



**BLUE-MASTER<sup>®</sup>**  
by *CEJESB*

CUTTING TECHNOLOGIES



**2023**  
CATALOGUE

# IDENTIFICATION

BACKGROUND COLOUR DISCOUNT  
DISCOUNTS ARE RELATED TO BACKGROUND  
COLOURS OF EACH PRICE



**BLUE-MASTER**  
*by CELESA*



GREY DISCOUNT  
BEST SELLING TWIST DRILLS



PINK DISCOUNT  
SPECIAL APPLICATIONS



GREEN DISCOUNT  
HAND TAPS & DIES SETS



YELLOW DISCOUNT  
BAND SAW BLADES



MORE THAN 11.000 M<sup>2</sup> OF INDUSTRIAL  
SURFACE AREA DEDICATED TO THE  
PRODUCTION AND STORAGE OF  
CUTTING TOOLS DIVIDED INTO  
2 PRODUCTION PLANTS

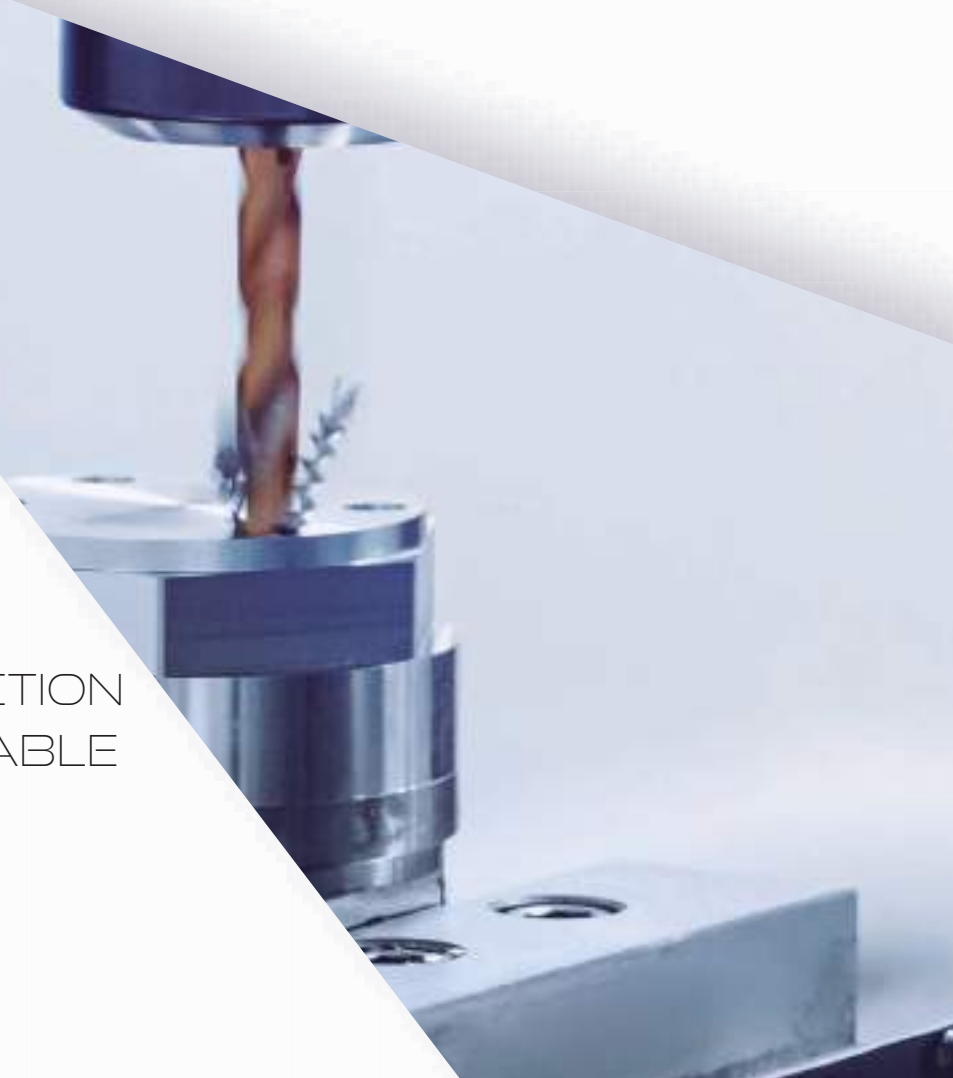




**BLUE-MASTER<sup>®</sup>**  
*by CELESA*

CUTTING TECHNOLOGIES

THE LATEST PRODUCTION  
TECHNOLOGY AVAILABLE  
FOR MORE EFFICIENT  
MANUFACTURING  
AND LOGISTIC





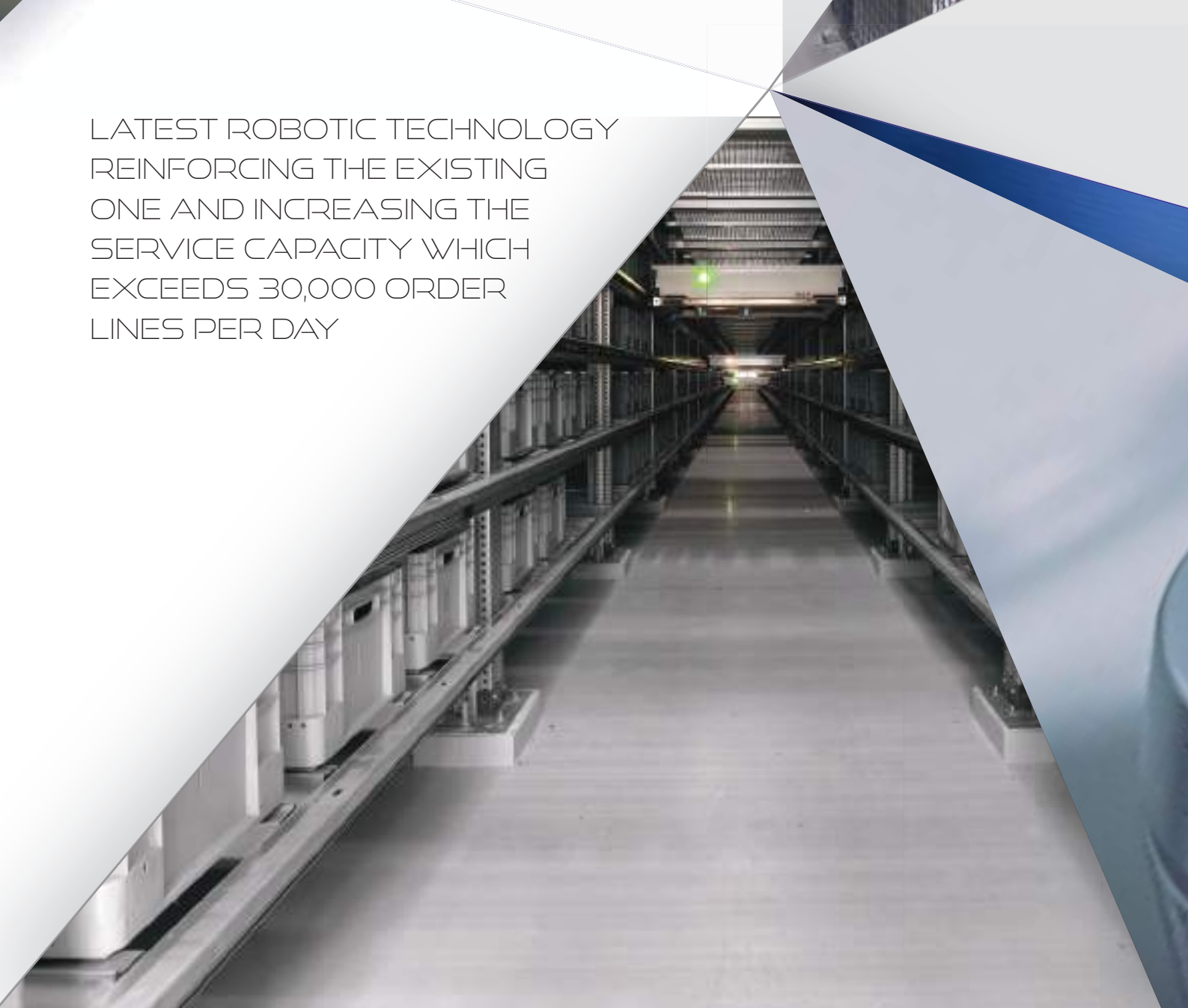


**BLUE-MASTER®**  
by *celesa*

CUTTING TECHNOLOGIES

OPTIMIZATION  
AND PROCESS  
CONTROL

LATEST ROBOTIC TECHNOLOGY  
REINFORCING THE EXISTING  
ONE AND INCREASING THE  
SERVICE CAPACITY WHICH  
EXCEEDS 30,000 ORDER  
LINES PER DAY





INNOVATION AND  
CONTINUOUS  
IMPROVEMENT OF  
THE INPUTS AND  
PRODUCTION  
TECHNOLOGIES



STORAGE AND ORDER  
PICKING TECHNOLOGY  
ADAPTED TO THE IMMEDIACY  
REQUESTED BY OUR CUSTOMER  
EXPRESS SERVICE





UNINTERRUPTED 8:00-19:00 H CUSTOMER SERVICE AND TECHNICAL ASSISTANCE

OVER 90.000 ITEMS IN STOCK READY FOR IMMEDIATE DELIVERY

THE BEST ATTENTION, AGILE, FAST AND PRECISE



**BLUE-MASTER**<sup>®</sup>  
by *celesa*





# PRODUCT FAMILY INDEX

TWIST DRILLS FOR METAL	041
CUTTING FLUIDS	115
DRILL CHUCKS & ACCESORIES	119
REAMERS	137
COUNTERSINKS	151
THREADING TAPS, DIES & TOOL HOLDERS	175
THREAD GAUGES	241
METAL LATHE TOOLING	257
END MILLS	265
SOLID CARBIDE END MILLS	287
SHELL MILLING CUTTERS	307
KEY CUTTERS	313
ROTARY BURRS	329
BAND SAW BLADES	357
HACK SAW BLADES	373
JIG SAW BLADES	377
RECIPROCATING SAW BLADES	391
OSCILLATING SAW BLADES	403
WOOD WORKING DRILL BITS	423
1/4" SHANK TOOLS	437
WOOD MILLING CUTTERS	455
CONSTRUCTION DRILL BITS	461
POINTS CHISELS	495
CUTTING SAW BLADES	503
HOLESAWS	531
ANNULAR CUTTERS	557
CONSTRUCTION COREBITS	573
CUTTING TOOLS INCHES	591
BLISTER AND POUCHES PACKAGING	597
DISPLAYS	645
THREAD RESTORATION	659
TECHNICAL INFORMATION	767



## FULLY GROUND TWIST DRILLS FOR METAL

BC2			HSS	DIN 338					OX		42
BC82			HSS	DIN 338					BRIGHT		42
BC02			HSS-G	DIN 338					GOLD OX	<i>Plus</i>	42
BC9			HSS	DIN 338					OX		42
BC5			HSSCo 5%	DIN 338					GOLD		42
BC99			HSSCo 5%	DIN 338					GOLD		42
BC58			HSSCo 8%	DIN 338					GOLD		42
BC16			HSS	DIN 338					BRIGHT	Al	42
BC66			HSS	DIN 338					BRIGHT	BRASS	42
BC15			HSS	DIN 338					OX		42
BC18			HSS	DIN 338					TiN	PRODUCTION	42
BTX			HSSCo 5%	DIN 338					GOLD		43
TTX			HSS	DIN 338					TiAlN		43
BC51			HSSCo 5%	DIN 338					TiAlN	HIGH PERFORMANCE	43
BC95			HSSCo 5%	DIN 338					GOLD OX	INOX	43
BC55			HSSCo 5%	DIN 338					BRIGHT	INOX	43
BC57			HSSCo 5%	DIN 338					TiAlN	INOX	43
BC50			HSSCo 5%	DIN 338					TiAlN	INOX <i>Plus</i>	43
BC7			CARBIDE TIPPED	DIN 338					BRIGHT	CAST IRON	43
BC98			CARBIDE TIPPED	DIN 338					BRIGHT	70 HRC	43
BC42			SOLID CARBIDE	DIN 338					BRIGHT	HIGH PERFORMANCE	43
































FULLY GROUND TWIST DRILLS FOR METAL

BC84 BC83			SOLID CARBIDE	DIN 6537K			135°		30° "N"	TiAIN	HARDOX 450	64
BC97 BC89 BC96			SOLID CARBIDE	DIN 6537L			135°		30° "N"	TiAIN	HARDOX 450	65 66
BXX BXL			SOLID CARBIDE	DIN 6537L			140°		30° "N"	TiAIN	HARDOX 450	67 68
BC30			HSS				118°		30° "N"		Ø 2,30mm	69
BC79			SOLID CARBIDE				118°		30° "N"		Ø 3,17mm HIGH PERFORMANCE	69
BC85			SOLID CARBIDE				140°		15° "H"	TiAIN	HARDOX 600	70
BCC06			SOLID CARBIDE				30° 30°		0°			71
BACH			Cu-Be				118°		30° "N"		Ex	71
BTT33			HSSCo 5%	DIN 338			135°		30° "N"	TOL H8	HIGH PERFORMANCE	72
BHA			HSSCo 8%	DIN 338			135°			HARDTOP	HARDOX 400/450 600	73
TK02			HSS	DIN 338			Ø ≥ 4 Ø ≥ 2,5mm			Cu-Ni-Zn	Al	74
<b>NEW</b> TK05			HSSCo 5%	DIN 338			Ø ≥ 5 Ø ≥ 3mm		INOX		CAST IRON	75
BC4			HSS	DIN 340			118°		30° "N"	OX	70 Kg/mm <sup>2</sup>	76
BC47			HSSCo 5%	DIN 340			135°		30° "N"	GOLD	120 Kg/mm <sup>2</sup>	76
BC40			HSS	DIN 340			118°		30° "N"	TiN	PRODUCTION	76
BC44			HSSCo 5%	DIN 340			135°		38° "S"	BRIGHT	INOX	76
BC48			HSSCo 5%	DIN 340			135°		38° "S"	TiAIN	INOX	76
BC78			CARBIDE TIPPED	DIN 340			118°		30° "N"	BRIGHT	CAST IRON	76
BC3			HSS	DIN 1897			135°		30° "N"	OX	70 Kg/mm <sup>2</sup>	76
BC31			HSSCo 5%	DIN 1897			135°		30° "N"	GOLD	120 Kg/mm <sup>2</sup>	76
BC37			HSS	DIN 1897			135°		30° "N"	TiN	PRODUCTION	76
BC33			HSSCo 5%	DIN 1897			135°		38° "S"	BRIGHT	INOX	76












FULLY GROUND TWIST DRILLS FOR METAL

BC35			HSSCo 5%	DIN 1897				38° "N"	TiAIN	INOX <i>Plus</i>	76
BC77			CARBIDE TIPPED	DIN 1897				30° "N"	BRIGHT	CAST IRON	76
BC43			SOLID CARBIDE	DIN 1897				35° "N"	BRIGHT	HIGH PERFORMANCE	76
BC17			HSS	DIN 1897				30° "N"	OX	 70 Kg/mm <sup>2</sup>	76
BC38			HSSCo 5%	DIN 1897				30° "N"	GOLD	 120 Kg/mm <sup>2</sup>	76
BC8			HSS	DIN 1869 I/II/III				30° "N"	OX	 70 Kg/mm <sup>2</sup>	81
BC88			HSSCo 5%	DIN 1869 I/II/III				38° "S"	BRIGHT	INOX	81
BC08		AIRCRAFT	HSS					30° "N"			82
BC08PMD		AIRCRAFT	CARBIDE TIPPED					85° "N"			82

CENTRE DRILLS

BC10 BC65		BC10I 		HSS	DIN 333A				60°	BRIGHT TiN	 70 Kg/mm <sup>2</sup>	83	
BC10Co BC10MD				HSSCo 5%	SOLID CARBIDE		DIN 333A			60°	BRIGHT	 120 Kg/mm <sup>2</sup>	83
BC64 BC68				HSS	DIN 333A				60°	BRIGHT TiN	 70 Kg/mm <sup>2</sup>	84	
BC62				HSS	DIN 333R				60°	RADIAL	BRIGHT	 70 Kg/mm <sup>2</sup>	84
BC63				HSS	DIN 333B				60° 120°	BRIGHT	 70 Kg/mm <sup>2</sup>	84	

POINTING DRILLS FOR CNC

BC75 BC76		B175 		HSSCo 5%	DIN 1412A	TOL h6		90°	120°	TiAIN	CNC Machines	85
DP75				HSSCo 5%	DIN 1412A	TOL h6		90°		TiAIN	CNC Machines	85
BC92 BC93				SOLID CARBIDE	DIN 1412A	TOL h6	DIN 6535HB	90°	120°			85
BN75				HSSCo 5%	 120 Kg/mm <sup>2</sup>	90°	Ti	INC	Ni	INOX	PVC	85
BL75				HSSCo 5%	DIN 1412A	TOL h6		90°		TiAIN		86
BP11				HSSCo 5%	 120 Kg/mm <sup>2</sup>			90°				86

**DRILLS TO REMOVE SPOT WELDS**



<b>HSSCo</b> 5%		<b>BRIGHT</b> <b>TiN</b>	87
<b>SOLID CARBIDE</b>		<b>TiAlN</b>	87
<b>HSSCo</b> 5%		<b>BRIGHT</b> <b>TiN</b>	87
BOX SET & SPARE PARTS: Cutting set, Hole saw & pilot drill			87

**DRILL MILLS**



<b>HSS</b>			<b>BRIGHT</b> <b>TiN</b>		88
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**SOLID CARBIDE DRILL MILL**



<b>SOLID CARBIDE</b>	<b>90°</b>	<b>CNC Machines</b>	88
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**FLOWDRILL FOR DRILLING METAL SHEET**



Ref. <b>FLUOB</b> Without collar		Ref. <b>FLUOBP</b> With collar		89
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**SUBLAND TWIST DRILLS, STRAIGHT AND TAPER SHANK**



<b>HSS</b>		<b>DIN 8376</b>	<b>DIN 8374</b>	<b>DIN 8378</b>	<b>90°</b>	<b>180°</b>		90
<b>HSS</b>		<b>DIN 8377</b>	<b>DIN 8375</b>	<b>DIN 8379</b>	<b>90°</b>	<b>180°</b>		90
<b>HSSCo</b> 5%					<b>90°</b>			91
<b>MD</b>					<b>90°</b>	<b>TiAlN</b>		91
<b>HSSCo</b> 5%					<b>180°</b>	<b>90°</b>		91




















**MORSE TAPER SHANK DRILLS**



<b>HSS</b>		<b>DIN 345</b>		<b>118°</b>	<b>OX</b>		92
<b>HSSCo</b> 5%		<b>DIN 345</b>		<b>135°</b>	<b>OX</b>		92
<b>HSSCo</b> 5%		<b>DIN 345</b>		<b>135°</b>	<b>OX</b>	<b>INOX</b>	92
<b>HSS</b>		<b>DIN 345</b>		<b>118°</b>	<b>TiN</b>		92
<b>CARBIDE TIPPED</b>		<b>DIN 345</b>		<b>118°</b>	<b>BRIGHT</b>	<b>CAST IRON</b>	92



MORSE TAPER SHANK DRILLS

<b>BC73</b>		HSSCo 8%				OX	HARDOX 450	95	
<b>BC22...FT</b>		HSSCo 5%		DIN 1412D			TiN	HARDOX 450	95
<b>BC12</b>		HSS		DIN 341			OX	70 Kg/mm <sup>2</sup>	96
<b>BC56</b>		HSSCo 5%		DIN 341			BRIGHT	120 Kg/mm <sup>2</sup>	96
<b>BC14</b>		HSS		DIN 1870 I/II			OX	70 Kg/mm <sup>2</sup>	97
<b>BC41</b>		HSSCo 5%		DIN 1870 I/II			BRIGHT	120 Kg/mm <sup>2</sup>	97
<b>BC87</b>		HSS		DIN 341			OX		98

TWIST DRILLS METAL SETS & DISPLAY CABINET

	DIN 338	DIN 340	DIN 1897	TiN	BRIGHT	99		
	HSS	HSS-G	HSSCo 5%	HSSCo 8%	CARBIDE TIPPED	CV		
	DIN 338	HSS	HSS-G	HSSCo 5%	OX	Plus	TiN	109

CUT MAGIC THE REFERENCE IN ENGINEERING OF CUTTING TOOLS

CUT MAGIC EXTRA

<b>AC</b>		FOR MACHINING ALL KIND OF MATERIALS	116
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CUT MAGIC XTHICK

<b>ACXT</b>		EXTREMELY THICK FOR EXTREMELY HARD MATERIALS UP TO HRc 45	116
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CUT MAGIC ALUMINIUM

<b>ACAL</b>		EXCLUSIVE FOR ALUMINIUM AND MAGNESIUM	117
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**CUT MAGIC FOAMY**

<b>ACF</b>		FOAMY: MAXIMUM ADHERENCE TO THE TOOL FOR ALL KIND OF MATERIALS	117
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**WATER SOLUBLE OIL**

<b>AST5000</b>		WATER SOLUBLE MINERAL OIL FOR AN OPTIMUM COOLING IN ANY TYPE OF MACHINING PROCESS	117
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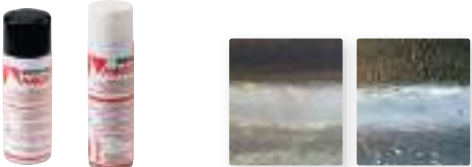
**CUT MAGIC PASTY**

<b>ACPU</b>		PASTY: SUITABLE FOR ANY TOOL WITH MAXIMUM ADHESION IN ALL KIND OF MATERIALS	118
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**CUT MAGIC TWISTY**



<b>ACPS</b>		TAKE ADVANTAGE OF THE TWISTY BAR FOR SAWING PROCESS. IN ANY TYPE OF MATERIALS	118
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**ANTI WELDING PROJECTIONS SPRAY**

<b>EPW0400</b>	<b>PW0400</b>		SPECIALLY DESIGNED TO PROTECT THE EQUIPMENT AND THE WORK PIECES FROM WELDING PROJECTIONS AND SPITTINGS	118
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**INDUSTRIAL SELF-TIGHTEN CHUCKS FOR COLUMN OR CNC DRILLING MACHINES**


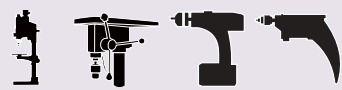
<b>DC1</b>	<b>DC2</b>	<b>DC3</b>			<b>&lt;0,05</b>	<b>&lt;0,12</b>	<b>&lt;0,20</b>	HIGH PRECISION INDUSTRIAL LIGHT-WEIGHT	120
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<b>DC10</b>	<b>DC11</b>			<b>&lt;0,05</b>	<b>&lt;0,12</b>	HIGH PRECISION INDUSTRIAL	121
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**PROFESSIONAL AUTO-LOCK DRILL CHUCKS**

<b>DC4</b>	<b>DC5</b>	<b>DC13</b>			<b>LOCK</b>	<b>&lt;950W</b>	<b>&lt;1050W</b>	PLASTIC SLEEVE METAL SLEEVE	122
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**PROFESSIONAL KEY CHUCKS**

<b>DC6</b>	<b>DC7</b>			123
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**DRILL CHUCK WITH FLEXIBLE EXTENSION / 90° ANGLE DRILL CHUCK / PROFESSIONAL DRILL STAND**

<b>DC15-001</b>		124
<b>DC15-002</b>		124
<b>STE99</b>		125

**MACHINE AND MANUAL MINI DRILL CHUCKS**
**P28**


Includes 3 jaws from Ø 0,1 to 2 mm

MACHINE

126

**P29**


from Ø 0,6 to 6,0 mm

126

**ACCESSORIES DRILL CHUCKS**
**DC**


SDS-PLUS ADAPTER

126

**DC-01**


ADAPTER 1/4" Hex.

126

**ACCESSORIES FOR DRILLS & DRILL CHUCKS**
**CR**

**HSS**
**DIN  
2185**

REDUCTION SLEEVES

127

**CA**

**HSS**

INCREASE SOCKET

127

**CA**

**HSS**

EXTENSION REDUCING SLEEVES

127

**CA**

**HSS**

EXTENSION SLEEVES

127

**CM**

**HSS**
**DIN  
238**

TAPER DRILL CHUCK ARBOR

127

**CMEXT**


HOLDING-PIN EXTRACTOR B16 AND B18 FOR DRILL CHUCK CONES

127

**CE**

**HSS**
**DIN  
317**

DRILL DRIFTS

128

**CMR**

**HSS**
**DIN  
228**

TAPER DRILL CHUCK THREADED ARBOR

128

**CPC**
**CPC...MD**


LATHE CENTER

128

**PGC**


LIVE CENTER

128

**TAP HOLDERS**
**TC10**




TAP HOLDER WITH INTERCHANGEABLE HEAD

129

**TC15**
**TC16**
TAP HOLDER WITHOUT CLUTCH  
TAP HOLDERS WITH CLUTCH

129

PRECISION COLLET

<b>ER8</b>			<b>TYPE ER</b>	<b>DIN 6499-B</b>	D2: 8,5 L1: 13,5	$\alpha: 8^\circ$ $\beta: 30^\circ$	131
<b>ER11</b>			<b>TYPE ER</b>	<b>DIN 6499-B</b>	D2: 11,5 L1: 18	$\alpha: 8^\circ$ $\beta: 30^\circ$	131
<b>ER16</b>			<b>TYPE ER</b>	<b>DIN 6499-B</b>	D2: 17 L1: 27,5	$\alpha: 8^\circ$ $\beta: 30^\circ$	132
<b>ER25</b>			<b>TYPE ER</b>	<b>DIN 6499-B</b>	D2: 26 L1: 34	$\alpha: 8^\circ$ $\beta: 30^\circ$	132
<b>ER32</b>			<b>TYPE ER</b>	<b>DIN 6499-B</b>	D2: 33 L1: 40	$\alpha: 8^\circ$ $\beta: 30^\circ$	133
<b>ER40</b>			<b>TYPE ER</b>	<b>DIN 6499-B</b>	D2: 41 L1: 46	$\alpha: 8^\circ$ $\beta: 30^\circ$	133

SHARPENERS

<b>AFB10</b>		<b>500X Professional sharpening</b>				$118^\circ$	$\emptyset$ 3-13	HSS	HSSCo	SOLID CARBIDE	<b>TiN</b>	CARBIDE TIPPED	134		
<b>AFB1</b>		<b>750X High Precision</b>				$118^\circ$	$135^\circ$	$\emptyset$ 2,5-19	$\emptyset$ 2,5-13	HSS	HSSCo	SOLID CARBIDE	<b>TiN</b>	CARBIDE TIPPED	135
<b>AFB2</b>						$118^\circ$		HSS	HSSCo	SOLID CARBIDE	<b>TiN</b>	CARBIDE TIPPED	135		
<b>AFB3</b>		<b>XP Practical &amp; Economic</b>				$118^\circ$		HSS	HSSCo	SOLID CARBIDE	<b>TiN</b>	CARBIDE TIPPED	135		

HAND REAMERS

<b>EM1</b>		<b>HSS</b>	<b>TOL H7</b>	<b>DIN 206B</b>		$8^\circ$	138
<b>EMA</b>		<b>HSS</b>	<b>TOL K7</b>	<b>NFE 74112</b>		$0^\circ$	139
<b>ECM</b>		<b>HSS</b>		<b>DIN 204D</b>			139
<b>EMNPT</b>		<b>HSS</b>	<b>1:16</b>	<b>NPT</b>			139
<b>EM2</b>		<b>HSS</b>	<b>TOL H9</b>	<b>DIN 9B</b>		<b>2% 1:50</b>	FOR TAPER PINS DIN 1 140

MACHINE REAMERS

EM29		HSSCo	TOL H9	DIN 2179E	2% 1:50	FOR TAPER PINS DIN 1	140		
EM3		HSSCo	TOL H7	DIN 212B	8°	DIN 212E	38°	GAMMON	141
EM10									
EM44		HSSCo	TOL H7	DIN 212L/XL	8°				142
EM33									
EM35		SOLID CARBIDE	TOL H7	DIN 8093B	8°				142
EM7		HSSCo	TOL H7	DIN 208B	10°	DIN 208C	38°	GAMMON	143
EM9									
EM41		HSSCo	DIN 208B/L	TOL H7					144
EM8		HSS	DIN 311	TOL H7		FOR BOIL WORKS			144
EM42		HSSCo	DIN 208B/XL	TOL H7					144
BC45		SOLID CARBIDE	DIN 1897		150°	30° "N"			145
EM22									
EM23		HSS	DIN 343	DIN 344		TO ENLARGE HOLES			146
EM17		HSSCo	TOL H7	DIN 219B	10°	DIN 219C	38°	GAMMON	147
EM18									
EM19				DIN 217					147
EM14		HSS			10% 1:10	25°			148

HSSCo SPRUE REAMERS 45° HELIX

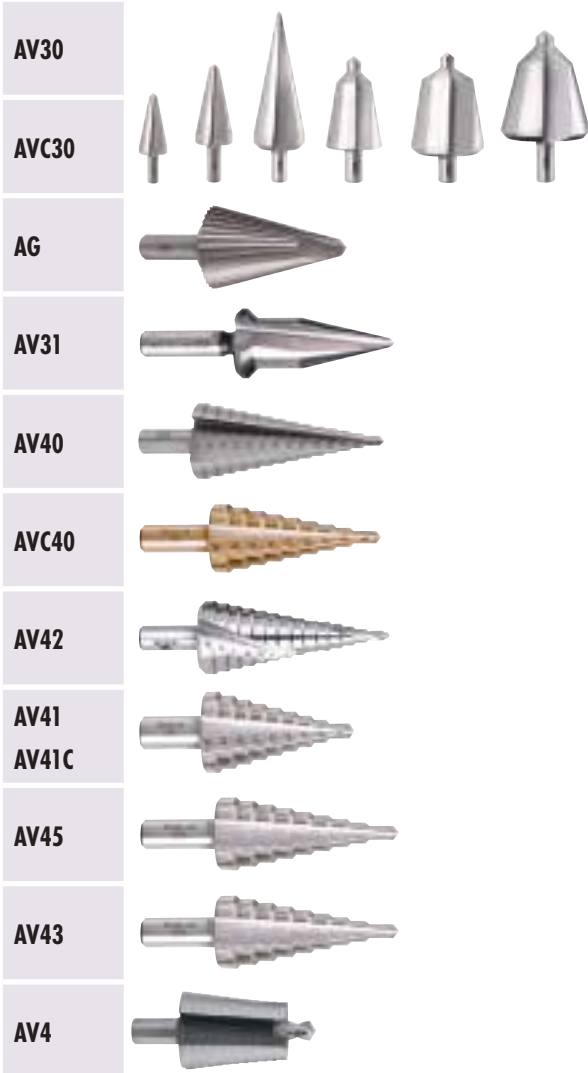
EM30		HSSCo	5% 1:20	8% 2:25	10% 1:10	45°	FOR MOULDS	148
EM31								
EM32								

EXTENSIBLE REAMERS

EM4G		HSS	WITH GUIDE: REAMERS + BLADES + SCREWS	149
EM4-6C		HSS	REINFORCED: REAMERS + BLADES + SCREWS	149
EM4-6T				
EM5E8		HSS	EXTENSIBLE REAMER WITH GUIDE SET (Ref. EM4G)	149
EM5E14				

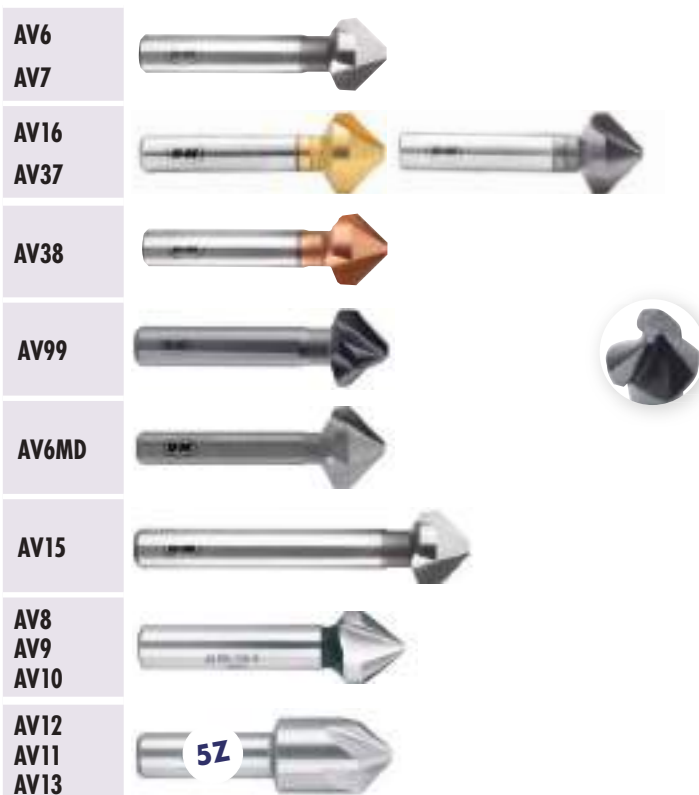


TUBE & SHEET DRILLS



HSS	BRIGHT TiN				152
HSSCo	GOLD TiN				152
HSS					153
HSS	BRIGHT TiN			WITH STOPPER	153
HSS	BRIGHT TiN				154
HSSCo	GOLD TiN				155
HSS	BRIGHT TiN			STRAIGHT	155
HSS	BRIGHT TiN			STRAIGHT	156
HSS	BRIGHT TiN			FOR ELECTRICIANS	156
HSS	BRIGHT TiN			3 Z	156
HSS				STEP DRILL WITH INTERCHANGEABLE PILOT DRILL	156

SINGLE, 3 FLUTED AND MULTI CUTTING COUNTERSINKS



HSS	HSSCo	DIN 335C		GENERAL PURPOSE	GENERAL PURPOSE INOX	157
HSS	TiN	TiAlN	DIN 335C		GENERAL PURPOSE	157
HSSCo	TiAlSiN	DIN 335C			INOX Plus	157
HSSCo	TiAlN	INOX Superplus			AI	157
CARBIDE	BRIGHT	DIN 335C			HARDOX 450	157
HSS		DIN 335C				157
HSS	BRIGHT	DIN 334C				158
HSS	BRIGHT					158

**SINGLE, 3 FLUTED AND MULTICUTTING COUNTERSINKS**



HSS	HSSCo	BRIGHT TiN	NORM CELESA			159
TiAIN			SOLID CARBIDE			159

**TAPER SHANK COUNTERSINKS**



HSS	SOLID CARBIDE		DIN 335D		3 Z	160
HSS			DIN 334B		MULTICUTTING	160
HSS			DIN 335B		DIN 347B	
HSS			NORM CELESA			1 Z 161
HSS			NORM CELESA			1 Z 161

**EXTERNAL CHAMFERING COUNTERSINKS**



HSS	3 FLUTED	NORM CELESA			161
HSS	FOR RESTORING STARTING THREADS				161

**COUNTERBORES FOR ALLEN SCREWS**



HSS	DIN 373		DIN 375		FINE	162
					MEDIUM	163
					CORE	163
HSS			DIN 1866	TAPER HEAD WITH GUIDE		FINE 162

**COUNTERSINKS WITH INTERCHANGEABLES ELEMENTS FOR ALLEN AND TAPER CAP SCREWS**



A/B/C SERIES	HSS	SOLID CARBIDE	CARBIDE TIPPED	HSS		HSS	SOLID CARBIDE	165
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**PRECISION DEBURRING TOOLS BLISTER PACKAGING**



168

172

HAND TAPS AND DIES



	M MF	176	UNC	178	UNF	178	BSP (GAS)	179	UNF 3B	179
HSS	BSW	180	BSF	180	NPTF	181	NPT	181	PG	182
	NPSF	182	NPS (M)	182	BSPT BA	183	UNx8 UNEF	184		
	HSSCo 5%	OX	M							185
	HSS PM	TiAlSiN	M							185
Al	HSS	BRIGHT								185
INOX	HSS	TiN	M							186
INOX	HSSCo 5%	OX	M							186
HSS	DIN 382	M	BSP (GAS)	BSW	UNC UNF					187
	M MF	188	UNC	188	UNF	188	BSP (GAS)	188	BSW	188
HSS										
	M MF		HSS		HSS					189

ACCESSORIES



THREAD PITCH GAUGES										190
DIN 377	DIN 10									190
DIN 1814										191
DIN 225		5		3						191
TYPE T	1 <sup>st</sup> Quality	2 <sup>nd</sup> Quality	SHORT AND LONG TYPE							192

TOOL HOLDERS AND THREADING DIES METHACRYLATE DISPLAY



HAND TAPS SETS

BROKEN TAP EXTRACTORS

192  
193  
205

MACHINE TAPS



HSSCo 5%	C FORM	M MF	206	UNC UNF	210 211	BSP BSF	212	BSW	213	UNJC UNJF	214
	B FORM	M MF	206	UNC UNF	210 211	BSP BSF	212	BSW	213		
	15°	M MF	206	UNC UNF	210 211	BSP BSF	212	BSW	213		
	35°	M MF	206	UNC UNF	210 211	BSP BSF	212	BSW	213		
HSSCo 5%	C FORM	BSPT	215	NPT	215	NPTF	216				
	C FORM	BSPP	215	NPS (M)	215	NPSF	216	MF	216	PG	216
	C FORM	DIN 374	TOL 2B	UNx8							217
	C FORM	35°	DIN 374	TOL 2B	UNEF						217
HSSCo 5%	C FORM	TOL 6H									217

MACHINE TAP ISO 529



HSSCo 5%	ISO 529	TOL 6H	C FORM	M MF							218
HSSCo 5%	ISO 529	TOL 6H	B FORM	M MF							218
HSSCo 5%	ISO 529	TOL 6H	35°	M MF							218
HSSCo 5%	ISO 529	TOL 6H	INTERRUPTED THREAD	M MF		AI					218

MACHINE TAPS DIN 352



HSS	DIN 352	TOL 6H		M MF							219
HSS	DIN 352	TOL 6H	COMPLETE PROFILE	M MF							219
HSSCo 5%	DIN 352	TOL 6H	INOX	M MF							219
HSS	DIN 352	TOL 6H	B FORM	M MF							219
HSS	DIN 352	TOL 6H	35°	M MF							219

MACHINE TAPS FOR SPECIAL APPLICATIONS



	<i>Plus</i>	HSS PM	BRIGHT	DIN 376/371	TOL 6H	B FORM	35°				220
	<i>Plus</i>	HSSCo 5%	TiN	DIN 376/371	TOL 6H	B FORM	35°				220
	<i>Plus</i>	HSS PM	HARD LUBE	DIN 376/371	TOL 6H	B FORM	35°				220



MACHINE TAPS FOR SPECIAL APPLICATIONS

M2RSP/DSP M4RSP/DSP		Vc 20 m/min	Super Plus HSS V3	ALTiN	DIN 376/371	TOL 6H	B FORM		41°	220
C5P			Plus HSS	BRIGHT	DIN 22568	TOL 6g				220
M2DX/RX M4DX/RX		Vc 6 m/min	INOX HSS PM	OX	DIN 376/371	TOL 6H	B FORM		35°	221
M2DXT/RXT M4DXT/RXT		Vc 10 m/min	INOX HSSCo 5%	TiN	DIN 376/371	TOL 6H	B FORM		35°	221
M2DXHL/RXHL M4DXHL/RXHL		Vc 12 m/min	INOX HSS PM	HARD LUBE	DIN 376/371	TOL 6H	B FORM		35°	221
M2RDU/DDU M4RDU/DDU			M HSS V3	TiCN	DIN 376/371	TOL 6H	B FORM		41°	222
M2RNI/DNI M3RNI/DNI			M HSS PM	BRIGHT	DIN 376/371	TOL 6H	B FORM		15°	222
M2RTIT/DTIT M3RTIT/DTIT			M HSS PM	OX	DIN 376/371	TOL 6H	B FORM		15°	222
M2RSS/DSS M4RSS/DSS		Vc 13 m/min	AI HSSCo 5%	OX	DIN 376/371	TOL 6H	B FORM		35°	223
M2DMD/RMD M4DMD/RMD		Vc 7 m/min	 1200 N/mm <sup>2</sup> HSS V3	OX	DIN 376/371	TOL 6H	B FORM		35°	224
M2DMDTX/RMDTX M4DMDTX/RMDTX		Vc 9 m/min	 1200 N/mm <sup>2</sup> HSS V3	TINALOX	DIN 376/371	TOL 6H	B FORM		35°	224
M2DC/RC M3DC/RC		Vc 5 m/min	 1400 N/mm <sup>2</sup> HSSE	TiCN	DIN 376/371	TOL 6H	B FORM		15°	225
M2HDC/HRC M4HDC/HRC		Vc 5 m/min	 1400 N/mm <sup>2</sup> HSS PM	TINALOX	DIN 376/371	TOL 6H	B FORM		35°	225
M1RCM		MATERIAL 48 HRC	 1400 N/mm <sup>2</sup> HSS PM	TiCN	DIN 371	TOL 6HX	C FORM			225
M1RHMC		MATERIAL 48-62 HRC	 1400 N/mm <sup>2</sup> SOLID CARBIDE	TiCN	DIN 376/371	TOL 6H	C FORM			225
M2DD/RD M4DD/RD		Vc 13 m/min	ALL ROAD HSSCo 5%	TiN	DIN 376/371	TOL 6H	B FORM		35°	226
M5D/R M6D/R		Vc 18 m/min	AI HSSCo 5%	BRIGHT	DIN 376/371	TOL 6H	INTERRUPTED THREAD		2 FLUTES	227
M1DFM M1RFM		Vc 11 m/min	CAST IRON HSSCo 5%	OX	DIN 376/371	TOL 6H	C FORM			227
MHM1D MHM1R		Vc 21 m/min	CAST IRON SOLID CARBIDE	BRIGHT	DIN 376/371	TOL 6H	C FORM			227
M1DL M1RL		Vc 16 m/min	BRASS HSSCo 5%	BRIGHT	DIN 376/371	TOL 6H	C FORM			227
M1DLCRN M1RLCRN		Vc 19 m/min	BRASS HSSCo 5%	CrN	DIN 376/371	TOL 6H	C FORM			227



FORMING MACHINE TAPS WITH & WITHOUT OIL GROOVES

<b>M07D/M07R</b> <b>M07DT/M07RT</b>			HSSCo 5%	OX TiN	DIN 376/2174	TOL 6HX		228
<b>M07DCR/RCR</b> <b>M07DCCR/RCCR</b>			HSSCo 5%	OX TiCN	DIN 376/2174	TOL 6HX		228
<b>M09DCCR/RCCR</b> <b>M07DTX/RTX</b>			HSSCo 5%	TiN TiCN	DIN 376/2174	TOL 6HX		228

MACHINE TAPS WITH SPECIAL TOLERANCE AND OVERSIZE

<b>M2D/M2R</b> <b>M4D/M4R</b>		HSSCo 5%	DIN 376/371	TOL 4H	TOL 6G	TOL 7G	TOL 6H (+0,1)	TOL 6H (+0,2)	B FORM		229
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EXTRA-LONG MACHINE TAPS

<b>M2L-D</b> <b>M4L-D</b>		HSSCo 5%	BRIGHT	M	DIN 376/371	TOL 6H	B FORM		230
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EXTRA-LONG NUTS MACHINE TAPS

<b>MTU</b>		HSSCo 5%	BRIGHT	M	DIN 357	TOL 6H	A FORM		231
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HSSCo DRILL TAPS

<b>M8M</b>		HSSCo 5%	BRIGHT	M	DIN 376/371	TOL 6H		232
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MACHINE TAPS FOR TRAPEZOIDAL THREADS

<b>MRTM</b>		HSS	BRIGHT		DIN 103	TOL 7H			232
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INDEXABLE THREAD TURNING INSERT

<b>PRE / PPRE / PEXT</b>		FULL PROFILE/ V PROFILE FOR EXTERNAL THREADING							233
<b>PRI / PPRI / PINT</b>		FULL PROFILE/ V PROFILE FOR INTERNAL THREADING							234

MACHINE TAPS IN METAL BOXES & DISPLAYS

		235
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THREAD GAUGES

<b>CTP</b> <b>CTNP</b>		M MF	BSP (GAS)	UNC	UNF	PLAIN	GO / NO GO GO NO GO	242
<b>AP</b> <b>ANP</b>		M MF	BSP (GAS)	UNC	UNF		GO NO GO	248

METAL LATHE TOOLING

<b>CT</b>			HSSCo 10%	DIN 4964	TOL h14	258
<b>CT..MD</b>			P-20	K-10	260	

SHORT & LONG SERIES END MILLS

<b>FF01</b>		2Z	HSS	DIN 327		WELDON	BRIGHT		34 HRc	INOX AL	266
<b>FF02</b> <b>FF60</b> <b>FT02</b>		2Z	HSSCo 8%	DIN 327		WELDON	BRIGHT TiAlN TiAlSiN		34 HRc	INOX AL	266

SHORT & LONG SERIES END MILLS

FF92				HSSCo 8%	DIN 327		30°		WELDON	BRIGHT			34 HRc	INOX AL	266
FP05 FT12				ASP 60	DIN 327		30°		WELDON	BRIGHT TiAlSiN			34 HRc	INOX AL	266
FP08 FT01				ASP 60	DIN 327		30°		WELDON	BRIGHT TiAlSiN			34 HRc	INOX AL	266
FFAL				HSSCo 8%	DIN 844		45° W		WELDON	BRIGHT				AI	266
FF06 FF67 FT06				HSSCo 8%	DIN 327/L		30°		WELDON	BRIGHT TiAl TiAlSiN			34 HRc	INOX AL	267
FF15 FP21				HSSCo 8% ASP 60	DIN 327/L		30°		WELDON	BRIGHT			34 HRc	INOX AL	267
FFLAL				HSSCo 8%	DIN 844/L		45° W		WELDON	BRIGHT				AI	267
FF63 FF75 FT63				HSSCo 8%	DIN 844		30° N		WELDON	BRIGHT TiAl TiAlSiN			34 HRc	INOX AL	268
FF73 FF76 FT73				HSSCo 8%	DIN 844		30° N		WELDON	BRIGHT TiAl TiAlSiN			NR	INOX AL	268
FP06 FT03				ASP 60	DIN 327		30° N		WELDON	BRIGHT TiAlSiN			34 HRc	INOX AL	268
FF83 FF86 FT83				HSSCo 8%	DIN 844/L		30° N		WELDON	BRIGHT TiAl TiAlSiN			34 HRc	INOX AL	269
FF18 FF20 FT18				HSSCo 8%	DIN 844		30° N		WELDON	BRIGHT TiAl TiAlSiN			34 HRc	INOX AL	270
FP07 FT09				ASP 60	DIN 844		30° N		WELDON	BRIGHT TiAlSiN			34 HRc	INOX AL	270
FF21 FF23 FT21				HSSCo 8%	DIN 844/L		30° N		WELDON	BRIGHT TiAl TiAlSiN			34 HRc	INOX AL	270
FP20				ASP 60	DIN 844/L		30° N		WELDON	BRIGHT			34 HRc	INOX AL	270
FF25 FF27 FT25				HSSCo 8%	DIN 844		30° N		WELDON	BRIGHT TiAl TiAlSiN			NR	INOX AL	271
FF29 FF31 FT29				HSSCo 8%	DIN 844/L		30° N		WELDON	BRIGHT TiAl TiAlSiN			NR	INOX AL	271
FF03*				HSS	DIN 844		30° N		WELDON	BRIGHT			34 HRc	INOX AL	272
FF04* FF54* FT04*				HSSCo 8%	DIN 844		30° N		WELDON	BRIGHT TiAl TiAlSiN			34 HRc	INOX AL	272

\* No center cutting end mills

SHORT & LONG SERIES END MILLS

FF07* FF57* FT07*			4-6 Z	HSSCo 8%	DIN 844/L		WELDON	BRIGHT TiAlN TiAlSiN			INOX AL	272
FP10 FT10			3-5 Z	ASP 60	DIN 844		WELDON	BRIGHT TiAlSiN	NF		INOX AL	273
FP11 FT11			3-5 Z	ASP 60	DIN 844		WELDON	BRIGHT TiAlSiN	NR		INOX AL	273
FP15 FT15			3-5 Z	ASP 60	DIN 844/L		WELDON	BRIGHT TiAlSiN	NF		INOX AL	273
FP13 FT13			3-5 Z	ASP 60	DIN 844/L		WELDON	BRIGHT TiAlSiN	NR		INOX AL	273
FF51 FF53			3 Z	HSSCo 8%			WELDON	BRIGHT			INOX AL	274
FP22			3-4 Z	HSS PM	DIN 844N		WELDON	BRIGHT		<25 HRc icon"/>	Cu	274

SOLID CARBIDE ROUTERS FOR COMPOSITE AND FIBER GLASS MATERIALS, PHENOLIC BOARDS, ETC

RFC/ RFCTL RF/RFTL		SOLID CARBIDE						BRIGHT TiAlN	FOR COMPOSITE & FIBER GLASS MATERIALS	275
RN		SOLID CARBIDE							TILE DRYWALL GROUT SHEET	275

ROTOZIP TYPE ACCESSORIES

RR0317 RR0635 RR0435 RR0247		SOLID CARBIDE								275
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SINGLE FLUTE END MILLS

FF13 FF14		1 Z	HSSCo					BRIGHT TiN		Al PVC	276
FF50 FF14-E FF14-ES		1 Z	HSSCo					BRIGHT TiN		Al PVC	276
FMGA13 FMGA13E FMGA13HI FMGA13CO FMGA13R		1 Z	SOLID CARBIDE							Al PVC	277

WOODRUF KEYSEAT CUTTERS AND DOVETAIL MILLING CUTTERS

FF17 FF17C		"T" SLOT CUTTERS	HSSCo	DIN 851AA	STRAIGHT	DIN 851B	TAPER	BRIGHT TiAlN		278
FF16		WOODRUFF TYPE	HSSCo	DIN 851B	STRAIGHT			BRIGHT TiAlN		278
FF1/4R		4 Z	HSSCo 8%	DIN 6518N	WELDON					278

WOODRUF KEYSEAT CUTTERS AND DOVETAIL MILLING CUTTERS

FF98 FF99			HSSCo	DIN 1833A	STRAIGHT		BRIGHT		279
FF97 FF95			HSSCo	DIN 1833B	STRAIGHT		BRIGHT		279

TAPER SHANK END MILLS SHORT AND LONG SERIES (NO CENTER CUTTING)

FF09 FF35 FF39			4-8 Z	HSSCo 8%	DIN 845B	30° N	TAPER	BRIGHT TiN TiAIN			INOX AL	280
FF10 FF46 FF48			4-8 Z	HSSCo 8%	DIN 845B	30° N	TAPER	BRIGHT TiN TiAIN	NR		INOX AL	280
FF55			2 Z	HSSCo 8%	DIN 326	30° N	TAPER	BRIGHT			INOX AL	280
FF11 FF61 FF71			4-8 Z	HSSCo 8%	DIN 845B/L	30° N	TAPER	BRIGHT TiN TiAIN			INOX AL	281
FF12 FF33 FF43			4-8 Z	HSSCo 8%	DIN 845B/L	30° N	TAPER	BRIGHT TiN TiAIN	NR		INOX AL	281

END MILLS IN METAL BOXES AND DISPLAYS



SOLID CARBIDE SHORT, LONG AND EXTRA-LONG SERIES FOR GENERAL PURPOSE

FMD2 FMD2TL		2 Z	SOLID CARBIDE	30°	STRAIGHT	BRIGHT TiAIN		44 HRc	INOX Ti	AI	288
FMD63 FMD63TL		3 Z	SOLID CARBIDE	30°	STRAIGHT	BRIGHT TiAIN		44 HRc	INOX Ti	AI	288
FMD48 FMD48TL		4 Z	SOLID CARBIDE	30°	STRAIGHT	BRIGHT TiAIN		44 HRc	INOX Ti	AI	288
FMD54 FMD54TL		2 Z	SOLID CARBIDE	30°	STRAIGHT	BRIGHT TiAIN		44 HRc	INOX Ti	AI	288
FMD58 FMD58TL		4 Z	SOLID CARBIDE	30°	STRAIGHT	BRIGHT TiAIN		44 HRc	INOX Ti	AI	288
FMD53 FMD53TL		2 Z	SOLID CARBIDE	30°	STRAIGHT	BRIGHT TiAIN		44 HRc	INOX Ti	AI	288
FMD56 FMD56TL		4 Z	SOLID CARBIDE	30°	STRAIGHT	BRIGHT TiAIN		44 HRc	INOX Ti	AI	288
FMD92 FMD92TL		2 Z	SOLID CARBIDE	30°	STRAIGHT	BRIGHT TiAIN		44 HRc	INOX Ti	AI	289
FMD51 FMD51TL		4 Z	SOLID CARBIDE	30°	STRAIGHT	BRIGHT TiAIN		44 HRc	INOX Ti	AI	289
FMD57 FMD57TL		2 Z	SOLID CARBIDE	30°	STRAIGHT	BRIGHT TiAIN		44 HRc	INOX Ti	AI	289
FMD55 FMD55TL		2 Z	SOLID CARBIDE	30°	STRAIGHT	BRIGHT TiAIN		44 HRc	INOX Ti	AI	289





CARBIDE 2 FLUTE LONG NECK AND BALL NOSE END MILLS

<b>FMG74</b> <b>FMG75</b> <b>FMG76</b>			MG CARBIDE		STRAIGHT	TiAIN	2 Z		301
<b>FMG77</b> <b>FMG78</b> <b>FMG79</b>			MG CARBIDE		STRAIGHT	TiAIN	2 Z		302

70 HRC 2 FLUTED STUB CUT END MILLS

<b>FMG01</b> <b>FMG04</b>			MG CARBIDE			STRAIGHT	BLUE	2 Z 4 Z		303
<b>FMG02</b>			MG CARBIDE			STRAIGHT	BLUE	2 Z		304
<b>FMG06</b> <b>FMG07</b>			MG CARBIDE			STRAIGHT	BLUE	6 Z		305
<b>FMG09</b> <b>FMG08</b>			MG CARBIDE			STRAIGHT	BLUE	2 Z		306

SIDE AND FACE MILLING CUTTERS

<b>FF56</b>			DIN 885A	3 Z				CROSS TEETH	308
<b>FF59</b>			DIN 885B	3 Z				STRAIGHT TEETH	309

GEAR MILLING CUTTERS

<b>99RFM</b>								GEAR MILLING CUTTERS	310
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MULTI-FLUTE SHELL END MILLS AND PLAIN MILLING CUTTERS WITH SHANK

<b>FF87</b>			DIN 1880					FINISHING	310
<b>FF88</b>			DIN 1880					ROUGHING	310
<b>FF89</b>			DIN 884					PLAIN	311
<b>FMF87</b>			8%						311
<b>FMF88</b>			8%						311

DOUBLE AND SINGLE ANGLE MILLING CUTTERS

<b>FF77/78/79</b> <b>FF91/90</b>			DIN 847						DIN 842			312
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LOCKSMITHING TOOLS.  
THE WIDEST RANGE OF TOOLS FOR LOCKSMITHS

							314
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CUTTERS FOR JMA KEY DUPLICATING MACHINES

<b>FLF4</b> <b>FLF19</b> <b>FLF22W</b>		DOUBLE ANGLE CUTTERS		SIDE MILLING CUTTERS		MILLING SLOT CUTTERS	316
<b>FLF3</b>						LASER CUTTERS	318



CUTTERS FOR JMA KEY DUPLICATING MACHINES

<b>FLL1</b>			UNIVERSAL DIMPLE CUTTERS FOR JMA AND SILCA DUPLICATING MACHINES	<b>318</b>	
<b>FLLP1 FLLP3</b>				TRACER POINTS	<b>319</b>

CUTTERS FOR SILCA KEY DUPLICATING MACHINES

<b>SLLP01 SLLSG2 SLLSG7W</b>		DOUBLE ANGLE CUTTERS		SIDE MILLING CUTTERS		MILLING SLOT CUTTERS	<b>320</b>
<b>SLLF1W</b>			<b>MATRIX</b>			DIMPLE CUTTERS	<b>322</b>
<b>SLLF3</b>				<b>MATRIX</b>		LASER CUTTERS	<b>323</b>
<b>SLLW133</b>				<b>QUATTROCODE TRIAX-E</b>		LASER CUTTERS	<b>323</b>
<b>SLLW103</b>			<b>QUATTROCODE TRIAX-E</b>			DIMPLE CUTTERS	<b>324</b>
<b>SLLW103Z1</b>			<b>QUATTROCODE TRIAX-E</b>			DIMPLE CUTTERS	<b>325</b>
<b>SLLH103</b>						DIMPLE CUTTERS	<b>325</b>
<b>SLLH101</b>						LASER CUTTERS	<b>326</b>
<b>SLLT1 SLLT3</b>						TRACER POINTS	<b>328</b>

CUTTERS FOR FLORA, NOVACLAU, WALKIN... KEY DUPLICATING MACHINES

<b>FLL</b>		DOUBLE ANGLE CUTTERS		SIDE MILLING CUTTER	<b>328</b>
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HSS ROTARY BURRS

	<b>HSS</b>	SHORT SERIES: 6 x 40 mm. SHANK LONG SERIES: 6 x 100 mm. SHANK	<b>330</b>
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SOLID CARBIDE ROTARY BURRS SHORT & LONG SERIES

	<b>SOLID CARBIDE</b>	<b>BRIGHT</b> <b>TiAlN</b>	SHANK: 3 / 6 / 8 mm.	<b>334</b>
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MINI ROTARY BURRS DISPLAY

	<b>Ti</b>	<b>Ni</b>	<b>CAST IRON</b>			<b>347</b>
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SPECIAL ROTARY BURRS FOR CYLINDERS / BOLT REMOVER

<b>SOLID CARBIDE</b>	SHANK: 3 / 6 mm.		<b>348</b>
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SOLID CARBIDE ROTARY BURRS SETS AND DISPLAYS

**349**

DIE GRINDERS FOR ROTARY BURRS

<b>RTFD</b>		ROTARY TOOL FLEXIBLE SHAFT EXTENSION	<b>352</b>
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**DIE GRINDERS FOR ROTARY BURRS**

P25  
P25LR  
P25XLR



\* New range of Industrial Air Die Grinders.  
Ergonomic design and safety control lever.

353

**DIAMOND ROTARY BURRS**

A..D  
C..D



354

**MOUNTED POINTS**



SHANK: 3 / 6 mm.

355

**BAND SAW BLADES**

357

<b>STANDARD</b>	Most usual pattern. Application: General Purpose. For materials up to 1400 N/mm2 (44 HRC)
<b>STRUCTURES</b>	Wider and deeper set. For all types of workpieces in high internal tension specially BEAMS. Reinforced teeth to significantly increase its resistance.
<b>MASTER</b>	Ground teeth, better cutting and performance for difficult steels in solid pieces of high alloys: stainless steel, titanium, etc...
<b>ALUMINIUM/WOOD</b>	Special for aluminium, non-ferrous materials and wood
<b>ANTI-WEAR</b>	High resistant steels. Chromium bars, stainless steel, (Maximum hardness 1600N/mm² 50 HRC)
<b>WOODCUT</b>	

<b>M42</b> 8% Co	0°	3° 5° 7° 10°		
<b>M42</b> 8% Co		<b>REINFORCED</b>		
<b>M42</b> 8% Co	12°			
<b>M42</b> 8% Co				
<b>M51</b> 10% Co	10°		<b>INOX</b>	
<b>M2</b> HSS	10°			

**HACKSAW BLADES**



HSS

CV



374

**POWER HACKSAW BLADES**



HSS

- Shatterproof blades.
- For cutting all kind of materials.

376

**HACK SAW FRAMES**



ASYH

376

**JIG SAW BLADES**



P55

GJ

RHS

HSS	CV	BI	Tungsten		
		<b>Al</b>	<b>INOX</b>		

377



UNIVERSAL RECIPROCATING BLADES



CV	BI	Tungsten				
		INOX AL				391

OSCILLATING SAW BLADES



HSS	HSSCo 8%	HCS		TiN	CARBIDE	
			PVC			404
HSS	HSSCo 8%	HCS		TiN	CARBIDE	
		PVC				407
HSS	HSSCo 8%	HCS		INOX	CARBIDE	
		PVC				410
HSS	HSSCo 8%	HCS	TiN	INOX		
		PVC				417
HSS	HSSCo 8%	HCS	TiN	INOX		
		PVC				420

WOOD WORKING BITS AND SETS



CV	★ ★ ★	STRAIGHT				424
HSS	★ ★ ★	STRAIGHT				425
CV	TYPE S ★ ★ ★					426
CV	TYPE S ★ ★ ★	SDS Plus				427
CARBIDE	TYPE S ★ ★ ★					427
CV	DOUBLE FLUTE ★ ★ ★					428
CV	TYPE S ★ ★ ★					428
CV	TYPE S ★ ★ ★	1/4"				429

SQUARE HOLE WOOD WORKING DRILLS

<b>BMCC</b>			CV	★★★	STRAIGHT				429
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FLAT DRILL BITS HEXAGONAL SHANK

<b>BMP BMPX400</b>			CV	★★★	1/4"				430
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WOOD MILLING CUTTER PLUGS

<b>TM</b>			CV	★★★	STRAIGHT				430
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4 EDGE CASTOR TYPE WOOD WORKING DRILLS

<b>BM4P</b>			HSS	4 BITS	★★★	1/4"				431
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FORTSNER BITS

<b>BB BMF</b>			MD	★★★	STRAIGHT				432
<b>BMF1</b>			TYPE FORSTNER CV	★★★	STRAIGHT				432

TWIST DRILLS FOR WOOD WITH COUNTERSINK

<b>BM3</b>				★★★	1/4"				433
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TWIST DRILLS FOR LOCKS AND HINGES INSTALATION IN WOOD

<b>BM4</b>				★★★	1/4"				433
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TWIST DRILLS FOR WOOD WITH COUNTERSINK

<b>BM5</b>			HSS	★★★	1/4"				433
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<b>BM6</b>			HSS	★★★	STRAIGHT				433
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EXTENSIBLE DRILLS FOR WOOD

<b>BME</b>			CV	★★★	STRAIGHT				434
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CARBIDE TIPPED WOOD WORKING DRILLS

<b>BMMD</b>			SOLID CARBIDE	★★★	STRAIGHT				434
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COUNTERSINK BITS AND STOPPERS FOR CYLINDRICAL SHANK DRILLS

<b>AV25/AV26 TOPE</b>									434
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SHUTTERING AND INSTALLATION BITS

<b>BE</b>			CV	DIN 7490	★★★	STRAIGHT				435
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<b>BESDS</b>			CV	DIN 7490	★★★	SDS Plus				436
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SCREWDRIVER BITS

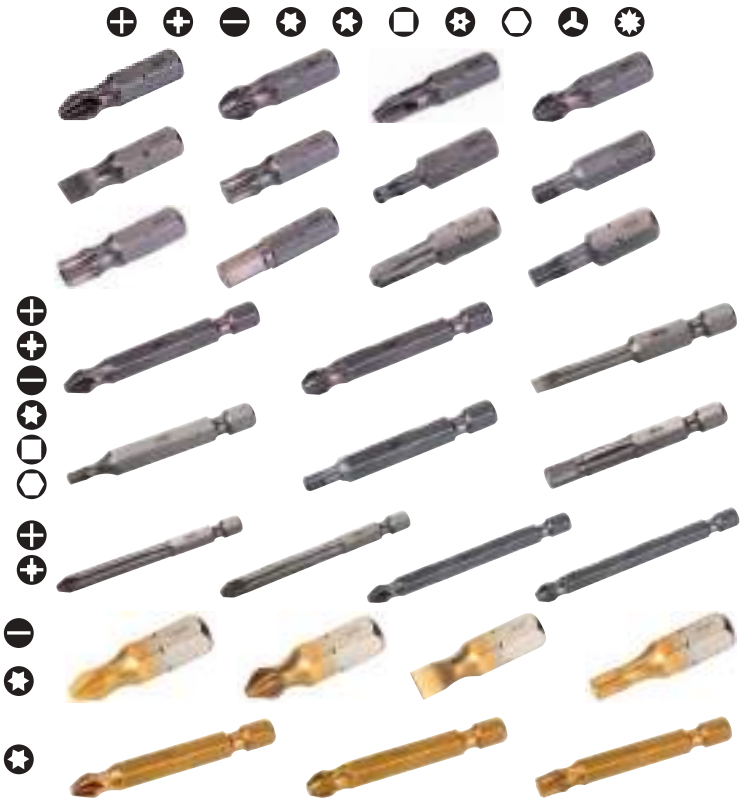
PHILLIPS  
POZIDRIV  
SLOT  
TORX  
TORX ROUND  
ROBERTSON  
TORX SECURITY  
HEXAGONAL  
TRI WING  
XZN

PHILLIPS  
POZIDRIV  
SLOT  
TORX  
ROBERTSON  
HEXAGONAL

PHILLIPS  
POZIDRIV

PHILLIPS POZIDRIV  SLOT   
POZIDRIV  TORX 





PHILLIPS POZIDRIV  TORX   
POZIDRIV  TORX 



Plus	25 mm	438
Plus	50 mm	441
Plus	70 mm 90 mm	443
TiN	25 mm	444
TiN	50 mm	445

SCREWDRIVER BIT HOLDERS



PMG		446
PCR	WITH QUICK CHANGE (Valid for 1/4" screwdriver bits with circlip) 	446
PCT	WITH ADJUSTABLE STOPPER  	446

STANDARD HEXAGONAL NUT DRIVERS



PLIH	50 mm  	447
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RATCHET SCREWDRIVER WITH BITS STORAGE



Plus	447
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SCREWDRIVER BITS SETS































	447
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MACHINE SCREW EXTRACTORS



MICRO GRABIT	   	450
PRO GRABIT	WITH 1/4" HEXAGONAL BODY	450
DRILL OUT	WITH PILOT DRILL M6 - M12	450
X-OUT	WITH HEXAGONAL SHANK	450
EX EFX	HAND SCREW EXTRACTORS	451















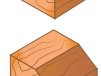









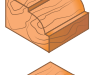




1/4" HEXAGONAL SHANK TOOLS

BH2		HSS	DIN 338				OX	1/4"		452
BC59 BC59CR		HSS-G					BRIGHT	1/4"		452
MAHM MAHMCR		HSS-G			DRILL TAP COUNTERSINK		BRIGHT	1/4"		453
M MCR		HSS-G			TAP		BRIGHT	1/4"		453
AV22		HSS-G			3 CUTS COUNTERSINK		BRIGHT	1/4"		453
AV1..CR		HSS			DEBURRING COUNTERSINK		OX	1/4"		453
BWH								1/4"		454
BMH		CV						1/4"		454

1/4" HEXAGONAL SHANK DRILL BOXES

	1/4"	454
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














WOOD-MILLING CUTTERS

FRC1 FRC2			CARBIDE	1Z	2Z			CARBIDE	1Z	2Z	456
FRC3 FRC4			CARBIDE	2Z				CARBIDE	2Z		457
FRC5 FRC6			CARBIDE	90°				CARBIDE		14°	457 458
FRC7 FRC8			CARBIDE					CARBIDE			458
FRC9 FRC10			CARBIDE					CARBIDE			459
FRC11 FRC12			CARBIDE					CARBIDE			459 460
FRC13 FRC14			CARBIDE					CARBIDE			460

DIAMOND DRILL BITS FOR VERY HARD MATERIAL LIKE STONWARE, HARD CERAMIC, ETC

PD CPD HPD			462
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CONSTRUCTION DRILL BITS

BW9						PROFESSIONAL HIGH PERFORMANCE TILE BITS		463	
BW7						STANDARD HIGH PERFORMANCE TILE BITS		464	
CPS						DIAMOND TILL DRILL BIT			465



CONSTRUCTION DRILL BITS

CPH						DIAMOND TILL DRILL BIT			466
BW8					DIN 8039		MULTI PURPOSE		467
BW1					DIN 8039		CARBIDE TIPPED HAMMER DRILL STANDARD		468
BW6					DIN 8039		CARBIDE TIPPED HAMMER DRILL PROFESSIONAL		470
BW15					DIN 8039		CARBIDE TIPPED HAMMER DRILL EXTRA PROFESSIONAL		472
BW16					$\varnothing \geq 3$		CARBIDE TIPPED CONCRETE HAMMER DRILL EXTRA PROFESSIONAL		473
BW35				130°					474
WT			SDS Plus						475
W08					SDS Plus				476
W05					SDS Plus		PROFESSIONAL		478
W55					SDS Plus		EXTRA PROFESSIONAL		480
W88					SDS Plus		DeltaTop X3		482
W99					SDS Plus				483
W77					SDS Plus		4 Z		484

CUTTERS FOR DRILLING REBAR IN CONCRETE & SETS

REB				SDS Plus	ROTATION		Z 4-12		486
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HAMMER DRILL BITS

QT				SDS Max				487	
AX				SDS Max			PROFESSIONAL		488
AX				SDS Max			PROFESSIONAL		488
X4AX				SDS Max			HIGH PERFORMANCE		489

GLASS AND TILE DRILL BITS

BC70..B			Diamond Series						490	
BW13			Professional Series	TiN						491
BC90B			Standard Serie						491	

CARBIDE MORTAR RAKE

BW33



CARBIDE

492

ADAPTORS WITH SLOT LOCKING DEVICE FOR FITTING HAMMER DRILL BITS WITH SDS PLUS SHANK

QFMX



SDS-PLUS EXIT



SDS-MAX SHANK



492

POINTS AND CHISELS

495

SDS Plus			POINT		PRR POINT	
SDS Max			PRR POINT		CHISEL	
BOSCH			19 CHISEL		CHISEL	
BOSCH			19 CHASING GOUGE		CHASING GOUGE FOR BRICKS	
KANGO			21 CHASING GOUGE FOR GLIDES		WIDE CHISEL	
BOSCH			28 TILE CHISEL		MORTAR CHISEL	
MAKITA			17 TCT MORTAR CHISEL		BRICK RAKING CHISEL	
MAKITA			30 BUSH HAMMER			
HILTI			22 BUSH HAMMER			
HEX.			22	25	28	32

CIRCULAR SAW BLADES FOR METAL

FF93/94 FF68					508 509
S5CM S8CM S7CM					510

CIRCULAR SAW BLADES FOR WOOD

DD37 DD23 S6CM					511
S1CM S4CM					512
S2CM S1CM S3CM					513
S11CM S9CM S10CM					514

WOOD ROUGHING DISCS

DMA115 DMB100 DMC125					515
DD34					515

CIRCULAR SAW BLADES

DD7 DD36 SCMD								516
MDT FFLATIG/RF CRS/ADQCA				CIRCULAR BLADES FOR HYDRAULIC HOSES CUTTING			ACCESSORIES	517

DIAMOND CIRCULAR SAW BLADES FOR CONSTRUCTION

DD1 DD2 DD3		DIAMOND GENERAL DE OBRA		TOP DIAMOND GENERAL DE OBRA		TURBO	518
DD4 DD6 DD8		TOP TURBO		TOP TILE		XTRACLEAN TILE	519
DD35 DD5 DD9				DIAMOND H <sub>2</sub> O		CANTERO	520
DD12 DD13 DD14		MARMOLISTA		ABRASIVES		ASPHALT	521
DD15 DR SCEP		CONCRETE		TOP WALL		TOP MULTIFUNCTION	522
DD10 DD11 DD20		UNIVERSAL STONE		TOP STONE		TOP STONE THREAD	523

ABRASIVE CIRCULAR SAW BLADES

AB05 AB11 AB11		INOX METAL		INOX METAL		INOX METAL	525
AB17 AB18 DD22		STONE		MULTIFUNCTION			526
AB15 AB20 DD21		INOX METAL XTRA LONG life		INOX METAL PROFESSIONAL			527

POLISHING DISC - HOOK & LOOP BACKING PAD AND ACCESSORIES

DD24 DD25 DD26						528
DD28 DD33						529
DD31 DD32						529

SANDING BELT

AB50 FP									
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FLAPPING WHEELS

		530
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BI-METAL HSS M3 HOLESAWS WITH VARIABLE TEETH 4/6

CB			30 mm	HSS M3	4/6		Al	Cu-Ni-La	CAST IRON		534
COB			45 mm	HSSCo 8%	4/6		INOX	Cu-Ni-La	CAST IRON		535



ARBORS AND ACCESSORIES FOR BI-METAL HOESAWS

536

HOESAW SET FOR PLASTER

CPL67  
CPL68



537

BI-METAL HSS M3 HOESAWS WITH VARIABLE TEETH 4/6 EXTRA LONG SERIES FOR LOCKSMITH

CBX100



100 mm	HSS M3	4/6		Al	Cu-Ni-La	CAST IRON	PVC		538
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COBX100

100 mm	HSSCo 8%	4/6			Cu-Ni-La	CAST IRON			538
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BI-METAL HOESAWS SETS & DISPLAYS

539

RESHARPENABLE HOESAWS FOR STEEL

CBR



5 mm	HSS			Al	Cu-Ni-La	CAST IRON			542
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CBR..T



5 mm	HSS	TiN		Al	Cu-Ni-La	CAST IRON			543
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CBC



10 mm	HSSCo			INOX	Al	Cu-Ni-La	CAST IRON		544
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CBCTL



10 mm	HSSCo	TiAlN		INOX	Al	Cu-Ni-La	CAST IRON		545
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CCF



2 mm	HSS			Al	Cu-Ni-La	CAST IRON			546
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CARBIDE TEETH HOLE SAW

CBMD



35 mm	INOX				Cu-Ni-La				547
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CARBIDE TIPPED HOLE SAW WITH SLUG PIN EJECTED FOR SERIAL WORKS

CP



12 mm	CARBIDE TIPPED			Al	Cu-Ni-La	CAST IRON			548
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SUPER LIGHT CARBIDE TIPPED HOESAWS WITH INTEGRATED SHANK

CX



12 mm	CARBIDE TIPPED		INOX	Al	Cu-Ni-La	CAST IRON			549
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CXL



25 mm	CARBIDE TIPPED		INOX	Al	Cu-Ni-La	CAST IRON			549
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SUPER LIGHT CARBIDE TIPPED HOESAWS WITH INTEGRATED SHANK

X



5 mm	CARBIDE TIPPED	Super		INOX	Al	Cu-Ni-La	CAST IRON		550
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XT



5 mm	CARBIDE TIPPED	Super		INOX	Al	Cu-Ni-La	CAST IRON		550
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MULTI PURPOSE CARBIDE TIPPED SUPER HOESAW

CXX



50 mm	CARBIDE TIPPED			Al	Cu-Ni-La	CAST IRON			552
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C50X



5 mm	CARBIDE TIPPED			Al	Cu-Ni-La	CAST IRON			553
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**SUPER HEAVY DUTY CARBIDE TIPPED HOLESAWS**

<b>MBM</b>		<b>50 mm</b>	<b>CARBIDE TIPPED</b>			<b>INOX</b>	<b>Al</b>	<b>CAST IRON</b>	MTS N°4-5	554
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**SCREW HOLE PUNCHES FOR DRILLING SHEETS**

<b>PC</b>		<b>4 mm</b>								555
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**ANNULAR CUTTERS FOR ELECTROMAGNETIC DRILLING MACHINE WITH DOUBLE WELDON**

<b>250R</b> <b>500R</b>		<b>30 mm</b>	<b>50 mm</b>	<b>HSS</b>	<b>2 x 90° WELDON</b>	 75 Kg/mm <sup>2</sup>	<b>INOX</b>	<b>Al</b>		558
<b>250C</b> <b>500C</b>		<b>30 mm</b>	<b>50 mm</b>	<b>HSSCo 8%</b>	<b>2 x 90° WELDON</b>	 110 Kg/mm <sup>2</sup>	<b>INOX</b>	<b>Al</b>		559
<b>250T</b> <b>500T</b>		<b>30 mm</b>	<b>50 mm</b>	<b>HSSCo 8%</b>	<b>2 x 90° WELDON</b>	 110 Kg/mm <sup>2</sup>	<b>INOX</b>	<b>Al</b>	<b>TiAIN</b>	560
<b>750C</b> <b>1000C</b>		<b>75 mm</b>	<b>100 mm</b>	<b>HSSCo 8%</b>	<b>2 x 90° WELDON</b>	 110 Kg/mm <sup>2</sup>	<b>INOX</b>	<b>Al</b>		561
<b>1500C</b> <b>2000C</b>		<b>200 mm</b>	<b>150 mm</b>	<b>HSS</b>	<b>2 x 90° WELDON</b>	 75 Kg/mm <sup>2</sup>	<b>INOX</b>	<b>Al</b>		562

**CARBIDE TIPPED CUTTERS FOR ELECTROMAGNETIC DRILLING MACHINE WITH DOUBLE WELDON**

<b>350A</b> <b>500A</b>		<b>35 mm</b>	<b>50 mm</b>	<b>CARBIDE TIPPED</b>	<b>2 x 90° WELDON</b>		<b>INOX</b>	<b>Al</b>	<b>CAST IRON</b>	563
<b>750A</b> <b>1000A</b>		<b>75 mm</b>	<b>100 mm</b>	<b>CARBIDE TIPPED</b>	<b>2 x 90° WELDON</b>		<b>INOX</b>	<b>Al</b>	<b>CAST IRON</b>	564















**ANNULAR CUTTERS FOR ELECTROMAGNETIC DRILLING MACHINE WITH DOUBLE WELDON SPECIAL FOR RAILROADS**

<b>MB350ST</b> <b>MB500ST</b>		<b>35 mm</b>	<b>CARBIDE TIPPED</b>		<b>2 x 90° WELDON</b>	<b>HARDOX 450</b>	<b>HARDOX 500</b>	<b>HARDOX 600</b>	RAILROADS	565
<b>MB250AT</b>		<b>25 mm</b>	<b>HSSCo 8%</b>	<b>TiAIN</b>	<b>2 x 90° WELDON</b>	<b>HARDOX 450</b>	<b>HARDOX 500</b>		RAILROADS AND VERY HARD MATERIALS	565
<b>MB500AT</b>		<b>50 mm</b>	<b>HSSCo 8%</b>	<b>TiAIN</b>	<b>2 x 90° WELDON</b>	<b>HARDOX 450</b>	<b>HARDOX 500</b>		RAILROADS AND VERY HARD MATERIALS	565

**DRILLS, TAPS AND ACCESSORIES FOR ELECTROMAGNETIC DRILLING MACHINE**

									ACCESSORIES, COUNTERSINK, DRILLS, TAPS EXTENSIONS AND CONVERTERS	566
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**CONSTRUCTION COREBITS**

<b>600W</b>		<b>80 mm</b>	<b>CARBIDE TIPPED</b>		<b>SDS Plus</b>					574
<b>CW</b>		<b>95 mm</b>	<b>CARBIDE TIPPED</b>		<b>SDS Plus</b>	<b>SDS Max</b>				575
<b>HA</b>		<b>54 mm</b>	<b>CARBIDE TIPPED</b>		<b>SDS Plus</b>					576
<b>MD</b>		<b>60 mm</b>	<b>CARBIDE TIPPED</b>		<b>SDS Plus</b>					577

**HEAVY DUTY CARBIDE TIPPED COREBITS FOR CONSTRUCTION**

<b>MH</b>		<b>100 mm</b>	<b>CARBIDE TIPPED</b>		<b>SDS Max</b>					578
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**HEAVY DUTY CARBIDE TIPPED COREBITS FOR CONSTRUCTION**

<b>HAR</b>		<b>80 mm</b>	<b>CARBIDE TIPPED</b>				579
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**DIAMOND SEGMENTED HOLESAWS**

<b>CDE</b>		<b>40 mm</b>									580
<b>CHH</b>		<b>300-450 mm</b>								581	
<b>CSE</b>		<b>35 mm</b>									582

**DIAMOND COUNTERSINKS FOR GRANITE, MARBLE AND HARD CERAMICS**

<b>AVD</b>									<b>M14X2</b>	583
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**GRIT EDGE HOLESAW FOR NON METALLIC MATERIALS**

<b>MG</b>		<b>30 mm</b>							584
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**HIGH PERFORMANCE CARBIDE TIPPED HOLESAW FOR WOOD**

<b>CM</b>		<b>60 mm</b>	<b>CARBIDE TIPPED</b>						585
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**CIRCLE CUTTING HOLE CUTTERS**

<b>TB-9600-200</b> <b>CL220</b> <b>CL285</b> <b>CL410</b>		<b>200 mm</b>	<b>220 mm</b>	<b>285 mm</b>	<b>410 mm</b>	<b>DRYWALL CAST</b>			586
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**DIAMOND HOLESAW FOR CONCRETE WITH REBARS WITH QUICK CHANGE POLY-CLIC**

<b>CDH</b>		<b>150 mm</b>						589
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**SELECTION OF TOOLS WITH DIMENSIONS IN INCHES**

<b>BC2P</b> <b>BC5P</b> <b>BC95P</b> <b>FMT2</b> <b>FMT48</b>		<b>BW6P</b> <b>BW1P</b> <b>W05P</b> <b>W55P</b> <b>AXP</b>		592
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**TWIST DRILLS FOR METAL BLISTER AND PLASTIC POUCH PACKAGING**

<b>BC5B</b> <b>BC5F</b> <b>BC02B</b> <b>BC02F</b> <b>BC2B</b> <b>BC2F</b> <b>BC18B</b> <b>BC18F</b>		<b>BC99B</b> <b>BC99P</b> <b>BC9B</b> <b>BC9P</b> <b>BC95B</b> <b>BC58F</b> <b>BC4F</b>		598
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**TWIST DRILLS FOR METAL SETS AND DISPLAYS**

610

**HAND TAPS, DIES & TAP HOLDERS BLISTER PACKAGING AND DISPLAYS**

<b>MOB</b> <b>GAB</b> <b>TCB</b>		<b>C5B</b> <b>VAB</b>		619
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CONSTRUCTION DRILL BITS BLISTER PACKAGING

BW16B  
BW15B  
BW6B



BW1B  
BW8B  
W05B



621

CONSTRUCTION DRILL BITS SETS AND DISPLAYS

623

WOOD WORKING DRILLS BLISTER PACKAGING

BMB  
BMPRB  
BMPB



634

WOOD WORKING DRILLS SETS AND DISPLAYS

635

DRILL BITS MIXED DISPLAYS

639

HOLESAW DOUBLE BLISTER PACKAGING DISPLAYS

640

SCREWDRIVER BIT AND HOLDER DISPLAYS

642

1/4" HEXAGONAL SHANK DRILL BITS BLISTER PACKAGING AND DISPLAYS

BH2B  
BWHB  
BMHB



643

TUBE & SHEET AND TWO FLUTED STEP DRILLS MIXED DISPLAY

644

JIGSAW BLADES MIXED DISPLAYS

644

DISPLAYS

645

EMPTY DISPLAYS AND ACCESSORIES

654

THREAD RESTORATION GUIDE



SCREW THREAD INSERTS

661



SELF TAPPING INSERTS

739



T-SERT INSERTS WITH COUNTERSINK HEAD

747



THREAD RESTORING CBN ROTARY BURRS

757



EXTERNAL THREAD REPAIR ROLLING TOOL

761



KEY LOCK INSERTS

731



SOLID INSERTS WITH ANAEROBIC THREADLOCKER

745



RIVET NUTS

749



THREAD RESTORING FILES

760



ANAEROBIC ADHESIVES AND SEALANTS THREADLOCKING

764

# TWIST DRILLS FOR METAL



**BLUE-MASTER<sup>®</sup>**  
*by celesa*

CUTTING TECHNOLOGIES





**FULLY GROUND TWIST DRILLS**



10 U. Ø 0,20 - Ø 10,50 mm

6 U. Ø 10,60 - Ø 14 mm

1 U. Ø 14,10 - Ø 20 mm

1 U. BC9-BC99  
BC7-BC98-BC42



**TURBO**

**TURBO**

		BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
MATERIAL		HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
SHARPENING											
POINT ANGLE		135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
HELIX ANGLE		38° "S"	38° "S"	30° "N"	Ø ≥ 3	38° "S"	38° "S"	38° "N"	30° "N"	30° "N"	35° "N"
COATING		<b>GOLD</b>	<b>TiAlSiN</b>	<b>TiAlN</b>	<b>GOLD OX</b>	<b>BRIGHT</b>	<b>TiAlN</b>	<b>TiAlN</b>	<b>BRIGHT</b>	<b>BRIGHT</b>	<b>BRIGHT</b>
APPLICATION											
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€
0,20	19 x 2,50										
0,25	19 x 3										
0,30	19 x 3										
0,35	19 x 4										
0,40	20 x 5										
0,45	20 x 5										
0,50	22 x 6										15,95
0,55	24 x 7										
0,60	24 x 7										
0,65	26 x 8										
0,70	28 x 9										
0,75	28 x 9										
0,80	30 x 10										
0,85	30 x 10										
0,90	32 x 11										
0,95	32 x 11										
1,00	34 x 12			3,48	3,13	4,14	5,90				10,04
1,05	34 x 12										
1,10	36 x 14										
1,15	36 x 14										
1,19	3/64"										
1,20	38 x 16					5,47	5,66				
1,25	38 x 16										
1,30	38 x 16										
1,35	40 x 18										
1,40	40 x 18										
1,45	40 x 18										
1,50	40 x 18			3,51	2,98	4,02	5,89				11,18
1,55	43 x 20										

Twist drills for Metal

Pink

Ø 0,20-1,55mm

**FULLY GROUND TWIST DRILLS**

Twist drills for Metal

Grey

Pink

**DIN  
338**


		BC2	BC82	BC02	BC9	BC5	BC99	BC58	BC16	BC66	BC15	BC18
MATERIAL		HSS	HSS	HSS-G	HSS	HSSCo 5%	HSSCo 5%	HSSCo 8%	HSS	HSS	HSS	HSS
SHARPENING												
POINT ANGLE		118°	118°	118°	118°	135°	135°	135°	135°	118°	118°	118°
HELIX ANGLE		30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	40° "W"	15° "H"	30° "N"	30° "N"
COATING		OX	BRIGHT	GOLD OX	OX	GOLD	GOLD	GOLD	BRIGHT	BRIGHT	OX	TiN
APPLICATION		 70 Kg/mm <sup>2</sup>	 70 Kg/mm <sup>2</sup>	<i>Plus</i>	 12,70	 120 Kg/mm <sup>2</sup>	 12,70	 120 Kg/mm <sup>2</sup>	Al	BRASS		PRODUCTION
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€	€
1,59	1/16"	1,61				2,95						
1,60	43 x 20	1,76	1,76			3,17						2,42
1,65	43 x 20	1,76	1,76									
1,70	43 x 20	1,76	1,76			3,17						2,41
1,75	46 x 22	1,58	1,58			3,09		4,52	2,74	4,44		2,32
1,80	46 x 22	1,57	1,57			3,10						2,27
1,85	46 x 22	1,57	1,57									
1,90	46 x 22	1,57	1,57			3,10						2,27
1,95	48 x 24	1,57										
1,98	5/64"	1,43				2,89						
2,00	49 x 24	1,34	1,34	1,42		2,55		3,74	2,39	2,79	3,76	2,14
2,05	49 x 24	1,37	1,37									
2,10	49 x 24	1,37	1,37			3,01						2,12
2,15	53 x 27	1,37										
2,20	53 x 27	1,37	1,37			3,01						2,11
2,25	53 x 27	1,26	1,26	1,41		2,86		4,52	2,72	3,04		2,05
2,30	53 x 27	1,57	1,57			3,01						2,25
2,35	53 x 27	1,58	1,58									
2,38	3/32"	1,50				2,84						
2,40	57 x 30	1,57	1,57			3,01						2,25
2,45	57 x 30	1,57										
2,50	57 x 30	1,33	1,33	1,49		2,34		3,74	2,23	2,63	3,76	2,12
2,55	57 x 30	1,61	1,61									
2,60	57 x 30	1,61	1,61			2,89						2,26
2,65	57 x 30	1,61										
2,70	61 x 33	1,61	1,61	1,81		2,89						2,26
2,75	61 x 33	1,41	1,41	1,54		2,86		4,52	2,72	3,56		2,20
2,78	7/64"	1,54				2,77						
2,80	61 x 33	1,61	1,61	1,81		2,90						2,26

FULLY GROUND TWIST DRILLS



10 U. Ø 0,20 - Ø 10,50 mm

6 U. Ø 10,60 - Ø 14 mm

1 U. Ø 14,10 - Ø 20 mm

1 U. BC9-BC99  
BC7-BC98-BC42



TURBO

TURBO

		BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
MATERIAL		HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
SHARPENING											
POINT ANGLE		135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
HELIX ANGLE		38° "5"	38° "5"	30° "N"	0 ≥ 3	38° "5"	38° "5"	38° "N"	30° "N"	30° "N"	35° "N"
COATING		GOLD	TiAlSiN	TiAlN	GOLD OX	BRIGHT	TiAlN	TiAlN	BRIGHT	BRIGHT	BRIGHT
APPLICATION											
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€
1,59	1/16"										
1,60	43 x 20					4,56					
1,65	43 x 20										
1,70	43 x 20					3,87					
1,75	46 x 22										
1,80	46 x 22					4,07	5,80				
1,85	46 x 22										
1,90	46 x 22					4,45					
1,95	48 x 24										
1,98	5/64"										
2,00	49 x 24			3,66	2,98	3,99	5,91	5,02	20,15		13,86
2,05	49 x 24										
2,10	49 x 24					4,17			21,67		19,45
2,15	53 x 27										
2,20	53 x 27					4,22	6,26		21,67		20,91
2,25	53 x 27								21,67		
2,30	53 x 27					4,13			21,67		20,91
2,35	53 x 27										
2,38	3/32"										
2,40	57 x 30					4,23			21,67		21,28
2,45	57 x 30										
2,50	57 x 30			3,39	2,79	3,73	5,49	5,09	20,15		16,80
2,55	57 x 30										
2,60	57 x 30					4,54			21,67		26,26
2,65	57 x 30										
2,70	61 x 33					4,32			20,64		26,26
2,75	61 x 33			3,58					21,67		
2,78	7/64"										
2,80	61 x 33					4,68	8,96		21,67		26,26

Twist drills for Metal

Pink

Ø 1,59-2,80mm



**FULLY GROUND TWIST DRILLS**

Twist drills for Metal

Grey

Pink

**DIN  
338**


		BC2	BC82	BC02	BC9	BC5	BC99	BC58	BC16	BC66	BC15	BC18
MATERIAL		HSS	HSS	HSS-G	HSS	HSSCo 5%	HSSCo 5%	HSSCo 8%	HSS	HSS	HSS	HSS
SHARPENING												
POINT ANGLE		118°	118°	118°	118°	135°	135°	135°	135°	118°	118°	118°
HELIX ANGLE		30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	40° "W"	15° "H"	30° "N"	30° "N"
COATING		OX	BRIGHT	GOLD OX	OX	GOLD	GOLD	GOLD	BRIGHT	BRIGHT	OX	TiN
APPLICATION		 70 Kg/mm <sup>2</sup>	 70 Kg/mm <sup>2</sup>	<i>Plus</i>	 12,70	 120 Kg/mm <sup>2</sup>	 12,70	 120 Kg/mm <sup>2</sup>	 Al	 BRASS		 PRODUCTION
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€	€
2,85	61 x 33	1,63										
2,90	61 x 33	1,61	1,61			2,89						2,26
2,95	61 x 33	1,61										
3,00	61 x 33	1,21	1,21	1,33		2,29		3,62	2,20	2,92	3,26	2,00
3,05	65 x 36	1,56										
3,10	65 x 36	1,41	1,41	1,53		2,78		4,84				2,53
3,15	65 x 36	1,56										
3,17	1/8"	1,35				2,64						
3,20	65 x 36	1,41	1,41	1,53		2,78		4,84	2,72			2,53
3,25	65 x 36	1,41	1,41	1,53		2,78		4,44	2,72	3,56		2,53
3,30	65 x 36	1,41	1,41	1,53		2,78		4,84	2,72			2,53
3,35	65 x 36	1,81										
3,40	70 x 39	1,81	1,81	2,00		2,90						2,72
3,45	70 x 39	1,82										
3,50	70 x 39	1,37	1,37	1,53		2,77		4,36	2,66	3,12	3,88	2,50
3,55	70 x 39	1,88										
3,57	9/64"	1,77				3,32						
3,60	70 x 39	1,88	1,88	2,10		3,49						2,73
3,65	70 x 39	1,88										
3,70	70 x 39	1,88	1,88	2,10		3,49						2,74
3,75	70 x 39	1,57	1,57	1,81		3,28		5,28	3,17	4,64		2,64
3,80	75 x 43	1,93	1,93	2,20		3,49						2,78
3,85	75 x 43	1,93										
3,90	75 x 43	1,93	1,93	2,20		3,49						2,77
3,95	75 x 43	1,93										
3,97	5/32"	1,83				3,32						
4,00	75 x 43	1,53	1,53	1,73		2,95		4,72	2,86	3,39	4,24	2,61
4,05	75 x 43	1,93										
4,10	75 x 43	1,73	1,73	1,93		3,28		5,82	3,12			2,71

**FULLY GROUND TWIST DRILLS**



10 U. Ø 0,20 - Ø 10,50 mm

6 U. Ø 10,60 - Ø 14 mm

1 U. Ø 14,10 - Ø 20 mm

1 U. BC9-BC99  
BC7-BC98-BC42



**TURBO**

**TURBO**

		BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
MATERIAL		HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
SHARPENING											
POINT ANGLE		135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
HELIX ANGLE		38° "5"	38° "5"	30° "N"	0 ≥ 3	38° "5"	38° "5"	38° "N"	30° "N"	30° "N"	35° "N"
COATING		<b>GOLD</b>	<b>TiAlSiN</b>	<b>TiAlN</b>	<b>GOLD OX</b>	<b>BRIGHT</b>	<b>TiAlN</b>	<b>TiAlN</b>	<b>BRIGHT</b>	<b>BRIGHT</b>	<b>BRIGHT</b>
APPLICATION											
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€
2,85	61 x 33										
2,90	61 x 33					4,72			21,67		26,26
2,95	61 x 33										
3,00	61 x 33	1,96	1,86	3,34	2,74	3,62	5,44	5,61	20,04	15,03	20,15
3,05	65 x 36										
3,10	65 x 36					4,37	6,68		20,51		26,50
3,15	65 x 36										
3,17	1/8"										
3,20	65 x 36	2,41	2,29		3,35	4,37	6,73		20,13		26,50
3,25	65 x 36								20,72		
3,30	65 x 36	2,41	2,29	4,23	3,36	4,37	6,69	6,81	20,33	17,01	23,30
3,35	65 x 36										
3,40	70 x 39					5,09			20,72		29,07
3,45	70 x 39										
3,50	70 x 39	2,40	2,28	4,19	3,30	4,41	6,64	6,02	19,65	15,70	22,98
3,55	70 x 39										
3,57	9/64"										
3,60	70 x 39					5,09			20,51	17,01	30,46
3,65	70 x 39										
3,70	70 x 39					5,09			21,10		30,46
3,75	70 x 39								21,10		
3,80	75 x 43					5,81	9,65		21,10		31,94
3,85	75 x 43										
3,90	75 x 43					5,55			21,10		31,94
3,95	75 x 43										
3,97	5/32"										
4,00	75 x 43	2,42	2,30	4,33	3,59	4,74	7,00	6,83	20,03	15,28	25,85
4,05	75 x 43										
4,10	75 x 43					5,24	7,54		20,26		33,21

Twist drills for Metal

Pink

Ø 2,85-4,10mm

**FULLY GROUND TWIST DRILLS**

Twist drills for Metal

Grey

Pink

**DIN  
338**


		BC2	BC82	BC02	BC9	BC5	BC99	BC58	BC16	BC66	BC15	BC18
MATERIAL		HSS	HSS	HSS-G	HSS	HSSCo 5%	HSSCo 5%	HSSCo 8%	HSS	HSS	HSS	HSS
SHARPENING												
POINT ANGLE												
HELIX ANGLE												
COATING		<b>OX</b>	<b>BRIGHT</b>	<b>GOLD OX</b>	<b>OX</b>	<b>GOLD</b>	<b>GOLD</b>	<b>GOLD</b>	<b>BRIGHT</b>	<b>BRIGHT</b>	<b>OX</b>	<b>TiN</b>
APPLICATION		 70 Kg/mm <sup>2</sup>	 70 Kg/mm <sup>2</sup>	 <i>Plus</i>	 12,70	 120 Kg/mm <sup>2</sup>	 12,70	 120 Kg/mm <sup>2</sup>	 <b>Al</b>	 <b>BRASS</b>		 <b>PRODUCTION</b>
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€	€
4,15	75 x 43	1,93										
4,20	75 x 43	1,73	1,73			3,28		5,82	3,12			2,71
4,25	75 x 43	1,73	1,73	1,93		3,28		5,28	3,63	5,03		2,71
4,30	80 x 47	2,29	2,29	2,60		3,49						3,01
4,35	80 x 47	2,27										
4,37	11/64"	2,15				3,32						
4,40	80 x 47	2,29	2,29	2,60		3,49						3,01
4,45	80 x 47	2,29										
4,50	80 x 47	1,81	1,81	1,96		3,38		5,28	3,20	4,14	4,40	2,74
4,55	80 x 47	2,31										
4,60	80 x 47	2,31	2,31			3,88						3,02
4,65	80 x 47	2,31										
4,70	80 x 47	2,31	2,31	2,60		3,88						3,02
4,75	80 x 47	2,05	2,05	2,32		3,69		5,83	4,09	6,09		2,91
4,76	3/16"	1,96				3,45						
4,80	86 x 52	2,60	2,60	2,84		3,91		6,42				3,20
4,85	86 x 52	2,51										
4,90	86 x 52	2,51	2,51	2,78		3,91						3,16
4,95	86 x 52	2,53										
5,00	86 x 52	1,92	1,92	2,14		3,54		5,65	3,43	4,49	4,78	2,80
5,05	86 x 52	2,61	2,61									
5,10	86 x 52	2,60	2,60	2,87		4,24		6,92	3,96		6,63	3,19
5,15	86 x 52	2,61										
5,16	13/64"	2,49				3,65						
5,20	86 x 52	2,60	2,60	2,87		4,24		6,92				3,20
5,25	86 x 52	2,43	2,43	2,76		4,18		6,63	4,88	6,82		3,18
5,30	86 x 52	3,23	3,23	3,57		4,24						3,62
5,35	93 x 57	3,22										
5,40	93 x 57	3,23	3,23			4,24						3,62

**FULLY GROUND TWIST DRILLS**



10 U. Ø 0,20 - Ø 10,50 mm

6 U. Ø 10,60 - Ø 14 mm

1 U. Ø 14,10 - Ø 20 mm

1 U. BC9-BC99  
BC7-BC98-BC42



		BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
MATERIAL		HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
SHARPENING											
POINT ANGLE		135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
HELIX ANGLE		38° "S"	38° "S"	30° "N"	Ø ≥ 3	38° "S"	38° "S"	38° "N"	30° "N"	30° "N"	35° "N"
COATING		GOLD	TiAlSiN	TiAlN	GOLD OX	BRIGHT	TiAlN	TiAlN	BRIGHT	BRIGHT	BRIGHT
APPLICATION											
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€
4,15	75 x 43										
4,20	75 x 43	2,89	2,74	4,55	4,00	5,21	7,52	8,41	20,26	17,80	31,63
4,25	75 x 43			4,55					22,07		
4,30	80 x 47					5,56	8,05		22,07	17,80	39,53
4,35	80 x 47										
4,37	11/64"										
4,40	80 x 47					5,56			22,07	17,80	40,32
4,45	80 x 47										
4,50	80 x 47	2,96	2,81	4,59	4,00	5,40	7,69	7,88	19,88	14,69	31,61
4,55	80 x 47										
4,60	80 x 47					6,72			21,26		39,32
4,65	80 x 47										
4,70	80 x 47					6,24			20,66		39,32
4,75	80 x 47								22,07		
4,76	3/16"										
4,80	86 x 52					6,24	8,53		21,26		40,33
4,85	86 x 52										
4,90	86 x 52					6,88			22,07		40,33
4,95	86 x 52										
5,00	86 x 52	3,99	3,80	4,70	4,27	5,63	7,90	8,30	20,40	14,39	35,06
5,05	86 x 52										
5,10	86 x 52					6,73	8,96		21,81	17,61	45,73
5,15	86 x 52										
5,16	13/64"										
5,20	86 x 52					6,69	9,03		21,71		45,73
5,25	86 x 52								23,20		
5,30	86 x 52					6,73			23,20		45,73
5,35	93 x 57										
5,40	93 x 57					8,71			23,20		51,77

Twist drills for Metal

Pink

Ø 4,15-5,40mm



**FULLY GROUND TWIST DRILLS**

Twist drills for Metal

Grey

Pink

**DIN  
338**


		BC2	BC82	BC02	BC9	BC5	BC99	BC58	BC16	BC66	BC15	BC18
MATERIAL		HSS	HSS	HSS-G	HSS	HSSCo 5%	HSSCo 5%	HSSCo 8%	HSS	HSS	HSS	HSS
SHARPENING												
POINT ANGLE		 118°	 118°	 118°	 118°	 135°	 135°	 135°	 135°	 118°	 118°	 118°
HELIX ANGLE		 30° "N"	 30° "N"	 30° "N"	 30° "N"	 30° "N"	 30° "N"	 30° "N"	 40° "W"	 15° "H"	 30° "N"	 30° "N"
COATING		<b>OX</b>	<b>BRIGHT</b>	<b>GOLD OX</b>	<b>OX</b>	<b>GOLD</b>	<b>GOLD</b>	<b>GOLD</b>	<b>BRIGHT</b>	<b>BRIGHT</b>	<b>OX</b>	<b>TiN</b>
APPLICATION		 70 Kg/mm <sup>2</sup>	 70 Kg/mm <sup>2</sup>	 <i>Plus</i>	 12,70	 120 Kg/mm <sup>2</sup>	 12,70	 120 Kg/mm <sup>2</sup>	 <b>Al</b>	 <b>BRASS</b>		 <b>PRODUCTION</b>
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€	€
5,45	93 x 57	3,23										
5,50	93 x 57	2,53	2,53	2,84		4,49		7,14	4,34	5,49	6,31	3,23
5,55	93 x 57	3,42										
5,56	7/32"	3,25				5,07						
5,60	93 x 57	3,43	3,43	3,80		5,33		8,81				3,77
5,65	93 x 57	3,42										
5,70	93 x 57	3,43	3,43	3,80		5,33		8,81				3,77
5,75	93 x 57	3,31	3,31	3,70		5,06		7,98	5,99	8,34		3,73
5,80	93 x 57	3,22	3,22	3,63		5,33		8,81				3,62
5,85	93 x 57	3,23										
5,90	93 x 57	3,22	3,22	3,63		5,33						3,62
5,95	15/64"	3,05				5,54						
6,00	93 x 57	2,64	2,64	2,93		4,83		7,60	4,59	5,90	6,53	3,28
6,05	101 x 63	3,75										
6,10	101 x 63	3,75	3,75	4,23		5,98						6,60
6,15	101 x 63	3,75										
6,20	101 x 63	3,75	3,75	4,23		5,98						6,60
6,25	101 x 63	3,54	3,54	3,96		5,64		8,89	5,99	8,34		6,60
6,30	101 x 63	3,95	3,95			5,98						6,69
6,35	1/4"	2,82				5,68						
6,40	101 x 63	4,07	4,07			5,99						6,79
6,45	101 x 63	3,97										
6,50	101 x 63	3,06	3,06	3,46		5,78		8,87	5,35	6,57	7,59	6,29
6,55	101 x 63	4,94										
6,60	101 x 63	4,91	4,91			7,18						7,32
6,65	101 x 63	4,94										
6,70	101 x 63	4,93	4,93	5,50		7,18		11,36				7,32
6,75	109 x 69	3,71	3,71	4,18		6,74		10,37	7,21	10,06		6,73
6,80	109 x 69	3,71	3,71	4,18		6,74		11,36	6,29			6,74

FULLY GROUND TWIST DRILLS



10 U. Ø 0,20 - Ø 10,50 mm

6 U. Ø 10,60 - Ø 14 mm

1 U. Ø 14,10 - Ø 20 mm

1 U. BC9-BC99  
BC7-BC98-BC42



		BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
MATERIAL		HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
SHARPENING											
POINT ANGLE		135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
HELIX ANGLE		38° "5"	38° "5"	30° "N"	0 ≥ 3	38° "5"	38° "5"	38° "N"	30° "N"	30° "N"	35° "N"
COATING		GOLD	TiAlSiN	TiAlN	GOLD OX	BRIGHT	TiAlN	TiAlN	BRIGHT	BRIGHT	BRIGHT
APPLICATION											
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€
5,45	93 x 57										
5,50	93 x 57	5,06	4,80	5,31	5,42	7,15	9,45	10,14	21,37	15,34	40,92
5,55	93 x 57										
5,56	7/32"										
5,60	93 x 57					8,53			22,71		54,38
5,65	93 x 57										
5,70	93 x 57					9,81			22,69		54,38
5,75	93 x 57					8,07			24,26		
5,80	93 x 57					8,53	10,82		22,69		54,38
5,85	93 x 57										
5,90	93 x 57					8,53			24,26		54,38
5,95	15/64"										
6,00	93 x 57	5,38	5,11	5,50	5,76	7,66	9,93	11,25	22,13	16,35	46,43
6,05	101 x 63										
6,10	101 x 63				6,07	10,64			26,18		67,35
6,15	101 x 63										
6,20	101 x 63					9,46	15,59		26,18		67,35
6,25	101 x 63								26,18		
6,30	101 x 63					10,64			26,18		67,35
6,35	1/4"										
6,40	101 x 63					10,64			26,18		67,35
6,45	101 x 63										
6,50	101 x 63	6,28	5,97	10,24	6,73	9,17	15,31	13,40	24,72	16,66	57,65
6,55	101 x 63										
6,60	101 x 63					12,04			27,00		83,73
6,65	101 x 63										
6,70	101 x 63					12,04			27,00		83,73
6,75	109 x 69			10,74					27,00		
6,80	109 x 69	7,32	6,94	10,74	7,83	10,68	16,84		27,00	19,94	67,59

Twist drills for Metal

Pink

Ø 5,45-6,80mm

**FULLY GROUND TWIST DRILLS**

Twist drills for Metal

Grey  
Pink
**DIN  
338**


		BC2	BC82	BC02	BC9	BC5	BC99	BC58	BC16	BC66	BC15	BC18
MATERIAL		HSS	HSS	HSS-G	HSS	HSSCo 5%	HSSCo 5%	HSSCo 8%	HSS	HSS	HSS	HSS
SHARPENING												
POINT ANGLE		118°	118°	118°	118°	135°	135°	135°	135°	118°	118°	118°
HELIX ANGLE		30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	40° "W"	15° "H"	30° "N"	30° "N"
COATING		OX	BRIGHT	GOLD OX	OX	GOLD	GOLD	GOLD	BRIGHT	BRIGHT	OX	TiN
APPLICATION		 70 Kg/mm <sup>2</sup>	 70 Kg/mm <sup>2</sup>	 Plus	 12,70	 120 Kg/mm <sup>2</sup>	 12,70	 120 Kg/mm <sup>2</sup>	 Al	 BRASS		 PRODUCTION
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€	€
6,85	109 x 69	5,48										
6,90	109 x 69	5,49	5,49			7,18						7,63
6,95	109 x 69	5,49										
7,00	109 x 69	3,71	3,71	4,18		6,33		9,28	5,85	6,98	9,27	6,74
7,05	109 x 69	5,77										
7,10	109 x 69	5,76	5,76			9,15						7,90
7,14	9/32"	5,51				8,63						
7,15	109 x 69	5,78										
7,20	109 x 69	5,76	5,76			9,15					9,73	7,90
7,25	109 x 69	4,75	4,75	5,28		8,58		12,62	9,54	13,18		7,38
7,30	109 x 69	5,77	5,77			9,17						7,90
7,35	109 x 69	5,76										
7,40	109 x 69	5,77	5,77	6,46		9,17						7,90
7,45	109 x 69	5,91										
7,50	109 x 69	3,95	3,95	4,41		6,75		9,90	6,26	8,16	9,73	6,89
7,54	19/64"	6,44				10,45						
7,55	117 x 75	6,84										
7,60	117 x 75	6,79	6,79			11,03						8,68
7,65	117 x 75	6,84										
7,70	117 x 75	6,79	6,79			11,00						8,68
7,75	117 x 75	5,24	5,24	5,86		10,39		15,29	12,13	17,59		7,81
7,80	117 x 75	6,89	6,89	7,75		11,00						8,70
7,85	117 x 75	6,90										
7,90	117 x 75	6,89	6,89	7,75		11,06						8,70
7,94	5/16"	5,90				10,43						
7,95	117 x 75	6,89										
8,00	117 x 75	4,50	4,50	5,06		7,92		12,02	7,29	8,67	11,14	7,21
8,05	117 x 75	7,04										
8,10	117 x 75	7,04	7,04			10,54						9,52

**FULLY GROUND TWIST DRILLS**



10 U. Ø 0,20 - Ø 10,50 mm

6 U. Ø 10,60 - Ø 14 mm

1 U. Ø 14,10 - Ø 20 mm

1 U. BC9-BC99  
BC7-BC98-BC42



**TURBO**

**TURBO**

		BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
MATERIAL		HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
SHARPENING											
POINT ANGLE		135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
HELIX ANGLE		38° "5"	38° "5"	30° "N"	0 ≥ 3	38° "5"	38° "5"	38° "N"	30° "N"	30° "N"	35° "N"
COATING		<b>GOLD</b>	<b>TiAlSiN</b>	<b>TiAlN</b>	<b>GOLD OX</b>	<b>BRIGHT</b>	<b>TiAlN</b>	<b>TiAlN</b>	<b>BRIGHT</b>	<b>BRIGHT</b>	<b>BRIGHT</b>
APPLICATION											
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€
6,85	109 x 69										
6,90	109 x 69					12,16			27,00	19,94	83,73
6,95	109 x 69										
7,00	109 x 69	6,87	6,53	10,81	7,36	9,95	16,36	15,75	26,93	18,65	67,14
7,05	109 x 69										
7,10	109 x 69					14,72			28,31	21,49	95,77
7,14	9/32"										
7,15	109 x 69										
7,20	109 x 69					14,10	20,34		28,31		95,77
7,25	109 x 69								28,31		
7,30	109 x 69					15,00			28,31		95,77
7,35	109 x 69										
7,40	109 x 69					15,00			28,31		95,77
7,45	109 x 69										
7,50	109 x 69	7,30	6,93	11,11	7,81	10,64	17,06	18,13	27,81	19,59	71,71
7,54	19/64"										
7,55	117 x 75										
7,60	117 x 75					15,43			30,41		95,77
7,65	117 x 75										
7,70	117 x 75					17,17			30,41		95,77
7,75	117 x 75								30,41		
7,80	117 x 75					17,17	24,19		30,41		95,77
7,85	117 x 75										
7,90	117 x 75					17,17			30,41		95,77
7,94	5/16"										
7,95	117 x 75										
8,00	117 x 75	8,55	8,12	11,77	9,16	12,48	18,83	19,16	28,32	21,89	81,89
8,05	117 x 75										
8,10	117 x 75					18,09			32,49		111,40

Twist drills for Metal

Pink

Ø 6,85-8,10mm





**FULLY GROUND TWIST DRILLS**



- 10 U.** Ø 0,20 - Ø 10,50 mm
- 6 U.** Ø 10,60 - Ø 14 mm
- 1 U.** Ø 14,10 - Ø 20 mm
- 1 U.** BC9-BC99  
BC7-BC98-BC42

		BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
<b>MATERIAL</b>		HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
<b>SHARPENING</b>											
<b>POINT ANGLE</b>		135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
<b>HELIX ANGLE</b>		38° "5"	38° "5"	30° "N"	Ø ≥ 3	38° "5"	38° "5"	38° "N"	30° "N"	30° "N"	35° "N"
<b>COATING</b>		<b>GOLD</b>	<b>TiAlSiN</b>	<b>TiAlN</b>	<b>GOLD OX</b>	<b>BRIGHT</b>	<b>TiAlN</b>	<b>TiAlN</b>	<b>BRIGHT</b>	<b>BRIGHT</b>	<b>BRIGHT</b>
<b>APPLICATION</b>											
<b>Ø mm</b>	<b>L1 x L2</b>	€	€	€	€	€	€	€	€	€	€
8,15	117 x 75										
8,20	117 x 75					16,86	24,34		32,49		111,40
8,25	117 x 75								32,49		
8,30	117 x 75					17,92			32,49		111,40
8,33	21/64"										
8,35	117 x 75										
8,40	117 x 75					17,92			32,49		111,40
8,45	117 x 75										
8,50	117 x 75	8,92	8,47	13,18	9,54	12,93	20,46	23,47	31,05	21,89	96,85
8,55	125 x 81										
8,60	125 x 81					18,26			34,88	26,48	129,14
8,65	125 x 81										
8,70	125 x 81					21,25			34,88		129,14
8,73	11/32"										
8,75	125 x 81								34,88		
8,80	125 x 81					20,78	28,17		34,88		129,14
8,85	125 x 81										
8,90	125 x 81					21,25			34,88		129,14
8,95	125 x 81										
9,00	125 x 81	11,36	10,80	14,59	12,17	16,50	24,06	24,92	30,99	23,74	107,07
9,05	125 x 81										
9,10	125 x 81					26,15			37,72		141,86
9,13	23/64"										
9,15	125 x 81										
9,20	125 x 81					26,15	30,36		37,72		141,86
9,25	125 x 81								37,72		
9,30	125 x 81					26,15			37,72		141,86
9,35	125 x 81										
9,40	125 x 81					26,15			37,72		141,86
9,45	125 x 81										

Twist drills for Metal

Pink

Ø 8,15-9,45mm

**FULLY GROUND TWIST DRILLS**

Twist drills for Metal

Grey

Pink

**DIN  
338**


		BC2	BC82	BC02	BC9	BC5	BC99	BC58	BC16	BC66	BC15	BC18
MATERIAL		HSS	HSS	HSS-G	HSS	HSSCo 5%	HSSCo 5%	HSSCo 8%	HSS	HSS	HSS	HSS
SHARPENING												
POINT ANGLE		118°	118°	118°	118°	135°	135°	135°	135°	118°	118°	118°
HELIX ANGLE		30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	40° "W"	15° "H"	30° "N"	30° "N"
COATING		OX	BRIGHT	GOLD OX	OX	GOLD	GOLD	GOLD	BRIGHT	BRIGHT	OX	TiN
APPLICATION												
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€	€
9,50	125 x 81	6,47	6,47	7,23		10,84		16,52	10,08	12,51	15,94	9,18
9,52	3/8"	6,08				10,33						
9,55	133 x 87	11,17										
9,60	133 x 87	11,03	11,03			17,45						12,21
9,65	133 x 87	11,17										
9,70	133 x 87	11,03	11,03			17,45						12,11
9,75	133 x 87	8,05	8,05	9,12		16,44		25,15	16,48	28,01		10,40
9,80	133 x 87	10,80	10,80			17,45						12,03
9,85	133 x 87	10,91										
9,90	133 x 87	10,91	10,91	12,28		17,45						12,03
9,92	25/64"	10,40				16,48						
9,95	133 x 87	10,90										
10,00	133 x 87	6,97	6,97	7,79	11,73	11,98		18,24	11,15	13,00	17,18	9,51
10,10	133 x 87	9,31	9,31	10,48		20,07						
10,20	133 x 87	8,68	8,68	9,72		16,92		32,99				16,70
10,25	133 x 87	9,69	9,69	12,03	15,46	20,70		32,99	18,30	31,93		16,95
10,30	133 x 87	10,86	10,86	12,14		20,12						
10,32	13/32"	10,40				19,07						
10,40	133 x 87	10,86	10,86			20,07						
10,50	133 x 87	8,66	8,66	9,69	13,13	16,93	25,74	26,84	14,87	15,62	23,49	15,86
10,60	133 x 87	11,97	11,97			23,34						
10,70	142 x 94	11,97	11,97			23,34						
10,72	27/64"	10,66				22,87						
10,75	142 x 94	11,19	11,19	12,38	17,48	24,25		38,38	21,40	29,16		17,49
10,80	142 x 94	13,28	13,28			23,34						
10,90	142 x 94	13,28	13,28			23,39						
11,00	142 x 94	10,11	10,11	11,34	14,87	18,70	27,50	29,60	16,15	17,39	26,92	16,76
11,10	142 x 94	13,55	13,55			26,63						
11,11	7 / 16"	12,89				25,12						
11,20	142 x 94	13,55	13,55			26,63						

**FULLY GROUND TWIST DRILLS**



10 U. Ø 0,20 - Ø 10,50 mm

6 U. Ø 10,60 - Ø 14 mm

1 U. Ø 14,10 - Ø 20 mm

1 U. BC9-BC99  
BC7-BC98-BC42



**TURBO**

**TURBO**

		BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
MATERIAL		HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
SHARPENING											
POINT ANGLE		135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
HELIX ANGLE		38° "5"	38° "5"	30° "N"	0 ≥ 3	38° "5"	38° "5"	38° "N"	30° "N"	30° "N"	35° "N"
COATING		<b>GOLD</b>	<b>TiAlSiN</b>	<b>TiAlN</b>	<b>GOLD OX</b>	<b>BRIGHT</b>	<b>TiAlN</b>	<b>TiAlN</b>	<b>BRIGHT</b>	<b>BRIGHT</b>	<b>BRIGHT</b>
APPLICATION											
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€
9,50	125 x 81	11,77	11,18	14,82	12,60	17,14	24,47	28,25	33,80	25,89	119,04
9,52	3/8"										
9,55	133 x 87										
9,60	133 x 87					26,15			40,45		150,46
9,65	133 x 87										
9,70	133 x 87					26,15			40,45		150,46
9,75	133 x 87								40,45		
9,80	133 x 87					26,02	33,52		40,45		150,46
9,85	133 x 87										
9,90	133 x 87					28,25			40,45		150,46
9,92	25/64"										
9,95	133 x 87										
10,00	133 x 87	12,95	12,29	15,54	13,86	18,89	26,32	31,15	33,88	26,57	128,69
10,10	133 x 87								45,31		
10,20	133 x 87	17,47	16,60	26,78	18,71	28,25	42,50	36,26	43,65	34,39	148,77
10,25	133 x 87								45,31		
10,30	133 x 87								45,31	34,39	
10,32	13/32"										
10,40	133 x 87								45,31		
10,50	133 x 87	17,48	16,61	26,75	18,72	26,77	41,83	36,78	40,49	34,13	142,58
10,60	133 x 87								48,19		
10,70	142 x 94								48,19		
10,72	27/64"										
10,75	142 x 94								48,19		
10,80	142 x 94					37,61			48,19		
10,90	142 x 94								48,19		
11,00	142 x 94	19,30	18,33	27,88	20,65	29,60	44,30	39,07	43,50	34,27	169,79
11,10	142 x 94								51,62		
11,11	7 / 16"										
11,20	142 x 94					45,66			51,62		

Twist drills for Metal

Pink

Ø 9,50-11,20mm



**FULLY GROUND TWIST DRILLS**

Twist drills for Metal

Grey

Pink

**DIN  
338**


		BC2	BC82	BC02	BC9	BC5	BC99	BC58	BC16	BC66	BC15	BC18
MATERIAL		HSS	HSS	HSS-G	HSS	HSSCo 5%	HSSCo 5%	HSSCo 8%	HSS	HSS	HSS	HSS
SHARPENING												
POINT ANGLE		118°	118°	118°	118°	135°	135°	135°	135°	118°	118°	118°
HELIX ANGLE		30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	40° "W"	15° "H"	30° "N"	30° "N"
COATING		<b>OX</b>	<b>BRIGHT</b>	<b>GOLD OX</b>	<b>OX</b>	<b>GOLD</b>	<b>GOLD</b>	<b>GOLD</b>	<b>BRIGHT</b>	<b>BRIGHT</b>	<b>OX</b>	<b>TiN</b>
APPLICATION		 70 Kg/mm <sup>2</sup>	 70 Kg/mm <sup>2</sup>	 <i>Plus</i>	 12,70	 120 Kg/mm <sup>2</sup>	 12,70	 120 Kg/mm <sup>2</sup>	 <b>Al</b>	 <b>BRASS</b>		 <b>PRODUCTION</b>
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€	€
11,25	142 x 94	11,49	11,49	13,32	18,49	27,62		45,02	28,17	38,40		17,64
11,30	142 x 94	13,28	13,28			26,61						
11,40	142 x 94	13,28	13,28			26,63						
11,50	142 x 94	10,80	10,80	12,13	15,70	22,37	29,74	37,86	19,09	20,90	31,83	17,23
11,51	29/64"	10,28				21,21						
11,60	142 x 94	13,28	13,28			27,49						
11,70	142 x 94	13,28	13,28			27,49						
11,75	142 x 94	11,49	11,49	13,72	20,14	28,56		48,44	27,64	38,40		17,64
11,80	142 x 94	14,55	14,55			27,49						
11,90	151 x 101	14,55	14,55			27,49						
11,91	15/32"	13,85				26,05						
12,00	151 x 101	12,02	12,02	13,54	17,18	23,85	31,88	40,57	20,47	22,64	32,00	17,99
12,10	151 x 101	16,94	16,94			31,94						
12,20	151 x 101	16,94	16,94			31,94						
12,25	151 x 101	14,97	14,97	16,81	21,86	33,05		57,83	38,42	52,34		22,52
12,30	151 x 101	15,95	15,95			31,94						
12,40	151 x 101	15,95	15,95			31,94						
12,50	151 x 101	13,23	13,23	14,83	18,64	29,14	38,80	50,89	22,77	25,68	39,00	21,37
12,60	151 x 101	16,54	16,54			33,20						
12,70	1/2"	14,64				31,62						
12,75	151 x 101	14,71	14,71	16,80	22,53	34,50		60,39	42,40	58,13		22,35
12,80	151 x 101	18,46	18,46			33,20						
12,90	151 x 101	18,46	18,46			33,20						
13,00	151 x 101	13,71	13,71	15,27	19,16	29,81	40,94	51,61	23,10	27,62	40,37	21,70
13,10	151 x 101	18,89	18,89									
13,20	151 x 101	18,89	18,89									
13,25	160 x 108	21,55	21,55		27,40	41,26						
13,30	160 x 108	29,25	29,25									
13,40	160 x 108	29,25	29,25									
13,49	17/32"	18,50				31,29						

**FULLY GROUND TWIST DRILLS**



10 U. Ø 0,20 - Ø 10,50 mm

6 U. Ø 10,60 - Ø 14 mm

1 U. Ø 14,10 - Ø 20 mm

1 U. BC9-BC99  
BC7-BC98-BC42



**TURBO**

**TURBO**

		BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
MATERIAL		HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
SHARPENING											
POINT ANGLE		135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
HELIX ANGLE		38° "5"	38° "5"	30° "N"	0 ≥ 3	38° "5"	38° "5"	38° "N"	30° "N"	30° "N"	35° "N"
COATING		<b>GOLD</b>	<b>TiAlSiN</b>	<b>TiAlN</b>	<b>GOLD OX</b>	<b>BRIGHT</b>	<b>TiAlN</b>	<b>TiAlN</b>	<b>BRIGHT</b>	<b>BRIGHT</b>	<b>BRIGHT</b>
APPLICATION											
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€
11,25	142 x 94								51,62		
11,30	142 x 94								51,62		
11,40	142 x 94								51,62		
11,50	142 x 94	22,21	21,10	29,61	23,78	35,25	49,83	44,81	50,00	39,39	187,56
11,51	29/64"										
11,60	142 x 94								56,91	43,20	
11,70	142 x 94								56,91		
11,75	142 x 94								56,91		
11,80	142 x 94					47,10			56,91		
11,90	151 x 101								56,91		
11,91	15/32"								56,91		
12,00	151 x 101	23,82	22,62	30,63	25,49	37,61	52,38	46,68	49,74	39,20	223,49
12,10	151 x 101								59,93	45,48	
12,20	151 x 101								59,93		
12,25	151 x 101								59,93		
12,30	151 x 101								59,93		
12,40	151 x 101								59,93		
12,50	151 x 101	29,06	27,62	37,86	31,11	45,82	56,62	52,83	59,64		305,35
12,60	151 x 101								63,31		
12,70	1/2"								63,31		
12,75	151 x 101								63,31		
12,80	151 x 101								63,31		
12,90	151 x 101								63,31		
13,00	151 x 101	29,49	28,01	38,42	31,57	47,09	65,42	56,86	59,53		241,66
13,10	151 x 101										
13,20	151 x 101										
13,25	160 x 108										
13,30	160 x 108										
13,40	160 x 108										
13,49	17/32"										

Twist drills for Metal

Pink

Ø 11,25-13,49mm

**FULLY GROUND TWIST DRILLS**

Twist drills for Metal

Grey

Pink

**DIN  
338**


		BC2	BC82	BC02	BC9	BC5	BC99	BC58	BC16	BC66	BC15	BC18
MATERIAL		HSS	HSS	HSS-G	HSS	HSSCo 5%	HSSCo 5%	HSSCo 8%	HSS	HSS	HSS	HSS
SHARPENING												
POINT ANGLE		118°	118°	118°	118°	135°	135°	135°	135°	118°	118°	118°
HELIX ANGLE		30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	40° "W"	15° "H"	30° "N"	30° "N"
COATING		OX	BRIGHT	GOLD OX	OX	GOLD	GOLD	GOLD	BRIGHT	BRIGHT	OX	TiN
APPLICATION		 70 Kg/mm <sup>2</sup>	 70 Kg/mm <sup>2</sup>	 Plus	 12,70	 120 Kg/mm <sup>2</sup>	 12,70	 120 Kg/mm <sup>2</sup>	 Al	 BRASS		 PRODUCTION
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€	€
13,50	160 x 108	19,43	19,43	21,80	25,55	32,85	43,48	56,88				26,47
13,60	160 x 108	29,25	29,25									
13,70	160 x 108	29,25	29,25									
13,75	160 x 108	21,80	21,80		29,38	41,26						
13,80	160 x 108	27,88	27,88									
13,89	35/64"	26,68				36,94						
13,90	160 x 108	28,00	28,00									
14,00	160 x 108	20,81	20,81	23,33	27,14	32,47	45,71	56,23				27,35
14,10	169 x 114	29,84										
14,20	169 x 114	29,84										
14,25	169 x 114	24,41	24,41		31,37	54,17						
14,29	9/16"	28,91				40,85						
14,30	169 x 114	30,36										
14,40	169 x 114	30,36										
14,50	169 x 114	22,48	22,48		29,34	46,06	61,34	79,73				28,36
14,60	169 x 114	30,92										
14,68	37/64"	23,24				51,60						
14,70	169 x 114	30,92										
14,75	169 x 114	24,41	24,41		36,03	54,17						
14,80	169 x 114	29,80										
14,90	169 x 114	29,80										
15,00	169 x 114	22,68	22,68	25,41	29,62	46,75	64,06	80,92				28,62
15,08	19/32"	21,60				44,52						
15,25	178 x 120	33,22			37,55	74,79						
15,48	39/64"	32,13				71,22						
15,50	178 x 120	26,56	26,56		34,21	54,07	71,49	93,57				31,13
15,75	178 x 120	33,74			38,91	74,77						
15,88	5/8"	26,29				53,46						
16,00	178 x 120	27,61	27,61		35,46	56,12	73,64	97,26				31,74
16,25	184 x 125	49,61			45,65							

**FULLY GROUND TWIST DRILLS**



10 U. Ø 0,20 - Ø 10,50 mm

6 U. Ø 10,60 - Ø 14 mm

1 U. Ø 14,10 - Ø 20 mm

1 U. BC9-BC99  
BC7-BC98-BC42



**TURBO**

BTX TTX BC51 BC95 BC55 BC57 BC50 BC7 BC98 BC42

		BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
MATERIAL		HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
SHARPENING											
POINT ANGLE		135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
HELIX ANGLE		38° "5"	38° "5"	30° "N"	0 ≥ 3	38° "5"	38° "5"	38° "N"	30° "N"	30° "N"	35° "N"
COATING		<b>GOLD</b>	<b>TiAlSiN</b>	<b>TiAlN</b>	<b>GOLD OX</b>	<b>BRIGHT</b>	<b>TiAlN</b>	<b>TiAlN</b>	<b>BRIGHT</b>	<b>BRIGHT</b>	<b>BRIGHT</b>
APPLICATION											
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€
13,50	160 x 108								68,15		
13,60	160 x 108										
13,70	160 x 108										
13,75	160 x 108										
13,80	160 x 108										
13,89	35/64"										
13,90	160 x 108										
14,00	160 x 108								69,30		
14,10	169 x 114										
14,20	169 x 114										
14,25	169 x 114										
14,29	9/16"										
14,30	169 x 114										
14,40	169 x 114										
14,50	169 x 114								77,39		
14,60	169 x 114										
14,68	37/64"										
14,70	169 x 114										
14,75	169 x 114										
14,80	169 x 114										
14,90	169 x 114										
15,00	169 x 114								79,34		
15,08	19/32"										
15,25	178 x 120										
15,48	39/64"										
15,50	178 x 120								96,37		
15,75	178 x 120										
15,88	5/8"										
16,00	178 x 120								91,53		
16,25	184 x 125										

Twist drills for Metal

Pink

Ø 13,50-16,25mm



**FULLY GROUND TWIST DRILLS**

Twist drills for Metal

Grey  
Pink
**DIN  
338**


		BC2	BC82	BC02	BC9	BC5	BC99	BC58	BC16	BC66	BC15	BC18
MATERIAL		HSS	HSS	HSS-G	HSS	HSSCo 5%	HSSCo 5%	HSSCo 8%	HSS	HSS	HSS	HSS
SHARPENING												
POINT ANGLE		118°	118°	118°	118°	135°	135°	135°	135°	118°	118°	118°
HELIX ANGLE		30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	30° "N"	40° "W"	15° "H"	30° "N"	30° "N"
COATING		OX	BRIGHT	GOLD OX	OX	GOLD	GOLD	GOLD	BRIGHT	BRIGHT	OX	TiN
APPLICATION												
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€	€
16,50	184 x 125	32,13	32,13		39,72	64,08	83,96					
16,75	184 x 125	51,97			44,78							
17,00	184 x 125	32,17	32,17		39,72	64,08	84,51					
17,25	191 x 130	53,92			50,43							
17,50	191 x 130	36,87	36,87		45,20	70,99	93,03					
17,75	191 x 130	59,72			53,19							
18,00	191 x 130	39,06	39,06		47,65	77,34	101,93					
18,25	198 x 135	58,58			64,91							
18,50	198 x 135	43,31	43,31		52,58	85,42	113,74					
18,75	198 x 135	60,20			60,05							
19,00	198 x 135	43,31	43,31		52,58	85,42	112,76					
19,25	205 x 140	78,67			64,10							
19,50	205 x 140	46,58	46,58		57,06	94,74	124,94					
19,75	205 x 140	76,58			71,79							
20,00	205 x 140	52,89	52,89		68,29	101,67	133,85					
20,50	205 x 140				79,21		144,17					
21,00	205 x 140				72,32		146,16					
21,50	209 x 140				84,10		160,83					
22,00	209 x 140				79,95		163,21					
22,50	214 x 140				85,53		174,56					
23,00	214 x 140				87,56		178,89					
23,50	220 x 145				97,20		198,58					
24,00	220 x 145				96,11		201,53					
24,50	225 x 150				103,54		217,14					
25,00	225 x 150				105,10		216,15					
26,00	243 x 157				126,07		314,54					
27,00	243 x 157				135,40		323,01					
28,00	253 x 167				140,08		355,85					
29,00	253 x 167				164,45		382,73					
30,00	258 x 171				172,87		396,14					

**FULLY GROUND TWIST DRILLS**



10 U. Ø 0,20 - Ø 10,50 mm

6 U. Ø 10,60 - Ø 14 mm

1 U. Ø 14,10 - Ø 20 mm

1 U. BC9-BC99  
BC7-BC98-BC42



**TURBO**

BTX TTX BC51 BC95 BC55 BC57 BC50 BC7 BC98 BC42

		BTX	TTX	BC51	BC95	BC55	BC57	BC50	BC7	BC98	BC42
MATERIAL		HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	CARBIDE TIPPED	SOLID CARBIDE
SHARPENING											
POINT ANGLE		135°	135°	135°	130°	135°	135°	118°	118°	135°	135°
HELIX ANGLE		38° "S"	38° "S"	30° "N"	Ø ≥ 3	38° "S"	38° "S"	38° "N"	30° "N"	30° "N"	35° "N"
COATING		<b>GOLD</b>	<b>TiAlSiN</b>	<b>TiAlN</b>	<b>GOLD OX</b>	<b>BRIGHT</b>	<b>TiAlN</b>	<b>TiAlN</b>	<b>BRIGHT</b>	<b>BRIGHT</b>	<b>BRIGHT</b>
APPLICATION											
Ø mm	L1 x L2	€	€	€	€	€	€	€	€	€	€
16,50	184 x 125								133,81		
16,75	184 x 125										
17,00	184 x 125								100,49		
17,25	191 x 130										
17,50	191 x 130								150,04		
17,75	191 x 130										
18,00	191 x 130								110,51		
18,25	198 x 135										
18,50	198 x 135								178,87		
18,75	198 x 135										
19,00	198 x 135								134,31		
19,25	205 x 140										
19,50	205 x 140								203,57		
19,75	205 x 140										
20,00	205 x 140								152,86		
20,50	205 x 140										
21,00	205 x 140										
21,50	209 x 140										
22,00	209 x 140										
22,50	214 x 140										
23,00	214 x 140										
23,50	220 x 145										
24,00	220 x 145										
24,50	225 x 150										
25,00	225 x 150										
26,00	243 x 157										
27,00	243 x 157										
28,00	253 x 167										
29,00	253 x 167										
30,00	258 x 171										

Twist drills for Metal

Pink

Ø 16,50-30mm

**SOLID CARBIDE REINFORCED SHANK DRILLS WITH & WITHOUT INTERNAL COOLING**

Ref. BC84

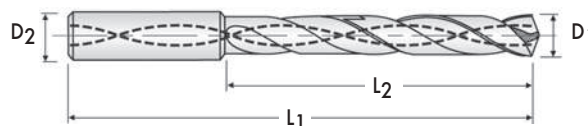
Ref. BC83

**3xD**
**DIN  
6537K**
**SOLID  
CARBIDE**
**TOL D<sub>1</sub>  
m7**
**TOL D<sub>2</sub>  
h6**

**TiAIN**
**HARDOX  
450**
**HIGH  
PERFORMANCE**


Recommended for HARDOX 450

Ref. BC83



BC84						BC83		BC84						BC83	
	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	€		€		D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	€		€
BC840300	3,0	6	62	20	48,13	BC830300	85,24	BC840900	9,0	10	89	47	64,95	BC830900	113,43
BC840320	3,2	6	62	20	48,13	BC830320	85,24	BC840930	9,3	10	89	47	64,95	BC830930	113,43
BC840350	3,5	6	62	20	48,13	BC830350	85,24	BC840950	9,5	10	89	47	64,95	BC830950	113,43
BC840380	3,8	6	66	24	48,13	BC830380	85,24	BC840960	9,6	10	89	47	64,95	BC830960	113,43
BC840400	4,0	6	66	24	48,13	BC830400	85,24	BC840980	9,8	10	89	47	64,95	BC830980	113,43
BC840420	4,2	6	66	24	48,13	BC830420	85,24	BC841000	10,0	10	89	47	64,95	BC831000	113,43
BC840450	4,5	6	66	24	48,13	BC830450	85,24	BC841020	10,2	12	102	55	97,42	BC831020	162,10
BC840480	4,8	6	66	28	48,13	BC830480	85,24	BC841040	10,4	12	102	55	97,42	BC831040	162,10
BC840500	5,0	6	66	28	48,13	BC830500	85,24	BC841050	10,5	12	102	55	97,42	BC831050	162,10
BC840520	5,2	6	66	28	48,13	BC830520	85,24	BC841060	10,6	12	102	55	97,42	BC831060	162,10
BC840550	5,5	6	66	28	48,13	BC830550	85,24	BC841080	10,8	12	102	55	97,42	BC831080	162,10
BC840560	5,6	6	66	28	48,13	BC830560	85,24	BC841100	11,0	12	102	55	97,42	BC831100	162,10
BC840570	5,7	6	66	28	48,13	BC830570	85,24	BC841120	11,2	12	102	55	97,42	BC831120	162,10
BC840580	5,8	6	66	28	48,13	BC830580	85,24	BC841150	11,5	12	102	55	97,42	BC831150	162,10
BC840590	5,9	6	66	28	48,13	BC830590	85,24	BC841180	11,8	12	102	55	97,42	BC831180	162,10
BC840600	6,0	6	66	28	48,13	BC830600	85,24	BC841200	12,0	12	102	55	97,42	BC831200	162,10
BC840610	6,1	8	79	34	56,36	BC830610	101,26	BC841250	12,5	14	107	60	129,90	BC831250	225,54
BC840620	6,2	8	79	34	56,36	BC830620	101,26	BC841280	12,8	14	107	60	129,90	BC831280	225,54
BC840630	6,3	8	79	34	56,36	BC830630	101,26	BC841300	13,0	14	107	60	129,90	BC831300	225,54
BC840650	6,5	8	79	34	56,36	BC830650	101,26	BC841350	13,5	14	107	60	129,90	BC831350	225,54
BC840660	6,6	8	79	34	56,36	BC830660	101,26	BC841380	13,8	14	107	60	129,90	BC831380	225,54
BC840680	6,8	8	79	34	56,36	BC830680	101,26	BC841400	14,0	14	107	60	129,90	BC831400	225,54
BC840690	6,9	8	79	34	56,36	BC830690	101,26	BC841450	14,5	16	115	65	162,65	BC831450	279,12
BC840700	7,0	8	79	34	56,36	BC830700	101,26	BC841480	14,8	16	115	65	162,65	BC831480	279,12
BC840710	7,1	8	79	41	56,36	BC830710	101,26	BC841500	15,0	16	115	65	162,65	BC831500	279,12
BC840740	7,4	8	79	41	56,36	BC830740	101,26	BC841550	15,5	16	115	65	162,65	BC831550	279,12
BC840750	7,5	8	79	41	56,36	BC830750	101,26	BC841600	16,0	16	115	65	162,65	BC831600	279,12
BC840780	7,8	8	79	41	56,36	BC830780	101,26	BC841650	16,5	18	123	73	248,63	BC831650	440,10
BC840800	8,0	8	79	41	56,36	BC830800	101,26	BC841700	17,0	18	123	73	248,63	BC831700	440,10
BC840810	8,1	10	89	47	64,95	BC830810	113,43	BC841750	17,5	18	123	73	248,63	BC831750	440,10
BC840820	8,2	10	89	47	64,95	BC830820	113,43	BC841800	18,0	18	123	73	248,63	BC831800	440,10
BC840840	8,4	10	89	47	64,95	BC830840	113,43	BC841850	18,5	20	131	79	303,57	BC831850	483,63
BC840850	8,5	10	89	47	64,95	BC830850	113,43	BC841900	19,0	20	131	79	303,57	BC831900	483,63
BC840860	8,6	10	89	47	64,95	BC830860	113,43	BC841950	19,5	20	131	79	303,57	BC831950	483,63
BC840870	8,7	10	89	47	64,95	BC830870	113,43	BC842000	20,0	20	131	79	303,57	BC832000	483,63
BC840880	8,8	10	89	47	64,95	BC830880	113,43								

**SOLID CARBIDE REINFORCED SHANK DRILLS WITH & WITHOUT INTERNAL COOLING**

Ref. BC97

Ref. BC89

**5xD**

**DIN 6537L**

**SOLID CARBIDE**

**TOL D1 m7**

**TOL D2 h6**



**TiAIN**

**HARDOX 450**

**HIGH PERFORMANCE**



Recommended for HARDOX 450

BC97						BC89	
	D1 mm	D2 mm	L1 mm	L2 mm	€		€
BC970300	3,0	6	66	28	55,89	BC890300	96,36
BC970310	3,1	6	66	28	55,89	BC890310	
BC970320	3,2	6	66	28	55,89	BC890320	96,36
BC970340	3,4	6	66	28	55,89	BC890340	
BC970350	3,5	6	66	28	55,89	BC890350	96,36
BC970360	3,6	6	66	28	55,89	BC890360	
BC970380	3,8	6	74	36	55,89	BC890380	96,36
BC970390	3,9	6	74	36	55,89	BC890390	
BC970400	4,0	6	74	36	55,89	BC890400	96,36
BC970420	4,2	6	74	36	55,89	BC890420	96,36
BC970440	4,4	6	74	36	55,89	BC890440	
BC970450	4,5	6	74	36	55,89	BC890450	96,36
BC970460	4,6	6	74	36	55,89	BC890460	
BC970480	4,8	6	82	44	55,89	BC890480	96,36
BC970490	4,9	6	82	44	55,89	BC890490	
BC970500	5,0	6	82	44	55,89	BC890500	96,36
BC970520	5,2	6	82	44	55,89	BC890520	96,36
BC970530	5,3	6	82	44	55,89	BC890530	
BC970540	5,4	6	82	44	55,89	BC890540	
BC970550	5,5	6	82	44	55,89	BC890550	96,36
BC970560	5,6	6	82	44	55,89	BC890560	96,36
BC970570	5,7	6	82	44	55,89	BC890570	96,36
BC970580	5,8	6	82	44	55,89	BC890580	96,36
BC970590	5,9	6	82	44	55,89	BC890590	96,36
BC970600	6,0	6	82	44	55,89	BC890600	96,36
BC970610	6,1	8	91	53	61,22	BC890610	107,96
BC970620	6,2	8	91	53	61,22	BC890620	107,96
BC970630	6,3	8	91	53	61,22	BC890630	107,96
BC970650	6,5	8	91	53	61,22	BC890650	107,96
BC970660	6,6	8	91	53	61,22	BC890660	107,96
BC970670	6,7	8	91	53	61,22	BC890670	
BC970680	6,8	8	91	53	61,22	BC890680	107,96
BC970690	6,9	8	91	53	61,22	BC890690	107,96
BC970700	7,0	8	91	53	61,22	BC890700	107,96
BC970710	7,1	8	91	53	61,22	BC890710	107,96
BC970720	7,2	8	91	53	61,22	BC890720	
BC970730	7,3	8	91	53	61,22	BC890730	
BC970740	7,4	8	91	53	61,22	BC890740	107,96
BC970750	7,5	8	91	53	61,22	BC890750	107,96
BC970760	7,6	8	91	53	61,22	BC890760	
BC970770	7,7	8	91	53	61,22	BC890770	
BC970780	7,8	8	91	53	61,22	BC890780	107,96
BC970790	7,9	8	91	53	61,22	BC890790	
BC970800	8,0	8	91	53	61,22	BC890800	107,96
BC970810	8,1	10	103	61	79,55	BC890810	125,49
BC970830	8,3	10	103	61	79,55	BC890830	
BC970840	8,4	10	103	61	79,55	BC890840	125,49
BC970850	8,5	10	103	61	79,55	BC890850	125,49
BC970860	8,6	10	103	61	79,55	BC890860	125,49
BC970870	8,7	10	103	61	79,55	BC890870	125,49
BC970880	8,8	10	103	61	79,55	BC890880	125,49
BC970890	8,9	10	103	61	79,55	BC890890	
BC970900	9,0	10	103	61	79,55	BC890900	125,49
BC970920	9,2	10	103	61	79,55	BC890920	
BC970930	9,3	10	103	61	79,55	BC890930	125,49
BC970940	9,4	10	103	61	79,55	BC890940	
BC970950	9,5	10	103	61	79,55	BC890950	125,49
BC970960	9,6	10	103	61	79,55	BC890960	125,49
BC970970	9,7	10	103	61	79,55	BC890970	
BC970980	9,8	10	103	61	79,55	BC890980	125,49
BC970990	9,9	10	103	61	79,55	BC890990	
BC971000	10,0	10	103	61	79,55	BC891000	125,49
BC971010	10,1	12	118	71	114,52	BC891010	
BC971020	10,2	12	118	71	114,52	BC891020	178,68
BC971040	10,4	12	118	71	114,52	BC891040	178,68
BC971050	10,5	12	118	71	114,52	BC891050	178,68
BC971060	10,6	12	118	71	114,52	BC891060	178,68
BC971080	10,8	12	118	71	114,52	BC891080	178,68
BC971100	11,0	12	118	71	114,52	BC891100	178,68
BC971110	11,1	12	118	71	114,52	BC891110	
BC971120	11,2	12	118	71	114,52	BC891120	178,68
BC971140	11,4	12	118	71	114,52	BC891140	
BC971150	11,5	12	118	71	114,52	BC891150	178,68
BC971160	11,5	12	118	71	114,52	BC891160	178,68
BC971170	11,5	12	118	71	114,52	BC891170	178,68
BC971180	11,8	12	118	71	114,52	BC891180	178,68
BC971200	12,0	12	118	71	114,52	BC891200	178,68
BC971250	12,5	14	124	77	150,54	BC891250	242,69
BC971300	13,0	14	124	77	150,54	BC891300	242,69
BC971350	13,5	14	124	77	150,54	BC891350	242,69
BC971400	14,0	14	124	77	150,54	BC891400	242,69
BC971450	14,5	16	133	83	188,72	BC891450	304,35
BC971480	14,8	16	133	83	188,71	BC891480	
BC971500	15,0	16	133	83	188,72	BC891500	304,35
BC971550	15,5	16	133	83	188,72	BC891550	304,35
BC971580	15,8	16	133	83	188,71	BC891580	
BC971600	16,0	16	133	83	188,72	BC891600	304,35
BC971650	16,5	18	143	93	314,36	BC891650	480,51
BC971700	17,0	18	143	93	314,36	BC891700	480,51
BC971750	17,5	18	143	93	314,36	BC891750	480,51
BC971800	18,0	18	143	93	314,36	BC891800	480,51
BC971850	18,5	20	153	101	343,60	BC891850	525,23
BC971900	19,0	20	153	101	343,60	BC891900	525,23
BC971950	19,5	20	153	101	343,60	BC891950	525,23
BC972000	20,0	20	153	101	343,60	BC892000	525,23

Check availability range for Ø < 3

Twist drills for Metal

Pink



**SOLID CARBIDE REINFORCED SHANK DRILLS WITH INTERNAL COOLING**
**8xD**

Ref. BC96

**DIN  
6537L**
**SOLID  
CARBIDE**
**TOL D1  
m7**
**TOL D2  
h6**

**TiAlN**
**HARDOX  
450**


Recommended for HARDOX 450



	BC96				
	D1 mm	D2 mm	L1 mm	L2 mm	€
BC960300	3,00	6	72	34	182,27
BC960320	3,20	6	72	34	182,27
BC960350	3,50	6	72	34	182,27
BC960380	3,80	6	81	43	182,27
BC960400	4,00	6	81	43	182,27
BC960420	4,20	6	81	43	182,27
BC960450	4,50	6	81	43	182,27
BC960480	4,80	6	95	57	182,27
BC960500	5,00	6	95	57	182,27
BC960520	5,20	6	95	57	182,27
BC960550	5,50	6	95	57	182,27
BC960560	5,60	6	95	57	182,27
BC960570	5,70	6	95	57	182,27
BC960580	5,80	6	95	57	182,27
BC960590	5,90	6	95	57	182,27
BC960600	6,00	6	95	57	182,27
BC960610	6,10	8	114	76	198,56
BC960620	6,20	8	114	76	198,56
BC960630	6,30	8	114	76	198,56
BC960650	6,50	8	114	76	198,56
BC960660	6,60	8	114	76	198,56
BC960680	6,80	8	114	76	198,56
BC960690	6,90	8	114	76	198,56
BC960700	7,00	8	114	76	198,56
BC960710	7,10	8	114	76	198,56
BC960740	7,40	8	114	76	198,56
BC960750	7,50	8	114	76	198,56
BC960780	7,80	8	114	76	198,56
BC960800	8,00	8	114	76	198,56
BC960810	8,10	10	142	95	268,86
BC960840	8,40	10	142	95	268,86
BC960850	8,50	10	142	95	268,86
BC960860	8,60	10	142	95	268,86
BC960870	8,70	10	142	95	268,86
BC960880	8,80	10	142	95	268,86
BC960900	9,00	10	142	95	268,86
BC960930	9,30	10	142	95	268,86
BC960950	9,50	10	142	95	268,86
BC960960	9,60	10	142	95	268,86
BC960980	9,80	10	142	95	268,86
BC961000	10,00	10	142	95	268,86
BC961020	10,20	12	162	114	354,45
BC961040	10,40	12	162	114	354,45
BC961050	10,50	12	162	114	354,45
BC961060	10,60	12	162	114	354,45
BC961080	10,80	12	162	114	354,45
BC961100	11,00	12	162	114	354,45
BC961120	11,20	12	162	114	354,45
BC961150	11,50	12	162	114	354,45
BC961180	11,80	12	162	114	354,45
BC961200	12,00	12	162	114	354,45

**SOLID CARBIDE REINFORCED SHANK DRILLS WITH INTERNAL COOLING**

Ref. BXX

**12xD**

**DIN 6537L**

**SOLID CARBIDE**

**TOL D1 m7**

**TOL D2 h6**

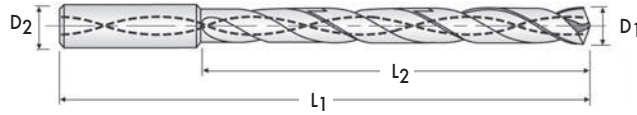


**TiAIN**

**HARDOX 450**

**HIGH PERFORMANCE**

Recommended for HARDOX 450



	BXX				
	D1 mm	D2 mm	L1 mm	L2 mm	€
BXX0300	3,0	6	92	54	200,08
BXX0320	3,2	6	92	54	200,08
BXX0330	3,3	6	92	54	200,08
BXX0350	3,5	6	92	54	200,08
BXX0370	3,7	6	92	54	200,08
BXX0380	3,8	6	102	64	200,08
BXX0390	3,9	6	102	64	200,08
BXX0400	4,0	6	102	64	200,08
BXX0420	4,2	6	102	64	200,08
BXX0430	4,3	6	102	64	200,08
BXX0440	4,4	6	102	64	213,44
BXX0450	4,5	6	102	64	213,44
BXX0460	4,6	6	102	64	213,44
BXX0470	4,7	6	102	64	213,44
BXX0480	4,8	6	116	78	213,44
BXX0490	4,9	6	116	78	213,44
BXX0500	5,0	6	116	78	213,44
BXX0510	5,1	6	116	78	213,44
BXX0520	5,2	6	116	78	213,44
BXX0530	5,3	6	116	78	213,44
BXX0540	5,4	6	116	78	213,44
BXX0550	5,5	6	116	78	213,44
BXX0560	5,6	6	116	78	213,44
BXX0570	5,7	6	116	78	213,44
BXX0580	5,8	6	116	78	213,44
BXX0590	5,9	6	116	78	213,44
BXX0600	6,0	6	116	78	213,44
BXX0610	6,1	8	146	108	261,47
BXX0620	6,2	8	146	108	261,47
BXX0650	6,5	8	146	108	261,47
BXX0660	6,6	8	146	108	261,47
BXX0670	6,7	8	146	108	261,47
BXX0680	6,8	8	146	108	277,45
BXX0690	6,9	8	146	108	277,45
BXX0700	7,0	8	146	108	277,45

	BXX				
	D1 mm	D2 mm	L1 mm	L2 mm	€
BXX0740	7,4	8	146	108	277,45
BXX0750	7,5	8	146	108	277,45
BXX0770	7,7	8	146	108	277,45
BXX0780	7,8	8	146	108	306,23
BXX0800	8,0	8	146	108	310,27
BXX0820	8,2	10	162	120	346,86
BXX0850	8,5	10	162	120	346,86
BXX0880	8,8	10	162	120	346,86
BXX0900	9,0	10	162	120	346,86
BXX0950	9,5	10	162	120	346,86
BXX0980	9,8	10	162	120	346,86
BXX0990	9,9	10	162	120	346,86
BXX1000	10,0	10	162	120	346,86
BXX1010	10,1	12	204	156	485,58
BXX1020	10,2	12	204	156	485,58
BXX1030	10,3	12	204	156	485,58
BXX1050	10,5	12	204	156	485,58
BXX1080	10,8	12	204	156	485,58
BXX1100	11,0	12	204	156	485,58
BXX1120	11,2	12	204	156	485,58
BXX1140	11,4	12	204	156	485,58
BXX1150	11,5	12	204	156	485,58
BXX1180	11,8	12	204	156	485,58
BXX1200	12,0	12	204	156	485,58
BXX1250	12,5	14	230	182	634,99
BXX1280	12,8	14	230	182	634,99
BXX1300	13,0	14	230	182	634,99
BXX1350	13,5	14	230	182	634,99
BXX1380	13,8	14	230	182	634,99
BXX1400	14,0	14	230	182	634,99
BXX1450	14,5	16	260	208	827,04
BXX1500	15,0	16	260	208	827,04
BXX1550	15,5	16	260	208	827,04
BXX1600	16,0	16	260	208	827,04



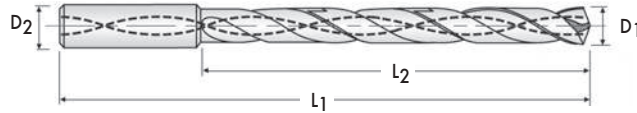
**SOLID CARBIDE REINFORCED SHANK DRILLS WITH INTERNAL COOLING**
**15xD**

Ref. BXL

**DIN  
6537L**
**SOLID  
CARBIDE**
**TOL D1  
m7**
**TOL D2  
h6**

**TiAlN**
**HARDOX  
450**

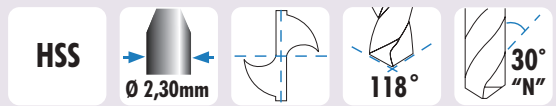

Recommended for HARDOX 450



	BXL				
	D1 mm	D2 mm	L1 mm	L2 mm	€
BXL0300	3,0	6	100	60	466,00
BXL0320	3,2	6	100	60	466,00
BXL0330	3,3	6	100	60	466,00
BXL0350	3,5	6	100	60	466,00
BXL0380	3,8	6	108	68	466,00
BXL0390	3,9	6	108	68	466,00
BXL0400	4,0	6	108	68	466,00
BXL0420	4,2	6	115	78	518,90
BXL0450	4,5	6	115	78	518,90
BXL0500	5,0	6	125	84	533,36
BXL0550	5,5	6	130	92	542,71
BXL0590	5,9	6	140	100	542,71
BXL0600	6,0	6	140	100	542,71
BXL0650	6,5	8	145	108	713,02
BXL0680	6,8	8	170	130	810,86
BXL0700	7,0	8	170	130	810,86
BXL0750	7,5	8	170	130	810,86
BXL0780	7,8	8	170	130	810,86
BXL0800	8,0	8	170	130	810,86
BXL0850	8,5	10	208	163	1.099,47
BXL0900	9,0	10	208	163	1.099,47
BXL0950	9,5	10	208	163	1.099,47
BXL0980	9,8	10	208	163	1.099,47
BXL1000	10,0	10	208	163	1.099,47
BXL1050	10,5	12	245	195	1.412,94
BXL1100	11,0	12	245	195	1.412,94
BXL1150	11,5	12	245	195	1.412,94
BXL1180	11,8	12	245	195	1.412,94
BXL1200	12,0	12	245	195	1.412,94
BXL1250	12,5	14	280	230	1.935,56
BXL1300	13,0	14	280	230	1.935,56
BXL1400	14,0	14	280	230	1.935,56
BXL1500	15,0	16	310	260	2.357,05

**MICRO DRILLS WITH REINFORCED SHANK**

Ref. BC30



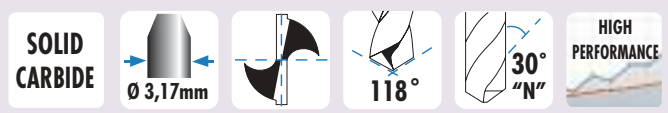
BC30				
	D1 mm	L1 mm	L2 mm	€
BC300050	0,50	43	5	3,27
BC300060	0,60	43	7	3,27
BC300070	0,70	43	7	3,27
BC300075	0,75	43	7	3,27
BC300080	0,80	43	7	3,27
BC300090	0,90	43	7	3,27
BC300095	0,95	43	7	3,27
BC300100	1,00	43	7	3,27
BC300110	1,10	43	7	3,27
BC300120	1,20	43	10	3,27
BC300125	1,25	43	10	3,27
BC300130	1,30	43	10	3,27

BC30				
	D1 mm	L1 mm	L2 mm	€
BC300140	1,40	43	10	3,27
BC300150	1,50	43	10	3,27
BC300160	1,60	43	10	3,27
BC300170	1,70	43	10	3,27
BC300175	1,75	43	10	3,27
BC300180	1,80	43	10	3,27
BC300190	1,90	43	10	3,27
BC300200	2,00	43	10	3,27
BC300210	2,10	43	10	3,27
BC300220	2,20	43	10	3,27
BC300225	2,25	43	10	3,27
BC300235	2,35	43	10	3,27
BC300240	2,40	43	10	3,27



Twist drills for Metal  
Pink

Ref. BC79



APPLICATIONS:  
For printed circuit boards

BC79				
	D1 mm	L1 mm	L2 mm	€
BC790025	0,25	38	5	67,58
BC790030	0,30	38	5	49,89
BC790035	0,35	38	5	23,43
BC790040	0,40	38	5	20,96
BC790045	0,45	38	5	21,20
BC790050	0,50	38	5	14,84
BC790055	0,55	38	5	14,84
BC790060	0,60	38	5	14,84
BC790065	0,65	38	5	13,40
BC790070	0,70	38	10	13,40
BC790075	0,75	38	10	13,40
BC790080	0,80	38	10	13,40
BC790085	0,85	38	10	13,40
BC790090	0,90	38	10	13,40
BC790095	0,95	38	10	13,40
BC790100	1,00	38	10	13,40
BC790105	1,05	38	10	13,40
BC790110	1,10	38	10	13,40
BC790115	1,15	38	10	13,40
BC790120	1,20	38	10	13,40
BC790125	1,25	38	10	13,40
BC790130	1,30	38	10	13,40
BC790135	1,35	38	10	13,40
BC790140	1,40	38	10	13,40
BC790145	1,45	38	10	13,40
BC790150	1,50	38	10	13,40
BC790155	1,55	38	10	13,40
BC790160	1,60	38	10	13,40
BC790165	1,65	38	10	16,83
BC790170	1,70	38	10	16,83

BC79				
	D1 mm	L1 mm	L2 mm	€
BC790175	1,75	38	10	16,83
BC790180	1,80	38	10	16,83
BC790185	1,85	38	10	16,83
BC790190	1,90	38	10	16,83
BC790195	1,95	38	10	16,83
BC790200	2,00	38	10	16,83
BC790205	2,05	38	10	16,83
BC790210	2,10	38	10	16,83
BC790215	2,15	38	10	16,83
BC790220	2,20	38	10	16,83
BC790225	2,25	38	10	16,83
BC790230	2,30	38	10	16,83
BC790235	2,35	38	10	16,83
BC790240	2,40	38	10	16,83
BC790245	2,45	38	10	16,83
BC790250	2,50	38	10	16,83
BC790255	2,55	38	10	16,83
BC790260	2,60	38	10	16,83
BC790265	2,65	38	10	16,83
BC790270	2,70	38	10	16,83
BC790275	2,75	38	10	16,83
BC790280	2,80	38	10	16,83
BC790285	2,85	38	10	16,83
BC790290	2,90	38	10	16,83
BC790295	2,95	38	10	16,83
BC790300	3,00	38	10	16,83
BC790305	3,05	38	10	16,83
BC790310	3,10	38	10	16,83
BC790315	3,15	38	10	16,83





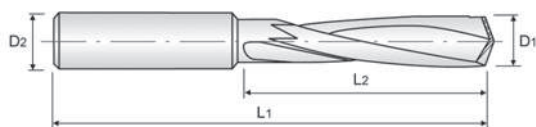
**SOLID CARBIDE DRILLS FOR HARDENED AND HIGH RESISTANCE STEEL**

Ref. BC85

**70  
HRC**
**SOLID  
CARBIDE**
**TOL D1  
h7**
**TOL D2  
h6**

**TiAIN**
**HARDOX  
600**
**HIGH  
PERFORMANCE**

Recommended for HARDOX 600

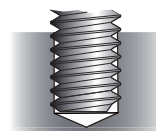
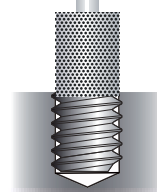
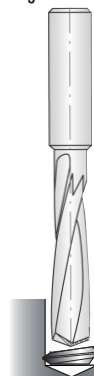
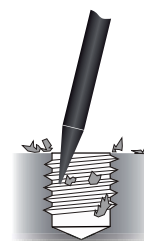
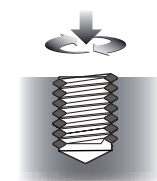


	BC85				
	D1 mm	D2 mm	L1 mm	L2 mm	€
BC850300	3,0	3	46	16	48,34
BC850330	3,3	4	48	18	55,48
BC850340	3,4	4	50	20	55,48
BC850350	3,5	4	50	20	55,48
BC850370	3,7	4	52	22	55,48 *
BC850400	4,0	4	52	22	56,60
BC850420	4,2	6	65	25	80,37
BC850430	4,3	6	68	28	80,37
BC850440	4,4	6	68	28	80,37
BC850450	4,5	6	68	28	80,37
BC850500	5,0	6	72	32	80,37
BC850510	5,1	6	72	32	80,37
BC850520	5,2	6	72	32	80,37
BC850550	5,5	6	75	35	80,37
BC850600	6,0	6	75	35	80,37
BC850630	6,3	8	80	40	93,35 *
BC850650	6,5	8	80	40	93,35
BC850680	6,8	8	85	45	93,35
BC850690	6,9	8	85	45	93,35
BC850700	7,0	8	85	45	93,35
BC850750	7,5	8	85	45	93,35
BC850800	8,0	8	98	50	93,35
BC850830	8,3	10	98	50	142,67 *
BC850850	8,5	10	98	50	142,67
BC850860	8,6	10	105	57	142,67
BC850880	8,8	10	105	57	142,67
BC850900	9,0	10	105	57	142,67
BC850950	9,5	10	105	57	142,67
BC851000	10,0	10	111	63	142,67
BC851020	10,2	12	111	63	184,78
BC851030	10,3	12	111	63	216,81
BC851040	10,4	12	111	63	216,81
BC851050	10,5	12	111	63	216,81
BC851080	10,8	12	119	71	216,81
BC851100	11,0	12	119	71	216,81
BC851150	11,5	12	119	71	216,81
BC851200	12,0	12	119	71	216,81
BC851400	14,0	14	125	77	246,37

\* Till end of stock

**DRILLING THROUGH BROKEN SCREWS**

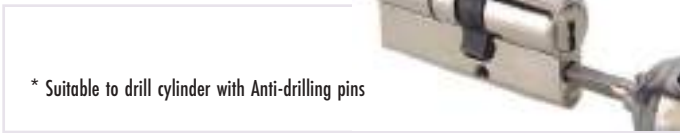
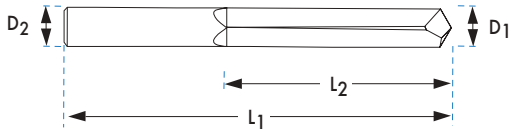
Broken screw


**1<sup>st</sup> Step**  
 Clean up the surface

**2<sup>nd</sup> Step**  
 Drilling with BC85 drill

**3<sup>rd</sup> Step**  
 Remove the chip

**4<sup>th</sup> Step (Optional)**  
 Repair the thread  
 with inserts


**CARBIDE DRILLS FOR CYLINDER**

Ref. BCC06

**SOLID CARBIDE**



\* Suitable to drill cylinder with Anti-drilling pins

BCC06					
	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>2</sub> mm	L <sub>1</sub> mm	€
BCC06X60MD	6	6	33	60	60,13

\* for antidrilling pins cylinder we recommend to drill at 300 RPM.

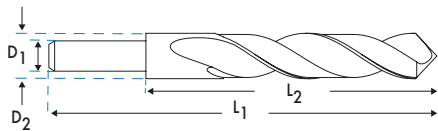


**NON SPARKING DRILL BIT (ATEX)**

Ref. BACH

**22 HRC**

**Cu-Be**



\* Made of Copper-Beryllium according to Q/ZBF-312 Standard.  
 \* Certificates and security sheets available.  
 \* Suitable for machining in explosive atmospheres.

BACH					
	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	€
BACH0600	6,0	6,0	100	60	461,99
BACH0700	7,0	7,0	120	80	481,18
BACH0800	8,0	8,0	140	80	510,81
BACH0900	9,0	9,0	160	86	532,60
BACH1000	10,0	10,0	180	108	562,24
BACH1100	11,0	11,0	200	125	581,42
BACH1200	12,0	12,0	220	135	600,60
BACH1300	13,0	12,0	240	150	623,26
BACH1400	14,0	12,0	260	160	642,44
BACH1500	15,0	12,0	280	190	661,60
BACH1600	16,0	12,0	300	195	704,32
BACH1700	17,0	12,0	300	195	738,31
BACH1800	18,0	12,0	320	195	803,69
BACH1900	19,0	12,0	320	205	835,07
BACH2000	20,0	12,0	330	205	882,14

\* Special lengths available on request

Due to its hardness (inferior compared with HSS Tools), non-sparking drill bits can not be guaranteed against deformation or breaking. We'll accept to replace only non-sparking drill bits with hardness less than 35 HRC.

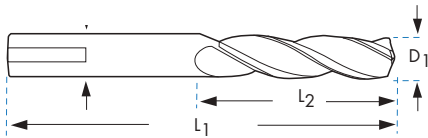


### 3 FLUTE DELTABIT DRILL BIT

Ref. BTT33

# 3Z

**DIN**  
**338**
**HSSCo**  
**5%**

**TOL**  
**H8**


- Greater accuracy of the holes.
- Holes better rounded and aligned.
- Anti-slip triangle shank, better clamping to the drill-chuck.



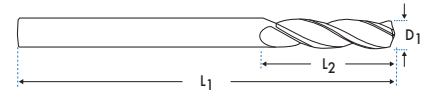
BTT33

	D1 mm	L1 mm	L2 mm	€
BTT330300	3,0	61	33	2,55
BTT330330	3,3	65	36	3,30
BTT330350	3,5	70	39	3,30
BTT330400	4,0	75	43	3,87
BTT330420	4,2	75	43	4,78
BTT330450	4,5	80	47	4,78
BTT330500	5,0	86	52	5,46
BTT330550	5,5	93	57	6,78
BTT330600	6,0	93	57	7,83
BTT330650	6,5	101	63	9,00
BTT330680	6,8	109	69	10,36
BTT330700	7,0	109	69	10,36
BTT330750	7,5	109	69	11,82
BTT330800	8,0	117	75	14,13
BTT330850	8,5	117	75	15,72
BTT330900	9,0	125	81	18,23
BTT330950	9,5	125	81	19,85
BTT331000	10,0	133	87	22,37
BTT331020	10,2	133	87	24,91
BTT331050	10,5	133	87	24,91
BTT331100	11,0	142	94	28,68
BTT331150	11,5	142	94	31,02
BTT331200	12,0	151	101	35,88
BTT331250	12,5	151	101	38,40
BTT331300	13,0	151	101	40,91

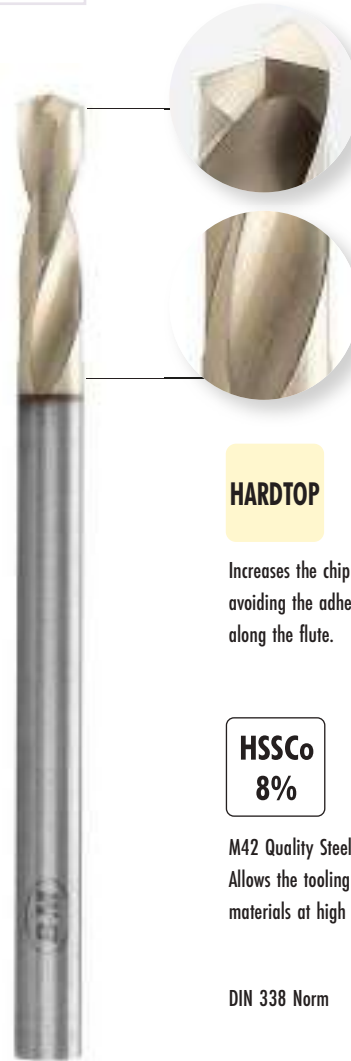
**SPECIAL DRILL FOR HARDOX AND WEAR RESISTANCE SHEETS**

Ref. BHA **3xD** **DIN 338** **HSSCo 8%** **135°** **HARDTOP** **HARDOX 400** **HARDOX 450** **HARDOX 600**

Special point geometry, with Split point and double facet sharpening.  
 HARDTOP coating that improves the slip of the chips and avoids their adherence to the cutting edge.  
 Improves the mechanical resistance and protects the drill reducing the friction coefficient.  
 Its low depth flute generates a reinforced core that facilitates the tooling stability.  
 Maximum performance in high resistance materials.



	BHA			
	D1 mm	L1 mm	L2 mm	€
BHA0100	1,0	34	6	11,67
BHA0150	1,5	40	9	11,67
BHA0200	2,0	49	12	12,13
BHA0250	2,5	57	14	12,36
BHA0300	3,0	61	16	12,47
BHA0320	3,2	65	18	13,27
BHA0330	3,3	65	18	13,27
BHA0350	3,5	70	20	13,27
BHA0400	4,0	75	22	14,10
BHA0420	4,2	75	22	18,38
BHA0450	4,5	80	24	18,38
BHA0500	5,0	86	26	17,42
BHA0550	5,5	93	28	23,53
BHA0600	6,0	93	28	22,05
BHA0650	6,5	101	31	25,42
BHA0680	6,8	109	34	29,52
BHA0700	7,0	109	34	27,21
BHA0750	7,5	109	34	32,59
BHA0800	8,0	117	37	35,44
BHA0850	8,5	117	37	35,44
BHA0900	9,0	125	40	42,43
BHA0950	9,5	125	40	47,89
BHA1000	10,0	133	43	46,46
BHA1020	10,2	133	43	54,05
BHA1050	10,5	133	43	58,38
BHA1100	11,0	142	47	60,75
BHA1150	11,5	142	47	68,40
BHA1200	12,0	151	51	63,71
BHA1250	12,5	151	51	83,69
BHA1300	13,0	151	51	91,20



135° Point Angle to provide an excellent centering.

NARROW GUIDE for a total reduction of the friction out of the cutting area.

**HARDTOP**

Increases the chip slipping over the cutting area avoiding the adherence and improving a fast slip along the flute.

**HSSCo 8%**

M42 Quality Steel HSSCo 8%  
 Allows the tooling of high resistance and hardened materials at high temperature.

DIN 338 Norm

Cutting speed (m/min)	BHA			
	Hardox® HiTuf	Hardox® 400	Hardox® 450	Hardox® 600
	11	8	6	4
Ø	f(mm/rev.)	f(mm/rev.)	f(mm/rev.)	f(mm/rev.)
2,5	0,035/1400	0,025/1000	0,015/770	0,005/500
3	0,04/1200	0,03/850	0,02/640	0,01/430
4	0,05/900	0,04/650	0,03/480	0,02/320
5	0,06/700	0,05/510	0,04/400	0,03/255
6	0,07/590	0,06/430	0,05/320	0,04/220
7	0,08/500	0,07/370	0,06/280	0,05/190
8	0,09/440	0,08/320	0,07/240	0,06/160
10	0,11/350	0,10/260	0,09/200	0,08/130
13	0,14/270	0,13/200	0,12/150	0,1/100



**STEP CUT DRILL FOR EASY DRILLING IN CURVED AND UNSTABLE SURFACES**

Ref. TK02

**DIN  
338**
**HSS**

**STEP CUT**

HSS Helical drill with STEP CUT point geometry, cut in steps.

NEW STEP CUT: its step geometry allows an easy penetration.

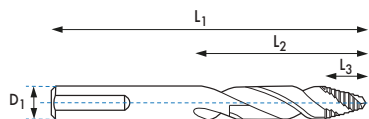
Work in a comfortable, fast and accurate way in curved, unstable or sloping surfaces.

Higher accuracy due to the centering point that avoids the slipping at the start of the drilling.

STEP CUT Geometry: With the Step Cut the holes are more rounded, accurate and centered.

Triple Flat ANTISLIP shank to transmit the power to the drill in a properly way.

Enables to make through holes in steel, aluminium, copper, nickel, zinc, PVC, fiberglass, wood...



	D <sub>1</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	L <sub>3</sub> mm		TK02
						€
TK020100	1,0	34	12	-	10	3,32
TK020150	1,5	40	18	-	10	3,42
TK020200	2,0	49	24	-	10	3,56
TK020250	2,5	57	30	1,6	10	4,15
TK020300	3,0	61	33	1,9	10	4,35
TK020350	3,5	70	39	2,1	10	5,20
TK020400	4,0	75	43	2,9	10	6,16
TK020450	4,5	80	47	3,3	10	6,77
TK020500	5,0	76	52	3,9	10	7,64
TK020550	5,5	93	57	4,6	10	8,09
TK020600	6,0	93	57	5,3	10	8,82
TK020650	6,5	101	63	5,8	10	10,28
TK020700	7,0	109	69	6,4	10	11,76
TK020750	7,5	109	69	6,9	10	13,75
TK020800	8,0	117	75	7,6	10	14,20
TK020850	8,5	117	75	8,2	10	16,85
TK020900	9,0	125	81	8,8	10	18,61
TK020950	9,5	125	81	9,3	10	20,08
TK021000	10,0	133	87	10,0	10	21,41
TK021050	10,5	133	87	10,7	10	23,32
TK021100	11,0	142	94	11,3	6	25,75
TK021150	11,5	142	94	12,0	6	28,01
TK021200	12,0	151	101	12,6	6	30,56
TK021250	12,5	151	101	13,8	6	32,52
TK021300	13,0	151	101	14,7	6	35,06



(Ref. TK02 drills)

REFERENCE	<b>PTK029314</b>
QUANTITY	6
QUALITY	HSS
CONTENT	Ø 2 - 3 - 4 - 5 - 6 - 8 mm.
PRICE €	47,41



<b>TK02010</b>	<b>TK02011</b>
19	25
HSS	HSS
Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm
192,60	343,60

**STEP CUT DRILL FOR EASY DRILLING IN CURVED AND UNSTABLE SURFACES**

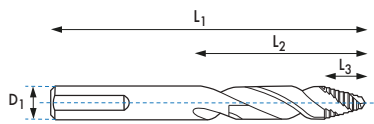
**NEW**  
Ref. TK05


**DIN 338** **HSSCo 5%**   **INOX**  **CAST IRON**  **Cu-Ni-Zn**  **PVC** 

**STEP CUT**



High Performance Helical Drill HSSCo 5% .  
**NEW STEP CUT:** its step geometry allows an easy penetration.  
 Work in a comfortable, fast and accurate way in curved, unstable or sloping surfaces.  
 Higher accuracy due to the centering point that avoids the slipping at the start of the drilling.  
**STEP CUT Geometry:** With the Step Cut the holes are more rounded, accurate and centered .  
**Triple Flat ANTISLIP** shank to transmit the power to the drill in a properly way.  
 Enables to make through holes in stainless steel, cast iron, copper, nickel, zinc, PVC, fiberglass, ...



	D1 mm	L1 mm	L2 mm	L3 mm		TK05 €
TK050100	1,0	34	12	-	10	4,48
TK050150	1,5	40	18	-	10	4,62
TK050200	2,0	49	24	-	10	4,81
TK050250	2,5	57	30	1,6	10	5,60
TK050300	3,0	61	33	1,9	10	5,88
TK050350	3,5	70	39	2,1	10	7,02
TK050400	4,0	75	43	2,9	10	8,32
TK050450	4,5	80	47	3,3	10	9,14
TK050500	5,0	76	52	3,9	10	10,31
TK050550	5,5	93	57	4,6	10	10,92
TK050600	6,0	93	57	5,3	10	11,02
TK050650	6,5	101	63	5,8	10	12,85
TK050700	7,0	109	69	6,4	10	14,70
TK050750	7,5	109	69	6,9	10	17,19
TK050800	8,0	117	75	7,6	10	17,75
TK050850	8,5	117	75	8,2	10	21,07
TK050900	9,0	125	81	8,8	10	23,26
TK050950	9,5	125	81	9,3	10	25,10
TK051000	10,0	133	87	10,0	10	24,62
TK051050	10,5	133	87	10,7	10	26,81
TK051100	11,0	142	94	11,3	6	29,62
TK051150	11,5	142	94	12,0	6	32,21
TK051200	12,0	151	101	12,6	6	35,14
TK051250	12,5	151	101	13,8	6	37,39
TK051300	13,0	151	101	14,7	6	40,32



(Ref. TK05 drills)

REFERENCE	<b>PTK059314</b>
QUANTITY	6
QUALITY	HSSCo 5%
CONTENT	Ø 2 - 3 - 4 - 5 - 6 - 8 mm.
PRICE €	59,26



	
<b>TK05010</b>	<b>TK05011</b>
19	25
HSSCo 5%	HSSCo 5%
Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm
240,75	429,50

Twist drills for Metal  
Pink

**TWIST DRILLS, LONG AND EXTRA SHORT SERIES**

Twist drills for Metal

Pink

**DIN  
340**

**DIN  
1897**


		BC4	BC47	BC40	BC44	BC48	BC78										
MATERIAL		HSS	HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED		BC3	BC31	BC37	BC33	BC35	BC77	BC43	BC17	BC38
SHARPENING																	
POINT ANGLE		118°	135°	118°	135°	135°	118°		135°	135°	135°	135°	118°	118°	135°	135°	135°
HELIX ANGLE		30° "N"	30° "N"	30° "N"	38° "S"	38° "S"	30° "N"		30° "N"	30° "N"	30° "N"	38° "S"	38° "S"	30° "N"	35° "N"	30° "N"	30° "N"
COATING		OX	GOLD	TIN	BRIGHT	TiAIN	BRIGHT		OX	GOLD	TIN	BRIGHT	TiAIN	BRIGHT	BRIGHT	OX	GOLD
APPLICATION				PRODUCTION	INOX	INOX	CAST IRON				PRODUCTION	INOX	INOX Plus	CAST IRON	HIGH PERFORMANCE		
Ø mm	L1 x L2	€	€	€	€	€	€	L1 x L2	€	€	€	€	€	€	€	€	€
0,50	<b>32x13</b>	6,74						<b>23x5</b>									14,43
0,60	<b>37x17</b>	5,48						<b>23x5</b>									14,43
0,70	<b>42x21</b>	5,48						<b>23x5</b>									14,43
0,80	<b>47x23</b>	5,46						<b>23x5</b>									14,43
0,90	<b>51x25</b>	5,46						<b>23x5</b>									
1,00	<b>56x33</b>	5,51						<b>26x6</b>	1,40	2,40	2,91	4,06			10,09		
1,10	<b>56x33</b>	5,36						<b>26x6</b>	1,64								
1,20	<b>60x37</b>	5,36						<b>26x6</b>	1,64								
1,25	<b>65x41</b>	5,54						<b>30x8</b>	1,22	2,80	2,73						
1,30	<b>65x41</b>	5,36						<b>30x8</b>	1,64								
1,40	<b>70x45</b>	5,36						<b>30x9</b>	1,64								
1,50	<b>70x45</b>	3,94		5,15				<b>30x9</b>	1,22	2,27	2,73	4,95			11,55		
1,60	<b>76x50</b>	5,36			10,17			<b>34x10</b>	1,40	2,94	2,91						
1,70	<b>76x50</b>	5,35			10,21			<b>36x11</b>	1,62								
1,75	<b>80x53</b>	4,43						<b>36x11</b>	1,40	2,80	2,91						
1,80	<b>80x53</b>	4,27			9,67			<b>36x11</b>	1,40	2,94	2,91						
1,90	<b>80x53</b>	4,27			10,21			<b>38x12</b>	1,46								
2,00	<b>85x56</b>	2,82	5,67	4,19	9,00	11,35	35,30	<b>38x12</b>	1,20	2,27	2,71	4,35	5,22	20,48	9,27	2,28	
2,10	<b>85x56</b>	4,00			8,69			<b>38x12</b>	1,31	2,78	2,81				10,90		
2,20	<b>90x59</b>	4,00			9,29			<b>40x13</b>	1,31	2,78	2,81				10,90		
2,25	<b>90x59</b>	3,20						<b>40x13</b>	1,12	2,74	2,63						
2,30	<b>90x59</b>	3,86			8,98			<b>40x13</b>	1,31	2,78	2,81				10,90		
2,40	<b>95x62</b>	3,86			11,45			<b>43x14</b>	1,31	2,78	2,81				10,90		
2,50	<b>95x62</b>	2,92	5,29	4,15	8,44	10,54	34,96	<b>43x14</b>	1,02	1,92	2,53	3,81	4,89	20,48	10,28	2,27	
2,60	<b>95x62</b>	3,87			10,50			<b>43x14</b>	1,24	2,24	2,75			20,97	10,90		
2,70	<b>100x66</b>	3,87			9,45			<b>46x16</b>	1,24	2,25	2,75				14,32		

DIN 340								DIN 1897										
		BC4	BC47	BC40	BC44	BC48	BC78			BC3	BC31	BC37	BC33	BC35	BC77	BC43	BC17	BC38
MATERIAL		HSS	HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED			HSS	HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	SOLID CARBIDE	HSS	HSSCo 5%
SHARPENING																		
POINT ANGLE		118°	135°	118°	135°	135°	118°			135°	135°	135°	135°	118°	118°	135°	135°	135°
HELIX ANGLE		30° "N"	30° "N"	30° "N"	38° "N"	38° "N"	30° "N"			30° "N"	30° "N"	30° "N"	38° "N"	38° "N"	30° "N"	35° "N"	30° "N"	30° "N"
COATING		OX	GOLD	TiN	BRIGHT	TiAlN	BRIGHT			OX	GOLD	TiN	BRIGHT	TiAlN	BRIGHT	BRIGHT	OX	GOLD
APPLICATION				PRODUCTION	INOX	INOX	CAST IRON					PRODUCTION	INOX	INOX Plus	CAST IRON	HIGH PERFORMANCE		
Ø mm	L1 x L2	€	€	€	€	€	€	L1 x L2	€	€	€	€	€	€	€	€	€	€
2,75	100x66	3,98						46x16	1,07	2,32	2,58							
2,80	100x66	3,87			10,50			46x16	1,25	2,25	2,76				14,32			
2,90	100x66	3,87			10,49			46x16	1,25	2,25	2,76				14,32			
3,00	100x66	2,70	5,29	3,98	8,39	10,63	31,40	46x16	1,07	1,92	2,58	3,65	4,75	18,59	13,00	1,99		
3,10	106x69	3,00	5,98	4,64	9,62	12,48		49x18	1,16	2,01	2,95	4,07			14,55	1,99		
3,20	106x69	3,00	5,99		9,65	12,40		49x18	1,16	2,01	2,95	4,07			14,55	1,99		
3,25	106x69	3,00	5,98	4,64				49x18	1,16	2,01	2,95			24,47		1,99	2,86	
3,30	106x69	3,00			9,67	12,37		49x18	1,17	2,01	2,96	4,07	5,87		14,55	1,99		
3,40	112x73	3,88			12,24			52x20	1,31	2,48	3,10	3,94		24,47	15,65	2,23		
3,50	112x73	2,84	6,24	4,44	9,97	12,75	30,07	52x20	1,16	2,01	2,95	4,30	5,84	18,59	14,59	2,23	3,54	
3,60	112x73	3,88			11,62			52x20	1,46	2,48	3,25	4,95			17,21			
3,70	112x73	3,88			12,05			52x20	1,46	2,48	3,25	4,95	6,53		17,21			
3,75	112x73	4,01	7,12	5,63				52x20	1,28	2,56	3,08					2,54		
3,80	119x78	4,82			14,48			55x22	1,46	2,48	3,25	4,96			18,51	2,45		
3,90	119x78	4,82	7,11		12,79			55x22	1,46	2,48	3,25	4,96			18,51			
4,00	119x78	3,08	6,44	4,70	10,23	13,08	31,16	55x22	1,28	2,27	3,08	4,76	6,09	18,55	17,30	2,26	3,63	
4,10	119x78	4,02	7,22		11,35	14,08		55x22	1,52	2,71	3,32	5,18			19,44	2,45		
4,20	119x78	4,02	7,22		11,37	14,18		55x22	1,52	2,71	3,32	5,24	6,67	21,75	19,44	2,45		
4,25	119x78	4,02	7,09	5,63				55x22	1,52	2,71	3,32					2,45		
4,30	126x82	5,22		5,63	12,66	15,35		58x24	1,74	3,09	3,54	5,56			20,62			
4,40	126x82	5,22			13,18			58x24	1,74	3,09	3,54	5,75			20,62			
4,50	126x82	3,67	7,91	5,33	12,55	15,46	31,84	58x24	1,52	2,71	3,32	5,34	6,77	20,32	20,02	2,54		
4,60	126x82	5,18			16,95			58x24	1,97	3,24	3,77	6,41			20,62			
4,70	126x82	5,18			12,58			58x24	1,97	3,24	3,77	6,16			22,10			
4,75	126x82	5,42	7,94	7,04				58x24	1,69	3,01	3,49					4,09		
4,80	132x87	6,01	8,08		13,18			62x26	1,97	3,24	3,77	6,27			22,10			
4,90	132x87	6,01			18,28			62x26	1,97	3,24	3,77	6,41			22,10			
5,00	132x87	3,95	7,91	5,55	12,74	15,46	32,14	62x26	1,69	3,00	3,49	5,83	7,13	21,97	21,18	2,90	4,63	
5,10	132x87	6,01	8,72		14,79	17,55		62x26	2,16	3,68	3,96	6,71		27,95	22,10	3,93		
5,20	132x87	6,01			14,83		34,86	62x26	2,15	3,65	3,95	6,91			28,62	3,93		
5,25	132x87	6,27	9,39	7,85				62x26	1,87	3,34	3,67					4,09		
5,30	132x87	6,54			15,40	18,17		62x26	2,17	3,65	3,97	7,08			28,62			
5,40	139x91	6,54			21,46			66x28	2,17	3,65	3,97	7,29			28,62			
5,50	139x91	5,20	10,87	6,79	17,19	19,96	34,87	66x28	1,87	3,34	3,67	6,92	8,30	26,26	27,78	3,50		
5,60	139x91	6,55			17,66			66x28	2,48	3,89	4,28	7,66			30,41			
5,70	139x91	6,55		8,39	14,03			66x28	2,50	3,89	4,30	7,91		29,17	30,41			
5,75	139x91	6,81	10,94	8,39				66x28	2,10	4,04	3,89					4,86		
5,80	139x91	7,19	10,93		18,00			66x28	2,48	3,89	4,28	7,67			30,41			
5,90	139x91	7,19			18,33			66x28	2,50	3,89	4,30	7,65			30,41			
6,00	139x91	4,80	10,87	6,37	17,27	20,12	34,84	66x28	2,14	3,80	3,94	7,39	8,71	28,71	30,94	3,95		
6,10	148x97	7,19			24,16			70x31	2,92	4,91	5,65	9,02		29,93	37,86			
6,20	148x97	7,19			22,56			70x31	2,92	4,91	5,65	8,88			37,86			
6,25	148x97	7,49		9,82				70x31	2,54	5,07	5,26							
6,30	148x97	7,28						70x31	2,92	4,91	5,65	9,22			37,86			
6,40	148x97	7,28						70x31	2,92	4,88	5,65	9,23			37,86			
6,50	148x97	6,18	12,49	10,43	19,93	27,25	37,50	70x31	2,53	4,53	7,34	8,90	13,28	30,01	36,41			
6,60	148x97	7,28						74x34	3,40	6,13	8,22	10,38			44,54			
6,70	148x97	7,28			18,73			74x34	3,40	6,13	8,22	10,38			44,54			
6,75	156x102	7,58	14,38	11,77				74x34	2,89	6,32	7,70							
6,80	156x102	7,54			23,15	30,61		74x34	2,95	6,30	7,77	10,20	16,39	37,86	44,54			
6,90	156x102	7,73						74x34	3,24					33,39	44,54			





DIN 340								DIN 1897											
		BC4	BC47	BC40	BC44	BC48	BC78			BC3	BC31	BC37	BC33	BC35	BC77	BC43	BC17	BC38	
MATERIAL		HSS	HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED			HSS	HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	SOLID CARBIDE	HSS	HSSCo 5%	
SHARPENING																			
POINT ANGLE		118°	135°	118°	135°	135°	118°			135°	135°	135°	135°	118°	118°	135°	135°	135°	
HELIX ANGLE		30° "N"	30° "N"	30° "N"	38° "G"	38° "G"	30° "N"			30° "N"	30° "N"	30° "N"	38° "G"	38° "N"	30° "N"	35° "N"	30° "N"	30° "N"	
COATING		OX	GOLD	TiN	BRIGHT	TiAlN	BRIGHT			OX	GOLD	TiN	BRIGHT	TiAlN	BRIGHT	BRIGHT	OX	GOLD	
APPLICATION				PRODUCTION	INOX	INOX	CAST IRON					PRODUCTION	INOX	INOX Plus	CAST IRON	HIGH PERFORMANCE			
Ø mm	L1 x L2	€	€	€	€	€	€	L1 x L2	€	€	€	€	€	€	€	€	€	€	
9,10	175x115	13,89						84x40							44,61	86,94			
9,20	175x115	13,89			42,05			84x40		10,54						88,63			
9,25	175x115	14,43						84x40	5,35	10,54	10,97								
9,30	175x115	14,93						84x40		10,54						88,63			
9,40	175x115	14,93						84x40		10,54						88,63			
9,50	175x115	10,46	21,05	15,39	33,65	42,81	50,30	84x40	5,35	9,61	10,97	17,94	22,84	46,52	81,08				
9,60	184x121	14,94						89x43								91,47			
9,70	184x121	14,93						89x43								91,47			
9,75	184x121	15,54						89x43	5,97	11,72	11,59								
9,80	184x121	14,95			56,71			89x43								91,47			
9,90	184x121	14,93						89x43								89,74			
10,00	184x121	11,26	22,79	16,39	36,23	45,53	49,95	89x43	5,97	10,63	12,39	19,92	24,77	50,28	80,01				
10,10	184x121	16,41												51,45					
10,20	184x121	15,30						89x43	6,77	11,87	13,19	20,98	35,20		99,50				
10,25	184x121	14,16	33,48	24,74				89x43	7,50										
10,30	184x121	21,74												51,45					
10,40	184x121	18,86																	
10,50	184x121	15,27	30,56	25,87	48,45	67,09	67,76	89x43	6,76	11,88	16,39	22,43		54,77	98,57				
10,60	195x128	21,35																	
10,70	195x128	21,35																	
10,75	195x128	15,54						95x47	8,32										
10,80	195x128	19,45																	
10,90	195x128	21,35																	
11,00	195x128	16,95	34,29	27,35	53,46	73,26	67,76	95x47	7,50	13,28	17,13	24,71	38,76	58,74	102,23				
11,10	195x128	20,99												62,23					
11,20	195x128	20,39																	
11,25	195x128	20,19																	
11,30	195x128	24,35																	
11,40	195x128	24,35																	
11,50	195x128	17,30	36,02	27,95	57,57	74,99	84,03	95x47	8,36	15,68	17,99	26,28		63,37	123,22				
11,60	195x128	24,35																	
11,70	195x128	24,35																	
11,75	195x128	22,72																	
11,80	195x128	22,72																	
11,90	195x128	22,72																	
12,00	205x134	19,32	38,97	29,95	62,45	80,06	78,16	102x51	8,81	16,77	18,44	29,53	46,29	68,95	119,70				
12,10	205x134	23,38												72,56					
12,20	205x134	21,86																	
12,25	205x134	21,91																	
12,30	205x134	25,83																	
12,40	205x134	28,91																	
12,50	205x134	20,39	46,81	33,75	61,59	97,92	84,88	102x51	9,90	20,40	22,74	34,84		73,03	160,48				
12,60	205x134	28,91																	
12,70	205x134	28,91						102x51	10,43	23,34	23,27								
12,75	205x134	26,84																	
12,80	205x134	28,91																	
12,90	205x134	28,78																	
13,00	205x134	23,10	47,68	36,37	76,67	99,51	84,88	102x51	10,84	20,81	23,68	36,41	57,74	78,87	160,48				
13,25	214x140	26,84																	
13,50	214x140	25,80						107x54	13,76	24,42	28,21	41,09							
13,75	214x140	26,93																	

Twist drills for Metal  
Pink

**TWIST DRILLS, LONG AND EXTRA SHORT SERIES**

Twist drills for Metal

Pink

**DIN  
340**

**DIN  
1897**


		BC4	BC47	BC40	BC44	BC48	BC78										
		BC3	BC31	BC37	BC33	BC35	BC77	BC43	BC17	BC38							
MATERIAL		HSS	HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	HSS	HSSCo 5%	HSS	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	SOLID CARBIDE	HSS	HSSCo 5%	
SHARPENING																	
POINT ANGLE		118°	135°	118°	135°	135°	118°	135°	135°	135°	135°	118°	118°	135°	135°	135°	
HELIX ANGLE		30° "N"	30° "N"	30° "N"	38° "S"	38° "S"	30° "N"	30° "N"	30° "N"	30° "N"	38° "S"	38° "N"	30° "N"	35° "N"	30° "N"	30° "N"	
COATING		OX	GOLD	TiN	BRIGHT	TiAlN	BRIGHT	OX	GOLD	TiN	BRIGHT	TiAlN	BRIGHT	BRIGHT	BRIGHT	OX	GOLD
APPLICATION				PRODUCTION	INOX	INOX	CAST IRON			PRODUCTION	INOX	INOX Plus	CAST IRON	HIGH PERFORMANCE			
Ø mm	L1 x L2	€	€	€	€	€	€	L1 x L2	€	€	€	€	€	€	€	€	€
14,00	214x140	27,85					98,05	107x54	14,79	26,27	29,23	44,70		92,89	188,97		
14,25	220x144	50,19															
14,50	220x144	32,58						111x56	17,02	36,45	31,47	56,56			309,33		
14,75	220x144	50,19															
15,00	220x144	31,54					106,59	111x56	19,47	37,01	33,92	53,54		114,78	203,01		
15,25	227x149	56,62															
15,50	227x149	46,80						115x58	23,45	42,80	37,90	61,88			372,35		
15,75	227x149	56,65															
16,00	227x149	36,71					131,89	115x58	23,45	44,38	37,90	62,99		133,14	252,33		
16,25	235x154	62,50															
16,50	235x154	43,44						119x60	27,58	50,76	46,84						
16,75	235x154	62,50															
17,00	235x154	43,63					168,09	119x60	27,58	50,76	46,84						
17,25	241x158	71,86															
17,50	241x158	64,47						123x62	30,72	56,22	49,98						
17,75	241x158	83,95															
18,00	241x158	45,48					175,87	123x62	30,72	61,25	53,19						
18,25	247x162	87,78															
18,50	247x162	70,43						127x64	34,23	67,63	56,70						
18,75	247x162	122,24															
19,00	247x162	57,03						127x64	34,23	67,63	56,70						
19,25	254x166	127,15															
19,50	254x166	109,66						131x66	41,03	75,01	66,71						
19,75	254x166	123,84															
20,00	254x166	63,99					243,97	131x66	41,03	80,38	66,71			634,18			

**TWIST DRILLS, EXTRA-LONG SERIES, DIN 1869 I/II/III**

**DIN  
1869  
I/II/III**



Ref. BC8



Ref. BC88

		BC8	BC88			BC8	BC88			BC8	BC88
MATERIAL		HSS	HSSCo 5%	Ø mm	L1 x L2	€	€	Ø mm	L1 x L2	€	€
SHARPENING											
POINT ANGLE											
HELIX ANGLE											
COATING		BRIGHT									
APPLICATION		INOX									
Ø mm	L1 x L2	€	€	Ø mm	L1 x L2	€	€	Ø mm	L1 x L2	€	€
1,00	100x60	16,95		5,25	195x135		32,14	9,25	250x175		88,01
1,50	140x45	13,69		5,25	245x170		44,45	9,25	320x220		112,23
2,00	125x85	13,15	17,99	5,25	315x210		53,26	9,25	410x280		140,35
2,00	160x125		29,03	5,50	205x140	22,33	25,96	9,50	250x175	53,28	75,27
2,00	200x135		34,63	5,50	260x180	31,82	39,27	9,50	320x220	73,65	97,72
2,25	135x90		22,90	5,50	330x225	36,89	48,28	9,50	410x280	99,00	129,89
2,50	140x95	13,85	17,99	5,75	205x140	26,96	32,14	9,75	265x185		89,81
2,50	180x130		32,34	5,75	260x180	37,29	44,45	9,75	340x235		116,94
2,50	225x150		38,19	5,75	330x225	45,66	53,94	9,75	430x295		150,72
2,75	150x100		25,10	6,00	205x140	22,30	25,95	10,00	265x185	53,02	68,23
3,00	150x100	14,23	20,44	6,00	260x180	32,00	39,27	10,00	340x235	68,95	89,84
3,00	190x130	16,52	25,13	6,00	330x225	36,75	48,44	10,00	430x295	95,79	126,63
3,00	240x160		41,63	6,25	215x150		37,67	10,25	265x185		133,07
3,25	155x105		25,10	6,25	275x190		46,51	10,25	340x235		144,26
3,25	200x135		30,99	6,25	350x235		60,04	10,25	430x295		153,41
3,50	165x115	16,16	20,72	6,50	215x150	26,45	32,15	10,50	265x185	97,69	115,36
3,50	210x145	18,56	26,61	6,50	275x190	34,23	43,34	10,50	340x235	105,87	125,05
3,50	265x180	26,46	36,10	6,50	350x235	42,64	55,31	10,50	430x295	112,60	132,98
3,75	165x115		29,07	6,75	225x155		40,92	10,75	280x195		133,07
3,75	210x145		30,99	6,75	290x200		53,71	10,75	365x250		144,26
3,75	265x180		40,92	6,75	370x250		76,15	10,75	455x310		153,41
4,00	175x120	16,00	20,72	7,00	225x155	28,13	39,90	11,00	280x195	66,89	86,50
4,00	220x150	19,01	26,61	7,00	290x200	39,14	48,44	11,00	365x250	95,06	112,28
4,00	280x190	27,10	36,10	7,00	370x250	52,89	71,34	11,00	455x310	111,28	131,41
4,25	175x120		30,79	7,25	225x155		52,12	11,25	280x195		123,94
4,25	220x150	33,10	39,80	7,25	290x200		64,26	11,25	365x250		166,39
4,25	280x190		49,80	7,25	370x250		85,85	11,25	455x310		171,87
4,50	185x125	17,91	24,24	7,50	225x155	31,63	44,02	11,50	280x195	90,95	107,45
4,50	235x160	22,29	31,62	7,50	290x200	42,18	57,71	11,50	365x250	122,12	144,25
4,50	295x220	31,85	44,93	7,50	370x250	61,42	81,01	11,50	455x310	126,17	149,01
4,75	185x125		31,70	7,75	240x165		53,71	11,75	280x195		123,94
4,75	235x160		39,80	7,75	305x210		64,26	11,75	365x250		166,39
4,75	295x200		49,80	7,75	390x265		94,96	11,75	455x310		171,87
5,00	195x135	18,78	32,55	8,00	240x165	34,97	44,93	12,00	295x205	88,00	97,72
5,00	245x170	23,96	36,80	8,00	305x210	48,49	56,20	12,00	375x260	107,25	126,63
5,00	315x210	29,52	42,46	8,00	390x265	63,18	83,21	12,00	480x330	130,50	154,11
				8,25	240x165		70,44	12,25	295x205		144,26
				8,25	305x210		93,51	12,25	375x260		161,55
				8,25	390x265		113,59	12,25	480x330		196,08
				8,50	240x165	47,54	60,95	12,50	295x205	105,87	125,05
				8,50	305x210	64,91	84,99	12,50	375x260	118,56	140,03
				8,50	390x265	88,62	104,09	12,50	480x330	143,90	169,95
				8,75	240x165		75,26	12,75	295x205		144,26
				8,75	320x220		93,51	12,75	375x260		161,55
				8,75	410x280		119,57	12,75	480x330		196,08
				9,00	250x175	45,44	65,03	13,00	295x205	105,87	125,05
				9,00	320x220	59,68	81,73	13,00	375x260	122,14	144,25
				9,00	410x280	88,10	110,51	13,00	480x330	145,26	171,55



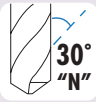

\* Special lengths available on request



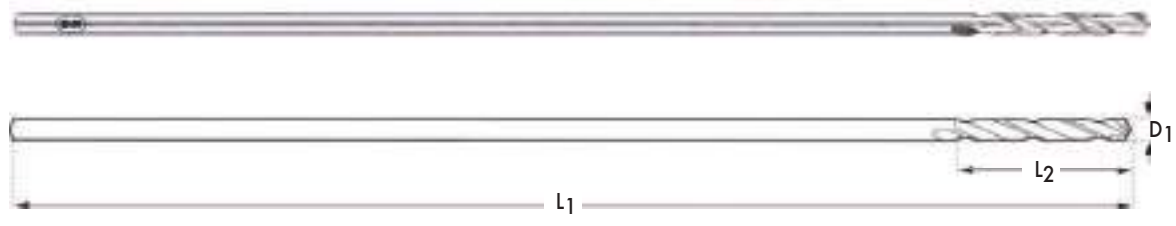
**SPECIAL TWIST DRILLS FOR AIRCRAFT INDUSTRY**

Ref. BC08

HSS

**AIRCRAFT**



**150 mm**

BC08				
	D <sub>1</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	€
BC080225150	2,25	150	25	14,39
BC080250150	2,50	150	25	13,89
BC080320150	3,20	150	26	13,86
BC080325150	3,25	150	36	13,66
BC080400150	4,00	150	43	14,13

**300 mm**





BC08				
	D <sub>1</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	€
BC080225300	2,25	300	25	15,28
BC080250300	2,50	300	25	14,45
BC080320300	3,20	300	26	14,48
BC080325300	3,25	300	36	14,43
BC080400300	4,00	300	43	16,15

\* Others diameters available on request

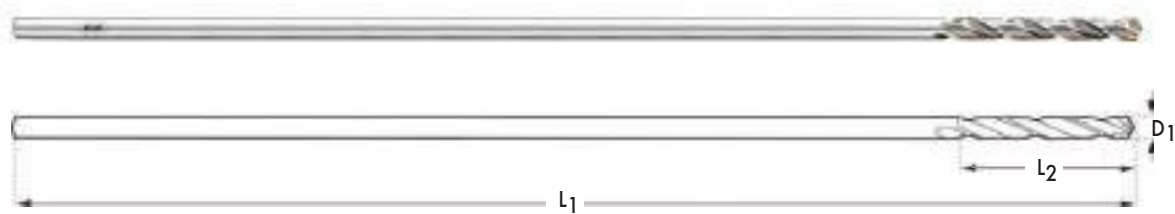
**EXTRALONG SERIES CARBIDE TIPPED DRILL FOR AIRCRAFT INDUSTRY**

Ref. BC08PMD

CARBIDE TIPPED

**AIRCRAFT MD**

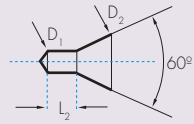


\* MD AirCraft series available. Special sizes available on request

**HSS & SOLID CARBIDE CENTRE DRILLS**

Ref. BC10  
Ref. BC10Co

Ref. BC65  
Ref. BC10I  
Ref. BC10MD

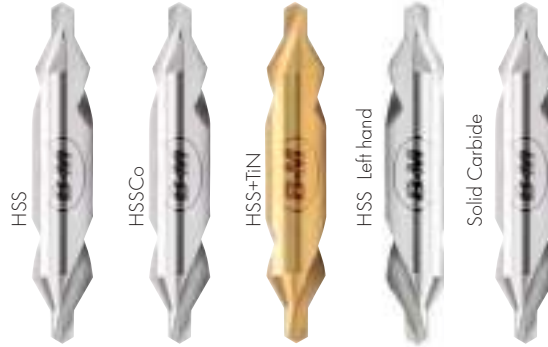
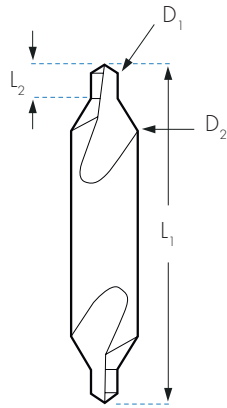


**DIN  
333A**



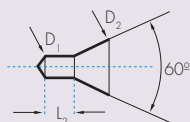
Twist drills for Metal

Pink

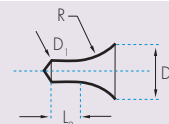


D1 x D2 mm	L1 x L2 mm	BC10	BC10Co	BC65	BC10I	BC10MD
		HSS	HSSCo 5%	TiN	HSS	SOLID CARBIDE
		€	€	€	€	€
0,50 x 3,00	31 x 1	14,00				
0,50 x 3,15	25 x 1	8,22	8,94	14,10		
0,63 x 3,15	25 x 1	8,22				63,91
0,80 x 3,15	25 x 1	8,08	8,94	13,97		
1,00 x 3,15	31 x 1	5,98	8,94	11,88		60,87
<b>1,25 x 3,15</b>	<b>33 x 1</b>	5,98	8,94	11,88		60,87
0,75 x 3,50	35 x 1	8,73	8,94	14,63		
1,00 x 4,00	35 x 1	7,51	8,94	13,41		68,24
<b>1,25 x 4,00</b>	<b>35 x 1</b>	6,35		12,69		
1,50 x 5,00	40 x 2	7,23	9,62	14,32		69,62
1,60 x 4,00	37 x 2	5,98	8,94	12,34	9,27	65,01
1,60 x 5,00	40 x 2	6,32		13,40		
<b>2,00 x 5,00</b>	<b>42 x 2</b>	6,43	9,62	13,51	9,96	74,08
2,00 x 6,00	45 x 2	7,23	10,14	14,79		78,98
<b>2,00 x 6,30</b>	<b>45 x 2</b>	6,49		14,54	10,57	
<b>2,50 x 6,30</b>	<b>47 x 3</b>	7,15	10,69	14,72	11,07	84,41
<b>2,50 x 8,00</b>	<b>50 x 3</b>	7,88	10,69	15,43	12,22	99,44
3,00 x 8,00	50 x 3	7,89	11,27	15,46		99,44
3,15 x 8,00	52 x 4	7,86	11,75	15,43	12,19	94,71
3,00 x 10,00	55 x 4	10,26	15,58	18,34		118,00
3,15 x 10,00	56 x 4	9,30			14,40	
4,00 x 10,00	59 x 5	10,91	15,58	20,82	16,91	118,00
4,00 x 12,00	63 x 5	17,63	24,56	26,87		
4,00 x 12,50	63 x 5	12,70			19,69	
5,00 x 12,00	63 x 5	17,63	24,56	26,87		191,15
<b>5,00 x 12,50</b>	<b>66 x 6</b>	19,13	25,67	28,49	29,66	197,08
5,00 x 14,00	69 x 6	30,30	33,92	40,82		
<b>5,00 x 16,00</b>	<b>71 x 6</b>	30,30			46,97	
6,30 x 16,00	74 x 8	26,17	36,74	37,15		314,82
6,30 x 18,00	77 x 8	46,13				
6,30 x 20,00	80 x 8	46,13		60,50		
<b>8,00 x 20,00</b>	<b>81 x 27</b>	50,52	100,53	75,17		
8,00 x 25,00	100 x 10	110,18				
10,00 x 25,00	100 x 31	78,39	110,65	112,55		
10,00 x 31,50	125 x 12	232,53				
12,50 x 31,50	125 x 33	186,47	242,34	243,72		

**HSS & SOLID CARBIDE CENTRE DRILLS**

 Ref. BC64  
 Ref. BC68

**DIN  
333A**
**DIN  
333R**
**HSS**

Ref. BC62


**LONG SERIES**


BC64      BC68

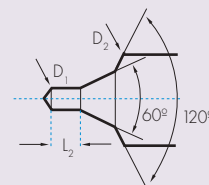
D1 x D2 mm	L1 x L2 mm	HSS	TiN
		€	€
1,00 x 4,00	60 x 1	20,49	31,07
1,00 x 4,00	120 x 1	41,38	79,03
1,50 x 5,00	60 x 2	20,90	31,47
1,50 x 5,00	120 x 2	42,18	69,92
2,00 x 5,00	200 x 2	86,27	154,44
2,00 x 6,00	80 x 2	21,77	34,17
2,00 x 6,00	120 x 2	32,97	69,11
2,50 x 6,30	200 x 2	84,73	152,89
2,50 x 8,00	80 x 3	26,49	44,44
2,50 x 8,00	120 x 3	40,11	81,91
3,00 x 8,00	80 x 4	26,49	44,44
3,00 x 8,00	120 x 4	40,11	81,91
3,15 x 8,00	200 x 4	80,10	148,27
3,00 x 10,00	100 x 4	34,20	55,90
3,00 x 10,00	120 x 4	41,43	92,72
4,00 x 10,00	100 x 5	34,24	55,90
4,00 x 10,00	120 x 5	41,49	92,72
4,00 x 10,00	200 x 5	87,81	155,98
4,00 x 12,00	100 x 5	46,12	83,46
4,00 x 12,00	120 x 5	55,86	118,04
5,00 x 14,00	120 x 6	78,22	142,27

**BC62**

D1 x D2 mm	L1 x L2 mm	€
1,00 x 3,15	31 x 3	6,53
1,25 x 3,15	31 x 3	6,53
1,25 x 4,00	35 x 3	6,53
1,60 x 4,00	37 x 4	6,53
1,60 x 5,00	40 x 4	7,37
2,00 x 5,00	42 x 5	7,11
2,00 x 6,30	45 x 6	8,24
2,50 x 6,30	47 x 6	7,90
2,50 x 8,00	50 x 7	8,68
3,15 x 8,00	52 x 8	8,68
3,15 x 10,00	56 x 9	11,30
4,00 x 10,00	56 x 10	11,30
4,00 x 12,50	63 x 11	18,84
5,00 x 12,50	66 x 13	18,89
5,00 x 16,00	71 x 15	26,81
6,30 x 16,00	74 x 17	27,14
6,30 x 20,00	80 x 19	48,11
8,00 x 20,00	80 x 21	51,56
10,00 x 25,00	100 x 31	85,42
12,50 x 31,50	125 x 33	194,85



Ref. BC63

**DIN  
333B**
**HSS**

**BC63**

D1 x D2 mm	L1 x L2 mm	€
1,00 x 4,00	37,50 x 1,60	10,95
1,25 x 5,00	42,00 x 1,90	10,95
1,60 x 6,30	47,00 x 2,40	10,95
2,00 x 8,00	52,00 x 2,90	11,49
2,50 x 10,00	59,00 x 3,60	13,29
3,15 x 11,20	63,00 x 4,40	15,36
4,00 x 14,00	70,00 x 5,60	23,62
5,00 x 18,00	78,00 x 6,90	32,65
6,30 x 20,00	83,00 x 8,60	47,63
8,00 x 25,00	100,00 x 26,00	105,20
10,00 x 31,50	125,00 x 30,00	208,46



**HSSCo & SOLID CARBIDE POINTING DRILLS FOR CNC**

Used for the previous centering in drilling works. Guides the drill when it starts to plunge.  
Increases the drilling speed attack.

**DIN 1412A**

D<sub>2</sub>

**TOL h6**

Ref. BC75  
Ref. BI75  
Ref. BC76

**HSSCo 5%** **TiAlN**



**DOUBLE POINTING DRILL**

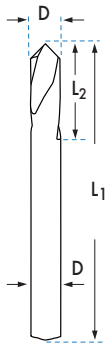
**HSSCo 5%** **TiAlN**



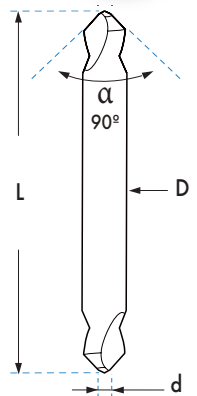
Ref. DP75



D mm	L1 x L2 mm	BC75		
		90°	90°	120°
		€	€	€
2	49 x 8	18,55		18,55
3	50 x 10	21,46	66,16	21,46
4	52 x 12	21,46	70,58	21,46
5	60 x 15	24,20	74,99	24,20
6	66 x 20	24,20	79,39	24,20
8	79 x 25	27,33	88,21	27,33
10	89 x 25	27,33	99,24	27,33
12	102 x 30	37,70	110,27	37,70
16	115 x 35	51,85		51,85
20	131 x 40	102,04		102,04



D x d mm	L mm	DP75	
		90°	€
3,0 x 0,5	40		26,78
4,0 x 1,0	45		26,89
6,0 x 2,0	55		30,50
8,0 x 2,5	65		35,22
10,0 x 3,0	75		37,80
12,0 x 3,5	85		46,63
16,0 x 4,0	90		71,83
20,0 x 5,0	100		117,83



**SOLID CARBIDE POINTING DRILL**

Ref. BC92  
Ref. BC93

**SOLID CARBIDE** **DIN 1412A** **TOL h6** **DIN 6535HB**

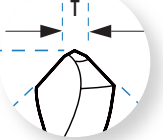
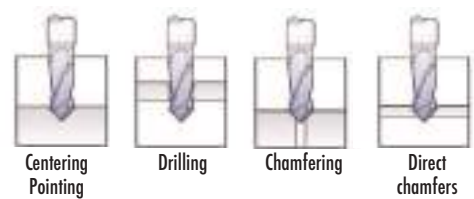
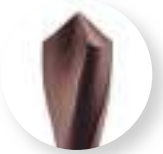
D<sub>2</sub>

D<sub>2</sub>



**HSSCo 5%** **120 Kg/mm²**

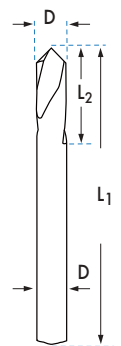
**Ti INC Ni INOX PVC**



D mm	L1 x L2 mm	BC92		BC93	
		90°	120°	90°	120°
		€	€	€	€
1,0	26 x 6	28,44			
1,5	32 x 9	28,86			
2,0	38 x 12	29,16			
3,0	45 x 12	29,57	30,42		
4,0	50 x 15	29,87	30,73		
5,0	50 x 18	35,59	36,60		
6,0	50 x 13	46,16	47,48		
8,0	60 x 23	64,98	66,83		
10,0	70 x 24	92,12	94,75		
12,0	70 x 24	118,93	122,33		
14,0	70 x 27	179,11	184,22		
16,0	75 x 29	218,87	212,62		
18,0	100 x 33	326,17	335,49		
20,0	100 x 35	386,24	377,00		



	D mm	L1 x L2 mm	T*	BN75	
				90°	€
BN750300	3,0	50 x 6	0,3		31,69
BN750400	4,0	52 x 8	0,4		34,36
BN750500	5,0	60 x 10	0,5		37,31
BN750600	6,0	66 x 12	0,6		39,99
BN750800	8,0	79 x 14	0,8		48,27
BN751000	10,0	89 x 16	1,0		57,75
BN751200	12,0	102 x 18	1,2		75,52
BN751400	14,0	115 x 21	1,4		106,61
BN751600	16,0	115 x 24	1,6		118,46



T\*: Core Thickness



## POINTING DRILLS

Used for the previous centering in drilling works. Guides the drill when it starts to plunge.  
Increases the drilling speed attack.

**DIN**  
**1412A**
D<sub>2</sub>
**TOL**  
**h6**

Ref. BL75

**HSSCo**  
**5%**
**TiAlN**


BL75		
HSSCo 5%	TiAlN	90°
D1 mm	L1 x L2 mm	€
3	80 x 10	44,11
4	100 x 12	48,51
5	120 x 15	52,93
6	140 x 20	57,34
8	140 x 25	63,95
10	170 x 25	79,39
12	170 x 30	97,04
16	200 x 35	130,12
20	200 x 40	165,40

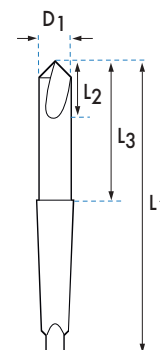


## MORSE TAPER SHANK POINTING DRILLS

Ref. BP11

**HSSCo**  
**5%**
**120**  
**Kg/mm<sup>2</sup>**


BP11					
D1 mm	L1 mm	L2 mm	L3 mm	MT	90° €
10	130	25	64	1	132,33
12	130	30	64	1	143,35
16	148	35	68	2	176,43
20	148	40	68	2	220,54
25	171	45	72	3	297,73



**HSSCo & SOLID CARBIDE DRILLS TO REMOVE WELDING SPOTS**

**SHORT DRILLS FOR PNEUMATIC DRILLING MACHINES**

**TO BE USED WITH STANDARD DRILLING MACHINES**

\* SOLID CARBIDE SPECIAL DRILL BC70MD COATED WITH TiAlN

- Special drill for boron weldings.
- Use with electric drilling machines.
- 1200 RPM.
- Important pushing strength.
- Use always "CUT-MAGIC" lubricant.



D1 mm	D2 mm	L1 x L2 mm	BC70	BC71	BC70MD*
			HSSCo 5%	HSSCo 5% TiN	SOLID CARBIDE TiAlN
			€	€	€
6,0	8,0	45 x 18	25,56	34,66	
6,5	6,5	40 x 18	26,65	39,69	65,02
8,0	8,0	38 x 18	20,95	34,66	
8,0	8,0	45 x 18	23,37	39,69	79,33
9,0	8,0	45 x 18	25,24	41,24	
10,0	8,0	45 x 18	27,66	46,79	



Ø mm	L1 x L2 mm	BC60	BC69
		HSSCo 5%	HSSCo 5% TiN
		€	€
6,0	66 x 26	12,64	22,17
7,0	74 x 34	18,13	28,86
8,0	79 x 36	16,76	31,27
10,0	89 x 44	20,69	33,03

**CUTTING SET: ARBOR, HOLE SAW & PILOT DRILL**

**HOLE SAW: 9,5 mm**

**PILOT DRILL**

EBC70-1  
24,08 €

EBC70-2  
17,41 €

EBC70-3  
1,06 €



**EBC70**

Composition:

- 1 Cutting set Ref. EBC70-1
- 5x9,5 mm Hole saws Ref. EBC70-2
- 2 Pilot drills Ref. EBC70-3
- 1 Drill bit Ref. BC60 Ø 8 mm

109,18 €

**DRILL MILLS**

FOR METAL, WOOD AND PLASTIC WORKING



\* For bodywork

Ø mm	L1 x L2 mm	BC80	BC81
		HSS	TiN
		€	€
6,0	90 x 60	17,63	27,68
8,0	90 x 60	22,68	35,43

**SOLID CARBIDE DRILL MILLS**

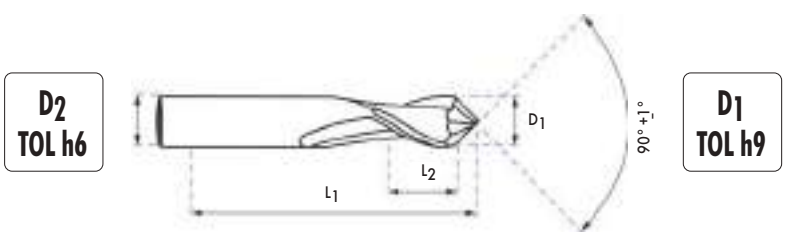
Ref. BC91

**SOLID CARBIDE**

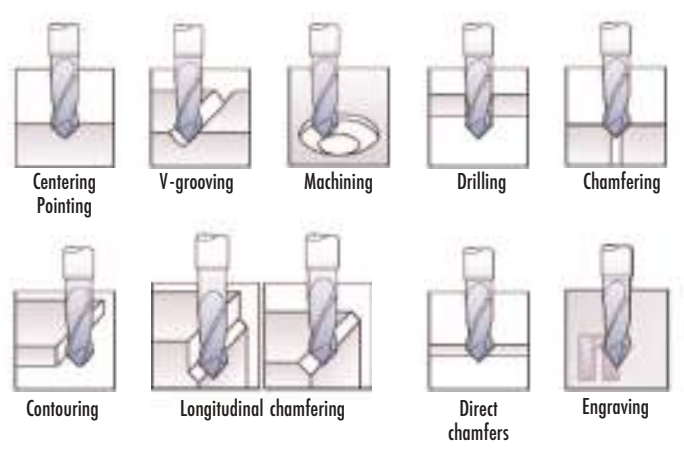
CHARACTERISTICS:  
Can be used successfully to complete different operations:  
Drilling, Pointing and chamfering.

50 HRc

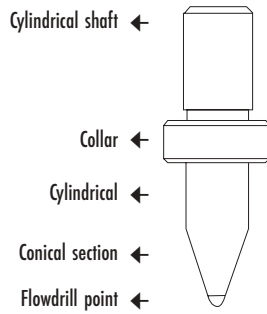
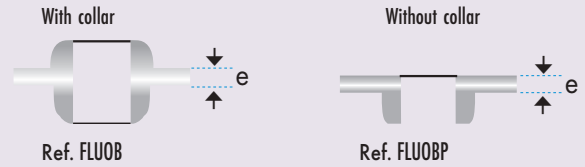
Ti INC Ni INOX PVC



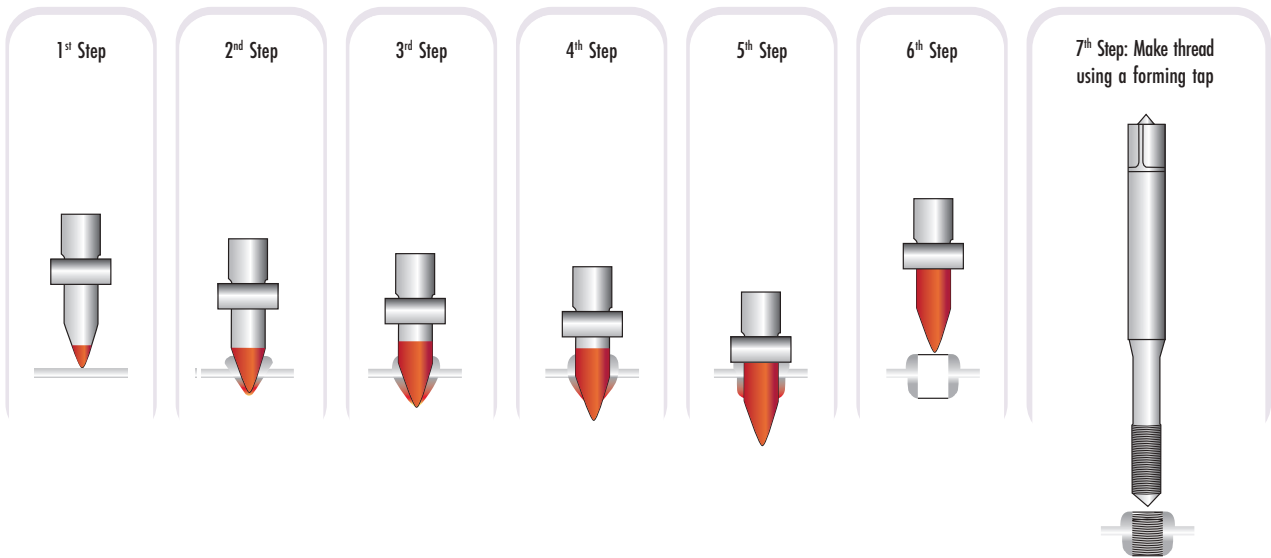
BC91			
D1 mm	D2 mm	L1 x L2 mm	€
3,0	3,0	50 x 6	60,14
4,0	4,0	50 x 8	68,37
5,0	5,0	50 x 10	78,14
6,0	6,0	60 x 12	84,60
8,0	8,0	70 x 16	117,50
10,0	10,0	70 x 18	163,45
12,0	12,0	70 x 20	163,45
14,0	14,0	88 x 30	194,98
16,0	16,0	80 x 26	233,47
20,0	20,0	100 x 32	412,46



**FLOWDRILL FOR THREADING METAL SHEET**

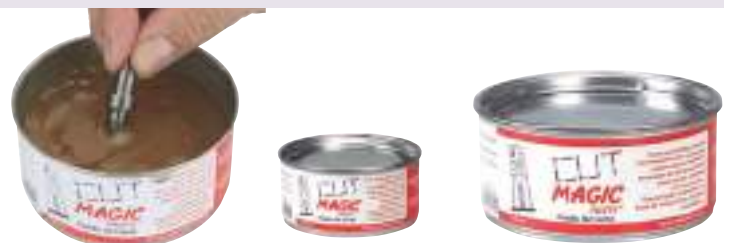


	e max. mm	D1 mm	D2 mm	R.P.M.	FLUOB		FLUOBP	
						€		€
M3x0,50	1,7	6	2,7	3000	FLUOBM03	134,49	FLUOBPM03	188,29
M4x0,70	1,7	6	3,7	2600	FLUOBM04	139,38	FLUOBPM04	195,14
M5x0,80	2,0	8	4,5	2500	FLUOBM05	145,57	FLUOBPM05	211,51
M6x1,00	2,0	8	5,3	2400	FLUOBM06	155,17	FLUOBPM06	225,43
M8x1,25	2,4	8	7,3	2200	FLUOBM08	191,44	FLUOBPM08	278,15
M10x1,50	2,6	10	9,2	2000	FLUOBM10	216,95	FLUOBPM10	315,21
M12x1,75	3,0	12	10,9	1800	FLUOBM12	232,62	FLUOBPM12	319,64
M16x2,00	3,4	16	14,8	1200	FLUOBM16	320,85	FLUOBPM16	409,81
M20x2,50	3,8	18	18,7	800	FLUOBM20	452,90	FLUOBPM20	577,71

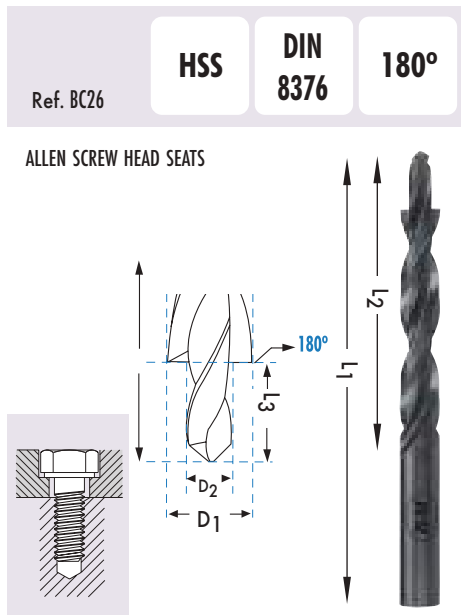


**FLOW-DRILLING LUBRICANT (250ml. & 750ml.)**

			PASTY
		PACKAGING UNIT	€
ACPU00250	0,250 l.	1 Can	28,92
ACPU00750	0,750 l.	1 Can	43,76

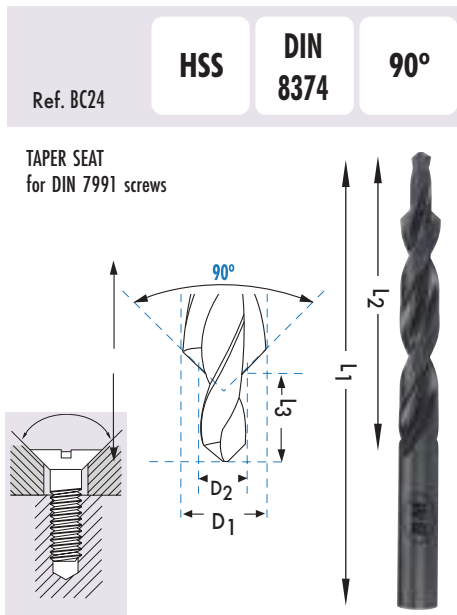




**HSS SUBLAND TWIST DRILLS STRAIGHT AND TAPER SHANK**


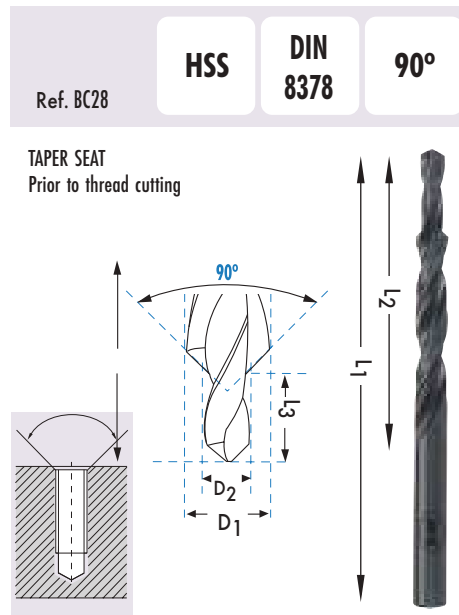
BC26

	D2 mm	D1 mm	L1 x L2 mm	L3 mm	€
M3	3,4	6	93 x 57	9	60,06
M4	4,5	8	117 x 75	11	62,99
M5	5,5	10	133 x 87	13	74,86
M6	6,6	11	142 x 94	15	84,59
M8	9,0	15	169 x 114	19	103,93
M10	11,0	18	191 x 130	23	206,53



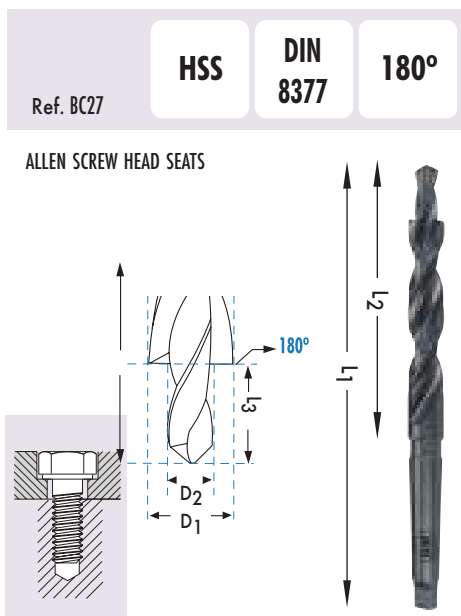
BC24

	D2 mm	D1 mm	L1 x L2 mm	L3 mm	€
M3	3,2	6,0	93 x 57	9	70,07
M4	4,3	8,0	117 x 75	11	73,49
M5	5,3	10,0	133 x 87	13	87,34
M6	6,4	11,5	142 x 94	15	99,78
M8	8,4	15,0	169 x 114	19	136,47
M10	10,5	19,0	198 x 135	23	210,72



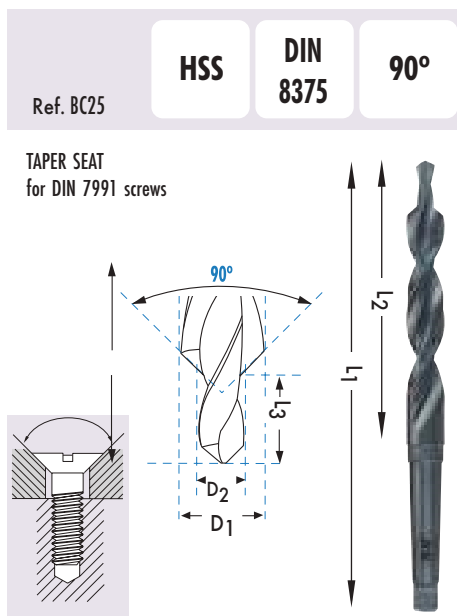
BC28

	D2 mm	D1 mm	L1 x L2 mm	L3 mm	€
M3	2,5	3,4	70 x 39	8,8	53,87
M4	3,3	4,5	80 x 47	11,8	57,96
M5	4,2	5,5	93 x 57	13,6	62,43
M6	5,0	6,6	101 x 63	16,5	71,04
M8	6,8	9,0	125 x 81	21,0	84,65
M10	8,5	11,0	142 x 94	25,5	98,74
M12	10,2	13,5	160 x 108	30,0	122,93



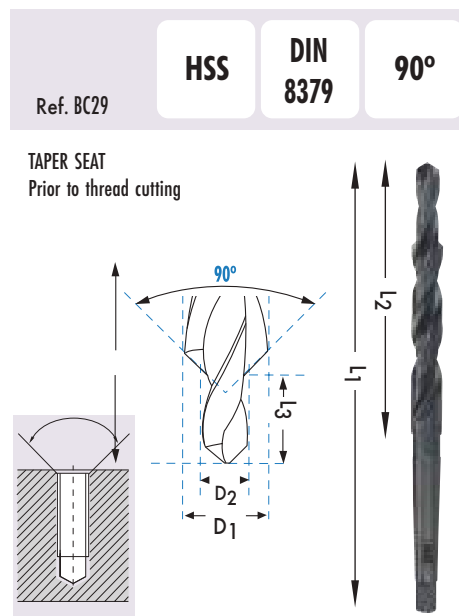
BC27

	D2 mm	D1 mm	L1 x L2 mm	L3 mm	MT	€
M6	6,6	11	175 x 94	15	1	150,50
M8	9,0	15	212 x 114	19	2	155,42
M10	11,0	18	228 x 130	23	2	175,23
M12	13,5	20	238 x 140	27	2	196,01
M14	15,5	24	281 x 160	31	3	277,95
M16	17,5	26	286 x 165	35	3	396,33
M18	20,0	30	296 x 175	39	3	443,18
M20	22,0	33	334 x 185	43	4	501,12



BC25

	D2 mm	D1 mm	L1 x L2 mm	L3 mm	MT	€
M5	5,5	11,0	175 x 94	13	1	150,35
M6	6,6	13,0	182 x 101	15	1	153,37
M8	9,0	17,2	228 x 130	19	2	182,79
M10	11,0	21,5	248 x 150	23	2	216,41



BC29

	D2 mm	D1 mm	L1 x L2 mm	L3 mm	MT	€
M8	6,8	9,0	162 x 81	21,0	1	137,89
M10	8,5	11,0	175 x 94	25,5	1	150,25
M12	10,2	13,5	189 x 108	30,0	1	177,47
M14	12,0	15,5	218 x 120	34,5	2	189,38
M16	14,0	17,5	228 x 130	38,5	2	204,38
M18	15,5	20,0	238 x 140	43,5	2	228,59
M20	17,5	22,0	248 x 150	47,5	2	276,40

**EXTRA SHORT SERIES SUBLAND TWIST DRILLS**

Ref. BC36

**HSSCo 5%** **90°**

BC36

	D1 mm	D2 mm	D3 mm	L1 x L2 mm	L3 mm	€
M3	3,4	2,5	3,4	52 x 20	8	29,17
M4	4,5	3,3	4,5	58 x 24	11	30,55
M5	5,5	4,2	5,5	66 x 28	13	31,94
M6	6,6	5,0	6,6	70 x 31	16	34,71
M8	9,0	6,8	9,0	84 x 40	20	41,66
M10	11,0	8,5	11,0	95 x 47	24	54,85
M12	14,0	10,2	14,0	107 x 54	29	73,59
M14	16,0	12,0	16,0	115 x 56	32	187,46
M16	18,0	14,0	18,0	135 x 60	34	236,06

Ref. BCMD36

**SOLID CARBIDE** **90°** **TiAlN**

BCMD36

	D1 mm	D2 mm	D3 mm	L1 x L2 mm	L3 mm	€
M3	6,0	2,5	6,0	66 x 20	8,8	55,54
M4	6,0	3,3	6,0	66 x 24	11,4	64,80
M5	6,0	4,2	6,0	66 x 28	13,6	69,43
M6	8,0	5,0	8,0	79 x 31	16,5	81,01
M8	10,0	6,8	10,0	89 x 40	21,0	111,09
M10	12,0	8,5	12,0	102 x 47	25,5	150,43
M12	14,0	10,2	14,0	107 x 54	30,0	208,29

Ref. BC74

**HSSCo 5%** **180°**

BC74

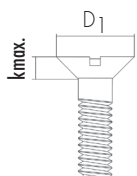
	D1 mm	D2 mm	D3 mm	L1 x L2 mm	L3 mm	€
M2	4,3	2,4	4,3	45 x 12	6	20,14
M3	6,0	3,4	6,0	45 x 18	9	20,48
M4	8,0	4,5	8,0	50 x 22	11	24,31
M5	10,0	5,5	10,0	55 x 26	13	27,08
M6	11,0	6,6	11,0	63 x 30	15	34,03
M8	15,0	9,0	12,5	100 x 34	19	63,88
M10	18,0	11,0	12,5	110 x 42	23	93,04
M12	20,0	14,0	12,5	110 x 34	28	122,19
M14	24,0	16,0	12,5	120 x 42	34	247,17

Ref. BC34

**HSSCo 5%** **90°**

BC34

	D1 mm	D2 mm	D3 mm	L1 x L2 mm	L3 mm	€
M2	4,6	2,2	4,6	45 x 12	6	20,14
M3	6,5	3,2	6,5	45 x 18	9	20,48
M4	8,6	4,3	8,6	50 x 26	11	24,31
M5	10,4	5,3	10,4	55 x 30	13	27,08
M6	12,4	6,4	12,4	63 x 34	15	34,03
M8	16,4	8,4	12,5	100 x 42	19	63,88
M10	20,4	10,5	12,5	110 x 34	23	93,04
M12	25,0	13,0	12,5	120 x 42	28	247,17



**DIN 7991**

	M2	M2.5	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20
Kmax.	1,2	1,5	1,7	2,3	2,8	3,3	4,4	5,5	6,5	7	7,5	8	8,5
D1	4	5	6	8	10	12	16	20	24	27	30	33	36

**MORSE TAPER SHANK DRILLS DIN 345**
**DIN  
345**


For drilling holes over 25mm we recommend to drill a previous hole of about a third part of the final diameter. For example: if you are going to use a 30mm drill, you should drill a previous hole of 10mm.

Ø mm	L1 x L2 mm	MT	BC11	BC22	BC32	BC21	BC13
			€	€	€	€	€
10,75	175 x 94	1	38,56				
11,00	175 x 94	1	33,31	100,87		49,03	91,56
11,25	175 x 94	1	40,25				
11,50	175 x 94	1	35,02	105,04		50,31	91,56
11,75	175 x 94	1	40,26				
12,00	182 x 101	1	35,20	108,34		37,20	95,59
12,25	182 x 101	1	44,83				
12,50	182 x 101	1	37,67	113,41		51,90	95,79
12,75	182 x 101	1	44,84				
13,00	182 x 101	1	39,28	110,98	84,18	53,00	109,03
13,25	189 x 101	1	49,63				
13,50	189 x 101	1	41,45	145,37	101,73	54,69	108,73
13,75	189 x 101	1	49,63				
14,00	189 x 108	1	41,48	142,70	96,71	43,92	118,47
14,25	212 x 114	2	53,75				
14,50	212 x 114	2	46,69	157,91	118,68	73,36	118,45
14,75	212 x 114	2	53,74				
15,00	212 x 114	2	46,69	145,54	112,81	73,36	134,04
15,25	218 x 120	2	55,28				
15,50	218 x 120	2	48,06	160,92	116,43	75,51	142,74
15,75	218 x 120	2	55,28	198,47	145,52		
16,00	218 x 120	2	48,33	153,13	116,43	49,81	142,67
16,25	223 x 125	2	62,50				
16,50	223 x 125	2	54,62	162,59	123,56	77,04	143,12
16,75	223 x 125	2	62,50				
17,00	223 x 125	2	54,61	160,15	123,56	76,64	151,62
17,25	228 x 130	2	69,21				
17,50	228 x 130	2	60,40	169,81	130,71	82,57	151,43
17,75	228 x 130	2	69,21	231,57	174,62		
18,00	228 x 130	2	58,00	166,58	139,70	56,85	163,89
18,25	233 x 135	2	76,09				
18,50	233 x 135	2	66,48	182,80	145,08	84,59	191,55
18,75	233 x 135	2	76,59				
19,00	233 x 135	2	66,70	178,79	145,08	71,20	191,27
19,25	238 x 140	2	82,85				
19,50	238 x 140	2	72,13	206,60	152,22	90,64	214,81
19,75	238 x 140	2	83,42				
20,00	238 x 140	2	72,16	199,70	152,22	74,88	215,33
20,25	243 x 145	2	86,30				
20,50	243 x 145	2	74,79	230,01	177,30	92,01	218,80
20,75	243 x 145	2	86,30				
21,00	243 x 145	2	74,79	232,60	177,30	91,59	218,80
21,25	248 x 150	2	95,23				
21,50	248 x 150	2	82,48	262,04	193,42	96,90	238,57
21,75	248 x 150	2	95,23	338,84	241,78		
22,00	248 x 150	2	82,64	236,32	193,42	87,21	238,57
22,00*	265 x 150	3	112,33				
22,25	248 x 150	2	104,23				
22,50	253 x 155	2	90,43	293,08	204,16	105,51	238,94
22,75	253 x 155	2	104,23				
23,00	253 x 155	2	90,22	275,31	222,06	104,75	259,15
23,25	276 x 155	3	114,95				
23,50	276 x 155	3	100,12	292,50	267,72	126,22	258,98
23,75	281 x 160	3	115,09				
24,00	281 x 160	3	99,91	296,27	247,16	108,06	284,87

\* Morse taper

MORSE TAPER SHANK DRILLS DIN 345

DIN  
345



For drilling holes over 25mm we recommend to drill a previous hole of about a third part of the final diameter. For example: if you are going to use a 30mm drill, you should drill a previous hole of 10mm.

			BC11	BC22	BC32	BC21	BC13								
			€	€	€	€	€	Ø mm	L1 x L2 mm	MT	€	€	€	€	€
MATERIAL			HSS	HSSCo 5%	HSSCo 5%	HSS	CARBIDE TIPPED	31,00	301x180	3	180,69	436,05		201,87	
								31,25	301x180	3	219,87				
SHARPENING								31,50	301x180	3	190,01	669,82			
								31,75	306x185	3	219,87		586,52		
POINT ANGLE			118°	135°	135°	118°	118°	32,00	334x185	4	190,33	504,44	469,20	211,22	543,25*
								32,00	334x185	3	354,43				
HELIX ANGLE			30° "N"	30° "N"	38° "N"	30° "N"	30° "N"	32,25	334x185	4	256,62				
								32,50	334x185	4	218,63				
COATING			OX	OX	OX	TiN	BRIGHT	32,75	334x185	4	256,62				
								33,00	334x185	4	217,33	576,71		229,89	669,50*
APPLICATION			70 Kg/mm²	120 Kg/mm²	INOX	PRODUCTION	CAST IRON	33,25	334x185	4	268,06				
								33,50	334x185	4	237,09				
Ø mm	L1 x L2	MT*	€	€	€	€	€	33,75	339x190	4	269,52				
24,25	281x160	3	124,97					34,00	339x190	4	236,37	649,80		326,68	670,63*
24,50	281x160	3	109,05	315,98	291,85	133,31	284,63	34,25	339x190	4	294,54				
24,75	281x160	3	125,40	312,08				34,50	339x190	4	258,17				
25,00	281x160	3	108,61	310,39	229,23	118,86	291,96	34,75	339x190	4	294,54	706,47			
25,25	286x165	3	136,76					35,00	339x190	4	259,45	682,80	642,87	360,20	
25,50	286x165	3	118,84	386,33	342,25	150,54	346,48	35,25	339x190	4	315,67				
25,75	286x165	3	136,39					35,50	339x190	4	276,96				
26,00	286x165	3	118,17	366,90	290,12	124,86	328,42	35,75	344x195	4	324,14				
26,25	286x165	3	147,69					36,00	344x195	4	277,64	733,58		373,86	1.077,03*
26,50	286x165	3	127,93	406,11	342,23	156,19	380,70	36,25	344x195	4	340,68				
26,75	291x170	3	147,69					36,50	344x195	4	293,64				
27,00	291x170	3	128,06	407,24	311,58	130,82	349,13	36,75	344x195	4	340,63				
27,25	291x170	3	158,07					37,00	344x195	4	293,25	685,65		384,76	1.163,28*
27,50	291x170	3	136,97	485,65		164,06	419,38	37,25	344x195	4	363,07				
27,75	291x170	3	158,07	450,91	686,91			37,50	344x195	4	307,28				
28,00	291x170	3	137,39	451,14	322,38	137,01	387,08	37,75	344x195	4	363,07				
28,25	296x175	3	169,54					38,00	349x200	4	307,99	791,28		395,76	
28,50	296x175	3	146,86	475,86		172,27	456,94	38,25	349x200	4	383,69				
28,75	296x175	3	169,57					38,50	349x200	4	327,74				
29,00	296x175	3	146,84	439,28	351,02	156,65	412,02	38,75	349x200	4	383,69				
29,25	296x175	3	186,44					39,00	349x200	4	328,01	809,69		410,57	1.286,35*
29,50	296x175	3	161,71	486,67		205,69	498,42	39,25	349x200	4	385,93				
29,75	296x175	3	186,44	483,48	670,38			39,50	349x200	4	347,39				
30,00	296x175	3	161,79	445,80	368,90	162,65	437,97	39,75	349x200	4	385,93				
30,25	301x180	3	207,54					40,00	349x200	4	346,93	848,49		423,91	1.326,96*
30,50	301x180	3	180,52	645,50				40,50	354x205	4	363,68				
30,75	301x180	3	207,63					41,00	354x205	4	364,13	891,93			
								41,50	354x205	4	387,05				
								42,00	354x205	4	386,25	933,92			
								42,50	354x205	4	405,93				
								43,00	359x210	4	405,94	979,26			
								43,50	359x210	4	425,01				
								44,00	359x210	4	425,27	1.016,83			
								44,50	359x210	4	444,77				
								45,00	359x210	4	445,11	1.063,38			
								45,50	364x215	4	462,49				
								46,00	364x215	4	460,55				
								46,50	364x215	4	481,37				
								47,00	364x215	4	481,14	1.148,98			
								47,50	364x215	4	497,53				
								48,00	369x220	4	497,18	1.197,14			
								48,50	369x220	4	517,27				

\* Morse taper

\* Till end of stock



**MORSE TAPER SHANK DRILLS DIN 345**

Twist drills for Metal

Grey

Ref. BC11

**DIN  
345**
**HSS**

**OX**

**70  
Kg/mm<sup>2</sup>**


BC11			
Ø mm	L1 x L2 mm	MT*	€
49,00	369x220	4	515,10
49,50	369x220	4	531,30
50,00	369x220	4	537,00
50,50	369x220	4	768,94
51,00	412x225	5	629,71
51,50	412x225	5	843,99
52,00	412x225	5	672,99
52,50	412x225	5	864,54
53,00	412x225	5	720,76
53,50	412x225	5	904,37
54,00	417x230	5	793,16
54,50	417x230	5	895,31
55,00	417x230	5	785,19
56,00	417x230	5	883,49
57,00	422x235	5	938,58
58,00	422x235	5	946,60
59,00	422x235	5	975,03
60,00	422x235	5	922,98
61,00	427x240	5	1.082,60
62,00	427x240	5	1.127,57
63,00	427x240	5	1.192,45
64,00	432x245	5	1.258,12
65,00	432x245	5	1.204,65
66,00	432x245	5	1.358,19
67,00	432x245	5	1.401,98
68,00	437x250	5	1.438,35
69,00	437x250	5	1.483,07
70,00	437x250	5	1.339,22
71,00	437x250	5	1.546,17
72,00	442x255	5	1.578,20
73,00	442x255	5	1.619,51
74,00	442x255	5	1.666,90
75,00	442x255	5	1.570,17
76,00	447x260	5	1.848,87
77,00	514x260	6	1.984,07
78,00	514x260	6	2.022,84
79,00	514x260	6	2.063,60
80,00	514x260	6	2.597,40
81,00	519x265	6	2.860,65
82,00	519x265	6	2.932,13
83,00	519x265	6	2.988,37
84,00	519x265	6	3.051,81
85,00	519x265	6	3.127,20
86,00	524x270	6	3.195,47
87,00	524x270	6	3.263,34
88,00	524x270	6	3.347,20
89,00	524x270	6	3.411,99
90,00	524x270	6	3.509,64
91,00	529x275	6	3.701,65
92,00	529x275	6	3.722,99
93,00	529x275	6	3.855,75
94,00	529x275	6	3.934,11
95,00	529x275	6	4.014,95
96,00	534x280	6	4.147,20
97,00	534x280	6	4.181,99
98,00	534x280	6	4.275,28
99,00	534x280	6	4.352,59
100,00	534x280	6	4.435,63



Ref. EXPBC11MC

**DIN 345 MORSE TAPER SHANK DRILLS DISPLAY, 15 PCS**

Morse taper shank n° 1	14	15	16	17	18	DIN 345
n° 2	19	20	21	22	23	
n° 3	24	25	26	28	30	

Dimensions:

Width 280 x depth 212/50 x height 155 mm.

1.261,51 €

**ADDITIONAL FEES FOR REDUCING THE MORSE TAPER SHANKS**


n° 2-1

n° 2-0

n° 3-2

n° 3-1

n° 4-3

n° 4-2

€ NET

53,30

79,95

\* Morse taper

370mm maximum length to reduce taper shank.

**M42 (8%) COBALT MORSE TAPER SHANK DRILLS FOR HARDENED AND ARMORED MATERIALS**

Ref. BC73

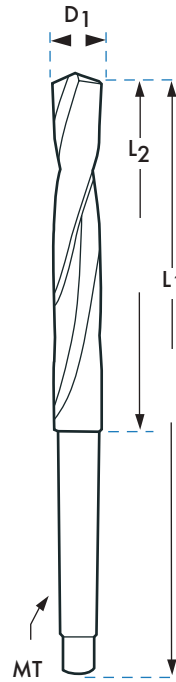
**HSSCo**  
**8%**



**OX**

**HARDOX**  
**450**

BC73					
	D <sub>1</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	MT*	€
BC731000	10,00	175	76	2	57,47
BC731020	10,20	175	76	2	57,47
BC731100	11,00	175	76	2	57,47
BC731200	12,00	179	81	2	62,94
BC731250	12,50	179	81	2	62,94
BC731300	13,00	179	81	2	62,94
BC731400	14,00	184	86	2	67,00
BC731450	14,50	187	89	2	67,88
BC731500	15,00	187	89	2	68,31
BC731550	15,50	187	89	2	77,60
BC731600	16,00	187	89	2	81,29
BC731650	16,50	190	92	2	85,04
BC731700	17,00	190	92	2	86,65
BC731800	18,00	190	92	2	87,95
BC731850	18,50	213	95	3	98,03
BC731900	19,00	213	95	3	99,94
BC732000	20,00	213	95	3	106,24
BC732100	21,00	219	102	3	115,71
BC732200	22,00	222	105	3	133,02
BC732400	24,00	222	105	3	143,31
BC732500	25,00	225	108	3	169,81
BC732600	26,00	270	124	4	201,21
BC732700	27,00	270	124	4	216,40
BC732800	28,00	270	124	4	224,69
BC733000	30,00	270	124	4	249,93
BC733200	32,00	280	133	4	290,88
BC733500	35,00	292	136	4	363,46
BC733600	36,00	292	146	4	382,27
BC734000	40,00	298	152	4	467,22
BC734500	45,00	298	152	4	635,42
BC735000	50,00	356	152	5	746,47
BC735500	55,00	360	156	5	886,85
BC736000	60,00	360	156	5	1.082,34



\* Morse taper

Recommended for HARDOX 450



For drilling holes over 25mm we recommend to drill a previous hole of about a third part of the final diameter. For example: if you are going to use a 30mm drill, you should drill a previous hole of 10mm.

Twist drills for Metal

Pink

Ref. BC22...FT

**DIN**  
**345**

**HSSCo**  
**5%**

**TiN**



**DIN 1412D**

**130°**



**30°**  
**"N"**



**120**  
**Kg/mm<sup>2</sup>**

**HARDOX**  
**450**

BC22...FT					
	D <sub>1</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	MT*	€
BC221600FT	16,00	218	120	2	98,53
BC221800FT	18,00	228	130	2	107,18
BC222000FT	20,00	238	140	2	128,50
BC222200FT	22,00	248	150	2	152,07
BC222400FT	24,00	281	160	3	190,64
BC222500FT	25,00	281	160	3	199,72
BC222600FT	26,00	286	165	3	236,09
BC222800FT	28,00	291	170	3	290,29
BC223000FT	30,00	296	175	3	286,86
BC223200FT	32,00	334	185	4	324,59
BC223400FT	34,00	339	190	4	418,12
BC223600FT	36,00	344	195	4	472,03

\* Morse taper

This drill has been used historically to drill railway rails.



- The best solution to drill large diameter holes in hardened metals.
- Special sharpening for very hard materials.

Recommended for HARDOX 450



**MORSE TAPER SHANK DRILLS, LONG SERIES DIN 341**
**DIN  
341**

Ref. BC12



Ref. BC56



			BC12	BC56				BC12	BC56				BC12	BC56
MATERIAL			HSS	HSSCo 5%	Ø mm	L1 x L2	MT*	€	€	Ø mm	L1 x L2	MT*	€	€
SHARPENING					14,00	223x142	1	47,23	118,76	27,00	343x222	3	158,01	382,70
					14,25	245x147	2	79,31		27,50	343x222	3	203,62	
POINT ANGLE					14,50	245x147	2	59,43		28,00	343x222	3	180,35	393,95
					14,75	245x147	2	79,31		28,50	351x230	3	241,66	
HELIX ANGLE					15,00	245x147	2	59,43	137,90	29,00	351x230	3	197,49	427,75
					15,25	251x153	2	78,53		29,50	351x230	3	241,87	
COATING					15,50	251x153	2	58,32	143,51	30,00	351x230	3	202,54	450,25
					15,75	251x153	2	81,43		30,50	360x239	3	276,56	
APPLICATION					16,00	251x153	2	60,48	143,51	31,00	360x239	3	255,79	506,53
					16,25	257x159	2	88,57		31,50	360x239	3	296,67	
					16,50	257x159	2	65,75	151,98	32,00	397x248	4	256,81	562,82
					16,75	257x159	2	88,57		32,50	397x248	4	325,11	
					17,00	257x159	2	65,75	151,98	33,00	397x248	4	273,65	
					17,25	263x165	2	86,68		33,50	397x248	4	320,99	
					17,50	263x165	2	69,87	160,40	34,00	406x257	4	333,09	
					17,75	263x165	2	98,56		34,50	406x257	4	352,69	
					18,00	263x165	2	73,17	171,67	35,00	406x257	4	335,10	
					18,25	269x171	2	98,95		35,50	406x257	4	352,69	
					18,50	269x171	2	79,42	178,68	36,00	416x267	4	385,57	
					18,75	269x171	2	102,13		36,50	416x267	4	487,95	
					19,00	269x171	2	77,21	178,68	37,00	416x267	4	415,30	
					19,25	275x177	2	107,17		37,50	416x267	4	483,54	
					19,50	275x177	2	86,79	186,29	38,00	426x277	4	434,78	
					19,75	275x177	2	108,50		38,50	426x277	4	551,17	
					20,00	275x177	2	82,79	186,29	39,00	426x277	4	451,72	
					20,50	282x184	2	100,40	216,69	39,50	426x277	4	551,17	
					21,00	282x184	2	94,98	216,69	40,00	426x277	4	488,55	
					21,50	289x191	2	114,59	236,37	41,00	436x287	4	624,69	
					22,00	289x191	2	108,12	236,37	42,00	436x287	4	651,58	
					22,50	296x198	2	118,16	250,44	43,00	447x298	4	693,45	
					23,00	296x198	2	108,18	270,16	44,00	447x298	4	704,01	
					23,50	319x198	3	137,57	278,57	45,00	447x298	4	741,99	
					24,00	327x206	3	138,86	303,92	46,00	459x310	4	780,73	
					24,50	327x206	3	147,50	315,18	47,00	459x310	4	821,69	
					25,00	327x206	3	138,84	295,49	48,00	470x321	4	858,88	
					25,50	335x214	3	167,44		49,00	470x321	4	886,94	
					26,00	335x214	3	146,38	348,95	50,00	470x321	4	918,27	
					26,50	335x214	3	172,72		55,00	505x310	5	1.200,72	

\* Morse taper

**MORSE TAPER SHANK DRILLS, EXTRA LONG SERIES, DIN 1870 I/II**

**DIN  
1870  
I/II**

Ref. BC14



Ref. BC41



Twist drills for Metal

Pink

			BC14	BC41				BC14	BC41				BC14	BC41
MATERIAL			HSS	HSSCo 5%				€	€				€	€
SHARPENING								€	€				€	€
POINT ANGLE			 118°	 135°				€	€				€	€
HELIX ANGLE			 30° "N"	 38° "g"				€	€				€	€
COATING			OX	BRIGHT				€	€				€	€
APPLICATION			 70 Kg/mm²	 120 Kg/mm²				€	€				€	€
Ø mm	L1 x L2	MT*	€	€	Ø mm	L1 x L2	MT*	€	€	Ø mm	L1 x L2	MT*	€	€
8,00	265x165	1	85,77		20,00	385x260	2	260,18	497,95	33,00	635x410	4	854,06	
8,00	330x210	1	106,91		20,00	490x325	2	316,24	648,67	34,00	530x340	4	683,98	
8,50	265x165	1	94,19		20,50	385x260	2	294,65	662,76	34,00	665x430	4	886,22	
8,50	330x210	1	109,30		20,50	490x325	2	353,83	763,13	35,00	530x340	4	704,49	
9,00	275x175	1	96,95		21,00	385x260	2	294,65	608,69	35,00	665x430	4	963,04	
9,00	345x220	1	123,23		21,00	490x325	2	353,83	756,18	36,00	530x340	4	760,03	
9,50	275x175	1	103,75		21,50	405x270	2	314,23	716,92	36,00	665x430	4	1.011,25	
9,50	345x220	1	124,57		21,50	515x345	2	379,72	895,50	37,00	530x340	4	779,25	
10,00	285x185	1	106,59		22,00	405x270	2	314,23	650,08	37,00	665x430	4	1.123,60	
10,00	360x235	1	131,47		22,00	515x345	2	379,72	872,96	38,00	555x360	4	850,03	
10,50	285x185	1	113,21		22,50	405x270	2	358,08	763,13	38,00	695x460	4	1.189,83	
10,50	360x235	1	135,50		22,50	515x345	2	428,66	947,78	39,00	555x360	4	885,91	
11,00	300x195	1	118,18		23,00	405x270	2	358,08	744,26	39,00	695x460	4	1.246,59	
11,00	375x250	1	140,54		23,00	515x345	2	428,66	895,50	40,00	555x360	4	933,91	
11,50	300x195	1	129,42		23,50	425x270	3	393,44	932,67	40,00	695x460	4	1.189,07	
11,50	375x250	1	161,64		23,50	535x345	3	477,06	1.137,56	41,00	555x360	4	1.050,81	
12,00	310x205	1	132,46	294,64	24,00	440x290	3	393,44	851,63	41,00	695x460	4	1.351,51	
12,00	395x260	1	165,05		24,00	555x365	3	477,06	1.042,12	42,00	555x360	4	1.085,43	
12,50	310x205	1	140,96		24,50	440x290	3	407,73	1.006,25	42,00	695x460	4	1.443,01	
12,50	395x260	1	184,20		24,50	555x365	3	502,78	1.196,04	43,00	585x385	4	1.131,92	
13,00	310x205	1	140,96	315,23	25,00	440x290	3	407,73	897,48	43,00	735x490	4	1.472,38	
13,00	395x260	1	184,20		25,00	555x365	3	502,78	1.069,69	44,00	585x385	4	1.185,37	
13,50	325x220	1	154,32		25,50	440x290	3	421,43	1.070,74	44,00	735x490	4	1.524,13	
13,50	410x275	1	189,18		25,50	555x365	3	555,40	1.394,36	45,00	585x385	4	1.221,00	
14,00	325x220	1	154,37	300,89	26,00	440x290	3	421,43	970,35	45,00	735x490	4	1.595,12	
14,00	410x275	1	189,18	421,56	26,00	555x365	3	555,40	1.254,69	46,00	585x385	4	1.258,32	
14,50	340x220	2	169,05	329,15	26,50	440x290	3	431,56	1.087,28	46,00	735x490	4	1.666,43	
14,50	425x275	2	206,03	462,22	26,50	555x365	3	573,04	1.497,06	47,00	585x385	4	1.363,16	
15,00	340x220	2	169,05	316,20	27,00	460x305	3	431,56	1.008,55	47,00	735x490	4	1.748,23	
15,00	425x275	2	206,03	448,94	27,00	580x385	3	573,04	1.328,08	48,00	605x405	4	1.363,75	
15,50	355x230	2	189,51	367,73	27,50	460x305	3	460,37	1.182,91	48,00	765x510	4	1.849,92	
15,50	445x295	2	227,24	495,47	27,50	580x385	3	619,92	1.585,25	49,00	605x405	4	1.405,27	
16,00	355x230	2	189,51	349,23	28,00	460x305	3	460,37	1.068,45	49,00	765x510	4	1.920,34	
16,00	445x295	2	227,24	482,88	28,00	580x385	3	619,92	1.443,25	50,00	605x405	4	1.446,63	
16,50	355x230	2	204,03	367,73	28,50	460x305	3	477,06	1.255,04	50,00	765x510	4	1.970,54	
16,50	445x295	2	245,54	501,15	28,50	580x385	3	684,01	1.650,99					

\* Morse taper

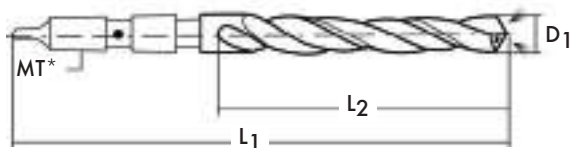


**MORSE TAPER SHANK HSS DRILLS WITH INTERNAL COOLING DIN 341**

Ref. BC87

 $\leq 10xD$ 
**DIN  
341**
**HSS**

**OX**

**SPECIAL 170° POINT FOR  
PERFECT CENTERING**


BC87					
	D <sub>1</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	MT*	€
BC871000	10,0	214	116	2	492,72
BC871050	10,5	214	116	2	499,50
BC871100	11,0	223	125	2	499,50
BC871150	11,5	223	125	2	510,42
BC871200	12,0	232	134	2	510,42
BC871250	12,5	232	134	2	510,42
BC871300	13,0	232	134	2	510,42
BC871350	13,5	240	142	2	510,42
BC871400	14,0	240	142	2	510,42
BC871450	14,5	245	147	2	527,82
BC871500	15,0	245	147	2	527,82
BC871550	15,5	251	153	2	545,55
BC871600	16,0	251	153	2	545,55
BC871650	16,5	257	159	2	545,55
BC871700	17,0	257	159	2	545,55
BC871750	17,5	263	165	2	580,31
BC871800	18,0	263	165	2	580,31
BC871850	18,5	292	171	3	598,16
BC871900	19,0	292	171	3	598,16
BC871950	19,5	298	177	3	633,26
BC872000	20,0	298	177	3	633,26
BC872050	20,5	305	184	3	668,68
BC872100	21,0	305	184	3	668,68
BC872150	21,5	312	191	3	710,54
BC872200	22,0	312	191	3	710,54
BC872250	22,5	319	198	3	703,75
BC872300	23,0	319	198	3	703,75

BC87					
	D <sub>1</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	MT*	€
BC872350	23,5	319	198	3	703,75
BC872400	24,0	327	206	3	703,75
BC872450	24,5	327	206	3	718,31
BC872500	25,0	327	206	3	718,31
BC872550	25,5	335	214	3	791,97
BC872600	26,0	335	214	3	791,97
BC872650	26,5	335	214	3	827,07
BC872700	27,0	371	222	4	827,07
BC872750	27,5	371	222	4	907,72
BC872800	28,0	371	222	4	907,72
BC872850	28,5	379	230	4	968,06
BC872900	29,0	379	230	4	968,06
BC872950	29,5	379	230	4	1.034,71
BC873000	30,0	379	230	4	1.034,71
BC873050	30,5	379	230	4	1.231,72
BC873100	31,0	388	239	4	1.231,72
BC873150	31,5	388	239	4	1.231,72
BC873200	32,0	397	248	4	1.231,72
BC873300	33,0	397	248	4	1.439,24
BC873400	34,0	406	257	4	1.439,24
BC873500	35,0	406	257	4	1.618,57
BC873600	36,0	406	257	4	1.618,57
BC873700	37,0	406	257	4	1.829,73
BC873800	38,0	426	277	4	1.829,73
BC873900	39,0	426	277	4	2.041,07
BC874000	40,0	426	277	4	2.041,07

\* Morse taper

**TWIST DRILLS IN METAL AND PLASTIC BOXES**

Twist drills for Metal

Pink Grey

**DIN 338 HSS**

(Ref. BC2 drills)

REFERENCE	<b>D0010</b>	<b>D0011</b>	<b>P6010</b>	<b>P6011</b>
QUANTITY	19	25	19	25
QUALITY	HSS	HSS	HSS	HSS
CONTENT	Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm	Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm
PRICE €	62,57	130,18	62,57	130,18

*Plus*

(Ref. BC2 drills)

REFERENCE	<b>DP010</b>	<b>DP011</b>	<b>PP6010</b>	<b>PP6011</b>
QUANTITY	19	25	19	25
QUALITY	<i>Plus</i>	<i>Plus</i>	<i>Plus</i>	<i>Plus</i>
CONTENT	Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm	Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm
PRICE €	70,74	146,35	70,74	146,35

**HSSCo 5%**

(Ref. BC5 drills)

REFERENCE	<b>DC010</b>	<b>DC011</b>	<b>PC6010</b>	<b>PC6011</b>
QUANTITY	19	25	19	25
QUALITY	HSSCo	HSSCo	HSSCo	HSSCo
CONTENT	Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm	Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm
PRICE €	104,56	245,22	104,56	245,22

**HSS TiN**

(Ref. BC18 drills)

REFERENCE	<b>DT010</b>	<b>DT011</b>	<b>PT6010</b>	<b>PT6011</b>
QUANTITY	19	25	19	25
QUALITY	HSS+TiN	HSS+TiN	HSS+TiN	HSS+TiN
CONTENT	Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm	Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm
PRICE €	92,36	202,03	92,36	202,03

**TWIST DRILLS IN METAL BOXES (quarters and tenths)**
**DIN  
338**
**HSS**

(Ref. BC2 drills)



REFERENCE	AD001	AD002	D0014	D0015
QUANTITY	37	49	50	41
QUALITY	HSS	HSS	HSS	HSS
CONTENT	Ø 1-10 x 0,25 mm	Ø 1-13 x 0,25 mm	Ø 1-5,90 x 0,10 mm	Ø 6-10 x 0,10 mm
PRICE €	170,48	305,97	116,14	302,34

*Plus*

(Ref. BC02 drills)



ON REQUEST

ON REQUEST

REFERENCE	ADP01	ADP02		
QUANTITY	37	49	50	41
QUALITY	<i>Plus</i>	<i>Plus</i>	<i>Plus</i>	<i>Plus</i>
CONTENT	Ø 1-10 x 0,25 mm	Ø 1-13 x 0,25 mm	Ø 1-5,90 x 0,10 mm	Ø 6-10 x 0,10 mm
PRICE €	204,26	363,40		

**HSSCo  
5%**

(Ref. BC5 drills)



REFERENCE	ADC01	ADC02	DC014	DC015
QUANTITY	37	49	50	41
QUALITY	HSSCo	HSSCo	HSSCo	HSSCo
CONTENT	Ø 1-10 x 0,25 mm	Ø 1-13 x 0,25 mm	Ø 1-5,90 x 0,10 mm	Ø 6-10 x 0,10 mm
PRICE €	246,53	551,76	181,66	447,88

**HSS**
**TiN**

(Ref. BC18 drills)



ON REQUEST

ON REQUEST

REFERENCE	ADT01	ADT02		
QUANTITY	37	49	50	41
QUALITY	HSS+TiN	HSS+TiN	HSS+TiN	HSS+TiN
CONTENT	Ø 1-10 x 0,25 mm	Ø 1-13 x 0,25 mm	Ø 1-5,90 x 0,10 mm	Ø 6-10 x 0,10 mm
PRICE €	210,50	430,03		

**TWIST DRILLS IN METAL BOXES (prior holes and tenths)**

Twist drills for Metal

Pink Grey

**DIN 338 HSS**



(Ref. BC2 drills)

REFERENCE	<b>D0022</b>	<b>D0017</b>	<b>D0035</b>	<b>D0007</b>
QUANTITY	81	23	29	10
QUALITY	HSS	HSS	HSS	HSS
CONTENT	Ø 2-10 x 0,10 mm	Ø 1-10 x 0,50 + Ø PH**	Ø 1-13 x 0,50 + Ø PH**	Ø 1-10 x 1 mm
PRICE €	533,38	119,27	197,15 *	50,92

\* Till end of stock

*Plus*

ON REQUEST



(Ref. BC02 drills)

REFERENCE		<b>DP017</b>	<b>DP035</b>	<b>DP007</b>
QUANTITY	81	23	29	10
QUALITY	<i>Plus</i>	<i>Plus</i>	<i>Plus</i>	<i>Plus</i>
CONTENT	Ø 2-10 x 0,10 mm	Ø 1-10 x 0,50 + Ø PH**	Ø 1-13 x 0,50 + Ø PH**	Ø 1-10 x 1 mm
PRICE €		119,44	205,47*	66,82

\* Till end of stock

**HSSCo 5%**



(Ref. BC5 drills)

REFERENCE	<b>DC022</b>	<b>DC017</b>	<b>DC035</b>	<b>DC007</b>
QUANTITY	81	23	29	10
QUALITY	HSSCo	HSSCo	HSSCo	HSSCo
CONTENT	Ø 2-10 x 0,10 mm	Ø 1-10 x 0,50 + Ø PH**	Ø 1-13 x 0,50 + Ø PH**	Ø 1-10 x 1 mm
PRICE €	728,78	167,39	320,69*	87,01

\* Till end of stock

**HSS TiN**

ON REQUEST

ON REQUEST

ON REQUEST



(Ref. BC18 drills)

REFERENCE				<b>DT007</b>
QUANTITY	81	23	29	10
QUALITY	HSS+TiN	HSS+TiN	HSS+TiN	HSS+TiN
CONTENT	Ø 2-10 x 0,10 mm	Ø 1-10 x 0,50 + Ø PH**	Ø 1-13 x 0,50 + Ø PH**	Ø 1-10 x 1 mm
PRICE €				72,27

\*\* Prior holes: From M3 to M12 ( Ø3,30 - Ø4,20 - Ø6,80 - Ø10,20)



**TWIST DRILLS IN METAL AND PLASTIC BOXES (additional compositions)**
**DIN  
338**
**HSS**
**BRIGHT**

**HSSCo  
8%**


(Ref. BC82 drills)

(Ref. BC58 drills)

REFERENCE	D8210	D8211	REFERENCE	DC810	DC811
QUANTITY	19	25	QUANTITY	19	25
QUALITY	HSS	HSS	QUALITY	HSSCo 8%	HSSCo 8%
CONTENT	Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm	CONTENT	Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm
PRICE €	62,92	130,18	PRICE €	151,30	356,94

**DIN  
338**
**HSSCo  
5%**
**OX  
GOLD**


(Ref. BC95 drills)

REFERENCE	DC9510	DC9511	PC9510	PC9511
QUANTITY	19	25	19	25
QUALITY	HSSCo 5%	HSSCo 5%	HSSCo	HSSCo
CONTENT	Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm	Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm
PRICE €	119,20	269,46	119,20	269,46

**DIN  
338**
**HSSCo  
5%**
**GOLD**

**HSS**
**TiAlSiN**


(Ref. BTX drills)

(Ref. TTX drills)

REFERENCE	PTX010	PTX011	REFERENCE	PTTX010	PTTX011
QUANTITY	19	25	QUANTITY	19	25
QUALITY	HSSCo 5%	HSSCo 5%	QUALITY	HSS + TiAlSiN	HSS + TiAlSiN
CONTENT	Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm	CONTENT	Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm
PRICE €	113,66	233,35	PRICE €	102,28	210,01

**DIN  
338**
**HSS**

*Plus*

**HSSCo  
5%**

**TiN**


(Ref. BC2 drills)

(Ref. BC02 drills)

(Ref. BC5 drills)

(Ref. BC18 drills)

REFERENCE	D0009	DP009	DC009	DT009
QUANTITY	13	13	13	13
QUALITY	HSS	<i>Plus</i>	HSSCo 5%	HSS+TiN
CONTENT	Ø 1,5 - 6,5x0,5 (+3,2 & 4,8) mm	Ø 1,5 - 6,5x0,5 (+3,2 & 4,8) mm	Ø 1,5 - 6,5x0,5 (+3,2 & 4,8) mm	Ø 1,5 - 6,5x0,5 (+3,2 & 4,8) mm
PRICE €	24,17	28,43	42,37	37,80

REFERENCE	D0008	DP008	DC008	DT008
QUANTITY	13	13	13	13
QUALITY	HSS	<i>Plus</i>	HSSCo 5%	HSS+TiN
CONTENT	Ø 1 - 7 x 0,50 mm	Ø 1 - 7 x 0,50 mm	Ø 1 - 7 x 0,50 mm	Ø 1 - 7 x 0,50 mm
PRICE €	25,16	28,47	44,39	41,33

**TWIST DRILLS IN METAL BOXES (additional compositions)**

**DIN 338 TWIST DRILLS IN METAL BOXES, 12 PCS**

DIN 338	HSS	<i>Plus</i>	HSSCo 5%	TiN	HSSCo 8%
	(Ref. BC2 drills)	(Ref. BC02 drills)	(Ref. BC5 drills)	(Ref. BC18 drills)	(Ref. BC58 drills)
REFERENCE	<b>D0006</b>	<b>DP006</b>	<b>DC006</b>	<b>DT006</b>	<b>DC806</b>
QUANTITY	12	12	12	12	12
QUALITY	HSS	<i>Plus</i>	HSSCo	HSS+TiN	HSSCo 8%
CONTENT	Ø 2-7x0,50 + 8 mm	Ø 2-7x0,50 + 8 mm	Ø 2-7x0,50 + 8 mm	Ø 2-7x0,50 + 8 mm	Ø 2-7x0,50 + 8 mm
PRICE €	46,17	47,78	66,54	60,48	87,69

**LONG SERIES DIN 340 TWIST DRILLS IN METAL BOXES**

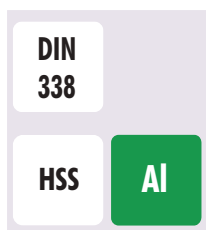
DIN 340	HSS	HSSCo 5%	TiN
			
	(Ref. BC4 drills)	(Ref. BC47 drills)	(Ref. BC40 drills)
REFERENCE	<b>D0004</b>	<b>DC004</b>	<b>DT004</b>
QUANTITY	19	17	19
QUALITY	HSS	HSSCo	HSS+TiN
CONTENT	Ø 1-10 x 0,50 mm	Ø 2-10 x 0,50 mm	Ø 1-10 x 0,50 mm
PRICE €	108,12	230,18	166,55

**EXTRA-SHORTS SERIES DIN 1897**

DIN 1897	HSS	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	SOLID CARBIDE
	(Ref. BC3 drills)	(Ref. BC31 drills)	(Ref. BC33 drills)	(Ref. BC77 drills)	(Ref. BC43 drills)
REFERENCE	<b>D3010</b>	<b>D3110</b>	<b>D3310</b>	<b>D7710</b>	<b>D4310</b>
QUANTITY	19	19	19	17	17
QUALITY	HSS	HSSCo	HSSCo "S"	Carbide tipped	Solid carbide
CONTENT	Ø 1-10 x 0,50 mm	Ø 1-10 x 0,50 mm	Ø 1-10 x 0,50 mm	Ø 2-10 x 0,50 mm	Ø 2-10 x 0,50 mm
PRICE €	72,70	108,99	198,65	505,20	751,54

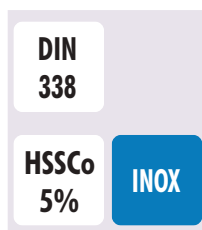


DIN 1897	HSS	HSSCo 5%	HSSCo 5%	CARBIDE TIPPED	SOLID CARBIDE
	(Ref. BC3 drills)	(Ref. BC31 drills)	(Ref. BC33 drills)	(Ref. BC77 drills)	(Ref. BC43 drills)
REFERENCE	<b>D3011</b>	<b>D3111</b>	<b>D3311</b>	<b>D7711</b>	<b>D4311</b>
QUANTITY	25	25	25	23	23
QUALITY	HSS	HSSCo	HSSCo "S"	Carbide tipped	Solid carbide
CONTENT	Ø 1-13 x 0,50 mm	Ø 1-13 x 0,50 mm	Ø 1-13 x 0,50 mm	Ø 2-13 x 0,50 mm	Ø 2-13 x 0,50 mm
PRICE €	139,40	229,01	359,51	845,79	1.597,93

**TWIST DRILLS IN METAL BOXES (additional compositions)**
**HSS TWIST DRILLS FOR ALUMINIUM**


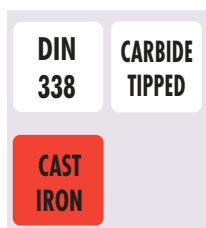
(Ref. BC16 drills)

REFERENCE	D16010	D16011
QUANTITY	19	25
QUALITY	HSS	HSS
CONTENT	Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm
PRICE €	99,07	217,35

**HSSCo "S" TYPE FLUTED TWIST DRILLS**


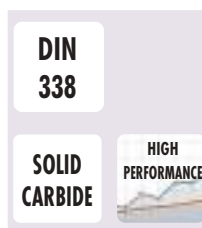
(Ref. BC55 drills)

REFERENCE	D55010	D55011
QUANTITY	18	24
QUALITY	HSSCo	HSSCo
CONTENT	Ø 1,50-10 x 0,50 mm	Ø 1,50-13 x 0,50 mm
PRICE €	202,43	460,96

**CARBIDE TIPPED TWIST DRILLS FOR HARDENED STEELS, CAST IRON, ETC**


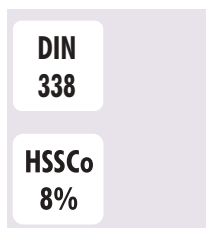
(Ref. BC7 drills)

REFERENCE	DPMD010	DPMD011
QUANTITY	17	23
QUALITY	Carbide tipped	Carbide tipped
CONTENT	Ø 2-10 x 0,50 mm	Ø 2-13 x 0,50 mm
PRICE €	407,21	700,72

**SOLID CARBIDE TWIST DRILLS FOR HARD MATERIALS**


(Ref. BC42 drills)

REFERENCE	D42010	D42011
QUANTITY	17	23
QUALITY	Solid carbide	Solid carbide
CONTENT	Ø 2-10 x 0,50 mm	Ø 2-13 x 0,50 mm
PRICE €	1.114,91	2.524,27

**HSSCo 8% TWIST DRILLS IN METAL BOXES**


(Ref. BC58 drills)

REFERENCE	ADC81	ADC82	D89380
QUANTITY	37	49	19
QUALITY	HSSCo 8%	HSSCo 8%	HSSCo 8%
CONTENT	Ø 1-10 x 0,25 mm	Ø 1-13 x 0,25 mm	Ø 1-10 x 0,50 mm
PRICE €	348,65	818,11	144,03

REFERENCE	DC807	DC817	DC835
QUANTITY	10	23	29
QUALITY	HSSCo 8%	HSSCo 8%	HSSCo 8%
CONTENT	Ø 1-10 x 1 mm	Ø 1-10 x 0,50 mm + PH*	Ø 1-13 x 0,50 mm + PH*
PRICE €	110,20	224,51	441,47

\* Prior holes: From M3 to M12 ( Ø3,30 - Ø4,20 - Ø6,80 - Ø10,20)

**TWIST DRILLS IN METAL BOXES (additional compositions)**

**TWIST DRILLS FOR STAINLESS STEEL**

**DIN 338** **HSSCo 5%** **TiAlN** **INOX Plus**

(Ref. BC50 drills)

REFERENCE	<b>D50010</b>	<b>D50011</b>
QUANTITY	19	25
QUALITY	HSSCo	HSSCo
CONTENT	Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm
PRICE €	352,60	606,35

**LEFT HAND CUT TWIST DRILLS**

**DIN 338** **HSS** 

(Ref. BC15 drills)



REFERENCE	<b>D0010I</b>	<b>D0011I</b>	<b>DR9312I</b>
QUANTITY	19	25	10
QUALITY	HSS	HSS	HSS
CONTENT	Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm	Ø 1-10 x 1 mm
PRICE €	184,04	387,92	91,49

**EMPTY BOXES**

**EMPTY BOXES**

REFERENCE	<b>D0010V</b>	<b>D0011V</b>	<b>AD001V</b>
QUANTITY	19	25	37
CONTENT	Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm	Ø 1-10 x 0,25 mm
PRICE €	19,40	27,06	71,08



REFERENCE	<b>AD002V</b>	<b>D0014V</b>	<b>D0015V</b>	<b>D0022V</b>	<b>D0006V</b>
QUANTITY	49	50	41	81	12
CONTENT	Ø 1-13 x 0,25 mm	Ø 1-5,9 x 0,10 mm	Ø 6-10 x 0,10 mm	Ø 2-10 x 0,10 mm	Ø 2-7x0,50 + 8 mm
PRICE €	82,55	62,96	125,80	241,26	26,32

REFERENCE	<b>D0007V</b>	<b>D0017V</b>	<b>D0035V</b>	<b>DE10V (Stub drills)</b>	<b>DE11V (Stub drills)</b>
QUANTITY	10	23	29	19	25
CONTENT	Ø 1-10 x 1 mm	Ø 1-10 x 0,50 mm+ PH*	Ø 1-13 x 0,50 mm+ PH*	Ø 1-10 x 0,50 mm	Ø 1-13 x 0,50 mm
PRICE €	45,15	52,38	74,08	45,82	55,97

\* Prior holes: From M3 to M12 ( Ø3,30 - Ø4,20 - Ø6,80 - Ø10,20)

**DIN 338 FULLY GROUND TWIST DRILLS IN PLASTIC CASES MICRO DRILLS FOR MODEL MAKING AND MARQUETRY**

**DIN 338**

Ref. DR9120



REFERENCE	<b>DR9120</b>	<b>DC9120</b>	<b>DR9102</b>
QUANTITY	10	10	15
QUALITY	HSS	HSSCo5%	HSS
CONTENT	Ø 1-1,90 x 0,10 mm	Ø 1-1,90 x 0,10 mm	Ø 0,30 - 0,35 - 0,40 - 0,45 - 0,50 - 0,55 - 0,60 - 0,65 - 0,70 - 0,75 - 0,80 - 0,85 - 0,90 - 0,95 - 1
PRICE €	24,43	36,84	49,00

Twist drills for Metal  
Pink Grey



**TWIST DRILLS IN PLASTIC BOXES**

Twist drills for Metal

Grey

Pink

**DIN  
338**
**HSS**


(Ref. BC2 drills)

REFERENCE	DR9314	DR9312	DR9313	DR9311
QUANTITY	6	10	13	19
QUALITY	HSS	HSS	HSS	HSS
CONTENT	Ø 2 - 3 - 4 - 5 - 6 - 8 mm	Ø 1-10 x 1 mm	Ø 2-8 x 0,50 mm	Ø 1-10 x 0,50 mm
PRICE €	18,21	38,77	38,47	67,73

*Plus*


(Ref. BC02 drills)

REFERENCE	DP9314	DP9312	DP9313	DP9311
QUANTITY	6	10	13	19
QUALITY	<i>Plus</i>	<i>Plus</i>	<i>Plus</i>	<i>Plus</i>
CONTENT	Ø 2 - 3 - 4 - 5 - 6 - 8 mm	Ø 1-10 x 1 mm	Ø 2-8 x 0,50 mm	Ø 1-10 x 0,50 mm
PRICE €	19,19	41,98	41,02	74,04

**HSSCo  
5%**


(Ref. BC5 drills)

REFERENCE	DC9314	DC9312	DC9313	DC9311
QUANTITY	6	10	13	19
QUALITY	HSSCo	HSSCo	HSSCo	HSSCo
CONTENT	Ø 2 - 3 - 4 - 5 - 6 - 8 mm	Ø 1-10 x 1 mm	Ø 2-8 x 0,50 mm	Ø 1-10 x 0,50 mm
PRICE €	28,94	62,07	62,53	110,95

**HSS**
**TiN**


(Ref. BC18 drills)

REFERENCE	DT9314	DT9312	DT9313	DT9311
QUANTITY	6	10	13	19
QUALITY	HSS+TiN	HSS+TiN	HSS+TiN	HSS+TiN
CONTENT	Ø 2 - 3 - 4 - 5 - 6 - 8 mm	Ø 1-10 x 1 mm	Ø 2-8 x 0,50 mm	Ø 1-10 x 0,50 mm
PRICE €	19,94	42,47	42,14	74,18

**TWIST DRILLS IN PLASTIC BOXES**

Twist drills for Metal  
Pink Grey

**HSS BRIGHT**



(Ref. BC82 drills)

REFERENCE	<b>D829314</b>	<b>D829312</b>	<b>D829313</b>	<b>D829311</b>
QUANTITY	6	10	13	19
QUALITY	HSS	HSS	HSS	HSS
CONTENT	Ø 2 - 3 - 4 - 5 - 6 - 8 mm	Ø 1-10 x 1 mm	Ø 2-8 x 0,50 mm	Ø 1-10 x 0,50 mm
PRICE €	17,24	36,69	36,40	64,10

**HSSCo 8%**



(Ref. BC58 drills)

REFERENCE	<b>D89314</b>	<b>D89312</b>	<b>D89313</b>	<b>D89311</b>
QUANTITY	6	10	13	19
QUALITY	HSSCo 8%	HSSCo 8%	HSSCo 8%	HSSCo 8%
CONTENT	Ø 2 - 3 - 4 - 5 - 6 - 8 mm	Ø 1-10 x 1 mm	Ø 2-8 x 0,50 mm	Ø 1-10 x 0,50 mm
PRICE €	36,93	78,98	80,95	142,00

**HSSCo 5%**



**HSSCo 5% GOLD**



**HSS TiAlSiN**



(Ref. BC95 drills)

(Ref. BTX drills)

(Ref. TTX drills)

REFERENCE	<b>DC959314</b>	REFERENCE	<b>PTX9314</b>	REFERENCE	<b>PTTX9314</b>
QUANTITY	6	QUANTITY	6	QUANTITY	6
QUALITY	HSSCo 5%	QUALITY	HSSCo 5%	QUALITY	HSS + TiAlSiN
CONTENT	Ø 2 - 3 - 4 - 5 - 6 - 8 mm	CONTENT	Ø 2 - 3 - 4 - 5 - 6 - 8 mm.	CONTENT	Ø 2 - 3 - 4 - 5 - 6 - 8 mm.
PRICE €	29,05	PRICE €	28,79	PRICE €	26,82

**TWIST DRILLS IN ROUND PLASTIC BOXES, 19 PCS**

**DIN 338**

**HSS**



(Ref. BC2 drills)

*Plus*



(Ref. BC02 drills)

**HSSCo 5%**



(Ref. BC5 drills)

**TiN**



(Ref. BC18 drills)

REFERENCE	<b>DR9380</b>	<b>DP9380</b>	<b>DC9380</b>	<b>DT9380</b>
QUANTITY	19	19	19	19
QUALITY	HSS	<i>Plus</i>	HSSCo	HSS+TiN
CONTENT	Ø 1-10 x 0,50 mm	Ø 1-10 x 0,50 mm	Ø 1-10 x 0,50 mm	Ø 1-10 x 0,50 mm
PRICE €	63,52	71,20	105,90	94,12

**MIXED PLASTIC BOXES: METAL, CONCRETE & WOOD WORKING DRILLS**
**STANDARD SERIES**

<b>HSS</b>  (Ref. BC2)				
				<b>CARBIDE TIPPED</b>  (Ref. BW1)
				<b>CV</b>  (Ref. BM)
REFERENCE	<b>EC9330</b>	<b>EC9331</b>	<b>EC9332</b>	
QUANTITY	8	9	9	
QUALITY CONTENT	  $\emptyset$ 4 - 5 - 6 - 8 mmx 2	   $\emptyset$ 4 - 6 - 8 mmx 3	   $\emptyset$ 5 - 6 - 8 mmx 3	
PRICE €	23,38	24,91	25,40	

\* Till end of stock

**PROFESSIONAL SERIES**

<b>HSSCo 5%</b>  (Ref. BC5)					
					<b>CARBIDE TIPPED</b>  (Ref. BW6)
					<b>HSS</b>  (Ref. BMPR)
REFERENCE	<b>M9330</b>	<b>M9331</b>	<b>M9332</b>	<b>M9382</b>	
QUANTITY	8	9	9	18	
QUALITY CONTENT	  $\emptyset$ 4 - 5 - 6 - 8 mmx 2	   $\emptyset$ 4 - 6 - 8 mmx 3	   $\emptyset$ 5 - 6 - 8 mmx 3	   $\emptyset$ 3 - 4 - 5 - 6 - 8 - 10 mmx 3	
PRICE €	40,39	39,66	40,47	79,13*	

\* Till end of stock

**EXTRA PROFESSIONAL SERIES**

<b>HSSCo 5%</b>  (Ref. BC5)					
					<b>CARBIDE TIPPED</b>  (Ref. BW15)
					<b>HSS</b>  (Ref. BMPR)
REFERENCE	<b>P9330</b>	<b>P9331</b>	<b>P9332</b>	<b>P9382</b>	
QUANTITY	8	9	9	18	
QUALITY CONTENT	  $\emptyset$ 4 - 5 - 6 - 8 mmx 2	   $\emptyset$ 4 - 6 - 8 mmx 3	   $\emptyset$ 5 - 6 - 8 mmx 3	   $\emptyset$ 3 - 4 - 5 - 6 - 8 - 10 mmx 3	
PRICE €	59,96*	54,72*	55,74*	111,37*	

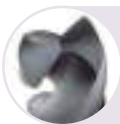
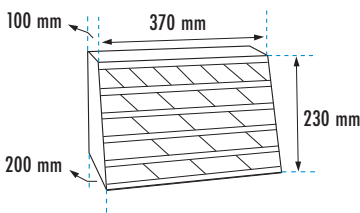
\* Till end of stock



**DISPLAY CABINET FOR TWIST DRILLS DIN 338**

Twist drills for Metal

Grey



Ref. BC2

**DIN 338**

**HSS**



118°



30°  
"N"



**OX**



70  
Kg/mm²



**EXPBROCASBC2**

1.248,83 €

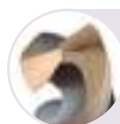


**HSS**

CONTENT 400 DRILLS

BC2 Drills

1,00 10	1,50 10	2,00 20	2,50 20	3,00 50	3,50 30	4,00 40	4,50 20	5,00 40	5,50 10	6,00 30	6,50 10	7,00 10
7,50 10	8,00 20	8,50 10	9,00 10	9,50 10	10,00 10	10,50 5	11,00 5	11,50 5	12,00 5	12,50 5	13,00 5	



Ref. BC02

**DIN 338**

**HSS-G Plus**



118°



30°  
"N"



**OX GOLD**



70  
Kg/mm²



**HSS-G Plus**



CONTENT 316 DRILLS

BC02 Drills

1,00 10	1,50 10	2,00 20	2,50 10	3,00 20	3,50 10	4,00 30	4,50 10	5,00 30	5,50 10	6,00 30	6,50 10	7,00 10
7,50 10	8,00 20	8,50 10	9,00 10	9,50 10	10,00 10	10,50 6	11,00 6	11,50 6	12,00 6	12,50 6	13,00 6	

**EXPBROCASBC02**

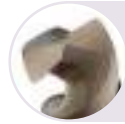
1.331,06 €



**DISPLAY CABINET FOR TWIST DRILLS DIN 338**



**EXPBROCASBC5**  
1.730,53 €



Ref. BC5

**DIN 338**

**HSSCo 5%**



**GOLD**

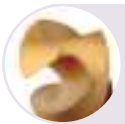
**120**  
Kg/mm<sup>2</sup>



CONTENT 220 DRILLS

BC5 Drills

1,00 10	1,50 10	2,00 10	2,50 10	3,00 10	3,50 10	4,00 10	4,50 10	5,00 10	5,50 10	6,00 10	6,50 10	7,00 10
7,50 10	8,00 10	8,50 10	9,00 10	9,50 10	10,00 10	10,50 5	11,00 5	11,50 5	12,00 5	12,50 5	13,00 5	



Ref. BC18

**DIN 338**

**HSS**



**TiN**



**EXPBROCASBC18**  
1.285,02 €



**TiN**



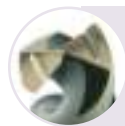
CONTENT 200 DRILLS

BC18 Drills

1,00 10	1,50 10	2,00 10	2,50 10	3,00 10	3,50 10	4,00 10	4,50 10	5,00 10	5,50 10	6,00 10	6,50 10	7,00 10
7,50 10	8,00 10	8,50 5	9,00 5	9,50 5	10,00 5	10,50 5	11,00 5	11,50 5	12,00 5	12,50 5	13,00 5	



**EXPBROCASBC95**  
1.112,51 €



Ref. BC95

**DIN 338**

**HSSCo 5%**



**OX GOLD**

**INOX**



CONTENT 176 DRILLS

BC95 Drills

1,00 10	1,50 10	2,00 10	2,50 10	3,00 10	3,50 10	4,00 10	4,50 10	5,00 10	5,50 10	6,00 10	6,50 10	7,00 10
7,50 10	8,00 10	8,50 5	9,00 5	9,50 5	10,00 5	10,50 1	11,00 1	11,50 1	12,00 1	12,50 1	13,00 1	

**DISPLAY CABINET FOR TWIST DRILLS DIN 338**



Ref. BTX

**DIN 338**

**HSSCo 5%**



**GOLD**

**120 Kg/mm<sup>2</sup>**



**HSSCo 5%**



CONTENT 176 DRILLS

(Ø1-2,5mm) BC5 Drills (Ø3-13mm) BTX Drills

1,00 10	1,50 10	2,00 10	2,50 10	3,00 10	3,50 10	4,00 10	4,50 10	5,00 10	5,50 10	6,00 10	6,50 10	7,00 10
7,50 10	8,00 10	8,50 5	9,00 5	9,50 5	10,00 5	10,50 1	11,00 1	11,50 1	12,00 1	12,50 1	13,00 1	

**EXPBROCASBTX**

100,76 €

**EXPBROCASBTX**

938,72 €



Ref. TK02

**DIN 338**

**HSS**



**Al**



**STEP CUT**



**HSS**



CONTENT 176 DRILLS

TK02 Drills

1,00 10	1,50 10	2,00 10	2,50 10	3,00 10	3,50 10	4,00 10	4,50 10	5,00 10	5,50 10	6,00 10	6,50 10	7,00 10
7,50 10	8,00 10	8,50 5	9,00 5	9,50 5	10,00 5	10,50 1	11,00 1	11,50 1	12,00 1	12,50 1	13,00 1	

**EXPBROCASTK02**

1.674,83 €



Ref. TK05

**DIN 338**

**HSSCo 5%**



**INOX**



**CAST IRON**



**STEP CUT**



**HSSCo 5%**



CONTENT 176 DRILLS

TK05 Drills

1,00 10	1,50 10	2,00 10	2,50 10	3,00 10	3,50 10	4,00 10	4,50 10	5,00 10	5,50 10	6,00 10	6,50 10	7,00 10
7,50 10	8,00 10	8,50 5	9,00 5	9,50 5	10,00 5	10,50 1	11,00 1	11,50 1	12,00 1	12,50 1	13,00 1	

**EXPBROCASTK05**

2.117,98 €



**TWIST DRILLS IN METAL CASE**

**DIN  
338**
**\* 125 DRILLS Ø 1-10 mm x 0,50**

Ø	1	1,50	2	2,50	3	3,50	4	4,50
Units	10	5	10	5	10	5	10	5
	5	5,50	6	6,50	7	7,50	8	8,50
	10	5	10	5	5	5	5	5
	9	9,50	10	= 125 DRILLS				
	5	5	5					



REFERENCE	<b>BC2880</b>	<b>BC02880</b>	<b>BC5880</b>	<b>BC18880</b>	<b>M0880V</b>
QUANTITY	125	125	125	125	250
QUALITY	<b>HSS</b>	<i>Plus</i>	<b>HSSCo 5%</b>	<b>HSS</b> <b>TiN</b>	
CONTENT	Ø 1-10 x 0,50 DETAILED IN*	Ø 1-10 x 0,50 DETAILED IN*	Ø 1-10 x 0,50 DETAILED IN*	Ø 1-10 x 0,50 DETAILED IN*	EMPTY BOX
PRICE €	398,82	447,06	660,18	547,50	154,62


**DIN  
338**
**\* 155 DRILLS Ø 1-13 mm x 0,50**

Ø	1	1,50	2	2,50	3	3,50	4	4,50	5,10	5
Units	10	5	10	5	10	5	10			
	5,50	6	6,50	7	7,50	8	8,50	9	9,50	
	5	10	5	5	5	5	5	5	5	
	10	10,50	11	11,50	12	12,50	13	= 155 DRILLS		
	5	5	5	5	5	5	5			



REFERENCE	<b>BC2881</b>	<b>BC02881</b>	<b>BC5881</b>	<b>BC18881</b>	<b>M0881V</b>
QUANTITY	155	155	155	155	290
QUALITY	<b>HSS</b>	<i>Plus</i>	<b>HSSCo 5%</b>	<b>HSS</b> <b>TiN</b>	
CONTENT	Ø 1-10 x 0,50 DETAILED IN*	Ø 1-10 x 0,50 DETAILED IN*	Ø 1-10 x 0,50 DETAILED IN*	Ø 1-10 x 0,50 DETAILED IN*	EMPTY BOX
PRICE €	801,07	890,36	1.421,56	1.115,43	358,04

**TAPER SHANK DRILLS IN METAL CASE**
**DIN  
345**
**HSS**


(Ref. BC11 drills)

REFERENCE	<b>MBC11-1</b>	<b>MBC11-2</b>
QUANTITY	10	10
QUALITY	HSS	HSS
CONTENT	Ø 14 - 15 - 16 - 17 - 18 - 19 - 20 - 21 - 22 - 23	Ø 14 - 16 - 18 - 20 - 22 - 24 - 25 - 26 - 28 - 30
PRICE €	701,45	978,58

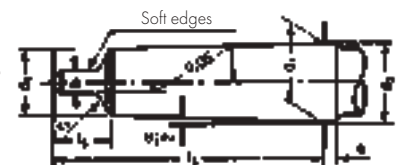
**CUTTING SPEED AND FEED CHART FOR METAL DRILLING**

			DIAMETER Ø (mm)											
			2	3	5	7	10	12	15	18	20	22	25	30
STEEL 70 kg/mm <sup>2</sup> BC2	C/S 25 m/min	RPM	3979	2653	1592	1137	796	663	531	442	398	362	318	265
		mm / rev	0,04	0,06	0,08	0,15	0,20	0,26	0,30	0,33	0,34	0,35	0,35	0,39
		S (mm / min)	159	159	127	171	159	172	159	146	135	127	111	103
HARDENED STEEL 120 kg/mm <sup>2</sup> BC5	C/S 13 m/min	RPM	2069	1379	828	591	414	345	276	230	207	188	166	138
		mm / rev	0,03	0,045	0,06	0,10	0,15	0,18	0,20	0,22	0,23	0,25	0,25	0,28
		S (mm / min)	62	62	50	59	62	60	55	51	48	47	41	39
STAINLESS STEEL BC50	C/S 11 m/min	RPM	1751	1167	700	500	350	292	233	195	175	159	140	117
		mm / rev	0,02	0,05	0,08	0,14	0,19	0,23	0,25	0,27	0,28	0,30	0,31	0,33
		S (mm / min)	35	58	56	70	67	67	58	53	49	48	43	39
ALUMINIUM BC16	C/S 50 m/min	RPM	7958	5305	3183	2274	1592	1326	1061	884	796	723	637	531
		mm / rev	0,03	0,06	0,08	0,16	0,20	0,23	0,25	0,28	0,29	0,30	0,30	0,36
		S (mm / min)	239	318	255	364	318	305	265	248	231	217	191	191
TITANIUM BC42	C/S 18 m/min	RPM	5570	3714	2228	1592	1114	928	743	619	557	506	446	371
		mm / rev	0,02	0,03	0,03	0,05	0,08	0,08	0,12	0,15				
		S (mm / min)	111	111	67	80	84	74	89	93				
CAST IRON BC7	C/S 25 m/min	RPM	3979	2653	1592	1137	796	663	531	442	398	362	318	265
		mm / rev	0,05	0,08	0,10	0,20	0,27	0,31	0,37	0,41	0,42	0,42	0,42	0,45
		S (mm / min)	199	199	159	227	215	206	196	181	167	152	134	119
BRASS BC66	C/S 50 m/min	RPM	7958	5305	3183	2274	1592	1326	1061	884	796	723	637	531
		mm / rev	0,04	0,07	0,08	0,17	0,21	0,25	0,28	0,28	0,30	0,30	0,33	0,40
		S (mm / min)	318	345	239	387	334	332	297	248	239	217	210	212
PLASTIC, CARBON FIBER BC7	C/S 12 m/min	RPM	1911	1274	764	546	382	318	255	212	191	174	153	127
		mm / rev	0,02	0,03	0,03	0,05	0,08	0,08	0,12	0,15				
		S (mm / min)	38	38	23	27	29	25	31	32				
NI ALLOYS BC42	C/S 30 m/min	RPM	4775	3183	1910	1364	955	796	637	531	477	434	382	318
		mm / rev	0,015	0,02	0,02	0,03	0,04	0,06	0,07	0,08	0,11	0,12	0,15	
		S (mm / min)	72	64	42	34	38	48	45	42	53	52	57	
CIRCUIT BOARDS BC79	25	RPM	3979	-	-	-	-	-	-	-	-	-	-	

**REMARKS:**

- If we know the drill diameter and workpiece material, the speed and feed are quickly found.  
Example;  
Material: Aluminium                      RPM=2274 RPM  
Ø drill: 7 mm.                                → S=364 mm/min
- After several holes you must adjust the speed and feed again.

**TECHNICAL INFORMATION ABOUT DIN 228D MORSE TAPER SHANK DIMENSIONS**



MORSE TAPER	Thinning	Ø 2	α	b h13	d <sub>1</sub>	d <sub>2</sub> Ø max	d <sub>6</sub> Ø min	d <sub>7</sub> Dimen. máx.	l <sub>3</sub> -1	l <sub>4</sub> Dimen. máx.	l <sub>5</sub> Dimen. máx.	r <sub>1</sub>	r <sub>2</sub>
0	1:19,212=0,05205	1°29' 27"	3,0	3,9	9,045	9,2	6,1	6,0	56,5	59,5	10,5	4	1,0
1	1:20,047=0,04988	1°25' 43"	3,5	5,2	12,065	12,2	9,0	8,7	62,0	65,5	13,5	5	1,2
2	1:20,020=0,04995	1°25' 50"	5,0	6,3	17,780	18,0	14,0	13,5	75,0	80,0	16,0	6	1,6
3	1:19,922=0,05020	1°26' 16"	5,0	7,0	23,825	24,1	19,1	18,5	94,0	99,0	20,0	7	2,0
4	1:19,254=0,05194	1°29' 15"	6,5	11,9	31,267	31,6	25,2	24,5	117,5	124,0	24,0	8	2,5
5	1:19,002=0,05263	1°30' 26"	6,5	15,9	44,399	44,7	36,5	35,7	149,5	156,0	29,0	10	3,0
6	1:19,180=0,05214	1°29' 36"	8,0	19,0	63,348	63,8	52,4	51,0	210,0	218,0	40,0	10	4,0





## ▶▶ DISPLAY CABINET FOR METAL DRILL BITS

The perfect display for your high rotation drills.

Transparent front and back covers, allowing a perfect visualization of the available drills, with more order and better presentation.

The hinged back lid makes it easy to fill the compartments from the counter.

Front and rear keyed security lock, improving security and easy access to the drills.

Descriptive images of the contents on the side panels to attract the public's attention.



Ref. EXPBROCASBC5



Ref. EXPBROCASBC2



## ▶▶ LARGE RANGE OF DRILL BOXES

### ▶▶ Blue Plastic

Light, rigid and robust

Transparent window

Reinforced plastic and shock-resistant rubber



Ref. P6010



Ref. PT6011

Ref. PP6010



Ref. PC011

### ▶▶ Black Plastic

Light and easy to use

Reinforced plastic with rubber

High resistance and durability



### ▶▶ Metal Classic

High resistance metal drill box



# CUTTING FLUIDS



**BLUE-MASTER<sup>®</sup>**  
*by celesa*

CUTTING TECHNOLOGIES



**THE REFERENCE IN ENGINEERING OF CUTTING FLUIDS**

UNIVERSAL FLUID.  
FOR MACHINING ALL KIND OF MATERIALS  
EXTRA

SAFETY DATA SHEET AVAILABLE COMPLIANT WITH REACH REGULATION.

**GENERAL PURPOSE**



Ref. AC00250      Ref. AC00300AERO      Ref. AC00500      Ref. AC01000

CUT MAGIC EXTRA, is the perfect solution for the lubrication of machining processes in any material  
Its characteristics and properties are designed to allow the highest lifetime of the cutting tools



EXP-AC00250  
8 U. x 250ml.  
**164,72 €**

200 x 180 x 240mm



Ref. AC05000

Ref. AC10000

EXP-AC00300AERO  
8 U.  
**280,92 €**

200 x 205 x 300mm

EXTRA-THICK FLUID,  
SPECIALLY DESIGNED FOR STAINLESS STEEL, TITANIUM, DUPLEX, HARDENED STEEL OVER 44HRC AND HARDOX 450/600.

XTHICK

SAFETY DATA SHEET AVAILABLE COMPLIANT WITH REACH REGULATION.

		PACKAGING UNIT	XTHICK €
ACXT00250	0,250 l.	1 Bottle	23,62
ACXT00500	0,500 l.	1 Bottle	41,18
ACXT01000	1,000 l.	1 Bottle	71,50
ACXT05000	5,000 l.	1 Can	258,79



EXP-ACXT00250  
8 U. x 250ml.  
**188,97 €**

200 x 180 x 240mm



Ref. ACXT00250

Ref. ACXT00500

Ref. ACXT01000

Ref. ACXT05000

\* All the range of cutting fluids Cut Magic is bio-degradable, in compliance with the REACH REGULATION n° 1907/2006.

Cut Magic  
Pink



**THE REFERENCE IN ENGINEERING OF CUTTING FLUIDS**

EXCLUSIVE FOR ALUMINIUM, MAGNESIUM AND ITS CASTS  
INSTANTANEOUS EVAPORATION WITHOUT LEAVING MARKS

ALUMINIUM

SAFETY DATA SHEET AVAILABLE COMPLIANT WITH REACH REGULATION.



Ref. ACAL00250

Ref. ACAL00500

Ref. ACAL01000



		PACKAGING UNIT	ALU €
ACAL00250	0,250 l.	1 Bottle	23,18
ACAL00500	0,500 l.	1 Bottle	40,34
ACAL01000	1,000 l.	1 Bottle	66,99

FOAMY UNIVERSAL CUTTING FLUID MAXIMUM ADHERENCE TO THE TOOL  
FOR ALL KIND OF MATERIALS

EXTRA FOAMY

SAFETY DATA SHEET AVAILABLE COMPLIANT WITH REACH REGULATION.



Ref. ACF00400

		PACKAGING UNIT	FOAMY €
ACF00400	0,400 l.	1 Spray Can	53,45

WATER SOLUBLE MINERAL OIL FOR AN OPTIMUM COOLING  
IN ANY TYPE OF MACHINING PROCESS

SAFETY DATA SHEET AVAILABLE COMPLIANT WITH REACH REGULATION.

When mixed with water, it forms a high stability emulsion and very good corrosion protection.  
It is particularly resistant to microorganisms and provides long lifetime with very low maintenance

CONCENTRATION: Machining & Grinding process: 4-7%



		PACKAGING UNIT	AST5000 €
AST5000	5 l.	1 Can	105,44

\* All the range of cutting fluids Cut Magic is bio-degradable, in compliance with the REACH REGULATION n° 1907/2006.



**THE REFERENCE IN ENGINEERING OF CUTTING FLUIDS**

PASTY, SUITABLE FOR ANY TOOL WITH MAXIMUM ADHERENCE OF MATERIALS

PASTY

SAFETY DATA SHEET AVAILABLE COMPLIANT WITH REACH REGULATION.



Ref. ACPU00250



Ref. ACPU00750

			PASTY
		PACKAGING UNIT	€
ACPU00250	0,250 l.	1 Can	28,92
ACPU00750	0,750 l.	1 Can	43,76

TAKE ADVANTAGE OF THE TWISTY BAR FOR SAWING PROCESS. IN ANY TYPE OF MATERIAL

TWISTY

SAFETY DATA SHEET AVAILABLE COMPLIANT WITH REACH REGULATION.



Ref. ACPS00300

			TWISTY
		PACKAGING UNIT	€
ACPS00300	0,300 l.	1 Bar	45,06

SPECIALLY DESIGNED TO PROTECT THE EQUIPMENT FROM WELDING PROJECTIONS. SILICONE-FREE

EPW0400

SAFETY DATA SHEET AVAILABLE COMPLIANT WITH REACH REGULATION.



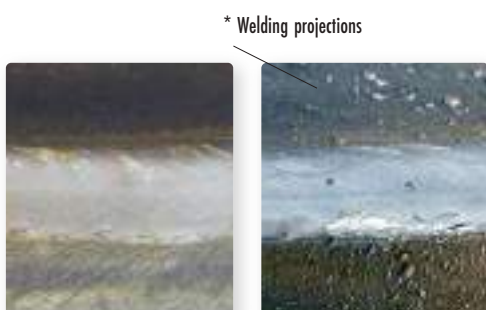
Ref. EPW0400

			SPATTER TOOL MAGIC
		PACKAGING UNIT	€
EPW0400	0,400 l.	1 Spray Can	29,99

DESIGNED TO PROTECT THE WORKPIECES FROM PROJECTIONS, SPITTINGS... SILICONE-FREE

PW0400

SAFETY DATA SHEET AVAILABLE COMPLIANT WITH REACH REGULATION.



Ref. PW0400

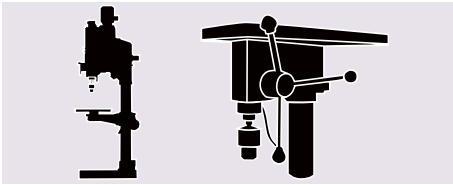
			SPATTER MAGIC
		PACKAGING UNIT	€
PW0400	0,400 l.	1 Spray Can	16,22

# DRILL CHUCKS



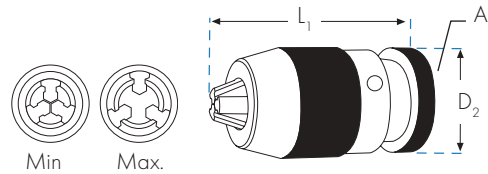
**BLUE-MASTER<sup>®</sup>**  
*by celesa*

CUTTING TECHNOLOGIES

**INDUSTRIAL CHUCKS FOR COLUMN OR CNC DRILLING MACHINE**

**PREC.  
<0,05**

Ref. DC1

HIGH PRECISION

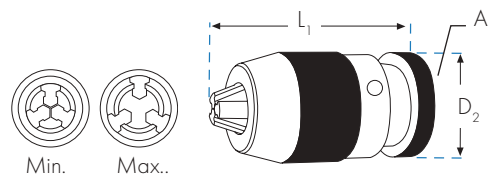


DC1						
	PRECISION mm	Min.-Max. mm	A	D <sub>2</sub> mm	L <sub>1</sub> mm	€
DC1-16-B16	<0,05	1-16	B16	53	119	173,92
DC1-20-B22	<0,05	5-20	B22	58	130	200,12

**PREC.  
<0,12**

Ref. DC2

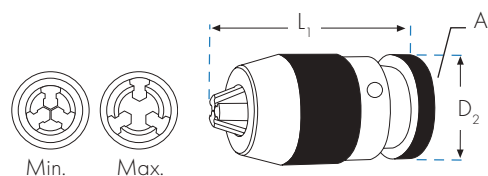
INDUSTRIAL



DC2						
	PRECISION mm	Min.-Max. mm	A	D <sub>2</sub> mm	L <sub>1</sub> mm	€
DC2-16-B18	<0,12	1-16	B18	53	119	147,56

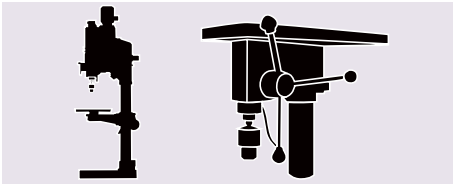
**PREC.  
<0,20**

Ref. DC3

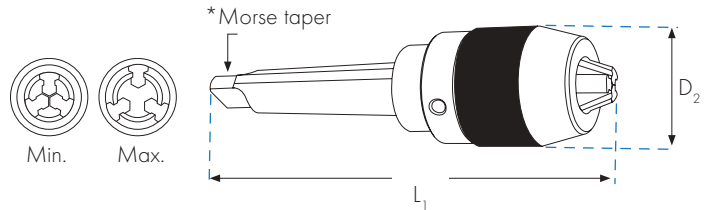
INDUSTRIAL  
LIGHT-WEIGHT

DC3						
	PRECISION mm	Min.-Max. mm	A	D <sub>2</sub> mm	L <sub>1</sub> mm	€
DC3-13-B16	<0,20	1-13	B16	43	94	79,51
DC3-13-3/8	<0,20	1-13	3/8-24 UNF	43	94	79,51
DC3-13-1/2	<0,20	1-13	1/2-20 UNF	43	94	79,51
DC3-16-B16	<0,20	1-16	B16	48	119	123,41
DC3-16-B18	<0,20	1-16	B18	48	119	123,41

**INDUSTRIAL TAPER SHANK CHUCKS FOR COLUMN OR CNC DRILLING MACHINE**

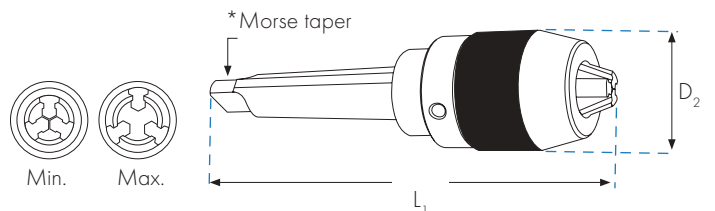


**PREC. <0,05** Ref. DC10 **HIGH PRECISION**



DC10						
	PRECISION mm	Min.-Max. mm	MT*	D2 mm	L1 mm	€
DC10-13-CM3	<0,05	1-13	MT3	51	192	256,53
DC10-13-CM4	<0,05	1-13	MT4	51	218	259,02
DC10-16-CM3	<0,05	1-16	MT3	56	207	262,29
DC10-16-CM4	<0,05	1-16	MT4	56	232	267,04

**PREC. <0,12** Ref. DC11 **INDUSTRIAL**



DC11						
	PRECISION mm	Min.-Max. mm	MT*	D2 mm	L1 mm	€
DC11-13-CM2	<0,12	1-13	MT2	51	174	154,90
DC11-13-CM3	<0,12	1-13	MT3	51	192	154,90
DC11-13-CM4	<0,12	1-13	MT4	51	218	154,90
DC11-16-CM3	<0,12	1-16	MT3	56	207	181,62

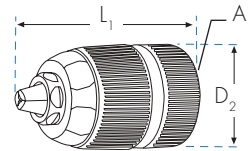
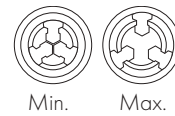


**PROFESSIONAL AUTO-LOCK DRILL CHUCKS**
**<950W**

Ref. DC4



- Auto-lock
- Plastic sleeve.
- Rotary and hammer mode drilling.



						DC4
	W	Min.-Max. mm	A	D2 mm	L1 mm	€
DC4-13-1/2	<950	1,5-13	1/2-20 UNF	43	75	36,87
DC4-13-1/2-SDS	<950	1,5-13	1/2-20 UNF	43	75	42,53

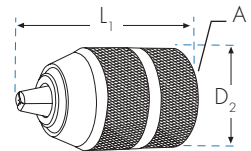
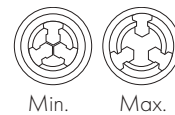
Ref. DC4-13-1/2-SDS

**<1050W**

Ref. DC5



- Auto-lock
- Metal sleeve
- High power
- Special jaws
- Rotary and hammer mode drilling.



						DC5
	W	Min.-Max. mm	A	D2 mm	L1 mm	€
DC5-13-1/2	<1050	1,5-13	1/2-20 UNF	43	75	48,63
DC5-13-SDS	<1050	1,5-13	1/2-20 UNF	43	75	56,17

Ref. DC5-13-SDS

**<950W**

Ref. DC13



- Locking by tightening softly the drill chuck with the hand while spinning
- Designed for light power drill
- Plastic sleeve.



						DC13
	W	Min.-Max. mm	A	D2 mm	L1 mm	€
DC13-10-1/2	<950W	0,8-10	1/2-20 UNF	40	65	12,38

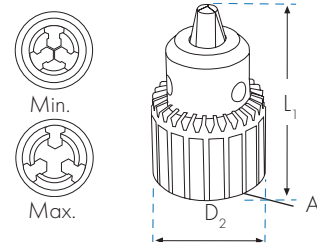
Ref. DC13-10-1/2

**PROFESSIONAL KEY CHUCKS**

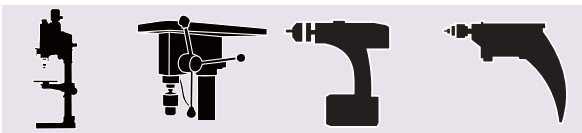


Ref. DC6

- Rotary and hammer mode drilling.
- Key included.

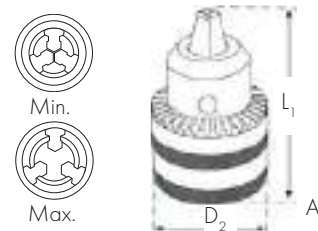


	Min.-Max. mm	A	D <sub>2</sub> mm	L <sub>1</sub> mm	DC6 €
DC6-06-B10	0,5-6,5	B10	31	50	36,98
DC6-06-3/8	0,5-6,5	3/8-24 UNF	31	50	36,98
DC6-10-1/2	1-10	1/2-20 UNF	37	60	28,96
DC6-13-B12	1-13	B12	46	78	37,87
DC6-13-3/8	1-13	3/8-24 UNF	46	78	37,87
DC6-16-B16	1-16	B16	57	95	42,33
DC6-16-B18	1-16	B18	57	95	42,33
DC6-16-1/2	1-16	1/2-20 UNF	57	95	42,33
DC6-19-B22	5-20	B22	68	115	57,92



Ref. DC7

- Rotary and hammer mode drilling.
- Key included.



	Min.-Max. mm	A	D <sub>2</sub> mm	L <sub>1</sub> mm	DC7 €
DC7-06-B10	0,6-6,5	B10	30	50	15,88
DC7-06-3/8	0,6-6,5	3/8-24 UNF	30	50	15,88
DC7-10-1/2	1,5-10	1/2-20 UNF	33	59	14,56
DC7-13-B12	1,5-13	B12	42	70	18,45
DC7-13-B16	1,5-13	B16	42	70	18,45
DC7-13-3/8	1,5-13	3/8-24 UNF	42	70	18,45
DC7-13-1/2	1,5-13	1/2-20 UNF	42	70	18,45
DC7-13-SDS	1,5-13	1/2-20 UNF	42	70	19,41
DC7-16-1/2	3-16	1/2-20 UNF	51	87	23,30
DC7-16-5/8	3-16	5/8-16 UN	51	87	23,30

Ref. DC7-13-SDS

• For spare keys look at page 126.

## DRILL CHUCK WITH FLEXIBLE EXTENSION

Ref. DC15-001

- 1050 mm length flexible extension
- Ø 1 to 6 mm auto-lock drill chuck.
- Max working speed: 6000 rpm.



	Min.-Max. mm	D <sub>2</sub> mm	L <sub>1</sub> mm	€
DC15-001	1-6	30	1050	34,13

## 90° ANGLE DRILL CHUCK

Ref. DC15-002

- For areas with limited access.
- Drill always in rotary mode.
- Ø 1 to 10 mm auto-lock drill chuck.
- Lightweight. For left or right-handed drilling.



	Min.-Max. mm	D <sub>2</sub> mm	α	€
DC15-002	1-10	41	90°	19,98

**PROFESSIONAL DRILL STAND**

- Auto return feeding handle (it comes back to original position quickly, easily and without any extra effort).
- Drilling depth calibrated ruler, 60 mm drilling capacity.
- Drilling power tool holder with Ø43/38mm. Robust column with Ø40mm.
- Die cast base with guides for easy clamping of workpiece, and holes for installation of stand in any workbench.
- Precise and smooth drilling of round or flat workpieces.

Ref. STE99

**43/38  
mm**

**60  
mm**

**510  
mm**

				STE99
	Ø Clamping mm	Drilling Depth mm	Height mm	€
STE99	43/38	60	510	64,80





## MACHINE AND MANUAL MINI DRILL CHUCKS

### MACHINE MINI-DRILL CHUCK



P28

Includes 3 jaws:

- From 0 to 1 mm

- From 1 to 2 mm

- From 0,5 to 1,5 mm

15,81 €

### HEX. SHANK MINI DRILL CHUCK



P29

- 1/4 Hex. Shank

- From 0,6 to 6,0 mm

17,94 €

## ACCESSORIES FOR DRILL CHUCKS

### DRILL CHUCK KEYS



	Min.-Max. mm	∅ mm	DC €
DC-10	1 - 10	6	4,30
DC-13	1 - 13	6	5,25
DC-16	1 - 16	8	6,53
DC-20	5 - 20	9	11,59

### SDS-PLUS ADAPTER



	Thread	DC €
DC -3/8	3/8 - 24 UNF	14,57
DC -1/2	1/2 - 20 UNF	14,57

### 1/4" HEX. ADAPTER



	Shank	Thread	DC-01 €
DC-01	1/4" Hex.	3/8 - 24 UNF	8,43

**DRILLS AND DRILL CHUCK ACCESSORIES**

**REDUCTION SLEEVES**

**DIN 2185**



MORSE TAPER		L <sub>1</sub> mm	CR	
EXT.	INT.		€	
1	0	80	23,43	
2	1	92	23,11	
3	1	99	31,56	
3	2	112	32,16	
4	1	124	48,59	
4	2	124	45,66	
4	3	140	45,66	

MORSE TAPER		L <sub>1</sub> mm	CR	
EXT.	INT.		€	
5	1	156	83,64	
5	2	156	76,34	
5	3	156	76,34	
5	4	171	77,94	
6	3	218	146,22	
6	4	218	165,91	
6	5	218	165,91	

**INCREASE SOCKET**

**DIN 2187**



MORSE TAPER		L <sub>1</sub> mm	D <sub>1</sub> mm	CA	
EXT.	INT.			€	
1	2	160	30	48,53	
2	3	196	36	65,98	
3	4	240	48	111,27	
4	5	300	63	186,77	
5	6	415	80	524,89	

**EXTENSION REDUCING SLEEVES**

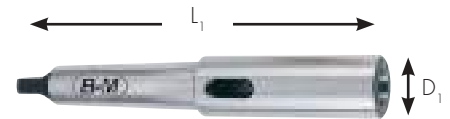
**DIN 2187**



MORSE TAPER		L <sub>1</sub> mm	CA	
EXT.	INT.		€	
2	1	160	32,65	
3	1	175	45,42	
3	2	194	49,02	
4	1	200	68,76	
4	2	215	67,21	
4	3	240	70,32	
5	1	232	167,04	

MORSE TAPER		L <sub>1</sub> mm	CA	
EXT.	INT.		€	
5	2	247	151,86	
5	3	268	133,83	
5	4	300	151,26	
6	3	330	345,09	
6	4	355	345,09	
6	5	390	347,65	

**EXTENSION SLEEVES**



MORSE TAPER		L <sub>1</sub> mm	D <sub>1</sub> mm	CA	
EXT.	INT.			€	
1	1	145	20	31,76	
2	2	175	30	46,20	
3	3	215	36	69,98	
4	4	265	48	127,47	
5	5	335	63	240,12	
6	6	470	85	551,13	

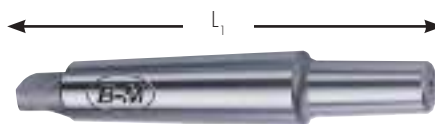
**TAPER DRILL CHUCK ARBOR**

**DIN 228**

\* MORSE TAPER

**DIN 238**

ARBOR



MT*	ARBOR	L <sub>1</sub> mm	CM	
			€	
1	B10	86	13,91	
1	B12	89	10,45	
1	B16	99	10,45	
1	B18	107	11,98	
2	B10	105	16,63	
2	B12	106	12,70	
2	B16	112	12,70	
2	B18	119	12,70	
2	B22	130	25,03	
3	B12	127	19,12	
3	B16	134	15,47	
3	B18	140	15,47	

MT*	ARBOR	L <sub>1</sub> mm	CM	
			€	
3	B22	147	26,04	
3	B24	157	38,41	
4	B16	158	23,26	
4	B18	166	23,88	
4	B22	176	42,95	
4	B24	186	43,44	
5	B16	193	84,24	
5	B18	200	84,24	
5	B22	208	87,87	
5	B24	221	95,46	
6	B22	240	179,50	

**HOLDING-PIN EXTRACTOR B16 AND B18 FOR DRILL CHUCK CONES**



CMEXT

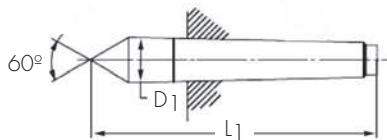
46,76 €

**DRILLS AND DRILL CHUCKS ACCESSORIES**
**DRILL DRIFTS**
**DIN  
317**

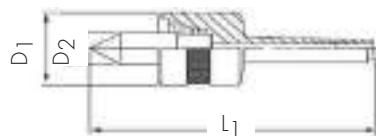

CE			
Nº	USEFULL FOR MT	L <sub>1</sub> mm	€
0	0	90	13,90
1	1 / 2	140	16,43
3	3	190	21,69
4	4	225	29,51
5	5 / 6	265	47,92

**DIN  
228**


CMR				CMR			
	MORSE TAPER	A	€		MORSE TAPER	A	€
CMR1-3/8	1	3/8-24h	20,52	CMR2-5/8	2	5/8-16h	20,52
CMR1-1/2	1	1/2-20h	20,52	CMR3-3/8	3	3/8-24h	27,77
CMR2-3/8	2	3/8-24h	20,52	CMR3-1/2	3	1/2-20h	27,77
CMR2-1/2	2	1/2-20h	20,52	CMR3-5/8	3	5/8-16h	27,77

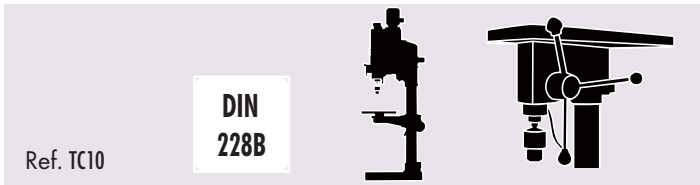
**ACCESSORIES**
**LATHE CENTER**


CPC				CPC..MD	
	D <sub>1</sub> mm	L <sub>1</sub> mm	MT* INT.	SOLID CARBIDE	€
CPCM1	12	80	1		
CPCM2	18	100	2	CPCM2-MD	57,58
CPCM3	24	125	3	CPCM3-MD	78,58
CPCM4	31	160	4	CPCM4-MD	95,84
CPCM5	44	200	5	CPCM5-MD	162,93
CPCM6	63	270	6		

**LIVE CENTER**


PGC					
	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	MT*	€
PGCM1	34	18	120	1	144,23
PGCM2	50	21	148	2	160,86
PGCM3	60	24	185	3	216,26
PGCM4	63	30	220	4	256,31
PGCM5	75	44	260	5	370,45

**TAP HOLDERS**



Ref. TC10

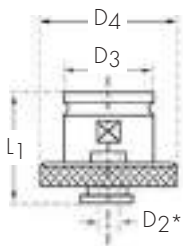
**DIN  
228B**

- With longitudinal compensation in compression and traction
- Taper Shank

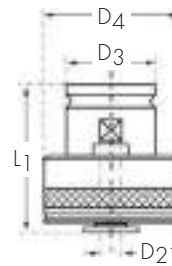
TC10						
	D1 mm	D3 mm	L1 mm	L2 mm	MORSE TAPER	€
TC10-19-CM2	36	19	122	47	2	307,14
TC10-19-CM3	36	19	141	47	3	392,42
TC10-31-CM3	53	31	165	71	3	504,96
TC10-31-CM4	53	31	189	72	4	562,67
TC10-48-CM4	78	48	222	105	4	851,21
TC10-48-CM5	78	48	255	106	5	908,92



**TAP HOLDER WITHOUT CLUTCH**



**TAP HOLDER WITH CLUTCH**



TC15					
	D2 mm	D3 mm	L1 mm	D4 mm	€
TC15-19-035	3,5	19	28	30	41,13
TC15-19-040	4,0	19	28	30	41,13
TC15-19-045	4,5	19	28	30	41,13
TC15-19-060	6,0	19	28	30	41,13
TC15-19-070	7,0	19	28	30	41,13
TC15-19-080	8,0	19	28	30	41,13
TC15-19-090	9,0	19	28	30	41,13
TC15-19-100	10,0	19	28	30	41,13
TC15-31-070	7,0	31	46	48	57,74
TC15-31-080	8,0	31	46	48	57,74
TC15-31-090	9,0	31	46	48	57,74
TC15-31-100	10,0	31	46	48	57,74
TC15-31-110	11,0	31	46	48	57,74
TC15-31-120	12,0	31	46	48	57,74
TC15-31-140	14,0	31	46	48	57,74
TC15-31-160	16,0	31	46	48	57,74
TC15-48-110	11,0	48	69	70	152,98
TC15-48-120	12,0	48	69	70	152,98
TC15-48-140	14,0	48	69	70	152,98
TC15-48-160	16,0	48	69	70	152,98
TC15-48-180	18,0	48	69	70	152,98
TC15-48-200	20,0	48	69	70	152,98
TC15-48-220	22,0	48	69	70	152,98
TC15-48-250	25,0	48	69	70	152,98
TC15-48-280	28,0	48	69	70	152,98

TC16					
	D2 mm	D3 mm	L1 mm	D4 mm	€
TC16-19-035	3,5	19	46	32	98,71
TC16-19-040	4,0	19	46	32	98,71
TC16-19-045	4,5	19	46	32	98,71
TC16-19-060	6,0	19	46	32	98,71
TC16-19-070	7,0	19	46	32	98,71
TC16-19-080	8,0	19	46	32	98,71
TC16-19-090	9,0	19	46	32	98,71
TC16-19-100	10,0	19	46	32	98,71
TC16-31-070	7,0	31	69	50	125,02
TC16-31-080	8,0	31	69	50	125,02
TC16-31-090	9,0	31	69	50	125,02
TC16-31-100	10,0	31	69	50	125,02
TC16-31-110	11,0	31	69	50	125,02
TC16-31-120	12,0	31	69	50	125,02
TC16-31-140	14,0	31	69	50	125,02
TC16-31-160	16,0	31	69	50	125,02
TC16-48-110	11,0	48	100	70	276,79
TC16-48-120	12,0	48	100	70	276,79
TC16-48-140	14,0	48	100	70	276,79
TC16-48-160	16,0	48	100	70	276,79
TC16-48-180	18,0	48	100	70	276,79
TC16-48-200	20,0	48	100	70	276,79
TC16-48-220	22,0	48	100	70	276,79
TC16-48-250	25,0	48	100	70	276,79
TC16-48-280	28,0	48	100	70	276,79

\* D2: Ø of the shank of the tap  
 \* To get information about the Ø of the shank of the tap please consult pag 130.



**TAPS SUITABLES FOR TAP HOLDER WITH/WITHOUT CLUTCH**
**D2 mm.**

3,5	4	4,5	6	7	8	9	10	11
M3x0,50R	M3,5x0,60R	M4x0,50R	M4,5x0,50R	M9x1,00D	M8x1,25R	M9x1,25R	M10x1,50R	M13x0,75D
M3x0,60R	M3,5x0,75R	M4x0,70R	M4,5x0,75R	M9x1,25D	M11x0,75D	M12x0,75D		M13x1,00D
M5x0,50D		M4x0,75R	M5x0,50R	M10x0,50D	M11x1,00D	M12x1,00D		M13x1,25D
M5x0,75D		M4x0,80R	M5x0,75R	M10x0,75D	M11x1,25D	M12x1,25D		M13x1,50D
M5x0,80D		M6x0,50D	M5x0,80R	M10x1,00D	M11x1,50D	M12x1,50D		M13x1,75D
M5x0,90D		M6x0,75D	M5x0,90R	M10x1,25D		M12x1,75D		M14x0,75D
		M6x1,00D	M5x1,00R	M10x1,50D				M14x1,00D
			M5,5x0,90R					M14x1,25D
			M6x0,50R					M14x1,50D
			M6x0,75R					M14x2,00D
			M6x1,00R					
			M6x1,25R					
			M8x0,50D					
			M8x0,75D					
			M8x1,00D					
			M8x1,25D					
			M8x1,50D					

**D2 mm.**

12	14	16	18	20	22	25	28
M15x1,00D	M18x1,00D	M20x1,00D	M22x1,00D	M27x1,00D	M30x1,00D	M33x1,00D	M34x1,50D
M15x1,25D	M18x1,25D	M20x1,25D	M22x1,25D	M27x1,50D	M30x1,50D	M33x1,50D	M34x2,00D
M15x1,50D	M18x1,50D	M20x1,50D	M22x1,50D	M27x2,00D	M30x2,00D	M33x2,00D	M35x1,50D
M15x2,00D	M18x2,00D	M20x2,00D	M22x2,00D	M27x3,00D	M30x3,00D	M33x3,50D	M35x2,00D
M16x1,00D	M18x2,50D	M20x2,50D	M22x2,50D	M28x1,00D	M30x3,50D		M36x1,50D
M16x1,25D	M19x1,00D	M21x1,00D	M23x1,00D	M28x1,50D	M32x1,00D		M36x2,00D
M16x1,50D	M19x1,25D	M21x1,25D	M23x1,50D	M28x2,00D	M32x1,50D		M36x3,00D
M16x2,00D	M19x1,50D	M21x1,50D	M24x1,00D		M32x2,00D		M36x4,00D
M17x1,00D	M19x2,00D		M24x1,25D				M38x1,50D
M17x1,25D			M24x1,50D				M38x2,00D
M17x1,50D			M24x2,00D				
			M24x3,00D				
			M25x1,00D				
			M25x1,25D				
			M25x1,50D				
			M25x2,00D				
			M26x1,00D				
			M26x1,50D				
			M26x2,00D				

- \* D2: Ø of the shank of the tap
- \* Chart is for taps DIN 371/374/DIN376
- \* R: Reinforced
- \* D: Straight

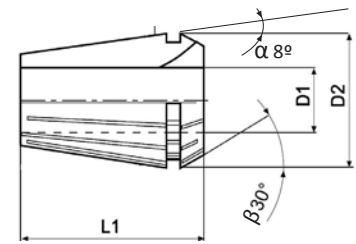
**PRECISION COLLET**

Ref. ER8

**TYPE ER**      **DIN 6499-B**

Collets to be used in cutting tools with plain straight shank.

D2: 8,5      α: 8°  
L1: 13,5      β: 30°

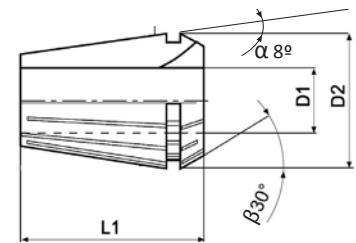


ER8					
	EXC 0,01 INDUSTRIAL		EXC 0,005 HIGH PRECISION		
	Capacity D1	€		Capacity D1	€
ER8-1	0,5-1,0	50,47	ER8-1MICRO	0,5-1,0	-
ER8-1,5	1,0-1,5	50,47	ER8-1,5MICRO	1,0-1,5	-
ER8-2	1,5-2,0	43,25	ER8-2MICRO	1,5-2,0	-
ER8-2,5	2,0-2,5	43,25	ER8-2,5MICRO	2,0-2,5	-
ER8-3	2,5-3,0	37,97	ER8-3MICRO	2,5-3,0	-
ER8-3,5	3,0-3,5	37,97	ER8-3,5MICRO	3,0-3,5	-
ER8-4	3,5-4,0	37,97	ER8-4MICRO	3,5-4,0	-
ER8-4,5	4,0-4,5	37,97	ER8-4,5MICRO	4,0-4,5	-
ER8-5	4,5-5,0	37,97	ER8-5MICRO	4,5-5,0	-

Ref. ER11

**TYPE ER**      **DIN 6499-B**

D2: 11,5      α: 8°  
L1: 18      β: 30°

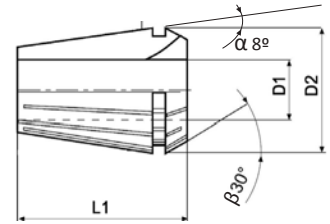


ER11					
	EXC 0,01 INDUSTRIAL		EXC 0,005 HIGH PRECISION		
	Capacity D1	€		Capacity D1	€
ER11-1	0,5-1,0	48,06	ER11-1MICRO	0,5-1,0	-
ER11-1,5	1,0-1,5	48,06	ER11-1,5MICRO	1,0-1,5	-
ER11-2	1,5-2,0	41,20	ER11-2MICRO	1,5-2,0	-
ER11-2,5	2,0-2,5	41,20	ER11-2,5MICRO	2,0-2,5	-
ER11-3	2,5-3,0	36,17	ER11-3MICRO	2,5-3,0	-
ER11-3,5	3,0-3,5	36,17	ER11-3,5MICRO	3,0-3,5	51,78
ER11-4	3,5-4,0	36,17	ER11-4MICRO	3,5-4,0	51,78
ER11-4,5	4,0-4,5	36,17	ER11-4,5MICRO	4,0-4,5	51,78
ER11-5	4,5-5,0	36,17	ER11-5MICRO	4,5-5,0	51,78
ER11-5,5	5,0-5,5	36,17	ER11-5,5MICRO	5,0-5,5	51,78
ER11-6	5,5-6,0	36,17	ER11-6MICRO	5,5-6,0	51,78
ER11-6,5	6,0-6,6	36,17	ER11-6,5MICRO	6,0-6,6	51,78
ER11-7	6,5-7,0	36,17	ER11-7MICRO	6,5-7,0	51,78

## PRECISION COLLET

Ref. ER16

**TYPE**  
**ER**
**DIN**  
**6499-B**

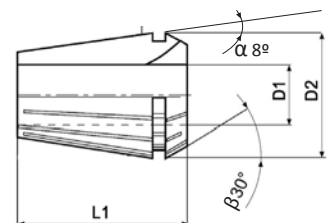
D2: 17      $\alpha: 8^\circ$   
L1: 27,5      $\beta: 30^\circ$ 


ER16

	EXC 0,01 INDUSTRIAL		EXC 0,005 HIGH PRECISION		
	Capacity D1	€	Capacity D1	€	
ER16-1	0,5-1,0	43,06	ER16-1 MICRO	0,5-1,0	-
ER16-2	1,0-2,0	38,77	ER16-2 MICRO	1,0-2,0	-
ER16-3	2,0-3,0	34,88	ER16-3 MICRO	2,0-3,0	-
ER16-4	3,0-4,0	34,88	ER16-4 MICRO	3,0-4,0	46,11
ER16-5	4,0-5,0	34,88	ER16-5 MICRO	4,0-5,0	46,11
ER16-6	5,0-6,0	34,88	ER16-6 MICRO	5,0-6,0	46,11
ER16-7	6,0-7,0	34,88	ER16-7 MICRO	6,0-7,0	46,11
ER16-8	7,0-8,0	34,88	ER16-8 MICRO	7,0-8,0	46,11
ER16-9	8,0-9,0	34,88	ER16-9 MICRO	8,0-9,0	46,11
ER16-10	9,0-10,0	34,88	ER16-10 MICRO	9,0-10,0	46,11

Ref. ER25

**TYPE**  
**ER**
**DIN**  
**6499-B**

D2: 26      $\alpha: 8^\circ$   
L1: 34      $\beta: 30^\circ$ 


ER25

	EXC 0,01 INDUSTRIAL		EXC 0,005 HIGH PRECISION		
	Capacity D1	€	Capacity D1	€	
ER25-2	1,0-2,0	39,94	ER25-2 MICRO	1,0-2,0	-
ER25-3	2,0-3,0	39,94	ER25-3 MICRO	2,0-3,0	-
ER25-4	3,0-4,0	39,94	ER25-4 MICRO	3,0-4,0	49,66
ER25-5	4,0-5,0	39,94	ER25-5 MICRO	4,0-5,0	49,66
ER25-6	5,0-6,0	39,94	ER25-6 MICRO	5,0-6,0	49,66
ER25-7	6,0-7,0	39,94	ER25-7 MICRO	6,0-7,0	49,66
ER25-8	7,0-8,0	39,94	ER25-8 MICRO	7,0-8,0	49,66
ER25-9	8,0-9,0	39,94	ER25-9 MICRO	8,0-9,0	49,66
ER25-10	9,0-10,0	39,94	ER25-10 MICRO	9,0-10,0	49,66
ER25-11	10,0-11,0	39,94	ER25-11 MICRO	10,0-11,0	49,66
ER25-12	11,0-12,0	39,94	ER25-12 MICRO	11,0-12,0	49,66
ER25-13	12,0-13,0	39,94	ER25-13 MICRO	12,0-13,0	49,66
ER25-14	13,0-14,0	39,94	ER25-14 MICRO	13,0-14,0	49,66
ER25-15	14,0-15,0	39,94	ER25-15 MICRO	14,0-15,0	49,66
ER25-16	15,0-16,0	39,94	ER25-16 MICRO	15,0-16,0	49,66

**PRECISION COLLET**

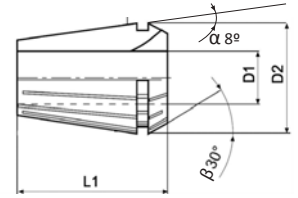
Ref. ER32

**TYPE**  
ER

**DIN**  
6499-B

D2: 33  
L1: 40

$\alpha$ : 8°  
 $\beta$ : 30°



ER32

	EXC 0,01 INDUSTRIAL		EXC 0,005 HIGH PRECISION		
	Capacity D1	€	Capacity D1	€	
ER32-3	2,0-3,0	37,96	ER32-3MICRO	2,0-3,0	-
ER32-4	3,0-4,0	37,96	ER32-4MICRO	3,0-4,0	51,85
ER32-5	4,0-5,0	37,96	ER32-5MICRO	4,0-5,0	51,85
ER32-6	5,0-6,0	37,96	ER32-6MICRO	5,0-6,0	51,85
ER32-7	6,0-7,0	37,96	ER32-7MICRO	6,0-7,0	51,85
ER32-8	7,0-8,0	37,96	ER32-8MICRO	7,0-8,0	51,85
ER32-9	8,0-9,0	37,96	ER32-9MICRO	8,0-9,0	51,85
ER32-10	9,0-10,0	37,96	ER32-10MICRO	9,0-10,0	51,85
ER32-11	10,0-11,0	37,96	ER32-11MICRO	10,0-11,0	51,85
ER32-12	11,0-12,0	37,96	ER32-12MICRO	11,0-12,0	51,85
ER32-13	12,0-13,0	37,96	ER32-13MICRO	12,0-13,0	51,85
ER32-14	13,0-14,0	37,96	ER32-14MICRO	13,0-14,0	51,85
ER32-15	14,0-15,0	37,96	ER32-15MICRO	14,0-15,0	51,85
ER32-16	15,0-16,0	37,96	ER32-16MICRO	15,0-16,0	51,85
ER32-17	16,0-17,0	37,96	ER32-17MICRO	16,0-17,0	51,85
ER32-18	17,0-18,0	37,96	ER32-18MICRO	17,0-18,0	51,85
ER32-19	18,0-19,0	37,96	ER32-19MICRO	18,0-19,0	51,85
ER32-20	19,0-20,0	37,96	ER32-20MICRO	19,0-20,0	51,85

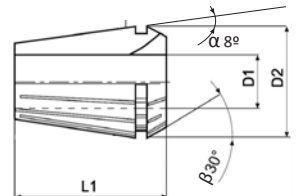
Ref. ER40

**TYPE**  
ER

**DIN**  
6499-B

D2: 41  
L1: 46

$\alpha$ : 8°  
 $\beta$ : 30°



ER40

	EXC 0,01 INDUSTRIAL		EXC 0,005 HIGH PRECISION		
	Capacity D1	€	Capacity D1	€	
ER40-3	2,0-3,0	48,24	ER40-3MICRO	2,0-3,0	-
ER40-4	3,0-4,0	48,24	ER40-4MICRO	3,0-4,0	61,70
ER40-5	4,0-5,0	48,24	ER40-5MICRO	4,0-5,0	61,70
ER40-6	5,0-6,0	48,24	ER40-6MICRO	5,0-6,0	61,70
ER40-7	6,0-7,0	48,24	ER40-7MICRO	6,0-7,0	61,70
ER40-8	7,0-8,0	48,24	ER40-8MICRO	7,0-8,0	61,70
ER40-9	8,0-9,0	48,24	ER40-9MICRO	8,0-9,0	61,70
ER40-10	9,0-10,0	48,24	ER40-10MICRO	9,0-10,0	61,70
ER40-11	10,0-11,0	48,24	ER40-11MICRO	10,0-11,0	61,70
ER40-12	11,0-12,0	48,24	ER40-12MICRO	11,0-12,0	61,70
ER40-13	12,0-13,0	48,24	ER40-13MICRO	12,0-13,0	61,70
ER40-14	13,0-14,0	48,24	ER40-14MICRO	13,0-14,0	61,70
ER40-15	14,0-15,0	48,24	ER40-15MICRO	14,0-15,0	61,70
ER40-16	15,0-16,0	48,24	ER40-16MICRO	15,0-16,0	61,70
ER40-17	16,0-17,0	48,24	ER40-17MICRO	16,0-17,0	61,70
ER40-18	17,0-18,0	48,24	ER40-18MICRO	17,0-18,0	61,70
ER40-19	18,0-19,0	48,24	ER40-19MICRO	18,0-19,0	61,70
ER40-20	19,0-20,0	48,24	ER40-20MICRO	19,0-20,0	61,70
ER40-21	20,0-21,0	48,24	ER40-21MICRO	20,0-21,0	61,70
ER40-22	21,0-22,0	48,24	ER40-22MICRO	21,0-22,0	61,70
ER40-23	22,0-23,0	48,24	ER40-23MICRO	22,0-23,0	61,70
ER40-24	23,0-24,0	48,24	ER40-24MICRO	23,0-24,0	61,70
ER40-25	24,0-25,0	48,24	ER40-25MICRO	24,0-25,0	61,70
ER40-26	25,0-26,0	48,24	ER40-26MICRO	25,0-26,0	61,70



**PROFESSIONAL BLUE-MASTER SHARPENER**





\*Includes case and spare grinding wheel



Ref. AFB10



		AFB10			
SHARPENING RANGE:	Ø 3-13				
POINT ANGLE:	118°				
SHARPENING TYPES:	 				
RESHARPENING OF DRILLS:	HSS	HSSCo	SOLID CARBIDE	<b>TIN</b>	CARBIDE TIPPED
<b>274,80 €</b>					



Forget about the electrical failures of other sharpeners  
Anti short circuit devices

**SHARP YOUR DRILLS IN 4 STEPS**



**1** Place and adjust the drill in the chuck



**2** Sharpen the drill



**3** Check the normal sharpening



**4** Split Point sharpening

**CHUCK**



PAFB10  
32,28 €

**GRINDING WHEEL**



MAFB10  
33,80 €

**DRILL DOCTOR SHARPENERS**

**750X**  
High Precision



AFB1

SHARPENING RANGE:	Ø 2,5-19			
POINT ANGLE:	118°	135°		
SHARPENING TYPES:				
RESHARPENING OF DRILLS:	HSS	HSSCo	SOLID CARBIDE	<b>TiN</b> CARBIDE TIPPED

\*Includes pouch

505,04 €

**500X**  
Professional Sharpening



AFB2

SHARPENING RANGE:	Ø 2,5-13			
POINT ANGLE:	118°	135°		
SHARPENING TYPES:				
RESHARPENING OF DRILLS:	HSS	HSSCo	SOLID CARBIDE	<b>TiN</b> CARBIDE TIPPED

424,22 €

**XP**  
Practical & Economic



AFB3

SHARPENING RANGE:	Ø 2,5-13			
POINT ANGLE:	118°			
SHARPENING TYPES:				
RESHARPENING OF DRILLS:	HSS	HSSCo	SOLID CARBIDE	<b>TiN</b> CARBIDE TIPPED

204,44 €

**ACCESSORIES FOR SHARPENERS**
**DRILL SHARPENER CHUCKS**

*For 750X*
**AFB1PB**
**76,43 €**

*For  
Left hand drill*
**AFB2PBI**
**76,45 €**
**COARSE GRINDSTONE FOR 750X & 500X SHARPENER**

**AFBT**
**71,01 €**
**STANDARD GRINDSTONE FOR 750X & 500X SHARPENER**

**AFBR**
**71,01 €**
**SPARE SCREW FOR 750X & 500X**

**AFBTLL**
**8,38 €**
**AFB10 SUPPORT**

**SOPAFB10**
**30,25 €**

# REAMERS



**BLUE-MASTER<sup>®</sup>**  
*by CELESA*

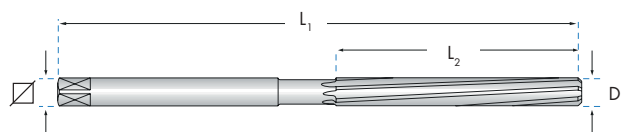
CUTTING TECHNOLOGIES

**HSS HAND REAMERS DIN 206B**

Ref. EMI

DIN  
206B

HSS

TOL  
H7

EMI					EMI					EMI					EMI				
D1 mm	L1 mm	L2 mm	∠	€	D1 mm	L1 mm	L2 mm	∠	€	D1 mm	L1 mm	L2 mm	∠	€	D1 mm	L1 mm	L2 mm	∠	€
1,50	41	20	1,12	31,59	8,75	124	62	7,10	42,74	19,50	201	100	16,00	139,52	35,00	284	142	28,00	331,02
2,00	50	25	1,60	23,82	9,00	124	62	7,10	30,33	20,00	201	100	16,00	117,82	35,50	284	142	28,00	451,50
2,25	54	27	1,80	30,13	9,25	124	62	7,10	44,74	20,50	201	100	16,00	170,30	36,00	284	142	28,00	346,69
2,50	58	29	2,00	23,82	9,50	124	62	7,10	37,14	13/16"	201	100	16,00	144,80	36,50	284	142	28,00	488,22
2,75	62	31	2,25	30,13	9,75	133	66	8,00	48,88	21,00	201	100	16,00	122,98	37,00	284	142	28,00	401,90
3,00	62	31	2,25	23,82	10,00	133	66	8,00	44,74	21,50	215	107	18,00	184,11	37,50	284	142	28,00	523,50
1/8	66	33	2,50	35,62	10,25	133	66	8,00	31,34	22,00	215	107	18,00	127,34	38,00	305	152	31,50	401,95
3,25	66	33	2,50	32,87	10,50	133	66	8,00	56,51	7/8"	215	107	18,00	206,48	38,50	305	152	31,50	523,50
3,50	71	35	2,80	24,97	10,75	142	71	9,00	41,54	22,50	215	107	18,00	197,49	39,00	305	152	31,50	401,95
3,75	71	35	2,80	32,87	10,75	142	71	9,00	56,51	23,00	215	107	18,00	132,91	39,50	305	152	31,50	523,50
5/32"	76	38	3,15	37,28	11,00	142	71	9,00	35,34	23,50	215	107	18,00	227,08	40,00	305	152	31,50	401,95
4,00	76	38	3,15	23,82	7/16"	142	71	9,00	66,56	24,00	231	115	20,00	147,20	40,50	305	152	31,50	603,49
4,25	76	38	3,15	34,34	11,25	142	71	9,00	60,90	24,50	231	115	20,00	250,22	41,00	305	152	31,50	484,39
4,50	81	41	3,55	24,86	11,50	142	71	9,00	46,67	25,00	231	115	20,00	156,16	41,50	305	152	31,50	658,31
4,75	81	41	3,55	29,82	11,75	142	71	9,00	60,90	1"	231	115	20,00	216,35	42,00	305	152	31,50	484,39
3/16"	87	44	4,00	37,57	12,00	152	76	10,00	46,43	25,50	231	155	20,00	273,33	42,50	305	152	31,50	682,13
5,00	87	44	4,00	24,86	12,50	152	76	10,00	59,42	26,00	231	115	20,00	170,40	43,00	326	163	35,50	579,15
5,25	87	44	4,00	34,34	1/2"	152	76	10,00	73,74	26,50	231	115	20,00	294,91	43,50	326	163	35,50	832,23
5,50	93	47	4,50	24,86	13,00	152	76	10,00	59,42	27,00	247	124	22,40	185,48	44,00	326	163	35,50	579,15
5,75	93	47	4,50	34,34	13,50	163	81	11,20	63,97	27,50	247	124	22,40	302,00	44,50	326	163	35,50	832,52
6,00	93	47	4,50	24,86	14,00	163	81	11,20	63,43	28,00	247	124	22,40	191,58	45,00	326	163	35,50	612,57
6,25	100	50	5,00	34,34	9/16"	163	81	11,20	94,41	28,50	247	124	22,40	317,55	45,50	326	163	35,50	891,31
1/4"	100	50	5,00	29,42	14,50	163	81	11,20	82,03	29,00	247	124	22,40	296,76	46,00	326	163	35,50	687,93
6,50	100	50	5,00	24,86	15,00	163	81	11,20	69,29	29,50	247	124	22,40	352,55	46,50	326	163	35,50	979,10
6,75	107	54	5,60	34,34	15,50	175	87	12,50	89,28	30,00	247	124	22,40	254,18	47,00	326	163	35,50	751,74
7,00	107	54	5,60	24,86	5/8"	175	87	12,50	99,68	30,50	265	133	25,00	392,88	47,50	326	163	35,50	1.198,52
9/32"	107	54	5,60	46,47	16,00	175	87	12,50	75,37	31,00	265	133	25,00	301,64	48,00	347	174	40,00	821,48
7,25	107	54	5,60	40,84	16,50	175	87	12,50	107,57	31,50	265	133	25,00	424,78	48,50	347	174	40,00	1.049,47
7,50	107	54	5,60	26,29	17,00	175	87	12,50	90,84	32,00	265	133	25,00	305,84	49,00	347	174	40,00	837,90
7,75	115	58	6,30	40,84	17,50	188	93	14,00	120,07	32,50	265	133	25,00	381,72	49,50	347	174	40,00	1.091,30
5/16"	115	58	6,30	37,27	18,00	188	93	14,00	108,92	33,00	265	133	25,00	320,76	50,00	347	174	40,00	908,98
8,00	115	58	6,30	26,29	18,50	188	93	14,00	128,95	33,50	265	133	25,00	400,32					
8,25	115	58	6,30	42,82	19,00	188	93	14,00	110,79	34,00	284	142	28,00	326,08					
8,50	115	58	6,30	27,62	3/4"	201	100	16,00	147,50	34,50	284	142	28,00	413,14					

**DECIMAL HAND REAMERS**

EMI	
D1 mm	€
3,10 - 3,90	34,96
4,10 - 6,90	36,58
7,10 - 7,90	43,47
8,10 - 8,90	45,63
9,10 - 9,90	47,61
10,10 - 10,90	61,99
11,10 - 11,90	66,70
12,10 - 12,90	105,44

**H7 TOLERANCE (in μ m)**

1-3	3-6	6-10	10-18	18-30	30-50	50-80	80-120	120-180
+8	+10	+12	+15	+17	+21	+25	+29	+34
+4	+5	+6	+8	+9	+12	+14	+16	+20

**FINE TOLERANCE (en μ m)**

1,00-6	6,01-12
+4	+5
+0	+0



Centesimal precision reamers available on request



**HSS PARIS TYPE HAND REAMERS**

Ref. EMA

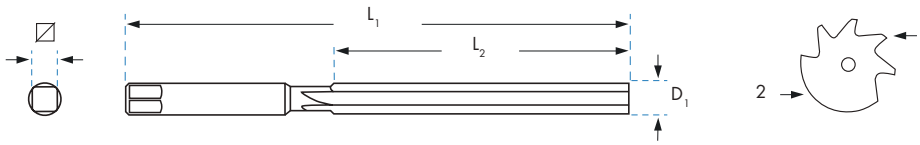
**NFE**  
**74112**

**HSS**

**TOL**  
**K7**



- 1.- Straight teeth
- 2.- Support side



EMA					
	D <sub>1</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	∠	€
EMA0300	3,00	85	50	2,24	42,83*
EMA0400	4,00	100	60	3,15	42,83*
EMA0500	5,00	112	67	4,00	44,06*
EMA0600	6,00	118	71	4,50	44,06*
EMA0700	7,00	132	80	5,60	44,06*
EMA0800	8,00	140	85	6,30	48,46*
EMA0900	9,00	150	90	7,10	55,20*
EMA1000	10,00	160	95	8,00	55,20*
EMA1100	11,00	170	100	9,00	63,94*
EMA1200	12,00	180	106	10,00	63,94*
EMA1300	13,00	180	106	10,00	71,35*
EMA1400	14,00	190	112	11,20	71,35*
EMA1500	15,00	190	112	11,20	86,15*
EMA1600	16,00	200	118	12,50	86,15*
EMA1700	17,00	200	118	12,50	98,27*

EMA					
	D <sub>1</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	∠	€
EMA1800	18,00	212	125	14,00	98,27*
EMA1900	19,00	212	125	14,00	114,43*
EMA2000	20,00	224	132	16,00	114,43*
EMA2100	21,00	224	132	16,00	131,92*
EMA2200	22,00	236	140	18,00	131,92*
EMA2300	23,00	236	140	18,00	154,20*
EMA2400	24,00	250	150	20,00	169,62*
EMA2500	25,00	250	150	20,00	169,62*
EMA2600	26,00	250	150	20,00	189,69*
EMA2700	27,00	265	160	22,40	189,69*
EMA2800	28,00	265	160	22,40	208,66*
EMA2900	29,00	265	160	22,40	235,58*
EMA3000	30,00	265	160	22,40	235,58*
EMA3200	32,00	280	170	25,00	267,89*
EMA3400	34,00	300	180	28,00	321,88*

\* Till end of stock

**HAND REAMER FOR MORSE TAPER SHANK**

Ref. ECM

**DIN**  
**204D**

**HSS**



**PRIOR NPT THREADING HAND REAMER**

Ref. EMNPT

**1:16**

**HSS**

**NPT**



ECM					
	MT	∅ mm min. x max.	L <sub>1</sub> mm	L <sub>2</sub> mm	€
ECM0	0	6,547 - 9,722	93	61	84,33
ECM1	1	9,571 - 12,863	102	66	86,26
ECM2	2	14,733 - 18,679	121	79	119,00
ECM3	3	20,010 - 24,829	146	96	187,57
ECM4	4	26,229 - 32,410	179	119	322,33
ECM5	5	37,873 - 45,767	222	150	681,72

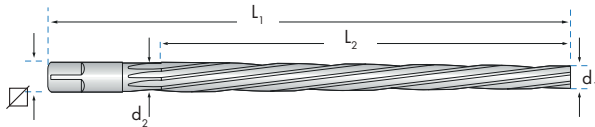
EMNPT						
	NPT Thread	∅ mm	∅ mm min. x max.	L <sub>1</sub> mm	L <sub>2</sub> mm	€
EMNPT1/16	NPT1/16	6,20	5,915 - 6,978	70	17	141,38
EMNPT1/8	NPT1/8	8,50	8,022 - 9,085	70	17	144,31
EMNPT1/4	NPT1/4	11,00	10,283 - 11,971	80	27	155,96
EMNPT3/8	NPT3/8	14,50	13,703 - 15,391	85	27	175,04
EMNPT1/2	NPT1/2	17,80	16,913 - 19,101	95	35	205,85

**HSS HAND TAPER PIN REAMERS DIN 9B**

Ref. EM2

**TOL  
H9**
**DIN  
9B**
**HSS**
**2%  
1:50**


FOR TAPER PINS DIN 1



Sizes Ø 1-1,20-1,50-2 and 2,50  
are manufactured with straight flutes

	D mm	Ø mm d <sub>1</sub> x d <sub>2</sub>	L <sub>1</sub> mm	L <sub>2</sub> mm	∠	EM2	
						€	
EM20100	1,00	0,95 x 1,46	46	28	2,50	77,15	
EM20120	1,20	1,15 x 1,74	50	32	2,50	77,15	
EM20150	1,50	1,40 x 2,14	57	37	2,50	58,48	
EM20200	2,00	1,90 x 2,86	68	48	2,50	42,44	
EM20250	2,50	2,40 x 3,36	68	48	2,50	50,70	
EM20300	3,00	2,90 x 4,06	80	58	3,15	40,45	
EM20350	3,50	3,40 x 4,66	87	63	3,15	62,55	
EM20400	4,00	3,90 x 5,26	93	68	4,00	41,25	
EM20450	4,50	4,40 x 5,80	95	70	4,00	58,29	
EM20500	5,00	4,90 x 6,36	100	73	5,00	39,28	
EM20550	5,50	5,40 x 7,20	118	90	5,00	55,49	
EM20600	6,00	5,90 x 8,00	135	105	6,30	47,76	
EM20650	6,50	6,40 x 8,60	140	110	6,30	68,18	
EM20700	7,00	6,90 x 9,40	160	125	6,30	58,08	
EM20800	8,00	7,90 x 10,80	180	145	8,00	76,77	
EM21000	10,00	9,90 x 13,40	215	175	10,00	87,05	
EM21200	12,00	11,80 x 16,00	255	210	11,20	112,17	
EM21300	13,00	12,80 x 17,00	255	210	11,20	122,28	
EM21400	14,00	13,80 x 18,00	255	210	11,20	170,24	
EM21600	16,00	15,80 x 20,40	280	230	14,00	172,47	
EM22000	20,00	19,80 x 24,80	310	250	18,00	247,09	
EM22500	25,00	24,70 x 30,70	370	300	22,40	385,85	
EM23000	30,00	29,70 x 36,10	400	320	25,00	840,29	
EM24000	40,00	39,70 x 46,50	430	340	31,50	1.385,00	
EM25000	50,00	49,70 x 56,90	460	360	40,00	2.164,54	

**HSSC<sub>0</sub> CHUCKING TAPER PIN REAMERS**

Ref. EM29

**TOL  
H9**
**DIN  
2179E**
**HSSC<sub>0</sub>**
**2%  
1:50**

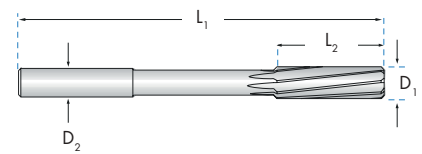

FOR TAPER PINS DIN1



	D <sub>1</sub> mm	D <sub>2</sub> mm	Ø mm min. x max.	L <sub>1</sub> mm	L <sub>2</sub> mm	EM29	
						€	
EM290150	1,50	2,00	1,40 - 2,14	70	37	69,64	
EM290200	2,00	3,00	1,90 - 2,86	68	48	71,04	
EM290250	2,50	3,00	2,40 - 3,35	86	48	79,05	
EM290300	3,00	4,00	2,90 - 4,06	100	58	63,60	
EM290400	4,00	5,00	3,90 - 5,26	112	68	61,20	
EM290500	5,00	6,50	4,90 - 6,36	122	73	57,27	
EM290600	6,00	8,00	5,90 - 8,00	160	105	54,95	
EM290700	7,00	9,00	6,90 - 9,40	160	125	87,77	
EM290800	8,00	10,00	7,90 - 10,80	207	145	101,23	
EM291000	10,00	12,50	9,90 - 13,40	245	175	137,63	
EM291200	12,00	16,00	11,80 - 16,00	290	210	208,73	

HSSCo MACHINE CHUCKING REAMERS

DIN  
212



				EM3	EM10					EM3	EM10					EM3	EM10
MATERIAL				HSSCo	HSSCo	D1	L1	L2	D2	€	€	D1	L1	L2	D2	€	€
NORM				DIN 212B	DIN 212E	mm	mm	mm	mm			mm	mm	mm	mm		
TOLERANCE				TOL H7	TOL H7												
HELIX ANGLE				8°	38°												
D1	L1	L2	D2	€	€	D1	L1	L2	D2	€	€	D1	L1	L2	D2	€	€
mm	mm	mm	mm			mm	mm	mm	mm			mm	mm	mm	mm		
1,00	34	7	1,00	59,29		4,20	75	19	4,00	30,89		8,10	117	33	8,00	43,88	
1,20	34	7	1,20	52,69		4,30	80	21	4,50	30,89		8,20	117	33	8,00	43,88	
1,40	40	8	1,40	48,99		4,40	80	21	4,50	30,89		8,30	117	33	8,00	43,88	
1,50	40	8	1,50	24,82		4,50	80	21	4,50	23,22		8,40	117	33	8,00	43,88	
1,60	43	9	1,60	30,23		4,60	80	21	4,50	30,89		8,50	117	33	8,00	32,11	
1,70	43	9	1,70	29,98		4,70	80	21	4,50	30,89		8,60	117	33	9,00	48,34	
1,80	46	10	1,80	30,23		4,80	86	23	5,00	30,89		8,70	125	36	9,00	48,34	
1,90	46	10	1,90	30,23		4,90	86	23	5,00	30,89		8,80	125	36	9,00	48,34	
2,00	49	11	2,00	22,86		5,00	86	23	5,00	23,22	32,64	8,90	125	36	9,00	48,34	
2,10	49	11	2,10	25,54		5,10	86	23	5,00	33,18		9,00	125	36	9,00	33,99	43,50
2,20	53	12	2,20	25,54		5,20	86	23	5,00	33,18		9,10	125	36	9,00	48,34	
2,30	53	12	2,30	25,54		5,30	86	23	5,00	33,18		9,20	125	36	9,00	48,34	
2,40	57	14	2,40	25,54		5,40	93	26	5,60	33,18		9,30	125	36	9,00	48,34	
2,50	57	14	2,50	23,26		5,50	93	26	5,60	23,22		9,40	125	36	9,00	48,34	
2,60	57	14	2,60	25,54		5,60	93	26	5,60	35,67		9,50	125	36	9,00	40,37	
2,70	61	15	2,70	25,54		5,70	93	26	5,60	35,67		9,60	125	36	10,00	48,63	
2,80	61	15	2,80	25,54		5,80	93	26	5,60	35,67		9,70	133	38	10,00	48,63	
2,90	61	15	2,90	25,54		5,90	93	26	5,60	35,67		9,80	133	38	10,00	48,63	
3,00	61	15	3,00	22,86	32,05	6,00	93	26	5,60	25,45	32,64	9,90	133	38	10,00	48,63	
3,10	65	16	3,10	30,89		6,10	101	28	6,30	36,35		10,00	133	38	10,00	34,39	44,85
3,20	65	16	3,20	30,89		6,20	101	28	6,30	36,35		10,50	133	38	10,00	59,70	
3,30	65	16	3,30	30,89		6,30	101	28	6,30	36,35		11,00	133	38	10,00	40,65	52,23
3,40	70	18	3,40	30,89		6,40	101	28	6,30	36,35		11,50	142	41	10,00	79,20	
3,50	70	18	3,50	23,22		6,50	101	28	6,30	29,88		12,00	151	44	10,00	41,56	55,68
3,60	70	18	3,60	30,89		6,60	101	28	6,30	36,35		12,50	151	44	10,00	81,14	
3,70	70	18	3,70	30,89		6,70	101	28	6,30	36,35		13,00	151	44	10,00	68,28	84,10
3,80	75	19	4,00	30,89		6,80	109	31	7,10	36,35		13,50	151	44	12,50	110,30	
3,90	75	19	4,00	30,89		6,90	109	31	7,10	36,35		14,00	160	47	12,50	69,89	88,09
4,00	75	19	4,00	23,22	32,05	7,00	109	31	7,10	29,88	33,22	15,00	160	47	12,50	71,28	91,64
4,10	75	19	4,00	30,89		7,10	109	31	7,10	39,06		16,00	162	50	12,50	76,33	107,24
						7,20	109	31	7,10	39,06		17,00	170	52	14,00	88,02	128,78
						7,30	109	31	7,10	39,06		18,00	175	54	14,00	91,78	154,77
						7,40	109	31	7,10	39,06		19,00	182	56	16,00	97,51	
						7,50	109	31	7,10	30,81		20,00	189	58	16,00	98,21	
						7,60	117	33	8,00	39,34		21,00	195	60	18,00	143,19	
						7,70	117	33	8,00	39,34		22,00	225	60	18,00	144,52	
						7,80	117	33	8,00	39,34		23,00	230	60	18,00	157,19	
						7,90	117	33	8,00	39,34		24,00	240	60	20,00	177,39	
						8,00	117	33	8,00	29,85	36,50	25,00	245	60	20,00	201,02	

CENTESIMAL CHUCKING REAMERS

EM3		EM3		EM3	
D1	€	D1	€	D1	€
mm		mm		mm	
2,37 - 2,65	56,68	6,71 - 7,29	65,61	12,03 - 13,02	151,57
2,66 - 3,35	52,47	7,30 - 8,50	73,77	13,03 - 14,02	184,33
3,36 - 4,25	58,91	8,51 - 9,25	83,26	14,03 - 15,02	224,73
4,26 - 5,30	58,91	9,26 - 10,60	95,05	15,03 - 16,02	240,58
5,31 - 5,95	59,01	10,61 - 11,25	107,36		
5,96 - 6,70	59,57	11,26 - 12,02	110,20		

EXTRA-FINE TOLERANCE (µ m)

1,00-6	6,01-12
+4	+5
+0	+0

**CHUCKING REAMERS HSSCo LONG SERIES**
**CHUCKING REAMERS HSSCo EXTRALONG SERIES**

Ref. EM44

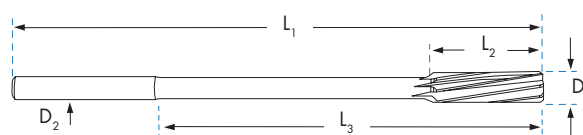
**DIN**  
**212L**
**HSSCo**
**TOL**  
**H7**


Ref. EM33

**DIN**  
**212XL**
**HSSCo**
**TOL**  
**H7**


EM44

	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	L <sub>3</sub> mm	€
EM440150	1,50	1,50	55	12	35	144,88
EM440200	2,00	2,00	65	14	45	114,61
EM440250	2,50	2,50	75	14	55	130,86
EM440300	3,00	3,00	90	14	70	100,02
EM440350	3,50	3,50	90	14	70	148,63
EM440400	4,00	4,00	105	16	80	100,02
EM440450	4,50	4,50	105	16	80	154,22
EM440500	5,00	5,00	115	16	90	105,62
EM440550	5,50	5,50	115	16	90	163,58
EM440600	6,00	6,00	130	16	100	109,35
EM440650	6,50	6,00	130	16	100	169,18
EM440700	7,00	7,00	140	18	110	117,76
EM440750	7,50	7,00	140	18	110	172,91
EM440800	8,00	8,00	160	18	130	114,02
EM440850	8,50	8,00	160	18	130	174,79
EM440900	9,00	9,00	175	18	140	128,98
EM440950	9,50	9,00	175	18	140	183,20
EM441000	10,00	10,00	190	20	150	130,86
EM441100	11,00	11,00	200	20	160	153,30
EM441200	12,00	12,00	210	20	160	144,88

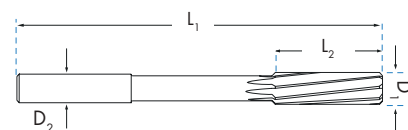


EM33

	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	L <sub>3</sub> mm	HSSCo €
EM330200	2,0	2,0	90	11	70	132,70
EM330300	3,0	3,0	120	15	100	132,70
EM330400	4,0	4,0	140	19	115	139,94
EM330500	5,0	5,0	170	23	140	142,78
EM330600	6,0	5,6	200	26	175	145,45
EM330700	7,0	7,0	250	35	220	184,41
EM330800	8,0	8,0	250	33	220	207,03
EM330900	9,0	9,0	250	35	220	206,26
EM331000	10,0	10,0	250	38	220	227,41
EM331200	12,0	10,0	250	44	220	273,39

**SOLID CARBIDE CHUCKING REAMERS**

Ref. EM35

**DIN**  
**8093B**
**SOLID**  
**CARBIDE**
**TOL**  
**H7**


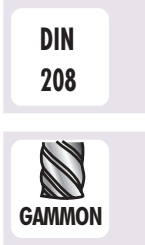
EM35

	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	€
EM350200	2,00	2,00	49	11	68,54
EM350250	2,50	2,50	57	14	78,82
EM350300	3,00	3,00	61	15	74,82
EM350350	3,50	3,50	70	18	83,79
EM350400	4,00	4,00	75	19	79,47
EM350450	4,50	4,50	80	21	91,36
EM350500	5,00	5,00	86	23	84,16
EM350550	5,50	5,50	93	26	102,28
EM350600	6,00	6,00	93	26	101,25
EM350650	6,50	6,00	101	28	124,17
EM350700	7,00	7,00	109	31	130,87
EM350750	7,50	7,00	109	31	143,97
EM350800	8,00	8,00	117	33	149,56
EM350850	8,50	8,00	117	33	172,01
EM350900	9,00	9,00	125	36	171,38
EM350950	9,50	9,00	125	36	191,96
EM351000	10,00	10,00	133	38	190,05
EM351050	10,50	10,00	133	38	212,85
EM351100	11,00	10,00	142	41	283,56
EM351150	11,50	12,00	142	41	311,90
EM351200	12,00	12,00	151	44	299,21



Special sizes on request

**HSSCo TAPER SHANK REAMERS**



Ref. EM7

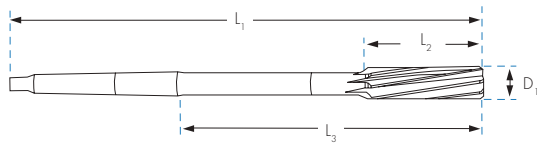


DIN 208B

Ref. EM9



DIN 208C



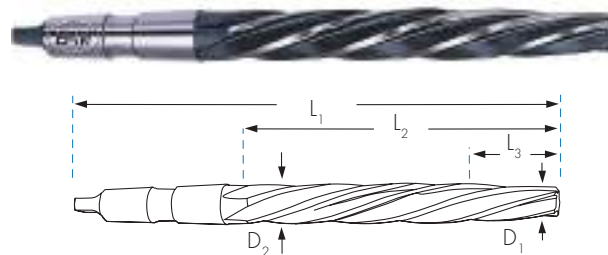
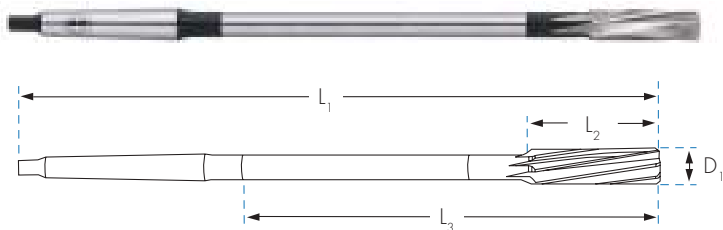
					EM7	EM9
MATERIAL					HSSCo	HSSCo
NORM					DIN 208B	DIN 208C
TOLERANCE					TOL H7	TOL H7
HELIX					10°	38°
D1 mm	L2 mm	L3 mm	L1 mm	MT	€	€
4,00	19	58	129	1	61,13	
5,00	23	62	133	1	47,46	81,56
5,50	26	67	138	1	62,21	
6,00	26	67	138	1	45,99	81,56
6,50	28	73	144	1	63,44	
7,00	31	79	150	1	47,04	81,56
7,50	31	79	150	1	64,88	
8,00	33	85	156	1	48,59	81,56
8,50	33	85	156	1	68,81	
9,00	36	91	162	1	51,83	78,61
9,50	36	91	162	1	74,60	
10,00	38	97	168	1	50,76	78,61
10,50	38	97	168	1	75,59	
11,00	41	104	175	1	51,72	82,09
11,50	41	104	175	1	79,62	
12,00	44	111	182	1	51,72	82,09
12,50	44	111	182	1	86,95	
13,00	44	111	182	1	65,38	122,10
13,50	47	118	189	1	89,52	
14,00	47	118	189	1	67,17	125,89
14,50	50	118	204	2	94,27	
15,00	50	118	204	2	69,37	137,84
15,50	52	124	210	2	99,09	
16,00	52	124	210	2	75,52	144,45
16,50	54	128	214	2	110,07	
17,00	54	128	214	2	85,04	156,40
17,50	56	133	219	2	125,58	

					EM7	EM9
D1 mm	L2 mm	L3 mm	L1 mm	MT	€	€
18,00	56	133	219	2	89,06	166,13
18,50	58	137	223	2	133,99	
19,00	58	137	223	2	94,53	176,21
19,50	60	142	228	2	142,91	
20,00	60	142	228	2	93,41	185,33
20,50	62	146	232	2	148,67	
21,00	62	146	232	2	111,16	200,24
21,50	64	151	237	2	192,69	
22,00	64	151	237	2	124,13	213,76
22,50	66	155	241	2	192,69	
23,00	66	155	241	2	129,86	229,14
23,50	66	163	241	3	223,86	
24,00	68	163	268	3	137,01	241,70
24,50	68	163	268	3	231,32	
25,00	68	163	268	3	149,04	256,60
25,50	70	168	273	3	269,77	
26,00	70	168	273	3	173,49	270,81
26,50	70	168	273	3	285,78	
27,00	71	172	277	3	200,30	365,10
28,00	71	172	277	3	185,06	299,37
29,00	73	176	281	3	209,37	411,24
30,00	73	176	281	3	201,30	317,96
31,00	75	180	285	3	275,22	
32,00	77	187	317	4	277,51	518,55
33,00	77	187	317	4	446,69	
34,00	78	191	321	4	303,01	780,32
35,00	78	191	321	4	349,05	
36,00	79	195	325	4	448,47	871,57
37,00	79	195	325	4	615,17	
38,00	81	199	329	4	477,50	991,35
39,00	81	199	329	4	823,46	
40,00	81	199	329	4	487,19	1.048,05
41,00	82	203	333	4	823,46	
42,00	82	203	333	4	870,79	
44,00	83	206	336	4	946,77	
45,00	83	206	336	4	947,45	
48,00	86	214	344	4	1.003,77	
50,00	86	214	344	4	1.066,73	



**HSSCo TAPER SHANK REAMERS, LONG SERIES**
**HSS BRIDGE REAMERS**

 Ref. EM41  
**DIN 208B/L**  
**HSSCo**  
**TOL H7**

 Ref. EM8  
**DIN 311**  
**HSS**  
**TOL H7**  
 FOR BOIL WORKS  
 Conicity 1:10 on L3


EM41						
	D1 mm	L2 mm	L3 mm	L1 mm	MT	€
EM411300	13	22	180	245	1	186,99
EM411400	14	22	180	245	1	186,99
EM411500	15	25	180	260	2	197,50
EM411600	16	25	180	260	2	220,62
EM411800	18	28	180	260	2	229,02
EM412000	20	28	190	270	2	247,93
EM412200	22	32	200	280	2	279,44
EM412400	24	32	200	300	3	365,60
EM412500	25	32	220	320	3	443,33
EM412600	26	32	230	330	3	521,05
EM412800	28	36	240	340	3	525,26
EM413000	30	36	250	350	3	535,77
EM413200	32	36	250	375	4	619,82
EM413400	34	40	250	375	4	720,66
EM413600	36	40	250	375	4	744,54
EM413800	38	40	270	395	4	799,62
EM414000	40	40	270	395	4	844,50
EM414200	42	40	280	405	4	891,41
EM414500	45	45	280	405	4	1.046,45
EM415000	50	45	290	415	4	1.258,59

EM8							
	D2 mm	D1 mm	L1 mm	L2 mm	L3 mm	MT	€
EM81000	10,00	6,6	171	95	38	1	81,65
EM81100	11,00	7,0	176	100	40	1	83,89
EM81200	12,00	7,8	199	105	42	2	86,89
EM81300	13,00	8,8	199	105	42	2	94,60
EM81400	14,00	9,4	209	115	46	2	103,26
EM81500	15,00	10,0	219	125	50	2	109,51
EM81600	16,00	10,6	229	135	54	2	114,95
EM81700	17,00	11,6	251	135	54	3	128,80
EM81800	18,00	12,2	261	145	58	3	139,50
EM81900	19,00	13,2	261	145	58	3	157,99
EM82000	20,00	13,8	271	155	62	3	160,87
EM82100	21,00	14,8	271	155	62	3	176,99
EM82200	22,00	15,4	281	165	66	3	184,72
EM82300	23,00	16,4	281	165	66	3	198,06
EM82400	24,00	16,8	296	180	72	3	211,90
EM82500	25,00	17,8	296	180	72	3	225,86
EM82600	26,00	18,8	296	180	72	3	246,66
EM82700	27,00	19,2	311	195	78	3	264,78
EM82800	28,00	20,2	311	195	78	3	289,20
EM82900	29,00	21,2	311	195	78	3	310,44
EM83000	30,00	22,2	311	195	78	3	311,01
EM83100	31,00	23,2	326	210	78	3	316,23
EM83200	32,00	23,6	354	210	84	4	344,24
EM83300	33,00	24,6	354	210	84	4	459,49
EM83400	34,00	25,6	364	220	88	4	565,06
EM83600	36,00	27,2	364	220	88	4	593,33

**HSSCo TAPER SHANK REAMERS, EXTRALONG SERIES**

 Ref. EM42  
**DIN 208B/XL**  
**HSSCo**  
**TOL H7**


EM42						
	D1 mm	L2 mm	L3 mm	L1 mm	MT	€
EM421200	12	40	250	315	1	302,84
EM421400	14	40	250	315	1	330,88
EM421600	16	45	270	350	2	345,83
EM421800	18	45	270	350	2	374,33
EM422000	20	45	270	350	2	396,31
EM422200	22	45	270	350	2	532,77
EM422400	24	70	350	450	3	607,56
EM422500	25	70	350	450	3	644,93
EM422600	26	70	350	450	3	747,75
EM422800	28	70	350	450	3	822,53
EM423000	30	70	350	450	3	887,95
EM423500	35	70	350	475	4	1.121,63
EM424000	40	70	350	475	4	1.308,57



**SOLID CARBIDE 3 TEETH DRILL-REAMERS**

Ref. BC45

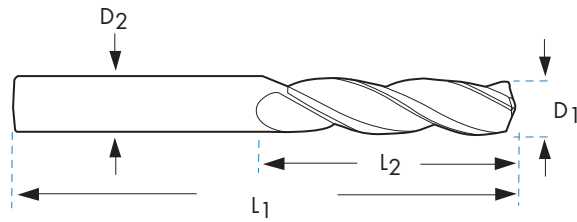
**3Z**

**DIN  
1897**

**SOLID  
CARBIDE**



**TOL  
H8**



BC45					
	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	€
BC450350	3,5	3,5	52	20	28,69*
BC450400	4,0	4,0	55	22	29,57*
BC450500	5,0	5,0	62	26	33,28*
BC450550	5,5	5,5	66	28	42,09*
BC450600	6,0	6,0	66	28	40,28*
BC450650	6,5	6,5	70	31	58,28*
BC450700	7,0	7,0	74	34	56,77*
BC450800	8,0	8,0	79	37	66,68*
BC450850	8,5	8,5	79	37	70,65*
BC450900	9,0	9,0	84	40	86,32*
BC450950	9,5	9,5	84	40	91,72*
BC451000	10,0	10,0	89	43	91,42*
BC451050	10,5	10,5	89	43	108,25*
BC451100	11,0	11,0	95	47	124,49*
BC451150	11,5	11,5	95	47	129,06*
BC451300	13,0	13,0	102	51	170,00*
BC451350	13,5	13,5	104	54	272,83*
BC451400	14,0	14,0	107	54	199,69*
BC451450	14,5	14,5	111	56	309,88*
BC451500	15,0	15,0	111	56	236,32*
BC451550	15,5	15,5	115	58	268,13*
BC451600	16,0	16,0	115	58	291,54*
BC451650	16,5	16,5	119	60	416,64*
BC451700	17,0	17,0	119	60	428,69*
BC451750	17,5	17,5	123	62	438,62*
BC451800	18,0	18,0	123	62	478,30*
BC451850	18,5	18,5	127	64	521,25*
BC451900	19,0	19,0	127	64	531,00*
BC451950	19,5	19,5	131	66	570,74*
BC452000	20,0	20,0	131	66	564,71*

\* Till end of stock

## HSS DRILL REAMERS

STRAIGHT SHANK

**3Z**
**DIN  
344**
**HSS**

**TOL  
H8**

Ref. EM22

TAPER SHANK

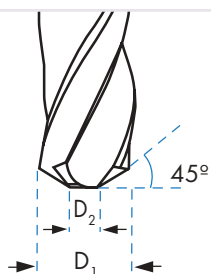
**3Z**
**DIN  
343**
**HSS**

**TOL  
H8**

Ref. EM23

APPLICATIONS: Specially recommended to enlarge holes and compensate non concentric holes.

The finishing obtained with 3 fluted drill reamers is better than with conventional drills which are not recommended to enlarge holes, to avoid cutting edge damage.



EM22					
	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	€
EM220500	5,00	3,00	108	74	36,41
EM220600	6,00	4,00	116	80	36,41
EM220700	7,00	5,00	133	93	36,41
EM220800	8,00	5,60	142	100	38,40
EM220900	9,00	6,30	151	107	45,32
EM221000	10,00	7,00	162	116	47,32
EM221100	11,00	7,70	173	125	52,19
EM221200	12,00	8,40	184	134	56,03
EM221300	13,00	9,10	184	134	71,44
EM221400	14,00	9,80	194	142	76,36
EM221500	15,00	10,50	202	147	83,35
EM221600	16,00	11,20	211	153	89,52

EM23						
	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	MT	€
EM230900	9,00	6,30	162	81	1	86,00
EM231000	10,00	7,00	168	87	1	76,98
EM231100	11,00	7,70	175	94	1	79,61
EM231200	12,00	8,40	182	101	1	82,42
EM231300	13,00	9,10	182	101	1	86,07
EM231400	14,00	9,80	189	108	1	91,20
EM231500	15,00	10,50	212	114	2	92,93
EM231600	16,00	11,20	218	120	2	103,66
EM231700	17,00	11,90	223	125	2	112,80
EM231800	18,00	12,60	228	130	2	122,44
EM231900	19,00	13,30	233	135	2	144,08
EM232000	20,00	14,00	238	140	2	147,58
EM232100	21,00	15,00	243	145	2	158,95
EM232200	22,00	15,50	248	150	2	171,87
EM232300	23,00	16,00	253	155	2	177,34
EM232400	24,00	17,00	281	160	3	187,39
EM232500	25,00	17,50	281	160	3	201,39
EM232600	26,00	18,00	286	165	3	216,40
EM232700	27,00	19,00	291	170	3	243,40
EM232800	28,00	19,50	291	170	3	276,01
EM233000	30,00	21,00	296	175	3	305,51
EM233200	32,00	22,00	334	185	4	363,37
EM233400	34,00	24,00	339	190	4	402,14
EM233500	35,00	25,00	339	190	4	423,04
EM233600	36,00	25,50	344	195	4	444,27
EM233800	38,00	26,50	349	200	4	502,29
EM234000	40,00	28,00	349	200	4	542,01
EM234500	45,00	31,00	359	210	4	648,45
EM235000	50,00	34,50	369	220	4	925,78

HSSCo SHELL REAMERS

DIN  
219



Ref. EM17



Ref. EM18



				EM17		EM18	
MATERIAL				HSSCo		HSSCo	
NORM				DIN 219B		DIN 219C	
TOLERANCE				TOL H7		TOL H7	
HELIX ANGLE				10°		38°	
D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	€	€	€	€
25,00	13,00	45	32	EM172500	136,17	EM182500	216,49
26,00	13,00	45	32	EM172600	137,32	EM182600	218,88
27,00	13,00	45	32	EM172700	153,36	EM182700	224,77
28,00	13,00	45	32	EM172800	155,42	EM182800	229,39
30,00	13,00	45	32	EM173000	156,86	EM183000	235,82
32,00	16,00	50	36	EM173200	167,37	EM183200	243,55
34,00	16,00	50	36	EM173400	187,39	EM183400	251,55
35,00	16,00	50	36	EM173500	190,06	EM183500	275,91
36,00	19,00	56	40	EM173600	195,40	EM183600	288,20
38,00	19,00	56	40	EM173800	207,21	EM183800	304,04
40,00	19,00	56	40	EM174000	217,58	EM184000	331,41
42,00	19,00	56	40	EM174200	231,58		
45,00	22,00	63	45	EM174500	245,91	EM184500	395,69
47,00	22,00	63	45	EM174700	308,22	EM184700	462,05
48,00	22,00	63	45	EM174800	308,22		
50,00	22,00	63	45	EM175000	309,72	EM185000	478,92
52,00	27,00	71	50	EM175200	327,48	EM185200	518,56
55,00	27,00	71	50	EM175500	355,29	EM185500	577,43
58,00	27,00	71	50	EM175800	401,34		
60,00	27,00	71	50	EM176000	416,48	EM186000	643,21
62,00	32,00	80	56	EM176200	478,40	EM186200	691,14
65,00	32,00	80	56	EM176500	533,33	EM186500	702,32
70,00	32,00	80	56	EM177000	650,16	EM187000	719,65
72,00	40,00	90	63	EM177200	726,27	EM187200	763,23
75,00	40,00	90	63	EM177500	780,91		
80,00	40,00	90	63	EM178000	850,50	EM188000	903,92
85,00	40,00	90	63	EM178500	987,73		
90,00	50,00	100	71	EM179000	1.076,49		
95,00	50,00	100	71	EM179500	1.235,10		
100,00	50,00	100	71	EM1710000	1.408,51		

TAPER SHANK ARBORS FOR SHELL REAMERS

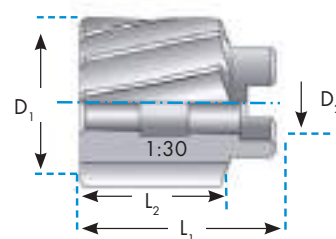
DIN  
217



Ref. EM19

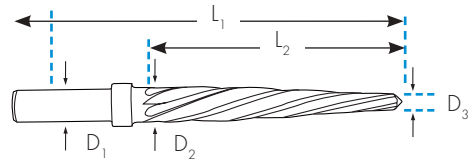
	D <sub>2</sub> mm	L <sub>1</sub> mm	MT	EM19 €
EM19CM313X300	13,00	300	3	192,50
EM19CM313X500	13,00	500	3	359,38*
EM19CM316X300	16,00	300	3	214,19
EM19CM316X400	16,00	400	3	341,95*
EM19CM419X300	19,00	300	4	254,12
EM19CM419X400	19,00	400	4	359,11*
EM19CM419X500	19,00	500	4	401,99*
EM19CM422X300	22,00	300	4	318,24
EM19CM422X400	22,00	400	4	398,16*
EM19CM422X500	22,00	500	4	446,90*
EM19CM527X350	27,00	350	5	453,86
EM19CM527X450	27,00	450	5	529,96*
EM19CM527X550	27,00	550	5	612,35*
EM19CM527X650	27,00	650	5	655,56*
EM19CM532X350	32,00	350	5	557,98
EM19CM532X400	32,00	400	5	672,13*
EM19CM532X500	32,00	500	5	714,23*
EM19CM532X600	32,00	600	5	785,26*
EM19CM540X450	40,00	450	5	791,81
EM19CM540X550	40,00	550	5	843,59*
EM19CM540X650	40,00	650	5	880,68*
EM19CM540X750	40,00	750	5	948,54*
EM19CM540X850	40,00	850	5	999,54*
EM19CM540X950	40,00	950	5	1.071,28*
EM19CM550X450	50,00	450	5	1.023,24
EM19CM550X550	50,00	550	5	1.011,87*
EM19CM550X650	50,00	650	5	1.056,56*
EM19CM550X750	50,00	750	5	1.107,12*
EM19CM550X850	50,00	850	5	1.181,64*
EM19CM550X950	50,00	950	5	1.217,62

\* Till end of stock



**5 FLUTES HSS REAMERS**
**5Z**
**HSS**
**10%  
1:10**
**25°**


Ref. EM14



	D <sub>2</sub> mm	Ø mm	D <sub>1</sub> mm	D <sub>3</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	EM14 €
EM141000	10,00	6,00 - 10,00	9,50	5,20	127	76	152,98
EM141200	12,00	7,00 - 12,00	12,70	5,60	152	102	168,22
EM141400	14,00	9,00 - 14,00	12,70	7,80	152	102	178,41
EM141800	18,00	10,00 - 18,00	12,70	9,20	178	125	219,22
EM142200	22,00	14,00 - 22,00	12,70	13,00	184	132	259,99
EM142600	26,00	18,00 - 26,00	12,70	17,20	184	132	280,43

**HSSCo SPRUE REAMERS 45° HELIX**

Ref. EM30

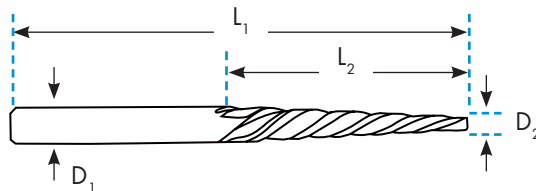
Ref. EM31

Ref. EM32

**HSSCo**

**TOL  
± 0,05**
**TOL  
h8**
**TOL  
± 1**
**TOL  
± 2**

FOR MOULDS


**5%  
1:20**
**8%  
2:25**
**10%  
1:10**

EM30				
D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	€
6,00	3,00	110	60	130,41
8,00	4,00	130	80	179,77
10,00	5,00	155	100	213,42
12,00	6,00	180	120	260,84
14,00	7,00	200	140	332,48

EM31				
D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	€
8,00	3,00	110	62	130,41
10,00	4,00	130	75	170,75
12,00	5,00	150	90	197,79
14,00	6,00	160	100	287,85

EM32				
D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	€
8,00	3,00	100	50	123,74
10,00	4,00	115	60	130,41
12,00	5,00	130	70	159,79
14,00	6,00	140	80	276,49



**HSS EXTENSIBLE REAMERS**

**HSS WITH GUIDE**



TOL H11	Ø mm	Ø mm min. x max.	EM4G	EM4-6C	EM4-6T
			REAMERS €	BLADES €	SCREWS €
EM4G0800	8,00	8,00 - 9,00	140,40*	77,69*	3,50*
EM4G0900	9,00	9,00 - 10,00	140,40*	77,69*	3,50*
EM4G1000	10,00	10,00 - 11,00	140,40*	77,69*	3,50*
EM4G1100	11,00	11,00 - 12,00	140,40*	77,69*	3,50*
EM4G1200	12,00	12,00 - 13,50	143,19*	77,75*	3,70*
EM4G1350	13,50	13,50 - 15,50	148,95*	77,75*	3,70*
EM4G1550	15,50	15,50 - 18,00	156,01*	81,44*	4,09*
EM4G1800	18,00	18,00 - 21,00	165,83*	84,27*	4,09*
EM4G2100	21,00	21,00 - 24,00	180,91*	96,99*	4,09*
EM4G2400	24,00	24,00 - 27,50	202,46*	102,12*	4,28*
EM4G2750	27,50	27,50 - 31,50	239,05*	112,32*	4,48*
EM4G3150	31,50	31,50 - 37,00	329,76*	138,16*	4,48*
EM4G3700	37,00	37,00 - 45,00	461,33*	213,83*	4,48*
EM4G4500	45,00	45,00 - 55,00	661,23*	328,87*	4,74*
EM4G5500	55,00	55,00 - 67,00	1.074,54*	508,86*	4,74*
EM4G6700	67,00	67,00 - 80,00	1.577,50*	773,18*	4,74*

\* Till end of stock

**HSS REINFORCED**



TOL H11	Ø mm	Ø mm min. x max.	EM6	EM4-6C	EM4-6T
			REAMERS €	BLADES €	SCREWS €
EM60640	6,40	6,40 - 7,20	119,60*		
EM60720	7,20	7,20 - 8,00	119,60*		
EM60800	8,00	8,00 - 9,00	119,60*	77,69*	3,50*
EM60900	9,00	9,00 - 10,00	119,60*	77,69*	3,50*
EM61000	10,00	10,00 - 11,00	119,60*	77,69*	3,50*
EM61100	11,00	11,00 - 12,00	119,60*	77,69*	3,50*
EM61200	12,00	12,00 - 13,50	119,60*	77,75*	3,70*
EM61350	13,50	13,50 - 15,50	119,60*	77,75*	3,70*
EM61550	15,50	15,50 - 18,00	127,27*	81,44*	4,09*
EM61800	18,00	18,00 - 21,00	131,76*	84,27*	4,09*
EM62100	21,00	21,00 - 24,00	153,31*	96,99*	4,09*
EM62400	24,00	24,00 - 27,50	166,91*	102,12*	4,28*
EM62750	27,50	27,50 - 31,50	182,51*	112,32*	4,48*
EM63150	31,50	31,50 - 37,00	237,92*	138,16*	4,48*
EM63700	37,00	37,00 - 45,00	354,76*	213,83*	4,48*
EM64500	45,00	45,00 - 55,00	510,48*	328,87*	4,74*
EM65500	55,00	55,00 - 67,00	936,86*	508,86*	4,74*
EM66700	67,00	67,00 - 80,00	1.437,74*	773,18*	4,74*

\* Till end of stock

**HSS EXTENSIBLE REAMER WITH GUIDE SET**



(Reamers Ref. EM4G)

HSS	REFERENCE	EM5E8	EM5E14
	QUANTITY		8
QUALITY		HSS	HSS
CONTENT		Ø 11 - 31,50 mm	Ø 8 - 55 mm
PRICE €		1.709,02	3.723,86

**CUTTING SPEED & FEED CHART FOR REAMERS**

	C/S	m/min	DIAMETER Ø (mm)											
			2	3	5	7	10	12	15	18	20	22	25	30
STEEL EM3	12	RPM	1911	1274	764	546	382	318	255	212	191	174	153	127
	mm / rev mm / min	FEED	0,10	0,10	0,11	0,12	0,15	0,18	0,20	0,22	0,23	0,24	0,25	0,29
			191	127	84	66	57	56	51	47	44	42	38	37
HARDENED STEEL EM3+TiAlN	7	RPM	1115	743	446	318	223	186	149	124	111	101	89	74
	mm / rev mm / min	FEED	0,08	0,080	0,08	0,09	0,10	0,11	0,12	0,15	0,20	0,21	0,22	0,26
			89	59	36	29	22	20	18	19	22	21	20	19
STAINLESS STEEL EM3+TiN	5	RPM	796	531	318	227	159	133	106	88	80	72	64	53
	mm / rev mm / min	FEED	0,08	0,08	0,09	0,10	0,10	0,12	0,14	0,16	0,18	0,20	0,21	0,24
			64	42	29	23	16	16	15	14	14	14	13	13
ALUMINIUM EM3	37	RPM	5892	3928	2357	1683	1178	982	786	655	589	536	471	393
	mm / rev mm / min	FEED	0,15	0,16	0,18	0,20	0,21	0,23	0,25	0,28	0,29	0,30	0,35	0,38
			884	628	424	337	247	226	196	183	171	161	165	149
CAST IRON EM3+TiCN	9	RPM	1433	955	573	409	287	239	191	159	143	130	115	96
	mm / rev mm / min	FEED	0,15	0,16	0,18	0,18	0,20	0,22	0,24	0,26	0,28	0,29	0,30	0,33
			215	153	103	74	57	53	46	41	40	38	34	32
BRASS EM3	17	RPM	2707	1805	1083	773	541	451	361	301	271	246	217	180
	mm / rev mm / min	FEED	0,10	0,12	0,14	0,18	0,20	0,25	0,28	0,28	0,30	0,30	0,35	0,41
			271	217	152	139	108	113	101	84	81	74	76	74

**REMARKS:**

- If we know the reamer size and workpiece material, the speed and feed are quickly found.  
 Example:  
 Material: Steel RPM= 382  
 Ø reamer: 10 mm. Vf= 57 mm/min
- After several holes you must adjust the speed and feed again.

**EASY USING CHART FOR DRILLING THE CORRECT DIAMETER BEFORE REAMING**

REAMING Ø	DRILL DIAMETER		
	STEEL	STAINLESS STEEL	ALUMINIUM
1<Ø<10 mm	Ø final - 0,2 mm	Ø final - 0,2 mm	Ø final - 0,3 mm
11<Ø<20 mm	Ø final - 0,3 mm	Ø final - 0,3 mm	Ø final - 0,4 mm
21<Ø<30 mm	Ø final - 0,4 mm	Ø final - 0,4 mm	Ø final - 0,45 mm
Ø>30 mm	Ø final - 0,5 mm	Ø final - 0,5 mm	Ø final - 0,6 mm

# COUNTERSINKS

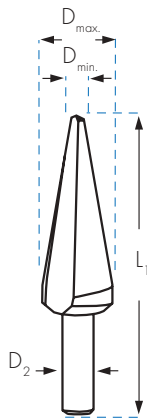


**BLUE-MASTER<sup>®</sup>**  
*by CELESA*

CUTTING TECHNOLOGIES

**HSS & HSSCo TUBE AND SHEET DRILLS**
**HSS**

Ref. AV30


**118°**

**BM0 BM1 BM5 BM3 BM4 BM6**

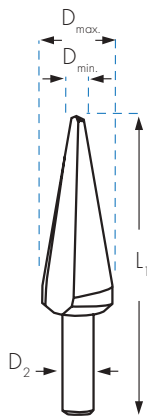

AV30

	D min. mm	D max. mm	D2 mm	L1 mm	HSS	TiN
					€	€
AV30BM0B	3,0	14,0	6,0	58	19,54	39,06
AV30BM8B	3,0	22,5	8,0	85	54,03	97,91
AV30BM5B	3,0	31,0	10,0	102	86,40	129,48
AV30BM9B	5,0	25,4	10,0	87	61,44	117,37
AV30BM1B	6,0	20,0	8,0	63	27,57	57,00
AV30BM2B	16,0	30,0	10,0	79	53,33	94,32
AV30BM3B	26,0	40,0	13,0	86	110,34	172,79
AV30BM4	36,0	50,0	13,0	89	162,52	250,70
AV30BM6	40,0	61,0	13,0	98	269,24	419,29

\* The references ended by a B are supplied in blister packaging

**HSSCo**

Ref. AVC30


**118°**

**BM0 BM1 BM2 BM3**


AVC30

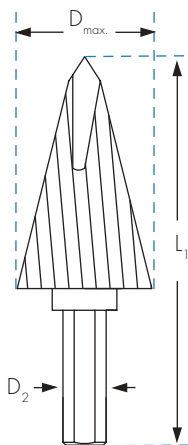
	D min. mm	D max. mm	D2 mm	L1 mm	HSSCo	TiN
					€	€
AVC30BM0B	3,0	14,0	6,0	58	36,17	47,25
AVC30BM1B	6,0	20,0	8,0	63	47,96	72,84
AVC30BM2B	16,0	30,0	10,0	79	79,14	105,51
AVC30BM3B	26,0	40,0	13,0	86	205,91	222,21

**HSS TUBE & SHEET DRILLS**

**HSS**

Ref. AG

Countersink Drill for tube and metal and light alloy sheets, also for plastic materials. Suitable up to 5mm depth.



TUBE AND SHEET DRILLS					AG
	D <sub>max.</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	Nº Z	HSS €
AG2500	25,0	8,0	72	20	27,59
AG3200	32,0	10,0	81	30	41,43
AG4500	45,0	10,0	94	36	68,43

**HSS**

Ref. AV31

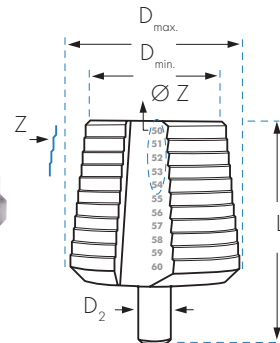
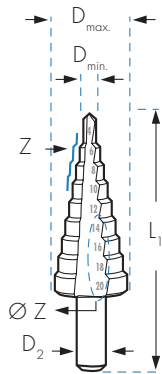


SPIRAL FLUTED WITH STOPPER					AV31	
	D <sub>min.</sub> mm	D <sub>max.</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	HSS €	TiN €
AV31BM0B	3,0	7,8	6,0	48	31,32	47,40
AV31BM1B	3,0	10,2	6,0	52	41,13	64,48
AV31BM2B	3,0	11,8	6,0	56	45,77	80,88



**HSS STRAIGHT FLUTED STEP DRILLS**
**HSS**


Ref. AV40



BM1

BM2

BM3

BM4

BM5

AV40

	D min. mm	D max. mm	D <sub>2</sub> mm	L <sub>1</sub> mm	Z	Ø Z mm min - max	AV40	
							HSS €	TiN €
AV40BM1B	4,0	12,0	6,0	65	5	4-6-8-10-12	40,72	62,38
AV40BM2B	4,0	12,0	6,0	65	9	4-5-6-7-8-9-10-11-12	40,55	62,74
AV40BM3B	4,0	20,0	8,0	69	9	4-6-8-10-12-14-16-18-20	51,99	80,08
AV40BM4B	4,0	30,0	10,0	96	14	4-6-8-10-12-14-16-18-20-22-24-26-28-30	85,28	130,00
AV40BM14	4,0	39,0	10,0	107	13	4-6-9-12-15-18-21-24-27-30-33-36-39	211,59	326,75
AV40BM16B	5,0	28,0	10,0	69	7	5-8-8-11,8-15,3-19-24,5-28	98,15	154,46
AV40BM35B	5,0	35,0	13,0	80	13	5-7-10-12-15-17-20-22-25-27-30-32-35	127,06	184,74
AV40BM11B	6,0	25,0	10,0	65	7	6-9-12-16-20-22,50-25	80,15	114,77
AV40BM10B	6,0	26,7	10,0	75	8	6-9-11,40-14-17,25-19-21,25-26,75	156,05	245,56
AV40BM17B	6,0	30,5	10,0	80	9	6-9-12,5-15,2-18,6-20,4-22,5-28,3-30,5	165,68	260,71
AV40BM12B	6,0	32,0	10,0	75	9	6-9-12-16-20-22,5-25-28,5-32	113,12	154,64
AV40BM18B	6,0	37,0	10,0	100	12	6-9-12,5-15,2-18,6-20,4-22,5-26-28,3-30,5-34-37	184,13	285,40
AV40BM5B	6,0	38,0	10,0	96	12	6-9-13-16-19-21-23-26-29-32-35-38	198,66	284,04
AV40BM13	6,0	40,0	13,0	105	16	6-11-17-23-29-30-31-32-33-34-35-36-37-38-39-40	273,95	336,61
AV40BM15B	6,5	32,5	10,0	79	9	6,50-8,50-10,50-12,50-16,50-20,50-25,50-29-32,50	130,97	183,55
AV40BM20	6,5	40,5	10,0	96	11	6,50-8,50-10,50-12,50-16,50-20,50-25,50-29-32,50-36,50-40,50	205,33	323,12
AV40BM21B	7,0	20,0	10,0	80	12	7-10-11-12-13-14-15-16-17-18-19-20	82,16	129,28
AV40BM22B	10,0	30,0	13,0	83	12	10-20-21-22-23-24-25-26-27-28-29-30	128,60	201,76
AV40BM25B	12,0	20,0	8,0	66	9	12-13-14-15-16-17-18-19-20	76,17	101,95
AV40BM26B	20,0	30,0	10,0	78	11	20-21-22-23-24-25-26-27-28-29-30	111,12	156,53
AV40BM27	30,0	40,0	10,0	78	11	30-31-32-33-34-35-36-37-38-39-40	166,43	214,27
AV40BM28	40,0	50,0	13,0	85	11	40-41-42-43-44-45-46-47-48-49-50	237,92	331,60
AV40BM29	50,0	60,0	13,0	85	11	50-51-52-53-54-55-56-57-58-59-60	299,78	372,38

**FOR TUBES IN GAS THREAD**

AV40BM6B	6,0	32,0	10,0	75	8	6-9-11,20(1/8)-14,50(1/4)-18,20(3/8)-22,30(1/2)-27,90(3/4)-32	117,36	160,88
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**FOR BLIND RIVETS M3 - M4 - M5 - M6 - M7**

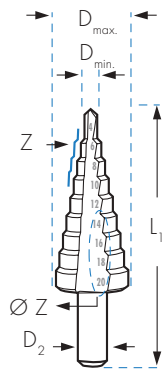
AV40BM7B	4,8	10,6	6,0	54	5	4,80-6,40-7,20-9,60-10,65	38,24	54,56
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**FOR ELECTRICAL CONDUCTIONS (OLD & NEW NORMS)**

AV40PG21B	PG7	PG21	13,0	70	11	6,5-8,5-10,5-12,5(PG7)-15,2(PG9)-18,6(PG11) 20,4(PG13,5)-22,5(PG16)-25,5-18,3(PG21)-30,5	129,23	182,70
AV40PG29B	PG7	PG29	13,0	81	14	6,5-9-11-12,5(PG7)-15,2(PG9)-18,6(PG11)-20,4(PG13,5) 22,5(PG16)-26-28,3(PG21)-30,5-33-35-37(PG29)	166,95	234,20
AV40BM8B	8,5	32,5	10,0	70	12	8,5-10,5-12,5-14,5-16,5-18,5-20,5-23,5-25,5 28-30,5-32,5	97,97	150,64
AV40BM9B	8,5	40,5	12,0	84	16	8,5-10,5-12,5-14,5-16,5-18,5-20,5-23,5-25,5 28-30,5-32,5-34,5-36,5-38,5-40,5	143,69	224,93

HSSCo STRAIGHT FLUTED STEP DRILLS

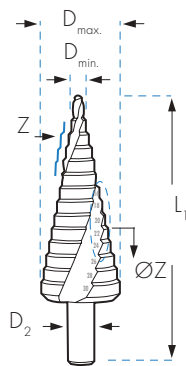
**HSSCo** **INOX** Ref. AVC40



								AVC40	
	D min. mm	D max. mm	D2 mm	L1 mm	Z	Ø Z mm min - max	HSSCo €	TiN €	
AVC40BM1B	4,0	12,0	6,0	65	5	4-6-8-10-12	62,60	90,33	
AVC40BM2B	4,0	12,0	6,0	65	9	4-5-6-7-8-9-10-11-12	66,10	109,10	
AVC40BM3B	4,0	20,0	8,0	69	9	4-6-8-10-12-14-16-18-20	99,91	123,61	
AVC40BM4B	4,0	30,0	10,0	96	14	4-6-8-10-12-14-16-18-20-22-24-26-28-30	143,70	193,77	
AVC40BM18B	6,0	37,0	10,0	100	12	6-9-12,5-15,2-18,6-20,4-22,5-26-28,3-30,5-34-37	257,43	325,55	


HSS SPIRAL FLUTED STEP DRILLS

**HSS** Ref. AV42



								AV42	
	D min. mm	D max. mm	D2 mm	L1 mm	Z	Ø Z mm min - max	HSS €	TiN €	
AV42BM1B	4,0	12,0	6,0	65	5	4-6-8-10-12	53,78	72,73	
AV42BM2B	4,0	12,0	6,0	68	9	4-5-6-7-8-9-10-11-12	55,63	75,74	
AV42BM3B	4,0	20,0	8,0	69	9	4-6-8-10-12-14-16-18-20	74,20	105,89	
AV42BM4B	4,0	30,0	10,0	96	14	4-6-8-10-12-14-16-18-20-22-24-26-28-30	118,03	168,58	
AV42BM5B	6,0	38,0	10,0	96	12	6-9-13-16-19-21-23-26-29-32-35-38	230,22	300,73	
AV42BM11B	6,0	25,0	10,0	65	7	6-9-12-16-20-22,50-25	95,53	124,20	
AV42BM12B	6,0	32,0	10,0	75	9	6-9-12-16-20-22,5-25-28,5-32	124,60	156,30	
AV42BM13	6,0	40,0	13,0	105	16	6-11-17-23-29-30-31-32-33-34-35-36-37-38-39-40	275,03	355,09	
AV42BM8B	8,5	32,5	10,0	70	12	8,5-10,5-12,5-14,5-16,5-18,5-20,5-23,5 25,5-28-30,5-32,5	125,76	162,53	
AV42BM9B	8,5	40,5	12,0	84	16	8,5-10,5-12,5-14,5-16,5-18,5-20,5-23,5 25,5-28-30,5-32,5-34,5-36,5-38,5-40,5	197,76	240,53	

**HSS SPIRAL FLUTED STEP DRILLS**
**HSS**
**1/4" HEXAGONAL SHANK**

	D min. mm	D max. mm		L <sub>1</sub> mm	Z	Ø Z mm min - max	AV41	
							HSS €	TiN €
AV41BM2B	4,0	12,0	1/4"	72	9	4-5-6-7-8-9-10-11-12	89,48	110,95
AV41BM3B	4,0	20,0	1/4"	81	9	4-6-8-10-12-14-16-18-20	118,29	146,71
AV41BM4B	4,0	30,0	1/4"	105	14	4-6-8-10-12-14-16-18-20-22-24-26-28-30	140,21	168,90



Ref. AV41BM2B

**SHORT SERIES max. 2mm thick**

	D min. mm	D max. mm	D <sub>2</sub> mm	L <sub>1</sub> mm	Z	Ø Z mm min - max	AV41C	
							HSS €	TiN €
AV41CBM2B	4,0	12,0	6,0	48	9	4-5-6-7-8-9-10-11-12	63,67	85,46
AV41CBM3B	4,0	20,0	8,0	58	9	4-6-8-10-12-14-16-18-20	79,05	110,45
AV41CBM4B	4,0	30,0	10,0	72	14	4-6-8-10-12-14-16-18-20-22-24-26-28-30	128,87	198,42



Ref. AV41CBM3B

**STRAIGHT FLUTED FOR ELECTRICIANS**

	DIN	D min. mm	D max. mm	D <sub>2</sub> mm	L <sub>1</sub> mm	Z	Ø Z mm min - max	AV45	
								HSS €	TiN €
AV45BM0B	60423	5,3	30,5	10,0	79	9	5,3-7-9-10,5-14,5-18,5-23,5-27-30,5	175,67	226,53
AV45BM2B	60423	5,3	38,5	10,0	96	11	5,3-7-9-10,5-14,5-18,5-23,5-27-30,5-34,5-38,5	211,25	266,90



Ref. AV45BM2B

**3 STRAIGHT FLUTED**

	D min. mm	D max. mm	D <sub>2</sub> mm	L <sub>1</sub> mm	Z	Ø Z mm min - max	AV43	
							HSS €	TiN €
AV43BM1B	4,0	12,0	6,0	65	9	4-5-6-7-8-9-10-11-12	76,74	100,41
AV43BM2B	4,0	20,0	8,0	75	9	4-6-8-10-12-14-16-18-20	105,21	163,02
AV43BM3B	4,0	30,0	10,0	100	14	4-6-8-10-12-14-16-18-20-22-24-26-28-30	154,68	252,99



Ref. AV43BM3B

**STEP DRILL WITH INTERCHANGEABLE PILOT DRILL**

	D min. mm	D max. mm	D <sub>2</sub> mm	L <sub>1</sub> mm	Z	Ø Z mm min - max	AV4	
							HSS €	
AV4BM3040	30,0	40,0	13,0	76	11	30-31-32-33-34-35-36-37-38-39-40	161,00	
AV4BM4050	40,0	50,0	13,0	76	11	40-41-42-43-44-45-46-47-48-49-50	232,54	
AV4BM5060	50,0	60,0	13,0	76	11	50-51-52-53-54-55-56-57-58-59-60	295,19	

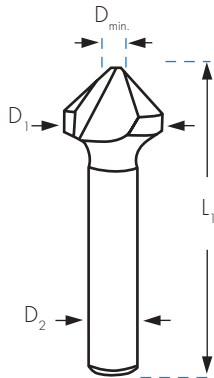


Ref. AV4BM3040

**PILOT DRILLS**

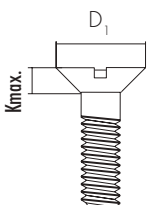

		BAV4BM
		€
BAV4BM	DESCRIPTION	
	10X35mm	10,42

3 FLUTED COUNTERSINKS



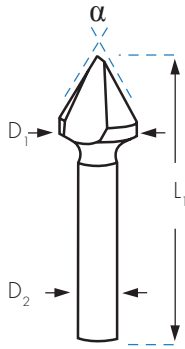
				AV6	AV16	AV37	AV7	AV38	AV99	AV6MD	AV15	
MATERIAL				HSS	HSS	HSS	HSSCo	HSSCo	HSSCo	CARBIDE	HSS	
COATING					TiN	TiAlN		TiAlSiN	TiAlN			
APPLICATION				GENERAL PURPOSE	GENERAL PURPOSE	GENERAL PURPOSE	GENERAL PURPOSE INOX	INOX Plus	INOX SpheroPlus Al	HARDOX 450		
D1 mm	D min. mm	D2 mm	L1 mm	€	€	€	€	€	€	€	L1 mm	€
4,30	1,3	4,0	40	17,53	32,38	38,12	19,50	46,57		65,77		
5,00	1,5	4,0	40	17,53	32,38	38,12	19,50	46,57				
5,30	1,5	4,0	40	17,53	32,38	38,12	19,50	46,57		63,32		
5,80	1,5	5,0	45	13,31	28,45	35,78	15,87	40,77				
6,00	1,5	5,0	45	12,69	27,83	35,78	15,25	40,27		65,43		
6,30	1,5	5,0	45	12,46	27,83	35,78	14,97	40,05	40,49	70,74		
7,00	1,8	6,0	50	17,53	37,15	47,72	19,50	54,16				
7,30	1,8	6,0	50	17,53	37,15	47,72	19,50	54,16				
8,00	2,0	6,0	50	17,53	37,15	47,72	19,71	54,31		75,36		
8,30	2,0	6,0	50	17,27	37,15	47,72	19,35	54,01	54,61	80,37		
9,40	2,2	6,0	50	20,44	41,92	53,47	22,81	61,48				
10,00	2,5	6,0	50	20,44	41,92	53,47	22,81	61,48		83,07		
10,40	2,5	6,0	50	20,07	41,92	53,47	23,29	61,31	61,99	87,66	112	62,39
11,50	2,8	8,0	56	20,54	44,41	57,49	24,89	66,64				
12,00	2,8	8,0	56	20,54	44,41	57,49	24,89	66,65				
12,40	2,8	8,0	56	20,54	44,41	57,49	24,88	66,65	67,39	91,41	112	76,81
13,40	2,9	8,0	56	22,21	45,88	59,38	27,15	69,80				
15,00	3,2	10,0	60	28,20	61,65	81,30	34,57	93,39		95,20		
16,50	3,2	10,0	60	27,73	63,31	81,30	34,10	92,97	94,01	100,11	120	92,56
19,00	3,5	10,0	63	41,53	77,24	98,66	51,13	113,54				
20,50	3,5	10,0	63	40,82	78,89	101,63	50,20	114,99	116,26	138,81	124	124,06
23,00	3,8	10,0	67	51,05	89,87	113,73	62,31	133,53				
25,00	3,8	10,0	67	51,51	91,14	114,91	63,42	135,31	136,81	226,50	128	149,62
28,00	4,0	12,0	71	71,93	115,85	148,70	90,57	181,84				
30,00	4,2	12,0	71	76,44	120,20	193,78	95,79	219,29				
31,00	4,2	12,0	71	79,57	124,59	208,09	95,79	214,54		255,58	133	175,27
40,00	6,5	13,0	80	118,32	190,15	244,66	149,54	267,75		443,75*		

\* Shank 16 mm

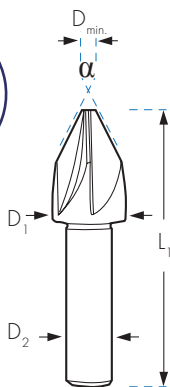


90° TAPER HEAD SCREWS DIMENSIONS

	M2	M2.5	M3	M4	M5	M6	M8	M10	M12	M14	M16	M18	M20
Kmax.	1,2	1,5	1,7	2,3	2,8	3,3	4,4	5,5	6,5	7	7,5	8	8,5
D1	4	5	6	8	10	12	16	20	24	27	30	33	36

**60°, 75°, 120° HSS COUNTERSINKS**
**3Z**


				AV8		AV9		AV10	
MATERIAL				HSS		HSS		HSS	
DIN				DIN 334C		NORM CELESA		NORM CELESA	
POINT ANGLE				60°		75°		120°	
D1 mm	D mín. mm	D2 mm	L1 mm	€		€		€	
6,30	1,5	5,0	45	AV80630	20,06	AV90630	15,44	AV100630	16,44
8,00	2,0	6,0	50	AV80800	22,05				
8,30	2,0	6,0	50			AV90830	21,05	AV100830	22,65
10,00	2,5	6,0	50	AV81000	24,05				
10,40	2,5	6,0	50			AV91040	24,87	AV101040	26,47
12,40	2,8	8,0	56	AV81250	26,67	AV91240	27,48	AV101240	31,69
16,50	3,2	10,0	60	AV81600	34,11	AV91650	34,47	AV101650	40,10
20,50	3,5	10,0	63	AV82000	48,14	AV92050	50,74	AV102050	59,16
25,00	3,8	10,0	67	AV82500	67,18	AV92500	63,96	AV102500	74,61
40,00	6,5	13,0	67	AV84000	154,34	AV94000	139,16	AV104000	163,99

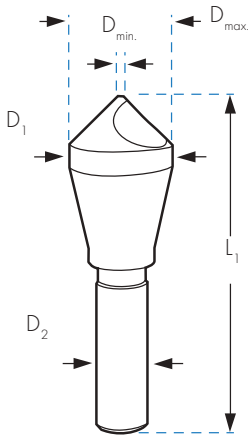
**60°, 90° & 120° MULTICUTTING COUNTERSINKS**
**5Z**


				AV12		AV11		AV13				
MATERIAL				HSS		HSS		HSS				
DIN				DIN 334A		DIN 335A		DIN 347A				
POINT ANGLE				60°		90°		120°				
D1 mm	D mín. mm	D2 mm	Nº Z	L1 mm	€	L1 mm	€	L1 mm	€			
8,00	2,5	8,0	5	AV120800	48	17,53	AV110800	44	13,18	AV130800	44	17,47
12,50	2,8	8,0	5	AV121250	52	24,53	AV111250	48	19,31	AV131250	48	25,65
16,00	3,0	10,0	5	AV121600	60	41,16	AV111600	56	32,42	AV131600	56	43,03
20,00	3,5	10,0	5	AV122000	64	53,09	AV112000	60	41,76	AV132000	60	55,48
25,00	3,5	10,0	5	AV122500	69	74,31	AV112500	65	58,46	AV132500*	65	75,47

\* D2: 12,00 mm



**HSS & HSSCo DEBURRING COUNTERSINKS**



MATERIAL					AV1	AV1T	AV2	AV2T	AV1-60
COATING						TiN		TiN	
POINT ANGLE					90°	90°	90°	90°	60°
D1 mm	Dmin mm	Dmax mm	D2 mm	L1 mm	€	€	€	€	€
6,35	2,0	5,0	6,35	45	AV100 14,31	AV100T 25,85	AV200 24,32	AV200T 40,91	AV100-60 25,63
10,00	2,0	5,0	6,00	45	AV101 17,64	AV101T 27,04	AV201 25,12	AV201T 40,91	AV101-60 32,02
14,00	6,0	13,0	8,00	50	AV102 22,04	AV102T 38,01	AV202 29,25	AV202T 51,01	AV102-60 38,87
20,00	8,0	18,0	10,00	65	AV103 39,46	AV103T 67,96	AV203 52,29	AV203T 86,34	AV103-60 44,34
27,00	11,0	25,0	12,00	85	AV104 70,52	AV104T 111,72	AV204 85,20	AV204T 136,02	AV104-60 77,25
30,00	12,0	28,0	15,00	95	AV105 119,02	AV105T 212,01	AV205 135,37	AV205T 233,72	AV105-60 126,60
35,00	14,0	33,0	15,00	100	AV106 182,80	AV106T 290,30	AV206 226,81	AV206T 393,05	AV106-60 200,63
40,00	16,0	38,0	15,00	110	AV107 252,39	AV107T 412,58	AV207 260,96	AV207T 421,11	AV107-60 271,91
45,00	18,0	42,0	15,00	120	AV108 334,41	AV108T 501,09	AV208 392,18	AV208T 558,65	AV108-60 351,42
50,00	20,0	48,0	15,00	130	AV109 403,49	AV109T 582,58	AV209 522,70	AV209T 701,38	AV109-60 428,19

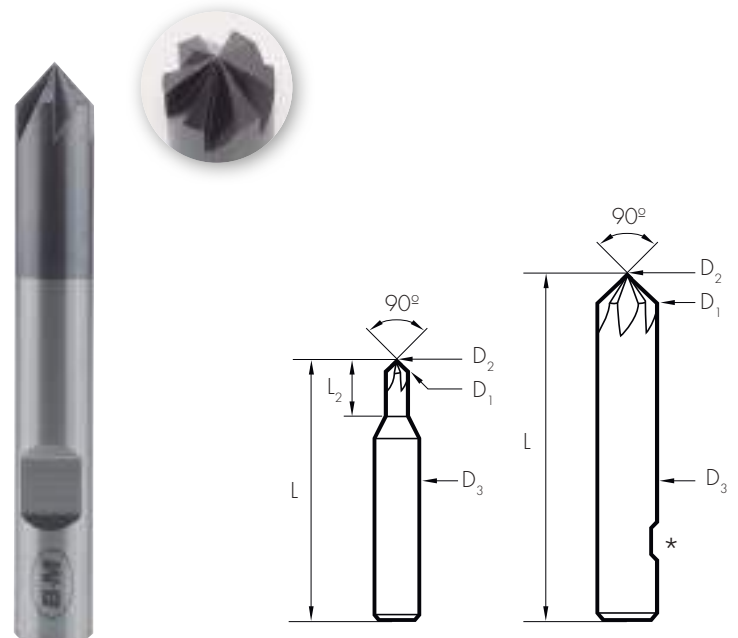
**MULTI FLUTES 90° CUTTERS**

Ref. FC

**TiAlN** **SOLID CARBIDE**

D1 mm	D2 mm	L mm	L2 mm	D3 mm	Z	FC	€
0,5	0,1	39,0	3,0	3,0	3	FC0050	63,95
0,6	0,1	39,0	3,0	3,0	3	FC0060	63,95
0,7	0,1	39,0	3,0	3,0	3	FC0070	63,95
0,8	0,1	39,0	3,0	3,0	3	FC0080	63,95
0,9	0,1	39,0	3,0	3,0	3	FC0090	63,95
1,0	0,1	39,0	3,0	3,0	3	FC0100	61,74
1,5	0,1	39,0	4,5	3,0	3	FC0150	61,74
2,0	0,1	39,0	6,0	3,0	3	FC0200	61,74
2,5	0,1	39,0	7,5	3,0	3	FC0250	61,74
3,0	0,1	39,0	-	3,0	3	FC0300	61,74
4,0	0,8	54,0	-	4,0	4	FC0400	63,95
6,0	0,8	57,0	-	6,0*	4	FC0600	67,25
8,0	0,8	63,0	-	8,0*	5	FC0800	73,87
10,00	1,0	72,0	-	10,0*	6	FC1000	88,20
12,00	1,2	83,0	-	12,0*	6	FC1200	130,10
16,00	1,6	92,0	-	16,0*	6	FC1600	232,63
20,00	2,0	104,0	-	20,0*	6	FC2000	425,56

\* Flat shank



**TAPER SHANK COUNTERSINKS**

**3Z**

Ref. AV17

**DIN 335D**

**HSS**



90°

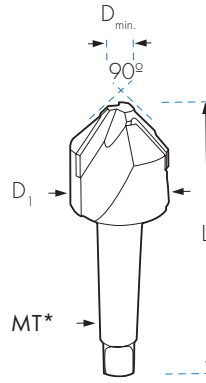
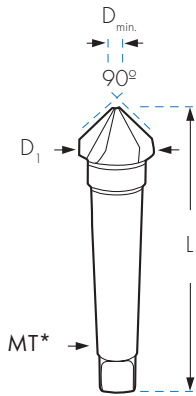
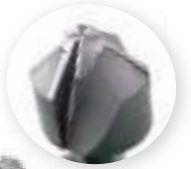
Ref. AV17MD

**DIN 335D**

**CARBIDE TIPPED**



90°



AV17

AV17MD

D <sub>1</sub> mm	D <sub>min.</sub> mm	L <sub>1</sub> mm	MT*	€
16,50	4,0	90	1	84,05
20,50	3,5	100	2	99,09
25,00	3,8	106	2	100,11
31,00	4,2	112	2	111,43
40,00	10,0	140	3	171,48
50,00	14,0	150	3	215,86
63,00	16,0	180	4	349,02
80,00	22,0	190	4	597,18
100,00	25,0	210	4	1.539,10

D <sub>1</sub> mm	D <sub>min.</sub> mm	L <sub>1</sub> mm	MT*	€
63,00	16,0	190	4	1.460,79*
80,00	22,0	190	4	1.783,34*

\*Till end of stock

**TAPER SHANK COUNTERSINKS**

**MULTI CUTTING**

Ref. AV23

**DIN 334B**



60°

Ref. AV18

**DIN 335B**



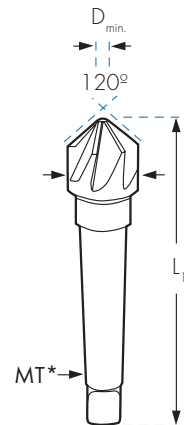
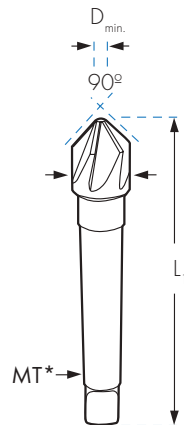
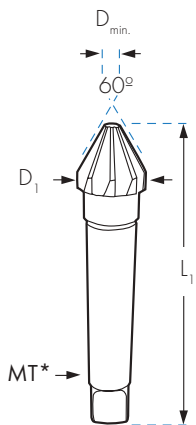
90°

Ref. AV24

**DIN 347B**



120°



AV23

AV18

AV24

D <sub>1</sub> mm	D <sub>min.</sub> mm	L <sub>1</sub> mm	MT*	Z	HSS €
16,00	3,2	93	1	7	63,77
20,00	4,0	116	2	7	74,65
25,00	7,0	121	2	9	81,77
31,50	9,0	124	2	9	111,81
40,00	12,5	150	3	11	204,63
50,00	16,0	153	3	13	244,61
63,00	20,0	185	4	15	374,47
80,00	25,0	196	4	17	578,74
100,00	22,0	230	4	3	1.823,64


D <sub>1</sub> mm	D <sub>min.</sub> mm	L <sub>1</sub> mm	MT*	Z	HSS €
16,00	3,2	93	1	7	65,04
20,00	4,0	116	2	7	76,06
25,00	7,0	121	2	9	83,41
31,50	9,0	124	2	9	114,08
40,00	12,5	150	3	11	208,77
50,00	16,0	153	3	13	249,44
63,00	20,0	185	4	15	358,12
80,00	25,0	196	4	17	590,36
100,00	22,0	190	4	20	1.591,39

D <sub>1</sub> mm	D <sub>min.</sub> mm	L <sub>1</sub> mm	MT*	Z	HSS €
16,00	3,2	93	1	7	66,23
20,00	4,0	116	2	7	77,51
25,00	7,0	121	2	9	89,02
31,50	9,0	124	2	9	116,13
40,00	12,5	150	3	11	184,91
50,00	16,0	153	3	13	238,84
63,00	20,0	185	4	15	388,86
80,00	25,0	196	4	17	601,00
100,00	27,0	210	4	3	1.577,33


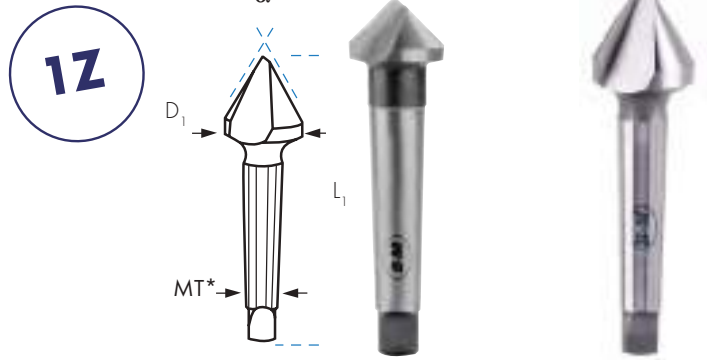
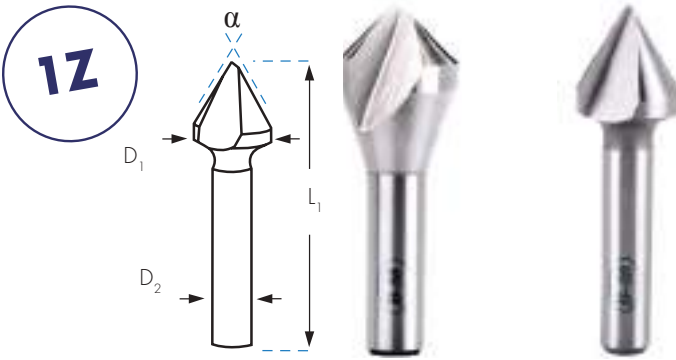
\* Morse taper

**SINGLE FLUTE COUNTERSINKS**

**HSS** STRAIGHT SHANK  
Ref. AV27  
Ref. AV29



**HSS** MORSE TAPER SHANK  
Ref. AV34  
Ref. AV28

	D1 mm	D2 mm	L1 mm	AV27		AV29	
				90°	€	60°	€
AV270600	6,0	5,0	45	13,77	AV290600	25,40	
AV270800	8,0	8,0	50	14,54	AV290800	26,60	
AV271000	10,0	8,0	50	15,41	AV291000	27,85	
AV271200	12,0	8,0	50	17,94	AV291200	31,29	
AV271600	16,0	10,0	56	21,37	AV291600	38,10	
AV272000	20,0	10,0	60	29,20	AV292000	48,97	
AV272500	25,0	10,0	75	38,47	AV292500	77,11	
AV273000	30,0	12,0	80	55,49	AV293000	100,70	
AV274000	40,0	13,0	89	144,59	AV294000	175,04	
AV275000	50,0	13,0	98	178,51	AV295000	261,50	

	D1 mm	MT*	L1 mm	AV34		AV28	
				90°	€	60°	€
AV341600	16,0	1	92	66,20	AV281600	63,34	
AV342000	20,0	2	107	82,97	AV282000	69,39	
AV342500	25,0	2	110	106,84	AV282500	102,88	
AV343000	30,0	2	114	121,41	AV283000	135,57	
AV344000	40,0	3	145	195,35	AV284000	178,50	
AV345000	50,0	3	152	285,25	AV285000	271,08	

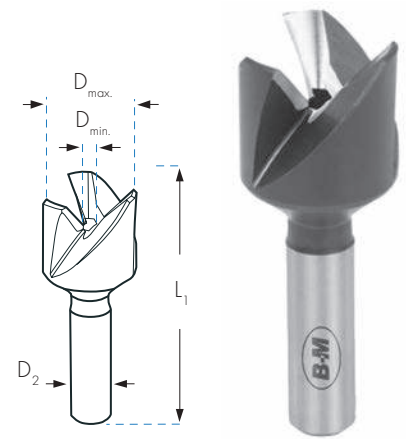
\* Morse taper

**3 FLUTED EXTERNAL CHAMFERING COUNTERSINKS**

**3Z** **HSS** Ref. AVX **90°** Ref. AVX-60 **HSS** **60°**

AVX					
Dmax. mm	Dmin. mm	D2 mm	L1 mm		€
12,00	4,0	8,0	55	AVX1	57,62
20,00	8,0	10,0	60	AVX2	107,34
28,00	10,0	13,0	70	AVX3	152,27
40,00	12,0	CM2	125	AVX4	231,07
50,00	15,0	CM3	130	AVX5	322,83

AVX-60					
Dmax. mm	Dmin. mm	D2 mm	L1 mm		€
8,00	3,0	8,0	55	AVX1-60	61,55
15,00	6,0	10,0	60	AVX2-60	118,12
28,00	10,0	13,0	75	AVX3-60	177,02



**EXTERNAL COUNTERSINKS FOR RESTORING STARTING THREADS**

Ref. AVEXT **HSS** **60°**

Min.-Max.		L1 mm		€
M8-M18	1/4"	75	AVEXT	37,48



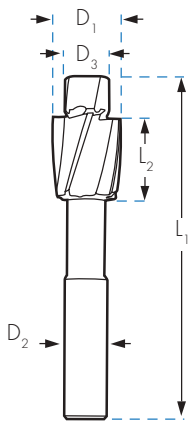
## HSS COUNTERBORES FOR ALLEN SCREWS

STRAIGHT SHANK

**DIN**  
**373**
**HSS**

NOTE: The guide is not included in the cutting length.  
 \* The core hole is used for counterboring threaded holes.

Ref. AV2



CORE HOLE  
for counterboring  
threaded holes



AV2M

AV2MM

AV2GM

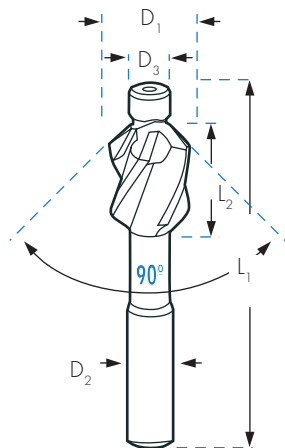
ADJUSTMENT					AV2M		AV2MM		AV2GM				
	D1 mm	D2 mm	L1 mm	L2 mm	D3 mm	FINE €	D3 mm	MEDIUM €	D3 mm	THREADED HOLE €			
M3	6,0	5,0	71	14	AV2M3	3,2	24,84	AV2MM3	3,4	26,89	AV2GM3	2,5	26,89
M4	8,0	5,0	71	14	AV2M4	4,3	24,84	AV2MM4	4,5	26,89	AV2GM4	3,3	26,89
M5	10,0	8,0	80	18	AV2M5	5,3	24,84	AV2MM5	5,5	26,89	AV2GM5	4,2	26,89
M6	11,0	8,0	80	18	AV2M6	6,4	28,00	AV2MM6	6,6	30,31	AV2GM6	5,0	30,31
M7	20,0	12,7	90	20	AV2M7	7,4	51,70						
M8	15,0	12,5	100	22	AV2M8	8,4	34,71	AV2MM8	9,0	37,57	AV2GM8	6,8	37,57
M10	18,0	12,5	100	22	AV2M10	10,5	41,32	AV2MM10	11,0	44,73	AV2GM10	8,5	44,73
M11	22,0	18,8	100	22	AV2M11	11,5	55,00						
M12	20,0	12,5	100	22	AV2M12	13,0	48,20	AV2MM12	14,0	52,18	AV2GM12	10,2	52,18
M14	24,0	12,5	100	22	AV2M14	15,0	75,40	AV2MM14	15,5	81,62	AV2GM14	12,0	81,62
M16	26,0	12,5	100	22	AV2M16	17,0	82,93	AV2MM16	17,5	89,77	AV2GM16	14,0	89,77

STRAIGHT SHANK

**DIN**  
**1866**
**HSS**

NOTE: The guide is not included in the cutting length.

Ref. AV3



ADJUSTMENT					AV3		
	D1 mm	D2 mm	L1 mm	L2 mm	D3 mm	FINE €	
M3	6,3	6,0	71	14,0	AV3M3	3,2	33,98
M4	8,3	8,0	71	14,0	AV3M4	4,3	33,98
M5	10,4	10,0	80	18,0	AV3M5	5,3	33,98
M6	12,4	10,0	80	18,0	AV3M6	6,4	38,61
M8	16,5	12,0	100	22,0	AV3M8	8,4	47,25
M10	20,5	12,0	100	22,0	AV3M10	10,5	51,12
M12	24,5	13,0	110	25,0	AV3M12	13,0	62,31

**HSS COUNTERBORES FOR ALLEN SCREWS**

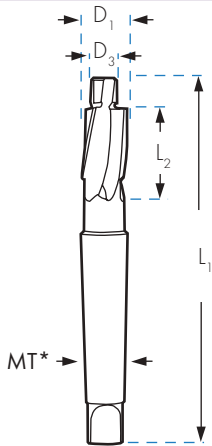
MORSE TAPER SHANK

Ref. AV5

**DIN  
375**

**HSS**

NOTE: The guide is not included in the cutting length.  
\* The core hole is used for counterboring threaded holes.



CORE HOLE  
for counterboring  
threaded holes



AV5M

AV5MM

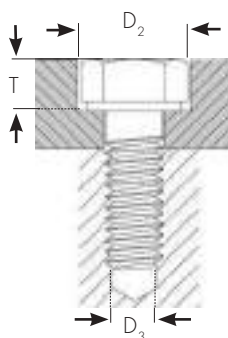
AV5GM

ADJUSTMENT					FINE			MEDIUM			THREADED HOLE		
	D1 mm	MT*	L1 mm	L2 mm		D3 mm	€		D3 mm	€		D3 mm	€
M8	15,0	2	132	22	AV5M8	8,4	67,27	AV5MM8	9,0	67,27	AV5GM8	6,8	67,27
M10	18,0	2	140	25	AV5M10	10,5	69,04	AV5MM10	11,0	69,04	AV5GM10	8,5	69,04
M12	20,0	2	140	25	AV5M12	13,0	76,39	AV5MM12	14,0	76,39	AV5GM12	10,2	76,39
M14	24,0	2	150	30	AV5M14	15,0	106,03	AV5MM14	15,5	106,03	AV5GM14	12,0	106,03
M16	26,0	3	180	35	AV5M16	17,0	124,51	AV5MM16	17,5	124,51	AV5GM16	14,0	124,51
M18	30,0	3	180	35	AV5M18	19,0	134,35	AV5MM18	20,0	134,35	AV5GM18	15,5	134,35
M20	33,0	3	190	40	AV5M20	21,0	146,38	AV5MM20	22,0	146,38	AV5GM20	17,5	146,38
M22	36,0	3	190	40	AV5M22	23,0	178,38	AV5MM22	24,0	178,38	AV5GM22	19,5	178,38
M24	40,0	3	190	40	AV5M24	25,0	215,64	AV5MM24	26,0	215,64	AV5GM24	21,0	215,64
M27	46,0	4	255	50	AV5M27	30,0	245,03						
M30	48,0	4	255	50	AV5M30	33,0	296,43						

\* Morse taper

**ADJUSTMENT APPLICATIONS: FINE, MEDIUM AND THREADED HOLE**

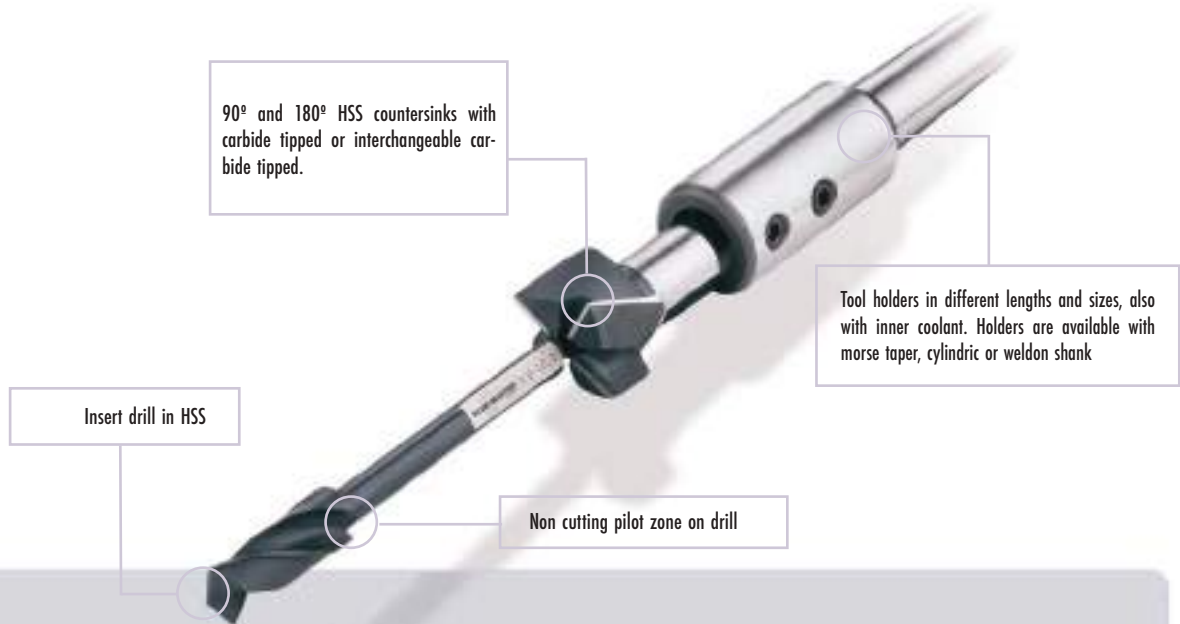
T<sub>1</sub> : For allen screws DIN 84 and DIN 7984  
 For allen screws DIN 7513 B  
 For allen screws DIN 7500 B  
 T<sub>2</sub> : For allen screws DIN 6912  
 T<sub>3</sub> : For allen screws DIN 912



	FINE	MEDIUM	THREADED HOLE				
METRIC THREAD	D3 mm	D3 mm	D3 mm	D2 mm	T <sub>1</sub> mm	T <sub>2</sub> mm	T <sub>3</sub> mm
M3	3,2	3,4	2,5	6,0	2,4	--	3,4
M4	4,3	4,5	3,3	8,0	3,2	3,4	4,6
M5	5,3	5,5	4,2	10,0	4,0	4,2	5,7
M6	6,4	6,6	5,0	11,0	4,7	4,8	6,8
M8	8,4	9,0	6,8	15,0	6,0	6,0	6,0
M10	10,5	11,0	8,5	18,0	7,0	7,5	11,0
M12	13,0	13,5	10,2	20,0	8,0	8,5	13,0
M14	15,0	15,5	12,0	24,0	9,0	9,5	15,0
M16	17,0	17,5	14,0	26,0	10,5	11,5	17,5
M18	19,0	20,0	15,5	30,0	11,5	12,5	19,5
M20	21,0	22,0	17,5	33,0	12,5	13,5	21,5
M22	23,0	24,0	19,5	36,0	13,5	14,5	23,5



**COUNTERSINKS WITH INTERCHANGEABLE ELEMENTS FOR ALLEN AND TAPER CAP SCREWS**



**THE BLUEMASTER SYSTEM**

Bluemaster's unique tool system for countersinking and counterboring helps you to increase productivity and decrease your costs.

Our toolholders, counterborers, insert drills and pilots can be combined to fit all types of machines and applications.

With only 1.300 parts, you can easily build more than 1.500.000 special tools.

The system has 3 groups of dimensions: **A SERIES, B SERIES and C SERIES.**

All combinations have to be made with elements belonging to the same group. Groups are not interchangeable.

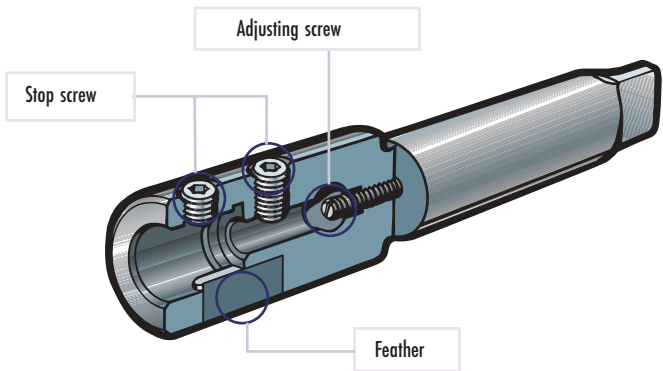
The range of tools available for each group along with recommendations for correct tools selection and cutting data can be found in the following pages.

**Important!**

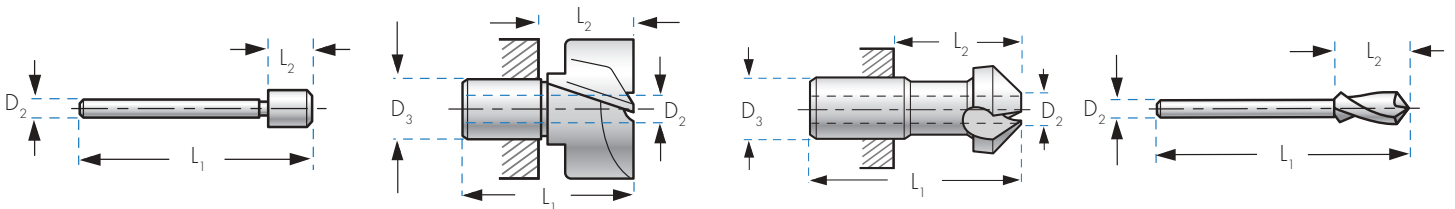
\* When using carbide cutters set the axial adjusting screw to contact the shank of inserted pilot or drill.

\* Leave a gap between the shoulder of the pilot drill and the carbide cutting edges to prevent damage by accidental impact.

\* The adjusting screw is also used to extend the life of insert drills after regrinding.



**GUIDE, COUNTERBORE, COUNTERSINK AND DRILL DIMENSIONS**



	GUIDE		
	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm
<b>AGP</b>	4	64	9
<b>BGP</b>	6	80	14
<b>CGP</b>	10	110	20

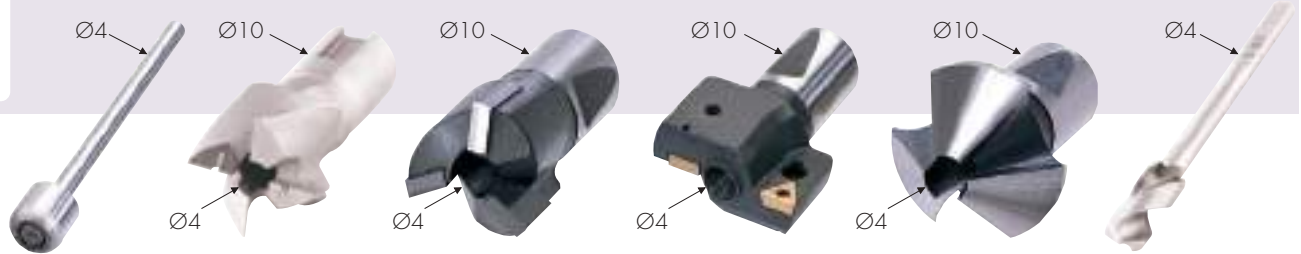
	COUNTERBORE			
	D <sub>3</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm
<b>APAV-MD-PQ</b>	10	4	40	22
<b>BPAV-MD-PQ</b>	14	6	48	28
<b>CPAV-MD-PQ</b>	22	10	61	33

	COUNTERSINK			
	D <sub>3</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm
<b>AVC</b>	10	4	40	22
<b>BVC</b>	14	6	48	28
<b>CVC</b>	22	10	61	33

	DRILL		
	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm
<b>ABP</b>	4	70	15
<b>BBP</b>	6	95	25
<b>CBP</b>	10	125	30

COUNTERSINKS WITH INTERCHANGEABLE ELEMENTS FOR ALLEN  
AND TAPER CAP SCREWS

**A  
SERIES**



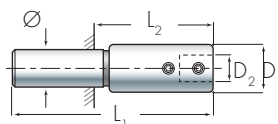
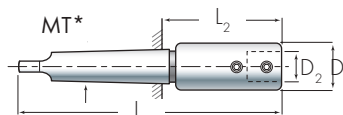
GUIDE                      COUNTERBORE                      COUNTERBORE                      INDEXABLE INSERTS                      COUNTERSINK                      DRILL

AGP		APAV		APAVMD		APAVPQ		AVC		ABP	
€	HSS €	CARBIDE €	Without insert	CARBIDE €	90° HSS €	HSS €					
										ABP0430	78,48
										ABP0450	78,48
										ABP0500	78,48
										ABP0530	78,48
										ABP0550	78,48
AGP0400	45,28									ABP0600	92,24
AGP0450	54,00	APAV0700	138,20					AVC0800	180,12	ABP0640	92,24
AGP0550	54,00	APAV0800	136,53							ABP0650	92,24
AGP0600	54,00	APAV0900	136,53								
AGP0650	54,00	APAV1000	132,16	APAVMD1000	388,14			AVC1000	180,12		
AGP0640	54,00										
AGP0660	54,00	APAV1100	136,53	APAVMD1100	388,14			AVC1200	182,81	ABP0660	92,24
AGP0500	54,00									ABP0700	92,24
		APAV1150	150,96								
		APAV1200	138,20	APAVMD1200	388,14			AVC1150	176,78		
		APAV1250	153,30					AVC1240	184,93		
		APAV1300	150,63	APAVMD1300	388,14						
		APAV1350	173,43					AVC1350	184,93		
		APAV1400	150,63	APAVMD1400	391,81			AVC1400	198,25		
		APAV1450	173,77								
AGP0840	54,69										
AGP0900	54,69	APAV1500	152,30	APAVMD1500	396,17			AVC1500	199,91		
AGP0680	54,00										
AGP0700	54,00	APAV1600	161,00	APAVMD1600	405,24			AVC1600	200,93		
AGP0750	54,00	APAV1700	164,07	APAVMD1700	413,97			AVC1650	195,58		
AGP0800	54,69	APAV1800	168,38	APAVMD1800	422,66	APAVPQ1800	882,90				
AGP0850	54,69	APAV1900	179,15	APAVMD1900	441,78						
AGP0900	54,69	APAV2000	185,51	APAVMD2000	451,19	APAVPQ2000	989,59				
AGP0950	54,69	APAV2100	202,29	APAVMD2100	472,63						
AGP1000	54,69										
AGP1050	54,69										
AGP1100	54,69										
AGP1150	54,69										

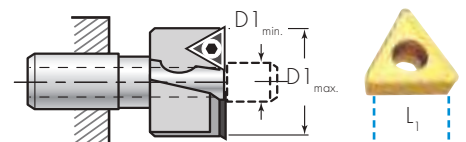
**TOOL HOLDERS**



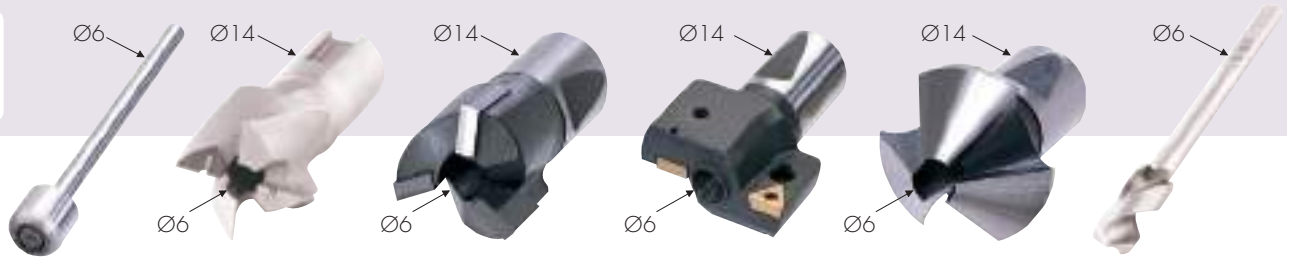
	D1 mm	D2 mm	L1 mm	L2 mm	MT* Ømm	APH
						€
APHCM1	18	10	110	48	CM1	323,70
APHCM2	18	10	132	57	CM2	317,67
APH-10	18	10	92	42	Ø10	302,57



**INDEXABLE INSERTS**



PPQ	L1 mm	D1 min. Ømm	D1 max. Ømm	PPQ
				€
PPQ07	7	18	20	33,55

**COUNTERSINKS WITH INTERCHANGEABLES ELEMENTS FOR ALLEN  
AND TAPER CAP SCREWS**
**B  
SERIES**


GUIDE

COUNTERBORE

COUNTERBORE

INDEXABLE INSERTS

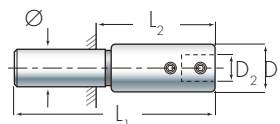
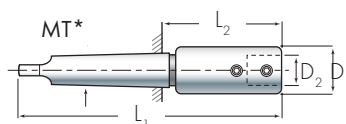
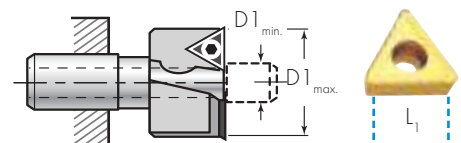
COUNTERSINK

DRILL

BGP		BPAV		BPAVMD		BPAVPQ		BVC		BBP	
€	HSS €	CARBIDE €	Without insert	CARBIDE €	90° HSS €	HSS €					
		BPAV1300 152,97	BPAVMD1300 413,97								
		BPAV1350 172,74									
		BPAV1400 152,97	BPAVMD1400 413,97								
		BPAV1450 172,74									BBP0800 109,70
BGP0840 50,99											
BGP0900 50,99	BPAV1500 152,97	BPAVMD1500 413,97			BVC15 189,87					BBP0900 109,70	
BGP0680 50,99											
BGP0800 50,99											
BGP1000 50,99	BPAV1550 175,10										
BGP1150 54,00	BPAV1600 161,37	BPAVMD1600 429,37								BBP0840 109,70	
BGP1250 56,02	BPAV1650 187,17									BBP0850 109,70	
BGP1350 61,72	BPAV1700 168,05	BPAVMD1700 429,37								BBP0950 109,70	
BGP1450 62,38	BPAV1750 188,50									BBP1000 125,12	
	BPAV1900 193,89	BPAVMD1900 433,09								BBP1050 125,12	
BGP1050 54,00											
BGP1100 54,00	BPAV1800 174,44	BPAVMD1800 433,09					BVC20 214,68			BBP1100 125,12	
BGP0850 50,99											
BGP1300 61,72											
BGP1400 62,38	BPAV2000 193,89	BPAVMD2000 446,49	BPAVPQ2000 883,64	BVC25 223,43							
BGP1020 54,00											
BGP1500 62,38											
BGP1550 62,38	BPAV2400 229,13	BPAVMD2400 474,34	BPAVPQ2400 884,78	BVC28 259,97							
BGP1200 54,00											
BGP1700 62,38											
BGP1750 62,38	BPAV2600 244,87	BPAVMD2600 477,02	BPAVPQ2600 1.014,46	BVC30 265,69							
BGP1400 62,38											
BGP1900 63,73											
BGP2000 79,50	BPAV3000 330,75	BPAVMD3000 520,30	BPAVPQ3000 1.014,46								
	BPAV3400 391,12	BPAVMD3400 600,08	BPAVPQ3400 1.170,92								

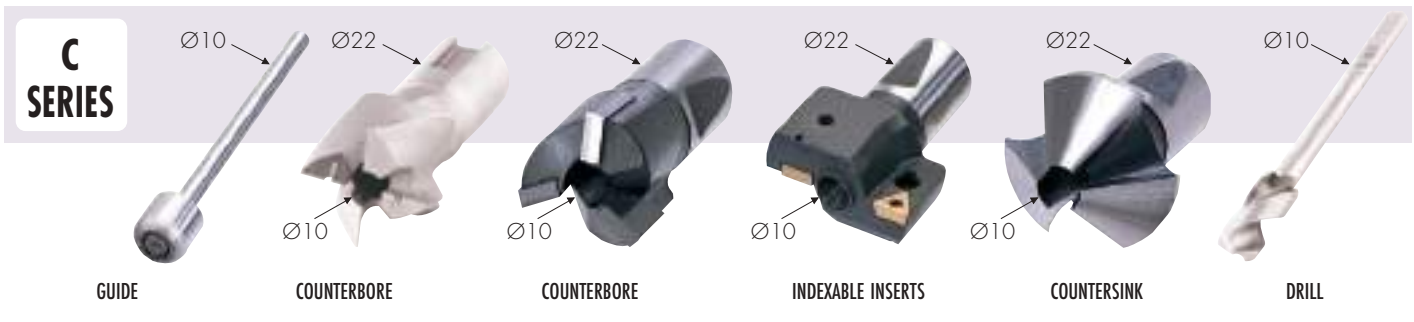
**TOOL HOLDERS**


	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	MT* Ømm	BPH
						€
BPHCM1	24	14	123	62	CM1	358,95
BPHCM2	24	14	137	62	CM2	327,74
BPHCM3	24	14	160	66	CM3	358,95
BPH-12	24	14	120	55	Ø12	324,03


**INDEXABLE INSERTS**


	L1 mm	D1 <sub>min.</sub> Ømm	D1 <sub>max.</sub> Ømm	PPQ
				€
PPQ07	7	20	25	33,55
PPQ10	10	26	33	30,20
PPQ12	12	34	36	30,20

**COUNTERSINKS WITH INTERCHANGEABLES ELEMENTS FOR ALLEN AND TAPER CAP SCREWS**

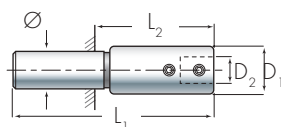
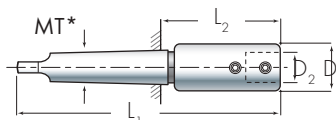


CGP		CPAV		CPAVMD		CPAVPQ		CVC		CBP	
€	HSS €	CARBIDE €	Without insert	CARBIDE €	90° HSS €	HSS €					
CGP1200	58,03	CPAV2300	277,75	CPAVMD2300	517,59						
CGP1250	58,03	CPAV2400	281,42	CPAVMD2400	512,22						
CGP1300	58,03	CPAV2500	304,27	CPAVMD2500	513,24						
CGP1350	58,03	CPAV2600	310,30	CPAVMD2600	527,33						
CGP1400	68,10	CPAV2700	314,65								
CGP1450	68,10	CPAV2800	320,69	CPAVMD2800	532,36					CBP1700	274,08
CGP1500	68,10	CPAV2900	328,40							CBP1800	308,94
CGP1600	68,10	CPAV3100	356,92							CBP1900	324,03
CGP1650	68,10	CPAV3200	368,66	CPAVMD3200	581,33					CBP2100	351,23
CGP1700	68,10	CPAV3300	372,00							CBP2300	422,66
CGP1900	68,10										
CGP2000	68,10	CPAV3000	332,75	CPAVMD3000	587,04			CVC35	387,44	CBP2000	351,23
CGP1550	68,10										
CGP2100	75,82										
CGP2200	75,82	CPAV3400	375,73	CPAVMD3400	623,94	CPAVPQ3400	1.210,86	CVC37	409,92	CBP2200	391,81
CGP1750	68,10										
CGP1850	68,10	CPAV3500	393,49								
CGP2300	75,82										
CGP2400	75,82	CPAV3600	398,19	CPAVMD3600	641,04	CPAVPQ3600	1.210,86	CVC37	409,92	CBP2400	431,75
CGP1950	68,10										
CGP2500	75,82										
CGP2600	93,24	CPAV4000	462,26	CPAVMD4000	710,14	CPAVPQ4000	1.238,76	CVC40	435,75		
CGP2100	75,82										
CGP2200	75,82	CPAV4500	570,27			CPAVPQ4500	1.261,38				
CGP2050	75,82	CPAV5000	828,23			CPAVPQ5000	1.475,89				
		CPAV5500	872,50			CPAVPQ5500	1.743,16				
		CPAV6000	919,46			CPAVPQ6000	1.743,16				
		CPAV6500	1.034,20			CPAVPQ6500	1.993,47				

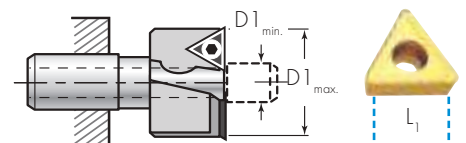
**TOOL HOLDERS**



	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	MT* Ømm	CPH €
CPHCM2	36	22	160	85	CM2	472,63
CPHCM3	36	22	180	87	CM3	446,49
CPHCM4	36	22	206	89	CM4	500,49
CPHCM5	36	22	240	91	CM5	1.101,30
CPH-12	36	22	140	71	Ø20	324,03



**INDEXABLE INSERTS**



	L <sub>1</sub> mm	D <sub>1</sub> min. Ømm	D <sub>1</sub> max. Ømm	PPQ €
PPQ12	12	34	45	30,20
PPQ17	17	<46		46,80

**STEP DRILLS AND TUBE & SHEET DRILL SETS**
**HSS & HSSCo TUBE AND SHEET DRILL SETS**
**HSS**


(Ref. AV30 drills)

**AV30BM0      AV30BM1      AV30BM2**

REFERENCE	<b>AV30BM012</b>	
QUANTITY	3	
QUALITY	HSS	
CONTENT	AV30BM0 - AV30BM1 - AV30BM2 (3-14mm) (6-20mm) (16-30mm)	
PRICE €	HSS	115,47
€	HSS <b>TiN</b>	219,14


**HSSCo**


(Ref. AVC30 drills)

**AVC30BM0      AVC30BM1      AVC30BM2**

REFERENCE	<b>AVC30BM012</b>	
QUANTITY	3	
QUALITY	HSSCo	
CONTENT	AVC30BM0 - AVC30BM1 - AVC30BM2 (3-14mm) (6-20mm) (16-30mm)	
PRICE €	HSS Co	166,34
€	HSS Co <b>TiN</b>	234,33


**HSS SPIRAL FLUTED STEP DRILL SETS**
**HSS**


(Ref. AV42 drills)

**AV42BM2      AV42BM3      AV42BM4**

REFERENCE	<b>AV42BM234</b>	
QUANTITY	3	
QUALITY	HSS	
CONTENT	AV42BM2 - AV42BM3 - AV42BM4	
PRICE €	HSS	317,53
€	HSS <b>TiN</b>	397,93





**STEP DRILL SETS**

**HSS STRAIGHT FLUTED STEP DRILL SETS**

**HSS**



AV40BM2 AV40BM3 AV40BM4 AV40BM5 AV40BM13



(Ref. AV40 drills)

REFERENCE	PAV40BM234	PAV40BM235	PAV40BM2313
QUANTITY	3	3	3
CONTENT	AV40BM2 - AV40BM3 - AV40BM4 (4-12mm) (4-20mm) (4-30mm)	AV40BM2 - AV40BM3 - AV40BM5 (4-12mm) (4-20mm) (6-38mm)	AV40BM2 - AV40BM3 - AV40BM13 (4-12mm) (4-20mm) (6-40mm)
PRICE €	186,80	232,75	286,06
€ HSS <b>TiN</b>	305,67	347,55	416,77



(Ref. AV40 drills)

REFERENCE	AV40BM234	AV40BM22122
QUANTITY	3	3
CONTENT	AV40BM2 - AV40BM3 - AV40BM4 (4-12mm) (4-20mm) (4-30mm)	AV40BM2 - AV40BM21 - AV40BM22 (4-12mm) (7+10-20mm) (10+20-30mm)
PRICE €	186,80	278,70
€ HSS <b>TiN</b>	305,67	403,89

(Ref. AVC40 drills)

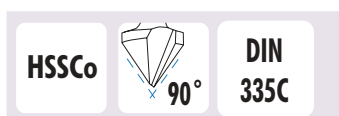
REFERENCE	AVC40BM234
QUANTITY	3
CONTENT	AVC40BM2 - AVC40BM3 - AVC40BM4 (4-12mm) (4-20mm) (4-30mm)
PRICE €	291,82
€ HSS Co <b>TiN</b>	402,89

## COUNTERSINKS SETS



(Ref. AV6 Countersink)

REFERENCE	AV6CM1	AV6CM2	AV6CM3	PAV6CM2
QUANTITY	6	6	7	6
CONTENT	Ø 6 - 8 - 10 - 11,5 - 15 - 19 mm	Ø 6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5 mm	Ø 6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5 - 25 mm	Ø 6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5 mm
PRICE €	154,90	135,69	228,38	135,69



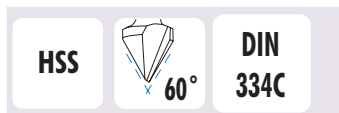
(Ref. AV7 Countersink)

REFERENCE	AV7CM1	AV7CM2	AV7CM3	PAV7CM2
QUANTITY	6	6	7	6
CONTENT	Ø 6 - 8 - 10 - 11,5 - 15 - 19 mm	Ø 6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5 mm	Ø 6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5 - 25 mm	Ø 6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5 mm
PRICE €	162,45	162,04	248,65	162,04



(Ref. AV16 Countersink)

REFERENCE	AV16CM1	AV16CM2	AV16CM3
QUANTITY	6	6	7
CONTENT	Ø 6 - 8 - 10 - 11,5 - 15 - 19 mm	Ø 6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5 mm	Ø 6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5 - 25 mm
PRICE €	282,86	288,76	403,03



(Ref. AV8 Countersink)

REFERENCE	AV8CM2	AV8CM3
QUANTITY	6	7
CONTENT	Ø 6,3 - 8 - 10 - 12,5 - 16 - 20 mm	Ø 6,3 - 8 - 10 - 12,5 - 16 - 20 - 25 mm
PRICE €	211,13	272,95

\* Other boxes on request AV99, etc...

**METALLIC COUNTERSINK SETS**


**HSS**  **CELESA NORM**



(Ref. AV9 Countersink)

REFERENCE	AV9CM1	AV9CM5
QUANTITY	6	7
CONTENT	Ø 6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5 mm	Ø 6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5 - 25 mm
PRICE €	215,94	279,44



**HSS**  **CELESA NORM**



(Ref. AV10 Countersink)

REFERENCE	AV10CM1	AV10CM6
QUANTITY	6	7
CONTENT	Ø 6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5 mm	Ø 6,3 - 8,3 - 10,4 - 12,4 - 16,5 - 20,5 - 25 mm
PRICE €	242,94	300,72



\* Other boxes on request AV99, etc...

**HSS & HSSCo 90° DEBURRING COUNTERSINK SETS**

 **90°**

**HSS**

(Ref. AV1 Countersink)

REFERENCE	AV1S2*
QUANTITY	5
CONTENT	Ø 10 - 14 - 20 - 27 - 30 mm
PRICE €	305,53*

**HSSCo**

(Ref. AV2 Countersink)

REFERENCE	AV2S2*
QUANTITY	5
CONTENT	Ø 10 - 14 - 20 - 27 - 30 mm
PRICE €	HSS Co 384,57*
€	HSS Co <b>TiN</b> 513,48*

**HSS STRAIGHT SHANK COUNTERBORES FOR ALLEN SCREW IN METAL SETS**

**HSS** **DIN 373**

**FINE**

**MEDIUM**

**CORE**

(Ref. AV2M Countersink)

(Ref. AV2MM Countersink)

(Ref. AV2GM Countersink)

REFERENCE	AV2M3-10	AV2M3-10M	AV2M3-10G
QUANTITY	6		
CONTENT	M3 - M4 - M5 - M6 - M8 - M10		
PRICE €	182,38	197,45	197,45

REFERENCE	AV2M3-12	AV2M3-12M	AV2M3-12G
QUANTITY	7		
CONTENT	M3 - M4 - M5 - M6 - M8 - M10 - M12		
PRICE €	234,23	253,56	253,56

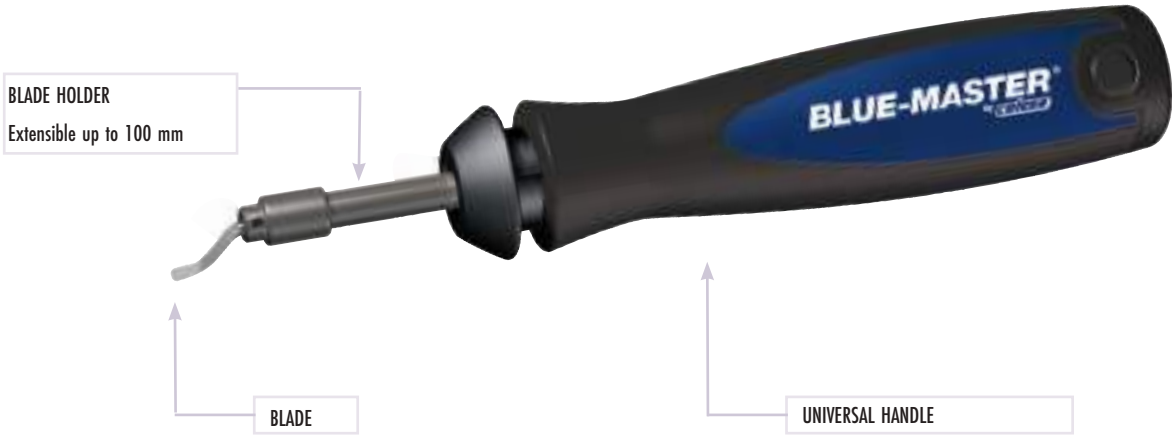


Ref. AV2M3-10

**PRECISION DEBURRING TOOLS**

**BLUEMASTER DEBURRING TOOL**

Deburring Tools remove chip and burrs created around the edge and corners in every piece made of metal, plastic and wood. They are made of three pieces: BLADE + BLADE HOLDER + UNIVERSAL HANDLE



**B SET**

**JRB1**

Content B:

Ref. RB10			Ref. RBB1
Ref. RB20			Ref. RBB

Blister: **32,65 €**

**C SET**

**JRB2**

Content C:

Ref. RC42			Ref. RBB1
			Ref. RBC

Blister: **59,46 €**

**D SET**

**JRB3**

Content D:

Ref. RD80MD			Ref. RBB1
			Ref. RBD

Blister: **93,73 €**

**E SET**

**JRB4**

Content E:

Ref. RE10			Ref. RBB1
Ref. RE20			Ref. RBE
Ref. RE30			

Blister: **36,36 €**



**PRECISION DEBURRING TOOLS**

**GROUP B**

**BLADE HOLDER GROUP B**



Ø2,6mm

Valid for deburring blades Group B

**RBB**

Blister 1 U.: 11,46 €

**BLADES GROUP B**



Deburring blade  
Short series: Steel, Aluminium, Plastic

**RB10\***

Blister 10 U.: 2,12 €/U.



Punching carbide tipped blade

**RB50\***

Blister 1 U.: 37,72 €



Bidirectional deburring blade  
Short series: Brass, Cast iron

**RB20**

Blister 10 U.: 2,12 €/U.



Long blade used for  
deburring till 20 mm. depth  
back-edge created after drilling.

**RB60\***

Blister 10 U.: 5,01 €/Ud



Double edge deburring blade  
4 mm. depth holes

**RB30**

Blister 10 U.: 2,12 €/Ud



Outside edges deburring blade

**RB70MD\***

Blister 1 U.: 42,91 €

**GROUP C**

**BLADE HOLDER GROUP C**



Valid for deburring blades Group C

**RBC**

Blister 1 U.: 11,46 €

**BLADES GROUP C**



**RC40\***

Blister 1 U.: 23,36 €



**RC42\***

Blister 1 U.: 29,06 €

\*Till end of stock

**GROUP D**

**BLADE HOLDER GROUP D**



Valid for deburring blades Group D

**RBD**

Blister 1 U.: 11,46 €

**BLADES GROUP D**



Solid carbide blade used in "V" shaped  
edges till 3 mm. (6 Working edges).

**RD80MD\***

Blister 1 U.: 61,07 €



Solid carbide blade used in "V" shaped  
edges till 8 mm. (2 Working edges).

**RD82MD\***

Blister 1 U.: 95,74 €

\*Till end of stock



**UNIVERSAL HANDLE**

General uses  
Valid for the following blade holders:  
RBB / RBC / RBD / RBE / RBF



**RBB1**  
Blister 1 ud.: 15,06 €

**PRECISION DEBURRING TOOLS**

**GROUP E**

**BLADE HOLDER GROUP E**



Ø3,2mm

Valid for deburring blades Group E

**RBE**  
Blister 1 ud.: 11,46 €

**BLADES GROUP E**



Deburring blade for inside & outside  
Long series: Steel, Aluminium, Plastic

**RE10**  
Blister 10 ud.: 2,59 €/Ud



Valid for 90° edges: Keyways,...

**RE35**  
Blister 10 ud.: 2,78 €/Ud



Bidirectional deburring blade  
Long series: Brass, Cast iron

**RE20**  
Blister 10 ud.: 2,59 €/Ud



Double edge closed deburring blade for 4 mm. depth holes.

**RE30**  
Blister 10 ud.: 2,59 €/Ud



Long blade used for deburring till 20mm depth back-edge created after drilling.

**RE60\***  
Blister 5 ud.: 3,64 €/Ud

**GROUP F**

**BLADE HOLDER GROUP F**



Valid for deburring blades Group F

**RBF**  
Blister 1 ud.: 11,46 €

**BLADES GROUP F (Thread M05 x 0,80)**



HSS counterbore blade 12 mm.

**RF12**  
Blister 1 ud.: 25,78 €



HSS counterbore blade 30 mm.

**RF30**  
Blister 1 ud.: 86,14 €



HSS counterbore blade 20 mm.

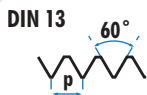
**RF20**  
Blister 1 ud.: 49,83 €

# THREADING TOOLS



**BLUE-MASTER<sup>®</sup>**  
*by CELESA*

CUTTING TECHNOLOGIES

**HSS HAND TAPS AND DIES**


Ref. M0

HSS

(M)

DIN  
352

(MF)

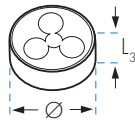
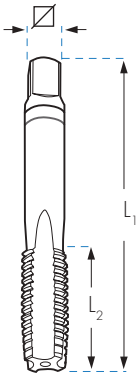
DIN  
2181TOL  
6H

Ref. C5

HSS

DIN  
223TOL  
6g

For hardness materials up to 38 HRC



		M0				C5	
		L1 x L2 x mm	€	Ø x L3 mm	€	Ø x L3 mm	€
M 1x0,20	2	0,80	32 x 5,5 x 2,1	91,57			
<b>M 1x0,25</b>	<b>3</b>	<b>0,75</b>	32 x 6,0 x 2,1	91,57	16 x 5	95,21	
M 1,1x0,20	2	0,90	32 x 5,5 x 2,1	91,57			
M 1,1x0,25	3	0,85	32 x 6,0 x 2,1	91,57	16 x 5	94,17	
M 1,2x0,20	2	1,00	32 x 5,5 x 2,1	91,57			
M 1,2x0,25	3	0,95	32 x 6,0 x 2,1	91,57	16 x 5	88,36	
M 1,4x0,20	2	1,20	32 x 7,0 x 2,1	91,57			
M 1,4x0,25	2	1,15	32 x 7,0 x 2,1	91,57			
M 1,4x0,30	3	1,10	32 x 7,0 x 2,1	91,57	16 x 5	83,27	
M 1,6x0,20	2	1,40	32 x 8,0 x 2,1	83,55			
M 1,6x0,25	2	1,35	32 x 8,0 x 2,1	83,55			
M 1,6x0,35	3	1,25	32 x 8,0 x 2,1	83,55	16 x 5	78,67	
M 1,7x0,35	3	1,35	32 x 8,0 x 2,1	78,42	16 x 5	78,67	
M 1,8x0,20	2	1,60	32 x 8,0 x 2,1	78,42			
M 1,8x0,25	2	1,55	32 x 8,0 x 2,1	78,42			
M 1,8x0,35	3	1,45	32 x 8,0 x 2,1	78,42	16 x 5	78,67	
M 2x0,25	2	1,75	36 x 8,0 x 2,1	78,42			
M 2x0,35	2	1,65	36 x 8,0 x 2,1	78,42			
<b>M 2x0,40</b>	<b>3</b>	<b>1,60</b>	36 x 9,0 x 2,1	39,33*	16 x 5	32,48*	
M 2,2x0,45	3	1,75	36 x 9,0 x 2,1	44,66	20 x 5	69,45	
M 2,3x0,40	3	1,90	36 x 9,0 x 2,1	41,21	20 x 5	35,62	
M 2,5x0,45	3	2,05	40 x 9,0 x 2,1	39,19	20 x 5	32,48	
M 2,6x0,45	3	2,10	40 x 9,0 x 2,1	40,06	25 x 9	34,00	
M 3x0,35	2	2,65	40 x 9,0 x 2,7	51,21	20 x 5	51,43	
<b>M 3x0,50</b>	<b>3</b>	<b>2,50</b>	40 x 11,0 x 2,7	22,08*	25 x 9	29,54*	
M 3x0,60	3	2,40	45 x 13,0 x 3,0	44,90	20 x 5	40,30	
M 3,5x0,60	3	2,90	45 x 13,0 x 3,0	26,33	25 x 9	30,91	
M 3,5x0,75	3	2,75	45 x 18,0 x 3,0	48,76	25 x 9	69,50	
M 4x0,50	2	3,50	45 x 13,0 x 3,4	44,27	25 x 9	33,19	
<b>M 4x0,70</b>	<b>3</b>	<b>3,30</b>	45 x 13,0 x 3,4	22,06*	25 x 9	29,69*	
M 4x0,75	3	3,25	45 x 13,0 x 3,4	36,52	20 x 7	44,90	
M 4x0,80	3	3,20	45 x 13,0 x 3,4	87,99	20 x 7	106,14	
M 4,5x0,50	2	4,00	50 x 12,0 x 4,9	42,95	25 x 9	46,23	
M 4,5x0,75	3	3,75	50 x 16,0 x 4,9	39,33	20 x 7	32,49	
M 5x0,50	2	4,50	50 x 12,0 x 4,9	44,07	20 x 5	36,24	
M 5x0,75	2	4,25	50 x 14,0 x 4,9	43,76	20 x 7	45,13	
<b>M 5x0,80</b>	<b>3</b>	<b>4,20</b>	50 x 16,0 x 4,9	23,58*	25 x 9	29,52*	
M 5x0,90	3	4,10	50 x 16,0 x 4,9	41,70	25 x 9	45,13	
M 5x1,00	3	4,00	50 x 16,0 x 4,9	92,91	25 x 9	102,33	
M 5,5x0,90	3	4,60	50 x 16 x 4,9	92,91			104,63
M 6x0,50	2	5,50	50 x 14 x 4,9	31,55			40,48
M 6x0,75	2	5,25	50 x 14 x 4,9	26,63			33,20
<b>M 6x1,00</b>	<b>3</b>	<b>5,00</b>	50 x 19 x 4,9	23,58*			29,54*
M 6x1,25	3	4,75	50 x 19 x 4,9	152,44			107,13
M 7x0,75	2	6,25	50 x 14 x 4,9	34,96			32,87
<b>M 7x1,00</b>	<b>3</b>	<b>6,00</b>	50 x 19 x 4,9	28,73*			31,01*
M 7x1,25	3	5,75	50 x 19 x 4,9	105,92			128,76
M 8x0,50	2	7,50	50 x 16 x 4,9	55,65			49,08
M 8x0,75	2	7,25	50 x 16 x 4,9	36,63			35,54
M 8x1,00	2	7,00	56 x 18 x 4,9	26,50*			34,27*
<b>M 8x1,25</b>	<b>3</b>	<b>6,80</b>	56 x 22 x 4,9	28,70*			31,34*
M 8x1,50	3	6,50	56 x 22 x 4,9	103,02			111,94
M 9x1,00	2	8,00	63 x 18 x 5,5	38,81			38,09
<b>M 9x1,25</b>	<b>3</b>	<b>7,80</b>	63 x 22 x 5,5	47,02*			36,43*
M 10x0,50	2	9,50	63 x 18 x 5,5	57,38			123,69
M 10x0,75	2	9,25	63 x 18 x 5,5	58,67			60,81
M 10x1,00	2	9,00	63 x 18 x 5,5	28,38			40,32
M 10x1,25	2	8,80	70 x 24 x 5,5	28,77			43,01
<b>M 10x1,50</b>	<b>3</b>	<b>8,50</b>	70 x 24 x 5,5	35,39*			41,95*
M 11x0,75	2	10,25	63 x 18 x 6,2	86,15			133,63
M 11x1,00	2	10,00	63 x 18 x 6,2	54,27			63,64
M 11x1,25	2	9,75	63 x 20 x 6,2	54,27			63,63
<b>M 11x1,50</b>	<b>3</b>	<b>9,50</b>	70 x 24 x 6,2	58,99			50,83
M 12x0,75	2	11,25	70 x 20 x 7,0	78,33			69,00
M 12x1,00	2	11,00	70 x 20 x 7,0	50,32			60,81
M 12x1,25	2	10,75	70 x 20 x 7,0	50,17			58,63
M 12x1,50	2	10,50	70 x 20 x 7,0	42,75*			52,58*
<b>M 12x1,75</b>	<b>3</b>	<b>10,20</b>	75 x 29 x 7,0	49,79*			45,58*
M 13x0,75	2	12,25	70 x 20 x 9,0	88,52			121,66
M 13x1,00	2	12,00	70 x 20 x 9,0	85,22			64,61
M 13x1,25	2	11,75	70 x 20 x 9,0	77,80			86,39
M 13x1,50	2	11,50	70 x 20 x 9,0	77,80			67,91
<b>M 13x1,75</b>	<b>3</b>	<b>11,25</b>	70 x 20 x 9,0	90,02			72,77
M 14x0,75	2	13,25	70 x 20 x 9,0	101,73			114,07
M 14x1,00	2	13,00	70 x 20 x 9,0	78,43			68,20
M 14x1,25	2	12,80	70 x 20 x 9,0	61,26*			68,20*
M 14x1,50	2	12,50	70 x 20 x 9,0	47,64			58,06
M 14x1,75	2	12,25	70 x 20 x 9,0	95,27			194,25
<b>M 14x2,00</b>	<b>3</b>	<b>12,00</b>	80 x 30 x 9,0	55,08*			45,13*
M 15x1,00	2	14,00	70 x 20 x 9,0	109,88			73,44
M 15x1,25	2	13,75	70 x 20 x 9,0	113,85			113,77
M 15x1,50	2	13,50	70 x 20 x 9,0	101,93			78,68
<b>M 15x2,00</b>	<b>3</b>	<b>13,00</b>	80 x 30 x 9,0	110,13			98,62
M 16x1,00	2	15,00	70 x 20 x 9,0	104,04			83,15
M 16x1,25	2	14,75	70 x 20 x 9,0	109,51			69,96
M 16x1,50	2	14,50	70 x 20 x 9,0	59,28*			65,31*
<b>M 16x2,00</b>	<b>3</b>	<b>14,00</b>	80 x 32 x 9,0	78,81*			61,19*
M 17x1,00	2	16,00	70 x 20 x 9,0	168,03			118,99
M 17x1,25	2	15,75	70 x 20 x 9,0	168,03			118,99
M 17x1,50	2	15,50	70 x 20 x 9,0	168,03			118,99
M 18x1,00	2	17,00	80 x 22 x 11,0	115,67			87,92
M 18x1,25	2	16,75	80 x 22 x 11,0	165,12			91,45

\* Check the price of left hand sets of taps and dies available in page 188.

\* Extra-fee of 20% for adjustable die

HSS HAND TAPS AND DIES

DIN 13  
60°

Ref. M0

HSS

DIN  
352

DIN  
2181

TOL  
6H

Ref. C5

HSS

DIN  
223

TOL  
6g

		M0					C5						
		€	Ø x L3 mm	€	Ø x L3 mm			€	Ø x L3 mm	€	Ø x L3 mm	€	
M 18x1,50	2	16,50	80 x 22 x 11,0	78,10	45 x 14	79,10	M 33x3,50	3	29,5	125 x 50 x 20,0	378,72*	65 x 25	140,34*
M 18x2,00	2	16,00	80 x 22 x 11,0	124,66*	45 x 14	88,38*	M 34x1,50	2	32,5	100 x 25 x 22,0	389,17	65 x 18	160,62
<b>M 18x2,50</b>	<b>3</b>	<b>15,50</b>	95 x 40 x 11,0	104,01*	45 x 18	61,22*	M 34x2,00	2	32,0	100 x 25 x 22,0	465,42	65 x 18	366,63
M 19x1,00	2	18,00	80 x 22 x 11,0	243,86	45 x 14	147,58	M 35x1,50	2	33,5	100 x 25 x 22,0	415,50	65 x 18	166,60
M 19x1,25	2	17,75	80 x 22 x 11,0	243,86	45 x 14	166,91	M 35x2,00	2	33,0	100 x 25 x 22,0	465,42	65 x 18	285,90
M 19x1,50	2	17,50	80 x 22 x 11,0	243,86	45 x 14	147,58	M 36x1,50	2	34,5	100 x 25 x 22,0	405,66	65 x 18	157,71
M 19x2,00	2	17,00	80 x 22 x 11,0	289,49	45 x 14	168,60	M 36x2,00	2	34,0	125 x 33 x 22,0	534,30	65 x 18	164,49
M 20x1,00	2	19,00	80 x 22 x 12,0	157,47	45 x 14	87,92	M 36x3,00	2	33,0	125 x 33 x 22,0	692,36*	65 x 25	165,03*
M 20x1,25	2	18,75	80 x 22 x 12,0	242,97	45 x 14	190,82	<b>M 36x4,00</b>	<b>3</b>	<b>32,0</b>	150 x 53 x 22,0	487,58*	65 x 25	143,08*
M 20x1,50	2	18,50	80 x 22 x 12,0	97,81	45 x 14	80,93	M 38x1,50	2	36,5	100 x 25 x 22,0	468,86	75 x 20	240,97
M 20x2,00	2	18,00	80 x 22 x 12,0	132,04*	45 x 14	87,92*	M 38x2,00	2	36,0	125 x 25 x 22,0	631,04	75 x 20	356,06
<b>M 20x2,50</b>	<b>3</b>	<b>17,50</b>	95 x 40 x 12,0	116,68*	45 x 18	60,26*	M 39x1,50	2	37,5	110 x 25 x 24,0	620,57	75 x 20	239,69
M 21x1,00	2	20,00	80 x 22 x 12,0	312,44	45 x 14	180,80	M 39x2,00	2	37,0	125 x 23 x 24,0	620,57	75 x 20	253,12
M 21x1,25	2	19,75	80 x 22 x 12,0	312,44	45 x 14	180,80	M 39x3,00	2	36,0	125 x 33 x 24,0	598,60*	75 x 30	258,53*
M 21x1,50	2	19,50	80 x 22 x 12,0	243,22	45 x 14	191,12	<b>M 39x4,00</b>	<b>3</b>	<b>35,0</b>	150 x 53 x 24,0	545,57*	75 x 30	217,63*
M 22x1,00	2	21,00	80 x 22 x 14,5	176,48	55 x 16	118,35	M 40x1,50	2	38,5	110 x 25 x 24,0	550,60	75 x 20	251,78
M 22x1,25	2	20,75	80 x 22 x 14,5	240,63	55 x 16	192,87	M 40x2,00	2	38,0	125 x 33 x 24,0	606,32	75 x 20	233,80
M 22x1,50	2	20,50	80 x 22 x 14,5	107,57	55 x 16	101,81	M 40x3,00	2	37,0	125 x 33 x 24,0	604,10	75 x 30	254,99
M 22x2,00	2	20,00	80 x 22 x 14,5	171,59*	55 x 16	113,28*	M 42x1,50	2	40,5	110 x 25 x 24,0	598,49	75 x 20	279,95
<b>M 22x2,50</b>	<b>3</b>	<b>19,50</b>	100 x 40 x 14,5	155,42*	55 x 22	90,55*	M 42x2,00	2	40,0	125 x 33 x 24,0	709,47	75 x 20	296,02
M 23x1,00	2	22,00	80 x 22 x 14,5	315,16	55 x 16	195,57	M 42x3,00	2	39,0	125 x 33 x 24,0	712,52	75 x 30	279,95
M 23x1,50	2	21,50	80 x 22 x 14,5	313,93	55 x 16	231,86	<b>M 42x4,50</b>	<b>3</b>	<b>37,5</b>	150 x 53 x 24,0	682,61	75 x 30	217,61
M 24x1,00	2	23,00	90 x 22 x 14,5	190,42	55 x 16	115,43	M 45x1,50	2	43,5	110 x 25 x 29,0	653,71	90 x 22	327,13
M 24x1,25	2	22,75	90 x 22 x 14,5	311,22	55 x 16	153,25	M 45x2,00	2	43,0	125 x 33 x 29,0	852,03	90 x 22	355,13
M 24x1,50	2	22,50	90 x 22 x 14,5	137,13	55 x 16	103,73	M 45x3,00	2	42,0	125 x 33 x 29,0	852,03	90 x 36	370,53
M 24x2,00	2	22,00	90 x 22 x 14,5	204,61*	55 x 16	115,43*	<b>M 45x4,50</b>	<b>3</b>	<b>40,5</b>	160 x 60 x 29,0	788,03	90 x 36	337,20
<b>M 24x3,00</b>	<b>3</b>	<b>21,00</b>	110 x 50 x 14,5	185,38*	55 x 22	90,55*	M 48x1,50	2	46,5	140 x 33 x 29,0	729,83	90 x 22	319,67
M 25x1,00	2	24,00	90 x 22 x 14,5	268,63	55 x 16	175,18	M 48x2,00	2	46,0	140 x 33 x 29,0	1.113,54	90 x 22	350,15
M 25x1,25	2	23,75	90 x 22 x 14,5	351,81	55 x 16	230,66	M 48x3,00	2	45,0	140 x 33 x 29,0	1.032,49	90 x 36	337,79
M 25x1,50	2	23,50	90 x 22 x 14,5	253,44	55 x 16	150,69	<b>M 48x5,00</b>	<b>3</b>	<b>43,0</b>	180 x 65 x 29,0	948,78	90 x 36	337,60
M 25x2,00	2	23,00	90 x 22 x 14,5	458,14	55 x 16	224,26	M 50x1,50	2	48,5	140 x 33 x 29,0	798,16	90 x 22	333,33
M 26x1,00	2	25,00	90 x 22 x 14,5	240,13	55 x 16	173,63	M 50x3,00	2	57,0	140 x 33 x 29,0	1.065,89	90 x 22	363,28
M 26x1,50	2	24,50	90 x 22 x 14,5	225,30	55 x 16	139,98	M 52x1,50	2	50,5	140 x 33 x 32,0	837,23	90 x 22	340,38
M 26x2,00	2	24,00	90 x 22 x 14,5	264,35	55 x 16	196,21	M 52x2,00	2	50,0	140 x 33 x 32,0	1.214,75	90 x 22	395,57
M 27x1,00	2	26,00	90 x 22 x 16,0	264,37	65 x 18	156,19	M 52x3,00	2	49,0	140 x 33 x 32,0	1.118,40	90 x 36	431,67
M 27x1,50	2	25,50	90 x 22 x 16,0	255,26	65 x 18	156,86	<b>M 52x5,00</b>	<b>3</b>	<b>47,0</b>	180 x 65 x 32,0	1.136,36	90 x 36	337,60
M 27x2,00	2	25,00	90 x 22 x 16,0	283,57*	65 x 18	170,60*	<b>M 56x4,00</b>	<b>2</b>	<b>52,0</b>	180 x 47 x 32,0	1.247,09	105 x 36	
<b>M 27x3,00</b>	<b>3</b>	<b>24,00</b>	110 x 50 x 16,0	234,42*	65 x 25	137,35*	<b>M 56x5,50</b>	<b>3</b>	<b>50,5</b>	200 x 85 x 35,0	1.763,76	105 x 36	
M 28x1,00	2	27,00	90 x 22 x 16,0	446,20	65 x 18	201,90	<b>M 60x5,50</b>	<b>3</b>	<b>54,5</b>	200 x 85 x 35,0	1.832,90	105 x 36	
M 28x1,50	2	26,50	90 x 22 x 16,0	250,28	65 x 18	142,20	<b>M 64x4,00</b>	<b>2</b>	<b>60,0</b>	180 x 50 x 35,0	1.756,34	120 x 36	
M 28x2,00	2	26,00	90 x 22 x 16,0	299,45	65 x 18	199,93	<b>M 64x6,00</b>	<b>3</b>	<b>58,0</b>	220 x 90 x 39,0	2.168,78	120 x 36	
M 30x1,00	2	29,00	90 x 22 x 18,0	277,93	65 x 18	165,52	<b>M 68x6,00</b>	<b>3</b>	<b>62,0</b>	220 x 90 x 39,0	2.596,44	120 x 36	
M 30x1,50	2	28,50	90 x 22 x 18,0	266,73	65 x 18	156,85	<b>M 72x6,00</b>	<b>3</b>	<b>66,0</b>	235 x 90 x 39,0	2.812,95	120 x 36	
M 30x2,00	2	28,00	90 x 22 x 18,0	307,51	65 x 18	173,83							
M 30x3,00	2	27,00	125 x 56 x 18,0	300,62*	65 x 25	193,63*							
<b>M 30x3,50</b>	<b>3</b>	<b>26,50</b>	125 x 50 x 18,0	301,60*	65 x 25	137,70*							
M 32x1,00	2	31,00	90 x 22 x 18,0	366,52	65 x 18	213,79							
M 32x1,50	2	30,50	90 x 22 x 18,0	317,59	65 x 18	162,68							
M 32x2,00	2	30,00	90 x 22 x 18,0	454,59	65 x 18	198,14							
M 33x1,00	2	32,00	100 x 25 x 20,0	584,92	65 x 18	226,37							
M 33x1,50	2	31,50	100 x 25 x 20,0	339,67	65 x 18	153,93							
M 33x2,00	2	31,00	100 x 25 x 20,0	428,84	65 x 18	154,99							
M 33x3,00	2	30,00	125 x 56 x 20,0	541,12*	65 x 25	239,18*							

DIES WITH EXTERNAL Ø AVAILABLE IN INCHES					
			C5		
	Ø x L3 mm	€		Ø x L3 mm	€
M 3x0,50	25,4 x 9,5	25,32	M 8x1,25	38,1 x 12,7	26,88
M 4x0,70	25,4 x 9,5	25,32	M 10x1,50	25,4 x 9,5	34,02
M 5x0,80	25,4 x 9,5	25,80	M 10x1,50	38,1 x 12,7	34,02
M 6x1,00	25,4 x 9,5	25,32	M 12x1,75	25,4 x 9,5	40,99
M 8x1,25	25,4 x 9,5	26,88	M 12x1,75	38,1 x 12,7	40,99

\* Check the price of left hand sets of taps and dies available in page 188.  
\* Extra-fee of 20% for adjustable die



## HSS HAND TAPS AND DIES

**UNC**

Ref. M0

HSS

DIN 351

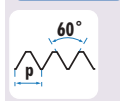
TOL 2B

Ref. C5

HSS

DIN 223

TOL 2a



**UNF**

Ref. M0

HSS

DIN 2181

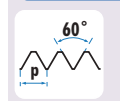
TOL 2B

Ref. C5

HSS

DIN 223

TOL 2a




UNC	Pcs.	D1 mm	L1	L2	L3	M0		C5	
						€	Ø x L3 mm	€	
UNC n°1-64h.	3	1,85	1,50	36x8x2,1		110,43	16x5		
UNC n°2-56h.	3	2,18	1,80	36x9x2,1		78,04	16x5		
UNC n°3-48h.	3	2,51	2,10	40x9x2,1		78,04	16x5		
UNC n°4-40h.	3	2,84	2,25	40x11x2,7		59,10	20x5	43,85	
UNC n°5-40h.	3	3,17	2,60	40x11x2,7		56,50	20x5	43,97	
UNC n°6-32h.	3	3,50	2,75	45x13x3,0		56,50	20x7	43,97	
UNC n°8-32h.	3	4,17	3,50	45x13x3,4		56,50	20x7	43,97	
UNC n°10-24h.	3	4,83	3,90	50x16x4,9		56,50	20x7	43,97	
UNC n°12-24h.	3	5,49	4,50	50x19x4,9		56,50	20x7	43,97	
UNC 1/4-20h.	3	6,35	5,10	50x19x4,9		48,42*	20x7	41,44*	
UNC 5/16-18h.	3	7,94	6,60	56x22x4,9		54,97*	25x9	42,52*	
UNC 3/8-16h.	3	9,52	8,00	70x24x5,5		62,54*	30x11	59,12*	
UNC 7/16-14h.	3	11,11	9,40	70x24x6,2		81,44	38x14	59,12	
UNC 1/2-13h.	3	12,70	10,75	75x29x7,0		93,70*	38x14	60,77*	
UNC 9/16-12h.	3	14,28	12,20	80x30x9,0		110,62	38x14	63,60	
UNC 5/8-11h.	3	15,87	13,50	80x32x9,0		152,56*	45x18	86,21*	
UNC 3/4-10h.	3	19,05	16,50	95x40x11,0		207,87*	45x18	86,21*	
UNC 7/8-9h.	3	22,22	19,50	100x40x14,5		255,89	55x22	120,36	
UNC 1"-8h.	3	25,40	22,25	110x50x14,5		345,54*	55x22	115,72*	
UNC 1.1/8-7h.	3	28,57	25,00	125x56x18,0		520,99	65x25	171,90	
UNC 1.1/4-7h.	3	31,75	28,00	125x56x18,0		655,77	65x25	171,90	
UNC 1.3/8-6h.	3	34,92	30,75	150x63x22,0		831,92	65x25	171,90	
UNC 1.1/2-6h.	3	38,10	34,00	150x63x24,0		1.021,43	75x30	268,02	
UNC 2"-4,5h.	3	50,80	45,00	180x75x32,0		2.200,08	90x36		

UNF	Pcs.	D1 mm	L1	L2	L3	M0		C5	
						€	Ø x L3 mm	€	
UNF n°2-64h.	2	2,18	1,85	36x8x2,1		70,71			
UNF n°3-56h.	2	2,51	2,15	40x9x2,1		70,71			
UNF n°4-48h.	2	2,84	2,35	40x9x2,7		44,06	20x5	45,57	
UNF n°5-44h.	2	3,17	2,70	45x10x2,7		44,06	20x5	43,97	
UNF n°6-40h.	2	3,50	2,95	45x16x3,0		42,11	20x5	43,97	
UNF n°8-36h.	2	4,17	3,50	50x12x3,4		42,11	20x7	43,97	
UNF n°10-32h.	2	4,83	4,10	50x12x4,9		42,11	20x7	43,97	
UNF n°12-28h.	2	5,49	4,60	50x12x4,9		44,06	20x7	43,97	
UNF 1/4-28h.	2	6,35	5,50	50x14x4,9		32,14*	25x9	38,82*	
UNF 5/16-24h.	2	7,94	6,90	56x22x4,9		34,41*	25x9	43,33*	
UNF 3/8-24h.	2	9,52	8,50	63x20x5,5		39,73*	38x10	59,12*	
UNF 7/16-20h.	2	11,11	9,90	63x20x6,2		52,72	38x10	58,00	
UNF 1/2-20h.	2	12,70	11,50	70x22x7,0		53,94*	38x10	63,19*	
UNF 9/16-18h.	2	14,29	12,90	70x22x9,0		70,29	38x10	66,15	
UNF 5/8-18h.	2	15,87	14,50	70x22x9,0		90,80*	45x14	86,21*	
UNF 3/4-16h.	2	19,05	17,50	80x22x11,0		121,96*	45x14	86,21*	
UNF 7/8-14h.	2	22,22	20,40	80x22x14,5		156,74*	55x16	115,72*	
UNF 1"-12h.	2	25,40	23,25	90x22x16,0		207,83	55x16	115,72	
UNF 1"-14h.	2	25,40	23,60	90x22x14,5		230,23*	55x16	125,74*	
UNF 1.1/8-12h.	2	28,57	26,50	90x22x18,0		306,75	65x18	140,93	
UNF 1.1/4-12h.	2	31,75	29,50	90x22x20,0		374,63	65x18	178,78	
UNF 1.3/8-12h.	2	34,92	32,80	125x35x22,0		505,42	65x18	187,15	
UNF 1.1/2-12h.	2	38,10	36,00	125x40x22,0		638,51	75x20	268,02	
UNF 2"-12h.	2	50,80	48,38	140x40x29,0		1.579,94	90x22		

\* Check the price of left hand sets of taps and dies available in page 188.

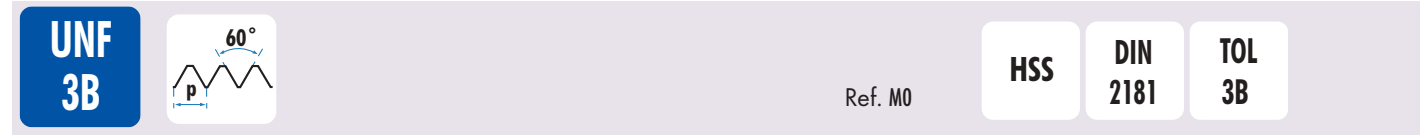


HSS HAND TAPS AND DIES



Threading tools  
Green  
Pink

Icon	Pcs.	D1 mm	L1 x L2 x L3 mm	M0		C5		MOT		C5T		MOX		CSX	
				HSS	€	HSS	€	HSS	€	HSS	€	HSSCo	OX	€	HSSCo
G 1/8-28h.	2	9,73	8,80	63 x 20 x 5,5	35,93*	38 x 10	52,86*	G 1/8-28 h.	2	78,20	98,55	89,85	67,01		
G 1/4-19h.	2	13,16	11,80	70 x 22 x 9,0	50,64*	38 x 10	52,58*	G 1/4-19 h.	2	142,27	101,99	161,46	69,12		
G 3/8-19h.	2	16,66	15,25	70 x 22 x 9,0	63,57*	45 x 14	69,64*	G 3/8-19 h.	2	173,58	114,73	200,57	82,22		
G 1/2-14h.	2	20,95	19,00	80 x 22 x 12,0	89,16*	45 x 14	69,64*	G 1/2-14 h.	2	244,64	129,87	270,62	90,98		
G 5/8-14h.	2	22,91	21,00	80 x 22 x 14,5	114,08*	55 x 16	96,61*								
G 3/4-14h.	2	26,44	24,50	90 x 22 x 16,0	139,17*	55 x 16	125,76*	G 3/4-14 h.	2	320,95	211,59	388,44	155,18		
G 7/8-14h.	2	30,20	28,25	90 x 22 x 18,0	187,36	65 x 18	149,71								
G 1"-11h.	2	33,25	30,75	100 x 25 x 20,0	220,63*	65 x 18	151,16*	G 1" -11 h.	2	559,37	282,63	638,89	185,39		
G 1.1/8-11h.	2	37,90	35,50	125 x 40 x 22,0	352,09	75 x 20	213,34								
G 1.1/4-11h.	2	41,91	39,50	125 x 40 x 24,0	383,69*	75 x 20	209,42*								
G 1.3/8-11h.	2	44,32	42,00	125 x 40 x 29,0	521,14	90 x 22	328,17								
G 1.1/2-11h.	2	47,80	45,25	140 x 40 x 29,0	579,86	90 x 22	316,12								
G 1.3/4-11h.	2	53,75	51,25	140 x 40 x 32,0	964,01	105 x 22	328,17								
G 2"-11h.	2	59,61	57,00	160 x 40 x 35,0	1.071,90	105 x 22	394,95								
G 2.1/4-11h.	2	65,71	63,00	160 x 40 x 39,0	1.770,67	105 x 22									
G 2.1/2-11h.	2	75,18	72,50	160 x 40 x 39,0	2.661,51	120 x 22									
G 2.3/4-11h.	2	81,53	79,00	160 x 40 x 39,0	3.227,33	120 x 22									
G 3"-11h.	2	87,88	85,50	160 x 40 x 39,0	3.358,99	150 x 25									
G 4"-11h.	2	113,03	110,50	180 x 45 x 44,0	5.094,44	180 x 25									



Icon	Pcs.	D1 mm	L1 x L2 x L3 mm	€
UNF n°4-48-3B	2	2,84	40x9x2,7	56,12
UNF n°5-44-3B	2	3,17	45x10x2,7	56,12
UNF n°6-40-3B	2	3,50	45x16x3,0	52,94
UNF n°8-36-3B	2	4,17	50x12x3,4	52,94
UNF n°10-32-3B	2	4,83	50x12x4,9	52,94
UNF n°12-28-3B	2	5,49	50x12x4,9	56,12
UNF 1/4-28-3B	2	6,35	50x14x4,9	40,93
UNF 5/16-24-3B	2	7,94	56x22x4,9	43,82
UNF 3/8-24-3B	2	9,52	63x20x5,5	50,59
UNF 7/16-20-3B	2	11,11	63x20x6,2	67,16
UNF 1/2-20-3B	2	12,70	70x22x7,0	68,70

\* Check the price of left hand sets of taps and dies available in page 188.

## HSS HAND TAPS AND DIES

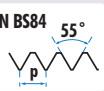
Threading tools

Pink  
Green

**BSW** Ref. M0 HSS DIN 351 TOL 2 Class

Ref. C5 HSS DIN 223

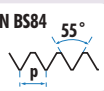
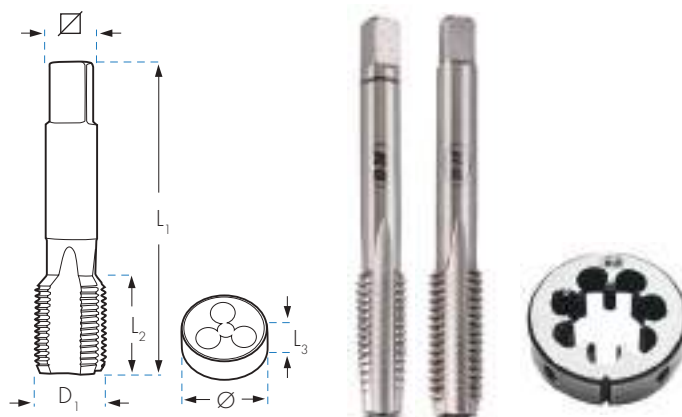
DIN BS84 55°



**BSF** Ref. M0 HSS DIN 5157 TOL ISO 228

Ref. C5 HSS DIN 223

DIN BS84 55°

Tap/Die Symbol	D1 mm	L1 x L2 x mm	M0		C5	
			€	Ø x L3 mm	€	€
W 1/16-60h.	3 1,59	1,15 32x8x2,1	60,71	16x5	81,70	
W 3/32-48h.	3 2,38	1,80 40x9x2,1	44,39	20x5	42,16	
W 1/8-40h.	3 3,17	2,55 40x14x2,7	31,88*	25x9	33,27*	
W 5/32-32h.	3 3,97	3,10 45x17x3,4	32,21	25x9	33,94	
W 3/16-24h.	3 4,76	3,60 50x19x4,9	31,88	25x9	33,27	
W 7/32-24h.	3 5,55	4,40 50x19x4,9	52,44	25x9	43,46	
W 1/4-20h.	3 6,35	5,10 50x20x4,9	35,91*	25x9	33,94*	
W 5/16-18h.	3 7,94	6,50 56x20x4,9	43,86*	25x9	35,40*	
W 3/8-16h.	3 9,52	7,90 63x22x5,5	48,19*	38x10	51,23*	
W 7/16-14h.	3 11,11	9,25 70x22x6,2	64,69	38x10	51,30	
W 1/2-12h.	3 12,70	10,50 75x25x7,0	69,42	38x14	50,34	
W 9/16-12h.	3 14,29	12,00 80x26x9,0	94,44	38x14	61,48	
W 5/8-11h.	3 15,87	13,40 80x27x9,0	108,60*	45x18	73,11*	
W 11/16-11h.	3 17,46	15,25 95x32x11,0	255,93	45x18	120,43	
W 3/4-10h.	3 19,05	16,50 95x32x11,0	154,60*	45x18	73,22*	
W 7/8-9h.	3 22,22	19,25 100x32x14,5	211,14*	55x22	107,66*	
W 1"-8h.	3 25,40	21,75 110x36x14,5	258,75*	55x22	108,64*	
W 1.1/8-7h.	3 28,57	24,75 125x40x18,0	383,52	65x25	171,07	
W 1.1/4-7h.	3 31,75	27,75 125x40x18,0	464,02	65x25	171,14	
W 1.3/8-6h.	3 34,92	30,50 150x50x22,0	577,03	65x25	174,30	
W 1.1/2-6h.	3 38,10	33,50 150x50x24,0	694,72	75x30	264,95	
W 1.5/8-5h.	3 41,27	46,50 150x56x24,0	966,99	75x30	329,91	
W 1.3/4-5h.	3 44,45	39,00 160x58x29,0	1.190,14	90x36	415,20	
W 1.7/8-4,5h.	3 47,62	42,00 180x65x29,0	1.537,13	90x36	454,32	
W 2"-4,5h.	3 50,80	44,50 180x65x32,0	1.613,72	90x36	476,13	
W 2.1/4-4h.	3 57,15	50,00 200x85x35,0	2.673,86	105x36		
W 2.1/2-4h.	3 63,50	56,50 220x85x39,0	3.252,80	120x36		
W 2.3/4-3,5h.	3 69,85	62,00 250x90x44,0	4.644,61	120x36		
W 3"-3,5h.	3 76,20	68,00 250x90x44,0	5.373,30	140x36		

Tap/Die Symbol	D1 mm	L1 x L2 x mm	M0		C5	
			€	Ø x L3 mm	€	€
BSF 3/16-32h.	2 4,76	4,0 50x19x4,9	119,98	20x7	43,78	
BSF 1/4-26h.	2 6,35	5,2 50x20x4,9	48,80	20x7	48,48	
BSF 5/16-22h.	2 7,94	6,6 56x20x4,9	56,90	25x9	49,03	
BSF 3/8-20h.	2 9,52	8,1 63x22x5,5	65,85	30x11	94,18	
BSF 7/16-18h.	2 11,11	9,5 70x22x6,2	79,02	30x11	93,31	
BSF 1/2-16h.	2 12,70	11,0 75x25x7,0	89,40	38x10	81,43	
BSF 9/16-16h.	2 14,29	12,5 80x26x9,0	107,16	38x10	85,93	
BSF 5/8-14h.	2 15,88	14,0 80x26x9,0	140,23	45x14	133,96	
BSF 3/4-12h.	2 19,05	16,5 95x33x11,0	214,34	45x14	135,20	
BSF 7/8-11h.	2 22,23	19,5 100x33x14,5	255,83	55x22	181,31	
BSF 1"-10h.	2 25,40	22,5 110x40x14,5	359,11	55x22	179,30	
BSF 1.1/8-9h.	2 28,57	25,5 110x40x16,0	810,29			
BSF 1.1/4-9h.	2 31,75	28,5 125x46x18,0	925,10			
BSF 1.1/2-8h.	2 38,10	34,5 150x55x22,0	1.409,91			

**BSW** **INOX** **TiN**

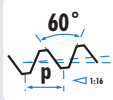
Tap/Die Symbol	D1 mm	L1 x L2 x mm	M0T		C5T	
			€	Ø x L3 mm	€	€
W 3/16-24 h.	3 50	19 x 4,90	60,87	25x9	60,84	
W 1/4-20 h.	3 50	20 x 4,90	68,14	25x9	61,96	
W 5/16-18 h.	3 56	20 x 4,90	74,66	25x9	64,41	
W 3/8-16 h.	3 63	22 x 5,50	87,87	38x10	76,14	
W 1/2-12 h.	3 75	25 x 7,00	124,00	38x14	102,29	



\* Check the price of left hand sets of taps and dies available in page 188.

HSS HAND TAPS AND DIES

NPTF



AMERICAN dryseal taper pipe thread

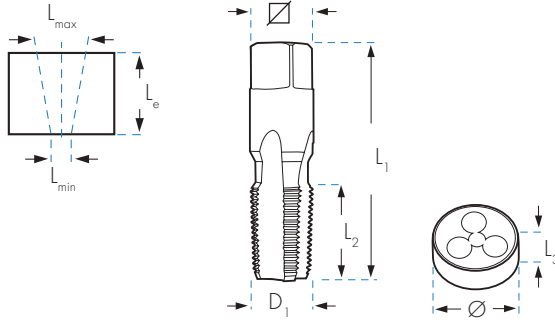
Ref. M0

HSS

Ref. C5

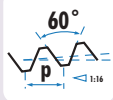
HSS

DIN 223



		D <sub>1</sub> mm		L <sub>min</sub> x L <sub>max</sub> mm	L <sub>e</sub> mm	L <sub>1</sub> x L <sub>2</sub> x	€	Ø x L <sub>3</sub> mm	€
NPTF 1/8-27 h.	1	10,22		8,30 x 8,76	12,0	54 x 19 x 8,0	97,82	38 x 10	213,61
NPTF 1/4-18 h.	1	13,58		10,70 x 11,40	17,5	62 x 27 x 11,0	137,10	38 x 15	213,61
NPTF 3/8-18 h.	1	17,02		14,20 x 14,84	17,6	65 x 27 x 13,0	189,25	45 x 14	278,91
NPTF 1/2-14 h.	1	21,21		17,40 x 18,33	22,8	80 x 35 x 13,0	264,64	45 x 20	278,91
NPTF 3/4-14 h.	1	26,56		22,80 x 23,68	23,0	83 x 35 x 17,0	404,52	55 x 22	531,58
NPTF 1"-11,5 h.	1	33,19		28,60 x 29,72	27,4	110 x 38 x 20,0	538,83		

NPT



AMERICAN taper pipe thread (Briggs)

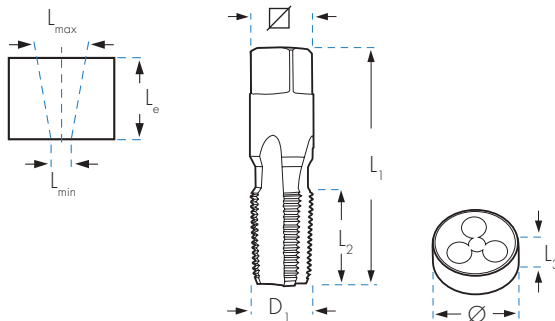
Ref. M0

HSS

Ref. C5

HSS

DIN 223

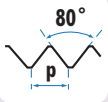


		D <sub>1</sub> mm			L <sub>min</sub> x L <sub>max</sub> mm	L <sub>e</sub> mm	L <sub>1</sub> x L <sub>2</sub> x	€	Ø x L <sub>3</sub> mm	€
NPT 1/16-27 h.	1	7,89			6,00 x 6,38	12,0	54 x 18 x 6,0	37,14	25 x 9	122,79
NPT 1/8-27 h.	1	10,24			8,30 x 8,73	12,0	65 x 19 x 5,5	37,14	30 x 11	90,79
NPT 1/4-18 h.	1	13,62			10,70 x 11,35	17,5	62 x 27 x 11,0	52,11	38 x 14	90,79
NPT 3/8-18 h.	1	17,05			14,20 x 14,80	17,6	65 x 27 x 13,0	71,91	45 x 18	118,52
NPT 1/2-14 h.	1	21,23			17,40 x 18,32	22,8	80 x 35 x 13,0	100,55	45 x 18	118,52
NPT 3/4-14 h.	1	26,57			22,80 x 23,66	23,0	83 x 35 x 17,0	153,72	55 x 22	216,82
NPT 1"-11,5 h.	1	33,23			28,60 x 29,69	27,4	95 x 44 x 21,0	171,20	65 x 25	260,65
NPT 1.1/4-11,5 h.	1	41,98			37,40 x 38,45	28,1	125 x 33 x 24,0	280,70	75 x 26	323,90
NPT 1.1/2-11,5 h.	1	48,05			43,40 x 44,52	28,4	140 x 33 x 29,0	426,53	90 x 27	451,90
NPT 2"-11,5 h.	1	60,09			55,50 x 56,56	28,4	160 x 33 x 35,0	665,90	105 x 36	629,16
NPT 2.1/2"-8h.	1	73,03			68,68 x 69,08	28,9	200 x 45 x 39,0	813,66		
NPT 3"-8h.	1	88,90			84,45 x 84,86	30,5	220 x 48 x 39,0	1.143,70		

\* Also available prior reamer on page 137

## HSS HAND TAPS AND DIES

PG



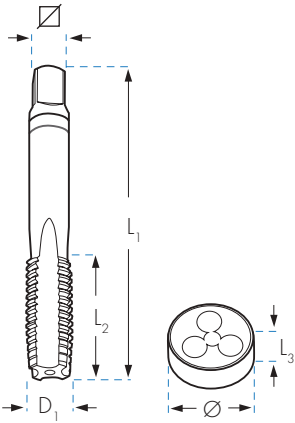
Ref. M0

HSS

DIN  
40430

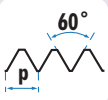
Ref. C5

HSS

DIN  
223

					M0		C5	
			D <sub>1</sub> mm		L <sub>1</sub> x L <sub>2</sub> x	€	Ø x L <sub>3</sub> mm	€
Pg 7	20h.	1	12,5	11,50	70x20x7,0	35,61	38x10	65,48
Pg 9	18h.	1	15,2	14,00	70x20x9,0	45,27	38x10	65,48
Pg 11	18h.	1	18,6	17,25	80x22x11,0	62,86	45x14	81,98
Pg 13,5	18h.	1	20,4	19,00	80x22x12,0	68,93	45x14	81,98
Pg 16	18h.	1	22,5	21,25	80x22x14,5	82,79	55x16	105,76
Pg 21	16h.	1	28,3	27,00	90x22x18,0	121,74	65x18	150,33
Pg 29	16h.	1	37,0	35,50	100x25x22,0	241,73	65x18	150,33
Pg 36	16h.	1	47,0	45,50	140x32x29,0	396,70	90x22	385,31
Pg 42	16h.	1	54,0	52,50	140x36x32,0	471,11	105x22	385,31
Pg 48	16h.	1	59,3	58,00	160x36x35,0	594,16	105x22	510,96

NPSF

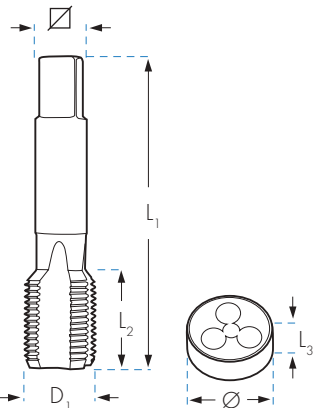
AMERICAN dryseal  
straight pipe thread

Ref. M0

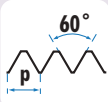
HSS

Ref. C5

HSS

DIN  
223

					M0		C5	
			D <sub>1</sub> mm		L <sub>1</sub> x L <sub>2</sub> x	€	Ø x L <sub>3</sub> mm	€
NPSF 1/8-27 h.	1	1	10,05	8,75	63x18x5,5	147,30	38x10	256,60
NPSF 1/4-18 h.	1	1	13,35	11,30	70x20x9,0	212,85	38x10	256,60
NPSF 3/8-18 h.	1	1	16,78	14,70	70x20x9,0	294,42	45x14	326,43
NPSF 1/2-14 h.	1	1	20,87	18,20	80x22x12,0	384,88	45x14	326,43
NPSF 3/4-14 h.	1	1	26,23	23,50	90x22x16,0	585,61	55x16	705,59

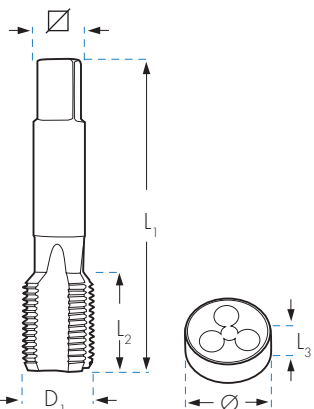
NPS  
(M)AMERICAN  
straight pipe thread

Ref. M0

HSS

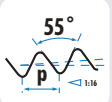
Ref. C5

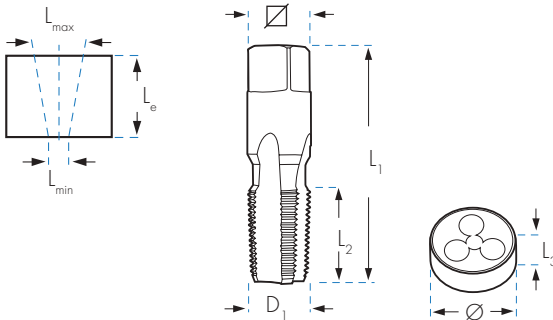
HSS





DIN  
223

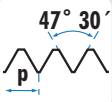
					M0		C5	
			D <sub>1</sub> mm		L <sub>1</sub> x L <sub>2</sub> x	€	Ø x L <sub>3</sub> mm	€
NPS 1/8-27 h.	1	1	10,20	8,9	63x18x5,5	122,05	38x10	213,78
NPS 1/4-18 h.	1	1	13,60	11,7	70x20x9,0	97,13	38x10	213,78
NPS 3/8-18 h.	1	1	17,00	15,0	70x20x9,0	134,34	45x14	272,01
NPS 1/2-14 h.	1	1	21,20	18,6	80x22x12,0	175,59	45x14	272,01
NPS 3/4-14 h.	1	1	26,55	24,0	90x22x16,0	254,99	55x16	538,85
NPS 1"-11,5 h.	1	1	33,20	30,0	100x25x20,0	356,54	65x18	543,05

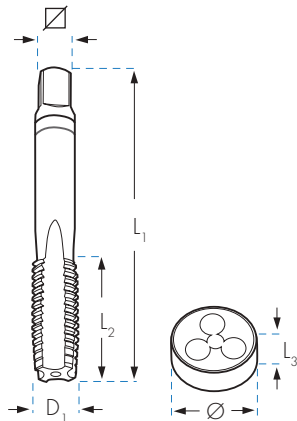
HSS HAND TAPS AND DIES





**BSPT**  Ref. M0 **HSS** **DIN 5157** Ref. C5 **HSS** **DIN 223**



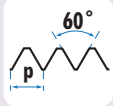
			D <sub>1</sub> mm		L <sub>min</sub> x L <sub>max</sub> mm	L <sub>e</sub> mm	L <sub>1</sub> x L <sub>2</sub> x  mm	€	Ø x L <sub>3</sub> mm	€
BSPT 1/8-28 h.	1	9,73	8,30	8,00 x 8,50	10,1	65 x 19 x 5,5	33,25	30 x 11	99,12	
BSPT 1/4-19 h.	1	13,16	11,00	10,70 x 11,35	15,0	70 x 25 x 9,0	46,85	38 x 14	99,12	
BSPT 3/8-19 h.	1	16,66	14,50	14,15 x 14,25	15,4	70 x 25 x 9,0	65,06	45 x 16	129,09	
BSPT 1/2-14 h.	1	20,95	18,10	17,60 x 18,50	20,5	80 x 31 x 12,0	91,10	55 x 22	129,09	
BSPT 5/8-14 h.	1	22,91	20,00	19,50 x 20,40	22,4	80 x 36 x 14,5	159,76	55 x 19	269,37	
BSPT 3/4-14 h.	1	26,44	23,50	23,00 x 24,00	21,8	85 x 33 x 16,0	148,65	55 x 22	243,78	
BSPT 7/8-14 h.	1	30,20	27,25	26,65 x 28,75	24,0	100 x 36 x 18,0	281,71	65 x 22	351,92	
BSPT 1"-11 h.	1	33,25	29,60	29,00 x 30,20	26,0	110 x 38 x 20,0	235,42	65 x 25	281,51	

**BA**  Ref. M0 **HSS** **DIN 352** Ref. C5 **HSS** **DIN 223**



			D <sub>1</sub> mm		L <sub>1</sub> x L <sub>2</sub> x  mm	€	Ø x L <sub>3</sub> mm	€
BA-0	1,00	3	6,0	5,1	50 x 18 x 4,9	207,17	20 x 5	161,97
BA-1	0,90	3	5,3	4,5	50 x 18 x 4,9	207,17	20 x 5	161,97
BA-2	0,81	3	4,7	4,0	50 x 17 x 4,9	207,17	20 x 5	161,97
BA-3	0,73	3	4,1	3,4	45 x 14 x 3,4	222,63	20 x 5	161,97
BA-4	0,66	3	3,6	3,0	45 x 14 x 3,0	222,63	20 x 5	161,97
BA-5	0,59	3	3,2	2,6	45 x 14 x 3,0	266,01	20 x 5	161,97
BA-6	0,53	3	2,8	2,3	40 x 12 x 2,7	266,01	20 x 5	161,97
BA-7	0,48	3	2,5	2,0	40 x 10 x 2,1	292,46	20 x 5	161,97
BA-8	0,43	3	2,2	1,8	36 x 10 x 2,1	292,46	20 x 5	161,97

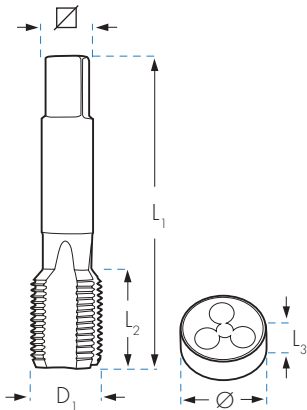


**HSS HAND TAPS AND DIES**
**UNx8**

**AMERICAN**  
 thread pitch

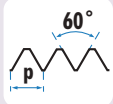
Ref. M0

**HSS**
**DIN**  
**2181**
**TOL**  
**2B**

Ref. C5

**HSS**
**DIN**  
**223**
**TOL**  
**2a**


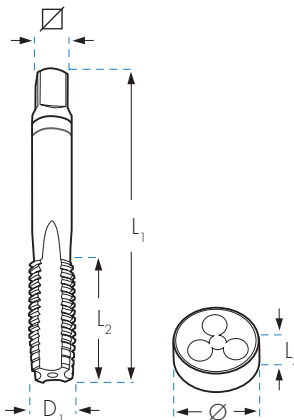
		M0		C5			
		€	Ø x L3 mm	€			
	D1 mm		L1 x L2 x mm	€	Ø x L3 mm	€	
UN 1"1/8-8h.	2	28,57	25,40	138x65x170	390,67	65x25	427,89
UN 1"1/4-8h.	2	31,75	28,50	146x65x19,5	506,63	65x25	427,89
UN 1"3/8-8h.	2	34,92	31,75	154x76x21,0	630,11	65x25	426,01
UN 1"1/2-8h.	2	38,10	35,00	162x76x23,5	721,11	75x30	482,28
UN 1"5/8-8h.	2	41,27	38,10	170x80x25,0	896,53	75x30	504,81
UN 1"3/4-8h.	2	44,45	41,25	178x81x27,0	1.117,32	90x36	673,10
UN 1"7/8-8h.	2	47,62	44,45	186x90x29,0	1.393,92	90x36	720,20
UN 2"-8h.	2	50,80	47,63	194x90x31,5	1.325,21	90x36	729,18
UN 2"1/4-8h.	2	57,15	54,00	208x90x36,0			
UN 2"1/2-8h.	2	63,50	60,35	220x100x36,0			
UN 2"3/4-8h.	2	69,85	66,70	234x104x39,0			
UN 3"-8h.	2	76,20	73,05	248x115x49,0			

**UNEF**

**AMERICAN**  
 extra fine thread

Ref. M0

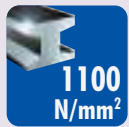
**HSS**
**DIN**  
**2181**
**TOL**  
**2B**

Ref. C5

**HSS**
**DIN**  
**223**
**TOL**  
**2a**


		M0		C5			
		€	Ø x L3 mm	€			
	D1 mm		L1 x L2 x mm	€	Ø x L3 mm	€	
UNEF 1/4-32h.	2	6,35	5,55	65x28x4,9	105,00	20x7	106,61
UNEF 5/16-32h.	2	7,94	7,15	70x30x6,0	117,31	25x9	106,61
UNEF 3/8-32h.	2	9,52	8,70	75x33x7,0	134,25	30x11	165,54
UNEF 7/16-28h.	2	11,11	10,20	81x38x6,0	170,89	30x11	165,54
UNEF 1/2-28h.	2	12,70	11,80	86x44x7,0	193,10	38x10	165,54
UNEF 9/16-24h.	2	14,29	13,20	92x44x8,0	157,85	38x10	165,54
UNEF 5/8-24h.	2	15,87	14,80	93x47x9,0	162,59	45x14	265,34
UNEF 3/4-20h.	2	19,05	17,80	108x52x11,0	178,94	45x14	265,34
UNEF 7/8-20h.	2	22,22	20,95	120x58x13,0	271,56	55x16	315,63
UNEF 1"-20h.	2	25,40	24,20	130x65x15,0	279,32	55x16	324,28

**HAND TAPS, SPECIAL APPLICATIONS**



Ref. M0MD

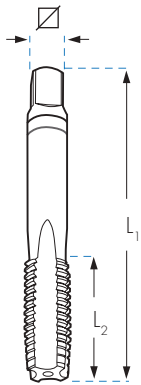
**HSSCo**  
5%

**DIN**  
352

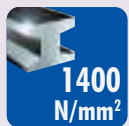
**OX**



HARD MATERIALS (< 1100 N/mm<sup>2</sup>=40Hrc )



				M0MD
			L <sub>1</sub> x L <sub>2</sub> x	€
M 3 x 0,50	3	2,50	40 x 11 x 2,7	38,32
M 4 x 0,70	3	3,30	45 x 13 x 3,4	38,32
M 5 x 0,80	3	4,20	50 x 17 x 4,9	39,56
M 6 x 1,00	3	5,00	50 x 19 x 4,9	40,73
M 8 x 1,25	3	6,80	56 x 20 x 4,9	46,31
M 10 x 1,50	3	8,50	70 x 22 x 5,5	59,44
M 12 x 1,75	3	10,20	75 x 24 x 7,0	85,11
M 14 x 2,00	3	12,00	80 x 26 x 9,0	100,74
M 16 x 2,00	3	14,00	80 x 27 x 9,0	133,85
M 18 x 2,50	3	15,50	95 x 30 x 11,0	205,86
M 20 x 2,50	3	17,50	95 x 32 x 12,0	228,55



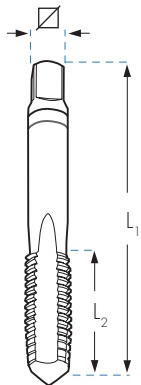
Ref. M0C

**HSS**  
PM

**TiAlSiN**



VERY HARD MATERIALS (< 1400 N/mm<sup>2</sup>=44Hrc )



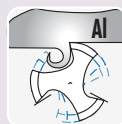
				M0C
			L <sub>1</sub> x L <sub>2</sub> x	€
M 3 x 0,50	3	2,50	40 x 11 x 2,7	95,43
M 4 x 0,70	3	3,30	45 x 13 x 3,4	102,97
M 5 x 0,80	3	4,20	50 x 17 x 4,9	104,25
M 6 x 1,00	3	5,00	50 x 19 x 4,9	104,25
M 8 x 1,25	3	6,80	56 x 20 x 4,9	117,51
M 10 x 1,50	3	8,50	70 x 22 x 5,5	145,25
M 12 x 1,75	3	10,20	75 x 24 x 7,0	176,57
M 14 x 2,00	3	12,00	80 x 26 x 9,0	216,66
M 16 x 2,00	3	14,00	80 x 27 x 9,0	259,60
M 18 x 2,50	3	15,50	95 x 30 x 11,0	359,92
M 20 x 2,50	3	17,50	95 x 32 x 12,0	396,13

**Al**

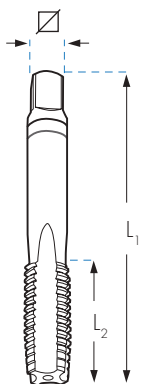
Ref. M0AL

**HSS**

**BRIGHT**



SPECIAL FOR ALUMINIUM



				M0AL
			L <sub>1</sub> x L <sub>2</sub> x	€
M 3 x 0,50	3	2,50	40 x 11 x 2,7	29,84
M 4 x 0,70	3	3,30	45 x 13 x 3,4	28,97
M 5 x 0,80	3	4,20	50 x 17 x 4,9	30,70
M 6 x 1,00	3	5,00	50 x 19 x 4,9	30,70
M 8 x 1,25	3	6,80	56 x 20 x 4,9	37,68
M 10 x 1,50	3	8,50	70 x 22 x 5,5	46,01
M 12 x 1,75	3	10,20	75 x 24 x 7,0	64,78
M 14 x 2,00	3	12,00	80 x 26 x 9,0	74,44
M 16 x 2,00	3	14,00	80 x 27 x 9,0	105,66
M 18 x 2,50	3	15,50	95 x 30 x 11,0	140,04
M 20 x 2,50	3	17,50	95 x 32 x 12,0	157,87

## HAND TAPS AND DIES FOR STAINLESS STEEL

M

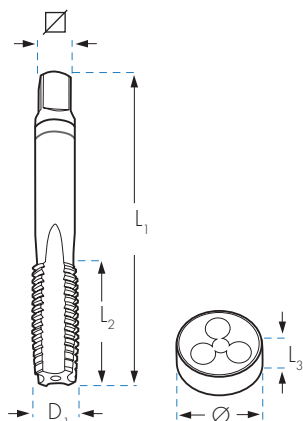
INOX



Ref. MOT  
Ref. MOXDIN  
352TOL  
6H

TiN

Ref. CST  
Ref. CSXDIN  
223TOL  
6g

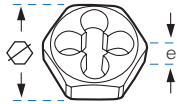
OX



			L <sub>1</sub> × L <sub>2</sub> × $\nabla$ mm	MOT	CST	MOX	CSX	Ø × L <sub>3</sub> mm
				HSS	HSS	HSSCo	HSSCo	
				TiN	TiN	OX	OX	
				€	€	€	€	
								
M	3 x 0,50	3	40 x 11 x 2,70	42,73	62,83	39,41	34,13	20 x 5
M	4 x 0,70	3	45 x 13 x 3,40	44,89	62,83	39,41	34,13	20 x 5
M	5 x 0,80	3	50 x 16 x 4,90	47,63	62,83	41,03	35,78	20 x 7
M	6 x 1,00	3	50 x 19 x 4,90	47,63	62,83	40,90	36,28	20 x 7
M	8 x 1,00	2	50 x 19 x 4,90	41,87				
M	8 x 1,25	3	56 x 22 x 4,90	54,93	64,41	47,60	39,35	25 x 9
M	10 x 1,00	2	63 x 18 x 5,50	48,31				
M	10 x 1,50	3	70 x 24 x 5,50	73,16	84,56	61,24	49,93	30 x 11
M	12 x 1,50	2	70 x 20 x 7,00	61,51				
M	12 x 1,75	3	75 x 29 x 7,00	84,88	93,76	87,70	52,75	38 x 14
M	14 x 1,50	2	70 x 20 x 9,00	73,86				
M	14 x 2,00	3	80 x 30 x 9,00	102,65	93,76	97,12	52,75	38 x 14
M	16 x 2,00	3	80 x 32 x 9,00	128,91	115,54	133,10	70,82	45 x 18
M	18 x 2,50	3	95 x 40 x 11,00	159,80		181,78		
M	20 x 2,50	3	95 x 40 x 12,00	165,71		201,77		
M	22 x 2,50	3	100 x 40 x 14,50	209,62				
M	24 x 3,00	3	110 x 50 x 14,50	252,59				

M

HSS HEXAGONAL DIES



**M** HSS DIN 382

C5HM			C5HM			
		€			€	
M 3 x 0,35		18 x 5	40,65	M 16 x 2,00	41 x 18	111,70
M 3 x 0,50		19 x 5	40,65	M 18 x 1,00	41 x 14	111,70
M 3,5 x 0,60		18 x 5	40,65	M 18 x 1,50	41 x 14	111,70
M 4 x 0,50		18 x 5	40,65	M 18 x 2,50	41 x 18	111,70
M 4 x 0,70		19 x 5	40,65	M 20 x 1,00	41 x 14	111,70
M 5 x 0,50		18 x 5	40,65	M 20 x 1,50	41 x 14	111,70
M 5 x 0,75		18 x 5	40,65	M 20 x 2,00	41 x 18	111,70
M 5 x 0,80		19 x 7	40,65	M 20 x 2,50	41 x 18	111,70
M 6 x 0,75		18 x 7	40,65	M 22 x 1,00	50 x 16	141,23
M 6 x 1,00		19 x 7	40,65	M 22 x 1,50	50 x 16	141,23
M 7 x 0,75		21 x 9	43,21	M 22 x 2,00	50 x 16	141,23
M 7 x 1,00		21 x 9	43,21	M 22 x 2,50	50 x 16	141,23
M 8 x 0,75		21 x 9	43,21	M 24 x 1,00	50 x 16	172,01
M 8 x 1,00		21 x 9	43,21	M 24 x 1,50	50 x 16	172,01
M 8 x 1,25		22 x 9	43,21	M 24 x 2,00	50 x 16	172,01
M 9 x 0,75		21 x 9	50,86	M 24 x 3,00	50 x 22	141,23
M 9 x 1,00		21 x 9	50,86	M 27 x 1,50	60 x 18	190,96
M 9 x 1,25		22 x 9	50,86	M 27 x 2,00	60 x 18	190,96
M 10 x 1,00		27 x 11	50,86	M 27 x 3,00	60 x 25	159,13
M 10 x 1,25		27 x 11	50,86	M 30 x 1,00	60 x 18	190,96
M 10 x 1,50		27 x 11	50,86	M 30 x 1,50	60 x 18	190,96
M 11 x 1,00		27 x 11	84,75	M 30 x 2,00	60 x 18	190,96
M 11 x 1,50		27 x 11	84,75	M 30 x 3,00	60 x 18	190,96
M 12 x 1,25		36 x 10	84,75	M 30 x 3,50	60 x 25	159,13
M 12 x 1,50		36 x 10	84,75	M 33 x 1,50	60 x 18	213,82
M 12 x 1,75		36 x 10	71,20	M 33 x 2,00	60 x 18	213,82
M 14 x 1,25		36 x 14	96,30	M 33 x 3,50	60 x 25	178,19
M 14 x 1,50		36 x 10	96,30	M 35 x 1,50	60 x 18	220,43
M 14 x 2,00		36 x 10	71,20	M 36 x 1,50	60 x 18	220,43
M 15 x 1,00		36 x 14	111,70	M 36 x 2,00	60 x 18	220,43
M 15 x 1,50		41 x 14	111,70	M 36 x 3,00	60 x 18	220,43
M 16 x 1,00		41 x 14	111,70	M 36 x 4,00	60 x 25	183,69
M 16 x 1,50		41 x 14	111,70			

**BSP (GAS)** HSS DIN 382

C5HG			
			€
G 1/8 x 28h.		27 x 11	89,51
G 1/4 x 19h.		36 x 10	89,51
G 3/8 x 19h.		41 x 14	111,94
G 1/2 x 14h.		41 x 14	111,94
G 5/8 x 14h.		50 x 16	263,56
G 3/4 x 14h.		50 x 16	263,56
G 7/8 x 14h.		60 x 18	265,90
G 1" x 11h.		60 x 18	265,90
G1.1/4 x 11h.		70 x 20	354,54
G1.1/2 x 11h.		85 x 22	598,13
G 2" x 11h.		100 x 22	900,05

**UNC** HSS DIN 382

C5HNC			
			€
UNC 1/4-20h		18 x 7	37,07
UNC 5/16-18h		21 x 9	46,13
UNC 3/8-16h		27 x 11	55,68
UNC 7/16-14h		27 x 11	82,17
UNC 1/2-13h		36 x 14	82,48
UNC 9/16-12h		36 x 14	98,56
UNC 5/8-11h		41 x 18	76,36
UNC 3/4-10h		41 x 18	121,47
UNC 7/8-9h		50 x 22	172,38
UNC 1"-8h		50 x 22	172,38
UNC 1.1/8-7h		60 x 25	227,91
UNC 1.1/4-7h		60 x 25	227,91

**UNF** HSS DIN 382

C5HNF			
			€
UNF 1/4-28h.		18 x 7	39,29
UNF 5/16-24h.		21 x 9	49,13
UNF 3/8-24h.		27 x 11	59,11
UNF 7/16-20h.		27 x 11	87,09
UNF 1/2-20h.		36 x 10	88,43
UNF 9/16-18h.		36 x 10	98,56
UNF 5/8-18h.		41 x 14	122,96
UNF 3/4-16h.		41 x 14	128,77
UNF 7/8-14h.		50 x 16	162,86
UNF 1"-12h.		50 x 16	170,72
UNS 1"-14h.		50 x 16	170,72
UNF 1.1/8-12h.		60 x 18	227,91
UNF 1.1/4-12h.		60 x 18	227,91

**BSW** HSS DIN 382

C5HW			C5HW			
		€			€	
BSW 1/8 x 40h.		19 x 5	50,86	BSW 9/16 x 12h.	36 x 14	76,30
BSW 3/16 x 24h.		19 x 7	50,86	BSW 5/8 x 11h.	41 x 18	112,75
BSW 1/4 x 20h.		19 x 7	50,86	BSW 3/4 x 10h.	41 x 18	112,75
BSW 5/16 x 18h.		22 x 9	53,39	BSW 7/8 x 9h.	50 x 22	165,25
BSW 3/8 x 16h.		27 x 11	63,56	BSW 1" x 8h.	50 x 22	165,25
BSW 7/16 x 14h.		27 x 11	63,56	BSW 1.1/8 x 7h.	60 x 25	284,83
BSW 1/2 x 12h.		36 x 14	76,30			

Threading tools  
Pink

**SET OF LEFT TURNING HAND TAPS AND DIES**


Ref. MOI

HSS

(M)

DIN  
352

(MF)

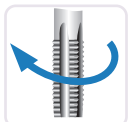
DIN  
2181TOL  
6H

Ref. CSI

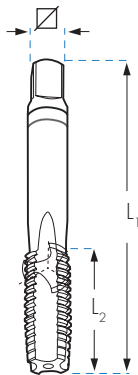
HSS

DIN  
223TOL  
6g

For hard materials up to 38 HRC



LEFT


**UNC**

	Pcs.	D1 mm		L1 x L2 x $\nabla$ mm	MOI		CSI	
					€	Ø x L3 mm	€	€
UNC 1/4-20h.	3	6,35	5,10	50x19x4,9	96,84	20x7	82,87	
UNC 5/16-18h.	3	7,94	6,60	56x22x4,9	109,94	25x9	85,03	
UNC 3/8-16h.	3	9,52	8,00	70x24x5,5	125,08	30x11	118,23	
UNC 1/2-13h.	3	12,70	10,75	75x29x7,0	187,41	38x14	121,54	
UNC 5/8-11h.	3	15,87	13,50	80x32x9,0	305,11	45x18	172,42	
UNC 3/4-10h.	3	19,05	16,50	95x40x11,0	415,73	45x18	172,42	
UNC 1"-8h.	3	25,40	22,25	110x50x14,5	691,08	55x22	231,44	

**UNF**

	Pcs.	D1 mm		L1 x L2 x $\nabla$ mm	MOI		CSI	
					€	Ø x L3 mm	€	€
UNF 1/4-28h.	2	6,35	5,50	50x14x4,9	64,28	25x9	77,63	
UNF 5/16-24h.	2	7,94	6,90	56x22x4,9	68,82	25x9	86,67	
UNF 3/8-24h.	2	9,52	8,50	63x20x5,5	79,46	38x10	118,23	
UNF 1/2-20h.	2	12,70	11,50	70x22x7,0	107,89	38x10	126,37	
UNF 5/8-18h.	2	15,87	14,50	70x22x9,0	181,60	45x14	172,42	
UNF 3/4-16h.	2	19,05	17,50	80x22x11,0	243,93	45x14	172,42	
UNS 1"-14h.	2	25,40	23,60	90x22x14,5	460,46	55x16	251,48	

**BSP  
(GAS)**

	Pcs.	D1 mm		L1 x L2 x $\nabla$ mm	MOI		CSI	
					€	Ø x L3 mm	€	€
G 1/8-28h.	2	9,73	8,80	63 x 20 x 5,5	71,87	38x10	105,72	
G 1/4-19h.	2	13,16	11,80	70 x 22 x 9,0	101,27	38x10	105,15	
G 3/8-19h.	2	16,66	15,25	70 x 22 x 9,0	127,14	45x14	139,28	
G 1/2-14h.	2	20,95	19,00	80 x 22 x 12,0	178,31	45x14	139,28	
G 5/8-14h.	2	22,91	21,00	80 x 22 x 14,5	228,15	55x16	193,22	
G 3/4-14h.	2	26,44	24,50	90 x 22 x 16,0	278,33	55x16	251,52	
G 1"-11h.	2	33,25	30,75	100 x 25 x 20,0	441,26	65x18	302,31	
G 1.1/4-11h.	2	41,91	39,50	125 x 40 x 24,0	767,38	75x20	418,85	

**BSW**

	Pcs.	D1 mm		L1 x L2 x $\nabla$ mm	MOI		CSI	
					€	Ø x L3 mm	€	€
W 1/8-40h.	3	3,17	2,55	40x14x2,7	63,77	25x9	66,55	
W 1/4-20h.	3	6,35	5,10	50x20x4,9	71,83	25x9	67,88	
W 5/16-18h.	3	7,94	6,50	56x20x4,9	87,73	25x9	70,81	
W 3/8-16h.	3	9,52	7,90	63x22x5,5	96,38	38x10	102,46	
W 5/8-11h.	3	15,87	13,40	80x27x9,0	217,19	45x18	146,22	
W 3/4-10h.	3	19,05	16,50	95x32x11,0	309,20	45x18	146,45	
W 7/8-9h.	3	22,22	19,25	100x32x14,5	422,28	55x22	215,33	
W 1"-8h.	3	25,40	21,75	110x36x14,5	517,49	55x22	217,28	

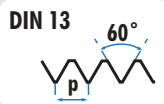
	Pcs.	D1 mm		L1 x L2 x $\nabla$ mm	MOI		CSI	
					€	Ø x L3 mm	€	€
M 2x0,40	3	1,60	36x9,0x2,1	78,65	16x5	64,96		
M 3x0,50	3	2,50	40x11,0x2,7	44,16	25x9	59,08		
M 4x0,70	3	3,30	45x13,0x3,4	44,12	25x9	59,38		
M 5x0,80	3	4,20	50x16,0x4,9	47,17	25x9	59,04		
M 6x1,00	3	5,00	50x19x4,9	47,17	25x9	59,08		
M 7x1,00	3	6,00	50x19x4,9	57,45	25x9	62,01		
M 8x1,00	2	7,00	56x18x4,9	53,00	25x9	68,54		
M 8x1,25	3	6,80	56x22x4,9	57,41	25x9	62,69		
M 9x1,25	3	7,80	63x22x5,5	94,04	25x9	72,86		
M 10x1,50	3	8,50	70x24x5,5	70,79	38x10	83,91		
M 12x1,50	2	10,50	70x20x7,0	85,50	38x10	105,15		
M 12x1,75	3	10,20	75x29x7,0	99,58	38x14	91,16		
M 14x1,25	2	12,80	70x20x9,0	122,51	38x10	136,40		
M 14x2,00	3	12,00	80x30x9,0	110,17	38x14	90,27		
M 16x1,50	2	14,50	70x20x9,0	118,55	45x14	130,61		
M 16x2,00	3	14,00	80x32x9,0	157,62	45x18	122,39		
M 18x2,00	2	16,00	80x22x11,0	249,31	45x14	176,77		
M 18x2,50	3	15,50	95x40x11,0	208,02	45x18	122,43		
M 20x2,00	2	18,00	80x22x12,0	264,09	45x14	175,83		
M 20x2,50	3	17,50	95x40x12,0	233,36	45x18	120,52		
M 22x2,00	2	20,00	80x22x14,5	343,19	55x16	226,56		
M 22x2,50	3	19,50	100x40x14,5	310,83	55x22	181,09		
M 24x2,00	2	22,00	90x22x14,5	409,22	55x16	230,87		
M 24x3,00	3	21,00	110x50x14,5	370,76	55x22	181,09		
M 27x2,00	2	25,00	90x22x16,0	567,14	65x18	341,19		
M 27x3,00	3	24,00	110x50x16,0	468,84	65x25	274,71		
M 30x3,00	2	27,00	125x56x18,0	601,23	65x25	387,26		
M 30x3,50	3	26,50	125x50x18,0	603,20	65x25	275,41		
M 33x2,00	2	31,00	100x25x20,0	857,69	65x18	478,36		
M 33x3,50	3	29,50	125x50x20,0	757,43	65x25	280,69		
M 36x3,00	2	33,00	125x33x22,0	1.384,72	65x25	330,06		
M 36x4,00	3	32,00	150x53x22,0	975,16	65x25	286,16		
M 39x3,00	2	36,00	125x33x24,0	1.197,21	75x30	517,07		
M 39x4,00	3	35,00	150x53x24,0	1.091,14	75x30	435,26		

Other dimensions are available on request



**METRIC THREAD LEFT AND RIGHT TURNING TAP NUMBER 3**

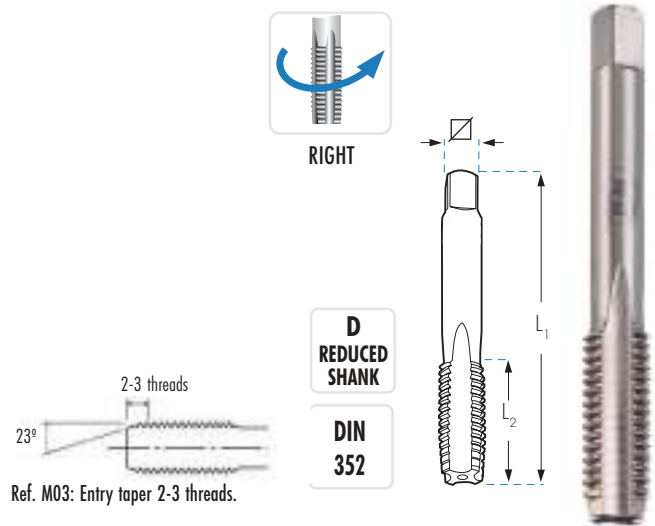
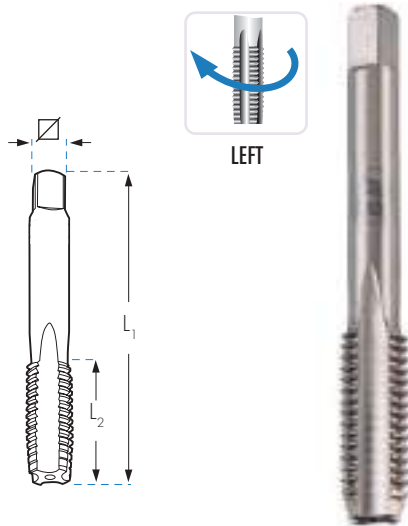
**M  
MF**



**HSS**

**DIN  
352**

**TOL  
6H**



		M03I	
		L <sub>1</sub> x L <sub>2</sub> x D <sub>2</sub> x	€
mm			
M 3x0,50	2,50	D 40 x 11 x 3,50 x 2,70	14,72
M 4x0,70	3,30	D 45 x 13 x 4,50 x 3,40	14,71
M 5x0,80	4,20	D 50 x 16 x 6,00 x 4,90	15,72
M 6x1,00	5,00	D 50 x 19 x 6,00 x 4,90	15,72
M 7x1,00	6,00	D 50 x 19 x 6,00 x 4,90	19,15
M 8x1,25	6,75	D 56 x 22 x 6,00 x 4,90	19,14
M 10x1,50	8,50	D 70 x 24 x 7,00 x 5,50	23,60
M 12x1,75	10,20	D 75 x 29 x 9,00 x 7,00	33,19
M 14x2,00	12,00	D 80 x 30 x 11,00 x 9,00	36,72
M 16x2,00	14,00	D 80 x 32 x 12,00 x 9,00	52,54
M 18x2,50	15,50	D 95 x 40 x 14,00 x 11,00	69,34
M 20x2,50	17,50	D 95 x 40 x 16,00 x 12,00	77,79

Other dimensions are available on request

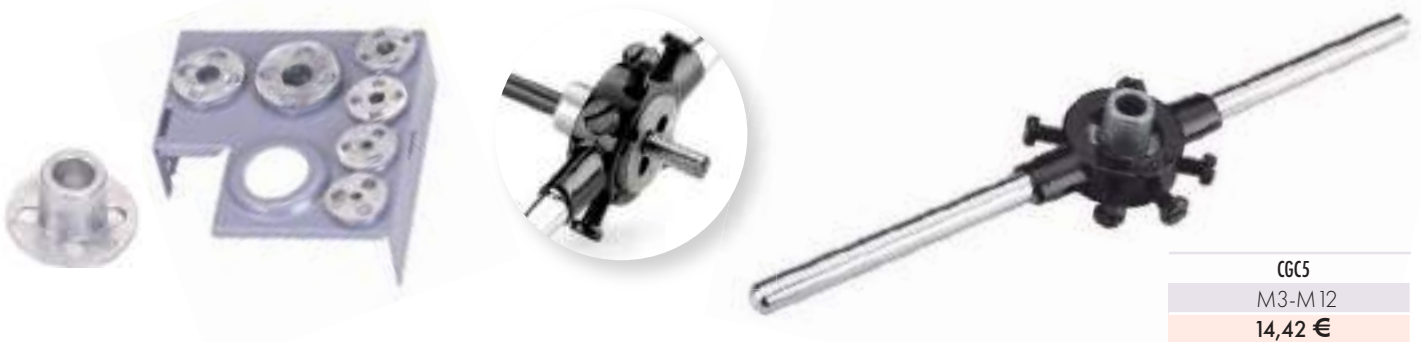
		M03	
		L <sub>1</sub> x L <sub>2</sub> x D <sub>2</sub> x	€
mm			
M 3x0,50	2,50	D 40 x 11 x 3,50 x 2,70	7,36
M 4x0,70	3,30	D 45 x 13 x 4,50 x 3,40	7,35
M 5x0,80	4,20	D 50 x 16 x 6,00 x 4,90	7,86
M 6x1,00	5,00	D 50 x 19 x 6,00 x 4,90	7,86
M 7x1,00	6,00	D 50 x 19 x 6,00 x 4,90	9,58
M 8x1,25	6,75	D 56 x 22 x 6,00 x 4,90	9,57
M 9x1,25	7,75	D 63 x 18 x 7,00 x 5,50	15,67
M 10x1,00	9,00	D 63 x 18 x 7,00 x 5,50	14,19
M 10x1,25	8,80	D 70 x 24 x 7,00 x 5,50	14,38
M 10x1,50	8,50	D 70 x 24 x 7,00 x 5,50	11,80
M 12x1,00	11,00	D 70 x 20 x 9,00 x 7,00	25,16
M 12x1,25	10,75	D 70 x 20 x 9,00 x 7,00	25,08
M 12x1,50	10,50	D 70 x 20 x 9,00 x 7,00	21,37
M 12x1,75	10,20	D 75 x 29 x 9,00 x 7,00	16,60
M 14x1,00	13,00	D 70 x 20 x 11,00 x 9,00	39,21
M 14x1,25	12,80	D 70 x 20 x 11,00 x 9,00	30,63
M 14x1,50	12,50	D 70 x 20 x 11,00 x 9,00	23,82
M 14x2,00	12,00	D 80 x 30 x 11,00 x 9,00	18,36
M 16x1,00	15,00	D 70 x 20 x 12,00 x 9,00	52,02
M 16x1,25	14,75	D 70 x 20 x 12,00 x 9,00	54,75
M 16x1,50	14,50	D 70 x 20 x 12,00 x 9,00	29,64
M 16x2,00	14,00	D 80 x 32 x 12,00 x 9,00	26,27
M 18x1,50	16,50	D 80 x 22 x 14,00 x 11,00	39,05
M 18x2,50	15,50	D 95 x 40 x 14,00 x 11,00	34,67
M 20x1,50	18,50	D 80 x 22 x 16,00 x 12,00	48,90
M 20x2,50	17,50	D 95 x 40 x 16,00 x 12,00	38,89
M 22x2,50	19,50	D 100 x 40 x 18,00 x 14,50	51,81
M 24x3,00	21,00	D 110 x 50 x 18,00 x 14,50	61,79
M 27x3,00	24,00	D 110 x 50 x 20,00 x 16,00	78,14
M 30x3,50	26,50	D 125 x 50 x 22,00 x 18,00	100,53

## THREAD PITCH GAUGES



	THREAD TYPE	THREAD RANGE		GAM
		Metric	Empire	€
GAM	Metric	0,25 - 2,5		11,91
GAMW	Metric / Empire	0,25 - 6,0	62h - 4h	21,58

## SET OF GUIDES FOR DIES M3-M12

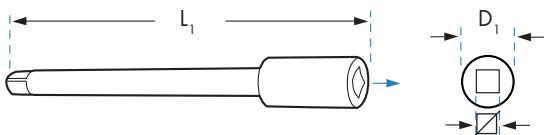


CG5  
M3-M12  
14,42 €

## TAP EXTENSION

DIN  
377

DIN 10



Same square dimensions in both male and female areas.

	$\square \times L_1$ mm	$D_1$	AL €
AL21	2,1 x 60	6,0	8,63
AL24	2,4 x 70	6,0	8,63
AL27	2,7 x 80	7,0	8,63
AL30	3,0 x 90	7,0	8,63
AL34	3,4 x 95	8,0	9,36
AL38	3,8 x 95	9,0	9,77
AL43	4,3 x 105	10,0	10,88
AL49	4,9 x 110	11,0	10,89
AL55	5,5 x 115	12,0	10,96
AL62	6,2 x 120	14,0	13,35
AL70	7,0 x 125	15,0	13,91
AL80	8,0 x 125	17,0	17,37
AL90	9,0 x 135	19,0	17,84

	$\square \times L_1$ mm	$D_1$	AL €
AL100	10,0 x 140	21,0	24,65
AL110	11,0 x 150	23,0	24,99
AL120	12,0 x 160	25,0	26,91
AL130	13,0 x 165	27,0	42,10
AL145	14,5 x 175	29,0	42,69
AL160	16,0 x 185	30,0	45,17
AL180	18,0 x 195	33,0	51,47
AL200	20,0 x 220	36,0	68,65
AL220	22,0 x 220	40,0	100,33
AL240	24,0 x 235	42,0	153,66
AL260	26,0 x 245	45,0	162,25
AL290	29,0 x 260	55,0	187,20
AL320	32,0 x 280	55,0	230,45

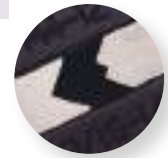
Maximum  
Performance  
150 kg/mm<sup>2</sup>

**DROP FORGED TAP HOLDERS**

Ref. GAPRO

- Drop Forged Steel body.
- Tensile Strength up to 150 Kg/mm2.
- Maximum performance and lifetime.

- Accurate and tight tap holding.
- Adjusted and reinforced thread provides robust tool.
- Anti slip handle for a smooth grip.



GAPRO

NORM N°	N° 0	N° 1	N° 1.1/2	N° 2	N° 3	N° 4	N° 5
	M1-M8 2,00-5,00	M1-M10 2,00-6,30	M1-M12 2,50-7,00	M1-M12 2,50-8,00	M5-M20 4,00-13,00	M5-M27 4,00-16,00	M9-M32 5,50-20,00
€	21,41	22,62	24,04	30,38	42,99	68,74	145,49

Ref. GA

- Zinc Alloy Body.
- High performance and lifetime.
- Accurate and precise grip.



GA

NORM N°	N° 0	N° 1	N° 1.1/2	N° 2	N° 3	N° 4	N° 5	N° 7	N° 8
	M1-M8 1,50-5,00	M1-M10 2,00-7,00	M1-M12 2,00-8,00	M4-M12 2,50-10,00	M5-M20 3,50-14,00	M9-M27 4,00-15,00	M13-M32 5,50-19,00	M22-M52 14,00-34,00	M33-M64 16,00-40,00
€	17,99	19,02	20,20	25,52	36,12	57,77	122,26	241,52	394,59

**DIE HOLDERS WITH 5 AND 3 SCREWS**

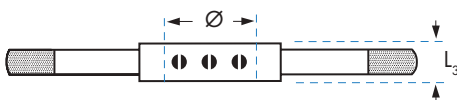
Ref. VA

DIN  
225



5

IMPORTANT: When placing an order, please use the thicknesses mentioned below



Ø x L3 mm	16x5	20x5	20x7	25x9	30x11	38x10	38x14	45x14	45x18	55x16	55x22	65x18	65x25
€	9,99	11,06	11,06	12,62	15,29	19,99	19,96	24,54	24,72	31,72	33,22	45,45	45,45
Ø x L3 mm	75x20	75x30	90x22	90x36	105x22	105x36	120x22	120x36	130x25	130x36	140x25		
€	78,75	82,43	99,75	107,47	148,41	148,41	385,98	385,98	401,27	401,27	421,98		

VA

Ref. VA

INCHES



3



Ø mm	20,60	25,40	38,10	50,80	63,50	76,20	88,90
Inches	13/16"	1"	1.1/2"	2"	2.1/2"	3"	3.1/2"
€	10,83	12,85	19,23	28,52	45,01	83,23	105,43

VA

NOTE: Die holders with imperial exterior Ø are now obsolete

## "T" TAP WRENCHES WITH RATCHET

Tool holder

Pink

Ref. TC

**TYPE**  
**T**


SHORT SERIES



	CAPACITY mm min.-max.	For tap shanks		L <sub>1</sub> mm	WEIGHT g	QUALITY	TC
		DIN	ISO				€
TC3B	2,6 - 5,5	M3 - 8	M3 - 6	85	180	1 <sup>st</sup> Quality	29,38
TC4B	4,6 - 8,0	M5 - 12	M6 - 12	110	300	1 <sup>st</sup> Quality	39,70
TC1B	2,6 - 5,5	M3 - 8	M3 - 6	85	180	2 <sup>nd</sup> Quality	22,25
TC2B	4,6 - 8,0	M5 - 12	M6 - 12	110	300	2 <sup>nd</sup> Quality	29,84

Ref. TL

**TYPE**  
**T**

LONG SERIES



	CAPACITY mm min.-max.	For tap shanks		L <sub>1</sub> mm	WEIGHT g	QUALITY	TL
		DIN	ISO				€
TL3	2,6 - 5,5	M3 - 8	M3 - 6	250	250	1 <sup>st</sup> Quality	44,69
TL4	4,6 - 8,0	M5 - 12	M6 - 12	300	440	1 <sup>st</sup> Quality	53,20
TL1	2,6 - 5,5	M3 - 10	M3 - 6	250	250	2 <sup>nd</sup> Quality	35,29
TL2	4,6 - 8,0	M5 - 12	M6 - 12	300	440	2 <sup>nd</sup> Quality	42,05

## METHACRYLATE DISPLAYS



Dimensions: 500 x 320 x 110 mm

	N° 1 1/2		N° 2		TC1 4	TC2 4	GV-01
	5	5	5	5			€
GV-01	20x5	20x7	25x9	30x11	38x14		773,85
	5	5	5	5	5		

**HAND TAPS AND DIES IN METAL CASE**




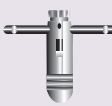
**M3  
M12**

**HSS**



Ref. D624

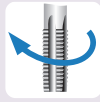
**CONTENT**

					No. Items	1st Quality €	* 2nd Quality €
D624	M3 - M4 - M5 - M6 - M8 - M10 - M12	N° 1.1/2	25 x 9	-	30	250,75	227,47

**HSS DIES IN METAL CASE**




**M3  
M12**

**HSS**



Ref. D671

**CONTENT**

					No. Items	1st Quality €	* 2nd Quality €
D671	M3 - M4 - M5 - M6 - M8 - M10 - M12	20 x 5 30 x 11	20 x 7 38 x 14	25 x 9	12	247,34	209,50
D671I (Left hand)	 M3 - M4 - M5 - M6 - M8 - M10 - M12	20 x 5 30 x 11	20 x 7 38 x 14	25 x 9	12	494,67	418,97

\* 2nd Quality: Die holder and tap holder in ZAMAK



**HSS AND HSSCo HAND TAPS AND DIES IN METAL CASES**

Threading tools

Green

**M3  
M12**

**HSS**
**HSSCo  
5%**


Ref. D621



Ref. D655

**CONTENT**

						No. Items	1st Quality €	**2nd Quality €
D621	M3 - M4 - M5 - M6 M8 - M10 - M12	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	Nº 1 Nº 2	20 x 5 20 x 7 25 x 9 30 x 11 38 x 14	TC1	43	502,79	368,52
D652	M3 - M4 - M5 - M6 M8 - M10 - M12	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	Nº 1 Nº 2	20 x 5 20 x 7 25 x 9 30 x 11 38 x 14	-	42	486,69	349,96
D662	M3-M4-M5-M6-M7 M8-M9-M10-M11-M12	-	Nº 1 Nº 2	20 x 5 20 x 7 25 x 9 30 x 11 38 x 14	TC1	48	749,01	658,81
D651	M3 - M4 - M5 - M6 M8 - M10 - M12	-	Nº 1 Nº 2	20 x 5 20 x 7 25 x 9 30 x 11 38 x 14	-	35	384,13	353,39
D655* (HSSCo)	M3 - M4 - M5 - M6 M8 - M10 - M12	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	Nº 1 Nº 2	20 x 5 20 x 7 25 x 9 30 x 11 38 x 14	TC1	43	802,08	705,53
D621I (Left hand)	M3 - M4 - M5 - M6 M8 - M10 - M12	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	Nº 1 Nº 2	20 x 5 20 x 7 25 x 9 30 x 11 38 x 14	TC1	43	785,25	684,80

\*

**HSSCo  
5%**

**\*\* 2nd Quality: Die holder and tap holder in ZAMAK**

**HSS AND HSSCo HAND TAPS AND DIES IN METAL CASES WITH GUIDES FOR DIES**

**M3  
M12**



**HSS**

**HSSCo  
5%**



Ref. D656



PILOT  
GUIDE



Ref. D657



PILOT  
GUIDE

**CONTENT**

							No. Items	1st Quality €	** 2nd Quality €	
D656	M3 - M4 - M5 - M6 M8 - M10 - M12		2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	N° 1 N° 2	20 x 5 20 x 7 25 x 9 30 x 11 38 x 14	+ PILOT GUIDE	TC1	43	561,85	497,37
D657* (HSSCo)	M3 - M4 - M5 - M6 M8 - M10 - M12		2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	N° 1 N° 2	20 x 5 20 x 7 25 x 9 30 x 11 38 x 14		TC1	43	836,41	738,24

\* **HSSCo  
5%**

\*\* 2nd Quality: Die holder and tap holder in ZAMAK

**HSS AND HSSCo HAND TAPS AND DIES IN METAL CASES**
**M3  
M20**
**M5  
M20**
**HSS**
**HSSCo  
5%**


Ref. D622



Ref. D623

**CONTENT**

					No. Items	1st Quality €	**2nd Quality €
D622 (Automotive)	M3 - M4 - M5 - M6 - M8 - M10 - M12 M14 - M16 - M18 - M20	Nº 1 Nº 3	20 x 5 20 x 7 25 x 9 30 x 11 38 x 14 45 x 18	TC1 TC2	54	859,95	675,64
D658	M3 - M4 - M5 - M6 - M8 - M10 - M12 M14 - M16 - M18 - M20	Nº 1 Nº 3	20 x 5 20 x 7 25 x 9 30 x 11 38 x 14 45 x 18	-	52	792,21	611,27
D622I (Left hand)	M3 - M4 - M5 - M6 - M8 - M10 - M12 M14 - M16 - M18 - M20	Nº 1 Nº 3	20 x 5 20 x 7 25 x 9 30 x 11 38 x 14 45 x 18	TC1 TC2	54	1.480,89	-
D659* (HSSCo)	M3 - M4 - M5 - M6 - M8 - M10 - M12 M14 - M16 - M18 - M20	Nº 1 Nº 3	20 x 5 20 x 7 25 x 9 30 x 11 38 x 14 45 x 18	-	52	1.786,29	1.571,22
D623	M5 - M6 - M8 - M10 - M12 M14 - M16 - M18 - M20	Nº 1 Nº 3	20 x 7 25 x 9 30 x 11 38 x 14 45 x 18	TC1 TC2	45	901,60	705,86
D663	M5 - M6 - M7 - M8 - M9 - M10 - M12 M14 - M16 - M18 - M20	Nº 1 Nº 3	20 x 7 25 x 9 30 x 11 38 x 14 45 x 18	-	51	1.202,03	1.081,20

\*

**HSSCo  
5%**


\*\* 2nd Quality: Die holder and tap holder in ZAMAK

**HSS HAND TAPS AND DIES IN METAL AND WOODEN CASES**

M1  
M10
M5  
M12
M3  
M24
M5  
M30
HSS

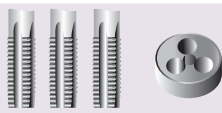





Ref. D628



Ref. D626

**CONTENT**

					No. Items	1st Quality €	* 2nd Quality €
D626	M1 - M1.2 - M1.4 - M1.7 - M2.0 - M2.3 M2.6 - M3 - M3.5 - M4 - M5 - M6 - M8 - M10	Nº 0 Nº 1	16 x 5 20 x 5 20 x 7 25 x 9 30 x 11	TC1	64	-	1.124,71
D627	M5 - M6 - M7 - M8 - M9 - M10 - M11 - M12	Nº 1 Nº 2	20 x 7 25 x 9 30 x 11 38 x 14	TC1	39	-	840,21
D625	M3 - M4 - M5 - M6 - M8 - M10 - M12 - M14 M16 - M18 - M20 - M22 - M24	Nº 1 Nº 4	20 x 5 20 x 7 25 x 9 30 x 11 38 x 14 45 x 18 55 x 22	-	61	1.984,50	1.464,24
D628	M5 - M6 - M8 - M10 - M12 - M14 - M16 M18 - M20 - M22 - M24 - M27 - M30	Nº 1 Nº 3 Nº 5	20 x 7 25 x 9 30 x 11 38 x 14 45 x 18 55 x 22 65 x 25	-	62	-	2.680,11

\* 2nd Quality: Die holder and tap holder in ZAMAK



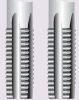




**HSS HAND TAPS AND DIES IN METAL CASES**
**MF**
**HSS**


Ref. D634



Ref. D636

**CONTENT**

						No. Items	1st Quality €	* 2nd Quality €
D634	MF 3 x 0.35 - 4 x 0.5 - 5 x 0.5 MF 6 x 0.75 - 8 x 0.75 - 8 x 1.0 MF 10 x 1.0 - 12 x 1.5		Nº 1 Nº 2	20 x 5 25 x 9 30 x 11 38 x 10	TC1	31	-	770,87
D635	MF 6 x 0.75 - 8 x 0.75 - 8 x 1.0 - 10 x 1.0 MF 12 x 1.0 - 12 x 1.5 - 14 x 1.25 - 14 x 1.5 MF 16 x 1.5 - 18 x 1.5 - 20 x 1.5		Nº 1 Nº 3	20 x 7 25 x 9 30 x 11 38 x 10 45 x 14	-	40	1.257,45	1.195,74
D636	MF 6 x 0.75 - 8 x 0.75 - 8 x 1.0 - 10 x 1.0 MF 12 x 1.0 - 12 x 1.5 - 14 x 1.25 - 14 x 1.5 MF 16 x 1.5 - 18 x 1.5 - 20 x 1.5 - 22 x 1.5 MF 24 x 1.5		Nº 1 Nº 4	20 x 7 25 x 9 30 x 11 38 x 10 45 x 14 55 x 16	-	47	1.724,99	1.594,87

\* 2nd Quality: Die holder and tap holder in ZAMAK







**HSS HAND TAPS AND DIES IN METAL CASES**



Ref. D638

**CONTENT**

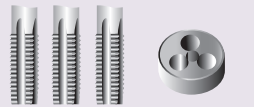



					No. Items	1st Quality €	* 2nd Quality €
D637	G 1/8 - 1/4 - 3/8 - 1/2 - 3/4 - 1"	Nº 1 Nº 3 Nº 5	30 x 11 38 x 10 45 x 14 55 x 16 65 x 18	-	26	1.396,16	1.127,80
D638	G 1/8 - 1/4 - 3/8 - 1/2 - 5/8 - 3/4 - 7/8 - 1"	Nº 1 Nº 3 Nº 5	30 x 11 38 x 10 45 x 14 55 x 16 65 x 18	-	32	1.894,73	1.653,96
D639	G 1/4 - 3/8 - 1/2 - 3/4 - 1" - 1".1/4 - 1".1/2	Nº 2 Nº 4 Nº 7	38 x 10 45 x 14 55 x 16 65 x 18 75 x 20 90 x 22	-	30	3.495,46	2.948,56

\* 2nd Quality: Die holder and tap holder in ZAMAK

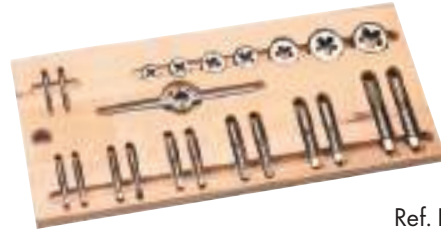


Ref. D640

**CONTENT**





					No. Items	1st Quality €	* 2nd Quality €
D640	BSW 1/8 - 3/16 - 1/4 - 5/16 - 3/8 - 7/16 - 1/2	Nº 1 Nº 2	20 x 5 20 x 7 25 x 9 30 x 11 38 x 14	TC1	36	778,86	665,81
D641	BSW 1/4 - 5/16 - 3/8 - 7/16 - 1/2	Nº 1 Nº 2	20 x 7 25 x 9 30 x 11 38 x 14	TC1	27	642,07	540,80
D642	BSW 1/4 - 5/16 - 3/8 - 7/16 - 1/2 - 5/8 - 3/4	Nº 1 Nº 3	20 x 7 25 x 9 30 x 11 38 x 14 45 x 18	-	35	1.149,07	1.048,48
D643	BSW 1/4 - 5/16 - 3/8 - 7/16 1/2 - 5/8 - 3/4 - 7/8 - 1"	Nº 1 Nº 4	20 x 7 25 x 9 30 x 11 38 x 14 45 x 18 55 x 22	-	44	1.625,05	1.426,74
D646	BSW 1/4 - 5/16 - 3/8 - 7/16 1/2 - 5/8 - 3/4 - 7/8 - 1" - 1".1/8 1".1/4 - 1".3/8 - 1".1/2	Nº 1 Nº 3 Nº 5	20 x 7 25 x 9 30 x 11 38 x 14 45 x 18 55 x 22 65 x 25	-	62	-	4.335,52

\* 2nd Quality: Die holder and tap holder in ZAMAK

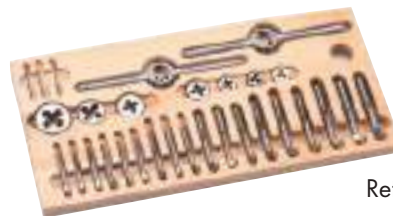
**HSS HAND TAPS AND DIES IN METAL CASES**
**BSF**
**HSS**


Ref. D648

**CONTENT**

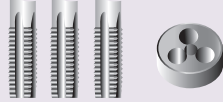



					No. Items	1st Quality €	* 2nd Quality €
D664	BSF 1/4 - 5/16 - 3/8 - 7/16 - 1/2	Nº 1 Nº 2	20 x 7 25 x 9 30 x 11 38 x 10	TC1	22	718,02	631,56
D648	BSF 1/4 - 5/16 - 3/8 - 7/16 - 1/2 - 5/8 - 3/4	Nº 1 Nº 3	20 x 7 25 x 9 30 x 11 38 x 10 45 x 14	-	28	1.114,65	1.048,48
D665	BSF 1/4 - 5/16 - 3/8 - 7/16 1/2 - 5/8 - 3/4 - 7/8 - 1"	Nº 1 Nº 4	20 x 7 25 x 9 30 x 11 38 x 10 45 x 14 55 x 16	-	35	1.891,38	1.663,64

\* 2nd Quality: Die holder and tap holder in ZAMAK

**BSW  
BSF**
**HSS**


Ref. D666

**CONTENT**

					No. Items	1st Quality €	* 2nd Quality €
D666	BSW 1/4 - 5/16 - 3/8 - 7/16 - 1/2 - 5/8 - 3/4 BSF 1/4 - 5/16 - 3/8 - 7/16 - 1/2 - 5/8 - 3/4	Nº 1 Nº 3	20 x 7 25 x 9 30 x 11 38 x 14 45 x 18	-	63	2.136,56	1.879,30

\* 2nd Quality: Die holder and tap holder in ZAMAK

**HSS HAND TAPS AND DIES IN METAL CASES**








**NPT**

**HSS**



Ref. D660

**CONTENT**

						No. Items	1st Quality €	* 2nd Quality €
D660	NPT 1/8 - 1/4 - 3/8 - 1/2 - 3/4 - 1"		Nº1 Nº3 Nº5	30 x 11 38 x 14 45 x 18 55 x 22 65 x 25	-	20	2.019,60	1.915,69
D661	NPT 1/8 - 1/4 - 3/8 - 1/2 - 3/4 1" - 1.1/4 - 1.1/2 - 2"		Nº2 Nº4 Nº7	30 x 11 38 x 14 45 x 18 55 x 22 65 x 25 75 x 30 90 x 36 105 x 36	-	29	6.045,65	5.679,86

\* 2nd Quality: Die holder and tap holder in ZAMAK



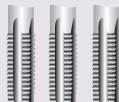




**UNC**

**HSS**



Ref. D650

**CONTENT**

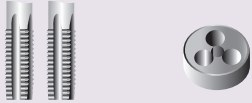



						No. Items	1st Quality €	* 2nd Quality €
D650	UNC 1/4 - 5/16 - 3/8 - 7/16 - 1/2		Nº1 Nº2	20 x 7 25 x 9 30 x 11 38 x 14	TC1	27	782,61	702,43
D667	UNC 1/4 - 5/16 - 3/8 - 7/16 - 1/2 - 5/8 - 3/4		Nº1 Nº2	20 x 7 25 x 9 30 x 11 38 x 14 45 x 18	-	35	1.260,92	1.109,09
D654	UNC 1/4 - 5/16 - 3/8 - 7/16 1/2 - 5/8 - 3/4 - 7/8 - 1"		Nº1 Nº4	20 x 7 25 x 9 30 x 11 38 x 14 45 x 18 55 x 22	-	44	2.034,61	1.904,14
D668	UNC 1/4 - 5/16 - 3/8 - 7/16 - 1/2 - 5/8 - 3/4 7/8 - 1" - 1.1/8 - 1.1/4 - 1.3/8 - 1.1/2"		Nº1 Nº3 Nº6	20 x 7 25 x 9 30 x 11 38 x 14 45 x 18 55 x 22 65 x 25	-	62	4.763,45	4.189,89

\* 2nd Quality: Die holder and tap holder in ZAMAK

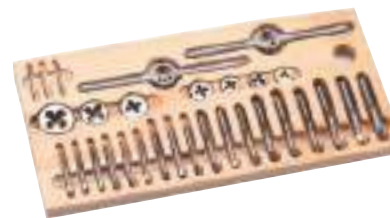
**HSS HAND TAPS AND DIES IN METAL CASES**
**UNF**
**HSS**


Ref. D644

**CONTENT**

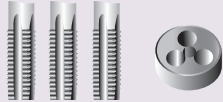


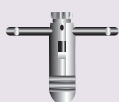
					No. Items	1st Quality €	* 2nd Quality €
D644	UNF 1/4 - 5/16 - 3/8 - 7/16 - 1/2	Nº 1 Nº 2	20 x 7 25 x 9 30 x 11 38 x 10	TC1	22	613,25	531,63
D669	UNF 1/4-5/16-3/8-7/16-1/2-5/8-3/4	Nº 1 Nº 3	20 x 7 25 x 9 30 x 11 38 x 10 45 x 14	-	28	1.155,83	1.016,66
D645	UNF 1/4 - 5/16 - 3/8 - 7/16 - 1/2 - 5/8 3/4 - 7/8 - 1"	Nº 1 Nº 4	20 x 7 25 x 9 30 x 11 38 x 10 45 x 14 55 x 16	-	34	1.417,28	1.285,05

\* 2nd Quality: Die holder and tap holder in ZAMAK

**UNC  
UNF**
**HSS**


Ref. D670

**CONTENT**

					No. Items	1st Quality €	* 2nd Quality €
D670	UNC 1/4 - 5/16 - 3/8 - 7/16 - 1/2 - 5/8 - 3/4 UNF 1/4 - 5/16 - 3/8 - 7/16 - 1/2 - 5/8 - 3/4	Nº 1 Nº 3	20 x 7 25 x 9 30 x 11 38 x 14 45 x 18	-	35	2.136,56	1.879,30

\* 2nd Quality: Die holder and tap holder in ZAMAK

**HSS & TIN COATED HAND TAPS SETS IN METAL BOXES**



Ref. JMB0



Ref. JMB2



Ref. JMBT2

**CONTENT**

					HSS €		TiN* €
JMB2	M3 - M4 - M5 - M6 M8 - M10 - M12	-	-	-	198,53	JMBT2	394,19
JMB0	M3 - M4 - M5 - M6 M8 - M10 - M12	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	-	-	226,46	JMBT0	442,36
JMB1	M3 - M4 - M5 - M6 M8 - M10 - M12	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	Nº 1.1/2	-	243,73	JMBT1	379,06
JMB5	M3 - M4 - M5 - M6 M8 - M10 - M12	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	Nº 1.1/2	TC1	258,87	JMBT5	397,19
JMBI2 (Left hand)	M3 - M4 - M5 - M6 M8 - M10 - M12	-	-	-	368,17	JMBIT2	684,78
JMBI0 (Left hand)	M3 - M4 - M5 - M6 M8 - M10 - M12	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	-	-	426,50	JMBIT0	742,74
JMBI1 (Left hand)	M3 - M4 - M5 - M6 M8 - M10 - M12	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	Nº 1.1/2	-	443,15	JMBIT1	758,13

**HSS AND TIN COATED BOTTOMING TAPS IN METAL BOXES**



Ref. JMB3



Ref. JMB4

**CONTENT**

					HSS €		TiN* €
JMB3	M3 - M4 - M5 - M6 M8 - M10 - M12	-	-	-	91,14	JMBT3	114,13
JMB4	M3 - M4 - M5 - M6 M8 - M10 - M12	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	-	-	113,43	JMBT4	150,77
JMB7	M3 - M4 - M5 - M6 M8 - M10 - M12	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	Nº 1.1/2	-	129,80	JMBT7	209,14
JMB6	M3 - M4 - M5 - M6 M8 - M10 - M12	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	Nº 1.1/2	TC1	140,55	JMBT6	222,91
JMBI3 (Left hand)	M3 - M4 - M5 - M6 M8 - M10 - M12	-	-	-	122,71	JMBIT3	228,25
JMBI4 (Left hand)	M3 - M4 - M5 - M6 M8 - M10 - M12	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	-	-	164,44	JMBIT4	302,56





**HSSCo HAND TAPS IN METAL BOXES**
**HSSCo**  
**5%**


Ref. JMBX0

**CONTENT**

INOX	 MOX	 HSSCo			€
JMBX0	M3 - M4 - M5 - M6 M8 - M10 - M12	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	-	-	312,94
JMBX1	M3 - M4 - M5 - M6 M8 - M10 - M12	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	Nº 1.1/2	-	329,35
JMBX2	M3 - M4 - M5 - M6 M8 - M10 - M12	-	-	-	295,92


**CONTENT**

 1100 N/mm <sup>2</sup>	 MOMD	 HSSCo			€
JMBMD0	M3 - M4 - M5 - M6 M8 - M10 - M12	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	-	-	326,82
JMBMD1	M3 - M4 - M5 - M6 M8 - M10 - M12	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	Nº 1.1/2	-	343,82
JMBMD2	M3 - M4 - M5 - M6 M8 - M10 - M12	-	-	-	311,53

**HSS DIES IN METAL BOXES**


Ref. C5B3



**CONTENT**

		HSS
		€
C5B3	M3 - M4 - M5 - M6 - M8 - M10 - M12	237,19
C5B31 (Left hand)	M3 - M4 - M5 - M6 - M8 - M10 - M12	469,78



**BROKEN TAP EXTRACTOR FOR STRAIGHT FLUTE TAPS (WITHOUT HELIX)**



**SINGLE EXTRACTORS**


TAP EXTRACTOR SIZE Ø		HAND TAPS	MACHINE TAPS	€/ Unit
BSW UNC	M			COMPLETE EXTRACTOR
--	M3		W10043	45,23
1/8	M3,2		W10053	45,23
--	M3,5		W10063	45,23
5/32	M4		W10083	45,23
3/16	M5		W10103	45,23
--	M5,5	W10124	W10123	45,23
1/4	M6	W10254	W10253	46,56
5/16	M8	W10314	W10313	48,79
--	M9	W10374	W10373	48,33
3/8	M10	W10404	W10373	48,33
7/16	M11	W10434	W10433	51,02
1/2	M12	W10504	W10503	54,55
9/16	M14	W10564	W10563	75,39
5/8	M16	W10624	W10623	82,05
--	M18	W10684	W10753	101,66
3/4	M20	W10754	W10753	101,66
7/8	M22	W10874	W10873	111,24
1"	M25	W11004	W11003	124,05

**SPARE HOLDER**


HAND TAPS	MACHINE TAPS	€/ Unit
		EXTRA HOLDER
	W12043	2,41
	W12053	2,41
	W12063	2,41
	W12083	2,41
	W12103	3,59
	W12123	3,59
	W12253	4,38
W12314	W12313	4,94
W12374		4,94
W12404	W12373	5,10
W12434	W12433	5,18
W12504	W12503	6,52
W12564	W12563	7,27
W12624	W12623	9,30
W12684		9,30
W12754	W12753	9,84
W12874	W12873	12,75
W13004	W13003	21,22

**3 SIMPLE STEPS FOR REMOVING BROKEN TAPS WITH STRAIGHT FLUTES**


Thoroughly remove all chips of the broken tap. Insert the extractors fingers into the flutes of the broken tap, pushing them gently but firmly into position.



Push the holder down until it touches the broken tap. Slide the sleeve down until it touches the work piece.



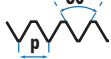
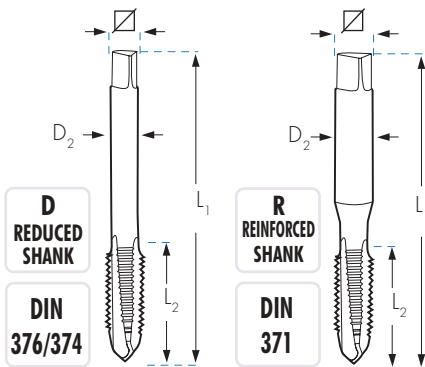
Apply a tap wrench to the square end of the holder. Twist forward & backwards a few times to loosen, then back out the broken tap.



**BROKEN TAP EXTRACTORS SETS FOR STRAIGHT FLUTES TAPS**



	NUMBER OF FLUTES	SIZES INCLUDED FOR MACHINE & HAND TAPS: 3 AND 4 FLUTES	
W180013	3	M5- M6- M8- M10- M11- M12	313,57
W180014	4	3/16 - 1/4 - 5/16 - 3/8 - 7/16 - 1/2	
W180023	3	M6- M8 -M10- M11- M12- M16	352,79
W180024	4	1/4 - 5/16 - 3/8 - 7/16 - 1/2 - 5/8	
W180153	3	M3- M3,2- M3,5- M4-M5- M5,50- M6- M8	986,83
W180154	4	M9- M10- M12- M16- M18- M22- M25	

**HSSCo MACHINE TAPS**
**M**  
**MF**
**DIN 13**

**HSSCo**  
**5%**
**TOL**  
**6H**
**Vc**  
**12 m/min**


			$L_1 \times L_2 \times D_2 \times \square$ mm	M1D	M2D	M3D	M4D	M1R	M2R	M3R	M4R
				C FORM €	B FORM €	 15° €	 35° €	C FORM €	B FORM €	 15° €	 35° €
M 1x0,25	0,75	R	40 x 5,5 x 2,5 x 2,1					43,34			
M 1,1x0,25	0,85	R	40 x 6 x 2,5 x 2,1					42,16			
M 1,2x0,25	0,95	R	40 x 6 x 2,5 x 2,1					38,51			
M 1,4x0,30	1,10	R	40 x 7 x 2,5 x 2,1					38,51			
M 1,6x0,35	1,25	R	40 x 8 x 2,5 x 2,1					37,82			
M 1,7x0,35	1,35	R	40 x 8 x 2,5 x 2,1					36,42			
M 1,8x0,35	1,45	R	40 x 8 x 2,5 x 2,1					35,52			
M 2x0,40	1,60	R	40 x 8 x 2,8 x 2,1					17,10	18,95	21,19	21,59
M 2,2x0,45	1,75	R	40 x 9 x 2,8 x 2,1					18,49			
M 2,3x0,40	1,90	R	40 x 9 x 2,8 x 2,1					17,03			
M 2,5x0,45	2,05	R	50 x 9 x 2,8 x 2,1					17,10	18,95	29,79	21,59
M 2,6x0,45	2,10	R	50 x 9 x 2,8 x 2,1					17,13	19,29		35,89
M 3x0,50	2,50	R D	56 x 11 x 3,5 x 2,7 56 x 11 x 2,2 x 1,8	11,33	12,27	17,08	14,72	11,33*	11,51	16,74	15,09
M 3x0,60	2,40	R	56 x 11 x 3,5 x 2,7					20,14	21,98		29,03
M 3,5x0,60	2,90	R D	56 x 12 x 4,0 x 3,0 56 x 12 x 2,5 x 2,1					16,47	17,14	22,14	20,78
M 3,5x0,75	2,75	R	56 x 12 x 4,0 x 3,0					21,77			
M 4x0,50	3,50	R D	63 x 13 x 4,5 x 3,4 63 x 13 x 2,8 x 2,1	24,81	27,32		28,89	23,71	26,38		30,54
M 4x0,70	3,30	R D	63 x 13 x 4,5 x 3,4 63 x 13 x 2,8 x 2,1	11,53	12,40	18,31	14,58	12,89*	12,16	16,52	15,10
M 4x0,75	3,25	R	63 x 13 x 4,5 x 3,4					18,03	19,25		
M 4x0,80	3,20	R	63 x 13 x 4,5 x 3,4					95,70			
M 4,5x0,50	4,00	R	70 x 14 x 6,0 x 4,9						30,69		
M 4,5x0,75	3,75	R	70 x 14 x 6,0 x 4,9					22,25	24,50		
M 5x0,50	4,50	R D	70 x 14 x 6,0 x 4,9 70 x 11 x 3,5 x 2,7	25,55	28,07		29,21	24,42	27,10		32,58
M 5x0,75	4,50	R D	74 x 14 x 6,0 x 4,9 70 x 16 x 3,5 x 2,7					21,90	25,69		32,37
M 5x0,80	4,20	R D	70 x 16 x 6,0 x 4,9 70 x 16 x 3,5 x 2,7	11,53	12,47	17,55	14,00	11,54*	12,18	15,85	14,48
M 5x0,90	4,10	R D	70 x 15 x 6,0 x 4,9 70 x 16 x 3,5 x 2,7					19,05	24,54		
M 5x1,00	4,00	R	72 x 17 x 6,0 x 4,9					51,02			
M 5,5x0,90	4,60	R	80 x 17 x 6,0 x 4,9					51,02			
M 6x0,50	5,50	R D	80 x 17 x 6,0 x 4,9 80 x 13 x 4,5 x 3,4	30,25	37,09		46,80	31,97			
M 6x0,75	5,25	R D	80 x 13 x 6,0 x 4,9 80 x 13 x 4,5 x 3,4	19,93	23,08		26,95	20,71	24,13		28,98
M 6x1,00	5,00	R D	80 x 19 x 6,0 x 4,9 80 x 19 x 4,5 x 3,4	13,15	13,66	18,36	15,35	13,13*	13,36	17,39	15,88

\* Check the price of left hand taps available in page 217.

\* Vc: Cutting Speed (m/min)

**HSSCo MACHINE TAPS**







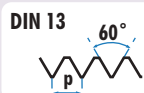
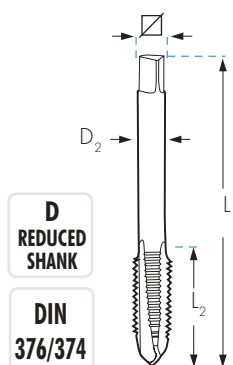




Tap Type	L1 x L2 x D2 x mm	M1D		M2D		M3D		M4D		M1R		M2R		M3R		M4R	
		C FORM	B FORM	C FORM	B FORM	15°	35°	C FORM	B FORM	15°	35°	C FORM	B FORM	15°	35°	C FORM	B FORM
		€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€
M 6x1,25	4,75 R 80 x 17 x 6,0 x 4,9									50,15							
M 7x0,75	6,25 D 80 x 13 x 5,5 x 4,3	25,66	28,46				35,15										
<b>M 7x1,00</b>	<b>6,00 R 80 x 19 x 7,0 x 5,5</b> D 80 x 19 x 5,5 x 4,3	17,69	20,45	22,09	21,26					17,03*	19,88	22,48	22,25				
M 8x0,50	7,50 D 80 x 13 x 6 x 4,9	34,51															
M 8x0,75	7,25 D 80 x 13 x 6 x 4,9	25,00	30,66				38,02										
M 8x1,00	7,00 D 90 x 20 x 6 x 4,9	20,45	23,47	28,12	26,00												
<b>M 8x1,25</b>	<b>6,80 R 90 x 22 x 8 x 6,2</b> D 90 x 22 x 6 x 4,9	14,75	15,41	20,90	17,92					14,84*	14,85	20,02	18,14				
M 8x1,50	6,50 D 90 x 20 x 6 x 4,9	101,14															
M 9x1,00	8,00 D 90 x 20 x 7 x 5,5	30,92	33,06				35,13										
<b>M 9x1,25</b>	<b>7,80 R 90 x 22 x 9 x 7,0</b> D 90 x 22 x 7 x 5,5	24,85	26,11	31,62	30,91					24,61	24,93	31,88	31,80				
M 10x0,50	9,50 D 90 x 20 x 7 x 5,5	100,21															
M 10x0,75	9,25 D 90 x 16 x 7 x 5,5	39,64	39,72				48,37										
M 10x1,00	9,00 D 90 x 16 x 7 x 5,5	22,64	26,08	33,20	31,63												
M 10x1,25	8,80 D 100 x 22 x 7 x 5,5	25,92	31,18	36,19	34,47												
<b>M 10x1,50</b>	<b>8,50 R 100 x 24 x 10 x 8,0</b> D 100 x 24 x 7 x 5,5	16,67	18,64	24,85	21,48					16,82*	18,29	22,99	21,48				
M 11x1,00	10,00 D 90 x 20 x 8 x 6,2	40,58	41,91	105,96	96,42												
M 11x1,25	9,75 D 100 x 22 x 8 x 6,2	38,83	43,14	105,96	86,07												
<b>M 11x1,50</b>	<b>9,50 D 100 x 24 x 8 x 6,2</b>	31,48	36,19	77,26	70,27												
M 12x0,75	11,25 D 100 x 22 x 9 x 7,0	59,46															
M 12x1,00	11,00 D 100 x 22 x 9 x 7,0	30,79	35,24	40,96	40,52												
M 12x1,25	10,75 D 100 x 22 x 9 x 7,0	31,17	34,62	39,22	38,79												
M 12x1,50	10,50 D 100 x 22 x 9 x 7,0	27,86*	30,88	37,71	37,31												
<b>M 12x1,75</b>	<b>10,20 D 110 x 28 x 9 x 7,0</b>	20,08*	23,28	31,78	27,39												
M 13x0,75	12,25 D 100 x 22 x 11 x 9,0	103,78															
M 13x1,00	12,00 D 100 x 22 x 11 x 9,0	54,96	62,23														
M 13x1,25	11,75 D 100 x 22 x 11 x 9,0	54,96	62,23														
M 13x1,50	11,50 D 100 x 22 x 11 x 9,0	54,96	62,23														
<b>M 13x1,75</b>	<b>11,25 D 100 x 28 x 11 x 9,0</b>	54,57	62,23														
M 14x0,75	13,25 D 100 x 22 x 11 x 9,0	103,78															
M 14x1,00	13,00 D 100 x 22 x 11 x 9,0	49,56	54,52	63,15	62,62												
M 14x1,25	12,80 D 100 x 22 x 11 x 9,0	42,18	46,04	57,92	55,18												
M 14x1,50	12,50 D 100 x 22 x 11 x 9,0	33,18*	36,56	45,68	43,51												
<b>M 14x2,00</b>	<b>12,00 D 110 x 30 x 11 x 9,0</b>	32,96*	36,62	42,44	42,44												
M 15x1,00	14,00 D 100 x 22 x 12 x 9,0	63,03	66,73		84,97												
M 15x1,25	13,75 D 100 x 22 x 12 x 9,0	67,51	73,11														
M 15x1,50	13,50 D 100 x 22 x 12 x 9,0	53,96	61,54	157,22	127,53												
<b>M 15x2,00</b>	<b>13,00 D 110 x 30 x 12 x 9,0</b>	66,05	72,69														
M 16x1,00	15,00 D 100 x 22 x 12 x 9,0	59,41	63,03	88,42	85,85												
M 16x1,25	14,75 D 100 x 22 x 12 x 9,0	63,57	69,88	98,33	95,22												
M 16x1,50	14,50 D 100 x 22 x 12 x 9,0	39,23*	45,71	56,92	54,23												
<b>M 16x2,00</b>	<b>14,00 D 110 x 32 x 12 x 9,0</b>	38,79*	42,84	51,27	51,27												
M 17x1,00	16,00 D 100 x 22 x 12 x 9,0	118,20															
M 17x1,25	15,75 D 100 x 22 x 12 x 9,0	118,20															
M 17x1,50	15,50 D 100 x 22 x 12 x 9,0	118,20															
M 18x1,00	17,00 D 110 x 25 x 14 x 11,0	66,53	73,12		105,05												
M 18x1,25	16,75 D 110 x 25 x 14 x 11,0	82,46															
M 18x1,50	16,50 D 110 x 25 x 14 x 11,0	51,94*	57,16	69,95	68,06												
M 18x2,00	16,00 D 125 x 30 x 14 x 11,0	73,30	81,23	138,42	123,54												

\* Check the price of left hand taps available in page 217.

\* Vc: Cutting Speed (m/min)

**HSSCo MACHINE TAPS**
**M**  
**MF**

**HSSCo**  
**5%**
**TOL**  
**6H**
**D**  
**REDUCED**  
**SHANK**
**DIN**  
**376/374**
**Vc**  
**12**  
**m/min**


					L <sub>1</sub> x L <sub>2</sub> x D <sub>2</sub> x $\square$ mm	M1D	M2D	M3D	M4D
						C FORM €	B FORM €	15° €	35° €
M 18x2,50	15,50	D	125 x 34 x 14 x 11,0		55,81 *	61,02	69,03	66,48	
M 19x1,00	18,00	D	110 x 22 x 14 x 11,0		155,30				
M 19x1,25	17,75	D	110 x 25 x 14 x 11,0		159,71				
M 19x1,50	17,50	D	110 x 25 x 14 x 11,0		152,44				
M 20x1,00	19,00	D	125 x 25 x 16 x 12,0		87,83	97,53		112,20	
M 20x1,25	18,75	D	125 x 25 x 16 x 12,0		155,30				
M 20x1,50	18,50	D	125 x 25 x 16 x 12,0		58,83 *	64,65	78,62	77,75	
M 20x2,00	18,00	D	140 x 32 x 16 x 12,0		77,10	84,77		100,09	
M 20x2,50	17,50	D	140 x 34 x 16 x 12,0		59,41 *	65,88	73,67	73,68	
M 21x1,00	20,00	D	125 x 25 x 16 x 12,0		225,49				
M 21x1,25	19,75	D	125 x 25 x 16 x 12,0		225,49				
M 21x1,50	19,50	D	125 x 25 x 16 x 12,0		215,34				
M 22x1,00	21,00	D	125 x 25 x 18 x 14,5		98,46	104,50		144,59	
M 22x1,25	20,75	D	125 x 25 x 18 x 14,5		155,30				
M 22x1,50	20,50	D	125 x 25 x 18 x 14,5		70,81	77,89	86,24	81,14	
M 22x2,00	20,00	D	140 x 32 x 18 x 14,5		98,46	108,29		144,59	
M 22x2,50	19,50	D	140 x 34 x 18 x 14,5		71,89 *	79,07	87,39	86,48	
M 23x1,00	22,00	D	125 x 25 x 18 x 14,5		219,22				
M 23x1,50	21,50	D	125 x 25 x 18 x 14,5		219,22				
M 24x1,00	23,00	D	140 x 25 x 18 x 14,5		107,29	130,15		152,77	
M 24x1,25	22,75	D	140 x 25 x 18 x 14,5		225,49				
M 24x1,50	22,50	D	140 x 28 x 18 x 14,5		87,09	95,75	115,27	109,80	
M 24x2,00	22,00	D	140 x 28 x 18 x 14,5		111,11 *	121,06		130,63	
M 24x3,00	21,00	D	160 x 38 x 18 x 14,5		86,06 *	94,19	105,32	105,11	
M 25x1,00	24,00	D	140 x 28 x 18 x 14,5		207,99				
M 25x1,25	23,75	D	140 x 28 x 18 x 14,5		328,66				
M 25x1,50	23,50	D	140 x 28 x 18 x 14,5		135,50	143,41			
M 25x2,00	23,00	D	140 x 28 x 18 x 14,5		291,68	320,86			
M 26x1,00	25,00	D	140 x 28 x 18 x 14,5		161,48				
M 26x1,50	24,50	D	140 x 28 x 18 x 14,5		117,44	123,10	215,94	189,89	
M 26x2,00	24,00	D	140 x 28 x 18 x 14,5		227,46	250,21		274,82	
M 27x1,00	26,00	D	140 x 28 x 20 x 16,0		144,63	186,74			
M 27x1,50	25,50	D	140 x 28 x 20 x 16,0		128,23	135,84	313,83	282,97	
M 27x2,00	25,00	D	140 x 28 x 20 x 16,0		158,61 *	167,83			

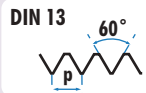
\* Check the price of left hand taps available in page 217.

\* Vc: Cutting Speed (m/min)



**HSSCo MACHINE TAPS**

**M  
MF**



**HSSCo  
5%**

**TOL  
6H**







**D  
REDUCED  
SHANK**

**DIN  
376/374**



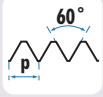
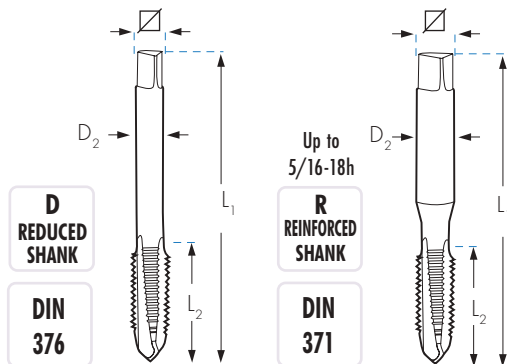
Threading tools

Pink

			L <sub>1</sub> x L <sub>2</sub> x D <sub>2</sub> x 	M1D	M2D	M3D	M4D
				<b>C FORM</b>	<b>B FORM</b>	 15°	 35°
				€	€	€	€
<b>M 27x3,00</b>	<b>24,00</b>	D	160 x 36 x 20 x 16	107,43*	117,81	129,58	129,33
M 28x1,00	27,00	D	140 x 28 x 20 x 16	291,68			
M 28x1,50	26,50	D	140 x 28 x 20 x 16	128,23	140,78	163,43	147,55
M 28x2,00	26,00	D	140 x 28 x 20 x 16	156,44	176,68	192,60	189,40
M 30x1,00	29,00	D	150 x 28 x 22 x 18	164,01	189,65		221,11
M 30x1,50	28,50	D	150 x 28 x 22 x 18	133,66	147,07	177,23	168,80
M 30x2,00	28,00	D	150 x 28 x 22 x 18	165,44*	175,59		242,96
<b>M 30x3,50</b>	<b>26,50</b>	D	180 x 40 x 22 x 18	137,67*	151,36	166,08	165,73
M 32x1,00	31,00	D	150 x 28 x 22 x 18	388,93	412,98		
M 32x1,50	30,50	D	150 x 28 x 22 x 18	169,12	185,68	218,36	
M 32x2,00	30,00	D	150 x 28 x 22 x 18	207,81	318,20		
M 33x1,00	32,00	D	160 x 30 x 25 x 20	358,20			
M 33x1,50	31,50	D	160 x 30 x 25 x 20	190,54	202,09		235,21
M 33x2,00	31,00	D	160 x 30 x 25 x 20	312,29	319,21		389,52
<b>M 33x3,50</b>	<b>29,50</b>	D	180 x 40 x 25 x 20	165,44*	190,36		211,14
M 34x1,50	32,50	D	170 x 30 x 28 x 22	212,21	224,80		
M 34x2,00	32,00	D	160 x 30 x 28 x 22	446,29			
M 35x1,50	33,50	D	170 x 30 x 28 x 22	223,80	246,17		269,20
M 35x2,00	33,00	D	170 x 30 x 28 x 22	411,82	453,36		
M 36x1,50	34,50	D	170 x 30 x 28 x 22	204,35	241,59		292,44
M 36x2,00	34,00	D	170 x 30 x 28 x 22	276,01	286,90		
M 36x3,00	33,00	D	200 x 50 x 28 x 22	316,67	329,12		423,25
<b>M 36x4,00</b>	<b>32,00</b>	D	200 x 50 x 28 x 22	217,13*	232,62	270,20	258,53
M 38x1,50	36,50	D	170 x 30 x 28 x 22	217,85	245,46		
M 38x2,00	36,00	D	170 x 32 x 28 x 22	463,04	509,37		
M 39x1,50	37,50	D	170 x 32 x 32 x 24	342,33			
M 39x2,00	37,00	D	170 x 32 x 32 x 24	342,33			
M 39x3,00	36,00	D	200 x 47 x 32 x 24	447,05			
<b>M 39x4,00</b>	<b>35,00</b>	D	200 x 50 x 32 x 24	260,50	270,79		333,90
M 40x1,50	38,50	D	170 x 30 x 32 x 24	284,85	313,53		
M 40x2,00	38,00	D	170 x 30 x 32 x 24	343,23			
M 40x3,00	37,00	D	200 x 47 x 32 x 24	336,52	401,49		
M 42x1,50	40,50	D	170 x 30 x 32 x 24	310,81	303,76		
M 42x2,00	40,00	D	170 x 30 x 32 x 24	392,65			
M 42x3,00	39,00	D	200 x 45 x 32 x 24	392,65	470,20		
<b>M 42x4,50</b>	<b>37,50</b>	D	200 x 56 x 32 x 24	334,98	348,10		372,23
M 45x1,50	43,50	D	180 x 32 x 36 x 29	371,22	408,30		
M 45x2,00	43,00	D	180 x 32 x 36 x 29	454,65			
M 45x3,00	42,00	D	200 x 47 x 36 x 29	454,65			
<b>M 45x4,50</b>	<b>40,50</b>	D	220 x 58 x 36 x 29	365,91	402,48		
M 48x1,50	46,50	D	190 x 32 x 36 x 29	365,91			
M 48x2,00	46,00	D	190 x 32 x 36 x 29	591,25			
M 48x3,00	45,00	D	220 x 52 x 36 x 29	550,95			
<b>M 48x5,00</b>	<b>43,00</b>	D	250 x 65 x 36 x 29	449,97	494,94		
M 50x1,50	48,50	D	190 x 32 x 36 x 29	443,49			
M 52x1,50	50,50	D	190 x 32 x 40 x 32	433,24			
M 52x2,00	50,00	D	190 x 32 x 40 x 32	685,61			
M 52x3,00	49,00	D	225 x 50 x 40 x 32	704,62			
<b>M 52x5,00</b>	<b>47,00</b>	D	250 x 65 x 40 x 32	460,83	570,19		

\* Check the price of left hand taps available in page 217.

\* Vc: Cutting Speed (m/min)

**HSSCo MACHINE TAPS**
**UNC**

**HSSCo**  
**5%**
**TOL**  
**2B**
**Vc**  
**12 m/min**


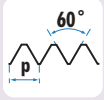
	D1 mm		L1 x L2 x D2 x $\nabla$ mm	MTR	M2R	M4R
				C FORM	B FORM	35°
				€	€	€
UNC n° 4-40h	2,84	2,25	R 56 x 11 x 3,5 x 2,7	25,64	30,49	34,79
UNC n° 5-40h	3,17	2,60	R 56 x 11 x 3,5 x 2,7	26,57	31,88	34,79
UNC n° 6-32h	3,50	2,75	R 56 x 12 x 4,0 x 3,0	25,29	30,39	34,64
UNC n° 8-32h	4,17	3,50	R 63 x 13 x 4,5 x 3,4	25,29	30,39	33,13
UNC n°10-24h	4,83	3,90	R 70 x 15 x 6,0 x 4,9	26,57	31,88	36,39
UNC n°12-24h	5,49	4,50	R 80 x 16 x 6,0 x 4,9	27,88	31,88	33,40
UNC 1/4-20h	6,35	5,10	R 80 x 17 x 7,0 x 5,5	24,84	27,08	31,25
UNC 5/16-18h	7,94	6,60	R 90 x 20 x 8,0 x 6,2	28,11	30,99	35,29

REDUCED SHANK STANDARD PITCH				MTD	M2D	M4D
UNC 3/8-16h	9,52	8,00	D 100 x 22 x 7,0 x 5,5	32,05	33,61	37,77
UNC 7/16-14h	11,11	9,40	D 100 x 22 x 8,0 x 6,2	44,11	44,26	55,35
UNC 1/2-13h	12,70	10,75	D 110 x 24 x 9,0 x 7,0	47,87	53,04	60,54
UNC 9/16-12h	14,28	12,20	D 110 x 26 x 11,0 x 9,0	65,80	72,25	82,19
UNC 5/8-11h	15,87	13,50	D 110 x 27 x 12,0 x 9,0	63,93	70,36	79,93
UNC 3/4-10h	19,05	16,50	D 125 x 30 x 14,0 x 11,0	84,64	93,05	105,87
UNC 7/8-9h	22,22	19,50	D 140 x 32 x 18,0 x 14,5	111,37	122,36	165,66
UNC 1"-8h	25,40	22,25	D 160 x 36 x 18,0 x 14,5	147,16	160,76	207,81
UNC 1.1/8-7h	28,57	25,00	D 180 x 40 x 22,0 x 18,0	192,22		232,19
UNC 1.1/4-7h	31,75	28,00	D 180 x 40 x 22,0 x 18,0	225,30		297,04
UNC 1.3/8-6h	34,92	30,75	D 200 x 50 x 28,0 x 22,0	336,06		
UNC 1.1/2-6h	38,10	34,00	D 200 x 50 x 32,0 x 24,0	381,64		

\* Vc: Cutting Speed (m/min)

**HSSCo MACHINE TAPS**

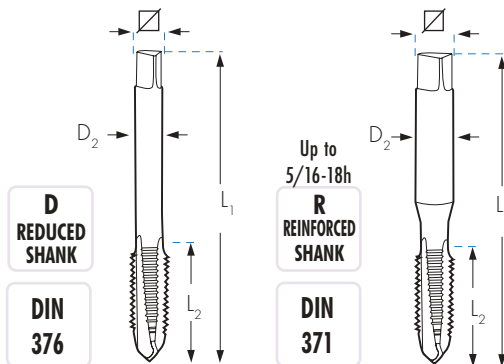
**UNF**



**HSSCo  
5%**

**TOL  
2B**

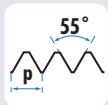
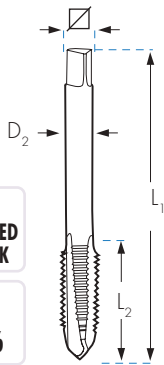
**Vc  
12 m/min**



UNF n°	D <sub>1</sub> mm	D <sub>2</sub> mm	R	L <sub>1</sub> × L <sub>2</sub> × D <sub>2</sub> × ∅ mm	M1R	M2R	M4R
					C FORM	B FORM	35°
					€	€	€
UNF n° 4-48h	2,84	2,35	R	56 × 11 × 3,5 × 2,7	26,84	29,22	36,68
UNF n° 5-44h	3,17	2,70	R	56 × 11 × 3,5 × 2,7	26,84	29,22	36,68
UNF n° 6-40h	3,50	2,95	R	56 × 12 × 4,0 × 3,0	25,67	30,74	36,40
UNF n° 8-36h	4,17	3,50	R	63 × 13 × 4,5 × 3,4	25,67	30,74	36,40
UNF n° 10-32h	4,83	4,10	R	70 × 15 × 6,0 × 4,9	25,67	30,74	36,40
UNF n° 12-28h	5,49	4,60	R	80 × 16 × 6,0 × 4,9	26,84	32,16	36,68
UNF 1/4-28h	6,35	5,50	R	80 × 17 × 7,0 × 5,5	21,68	23,22	27,09
UNF 5/16-24h	7,94	6,90	R	90 × 20 × 8,0 × 6,2	24,24	26,72	31,24

REDUCED SHANK STANDARD PITCH				M1D	M2D	M4D	
UNF 3/8-24h	9,52	8,50	D	90 × 16 × 7,0 × 5,5	26,54	30,70	39,08
UNF 7/16-20h	11,11	9,90	D	100 × 22 × 8,0 × 6,2	32,74	37,95	50,10
UNF 1/2-20h	12,70	11,50	D	100 × 22 × 9,0 × 7,0	34,86	40,35	53,30
UNF 9/16-18h	14,29	12,90	D	100 × 22 × 11,0 × 9,0	42,83	49,60	66,00
UNF 5/8-18h	15,87	14,50	D	100 × 22 × 12,0 × 9,0	48,22	55,79	73,74
UNF 3/4-16h	19,05	17,50	D	110 × 25 × 14,0 × 11,0	61,70	71,45	94,32
UNF 7/8-14h	22,22	20,40	D	125 × 25 × 18,0 × 14,5	77,59	97,06	144,28
UNF 1"-12h	25,40	23,25	D	140 × 28 × 18,0 × 14,5	116,79	127,17	169,81
UNS 1"-14h	25,40	23,60	D	140 × 28 × 18,0 × 14,5	117,31	130,82	169,82
UNF 1.1/8-12h	28,57	26,50	D	150 × 28 × 22,0 × 18,0	177,95		
UNF 1.1/4-12h	31,75	29,50	D	150 × 28 × 22,0 × 18,0	224,88		
UNF 1.1/2-12h	38,10	36,00	D	170 × 30 × 32,0 × 24,0	377,42		

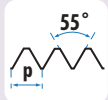
\* Vc: Cutting Speed (m/min)

**HSSCo MACHINE TAPS**
**BSP  
(GAS)**

**HSSCo  
5%**
**TOL  
ISO 228**
**INOX**
**Vc  
12 m/min**
**Vc  
6 m/min**

**D  
REDUCED  
SHANK**
**DIN  
5156**


	D1 mm	D2	L1 x L2 x D2 x $\nabla$ mm	M1D		M2D		M3D		M4D		M2DX		M4DX	
				C FORM	B FORM	B FORM	B FORM	15°	35°	B FORM	B FORM	35°			
				€	€	€	€	€	€	€	€	€	€	€	€
G 1/8-28h.	9,728	8,80	D 90 x 16 x 7 x 5,5	33,94*	38,77	39,72	41,16					59,93	59,31		
G 1/4-19h.	13,157	11,80	D 100 x 22 x 11 x 9,0	47,07*	51,82	57,04	59,11					80,74	86,42		
G 3/8-19h.	16,662	15,25	D 100 x 22 x 12 x 9,0	56,36*	62,01	68,13	70,59					95,79	101,56		
G 1/2-14h.	20,955	19,00	D 125 x 25 x 16 x 12,0	71,23*	78,38	85,93	89,02					118,60	128,19		
G 5/8-14h.	22,911	21,00	D 125 x 25 x 18 x 14,5	88,76*	93,09	106,99	106,00								
G 3/4-14h.	26,441	24,50	D 140 x 28 x 20 x 16,0	111,49	122,71	134,50	139,36					179,20	197,70		
G 7/8-14h.	30,201	28,25	D 150 x 28 x 22 x 18,0	149,87	157,66	180,90	179,21								
G 1"-11h.	33,249	30,75	D 160 x 30 x 25 x 20,0	173,06	190,32	206,53	214,00								
G 1.1/8-11h.	37,897	35,50	D 170 x 30 x 28 x 22,0	276,34	301,43		331,06								
G 1.1/4-11h.	41,910	39,50	D 170 x 30 x 32 x 24,0	324,25	341,16		377,68								
G 1.3/8-11h.	44,323	42,00	D 180 x 32 x 36 x 29,0	387,73			524,62								
G 1.1/2-11h.	47,803	45,25	D 190 x 32 x 36 x 29,0	517,04	720,77		682,81								
G 1.3/4-11h.	53,746	51,25	D 190 x 32 x 40 x 32,0	614,56	710,98										
G 2"-11h.	59,614	57,00	D 220 x 36 x 45 x 35,0	783,81	780,18										

\* Also available in left-hand cutting: double the standard price

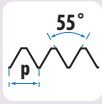
\* Vc: Cutting Speed (m/min)

**BSF**

**HSSCo  
5%**
**TOL  
ISO 228**
**Vc  
12 m/min**
**D  
REDUCED  
SHANK**
**DIN  
5156**

	D1 mm	D2	L1 x L2 x D2 x $\nabla$ mm	M1D	
				C FORM	€
BSF 3/16-32h.	4,762	4,00	D 70 x 16 x 3,5 x 2,7		77,66
BSF 1/4-26h.	6,350	5,20	D 80 x 17 x 4,5 x 3,4		33,98
BSF 5/16-22h.	7,938	6,60	D 90 x 20 x 6,0 x 4,9		40,35
BSF 3/8-20h.	9,525	8,10	D 100 x 22 x 7,0 x 5,5		42,42
BSF 7/16-18h.	11,113	9,50	D 100 x 22 x 8,0 x 6,2		57,17
BSF 1/2-16h.	12,700	11,00	D 110 x 24 x 9,0 x 7,0		64,70
BSF 9/16-16h.	14,287	12,50	D 110 x 25 x 11,0 x 9,0		68,48
BSF 5/8-14h.	15,876	14,00	D 110 x 27 x 12,0 x 9,0		91,27
BSF 3/4-12h.	19,051	16,50	D 125 x 30 x 14,0 x 11,0		108,04
BSF 7/8-11h.	22,226	19,50	D 140 x 32 x 18,0 x 14,5		150,15
BSF 1"-10h.	25,400	22,50	D 160 x 36 x 18,0 x 14,5		174,54

\* Vc: Cutting Speed (m/min)

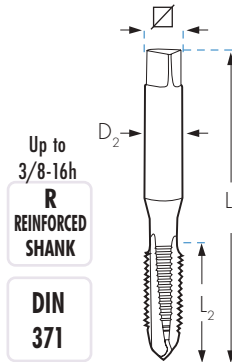
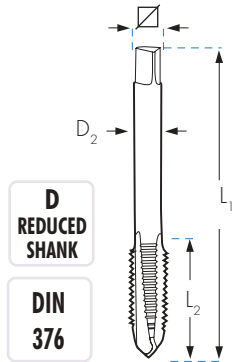
HSSCo MACHINE TAPS



HSSCo  
5%

TOL 2  
Class

Vc  
12 m/min



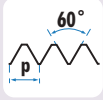
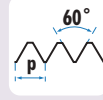
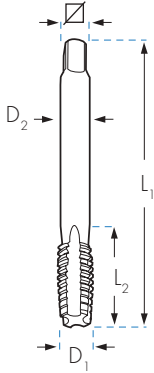
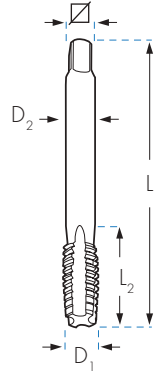
	D1 mm		L1 x L2 x D2 x	M1R	M2R	M3R	M4R
				C FORM	B FORM	15°	35°
				€	€	€	€
W 3/32-48h.	2,38	1,80	R 50 x 9 x 2,8 x 2,1	23,59	25,18		
W 1/8-40h.	3,17	2,55	R 56 x 11 x 3,5 x 2,7	19,68*	21,75	25,68	24,71
W 5/32-32h.	3,97	3,10	R 63 x 13 x 4,5 x 3,4	19,68	21,75	25,68	24,71
W 3/16-24h.	4,76	3,60	R 70 x 15 x 6,0 x 4,9	21,84	21,75	25,68	24,71
W 7/32-24h.	5,56	4,40	R 80 x 16 x 6,0 x 4,9	29,88	31,59		
W 1/4-20h.	6,35	5,10	R 80 x 17 x 7,0 x 5,5	21,02	24,71	29,15	30,20
W 5/16-18h.	7,94	6,50	R 90 x 20 x 8,0 x 6,2	23,57	31,16	34,02	33,96
W 3/8-16h.	9,52	7,90	R 100 x 22 x 10,0 x 8,0	26,38	34,44	37,81	37,75

REDUCED SHANK STANDARD PITCH				M1D	M2D	M3D	M4D
W 7/16-14h.	11,11	9,25	D 100 x 22 x 8,0 x 6,2	36,69	37,93	47,66	48,00
W 1/2-12h.	12,70	10,50	D 110 x 24 x 9,0 x 7,0	35,18	39,55	45,66	45,99
W 9/16-12h.	14,29	12,00	D 110 x 26 x 11,0 x 9,0	50,43	52,37	65,49	65,95
W 5/8-11h.	15,87	13,40	D 110 x 27 x 12,0 x 9,0	47,75	49,48	61,93	62,36
W 3/4-10h.	19,05	16,50	D 125 x 30 x 14,0 x 11,0	66,83	69,37	82,97	83,56
W 7/8-9h.	22,22	19,25	D 140 x 32 x 18,0 x 14,5	86,56	89,76	112,31	108,15
W 1"-8h.	25,40	21,75	D 160 x 36 x 18,0 x 14,5	108,79	112,82	140,94	141,94
W 1.1/8-7h.	28,57	24,75	D 180 x 40 x 22,0 x 18,0	147,54	168,11	202,14	
W 1.1/4-7h.	31,75	27,75	D 180 x 40 x 22,0 x 18,0	214,33	244,27		
W 1.3/8-6h.	34,92	30,50	D 200 x 50 x 28,0 x 22,0	352,29	401,13		
W 1.1/2-6h.	38,10	33,50	D 200 x 50 x 32,0 x 24,0	382,38	435,79		
W 1.5/8-5h.	41,27	46,50	D 220 x 65 x 32,0 x 24,0	533,73	608,30		
W 1.3/4-5h.	44,45	39,00	D 220 x 58 x 36,0 x 29,0	571,69	656,25		
W 1.7/8-4,5h.	47,62	42,00	D 250 x 75 x 36,0 x 29,0	662,89	727,51		
W 2"-4,5h.	50,80	44,50	D 250 x 65 x 40,0 x 32,0	818,21			

\* Also available in left-hand cutting: double the standard price

\* Vc: Cutting Speed (m/min)



**HSSCo MACHINE TAPS**
**UNJC**

**HSSCo**  
**5%**
**TOL**  
**3B**
**UNJF**

**HSSCo**  
**5%**
**TOL**  
**3B**
**Vc**  
**12 m/min**

**Vc**  
**12 m/min**


	D1 mm		L1 x L2 x D2 x $\nabla$ mm	MIR
				C FORM €
UNJC n° 4-40h	2,84	2,25	R 56 x 11 x 3,5 x 2,7	38,94
UNJC n° 5-40h	3,17	2,60	R 56 x 11 x 3,5 x 2,7	38,94
UNJC n° 6-32h	3,50	2,75	R 56 x 12 x 4,0 x 3,0	38,94
UNJC n° 8-32h	4,17	3,50	R 63 x 13 x 4,5 x 3,4	38,94
UNJC n°10-24h	4,83	3,90	R 70 x 15 x 6,0 x 4,9	38,94
UNJC n°12-24h	5,49	4,50	R 80 x 16 x 6,0 x 4,9	40,85
UNJC 1/4-20h	6,35	5,10	R 80 x 17 x 7,0 x 5,5	36,34
UNJC 5/16-18h	7,94	6,60	R 90 x 20 x 8,0 x 6,2	41,12
UNJC 3/8-16h	9,52	8,00	R 100 x 22 x 8,0 x 6,2	46,88

	D1 mm		L1 x L2 x D2 x $\nabla$ mm	MIR
				C FORM €
UNJF n° 4-48h	2,84	2,35	R 56 x 11 x 3,5 x 2,7	42,72
UNJF n° 5-44h	3,17	2,70	R 56 x 11 x 3,5 x 2,7	42,72
UNJF n° 6-40h	3,50	2,95	R 56 x 12 x 4,0 x 3,0	42,72
UNJF n° 8-36h	4,17	3,50	R 63 x 13 x 4,5 x 3,4	42,72
UNJF n°10-32h	4,83	4,10	R 70 x 15 x 6,0 x 4,9	42,72
UNJF n°12-28h	5,49	4,60	R 80 x 16 x 6,0 x 4,9	42,72
UNJF 1/4-28h	6,35	5,50	R 80 x 17 x 7,0 x 5,5	33,17
UNJF 5/16-24h	7,94	6,90	R 90 x 20 x 8,0 x 6,2	37,09
UNJF 3/8-24h	9,52	8,50	R 90 x 16 x 7,0 x 6,2	40,61

REDUCED SHANK STANDARD PITCH				M1D
UNJC 7/16-14h	11,11	9,40	D 110 x 24 x 9,0 x 7,0	64,65
UNJC 1/2-13h	12,70	10,75	D 110 x 26 x 11,0 x 9,0	70,17
UNJC 9/16-12h	14,28	12,20	D 110 x 27 x 12,0 x 9,0	96,45
UNJC 5/8-11h	15,87	13,50	D 110 x 27 x 12,0 x 9,0	98,87
UNJC 3/4-10h	19,05	16,50	D 125 x 30 x 14,0 x 11,0	124,05
UNJC 7/8-9h	22,22	19,50	D 140 x 32 x 18,0 x 14,5	163,23
UNJC 1"-8h	25,40	22,25	D 160 x 36 x 18,0 x 14,5	215,66

REDUCED SHANK STANDARD PITCH				M1D
UNJF 7/16-20h	11,11	9,90	D 100 x 22 x 8,0 x 6,2	55,77
UNJF 1/2-20h	12,70	11,50	D 100 x 22 x 9,0 x 7,0	59,39
UNJF 9/16-18h	14,29	12,90	D 100 x 22 x 11,0 x 9,0	72,97
UNJF 5/8-18h	15,87	14,50	D 100 x 22 x 12,0 x 9,0	82,15
UNJF 3/4-16h	19,05	17,50	D 110 x 25 x 14,0 x 11,0	105,10
UNJF 7/8-14h	22,22	20,40	D 125 x 25 x 18,0 x 14,5	132,16
UNJF 1"-12h	25,40	23,25	D 140 x 28 x 18,0 x 14,5	147,35

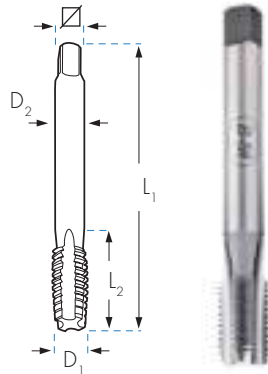
\* Vc: Cutting Speed (m/min)

HSSCo MACHINE TAPS

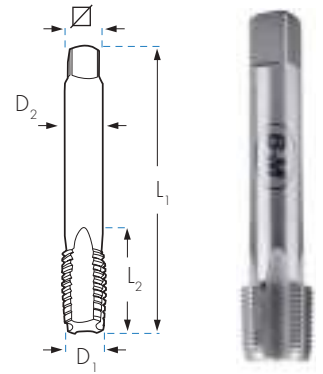
**BSP** **DIN 2999** **55°** **HSSCo 5%** **DIN 374** **C FORM**

**BSPT** **BS21 ISO7/1** **55°** **HSSCo 5%** **DIN 5156** **C FORM**

BRITISH STANDARD PIPE



BRITISH STANDARD TAPER PIPE



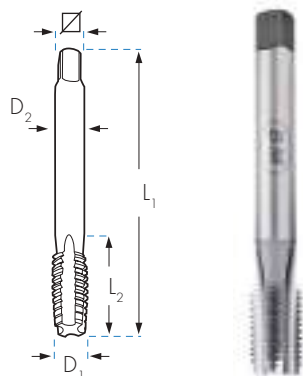
	D1 mm	L1 x L2 x D2 x $\nabla$ mm	MTD	€
Rp 1/16-28h.	7,72	D 90 x 16 x 6 x 4,9		
Rp 1/8-28h.	9,73	D 90 x 16 x 7 x 5,5		50,65
Rp 1/4-19h.	13,16	D 100 x 22 x 11 x 9,0		69,96
Rp 3/8-19h.	16,66	D 100 x 22 x 12 x 9,0		83,77
Rp 1/2-14h.	20,95	D 125 x 25 x 16 x 12,0		105,87
Rp 3/4-14h.	26,44	D 140 x 28 x 20 x 16,0		165,78
Rp 1"-11h.	33,25	D 160 x 30 x 25 x 20,0		257,22
Rp 1.1/4-11h.	41,91	D 170 x 30 x 32 x 24,0		
Rp 1.1/2-11h.	46,80	D 190 x 32 x 36 x 29,0		
Rp 2"-11h.	59,61	D 220 x 36 x 45 x 35,0		

	D1 mm		L1 x L2 x D2 x $\nabla$ mm	MTD	€
Rc 1/16-28h.	7,72		D 90 x 14 x 6 x 4		
Rc 1/8-28h.	9,73	8,30	D 90 x 15 x 7 x 5		51,82
Rc 1/4-19h.	13,16	11,00	D 100 x 19 x 11 x 9		74,53
Rc 3/8-19h.	16,66	14,50	D 100 x 21 x 12 x 9		103,58
Rc 1/2-14h.	20,95	18,10	D 125 x 26 x 16 x 12		143,92
Rc 5/8-14h.	22,91	21,00	D 140 x 36 x 18 x 19		232,16
Rc 3/4-14h.	26,44	23,50	D 140 x 28 x 20 x 16		224,47
Rc 7/8-14h.	30,20	28,25	D 160 x 36 x 22 x 18		390,60
Rc 1"-11h.	33,25	29,60	D 160 x 33 x 25 x 20		321,71

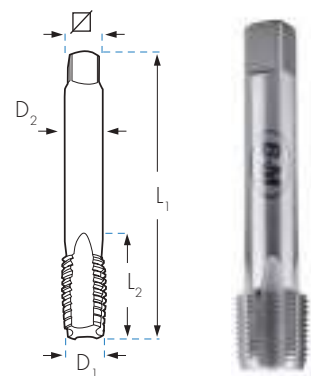
**NPS (M)** **ANSI B 1.20.1** **60°** **HSSCo 5%** **DIN 374** **C FORM**

**NPT** **ANSI B 1.20.1** **60°** **HSSCo 5%** **DIN 374** **C FORM**

NATIONAL STRAIGHT PIPE MECHANICAL



NATIONAL TAPER PIPE



	D1 mm		L1 x L2 x D2 x $\nabla$ mm	MTD	€
NPS 1/8-27h.	10,20	8,90	D 90 x 16 x 7 x 5,5		130,46
NPS 1/4-18h.	13,60	11,70	D 100 x 22 x 11 x 9,0		186,72
NPS 3/8-18h.	17,00	15,00	D 100 x 22 x 12 x 9,0		256,05
NPS 1/2-14h.	21,20	18,60	D 125 x 25 x 16 x 12,0		351,11
NPS 3/4-14h.	26,55	24,00	D 140 x 28 x 20 x 16,0		519,05
NPS 1"-11,5 h.	33,20	30,00	D 160 x 30 x 25 x 20,0		671,23
NPS 1.1/4-11,5h.	41,60		D 170 x 30 x 32 x 24,0		
NPS 1.1/2-11,5h.	47,68		D 190 x 32 x 36 x 29,0		
NPS 2"-11,5h.	59,71		D 220 x 36 x 45 x 35,0		

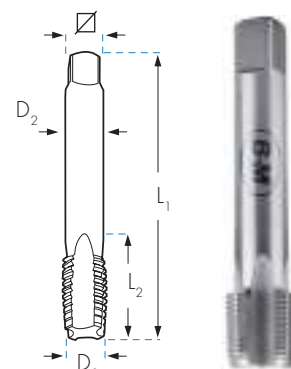
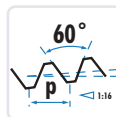
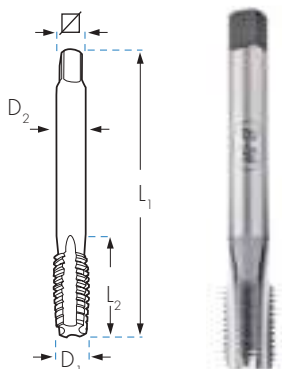
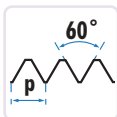
	D1 mm		L1 x L2 x D2 x $\nabla$ mm	MTD	€
NPT 1/16-27h.	7,89	6,2	D 90 x 14 x 6 x 5		45,39
NPT 1/8-27h.	10,24	8,5	D 90 x 15 x 8 x 6		47,47
NPT 1/4-18h.	13,62	11,0	D 100 x 19 x 11 x 9		61,30
NPT 3/8-18h.	17,05	14,5	D 100 x 21 x 12 x 9		78,80
NPT 1/2-14h.	21,22	17,8	D 125 x 26 x 16 x 12		102,51
NPT 3/4-14h.	26,57	23,0	D 140 x 28 x 20 x 16		158,83
NPT 1"-11,5h.	33,23	29,0	D 160 x 33 x 25 x 20		206,44
NPT 1.1/4-11,5h.	41,98	37,5	D 170 x 36 x 32 x 24		281,86
NPT 1.1/2-11,5h.	48,05	44,0	D 190 x 37 x 36 x 29		443,82
NPT 2"-11,5h.	60,09	56,0	D 220 x 41 x 45 x 35		696,18

## HSSCo MACHINE TAPS

NPSF

HSSCo  
5%DIN  
374C  
FORM

NPTF

HSSCo  
5%DIN  
374C  
FORMNATIONAL STRAIGHT  
PIPE DRYSEALNATIONAL TAPER  
PIPE DRYSEAL

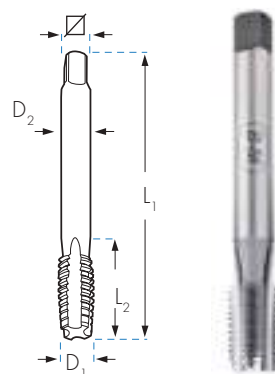
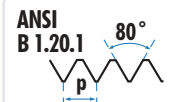
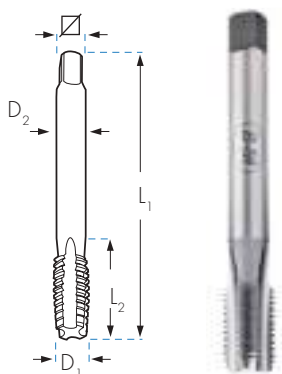
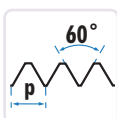
	D1 mm		L1 x L2 x D2 x $\square$ mm	MID €
NPSF 1/8-27h.	10,05	8,75	D 90 x 16 x 7 x 5,5	163,42
NPSF 1/4-18h.	13,33	11,30	D 100 x 22 x 11 x 9,0	225,25
NPSF 3/8-18h.	16,78	14,70	D 100 x 22 x 12 x 9,0	320,44
NPSF 1/2-14h.	20,87	18,20	D 125 x 25 x 16 x 12,0	399,60
NPSF 3/4-14h.	26,23	23,50	D 140 x 28 x 20 x 16,0	654,00
NPSF 1"-11,5h.	32,81	29,50	D 160 x 30 x 25 x 20,0	

	D1 mm		L1 x L2 x D2 x $\square$ mm	MID €
NPTF 1/16-27h.	7,87	6,20	D 90 x 14 x 12,0 x 6	
NPTF 1/8-27h.	10,22	8,50	D 90 x 15 x 12,0 x 7	110,41
NPTF 1/4-18h.	13,58	11,00	D 100 x 21 x 17,5 x 11	154,90
NPTF 3/8-18h.	17,02	14,50	D 110 x 21 x 17,6 x 12	198,99
NPTF 1/2-14h.	21,21	17,80	D 140 x 27 x 22,8 x 16	259,05
NPTF 3/4-14h.	26,56	23,00	D 140 x 27 x 23,0 x 20	401,32

MF

HSSCo  
5%TOL  
6HC  
FORMDIN  
374

PG

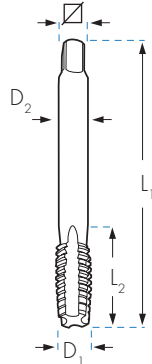
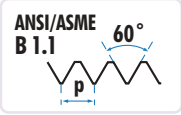
HSSCo  
5%DIN  
40430C  
FORMMETRIC FINE FOR ELECTRICIAN PIPE  
NORM EN 60423ARMOUR PIPE  
STEEL CONDUIT

	D1 mm		L1 x L2 x D2 x $\square$ mm	MID €
MF 12 x 1,50	12	10,5	D 100 x 22 x 9 x 7,0	27,86
MF 16 x 1,50	16	14,5	D 100 x 22 x 12 x 9,0	39,23
MF 20 x 1,50	20	18,5	D 125 x 25 x 16 x 12,0	58,83
MF 25 x 1,50	25	23,5	D 140 x 28 x 18 x 14,5	135,50
MF 32 x 1,50	32	30,5	D 150 x 28 x 22 x 18,0	169,12
MF 40 x 1,50	40	38,5	D 170 x 30 x 32 x 24,0	284,85
MF 50 x 1,50	50	48,5	D 190 x 32 x 36 x 29,0	443,49
MF 63 x 1,50	63	61,5	D 275 x 36 x 50 x 39,0	

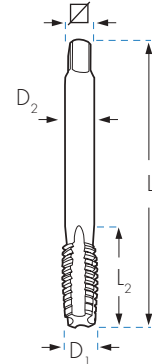
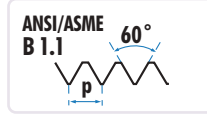
	D1 mm		L1 x L2 x D2 x $\square$ mm	MID €
PG 7 - 20h.	12,5	11,50	D 100 x 22 x 9 x 7,0	48,45
PG 9 - 18h.	15,2	14,00	D 100 x 22 x 12 x 9,0	67,10
PG 11 - 18h.	18,6	17,25	D 110 x 25 x 14 x 11,0	87,30
PG 13,5 - 18h.	20,4	19,00	D 125 x 25 x 16 x 12,0	98,04
PG 16 - 18h.	22,5	21,25	D 125 x 25 x 18 x 14,5	115,38
PG 21 - 16h.	28,3	27,00	D 150 x 28 x 22 x 18,0	183,17
PG 29 - 16h.	37,0	35,50	D 170 x 30 x 28 x 22,0	309,65
PG 36 - 16h.	47,0	45,50	D 190 x 32 x 36 x 29,0	502,89
PG 42 - 16h.	54,0	52,50	D 190 x 32 x 40 x 32,0	798,67
PG 48 - 16h.	59,3	58,00	D 220 x 36 x 45 x 35,0	973,64

HSSCo MACHINE TAPS

**UNx8** HSSCo 5% DIN 374 C FORM TOL 2B



**UNEF** HSSCo 5% DIN 374 TOL 2B

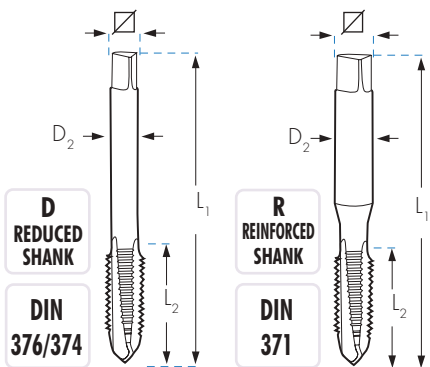
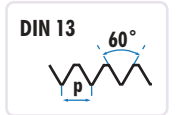


Icon	D <sub>2</sub> mm	L <sub>1</sub> x L <sub>2</sub> x mm	M1D	
			C FORM	€
UN 1" 1/8-8h.	25,40	22 180 x 45 x 18		240,85
UN 1" 1/4-8h.	28,50	22 180 x 48 x 18		310,74
UN 1" 3/8-8h.	31,75	28 200 x 56 x 22		352,49
UN 1" 1/2-8h.	35,00	32 200 x 58 x 22		448,49
UN 1" 5/8-8h.	38,10	32 200 x 65 x 24		524,62
UN 1" 3/4-8h.	41,25	36 200 x 50 x 29		639,07
UN 1" 7/8-8h.	44,45	36 225 x 53 x 29		737,18
UN 2"-8h.	47,63	40 225 x 50 x 32		753,23

Icon	D <sub>2</sub> mm	L <sub>1</sub> x L <sub>2</sub> x mm	M2D		M4D
			B FORM	€	35° €
UNEF 1/4-32h.	5,55	7,0 R 82 x 16 x 5,4		99,66	112,00
UNEF 5/16-32h.	7,15	8,4 R 85 x 21 x 6,1		109,81	123,38
UNEF 3/8-32h.	8,70	7,0 D 95 x 22 x 5,4		109,87	123,45
UNEF 7/16-28h.	10,20	8,0 D 100 x 22 x 6,2		145,83	163,85
UNEF 1/2-28h.	11,80	9,0 D 100 x 22 x 7,0		153,60	172,59
UNEF 9/16-24h.	13,20	12,0 D 100 x 24 x 9,0		192,44	216,23
UNEF 5/8-24h.	14,80	12,0 D 100 x 24 x 9,0		218,99	246,06
UNEF 3/4-20h.	17,80	14,0 D 110 x 27 x 11,0		284,81	320,04
UNEF 7/8-20h.	20,95	18,0 D 125 x 26 x 14,5		306,15	328,02
UNEF 1"-20h.	24,20	18,0 D 140 x 28 x 14,5		468,51	526,42

HSSCo MACHINE TAPS LEFT-HAND

**M MF** HSSCo 5% C FORM TOL 6H

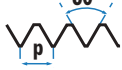
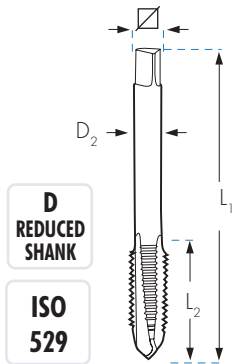
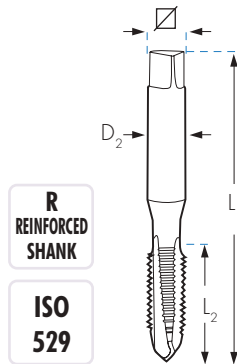


Check other dimensions upon request

\* Vc: Cutting Speed (m/min)

Icon	D <sub>2</sub> mm	L <sub>1</sub> x L <sub>2</sub> x D <sub>2</sub> x mm	M1R1	
			C FORM	€
M 3x0,50	2,50	R 56 x 11 x 3,5 x 2,7		22,66
M 4x0,70	3,30	R 63 x 13 x 4,5 x 3,4		25,79
M 5x0,80	4,20	R 70 x 16 x 6,0 x 4,9		23,09
M 6x1,00	5,00	R 80 x 17 x 6,0 x 4,9		26,27
M 7x1,00	6,00	R 80 x 17 x 7,0 x 5,5		34,07
M 8x1,25	6,80	R 90 x 20 x 8,0 x 6,2		29,68
M 10x1,50	8,50	R 100 x 22 x 10,0 x 8,0		33,64

Icon	D <sub>2</sub> mm	L <sub>1</sub> x L <sub>2</sub> x D <sub>2</sub> x mm	REDUCED SHANK STANDARD PITCH		M1D1
			C FORM	€	€
M 12x1,50	10,50	D 100 x 22 x 9,0 x 7,0		55,72	
M 12x1,75	10,20	D 110 x 24 x 9,0 x 7,0		40,15	
M 14x1,50	12,50	D 100 x 22 x 11,0 x 9,0		66,36	
M 14x2,00	12,00	D 110 x 26 x 11,0 x 9,0		65,92	
M 16x1,50	14,50	D 100 x 22 x 12,0 x 9,0		78,46	
M 16x2,00	14,00	D 110 x 27 x 12,0 x 9,0		77,59	
M 18x1,50	16,50	D 110 x 25 x 14,0 x 11,0		103,88	
M 18x2,50	15,50	D 125 x 30 x 14,0 x 11,0		111,62	
M 20x1,50	18,50	D 125 x 25 x 16,0 x 12,0		117,65	
M 20x2,50	17,50	D 140 x 32 x 16,0 x 12,0		118,81	
M 22x2,50	19,50	D 140 x 32 x 18,0 x 14,5		143,77	
M 24x2,00	22,00	D 140 x 28 x 18,0 x 14,5		222,23	
M 24x3,00	21,00	D 160 x 34 x 18,0 x 14,5		172,11	
M 27x3,00	24,00	D 160 x 36 x 20,0 x 16,0		214,86	
M 30x2,00	28,00	D 150 x 28 x 22,0 x 18,0		330,88	
M 30x3,50	26,50	D 180 x 40 x 22,0 x 18,0		275,33	
M 33x3,50	29,50	D 180 x 40 x 25,0 x 20,0		330,88	
M 36x4,00	32,00	D 200 x 50 x 28,0 x 22,0		434,27	

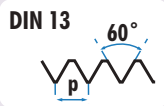
**HSSCo MACHINE TAPS ISO 529**
**M**  
**MF**
**DIN 13**

**HSSCo**  
**5%**
**ISO**  
**529**
**TOL**  
**6H**

**D**  
**REDUCED**  
**SHANK**
**ISO**  
**529**

**R**  
**REINFORCED**  
**SHANK**
**ISO**  
**529**


			L1 x L2 x D2 x $\square$ mm	M1RISO	M2RISO	M4RISO	M5RISO
				C FORM	B FORM	35°	INTERRUPTED THREAD
				€	€	€	€
M 3x0,50	2,50	R	48 x 11 x 3,15 x 2,50	8,17	8,52	10,26	12,20
M 4x0,70	3,30	R	53 x 13 x 4,00 x 3,15	8,17	8,52	10,26	12,20
M 5x0,80	4,20	R	58 x 16 x 5,00 x 4,00	8,17	8,52	10,26	12,20
M 6x1,00	5,00	R	66 x 19 x 6,30 x 5,00	8,17	8,52	10,48	12,20
M 7x1,00	6,00	R	66 x 19 x 7,10 x 5,60		12,12	13,91	
M 8x1,00	7,00	R	69 x 19 x 8,00 x 6,30		16,72	17,16	
M 8x1,25	6,75	R	72 x 22 x 8,00 x 6,30	10,92	11,37	11,76	13,33
M 9x1,25	7,75	R	76 x 20 x 10,00 x 8,00		18,09	20,66	
M 10x1,00	9,00	R	76 x 20 x 10,00 x 8,00		19,18	20,95	
M 10x1,25	8,80	R	76 x 20 x 10,00 x 8,00		22,93	23,67	
M 10x1,50	8,50	R	80 x 24 x 10,00 x 8,00	13,89	14,47	15,16	16,82
<b>REDUCED SHANK</b>				<b>M1DISO</b>	<b>M2DISO</b>	<b>M4DISO</b>	<b>M5DISO</b>
M 12x1,00	11,00	D	84 x 24 x 9,00 x 7,10		26,42	27,07	
M 12x1,25	10,75	D	84 x 24 x 9,00 x 7,10		25,95	26,87	
M 12x1,50	10,50	D	89 x 29 x 9,00 x 7,10		23,15	24,93	
M 12x1,75	10,20	D	89 x 29 x 9,00 x 7,10	17,85	18,59	19,69	25,16
M 14x1,00	13,00	D	90 x 25 x 11,20 x 9,00		33,09	41,16	
M 14x1,25	12,80	D	90 x 25 x 11,20 x 9,00		27,94	34,99	
M 14x1,50	12,50	D	95 x 30 x 12,50 x 9,00		24,55	27,59	
M 14x2,00	12,00	D	95 x 30 x 11,20 x 9,00	21,34	22,23	26,91	
M 16x1,00	15,00	D	95 x 25 x 12,50 x 10,00		42,10	54,18	
M 16x1,25	14,75	D	102 x 32 x 12,50 x 10,00		46,68	60,08	
M 16x1,50	14,50	D	102 x 32 x 14,00 x 10,00		29,47	33,02	
M 16x2,00	14,00	D	102 x 32 x 12,50 x 10,00	26,50	27,60	31,22	
M 18x1,50	16,50	D	104 x 29 x 14,00 x 11,20		38,93	53,20	
M 18x2,50	15,50	D	112 x 37 x 14,00 x 11,20	39,90	41,56	51,96	
M 20x1,50	18,50	D	104 x 29 x 14,00 x 11,20		50,10	61,28	
M 20x2,50	17,50	D	112 x 37 x 14,00 x 11,20	44,60	46,46	58,07	
M 22x2,50	19,50	D	118 x 38 x 16,00 x 12,50	51,57	53,72	67,15	
M 24x3,00	21,00	D	130 x 45 x 18,00 x 14,00	58,26	60,69	75,85	
M 27x3,00	24,00	D	135 x 45 x 20,00 x 16,00	71,74	74,73	93,42	
M 30x3,50	26,50	D	138 x 48 x 20,00 x 16,00	106,59	111,04	138,79	



MACHINE TAPS DIN 352

M  
MF

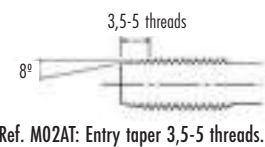
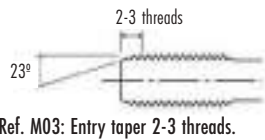


HSS

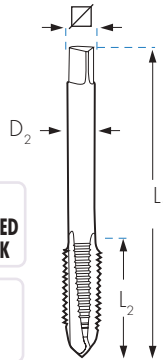
HSSCo  
5%

DIN  
352

TOL  
6H



D  
REDUCED  
SHANK  
  
DIN  
352



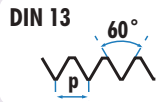
		$L_1 \times L_2 \times D_2 \times \square$ mm	M03	M02AT	M03X	M02DIN	M04DIN
			HSS	COMPLETE PROFILE	INOX	B FORM	35°
			€	HSS	HSSCo	HSS	HSS
M 3x0,50	2,50	D 40 x 11 x 3,50 x 2,70	7,36	9,93	13,14	9,37	11,29
M 4x0,70	3,30	D 45 x 13 x 4,50 x 3,40	7,35	9,92	13,14	9,37	11,29
M 5x0,80	4,20	D 50 x 16 x 6,00 x 4,90	7,86	10,62	13,68	9,37	11,29
M 6x1,00	5,00	D 50 x 19 x 6,00 x 4,90	7,86	10,62	13,63	9,37	11,53
M 7x1,00	6,00	D 50 x 19 x 6,00 x 4,90	9,58				
M 8x1,00	7,00	D 56 x 18 x 6,00 x 4,90	13,25				
M 8x1,25	6,75	D 56 x 22 x 6,00 x 4,90	9,57	12,92	15,87	12,51	13,98
M 9x1,25	7,75	D 63 x 18 x 7,00 x 5,50	15,67				
M 10x1,00	9,00	D 63 x 18 x 7,00 x 5,50	14,19				
M 10x1,25	8,80	D 70 x 24 x 7,00 x 5,50	14,38				
M 10x1,50	8,50	D 70 x 24 x 7,00 x 5,50	11,80	15,92	20,41	15,91	17,62
M 12x1,00	11,00	D 70 x 20 x 9,00 x 7,00	25,16				
M 12x1,25	10,75	D 70 x 20 x 9,00 x 7,00	25,08				
M 12x1,50	10,50	D 70 x 20 x 9,00 x 7,00	21,37				
M 12x1,75	10,20	D 75 x 29 x 9,00 x 7,00	16,60	22,42	29,23	20,46	22,94
M 14x1,00	13,00	D 70 x 20 x 11,00 x 9,00	39,21				
M 14x1,25	12,80	D 70 x 20 x 11,00 x 9,00	30,63				
M 14x1,50	12,50	D 70 x 20 x 11,00 x 9,00	23,82				
M 14x2,00	12,00	D 80 x 30 x 11,00 x 9,00	18,36	24,79	32,37	24,45	29,61
M 16x1,00	15,00	D 70 x 20 x 12,00 x 9,00	52,02				
M 16x1,25	14,75	D 70 x 20 x 12,00 x 9,00	54,75				
M 16x1,50	14,50	D 70 x 20 x 12,00 x 9,00	29,64				
M 16x2,00	14,00	D 80 x 32 x 12,00 x 9,00	26,27		44,37	30,37	34,33
M 18x1,50	16,50	D 80 x 22 x 14,00 x 11,00	39,05				
M 18x2,50	15,50	D 95 x 40 x 14,00 x 11,00	34,67		60,59	45,72	57,16
M 20x1,50	18,50	D 80 x 22 x 16,00 x 12,00	48,90				
M 20x2,50	17,50	D 95 x 40 x 16,00 x 12,00	38,89		67,26	51,10	63,88
M 22x2,50	19,50	D 100 x 40 x 18,00 x 14,50	51,81			59,08	73,87
M 24x3,00	21,00	D 110 x 50 x 18,00 x 14,50	61,79			66,76	83,44
M 27x3,00	24,00	D 110 x 50 x 20,00 x 16,00	78,14			86,17	94,59
M 30x3,50	26,50	D 125 x 50 x 22,00 x 18,00	100,53			118,03	121,22

Threading tools  
Pink  
Green

MACHINE TAPS AND DIES *Plus & Super Plus*

Threading tools

Pink



TOL  
6H

FOR HIGH PRODUCTION WORKS  
HSS PM: POWDER STEEL

DIN  
22568

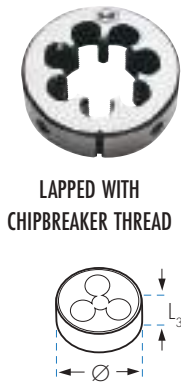
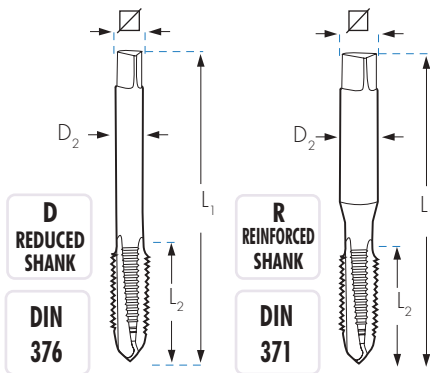
TOL  
6g

Vc  
14 m/min

Vc  
16 m/min

Vc  
17 m/min

Vc  
20 m/min



**Plus**      **Plus TiN**      **Plus LUBE**      **Super Plus ALTiN**

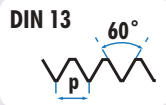
QUALITY	M2RP		M4RP		M2RT		M4RT		M2RHL		M4RHL		M2RSP		M4RSP		C5P	
	★★	★★	★★★	★★★	★★★★	★★★★	★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★				
MATERIAL	HSS PM		HSS PM		HSSCo 5%		HSSCo 5%		HSS PM		HSS PM		HSS V3		HSS V3		HSS	
COATING	BRIGHT		BRIGHT		TiN		TiN		HARD LUBE		HARD LUBE		ALTiN		ALTiN		BRIGHT	
HELIX ANGLE	B FORM		35°		B FORM		35°		B FORM		35°		B FORM		41°			
	L1 x L2 x D2 x ∅		€	€	€	€	€	€	€	€	€	€	€	€	€	€	∅ x L3 mm	€
M 3x0,50	2,50	R	56 x 11 x 3,5 x 2,7	16,75	20,70	22,55	24,92	30,20	32,69	40,58	42,47	25 x 9	30,82					
M 4x0,70	3,30	R	63 x 13 x 4,5 x 3,4	17,11	20,70	22,91	25,99	30,66	33,14	40,58	42,47	25 x 9	30,82					
M 5x0,80	4,20	R	70 x 16 x 6,0 x 4,9	17,11	19,84	22,91	25,99	30,66	33,14	42,86	44,05	25 x 9	30,82					
M 6x1,00	5,00	R	80 x 17 x 6,0 x 4,9	18,82	21,79	26,38	28,57	33,66	35,09	42,86	44,05	25 x 9	30,82					
M 8x1,00	7,00	D	90 x 20 x 6,0 x 4,9	26,86	31,87	37,82	42,09	51,06	56,83			25 x 9	42,98					
M 8x1,25	6,80	R	90 x 20 x 8,0 x 6,2	22,03	25,31	30,84	33,54	42,80	44,65	54,41	57,98	25 x 9	33,43					
M 10x1,00	9,00	D	90 x 16 x 7,0 x 5,5	29,94	37,54	44,18	50,72	59,62	70,44			30 x 10	52,53					
M 10x1,50	8,50	R	100 x 22 x 10,0 x 8,0	25,92	29,47	36,32	39,77	53,08	55,56	64,84	69,17	30 x 10	45,97					
<b>REDUCED SHANK</b>			M2DP	M4DP	M2DT	M4DT	M2DHL	M4DHL	M2DSP	M4DSP								
M 12x1,50	10,50	D	100 x 22 x 9,0 x 7,0	35,52	42,94	47,85	53,87	64,30	73,75			38 x 10	54,61					
M 12x1,75	10,20	D	110 x 24 x 9,0 x 7,0	33,41	39,68	44,78	50,49	56,03	67,25	81,58	88,50	38 x 14	48,22					
M 14x1,50	12,50	D	100 x 22 x 11,0 x 9,0	42,09	52,78	56,27	62,15	75,63	86,73			38 x 10	57,09					
M 14x2,00	12,00	D	110 x 26 x 11,0 x 9,0	41,77	48,42	55,26	60,75	76,43	84,01	83,29	112,14	38 x 14	49,15					
M 16x1,50	14,50	D	100 x 22 x 12,0 x 9,0	52,65	64,91	67,63	77,32	74,68	87,17			45 x 14	78,42					
M 16x2,00	14,00	D	110 x 27 x 12,0 x 9,0	49,12	58,52	63,09	69,74	87,26	96,44	113,69	120,94	45 x 18	66,03					
M 18x2,50	15,50	D	125 x 30 x 14,0 x 11,0	69,63	78,66	86,15	93,99	123,27	130,97	168,75	182,57	45 x 18	66,03					
M 20x2,50	17,50	D	140 x 32 x 16,0 x 12,0	75,23	83,85	98,19	105,78	129,51	147,46	179,85	190,10	45 x 18	66,03					
M 22x2,50	19,50	D	140 x 32 x 18,0 x 14,5	91,01	103,47	110,97	118,78	151,90	165,76			55 x 22	98,15					
M 24x3,00	21,00	D	160 x 34 x 18,0 x 14,5	108,21	123,87	125,04	135,87	171,16	189,59			55 x 22	98,15					

\* Vc: Cutting Speed (m/min))

**POWDER STEEL MACHINE TAPS FOR STAINLESS STEEL**

**INOX**

**M**

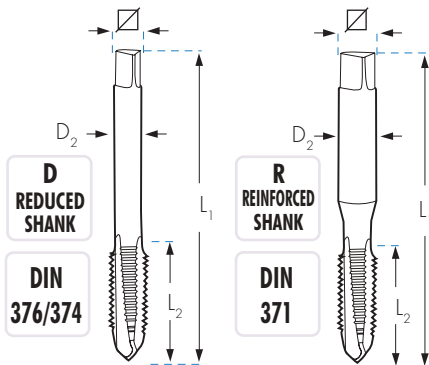


**TOL  
6H**

**Vc  
6 m/min**

**Vc  
10 m/min**

**Vc  
12 m/min**



		M2RX	M4RX	M2RXT	M4RXT	M2RXHL	M4RXHL	
QUALITY		★★	★★	★★★	★★★	★★★★	★★★★	
MATERIAL		HSS PM	HSS PM	HSSCo 5%	HSSCo 5%	HSS PM	HSS PM	
COATING		OX	OX	TIN	TIN	HARD LUBE	HARD LUBE	
HELIX ANGLE		B FORM	35°	B FORM	35°	B FORM	35°	
		L1 x L2 x D2 x $\nabla$ mm	€	€	€	€	€	
M 3x0,50	2,50	R 56 x 11 x 3,5 x 2,7	20,02	23,79	23,12	26,16	30,58	35,96
M 4x0,70	3,30	R 63 x 13 x 4,5 x 3,4	21,02	23,79	24,25	26,59	32,12	36,90
M 5x0,80	4,20	R 70 x 16 x 6,0 x 4,9	21,02	23,97	24,25	26,99	32,12	37,46
M 6x1,00	5,00	R 80 x 17 x 6,0 x 4,9	23,03	25,92	25,68	28,22	35,17	39,19
M 8x1,00	7,00	D 90 x 20 x 6,0 x 4,9	37,18	40,74				
M 8x1,25	6,80	R 90 x 20 x 8,0 x 6,2	25,69	29,53	29,68	32,51	39,27	45,13
M 10x1,00	9,00	D 90 x 16 x 7,0 x 5,5	38,32	40,91				
M 10x1,50	8,50	R 100 x 22 x 10,0 x 8,0	31,42	35,04	34,70	38,34	47,98	53,52
<b>REDUCED SHANK</b>		M2DX	M4DX	M2DXT	M4DXT	M2DXHL	M4DXHL	
M 12x1,00	11,00	D 100 x 22 x 9,0 x 7,0	43,46	49,86				
M 12x1,50	10,50	D 100 x 22 x 9,0 x 7,0	44,11	52,16				
M 12x1,75	10,20	D 110 x 24 x 9,0 x 7,0	40,37	47,27	44,39	49,97	63,18	73,96
M 14x2,00	12,00	D 110 x 26 x 11,0 x 9,0	57,47	65,83	57,83	62,51	83,95	92,96
M 16x2,00	14,00	D 110 x 27 x 12,0 x 9,0	64,00	75,97	65,64	71,93	93,47	112,44
M 18x2,50	15,50	D 125 x 30 x 14,0 x 11,0	95,84	108,10	98,95	102,68	149,99	159,97
M 20x2,50	17,50	D 140 x 32 x 16,0 x 12,0	103,57	114,16	112,98	116,00	159,46	168,91
M 22x2,50	19,50	D 140 x 32 x 18,0 x 14,5	124,28	131,31	140,25	151,85		
M 24x3,00	21,00	D 160 x 34 x 18,0 x 14,5	130,66	149,97	142,98	155,32		
M 27x3,00	24,00	D 160 x 36 x 20,0 x 16,0	171,15	196,45				
M 30x3,50	26,50	D 180 x 40 x 22,0 x 18,0	218,87	251,22				

\* Vc: Cutting Speed (m/min)



- **CUT MAGIC XTHICK** Coolant
- We recommend using CUT MAGIC XTHICK to optimize the stainless steel, inconel, titanium.. threading

Ref. ACXT00250

*Super Plus* TAPS FOR THREADING REFRACTORY ALLOYS

M

DIN 13

TOL
6H

INOX  
DUPLEX

Ni

INC

Ti

SPECIALLY RECOMMENDED  
 FOR AERONAUTICAL APPLICATIONS

**Vc**  
15 m/min

INOX  
DUPLEX

**Vc**  
6 m/min

NICKEL  
INCONEL

**Vc**  
6 m/min

TITANIUM

**D**  
REDUCED  
SHANK

**DIN**  
376

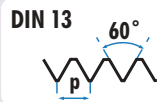
**R**  
REINFORCED  
SHANK

**DIN**  
371

			M2RDU	M4RDU	M2RNI	M3RNI	M2RTIT	M3RTIT
QUALITY			★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
MATERIAL			HSS V3	HSS V3	HSS PM	HSS PM	HSS PM	HSS PM
COATING			TiCN	TiCN	BRIGHT	BRIGHT	OX	OX
HELIX ANGLE			B FORM	41°	B FORM	15°	B FORM	15°
		$L_1 \times L_2 \times D_2 \times \square$ mm	€	€	€	€	€	€
M 3x0,50	2,50	R 56 x 11 x 3,5 x 2,7	41,15	42,15	76,45	78,12	56,76	62,65
M 4x0,70	3,30	R 63 x 13 x 4,5 x 3,4	41,15	42,41	78,12	80,24	58,53	62,65
M 5x0,80	4,20	R 70 x 16 x 6,0 x 4,9	42,53	43,36	80,88	82,79	60,01	66,73
M 6x1,00	5,00	R 80 x 17 x 6,0 x 4,9	43,70	44,63	81,51	83,82	60,01	67,66
M 8x1,25	6,80	R 90 x 20 x 8,0 x 6,2	61,04	63,64	92,12	94,57	69,34	78,12
M 10x1,50	8,50	R 100 x 22 x 10,0 x 8,0	79,11	81,17	109,45	112,80	85,88	94,14
<b>REDUCED SHANK</b>			M2DDU	M4DDU	M2DNI	M3DNI	M2DTIT	M3DTIT
M 12x1,75	10,20	D 110 x 24 x 9,0 x 7,0	106,95	115,49	140,78	155,66	107,78	116,96
M 14x2,00	12,00	D 110 x 26 x 11,0 x 9,0						
M 16x2,00	14,00	D 110 x 27 x 12,0 x 9,0	157,28	168,18				
M 18x2,50	15,50	D 125 x 30 x 14,0 x 11,0						
M 20x2,50	17,50	D 140 x 32 x 16,0 x 12,0	232,89	251,55				
M 22x2,50	19,50	D 140 x 32 x 18,0 x 14,5						
M 24x3,00	21,00	D 160 x 34 x 18,0 x 14,5	315,44	320,85				
M 27x3,00	24,00	D 160 x 36 x 20,0 x 16,0	405,25	424,79				
M 30x3,50	26,50	D 180 x 40 x 22,0 x 18,0	478,61	500,81				

\* Vc: Cutting Speed (m/min))

MACHINE TAPS FOR SUPER SOFT CONSTRUCTION STEEL <450 N/mm<sup>2</sup>



HSSCo  
5%

OX

TOL  
6H

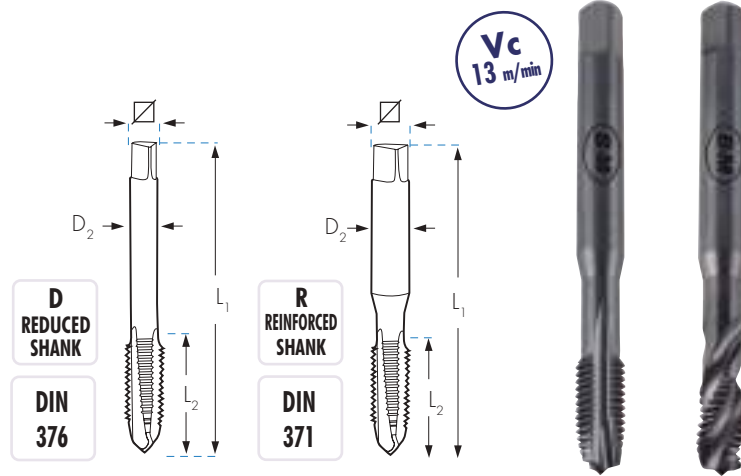
APPLICATIONS




450  
N/mm<sup>2</sup>

ST52

AI

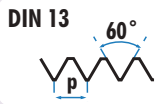
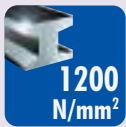
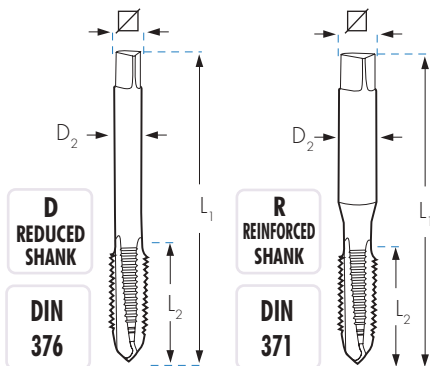
Specific cutting geometry for soft materials without oversize. The tap fits perfectly with this type of materials while the conventional taps can generate oversize when tapping.



		L <sub>1</sub> × L <sub>2</sub> × D <sub>2</sub> × □ mm	M2RSS      M4RSS	
			B FORM	
			€	€
M 3 × 0,50	2,50	R 56 × 11 × 3,5 × 2,7	14,26	19,05
M 4 × 0,70	3,30	R 63 × 13 × 4,5 × 3,4	14,92	19,06
M 5 × 0,80	4,20	R 70 × 16 × 6,0 × 4,9	14,94	18,28
M 6 × 1,00	5,00	R 80 × 17 × 6,0 × 4,9	16,39	20,04
M 8 × 1,25	6,80	R 90 × 20 × 8,0 × 6,2	18,39	22,67
M 10 × 1,50	8,50	R 100 × 22 × 10,0 × 8,0	22,65	26,85
REDUCED SHANK			M2DSS	M4DSS
M 12 × 1,75	10,20	D 110 × 24 × 9,0 × 7,0	28,56	34,58
M 14 × 2,00	12,00	D 110 × 26 × 11,0 × 9,0	42,17	49,80
M 16 × 2,00	14,00	D 110 × 27 × 12,0 × 9,0	49,32	60,16
M 18 × 2,50	15,50	D 125 × 30 × 14,0 × 11,0	70,26	77,99
M 20 × 2,50	17,50	D 140 × 32 × 16,0 × 12,0	75,84	86,46
M 22 × 2,50	19,50	D 140 × 32 × 18,0 × 14,5	91,04	101,46
M 24 × 3,00	21,00	D 160 × 34 × 18,0 × 14,5	108,44	123,32
M 27 × 3,00	24,00	D 160 × 36 × 20,0 × 16,0	135,63	151,73
M 30 × 3,50	26,50	D 180 × 40 × 22,0 × 18,0	174,27	194,45

\* Vc: Cutting Speed (m/min)

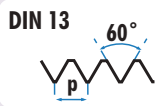
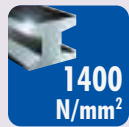


**HSSV3 MACHINE TAPS FOR HARD MATERIALS**

**HSS  
V3**
**TOL  
6H**
**HARD  
MATERIALS**

**Vc  
7 m/min**
**Vc  
9 m/min**


		M2RMD	M4RMD	M2RMDTX	M4RMDTX
QUALITY		★★★	★★★	★★★★	★★★★
MATERIAL		HSS V3	HSS V3	HSS V3	HSS V3
COATING		OX	OX	TINALOX	TINALOX
HELIX ANGLE		B FORM	35°	B FORM	35°
	$L_1 \times L_2 \times D_2 \times \square$ mm	€	€	€	€
M 3x0,50	2,50 R 56 x 11 x 3,5 x 2,7	17,57	19,24	25,77	30,30
M 4x0,70	3,30 R 63 x 13 x 4,5 x 3,4	17,63	19,30	27,08	31,73
M 5x0,80	4,20 R 70 x 16 x 6,0 x 4,9	17,63	20,25	27,08	31,73
M 6x1,00	5,00 R 80 x 17 x 6,0 x 4,9	20,01	20,92	29,66	33,37
M 8x1,25	6,80 R 90 x 20 x 8,0 x 6,2	21,38	24,69	33,10	38,05
M 10x1,50	8,50 R 100 x 22 x 10,0 x 8,0	24,63	28,43	41,89	46,72
<b>REDUCED SHANK</b>		M2DMD	M4DMD	M2DMDTX	M4DMDTX
M 12x1,75	10,20 D 110 x 24 x 9,0 x 7,0	35,11	40,50	55,79	65,31
M 14x2,00	12,00 D 110 x 26 x 11,0 x 9,0	46,06	48,08	79,38	87,16
M 16x2,00	14,00 D 110 x 27 x 12,0 x 9,0	51,52	58,17	88,42	105,41
M 18x2,50	15,50 D 125 x 30 x 14,0 x 11,0	76,82	82,75	130,00	147,22
M 20x2,50	17,50 D 140 x 32 x 16,0 x 12,0	83,02	87,37	140,50	155,41

\* Vc: Cutting Speed (m/min)

**MACHINE TAPS FOR HARDENED MATERIALS (HARDOX 450/500)**



**TOL 6H**

**HSSE**

**HSS PM**

**SOLID CARBIDE**

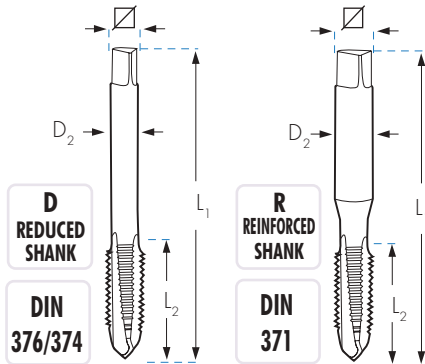
**VERY HARD MATERIALS**

**48 HRC**

**48-62 HRC**

**Vc 5 m/min**

**SOLID CARBIDE**



MATERIAL	M2RC		M3RC		M2HRC		M4HRC		M1RCM		M1RHMC	
	HSSE	HSSE	HSS PM	HSS PM	HSS PM	HSS PM	HSS PM	SOLID CARBIDE				
COATING	TiAIN	TiAIN	TINALOX	TINALOX			TiCN	TiCN				
FORM	B FORM	15°	B FORM	35°			C FORM	C FORM				
	€	€	€	€	€	€	€	€				
M 2 x 0,40	1,60	R 40 x 9 x 2,5 x 2,1			34,07	37,25	1,70		1,70			
M 3 x 0,50	2,50	R 56 x 11 x 3,5 x 2,7	28,11	29,90	31,09	34,82	2,60	45,03	2,60	124,74		
M 4 x 0,70	3,30	R 63 x 13 x 4,5 x 3,4	28,17	31,85	32,29	36,16	3,40	39,61	3,40	124,74		
M 5 x 0,80	4,20	R 70 x 16 x 6,0 x 4,9	28,44	31,12	32,60	36,51	4,30	44,26	4,30	124,74		
M 6 x 1,00	5,00	R 80 x 17 x 6,0 x 4,9	30,74	34,46	33,99	38,07	5,10	56,67	5,10	155,93		
M 8 x 1,25	6,80	R 90 x 20 x 8,0 x 6,2	35,50	40,51	42,26	47,34	6,90	62,86	6,90	175,49		
M 10 x 1,50	8,50	R 100 x 22 x 10,0 x 8,0	42,50	50,19	50,58	53,11	8,60	81,49	8,60	269,27		
REDUCED SHANK			M2DC	M3DC	M2HDC	M4HDC	M1RCM		M1DHMC			
M 12 x 1,75	10,20	D 110 x 24 x 9,0 x 7,0	63,56	75,45	77,21	84,17	10,40	107,81*	10,40	421,71		
M 14 x 2,00	12,00	D 110 x 26 x 11,0 x 9,0	85,82	100,38	91,56	102,98	12,10	136,30*	12,10	485,93		
M 16 x 2,00	14,00	D 110 x 27 x 12,0 x 9,0	96,83	115,30	101,80	118,05	14,10	145,80*	16,10	634,52		
M 18 x 2,50	15,50	D 125 x 30 x 14,0 x 11,0	122,62	133,52	126,02	137,36			15,75	775,19		
M 20 x 2,50	17,50	D 140 x 32 x 16,0 x 12,0	148,50	154,56	148,82	162,22			17,75	1.226,22		
M 22 x 2,50	19,50	D 140 x 32 x 18,0 x 14,5	210,36	219,36								
M 24 x 3,00	21,00	D 160 x 34 x 18,0 x 14,5	215,36	225,36	224,73	244,97						
M 27 x 3,00	24,00	D 160 x 36 x 20,0 x 16,0	235,36	242,36								
M 30 x 3,50	26,50	D 180 x 40 x 22,0 x 18,0	241,25	255,36								

\* Vc: Cutting Speed (m/min)

\* Reinforced shank: M12 - Ø 12 x 9  
M14 - Ø 14 x 11  
M16 - Ø 16 x 12



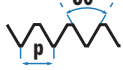
- **CUT MAGIC XTHICK Coolant**
- We recommend using the same machine and exact position as the one used during prior drilling to ensure perfect coaxiality.

Ref. ACXT00250

HRC	Vc (m/min)
48 Hrc	8 m/min
56 Hrc	6 m/min
62 Hrc	3 m/min

**ALL ROAD MACHINE TAPS FOR THREADING ANY MATERIAL**
**ALL  
ROAD**

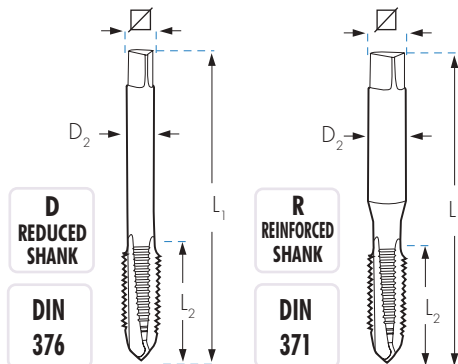
DIN 13



60°

**HSSCo**  
5%

**TiN**
**TOL**  
6H

**APPLICATIONS**
**1200**  
N/mm<sup>2</sup>
**Al**
**CAST  
IRON**
**Ti**
**INOX**
**Vc**  
13 m/min


		$L_1 \times L_2 \times D_2 \times \square$ mm	M2RD	M4RD
			<b>B FORM</b> €	35° €
M 3 x 0,50	2,50	R 56 x 11 x 3,5 x 2,7	26,39	32,99
M 4 x 0,70	3,30	R 63 x 13 x 4,5 x 3,4	28,24	32,99
M 5 x 0,80	4,20	R 70 x 16 x 6,0 x 4,9	30,04	34,17
M 6 x 1,00	5,00	R 80 x 17 x 6,0 x 4,9	31,09	35,47
M 8 x 1,25	6,80	R 90 x 20 x 8,0 x 6,2	36,42	40,47
M 10 x 1,50	8,50	R 100 x 22 x 10,0 x 8,0	42,02	47,94
<b>REDUCED SHANK</b>			M2DD	M4DD
M 12 x 1,75	10,20	D 110 x 24 x 9,0 x 7,0	52,95	63,04
M 14 x 2,00	12,00	D 110 x 26 x 11,0 x 9,0	69,15	75,99
M 16 x 2,00	14,00	D 110 x 27 x 12,0 x 9,0	77,49	83,87
M 18 x 2,50	15,50	D 125 x 30 x 14,0 x 11,0	121,09	124,17
M 20 x 2,50	17,50	D 140 x 32 x 16,0 x 12,0	123,34	127,96

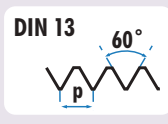
\* Vc: Cutting Speed (m/min)

**HSSCo & CARBIDE MACHINE TAPS FOR SPECIAL APPLICATIONS**

**Al**

**CAST IRON**

**BRASS**



**HSSCo 5%**

**SOLID CARBIDE**

**TOL 6H**

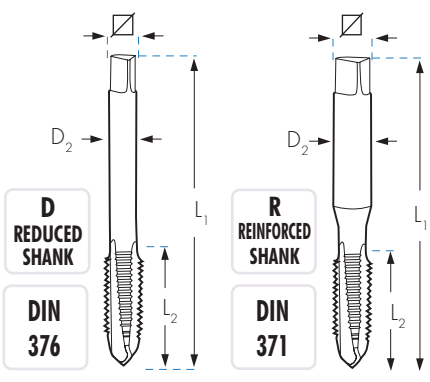
**Vc 18 m/min**

**Vc 11 m/min**

**Vc 21 m/min**

**Vc 16 m/min**

**Vc 19 m/min**



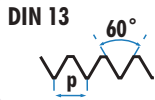
				M5R	M6R	MTRFM	MHMTR	M1RL	M1RLCRN
APPLICATION				<b>Al</b>	<b>Al</b>	<b>CAST IRON</b>	<b>CAST IRON</b>	<b>BRASS</b>	<b>BRASS</b>
MATERIAL				<b>HSSCo 5%</b>	<b>HSSCo 5%</b>	<b>HSSCo 5%</b>	<b>SOLID CARBIDE</b>	<b>HSSCo 5%</b>	<b>HSSCo 5%</b>
COATING				<b>BRIGHT</b>	<b>BRIGHT</b>	<b>OX</b>	<b>BRIGHT</b>	<b>BRIGHT</b>	<b>CrN</b>
FORM				<b>INTERRUPTED THREAD</b>	<b>2 FLUTES</b>	<b>C FORM</b>	<b>C FORM</b>	<b>C FORM</b>	<b>C FORM</b>
			$L_1 \times L_2 \times D_2 \times \square$ mm	€	€	€	€	€	€
M 3x0,50	2,50	R	56 x 11 x 3,5 x 2,7	22,77	24,43	16,11	81,66	19,29	21,91
M 4x0,70	3,30	R	63 x 13 x 4,5 x 3,4	22,90	24,43	16,65	81,66	20,48	24,15
M 5x0,80	4,20	R	70 x 16 x 6,0 x 4,9	22,77	24,95	16,65	81,66	20,48	24,24
M 6x1,00	5,00	R	80 x 17 x 6,0 x 4,9	24,00	26,98	18,91	93,14	22,44	26,47
M 8x1,25	6,80	R	90 x 20 x 8,0 x 6,2	28,73	32,33	21,18	104,00	25,59	32,18
M 10x1,50	8,50	R	100 x 22 x 10,0 x 8,0	34,64	38,23	24,23	130,34	30,78	39,16
<b>REDUCED SHANK</b>				M5D	M6D	M1DFM	MHM1D	M1DL	M1DLCRN
M 12x1,75	10,20	D	110 x 24 x 9,0 x 7,0	44,03	48,05	31,05	181,83	36,59	48,22
M 14x2,00	12,00	D	110 x 26 x 11,0 x 9,0	79,73	82,98	51,04	283,26	44,92	58,76
M 16x2,00	14,00	D	110 x 27 x 12,0 x 9,0	86,90	94,10	60,05	336,99	51,68	65,70
M 18x2,50	15,50	D	125 x 30 x 14,0 x 11,0			84,00	413,09	67,78	83,21
M 20x2,50	17,50	D	140 x 32 x 16,0 x 12,0			84,33	500,23	76,08	92,64

\* Vc: Cutting Speed (m/min)

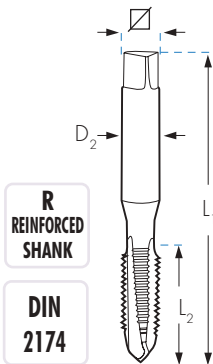


- **CUT MAGIC ALUMINIO** Coolant
- We recommend using CUT MAGIC ALUMINIO to optimize the aluminium and its casts threading

Ref. ACAL00250

**FORMING MACHINE TAPS WITH & WITHOUT OIL GROOVES**

**HSSCo**  
**5%**
**HSSCo**  
**8%**
**TOL**  
**6HX**
**APPLICATIONS**

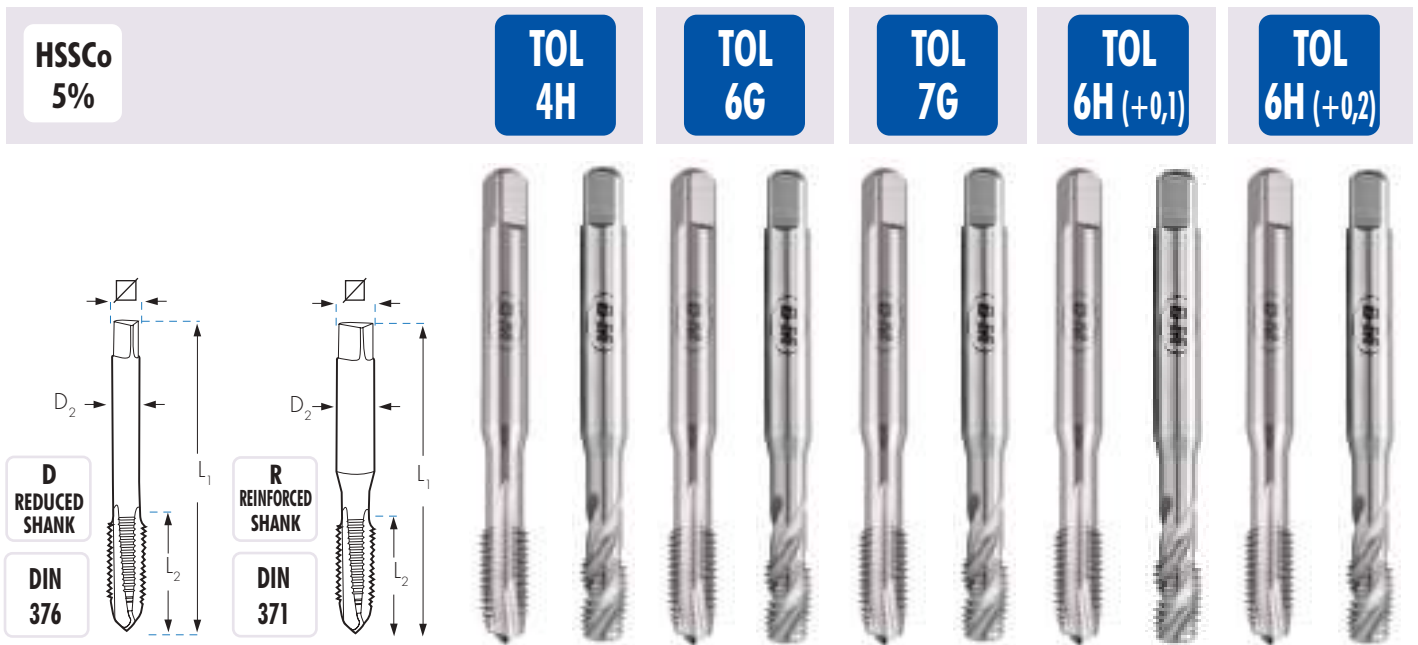
**Al**
**CAST**  
**IRON**


**INOX**
*Plus*


APPLICATION		MATERIAL		COATING		FORM		M07R	M07RT	M07RCR	M07RCCR	M09RCCR	M07RXTCR
FORMING		HSSCo 5%		OX		FORMING		FORMING	FORMING	FORMING	FORMING	FORMING	FORMING
FORMING		HSSCo 5%		TiN		FORMING		FORMING	FORMING	FORMING	FORMING	FORMING	FORMING
FORMING		HSSCo 5%		OX		FORMING		FORMING	FORMING	FORMING	FORMING	FORMING	FORMING
FORMING		HSSCo 5%		TiCN		FORMING		FORMING	FORMING	FORMING	FORMING	FORMING	FORMING
FORMING		HSSCo 8%		TiCN		FORMING		FORMING	FORMING	FORMING	FORMING	FORMING	FORMING
FORMING		HSSCo 5%		TiN		FORMING		FORMING	FORMING	FORMING	FORMING	FORMING	FORMING
M 3x0,50	2,75	R	56 x 11 x 3,5 x 2,7	€	€	€	€	€	€	€	€	€	€
M 3,5x0,60	3,20	R	56 x 11 x 3,5 x 2,7	32,21	34,97	35,45	44,48	107,01	79,80				
M 4x0,70	3,65	R	63 x 13 x 4,5 x 3,4	33,86	38,56	36,62	47,08	108,36	79,80				
M 5x0,80	4,60	R	70 x 16 x 6,0 x 4,9	32,21	36,47	35,45	46,39	109,80	86,12				
M 6x1,00	5,50	R	80 x 17 x 6,0 x 4,9	34,78	38,54	38,25	49,03	111,54	86,12				
M 8x1,25	7,40	R	90 x 20 x 8,0 x 6,2	40,53	50,87	44,59	64,73	123,73	103,07				
M 10x1,50	9,30	R	100 x 22 x 10,0 x 8,0	45,08	57,04	49,60	71,24	147,73	125,83				
<b>REDUCED SHANK</b>				M07D	M07DT	M07DCR	M07DCCR	M09DCCR	M07DXTCR				
M 12x1,75	11,20	D	110 x 24 x 9,0 x 7,0	53,13	74,59	56,28	81,58	174,88	163,86				
M 14x2,00	13,05	D	110 x 26 x 11,0 x 9,0	95,78	117,80	99,50	132,44	217,64	235,72				
M 16x2,00	15,05	D	110 x 27 x 12,0 x 9,0	112,44	132,68	116,79	140,20	299,33	239,81				
M 18x2,50	16,80	D	125 x 30 x 14,0 x 11,0	129,03	158,65	134,02	165,66	354,67					
M 20x2,50	18,80	D	140 x 32 x 16,0 x 12,0	170,01	240,16	176,60	251,84	392,66					



MACHINE TAPS WITH SPECIAL TOLERANCE AND OVERSIZE



		M2R4H	M4R4H	M2R6G	M4R6G	M2R7G	M4R7G	M2R+0,1	M4R+0,1	M2R+0,2	M4R+0,2
TOLERANCE		TOL 4H	TOL 4H	TOL 6G	TOL 6G	TOL 7G	TOL 7G	TOL 6H (+0,1)	TOL 6H (+0,1)	TOL 6H (+0,2)	TOL 6H (+0,2)
MATERIAL		HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%	HSSCo 5%
COATING		BRIGHT	BRIGHT	BRIGHT	BRIGHT	BRIGHT	BRIGHT	BRIGHT	BRIGHT	BRIGHT	BRIGHT
FORM		B FORM	35°	B FORM	35°	B FORM	35°	B FORM	35°	B FORM	35°
	 $L_1 \times L_2 \times D_2 \times \square$ mm	€	€	€	€	€	€	€	€	€	€
M 3x0,50	2,50 R 56x11x 3,5x 2,7	22,04	27,25	16,17	19,24	22,04	27,25	22,75	30,35	26,10	32,32
M 4x0,70	3,30 R 63x13x 4,5x 3,4	22,55	27,25	16,17	19,24	22,55	27,25	23,29	30,35	26,70	32,32
M 5x0,80	4,20 R 70x16x 6,0x 4,9	22,55	26,11	16,17	18,88	22,55	26,11	23,29	29,07	26,70	30,94
M 6x1,00	5,00 R 80x17x 6,0x 4,9	24,78	28,65	17,41	20,73	24,78	28,65	25,57	31,90	29,35	33,96
M 8x1,00	7,00 D 90x20x 6,0x 4,9			33,90	37,49						
M 8x1,25	6,75 R 90x20x 8,0x 6,2	27,75	32,71	20,24	24,30	27,75	32,71	28,65	36,40	32,88	38,77
M 10x1,00	9,00 D 90x16x 7,0x 5,5			40,04	46,60						
M 10x1,50	8,50 R 100x22x 10,0x 8,0	34,12	38,83	24,90	27,79	34,12	38,83	35,25	43,17	40,46	45,96
<b>REDUCED SHANK</b>		M2D4H	M4D4H	M2D6G	M4D6G	M2D7G	M4D7G	M2D+0,1	M4D+0,1	M2D+0,2	M4D+0,2
M 12x1,50	10,50 D 100x22x 9,0x 7,0			72,95	86,49						
M 12x1,75	10,20 D 110x24x 9,0x 7,0	44,00	52,24	32,84	39,56	44,00	52,24	44,14	55,96	50,15	59,59
M 14x2,00	12,00 D 110x26x 11,0x 9,0			40,34	48,47			72,01	89,08	81,83	94,87
M 16x2,00	14,00 D 110x27x 12,0x 9,0			49,86	58,54			84,69	107,65	96,27	114,64
M 18x2,50	15,50 D 125x30x 14,0x 11,0			70,31	72,48			128,06	144,99	136,36	154,39
M 20x2,50	17,50 D 140x32x 16,0x 12,0			72,62	83,31			138,37	154,28	147,34	164,29

4H.- Highly accurate threads. Finer adjustment.

6G.- For coating threads. Thicknesses between 20 - 40 μ

7G.- For coating threads. Thicknesses between 40 - 50 μ

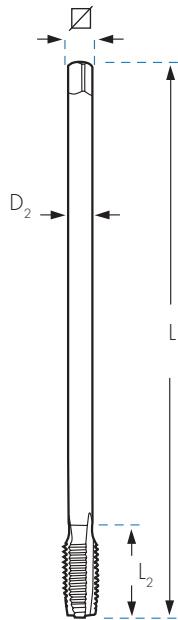
6H (+0,1).- To make oversized threads or compensate heat treatment deformations.




6H (+0,2).- To make oversized threads or compensate heat treatment deformations.

## HSSCo EXTRA-LONG MACHINE TAPS

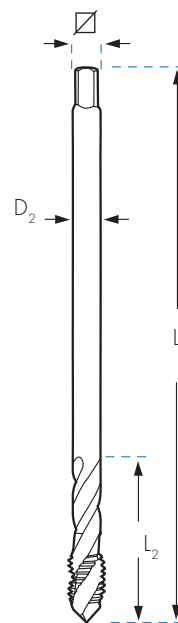
Threading tools





Pink

**B  
FORM****HSSCo  
5%****BRIGHT****TOL  
6H****R  
REINFORCED  
SHANK****DIN  
371****D  
REDUCED  
SHANK****DIN  
376**

			M2L	
			$L_1 \times L_2 \times D_2 \times \square$ mm	<b>B FORM</b> €
M	3x0,50	2,50 R	100 x 10 x 3,5 x 2,7	36,79
M	4x0,70	3,30 R	120 x 12 x 4,5 x 3,4	37,60
M	5x0,80	4,20 R	140 x 14 x 6,0 x 4,9	37,60
M	6x1,00	5,00 R	160 x 16 x 6,0 x 4,9	41,31
M	7x1,00	6,00 R	160 x 17 x 7,0 x 5,5	46,92
M	8x1,25	6,80 R	180 x 18 x 8,0 x 6,2	48,44

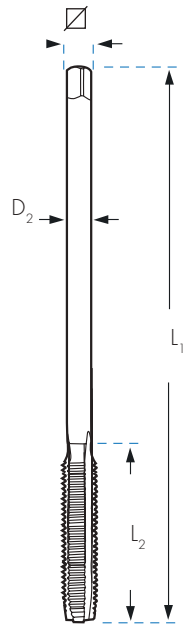
			M2L-D	
			$L_1 \times L_2 \times D_2 \times \square$ mm	€
M	6x1,00	5,00 D	160 x 16 x 4,5 x 3,4	42,89
M	8x1,25	6,80 D	180 x 18 x 6,2 x 5,0	50,32
M	10x1,50	8,50 D	200 x 20 x 7,0 x 5,5	59,63
M	12x1,75	10,20 D	220 x 22 x 8,5 x 6,5	73,37
M	14x2,00	12,00 D	220 x 25 x 10,5 x 8,0	113,86
M	16x2,00	14,00 D	220 x 28 x 12,5 x 10,0	133,94
M	18x2,50	15,50 D	250 x 32 x 14,0 x 11,0	243,71
M	20x2,50	17,50 D	250 x 32 x 16,0 x 12,0	263,40
M	22x2,50	19,50 D	250 x 35 x 18,0 x 14,5	300,30
M	24x3,00	21,00 D	250 x 38 x 18,0 x 14,5	367,21

**35°****HSSCo  
5%****BRIGHT****TOL  
6H****R  
REINFORCED  
SHANK****DIN  
371****D  
REDUCED  
SHANK****DIN  
376**

			M4L	
			$L_1 \times L_2 \times D_2 \times \square$ mm	 €
M	3x0,50	2,50 R	100 x 10 x 3,5 x 2,7	45,52
M	4x0,70	3,30 R	120 x 12 x 4,5 x 3,4	45,52
M	5x0,80	4,20 R	140 x 14 x 6,0 x 4,9	43,61
M	6x1,00	5,00 R	160 x 16 x 6,0 x 4,9	47,84
M	7x1,00	6,00 R	160 x 17 x 7,0 x 5,5	54,31
M	8x1,25	6,80 R	180 x 18 x 8,0 x 6,2	58,13

			M4L-D	
			$L_1 \times L_2 \times D_2 \times \square$ mm	€
M	6x1,00	5,00 D	160 x 16 x 4,5 x 3,4	49,70
M	8x1,25	6,80 D	180 x 18 x 6,2 x 5,0	59,19
M	10x1,50	8,50 D	200 x 20 x 7,0 x 5,5	67,37
M	12x1,75	10,20 D	220 x 22 x 8,5 x 6,5	87,15
M	14x2,00	12,00 D	220 x 25 x 10,5 x 8,0	127,58
M	16x2,00	14,00 D	220 x 28 x 12,5 x 10,0	184,89
M	18x2,50	15,50 D	250 x 32 x 14,0 x 11,0	275,95
M	20x2,50	17,50 D	250 x 32 x 16,0 x 12,0	293,69
M	22x2,50	19,50 D	250 x 25 x 18,0 x 14,5	328,99
M	24x3,00	21,00 D	250 x 32 x 18,0 x 14,5	375,04

**EXTRA-LONG NUT MACHINE TAPS**






**HSSCo**  
5%

**BRIGHT**

**TOL**  
6H

**DIN**  
357

 		$L_1 \times L_2 \times D_2 \times \square$ mm	MTU
			A FORM
			€
M 3x0,50**	2,50	D 70 x 22 x 2,2	24,13
M 4x0,70	3,30	D 90 x 25 x 2,8 x 2,1	24,13
M 5x0,80	4,20	D 100 x 28 x 3,5 x 2,7	24,13
M 6x1,00	5,00	D 110 x 32 x 4,5 x 3,4	24,13
M 8x1,25	6,80	D 125 x 40 x 6,0 x 4,9	29,09
M 10x1,50	8,50	D 140 x 45 x 7,0 x 5,5	28,43
M 12x1,75	10,20	D 180 x 50 x 9,0 x 7,0	34,43
M 14x2,00	12,00	D 200 x 56 x 11,0 x 9,0	54,41
M 16x2,00	14,00	D 200 x 63 x 12,0 x 9,0	67,36
M 18x2,50	15,50	D 220 x 63 x 14,0 x 11,0	90,62
M 20x2,50	17,50	D 250 x 70 x 16,0 x 12,0	127,93*
M 22x2,50	19,50	D 280 x 80 x 18,0 x 14,5	156,96*
M 24x3,00	21,00	D 280 x 80 x 18,0 x 14,5	213,57*

\*\*Cylindrical shank

\*Available until end of stock

Threading tools  
Pink

**BLUE-MASTER**  
by CELESA

CHECK OUR WIDE RANGE OF TOOLS  
TO REPAIR ANY KIND OF THREAD P. 659



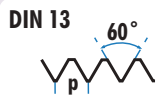
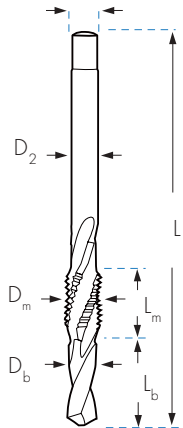
SELF TAPPING  
INSERTS


SOLID INSERTS WITH ANAEROBIC  
THREADLOCKER

SCREW THREAD  
INSERTS

KEY LOCK  
INSERTS

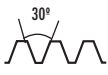
### HSSCo DRILL-TAPS

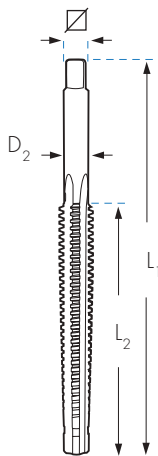

**HSSCo**  
**5%**
**BRIGHT**
**TOL**  
**6H**
**R**  
**REINFORCED**  
**SHANK**
**DIN**  
**371**
**D**  
**REDUCED**  
**SHANK**
**DIN**  
**376**



								M8M	
		L <sub>b</sub> mm	L <sub>m</sub> mm	L <sub>1</sub> mm	D <sub>b</sub> mm	D <sub>m</sub> mm	D <sub>2</sub> mm	∅ mm	€
M 3x0,50	R	9,0	12,5	62,0	2,50	3,0	3,5	2,7	36,99
M 4x0,70	R	10,0	16,0	66,0	3,30	4,0	4,5	3,4	36,99
M 5x0,80	R	12,5	18,0	75,5	4,20	5,0	6,0	4,9	38,44
M 6x1,00	R	14,0	20,0	81,0	5,00	6,0	6,0	4,9	42,45
M 8x1,00	R	20,0	14,0	91,0	7,00	8,0	6,0	4,9	49,83
M 8x1,25	R	20,0	14,0	91,0	6,75	8,0	8,0	6,2	47,86
<b>REDUCED SHANK</b>									
M 8x1,25	D	20,0	14,0	91,0	6,75	8,0	6,0	4,9	51,70
M 10x1,00	D	20,0	15,0	95,0	9,00	10,0	7,0	5,5	61,85
M 10x1,50	D	25,0	18,0	105,0	8,50	10,0	7,0	5,5	65,65
M 12x1,50	D	24,0	18,0	110,0	10,50	12,0	9,0	7,0	71,65
M 12x1,75	D	28,0	20,0	118,0	10,20	12,0	9,0	7,0	71,23
M 14x1,50	D	28,0	20,0	118,0	12,50	14,0	11,0	9,0	113,38
M 14x2,00	D	28,0	22,0	130,0	12,00	14,0	11,0	9,0	128,96
M 16x2,00	D	36,0	24,0	139,0	14,00	16,0	12,0	9,0	169,61
M 18x2,50	D	40,0	26,0	151,0	15,50	18,0	14,0	11,0	247,38
M 20x2,50	D	45,0	30,0	168,0	17,50	20,0	16,0	12,0	355,26

Note: Never use the drill taps in blind hole or through hole deeper than L<sub>b</sub>

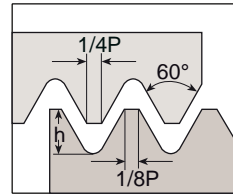
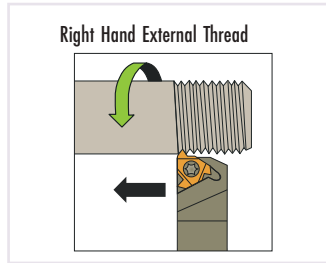
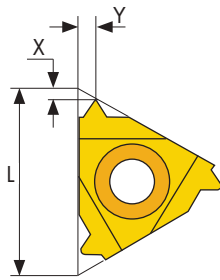
### HSS MACHINE TAPS FOR TRAPEZOIDAL THREADS


**HSS**
**BRIGHT**

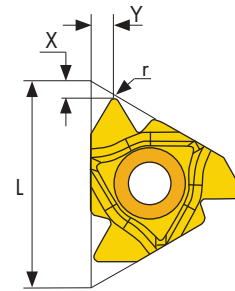
**DIN**  
**103**
**TOL**  
**7H**


			MRTM
		L <sub>1</sub> x L <sub>2</sub> x D <sub>2</sub> x ∅ mm	€
Tr 14 x 3	11,25	160 x 105 x 10,5 x 8,0	570,43
Tr 16 x 4	12,25	205 x 110 x 11,5 x 9,0	593,84
Tr 18 x 4	14,25	215 x 120 x 13,0 x 10,0	626,00
Tr 20 x 4	16,25	230 x 130 x 15,0 x 12,0	628,93
Tr 22 x 5	17,25	270 x 165 x 16,0 x 12,0	827,86
Tr 24 x 5	19,25	280 x 165 x 18,0 x 14,5	939,03
Tr 26 x 5	21,25	290 x 170 x 20,0 x 16,0	971,60
Tr 28 x 5	23,25	300 x 180 x 22,0 x 18,0	1.100,61
Tr 30 x 6	24,25	345 x 200 x 23,0 x 18,0	1.266,65

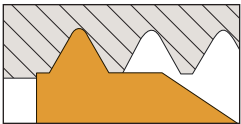
INDEXABLE THREAD TURNING INSERT



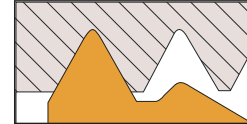
Norm: R262 (DIN 13)  
Class Tolerance: 6g/6H



Full Profile



V-Profile



Form a complete thread, including the crest.  
We'll need a separate insert for each pitch and profile

Doesn't top the thread crests.  
The same insert may be used for a range of pitches with the same thread profile angle

FULL PROFILE 60°

EXTERNAL THREADING	L	PITCH	h	X	Y	€
PRE-16-075	16	0,75	0,46	0,6	0,6	25,56*
PRE-16-100		1,00	0,61	0,7	0,7	25,56*
PRE-16-125		1,25	0,77	0,8	0,9	25,56*
PRE-16-150		1,50	0,92	0,8	1	25,56*
PRE-16-175		1,75	1,07	0,9	1,2	25,56*
PRE-16-200		2,00	1,23	1	1,3	25,56*
PRE-16-250		2,50	1,53	1,1	1,5	25,56*
PRE-16-300		3,00	1,84	1,2	1,6	25,56*

\* Till end of stock

V-PROFILE 60°

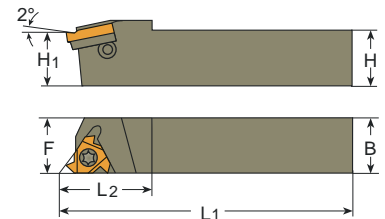
EXTERNAL THREADING	L	METRIC RANGE	INCH RANGE	r	X	Y	€
PPRE-16-150	16	0,50-1,50	48 - 16	0,05	0,80	0,90	25,56*
PPRE-16-300		1,75-3,00	14 - 8	0,27	1,20	1,70	25,56*

\* Till end of stock

TOOL HOLDER FOR EXTERNAL THREADING

EXTERNAL THREADING	H1=H=B=F	L1	L2	€
PEXT-25-16	25	153	30	186,87*

\* Till end of stock



	Cs		Cs
STEEL 70 kg/mm <sup>2</sup>	25 m / min	ALUMINIUM	50 m / min
HARDENED STEEL 120 kg/mm <sup>2</sup>	13 m / min	TITANIUM	18 m / min
STAINLESS STEEL	11 m / min	CAST IRON	25 m / min
		BRASS	50 m / min

**FORMULA TO CALCULATE THE TURNING SPEED OF THE WORKPIECE**

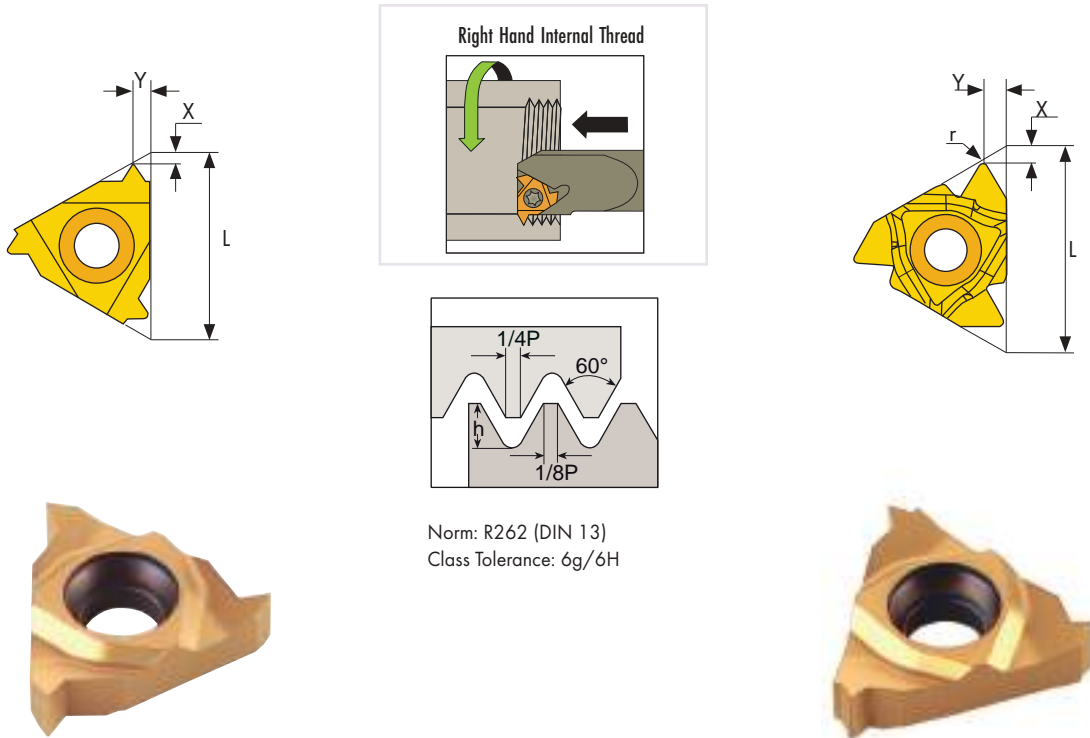
N: Revolution per Minute  
Vc: Cutting Speed (m/min)  
D: Workpiece Diameter (mm)

$$RPM = \frac{1000 \times Vc}{\pi \times D}$$

RPM Depends on Vc and D



**INDEXABLE THREAD TURNING INSERT**



Norm: R262 (DIN 13)  
Class Tolerance: 6g/6H

**FULL PROFILE 60°**

INTERNAL THREADING	L	PITCH	h	X	Y	€
PRI-16-075	16	0,75	0,43	0,6	0,6	25,56*
PRI-16-100		1,00	0,58	0,6	0,7	25,56*
PRI-16-125		1,25	0,72	0,8	0,9	25,56*
PRI-16-150		1,50	0,87	0,8	1,0	25,56*
PRI-16-175		1,75	1,01	0,9	1,2	25,56*
PRI-16-200		2,00	1,15	1,0	1,3	25,56*
PRI-16-250		2,50	1,44	1,1	1,5	25,56*
PRI-16-300		3,00	1,73	1,1	1,5	25,56*

\* Till end of stock

**V-PROFILE 60°**

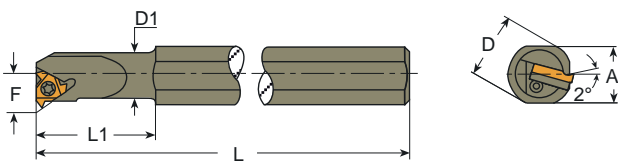
INTERNAL THREADING	L	METRIC RANGE	INCH RANGE	r	X	Y	€
PPRI-16-150	16	0,50-1,50	48 - 16	0,05	0,80	0,90	25,56*
PPRI-16-300		1,75-3,00	14 - 8	0,16	1,20	1,70	25,56*

\* Till end of stock

**TOOL HOLDER FOR INTERNAL THREADING**

INTERNAL THREADING	L	L1	D	D1	A	∅ Min. Hole	€
PINT-20-16	180	40	20	20	18	24	184,18*
PINT-25-16	200	45	25	24,6	22,6	29	225,20*

\* Till end of stock



**MACHINE TAPS FOR GENERAL PURPOSE IN METAL BOXES**

**GENERAL  
PURPOSE**

**HSSCo  
5%**



Ref. JM6



Ref. JM2






Ref. JM8



Ref. JM4

**CONTENT**

	<b>C FORM</b>	<b>B FORM</b>	 <b>15°</b>	 <b>35°</b>	 <b>HSS</b>	<b>HSSCo 5%</b> €
JM5	M3 - M4 - M5 - M6 M8 - M10 - M12	-	-	-	-	106,49
JM1	M3 - M4 - M5 - M6 M8 - M10 - M12	-	-	-	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	127,37
JM6	-	M3 - M4 - M5 - M6 M8 - M10 - M12	-	-	-	113,46
JM2	-	M3 - M4 - M5 - M6 M8 - M10 - M12	-	-	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	127,60
JM7	-	-	M3 - M4 - M5 - M6 M8 - M10 - M12	-	-	141,35
JM3	-	-	M3 - M4 - M5 - M6 M8 - M10 - M12	-	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	168,90
JM8	-	-	-	M3 - M4 - M5 - M6 M8 - M10 - M12	-	143,79
JM4	-	-	-	M3 - M4 - M5 - M6 M8 - M10 - M12	2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	167,10

**MACHINE TAPS FOR SPECIAL APPLICATIONS IN METAL BOXES**
**Plus**



Ref. JMPT2

**CONTENT**

	B FORM	BRIGHT	 35°	BRIGHT	 HSSCo 5%	HSS PM €		TiN €
JMP6	M3 - M4 - M5 - M6 M8 - M10 - M12		-		-	118,23	JMPT6	170,52
JMP2	M3 - M4 - M5 - M6 M8 - M10 - M12		-		2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	155,05	JMPT2	207,48
JMP8	-		M3 - M4 - M5 - M6 M8 - M10 - M12		-	170,52	JMPT8	187,81
JMP4	-		M3 - M4 - M5 - M6 M8 - M10 - M12		2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	207,48	JMPT4	224,89

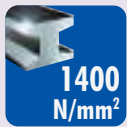
**INOX**
**CONTENT**

	B FORM	OX	 35°	OX	 HSSCo 5%	HSS PM €		TiN €
JMX6	M3 - M4 - M5 - M6 M8 - M10 - M12		-		-	152,53	JMXT6	166,39
JMX2	M3 - M4 - M5 - M6 M8 - M10 - M12		-		2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	189,50	JMXT2	203,36
JMX8	-		M3 - M4 - M5 - M6 M8 - M10 - M12		-	174,07	JMXT8	191,90
JMX4	-		M3 - M4 - M5 - M6 M8 - M10 - M12		2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	211,02	JMXT4	228,85


**1200**  
 N/mm<sup>2</sup>
**CONTENT**

	B FORM	OX	 35°	OX	 HSSCo 5%	HSS V3 €		TINALOX €
JMMD6	M3 - M4 - M5 - M6 M8 - M10 - M12		-		-	138,65	JMMDT6	196,84
JMMD2	M3 - M4 - M5 - M6 M8 - M10 - M12		-		2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	175,61	JMMDT2	233,79
JMMD8	-		M3 - M4 - M5 - M6 M8 - M10 - M12		-	158,24	JMMDT8	226,98
JMMD4	-		M3 - M4 - M5 - M6 M8 - M10 - M12		2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	195,19	JMMDT4	263,93

**MACHINE TAPS FOR SPECIAL APPLICATIONS IN METAL BOXES**



Ref. JMC2

**CONTENT**

	<b>B FORM</b>	<b>TiCN</b>	<b>15°</b>	<b>TiCN</b>	<b>HSSCo 5%</b>	<b>HSS-PM</b> €
JMC6	M3 - M4 - M5 - M6 M8 - M10 - M12		-		-	235,86
JMC2	M3 - M4 - M5 - M6 M8 - M10 - M12		-		2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	272,82
JMC8	-		M3 - M4 - M5 - M6 M8 - M10 - M12		-	268,47
JMC4	-		M3 - M4 - M5 - M6 M8 - M10 - M12		2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	305,43

**ALL ROAD**

**CONTENT**


	<b>B FORM</b>	<b>TiN</b>	<b>35°</b>	<b>TiN</b>	<b>HSSCo 5%</b>	<b>HSSCo 5%</b> €
JMD6	M3 - M4 - M5 - M6 M8 - M10 - M12		-		-	213,14
JMD2	M3 - M4 - M5 - M6 M8 - M10 - M12		-		2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	250,10
JMD8	-		M3 - M4 - M5 - M6 M8 - M10 - M12		-	240,36
JMD4	-		M3 - M4 - M5 - M6 M8 - M10 - M12		2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	277,32

**AI**

**CONTENT**

	<b>INTERRUPTED THREAD</b>	<b>BRIGHT</b>	<b>2 FLUTES</b>	<b>BRIGHT</b>	<b>HSS</b>	<b>HSSCo 5%</b> €
JMAL6	M3 - M4 - M5 - M6 M8 - M10 - M12		-		-	168,76
JMAL2	M3 - M4 - M5 - M6 M8 - M10 - M12		-		2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	205,71
JMAL8	-		M3 - M4 - M5 - M6 M8 - M10 - M12		-	166,88
JMAL4	-		M3 - M4 - M5 - M6 M8 - M10 - M12		2.5 / 3.3 / 4.2 / 5.0 6.8 / 8.5 / 10.2 mm	203,84


**MACHINE TAPS IN PLASTIC BOXES**
**GENERAL  
PURPOSE**
**CONTENT**

	B FORM	BRIGHT	 35°	BRIGHT	HSSCo 5%	€
PT01	M4 - M5 - M6 M8 - M10		M4 - M5 - M6 M8 - M10			129,44



Ref. PT01

**Plus**
**CONTENT**

	B FORM	BRIGHT	 35°	BRIGHT	HSS PM		TiN
					€		€
PT02	M4 - M5 - M6 M8 - M10		M4 - M5 - M6 M8 - M10		162,83	PT03	239,13



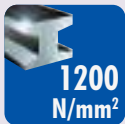
Ref. PT03


**INOX**
**CONTENT**

	B FORM	OX	 35°	OX	HSS PM		TiN
					€		€
PT05	M4 - M5 - M6 M8 - M10		M4 - M5 - M6 M8 - M10		213,95	PT13	227,69



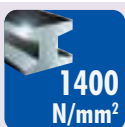
Ref. PT05



**CONTENT**

	B FORM	OX	 35°	OX	HSS V3		TINALOX
					€		€
PT04	M4 - M5 - M6 M8 - M10		M4 - M5 - M6 M8 - M10		183,61	PT14	275,93



Ref. PT04


**CONTENT**

	B FORM	TiCN	 15°	TiCN	HSS PM	€
PT11	M4 - M5 - M6 M8 - M10		M4 - M5 - M6 M8 - M10			332,64



Ref. PT11



**MACHINE TAPS IN PLASTIC BOXES**



Ref. PT06

**CONTENT**

	INTERRUPTED THREAD	2 FLUTES	HSSCo 5% €
PT06	M4 - M5 - M6 M8 - M10	M4 - M5 - M6 M8 - M10	202,99



Ref. PT07

**CONTENT**

	C FORM	HSSCo 5% €
PT07	M4 - M5 - M6 - M8 - M10 M4 - M5 - M6 - M8 - M10	153,41



Ref. PT10


**CONTENT**

	C FORM	HSSCo 5% €
PT10	M4 - M5 - M6 - M8 - M10 M4 - M5 - M6 - M8 - M10	186,49



Ref. PT08

**CONTENT**

		HSSCo 5% €
PT08	M4 - M5 - M6 - M8 - M10 M4 - M5 - M6 - M8 - M10	280,77



Ref. PT09


**CONTENT**

		HSSCo 5% €
PT09	M4 - M5 - M6 - M8 - M10 M4 - M5 - M6 - M8 - M10	378,25



Ref. PT12

**CONTENT**

	B FORM	 35°	HSSCo 5% €
PT12	M4 - M5 - M6 M8 - M10	M4 - M5 - M6 M8 - M10	209,75

**MACHINE TAPS METHACRYLATE DISPLAYS**
**METHACRYLATE DISPLAY**

MM-03

Content: Standard series machine taps

**HSSCo**  
**5%**


Ref. MM-03

**B**  
**FORM**

B Form through holes: Ref. M2

<u>M4</u>	<u>M5</u>	<u>M6</u>	<u>M8</u>	<u>M10</u>	<u>M12</u>	<u>M14</u>
5	10	10	10	10	5	4



35°

35° blind holes: Ref. M4

<u>M4</u>	<u>M5</u>	<u>M6</u>	<u>M8</u>	<u>M10</u>	<u>M12</u>	<u>M14</u>
5	10	10	10	10	5	4

Dimensions: width 240 x depth 240 x height 245 mm.

1.992,33 €



Ref. MM-04

**METHACRYLATE DISPLAY**

MM-04

Content: Plus series machine taps  
Manufactured in powder steel (ASP)
**HSS**  
**PM**
*Plus*
**B**  
**FORM**

B Form through holes: Ref. M2

<u>M4</u>	<u>M5</u>	<u>M6</u>	<u>M8</u>	<u>M10</u>	<u>M12</u>	<u>M14</u>
5	10	10	10	10	5	4



35°

35° blind holes: Ref. M4

<u>M4</u>	<u>M5</u>	<u>M6</u>	<u>M8</u>	<u>M10</u>	<u>M12</u>	<u>M14</u>
5	10	10	10	10	5	4

Dimensions: width 240 x depth 240 x height 245 mm.

2.718,13 €

**METHACRYLATE DISPLAY**

MM-05

Content: Machine taps for special works

**B**  
**FORM**

B Form through holes: Ref. M2

1200  
N/mm<sup>2</sup>

<u>M4</u>	<u>M5</u>	<u>M6</u>	<u>M8</u>	<u>M10</u>	<u>M12</u>	<u>M14</u>
1	2	2	2	2	1	1



INOX

<u>M4</u>	<u>M5</u>	<u>M6</u>	<u>M8</u>	<u>M10</u>	<u>M12</u>	<u>M14</u>
1	2	2	2	2	1	1



AI

<u>M4</u>	<u>M5</u>	<u>M6</u>	<u>M8</u>	<u>M10</u>	<u>M12</u>	<u>M14</u>
1	2	2	2	2	1	1



TiN

<u>M4</u>	<u>M5</u>	<u>M6</u>	<u>M8</u>	<u>M10</u>	<u>M12</u>	<u>M14</u>
1	2	2	2	2	1	1

1400  
N/mm<sup>2</sup>

<u>M4</u>	<u>M5</u>	<u>M6</u>	<u>M8</u>	<u>M10</u>	<u>M12</u>
1	2	2	2	2	1



35°

35° blind holes: Ref. M4

1200  
N/mm<sup>2</sup>

<u>M4</u>	<u>M5</u>	<u>M6</u>	<u>M8</u>	<u>M10</u>	<u>M12</u>	<u>M14</u>
1	2	2	2	2	1	1



INOX

<u>M4</u>	<u>M5</u>	<u>M6</u>	<u>M8</u>	<u>M10</u>	<u>M12</u>	<u>M14</u>
1	2	2	2	2	1	1



AI

<u>M4</u>	<u>M5</u>	<u>M6</u>	<u>M8</u>	<u>M10</u>	<u>M12</u>	<u>M14</u>
1	2	2	2	2	1	1



TiN

<u>M4</u>	<u>M5</u>	<u>M6</u>	<u>M8</u>	<u>M10</u>	<u>M12</u>	<u>M14</u>
1	2	2	2	2	1	1

1400  
N/mm<sup>2</sup>

<u>M4</u>	<u>M5</u>	<u>M6</u>	<u>M8</u>	<u>M10</u>	<u>M12</u>
1	2	2	2	2	1

Dimensions: width 240 x depth 240 x height 245 mm.

3.395,23 €

# THREAD GAUGES

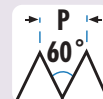


**BLUE-MASTER<sup>®</sup>**  
*by CELESA*

CUTTING TECHNOLOGIES

**M/MF THREAD PLUG GAUGES**
**M**  
**MF**

 Ref. CT GO / NO GO  
 Ref. CTP GO  
 Ref. CTNP NO GO

**DIN**  
**13**
**DIN/ISO**  
**1502**
**TOL**  
**6H**

**X210**  
**Cr12**

Ref. CT



\* Calibration certificate included in the price.

	GO / NO GO	CT	GO	CTP	NO GO	CTNP
		€		€		€
M 1,1x0,25	CTM01,1x0,25	295,33*	CTPM01,1x0,25	-	CTNPM01,1x0,25	-
M 1,2x0,25	CTM01,2x0,25	295,33*	CTPM01,2x0,25	-	CTNPM01,2x0,25	-
M 1,4x0,30	CTM01,4x0,30	295,33*	CTPM01,4x0,30	-	CTNPM01,4x0,30	-
M 1,6x0,35	CTM01,6x0,35	158,23	CTPM01,6x0,35	-	CTNPM01,6x0,35	-
M 1,8x0,35	CTM01,8x0,35	137,94	CTPM01,8x0,35	-	CTNPM01,8x0,35	-
M 2x0,40	CTM02x0,40	147,68	CTPM02x0,40	-	CTNPM02x0,40	-
M 2,2x0,45	CTM02,2x0,45	151,19	CTPM02,2x0,45	-	CTNPM02,2x0,45	-
M 2,3x0,40	CTM02,3x0,40	153,71	CTPM02,3x0,40	-	CTNPM02,3x0,40	-
M 2,5x0,45	CTM02,5x0,45	146,67	CTPM02,5x0,45	-	CTNPM02,5x0,45	-
M 2,6x0,45	CTM02,6x0,45	149,35	CTPM02,6x0,45	-	CTNPM02,6x0,45	-
M 3x0,50	CTM03x0,50	119,56	CTPM03x0,50	-	CTNPM03x0,50	-
M 3,5x0,60	CTM03,5x0,60	116,02	CTPM03,5x0,60	-	CTNPM03,5x0,60	-
M 4x0,50	CTM04x0,50	135,73	CTPM04x0,50	-	CTNPM04x0,50	-
M 4x0,70	CTM04x0,70	112,53	CTPM04x0,70	-	CTNPM04x0,70	-
M 4,5x0,75	CTM04,5x0,75	157,40	CTPM04,5x0,75	-	CTNPM04,5x0,75	-
M 5x0,50	CTM05x0,50	141,77	CTPM05x0,50	-	CTNPM05x0,50	-
M 5x0,75	CTM05x0,75	154,71	CTPM05x0,75	-	CTNPM05x0,75	-
M 5x0,80	CTM05x0,80	109,00	CTPM05x0,80	-	CTNPM05x0,80	-
M 6x0,50	CTM06x0,50	141,77	CTPM06x0,50	-	CTNPM06x0,50	-
M 6x0,75	CTM06x0,75	147,68	CTPM06x0,75	-	CTNPM06x0,75	-
M 6x1,00	CTM06x1,00	105,48	CTPM06x1,00	-	CTNPM06x1,00	-
M 7x0,75	CTM07x0,75	151,19	CTPM07x0,75	-	CTNPM07x0,75	-
M 7x1,00	CTM07x1,00	121,31	CTPM07x1,00	-	CTNPM07x1,00	-
M 8x0,50	CTM08x0,50	141,77	CTPM08x0,50	-	CTNPM08x0,50	-
M 8x0,75	CTM08x0,75	154,71	CTPM08x0,75	-	CTNPM08x0,75	-
M 8x1,00	CTM08x1,00	129,83	CTPM08x1,00	-	CTNPM08x1,00	-
M 8x1,25	CTM08x1,25	109,00	CTPM08x1,25	-	CTNPM08x1,25	-
M 9x1,00	CTM09x1,00	140,65	CTPM09x1,00	-	CTNPM09x1,00	-
M 9x1,25	CTM09x1,25	112,53	CTPM09x1,25	-	CTNPM09x1,25	-
M 10x0,75	CTM10x0,75	161,75	CTPM10x0,75	-	CTNPM10x0,75	-
M 10x1,00	CTM10x1,00	147,68	CTPM10x1,00	-	CTNPM10x1,00	-
M 10x1,25	CTM10x1,25	151,19	CTPM10x1,25	-	CTNPM10x1,25	-
M 10x1,50	CTM10x1,50	116,02	CTPM10x1,50	-	CTNPM10x1,50	-
M 11x1,00	CTM11x1,00	154,71	CTPM11x1,00	-	CTNPM11x1,00	-
M 11x1,50	CTM11x1,50	119,56	CTPM11x1,50	-	CTNPM11x1,50	-
M 12x0,75	CTM12x0,75	168,78	CTPM12x0,75	-	CTNPM12x0,75	-
M 12x1,00	CTM12x1,00	157,18	CTPM12x1,00	-	CTNPM12x1,00	-

\* Till end of stock

**M/MF THREAD PLUG GAUGES**

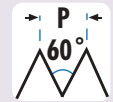


Ref. CT GO / NO GO  
Ref. CTP GO  
Ref. CTNP NO GO

**DIN 13**

**DIN/ISO 1502**

**TOL 6H**



**X210 Cr12**



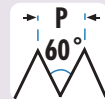
\* Calibration certificate included in the price.

	CT	€	CTP	€	CTNP	€
M 12x1,25	CTM12x1,25	165,27	CTPM12x1,25	-	CTNPM12x1,25	-
M 12x1,50	CTM12x1,50	140,65	CTPM12x1,50	-	CTNPM12x1,50	-
M 12x1,75	CTM12x1,75	123,07	CTPM12x1,75	-	CTNPM12x1,75	-
M 13x1,00	CTM13x1,00	165,27	CTPM13x1,00	-	CTNPM13x1,00	-
M 13x1,50	CTM13x1,50	151,19	CTPM13x1,50	-	CTNPM13x1,50	-
M 14x1,00	CTM14x1,00	168,78	CTPM14x1,00	-	CTNPM14x1,00	-
M 14x1,25	CTM14x1,25	165,27	CTPM14x1,25	-	CTNPM14x1,25	-
M 14x1,50	CTM14x1,50	154,71	CTPM14x1,50	-	CTNPM14x1,50	-
M 14x2,00	CTM14x2,00	130,11	CTPM14x2,00	-	CTNPM14x2,00	-
M 15x1,00	CTM15x1,00	172,29	CTPM15x1,00	-	CTNPM15x1,00	-
M 15x1,50	CTM15x1,50	161,75	CTPM15x1,50	-	CTNPM15x1,50	-
M 16x1,00	CTM16x1,00	182,84	CTPM16x1,00	-	CTNPM16x1,00	-
M 16x1,50	CTM16x1,50	165,27	CTPM16x1,50	-	CTNPM16x1,50	-
M 16x2,00	CTM16x2,00	144,16	CTPM16x2,00	-	CTNPM16x2,00	-
M 18x1,00	CTM18x1,00	168,12	CTPM18x1,00	-	CTNPM18x1,00	-
M 18x1,50	CTM18x1,50	172,29	CTPM18x1,50	-	CTNPM18x1,50	-
M 18x2,00	CTM18x2,00	172,29	CTPM18x2,00	-	CTNPM18x2,00	-
M 18x2,50	CTM18x2,50	154,71	CTPM18x2,50	-	CTNPM18x2,50	-
M 20x1,00	CTM20x1,00	200,44	CTPM20x1,00	-	CTNPM20x1,00	-
M 20x1,50	CTM20x1,50	182,84	CTPM20x1,50	-	CTNPM20x1,50	-
M 20x2,00	CTM20x2,00	182,84	CTPM20x2,00	-	CTNPM20x2,00	-
M 20x2,50	CTM20x2,50	165,27	CTPM20x2,50	-	CTNPM20x2,50	-
M 22x1,00	CTM22x1,00	214,32	CTPM22x1,00	-	CTNPM22x1,00	-
M 22x1,50	CTM22x1,50	197,58	CTPM22x1,50	-	CTNPM22x1,50	-
M 22x2,00	CTM22x2,00	207,46	CTPM22x2,00	-	CTNPM22x2,00	-
M 22x2,50	CTM22x2,50	175,80	CTPM22x2,50	-	CTNPM22x2,50	-
M 24x1,00	CTM24x1,00	228,17	CTPM24x1,00	-	CTNPM24x1,00	-
M 24x1,50	CTM24x1,50	207,62	CTPM24x1,50	-	CTNPM24x1,50	-
M 24x2,00	CTM24x2,00	207,62	CTPM24x2,00	-	CTNPM24x2,00	-
M 24x3,00	CTM24x3,00	196,91	CTPM24x3,00	-	CTNPM24x3,00	-
M 25x1,00	CTM25x1,00	234,41	CTPM25x1,00	-	CTNPM25x1,00	-
M 25x1,50	CTM25x1,50	214,32	CTPM25x1,50	-	CTNPM25x1,50	-
M 25x2,00	CTM25x2,00	214,32	CTPM25x2,00	-	CTNPM25x2,00	-
M 26x1,00	CTM26x1,00	256,67	CTPM26x1,00	-	CTNPM26x1,00	-
M 26x1,50	CTM26x1,50	232,07	CTPM26x1,50	-	CTNPM26x1,50	-
M 26x2,00	CTM26x2,00	232,07	CTPM26x2,00	-	CTNPM26x2,00	-
M 27x1,00	CTM27x1,00	253,44	CTPM27x1,00	-	CTNPM27x1,00	-
M 27x1,50	CTM27x1,50	232,88	CTPM27x1,50	-	CTNPM27x1,50	-
M 27x2,00	CTM27x2,00	232,88	CTPM27x2,00	-	CTNPM27x2,00	-
M 27x3,00	CTM27x3,00	222,96	CTPM27x3,00	-	CTNPM27x3,00	-
M 28x1,50	CTM28x1,50	246,14	CTPM28x1,50	-	CTNPM28x1,50	-
M 28x2,00	CTM28x2,00	246,14	CTPM28x2,00	-	CTNPM28x2,00	-
M 30x1,00	CTM30x1,00	271,43	CTPM30x1,00	-	CTNPM30x1,00	-
M 30x1,50	CTM30x1,50	256,87	CTPM30x1,50	-	CTNPM30x1,50	-
M 30x2,00	CTM30x2,00	256,87	CTPM30x2,00	-	CTNPM30x2,00	-
M 30x3,00	CTM30x3,00	291,11	CTPM30x3,00	-	CTNPM30x3,00	-
M 30x3,50	CTM30x3,50	244,53	CTPM30x3,50	-	CTNPM30x3,50	-
M 32x1,00	CTM32x1,00	271,71	CTPM32x1,00	-	CTNPM32x1,00	-
M 32x1,50	CTM32x1,50	246,14	CTPM32x1,50	-	CTNPM32x1,50	-






**M/MF THREAD PLUG GAUGES**
**M**  
**MF**

 Ref. CT GO / NO GO  
 Ref. CTP GO  
 Ref. CTNP NO GO

**DIN**  
**13**
**DIN/ISO**  
**1502**
**TOL**  
**6H**

**X210**  
**Cr12**


\* Calibration certificate included in the price.

	 GO / NO GO	CT		CTP		CTNP	
		€	 GO	€	 NO GO	€	
M 32x2,00	CTM32x2,00	246,14	CTPM32x2,00	-	CTNPM32x2,00	-	
M 33x1,00	CTM33x1,00	285,28	CTPM33x1,00	-	CTNPM33x1,00	-	
M 33x1,50	CTM33x1,50	270,56	CTPM33x1,50	-	CTNPM33x1,50	-	
M 33x2,00	CTM33x2,00	270,56	CTPM33x2,00	-	CTNPM33x2,00	-	
M 33x3,00	CTM33x3,00	285,28	CTPM33x3,00	-	CTNPM33x3,00	-	
M 33x3,50	CTM33x3,50	269,70	CTPM33x3,50	-	CTNPM33x3,50	-	
M 34x1,50	CTM34x1,50	262,12	CTPM34x1,50	-	CTNPM34x1,50	-	
M 34x2,00	CTM34x2,00	262,12	CTPM34x2,00	-	CTNPM34x2,00	-	
M 35x1,00	CTM35x1,00	290,89	CTPM35x1,00	-	CTNPM35x1,00	-	
M 35x1,50	CTM35x1,50	265,31	CTPM35x1,50	-	CTNPM35x1,50	-	
M 35x2,00	CTM35x2,00	265,31	CTPM35x2,00	-	CTNPM35x2,00	-	
M 36x1,00	CTM36x1,00	306,87	CTPM36x1,00	-	CTNPM36x1,00	-	
M 36x1,50	CTM36x1,50	291,11	CTPM36x1,50	-	CTNPM36x1,50	-	
M 36x2,00	CTM36x2,00	291,11	CTPM36x2,00	-	CTNPM36x2,00	-	
M 36x4,00	CTM36x4,00	291,29	CTPM36x4,00	-	CTNPM36x4,00	-	
M 38x1,00	CTM38x1,00	319,65	CTPM38x1,00	-	CTNPM38x1,00	-	
M 38x1,50	CTM38x1,50	290,89	CTPM38x1,50	-	CTNPM38x1,50	-	
M 38x2,00	CTM38x2,00	290,89	CTPM38x2,00	-	CTNPM38x2,00	-	
M 39x1,00	CTM39x1,00	333,07	CTPM39x1,00	-	CTNPM39x1,00	-	
M 39x1,50	CTM39x1,50	315,09	CTPM39x1,50	-	CTNPM39x1,50	-	
M 39x2,00	CTM39x2,00	315,09	CTPM39x2,00	-	CTNPM39x2,00	-	
M 39x3,00	CTM39x3,00	333,07	CTPM39x3,00	-	CTNPM39x3,00	-	
M 39x4,00	CTM39x4,00	320,06	CTPM39x4,00	-	CTNPM39x4,00	-	
M 40x1,00	CTM40x1,00	314,63	CTPM40x1,00	-	CTNPM40x1,00	-	
M 40x1,50	CTM40x1,50	298,34	CTPM40x1,50	-	CTNPM40x1,50	-	
M 40x2,00	CTM40x2,00	298,34	CTPM40x2,00	-	CTNPM40x2,00	-	
M 40x3,00	CTM40x3,00	314,63	CTPM40x3,00	-	CTNPM40x3,00	-	
M 42x1,00	CTM42x1,00	370,40	CTPM42x1,00	-	CTNPM42x1,00	-	
M 42x1,50	CTM42x1,50	363,20	CTPM42x1,50	-	CTNPM42x1,50	-	
M 42x2,00	CTM42x2,00	363,20	CTPM42x2,00	-	CTNPM42x2,00	-	
M 42x3,00	CTM42x3,00	365,27	CTPM42x3,00	-	CTNPM42x3,00	-	
M 42x4,50	CTM42x4,50	377,60	CTPM42x4,50	-	CTNPM42x4,50	-	
M 45x1,00	CTM45x1,00	343,25	CTPM45x1,00	-	CTNPM45x1,00	-	
M 45x1,50	CTM45x1,50	335,63	CTPM45x1,50	-	CTNPM45x1,50	-	
M 45x2,00	CTM45x2,00	336,10	CTPM45x2,00	-	CTNPM45x2,00	-	
M 45x3,00	CTM45x3,00	337,91	CTPM45x3,00	-	CTNPM45x3,00	-	
M 45x4,00	CTM45x4,00	428,33	CTPM45x4,00	-	CTNPM45x4,00	-	
M 45x4,50	CTM45x4,50	-	CTPM45x4,50	228,88	CTNPM45x4,50	228,88	
M 48x1,00	CTM48x1,00	449,33	CTPM48x1,00	-	CTNPM48x1,00	-	
M 48x1,50	CTM48x1,50	354,82	CTPM48x1,50	-	CTNPM48x1,50	-	
M 48x2,00	CTM48x2,00	361,20	CTPM48x2,00	-	CTNPM48x2,00	-	
M 48x3,00	CTM48x3,00	399,57	CTPM48x3,00	-	CTNPM48x3,00	-	
M 48x4,00	CTM48x4,00	453,90	CTPM48x4,00	-	CTNPM48x4,00	-	
M 48x5,00	CTM48x5,00	-	CTPM48x5,00	248,62	CTNPM48x5,00	248,62	
M 50x1,00	CTM50x1,00	465,78	CTPM50x1,00	-	CTNPM50x1,00	-	
M 50x1,50	CTM50x1,50	370,81	CTPM50x1,50	-	CTNPM50x1,50	-	
M 50x2,00	CTM50x2,00	377,18	CTPM50x2,00	-	CTNPM50x2,00	-	
M 50x3,00	CTM50x3,00	418,74	CTPM50x3,00	-	CTNPM50x3,00	-	
M 52x1,00	CTM52x1,00	490,44	CTPM52x1,00	-	CTNPM52x1,00	-	

**M/MF THREAD PLUG GAUGES**



Ref. CT GO / NO GO  
Ref. CTP GO  
Ref. CTNP NO GO

**DIN 13** **DIN/ISO 1502** **TOL 6H** **X210 Cr12**

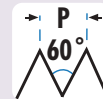


\* Calibration certificate included in the price.

	GO / NO GO	CT		CTP		CTNP	
		€	GO	€	NO GO	€	
M 52x1,50	CTM52x1,50	383,58	CTPM52x1,50	-	CTNPM52x1,50	-	
M 52x2,00	CTM52x2,00	396,37	CTPM52x2,00	-	CTNPM52x2,00	-	
M 52x3,00	CTM52x3,00	441,12	CTPM52x3,00	-	CTNPM52x3,00	-	
M 52x4,00	CTM52x4,00	427,42	CTPM52x4,00	-	CTNPM52x4,00	-	
M 52x5,00	CTM52x5,00	-	CTPM52x5,00	264,41	CTNPM52x5,00	264,41	
M 55x1,00	CTM55x1,00	520,58	CTPM55x1,00	-	CTNPM55x1,00	-	
M 55x1,50	CTM55x1,50	396,37	CTPM55x1,50	-	CTNPM55x1,50	-	
M 55x2,00	CTM55x2,00	418,74	CTPM55x2,00	-	CTNPM55x2,00	-	
M 55x3,00	CTM55x3,00	422,25	CTPM55x3,00	-	CTNPM55x3,00	-	
M 55x4,00	CTM55x4,00	474,30	CTPM55x4,00	-	CTNPM55x4,00	-	
M 56x1,00	CTM56x1,00	-	CTPM56x1,00	339,79	CTNPM56x1,00	339,79	
M 56x1,50	CTM56x1,50	-	CTPM56x1,50	306,63	CTNPM56x1,50	306,63	
M 56x2,00	CTM56x2,00	-	CTPM56x2,00	306,63	CTNPM56x2,00	306,63	
M 56x3,00	CTM56x3,00	-	CTPM56x3,00	339,79	CTNPM56x3,00	339,79	
M 56x4,00	CTM56x4,00	-	CTPM56x4,00	339,79	CTNPM56x4,00	339,79	
M 56x5,50	CTM56x5,50	-	CTPM56x5,50	306,63	CTNPM56x5,50	306,63	
M 58x1,00	CTM58x1,00	-	CTPM58x1,00	352,22	CTNPM58x1,00	352,22	
M 58x1,50	CTM58x1,50	-	CTPM58x1,50	310,78	CTNPM58x1,50	310,78	
M 58x2,00	CTM58x2,00	-	CTPM58x2,00	310,78	CTNPM58x2,00	310,78	
M 58x3,00	CTM58x3,00	-	CTPM58x3,00	352,22	CTNPM58x3,00	352,22	
M 60x1,00	CTM60x1,00	-	CTPM60x1,00	364,64	CTNPM60x1,00	364,64	
M 60x1,50	CTM60x1,50	-	CTPM60x1,50	327,34	CTNPM60x1,50	327,34	
M 60x2,00	CTM60x2,00	-	CTPM60x2,00	327,34	CTNPM60x2,00	327,34	
M 60x3,00	CTM60x3,00	-	CTPM60x3,00	364,64	CTNPM60x3,00	364,64	
M 60x4,00	CTM60x4,00	-	CTPM60x4,00	364,64	CTNPM60x4,00	364,64	
M 60x5,50	CTM60x5,50	-	CTPM60x5,50	327,34	CTNPM60x5,50	327,34	
M 62x1,00	CTM62x1,00	-	CTPM62x1,00	377,08	CTNPM62x1,00	377,08	
M 62x1,50	CTM62x1,50	-	CTPM62x1,50	339,79	CTNPM62x1,50	339,79	
M 62x2,00	CTM62x2,00	-	CTPM62x2,00	339,79	CTNPM62x2,00	339,79	
M 62x3,00	CTM62x3,00	-	CTPM62x3,00	377,08	CTNPM62x3,00	377,08	
M 64x1,00	CTM64x1,00	-	CTPM64x1,00	381,23	CTNPM64x1,00	381,23	
M 64x1,50	CTM64x1,50	-	CTPM64x1,50	352,22	CTNPM64x1,50	352,22	
M 64x2,00	CTM64x2,00	-	CTPM64x2,00	352,22	CTNPM64x2,00	352,22	
M 64x3,00	CTM64x3,00	-	CTPM64x3,00	381,23	CTNPM64x3,00	381,23	
M 64x4,00	CTM64x4,00	-	CTPM64x4,00	381,23	CTNPM64x4,00	381,23	
M 64x6,00	CTM64x6,00	-	CTPM64x6,00	360,51	CTNPM64x6,00	360,51	
M 65x1,00	CTM65x1,00	-	CTPM65x1,00	389,50	CTNPM65x1,00	389,50	
M 65x2,00	CTM65x2,00	-	CTPM65x2,00	364,64	CTNPM65x2,00	364,64	
M 65x3,00	CTM65x3,00	-	CTPM65x3,00	389,50	CTNPM65x3,00	389,50	
M 68x1,00	CTM68x1,00	-	CTPM68x1,00	410,22	CTNPM68x1,00	410,22	
M 68x1,50	CTM68x1,50	-	CTPM68x1,50	377,08	CTNPM68x1,50	377,08	
M 68x2,00	CTM68x2,00	-	CTPM68x2,00	377,08	CTNPM68x2,00	377,08	
M 68x3,00	CTM68x3,00	-	CTPM68x3,00	410,22	CTNPM68x3,00	410,22	
M 68x4,00	CTM68x4,00	-	CTPM68x4,00	410,22	CTNPM68x4,00	410,22	
M 68x6,00	CTM68x6,00	-	CTPM68x6,00	377,08	CTNPM68x6,00	377,08	
M 70x1,00	CTM70x1,00	-	CTPM70x1,00	426,80	CTNPM70x1,00	426,80	
M 70x1,50	CTM70x1,50	-	CTPM70x1,50	389,50	CTNPM70x1,50	389,50	

**M/MF THREAD PLUG GAUGES**
**M**  
**MF**

 Ref. CT GO / NO GO  
 Ref. CTP GO  
 Ref. CTNP NO GO

**DIN**  
**13**
**DIN/ISO**  
**1502**
**TOL**  
**6H**

**X210**  
**Cr12**


\* Calibration certificate included in the price.

	GO / NO GO	CT		CTP		CTNP	
		€	GO	€	NO GO	€	
M 70x2,00	CTM70x2,00	-	CTPM70x2,00	389,50	CTNPM70x2,00	389,50	
M 70x3,00	CTM70x3,00	-	CTPM70x3,00	426,80	CTNPM70x3,00	426,80	
M 70x4,00	CTM70x4,00	-	CTPM70x4,00	426,80	CTNPM70x4,00	426,80	
M 70x6,00	CTM70x6,00	-	CTPM70x6,00	464,09	CTNPM70x6,00	464,09	
M 72x1,00	CTM72x1,00	-	CTPM72x1,00	435,09	CTNPM72x1,00	435,09	
M 72x1,50	CTM72x1,50	-	CTPM72x1,50	397,79	CTNPM72x1,50	397,79	
M 72x2,00	CTM72x2,00	-	CTPM72x2,00	397,79	CTNPM72x2,00	397,79	
M 72x3,00	CTM72x3,00	-	CTPM72x3,00	435,09	CTNPM72x3,00	435,09	
M 72x4,00	CTM72x4,00	-	CTPM72x4,00	435,09	CTNPM72x4,00	435,09	
M 72x6,00	CTM72x6,00	-	CTPM72x6,00	472,37	CTNPM72x6,00	472,37	
M 75x1,00	CTM75x1,00	-	CTPM75x1,00	459,94	CTNPM75x1,00	459,94	
M 75x1,50	CTM75x1,50	-	CTPM75x1,50	414,37	CTNPM75x1,50	414,37	
M 75x2,00	CTM75x2,00	-	CTPM75x2,00	414,37	CTNPM75x2,00	414,37	
M 75x3,00	CTM75x3,00	-	CTPM75x3,00	459,94	CTNPM75x3,00	459,94	
M 75x4,00	CTM75x4,00	-	CTPM75x4,00	459,94	CTNPM75x4,00	459,94	
M 76x1,00	CTM76x1,00	-	CTPM76x1,00	459,94	CTNPM76x1,00	459,94	
M 76x1,50	CTM76x1,50	-	CTPM76x1,50	418,51	CTNPM76x1,50	418,51	
M 76x2,00	CTM76x2,00	-	CTPM76x2,00	418,51	CTNPM76x2,00	418,51	
M 76x3,00	CTM76x3,00	-	CTPM76x3,00	459,94	CTNPM76x3,00	459,94	
M 76x4,00	CTM76x4,00	-	CTPM76x4,00	459,94	CTNPM76x4,00	459,94	
M 76x6,00	CTM76x6,00	-	CTPM76x6,00	484,81	CTNPM76x6,00	484,81	
M 80x1,00	CTM80x1,00	-	CTPM80x1,00	484,81	CTNPM80x1,00	484,81	
M 80x1,50	CTM80x1,50	-	CTPM80x1,50	443,39	CTNPM80x1,50	443,39	
M 80x2,00	CTM80x2,00	-	CTPM80x2,00	443,39	CTNPM80x2,00	443,39	
M 80x3,00	CTM80x3,00	-	CTPM80x3,00	484,81	CTNPM80x3,00	484,81	
M 80x4,00	CTM80x4,00	-	CTPM80x4,00	484,81	CTNPM80x4,00	484,81	
M 80x6,00	CTM80x6,00	-	CTPM80x6,00	517,97	CTNPM80x6,00	517,97	
M 85x1,50	CTM85x1,50	-	CTPM85x1,50	472,37	CTNPM85x1,50	472,37	
M 85x2,00	CTM85x2,00	-	CTPM85x2,00	472,37	CTNPM85x2,00	472,37	
M 85x3,00	CTM85x3,00	-	CTPM85x3,00	517,97	CTNPM85x3,00	517,97	
M 85x4,00	CTM85x4,00	-	CTPM85x4,00	517,97	CTNPM85x4,00	517,97	
M 85x6,00	CTM85x6,00	-	CTPM85x6,00	551,11	CTNPM85x6,00	551,11	
M 90x1,50	CTM90x1,50	-	CTPM90x1,50	497,25	CTNPM90x1,50	497,25	
M 90x2,00	CTM90x2,00	-	CTPM90x2,00	497,25	CTNPM90x2,00	497,25	
M 90x3,00	CTM90x3,00	-	CTPM90x3,00	542,82	CTNPM90x3,00	542,82	
M 90x4,00	CTM90x4,00	-	CTPM90x4,00	542,82	CTNPM90x4,00	542,82	
M 90x6,00	CTM90x6,00	-	CTPM90x6,00	588,41	CTNPM90x6,00	588,41	
M 95x1,50	CTM95x1,50	-	CTPM95x1,50	522,10	CTNPM95x1,50	522,10	
M 95x2,00	CTM95x2,00	-	CTPM95x2,00	522,10	CTNPM95x2,00	522,10	
M 95x4,00	CTM95x4,00	-	CTPM95x4,00	575,97	CTNPM95x4,00	575,97	
M 95x6,00	CTM95x6,00	-	CTPM95x6,00	621,54	CTNPM95x6,00	621,54	
M 100x1,50	CTM100x1,50	-	CTPM100x1,50	551,11	CTNPM100x1,50	551,11	
M 100x2,00	CTM100x2,00	-	CTPM100x2,00	551,11	CTNPM100x2,00	551,11	
M 100x3,00	CTM100x3,00	-	CTPM100x3,00	604,98	CTNPM100x3,00	604,98	
M 100x4,00	CTM100x4,00	-	CTPM100x4,00	604,98	CTNPM100x4,00	604,98	
M 100x6,00	CTM100x6,00	-	CTPM100x6,00	658,83	CTNPM100x6,00	658,83	

M/MF THREAD PLUG GAUGES SPECIAL TOLERANCES



Ref. CTI  
Ref. CT..-6G  
Ref. CT..-6E GO / NO GO

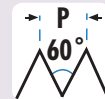
DIN  
13

DIN/ISO  
1502

TOL  
6H (left hand)

TOL  
6G

TOL  
6E



X210  
Cr12

Ref. CT



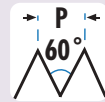
\* Calibration certificate included in the price.

	GO / NO GO	CTI	GO / NO GO	CT..-6G	GO / NO GO	CT..-6E
		TOL 6H (left hand) €		TOL 6G €		TOL 6E €
M 1x0,25	CTIM01x0,25	-	CTM01x0,25-6G	-		-
M 1,1x0,25	CTIM01,1x0,25	763,65	CTM01,1x0,25-6G	504,24		-
M 1,4x0,30	CTIM01,4x0,30	713,48	CTM01,4x0,30-6G	471,12		-
M 2x0,40	CTIM02x0,40	234,11	CTM02x0,40-6G	154,59		-
M 2,2x0,45	CTIM02,2x0,45	-	CTM02,2x0,45-6G	231,89		-
M 2,3x0,40	CTIM02,3x0,40	434,76	CTM02,3x0,40-6G	287,07		-
M 2,5x0,45	CTIM02,5x0,45	200,66	CTM02,5x0,45-6G	173,90		-
M 2,6x0,45	CTIM02,6x0,45	289,84	CTM02,6x0,45-6G	251,21		-
M 3x0,50	CTIM03x0,50	189,51	CTM03x0,50-6G	164,25	CTM03x0,50-6E	189,51
M 3,5x0,60	CTIM03,5x0,60	183,95	CTM03,5x0,60-6G	159,43		-
M 4x0,70	CTIM04x0,70	178,36	CTM04x0,70-6G	154,56	CTM04x0,70-6E	178,36
M 4,5x0,75	CTIM04,5x0,75	261,99	CTM04,5x0,75-6G	227,06		-
M 5x0,80	CTIM05x0,80	172,80	CTM05x0,80-6G	149,74	CTM05x0,80-6E	172,80
M 6x1,00	CTIM06x1,00	168,38	CTM06x1,00-6G	144,91	CTM06x1,00-6E	167,23
M 7x1,00	CTIM07x1,00	168,38	CTM07x1,00-6G	144,91		-
M 08x1,00	CTIM08x1,00	-	CTM08x1,00-6G	-		-
M 08x1,25	CTIM08x1,25	172,80	CTM08x1,25-6G	149,74	CTM08x1,25-6E	172,80
M 10x1,00	CTIM10x1,00	-	CTM10x1,00-6G	-		-
M 10x1,25	CTIM10x1,25	-	CTM10x1,25-6G	-		-
M 10x1,50	CTIM10x1,50	183,95	CTM10x1,50-6G	159,43	CTM10x1,50-6E	184,49
M 11x1,50	CTIM11x1,50	-	CTM11x1,50-6G	-		-
M 12x1,00	CTIM12x1,00	-	CTM12x1,00-6G	-		-
M 12x1,25	CTIM12x1,25	-	CTM12x1,25-6G	-		-
M 12x1,50	CTIM12x1,50	-	CTM12x1,50-6G	-		-
M 12x1,75	CTIM12x1,75	197,10	CTM12x1,75-6G	168,87		-
M 14x1,25	CTIM14x1,25	-	CTM14x1,25-6G	-		-
M 14x1,50	CTIM14x1,50	-	CTM14x1,50-6G	-		-
M 14x2,00	CTIM14x2,00	206,24	CTM14x2,00-6G	178,74		-
M 16x1,50	CTIM16x1,50	-	CTM16x1,50-6G	-		-
M 16x2,00	CTIM16x2,00	228,54	CTM16x2,00-6G	190,51		-
M 18x1,50	CTIM18x1,50	-	CTM18x1,50-6G	-		-
M 18x2,50	CTIM18x2,50	245,26	CTM18x2,50-6G	212,54		-
M 20x1,50	CTIM20x1,50	-	CTM20x1,50-6G	-		-
M 20x2,50	CTIM20x2,50	261,99	CTM20x2,50-6G	227,06		-
M 22x2,50	CTIM22x2,50	278,70	CTM22x2,50-6G	241,53		-
M 24x1,50	CTIM24x1,50	-	CTM24x1,50-6G	-		-
M 24x3,00	CTIM24x3,00	312,14	CTM24x3,00-6G	270,52		-
M 27x3,00	CTIM27x3,00	345,58	CTM27x3,00-6G	299,52		-
M 30x3,50	CTIM30x3,50	379,04	CTM30x3,50-6G	328,49		-



**M/MF THREAD RING GAUGES**
**M**  
**MF**

 Ref. AP  
 Ref. ANP

**DIN**  
**13**
**DIN/ISO**  
**1502**
**TOL**  
**6g**

**X210**  
**Cr12**


\* Calibration certificate included in the price.


 GO  
 Ref. AP

 NO GO  
 Ref. ANP

	AP			ANP	
	GO	€	NO GO	€	
M 14x1,50	APM14x1,50	160,41	ANPM14x1,50	160,41	
M 14x2,00	APM14x2,00	173,16	ANPM14x2,00	173,16	
M 15x1,00	APM15x1,00	223,17	ANPM15x1,00	223,17	
M 15x1,50	APM15x1,50	209,23	ANPM15x1,50	209,23	
M 16x1,00	APM16x1,00	184,82	ANPM16x1,00	184,82	
M 16x1,50	APM16x1,50	177,84	ANPM16x1,50	177,84	
M 16x2,00	APM16x2,00	190,06	ANPM16x2,00	190,06	
M 18x1,00	APM18x1,00	202,26	ANPM18x1,00	202,26	
M 18x1,50	APM18x1,50	191,79	ANPM18x1,50	191,79	
M 18x2,00	APM18x2,00	209,23	ANPM18x2,00	209,23	
M 18x2,50	APM18x2,50	219,62	ANPM18x2,50	219,62	
M 20x1,00	APM20x1,00	212,73	ANPM20x1,00	212,73	
M 20x1,50	APM20x1,50	209,23	ANPM20x1,50	209,23	
M 20x2,00	APM20x2,00	223,17	ANPM20x2,00	223,17	
M 20x2,50	APM20x2,50	244,95	ANPM20x2,50	244,95	
M 22x1,00	APM22x1,00	252,41	ANPM22x1,00	252,41	
M 22x1,50	APM22x1,50	223,17	ANPM22x1,50	223,17	
M 22x2,00	APM22x2,00	240,61	ANPM22x2,00	240,61	
M 22x2,50	APM22x2,50	266,08	ANPM22x2,50	266,08	
M 24x1,00	APM24x1,00	254,57	ANPM24x1,00	254,57	
M 24x1,50	APM24x1,50	240,61	ANPM24x1,50	240,61	
M 24x2,00	APM24x2,00	254,57	ANPM24x2,00	254,57	
M 24x3,00	APM24x3,00	269,49	ANPM24x3,00	269,49	
M 25x1,00	APM25x1,00	282,29	ANPM25x1,00	282,29	
M 25x1,50	APM25x1,50	247,59	ANPM25x1,50	247,59	
M 25x2,00	APM25x2,00	254,57	ANPM25x2,00	254,57	
M 26x1,00	APM26x1,00	306,87	ANPM26x1,00	306,87	
M 26x1,50	APM26x1,50	254,57	ANPM26x1,50	254,57	
M 26x2,00	APM26x2,00	312,52	ANPM26x2,00	312,52	
M 27x1,00	APM27x1,00	302,22	ANPM27x1,00	302,22	
M 27x1,50	APM27x1,50	261,53	ANPM27x1,50	261,53	
M 27x2,00	APM27x2,00	275,49	ANPM27x2,00	275,49	
M 27x3,00	APM27x3,00	301,67	ANPM27x3,00	301,67	
M 28x1,50	APM28x1,50	265,03	ANPM28x1,50	265,03	
M 28x2,00	APM28x2,00	301,87	ANPM28x2,00	301,87	
M 30x1,00	APM30x1,00	306,87	ANPM30x1,00	306,87	
M 30x1,50	APM30x1,50	282,46	ANPM30x1,50	282,46	
M 30x2,00	APM30x2,00	282,46	ANPM30x2,00	282,46	
M 30x3,00	APM30x3,00	302,22	ANPM30x3,00	302,22	
M 30x3,50	APM30x3,50	317,14	ANPM30x3,50	317,14	
M 32x1,00	APM32x1,00	327,79	ANPM32x1,00	327,79	
M 32x1,50	APM32x1,50	299,89	ANPM32x1,50	299,89	
M 32x2,00	APM32x2,00	328,61	ANPM32x2,00	328,61	
M 33x1,00	APM33x1,00	334,76	ANPM33x1,00	334,76	
M 33x1,50	APM33x1,50	310,35	ANPM33x1,50	310,35	
M 33x2,00	APM33x2,00	313,85	ANPM33x2,00	313,85	
M 33x3,00	APM33x3,00	334,76	ANPM33x3,00	334,76	
M 33x3,50	APM33x3,50	325,79	ANPM33x3,50	325,79	
M 34x1,00	APM34x1,00	332,11	ANPM34x1,00	332,11	

	AP		ANP	
	GO	€	NO GO	€
M 2x0,40	APM02x0,40	173,16	ANPM02x0,40	173,16
M 2,2x0,45	APM02,2x0,45	202,72	ANPM02,2x0,45	202,72
M 2,5x0,45	APM02,5x0,45	130,93	ANPM02,5x0,45	130,93
M 3x0,50	APM03x0,50	126,69	ANPM03x0,50	126,69
M 3,5x0,60	APM03,5x0,60	118,25	ANPM03,5x0,60	118,25
M 4x0,50	APM04x0,50	242,44	ANPM04x0,50	242,44
M 4x0,70	APM04x0,70	118,25	ANPM04x0,70	118,25
M 4,5x0,75	APM04,5x0,75	168,93	ANPM04,5x0,75	168,93
M 5x0,50	APM05x0,50	242,44	ANPM05x0,50	242,44
M 5x0,75	APM05x0,75	174,36	ANPM05x0,75	174,36
M 5x0,80	APM05x0,80	118,25	ANPM05x0,80	118,25
M 6x0,50	APM06x0,50	242,44	ANPM06x0,50	242,44
M 6x0,75	APM06x0,75	166,05	ANPM06x0,75	166,05
M 6x1,00	APM06x1,00	118,25	ANPM06x1,00	118,25
M 7x0,75	APM07x0,75	174,36	ANPM07x0,75	174,36
M 7x1,00	APM07x1,00	144,80	ANPM07x1,00	144,80
M 8x0,50	APM08x0,50	229,15	ANPM08x0,50	229,15
M 8x0,75	APM08x0,75	167,39	ANPM08x0,75	167,39
M 8x1,00	APM08x1,00	122,05	ANPM08x1,00	122,05
M 8x1,25	APM08x1,25	118,25	ANPM08x1,25	118,25
M 9x0,75	APM09x0,75	184,82	ANPM09x0,75	184,82
M 9x1,00	APM09x1,00	125,53	ANPM09x1,00	125,53
M 9x1,25	APM09x1,25	160,89	ANPM09x1,25	160,89
M 10x0,75	APM10x0,75	176,02	ANPM10x0,75	176,02
M 10x1,00	APM10x1,00	139,48	ANPM10x1,00	139,48
M 10x1,25	APM10x1,25	149,95	ANPM10x1,25	149,95
M 10x1,50	APM10x1,50	135,14	ANPM10x1,50	135,14
M 11x1,00	APM11x1,00	142,97	ANPM11x1,00	142,97
M 11x1,50	APM11x1,50	194,28	ANPM11x1,50	194,28
M 12x0,75	APM12x0,75	212,54	ANPM12x0,75	212,54
M 12x1,00	APM12x1,00	156,92	ANPM12x1,00	156,92
M 12x1,25	APM12x1,25	170,86	ANPM12x1,25	170,86
M 12x1,50	APM12x1,50	153,44	ANPM12x1,50	153,44
M 12x1,75	APM12x1,75	156,28	ANPM12x1,75	156,28
M 13x1,00	APM13x1,00	219,68	ANPM13x1,00	219,68
M 13x1,50	APM13x1,50	236,51	ANPM13x1,50	236,51
M 14x1,00	APM14x1,00	170,86	ANPM14x1,00	170,86
M 14x1,25	APM14x1,25	184,82	ANPM14x1,25	184,82



**M/MF THREAD RING GAUGES**

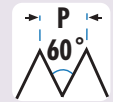


Ref. AP  
Ref. ANP

**DIN**  
**13**

**DIN/ISO**  
**1502**

**TOL**  
**6g**



**X210**  
**Cr12**


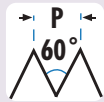









\* Calibration certificate included in the price.

		AP		ANP				AP		ANP	
		€			€			€			€
M 34x1,50	APM34x1,50	298,89	ANPM34x1,50	298,89	M 55x1,50	APM55x1,50	415,47	ANPM55x1,50	415,47		
M 34x2,00	APM34x2,00	336,67	ANPM34x2,00	336,67	M 55x2,00	APM55x2,00	431,74	ANPM55x2,00	431,74		
M 35x1,00	APM35x1,00	307,86	ANPM35x1,00	307,86	M 55x3,00	APM55x3,00	445,35	ANPM55x3,00	445,35		
M 35x1,50	APM35x1,50	277,98	ANPM35x1,50	277,98	M 55x4,00	APM55x4,00	599,71	ANPM55x4,00	599,71		
M 35x2,00	APM35x2,00	361,99	ANPM35x2,00	361,99	M 56x1,00	APM56x1,00	664,21	ANPM56x1,00	664,21		
M 36x1,00	APM36x1,00	310,85	ANPM36x1,00	310,85	M 56x1,50	APM56x1,50	468,28	ANPM56x1,50	468,28		
M 36x1,50	APM36x1,50	280,97	ANPM36x1,50	280,97	M 56x2,00	APM56x2,00	448,35	ANPM56x2,00	448,35		
M 36x2,00	APM36x2,00	298,89	ANPM36x2,00	298,89	M 56x3,00	APM56x3,00	501,49	ANPM56x3,00	501,49		
M 36x4,00	APM36x4,00	351,13	ANPM36x4,00	351,13	M 56x4,00	APM56x4,00	504,48	ANPM56x4,00	504,48		
M 38x1,00	APM38x1,00	328,80	ANPM38x1,00	328,80	M 56x5,50	APM56x5,50	611,37	ANPM56x5,50	611,37		
M 38x1,50	APM38x1,50	295,92	ANPM38x1,50	295,92	M 58x1,00	APM58x1,00	476,57	ANPM58x1,00	476,57		
M 38x2,00	APM38x2,00	394,58	ANPM38x2,00	394,58	M 58x1,50	APM58x1,50	481,55	ANPM58x1,50	481,55		
M 39x1,00	APM39x1,00	346,72	ANPM39x1,00	346,72	M 58x2,00	APM58x2,00	474,91	ANPM58x2,00	474,91		
M 39x1,50	APM39x1,50	313,84	ANPM39x1,50	313,84	M 58x3,00	APM58x3,00	472,37	ANPM58x3,00	472,37		
M 39x2,00	APM39x2,00	325,79	ANPM39x2,00	325,79	M 60x1,00	APM60x1,00	522,66	ANPM60x1,00	522,66		
M 39x3,00	APM39x3,00	340,74	ANPM39x3,00	340,74	M 60x1,50	APM60x1,50	485,84	ANPM60x1,50	485,84		
M 39x4,00	APM39x4,00	383,72	ANPM39x4,00	383,72	M 60x2,00	APM60x2,00	500,18	ANPM60x2,00	500,18		
M 40x1,00	APM40x1,00	346,72	ANPM40x1,00	346,72	M 60x3,00	APM60x3,00	512,58	ANPM60x3,00	512,58		
M 40x1,50	APM40x1,50	313,84	ANPM40x1,50	313,84	M 60x4,00	APM60x4,00	563,09	ANPM60x4,00	563,09		
M 40x2,00	APM40x2,00	331,78	ANPM40x2,00	331,78	M 60x5,50	APM60x5,50	571,96	ANPM60x5,50	571,96		
M 40x3,00	APM40x3,00	419,91	ANPM40x3,00	419,91	M 62x1,00	APM62x1,00	590,08	ANPM62x1,00	590,08		
M 42x1,00	APM42x1,00	451,33	ANPM42x1,00	451,33	M 62x1,50	APM62x1,50	485,84	ANPM62x1,50	485,84		
M 42x1,50	APM42x1,50	361,99	ANPM42x1,50	361,99	M 62x2,00	APM62x2,00	500,18	ANPM62x2,00	500,18		
M 42x2,00	APM42x2,00	371,96	ANPM42x2,00	371,96	M 62x3,00	APM62x3,00	512,58	ANPM62x3,00	512,58		
M 42x3,00	APM42x3,00	398,53	ANPM42x3,00	398,53	M 64x1,00	APM64x1,00	657,47	ANPM64x1,00	657,47		
M 42x4,50	APM42x4,50	412,69	ANPM42x4,50	412,69	M 64x1,50	APM64x1,50	485,84	ANPM64x1,50	485,84		
M 45x1,00	APM45x1,00	478,22	ANPM45x1,00	478,22	M 64x2,00	APM64x2,00	500,18	ANPM64x2,00	500,18		
M 45x1,50	APM45x1,50	381,92	ANPM45x1,50	381,92	M 64x3,00	APM64x3,00	512,58	ANPM64x3,00	512,58		
M 45x2,00	APM45x2,00	381,92	ANPM45x2,00	381,92	M 64x4,00	APM64x4,00	563,09	ANPM64x4,00	563,09		
M 45x3,00	APM45x3,00	408,50	ANPM45x3,00	408,50	M 64x6,00	APM64x6,00	608,16	ANPM64x6,00	608,16		
M 45x4,00	APM45x4,00	520,07	ANPM45x4,00	520,07	M 65x1,00	APM65x1,00	673,57	ANPM65x1,00	673,57		
M 45x4,50	APM45x4,50	438,03	ANPM45x4,50	438,03	M 65x1,50	APM65x1,50	478,22	ANPM65x1,50	478,22		
M 48x1,00	APM48x1,00	505,14	ANPM48x1,00	505,14	M 65x2,00	APM65x2,00	472,25	ANPM65x2,00	472,25		
M 48x1,50	APM48x1,50	408,50	ANPM48x1,50	408,50	M 65x3,00	APM65x3,00	633,48	ANPM65x3,00	633,48		
M 48x2,00	APM48x2,00	385,25	ANPM48x2,00	385,25	M 68x1,00	APM68x1,00	675,16	ANPM68x1,00	675,16		
M 48x3,00	APM48x3,00	418,45	ANPM48x3,00	418,45	M 68x1,50	APM68x1,50	485,84	ANPM68x1,50	485,84		
M 48x4,00	APM48x4,00	552,96	ANPM48x4,00	552,96	M 68x2,00	APM68x2,00	500,18	ANPM68x2,00	500,18		
M 48x5,00	APM48x5,00	466,98	ANPM48x5,00	466,98	M 68x3,00	APM68x3,00	512,58	ANPM68x3,00	512,58		
M 50x1,00	APM50x1,00	532,04	ANPM50x1,00	532,04	M 68x4,00	APM68x4,00	563,09	ANPM68x4,00	563,09		
M 50x1,50	APM50x1,50	418,45	ANPM50x1,50	418,45	M 68x6,00	APM68x6,00	644,36	ANPM68x6,00	644,36		
M 50x2,00	APM50x2,00	405,17	ANPM50x2,00	405,17	M 70x1,00	APM70x1,00	702,24	ANPM70x1,00	702,24		
M 50x3,00	APM50x3,00	470,60	ANPM50x3,00	470,60	M 70x1,50	APM70x1,50	485,84	ANPM70x1,50	485,84		
M 52x1,00	APM52x1,00	555,94	ANPM52x1,00	555,94	M 70x2,00	APM70x2,00	500,18	ANPM70x2,00	500,18		
M 52x1,50	APM52x1,50	441,70	ANPM52x1,50	441,70	M 70x3,00	APM70x3,00	512,58	ANPM70x3,00	512,58		
M 52x2,00	APM52x2,00	418,45	ANPM52x2,00	418,45	M 70x4,00	APM70x4,00	563,09	ANPM70x4,00	563,09		
M 52x3,00	APM52x3,00	468,28	ANPM52x3,00	468,28	M 70x6,00	APM70x6,00	679,87	ANPM70x6,00	679,87		
M 52x4,00	APM52x4,00	609,75	ANPM52x4,00	609,75	M 72x1,00	APM72x1,00	711,22	ANPM72x1,00	711,22		
M 52x5,00	APM52x5,00	503,17	ANPM52x5,00	503,17	M 72x1,50	APM72x1,50	485,84	ANPM72x1,50	485,84		
M 55x1,00	APM55x1,00	585,85	ANPM55x1,00	585,85	M 72x2,00	APM72x2,00	500,18	ANPM72x2,00	500,18		




Thread gauges  
Pink






**M/MF THREAD RING GAUGES**

	Ref. AP	<b>DIN</b>	<b>DIN/ISO</b>	<b>TOL</b>		<b>X210</b>		* Calibration certificate included in the price.
	Ref. ANP	<b>13</b>	<b>1502</b>	<b>6g</b>		<b>Cr12</b>		

		AP		ANP				AP		ANP	
		€		€			€		€		
	GO		NO GO			GO		NO GO			
M 72x3,00	APM72x3,00	512,58	ANPM72x3,00	512,58	M 85x2,00	APM85x2,00	700,76	ANPM85x2,00	700,76		
M 72x4,00	APM72x4,00	563,09	ANPM72x4,00	563,09	M 85x3,00	APM85x3,00	730,36	ANPM85x3,00	730,36		
M 72x6,00	APM72x6,00	697,84	ANPM72x6,00	697,84	M 85x4,00	APM85x4,00	774,14	ANPM85x4,00	774,14		
M 75x1,00	APM75x1,00	736,10	ANPM75x1,00	736,10	M 85x6,00	APM85x6,00	859,49	ANPM85x6,00	859,49		
M 75x1,50	APM75x1,50	581,19	ANPM75x1,50	581,19	M 90x1,50	APM90x1,50	760,53	ANPM90x1,50	760,53		
M 75x2,00	APM75x2,00	607,76	ANPM75x2,00	607,76	M 90x2,00	APM90x2,00	757,21	ANPM90x2,00	757,21		
M 75x3,00	APM75x3,00	664,21	ANPM75x3,00	664,21	M 90x3,00	APM90x3,00	913,29	ANPM90x3,00	913,29		
M 75x4,00	APM75x4,00	721,49	ANPM75x4,00	721,49	M 90x4,00	APM90x4,00	839,25	ANPM90x4,00	839,25		
M 76x1,50	APM76x1,50	601,12	ANPM76x1,50	601,12	M 90x6,00	APM90x6,00	893,34	ANPM90x6,00	893,34		
M 76x2,00	APM76x2,00	614,40	ANPM76x2,00	614,40	M 95x1,50	APM95x1,50	800,38	ANPM95x1,50	800,38		
M 76x3,00	APM76x3,00	664,21	ANPM76x3,00	664,21	M 95x2,00	APM95x2,00	807,03	ANPM95x2,00	807,03		
M 76x4,00	APM76x4,00	953,14	ANPM76x4,00	953,14	M 95x4,00	APM95x4,00	885,73	ANPM95x4,00	885,73		
M 76x6,00	APM76x6,00	761,89	ANPM76x6,00	761,89	M 95x6,00	APM95x6,00	994,27	ANPM95x6,00	994,27		
M 80x1,50	APM80x1,50	677,51	ANPM80x1,50	677,51	M 100x1,50	APM100x1,50	843,54	ANPM100x1,50	843,54		
M 80x2,00	APM80x2,00	650,94	ANPM80x2,00	650,94	M 100x2,00	APM100x2,00	856,84	ANPM100x2,00	856,84		
M 80x3,00	APM80x3,00	743,91	ANPM80x3,00	743,91	M 100x3,00	APM100x3,00	1.012,93	ANPM100x3,00	1.012,93		
M 80x4,00	APM80x4,00	746,25	ANPM80x4,00	746,25	M 100x4,00	APM100x4,00	929,90	ANPM100x4,00	929,90		
M 80x6,00	APM80x6,00	769,63	ANPM80x6,00	769,63	M 100x6,00	APM100x6,00	1.024,71	ANPM100x6,00	1.024,71		
M 85x1,50	APM85x1,50	717,36	ANPM85x1,50	717,36							



**M/MF THREAD RING GAUGES SPECIAL TOLERANCES**


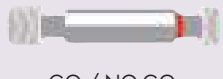
	Ref. API	<b>DIN</b>	<b>DIN/ISO</b>	<b>TOL</b>	<b>TOL</b>		<b>X210</b>		* Calibration certificate included in the price.
	Ref. ANPI	<b>13</b>	<b>1502</b>	<b>6g (left hand)</b>	<b>6e</b>		<b>Cr12</b>		
	Ref. AP..-6e								
	Ref. ANP..-6e								

		API		ANPI		AP..6e		ANP..6e	
		<b>TOL</b>		<b>TOL</b>		<b>TOL</b>		<b>TOL</b>	
	GO	<b>6g (left hand)</b>	NO GO	<b>6g (left hand)</b>	GO	<b>6e</b>	NO GO	<b>6e</b>	
		€		€		€		€	
M 2x0,40	APIM02x0,40	238,30	ANPIM02x0,40	238,30	APM02x0,40-6e	-	ANPM02x0,40-6e	-	
M 2,5x0,45	APIM02,5x0,45	180,19	ANPIM02,5x0,45	180,19	APM02,5x0,45-6e	-	ANPM02,5x0,45-6e	-	
M 3x0,50	APIM03x0,50	174,36	ANPIM03x0,50	174,36	APM03x0,50-6e	174,36	ANPM03x0,50-6e	174,36	
M 3,5x0,60	APIM03,5x0,60	162,73	ANPIM03,5x0,60	162,73	APM03,5x0,60-6e	162,73	ANPM03,5x0,60-6e	162,73	
M 4x0,70	APIM04x0,70	162,73	ANPIM04x0,70	162,73	APM04x0,70-6e	162,73	ANPM04x0,70-6e	162,73	
M 4,5x0,75	APIM04,5x0,75	244,10	ANPIM04,5x0,75	244,10	APM04,5x0,75-6e	-	ANPM04,5x0,75-6e	-	
M 5x0,80	APIM05x0,80	162,73	ANPIM05x0,80	162,73	APM05x0,80-6e	162,73	ANPM05x0,80-6e	162,73	
M 6x1,00	APIM06x1,00	162,73	ANPIM06x1,00	162,73	APM06x1,00-6e	162,73	ANPM06x1,00-6e	162,73	
M 7x1,00	APIM07x1,00	209,23	ANPIM07x1,00	209,23	APM07x1,00-6e	209,23	ANPM07x1,00-6e	209,23	
M 8x1,25	APIM08x1,25	162,73	ANPIM08x1,25	162,73	APM08x1,25-6e	162,73	ANPM08x1,25-6e	162,73	
M 10x1,50	APIM10x1,50	185,99	ANPIM10x1,50	185,99	APM10x1,50-6e	185,99	ANPM10x1,50-6e	185,99	
M 12x1,75	APIM12x1,75	215,05	ANPIM12x1,75	215,05	APM12x1,75-6e	215,05	ANPM12x1,75-6e	215,05	
M 14x2,00	APIM14x2,00	238,30	ANPIM14x2,00	238,30	APM14x2,00-6e	238,30	ANPM14x2,00-6e	238,30	
M 16x2,00	APIM16x2,00	261,54	ANPIM16x2,00	261,54	APM16x2,00-6e	261,54	ANPM16x2,00-6e	261,54	
M 18x2,50	APIM18x2,50	302,22	ANPIM18x2,50	302,22	APM18x2,50-6e	302,22	ANPM18x2,50-6e	302,22	
M 20x2,50	APIM20x2,50	337,08	ANPIM20x2,50	337,08	APM20x2,50-6e	337,08	ANPM20x2,50-6e	337,08	
M 22x2,50	APIM22x2,50	366,15	ANPIM22x2,50	366,15	APM22x2,50-6e	-	ANPM22x2,50-6e	-	
M 24x3,00	APIM24x3,00	389,40	ANPIM24x3,00	389,40	APM24x3,00-6e	-	ANPM24x3,00-6e	-	
M 27x3,00	APIM27x3,00	435,90	ANPIM27x3,00	435,90	APM27x3,00-6e	-	ANPM27x3,00-6e	-	
M 30x3,50	APIM30x3,50	446,66	ANPIM30x3,50	446,66	APM30x3,50-6e	-	ANPM30x3,50-6e	-	



**BSP THREAD PLUG & RING GAUGES**

**BSP** Ref. CT GO / NO GO  
 Ref. CTP GO /  
 Ref. CTNP NO GO


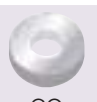
**DIN EN ISO 228-2**  **X210 Cr12**  \* Calibration certificate included in the price.

		CT		CTP		CTNP	
		€	GO	€	NO GO	€	
G 1/8-28h.	CTG1/8X28	137,13		-		-	
G 1/4-19h.	CTG1/4X19	149,60		-		-	
G 3/8-19h.	CTG3/8X19	174,54		-		-	
G 1/2-14h.	CTG1/2X14	167,49		-		-	
G 5/8-14h.	CTG5/8X14	211,94		-		-	
G 3/4-14h.	CTG3/4X14	232,72		-		-	
G 7/8-14h.	CTG7/8X14	261,79		-		-	
G 1"-11h.	CTG1X11	274,27		-		-	
G 1 1/8-11h.	CTG1.1/8X11	315,82		-		-	
G 1 1/4-11h.	CTG1.1/4X11	344,91		-		-	
G 1 1/2-11h.	CTG1.1/2X11	403,08		-		-	
G 1 3/4-11h.	CTG1.3/4X11	-	CTPG1.3/4X11	241,41	CTNPG1.3/4X11	241,41	
G 2"-11h.	CTG2X11	-	CTPG2X11	265,15	CTNPG2X11	265,15	
G 2 1/4-11h.	CTG2.1/4X11	-	CTPG2.1/4X11	288,91	CTNPG2.1/4X11	288,91	
G 2 1/2-11h.	CTG2.1/2X11	-	CTPG2.1/2X11	336,40	CTNPG2.1/2X11	336,40	
G 2 3/4-11h.	CTG2.3/4X11	-	CTPG2.3/4X11	382,32	CTNPG2.3/4X11	382,32	
G 3"-11h.	CTG3X11	-	CTPG3X11	411,39	CTNPG3X11	411,39	
G 3 1/2-11h.	CTG3.1/2X11	-	CTPG3.1/2X11	731,38	CTNPG3.1/2X11	731,38	
G 4"-11h.	CTG4X11	-	CTPG4X11	797,86	CTNPG4X11	797,86	

**BSP** Ref. AP  
 Ref. ANP

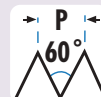
**DIN EN ISO 228-2**  **X210 Cr12**  \* Calibration certificate included in the price.



		AP		ANP	
		€	NO GO	€	
G 1/8-28h.	APG1/8X28	154,99	ANPG1/8X28	154,99	
G 1/4-19h.	APG1/4X19	182,11	ANPG1/4X19	182,11	
G 3/8-19h.	APG3/8X19	220,84	ANPG3/8X19	220,84	
G 1/2-14h.	APG1/2X14	213,09	ANPG1/2X14	213,09	
G 5/8-14h.	APG5/8X14	224,38	ANPG5/8X14	224,38	
G 3/4-14h.	APG3/4X14	243,54	ANPG3/4X14	243,54	
G 7/8-14h.	APG7/8X14	274,00	ANPG7/8X14	274,00	
G 1"-11h.	APG1X11	300,63	ANPG1X11	300,63	
G 1 1/8-11h.	APG1.1/8X11	348,72	ANPG1.1/8X11	348,72	
G 1 1/4-11h.	APG1.1/4X11	383,58	ANPG1.1/4X11	383,58	
G 1 1/2-11h.	APG1.1/2X11	433,95	ANPG1.1/2X11	433,95	
G 1 3/4-11h.	APG1.3/4X11	480,45	ANPG1.3/4X11	480,45	
G 2"-11h.	APG2X11	530,83	ANPG2X11	530,83	
G 2 1/4-11h.	APG2.1/4X11	573,44	ANPG2.1/4X11	573,44	
G 2 1/2-11h.	APG2.1/2X11	654,80	ANPG2.1/2X11	654,80	
G 2 3/4-11h.	APG2.3/4X11	704,76	ANPG2.3/4X11	704,76	
G 3"-11h.	APG3X11	767,18	ANPG3X11	767,18	
G 3 1/2-11h.	APG3.1/2X11	1.019,01	ANPG3.1/2X11	1.019,01	
G 4"-11h.	APG4X11	1.115,89	ANPG4X11	1.115,89	

**UNC THREAD PLUG GAUGES**
**UNC**




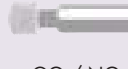
 Ref. CTNC GO / NO GO  
 Ref. CTPNC GO  
 Ref. CTNPNC NO GO  
 Ref. CTNC..3B

**ANSI  
ASME  
B1.2**
**TOL  
2B**
**TOL  
3B**

**X210  
Cr12**

Ref. CTNC



\* Calibration certificate included in the price.

	CTNC		CTPNC		CTNPNC		CTNC..3B	
		€		€		€		€
UNC N°4-40h.	CTNCN°4-40	210,97		-		-	CTNCN°4-40-3B	274,27
UNC N°5-40h.	CTNCN°5-40	210,06		-		-	CTNCN°5-40-3B	286,74
UNC N°6-32h.	CTNCN°6-32	127,86		-		-	CTNCN°6-32-3B	166,22
UNC N°8-32h.	CTNCN°8-32	124,66		-		-	CTNCN°8-32-3B	162,06
UNC N°10-24h.	CTNCN°10-24	121,47		-		-	CTNCN°10-24-3B	157,90
UNC N°12-24h.	CTNCN°12-24	121,47		-		-	CTNCN°12-24-3B	149,60
UNC 1/4-20h.	CTNC1/4X20	115,08		-		-	CTNC1/4X20-3B	149,60
UNC 5/16-18h.	CTNC5/16X18	121,47		-		-	CTNC5/16X18-3B	157,90
UNC 3/8-16h.	CTNC3/8X16	121,47		-		-	CTNC3/8X16-3B	157,90
UNC 7/16-14h.	CTNC7/16X14	127,86		-		-	CTNC7/16X14-3B	166,22
UNC 1/2-13h.	CTNC1/2X13	137,44		-		-	CTNC1/2X13-3B	178,69
UNC 9/16-12h.	CTNC9/16X12	147,04		-		-	CTNC9/16X12-3B	191,16
UNC 5/8-11h.	CTNC5/8X11	153,44		-		-	CTNC5/8X11-3B	199,47
UNC 3/4-10h.	CTNC3/4X10	175,80		-		-	CTNC3/4X10-3B	228,56
UNC 7/8-9h.	CTNC7/8X9	198,19		-		-	CTNC7/8X9-3B	257,64
UNC 1"-8h.	CTNC1X8	223,77		-		-	CTNC1X8-3B	290,89
UNC 1"1/8-7h.	CTNC1.1/8X7	249,33		-		-		-
UNC 1"1/4-7h.	CTNC1.1/4X7	271,71		-		-		-
UNC 1"3/8-6h.	CTNC1.3/8X6	294,08		-		-		-
UNC 1"1/2-6h.	CTNC1.1/2X6	329,25		-		-		-
UNC 1"3/4-5h.	CTNC1.3/4X5	-	CTPNC1.3/4X5	217,36	CTNPNC1.3/4X5	217,36		-
UNC 2"-4.1/2h.	CTNC2X4,5	-	CTPNC2X4,5	249,33	CTNPNC2X4,5	249,33		-
UNC 2"1/4-4.1/2h.	CTNC2.1/4X4,5	-	CTPNC2.1/4X4,5	278,10	CTNPNC2.1/4X4,5	278,10		-
UNC 2"1/2-4h.	CTNC2.1/2X4	-	CTPNC2.1/2X4	313,26	CTNPNC2.1/2X4	313,26		-
UNC 2"3/4-4h.	CTNC2.3/4X4	-	CTPNC2.3/4X4	345,22	CTNPNC2.3/4X4	345,22		-
UNC 3"-4h.	CTNC3X4	-	CTPNC3X4	377,18	CTNPNC3X4	377,18		-
UNC 3"1/4-4h.	CTNC3.1/4X4	-	CTPNC3.1/4X4	412,34	CTNPNC3.1/4X4	412,34		-
UNC 3"1/2-4h.	CTNC3.1/2X4	-	CTPNC3.1/2X4	444,31	CTNPNC3.1/2X4	444,31		-
UNC 4"-4h.	CTNC4X4	-	CTPNC4X4	508,25	CTNPNC4X4	508,25		-

UNC THREAD RING GAUGES

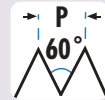


Ref. APNC  
Ref. ANPNC  
Ref. APNC..3A  
Ref. ANPNC..3A

ANSI  
ASME  
B1.2

TOL  
2A

TOL  
3A



X210  
Cr12



GO  
Ref. APNC



NO GO  
Ref. ANPNC



\* Calibration certificate included in the price.

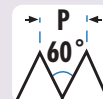
	APNC		ANPNC		APNC..3A		ANPNC..3A	
	GO	TOL 2A €	NO GO	TOL 2A €	GO	TOL 3A €	NO GO	TOL 3A €
UNC N°4-40h.	APNCN°4-40	201,48	ANPNCN°4-40	201,48	APNCN°4-40-3A	261,94	ANPNCN°4-40-3A	261,94
UNC N°5-40h.	APNCN°5-40	148,79	ANPNCN°5-40	148,79	APNCN°5-40-3A	193,42	ANPNCN°5-40-3A	193,42
UNC N°6-32h.	APNCN°6-32	142,59	ANPNCN°6-32	142,59	APNCN°6-32-3A	185,37	ANPNCN°6-32-3A	185,37
UNC N°8-32h.	APNCN°8-32	133,29	ANPNCN°8-32	133,29	APNCN°8-32-3A	173,28	ANPNCN°8-32-3A	173,28
UNC N°10-24h.	APNCN°10-24	127,09	ANPNCN°10-24	127,09	APNCN°10-24-3A	165,20	ANPNCN°10-24-3A	165,20
UNC N°12-24h.	APNCN°12-24	123,99	ANPNCN°12-24	123,99	APNCN°12-24-3A	161,18	ANPNCN°12-24-3A	161,18
UNC 1/4-20h.	APNC1/4X20	123,99	ANPNC1/4X20	123,99	APNC1/4X20-3A	161,18	ANPNC1/4X20-3A	161,18
UNC 5/16-18h.	APNC5/16X18	133,29	ANPNC5/16X18	133,29	APNC5/16X18-3A	173,28	ANPNC5/16X18-3A	173,28
UNC 3/8-16h.	APNC3/8X16	142,59	ANPNC3/8X16	142,59	APNC3/8X16-3A	185,37	ANPNC3/8X16-3A	185,37
UNC 7/16-14h.	APNC7/16X14	154,99	ANPNC7/16X14	154,99	APNC7/16X14-3A	201,48	ANPNC7/16X14-3A	201,48
UNC 1/2-13h.	APNC1/2X13	173,58	ANPNC1/2X13	173,58	APNC1/2X13-3A	225,67	ANPNC1/2X13-3A	225,67
UNC 9/16-12h.	APNC9/16X12	195,27	ANPNC9/16X12	195,27	APNC9/16X12-3A	253,86	ANPNC9/16X12-3A	253,86
UNC 5/8-11h.	APNC5/8X11	213,88	ANPNC5/8X11	213,88	APNC5/8X11-3A	278,11	ANPNC5/8X11-3A	278,11
UNC 3/4-10h.	APNC3/4X10	244,87	ANPNC3/4X10	244,87	APNC3/4X10-3A	318,35	ANPNC3/4X10-3A	318,35
UNC 7/8-9h.	APNC7/8X9	268,65	ANPNC7/8X9	268,65		-		-
UNC 1"-8h.	APNC1X8	307,01	ANPNC1X8	307,01		-		-
UNC 1"1/8-7h.	APNC1.1/8X7	339,49	ANPNC1.1/8X7	339,49		-		-
UNC 1"1/4-7h.	APNC1.1/4X7	392,62	ANPNC1.1/4X7	392,62		-		-
UNC 1"3/8-6h.	APNC1.3/8X6	431,01	ANPNC1.3/8X6	431,01		-		-
UNC 1"1/2-6h.	APNC1.1/2X6	460,52	ANPNC1.1/2X6	460,52		-		-
UNC 1"3/4-5h.	APNC1.3/4X5	567,25	ANPNC1.3/4X5	567,25		-		-
UNC 2"-4.1/2h.	APNC2x4,5	650,94	ANPNC2x4,5	650,94		-		-
UNC 2"1/4-4.1/2h.	APNC2.1/4x4,5	740,82	ANPNC2.1/4x4,5	740,82		-		-
UNC 2"1/2-4h.	APNC2.1/2x4	830,71	ANPNC2.1/2x4	830,71		-		-
UNC 2"3/4-4h.	APNC2.3/4X4	923,70	ANPNC2.3/4X4	923,70		-		-
UNC 3"-4h.	APNC3x4	912,28	ANPNC3X4	912,28		-		-
UNC 3"1/4-4h.	APNC3.1/4x4	998,40	ANPNC3.1/4x4	998,40		-		-
UNC 3"1/2-4h.	APNC3.1/2x4	1.023,47	ANPNC3.1/2x4	1.023,47		-		-
UNC 4"-4h.	APNC4x4	1.067,28	ANPNC4X4	1.067,28		-		-



**UNF THREAD PLUG GAUGES**
**UNF**

Ref. CTNF




Ref. CTNF..3B GO / NO GO

**ANSI  
ASME  
B1.2**
**TOL  
2B**
**TOL  
3B**

**X210  
Cr12**

Ref. CTNF



\* Calibration certificate included in the price.

	CTNF		CTNF..3B	
	GO / NO GO	TOL 2B €	GO / NO GO	TOL 3B €
				
UNF N°0-80h.	CTNFN°0-80	287,70	CTNFN°0-80-3B	-
UNF N°1-72h.	CTNFN°1-72	246,14	CTNFN°1-72-3B	-
UNF N°2-64h.	CTNFN°2-64	230,16	CTNFN°2-64-3B	-
UNF N°3-56h.	CTNFN°3-56	210,97	CTNFN°3-56-3B	-
UNF N°4-48h.	CTNFN°4-48	210,97	CTNFN°4-48-3B	274,27
UNF N°5-44h.	CTNFN°5-44	134,25	CTNFN°5-44-3B	174,54
UNF N°6-40h.	CTNFN°6-40	127,86	CTNFN°6-40-3B	166,22
UNF N°8-36h.	CTNFN°8-36	124,66	CTNFN°8-36-3B	167,89
UNF N°10-32h.	CTNFN°10-32	121,47	CTNFN°10-32-3B	157,90
UNF N°12-28h.	CTNFN°12-28	115,08	CTNFN°12-28-3B	149,60
UNF 1/4-28h.	CTNF1/4X28	115,08	CTNF1/4X28-3B	149,60
UNF 5/16-24h.	CTNF5/16X24	121,47	CTNF5/16X24-3B	157,90
UNF 3/8-24h.	CTNF3/8X24	121,47	CTNF3/8X24-3B	157,90
UNF 7/16-20h.	CTNF7/16X20	127,86	CTNF7/16X20-3B	166,22
UNF 1/2-20h.	CTNF1/2X20	137,44	CTNF1/2X20-3B	178,69
UNF 9/16-18h.	CTNF9/16X18	147,04	CTNF9/16X18-3B	191,16
UNF 5/8-18h.	CTNF5/8X18	150,24	CTNF5/8X18-3B	195,32
UNF 3/4-16h.	CTNF3/4X16	166,22	CTNF3/4X16-3B	216,09
UNF 7/8-14h.	CTNF7/8X14	182,22	CTNF7/8X14-3B	236,87
UNF 1"-12h.	CTNF1X12	204,57	CTNF1X12-3B	265,95
UNF 1"1/8-12h.	CTNF1.1/8X12	223,77	CTNF1.1/8X12-3B	-
UNF 1"1/4-12h.	CTNF1.1/4X12	236,54	CTNF1.1/4X12-3B	-
UNF 1"3/8-12h.	CTNF1.3/8X12	262,12	CTNF1.3/8X12-3B	-
UNF 1"1/2-12h.	CTNF1.1/2X12	287,70	CTNF1.1/2X12-3B	-

**UNF THREAD RING GAUGES**

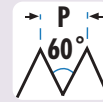


Ref. APNF  
Ref. ANPNF  
Ref. APNF..3A  
Ref. ANPNF..3A

**ANSI  
ASME  
B1.2**

**TOL  
2A**

**TOL  
3A**



**X210  
Cr12**



GO  
Ref. APNF



NO GO  
Ref. ANPNF



\* Calibration certificate included in the price.

	APNF		ANPNF		APNF..3A		ANPNF..3A	
	GO	TOL 2A €	NO GO	TOL 2A €	GO	TOL 3A €	NO GO	TOL 3A €
UNF N°0-80h.	APNFN°0-80	282,09	ANPNFN°0-80	282,09		-		-
UNF N°1-72h.	APNFN°1-72	235,58	ANPNFN°1-72	235,58		-		-
UNF N°2-64h.	APNFN°2-64	220,08	ANPNFN°2-64	220,08		-		-
UNF N°3-56h.	APNFN°3-56	210,78	ANPNFN°3-56	210,78		-		-
UNF N°4-48h.	APNFN°4-48	198,37	ANPNFN°4-48	198,37	APNFN°4-48-3A	257,88	ANPNFN°4-48-3A	257,88
UNF N°5-44h.	APNFN°5-44	148,79	ANPNFN°5-44	148,79	APNFN°5-44-3A	193,42	ANPNFN°5-44-3A	193,42
UNF N°6-40h.	APNFN°6-40	142,59	ANPNFN°6-40	142,59	APNFN°6-40-3A	185,37	ANPNFN°6-40-3A	185,37
UNF N°8-36h.	APNFN°8-36	133,29	ANPNFN°8-36	133,29	APNFN°8-36-3A	173,28	ANPNFN°8-36-3A	173,28
UNF N°10-32h.	APNFN°10-32	127,09	ANPNFN°10-32	127,09	APNFN°10-32-3A	168,78	ANPNFN°10-32-3A	168,78
UNF N°12-28h.	APNFN°12-28	123,99	ANPNFN°12-28	123,99	APNFN°12-28-3A	161,18	ANPNFN°12-28-3A	161,18
UNF 1/4-28h.	APNF1/4X28	123,99	ANPNF1/4X28	123,99	APNF1/4X28-3A	161,18	ANPNF1/4X28-3A	161,18
UNF 5/16-24h.	APNF5/16X24	133,29	ANPNF5/16X24	133,29	APNF5/16X24-3A	173,28	ANPNF5/16X24-3A	173,28
UNF 3/8-24h.	APNF3/8X24	142,59	ANPNF3/8X24	142,59	APNF3/8X24-3A	185,37	ANPNF3/8X24-3A	185,37
UNF 7/16-20h.	APNF7/16X20	154,99	ANPNF7/16X20	154,99	APNF7/16X20-3A	201,48	ANPNF7/16X20-3A	201,48
UNF 1/2-20h.	APNF1/2X20	173,58	ANPNF1/2X20	173,58	APNF1/2X20-3A	225,67	ANPNF1/2X20-3A	225,67
UNF 9/16-18h.	APNF9/16X18	195,27	ANPNF9/16X18	195,27	APNF9/16X18-3A	253,86	ANPNF9/16X18-3A	253,86
UNF 5/8-18h.	APNF5/8X18	213,88	ANPNF5/8X18	213,88	APNF5/8X18-3A	278,05	ANPNF5/8X18-3A	278,05
UNF 3/4-16h.	APNF3/4X16	244,87	ANPNF3/4X16	244,87	APNF3/4X16-3A	318,35	ANPNF3/4X16-3A	318,35
UNF 7/8-14h.	APNF7/8X14	268,65	ANPNF7/8X14	268,65		-		-
UNF 1"-12h.	APNF1X12	307,01	ANPNF1X12	307,01		-		-
UNF 1 1/8-12h.	APNF1.1/8X12	357,20	ANPNF1.1/8X12	357,20		-		-
UNF 1 1/4-12h.	APNF1.1/4X12	392,62	ANPNF1.1/4X12	392,62		-		-
UNF 1 3/8-12h.	APNF1.3/8X12	431,01	ANPNF1.3/8X12	431,01		-		-
UNF 1 1/2-12h.	APNF1.1/2X12	460,52	ANPNF1.1/2X12	460,52		-		-

**PLAIN PLUG GAUGES**
**PLAIN**

 Ref. CTL GO / NO GO  
 Ref. CTLP GO  
 Ref. CTLNP NO GO

**DIN  
7162**
**TOL  
H7**
**X210  
Cr12**

Ref. CTL



\* Calibration certificate included in the price.

CTL			CTL			CTLP		CTLNP	
Ø mm	GO NO GO	€	Ø mm	GO NO GO	€	GO	€	NO GO	€
2	CTL0200	69,53	51	CTL5100	176,95	CTLP5100	-	CTLNP5100	-
3	CTL0300	63,20	52	CTL5200	176,95	CTLP5200	-	CTLNP5200	-
4	CTL0400	63,20	53	CTL5300	176,95	CTLP5300	-	CTLNP5300	-
5	CTL0500	63,20	54	CTL5400	176,95	CTLP5400	-	CTLNP5400	-
6	CTL0600	63,20	55	CTL5500	176,95	CTLP5500	-	CTLNP5500	-
7	CTL0700	56,86	56	CTL5600	176,95	CTLP5600	-	CTLNP5600	-
8	CTL0800	56,86	57	CTL5700	-	CTLP5700	116,75	CTLNP5700	116,75
9	CTL0900	56,86	58	CTL5800	-	CTLP5800	116,75	CTLNP5800	116,75
10	CTL1000	66,35	59	CTL5900	-	CTLP5900	116,75	CTLNP5900	116,75
11	CTL1100	66,35	60	CTL6000	-	CTLP6000	116,75	CTLNP6000	116,75
12	CTL1200	66,35	61	CTL6100	-	CTLP6100	116,75	CTLNP6100	116,75
13	CTL1300	66,35	62	CTL6200	-	CTLP6200	116,75	CTLNP6200	116,75
14	CTL1400	72,68	63	CTL6300	-	CTLP6300	146,69	CTLNP6300	146,69
15	CTL1500	72,68	64	CTL6400	-	CTLP6400	146,69	CTLNP6400	146,69
16	CTL1600	72,68	65	CTL6500	-	CTLP6500	146,69	CTLNP6500	146,69
17	CTL1700	72,68	66	CTL6600	-	CTLP6600	146,69	CTLNP6600	146,69
18	CTL1800	85,31	67	CTL6700	-	CTLP6700	146,69	CTLNP6700	146,69
19	CTL1900	85,31	68	CTL6800	-	CTLP6800	146,69	CTLNP6800	146,69
20	CTL2000	85,31	69	CTL6900	-	CTLP6900	146,69	CTLNP6900	146,69
21	CTL2100	85,31	70	CTL7000	-	CTLP7000	185,61	CTLNP7000	185,61
22	CTL2200	91,64	71	CTL7100	-	CTLP7100	185,61	CTLNP7100	185,61
23	CTL2300	91,64	72	CTL7200	-	CTLP7200	185,61	CTLNP7200	185,61
24	CTL2400	91,64	73	CTL7300	-	CTLP7300	185,61	CTLNP7300	185,61
25	CTL2500	91,64	74	CTL7400	-	CTLP7400	185,61	CTLNP7400	185,61
26	CTL2600	91,64	75	CTL7500	-	CTLP7500	185,61	CTLNP7500	185,61
27	CTL2700	101,13	76	CTL7600	-	CTLP7600	185,61	CTLNP7600	185,61
28	CTL2800	101,13	77	CTL7700	-	CTLP7700	227,52	CTLNP7700	227,52
29	CTL2900	101,13	78	CTL7800	-	CTLP7800	227,52	CTLNP7800	227,52
30	CTL3000	101,13	79	CTL7900	-	CTLP7900	227,52	CTLNP7900	227,52
31	CTL3100	101,13	80	CTL8000	-	CTLP8000	227,52	CTLNP8000	227,52
32	CTL3200	116,93	81	CTL8100	-	CTLP8100	227,52	CTLNP8100	227,52
33	CTL3300	116,93	82	CTL8200	-	CTLP8200	227,52	CTLNP8200	227,52
34	CTL3400	116,93	83	CTL8300	-	CTLP8300	227,52	CTLNP8300	227,52
35	CTL3500	116,93	84	CTL8400	-	CTLP8400	263,44	CTLNP8400	263,44
36	CTL3600	116,93	85	CTL8500	-	CTLP8500	263,44	CTLNP8500	263,44
37	CTL3700	116,93	86	CTL8600	-	CTLP8600	263,44	CTLNP8600	263,44
38	CTL3800	123,24	87	CTL8700	-	CTLP8700	263,44	CTLNP8700	263,44
39	CTL3900	123,24	88	CTL8800	-	CTLP8800	263,44	CTLNP8800	263,44
40	CTL4000	123,24	89	CTL8900	-	CTLP8900	263,44	CTLNP8900	263,44
41	CTL4100	123,24	90	CTL9000	-	CTLP9000	263,44	CTLNP9000	263,44
42	CTL4200	123,24	91	CTL9100	-	CTLP9100	263,44	CTLNP9100	263,44
43	CTL4300	142,19	92	CTL9200	-	CTLP9200	305,34	CTLNP9200	305,34
44	CTL4400	142,19	93	CTL9300	-	CTLP9300	305,34	CTLNP9300	305,34
45	CTL4500	142,19	94	CTL9400	-	CTLP9400	305,34	CTLNP9400	305,34
46	CTL4600	142,19	95	CTL9500	-	CTLP9500	305,34	CTLNP9500	305,34
47	CTL4700	142,19	96	CTL9600	-	CTLP9600	305,34	CTLNP9600	305,34
48	CTL4800	142,19	97	CTL9700	-	CTLP9700	305,34	CTLNP9700	305,34
49	CTL4900	176,95	98	CTL9800	-	CTLP9800	305,34	CTLNP9800	305,34
50	CTL5000	176,95	99	CTL9900	-	CTLP9900	305,34	CTLNP9900	305,34
			100	CTL10000	-	CTLP10000	320,32	CTLNP10000	320,32

# METAL LATHE TOOLING



**BLUE-MASTER®**  
by *celesa*

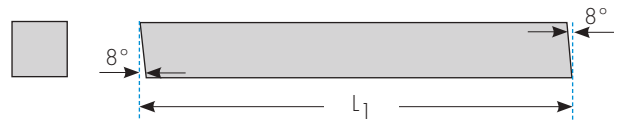
CUTTING TECHNOLOGIES

**COBALT 10% LATHE TOOL BITS**


Ref. CT1

**HSSCo**  
**10%**
**DIN**  
**4964**
**B**  
**NORM**
**TOL**  
**h14**

SQUARE



CT1

□ x L <sub>1</sub> mm	€	□ x L <sub>1</sub> mm	€	□ x L <sub>1</sub> mm	€	□ x L <sub>1</sub> mm	€	□ x L <sub>1</sub> mm	€
4 x 4 x 80	10,72	6 x 6 x 100	16,29	8 x 8 x 200	41,67	12 x 12 x 100	45,79	16 x 16 x 125	108,65
4 x 4 x 100	16,23	6 x 6 x 125	20,21	10 x 10 x 63	22,68	12 x 12 x 125	56,73	16 x 16 x 160	118,94
4 x 4 x 150	23,56	6 x 6 x 160	23,73	10 x 10 x 80	25,64	12 x 12 x 160	72,55	16 x 16 x 200	137,52
4 x 4 x 200	33,52	6 x 6 x 200	29,48	10 x 10 x 100	35,80	12 x 12 x 200	84,17	18 x 18 x 160	135,70
5 x 5 x 80	14,16	8 x 8 x 63	13,80	10 x 10 x 125	43,59	14 x 14 x 100	53,53	18 x 18 x 200	171,40
5 x 5 x 100	19,64	8 x 8 x 80	17,60	10 x 10 x 160	54,03	14 x 14 x 125	65,07	20 x 20 x 160	191,73
5 x 5 x 150	27,57	8 x 8 x 100	22,68	10 x 10 x 200	64,76	14 x 14 x 160	87,52	20 x 20 x 200	208,86
5 x 5 x 200	37,65	8 x 8 x 125	30,47	12 x 12 x 63	30,48	14 x 14 x 200	93,87	25 x 25 x 160	294,57
6 x 6 x 80	13,12	8 x 8 x 160	32,70	12 x 12 x 80	36,53	16 x 16 x 100	69,55	25 x 25 x 200	327,25



Ref. CT2

**HSSCo**  
**10%**
**DIN**  
**4964**
**A**  
**NORM**
**TOL**  
**h8**

CYLINDRICAL



CT2

∅ x L <sub>1</sub> mm	€	∅ x L <sub>1</sub> mm	€	∅ x L <sub>1</sub> mm	€	∅ x L <sub>1</sub> mm	€	∅ x L <sub>1</sub> mm	€
3 x 100	10,25	6 x 63	9,44	8 x 100	20,60	10 x 100	29,40	14 x 200	122,50
4 x 63	8,65	6 x 80	12,20	8 x 125	32,66	10 x 160	54,96	16 x 125	63,56
4 x 80	10,62	6 x 100	14,99	8 x 160	32,95	10 x 200	67,89	16 x 160	87,25
4 x 100	14,08	6 x 160	21,71	8 x 200	37,46	12 x 80	31,44	16 x 200	111,85
4 x 150	21,18	6 x 200	26,22	9 x 100	31,59	12 x 100	30,81	18 x 160	168,39
5 x 63	8,65	7 x 100	23,10	9 x 150	53,03	12 x 125	53,08	18 x 200	215,70
5 x 80	10,62	7 x 150	31,02	9 x 200	62,82	12 x 160	79,42	20 x 160	195,28
5 x 100	18,87	7 x 200	33,99	10 x 63	20,86	12 x 200	87,84	20 x 200	217,28
5 x 150	23,81	8 x 63	12,97	10 x 80	23,99	14 x 160	95,55	25 x 200	492,51
5 x 200	30,08	8 x 80	17,31						



COBALT 10% LATHE TOOL BITS



Ref. CT3

HSSCo  
10%

DIN  
4964

D  
NORM

TOL  
h14

RECTANGULAR



CT3

$h \times h_1 \times L_1$ mm	€	$h \times h_1 \times L_1$ mm	€	$h \times h_1 \times L_1$ mm	€	$h \times h_1 \times L_1$ mm	€	$h \times h_1 \times L_1$ mm	€
8 x 4 x 100	16,90	12 x 8 x 160	68,05	15 x 5 x 200	84,77	16 x 10 x 160	107,39	20 x 10 x 200	146,72
10 x 5 x 160	44,46	12 x 8 x 200	83,46	16 x 4 x 80	28,71	16 x 10 x 200	130,98	20 x 12 x 160	130,19
10 x 5 x 200	53,50	15 x 3 x 150	52,58	16 x 4 x 100	35,79	20 x 4 x 150	82,26	20 x 12 x 200	162,07
10 x 6 x 160	53,50	15 x 3 x 200	64,08	16 x 4 x 160	57,82	20 x 4 x 200	102,45	25 x 6 x 160	92,84
10 x 6 x 200	66,08	15 x 4 x 150	60,43	16 x 8 x 160	80,23	20 x 5 x 160	78,66	25 x 6 x 200	112,47
12 x 6 x 160	57,02	15 x 4 x 200	73,78	16 x 8 x 200	97,55	20 x 5 x 200	97,94	25 x 12 x 200	212,40
12 x 6 x 200	67,65	15 x 5 x 150	69,55	16 x 10 x 100	62,94	20 x 10 x 160	118,00		



Ref. CT4

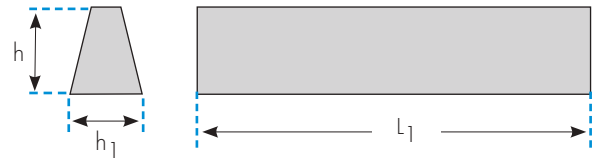
HSSCo  
10%

DIN  
4964

E  
NORM

TOL  
h12

TRAPEZOID



CT4

$h \times h_1 \times L_1$ mm	€	$h \times h_1 \times L_1$ mm	€
12 x 3,0 x 160	33,05	19 x 3,50 x 125	59,12
13 x 2,5 x 100	43,46	20 x 5,00 x 160	84,00
15 x 2,5 x 100	50,29	20 x 5,00 x 200	116,03
16 x 4,0 x 160	66,78	25 x 6,00 x 160	108,82



Ref. CT5

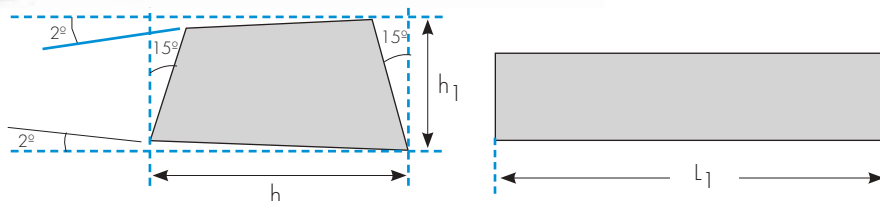
HSSCo  
10%

DIN  
4964

INDEX 1  
NORM

TOL  
h12

IRREGULAR TRAPEZOID

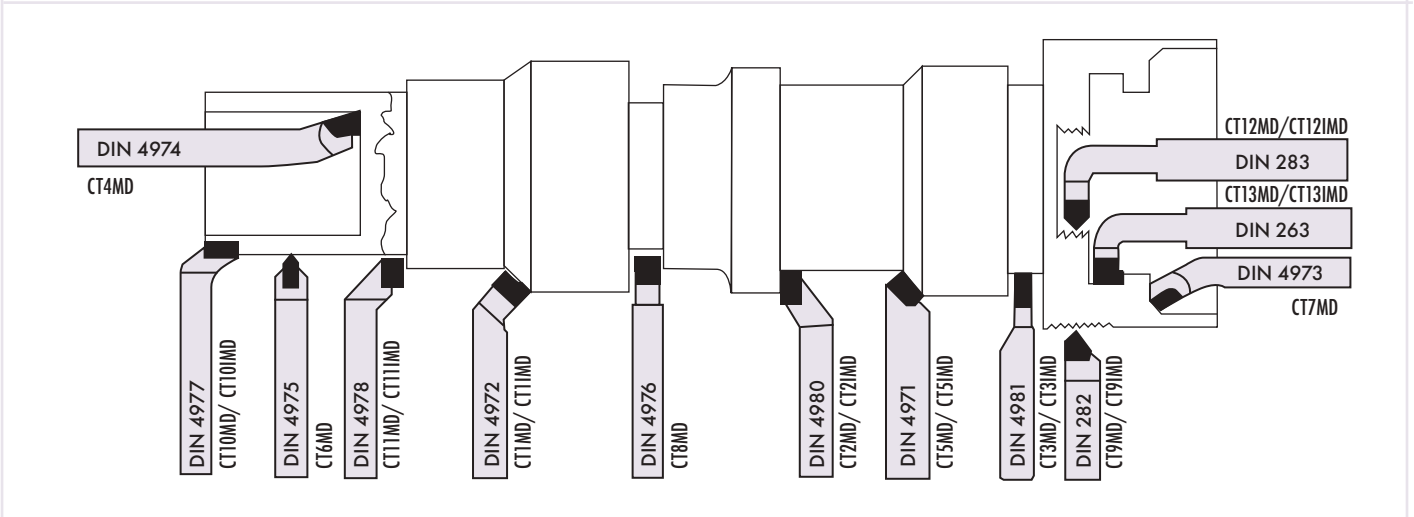


CT5

$h \times h_1 \times L_1$ mm	€
13 x 2,5 x 100	47,37
15 x 2,5 x 100	51,49
19 x 3,5 x 125	64,44

**CARBIDE TIPPED LATHE TOOL BITS**

**LATHE MACHINE OPERATIONS DIAGRAM**



\* Other sizes available on request.

**APPLICATIONS**

P20	Recommended for steel, molten steel, long chip malleable cast iron turning. Wear resistance.
K10	Recommended for grey cast iron, hard cast iron, hardened steel, short chip malleable cast iron, aluminium alloy with silicium, brass and copper turning.

**QUALITIES**



Ref. CT5MD  
Ref. CT5IMD

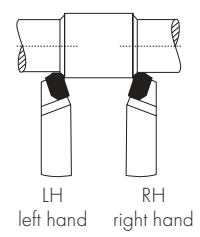
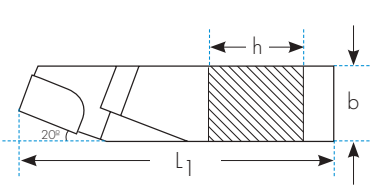
**DIN 4971**

**P-20**

**K-10**

**ISO 1**

**FINISHING**



P20		K10		h x b x L1 mm	€
RIGHT HAND	LEFT HAND	RIGHT HAND	LEFT HAND		
CT5MD10x10x90P	CT5IMD10x10x90P	CT5MD10x10x90K	CT5IMD10x10x90K	10 x 10 x 90	11,04
CT5MD12x12x100P	CT5IMD12x12x100P	CT5MD12x12x100K	CT5IMD12x12x100K	12 x 12 x 100	11,87
CT5MD16x16x110P	CT5IMD16x16x110P	CT5MD16x16x110K	CT5IMD16x16x110K	16 x 16 x 110	14,92
CT5MD20x20x125P	CT5IMD20x20x125P	CT5MD20x20x125K	CT5IMD20x20x125K	20 x 20 x 125	20,35
CT5MD25x25x140P	CT5IMD25x25x140P	CT5MD25x25x140K	CT5IMD25x25x140K	25 x 25 x 140	30,12

**CARBIDE TIPPED LATHE TOOL BITS**

Ref. CT1MD  
Ref. CT11MD

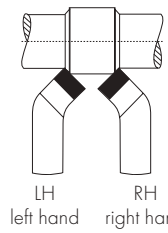
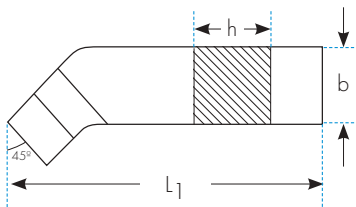
**DIN**  
**4972**

**P-20**

**K-10**

**ISO**  
**2**

**TAPERING 45°**



**P20**

**K10**

RIGHT HAND	LEFT HAND	RIGHT HAND	LEFT HAND	h x b x L1 mm	€
CT1MD12x12x100P	CT11MD12x12x100P	CT1MD12x12x100K	CT11MD12x12x100K	12 x 12 x 100	13,18
CT1MD16x16x110P	CT11MD16x16x110P	CT1MD16x16x110K	CT11MD16x16x110K	16 x 16 x 110	16,42
CT1MD20x20x125P	CT11MD20x20x125P	CT1MD20x20x125K	CT11MD20x20x125K	20 x 20 x 125	20,86
CT1MD25x25x140P	CT11MD25x25x140P	CT1MD25x25x140K	CT11MD25x25x140K	25 x 25 x 140	29,51

Ref. CT7MD

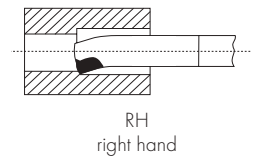
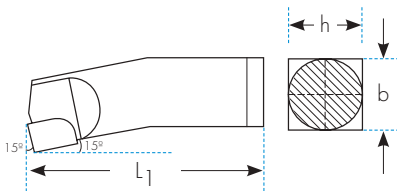
**DIN**  
**4973**

**P-20**

**K-10**

**ISO**  
**8**

**REAMING**



**P20**

**K10**

RIGHT HAND	RIGHT HAND	h x b x L1 mm	€
CT7MD8x8x125P	CT7MD8x8x125K	8 x 8 x 125	15,78
CT7MD10x10x125P	CT7MD10x10x125K	10 x 10 x 125	16,26
CT7MD12x12x180P	CT7MD12x12x180K	12 x 12 x 180	16,73
CT7MD16x16x210P	CT7MD16x16x210K	16 x 16 x 210	18,76
CT7MD20x20x250P	CT7MD20x20x250K	20 x 20 x 250	24,37
CT7MD25x25x300P	CT7MD25x25x300K	25 x 25 x 300	38,38

Ref. CT4MD

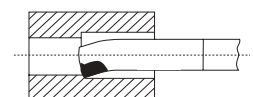
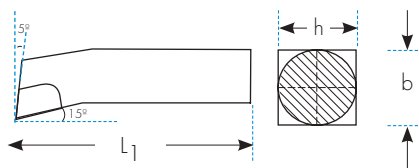
**DIN**  
**4974**

**P-20**

**K-10**

**ISO**  
**9**

**REAMING**



**P20**

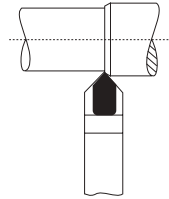
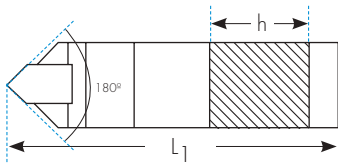
**K10**

RIGHT HAND	RIGHT HAND	h x b x L1 mm	€
CT4MD8x8x125P	CT4MD8x8x125K	8 x 8 x 125	16,26
CT4MD10x10x150P	CT4MD10x10x150K	10 x 10 x 150	16,06
CT4MD12x12x180P	CT4MD12x12x180K	12 x 12 x 180	17,03
CT4MD16x16x210P	CT4MD16x16x210K	16 x 16 x 210	20,28
CT4MD20x20x250P	CT4MD20x20x250K	20 x 20 x 250	25,63
CT4MD25x25x300P	CT4MD25x25x300K	25 x 25 x 300	38,93
CT4MD32x32x355P	CT4MD32x32x355K	32 x 32 x 355	68,53

**RH**  
right hand

**CARBIDE TIPPED LATHE TOOL BITS**

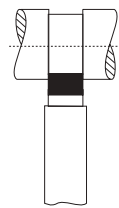
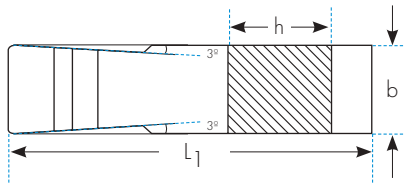
Ref. CT6MD

**DIN**  
**4975**
**P-20**
**K-10**
**ISO**  
**10**
**FINISHING**


Straight

P20		K10		h x b x L1 mm	€
STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT		
CT6MD16x10x110P	CT6MD16x10x110K	CT6MD16x10x110K	CT6MD16x10x110K	16 x 10 x 110	12,16
CT6MD20x12x125P	CT6MD20x12x125K	CT6MD20x12x125K	CT6MD20x12x125K	20 x 12 x 125	14,08
CT6MD25x16x140P	CT6MD25x16x140K	CT6MD25x16x140K	CT6MD25x16x140K	25 x 16 x 140	17,94
CT6MD32x20x170P	CT6MD32x20x170K	CT6MD32x20x170K	CT6MD32x20x170K	32 x 20 x 170	40,32

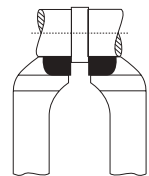
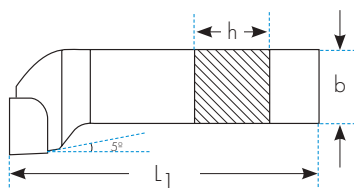
Ref. CT8MD

**DIN**  
**4976**
**P-20**
**K-10**
**ISO**  
**4**
**WIDTH GROOVING**


Straight

P20		K10		h x b x L1 mm	€
STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT		
CT8MD16x10x110P	CT8MD16x10x110K	CT8MD16x10x110K	CT8MD16x10x110K	16 x 10 x 110	14,60
CT8MD20x12x125P	CT8MD20x12x125K	CT8MD20x12x125K	CT8MD20x12x125K	20 x 12 x 125	16,02
CT8MD25x16x140P	CT8MD25x16x140K	CT8MD25x16x140K	CT8MD25x16x140K	25 x 16 x 140	22,58
CT8MD32x20x170P	CT8MD32x20x170K	CT8MD32x20x170K	CT8MD32x20x170K	32 x 20 x 170	33,30

 Ref. CT10MD  
 Ref. CT10IMD

**DIN**  
**4977**
**P-20**
**K-10**
**ISO**  
**5**
**FRONT CUTTING**

 LH  
 left hand

 RH  
 right hand

P20		K10		h x b x L1 mm	€
RIGHT HAND	LEFT HAND	RIGHT HAND	LEFT HAND		
CT10MD10x10x90P	CT10IMD10x10x90P	CT10MD10x10x90K	CT10IMD10x10x90K	10 x 10 x 90	12,31
CT10MD12x12x100P	CT10IMD12x12x100P	CT10MD12x12x100K	CT10IMD12x12x100K	12 x 12 x 100	14,10
CT10MD16x16x110P	CT10IMD16x16x110P	CT10MD16x16x110K	CT10IMD16x16x110K	16 x 16 x 110	15,48
CT10MD20x20x125P	CT10IMD20x20x125P	CT10MD20x20x125K	CT10IMD20x20x125K	20 x 20 x 125	19,87
CT10MD25x25x140P	CT10IMD25x25x140P	CT10MD25x25x140K	CT10IMD25x25x140K	25 x 25 x 140	30,58

**CARBIDE TIPPED LATHE TOOL BITS**

Ref. CT11MD  
Ref. CT11IMD

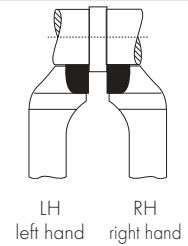
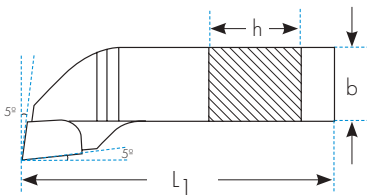
**DIN**  
**4978**

**P-20**

**K-10**

**ISO**  
**3**

**LATERAL CUTTING**



P20		K10		h x b x L1 mm	€
RIGHT HAND	LEFT HAND	RIGHT HAND	LEFT HAND		
CT11 MD10x10x90P	CT11IMD10x10x90P	CT11 MD10x10x90K	CT11IMD10x10x90K	10 x 10 x 90	13,50
CT11 MD12x12x100P	CT11IMD12x12x100P	CT11 MD12x12x100K	CT11IMD12x12x100K	12 x 12 x 100	15,90
CT11 MD16x16x110P	CT11IMD16x16x110P	CT11 MD16x16x110K	CT11IMD16x16x110K	16 x 16 x 110	17,68
CT11 MD20x20x125P	CT11IMD20x20x125P	CT11 MD20x20x125K	CT11IMD20x20x125K	20 x 20 x 125	26,21
CT11 MD25x25x140P	CT11IMD25x25x140P	CT11 MD25x25x140K	CT11IMD25x25x140K	25 x 25 x 140	43,30

Ref. CT2MD  
Ref. CT2IMD

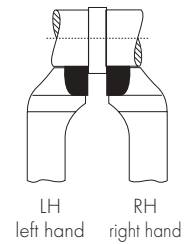
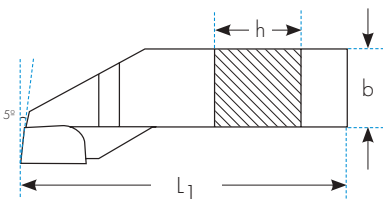
**DIN**  
**4980**

**P-20**

**K-10**

**ISO**  
**6**

**TURNING 90°**



P20		K10		h x b x L1 mm	€
RIGHT HAND	LEFT HAND	RIGHT HAND	LEFT HAND		
CT2MD10x10x90P	CT2IMD10x10x90P	CT2MD10x10x90K	CT2IMD10x10x90K	10 x 10 x 90	11,94
CT2MD12x12x100P	CT2IMD12x12x100P	CT2MD12x12x100K	CT2IMD12x12x100K	12 x 12 x 100	13,22
CT2MD16x16x110P	CT2IMD16x16x110P	CT2MD16x16x110K	CT2IMD16x16x110K	16 x 16 x 110	16,06
CT2MD20x20x125P	CT2IMD20x20x125P	CT2MD20x20x125K	CT2IMD20x20x125K	20 x 20 x 125	21,36
CT2MD25x25x140P	CT2IMD25x25x140P	CT2MD25x25x140K	CT2IMD25x25x140K	25 x 25 x 140	31,10

Ref. CT3MD  
Ref. CT3IMD

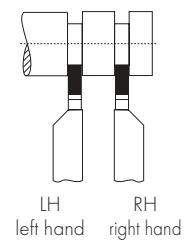
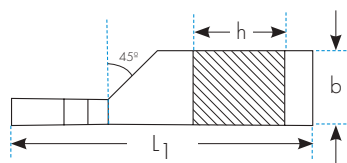
**DIN**  
**4981**

**P-20**

**K-10**

**ISO**  
**7**

**GROOVING / PARTING**

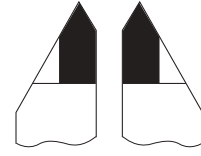


P20		K10		h x b x L1 mm	€
RIGHT HAND	LEFT HAND	RIGHT HAND	LEFT HAND		
CT3MD12x08x100P	CT3IMD12x08x100P	CT3MD12x08x100K	CT3IMD12x08x100K	12 x 8 x 100 x 3	12,36
CT3MD16x10x110P	CT3IMD16x10x110P	CT3MD16x10x110K	CT3IMD16x10x110K	16 x 10 x 110 x 4	13,50
CT3MD20x12x125P	CT3IMD20x12x125P	CT3MD20x12x125K	CT3IMD20x12x125K	20 x 12 x 125 x 5	15,61
CT3MD25x16x140P	CT3IMD25x16x140P	CT3MD25x16x140K	CT3IMD25x16x140K	25 x 16 x 140 x 6	20,70



**CARBIDE TIPPED LATHE TOOL BITS**

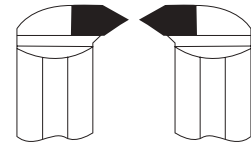
 Ref. CT9MD  
 Ref. CT9IMD

**DIN**  
**282**
**P-20**
**K-10**
**ISO**  
**12**
**EXTERNAL THREAD CUTTING**

 LH left hand  
 RH right hand

**P20**
**K10**

RIGHT HAND	LEFT HAND	RIGHT HAND	LEFT HAND	h x b x L <sub>1</sub> mm	€
CT9MD16x10x120P	CT9IMD16x10x120P	CT9MD16x10x120K	CT9IMD16x10x120K	16 x 10 x 120	15,47
CT9MD20x12x140P	CT9IMD20x12x140P	CT9MD20x12x140K	CT9IMD20x12x140K	20 x 12 x 140	18,12
CT9MD25x16x160P	CT9IMD25x16x160P	CT9MD25x16x160K	CT9IMD25x16x160K	25 x 16 x 160	23,60

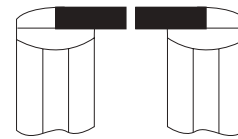
 Ref. CT12MD  
 Ref. CT12IMD

**DIN**  
**283**
**P-20**
**K-10**
**ISO**  
**13**
**THREAD INTERNAL CUTTING**

 LH left hand  
 RH right hand

**P20**
**K10**

RIGHT HAND	LEFT HAND	RIGHT HAND	LEFT HAND	h x b x L <sub>1</sub> mm	€
CT12MD10x10x140P	CT12IMD10x10x140P	CT12MD10x10x140K	CT12IMD10x10x140K	10 x 10 x 140	25,31
CT12MD12x12x160P	CT12IMD12x12x160P	CT12MD12x12x160K	CT12IMD12x12x160K	12 x 12 x 160	25,75
CT12MD16x16x180P	CT12IMD16x16x180P	CT12MD16x16x180K	CT12IMD16x16x180K	16 x 16 x 180	33,84
CT12MD20x20x210P	CT12IMD20x20x210P	CT12MD20x20x210K	CT12IMD20x20x210K	20 x 20 x 210	40,19
CT12MD25x25x250P	CT12IMD25x25x250P	CT12MD25x25x250K	CT12IMD25x25x250K	25 x 25 x 250	56,98

 Ref. CT13MD  
 Ref. CT13IMD

**DIN**  
**263**
**P-20**
**K-10**
**ISO**  
**11**
**GROOVING / PARTING**

 LH left hand  
 RH right hand

**P20**
**K10**

RIGHT HAND	LEFT HAND	RIGHT HAND	LEFT HAND	h x b x L <sub>1</sub> mm	€
CT13MD12x12x160P	CT13IMD12x12x160P	CT13MD12x12x160K	CT13IMD12x12x160K	12 x 12 x 160	26,53
CT13MD16x16x180P	CT13IMD16x16x180P	CT13MD16x16x180K	CT13IMD16x16x180K	16 x 16 x 180	33,17
CT13MD20x20x210P	CT13IMD20x20x210P	CT13MD20x20x210K	CT13IMD20x20x210K	20 x 20 x 210	41,88
CT13MD25x25x250P	CT13IMD25x25x250P	CT13MD25x25x250K	CT13IMD25x25x250K	25 x 25 x 250	52,62

# END MILLS



**BLUE-MASTER<sup>®</sup>**  
*by colasa*

CUTTING TECHNOLOGIES

**2 FLUTE END MILLS**

**2 Z**

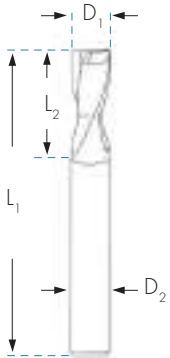


**TOL D2  
h6**

Ref. FFAL



**SHORT SERIES**





See DIN844 dimensions next pages

DIN 327	MATERIAL				FF01	FF02	FF60	FT02	FF92	FP05	FT12	FP08	FT01	DIN 844	FFAL
	COATING				HSS	HSSCo 8%	HSSCo 8%	HSSCo 8%	HSSCo 8%	ASP 60	ASP 60	ASP 60	ASP 60		HSSCo 8%
	QUALITY				BRIGHT	BRIGHT	TiAlN	TiAlSiN	BRIGHT	BRIGHT	TiAlSiN	BRIGHT	TiAlSiN		BRIGHT
D1 mm	L1 mm	L2 mm	D2 mm	TOL e8 €	TOL e8 €	TOL e8 €	TOL e8 €	TOL h10 €	TOL e8 €	TOL e8 €	TOL h10 €	TOL h10 €	TOL e8 €		
1,00	47	2,5	6							23,85	30,89	34,77	41,50		
2,00	48	4,0	6	10,84	13,73	22,52	26,26	27,95	20,12	27,46	30,69	37,73			16,61
2,50	49	5,0	6	10,84*	13,73	22,52	26,26	29,73							16,94
3,00	49	5,0	6	10,84	13,73	22,52	26,26	28,09	20,12	27,46	30,69	37,73			16,57
3,50	50	6,0	6			14,91	23,68	27,59							17,58
4,00	51	7,0	6	10,63	13,73	22,53	26,27	28,09	18,29	26,25	30,69	37,73			17,06
4,50	52	8,0	6	10,63*	16,40	24,99	29,14	29,73							18,67
5,00	52	8,0	6	10,63	13,73	22,53	26,27	28,09	18,29	26,25	30,69	37,73			17,06
5,50	52	8,0	6			16,97	25,64	29,89							20,89
6,00	52	8,0	6	10,63	13,73	22,53	26,27	28,09	18,29	26,25	30,69	37,73			18,49
6,50	60	10,0	10	15,86*	22,21	32,13	37,46								27,33
7,00	60	10,0	10	15,86	21,55	31,45	36,67	33,85	27,60	36,30	40,61	53,70			24,85
7,50	61	11,0	10			21,35	31,24	36,43							29,13
8,00	61	11,0	10	12,90	17,75	27,78	32,41	30,14	23,97	35,59	40,61	53,70			22,49
8,50	61	11,0	10			23,98	34,75	40,52							30,71
9,00	61	11,0	10	16,49	21,92	32,85	38,29	34,65	29,51	39,20	40,61	55,32			27,84
9,50	63	13,0	10			23,46	34,00	39,63							
10,00	63	13,0	10	13,57	17,63	28,61	33,53	29,90	26,70	36,27	40,61	55,32			24,31
10,50	70	13,0	12			28,18	42,80	49,21							
11,00	70	13,0	12			26,76	39,16	45,67	42,23						33,57
12,00	73	16,0	12	17,73	23,62	35,86	41,81	39,86	34,07	46,81	55,30	70,30			30,49
13,00	73	16,0	12			34,44	48,29	56,31	52,66						43,45
14,00	73	16,0	12	25,22	34,44	48,29	56,31	52,66	41,53	57,40	62,49	77,79			42,65
15,00	73	16,0	12			38,51	54,70	63,80	56,64						46,85
16,00	79	19,0	16	26,33	34,09	50,20	58,55	57,54	51,99	68,04	73,07	90,77			45,64
17,00	79	19,0	16			46,27	64,10	74,75							63,51
18,00	79	19,0	16	34,49	46,27	64,16	74,83	70,08	65,84	81,15	92,62	139,90			57,01
19,00	79	19,0	16			57,82	77,70	90,63							76,89
20,00	88	22,0	16			54,73	74,77	87,20							
20,00	88	22,0	20	40,43	54,73	74,77	87,20	83,69	77,55	97,61	107,97	142,89			65,90
22,00	88	22,0	20	55,46	72,29	99,09	115,54	109,52	98,77	136,91	128,22	164,10			91,74
24,00	102	26,0	25	69,60	93,29	123,04	143,46	130,88							137,87
25,00	102	26,0	25	69,62	90,88	117,98	137,58	120,27	131,86	164,96	168,08	207,67			116,77
26,00	102	26,0	25			106,61	163,36	187,83							183,38
28,00	102	26,0	25	87,21	114,76	153,09	179,38								142,09
30,00	102	26,0	25	100,34	130,76	169,47	197,62	174,20							163,51
32,00	112	32,0	32	104,05	134,32	172,58	201,25								173,18
36,00	112	32,0	32	133,96	179,66	221,69	258,52								
40,00	130	38,0	40	162,87	220,62	274,10	319,64								

\*Available until end of stock

**2 FLUTE END MILLS**

**2Z**    **INOX** **Al** **TOL D2 h6** Ref. FFLAL 

LONG SERIES



DIN 327/L				MATERIAL COATING QUALITY					DIN 844/L			FFLAL
D1 mm	L1 mm	L2 mm	D2 mm	FF06	FF67	FT06	FF15	FP21				FFLAL
				HSSCo 8% BRIGHT ★★ TOL e8	HSSCo 8% TiAlN ★★★ TOL e8	HSSCo 8% TiAlSiN ★★★★ TOL e8	HSSCo 8% BRIGHT ★★ TOL h10	ASP 60 BRIGHT Premium Quality TOL h10	HSSCo 8% BRIGHT Al TOL e8			
				€	€	€	€	€	L1 mm	L2 mm	D2 mm	€
2,00	54	7	6	15,13	23,87	27,83	30,73	36,05	54	10	6	25,03
2,50	56	8	6	15,21	23,87	27,83	30,77		56	12	6	
3,00	56	8	6	15,13	23,93	27,91	30,77	37,15	56	12	6	25,15
3,50	59	10	6	17,19	28,42	33,17			59	15	6	
4,00	63	11	6	15,20	23,93	27,91	30,77	37,15	63	19	6	25,31
4,50	63	11	6	17,19	24,44	28,50			63	19	6	
5,00	68	13	6	15,20	23,93	27,91	32,58	39,33	68	24	6	25,43
5,50	68	13	6	17,19	28,42	33,17			68	24	6	
6,00	68	13	6	15,20	23,93	27,91	29,44	35,53	68	24	6	26,40
6,50	80	16	10	28,51	46,65	53,64			68	24	6	
7,00	80	16	10	25,10	35,04	40,87	37,13	44,40	80	30	10	
7,50	88	19	10						80	30	10	
8,00	88	19	10	22,09	31,99	37,33	37,13	44,81	88	38	10	36,08
8,50	88	19	10	33,81	46,01	53,65			88	38	10	
9,00	88	19	10	29,72	40,52	47,23	40,73	48,72	88	38	10	38,05
10,00	95	22	10	24,34	37,06	43,21	40,56	49,19	95	45	10	36,08
11,00	102	22	12	38,37	51,76	60,35	54,02		102	45	12	50,56
12,00	110	26	12	34,99	48,94	57,08	52,98	63,66	110	53	12	46,67
13,00	110	26	12						110	53	12	
14,00	110	26	12	46,12	59,82	69,75	70,29	79,79	110	53	12	53,42
15,00	123	32	16						110	53	12	
16,00	123	32	16	52,86	73,82	86,10	80,00	95,22	123	63	16	65,21
17,00	123	32	16						123	63	16	
18,00	123	32	16	60,39	86,65	101,02	96,14	114,41	123	63	16	80,70
20,00	141	38	20	69,45	95,05	110,85	104,25	124,05	141	75	20	96,26
22,00	141	38	20	95,22	128,98	150,40	129,22	153,79	141	75	20	
24,00	166	45	25	144,90	164,10	188,67	173,83		166	90	25	
25,00	166	45	25	136,60	173,56	202,39	158,93	189,13	166	90	25	
26,00	166	45	25	181,38	193,23	222,17			166	90	25	
28,00	166	45	25	165,53	211,30	246,41			166	90	25	
30,00	166	45	25	184,01	227,46	265,24	236,75		166	90	25	
32,00	186	53	32	254,58	296,52	345,76	308,48		186	106	32	
36,00	186	53	32	288,02	337,14	393,14			186	106	32	
40,00	196	63	32	377,43	455,50	531,18			196	125	40	



End mills

Pink

**3 FLUTE END MILLS**

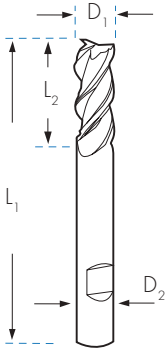
End mills

Pink

**3Z**     **INOX** **Al** **TOL D2 h6**



SHORT SERIES

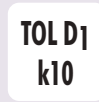


DIN 844				MATERIAL		COATING		QUALITY		ROUGHING		DIN 327			ASP 60		ASP 60	
				HSSCo 8%	HSSCo 8%	BRIGHT	TiAlN	TiAlSiN	BRIGHT	TiAlN	TiAlSiN				★★	★★★	★★★★	★★
D1 mm	L1 mm	L2 mm	D2 mm	TOL k10	TOL k10	TOL k10	TOL k10	TOL k10	TOL k10	TOL k10	TOL k12	TOL k12	TOL k12	L1 mm	L2 mm	D2 mm	TOL e8	TOL e8
€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€
1,00	49	3	6											47	2,5	6	25,63	31,92
2,00	51	7	6	15,09	23,75	27,69								48	4,0	6	20,83	31,18
2,50	52	8	6	15,09	23,75	27,69								49	5,0	6		
3,00	52	8	6	15,05	23,75	27,69								49	5,0	6	20,83	31,18
3,50	55	11	6	15,55	24,19	28,36								50	6,0	6		
4,00	55	11	6	15,08	23,75	27,69								51	7,0	6	20,83	31,18
4,50	57	13	6	16,61	25,10	29,27								52	8,0	6		
5,00	57	13	6	15,08	23,86	27,83								52	8,0	6	20,83	31,18
5,50	57	13	6	20,50	32,65	38,07								52	8,0	6		
6,00	57	13	6	15,88	26,68	31,11	43,05	52,00	59,77					52	8,0	6	20,83	31,18
6,50	66	16	10	28,48	43,67	50,22								60	10,0	10		
7,00	66	16	10	22,19	32,07	37,55	50,92	62,07	71,37					60	10,0	10	28,04	38,00
7,50	69	19	10	28,69	44,13	50,75								61	11,0	10		
8,00	69	19	10	19,82	29,60	34,53	44,12	51,39	59,94					61	11,0	10	28,04	38,00
8,50	69	19	10	30,24	45,58	52,40								61	11,0	10		
9,00	69	19	10	24,75	35,50	41,39	52,36	61,46	71,67					61	11,0	10		
9,50	72	22	10	32,68	47,89	55,06								63	13,0	10		
10,00	72	22	10	21,47	32,13	37,46	44,39	54,63	63,69					63	13,0	10	29,72	39,31
11,00	79	22	12	34,10	50,71	58,31	64,06	73,80	86,08					70	13,0	12		
12,00	83	26	12	26,96	38,35	44,72	53,41	62,87	73,32					73	16,0	12	38,34	49,71
13,00	83	26	12	42,88	58,96	67,80	69,77	81,27	94,79					73	16,0	12		
14,00	83	26	12	36,73	50,30	58,66	60,95	71,71	83,63					73	16,0	12	49,67	60,54
15,00	83	26	12	44,06	61,19	70,37	77,14	84,44	93,08					73	16,0	12		
16,00	92	32	16	40,33	56,13	65,46	73,88	89,10	103,93					79	19,0	16	58,42	69,69
17,00	92	32	16	66,00	86,66	99,63								79	19,0	16		
18,00	92	32	16	50,67	68,54	79,93	80,84	98,09	114,39					79	19,0	16	71,89	85,24
19,00	92	31	16	80,71	99,70	114,65								79	19,0	16		
20,00	104	38	20	58,18	77,25	90,10	98,63	115,38	134,55					88	22,0	20	85,50	102,05
22,00	104	38	20	92,75	116,64	134,12								88	22,0	20	114,13	145,99
25,00	121	45	25	121,18	154,43	177,58	149,40	170,73	199,10					102	26,0	25	143,28	164,63
28,00	121	45	25	140,77	172,69	198,55								102	26,0	25		
30,00	121	45	25	173,17	202,82	233,20	185,79	219,21	255,64					102	26,0	25		
32,00	133	53	32	176,26	218,89	251,68								112	32,0	32		

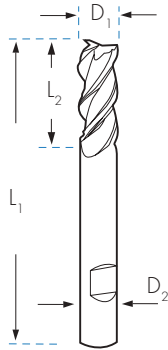


**3 FLUTE END MILLS**

**3Z**



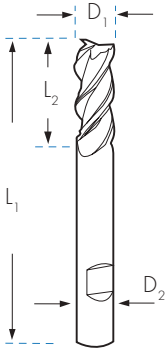
LONG SERIES



DIN 844/L		MATERIAL COATING QUALITY		FF83	FF86	FT83
				HSSCo 8% BRIGHT ★★	HSSCo 8% TiAlN ★★★★	HSSCo 8% TiAlSiN ★★★★★
D1 mm	L1 mm	L2 mm	D2 mm	€	€	€
1,00	52	7	6			
2,00	54	10	6	20,34	29,78	34,72
2,50	56	12	6	20,72	29,73	34,68
3,00	56	12	6	20,34	29,69	34,62
3,50	59	15	6	22,76	31,83	37,13
4,00	63	19	6	20,34	29,69	34,62
4,50	63	19	6	22,76	31,83	37,13
5,00	68	24	6	20,34	29,69	34,62
5,50	68	24	6	22,76	31,83	37,13
6,00	68	24	6	22,79	31,05	36,21
6,50	68	24	6			
7,00	80	30	10	30,87	41,57	48,48
7,50	80	30	10			
8,00	88	38	10	28,24	37,50	43,73
8,50	88	38	10			
9,00	88	38	10	34,36	44,48	51,88
9,50	88	38	10			
10,00	95	45	10	28,39	41,24	48,09
11,00	102	45	12	43,65	56,16	65,49
12,00	110	53	12	36,12	50,27	58,63
13,00	110	53	12			
14,00	110	53	12	47,05	61,47	71,69
15,00	110	53	12			
16,00	123	63	16	53,01	74,09	86,41
17,00	123	63	16			
18,00	123	63	16	64,24	87,58	102,14
19,00	123	63	16			
20,00	141	75	20	75,41	100,21	116,85
22,00	141	75	20	95,11	129,22	150,69
25,00	166	90	25	138,61	170,71	199,08
28,00	166	90	25	154,31	204,42	238,40
30,00	166	90	25	171,80	218,36	254,64
32,00	186	106	32	204,41	245,93	286,80

**MULTI-FLUTE END MILLS**
**4-6 Z**

**INOX**
**Al**
**TOL D1  
k10**
**TOL D2  
h6**

**SHORT SERIES**
**LONG SERIES**


DIN 844					MATERIAL		COATING		QUALITY		DIN 844/L								
					HSSCo 8%	HSSCo 8%	HSSCo 8%	ASP 60	ASP 60	HSSCo 8%	HSSCo 8%	HSSCo 8%	ASP 60	L1 mm	L2 mm	D2 mm	Z	€	€
D1 mm	L1 mm	L2 mm	D2 mm	Z	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€
1,00	49	3	6	4						28,42	33,75	52	7	6	4				
2,00	51	7	6	4	15,14	23,82	27,76	20,77	28,47			54	10	6	4	18,48	27,05	31,54	29,51
2,50	52	8	6	4	15,14	23,82	27,76					56	12	6	4	18,38	27,05	31,54	
3,00	52	8	6	4	15,14	23,82	27,76	20,77	28,47			56	12	6	4	18,48	27,06	31,55	29,51
3,50	55	11	6	4	15,59	24,26	28,30					59	15	6	4	24,29	32,80	38,24	
4,00	55	11	6	4	15,14	23,82	27,76	20,77	28,47			63	19	6	4	18,48	27,06	31,55	29,51
4,50	57	13	6	4	16,64	25,15	29,32					63	19	6	4	24,29	32,80	38,24	
5,00	57	13	6	4	15,14	23,82	27,76	20,77	28,47			68	24	6	4	18,48	27,06	31,55	29,51
5,50	57	13	6	4	24,20	32,65	38,07					68	24	6	4	24,13	32,80	38,24	
6,00	57	13	6	4	15,80	24,56	28,63	20,77	28,47			68	24	6	4	18,48	27,06	31,55	29,51
6,50	66	16	10	4	24,15	33,99	39,63					68	24	6	4				
7,00	66	16	10	4	22,19	32,08	37,40	28,23	40,62			80	30	10	4	28,04	37,62	43,88	44,02
7,50	69	16	10	4	28,60	38,18	44,53					80	30	10	4				
8,00	69	19	10	4	19,53	29,72	34,66	28,11	40,22			88	38	10	4	25,47	33,90	39,53	44,02
8,50	69	19	10	4	29,82	40,38	47,10					88	38	10	4				
9,00	69	19	10	4	24,64	35,54	41,45	33,21	43,87			88	38	10	4	29,02	39,52	46,09	44,02
9,50	69	19	10	4	31,55	42,01	48,98					88	38	10	4				
10,00	72	22	10	4	21,36	32,26	37,63	29,85	41,23			95	45	10	4	25,58	37,41	43,64	44,02
11,00	79	22	12	4	29,71	41,98	48,96					102	45	12	4	36,34	49,30	57,51	
12,00	83	26	12	4	26,96	37,29	43,49	39,42	54,59			110	53	12	4	33,47	46,83	54,63	63,83
13,00	83	26	12	4	38,03	51,87	60,49					110	53	12	4				
14,00	83	26	12	4	35,89	50,60	59,02	48,98	58,15			110	53	12	4	43,80	57,10	66,59	73,68
15,00	83	26	12	4	40,99	56,55	65,95					110	53	12	4				
16,00	92	32	16	4	40,00	56,41	65,76	57,41	68,87			123	63	16	4	47,88	67,18	78,35	91,30
17,00	92	32	16	4	49,84	67,54	78,76					123	63	16	4				
18,00	92	32	16	4	49,27	68,61	79,99	70,02	86,13			123	63	16	4	58,49	79,97	93,26	116,82
19,00	92	31	16	4	58,36	77,64	90,52					123	63	16	4				
20,00	104	38	20	4	57,68	77,64	90,52	82,35	111,89			141	75	20	4	68,50	92,38	107,72	143,25
22,00	104	38	20	4	80,07	107,61	125,50	108,50	131,97			141	75	20	5	94,99	121,75	141,99	160,68
24,00	121	45	25	5	100,66	126,81	147,88					141	75	25	5				
25,00	121	45	25	5	96,22	126,21	147,19	140,00	174,02			166	90	25	5	125,94	155,49	181,31	233,41
26,00	121	45	25	5	115,50	153,21	181,25					166	90	25	5				
28,00	121	45	25	5	114,53	153,55	185,20					166	90	25	5	140,87	184,97	215,69	
30,00	121	45	25	6	133,14	170,43	208,65					166	90	25	6	159,01	203,19	236,97	
32,00	133	53	32	6	136,51	174,36	213,46					186	106	32	6	160,30	204,63	238,62	
36,00	133	53	32	6	206,74	250,33	306,43					186	106	32	6	229,77	275,86	321,68	
40,00	155	63	32	6	248,54	304,43	372,66					217	125	32	6	254,67	328,90	385,37	

**MULTI-FLUTE ROUGHING END MILLS**

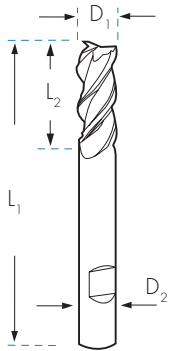
**4-6 Z**



**TOL D1  
k12**

**TOL D2  
h6**

**SHORT SERIES**



**LONG SERIES**

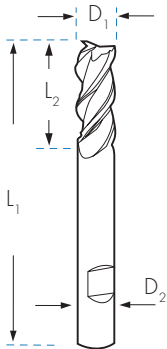


DIN 844		MATERIAL			FF25	FF27	FT25
		COATING			HSSCo 8%	HSSCo 8%	HSSCo 8%
		QUALITY			BRIGHT	TiAlN	TiAlSiN
		ROUGHING			★★	★★★	★★★★
		ROUGHING			NR	NR	NR
D1 mm	L1 mm	L2 mm	D2 mm	Z	€	€	€
6,00	57	13	6	4	38,75	46,78	54,55
7,00	66	16	10	4	46,57	55,84	65,11
8,00	69	19	10	4	40,45	49,72	57,98
9,00	69	19	10	4	48,35	58,54	68,29
10,00	72	22	10	4	40,13	49,24	57,41
11,00	79	22	12	4	58,81	70,53	82,26
12,00	83	26	12	4	48,47	60,03	69,99
13,00	83	26	12	4	68,82	81,44	94,97
14,00	83	26	12	4	56,27	69,62	81,19
15,00	83	26	12	4	74,00	89,61	104,50
16,00	92	32	16	4	66,75	82,04	95,68
17,00	92	32	16	4	91,15	108,45	126,46
18,00	92	32	16	4	72,79	90,39	105,40
19,00	92	31	16	4	107,72	125,70	146,60
20,00	104	38	20	4	91,21	110,41	128,76
NO CENTER CUTTING					FF05	FF74	FT05
22,00	104	38	20	6	103,05	133,23	
24,00	121	45	25	6	129,80	157,99	176,31
25,00	121	45	25	6	128,58	157,08	175,29
26,00	121	45	25	6	148,90	192,21	214,48
28,00	121	45	25	6	162,43	209,12	233,35
30,00	121	45	25	6	174,49	228,89	255,41
32,00	133	53	32	6	197,68	246,18	274,70
36,00	133	53	32	6	234,29	283,68	316,57
40,00	155	63	32	6	263,39	328,50	366,58

DIN 844/L		MATERIAL			FF29	FF31	FT29
		COATING			HSSCo 8%	HSSCo 8%	HSSCo 8%
		QUALITY			BRIGHT	TiAlN	TiAlSiN
		ROUGHING			★★	★★★	★★★★
		ROUGHING			NR	NR	NR
L1 mm	L2 mm	D2 mm	Z	€	€	€	
68	24	6	4	54,92	62,12	72,79	
80	30	10	4	56,62	70,97	82,76	
88	38	10	4	56,80	65,68	76,59	
88	38	10	4	62,28	71,96	83,91	
95	45	10	4	49,47	61,17	71,34	
102	45	12	4	80,96	92,77	108,20	
110	53	12	4	61,11	73,93	86,22	
110	53	12	4				
110	53	12	4	70,61	83,53	97,43	
110	53	12	4				
123	63	16	4	82,65	101,37	118,20	
123	63	16	4				
123	63	16	4	96,53	118,53	138,22	
123	63	16	4				
141	75	20	4	117,48	139,73	162,94	
					FF08	FF58	FT08
141	75	20	6	132,33	178,49	199,18	
141	75	25	6				
166	90	25	6	167,11	211,45	235,96	
166	90	25	6				
166	90	25	6	188,45	243,10	271,27	
166	90	25	6	244,33	290,38	324,05	
186	106	32	6	255,55	296,87	331,28	
186	106	32	6	306,86	354,51	395,59	
217	125	40	6	362,81	441,25	492,40	

**NO CENTER CUTTING MULTI-FLUTE END MILLS**
**4-6 Z**





**INOX**
**Al**
**TOL D1  
k10**
**TOL D2  
h6**

**SHORT SERIES**
**LONG SERIES**


DIN 844					MATERIAL				DIN 844/L						
COATING					HSS	HSSCo 8%	HSSCo 8%	HSSCo 8%	MATERIAL						
QUALITY					BRIGHT	BRIGHT	TiAIN	TiAISIN	COATING						
					★	★★	★★★	★★★★	QUALITY						
D1	L1	L2	D2	Z	€	€	€	€	L1	L2	D2	Z	€	€	€
mm	mm	mm	mm						mm	mm	mm				
2,00	51	7	6	4	10,85	14,22	22,88	26,70	54	10	6	4	17,78	27,52	32,24
2,50	52	8	6	4	10,85	14,22	22,88	26,70	56	12	6	4	17,78	25,26	29,60
3,00	52	8	6	4	10,85	14,22	22,88	26,70	56	12	6	4	17,78	28,62	33,54
3,50	55	11	6	4	11,19	14,66	23,40	27,27	59	15	6	4	23,39	34,35	40,25
4,00	55	11	6	4	10,85	14,22	22,97	26,77	63	19	6	4	17,78	28,62	33,54
4,50	57	13	6	4	11,19	14,65	23,40	27,27	63	19	6	4	23,39	34,35	40,25
5,00	57	13	6	4	10,85	14,22	22,97	26,77	68	24	6	4	17,78	28,62	33,54
5,50	57	13	6	4	16,86	22,12	30,76	35,86	68	24	6	4	23,39	34,35	40,25
6,00	57	13	6	4	10,85	14,22	22,96	26,75	68	24	6	4	17,78	28,62	33,54
6,50	66	16	10	4	16,86*	22,12	31,83	37,13	68	24	6	4			
7,00	66	16	10	4	15,91	20,89	30,67	35,76	80	30	10	4	26,91	39,50	46,28
7,50	69	16	10	4	19,94	26,13	35,65	41,58	80	30	10	4			
8,00	69	19	10	4	12,36	16,04	26,00	30,33	88	38	10	4	24,70	37,22	43,59
8,50	69	19	10	4	20,78	27,30	37,77	44,04	88	38	10	4			
9,00	69	19	10	4	16,64	21,81	32,58	37,99	88	38	10	4	27,94	41,65	48,81
9,50	72	22	10	4	22,56	28,84	39,66	46,26	88	38	10	4			
10,00	72	22	10	4	15,10	19,79	30,69	35,78	95	45	10	4	24,57	39,61	46,42
11,00	79	22	12	4	20,81	27,30	39,59	46,17	102	45	12	4	33,61	49,98	58,58
12,00	83	26	12	4	17,95	23,62	35,62	41,53	110	53	12	4	31,21	47,54	55,70
13,00	83	26	12	4	26,76	35,24	48,52	56,57	110	53	12	4			
14,00	83	26	12	4	25,32	33,13	46,67	54,42	110	53	12	4	40,80	57,67	67,58
15,00	83	26	12	4	28,86	37,82	53,75	62,67	110	53	12	4			
16,00	92	32	16	4	28,16	36,88	52,87	61,64	123	63	16	4	44,59	68,18	79,89
17,00	92	32	16	4	34,69	45,66	63,21	73,71	123	63	16	4			
18,00	92	32	16	4	34,65	45,47	63,21	73,71	123	63	16	4	54,46	81,02	94,92
19,00	92	31	16	4	41,04	53,50	72,52	84,59	123	63	16	4			
20,00	104	38	20	4	40,62	53,50	72,52	84,59	141	75	20	4	63,78	92,97	108,93
22,00	104	38	20	5	56,39	74,25	100,38	117,07	141	75	20	5	88,45	122,20	143,19
24,00	121	45	25	5	70,04	92,27	118,00	137,61	141	75	25	5			
25,00	121	45	25	5	69,81	92,27	118,00	137,61	166	90	25	5	117,32	156,46	183,32
26,00	121	45	25	5	87,56	115,35	149,17	173,95	166	90	25	5			
28,00	121	45	25	5	87,56	115,35	153,20	178,64	166	90	25	5	143,39	192,67	225,76
30,00	121	45	25	6	101,51	132,96	170,83	199,22	166	90	25	6	164,12	213,61	250,26
32,00	133	53	32	6	104,40*	136,39	174,80	203,85	186	106	32	6	163,86	215,11	252,03
36,00	133	53	32	6	136,62	179,93	218,88	255,24	186	106	32	6	233,70	295,56	346,31
40,00	143	63	32	6	163,79	216,28	268,60	313,23	217	125	40	6	259,78	397,22	465,43

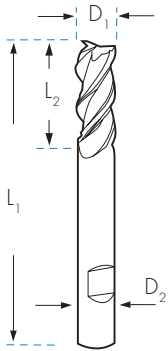
\*Available until end of stock

MULTI-FLUTE ROUGHING END MILLS

**3-5 Z**   **30° N**  **WELDON**  **34 HRC** **INOX** **Al** **TOL D1 k12** **TOL D2 h6**

SHORT SERIES

LONG SERIES



DIN 844		MATERIAL			FP10	FT10	FP11	FT11
		COATING			ASP 60	ASP 60	ASP 60	ASP 60
		ROUGHING			BRIGHT	TiAlSiN	BRIGHT	TiAlSiN
		QUALITY			NF	NF	NR	NR
					Premium Quality	Premium Quality	Premium Quality	Premium Quality
D1 mm	L1 mm	L2 mm	D2 mm	Z	€	€	€	€
2,00	51	7	6	3				
2,50	52	8	6	3				
3,00	52	8	6	3				
3,50	55	11	6	3				
4,00	55	11	6	3				
4,50	57	13	6	3				
5,00	57	13	6	3				
5,50	57	13	6	3				
6,00	57	13	6	3	48,53	55,69	44,97	51,71
6,50	66	16	10	3				
7,00	66	16	10	3	62,23	67,76	56,46	64,25
7,50	69	19	10	3				
8,00	69	19	10	3	53,60	62,43	49,14	56,77
8,50	69	19	10	3				
9,00	69	19	10	3	64,56	70,69	58,73	67,19
9,50	72	22	10	3				
10,00	72	22	10	4	51,11	60,58	46,33	57,53
11,00	79	22	12	4				
12,00	83	26	12	4	67,23	76,14	61,30	70,14
13,00	83	26	12	4				
14,00	83	26	12	4	81,64	92,82	74,02	84,17
15,00	83	26	12	4				
16,00	92	32	16	4	100,08	110,35	91,25	102,81
17,00	92	32	16	4				
18,00	92	32	16	4	109,88	119,99	99,01	112,45
19,00	92	31	16	4				
20,00	104	38	20	4	136,31	150,27	123,21	140,97
22,00	104	38	20	5	168,04	185,13	152,38	173,18
24,00	121	45	25	5				
25,00	121	45	25	5	199,19	221,33	180,68	204,99
26,00	121	45	25	5				
28,00	121	45	25	5				
30,00	121	45	25	5				
32,00	133	53	32	5				
36,00	133	53	32	5				
40,00	155	63	40	5				

DIN 844/L		MATERIAL			FP15	FT15	FP13	FT13
		COATING			ASP 60	ASP 60	ASP 60	ASP 60
		ROUGHING			BRIGHT	TiAlSiN	BRIGHT	TiAlSiN
		QUALITY			NF	NF	NR	NR
					Premium Quality	Premium Quality	Premium Quality	Premium Quality
L1 mm	L2 mm	D2 mm	Z	€	€	€	€	
54	10	6	3					
56	12	6	3					
56	12	6	3					
59	15	6	3					
63	19	6	3					
63	19	6	3					
68	24	6	3					
68	24	6	3					
68	24	6	3	76,15	80,45	67,55	74,34	
68	24	6	3					
80	30	10	3	86,09	98,01	78,18	91,30	
80	30	10	3					
88	38	10	3	80,10	85,25	70,90	79,41	
88	38	10	3					
88	38	10	3	84,49	96,69	78,18	91,88	
88	38	10	3					
95	45	10	4	72,07	80,15	64,22	74,01	
102	45	12	4					
110	53	12	4	91,33	99,77	80,66	91,33	
110	53	12	4					
110	53	12	4	107,05	122,83	96,27	108,71	
110	53	12	4					
123	63	16	4	128,05	140,65	114,25	129,78	
123	63	16	4					
123	63	16	4	143,23	166,78	130,49	148,68	
123	63	16	4					
141	75	20	4	186,18	204,23	164,95	189,89	
141	75	20	5	284,45	303,97	249,08	275,75	
141	75	25	5					
166	90	25	5	285,63	313,61	251,96	292,25	
166	90	25	5					
166	90	25	5					
166	90	25	5					
186	106	32	5					
186	106	32	5					
217	125	40	5					



**3 FLUTE END MILLS SHORT SERIES**
**3Z**

**INOX**
**Al**
**TOL D1**  
e8

**TOL D2**  
h6

**SUPER-SHORT SERIES**
**EXTRA-SHORT SERIES**

MATERIAL					FF51
COATING					HSSCo 8%
					BRIGHT
D1 mm	L1 mm	L2 mm	D2 mm	Z	€
1,00	34	2	6	3	14,48
1,50	34	3	6	3	14,48
2,00	35	4	6	3	14,45
2,50	36	5	6	3	14,45
3,00	36	5	6	3	14,45
3,50	37	6	6	3	14,45
4,00	38	7	6	3	14,45
4,50	38	7	6	3	14,45
5,00	39	8	6	3	14,45
5,50	39	8	6	3	14,45
6,00	39	8	6	3	14,45
6,50	42	10	8	3	19,87
7,00	42	10	8	3	19,87
7,50	42	10	8	3	19,87
8,00	43	11	8	3	19,87
8,50	48	11	10	3	22,77
9,00	48	11	10	3	22,77
9,50	48	11	10	3	22,77
10,00	50	13	10	3	22,77



MATERIAL					FF53
COATING					HSSCo 8%
					BRIGHT
D1 mm	L1 mm	L2 mm	D2 mm	Z	€
2,00	38	7	6	3	15,85
2,50	39	8	6	3	15,85
3,00	39	8	6	3	15,85
3,50	41	10	6	3	15,85
4,00	42	11	6	3	15,85
4,50	42	11	6	3	15,85
5,00	44	13	6	3	15,85
5,50	44	13	6	3	15,85
6,00	44	13	6	3	15,85
6,50	48	16	8	3	21,81
7,00	48	16	8	3	21,81
8,00	51	19	8	3	21,81
8,50	56	19	10	3	24,94
9,00	56	19	10	3	24,94
10,00	59	22	10	3	24,94

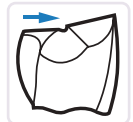

**3Z**

**DIN**  
844N

**HSS**  
PM

**Al**
**Cu**
**TOL D1**  
k10

**TOL D2**  
h6

 Improves chip  
removal


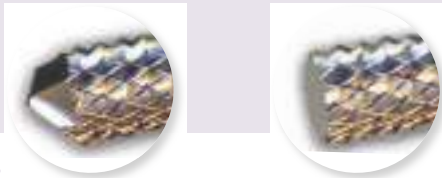
						FP22
	D1 mm	L1 mm	L2 mm	D2 mm	Z	€
FP220600	6,00	57	13	6	3	35,03*
FP220700	7,00	66	16	10	3	47,33*
FP220800	8,00	69	19	10	3	47,33*
FP220900	9,00	69	19	10	3	47,33*
FP221000	10,00	72	22	10	3	47,33*
FP221200	12,00	83	26	12	3	65,14*
FP221400	14,00	83	26	12	3	74,27*
FP221500	15,00	83	26	12	3	90,71*
FP221600	16,00	92	32	16	3	90,71*
FP221800	18,00	92	32	16	3	127,17*
FP222000	20,00	104	38	20	3	151,76*



\*Available until end of stock

**SOLID CARBIDE ROUTERS FOR COMPOSITE AND FIBER GLASS MATERIALS, PHENOLIC BOARDS, ETC**

**SOLID CARBIDE**



REV. AND FEED		
D <sub>1</sub> mm	RPM rev./min	FEED mm/min
1,50	60.000	3.000
2,00	50.000	2.500
3,00	32.000	1.600
5,00	20.000	1.200
6,00	16.000	1.000
6,35	14.000	1.000
8,00	9.000	700
10,00	7.000	550
12,00	6.000	450



D <sub>1</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	D <sub>2</sub> mm	RFC		RF		RFC TL		RFTL	
				€		€	TiAIN	€	TiAIN	€	
1,50	38	5	3,00	RFC0150	18,63	RF0150	17,66	RFC0150TL	28,16	RF0150TL	27,19
2,00	38	10	3,00	RFC0200	18,63	RF0200	17,66	RFC0200TL	28,16	RF0200TL	27,19
3,00	38	12	3,00	RFC0300	18,63	RF0300	17,66	RFC0300TL	28,16	RF0300TL	27,19
5,00	50	16	5,00	RFC0500	36,98	RF0500	33,59	RFC0500TL	46,53	RF0500TL	43,12
6,00	63	25	6,00	RFC0600	43,98	RF0600	39,87	RFC0600TL	55,57	RF0600TL	51,48
6,35	75	30	6,35	RFC0635	48,83	RF0635	44,70	RFC0635TL	60,46	RF0635TL	56,31
8,00	63	25	8,00	RFC0800	73,22	RF0800	66,47	RFC0800TL	84,19	RF0800TL	77,41
10,00	63	25	10,00	RFC1000	93,02	RF1000	84,59	RFC1000TL	104,53	RF1000TL	96,09
12,00	75	25	12,00	RFC1200	116,94	RF1200	106,35	RFC1200TL	131,20	RF1200TL	120,58

**SOLID CARBIDE TYRE BURRS**

**SOLID CARBIDE**



	RN				
	D <sub>1</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	D <sub>2</sub> mm	€
RN0300	3,00	50	25	3	18,13
RN0600	6,00	80	50	6	43,76
RN0800	8,00	110	50	8	49,28
RN1000	10,00	110	60	10	77,34

**SOLID CARBIDE ROUTERS, ROTOZIP TYPE ACCESSORIES**



		RR				
		D <sub>1</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	D <sub>2</sub> mm	€
RR0317	Tile	3,17	50	25	3,17	20,91*
RR0635	Tile	6,35	50	25	6,35	35,05*
RR0435	Drywall	6,35	52	32	6,35	43,86*
RR0247	Grout	2,47	38	14	3,17	15,37*

\*Available until end of stock

**HSSCo SINGLE FLUTE END MILLS (FOR ALUMINIUM & PVC)**

HSSCo

Al

PVC

TOL D1  
k12TOL D2  
h6

## SHORT SERIES



## FF13

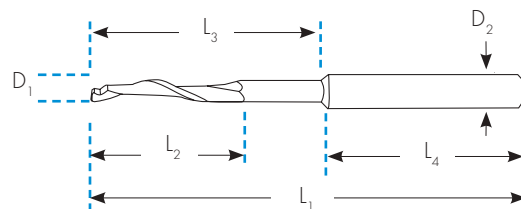
	D1 mm	L1 mm	L2 mm	D2 mm	HSSCo €	TiN €
FF1381	1,0	60	12	8	44,70	62,96
FF1382	2,0	60	12	8	44,70	62,96
FF1383	3,0	60	12	8	17,03	24,85
FF1384	4,0	60	12	8	17,03	24,85
FF1385	5,0	60	13	8	17,03	24,85
FF1386	6,0	60	16	8	17,97	25,75
FF1387	7,0	60	16	8	20,78	29,22
FF1388	8,0	80	16	8	20,78	29,22
FF131010	10,0	80	15	10	23,05	30,28
FF1361	1,0	45	6	6	31,20	41,37
FF13615	1,5	45	6	6	31,20	41,37
FF1362	2,0	45	6	6	31,20	41,37
FF1363	3,0	60	12	6	16,16	22,66
FF1364	4,0	60	12	6	16,21	22,66
FF1365	5,0	60	12	6	16,21	22,66
FF1366	6,0	60	14	6	16,21	22,66

## LONG SERIES



## FF14

	D1 mm	L1 mm	L2 mm	L3 mm	D2 mm	HSSCo €	TiN €
FF1483	3	80	16	45	8	29,31	37,20
FF1484	4	80	16	45	8	24,95	33,03
FF1485	5	80	16	45	8	24,95	33,03
FF1486	6	90	16	45	8	24,95	33,03
FF1487	7	90	20	50	8	32,31	40,73
FF1488	8	100	30	70	8	29,21	37,55
FF1465	5	80	14	45	6	24,93	33,03
FF1466	6	80	14	45	6	24,95	33,03



## EXTRA LONG SERIES



## FF14-E

	D1 mm	L1 mm	L2 mm	L3 mm	D2 mm	L4 mm	HSSCo €	TiN €
FF1485-E	5	100	30	55	8	45	24,43	30,59
FF1485-EL	5	100	50	-	8	50	29,25	41,54

## LACQUERED ALUMINIUM



## FF50

	D1 mm	L1 mm	L2 mm	L3 mm	D2 mm	HSSCo €	TiN €
FF5084	4	80	16	35	8	22,66	30,92
FF5085	5	80	18	35	8	22,66	30,92

## SPECIAL SIZES



## FF14 Specials

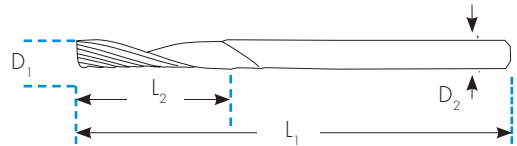
	D1 mm	L1 mm	L2 mm	L3 mm	D2 mm	HSSCo €
FF148412020	4	120	20	-	8	24,71
FF14856018	5	60	18	-	8	20,37
FF14859025	5	90	25	-	8	26,58
FF148510025	5	100	25	-	8	24,70
FF148512014	5	120	14	-	8	24,70
FF14851001817	5	100	18	35	8	25,10
FF14851201461	5	120	14	75	8	33,80
FF14851201817	5	120	18	35	8	33,80
FF1486801421	6	80	14	35	8	28,00
FF14861001835	6	100	18	35	8	28,00
FF14861201461	6	120	14	75	8	40,50

## FF14 Specials

	D1 mm	L1 mm	L2 mm	L3 mm	D2 mm	HSSCo €
FF14861003045	6	100	30	45	8	33,97
FF14861006040	6	100	60	-	8	43,61
FF14888025	8	80	25	-	8	21,14
FF148810014	8	100	14	-	8	23,38
FF148812014	8	120	14	-	8	25,38
FF14881201476	8	120	14	90	8	30,63
FF14898014	9	80	14	-	8	24,52
FF148108014	10	80	14	-	8	26,10
FF1410101003040	10	100	30	70	10	31,86
FF1410101201481	10	120	14	95	10	33,93
FF14101012014	10	120	14	-	10	27,35
FF148128014	12	80	14	-	8	29,60

**SOLID CARBIDE SINGLE FLUTE END MILLS (FOR ALUMINIUM & PVC)**

**SOLID CARBIDE** **Al** **PVC** **TOL h10** **TOL D2 h6**



**HELIX A - SHORT SERIES**



A	D1 mm	L1 mm	L2 mm	D2 mm	FMGA13	
					CARBIDE	€
FMGA13305	0,5	39	1,5	3		51,93
FMGA1331	1,0	39	3,0	3		39,81
FMGA13315	1,5	39	4,0	3		35,83
FMGA1322	2,0	40	10,0	2		30,19
FMGA1333	3,0	40	12,0	3		25,57
FMGA1336	3,0	64	12,0	6		44,73
FMGA1338	3,0	64	12,0	8		64,79
FMGA1344	4,0	50	16,0	4		28,11
FMGA1346	4,0	64	16,0	6		45,18
FMGA1348	4,0	64	16,0	8		75,39
FMGA135550	5,0	50	16,0	5		29,17
FMGA1355	5,0	64	16,0	5		31,96
FMGA1356	5,0	64	16,0	6		50,86
FMGA1358	5,0	64	16,0	8		77,10
FMGA136650	6,0	50	16,0	6		39,22
FMGA1366	6,0	64	20,0	6		43,21
FMGA1368	6,0	64	20,0	8		78,27
FMGA1378	7,0	64	20,0	8		87,75
FMGA138816	8,0	66	16,0	8		44,49
FMGA1388	8,0	76	38,0	8		59,00
FMGA131010	10,0	76	30,0	10		73,94

**HELIX A - LONG SERIES**



A	D1 mm	L1 mm	L2 mm	D2 mm	FMGA13E	
					CARBIDE	€
FMGA1355E	5	80	38	5		56,34
FMGA1366E	6	85	40	6		62,22
FMGA1388E	8	90	38	8		79,98
FMGA1388EX	8	110	43	8		104,93
FMGA131010E	10	100	40	10		114,67
FMGA131010EL	10	120	60	10		148,64

**HELIX B**



B	D1 mm	L1 mm	L2 mm	D2 mm	FMGA13HI	
					CARBIDE	€
FMGA1333HI	3	50	8	3		33,31
FMGA1344HI	4	64	12	4		33,31
FMGA1355HI	5	64	16	5		36,07
FMGA1366HI	6	64	20	6		54,45
FMGA1388HI	8	76	38	8		72,06
FMGA131010HI	10	76	35	10		88,08

**HELIX C**

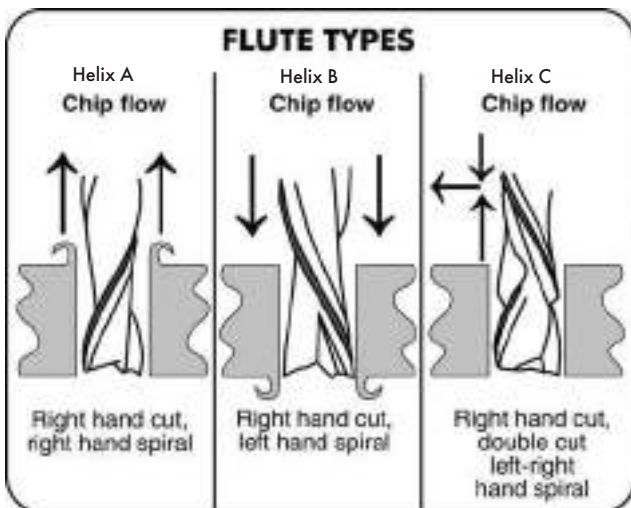


C	D1 mm	L1 mm	L2 mm	D2 mm	FMGA13CO	
					CARBIDE	€
FMGA1366CO	6	64	25	6		132,00
FMGA1388CO	8	64	25	8		182,53
FMGA131010CO	10	76	35	10		214,54
FMGA131212CO	12	76	35	12		284,62

**STRAIGHT FLUTE**



R	D1 mm	L1 mm	L2 mm	D2 mm	FMGA13R	
					CARBIDE	€
FMGA1346R	4	64	16	6		48,81
FMGA1356R	5	64	20	6		48,81
FMGA1366R	6	64	25	6		56,83
FMGA1388R	8	64	25	8		84,06
FMGA131010R	10	88	35	10		110,02
FMGA131212R	12	88	35	12		158,79



**CUTTING SPEED FOR SINGLE FLUTE END MILLS**

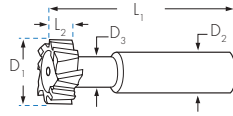
D1 mm	HSSCo		CARBIDE	
	Aluminium (R.P.M.)	PVC (R.P.M.)	Aluminium (R.P.M.)	PVC (R.P.M.)
3,00	12000	12000	19000	19000
4,00	11000	11000	18000	18000
5,00	10000	10000	18000	18000
6,00	10000	10000	17000	17000
7,00	9000	9000	17000	17000
8,00	9000	9000	16000	16000
9,00	9000	9000	16000	16000
10,00	9000	9000	16000	16000

### T SLOT CUTTERS

Ref. FF17

**"T" SLOTS CUTTERS**

**DIN 851A**



TOL D1  
d11

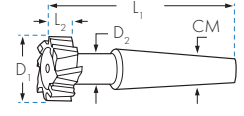
TOL D2  
h6

FF17							
D1 x L2 mm	D2 mm	D3 mm	Z	L1 mm	HSSCo €	TiAlN €	
11,0x4,0	10	4	4	53,5	102,04	125,38	
12,5x6,0	10	5	6	57,0	106,07	132,61	
16,0x8,0	10	7	6	62,0	116,63	147,97	
18,0x8,0	12	8	8	70,0	122,86	158,21	
21,0x9,0	12	10	8	74,0	135,31	190,06	
25,0x11,0	16	12	8	82,0	152,71	206,97	
32,0x14,0	16	15	10	90,0	192,63	268,41	
40,0x18,0	25	19	10	108,0	267,20	374,18	
50,0x22,0	32	25	10	124,0	321,30	421,37	
60,0x28,0	32	30	10	139,0	335,87	440,51	
72,0x35,0	32	35	10	153,0	350,47	459,66	

Ref. FF17C

**"T" SLOTS CUTTERS**

**DIN 851B**



TOL D2  
h12

FF17C							
D1 x L2 mm	MT*	THREAD	D2 mm	L1 mm	HSSCo €	TiAlN €	
18,0x8,0	1	M6	8	70	133,86	165,98	
21,0x9,0	2	M10	10	74	146,97	182,24	
25,0x11,0	2	M10	12	82	153,22	190,00	
32,0x14,0	2	M10	16	90	204,35	253,39	
40,0x18,0	3	M12	20	108	258,35	320,35	
50,0x22,0	4	M16	25	124	341,22	423,10	
60,0x28,0	4	M16	31	139	451,47	559,82	
72,0x35,0	5	M20	36	153	612,80	759,86	

MT\*: Morse taper shank

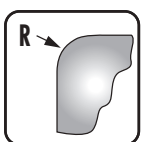
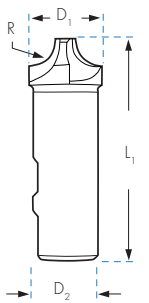
### CORNER RADIUS END MILLS

**4 Z**

**HSSCo 8%**

**DIN 6518N**

**WELDON**



FF1/4R					
	TOL H11 R	js 15 D1 mm	TOL h6 D2 mm	L1 mm	€
FF1/4R1	1,0	8	10	60	71,46
FF1/4R1.50	1,5	9	10	60	69,12
FF1/4R2	2,0	10	10	60	58,15
FF1/4R2.50	2,5	11	10	60	66,90
FF1/4R3	3,0	12	12	60	66,65
FF1/4R3.50	3,5	13	12	60	86,81
FF1/4R4	4,0	14	12	60	74,02
FF1/4R4.50	4,5	15	12	60	98,94
FF1/4R5	5,0	16	12	60	82,94
FF1/4R5.50	5,5	19	16	67	98,94
FF1/4R6	6,0	20	16	67	83,09
FF1/4R6.50	6,5	21	16	71	125,93
FF1/4R7	7,0	22	16	71	113,55
FF1/4R7.50	7,5	23	16	71	137,08
FF1/4R8	8,0	24	16	71	113,55
FF1/4R8.50	8,5	25	25	85	167,91
FF1/4R9	9,0	26	25	85	147,99
FF1/4R9.50	9,5	27	25	85	176,47
FF1/4R10	10,0	28	25	85	147,99
FF1/4R10.50	10,5	31	25	90	205,60
FF1/4R11	11,0	32	25	90	197,58
FF1/4R12	12,0	34	25	90	162,79
FF1/4R12.50	12,5	41	25	100	211,41
FF1/4R13	13,0	42	25	100	262,06
FF1/4R14	14,0	44	25	100	271,92
FF1/4R15	15,0	46	25	100	338,52
FF1/4R16	16,0	48	25	100	311,14
FF1/4R18	18,0	52	32	112	401,34
FF1/4R20	20,0	56	32	112	450,88

### WOODRUFF KEYSEAT CUTTERS

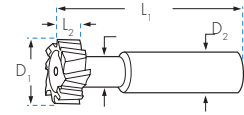
Ref. FF16

**WOODRUFF TYPE**

**DIN 850B**

**TOL D1 h12**

**TOL D2 h6**



FF16					
D1 x L2 mm	D2 mm	Z	L1 mm	HSSCo €	TiAlN €
4,5x1,0	6	6	50	58,01	68,61
7,5x1,5	6	6	50	60,40	72,60
7,5x2,0	6	6	50	60,40	72,60
10,5x2,0	6	6	50	64,98	78,34
10,5x2,5	6	6	50	64,98	78,34
10,5x3,0	6	6	50	64,98	78,34
13,5x3,0	10	6	56	66,01	82,46
13,5x4,0	10	6	56	66,01	82,46
16,5x3,0	10	6	56	66,61	88,30
16,5x4,0	10	6	56	66,61	88,30
16,5x5,0	10	6	56	66,61	85,42
19,5x4,0	10	8	63	75,83	100,17
19,5x5,0	10	8	63	75,83	95,98
19,5x6,0	10	8	63	75,83	95,98
22,5x5,0	10	8	63	83,06	111,26
22,5x6,0	10	8	63	83,06	111,81
22,5x8,0	10	8	63	83,06	111,81
25,5x6,0	10	10	63	97,27	138,47
28,5x6,0	10	10	63	98,95	140,13
28,5x8,0	10	10	63	98,95	140,13
28,5x10,0	12	10	71	98,95	140,13
32,5x7,0	12	10	71	122,71	167,70
32,5x8,0	12	10	71	122,71	167,70
32,5x10,0	12	10	71	122,71	167,70
45,5x10,0	12	12	71	194,12	275,97



**DOVETAIL AND INVERTED DOVETAIL MILLING CUTTERS**



Ref. FF98  
Ref. FF99

**HSSCo**

**DIN 1833A**

**TOL D1 js16**

**TOL D2 h6**



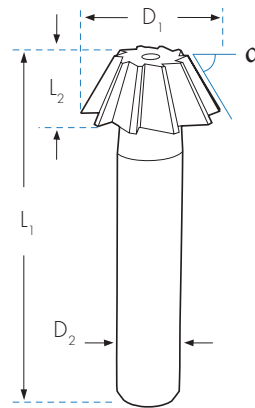
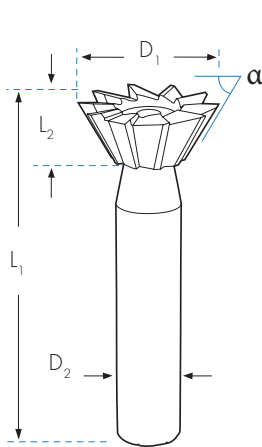
Ref. FF97  
Ref. FF95

**HSSCo**

**DIN 1833B**

**TOL D1 js16**

**TOL D2 h6**



**FF98**

<b>45°</b>	D1 mm	α	D2 mm	L1 mm	L2 mm	Z	€
FF981600	16	45°	12	60	4,0	8	103,15
FF982000	20	45°	12	63	5,0	10	109,37
FF982500	25	45°	12	67	6,3	12	133,76
FF983200	32	45°	16	71	8,0	14	149,25

**FF97**

<b>45°</b>	D1 mm	α	D2 mm	L1 mm	L2 mm	Z	€
FF971600	16	45°	12	60	4,0	8	83,08
FF972000	20	45°	12	63	5,0	10	93,42
FF972500	25	45°	12	67	6,3	12	105,05
FF973200	32	45°	16	71	8,0	12	119,46

**FF99**

<b>60°</b>	D1 mm	α	D2 mm	L1 mm	L2 mm	Z	€
FF991600	16	60°	12	60	6,3	8	103,15
FF992000	20	60°	12	63	8,0	10	109,37
FF992500	25	60°	12	67	10,0	12	133,76
FF993200	32	60°	16	71	12,5	14	149,25

**FF95**

<b>60°</b>	D1 mm	α	D2 mm	L1 mm	L2 mm	Z	€
FF951600	16	60°	12	60	6,3	8	81,50
FF952000	20	60°	12	63	8,0	10	91,66
FF952500	25	60°	12	67	10,0	12	103,09
FF953200	32	60°	16	71	12,5	12	117,23

**SPECIAL SIZES**

**FF99**

FF991600-50	16	50°	12	60	5,0	8	115,84
FF992000-50	20	50°	12	63	6,3	10	123,48
FF992500-50	25	50°	12	67	8,0	12	152,57
FF991600-55	16	55°	12	60	5,6	8	115,84
FF992000-55	20	55°	12	63	7,1	10	123,48
FF992500-55	25	55°	12	67	9,0	12	152,57
FF991600-75	16	75°	12	60	8,0	8	115,84
FF992500-75	25	75°	12	67	10,0	12	152,57
FF991600-80	16	80°	12	60	8,0	8	115,84
FF992500-80	25	80°	12	67	10,0	12	152,57
FF991600-85	16	85°	12	60	8,0	8	115,84
FF992500-85	25	85°	12	67	10,0	12	152,57

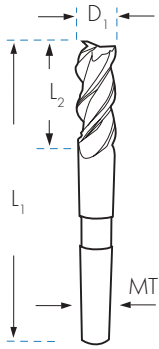
**SPECIAL SIZES**

**FF95**

FF951600-50	16	50°	12	60	5,0	8	96,71
FF952000-50	20	50°	12	63	6,3	10	123,46
FF952500-50	25	50°	12	67	8,0	12	154,03
FF951600-55	16	55°	12	60	5,6	8	96,71
FF952000-55	20	55°	12	63	7,1	10	123,46
FF952500-55	25	55°	12	67	9,0	12	154,03
FF951600-75	16	75°	12	60	8,0	8	96,71
FF952500-75	25	75°	12	67	10,0	12	154,03

**TAPER SHANK END MILLS**
**4-8 Z**

**INOX**
**Al**
**2 Z**

**SHORT SERIES**


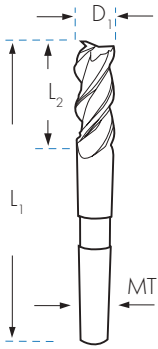
DIN 845B		MATERIAL		COATING		QUALITY		ROUGHING		FF09		FF35		FF39		FF10		FF46		FF48		DIN 326		FF55	
										HSSCo 8%		HSSCo 8%		HSSCo 8%		HSSCo 8%		HSSCo 8%		HSSCo 8%		HSSCo 8%		HSSCo 8%	
				BRIGHT		TIN		TiAlN		BRIGHT		TIN		TiAlN								BRIGHT			
				★★		★★★		★★★		★★		★★★		★★★										TOL e8	
				TOL k10		TOL k10		TOL k10		TOL k12		TOL k12		TOL k12										TOL e8	
D1	L1	L2	Z	MT*	THREAD	€	€	€	€	€	€	€	€	€	€	€	L1	L2	Z	€	L1	L2	Z	€	
10,00	92	22	4	1	M6	54,10	75,12	77,36	80,25	100,25	103,17	83	13	2	68,02										
12,00	111	26	4	2	M6	71,52	91,75	96,17	81,79	102,37	106,33	86	16	2	70,62										
14,00	111	26	4	2	M10	79,24	100,47	106,28	92,92	114,38	119,94	101	16	2	73,27										
15,00	111	26	4	2	M10	85,03	109,97	115,27	116,08	139,85	146,65														
16,00	117	32	4	2	M10	78,89	104,29	109,31	95,84	121,23	125,92	104	19	2	80,06										
18,00	117	32	4	2	M10	83,80	108,85	114,08	105,18	129,82	136,15	104	19	2	83,92										
20,00	123	38	4	2	M10	93,48	122,57	128,48	115,68	144,36	151,39	107	22	2	88,07										
22,00	123	38	5	2	M10	105,72	133,35	141,06	127,35	155,13	162,66	107	22	2	103,72										
24,00	147	45	6	3	M12	159,89	183,45	195,88	177,56	203,61	213,49	128	26	2	134,20										
25,00	154	45	5	3	M12	144,32	177,50	187,83	177,61	210,88	221,13	128	26	2	141,05										
26,00	147	45	6	3	M12	145,73	184,31	187,83	195,11	226,97	238,04	128	26	2	134,62										
28,00	154	50	5	3	M12	145,73	184,31	187,83	195,16	226,97	238,04	128	26	2	163,49										
30,00	154	50	6	3	M12	161,03	211,77	215,79	229,15	271,06	284,26	128	26	2	179,98										
32,00	178	53	6	4	M16	211,53	271,73	276,91	271,72	335,30	351,59	157	32	2	198,17										
36,00	178	53	6	4	M16	240,94	300,96	309,73	299,55	363,96	381,66	157	32	2	252,77										
40,00	188	63	6	4	M16	290,28	361,20	371,69	418,46	492,58	516,52	163	38	2	291,31										
45,00	188	63	6	4	M16	373,86	457,73	470,90	475,63	544,65	571,13	163	38	2	420,73										
50,00	233	75	6	5	M20	450,38	528,94	544,19	504,42	593,88	622,73	203	45	2	528,55										
56,00	233	75	8	5	M20	621,31	688,07	707,89	718,26	767,60	804,91														
63,00	241	90	8	5	M20	780,05	835,87	859,94	902,14	936,56	982,06														

\* Morse taper

**TAPER SHANK END MILLS WITHOUT CENTER CUTTING**

**4-8 Z**     **INOX** **Al**

LONG SERIES



DIN 845B/L		MATERIAL				COATING				QUALITY				ROUGHING			
D1 mm	L1 mm	L2 mm	Z	MT*	THREAD	FF11	FF61	FF71	FF12	FF33	FF43	TOL k10	TOL k10	TOL k10	TOL k12	TOL k12	TOL k12
€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€
10,00	115	45	4	1	M6	HSSCo 8%	HSSCo 8%	HSSCo 8%	HSSCo 8%	HSSCo 8%	HSSCo 8%	€ 98,27	€ 119,77	€ 123,83	€ 143,42	€ 163,89	€ 169,46
12,00	138	53	4	2	M6	BRIGHT	TIN	TiAlN	BRIGHT	TIN	TiAlN	€ 92,65	€ 119,77	€ 127,34	€ 146,11	€ 166,05	€ 173,28
14,00	138	53	4	2	M10	★★	★★★	★★★	★★	★★★	★★★	€ 97,50	€ 130,11	€ 135,77	€ 184,09	€ 203,78	€ 212,67
15,00	138	53	4	2	M10	NR	NR	NR	NR	NR	NR	€ 107,04	€ 136,40	€ 142,33	€ 211,70	€ 234,14	€ 244,39
16,00	148	63	4	2	M10	TOL k10	TOL k10	TOL k10	TOL k12	TOL k12	TOL k12	€ 105,95	€ 132,98	€ 138,78	€ 153,12	€ 178,78	€ 186,59
18,00	148	63	4	2	M10	€	€	€	€	€	€	€ 120,37	€ 145,98	€ 152,32	€ 158,94	€ 184,32	€ 192,36
20,00	160	75	4	2	M10	€ 133,55	€ 163,30	€ 170,40	€ 182,33	€ 211,49	€ 220,70	€ 133,55	€ 163,30	€ 170,40	€ 182,33	€ 211,49	€ 220,70
22,00	160	75	5	2	M10	€ 151,14	€ 179,67	€ 188,36	€ 189,37	€ 218,10	€ 227,61	€ 151,14	€ 179,67	€ 188,36	€ 189,37	€ 218,10	€ 227,61
24,00	192	90	5	3	M12	€ 205,58	€ 232,68	€ 245,09	€ 257,11	€ 284,53	€ 298,85	€ 205,58	€ 232,68	€ 245,09	€ 257,11	€ 284,53	€ 298,85
25,00	184	80	5	3	M12	€ 204,18	€ 240,10	€ 252,30	€ 268,82	€ 303,06	€ 316,27	€ 204,18	€ 240,10	€ 252,30	€ 268,82	€ 303,06	€ 316,27
26,00	192	90	5	3	M12	€ 226,14	€ 259,24	€ 272,42	€ 279,35	€ 313,01	€ 326,67	€ 226,14	€ 259,24	€ 272,42	€ 279,35	€ 313,01	€ 326,67
28,00	192	90	5	3	M12	€ 229,15	€ 274,32	€ 288,94	€ 277,32	€ 313,01	€ 326,67	€ 229,15	€ 274,32	€ 288,94	€ 277,32	€ 313,01	€ 326,67
30,00	192	90	5	3	M12	€ 264,15	€ 308,02	€ 323,65	€ 330,74	€ 374,90	€ 391,28	€ 264,15	€ 308,02	€ 323,65	€ 330,74	€ 374,90	€ 391,28
32,00	229	100	6	4	M16	€ 311,42	€ 364,72	€ 383,24	€ 393,88	€ 447,58	€ 467,14	€ 311,42	€ 364,72	€ 383,24	€ 393,88	€ 447,58	€ 467,14
36,00	231	106	6	4	M16	€ 356,60	€ 408,98	€ 429,73	€ 451,15	€ 503,58	€ 525,56	€ 356,60	€ 408,98	€ 429,73	€ 451,15	€ 503,58	€ 525,56
40,00	250	125	6	4	M16	€ 396,24	€ 460,17	€ 483,56	€ 554,40	€ 616,23	€ 643,16	€ 396,24	€ 460,17	€ 483,56	€ 554,40	€ 616,23	€ 643,16
45,00	250	125	6	4	M16	€ 534,05	€ 611,86	€ 644,51	€ 707,14	€ 778,71	€ 812,74	€ 534,05	€ 611,86	€ 644,51	€ 707,14	€ 778,71	€ 812,74
50,00	268	110	6	5	M20	€ 651,77	€ 716,86	€ 755,13	€ 882,44	€ 944,35	€ 985,59	€ 651,77	€ 716,86	€ 755,13	€ 882,44	€ 944,35	€ 985,59
56,00	308	150	8	5	M20	€ 685,89	€ 748,45	€ 789,70	€ 1.028,31	€ 1.082,14	€ 1.139,99	€ 685,89	€ 748,45	€ 789,70	€ 1.028,31	€ 1.082,14	€ 1.139,99
63,00	338	180	8	5	M20	€ 907,25	€ 954,57	€ 1.005,32	€ 1.294,58	€ 1.333,70	€ 1.404,95	€ 907,25	€ 954,57	€ 1.005,32	€ 1.294,58	€ 1.333,70	€ 1.404,95

\* Morse taper

**CENTER CUTTING END MILLS IN PLASTIC BOXES**

End mills

Pink

**2Z**
**DIN  
327**
**4Z**
**DIN  
844**


REFERENCE	<b>PTF20</b>	<b>PTF60</b>
QUANTITY	8	8
TYPE		
QUALITY	HSSCo 8%	<b>TiAIN</b>
CONTENT	<u>6</u> <u>8</u> <u>10</u> <u>12</u>	<u>6</u> <u>8</u> <u>10</u> <u>12</u>
Ø mm	<u>2</u> <u>2</u> <u>2</u> <u>2</u>	<u>2</u> <u>2</u> <u>2</u> <u>2</u>
PRICE €	146,30	231,97

REFERENCE	<b>PTF24</b>	<b>PTF64</b>
QUANTITY	8	8
TYPE		
QUALITY	HSSCo 8%	<b>TiAIN</b>
CONTENT	<u>6</u> <u>8</u> <u>10</u> <u>12</u>	<u>6</u> <u>8</u> <u>10</u> <u>12</u>
Ø mm	<u>2</u> <u>2</u> <u>2</u> <u>2</u>	<u>2</u> <u>2</u> <u>2</u> <u>2</u>
PRICE €	161,98	245,75

**2Z**
**DIN  
327**
**4Z**
**DIN  
844**


REFERENCE	<b>PTF21</b>	<b>PTF61</b>
QUANTITY	6	6
TYPE		
QUALITY	HSSCo 8%	<b>TiAIN</b>
CONTENT	<u>6-8-10-12-16-20</u>	<u>6-8-10-12-16-20</u>
Ø mm		
PRICE €	158,33	240,87

REFERENCE	<b>PTF25</b>	<b>PTF65</b>
QUANTITY	6	6
TYPE		
QUALITY	HSSCo 8%	<b>TiAIN</b>
CONTENT	<u>6-8-10-12-16-20</u>	<u>6-8-10-12-16-20</u>
Ø mm		
PRICE €	176,81	255,01

**2Z**
**DIN  
327**
**4Z**
**DIN  
844**


REFERENCE	<b>PTF22</b>	<b>PTF62</b>
QUANTITY	6	6
TYPE		
QUALITY	HSSCo 8%	<b>TiAIN</b>
CONTENT	<u>4-5-6-8-10-12</u>	<u>4-5-6-8-10-12</u>
Ø mm		
PRICE €	100,33	161,35

REFERENCE	<b>PTF26</b>	<b>PTF66</b>
QUANTITY	6	6
TYPE		
QUALITY	HSSCo 8%	<b>TiAIN</b>
CONTENT	<u>4-5-6-8-10-12</u>	<u>4-5-6-8-10-12</u>
Ø mm		
PRICE €	111,10	171,30

**CENTER CUTTING END MILLS IN METAL BOXES**

2Z



DIN  
327

Ref. FF020787



Ref. FT020787



Ref. FF600787



REFERENCE	<b>FF010787</b>	<b>FF020787</b>	<b>FT020787</b>	<b>FF600787</b>
QUANTITY	6	6	6	6
TYPE	Ref. FFO1	Ref. FFO2	Ref. FTO2	Ref. FF60
QUALITY	<b>HSS</b>	<b>HSSCo 8%</b>	<b>TiAlSiN</b>	<b>TiAlN</b>
CONTENT Ø mm	4 - 5 - 6 - 8 - 10 - 12	4 - 5 - 6 - 8 - 10 - 12	4 - 5 - 6 - 8 - 10 - 12	4 - 5 - 6 - 8 - 10 - 12
PRICE €	92,87	122,82	143,21	183,83

REFERENCE	<b>FF010447</b>	<b>FF020447</b>	<b>FT020447</b>	<b>FF600447</b>
QUANTITY	6	6	6	6
TYPE	Ref. FFO1	Ref. FFO2	Ref. FTO2	Ref. FF60
QUALITY	<b>HSS</b>	<b>HSSCo 8%</b>	<b>TiAlSiN</b>	<b>TiAlN</b>
CONTENT Ø mm	6 - 8 - 10 - 12 - 16 - 20	6 - 8 - 10 - 12 - 16 - 20	6 - 8 - 10 - 12 - 16 - 20	6 - 8 - 10 - 12 - 16 - 20
PRICE €	138,91	184,22	214,83	266,73

REFERENCE	<b>FF010801</b>	<b>FF020801</b>
QUANTITY	14	14
TYPE	Ref. FFO1	Ref. FFO2
QUALITY	<b>HSS</b>	<b>HSSCo 8%</b>
CONTENT Ø mm	3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 12 - 14 - 15 - 16 - 18 - 20	3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 12 - 14 - 15 - 16 - 18 - 20
PRICE €	299,43*	393,46*

\*Available until end of stock

**EMPTY METAL BOXES FOR END MILLS**

2-4Z



DIN  
327



REFERENCE	<b>EV0787</b>	<b>EV0847</b>
QUANTITY	6	6
CONTENT Ø mm	4 - 5 - 6 - 8 - 10 - 12	6 - 8 - 10 - 12 - 16 - 20
PRICE €	28,95	32,36



**END MILLS IN METAL BOXES**
**4 Z**

**DIN  
844**


REFERENCE	<b>FF030787</b>	<b>FF040787</b>	<b>FT040787</b>	<b>FF540787</b>
QUANTITY	6	6	6	6
TYPE	Ref. FF03	Ref. FF04	Ref. FT04	Ref. FF54
QUALITY	<b>HSS</b>	<b>HSSCo 8%</b>	<b>TiAlSiN</b>	<b>TiAlN</b>
CONTENT Ø mm	4 - 5 - 6 - 8 - 10 - 12	4 - 5 - 6 - 8 - 10 - 12	4 - 5 - 6 - 8 - 10 - 12	4 - 5 - 6 - 8 - 10 - 12
PRICE €	91,34	120,46	141,13	183,82

REFERENCE	<b>FF030847</b>	<b>FF040847</b>	<b>FT040847</b>	<b>FF540847</b>
QUANTITY	6	6	6	6
TYPE	Ref. FF03	Ref. FF04	Ref. FT04	Ref. FF54
QUALITY	<b>HSS</b>	<b>HSSCo 8%</b>	<b>TiAlSiN</b>	<b>TiAlN</b>
CONTENT Ø mm	6 - 8 - 10 - 12 - 16 - 20	6 - 8 - 10 - 12 - 16 - 20	6 - 8 - 10 - 12 - 16 - 20	6 - 8 - 10 - 12 - 16 - 20
PRICE €	136,48	183,11	214,56	263,78



REFERENCE	<b>FF030764</b>	<b>FF040764</b>
QUANTITY	14	14
TYPE	Ref. FF03	Ref. FF04
QUALITY	<b>HSS</b>	<b>HSSCo 8%</b>
CONTENT Ø mm	3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 12 - 14 - 15 - 16 - 18 - 20	3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 12 - 14 - 15 - 16 - 18 - 20
PRICE €	290,36*	384,51*

\*Available until end of stock

**4 Z**

**DIN  
844**


REFERENCE	<b>FF250847</b>	<b>FT250847</b>	<b>FF270847</b>
QUANTITY	6	6	6
TYPE	Ref. FF25	Ref. FT25	Ref. FF27
QUALITY	<b>HSSCo 8%</b>	<b>TiAlSiN</b>	<b>TiAlN</b>
CONTENT Ø mm	6 - 8 - 10 - 12 - 16 - 20	6 - 8 - 10 - 12 - 16 - 20	6 - 8 - 10 - 12 - 16 - 20
PRICE €	340,84	397,47	409,97

**END MILLS IN METAL BOXES**

**4 Z**  **DIN 844**

REFERENCE	<b>FF180787</b>	<b>FT180787</b>	<b>FF200787</b>
QUANTITY	6	6	6
TYPE	Ref. FF18	Ref. FT18	Ref. FF20
QUALITY	<b>HSSCo 8%</b>	<b>TiAlSiN</b>	<b>TiAlN</b>
CONTENT Ø mm	4 - 5 - 6 - 8 - 10 - 12	4 - 5 - 6 - 8 - 10 - 12	4 - 5 - 6 - 8 - 10 - 12
PRICE €	128,25	149,56	193,77



Ref. FF180787

REFERENCE	<b>FF180847</b>	<b>FT180847</b>	<b>FF200847</b>
QUANTITY	6	6	6
TYPE	Ref. FF18	Ref. FT18	Ref. FF20
QUALITY	<b>HSSCo 8%</b>	<b>TiAlSiN</b>	<b>TiAlN</b>
CONTENT Ø mm	6 - 8 - 10 - 12 - 16 - 20	6 - 8 - 10 - 12 - 16 - 20	6 - 8 - 10 - 12 - 16 - 20
PRICE €	200,49	233,82	278,19



Ref. FF180847

REFERENCE	<b>FF180764</b>
QUANTITY	14
TYPE	Ref. FF18
QUALITY	<b>HSSCo 8%</b>
CONTENT Ø mm	3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 12 - 14 - 15 - 16 - 18 - 20
PRICE €	416,79*





Ref. FF180764

\*Available until end of stock

**163 END MILLS DISPLAY**

Ref. MF-01

MF-01

				Content: 163 End mills																			
Ref. FF13	<b>1 Z</b>	<b>HSSCo</b>	<b>Al</b>	<b>SHORT SERIES</b>	Ø	5 x 8	Shank	6 x 8	Shank														
					Quantity	5		5															
Ref. FF14	<b>1 Z</b>	<b>HSSCo</b>	<b>Al</b>	<b>LONG SERIES</b>	Ø	5 x 8	Shank	6 x 8	Shank														
					Quantity	5		5															
Ref. FF02	<b>2 Z</b>	<b>HSSCo</b>	<b>DIN 327N</b>		Ø	2	3	4	5	6	7	8	9	10	12	14	16						
					Quantity	5	5	5	5	5	5	5	5	5	5	5	5	5	3				
Ref. FF18	<b>4 Z</b>	<b>HSSCo</b>	<b>DIN 844N</b>		Ø	2	3	4	5	6	7	8	9	10	12	14	16						
					Quantity	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3			
Ref. FF25	<b>4 Z</b>	<b>HSSCo</b>	<b>DIN 844N</b>		<b>NR</b>	Ø	6	7	8	9	10	11	12	14	16								
						Quantity	3	3	3	3	3	3	3	3	3	3							



Dimensions: width 245 x depth 210 x height 350 mm  
NOTE: Special compositions on request

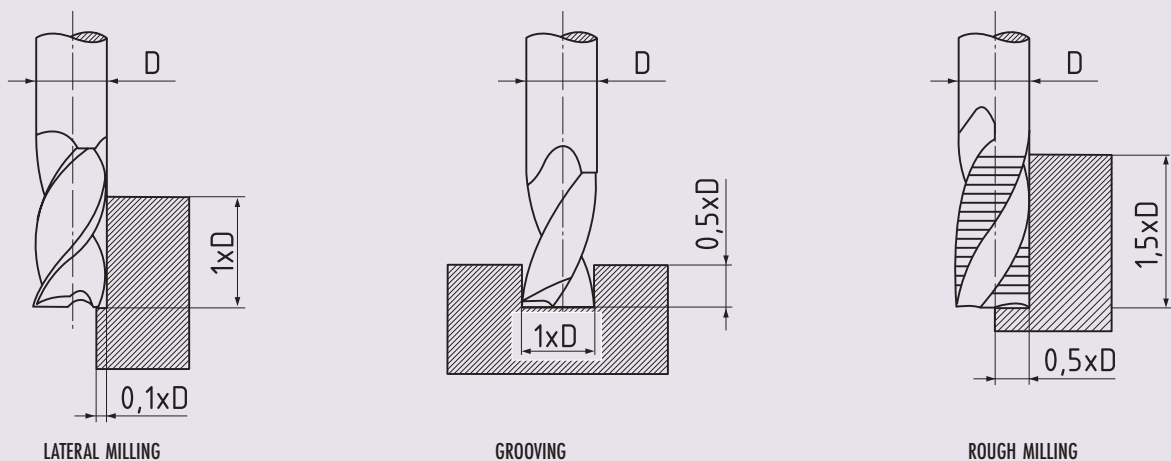
PRICE: 4.142,69 €

**CUTTING CONDITIONS FOR HSSCo 8% END MILLS**

		DIAMETER Ø (mm)														
		2	4	6	8	10	12	18	22	26	30	32	36	40		
<b>SOFT STEEL</b> 70 kg/mm <sup>2</sup>	<b>V/C 39 RPM</b>	<b>6207</b>	<b>3104</b>	<b>2069</b>	<b>1552</b>	<b>1241</b>	<b>1035</b>	<b>690</b>	<b>564</b>	<b>477</b>	<b>414</b>	<b>388</b>	<b>345</b>	<b>310</b>		
	<b>FEED</b> (mm/min)	Flutes	<b>2</b>	50	56	74	84	82	81	80	81	76	68	68	62	60
		No	<b>3</b>	74	84	112	126	123	121	120	122	115	102	102	93	89
		<b>4</b>	99	112	149	168	164	161	160	163	153	136	137	124	119	
<b>TREATED STEEL</b> 120 kg/mm <sup>2</sup>	<b>V/C 20 RPM</b>	<b>3183</b>	<b>1592</b>	<b>1061</b>	<b>796</b>	<b>637</b>	<b>531</b>	<b>354</b>	<b>289</b>	<b>245</b>	<b>212</b>	<b>199</b>	<b>177</b>	<b>159</b>		
	<b>FEED</b> (mm/min)	Flutes	<b>2</b>	25	29	38	43	42	41	41	42	39	35	35	32	31
		No	<b>3</b>	38	43	57	64	63	62	62	63	59	52	53	48	46
		<b>4</b>	51	57	76	86	84	83	82	83	78	70	70	64	61	
<b>STAINLESS STEEL</b>	<b>V/C 15 RPM</b>	<b>2387</b>	<b>1194</b>	<b>796</b>	<b>597</b>	<b>477</b>	<b>398</b>	<b>265</b>	<b>217</b>	<b>184</b>	<b>159</b>	<b>149</b>	<b>133</b>	<b>119</b>		
	<b>FEED</b> (mm/min)	Flutes	<b>2</b>	19	21	29	32	32	31	31	31	29	26	26	24	23
		No	<b>3</b>	29	32	43	48	47	47	46	47	44	39	39	36	34
		<b>4</b>	38	43	57	64	63	62	62	63	59	52	53	48	46	
<b>ALUMINIUM</b>	<b>V/C 230 RPM</b>	<b>36606</b>	<b>18303</b>	<b>12202</b>	<b>9151</b>	<b>7321</b>	<b>6101</b>	<b>4067</b>	<b>3328</b>	<b>2816</b>	<b>2440</b>	<b>2288</b>	<b>2034</b>	<b>1830</b>		
	<b>FEED</b> (mm/min)	Flutes	<b>2</b>	293	329	439	494	483	476	472	479	451	400	403	366	351
		No	<b>3</b>	439	494	659	741	725	714	708	719	676	600	604	549	527
		<b>4</b>	586	659	879	988	966	952	944	958	901	800	805	732	703	
<b>TITANIUM</b>	<b>V/C 12 RPM</b>	<b>1910</b>	<b>955</b>	<b>637</b>	<b>477</b>	<b>382</b>	<b>318</b>	<b>212</b>	<b>174</b>	<b>147</b>	<b>127</b>	<b>119</b>	<b>106</b>	<b>95</b>		
	<b>FEED</b> (mm/min)	Flutes	<b>2</b>	15	17	23	26	25	25	25	25	24	21	21	19	18
		No	<b>3</b>	23	26	34	39	38	37	37	38	35	31	32	29	28
		<b>4</b>	31	34	46	52	50	50	49	50	47	42	42	38	37	

\* In the case of the coated mills the board parameters must be multiplied by 1.3 and for the ASP 60 by 1.8

\* V/C: Cutting speed (m/min)

**MILLING DEPTH ACCORDING TO TYPE OF MILLING**


# SOLID CARBIDE END MILLS



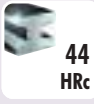
**BLUE-MASTER<sup>®</sup>**  
*by CELESA*

CUTTING TECHNOLOGIES

**GENERAL PURPOSE SOLID CARBIDE END MILLS SHORT, LONG & EXTRA LONG SERIES**

End mills

Pink



**SHORT SERIES**

**LONG SERIES**



				FMD2	FMD2TL	FMD63	FMD63TL	FMD48	FMD48TL
MATERIAL				CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE	CARBIDE
COATING				BRIGHT	TiAIN	BRIGHT	TiAIN	BRIGHT	TiAIN
QUALITY				★★	★★★	★★	★★★	★★	★★★
				2Z	2Z	3Z	3Z	4Z	4Z
D1 mm	L1 mm	L2 mm	D2 mm	€	€	€	€	€	€
1,00	38	3	3	17,56	23,28	17,56	23,28	17,56	23,28
1,50	38	4	3	17,56	23,28	17,56	23,28	17,56	23,28
2,00	38	6	3	17,56	23,28	17,56	23,28	17,56	23,28
2,50	38	8	3	17,56	23,28	17,56	23,28	17,56	23,28
3,00	38	8	3	16,85	22,57	16,85	22,57	16,85	22,57
3,50	50	11	4	19,69	25,41	19,69	25,41	19,69	25,41
4,00	50	11	4	16,74	22,46	16,74	22,46	16,74	22,46
4,50	50	13	5	21,57	27,29	21,57	27,29	21,57	27,29
5,00	50	13	5	19,01	24,73	19,01	24,73	19,01	24,73
6,00	50	16	6	20,80	26,52	20,80	26,52	20,80	26,52
7,00	60	16	8	34,03	40,90	34,03	40,90	34,03	40,90
8,00	60	19	8	30,92	37,79	30,92	37,79	30,92	37,79
9,00	72	19	10	48,99	57,00	48,99	57,00	48,99	57,00
10,00	72	22	10	46,44	54,45	46,44	54,45	46,44	54,45
11,00	75	26	12	77,57	86,72	77,57	86,72	77,57	86,72
12,00	75	26	12	59,22	68,37	59,22	68,37	59,22	68,37
14,00	84	30	14	90,99	102,44	90,99	102,44	90,99	102,44
16,00	92	32	16	117,56	130,15	117,56	130,15	117,56	130,15
18,00	100	38	18	172,25	189,42	172,25	189,42	172,25	189,42
20,00	100	38	20	195,92	217,67	195,92	217,67	195,92	217,67
25,00	100	45	25	339,97	373,17			339,97	373,17

				FMD54	FMD54TL	FMD58	FMD58TL
MATERIAL				CARBIDE	CARBIDE	CARBIDE	CARBIDE
COATING				BRIGHT	TiAIN	BRIGHT	TiAIN
QUALITY				★★	★★★	★★	★★★
				2Z	2Z	4Z	4Z
D1 mm	L1 mm	L2 mm	D2 mm	€	€	€	€
3,00	60	15	3	18,65	25,52	18,65	25,52
4,00	80	20	4	19,66	26,52	19,66	26,52
5,00	80	25	5	24,47	31,34	24,47	31,34
6,00	80	25	6	34,51	41,37	34,51	41,37
8,00	90	35	8	39,29	48,45	39,29	48,45
10,00	100	45	10	55,52	64,68	55,52	64,68
12,00	100	50	12	75,79	87,24	75,79	87,24
14,00	150	65	14	124,71	139,59	124,71	139,59
16,00	150	65	16	136,63	151,51	136,63	151,51
18,00	150	65	18			197,33	217,93
20,00	150	70	20	242,37	265,27	242,37	265,27

**EXTRA LONG SERIES**


				FMD53	FMD53TL	FMD56	FMD56TL
MATERIAL				CARBIDE	CARBIDE	CARBIDE	CARBIDE
COATING				BRIGHT	TiAIN	BRIGHT	TiAIN
QUALITY				★★	★★★	★★	★★★
				2Z	2Z	4Z	4Z
Ø mm	L1 mm	L2 mm	D2 mm	€	€	€	€
3,00	75	25	3	40,11	51,56	41,50	52,95
4,00	100	25	4	43,58	55,03	44,94	56,39
5,00	100	25	5	49,25	60,70	51,75	63,20
6,00	150	75	6	82,20	100,52	90,42	108,73
8,00	150	75	8	113,18	134,94	124,50	146,25
10,00	150	75	10	143,37	171,99	157,70	186,32
12,00	150	75	12	209,77	246,40	230,74	267,38
14,00	150	75	14	289,99	334,64	318,99	363,64
16,00	200	75	16	393,99	445,51	433,39	484,91
20,00	200	75	20	614,76	683,45	614,76	683,45



**GENERAL PURPOSE SOLID CARBIDE END MILLS SHORT, LONG & EXTRA LONG SERIES**

**INOX**  
**Al**  
**Ti**

**2Z**



**30° N**

**44 HRc**

**STRAIGHT**

**4Z**

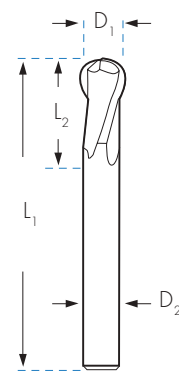


**SHORT SERIES**



MATERIAL COATING QUALITY				FMD92	FMD92TL	FMD51	FMD51TL
MATERIAL				CARBIDE	CARBIDE	CARBIDE	CARBIDE
COATING				BRIGHT	TiAlN	BRIGHT	TiAlN
QUALITY				★★	★★★	★★	★★★
				<b>2Z</b>	<b>2Z</b>	<b>4Z</b>	<b>4Z</b>
D1 mm	L1 mm	L2 mm	D2 mm	€	€	€	€
1,00	38	2	3	21,07	26,79		
1,50	38	3	3	21,07	26,79		
2,00	38	4	3	21,07	26,79		
2,50	38	5	3	21,07	26,79		
3,00	38	6	3	21,07	26,79	23,18	29,47
4,00	50	8	4	24,01	29,73	26,41	32,70
5,00	50	10	5	25,40	31,13	27,94	34,24
6,00	50	12	6	29,89	35,62	32,89	39,18
8,00	60	15	8	36,90	43,77	46,14	54,72
10,00	75	20	10	55,45	63,46	69,30	79,33
12,00	75	20	12	68,89	78,05	86,11	97,56
14,00	90	25	14	101,98	113,43	127,48	141,79
16,00	100	25	16	129,03	141,62	161,29	177,03
18,00	100	30	18	191,84	209,01	239,80	261,27
20,00	100	30	20	198,88	220,63	248,59	275,79

**LONG SERIES**




MATERIAL COATING QUALITY				FMD57	FMD57TL
MATERIAL				CARBIDE	CARBIDE
COATING				BRIGHT	TiAlN
QUALITY				★★	★★★
				<b>2Z</b>	<b>2Z</b>
D1 mm	L1 mm	L2 mm	D2 mm	€	€
3,00	60	4	3	31,76	38,63
4,00	80	5	4	36,87	43,74
5,00	80	6	5	43,61	50,48
6,00	80	8	6	50,97	57,83
8,00	100	12	8	67,27	76,43
10,00	100	15	10	83,12	93,42
12,00	100	15	12	144,04	155,49
14,00	150	20	14	180,61	195,50
16,00	150	20	16	228,12	243,00
18,00	150	25	18	354,33	371,50
20,00	150	25	20	470,86	493,75

**EXTRA LONG SERIES**

MATERIAL COATING QUALITY				FMD55	FMD55TL
MATERIAL				CARBIDE	CARBIDE
COATING				BRIGHT	TiAlN
QUALITY				★★	★★★
				<b>2Z</b>	<b>2Z</b>
D1 mm	L1 mm	L2 mm	D2 mm	€	€
3,00	75	6	3	38,07	49,52
4,00	100	6	4	43,91	55,36
5,00	100	6	5	53,07	64,52
6,00	100	15	6	66,69	78,14
8,00	150	25	8	89,59	106,76
10,00	150	25	10	126,22	143,39
12,00	150	25	12	200,75	232,80
14,00	200	50	14	246,54	283,18
16,00	200	50	16	331,26	371,33
18,00	200	75	18	486,54*	549,50*
20,00	200	75	20	629,64*	704,05*

**RECOMMENDED CUTTING SPEED**

		Ø2	Ø3	Ø4	Ø5	Ø6	Ø8	Ø10	Ø12	Ø14
	RPM	4000	2600	2000	1600	1300	1000	800	660	570
	FEED (mm/min)	50	55	55	55	55	55	55	55	55
<b>INOX</b> <b>Ti</b>	RPM	8000	5300	4000	3200	2600	2000	1600	1300	1100
	FEED (mm/min)	55	55	55	55	60	60	60	60	60
<b>Al</b>	RPM	16000	11000	8000	6400	5300	4000	3200	2600	2300
	FEED (mm/min)	290	290	290	290	290	290	290	290	300

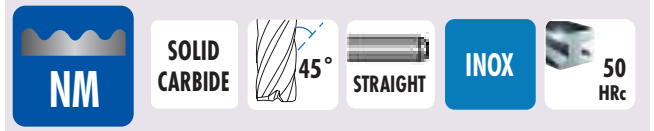
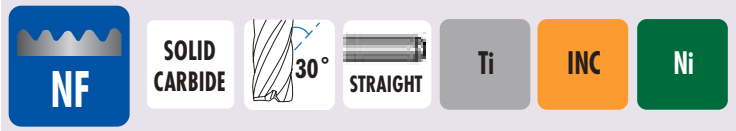
\* To obtain cutting conditions for end mills TiAlN coated, you have to multiply the figures by 1,3.

\* Available until end of stock

**SOLID CARBIDE FINE, MEDIUM AND COARSE ROUGHING END MILLS**

End mills

Pink



FMD1

D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	Z	€
TOL D <sub>1</sub> +0 -0,05	TOL D <sub>2</sub> h6				
6	6	63	19	3	41,47*
8	8	63	19	3	44,52*
10	10	63	22	3	56,91*
12	12	75	25	4	71,87*
16	16	88	32	4	122,98*
20	20	100	38	4	143,95*

FMD3

D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	Z	€
TOL D <sub>1</sub> +0 -0,05	TOL D <sub>2</sub> h6				
6	6	50	16	4	34,47
8	8	60	19	3	46,71
10	10	75	22	4	71,88
12	12	75	26	4	98,66
16	16	92	32	4	224,45
20	20	100	38	4	336,35

\*Available until end of stock



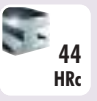
FMD6

D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	Z	€
TOL D <sub>1</sub> +0 -0,05	TOL D <sub>2</sub> h6				
6	6	63	19	3	41,47*
8	8	63	19	3	44,52*
10	10	63	22	3	56,91*
12	12	75	25	4	71,87*
16	16	88	32	4	122,98*
20	20	100	38	4	143,95*


\*Available until end of stock

**SOLID CARBIDE END MILLS GENERAL PURPOSE**

**INOX**  
Ni  
Ti




44  
HRC




STRAIGHT


2Z



3Z



4Z






\* Specially recommended for machining of stainless steel and titanium.


Micro Grain  
CARBIDE


**SHORT SERIES**


**TOL D1**  
+0 -0,05

**TOL D2**  
h6


				FMT2	FMT63	FMT48
						
				CARBIDE	CARBIDE	CARBIDE
				TiAlSiN	TiAlSiN	TiAlSiN
				Premium Quality	Premium Quality	Premium Quality
				2Z	3Z	4Z
D1	L1	L2	D2	€	€	€
1,00	38	3	3	44,09	44,09	44,09
1,50	38	4	3	43,05	43,05	43,05
2,00	38	6	3	34,26	34,26	34,26
2,50	38	8	3	33,48	33,48	33,48
3,00	38	8	3	28,84	28,84	28,84
3,50	50	11	4	35,39	35,39	35,39
4,00	50	11	4	32,88	32,88	32,88
4,50	50	13	5	42,06	42,06	42,06
5,00	50	13	5	41,55	41,55	41,55
6,00	50	16	6	46,84	46,84	46,84
7,00	60	16	8	65,33	65,33	65,33
8,00	60	19	8	55,44	55,44	55,44
9,00	72	19	10	79,49	79,49	79,49
10,00	72	22	10	88,38	88,38	88,38
11,00	75	26	12	117,57	117,57	117,57
12,00	75	26	12	109,32	109,32	109,32
14,00	84	30	14	162,50	162,50	162,50
16,00	92	32	16	210,50	210,50	210,50
18,00	100	38	18	292,51	292,51	292,51
20,00	100	38	20	333,49	333,49	333,49
25,00	100	38	25	547,40	547,40	547,40

				FMT81
				
				CARBIDE
				TiAlSiN
				Premium Quality
				4Z
D1	L1	L2	D2	€
1,00	38	3	3	
1,50	38	5	3	
2,00	38	6	3	
2,50	38	7	3	
3,00	38	12	3	
3,50	50	12	4	
4,00	50	14	4	
4,50	50	14	5	
5,00	50	16	5	45,71
6,00	63	19	6	51,53
7,00	63	19	8	
8,00	63	19	8	60,98
9,00	70	22	10	
10,00	70	22	10	97,21
11,00	75	25	11	
12,00	75	25	12	120,24
14,00	88	30	14	178,74
16,00	88	32	16	231,55
18,00	100	36	18	321,75
20,00	100	36	20	366,84
25,00	100	38	25	

				FMT92
				
				CARBIDE
				TiAlSiN
				Premium Quality
				2Z
D1	L1	L2	D2	€
1,00	38	2	3	
1,50	38	3	3	
2,00	38	4	3	
2,50	38	5	3	
3,00	38	6	3	38,07
4,00	50	8	4	42,23
5,00	50	10	5	52,20
6,00	50	12	6	59,72
8,00	60	15	8	73,42
10,00	75	20	10	106,43
12,00	75	20	12	130,89
14,00	90	25	14	190,23
16,00	100	25	16	237,51
18,00	100	30	18	350,54
20,00	100	30	20	370,01

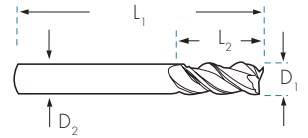
\*  FMT81: Variable helix TiAlSiN coated: minimizes the vibrations and allows an impressive efficiency during the machining

**RECOMMENDED CUTTING SPEED**

		Ø 2	Ø 3	Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 16	Ø 20	Ø 25
	RPM	5600	3640	2800	2240	1820	1400	1120	924	798	700	560	420
	FEED (mm/min)	70	77	77	77	77	77	77	77	77	91	91	70
<b>INOX</b> Ti	RPM	11200	7420	5600	4480	3640	2800	2240	1820	1540	1400	1120	840
	FEED (mm/min)	77	77	77	77	84	84	84	84	84	98	98	77
<b>Ni</b>	RPM	11200	7420	5600	4480	3640	2800	2240	1820	1540	1400	1120	840
	FEED (mm/min)	77	77	77	77	84	84	84	84	84	98	98	77

End mills

Pink



## SOLID CARBIDE 2 FLUTES END MILLS

INOX

Ref. FMG10

2 Z

MG  
CARBIDE

30°



STRAIGHT

TiAIN

INOX

45  
HRc

Ti

INC

Micro Grain  
CARBIDE

SHORT SERIES

R.P.M. &amp; FEED

R.P.M. rev./min	FEED mm/min	R.P.M. rev./min	FEED mm/min	R.P.M. rev./min	FEED mm/min		TOL	TOL	L <sub>1</sub> mm	L <sub>2</sub> mm	€
							-0,03 D <sub>1</sub> mm	h <sub>6</sub> D <sub>2</sub> mm			
21.500	170	12.900	101	10.750	84	FMG100100	1,0	6	40	2,5	37,13*
15.000	180	9.000	107	7.500	89	FMG100150	1,5	6	40	4,0	37,13*
11.560	190	7.560	120	6.300	90	FMG100200	2,0	6	50	6,0	37,13
8.920	210	5.560	140	4.620	120	FMG100300	3,0	6	50	8,0	37,13
7.560	300	4.620	180	3.880	150	FMG100400	4,0	6	50	11,0	37,13
6.300	320	3.780	190	3.160	160	FMG100500	5,0	6	50	12,0	37,13
5.560	350	3.360	220	2.840	180	FMG100600	6,0	6	50	12,0	37,13
4.880	385	2.940	220	2.470	180	FMG100700	7,0	8	60	16,0	51,11*
4.200	380	2.520	200	2.100	180	FMG100800	8,0	8	60	15,0	51,11
3.730	375	2.260	190	1.890	180	FMG100900	9,0	10	70	19,0	70,38*
3.260	330	2.000	160	1.680	160	FMG101000	10,0	10	72	20,0	70,38
2.740	280	1.680	130	1.360	130	FMG101200	12,0	12	75	24,0	99,41
2.470	265	1.520	125	1.210	125	FMG101400	14,0	14	85	26,0	115,25*
2.200	220	1.360	110	1.060	110	FMG101600	16,0	16	92	30,0	186,59
1.940	205	1.210	100	950	100	FMG101800	18,0	18	100	32,0	201,00*
1.680	170	1.060	80	840	80	FMG102000	20,0	20	105	38,0	222,00*
1.150	165	970	80	775	75	FMG102200	22,0	20	105	38,0	245,00*
1.360	130	840	70	680	60	FMG102500	25,0	25	120	45,0	289,00*

\*Available until end of stock



## SOLID CARBIDE 3 FLUTES END MILLS VARIABLE HELIX

INOX

Ref. FMD67

3 Z

SOLID  
CARBIDE35°  
38°

STRAIGHT

TiAlSiN

INOX

Ti

Ni

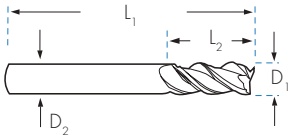
Micro Grain  
CARBIDE

SHORT SERIES

FMD67

	TOL	TOL	L <sub>1</sub> mm	L <sub>2</sub> mm	€
	e <sub>8</sub> D <sub>1</sub> mm	h <sub>6</sub> D <sub>2</sub> mm			
FMD670300	3	6	50	8	31,40
FMD670400	4	6	50	11	31,40
FMD670500	5	6	50	13	31,40
FMD670600	6	6	50	16	31,40
FMD670800	8	8	60	19	39,60
FMD671000	10	10	73	22	58,50
FMD671200	12	12	75	26	79,80
FMD671600	16	16	92	32	155,40
FMD672000	20	20	100	38	229,20





**SOLID CARBIDE 4 FLUTES END MILLS VARIABLE HELIX**

**INOX** Ref. FMG12 **4 Z** **MG CARBIDE** **WELDON** **TiAlSiN** **INOX** **45 HRc** **Ti** **INC** **Micro Grain CARBIDE**

**SHORT SERIES**

R.P.M. & FEED						FMG12						
R.P.M. rev./min	FEED mm/min	R.P.M. rev./min	FEED mm/min	R.P.M. rev./min	FEED mm/min	TOL -0,03	TOL h6	D1 mm	D2 mm	L1 mm	L2 mm	€
11.560	280	7.560	170	6.300	140	FMG120200		2,0	6	40	6	31,40*
10.240	300	6.560	185	5.460	155	FMG120250		2,5	6	40	8	31,40*
8.920	320	5.560	200	4.620	170	FMG120300		3,0	6	50	8	31,40
7.560	570	4.620	350	3.880	280	FMG120400		4,0	6	50	11	31,40
6.300	600	3.780	360	3.160	300	FMG120500		5,0	6	50	13	31,40
5.560	660	3.360	410	2.840	330	FMG120600		6,0	6	50	16	31,40
4.880	685	2.940	420	2.470	340	FMG120700		7,0	8	60	16	39,60*
4.200	710	2.520	380	2.100	350	FMG120800		8,0	8	60	19	39,60
3.730	660	2.260	340	1.890	325	FMG120900		9,0	10	70	19	58,50*
3.260	610	2.000	300	1.680	300	FMG121000		10,0	10	73	22	58,50
2.740	520	1.680	250	1.360	240	FMG121200		12,0	12	75	26	79,80
2.470	465	1.520	225	1.210	220	FMG121400		14,0	14	85	30	109,00
2.200	410	1.360	200	1.060	200	FMG121600		16,0	16	92	32	155,40
1.940	365	1.210	180	950	175	FMG121800		18,0	18	92	38	229,20
1.680	320	1.060	160	840	150	FMG122000		20,0	20	100	38	229,20
1.360	250	840	130	680	130	FMG122500		25,0	25	120	40	315,25*

\*Available until end of stock



**SOLID CARBIDE 6 FLUTES END MILLS**

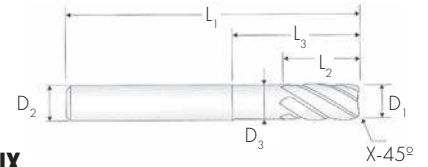
**INOX** Ref. FMG14 **6 Z** **MG CARBIDE** **WELDON** **TiAlN** **INOX** **45 HRc** **Ti** **INC** **Micro Grain CARBIDE**

**SHORT SERIES**

R.P.M. & FEED								FMG14						
R.P.M. rev./min	FEED mm/min	R.P.M. rev./min	FEED mm/min	R.P.M. rev./min	FEED mm/min	R.P.M. rev./min	FEED mm/min	TOL -0,03	TOL h6	D1 mm	D2 mm	L1 mm	L2 mm	€
8.900	2.670	5.760	1.555	4.850	1.310	2.100	370	FMG140300		3,0	3	38	8	23,59
7.560	2.260	4.800	1.440	4.100	1.230	1.800	325	FMG140400		4,0	4	50	11	26,10
6.300	2.090	4.050	1.215	3.700	1.180	1.580	300	FMG140500		5,0	5	50	13	33,00
5.560	2.000	3.880	1.370	3.370	1.100	1.350	280	FMG140600		6,0	6	50	16	33,86
4.200	2.000	2.940	1.370	2.490	1.100	1.000	280	FMG140800		8,0	8	60	19	47,36
3.360	2.000	2.320	1.370	1.920	1.100	440	280	FMG141000		10,0	10	75	22	66,05
2.840	1.680	2.000	1.160	1.610	1.000	400	250	FMG141200		12,0	12	75	26	96,71
2.470	1.470	1.740	1.020	1.380	885	355	220	FMG141400		14,0	14	90	32	124,83
2.100	1.260	1.480	880	1.160	770	310	190	FMG141600		16,0	16	100	32	170,32
1.890	1.130	1.320	785	1.030	695	280	170	FMG141800		18,0	18	100	38	197,69
1.680	1.010	1.160	690	900	920	250	155	FMG142000		20,0	20	100	38	246,63
1.500	900	1.100	600	850	540	220	135	FMG142500		25,0	25	100	38	420,39







## SOLID CARBIDE 4 FLUTES END MILLS VARIABLE HELIX

INOX

Ref. FMG83

4 Z

DIN  
6527MG  
CARBIDE

WELDON

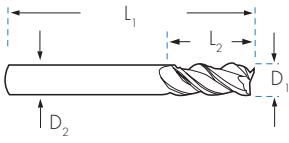
TiAIN

Micro Grain  
CARBIDE

## R.P.M. &amp; FEED

R.P.M. rev./min	INOX AISI 316L	R.P.M. rev./min	INOX AISI 304	TOL -0,03 D1 mm	TOL h6 D2 mm	L1 mm	L2 mm	L3 mm	X-45°	FMG83	€
	FEED mm/min		FEED mm/min								
10.185	195	14.260	205	FMG830300	3,0	6	57	8	11	0,07	53,09
7.600	250	14.260	255	FMG830400	4,0	6	57	11	14	0,09	53,09
6.110	310	8.655	310	FMG830500	5,0	6	57	13	16	0,12	53,09
5.095	360	7.130	360	FMG830600	6,0	6	57	13	21	0,20	53,09
3.820	435	5.345	465	FMG830800	8,0	8	63	19	27	0,25	68,01
3.055	590	4.275	585	FMG831000	10,0	10	73	22	32	0,35	99,28
2.545	565	3.565	565	FMG831200	12,0	12	83	26	38	0,40	133,81
2.180	520	3.055	520	FMG831400	14,0	14	84	30	40	0,40	192,03
1.910	480	2.670	480	FMG831600	16,0	16	92	32	44	0,40	225,52
1.525	470	2.140	470	FMG832000	20,0	20	104	38	55	0,40	356,55





**SOLID CARBIDE 3 TO 4 FLUTES END MILLS**

**INOX** Ref. FMG13

**3-4 Z** **MG CARBIDE** **WELDON** **TiAlN** **INOX** **45 HRc** **Ti** **INC** **Micro Grain CARBIDE**

SHORT SERIES

R.P.M. & FEED							
<30 HRc		30-45 HRc		INOX		INC	
R.P.M. rev./min	FEED mm/min	R.P.M. rev./min	FEED mm/min	R.P.M. rev./min	FEED mm/min	R.P.M. rev./min	FEED mm/min
5.560	310	3.360	200	2.840	160	1.280	40
4.200	310	2.520	180	2.100	160	920	40
3.260	310	2.000	140	1.680	140	740	40
2.740	250	1.680	120	1.370	120	620	30
2.200	200	1.360	100	1.050	100	460	25
1.940	175	1.210	85	950	85	410	20
1.680	150	1.060	70	840	70	350	20
1.360	115	840	60	670	60	300	15

FMG13						
	TOL -0,03	TOL h6				
	D1 mm	D2 mm	L1 mm	L2 mm	Z	€
FMG130600	6,0	6	50	13	3	40,38*
FMG130800	8,0	8	60	19	3	51,65*
FMG131000	10,0	10	70	22	3	76,30*
FMG131200	12,0	12	75	25	3	104,56*
FMG131600	16,0	16	90	32	3	173,27*
FMG131800	18,0	18	90	32	3	202,56*
FMG132000	20,0	20	100	28	4	229,72*
FMG132500	25,0	25	120	45	4	367,40*

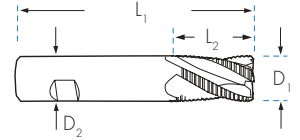


\*Available until end of stock

TOLERANCES ACCORDING TO DIN 7160 & 7161					
Tolerance range in $\mu\text{m}$ / Nominal diameter in mm					
	1 - 3	3 - 6	6 - 10	10 - 18	18 - 30
<b>TOL e8</b>	- 14 - 28	- 20 - 38	- 25 - 47	- 32 - 59	- 40 - 73
<b>TOL h6</b>	0 - 6	0 - 8	0 - 9	0 - 11	0 - 13

End mills

Pink



**SOLID CARBIDE 3 TO 5 FLUTES FINE ROUGHING END MILLS**

**INOX**

Ref. FMG15  
Ref. FMG16



**MG CARBIDE**



**NF**



**TiAIN**

**INOX**



**Ti**

**INC**

**Micro Grain CARBIDE**

**SHORT SERIES**

R.P.M. & FEED									
R.P.M. rev./min	FEED mm/min								
		R.P.M. rev./min	FEED mm/min	R.P.M. rev./min	FEED mm/min	R.P.M. rev./min	FEED mm/min	R.P.M. rev./min	FEED mm/min
15.600	2.320	12.400	840	8.400	570	2.400	190		
13.600	2.320	10.800	840	7.350	570	2.100	190		
11.600	2.320	9.200	840	6.300	570	1.800	190		
10.400	2.320	8.400	840	5.700	570	1.550	190		
9.200	2.320	7.600	840	5.100	570	1.300	190		
8.000	2.400	6.000	800	4.200	570	1.200	190		
6.800	2.400	5.200	840	3.600	570	900	130		
6.000	2.400	4.800	760	3.300	510	800	110		
5.200	2.320	4.400	720	2.700	420	700	100		
4.800	2.160	3.600	560	2.400	360	660	100		
4.300	2.150	3.200	620	2.160	410	600	100		

	TOL		L1 mm	L2 mm	Z	€
	h10 mm	h6 mm				
FMG150600	6,0	6	54	7	3	38,45*
FMG150700	7,0	8	58	8	3	44,93*
FMG150800	8,0	8	58	9	3	44,93*
FMG150900	9,0	10	66	13	4	67,00*
FMG151000	10,0	10	66	14	4	67,00*
FMG151200	12,0	12	73	16	4	85,95*
FMG151400	14,0	14	75	18	4	104,25*
FMG151600	16,0	16	82	22	4	139,88*
FMG151800	18,0	18	84	24	4	179,17*
FMG152000	20,0	20	92	26	4	202,48*
FMG152500	25,0	25	110	25	5	315,43*



\*Available until end of stock

**LONG SERIES**

R.P.M. & FEED									
R.P.M. rev./min	FEED 1 mm/min								
		R.P.M. rev./min	FEED 1 mm/min	R.P.M. rev./min	FEED 1 mm/min	R.P.M. rev./min	FEED 1 mm/min	R.P.M. rev./min	FEED 1 mm/min
15.600	2.320	12.400	840	8.400	570	2.400	190		
13.600	2.320	10.800	840	7.350	570	2.100	190		
11.600	2.320	9.200	840	6.300	570	1.800	190		
10.400	2.320	8.400	840	5.700	570	1.550	190		
9.200	2.320	7.600	840	5.100	570	1.300	190		
8.000	2.400	6.000	800	4.200	570	1.200	190		
6.800	2.400	5.200	840	3.600	570	900	130		
6.000	2.400	4.800	760	3.300	510	800	110		
5.200	2.320	4.400	720	2.700	420	700	100		
4.800	2.160	3.600	560	2.400	360	660	100		
4.300	2.150	3.200	620	2.160	410	600	100		

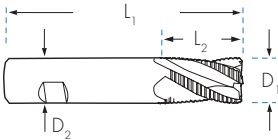
	TOL		L1 mm	L2 mm	Z	€
	h10 mm	h6 mm				
FMG160600	6,0	6	57	16	3	41,32*
FMG160700	7,0	8	63	16	3	48,29*
FMG160800	8,0	8	63	16	3	48,29*
FMG160900	9,0	9	72	19	4	72,02*
FMG161000	10,0	10	72	22	4	72,02*
FMG161200	12,0	12	83	26	4	92,41*
FMG161400	14,0	14	83	26	4	112,06*
FMG161600	16,0	16	92	32	4	150,39*
FMG161800	18,0	18	92	32	4	192,63*
FMG162000	20,0	20	104	38	4	217,71*
FMG162500	25,0	25	121	45	5	339,16*



\*Available until end of stock

**TOLERANCES ACCORDING TO DIN 7160 & 7161**

Tolerance range in $\mu\text{m}$ / Nominal diameter in mm					
	1 - 3	3 - 6	6 - 10	10 - 18	18 - 30
<b>TOL e8</b>	0	0	0	0	0
	-40	-48	-58	-70	-84
<b>TOL h6</b>	0	0	0	0	0
	-6	-8	-9	-11	-13



**SOLID CARBIDE 4 TO 6 FLUTES FINE ROUGHING END MILLS**

**INOX** Ref. FMG17

4-6 Z

MG CARBIDE

45°

NF WELDON

TiAIN INOX

45 HRc

INC

Micro Grain CARBIDE

**SHORT SERIES**

R.P.M. & FEED								FMG17						
R.P.M. rev./min	FEED mm/min	R.P.M. rev./min	FEED mm/min	INOX		INC		D1 mm	TOL h10 D2 mm	L1 mm	L2 mm	Z	€	
				R.P.M. rev./min	FEED mm/min	R.P.M. rev./min	FEED mm/min							
15.600	2.320	12.400	840	8.400	570	2.400	190	FMG170600	6,0	6	54	7	4	38,45*
11.600	2.320	9.200	840	6.300	570	1.800	190	FMG170800	8,0	8	58	9	4	44,93*
9.200	2.320	7.600	840	5.100	570	1.300	190	FMG171000	10,0	10	66	14	4	67,00*
8.000	2.400	6.000	800	4.200	570	1.200	190	FMG171200	12,0	12	73	16	4	85,95*
6.000	2.400	4.800	760	3.300	510	800	110	FMG171600	16,0	16	82	22	5	139,88*
4.800	2.160	3.600	560	2.400	360	660	100	FMG172000	20,0	20	92	26	6	179,98*

\*Available until end of stock



**CARBIDE 3 TO 6 FLUTES FINE ROUGHING END MILLS**

**INOX** Ref. FMG18

3-6 Z

MG CARBIDE

45°

NF WELDON

TiAIN INOX

45 HRc

INC

Micro Grain CARBIDE

**LONG SERIES**

R.P.M. & FEED								FMG18						
R.P.M. rev./min	FEED mm/min	R.P.M. rev./min	FEED mm/min	INOX		INC		D1 mm	TOL h10 D2 mm	L1 mm	L2 mm	Z	€	
				R.P.M. rev./min	FEED mm/min	R.P.M. rev./min	FEED mm/min							
20.100	4.600	18.400	1.700	12.600	1.040	3.800	399	FMG180400	4,0	6	57	11	3	40,12*
18.000	4.600	15.000	1.650	10.200	1.040	2.200	390	FMG180500	5,0	6	57	13	4	40,12*
15.600	2.320	12.400	840	8.400	570	2.400	190	FMG180600	6,0	6	57	16	4	40,12*
13.600	2.320	10.800	840	7.350	570	2.100	190	FMG180700	7,0	8	63	16	4	46,88*
11.600	2.320	9.200	840	6.300	570	1.800	190	FMG180800	8,0	8	63	16	4	46,88*
10.400	2.320	8.400	840	5.700	570	1.550	190	FMG180900	9,0	10	72	19	4	69,92*
9.200	2.320	7.600	840	5.100	570	1.300	190	FMG181000	10,0	10	72	22	4	69,92*
8.000	2.400	6.000	800	4.200	570	1.200	190	FMG181200	12,0	12	83	26	4	89,72*
6.800	2.400	5.200	840	3.600	570	900	130	FMG181400	14,0	14	83	26	5	108,80*
6.000	2.400	4.800	760	3.300	510	800	110	FMG181600	16,0	16	92	32	5	146,01*
4.800	2.160	3.600	560	2.400	360	660	100	FMG182000	20,0	20	104	38	6	234,85*
4.300	2.150	3.200	620	2.160	410	600	100	FMG182500	25,0	25	121	45	6	411,61*

\*Available until end of stock



## SOLID CARBIDE 4 TO 6 FLUTES FINE ROUGHING END MILLS

INOX

Ref. FMG19

4-6 Z

MG  
CARBIDE

NF

WELDON

TiAlN

INOX

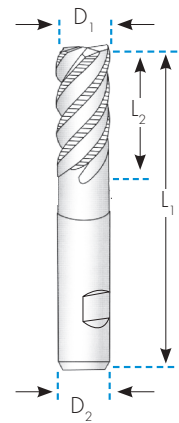
INC

45  
HRcMicro Grain  
CARBIDE

LONG SERIES

	FMG19							
	TOL h10 D1 mm	TOL h6 D2 mm	D3 mm	L1 mm	L2 mm	L3 mm	Z	€
FMG190600	6,0	6	5,5	57	16	20	4	49,53*
FMG190800	8,0	8	7,5	63	16	26	4	57,90*
FMG191000	10,0	10	9,5	72	22	31	4	86,37*
FMG191200	12,0	12	11,5	83	26	37	4	110,82*
FMG191600	16,0	16	15,5	100	32	51	5	144,44*
FMG192000	20,0	20	19,2	110	38	59	6	232,18*

\*Available until end of stock



## R.P.M. &amp; FEED

R.P.M. rev./min	<30 HRc		30-45 HRc		INOX		INC	
	FEED 1 mm/min	R.P.M. rev./min	FEED 1 mm/min	R.P.M. rev./min	FEED 1 mm/min	R.P.M. rev./min	FEED 1 mm/min	
15.600	2.320	12.400	840	8.400	570	2.400	190	
11.600	2.320	9.200	840	6.300	570	1.800	190	
9.200	2.320	7.600	840	5.100	570	1.300	190	
8.000	2.400	6.000	800	4.200	570	1.200	190	
6.000	2.400	4.800	760	3.300	510	800	110	
4.800	2.160	3.600	560	2.400	360	660	100	

## TOLERANCES ACCORDING TO DIN 7160 &amp; 7161

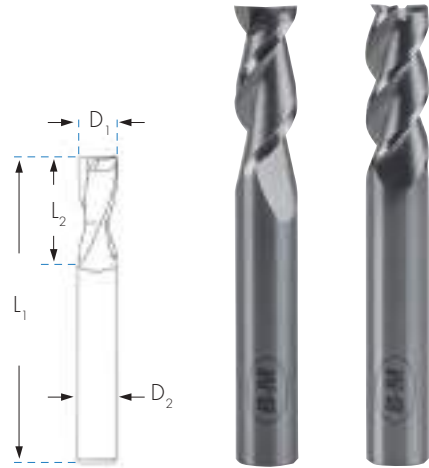
Tolerance range in $\mu\text{m}$ / Nominal diameter in mm					
	1 - 3	3 - 6	6 - 10	10 - 18	18 - 30
TOL h10	0 -40	0 -48	0 -58	0 -70	0 -84
TOL h6	0 -6	0 -8	0 -9	0 -11	0 -13



**SOLID CARBIDE 2 & 3 FLUTE END MILLS**

**Al**
MG CARBIDE
45° N
STRAIGHT
**2Z**
Ref. FMD59
**3Z**
Ref. FMD33
Micro Grain CARBIDE

**SHORT SERIES**

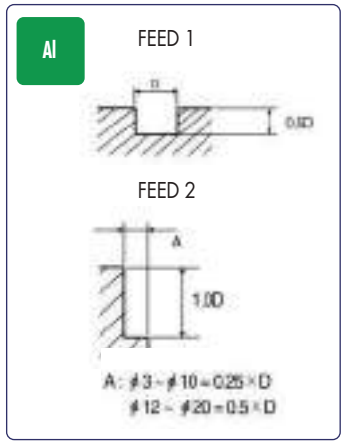


R.P.M. & FEED							FMD59	FMD33
			TOL -0,05	TOL h6			2Z	3Z
R.P.M. rev./min.	FEED 1 mm/min	FEED 2 mm/min	D1 mm	D2 mm	L1 mm	L2 mm	€	€
10.000	700	900	3,0	6,0	50	8	26,54	26,54
10.000	900	1.100	4,0	6,0	50	11	28,75	28,75
10.000	1.000	1.300	5,0	6,0	50	13	29,70	29,70
10.000	1.200	1.500	6,0	6,0	50	16	33,72	33,72
8.000	1.400	1.800	8,0	8,0	60	19	48,05	48,05
8.000	1.700	2.100	10,0	10,0	72	25	70,64	70,64
8.000	2.100	2.600	12,0	12,0	75	30	93,34	93,34
6.000	1.800	2.200	14,0	14,0	84	35	130,99	130,99
6.000	1.900	2.400	16,0	16,0	92	40	166,15	166,15
4.000	1.600	1.900	20,0	20,0	100	45	274,03	274,03

**TOLERANCES ACCORDING TO DIN 7160 & 7161**

Tolerance range in  $\mu\text{m}$  / Nominal diameter in mm

	1 - 3	3 - 6	6 - 10	10 - 18	18 - 30
<b>TOL</b>	0	0	0	0	0
<b>h10</b>	- 40	- 48	- 58	- 70	- 84
<b>TOL</b>	0	0	0	0	0
<b>h6</b>	- 6	- 8	- 9	- 11	- 13



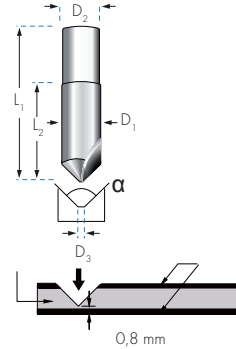
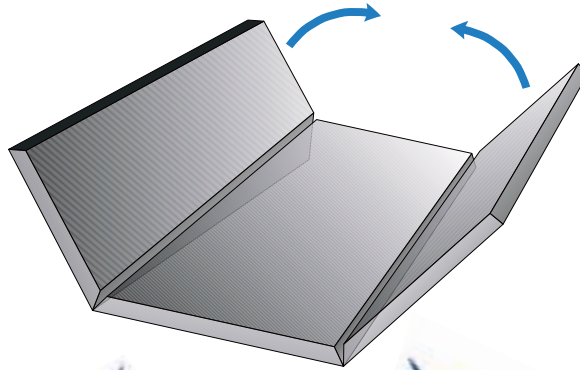
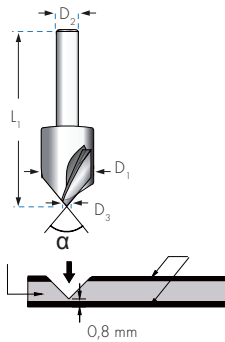


## SPECIAL CARBIDE END MILLS FOR ALUCOBOND

CARBIDE  
TIPPEDSOLID  
CARBIDE

Ref. FFALUC

Ref. FFALUC...MDI



CARBIDE TIPPED

SOLID CARBIDE

	FFALUC					
	D1 mm	D2 mm	D3 mm	L1 mm	$\alpha$	€
FFALUC1600	16,00	8	2,5	55	90°	226,48
FFALUC1800	18,00	8	2,5	55	90°	238,52
FFALUC2000	20,00	8	2,5	55	90°	254,32
FFALUC1600-135	16,00	8	2,3	55	135°	226,48
FFALUC1800-135	18,00	8	2,3	55	135°	238,52
FFALUC2000-135	20,00	8	2,3	55	135°	254,32

	FFALUC...MDI						
	D1 mm	D2 mm	D3 mm	L1 mm	L2 mm	$\alpha$	€
FFALUC1400MDI	14,00	14	2,5	50	14	90°	135,48
FFALUC1600MDI	16,00	16	2,5	50	16	90°	154,18
FFALUC1800MDI	18,00	18	2,5	50	18	90°	177,86
FFALUC1400MDI-135	14,00	14	0,5	50	14	135°	135,48
FFALUC1600MDI-135	16,00	16	0,5	50	16	135°	154,18
FFALUC1800MDI-135	18,00	18	0,5	50	18	135°	177,86

SOLID CARBIDE 2 FLUTE LONG NECK END MILLS



Ref. FMG74  
Ref. FMG75  
Ref. FMG76

2 Z



MG  
CARBIDE



30°



STRAIGHT

TiAlN

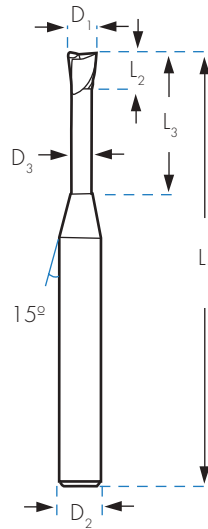


50  
HRc

Micro Grain  
CARBIDE

End mills

Pink



FMG74

	TOL -0,015	TOL h6					€
	D1 mm	D2 mm	D3 mm	L1 mm	L2 mm	L3 mm	
FMG740050	0,5	4	0,45	45	0,7	8	101,06
FMG740100	1,0	4	0,95	55	1,5	20	103,69
FMG740150	1,5	4	1,45	55	2,3	20	93,60
FMG740200	2,0	4	1,95	55	3,0	20	89,82
FMG740300	3,0	6	2,85	60	4,5	20	116,16
FMG740400	4,0	6	3,85	60	6,0	20	116,16
FMG740500	5,0	6	4,85	60	7,5	20	116,16
FMG740600	6,0	6	5,85	80	9,0	20	116,16

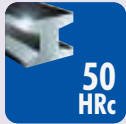
FMG75

	TOL -0,015	TOL h6					€
	D1 mm	D2 mm	D3 mm	L1 mm	L2 mm	L3 mm	
FMG750200	2,0	4	1,95	70	3,0	30	106,16
FMG750300	3,0	6	2,85	70	4,5	30	120,66
FMG750400	4,0	6	3,85	70	6,0	30	120,66
FMG750500	5,0	6	4,85	80	7,5	30	120,66
FMG750600	6,0	6	5,85	90	9,0	30	120,66

FMG76

	TOL -0,015	TOL h6					€
	D1 mm	D2 mm	D3 mm	L1 mm	L2 mm	L3 mm	
FMG760400	4,0	6	3,85	90	6,0	40	132,68
FMG760500	5,0	6	4,85	80	7,5	40	132,68
FMG760600	6,0	6	5,85	100	9,0	40	132,68

## SOLID CARBIDE 2 FLUTE BALL NOSE END MILLS



Ref. FMG77  
Ref. FMG78  
Ref. FMG79

2 Z

MG  
CARBIDE

30°



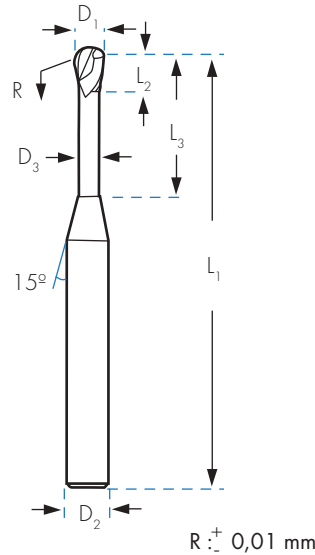
STRAIGHT

TiAlN

50  
HRcMicro Grain  
CARBIDE

End mills

Pink



FMG77

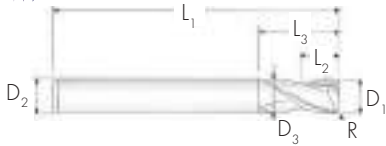
	TOL -0,02	TOL h6					€
	D <sub>1</sub> mm	D <sub>2</sub> mm	D <sub>3</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	L <sub>3</sub> mm	
FMG770050	0,5	4	0,45	45	0,7	8	101,06
FMG770100	1,0	4	0,95	55	1,5	20	103,69
FMG770150	1,5	4	1,45	55	2,3	20	93,60
FMG770200	2,0	4	1,95	55	3,0	20	89,82
FMG770300	3,0	6	2,85	60	4,5	20	116,16
FMG770400	4,0	6	3,85	65	6,0	20	116,16
FMG770500	5,0	6	4,85	60	7,5	20	116,16
FMG770600	6,0	6	5,85	80	9,0	20	116,16

FMG78

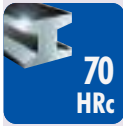
	TOL -0,02	TOL h6					€
	D <sub>1</sub> mm	D <sub>2</sub> mm	D <sub>3</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	L <sub>3</sub> mm	
FMG780200	2,0	4	1,95	70	3,0	30	106,16
FMG780300	3,0	6	2,85	70	4,5	30	120,66
FMG780400	4,0	6	3,85	70	6,0	30	120,66
FMG780500	5,0	6	4,85	80	7,5	30	120,66
FMG780600	6,0	6	5,85	90	9,0	30	120,66

FMG79

	TOL -0,02	TOL h6					€
	D <sub>1</sub> mm	D <sub>2</sub> mm	D <sub>3</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	L <sub>3</sub> mm	
FMG790400	4,0	6	3,85	90	6,0	40	132,68
FMG790600	6,0	6	5,85	100	9,0	40	132,68



## SOLID CARBIDE 2 FLUTE STUB CUT END MILLS



Ref. FMG01

2 Z



MG  
CARBIDE



30°



STRAIGHT

BLUE



70  
HRc

Micro Grain  
CARBIDE

R.P.M. & FEED								FMG01								
R.P.M. rev./min.	FEED mm/min	50-55 HRc		55-60 HRc		60-65 HRc		Special TOL		TOL h6		L3 mm	R	€		
		R.P.M. rev./min.	FEED mm/min	R.P.M. rev./min.	FEED mm/min	R.P.M. rev./min.	FEED mm/min	R.P.M. rev./min.	FEED mm/min	D1 mm	D2 mm				D3 mm	L1 mm
25.500	360	20.500	215	16.000	135	12.500	88	FMG010100	1,0	3	-	40	1,5	-	0,1	29,23*
21.500	390	17.500	240	13.500	150	11.000	102	FMG010150	1,5	3	-	40	2,2	-	0,1	29,23*
11.500	420	9.500	260	7.500	160	6.400	115	FMG010300	3,0	6	2,9	45	4,0	7	0,1	38,73*
10.150	430	8.350	270	6.550	165	5.575	118	FMG010350	3,5	6	3,3	45	5,0	9	0,1	38,73*
8.800	440	7.200	270	5.600	170	4.750	118	FMG010400	4,0	6	3,8	45	5,0	9	0,1	38,73*
8.550	470	6.800	280	5.350	175	4.600	125	FMG010450	4,5	6	4,3	45	6,0	10	0,1	38,73*
8.300	500	6.400	285	5.100	180	4.450	132	FMG010500	5,0	6	4,8	50	6,0	11	0,2	38,73*
6.900	480	5.300	280	4.200	180	3.700	130	FMG010600	6,0	6	5,8	50	7,0	14	0,2	38,73*
5.200	445	4.000	255	3.200	165	2.800	120	FMG010800	8,0	8	7,8	60	9,0	18	0,2	48,97*
4.100	415	3.200	240	2.550	155	2.200	112	FMG011000	10,0	10	9,7	75	12,0	25	0,2	73,20*
3.500	415	2.650	240	2.100	155	1.860	112	FMG011200	12,0	12	11,7	75	15,0	30	0,3	100,94*
2.600	365	2.000	210	1.600	135	1.400	98	FMG011600	16,0	16	15,7	90	18,0	38	0,3	168,29*
2.050	335	1.600	295	1.300	125	1.100	88	FMG012000	20,0	20	19,7	100	24,0	45	0,3	222,60*



\*Available until end of stock

## SOLID CARBIDE 4 FLUTE STUB CUT END MILLS



Ref. FMG04

4 Z



MG  
CARBIDE



30°



STRAIGHT

BLUE



70  
HRc

Micro Grain  
CARBIDE

R.P.M. & FEED								FMG04								
R.P.M. rev./min.	FEED mm/min	50-55 HRc		55-60 HRc		60-65 HRc		Special TOL		TOL h6		L3 mm	R	€		
		R.P.M. rev./min.	FEED mm/min	R.P.M. rev./min.	FEED mm/min	R.P.M. rev./min.	FEED mm/min	R.P.M. rev./min.	FEED mm/min	D1 mm	D2 mm				D3 mm	L1 mm
25.500	710	20.500	430	16.000	270	12.500	175	FMG040100	1,0	3	-	40	1,5	-	0,1	29,23*
21.500	775	17.500	475	13.500	295	11.000	200	FMG040150	1,5	3	-	40	2,2	-	0,1	29,23*
17.500	840	14.500	520	11.000	320	9.500	230	FMG040200	2,0	3	1,9	40	3,0	6	0,1	26,52*
14.500	840	12.000	520	9.250	320	7.950	230	FMG040250	2,5	3	2,4	40	4,0	6	0,1	26,52*
11.500	840	9.500	520	7.500	320	6.400	230	FMG040300	3,0	6	2,9	45	4,0	7	0,1	38,73*
10.150	860	8.350	530	6.550	328	5.575	240	FMG040350	3,5	6	3,3	45	5,0	9	0,1	38,73*
8.800	880	7.200	540	5.600	335	4.750	240	FMG040400	4,0	6	3,8	45	5,0	9	0,1	38,73*
8.550	940	6.800	560	5.350	353	4.600	255	FMG040450	4,5	6	4,3	45	6,0	10	0,1	38,73*
8.300	1.000	6.400	580	5.100	370	4.450	270	FMG040500	5,0	6	4,8	50	6,0	11	0,2	38,73*
6.900	950	5.300	560	4.200	350	3.700	260	FMG040600	6,0	6	5,8	50	7,0	14	0,2	38,73*
5.200	900	4.000	520	3.200	330	2.800	240	FMG040800	8,0	8	7,8	60	9,0	18	0,2	48,97*
4.100	840	3.200	480	2.550	310	2.200	220	FMG041000	10,0	10	9,7	75	12,0	25	0,2	73,20*
3.500	840	2.650	480	2.100	300	1.860	220	FMG041200	12,0	12	11,7	75	15,0	30	0,3	100,94*
2.600	730	2.000	420	1.600	270	1.400	200	FMG041600	16,0	16	15,7	90	18,0	38	0,3	168,29*
2.050	650	1.600	380	1.300	250	1.100	180	FMG042000	20,0	20	19,7	100	24,0	45	0,3	222,60*



\*Available until end of stock



## SOLID CARBIDE 2 FLUTE STUB CUT END MILLS

70  
HRc

Ref. FMG02

2 Z

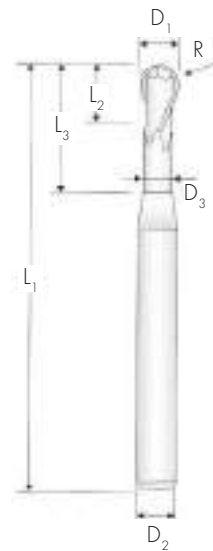
MG  
CARBIDE

30°



STRAIGHT

BLUE

70  
HRcMicro Grain  
CARBIDE

## SHORT SERIES

## R.P.M. &amp; FEED

R.P.M. rev./min.	50-55 HRc		55-60 HRc		60-65 HRc		65-70 HRc	
	R.P.M. rev./min.	FEED 1 mm/min	R.P.M. rev./min.	FEED 1 mm/min	R.P.M. rev./min.	FEED 1 mm/min	R.P.M. rev./min.	FEED 1 mm/min
57.000	4.000	54.000	3.400	51.000	2.700	48.000	2.300	
52.750	4.000	50.000	3.300	46.000	2.700	43.000	2.300	
48.500	4.000	44.500	3.275	41.500	2.750	38.250	2.300	
40.000	4.000	35.000	3.150	32.000	2.800	28.500	2.300	
26.500	4.000	23.500	3.150	21.000	2.800	19.000	2.300	
20.000	4.000	17.500	3.150	16.000	2.800	14.500	2.300	
15.000	3.750	13.500	3.050	11.500	2.550	10.500	2.100	
11.000	3.100	10.000	2.500	8.800	2.150	8.000	1.750	
10.000	2.900	9.000	2.325	7.900	2.000	7.250	1.650	
9.000	2.700	8.000	2.150	7.000	1.850	6.500	1.550	
8.250	2.500	7.300	2.025	6.400	1.750	5.900	1.465	
7.500	2.400	6.600	1.900	5.800	1.650	5.300	1.380	
5.600	1.900	5.000	1.550	4.400	1.250	4.000	1.050	
5.000	1.800	4.500	1.450	3.950	1.125	3.600	950	
4.000	1.600	3.600	1.275	3.150	900	2.875	750	
3.600	1.500	3.200	1.200	2.800	800	2.550	660	
-	-	-	-	-	-	-	-	

## FMG02

	Special TOL	TOL h6		TOL R			€	
	D1 mm	D2 mm	D3 mm	L1 mm	L2 mm	L3 mm		R
FMG020100	1,0	4	0,95	50	1,0	2,2	0,5	48,20*
FMG020120	1,2	4	1,10	50	1,2	2,6	0,6	48,20*
FMG020150	1,5	4	1,40	50	1,5	3,0	0,8	48,20*
FMG020200	2,0	4	1,90	50	2,0	4,0	1,0	45,77*
FMG020300	3,0	6	2,90	60	3,0	6,0	1,5	45,77*
FMG020400	4,0	6	3,30	70	4,0	8,0	2,0	47,83*
FMG020500	5,0	6	4,90	80	5,0	10,0	2,5	49,25*
FMG020600	6,0	6	5,90	90	6,0	12,0	3,0	52,81*
FMG020700	7,0	8	6,90	90	7,0	14,0	3,5	83,27*
FMG020800	8,0	8	7,90	100	8,0	16,0	4,0	82,41*
FMG020900	9,0	10	8,90	100	9,0	18,0	4,5	135,92*
FMG021000	10,0	10	9,90	100	10,0	20,0	5,0	135,92*
FMG021200	12,0	12	11,90	110	12,0	24,0	6,0	174,47*
FMG021400	14,0	14	13,80	110	14,0	28,0	7,0	176,50*
FMG021800	18,0	18	17,80	140	18,0	36,0	9,0	251,60*
FMG022000	20,0	20	19,80	160	20,0	40,0	10,0	356,56*
FMG022500	25,0	25	24,80	180	25,0	50,0	12,5	578,00*

\*Available until end of stock

## TOLERANCES ACCORDING TO DIN 7160 &amp; 7161

Tolerance range in  $\mu\text{m}$  / Nominal diameter in mm

	1 - 3	3 - 6	6 - 10	10 - 18	18 - 30
Special TOL	0 - 12	0 - 12	0 - 15	0 - 15	0 - 15
TOL h6	0 - 6	0 - 8	0 - 9	0 - 11	0 - 13
TOL R	0 - 5	0 - 10	0 - 10	0 - 10	0 - 10

SOLID CARBIDE 6 FLUTE END MILLS



Ref. FMG06

6 Z



MG  
CARBIDE

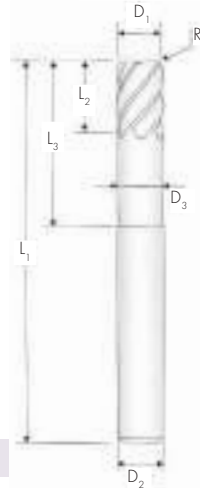


STRAIGHT

BLUE



Micro Grain  
CARBIDE



SHORT SERIES

FMG06

R.P.M. & FEED							
50-55 HRc		55-60 HRc		60-65 HRc		65-70 HRc	
R.P.M. rev./min.	FEED 1 mm/min	R.P.M. rev./min.	FEED 1 mm/min	R.P.M. rev./min.	FEED 1 mm/min	R.P.M. rev./min.	FEED 1 mm/min
16.000	4.900	13.500	3.300	10.500	2.100	8.000	1.450
12.000	4.600	10.000	3.100	8.000	2.000	6.000	1.400
9.500	4.100	8.000	2.900	6.400	1.800	4.800	1.300
8.000	3.800	6.600	2.500	5.300	1.600	4.000	1.150

	Special TOL			TOL h6			TOL R		€
	D1 mm	D2 mm	D3 mm	L1 mm	L2 mm	L3 mm	R		
FMG060600	6,0	6	5,70	50	6	14	0,5	55,40*	
FMG060800	8,0	8	7,65	60	8	24	0,5	66,09*	
FMG061000	10,0	10	9,65	70	10	30	1,0	103,09*	
FMG061200	12,0	12	11,60	75	12	30	1,0	123,14*	

\*Available until end of stock

LONG SERIES

FMG07

R.P.M. & FEED							
50-55 HRc		55-60 HRc		60-65 HRc		65-70 HRc	
R.P.M. rev./min.	FEED 1 mm/min	R.P.M. rev./min.	FEED 1 mm/min	R.P.M. rev./min.	FEED 1 mm/min	R.P.M. rev./min.	FEED 1 mm/min
16.000	4.900	13.500	3.300	10.500	2.100	8.000	1.450
12.000	4.600	10.000	3.100	8.000	2.000	6.000	1.400
9.500	4.100	8.000	2.900	6.400	1.800	4.800	1.300
9.500	4.100	8.000	2.900	6.400	1.800	4.800	1.300
8.000	3.800	6.600	2.500	5.300	1.600	4.000	1.150
8.000	3.800	6.600	2.500	5.300	1.600	4.000	1.150
6.000	3.400	5.000	2.300	4.000	1.250	3.000	870
6.000	3.400	5.000	2.300	4.000	1.250	3.000	870
4.800	3.200	4.000	2.100	3.200	1.020	2.400	690
4.800	3.200	4.000	2.100	3.200	1.020	2.400	690
4.800	3.200	4.000	2.100	3.200	1.020	2.400	690

	Special TOL		TOL h6		R	€
	D1 mm	D2 mm	L1 mm	L2 mm		
FMG070600	6,0	6	70	13	0,5	62,95*
FMG070800	8,0	8	90	19	0,5	78,90*
FMG071000	10,0	10	100	22	0,5	118,87*
FMG071001	10,0	10	100	22	1,0	133,13*
FMG071200	12,0	12	110	26	0,5	162,13*
FMG071201	12,0	12	110	26	1,0	181,58*
FMG071600	16,0	16	130	32	1,0	218,73*
FMG071601	16,0	16	130	32	1,5	238,88*
FMG072000	20,0	20	140	38	1,0	320,10*
FMG072001	20,0	20	140	38	1,5	349,68*
FMG072002	20,0	20	140	38	2,0	349,68*

\*Available until end of stock

TOLERANCES ACCORDING TO DIN 7160 & 7161

Tolerance range in  $\mu\text{m}$  / Nominal diameter in mm

	1 - 3	3 - 6	6 - 10	10 - 18	18 - 30
Special TOL	0 - 12	0 - 12	0 - 15	0 - 15	0 - 15
TOL h6	0 - 6	0 - 8	0 - 9	0 - 11	0 - 13



## SOLID CARBIDE 2 FLUTE MINIATURE END MILLS



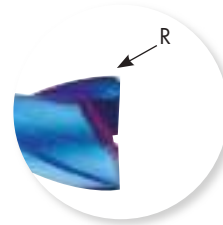
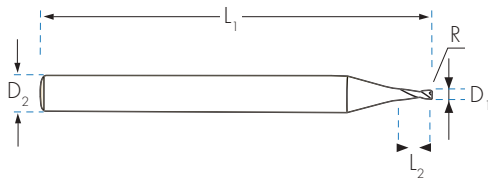
Ref. FMG09

2 Z

MG  
CARBIDE

STRAIGHT

BLUE

TOL D1  
-0,012TOL D2  
h6Micro Grain  
CARBIDE

FMG09

	D1 mm	D2 mm	L1 mm	L2 mm	R	€
FMG090030	0,30	6	50	0,45	-	112,77
FMG090040	0,40	6	50	0,60	-	105,83
FMG090050	0,50	6	50	0,70	0,05	92,06
FMG090060	0,60	6	50	0,90	0,05	88,56
FMG090080	0,80	6	50	1,20	0,05	81,61
FMG090100	1,00	6	50	1,50	0,10	78,21
FMG090120	1,20	6	50	1,80	0,10	78,21
FMG090150	1,50	6	50	2,20	0,15	78,21
FMG090200	2,00	6	50	2,20	0,15	70,88



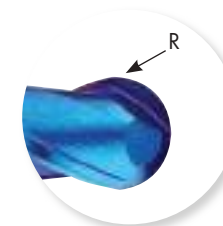
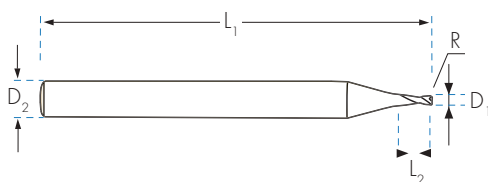
Ref. FMG08

2 Z

MG  
CARBIDE

STRAIGHT

BLUE

TOL D1  
-0,012TOL D2  
h6Micro Grain  
CARBIDE

FMG08

	D1 mm	D2 mm	L1 mm	L2 mm	R	€
FMG080040	0,40	6	50	0,40	0,20	114,46
FMG080050	0,50	6	50	0,50	0,25	105,66
FMG080060	0,60	6	50	0,60	0,30	96,88
FMG080080	0,80	6	50	0,80	0,40	79,01
FMG080100	1,00	6	50	1,00	0,50	74,40
FMG080120	1,20	6	50	1,20	0,60	74,40
FMG080150	1,50	6	50	1,50	0,75	74,40
FMG080200	2,00	6	50	2,00	1,00	67,41

# SHELL MILLING CUTTERS



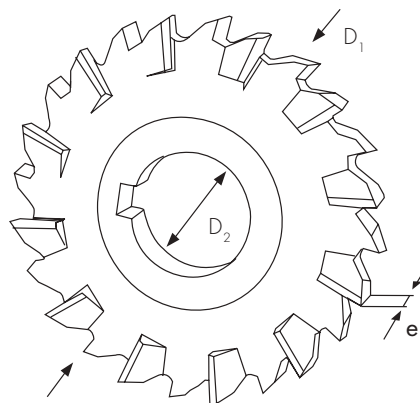
**BLUE-MASTER<sup>®</sup>**  
by *celes*

CUTTING TECHNOLOGIES

**SIDE AND FACE MILLING CUTTERS CROSS TEETH**


Ref. FF56

HSSCo

DIN  
885A

FF56				
D1 mm	e mm	D2 mm	Z	€
50	4,0	16	12	101,45
50	5,0	16	12	101,45
50	6,0	16	12	117,56
50	8,0	16	12	114,49
50	10,0	16	12	126,07
63	1,6	22	16	217,28
63	2,0	22	16	192,37
63	2,5	22	16	196,38
63	3,0	22	16	201,77
63	4,0	22	12	117,06
63	5,0	22	12	117,06
63	6,0	22	12	120,37
63	8,0	22	12	131,17
63	10,0	22	12	141,14
63	12,0	22	12	150,70
63	14,0	22	12	162,32
63	16,0	22	12	170,86
63	18,0	22	12	204,13
80	1,6	27	20	217,17
80	2,0	27	20	210,94
80	2,5	27	20	214,46
80	3,0	27	20	210,20
80	4,0	27	20	251,47
80	5,0	27	14	159,03
80	6,0	27	14	162,78
80	8,0	27	14	171,79
80	10,0	27	14	183,85
80	12,0	27	14	196,80
80	14,0	27	14	210,44
80	16,0	27	14	215,30
80	18,0	27	14	230,95
80	20,0	27	14	253,94

FF56				
D1 mm	e mm	D2 mm	Z	€
100	1,6	32	24	259,79
100	2,0	32	24	258,38
100	2,5	32	24	258,13
100	3,0	32	24	250,62
100	4,0	32	24	270,19
100	5,0	32	24	286,43
100	6,0	32	16	223,55
100	8,0	32	16	228,26
100	10,0	32	16	236,64
100	12,0	32	16	254,87
100	14,0	32	16	280,60
100	16,0	32	16	294,31
100	18,0	32	16	324,42
100	20,0	32	16	324,42
100	22,0	32	16	363,66
100	25,0	32	16	395,59
125	1,6	32	16	328,54
125	2,0	32	16	316,00
125	2,5	32	16	323,86
125	3,0	32	16	331,74
125	4,0	32	16	355,40
125	5,0	32	16	380,43
125	6,0	32	16	389,83
125	8,0	32	18	352,58
125	10,0	32	18	361,78
125	12,0	32	18	375,49
125	14,0	32	18	407,77
125	16,0	32	18	432,99
125	18,0	32	18	457,99
125	20,0	32	18	487,28
125	22,0	32	18	554,84
125	25,0	32	18	560,21
125	28,0	32	18	612,31

FF56				
D1 mm	e mm	D2 mm	Z	€
160	2,0	40	30	528,80
160	2,5	40	30	509,08
160	3,0	40	30	518,86
160	4,0	40	30	548,26
160	5,0	40	30	580,59
160	6,0	40	30	623,39
160	8,0	40	30	711,53
160	10,0	40	22	584,40
160	12,0	40	22	584,40
160	14,0	40	22	581,54
160	16,0	40	22	636,44
160	18,0	40	22	670,62
160	20,0	40	22	688,38
160	22,0	40	22	756,64
160	25,0	40	22	819,87
160	28,0	40	22	901,24
160	32,0	40	22	963,61
200	12,0	40	24	891,45
200	14,0	40	24	900,17
200	16,0	40	24	927,38
200	18,0	40	24	973,03
200	20,0	40	24	1.040,66
200	22,0	40	24	1.044,09
200	25,0	40	24	1.211,11
200	28,0	40	24	1.249,39
200	32,0	40	24	1.558,18



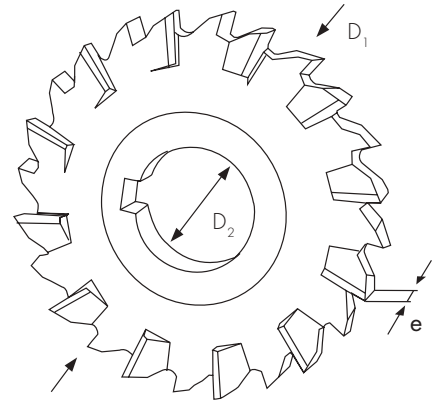
**SIDE AND FACE MILLING CUTTERS STRAIGHT TEETH**



Ref. FF59

**HSSCo**

**DIN  
885B**



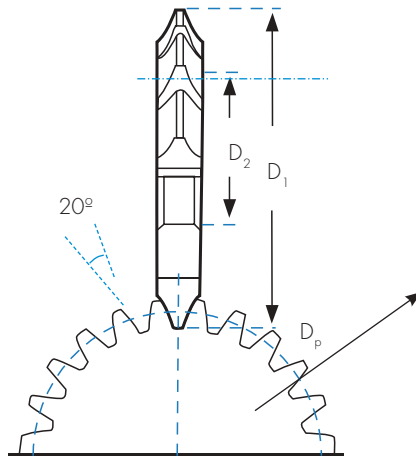
FF59				
D1 mm	e mm	D2 mm	Z	€
50	4	16	16	101,13
50	5	16	16	101,13
50	6	16	16	117,21
50	8	16	16	114,15
50	10	16	16	125,70
63	4	22	18	117,82
63	5	22	18	117,82
63	6	22	18	119,38
63	8	22	18	129,79
63	10	22	18	139,66
63	12	22	18	149,59
63	14	22	18	161,10
63	16	22	18	170,40
63	18	22	18	203,52
80	5	27	20	158,48
80	6	27	20	162,66
80	8	27	20	171,65
80	10	27	20	183,24
80	12	27	20	196,19
80	14	27	20	209,81
80	16	27	20	215,26
80	18	27	20	230,91
80	20	27	20	253,89

FF59				
D1 mm	e mm	D2 mm	Z	€
100	6	32	22	221,28
100	8	32	22	227,56
100	10	32	22	235,88
100	12	32	22	254,04
100	14	32	22	279,69
100	16	32	22	296,32
100	18	32	22	324,36
100	20	32	22	324,36
100	22	32	22	362,57
100	25	32	22	396,62
125	8	32	24	352,37
125	10	32	24	361,56
125	12	32	24	375,27
125	14	32	24	407,54
125	16	32	24	428,46
125	18	32	24	457,85
125	20	32	24	487,14
125	22	32	24	554,69
125	25	32	24	560,07
125	28	32	24	612,12

FF59				
D1 mm	e mm	D2 mm	Z	€
160	10	40	28	584,23
160	12	40	28	584,23
160	14	40	28	581,38
160	16	40	28	636,25
160	18	40	28	670,43
160	20	40	28	688,19
160	22	40	28	756,42
160	25	40	28	819,64
160	28	40	28	900,98
160	32	40	28	963,33
200	12	40	30	891,19
200	14	40	30	899,92
200	16	40	30	927,13
200	18	40	30	972,76
200	20	40	30	1.040,37
200	22	40	30	1.043,80
200	25	40	30	1.210,78
200	28	40	30	1.249,05
200	32	40	30	1.557,76

**GEAR MILLING CUTTERS**
**HSS**

Ref. 99RFM



MILLING CUTTER UNIT	D <sub>1</sub> mm	D <sub>2</sub> mm	99RFM
			€
0,50	40	16	126,50
0,70	40	16	126,50
0,75	40	16	126,50
0,80	40	16	126,50
1,00	50	16	126,50
1,25	50	16	126,50
1,50	56	22	129,90
1,75	56	22	129,90
2,00	63	22	129,90
2,25	63	22	152,24
2,50	63	22	152,24
2,75	71	27	152,24
3,00	71	27	152,24
3,25	71	27	200,90
3,50	80	27	200,90
3,75	80	27	200,90
4,00	80	27	200,90
4,50	90	32	275,36
5,00	90	32	275,36
6,00	100	32	348,66
7,00	100	32	348,66

**CUTTER N° / TEETH**

N°1	N°2	N°3	N°4	N°5	N°6	N°7	N°8	Set
12-13	14-16	17-20	21-25	26-34	35-54	55-134	135-∞	12-∞

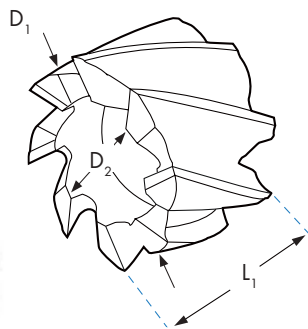
$$\text{Milling cutter unit} = \frac{\text{ØEst}}{(Z+2)}$$

\* Price depends on the n° of milling cutter unit independently of the n° of teeth.

**MULTI-FLUTE SHELL END MILLS WITH DOUBLE DRIVING SLOT**

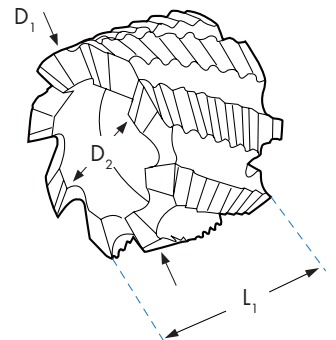
Ref. FF87

**HSSCo**
**DIN 1880**

**FINISHING**


Ref. FF88

**HSSCo**
**DIN 1880**

**NR**
**ROUGHING**

**FF87**

D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	Z	€
40	16	32	8	133,41
50	22	36	8	183,56
63	27	40	8	250,82
80	27	45	10	355,01
100	32	50	12	571,53
125	40	56	14	917,83
160	50	63	16	1.640,35

**FF88**

D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	Z	€
40	16	32	6	193,22
50	22	36	6	239,94
63	27	40	8	317,91
80	27	45	8	467,27
100	32	50	10	770,93
125	40	56	12	1.307,90
160	50	63	14	2.269,40

**MULTI-FLUTE SHELL END MILLS WITH DOUBLE DRIVING SLOT**



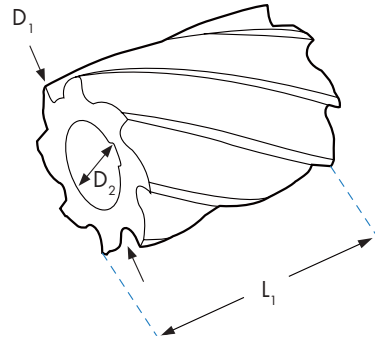
Ref. FF89

**HSSCo**

**DIN 884**



PLAIN



FF89				
D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	Z	€
50	22	63	8	167,15*
50	22	80	8	249,17*
63	27	50	8	219,34*
63	27	70	8	266,86*
80	32	63	8	369,69*
100	40	70	10	575,17*

\* Till end of stock

**PLAIN MILLING CUTTERS WITH SHANK**

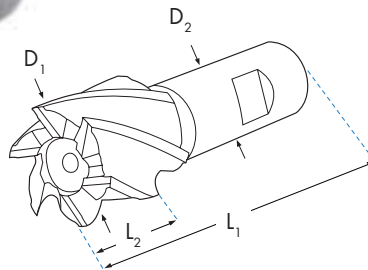


Ref. FMF87

**HSSCo 8%**



FINISHING



FMF87					
D <sub>1</sub> mm	L <sub>2</sub> mm	L <sub>1</sub> mm	D <sub>2</sub> mm	Z	€
30	30	90	20	6	194,48
35	30	90	20	6	223,19
40	32	95	25	8	278,17

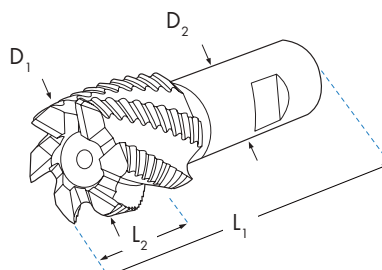


Ref. FMF88

**HSSCo 8%**



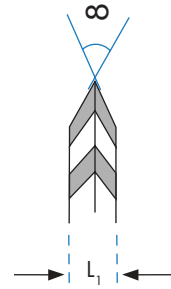
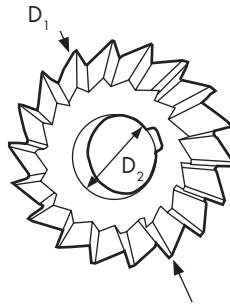
ROUGHING



FMF88					
D <sub>1</sub> mm	L <sub>2</sub> mm	L <sub>1</sub> mm	D <sub>2</sub> mm	Z	€
30	30	90	20	6	224,83
35	30	90	20	6	288,03
40	32	95	25	8	352,84

**HSSCo DOUBLE ANGLE MILLING CUTTERS**

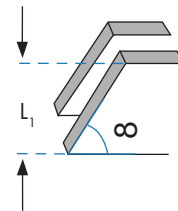
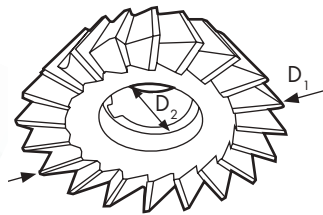
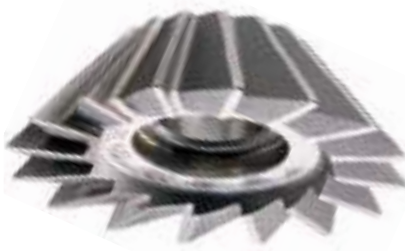
Ref. FF77	HSSCo	DIN 847	45°	Ref. FF78	HSSCo	DIN 847	60°	Ref. FF79	HSSCo	DIN 847	90°
-----------	-------	---------	-----	-----------	-------	---------	-----	-----------	-------	---------	-----



FF77						FF78						FF79					
D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	∞	Z	€	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	∞	Z	€	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	∞	Z	€
50	16	8	45°	20	178,09	50	16	10	60°	18	181,59	50	16	14	90°	16	181,59
63	22	10	45°	22	211,83	63	22	14	60°	20	215,99	63	22	20	90°	18	215,99
80	27	12	45°	24	295,76	80	27	18	60°	22	301,55	80	27	22	90°	20	301,55
100	32	18	45°	26	369,75	100	32	25	60°	24	377,00	100	32	32	90°	22	377,00

**HSSCo SINGLE ANGLE MILLING CUTTERS**

Ref. FF91	HSSCo	DIN 842	50°	Ref. FF90	HSSCo	DIN 842	60°
-----------	-------	---------	-----	-----------	-------	---------	-----



FF91						FF90					
D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	∞	Z	€	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	∞	Z	€
40	10	13	50°	14	140,82	40	10	13	60°	14	138,08
50	13	16	50°	16	173,65	50	13	16	60°	16	170,28
63	16	20	50°	18	219,51	63	16	20	60°	18	215,25
80	22	25	50°	20	316,26	80	22	25	60°	20	310,13
100	27	32	50°	22	458,70	100	27	32	60°	22	449,78
125	32	40	50°	24	757,47	125	32	40	60°	24	742,79
160	40	50	50°	30	1.325,02	160	40	50	60°	30	1.299,30



# KEY CUTTERS

**BLUE-MASTER<sup>®</sup>**  
*by celesa*

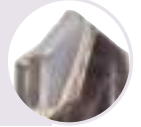
CUTTING TECHNOLOGIES



## LOCKSMITHING TOOLS

### THE WIDEST RANGE OF TOOLS FOR LOCKSMITHS

**DIN  
338**
**CARBIDE  
TIPPED**

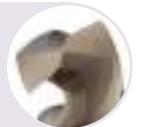
**BRIGHT**
**CAST  
IRON**


Carbide Tipped twist drill (DIN 338) for hard metals.  
High hardness twist drill for hard metals use in locksmithing.  
Go to page 51 for full information.

Ø mm	L <sub>1</sub> x L <sub>2</sub> mm	1U.	BC7		BC7B	
			€/U.	BLISTER	1	€/U.
6,00	93 x 57	BC70600	22,13	BC70600B	1	26,13

**DIN  
338**
**HSSCo  
5%**

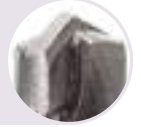
**GOLD**

**120  
Kg/mm²**


HSSCo twist drill (DIN 338) for metals of 120 Kg/mm².  
High hardness twist drill for general use in locksmithing.  
Go to page 50 for full information.

Ø mm	L <sub>1</sub> x L <sub>2</sub> mm	1U.	BC5		BC5F		BC5B		
			€/U.	10	€	1	€		
6,00	93 x 57	BC50600	4,83	BC50600F	1	5,39	BC50600B	1	6,25


**DIN  
338**
**CARBIDE  
TIPPED**

**BRIGHT**
**70 HRc**


Carbide Tipped twist drill (DIN 338) for very hard metals .  
High hardness twist drill for very hard metals use in locksmithing.  
Go to page 51 for full information.

Ø mm	L <sub>1</sub> x L <sub>2</sub> mm	1U.	BC98		BC98B	
			€/U.	10	€/U.	1
6,00	93 x 57	BC980600	16,35	BC980600B	20,35	

**SOLID  
CARBIDE**
**TOL D1  
h7**
**TOL D2  
h6**

**TiAIN**
**HARDOX  
600**
**HIGH  
PERFORMANCE**
**70  
HRc**


Solid Carbide Drill for hardened steel (up to 70 HRc)  
Maximum hardness drill for hardened metals use in locksmithing.  
Go to page 70 for full information.

Ø mm	L <sub>1</sub> x L <sub>2</sub> mm	1U.	BC85		BC85B	
			€/U.	10	€/U.	1
6,00	75 x 35	BC850600	80,37	BC850600B	85,37	

**CARBIDE DRILLS FOR CYLINDER**

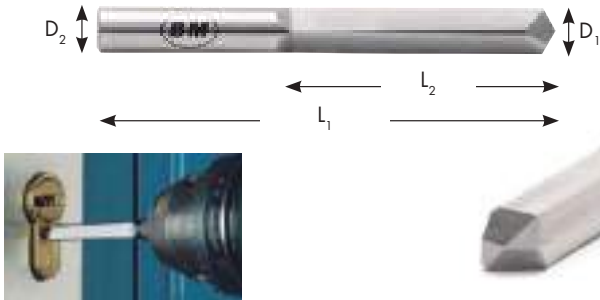


**SOLID CARBIDE**



Solid Carbide square section drill for cylinders and anti-drilling pins.  
THE DRILL N°1 TO DRILL HIGH HARDNESS CYLINDERS.

\* for antidrilling pins cylinder we recommend to drill at 300 RPM.

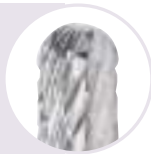


D1 mm	D2 mm	L2 mm	L1 mm	1U.	€	1U.	€
6	6	33	60	BCC06X60MD	60,13	BCC06X60MDB	65,13

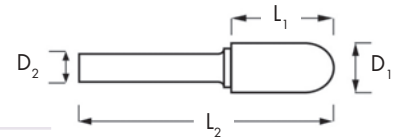
**SPECIAL ROTARY BURRS FOR CYLINDERS**

**TYPE C**

**CARBIDE / HSS**



Solid Carbide Rotary Burr for locksmith use, also known as Vampire. Semi-spherical geometry and total lengths from 60 to 150mm. The most appropriate burr for cylinders. Select the adequate option for your application among our wide range.



	D1 mm	D2 mm	L1 mm	L2 mm		1U.		1U.	
3 mm. SHANK	3.0	3	25.0	60	HSS	Y548TG2	21,00	Y548TG2B	24,00
	3.0	3	25.0	60	Monobloc	C30325-6	42,00	C30325-6B	46,00
6 mm. SHANK	6.0	6	25.0	50	Monobloc	C60625-6	39,49	C60625-6B	43,49
	6.0	6	25.0	60	Monobloc	C60625-60-6	44,48	C60625-60-6B	48,48
	6.0	6	25.0	80	Monobloc	C60625-80-6	53,14	C60625-80-6B	57,14
	6.0	6	25.0	100	Monobloc	C60625-100-6	59,29	C60625-100-6B	63,29
	6.0	6	25.0	120	Monobloc	C60625-120-6	88,94	C60625-120-6B	92,94
	6.0	6	25.0	150	Monobloc	C60625-150-6	118,59	C60625-150-6B	122,59



**CYLINDER WITH END CUT**

**TYPE A/E**

**CARBIDE**



Solid Carbide Rotary Burr A/F form (cylinder with end cut) and C form (semi-spherical) The most appropriate burr for cylinders. Select the adequate option for your application among our wide range.  
Go to pages 335 for full information.

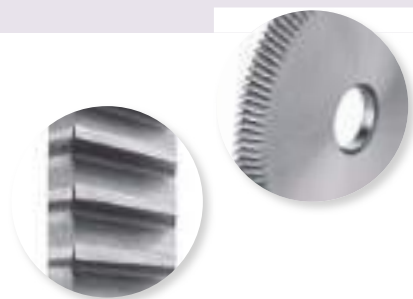


	D1 mm	L2 mm	D2 mm	L1 mm		1U.		1U.	
6 mm. SHANK	6.0	25.0	6	50	Monobloc	A60625-6E	35,21	A60625-6EB	39,21



**CUTTERS FOR JMA KEY DUPLICATING MACHINES**
**DOUBLE ANGLE CUTTERS**


Ref. FLLFP4



Ref. BM	Ref. JMA	MACHINE TYPES	MATERIAL	mm		mm	$\beta^\circ$	Z	mm	FLL	€
FLLFP1 (FLL02)	FP1	OREGON	HSSV	25	10	10	100°	60	0,1		91,57
FLLFP2W	FP2W	VIRGINIA	CARBIDE	40	10	6	70°	70	0,1		360,15
FLLFP3 (FLL04)	FP3	KIS, SPRINT	HSSV	50	12	6	90°	80	0,15		111,45
FLLFP4 (FLL06)	FP4	KIS	HSSV	53	12,7	6,35	45/15°	72	0,6		114,94
FLLFP5	FP5	JMA	HSSV	57	12,7	5	90°	80	0,15		143,25
FLLFP6 (FLL09)	FP6	KIS, SPRINT	HSSV	60	12,7	5	84°	140	0,1		111,45
FLLFP11ECCO (FLL11)	FP11/ECCO-009	ECCO, ECCO-PLUS	HSSV	63	16	5	84°	80	1		106,62
FLLFP11W	FP11W	ECCO, ECCO-PLUS	CARBIDE	63	16	5	84°	80	1		326,05
FLLFP12	FP12	TUCSON	HSSV	63	16	5	80°	80	1,25		114,94
FLLFP12W	FP12W	TUCSON	CARBIDE	63	16	5	80°	80	1,25		352,05
FLLFP13	FP13	DALLAS	HSSV	63	16	5	84°	100	1		143,13
FLLCU14	CU14	ECCO, ECCO-PLUS	HSSV	63	16	5	80°	80	1,25		140,26
FLLFP16 (FLL13)	FP16	PROCEDURE	HSSV	70	16	5,25	76°	100	1		143,13
FLLFP16W	FP16W	PROCEDURE	CARBIDE	70	16	5,25	76°	100	1		352,05
SLLP01	FP24 DAKOTA = P01	DAKOTA, ERREBI SARATOGA, NEVADA, DENVER, TITAN, VIENNA	HSSV	80	16	5	84°	110	1		99,52
SLLP01/120	FP24 DAKOTA=P01/120		HSSV	80	16	5	84°	120	1		101,41
FLLFP24 (FLL16)	FP24 ERREBI		HSSV	80	16	5	84°	110	1,25		87,91
FLLFP24W	FP24W ERREBI		CARBIDE	80	16	5	84°	110	1,25		326,05
FLL99	FP24		HSSV	80	16	5	84°	110	0		101,57



Ref.FLL99: Double angle cutter without lateral chamfer 80x5x16 Z110.

**CUTTERS FOR JMA KEY DUPLICATING MACHINES**

**SIDE MILLING CUTTER**



Ref. FLLFP19

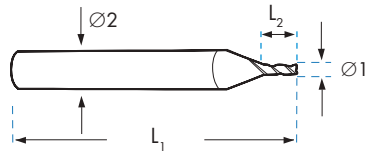
Ref. BM	Ref. JMA	MACHINE TYPES	MATERIAL	mm			Z	FLL	€
FLLFP7	FP7	ECCO BIT, DETROIT	HSSV	63	16	1,25	80	111,45	
FLLFP7W	FP7W	ECCO BIT, DETROIT	CARBIDE	63	16	1,25	80	284,38	
FLLFP8 (FLL19)	FP8	ECCO BIT, DETROIT	HSSV	63	16	1,4	80	79,50	
FLLFP17	FP17	TITAN BIT, SARATOGA, YAKARTA	HSSV	80	16	1,25	100	81,44	
FLLFP17W	FP17W	TITAN BIT, SARATOGA, YAKARTA	CARBIDE	80	16	1,25	100	298,78	
FLLFP18	FP18	ATLANTA, TOPEKA	HSSV	80	22	1,25	100	111,45	
FLLFP18W	FP18W	ATLANTA, TOPEKA	CARBIDE	80	22	1,25	100	298,78	
FLLFP19 (FLL21)	FP19	SARATOGA, YAKARTA, TITAN BIT, DAKOTA	HSSV	80	16	1,4	100	84,43	
FLLFP19W	FP19W	SARATOGA, YAKARTA, TITAN BIT, DAKOTA	CARBIDE	80	16	1,4	100	279,84	
FLLFP20 (FLL22)	FP20	ATLANTA, TOPEKA	HSSV	80	22	1,4	100	84,43	
FLLFP21 (FLL24)	FP21 / SLLSG2	ATLANTA, TOPEKA, DUPLEX, KANSAS	HSSV	80	22	1,5	100	86,77	
FLLFP21W	FP21W	ATLANTA, TOPEKA, DUPLEX, KANSAS	CARBIDE	80	22	1,5	100	304,62	

**MILLING SLOT CUTTERS**

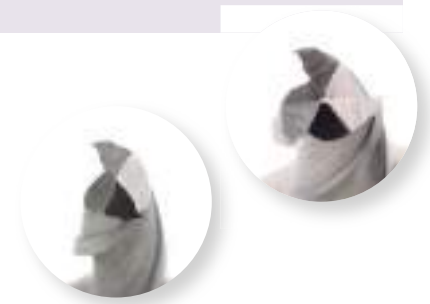


Ref. FLLFP22W

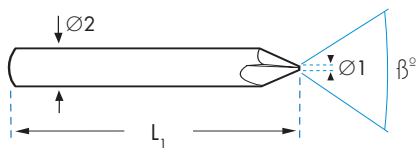
Ref. BM	Ref. JMA	MACHINE TYPES	MATERIAL	mm			Z	FLL	€
FLLFP9	FP9	ECCO BIT	HSSV	63	16	1	80	75,45	
FLLFP10	FP10	ECCO FORD, ECCO ABBLOY, PASADENA, NEBRASCA	HSSV	63	16	2,4	80	75,45	
FLLFP22	FP22	TITAN BIT, DAKOTA, SARATOGA	HSSV	80	16	1	100	80,48	
FLLFP22W	FP22W	TITAN BIT, DAKOTA, SARATOGA	CARBIDE	80	16	1	100	275,42	
FLLFP23	FP23	DUPLEX, ATLANTA, TOPEKA	HSSV	80	22	1	100	83,38	
FLLFP23W	FP23W	DUPLEX, ATLANTA, TOPEKA	CARBIDE	80	22	1	100	275,42	
FF68801416100CO	-	TITAN , DAKOTA, SARATOGA, YAKARTA	HSSCo	80	16	1,4	100	81,06	
FLLFP26 (FLL23)	FP26	G, SENNA, DAKOTA, SARATOGA, YAKARTA	HSSV	80	16	1,5	100	84,54	
FLLFP26W	FP26W	G, SENNA, DAKOTA, SARATOGA,	CARBIDE	80	16	1,5	100	279,28	

**CUTTERS FOR JMA KEY DUPLICATING MACHINES**
**LASER CUTTERS**


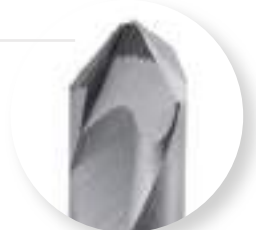
Ref. FLLF3



Ref. BM	Ref. JMA	MACHINE TYPES	MATERIAL	Ø <sub>1</sub> mm	L <sub>1</sub> mm	Ø <sub>2</sub> mm	L <sub>2</sub> mm	Z	FLL	€
FLLF3Z3	(FLL32)	≈ F3	HSSCo	1,5	45	6	3	3		39,73
FLLF3	(FLL44)	F3	HSSCo	1,5	45	6	3	2		37,19
FLLF3W	(FLL45)	F3W	CARBIDE	1,5	45	6	3	2		120,90
FLLF33	(FLL53)	F33	HSSCo	2	45	6	4	3		35,90
FLL11Z3	(FLL33)	≈ F11	HSSCo	2,5	45	6	5	3		35,90
FLLF11	(FLL48)	F11	HSSCo	2,5	45	6	5	2		32,13
FLLF11W	(FLL49)	F11W	CARBIDE	2,5	45	6	5	2		91,52
FLLF17	(FLL34)	F17	HSSCo	3	45	6	6	3		35,90
FLLF8Z3	(FLL35)	≈ F8	HSSCo	4	45	6	6	3		41,79
FLLF8	(FLL46)	F8	HSSCo	4	45	6	7	2		37,19
FLLF8W	(FLL47)	F8W	CARBIDE	4	45	6	6	2		113,46
FLLF77	(FLL36)	-	HSSCo	5	45	6	7	3		41,79
FLLF78	(FLL37)	-	HSSCo	6	45	6	8	3		41,79
FLLF78W	(FLL54)	-	CARBIDE	6	45	6	8	3		91,52
FLLF78WZ4	(FLL55)	-	CARBIDE	6	45	6	8	4		91,52

**UNIVERSAL DIMPLE CUTTERS FOR JMA AND SILCA DUPLICATING MACHINES**


Ref. FLLF1

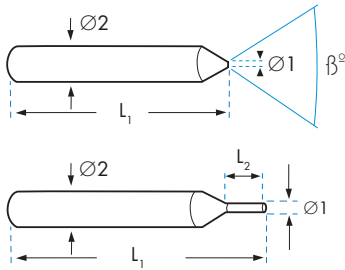


Ref. BM	Ref. JMA	MACHINE TYPES	MATERIAL	β°	Ø <sub>1</sub> mm	L <sub>1</sub> mm	Ø <sub>2</sub> mm	Z	FLL	€
FLLF82	-		HSSCo	82°	0,9	45	6	2		24,48
FLLF1	(FLL43)	F1	HSSCo	90°	0,8	45	6	2		24,48
FLLF1W	(FLL42)	F1W	CARBIDE	90°	0,8	45	6	2		75,82
FLLF5	(FLL52)	F5	HSSCo	90°	0,9	45	6	2		24,48
FLLF5W	(FLL42)	F5W	CARBIDE	90°	0,9	45	6	2		75,82
FLLF95	-		HSSCo	95°	0,9	45	6	2		24,48
FLLF13	(FLL50)	F13	HSSCo	100°	0,8	45	6	2		24,48
FLLF13W	(FLL51)	F13W	CARBIDE	100°	0,8	45	6	2		70,94
FLLF105	-		HSSCo	105°	0,9	45	6	2		24,48



**CUTTERS FOR JMA KEY DUPLICATING MACHINES**

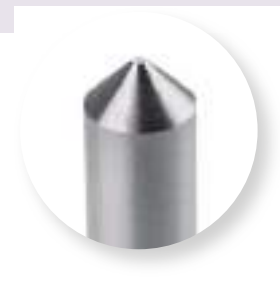
**TRACER POINTS**



Ref. FLLP1



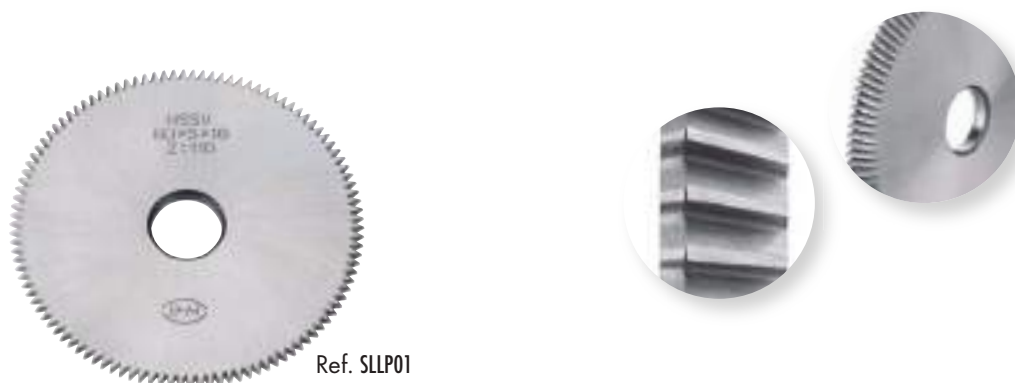
Ref. FLLP3



Ref. BM	Ref. JMA	MACHINE TYPES	MATERIAL	$\beta^\circ$	$\varnothing_1$ mm	$L_1$ mm	$\varnothing_2$ mm	$L_2$ mm	FLL	€
FLLP1	(PLL38)	P1	HSSV	90°	0,8	45	6	-		19,93
FLLP3	(PLL32)	P3	HSSV	-	1,5	45	6	4		35,25
FLLP5		P5	HSSV	90°	0,9	45	6	-		19,93
FLLP8	(PLL35)	P8	HSSV	-	4	45	6	7		35,25
FLLP11	(PLL33)	P11	HSSV	-	2,5	45	6	4		35,25
FLLP13	(PLL50)	P13	HSSV	100°	0,8	45	6	-		19,93
FLLP17	(PLL34)	P17	HSSV	-	3	45	6	6		35,25
FLLP52	(PLL52)	-	HSSV	90°	0,9	45	6	-		19,93
FLLP77	(PLL36)	-	HSSV	-	5	45	6	7		35,25
FLLP78	(PLL37)	-	HSSV	-	6	45	6	8		35,25

**KEY LINE CUTTERS**

Ref. BM	Ref. JMA	MACHINE TYPES	MATERIAL	$\beta^\circ$	$\varnothing_1$ mm	$L_1$ mm	$\varnothing_2$ mm	$L_2$ mm	€
V001	-	KEY LINE	CARBIDE	90°	0,4	32	4	-	139,40
V003	-		CARBIDE	-	2,5	32	4	5	139,40
V004	-		CARBIDE	82°	0,5	32	4	-	139,40
V007	-		CARBIDE	100°	0,4	32	4	-	139,40
V012	-		CARBIDE	-	1,5	32	4	4	171,40

**CUTTERS FOR SILCA KEY DUPLICATING MACHINES**
**DOUBLE ANGLE CUTTERS**


Ref. SLLP01

Ref. BM	Ref. SILCA	MACHINE TYPES	MATERIAL	mm		mm	$\beta^{\circ}$	Z	mm	SLL	€
SLL01F	O1F	FUTURA PRO	CARBIDE	60,4	9,52	3,05	40	110	0		153,96
SLLU01	U01	UNOCODE/ULTRACODE	HSSV	60,4	9,52	5,25	80	72	0,5		123,67
SLLU01W	U01W	UNOCODE/ULTRACODE	CARBIDE	60,4	9,52	5,25	80	72	0,5		395,12
SLLP21	P21	SILCA DELTA	HSSV	60,4	9,52	5,25	84	72	0,5		111,55
SLLP01	P01	BRAVO / POKER / REKORD / BRAVO SUPER / SUPER MASTER	HSSV	80	16	5	84	110	1		99,52
SLLP01/120	P01/120		HSSV	80	16	5	84	120	1		101,41
SLLP01W	P01W		CARBIDE	80	16	5	84	110	1		326,05

**SIDE MILLING CUTTER**


Ref. SLLSG2




Ref. BM	Ref. SILCA	MACHINE TYPES	MATERIAL	mm		mm	Z	SLL	€
SLLY2KW	Y2KW	DELTA	CARBIDE	63	16	1,35	80		298,78
SLLSG19	SG19	DELTA	HSSV	64,6	9,52	1,5	40		84,43
SLLSG19W	SG19W	DELTA	CARBIDE	64,6	9,52	1,5	40		284,38
SLLSG18	SG18	DELTA	HSSV	64,6	9,52	2,4	40		84,43
SLLSG18W	SG18W	DELTA	CARBIDE	64,6	9,52	2,4	40		284,38
SLLSG6	SG6	LANCER	HSSV	80	22	1,3	100		86,77
SLLSG6W	SG6W	LANCER	CARBIDE	80	22	1,3	100		298,78
SLLSG2	SG2	TARGA/TECH3/TECHNICA	HSSV	80	22	1,5	100		86,77
SLLSG2W	SG2W	TARGA/TECH3/TECHNICA	CARBIDE	80	22	1,5	100		298,78
SLLFSL4-CAW	FSCL4-CAW	DELTA	CARBIDE	80	22	1,8	100		310,59

**CUTTERS FOR SILCA KEY DUPLICATING MACHINES**

**MILLING SLOT CUTTERS**

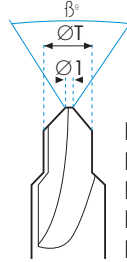
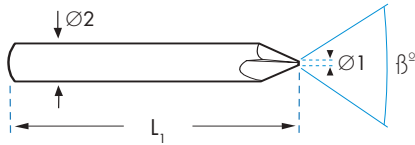
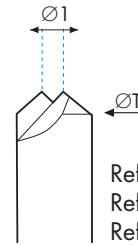



Ref. SLLSG7W

Ref. BM	Ref. SILCA	MACHINE TYPES	MATERIAL	mm			Z	SLL	€
									
SLLSG14W	SG14W	DELTA	CARBIDE	60,4	9,52	1,14	80	238,93	
SLLGB1	GB1	ULTRACODE / UNOCODE	HSSV	60,4	9,52	1,7	66	87,65	
SLL05	05	UNOCODE/ULTRACODE	HSSV	60,4	9,52	1,8	68	87,65	
SLL05W	05W	UNOCODE/ULTRACODE	CARBIDE	60,4	9,52	1,8	68	250,75	
SLLCU-15C	CU-15C	OPERA /TARGA	CARBIDE	63	16	1,5	80	326,61	
SLLSG17	SG17	DELTA	HSSV	64,6	9,52	1,8	70	87,65	
SLLSG17W	SG17W	DELTA	CARBIDE	64,6	9,52	1,8	70	275,42	
SLLSG13	SG13	UNOCODE / DELTA	HSSV	64,6	9,52	2	70	87,65	
SLLSG13W	SG13W	UNOCODE / DELTA	CARBIDE	64,6	9,52	2	70	326,61	
SLL06	06	UNOCODE/ULTRACODE	HSSV	64,6	9,52	2,4	70	87,65	
SLL06W	06W	UNOCODE/ULTRACODE	CARBIDE	64,6	9,52	2,4	70	266,31	
SLLSG3	SG3	OPERA /TARGA/TECH3	HSSV	80	22	1	100	83,38	
SLLSG3W	SG3W	OPERA /TARGA/TECH3	CARBIDE	80	22	1	100	275,42	
SLLSG4	SG4	OPERA /TARGA/TECH3	HSSV	80	22	1,25	100	83,38	
SLLSG4W	SG4W	OPERA /TARGA/TECH3	CARBIDE	80	22	1,25	100	275,42	
SLLSG5	SG5	LANCER	HSSV	80	22	1,3	100	83,38	
SLLSG5W	SG5W	LANCER	CARBIDE	80	22	1,3	100	275,42	
SLLSG7	SG7	OPERA / TARGA	HSSV	80	22	1,4	100	83,38	
SLLSG7M35	SG7M35	OPERA / TARGA	HSSCo	80	22	1,4	100	106,75	
SLLSG7W	SG7W	LANCER	CARBIDE	80	22	1,4	100	275,42	
SLLSG1	SG1	OPERA /TARGA/TECH3	HSSV	80	22	1,5	100	83,38	
SLLSG1W	SG1W	OPERA /TARGA/TECH3	CARBIDE	80	22	1,5	100	275,42	
SLLSG8	SG8	TECH3 / TECHNICA	HSSV	80	22	1,75	100	83,38	
SLLSG10	SG10	LANCER	HSSV	80	22	2	100	83,38	
SLLSG10W	SG10W	LANCER/ OPERA /TARGA	CARBIDE	80	22	2	100	287,10	
SLLSG11	SG11	SILCA GT40	HSSV	80	22	2,3	100	83,38	
SLLSG12	SG12	TARGA/TECH3/TECHNICA/OPERA	HSSV	80	22	2,5	100	83,38	
SLLSG58400	SG58400	DELTA	CARBIDE	80	22	4	100	263,73	
SLLPL1	PL1	PRIMA LASER	HSSV	100	22	1	100	143,87	
SLLPL1W	PL1W	PRIMA LASER	CARBIDE	100	22	1	100	369,14	
SLLPL1,25	PL1,25	PRIMA LASER	HSSV	100	22	1,25	100	143,87	
SLLPL1,25W	PL1,25W	PRIMA LASER	CARBIDE	100	22	1,25	100	352,02	
SLLPL1,5	PL1,5	PRIMA LASER	HSSV	100	22	1,5	100	143,87	
SLLPL1,5W	PL1,5W	PRIMA LASER	CARBIDE	100	22	1,5	100	352,02	
SLLPL1,7W	PL1,7W	PRIMA LASER	CARBIDE	100	22	1,7	100	362,81	
SLLPL2	PL2.0	PRIMA LASER	HSSV	100	22	2	100	143,87	
SLLPL2W	PL2.0W	PRIMA LASER	CARBIDE	100	22	2	100	362,81	

**CUTTERS FOR SILCA KEY DUPLICATING MACHINES**
**DIMPLE CUTTERS**
**MATRIX**


Ref. SLLFIW


 Ref. SLLF19-CAZ1  
 Ref. SLLF19  
 Ref. SLLF43  
 Ref. SLLF21  
 Ref. SLLF25

 Ref. SLLF12B  
 Ref. SLLF15  
 Ref. SLLF37

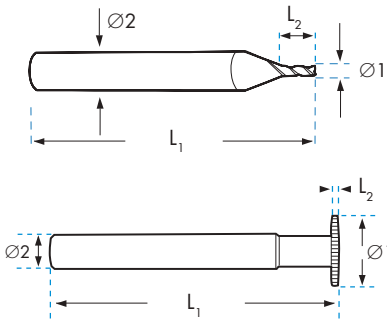

Ref. BM	Ref. SILCA	UNIV.	MACHINE TYPES	MATERIAL		Ø1 mm	L1 mm	Ø2 mm	Z	SLL
										€
SLLF1Z1	F1	FLLF1	MATRIX	HSSV	90°	0,7	48	6	1	55,77
SLLF1	F1	FLLF1	MATRIX	HSSV	90°	0,7	48	6	2	55,77
SLLF1W	F1W	FLLF1W	MATRIX	CARBIDE	90°	0,7	48	6	1	99,70
SLLF4	F4	FLLF1	MATRIX	HSSV	90°	0,4	48	6	1	55,77
SLLF5	F5	FLLF5	MATRIX	HSSV	90°	0,9	48	6	1	55,77
SLLF6	F6	FLLF105	MATRIX	HSSV	106°	1	48	6	1	55,77
SLLF7	F7	FLLF82	MATRIX	HSSV	72°	0,8	48	6	2	55,79
SLLF12A	F12A	FLLF13	MATRIX	HSSV	100°	0,4	48	6	1	55,77
SLLF12B	F12B	FLLF1	MATRIX	HSSV	90°	8 x 1,8*	48	6	2	55,77
SLLF13	F13	FLLF1	MATRIX	HSSV	90°	0,77	48	6	1	55,77
SLLF14	F14	FLLF5	MATRIX	HSSV	90°	0,9	48	6	1	55,77
SLLF15	F15	FLLF1	MATRIX	HSSV	90°	8 x 0,8*	48	6	1	63,91
SLLF19	F19	FLLF1	MATRIX	HSSCo	90°	2,2 x 0,6*	48	6	1	55,79
SLLF19-CAZ1	F19-CA	FLLF1W	MATRIX	CARBIDE	90°	2,2 x 0,6*	48	6	1	99,70
SLLF20	F20	FLLF1	MATRIX	HSSV	90°	0,45	48	6	2	55,77
SLLF21	F21	FLLF82	MATRIX	HSSCo	85°	3,2 x 0,8*	48	6	1	63,91
SLLF23	F23	FLLF1	MATRIX	HSSV	90°	1,5	48	6	2	63,91
SLLF24	F24	FLLF13	MATRIX	HSSV	100°	1,3	48	6	1	55,77
SLLF25	F25	FLLF1	MATRIX	HSSV	90°	3,5 x 0,65*	48	6	1	55,77
SLLF26	F26	FLLF82	MATRIX	HSSV	82°	0,8	48	6	1	55,77
SLLF27-CA	F27-CA	-	MATRIX	CARBIDE	60°	2,4 x 1,9*	48	6	1	133,19
SLLF28	F28	-	MATRIX	HSSV	76°	0,76	48	6	1	55,77
SLLF29	F29	-	MATRIX	HSSV	76°	1,9 x 0,76*	48	6	1	55,77
SLLF34	F34	-	MATRIX	HSSV	50°	1,5	48	6	1	55,77
SLLF34-CAZ1	F34-CA	-	MATRIX	CARBIDE	50°	1,5	48	6	1	99,70
SLLF37	F37	FLLF1	MATRIX	HSSV	90°	6 x 2,1*	48	6	2	63,91
SLLF39	F39	FLLF1	MATRIX	HSSV	90°	0,6	48	6	2	67,74
SLLF42	F42	FLLF13	MATRIX	HSSV	100°	0,7	48	6	1	55,77
SLLF43	F43	FLLF1	MATRIX	HSSCo	90°	1	48	6	1	55,77
SLLF45	F45	-	MATRIX	HSSV	130°	0,56	48	6	1	55,79
SLLF46	F46	FLLF13	MATRIX	HSSV	100°	0,65	48	6	1	55,79
SLLF49	F49	FLLF95	MATRIX	HSSV	95°	0,8	48	6	1	63,91
SLLF50	F50	FLLF13	MATRIX	HSSV	100°	0,5	48	6	1	63,91
SLLF52-CA	F52-CA	-	MATRIX	CARBIDE	54°	0,86	48	6	2	55,77
SLLF59	F59	FLLF1	MATRIX	HSSV	90°	0,8	48	6	2	55,77
SLL01D	01D	-	FUTURA PRO	CARBIDE	90°	0,4	30	6	2	62,62
SLL02D	02D	-	FUTURA PRO	CARBIDE	100°	0,4	30	6	2	62,62

\* Ø1 x Ø1

**CUTTERS FOR SILCA KEY DUPLICATING MACHINES**

**LASER CUTTERS**

**MATRIX**



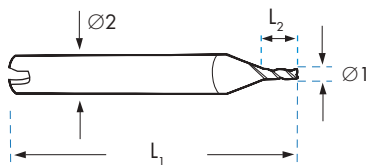
Ref. SLLF3



Ref. BM	Ref. SILCA	MACHINE TYPES	MATERIAL	Ø1 mm	L1 mm	Ø2 mm	L2 mm	Z	€	SLL
SLLF3	F3	MATRIX	HSSV	1,5	48	6	2	3	55,77	
SLLF8	F8	MATRIX	HSSV	4	48	6	13	3	55,77	
SLLF11	F11	MATRIX	HSSV	2,5	48	6	7	3	55,77	
SLLF22	F22	MATRIX	HSSV	2,5	42	6	6	3	55,77	
SLLF30	F30	MATRIX	HSSV	3	48	6	6	3	55,77	
SLLF30Z2	F30	MATRIX	HSSV	3	48	6	6	2	65,55	
SLLF44	F44	MATRIX	HSSV	2	40	6	6	3	55,77	
SLLF62W*	F62W	MATRIX	CARBIDE	11,8	48	6	1	20	178,05	
SLL01L	O1L	FUTURA PRO	CARBIDE	2,5	30	6	3	3	62,62	
SLL02L	O2L	FUTURA PRO	CARBIDE	2	30	6	3	3	62,62	

**LASER CUTTERS**

**QUATTROCODE / TRIAX-E**



Ref. SLLW133

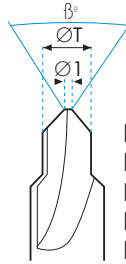
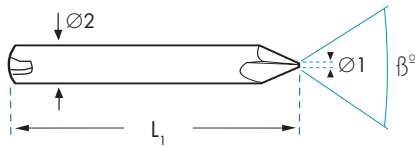
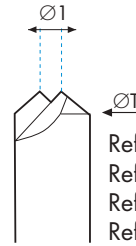
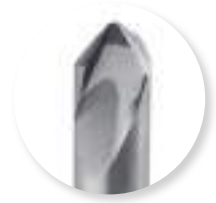


Ref. BM	Ref. SILCA	MACHINE TYPES	MATERIAL	Ø1 mm	L1 mm	Ø2 mm	L2 mm	Z	€	SLL
SLLW101	W101	QUATTROCODE / TRIAX-E	CARBIDE	2,5	40	6	6	3	127,22	
SLLW114	W114	QUATTROCODE / TRIAX-E	CARBIDE	2	40	6	6	3	127,24	
SLLW117	W117	QUATTROCODE / TRIAX-E	CARBIDE	5	48	6	R1	4	103,26	
SLLW129	W129	QUATTROCODE / TRIAX-E	CARBIDE	3	40	6	6	3	127,22	
SLLW131	W131	QUATTROCODE / TRIAX-E	CARBIDE	6	40	6	5	3	93,91	
SLLW133	W133	QUATTROCODE / TRIAX-E	CARBIDE	1,5	40	6	3	3	138,94	
SLLW134	W134	QUATTROCODE / TRIAX-E	CARBIDE	4	40	6	7	3	127,24	
SLLW219	W219	QUATTROCODE / TRIAX-E	CARBIDE	1,2	40	6	2	3	127,22	
SLLW235	W235	QUATTROCODE / TRIAX-E	CARBIDE	1,1	40	6	2	3	127,19	
SLLW268	W268	QUATTROCODE / TRIAX-E	CARBIDE	1,5	40	6	6	2	127,31	



**CUTTERS FOR SILCA KEY DUPLICATING MACHINES**
**DIMPLE CUTTERS**
**QUATTROCODE /TRIAX-E**


Ref. SLLW103


 Ref. SLLW115  
 Ref. SLLW128  
 Ref. SLLW135  
 Ref. SLLW145  
 Ref. SLLW210

 Ref. SLLW111  
 Ref. SLLW126  
 Ref. SLLW127  
 Ref. SLLW139


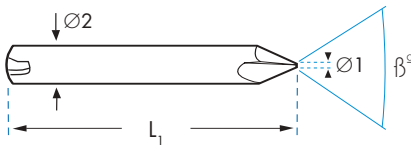
Ref. BM	Ref. SILCA	MACHINE TYPES	MATERIAL	$\beta^\circ$	$\varnothing_1$ mm	$L_1$ mm	$\varnothing_2$ mm	Z	€
SLLW102	W102	QUATTROCODE /TRIAX-E	CARBIDE	106°	1	40	6	2	89,29
SLLW103	W103/W299	QUATTROCODE /TRIAX-E	CARBIDE	90°	0,8	40	6	2	89,29
SLLW104	W104	QUATTROCODE /TRIAX-E	CARBIDE	90°	1,2	40	6	2	89,29
SLLW105	W105	QUATTROCODE /TRIAX-E	CARBIDE	90°	0,7	40	6	2	89,29
SLLW106	W106	QUATTROCODE /TRIAX-E	CARBIDE	90°	0,6	40	6	2	89,29
SLLW107	W107	QUATTROCODE /TRIAX-E	CARBIDE	90°	0,9	40	6	2	89,29
SLLW108	W108	QUATTROCODE /TRIAX-E	CARBIDE	82°	0,9	40	6	2	89,29
SLLW109	W109	QUATTROCODE /TRIAX-E	CARBIDE	110°	0,4	40	6	2	89,29
SLLW110	W110	QUATTROCODE /TRIAX-E	CARBIDE	100°	0,6	40	6	2	89,29
SLLW111	W111	QUATTROCODE /TRIAX-E	CARBIDE	96°	8x2,75*	40	6	2	100,31
SLLW112	W112	QUATTROCODE /TRIAX-E	CARBIDE	60°/0°	1,5	40	6	2	89,87
SLLW113	W113	QUATTROCODE /TRIAX-E	CARBIDE	100°	0,76	40	6	2	89,29
SLLW115	W115	QUATTROCODE /TRIAX-E	CARBIDE	54°	4x0,86*	40	6	1	119,70
SLLW116	W116	QUATTROCODE /TRIAX-E	CARBIDE	90°	1	40	6	2	89,29
SLLW118	W118	QUATTROCODE /TRIAX-E	CARBIDE	120°	0,6	40	6	2	89,29
SLLW119	W119	QUATTROCODE /TRIAX-E	CARBIDE	85°	0,3	40	6	2	89,29
SLLW121	W121	QUATTROCODE /TRIAX-E	CARBIDE	86°	0,05	48	6	3	124,24
SLLW122	W122	QUATTROCODE /TRIAX-E	CARBIDE	90°	0,55	40	6	2	107,15
SLLW123	W123	QUATTROCODE /TRIAX-E	CARBIDE	76°	0,9	40	6	2	89,29
SLLW124	W124	QUATTROCODE /TRIAX-E	CARBIDE	90°	8x0,8*	48	6	3	171,16
SLLW126	W126	QUATTROCODE /TRIAX-E	CARBIDE	80°	3,3	48	6	2	107,15
SLLW127	W127	QUATTROCODE /TRIAX-E	CARBIDE	80°	2,1	48	6	2	107,15
SLLW128	W128	QUATTROCODE /TRIAX-E	CARBIDE	90°	4x0,55*	48	6	1	119,70
SLLW130	W130	QUATTROCODE /TRIAX-E	CARBIDE	90°	1,4	40	6	2	120,20
SLLW132	W132	QUATTROCODE /TRIAX-E	CARBIDE	60°	2	40	6	1	119,70
SLLW135	W135	QUATTROCODE /TRIAX-E	CARBIDE	90°	4x0,55*	40	6	2	119,63
SLLW136	W136	QUATTROCODE /TRIAX-E	CARBIDE	76°	2,23	40	6	1	119,70
SLLW138	W138	QUATTROCODE /TRIAX-E	CARBIDE	90°	4x0,7*	48	6	2	89,29
SLLW139	W139	QUATTROCODE /TRIAX-E	CARBIDE	60°/50°	0,9	40	6	2	133,19
SLLW142	W142	QUATTROCODE /TRIAX-E	CARBIDE	100°	1,2	40	6	2	89,29
SLLW145	W145	QUATTROCODE /TRIAX-E	CARBIDE	90°	3,2x0,8*	48	6	2	119,63
SLLW210	W210	QUATTROCODE /TRIAX-E	CARBIDE	90°	5x1,05*	40	6	3	179,16
SLLW213	W213	QUATTROCODE /TRIAX-E	CARBIDE	90°	0,95*	40	6	2	134,82
SLLW221	W221	QUATTROCODE /TRIAX-E	CARBIDE	90°	0,5	40	6	2	120,20
SLLW225	W225	QUATTROCODE /TRIAX-E	CARBIDE	90°	1	40	6	2	120,20
SLLW238	W238	QUATTROCODE /TRIAX-E	CARBIDE	90°	0,8	40	6	2	89,29
SLLW261	W261	QUATTROCODE /TRIAX-E	CARBIDE	1,1	3x1,5*	48	6	2	134,82
SLLW255	W255	QUATTROCODE /TRIAX-E	CARBIDE	90°	4x0,8*	48	6	2	120,20
SLLW293	W293	QUATTROCODE /TRIAX-E	CARBIDE	90°	0,85	40	6	2	120,20
SLLW299	W299	QUATTROCODE /TRIAX-E	CARBIDE	90°	3x0,80	40	6	2	89,93

 \*  $\varnothing_1 \times \varnothing_1$

**CUTTERS FOR SILCA KEY DUPLICATING MACHINES**

**DIMPLE CUTTERS**

**QUATTROCODE / TRIAX-E**



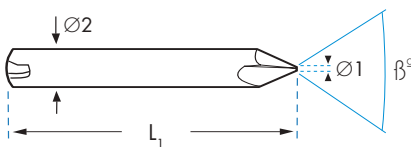
Ref. SLLW103Z1



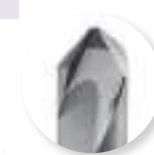
Ref. BM	Ref. SILCA	MACHINE TYPES	MATERIAL	$\beta^\circ$	$\varnothing_1$ mm	L1 mm	$\varnothing_2$ mm	Z	€
SLLW102Z1	W102 Z1	QUATTROCODE / TRIAX-E	CARBIDE	106°	1	40	6	2	89,87
SLLW103Z1	W103 Z1	QUATTROCODE / TRIAX-E	CARBIDE	90°	0,8	40	6	2	89,87
SLLW104Z1	W104 Z1	QUATTROCODE / TRIAX-E	CARBIDE	90°	1,2	40	6	2	89,87
SLLW105Z1	W105 Z1	QUATTROCODE / TRIAX-E	CARBIDE	90°	0,7	40	6	2	89,87
SLLW106Z1	W106 Z1	QUATTROCODE / TRIAX-E	CARBIDE	90°	0,6	40	6	2	89,87
SLLW107Z1	W107 Z1	QUATTROCODE / TRIAX-E	CARBIDE	90°	0,9	40	6	2	89,87
SLLW108Z1	W108 Z1	QUATTROCODE / TRIAX-E	CARBIDE	82°	0,9	40	6	2	89,87
SLLW109Z1	W109 Z1	QUATTROCODE / TRIAX-E	CARBIDE	110°	0,4	40	6	2	89,87
SLLW113Z1	W113 Z1	QUATTROCODE / TRIAX-E	CARBIDE	100°	0,76	40	6	2	89,87
SLLW116Z1	W116 Z1	QUATTROCODE / TRIAX-E	CARBIDE	90°	1	40	6	2	89,87
SLLW118Z1	W118 Z1	QUATTROCODE / TRIAX-E	CARBIDE	120°	0,6	40	6	2	89,87
SLLW119Z1	W119 Z1	QUATTROCODE / TRIAX-E	CARBIDE	85°	0,3	40	6	2	89,87
SLLW122Z1	W122 Z1	QUATTROCODE / TRIAX-E	CARBIDE	90°	0,55	40	6	2	89,87
SLLW123Z1	W123 Z1	QUATTROCODE / TRIAX-E	CARBIDE	76°	0,9	40	6	2	89,87
SLLW146Z1	W146 Z1	QUATTROCODE / TRIAX-E	CARBIDE	90°	0,25	40	6	1	89,87

SLL

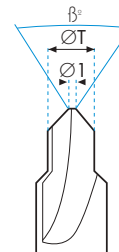
**DIMPLE CUTTERS**



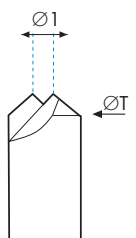
Ref. SLLH103



Ref. SLLH115



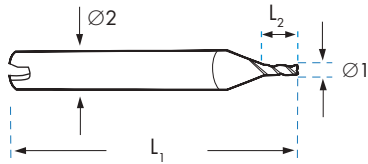
Ref. SLLH111  
Ref. SLLH126  
Ref. SLLH127



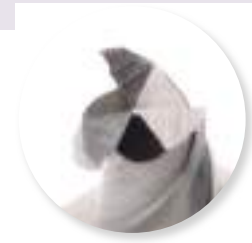
Ref. BM	Ref. SILCA	UNIV.	MACHINE TYPES	MATERIAL	$\beta^\circ$	$\varnothing_1$ mm	L1 mm	$\varnothing_2$ mm	Z	€
SLLH103	H103	FLLF1	QUATTROCODE / TRIAX-E	HSSV	90°	0,8	40	6	2	65,88
SLLH104	H104	FLLF1	QUATTROCODE / TRIAX-E	HSSV	90°	1,2	40	6	2	58,85
SLLH105	H105	FLLF1	QUATTROCODE / TRIAX-E	HSSV	90°	0,7	40	6	2	58,85
SLLH106	H106	FLLF1	QUATTROCODE / TRIAX-E	HSSV	90°	0,6	40	6	2	55,77
SLLH107	H107	FLLF1	QUATTROCODE / TRIAX-E	HSSV	90°	0,9	40	6	2	55,77
SLLH108	H108	FLLF82	QUATTROCODE / TRIAX-E	HSSV	82°	0,9	40	6	2	55,77
SLLH110	H110	FLLF13	QUATTROCODE / TRIAX-E	HSSV	100°	0,6	40	6	2	55,77
SLLH111	H111	FLLF95	QUATTROCODE / TRIAX-E	HSSV	96°	6,4x2,75*	40	6	2	55,77
SLLH112	H112	-	QUATTROCODE / TRIAX-E	HSSV	60°	1,5	40	6	2	55,77
SLLH113	H113	FLLF13	QUATTROCODE / TRIAX-E	HSSV	100°	0,76	40	6	2	55,77
SLLH115	H115	-	QUATTROCODE / TRIAX-E	HSSV	54°	4x0,86*	40	6	1	55,77
SLLH116	H116	FLLF1	QUATTROCODE / TRIAX-E	HSSV	90°	1	40	6	2	73,62
SLLH118	H118	-	QUATTROCODE / TRIAX-E	HSSV	120°	0,6	40	6	1	55,77
SLLH119	H119	FLLF82	QUATTROCODE / TRIAX-E	HSSV	85°	0,3	40	6	2	55,77
SLLH122	H122	FLLF1	QUATTROCODE / TRIAX-E	HSSV	90°	0,55	40	6	2	55,77
SLLH126	H126	FLLF85	QUATTROCODE / TRIAX-E	HSSV	80°	3,3*	48	6	2	83,24
SLLH127	H127	FLLF85	QUATTROCODE / TRIAX-E	HSSV	80°	2,1*	48	6	2	83,24
SLLH128	H128	FLLF1	QUATTROCODE / TRIAX-E	HSSV	90°	0,75	48	6	2	55,77

SLL

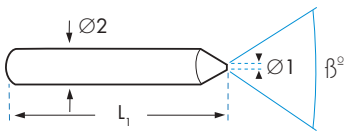
\*  $\varnothing_1 \times \varnothing_1$

**CUTTERS FOR SILCA KEY DUPLICATING MACHINES**
**LASER CUTTERS**


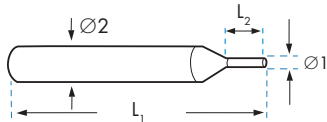
Ref. SLLH101



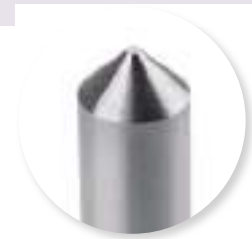
Ref. BM	Ref. SILCA	MACHINE TYPES	MATERIAL	Ø <sub>1</sub> mm	L <sub>1</sub> mm	Ø <sub>2</sub> mm	L <sub>2</sub> mm	Z	€	SLL
SLLH101	H101	QUATTROCODE / TRIAX-E	HSSV	2,5	40	6	6	3	65,51	
SLLH114	H114	QUATTROCODE / TRIAX-E	HSSV	2	40	6	6	3	55,77	
SLLH117	H117	QUATTROCODE / TRIAX-E	HSSV	5	48	6	R1	4	67,66	
SLLH129	H129	QUATTROCODE / TRIAX-E	HSSV	3	40	6	6	3	55,77	
SLLH131	H131	QUATTROCODE / TRIAX-E	HSSV	6	40	6	5	3	73,62	

**TRACER POINTS**


Ref. SLLT1



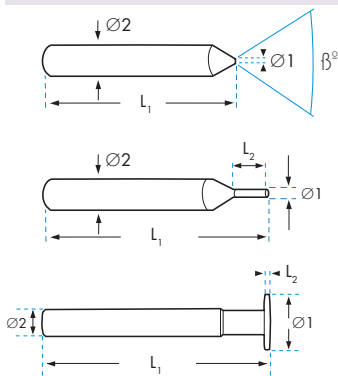
Ref. SLLT3



Ref. BM	Ref. SILCA	MACHINE TYPES	Ref. CUTTER	MATERIAL	β°	Ø <sub>1</sub> mm	L <sub>1</sub> mm	Ø <sub>2</sub> mm	L <sub>2</sub> mm	Ø <sub>T</sub> mm	€	SLL
SLLT1	T1	MATRIX	F1	HSSV	90°	0,7	48	6	-	-	38,94	
SLLT2	T2	MATRIX	F2	HSSV	88°	1,6	48	6	-	-	43,86	
SLLT3	T3	MATRIX	F3	HSSV	-	1,5	48	6	3	-	43,86	
SLLT4	T4	MATRIX	F4	HSSV	90°	0,4	48	6	-	-	43,86	
SLLT5	T5	MATRIX	F5	HSSV	90°	0,9	48	6	-	-	43,86	
SLLT6	T6	MATRIX	F6	HSSV	106°	1	48	6	15	-	43,86	
SLLT7	T7	MATRIX	F7	HSSV	72°	0,8	48	6	2	-	43,86	
SLLT8	T8	MATRIX	F8	HSSV	-	4	48	6	12	-	43,86	
SLLT11	T11	MATRIX	F11	HSSV	-	2,5	48	6	6	-	43,86	
SLLT12A	T12A	MATRIX	F12A	HSSV	100°	0,4	48	6	-	-	43,86	
SLLT12B	T12B	MATRIX	F12B	HSSV	90°	2,8	48	6	-	-	43,86	
SLLT13	T13	MATRIX	F13	HSSV	90°	0,77	48	6	-	-	43,86	
SLLT14	T14	MATRIX	F14	HSSV	90°	0,9	48	6	-	-	43,86	
SLLT15	T15	MATRIX	F15	HSSV	90°	0,8	48	6	-	-	43,86	
SLLT19	T19	MATRIX	F19	HSSV	90°	2,2 x 0,6*	48	6	-	-	43,86	
SLLT20	T20	MATRIX	F20	HSSV	90°	0,45	48	6	-	-	43,86	
SLLT21	T21	MATRIX	F21	HSSV	85°	3,2 x 0,8*	48	6	-	-	43,86	
SLLT22	T22	MATRIX	F22	HSSV	-	2,5	42	6	6	-	43,86	
SLLT23	T23	MATRIX	F23	HSSV	90°	1,5	48	6	5	-	43,86	

**CUTTERS FOR SILCA KEY DUPLICATING MACHINES**

**TRACER POINTS**



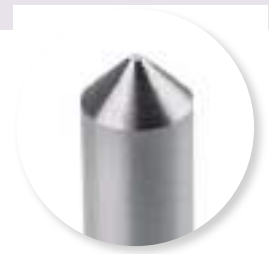
\*Ref. SLLT62W



Ref. SLLT1



Ref. SLLT3



End mills

Pink

Ref. BM	Ref. SILCA	MACHINE TYPES	Ref. CUTTER	MATERIAL	$\beta^\circ$	$\varnothing_1$ mm	L1 mm	$\varnothing_2$ mm	L2 mm	$\varnothing_T$ mm	€
SLLT24	T24	MATRIX	F24	HSSV	100°	1,3	48	6	-	-	43,86
SLLT25	T25	MATRIX	F25	HSSV	90°	3,5 x 0,65*	48	6	-	-	43,86
SLLT26	T26	MATRIX	F26	HSSV	82°	0,8	48	6	-	-	43,86
SLLT27	T27	MATRIX	F27	HSSV	60°	1,28	48	6	-	-	49,51
SLLT28	T28	MATRIX	F28	HSSV	76°	0,76	48	6	-	-	43,86
SLLT29	T29	MATRIX	F29	HSSV	76°	1,9	48	6	-	-	43,86
SLLT30	T30	MATRIX	F30	HSSV	-	3	48	6	10	-	43,86
SLLT30-45	T30-45	MATRIX		HSSV	-	3	45	6	10	-	43,86
SLLT33	T33	MATRIX	F33	HSSV	48°	1,4	48	6	-	-	65,39
SLLT34	T34	MATRIX	F34	HSSV	50°	1,5	48	6	-	-	43,86
SLLT37	T37	MATRIX	F37	HSSV	90°	2,1	48	6	-	-	43,86
SLLT39	T39	MATRIX	F39	HSSV	90°	0,6	48	6	-	-	43,86
SLLT40	T40	MATRIX	F40	HSSV	108°	0,4	48	6	-	-	43,86
SLLT42	T42	MATRIX	F42	HSSV	100°	0,7	48	6	-	-	43,86
SLLT43	T43	MATRIX	F43	HSSV	90°	1	48	6	-	-	43,86
SLLT44	T44	MATRIX	F44	HSSV	-	2	48	6	8	-	43,86
SLLT44-45	T44-45	MATRIX		HSSV	-	2	45	6	8	-	43,86
SLLT46	T46	MATRIX	F46	HSSV	100°	0,65	48	6	-	-	43,86
SLLT49	T49	MATRIX	F49	HSSV	95°	0,8	48	6	-	-	43,86
SLLT50	T50	MATRIX	F50	HSSV	100°	0,5	48	6	-	-	43,86
SLLT52	T52	MATRIX	F52	HSSV	54°	0,86	48	6	6	2	43,86
SLLT54	T54	MATRIX	F54	HSSV	-	4	40	6	6,5	-	55,77
SLLT55	T55	MATRIX	F55	HSSV	100°	1	48	6	4	-	43,86
SLLT59	T59	MATRIX	F59	HSSV	90°	0,8	48	6	-	-	43,86
SLLT62W*	T62W	MATRIX	F62W	CARBIDE	-	11,8	48	6	1	-	87,57
SLLT63	T63	MATRIX	F63	HSSV	78°	0,5	48	6	4	3	43,86
SLLT65	T65	MATRIX	F65	HSSV	90°	1,05	48	6	5	3	43,86
SLLT101	T101	MATRIX		HSSV	-	2,5	40	6	6	-	43,86
SLLT129	T129	MATRIX		HSSV	-	3	40	6	10	-	43,86
SLLU101	U101	QUATTROCODE		CARBIDE	-	1,2	48	6	3	-	55,77
SLLU101/H	U101/H	QUATTROCODE /TRIAX-E		CARBIDE	-	1,2	48	6	3	-	37,89
SLLU102/65	U102/65	QUATTROCODE /TRIAX-E		CARBIDE	30°	0,2	48	6	9	2,6	59,57
SLLU102TT	U102TT	QUATTROCODE /TRIAX-E		CARBIDE	30°	0,2	26	4	6	2	59,57
SLLU103	U103	QUATTROCODE /TRIAX-E		CARBIDE	-	1	48	6	3	-	55,77
SLLU103/H	U103/H	QUATTROCODE /TRIAX-E		CARBIDE	-	1	48	6	3	-	37,89
SLLU103-TT	U103-TT	QUATTROCODE /TRIAX-E		CARBIDE	-	1	21	4	3	-	55,77
SLLU103-TT/H	U103-TT/H	QUATTROCODE /TRIAX-E		CARBIDE	-	1	21	4	3	-	37,89
SLLU111	U111	SILCA VIPER		CARBIDE	-	1	40	6	2,2	-	55,77
SLLU111/H	U111/H	SILCA VIPER		CARBIDE	-	1	40	6	2,2	-	37,89
SLLB3304	B3304	KEYLINE BIANCHI 994 LASER		CARBIDE	-	1	33	6	6	-	55,79
SLLB3310	B3310	KEYLINE BIANCHI 994 LASER		CARBIDE	-	1	30	6	2,6	-	55,79
SLLB3310M2	B3310	KEYLINE BIANCHI 994 LASER		HSSV	-	1	30	6	2,6	-	41,33

SLL

**CUTTERS FOR FLORA, NOVACLAU, WALKIN KEY DUPLICATING MACHINES**
**FURTHER GENERAL PURPOSE KEY CUTTERS**

**DOUBLE ANGLE CUTTERS**

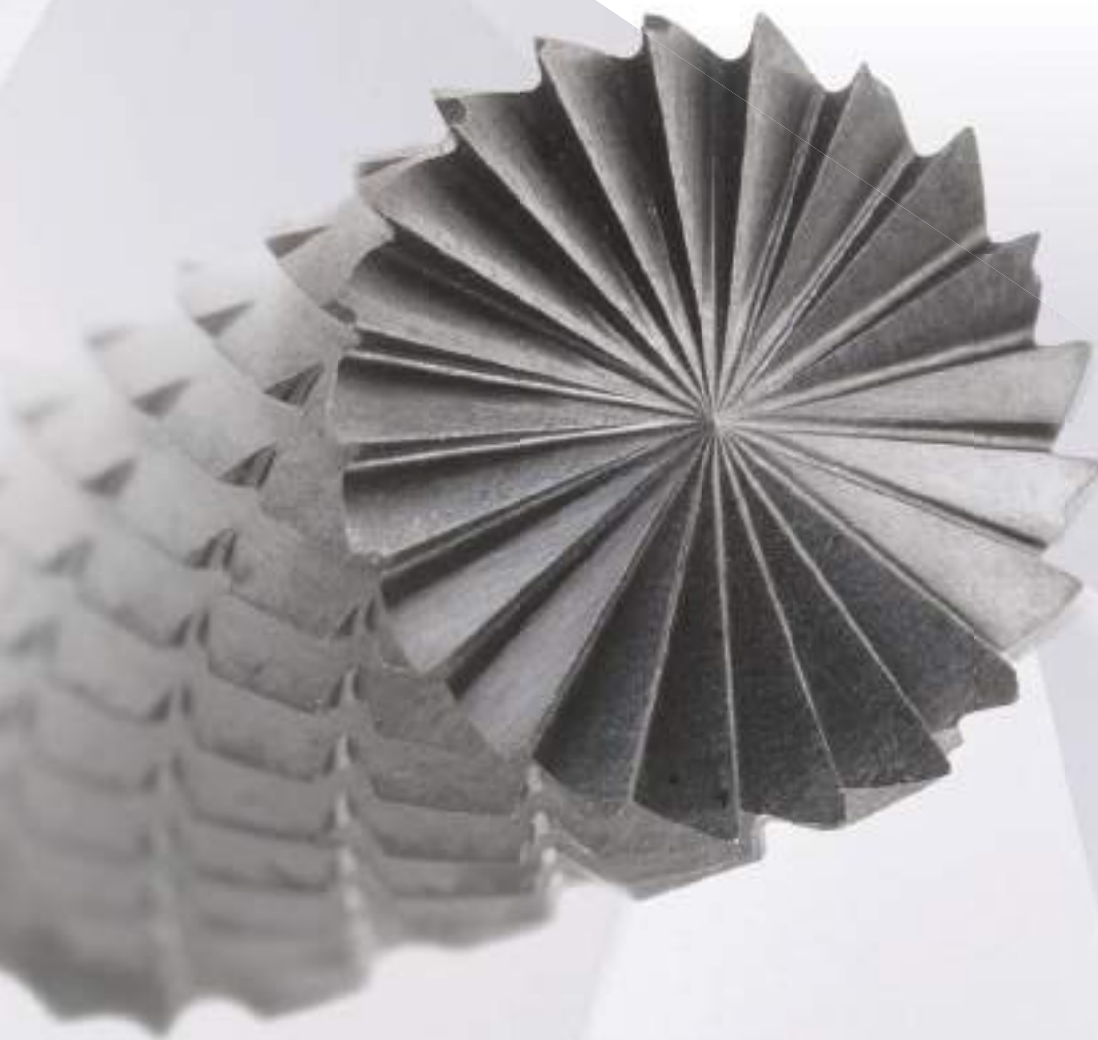
Ref. BM	MACHINE TYPES	MATERIAL	mm		mm	Z	FLL	
			mm	mm			€	€
FLL01	FLORA	HSSV	23	10	5	36	98,40	
FLL03	YALE	HSSV	40	8	5	80	106,76	
FLL05	NOVACLAU	HSSV	52	16	5	110	126,06	
FLL07	KIS	HSSV	53	12,7	6	80	140,26	
FLL08	KIS	HSSV	55	12	6	80	140,26	
FLL10	NOVACLAU	HSSV	61	12,7	6,5	140	142,81	
FLL11	NOVACLAU	HSSV	62	16	5	80	140,03	
FLL12	NOVACLAU	HSSV	63	16	5	140	140,03	
FLL14	WALKIN	HSSV	70	15	6,5	150	148,26	
FLL15	LINCE	HSSV	70	13	7	88	144,24	


**SIDE MILLING CUTTER**

Ref. BM	MACHINE TYPES	MATERIAL	mm		mm	Z	FLL	
			mm	mm			€	€
FLL17	JMA-NOVACLAU-WALKIN	HSSV	35	12	3,15	50	73,57	
FLL18	JMA-NOVACLAU-WALKIN	HSSV	63	15	1,40	80	89,97	
FLL20	JMA-NOVACLAU-WALKIN	HSSV	70	16	1,40	100	111,16	

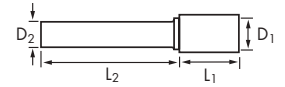


# ROTARY BURRS



**BLUE-MASTER<sup>®</sup>**  
*by CELESA*

CUTTING TECHNOLOGIES



Rotary burs

Pink

**HSS ROTARY BURRS**



D1 mm	L1 mm	D2 mm	L2 mm	TG0 / 3	€	TG2 / 6	€
<b>6 mm. SHANK</b>							
6	20	6	40	Y501TG0	17,22	Y501TG2	17,22
8	30	6	40	Y508TG0	23,80	Y508TG2	23,80
10	30	6	40	Y510TG0	24,41	Y510TG2	24,41
12	30	6	40	Y505TG0	24,41	Y505TG2	24,41
15	30	6	40	Y504TG0	28,02	Y504TG2	28,02
10	15	6	40			Y503TG2	23,81
<b>LONG SERIES</b>							
6	20	6	100			Y501LTG2	22,39
8	30	6	100			Y508LTG2	30,99
10	30	6	100			Y510LTG2	31,91
12	30	6	100			Y505LTG2	31,91
15	30	6	100			Y504LTG2	36,78
10	15	6	100			Y503LTG2	30,99



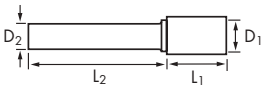
D1 mm	L1 mm	D2 mm	L2 mm	TG0 / 3	€	TG2 / 6	€
<b>6 mm. SHANK</b>							
6	20	6	40	Y502TG0	17,22	Y502TG2	17,22
8	20	6	40			Y507TG2	23,80
10	20	6	40	Y509TG0	23,80	Y509TG2	23,80
10	30	6	40	Y511TG0	24,41	Y511TG2	24,41
12	30	6	40	Y506TG0	24,41	Y506TG2	24,41
15	30	6	40			Y514TG2	28,02
<b>LONG SERIES</b>							
6	20	6	100			Y502LTG2	22,39
8	20	6	100			Y507LTG2	30,99
10	20	6	100			Y509LTG2	30,99
10	30	6	100			Y511LTG2	31,93
12	30	6	100			Y506LTG2	31,93
15	30	6	100			Y514LTG2	36,78



D1 mm	L1 mm	D2 mm	L2 mm	TG0 / 3	€	TG2 / 6	€
<b>6 mm. SHANK</b>							
4,5	4,5	6	40			Y551TG2	17,22
6,0	6,0	6	40			Y556TG2	17,22
8,0	8,0	6	40	Y552TG0	23,80	Y552TG2	23,80
10,0	10,0	6	40			Y554TG2	23,80
12,0	12,0	6	40			Y553TG2	23,80
15,0	15,0	6	40	Y557TG0	28,02	Y557TG2	28,02
<b>LONG SERIES</b>							
4,5	4,5	6	100			Y551LTG2	22,39
6,0	6,0	6	100			Y556LTG2	22,39
8,0	8,0	6	100			Y552LTG2	30,99
10,0	10,0	6	100			Y554LTG2	30,99
12,0	12,0	6	100			Y553LTG2	30,99
15,0	15,0	6	100			Y557LTG2	36,78



D1 mm	L1 mm	D2 mm	L2 mm	TG0 / 3	€	TG2 / 6	€
<b>6 mm. SHANK</b>							
6	20	6	40			Y521TG2	17,22
10	30	6	40			Y524TG2	24,41
12	20	6	40	Y525TG0	23,81	Y525TG2	23,81
12	30	6	40			Y526TG2	24,41
15	30	6	40			Y527TG2	28,02
12	30	6	40			Y515TG2	24,41
<b>LONG SERIES</b>							
6	20	6	100			Y521LTG2	22,39
10	30	6	100			Y524LTG2	31,93
12	20	6	100			Y525LTG2	30,99
12	30	6	100			Y526LTG2	31,93
15	30	6	100			Y527LTG2	36,78
12	30	6	100			Y515LTG2	31,91



**HSS ROTARY BURRS**

**TYPE E** **HSS**



D1 mm	L1 mm	D2 mm	L2 mm	TG0 / 3		TG2 / 6	
					€		€
<b>6 mm. SHANK</b>							
12	20	6	40			Y545TG2	23,81
15	30	6	40			Y547TG2	28,02
<b>LONG SERIES</b>							
12	20	6	100			Y545LTG2	30,99
15	30	6	100			Y547LTG2	36,78

**TYPE L** **HSS**



D1 mm	L1 mm	D2 mm	L2 mm	TG0 / 3		TG2 / 6	
					€		€
<b>6 mm. SHANK</b>							
10	15	6	40			Y533TG2	23,81
15	35	6	40	Y537TG0	28,02	Y537TG2	28,02
<b>LONG SERIES</b>							
10	15	6	100			Y533LTG2	30,99
15	35	6	100	Y537LTG0	36,78	Y537LTG2	36,78

**TYPE M** **HSS**

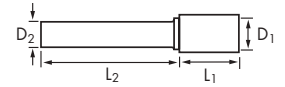


D1 mm	L1 mm	D2 mm	L2 mm	TG0 / 3		TG2 / 6	
					€		€
<b>6 mm. SHANK</b>							
6	20	6	40	Y532TG0	17,22	Y532TG2	17,22
10	20	6	40	Y534TG0	23,81	Y534TG2	23,81
12	30	6	40	Y536TG0	24,41	Y536TG2	24,41
12	12	6	40			Y512TG2	23,81
<b>LONG SERIES</b>							
6	20	6	100			Y532LTG2	22,39
10	20	6	100			Y534LTG2	30,99
12	30	6	100			Y536LTG2	31,91
12	12	6	100			Y512LTG2	30,99

**TYPE N** **HSS**



D1 mm	L1 mm	D2 mm	L2 mm	TG0 / 3		TG2 / 6	
					€		€
<b>6 mm. SHANK</b>							
12	15	6	40			Y513TG2	23,81
12	30	6	40			Y516TG2	24,41
<b>LONG SERIES</b>							
12	15	6	100			Y513LTG2	30,99
12	30	6	100			Y516LTG2	31,91



**Ø 3 & 6 SHANK HSS ENGRAVING ROTARY BURRS**



TYPE	D1 mm	L1 mm	D2 mm	L2 mm	TGO / 3	
						€
<b>3 mm. SHANK</b>						
A/E	7	9	3	30	Y055	18,17
D	7	7	3	30	Y062	18,17
E	7	9	3	30	Y059	18,17
N	7	9	3	30	Y056	18,17
L	7	9	3	30	Y057	18,17
M	7	9	3	30	Y058	18,17

TYPE	D1 mm	L1 mm	D2 mm	L2 mm	TGO / 3	
						€
<b>6 mm. SHANK</b>						
A/E	6	8	6	40	Y255	18,17
D	6	6	6	40	Y272	18,17
E	6	8	6	40	Y259	18,17
N	6	8	6	40	Y256	18,17
M	6	8	6	40	Y258	18,17
J	6	3	6	40	Y264	18,17
SHAPE	6	2	6	40	Y265	18,17

**HSS ROTARY BURRS DISPLAYS**



REFERENCE	E70SRTG2				
QUANTITY / QUALITY	70		HSS		
CONTENT	Y504 (x5)	Y537 (x5)	Y526 (x5)	Y505 (x5)	Y506 (x5)
Quantity	Y510 (x5)	Y536 (x5)	Y553 (x5)	Y525 (x5)	Y534 (x5)
	Y552 (x5)	Y502 (x5)	Y532 (x5)	Y501 (x5)	
PRICE €	1.625,03				

REFERENCE	E33SRTG2				
QUANTITY / QUALITY	33		HSS		
CONTENT	Y502 - Y501 - Y541 - Y532 - Y521 - Y571 - Y561 - Y551 - Y556				
Quantity	Y507 - Y512 - Y533 - Y534 - Y552 - Y554 - Y553 - Y557 - Y509				
	Y513 - Y525 - Y545 - Y524 - Y515 - Y536 - Y526 - Y537 - Y547				
	Y527 - Y504 - Y566 - Y516 - Y505 - Y506				
PRICE €	752,30				

**CARBIDE ROTARY BURRS**



**Standard Cut Types**

**Special Cut Types**

- Recommended
- Highly Recommended



Material	6	2	3	1	4	5	8	9	10	6 TiAlN	3 INOX
Aluminium, Plastic			●						○		
Brass, Copper, Cast Iron, Bronze	●	●		○	○	●	○	○		●	
Steels	●	●			○	●	○	○		●	
Stainless Steel, Titanium	○	○			○	○	○	○		○	●

**RECOMMENDED OPERATING SPEEDS**

The speeds in the table below are quoted x 1.000 rpm

Ø mm	"	Aluminium, Plastic		Brass, Copper, Cast Iron, Bronze		Steels		Stainless Steel, Titanium	
		Speed Range	Recomm. Start Point	Speed Range	Recomm. Start Point	Speed Range	Recomm. Start Point	Speed Range	Recomm. Start Point
3	1/8"	60-80	65	45-80	65	60-80	80	60-80	80
6	1/4"	15-60	40	22-60	45	45-60	50	30-45	40
10	3/8"	10-50	25	15-40	30	30-40	30	19-30	25
12	1/2"	7-30	20	11-30	25	22-30	25	15-22	20
16	5/8"	6-20	15	9-20	20	18-20	20	12-18	15
20	3/4"	5-17	10	8-17	12	15-17	15	10-15	10
25	1"	4-13	8	6-13	10	10-13	10	7-11	8

Recommended speeds are based on standard shank length of 45 mm. and maximum overhang of 10 mm.  
Maximum recommended operating speeds for extended length shanks is 15.000 rpm.

**ROTARY BURRS FOR STAINLESS STEEL**

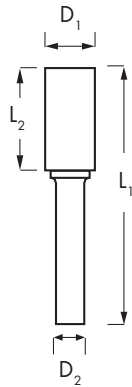
Our new cut called **"3 INOX"** is specifically designed for all types of stainless steels, specially those with a high % of nickel.

Advantages of the **"3 INOX"** cut :

- ▶ Reduction of time working as chip doesn't remain stucked on the burr.
- ▶ Less friction and heating of the burr and improved lifetime of the tool.
- ▶ Better finishing of the surface.





**CYLINDER WITHOUT END CUT**
**TYPE  
A**
**CARBIDE**

**TiAlN**


		Cuts - PRICE												
		D1	L2	D2	L1	Type	2	3	4	6	6+TiAlN	8	9	INOX
		mm	mm	mm	mm									
3 mm. SHANK	A30106	1.5	6.0	3	38	Solid Carbide	18,71			18,71	27,51			
	A30211	2.0	11.0	3	38	Solid Carbide	16,40			16,40	24,83	√	√	
	A30314	3.0	14.0	3	38	Solid Carbide	12,31	18,98	√	12,47	22,20	√	√	27,64
	A30512	5.0	12.7	3	38	Solid Carbide	32,20			32,20	50,13			
	A30605	6.3	4.7	3	37	Welded	21,89		√	21,89	33,97	√	√	
	A30612	6.3	12.7	3	45	Welded	21,90	38,00	√	22,55	39,67	√	√	40,26
LONG SERIES	A30314-50	3.0	14.0	3	50	Solid Carbide	28,96	40,54	√	28,96	√	√	√	
	A30314-75	3.0	14.0	3	75	Solid Carbide	35,83	50,13	√	36,16	√	√	√	
	A30314-100	3.0	14.0	3	100	Solid Carbide	41,60	58,26	√	41,60	√	√	√	

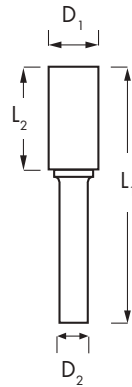
		Cuts - PRICE												
		D1	L2	D2	L1	Type	2	3	4	6	6+TiAlN	8	9	INOX
		mm	mm	mm	mm									
6 mm. SHANK	A60312	3.0	14.0	6	50	Solid Carbide	32,96			32,96	48,71			
	A60414	4.0	14.0	6	50	Solid Carbide	30,21			30,21	45,86			
	A60516	5.0	16.0	6	50	Solid Carbide	25,02			25,97	42,90			
	A60618	6.0	18.0	6	50	Solid Carbide	24,20	33,32	√	23,51	37,99	√	√	35,31
	A60625	6.0	25.0	6	50	Solid Carbide	33,78			33,78	55,78			
	A60820	8.0	19.0	6	64	Welded	29,64	37,39	√	29,92	47,15	√	√	39,63
	A61014	9.6	13.5	6	59	Welded	35,08			35,08	48,79			
	A61020	9.6	19.0	6	64	Welded	33,50	37,96	√	33,82	54,71	√	√	40,23
	A61025	9.6	25.0	6	70	Welded	38,80			38,80	57,23			
	A61125	11.0	25.0	6	70	Welded	45,69		√	45,69	68,60	√	√	
	A61220	12.7	19.0	6	64	Welded	52,47		√	50,51	77,35	√	√	
	A61225	12.7	25.0	6	70	Welded	47,02	56,48	√	47,93	74,73	√	√	59,86
	A61525	16.0	25.0	6	70	Welded	59,18	78,33	√	60,32	91,99	√	√	
A62025	19.0	25.0	6	70	Welded	104,34	117,73	√	104,34	139,94	√	√		
A62525	25.0	25.0	6	70	Welded	152,01	195,00	√	152,01	195,70	√	√		
LONG SERIES	A60618-100	6.0	18.0	6	100	Solid Carbide	70,53	98,75		70,53	√	√	√	
	A60618-150	6.0	18.0	6	150	Solid Carbide	90,84	127,16		90,84	√	√	√	
	A60820-170	8.0	19.0	6	172	Welded	39,89	58,65		39,89	√	√	√	
	A61020-170	9.6	19.0	6	172	Welded	45,60	63,12		43,89	√	√	√	
	A61225-175	12.7	25.0	6	178	Welded	71,18	98,75		71,18	√	√	√	

		Cuts - PRICE												
		D1	L2	D2	L1	Type	2	3	4	6	6+TiAlN	8	9	INOX
		mm	mm	mm	mm									
8 mm. SHANK	A81225	12.7	25.0	8	70	Welded	48,86	59,25	√	48,86	74,73	√	√	
	A81525	16.0	25.0	8	70	Welded	61,47	78,33	√	61,47	91,99	√	√	
	A82025	19.0	25.0	8	70	Welded	104,34	117,73	√	104,34	139,94	√	√	
	A82525	25.0	25.0	8	70	Welded	152,01	195,00	√	152,01	195,70	√	√	

CYLINDER WITH END CUT

TYPE  
A/E

CARBIDE



TiAlN



Rotary burrs

Pink

Cuts - PRICE

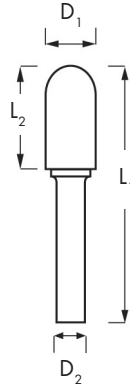
	D1 mm	L2 mm	D2 mm	L1 mm	Type	Cuts - PRICE							
						2	3	4	6	6+TiAlN	8	9	
3 mm. SHANK	A30106E	1.5	6.0	3	38	Solid Carbide	18,89			18,89	27,77		
	A30211E	2.0	11.0	3	38	Solid Carbide	16,55			16,55	25,06	√	√
	A30314E	3.0	14.0	3	38	Solid Carbide	13,04	19,45		13,42	22,40		
	A30512E	5.0	12.7	3	38	Solid Carbide	33,91			33,91	50,60		
	A30605E	6.3	4.7	3	37	Welded	22,10		√	22,10	34,29	√	√
	A30612E	6.3	12.7	3	45	Welded	24,13	38,32	√	24,13	40,01	√	√
LONG SERIES	A30314-50E	3.0	14.0	3	50	Solid Carbide	31,87		√	31,87	√	√	√
	A30314-75E	3.0	14.0	3	75	Solid Carbide	39,39		√	39,39	√	√	√
	A30314-100E	3.0	14.0	3	100	Solid Carbide	45,75		√	45,75	√	√	√

Cuts - PRICE

	D1 mm	L2 mm	D2 mm	L1 mm	Type	Cuts - PRICE							
						2	3	4	6	6+TiAlN	8	9	
6 mm. SHANK	A60312E	3.0	14.0	6	50	Solid Carbide	33,27			33,27	49,17		
	A60414E	4.0	14.0	6	50	Solid Carbide	30,49			30,49	46,29		
	A60516E	5.0	16.0	6	50	Solid Carbide	26,48			27,25	43,30		
	A60618E	6.0	18.0	6	50	Solid Carbide	24,66	37,00	√	24,20	38,35	√	√
	A60625E	6.0	25.0	6	50	Solid Carbide	35,21			35,21	56,30		
	A60820E	8.0	19.0	6	64	Welded	31,37	41,56	√	31,97	47,59	√	√
	A61014E	9.6	13.5	6	59	Welded	35,45			35,45	49,25		
	A61020E	9.6	19.0	6	64	Welded	35,45	43,83	√	36,13	55,22	√	√
	A61025E	9.6	25.0	6	70	Welded	41,93			41,93	57,77		
	A61125E	11.0	25.0	6	70	Welded	46,12		√	46,12	69,25	√	√
	A61220E	12.7	19.0	6	64	Welded	53,98		√	53,98	78,08	√	√
	A61225E	12.7	25.0	6	70	Welded	49,77	63,39	√	50,72	75,44	√	√
	A61525E	16.0	25.0	6	70	Welded	63,83	88,70	√	61,43	92,85	√	√
	A62025E	19.0	25.0	6	70	Welded	105,32	130,73	√	105,32	141,26	√	√
A62525E	25.0	25.0	6	70	Welded	169,99	226,19	√	169,99	197,71	√	√	
LONG SERIES	A60618-100E	6.0	18.0	6	100	Solid Carbide	77,58			77,58	√	√	√
	A60618-150E	6.0	18.0	6	150	Solid Carbide	99,91			99,91	√	√	√
	A60820-170E	8.0	19.2	6	170	Welded	43,87			43,87	√	√	√
	A61020-170E	9.6	19.2	6	170	Welded	50,16			50,16	√	√	√
	A61225-175E	12.7	25.4	6	175	Welded	78,30			78,30	√	√	√

Cuts - PRICE

	D1 mm	L2 mm	D2 mm	L1 mm	Type	Cuts - PRICE							
						2	3	4	6	6+TiAlN	8	9	
8 mm. SHANK	A81225E	12.7	25.0	8	70	Welded	50,72	65,84	√	50,72	75,44	√	√
	A81525E	16.0	25.0	8	70	Welded	63,83	88,70	√	63,83	92,85	√	√
	A82025E	19.0	25.0	8	70	Welded	105,32	130,73	√	105,32	141,26	√	√
	A82525E	25.0	25.0	8	70	Welded	169,99	226,19	√	169,99	197,71	√	√

**BALL NOSED CYLINDER**
**TYPE**  
**C**
**CARBIDE**

**TiAlN**


	D1 mm	L2 mm	D2 mm	L1 mm	Type	Cuts - PRICE								
						2	3	4	6	6+TiAlN	8	9	INOX	
3 mm. SHANK	C30211	2.0	11.0	3	38	Solid Carbide	14,29		√	14,29	22,64	√	√	
	C30212	2.5	11.0	3	38	Solid Carbide	14,29			14,29	22,64			
	C30312	3.0	14.0	3	38	Solid Carbide	14,41	23,85	√	13,88	22,64	√	√	25,28
	C30512	5.0	12.7	3	38	Solid Carbide	31,60			31,60	51,12			
	C30612	6.3	12.7	3	45	Welded	24,13	36,32	√	24,13	39,67	√	√	38,49
LONG SERIES	C30312-50	3.0	14.0	3	50	Solid Carbide	32,47	45,48	√	32,47	√	√	√	
	C30312-75	3.0	14.0	3	75	Solid Carbide	40,09	56,14	√	40,09	√	√	√	
	C30312-100	3.0	14.0	3	100	Solid Carbide	45,69	63,94	√	45,69	√	√	√	

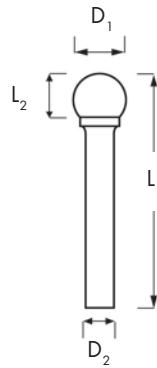
	D1 mm	L2 mm	D2 mm	L1 mm	Type	Cuts - PRICE								
						2	3	4	6	6+TiAlN	8	9	INOX	
6 mm. SHANK	C60312	3.0	14.0	6	50	Solid Carbide	32,97			32,97	47,76			
	C60413	4.0	14.0	6	50	Solid Carbide	32,99			32,99	49,21			
	C60516	5.0	16.0	6	50	Solid Carbide	27,91			27,91	48,00			
	C60618	6.0	18.0	6	50	Solid Carbide	28,73	38,81	√	28,68	42,82	√	√	41,13
	C60625	6.0	25.0	6	50	Solid Carbide	39,49			39,49	56,29			
	C60820	8.0	19.0	6	64	Welded	31,39	40,73	√	31,99	48,08	√	√	43,15
	C61020	9.6	19.0	6	64	Welded	37,60	43,10	√	37,24	58,38	√	√	45,69
	C61025	9.6	25.0	6	70	Welded	42,15			42,15	62,23			
	C61125	11.0	25.0	6	70	Welded	50,18		√	50,18	73,22	√	√	
	C61210	12.0	10.0	6	54	Welded	54,37			54,37	74,22			
	C61220	12.7	19.0	6	64	Welded	55,80		√	53,71	79,72	√	√	
	C61225	12.7	25.0	6	70	Welded	53,23	67,79	√	53,23	80,87	√	√	71,84
	C61525	16.0	25.0	6	70	Welded	66,93	88,61	√	68,22	99,69	√	√	
C62025	19.0	25.0	6	70	Welded	112,51	127,23	√	112,51	148,35	√	√		
C62525	25.0	25.0	6	70	Welded	145,69	197,43		145,69	226,77				
LONG SERIES	C60618-100	6.0	18.0	6	100	Solid Carbide	80,69	112,95		80,69	√	√	√	
	C60618-150	6.0	18.0	6	150	Solid Carbide	104,02	145,63		104,02	√	√	√	
	C60820-170	8.0	19.2	6	175	Welded	43,62	63,94		43,62	√	√	√	
	C61020-170	9.6	19.2	6	170	Welded	51,75	70,34		50,78	√	√	√	
	C61225-175	12.7	25.4	6	175	Welded	82,17	110,53		78,33	√	√	√	

	D1 mm	L2 mm	D2 mm	L1 mm	Type	Cuts - PRICE								
						2	3	4	6	6+TiAlN	8	9	INOX	
8 mm. SHANK	C81225	12.7	25.0	8	70	Welded	55,29	70,41	√	55,29	80,87	√	√	
	C81525	16.0	25.0	8	70	Welded	69,51	88,61	√	68,22	99,69	√	√	
	C82025	19.0	25.0	8	70	Welded	112,51	127,23	√	112,51	148,35	√	√	
	C82525	25.0	25.0	8	70	Welded	152,01	197,43		145,69	226,77			

BALL

TYPE  
D

CARBIDE



TiAlN

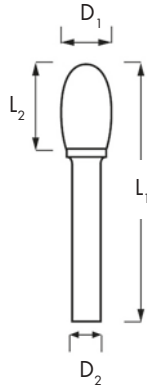


		Cuts - PRICE												
		D1 mm	L2 mm	D2 mm	L1 mm	Type	2	3	4	6	6+TiAlN	8	9	INOX
3 mm. SHANK	D30202	2.0	1.8	3	38	Solid Carbide	16,40		√	16,40	24,83	√	√	
	D30302	2.5	2.3	3	38	Solid Carbide	15,36			15,36	23,06			
	D30303	3.0	2.5	3	38	Solid Carbide	13,70	22,58	√	13,71	23,71	√	√	23,92
	D30404	4.0	3.4	3	38	Solid Carbide	32,40	38,81	√	32,40	43,88	√	√	
	D30505	5.0	4.7	3	38	Solid Carbide	36,00			36,00	55,42			
	D30606	6.3	5.0	3	38	Welded	20,67	33,04	√	20,67	35,65	√	√	35,01
LONG SERIES	D30303-50	3.0	2.7	3	50	Solid Carbide	30,28	42,40	√	30,28	√	√	√	
	D30303-75	3.0	2.7	3	75	Solid Carbide	37,20	52,07	√	37,20	√	√	√	

		Cuts - PRICE												
		D1 mm	L2 mm	D2 mm	L1 mm	Type	2	3	4	6	6+TiAlN	8	9	INOX
6 mm. SHANK	D60303	3.0	2.5	6	50	Solid Carbide	36,17			36,17				
	D60404	4.0	3.0	6	50	Solid Carbide	31,60			31,60				
	D60505	5.0	4.0	6	50	Solid Carbide	27,49			27,49				
	D60606	6.0	4.7	6	50	Solid Carbide	23,56	35,65	√	24,23	38,27	√	√	37,78
	D60808	8.0	6.0	6	52	Welded	26,30	32,86	√	26,30	41,72	√	√	34,83
	D61010	9.6	8.0	6	54	Welded	29,43	35,67	√	28,60	48,29	√	√	37,80
	D61111	11.0	9.5	6	55	Welded	38,91		√	38,91	61,65	√	√	
	D61212	12.7	11.0	6	56	Welded	39,23	49,53	√	39,61	64,66	√	√	52,48
	D61515	16.0	14.0	6	59	Welded	49,09	61,44	√	49,09	77,72	√	√	
	D62020	19.0	16.5	6	62	Welded	67,80	84,87	√	67,80	101,09	√	√	
D62525	25.0	22.0	6	67	Welded	128,18	168,21	√	128,18	171,20	√	√		
LONG SERIES	D60808-180	8.0	7.0	6	180	Welded	35,16	51,56		35,16	√	√	√	
	D61010-185	9.6	8.5	6	185	Welded	41,76	57,64		41,76	√	√	√	
	D61212-162	12.7	11.4	6	162	Welded	60,66	80,03		58,39	√	√	√	

		Cuts - PRICE												
		D1 mm	L2 mm	D2 mm	L1 mm	Type	2	3	4	6	6+TiAlN	8	9	INOX
8 mm. SHANK	D81212	12.7	11.0	8	56	Welded	39,64	49,61	√	39,64	62,88	√	√	
	D81515	16.0	14.0	8	59	Welded	49,09	61,45	√	49,09	77,72	√	√	
	D82020	19.0	16.5	8	62	Welded	67,80	84,87	√	67,80	101,09	√	√	
	D82525	25.0	22.0	8	67	Welded	128,18	168,21	√	128,18	171,20	√	√	

## OVAL

**TYPE  
E**
**CARBIDE**

**TiAlN**


		Cuts - PRICE											
		2	3	4	6	6+TiAlN	8	9	INOX				
		D1 mm	L2 mm	D2 mm	L1 mm	Type							
3 mm. SHANK	E30306	3.0	6.0	3	38	Solid Carbide	14,74	24,26	√	14,74	24,83	√	√
	E30508	5.0	8.0	3	38	Solid Carbide	31,17			31,17	47,28		
	E30610	6.3	9.5	3	42	Welded	21,05	32,72	√	21,48	35,64	√	√
LONG SERIES	E30306-50	3.0	6.0	3	50	Solid Carbide	37,66						
	E30306-75	3.0	6.0	3	75	Solid Carbide	43,20						

		Cuts - PRICE											
		2	3	4	6	6+TiAlN	8	9	INOX				
		D1 mm	L2 mm	D2 mm	L1 mm	Type							
6 mm. SHANK	E60610	6.0	10.0	6	50	Solid Carbide	26,43	39,24	√	27,73	44,14	√	√
	E60815	8.0	15.0	6	60	Welded	30,00	43,17	√	30,89	48,17	√	√
	E61015	9.6	16.0	6	60	Welded	34,10	41,09	√	35,10	52,69	√	√
	E61220	12.7	22.0	6	67	Welded	49,99	65,61	√	49,99	76,44	√	√
	E61525	16.0	25.0	6	70	Welded	69,45	91,12	√	69,45	102,25	√	√
	E62025	19.0	25.0	6	70	Welded	95,99	122,44	√	95,99	132,66	√	√
LONG SERIES	E61015-165	9.6	16.0	6	165	Welded	59,81						
	E61220-170	12.7	22.0	6	170	Welded	77,81						

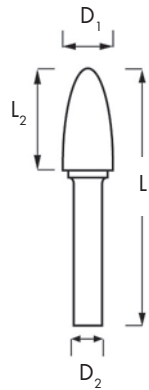
		Cuts - PRICE											
		2	3	4	6	6+TiAlN	8	9	INOX				
		D1 mm	L2 mm	D2 mm	L1 mm	Type							
8 mm. SHANK	E81220	12.7	22.0	8	67	Welded	52,44	65,61	√	51,48	76,44	√	√
	E81525	16.0	25.0	8	70	Welded	72,85	91,12	√	72,85	102,25	√	√
	E82025	19.0	25.0	8	70	Welded	95,99	122,44	√	95,99	132,66	√	√



BALL NOSED TREE

TYPE  
F

CARBIDE



TiAlN



		Cuts - PRICE												
		D1 mm	L2 mm	D2 mm	L1 mm	Type	2	3	4	6	6+TiAlN	8	9	INOX
3 mm. SHANK	F30306	3.0	6.0	3	38	Solid Carbide	26,56			26,56	37,21			
	F30308	3.0	8.0	3	38	Solid Carbide	17,86		√	17,86	26,33	√	√	
	F30312	3.0	14.0	3	38	Solid Carbide	18,20	25,47	√	17,35	26,33	√	√	27,01
	F30512	5.0	12.7	3	38	Solid Carbide	32,30			32,30	46,85			
	F30612	6.3	12.7	3	45	Welded	23,91	34,74	√	23,91	39,67	√	√	36,83
LONG SERIES	F30312-50	3.0	14.0	3	50	Solid Carbide	33,49	46,86	√	33,49		√	√	
	F30312-75	3.0	14.0	3	75	Solid Carbide	40,03			40,03				

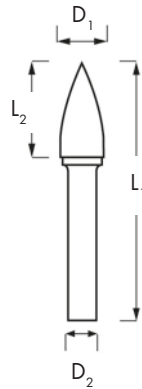
		Cuts - PRICE												
		D1 mm	L2 mm	D2 mm	L1 mm	Type	2	3	4	6	6+TiAlN	8	9	INOX
6 mm. SHANK	F60618	6.0	18.0	6	50	Solid Carbide	27,79	40,52	√	26,50	41,62	√	√	42,95
	F60820	8.0	20.0	6	65	Welded	32,08	40,91	√	32,08	48,17	√	√	43,34
	F61020	9.6	19.0	6	64	Welded	40,36	43,36	√	39,58	60,09	√	√	45,96
	F61125	11.0	25.0	6	70	Welded	50,85		√	50,85	73,92	√	√	
	F61220	12.7	19.0	6	64	Welded	51,03		√	51,03	75,75	√	√	
	F61225	12.7	25.0	6	70	Welded	51,31	64,21	√	52,30	77,75	√	√	68,05
	F61525	16.0	25.0	6	70	Welded	71,53	91,17	√	68,85	100,38	√	√	
	F61530	16.0	30.0	6	75	Welded	78,73			82,58	117,08			
	F62025	19.0	25.0	6	70	Welded	92,38	117,73	√	92,38	127,65	√	√	
	F62032	19.0	32.0	6	77	Welded	128,25	149,44	√	128,25	171,24	√	√	
F62038	19.0	38.0	6	83	Welded	162,73	197,10	√	162,73	206,74	√	√		
LONG SERIES	F60618-150	6.0	18.0	6	150	Solid Carbide	77,61	110,64		77,61	√	√	√	
	F61020-170	9.6	19.2	6	170	Welded	49,92	68,82		49,92	√	√	√	
	F61225-175	12.7	25.4	6	175	Welded	78,92	103,60		75,23				

		Cuts - PRICE												
		D1 mm	L2 mm	D2 mm	L1 mm	Type	2	3	4	6	6+TiAlN	8	9	INOX
8 mm. SHANK	F81225	12.7	25.0	8	70	Welded	51,82	64,89	√	51,82	76,31	√	√	
	F81525	16.0	25.0	8	70	Welded	71,53	89,49	√	71,53	100,38	√	√	
	F82025	19.0	25.0	8	70	Welded	92,38	117,73	√	92,38	127,65	√	√	
	F82032	19.0	32.0	8	77	Welded	128,25	149,44	√	128,25	171,24	√	√	
	F82038	19.0	38.0	8	83	Welded	162,73	197,10	√	162,73	206,74	√	√	

## POINTED TREE

TYPE  
G

CARBIDE



TiAlN



		Cuts - PRICE												
		D1 mm	L2 mm	D2 mm	L1 mm	Type	2	3	4	6	6+TiAlN	8	9	INOX
3 mm. SHANK	G30306	3.0	6.0	3	38	Solid Carbide	16,40		√	16,40	24,83	√	√	
	G30310	3.0	10.0	3	38	Solid Carbide	16,79			16,79	25,66			
	G30312	3.0	14.0	3	38	Solid Carbide	17,35	25,25	√	17,01	26,33	√	√	
	G30512	5.0	12.7	3	38	Solid Carbide	32,20			32,20	47,28			
	G30612	6.3	12.7	3	45	Welded	24,36	34,28	√	24,36	39,67	√	√	
LONG SERIES	G30312-50	3.0	14.0	3	50	Solid Carbide	29,93	41,93	√	29,93	√	√	√	
	G30312-75	3.0	14.0	3	75	Solid Carbide	37,57	52,58	√	37,57	√	√	√	

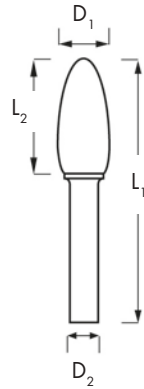
		Cuts - PRICE												
		D1 mm	L2 mm	D2 mm	L1 mm	Type	2	3	4	6	6+TiAlN	8	9	INOX
6 mm. SHANK	G60618	6.0	18.0	6	50	Solid Carbide	25,78	45,29	√	26,53	41,64	√	√	48,00
	G60820	8.0	19.0	6	64	Welded	29,76	48,72	√	30,36	49,22	√	√	51,62
	G61020	9.6	19.0	6	64	Welded	35,11	58,65	√	35,81	58,75	√	√	62,15
	G61220	12.7	19.0	6	64	Welded	49,86		√	48,46	74,15	√	√	
	G61225	12.7	25.0	6	70	Welded	45,96	65,92	√	46,42	76,57	√	√	69,86
	G61230	12.7	30.0	6	75	Welded	82,57		√	82,57	113,10	√	√	
	G61525	16.0	25.0	6	70	Welded	70,08	102,06	√	70,00	104,05	√	√	
	G61530	16.0	30.0	6	75	Welded	97,83		√	97,83	144,53	√	√	
	G62025	19.2	25.0	6	70	Welded	108,79		√	108,79	144,53	√	√	
	G62038	19.2	38.0	6	83	Welded	152,76		√	152,76	196,49	√	√	
LONG SERIES	G61020-170	9.6	19.2	6	170	Welded	52,90	73,48		52,90	√	√	√	
	G61225-175	12.7	25.4	6	175	Welded	75,09	99,85		71,59	√	√	√	

		Cuts - PRICE												
		D1 mm	L2 mm	D2 mm	L1 mm	Type	2	3	4	6	6+TiAlN	8	9	INOX
8 mm. SHANK	G81225	12.7	25.0	8	70	Welded	48,21		√	48,21	76,57	√	√	
	G81230	12.7	30.0	8	75	Welded	82,57		√	82,57	113,10	√	√	
	G81525	16.0	25.0	8	70	Welded	70,08		√	70,08	104,05	√	√	
	G81630	16.0	30.0	8	75	Welded	102,63		√	102,63	144,53	√	√	
	G82025	19.0	25.0	8	70	Welded	108,79		√	108,79	149,88	√	√	
	G82038	19.0	38.0	8	83	Welded	152,76		√	152,76	196,49	√	√	

FLAME

TYPE  
H

CARBIDE



TiAlN



	D1 mm	L2 mm	D2 mm	L1 mm	Type	Cuts - PRICE									
						2	3	4	6	6+TiAlN	8	9	INOX		
3 mm. SHANK	H30306	3.0	6.0	3	38	Solid Carbide	16,82		√	16,82	25,12	√	√		
	H30510	5.0	9.5	3	38	Solid Carbide	33,50			33,50	46,06				
	H30612	6.0	10.0	3	43	Welded	24,77			24,77	34,74				

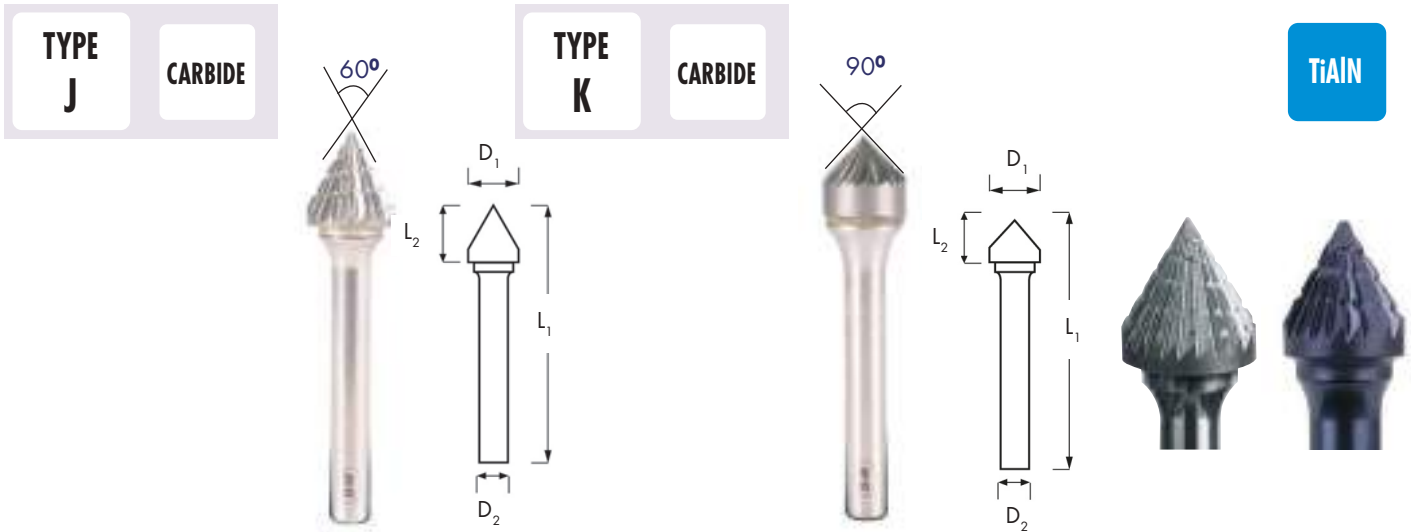
	D1 mm	L2 mm	D2 mm	L1 mm	Type	Cuts - PRICE									
						2	3	4	6	6+TiAlN	8	9	INOX		
6 mm. SHANK	H60614	6.0	14.0	6	50	Solid Carbide	29,57			29,57	44,33				
	H60820	8.0	19.0	6	64	Welded	32,43	48,82	√	32,74	52,26	√	√	51,75	
	H61020	10.0	19.0	6	65	Welded	64,94	75,07		64,94	90,57			79,56	
	H61232	12.7	32.0	6	77	Welded	67,48	99,07	√	66,18	98,55	√	√	104,99	
	H61535	16.0	36.0	6	81	Welded	101,55	134,22	√	96,79	141,16	√	√		
	H62042	19.0	41.0	6	86	Welded	144,85		√	144,85	188,34	√	√		

	D1 mm	L2 mm	D2 mm	L1 mm	Type	Cuts - PRICE								
						2	3	4	6	6+TiAlN	8	9	INOX	
8 mm. SHANK	H81232	12.7	32.0	8	77	Welded	70,80		√	70,80	98,55	√	√	
	H81535	16.0	36.0	8	81	Welded	101,55		√	101,55	141,16	√	√	
	H82042	19.0	41.0	8	86	Welded	144,85		√	144,85	188,34	√	√	

**60° / 90° COUNTERSINK**

Rotary burs

Pink



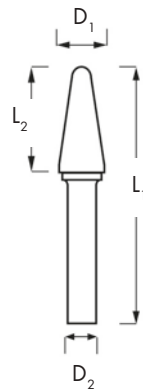
	TYPE J	D1 mm	L2 mm	D2 mm	L1 mm	Angle	Type	Cuts - PRICE					
								2	3	4	6	6+TiAlN	9
3 mm. SHANK	J30303	3.0	2.5	3	38	60°	Solid Carbide	13,75			13,75	22,48	√
6 mm. SHANK	J60606	6.0	4.0	6	50	60°	Solid Carbide	24,02			24,02	38,27	√
	J61008	9.6	8.0	6	56	60°	Welded	31,39			31,39	50,87	√
	J61210	12.7	11.0	6	59	60°	Welded	38,13			38,13	62,09	√
	J61512	16.0	14.5	6	63	60°	Welded	57,38			57,38	87,19	√
	J62018	19.0	17.5	6	65	60°	Welded	72,94			72,94	107,63	√
	J62520	25.0	24.5	6	70	60°	Welded	114,40			114,40	143,88	√
8 mm. SHANK	J81210	12.7	11.0	8	59	60°	Welded	38,13			38,13	62,09	√
	J81512	16.0	14.5	8	63	60°	Welded	57,38			57,38	87,19	√
	J82018	19.0	17.5	8	65	60°	Welded	72,94			72,94	107,63	√
	J82520	25.0	24.5	8	70	60°	Welded	114,40			114,40	143,88	√

	TYPE K	D1 mm	L2 mm	D2 mm	L1 mm	Angle	Type	Cuts - PRICE					
								2	3	4	6	6+TiAlN	9
3 mm. SHANK	K30303	3.0	1.5	3	38	90°	Solid Carbide	13,66			13,66	22,39	√
6 mm. SHANK	K60603	6.0	3.0	6	50	90°	Solid Carbide	24,02			24,02	38,27	√
	K61004	9.6	4.7	6	53	90°	Welded	31,09			29,64	50,87	√
	K61206	12.7	6.3	6	55	90°	Welded	38,13			38,13	62,09	√
	K61508	16.0	8.0	6	57	90°	Welded	54,12			51,60	87,19	√
	K62012	19.0	9.5	6	59	90°	Welded	74,81			74,81	109,58	√
	K62512	25.0	12.7	6	61	90°	Welded	114,40			114,40	143,95	√
8 mm. SHANK	K81206	12.7	6.3	8	55	90°	Welded	38,13			38,13	62,09	√
	K81508	16.0	8.0	8	57	90°	Welded	54,12			54,12	87,19	√
	K82012	19.0	9.5	8	59	90°	Welded	74,81			74,81	109,58	√
	K82512	25.0	12.7	8	61	90°	Welded	114,40			114,40	143,95	√

BALL NOSED CONE

**TYPE**  
**L**

**CARBIDE**



**TiAlN**



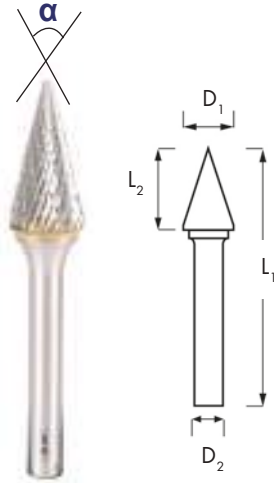
		Cuts - PRICE													
		D1	L2	D2	L1	Angle	Type	2	3	4	6	6+TiAlN	8	9	INOX
		mm	mm	mm	mm	°									
3 mm. SHANK	L30310	3.0	10.0	3	38	10°	Solid Carbide	16,72		√	16,72	24,83	√	√	
	L30312	3.0	14.0	3	38	8°	Solid Carbide	14,74	25,43	√	14,90	24,83	√	√	
	L30512	5.0	12.7	3	38	14°	Solid Carbide	36,84			36,84	54,97			
	L30612	6.3	15.8	3	48	22°	Welded	26,88	45,37	√	28,21	47,64	√	√	

		Cuts - PRICE													
		D1	L2	D2	L1	Angle	Type	2	3	4	6	6+TiAlN	8	9	INOX
		mm	mm	mm	mm	°									
6 mm. SHANK	L60618	6.0	18.0	6	50	14°	Solid Carbide	27,90	42,61	√	28,17	42,26	√	√	
	L60822	8.0	25.4	6	70	14°	Welded	34,86	55,76	√	35,54	56,22	√		59,10
	L61020	10.0	20.0	6	65	14°	Welded	41,51	56,45		43,53	59,69			59,83
	L61026	9.6	30.0	6	76	14°	Welded	43,53	56,93	√	44,33	66,81	√	√	
	L61225	12.0	25.0	6	70	14°	Welded	53,08	67,03		55,14	77,14			
	L61228	12.7	32.0	6	77	14°	Welded	51,74	67,68	√	51,66	78,06	√	√	69,12
	L61533	16.0	33.0	6	78	14°	Welded	95,01	121,09	√	95,01	141,29	√	√	
L62038	19.0	41.0	6	86	14°	Welded	156,47	177,73	√	156,47	200,30	√	√		
LONG SERIES	L61026-176	9.6	30.2	6	176	14°	Welded	63,57	87,98		63,57	√			
	L61228-182	12.7	32.0	6	182	14°	Welded	77,80	107,37		77,80	√			

		Cuts - PRICE													
		D1	L2	D2	L1	Angle	Type	2	3	4	6	6+TiAlN	8	9	INOX
		mm	mm	mm	mm	°									
8 mm. SHANK	L81228	12.7	32.0	8	77	14°	Welded	53,15	68,41	√	53,15	78,06	√	√	
	L81533	16.0	33.0	8	78	14°	Welded	99,67	134,64	√	99,67	141,29	√	√	
	L82038	19.0	41.0	8	86	14°	Welded	156,47	177,73	√	156,47	200,30	√	√	



## CONE

**TYPE**  
**M**
**CARBIDE**

**TiAlN**

**Cuts - PRICE**

	D1 mm	L2 mm	D2 mm	L1 mm	Angle	Type	Cuts - PRICE							
							2	3	4	6	6+TiAlN	8	9	
3 mm. SHANK	M30308	3.0	8.0	3	38	18°	Solid Carbide	16,40		√	16,40	24,83	√	√
	M30311	3.0	11.0	3	38	14°	Solid Carbide	18,69	29,50	√	17,82	27,56	√	√
	M30315	3.0	15.0	3	38	10°	Solid Carbide	19,05		√	19,05	27,56	√	√
	M30612	6.3	17.0	3	49	22°	Welded	21,92	39,58	√	22,56	41,48	√	√

**Cuts - PRICE**

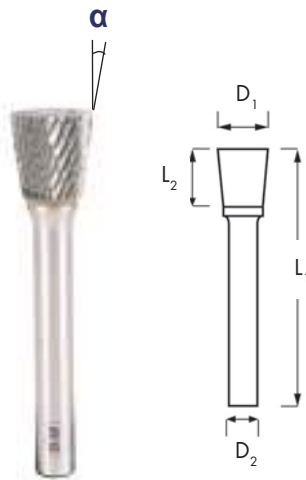
	D1 mm	L2 mm	D2 mm	L1 mm	Angle	Type	Cuts - PRICE							
							2	3	4	6	6+TiAlN	8	9	
6 mm. SHANK	M60612	6.0	12,7	6	50	20°	Solid Carbide	30,73			30,73	38,67		
	M60620	6.0	20.0	6	50	14°	Solid Carbide	25,09	44,01	√	26,32	43,88	√	√
	M60625	6.0	25.0	6	50	10°	Solid Carbide	33,50			33,50	51,56		
	M60818	8.0	18.0	6	64	22°	Welded	36,10			37,88	59,69		
	M61020	9.6	16.0	6	64	28°	Welded	39,60	56,45	√	38,82	63,88	√	√
	M61222	12.7	22.0	6	71	28°	Welded	49,59	72,11	√	48,61	80,70	√	√
	M61525	16.0	25.0	6	71	31°	Welded	74,20		√	77,83	117,48	√	√

**Cuts - PRICE**

	D1 mm	L2 mm	D2 mm	L1 mm	Angle	Type	Cuts - PRICE							
							2	3	4	6	6+TiAlN	8	9	
8 mm. SHANK	M81222	12.7	22.0	8	71	28°	Welded	52,01		√	52,01	80,70	√	√
	M81525	16.0	25.0	8	71	31°	Welded	77,83		√	77,83	117,48	√	√

**INVERTED CONE**

**TYPE**  
**N**  
**CARBIDE**



Example:



**TiAIN**



Rotary burrs

Pink

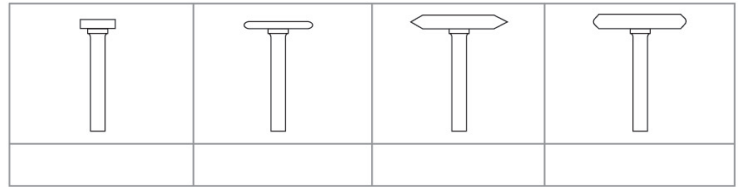
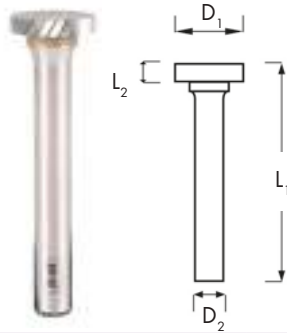
		Cuts - PRICE											
		D1 mm	L2 mm	D2 mm	L1 mm	Angle	Type	2	3	4	6	6+TiAIN	9
3 mm. SHANK	N30304	3.0	4.0	3	38	10°	Solid Carbide						
	N30304E	3.0	4.0	3	38	10°	Solid Carbide	17,13			17,13	27,56	√
	N30606	6.3	6.0	3	39	12°	Welded	19,71			19,71	30,70	
	N30606E	6.3	6.4	3	39	12°	Welded	21,18			21,89	36,07	√
								25,01			25,01	38,17	

		Cuts - PRICE											
		D1 mm	L2 mm	D2 mm	L1 mm	Ángulo	Type	2	3	4	6	6+TiAIN	9
6 mm. SHANK	N60608	6.0	8.0	6	50	10°	Solid Carbide						
	N61010	9.6	9.5	6	55	16°	Welded	26,62			26,62	40,93	√
	N61212	12.7	12.7	6	58	28°	Welded	38,86			38,86	58,58	√
	N61520	16.0	19.0	6	64	18°	Welded	49,42			49,42	79,36	√
	N62015	19.0	16.0	6	61	30°	Welded	70,56			70,56	100,74	√
								88,99			88,99	124,17	√

		Cuts - PRICE											
		D1 mm	L2 mm	D2 mm	L1 mm	Ángulo	Type	2	3	4	6	6+TiAIN	9
8 mm. SHANK	N81212	12.7	12.7	8	58	28°	Welded						
	N81520	16.0	19.0	8	64	18°	Welded	51,86			51,86	79,36	√
								70,56			70,56	100,74	√

**RIM SHAPE**

**RIM SHAPE** **SOLID CARBIDE**



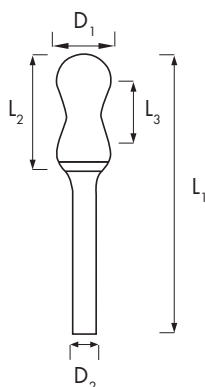
		D1 mm	L2 mm	D2 mm	L1 mm	Angle	Cuts - PRICE					
							2	3	4	6	6+TiAlN	
3 mm. SHANK	P31001	10.0	1.6	3	34	-						37,98

		D1 mm	L2 mm	D2 mm	L1 mm	Angle	Cuts - PRICE					
							2	3	4	6	6+TiAlN	
6 mm. SHANK	P61202	12.0	2.6	6	48	-						37,29
	P62503	25.0	3.2	6	48	90° + Radial						163,29
	P62505	25.0	5.5	6	50	90°						170,32
	P62506	25.0	6.3	6	51	Radial						144,51
	P63806	38.0	6.1	6	51	90° + Radial						350,94

		D1 mm	L2 mm	D2 mm	L1 mm	Angle	Cuts - PRICE					
							2	3	4	6	6+TiAlN	
8 mm. SHANK	P82503	25.0	3.2	8	48	90° + Radial						163,29
	P82505	25.0	5.5	8	50	90°						170,32
	P82506	25.0	6.3	8	51	Radial						144,51
	P83806	38.0	6.1	8	51	90° + Radial						350,94

**RADIAL BURR**

**SOLID CARBIDE**




Reference	Dimensions - En mm							€
	D1	L2	L3	D2	L1	Angle		
CMN61225-2	12,8	25	16	6	70	20°	81,99	

**MINIATURE CARBIDE ROTARY BURRS**

**MATERIAL**

**SOLID CARBIDE** **INOX** **Ti** **Ni** **CAST IRON**



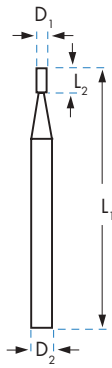
Micro standard cut for general purposes

**APPLICATIONS**

- Precision pieces producers
- Jewellery applications
- Turbines producers



Accurate drilling of precious stones



		D <sub>1</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	D <sub>2</sub> mm	€	
<b>TYPE A</b>	Cylinder without end cut	A30104-2M	1,0	38,0	4,0	3,0	24,77
		A31504-2M	1,5	38,0	4,0	3,0	24,77
		A30204-2M	2,0	38,0	4,0	3,0	24,77
<b>TYPE C</b>	Ball nosed cylinder	C30104-2M	1,0	38,0	4,0	3,0	24,77
		C31504-2M	1,5	38,0	4,0	3,0	24,77
		C30204-2M	2,0	38,0	4,0	3,0	24,77
<b>TYPE D</b>	Ball	D30101-2M	1,0	38,0	1,0	3,0	24,77
		D31515-2M	1,5	38,0	1,5	3,0	24,77
		D30202-2M	2,0	38,0	2,0	3,0	24,77
<b>TYPE E</b>	Oval	E31504-2M	1,5	38,0	4,0	3,0	24,77
<b>TYPE F</b>	Ball nosed tree	F31504-2M	1,5	38,0	4,0	3,0	24,77
<b>TYPE G</b>	Pointed tree	G31504-2M	1,5	38,0	4,0	3,0	24,77
<b>TYPE M</b>	Cone	M31504-2M	1,5	38,0	4,0	3,0	24,77

Recommended operating speeds 70.000 rpm

**MICRO BURR SET**

BSMicro

Content: 10 Miniatures rotary burrs

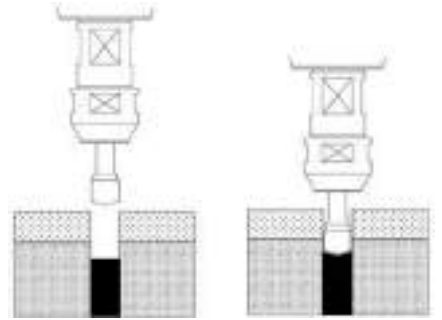
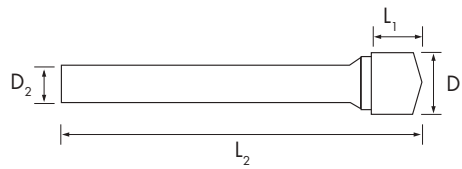


<b>TYPE A</b>	Cylinder without end cut: A30104-2M A31504-2M	<b>TYPE E</b>	Oval: E31504-2M
<b>TYPE C</b>	Ball nosed cylinder: C30104-2M C31504-2M	<b>TYPE F</b>	Ball nosed tree: F31504-2M
<b>TYPE D</b>	Ball: D30101-2M D31515-2M	<b>TYPE G</b>	Pointed tree: G31504-2M
		<b>TYPE M</b>	Cone: M31504-2M

PRICE.: 247,72 €

## BOLT REMOVER

- Centering carbide burr system - Maximizing the potential of drilling threads on centre
- Extracting of broken bolt threads - Reducing damage to existing threaded holes
- Guided steps to accomplish required outcome - Saving the threads and the component
- Choose the correct size of the carbide burr for the broken bolt



	Size Bolt/Tap	D <sub>1</sub> mm	L <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>2</sub> mm	RPM	Type	€
K60520-2BR	M6	4,9	5,0	6,0	50,0	60.000	Solid Carbide	30,05
K60705-2BR	M8	6,4	5,0	6,0	50,0	55.000	Welded	30,05
K60805-2BR	M10	7,8	5,0	6,0	50,0	53.000	Welded	39,30
K61005-2BR	M12	9,3	5,0	6,0	50,0	50.000	Welded	41,37
K61105-2BR	M14	10,7	5,2	6,0	50,0	45.000	Welded	61,19



**CARBIDE ROTARY BURR SETS**

**Ø 6 mm. SHANK**



REFERENCE	PTFR31	PTFR32	PTFR33
QUANTITY	10	10	10
CUTS	6	6	3
QUALITY	<b>CARBIDE</b>	<b>CARBIDE</b>	<b>CARBIDE</b> <b>AI</b>
CONTENT	A61020-6E A61225-6E C61020-6 C61225-6 L61228-6 E61015-6 G61020-6 G61225-6 D61212-6 F61225-6	A60820-6E A61020-6E C60820-6 C61020-6 D60808-6 D61010-6 F60820-6 F61020-6 L60822-6 L61026-6	A60820-3E A61020-3E C60820-3 C61020-3 D60808-3 D61010-3 F60820-3 F61020-3 L61026-3 L61228-3
PRICE €	438,22	343,76	446,62

**Ø 3 mm. SHANK**

**Ø 6 mm. SHANK**



REFERENCE	PTFR34	PTFR35	PTFR36
QUANTITY	10	5	5
CUTS	6	6	3
QUALITY	<b>CARBIDE</b>	<b>CARBIDE</b>	<b>CARBIDE</b> <b>AI</b>
CONTENT	A30314-6 A30314-6E C30312-6 D30303-6 E30306-6 F30312-6 G30312-6 H30306-6 L30312-6 M30311-6	A61225-6E M61222-6 C61225-6 D61212-6 F61225-6	A61225-3E L61228-3 C61225-3 D61212-3 F61225-3
PRICE €	152,13	244,48	312,59

REFERENCE	PTFR41	PTFR42	PTFR43	PTFR44
QUANTITY	4	4	4	4
CUTS	6	6	6	3
QUALITY	<b>CARBIDE</b>	<b>CARBIDE</b>	<b>CARBIDE</b>	<b>CARBIDE</b> <b>AI</b>
CONTENT	A61225-6E C61225-6 F61225-6 G61225-6	A60820-6E C60820-6 F60820-6 G60820-6	A61225-6E C61225-6 M61222-6 G61225-6	A61225-3E C61225-3 F61225-3 G61225-3
PRICE €	202,67	126,40	198,98	261,30



\* Other sets on request.

**CARBIDE ROTARY BURRS DISPLAYS AND SETS**


REFERENCE	<b>EMFR-01</b>		
QUANTITY	15		
QUALITY	<b>CARBIDE</b>		
CONTENT	A60618-6E C60618-6 D60606-6 F60618-6 G60618-6	A61020-6E C61020-6 D61010-6 F61020-6 G61020-6	A61225-6E C61225-6 D61212-6 F61225-6 G61225-6
PRICE €	<b>549,79</b>		

REFERENCE	<b>EMFR-02</b>		
QUANTITY	15		
QUALITY	<b>CARBIDE</b>		
CONTENT	A61225-6 D61212-6 G61225-6 L61228-6 A61225-6-150	A61225-6E E61220-6 H61232-6 M60620-6 C61225-6-150	C61225-6 F61225-6 K61206-6 N61212-6 F61225-6-150
Long series			
PRICE €	<b>796,66</b>		

REFERENCE	<b>AUTOMOCION</b>		
QUANTITY	8		
QUALITY	<b>CARBIDE</b>		
CONTENT	A60820-6E C60820-6 D60606-6	D60808-6 E61220-6 H61232-6	L61026-6 M61020-6
PRICE €	<b>313,81</b>		

REFERENCE	<b>B52</b>		
QUANTITY	8		
QUALITY	<b>CARBIDE</b>		
CONTENT	A61225-6 C61225-6 D61212-6	E61220-6 F61225-6 G61225-6	H61232-6 M61222-6
PRICE €	<b>404,28</b>		



\* Other sets on request.


**T12**

Content:

- \* 1 Propower model P25 Die grinder 25.000 R.P.M. 0,55 HP with safety lever and 6 mm collet (Proven durability in production works)
- \* 5 rotary burrs **REF. C61225-6**
- \* 5 rotary burrs **REF. F61225-6**
- \* 1 Air inlet and exhaust hose assemblies

**PRICE: 982,25 €**
**T3**

Content:

- \* 1 Propower Die grinder 75.000 R.P.M. 0,15 HP with 3 mm collet
- \* 10 Rotary burrs in 3 mm shank to choose

**PRICE: 1.251,72 €**

**METHACRYLATE DISPLAYS FOR CARBIDE ROTARY BURRS**



Ref. **MINILUX-1**

**MINILUX-1**

Content: 30 Carbide rotary burrs

x 1 Uds :	A61225-6E	D61212-6	G61225-6
	C61225-6	F61225-6	L61228-6
x 2 Uds:	A60820-6E	D60808-6	G60820-6
	A61020-6E	D61010-6	G61020-6
	C60820-6	F60820-6	L60822-6
	C61020-6	F61020-6	L61026-6

Dimensions: width 210 x depth 210 x height 210 mm.

**1.113,80 €**



Ref. **MAXILUX-2**

**MAXILUX-2**

Content: 180 Carbide rotary burrs

x 5 Uds:	A60618-6	D60606-6	M60620-6
	A60820-6	D60808-6	M61020-6
	A61020-6	D61010-6	M61222-6
	A61225-6	D61212-6	L60618-6
	A60618-6E	F60618-6	L60822-6
	A60820-6E	F60820-6	L61026-6
	A61020-6E	F61020-6	L61228-6
	A61225-6E	F61225-6	H60820-6
	C60618-6	G60618-6	H61232-6
	C60820-6	G60820-6	E60815-6
	C61020-6	G61020-6	E61015-6
	C61225-6	G61225-6	E61220-6

Dimensions: width 250 x depth 365 x height 235 mm.

**6.630,16 €**



Ref. **BS40**

**BS40**

Content: 40 Carbide rotary burrs

x 2 Uds:	A60618-6E	F60618-6	L60618-6
	A60820-6E	F60820-6	L60822-6
	A61020-6E	F61020-6	L61026-6
	A61225-6E	F61225-6	L61228-6
	C60618-6	G60618-6	
	C60820-6	G60820-6	
	C61020-6	G61020-6	
	C61225-6	G61225-6	

Dimensions: width 65 x depth 245 x height 300 mm.

**1.486,91 €**

## DIE GRINDERS FOR ROTARY BURRS



The large range of BLUE-MASTER rotary burrs is completed by the range of die grinders which allow to maximize your efficiency and productivity.

With an excellent relation between power and weight, our range of air die grinders offers 3 different models focused to sectors such as aeronautics, foundry, automotive, shipyards, etc...

This range of industrial air die grinders optimizes the results in all applications such as polishing, roughing and finishing of surfaces.

They offer the best, the most reliable and safest solution for all the roughing and finishing applications.



## ROTARY TOOL FLEXIBLE SHAFT EXTENSION



- For an improved control and for precision working.
- Suitable for a majority of rotary tools and for 3 mm shank tools.  
Thread 19x2mm.
- Great for working in reduced spaces.
- Max speed: 28000 rpm.

L :1070 mm

RTFD

19,20 €

**DIE GRINDERS FOR ROTARY BURRS**



**HIGH POWER DIE GRINDER - P25**

- Engine offers more power and less air consumption.
- Throttle valve for smoother start up action.
- Moulded sleeve for improved ergonomoy, operator comfort and insulation.
- Ergonomically designed lever construction.

	R.P.M. 6.3 BAR	HP	WEIGHT Kg.	D1 x L1 mm.	EXTENSION spindle	Ø mm. COLLET	OUTLET AIR	REPLACEMENT ENGINE	€
P25	25.000	1.10	0,73	36 x 152	without extension	6 mm.	Ahead	YES	681,70



**LOW VIBRATION DIE GRINDER - P25LR**

- Unique anti-vibration dampening system.
- Throttle valve for smoother start up action.
- Moulded sleeve for improved ergonomoy, operator comfort and insulation.
- Ergonomically designed lever construction.
- Recommended for long term work.

	R.P.M. 6.3 BAR	HP	WEIGHT Kg.	D1 x L1 mm.	EXTENSION spindle	Ø mm. COLLET	OUTLET AIR	REPLACEMENT ENGINE	€
P25LR	25.000	1.10	0,80	36 x 160	without extension	6 mm.	Ahead	YES	774,91



**EXTENDED STRAIGHT DIE GRINDER – P25XLR**

- Engine offers more power and less air consumption.
- Throttle valve for smoother start up action.
- Ergonomically designed lever construction.
- Spider coupling for improved transmission strength.

	R.P.M. 6.3 BAR	HP	WEIGHT Kg.	D1 x L1 mm.	EXTENSION spindle	Ø mm. COLLET	OUTLET AIR	REPLACEMENT ENGINE	€
P25XLR	25.000	1.10	1,3	40 x 345	12 x 150	6 mm.	Ahead	NO	1.025,45



Spare parts prices on request.



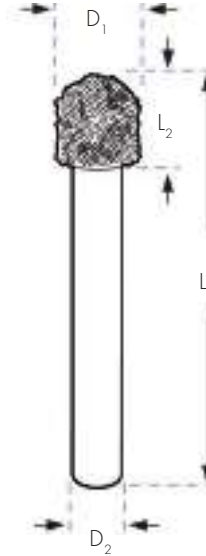
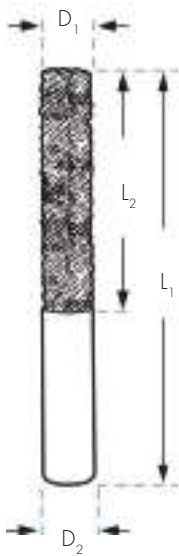
**DIAMOND ROTARY BURRS**

**APPLICATIONS**
**Construction:**

- Stone, Sandstone, Marble, Granite

**Composite materials:**

- Fiberglass, Carbon and graphite, glass, polyester, plastics

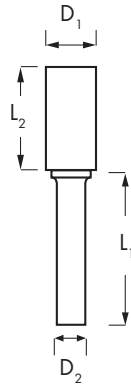


	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	A..D
					€
A30211D	2,40	3	38	11,00	29,42
A30314D	3,00	3	38	14,00	32,14
A30605D	6,35	3	44	4,70	32,01
A30612D	6,35	3	51	12,70	43,27
A60610D	6,00	6	50	10,00	44,74
A60820D	8,00	6	64	19,20	48,95
A80838D	8,00	8	66	38,00	70,12
A61020D	9,60	6	64	19,00	53,34
A61125D	11,00	6	70	25,40	71,36
A61220D	12,50	6	64	19,20	70,47
A61225D	12,50	6	70	25,40	73,60
A61525D	15,80	6	70	25,40	88,47
A62025D	19,20	6	70	25,40	117,50
A62525D	25,00	6	70	25,40	135,52

	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	L <sub>2</sub> mm	C..D
					€
C30211D	2,40	3	38	11,00	33,46
C30612D	6,35	3	51	12,70	46,72
C60618D	6,00	6	50	18,00	50,90
C60820D	8,00	6	64	19,20	55,69
C60840D	8,00	6	64	38,00	62,65
C80838D	8,00	8	66	38,00	66,20
C61020D	9,60	6	64	19,20	59,75
C61011D	10,00	6	50	11,00	82,01
C61035D	10,00	6	66	35,00	63,75
C61125D	11,00	6	70	25,40	79,91
C61220D	12,50	6	64	19,20	78,93
C61225D	12,50	6	70	25,40	82,42
C61525D	15,80	6	70	25,40	99,09
C62025D	19,20	6	70	25,40	131,61
C62525D	25,00	6	70	25,40	151,78

CYLINDRICAL MOUNTED POINTS

TYPE  
A



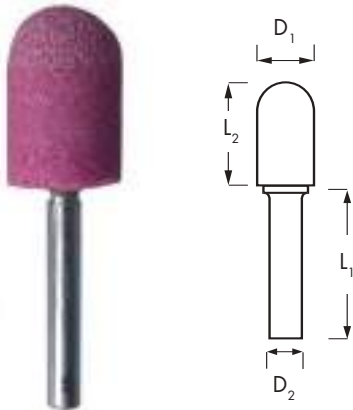
3 mm. SHANK

	D <sub>1</sub> mm	L <sub>2</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	A
					€
MA030408V	4.0	8.0	3	32	3,67
MA030510V	5.0	10.0	3	32	3,75
MA030515V	5.0	15.0	3	32	3,85
MA030613V	6.0	13.0	3	32	3,75
MA030625V	6.0	25.0	3	32	5,81
MA030810V	8.0	10.0	3	32	3,85
MA030816V	8.0	16.0	3	32	5,18
MA031013V	10.0	13.0	3	32	5,18
MA031313V	13.0	13.0	3	32	4,56
MA031340V	13.0	40.0	3	32	8,13
MA032050V*	20.0	50.0	3	32	9,77

\* Till end of stock

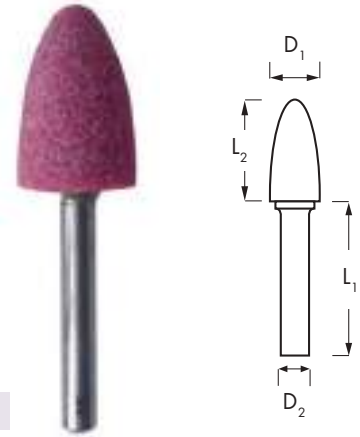
6 mm. SHANK

	D <sub>1</sub> mm	L <sub>2</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	A
					€
MA060510V*	5.0	10.0	6	32	4,00
MA060515V*	5.0	15.0	6	32	4,09
MA060613V	6.0	13.0	6	32	4,00
MA060625V	6.0	25.0	6	32	6,18
MA060810V	8.0	10.0	6	32	4,09
MA060816V	8.0	16.0	6	32	5,52
MA061013V	10.0	13.0	6	32	4,57
MA061020V	10.0	20.0	6	32	5,81
MA061025V	10.0	25.0	6	32	6,18
MA061032V	10.0	32.0	6	32	6,95
MA061313V	13.0	13.0	6	32	4,87
MA061320V	13.0	20.0	6	32	5,62
MA061325V	13.0	25.0	6	32	5,99
MA061340V	13.0	40.0	6	32	8,66
MA061610V	16.0	10.0	6	32	5,71
MA061620V	16.0	20.0	6	32	5,99
MA062010V	20.0	10.0	6	32	5,99
MA062020V	20.0	20.0	6	32	6,28
MA062025V	20.0	25.0	6	32	6,67
MA062032V	20.0	32.0	6	32	7,42
MA062040V	20.0	40.0	6	32	8,95
MA062050V	20.0	50.0	6	32	10,29
MA062510V	25.0	10.0	6	32	6,57
MA062513V	25.0	13.0	6	32	6,67
MA062516V	25.0	16.0	6	32	6,76
MA062525V	25.0	25.0	6	32	7,52
MA062532V	25.0	32.0	6	32	8,37
MA062540V	25.0	40.0	6	32	9,71
MA063216V	32.0	16.0	6	32	7,13
MA063220V	32.0	20.0	6	32	7,52
MA063232V	32.0	32.0	6	32	9,15
MA063240V	32.0	40.0	6	32	11,52
MA064010V	40.0	10.0	6	32	9,05
MA064015V	40.0	15.0	6	32	10,38
MA064020V	40.0	20.0	6	32	11,14
MA064040V	40.0	40.0	6	32	15,04
MA065013V	50.0	13.0	6	32	11,81
MA065025V	50.0	25.0	6	32	14,65
MA065040V	50.0	40.0	6	32	17,62

**CYLINDRICAL MOUNTED POINTS WITH ROUNDED HEAD**
**TYPE  
C**


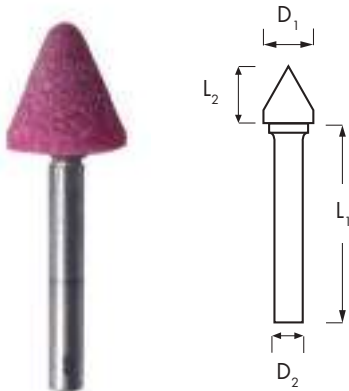
6 mm. SHANK

C					
	D <sub>1</sub> mm	L <sub>2</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	€
MC060510V	5.0	10.0	6	32	5,20
MC060816V	8.0	16.0	6	32	7,18
MC061320V	13.0	20.0	6	32	7,29
MC062025V	20.0	25.0	6	32	8,66
MC062532V	25.0	32.0	6	32	10,89

**RIB MOUNTED POINTS**
**TYPE  
F**


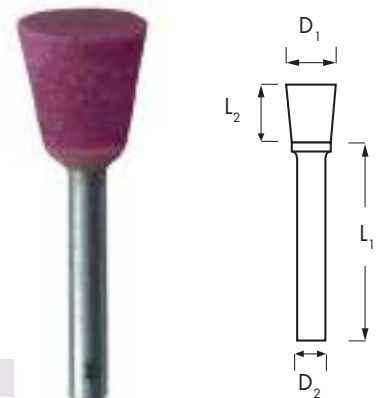
6 mm. SHANK

F					
	D <sub>1</sub> mm	L <sub>2</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	€
MF060510V	5.0	10.0	6	32	5,20
MF060816V	8.0	16.0	6	32	7,18
MF061320V	13.0	20.0	6	32	7,29
MF062032V	20.0	32.0	6	32	9,65
MF062050V	20.0	50.0	6	32	13,37
MF062540V	25.0	40.0	6	32	12,62

**CONICAL MOUNTED POINTS**
**TYPE  
M**


6 mm. SHANK

M					
	D <sub>1</sub> mm	L <sub>2</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	€
MM061010V	10.0	10.0	6	32	5,33
MM061025V	10.0	25.0	6	32	8,03
MM061313V	13.0	13.0	6	32	6,30
MM061616V	16.0	16.0	6	32	7,54
MM061645V	16.0	45.0	6	32	13,37
MM062020V	20.0	20.0	6	32	8,16
MM062032V	20.0	32.0	6	32	9,65
MM062040V	20.0	40.0	6	32	11,63
MM062525V	25.0	25.0	6	32	9,77
MM062545V	25.0	45.0	6	32	13,61
MM063232V	32.0	32.0	6	32	11,88
MM063250V	32.0	50.0	6	32	19,05

**REVERSE CONE MOUNTED POINTS**
**TYPE  
N**


6 mm. SHANK

N					
	D <sub>1</sub> mm	L <sub>2</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	€
MN062016V	20.0	16.0	6	32	9,28
MN062520V	25.0	20.0	6	32	10,72
MN063225V	32.0	25.0	6	32	12,56
MN064032V	40.0	32.0	6	32	19,56



# BAND SAW BLADES

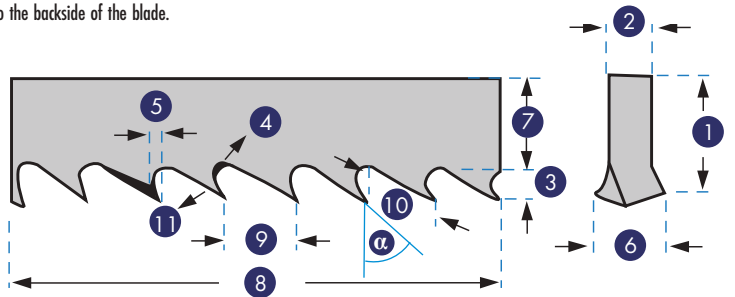
BLUE-MASTER<sup>®</sup>

**BLUE-MASTER<sup>®</sup>**  
*by CELESA*

CUTTING TECHNOLOGIES

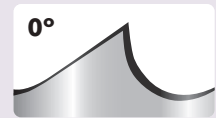
## BAND SAW BLADES TERMINOLOGY

1. **WIDTH:** The nominal dimension of a bandsaw blade, which is measured from the top of the tooth to the backside of the blade.
2. **THICKNESS (gauge):** The thickness of the blade.
3. **TOOTH:** The cutting part of the saw blade.
4. **GULLET:** The curved area at the base of the tooth.
5. **CHIPPING FACE OR RAKE ANGLE:** The cutting surface of the tooth.
6. **TOOTH SET:** The bending of the teeth from right to left to allow clearance (kerf) of the blade back through the cut.
7. **BODY OF THE BANDSAW:** The body of the band saw without including the cutting teeth.
8. **TPI.:** The number of teeth per inch.
9. **TEETH PITCH:** The distance from one tip to the next tip.
10. **GULLET DEPTH:** The distance from the tip to the bottom of the gullet.
11. **TOOTH BACK OR RELIEF SURFACE:** The surface of the tooth opposite the cutting edge, or tooth face.



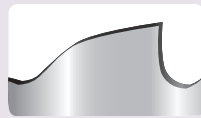
### TEETH TYPES

The teeth selection is very important to work different thicknesses with band saw blades. If we don't use the correct one, we must know that performance of the band saw will be low due to teeth breaking or wearing.



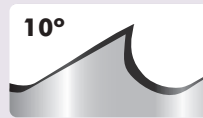
**USUAL TOOTH**

The usual tooth has a cutting angle of 0°. It is suitable for cutting materials with a high carbon content, such as cast iron, for materials with small cross sections and for thin-wall profiles and pipes.



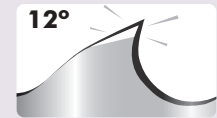
**REINFORCED**

Reinforced teeth with extra setting for profile and structural steel cutting. Teeth lifetime guaranteed. Specially recommended for hand use machines, with high looseness and vibrations.



**HOOK TOOTH HR**

The hook tooth has a positive cutting angle of 10°. This tooth form is particularly suitable for cutting solid, thick-walled tubes and all higher-grade alloy material.

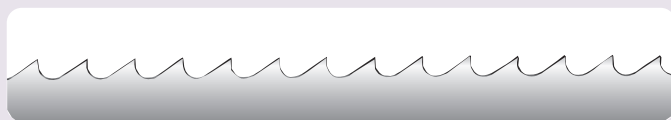


**MASTER**

The tooth has a cutting angle of both 10 or 16°. The master teeth is based on a high-low triple chip design recognised as one of the most efficient in engineering cutting technology. Used to cover a wide range of difficult steel and exotic alloys.

### TEETH PITCH

Tooth pitch is measured in number of teeth per inch. For combi (variable) tooth pitches, the two figures represent the highest and lowest possible number of teeth.



**REGULAR TEETH PITCH:**

The distance between the teeth is constant throughout the blade. Very convenient for cutting solid materials on sawing machines with efficient clamping. Very effective on high alloy steels and exotic alloys.



**COMBI (VARIABLE) TEETH PITCH:**

Combi (variable) teeth pitch is based on groups of different tooth pitches which are repeated at regular intervals throughout the blade. Reducing vibration through resonance during cutting is the purpose of this concept. Sawing thin-walled hollow sections and material in bundles or with weak clamping are typical applications for this tooth pitch configuration.

### WHEN DO I USE THE VARIABLE TEETH AND WHEN THE REGULAR?

#### VARIABLE (COMBI) TEETH PITCH

- Steel
- Stainless Steel
- Bronze

#### REGULAR TEETH PITCH

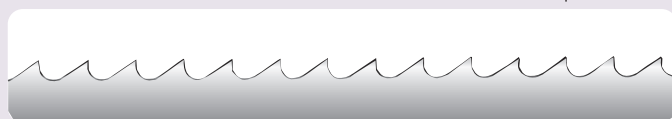
- Brass
- Aluminium
- Copper
- Wood



### HOW TO IDENTIFY A CONCRETE TEETH ?

#### REGULAR

25,4 mm (1")



10 gullets = 10 RR

#### VARIABLE

50,8 mm (2")

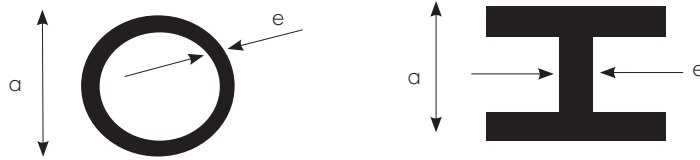


10 gullets = 4/6

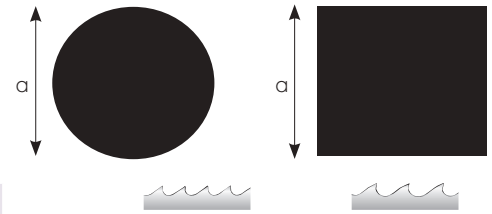


**RECOMMENDATIONS FOR CORRECT TOOTH SELECTION IN TUBES & PROFILES CUTTING**

**FOR TUBES AND STRUCTURAL PROFILES**



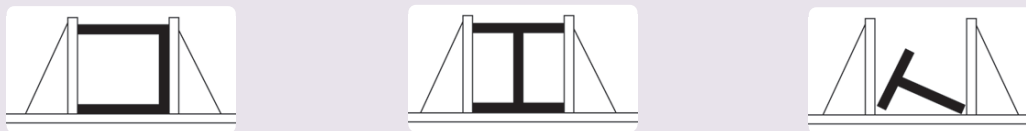
**FOR SOLID WORKPIECES**



		DIMENSION $\alpha$									
		20	40	60	80	100	120	150	200	300	500
THICKNESS $e$	2	14/18	10/14	10/14	10/14	10/14	8/12	8/12	8/12	8/12	5/8
	3	14/18	10/14	10/14	8/12	8/12	8/12	8/12	6/10	6/10	5/8
	4	10/14	10/14	8/12	8/12	8/12	6/10	6/10	5/8	5/8	4/6
	5	10/14	10/14	8/12	8/12	6/10	6/10	5/8	4/6	4/6	4/6
	6	10/14	10/14	8/12	8/12	6/10	5/8	5/8	4/6	4/6	4/6
	8	10/14	8/12	8/12	6/10	5/8	5/8	4/6	4/6	4/6	4/6
	10	-	8/12	6/10	5/8	4/6	4/6	4/6	4/6	4/6	4/5
	12	-	8/12	6/10	4/6	4/6	4/6	4/6	4/6	4/6	4/5
	15	-	8/12	6/10	4/6	4/6	4/6	4/6	4/5	4/5	4/5
	20	-	-	4/6	4/6	4/6	4/6	4/5	4/5	4/5	3/4
	30	-	-	-	4/6	4/5	4/5	4/5	4/5	4/5	2/3
	50	-	-	-	-	-	-	4/5	3/4	2/3	2/3
80	-	-	-	-	-	-	-	3/4	2/3	2/3	
>100	-	-	-	-	-	-	-	-	2/3	1,5/2	

$\alpha$ mm	Regular	$\alpha$ mm	Variable
<5	18	<10	14/18
5-10	14	10-20	10/14
10-30	10	15-40	8/12
30-50	8	25-50	6/10
50-80	6	35-70	5/8
80-120	4	40-90	5/6
120-200	3	50-120	4/6
200-400	2	80-180	3/4
300-700	1,25	130-350	2/3
>600	0,75	150-450	1,5/2
		200-600	1,1/1,6
		>500	0,75/1,25

**CORRECT WAYS TO FIX PIECES**



**CUTTING SPEEDS FOR SECTIONS FROM 75 to 150 mm**

MATERIAL	REFERENCE H.I.A.	EQUIVALENT A.I.S.A.-S.A.E.	M.P.M.	MATERIAL	REFERENCE H.I.A.	EQUIVALENT A.I.S.A.-S.A.E.	M.P.M.
CARBON STEEL	F-111, F-112	1015-1025	95	DEFORMABLE	F-521	D-2, D-3	33
	F-113	1035	65		F-522	O-1	58
	F-114, F-115	1045-1055	60		-	D-7	25
	F-512, F-516	W-1	55	SHOCK	F-524	S-1	58
HIGH PERFORMANCE ALLOY	F-123	3435	60		F-525	-	60
	F-125	4135	70		-	S-2, S-5	40
	F-127, F-128	4340	65	HOT WORKING PIECES	F-524	H-20	60
	F-131, F-523	L-3	50		F-527	-	55
FOR SPRINGS	F-143	6150	60		F-528	L-S	55
	F-144	9225	60	F-537	H-13	58	
	CEMENTED	F-151	1010	90	CUTTING	F-531	F-3
F-153		3310	55	F-532		F-1	50
F-154		3415	58	FAST	F-550-A	M-2	40
F-155		-	62		F-550-C	M-35	20
STAINLESS STEEL	F-311, F-312	410-420	40		F-552	T-1	35
	-	430	26		F-533	T-4	30
	F-313	431	32	F-554	T-5	30	
	F-314	301-304	30	Ni ALLOY		MONEL	22
	F-321, F-322	343	32			INCONEL	20
	-	316	22			HASTELLOY	20
-	446	18			TITANIO	20	

Increase speed: 10/20% for sections under 75 mm. Reduce speed: 10/20% for sections above 150 mm.

**BI-METAL BAND SAWS**
**6 mm x 0,65 mm (1/4" x 0,025")**

QUALITY: M42 (8% Co)

LENGTH mm	€	AVAILABLE TEETH									
1.325	27,69	<table border="1"> <thead> <tr> <th>Ref.</th> <th>TPI</th> <th>α</th> </tr> </thead> <tbody> <tr> <td>560</td> <td>6 HR</td> <td>Hook 10°</td> </tr> <tr> <td>561</td> <td>10/14</td> <td>0°</td> </tr> </tbody> </table>	Ref.	TPI	α	560	6 HR	Hook 10°	561	10/14	0°
Ref.	TPI		α								
560	6 HR		Hook 10°								
561	10/14		0°								
1.425	29,14										
1.500	30,22										
1.680	32,81										
2.000	37,42										
2.370	42,13										
2.600	46,05										
2.700	47,50										
2.730	47,93										
2.760	48,38										
2.860	49,81										
2.900	50,38										
3.000	51,82										
3.100	53,26										
3.135	53,76										
3.300	56,13										
3.320	56,42										
3.353	56,90										
3.840	63,91										

**6 mm x 0,90 mm (1/4" x 0,035")**

QUALITY: M42 (8% Co)

LENGTH mm	€	AVAILABLE TEETH									
1.325	27,69	<table border="1"> <thead> <tr> <th>Ref.</th> <th>TPI</th> <th>α</th> </tr> </thead> <tbody> <tr> <td>501</td> <td>6 HR</td> <td>Hook 10°</td> </tr> <tr> <td>504</td> <td>10/14</td> <td>0°</td> </tr> </tbody> </table>	Ref.	TPI	α	501	6 HR	Hook 10°	504	10/14	0°
Ref.	TPI		α								
501	6 HR		Hook 10°								
504	10/14		0°								
1.425	29,14										
1.500	30,22										
1.680	32,81										
2.000	37,42										
2.370	42,13										
2.600	46,05										
2.700	47,50										
2.730	47,93										
2.760	48,38										
2.860	49,81										
2.900	50,38										
3.000	51,82										
3.100	53,26										
3.135	53,76										
3.300	56,13										
3.320	56,42										
3.353	56,90										
3.840	63,91										

The reference indicates the band saw's geometry: width, thickness and tooth type.

**HOW TO ORDER A BANDSAW:**

Please quote the length in mm and the reference.

**EXAMPLE:**

1 Ut 1325 mm. Ref. 504 = 1 Ut 1325 x 6,5 x 0,90 teeth 10/14 Variable

- For intermediate lengths that do not appear on the price list, take the price of the superior length.


**15 METERS COILS**

QUALITY: M42 (8% Co)

	TEETH	€
560	6 HR Hook 10°	216,05
561	10/14 0°	216,05

**15 METERS COILS**

QUALITY: M42 (8% Co)

	TEETH	€
501	6 HR Hook 10°	216,05
504	10/14 0°	216,05

**30 METERS COILS**

QUALITY: M42 (8% Co)

	TEETH	€
560	6 HR Hook 10°	432,10
561	10/14 0°	432,10

**30 METERS COILS**

QUALITY: M42 (8% Co)

	TEETH	€
501	6 HR Hook 10°	432,10
504	10/14 0°	432,10

**BI-METAL BAND SAWS**

**10 mm x 0,65 mm (3/8" x 0,025")**

QUALITY: M42 (8% Co)											
LENGTH mm	€	AVAILABLE TEETH									
1.137	24,98	<table border="1"> <thead> <tr> <th>Ref.</th> <th>TPI</th> <th>α</th> </tr> </thead> <tbody> <tr> <td>512</td> <td>6 HR</td> <td>Hook 10°</td> </tr> <tr> <td>510</td> <td>10/14</td> <td>0°</td> </tr> </tbody> </table>	Ref.	TPI	α	512	6 HR	Hook 10°	510	10/14	0°
Ref.	TPI		α								
512	6 HR		Hook 10°								
510	10/14		0°								
1.140	25,03										
1.300	27,33										
1.325	27,69										
1.340	27,92										
1.350	28,07										
1.500	30,22										
1.580	31,36										
1.660	32,53										
2.360	42,59										
2.640	46,63										
2.720	47,80										
2.800	48,93										
2.900	50,38										
2.945	51,02										
3.250	55,41										
3.300	56,13										
3.350	56,87										
3.353	56,90										
3.400	57,59										
3.800	63,34										

**10 mm x 0,90 mm (3/8" x 0,035")**

QUALITY: M42 (8% Co)																				
LENGTH mm	€	AVAILABLE TEETH																		
1.137	24,98	<table border="1"> <thead> <tr> <th>Ref.</th> <th>TPI</th> <th>α</th> </tr> </thead> <tbody> <tr> <td>511</td> <td>4 HR</td> <td>Hook 10°</td> </tr> <tr> <td>911</td> <td>6 HR</td> <td>Hook 10°</td> </tr> <tr> <td>513</td> <td>8 RR</td> <td>0°</td> </tr> <tr> <td>514</td> <td>10 RR</td> <td>0°</td> </tr> <tr> <td>516</td> <td>10/14</td> <td>0°</td> </tr> </tbody> </table>	Ref.	TPI	α	511	4 HR	Hook 10°	911	6 HR	Hook 10°	513	8 RR	0°	514	10 RR	0°	516	10/14	0°
Ref.	TPI		α																	
511	4 HR		Hook 10°																	
911	6 HR		Hook 10°																	
513	8 RR		0°																	
514	10 RR		0°																	
516	10/14		0°																	
1.140	25,03																			
1.300	27,33																			
1.325	27,69																			
1.340	27,92																			
1.350	28,07																			
1.500	30,22																			
1.580	31,36																			
1.660	32,53																			
2.360	42,59																			
2.640	46,63																			
2.720	47,80																			
2.800	48,93																			
2.900	50,38																			
2.945	51,02																			
3.250	55,41																			
3.300	56,13																			
3.350	56,87																			
3.353	56,90																			
3.400	57,59																			
3.800	63,34																			

The reference indicates the band saw's geometry: width, thickness and tooth type.

**HOW TO ORDER A BANDSAW:**

Please quote the length in mm and the reference.

**EXAMPLE:**

1 Ut 2720 mm. Ref.911 = 1 Ut 2720 x 10 x 0,9 teeth 6HR (hook type 10°)



- For intermediate lengths that do not appear on the price list, take the price of the superior length.

**15 METERS COILS**

QUALITY: M42 (8% Co)		
	TEETH	€
512	6 HR Hook 10°	216,05
510	10/14 0°	216,05

**30 METERS COILS**

QUALITY: M42 (8% Co)		
	TEETH	€
512	6 HR Hook 10°	432,10
510	10/14 0°	432,10

**15 METERS COILS**

QUALITY: M42 (8% Co)		
	TEETH	€
511	4 HR Hook 10°	216,05
911	6 HR Hook 10°	216,05
513	8 RR 0°	216,05
514	10 RR 0°	216,05
516	10/14 0°	216,05

**30 METERS COILS**

QUALITY: M42 (8% Co)		
	TEETH	€
511	4 HR Hook 10°	432,10
911	6 HR Hook 10°	432,10
513	8 RR 0°	432,10
514	10 RR 0°	432,10
516	10/14 0°	432,10

**BI-METAL BAND SAWS**
**13 mm x 0,65 mm (1/2" x 0,025")**
**QUALITY: M42 (8% Co)**

LENGTH mm	€	AVAILABLE TEETH		
1.135	24,56			
1.138	24,56			
1.140	24,56			
1.300	26,89			
1.315	27,09			
1.320	27,17			
1.325	27,17			
1.330	27,24			
1.335	27,43			
1.340	27,43			
1.350	27,57			
1.360	27,73			
1.368	27,86			
1.370	27,86			
1.440	29,00			
1.450	29,00			
1.470	31,19			
1.605	31,19			
1.620	31,42			
1.625	31,56			
1.630	31,56			
1.638	31,60			
1.640	31,60			
1.645	31,69			
1.650	31,75			
1.660	31,98			
1.730	32,97			
1.735	33,18			
1.750	33,18			
1.755	33,33			
2.375	42,01			
2.390	42,32			
2.410	42,90			

Ref.	TPI	α
530	4 HR	Hook 10°
531	6 HR	Hook 10°
533	14 RR	0°
534	18 RR	0°
913	6/10	0°
535	8/12	0°
536	10/14	0°

**Width 13x0,50 thickness**

Ref.	TPI	A
821*	10/14	0°
822*	10 RR	0°
823*	14 RR	0°
824*	18 RR	0°
825*	24 RR	0°

\* Till end of stock

**13 mm x 0,90 mm (1/2" x 0,035")**
**QUALITY: M42 (8% Co)**

LENGTH mm	€	AVAILABLE TEETH		
1.130	24,89			
1.140	25,03			
1.325	27,69			
1.330	27,77			
1.460	29,64			
1.635	32,16			
1.638	32,21			
1.640	32,22			
1.645	32,31			
1.650	32,37			
1.750	33,82			
2.340	42,32			
2.375	42,83			
2.665	46,99			
3.300	56,13			
3.800	63,34			
5.445	87,04			
6.200	97,92			

Ref.	TPI	α
541	3 HR	Hook 10°
542	4 HR	Hook 10°
543	6 HR	Hook 10°
544	8 RR	0°
545	10 RR	0°
546	14 RR	0°
548	6/10	0°
829	8/12	0°
547	10/14	0°

The reference indicates the band saw's geometry: width, thickness and tooth type.

**HOW TO ORDER A BANDSAW:**

Please quote the length in mm and the reference.

**EXAMPLE:**

1Ut 1650 mm. Ref.545 = 1Ut 1650 x 13 x 0,9 teeth 10RR standard type 0°

- For intermediate lengths that do not appear on the price list, take the price of the superior length.

**15 METERS COILS**
**QUALITY: M42 (8% Co)**

	TEETH	€
541	3 HR Hook 10°	216,05
542	4 HR Hook 10°	216,05
543	6 HR Hook 10°	216,05
544	8 RR 0°	216,05
545	10 RR 0°	216,05
546	14 RR 0°	216,05
547	10/14 0°	216,05

**30 METERS COILS**
**QUALITY: M42 (8% Co)**

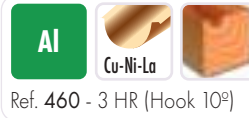
	TEETH	€
541	3 HR Hook 10°	432,10
542	4 HR Hook 10°	432,10
543	6 HR Hook 10°	432,10
544	8 RR 0°	432,10
545	10 RR 0°	432,10
546	14 RR 0°	432,10
547	10/14 0°	432,10

**BI-METAL BAND SAWS**

**20 mm x 0,90 mm (3/4" x 0,035")**

QUALITY: M42 (8% Co)

LENGTH mm	€	AVAILABLE TEETH
1.363	28,24	
1.620	31,95	
1.645	32,31	
1.765	34,02	
2.000	37,42	
2.060	38,27	
2.090	38,71	
2.100	38,85	
2.225	40,65	
2.300	41,74	
2.350	42,45	
2.362	42,63	
2.375	42,83	
2.630	46,49	
2.825	49,31	
2.850	49,66	
2.970	51,39	
3.000	51,82	
3.100	53,98	
3.350	55,75	
3.425	57,95	
3.660	61,33	
3.830	63,77	
4.525	73,79	

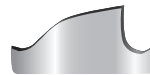


Ref. 460 - 3 HR (Hook 10°)

Ref.	TPI	α
551	3 HR	Hook 10°
552	4 HR	Hook 10°
843	10 RR	0°
908	14 RR	0°
903	4/6	5°
904	5/8	0°
910	6/8	5°
907	6/10	0°
905	8/12	0°
906	10/14	0°



Ref.	TPI	α
723	5/7	Reinforced
724	8/11	Reinforced



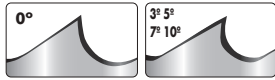
Reinforced teeth with extra setting for profile and structural steel cutting. Teeth lifetime guaranteed. Specially recommended for hand use machines, with high looseness and vibrations.



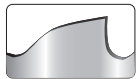


**BI-METAL BAND SAWS**
**27 mm x 0,90 mm (1" x 0,035")**
**STANDARD**

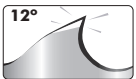
Most usual pattern.  
 Application: General Purpose.  
 For materials up to 1400 N/mm<sup>2</sup> (44 HRc)


**STRUCTURES  
 PROFILES/STRUCTURAL PIPES**

Wider and deeper set.  
 For all types of workpieces in high internal tension  
 specially BEAMS.  
 Reinforced teeth to significantly increase its resistance.


**REINFORCED**
**MASTER**

The tooth has a cutting angle of both 10° or 16°. The master teeth is based on a high-low triple chip design recognised as one of the most efficient in engineering cutting technology. Used to cover a wide range of difficult steel and exotic alloys.



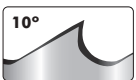
Cylindrical and squared solid workpieces

**ALUMINIUM/WOOD**

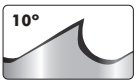
Special for aluminium, non-ferrous materials and wood

**ANTI-WEAR**

High resistant steels. Chromium bars, stainless steel,  
 (Maximum hardness 1600N/mm<sup>2</sup> 50 HRc)



Solid round, square and big structures

**WOODCUT**

**QUALITY:**
**M42 (8% Co)**
**M42 (8% Co)**

LENGTH mm	STANDARD		STRUCTURES, PROFILES STRUCTURAL PIPES																																																															
	€	AVAILABLE TEETH	€	AVAILABLE TEETH																																																														
2.000	36,83	<table border="1"> <thead> <tr> <th>Ref.</th> <th>TPI</th> <th>α</th> </tr> </thead> <tbody> <tr><td>916</td><td>2 HR</td><td>Hook 10°</td></tr> <tr><td>918</td><td>3 HR</td><td>Hook 10°</td></tr> <tr><td>914</td><td>4 HR</td><td>Hook 10°</td></tr> <tr><td>915</td><td>6 HR</td><td>Hook 10°</td></tr> <tr><td>923</td><td>8 RR</td><td>0°</td></tr> <tr><td>972</td><td>10 RR</td><td>0°</td></tr> <tr><td>973*</td><td>14 RR</td><td>0°</td></tr> <tr><td>927</td><td>2/3</td><td>10°</td></tr> <tr><td>928</td><td>3/4</td><td>10°</td></tr> <tr><td>929</td><td>4/6</td><td>7°</td></tr> <tr><td>975</td><td>5/8</td><td>3°</td></tr> <tr><td>989</td><td>6/8</td><td>5°</td></tr> <tr><td>970</td><td>6/10</td><td>0°</td></tr> <tr><td>971</td><td>8/12</td><td>0°</td></tr> <tr><td>969</td><td>10/14</td><td>0°</td></tr> </tbody> </table>	Ref.	TPI	α	916	2 HR	Hook 10°	918	3 HR	Hook 10°	914	4 HR	Hook 10°	915	6 HR	Hook 10°	923	8 RR	0°	972	10 RR	0°	973*	14 RR	0°	927	2/3	10°	928	3/4	10°	929	4/6	7°	975	5/8	3°	989	6/8	5°	970	6/10	0°	971	8/12	0°	969	10/14	0°	<table border="1"> <thead> <tr> <th>Ref.</th> <th>TPI</th> <th>α</th> </tr> </thead> <tbody> <tr><td>715</td><td>3/4</td><td>Reinforced</td></tr> <tr><td>152</td><td>4/6</td><td>Reinforced</td></tr> <tr><td>717</td><td>5/7</td><td>Reinforced</td></tr> <tr><td>719</td><td>8/11</td><td>Reinforced</td></tr> </tbody> </table> <p>Reinforced teeth with extra setting for profile and structural steel cutting. Teeth lifetime guaranteed. Specially recommended for hand use machines, with high looseness and vibrations.</p>	Ref.	TPI	α	715	3/4	Reinforced	152	4/6	Reinforced	717	5/7	Reinforced	719	8/11	Reinforced
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3.100	53,62																																																																	
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			76,13																																																															
			80,57																																																															
			82,50																																																															

\* 14RR teeth are suitable for panel Sandwich cutting.

**CARBIDE TEETH BAND SAW BLADES**

€/m. welded

	1,4/2,0	€	2/3	€	3/4	€
27x0,90			1003	90,56	1006	111,25
34x1,10	1001	88,46	1004	99,52	1007	126,29
41x1,30	1002	91,23	1005	105,85	1008	134,44

Suitable band saw for up 700 mm sections in hard metals.



**BI-METAL BAND SAWS**

**27 mm x 0,90 mm (1" x 0,035")**

QUALITY:																																				
	M42 (8% Co)		M42 (8% Co)		M51 (10% Co)																															
	MASTER		ALUMINIUM/WOOD		ANTI-WEAR																															
LENGTH mm	€	AVAILABLE TEETH	€	AVAILABLE TEETH	€	AVAILABLE TEETH																														
2.000	44,21	<table border="1"> <thead> <tr> <th>Ref.</th> <th>TPI</th> <th>α</th> </tr> </thead> <tbody> <tr> <td>729</td> <td>2/3</td> <td>12°</td> </tr> <tr> <td>728</td> <td>3/4</td> <td>12°</td> </tr> <tr> <td>730</td> <td>4/6</td> <td>12°</td> </tr> </tbody> </table>	Ref.	TPI	α	729	2/3	12°	728	3/4	12°	730	4/6	12°	36,83	<table border="1"> <thead> <tr> <th>Ref.</th> <th>TPI</th> <th>α</th> </tr> </thead> <tbody> <tr> <td>470</td> <td>2 HR</td> <td>Hook 10°</td> </tr> <tr> <td>471</td> <td>3 HR</td> <td>Hook 10°</td> </tr> </tbody> </table>	Ref.	TPI	α	470	2 HR	Hook 10°	471	3 HR	Hook 10°	45,49	<table border="1"> <thead> <tr> <th>Ref.</th> <th>TPI</th> <th>α</th> </tr> </thead> <tbody> <tr> <td>205</td> <td>3/4</td> <td>10°</td> </tr> <tr> <td>206</td> <td>4/6</td> <td>10°</td> </tr> </tbody> </table>	Ref.	TPI	α	205	3/4	10°	206	4/6	10°
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2.945	60,33	50,28	62,07																																	
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4.570	88,18	73,50	90,73																																	
4.870	93,33	77,78	96,03																																	
5.000	95,56	79,63	98,32																																	

Band saws

Yellow

**34 mm x 0,90 mm (1-1/4" x 0,035")**

QUALITY:	M2 (HSS)										
LENGTH mm	WOOD CUT										
	€	AVAILABLE TEETH									
	3.505	65,40	<table border="1"> <thead> <tr> <th>Ref.</th> <th>TPI</th> <th>α</th> </tr> </thead> <tbody> <tr> <td>939</td> <td>1,14</td> <td>10°</td> </tr> <tr> <td>940</td> <td>2</td> <td>10°</td> </tr> </tbody> </table>	Ref.	TPI	α	939	1,14	10°	940	2
Ref.	TPI	α									
939	1,14	10°									
940	2	10°									
4.530	84,53										
4.600	85,84										
4.680	87,33										
5.150	96,10										
5.200	97,03										
5.220	97,41										
5.430	101,32										
5.620	104,87										
5.780	107,85										
6.110	114,01										
6.140	114,57										
6.170	115,13										
6.200	115,69										
6.300	117,56										
7.140	133,23										
7.200	134,35										
7.300	136,22										
7.800	145,55										

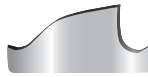
What is important for the price of a bandsaw is just the length in mm, its width and its quality.

\* Instructions for stainless steel cutting:

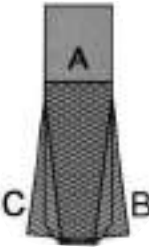
- 1- Select the appropriate blade type (Rectified 10° or Anti-wear for example)
- 2- Adapt tooth geometry according to the material section to be cut
- 3- Reduce the cutting speed to the minimum 28 to 30 meters/min

**BI-METAL BAND SAWS**
**34 mm x 1,10 mm (1-1/4" x 0,042")**

**QUALITY: M42 (8% Co)**
**M42 (8% Co)**

LENGTH mm	STANDARD		STRUCTURES																																																	
	€	AVAILABLE TEETH	€	AVAILABLE TEETH																																																
3.180	71,47	<table border="1"> <thead> <tr> <th>Ref.</th> <th>TPI</th> <th>α</th> </tr> </thead> <tbody> <tr> <td>944</td> <td>1,14 HR</td> <td>Hook 10°</td> </tr> <tr> <td>947</td> <td>1,25 HR</td> <td>Hook 10°</td> </tr> <tr> <td>949</td> <td>2 HR</td> <td>Hook 10°</td> </tr> <tr> <td>960</td> <td>2/3</td> <td>10°</td> </tr> <tr> <td>961</td> <td>3/4</td> <td>10°</td> </tr> <tr> <td>962</td> <td>4/6</td> <td>7°</td> </tr> <tr> <td>966</td> <td>5/8</td> <td>0°</td> </tr> <tr> <td>967</td> <td>6/10</td> <td>0°</td> </tr> <tr> <td>948</td> <td>8/12</td> <td>0°</td> </tr> </tbody> </table>	Ref.	TPI	α	944	1,14 HR	Hook 10°	947	1,25 HR	Hook 10°	949	2 HR	Hook 10°	960	2/3	10°	961	3/4	10°	962	4/6	7°	966	5/8	0°	967	6/10	0°	948	8/12	0°	71,47	<table border="1"> <thead> <tr> <th>Réf.</th> <th>TPI</th> <th>α</th> </tr> </thead> <tbody> <tr> <td>160</td> <td>2/3</td> <td>Reinforced</td> </tr> <tr> <td>161</td> <td>3/4</td> <td>Reinforced</td> </tr> <tr> <td>162</td> <td>4/6</td> <td>Reinforced</td> </tr> <tr> <td>727</td> <td>5/7</td> <td>Reinforced</td> </tr> <tr> <td>725</td> <td>8/11</td> <td>Reinforced</td> </tr> </tbody> </table> <p> Reinforced teeth with extra setting for profile and structural steel cutting. Teeth lifetime guaranteed. Specially recommended for hand use machines, with high looseness and vibrations.</p>	Réf.	TPI	α	160	2/3	Reinforced	161	3/4	Reinforced	162	4/6	Reinforced	727	5/7	Reinforced	725	8/11	Reinforced
Ref.	TPI		α																																																	
944	1,14 HR		Hook 10°																																																	
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960	2/3		10°																																																	
961	3/4		10°																																																	
962	4/6		7°																																																	
966	5/8		0°																																																	
967	6/10		0°																																																	
948	8/12		0°																																																	
Réf.	TPI		α																																																	
160	2/3		Reinforced																																																	
161	3/4		Reinforced																																																	
162	4/6		Reinforced																																																	
727	5/7		Reinforced																																																	
725	8/11		Reinforced																																																	
3.505	77,89		77,89																																																	
3.720	82,13		82,13																																																	
4.100	89,65		89,65																																																	
4.115	89,94	89,94																																																		
4.520	97,94	97,94																																																		
4.570	98,93	98,93																																																		
4.640	100,33	100,33																																																		
4.800	103,47	103,47																																																		
4.860	104,66	104,66																																																		
4.990	107,25	107,25																																																		
5.070	108,82	108,82																																																		
5.145	110,30	110,30																																																		
5.240	112,18	112,18																																																		
5.270	112,77	112,77																																																		
5.334	114,04	114,04																																																		
5.400	115,33	115,33																																																		
5.620	119,69	119,69																																																		
5.734	121,93	121,93																																																		
5.970	129,59	129,59																																																		
6.070	131,56	131,56																																																		
6.750	145,02	145,02																																																		
6.900	147,99	147,99																																																		


**QUALITY: M42 (8% Co)**
**M51 (10% Co)**

LENGTH mm	MASTER		ANTI-WEAR																						
	€	AVAILABLE TEETH	€	AVAILABLE TEETH																					
3.180	85,75	<table border="1"> <thead> <tr> <th>Ref.</th> <th>TPI</th> <th>α</th> </tr> </thead> <tbody> <tr> <td>761</td> <td>3/4</td> <td>12°</td> </tr> <tr> <td>784</td> <td>4/6</td> <td>12°</td> </tr> </tbody> </table> <p></p>	Ref.	TPI	α	761	3/4	12°	784	4/6	12°	88,22	<table border="1"> <thead> <tr> <th>Ref.</th> <th>TPI</th> <th>α</th> </tr> </thead> <tbody> <tr> <td>201</td> <td>2/3</td> <td>10°</td> </tr> <tr> <td>202</td> <td>3/4</td> <td>10°</td> </tr> <tr> <td>203</td> <td>4/6</td> <td>10°</td> </tr> </tbody> </table>	Ref.	TPI	α	201	2/3	10°	202	3/4	10°	203	4/6	10°
Ref.	TPI		α																						
761	3/4		12°																						
784	4/6		12°																						
Ref.	TPI		α																						
201	2/3		10°																						
202	3/4		10°																						
203	4/6		10°																						
3.505	93,45		96,15																						
3.720	98,54		101,38																						
4.100	107,58		110,68																						
4.115	107,94		111,06																						
4.520	117,53		120,92																						
4.570	118,72		122,15																						
4.640	120,38		123,85																						
4.800	124,16		127,74																						
4.860	125,58		129,20																						
4.990	128,68		132,40																						
5.070	130,58		134,35																						
5.145	132,37		136,19																						
5.240	134,62	138,50																							
5.270	135,31	139,22																							
5.334	136,85	140,79																							
5.400	138,40	142,39																							
5.620	143,62	147,76																							
5.734	146,32	150,54																							
5.970	155,52	160,00																							
6.070	157,88	162,44																							
6.750	174,01	179,03																							
6.900	177,58	182,71																							

**BI-METAL BAND SAWS**

**41 mm x 1,30 mm (1-1/2" x 0,050")**



**QUALITY: M42 (8% Co)**

LENGTH mm	STANDARD																			
	€	AVAILABLE TEETH																		
4.115	124,61	<table border="1"> <thead> <tr><th>Ref.</th><th>TPI</th><th>α</th></tr> </thead> <tbody> <tr><td>941</td><td>1,14HR</td><td>10°</td></tr> <tr><td>977</td><td>2/3</td><td>10°</td></tr> <tr><td>978</td><td>3/4</td><td>10°</td></tr> <tr><td>979</td><td>4/6</td><td>7°</td></tr> <tr><td>998</td><td>5/8</td><td>3°</td></tr> </tbody> </table>	Ref.	TPI	α	941	1,14HR	10°	977	2/3	10°	978	3/4	10°	979	4/6	7°	998	5/8	3°
Ref.	TPI		α																	
941	1,14HR		10°																	
977	2/3		10°																	
978	3/4		10°																	
979	4/6		7°																	
998	5/8		3°																	
4.170	126,17																			
4.570	137,45																			
4.670	140,26																			
4.870	145,92																			
5.030	150,40																			
5.040	150,70																			
5.070	151,55																			
5.145	153,66																			
5.334	159,01																			
5.400	160,85																			
5.450	162,27																			
5.734	170,26																			
5.800	172,12																			
5.920	175,55																			
6.096	178,75																			
6.200	183,41																			
6.300	186,24																			
6.480	191,31																			
6.600	194,69																			
6.700	197,50																			
6.900	203,14																			
7.100	208,79																			

**54 mm x 1,30 mm (2" x 0,050")**



**QUALITY: M42 (8% Co)**

LENGTH mm	STANDARD													
	€	AVAILABLE TEETH												
6.000	237,95	<table border="1"> <thead> <tr><th>Ref.</th><th>TPI</th><th>α</th></tr> </thead> <tbody> <tr><td>994</td><td>2/3</td><td>10°</td></tr> <tr><td>995</td><td>3/4</td><td>10°</td></tr> <tr><td>599</td><td>4/6</td><td>7°</td></tr> </tbody> </table>	Ref.	TPI	α	994	2/3	10°	995	3/4	10°	599	4/6	7°
Ref.	TPI		α											
994	2/3		10°											
995	3/4		10°											
599	4/6		7°											
7.200	283,01													
7.239	284,48													
7.400	290,53													
7.545	295,97													
7.600	298,04													
7.830	306,66													
7.940	310,81													
8.077	315,95													
8.128	317,86													
8.325	325,27													
8.800	343,12													
9.080	353,61													
9.398	365,57													

**54 mm x 1,60 mm (2" x 0,063")**



**QUALITY: M42 (8% Co)**

LENGTH mm	STANDARD																
	€	AVAILABLE TEETH															
6.000	265,74	<table border="1"> <thead> <tr><th>Ref.</th><th>TPI</th><th>α</th></tr> </thead> <tbody> <tr><td>523</td><td>1,4/2</td><td>10°</td></tr> <tr><td>996</td><td>2/3</td><td>10°</td></tr> <tr><td>997</td><td>3/4</td><td>10°</td></tr> <tr><td>525</td><td>4/6</td><td>7°</td></tr> </tbody> </table>	Ref.	TPI	α	523	1,4/2	10°	996	2/3	10°	997	3/4	10°	525	4/6	7°
Ref.	TPI		α														
523	1,4/2		10°														
996	2/3		10°														
997	3/4		10°														
525	4/6		7°														
7.200	316,21																
7.239	317,83																
7.400	324,56																
7.545	330,60																
7.600	332,91																
7.830	342,49																
7.940	347,10																
8.077	352,81																
8.128	354,93																
8.325	363,16																
8.800	383,01																
9.080	394,67																
9.398	407,95																



**BI-METAL BAND SAWS**
**67 mm x 1,60 mm (2-5/8" x 0,063")**
**80 mm x 1,60 mm (3" x 0,063")**

**M42 (8% Co)**
**STANDARD**

 AVAILABLE  
TEETH

Ref.	TPI	α
932	1,25 HR	Hook 10°
933	2 HR	Hook 10°
934	0,75/1,25	10°
935	1,1/1,6	10°
936	1,5/2	10°
937	2/3	10°
938	3/4	10°

PRICE x METER

**55,33 €**

PRICE x WELDING

**23,27 €**

**M42 (8% Co)**
**STANDARD**

 AVAILABLE  
TEETH

Ref.	TPI	α
985	0,75	Hook 10°
987	0,75/1,25	10°
988	1,1/1,6	10°
999	1,5/2	10°
993	2/3	10°

PRICE x METER

**66,97 €**

PRICE x WELDING

**37,16 €**
**TO PLACE AN ORDER:**

indicate the total length in mm and the reference

**HOW TO CALCULATE THE GROSS PRICE OF A BAND SAW:**

Total length in meters x (price x meter) + (Price x welding) = Gross price

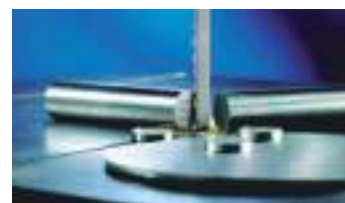
**HIGH CARBON STEEL BAND SAW COILS**
**30 METERS COILS**

**APPLICATIONS:**

Wood

Non ferrous metals, aluminium, copper, brass

Very soft steels


**TEETH PER INCH**

DIMENSIONS	TPI	3	4	6	8	10	14	18	24	€
	REFERENCE									
6 x 0,65			436	401	402	403	404	405	406	127,89*
8 x 0,65			440	408	409	410	411	412	413	130,66*
10 x 0,65	477		414	415	416	417	418	419	439	131,10*
13 x 0,65			420	421	422	423	424	425	476	140,69*
16 x 0,65			426		427					183,85*
16 x 0,80	448		449	450	481	482	451			246,33*
20 x 0,80			442	485	486	487	488	489		266,10*
25 x 0,90	496		491	437	493	452	495			275,67*

\* Till end of stock

Only whole coils



**STAINLESS STEEL BAND SAWS FOR FRESH FOOD INDUSTRY**



For fresh meat with bones and frozen meal cutting



For fresh meat without bones cutting



HALFMOON

Band saws

Yellow

LENGTH mm	13 x 0,50		16 x 0,50		16 x 0,55		19 x 0,50		19 x 0,55	
	€		€		€	€	€		€	
1.500	22,17		22,17		22,17		23,77		23,77	
1.550	22,55		22,55		22,55		24,20		24,20	
1.600	22,92		22,92		22,92		24,63		24,63	
1.625	23,13		23,13		23,13		24,90		24,90	
1.650	23,35		23,35		23,35		25,11		25,11	
1.750	24,09		24,09		24,09		25,96		25,96	
1.830	24,73	Ref. TPI 600 4RR	24,73	Ref. TPI 610 3RR 611 4RR	24,73	Ref. TPI 613 3RR 614 4RR	26,65	Ref. TPI 620 3RR 621 4RR	26,65	Ref. TPI 623 3RR 624 4RR
1.985	25,91		25,91		25,91		28,04		28,04	
2.000	26,01		26,01		26,01		28,14		28,14	
2.040	26,33		26,33		26,33		28,52		28,52	
2.120	26,92		26,92		26,92		29,21		29,21	
2.200	27,56		27,56		27,56		29,91		29,91	
2.350	28,68		28,68	HALFMOON 632	28,68	HALFMOON 634	31,19		31,19	
2.450	29,48		29,48		29,48		32,09		32,09	
2.500	29,85		29,85		29,85		32,51		32,51	
2.750	31,77		31,77		31,77		34,71		34,71	
2.920	33,05		33,05		33,05		36,20		36,20	
3.150	34,86		34,86		34,86		38,22		38,22	
3.250	35,61		35,61		35,61		39,08		39,08	
3.500	37,52		37,52		37,52		41,26		41,26	
3.690	38,97		38,97		38,97		42,91		42,91	

**REMGRIT GRIT-EDGE CARBIDE GRIT BAND SAW COILS**


REMGRIT GRIT EDGE BAND SAW BLADES ARE THE ANSWER FOR TODAY'S TOUGH CUTTING PROBLEMS

SPECIAL FOR GRAPHITE, TITANIUM ALLOYS, ETC.


**CHARACTERISTICS**

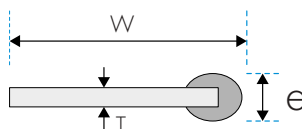
- \*Tungsten carbide grit is permanently bonded to tough alloy steel.
- \*Extremely long life cutting edge that does not snag or strip.
- \*Exceptional life and cutting performance in tough, hard and abrasive materials.
- \*The reversible blade lasts 25% longer.
- \*Continuous edge band should be used on machines with carrier wheels at least 600 mm in diameter.
- \*Smaller diameter wheels will give proportionally less band life due to fatigue.

**EDGE TYPES**

- G: Gulleted  
C: Continuous

**GRIT SIZE**

- M: Medium 200-300μ  
C: Coarse 425-600μ


**GULLETED EDGE**

	DIMENSIONS		e	Edge	Grit	€
	WxT"	WxT mm				Welding meter
308	1/4x0,020"	6x0,51	1,30	G	M	43,57 *
322	3/8x0,025"	10x0,64	1,45	G	M	43,57 *
335	1/2x0,020"	13x0,51	1,30	G	M	43,57 *
330	1/2x0,025"	13x0,64	1,45	G	M	43,57 *
341	3/4x0,032"	19x0,81	1,60	G	M	53,22
350	1"x0,035"	25x0,89	1,95	G	M	53,22
351	1"x0,035"	25x0,89	2,30	G	C	53,22 *
362	1 1/4"x0,035"	32x0,89	2,30	G	C	61,98 *
374	1 1/2"x0,042"	38x1,07	2,50	G	C	61,98 *

\* Till end of stock

**CONTINUOUS EDGE**

	DIMENSIONS		e	Edge	Grit	€
	WxT"	WxT mm				Welding meter
310	1/4x0,020"	6x0,51	1,30	C	M	43,57 *
328	3/8x0,025"	10x0,64	1,45	C	M	43,57 *
337	1/2x0,020"	13x0,51	1,30	C	M	43,57 *
333	1/2x0,025"	13x0,64	1,45	C	M	43,57 *
346	3/4x0,032"	19x0,81	1,60	C	M	53,22 *
356	1x0,035"	25x0,89	1,68	C	M	53,22 *
363	1 1/4"x0,035"	32x0,89	2,50	C	C	61,98 *

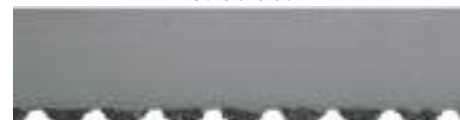
\* Till end of stock

**CUTTING RECOMMENDATIONS**

1. If a specific material is not listed, select conditions for a similar material.
2. Start cutting at low speed; increase band speed until optimum cutting performance is achieved.
3. Large cross-sectioned workpieces require lower speeds, higher feed pressure.
4. Small cross-sectioned workpieces should be cut at higher speeds with moderate pressure.
5. In metals, a fine stringy chip is evidence of proper speed and feed rates.
6. Coolant is essential for metal cutting and it is also recommended for ceramics, glass and similar materials.

\* CAUTION: Use dust collectors and respirators when cutting these and similar materials.

G: Gulleted



\* Gulleted type cutting edge, for cutting operations in materials thicker than 6mm. Perfect for non ferrous materials like rubber, Fiber Glass...

C: Continuous



\* Continuous type cutting edge for finishing cutting operations in materials thinner than 6mm. Perfect for very hard hardness tile, hardened metals, stainless steel, titanium and nickel alloys

## REMGRIT GRIT-EDGE BAND SAW BLADE SELECTION AND APPLICATION

### CUTTING CHART

GROUP	MATERIAL	SPEED m. /min.	COOLING	EDGE	TYPE OF GRAIN	
					MEDIUM	COARSE
STEELS	HARDENED STEEL	45-90	YES	C		●
	HASTELLOY™	36-106	YES	C		●
	STAINLESS STEEL	45-150	YES	C	●	●
	CAST IRON	45-106	YES	D		●
	TITANIUM	45-120	YES	C		●
BUILDING, INDUSTRY	LOW DENSITY CERAMICS	150-450	NO	C	●	
	HIGH DENSITY CERAMICS	60-360	NO	C	●	
	CARBON AND GRAPHITE	1000-1200	NO	C		●
	TILE	45-180	NO	C	●	●
	MARBLE	90-150	YES	C	●	●
	GLASS	150-300	YES	C	●	
PLASTICS, RUBBERS & COMPOSITES	METHACRYLATE	300-900	NO	C	●	
	FOAM	90-210	NO	D	●	
	FIBER GLASS /CARBON (FIBER)	1200-1800	NO	D	●	
	REINFORCED PLASTICS	300-900	NO	D	●	
	REINFORCED RUBBER (TIRES)	360-900	YES	D		●

#### MINIMUM RADIUS PER WIDTH

Blade width	Minimum radius (mm.)
1/4 - 6	12,70
3/8 - 10	27
1/2 - 12	44,50
3/4 - 19	102
1" - 25	140
1 1/4 - 32	240
1 1/2 - 38	318

Radius limits vary with material type, thickness, feed force and pivot point. This table is based on cutting 25 mm. metal.

● Recommended grain




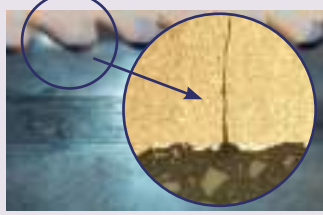














### HOW TO CLEAN THE GRIT EDGE BANDSAW

\* If we use the band saw to cut snaggy materials with tendency to snag the cutting edge, we must clean it with a metal brush, while the bandsaw turns slowly at the machine.

\* You can use also solvent for cleaning.

**TROUBLESHOOTER AND CLAIM ACCEPTANCE**

	<p><b>CRACKS ORIGINATING FROM THE BACK EDGE</b></p>	<p><b>Causes:</b></p> <ul style="list-style-type: none"> <li>• Guides are faulty (crushing the back).</li> <li>• The back edge of the blade is touching the rolling guides.</li> <li>• Blade too tightly fitted in the machine's arm guide when mounted.</li> </ul> <p><b>NON-ACCEPTABLE CLAIM</b></p>	 
	<p><b>CRACKS ORIGINATING FROM THE TOOTH</b></p>	<p><b>Causes:</b></p> <ul style="list-style-type: none"> <li>• Tooth pitch is too short: chips get stuffed.</li> <li>• Tooth pitch is too large: excessive vibrations.</li> <li>• Feeding is too high in comparison with cutting speed.</li> </ul> <p><b>NON-ACCEPTABLE CLAIM</b></p>	
	<p><b>STREAK ON THE BACK</b></p>	<p><b>Causes:</b></p> <ul style="list-style-type: none"> <li>• Back rolling guide is faulty.</li> <li>• The back edge of the blade is touching the rolling guides.</li> </ul> <p><b>NON-ACCEPTABLE CLAIM</b></p>	
	<p><b>DEEP SCRATCH ON THE SIDES OF THE BLADE</b></p>	<p><b>Causes:</b></p> <ul style="list-style-type: none"> <li>• Lateral guides are faulty.</li> <li>• Tooth pitch is too large: excessive vibrations.</li> <li>• Cutting speed is not adapted to the material (too high).</li> <li>• The work piece isn't sufficiently fastened during the cutting operation.</li> </ul> <p><b>NON-ACCEPTABLE CLAIM</b></p>	 
	<p><b>BROKEN OR CRUSHED TOOTH</b></p>	<p><b>Causes:</b></p> <ul style="list-style-type: none"> <li>• Tooth pitch is too short: chips get stuffed.</li> <li>• Tooth pitch is too large: excessive vibrations.</li> <li>• Cutting speed is not adapted to the material (too high).</li> <li>• The work piece isn't sufficiently fastened during the cutting operation.</li> </ul> <p><b>NON-ACCEPTABLE CLAIM</b></p>	
<p><b>CLEAR BREACH AT WELDING POINT</b></p>	<p><b>Causes:</b></p> <ul style="list-style-type: none"> <li>• Manufacturing default: faulty welding.</li> </ul> <p><b>ACCEPTABLE CLAIM</b></p>		
	<p><b>BROKEN BLADE, TOOTH IN OPPOSITE DIRECTION</b></p>	<p><b>Causes:</b></p> <ul style="list-style-type: none"> <li>• Lateral guides too tight.</li> <li>• Saw guide arms too far apart from piece.</li> <li>• Wheels and groups of guides are not aligned.</li> </ul> <p><b>NON-ACCEPTABLE CLAIM</b></p>	
<p><b>UNSTRAIGHT CUT</b></p>	<p><b>Causes:</b></p> <ul style="list-style-type: none"> <li>• Normal tooth wear.</li> <li>• Cutting speed and feed are not adapted to the material.</li> <li>• The tooth pattern is rubbing against the guide side.</li> </ul> <p><b>NON-ACCEPTABLE CLAIM</b></p>		

# HACK SAW BLADES



**BLUE-MASTER**<sup>®</sup>  
by *celesa*

CUTTING TECHNOLOGIES



## HAND SAW BLADES

### BI-METAL


**HSS**

- HSS Teeth with high resistance to impacts
- Tough steel body
- High performance in any material (including stainless steel)


 100 Units  
 Ref. 1224ULBM

 10 Units  
 Ref. 1224ULBM10

 2 Units  
 Ref. 1224UL2

### BI-METAL

	tpi				€/Unit
1224ULBM	24	100			2,43
1224ULBM-50	24	50			2,59
1224ULBM10	24		10		3,04
1224UL2	24			2	3,40

### HSS FLEXIBLE


**HSS**

- Full HSS blade with high resistance to impacts
- High performance in any material


 10 Units  
 Ref. 1224BF10

 2 Units  
 Ref. 1224BF2

### HSS FLEXIBLE

	tpi				€/Unit
1214UL	14	100			2,48
1218UL	18	100			2,43
1224BF	24	100			2,43
1232UL	32	100			2,43
1224BF10	24		10		3,04
1224BF2	24			2	3,40

### TUNGSTEN


 100 Units  
 Ref. 65FH

 10 Units  
 Ref. 65FH10

 2 Units  
 Ref. 65FH2

### TUNGSTEN STEEL

	tpi				€/Unit
65FH	24	100			1,48
65FH-50	24	50			1,57
65FH10	24		10		1,84
65FH2	24			2	2,06

### ECONOMY TUNGSTEN STEEL

	tpi				€/Unit
67FH	24	100			0,49

**DOUBLE CUTTING CARBON STEEL BLADES FOR PLUMBERS**



2 Units  
Ref. 66FH2

Ref. 66FHP



Ref. 66FH



CARBON STEEL				
	tpi			€/Unit
66FHP	24	100		1,81
66FH	24	100		0,84
66FH2	24		2	1,52

**MIXED SETS OF HANDSAW BLADES**



1 Ut. - Ref. 1224ULBM - HSS BIMETAL  
1 Ut. - Ref. 1224BF - HSS FLEXIBLES

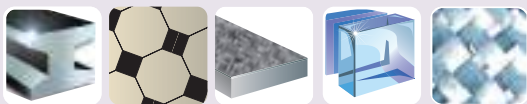
ULBF2 6,80 €U.



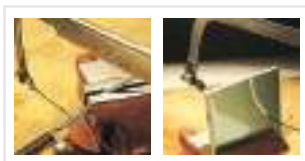
1 Ut. - Ref. 1224ULBM - HSS BI-METAL  
1 Ut. - Ref. 65FH TUNGSTEN STEEL

ULFH2 5,25 €U.

**CARBIDE GRIT EDGE ROD SAWS, CURVE AND STRAIGHT CUTS**



- Cutting edge of tungsten carbide electrodeposited, specially designed for non-ferrous materials
- Accurate and clean cutting
- Cut both directions
- Suitable for standard hacksaw frames



1 Unit Ref. RS 12 CH-S



10 Units Ref. HS 12 CH



1 Unit Ref. HS1 2 CH-S

**CURVE AND STRAIGHT CUTS**

	L mm			€/Unit
RS 12 CH	300	10 U		7,04
RS 12 CH-S	300		1 U	7,96


**STRAIGHT CUTS**


	L mm			€/Unit
HS 12 CH	300	10 U		8,90
HS 12 CH-S	300		1 U	9,79

**POWER HACK SAW BLADES**
**HSS**

- HSS Production - Special for saws, for better performance and durability.
- Shatterproof blades.
- Longer blade life.
- For cutting all kind of materials.



	DIMENSIONS mm	tpi 	SOM €/Unit
SOM3002506	300x25x1,2	6	17,07
SOM3002508	300x25x1,2	8	17,07
SOM3002510	300x25x1,2	10	17,07
SOM3002514	300x25x1,2	14	17,07
SOM3502510	350x25x1,6	10	22,23
SOM3502514	350x25x1,6	14	22,23
SOM3503006	350x32x1,6	6	25,96
SOM3503008	350x32x1,6	8	25,96
SOM3503010	350x32x1,6	10	25,96
SOM3503014	350x32x1,6	14	25,96
SOM4003204	400x32x1,6	4	29,06
SOM4003206	400x32x1,6	6	29,06
SOM4003208	400x32x1,6	8	29,06
SOM4003210	400x32x1,6	10	29,06
SOM4003214	400x32x1,6	14	29,06
SOM4503204	450x32x1,6	4	32,02
SOM4503206	450x32x1,6	6	32,02
SOM4503208	450x32x1,6	8	32,02
SOM4503210	450x32x1,6	10	32,02
SOM4503214	450x32x1,6	14	32,02
SOM4504004	450x40x2,0	4	45,34
SOM4504006	450x40x2,0	6	45,34

	DIMENSIONS mm	tpi 	SOM €/Unit
SOM4504008	450x40x2,0	8	45,34
SOM4504010	450x40x2,0	10	45,34
SOM5004004	500x40x2,0	4	58,13
SOM5004006	500x40x2,0	6	58,13
SOM5004008	500x40x2,0	8	58,13
SOM5004010	500x40x2,0	10	58,13
SOM5505004	550x50x2,5	4	75,63
SOM5505006	550x50x2,5	6	75,63
SOM5505008	550x50x2,5	8	75,63
SOM5505010	550x50x2,5	10	75,63
SOM6005004	600x50x2,5	4	88,26
SOM6005006	600x50x2,5	6	88,26
SOM6005008	600x50x2,5	8	88,26
SOM6005010	600x50x2,5	10	88,26
SOM6505004	650x50x2,5	4	108,14
SOM6505006	650x50x2,5	6	108,14
SOM6505008	650x50x2,5	8	108,14
SOM6505010	650x50x2,5	10	108,14
SOM7005004	700x50x2,5	4	116,72
SOM7005006	700x50x2,5	6	116,72
SOM7005008	700x50x2,5	8	116,72
SOM7005010	700x50x2,5	10	116,72

**HACK SAW FRAMES**

**ASYH2015**

- Professional hacksaw frames
- Reinforced ergonomic shank
- High tension: Vibrations reduced
- Storage for blades
- Quick change mechanism
- Includes bimetal quality blade 300 mm

**26,77 €**

**ASYH99**

- Professional quality
- Reinforced shank, ergonomic
- 10 blades store
- Includes bimetal quality blade 300 mm

**19,14 €**

**ASYH2009**

- Standard quality
- Rigid metal structure
- Includes bimetal quality blade 300 mm

**16,02 €**

**ASYH2107**

- Reinforced shank, ergonomic
- 150 mm. length blades
- Full aluminium body
- Includes bimetal quality blade 150 mm (Ref. H2107)

**8,18 €\***

\*Available until end of stock


**ASYH012**

- Saw arches support shank
- For 300 mm length blades

**10,36 €**

# JIG SAW BLADES



**BLUE-MASTER**<sup>®</sup>  
by *celeso*

CUTTING TECHNOLOGIES

**GUIDELINES FOR CHOOSING THE PROPER JIG SAW BLADE**

\* The Saw Blades valid for Wood are also valid for Plastic

REF CELESA	REF BOSCH	MATERIAL	CUTTING LENGTH	FINISHING	SPEED	TEETH	CURVED CUTS	WOOD											
														Hard wood	Chipboard	Plywood	Agglomerate	Wood & nails	Laminated particle board

PROFESSIONAL WOOD (ACCURATE CUT)																					
P5543	T101 AO	CV	50	Fine	Normal	1,3	*	2-20	2-20	2-20	2-20										
P5501	T101 B	CV	75	Fine	Normal	2,5		4-30	4-30	4-30	4-30										
P5532	-	CV	75	Fine	Normal	2,5	*	4-30	4-30	4-30	4-30										
P5516	T101 BR	CV	75 <sup>up</sup>	Fine	Normal	2,5		4-30	4-30	4-30	4-30										
P5550	T101 AIF	CV	75	Fine	Normal	2		3-60	3-60	3-60	3-60										
P5545	Premium	CV	75	Fine	High	3		6-30	6-30	6-30	6-30										
P5502	T101 D	CV	75	Fine	High	4		10-45	10-45	10-45	10-45										
P5533	T101 DP	CV	75F	Fine	High	4		6-60	6-60	6-60	6-60										
P5542	T301 CD	CV	90	Fine	High	3		6-60	6-60	6-60	6-60										
P5544	T234 X	CV	90	Fine	Normal	Progr.		1-80	1-80	1-80	1-80										
P5522	T301 D	CV	95	Fine	High	4		8-75	8-75	8-75	8-75										
P5555	T301 BCP	CV	110	Fine	High	2		3-100	3-100	3-100	3-100									3-100	
P5548	T101 BL	CV	110	Fine	Normal	2,5		4-100	4-100	4-100	4-100										
P5525	T301 DL	CV	110	Fine	High	4		6-100	6-100	6-100	6-100										
P5547	-	CV	220	Fine	Normal	2,5		4-200	4-200	4-200	4-200									4-200	
P5552	-	CV	55-85	Fine	High	2,5/2,2-3,2		3-40	3-40	3-40	3-40									3-40	
PROFESSIONAL WOOD (FAST AND ROUGH CUT)																					
P5503	T144 D	CV	75	Rough	High	4		6-60	6-60	6-60	6-60									6-60	
P5560	T144 DP	CV	75F	Rough	High	4		6-60	6-60	6-60	6-60									6-60	
P5504	T244 D	CV	75	Rough	High	4		6-60	6-60	6-60	6-60									6-60	
P5553	~T344 D	CV	110	Rough	High	4		8-100	8-100	8-100	8-100									8-100	
P5554	T344 D	CV	130	Rough	High	4		8-120	8-120	8-120	8-120									8-120	
P5561	Extra Larga	CV	230	Rough	High	4		8-150	8-150	8-150	8-150									8-150	
WOOD CLASSICO (ROUGH CUT)																					
P5506	T119 A	CV	50	Rough	Normal	1,2		2-15		2-15											
P5507	T119 B	CV	50	Rough	Normal	2		4-30		4-30											
P5508	T119 BO	CV	50	Rough	Normal	2	*	4-20		4-20											
P5505	T111 C	CV	75	Rough	Normal	3		5-60		5-60											
EXTRA PROFESSIONAL WOOD (FAST & ACCURATE CUT)																					
P5541	T101 AIF	Bi	75	Fine	High	2		2-30	2-30	2-30	2-30	2-30									
P5531	T101 BF	Bi	75	Fine	High	2,5		4-30	4-30	4-30	4-30									4-30	
P5534	T144 DF	Bi	75	Fine	High	4		5-50	5-50	5-50	5-50									5-50	
P5540	T345 XF	Bi	110	Fine	High	2-4		3-65	3-65	3-65	3-65	3-65								3-65	
METAL CLASSICO																					
P5511	T118 G	HSS	50	Normal	Normal	0,9															
P5512	T118 A	HSS	50	Normal	Normal	1,2															
P5513	T218 A	HSS	50	Normal	Normal	1,2															
P5514	T118 B	HSS	50	Normal	Normal	2															
P5519	T101 A	HSS	75	Fine	Normal	2															
P5509	T127 D	HSS	75	Rough	Normal	3															
P5559	T123 XF	HSS	75	Normal	Normal	1,2/2,5															
P5520	T318 A	HSS	110			1,2															
METAL EXTRA PROFESSIONAL																					
P5524	T118 AF	Bi	50	Normal	Normal	1,2															
P5523	T118 BF	Bi	50	Normal	Normal	2															
P5551	~T318AF	Bi	75	Normal	Normal	1,2															
P5537	T127 DF	Bi	75	Rough	Normal	3														3-15	
P5535	T318 AF	Bi	110	Fine	Normal	1,2															
P5536	T318 BF	Bi	110	Normal	Normal	2															
SANDWICH PANEL																					
P5546	T718BF	Bi	180	Rough	Normal	1,4															
P5566	T 1018 AFP	Bi	230	Rough	Normal	1,2															
MULTIPURPOSE																					
P5526	-	Bi	110	Normal	Fast	1,8/2,5		3-100	3-100	3-100										3-100	
P5549	-	Bi/ CV	-	Fine	Fast	-		3-100	3-100	3-100										3-100	
DIAMOND																					
JIG55/427	-	DIA	55	Fine	High	-														1-15	
JIG55/602	-	DIA	55	Fine	High	-															1-15
JIG75/427	-	DIA	75	Fine	High	-															1-20
JIG75/602	-	DIA	75	Fine	High	-															1-20
CARBIDE																					
P5538	T141 HM	CARBIDE TIP	75	Fine	High	4,3															
P5539	T118 EHM	CARBIDE TIP	50	Fine	High	1,4															
GJ12	T150 RIFF	CARBIDE	54	Fine	High	-															
GJ14	T130 RIFF	CARBIDE	54	Fine	High	-															
NON TOOTHED BLADE																					
P5557	T313 AW	CV	127	Fine	High																
P5558	T113 A	CV	75	Fine	High																



**GUIDELINES FOR CHOOSING THE PROPER JIG SAW BLADE**

METAL							OTHER MATERIALS									
Stainless steel	Metal in general	Sheet	Laminated sheet	Non ferrous (Copper, brass)	Aluminium	Sandwich construction	Plastic in general	Acrylic glass	Fiberglass	Uralit	Ceramics	Concrete	Glass	Leather rubber cardboard	Plaster Board	

**PROFESSIONAL WOOD (ACCURATE CUT)**

	4-30
	4-30
	4-30
	3-60
	6-30
	6-60
	6-60
	6-60
	8-75
	3-100
	4-100
	6-100
	4-200
	3-40

**PROFESSIONAL WOOD (FAST AND ROUGH CUT)**

	8-60
	5-50
	8-60
	8-100
	8-120
	8-150

**WOOD CLASSICO (ROUGH CUT)**

	2-15	
	4-20	4-20
	4-20	4-20
	5-60	

**EXTRA PROFESSIONAL WOOD (FAST & ACCURATE CUT)**

	3-10	3-10
	4-30	
	6-60	
	8-85	

**METAL CLASSICO**

	0,9-1,2	0,9-1,2	0,9-1,2	0,9-1,2	0,9-1,2	0,9-1,2
	1,5-3	1,5-3	1,5-3	1,5-3	1,5-3	1,5-3
	1,5-3	1,5-3	1,5-3	1,5-3	1,5-3	1,5-3
	3-6	3-6		3-6	3-6	
	2-20	2-20		2-20	2-20	
	3-15	3-15		3-15	3-15	
	1,5-10	1,5-10		1,5-10	1,5-10	
	1,5-3	1,5-3		1,5-3	1,5-3	1,5-65

**METAL EXTRA PROFESSIONAL**

	1,5-3	1,5-3	1,5-3	1,5-3	1,5-3	1,5-3	1,5-3
	2-60	2-60	2-60	2-60	2-60		2-6
	1,5-3	1,5-3	1,5-3	1,5-3	1,5-3		1,5-3
	3-15	3-15	3-15	3-15	3-15		3-15
	1,5-3	1,5-3	1,5-3	1,5-3	1,5-3	2-65	1,5-3
	2-6	2-6	2-6	2-6	2-6	2-85	2-6

**SANDWICH PANEL**

	1,5-3	1,5-3	1,5-3	1,5-3	1,5-3	2-180	1,5-3	1,5-3
	1-3	1-3	1-3	1-3	1-3	2-210	1-3	1-3

**MULTIPURPOSE**

	1,5-3	1,5-3	1,5-3	1,5-3	1,5-3	1,5-3	3-100	3-100	1,5-3	1,5-3
	1,5-3	1,5-3	1,5-3	1,5-3	1,5-3	1,5-3	3-100	3-100		

**DIAMOND**

	1-15	1-15	1-15		1-15		1-15
	1-15	1-15	1-15		1-15		1-15
	1-20	1-20	1-20		1-15		1-15
	1-20	1-20	1-20		1-20		1-20

**CARBIDE**

					5-50			5-50
					1-5			1-5
					2-15		2-15	
					2-15		2-15	

**NON TOOTHED BLADE**

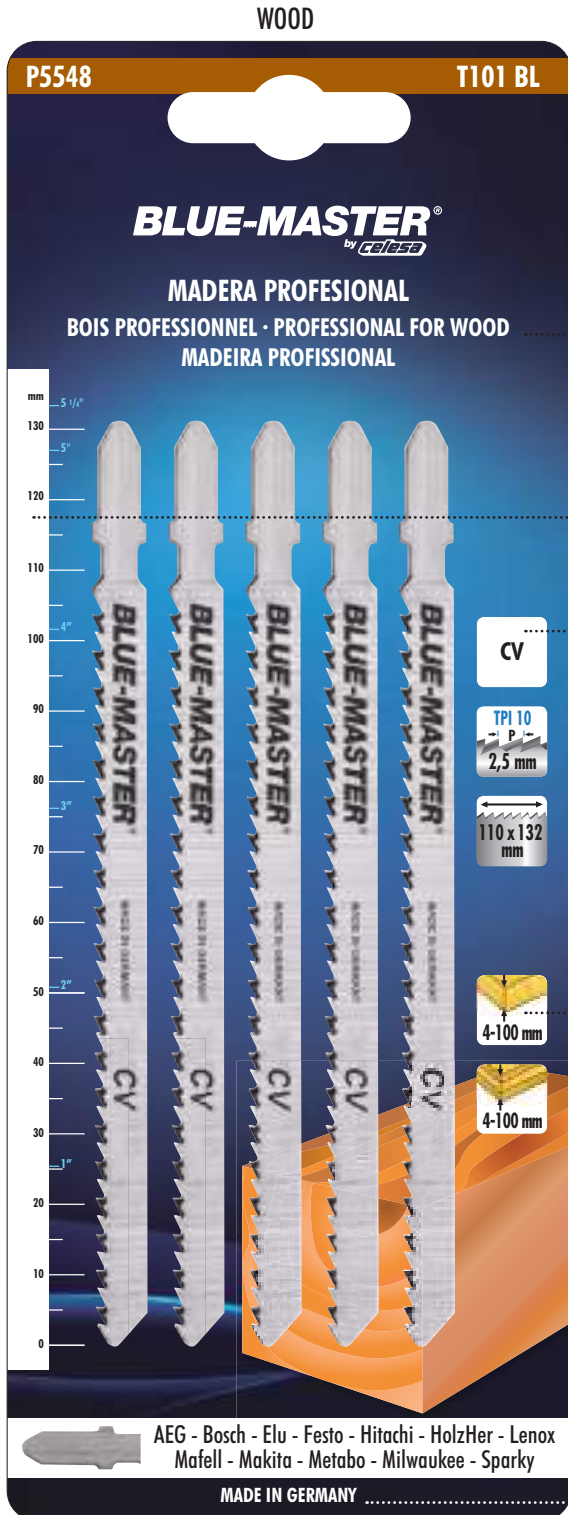
								1-100
								1-50

**JIG SAW BLADES BLUE-MASTER**

The wide range of Jig Saw Blades BLUE MASTER meets the highest requirements in all kind of applications, from solid wood to hard metals or synthetic materials. The state-of-the-art production technologies and high quality standards provide the best performances in all applications becoming the market leader in Jig Saw Blades.

Manufactured with the best raw materials for the applications and designed according to the most adequate geometries to obtain the maximum performance in every cutting operation.

**JIG SAW BLADES DESCRIPTIVE BLISTER**



APPLICATION MARKING IN COLOURS

- Wood
- Metal
- Multipurpose

DESCRIPTION OF THE APPLICATION

RULER TO CHECK THE DIMENSIONS

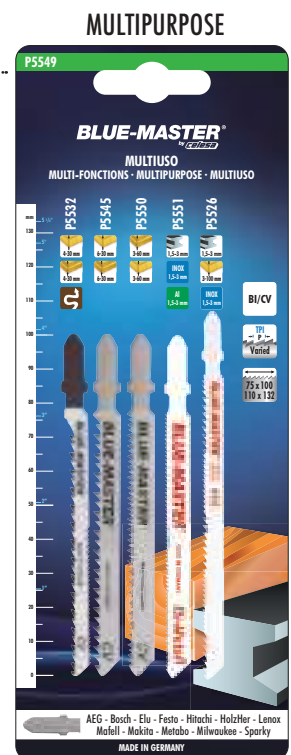
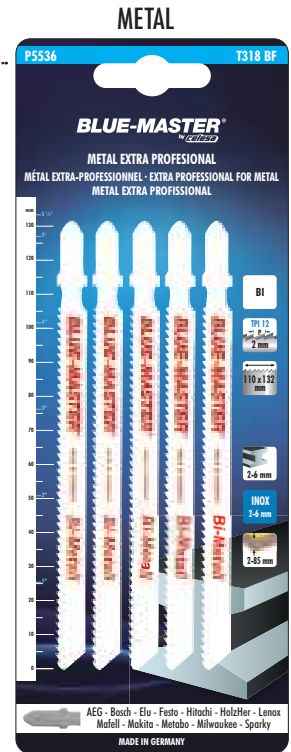
ICONS FOR THE CHARACTERISTICS

- Manufacturing material
- Tooth characteristics
- Dimensions

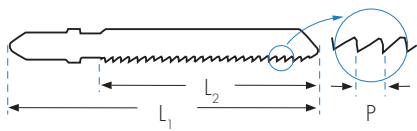
ICONS FOR THE APPLICATIONS

SHANK COMPATIBILITY

ORIGIN



**JIG SAW BLADES**

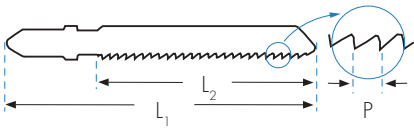


Shank Suitable for the following machines:

**AEG - Bosch - Elu - Festo - Hitachi - HolzHer - Lenox  
Mafell - Makita - Metabo - Milwaukee - Sparky**



Ref. CELESA	Ref. ULTRA	Ref. BOSCH	TEETH PITCH	DIMENSIONS L2 x L1	QUALITY	APPLICATIONS
<b>PROFESSIONAL WOOD (ACCURATE CUT)</b>						
Ref. P5543	-	T101 AO	TPI 20 1,3 mm	50 x 75 mm	CV	2-20 mm
						Blister 5u.: 11,01 €
Ref. P5501	Ref. 8001	T101 B	TPI 10 2,5 mm	75 x 100 mm	CV	4-30 mm
						Blister 5u.: 9,59 €
Ref. P5532	-	-	TPI 10 2,5 mm	75 x 100 mm	CV	4-30 mm
Double cut with extra clean cut						
						Blister 5u.: 14,58 €
Ref. P5516	Ref. 8018	T101 BR	UPCUT TEETH	TPI 10 2,5 mm	75 x 100 mm	CV
Precise and clean cuts						
						Blister 5u.: 11,46 €
Ref. P5550	-	T101 AIF	TPI 12 2 mm	75 x 100 mm	CV	3-60 mm
Upcut and downcut in the same blade for extra clean cut						
						Blister 5u.: 11,48 €
Ref. P5545	-	Premium	TPI 8 3 mm	75 x 100 mm	CV	6-30 mm
The best blade ever for wood cutting						
						Blister 5u.: 11,70 €
Ref. P5502	Ref. 8002	T101 D	TPI 6 4 mm	75 x 100 mm	CV	10-45 mm
						Blister 5u.: 9,69 €

**JIG SAW BLADES**


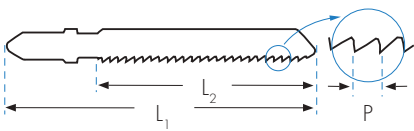
Shank Suitable for the following machines:

**AEG - Bosch - Elu - Festo - Hitachi - HolzHer - Lenox  
 Matell - Makita - Metabo - Milwaukee - Sparky**


Ref. CELESA	Ref. ULTRA	Ref. BOSCH	TEETH PITCH	DIMENSIONS L2 x L1	QUALITY	APPLICATIONS
<b>PROFESSIONAL WOOD (ACCURATE CUT)</b>						
Ref. P5533	-	T101 DP	4 mm	75 x 100 mm	CV	6-60 mm 6-60 mm Blister 5u.: 12,43 €
Ref. P5542	-	T301 CD	3 mm	90 x 115 mm	CV	6-60 mm 6-60 mm Blister 5u.: 12,69 €
Ref. P5544	-	T234 X	2,5-3,2 mm	90 x 115 mm	CV	1-80 mm 1-80 mm Blister 5u.: 18,60 €
Ref. P5522	Ref. 8022	T301 D	4 mm	95 x 115 mm	CV	8-75 mm 8-75 mm Blister 5u.: 12,50 €
Ref. P5555	-	T301 BCP	2 mm	110 x 132 mm	CV	3-100 mm 3-100 mm Blister 5u.: 16,06 €
Ref. P5548	-	T101 BL	2,5 mm	110 x 132 mm	CV	4-100 mm 4-100 mm Blister 5u.: 12,56 €
Ref. P5525	-	T301 DL	4 mm	110 x 132 mm	CV	6-100 mm 6-100 mm Blister 5u.: 12,50 €
Ref. P5547	-	-	2,5 mm	220 x 250 mm	CV	4-200 mm 4-200 mm Blister 5u.: 50,26 €



**JIG SAW BLADES**



Shank Suitable for the following machines:

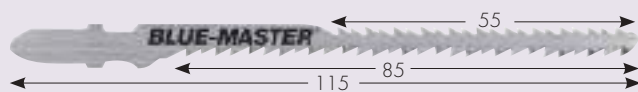
**AEG - Bosch - Elu - Festo - Hitachi - HolzHer - Lenox  
Mafell - Makita - Metabo - Milwaukee - Sparky**



Ref. CELESA	Ref. ULTRA	Ref. BOSCH	TEETH PITCH	DIMENSIONS L2 x L1	QUALITY	APPLICATIONS
-------------	------------	------------	-------------	--------------------	---------	--------------

**PROFESSIONAL WOOD (ACCURATE CUT)**

Ref. P5552



Close curve cuts



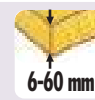
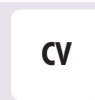
Blister 5u.: 24,26 €

**PROFESSIONAL WOOD (FAST AND ROUGH CUT)**

Ref. P5503

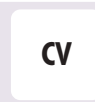
Ref. 8006

T144 D



Blister 5u.: 8,32 €

Ref. P5560

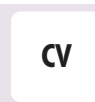


Blister 5u.: 10,26 €

Ref. P5504

Ref. 8007

T244 D

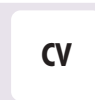
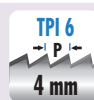


Blister 5u.: 9,41 €

Ref. P5553

Ref. 8024

~T344 D

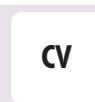
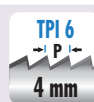


Blister 5u.: 11,33 €

Ref. P5554

Ref. 8080

T344 D

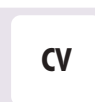
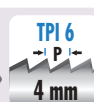


Blister 5u.: 14,88 €

Ref. P5561

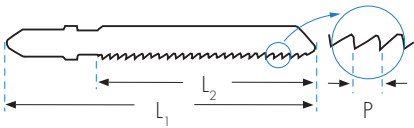
EXTRA LONG SERIES

T 1044 DP



Blister 5u.: 43,20 €



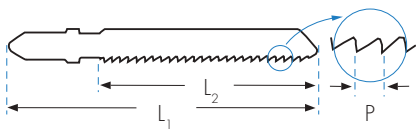
**JIG SAW BLADES**


Shank Suitable for the following machines:

**AEG - Bosch - Elu - Festo - Hitachi - HolzHer - Lenox  
 Matell - Makita - Metabo - Milwaukee - Sparky**


Ref. CELESA	Ref. ULTRA	Ref. BOSCH	TEETH PITCH	DIMENSIONS L2 x L1	QUALITY	APPLICATIONS
<b>WOOD CLASSICO (ROUGH CUT)</b>						
Ref. P5506	Ref. 8004	T119 A	TPI 21 P 1,2 mm	50 x 75 mm	CV	2-15 mm  2-15 mm Blister 5u.: 5,68 €
Ref. P5507	Ref. 8005	T119 B	TPI 12 P 2 mm	50 x 75 mm	CV	4-30 mm  4-30 mm Blister 5u.: 5,46 €
Ref. P5508	Ref. 8015	T119 BO	TPI 12 P 2 mm	50 x 75 mm	CV	4-20 mm  4-20 mm Blister 5u.: 7,88 €
Ref. P5505	Ref. 8003	T111 C	TPI 8 P 3 mm	75 x 100 mm	CV	5-60 mm  5-60 mm Blister 5u.: 5,68 €
<b>EXTRA PROFESSIONAL WOOD (FAST &amp; ACCURATE CUT)</b>						
Ref. P5541	-	T101 AIF	TPI 12 P 2 mm	75 x 100 mm	BI	2-30 mm  2-30 mm Blister 5u.: 20,06 €
Ref. P5531	Ref. 8025	T101 BF	TPI 10 P 2,5 mm	75 x 100 mm	BI	4-30 mm  4-30 mm Blister 5u.: 20,88 €
Ref. P5534	Ref. 8021	T144 DF	TPI 6 P 4 mm	75 x 100 mm	BI	5-50 mm  5-50 mm Blister 5u.: 16,24 €
Ref. P5540	-	T345 XF	TPI 6-12 P 2-4 mm	110 x 132 mm	BI	3-65 mm  3-65 mm Blister 5u.: 23,07 €
Progressive teeth						

**JIG SAW BLADES**



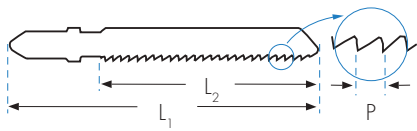
Shank Suitable for the following machines:

**AEG - Bosch - Elu - Festo - Hitachi - HolzHer - Lenox  
Mafell - Makita - Metabo - Milwaukee - Sparky**



Ref. CELESA	Ref. ULTRA	Ref. BOSCH	TEETH PITCH	DIMENSIONS L2 x L1	QUALITY	APPLICATIONS
<b>METAL CLASSICO</b>						
Ref. P5511	Ref. 8012	T118 G	0,9 mm	50 x 75 mm	HSS	0,9-1,2 mm <b>Al</b> 0,9-1,2 mm Blister 5u.: 10,08 €
Ref. P5512	Ref. 8009	T118 A	1,2 mm	50 x 75 mm	HSS	1,5-3 mm <b>Al</b> 1,5-3 mm Blister 5u.: 9,50 €
Ref. P5513	Ref. 8010	T218 A	1,2 mm	50 x 75 mm	HSS	1,5-3 mm <b>Al</b> 1,5-3 mm Blister 5u.: 10,78 €
Ref. P5514	Ref. 8011	T118 B	2 mm	50 x 75 mm	HSS	3-6 mm <b>Al</b> 3-6 mm Blister 5u.: 9,50 €
Ref. P5519	Ref. 8008	T101 A	2 mm	75 x 100 mm	HSS	2-20 mm <b>Al</b> 2-20 mm Blister 5u.: 15,20 €
Ref. P5509	Ref. 8013	T127 D	3 mm	75 x 100 mm	HSS	3-15 mm <b>Al</b> 3-15 mm Blister 5u.: 11,81 €
Ref. P5559	-	T123 XF	1,2/2,5 mm	75 x 100 mm	HSS	1,5-10 mm <b>Al</b> 1,5-10 mm Blister 5u.: 16,26 €
Ref. P5520	Ref. 8016	T318 A	1,2 mm	110 x 132 mm	HSS	1,5-3 mm <b>Al</b> 1,5-3 mm Blister 5u.: 14,97 €

## JIG SAW BLADES



Shank Suitable for the following machines:

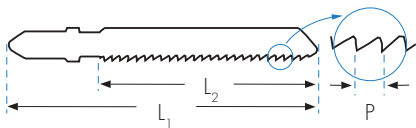
**AEG - Bosch - Elu - Festo - Hitachi - HolzHer - Lenox  
Mafell - Makita - Metabo - Milwaukee - Sparky**



Ref. CELESA	Ref. ULTRA	Ref. BOSCH		TEETH PITCH	DIMENSIONS L2 x L1	QUALITY	APPLICATIONS		
<b>METAL EXTRA PROFESSIONAL</b>									
Ref. P5524	Ref. 8027	T118 AF		<b>TPI 21</b> P 1,2 mm	 50 x 75 mm	BI	 1,5-3 mm	<b>INOX</b> 1,5-3 mm	<b>Al</b> 1,5-3 mm
							Blister 5u.:	11,96 €	
Ref. P5523	Ref. 8028	T118 BF		<b>TPI 12</b> P 2 mm	 50 x 75 mm	BI	 2-6 mm	<b>INOX</b> 2-6 mm	<b>Al</b> 2-6 mm
							Blister 5u.:	12,29 €	
Ref. P5551	-	~T318 AF		<b>TPI 21</b> P 1,2 mm	 75 x 100 mm	BI	 1,5-3 mm	<b>INOX</b> 1,5-3 mm	<b>Al</b> 1,5-3 mm
							Blister 5u.:	14,18 €	
Ref. P5537	-	T127 DF		<b>TPI 8</b> P 3 mm	 75 x 100 mm	BI	 3-15 mm	<b>INOX</b> 3-15 mm	<b>Al</b> 3-15 mm
							Blister 5u.:	15,47 €	
Ref. P5535	Ref. 8019	T318 AF		<b>TPI 21</b> P 1,2 mm	 110 x 132 mm	BI	 1,5-3 mm	<b>INOX</b> 1,5-3 mm	 2-65 mm
							Blister 5u.:	22,84 €	
Ref. P5536	Ref. 8020	T318 BF		<b>TPI 12</b> P 2 mm	 110 x 132 mm	BI	 2-6 mm	<b>INOX</b> 2-6 mm	 2-85 mm
							Blister 5u.:	22,84 €	
<b>SANDWICH PANEL</b>									
Ref. P5546	Ref. 8082	T718 BF	SANDWICH 	<b>TPI 18</b> P 1,4 mm	 180 x 200 mm	BI	 2-180 mm	 1,5-3 mm	
							Blister 5u.:	44,80 €	
Ref. P5566		T 1018 AFP	SANDWICH 	<b>TPI 18</b> P 1,2 mm	 230 x 250 mm	BI	 2-210 mm	 1-3 mm	
							Blister 5u.:	50,52 €	



**JIG SAW BLADES**



Shank Suitable for the following machines:

**AEG - Bosch - Elu - Festo - Hitachi - HolzHer - Lenox  
Mafell - Makita - Metabo - Milwaukee - Sparky**



Ref. CELESA	Ref. ULTRA	Ref. BOSCH	TEETH PITCH	DIMENSIONS L2 x L1	QUALITY	APPLICATIONS
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**MULTIPURPOSE**

Ref. P5526

Ref. 8017

-



TPI 14/10  
P  
1,8/2,5mm

110 x 132  
mm

BI

3-100 mm

1,5-3 mm

INOX  
1,5-3 mm

Variable teeth

Blister 5u.: 21,54 €

Ref. P5549



1Ud. 5532  
1Ud. 5545  
1Ud. 5550  
1Ud. 5526

1Ud. 5551

TPI  
P  
Varied

75 x 110  
110 x 132

BI/CV

3-100 mm

1,5-3 mm

INOX  
1,5-3 mm

Blister 5u.: 16,68 €



**DIAMOND**

Ref. JIG55/427

-

-



Grit  
FINE

55 x 78  
mm

★ ★ ★

1-15 mm

1-15 mm

Plastic pouch 1u.: 44,55 €

Ref. JIG55/602

-

-



Grit  
COARSE

55 x 78  
mm

★ ★ ★

1-15 mm

1-15 mm

Plastic pouch 1u.: 44,55 €

Ref. JIG75/427

-

-



Grit  
FINE

75 x 96  
mm

★ ★ ★

1-20 mm

1-15 mm

Plastic pouch 1u.: 50,35 €

Ref. JIG75/602

-

-



Grit  
COARSE

75 x 100  
mm

★ ★ ★

1-20 mm

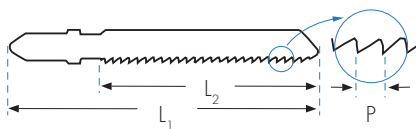
1-20 mm

Plastic pouch 1u.: 50,35 €

Jig saw blades

Pink

## JIG SAW BLADES



Shank Suitable for the following machines:

**AEG - Bosch - Elu - Festo - Hitachi - HolzHer - Lenox  
Mafell - Makita - Metabo - Milwaukee - Sparky**



Ref. CELESA	Ref. ULTRA	Ref. BOSCH	TEETH PITCH	DIMENSIONS L2 x L1	QUALITY	APPLICATIONS
<b>CARBIDE</b>						
Ref. P5538	-	T141 HM	4,3 mm	75 x 100 mm		5-50 mm Plastic pouch 1u.: 19,47 €
Special application for laminated plaster boards and fiberglass.						
Ref. P5539	-	T118 EHM	1,4 mm	50 x 75 mm		1-5 mm Plastic pouch 3u.: 36,50 €
Special application for laminated plaster boards and fiberglass.						
Ref. GJ12	Ref. 8040	T150 RIFF	FINE	54 x 75 mm	Tungsten	2-15 mm Plastic pouch 5u.: 18,49 €
Special application for ceramics.						
Ref. GJ14	-	T130 RIFF	COARSE	54 x 75 mm	Tungsten	2-15 mm Plastic pouch 5u.: 18,49 €
Special application for ceramics.						



Ref. CELESA	Ref. ULTRA	Ref. BOSCH	TEETH PITCH	DIMENSIONS L2 x L1	QUALITY	APPLICATIONS
<b>NOT SERRATED BLADES</b>						
Ref. P5557	-	T313AW		127 x 152 mm	CV	1-100 mm Plastic pouch 1u.: 59,69 €
Ref. P5558	-	T113A		75 x 100 mm	CV	1-50 mm Plastic pouch 1u.: 25,29 €













**EQUIVALENCE CHART FOR JIG SAW BLADES**

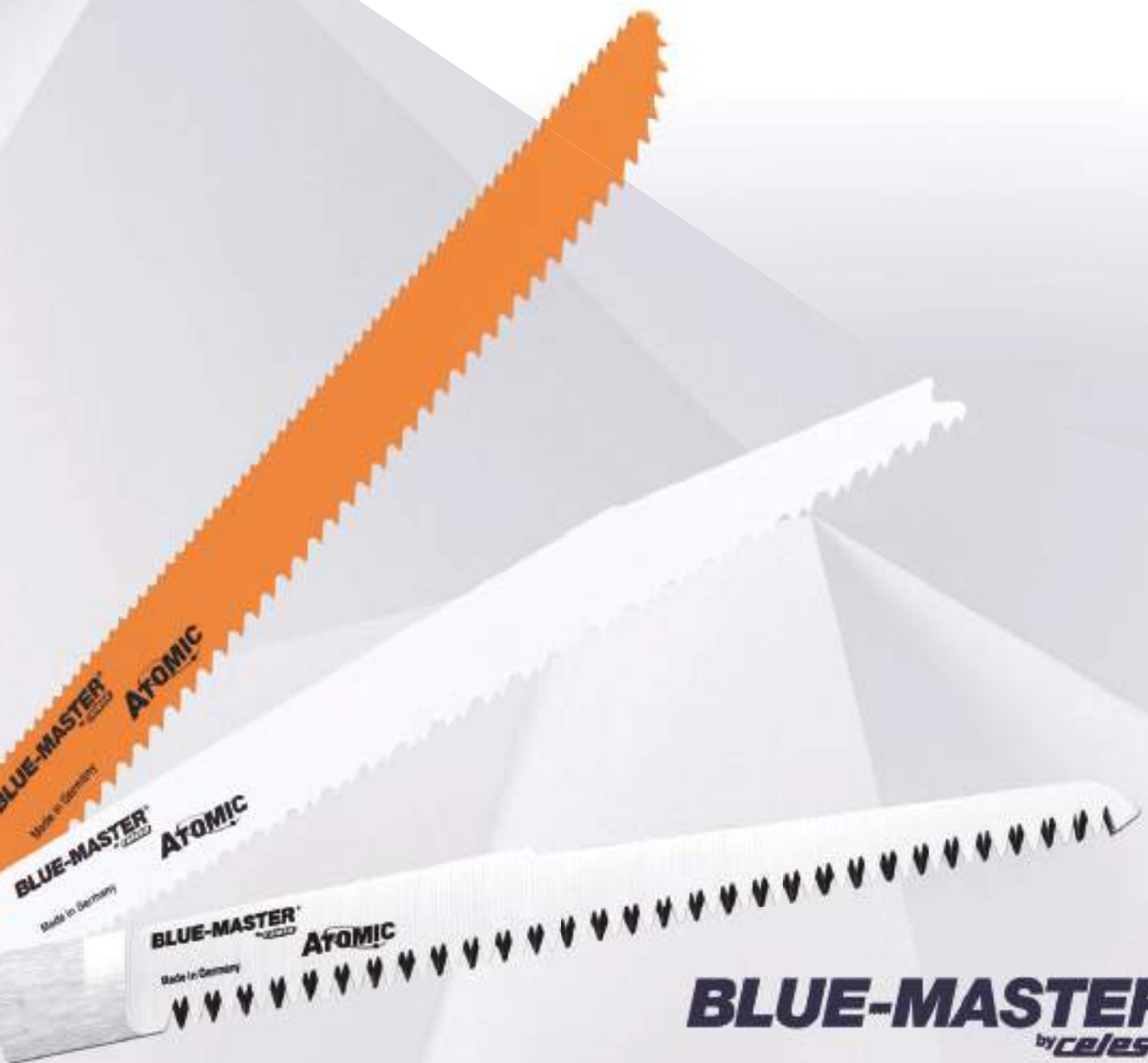
CODE CELESA	BOSCH	ASEIN	A.E.G.	MAKITA	LENOX	METABO	FESTO	HITACHI	ULTRA	STARRET
<b>PROFESSIONAL WOOD (ACCURATE CUT)</b>										
P5543	T101 AO	2113	373392	-	-	23651	S50/1,4	-	-	-
P5501	T101 B	2110	254061	P-04606	F 450 S	23624	S75/2,5	12501	8001	KGf108
P5532	-	-	-	-	-	-	-	-	-	-
P5516	T 101 BR	2114	346079	P-04662	F 450 SR	-	-	-	8018	KGf121
P5550	T 101AIF	-	-	-	-	-	-	-	-	-
P5545	T 301CD	-	-	-	-	-	-	-	-	-
P5502	T 101 D	2170	275351	P-04612	F 416 SC	23635	-	12502	8002	KGf110
P5533	T 101 DP	2172	373080	-	-	23655	S75/4FS	-	-	-
P5542	T 301CD	2150	-	-	-	23977	-	-	-	-
P5544	T 234 X	2105	-	-	-	-	-	-	-	-
P5522	T 301 D	-	-	-	F 410 S	-	-	-	8022	KGf120
P5555	T 301 BCP	-	-	-	-	-	-	-	-	-
P5548	T 101 BL	-	-	-	-	-	-	-	-	-
P5525	T 301 DL	2180	346071	-	-	-	-	-	-	-
P5547	-	-	-	-	-	-	-	-	-	-
P5552	-	-	-	-	-	-	-	-	-	-
<b>PROFESSIONAL WOOD (FAST AND ROUGH CUT)</b>										
P5503	T144 D	2360	213116	P-04640	F 406 S	23633	S75/4	12504	8006	-
P5560	T144 DP	-	-	-	-	-	-	-	-	-
P5504	T244 D	2370	265654	P-04656	-	23649	S75/4K	12505	8007	-
P5553	~T344 D	-	-	-	-	-	-	-	8024	-
P5554	T344 D	-	-	-	-	-	-	-	8080	-
P5561	T 1044 DP	-	-	-	-	-	-	-	-	-
<b>WOOD CLASSICO (ROUGH CUT)</b>										
P5506	T119 A	2400	274352	-	-	23630	-	-	8004	-
P5507	T119 B	2410	274353	P-04581	F 410 S	23631	-	-	8005	KGf106
P5508	T119 BO	2413	274650	P-04597	F 416 SC	23646	-	-	8015	KGf105
P5505	T111 C	2280	254071	P-04628	-	23632	S75/3	12503	8003	KGf111
<b>EXTRA PROFESSIONAL WOOD (FAST &amp; ACCURATE CUT)</b>										
P5541	T101 AIF	-	-	-	-	-	-	-	-	-
P5531	T101 BF	2111	373390	P-31594	-	23975	S75/2,5 BI	-	8025	KBS108
P5534	T144 DF	2361	373391	P-31588	-	23976	S75/4BI	-	8021	KBS116
P5540	T345 XF	-	-	-	-	-	-	-	-	-
<b>METAL CLASSICO</b>										
P5511	T118 G	2520	274652	P-04525	-	23636	-	12513	8012	KRS106
P5512	T118 A	2550	254063	254063	F 324 S	23637	-	12511	8009	KRS105
P5513	T218 A	2560	346082	P-04569	F 318 SC	23647	HS 50/1,2	-	8010	KRS107
P5514	T118 B	2650	254064	P-04519	F 340 SV	23638	HS 50/2	12512	8011	KRS103
P5519	T101 A	2501	274651	P-04553	F 314 S	23640	-	-	8008	-
P5509	T127 D	2760	274315	P-04531	F 410 S	23639	HS 75/3	12510	8013	KRS108
P5559	T123 XF	-	-	-	-	-	-	-	-	-
P5520	T318 A	-	274654	-	F 518 S	23629	-	-	8016	KRS110
<b>METAL EXTRA-PROFESSIONAL</b>										
P5524	T118 AF	2551	340011	-	F 324 S	23971	HS60/1,2BI	-	8027	KBS105
P5523	T118 BF	2651	340012	-	F 314 S	23973	HS60/2BI	-	8028	KBS103
P5551	~T118AF	-	-	-	-	-	-	-	-	-
P5537	T127 DF	2761	340014	-	-	23974	HS75/3BI	-	-	KBS111
P5535	T318 AF	2571	274654	-	-	23978	HS105/1,2BI	-	8019	-
P5536	T318 BF	2671	274653	-	-	23979	HS105/2BI	-	8020	-
<b>SANDWICH PANEL</b>										
P5546	T718BF	-	-	-	-	-	-	-	8082	-
P5566	T 1018 AFP	-	-	-	-	-	-	-	-	-
<b>MULTIPURPOSE</b>										
P5526	-	-	-	-	-	-	-	-	-	-
P5549	-	-	-	-	-	-	-	-	-	-
<b>CARBIDE</b>										
JIG55/427	-	-	-	-	-	-	-	-	-	-
JIG55/602	-	-	-	-	-	-	-	-	-	-
JIG75/427	-	-	-	-	-	-	-	-	-	-
JIG75/602	-	-	-	-	-	-	-	-	-	-
<b>DIAMOND</b>										
P5538	T141 HM	2890	-	P-38766	-	23652	HM75/4,5	-	8017	-
P5539	T118 EHM	2585	373394	-	-	23663	-	-	-	-
GJ12	T150 RIFF	-	213-232	-	300SG	23.658	-	-	-	-
GJ14	T130 RIFF	-	213-231	-	-	23.657	-	-	-	-
<b>NON TOOTHED BLADES</b>										
P5557	T313 AW	-	-	-	-	-	-	-	-	-
P5558	T113 A	-	-	-	-	-	-	-	-	-

**JIG SAW BLADES FOR PNEUMATIC MACHINES**

 Shank Suitable for the following machines:  
**Fein, Spitznas, Premag, Rockwell**

Ref. CELESA	TEETH PITCH	DIMENSIONS L2 x L1	QUALITY	APPLICATIONS		
<b>BODYWORK CONSTRUCTION</b>						
Ref. RHS151110	 TPI 24 1 mm	 100 mm	BI	 INOX 1-2 mm  1-2 mm  1-2 mm		
				Blister 5u.: 25,84 €		
Ref. RHS171108	 TPI 32 0,7 mm	 75 x 100 mm	BI	 INOX 0,5-1 mm  0,5-1 mm  0,5-1 mm		
				Blister 5u.: 25,84 €		
Ref. RHS171110	 TPI 24 1 mm	 75 x 100 mm	BI	 INOX 1-2 mm  1-2 mm  1-2 mm		
				Blister 5u.: 25,84 €		
<b>EXTREME APPLICATIONS</b>						
Ref. RHS161110	 TPI 15 1,6 mm	 200 mm	HSS	 INOX 1-2 mm  1-2 mm  1-2 mm		
				Plastic pouch 5u.: 89,45 €		
Ref. RHS161110-300		FEIN 63503063007	 TPI 15 1,6 mm	 300 mm	HSS	 INOX 1-2 mm  1-2 mm  1-2 mm
				Plastic pouch 1u.: 19,83 €		
Ref. RHS161110-400		FEIN 63503064005	 TPI 15 1,6 mm	 400 mm	HSS	 INOX 1-2 mm  1-2 mm  1-2 mm
				Plastic pouch 1u.: 29,21 €		
Ref. RHS161110-500			 TPI 15 1,6 mm	 500 mm	HSS	 INOX 2-6 mm  2-6 mm  2-6 mm
				Plastic pouch 1u.: 43,27 €		

# RECIPROCATING SAW BLADES

















**BLUE-MASTER®**  
by *celes*

CUTTING TECHNOLOGIES


**GUIDELINES FOR CHOOSING THE PROPER RECIPROCATING SAW BLADE**

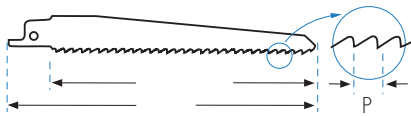
REF CELESA	REF BOSCH	MATERIAL	CUTTING LENGTH	FINISHING	SPEED	TEETH	CURVED CUTS	WOOD					
								Hard wood	Chipboard	Plywood	Pallets	Wood & nails	Special saws for tree pruning
<b>WOOD CLASSICO CV</b>													
WC608	S644D	CV	130	Normal	Fast	4,2	*	6-100	6-100	6-100		6-100	
WCD606	S744D	CV	130	Normal	Normal	4,2	*	6-100	6-100	6-100		6-100	
WC4031	-	CV	130	Normal	Normal	6,2		20-100	20-100	20-100		20-100	
AG4053	S617K	CV	130	Rough	Fast	8,5	*	20-100	20-100	20-100		20-100	
AG4045	-	CV	210	X-Fine	X-Fast	2,5	*	6-180	6-180	6-180		6-180	
AG4054	S1111K	CV	210	Rough	Fast	8,5		20-250	20-250	20-250		20-250	
WCD1206	S1344D	CV	280	Normal	Fast	4,2		6-250	6-250	6-250		6-250	
WC1208	S1617K	CV	280	Rough	Fast	8,5		20-250	20-250	20-250		20-250	
<b>WOOD. PRUNING</b>													
AG4052	S1531L	CV	210	Fine	Fast	5/6,5		15-190	15-190	15-190		15-190	
AG4055	S1542K	CV	210	Rough	Fast	8,5		15-150	15-150	15-150		15-150	
<b>FIXING PALLETES</b>													
AG916		Bi	195			1,8-2,5					✓		
AG917		Bi	210			1,8-2,5					✓		
AG918		Bi	195			1,8-2,5					✓		
AG919		Bi	210			1,8-2,5					✓		
<b>WOOD WITH NAILS</b>													
AG610	S922HF	Bi	130	Clean	Normal	2,5						3-100	
AG611	Lenox 810R	Bi	180	Clean	Normal	2,5						3-150	
AG612	S1122HF	Bi	210	Clean	Normal	2,5				3-190			
AG913	S1025BF	Bi	280	Clean	Normal	2				3-270			
<b>WOOD WITH NAILS (ROUGH CUT)</b>													
AG608	S628DF	Bi	130F	Rough	Normal	4,2	*	6-100	6-100	6-100			
AG906	-	Bi	210F	Rough	Normal	4,2	*	6-180	6-180	6-180			
AG1208	S1411DF	Bi	280	Rough	Normal	4,2		6-250	6-250	6-250			
<b>PIPES, PROFILES, AND FINE SHEETS</b>													
AG224	S522AF	Bi	80	Normal	Normal	1							
AG218	S522EF	Bi	80	Normal	Normal	1,4							
AG324	S922AF	Bi	130	Normal	Normal	1							
AG418	S1122EF	Bi	180	Fine	Normal	1,4							
<b>BUILDING METALS</b>													
AG901	S1020CF	Bi	210F	Fine	Fast	4,2		<190	<190	<190		<190	
AG902	-	Bi	210F	Fine	Fast	3						<190	
<b>MEDIUM THICKNESS SHEET STEEL, PIPES AND PROFILES</b>													
AG318	S922EF	Bi	130	Normal	Normal	1,4							
AG214	S522BF	Bi	80	Normal	Normal	1,8							
AG314	S922BF	Bi	130	Normal	Normal	1,8							
AG441	~S1122BF	Bi	180	Normal	Normal	1,8							
AG903	S1122BF	Bi	210	Normal	Normal	1,8						3-180	
AG904	31124M	Bi	280	Fine	Fast	1,8							
AG909	S936BEF	Bi	130	Clean	Normal	1,8						3-100	
AG910	S1136BEF	Bi	205	Clean	Normal	1,8				3-180			
<b>ABRASIVES METALS AND CAST PIPES</b>													
GR20	-	MD	130	Fine	Fast	-						1-10	
GR24	-	MD	180	Fine	Fast	-						1-10	
GR26	S1130RIFF	MD	200	Fine	Fast	-						3-25	
<b>GLASS FIBER AND CELL CONCRETE</b>													
GR30	S1543HM	MD	210	Fine	Fast	4,2		6-100					
GR32	S1243HM	MD	280	Fine	Fast	8,5		6-250					
<b>MULTIPURPOSE</b>													
AG912	S123XF	Bi	130			1,8-3,2						3-100	
AG911	S3456XF	Bi	180			2,1-4,3						3-150	
AG410	S1122VF	Bi	180F			1,8/2,5		3-150	3-150	3-150		3-150	
AG914	-	Bi	180			4,2-2,5		10-150	10-150	10-150		10-150	
AG443	S1211H	Bi	280			2,5						1-190	
AG411	S1222VF	Bi	280			1,8/2,5		2-250	2-250	2-250		2-250	
<b>FOOD (INDUSTRY)</b>													
AG905	S1211K	Inox	280			8,5							
<b>REFURBISHMENT WORKS: METAL AND WOOD</b>													
AG953	S956DHM	MD	130			4,2		<100				<100	
AG954	S1156XHM	MD	210			4,2		5-175				5-175	
AG955	S1256XHM	MD	280			4,2		5-250				5-250	
<b>REFURBISHMENT WORKS: METAL</b>													
AG950	S955CHM	MD	130			3							
AG951	S1155CHM	MD	210			3							
AG952	S1255CHM	MD	280			3							
<b>REFURBISHMENT WORKS: BUILDING MATERIALS</b>													
GR28	S641HM	MD	130			4,2							
AG956	S1141HM	MD	210			8,5							
AG957	S1241HM	MD	280			8,5							

**GUIDELINES FOR CHOOSING THE PROPER RECIPROCATING SAW BLADE**

METAL							OTHER MATERIALS						
													
INOX	Metals in general	Laminated sheet	Non ferrous (Copper, brass)	Aluminium	Steel pipes	Cast iron pipes	Plastic in general	Cell Concrete	Ceramics Concrete	Plaster Board	Glass	Window frames	Food

<b>WOOD CLASSICO CV</b>							6-100						
							6-100						
							6-250						
<b>WOOD. PRUNING</b>													
<b>FIXING PALLETS</b>													
<b>WOOD WITH NAILS</b>													
3-12	3-12		3-12	3-12	3-12	3-12	3-12						
3-12	3-12		3-12	3-12	3-12	3-12	3-12						
3-12	3-12		3-12	3-12	3-12	3-12	3-12						
2,5-10	2,5-10		2,5-10	2,5-10	2,5-10	2,5-10	2,5-10						
<b>WOOD WITH NAILS (ROUGH CUT)</b>							6-100					6-100	
							6-180					6-250	
							6-250						
<b>PIPES, PROFILES, AND FINE SHEETS</b>													
>1	>1	>1	>1	>1	>1	>1							
1,5-3	1,5-3		1,5-3	1,5-3	1,5-3	1,5-3							
2-8	2-8		2-8	2-8	2-8	2-8							
>1	>1	>1	>1	>1	>1	>1							
<b>BUILDING METALS</b>													
1,5-3	1,5-3	1,5-3	1,5-3	1,5-3	1,5-3	1,5-3							
2-8	2-8	2-8	2-8	2-8	2-8	2-8	2-8						
<b>MEDIUM THICKNESS SHEET STEEL, PIPES AND PROFILES</b>													
1,5-3	1,5-3	1,5-3	1,5-3	1,5-3	1,5-3	1,5-3							<190
2-8	2-8	2-8	2-8	2-8	2-8	2-8							
2-8	2-8	2-8	2-8	2-8	2-8	2-8							2-8
4-12	4-12	4-12	4-12	4-12	4-12	4-12							
3-12	3-12	3-12	3-12	3-12	3-12	3-12							
2-8	2-8	2-8	2-8	2-8	2-8	2-8							
3-8	3-8		3-8	3-8	3-8	3-8	3-8						
3-8	3-8		3-8	3-8	3-8	3-8	3-8						
<b>ABRASIVES METALS AND CAST PIPES</b>													
						ø 50	1-10	1-10	1-10		1-10		
						ø 100	1-10	1-10	1-10		1-10		
						ø 150	3-25	3-25					
<b>GLASS FIBER AND CELL CONCRETE</b>													
							3-12	3-12	6-100				
							3-12	3-12	6-250				
<b>MULTIPURPOSE</b>													
3-10	3-10		3-10	3-10	3-10	3-10	3-10						
3-18	3-18		3-18	3-18	3-18	3-18	3-18						
3-12	3-12	3-12	3-12	3-12	3-12	3-12	3-12						
3-12	3-12	3-12	3-12	3-12	3-12	3-12	3-12						
3-12	3-12	3-12	3-12	3-12	3-12	3-12	3-12						
3-12	3-12	3-12	3-12	3-12	3-12	3-12	3-12						
<b>FOOD (INDUSTRY)</b>													3-250
<b>REFURBISHMENT WORKS: METAL AND WOOD</b>													
<b>REFURBISHMENT WORKS: METAL</b>													
3-12	3-12				3-12	3-12							
3-12	3-12				3-12	3-12							
3-12	3-12				3-12	3-12							
<b>REFURBISHMENT WORKS: BUILDING MATERIALS</b>													
							6-100		6-100				
							6-180		6-180				
							6-250		6-250				



**UNIVERSAL RECIPROCATING SAW BLADES**


Shank Suitable for the following machines:

**AEG - Bosch - Black & Decker - Metabo - Flex - Hitachi  
 Milwaukee - Rockwell - Makita - Skil - Dewalt**


Ref. CELESA	Ref. BOSCH	TEETH PITCH	DIMENSIONS L2 x L1	QUALITY	APPLICATIONS
<b>WOOD CLASSICO CV</b>					

Ref. WC608	S644D (QUICK CUT)		TPI 6 4,2 mm	 130 x 150 mm	CV	 6-100 mm	 6-100 mm	Plastic pouch 5u.: 19,71 €
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Ref. WCD606	S744D		TPI 6 4,2 mm	 130 x 150 mm	CV	 6-100 mm	 6-100 mm	Plastic pouch 5u.: 19,14 €
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Ref. WC4031	-		TPI 4 6,2 mm	 130 x 150 mm	CV	 20-100 mm	 20-100 mm	Plastic pouch 5u.: 19,14 €
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Ref. AG4053	S617K		TPI 3 8,5 mm	 130 x 150 mm	CV	 20-100 mm	 20-100 mm	Plastic pouch 5u.: 20,04 €
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Ref. AG4045	-		TPI 10 2,5 mm	 210 x 230 mm	CV	 6-180 mm	 6-180 mm	Plastic pouch 5u.: 75,94 €
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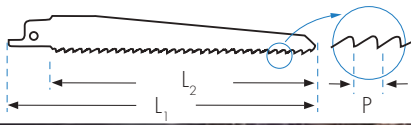
Japanese Teeth

Ref. AG4054	S1111K		TPI 3 8,5 mm	 210 x 230 mm	CV	 20-250 mm	 20-250 mm	Plastic pouch 5u.: 21,18 €
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Ref. WCD1206	S1344D		TPI 6 4,2 mm	 280 x 300 mm	CV	 6-250 mm	 6-250 mm	Plastic pouch 5u.: 29,41 €
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Ref. WC1208	S1617K		TPI 3 8,5 mm	 280 x 300 mm	CV	 20-250 mm	 20-250 mm	Plastic pouch 5u.: 29,41 €
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**UNIVERSAL RECIPROCATING SAW BLADES**



Shank Suitable for the following machines:

**AEG - Bosch - Black & Decker - Metabo - Flex - Hitachi  
Milwaukee - Rockwell - Makita - Skil - Dewalt**



Ref. BOSCH

TEETH  
PITCH

DIMENSIONS  
L2 x L1

QUALITY

APPLICATIONS

**WOOD. PRUNING**

Ref. AG4052

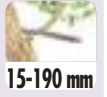
S1531L



TPI 5/4  
P  
5/6,5mm

210 x 230  
mm

CV



15-190 mm

Plastic pouch 5u.:

30,61 €

Ref. AG4055

S1542K



TPI 3  
P  
8,5 mm

210 x 230  
mm

CV



15-150 mm

Plastic pouch 5u.:

28,40 €



**FIXING PALLETS**

Ref. AG916

e=0,90



TPI 10/14  
P  
1,8-2,5 mm

195 x 215  
mm

BI



Pack 100u.:

297,98 €

Ref. AG917

e=0,90



TPI 10/14  
P  
1,8-2,5 mm

210 x 230  
mm

BI

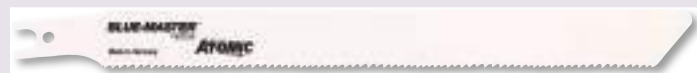


Pack 100u.:

313,52 €

Ref. AG918

e=1,27



TPI 10/14  
P  
1,8-2,5 mm

195 x 215  
mm

BI

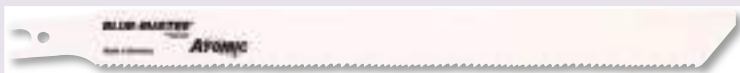


Pack 100u.:

391,26 €

Ref. AG919

e=1,27



TPI 10/14  
P  
1,8-2,5 mm

210 x 230  
mm

BI



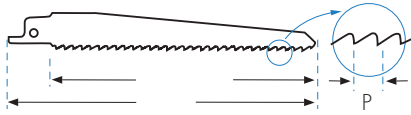
Pack 100u.:

396,44 €

**UNIVERSAL RECIPROCATING SAW BLADES**

Reciprocating Saw Blades

Pink



Shank Suitable for the following machines:

**AEG - Bosch - Black & Decker - Metabo - Flex - Hitachi  
Milwaukee - Rockwell - Makita - Skil - Dewalt**



Ref. CELESA	Ref. BOSCH	TEETH PITCH	DIMENSIONS L2 x L1	QUALITY	APPLICATIONS
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**WOOD WITH NAILS**

Ref. AG610	S922HF			BI		Plastic pouch 5u.: 24,32 €
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• Valid for fine metal sheet, windows renovation, aluminium, plastics and epoxy resins

Ref. AG611	Lenox 810R			BI		Plastic pouch 5u.: 25,50 €
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• Suitable for fine metal sheet, pallets fixing, aluminium

Ref. AG612	S1122HF			BI		Plastic pouch 5u.: 29,10 €
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• Suitable for fine metal sheet, pallets fixing, aluminium

Ref. AG913	S1025BF			BI		Plastic pouch 5u.: 44,88 €
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• Suitable for fine metal sheet, aluminium, epoxy resins and cast pipes

**WOOD WITH NAILS (ROUGH CUT)**

Ref. AG608	S628DF	WINDOWS INSTALLATION				BI		Plastic pouch 5u.: 24,32 €
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• Suitable for fine metal sheet, windows renovation, aluminium, plastics and epoxy resins. Curved cutting.

Ref. AG906	-	WINDOWS INSTALLATION				BI		Plastic pouch 5u.: 31,96 €
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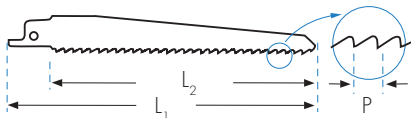
• Suitable for fine metal sheet, windows renovation, aluminium, plastics and epoxy resins

Ref. AG1208	S1411DF					BI		Plastic pouch 5u.: 42,58 €
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• Suitable for fine metal sheet, plastics and epoxy resins



**UNIVERSAL RECIPROCATING SAW BLADES**




Shank Suitable for the following machines:

**AEG - Bosch - Black & Decker - Metabo - Flex - Hitachi  
Milwaukee - Rockwell - Makita - Skil - Dewalt**



Ref. CELESA	Ref. BOSCH	TEETH PITCH	DIMENSIONS L2 x L1	QUALITY	APPLICATIONS
<b>PIPES, PROFILES, FINE SHEETS AND SANDWICH TYPE PANELS</b>					

Ref. AG224 S522AF



TPI 25 P 1 mm

80 x 100 mm

BI

>1 mm

INOX >1 mm

Al >1 mm

Plastic pouch 5u.: 16,24 €

Ref. AG218 S522EF



TPI 18 P 1,4 mm

80 x 100 mm

BI

1,5-3 mm

INOX 1,5-3 mm

Al 1,5-3 mm

Plastic pouch 5u.: 16,24 €

Ref. AG324 S922AF



TPI 25 P 1 mm

130 x 150 mm

BI

>1 mm

INOX >1 mm

Al >1 mm

Plastic pouch 5u.: 20,14 €

Ref. AG418 S1122EF



TPI 18 P 1,4 mm

180 x 200 mm

BI

1,5-3 mm

INOX 1,5-3 mm

Al 1,5-3 mm

Plastic pouch 5u.: 31,70 €



**BUILDING METALS**

Ref. AG901\* S1020CF



DEMOLITION RESCUE

TPI 6 P 4,2 mm

210 x 230 mm

BI

3-12 mm

INOX 3-12 mm

Al 3-12 mm

Plastic pouch 5u.: 61,46 €

\* These sabre saw blades are thicker than the other ones

Ref. AG902 -



TPI 8 P 3 mm

210 x 230 mm

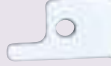
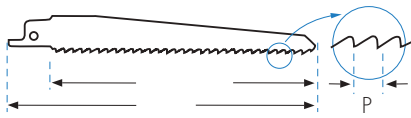
BI

4-12 mm

INOX 4-12 mm

Al 4-12 mm

Plastic pouch 5u.: 57,51 €

**UNIVERSAL RECIPROCATING SAW BLADES**


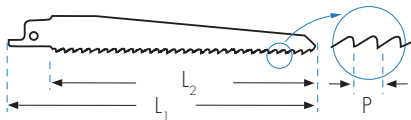
Shank Suitable for the following machines:

**AEG - Bosch - Black & Decker - Metabo - Flex - Hitachi  
 Milwaukee - Rockwell - Makita - Skil - Dewalt**


Ref. CELESA	Ref. BOSCH	TEETH PITCH	DIMENSIONS L2 x L1	QUALITY	APPLICATIONS	
<b>TUBES AND PROFILES WITH HEAVY THICKNESS</b>						
Ref. AG318	S922EF	TPI 18 1,4 mm	130 x 150 mm	BI	1,5-3 mm	<b>INOX</b> 1,5-3 mm <b>Al</b> 1,5-3 mm
					Plastic pouch 5u.:	20,36 €
Ref. AG214	S522BF	TPI 14 1,8 mm	80 x 100 mm	BI	2-8 mm	<b>INOX</b> 2-8 mm <b>Al</b> 2-8 mm
					Plastic pouch 5u.:	16,24 €
Ref. AG314	S922BF	TPI 14 1,8 mm	130 x 150 mm	BI	2-8 mm	<b>INOX</b> 2-8 mm <b>Al</b> 2-8 mm
					Plastic pouch 5u.:	20,36 €
Ref. AG441	~S1122BF	TPI 14 1,8 mm	180 x 200 mm	BI	2-8 mm	<b>INOX</b> 2-8 mm <b>Al</b> 2-8 mm
					Plastic pouch 5u.:	27,89 €
Ref. AG903	S1122BF	TPI 14 1,8 mm	210 x 230 mm	BI	2-8 mm	<b>INOX</b> 2-8 mm <b>Al</b> 2-8 mm
					Plastic pouch 5u.:	27,96 €
Ref. AG904	31124 Metabo	TPI 14 1,8 mm	280 x 300 mm	BI	2-8 mm	<b>INOX</b> 2-8 mm <b>Al</b> 2-8 mm
					Plastic pouch 5u.:	39,59 €
Ref. AG909	S936BEF	TPI 14 1,8 mm	130 x 150 mm	BI	3-8 mm	<b>INOX</b> 3-8 mm <b>Al</b> 3-8 mm
					Plastic pouch 5u.:	25,92 €
Ref. AG910	S1136BEF	TPI 14 1,8 mm	205 x 225 mm	BI	3-8 mm	<b>INOX</b> 3-8 mm <b>Al</b> 3-8 mm
					Plastic pouch 5u.:	32,97 €



**UNIVERSAL RECIPROCATING SAW BLADES**



Shank Suitable for the following machines:

**AEG - Bosch - Black & Decker - Metabo - Flex - Hitachi  
Milwaukee - Rockwell - Makita - Skil - Dewalt**



Ref. CELESA      Ref. BOSCH      **TEETH PITCH**      **DIMENSIONS L2 x L1**      **QUALITY**      **APPLICATIONS**

**ABRASIVES METALS AND CAST PIPES**



Plastic Pouch 1u.: 5,05 €



Plastic Pouch 1u.: 6,58 €



Plastic Pouch 1u.: 8,39 €



**CELL CONCRETE**

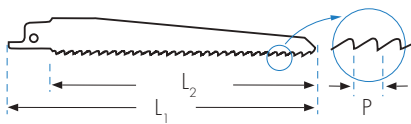


Plastic pouch 1u.: 42,55 €



Plastic pouch 1u.: 52,98 €

**UNIVERSAL RECIPROCATING SAW BLADES**



Shank Suitable for the following machines:

**AEG - Bosch - Black & Decker - Metabo - Flex - Hitachi  
Milwaukee - Rockwell - Makita - Skil - Dewalt**



Ref. CELESA	Ref. BOSCH	TEETH PITCH	DIMENSIONS L2 x L1	QUALITY	APPLICATIONS
<b>MULTIPURPOSE</b>					

Ref. AG912	S123XF	TPI 14/8 P 1,8/3,2 mm	130 x 150 mm	BI	 3-100 mm	 3-100 mm	 3-10 mm	Plastic pouch 5u.: 39,02 €
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Ref. AG911	S3456XF	TPI 12/6 P 2,1/4,3 mm	180 x 200 mm	BI	 3-150 mm	 3-150 mm	 3-18 mm	Plastic pouch 5u.: 59,83 €
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Ref. AG410	S1122VF	TPI 14/10 P 1,8/2,5 mm	180 x 200 mm	BI	 3-150 mm	 3-150 mm	 3-12 mm	Plastic pouch 5u.: 28,89 €
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Ref. AG914	-	TPI 6/10 P 4,2/2,5 mm	180 x 200 mm	BI	 10-150 mm	 3-150 mm	 3-12 mm	Plastic pouch 2u.: 24,44 €
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Ref. AG443	S1211H	TPI 10 P 2,5 mm	280 x 300 mm	BI	 10-150 mm	 3-150 mm	 3-12 mm	Plastic pouch 5u.: 34,31 €
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Ref. AG411	S1222VF	TPI 14/10 P 1,8/2,5 mm	280 x 300 mm	BI	 2-250 mm	 2-250 mm	 3-12 mm	Plastic pouch 5u.: 42,12 €
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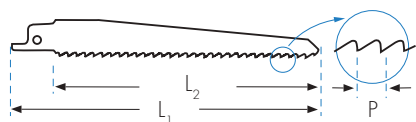


**FOOD INDUSTRY**

Ref. AG905	S1211K	TPI 3 P 8,5 mm	280 x 300 mm	INOX	 3-250 mm	 3-250 mm	 3-250 mm	Plastic Pouch 2u.: 36,52 €
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**MULTI-PURPOSE CARBIDE RECIPROCATING SAW BLADES**



Shank Suitable for the following machines:

**AEG - Bosch - Black & Decker - Metabo - Flex - Hitachi  
Milwaukee - Rockwell - Makita - Skil - Dewalt**






**RECIPROCATING BLADES FOR WOOD AND METAL, SPECIAL FOR WINDOWS, WOOD WITH METAL FITTINGS, ETC...**

High performance for intensive work in wood and metal, windows, wood with metal fittings, etc...

Ideal for applications in renovations and debris removal. It supports the possible rubbing with mortar, brick, and materials of the wall where the wood is housed.

Specific carbide teeth for wood and metal, cuts where conventional bimetal reciprocating saws must stop.

Ref. CELESA	Ref. BOSCH	TEETH PITCH	DIMENSIONS L2 x L1	QUALITY	APPLICATIONS
<b>WOOD AND METAL</b>					
Ref. AG953	S 956 DHM	TPI 6 4,2 mm	130 x 150 mm	CARBIDE	  
					Plastic pouch 1u.: 20,12 €







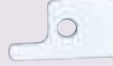
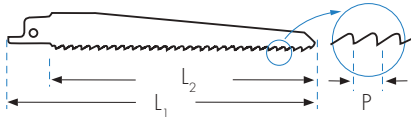
**RECIPROCATING BLADES FOR WOOD AND METAL, WOOD WITH NAILS, BOLTS, ETC...**

High performance for intensive work in wood and metal, wood with nails, screws, bolts, etc...

Ideal for applications in renovations and debris removal.

Specific carbide teeth for wood and metal, cuts where conventional bimetal reciprocating saws must stop.

Ref. CELESA	Ref. BOSCH	TEETH PITCH	DIMENSIONS L2 x L1	QUALITY	APPLICATIONS
<b>WOOD AND METAL</b>					
Ref. AG954	S 1156 XHM	TPI 6 4,2 mm	210 x 230 mm	CARBIDE	 
					Plastic pouch 1u.: 32,95 €
Ref. AG955	S 1256 XHM	TPI 6 4,2 mm	280 x 300 mm	CARBIDE	 
					Plastic pouch 1u.: 42,39 €

**CARBIDE RECIPROCATING SAW BLADES**


Shank Suitable for the following machines:

**AEG - Bosch - Black & Decker - Metabo - Flex - Hitachi  
 Milwaukee - Rockwell - Makita - Skil - Dewalt**

**CARBIDE RECIPROCATING SAW BLADE FOR METAL.**

High performance for intensive work on hard metals.

Perfect straight cuts in cast iron, high alloyed steels, high hardness steels and stainless steels.

Intensive use in cuts for any type of metal, specifically for renovators or those professionals who need to make precise cuts in sheet metal, thick sheet metal or very thick pipes.

Ref. CELESA	Ref. BOSCH	TEETH PITCH	DIMENSIONS L2 x L1	QUALITY	APPLICATIONS	
<b>METAL</b>						
Ref. AG950	S 955 CHM	TPI 8 P 3 mm	130 x 150 mm	CARBIDE	3-12 mm	INOX 3-12 mm
						Plastic pouch 1u.: 21,29 €
Ref. AG951	S 1155 CHM	TPI 8 P 3 mm	210 x 230 mm	CARBIDE	3-12 mm	INOX 3-12 mm
						Plastic pouch 1u.: 35,88 €
Ref. AG952	S 1255 CHM	TPI 8 P 3 mm	280 x 300 mm	CARBIDE	3-12 mm	INOX 3-12 mm
						Plastic pouch 1u.: 45,05 €


**CARBIDE RECIPROCATING SAW BLADE FOR REINFORCED PLASTICS, CARBON FIBER, GLASS FIBER, FIBERCEMENT, PLASTER BOARD.**

High performance for intensive work on all types of construction materials.

Specific for renovations and finishing work.

Specific carbide teeth for all types of construction materials in finishing works, cuts where conventional bimetal reciprocating saw blades must stop.

**BUILDING MATERIALS**

Ref. GR28	S 641 HM	TPI 6 P 4,2 mm	130 x 150 mm	CARBIDE	<100 mm	PVC
						Plastic pouch 1u.: 20,93 €
Ref. AG956	S 1141 HM	TPI 3 P 8,5 mm	210 x 230 mm	CARBIDE	<175 mm	PVC
						Plastic pouch 1u.: 24,78 €
Ref. AG957	S 1241 HM	TPI 3 P 8,5 mm	280 x 300 mm	CARBIDE	<250 mm	PVC
						Plastic pouch 1u.: 29,45 €

# OSCILLATING SAW BLADES



**BLUE-MASTER®**  
by *celeso*

CUTTING TECHNOLOGIES



# STARLOCK



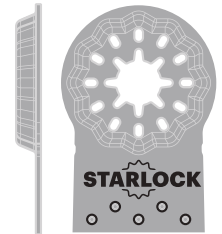
## OSCILLATING SAW BLADES

### STARLOCK FIT

BLADES MATERIAL:

HSS
HSSCo 8%
HCS
CARBIDE
DIAMOND
TiN

APPLICATIONS:



		QUALITY	DIMENSIONS L1 x L2				TEETH PITCH	
<b>NEW</b> FTKT5205 STARLOCK PLUS		LONG Life CARBIDE TiN	32x54	★★★★★	★	★★★★★	★★	METAL
FTK5106		LONG Life HSSCo 8%	30x50	★★★★★	★	★★		
<b>NEW</b> FTK5121		HSS	Ø85	★★★★★	★★	★	★★	WOOD EXTRA
FTK5110		LONG Life HSSCo 8%	35x50		EXTRA ★★★★★			
FTK5140		HCS	35x50		EXTRA ★★★★★			
FTK5117		LONG Life HSSCo 8%	65x50		EXTRA ★★★★★			
FTK5147		HCS	65x50		EXTRA ★★★★★		EXTRA	
FTK5132		LONG Life HSSCo 8%	35x50	★★	★★★	★★★★	★★	MULTI-PURPOSE
FTK5108		HCS	35x50	★	★★	★	★	
<b>NEW</b> FTK5130		LONG Life HSSCo 8%	50x42	★★	★★★★★	★★★★★	★★	
FTK5129		LONG Life HSSCo 8%	65x50	★★	★★★	★★★★	★★	
FTK5113		HCS	65x50	★	★★	★	★	
<b>NEW</b> FTK5302		LONG Life DIAMOND	Ø90	★★★★★	★★★★★	★★★★★	★★★★★	CONSTRUCTION
<b>NEW</b> FTK5201		LONG Life CARBIDE	Ø75	★★★★★	★★★★★	★★★★★	★★★★★	
<b>NEW</b> FTK204 STARLOCK PLUS		LONG Life CARBIDE	35x42	★★★★★	★★★★★	★★★★★	★★★★★	

**OSCILLATING SAW BLADES**

Ref. CELESA	Ref. FEIN	QUALITY	DIMENSIONS L2 x L1	THICKNESS	TEETH PITCH	APPLICATIONS
<b>SAW BLADES (METAL)</b>						
<b>NEW</b> Ref. FTK5205	63502 237 210	<b>LONG Life</b> CARBIDE TiN	 32 x 54 mm	 0,7 mm	 1,35 mm	
Blister 1 u.: 40,01 €						
Ref. FTK5106	63502 157 210	<b>LONG Life</b> HSSCo 8%	 30 x 50 mm	 0,7 mm	 1,35 mm	
Blister 1 u.: 18,01 €						
<b>NEW</b> Ref. FTK5121	63502 106 210	HSS	 Ø 85 mm	 0,7 mm	 1,35 mm	
Blister 1 u.: 31,08 €						
<b>SAW BLADES (WOOD)</b>						
Ref. FTK5110	63502 205 210	<b>LONG Life</b> HSSCo 8%	 35 x 50 mm	 1,15 mm	 1,81 mm	
Blister 1 u.: 18,01 €						
Ref. FTK5140	63502 126 210	HCS	 35 x 50 mm	 1,15 mm	 1,81 mm	
Blister 1 u.: 16,62 €						
Ref. FTK5117	63502 229 210	<b>LONG Life</b> HSSCo 8%	 65 x 50 mm	 1,15 mm	 1,81 mm	
Blister 1 u.: 23,30 €						
Ref. FTK5147	63502 230 210	HCS	 65 x 50 mm	 1,15 mm	 1,81 mm	
Blister 1 u.: 20,90 €						
<b>SAW BLADES (MULTI-PURPOSE)</b>						
Ref. FTK5132	63502 160 210	<b>LONG Life</b> HSSCo 8%	 35 x 50 mm	 1,05 mm	 1,41 mm	
Blister 1 u.: 18,01 €						
Ref. FTK5108	63502 133 210	HCS	 35 x 50 mm	 1,05 mm	 1,41 mm	
Blister 1 u.: 13,97 €						
<b>NEW</b> Ref. FTK5130	63502 221 210	<b>LONG Life</b> HSSCo 8%	 50 x 42 mm	 1,05 mm	 1,41 mm	
Blister 1 u.: 22,28 €						
Ref. FTK5129	63502 228 210	<b>LONG Life</b> HSSCo 8%	 65 x 50 mm	 1,05 mm	 1,41 mm	
Blister 1 u.: 22,83 €						
Ref. FTK5113	63502 225 210	<b>CURVED CUT</b> HCS	 65 x 50 mm	 1,05 mm	 1,41 mm	
Blister 1 u.: 19,55 €						

**OSCILLATING SAW BLADES**

Ref. CELESA	Ref. FEIN	QUALITY	DIMENSIONS L2 x L1	THICKNESS	TEETH PITCH	APPLICATIONS
<b>CONSTRUCTION</b>						
<b>NEW</b> Ref. FTK5302	63502 166 210	<b>LONG Life</b>		2,2 mm	Ø 90 mm	
Blister 1 u.: 81,68 €						
<b>NEW</b> Ref. FTK5201	63502 118 210	<b>LONG Life</b>	<b>CARBIDE</b>	2,2 mm	Ø 75 mm	
Blister 1 u.: 37,22 €						
<b>NEW</b> Ref. FTK5204	63502 191 210	<b>LONG Life</b>	<b>CARBIDE</b>	1,5 mm	35 x 42 mm	
<b>STARLOCK PLUS</b> Blister 1 u.: 43,08 €						

**STARLOCK**

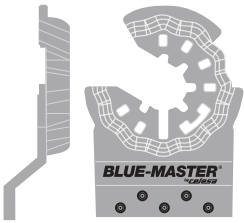
**OSCILLATING SAW BLADES IN QUADROPACK**

		<b>REFERENCE</b>	<b>FTK5106-12</b> 50x50x114
	<b>QUALITY / DIMENSIONS APPLICATIONS</b>		
<b>SAW Ref. x UNIT</b>	FTK5106 (x12)		
<b>PRICE €</b>	205,24		
		<b>REFERENCE</b>	<b>FTK5110-12</b> 50x50x114
	<b>QUALITY / DIMENSIONS APPLICATIONS</b>		
<b>SAW Ref. x UNIT</b>	FTK5110 (x12)		
<b>PRICE €</b>	205,24		
		<b>REFERENCE</b>	<b>FTK5140-12</b> 50x50x114
	<b>QUALITY / DIMENSIONS APPLICATIONS</b>		
<b>SAW Ref. x UNIT</b>	FTK5140 (x12)		
<b>PRICE €</b>	189,44		
		<b>REFERENCE</b>	<b>FTK5117-15</b> 71x71x114
	<b>QUALITY / DIMENSIONS APPLICATIONS</b>		
<b>SAW Ref. x UNIT</b>	FTK5117 (x15)		
<b>PRICE €</b>	331,95		
		<b>REFERENCE</b>	<b>FTK5147-15</b> 71x71x114
	<b>QUALITY / DIMENSIONS APPLICATIONS</b>		
<b>SAW Ref. x UNIT</b>	FTK5147 (x15)		
<b>PRICE €</b>	297,79		
		<b>REFERENCE</b>	<b>FTK5132-12</b> <b>LONG Life</b> 50x50x114
	<b>QUALITY / DIMENSIONS APPLICATIONS</b>		
<b>SAW Ref. x UNIT</b>	FTK5132 (x12)		
<b>PRICE €</b>	205,23		
		<b>REFERENCE</b>	<b>FTK5108-12</b> 50x50x114
	<b>QUALITY / DIMENSIONS APPLICATIONS</b>		
<b>SAW Ref. x UNIT</b>	FTK5108 (x12)		
<b>PRICE €</b>	159,30		
		<b>NEW</b> <b>REFERENCE</b>	<b>FTK5130-15</b> <b>LONG Life</b> 71x71x114
	<b>QUALITY / DIMENSIONS APPLICATIONS</b>		
<b>SAW Ref. x UNIT</b>	FTK5130 (x15)		
<b>PRICE €</b>	317,42		
		<b>REFERENCE</b>	<b>FTK5129-15</b> <b>LONG Life</b> 71x71x114
	<b>QUALITY / DIMENSIONS APPLICATIONS</b>		
<b>SAW Ref. x UNIT</b>	FTK5129 (x15)		
<b>PRICE €</b>	325,33		
		<b>REFERENCE</b>	<b>FTK5113-15</b> <b>CURVED CUT</b> 71x71x114
	<b>QUALITY / DIMENSIONS APPLICATIONS</b>		
<b>SAW Ref. x UNIT</b>	FTK5113 (x15)		
<b>PRICE €</b>	278,51		



# OSCILLATING SAW BLADES

## BLUEMASTER 100% STK UNIVERSAL FIT STARLOCK



BLADES MATERIAL:

HSS HSSCo 8% TiN HCS CARBIDE DIAMOND

APPLICATIONS:

		QUALITY	DIMENSIONS L1 x L2							TEETH PITCH		
STK5205		CARBIDE	34x40	★★★★★	★★★★★	★★★★★					METAL	
STK5106		HSSCo 8%	34x40	★★★	★	★						
STKT5106		HSSCo 8% TiN	34x40	★★★★★	★	★★						
STK5116		HSSCo 8%	28x57	★★★	★	★						
STK5112		HSSCo 8%	45x57	★★★	★	★						
STKT5112		HSSCo 8% TiN	45x57	★★★★★	★	★★						
STK5122		HSSCo 8%	Ø88	★★★	★	★★						
STKT5122		HSSCo 8% TiN	Ø88	★★★★★	★	★★★★						
STK5110		HSSCo 8%	34x40		★★★★★							WOOD
STK5130		HSSCo 8%	45x40		★★★★★							
STK5131		HSSCo 8%	45x57		★★★★★							
STK5117		HSSCo 8%	68x42		★★★★★							
STK5132		HSSCo 8%	34x40	★★	★★★★★	★★						
STK5129		HSSCo 8%	68x42	★★	★★★★★	★★					MULTI-PURPOSE	
STK5109		HCS	20x40	★	★★★	★★						
STK5108		HCS	34x40	★	★★★	★★						
STK5107		HCS	34x50	★	★★★	★★						
STK5126		HCS	34x68	★	★★★	★★						
STK5113		HCS	68x42	★	★★★	★★						
STK5121		HSS	Ø88	★	★★	★★						
STK5303		DIAMOND	58x20				★★★	★★★★	★★★★			CONSTRUCTION
STK5302		DIAMOND	Ø85				★★★★★	★★★★★	★★★★★			
STK5201		CARBIDE	Ø85				★★★★★	★★★★★	★★★★★			



**OSCILLATING SAW BLADES**


Ref. CELESA	QUALITY	DIMENSIONS L2 x L1	THICKNESS	TEETH PITCH	APPLICATIONS
<b>NEW</b> Ref. STK5205 Blister 1 u.: 30,26 €	<b>CARBIDE</b>	34 x 40 mm	1,15 mm	1,25 mm	METAL
<b>NEW</b> Ref. STK5106 Blister 1 u.: 13,39 €	<b>HSSCo 8%</b>	34 x 40 mm	1,05 mm	1,25 mm	METAL
<b>NEW</b> Ref. STKT5106 Blister 1 u.: 16,18 €	<b>HSSCo 8% TiN</b>	34 x 40 mm	1,05 mm	1,25 mm	METAL
<b>NEW</b> Ref. STK5116 Blister 1 u.: 15,45 €	<b>HSSCo 8%</b>	28 x 57 mm	1,05 mm	1,25 mm	METAL
<b>NEW</b> Ref. STK5112 Blister 1 u.: 17,00 €	<b>HSSCo 8%</b>	45 x 57 mm	1,05 mm	1,25 mm	METAL
<b>NEW</b> Ref. STKT5112 Blister 1 u.: 20,55 €	<b>HSSCo 8% TiN</b>	45 x 57 mm	1,05 mm	1,25 mm	METAL
<b>NEW</b> Ref. STK5122 Blister 1 u.: 25,98 €	<b>HSSCo 8%</b>	Ø 88 mm	1,05 mm	1,25 mm	METAL
<b>NEW</b> Ref. STKT5122 Blister 1 u.: 30,24 €	<b>HSSCo 8% TiN</b>	Ø 88 mm	1,05 mm	1,25 mm	METAL
<b>NEW</b> Ref. STK5110 Blister 1 u.: 13,39 €	<b>HSSCo 8%</b>	34 x 40 mm	1,15 mm	1,81 mm	WOOD
<b>NEW</b> Ref. STK5130 Blister 1 u.: 16,33 €	<b>HSSCo 8%</b>	45 x 40 mm	1,15 mm	1,81 mm	WOOD
<b>NEW</b> Ref. STK5131 Blister 1 u.: 17,00 €	<b>HSSCo 8%</b>	45 x 57 mm	1,15 mm	1,81 mm	WOOD
<b>NEW</b> Ref. STK5117 Blister 1 u.: 17,52 €	<b>HSSCo 8%</b>	68 x 42 mm	1,15 mm	1,81 mm	WOOD
<b>NEW</b> Ref. STK5132 Blister 1 u.: 13,39 €	<b>HSSCo 8%</b>	34 x 40 mm	1,05 mm	1,41 mm	MULTI-PURPOSE
<b>NEW</b> Ref. STK5129 Blister 1 u.: 17,52 €	<b>HSSCo 8%</b>	68 x 42 mm	1,05 mm	1,41 mm	MULTI-PURPOSE
<b>NEW</b> Ref. STK5109 Blister 1 u.: 11,09 €	<b>HCS</b>	20 x 40 mm	1,05 mm	1,41 mm	MULTI-PURPOSE
<b>NEW</b> Ref. STK5108 Blister 1 u.: 11,85 €	<b>HCS</b>	34 x 40 mm	1,05 mm	1,41 mm	MULTI-PURPOSE



**OSCILLATING SAW BLADES**



Ref. CELESA	QUALITY	DIMENSIONS L2 x L1	THICKNESS	TEETH PITCH	APPLICATIONS
<b>NEW</b> Ref. STK5107 Blister 1 u.: 12,08 €	HCS	34 x 50 mm	1,05 mm	1,41 mm	PVC, Wood, Metal
<b>NEW</b> Ref. STK5126 Blister 1 u.: 12,67 €	HCS	34 x 68 mm	1,05 mm	1,41 mm	PVC, Wood, Metal
<b>NEW</b> Ref. STK5113 Blister 1 u.: 15,10 €	HCS	68 x 42 mm	1,05 mm	1,41 mm	PVC, Wood, Metal
<b>NEW</b> Ref. STK5121 Blister 1 u.: 25,19 €	HSS	Ø 88 mm	1,05 mm	1,41 mm	PVC, Wood, Metal
<b>NEW</b> Ref. STK5303 Blister 1 u.: 47,03 €	Diamond	60 x 50 mm		40 - 45 Grano/Grain Grão/Grano	Concrete, Brick, Tile
<b>NEW</b> Ref. STK5302 Blister 1 u.: 45,45 €	Diamond	Ø 85 mm		40 - 45 Grano/Grain Grão/Grano	Concrete, Brick, Tile
<b>NEW</b> Ref. STK5201 Blister 1 u.: 35,82 €	CARBIDE	Ø 85 mm		60 - 80 Grano/Grain Grão/Grano	Concrete, Brick, Tile

MULTI-PURPOSE

CONSTRUCTION

**SHANK ADAPTOR BLUEMASTER STK**

<b>NEW</b> Ref. ADSTK Blister 1 u.: 0,33 €	
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**OSCILLATING SAW BLADES IN QUADROPACK**

100% COMPATIBLE STK BLUEMASTER FIT

<b>REFERENCE</b> STK5106-12 50x50x114	<b>REFERENCE</b> STK5112-15 71x71x114	<b>REFERENCE</b> STK5112-15 71x71x114
<b>QUALITY / DIMENSIONS APPLICATIONS</b> HSSCo 8% 34 x 40 mm 1,25 mm PVC	<b>QUALITY / DIMENSIONS APPLICATIONS</b> HSSCo 8% 45 x 57 mm 1,25 mm PVC	<b>QUALITY / DIMENSIONS APPLICATIONS</b> HSSCo 8% TiN 45 x 57 mm 1,25 mm PVC
<b>SAW Ref. x UNIT</b> STK5106 (x12)	<b>SAW Ref. x UNIT</b> STK5112 (x15)	<b>SAW Ref. x UNIT</b> STK5112 (x15)
<b>PRICE €</b> 152,65	<b>PRICE €</b> 242,18	<b>PRICE €</b> 292,82
<b>REFERENCE</b> STK5110-12 50x50x114	<b>REFERENCE</b> STK5117-15 71x71x114	<b>REFERENCE</b> STK5108-12 50x50x114
<b>QUALITY / DIMENSIONS APPLICATIONS</b> HSSCo 8% 34 x 40 mm 1,81 mm PVC	<b>QUALITY / DIMENSIONS APPLICATIONS</b> HSSCo 8% 65 x 40 mm 1,81 mm PVC	<b>QUALITY / DIMENSIONS APPLICATIONS</b> HCS 34 x 40 mm 1,41 mm PVC
<b>SAW Ref. x UNIT</b> STK5110 (x12)	<b>SAW Ref. x UNIT</b> STK5117 (x15)	<b>SAW Ref. x UNIT</b> STK5108 (x12)
<b>PRICE €</b> 152,65	<b>PRICE €</b> 249,66	<b>PRICE €</b> 135,03

Oscillating Saw blades

Pink

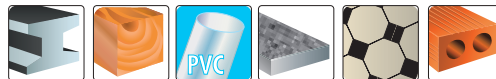
**BLUE-MASTER**  
by *CELESA***OSCILLATING SAW BLADES**

BLUEMASTER 100% UNIVERSAL FIT

BLADES MATERIAL:



APPLICATIONS:



		QUALITY	DIMENSIONS L1 x L2				TEETH PITCH	
FM5106		HSSCo 8%	34x40	★★★★	★	★	 1,25 mm	METAL
FM5112		HSSCo 8%	44x42	★★★★	★	★		
FMT5112		HSSCo 8% TiN	44x42	★★★★	★	★		
FM5116		HSS	28x54	★★★	★	★		
FM5115		HSS	10x24	★★★	★	★		
FM5114		HSS	20x24	★★★	★	★		
FM5124		HSS	Ø80	★★★	★	★		
FM5119		HSS	Ø80	★★★	★	★		
FM5122		HSS	Ø88	★★★	★	★		
FM5123		HSS	Ø88	★★★	★	★		
FM5120		HSS	Ø80	★★★	★	★		
FM5125		HSS	Ø100	★★★	★	★		
FM5129		HSSCo 8%	34x40		★★★★★			
FM5130		HSSCo 8%	44x50		★★★★★			
FM5110		HCS	34x40		★★★			
FM5117		HCS	68x42		★★★			
FM5107		HCS	34x40	★	★★★	★★	 1,41 mm	MULTI-PURPOSE
FM5108		HCS	34x40	★	★★★	★★		
FM5113		HCS	68x42	★	★★★	★★		
FM5126		HCS	34x60	★	★★★	★★		

**BLUE-MASTER**  
by *CELESA*



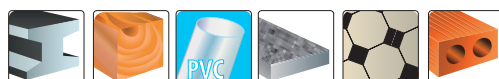
**OSCILLATING SAW BLADES**

BLUEMASTER 100% UNIVERSAL FIT

BLADES MATERIAL:



APPLICATIONS:



		QUALITY	DIMENSIONS L1 x L2				TEETH PITCH
FM5109		HCS	20x40	★	★★★★	★★	
FM5111		HCS	10x40	★	★★★★	★★	
FM5128		HCS	19x39	★	★★★★	★★	
FM5104		INOX	20x40		★★★★	★★	
FM5102		INOX	31x40		★★★★	★★	
FM5101		INOX	32x40		★★★★	★★	
FM5103		INOX	10x40		★★★★	★★	
FM5121		HCS	Ø88	★	★★★★	★★	
FM5118		HCS	Ø91	★	★★★★	★★	
FM5201		CARBIDE	Ø63,5	★★★★★	★★★★★	★★★★★	
FM5204		CARBIDE	34x40	★★★★★	★★★★★	★★★★★	
FM5202		CARBIDE	78x78x78	★★★★★	★★★★★	★★★★★	
FM5203		CARBIDE	35x40	★★★★★	★★★★★	★★★★★	
FM5303			58x20	★★★★★	★★★★★	★★★★★	
FM5302			Ø91	★★★★★	★★★★★	★★★★★	
FM5301			Ø63,5	★★★★★	★★★★★	★★★★★	

MULTI-PURPOSE

CONSTRUCTION

**SANDING BACKER**

FM54



**SAND PAPERS**

FM55



**SCRAPERS**

FM50



**OSCILLATING SAW BLADES**


Ref. CELESA		QUALITY	DIMENSIONS L2 x L1	THICKNESS	TEETH PITCH	APPLICATIONS
<b>SAW BLADES (METAL)</b>						
Ref. FM5106		HSSCo 8%	 34 x 40 mm	 0,95 mm	 1,35 mm	
Blister 1 u.:	12,56 €					
Ref. FM5112		HSSCo 8%	 44 x 42 mm	 0,95 mm	 1,35 mm	
Blister 1 u.:	13,91 €					
Ref. FMT5112		HSSCo 8% <b>TiN</b>	 44 x 42 mm	 0,95 mm	 1,35 mm	 
Blister 1 u.:	18,74 €					
Ref. FM5116		HSS	 28 x 54 mm	 0,80 mm	 1,35 mm	
Blister 1 u.:	14,93 €					
Ref. FM5115		HSS	 10 x 24 mm	 0,80 mm	 1,35 mm	
Blister 1 u.:	14,70 €*					
* Till end of stock						
Ref. FM5114		HSS	 20 x 24 mm	 0,80 mm	 1,35 mm	
Blister 1 u.:	14,81 €*					
* Till end of stock						
Ref. FM5124		HSS	 Ø 80 mm	 0,80 mm	 1,35 mm	
Blister 1 u.:	23,39 €					
Ref. FM5119		HSS	 Ø 80 mm	 0,60 mm	 1,35 mm	
Blister 1 u.:	23,27 €*					
* Till end of stock						
Ref. FM5122		HSS	 Ø 88 mm	 1,00 mm	 1,35 mm	
Blister 1 u.:	24,34 €					
Ref. FM5123		HSS	 Ø 88 mm	 0,80 mm	 1,35 mm	
Blister 1 u.:	23,87 €*					
* Till end of stock						
Ref. FM5120		HSS	 Ø 80 mm	 0,80 mm	 1,35 mm	
Blister 1 u.:	25,64 €					
Ref. FM5125		HSS	 Ø 100 mm	 0,80 mm	 1,35 mm	
Blister 1 u.:	26,71 €					

**OSCILLATING SAW BLADES**



Ref. CELESA		QUALITY	DIMENSIONS L2 x L1	THICKNESS	TEETH PITCH	APPLICATIONS
<b>SAW BLADES (WOOD)</b>						
Ref. FM5129		HSSCo 8%	 34 x 40 mm	 0,60 mm	 1,81 mm	 
Blister 1 u.:	12,56 €					
Ref. FM5130		HSSCo 8%	 44 x 50 mm	 0,60 mm	 1,81 mm	 
Blister 1 u.:	13,91 €					
Ref. FM5110		HCS	 34 x 40 mm	 0,60 mm	 1,81 mm	 
Blister 1 u.:	11,03 €					
Ref. FM5117		HCS	 68 x 42 mm	 0,60 mm	 1,81 mm	 
Blister 1 u.:	14,05 €					
<b>SAW BLADES (MULTI-PURPOSE)</b>						
Ref. FM5107		HCS	 34 x 40 mm	 0,60 mm	 1,41 mm	  
Blister 1 u.:	11,03 €					
Ref. FM5108		HCS	 34 x 40 mm	 0,60 mm	 1,35 mm	  
Blister 1 u.:	11,03 €					
Ref. FM5113		HCS	 68 x 42 mm	 0,60 mm	 1,41 mm	  
Blister 1 u.:	13,48 €*					
* Till end of stock						
Ref. FM5126		HCS	 34 x 60 mm	 0,60 mm	 1,41 mm	  
Blister 1 u.:	11,97 €					
Ref. FM5109		HCS	 20 x 40 mm	 0,60 mm	 1,41 mm	  
Blister 1 u.:	11,03 €					
Ref. FM5111		HCS	 10 x 40 mm	 0,60 mm	 1,41 mm	  
Blister 1 u.:	10,81 €					
Ref. FM5128		HCS	 19 x 39 mm	 0,60 mm	 1,41 mm	 
Blister 1 u.:	13,99 €*					
* Till end of stock						



## OSCILLATING SAW BLADES



Ref. CELESA	QUALITY	DIMENSIONS L2 x L1	THICKNESS	TEETH PITCH	APPLICATIONS
<b>SAW BLADES (MULTI-PURPOSE)</b>					
Ref. FM5104 Blister 1 u.: 13,23 €	INOX	20 x 40 mm	0,55 mm	1,41 mm	
Ref. FM5102 Blister 1 u.: 13,99 €	INOX	31 x 40 mm	0,55 mm	1,35 mm	
Ref. FM5101 Blister 1 u.: 13,99 €	INOX	32 x 40 mm	0,60 mm	1,41 mm	
Ref. FM5103 Blister 1 u.: 13,23 €	INOX	10 x 40 mm	0,55 mm	1,41 mm	
Ref. FM5121 Blister 1 u.: 19,12 €	HCS	Ø 88 mm	0,60 mm	1,41 mm	
Ref. FM5118 Blister 1 u.: 20,57 €	HCS	Ø 91 mm	0,60 mm	1,41 mm	

\* Till end of stock

## ABRASIVE SAW BLADES FOR CONSTRUCTION

Ref. FM5201 Blister 1 u.: 32,48 €	CARBIDE	Ø 63,5 mm	60 - 80 Grano/Grain Grao/Grana	
Ref. FM5204 Blister 1 u.: 24,84 €	CARBIDE	34 x 40 mm	30 - 40 Grano/Grain Grao/Grana	
Ref. FM5202 Blister 1 u.: 29,37 €	CARBIDE	78x78x78mm	30 - 40 Grano/Grain Grao/Grana	
Ref. FM5203 Blister 1 u.: 22,80 €	CARBIDE	35 x 40mm	30 - 40 Grano/Grain Grao/Grana	
Ref. FM5303 Blister 1 u.: 38,73 €	Diamond	58 x 20 mm	40 - 45 Grano/Grain Grao/Grana	
Ref. FM5302 Blister 1 u.: 37,43 €	Diamond	Ø 91 mm	40 - 45 Grano/Grain Grao/Grana	
Ref. FM5301 Blister 1 u.: 38,79 €	Diamond	Ø 63,5 mm	40 - 45 Grano/Grain Grao/Grana	

**OSCILLATING SAW BLADES**

Ref. CELESA	MATERIAL	DIMENSIONS L2 x L1	GRAIN	APPLICATIONS
<b>SANDING BACKER</b>				
Ref. FM5401	$Al_2O_3$	 55x40x55mm	60/120/240  Grano/Grain Grão/Grana	   
Blister 1 u.: 21,97 €				3 Sand papers included Ref.: FM5509/ FM5511/ FM5512
<b>SAND PAPERS</b>				
Ref. FM5509	$Al_2O_3$	 55x40x55mm	60  Grano/Grain Grão/Grana	   
Blister 5 ud.: 5,50 €				
Ref. FM5510	$Al_2O_3$	 55x40x55mm	80  Grano/Grain Grão/Grana	   
Blister 5 ud.: 5,50 €				
Ref. FM5511	$Al_2O_3$	 55x40x55mm	120  Grano/Grain Grão/Grana	   
Blister 5 ud.: 5,50 €				
Ref. FM5512	$Al_2O_3$	 55x40x55mm	240  Grano/Grain Grão/Grana	   
Blister 5 ud.: 5,50 €				
<b>SANDING BACKER</b>				
Ref. FM5402		 80x80x80mm		   
Blister 1 u.: 18,19 €				
<b>SAND PAPERS</b>				
Ref. FM5501	$Al_2O_3$	 80x80x80mm	60  Grano/Grain Grão/Grana	   
Blister 5 u.: 5,50 €				
Ref. FM5502	$Al_2O_3$	 80x80x80mm	80  Grano/Grain Grão/Grana	   
Blister 5 u.: 5,50 €				
Ref. FM5503	$Al_2O_3$	 80x80x80mm	120  Grano/Grain Grão/Grana	   
Blister 5 u.: 5,50 €				
Ref. FM5504	$Al_2O_3$	 80x80x80mm	240  Grano/Grain Grão/Grana	   
Blister 5 u.: 5,50 €				
Ref. FM5520		 80x80x80mm	60  Grano/Grain Grão/Grana	 
Blister 5 u.: 6,04 €				
Ref. FM5521		 80x80x80mm	80  Grano/Grain Grão/Grana	 
Blister 5 u.: 6,04 €				
Ref. FM5522		 80x80x80mm	120  Grano/Grain Grão/Grana	 
Blister 5 u.: 6,04 €				
Ref. FM5523		 80x80x80mm	240  Grano/Grain Grão/Grana	 
Blister 5 u.: 6,04 €				

## OSCILLATING SAW BLADES

Ref. CELESA	QUALITY	DIMENSIONS L2 x L1	THICKNESS	APPLICATIONS
<b>SCRAPERS</b>				
Ref. FM5003 Blister 1 u.: 8,41 €*	INOX	52 x 29 mm	0,80 mm	
Ref. FM5002 Blister 1 u.: 8,41 €	INOX	52 x 29 mm	0,80 mm	
Ref. FM5005 Blister 1 u.: 8,41 €	INOX	30 x 50 mm	1,00 mm	
Ref. FM5001 Blister 1 u.: 8,41 €	INOX	52 x 40 mm	0,80 mm	
Ref. FM5006 Blister 1 u.: 9,48 €	INOX	28 x 50 mm		
Ref. FM5004 Blister 1 u.: 8,41 €*	INOX	52 x 29 mm	0,80 mm	

\* Till end of stock

## OSCILLATING SAW BLADES IN QUADROPACK

### BLUEMASTER 100% UNIVERSAL FIT

REFERENCE	<b>FM5106-12</b>	41x41x90	<b>FM5112-15</b>	52x52x100	<b>FMT5112-15</b>	52x52x100
QUALITY / DIMENSIONS APPLICATIONS	HSSCo 8% 34 x 40 mm 1,35 mm 		HSSCo 8% 44 x 42 mm 1,35 mm 		HSSCo 8% TiN 44 x 42 mm 1,35 mm 	
SAW Ref. x UNIT	FM5106 (x12)		FM5112 (x15)		FMT5112 (x15)	
PRICE €	143,16		198,25		267,08	
REFERENCE	<b>FM5110-12</b>	41x41x90	<b>FM5117-15</b>	71x71x114	<b>FM5108-12</b>	41x41x90
QUALITY / DIMENSIONS APPLICATIONS	HCS 34 x 40 mm 1,81 mm 		HCS 68 x 42 mm 1,81 mm 		HCS 34 x 40 mm 1,35 mm 	
SAW Ref. x UNIT	FM5110 (x12)		FM5117 (x15)		FM5108 (x12)	
PRICE €	125,69		200,20		125,69	

**QUICK CHANGE**



**OSCILLATING SAW BLADES**

**QUICK CHANGE FIT**

BLADES MATERIAL:



APPLICATIONS:



		QUALITY	DIMENSIONS L1 x L2				TEETH PITCH	
QC5106		HSSCo 8%	34x40	★★★★★	★	★		METAL
QC5112		HSSCo 8%	44x42	★★★★★	★	★		
QCT5112		HSSCo 8% TiN	44x42	★★★★★★	★	★		
QC5116		HSS	28x54	★★★	★	★		
QC5124		HSS	Ø80	★★★	★	★		
QC5110		HCS	34x40		★★★★★			WOOD
QC5117		HCS	68x42		★★★★★			
QC5130		HSSCo 8%	44x50		★★★★★★			
QC5107		HCS	34x40	★	★★★★	★★		MULTI-PURPOSE
QC5108		HCS	34x40	★	★★★★	★★		
QC5113		HCS	68x42	★	★★★★	★★		
QC5126		HCS	34x60	★	★★★★	★★		
QC5109		HCS	20x40	★	★★★★	★★		
QC5121		HCS	Ø88	★	★★★★	★★		

**SCRAPERS**

QC5002		INOX	52x29			
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## OSCILLATING SAW BLADES

Ref. CELESA		QUALITY	DIMENSIONS L2 x L1	THICKNESS	TEETH PITCH	APPLICATIONS
<b>SAW BLADES (METAL)</b>						
Ref. QC5106		HSSCo 8%	 34 x 40 mm	 0,95 mm	 1,35 mm	
Blister 1 u.: 12,56 €						
Ref. QC5112		HSSCo 8%	 44 x 42 mm	 0,95 mm	 1,35 mm	
Blister 1 u.: 13,91 €						
Ref. QCT5112		HSSCo 8% <b>TiN</b>	 44 x 42 mm	 0,95 mm	 1,35 mm	
Blister 1 u.: 18,74 €						
Ref. QC5116		HSS	 28 x 54 mm	 0,80 mm	 1,35 mm	
Blister 1 u.: 14,93 €						
Ref. QC5124		HSS	 Ø 80 mm	 0,80 mm	 1,35 mm	
Blister 1 u.: 23,39 €						
<b>SAW BLADES (WOOD)</b>						
Ref. QC5110		HCS	 34 x 40 mm	 0,60 mm	 1,81 mm	
Blister 1 u.: 11,03 €						
Ref. QC5117		HCS	 68 x 42 mm	 0,60 mm	 1,81 mm	
Blister 1 u.: 14,05 €						
Ref. QC5130		HSSCo 8%	 44 x 50 mm	 0,60 mm	 1,81 mm	
Blister 1 u.: 13,91 €						
<b>SAW BLADES (MULTI-PURPOSE)</b>						
Ref. QC5107		HCS	 34 x 40 mm	 0,60 mm	 1,41 mm	
Blister 1 u.: 11,03 €						
Ref. QC5108		HCS	 34 x 40 mm	 0,60 mm	 1,35 mm	
Blister 1 u.: 11,03 €						
Ref. QC5113		HCS	 68 x 42 mm	 0,60 mm	 1,41 mm	
Blister 1 u.: 13,48 €						










**OSCILLATING SAW BLADES**

Ref. CELESA	QUALITY	DIMENSIONS L2 x L1	THICKNESS	TEETH PITCH	APPLICATIONS
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**SAW BLADES (MULTI-PURPOSE)**

Ref. QC5126		<b>HCS</b>	 34 x 60 mm	 0,60 mm	 1,41 mm	  
Blister 1 u.: 11,97 €						

Ref. QC5109		<b>HCS</b>	 20 x 40 mm	 0,60 mm	 1,41 mm	  
Blister 1 u.: 11,03 €						

Ref. QC5121		<b>HCS</b>	 Ø 88 mm	 0,60 mm	 1,41 mm	  
Blister 1 u.: 19,12 €						

**SCRAPERS**

Ref. QC5002		<b>INOX</b>	 52 x 29 mm	 0,80 mm	
Blister 1 u.: 8,41 €					

**SUPER CUT**



**OSCILLATING SAW BLADES**

**SUPER CUT FIT**

BLADES MATERIAL:



APPLICATIONS:



		QUALITY	DIMENSIONS L1 x L2				TEETH PITCH	
SP5106		HSSCo 8%	34x40	★★★★	★	★		METAL
SP5112		HSSCo 8%	44X42	★★★★	★	★		
SPT5112		HSSCo 8% <b>TiN</b>	44X42	★★★★★	★	★		
SP5116		HSS	28x54	★★★	★	★		
SP5124		HSS	Ø80	★★★	★	★		
SP5125		HSS	Ø100	★★★	★	★		
SP5110		HCS	34x40		★★★			WOOD
SP5117		HCS	68x42		★★★			
SP5127		HCS	75x50		★★★			
SP5107		HCS	34x40	★	★★★	★★		MULTI-PURPOSE
SP5108		HCS	34x40	★	★★★	★★		
SP5113		HCS	68x42	★	★★★	★★		
SP5109		HCS	20x40	★	★★★	★★		
SP5121		HCS	Ø88	★	★★★	★★		

**SCRAPERS**

SP5002			52x29			
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**OSCILLATING SAW BLADES**





Ref. CELESA		QUALITY	DIMENSIONS L2 x L1	THICKNESS	TEETH PITCH	APPLICATIONS
<b>SAW BLADES (METAL)</b>						
Ref. SP5106		HSSCo 8%	 34 x 40 mm	 0,95 mm	 1,35 mm	
Blister 1 u.: 12,56 €						
Ref. SP5112		HSSCo 8%	 44 x 42 mm	 0,95 mm	 1,35 mm	
Blister 1 u.: 13,91 €						
Ref. SPT5112		HSSCo 8% <b>TiN</b>	 44 x 42 mm	 0,95 mm	 1,35 mm	
Blister 1 u.: 18,74 €						
Ref. SP5116		HSS	 28 x 54 mm	 0,80 mm	 1,35 mm	
Blister 1 u.: 14,93 €						
Ref. SP5124		HSS	 Ø 80 mm	 0,80 mm	 1,35 mm	
Blister 1 u.: 23,39 €						
Ref. SP5125		HSS	 Ø 100 mm	 0,80 mm	 1,35 mm	
Blister 1 u.: 26,71 €						
<b>SAW BLADES (WOOD)</b>						
Ref. SP5110		HCS	 34 x 40 mm	 0,60 mm	 1,81 mm	
Blister 1 u.: 11,03 €						
Ref. SP5117		HCS	 68 x 42 mm	 0,60 mm	 1,81 mm	
Blister 1 u.: 14,05 €						
Ref. SP5127		HCS	 75 x 50 mm	 0,60 mm	 1,81 mm	
Blister 1 u.: 17,14 €						
<b>SAW BLADES (MULTI-PURPOSE)</b>						
Ref. SP5107		HCS	 34 x 40 mm	 0,60 mm	 1,41 mm	
Blister 1 u.: 11,03 €						
Ref. SP5108		HCS	 34 x 40 mm	 0,60 mm	 1,35 mm	
Blister 1 u.: 11,03 €						
Ref. SP5113		HCS	 68 x 42 mm	 0,60 mm	 1,41 mm	
Blister 1 u.: 13,48 €						

**OSCILLATING SAW BLADES**





Ref. CELESA	QUALITY	DIMENSIONS L2 x L1	THICKNESS	TEETH PITCH	APPLICATIONS
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**SAW BLADES (MULTI-PURPOSE)**

Ref. SP5109		<b>HCS</b>	 20 x 40 mm	 0,60 mm	 1,41 mm	
Blister 1 u.:	11,03 €					

Ref. SP5121		<b>HCS</b>	 Ø 88 mm	 0,60 mm	 1,41 mm	
Blister 1 u.:	19,12 €					










**SCRAPERS**

Ref. SP5002		<b>INOX</b>	 52 x 29 mm	 0,80 mm	
Blister 1 u.:	8,41 €				



**OSCILLATING SAW BLADES IN QUADROPACK**

**SUPER CUT FIT**

						
REFERENCE	<b>SP5106-12</b>	41x41x90	<b>SP5112-15</b>	52x52x100	<b>SPT5112-15</b>	52x52x100
QUALITY / DIMENSIONS APPLICATIONS						
SAW Ref. x UNIT	SP5106 (x12)		SP5112 (x15)		SPT5112 (x15)	
PRICE €	143,16		198,25		267,08	

						
REFERENCE	<b>SP5110-12</b>	41x41x90	<b>SP5117-15</b>	71x71x114	<b>SP5108-12</b>	41x41x90
QUALITY / DIMENSIONS APPLICATIONS						
SAW Ref. x UNIT	SP5110 (x12)		SP5117 (x15)		SP5108 (x12)	
PRICE €	125,69		200,20		125,69	

# WOOD WORKING DRILL BITS



**BLUE-MASTER<sup>®</sup>**  
*by celesta*

CUTTING TECHNOLOGIES

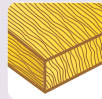
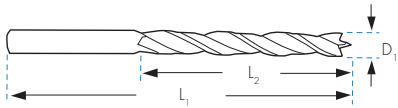


**CV BRAD POINTED WOOD WORKING DRILLS**

Ref. BM

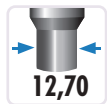


CV


**Standard  
series**


D <sub>1</sub> mm	Ref.	L <sub>1</sub> x L <sub>2</sub> mm	€	LONG SERIES 300 mm			EXTRA LONG SERIES 450 mm		
				Ref.	L <sub>1</sub> x L <sub>2</sub> mm	€	Ref.	L <sub>1</sub> x L <sub>2</sub> mm	€
3,0	BM03	59 x 35	1,18						
4,0	BM04	74 x 41	1,31						
5,0	BM05	82 x 55	1,42	BM05X300	300x160	5,21			
6,0	BM06	88 x 58	1,77	BM06X300	300x160	4,83			
7,0	BM07	110 x 70	1,95	BM07X300	300x160	5,94			
8,0	BM08	110 x 70	2,43	BM08X300	300x160	5,50	BM08X450	450x250	12,14
9,0	BM09	110 x 70	2,85	BM09X300	300x160	6,92	BM09X450	450x250	13,72
10,0	BM10	115 x 75	3,02	BM10X300	300x160	7,08	BM10X450	450x250	15,11
11,0	BM11	135 x 85	3,77	BM11X300	300x160	8,51	BM11X450	450x250	16,46
12,0	BM12	135 x 85	4,11	BM12X300	300x160	8,56	BM12X450	450x250	18,84
13,0	BM13*	135 x 90	4,35	BM13X300*	300x160	10,66	BM13X450*	450x250	21,14
14,0	BM14*	145 x 95	4,76	BM14X300*	300x160	11,76	BM14X450*	450x250	23,47
15,0	BM15*	160 x 95	5,62	BM15X300*	300x160	12,82			
16,0	BM16*	160 x 95	6,57	BM16X300*	300x160	15,26	BM16X450*	450x250	24,82
18,0	BM18*	160 x 100	10,55	BM18X300*	300x160	19,13	BM18X450*	450x250	30,28
20,0	BM20*	175 x 100	13,05	BM20X300*	300x160	21,30	BM20X450*	450x250	33,48
22,0	BM22*	209 x 140	17,67						

\* From 13 mm Ø all the drills have reduced shank



REFERENCE	BM9334	BM9335	BM9336	BM9333
QUANTITY	5	5	7	8
QUALITY	STANDARD SERIES	STANDARD SERIES	STANDARD SERIES	STANDARD SERIES
CONTENT	Ø 4 - 5 - 6 - 8 - 10 mm	Ø 3 - 4 - 5 - 6 - 8 mm	Ø 3 - 4 - 5 - 6 - 7 - 8 - 10 mm	Ø 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 mm
PRICE €	12,07	11,03	17,01*	19,90

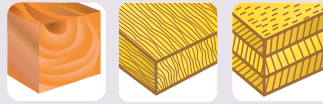
\* Till end of stock

**HSS BRAD POINTED PROFESSIONAL WOOD WORKING DRILLS**

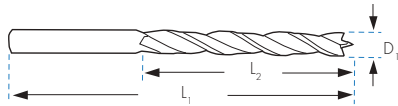
Ref. BMPR



HSS

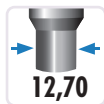


Professional series



D <sub>1</sub> mm		L <sub>1</sub> x L <sub>2</sub> mm	€	LONG SERIES		EXTRA LONG SERIES			
				245 mm		400 mm			
				L <sub>1</sub> x L <sub>2</sub> mm	€	L <sub>1</sub> x L <sub>2</sub> mm	€		
3,0	BMPR03	59 x 35	2,01						
4,0	BMPR04	74 x 41	2,17						
5,0	BMPR05	82 x 55	2,50						
6,0	BMPR06	88 x 58	3,31	BMPR06X245	245x160	11,35	BMPR06X400	400x160	26,78
7,0	BMPR07	110 x 70	3,84						
8,0	BMPR08	110 x 70	4,54	BMPR08X245	245x160	14,17	BMPR08X400	400x160	26,78
9,0	BMPR09	110 x 70	5,49						
10,0	BMPR10	115 x 75	5,95	BMPR10X245	245x160	17,00	BMPR10X400	400x160	32,00
11,0	BMPR11	135 x 85	7,04						
12,0	BMPR12	135 x 85	7,75	BMPR12X245	245x200	22,63	BMPR12X400	400x250	37,54
13,0	BMPR13*	135 x 90	8,29						
14,0	BMPR14*	145 x 95	9,08	BMPR14X245*	245x200	31,02	BMPR14X400*	400x250	50,74
15,0	BMPR15*	160 x 95	11,20						
16,0	BMPR16*	165 x 95	13,31	BMPR16X245*	245x200	41,37	BMPR16X400*	400x250	64,27
18,0	BMPR18*	160 x 100	18,30	BMPR18X245*	245x200	44,31	BMPR18X400*	400x250	84,59
20,0	BMPR20*	175 x 100	24,28						

\* From 13 mm Ø all the drills have reduced shank



REFERENCE	BMPR9334	BMPR9335	BMPR9336	BMPR9333
QUANTITY	5	5	7	8
QUALITY	PROFESSIONAL SERIES	PROFESSIONAL SERIES	PROFESSIONAL SERIES	PROFESSIONAL SERIES
CONTENT	Ø 4 - 5 - 6 - 8 - 10 mm	Ø 3 - 4 - 5 - 6 - 8 mm	Ø 3 - 4 - 5 - 6 - 7 - 8 - 10 mm	Ø 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 mm
PRICE €	21,69	20,13	30,63*	34,58

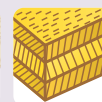
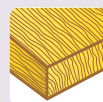
\* Till end of stock

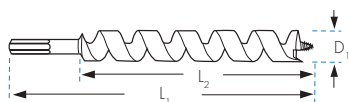
**CV AUGER BITS HEXAGONAL SHANK**

Ref. BM"S"



CV


 Ø 6 - Straight shank  
 Ø > 6 - Hexagonal shank

**S**  
 Type


D <sub>1</sub> mm	230 mm			LONG SERIES 460 mm			EXTRA LONG SERIES 650 mm		
	BM	L <sub>1</sub> x L <sub>2</sub> mm	€	BM	L <sub>1</sub> x L <sub>2</sub> mm	€	BM	L <sub>1</sub> x L <sub>2</sub> mm	€
6,0	BM06X230	230x160	18,33	BM06X460	460x370	25,02	BM06X650	650x550	32,14
8,0	BM08X230	230x160	19,33	BM08X460	460x370	23,63	BM08X650	650x550	33,49
10,0	BM10X230	230x160	19,71	BM10X460	460x370	25,70	BM10X650	650x550	39,63
12,0	BM12X230	230x160	21,50	BM12X460	460x370	27,87	BM12X650	650x550	39,94
14,0	BM14X230	230x160	22,44	BM14X460	460x370	34,08	BM14X650	650x550	57,31
15,0	BM15X230	230x160	34,35						
16,0	BM16X230	230x160	26,10	BM16X460	460x370	40,41	BM16X650	650x550	67,97
17,0	BM17X230	230x160	39,07						
18,0	BM18X230	230x160	32,92	BM18X460	460x370	53,92	BM18X650	650x550	100,40
20,0	BM20X230	230x160	35,87	BM20X460	460x370	60,70	BM20X650	650x550	115,74
22,0	BM22X230	230x160	39,17	BM22X460	460x370	66,79	BM22X650	650x550	128,24
24,0	BM24X230	230x160	44,38	BM24X460	460x370	73,20	BM24X650	650x550	146,63
26,0	BM26X230	230x160	50,25	BM26X460	460x370	79,17	BM26X650	650x550	153,00
28,0	BM28X230	230x160	57,54	BM28X460	460x370	86,19	BM28X650	650x550	156,83
30,0	BM30X230	230x160	66,30	BM30X460	460x370	94,10	BM30X650	650x550	163,73
32,0	BM32X230	230x160	85,72	BM32X460	460x370	105,03	BM32X650	650x550	168,38
34,0	BM34X230	230x160	110,53	BM34X460	460x370	137,03	BM34X650	650x550	177,71
36,0	BM36X230	230x160	128,94	BM36X460	460x370	154,43	BM36X650	650x550	193,48
38,0	BM38X230	230x160	149,64	BM38X460	460x370	173,99	BM38X650	650x550	211,60

**AUGER BITS BOXES**


Ref. BM9440

**230 mm**

REFERENCE	BM9440	BM9441	BM9442	BM9443
QUANTITY	5	5	4	5
QUALITY	STANDARD SERIES	STANDARD SERIES	STANDARD SERIES	STANDARD SERIES
CONTENT	Ø 6 - 8 - 10 - 12 - 14 mm	Ø 12 - 14 - 16 - 18 - 20 mm	Ø 8 - 10 - 12 - 14 mm	Ø 8 - 12 - 20 - 25 - 30 mm
PRICE €	125,75	157,88	107,70	207,28

**460 mm**

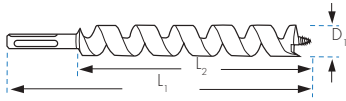
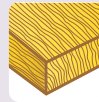
REFERENCE	BM9540	BM9541	BM9542	BM9543
QUANTITY	5	5	4	5
QUALITY	STANDARD SERIES	STANDARD SERIES	STANDARD SERIES	STANDARD SERIES
CONTENT	Ø 6 - 8 - 10 - 12 - 14 mm	Ø 12 - 14 - 16 - 18 - 20 mm	Ø 8 - 10 - 12 - 14 mm	Ø 8 - 12 - 20 - 25 - 30 mm
PRICE €	203,74	275,04	179,41	371,34

CV AUGER BITS SDS PLUS SHANK

Ref. BMSDS



CV



230 mm				LONG SERIES			EXTRA LONG SERIES		
D <sub>1</sub> mm		L <sub>1</sub> x L <sub>2</sub> mm	€		L <sub>1</sub> x L <sub>2</sub> mm	€		L <sub>1</sub> x L <sub>2</sub> mm	€
6,0	BMSDS06X230	230x160	27,71	BMSDS06X460	460x370	37,21	BMSDS06X650	650x550	49,05
8,0	BMSDS08X230	230x160	28,54	BMSDS08X460	460x370	38,08	BMSDS08X650	650x550	49,40
10,0	BMSDS10X230	230x160	28,80	BMSDS10X460	460x370	39,52	BMSDS10X650	650x550	58,45
12,0	BMSDS12X230	230x160	32,66	BMSDS12X460	460x370	42,84	BMSDS12X650	650x550	58,92
14,0	BMSDS14X230	230x160	35,05	BMSDS14X460	460x370	52,43	BMSDS14X650	650x550	84,58
16,0	BMSDS16X230	230x160	39,26	BMSDS16X460	460x370	60,43	BMSDS16X650	650x550	100,27
18,0	BMSDS18X230	230x160	44,18	BMSDS18X460	460x370	77,91	BMSDS18X650	650x550	148,14
20,0	BMSDS20X230	230x160	47,44	BMSDS20X460	460x370	87,28	BMSDS20X650	650x550	170,78
22,0	BMSDS22X230	230x160	52,60	BMSDS22X460	460x370	96,04	BMSDS22X650	650x550	189,20
24,0	BMSDS24X230	230x160	57,87	BMSDS24X460	460x370	105,26	BMSDS24X650	650x550	200,60
25,0	BMSDS25X230	230x160	69,36	BMSDS25X460	460x370	118,82			
26,0	BMSDS26X230	230x160	69,36	BMSDS26X460	460x370	118,82	BMSDS26X650	650x550	209,32
28,0	BMSDS28X230	230x160	79,43	BMSDS28X460	460x370	128,75	BMSDS28X650	650x550	214,56
30,0	BMSDS30X230	230x160	91,53	BMSDS30X460	460x370	141,21	BMSDS30X650	650x550	224,02
32,0	BMSDS32X230	230x160	134,38	BMSDS32X460	460x370	156,90	BMSDS32X650	650x550	233,27
34,0	BMSDS34X230	230x160	151,22	BMSDS34X460	460x370	189,10	BMSDS34X650	650x550	243,13
36,0	BMSDS36X230	230x160	176,39	BMSDS36X460	460x370	213,10	BMSDS36X650	650x550	264,71
38,0	BMSDS38X230	230x160	204,72	BMSDS38X460	460x370	240,08	BMSDS38X650	650x550	289,52

CARBIDE TIPPED AUGER BITS HEXAGONAL SHANK

Ref. BMMD

S  
Type



SOLID  
CARBIDE



New carbide tipped  
geometry.  
Ideal for very hard wood.



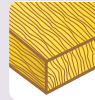
STANDARD SERIES				LONG SERIES			
230 mm				460 mm			
D <sub>1</sub> mm		L <sub>1</sub> x L <sub>2</sub> mm	€	D <sub>1</sub> mm		L <sub>1</sub> x L <sub>2</sub> mm	€
12,0	BMMD12X230	230x160	47,85	15,0	BMMD15X460	460x370	96,56
14,0	BMMD14X230	230x160	56,25	17,0	BMMD17X460	460x370	116,39
15,0	BMMD15X230	230x160	56,49	18,0	BMMD18X460	460x370	131,37
16,0	BMMD16X230	230x160	56,49	20,0	BMMD20X460	460x370	139,82
17,0	BMMD17X230	230x160	63,03	22,0	BMMD22X460	460x370	151,13
20,0	BMMD20X230	230x160	74,42	24,0	BMMD24X460	460x370	164,96
22,0	BMMD22X230	230x160	80,47	26,0	BMMD26X460	460x370	186,76
24,0	BMMD24X230	230x160	90,80	28,0	BMMD28X460	460x370	199,12
26,0	BMMD26X230	230x160	117,28	30,0	BMMD30X460	460x370	204,07
28,0	BMMD28X230	230x160	128,41	32,0	BMMD32X460	460x370	257,41
30,0	BMMD30X230	230x160	135,92				
32,0	BMMD32X230	230x160	198,01				

**DOUBLE FLUTE WOOD WORKING DRILLS HEXAGONAL SHANK**

Ref. BM2P



CV


**Double  
Flute**

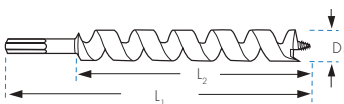

	BM2P		
	D <sub>1</sub> mm	L <sub>1</sub> x L <sub>2</sub> mm	€
BM2P06X230	6,0	230 x 160	24,98
BM2P08X230	8,0	230 x 160	24,98
BM2P10X230	10,0	230 x 160	24,98
BM2P12X230	12,0	230 x 160	29,16
BM2P14X230	14,0	230 x 160	30,43
BM2P15X230	15,0	230 x 160	37,49
BM2P16X230	16,0	230 x 160	34,08
BM2P17X230	17,0	230 x 160	42,62
BM2P18X230	18,0	230 x 160	38,71
BM2P20X230	20,0	230 x 160	42,18
BM2P22X230	22,0	230 x 160	46,10
BM2P24X230	24,0	230 x 160	52,21
BM2P26X230	26,0	230 x 160	59,07
BM2P28X230	28,0	230 x 160	67,68
BM2P30X230	30,0	230 x 160	77,98
BM2P32X230	32,0	230 x 160	114,49
BM2P34X230	34,0	230 x 160	122,87
BM2P36X230	36,0	230 x 160	143,33
BM2P38X230	38,0	230 x 160	166,33

**CV AUGER BITS FOR NAILED WOOD**

Ref. BMC

**S  
Type**


CV



	BMC		
	D <sub>1</sub> mm	L <sub>1</sub> x L <sub>2</sub> mm	€
BMC06X230	6,0	230 x 160	26,95*
BMC08X230	8,0	230 x 160	26,95*
BMC10X230	10,0	230 x 160	26,95*
BMC12X230	12,0	230 x 160	31,44*
BMC14X230	14,0	230 x 160	32,80*
BMC15X230	15,0	230 x 160	40,44*
BMC16X230	16,0	230 x 160	36,74*
BMC17X230	17,0	230 x 160	45,95*
BMC18X230	18,0	230 x 160	41,76*
BMC20X230	20,0	230 x 160	45,45*
BMC22X230	22,0	230 x 160	49,68*
BMC24X230	24,0	230 x 160	56,28*
BMC26X230	26,0	230 x 160	63,71*
BMC28X230	28,0	230 x 160	72,95*
BMC30X230	30,0	230 x 160	84,07*
BMC32X230	32,0	230 x 160	123,44*
BMC34X230	34,0	230 x 160	132,44*
BMC36X230	36,0	230 x 160	154,52*
BMC38X230	38,0	230 x 160	179,34*

\*Until end of stock

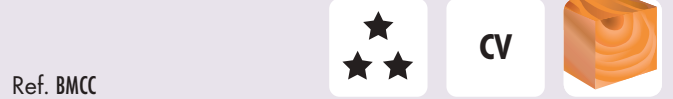


**CV AUGER BITS  
HEXAGONAL SHANK**

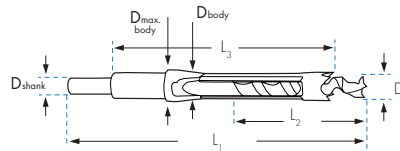
**SQUARE HOLE WOOD  
WORKING DRILLS**




Ref. BMH



Ref. BMCC



BMH				
	D <sub>1</sub> mm		L <sub>1</sub> x L <sub>2</sub> mm	€
BMH03X100	3,0	1/4"	100 x 50	23,74 *
BMH04X100	4,0	1/4"	100 x 50	23,06 *
BMH05X105	5,0	1/4"	105 x 55	22,18 *
BMH06X105	6,0	1/4"	105 x 55	20,14 *
BMH07X105	7,0	1/4"	105 x 55	20,38 *
BMH08X105	8,0	1/4"	105 x 55	21,15 *
BMH09X110	9,0	1/4"	110 x 60	21,62 *
BMH10X110	10,0	1/4"	110 x 60	21,72 *
BMH12X110	12,0	1/4"	110 x 60	24,02 *
BMH13X110	13,0	1/4"	110 x 60	26,74 *
BMH14X110	14,0	1/4"	110 x 60	29,04 *
BMH15X110	15,0	1/4"	110 x 60	30,89 *
BMH16X115	16,0	1/4"	115 x 65	32,91 *
BMH17X115	17,0	1/4"	115 x 65	33,85 *
BMH19X120	19,0	1/4"	120 x 70	37,26 *
BMH22X120	22,0	3/8"	120 x 70	42,75 *
BMH23X120	23,0	3/8"	120 x 70	45,51 *
BMH24X120	24,0	3/8"	120 x 70	47,34 *
BMH26X130	26,0	3/8"	130 x 80	53,77 *
BMH27X130	27,0	3/8"	130 x 80	56,05 *
BMH28X130	28,0	3/8"	130 x 80	60,38 *
BMH29X130	29,0	3/8"	130 x 80	64,05 *
BMH30X130	30,0	3/8"	130 x 80	67,00 *
BMH33X140	33,0	3/8"	140 x 90	79,15 *
BMH36X140	36,0	3/8"	140 x 90	88,78 *

BMCC							
	D <sub>1</sub> mm	L <sub>1</sub> x L <sub>2</sub> mm	L <sub>3</sub> mm	D <sub>shank</sub> mm	D <sub>body</sub> mm	D <sub>max.body</sub> mm	€
BMCC05	5,0	210 x 70	135	3,35	19,00	20,00	44,64
BMCC06	6,0	210 x 70	135	4,50	19,00	20,50	44,64
BMCC07	7,0	210 x 70	140	5,00	19,00	20,50	44,64
BMCC08	8,0	210 x 70	140	5,80	19,00	20,50	44,64
BMCC09	9,0	210 x 70	140	6,40	19,00	20,50	44,64
BMCC10	10,0	210 x 80	140	6,75	19,00	20,50	44,64
BMCC12	12,0	210 x 80	140	9,25	19,00	20,50	45,97
BMCC13	13,0	210 x 80	140	9,75	19,00	20,50	45,97
BMCC14	14,0	218 x 100	140	10,00	19,00	20,50	57,69
BMCC16	16,0	218 x 100	160	12,00	19,00	23,50	65,79
BMCC18	18,0	218 x 100	160	12,00	19,00	26,50	84,32
BMCC22	22,0	218 x 100	160	12,00	19,00	32,00	113,22

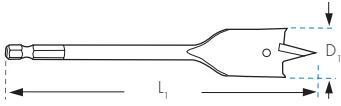


**FLAT DRILL BITS HEXAGONAL SHANK**

Ref. BMP/BMPL



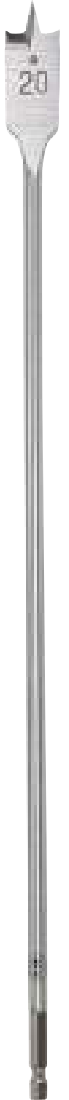
CV


**1/4"**  
 Hexagonal


	BMP		
	D <sub>1</sub> mm	L <sub>1</sub> mm	€
BMP06	6,0	150	3,16
BMP08	8,0	150	3,36
BMP10	10,0	150	3,56
BMP12	12,0	150	3,81
BMP13	13,0	150	4,38
BMP14	14,0	150	4,09
BMP15	15,0	150	4,79
BMP16	16,0	150	4,49
BMP17	17,0	150	5,09
BMP18	18,0	150	4,77
BMP19	19,0	150	5,41
BMP20	20,0	150	5,16
BMP22	22,0	150	5,93
BMP24	24,0	150	6,40
BMP25	25,0	150	7,21
BMP26	26,0	150	7,49
BMP28	28,0	150	7,91
BMP30	30,0	150	8,52
BMP32	32,0	150	9,07
BMP34	34,0	150	10,98
BMP35	35,0	150	11,15
BMP36	36,0	150	10,60
BMP38	38,0	150	11,13
BMP40	40,0	150	11,36



	BMPX400		
	D <sub>1</sub> mm	L <sub>1</sub> mm	€
BMP06X400	6,0	400	11,88
BMP08X400	8,0	400	11,88
BMP10X400	10,0	400	12,45
BMP12X400	12,0	400	13,76
BMP13X400	13,0	400	12,24
BMP14X400	14,0	400	11,83
BMP16X400	16,0	400	12,99
BMP17X400	17,0	400	13,81
BMP18X400	18,0	400	14,64
BMP19X400	19,0	400	14,65
BMP20X400	20,0	400	14,64
BMP22X400	22,0	400	16,95
BMP24X400	24,0	400	18,19
BMP25X400	25,0	400	20,73
BMP26X400	26,0	400	22,03
BMP28X400	28,0	400	23,33
BMP30X400	30,0	400	24,62
BMP32X400	32,0	400	26,44
BMP35X400	35,0	400	29,69
BMP36X400	36,0	400	33,29
BMP38X400	38,0	400	35,00
BMP40X400	40,0	400	35,49


**WOOD MILLING CUTTER PLUGS**

Ref. TM



CV



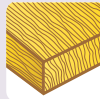
	TM			
	D <sub>1</sub> mm	D <sub>2</sub> mm	L mm	€
TM0800	8,0	11	140	45,53
TM1000	10,0	11	140	48,76
TM1200	12,0	13	140	57,56
TM1500	15,0	13	140	75,93
TM1600	16,0	13	140	77,26
TM2000	20,0	13	140	87,72
TM2200	22,0	13	140	96,27
TM2500	25,0	13	140	105,76
TM2600	26,0	13	140	107,66
TM3000	30,0	13	140	119,06
TM3500	35,0	16	160	132,36
TM4000	40,0	16	160	151,70

**4 EDGE CASTOR TYPE WOOD WORKING DRILLS**

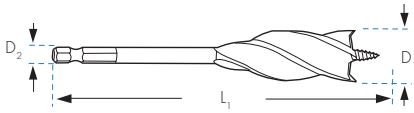
Ref. BM4P




**HSS**



Until Ø 26 - 1/4" Hexagonal shank  
From Ø 28 - 11 mm Hexagonal shank



CLEAN CUT  
EASY DRILLING  
GREAT PERFORMANCE  
HIGH PRECISION HOLES

	D1 mm		D2 mm	L1 mm	BM4P €
BM4P10	10,0	1/4"	6,35	165	21,52
BM4P11	11,0	1/4"	6,35	165	21,52
BM4P12	12,0	1/4"	6,35	165	23,91
BM4P13	13,0	1/4"	6,35	165	25,44
BM4P15	15,0	1/4"	6,35	165	25,44
BM4P16	16,0	1/4"	6,35	165	27,38
BM4P18	18,0	1/4"	6,35	165	28,48
BM4P19	19,0	1/4"	6,35	165	31,31
BM4P20	20,0	1/4"	6,35	165	35,21
BM4P21	21,0	1/4"	6,35	165	38,91
BM4P22	22,0	1/4"	6,35	165	38,91
BM4P24	24,0	1/4"	6,35	165	48,47
BM4P25	25,0	1/4"	6,35	165	49,12
BM4P26	26,0	1/4"	6,35	165	53,93
BM4P28	28,0	7/16"	11,11	165	56,29
BM4P30	30,0	7/16"	11,11	165	58,26
BM4P32	32,0	7/16"	11,11	165	59,56
BM4P35	35,0	7/16"	11,11	165	62,17
BM4P38	38,0	7/16"	11,11	165	67,61
BM4P40	40,0	7/16"	11,11	165	73,47



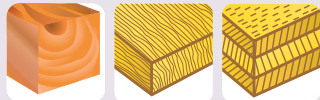
**EXTENSION SHANK 6,35 mm (1/4" HEXAGONAL)**



	DESCRIPTION	AM €
AMC60	Hexagonal, LT 150 mm.	8,55
AMC60AR	Hexagonal, quick change, LT 150 mm.	18,45
AMC300	Hexagonal, LT 300 mm.	14,82
AMSDS60	SDS PLUS, LT 60 mm.	14,95
AMSDS60AR	SDS PLUS, quick change, LT 60 mm.	29,93
AMSDS300	SDS PLUS, LT 300 mm.	23,28
AMSDS300AR	SDS PLUS, quick change, LT 300 mm.	33,75

**CARBIDE TIPPED FORSTNER BITS**

Ref. BB

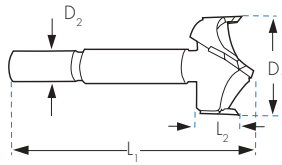

**CARBIDE  
TIPPED**


Ref. BMF



Ø 65 - Straight shank

Ø &gt; 65 - Hexagonal shank



	BB			
	D1 mm	D2 mm	L1 x L2 mm	€
*BB12B	12,0	8	90 x 15	33,36
*BB15B	15,0	8	90 x 15	34,78
*BB16B	16,0	8	90 x 15	35,25
*BB18B	18,0	8	90 x 15	37,36
*BB20B	20,0	8	90 x 15	38,93
*BB25B	25,0	8	90 x 15	45,86
*BB26B	26,0	8	90 x 15	46,73
*BB30B	30,0	8	90 x 15	51,29
*BB32B	32,0	10	90 x 15	59,14
*BB35B	35,0	10	90 x 15	58,57
*BB40B	40,0	10	90 x 15	65,27
BB50	50,0	10	90 x 15	76,80
BB55	55,0	10	90 x 15	103,22
BB60	60,0	12	90 x 15	112,25
BB65	65,0	12	90 x 15	126,09
BB70	70,0	12	90 x 15	139,84
BB75	75,0	12	90 x 15	149,83
BB80	80,0	12	90 x 15	167,56
BB85	85,0	12	90 x 15	182,66
BB90	90,0	12	90 x 15	212,45

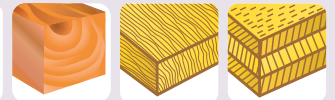
\* Blister packaging



	BMF			
	D1 mm	D2 mm	L1 mm	€
BMF16	16,0	13	140	49,77
BMF18	18,0	13	140	52,41
BMF20	20,0	13	140	59,74
BMF22	22,0	13	140	63,69
BMF24	24,0	13	140	69,99
BMF25	25,0	13	140	73,65
BMF26	26,0	13	140	74,48
BMF28	28,0	13	140	74,48
BMF30	30,0	13	140	69,62
BMF32	32,0	13	140	76,83
BMF35	35,0	13	140	76,83
BMF40	40,0	13	140	91,72
BMF42	42,0	13	140	83,42
BMF45	45,0	13	140	89,24
BMF50	50,0	13	140	99,19
BMF55	55,0	9	210	139,74
BMF60	60,0	9	210	152,52
BMF65	65,0	9	210	167,20
BMF70	70,0	9	210	179,97
BMF75	75,0	9	210	209,88
BMF80	80,0	9	210	223,88
BMF85	85,0	9	210	237,87
BMF90	90,0	9	210	292,86

**CV FORSTNER BITS**

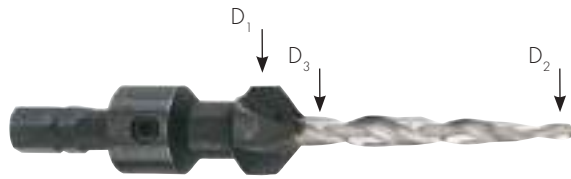
Ref. BMF1


**CV**


	BMF1			
	D1 mm	D2 mm	L1 mm	€
BMF106	6,0	8,0	90	11,76
BMF108	8,0	8,0	90	11,76
BMF110	10,0	8,0	90	12,26
BMF111	11,0	8,0	90	12,75
BMF112	12,0	8,0	90	13,26
BMF113	13,0	8,0	90	13,56
BMF114	14,0	8,0	90	13,91
BMF115	15,0	8,0	90	13,91
BMF116	16,0	8,0	90	14,56
BMF118	18,0	8,0	90	17,69
BMF119	19,0	8,0	90	18,92
BMF120	20,0	8,0	90	16,48
BMF121	21,0	8,0	90	19,35
BMF122	22,0	8,0	90	18,58
BMF124	24,0	8,0	90	18,99
BMF125	25,0	8,0	90	19,51
BMF126	26,0	8,0	90	20,94
BMF127	27,0	8,0	90	21,36
BMF128	28,0	8,0	90	18,38
BMF130	30,0	8,0	90	18,38
BMF132	32,0	10,0	90	22,37
BMF134	34,0	10,0	90	23,65
BMF135	35,0	10,0	90	25,39
BMF136	36,0	10,0	90	26,24
BMF138	38,0	10,0	90	27,97
BMF140	40,0	10,0	90	28,40
BMF141	41,0	10,0	90	30,13
BMF143	43,0	10,0	90	31,39
BMF144	44,0	10,0	90	33,12
BMF145	45,0	10,0	90	32,92
BMF146	46,0	10,0	90	34,84
BMF148	48,0	10,0	90	36,99
BMF149	49,0	10,0	90	38,26
BMF150	50,0	10,0	90	36,35
BMF151	51,0	10,0	90	39,57
BMF152	52,0	10,0	90	41,30
BMF154	54,0	10,0	90	43,01
BMF157	57,0	12,5	159	61,94
BMF160	60,0	12,5	159	65,81
BMF163	63,0	12,5	159	70,56
BMF166	66,0	12,5	159	77,39
BMF170	70,0	12,5	159	86,45
BMF173	73,0	12,5	159	95,05
BMF176	76,0	12,5	159	103,65
BMF179	79,0	12,5	159	120,43
BMF183	83,0	12,5	159	135,91
BMF186	86,0	12,5	159	153,55
BMF189	89,0	12,5	159	140,78

**TWIST DRILLS TO ASSEMBLE SCREWS IN WOOD HEXAGONAL SHANK**

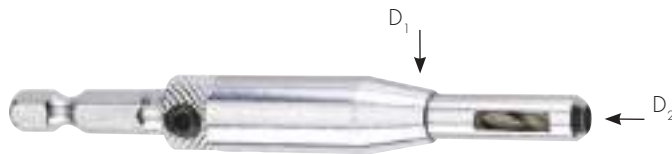
Ref. BM3



				BM3
	D1 mm	D2 mm	D3 mm	€
BM306	6,0	1,5	3,0	19,55
BM308	8,0	2,0	3,5	19,55
BM310	10,0	2,5	4,0	19,55
BM312	12,0	2,5	4,0	19,55

**TWIST DRILLS FOR LOCKS AND HINGES INSTALLATIONS IN WOOD HEXAGONAL SHANK**

Ref. BM4



				BM4
	D1 mm	D2 mm		€
BM406	6,0	2,0		15,05
BM408	8,0	2,7		15,05
BM410	10,0	3,5		15,05
BM412	12,0	4,5		15,05

**CV TWIST DRILLS FOR WOOD WITH COUNTERSINK CYLINDRICAL AND HEXAGONAL SHANK**

Ref. BM5



Ref. BM6



				BM5
	D1 mm	D2 mm		€
BM506	6,0	2,3		27,69
BM508	8,0	2,7		27,69
BM510	10,0	3,1		27,69
BM512	12,0	3,5		27,69

				BM6
	D1 mm	D2 mm		€
BM603	16,0	3,0		14,72
BM604	16,0	4,0		15,69
BM605	16,0	5,0		16,39
BM606	16,0	6,0		18,14
BM607	16,0	7,0		18,49

				BM6
	D1 mm	D2 mm		€
BM608	16,0	8,0		20,14
BM609	16,0	9,0		22,13
BM610	16,0	10,0		23,41
BM611	20,0	11,0		33,66
BM612	20,0	12,0		37,20

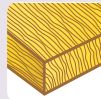


**CV EXTENSIBLE DRILLS FOR WOOD**

Ref. BME



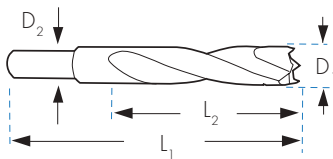
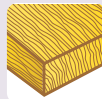
CV



		BME
		€
	CAPACITY	
BME 15/45	15-45	49,64
BME 25/75	25-75	60,87

**CARBIDE TIPPED WOOD WORKING DRILLS**

Ref. BMMD

CARBIDE  
TIPPED

				BMMD
	D1 mm	D2 mm	L1 x L2 mm	€
BMMD03	3,0	3,0	75 x 35	8,34
BMMD04	4,0	4,0	75 x 35	8,88
BMMD05	5,0	4,0	86 x 52	9,32
BMMD06	6,0	5,0	98 x 57	9,44
BMMD07	7,0	6,0	100 x 60	9,95
BMMD08	8,0	7,0	102 x 63	10,22
BMMD09	9,0	8,0	102 x 63	12,00
BMMD10	10,0	9,0	102 x 63	13,45
BMMD11	11,0	11,0	110 x 63	15,11
BMMD12	12,0	11,5	110 x 63	18,65
BMMD13	13,0	11,5	110 x 63	21,08
BMMD14	14,0	10,0	110 x 63	32,42
BMMD15	15,0	10,0	110 x 63	41,56
BMMD16	16,0	10,0	110 x 63	49,58
BMMD18	18,0	10,0	140 x 63	61,12
BMMD20	20,0	12,7	140 x 63	69,60
BMMD22	22,0	12,7	140 x 63	73,69
BMMD24	24,0	12,7	170 x 63	96,35
BMMD25	25,0	12,7	170 x 63	114,91
BMMD26	26,0	12,7	170 x 63	136,66
BMMD28	28,0	12,7	170 x 63	149,45
BMMD30	30,0	12,7	170 x 63	176,56

**COUNTERSINK BITS FOR WOOD**


Ref. AV26

AV25			
	D1 mm	D2 mm	€
AV250312	3,0	12	9,53
AV250412	4,0	12	9,53
AV250512	5,0	12	9,53
AV250612	6,0	12	9,53
AV26			
AV260316	3,0	16	12,81
AV260416	4,0	16	12,81
AV260516	5,0	16	12,81
AV260616	6,0	16	12,81
AV260816	8,0	16	12,81

**STOPPERS FOR CYLINDRICAL  
SHANK DRILLS**


Ref. TOPE

TOPE		
	D1 mm	€
TOPE03	3,0	4,49
TOPE04	4,0	5,02
TOPE05	5,0	5,48
TOPE06	6,0	6,14
TOPE08	8,0	6,54
TOPE10	10,0	6,91
TOPE12	12,0	12,90

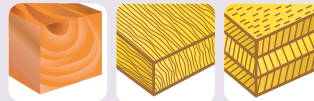
**CV SHUTTERING AND INSTALLATION BITS STRAIGHT SHANK**

Ref. BE

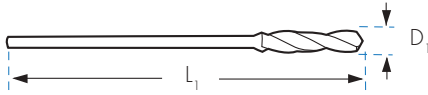


**CV**

**DIN  
7490**



Drill threaded into the shank



Ref. BE06X400

Ref. BE06X600

Ref. BE06X800

Ref. BE06X1000

LENGTH 400 mm			
	D <sub>1</sub> mm	L <sub>1</sub> mm	BE €
BE06X400	6,0	400	17,00
BE08X400	8,0	400	17,53
BE10X400	10,0	400	20,89
BE12X400	12,0	400	27,06
BE14X400	14,0	400	29,94
BE16X400	16,0	400	34,84
BE18X400	18,0	400	42,59
BE20X400	20,0	400	57,47
BE22X400	22,0	400	76,76
BE24X400	24,0	400	87,41
BE26X400	26,0	400	98,92
BE28X400	28,0	400	107,82
BE30X400	30,0	400	113,75

LENGTH 600 mm			
	D <sub>1</sub> mm	L <sub>1</sub> mm	BE €
BE06X600	6,0	600	18,75
BE08X600	8,0	600	18,64
BE10X600	10,0	600	21,71
BE12X600	12,0	600	28,39
BE14X600	14,0	600	31,02
BE16X600	16,0	600	35,92
BE18X600	18,0	600	43,68
BE20X600	20,0	600	58,35
BE22X600	22,0	600	77,85
BE24X600	24,0	600	91,13
BE26X600	26,0	600	100,26
BE28X600	28,0	600	109,14
BE30X600	30,0	600	115,62

LENGTH 800 mm			
	D <sub>1</sub> mm	L <sub>1</sub> mm	BE €
BE06X800	6,0	800	22,35
BE08X800	8,0	800	25,28
BE10X800	10,0	800	28,11
BE12X800	12,0	800	34,33
BE14X800	14,0	800	39,33
BE16X800	16,0	800	45,97
BE18X800	18,0	800	54,72
BE20X800	20,0	800	69,26
BE22X800	22,0	800	90,34
BE24X800	24,0	800	103,50
BE26X800	26,0	800	112,53
BE28X800	28,0	800	121,32
BE30X800	30,0	800	127,28

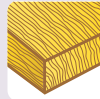
LENGTH 1000 mm			
	D <sub>1</sub> mm	L <sub>1</sub> mm	BE €
BE06X1000	6,0	1000	25,32
BE08X1000	8,0	1000	26,36
BE10X1000	10,0	1000	29,71
BE12X1000	12,0	1000	35,82
BE14X1000	14,0	1000	40,90
BE16X1000	16,0	1000	58,23
BE18X1000	18,0	1000	58,23
BE20X1000	20,0	1000	72,74
BE22X1000	22,0	1000	94,05
BE24X1000	24,0	1000	107,47
BE26X1000	26,0	1000	116,01
BE28X1000	28,0	1000	121,46
BE30X1000	30,0	1000	131,01

**CV SHUTTERING AND INSTALLATION BITS SDS PLUS SHANK**

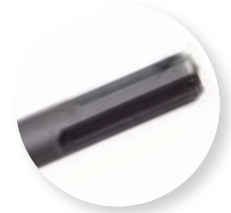
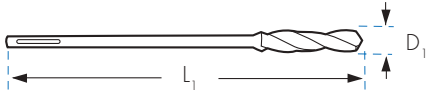
Ref. BESDS



CV

DIN  
7490

Drill threaded into the shank



Ref. BESDS06X400

Ref. BESDS06X600

Ref. BESDS06X800

Ref. BESDS06X1000

**LENGTH 400 mm**

	BESDS		
	D <sub>1</sub> mm	L <sub>1</sub> mm	€
BESDS06X400	6,0	400	40,75
BESDS08X400	8,0	400	42,02
BESDS10X400	10,0	400	38,63
BESDS12X400	12,0	400	41,55
BESDS14X400	14,0	400	53,24
BESDS16X400	16,0	400	67,54
BESDS18X400	18,0	400	87,46
BESDS20X400	20,0	400	95,69
BESDS22X400	22,0	400	114,28
BESDS24X400	24,0	400	134,18
BESDS26X400	26,0	400	156,62
BESDS28X400	28,0	400	169,71
BESDS30X400	30,0	400	191,94

**LENGTH 600 mm**

	BESDS		
	D <sub>1</sub> mm	L <sub>1</sub> mm	€
BESDS06X600	6,0	600	41,98
BESDS08X600	8,0	600	45,10
BESDS10X600	10,0	600	40,03
BESDS12X600	12,0	600	44,65
BESDS14X600	14,0	600	59,90
BESDS16X600	16,0	600	74,14
BESDS18X600	18,0	600	95,14
BESDS20X600	20,0	600	104,66
BESDS22X600	22,0	600	120,25
BESDS24X600	24,0	600	154,41
BESDS26X600	26,0	600	172,20
BESDS28X600	28,0	600	193,36
BESDS30X600	30,0	600	217,09

**LENGTH 800 mm**

	BESDS		
	D <sub>1</sub> mm	L <sub>1</sub> mm	€
BESDS06X800	6,0	800	43,23
BESDS08X800	8,0	800	48,43
BESDS10X800	10,0	800	47,78
BESDS12X800	12,0	800	51,24
BESDS14X800	14,0	800	79,18
BESDS16X800	16,0	800	97,50
BESDS18X800	18,0	800	122,78
BESDS20X800	20,0	800	133,12
BESDS22X800	22,0	800	142,60
BESDS24X800	24,0	800	184,33
BESDS26X800	26,0	800	189,29
BESDS28X800	28,0	800	220,31
BESDS30X800	30,0	800	245,54

**LENGTH 1000 mm**

	BESDS		
	D <sub>1</sub> mm	L <sub>1</sub> mm	€
BESDS06X1000	6,0	1000	44,53
BESDS08X1000	8,0	1000	51,98
BESDS10X1000	10,0	1000	52,50
BESDS12X1000	12,0	1000	53,10
BESDS14X1000	14,0	1000	92,18
BESDS16X1000	16,0	1000	111,82
BESDS18X1000	18,0	1000	138,86
BESDS20X1000	20,0	1000	149,90
BESDS22X1000	22,0	1000	151,62
BESDS24X1000	24,0	1000	212,07
BESDS26X1000	26,0	1000	208,13
BESDS28X1000	28,0	1000	251,03
BESDS30X1000	30,0	1000	277,74

# 1/4" SHANK TOOLS



**BLUE-MASTER<sup>®</sup>**  
*by CEJES*

CUTTING TECHNOLOGIES

**INTERCHANGEABLE SCREWDRIVER BITS**

**25mm**  
 OVERALL  
 LENGTH  
 (L<sub>1</sub>)

**PHILLIPS**


€ per Bit		2 U		5 U		50 U		100 U	
	L <sub>1</sub> mm		€		€		€		€
Ph 0	25	Ph0-2	1,47	Ph0-5	1,29	Ph0-50	1,15	Ph0-100	1,10
Ph 1	25	Ph1-2	1,24	Ph1-5	0,77	Ph1-50	0,70	Ph1-100	0,64
Ph 2	25	Ph2-2	1,24	Ph2-5	0,77	Ph2-50	0,70	Ph2-100	0,64
Ph 3	25	Ph3-2	1,24	Ph3-5	0,77	Ph3-50	0,70	Ph3-100	0,64

**POZIDRIV**


€ per Bit		2 U		5 U		50 U		100 U	
	L <sub>1</sub> mm		€		€		€		€
Pz 0	25	Pz0-2	1,47	Pz0-5	1,29	Pz0-50	1,15	Pz0-100	1,10
Pz 1	25	Pz1-2	1,24	Pz1-5	0,77	Pz1-50	0,70	Pz1-100	0,64
Pz 2	25	Pz2-2	1,24	Pz2-5	0,77	Pz2-50	0,70	Pz2-100	0,64
Pz 3	25	Pz3-2	1,24	Pz3-5	0,77	Pz3-50	0,70	Pz3-100	0,64

**SLOT**


€ per Bit		2 U		5 U		50 U		100 U	
	L <sub>1</sub> mm		€		€		€		€
0,5X3,0	25	P0,5X3,0-2	1,68	P0,5X3,0-5	1,45	P0,5X3,0-50	1,32	P0,5X3,0-100	1,24
0,6X3,5	25	P0,6X3,5-2	1,68	P0,6X3,5-5	1,45	P0,6X3,5-50	1,32	P0,6X3,5-100	1,24
0,5X4,0	25	P0,5X4,0-2	1,68	P0,5X4,0-5	1,45	P0,5X4,0-50	1,32	P0,5X4,0-100	1,24
0,6X4,5	25	P0,6X4,5-2	1,68	P0,6X4,5-5	1,45	P0,6X4,5-50	1,32	P0,6X4,5-100	1,24
0,8X4,0	25	P0,8X4,0-2	1,68	P0,8X4,0-5	1,45	P0,8X4,0-50	1,32	P0,8X4,0-100	1,24
0,8X5,0	25	P0,8X5,0-2	1,68	P0,8X5,0-5	1,45	P0,8X5,0-50	1,32	P0,8X5,0-100	1,24
0,8X5,5	25	P0,8X5,5-2	1,68	P0,8X5,5-5	1,45	P0,8X5,5-50	1,32	P0,8X5,5-100	1,24
1,0X5,5	25	P1X5,5-2	1,68	P1X5,5-5	1,45	P1X5,5-50	1,32	P1X5,5-100	1,24
1,0X6,0	25	P1X6,0-2	1,68	P1X6,0-5	1,45	P1X6,0-50	1,32	P1X6,0-100	1,24
1,2X6,5	25	P1,2X6,5-2	1,68	P1,2X6,5-5	1,45	P1,2X6,5-50	1,32	P1,2X6,5-100	1,24
1,2X8,0	25	P1,2X8,0-2	1,68	P1,2X8,0-5	1,45	P1,2X8,0-50	1,32	P1,2X8,0-100	1,24



**INTERCHANGEABLE SCREWDRIVER BITS**



**25mm**  
OVERALL  
LENGTH  
(L<sub>1</sub>)



TORX



€per Bit	2 U		5 U		50 U		100 U		
	L <sub>1</sub> mm	€	€	€	€	€	€		
T5	25	PT5-2	2,21	PT5-5	1,92	PT5-50	1,73	PT5-100	1,64
T6	25	PT6-2	2,21	PT6-5	1,92	PT6-50	1,73	PT6-100	1,64
T7	25	PT7-2	2,21	PT7-5	1,92	PT7-50	1,73	PT7-100	1,64
T8	25	PT8-2	2,21	PT8-5	1,92	PT8-50	1,73	PT8-100	1,64
T9	25	PT9-2	2,21	PT9-5	1,92	PT9-50	1,73	PT9-100	1,64
T10	25	PT10-2	1,81	PT10-5	1,42	PT10-50	1,27	PT10-100	1,20
T15	25	PT15-2	1,81	PT15-5	1,42	PT15-50	1,27	PT15-100	1,20
T20	25	PT20-2	1,81	PT20-5	1,42	PT20-50	1,27	PT20-100	1,20
T25	25	PT25-2	1,81	PT25-5	1,42	PT25-50	1,27	PT25-100	1,20
T27	25	PT27-2	1,81	PT27-5	1,42	PT27-50	1,27	PT27-100	1,20
T30	25	PT30-2	1,81	PT30-5	1,42	PT30-50	1,27	PT30-100	1,20
T40	25	PT40-2	1,81	PT40-5	1,42	PT40-50	1,27	PT40-100	1,20

TORX  
ROUND



€per Bit	2 U		5 U		50 U		100 U		
	L <sub>1</sub> mm	€	€	€	€	€	€		
TR10	25	PTR10-2	5,88	PTR10-5	5,11	PTR10-50	4,61	PTR10-100	4,33
TR15	25	PTR15-2	5,88	PTR15-5	5,11	PTR15-50	4,61	PTR15-100	4,33
TR20	25	PTR20-2	5,88	PTR20-5	5,11	PTR20-50	4,61	PTR20-100	4,33
TR25	25	PTR25-2	5,88	PTR25-5	5,11	PTR25-50	4,61	PTR25-100	4,33
TR30	25	PTR30-2	5,88	PTR30-5	5,11	PTR30-50	4,61	PTR30-100	4,33
TR40	25	PTR40-2	5,88	PTR40-5	5,11	PTR40-50	4,61	PTR40-100	4,33

ROBERTSON



€per Bit	2 U		5 U		50 U		100 U		
	L <sub>1</sub> mm	€	€	€	€	€	€		
Nº1	25	PC1-2	2,37	PC1-5	2,06	PC1-50	1,86	PC1-100	1,75
Nº2	25	PC2-2	2,37	PC2-5	2,06	PC2-50	1,86	PC2-100	1,75
Nº3	25	PC3-2	2,37	PC3-5	2,06	PC3-50	1,86	PC3-100	1,75

**INTERCHANGEABLE SCREWDRIVER BITS**

Screwdriver bits

Pink


**25mm**  
 OVERALL  
 LENGTH  
 (L<sub>1</sub>)

**TORX  
SECURITY**


€ per Bit		2 U		5 U		50 U		100 U	
	L <sub>1</sub> mm		€		€		€		€
TS10	25	PTS10-2	3,15	PTS10-5	2,73	PTS10-50	2,46	PTS10-100	2,33
TS15	25	PTS15-2	3,15	PTS15-5	2,73	PTS15-50	2,46	PTS15-100	2,33
TS20	25	PTS20-2	3,15	PTS20-5	2,73	PTS20-50	2,46	PTS20-100	2,33
TS25	25	PTS25-2	3,15	PTS25-5	2,73	PTS25-50	2,46	PTS25-100	2,33
TS27	25	PTS27-2	3,15	PTS27-5	2,73	PTS27-50	2,46	PTS27-100	2,33
TS30	25	PTS30-2	3,15	PTS30-5	2,73	PTS30-50	2,46	PTS30-100	2,33
TS40	25	PTS40-2	3,15	PTS40-5	2,73	PTS40-50	2,46	PTS40-100	2,33

**HEXAGONAL**


€ per Bit		2 U		5 U		50 U		100 U	
	L <sub>1</sub> mm		€		€		€		€
2 mm	25	PHX2-2	1,74	PHX2-5	1,58	PHX2-50	1,41	PHX2-100	1,35
2,5 mm	25	PHX2,5-2	1,74	PHX2,5-5	1,58	PHX2,5-50	1,41	PHX2,5-100	1,35
3 mm	25	PHX3-2	1,74	PHX3-5	1,58	PHX3-50	1,41	PHX3-100	1,35
4 mm	25	PHX4-2	1,74	PHX4-5	1,58	PHX4-50	1,41	PHX4-100	1,35
5 mm	25	PHX5-2	1,74	PHX5-5	1,58	PHX5-50	1,41	PHX5-100	1,35
6 mm	25	PHX6-2	1,74	PHX6-5	1,58	PHX6-50	1,41	PHX6-100	1,35
8 mm	25	PHX8-2	2,07	PHX8-5	1,88	PHX8-50	1,81	PHX8-100	1,71

**TRI  
WING**


€ per Bit		2 U		5 U		50 U		100 U	
	L <sub>1</sub> mm		€		€		€		€
N°4	25	PTRW4-2	10,40	PTRW4-5	9,05	PTRW4-50	8,14	PTRW4-100	7,69
N°5	25	PTRW5-2	10,40	PTRW5-5	9,05	PTRW5-50	8,14	PTRW5-100	7,69
N°6	25	PTRW6-2	10,40	PTRW6-5	9,05	PTRW6-50	8,14	PTRW6-100	7,69
N°8	25	PTRW8-2	10,40	PTRW8-5	9,05	PTRW8-50	8,14	PTRW8-100	7,69

**XZN**


€ per Bit		2 Pcs		5 Pcs		50 Pcs		100 Pcs	
	L <sub>1</sub> mm		€		€		€		€
N°4	25	PXZN4-2	6,38	PXZN4-5	5,55	PXZN4-50	4,99	PXZN4-100	4,72
N°5	25	PXZN5-2	6,38	PXZN5-5	5,55	PXZN5-50	4,99	PXZN5-100	4,72
N°6	25	PXZN6-2	6,38	PXZN6-5	5,55	PXZN6-50	4,99	PXZN6-100	4,72
N°8	25	PXZN8-2	7,15	PXZN8-5	6,22	PXZN8-50	6,11	PXZN8-100	5,99
N°10	25	PXZN10-2	7,15	PXZN10-5	6,22	PXZN10-50	6,11	PXZN10-100	5,99

**INTERCHANGEABLE SCREWDRIVER BITS**



**50mm**  
OVERALL  
LENGTH  
(L<sub>1</sub>)



PHILLIPS



€ per Bit

	L <sub>1</sub> mm	2 U		5 U		50 U	
			€		€		€
Ph 1	50	Ph1X50-2	2,83	Ph1X50-5	2,47	Ph1X50-50	2,22
Ph 2	50	Ph2X50-2	2,83	Ph2X50-5	2,47	Ph2X50-50	2,22
Ph 3	50	Ph3X50-2	2,83	Ph3X50-5	2,47	Ph3X50-50	2,22
Ph 4	50	Ph4X50-2	-	Ph4X50-5	-	Ph4X50-50	-

POZIDRIV



€ per Bit

	L <sub>1</sub> mm	2 U		5 U		50 U	
			€		€		€
Pz 1	50	Pz1X50-2	2,83	Pz1X50-5	2,47	Pz1X50-50	2,22
Pz 2	50	Pz2X50-2	2,83	Pz2X50-5	2,47	Pz2X50-50	2,22
Pz 3	50	Pz3X50-2	2,83	Pz3X50-5	2,47	Pz3X50-50	2,22
Pz 4	50	Pz4X50-2	-	Pz4X50-5	-	Pz4X50-50	-

SLOT



€ per Bit

	L <sub>1</sub> mm	2 U		5 U		50 U	
			€		€		€
0,5X4,0	50	P0,5X4,0X50-2	4,47	P0,5X4,0X50-5	3,87	P0,5X4,0X50-50	3,47
0,5X3,0	50	P0,5X3,0X50-2	4,47	P0,5X3,0X50-5	3,87	P0,5X3,0X50-50	3,47
0,6X3,5	50	P0,6X3,5X50-2	4,47	P0,6X3,5X50-5	3,87	P0,6X3,5X50-50	3,47
0,6X4,5	50	P0,6X4,5X50-2	4,47	P0,6X4,5X50-5	3,87	P0,6X4,5X50-50	3,47
0,8X4,0	50	P0,8X4,0X50-2	4,47	P0,8X4,0X50-5	3,87	P0,8X4,0X50-50	3,47
0,8X5,0	50	P0,8X5,0X50-2	4,47	P0,8X5,0X50-5	3,87	P0,8X5,0X50-50	3,47
0,8X5,5	50	P0,8X5,5X50-2	4,47	P0,8X5,5X50-5	3,87	P0,8X5,5X50-50	3,47
1X5,5	50	P1X5,5X50-2	4,47	P1X5,5X50-5	3,87	P1X5,5X50-50	3,47
1X6,0	50	P1X6,0X50-2	4,47	P1X6,0X50-5	3,87	P1X6,0X50-50	3,47
1,2X6,5	50	P1,2X6,5X50-2	4,47	P1,2X6,5X50-5	3,87	P1,2X6,5X50-50	3,47
1,2X8,0	50	P1,2X8,0X50-2	4,47	P1,2X8,0X50-5	3,87	P1,2X8,0X50-50	3,47

**INTERCHANGEABLE SCREWDRIVER BITS**

**50mm**  
 OVERALL  
 LENGTH  
 (L<sub>1</sub>)


Screwdriver bits

Pink

TORX



€ per Bit

2 U

5 U

50 U

	L <sub>1</sub> mm		€		€		€
T 5	50	PT5X50-2	5,71	PT5X50-5	4,36	PT5X50-50	4,03
T 6	50	PT6X50-2	5,71	PT6X50-5	4,36	PT6X50-50	4,03
T 7	50	PT7X50-2	5,71	PT7X50-5	4,36	PT7X50-50	4,03
T 8	50	PT8X50-2	5,71	PT8X50-5	4,36	PT8X50-50	4,03
T 9	50	PT9X50-2	5,71	PT9X50-5	4,36	PT9X50-50	4,03
T 10	50	PT10X50-2	5,26	PT10X50-5	4,09	PT10X50-50	3,69
T 15	50	PT15X50-2	5,26	PT15X50-5	4,09	PT15X50-50	3,69
T 20	50	PT20X50-2	5,26	PT20X50-5	4,09	PT20X50-50	3,69
T 25	50	PT25X50-2	5,26	PT25X50-5	4,09	PT25X50-50	3,69
T 27	50	PT27X50-2	5,26	PT27X50-5	4,09	PT27X50-50	3,69
T 30	50	PT30X50-2	5,26	PT30X50-5	4,09	PT30X50-50	3,69
T 40	50	PT40X50-2	5,26	PT40X50-5	4,09	PT40X50-50	3,69

ROBERTSON



€ per Bit

2 U

5 U

50 U

	L <sub>1</sub> mm		€		€		€
Nº1	50	PC1X50-2	6,86	PC1X50-5	5,97	PC1X50-50	5,37
Nº2	50	PC2X50-2	6,86	PC2X50-5	5,97	PC2X50-50	5,37
Nº3	50	PC3X50-2	6,86	PC3X50-5	5,97	PC3X50-50	5,37

HEXAGONAL



€ per Bit

2 U

5 U

50 U

	L <sub>1</sub> mm		€		€		€
2mm	50	PHX2X50-2	5,56	PHX2X50-5	4,83	PHX2X50-50	4,34
2,5mm	50	PHX2,5X50-2	5,56	PHX2,5X50-5	4,83	PHX2,5X50-50	4,34
3mm	50	PHX3X50-2	5,56	PHX3X50-5	4,83	PHX3X50-50	4,34
4mm	50	PHX4X50-2	5,56	PHX4X50-5	4,83	PHX4X50-50	4,34
5mm	50	PHX5X50-2	5,56	PHX5X50-5	4,83	PHX5X50-50	4,34
6mm	50	PHX6X50-2	5,56	PHX6X50-5	4,83	PHX6X50-50	4,34
8mm	50	PHX8X50-2	7,11	PHX8X50-5	6,51	PHX8X50-50	5,57

**INTERCHANGEABLE SCREWDRIVER BITS**



**70mm**  
OVERALL  
LENGTH  
(L<sub>1</sub>)



PHILLIPS



€ per Bit		2 U		5 U	
	L <sub>1</sub> mm		€		€
Ph 1	70	Ph1X70-2	6,64	Ph1X70-5	5,78
Ph 2	70	Ph2X70-2	6,64	Ph2X70-5	5,78
Ph 3	70	Ph3X70-2	6,64	Ph3X70-5	5,78
Ph 4	70	Ph4X70-2	-	Ph4X70-5	-

POZIDRIV



€ per Bit		2 U		5 U	
	L <sub>1</sub> mm		€		€
Pz 1	70	Pz1X70-2	6,70	Pz1X70-5	5,83
Pz 2	70	Pz2X70-2	6,70	Pz2X70-5	5,83
Pz 3	70	Pz3X70-2	6,70	Pz3X70-5	5,83
Pz 4	70	Pz4X70-2	-	Pz4X70-5	-



**90mm**  
OVERALL  
LENGTH  
(L<sub>1</sub>)



PHILLIPS



€ per Bit		2 U		5 U	
	L <sub>1</sub> mm		€		€
Ph 1	90	Ph1X90-2	8,18	Ph1X90-5	7,12
Ph 2	90	Ph2X90-2	8,18	Ph2X90-5	7,12
Ph 3	90	Ph3X90-2	8,18	Ph3X90-5	7,12
Ph 4	90	Ph4X90-2	-	Ph4X90-5	-

POZIDRIV



€ per Bit		2 U		5 U	
	L <sub>1</sub> mm		€		€
Pz 1	90	Pz1X90-2	8,26	Pz1X90-5	7,19
Pz 2	90	Pz2X90-2	8,26	Pz2X90-5	7,19
Pz 3	90	Pz3X90-2	8,26	Pz3X90-5	7,19
Pz 4	90	Pz4X90-2	-	Pz4X90-5	-



**INTERCHANGEABLE SCREWDRIVER BITS**
**TiN**

**25mm**  
 OVERALL  
 LENGTH  
 (L<sub>1</sub>)


Screwdriver bits

Pink

**PHILLIPS**


€ per Bit

2 U

5 U

50 U

	L <sub>1</sub> mm		€		€		€
Ph 1	25	Ph1T-2	3,34	Ph1T-5	2,52	Ph1T-50	2,27
Ph 2	25	Ph2T-2	3,34	Ph2T-5	2,52	Ph2T-50	2,27
Ph 3	25	Ph3T-2	3,34	Ph3T-5	2,52	Ph3T-50	2,27

**POZIDRIV**


€ per Bit

2 U

5 U

50 U

	L <sub>1</sub> mm		€		€		€
Pz 1	25	Pz1T-2	3,38	Pz1T-5	2,54	Pz1T-50	2,29
Pz 2	25	Pz2T-2	3,38	Pz2T-5	2,54	Pz2T-50	2,29
Pz 3	25	Pz3T-2	3,38	Pz3T-5	2,54	Pz3T-50	2,29

**SLOT**


€ per Bit

2 U

5 U

50 U

	L <sub>1</sub> mm		€		€		€
0,6X4,5	25	PO,6X4,5T-2	3,61	PO,6X4,5T-5	3,13	PO,6X4,5T-50	2,82
0,8X5,5	25	PO,8X5,5T-2	3,61	PO,8X5,5T-5	3,13	PO,8X5,5T-50	2,82
1X5,5	25	P1X5,5T-2	3,61	P1X5,5T-5	3,13	P1X5,5T-50	2,82
1,2X6,5	25	P1,2X6,5T-2	3,61	P1,2X6,5T-5	3,13	P1,2X6,5T-50	2,82

**TORX**


€ per Bit

2 U

5 U

50 U

	L <sub>1</sub> mm		€		€		€
T 10	25	PT10T-2	3,48	PT10T-5	3,13	PT10T-50	2,73
T 15	25	PT15T-2	3,48	PT15T-5	3,13	PT15T-50	2,73
T 20	25	PT20T-2	3,48	PT20T-5	3,13	PT20T-50	2,73
T 25	25	PT25T-2	3,48	PT25T-5	3,13	PT25T-50	2,73
T 27	25	PT27T-2	3,48	PT27T-5	3,13	PT27T-50	2,73
T 30	25	PT30T-2	3,48	PT30T-5	3,13	PT30T-50	2,73
T 40	25	PT40T-2	3,48	PT40T-5	3,13	PT40T-50	2,73

**INTERCHANGEABLE SCREWDRIVER BITS**

**TiN**



**50mm**  
OVERALL  
LENGTH  
(L<sub>1</sub>)



**PHILLIPS**



€ per Bit		2 U		5 U		50 U	
	L <sub>1</sub> mm		€		€		€
Ph 1	50	Ph1Tx50-2	7,71	Ph1Tx50-5	6,70	Ph1Tx50-50	6,01
Ph 2	50	Ph2Tx50-2	7,71	Ph2Tx50-5	6,70	Ph2Tx50-50	6,01
Ph 3	50	Ph3Tx50-2	7,71	Ph3Tx50-5	6,70	Ph3Tx50-50	6,01

**POZIDRIV**



€ per Bit		2 U		5 U		50 U	
	L <sub>1</sub> mm		€		€		€
Pz 1	50	Pz1Tx50-2	7,78	Pz1Tx50-5	6,76	Pz1Tx50-50	6,07
Pz 2	50	Pz2Tx50-2	7,78	Pz2Tx50-5	6,76	Pz2Tx50-50	6,07
Pz 3	50	Pz3Tx50-2	7,78	Pz3Tx50-5	6,76	Pz3Tx50-50	6,07

**TORX**



€ per Bit		2 U		5 U		50 U	
	L <sub>1</sub> mm		€		€		€
T 10	50	PT10Tx50-2	11,02	PT10Tx50-5	9,58	PT10Tx50-50	8,61
T 15	50	PT15Tx50-2	11,02	PT15Tx50-5	9,58	PT15Tx50-50	8,61
T 20	50	PT20Tx50-2	11,02	PT20Tx50-5	9,58	PT20Tx50-50	8,61
T 25	50	PT25Tx50-2	11,02	PT25Tx50-5	9,58	PT25Tx50-50	8,61
T 27	50	PT27Tx50-2	11,02	PT27Tx50-5	9,58	PT27Tx50-50	8,61
T 30	50	PT30Tx50-2	11,02	PT30Tx50-5	9,58	PT30Tx50-50	8,61
T 40	50	PT40Tx50-2	11,02	PT40Tx50-5	9,58	PT40Tx50-50	8,61

## SCREWDRIVER BIT HOLDERS

### MAGNETIC SCREWDRIVER BIT HOLDERS

	L <sub>1</sub> mm	SHANK TYPE	€
PMGx51	51	MAGNETIC WITHOUT RING	6,66
PMGx58	58	MAGNETIC WITHOUT RING	6,91
PMGx74	74	MAGNETIC WITH RING	11,40
PMGx100	100	MAGNETIC WITH RING	13,79
PMGx150	150	MAGNETIC WITH RING	15,36
PMGx200	200	MAGNETIC WITH RING	18,18
PMGx250	250	MAGNETIC WITH RING	27,96
PMGSDSx78	78	SDS PLUS	19,08
PBERx74	74	BERYLLIUM	48,95*
PDESSx70	70	5/16" DESSOUTTER	30,16*
P7x74	74	7mm Fein	32,76*

\*Until end of stock



Ref. PMGSDSx78

Ref. PMGX74

Ref. PMGX100

### MAGNETIC HOLDER WITH QUICK CHANGE (VALID FOR 1/4" SCREWDRIVER BITS WITH CIRCLIP)

	L <sub>1</sub> mm	SHANK TYPE	€
PCR60	60	Quick change 1/4" Valid for 1/4" screwdriver bits with circlip	16,96
PCR74	74	Quick change 1/4" Valid for 1/4" screwdriver bits with circlip	17,47
PCRSDSX80	80	SDS PLUS	27,82



Ref. PCRSDSX80

Ref. PCR60

### SCREWDRIVER BITS HOLDERS WITH ADJUSTABLE STOPPER



Ref. PCTX60

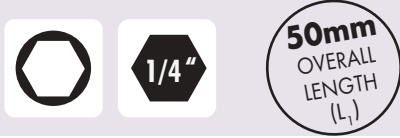
1. With an adjustable stopper
2. Front magnetic circlip for screw holding.
3. Magnetic circlip for screwdriver bit holding.

	L <sub>1</sub> mm	SHANK TYPE	€
PCTX60	60	Adjustable stopper	15,97



Ref. PCTX60

**STANDARD HEXAGONAL NUT DRIVERS**



**MAGNETIC HEXAGONAL NUT DRIVERS**



	mm	"		€ / U.
PLIHX5-2	5,0		2	6,05
PLIHX5,5-2	5,5		2	6,05
PLIHX6-2	6,0		2	6,05
PLIHX1/4-2		1/4"=6,35	2	6,05
PLIHX7-2	7,0		2	6,18
PLIHX5/16-2		5/16"=7,93	2	6,18
PLIHX8-2	8,0		2	6,18
PLIHX3/8-2		3/8"=9,52	2	6,18
PLIHX10-2	10,0		2	6,33
PLIHX11-2	11,0		2	6,51
PLIHX12-2	12,0		2	6,57
PLIHX13-2	13,0		2	6,89

**7 MAGNETIC HEXAGONAL NUT DRIVERS BOX**

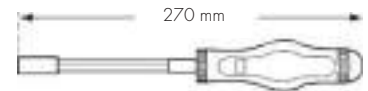
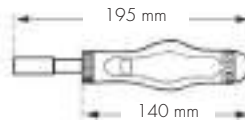
REFERENCE	EPLL
QUANTITY	7
CONTENT	HX1/4 - HX7 - HX8 - HX3/8 HX10 - HX12 - HX13
PRICE €	44,85



**RATCHET SCREWDRIVER WITH BITS STORAGE**

*Plus*

1. High quality and performance
2. Left and right hand turn
3. Telescopic and adjustable
4. Manufactured in high quality plastic and steel



DTRC

- Screwdriver bits included:
- PH1 - PH2
  - PZ1 - PZ2
  - T15 - T20 - T25 - T30

34,07 €

**SCREWDRIVER BITS SETS**

**DiN 7 SCREWDRIVER BIT SETS**



Ref. EPT1

REFERENCE	EPT1	EPT2	EPT3
QUANTITY	7	7	7
CONTENT	<ul style="list-style-type: none"> <li> PH1 - PH2</li> <li> PZ1 - PZ2</li> <li> 0,8x5,5 - 1,2x6,5</li> </ul> 1 PMG Bit holder	<ul style="list-style-type: none"> <li>T10 - T15</li> <li> T20 - T25</li> <li>T30 - T40</li> </ul> 1 PMG Bit holder	<ul style="list-style-type: none"> <li> PH1 - PH2 - PH3</li> <li> PZ1 - PZ2 - PZ3</li> </ul> 1 PMG Bit holder
PRICE €	11,86	15,98	14,21





Ref. EPTT1

REFERENCE	EPTT1	EPTT2	EPTT3
QUANTITY	7	7	7
CONTENT	<ul style="list-style-type: none"> <li> PH1 - PH2</li> <li> PZ1 - PZ2</li> <li> 0,8x5,5 - 1,2x6,5</li> </ul> 1 PMG Bit holder	<ul style="list-style-type: none"> <li>T10 - T15</li> <li> T20 - T25</li> <li>T30 - T40</li> </ul> 1 PMG Bit holder	<ul style="list-style-type: none"> <li> PH1 - PH2 - PH3</li> <li> PZ1 - PZ2 - PZ3</li> </ul> 1 PMG Bit holder
PRICE €	33,63	39,00	32,42


## SCREWDRIVER BITS SETS


### PLUS & TiN 12 SCREWDRIVER BIT SETS

 Ref. EPT4	REFERENCE	<b>EPT4</b>		<b>EPT5</b>	
	QUANTITY	12		12	
	CONTENT	+ PH1 - PH2(2) - PH3 + PZ1 - PZ2(2) - PZ3 - 0,6x4,5 - 0,8x5,5 - 1,2x6,5 1 PMG Bit holder		☆ T10 - T15(2) ☆ T20(2) - T25(2) T27 - T30(2) - T40 1 PMG Bit holder	
	PRICE €	15,90		21,84	


 Ref. EPT4	REFERENCE	<b>EPT4</b>		<b>EPT5</b>	
	QUANTITY	12		12	
	CONTENT	+ PH1 - PH2(2) - PH3 + PZ1 - PZ2(2) - PZ3 - 0,6x4,5 - 0,8x5,5 - 1,2x6,5 1 PCT Bit holder		☆ T10 - T15(2) ☆ T20(2) - T25(2) T27 - T30(2) - T40 1 PCT Bit holder	
	PRICE €	42,35		49,82	


### PLUS & TiN 31 SCREWDRIVER BIT SETS

 Ref. EPT6	REFERENCE	<b>EPT6</b>			
	QUANTITY	31			
	CONTENT	+ PH1(3) - PH2(3) - PH3(3) + PZ1(3) - PZ2(3) - PZ3(3) - 0,6x4,5 - 0,8x5,5 - 1,2x6,5		☆ T10 - T15 - T20 - T25 - T30 - T40 ○ H3 - H4 - H5 1 PMG Bit holder	
	PRICE €	45,45			

 Ref. EPT6	REFERENCE	<b>EPT6</b>			
	QUANTITY	31			
	CONTENT	+ PH1(3) - PH2(3) - PH3(3) + PZ1(3) - PZ2(3) - PZ3(3) - 0,6x4,5 - 0,8x5,5 - 1,2x6,5		☆ T10 - T15 - T20 - T25 - T30 - T40 ○ H3 - H4 - H5 1 PCT Bit holder	
	PRICE €	96,43			

### PLUS & TiN 36 SCREWDRIVER BIT SETS

 Ref. EPT7	REFERENCE	<b>EPT7</b>			
	QUANTITY	36			
	CONTENT	+ PH1(3) - PH2(3) - PH3(3) + PZ1(3) - PZ2(3) - PZ3(3) - 0,5 x 4 - 0,6 x 4,5 - 0,8 x 5 - 0,8 x 5,5 - 1 x 6 - 1,2 x 6,5 - 1,2 x 8 1 PMG Bit holder		☆ T10 - T15 - T20 - T25 - T27 - T30 - T40 ○ H2 - H2,5 - H3 - H4 - H5 - H6 - H8	
	PRICE €	57,55			

 Ref. EPT7	REFERENCE	<b>EPT7*</b>			
	QUANTITY	36			
	CONTENT	+ PH1(3) - PH2(3) - PH3(3) + PZ1(3) - PZ2(3) - PZ3(3) - 0,5 x 4 - 0,6 x 4,5 - 0,8 x 5 - 0,8 x 5,5 - 1 x 6 - 1,2 x 6,5 - 1,2 x 8 1 PCT Bit holder		☆ T10 - T15 - T20 - T25 - T27 - T30 - T40 ○ H2 - H2,5 - H3 - H4 - H5 - H6 - H8	
	PRICE €	118,09*			

\*Until end of stock



**SCREWDRIVER BITS SETS**












**45 & 80 SCREWDRIVER BITS SETS**











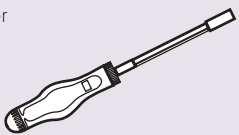








Ref. EPT45



Ref. EPT80

REFERENCE QUANTITY CONTENT	EPT45	
	45	
	 PH1 (2) - PH2(2) - PH3(2)	 Hexagonal sockets (mm): 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14
	 PZ1 (2) - PZ2(2) - PZ3(2)	 1 Sockets adapter
	 0,5x3-0,6x4,5-0,8x5,5(2)-1,2x6,5-1,6x8	 1 Screwdriver bits adapter
	 H2,5 - H3 - H4 - H5 - H6 - H7	 1 PCR Magnetic bit holder
	 T10 - T15 - T20 - T25 - T30 - T40	 1 Ratched handle 72 teeth 1 Screwdriver
PRICE €	144,01	

REFERENCE QUANTITY CONTENT	EPT80*	
	80	
	 PH0 - PH1 - PH2(4) - PH3(2)	 C0 - C1 - C2 - C3
	 PZ1 - PZ2(4) - PZ3(2)	 SP4 - SP6 - SP8 - SP10
	 0,5x3-0,6x4,5-0,8x5,5(2)-1,2x6,5-1,6x8	 HS3 - HS4 - HS5 - HS6
	 H2 - H2,5 - H3 - H4 - H5 - H6 - H7 - H8	 1 PCR Magnetic bit holder
	 TW1 - TW2 - TW3 - TW4 - TW5	 1 Screwdriver
	 TQ5 - TQ6 - TQ8 - TQ10	
	 T5 - T6 - T7 - T8 - T9 - T10 - T15 T20(2) - T25(2) - T27 - T30 - T40	 PH1 - PH2
	 TS10 - TS15 - TS20 - TS25 - TS30 - TS40	 PZ1 - PZ2
		 T15 - T20 - T25 - T30
	PRICE €	147,85 *

\*Until end of stock

**5 & 10 SETS DISPLAYS**



Ref. EXEPT7



Ref. EXEPT80

EXEPT7	
36 pieces 10 Sets	
	
Ref. EPT7	
575,52* €	

\*Until end of stock


EXEPT80	
80 pieces 5 Sets	
	
Ref. EPT80	
858,27* €	

\*Until end of stock

**MACHINE SCREW EXTRACTORS**

**MICRO GRABIT**



		EP
		€
EP451C	M3	52,48
EP452C	M4	52,48
EP453C	M5	52,48
EP454C	M6	52,48




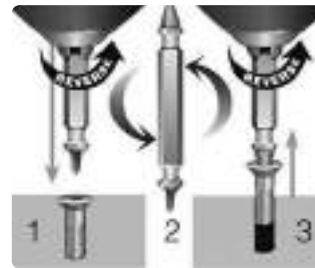
1. Drill the screw
2. Flip the extractor
3. Remove



**PRO GRABIT WITH 1/4" HEXAGONAL BODY**



		EP
		€
EP8401C	M5	41,62
EP8402C	M6	49,17
EP8403C	M8	49,17
EP8404C	M10	51,60




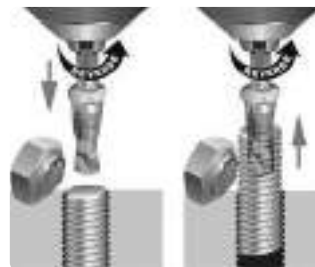
1. Drill the screw
2. Flip the extractor
3. Remove



**DRILL-OUT WITH PILOT DRILL (M6-M12)**




		EP
		€
EP205C	M6	50,88
EP312C	M8	61,65
EP375C	M10	61,65
EP500C	M12	69,39



**X-OUT WITH HEXAGONAL SHANK**



		EP
		€
EP3701C	M3	41,62
EP3702C	M4	41,62
EP3703C	M5	46,26



**MACHINE SCREW EXTRACTORS SETS**

**MICRO GRABIT**



REFERENCE	EP450C
QUANTITY	4
CONTENT	M3-M4-M5-M6
PRICE €	215,24

**PROGRABIT**



REFERENCE	EP8420C	EP8430C	EP8440C
QUANTITY	2	3	4
CONTENT	M5-M6	M5-M6-M8	M5-M6-M8-M10
PRICE €	87,99*	128,33*	176,12

\*Until end of stock

**MICRO GRABIT**



REFERENCE	EP401C
QUANTITY	4
CONTENT	M6-M8-M10-M12
PRICE €	253,21

**MIX**



REFERENCE	EP701C	EP100C
QUANTITY	7	10
CONTENT	MICRO GRABIT (M3-M6) DRILL OUT (M8-M12)	X OUT (M3-M5)-MICRO GRABIT (M3-M6) DRILL OUT (M8-M12)
PRICE €	354,49*	396,07*

\*Until end of stock

**HAND SCREW EXTRACTORS SETS**

**HAND SCREW EXTRACTOR CLASSIC SETS**

Use a BLUE-MASTER drill to make a hole where the screw extractor should be introduced.  
Turn the extractor anti-clockwise until the broken screw comes out.

REFERENCE	EX/1-5	EX/1-6	EX/1-8
QUANTITY	5	6	8
CONTENT	M3 - M18	M3 - M24	M3 - M45
PRICE €	22,27	30,13	69,55



Ref. EX/1-6

**ROLLED- HAND EXTRACTORS**



	for SCREWS	mm	mm	L <sub>1</sub> mm	∅ <sub>min</sub> mm	∅ <sub>max.</sub> mm	EX €
EX/1	M3 - M6	3,2	2,5	51	1,75	3,95	2,76
EX/2	M6 - M8	4,0	3,0	60	2,20	4,80	2,76
EX/3	M8 - M11	5,1	4,5	68	3,30	6,40	3,28
EX/4	M11 - M14	6,2	6,0	76	4,75	8,40	4,06
EX/5	M14 - M18	8,6	8,0	86	6,35	11,00	5,28
EX/6	M18 - M24	12,0	11,0	95	9,50	15,00	8,93
EX/7	M24 - M33	15,9	14,0	105	12,70	19,00	24,19
EX/8	M33 - M45	20,0	21,0	111	19,00	25,00	39,63




REFERENCE	EXTT
QUANTITY	10
CONTENT	EX/1-EX/2-EX/3-EX/4-EX/5 Ref. BC3 Ø2,5-3-4,5-6-8
PRICE €	37,15

## HAND SCREW EXTRACTORS SETS

### MILLED - HAND EXTRACTORS



	for SCREWS	mm		L <sub>1</sub> mm	∅ <sub>min</sub> mm	∅ <sub>max.</sub> mm	EFX €
EFX/1	M3-M6	2,9	2	50	1,9	3,2	3,51
EFX/2	M6-M8	3,9	3,2	60	2,8	5	3,51
EFX/3	M8-M11	4,8	4	68	3,2	6,5	4,14
EFX/4	M11-M14	6,7	6,4	75	5,2	9	5,14
EFX/5	M14-M18	8,5	7,1	85	6,4	11	6,67
EFX/6	M18-M25	11,8	9,5	95	9,4	15	11,31
EFX/7	M25-M35	14,3	12,7	106	12,8	19	30,63
EFX/8	M35-M45	19,5	19,5	110	19,3	25	50,16

Ref. EFX/1-5



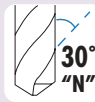
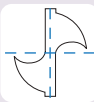
REFERENCE	EFX/1-5
QUANTITY	5
CONTENT	M3 - M18
PRICE €	26,82

## 1/4" HEXAGONAL SHANK TOOLS

### DIN 338 TWIST DRILL


Ref. BH2

HSS



OX



	∅ mm	L <sub>1</sub> x L <sub>2</sub> mm		BH2 €
BH20300	3,00	61 x 33	1/4"	7,32
BH20400	4,00	75 x 43	1/4"	7,75
BH20500	5,00	86 x 52	1/4"	9,64
BH20600	6,00	93 x 57	1/4"	10,41
BH20700	7,00	109 x 69	1/4"	13,12
BH20800	8,00	117 x 75	1/4"	14,73
BH20900	9,00	125 x 81	1/4"	16,57
BH21000	10,00	133 x 87	1/4"	18,46

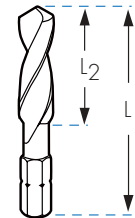



REFERENCE	<b>BH29335</b>	<b>BH29333</b>
QUANTITY	5	8
QUALITY	HSS	HSS
CONTENT	∅ 3 - 4 - 5 - 6 - 8 mm	∅ 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 mm
PRICE €	50,62	67,71

### EXTRA SHORT METAL DRILL

Ref. BC59

HSS-G



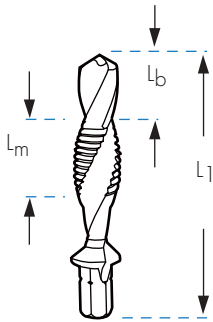
	∅ mm	L <sub>1</sub> x L <sub>2</sub> mm		BC59 €	BC59CR €
BC590100	1,00	34 x 12	1/4"	7,16	-
BC590150	1,50	34 x 12	1/4"	7,16	-
BC590200	2,00	34 x 12	1/4"	7,16	7,16
BC590250	2,50	36 x 14	1/4"	7,16	7,16
BC590300	3,00	38 x 16	1/4"	7,16	7,16
BC590330	3,30	40 x 18	1/4"	7,16	7,16
BC590350	3,50	40 x 18	1/4"	7,16	7,16
BC590400	4,00	44 x 20	1/4"	7,16	7,16
BC590420	4,20	45 x 20	1/4"	7,16	7,16
BC590450	4,50	46 x 24	1/4"	7,16	7,16
BC590500	5,00	50 x 26	1/4"	7,16	7,16
BC590550	5,50	50 x 26	1/4"	7,82	7,82
BC590600	6,00	50 x 26	1/4"	7,82	7,82
BC590650	6,50	50 x 30	1/4"	7,82	7,82
BC590680	6,80	50 x 30	1/4"	7,82	7,82
BC590700	7,00	50 x 30	1/4"	7,82	7,82
BC590750	7,50	51 x 32	1/4"	8,85	8,85
BC590800	8,00	51 x 32	1/4"	8,85	8,85
BC590850	8,50	53 x 33	1/4"	8,85	8,85
BC590900	9,00	53 x 33	1/4"	10,68	10,68
BC590950	9,50	54 x 38	1/4"	10,68	10,68
BC591000	10,00	54 x 38	1/4"	10,68	10,68
BC591020	10,20	54 x 38	1/4"	10,68	10,68

**1/4" HEXAGONAL SHANK TOOLS**

**DRILL TAP COUNTERSINK**

**HSS-G**

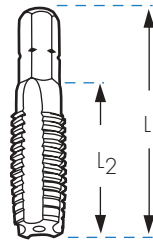
Ref. MAHM

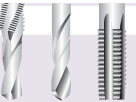





**HSS-G TAP**

**HSS-G**

Ref. M



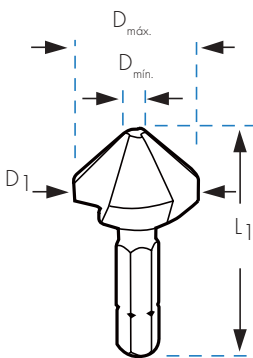
			MAHM	MAHMCR
		$L_1 \times L_b \times L_m$ mm	€	€
M 3 x 0,50	1/4"	36 x 5 x 6	23,36	23,36
M 4 x 0,70	1/4"	39 x 6 x 7	23,36	23,36
M 5 x 0,80	1/4"	41 x 8 x 8	24,38	24,38
M 6 x 1,00	1/4"	44 x 8 x 10	25,39	25,39
M 8 x 1,25	1/4"	50 x 10 x 11	35,10	35,10
M 10 x 1,50	1/4"	59 x 11 x 11	42,35	42,35

		$L_1 \times L_2$ mm		M €	MCR €
	M 3 x 0,50	33 x 11	1/4"	8,48	8,48
	M 4 x 0,70	35 x 12	1/4"	8,48	8,48
	M 5 x 0,80	36 x 15	1/4"	10,80	10,80
	M 6 x 1,00	39 x 18	1/4"	10,80	10,80
	M 8 x 1,25	40 x 19	1/4"	14,95	14,95
	M 10 x 1,50	41 x 21	1/4"	18,47	18,47

**3 CUTS COUNTERSINKS**

**HSS-G**

Ref. AV22

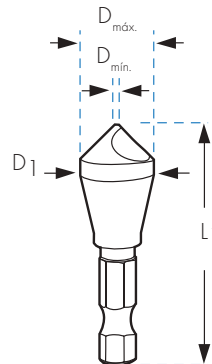


**DEBURRING COUNTERSINK**

**HSS**





Ref. AV1...CR



Ref. AV101CR  
Ref. AV102CR

Ref. AV103CR  
Ref. AV104CR

					AV22
D1 mm	L1 mm	D <sub>min.</sub> - D <sub>max.</sub> mm		€	
6,30	31	1,50 - 5,8	1/4"	21,57	
8,30	31	2,00 - 7,8	1/4"	21,57	
10,40	34	2,50 - 10,0	1/4"	23,11	
12,40	35	2,80 - 12,0	1/4"	24,66	
16,50	40	3,20 - 16,0	1/4"	26,41	
20,50	41	3,50 - 20,0	1/4"	31,69	

					AV1...CR
	D1 mm	L1 mm	D <sub>min.</sub> - D <sub>max.</sub> mm		€
AV101CR	10,00	40	2,0 - 5,0	1/4"	21,58
AV102CR	14,00	42	5,0 - 10,0	1/4"	26,98
AV103CR	17,00	45	5,0 - 13,0	1/4"	48,31
AV104CR	25,00	55	7,0 - 20,0	1/4"	86,29

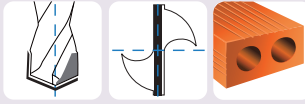
These tools are available with hexagonal shank with neck.  
\* Available HSS 1/4" hexagonal shank step drills with spiral flutes.  
See page 156.




## 1/4" HEXAGONAL SHANK TOOLS

### PROFESSIONAL MASONRY DRILL

Ref. BWH

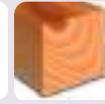



	Ø mm	L1 x L2 mm		BWH €
BWH03	3	70 x 30	1/4"	3,08
BWH04	4	70 x 30	1/4"	3,33
BWH05	5	85 x 45	1/4"	3,61
BWH06	6	100 x 50	1/4"	4,01
BWH07	7	100 x 50	1/4"	4,71
BWH08	8	120 x 70	1/4"	5,45
BWH09	9	120 x 70	1/4"	6,52
BWH10	10	120 x 70	1/4"	7,30
BWH11	11	150 x 80	1/4"	9,09
BWH12	12	150 x 80	1/4"	10,27
BWH13	13	150 x 80	1/4"	12,64
BWH14	14	150 x 80	1/4"	14,72

### WOOD WORKING DRILL

Ref. BMH

CV



	Ø mm	L1 x L2 mm		BMH €
BMH03	3	59 x 35	1/4"	1,97
BMH04	4	74 x 41	1/4"	2,07
BMH05	5	82 x 55	1/4"	2,05
BMH06	6	88 x 58	1/4"	2,76
BMH07	7	110 x 70	1/4"	3,13
BMH08	8	110 x 70	1/4"	3,26
BMH09	9	110 x 70	1/4"	3,39
BMH10	10	115 x 75	1/4"	3,75
BMH11	11	135 x 85	1/4"	4,38
BMH12	12	135 x 85	1/4"	5,14
BMH13	13	135 x 90	1/4"	8,05
BMH14	14	145 x 95	1/4"	10,01



REFERENCE	BWH9318	BWH9327	BWH9319	BMH9335	BMH9333
QUANTITY	5	5	8	5	8
APPLICATION	CONCRETE	CONCRETE	CONCRETE	WOOD	WOOD
CONTENT	Ø 3 - 4 - 5 - 6 - 8 mm	Ø 4 - 5 - 6 - 8 - 10 mm	Ø 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 mm	Ø 3 - 4 - 5 - 6 - 8 mm	Ø 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 mm
PRICE €	25,98	31,35	35,90	16,12	21,27

### 1/4" HEXAGONAL SHANK DRILL BOXES



Ref. EB



Ref. EMBP

#### CONTENT

	 HSS-G	 HSS-G			€
EM	M3 - M4 - M5 - M6 M8 - M10	-	-	-	68,75
EMBP	M3 - M4 - M5 - M6 M8 - M10	Ø 2,50 - 3,30 - 4,20 5 - 6,80 - 8,50	-	-	99,12
EBM	-	-	M3 - M4 - M5 - M6 M8 - M10	-	151,34
EA	-	-	-	Ø 6,30 - 8,30 - 10,40 12,40 - 16,50 - 20,50	138,76
EB	-	Ø 1 - 10 mm x 0,50	-	-	115,61

# WOOD MILLING CUTTERS

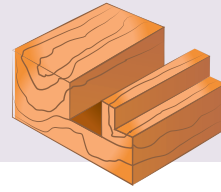


**BLUE-MASTER<sup>®</sup>**  
*by CEJES*

CUTTING TECHNOLOGIES

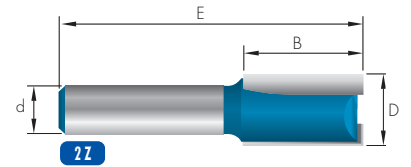
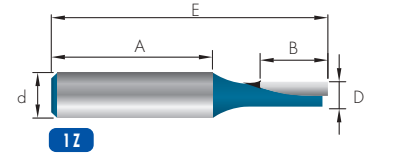
**STRAIGHT BIT**
**CARBIDE  
TIPPED**
**1Z**
**2Z**

Ref. FRC1

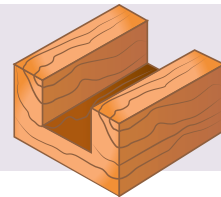


Ref. FRC10500

							FRC1
	Z	D	B	d	A	E	€
FRC10300	1Z	3,0	8,0	8,0	32,0	51,0	26,34
FRC10400	1Z	4,0	8,0	8,0	33,6	51,0	26,34
FRC10500	1Z	5,0	12,5	8,0	29,7	51,0	28,33
FRC10600	2Z	6,0	16,0	8,0	-	48,0	28,33
FRC10800	2Z	8,0	20,0	8,0	-	51,0	29,41
FRC11000	2Z	10,0	20,0	8,0	-	51,0	29,41
FRC11200	2Z	12,0	20,0	8,0	-	51,0	31,54

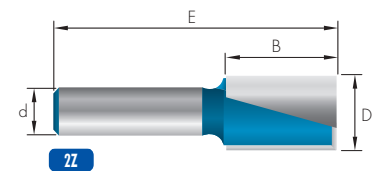
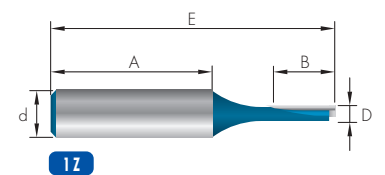

**STRAIGHT BIT WITH CENTRE TIP**
**CARBIDE  
TIPPED**
**1Z**
**2Z**

Ref. FRC2



Ref. FRC21400

							FRC2
	Z	D	B	d	A	E	€
FRC20300	1Z	3,0	11,0	8,0	29,0	51,0	22,91
FRC20400	2Z	4,0	11,0	8,0	-	51,2	22,91
FRC20500	2Z	5,0	11,0	8,0	-	51,2	24,64
FRC20600	2Z	6,0	19,5	8,0	-	51,0	24,64
FRC20760	2Z	7,6	21,0	8,0	-	58,0	24,64
FRC20800	2Z	8,0	20,0	8,0	-	51,0	24,64
FRC21000	2Z	10,0	20,0	8,0	-	51,0	25,57
FRC21200	2Z	12,0	20,0	8,0	-	51,0	27,43
FRC21400	2Z	14,0	20,0	8,0	-	51,0	29,46
FRC21600	2Z	16,0	20,0	8,0	-	51,0	31,71
FRC21800	2Z	18,0	20,0	8,0	-	51,0	32,91
FRC22000	2Z	20,0	20,0	8,0	-	51,0	35,74
FRC22200	2Z	22,0	25,0	8,0	-	56,0	37,13
FRC22400	2Z	24,0	10,0	8,0	-	42,5	38,11

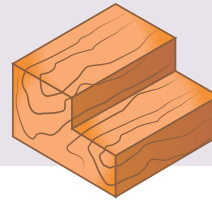


**RABBETING BIT**

Ref. FRC3

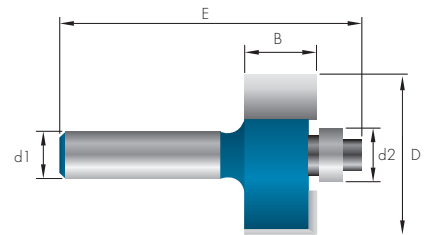
**CARBIDE  
TIPPED**

**2Z**



Ref. FRC32860

FRC3						
	D	B	d1	d2	E	€
FRC32860	28,6	12,7	8,0	9,5	53,4	44,37

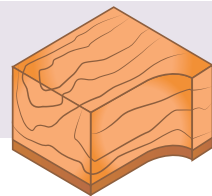


**FLUSH TRIM BIT**

Ref. FRC4

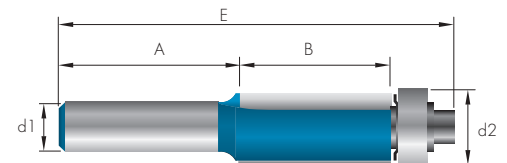
**CARBIDE  
TIPPED**

**2Z**



Ref. FRC41270

FRC4						
	d2	B	d1	A	E	€
FRC41270	12,7	25,4	8,0	30,0	67,0	34,81

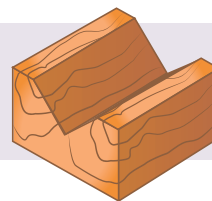


**V GROOVING BIT (90°)**

Ref. FRC5

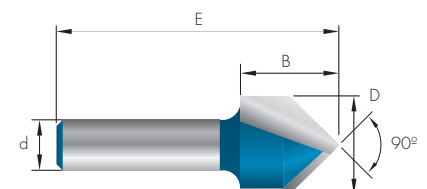
**CARBIDE  
TIPPED**

**90°**



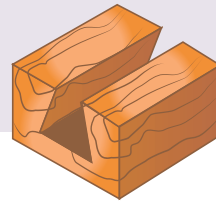
Ref. FRC51900

FRC5					
	D	B	d	E	€
FRC51270	12,7	12,7	8,0	45,5	28,64
FRC51600	16,0	15,9	8,0	45,7	32,34
FRC51900	19,0	16,0	8,0	51,5	38,22



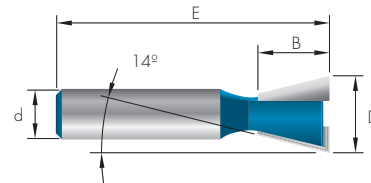
## DOVETAIL CUTTER

Ref. FRC6

**CARBIDE  
TIPPED**


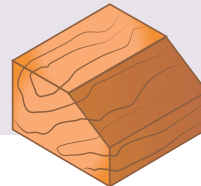
Ref. FRC61270

FRC6					
	D	B	d	E	€
FRC61270	12,7	11,8	8,0	45	43,09



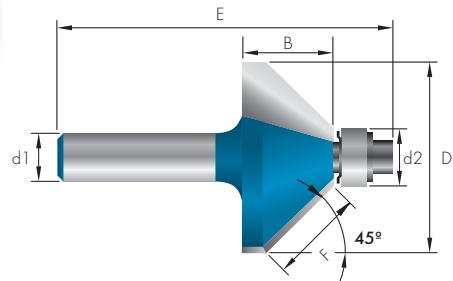
## CHAMFER BIT

Ref. FRC7

**CARBIDE  
TIPPED**


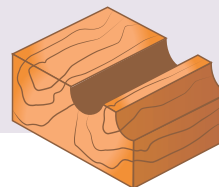
Ref. FRC73200

FRC7							
	D	B	d1	d2	E	F	€
FRC73200	32,0	15,0	8,0	9,5	56	15,7	40,39



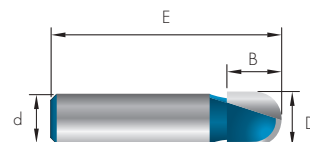
## ROUND NOSE BIT

Ref. FRC8

**CARBIDE  
TIPPED**


Ref. FRC81270

FRC8					
	D	B	d	E	€
FRC80950	9,5	9,5	8,0	40	35,46
FRC81270	12,7	12,7	8,0	40	37,86

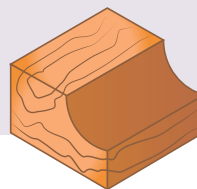




**COVE BIT**

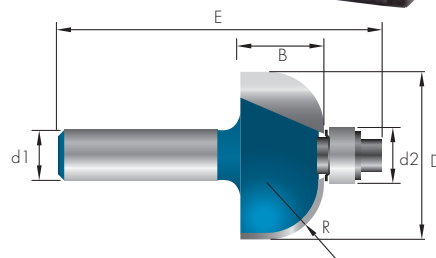
**CARBIDE  
TIPPED**

Ref. FRC9



Ref. FRC92850

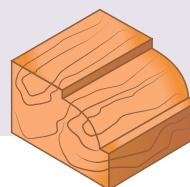
FRC9							
	D	B	d1	d2	E	R	€
FRC92850	28,5	14,1	8,0	9,5	50,0	9,5	54,46
FRC93500	35,0	16,0	8,0	9,5	59,0	12,7	64,61



**BEADING BIT**

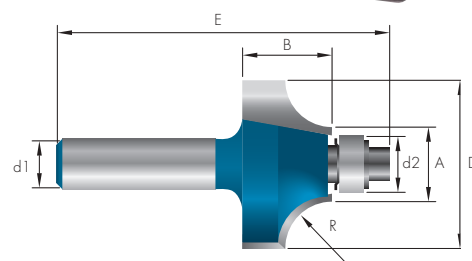
**CARBIDE  
TIPPED**

Ref. FRC10



Ref. FRC102860

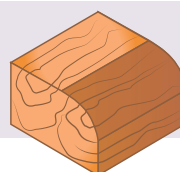
FRC10								
	D	B	d1	A	E	d2	R	€
FRC102540	25,4	13,5	8,0	12,7	54,0	9,5	6,35	59,53
FRC102860	28,6	15,2	8,0	12,7	57,0	9,5	7,95	62,79
FRC103180	31,8	16,5	8,0	12,7	56,0	9,5	9,55	67,58
FRC103810	38,1	19,0	8,0	12,7	59,0	9,5	12,7	78,63



**ROUNDROVER BIT**

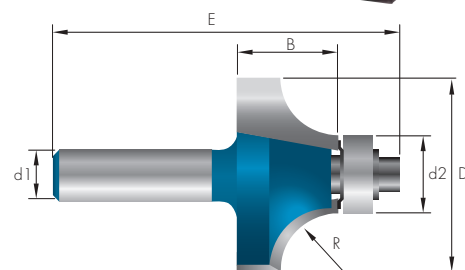
**CARBIDE  
TIPPED**

Ref. FRC11



Ref. FRC112860

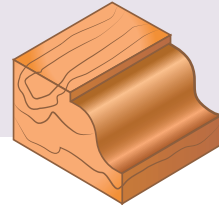
FRC11							
	D	B	d1	d2	E	R	€
FRC112500	25,0	13,5	8,0	12,7	55,0	6,35	59,53
FRC112860	28,6	15,2	8,0	12,7	57,0	7,95	62,79
FRC113180	31,8	16,5	8,0	12,7	57,0	9,55	67,58
FRC113810	38,1	16,5	8,0	12,7	59,0	12,7	78,63



**ROMAN OGEE BIT**

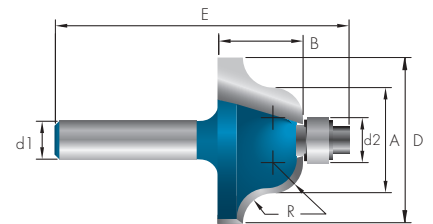
**CARBIDE TIPPED**

Ref. FRC12



Ref. FRC123500

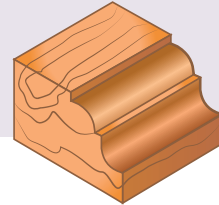
								FRC12
	D	B	d1	A	E	d2	R	€
FRC123500	35,0	17,8	8,0	22,2	62,0	9,5	6,35	84,62



**CLASSICAL ROMAN OGEE BIT**

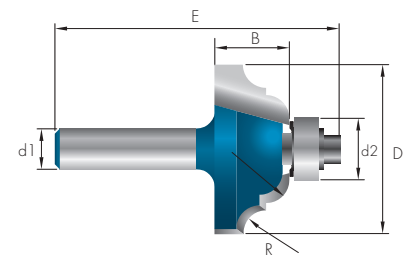
**CARBIDE TIPPED**

Ref. FRC13



Ref. FRC133500

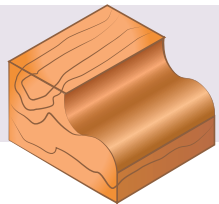
							FRC13
	D	B	d1	d2	E	R	€
FRC133500	35,0	15,4	8,0	12,7	59,0	6,35	56,55



**ROMAN OGEE BIT**

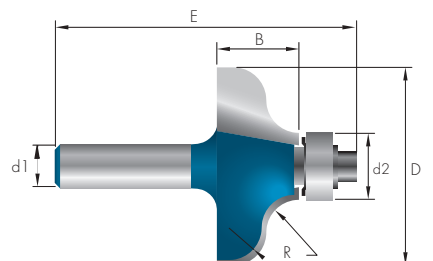
**CARBIDE TIPPED**

Ref. FRC14



Ref. FRC143180

							FRC14
	D	B	d1	d2	E	R	€
FRC143180	31,8	12,6	8,0	12,7	55,0	4,8	66,15
FRC143810	38,1	15,8	8,0	12,7	58,0	6,3	75,58



# CONSTRUCTION DRILL BITS



**BLUE-MASTER<sup>®</sup>**  
*by celesta*

CUTTING TECHNOLOGIES

**DIAMOND DRILL BITS FOR VERY HARD MATERIAL  
LIKE STONEWARE, HARD CERAMIC, ETC**

**PD:**  
Diamond interchangeable point cutters.

**CPD:**  
Body length.  
Available in 50 or 100 mm

**HPD:**  
Shank with internal water cooling.



PD			CPD		CPD-100		HPD	
	Ø mm	€		€		€		€
PD0500	5,00	21,54	CPD0500	30,23	CPD0500-100	43,09	HPD1	220,44
PD0600	6,00	25,58	CPD0600	31,31	CPD0600-100	43,09		
PD0650	6,50	25,58						
PD0800	8,00	43,09						
PD0850	8,50	43,09						
PD0900	9,00	47,12	CPD0850	34,55	CPD0850-100	48,47		
PD1000	10,00	47,12	CPD1050	34,55	CPD1050-100	48,47		
PD1050	10,50	47,12						
PD1200	12,00	53,86						
PD1450	14,50	61,94	CPD1450	40,49	CPD1450-100	53,86		
PD1600	16,00	68,67			CPD1600-100	53,86		
PD1800	18,00	76,74			CPD1800-100	53,86		
PD2000	20,00	90,20			CPD2000-100	59,24		



**GUIDE FOR CENTERING DRILLS AND DIAMOND CUTTERS**

- 8 holes: Ø 4 - 5 - 6 - 6,5 - 8 - 10 - 12 - 13 mm
- Easy adaptation of cooling system.
- Fixing with suction pad for a perfect adherence in plane surfaces.
- Center drilling and cooling in glass, stoneware, hard tiles, etc.



**GBD**  
23,90 €

**CAN FOR WATER REFRIGERATION**

- Capacity: 1,1L.



**GBP**  
9,73 €



• Other compositions on request

**DIAMOND CUTTERS SHORT CASE**

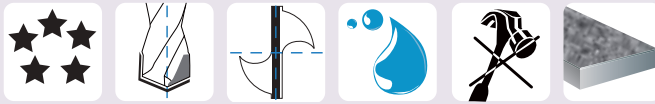
**EPD**

- Content:
- (1 Ud) PD0500
  - (1 Ud) PD0600
  - (1 Ud) PD0800
  - (1 Ud) PD1000
  - (1 Ud) CPD0500
  - (1 Ud) HPD1
  - (1 Ud) MPDV
  - (1 Ud) CPD0600
  - (1 Ud) CPD0850-100
  - (1 Ud) PDA (Hex Key)

**427,27 €**

**PROFESSIONAL HIGH PERFORMANCE TILE BITS**

Ref. BW9



Revolutionary tip geometry

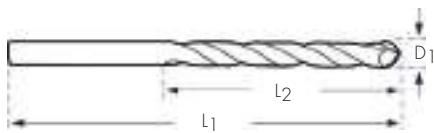
Extra Professional Series



- The innovation of this drill bit comes from its carbide grade, the welding technique and its revolutionary geometry.
- For use with portable or electric drill in rotary mode.
- Always cooling with water, using preferably the CGB guide.

**APPLICATIONS:**

- For hard and abrasive ceramics, as stoneware or hard tile. This high performance bit will make a hole where all the others have failed.



	BW9		
	D1 mm	L1 x L2 mm	€
BW90300	3,0	85 x 40	25,06
BW90350	3,5	85 x 40	25,06
BW90400	4,0	85 x 45	25,06
BW90450	4,5	85 x 45	25,06
BW90500	5,0	85 x 45	26,50
BW90550	5,5	100 x 60	27,02
BW90600	6,0	100 x 60	27,72
BW90650	6,5	100 x 60	28,23
BW90700	7,0	125 x 70	31,72
BW90750	7,5	125 x 70	32,31
BW90800	8,0	125 x 70	34,40
BW90850	8,5	125 x 70	35,04
BW90900	9,0	150 x 85	41,69
BW91000	10,0	150 x 85	41,69
BW91050	10,5	150 x 85	55,11
BW91100	11,0	150 x 85	54,11

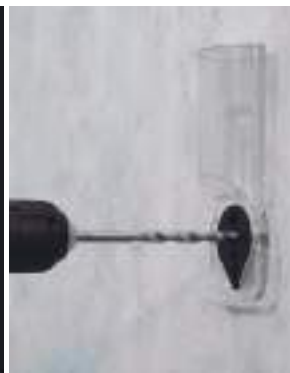


REFERENCE	BW99325	BW99318
QUANTITY	4	5
QUALITY	EXTRA-PROFESSIONAL	EXTRA-PROFESSIONAL
CONTENT	Ø 4 - 5 - 6 - 8 mm	Ø 3 - 4 - 5 - 6 - 8 mm
PRICE €	117,37	142,97

**WATER COOLING GUIDE WITH TANK**

**CUTTING SPEED R.P.M.**

Ø mm	R.P.M.	
	Max.	Min.
3,0	1350	1100
4,0	1200	1000
5,0	1100	920
6,0	1000	830
7,0	900	740
8,0	800	650
9,0	700	550
10,0	600	500
11,0	550	450



- Guide to drill 5-6-7-8-10-12-15-35 mm

CGB  
11,08 €



**STANDARD HIGH PERFORMANCE TILE BITS**

Ref. BW7



Standard series

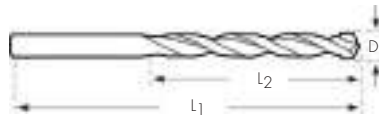



- Always drill in rotary mode
- Always cooling with water, using preferably the CGB guide.

APPLICATIONS:


- Very hard and abrasives ceramics, tile...

- Special application: Due to its cutting geometry this drill is also recommended to drill broken screws and also HARDOX 450 and lowers.



BW7				
	D1 mm	L1 x L2 mm		€
BW703	3,0	60 x 32	1	7,10
BW704	4,0	75 x 43	1	7,10
BW705	5,0	85 x 50	1	7,22
BW706	6,0	100 x 60	1	7,22
BW707	7,0	100 x 62	1	9,98

Blister: 190x60 mm.

BW7				
	D1 mm	L1 x L2 mm		€
BW708	8,0	120 x 80	1	11,56
BW709	9,0	120 x 82	1	12,23
BW710	10,0	120 x 82	1	12,58
BW712	12,0	150 x 101	1	25,46
BW713	13,0	150 x 92	1	27,68

Blister: 230x60 mm.

REFERENCE	<b>BW79325</b>
QUANTITY	4
QUALITY	STANDARD
CONTENT	Ø 4 - 5 - 6 - 8 mm
PRICE €	37,25



**WATER COOLING GUIDE WITH TANK**



CGB  
11,08 €



CUTTING SPEED R.P.M.

Ø mm	R.P.M.	
	Max.	Min.
4,0	1000	830
5,0	900	740
6,0	800	650
8,0	600	500
10,0	500	400

- Guide to drill 5-6-7-8-10-12-15-35 mm

**DIAMOND TILE DRILL BIT**

Ref. CPS



Dry Working

Diamond series



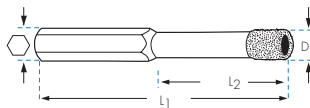
Paraffin

M14x2

Diamond hole saw available p.582 in diam. Ø5-83mm. with threaded shank m14x2 for grinder



- Always drill with rotary mode
- CPS may drill ceramics without water thanks to its innovative mechanism of autolubrication with paraffin. Nevertheless, by using water you'll increase the performance of the drill dramatically.
- Start drilling with an angle between 15° and 30° and then keep on drilling horizontally. No guide needed.
- Drill ceramics with soft circular movements to make easier the further extraction of the core
- Before finishing, stop pushing strongly to avoid the core to get stuck inside the holesaw.
- It's suitable to extract manually the perforated core, after each drilling operation.
- More holes in less time and with less effort.
- The internal tank of paraffin can not be refilled.



	D1 mm	Hexagon	L1 x L2 mm	CPS €
CPS05	5,0	8,5	67 x 33	32,24
CPS06	6,0	8,5	67 x 33	32,71
CPS08	8,0	8,5	80 x 33	36,17
CPS10	10,0	8,5	80 x 33	44,40
CPS12	12,0	8,5	80 x 33	52,51
CPS14	14,0	8,5	80 x 33	57,87
CPS15	15,0	8,5	80 x 33	59,81
CPS20*	20,0	8,5	80 x 50	65,45
CPS22*	22,0	8,5	80 x 50	71,94
CPS25*	25,0	8,5	80 x 50	76,41
CPS30*	30,0	8,5	80 x 50	83,09

\* Without paraffin



REFERENCE	<b>CPS9328</b>
QUANTITY	4
CONTENT	Ø 5 - 6 - 8 - 10 mm
PRICE €	145,53



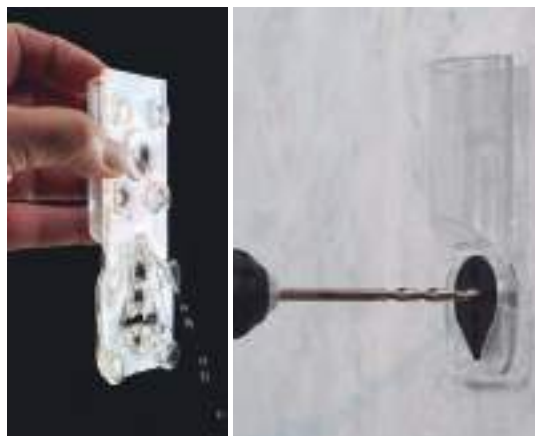
**CAN OF PARAFFIN LUBRICANT**

<b>PACSE</b>
<b>8,82 €</b>

**WATER COOLING GUIDE WITH TANK**

CUTTING SPEED R.P.M.

Ø mm	R.P.M. Max.	R.P.M. Min.
4,0	1000	830
5,0	900	740
6,0	800	650
8,0	600	500
10,0	500	400



**CGB**  
**11,08 €**

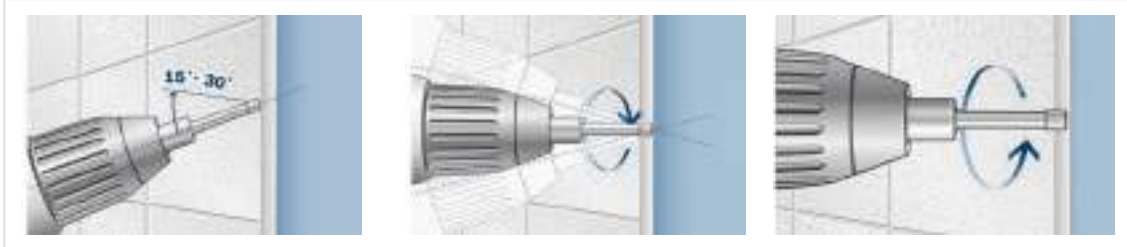
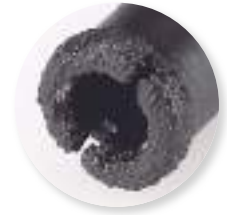
- Guide to drill 5-6-7-8-10-12-15-35 mm

**DIAMOND TILE DRILL BIT**

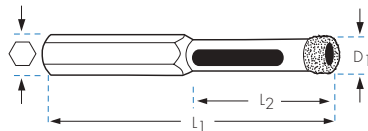
Ref. CPH



Diamond series



- Always drill with rotary mode
- Cooling with plenty of water during the drilling operation
- CPH drill may drill ceramics whenever some water will be between the diamond and the piece to be machined
- Never put the CPH Drill in water after drilling operations. Once the drill achieve high temperatures, let it getting cooled by the air.
- Start drilling with an angle between 15° and 30° and then keep on drilling horizontally. No guide
- Drill ceramics with soft circulary movements to make easier the further extraction of the core
- Before finishing, stop pushing strongly to avoid the core to get stucked inside the holesaw
- Extract the perforated core by the lateral opening
- More holes in less time and with less effort



	CPH			
	D <sub>1</sub> mm	Hexagon	L <sub>1</sub> x L <sub>2</sub> mm	€
CPH05	5,0	8,5	55 x 25	19,05
CPH06	6,0	8,5	55 x 25	20,42
CPH08	8,0	8,5	55 x 25	26,76
CPH10	10,0	8,5	55 x 25	28,23
CPH12	12,0	8,5	55 x 25	34,83
CPH14	14,0	8,5	55 x 25	39,51



REFERENCE	<b>CPH9328</b>
QUANTITY	4
CONTENT	Ø 5 - 6 - 8 - 10 mm
PRICE €	94,47

**WATER COOLING GUIDE WITH TANK**



CGB  
11,08 €



Ø mm	CUTTING SPEED R.P.M.	
	R.P.M. Max.	R.P.M. Min.
4,0	1000	830
5,0	900	740
6,0	800	650
8,0	600	500
10,0	500	400

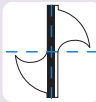
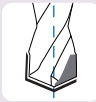
- Guide to drill 5-6-7-8-10-12-15-35 mm

**CARBIDE TIPPED MULTI-PURPOSE HAMMER DRILLS**

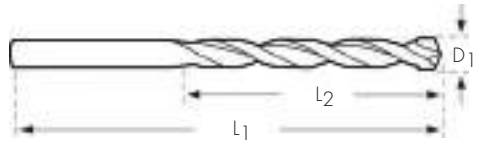
Ref. BW8



**DIN  
8039**



Multi  
purpose  
Professional



	D <sub>1</sub> mm	L <sub>1</sub> x L <sub>2</sub> mm	BW8 €
BW804	4	70 x 30	7,44
BW805	5	85 x 45	7,55
BW806	6	100 x 50	8,65
BW807	7	100 x 50	9,93
BW808	8	120 x 70	10,92
BW809	9	120 x 70	12,49
BW810	10	120 x 70	16,12
BW812	12	150 x 80	17,29

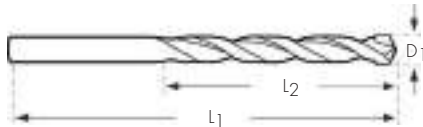


REFERENCE	BW89325	BW89328	BW89327	BW89434
QUANTITY	4	4	5	7
QUALITY	MULTIPURPOSE PROF.	MULTIPURPOSE PROF.	MULTIPURPOSE PROF.	MULTIPURPOSE PROF.
CONTENT	Ø 4 - 5 - 6 - 8 mm	Ø 5 - 6 - 8 - 10 mm	Ø 4 - 5 - 6 - 8 - 10 mm	Ø 4 - 5 - 6 - 7 - 8 - 10 - 12 mm
PRICE €	37,70	48,28	53,93	83,51

**CARBIDE TIPPED HAMMER DRILLS**

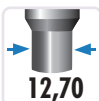
Ref. BW1


**DIN  
8039**

**Standard  
series**


SHORT SERIES				LONG SERIES					
D1 mm		L1 x L2 mm	€	150 mm		200 mm			
				L1 x L2 mm	€		L1 x L2 mm	€	
3	BW103	70x30	1,41						
4	BW104	70x30	1,43						
5	BW105	85x45	1,56	BW105X150	150x80	2,78			
6	BW106	100x50	1,73	BW106X150	150x80	2,78	BW106X200	200x125	5,40
7	BW107	100x50	2,05	BW107X150	150x80	3,53			
8	BW108	120x70	2,26	BW108X150	150x80	4,00	BW108X200	200x125	5,40
9	BW109	120x70	2,60	BW109X150	150x80	4,66			
10	BW110	120x70	2,76	BW110X150	150x80	5,22	BW110X200	200x125	6,77
11	BW111	150x80	4,03						
12	BW112	150x80	4,67				BW112X200	200x125	7,45
13	BW113*	150x80	5,35						
14	BW114*	150x80	6,84				BW114X200*	200x125	9,86
15	BW115*	160x80	8,83						
16	BW116*	160x80	10,19				BW116X200*	200x125	14,61
18	BW118*	160x80	12,11				BW118X200*	200x125	16,65
20	BW120*	160x80	14,87						
22	BW122*	160x80	17,31						
24	BW124*	160x80	22,63						
25	BW125*	160x80	21,59						
30	BW130*	160x80	42,85						

EXTRA LONG SERIES									
D1 mm		300 mm		400 mm		600 mm			
		L1 x L2 mm	€	L1 x L2 mm	€		L1 x L2 mm	€	
6	BW106X300	300x210	6,99	BW106X400	400x280	8,59			
8	BW108X300	300x210	6,99	BW108X400	400x280	9,46			
10	BW110X300	300x210	8,29	BW110X400	400x280	10,17	BW110X600	600x480	12,44
12	BW112X300	300x210	9,46	BW112X400	400x280	12,47	BW112X600	600x480	15,64
13	BW113X300*	300x210	11,19	BW113X400*	400x280	12,95	BW113X600*	600x480	16,48
14	BW114X300*	300x210	11,50	BW114X400*	400x280	13,73	BW114X600*	600x480	18,67
15	BW115X300*	300x210	15,50	BW115X400*	400x280	16,89	BW115X600*	600x480	22,20
16	BW116X300*	300x210	15,43	BW116X400*	400x280	18,10	BW116X600*	600x480	24,65
18	BW118X300*	300x210	17,51	BW118X400*	400x280	20,51	BW118X600*	600x480	28,12
20	BW120X300*	300x210	20,97	BW120X400*	400x280	23,92	BW120X600*	600x480	33,59
22	BW122X300*	300x210	26,56	BW122X400*	400x280	34,72	BW122X600*	600x480	40,53
24	BW124X300*	300x210	39,52	BW124X400*	400x280	39,96	BW124X600*	600x480	52,31
25	BW125X300*	300x210	39,96	BW125X400*	400x280	42,65	BW125X600*	600x480	52,86



\* From 13 mm Ø all the drills have reduced shank

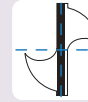


**CARBIDE TIPPED HAMMER DRILLS IN PLASTIC BOXES**

Ref. BW1



**DIN 8039**



**Standard series**



REFERENCE	<b>BW19325</b>	<b>BW19328</b>	<b>BW19318</b>
QUANTITY	4	4	5
QUALITY	STANDARD	STANDARD	STANDARD
CONTENT	Ø 4 - 5 - 6 - 8 mm	Ø 5 - 6 - 8 - 10 mm	Ø 3 - 4 - 5 - 6 - 8 mm
PRICE €	12,66	12,65	14,07

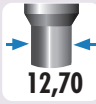
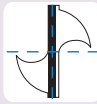


REFERENCE	<b>BW19327</b>	<b>BW19434</b>	<b>BW19319</b>
QUANTITY	5	7	8
QUALITY	STANDARD	STANDARD	STANDARD
CONTENT	Ø 4 - 5 - 6 - 8 - 10 mm	Ø 4 - 5 - 6 - 7 - 8 - 10 - 12 mm	Ø 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 mm
PRICE €	14,12	26,55	21,15

CUTTING SPEED R.P.M.											
Soft material	Ø 3	Ø 5	Ø 8	Ø 10	Ø 12	Hard material	Ø 3	Ø 5	Ø 8	Ø 10	Ø 12
Brick						Marble					
Sandstone						Cement					
Plaster	2800	1750	1150	1000	800	Concrete	1800	1000	1000	600	500
Gypsum						Blackboard					
Asbestos						Limestone					
						Granite					

**CARBIDE TIPPED HAMMER DRILLS PROFESSIONAL QUALITY**

Ref. BW6


**DIN  
8039**

**Professional  
series**


SHORT SERIES				LONG SERIES					
D1 mm		L1 x L2 mm	€	150 mm		200 mm			
				L1 x L2 mm	€	L1 x L2 mm	€		
3,0	BW603	70x30	3,59						
3,5	BW60350	70x30	3,86						
4,0	BW604	70x30	3,59						
4,5	BW60450	85x45	3,88						
5,0	BW605	85x45	3,64	BW605X150	150x80	5,01			
5,5	BW60550	85x45	3,95						
6,0	BW606	100x50	4,02	BW606X150	150x80	5,54	BW606X200	200x140	7,32
6,5	BW60650	100x50	4,59						
7,0	BW607	100x50	4,62	BW607X150	150x80	6,49			
8,0	BW608	120x70	4,88	BW608X150	150x80	7,74	BW608X200	200x140	8,24
9,0	BW609	120x70	6,00						
10,0	BW610	120x70	6,86	BW610X150	150x80	10,12	BW610X200	200x140	11,00
11,0	BW611	150x80	8,93						
12,0	BW612	150x80	10,52				BW612X200	200x140	12,76
13,0	BW613*	150x80	12,72						
14,0	BW614*	150x80	15,37				BW614X200*	200x140	21,07
15,0	BW615*	160x80	17,87						
16,0	BW616*	160x80	19,47				BW616X200*	200x140	24,46
18,0	BW618*	160x80	24,28				BW618X200*	200x140	31,33
20,0	BW620*	160x80	31,81						
22,0	BW622*	160x80	36,11						
24,0	BW624*	160x80	56,90						
25,0	BW625*	160x80	58,29						

**EXTRA LONG SERIES**

D1 mm	300 mm			400 mm			600 mm			1000 mm		
	L1 x L2 mm	€		L1 x L2 mm	€		L1 x L2 mm	€		L1 x L2 mm	€	
6,0	BW606X300	300x200	11,09	BW606X400	400x300	12,53	BW606X600	600x500	20,45			
8,0	BW608X300	300x200	12,23	BW608X400	400x300	12,79	BW608X600	600x500	25,56			
10,0	BW610X300	300x200	12,97	BW610X400	400x300	16,99	BW610X600	600x500	25,99			
12,0	BW612X300	300x200	16,74	BW612X400	400x300	21,32	BW612X600	600x500	32,66	BW612X1000	1000x900	96,15
13,0	BW613X300*	300x200	19,59	BW613X400*	400x300	25,68				BW613X1000*	1000x900	101,52
14,0	BW614X300*	300x200	23,82	BW614X400*	400x300	27,88	BW614X600*	600x500	38,98	BW614X1000*	1000x900	104,41
15,0	BW615X300*	300x200	27,13	BW615X400*	400x300	32,60	BW615X600*	600x500	48,64	BW615X1000*	1000x900	109,30
16,0	BW616X300*	300x200	29,46	BW616X400*	400x300	32,60	BW616X600*	600x500	46,76	BW616X1000*	1000x900	122,50
17,0										BW617X1000*	1000x900	131,59
18,0				BW618X400*	400x300	40,52	BW618X600*	600x500	59,83	BW618X1000*	1000x900	137,26
20,0	BW620X300*	300x200	42,56**	BW620X400*	400x300	45,85	BW620X600*	600x500	70,13	BW620X1000*	1000x900	140,68
22,0	BW622X300*	300x200	51,60**	BW622X400*	400x300	58,12	BW622X600*	600x500	87,73	BW622X1000*	1000x900	141,46
24,0	BW624X300*	300x200	57,24**	BW624X400*	400x300	69,93	BW624X600*	600x500	107,46	BW624X1000*	1000x900	169,42
25,0	BW625X300*	300x200	61,35**	BW625X400*	400x300	75,06	BW625X600*	600x500	115,66	BW625X1000*	1000x900	178,50
26,0										BW626X1000*	1000x900	185,49
28,0										BW628X1000*	1000x900	192,49
30,0										BW630X1000*	1000x900	202,29

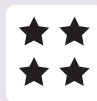


From 13 mm Ø all the drills have reduced shank

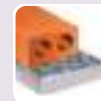
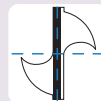
\*\* Till end of stock

**CARBIDE TIPPED HAMMER DRILLS PROFESSIONAL QUALITY IN PLASTIC BOXES**

Ref. BW6



**DIN  
8039**



**Professional  
series**



REFERENCE	<b>BW69325</b>	<b>BW69328</b>	<b>BW69318</b>	<b>BW69327</b>
QUANTITY	4	4	5	5
QUALITY	PROFESSIONAL SERIES	PROFESSIONAL SERIES	PROFESSIONAL SERIES	PROFESSIONAL SERIES
CONTENT	Ø 4 - 5 - 6 - 8 mm	Ø 5 - 6 - 8 - 10 mm	Ø 3 - 4 - 5 - 6 - 8 mm	Ø 4 - 5 - 6 - 8 - 10 mm
PRICE €	21,60	26,19	25,09	28,22



REFERENCE	<b>BW69434</b>	<b>BW69319</b>
QUANTITY	7	8
QUALITY	PROFESSIONAL SERIES	PROFESSIONAL SERIES
CONTENT	Ø 4 - 5 - 6 - 7 - 8 - 10 - 12 mm	Ø 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 mm
PRICE €	46,25	44,71

**CUTTING SPEED R.P.M.**

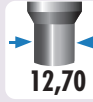
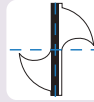
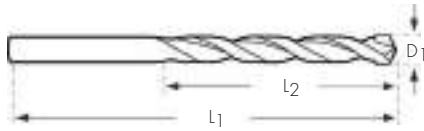
	Ø 3	Ø 5	Ø 8	Ø 10	Ø 12		Ø 3	Ø 5	Ø 8	Ø 10	Ø 12
Soft material						Hard material					
Brick						Marble					
Sandstone						Cement					
Plaster	3200	1900	1300	1100	900	Concrete	2100	1200	900	700	600
Gypsum						Blackboard					
Asbestos						Limestone					
						Granite					

**CARBIDE TIPPED HAMMER DRILLS EXTRA PROFESSIONAL QUALITY**

Construction drill bits

Grey

Ref. BW15

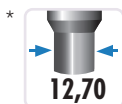

**DIN  
8039**

**Extra  
Professional  
series**


D1 mm		L1 x L2 mm	€
3,0	BW1503*	70x30	5,98
3,5	BW150350*	70x30	6,53
4,0	BW1504*	70x30	5,98
4,5	BW150450*	85x45	7,04
5,5	BW150550*	85x45	7,13
6,5	BW150650*	100x50	8,26
7,0	BW1507*	100x50	6,65
9,0	BW1509*	120x70	9,79
11,0	BW1511*	150x80	11,40
12,0	BW1512*	150x80	13,32
13,0	BW1513*	150x80	17,88
14,0	BW1514*	150x80	21,72
15,0	BW1515*	160x80	26,17
16,0	BW1516*	160x80	28,07
18,0	BW1518*	160x80	32,91
20,0	BW1520*	160x80	43,18

D1 mm		L1 x L2 mm	€
3,0	BW1503B*	85x45	15,83
4,0	BW1504B*	85x45	15,83
9,0	BW1509B*	120x70	12,99
11,0	BW1511B*	150x80	15,09
12,0	BW1512B*	150x80	17,66
13,0	BW1513B*	150x80	23,69
14,0	BW1514B*	150x80	28,77


**150 mm / 250 mm**

D1 mm		L1 x L2 mm	€
5,5	BW150550X150*	150x80	10,50
6,0	BW1506X150*	150x80	9,42
6,5	BW150650X150*	150x80	9,93
7,0	BW1507X150*	150x80	13,35
8,0	BW1508X250*	250x190	13,88
10,0	BW1510X250*	250x190	15,32
14,0	BW1514X250*	250x190	23,59



From 13 mm Ø all the drills have reduced shank.

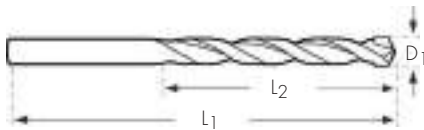
\* Ref. BW15: All the references until end of stock.

**CARBIDE TIPPED CONCRETE HAMMER DRILL EXTRA PROFESSIONAL QUALITY**

Ref. BW16



Extra Professional series



SHORT SERIES				LONG SERIES				EXTRA LONG SERIES			
D1 mm	Ref.	L1 x L2 mm	€	150 mm		200 mm		400 mm			
				L1 x L2 mm	€	L1 x L2 mm	€	L1 x L2 mm	€		
4,0	BW1604	75x38	3,87								
5,0	BW1605	85x45	3,90	BW1605X150	150x100	5,40					
6,0	BW1606	100x55	4,31	BW1606X150	150x100	5,96	BW1606X200	200x150	7,88		
7,0	BW1607	100x55	4,97								
8,0	BW1608	120x70	5,51	BW1608X150	150x100	8,75	BW1608X200	200x150	9,31		
9,0	BW1609	120x70	6,78								
10,0	BW1610	120x70	7,76	BW1610X150	150x100	11,45	BW1610X200	200x150	12,44		
12,0	BW1612	150x80	11,89				BW1612X200	200x150	14,44		
14,0	BW1614*	150x80	17,38				BW1614X200*	200x150	23,83		
16,0	BW1616*	150x80	22,03				BW1616X200*	200x150	27,67		
18,0	BW1618*	160x80	27,46						BW1618X400*	400x350	45,82
20,0	BW1620*	160x80	35,97						BW1620X400*	400x350	51,84

\* From 13 mm Ø all the drills have reduced shank



REFERENCE	BW169325	BW169327	BW169434
QUANTITY	4	5	7
QUALITY	EXTRA-PROFESSIONAL	EXTRA-PROFESSIONAL	EXTRA-PROFESSIONAL
CONTENT	Ø 4 - 5 - 6 - 8 mm	Ø 4 - 5 - 6 - 8 - 10 mm	Ø 4 - 5 - 6 - 7 - 8 - 10 - 12 mm
PRICE €	23,22	30,33	49,71

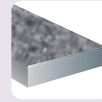
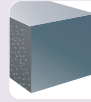


**THREE EDGE MASONRY DRILL BIT DELTA 3 PLUS**

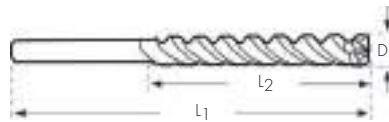
Construction drill bits

Grey

Ref. BW35



- Drill always with percussion mode
- Innovative geometry of the tip. 3 edge monoblock tip
- Centered, Rounded and accurate holes
- 3 flutes for an improved dust removal and an improved lifetime of the drill bit
- Minimum wear of the drill bit
- Less effort and higher performance


**STANDARD**

**SHORT SERIES**
**LONG SERIES**
**200 mm**

D1 mm		L1 x L2 mm	€		L1 x L2 mm	€
5	BW3505	90x50	5,06	BW3505X150	150x100	8,95
6	BW3506	100x60	5,10	BW3506X150	150x100	9,12
8	BW3508	120x80	6,29	BW3508X200	200x150	11,15
10	BW3510	120x80	8,37	BW3510X200	200x150	14,78
12	BW3512	130x90	11,79	BW3512X200	200x150	16,09

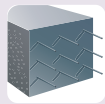


REFERENCE	<b>BW359328</b>
QUANTITY	4
QUALITY	DELTA 3 PLUS
CONTENT	Ø 5 - 6 - 8 - 10 mm
PRICE €	30,88

**SDS PLUS HAMMER DRILL WITH STOPPER FOR PREVIOUS HOLES FOR METALLIC ANCHORAGES**



Ref. WT



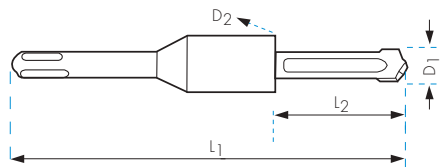
- Carbide tipped monoblock with self-centering.
- Hole centering, prevents the slide effect. More accuracy.
- Straight extraction flute. In short length the extraction volume is increased
- Depth stopper, control of the hole length
- Stopper which allows repetitive drill operations with full accuracy
- Better quality of the hole.

**APPLICATIONS:**

- Special for works with repetitive drilling operations which require depth control.
- Appropriate for the previous holes for placing metallic anchorages in concrete.
- Allows the assembly of fastening systems which require accurate and regular holes.
- Commonly used to install grandstands, refrigeration systems, rack systems, etc.

**VERY IMPORTANT:**

The material to drill must be solid, Concrete, Reinforced Concrete, Stone, Brick. If the previous hole is made in a lightweight material the anchorage will not bear up.



	D <sub>1</sub> mm	L <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>2</sub> mm	Thread Anchorage	WT €
WT08x27	8	103	16	27	M6	24,98
WT10x33	10	103	22	33	M8	28,12
WT12x43	12	113	22	43	M10	30,87
WT15x54	15	128	22	54	M12	39,61



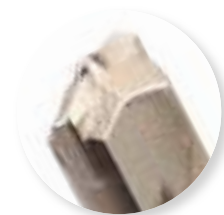
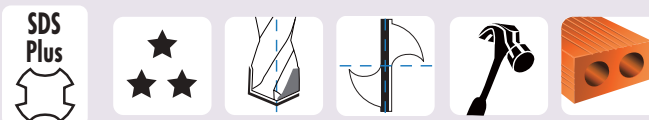
- Metal threaded anchorages, wedge anchor  
Special for solid materials.

**METAL THREADED ANCHORAGES**

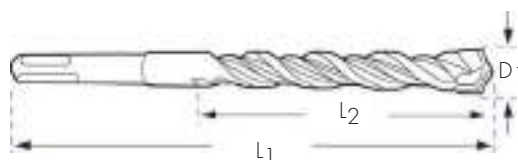
INTERNAL THREAD	previous hole Ø (mm)	anchorage length (mm)
M6	8	25
M8	10	30
M10	12	40
M12	15	50

**PROFESSIONAL HAMMER DRILL BITS SDS PLUS**

Ref. W08



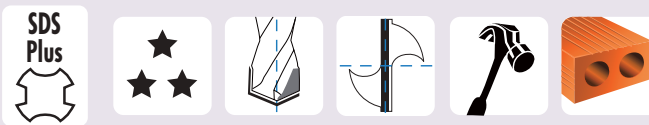
- Self centering carbided tipped point.
  - Higher durability.
  - Spiral flutes for improved dust removal.
  - Accurate drill holes thanks to reduced friction.
  - Long lifetime thanks to minimum friction in flutes and head point.
  - Easier drilling thanks to higher dust removal.
  - For use in rotary hammer machines with SDS PLUS shank.
- APPLICATIONS:**
- Concrete and construction materials, marble, granite, blackboard, stone.



D <sub>1</sub> mm	W08									
	L <sub>1</sub> x L <sub>2</sub> (mm)									
	110x50	160x100	200x150	250x200	300x250	450x400	600x550	800x750	1000x950	1400x1350
	€	€	€	€	€	€	€	€	€	€
3,00	6,13	6,13								
3,50	6,19									
4,00	6,51	7,03								
5,00	5,33	6,78	10,77	12,92	13,77	18,86				
5,50	6,22	7,23	12,91	15,72						
6,00	5,49	6,33	9,52	13,31	18,38	20,66				
6,50	6,57	7,13	14,77	15,13	19,48	21,57				
7,00	6,91	7,63	10,82			28,84				
8,00	6,73	6,96	8,60	11,52	18,83	25,66	44,63			
9,00		8,79	10,75	13,08						
10,00	7,22	8,65	10,48	12,65	17,36	27,53	40,44	73,32	95,79	
11,00		10,10	11,25	14,63						
12,00		9,70	11,93	14,68	21,81	27,81	41,57		92,42	
13,00		10,52	13,89	18,77						
14,00		13,31	17,20	18,93	23,34	30,86	45,86		108,66	
15,00		17,66		22,86		37,58				
16,00			21,54	22,77	25,01	36,70	49,29	78,94	123,36	174,56
17,00			28,92							
18,00			29,14		37,48	41,90	66,54		128,38	185,80
19,00			35,59		44,07					
20,00			33,31		43,96	54,23	75,12		132,87	207,03
22,00				41,80		60,04	85,80		134,11	241,86
24,00				49,15		74,55			175,68	
25,00				52,69		68,21	95,60		148,60	271,07
26,00				55,17		86,33				298,16
28,00				127,34		136,86	163,21		208,15	320,63
30,00				152,52		174,84	220,63		288,04	

**PROFESSIONAL HAMMER DRILL BITS SDS PLUS**

Ref. W08



**W08 DRILLS 10 UNITS BOX**



Ø mm	10 U.		
	L1 x L2 (mm)		
	110x50 €	160x100 €	200x150 €
5,0	50,68	64,34	
6,0	52,14	60,12	90,33
8,0	65,75	66,28	83,60
10,0	70,35	82,15	99,68
12,0		92,03	113,38

Ex. W0806X110-10

**W08 DRILLS 50 UNITS BOX**



Ø mm	50 U.	
	L1 x L2 (mm)	
	160x100 €	
6,0	281,41	
8,0	295,08	

Ex. W0806X160-50



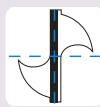
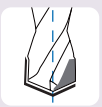
REFERENCE	W08D9358	W08D9412	W08D9319	W08D9320
QUANTITY	4	6	4	5
CONTENT	Ø 5 -6 -8 -10 x 110 mm	Ø 5-6-8x110 mm    Ø 6-8-10x160 mm	Ø 5 -6 -8 -10 x 160 mm	Ø 5-6-x110 mm    Ø 6-8-10x160 mm
PRICE €	30,38	46,51	34,34	39,34



REFERENCE	W08D0080	W08D0708
QUANTITY	7	6
CONTENT	Ø 5-6-8 x 110 mm    Ø 6-8-10-12 x 160 mm	Ø 6 x 110 mm    Ø 6-8-10-12-14 x 160 mm
PRICE €	57,05	58,30

**PROFESSIONAL HAMMER DRILL BITS SDS PLUS**

Ref. W05

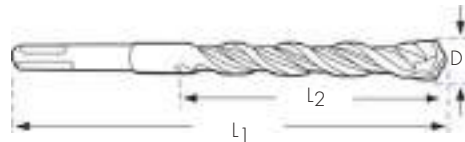

**Professional series**


- Self centering high performance carbided tipped point.
- Higher drilling speed and better durability.
- 4 spiral flutes for faster drilling and fast dust removal.
- Accurate drill holes thanks to reduced friction.
- Longer lifetime thanks to minimum friction in flutes and head point.

- Easier drilling thanks to faster drilling and dust removal.
- For use in rotary hammer machines with SDS PLUS shank.

**APPLICATIONS:**

- Concrete and construction materials, marble, granite, blackboard, stone.



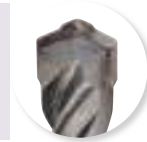
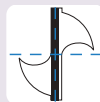
D1 mm	L1 x L2 (mm)									W05
	110x50	160x100	200x150	250x200	300x250	450x400	600x550	800x750	1000x950	
	€	€	€	€	€	€	€	€	€	€
3,00	17,21	19,32								
3,50	15,04	15,40								
4,00	7,23	12,32								
5,00	5,93	7,54	11,97	16,02	18,26	37,37				
5,50	6,92	8,02	14,35	20,04						
6,00	6,10	7,04	10,58	15,70	21,63	35,63				
6,50	7,78	8,60	16,41	16,80	21,66					
7,00	7,78	8,60	13,78	18,13	22,91	32,65				
8,00	7,67	7,74	9,78	14,23	21,72	28,51	49,58			
8,50				14,53						
9,00		9,92	11,95	14,53						
9,50		12,20*								
10,00	8,24	9,60	11,65	14,74	19,81	30,59	44,93			117,82
11,00		11,88	14,45*	16,25						
12,00		10,77	13,25	16,31	24,23	31,75	46,35			111,11
13,00		16,99	22,12	22,83						
14,00		17,38	19,12	21,35	25,93	34,28	50,94			120,73
15,00		19,62		25,41		41,75				
16,00			23,93	26,32	29,79	40,77	54,77			137,07
17,00			32,14		54,07	58,83				
18,00			32,38		43,15	46,56	75,34	97,85		164,19
19,00			39,56		48,97	54,44				
20,00			37,00		50,85	60,25	83,46			172,82
22,00				46,44		66,72	108,49			177,61
23,00										
24,00				54,62		82,84				
25,00				58,54		75,79	110,40			194,56
26,00				61,30		95,91		135,37		

\* Till end of stock



**PROFESSIONAL HAMMER DRILL BITS SDS PLUS**

Ref. W05



Professional series

**W05 DRILLS 10 UNITS BOX**



Ø mm	10 U.		
	L1 x L2 (mm)		
	110x50 €	160x100 €	200x150 €
5,0	53,34	67,73	
6,0	54,89	63,29	95,08
8,0	69,22	69,77	88,00
10,0	74,05	86,47	104,92
12,0		96,87	119,35

Ex. W0506X110-10

**W05 DRILLS 50 UNITS BOX**



50 U.	
L1 x L2 (mm)	
Ø mm	160x100 €
6,0	305,87
8,0	320,75

Ex. W0506X160-50



REFERENCE	W05D9358	W05D9412	W05D9319	W05D9320
QUANTITY	4	6	4	5
CONTENT	Ø 5 - 6 - 8 - 10 x 110 mm	Ø 5 - 6 - 8 x 110 mm Ø 6 - 8 - 10 x 160 mm	Ø 5 - 6 - 8 - 10 x 160 mm	Ø 5 - 6 x 110 mm Ø 6 - 8 - 10 x 160 mm
PRICE €	33,56	51,10	37,53	42,97



REFERENCE	W05D0080	W05D0708
QUANTITY	7	6
CONTENT	Ø 5 - 6 - 8 x 110 mm Ø 6 - 8 - 10 - 12 x 160 mm	Ø 6 x 110 mm Ø 6 - 8 - 10 - 12 - 14 x 160 mm
PRICE €	62,72	66,50

**4 EDGE HAMMER DRILL BITS (OPTIMAL CENTERING)**

Ref. W55



Extra Professional series



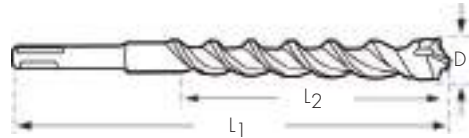
4 EDGES

- 4 Carbide edges. High performance.
- Higher efficiency.
- Centering of the drill, accurate holes and finishing.
- Higher lifetime due to reduced friction.

- For use in rotary hammer machines with SDS PLUS shank.

APPLICATIONS:

- Concrete and construction materials, marble, granite, blackboard, stone.



D1 mm	W55									
	L1 x L2 mm									
	110x50	160x100	210x160	250x200	300x250	350x300	460x410	600x550	800x750	1000x950
	€	€	€	€	€	€	€	€	€	€
5,0	8,24	10,26	15,39	17,67	23,17					
5,5	9,06	11,29	16,93	19,44						
6,0	8,45	10,27	14,17	16,96	23,26		37,98			
6,5	10,20	10,80	17,99	18,35	23,40		37,21			
7,0	11,22	11,88	18,11	20,18			40,92			
8,0	10,65	10,87	15,45	17,60	25,12		36,62	61,29		
9,0		11,95	17,01							
10,0	11,42	13,23	17,28	20,31	29,33	36,36	40,43	58,89	120,66	128,78
11,0		14,55	19,01	22,34						
12,0		14,94	18,39	22,92	30,79	36,36	44,06	67,58		123,42
13,0		17,36	23,29	25,21						
14,0		21,92	26,50	29,63	35,96	39,55	47,57	72,44		137,87
15,0		24,11		32,58			52,33			
16,0			35,11	36,22	39,73	44,22	56,13	78,38	103,91	145,93
17,0			38,62		43,70					
18,0			40,85	50,46	57,58		64,07	107,83		174,81
19,0			46,35		63,34		70,48			
20,0			52,09	54,01	68,82		82,95	119,47		183,99
22,0				62,65			91,82	149,30		189,09
24,0				73,69			114,01	166,11		202,25
25,0				78,99			104,30	173,25		215,42
26,0				158,71			166,57			
28,0				168,34			180,91	222,48		220,69
30,0				201,65			231,12	284,23		275,75
32,0				205,92			224,78			
35,0				211,80			258,67			
38,0				231,79			298,40			
40,0				272,70			340,33			

**4 EDGE HAMMER DRILL BITS (OPTIMAL CENTERING)**

Ref. W55



4 Z



Extra Professional series

**W55 DRILLS 10 UNITS BOX**



Ø mm	10 U.		
	L1 x L2 (mm)		
	110x50 €	160x100 €	210x150 €
5,0	78,26	97,47	
6,0	80,26	97,58	134,66
8,0	101,24	103,24	146,87
10,0	108,46	125,66	164,18
12,0		141,87	174,73

Ex. W5506X110-10

**W55 DRILLS 50 UNITS BOX**



Ø mm	50 U.	
	L1 x L2 (mm)	
	160x100	
6,0		472,48
8,0		499,91

Ex. W5506X160-50



REFERENCE	W55D9358	W55D9412	W55D9319	W55D9320
QUANTITY	4	6	4	5
QUALITY	EXTRA PROFESSIONAL	EXTRA PROFESSIONAL	EXTRA PROFESSIONAL	EXTRA PROFESSIONAL
CONTENT	Ø 5 -6 -8 -10 x 110 mm	Ø 5-6-8x110 mm    Ø 6-8-10x160 mm	Ø 5 -6 -8 -10 x 160 mm	Ø 5-6-x110 mm    Ø 6-8-10x160 mm
PRICE €	44,38	68,73	50,24	57,62



REFERENCE	W55D0080	W55D0708
QUANTITY	7	6
QUALITY	EXTRA PROFESSIONAL	EXTRA PROFESSIONAL
CONTENT	Ø 5-6-8 x 110 mm    Ø 6-8-10-12 x 160 mm	Ø 6 x 110 mm    Ø 6-8-10-12-14 x 160 mm
PRICE €	84,51	87,53

**DELTATOP PROFESSIONAL HAMMER DRILL BITS SDS PLUS SHANK WITH 3 CUTTING EDGE SOLID CARBIDE HEAD**

Construction drill bits

Grey

Ref. W88



**Improved drilling in reinforced concrete.**

Drills into a concrete steel rebar when it does not cover more than 1/3 of the tip.

Exclusive features that offer superior performance to any other drill bit and reduces the cost per hole.

**Penetrate through sheet plates.**

Drill into metal deck plate up to 1mm thick and then concrete.

**Innovative carbide head welding technology.**

Supports continuous and great efforts and pressure in reinforced concrete.

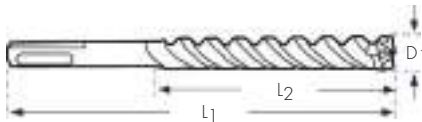
APPLICATIONS: Granite, marble, concrete, stone, brick.



Standard drill



DeltaTOP drill



D1 mm	L1 x L2 mm							W88
	120x50 €	170x100 €	220x150 €	270x200 €	320x250 €	370x300 €	470x400 €	
3,00	10,42	10,83						
4,00	10,42	10,83						
5,00	9,83	10,43	19,24	19,76	27,01	28,73		
6,00	10,02	10,89	16,02	17,76	23,92		38,63	
6,50	12,40	12,93	18,12	21,31	27,08			
7,00	11,78	12,94	18,71					
8,00	11,41	11,41	16,02	17,94	25,62	29,70	38,76	
10,00	13,13	13,32	18,20	21,15	30,03	31,51	41,64	
12,00		18,43	21,54	25,07	31,97		48,65	
13,00		19,66	26,92					
14,00		27,01	31,12	34,19	37,30	46,03	57,73	
16,00			38,93	41,22	42,19		78,68	
18,00					65,78		95,56	
20,00					74,58		105,41	



REFERENCE	W88D9358	W88D9412	W88D9319	W88D9320
CONTENT	(x4) Ø 5-6-8-10 x 120 mm	(x6) Ø 5-6-8x120mm Ø 6-8-10x170 mm	(x4) Ø 5-6-8-10 x 170 mm	(x5) Ø 5-6-x120mm Ø 6-8-10x170mm
PRICE €	50,35	74,68	52,33	62,60

REFERENCE	W88D0080
CONTENT	(x7) Ø 5-6-8 x 120 mm Ø 6-8-10-12 x 170 mm
PRICE €	93,66



REFERENCE	W88D0708
CONTENT	(x6) Ø 6 x 120 mm Ø 6 - 8 - 10 - 12 - 14 x 170 mm
PRICE €	99,71



DOUBLE FLUTE MULTIFUNCTION CARBIDE TIPPED DRILL FOR SDS PLUS HAMMER

Ref. W99



DIN 8039



Multi purpose Professional



- SPECIAL SDS PLUS Short Shank which allows drilling light materials.
  - **The Short Shank produces a low impact in the material to drill;** the solution to drill light materials as bricks, tiles, slates...
  - High performance solid carbide tipped special to drill in all kind of materials.
  - Double helix flute to enhance the extraction of the drilling dust.
- APPLICATIONS:
- Low impact geometry to ensure a high performance in materials as tiles, bricks, cellular concrete.
  - Particularly suitable to place anchorages under tiles ensuring the multi drilling; first tile and afterwards the concrete to install the anchorage under the roof.



New SDS PLUS Shank low impact.

D <sub>1</sub> mm	L <sub>1</sub> x L <sub>2</sub> mm				
	110 x 60	160 x 110	210 x 160	260 x 210	400 x 350
4,00	16,28	20,94			
5,00	10,07	12,82	20,34		
6,00	10,37	11,96	17,98	26,68	
8,00	13,05	13,15	16,63	24,18	
10,00	14,00	16,32	19,80	25,07	
12,00		18,32	22,53	27,73	
14,00		29,56	32,50	36,29	
16,00		33,13	40,68	44,73	52,36
18,00					58,36
20,00					65,21
22,00					76,36



Drills all kind of light building materials.

Particularly suitable to place anchorages under tiles ensuring the multi drilling; first tile and afterwards the concrete to install the anchorage under the roof.

Specially sharpened solid carbide tipped for universal use in a wide variety of materials. Ideal to drill light building materials.

Special SDS PLUS short shank to reduce the impact in light materials avoiding to damage them.

Creation of perfect holes in surfaces where other drills have unexpected breaks.

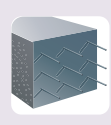


**REINFORCED CONCRETE HAMMER DRILL BITS SDS PLUS SHANK WITH 4 CUTTING EDGE SOLID CARBIDE HEAD**

Construction drill bits

Grey

Ref. W77



- 4 cutting edge solid carbide head.
- Maximum performance and durability in reinforced concrete.
- Drill faster and easier in high resistance reinforced concrete, with the best drill.
- SDS-Plus Shank
- Faster dust removal thanks to its 4 flutes
- APPLICATIONS: Reinforced concrete, concrete and masonry.

**4 CUTTING EDGE SOLID CARBIDE HEAD**

Point specially designed for reinforced concrete.



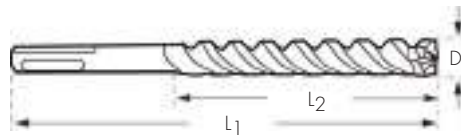
Self-centering 90° angled point for perfectly centered hole



4 flute high performance design increasing dust removal volume and decreasing drill wear



Side wear marks



W77

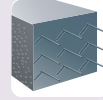
D1 mm	L1 x L2 mm										
	115x50	165x100	215x150	250x200	265x200	315x250	365x300	450x400	465x400	600x550	1000x950
	€	€	€	€	€	€	€	€	€	€	€
3,50	12,13	13,65									
4,00	13,17	13,79									
5,00	11,14	13,26	22,37		22,76	28,10			39,08		
5,50	12,48	14,05			23,77	31,24			42,23		
6,00	11,14	12,17	20,72		22,99	26,01			39,08		
6,50	14,44	15,86	18,68		27,48	33,36			55,42		
7,00	15,22	16,64	19,30		26,67						
8,00	14,44	14,60	17,43		23,20	32,02	41,13		49,84		
9,00		14,60	15,72								
10,00	16,95	17,19	20,49		25,82	32,16	42,29		51,15	63,95	138,78
11,00		19,49	23,39		27,58						
12,00		20,64	24,18		28,38	32,31	52,12		54,62	73,92	155,61
13,00		22,64	28,70		34,38						
14,00		30,38	34,53		38,46	40,74	54,22		64,83	79,05	171,68
15,00		37,21			49,92				69,28		
16,00			44,27		50,22	51,79			88,22	96,73	175,21
17,00			78,27			107,88					
18,00				90,45				111,73		144,82	291,93
20,00				106,18				118,38		234,73	334,89
22,00				130,39				173,50		234,73	354,62
24,00								193,93			
25,00								197,86		289,62	403,13
28,00								220,38			
30,00								235,49			

**REINFORCED CONCRETE HAMMER DRILL BITS SDS PLUS SHANK WITH 4 CUTTING EDGE SOLID CARBIDE HEAD**

Ref. W77



4 Z



**W77 DRILLS 10 UNITS BOX**



Ø mm	10 U.		
	L1 x L2 (mm)		
	115x50 €	165x100 €	215x150 €
5,0	100,31	119,38	
6,0	100,31	109,49	186,49
8,0	129,98	131,39	156,82
10,0	152,58	154,70	184,37
12,0		185,78	217,57

Ex. W7706X110-10

**W77 DRILLS 50 UNITS BOX**



Ø mm	50 U.	
	L1 x L2 (mm)	
	165x100 €	
6,0		529,19
8,0		635,04

Ex. W7706X160-50



REFERENCE	<b>W77D9358</b>	<b>W77D9412</b>	<b>W77D9319</b>	<b>W77D9320</b>
QUANTITY	4	6	4	5
CONTENT	Ø 5 - 6 - 8 - 10 x 115 mm	Ø 5 - 6 - 8 x 115 mm Ø 6 - 8 - 10 x 165 mm	Ø 5 - 6 - 8 - 10 x 165 mm	Ø 5 - 6 x 115 mm Ø 6 - 8 - 10 x 165 mm
PRICE €	59,31	87,70	62,84	72,81



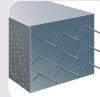
REFERENCE	<b>W77D0080</b>	<b>W77D0708</b>
QUANTITY	7	6
CONTENT	Ø 5 - 6 - 8 x 115 mm Ø 6 - 8 - 10 - 12 x 165 mm	Ø 6 x 115 mm Ø 6 - 8 - 10 - 12 - 14 x 165 mm
PRICE €	109,19	113,98

## REBAR CUTTER

Ref. REB



ROTATION

Z  
4 -10

1. Use the Rebar cutter with water and only in rotation mode.
2. Once the rebar is cut, remove the metal chips from the hole with a magnet. If not, the hammer drill you will use to drill the concrete, won't be able to work properly.



	REB				
	D1 mm	L1 mm	L2 mm	Z	€
REB 10X300	10	300	80	4	37,00
REB 12X300	12	300	80	4	40,11
REB 14X300	14	300	80	4	44,17
REB 16X300	16	300	80	6	53,00
REB 18X300	18	300	80	6	56,47
REB 20X300	20	300	80	6	57,78
REB 22X300	22	300	80	8	65,09
REB 26X300	26	300	80	8	70,16
REB 28X300	28	300	80	10	76,75
REB 32X300	32	300	80	10	86,68



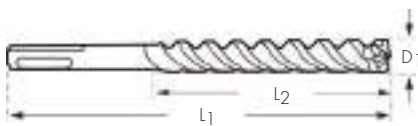
**SDS MAX HAMMER DRILL BITS**

Ref. QT



4 EDGES

- Self centering high performance carbided tipped point.
  - Higher drilling speed and better durability.
  - 4 spiral flutes for faster drilling and fast dust removal.
  - Accurate drill holes thanks to reduced friction.
  - Longer lifetime thanks to minimum friction in flutes and head point.
  - Easier drilling thanks to faster drilling and dust removal.
  - For use in rotary hammer machines with SDS Max shank
- APPLICATIONS:**
- Concrete and construction materials, marble, granite, blackboard, stone.



	D <sub>1</sub> mm	L <sub>1</sub> x L <sub>2</sub> mm	QT €
QT12X340	12	340x200	57,63
QT12X540	12	540x400	67,91
QT12X740	12	740x600	85,97
QT12X940	12	920x800	125,48
QT14X340	14	340x200	62,62
QT14X540	14	540x400	71,62
QT14X740	14	740x600	101,53
QT14X940	14	920x800	130,89
QT15X340	15	340x200	65,72
QT15X540	15	540x400	72,68
QT16X340	16	340x200	78,48
QT16X540	16	540x400	89,02
QT16X740	16	740x600	105,24
QT16X940	16	920x800	131,96
QT16X1340	16	1320x1200	292,10
QT17X340	17	340x200	83,09
QT17X540	17	540x400	94,89
QT18X340	18	340x200	85,34
QT18X540	18	540x400	96,64
QT18X720	18	740x600	115,54
QT18X940	18	920x800	133,89
QT18X1320	18	1320x1200	297,85

	D <sub>1</sub> mm	L <sub>1</sub> x L <sub>2</sub> mm	QT €
QT19X320	19	320x200	88,15
QT19X520	19	520x400	98,27
QT20X320	20	320x200	90,57
QT20X520	20	520x400	98,58
QT20X720	20	720x600	132,30
QT20X920	20	920x800	152,19
QT20X1320	20	1320x1200	301,70
QT22X320	22	320x200	91,74
QT22X520	22	520x400	105,46
QT22X720	22	720x600	135,21
QT22X920	22	920x800	159,77
QT22X1320	22	1320x1200	306,38
QT24X320	24	320x200	95,83
QT24X520	24	520x400	112,28
QT25X320	25	320x200	98,88
QT25X520	25	520x400	112,96
QT25X720	25	720x600	151,80
QT25X920	25	920x800	175,25
QT25X1320	25	1320x1200	319,49
QT26X320	26	320x200	120,59
QT26X520	26	520x400	124,26
QT28X320	28	320x200	122,38

	D <sub>1</sub> mm	L <sub>1</sub> x L <sub>2</sub> mm	QT €
QT28X520	28	520x400	130,52
QT28X720	28	720x600	167,45
QT28X920	28	920x800	209,65
QT28X1320	28	1320x1200	363,87
QT30X320	30	320x200	123,29
QT30X520	30	520x400	135,92
QT32X320	32	320x200	133,25
QT32X520	32	520x400	164,33
QT32X720	32	720x600	219,50
QT32X920	32	920x800	265,70
QT35X520	35	520x400	196,17
QT35X720	35	720x600	222,94
QT35X920	35	920x800	318,74
QT35X1320	35	1320x1200	471,19
QT38X520	38	520x400	237,62
QT38X720	38	720x600	279,56
QT40X520	40	520x400	283,30
QT40X720	40	720x600	323,29
QT40X920	40	920x800	350,26
QT40X1320	40	1320x1200	561,23





**SDS MAX HAMMER DRILL BITS**

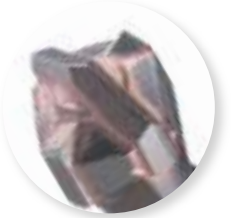
Construction drill bits

Grey

Ref. AX



Professional series



4 EDGES



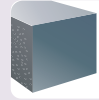
2 EDGES

AX				AX				AX			
	D1 mm	L1x L2 mm	€		D1 mm	L1x L2 mm	€		D1 mm	L1x L2 mm	€
AX12.0X340	12	340x200	83,27	AX20.0X720	20	720x600	191,17	AX28.0X1500	28	1500x1320	585,73
AX12.0X540	12	540x400	98,13	AX20.0X920	20	920x800	219,91	AX30.0X320	30	320x200	178,15
AX12.0X740	12	740x550	124,22	AX20.0X1320	20	1320x1200	435,95	AX30.0X520	30	520x400	196,40
AX12.0X940	12	940x800	181,32	AX22.0X320	22	320x200	132,56	AX32.0X520	32	520x400	237,45
AX13.0X340*	13	340x200	91,83*	AX22.0X520	22	520x400	152,38	AX32.0X720	32	720x600	285,74
AX13.0X540*	13	540x400	103,40*	AX22.0X720	22	720x600	195,38	AX32.0X920	32	920x800	345,88
AX14.0X340	14	340x200	90,49	AX22.0X920	22	920x800	230,87	AX32.0X1320	32	1320x1200	580,35
AX14.0X540	14	540x400	103,50	AX22.0X1320	22	1320x1200	442,71	AX32.0X1500	32	1500x1320	659,39
AX14.0X740	14	740x600	146,71	AX22.0X2000	22	1500x2000	665,36	AX35.0X520	35	520x400	255,38
AX14.0X940	14	940x800	189,14	AX22.0X2500	22	2080x2500	1.111,11	AX35.0X720	35	720x530	290,22
AX15.0X340	15	340x200	94,95	AX24.0X320	24	320x200	138,48	AX35.0X920	35	920x800	414,93
AX15.0X540	15	540x400	115,51	AX24.0X520	24	520x400	162,23	AX35.0X1320	35	1320x1200	613,37
AX16.0X340	16	340x200	113,40	AX24.0X1500	24	1500x1320	441,15	AX36.0X1500	36	1500x1320	716,56
AX16.0X540	16	540x400	128,63	AX25.0X320	25	320x200	142,88	AX38.0X520	38	520x400	309,33
AX16.0X740	16	740x600	152,06	AX25.0X520	25	520x400	163,23	AX38.0X720	38	720x600	377,66
AX16.0X940	16	940x800	190,67	AX25.0X720	25	720x600	219,35	AX40.0X520	40	520x400	368,78
AX16.0X1340	16	1340x1200	422,08	AX25.0X920	25	920x800	253,22	AX40.0X720	40	720x600	436,73
AX17.0X340	17	340x200	120,07	AX25.0X1320	25	1320x1200	460,96	AX40.0X920	40	920x800	455,96
AX17.0X540	17	540x400	137,11	AX25.0X1500	25	1500x1320	461,38	AX40.0X1320	40	1320x1200	730,58
AX18.0X340	18	340x200	121,64	AX25.0X2000	25	1500x2000	705,36	AX40.0X1500	40	1500x1320	876,68
AX18.0X540	18	540x400	139,63	AX25.0X2500	25	2080x2500	1.159,36	AX42.0X1500	42	1500x1320	920,97
AX18.0X720	18	720x600	166,95	AX26.0X320	26	320x200	174,23	AX45.0X520	45	520x400	422,12
AX18.0X940	18	940x800	193,46	AX26.0X520	26	520x400	177,82	AX45.0X1500	45	1500x1320	1.013,18
AX18.0X1320	18	1320x1200	430,37	AX28.0X320	28	320x200	175,68	AX52.0X520	52	520x400	558,28
AX19.0X320	19	320x200	127,38	AX28.0X520	28	520x400	188,60				
AX19.0X540	19	520x400	142,00	AX28.0X720	28	720x530	241,96				
AX20.0X320	20	320x200	119,65	AX28.0X920	28	920x800	302,94				
AX20.0X520	20	520x400	142,44	AX28.0X1320	28	1320x1200	525,77				

\*Until end of stock

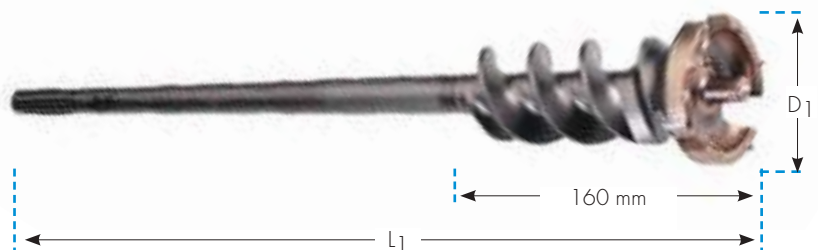
**SDS MAX BREAKTHROUGH ONE PIECE DRILL BITS FOR DRILLING LARGE DIAMETERS FROM Ø 45 TO 80 MM**

Ref. AX



Professional series

AX			
	D1 mm	L1x L2 mm	€
AX45.0X590	45,0	590x450	567,45
AX45.0X990	45,0	990x850	611,14
AX55.0X590	55,0	590x450	635,17
AX55.0X990	55,0	990x850	697,84
AX65.0X590	65,0	590x450	702,42
AX65.0X990	65,0	990x850	789,39
AX80.0X590	80,0	590x450	821,93
AX80.0X990	80,0	990x850	960,97





**REINFORCED CONCRETE HAMMER DRILL BITS SDS MAX SHANK WITH 4 CUTTING EDGE SOLID CARBIDE HEAD**

Ref. X4AX



4 Z



High Performance



- 4 cutting edge solid carbide head.
- Maximum performance and durability in reinforced concrete.
- Drill faster and easier in high resistance reinforced concrete, with the best drill.

- SDS-Max Shank.
  - Faster dust removal thanks to its 4 flutes.
- APPLICATIONS: Reinforced concrete, concrete and masonry

**4 CUTTING EDGE SOLID CARBIDE HEAD**

Point specially designed for reinforced concrete.



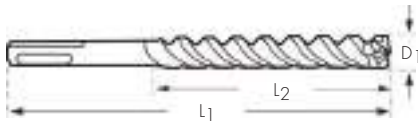
Self-centering 90° angled point for perfectly centered hole



4 flute high performance design increasing dust removal volume and decreasing drill wear



Side wear marks



	D1 mm	L1 x L2 mm	X4AX €
X4AX12X340	12	340x200	114,47
X4AX12X540	12	540x400	134,97
X4AX12X740	12	740x600	191,35
X4AX12X940	12	940x800	256,28
X4AX14X340	14	340x200	127,28
X4AX14X540	14	540x400	152,06
X4AX14X740	14	740x600	203,32
X4AX14X940	14	940x800	259,70
X4AX16X340	16	340x200	137,54
X4AX16X540	16	540x400	160,60
X4AX16X740	16	740x600	210,15
X4AX16X940	16	940x800	263,11
X4AX18X340	18	340x200	142,32
X4AX18X540	18	540x400	169,65
X4AX18X740	18	740x600	216,81
X4AX18X940	18	940x800	263,80
X4AX20X320	20	320x200	149,84
X4AX20X520	20	520x400	172,56

	D1 mm	L1 x L2 mm	X4AX €
X4AX20X720	20	720x600	220,58
X4AX20X920	20	920x800	271,32
X4AX22X320	22	320x200	160,26
X4AX22X520	22	520x400	181,96
X4AX22X720	22	720x600	229,63
X4AX22X920	22	920x800	275,07
X4AX24X320	24	320x200	174,44
X4AX24X520	24	520x400	192,04
X4AX25X320	25	320x200	174,44
X4AX25X520	25	520x400	201,78
X4AX25X720	25	720x600	263,80
X4AX25X920	25	920x800	327,87
X4AX26X320	26	320x200	197,66
X4AX26X520	26	520x400	227,97
X4AX28X320	28	320x200	203,50
X4AX28X520	28	520x400	230,22
X4AX28X720	28	720x600	272,04
X4AX28X920	28	920x800	343,69



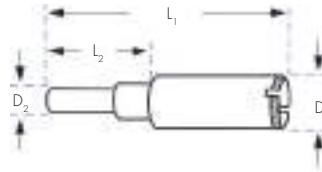
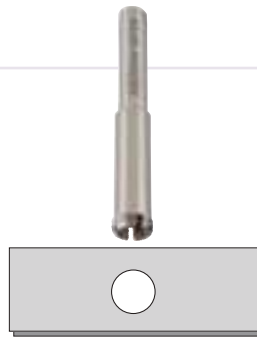
**ELECTRODEPOSITED DIAMOND HOLESAW FOR GLASS**

Ref. BC70..B


**Diamond series**


Given the characteristics and small diameter of these holesaws it is important to keep in mind that they do not come with a pilot drill. For portable drilling machines, we highly recommend making an exterior guide (see picture). In stationary machines, both workpiece and the machine should be securely fastened.

Example of exterior guide for working with portable machines



	BC70..B				
	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>2</sub> mm	L <sub>1</sub> mm	€
BC700400B	4	6,0	25	45	8,46
BC700500B	5	6,0	25	45	10,28
BC700600B	6	6,0	30	66	12,00
BC700700B	7	6,0	30	66	13,72
BC700800B	8	6,0	30	66	14,69
BC700900B	9	6,0	30	66	16,38
BC701000B	10	6,0	30	66	18,10
BC701200B	12	6,5	20	66	22,48
BC701400B	14	6,5	20	66	28,60
BC701500B	15	6,5	20	66	33,02
BC701600B	16	6,5	20	66	36,57
BC701800B	18	6,5	20	66	40,11
BC702000B	20	6,5	20	66	43,51

**GLASS AND TILE DRILL BITS**

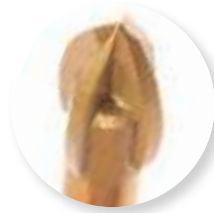
**GLASS DRILL BIT**

Ref. BW13

TiN



Professional series



Ref. BC90B



Standard series



- 4 teeth sharpening provides high performance drilling in glass.
- Fully ground carbide tip.

APPLICATIONS:

- Glass, ceramic, tile, porcelain, etc...

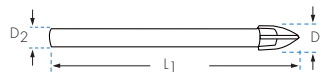
CUTTING SPEED  
R.P.M.

Ø mm	R.P.M.
3 - 6	900
8 - 10	700
12 - 14	600

- Fully ground carbide tip.

APPLICATIONS:

- Glass, ceramic, tile, porcelain, etc...



BW13				
	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	€
BW1303	3,0	2,5	62	9,06
BW1304	4,0	3,0	65	9,82
BW1305	5,0	4,0	68	10,42
BW1306	6,0	4,0	72	11,01
BW1308	8,0	6,0	80	11,98
BW1310	10,0	8,0	90	16,75
BW1312	12,0	10,0	100	23,33
BW1314	14,0	10,0	100	26,57



BC90B				
	D <sub>1</sub> mm	D <sub>2</sub> mm	L <sub>1</sub> mm	€
BC9003B	3,0	2,5	65	6,65
BC9004B	4,0	3,0	65	7,27
BC9005B	5,0	4,0	65	7,72
BC9006B	6,0	4,0	65	8,16
BC9008B	8,0	6,0	70	9,03
BC9010B	10,0	8,0	80	12,64
BC9012B	12,0	10,0	80	17,60
BC9014B	14,0	10,0	80	19,68



REFERENCE	<b>BW139325</b>
QUANTITY	4
QUALITY	PROFESSIONAL
CONTENT	Ø 4 - 5 - 6 - 8 mm
PRICE €	49,14



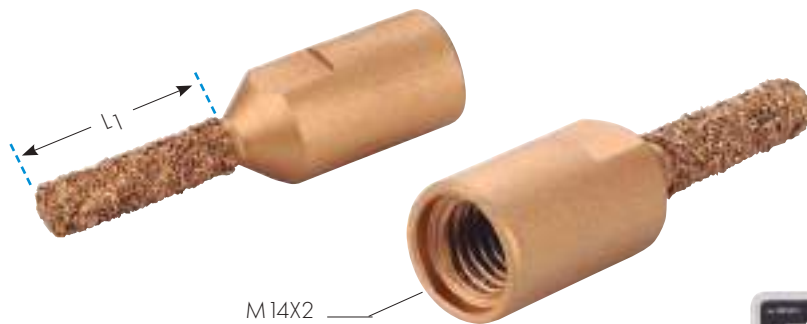
REFERENCE	<b>BC909325</b>
QUANTITY	4
QUALITY	STANDARD
CONTENT	Ø 4 - 5 - 6 - 8 mm
PRICE €	34,14

## CARBIDE MORTAR RAKE

Ref. BW33

**CARBIDE  
GRIT**

To remove the mortar between the bricks before grouting  
Can be used on angular grinder with M14x2.00 threads



BW33				
	Thread mm	L <sub>1</sub> mm	D <sub>1</sub> mm	€
BW3308	M14x2	33	8	20,63
BW3310	M14x2	33	10	23,88
BW3312	M14x2	33	12	28,38

## ADAPTORS WITH SLOT LOCKING DEVICE FOR FITTING HAMMER DRILL BITS WITH SDS PLUS SHANK



SDS-PLUS EXIT



SDS-MAX SHANK



This mechanism was designed to use SDS PLUS Drills, till 18 mm maximum diameter, which are not available with SDS-MAX shank. The lifetime and performance of these adaptors will depend on their adequate use

SHANK		MACHINE TYPE (SDS-PLUS EXIT IN ALL CASES)		€
QFMX	SDS-MAX	All machines with SDS MAX shank		156,36
QFK2 HEX. 14 mm	14 mm Hexagonal shank	PETIT KANGO	501 - 637 - 430C	156,36













## CLAIM ACCEPTANCE

The concrete drill bit may be damaged in the following situations:

- Continue working when the tool is worn.
- When drilling in improper material.
- When drilling deeper than the flute's length.
- When the drill bit is used with an improper machine.








How can I check the wear limit of drill bits?

- Check the state and wear level of the carbide tip.
- Verify the state of the drill's flutes.
- The drill holder of the power tool is a good indicator of wear.

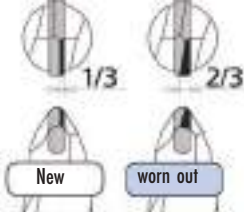

	<p><b>LOOSE CARBIDE TIP</b></p>	<p>Happens when the drill is still being used even if completely worn. The heat generated can melt the brazing and loosen the carbide insert.</p> <p><b>NON-ACCEPTABLE CLAIM</b></p>	
	<p><b>FLUTE RUPTURE</b></p>	<p>The metal fatigue has worn out the tip and, if used beyond this point, can lead to a flute breach.</p> <p><b>NON-ACCEPTABLE CLAIM</b></p>	 <p>Carbide tip worn out</p>
	<p><b>FLUTE RUPTURE</b></p>	<p>Flute rupture caused by insufficient heat treatment (carbide tip is visibly not worn).</p> <p><b>ACCEPTABLE CLAIM</b></p>	 <p>Carbide tip in good condition</p>
	<p><b>FLUTE RUPTURE</b></p>	<p>Drilling over the flute length causes the dust channel to clog and the subsequent overload results in flute breach. The non-fluted part of the drill shows unusual wear when it should be clear.</p> <p><b>NON-ACCEPTABLE CLAIM</b></p>	
	<p><b>HEAD BREACH</b></p>	<p>Can be due to operator drilling over the useful length or possibly keeping on using a worn out drill until rupture.</p> <p><b>NON-ACCEPTABLE CLAIM</b></p>	
	<p><b>CARBIDE TIP BREACH</b></p>	<p>Due to the tip violently impacting very hard bodies like the metal rebar of reinforced concrete.</p> <p><b>NON-ACCEPTABLE CLAIM</b></p>	
	<p><b>CARBIDE TIPPED CRACK</b></p>	<p>The tip crack was caused by the hard material, then drilling continued as it is.</p> <p><b>NON-ACCEPTABLE CLAIM</b></p>	



**CLAIM ACCEPTANCE FOR DELTATOP DRILL BITS**



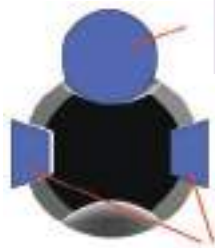
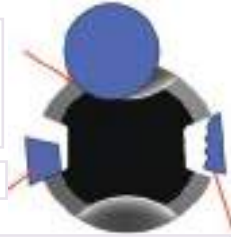
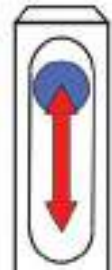
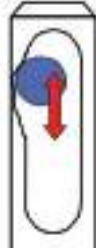


 <p>worn out</p>	<p>USUAL LIFE OF DELTATOP BIT</p>	<p>When the tip's ridge line of the drill bits looks like the picture, it is considered worn out (see left)</p>	<p><b>NON-ACCEPTABLE CLAIM</b></p>	
 <p>worn out</p>	<p>USUAL LIFE OF DELTATOP BIT</p>	<p>The shank part of the drill bit is considered worn out when it is burnt blue (Used with only rotation or used after the tip has worn out). The shank of the drill bit could turn blue also when drilling on extremely hard material.</p>	<p><b>NON-ACCEPTABLE CLAIM</b></p>	
 <p>accepted worn out</p>	<p>LOOSE DELTATOP CARBIDE TIP</p>	<p> If the head shows burnt blue areas, it means the operator has continued working with a worn out drill bit. The heat generated has melted the brazing and caused the carbide insert to loosen.</p>	<p><b>NON-ACCEPTABLE CLAIM</b></p>	
		<p> However, when the tip is detached at the early stage without having the flute turning blue, this claim will be accepted.</p>	<p><b>ACCEPTABLE CLAIM</b></p>	

**HOW TO VERIFY THE DRILL BIT'S WEAR LEVEL ?**

 <p>1/3 2/3 New worn out</p>	<p>When the tip's ridge line of the drill bits looks like the picture, it is considered worn out (see left).</p>	 <p>New worn out</p>	<p>When the tip's ridge line of the drill bits looks like the picture, it is considered worn out (see left).</p>
--	--	---	--

**CLAIM ACCEPTANCE**

**DYSFUNCTION AT THE POWER CHUCKS SDS PLUS NOTCHES**

<p><b>POWER TOOL CHUCK IN GOOD CONDITION</b> </p>	<p><b>DAMAGED POWER TOOL CHUCK</b> </p>
 <p>Steel ball, responsible for axial fixing.</p>	<p>A worn out trapezoidal does not transmit the rotation movement correctly, thus forcing the ball to transmit rotation as well as axial movement. The ball impacts and forces against the notch, damaging the chuck.</p>  <p>Worn out trapezoidal nose. Broken trapezoidal nose.</p>
 <p>Trapezoidal noses responsible for rotation.</p> <p>Axial movement of the drill is correct.</p>	 <p>A worn out chuck does not allow a correct transmission of the axial impact movement.</p>  <p>Extreme example</p>
	<p><b>CONCLUSION:</b> This results in the drill rotating without correctly hammering which leads to excessive friction and over-heating of the drill bit.</p> <p><b>NON-ACCEPTABLE CLAIM</b> </p>



# POINTS CHISELS

**BLUE-MASTER<sup>®</sup>**  
*by celesa*

CUTTING TECHNOLOGIES

**POINTS AND CHISELS FOR ELECTROPNEUMATIC MACHINES**
**SDS Plus**


Points &amp; chisels

Grey



P02140



P02250



C02140



C02250



CV02250



R02250



CA02140



CA02250



CZ02250



RA02250

**SDS PLUS**

	WIDTH mm	LENGTH. mm	€
--	-------------	---------------	---

**POINT**

P02140	-	140	9,36
P02250	-	250	14,92

**CHISEL**

C02140	20	140	9,36
C02250	20	250	14,92

**CHISEL (low vibration)**

CV02250	20	250	18,91
---------	----	-----	-------

**CHASING GOUGE**

R02250	22	250	30,27
--------	----	-----	-------

**WIDE CHISEL**

CA02140	40	140	11,69
CA02250	40	250	25,71
CA06250	60	250	40,85

**TILE CHISEL**

CZ02250	40	250	41,29
---------	----	-----	-------

**CHASING GOUGE WITH GLIDES**

RA02250	22	250	88,12
---------	----	-----	-------


**NEW GENERATION OF POINTS AND CHISELS**

NEW revolutionary geometry reducing the efforts of the worker

INNOVATING heat treatment increasing the lifetime of the tool

**POINTS AND CHISELS FOR ELECTROPNEUMATIC MACHINES**



**SDS MAX**

	WIDTH mm	LENGTH. mm	€
--	-------------	---------------	---

**POINT**

P01280	-	280	19,50
P01400	-	400	19,91
P01600	-	600	31,60

**POINT (low vibration)**

PR01400	-	400	37,15
PRR1400*	-	400	35,83*

**POINT PRH (low vibration)**

PRH1400	-	400	40,67
---------	---	-----	-------

**CHISEL**

C01280	25	280	19,45
C01400	25	400	19,81
C01600	25	600	31,51

**CHISEL (low vibration)**

CR01400	25	400	34,60
---------	----	-----	-------

**CHISEL (low vibration)**

CH01400	25	400	40,67
---------	----	-----	-------

**CHASING GOUGE**

R0126	25	300	51,07*
-------	----	-----	--------

**CHASING GOUGE FOR BRICKS**

RL0132	32	300	62,12*
--------	----	-----	--------

\*Until end of stock



P01280



PR01400



PRR1400



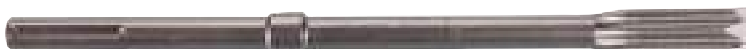
PRH1400



C01280



CR01400



CH01400



R0126



RL0132

**POINTS AND CHISELS FOR ELECTROPNEUMATIC MACHINES**

Points & chisels

Grey



C0175



CZ0150



CM0110



BU45



CD0132



CMD0132



**SDS MAX**

	WIDTH mm	LENGTH. mm	€
--	-------------	---------------	---

**WIDE CHISEL**

C0150	50	400	37,32
C0175	75	300	49,01
C01115	115	350	97,26

**TILE CHISEL**

CZ0150	50	300	59,00
--------	----	-----	-------

**BRICK RAKING CHISEL**

CM0110	8	300	70,09
--------	---	-----	-------

**BUSH HAMMER**

BU45	45	250	215,11
------	----	-----	--------

**CARBIDE BUSH HAMMER**

BU45MD	45	250	328,25*
--------	----	-----	---------

**MORTAR CHISEL**

CD0132	32	280	91,05*
--------	----	-----	--------

**TCT MORTAR CHISE**

CMD0132	38	280	208,28*
---------	----	-----	---------

\*Until end of stock



Ref. CH01400



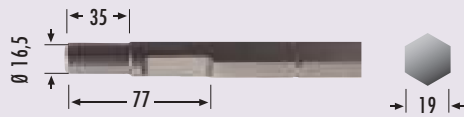
Ref. PRH1400



POINTS AND CHISELS FOR ELECTROPNEUMATIC MACHINES

BOSCH

Ø 16,5



P05300



C05300



CA05300



R05300

BOSCH 19 - Ø 16,5 mm

	WIDTH mm	LENGH. mm	€
--	-------------	--------------	---

POINT

P05300	-	300	43,71*
P05400	-	400	52,35
P05600	-	600	65,12

CHISEL

C05300	25	300	43,71*
C05400	25	400	61,58

WIDE CHISEL

CA05300	50	300	54,64
CA0575	75	300	61,64

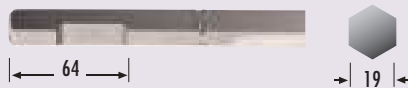
CHASING GOUGE

R05300	25	300	83,31*
--------	----	-----	--------

\*Until end of stock

BOSCH

19



P04400



C04300



CA04300



R04300

BOSCH 19 mm

	WIDTH mm	LENGH. mm	€
--	-------------	--------------	---

POINT

P04400	-	400	38,75
P04600	-	600	51,46

CHISEL

C04300	25	300	39,09*
C04400	25	400	40,89
C04600	25	600	53,10

WIDE CHISEL

CA04300	50	300	76,71
CA04450	50	450	79,44

CHASING GOUGE

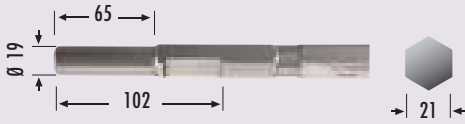
R04300	25	300	114,73*
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\*Until end of stock

**POINTS AND CHISELS FOR ELECTROPNEUMATIC MACHINES**

Points &amp; chisels

Grey

**KANGO**  
**Ø 19**  
**21**


P06400



C06400



CA06400



R06300


**KANGO 21 - Ø 19 mm**

	WIDTH mm	LENGTH. mm	€
--	-------------	---------------	---

**POINT**

P06400	-	380	52,53
P06450	-	460	61,20
P06600	-	600	80,21

**CHISEL**

C06400	25	380	52,53
C06450	25	460	57,53
C06600	25	600	71,58

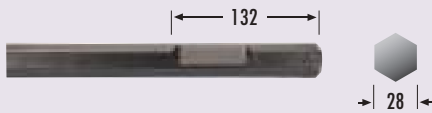
**WIDE CHISEL**

CA06400	50	400	113,26
CA0675400	75	400	120,81

**CHASING GOUGE**

R06300	33	300	95,22*
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\*Until end of stock

**BOSCH**  
**28**


P07400



C07400


**BOSCH 28 mm**

	WIDTH mm	LENGTH. mm	€
--	-------------	---------------	---

**POINT**

P07400	-	400	60,79
P07450	-	450	91,88

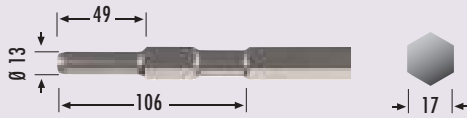
**CHISEL**

C07400	33	400	62,75
--------	----	-----	-------



**POINTS AND CHISELS FOR ELECTROPNEUMATIC MACHINES**

**MAKITA**  
Ø 13  
**17**



P10280



C10280



CA10280

**MAKITA** **17 - Ø 13 mm**

	WIDTH mm	LENGTH. mm	€
--	-------------	---------------	---

**POINT**

P10280	-	280	41,31
P10450	-	450	51,99

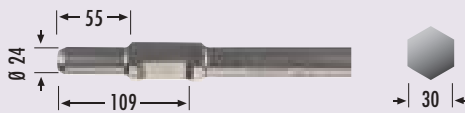
**CHISEL**

C10280	22	280	48,58
C10450	22	450	55,08

**WIDE CHISEL**

CA10280	50	280	111,68
---------	----	-----	--------

**MAKITA** Ø  
**24**  
**30**



P11410



C11410



CA1175

**MAKITA** **30 - Ø 24 mm**

	WIDTH mm	LENGTH. mm	€
--	-------------	---------------	---

**POINT**

P11410	-	410	63,49
P11550	-	700	129,36

**CHISEL**

C11410	30	410	65,11
--------	----	-----	-------

**WIDE CHISEL**

CA1175	75	410	88,53
CA11125	125	400	202,61

**HILTI**  
**22**



P21360



PR21360



C21360



CA21360

**HILTI** **22**

	WIDTH mm	LENGTH. mm	€
--	-------------	---------------	---

**POINT**

P21360	-	360	31,85
P21500	-	500	47,40

**POINT (low vibration)**

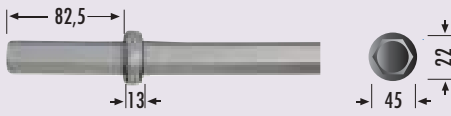
PR21360	-	360	61,01
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**CHISEL**

C21360	28	360	29,72
C21500	28	500	47,27

**WIDE CHISEL**

CA21360	80	360	73,52
CA21500	80	500	74,91

**POINTS AND CHISELS FOR PNEUMATIC MACHINE**
**HEX.**
**22**


P17450



C17450


**HEXAGONAL 22 x 82 mm**

	WIDTH mm	LENGH. mm	€
--	-------------	--------------	---

**POINT**

P17450	-	450	42,59
P171000	-	1000	111,10

**CHISEL**

C17450	30	450	42,59
--------	----	-----	-------

**HEX.**
**25**


P18500



C18500


**HEXAGONAL 25 x 108 mm**

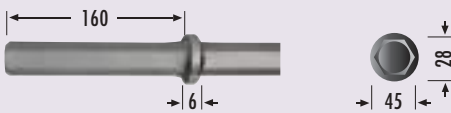
	WIDTH mm	LENGH. mm	€
--	-------------	--------------	---

**POINT**

P18500	-	500	59,26
--------	---	-----	-------

**CHISEL**

C18500	30	500	59,26
--------	----	-----	-------

**HEX.**
**28**


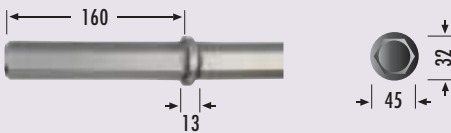
P19550


**HEXAGONAL 28 x 160 mm**

	WIDTH mm	LENGH. mm	€
--	-------------	--------------	---

**POINT**

P19550	-	550	83,33
--------	---	-----	-------

**HEX.**
**32**


P20550


**HEXAGONAL 32 x 160 mm**

	WIDTH mm	LENGH. mm	€
--	-------------	--------------	---

**POINT**

P20550	-	550	98,14
--------	---	-----	-------

**BLUE-MASTER**<sup>®</sup>  
by *celesa*










































CUTTING TECHNOLOGIES

# CUTTING SAW BLADES








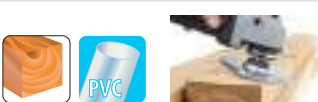

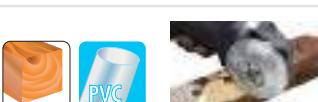

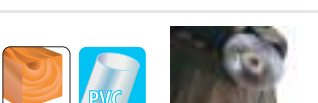








**GUIDELINE TO SELECT THE CIRCULAR SAW BLADES**

REFERENCE	PRODUCTION MATERIAL	MACHINE	APPLICATION	Page
FF93		CUT-OFF MACHINE	 	508
FF94		CUT-OFF MACHINE	 	509
FF68	 	CUT-OFF MACHINE		509
S5CM		CUT-OFF MACHINE		510
S8CM		CUT-OFF MACHINE	 	510
DD7	 	ANGLE GRINDER	   	516
DD36		ANGLE GRINDER	 	516
S7CM		CUT-OFF MACHINE	 	510
DD37		CUT-OFF MACHINE/ANGLE GRINDER	 	511
DD23		ANGLE GRINDER	 	511
S6CM		CUT-OFF MACHINE		511
S1CM		CUT-OFF MACHINE		512
S4CM		CUT-OFF MACHINE	   	512
S2CM		CUT-OFF MACHINE		513

**GUIDELINE TO SELECT THE CIRCULAR SAW BLADES**

REFERENCE	PRODUCTION MATERIAL	MACHINE	APPLICATION	Page
SINC	 CARBIDE TIPPED	CUT-OFF MACHINE		513
S3CM	 CARBIDE TIPPED	GROOVING MACHINE		513
S11CM	 PCD	MITER SAW		514
DMA115	 HCS	ANGLE GRINDER		515
DMB100	 HCS	ANGLE GRINDER		515
DMC125	 HCS	ANGLE GRINDER		515
 DD34	 CARBIDE TIPPED  EXTRA HARD QUALITY	ANGLE GRINDER		515

WOOD EXTRA



Cutting saw blades

Pink

S9CM	 CARBIDE TIPPED	CUT-OFF MACHINE		514
S10CM	 PCD	CUT-OFF MACHINE		514
SCMD	 Tungsten	ANGLE GRINDER		516
MDT	 Diamond	ANGLE GRINDER		517
FFLATIG RFLATIG	 HSS	MÁQUINA CORTA MANGUERA		517

MULTI-PURPOSE

**ACCESORIES FOR SAW BLADES, RINGS AND CUTTING DISCS**

CRS		ANGLE GRINDER	Ø EXT. 20-40	Ø INT. 16-32	e mm 1,4-2,2	517
ADQCA		ANGLE GRINDER		M14x2		517

**GUIDELINE TO SELECT THE CIRCULAR SAW BLADES**

REFERENCE	PRODUCTION MATERIAL	MACHINE	APPLICATION	Ø EXT.	e mm	GRAIN	Page
DD1	 <b>DIAMOND</b> <b>GENERAL DE OBRA</b> 	ANGLE GRINDER	    	115-125-180 230-300-350	2-2-2,4 2,8-3-3,2	9-9-14 18-22-24	518
DD2	 <b>TOP DIAMOND</b> <b>GENERAL DE OBRA</b>  	ANGLE GRINDER	    	115-125 180-230	1,8-2,2 2,2-2,4	9-9 14-18	518
DD3	 <b>TURBO</b> 	ANGLE GRINDER	    	115-125 180-230	2-2,2 2,8-2,8	CONTINUOUS	518
DD4	 <b>TOP TURBO</b>  	ANGLE GRINDER	    	115-125 180-230	1,8-2,5 2,5-2,8	CONTINUOUS	519
DD6	 <b>TOP TILE</b>  	ANGLE GRINDER	  	115-125 180-230	1,5-1,5 1,8-2,0	CONTINUOUS	519
DD8	 <b>XCLEAN TILE</b>  	ANGLE GRINDER	  	115 125	1,4 1,4	CONTINUOUS	519
 DD35	 <b>3X</b>   DOUBLE FACE	ANGLE GRINDER	   	115 125	1,5	CONTINUOUS	520
DD5	 <b>DIAMOND</b> <b>H<sub>2</sub>O</b> 	ANGLE GRINDER	   	115-125 180-230	2-2,2 2,4-2,8	CONTINUOUS	520
DD9	 <b>CANTERO</b> 	ANGLE GRINDER	    	115 125 230	2 2 2,8	9 9 18	520
DD12	 <b>MARMOLISTA</b> 	ANGLE GRINDER	  	115-125 300-350	2-2 3-3,2	9-9 22-24	521
DD13	 <b>ABRASIVES</b> 	ANGLE GRINDER	    	350 400	3,2 3,4	21 24	521
DD14	 <b>ASPHALT</b> 	ANGLE GRINDER	  	300 350 400	3 3,2 3,4	18 21 24	521
DD15	 <b>CONCRETE</b> 	ANGLE GRINDER	  	115-125-230 300-350	2,5-2,5-2,8 3,2-3,4	9-9-18 22-24	522
DR	 <b>TOP WALL</b> 	ANGLE GRINDER	   	115 125 150	6,4 6,4 6,4	8 9 12	522
SCEP	 <b>TOP</b> <b>MULTIFUNCTION</b> 	ANGLE GRINDER	     <b>CAST IRON</b>	115-125 230-300 355-400	2,2-2,2 3-3,2 3,5-3,5	8-9 18-22 26-30	522
DD10	 <b>UNIVERSAL</b> <b>STONE</b> 	ANGLE GRINDER	    	115 125 180	16 20 28	SURFACE WORKS	523
DD11	 <b>TOP</b> <b>STONE</b> 	ANGLE GRINDER	    	115 125 180	16 20 28	SURFACE WORKS	523
DD20	 <b>TOP STONE</b> <b>THREAD</b> 	ANGLE GRINDER	     M 14x	115 125	18 20	SURFACE WORKS	523

**GUIDELINE TO SELECT THE CIRCULAR SAW BLADES**

REFERENCE	QUALITY MATERIAL	MACHINE	FORM	APPLICATION	Ø EXT.	e mm	Page
AB05		ANGLE GRINDER	T41 CUTTING 	INOX	115 125	1	525
AB11		ANGLE GRINDER	T41 CUTTING 	INOX	115 125 230	1 1 1,9	525
AB11		ANGLE GRINDER	T42 CUTTING 	INOX	115 230	2,5	525
AB15		ANGLE GRINDER	T27 POLISHING 	INOX	115 125	Grain 40/120	527
AB20		ANGLE GRINDER	T27 POLISHING ROUGHING 	INOX	115 125	Grain 40/120	527
<b>NEW</b> DD21		ANGLE GRINDER		INOX  CAST IRON	115 125		527
AB17		ANGLE GRINDER	T42 CUTTING 		115 125 230	2,5	526
AB18		ANGLE GRINDER	T41 CUTTING 	INOX	115 125 230	1,6 1,6 2,0	526
<b>NEW</b> DD22	CARBIDE TIPPED	ANGLE GRINDER			115	22,23	526

INOX  
METAL  
STONE  
MULTI-FUNCTION

Cutting saw blades  
Pink

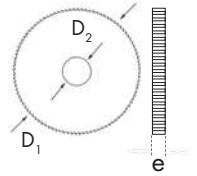
**POLISHING DISC- SANDING BODY AND ACCESORIES**

<b>NEW</b> DD24		FELT	ANGLE GRINDER	ANTI-OXIDE POLISHING Polishing and finish of surfaces.		100	Ø INT. 22,23	528
<b>NEW</b> DD25		VELCRO	ANGLE GRINDER	HOOK & LOOP BACKING PAD Polishing and sanding of surfaces		100 115 125	Ø INT. M14x2	528
<b>NEW</b> DD26			ANGLE GRINDER	POLISHING DISC FOR STONE Optimal surface polishing.		100	Grain 50/100/50/300 500/800/1000 1500/2000/3000	528
<b>NEW</b> DD28		VELCRO	ANGLE GRINDER	POLISHING DISC OF OXIDE ALUMINIUM Different finish quality according to the grain.		100 115 125	Grain 60/80/120/240	529
<b>NEW</b> DD33		VELCRO	ANGLE GRINDER	FELT POLISHING PAD Polishing, finish and final brightening in all surfaces.		100 115 125	e mm 6	529
<b>NEW</b> DD31		VELCRO	ANGLE GRINDER	POLISHING FOAM Fine finish. Specific for automotive and nautical applications.		100 115 125	e mm 25	529
<b>NEW</b> DD32		VELCRO	ANGLE GRINDER	WOOL DISC Polishing, finish and final brightening in all surfaces.		100 115 125	e mm 25	529

**SANDING BELT AND FLAPPING WHEELS**

AB50			SANDING BELT		L1 100	L2 690	Grain 40-120	530
FP			FLAPPING WHEELS		Ø EXT. 30 / 40 50 / 60 / 80		Grain 40-120	530



**SLITTING SAWS FOR METAL - FINE TEETH**


Ref. FF93

**HSS****DIN  
1837****CUTS  
< 5 mm**

FF93				
D1 mm	e mm	D2 mm	Z	€
20	0,20	5	80	19,58
20	0,25	5	64	19,58
20	0,30	5	64	17,59
20	0,40	5	64	17,59
20	0,50	5	48	16,92
20	0,60	5	48	16,92
20	0,80	5	48	16,92
20	1,00	5	40	16,92
20	1,20	5	40	19,58
20	1,60	5	40	21,53
20	2,00	5	32	22,37
20	2,50	5	32	26,93
20	3,00	5	32	29,12
20	4,00	5	24	38,52
20	5,00	5	24	45,16
20	6,00	5	24	51,44
25	0,20	8	80	20,09
25	0,25	8	80	20,09
25	0,30	8	80	18,71
25	0,40	8	64	18,71
25	0,50	8	64	17,83
25	0,60	8	64	17,83
25	0,80	8	48	17,83
25	1,00	8	48	17,83
25	1,20	8	48	20,50
25	1,60	8	40	21,89
25	2,00	8	40	23,42
25	2,50	8	40	25,37
25	3,00	8	32	34,44
25	4,00	8	32	40,87
25	5,00	8	32	47,83
25	6,00	8	32	53,59
32	0,20	8	100	21,47
32	0,25	8	100	21,47
32	0,30	8	80	19,58
32	0,40	8	80	19,58
32	0,50	8	80	18,70
32	0,60	8	64	18,70
32	0,80	8	64	18,70
32	1,00	8	64	18,70
32	1,20	8	48	21,92
32	1,60	8	48	22,04
32	2,00	8	48	24,85
32	2,50	8	40	26,90
32	3,00	8	40	29,99
32	4,00	8	40	43,67
32	5,00	8	32	53,18
32	6,00	8	32	56,27

FF93				
D1 mm	e mm	D2 mm	Z	€
40	0,20	10	128	23,22
40	0,25	10	100	23,22
40	0,30	10	100	22,36
40	0,40	10	100	22,36
40	0,50	10	80	20,89
40	0,60	10	80	20,89
40	0,80	10	80	20,89
40	1,00	10	64	20,89
40	1,20	10	64	22,46
40	1,60	10	64	23,84
40	2,00	10	48	25,82
40	2,50	10	48	28,84
40	3,00	10	48	34,07
40	4,00	10	40	39,52
40	5,00	10	40	59,89
40	6,00	10	40	65,77
50	0,20	13	128	31,62
50	0,25	13	128	27,71
50	0,30	13	128	25,19
50	0,40	13	100	25,19
50	0,50	13	100	23,84
50	0,60	13	100	23,84
50	0,80	13	80	23,84
50	1,00	13	80	23,84
50	1,20	13	80	25,19
50	1,60	13	64	27,46
50	2,00	13	64	29,65
50	2,50	13	64	31,75
50	3,00	13	48	36,35
50	4,00	13	48	42,07
50	5,00	13	48	55,73
50	6,00	13	40	74,48
63	0,25	16	160	33,76
63	0,30	16	128	28,68
63	0,40	16	128	28,68
63	0,50	16	128	27,58
63	0,60	16	100	27,58
63	0,80	16	100	27,58
63	1,00	16	100	27,58
63	1,20	16	80	28,50
63	1,60	16	80	31,81
63	2,00	16	80	34,27
63	2,50	16	64	36,16
63	3,00	16	64	40,10
63	4,00	16	64	50,48
63	5,00	16	48	63,88
63	6,00	16	48	71,40
80	0,30	22	160	37,76
80	0,40	22	160	37,76
80	0,50	22	128	32,81
80	0,60	22	128	32,81
80	0,80	22	128	32,81
80	1,00	22	100	32,81
80	1,20	22	100	33,82
80	1,60	22	100	35,84
80	2,00	22	80	39,46
80	2,50	22	80	47,22
80	3,00	22	80	51,49
80	4,00	22	64	63,13
80	5,00	22	64	77,53
80	6,00	22	64	87,01

FF93				
D1 mm	e mm	D2 mm	Z	€
100	0,50	22	160	41,50
100	0,60	22	160	38,08
100	0,80	22	128	38,08
100	1,00	22	128	38,08
100	1,20	22	128	39,59
100	1,60	22	100	47,60
100	2,00	22	100	52,49
100	2,50	22	100	58,98
100	3,00	22	80	63,88
100	4,00	22	80	87,01
100	5,00	22	80	97,26
100	6,00	22	64	113,72
125	0,60	22	160	61,98
125	0,80	22	160	57,98
125	1,00	22	160	57,98
125	1,20	22	128	57,98
125	1,60	22	128	60,65
125	2,00	22	128	64,14
125	2,50	22	100	67,92
125	3,00	22	100	75,53
125	4,00	22	100	112,81
125	5,00	22	80	131,92
125	6,00	22	80	147,22
160	1,00	32	160	88,86
160	1,20	32	160	81,56
160	1,60	32	160	84,24
160	2,00	32	128	87,01
160	2,50	32	128	96,88
160	3,00	32	128	110,03
160	4,00	32	100	155,32
160	5,00	32	100	184,43
160	6,00	32	100	210,34
200	1,00	32	200	117,55
200	1,20	32	200	117,55
200	1,60	32	160	116,63
200	2,00	32	160	123,50
200	2,50	32	160	140,80
200	3,00	32	128	157,61
200	4,00	32	128	223,37
200	5,00	32	128	265,42
200	6,00	32	100	304,90
250	1,60	32	200	167,93
250	2,00	32	200	171,14
250	2,50	32	160	195,65
250	3,00	32	160	215,82
250	4,00	32	160	312,91
250	5,00	32	128	372,91
250	6,00	32	128	441,85
315	2,50	40	200	306,48
315	3,00	40	200	344,05
315	4,00	40	160	444,43
315	5,00	40	160	544,03
315	6,00	40	160	643,66



**SLITTING SAWS FOR METAL - COARSE TEETH**

**CIRCULAR SAW BLADES FOR CUTTING-OFF MACHINES**



FF94					
D1 mm	e mm	D2 mm	Z	€	
50	0,5	13	48	27,07	
50	0,6	13	48	27,07	
50	0,8	13	40	27,07	
50	1,0	13	40	27,07	
50	1,2	13	40	28,31	
50	1,6	13	32	30,79	
50	2,0	13	32	32,06	
50	2,5	13	32	34,08	
50	3,0	13	24	36,83	
50	4,0	13	24	47,71	
50	5,0	13	24	59,45	
50	6,0	13	20	64,86	
63	0,5	16	64	29,94	
63	0,6	16	48	29,94	
63	0,8	16	48	29,94	
63	1,0	16	48	29,94	
63	1,2	16	40	30,37	
63	1,6	16	40	34,33	
63	2,0	16	40	37,00	
63	2,5	16	32	38,65	
63	3,0	16	32	42,83	
63	4,0	16	32	51,82	
63	5,0	16	24	62,54	
63	6,0	16	24	70,07	
80	0,6	22	64	33,34	
80	0,8	22	64	33,34	
80	1,0	22	48	33,34	
80	1,2	22	48	34,39	
80	1,6	22	48	36,95	
80	2,0	22	40	38,87	
80	2,5	22	40	46,31	
80	3,0	22	40	50,50	
80	4,0	22	32	61,76	
80	5,0	22	32	75,77	
80	6,0	22	32	84,72	
100	0,6	22	80	39,64	
100	0,8	22	64	37,42	
100	1,0	22	64	37,42	
100	1,2	22	64	38,86	
100	1,6	22	48	46,87	
100	2,0	22	48	51,55	
100	2,5	22	48	57,90	
100	3,0	22	40	62,40	
100	4,0	22	40	85,22	
100	5,0	22	40	95,34	
100	6,0	22	32	111,59	

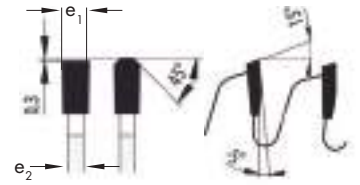
FF94					
D1 mm	e mm	D2 mm	Z	€	
125	0,8	22	80	56,90	
125	1,0	22	80	56,90	
125	1,2	22	64	56,90	
125	1,6	22	64	59,84	
125	2,0	22	64	62,34	
125	2,5	22	48	66,58	
125	3,0	22	48	73,49	
125	4,0	22	48	110,20	
125	5,0	22	40	129,36	
125	6,0	22	40	143,60	
160	1,0	32	80	80,42	
160	1,2	32	80	80,48	
160	1,6	32	80	83,15	
160	2,0	32	64	85,34	
160	2,5	32	64	94,97	
160	3,0	32	64	108,53	
160	4,0	32	48	151,90	
160	5,0	32	48	180,90	
160	6,0	32	48	204,47	
200	1,2	32	100	94,10	
200	1,6	32	80	113,88	
200	2,0	32	80	122,16	
200	2,5	32	80	137,72	
200	3,0	32	64	154,58	
200	4,0	32	64	217,06	
200	5,0	32	64	258,38	
200	6,0	32	48	300,35	
250	1,6	32	100	158,16	
250	2,0	32	100	168,97	
250	2,5	32	80	191,90	
250	3,0	32	80	212,72	
250	4,0	32	80	311,26	
250	5,0	32	64	363,96	
250	6,0	32	64	430,81	
315	2,5	40	100	302,04	
315	3,0	40	100	337,39	
315	4,0	40	80	435,84	
315	5,0	40	80	529,42	
315	6,0	40	80	644,81	

FF68					
D1 mm	e mm	D2 mm	D3 mm	Z	€
175	2,0	32	75	70/90/110/140/180	121,63
200	1,8/2"	32	90	80/100/128/160/200	125,15
225	1,6	32	90	90/120/140/180/220	138,31
225	2,0	32/40	90		131,51
250	1,2	32/40	100	90/100/128/160/200/250	189,64
250	1,6	32/40	100		151,02
250	2,0	32/40	100	90/110/120/140/180/220/280	149,03
250	2,5	32/40	100		166,73
275	1,6	32/40	100	90/110/120/140/180/220/280	199,43
275	2,0	32/40	100		196,16
275	2,5	32/40	100	90/120/160/180/220/300	204,14
300	2,0	32	100		241,08
300	2,5	32	100	80/100/120/160/200/240/320	246,55
300	3,0	32	100		298,08
315	2,0	32	100	80/100/120/160/200/240/320	262,99
315	2,5	32/40	100		264,11
315	3,0	32	100	90/110/120/140/160/180/220/280/350	316,76
350	2,5	32/40/50	120		337,51
350	3,0	32/40/50	120	90/110/120/140/160/200/220	379,15
370	3,0	50	120		477,77
400	3,0	40/50	120	100/120/160/200/240/310	556,68
400	3,5	40/50	120		607,09
425	3,0	40/50	120	110/160/220/260/320	626,84
425	3,5	40/50	120		685,99
450	3,0	40/50	120	110/130/160/200/260/310	815,30
450	3,5	40/50	130		885,43
450	4,0	40/50	130	100/120/140/180/220/340	931,45
500	3,5	40/50	130		1.139,66
500	4,0	40/50	130	100/140/160/210/270/330	1.205,42
525	4,0	50	140		1.369,81
550	4,0	50	140	120/140/170/220/280/340	1.435,55

Check other ranges of saw for miter under request.  
HssCo, HSS, TiN, etc...

**CARBIDE TIPPED SLITTING SAWS**
**Ref. S5CM**

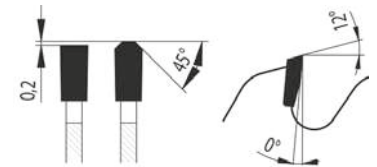
Medium or small thickness specific circular saw blade for **NON-FERROUS MATERIALS** as **ALUMINIUM PROFILES, PVC** and other plastics. **WINDOWS MANUFACTURING**. Alternated trapezoidal tooth geometry with negative angle.

**CARBIDE  
TIPPED**


	D1 mm	e1 mm	e2 mm	D2 mm	Z	€
S5CM160202848	160	2,8	2,2	20	48	91,54
S5CM190302856	190	2,8	2,2	30	56	104,59
S5CM200303260	200	3,2	2,5	30	60	128,26
S5CM250303280	250	3,2	2,5	30	80	177,95
S5CM260303280	260	3,2	2,5	30	80	181,41
S5CM300303296	300	3,2	2,5	30	96	209,20
S5CM330303296	330	3,2	2,5	30	96	232,20
S5CM3503036108	350	3,6	2,8	30	108	251,05
S5CM3803036110	380	3,6	2,8	30	110	269,98
S5CM4003036120	400	3,6	2,8	30	120	282,55

**Ref. S8CM**

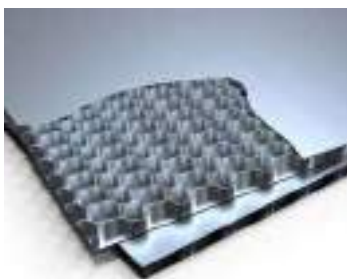
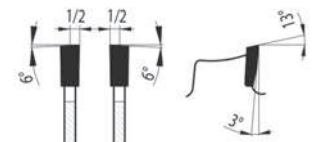
Circular saw blade for metal, solid workpieces, profiles, tubes. Not suitable for **STAINLESS STEEL**.

**CARBIDE  
TIPPED**


	D1 mm	e mm	D2 mm	Z	€
S8CM180201844	180	1,8	20,0	44	155,62
S8CM190201848	190	1,8	20,0	48	165,30
S8CM3052542260	305	2,2	25,4	60	233,71
S8CM3052542278	305	2,2	25,4	78	270,82
S8CM3552542266	355	2,2	25,4	66	262,24
S8CM3552542290	355	2,2	25,4	90	311,74

**Ref. S7CM**

Specific circular saw blade for **SANDWICH TYPE PANELS**, metal sheets and reduced thickness metals.

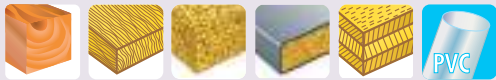


	D1 mm	e mm	D2 mm	Z	€
S7CM150202230	150	2,2	20,0	30	74,81
S7CM160202230	160	2,2	20,0	30	76,03
S7CM170202232	170	2,2	20,0	32	80,52
S7CM180202236	180	2,2	20,0	36	88,23
S7CM190202238	190	2,2	20,0	38	97,42
S7CM200202440	200	2,4	20,0	40	102,42
S7CM210302440	210	2,4	30,0	40	104,07
S7CM216302440	216	2,4	30,0	40	105,06
S7CM230302444	230	2,4	30,0	44	114,29
S7CM235302444	235	2,4	30,0	44	115,14
S7CM250302448	250	2,4	30,0	48	127,76
S7CM300302460	300	2,4	30,0	60	159,66
S7CM300302480	300	2,4	30,0	80	193,53
S7CM3052542460	305	2,4	25,4	60	160,93
S7CM3052542480	305	2,4	25,4	80	194,75
S7CM350302680	350	2,6	30,0	80	221,42
S7CM3552542680	355	2,6	25,4	80	222,98

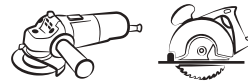
**CARBON STEEL CIRCULAR SAW BLADES**

**NEW**  
Ref. DD37

CV



Carbon steel wood cutting disc.



Wood intensive cut.  
Use with grinder.



DD37								
	"	Ø mm	Ø Int. mm	e mm		Z	R.P.M.	€/3U.
DD37-110Z40	4,3	110	22,23	1,2	3	40	12.500	20,51
DD37-110Z60	4,3	110	22,23	1,2	3	60	12.500	21,60
DD37-110Z80	4,3	110	22,23	1,2	3	80	12.500	22,14
DD37-110Z100	4,3	110	22,23	1,2	3	100	12.500	23,23

Cutting saw blades

Pink

**CARBIDE TIPPED SLITTING SAWS**

**NEW**  
Ref. DD23

CARBIDE TIPPED



Wood cutting and slitting disc.  
Carbide tipped, high resistance and durability.  
Use with grinder.



Special for cutting and grooving; shape creations, reliefs and wood figures.



CUTTING CARVING

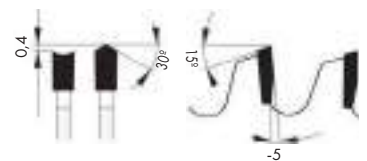


DD23								
	"	Ø mm	Ø Int. mm	e mm		Z	R.P.M.	€
DD23-115	4,5	115	22,23	3,8	1	3	15.500	16,55
DD23-125	5	125	22,23	3,8	1	6	13.300	18,92

Ref. S6CM

Specific circular saw blade for melamine, plastics, phenolic panels, MDF, HDF, HPL for cutting without scoring blades

CARBIDE TIPPED



CUTTING WITHOUT SCORING BLADES

**MELAMINE CIRCULAR SAW BLADE WITHOUT SCORING**

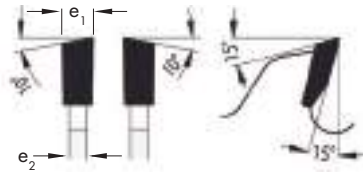
S6CM					
	D1 mm	e mm	D2 mm	Z	€
S6CM220303242	220	3,2	30	42	156,74
S6CM250303248	250	3,2	30	48	179,16
S6CM303303260	303	3,2	30	60	224,39
S6CM350303672	350	3,6	30	72	273,25



**CARBIDE TIPPED SLITTING SAWS FOR WOOD**

Ref. S1CM

Universal saw for natural wood and other materials based on wood (not valid for mdf, hdf...)

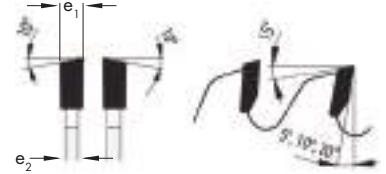
**CARBIDE TIPPED**


S1CM

	D1 mm	e1 mm	e2 mm	D2 mm	Z	€
S1CM160202516	160	2,5	1,6	20	16	53,16
S1CM160202524	160	2,5	1,6	20	24	61,36
S1CM160202536	160	2,5	1,6	20	36	69,01
S1CM160202548	160	2,5	1,6	20	48	79,86
S1CM180202528	180	2,5	1,6	20	28	71,91
S1CM180202556	180	2,5	1,6	20	56	90,41
S1CM200202524	200	2,5	1,6	20	24	66,61
S1CM200202532	200	2,5	1,6	20	32	77,21
S1CM250303240	250	3,2	2,2	30	40	106,31
S1CM250303248	250	3,2	2,2	30	48	114,45
S1CM250303260	250	3,2	2,2	30	60	116,85
S1CM250303264	250	3,2	2,2	30	64	119,77
S1CM250303272	250	3,2	2,2	30	72	130,36
S1CM250303280	250	3,2	2,2	30	80	140,91
S1CM300303248	300	3,2	2,2	30	48	132,66
S1CM300303264	300	3,2	2,2	30	64	149,49
S1CM300303272	300	3,2	2,2	30	72	155,11
S1CM300303296	300	3,2	2,2	30	96	174,79
S1CM315303248	315	3,2	2,2	30	48	149,49
S1CM350303654	350	3,6	2,5	30	54	169,18
S1CM350303672	350	3,6	2,5	30	72	183,43
S1CM350303684	350	3,6	2,5	30	84	191,88
S1CM3503036108	350	3,6	2,5	30	108	217,38
S1CM400303648	400	3,6	2,5	30	48	150,50
S1CM400303664	400	3,6	2,5	30	64	194,69
S1CM400303684	400	3,6	2,5	30	84	217,38
S1CM400303696	400	3,6	2,5	30	96	225,57
S1CM4003036120	400	3,6	2,5	30	120	239,83
S1CM45030456	450	4	2,8	30	56	190,60
S1CM45030472	450	4	2,8	30	72	255,56
S1CM50030464	500	4	2,8	30	64	225,37
S1CM50030484	500	4	2,8	30	84	300,45
S1CM600305290	600	5,2	3,5	30	90	727,29
S1CM70030460	700	4	3	30	60	506,69

Ref. S4CM

Universal blade for a hand-held power tool specific for wood-based materials.

**CARBIDE TIPPED**


S4CM

	D1 mm	e1 mm	e2 mm	D2 mm	Z	€
S4CM127202610	127	2,6	1,6	20	10	37,98
S4CM127202620	127	2,6	1,6	20	20	53,16
S4CM127202636	127	2,6	1,6	20	36	63,52
S4CM130202610	130	2,6	1,6	20	10	40,39
S4CM130202620	130	2,6	1,6	20	20	53,16
S4CM130202636	130	2,6	1,6	20	36	65,68
S4CM140202610	140	2,6	1,6	20	10	40,39
S4CM140202620	140	2,6	1,6	20	20	55,57
S4CM140202642	140	2,6	1,6	20	42	69,26
S4CM150202612	150	2,6	1,6	20	12	45,45
S4CM150202624	150	2,6	1,6	20	24	55,57
S4CM150202640	150	2,6	1,6	20	40	71,67
S4CM150202648	150	2,6	1,6	20	48	80,36
S4CM160202612	160	2,6	1,6	20	12	45,45
S4CM160202624	160	2,6	1,6	20	24	55,57
S4CM160202640	160	2,6	1,6	20	40	75,29
S4CM160202648	160	2,6	1,6	20	48	81,02
S4CM170302612	170	2,6	1,6	30	12	48,10
S4CM170302624	170	2,6	1,6	30	24	58,22
S4CM170302640	170	2,6	1,6	30	40	71,91
S4CM170302654	170	2,6	1,6	30	54	88,74
S4CM180302612	180	2,6	1,6	30	12	48,10
S4CM180302624	180	2,6	1,6	30	24	58,22
S4CM180302640	180	2,6	1,6	30	40	73,38
S4CM180302656	180	2,6	1,6	30	56	91,39
S4CM184302612	184	2,6	1,6	30	12	48,10
S4CM184302624	184	2,6	1,6	30	24	58,22
S4CM184302640	184	2,6	1,6	30	40	75,79
S4CM184302656	184	2,6	1,6	30	56	91,15
S4CM190302614	190	2,6	1,6	30	14	53,16
S4CM190302624	190	2,6	1,6	30	24	60,62
S4CM190302630	190	2,6	1,6	30	30	68,33
S4CM190302640	190	2,6	1,6	30	40	80,79
S4CM190302656	190	2,6	1,6	30	56	91,39
S4CM200302816	200	2,8	1,8	30	16	58,22
S4CM200302830	200	2,8	1,8	30	30	73,38
S4CM200302840	200	2,8	1,8	30	40	85,83
S4CM200302864	200	2,8	1,8	30	64	113,27
S4CM210302818	210	2,8	1,8	30	18	63,27
S4CM210302832	210	2,8	1,8	30	32	75,79
S4CM210302840	210	2,8	1,8	30	40	98,61
S4CM210302864	210	2,8	1,8	30	64	119,50
S4CM216302824	216	2,8	1,8	30	24	75,79
S4CM216302848	216	2,8	1,8	30	48	98,61
S4CM216302864	216	2,8	1,8	30	64	119,50
S4CM230302820	230	2,8	1,8	30	20	65,68
S4CM230302834	230	2,8	1,8	30	34	83,42
S4CM230302848	230	2,8	1,8	30	48	101,02
S4CM230302864	230	2,8	1,8	30	64	119,50

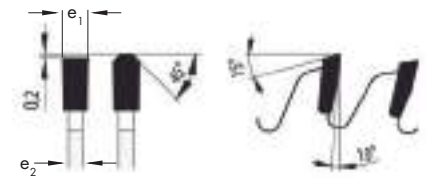
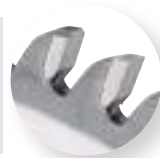


**CARBIDE TIPPED SLITTING SAWS**

**Ref. S2CM**

Specific saw for MDF, HDF, Phenolic Boards. Also valid for non ferrous metals (Aluminium, Copper, Bronze) with an acceptable performance. Always works with scoring blades.

**CARBIDE TIPPED**



**ALWAYS WORKS WITH SCORING BLADE**

**S2CM**

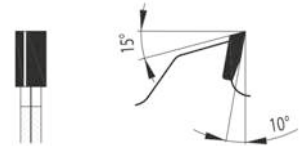
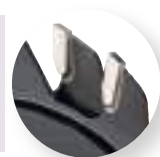
	D <sub>1</sub> mm	e <sub>1</sub> mm	e <sub>2</sub> mm	D <sub>2</sub> mm	Z	€
S2CM200303264	200	3,2	2,2	30	64	138,80
S2CM250303260	250	3,2	2,2	30	60	149,80
S2CM250303280	250	3,2	2,2	30	80	177,41
S2CM300303272	300	3,2	2,2	30	72	177,41
S2CM300303272HP*	300	3,2	2,2	30	72*	177,41
S2CM300303296	300	3,2	2,2	30	96	210,81
S2CM3503036108	350	3,6	2,5	30	108	238,67

\* High Performance

**Ref. SINC**

Special to solve the problem of the chipping on the interior melamine sheet when cutting laminated board. Specific for laminated board, chipboard panel and sandwich type panels.

**CARBIDE TIPPED**



**SCORING CIRCULAR SAW BLADE**

**SCORING CIRCULAR SAW BLADES**

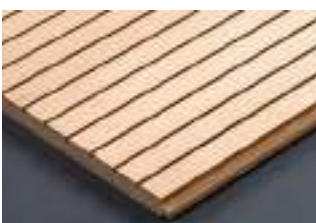
**SINC**

	D <sub>1</sub> mm	e <sub>1</sub> mm	e <sub>2</sub> mm	D <sub>2</sub> mm	Z	€
SINC80203620	80	3,6	2,8	20	20	100,11
SINC100203624	100	3,6	2,8	20	24	105,90
SINC120203624	120	3,6	2,8	20	24	107,89
SINC125203624	125	3,6	2,8	20	24	107,89
SINC140203628	140	3,6	2,8	20	28	123,34
SINC160203632	160	3,6	2,8	20	32	129,55

**Ref. S3CM**

Specific for laminated board, chipboard and sandwich type panels. Saw for grooving use exclusively.

**CARBIDE TIPPED**



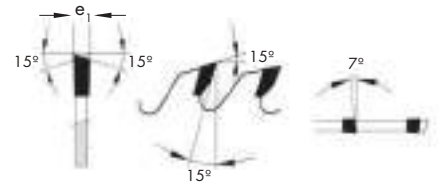
**S3CM**

	D <sub>1</sub> mm	e <sub>1</sub> mm	e <sub>2</sub> mm	D <sub>2</sub> mm	Z	€
S3CM150303512	150	3,5	2,5	30	12	66,54
S3CM15030412	150	4	2,5	30	12	68,89
S3CM15030512	150	5	3,5	30	12	71,47
S3CM15030612	150	6	3,5	30	12	71,47
S3CM18030416	180	4	2,5	30	16	78,68
S3CM18030516	180	5	3,5	30	16	81,25
S3CM18030616	180	6	3,5	30	16	88,08
S3CM20030432	200	4	2,5	30	32	121,22



**CARBIDE TIPPED SLITTING SAWS**
**Ref. S11CM**

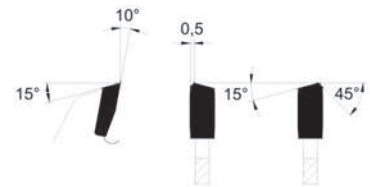
For wood and derivative products in miter saws.

**CARBIDE  
TIPPED**

**S11CM**

	D <sub>1</sub> mm	e <sub>1</sub> mm	D <sub>2</sub> mm	Z	€
S11CM260302660	260	2,6	30	60	141,10

**Ref. S9CM**

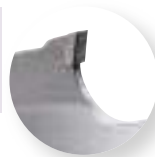
Circular saw blades for plastics: METHACRYLATE, THERMOPLASTIC in general, POLYURETHANE PANELS...

**CARBIDE  
TIPPED**

**S9CM**

	D <sub>1</sub> mm	e <sub>1</sub> mm	D <sub>2</sub> mm	Z	€
S9CM300303260	300	3,2	30	60	299,30
S9CM300303296	300	3,2	30	96	334,76
S9CM3503035108	350	3,5	30	108	405,99
S9CM350304472	350	4,4	30	72	496,94
S9CM350604472	350	4,4	60	72	496,94

**Ref. S10CM**

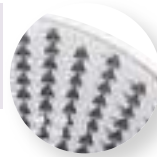
Circular saw blades for CARTON BOARD, PLASTER BOARD, FIBRE CEMENT and ACRYLIC PANELS IN GENERAL. Manufactured with polycrystalline diamond plates, multiplies the performance.

**PCD**

**S10CM**

	D <sub>1</sub> mm	e <sub>1</sub> mm	D <sub>2</sub> mm	Z	€
S10CM160202206	160	2,2/1,6	20	6	233,97
S10CM210202206	210	2,2/1,6	20	6	263,95
S10CM230202206	230	2,2/1,6	20	6	293,63

**WOOD ROUGHING DISC**

Ref. DMA115 **HCS**   Special **FLAT** disc for great roughing in wood and non-metallic materials.

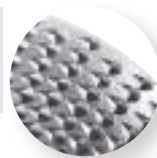


Provides a fast performance in cleaning, roughing and finishing of flat surfaces.

Suitable for angle polishing and moulding with easy manoeuvrability.

	D <sub>1</sub> mm	D <sub>2</sub> mm	R.P.M.	DMA €
DMA115	115	22,23	12.500	28,50

Ref. DMB100 **HCS**   Special **CHAMFER ROUND** disc for great roughing in wood and non-metallic materials.

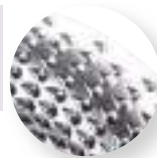


Provides a fast performance in cleaning, roughing and finishing of flat and curved surfaces: moth-eaten beams and all kinds of wood structures.

Suitable for angle polishing and moulding with easy manoeuvrability.

	D <sub>1</sub> mm	D <sub>2</sub> mm	R.P.M.	DMB €
DMB100	100	22,23	12.500	27,68

Ref. DMC125 **HCS**   Special **CORNER RADIUS** disc for great roughing in wood and non-metallic materials.



Provides a fast performance in cleaning, roughing and finishing of flat and curved surfaces. Able to work with front end and corner. Specially suitable for all types of works in wood structures, moth-eaten beams. etc

Remarkable versatility in surfaces with all kind of curvatures. Suitable for angle polishing and moulding with easy manoeuvrability.

	D <sub>1</sub> mm	D <sub>2</sub> mm	R.P.M.	DMC €
DMC125	125	22,23	12.500	30,67

**NEW**  
Ref. DD34

**CARBIDE TIPPED**




Wood roughing and shape. Cleaning in concrete, glue, cement and fiberglass surfaces. Cleaning in general. Angled design, improves the ergonomoy.



Use with grinder.

2 qualities according to the type of work:

 **Grain M** - Medium roughing.

 **Grain G** - Coarse roughing.



**WOOD**

**Grain M**

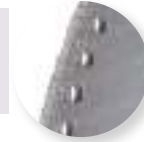


**Grain G**

	"	Ø mm	Ø Int. mm	e mm	R.P.M.	Grain	DD34 €
DD34-115G	4,5	115	22,23	3	13.300	G	40,32
DD34-115M	4,5	115	22,23	3	13.300	M	40,32
DD34-125G	5	125	22,23	3	12.250	G	43,50
DD34-125M	5	125	22,23	3	12.250	M	43,50

## METAL CUTTING DIAMOND DISC

Ref. DD7


**TOP METAL**

Able to cut all types of profiles, sheets, tubes, beams, made of steel, stainless steel, cast iron... The vacuum brazed diamond disc provides the highest durability and productivity in metal cutting applications. Special anti-breaking body, less vibrations and sparks, higher lifetime compared with the abrasive disc. The cutting depth is the same during the lifetime of the tool. Vacuum brazed diamond, does not expire.

	Ø mm	Ø Int. mm	e mm	R.P.M	DD7 €
DD7-105	105	20,00	1,20	15.500	32,04
DD7-115	115	22,23	1,20	13.300	34,44
DD7-125	125	22,23	1,20	12.250	40,11
DD7-180	180	22,23	1,80	8.500	85,48
DD7-230	230	22,23	2,00	6.500	100,02
DD7-300	300	25,40	2,20	5.500	212,78
DD7-355	355	25,40	2,50	5.500	260,15
DD7-400	400	25,40	2,50	5.000	307,48

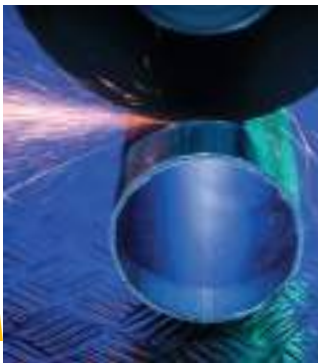
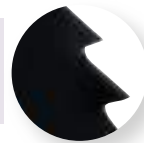
## HSS CUTTING DISC FOR METAL

**NEW**

Ref. DD36

HSS

Z60



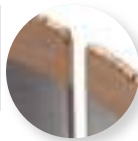
HSS Metal sheet and pipe cutting disc.  
Use with grinder.

**METAL**

	"	Ø mm	Ø Int. mm	e mm	Z	RPM	DD36 €
DD36-115Z60	4,5	115	22,23	1	60	10.000	14,34

## CARBIDE GRIT MULTI-PURPOSE DISC

Ref. SCMD



Multi-purpose disc for angle grinder.  
Tungsten carbide grit edge.

High performance in any material.

Fast and accurate cutting.

Highly recommended for working in wood, wood with nails, plastics, cardboard plaster, metal sheets less than 1 mm thick and copper.



	Ø mm	Ø Int. mm	e mm	R.P.M	SCMD €
SCMD115X1,60	115	22,2	1,6	13.300	17,81
SCMD125X1,60	125	22,2	1,6	12.250	20,03
SCMD230X1,60	230	22,2	1,6	10.500	44,80
SCMD300X2	300	25,4/20	2,0	5.100	72,62
SCMD350X3	350	25,4/20	3,0	4.400	90,43



**ELECTROPLATED DIAMOND CIRCULAR BLADE FOR ANGLE GRINDER**



CARBON FIBER AND COMPOSITE MATERIALS.



Multi-Purpose disc for angle grinder.

Diamond grit edge.

High performance in all type of non ferrous materials. Fast and accurate cutting.

Ideal to work in hard tile (always with water), PVC, reinforced plastics, fiberglass, carbon fiber...



	Ø mm	Ø Int. mm	e mm	R.P.M	MDT €
MDT50X0,80	50	22,23	1,8	20.000	63,25
MDT10423	115	22,23	1,8	15.000	66,10
MDT115X2X22	115	22,23	2,0	15.000	69,17
MDT115X3X22	115	22,23	3,0	15.000	73,49
MDT115X4X22	115	22,23	4,0	15.000	75,48
MDT115X5X22	115	22,23	5,0	15.000	77,76

**CIRCULAR BLADES FOR HYDRAULIC HOSES CUTTING**

Ref. FFLATIG  
Ref. RFLATIG

**HSS**



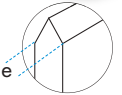
Special cutting disc for reinforced hydraulic hoses of low, high and very high pressure. Continuous bevelled cutting edge. High performance in rubber and plastic materials reinforced with metal wires or meshes, specially designed to withstand high pressures or abrasion.



To cut non-reinforced or light reinforced hoses.



To cut heavy reinforced hoses.



	Ø mm	e mm	Ø Int. mm	FFLATIG €
FFLATIG-200x2x32	200	2,0	32	323,34
FFLATIG-250x3x32	250	3,0	32	433,18
FFLATIG-300x3x32	300	3,0	32	596,53

	Ø mm	e mm	Ø Int. mm	Z	RFLATIG €
RFLATIG-200X2x32	200	2,0	32	220	381,54
RFLATIG-250X3x32	250	3,0	32	220	511,15
RFLATIG-300X3x32	300	3,0	32	220	703,90

**ACCESSORIES FOR CIRCULAR SAW BLADES AND CIRCULAR BLADE**

**REDUCING RING FOR CIRCULAR SAW**



e: thickness of the ring  
always choose a ring thinner than the body of the saw.

	Ø mm	Ø Int. mm	e mm	CRS €
CRS16/12,7X1,6	16,0	12,7	1,6	8,03
CRS20/16X1,4	20,0	16,0	1,4	8,03
CRS25,4/20X2,0	25,4	20,0	2,0	8,03
CRS30/15X1,8	30,0	15,0	1,8	8,03
CRS30/16X1,8	30,0	16,0	1,8	8,03
CRS30/18X1,8	30,0	18,0	1,8	8,03
CRS30/20X1,8	30,0	20,0	1,8	8,03
CRS30/25X1,8	30,0	25,0	1,8	8,03
CRS32/20X1,8	32,0	20,0	1,8	8,03
CRS32/20X2,2	32,0	20,0	2,2	8,03
CRS32/25X1,8	32,0	25,0	1,8	8,03
CRS32/25X2,2	32,0	25,0	2,2	8,03
CRS32/25,4X1,8	32,0	25,4	1,8	8,03
CRS32/25,4X2	32,0	25,4	2,0	8,03
CRS32/30X1,8	32,0	30,0	1,8	8,03
CRS32/30X2,2	32,0	30,0	2,2	8,03
CRS40/25X2,2	40,0	25,0	2,2	8,03
CRS40/25,4X2,2	40,0	25,4	2,2	8,03
CRS40/32X2,2	40,0	32,0	2,2	8,03

**REDUCING RING FOR ANGLE GRINDER**



Quick locking nut of M14x2.

Suitable for any angle grinder with M14x2 thread.

The disc must be centered on the ring of the portable power tool, not on the nut.

	Ø Ext.	THREAD	ADQCA €
ADQCA	46,30	M14X2	35,36

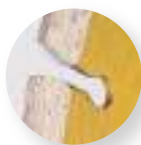
## DIAMOND CIRCULAR BLADES FOR CONSTRUCTION

### GENERAL PURPOSE DIAMOND SAW BLADE

Ref. DD1



GENERAL PURPOSE: Special for cutting of concrete, brick, marble, tile, ceramic & stone. Specific for dry work. Nevertheless, water cooling exponentially increases the efficiency of the disc.



### DIAMOND GENERAL DE OBRA

DD1

	"	Ø mm	Ø Int. mm	RPM	*H mm	*NºS	e mm	€
DD1-115	4,5	115	22,23	13.200	10	9	2,0	9,55
DD1-125	5	125	22,23	12.200	10	9	2,0	11,63
DD1-180	7	180	22,23	8.400	10	14	2,4	27,07
DD1-230	9	230	22,23	6.500	10	18	2,8	40,10
Reducing ring included. 25,4/20	12	300	25,4/20	5.100	10	22	3,0	108,16
DD1-350	14	350	25,4/20	4.400	10	24	3,2	125,05

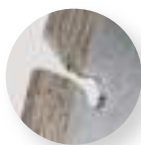
\* H: Teeth Height · \* NºS: Number of teeth

### GENERAL PURPOSE DIAMOND SAW BLADE

Ref. DD2



SPECIAL FOR CUTTING OF CONCRETE, BRICK, MARBLE, TILE, CERAMIC & STONE. SPECIFIC FOR DRY WORK. NEVERTHELESS, WATER COOLING EXPONENTIALLY INCREASES THE EFFICIENCY OF THE DISC. HIGH PERFORMANCE.



### TOP DIAMOND GENERAL DE OBRA

DD2

	"	Ø mm	Ø Int. mm	RPM	*H mm	*NºS	e mm	€
DD2-115	4,5	115	22,23	13.200	12	9	1,8	23,55
DD2-125	5	125	22,23	12.200	12	9	2,2	28,77
DD2-180	7	180	22,23	8.400	12	14	2,2	68,36
DD2-230	9	230	22,23	6.500	12	18	2,4	104,37

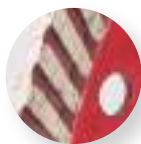
\* H: Teeth Height · \* NºS: Number of teeth

### HIGH PERFORMANCE DIAMOND SAW BLADE

Ref. DD3



SPECIAL FOR EXTRA FINE CUTTING OF CONCRETE, BRICK, MARBLE, TILE, CERAMIC & STONE. SPECIFIC FOR DRY WORK. NEVERTHELESS, WATER COOLING EXPONENTIALLY INCREASES THE EFFICIENCY OF THE DISC.



### TURBO

DD3

	"	Ø mm	Ø Int. mm	RPM	*H mm	e mm	€
DD3-115	4,5	115	22,23	13.200	10	2,0	12,29
DD3-125	5	125	22,23	12.200	10	2,2	14,73
DD3-180	7	180	22,23	8.400	10	2,8	31,31
DD3-230	9	230	22,23	6.500	10	2,8	57,92

\* H: Teeth Height



**DIAMOND CIRCULAR BLADES FOR CONSTRUCTION**

**HIGH PERFORMANCE DIAMOND SAW BLADE**

Ref. DD4

Special for extrafine cutting of concrete, brick, marble, tile, ceramic & stone. Specific for dry work. Nevertheless, water cooling exponentially increases the efficiency of the disc. High performance.



**TOP TURBO**

DD4							
	"	Ø mm	Ø Int. mm	RPM	*H mm	e mm	€
DD4-115	4,5	115	22,23	13.200	12	1,8	21,01
DD4-125	5	125	22,23	12.200	12	2,5	24,10
DD4-180	7	180	22,23	8.400	12	2,5	74,78
DD4-230	9	230	22,23	6.500	12	2,8	104,37

\* H: Teeth Height

**CONTINUOUS RIM DIAMOND SAW BLADE**

Ref. DD6

Special for cutting of stoneware, hard ceramics. Specific for dry work. Nevertheless, water cooling exponentially increases the efficiency of the disc. High performance.



**TOP TILE**

DD6							
	Ø mm	"	Ø Int. mm	RPM	*H mm	e mm	€
DD6-115	115	4,5	22,23	13.200	10	1,5	41,37
DD6-125	125	5	22,23	12.200	10	1,5	44,65
DD6-180	180	7	22,23	8.400	10	1,8	85,60
DD6-230	230	9	22,23	6.500	10	2,0	120,91

\* H: Teeth Height

**CONTINUOUS RIM DIAMOND SAW BLADE PRECISE CUT XTRACLEAN TILE**

Ref. DD8

High performance in stoneware and hard ceramics. Fine and precise cutting. Specific for dry work. Nevertheless, water cooling exponentially increases the efficiency of the disc.



**XTRACLEAN TILE**

DD8							
	Ø mm	"	Ø Int. mm	RPM	*H mm	e mm	€
DD8-115	115	4,5	22,23	13.200	10	1,4	47,58
DD8-125	125	5	22,23	12.200	10	1,4	51,34

\* H: Teeth Height

## DIAMOND CUTTING CUP WHEEL FOR CONSTRUCTION

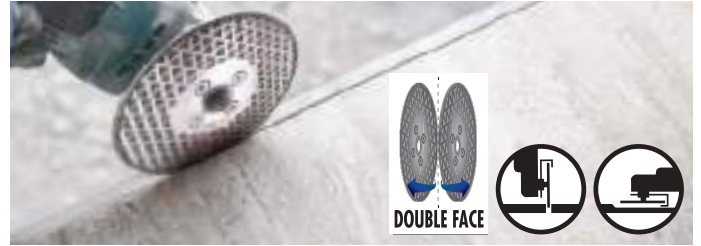
### FINE ROUGHING AND CUTTING DIAMOND DISC

**NEW**
**HIGH PERFORMANCE**

Ref. DD35



Continuous electrodeposited diamond disc. Special for all type of ceramic tile, natural stone, concrete, concrete glue and synthetic materials. Fine cut and roughing. 3 working areas, cut and roughing blade two sides reversible. Obtain the maximum performance working in any position, perpendicular cut, side chamfers...., Use with grinder. M14x2 adaptor included.



DD35

	"	Ø mm	Ø Int. mm	RPM	e mm	€
DD35-115	4,5	115	22,2/M14x2	13.200	1,5	71,31
DD35-125	5	125	22,2/M14x2	12.200	1,5	82,20

### CONTINUOUS DIAMOND SAW BLADE CUTTING WITH WATER

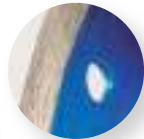
Ref. DD5



Special for cutting tile, ceramic, marble, tile & stone.  
Water cooling.



EN13236



### DIAMOND H<sub>2</sub>O

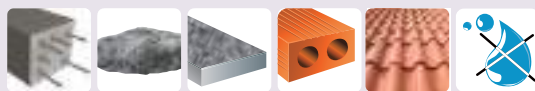
DD5

	"	Ø mm	Ø Int. mm	RPM	*H mm	e mm	€
DD5-115	4,5	115	22,23	13.200	10	2,0	7,61
DD5-125	5	125	22,23	12.200	10	2,2	8,90
DD5-180	7	180	22,23	8.400	10	2,4	22,18
DD5-230	9	230	22,23	6.500	10	2,8	31,31

\* H: Teeth Height

### SEGMENTED DIAMOND SAW BLADE SPECIFIC FOR STONE

Ref. DD9



Special for cutting Reinforced concrete, Stone, Granite, Brick, Clinker bricks & Tile.  
Specific for dry work.  
Nevertheless, water cooling exponentially increases the efficiency of the disc.



EN13236



### CANTERO

DD9

	"	Ø mm	Ø Int. mm	RPM	*H mm	*NºS	e mm	€
DD9-115	4,5	115	22,23	13.200	10	9	2,0	36,71
DD9-125	5	125	22,23	12.200	10	9	2,0	44,65
DD9-230	9	230	22,23	6.500	10	18	2,8	108,16

\* H: Teeth Height · \* NºS: Number of teeth





## DIAMOND CIRCULAR BLADES FOR CONSTRUCTION

### SEGMENTED DIAMOND SAW BLADE FOR CONCRETE

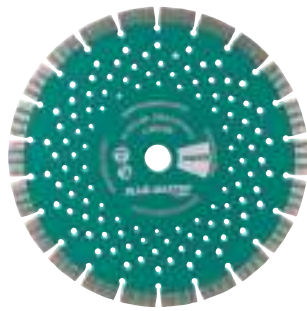
Ref. DD15



Specific for cutting all types of concrete: porous, reinforced, prestressed. Excellent cutting speed due to grooved segments with high dust evacuation capacity and less lateral friction. Specific for dry work. Nevertheless, water cooling exponentially increases the efficiency of the disc.



EN13236



Reducing ring  
included. 25,4/20

### CONCRETE

								DD15
	"	Ø mm	Ø Int. mm	RPM	*H mm	*N°S	e mm	€
DD15-115	4,5	115	22,23	13.200	15	9	2,5	25,62
DD15-125	5	125	22,23	12.200	15	9	2,5	29,28
DD15-230	9	230	22,23	6.600	15	18	2,8	41,24
DD15-300	12	300	25,4/20	5.100	15	22	3,2	142,72
DD15-350	14	350	25,4/20	4.400	15	24	3,4	179,31

\* H: Teeth Height · \* N°S: Number of teeth

### DIAMOND DISC FOR GROOVING MACHINE

Ref. DR



Ideal to work in Clinker bricks, refractory. Vault and concrete blocks. Diamond Segmented disc 6.4 mm thickness. Special disc to make grooves for the electricity cables. Specific for Electricians, intensive wall cutting. Dry working. Nevertheless, water cooling increases the efficiency of the disc.



### TOP WALL



								DR
	"	Ø mm	Ø Int. mm	RPM	*H mm	*N°S	e mm	€
DR-115	4,5	115	22,2	13.300	10	8	6,4	117,93
DR-125	5	125	22,2	12.200	10	9	6,4	129,47
DR-150	6	150	22,2	10.000	10	12	6,4	154,08

\* H: Teeth Height · \* N°S: Number of teeth

### MULTI FUNCTION DIAMOND VACUUM WELDED DISC


**CAST  
IRON**

Ideal for work in all kind of materials. Clinker bricks, refractory, roof tile, vault and concrete blocks, PVC Tubes, Wood, Steel, Foundry. Multipurpose cutting disc for grinder. Made in Vacuum Welded Diamond. Excellent performance for cutting of all kind of materials.



Ref. SCEP


 ø 115  
 ø 125  
 ø 230

 ø 300  
 ø 355  
 ø 400

Ø 115 - 125 - 230 mm - Dry working. Nevertheless, water cooling increases the efficiency of the disc.  
 Ø 300 - 355 - 400 mm - Always water cooling.

### TOP MULTIFUNCTION



								SCEP
	"	Ø mm	Ø Int. mm	RPM	*H mm	*N°S	e mm	€
SCEP-115	4,5	115	22,23	13.300	4	8	2,2	32,18
SCEP-125	5	125	22,23	12.200	4	9	2,2	37,48
SCEP-230	9	230	22,23	6.600	4	18	3,0	93,78
SCEP-300	12	300	25,40	5.100	5	22	3,2	198,87
SCEP-355	14	355	25,40	4.300	5	26	3,5	243,12
SCEP-400	16	400	25,40	3.800	5	30	3,5	287,37

\* H: Teeth Height · \* N°S: Number of teeth

**DIAMOND CIRCULAR BLADES FOR CONSTRUCTION**

**GRINDING CUP**



Ref. DD10

Special for rough polishing natural stone, universal concrete, granite & soils.  
Specific for dry work. Nevertheless, water cooling exponentially increases the efficiency of the disc.



EN13236



**UNIVERSAL STONE**

DD10

	"	Ø mm	Ø Int. mm	RPM	*N°S	€
DD10-115	4,5	115	22,23	13.200	16	47,64
DD10-125	5	125	22,23	12.250	20	52,17
DD10-180	7	180	22,23	8.400	28	96,41

\* N°S: Number of teeth



Ref. DD11

Special for fine polishing natural stone, universal concrete, granite & soils.  
Specific for dry work. Nevertheless, water cooling exponentially increases the efficiency of the disc.  
High performance.



EN13236



**TOP STONE**

DD11

	"	Ø mm	Ø Int. mm	RPM	*N°S	€
DD11-115	4,5	115	22,23	13.200	16	66,92
DD11-125	5	125	22,23	12.250	20	72,59
DD11-180	7	180	22,23	8.400	28	125,90

\* N°S: Number of teeth



Ref. DD20

M14x2

M14X2 to connect a grinding machine.  
Special for fine polishing natural stone, universal concrete, granite & soils.  
Specific for dry work. Nevertheless, water cooling exponentially increases the efficiency of the disc. High performance.



EN13236



**TOP STONE THREAD**

DD20

	"	Ø mm	Ø Int. mm	RPM	*N°S	€
DD20-115	4,5	115	M14x2	5.100	18	66,92
DD20-125	5	125	M14x2	4.400	20	72,59

\* N°S: Number of teeth








## IDENTIFICATION OF THE TYPES OF CIRCULAR SAW BLADES

### TYPE OF ABRASIVE

- A:** Aluminium Oxide
- AX:** High Resistance Aluminium Oxide
- AC:** Aluminium Oxide and Silicium Carbide
- C:** Silicium Carbide
- Z:** Zirconium

### SHAPE OF THE CIRCULAR SAW BLADE

-  **T41**  
Flat top for cutting
-  **T42**  
Centre low-profiled for cutting
-  **T27**  
Centre low-profiled flap for polishing

**AX 60 S BF T41**

### GRAIN

- 30-36:** Medium
- 40-60:** Fine
- 80-120:** Extra fine

### HARDNESS

- Q:** Soft
- R:** Medium
- S:** Hard

### TYPE OF CIRCULAR SAW BLADE (BINDER)

- BF:** Fibre-reinforced resin bond



90°

Circular Saw Blades for  
**Cutting**



15°

Circular Saw Blades for  
**Polishing and Roughing**



**Iron, Sulphur and Chloride free**

### **A: Aluminium Oxide.**

The aluminium oxide is resistant and durable, for cutting and roughing of high-resistance materials as carbon steel, stainless steel and all type of metals.

### **AX: High-Resistance Aluminium Oxide:**

The high-resistance aluminium oxide is a top class abrasive, its grain microstructure allows its breaking when cutting and roughing and generating multiple cutting edges. It is typically used in high production and hardness. Recommended for stainless steel, carbon steel and forged steel.

### **AC: Aluminium Oxide + Silicon Carbide:**

### **C: Silicon Carbide:**

The Silicon Carbide is the hardest and sharpest mineral. It is ideal for cutting, sanding and polishing all kind of materials, non-ferrous metals: aluminium, brass, bronze, rubber, glass, plastics, fibrous wood, enamel...The silicon carbide is superior to any other abrasive concerning its penetration and cutting capacity, faster and with less effort.

### **Z: Zirconium:**

The zirconium self-sharpening quality allows a long working life in high performance works and materials disposal. It is ideal for high performance roughing and polishing in stainless steel, steel carbon and all kind of materials.

**ABRASIVE CIRCULAR SAW BLADES**

**ABRASIVE CIRCULAR SAW BLADES FOR METAL AND STAINLESS STEEL**

Ref. AB05

**T41** 90°

**Fe S Cl**

**T41:** Flat abrasive circular saw blade.  
Norm EN12413.  
Iron, chloride and sulphur free.  
Specific for general use in metal cutting.



**INOX METAL**

	"	Ø mm	Ø Int. mm	RPM	e mm		€/ 10U.
AB05-115X1-10	4,5	115	22,23	13.300	1	10	11,26
AB05-125X1-10	5	125	22,23	12.250	1	10	11,79

Ref. AB11

**T41** 90°

**Fe S Cl**

**T41:** Flat abrasive circular saw blade.  
OSA Certificate according to norm EN12413.  
Iron, chloride and sulphur free.  
High performance in steel, stainless steel and metal cutting.



**AX:** High-Resistance Aluminium Oxide.  
High performance abrasive circular saw blade.  
Long working life.  
Maximum ergonomoy due to the reduction the vibrations.

**INOX METAL**

	"	Ø mm	Ø Int. mm	RPM	e mm	Grain		€/ 10U.
AB11-115X1	4,5	115	22,23	13.300	1,0	60	25	1,39
AB11-125X1	5	125	22,23	12.250	1,0	60	25	1,55
AB11-230X1,9	9	230	22,23	6.650	1,9	46	25	3,59

Ref. AB11

**T42** 90°

**Fe S Cl**

**T42:** Centre low-profiled for cutting circular saw blade.  
OSA Certificate according to norm EN12413.  
Iron, chloride and sulphur free.  
High performance in steel, stainless steel and metal cutting.



**AX:** High-Resistance Aluminium Oxide.  
High performance abrasive circular saw blade.  
Long working life.  
Maximum ergonomoy due to the reduction the vibrations.

**INOX METAL**

	"	Ø mm	Ø Int. mm	RPM	e mm	Grain		€/ 1U.
AB11-115X2,5	4,5	115	22,23	13.300	2,5	36	25	1,54
AB11-230X2,5	9	230	22,23	6.650	2,5	30	25	4,06

**ABRASIVE CIRCULAR SAW BLADES**

**ABRASIVE CIRCULAR SAW BLADE FOR CONSTRUCTION MATERIALS**

Ref. AB17

**T42**

**T42:** Centre low profile abrasive circular saw blade. OSA Certificate according to Norm EN12413. Iron, chloride and sulphur free. High performance in construction materials cutting.



**C:** Silicon Carbide. High performance abrasive circular saw blade. Long working life. Maximum ergonomomy due to the reduction the vibrations.

**STONE**

								AB17
	"	Ø mm	Ø Int. mm	RPM	e mm	Grain		€/ 1U.
AB 17-115X2,5	4,5	115	22,23	13.300	2,5	36	25	1,61
AB 17-125X2,5	5	125	22,23	12.250	2,5	36	25	1,71
AB 17-230X2,5	9	230	22,23	6.650	2,5	30	25	4,62

**ABRASIVE CIRCULAR SAW BLADE FOR ALL TYPE OF MATERIALS**

Ref. AB18

**INOX**

**T41**

**T41:** Flat abrasive circular saw blade. OSA Certificate according to Norm EN12413. Iron, chloride and sulphur free. High performance in all type of materials.



**AC:** Aluminium Oxide + Silicon Carbide. High performance abrasive circular saw blade. Long working life. Maximum ergonomomy due to the reduction the vibrations.

**MULTIFUNCTION**

								AB18
	"	Ø mm	Ø Int. mm	RPM	e mm	Grain		€/ 1U.
AB 18-115X1,6	4,5	115	22,23	13.300	1,6	46	25	1,54
AB 18-125X1,6	5	125	22,23	12.250	1,6	46	25	1,70
AB 18-230X2	9	230	22,23	6.650	2,0	36	25	4,82

**TUNGSTEN CARBIDE GRINDING DISC**

**NEW**

Ref. DD22

**CARBIDE TIPPED**

General cleaning of surfaces. Wood roughing and shaped Concrete, glue, cement, fiberglass. Surface cleaning in general.



Carbide abrasive grain. Extra-strong quality.



**MULTIFUNCTION**

					DD22
	"	Ø mm	Ø Int. mm	RPM	€
DD22-115	4,5	115	22,23	13.300	15,35



**ABRASIVE FLAP CIRCULAR SAW BLADES**

**ABRASIVE FLAP CIRCULAR SAW BLADE FOR STAINLESS STEEL AND STEEL POLISHING**


Ref. AB15         **T27: Centre low-profiled for polishing abrasive flap circular saw blade. Norm EN13743. Iron, chloride and sulphur free. High performance in polishing stainless steel, steel and metal.**




**Z: Zirconium.** Long working life. Optimum material evacuation rate. Reinforced fibre glass tissues for maximum productivity and security.

**XTRA LONG life**



**INOX**  **METAL** 

AB15							
	"	Ø mm	Ø Int. mm	RPM	Grain		€/ 1U.
AB15-115XC40	4,5	115	22,23	13.300	40	10	3,51
AB15-115XC60	4,5	115	22,23	13.300	60	10	3,51
AB15-115XC80	4,5	115	22,23	13.300	80	10	3,51
AB15-115XC120	4,5	115	22,23	13.300	120	10	3,51
AB15-125XC40	5	125	22,23	12.250	40	10	3,71
AB15-125XC60	5	125	22,23	12.250	60	10	3,71
AB15-125XC80	5	125	22,23	12.250	80	10	3,71
AB15-125XC120	5	125	22,23	12.250	120	10	3,71


Ref. AB20         **T27: Centre low-profiled for polishing abrasive flap circular saw blade. Norm EN13743. Iron, chloride and sulphur free. High performance in roughing and polishing stainless steel, steel and metal.**

**A: Aluminium Oxide.** Light, flexible and noiseless thanks to its multi-layer body.






**PROFESSIONAL**



**INOX**  **METAL** 

AB20							
	"	Ø mm	Ø Int. mm	RPM	Grain		€/ 1U.
AB20-115XC40	4,5	115	22,23	13.300	40	10	1,99
AB20-115XC60	4,5	115	22,23	13.300	60	10	1,99
AB20-115XC80	4,5	115	22,23	13.300	80	10	1,99
AB20-115XC120	4,5	115	22,23	13.300	120	10	1,99
AB20-125XC40	5	125	22,23	12.250	40	10	2,24
AB20-125XC60	5	125	22,23	12.250	60	10	2,24
AB20-125XC80	5	125	22,23	12.250	80	10	2,24
AB20-125XC120	5	125	22,23	12.250	120	10	2,24

**POLYCARBONATE ABRASIVE DISC**

**NEW** Ref. DD21      **Elimination of oxide and corrosion remains, dirtiness, strongly adhered paints, old glues and joints remains. Cleaning of welding cords, elimination of light inner stretches, oxidations and discolorations especially in high-grade stainless steel.**



Cleaning abrasive disc made from a special combination of synthetic fibres and abrasive grains. Flexible structure for an extraordinary adaptation to the surface profile and to the shape of the piece. The opened structure avoids the clogging and generates a fine grinding. High efficiency cleaning of all the corrosive remains of the piece surface.



**INOX**  **METAL** 

DD21					
	"	Ø mm	Ø Int. mm	RPM	€
DD21-115	4,5	115	22,23	3.400	18,92
DD21-125	5	125	22,23	3.400	22,07

## ANTI-OXIDE POLISHING DISC

**NEW**

Ref. DD24

**FELT**


Rigid base disc made in felt for polishing and finish of surfaces.  
Ideal to polish and brightening of all kind of metals.



DD24

	"	Ø mm	Ø Int. mm		€
DD24-100	4	100	22,23	1	7,09

## HOOK & LOOP BACKING PAD

**NEW**

Ref. DD25

**VELCRO**


Velcro plate for polishing and sanding of surfaces. M14X2 integrated thread.  
Able to work with all kind of accessories of polishing, grinding, felt, BLUEMASTER wool.  
For velcro accessories: **DD26 • DD28 • DD31 • DD32 • DD33**.  
Use with grinder.



DD25

	"	Ø mm	Ø Int. mm	RPM		€
DD25-100	4	100	M14x2	12.500	1	13,24
DD25-115	4,5	115	M14x2	12.500	1	15,77
DD25-125	5	125	M14x2	12.500	1	16,39

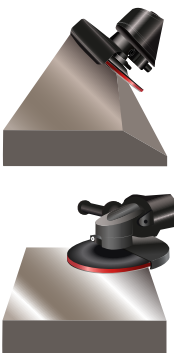
## POLISHING DIAMOND DISC FOR STONE

**NEW**

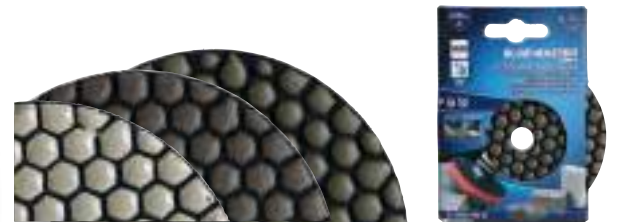
Ref. DD26

**VELCRO**


Made in diamond dust with resin for an optimal surface polishing.  
Polishing diamond disc for granite, marble, stone, concrete.  
Dry working. Use with backing pad Ref: **DD25**.



Different finish quality according to the selected grain.



DD26

	"	Ø mm	Grain		€
DD26-100-50	4	100	50	1	15,00
DD26-100-100	4	100	100	1	15,00
DD26-100-150	4	100	150	1	15,00
DD26-100-300	4	100	300	1	15,00
DD26-100-500	4	100	500	1	15,00
DD26-100-800	4	100	800	1	15,00
DD26-100-1000	4	100	1000	1	15,00
DD26-100-1500	4	100	1500	1	15,00
DD26-100-2000	4	100	2000	1	15,00
DD26-100-3000	4	100	3000	1	15,00



**POLISHING DISC OF OXIDE ALUMINIUM**

**NEW**  
Ref. DD28



Dry working.  
Use with backing pad Ref: **DD25**  
Different finish quality according to the selected grain.



DD28					
	"	Ø mm	Grain		€/1U.
DD28-100-60	4	100	60	10	0,21
DD28-100-80	4	100	80	10	0,21
DD28-100-120	4	100	120	10	0,21
DD28-100-240	4	100	240	10	0,21
DD28-115-60	4,5	115	60	10	0,28
DD28-115-80	4,5	115	80	10	0,28
DD28-115-120	4,5	115	120	10	0,28
DD28-115-240	4,5	115	240	10	0,28
DD28-125-60	5	125	60	10	0,33
DD28-125-80	5	125	80	10	0,33
DD28-125-120	5	125	120	10	0,33
DD28-125-240	5	125	240	10	0,33

**FELT POLISHING PAD**

**NEW**  
Ref. DD33



Polishing, finish and final brightening in all surfaces, paint, fiberglass, plastic, stainless steel, steel.  
To be used with backing pad Ref. **DD25**.



DD33					
	"	Ø mm	e mm		€
DD33-100	4	100	6	1	9,40
DD33-115	4,5	115	6	1	9,76
DD33-125	5	125	6	1	10,29

**POLISHING FOAM**

**NEW**  
Ref. DD31



Fine finish in metal and fiberglass structures.  
Specific for automotive and nautical applications.  
To be used with backing pad Ref. **DD25**.



DD31					
	"	Ø mm	e mm		€
DD31-100	4	100	25	1	7,98
DD31-115	4,5	115	25	1	8,52
DD31-125	5	125	25	1	9,22

**WOOL DISC FOR FINAL POLISHING**

**NEW**  
Ref. DD32



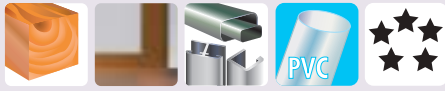
Wool Disc for Velcro structure.  
Polishing, finish and final brightening in all surfaces.  
To be used with backing pad Ref. **DD25**.



DD32				
	"	Ø mm		€
DD32-100	4	100	1	6,74
DD32-115	4,5	115	1	7,63
DD32-125	5	125	1	8,52

## SANDING BELT

Ref. AB50



High performance in polishing and sanding of material in fine surfaces.

Sanding belts with high precision without glue waste to generate highest quality surfaces.

Indicated to sand and polish all types of wood, hard wood, chipboard panels, construction chipboard, metal...

Perfect finish in cleaning surfaces with paint, enamel, oxide and all type of impurities.



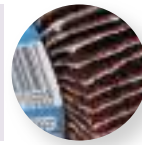
					AB50
	Grain	L 2 mm	L 1 mm	Units	€/ 1U.
AB50100X690Z40	40	100	690	10	3,00
AB50100X690Z60	60	100	690	10	2,89
AB50100X690Z80	80	100	690	10	2,84
AB50100X690Z100	100	100	690	10	2,84
AB50100X690Z120	120	100	690	10	2,84

## FLAPPING WHEELS

Aluminium Oxide flaps, with highest quality specially used in finishing operations. They adapt to all contours and shapes providing an effective sanding in edges and clefts. Uniform finish provided throughout the life of the wheel.

Ref. FP

High performance in polishing and cleaning of paint, oxide, welding and moulds.



### QUALITY

Grain 40 / 60 Coarse finishing  
 Grain 80 / 120 Medium finishing



						FP
	Grain	D 1 mm	D 2 mm	* H mm	R.P.M.	€
FP30X10-60	60	30	6	10	14.000	2,63
FP30X15-60	60	30	6	15	14.000	2,63
FP30X15-80	80	30	6	15	14.000	2,63
FP30X20-40	40	30	6	20	14.000	2,80
FP30X20-60	60	30	6	20	14.000	2,92
FP30X20-80	80	30	6	20	14.000	2,92
FP30X20-120	120	30	6	20	14.000	2,92
FP40X15-60	60	40	6	15	13.000	2,86
FP40X15-80	80	40	6	15	13.000	2,86
FP40X15-120	120	40	6	15	13.000	2,86
FP40X20-40	40	40	6	20	13.000	3,03
FP40X20-60	60	40	6	20	13.000	3,03
FP40X30-40	40	40	6	30	13.000	3,03
FP40X30-60	60	40	6	30	13.000	3,03
FP50X20-60	60	50	6	20	11.800	3,44
FP50X20-80	80	50	6	20	11.800	3,44
FP50X20-220	220	50	6	20	11.800	3,44
FP50X30-40	40	50	6	30	11.800	4,09
FP50X30-60	60	50	6	30	11.800	4,09
FP50X30-80	80	50	6	30	11.800	4,09
FP50X30-120	120	50	6	30	11.800	4,28
FP60X20-40	40	60	6	20	10.000	4,22
FP60X20-60	60	60	6	20	10.000	4,22
FP60X30-40	40	60	6	30	10.000	4,89
FP60X30-60	60	60	6	30	10.000	4,89
FP60X30-80	80	60	6	30	10.000	4,89
FP60X30-120	120	60	6	30	10.000	5,13
FP60X40-60	60	60	6	40	10.000	5,50
FP60X40-80	80	60	6	40	10.000	5,50
FP80X30-60	60	80	6	30	8.800	6,48
FP80X30-80	80	80	6	30	8.800	6,48
FP80X50-40	40	80	6	50	8.800	11,67
FP80X50-60	60	80	6	50	8.800	11,67
FP80X50-80	80	80	6	50	8.800	11,67
FP80X50-120	120	80	6	50	8.800	12,56

\* H: Teeth Height

# HOLESAWS



**BLUE-MASTER<sup>®</sup>**  
*by CELESA*

CUTTING TECHNOLOGIES



**GUIDE FOR SELECTION OF HOLESAWS**
**METAL HOLESAWS**

REFERENCE	Type and cutting depth	Applications Characteristics and Range	Page
CB	BI-METAL HSS 35 mm	Range Ø14/250mm	534
COB	BI-METAL HSSCo 8% 45 mm	Range Ø14/152mm	535
CBX100	BI-METAL HSS 100 mm	Range Ø25/152mm	538
COBX100	BI-METAL HSSCo 8% 100 mm	Range Ø25/51 mm	538
CBR	HSS 5 mm	Range Ø8/100mm	542
CBR..T	HSS-TiN 5 mm	Range Ø12/100mm	543
CBC	HSSCo Inox 10 mm	Range Ø12/100mm	544
CBCTL	HSSCo Inox TiAIN 10 mm	Range Ø10/50mm	545
CCF	HSS 2 mm	Range Ø10/50mm	546
CBMD	CARBIDE TIPPED 35 mm	Range Ø19/152mm	547
CP	12 mm	Range Ø15/35mm	548

**METAL HOLESAWS**

REFERENCE	Type and cutting depth	Applications Characteristics and Range	Page
CX CXL	CARBIDE TIPPED 12 mm 25 mm	Range Ø18/65mm	549
X	CARBIDE TIPPED 5 mm	Range Ø14/120mm	550
XT	CARBIDE TIPPED 5 mm	Range Ø16/150mm	550
CXX	CARBIDE TIPPED 50 mm	Range Ø14/100mm	552
C50X	CARBIDE TIPPED 5 mm	Range Ø14/100mm	553
MBM	CARBIDE TIPPED 50 mm	Range Ø35/150mm	554

**ANNULAR CUTTERS FOR ELECTROMAGNETIC DRILLING MACHINES**

REFERENCE	Type and cutting depth	Applications Characteristics and Range	Page
250R 500R	HSS 30 mm 50 mm	Range Ø12/50mm	558
250C 500C 750C 1000C	HSS 30 mm 50 mm 75 mm 100 mm	Range Ø12/100mm	559
1500C 2000C	HSS 150 mm 200 mm	Range Ø22/50mm - Ø26/50mm	562

**GUIDE FOR SELECTION OF HOLESAWS**

**ANNULAR CUTTERS FOR ELECTROMAGNETIC DRILLING MACHINES**

REFERENCE	Type and cutting depth	Applications Characteristics and Range	Page
250T 500T	HSSCo 30 mm 50 mm	 IN $\alpha$ AI Range $\varnothing 12/60$ mm	560
350A 500A	CARBIDE TIPPED 35 mm 50 mm	 Range $\varnothing 14/52$ mm - $\varnothing 14/70$ mm	563
750A 1000A	CARBIDE TIPPED 75mm 100 mm	 Range $\varnothing 16/70$ mm	564
MB250AT MB500AT	HSSCo 25/50 mm	 Range $\varnothing 16/32$ mm	565
MB350ST	CARBIDE TIPPED 35 m	 Range $\varnothing 16/32$ mm	565

**CONSTRUCTION CORE BITS**

REFERENCE	Type and cutting depth	Applications Characteristics and Range	Page
600W	CARBIDE TIPPED 80 mm	 Range $\varnothing 25/100$ mm	574
CW	CARBIDE TIPPED 95 mm	 Range $\varnothing 25/200$ mm	575
HA	CARBIDE TIPPED 54 mm	 Range $\varnothing 25/112$ mm	576
MD	CARBIDE TIPPED 60 mm	 Range $\varnothing 22/120$ mm	577

**CONSTRUCTION CORE BITS**

REFERENCE	Type and cutting depth	Applications Characteristics and Range	Page
MH	CARBIDE TIPPED 100 mm	 Range $\varnothing 25/150$ mm	578
HAR	CARBIDE TIPPED 80 mm	 Range $\varnothing 45/150$ mm	579
CDE	TILE 40 mm	 Range $\varnothing 12/120$ mm	580
CMAD	TILE 40 mm	 Range $\varnothing 20/50$ mm	580
CHH	DIAMOND 300-450 mm		581
CSE	TILE 35 mm	 Range $\varnothing 5/83$ mm	582
MG	30 mm	 Range $\varnothing 16/114$ mm	584
CM	WOOD 60 mm $\varnothing 22/125$	 Range $\varnothing 22/125$ mm	585
TB CL	CIRCLE CUTTING HOLE CUTTERS $\varnothing 200/220/285/410$ mm		586
CDH	150 mm		589



**BI-METAL HSS HOLESAWS WITH VARIABLE TEETH 4/6**

Ref. CB

**HSS  
M3**
**4/6**

**Al**

**Cu-Ni-La**
**CAST  
IRON**

**PVC**
**35 mm  
CUTTING  
CAPACITY**

**Blister dimensions  
165 x 105 mm**
**Ref. CB AVAILABLE IN BLISTER AND CARTON BOX**

Ø mm	Ø Inches	CB			
		Carton		Blister	
		Ref.	€	Ref.	€
14	9/16	CB14	11,99	CB14B	11,99
16	5/8	CB16	11,99	CB16B	11,99
17	11/16	CB17	12,39	CB17B	12,39
19	3/4	CB19	12,39	CB19B	12,39
20	-	CB20	12,39	CB20B	12,39
21	13/16	CB21	12,39	CB21B	12,39
22	7/8	CB22	12,81	CB22B	12,81
24	15/16	CB24	13,15	CB24B	13,15
25	1"	CB25	13,50	CB25B	13,50
27	1.1/16	CB27	13,91	CB27B	13,91
29	1.1/8	CB29	14,67	CB29B	14,67
30	1.3/16	CB30	15,03	CB30B	15,03
32	1.1/4	CB32	15,40	CB32B	15,40
33	1.5/16	CB33	15,56	CB33B	15,56
35	1.3/8	CB35	15,91	CB35B	15,91
37	1.7/16	CB37	15,91	CB37B	15,91
38	1.1/2	CB38	16,37	CB38B	16,37
40	1.9/16	CB40	17,09	CB40B	17,09
41	1.5/8	CB41	17,09	CB41B	17,09
43	1.11/16	CB43	18,09	CB43B	18,09
44	1.3/4	CB44	19,13	CB44B	19,13
45	-	CB45	19,13	CB45B	19,13
46	1.13/16	CB46	19,22	CB46B	19,22
48	1.7/8	CB48	19,73	CB48B	19,73
50	-	CB50	19,73	CB50B	19,73
51	2"	CB51	19,73	CB51B	19,73
52	2.1/16	CB52	20,62	CB52B	20,62
54	2.1/8	CB54	20,69	CB54B	20,69
55	-	CB55	20,69	CB55B	20,69
57	2.1/4	CB57	21,77	CB57B	21,77
59	2.5/16	CB59	22,67	CB59B	22,67
60	2.3/8	CB60	22,71	CB60B	22,71

Ø mm	Ø Inches	CB			
		Carton		Blister	
		Ref.	€	Ref.	€
64	2.1/2	CB64	23,07	CB64B	23,07
65	2.9/16	CB65	25,81	CB65B	25,81
67	2.5/8	CB67	25,81	CB67B	25,81
68	-	CB68	25,81	CB68B	25,81
70	2.3/4	CB70	26,34	CB70B	26,34
73	2.7/8	CB73	26,83	CB73B	26,83
75	-	CB75	27,52	CB75B	27,52
76	3"	CB76	27,52	CB76B	27,52
79	3.1/8	CB79	28,12	CB79B	28,12
83	3.1/4	CB83	28,12	CB83B	28,12
86	3.3/8	CB86	28,22		
89	3.1/2	CB89	28,33		
92	3.5/8	CB92	31,26		
95	3.3/4	CB95	33,65		
98	3.7/8	CB98	34,84		
100	-	CB100	36,69		
102	4"	CB102	36,69		
104	4.1/8	CB104	40,55		
108	4.1/4	CB108	44,80		
111	4.3/8	CB111	49,15		
114	4.1/2	CB114	56,10		
121	4.3/4	CB121	62,32		
127	5"	CB127	69,06		
140	5.1/2	CB140	82,34		
146	5.3/4	CB146	87,81		
152	6"	CB152	93,30		
160	-	CB160	128,41		
168	-	CB168	141,11		
177	-	CB177	143,73		
210	-	CB210	151,57		
225	-	CB225	200,58		
250	-	CB250	244,74		

Holesaws with diameter between 14 and 30mm have no holes for arbors with pins.

Check page 556 for cutting conditions.

**BI-METAL HSSCo 8% HOLESAWS WITH VARIABLE TEETH 4/6**

Ref. COB

**HSSCo  
8%**

**4/6**

**IN Ø**



**CAST  
IRON**

**C u-N i-L a**

- Longer duration of the sharpening and cutting life time.
- Sharper, quicker and more precise cut.
- Reduced vibrations and wear.
- M42: Improved performance and durability.

**45 mm  
CUTTING  
CAPACITY**



Ref. COB AVAILABLE IN BLISTER AND CARTON BOX

		COB			
Ø mm	Ø Inches	Carton		Blister	
		Ref.	€	Ref.	€
14	9/16	COB14	12,83	COB14B	12,83
16	5/8	COB16	12,83	COB16B	12,83
17	11/16	COB17	13,25	COB17B	13,25
19	3/4	COB19	13,25	COB19B	13,25
20	-	COB20	13,25	COB20B	13,25
21	13/16	COB21	13,25	COB21B	13,25
22	7/8	COB22	13,58	COB22B	13,58
24	15/16	COB24	13,62	COB24B	13,62
25	1"	COB25	14,25	COB25B	14,25
27	1.1/16	COB27	14,86	COB27B	14,86
29	1.1/8	COB29	15,10	COB29B	15,10
30	1.3/16	COB30	15,31	COB30B	15,31
32	1.1/4	COB32	15,70	COB32B	15,70
33	1.5/16	COB33	15,88	COB33B	15,88
35	1.3/8	COB35	16,21	COB35B	16,21
37	1.7/16	COB37	16,21	COB37B	16,21
38	1.1/2	COB38	16,69	COB38B	16,69
40	1.9/16	COB40	17,41	COB40B	17,41
41	1.5/8	COB41	17,41	COB41B	17,41
43	1.11/16	COB43	18,45	COB43B	18,45
44	1.3/4	COB44	19,77	COB44B	19,77
45	-	COB45	19,77	COB45B	19,77
46	1.13/16	COB46	19,84	COB46B	19,84
48	1.7/8	COB48	20,11	COB48B	20,11
50	-	COB50	20,11	COB50B	20,11
51	2"	COB51	20,11	COB51B	20,11
52	2.1/16	COB52	22,06	COB52B	22,06
54	2.1/8	COB54	22,13	COB54B	22,13
55	-	COB55	22,13	COB55B	22,13
57	2.1/4	COB57	23,19	COB57B	23,19
59	2.5/16	COB59	23,38	COB59B	23,38
60	2.3/8	COB60	23,38	COB60B	23,38

		COB			
Ø mm	Ø Inches	Carton		Blister	
		Ref.	€	Ref.	€
64	2.1/2	COB64	24,69	COB64B	24,69
65	2.9/16	COB65	26,31	COB65B	26,31
67	2.5/8	COB67	26,31	COB67B	26,31
68	-	COB68	26,31	COB68B	26,31
70	2.3/4	COB70	26,85	COB70B	26,85
73	2.7/8	COB73	27,35	COB73B	27,35
75	-	COB75	28,06	COB75B	28,06
76	3"	COB76	28,06	COB76B	28,06
79	3.1/8	COB79	28,67	COB79B	28,67
83	3.1/4	COB83	28,67	COB83B	28,67
86	3.3/8	COB86	28,76		
89	3.1/2	COB89	28,88		
92	3.5/8	COB92	31,85		
95	3.3/4	COB95	36,01		
98	3.7/8	COB98	37,29		
100	-	COB100	39,26		
102	4"	COB102	39,26		
104	4.1/8	COB104	43,38		
108	4.1/4	COB108	47,94		
111	4.3/8	COB111	52,60		
114	4.1/2	COB114	61,70		
121	4.3/4	COB121	68,56		
127	5"	COB127	75,97		
140	5.1/2	COB140	90,57		
146	5.3/4	COB146	96,61		
152	6"	COB152	97,50		

Holesaws with diameter between 14 and 30mm have no holes for arbors with pins.  
Check page 556 for cutting conditions.

CUTTING SPEED	
CAPACITY Ø mm	R.P.M
14-25	600
27-45	350
46-60	250
64-83	150
86-102	120
104-121	90
127-152	60

**ARBORS AND ACCESSORIES FOR BI-METAL HOLESAWS**
**ARBORS IN CARTON BOX AND BLISTER**


Ref. B5514



Ref. B5518


 → Ref. B5519  
 The most usual


Ref. B5520



Ref. B5545


 → Ref. B5546  
 The most usual


Ref. B5547\*



Ref. B5556SDS



Ref. B5547M


**WITHOUT EJECT SPRING**
**WITH EJECT SPRING**

SHANK	CAPACITY Ø mm	Carton		Blister		Carton		Blister	
		Ref.	€	Ref.	€	Ref.	€	Ref.	€
Ø 6,35 mm	14 - 30	B5514	12,61	B5514S	13,45	B5514M	13,93	5514-BME	13,96
Ø 11,0 mm	14 - 30	B5518	16,59	B5518S	17,69	B5518M	17,90	5518-BME	17,90
Ø 9,5 mm	14 - 30	B5519	16,98	B5519S	18,47	B5519M	18,26	5519-BME	19,86
Ø 11,0 mm	32 - 38	B5520	19,90	B5520S	19,90	B5520M	21,20		
Ø 11,0 mm	32 - 250	B5545	26,92	B5545S	26,92	B5545M	28,21		
Ø 9,5 mm	32 - 250	B5546	26,92	B5546S	28,72	B5546M	28,21	5546-BME	30,10
Ø 11,0 mm	32 - 250	B5547*	28,11	B5547S	30,73	B5547M	29,44	5547-BME	32,19
Ø 16,0 mm	32 - 250	B5573	29,33			B5573M	30,64		
SDS-PLUS	14 - 30	B5529SDS	22,55			B5529SDSM	23,25		
SDS-PLUS	32 - 250	B5556SDS	41,76			B5556SDSM	42,67		

**EJECTION SPRING**

 B8530  
 0,96 €

\* High performance rigid arbor

**PILOT DRILLS**
**HSS**


Ref. B8534 The most usual



Ref. B8535



Ref. B8536



Ref. B8537



Ref. B8538



Ø mm	Lt mm	FLAT N°	PACKAGING	CORRESPONDING ARBORS	Box		Blister	
					Ref.	€	Ref.	€
6,35	83	2	10	5514-5518-5519-5520-5545-5546 5573-5529SDS -5556SDS -5547	B8534	6,30	B8534S	8,31
6,35	107	3	10	5514-5518-5519-5520-5545-5546 5573-5529SDS -5556SDS -5547	B8535	6,30	B8535S	8,31
6,35	87	1	10	5514-5518-5520-5573-5545	B8536	6,30	B8536S	8,31
6,35	82	1	10	Holesaws Remgrit	B8537	5,41	B8537S	6,75
6,35	97	1	10	Holesaws Remgrit	B8538	5,41	B8538S	6,75

**ARBORS AND ACCESSORIES FOR BI-METAL HOLESAWS**

**EXTENSION ARBOR 300 mm**



Suitable for arbors:  
Ref. 5519-5546  
Hex. shank 9,5 mm

B5500  
24,61 €

**ARBOR ADAPTER mm**



This threaded adaptor allows to use 5514, 5518 and 5519 HOLESAWS with diameter >30 mm in favourable cutting conditions

B5511  
8,55 €

**SPARE SCREW (TO HOLD DRILL AT THE ARBOR)**



Arbors screw:  
Ref. 5514 - 5518 - 5519 - 5520

BSS1  
2,24 €



Arbors screw:  
Ref. 5545 - 5546 - 5573

BSS2  
2,24 €

**HOLESAW SET FOR PLASTER**



**Set 1 Ø67**

Ref. CPL67

Content:

- 1 Bimetal hole saw CB67: Ø 67 mm.
- 1 Arbor Ref. B5547
- 1 Countersinking washer for plaster Ref. CPL

89,47 €



**Set 2 Ø68**

Ref. CPL68

Content:

- 1 Bimetal hole saw CB68: Ø 68 mm.
- 1 Arbor Ref. B5547
- 1 Countersinking washer for plaster Ref. CPL

89,47 €

**COMPONENTS**

	DESCRIPTION	€
CPL	Countersinking washer for plaster	58,65
B5547	Rigid arbor for HOLESAWS Ø 32-250 mm	28,11
CB67	Bimetal hole saw CB67 Ø 67 mm	25,81
CB68	Bimetal hole saw CB68 Ø 68 mm	25,81

**BI-METAL HSS HOLESAWS WITH VARIABLE TEETH 4/6 EXTRA LONG SERIES FOR LOCKSMITH**

Holesaws

Pink

Ref. CBX100

**HSS**  
**M3**

4/6



Al



C u-Ni-La

CAST  
IRON

PVC

**100 mm**  
**CUTTING**  
**CAPACITY**


CBX100		
	Ø mm	€
CB25X100	25	59,80
CB27X100	27	65,84
CB29X100	29	69,46
CB30X100	30	71,18
CB32X100	32	72,93
CB33X100	33	73,76
CB35X100	35	70,42
CB38X100	38	77,54
CB40X100	40	75,60

CBX100		
	Ø mm	€
CB41X100	41	80,89
CB43X100	43	85,67
CB44X100	44	86,22
CB45X100	45	86,22
CB46X100	46	86,74
CB48X100	48	86,74
CB50X100	50	87,56
CB51X100	51	87,56
CB52X100	52	95,16
CB54X100	54	95,56
CB55X100	55	95,56
CB57X100	57	100,56
CB59X100	59	104,63
CB60X100	60	104,90
CB64X100	64	106,50
CB65X100	65	119,18
CB67X100	67	119,18
CB68X100	68	119,18
CB70X100	70	121,66

CBX100		
	Ø mm	€
CB73X100	73	123,91
CB75X100	75	127,09
CB79X100	79	129,90
CB83X100	83	129,90
CB86X100	86	130,33
CB89X100	89	130,84
CB92X100	92	144,30
CB95X100	95	152,46
CB98X100	98	157,89
CB100X100	100	166,26
CB102X100	102	166,26
CB104X100	104	183,78
CB108X100	108	202,99
CB111X100	111	222,76
CB114X100	114	254,19
CB127X100	127	312,92
CB140X100	140	373,11
CB146X100	146	397,93
CB152X100	152	422,80

Holesaws with diameter between 14 and 30mm have no holes for arbors with pins.

**BI-METAL HSSCo HOLESAWS WITH VARIABLE TEETH 4/6**

Ref. COB

**HSSCo**  
**8%**

4/6

CAST  
IRON

C u-Ni-La

- Longer duration of the sharpening and cutting life time.
- Sharper, quicker and more precise cut.
- Reduced vibrations and wear.
- M42: better performance and durability.

**100 mm**  
**CUTTING**  
**CAPACITY**

COB100		
	Ø mm	€
COB25X100	25	78,98
COB35X100	35	93,01
COB40X100	40	99,84
COB45X100	45	111,75
COB50X100	50	112,42
COB51X100	51	112,42


**ARBORS FOR EXTRA LONG HOLESAWS**

**PILOT DRILLS**


DESCRIPTION		CAPACITY mm	€			CORRESPONDING ARBORS		€
B5516	Arbor for extra long HOLESAWS	14 - 30	28,62	B8532	6,35	155	B5516 / B5548	17,23
B5548	Arbor for extra long HOLESAWS	32-250	43,45					



**BI-METAL HOLESAWS DISPLAYS**



Ref. CB

<b>HSS</b> <b>M3</b>	<b>4/6</b>		<b>A1</b>	<b>Cu-Ni-La</b>	<b>CAST IRON</b>	<b>PVC</b>	
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ARBORS BLUEMASTER HOLESAW DISPLAY

<b>B5519</b>	<b>CB16</b>	<b>CB19</b>	<b>CB20</b>	<b>CB22</b>	<b>CB25</b>	<b>CB27</b>	<b>CB30</b>
<u>Ø 14-30</u>	<u>Ø 16</u>	<u>Ø 19</u>	<u>Ø 20</u>	<u>Ø 22</u>	<u>Ø 25</u>	<u>Ø 27</u>	<u>Ø 30</u>
5	3	3	3	3	3	3	3
<b>B5546</b>	<b>CB32</b>	<b>CB35</b>	<b>CB40</b>	<b>CB48</b>	<b>CB50</b>	<b>CB60</b>	<b>CB68</b>
<u>Ø32-250</u>	<u>Ø 32</u>	<u>Ø 35</u>	<u>Ø 40</u>	<u>Ø 48</u>	<u>Ø 50</u>	<u>Ø 60</u>	<u>Ø 68</u>
4	3	3	2	2	2	2	2

Ref. CBEXP1      530 mm  
 772,71 €      ↑ → 885 mm



Ref. COB

<b>HSSCo</b> <b>8%</b>	<b>4/6</b>		<b>IN CX</b>	<b>Cu-Ni-La</b>	<b>CAST IRON</b>
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ARBORS BLUEMASTER HSS-CO 8% HOLESAW DISPLAY

<b>B5519</b>	<b>COB16</b>	<b>COB19</b>	<b>COB20</b>	<b>COB22</b>	<b>COB25</b>	<b>COB27</b>	<b>COB30</b>
<u>Ø 14-30</u>	<u>Ø 16</u>	<u>Ø 19</u>	<u>Ø 20</u>	<u>Ø 22</u>	<u>Ø 25</u>	<u>Ø 27</u>	<u>Ø 30</u>
5	3	3	3	3	3	3	3
<b>B5546</b>	<b>COB32</b>	<b>COB35</b>	<b>COB40</b>	<b>COB48</b>	<b>COB51</b>	<b>COB60</b>	<b>COB68</b>
<u>Ø32-250</u>	<u>Ø 32</u>	<u>Ø 35</u>	<u>Ø 40</u>	<u>Ø 48</u>	<u>Ø 51</u>	<u>Ø 60</u>	<u>Ø 68</u>
4	3	3	2	2	2	2	2

Ref. COBEXP1      530 mm  
 794,96 €      ↑ → 885 mm

**BI-METAL HOLESAWS SETS HSS**
**HSS  
M3**
**4/6**

**Al**

**CAST  
IRON**

**PVC**
**35 mm  
CUTTING  
CAPACITY**


Ref. CB

**ELECTRICIANS SET, GENERAL USES**
**9  
Pieces**

**CB9571** 6 Holesaws CB: **Ø 22 - 35 - 51 - 60 - 68 - 73 mm**
**CB9574** 6 Holesaws CB: **Ø 22 - 35 - 50 - 60 - 68 - 73 mm**

Content:

1 Arbor Ref. 5519  $\square$  9,5 Capacity 14-301 Arbor Ref. 5546  $\square$  9,5 Capacity 32-250

1 Arbor adapter Ref. 5511

137,35 €

**PLUMBERS SET**
**10  
Pieces**
**CB9570** 7 Holesaws CB: **Ø 20 - 25 - 32 - 40 - 44 - 60 - 68 mm**
**CB9573** 7 Holesaws CB: **Ø 20 - 25 - 30 - 40 - 44 - 60 - 68 mm**
**CB9575** 7 Holesaws CB: **Ø 19 - 25 - 32 - 40 - 44 - 60 - 68 mm**

Content:

1 Arbor Ref. 5519  $\square$  9,5 Capacity 14-301 Arbor Ref. 5546  $\square$  9,5 Capacity 32-250

1 Arbor adapter Ref. 5511

131,94 €


**INDUSTRIAL MAINTENANCES SET**
**13  
Pieces**

**CB9572** 10 Holesaws CB: **20 - 22 - 25 - 32 - 35 - 40 - 44 - 60 - 68 - 76 mm**

Content:

1 Arbor Ref. 5519  $\square$  9,5 Capacity 14-301 Arbor Ref. 5546  $\square$  9,5 Capacity 32-250

1 Arbor adapter Ref. 5511

166,29 €

**BI-METAL HOLESAWS SETS HSSCO 8%**

**HSSCo**  
8%

**4/6**

**IN  $\alpha$**



**CAST IRON**

**C-Ni-La**

- Longer duration of the sharpening and cutting life time.
- Sharper, quicker and more precise cut.
- Reduced vibrations and wear.
- M42: Improved performance and durability.

**45 mm**  
**CUTTING CAPACITY**



Ref. COB

Holesaws

**9**  
Pieces

**ELECTRICIANS SET, GENERAL USES**



COB9571 6 Holesaws COB: Ø 22 - 35 - 51 - 60 - 68 - 73 mm

COB9574 6 Holesaws COB: Ø 22 - 35 - 50 - 60 - 68 - 73 mm

Content:

1 Arbor Ref. 5519  $\square$  9,5 Capacity 14-30

1 Arbor Ref. 5546  $\square$  9,5 Capacity 32-250

1 Arbor adapter Ref. 5511

151,09 €

Pink

**PLUMBERS SET**

**10**  
Pieces

COB9570 7 Holesaws COB: Ø 20 - 25 - 32 - 40 - 44 - 60 - 68 mm

COB9573 7 Holesaws COB: Ø 20 - 25 - 30 - 40 - 44 - 60 - 68 mm

COB9575 7 Holesaws COB: Ø 19 - 25 - 32 - 40 - 44 - 60 - 68 mm

Content:

1 Arbor Ref. 5519  $\square$  9,5 Capacity 14-30

1 Arbor Ref. 5546  $\square$  9,5 Capacity 32-250

1 Arbor adapter Ref. 5511

145,13 €



**INDUSTRIAL MAINTENANCES SET**

**13**  
Pieces



COB9572 10 Holesaws COB: 20 - 22 - 25 - 32 - 35 - 40 - 44 - 60 - 68 - 76 mm

Content:

1 Arbor Ref. 5519  $\square$  9,5 Capacity 14-30

1 Arbor Ref. 5546  $\square$  9,5 Capacity 32-250

1 Arbor adapter Ref. 5511

182,91 €

**HSS RESHARPENABLE HOLESAWS FOR METALS**
**HSS**

Ref. CBR


**Al**

**Cu-Ni-La**
**CAST IRON**
**5 mm  
CUTTING  
CAPACITY**


Clamp the jaws of the chuck on the 3 flat faces in order to avoid any slippery of the arbor.

	CBR	
	Ø mm	€
CBR010	10	21,31
CBR011	11	21,31
CBR012	12	21,64
CBR013	13	21,68
CBR014	14	21,68
CBR015	15	21,68
CBR016	16	21,68
CBR017	17	23,21
CBR018	18	24,98
CBR019	19	26,36
CBR020	20	27,78
CBR021	21	27,87
CBR022	22	29,21
CBR023	23	30,75
CBR024	24	32,36
CBR025	25	33,75
CBR026	26	35,16
CBR027	27	36,60
CBR028	28	38,58
CBR029	29	40,05
CBR030	30	40,10
CBR031	31	42,53
CBR032	32	43,00
CBR033	33	44,43
CBR034	34	45,70
CBR035	35	45,77
CBR036	36	48,56
CBR037	37	50,73
CBR038	38	50,90
CBR039	39	52,47

	CBR	
	Ø mm	€
CBR040	40	53,91
CBR041	41	56,51
CBR042	42	56,76
CBR043	43	59,56
CBR044	44	60,69
CBR045	45	61,01
CBR046	46	63,58
CBR047	47	63,80
CBR048	48	64,03
CBR049	49	66,06
CBR050	50	67,14
CBR051	51	82,27
CBR052	52	82,27
CBR053	53	82,27
CBR054	54	83,09
CBR055	55	83,09
CBR056	56	97,99
CBR057	57	97,99
CBR058	58	97,99
CBR059	59	97,99
CBR060	60	97,99
CBR061	61	114,45
CBR062	62	114,45
CBR063	63	114,45
CBR064	64	114,45
CBR065	65	114,45
CBR066	66	136,15
CBR067	67	136,15
CBR068	68	136,15
CBR069	69	136,15

	CBR	
	Ø mm	€
CBR070	70	136,15
CBR071	71	143,13
CBR072	72	143,13
CBR073	73	143,13
CBR074	74	143,13
CBR075	75	143,13
CBR076	76	162,75
CBR077	77	162,75
CBR078	78	162,75
CBR079	79	162,75
CBR080	80	162,75
CBR081	81	185,51
CBR082	82	185,51
CBR083	83	185,51
CBR084	84	185,51
CBR085	85	185,51
CBR086	86	194,61
CBR087	87	194,95
CBR088	88	194,95
CBR089	89	194,95
CBR090	90	194,95
CBR091	91	214,16
CBR092	92	216,50
CBR093	93	216,50
CBR094	94	216,50
CBR095	95	216,50
CBR096	96	225,91
CBR097	97	225,91
CBR098	98	225,91
CBR099	99	225,91
CBR100	100	226,27

These holesaws are always delivered with an arbor, which is included in the price.



Ref. AT12



Ref. CM12

**ARBORS FOR RESHARPENABLE HOLESAWS WITH & WITHOUT TIN**

DESCRIPTION	RANGE Ø mm	€	
AT09	Ø10 triangular with thread M12x1,25+drill 6mm	10 - 13	17,22
AT10	Shank Ø8mm - thread M10x1,25 and drill+Ø6mm	14 - 22	17,22
AT12	Shank Ø9mm triangular thread M12x1,25+drill Ø6mm	23 - 40	19,29
AT16	Shank Ø10mm triangular thread M16x1,25+drill Ø6mm	41 - 60	24,50
AT20	Shank Ø12mm triangular thread M20x1,25+drill Ø8mm	61 - 90	28,06
AT28	Shank Ø13mm triangular thread M28x2,00+drill Ø 8mm	91 - 100	37,86
CM09	Morse Taper 2 - thread M09x1,25 + drill Ø5mm	10 - 13	44,31
CM10	Morse Taper 2 - thread M10x1,25 + drill Ø5mm	14 - 22	44,31
CM12	Morse Taper 2 - thread M12x1,25 + drill Ø6mm	23 - 40	45,29
CM16	Morse Taper 2 - thread M16x1,25 + drill Ø6mm	41 - 60	45,29
CM20	Morse Taper 3 - thread M20x1,25 + drill Ø8mm	61 - 90	65,71
CM28	Morse Taper 4 - thread M28x2,00 + drill Ø8mm	91 - 100	108,98

**PILOT DRILL**

	DESCRIPTION	RANGE Ø mm	€
B5	HSS Ø 5 mm	10 - 22	6,76
B6	HSS Ø 6 mm	23 - 60	7,78
B8	HSS Ø 8 mm	61 - 100	8,61
B6TIN	HSS + TiN Ø 6 mm	23 - 60	11,97
B8TIN	HSS + TiN Ø 8 mm	61 - 100	14,02





**HSS + TIN RESHARPENABLE HOLESAWS FOR METALS**

**HSS**

**TN**

Ref. CBR..T



**Al**



**Cu-Ni-La**

**CAST IRON**

**5 mm CUTTING CAPACITY**



Holesaws

Pink



CBR..T		
	Ø mm	€
CBR010T	10	33,60
CBR011T	11	33,95
CBR012T	12	33,95
CBR013T	13	35,72
CBR014T	14	35,72
CBR015T	15	35,72
CBR016T	16	37,87
CBR017T	17	41,44
CBR018T	18	42,88
CBR019T	19	47,18
CBR020T	20	49,31
CBR021T	21	51,46
CBR022T	22	53,58
CBR023T	23	56,09
CBR024T	24	58,97
CBR025T	25	60,76
CBR026T	26	68,24
CBR027T	27	69,68
CBR028T	28	71,46
CBR029T	29	72,89
CBR030T	30	74,31
CBR031T	31	76,47
CBR032T	32	77,90
CBR033T	33	80,04
CBR034T	34	82,56
CBR035T	35	85,39
CBR036T	36	87,54
CBR037T	37	90,04
CBR038T	38	92,16

CBR..T		
	Ø mm	€
CBR039T	39	95,03
CBR040T	40	97,56
CBR041T	41	99,69
CBR042T	42	102,18
CBR043T	43	104,32
CBR044T	44	107,19
CBR045T	45	109,69
CBR046T	46	111,86
CBR047T	47	114,35
CBR048T	48	119,00
CBR049T	49	119,36
CBR050T	50	121,47
CBR051T	51	146,26
CBR052T	52	149,22
CBR053T	53	151,95
CBR054T	54	154,79
CBR055T	55	157,93
CBR056T	56	160,58
CBR057T	57	163,41
CBR058T	58	166,75
CBR059T	59	169,24
CBR060T	60	172,23
CBR061T	61	202,89
CBR062T	62	206,38
CBR063T	63	209,61
CBR064T	64	212,82
CBR065T	65	216,53
CBR066T	66	219,54
CBR067T	67	222,75
CBR068T	68	226,22
CBR069T	69	229,46

CBR..T		
	Ø mm	€
CBR070T	70	235,82
CBR071T	71	236,57
CBR072T	72	240,09
CBR073T	73	243,54
CBR074T	74	246,87
CBR075T	75	250,22
CBR076T	76	253,84
CBR077T	77	257,20
CBR078T	78	260,53
CBR079T	79	264,16
CBR080T	80	270,88
CBR081T	81	270,88
CBR082T	82	274,34
CBR083T	83	277,83
CBR084T	84	281,19
CBR085T	85	284,68
CBR086T	86	288,16
CBR087T	87	291,52
CBR088T	88	294,87
CBR089T	89	298,34
CBR090T	90	303,00
CBR091T	91	312,79
CBR092T	92	316,35
CBR093T	93	319,92
CBR094T	94	323,35
CBR095T	95	326,93
CBR096T	96	330,52
CBR097T	97	333,91
CBR098T	98	337,37
CBR099T	99	341,08
CBR100T	100	346,58

These holesaws are always delivered with an arbor, which is included in the price.

**RESHARPENABLE HOLESAWS DISPLAY**

E41P

Content:  
41 Ref. CBR holesaws  
Ø 10 - Ø 50 mm

1.694,87 €





**HSSCo RESHARPENABLE HOLESAWS FOR METALS (SPECIAL FOR STAINLESS STEEL)**


Ref. CBC


**10 mm**  
**CUTTING**  
**CAPACITY**

 Specific sharpening  
 with chip-breaker

	CBC	
	Ø mm	€
CBC012	12	35,68
CBC013	13	35,68
CBC014	14	35,68
CBC015	15	36,67
CBC016	16	37,46
CBC017	17	38,05
CBC018	18	39,05
CBC019	19	40,85
CBC020	20	42,65
CBC021	21	44,82
CBC022	22	47,40
CBC023	23	49,02
CBC024	24	50,61
CBC025	25	52,61
CBC026	26	54,60
CBC027	27	56,99
CBC028	28	58,78
CBC029	29	60,77
CBC030	30	62,76
CBC031	31	64,35
CBC032	32	66,56
CBC033	33	68,54
CBC034	34	70,72
CBC035	35	73,12
CBC036	36	74,71
CBC037	37	76,91
CBC038	38	79,50
CBC039	39	84,46
CBC040	40	85,67
CBC041	41	85,48

	CBC	
	Ø mm	€
CBC042	42	87,43
CBC043	43	89,37
CBC044	44	90,94
CBC045	45	93,49
CBC046	46	95,04
CBC047	47	97,39
CBC048	48	99,16
CBC049	49	101,08
CBC050	50	102,84
CBC051	51	144,78
CBC052	52	148,19
CBC053	53	150,26
CBC054	54	153,10
CBC055	55	156,88
CBC056	56	159,53
CBC057	57	162,18
CBC058	58	164,82
CBC059	59	167,86
CBC060	60	170,31
CBC061	61	204,15
CBC062	62	207,55
CBC063	63	210,01
CBC064	64	213,98
CBC065	65	217,19
CBC066	66	228,73
CBC067	67	231,45
CBC068	68	234,79
CBC069	69	237,11
CBC070	70	240,64
CBC071	71	242,56

	CBC	
	Ø mm	€
CBC072	72	246,09
CBC073	73	249,40
CBC074	74	252,73
CBC075	75	256,23
CBC076	76	260,15
CBC077	77	262,88
CBC078	78	266,20
CBC079	79	269,71
CBC080	80	273,60
CBC081	81	276,35
CBC082	82	279,85
CBC083	83	283,17
CBC084	84	286,48
CBC085	85	290,01
CBC086	86	293,32
CBC087	87	296,62
CBC088	88	300,15
CBC089	89	303,26
CBC090	90	306,78
CBC091	91	310,30
CBC092	92	313,42
CBC093	93	316,92
CBC094	94	320,45
CBC095	95	323,56
CBC096	96	326,89
CBC097	97	330,39
CBC098	98	333,51
CBC099	99	337,04
CBC100	100	347,18

These HOLESAWS are always delivered with arbor, which is included in price.

Ref. HCBC1


**ARBORS FOR RESHARPENABLE HOLESAWS WITH & WITHOUT TiAIN**

	DESCRIPTION	CAPACITY Ø mm	€
HCBC0	Shank 7mm Triangular thread M09x1,25+drill Ø 5 mm	10 - 13	17,22
HCBC1	Shank 8mm Triangular thread M10x1,25+drill Ø 5 mm	14 - 22	17,22
HCBC2	Shank 9mm Triangular thread M12x1,25+drill Ø 6 mm	23 - 35	17,22
HCBC3	Shank 10mm Triangular thread M16x1,25+drill Ø 6 mm	36 - 49	19,29
HCBC4	Shank 12mm Triangular thread M20x1,50+drill Ø 8 mm	50 - 90	24,50
HCBC5	Shank 13mm Triangular thread M28x2,00+drill Ø 8 mm	91 - 100	28,06
HCBC0-CM2	Morse Taper 2 thread M09x1,25 and drill Ø 5 mm	10 - 13	44,31
HCBC1-CM2	Morse Taper 2 thread M10x1,25 and drill Ø 5 mm	14 - 22	44,31
HCBC2-CM2	Morse Taper 2 thread M12x1,25 and drill Ø 6 mm	23 - 35	45,29
HCBC2-CM3	Morse Taper 3 thread M12x1,25 and drill Ø 6 mm	23 - 35	64,89
HCBC3-CM2	Morse Taper 2 thread M16x1,25 and drill Ø 6 mm	36 - 49	64,89
HCBC3-CM3	Morse Taper 3 thread M16x1,25 and drill Ø 6 mm	36 - 49	64,89
HCBC4-CM3	Morse Taper 3 thread M20x1,50 and drill Ø 8 mm	50 - 90	65,71
HCBC4-CM4	Morse Taper 4 thread M20x1,50 and drill Ø 8 mm	50 - 90	108,98
HCBC5-CM3	Morse Taper 3 thread M28x2,00 and drill Ø 8 mm	91 - 100	108,98
HCBC5-CM4	Morse Taper 4 thread M28x2,00 and drill Ø 8 mm	91 - 100	108,98


**PILOT DRILL**

	DESCRIPTION	CAPACITY Ø mm	€
PCBC1	Pilot HSSCo Ø 5 mm	10 - 22	6,76
PCBC2	Pilot HSSCo Ø 6 mm	23 - 49	7,78
PCBC3	Pilot HSSCo Ø 8 mm	50 - 100	8,61
PCBC1TL	Pilot HSSCo+TiAIN Ø5 mm	10 - 22	9,80
PCBC2TL	Pilot HSSCo+TiAIN Ø6 mm	23 - 49	11,29
PCBC3TL	Pilot HSSCo+TiAIN Ø8 mm	50 - 100	12,49

**HSSCo+TiAlN RESHARPENABLE HOLESAWS FOR METALS (SPECIAL FOR STAINLESS STEEL)**



Ref. CBCTL



**10 mm**  
CUTTING  
CAPACITY



Holesaws

Pink



CBCTL			CBCTL			CBCTL		
	Ø mm	€		Ø mm	€		Ø mm	€
CBC012TL	12	51,16	CBC042TL	42	137,62	CBC072TL	72	357,24
CBC013TL	13	51,16	CBC043TL	43	140,94	CBC073TL	73	363,71
CBC014TL	14	51,16	CBC044TL	44	143,81	CBC074TL	74	373,60
CBC015TL	15	52,59	CBC045TL	45	147,71	CBC075TL	75	383,93
CBC016TL	16	56,93	CBC046TL	46	150,45	CBC076TL	76	383,93
CBC017TL	17	59,37	CBC047TL	47	154,06	CBC077TL	77	383,93
CBC018TL	18	60,32	CBC048TL	48	158,73	CBC078TL	78	383,93
CBC019TL	19	65,52	CBC049TL	49	159,69	CBC079TL	79	383,93
CBC020TL	20	67,79	CBC050TL	50	161,90	CBC080TL	80	397,98
CBC021TL	21	70,62	CBC051TL	51	220,67	CBC081TL	81	397,98
CBC022TL	22	74,98	CBC052TL	52	230,43	CBC082TL	82	397,98
CBC023TL	23	77,38	CBC053TL	53	237,90	CBC083TL	83	397,98
CBC024TL	24	79,44	CBC054TL	54	246,92	CBC084TL	84	397,98
CBC025TL	25	82,37	CBC055TL	55	258,18	CBC085TL	85	397,98
CBC026TL	26	92,15	CBC056TL	56	258,18	CBC086TL	86	397,98
CBC027TL	27	95,32	CBC057TL	57	258,18	CBC087TL	87	397,98
CBC028TL	28	97,02	CBC058TL	58	258,18	CBC088TL	88	397,98
CBC029TL	29	98,63	CBC059TL	59	258,18	CBC089TL	89	397,98
CBC030TL	30	100,18	CBC060TL	60	258,18	CBC090TL	90	408,71
CBC031TL	31	102,14	CBC061TL	61	310,19	CBC091TL	91	408,71
CBC032TL	32	104,90	CBC062TL	62	320,82	CBC092TL	92	408,71
CBC033TL	33	107,45	CBC063TL	63	329,67	CBC093TL	93	408,71
CBC034TL	34	110,85	CBC064TL	64	341,07	CBC094TL	94	417,58
CBC035TL	35	115,82	CBC065TL	65	352,21	CBC095TL	95	421,83
CBC036TL	36	117,80	CBC066TL	66	352,21	CBC096TL	96	421,83
CBC037TL	37	121,10	CBC067TL	67	352,21	CBC097TL	97	421,83
CBC038TL	38	124,62	CBC068TL	68	352,21	CBC098TL	98	426,41
CBC039TL	39	133,76	CBC069TL	69	352,21	CBC099TL	99	431,23
CBC040TL	40	135,55	CBC070TL	70	357,24	CBC100TL	100	455,79
CBC041TL	41	135,55	CBC071TL	71	357,24			

These HOLESAWS are always delivered with arbor, which is included in price.

**RESHARPENABLE HOLESAWS DISPLAY**

CBC41P

Content: 39 Ref. CBC HOLESAWS  
Ø 12 - Ø 50 mm

2.566,88 €



\* Boxes and displays on request

**HSS RESHARPENABLE HOLE SAW FOR THIN METAL SHEET**
**HSS**

Ref. CCF


**AI**

**C-U-Ni-La**
**CAST IRON**
**2 mm CUTTING CAPACITY**


CCF			CCF		
	Ø mm	€		Ø mm	€
CCF12	12	31,53	CCF31	31	61,98
CCF13	13	31,59	CCF32	32	62,65
CCF14	14	31,59	CCF33	33	64,74
CCF15	15	31,59	CCF34	34	66,60
CCF16	16	31,59	CCF35	35	67,33
CCF17	17	33,81	CCF36	36	70,75
CCF18	18	36,41	CCF37	37	73,91
CCF19	19	38,40	CCF38	38	74,17
CCF20	20	40,49	CCF39	39	76,46
CCF21	21	40,81	CCF40	40	78,56
CCF22	22	42,55	CCF41	41	78,03
CCF23	23	44,81	CCF42	42	78,38
CCF24	24	47,16	CCF43	43	82,24
CCF25	25	49,18	CCF44	44	83,81
CCF26	26	51,23	CCF45	45	84,26
CCF27	27	53,33	CCF46	46	87,80
CCF28	28	56,21	CCF47	47	88,10
CCF29	29	58,35	CCF48	48	88,41
CCF30	30	58,45	CCF49	49	92,12

These hole saws are always delivered with an arbor, which is included in the price.



Ref. AT12



Ref. CM12

**ARBORS FOR RESHARPENABLE HOLESAWS**

	DESCRIPTION	RANGE Ø mm	€
AT09	Shank Ø7mm Triangular thread M9x1,25+drill Ø5mm	10 - 13	17,22
AT10	Shank Ø8mm Triangular thread M10x1,25+drill Ø5mm	14 - 22	17,22
AT12	Shank Ø9mm Triangular thread M12x1,25+drill Ø6mm	23 - 40	19,29
AT16	Shank Ø10mm Triangular thread M16x1,25+drill Ø6mm	41 - 60	24,50
CM09	Morse Taper 2 - thread M09x1,25 + drill Ø5mm	10 - 13	44,31
CM10	Morse Taper 2 - thread M10x1,25 + drill Ø5mm	14 - 22	44,31
CM12	Morse Taper 2 - thread M12x1,25 + drill Ø6mm	23 - 40	45,29
CM16	Morse Taper 2 - thread M16x1,25 + drill Ø6mm	41 - 60	45,29

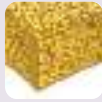
**PILOT DRILL**

	DESCRIPTION	RANGE Ø mm	€
B5	HSS Ø 5 mm	10 - 22	6,76
B6	HSS Ø 6 mm	23 - 60	7,78
B6TiN	HSS + TiN Ø 6 mm	23 - 60	11,97



**CARBIDE TEETH HOLE SAW**

Ref. CBMD



**35 mm  
CUTTING  
CAPACITY**



- Carbide teeth.
- Special for intensive works in stainless steel.
- Higher lifetime in abrasive conditions than bi-metal holesaws.
- Drill when bimetal hole-saws stop working.
- Increase and improve the drilling productivity.
- We recommend to drill metallic materials up to 3mm thickness.

Ø mm			Blister	
	Ref.	€	Ref.	€
19	CBMD19	16,86	CBMD19B	16,86
22	CBMD22	19,53	CBMD22B	19,53
25	CBMD25	22,18	CBMD25B	22,18
30	CBMD30	26,62	CBMD30B	26,62
32	CBMD32	28,30	CBMD32B	28,30
35	CBMD35	31,07	CBMD35B	31,07
37	CBMD37	32,85	CBMD37B	32,85
38	CBMD38	33,74	CBMD38B	33,74
44	CBMD44	39,04	CBMD44B	39,04
48	CBMD48	42,61	CBMD48B	42,61
51	CBMD51	45,27	CBMD51B	45,27
54	CBMD54	47,93	CBMD54B	47,93
57	CBMD57	50,50	CBMD57B	50,50
60	CBMD60	53,25	CBMD60B	53,25
64	CBMD64	56,81	CBMD64B	56,81
67	CBMD67	59,48	CBMD67B	59,48
70	CBMD70	62,13	CBMD70B	62,13
76	CBMD76	67,46	CBMD76B	67,46
83	CBMD83	73,68	CBMD83B	73,68
86	CBMD86	76,35		
89	CBMD89	79,01		
95	CBMD95	84,34		
102	CBMD102	90,55		
108	CBMD108	95,86		
111	CBMD111	98,54		
114	CBMD114	101,20		
121	CBMD121	107,41		
127	CBMD127	112,73		
140	CBMD140	124,28		
146	CBMD146	129,60		
152	CBMD152	134,92		

- the arbors for the CBMD hole saw are the same than for CB and COB holesaws

**CARBIDE TIPPED HOLE SAW WITH SLUG PIN EJECTED FOR SERIAL WORKS**

Holesaws

Pink

Ref. CP

**CARBIDE TIPPED**



**Al**



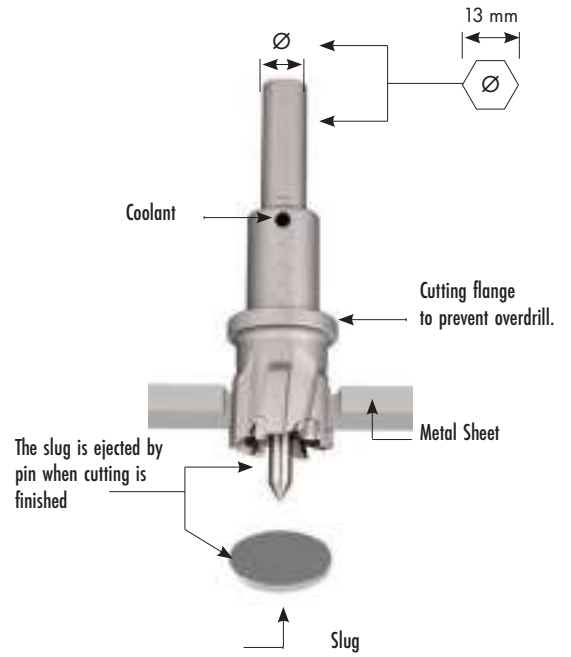
**Cu-Ni-La**

**CAST IRON**

**12 mm CUTTING CAPACITY**



		CP
	Ø mm	€
CP1500	15	105,74
CP1600	16	105,74
CP1700	17	105,74
CP1800	18	105,74
CP1900	19	105,74
CP2000	20	105,74
CP2100	21	105,74
CP2200	22	117,15
CP2300	23	117,15
CP2400	24	117,15
CP2500	25	125,44
CP2600	26	125,44
CP2700	27	125,44
CP2800	28	125,44
CP2900	29	125,44
CP3000	30	125,44
CP3100	31	148,25
CP3200	32	148,25
CP3300	33	148,25
CP3400	34	148,25
CP3500	35	148,25



**REPLACEMENT PIN**



		PCP01
		€
PCP01	Ø 6 x 53 mm	17,79



**CARBIDE TIPPED SUPER HOLESAW FOR ALL MATERIALS (SPECIAL FOR STAINLESS STEEL)**



**CARBIDE TIPPED**



**IN  $\alpha$**

**AI**



**CAST IRON**

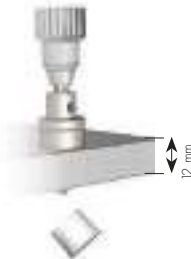
One piece hole saw



**12 mm CUTTING CAPACITY**

CX18-CX40:  $\varnothing$ 10 mm  
CX41-CX100:  $\varnothing$ 13 mm

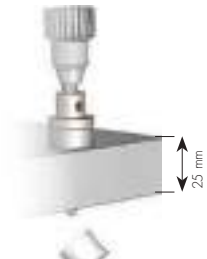
28 mm



**25 mm CUTTING CAPACITY**

$\varnothing$ 13 mm

35 mm



**STAINLESS STEEL SPECIFIC GEOMETRY**

Ref. CX

Ref. CXL

	$\varnothing$ mm	Z	€
CX18	18	4	77,27
CX19	19	4	77,27
CX20	20	6	78,42
CX21	21	6	80,34
CX22	22	6	80,34
CX23	23	6	80,34
CX24	24	6	80,34
CX25	25	6	80,34
CX26	26	6	88,66
CX27	27	6	88,66
CX28	28	6	88,66
CX29	29	6	88,66
CX30	30	6	88,66
CX31	31	6	104,19
CX32	32	6	107,77
CX33	33	6	107,77
CX34	34	8	107,77
CX35	35	8	107,77
CX36	36	8	117,59
CX38	38	8	117,59
CX39	39	8	117,59
CX40	40	8	117,59
CX41	41	8	135,97
CX42	42	8	135,97
CX43	43	8	135,97
CX44	44	10	135,97
CX45	45	10	135,97
CX46	46	10	156,16

	$\varnothing$ mm	Z	€
CX48	48	10	156,16
CX49	49	10	156,16
CX50	50	10	156,16
CX51	51	10	173,64
CX52	52	10	173,64
CX53	53	10	173,64
CX55	55	10	173,64
CX56	56	12	201,18
CX57	57	12	201,18
CX58	58	12	201,18
CX59	59	12	201,18
CX60	60	12	201,18
CX61	61	12	236,10
CX62	62	12	236,10
CX63	63	12	236,10
CX64	64	12	236,10
CX65	65	12	236,10
CX66	66	12	255,84
CX67	67	12	255,84
CX68	68	12	255,84
CX69	69	12	255,84
CX70	70	12	255,84
CX75	75	14	289,22
CX80	80	14	301,01
CX85	85	14	328,13
CX90	90	16	336,26
CX95	95	16	353,14
CX100	100	16	365,72

	$\varnothing$ mm	Z	€
CXL18	18	6	108,45
CXL19	19	6	108,45
CXL20	20	6	108,45
CXL21	21	6	108,45
CXL22	22	6	108,45
CXL23	23	6	108,45
CXL24	24	6	108,45
CXL25	25	6	108,45
CXL26	26	6	125,68
CXL27	27	6	125,68
CXL28	28	6	125,68
CXL29	29	6	125,68
CXL30	30	6	125,68
CXL31	31	6	145,50
CXL32	32	6	145,50
CXL33	33	6	145,50
CXL34	34	6	145,50
CXL35	35	6	145,50
CXL36	36	6	158,75
CXL38	38	6	158,75
CXL39	39	6	158,75
CXL40	40	8	158,75
CXL41	41	8	183,56
CXL42	42	8	183,56
CXL43	43	8	183,56
CXL44	44	8	183,56
CXL45	45	8	183,56
CXL46	46	8	210,83

	$\varnothing$ mm	Z	€
CXL48	48	8	210,83
CXL49	49	8	210,83
CXL50	50	8	210,83
CXL51	51	8	234,41
CXL52	52	8	234,41
CXL53	53	8	234,41
CXL55	55	8	234,41
CXL56	56	8	271,60
CXL57	57	8	271,60
CXL58	58	8	271,60
CXL59	59	8	271,60
CXL60	60	8	271,60
CXL61	61	10	318,74
CXL62	62	10	318,74
CXL63	63	10	318,74
CXL64	64	10	318,74
CXL65	65	10	318,74

**PILOT DRILLS CX**



		€
BRCX06X70	$\varnothing$ 6 x 70 mm	15,58

**PILOT DRILLS CXL**

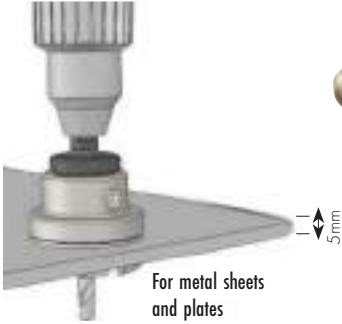


		€
BRCXL06X75	$\varnothing$ 6 x 75 mm	18,13

**CARBIDE TIPPED SUPER HOLE SAW FOR PIPE AND METAL SHEET (SPECIAL FOR STAINLESS STEEL)**
**CARBIDE  
TIPPED**

**IN  $\alpha$** 
**Al**

**Cu-Ni-La**
**CAST  
IRON**
**5 mm  
CUTTING  
CAPACITY**

 Ref. X  
 Ref. XT


	$\emptyset$ mm	Z	€
X14	14,0	3	84,62
X14,5	14,5	3	84,62
X15	15,0	3	84,62
X16	16,0	3	84,62
X17	17,0	4	84,62
X18	18,0	4	84,62
X19	19,0	4	84,62
X20	20,0	4	84,62
X21	21,0	4	84,62
X22	22,0	4	84,62
X23	23,0	4	84,62
X24	24,0	4	84,62
X25	25,0	4	84,62
X26	26,0	4	98,05
X27	27,0	4	98,05
X28	28,0	6	98,05
X29	29,0	6	98,05
X30	30,0	6	98,05
X31	31,0	6	113,53
X32	32,0	6	113,53
X33	33,0	6	113,53
X34	34,0	6	113,53
X35	35,0	8	113,53
X36	36,0	8	132,11
X37	37,0	8	132,11
X38	38,0	8	132,11
X39	39,0	8	132,11
X40	40,0	8	132,11
X41	41,0	8	152,75
X42	42,0	10	152,75
X43	43,0	10	152,75
X44	44,0	10	152,75
X45	45,0	10	152,75
X46	46,0	10	175,46
X47	47,0	10	175,46
X48	48,0	10	175,46
X49	49,0	10	175,46
X50	50,0	10	175,46
X51	51,0	10	195,08
X52	52,0	10	195,08
X53	53,0	10	195,08
X54	54,0	10	195,08

	$\emptyset$ mm	Z	€
X55	55,0	12	195,08
X56	56,0	12	226,03
X57	57,0	12	226,03
X58	58,0	12	226,03
X59	59,0	12	226,03
X60	60,0	12	226,03
X61	61,0	12	265,25
X62	62,0	12	265,25
X63	63,0	12	265,25
X64	64,0	12	265,25
X65	65,0	12	265,25
X66	66,0	12	287,42
X67	67,0	12	287,42
X68	68,0	12	287,42
X69	69,0	12	287,42
X70	70,0	12	287,42
X71	71,0	14	310,64
X72	72,0	14	310,64
X73	73,0	14	310,64
X74	74,0	14	310,64
X75	75,0	14	310,64
X76	76,0	14	333,89
X77	77,0	14	333,89
X78	78,0	14	333,89
X79	79,0	14	333,89
X80	80,0	14	333,89
X81	81,0	14	369,47
X82	82,0	16	369,47
X83	83,0	16	369,47
X84	84,0	16	369,47
X85	85,0	16	369,47
X89	89,0	16	405,60
X90	90,0	16	405,60
X91	91,0	16	422,12
X92	92,0	16	422,12
X95	95,0	16	422,12
X100	100,0	18	449,99
X102	102,0	18	496,42
X105	105,0	18	496,42
X110	110,0	20	546,99
X115	115,0	20	601,71
X120	120,0	20	663,10

	$\emptyset$ mm	Z	€
XT16	16,0	3	127,04
XT17	17,0	4	127,04
XT18	18,0	4	127,04
XT19	19,0	4	127,04
XT20	20,0	4	127,04
XT21	21,0	4	127,04
XT22	22,0	4	127,04
XT23	23,0	4	127,04
XT24	24,0	4	127,04
XT25	25,0	4	127,04
XT26	26,0	4	147,23
XT27	27,0	4	147,23
XT28	28,0	6	147,23
XT29	29,0	6	147,23
XT30	30,0	6	147,23
XT31	31,0	6	170,39
XT32	32,0	6	170,39
XT33	33,0	6	170,39
XT34	34,0	6	170,39
XT35	35,0	8	170,39
XT36	36,0	8	198,19
XT37	37,0	8	198,19
XT38	38,0	8	198,19
XT39	39,0	8	198,19
XT40	40,0	8	198,19
XT41	41,0	8	229,14
XT42	42,0	10	229,14
XT43	43,0	10	229,14
XT44	44,0	10	229,14
XT45	45,0	10	229,14
XT46	46,0	10	260,11
XT47	47,0	10	260,11
XT48	48,0	10	260,11
XT49	49,0	10	260,11
XT50	50,0	10	260,11
XT51	51,0	10	292,84
XT52	52,0	10	292,84
XT53	53,0	10	292,84
XT54	54,0	10	292,84
XT55	55,0	12	292,84
XT60	60,0	12	433,48
XT61	61,0	12	433,48

	$\emptyset$ mm	Z	€
XT62	62,0	12	433,48
XT65	65,0	12	433,48
XT70	70,0	12	454,10
XT75	75,0	14	491,26
XT80	80,0	14	528,43
XT85	85,0	16	584,13
XT90	90,0	16	639,89
XT95	95,0	16	670,85
XT100	100,0	18	712,13
XT105	105,0	18	784,37
XT110	110,0	20	866,94
XT115	115,0	20	953,65
XT120	120,0	20	1.052,73
XT130	130,0	20	1.650,42
XT140	140,0	25	1.939,11
XT150	150,0	28	2.353,09

**HSSCo PILOT DRILLS FOR METAL**


	CAPACITY $\emptyset$ mm	€		CAPACITY $\emptyset$ mm	€
X6	14 - 59	13,74	XT8	23 - 59	25,09
X8	60 - 120	16,21	XT8L	60 - 100	32,36
XT6	6 - 22	18,77	XT8XL	105 - 120	36,56

**GUIDELINES FOR MULTI PURPOSE CARBIDE TIPPED SUPER HOLESAW**



	<p>9mm Ø14-60 Ref. BCX1</p>	+	<p>Ref. C50X</p>	+	<p>Ref. CXX2</p>	=	
	<p>11mm Ø14-100 Ref. BCX2</p>						
	<p>9mm Ø14-60 Ref. BCX1</p>						
	<p>11mm Ø14-100 Ref. BCX2</p>						
	<p>FEIN 18-00 mm</p> <p>Ref. CXX18W</p>	+	<p>Ref. C50X    Ref. CXX</p>	+	<p>Ref. P750CA</p>	=	
	<p>DOBLE WELDON 19-05 mm</p> <p>Ref. CXXW</p>						
	<p>Ø14-100 Ref. CXXCM2</p>	+	<p>Ref. C50X</p>	=	<p>Ref. CXX2</p>	=	
	<p>Ø14-150 Ref. CXXCM3</p>						

**MULTI PURPOSE CARBIDE TIPPED SUPER HOLESAW FOR SOLID WORKPIECES**
**CARBIDE  
TIPPED**

Ref. CXX



AI



Cu-Ni-La

CAST  
IRON
**50 mm  
CUTTING  
CAPACITY**

**ARBORS FOR MULTI PURPOSE HOLESAWS HEXAGONAL SHANK**


	DESCRIPTION	RANGE Ø mm	€
BCX1	Hexagonal shank 9 mm	14 - 60	20,31
BCX2	Hexagonal shank 11 mm	14 - 100	20,31

**ARBORS FOR MULTI PURPOSE HOLESAWS TAPER MORSE SHANK**


	DESCRIPTION	RANGE Ø mm	€
CXXCM2	Taper morse shank 2	14 - 100	36,79
CXXCM3	Taper morse shank 3	14 - 150	39,14

**PILOT DRILLS**


	DESCRIPTION	€
CXX1	Ø 6 x 90L mm	6,59

CXX

**CONVERTERS**


Fein Type



Weldon Type

	DESCRIPTION	€
CXX18W	Fein Shank 18,00mm	36,79
CXXW	Weldon Shank 19,05mm	36,79

CXX

**PILOT PIN**


	DESCRIPTION	€
P750CA	Ø 6.35mm x 100mm	28,35

P

**MULTI PURPOSE CARBIDE TIPPED SUPER HOLESAW FOR PIPE AND METAL SHEET**

**CARBIDE TIPPED**

Ref. C50X



**ARBORS FOR MULTI PURPOSE HOLESAWS HEXAGONAL SHANK**



	DESCRIPTION	RANGE Ø mm	€
BCX1	Hexagonal shank 9 mm	14 - 60	20,31
BCX2	Hexagonal shank 11 mm	14 - 100	20,31

**ARBORS FOR MULTI PURPOSE HOLESAWS TAPER MORSE SHANK**



	DESCRIPTION	RANGE Ø mm	€
CXXCM2	Taper morse shank 2	14 - 100	36,79
CXXCM3	Taper morse shank 3	14 - 150	39,14

**PILOT DRILLS**



	DESCRIPTION	€
CXX2	Ø 6 x 75L mm	6,18

**CONVERTERS**



Fein Type



Weldon Type

	DESCRIPTION	€
CXX18W	Fein Shank 18,00mm	36,79
CXXW	Weldon Shank 19,05mm	36,79

**PILOT PIN**



	DESCRIPTION	€
P750CA	Ø 6.35mm x 100mm	28,35

	Ø mm	€
C50X14	14	60,93
C50X15	15	60,93
C50X16	16	60,93
C50X17	17	60,93
C50X18	18	60,93
C50X19	19	68,78
C50X20	20	68,78
C50X21	21	68,78
C50X22	22	68,78
C50X23	23	68,78
C50X24	24	68,78
C50X25	25	68,78
C50X26	26	74,82
C50X27	27	74,82
C50X28	28	74,82
C50X29	29	74,82
C50X30	30	74,82
C50X31	31	92,27
C50X32	32	92,27
C50X33	33	92,27
C50X34	34	92,27
C50X35	35	92,27
C50X36	36	111,03
C50X37	37	111,03
C50X38	38	111,03
C50X39	39	111,03
C50X40	40	111,03
C50X41	41	133,93
C50X42	42	133,93
C50X43	43	133,93
C50X44	44	133,93

	Ø mm	€
C50X45	45	133,93
C50X46	46	157,12
C50X47	47	157,12
C50X48	48	157,12
C50X49	49	157,12
C50X50	50	157,12
C50X51	51	179,57
C50X52	52	179,57
C50X53	53	179,57
C50X54	54	179,57
C50X55	55	179,57
C50X56	56	209,06
C50X57	57	209,06
C50X58	58	209,06
C50X59	59	209,06
C50X60	60	209,06
C50X61	61	253,68
C50X62	62	253,68
C50X63	63	253,68
C50X64	64	253,68
C50X65	65	253,68
C50X66	66	276,60
C50X67	67	276,60
C50X68	68	276,60
C50X69	69	276,60
C50X70	70	276,60
C50X75	75	370,83
C50X80	80	393,99
C50X85	85	417,18
C50X90	90	449,47
C50X100	100	609,40



**HEAVY DUTY CARBIDE TIPPED HOLESAWS WITH QUICK CHANGE POLY-CLIC  
 MORSE TAPER N° 4 AND N° 5 CONNECTION WITH INTERNAL COOLING**

Holesaws

Pink

Ref. MBM

**CARBIDE  
 TIPPED**

**IN Ø**
**AI**
**CAST  
 IRON**
**50 mm  
 CUTTING  
 CAPACITY**


- Always use internal Cooling
- In order to make possible their re-sharpening, don't wear out the teeth
- The engagement/contact should be progressive and smooth in order to avoid teeth breaks



	MBM		
	Ø mm	Z	€
MBM35	35,0	4	64,93*
MBM36	36,0	4	64,93*
MBM38	38,0	4	64,93*
MBM40	40,0	6	76,52*
MBM42	42,0	6	76,52*
MBM43	43,0	6	76,52*
MBM44	44,0	6	76,52*
MBM45	45,0	6	84,39*
MBM48	48,0	6	84,39*
MBM49	49,0	6	84,39*
MBM50	50,0	6	94,60*
MBM51	51,0	6	94,60*
MBM52	52,0	6	94,60*
MBM53	53,0	6	94,60*
MBM54	54,0	6	94,60*
MBM55	55,0	6	94,60*
MBM56	56,0	6	104,80*
MBM58	58,0	6	104,80*
MBM60	60,0	6	122,42*
MBM61	61,0	6	122,42*
MBM62	62,0	6	122,42*

	MBM		
	Ø mm	Z	€
MBM65	65,0	6	122,42*
MBM66	66,0	6	132,62*
MBM68	68,0	6	132,62*
MBM70	70,0	6	132,62*
MBM75	75,0	6	142,82*
MBM77	77,0	6	153,03*
MBM78	78,0	6	153,03*
MBM80	80,0	6	153,03*
MBM82	82,0	6	240,47*
MBM85	85,0	6	240,47*
MBM90	90,0	6	262,33*
MBM95	95,0	6	282,21*
MBM105	105,0	6	222,59*
MBM110	110,0	6	244,85*
MBM115	115,0	6	268,03*
MBM120	120,0	6	298,63*
MBM125	125,0	6	340,83*
MBM130	130,0	6	384,89*
MBM140	140,0	6	459,08*

\* Till end of stock


**TAPER SHANK ARBOR WITH RETRACTILE  
 GUIDING PILOT-HOLE SAW**

	DESCRIPTION	€
500MT4	Morse taper 4 arbor	192,91*
500MT5	Morse taper 5 arbor	199,40*

**SCREW HOLE PUNCHES FOR DRILLING UP TO 4 mm. SHEETS**

Ref. PC

**UP TO  
4 mm  
SHEETS**



**Use instructions**

- Drill prior hole by using our tube and sheet drill Ref. AV31.
- Introduce the screw Ref. PCM with one side of mechanism through the hole.
- At the other side thread the cutter Ref. PCC on the screw.
- Thread the screw by pressing until the cutter side Ref. PCC cuts the sheet against the body Ref. PBC.



THREAD	MAXIMUM SHEET THICKNESS TO DRILL			
	NORMAL STEEL	STAINLESS STEEL	NON-FERROUS	PLASTIC
M10x1.0	2.00 mm	1.00 mm	4.00 mm	4.00 mm
M12x1.5	3.00 mm	1.50 mm	4.00 mm	4.00 mm
M16x1.5	3.00 mm	1.50 mm	4.00 mm	4.00 mm

	∅	PC €
PC1270	12,70 PG7	33,93
PC1400	14,00	34,47
PC1520	15,20 PG9	34,81
PC1600	16,00	34,81
PC1650	16,50	35,58
PC1700	17,00	36,08
PC1800	18,00	36,08
PC1860	18,60 PG11	38,06
PC1900	19,00	38,06
PC2000	20,00	38,93
PC2040	20,40 PG13,5	38,93
PC2100	21,00	39,98
PC2200	22,00	41,58
PC2250	22,50 PG16	41,58
PC2300	23,00	43,05
PC2400	24,00	43,05
PC2500	25,00	45,71
PC2540	25,40	45,71

	∅	PC €
PC2600	26,00	47,23
PC2700	27,00	47,23
PC2830	28,30 PG21	47,23
PC2900	29,00	50,70
PC3000	30,00	50,70
PC3100	31,00	50,70
PC3200	32,00	51,39
PC3250	32,50	58,33
PC3300	33,00	58,33
PC3400	34,00	58,33
PC3500	35,00	58,33
PC3600	36,00	62,96
PC3700	37,00 PG29	62,96
PC3800	38,00	62,96
PC3900	39,00	79,91
PC4000	40,00	79,91
PC4050	40,50	80,34
PC4100	41,00	80,34

	∅	PC €
PC4200	42,00	87,31
PC4300	43,00	87,31
PC4400	44,00	89,93
PC4500	45,00	94,94
PC4600	46,00	94,94
PC4700	47,00 PG36	96,51
PC4800	48,00	104,16
PC4900	49,00	104,16
PC5000	50,00	107,35
PC5050	50,50	114,19
PC5100	51,00	114,19
PC5200	52,00	117,53
PC5300	53,00	117,53
PC5400	54,00 PG42	123,65
PC5500	55,00	123,65
PC6000	60,00 PG48	152,95
PC6350	63,50	175,79

**SCREW & WASHER**



DESCRIPTION		PCM €
PCM10	(Thread M10x1,50)Screw hole punches from ∅ 12,70 - 25,40 mm.	4,83
PCM12	(Thread M12x1,75)Screw hole punches from ∅ 26 - 41 mm.	4,83
PCM16	(Thread M16x2)Screw hole punches from ∅ 42 - 63,50 mm.	5,49

**SCREW HOLE PUNCH BODY**



PBC

Price per each diameter on request

**SCREW HOLE PUNCH CUTTER**



PCC

Price per each diameter on request

**CUTTING CONDITIONS FOR HSS & HSSCo HOLESAWS**
**FEED CHART**

mm/REV	 	  50 HRc	 IN CK	 CAST IRON	 Al
CB - COB - CBR	<b>0,053</b>	-	<b>0,05</b>	<b>0,075</b>	<b>0,12</b>
CBC - CCF	<b>0,063</b>	-	<b>0,055</b>	<b>0,085</b>	<b>0,15</b>

**R.P.M. SELECTION FOR HOLESAWS: CB - COB - CBR - CBC - CCF**

Cutting Speed (m/min...)	R.P.M. SELECTION FOR HOLESAWS: CB - COB - CBR - CBC - CCF																		
	100	95	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10
	3183	3024	2865	2706	2547	2387	2228	2069	1910	1751	1592	1432	1273	1114	955	796	637	477	318
	2122	2016	1910	1804	1698	1592	1485	1379	1273	1167	1061	955	849	743	637	531	424	318	212
	1952	1512	1432	1353	1273	1194	1114	1035	955	875	796	716	637	557	477	398	318	239	159
	1273	1512	1432	1353	1276	1194	1114	1035	955	875	796	716	637	557	477	398	318	239	159
	1061	1008	819	773	728	682	637	591	546	500	455	409	364	318	273	227	182	136	91
	909	864	819	773	728	682	637	591	546	500	455	409	364	318	273	227	182	136	91
	796	756	716	676	637	597	557	517	477	438	398	358	318	279	239	199	159	119	80
	637	605	573	541	509	477	446	414	382	350	318	286	255	223	191	159	127	95	64
	531	504	477	451	424	398	371	345	318	292	265	239	212	186	159	133	106	80	53
	455	432	409	387	364	341	318	296	273	250	227	205	192	159	136	114	91	68	45
	398	378	358	338	318	298	279	259	239	219	199	179	159	139	119	99	80	60	40
	354	336	318	301	283	265	248	230	212	195	177	159	141	124	106	88	71	53	35
	318	302	286	271	255	239	223	207	191	175	159	143	127	111	95	80	64	48	32
	<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>	<b>30</b>	<b>35</b>	<b>40</b>	<b>50</b>	<b>60</b>	<b>70</b>	<b>80</b>	<b>90</b>	<b>100</b>						

DIAMETER SELECTION (Ø mm)

**CUTTING CONDITIONS FOR CARBIDE TIPPED HOLESAWS**
**FEED CHART**

mm/REV	 	  50 HRc	 IN CK	 CAST IRON	 Al	 Ni
LIGHT: CX - CXL - X - XT	<b>0,035</b>	<b>0,025</b>	<b>0,02</b>	<b>0,040</b>	<b>0,075</b>	<b>0,020</b>
C50X - CXX - MBM - CBMD - CP	<b>0,10</b>	<b>0,075</b>	<b>0,095</b>	<b>0,15</b>	<b>0,22</b>	<b>0,07</b>

**R.P.M. SELECTION FOR HOLESAWS: CX - CXL - X - XT - C50X - CXX - MBM - CBMD - CP**

Cutting Speed (m/min...)	R.P.M. SELECTION FOR HOLESAWS: CX - CXL - X - XT - C50X - CXX - MBM - CBMD - CP																		
	100	95	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10
	3183	3024	2865	2706	2547	2387	2228	2069	1910	1751	1592	1432	1273	1114	955	796	637	477	318
	2122	2016	1910	1804	1698	1592	1485	1379	1273	1167	1061	955	849	743	637	531	424	318	212
	1952	1512	1432	1353	1273	1194	1114	1035	955	875	796	716	637	557	477	398	318	239	159
	1273	1512	1432	1353	1276	1194	1114	1035	955	875	796	716	637	557	477	398	318	239	159
	1061	1008	819	773	728	682	637	591	546	500	455	409	364	318	273	227	182	136	91
	909	864	819	773	728	682	637	591	546	500	455	409	364	318	273	227	182	136	91
	796	756	716	676	637	597	557	517	477	438	398	358	318	279	239	199	159	119	80
	637	605	573	541	509	477	446	414	382	350	318	286	255	223	191	159	127	95	64
	531	504	477	451	424	398	371	345	318	292	265	239	212	186	159	133	106	80	53
	455	432	409	387	364	341	318	296	273	250	227	205	192	159	136	114	91	68	45
	398	378	358	338	318	298	279	259	239	219	199	179	159	139	119	99	80	60	40
	354	336	318	301	283	265	248	230	212	195	177	159	141	124	106	88	71	53	35
	318	302	286	271	255	239	223	207	191	175	159	143	127	111	95	80	64	48	32
	<b>10</b>	<b>15</b>	<b>20</b>	<b>25</b>	<b>30</b>	<b>35</b>	<b>40</b>	<b>50</b>	<b>60</b>	<b>70</b>	<b>80</b>	<b>90</b>	<b>100</b>						

DIAMETER SELECTION (Ø mm)

# ANNULAR CUTTERS



**BLUE-MASTER<sup>®</sup>**  
*by celesa*


CUTTING TECHNOLOGIES

**ANNULAR CUTTERS FOR ELECTROMAGNETIC DRILLING MACHINES**

Holesaws

Pink

HSS



**75**  
Kg/m<sup>3</sup>

Ref. 250R

**30 mm**  
CUTTING  
CAPACITY

HSS



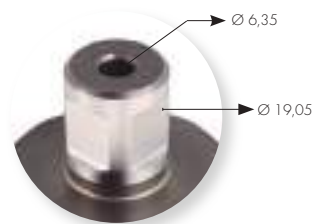
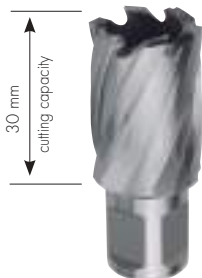
**75**  
Kg/m<sup>3</sup>

Ref. 500R

**50 mm**  
CUTTING  
CAPACITY

**AVAILABLE FOR MACHINE TYPES AS BELOW:**

Rota Broach - Alfa Rota Best - Magnetor - Slugger - Dr. Bemder - Bux - Hougen



250R		
	Ø mm	€
250R12	12	41,13
250R13	13	41,13
250R14	14	42,64
250R15	15	44,42
250R16	16	46,22
250R17	17	47,69
250R18	18	49,48
250R19	19	50,68
250R20	20	53,07
250R21	21	56,65
250R22	22	58,74
250R23	23	61,12
250R24	24	63,51
250R25	25	65,58
250R26	26	67,96
250R27	27	68,57
250R28	28	72,73
250R29	29	75,14
250R30	30	77,21
250R31	31	84,06
250R32	32	90,03
250R33	33	94,79
250R34	34	111,51
250R35	35	123,43
250R36	36	126,41
250R37	37	128,68
250R38	38	129,97
250R39	39	131,16
250R40	40	132,36
250R41	41	134,75
250R42	42	143,70
250R43	43	150,24
250R44	44	155,01
250R45	45	156,81
250R46	46	160,38
250R47	47	163,36
250R48	48	169,93
250R49	49	171,13
250R50	50	181,24


500R		
	Ø mm	€
500R12	12	78,56
500R13	13	78,56
500R14	14	59,03
500R15	15	61,40
500R16	16	65,58
500R17	17	67,96
500R18	18	73,04
500R19	19	74,54
500R20	20	76,61
500R21	21	85,26
500R22	22	87,65
500R23	23	90,64
500R24	24	93,31
500R25	25	95,99
500R26	26	98,96
500R27	27	103,74
500R28	28	108,52
500R29	29	112,69
500R30	30	117,46
500R31	31	123,43
500R32	32	128,78
500R33	33	134,75
500R34	34	140,72
500R35	35	146,69
500R36	36	150,84
500R37	37	156,52
500R38	38	160,99
500R39	39	172,91
500R40	40	181,85
500R41	41	184,84
500R42	42	187,22
500R43	43	191,99
500R44	44	194,37
500R45	45	200,33
500R46	46	202,71
500R47	47	214,04
500R48	48	219,41
500R49	49	220,59
500R50	50	225,37

**SCREW HOLE PUNCH BODY Ø 6,35 mm**


	DESCRIPTION	L mm	€
P250CA	Standard pin for cutters 250R/C/T series	71	18,40
P250CAA	For using with adaptors to FEIN/NITTO 250R/C/T	101	22,08
P500CA	Standard pin for cutters 500R/C/Tseries	92	25,88

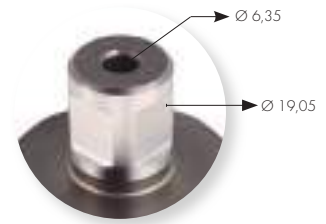
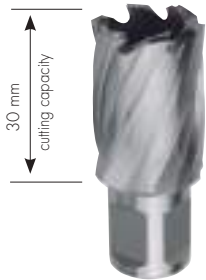


**ANNULAR CUTTERS FOR ELECTROMAGNETIC DRILLING MACHINES**

**HSSC 8%**  **110 Kg/m<sup>3</sup>** Ref. 250C **30 mm CUTTING CAPACITY**

**HSSC 8%**  **110 Kg/m<sup>3</sup>** Ref. 500C **50 mm CUTTING CAPACITY**

AVAILABLE FOR MACHINE TYPES AS BELOW:  
Rota Broach - Alfa Rota Best - Magnetor - Slugger - Dr. Bemder - Bux - Hougen



250C			250C		
	Ø mm	€		Ø mm	€
250C12	12	63,48	250C57	57	266,31
250C13	13	63,48	250C58	58	293,70
250C14	14	63,48	250C59	59	302,73
250C15	15	65,04	250C60	60	305,05
250C16	16	65,82	250C61	61	327,15
250C17	17	68,12	250C62	62	330,69
250C18	18	70,46	250C63	63	334,20
250C19	19	72,79	250C64	64	351,92
250C20	20	76,65	250C65	65	363,23
250C21	21	80,52	250C66	66	529,84
250C22	22	82,85	250C67	67	536,93
250C23	23	87,11	250C68	68	547,70
250C24	24	90,21	250C69	69	560,45
250C25	25	94,08	250C70	70	575,07
250C26	26	96,79	250C71	71	600,95
250C27	27	99,88	250C72	72	605,48
250C28	28	103,37	250C73	73	611,00
250C29	29	106,47	250C74	74	622,09
250C30	30	109,16	250C75	75	611,86
250C31	31	118,85	250C76	76	646,89
250C32	32	127,22	250C77	77	649,39
250C33	33	134,14	250C78	78	652,05
250C34	34	135,74	250C79	79	660,67
250C35	35	157,11	250C80	80	643,58
250C36	36	157,79	250C81	81	676,40
250C37	37	169,51	250C82	82	688,13
250C38	38	178,48	250C83	83	702,08
250C39	39	179,36	250C84	84	717,01
250C40	40	181,09	250C85	85	692,50
250C41	41	185,07	250C86	86	723,95
250C42	42	180,09	250C87	87	728,22
250C43	43	187,85	250C88	88	737,19
250C44	44	193,81	250C89	89	743,15
250C45	45	200,96	250C90	90	754,08
250C46	46	207,53	250C91	91	762,33
250C47	47	213,49	250C92	92	769,36
250C48	48	218,26	250C93	93	777,08
250C49	49	247,58	250C94	94	787,67
250C50	50	225,42	250C95	95	795,13
250C51	51	235,19	250C96	96	802,60
250C52	52	242,10	250C97	97	809,80
250C53	53	250,74	250C98	98	820,72
250C54	54	212,51	250C99	99	831,75
250C55	55	230,00	250C100	100	846,06
250C56	56	248,83			

500C			500C		
	Ø mm	€		Ø mm	€
500C12	12	87,41	500C57	57	402,92
500C13	13	82,46	500C58	58	444,54
500C14	14	82,46	500C59	59	458,25
500C15	15	85,95	500C60	60	469,91
500C16	16	92,90	500C61	61	480,84
500C17	17	94,08	500C62	62	487,56
500C18	18	105,32	500C63	63	506,21
500C19	19	108,00	500C64	64	514,56
500C20	20	113,43	500C65	65	528,18
500C21	21	120,39	500C66	66	594,11
500C22	22	123,10	500C67	67	612,35
500C23	23	127,35	500C68	68	621,15
500C24	24	130,07	500C69	69	630,03
500C25	25	135,50	500C70	70	639,29
500C26	26	141,10	500C71	71	671,01
500C27	27	146,72	500C72	72	674,82
500C28	28	142,64	500C73	73	679,19
500C29	29	149,54	500C74	74	690,24
500C30	30	135,95	500C75	75	679,07
500C31	31	143,12	500C76	76	721,19
500C32	32	149,08	500C77	77	727,10
500C33	33	153,87	500C78	78	735,00
500C34	34	159,23	500C79	79	741,48
500C35	35	164,00	500C80	80	719,38
500C36	36	169,37	500C81	81	753,75
500C37	37	172,94	500C82	82	761,19
500C38	38	178,89	500C83	83	772,71
500C39	39	193,26	500C84	84	781,56
500C40	40	199,54	500C85	85	763,37
500C41	41	203,93	500C86	86	808,42
500C42	42	210,87	500C87	87	820,31
500C43	43	218,42	500C88	88	824,23
500C44	44	225,97	500C89	89	828,22
500C45	45	231,64	500C90	90	836,13
500C46	46	239,82	500C91	91	844,32
500C47	47	245,48	500C92	92	855,93
500C48	48	253,05	500C93	93	863,07
500C49	49	321,09	500C94	94	873,73
500C50	50	261,23	500C95	95	885,92
500C51	51	349,70	500C96	96	893,26
500C52	52	355,47	500C97	97	902,39
500C53	53	363,15	500C98	98	912,68
500C54	54	372,76	500C99	99	934,10
500C55	55	380,44	500C100	100	943,91
500C56	56	405,42			

**SCREW HOLE PUNCH BODY Ø 6,35 mm**



	DESCRIPTION	L mm	€
P250CA	Standard pin for cutters 250R/C/T series	71	18,40
P250CAA	For using with adaptors to FEIN/NITTO 250R/C/T	101	22,08
P500CA	Standard pin for cutters 500R/C/T series	92	25,88

**ANNULAR CUTTERS FOR ELECTROMAGNETIC DRILLING MACHINES**
**HSSC**  
**8%**

**110**  
**Kg/m<sup>3</sup>**
**TiAlN**

Ref. 250T

**30 mm**  
**CUTTING**  
**CAPACITY**
**HSSC**  
**8%**

**110**  
**Kg/m<sup>3</sup>**
**TiAlN**

Ref. 500T

**50 mm**  
**CUTTING**  
**CAPACITY**

AVAILABLE FOR MACHINE TYPES AS BELOW:

Rota Broach - Alfa Rota Best - Magnetor - Slugger - Dr. Bemder - Bux - Hougen



250T			250T		
	Ø mm	€		Ø mm	€
250T12	12	82,18	250T36	36	213,61
250T13	13	82,18	250T37	37	231,16
250T14	14	82,18	250T38	38	241,86
250T15	15	85,61	250T39	39	252,56
250T16	16	85,61	250T40	40	261,12
250T17	17	92,25	250T41	41	262,40
250T18	18	95,68	250T42	42	274,73
250T19	19	97,60	250T43	43	285,03
250T20	20	101,46	250T44	44	292,97
250T21	21	108,72	250T45	45	302,46
250T22	22	113,43	250T46	46	311,20
250T23	23	117,52	250T47	47	319,11
250T24	24	121,78	250T48	48	325,46
250T25	25	126,49	250T49	49	364,42
250T26	26	131,22	250T50	50	334,97
250T27	27	135,71	250T51	51	347,96
250T28	28	139,99	250T52	52	357,14
250T29	29	144,48	250T53	53	368,63
250T30	30	148,55	250T54	54	398,51
250T31	31	162,25	250T55	55	433,93
250T32	32	173,81	250T56	56	466,11
250T33	33	184,94	250T57	57	495,97
250T34	34	196,27	250T58	58	542,77
250T35	35	202,90	250T59	59	558,18
			250T60	60	562,16

500T			500T		
	Ø mm	€		Ø mm	€
500T12	12	109,79	500T36	36	282,52
500T13	13	109,79	500T37	37	295,38
500T14	14	109,79	500T38	38	303,93
500T15	15	119,23	500T39	39	312,50
500T16	16	127,58	500T40	40	329,63
500T17	17	132,28	500T41	41	335,16
500T18	18	142,12	500T42	42	343,89
500T19	19	145,76	500T43	43	356,18
500T20	20	153,25	500T44	44	366,95
500T21	21	164,60	500T45	45	376,89
500T22	22	169,94	500T46	46	388,88
500T23	23	175,72	500T47	47	398,76
500T24	24	181,29	500T48	48	408,32
500T25	25	187,08	500T49	49	497,26
500T26	26	192,40	500T50	50	421,90
500T27	27	201,20	500T51	51	514,05
500T28	28	209,96	500T52	52	520,57
500T29	29	220,47	500T53	53	531,17
500T30	30	229,02	500T54	54	544,27
500T31	31	239,72	500T55	55	554,94
500T32	32	244,01	500T56	56	586,30
500T33	33	254,70	500T57	57	638,38
500T34	34	263,29	500T58	58	695,19
500T35	35	273,98	500T59	59	714,93
			500T60	60	731,91

**SCREW HOLE PUNCH BODY Ø 6,35 mm**


	DESCRIPTION	L mm	€
P250CA	Standard pin for cutters 250R/C/T series	71	18,40
P250CAA	For using with adaptors to FEIN/NITTO 250R/C/T	101	22,08
P500CA	Standard pin for cutters 500R/C/T series	92	25,88

**ANNULAR CUTTERS FOR ELECTROMAGNETIC DRILLING MACHINES**



Ref. 750C

**75 mm CUTTING CAPACITY**

Ref. 1000C

**100 mm CUTTING CAPACITY**



AVAILABLE FOR MACHINE TYPES AS BELOW:  
Rota Broach - Alfa Rota Best - Magnetor - Slugger - Dr. Bemder - Bux - Hougen



750C		
	Ø mm	€
750C50	50	397,49
750C51	51	414,65
750C52	52	418,48
750C53	53	422,21
750C54	54	427,32
750C55	55	434,11
750C56	56	442,32
750C57	57	446,58
750C58	58	456,73
750C59	59	467,65
750C60	60	491,24
750C61	61	510,66
750C62	62	525,33
750C63	63	535,29
750C64	64	549,00
750C65	65	562,71
750C66	66	703,03
750C67	67	719,42
750C68	68	734,70
750C69	69	746,57
750C70	70	756,28
750C71	71	767,03
750C72	72	779,58
750C73	73	791,46
750C74	74	801,94
750C75	75	810,94
750C76	76	820,40
750C77	77	827,76
750C78	78	836,08
750C79	79	853,24
750C80	80	876,32
750C81	81	902,45
750C82	82	911,46
750C83	83	938,33
750C84	84	958,52
750C85	85	982,22
750C86	86	1.011,63
750C87	87	1.040,92
750C88	88	1.058,17
750C89	89	1.083,30
750C90	90	1.106,94
750C91	91	1.143,95
750C92	92	1.177,31
750C93	93	1.202,36
750C94	94	1.239,78
750C95	95	1.275,05
750C96	96	1.295,15
750C97	97	1.322,10
750C98	98	1.348,26
750C99	99	1.370,27
750C100	100	1.394,12

750C		
	Ø mm	€
750C18	18	110,15
750C19	19	114,74
750C20	20	120,47
750C21	21	124,97
750C22	22	132,60
750C23	23	137,91
750C24	24	142,85
750C25	25	145,79
750C26	26	150,05
750C27	27	154,29
750C28	28	160,79
750C29	29	167,73
750C30	30	176,15
750C31	31	179,01
750C32	32	184,99
750C33	33	197,65
750C34	34	201,56
750C35	35	205,20
750C36	36	210,67
750C37	37	216,83
750C38	38	223,34
750C39	39	238,25
750C40	40	248,83
750C41	41	251,16
750C42	42	270,33
750C43	43	284,56
750C44	44	299,13
750C45	45	313,88
750C46	46	338,07
750C47	47	351,52
750C48	48	366,69
750C49	49	382,66



1000C		
	Ø mm	€
1000C18	18	161,09
1000C19	19	169,32
1000C20	20	177,57
1000C21	21	187,65
1000C22	22	195,72
1000C23	23	201,16
1000C24	24	210,84
1000C25	25	212,45
1000C26	26	213,96
1000C27	27	216,35
1000C28	28	226,36
1000C29	29	235,56
1000C30	30	246,99
1000C31	31	251,15
1000C32	32	257,63
1000C33	33	275,38
1000C34	34	279,31
1000C35	35	283,86
1000C36	36	291,77
1000C37	37	301,61
1000C38	38	308,90
1000C39	39	316,42
1000C40	40	326,26
1000C41	41	338,18
1000C42	42	364,09
1000C43	43	382,88
1000C44	44	402,00
1000C45	45	418,64
1000C46	46	436,47
1000C47	47	459,19
1000C48	48	481,74
1000C49	49	498,87

1000C		
	Ø mm	€
1000C50	50	506,13
1000C51	51	512,30
1000C52	52	514,94
1000C53	53	517,02
1000C54	54	520,14
1000C55	55	525,74
1000C56	56	531,57
1000C57	57	535,42
1000C58	58	548,61
1000C59	59	560,70
1000C60	60	584,05
1000C61	61	594,36
1000C62	62	610,44
1000C63	63	620,35
1000C64	64	636,75
1000C65	65	646,51
1000C66	66	749,05
1000C67	67	764,97
1000C68	68	779,21
1000C69	69	795,85
1000C70	70	802,08
1000C71	71	817,60
1000C72	72	829,28
1000C73	73	840,16
1000C74	74	849,60
1000C75	75	859,75
1000C76	76	870,88
1000C77	77	875,27
1000C78	78	879,75
1000C79	79	898,71
1000C80	80	919,98
1000C81	81	941,34
1000C82	82	957,82
1000C83	83	976,85
1000C84	84	999,81
1000C85	85	1.193,31
1000C86	86	1.239,41
1000C87	87	1.266,75
1000C88	88	1.294,00
1000C89	89	1.318,44
1000C90	90	1.353,72
1000C91	91	1.395,16
1000C92	92	1.432,76
1000C93	93	1.465,70
1000C94	94	1.515,26
1000C95	95	1.551,64
1000C96	96	1.577,68
1000C97	97	1.608,93
1000C98	98	1.637,12
1000C99	99	1.663,24
1000C100	100	1.702,07

**SCREW HOLE PUNCH BODY Ø 6,35 mm**



	DESCRIPTION	L mm	€
P750CA	Standard pin for cutters 750C series	123	28,35
P1000CA	Standard pin for cutters 1000C series	147	40,62
P1000CAA	For using with adaptors to FEIN/NITTO 1000C	177	34,02

**ANNULAR CUTTERS FOR ELECTROMAGNETIC DRILLING MACHINES**

Holesaws

Pink

**HSS**

**75**  
 Kg/m min

Ref. 1500C

**150 mm**  
 CUTTING  
 CAPACITY

**HSS**

**75**  
 Kg/m min

Ref. 2000C

**200 mm**  
 CUTTING  
 CAPACITY


1500C		
	Ø mm	€
1500C22	22	516,10
1500C24	24	555,96
1500C26	26	564,19
1500C28	28	596,87
1500C30	30	651,28
1500C32	32	741,25
1500C34	34	803,62
1500C36	36	839,51
1500C38	38	888,77
1500C40	40	938,71
1500C42	42	1.047,55
1500C44	44	1.156,66
1500C46	46	1.255,83
1500C48	48	1.386,07
1500C50	50	1.456,28
1500C52	52	1.648,48
1500C54	54	1.765,33
1500C55	55	1.939,52

2000C		
	Ø mm	€
2000C26	26	784,21
2000C28	28	829,67
2000C30	30	905,29
2000C32	32	1.030,33
2000C34	34	1.117,02
2000C36	36	1.247,27
2000C38	38	1.320,44
2000C40	40	1.394,62
2000C42	42	1.556,34
2000C44	44	1.718,42
2000C46	46	1.865,77
2000C48	48	2.111,56
2000C50	50	2.218,47
2000C52	52	2.320,21
2000C54	54	2.391,59

**SCREW HOLE PUNCH BODY Ø 8 mm**


	DESCRIPTION	L mm	€
P1500CA	Standard pin for cutters 1500 series	220	48,67
P2000CA	Standard pin for cutters 2000 series	248	61,66
P2500CA	Extra Long pin for use with annular cutters with extensions	310	72,03

**CARBIDE TIPPED CUTTERS FOR ELECTROMAGNETIC DRILLING MACHINES**

**35 mm  
CUTTING  
CAPACITY**

**50 mm  
CUTTING  
CAPACITY**

**CARBIDE  
TIPPED**



**IN  $\alpha$**

**AI**



**CAST  
IRON**

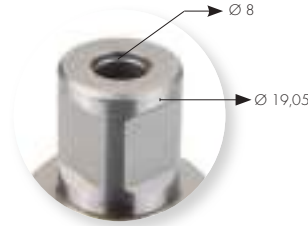


Holesaws

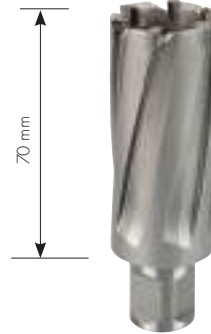
Pink



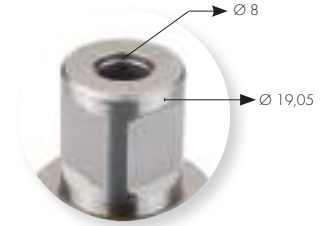
Ref. 350A



DOUBLE WELDON  
SHANK



Ref. 500A



DOUBLE WELDON  
SHANK

**35 mm CAPACITY**

	$\varnothing$ mm	€
350A12	12,0	133,16
350A13	13,0	134,41
350A14	14,0	134,42
350A15	15,0	134,42
350A16	16,0	134,42
350A17	17,0	134,42
350A17,5*	17,5	87,12
350A18	18,0	134,42
350A19	19,0	134,42
350A20	20,0	134,42
350A21	21,0	134,42
350A21,5*	21,5	93,49
350A22	22,0	144,23
350A22,5*	22,5	93,49
350A23	23,0	144,23
350A23,5*	23,5	93,49
350A24	24,0	144,23
350A24,5*	24,5	93,49
350A25	25,0	144,23

	$\varnothing$ mm	€
350A26	26,0	144,23
350A26,5*	26,5	93,49
350A27	27,0	144,23
350A28	28,0	144,23
350A29	29,0	144,23
350A30	30,0	144,23
350A31	31,0	160,64
350A32	32,0	160,64
350A33	33,0	160,64
350A34	34,0	160,64
350A35	35,0	160,64
350A36	36,0	160,64
350A37	37,0	160,64
350A38	38,0	160,64
350A39	39,0	183,59
350A40	40,0	185,89
350A41	41,0	188,18
350A42	42,0	190,48
350A43	43,0	192,77
350A44	44,0	195,07
350A45	45,0	197,36
350A46	46,0	199,66
350A47	47,0	201,95
350A48	48,0	204,25
350A49	49,0	206,54
350A50	50,0	208,83
350A51	51,0	211,13
350A52	52,0	213,42

**50 mm CUTTING CAPACITY**

	$\varnothing$ mm	€
500A14	14,0	151,04
500A15	15,0	151,04
500A16	16,0	151,04
500A17	17,0	151,04
500A17,5*	17,5	97,90
500A18	18,0	151,04
500A19	19,0	151,04
500A20	20,0	151,04
500A21	21,0	151,04
500A21,5*	21,5	104,73
500A22	22,0	161,58
500A22,5*	22,5	104,73
500A23	23,0	161,58
500A23,5*	23,5	104,73
500A24	24,0	161,58
500A24,5*	24,5	104,73
500A25	25,0	161,58
500A26	26,0	161,58
500A26,5*	26,5	104,73
500A27	27,0	161,58
500A28	28,0	161,58
500A29	29,0	161,58
500A30	30,0	161,58
500A31	31,0	179,14
500A32	32,0	179,14
500A33	33,0	179,14
500A34	34,0	179,14
500A35	35,0	179,14
500A36	36,0	205,46
500A37	37,0	205,46
500A38	38,0	205,46
500A39	39,0	205,46

	$\varnothing$ mm	€
500A40	40,0	205,46
500A41	41,0	240,60
500A42	42,0	240,60
500A43	43,0	240,60
500A44	44,0	240,60
500A45	45,0	240,60
500A46	46,0	266,94
500A47	47,0	266,94
500A48	48,0	266,94
500A49	49,0	266,94
500A50	50,0	266,94
500A51	51,0	295,03
500A52	52,0	295,03
500A53	53,0	295,03
500A54	54,0	295,03
500A55	55,0	295,03
500A56	56,0	333,67
500A57	57,0	333,67
500A58	58,0	333,67
500A59	59,0	333,67
500A60	60,0	333,67
500A61	61,0	386,36
500A62	62,0	386,36
500A63	63,0	386,36
500A64	64,0	386,36
500A65	65,0	386,36
500A66	66,0	409,77
500A67	67,0	409,77
500A68	68,0	409,77
500A69	69,0	409,77
500A70	70,0	409,77

Shank 32 mm

\*Until end of stock



- The hit between cutter and material must be soft, without crashings or hard pushings.
- Use CUT MAGIC cutting fluid.

**PILOT PINS FOR CARBIDE TIPPED CUTTERS**



Ref. P350AA



Ref. P350AA-1

	DESCRIPTION	$\varnothing \times L$ mm	€
P350AA	350A $\varnothing$ 12 - 15 mm cutters	$\varnothing$ 5 x 91	19,67
P350AA-1	350A $\varnothing$ 16 - 52 mm cutters	$\varnothing$ 8 x 91	19,96
P500AA	500A $\varnothing$ 14 - 16 mm cutters	$\varnothing$ 5 x 112	22,86
P500AA	500A $\varnothing$ 17 - 70 mm cutters	$\varnothing$ 8 x 112	22,40



**CARBIDE TIPPED CUTTERS FOR ELECTROMAGNETIC DRILLING MACHINES**
**75 mm**  
 CUTTING  
 CAPACITY

**100 mm**  
 CUTTING  
 CAPACITY

**CARBIDE**  
 TIPPED

**IN Ø**
**AI**

**CAST**  
**IRON**


Ref. 750A



Ref. 1000A

**75 mm CAPACITY**

750A			750A		
	Ø mm	€		Ø mm	€
750A17	17	192,35	750A52	52	452,38
750A18	18	231,58	750A53	53	452,38
750A19	19	231,58	750A54	54	452,38
750A20	20	231,58	750A55	55	452,38
750A21	21	231,58	750A56	56	511,63
750A22	22	247,75	750A57	57	511,63
750A23	23	247,75	750A58	58	511,63
750A24	24	247,75	750A59	59	511,63
750A25	25	247,75	750A60	60	511,63
750A26	26	247,75	750A61	61	592,41
750A27	27	247,75	750A62	62	592,41
750A28	28	247,75	750A63	63	592,41
750A29	29	247,75	750A64	64	592,41
750A30	30	247,75	750A65	65	592,41
750A31	31	274,69	750A66	66	592,41
750A32	32	274,69	750A67	67	592,41
750A33	33	274,69	750A68	68	592,41
750A34	34	274,69	750A69	69	592,41
750A35	35	274,69	750A70	70	592,41
750A36	36	315,05	750A75	75	623,21
750A37	37	315,05	750A80	80	658,52
750A38	38	315,05	750A85	85	714,41
750A39	39	315,05	750A90	90	784,59
750A40	40	315,05	750A95	95	819,47
750A41	41	368,93	750A100	100	896,37
750A42	42	368,93	750A105	105	1.232,56
750A43	43	368,93	750A110	110	1.232,56
750A44	44	368,93	750A115	115	1.589,77
750A45	45	368,93	750A120	120	1.589,77
750A46	46	409,31	750A125	125	2.045,30
750A47	47	409,31	750A130	130	1.804,68
750A48	48	409,31	750A135	135	2.231,11
750A49	49	409,31	750A140	140	2.231,11
750A50	50	409,31	750A145	145	2.824,38
750A51	51	452,38	750A150	150	2.824,38

Shank 32 mm

**100 mm CUTTING CAPACITY**

1000A			1000A		
	Ø mm	€		Ø mm	€
1000A25	25	284,91	1000A56	56	647,21
1000A27	27	284,91	1000A57	57	647,21
1000A28	28	284,91	1000A58	58	647,21
1000A29	29	284,91	1000A59	59	647,21
1000A30	30	284,91	1000A60	60	647,21
1000A31	31	315,89	1000A61	61	749,40
1000A32	32	315,89	1000A62	62	749,40
1000A33	33	315,89	1000A63	63	749,40
1000A34	34	315,89	1000A64	64	749,40
1000A35	35	326,33	1000A65	65	749,40
1000A36	36	362,30	1000A66	66	749,40
1000A37	37	362,30	1000A67	67	777,54
1000A38	38	362,30	1000A68	68	777,54
1000A39	39	362,30	1000A69	69	777,54
1000A40	40	383,78	1000A70	70	777,54
1000A41	41	424,27	1000A75	75	777,54
1000A42	42	424,27	1000A80	80	797,22
1000A43	43	466,70	1000A85	85	902,16
1000A44	44	466,70	1000A90	90	945,54
1000A45	45	466,70	1000A95	95	988,92
1000A46	46	517,78	1000A100	100	1.044,54
1000A47	47	517,78	1000A105	105	1.470,96
1000A48	48	517,78	1000A110	110	1.470,96
1000A49	49	517,78	1000A115	115	1.965,24
1000A50	50	539,79	1000A120	120	1.965,24
1000A51	51	572,27	1000A125	125	2.519,59
1000A52	52	572,27	1000A130	130	2.519,59
1000A53	53	572,27	1000A135	135	3.151,80
1000A54	54	572,27	1000A140	140	3.151,80
1000A55	55	572,27	1000A145	145	4.233,43
			1000A150	150	4.233,43

Shank 32 mm

**PILOT PINS FOR CARBIDE TIPPED CUTTERS**


	DESCRIPTION	Ø x L mm	€
P750AA	750A Ø 17 - 70 mm cutters	Ø8x140	30,84
P750AA-1	750A Ø 75 - 150 mm cutters	Ø8x160	36,22
P1000AA	1000A Ø 25 - 70 mm cutters	Ø8x160	40,18
P1000AA-1	1000A Ø 75 - 150 mm cutters	Ø8x190	47,10

**ANNULAR CUTTER FOR ELECTROMAGNETIC DRILLING MACHINES WITH DOUBLE WELDON Ø 19,05 mm  
SPECIAL FOR RAILROADS, HARDOX ...**



- Solid carbide teeth.
- For extremely hard materials.
- Possibility to work in lathes and drilling and milling machines.
- Possibility to work with quick change morse taper



Holesaws

Pink

Ref. MB250AT  
Ref. MB500AT

**HSSCo**  
**8%**

**TiA IN**

**HARDOX**  
**450**

**HARDOX**  
**500**

Ref. MB350ST  
Ref. MB500ST

**CARBIDE**  
**TIPPED**

**HARDOX**  
**450**

**HARDOX**  
**500**

**HARDOX**  
**600**

**25 mm**  
**CUTTING**  
**CAPACITY**



Ref. MB250AT

**25 mm CAPACITY**

**50 mm**  
**CUTTING**  
**CAPACITY**



Ref. MB500AT

**50 mm CAPACITY**

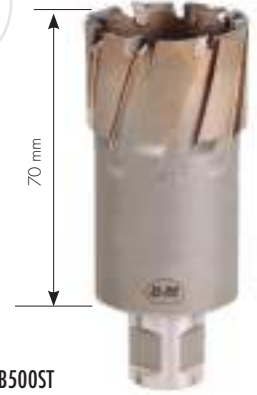
**35 mm**  
**CUTTING**  
**CAPACITY**



Ref. MB350ST

**35 mm CAPACITY**

**50 mm**  
**CUTTING**  
**CAPACITY**



Ref. MB500ST

**50 mm CAPACITY**

MB250AT		
	Ø mm	€
MB250AT16	16	137,11
MB250AT18	18	141,04
MB250AT20	20	144,97
MB250AT22	22	151,44
MB250AT24	24	156,87
MB250AT26	26	161,91
MB250AT28	28	167,12
MB250AT30	30	172,39
MB250AT32	32	202,41

MB500AT		
	Ø mm	€
MB500AT16	16	171,05
MB500AT18	18	180,20
MB500AT20	20	189,33
MB500AT22	22	197,22
MB500AT24	24	203,67
MB500AT26	26	210,20
MB500AT28	28	220,69
MB500AT30	30	233,70
MB500AT32	32	257,84

MB350ST		
	Ø mm	€
MB350ST18	18	154,94
MB350ST19	19	154,94
MB350ST20	20	154,94
MB350ST21	21	156,02
MB350ST22	22	166,27
MB350ST23	23	166,26
MB350ST24	24	166,27
MB350ST25	25	166,26
MB350ST26	26	166,27
MB350ST27	27	166,26
MB350ST28	28	166,27
MB350ST29	29	166,26
MB350ST30	30	166,27
MB350ST31	31	166,26
MB350ST32	32	185,17
MB350ST33	33	185,17
MB350ST34	34	185,17
MB350ST35	35	185,17
MB350ST36	36	185,17

MB500ST		
	Ø mm	€
MB500ST37	37	217,32
MB500ST38	38	217,32
MB500ST39	39	217,32
MB500ST40	40	217,32
MB500ST41	41	233,85
MB500ST42	42	233,85
MB500ST43	43	233,85
MB500ST44	44	233,85
MB500ST45	45	233,85
MB500ST46	46	272,94
MB500ST47	47	272,94
MB500ST48	48	272,94
MB500ST49	49	272,94
MB500ST50	50	272,94

**Ø 6,35 mm PILOT PINS Ref. MB250AT  
and Ref. MB500AT ANNULAR CUTTERS**



	DESCRIPTION	L mm	€
P250CA	Ref. MB250AT Ø 16-32 mm cutters	71	18,40
P500CA	Ref. MB500AT Ø 16-32 mm cutters	92	25,88

**PILOT PINS  
Ref. MB350ST & MB500ST ANNULAR CUTTERS**



	DESCRIPTION	Ø x L mm	€
P350AA-1	Ref. MB350ST Ø18-36 mm	Ø8x91	19,96
P500AA	Ref. MB500ST Ø37-50 mm	Ø8x112	22,40

**DRILLS, TAPS AND ACCESSORIES FOR ELECTROMAGNETIC DRILLING MACHINES**

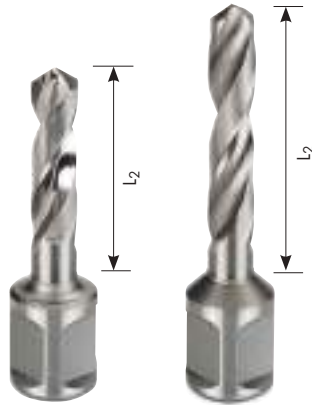
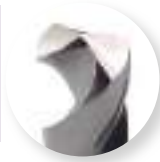
Holesaws

Pink

**HSS**

DRILL BIT

Ref. BMG

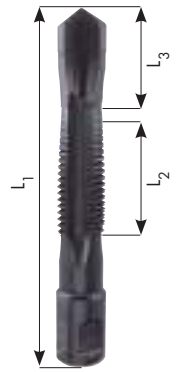
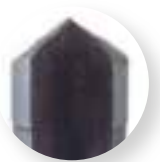


	Ø mm	L <sub>2</sub> mm	BMG €	L <sub>2</sub> mm	BMGL €
BMG0600	6,00	25	40,20	50	50,25
BMG0675	6,75	25	40,20	50	
BMG0700	7,00	25	40,20	50	50,25
BMG0800	8,00	25	40,20	50	50,25
BMG0850	8,50	25	40,20	50	
BMG0900	9,00	25	40,20	50	50,25
BMG1000	10,00	25	42,35	50	52,93
BMG1020	10,20	25	42,35	50	
BMG1100	11,00	25	42,35	50	52,93
BMG1200	12,00	25	42,35	50	52,93
BMG1300	13,00	25	45,35	50	60,31
BMG1400	14,00	25	46,20	50	61,45
BMG1500	15,00	25	46,63	50	62,96
BMG1600	16,00	25	57,55	50	71,94

**HSS**

DRILL TAP

Ref. MBE



	Ø	L <sub>1</sub> x L <sub>2</sub> x L <sub>3</sub> mm	THREAD	MBE €
MBE8M08X1,25	6,75	110x12,5x15	M 8 x 1,25	79,10
MBE8M10X1,50	8,50	113x15,0x15	M10 x 1,50	79,10
MBE8M12X1,75	10,20	117x18,0x16	M12 x 1,75	79,10
MBE8M14X2,00	12,00	117x20,0x16	M14 x 2,00	79,10
MBE8M16X2,00	14,00	117x20,0x16	M16 x 2,00	79,10
MBE8M18X2,50	15,50	130x25,0x16	M18 x 2,50	79,10
MBE8M20X2,50	17,50	135x25,0x16	M20 x 2,50	87,97
MBE8M22X2,50	19,50	135x25,0x17	M22 x 2,50	94,04
MBE8M24X3,00	21,00	148x30,0x17	M24 x 3,00	125,58
MBE8M27X3,00	24,00	155x30,0x18	M27 x 3,00	160,44
MBE8M30X3,50	26,50	169x63,0x19	M30 x 3,50	182,56

**HSS**

COUNTERSINK

Ref. ABE

**90°**


	Ø mm	ABE €
ABE25	25	98,55
ABE30	30	101,09
ABE40	40	114,83
ABE50	50	177,83
ABE55	55	194,96
ABE63	63	248,46



DRILLS, TAPS AND ACCESSORIES FOR ELECTROMAGNETIC DRILLING MACHINES

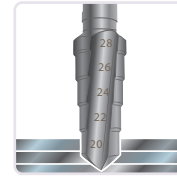
Holesaws

Pink

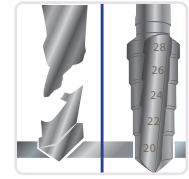
HSS

COUNTERSINK

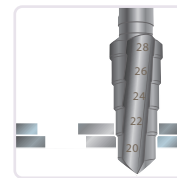
Ref. MBE



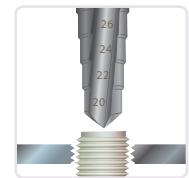
Several dimensions  
in one tool



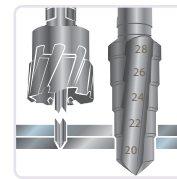
More rigid than hole saws



Able to drill two separate pieces.  
Can align two non-coaxial holes.



Able to enlarge holes.



Can drill through different  
sheets without breaking  
problem as in the hole-saws.



No need pin guide.

MBE					
	Ø Z mm min - max	Geometry	Z	Lz mm	€
MBE08-16	8 - 10 - 12 - 14 - 16	Type A	5	12	43,70
MBE10-18	10 - 12 - 14 - 16 - 18	Type A	5	12	48,37
MBE20-28	20 - 22 - 24 - 26 - 28	Type A	5	12	68,94
MBE30-38	30 - 32 - 34 - 36 - 38	Type B	5	12	107,32
MBE40-48	40 - 42 - 44 - 46 - 48	Type B	5	12	153,73
MBE10-14	10 - 12 - 14	Type A	3	25	37,15
MBE16-20	16 - 18 - 20	Type A	3	25	53,01
MBE22-26	22 - 24 - 26	Type B	3	25	63,63
MBE28-32	28 - 30 - 32	Type B	3	25	86,15
MBE34-38	34 - 36 - 38	Type B	3	25	107,35
MBE40-44	40 - 42 - 44	Type B	3	25	132,51
MBE46-50	46 - 48 - 50	Type B	3	25	159,04

Type A geometry: With tip and centre cutting.

Type B Geometry: Without tip and without centre cutting. Only enlarges holes already drilled.

HSS

Ref. MBE



Ref. MBEHEX1/4

MBEHEX1/4		
	DESCRIPTION	€
MBEHEX1/4	DOUBLE WELDON 19,05 ø 1/4"HEX	16,36

**EXTENSIONS FOR ELECTROMAGNETIC DRILLING MACHINES**
**SHANK: 19,05 mm DOUBLE WELDON**
**EXIT: 19,05 mm WELDON**


	L mm	D <sub>1</sub> mm	ACRWX
			€
ACRWX75	75	35	39,04
ACRWX100	100	35	86,67
ACRWX150	150	35	114,40
ACRWX200	200	35	154,85
ACRWX250	250	35	192,99

This adaptor is provided with an extension pilot pin which enables to use the HSS/HSSCo annular cutters with the original pilot pin, it is not necessary to replace it with an extra-large one. In the case of carbide teeth Annular Cutters it becomes necessary to replace the pilot pin with a larger one as P1500CA, P2000CA o P2500CA.

**EXTENSIONS FOR ELECTROMAGNETIC DRILLING MACHINES**


Ref. CMN°2



Ref. CMN°2SR



Ref. CMN°2CR



Ref. CMN°3



Ref. CMN°3SR



Ref. CMN°3x32



Ref. CMN°4x32



	L2 mm	L1 mm	CM	Exit	Cooling	€
CMN°2	43	158	2	19,05	Yes	162,52
CMN°2SR	43	158	2	19,05	No	105,64
CMN°2CR	43	158	2	19,05 Quick Change	Yes	275,75
CMN°3	43	177	3	19,05	Yes	162,52
CMN°3SR	43	177	3	19,05	No	105,64
CMN°3CR	43	177	3	19,05 Quick Change	Yes	275,75
CMN°4	80	250	4	19,05	Yes	209,65
CMN°5	80	270	5	19,05	Yes	228,69
CMN°3x32	116	229	3	32,00	Yes	239,68
CMN°4x32	116	250	4	32,00	Yes	299,47



**CONVERTERS FOR OTHER SHANK TYPES**



ACR18W

**SHANK: 18 mm FEIN  
EXIT: 19,05 mm DOUBLE WELDON**



ACRWB16

**SHANK: NITTO  
EXIT: 19,05 mm DOUBLE WELDON**



ACR18W  
39,04 €

**SHANK: 19,05 mm DOUBLE WELDON  
EXIT: M18 X 6 P1,5 THREAD**



ACRNITTO  
39,04 €

**SHANK: 19,05 mm DOUBLE WELDON  
EXIT: B16**



ACRWM18X6P1,5  
39,04 €

**SHANK: NITTO  
EXIT: M18 X 6 P1,5 THREAD**



ACRWB16  
39,04 €

**SHANK: 18 mm FEIN  
EXIT: B16**



ACRNM18X6P1,5  
39,04 €

**SHANK: 19,05 mm DOUBLE WELDON  
EXIT: 1/2 X 20 UNF**



ACR18B16  
39,04 €

**SHANK: NITTO / 19,05 mm DOUBLE WELDON  
EXIT: B16**



ACRW1/2X20  
39,04 €

**SHANK: NITTO / 19,05 mm DOUBLE WELDON  
EXIT: 1/2 X 20 UNF**

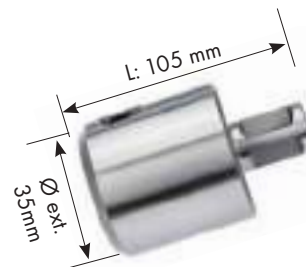


ACRNB16  
39,04 €

**SHANK: 19,05 mm DOUBLE WELDON  
EXIT: 32 mm DOUBLE WELDON**



ACRN1/2X20  
39,04 €



ACRWX32  
39,04 €

**ANNULAR CUTTERS FOR ELECTROMAGNETIC DRILLING MACHINE CASES AND METHACRYLATE DISPLAYS**

Holesaws

Pink



	Content:	€
<b>EFB250R1</b>	6 Ref. 250R cutters: Ø 12 - 14 - 16 - 18 - 20 - 22 mm 2 Pilot pins	<b>380,33</b>
<b>EFB250R2</b>	6 Ref. 250R cutters: Ø 24 - 25 - 26 - 28 - 30 - 32 mm 2 Pilot pins	<b>463,04</b>
<b>EFB250C1</b>	6 Ref. 250C cutters: Ø 12 - 14 - 16 - 18 - 20 - 22 mm 2 Pilot pins	<b>495,86</b>
<b>EFB250C2</b>	6 Ref. 250C cutters: Ø 24 - 25 - 26 - 28 - 30 - 32 mm 2 Pilot pins	<b>606,22</b>
<b>250RM14-24</b>	6 Ref. 250R cutters: Ø 14 - 16 - 18 - 20 - 22 - 24 mm 1 Pilot pin	<b>367,45</b>
<b>EFB500R1</b>	6 Ref. 500R cutters: Ø 12 - 14 - 16 - 18 - 20 - 22 mm 2 Pilot pins	<b>549,35</b>
<b>EFB500C1</b>	6 Ref. 500C cutters: Ø 12 - 14 - 16 - 18 - 20 - 22 mm 2 Pilot pins	<b>735,29</b>



Content: 20 Annular cutters

CFBE01

**HSS**Ref. 250R: Ø 14 - 16 - 18 - 20 - 22 - 24 - 26 - 28 - 30 - 32 mm  
Ref. 500R: Ø 14 - 16 - 18 - 20 - 22 - 24 - 26 - 28 - 30 - 32 mm**1.530,53 €**

Content: 20 Annular cutters

CFBE02

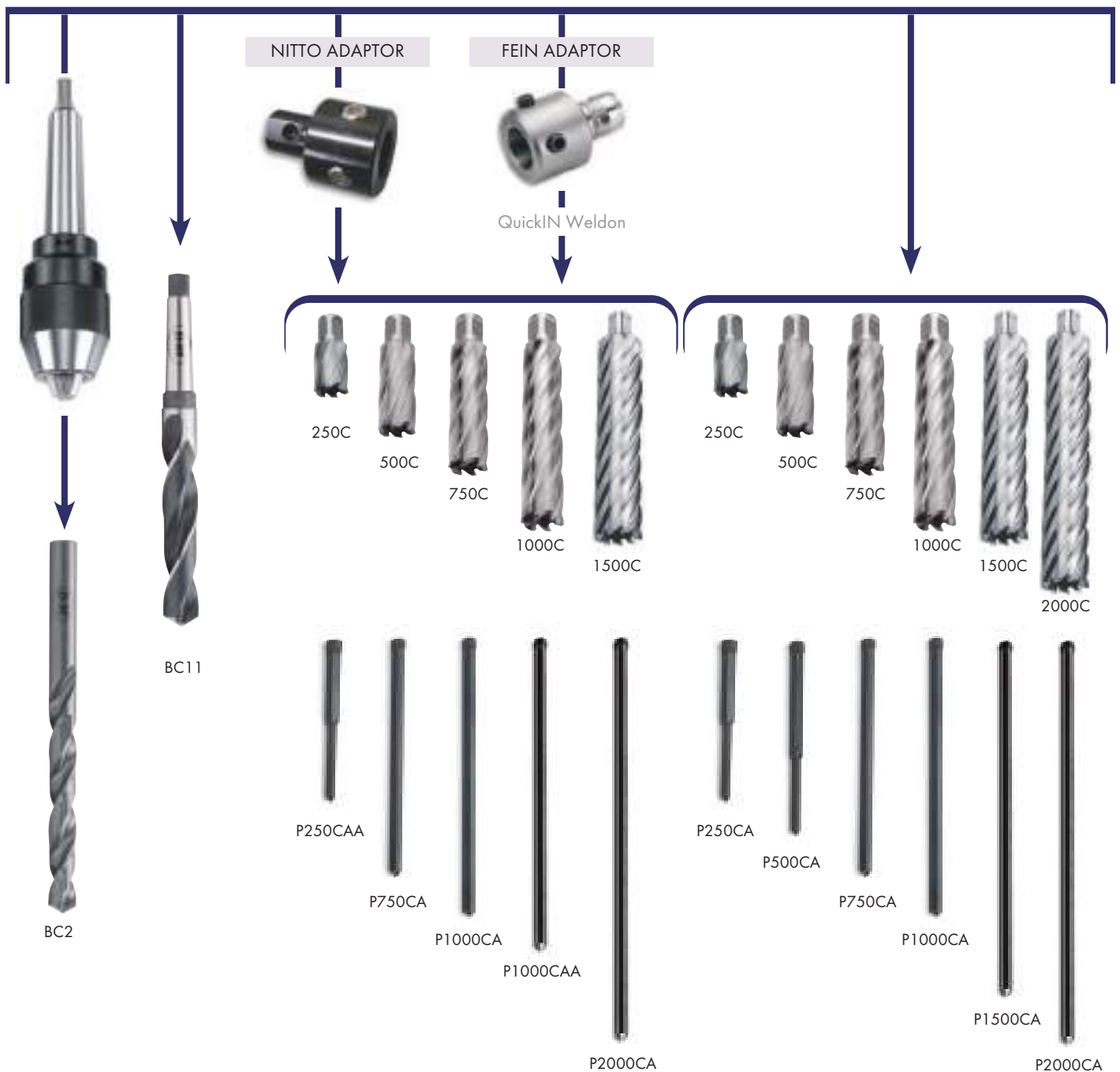
**HSS Co**Ref. 250C: Ø 14 - 16 - 18 - 20 - 22 - 24 - 26 - 28 - 30 - 32 mm  
Ref. 500C: Ø 14 - 16 - 18 - 20 - 22 - 24 - 26 - 28 - 30 - 32 mm**2.102,06 €**

Content: 18 Annular cutters

CFBE03

**CARBIDE  
TIPPED**Ref. 350A: Ø 14 - 16 - 18 - 20 - 22 - 24 - 26 - 28 - 30 - 32 mm  
Ref. 500A: Ø 18 - 20 - 22 - 24 - 26 - 28 - 30 - 32 mm**2.708,59 €**

**EXPLICATIVE ANNULAR CUTTERS ACCESSORIES EASY USING DIAGRAM**



**CUTTING CONDITIONS FOR ANNULAR CUTTERS**

mm/REV.						
						
250R - 500R - 1500C - 2000C	<b>0,053</b>	-	<b>0,05</b>	<b>0,075</b>	<b>0,12</b>	-
250C - 500C - 750C - 1000C - MB350AT - MB500AT	<b>0,063</b>	-	<b>0,055</b>	<b>0,085</b>	<b>0,15</b>	-
350A - 500A - 750A - 1000A - MB350ST - MB500ST	<b>0,10</b>	<b>0,075</b>	<b>0,10</b>	<b>0,15</b>	<b>0,22</b>	<b>0,07</b>

**R.P.M. SELECTION FOR HOLESAWS: 250R - 500R - 250C - 500C - 750C - 1000C**

Cutting speed (m./min.)	R.P.M. SELECTION FOR HOLESAWS: 250R - 500R - 250C - 500C - 750C - 1000C																		
	100	95	90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10
	3183	3024	2865	2706	2547	2387	2228	2069	1910	1751	1592	1432	1273	1114	955	796	637	477	318
	2122	2016	1910	1804	1698	1592	1485	1379	1273	1167	1061	955	849	743	637	531	424	318	212
	1952	1512	1432	1353	1273	1194	1114	1035	922	875	796	716	637	557	477	398	318	239	159
	1273	1512	1432	1353	1276	1194	1114	1035	922	875	796	716	637	557	477	398	318	239	159
	1061	1008	955	902	849	796	743	690	637	584	531	477	424	371	318	265	212	159	106
	909	864	819	773	728	682	637	591	546	500	455	409	364	318	273	227	191	159	136
	796	756	716	676	637	597	557	517	477	438	398	358	318	279	239	199	168	136	119
	637	605	573	541	509	477	446	414	382	350	318	286	255	223	191	159	136	119	95
	531	504	477	451	424	398	371	345	318	292	265	239	212	186	159	133	114	95	80
	455	432	409	387	364	341	318	296	273	250	227	205	186	166	146	126	106	91	78
	398	378	358	338	318	298	279	259	239	219	199	179	159	139	119	100	88	77	67
	354	336	318	301	283	265	248	230	212	195	177	159	141	124	106	91	78	67	58
	318	302	286	271	255	239	223	207	191	175	159	143	127	111	95	80	68	58	49
	2547	2387	2228	2069	1910	1751	1592	1432	1273	1114	955	796	637	477	318	212	159	106	71
	1698	1592	1485	1379	1273	1167	1061	955	849	743	637	531	424	318	212	159	106	71	48
	1273	1194	1114	1035	922	875	796	690	584	500	455	398	318	239	159	106	71	48	32
	849	796	743	682	637	597	557	517	477	438	398	358	318	279	239	199	168	136	119
	637	605	573	541	509	477	446	414	382	350	318	286	255	223	191	159	136	119	95
	531	504	477	451	424	398	371	345	318	292	265	239	212	186	159	133	114	95	80
	455	432	409	387	364	341	318	296	273	250	227	205	186	166	146	126	106	91	78
	398	378	358	338	318	298	279	259	239	219	199	179	159	139	119	100	88	77	67
	354	336	318	301	283	265	248	230	212	195	177	159	141	124	106	91	78	67	58
	318	302	286	271	255	239	223	207	191	175	159	143	127	111	95	80	68	58	49
	2547	2387	2228	2069	1910	1751	1592	1432	1273	1114	955	796	637	477	318	212	159	106	71
	1698	1592	1485	1379	1273	1167	1061	955	849	743	637	531	424	318	212	159	106	71	48
	1273	1194	1114	1035	922	875	796	690	584	500	455	398	318	239	159	106	71	48	32
	849	796	743	682	637	597	557	517	477	438	398	358	318	279	239	199	168	136	119
	637	605	573	541	509	477	446	414	382	350	318	286	255	223	191	159	136	119	95
	531	504	477	451	424	398	371	345	318	292	265	239	212	186	159	133	114	95	80
	455	432	409	387	364	341	318	296	273	250	227	205	186	166	146	126	106	91	78
	398	378	358	338	318	298	279	259	239	219	199	179	159	139	119	100	88	77	67
	354	336	318	301	283	265	248	230	212	195	177	159	141	124	106	91	78	67	58
	318	302	286	271	255	239	223	207	191	175	159	143	127	111	95	80	68	58	49
	2547	2387	2228	2069	1910	1751	1592	1432	1273	1114	955	796	637	477	318	212	159	106	71
	1698	1592	1485	1379	1273	1167	1061	955	849	743	637	531	424	318	212	159	106	71	48
	1273	1194	1114	1035	922	875	796	690	584	500	455	398	318	239	159	106	71	48	32
	849	796	743	682	637	597	557	517	477	438	398	358	318	279	239	199	168	136	119
	637	605	573	541	509	477	446	414	382	350	318	286	255	223	191	159	136	119	95
	531	504	477	451	424	398	371	345	318	292	265	239	212	186	159	133	114	95	80
	455	432	409	387	364	341	318	296	273	250	227	205	186	166	146	126	106	91	78
	398	378	358	338	318	298	279	259	239	219	199	179	159	139	119	100	88	77	67
	354	336	318	301	283	265	248	230	212	195	177	159	141	124	106	91	78	67	58
	318	302	286	271	255	239	223	207	191	175	159	143	127	111	95	80	68	58	49
	2547	2387	2228	2069	1910	1751	1592	1432	1273	1114	955	796	637	477	318	212	159	106	71
	1698	1592	1485	1379	1273	1167	1061	955	849	743	637	531	424	318	212	159	106	71	48
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	849	796	743	682	637	597	557	517	477	438	398	358	318	279	239	199	168	136	119
	637	605	573	541	509	477	446	414	382	350	318	286	255	223	191	159	136	119	95
	531	504	477	451	424	398	371	345	318	292	265	239	212	186	159	133	114	95	80
	455	432	409	387	364	341	318	296	273	250	227	205	186	166	146	126	106	91	78
	398	378	358	338	318	298	279	259	239	219	199	179	159	139	119	100	88	77	67
	354	336	318	301	283	265	248	230	212	195	177	159	141	124	106	91	78	67	58
	318	302	286	271	255	239	223	207	191	175	159	143	127	111	95	80	68	58	49
	2547	2387	2228	2069	1910	1751	1592	1432	1273	1114	955	796	637	477	318	212	159	106	71
	1698	1592	1485	1379	1273	1167	1061	955	849	743	637	531	424	318	212	159	106	71	48
	1273	1194	1114	1035	922	875	796	690	584	500	455	398	318	239	159	106	71	48	32
	849	796	743	682	637	597	557	517	477	438	398	358	318	279	239	199	168	136	119
	637	605	573	541	509	477	446	414	382	350	318	286	255	223	191	159	136	119	95
	531	504	477	451	424	398	371	345	318	292	265	239	212	186	159	133	114	95	80
	455	432	409	387	364	341	318	296	273	250	227	205	186	166	146	126	106	91	78
	398	378	358	338	318	298	279	259	239	219	199	179	159	139	119	100	88	77	67
	354	336	318	301	283	265	248	230	212	195	177	159	141	124	106	91	78	67	58
	318	302	286	271	255	239	223	207	191	175	159	143	127	111	95	80	68	58	49
	2547	2387	2228	2069	1910	1751	1592	1432	1273	1114	955	796	637	477	318	212	159	106	71
	1698	1592	1485	1379	1273	1167	1061	955	849	743	637	531	424	318	212	159	106	71	48
	1273	1194	1114	1035	922	875	796	690	584	500	455	398	318	239	159	106	71	48	32
	849	796	743	682	637	597	557	517	477	438	398	358	318	279	239	199	168	136	119

# CONSTRUCTION COREBITS



**BLUE-MASTER<sup>®</sup>**  
*by celesa*

CUTTING TECHNOLOGIES



**EXTRA PROFESSIONAL SERIES SDS PLUS SHANK CARBIDE TIPPED CORE BIT**

Holesaws

Pink

Ref. 600W


**CARBIDE  
TIPPED**

**80 mm  
CUTTING  
CAPACITY**


- These core bits are made of three parts that can be ordered separately:
  - The core bit with the diameters shown below.
  - SDS Plus arbor with special round thread in different lengths.
  - Centre pin.
- This tool is not suitable to drill metal, tile nor reinforced concrete.
- The core bit must be removed from the hole in rotary movement to avoid teeth damage
- When using long arbors it is necessary to pre-drill with a shorter arbor.
- 700 R.P.M. in hammer mode

600W		
	Ø mm	€
600W25C	25	80,44*
600W29C	29	85,78*
600W32C	32	95,47*
600W35C	35	106,11*
600W45C	45	133,97*
600W55C	55	149,95*
600W60C	60	161,84*
600W65C	65	172,49*
600W70C	70	185,33*
600W75C	75	198,16*
600W80C	80	210,99*
600W90C	90	241,05*
600W100C	100	268,90*

- Price does not include arbor nor center pin.

\* Till end of stock



**HUGE INCREASE OF THE CORE BIT  
RESISTANCE DUE TO  
EXTREMELY ROBUSTE SHANK**



Ref. 600WSDS1105



Ref. 600WSDS1200



Ref. 600WSDS1300



Ref. 600WSDS2105



Ref. 600WSDS2200



Ref. 600WSDS2300



Ref. 600WP

**ARBORS FOR EXTRA PROFESSIONAL CORE BITS**

	DESCRIPTION	CAPACITY Ø mm	€
600WSDS1105	SDS Plus arbor 105 mm	25 - 38	21,78
600WSDS1200	SDS Plus arbor 200 mm	25 - 38	26,96
600WSDS1300	SDS Plus arbor 300 mm	25 - 38	32,01
600WSDS2105	SDS Plus arbor 105 mm	45 - 100	24,37
600WSDS2200	SDS Plus arbor 200 mm	45 - 100	35,95
600WSDS2300	SDS Plus arbor 300 mm	45 - 100	47,39
600WP0	Center pin	25 - 29	30,80
600WP1	Center pin	32 - 38	30,80
600WP2	Center pin	45 - 100	30,80

**EXTRA PROFESSIONAL SERIES SDS PLUS/MAX SHANK CARBIDE TIPPED CORE BIT**

Ref. CW



**CARBIDE TIPPED**



**95 mm CUTTING CAPACITY**



- These core bits are made of three parts that can be ordered separately:
  - The core bit with the diameters shown below.
  - SDS Plus & SDS Max arbor with special round thread in different lengths.
  - Centre pin.
- This tool is not suitable to drill metal, tile or reinforced concrete.
- When using long arbors it is necessary to pre-drill with a shorter arbor.

	CW	
	Ø mm	€
CW25	25	62,44
CW27	27	63,30
CW30	30	72,65
CW35	35	80,15
CW40	40	92,57
CW45	45	107,02
CW50	50	118,96
CW60	60	135,07
CW65	65	162,55
CW68	68	172,43
CW70	70	177,18
CW75	75	190,46
CW80	80	208,20
CW90	90	215,68
CW95	95	250,25
CW100	100	275,55
CW105	105	294,79
CW110	110	325,81
CW115	115	362,48
CW120	120	362,48
CW130	130	413,61
CW140	140	476,01
CW150	150	497,18
CW160	160	565,94
CW170	170	614,61
CW180	180	666,44
CW190	190	764,26
CW200	200	814,54



**HUGE INCREASE OF THE CORE BIT RESISTANCE DUE TO EXTREMELY ROBUSTE SHANK**

\* Price does not include arbor nor center pin.



Ref. CWSDS-105



Ref. CWSDS-200



Ref. CWSMAX-105



Ref. CWSMAX-200



Ref. CWBR

**ARBORS FOR EXTRA PROFESSIONAL CORE BITS**

	DESCRIPTION	CAPACITY Ø mm	€
CWSDS-105	SDS Plus arbor 105 mm	25 - 200	31,66
CWSDS-200	SDS Plus arbor 200 mm	25 - 200	49,83
CWSDS-300	SDS Plus arbor 300 mm	25 - 200	65,93
CWSDS-450	SDS Plus arbor 450 mm	25 - 200	89,29
CWSMAX-200	SDS Max arbor 200 mm	25 - 200	49,83
CWSMAX-300	SDS Max arbor 300 mm	25 - 200	65,93
CWSMAX-450	SDS Max arbor 450 mm	25 - 200	89,29
CWBR	Pilot drill Ø10 x 160 mm	25 - 200	18,99

**CARBIDE TIPPED CONSTRUCTION CORE BIT Ø 11 mm. HEXAGONAL AND SDS PLUS SHANK**

Holesaws

Pink

Ref. HA


**CARBIDE  
TIPPED**

**54 mm  
CUTTING  
CAPACITY**

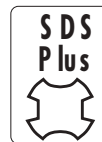

- These core bits are made of three parts that can be ordered separately:
  - The core bit with the diameters shown below.
  - Arbors: Thread M16 x 2. Available SDS PLUS and hexagonal shank.
  - Pilot drill Ø 8 mm.
- This tool is not suitable to drill metal, tile nor reinforced concrete.
- When using long arbors it is necessary to pre-drill with a shorter arbor.
- 700 R.P.M. in hammer mode

**11mm HEXAGONAL SHANK ARBORS**


	HA		
	Ø mm	Z	€
HA25	25	4	57,79
HA30	30	6	61,97
HA35	35	6	66,47
HA40	40	6	72,46
HA50	50	6	83,10
HA68	68	6	92,47
HA82	82	6	120,36
HA90	90	6	141,69
HA100	100	6	160,64
HA112	112	6	193,70

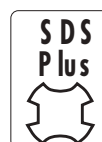
\* Price does not include arbor nor pilot drill.

	DESCRIPTION	CAPACITY Ø mm	€
HA11X78	Short shank 78 mm	Drill chuck	29,05
HA11X220	Long shank 220 mm	until 13 mm	40,76
HA11X370	Extra long shank 370mm	capacity	49,56

**SDS PLUS SHANK ARBORS**


	DESCRIPTION	€
HA105SDS	Short shank SDS-PLUS 105 mm	34,83
HA220SDS	Long shank SDS-PLUS 220 mm	46,63
HA370SDS	Extra long shank SDS-PLUS 370 mm	56,46

**Ø 8 x 120 mm PILOT DRILL**

**HA8X120**  
**7,35 €**
**ONE PIECE "NO BREAKING" SDS PLUS SHANK PILOT DRILL**


	DESCRIPTION	€
HA175SDSM	Short shank SDS-PLUS 175 mm	78,72
HA340SDSM	Long shank SDS-PLUS 340 mm	102,69
HA440SDSM	Extra long. SDS-PLUS 440 mm	120,14

**HEXAGONAL & SDS PLUS SHANK CARBIDE TIPPED LIGHT CONSTRUCTION CORE BIT**

Ref. MD



**CARBIDE TIPPED**



**60 mm CUTTING CAPACITY**



- These core bits are made of three parts that can be ordered separately:
  - The core bit with the diameters shown below.
  - Arbors: Thread M16 x 2. Available SDS PLUS and hexagonal shank.
  - Pilot drill Ø 8 mm.
- This tool is not suitable to drill metal, tile nor reinforced concrete.
- When using long arbors it is necessary to pre-drill with a shorter arbor.
- 700 R.P.M. in hammer mode

**11mm HEXAGONAL SHANK ARBORS**

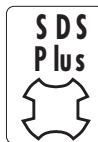


	MD	
	Ø mm	€
MD22SH	22	33,70
MD25SH	25	40,98
MD27SH	27	41,56
MD30SH	30	47,68
MD35SH	35	52,62
MD40SH	40	60,76
MD45SH	45	67,17
MD50SH	50	69,20
MD60SH	60	78,88
MD65SH	65	79,34
MD68SH	68	79,43
MD70SH	70	103,38
MD75SH	75	111,13
MD80SH	80	113,90
MD90SH	90	117,99
MD95SH	95	127,77
MD100SH	100	134,23
MD120SH	120	159,76

\* Price does not include arbor nor pilot drill.

	DESCRIPTION	CAPACITY Ø mm	€
HA11X78	Short shank 78 mm	Drill chuck	29,05
HA11X220	Long shank 220 mm	until 13 mm	40,76
HA11X370	Extra long shank 370mm	capacity	49,56

**SDS PLUS SHANK ARBORS**



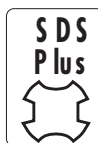
	DESCRIPTION	€
HA105SDS	Short shank SDS-PLUS 105 mm	34,83
HA220SDS	Long shank SDS-PLUS 220 mm	46,63
HA370SDS	Extra long shank SDS-PLUS 370 mm	56,46

**Ø 8 x 120 mm PILOT DRILL**



HA8X120  
7,35 €

**ONE PIECE "NO BREAKING" SDS PLUS SHANK PILOT DRILL**



	DESCRIPTION	€
HA175SDSM	Short shank SDS-PLUS 175 mm	78,72
HA340SDSM	Long shank SDS-PLUS 340 mm	102,69
HA440SDSM	Extra long. SDS-PLUS 440 mm	120,14

**HEAVY DUTY CONSTRUCTION CORE BIT FOR REINFORCED CONCRETE SDS MAX**

Holesaws

Pink

Ref. MH

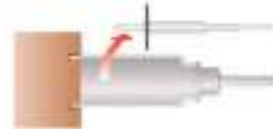

**CARBIDE  
TIPPED**

**100 mm  
CUTTING  
CAPACITY**


- 500 Rpm in most applications.
- Light axial pressure which must be reduced when we start cutting the rebar.
- Remove the center pin when the CORE BIT has penetrated into the concrete.
- Not suitable for metal or ceramic.
- Work in hammer mode.



1- Use the center pin when start drilling.



2- We remove the center pin when the CORE BIT has penetrated slightly.



	MH		
	Ø mm	Z	€
MH25	25	4	123,85
MH29	29	4	132,16
MH32	32	4	147,12
MH35	35	4	163,54
MH38	38	4	181,69
MH45	45	6	206,38
MH50	50	8	219,64
MH55	55	10	231,28
MH60	60	10	249,43
MH65	65	10	265,82
MH70	70	12	285,78
MH75	75	12	305,52
MH80	80	12	325,30
MH90	90	14	371,50
MH100	100	16	414,55
MH120	120	18	503,61
MH150	150	24	705,61



**HUGE INCREASE IN SAW  
RESISTANCE DUE TO  
EXTREMELY ROBUSTE SHANK**

Price does not include arbor nor center pin.

**ARBORS FOR EXTRA PROFESSIONAL CORE BITS**

Ref. MHSK1MAX

Ref. MHC

	DESCRIPTION	CAPACITY Ø mm	€
MHSK1MAX	SDS-MAX arbor 300 mm	25 - 35	101,61
MHSK2MAX	SDS-MAX arbor 300 mm	38 - 150	105,83
MHCPO	Center pin N° 0	25 - 29	56,46
MHCP1	Center pin N° 1	32 - 35	56,46
MHCP2	Center pin N° 2	38 - 150	56,46



**HEAVY DUTY CONSTRUCTION CARBIDE TIPPED CORE BIT THREADED ANTI-BREAKAGE SHANK**

Ref. HAR



**CARBIDE  
TIPPED**



**80 mm  
CUTTING  
CAPACITY**



- These core bits are made of three parts that can be ordered separately:
  - The core bit with the diameters shown below.
  - Arbor in round thread: Available in SDS MAX, Spline and hexagonal (19 and 13 mm)
  - HAR Ø 11mm pilot drill.
- This tool is not suitable to drill metal, tile or reinforced concrete.
- The core bit must be removed from the hole rotary movement to avoid teeth damage
- When long arbors are required it is necessary to pre-drill with a shorter arbor.
- Must be used with a cutting speed of 600RPM in hammer mode.

	HAR	
	Ø mm	€
HAR050	50	162,35
HAR055	55	175,68
HAR068	68	186,35
HAR082	82	258,35
HAR090	90	298,38
HAR100	100	322,38
HAR125	125	362,37
HAR150	150	469,07

Price includes pilot drill.

**SDS-MAX SHANK ARBORS**



	DESCRIPTION	€
HARMAX200	SDS-MAX shank 200 mm	75,54
HARMAX460	SDS-MAX shank 460 mm	89,02

**13/19 mm HEXAGONAL SHANK ARBORS**



	DESCRIPTION	€
HAR13X200	Hexagonal shank 13mm 200 mm	75,54
HAR13X460	Hexagonal shank 13mm 460 mm	89,02
HAR19X200	Hexagonal shank 19mm 200 mm	48,96

**SPLINE SHANK ARBORS**



	DESCRIPTION	€
HAREST200	Spline 200 mm	75,54
HAREST460	Spline 460 mm	89,02

- The shank thread Ref. HAR is special. It is not compatible with other holesaws and can only be used with the ones showed in this page.

**Ø 11x135mm PILOT DRILL FOR HAR CORE BITS**



HAR11X135  
15,80 €

**ELECTRODEPOSITED DIAMOND HOLESAW FOR GRANITE, MARBLE, TILE & REINFORCED PLASTIC**

Holesaws

Grey

Pink

 Ref. CDE  
 Ref. CMAD

**40 mm  
CUTTING  
CAPACITY**
**MONOBLOCK COREBIT AND ARBOR**


		CDE
	Ø mm	€
CDE12	12	55,32
CDE14	14	55,85
CDE16	16	59,03
CDE18	18	62,21
CDE20	20	70,52
CDE25	25	78,14
CDE28	28	81,13
CDE30	30	86,04
CDE32	32	90,12
CDE35	35	94,09
CDE40	40	98,44
CDE43	43	99,66
CDE45	45	100,16
CDE50	50	100,45
CDE65	65	118,61
CDE68	68	133,27
CDE75	75	163,09
CDE80	80	172,32
CDE90	90	195,21
CDE100	100	195,21
CDE120	120	229,08

\* Price includes arbor and pilot drill

**INTERCHANGEABLE THREAD SHANK**

- Serial drilling of fiberglass, carbon, polyester....
- The pilot drill ejects the core automatically



		CMAD
	Ø mm	€
CMAD20	20	142,06
CMAD22	22	148,71
CMAD25	25	153,52
CMAD28	28	156,81
CMAD30	30	159,08
CMAD32	32	163,83
CMAD35	35	189,04
CMAD40	40	198,77
CMAD45	45	210,23
CMAD50	50	221,46

\* Price of the arbor is not included

**PILOT DRILL Ø 5 mm**

 BW90500  
 26,50 €

- Remove the drill when the CORE BIT has already penetrated in the material.
  - We recommend to use the GCD guide for holesaws.
  - Remove diamond holesaw from the hole in rotary movement in order to avoid tip breaking.
  - Must be used with water cooling.
  - References RPM:
- Ø 100mm: 400 RPM  
 Ø 50mm: 800 RPM  
 Ø 20mm: 1300 RPM
- Exclusively in rotary mode, no hammer.

**HOLESAWS GUIDE**

 GCD  
 43,61 €

Capacity: Ø 10 - 83 mm

**CAN FOR COOLING**

 GBP  
 9,73 €

Capacity: 1,1 l.

**STRAIGHT SHANK ARBOR WITH INTERNAL COOLING**

	DESCRIPTION	€
350MC13	Straight shank arbor Ø 13 mm	227,40
350MC16	Straight shank arbor Ø 16 mm	227,40



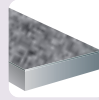
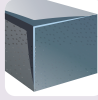
GCD



GBP

**DIAMOND HOLE SAW**

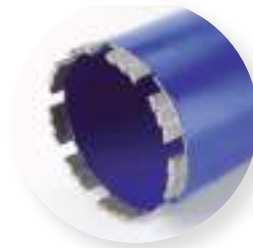
Ref. CHH



**300-450  
CUTTING  
CAPACITY**

Holesaws

Pink



1" 1/4

- New segmented diamond hole saw for heavy works in construction.
- High performance in intensive works in reinforced concrete, granite, stone, brick and asphalt.
- Cool with plenty of water
- Efficient and constant work that enlarges the lifetime of the tool and the machine.
- More resistant segments with more diamond content to provide the maximum performance
- Better removal of debris so the effort of the machine is reduced.
- Excellent management of the effort in high capacity machines.

	Ø mm	L1 mm	L2 mm	Z	KW	CHH €
CHH32	32	380	300	3	0,7>1,2	146,15
CHH42	42	380	300	4	0,7>1,2	159,44
CHH52	52	520	450	5	0,7>1,2	172,74
CHH62	62	520	450	6	0,7>1,2	199,32
CHH72	72	520	450	6	0,7>1,2	239,21
CHH82	82	520	450	7	1,2>2,3	252,51
CHH92	92	520	450	8	1,2>2,3	292,37
CHH102	102	520	450	9	1,2>2,3	318,98
CHH112	112	520	450	9	1,2>2,3	332,26
CHH122	122	520	450	10	1,2>2,3	358,84
CHH127	127	520	450	11	1,2>2,3	378,71
CHH132	132	520	450	11	1,2>2,3	398,72
CHH142	142	520	450	12	1,2>2,3	465,18
CHH152	152	520	450	12	1,2>2,3	465,18
CHH162	162	520	450	12	2,3>3,9	491,78
CHH172	172	520	450	13	2,3>3,9	558,23
CHH182	182	520	450	13	2,3>3,9	571,53
CHH200	200	520	450	15	2,3>3,9	638,00
CHH225	225	520	450	15	2,3>3,9	757,62
CHH250	250	520	450	16	2,3>3,9	837,37
CHH300	300	520	450	17	2,3>3,9	1.063,37

**CSE DIAMOND HOLESAWS FOR GRANITE, MARBLE AND HARD CERAMICS**

Holesaws

Grey

Pink

Ref. CSE

**SERIE  
DIAMOND**

**M 14x2**
**35 mm  
CUTTING  
CAPACITY**

**FOR DRY  
DRILLING**

**M14x2**  
 Special for angle grinder


	Ø mm	CSE €
CSE05*	5	54,60
CSE06*	6	54,76
CSE08*	8	55,22
CSE10*	10	55,83
CSE12*	12	56,98
CSE14*	14	57,52
CSE16	16	60,79
CSE18	18	64,07
CSE20	20	72,62
CSE22	22	75,59
CSE25	25	80,46
CSE27	27	83,32
CSE30	30	88,61
CSE32	32	92,80
CSE35	35	96,89
CSE38	38	98,57
CSE40	40	101,37
CSE45	45	103,15
CSE50	50	103,46
CSE51	51	107,39
CSE55	55	109,45
CSE57	57	115,55
CSE60	60	119,28
CSE65	65	122,14
CSE67	67	131,32
CSE68	68	137,25
CSE70	70	150,44
CSE75	75	167,95
CSE80	80	177,47
CSE83	83	200,55



- Female thread M14x2 on the back side to be fixed on an angle grinder.
- These Holesaws can work ceramics without water. Nevertheless, using water increases dramatically the performance.
- Start drilling with an angle between 15 and 30° and afterwards horizontally. No need to guide.
- Drill the ceramics making soft rotary movements.
- Remove the core after each operation.

**ADAPTORS FOR CSE**


ALCSE50

ADCSE-MAX

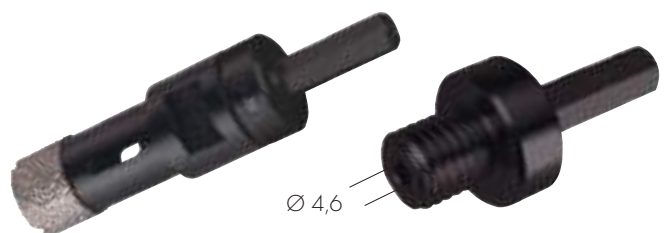
ADCSE-PLUS

	DESCRIPTION	L mm	€
ALCSE50	50mm Extension CSE M14X2,00 Ø22mm	50	14,63
ALCSE75	75mm Extension CSE M14X2,00 Ø22mm	75	16,73
ADCSE-MAX	Adaptor CSE M14X2,00 SDS MAX	113	36,36
ADCSE-PLUS	Adaptor CSE M14X2,00 SDS PLUS	90	20,63

**CAN OF PARAFFIN**
20 cm<sup>3</sup>
**PACSE  
8,82 €**

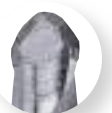
These prices don't include the arbor

\* Ø 5 a 14 mm The holesaw contains cooling vegetal paraffin

**HEX ARBOR FOR CSE**


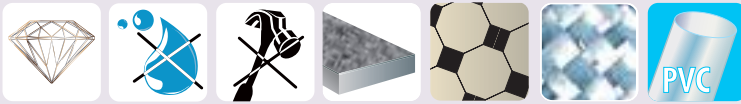
Ø 4,6

**ADCSE  
14,95 €**
**OPTIONAL PILOT DRILL FOR ARBOR REF. ADCSE**

**BW90500  
26,50 €**


**VACUUM BRAZED DIAMOND HOLESAWS FOR GRANITE, MARBLE AND HARD CERAMICS**

Ref. CSE



**35 mm**  
CUTTING  
CAPACITY

Dry  
Working

Diamond  
series

**CSE HOLESAWS + 1 ARBOR SET + PARAFFIN**



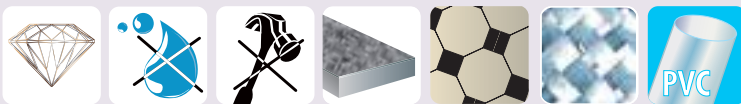
CSE9328

4 Holesaws CSE: Ø 5 - 6 - 8 - 10 mm  
1 Arbor  
1 Paraffin can 20 cm<sup>3</sup>

185,68 €

**DIAMOND COUNTERSINKS FOR GRANITE, MARBLE AND HARD CERAMICS**

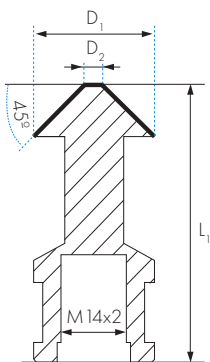
Ref. AVD



M 14 x 2

Dry  
Working

Diamond  
series



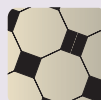
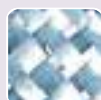
	D1 mm	D2 mm	α	L1 mm		AVD €
AVD0630	6,30	1,50	90°	45	M14X2	83,23
AVD0830	8,30	2,00	90°	50	M14X2	83,23
AVD1040	10,40	2,50	90°	50	M14X2	83,23
AVD1240	12,40	2,80	90°	56	M14X2	91,55
AVD1650	16,50	3,20	90°	60	M14X2	99,87
AVD2050	20,50	3,50	90°	63	M14X2	104,04
AVD2500	25,00	3,80	90°	67	M14X2	130,05
AVD3100	31,00	4,20	90°	71	M14X2	161,26

- These countersinks can work ceramics without water. Nevertheless, using with water increases heavily the performance.
- Female thread M14x2 on the back side to be fixed on an angle grinder.



## GRIT EDGE HOLE SAW FOR NON METALLIC MATERIALS

Ref. MG

30 mm  
CUTTING  
CAPACITY

## VERY CLEAN FINISHING

- Ideal for use in agglomerate and wood



Ø mm	Carton		Blister	
	Ref.	€	Ref.	€
16	MG16	17,96	MG16B	17,96
19	MG19	18,86	MG19B	18,86
20	MG20	19,34	MG20B	19,34
22	MG22	19,34	MG22B	19,34
25	MG25	19,77	MG25B	19,77
29	MG29	21,32	MG29B	21,32
32	MG32	21,60	MG32B	21,60
35	MG35	22,35	MG35B	22,35
38	MG38	24,39	MG38B	24,39
44	MG44	26,06	MG44B	26,06
48	MG48	26,58	MG48B	26,58
51	MG51	26,58	MG51B	26,58
54	MG54	27,72	MG54B	27,72
57	MG57	27,84	MG57B	27,84
60	MG60	29,79	MG60B	29,79
64	MG64	29,79	MG64B	29,79
70	MG70	37,92	MG70B	37,92
76	MG76	40,68	MG76B	40,68
83	MG83	41,55	MG83B	41,55
86	MG86	43,64		
95	MG95	46,15		
102	MG102	47,02		
114	MG114	48,61		

\* Price does not include arbor nor pilot drill.

## HEXAGONAL SHANK ARBORS FOR Ref. MG HOLESAWS

	Ø mm	PACKAGING	€
B5519-CM	16 - 29	Box	18,76
B5546-CM	32 - 114	Box	28,46
B5519-CMS	16 - 29	Blister	18,76
B5546-CMS	32 - 114	Blister	28,46



## CARBIDE TIPPED PILOT DRILLS

Ø 6,35 mm

	LTmm	PACKAGING	€
B8537	82 mm	Box	5,41
B8538	97 mm	Box	5,41
B8537S	82 mm	Blister	6,75
B8538S	97 mm	Blister	6,75

## MASTER-GRIT HOLESAWS BOXES



Ref. MG9573



Ref. MG9572

MG9571 6 Holesaws MG:  
22 - 35 - 51 - 60 - 64 - 70 mm

## Content:

- 1 Arbor Ref. B5519-CM  $\square$  9,5 Capacity 14-30
- 1 Arbor Ref. B5546-CM  $\square$  9,5 Capacity 32-250
- 1 Arbor adapter Ref. B5511

177,24 €

MG9572 10 Holesaws MG:  
20-22-25-32-35-38-44-60-70-76 mm

## Content:

- 1 Arbor Ref. B5519-CM  $\square$  9,5 Capacity 14-30
- 1 Arbor Ref. B5546-CM  $\square$  9,5 Capacity 32-250
- 1 Arbor adapter Ref. B5511

253,62 €

MG9573 7 Holesaws MG:  
20 - 25 - 29 - 38 - 44 - 60 - 70 mm

## Content:

- 1 Arbor Ref. B5519-CM  $\square$  9,5 Capacity 14-30
- 1 Arbor Ref. B5546-CM  $\square$  9,5 Capacity 32-250
- 1 Arbor adapter Ref. B5511

187,49 €

**HIGH PERFORMANCE CARBIDE TIPPED HOLESAW FOR WOOD**

Ref. CM

**CARBIDE  
TIPPED**



**60 mm  
CUTTING  
CAPACITY**



- High cutting speed.
- Great lateral chip evacuation.
- Long life even in abrasive material.
- Optimal hole finishing.
- Exclusively in rotary mode, no hammer.



	CM	
	Ø mm	€
CM022	22	29,69
CM025	25	32,12
CM027	27	33,61
CM030	30	36,91
CM032	32	40,10
CM035	35	40,10
CM038	38	48,07
CM040	40	48,07
CM045	45	52,14
CM050	50	56,87
CM055	55	59,82
CM060	60	65,12
CM062	62	73,35
CM065	65	73,35
CM068	68	80,78
CM070	70	83,74
CM075	75	95,73
CM080	80	95,73
CM090	90	105,53
CM095	95	118,20
CM100	100	118,20
CM110	110	139,03
CM120	120	156,10
CM125	125	165,90
CM130	130	189,30
CM140	140	212,20
CM150	150	218,95
CM160	160	235,09

CUTTING SPEED	
CAPACITY Ø mm	R.P.M.
22 - 27	2.800
30 - 38	2.300
40 - 50	1.800
55 - 60	1.500
62 - 80	1.000
90 - 100	700
108 - 125	500

\* Price includes arbor and pilot drill

**ARBORS FOR WOOD HOLESAWS**



Ref. CMB5520



Ref. CMB5545



Ref. CMB556SDS

DESCRIPTION	€
CMB5520 Straight shank 11 mm Ø 22 - 32 mm	19,90
CMB5529SDS Straight shank Ø 35 - 125 mm	22,55
CMB5545 SDS PLUS shank 11 mm Ø 45 - 160 mm	26,92
CMB556SDS SDS PLUS shank Ø 45 - 160 mm	41,76

**PILOT DRILL Ø 6,35 x 107 mm**



Ref. B8535

B8535	6,30 €
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Holesaws

Pink

**CIRCLE CUTTING HOLE CUTTERS**

**200 mm**

**DRYWALL  
CAST**



- Multipurpose circle cutting hole cutters with adjustable blade.
- To cut large circles in ceilings, walls, and floors.
- Chip holding system to allow clean work.
- Works in aluminium, brass and metal up to 1 mm thickness.
- Minimum cutting diameter: 40mm
- Blade CL12-BT002 installed and CL12-BH002 provided in the case.



**CIRCLE CUTTING HOLE CUTTERS 200 mm**

TB-9600-200  
241,20 €

**SPARE PARTS**



CL12-BT002



CL12-BH002

	DESCRIPTION	€
CL12-BH002	Blade for wood, pladur, laminated panels, etc	20,09
CL12-BT002	Blade for plaster and metals up to 1mm thickness	25,43

**CIRCLE CUTTING HOLE CUTTERS**

**220 mm & 285 mm**

**DRYWALL  
CAST**



- Multipurpose circle cutting hole cutters with adjustable blade.
- To cut large circles in ceilings, walls, and floors.
- Chip holding system to allow clean work.
- Works in aluminium, brass and metal up to 1 mm thickness.
- Minimum cutting diameter: 40mm
- Blade CL12HSS installed



**CIRCLE CUTTING HOLE CUTTERS 220 mm**

CL220  
252,53 €

**CIRCLE CUTTING HOLE CUTTERS 285 mm**

CL285  
290,40 €



**SPARE PARTS**

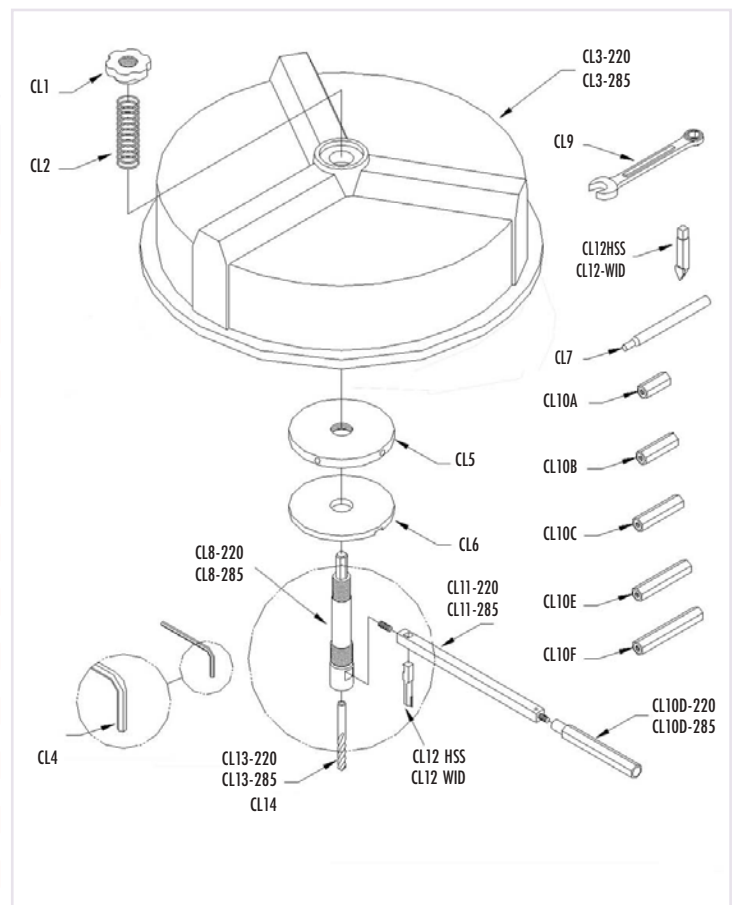


**CL12HSS:** Blade for wood, plaster, laminated panels, etc



**CL12WID:** Blade metals up to 1mm thickness

	DESCRIPTION	€
CL1	Hexagonal nut 220 / 285	9,22
CL2	Compression spring 220 / 285	2,59
CL3-220	Cowl with bearing 220	92,16
CL3-285	Cowl with bearing 285	137,21
CL4	Allen key 220/285 (3 mm)	2,61
CL5	Fixed plate 220 / 285	17,95
CL6	Adjusting plate 220 / 285	7,68
CL7	Adjusting rod 220 / 285	5,19
CL8-220	Vertical axle 220	40,99
CL8-285	Vertical axle 285	43,58
CL9	Combination wrench 220 / 285	7,68
CL10A	Balance f/cl220-cl285-cl410 of 33 mm.	3,70
CL10B	Balance f/cl220-cl285-cl410 of 40 mm.	4,19
CL10C	Balance f/cl220-cl285-cl410 of 56 mm.	4,87
CL10D-220	Balance f/cl220 of 74 mm.	5,19
CL10D-285	Balance f/cl285-cl410 of 74 mm.	5,19
CL10E	Balance f/cl285-cl410 of 95 mm.	6,71
CL10F	Balance f/cl285-cl410 of 120 mm.	8,90
CL10-285	Balance cl285 (6pcs)	15,26
CL11-220	Transversal axle for 220	17,95
CL11-285	Transversal axle for 285	25,32
CL12HSS	Blade for wood, pladur, laminated panels	20,53
CL12WID	Blade metals up to 1 mm thickness	26,91
CL13-220	Pilot drill 220	17,13
CL13-285	Pilot drill 285	17,70
CL14	HSS pilot drill 285	19,41





**CIRCLE CUTTING HOLE CUTTERS**

**410 mm**

**DRYWALL  
CAST**



- For bigger diameters.
- High resistant carbide tip with innovative geometry.
- Better hole finishing.
- The spare parts of holesaws 163 mm, 200 mm, 220 mm & 285 mm are valid for CL410 with exception of balances CL10G and CL10H.
- Blade CL12HSS installed



**CIRCLE CUTTING HOLE CUTTERS 410 mm**

CL410  
493,77 €

**SPARE PARTS**

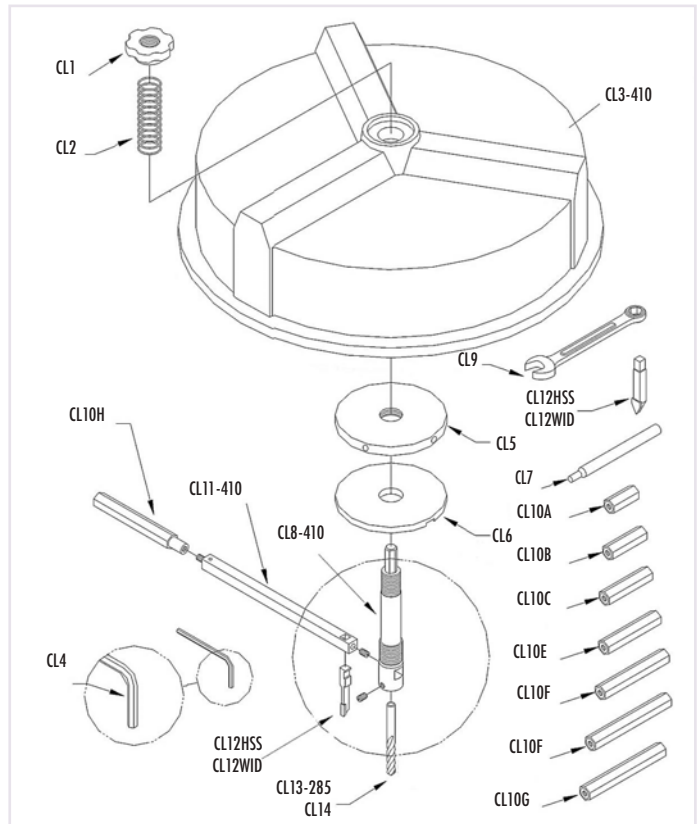


CL12HSS: blade for wood, plaster, laminated panels, etc



CL12WID: blade metals up to 1mm thickness

	DESCRIPTION	€
CL1	Hexagonal nut 220 / 285 & 410	9,22
CL2	Compression spring 220, 285 & 410	2,59
CL3-410	Cowl with bearing 410	166,50
CL4	Allen key 220/285 (3 mm)	2,61
CL5	Fixed plate 220, 285 & 410	17,95
CL6	Adjusting plate 220, 285 & 410	7,68
CL7	Vertical axle 220, 285 & 410	5,19
CL8-410	Vertical axle 410	61,43
CL9	Combination wrench 220, 285 & 410	7,68
CL10A	Balance P/CL220-CL285-CL410 of 33 mm	3,70
CL10B	Balance P/CL220-CL285-CL410 of 40 mm	4,19
CL10C	Balance P/CL220-CL285-CL410 of 56 mm	4,87
CL10E	Balance P/CL285-CL410 of 95 mm	6,71
CL10F	Balance P/CL285-CL410 of 120 mm	8,90
CL10G	Balance P/CL410 of 145 mm	10,99
CL10H	Balance P/CL410 D of e 175 mm	13,92
CL11-410	Transversal axle for CL410	36,73
CL12HSS	Cutter	20,53
CL12WID	Cutter	26,91
CL13-285	Solid carbide drill guide 285 & 410	17,70
CL14	HSS pilot drill 285 & 410	19,41





**DIAMOND HOLESAW FOR CONCRETE WITH REBARS WITH QUICK CHANGE POLY-CLIC**

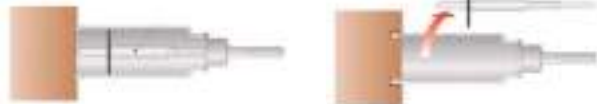
Ref. CDH



**150 mm**  
CUTTING  
CAPACITY

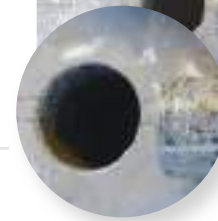


- Exclusively in rotary mode, no percussion.
- Must be used with water cooling.
- High speed (2500-3000 R.P.M.).
- Remove the drill when the CORE BIT has already penetrated in the material.
- We recommend to use the GCD guide for holesaws.
- Remove diamond holesaw from the hole in rotary movement in order to avoid tip breakages.



1- Use Center pin to start drilling

2- We remove the center pin when the CORE BIT has penetrated slightly.



	CDH	
	Ø mm	€
CDH25	25	118,84 *
CDH29	29	118,84 *
CDH32	32	118,84 *
CDH35	35	118,84 *
CDH38	38	118,84 *
CDH45	45	118,84 *
CDH50	50	131,75 *
CDH55	55	136,92 *
CDH60	60	142,09 *
CDH65	65	148,54 *
CDH70	70	161,46 *
CDH75	75	174,38 *
CDH80	80	187,29 *
CDH90	90	215,71 *
CDH100	100	245,41 *
CDH110	110	264,80 *
CDH120	120	284,17 *
CDH170	170	393,96 *
CDH220	220	527,00 *

Price does not include arbor nor center pin.

\* Till end of stock

**ACCESSORIES**

	DESCRIPTION	CAPACITY	€
CDHAPH	Hexagonal shank short	25 - 45	129,16 *
CDHAPSDS	SDS PLUS short	25 - 45	129,16 *
CDHAPH300	Hexagonal 300mm	25 - 45	135,63 *
CDHAPSDS300	SDS PLUS 300mm	25 - 45	135,63 *
CDHAGH	Hexagonal shank short	50 - 220	148,54 *
CDHAGSDS	SDS PLUS corto	50 - 220	148,54 *
CDHAGH300	Hexagonal 300mm	50 - 220	161,46 *
CDHAGSDS300	SDS PLUS 300mm	50 - 220	161,46 *
CDHBP	centering pin	25 - 220	18,08 *

\* Till end of stock



**CAN FOR COOLING**

Capacity: 1,1 l.

GBP


9,73 €

## No.1 IN CONSTRUCTION MATERIALS DRILLING

TILE RANGE					
Standard Series <b>BW7</b>	Professional Series <b>BW9</b>	Diamond (Water) <b>CPH</b>	Diamond (Dry) <b>CPS</b>	Diamond Holesaw (Dry) <b>CSE</b>	High Performance Diamond
					
Page 464	463	466	465	582	462

CYLINDRICAL RANGE					CYLINDRICAL 
Standard Series <b>BW1</b>	Professional Series <b>BW6</b>	Extra Professional Series <b>BW16</b>	Delta 3 Plus <b>BW35</b>	Multi Purpose <b>BW8</b>	
					
Page 468	470	473	474	467	

SDS PLUS RANGE					SDS Plus 
Standard Series <b>W08</b>	Professional Series <b>W05</b>	4 Cuts Series <b>W55</b>	Reinforced Concrete Series Solid Carbide Head <b>W88</b>	Reinforced Concrete Series Solid Carbide Head <b>W77</b>	Multi Purpose <b>W99</b>
					
Page 476	478	480	482	484	483

SDS MAX RANGE			SDS Max 
Standard Series <b>QT</b>	Professional Series <b>AX</b>	Reinforced Concrete Series Solid Carbide Head <b>X4AX</b>	
			
Page 487	488	489	





CUTTING TOOLS  
INCHES

**BLUE-MASTER<sup>®</sup>**  
*by CELESA*

CUTTING TECHNOLOGIES

**DRILLS FOR METAL**

Twist drills for Metal  
Grey  
Pink

**DIN  
338**



	BC2P			BC5P			BC95P		
	HSS	OX	€	HSS C	GOLD	€	HSS C	GOLD OX	€
1/32"	BC2P1/32		2,25	BC5P1/32		2,76	BC95P1/32		2,87
3/64"	BC2P3/64		1,88	BC5P3/64		2,89	BC95P3/64		2,87
1/16"	BC2P1/16		1,61	BC5P1/16		2,95	BC95P1/16		2,87
5/64"	BC2P5/64		1,43	BC5P5/64		2,89	BC95P5/64		2,69
3/32"	BC2P3/32		1,50	BC5P3/32		2,84	BC95P3/32		2,69
7/64"	BC2P7/64		1,54	BC5P7/64		2,77	BC95P7/64		2,65
1/8"	BC2P1/8		1,35	BC5P1/8		2,64	BC95P1/8		2,63
9/64"	BC2P9/64		1,77	BC5P9/64		3,32	BC95P9/64		3,07
5/32"	BC2P5/32		1,83	BC5P5/32		3,32	BC95P5/32		3,43
11/64"	BC2P11/64		2,15	BC5P11/64		3,32	BC95P11/64		3,82
3/16"	BC2P3/16		1,96	BC5P3/16		3,45	BC95P3/16		4,07
13/64"	BC2P13/64		2,49	BC5P13/64		3,65	BC95P13/64		4,52
7/32"	BC2P7/32		3,25	BC5P7/32		5,07	BC95P7/32		4,75
15/64"	BC2P15/64		3,05	BC5P15/64		5,54	BC95P15/64		5,05
1/4"	BC2P1/4		2,82	BC5P1/4		5,68	BC95P1/4		5,49
17/64"	BC2P17/64		3,52	BC5P17/64		6,33	BC95P17/64		6,43
9/32"	BC2P9/32		5,51	BC5P9/32		8,63	BC95P9/32		7,48
19/64"	BC2P19/64		6,44	BC5P19/64		10,45	BC95P19/64		8,23
5/16"	BC2P5/16		5,90	BC5P5/16		10,43	BC95P5/16		8,76
21/64"	BC2P21/64		6,96	BC5P21/64		9,99	BC95P21/64		9,14
11/32"	BC2P11/32		6,69	BC5P11/32		11,91	BC95P11/32		11,64
23/64"	BC2P23/64		8,83	BC5P23/64		14,10	BC95P23/64		11,64
3/8"	BC2P3/8		6,08	BC5P3/8		10,33	BC95P3/8		12,06
25/64"	BC2P25/64		10,40	BC5P25/64		16,48	BC95P25/64		13,32
13/32"	BC2P13/32		10,40	BC5P13/32		19,07	BC95P13/32		13,32
27/64"	BC2P27/64		10,66	BC5P27/64		22,87	BC95P27/64		18,00
7/16"	BC2P7/16		12,89	BC5P7/16		25,12	BC95P7/16		19,86
29/64"	BC2P29/64		10,28	BC5P29/64		21,21	BC95P29/64		22,87
15/32"	BC2P15/32		13,85	BC5P15/32		26,05	BC95P15/32		24,51
31/64"	BC2P31/64		14,34	BC5P31/64		29,86	BC95P31/64		27,32
1/2"	BC2P1/2		14,64	BC5P1/2		31,62	BC95P1/2		27,71
33/64"	BC2P33/64		16,98	BC5P33/64		31,19			
17/32"	BC2P17/32		18,50	BC5P17/32		31,29			
35/64"	BC2P35/64		26,68	BC5P35/64		36,94			
9/16"	BC2P9/16		28,91	BC5P9/16		40,85			
37/64"	BC2P37/64		23,24	BC5P37/64		51,60			
19/32"	BC2P19/32		21,60	BC5P19/32		44,52			
39/64"	BC2P39/64		32,13	BC5P39/64		71,22			
5/8"	BC2P5/8		26,29	BC5P5/8		53,46			
*41/64"	BC2P41/64		29,76	BC5P41/64		54,90			
*21/32"	BC2P21/32		30,31	BC5P21/32		57,17			
*43/64"	BC2P43/64		30,36	BC5P43/64		60,20			
*11/16"	BC2P11/16		34,80	BC5P11/16		66,69			
*45/64"	BC2P45/64		38,39	BC5P45/64		70,51			
*23/32"	BC2P23/32		39,13	BC5P23/32		72,94			
*47/64"	BC2P47/64		40,87	BC5P47/64		80,23			
*3/4"	BC2P3/4		46,41	BC5P3/4		84,93			
*49/64"	BC2P49/64		48,00	BC5P49/64		91,40			
*25/32"	BC2P25/32		49,92	BC5P25/32		95,50			
*1"	BC2P1		100,85	BC5P1		201,90			

10 Uds. Ø 1/32" - Ø 13/32"  
6 Uds. Ø 27/64" - Ø 9/16"  
1 Ud. Ø 37/64" - Ø 1"



\* Reduced Shank 1/2"



**TWIST DRILLS IN METAL AND PLASTIC BOXES**

Twist drills for Metal

Grey

**DIN 338 HSS**



(Ref. BC2P drills)

REFERENCE	<b>DP7021</b>	<b>DP7029</b>
QUANTITY	21	29
QUALITY	HSS	HSS
CONTENT	∅ 1/16-3/8"	∅ 1/16-1/2"
PRICE €	75,38	171,88

**DIN 338 HSS**



(Ref. BC2P drills)

REFERENCE	<b>PP7021</b>	<b>PP7029</b>
QUANTITY	21	29
QUALITY	HSS	HSS
CONTENT	∅ 1/16-3/8"	∅ 1/16-1/2"
PRICE €	75,38	171,88

**HSS C 5%**



(Ref. BC5P drills)

REFERENCE	<b>DCP7021</b>	<b>DCP7029</b>
QUANTITY	21	29
QUALITY	HSSCo	HSSCo
CONTENT	∅ 1/16-3/8"	∅ 1/16-1/2"
PRICE €	126,85	315,14

**HSS C 5%**



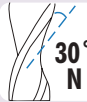
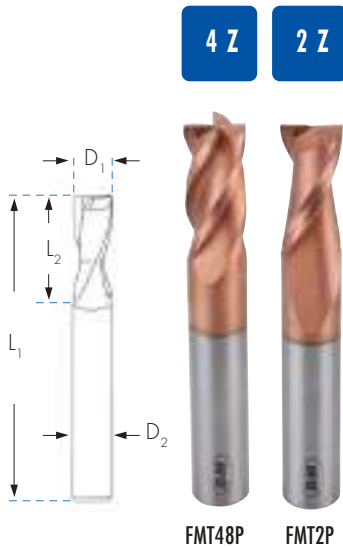
(Ref. BC5P drills)

REFERENCE	<b>PCP7021</b>	<b>PCP7029</b>
QUANTITY	21	29
QUALITY	HSSCo	HSSCo
CONTENT	∅ 1/16-3/8"	∅ 1/16-1/2"
PRICE €	126,85	315,14



**SOLID CARBIDE END MILLS**

 Ref. FMT48  
 Ref. FMT2

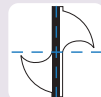
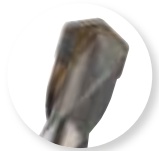
**SOLID  
CARBIDE**

**TiAlSiN**


FMT48P    FMT2P

				FMT48P	FMT2P					FMT48P	FMT2P
D <sub>1</sub>	L <sub>2</sub>	D <sub>2</sub>	L <sub>1</sub>	€	€	D <sub>1</sub>	L <sub>2</sub>	D <sub>2</sub>	L <sub>1</sub>	€	€
1/32	3/32	1/8	1.1/2	38,07	38,07	21/64	7/8	3/8	2.1/2	78,14	78,14
3/64	1/8	1/8	1.1/2	38,07	38,07	11/32	7/8	3/8	2.1/2	78,14	78,14
1/16	1/4	1/8	1.1/2	30,48	30,48	23/64	7/8	3/8	2.1/2	78,14	78,14
5/64	1/4	1/8	1.1/2	29,79	29,79	3/8	7/8	3/8	2.1/2	76,86	76,86
3/32	3/8	1/8	1.1/2	25,08	25,08	25/64	7/8	7/16	2.1/2	103,09	103,09
7/64	3/8	1/8	1.1/2	25,08	25,08	13/32	7/8	7/16	2.1/2	103,09	103,09
1/8	1/2	1/8	1.1/2	25,08	25,08	27/64	7/8	7/16	2.1/2	103,09	103,09
9/64	9/16	3/16	2	28,59	28,59	7/16	1	7/16	2.1/2	103,09	103,09
5/32	9/16	3/16	2	28,59	28,59	29/64	1	1/2	3	113,20	113,20
11/64	9/16	3/16	2	28,59	28,59	15/32	1	1/2	3	113,20	113,20
3/16	5/8	3/16	2	36,11	36,11	31/64	1	1/2	3	113,20	113,20
13/64	5/8	1/4	2.1/2	41,91	41,91	1/2	1	1/2	3	102,90	102,90
7/32	5/8	1/4	2.1/2	41,91	41,91	9/16	1.1/4	9/16	3.1/2	150,89	150,89
15/64	3/4	1/4	2.1/2	41,91	41,91	5/8	1.1/4	5/8	3.1/2	197,97	197,97
1/4	3/4	1/4	2.1/2	40,20	40,20	3/4	1.1/2	3/4	4	290,00	290,00
17/64	7/8	5/16	2.1/2	55,59	55,59	7/8	1.1/2	7/8	4	283,60	283,60
9/32	7/8	5/16	2.1/2	55,59	55,59	1	1.1/2	1	4	427,99	427,99
19/64	7/8	5/16	2.1/2	55,59	55,59	1.1/4	2	1.1/4	4.1/2	2.046,27	2.046,27
5/16	7/8	5/16	2.1/2	48,22	48,22						

**CONSTRUCTION DRILL BITS**

 Ref. BW6P  
 Ref. BW1P

**DIN  
8039**

**PROFESSIONAL SERIES**
**STANDARD SERIES**


Ref. BW6P



Ref. BW1P

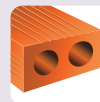
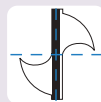


	BW6P			BW1P		
	€			€		
1/8"	BW6P1/8	3,05		BW1P1/8	1,31	
5/32"	BW6P5/32	3,05		BW1P5/32	1,31	
3/16"	BW6P3/16	3,15		BW1P3/16	1,38	
1/4"	BW6P1/4	3,65		BW1P1/4	1,49	
9/32"	BW6P9/32	4,27		BW1P9/32	1,67	
5/16"	BW6P5/16	4,46		BW1P5/16	1,89	
11/32"	BW6P11/32	5,76		BW1P11/32	2,23	
3/8"	BW6P3/8	6,20		BW1P3/8	2,45	
7/16"	BW6P7/16	8,08		BW1P7/16	3,99	
15/32"	BW6P15/32	9,09		BW1P15/32	4,11	
1/2"	BW6P1/2	12,25		BW1P1/2	4,76	
*9/16"	BW6P9/16	13,54		BW1P9/16	6,28	
*19/32"	BW6P19/32	16,65		BW1P19/32	7,63	
*5/8"	BW6P5/8	17,31		BW1P5/8	8,64	
*11/16"	BW6P11/16	21,78		BW1P11/16	10,38	
*3/4"	BW6P3/4	27,50		BW1P3/4	12,61	
*7/8"	BW6P7/8	32,39		BW1P7/8	14,31	
*1"	BW6P1	49,49		BW1P1	17,52	

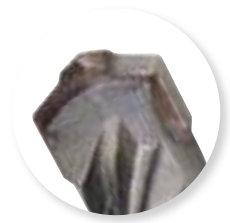
\* Reduced Shank 1/2"

**CONSTRUCTION DRILL BITS**

Ref. W05P



Ref. W05P



D1	L1 x L2"							
	4"	6"	8"	10"	12"	18"	24"	39"
	€	€	€	€	€	€	€	€
1/8"	17,03	19,13						
9/64"	14,88	15,24						
5/32"	7,30	12,43						
13/64"	5,98	7,55	11,84		18,07			
7/32"	6,99	8,10	14,20	19,82				
15/64"	6,16	7,10	10,46	15,85		35,27		
1/4"	7,87	8,68	16,23	16,63	21,43			
9/32"	7,87	8,68	13,63	17,95	22,67	31,72		
5/16"	7,75	7,80	9,87	14,36	21,12	28,22	49,07	
23/64"		10,02	12,05	14,68				
3/8"		12,32						
25/64"	8,31	9,70	11,77	14,88	19,99	30,89	45,36	118,93
7/16"		12,00	14,58	16,41	29,69			
15/32"		10,88	13,38	16,15	23,30	29,63	44,44	112,15
1/2"		17,15	22,33	20,64	24,27	39,02		
35/64"		17,55	19,29	21,55	26,18	34,61	51,42	121,75
19/32"		19,80	24,41	25,64		42,15		
5/8"		19,80	24,16	26,56	30,07	41,16	55,28	138,36
43/64"			32,44					
45/64"			32,69	36,99	53,30	46,99	76,06	165,74
3/4"			39,16		49,44	53,89		
25/32"			36,62	39,60	48,34	60,81	84,26	174,47
7/8"				45,96	56,33	67,34	109,51	179,30
29/32"				65,20				
15/16"				54,05		83,62		
1"				57,94	63,97	76,50	105,12	196,40

**W05P - 10 UNITS**

D1	L1 x L2"		
	4"	6"	8"
	€	€	€
13/64"	53,85	67,70	
15/64"	55,41	63,89	94,10
5/16"	69,86	70,44	88,83
25/64"	74,74	87,29	105,92
15/32"		97,80	120,48



**W05P - 50 UNITS**

D1	L1 x L2"
	6"
	€
15/64"	308,77
5/16"	323,77



**CONSTRUCTION DRILL BITS**

Ref. W55P



W55P									
L <sub>1</sub> x L <sub>2</sub> "									
D1	4"	6"	8"	10"	12"	18"	24"	32"	39"
	€	€	€	€	€	€	€	€	€
13/64"	7,92	9,86	14,79	16,99	22,29				
15/64"	8,13	10,17	14,31	17,12	22,36	36,51			
1/4"	9,79	10,38	14,98	17,64	22,50				
5/16"	10,25	10,44	15,14	17,77	25,37	36,96	58,93		
25/64"	10,97	12,71	16,62	19,51	28,20	40,81	59,46	153,70	162,13
15/32"		14,36	17,68	22,04	30,77	42,36	68,21		165,08
35/64"		22,13	25,47	28,48	34,56	45,73	69,64		171,54
5/8"				34,82		53,95	75,25	174,82	181,34
45/64"				48,50		61,60	103,68		217,25
25/32"				51,92		64,33	114,85		228,65
7/8"				60,23		88,27	143,55		234,99
15/16"				70,84		109,60	159,70		251,35
1"				75,95		100,28	166,56		267,71
1.1/8"				169,93		182,62	213,88		274,25
1.3/16"				203,55		233,31	273,25		342,68

Ref. AXP



AXP											
L <sub>1</sub> x L <sub>2</sub> "											
D1	12"	13"	20"	21"	28"	29"	36"	37"	52"	53"	59"
	€	€	€	€	€	€	€	€	€	€	€
15/32"		82,42		99,06		122,94		179,44			
33/64"		90,88		102,34							
9/16"		91,35		104,47		145,19		187,17			
19/32"		93,98		116,60							
5/8"		114,46		129,84		150,49		192,47		417,71	
43/64"		118,82		135,68							
45/64"		120,07		140,95	165,22			195,28	425,92		
3/4"	126,06		140,51								
25/32"	120,78		143,79		189,19		221,99		431,43		
7/8"	133,81		150,81		193,34		233,04		438,13		
15/16"	139,79		162,14								445,31
1"	144,22		164,77		221,42		255,62		401,80		456,60
1.1/8"	173,01		190,38		244,23		299,79		520,32		591,26
1.1/4"	194,36		239,69		288,45		349,14		574,34		652,56
1.3/8"			257,79		290,06		418,84		607,01		
1.1/2"			312,24		367,35						
1.5/8"			372,27		416,48		460,26		723,00		884,96
1.3/4"			395,37								948,97
2"			532,41								

**2 EDGED POINT  
EXECUTION**

Ref. AXP

AXP		
L <sub>1</sub> x L <sub>2</sub> "		
D1	23"	39"
	€	€
1.3/4"	572,80	616,91
2.1/4"	641,16	704,41
2.1/2"	709,04	796,84
3.1/4"	829,69	970,04



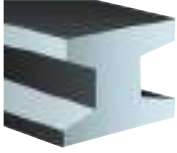
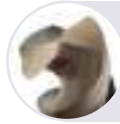
**BLUE-MASTER®**  
by CELESA

CUTTING TECHNOLOGIES

# BLISTER PACKAGING






**CYLINDRICAL SHANK TWIST DRILL DIN 338 IN POUCH AND BLISTER**

 Ref. BC99B  
 Ref. BC99P

**DIN  
338**
**HSS Co  
5%**

**GOLD**

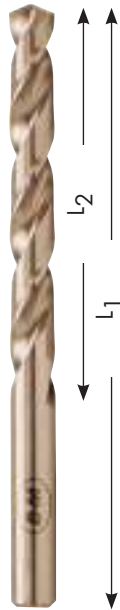
 120  
Kg/m

BC5B				
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€	
1,00	34 x 12	2	6,70	
1,50	40 x 18	2	6,13	
2,00	49 x 24	2	6,54	
2,50	57 x 30	2	6,39	
3,00	61 x 33	2	6,20	
3,30	65 x 36	2	6,96	
3,50	70 x 39	2	7,12	
4,00	75 x 43	2	7,37	
4,20	75 x 43	1	4,53	
4,50	80 x 47	1	4,82	
5,00	86 x 52	1	4,83	
5,50	93 x 57	1	5,89	
5,75	93 x 57	1	6,50	
6,00	93 x 57	1	6,25	
6,50	101 x 63	1	7,33	
6,75	109 x 69	1	8,41	
7,00	109 x 69	1	8,01	

Blister: 190x60 mm.

BC5B				
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€	
7,50	109 x 69	1	8,82	
8,00	117 x 75	1	9,82	
8,50	117 x 75	1	10,69	
9,00	125 x 81	1	12,96	
9,50	125 x 81	1	13,05	
10,00	133 x 87	1	14,54	
10,25	133 x 87	1	23,80	
10,50	133 x 87	1	20,71	
11,00	142 x 94	1	22,90	
11,50	142 x 94	1	26,36	
12,00	151 x 101	1	28,03	
12,50	151 x 101	1	33,93	
13,00	151 x 101	1	34,37	
13,50	160 x 108	1	37,71	
14,00	160 x 108	1	37,71	

Blister: 230x60 mm.



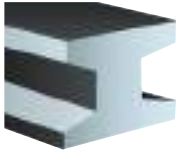
BC5F				
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€	
1,00	34 x 12	2	5,81	
1,50	40 x 18	2	5,45	
2,00	49 x 24	2	5,81	
2,50	57 x 30	2	5,52	
3,00	61 x 33	2	5,31	
3,25	65 x 36	2	6,26	
3,50	70 x 39	2	6,24	
4,00	75 x 43	2	6,57	
4,25	75 x 43	1	3,76	
4,50	80 x 47	1	3,86	
5,00	86 x 52	1	3,94	
5,25	86 x 52	1	4,83	
5,50	93 x 57	1	5,04	
5,75	93 x 57	1	5,67	

BC5F				
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€	
6,00	93 x 57	1	5,39	
6,50	101 x 63	1	6,24	
6,75	109 x 69	1	7,31	
7,00	109 x 69	1	6,86	
7,50	109 x 69	1	7,23	
8,00	117 x 75	1	8,54	
8,50	117 x 75	1	8,83	
9,00	125 x 81	1	11,46	
9,50	125 x 81	1	11,79	
10,00	133 x 87	1	12,86	
10,50	133 x 87	1	18,55	
11,00	142 x 94	1	20,12	
12,00	151 x 101	1	25,37	
13,00	151 x 101	1	32,00	

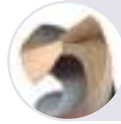
**Recommended R.P.M.**

METAL	Ø 2	Ø 4	Ø 6	Ø 8	Ø 10	Ø 12
Soft	4000	2000	1300	1000	800	700
Medium	3200	1600	1000	800	650	550
Hard	2300	1100	1700	600	475	350





**CYLINDRICAL SHANK TWIST DRILL DIN 338 IN POUCH AND BLISTER**



Ref. BC02B  
Ref. BC02F

**DIN 338**

**HSS-G Plus**




**OX GOLD**


**70 Kg/m<sup>3</sup>**

Display

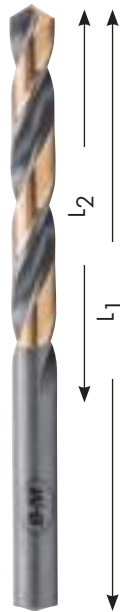
Grey


BC02B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
1,00	34 x 12	2	5,81
1,50	40 x 18	2	5,52
2,00	49 x 24	2	4,42
2,50	57 x 30	2	4,42
3,00	61 x 33	2	4,48
3,30	65 x 36	2	5,00
3,50	70 x 39	2	4,40
4,00	75 x 43	2	5,02
4,20	75 x 43	1	3,32
4,50	80 x 47	1	3,36
5,00	86 x 52	1	3,50
5,50	93 x 57	1	4,36
5,75	93 x 57	1	5,52
6,00	93 x 57	1	4,36
6,50	101 x 63	1	5,18
6,75	109 x 69	1	6,24
7,00	109 x 69	1	6,24


Blister: 190x60 mm.

BC02B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
7,50	109 x 69	1	6,20
8,00	117 x 75	1	6,70
8,50	117 x 75	1	7,86
9,00	125 x 81	1	8,77
9,50	125 x 81	1	9,36
10,00	133 x 87	1	10,36
10,25	133 x 87	1	14,86
10,50	133 x 87	1	12,08
11,00	142 x 94	1	13,81
11,50	142 x 94	1	14,66
12,00	151 x 101	1	16,19
12,50	151 x 101	1	17,44
13,00	151 x 101	1	18,33
13,50	160 x 108	1	25,08
14,00	160 x 108	1	28,12

Blister: 230x60 mm.



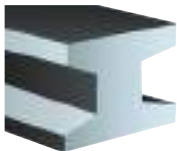
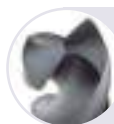
BC02F			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
1,00	34 x 12	2	4,72
1,50	40 x 18	2	4,37
2,00	49 x 24	2	3,61
2,50	57 x 30	2	3,96
3,00	61 x 33	2	3,43
3,25	65 x 36	2	3,76
3,50	70 x 39	2	3,76
4,00	75 x 43	2	4,21
4,25	75 x 43	1	2,39
4,50	80 x 47	1	2,46
5,00	86 x 52	1	2,64
5,25	86 x 52	1	3,56
5,50	93 x 57	1	3,46
5,75	93 x 57	1	4,62

BC02F			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
6,00	93 x 57	1	3,66
6,50	101 x 63	1	4,20
6,75	109 x 69	1	5,19
7,00	109 x 69	1	4,98
7,50	109 x 69	1	5,21
8,00	117 x 75	1	6,02
8,50	117 x 75	1	6,64
9,00	125 x 81	1	8,10
9,50	125 x 81	1	8,78
10,00	133 x 87	1	9,51
10,50	133 x 87	1	11,57
11,00	142 x 94	1	13,34
12,00	151 x 101	1	15,71
13,00	151 x 101	1	17,97

**Recommended R.P.M.**

METAL	Ø 2	Ø 4	Ø 6	Ø 8	Ø 10	Ø 12
Soft	3000	1600	950	800	630	450
Medium	2200	1200	725	625	490	375
Hard	1400	800	500	450	350	300

Upon demand we can provide our package of an electromagnetic anti-theft device with an additional charge of 0,07 € per unit. They can be placed in all the products or randomly.


**CYLINDRICAL SHANK TWIST DRILL DIN 338 IN POUCH AND BLISTER**

 Ref. BC2B  
 Ref. BC2F

**DIN  
338**
**HSS**

**118°**

**30°**

**OX**

**70  
Kg/m rñ**


BC2B				
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€	
1,00	34 x 12	2	4,85	
1,50	40 x 18	2	4,63	
2,00	49 x 24	2	4,26	
2,50	57 x 30	2	4,17	
3,00	61 x 33	2	4,17	
3,30	65 x 36	2	4,73	
3,50	70 x 39	2	4,13	
4,00	75 x 43	2	4,38	
4,20	75 x 43	1	3,11	
4,50	80 x 47	1	3,17	
5,00	86 x 52	1	3,26	
5,50	93 x 57	1	4,11	
5,75	93 x 57	1	4,83	
6,00	93 x 57	1	4,00	
6,50	101 x 63	1	4,44	
6,75	109 x 69	1	5,71	
7,00	109 x 69	1	5,31	

*Blister: 190x60 mm.*

BC2B				
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€	
7,50	109 x 69	1	5,61	
8,00	117 x 75	1	6,20	
8,50	117 x 75	1	6,47	
9,00	125 x 81	1	7,98	
9,50	125 x 81	1	8,35	
10,00	133 x 87	1	9,43	
10,25	133 x 87	1	12,17	
10,50	133 x 87	1	11,24	
11,00	142 x 94	1	12,51	
11,50	142 x 94	1	13,40	
12,00	151 x 101	1	14,74	
12,50	151 x 101	1	15,98	
13,00	151 x 101	1	16,55	
13,50	160 x 108	1	23,42	
14,00	160 x 108	1	25,93	

*Blister: 230x60 mm.*

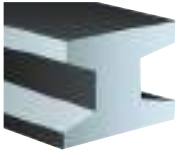


BC2F				
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€	
1,00	34 x 12	2	4,06	
1,50	40 x 18	2	3,37	
2,00	49 x 24	2	3,10	
2,50	57 x 30	2	3,33	
3,00	61 x 33	2	3,03	
3,25	65 x 36	2	3,46	
3,50	70 x 39	2	3,34	
4,00	75 x 43	2	3,63	
4,25	75 x 43	1	2,17	
4,50	80 x 47	1	2,30	
5,00	86 x 52	1	2,38	
5,25	86 x 52	1	3,22	
5,50	93 x 57	1	3,09	
5,75	93 x 57	1	4,16	

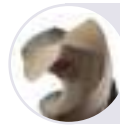
BC2F				
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€	
6,00	93 x 57	1	3,20	
6,50	101 x 63	1	3,55	
6,75	109 x 69	1	4,58	
7,00	109 x 69	1	4,41	
7,50	109 x 69	1	4,56	
8,00	117 x 75	1	5,28	
8,50	117 x 75	1	5,61	
9,00	125 x 81	1	7,25	
9,50	125 x 81	1	7,90	
10,00	133 x 87	1	8,28	
10,50	133 x 87	1	10,29	
11,00	142 x 94	1	11,79	
12,00	151 x 101	1	14,09	
13,00	151 x 101	1	16,23	

**Recommended R.P.M.**

METAL	Ø 2	Ø 4	Ø 6	Ø 8	Ø 10	Ø 12
Soft	3000	1600	950	800	630	450
Medium	2200	1200	725	625	490	375
Hard	1400	800	500	450	350	300



**REDUCED SHANK TWIST DRILL IN BLISTER AND TELESCOPIC PACKAGE**



Ref. BC99B  
Ref. BC99P

**DIN 338**

**HSS C 5%**



**GOLD**



BC99B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
13,50	160 x 108	1	47,92
14,00	160 x 108	1	52,39
14,50	169 x 114	1	66,95
15,00	169 x 114	1	69,91
<i>Blister: 230x60 mm.</i>			

BC99B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
15,50	178 x 120	1	78,02
16,00	178 x 120	1	80,38
16,50	184 x 125	1	91,65
17,00	184 x 125	1	92,25
17,50	191 x 130	1	101,53
18,00	191 x 130	1	111,26
18,50	198 x 135	1	124,14
19,00	198 x 135	1	123,07
19,50	205 x 140	1	136,36
20,00	205 x 140	1	146,09
<i>Blister: 282x60 mm.</i>			

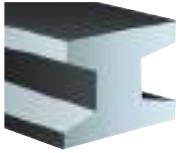
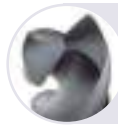


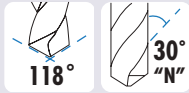
Ø 12,70 mm Reduced shank

BC99P			
	Ø mm	L <sub>1</sub> x L <sub>2</sub> mm	€
14x 169mm	13,50	160 x 108	47,92
	14,00	160 x 108	52,39
	14,50	169 x 114	66,95
Quadro pack: 20x205 mm	15,00	169 x 114	69,91
	15,50	178 x 120	78,02
	16,00	178 x 120	80,38
	16,50	184 x 125	91,65
	17,00	184 x 125	92,25
	17,50	191 x 130	101,53
	18,00	191 x 130	111,26
	18,50	198 x 135	124,14
	19,00	198 x 135	123,07
	19,50	205 x 140	136,36
20,00	205 x 140	146,09	

**Recommended R.P.M.**

METAL	Ø 14	Ø 15	Ø 16	Ø 18	Ø 20
Soft	571	533	500	444	400
Medium	457	427	400	356	320
Hard	329	287	271	256	230


**REDUCED SHANK TWIST DRILL IN BLISTER AND TELESCOPIC PACKAGE**

 Ref. BC9B  
 Ref. BC9P

**DIN  
338**
**HSS**

**OX**


BC9B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
13,50	160 x 108	1	33,13
14,00	160 x 108	1	35,04
14,50	169 x 114	1	36,87

*Blister: 230x60 mm.*

BC9B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
15,00	169 x 114	1	37,17
15,50	178 x 120	1	42,66
16,00	178 x 120	1	44,15
16,50	184 x 125	1	49,21
17,00	184 x 125	1	49,34
17,50	191 x 130	1	53,10
18,00	191 x 130	1	55,85
18,50	198 x 135	1	60,72
19,00	198 x 135	1	60,72
19,50	205 x 140	1	70,98
20,00	205 x 140	1	78,45

*Blister: 282x60 mm.*



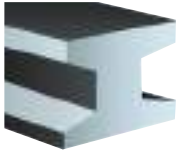
Ø 12,70 mm. Reduced shank

BC9P				
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€	
14x169mm	13,50	160 x 108	1	30,99
	14,00	160 x 108	1	32,91
	14,50	169 x 114	1	35,59
Quadro pack: 20x205 mm	15,00	169 x 114	1	35,93
	15,50	178 x 120	1	41,49
	16,00	178 x 120	1	43,00
	16,50	184 x 125	1	48,17
	17,00	184 x 125	1	48,17
	17,50	191 x 130	1	54,81
	18,00	191 x 130	1	57,78
	18,50	198 x 135	1	60,58
	19,00	198 x 135	1	60,58
	19,50	205 x 140	1	69,20
20,00	205 x 140	1	74,99	
20,50	205 x 140	1	86,99	
21,00	205 x 140	1	79,42	

BC9P				
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€	
Quadro pack: 26x258 mm	21,50	209 x 140	1	92,36
	22,00	209 x 140	1	87,80
	22,50	214 x 140	1	93,91
	23,00	214 x 140	1	96,15
	23,50	220 x 145	1	106,73
	24,00	220 x 145	1	105,54
	24,50	225 x 150	1	113,71
32x273 mm	25,00	225 x 150	1	115,41
	26,00	243 x 157	1	138,44
	27,00	243 x 157	1	148,69
	28,00	253 x 167	1	153,84
	29,00	253 x 167	1	180,59
	30,00	258 x 171	1	189,83

**Recommended R.P.M.**

METAL	Ø 14	Ø 15	Ø 16	Ø 18	Ø 20
Soft	429	400	375	333	300
Medium	314	293	275	244	220
Hard	200	200	175	156	140



**CYLINDRICAL SHANK TWIST DRILL DIN 338 IN POUCH AND BLISTER**



Ref. BC18B  
Ref. BC18F

**DIN 338**

**HSS**



**TN**



BC18B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
1,00	34 x 12	2	6,25
1,50	40 x 18	2	5,36
2,00	49 x 24	2	5,39
2,50	57 x 30	2	5,85
3,00	61 x 33	2	5,45
3,30	65 x 36	2	6,62
3,50	70 x 39	2	6,27
4,00	75 x 43	2	6,79
4,20	75 x 43	1	4,00
4,50	80 x 47	1	3,95
5,00	86 x 52	1	3,97
5,50	93 x 57	1	4,60
5,75	93 x 57	1	5,27
6,00	93 x 57	1	4,54
6,50	101 x 63	1	7,74
6,75	109 x 69	1	8,69
7,00	109 x 69	1	8,10

*Blister: 190x60 mm.*

BC18B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
7,50	109 x 69	1	8,85
8,00	117 x 75	1	9,14
8,50	117 x 75	1	10,06
9,00	125 x 81	1	10,96
9,50	125 x 81	1	11,54
10,00	133 x 87	1	11,83
10,25	133 x 87	1	20,39
10,50	133 x 87	1	18,98
11,00	142 x 94	1	19,99
11,50	142 x 94	1	20,52
12,00	151 x 101	1	21,39
12,50	151 x 101	1	25,14
13,00	151 x 101	1	26,25
13,50	160 x 108	1	31,30
14,00	160 x 108	1	32,33

*Blister: 230x60 mm.*



BC18F			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
1,00	34 x 12	2	5,70
1,50	40 x 18	2	4,82
2,00	49 x 24	2	4,73
2,50	57 x 30	2	5,23
3,00	61 x 33	2	4,73
3,25	65 x 36	2	5,67
3,50	70 x 39	2	5,50
4,00	75 x 43	2	5,97
4,25	75 x 43	1	3,15
4,50	80 x 47	1	3,11
5,00	86 x 52	1	3,15
5,25	86 x 52	1	3,82
5,50	93 x 57	1	3,74
5,75	93 x 57	1	4,57

BC18F			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
6,00	93 x 57	1	3,77
6,50	101 x 63	1	6,99
6,75	109 x 69	1	7,65
7,00	109 x 69	1	7,48
7,50	109 x 69	1	7,84
8,00	117 x 75	1	8,28
8,50	117 x 75	1	9,22
9,00	125 x 81	1	10,10
9,50	125 x 81	1	11,02
10,00	133 x 87	1	11,32
10,50	133 x 87	1	18,33
11,00	142 x 94	1	19,33
12,00	151 x 101	1	20,71
13,00	151 x 101	1	25,57

**Recommended R.P.M.**

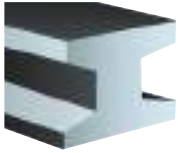
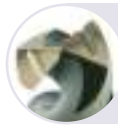
METAL	Ø 2	Ø 4	Ø 6	Ø 8	Ø 10	Ø 12
Soft	4500	2400	1425	1200	950	675
Medium	3300	1800	1100	950	735	560
Hard	2100	1200	750	675	525	450

Upon demand we can provide our package of an electromagnetic anti-theft device with an additional charge of 0,07 € per unit. They can be placed in all the products or randomly.

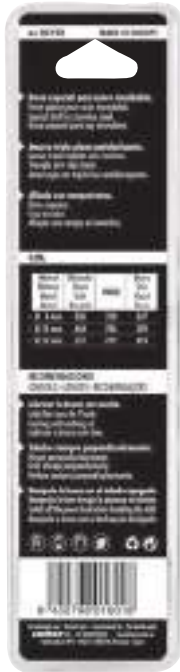
Display

Pink




**CYLINDRICAL SHANK TWIST DRILLS DIN 338 IN BLISTER & POUCH**


Ref. BC95B

**DIN**  
**338**
**HSS C**  
**5%**


BC95B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
1,00	34 x 12	2	8,16
1,50	40 x 18	2	7,77
2,00	49 x 24	2	7,77
2,50	57 x 30	2	7,05
3,00	61 x 33	2	6,91
3,20	65 x 36	2	7,10
3,30	65 x 36	2	8,15
3,50	70 x 39	2	8,07
4,00	75 x 43	2	8,69
4,20	75 x 43	1	4,86
4,50	80 x 47	1	4,86
5,00	86 x 52	1	5,21
5,50	93 x 57	1	6,58
6,00	93 x 57	1	7,01
6,50	101 x 63	1	7,91
6,80	109 x 69	1	9,06

Blister: 190x60 mm.

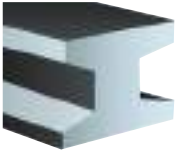
BC95B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
7,00	109 x 69	1	8,62
7,50	109 x 69	1	9,19
8,00	117 x 75	1	10,77
8,50	117 x 75	1	11,23
9,00	125 x 81	1	14,31
9,50	125 x 81	1	16,48
10,00	133 x 87	1	17,78
10,20	133 x 87	1	23,04
10,50	133 x 87	1	23,04
11,00	142 x 94	1	25,03
11,50	142 x 94	1	28,24
12,00	151 x 101	1	30,00
12,50	151 x 101	1	35,78
13,00	151 x 101	1	36,27

Blister: 230x60 mm.

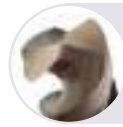


BC95F			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
1,00	34 x 12	2	6,94
1,50	40 x 18	2	6,63
2,00	49 x 24	2	6,63
2,50	57 x 30	2	6,22
3,00	61 x 33	2	6,08
3,20	65 x 36	2	7,24
3,30	65 x 36	2	7,46
3,50	70 x 39	2	7,32
4,00	75 x 43	2	7,99
4,20	75 x 43	1	4,45
4,50	80 x 47	1	4,45
5,00	86 x 52	1	4,75
5,50	93 x 57	1	6,02
6,00	93 x 57	1	6,40
6,50	101 x 63	1	7,47
6,80	109 x 69	1	8,69

BC95F			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
7,00	109 x 69	1	8,18
7,50	109 x 69	1	8,67
8,00	117 x 75	1	10,17
8,50	117 x 75	1	10,61
9,00	125 x 81	1	13,52
9,50	125 x 81	1	14,00
10,00	133 x 87	1	15,40
10,20	133 x 87	1	20,78
10,50	133 x 87	1	20,79
11,00	142 x 94	1	22,95
11,50	142 x 94	1	26,42
12,00	151 x 101	1	28,32
12,50	151 x 101	1	34,56
13,00	151 x 101	1	35,07



**CYLINDRICAL SHANK TWIST DRILLS IN POUCH**



Ref. BC58F

**DIN 338**

**HSSCo 8%**



**GOLD**

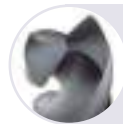
**120 Kg/m<sup>3</sup>**

Recommended R.P.M.

METAL	Soft	Medium	Hard
Ø 2 mm	4000	3200	2300
Ø 4 mm	2000	1600	1100
Ø 6 mm	1300	1000	1700
Ø 8 mm	1000	800	600
Ø 10 mm	800	650	475
Ø 12 mm	700	550	350

BC58F			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm	●	€
1,00	34 x 12	2	8,62
1,50	40 x 18	2	8,19
2,00	49 x 24	2	8,19
2,50	57 x 30	2	8,19
3,00	61 x 33	2	7,93
3,25	65 x 36	2	9,63
3,50	70 x 39	2	9,47
4,00	75 x 43	2	10,23
4,25	75 x 43	1	5,90
4,50	80 x 47	1	5,90
5,00	86 x 52	1	6,39
5,25	86 x 52	1	7,42
5,50	93 x 57	1	7,94
5,75	93 x 57	1	8,79

BC58F			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm	●	€
6,00	93 x 57	1	8,41
6,50	101 x 63	1	9,74
6,75	109 x 69	1	11,37
7,00	109 x 69	1	10,23
7,50	109 x 69	1	10,89
8,00	117 x 75	1	12,66
8,50	117 x 75	1	13,13
9,00	125 x 81	1	17,00
9,50	125 x 81	1	17,54
10,00	133 x 87	1	19,28
10,50	133 x 87	1	27,90
11,00	142 x 94	1	30,67
12,00	151 x 101	1	41,69
13,00	151 x 101	1	52,78



Ref. BC4F

**DIN 340**

**HSS**



**OX**

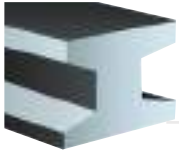
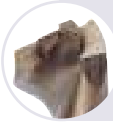
**70 Kg/m<sup>3</sup>**

Recommended R.P.M.

METAL	Soft	Medium	Hard
Ø 2 mm	3000	2200	1400
Ø 4 mm	1600	1200	800
Ø 6 mm	950	725	500
Ø 8 mm	800	625	450
Ø 10 mm	630	490	350
Ø 12 mm	450	375	300

BC4F			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm	●	€
1,00	56 x 33	1	6,16
1,50	70 x 45	1	4,40
2,00	85 x 56	1	3,08
2,50	95 x 62	1	3,38
3,00	100 x 66	1	3,10
3,25	106 x 69	1	3,25
3,50	112 x 73	1	3,12
4,00	119 x 78	1	3,38
4,25	119 x 78	1	4,42
4,50	126 x 82	1	4,14
5,00	132 x 87	1	4,38
5,25	132 x 87	1	7,10
5,50	139 x 91	1	5,79
5,75	139 x 91	1	7,57

BC4F			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm	●	€
6,00	139 x 91	1	5,29
6,50	148 x 97	1	6,87
6,75	156 x 102	1	8,41
7,00	156 x 102	1	8,08
7,50	156 x 102	1	8,60
8,00	165 x 109	1	9,32
8,50	165 x 109	1	10,66
9,00	175 x 115	1	11,58
9,50	175 x 115	1	11,63
10,00	184 x 121	1	12,85
10,50	184 x 121	1	17,12
11,00	195 x 128	1	19,00
12,00	205 x 134	1	21,28
13,00	205 x 134	1	25,42


**XTURBO DRILLS WITH CENTERING POINT**


Ref. BTX

**DIN**  
**338**
**HSS C**  
**5%**
**TQ**  
**H8**
**120**  
**Kg/m<sup>3</sup>**
 $\varnothing \geq 3$ 
**135°**
**38°**  
**"S"**
**IN X**
**X**  
**TURBO**


BTXB			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
3,00	61 x 33	1	2,67
3,20	65 x 36	1	3,28
3,30	65 x 36	1	3,28
3,50	70 x 39	1	3,27
4,00	75 x 43	1	3,30
4,20	75 x 43	1	3,93
4,50	80 x 47	1	3,89
5,00	86 x 52	1	5,03
5,50	93 x 57	1	6,38
6,00	93 x 57	1	6,79
6,50	101 x 63	1	7,93
6,80	109 x 69	1	9,23

Blister: 190x60 mm.

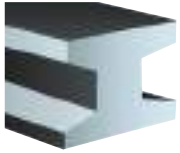
BTXB			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
7,00	109 x 69	1	8,67
7,50	109 x 69	1	9,20
8,00	117 x 75	1	10,79
8,50	117 x 75	1	11,25
9,00	125 x 81	1	13,77
9,50	125 x 81	1	14,49
10,00	133 x 87	1	15,94
10,20	133 x 87	1	20,64
10,50	133 x 87	1	20,65
11,00	142 x 94	1	22,79
11,50	142 x 94	1	25,56
12,00	151 x 101	1	27,40
12,50	151 x 101	1	34,03
13,00	151 x 101	1	34,53

Blister: 230x60 mm.

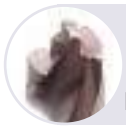


BTXF			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
3,00	61 x 33	1	2,19
3,20	65 x 36	1	2,70
3,30	65 x 36	1	2,70
3,50	70 x 39	1	2,69
4,00	75 x 43	1	2,71
4,20	75 x 43	1	3,24
4,50	80 x 47	1	3,33
5,00	86 x 52	1	4,48
5,50	93 x 57	1	5,68
6,00	93 x 57	1	6,04
6,50	101 x 63	1	7,05
6,80	109 x 69	1	8,21

BTXF			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
7,00	109 x 69	1	7,71
7,50	109 x 69	1	8,19
8,00	117 x 75	1	9,59
8,50	117 x 75	1	10,00
9,00	125 x 81	1	12,74
9,50	125 x 81	1	13,20
10,00	133 x 87	1	14,52
10,20	133 x 87	1	19,60
10,50	133 x 87	1	19,61
11,00	142 x 94	1	21,64
11,50	142 x 94	1	24,92
12,00	151 x 101	1	26,71
12,50	151 x 101	1	32,59
13,00	151 x 101	1	33,08



**TTURBO DRILLS WITH CENTERING POINT**



Ref. TTX

**DIN 338**

**HSS**

**TQ H8**

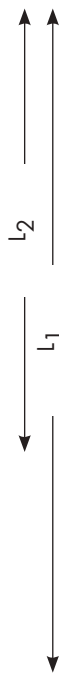


TTXB			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
3,00	61 x 33	1	2,54
3,20	65 x 36	1	3,12
3,30	65 x 36	1	3,12
3,50	70 x 39	1	3,11
4,00	75 x 43	1	3,13
4,20	75 x 43	1	3,74
4,50	80 x 47	1	3,69
5,00	86 x 52	1	4,78
5,50	93 x 57	1	6,07
6,00	93 x 57	1	6,45
6,50	101 x 63	1	7,53
6,80	109 x 69	1	8,77

*Blister: 190x60 mm.*

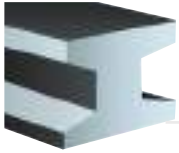
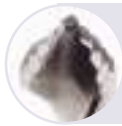
TTXB			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
7,00	109 x 69	1	8,24
7,50	109 x 69	1	8,75
8,00	117 x 75	1	10,25
8,50	117 x 75	1	10,69
9,00	125 x 81	1	13,08
9,50	125 x 81	1	13,77
10,00	133 x 87	1	15,14
10,20	133 x 87	1	19,60
10,50	133 x 87	1	19,61
11,00	142 x 94	1	21,65
11,50	142 x 94	1	24,28
12,00	151 x 101	1	26,03
12,50	151 x 101	1	32,34
13,00	151 x 101	1	32,80

*Blister: 230x60 mm.*



TTXF			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
3,00	61 x 33	1	1,98
3,20	65 x 36	1	2,43
3,30	65 x 36	1	2,43
3,50	70 x 39	1	2,42
4,00	75 x 43	1	2,44
4,20	75 x 43	1	2,92
4,50	80 x 47	1	2,99
5,00	86 x 52	1	4,03
5,50	93 x 57	1	5,11
6,00	93 x 57	1	5,43
6,50	101 x 63	1	6,34
6,80	109 x 69	1	7,39

TTXF			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
7,00	109 x 69	1	6,93
7,50	109 x 69	1	7,37
8,00	117 x 75	1	8,63
8,50	117 x 75	1	9,01
9,00	125 x 81	1	11,47
9,50	125 x 81	1	11,88
10,00	133 x 87	1	13,07
10,20	133 x 87	1	17,64
10,50	133 x 87	1	17,65
11,00	142 x 94	1	19,48
11,50	142 x 94	1	22,42
12,00	151 x 101	1	24,04
12,50	151 x 101	1	29,33
13,00	151 x 101	1	29,76


**STEP CUT DRILL FOR EASY DRILLING IN CURVED AND UNSTABLE SURFACES**

 Ref. TK02B  
 Ref. TK02F

**DIN  
338**
**HSS**

 $\varnothing \geq 2,5 \text{ mm}$ 

 $\varnothing \geq 4$ 

**AI**

**Cu-Ni-Zn**

**PVC**

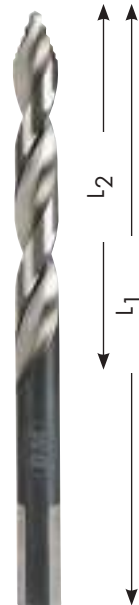
**STEP CUT**


TK02B			
$\varnothing$ mm	L <sub>1</sub> x L <sub>2</sub> mm		€
1,00	34 x 12	1	4,98
1,50	40 x 18	1	5,09
2,00	49 x 24	1	5,23
2,50	57 x 30	1	5,82
3,00	61 x 33	1	6,02
3,50	70 x 39	1	6,87
4,00	75 x 43	1	7,83
4,50	80 x 47	1	8,44
5,00	76 x 52	1	9,42
5,50	93 x 57	1	9,87
6,00	93 x 57	1	10,59
6,50	101 x 63	1	12,06
7,00	109 x 69	1	13,54

*Blister: 190x60 mm.*

TK02B			
$\varnothing$ mm	L <sub>1</sub> x L <sub>2</sub> mm		€
7,50	109 x 69	1	15,53
8,00	117 x 75	1	16,42
8,50	117 x 75	1	19,07
9,00	125 x 81	1	20,83
9,50	125 x 81	1	22,31
10,00	133 x 87	1	23,63
10,50	133 x 87	1	26,09
11,00	142 x 94	1	28,53
11,50	142 x 94	1	31,90
12,00	151 x 101	1	34,45
12,50	151 x 101	1	37,18
13,00	151 x 101	1	39,73

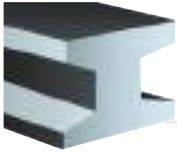
*Blister: 230x60 mm.*



TK02F			
$\varnothing$ mm	L <sub>1</sub> x L <sub>2</sub> mm		€
1,00	34 x 12	1	4,07
1,50	40 x 18	1	4,18
2,00	49 x 24	1	4,32
2,50	57 x 30	1	4,91
3,00	61 x 33	1	5,10
3,50	70 x 39	1	5,96
4,00	75 x 43	1	6,92
4,50	80 x 47	1	7,55
5,00	76 x 52	1	8,75
5,50	93 x 57	1	9,20
6,00	93 x 57	1	9,93
6,50	101 x 63	1	11,39

TK02F			
$\varnothing$ mm	L <sub>1</sub> x L <sub>2</sub> mm		€
7,00	109 x 69	1	12,87
7,50	109 x 69	1	14,86
8,00	117 x 75	1	15,53
8,50	117 x 75	1	18,19
9,00	125 x 81	1	19,94
9,50	125 x 81	1	21,42
10,00	133 x 87	1	22,74
10,50	133 x 87	1	24,65
11,00	142 x 94	1	27,42
11,50	133 x 87	1	29,68
12,00	151 x 101	1	32,23
12,50	151 x 101	1	34,74
13,00	151 x 101	1	37,30





**STEP CUT DRILL FOR EASY DRILLING IN CURVED AND UNSTABLE SURFACES**



Ref. TK05B  
Ref. TK05F

**DIN 338**

**HSS C 5%**



**STEP CUT**

Display  
Pink



TK05B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
1,00	34 x 12	1	6,14
1,50	40 x 18	1	6,29
2,00	49 x 24	1	6,48
2,50	57 x 30	1	7,27
3,00	61 x 33	1	7,55
3,50	70 x 39	1	8,69
4,00	75 x 43	1	9,99
4,50	80 x 47	1	10,81
5,00	76 x 52	1	12,09
5,50	93 x 57	1	12,70
6,00	93 x 57	1	12,80
6,50	101 x 63	1	14,63
7,00	109 x 69	1	16,48

*Blister: 190x60 mm.*

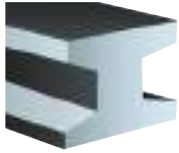
TK05B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
7,50	109 x 69	1	18,96
8,00	117 x 75	1	19,97
8,50	117 x 75	1	23,29
9,00	125 x 81	1	25,48
9,50	125 x 81	1	27,33
10,00	133 x 87	1	26,84
10,50	133 x 87	1	29,59
11,00	142 x 94	1	32,40
11,50	142 x 94	1	36,10
12,00	151 x 101	1	39,03
12,50	151 x 101	1	42,06
13,00	151 x 101	1	44,99

*Blister: 230x60 mm.*



TK05F			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
1,00	34 x 12	1	5,23
1,50	40 x 18	1	5,38
2,00	49 x 24	1	5,57
2,50	57 x 30	1	6,36
3,00	61 x 33	1	6,63
3,20	65 x 36	1	7,20
3,50	70 x 39	1	7,78
4,00	75 x 43	1	9,08
4,20	75 x 43	1	9,65
4,50	80 x 47	1	9,92
5,00	76 x 52	1	11,42
5,50	93 x 57	1	12,03
6,00	93 x 57	1	12,13
6,50	101 x 63	1	13,96

TK05F			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
6,80	109 x 69	1	14,85
7,00	109 x 69	1	15,81
7,50	109 x 69	1	18,30
8,00	117 x 75	1	19,08
8,50	117 x 75	1	22,40
9,00	125 x 81	1	24,59
9,50	125 x 81	1	26,44
10,00	133 x 87	1	25,96
10,20	133 x 87	1	27,36
10,50	133 x 87	1	28,15
11,00	142 x 94	1	31,28
11,50	142 x 94	1	33,88
12,00	151 x 101	1	36,81
12,50	151 x 101	1	39,62
13,00	151 x 101	1	42,56


**METAL DRILL SETS IN BLISTER / WITHOUT BLISTER**
**HSS G8%**


Ref. BC5



Cont.	19 Uts - Ø 1 - 10 x 0,50 mm.	19 Uts - Ø 1 - 10 x 0,50 mm.	25 Uts - Ø 1 - 13 x 0,50 mm.	25 Uts - Ø 1 - 13 x 0,50 mm.
	<b>PC010B</b> 120,56 €	<b>PC010</b> 104,56 €	<b>PC011B</b> 278,80 €	<b>PC011</b> 245,22 €

*Plus*


Ref. BC02



Cont.	19 Uts - Ø 1 - 10 x 0,50 mm.	19 Uts - Ø 1 - 10 x 0,50 mm.	25 Uts - Ø 1 - 13 x 0,50 mm.	25 Uts - Ø 1 - 13 x 0,50 mm.
	<b>PP010B</b> 89,80 €	<b>PP010</b> 70,74 €	<b>PP011B</b> 172,43 €	<b>PP011</b> 146,35 €

**HSS**


Ref. BC2



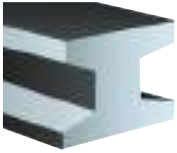
Cont.	19 Uts - Ø 1 - 10 x 0,50 mm.	19 Uts - Ø 1 - 10 x 0,50 mm.	25 Uts - Ø 1 - 13 x 0,50 mm.	25 Uts - Ø 1 - 13 x 0,50 mm.
	<b>P0010B</b> 85,77 €	<b>P0010</b> 62,57 €	<b>P0011B</b> 153,33 €	<b>P0011</b> 130,18 €

**HSS G8%**

*Plus*

**HSS**


Cont.	15 (Ref. BC5) HSSCo 5%	15 (Ref. BC02) <i>Plus</i>	15 (Ref. BC2) HSS
	Ø 1,5(x2) - 2(x2) - 2,5(x2) - 3 - 3,2 - 3,5 - 4 - 4,5 - 5 - 6 - 8 - 10mm	Ø 1,5(x2) - 2(x2) - 2,5(x2) - 3 - 3,2 - 3,5 - 4 - 4,5 - 5 - 6 - 8 - 10mm	Ø 1,5(x2) - 2(x2) - 2,5(x2) - 3 - 3,2 - 3,5 - 4 - 4,5 - 5 - 6 - 8 - 10mm
	<b>PC015B</b> 71,60 €	<b>PP015B</b> 51,06 €	<b>P0015B</b> 46,08 €



**CYLINDRICAL SHANK TWIST DRILLS DIN 338 DISPLAYS**

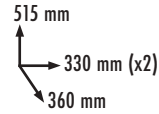


**HSS Co**  
5%

HSSCo DRILLS IN BLISTER

BC5B drills

$\frac{11,00}{7}$	$\frac{11,50}{7}$	$\frac{12,00}{7}$	$\frac{13,00}{7}$	$\frac{14,00}{7}$
$\frac{9,00}{10}$	$\frac{9,50}{10}$	$\frac{10,00}{8}$	$\frac{10,25}{8}$	$\frac{10,50}{8}$
$\frac{6,75}{12}$	$\frac{7,00}{12}$	$\frac{7,50}{10}$	$\frac{8,00}{10}$	$\frac{8,50}{10}$
$\frac{5,00}{12}$	$\frac{5,50}{12}$	$\frac{5,75}{12}$	$\frac{6,00}{12}$	$\frac{6,50}{12}$
$\frac{3,30}{18}$	$\frac{3,50}{18}$	$\frac{4,00}{18}$	$\frac{4,20}{12}$	$\frac{4,50}{12}$
$\frac{1,00}{18}$	$\frac{1,50}{18}$	$\frac{2,00}{18}$	$\frac{2,50}{18}$	$\frac{3,00}{18}$



Ref. 1-60

3.711,52 €

Ref. BC5B



**HSS Co**  
5%

HSSCo DRILLS IN POUCH

BC5F drills

$\frac{8,50}{12}$	$\frac{9,00}{12}$	$\frac{9,50}{6}$	$\frac{10,00}{12}$	$\frac{10,50}{6}$	$\frac{11,00}{10}$	$\frac{12,00}{10}$	$\frac{13,00}{6}$		
$\frac{5,00}{20}$	$\frac{5,25}{20}$	$\frac{5,50}{20}$	$\frac{5,75}{12}$	$\frac{6,00}{20}$	$\frac{6,50}{12}$	$\frac{6,75}{12}$	$\frac{7,00}{12}$	$\frac{7,50}{12}$	$\frac{8,00}{12}$
$\frac{1,00}{20}$	$\frac{1,50}{20}$	$\frac{2,00}{20}$	$\frac{2,50}{20}$	$\frac{3,00}{25}$	$\frac{3,25}{20}$	$\frac{3,50}{20}$	$\frac{4,00}{20}$	$\frac{4,25}{20}$	$\frac{4,50}{20}$



Ref. 1-52

3.231,54 €



Ref. BC5F



**HSS Co**  
5%

HSSCo TWIST DRILLS DISPLAY

BC5 drills

$\frac{8,50}{10}$	$\frac{9,00}{20}$	$\frac{9,50}{10}$	$\frac{10,00}{20}$				
$\frac{6,00}{30}$	$\frac{6,50}{20}$	$\frac{7,00}{30}$	$\frac{7,50}{20}$	$\frac{8,00}{30}$			
$\frac{2,00}{50}$	$\frac{2,50}{50}$	$\frac{3,00}{50}$	$\frac{3,50}{50}$	$\frac{4,00}{50}$	$\frac{4,50}{50}$	$\frac{5,00}{50}$	$\frac{5,50}{30}$



Ref. 1-45

2.589,19 €

Ref. BC5



**HSS Co**  
5%

HSSCo TWIST DRILLS DISPLAY

BC5 drills

$\frac{2,00}{100}$	$\frac{2,50}{50}$	$\frac{3,00}{100}$	$\frac{3,25}{30}$	$\frac{3,50}{30}$	$\frac{4,00}{100}$
$\frac{4,25}{30}$	$\frac{4,50}{30}$	$\frac{5,00}{100}$	$\frac{5,25}{20}$	$\frac{5,50}{30}$	$\frac{5,75}{30}$
$\frac{6,00}{50}$	$\frac{6,50}{20}$	$\frac{6,75}{20}$	$\frac{7,00}{30}$	$\frac{7,50}{20}$	$\frac{8,00}{30}$
$\frac{8,50}{10}$	$\frac{9,00}{30}$	$\frac{9,50}{10}$	$\frac{10,00}{30}$	$\frac{10,50}{10}$	
$\frac{11,00}{12}$	$\frac{11,50}{12}$	$\frac{12,00}{12}$	$\frac{12,50}{6}$	$\frac{13,00}{6}$	$\frac{14,00}{6}$



Ref. 3-3

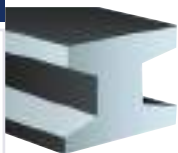
5.403,18 €



Ref. BC5





**CYLINDRICAL SHANK TWIST DRILLS DIN 338 DISPLAYS**

*Plus*
**HSS-G DRILLS IN BLISTER**
**BC02B drills**

$\frac{11,00}{7}$	$\frac{11,50}{7}$	$\frac{12,00}{7}$	$\frac{13,00}{7}$	$\frac{14,00}{7}$
$\frac{9,00}{10}$	$\frac{9,50}{10}$	$\frac{10,00}{8}$	$\frac{10,25}{8}$	$\frac{10,50}{8}$
$\frac{6,75}{12}$	$\frac{7,00}{12}$	$\frac{7,50}{10}$	$\frac{8,00}{10}$	$\frac{8,50}{10}$
$\frac{5,00}{12}$	$\frac{5,50}{12}$	$\frac{5,75}{12}$	$\frac{6,00}{12}$	$\frac{6,50}{12}$
$\frac{3,30}{18}$	$\frac{3,50}{18}$	$\frac{4,00}{18}$	$\frac{4,20}{12}$	$\frac{4,50}{12}$
$\frac{1,00}{18}$	$\frac{1,50}{18}$	$\frac{2,00}{18}$	$\frac{2,50}{18}$	$\frac{3,00}{18}$



515 mm  
 330 mm (x2)  
 360 mm

Ref. 1-61

Ref. BC02B

2.533,22 €


*Plus*
**HSS-G DRILLS IN POUCH**
**BC02F drills**

$\frac{8,50}{12}$	$\frac{9,00}{12}$	$\frac{9,50}{6}$	$\frac{10,00}{12}$	$\frac{10,50}{6}$	$\frac{11,00}{10}$	$\frac{12,00}{10}$	$\frac{13,00}{6}$		
$\frac{5,00}{20}$	$\frac{5,25}{20}$	$\frac{5,50}{20}$	$\frac{5,75}{12}$	$\frac{6,00}{20}$	$\frac{6,50}{12}$	$\frac{6,75}{12}$	$\frac{7,00}{12}$	$\frac{7,50}{12}$	$\frac{8,00}{12}$
$\frac{1,00}{20}$	$\frac{1,50}{20}$	$\frac{2,00}{20}$	$\frac{2,50}{20}$	$\frac{3,00}{25}$	$\frac{3,25}{20}$	$\frac{3,50}{20}$	$\frac{4,00}{20}$	$\frac{4,25}{20}$	$\frac{4,50}{20}$



515 mm  
 330 mm  
 360 mm

Ref. 1-51

2.191,06 €



Ref. BC02F


*Plus*
**HSS-G TWIST DRILLS**
**BC02 drills**

$\frac{8,50}{10}$	$\frac{9,00}{20}$	$\frac{9,50}{10}$	$\frac{10,00}{30}$				
$\frac{6,00}{40}$	$\frac{6,50}{20}$	$\frac{7,00}{30}$	$\frac{7,50}{20}$	$\frac{8,00}{30}$			
$\frac{2,00}{50}$	$\frac{2,50}{50}$	$\frac{3,00}{50}$	$\frac{3,50}{50}$	$\frac{4,00}{50}$	$\frac{4,50}{50}$	$\frac{5,00}{50}$	$\frac{5,50}{30}$



515 mm  
 330 mm  
 360 mm

Ref. 1-46

1.710,93 €



Ref. BC02


*Plus*
**HSS-G TWIST DRILLS**
**BC02 drills**

$\frac{2,00}{100}$	$\frac{2,50}{50}$	$\frac{3,00}{100}$	$\frac{3,25}{50}$	$\frac{3,50}{50}$	$\frac{4,00}{100}$
$\frac{4,25}{50}$	$\frac{4,50}{50}$	$\frac{5,00}{100}$	$\frac{5,25}{50}$	$\frac{5,50}{50}$	$\frac{5,75}{50}$
$\frac{6,00}{50}$	$\frac{6,50}{50}$	$\frac{6,75}{20}$	$\frac{7,00}{50}$	$\frac{7,50}{30}$	$\frac{8,00}{40}$
$\frac{8,50}{20}$	$\frac{9,00}{40}$	$\frac{9,50}{20}$	$\frac{10,00}{40}$	$\frac{10,50}{10}$	
$\frac{11,00}{12}$	$\frac{11,50}{12}$	$\frac{12,00}{12}$	$\frac{12,50}{6}$	$\frac{13,00}{6}$	$\frac{14,00}{6}$



815 mm  
 400 mm  
 240 mm

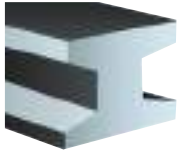
Ref. 3-2

4.189,65 €



Ref. BC02





**CYLINDRICAL SHANK TWIST DRILLS DIN 338 DISPLAYS**

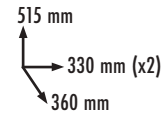
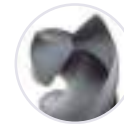


**HSS**

HSS DRILLS IN BLISTER

Brocas BC2B

$\frac{11,00}{7}$	$\frac{11,50}{7}$	$\frac{12,00}{7}$	$\frac{13,00}{7}$	$\frac{14,00}{7}$
$\frac{9,00}{10}$	$\frac{9,50}{10}$	$\frac{10,00}{8}$	$\frac{10,25}{8}$	$\frac{10,50}{8}$
$\frac{6,75}{12}$	$\frac{7,00}{12}$	$\frac{7,50}{10}$	$\frac{8,00}{10}$	$\frac{8,50}{10}$
$\frac{5,00}{12}$	$\frac{5,50}{12}$	$\frac{5,75}{12}$	$\frac{6,00}{12}$	$\frac{6,50}{12}$
$\frac{3,30}{18}$	$\frac{3,50}{18}$	$\frac{4,00}{18}$	$\frac{4,20}{12}$	$\frac{4,50}{12}$
$\frac{1,00}{18}$	$\frac{1,50}{18}$	$\frac{2,00}{18}$	$\frac{2,50}{18}$	$\frac{3,00}{18}$



Ref. 1-62

2.281,66 €

Ref. BC2B

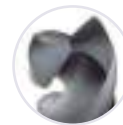


**HSS**

HSS DRILLS IN POUCH

Brocas BC2F

$\frac{8,50}{12}$	$\frac{9,00}{12}$	$\frac{9,50}{6}$	$\frac{10,00}{12}$	$\frac{10,50}{6}$	$\frac{11,00}{10}$	$\frac{12,00}{10}$	$\frac{13,00}{6}$		
$\frac{5,00}{20}$	$\frac{5,25}{20}$	$\frac{5,50}{20}$	$\frac{5,75}{12}$	$\frac{6,00}{20}$	$\frac{6,50}{12}$	$\frac{6,75}{12}$	$\frac{7,00}{12}$	$\frac{7,50}{12}$	$\frac{8,00}{12}$
$\frac{1,00}{20}$	$\frac{1,50}{20}$	$\frac{2,00}{20}$	$\frac{2,50}{20}$	$\frac{3,00}{25}$	$\frac{3,25}{20}$	$\frac{3,50}{20}$	$\frac{4,00}{20}$	$\frac{4,25}{20}$	$\frac{4,50}{20}$



Ref. 1-50

1.925,77 €



Ref. BC2F

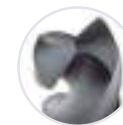


*Plus*

HSS TWIST DRILLS

BC2 drills

$\frac{8,50}{10}$	$\frac{9,00}{20}$	$\frac{9,50}{10}$	$\frac{10,00}{30}$				
$\frac{6,00}{40}$	$\frac{6,50}{30}$	$\frac{7,00}{30}$	$\frac{7,50}{30}$	$\frac{8,00}{30}$			
$\frac{2,00}{50}$	$\frac{2,50}{50}$	$\frac{3,00}{50}$	$\frac{3,50}{50}$	$\frac{4,00}{50}$	$\frac{4,50}{50}$	$\frac{5,00}{50}$	$\frac{5,50}{30}$



Ref. 1-44

1.604,85 €



Ref. BC2

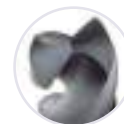


*Plus*

HSS TWIST DRILLS

BC2 drills

$\frac{2,00}{100}$	$\frac{2,50}{50}$	$\frac{3,00}{100}$	$\frac{3,25}{50}$	$\frac{3,50}{50}$	$\frac{4,00}{100}$
$\frac{4,25}{50}$	$\frac{4,50}{50}$	$\frac{5,00}{100}$	$\frac{5,25}{50}$	$\frac{5,50}{50}$	$\frac{5,75}{50}$
$\frac{6,00}{50}$	$\frac{6,50}{50}$	$\frac{6,75}{20}$	$\frac{7,00}{50}$	$\frac{7,50}{30}$	$\frac{8,00}{40}$
$\frac{8,50}{20}$	$\frac{9,00}{40}$	$\frac{9,50}{20}$	$\frac{10,00}{40}$	$\frac{10,50}{10}$	
$\frac{11,00}{12}$	$\frac{11,50}{12}$	$\frac{12,00}{12}$	$\frac{12,50}{6}$	$\frac{13,00}{6}$	$\frac{14,00}{6}$



Ref. 3-1

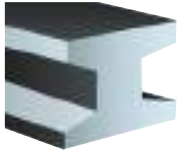
3.750,76 €



Ref. BC2






**REDUCED SHANK DRILLS DISPLAYS**

**HSSCo**  
 5%

**HSSCo REDUCED SHANK DRILLS IN BLISTER**

BC99B drills

18,00 3	18,50 1	19,00 2	19,50 1	20,00 2
16,00 3	16,00 3	16,50 2	17,00 2	17,50 1
13,50 2	14,00 3	14,50 2	15,00 3	15,50 2

 615 mm  
 ↘ 330 mm  
 ↘ 360 mm

Ref. 2-66

2.836,84 €



Ref. BC99B



Ref. BC99P


 515 mm  
 ↘ 330 mm  
 ↘ 360 mm

Ref. 1-6

4.373,19 €


**HSSCo**  
 5%

**HSSCo REDUCED SHANK DRILLS IN TELESCOPIC PACKAGE**

BC99P drills

17,50 2	18,00 2	18,00 2	18,50 2	19,00 2	19,00 2	19,50 2	20,00 2
15,50 2	16,00 2	16,00 2	16,00 2	16,00 2	16,50 2	17,00 2	17,00 2
13,50 2	14,00 3	14,00 3	14,00 2	14,50 2	15,00 2	15,00 2	15,00 2


**HSS**
**HSS REDUCED SHANK DRILLS IN BLISTER**

BC9B drills

18,00 4	18,50 1	19,00 2	19,50 1	20,00 2
16,00 4	16,00 4	16,50 2	17,00 2	17,50 1
13,50 2	14,00 4	14,50 2	15,00 4	15,50 2

 615 mm  
 ↘ 330 mm  
 ↘ 360 mm

Ref. 2-65

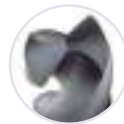
1.751,01 €



Ref. BC9B



Ref. BC9P


 515 mm  
 ↘ 330 mm  
 ↘ 360 mm

Ref. 1-3

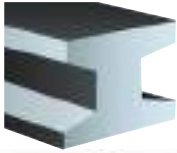
3.044,84 €


**HSS**
**HSS REDUCED SHANK DRILLS IN TELESCOPIC QUADROPACK**

BC9P drills

17,50 2	18,00 3	18,00 2	18,50 2	19,00 2	19,00 2	19,50 2	20,00 3
15,50 2	16,00 3	16,00 3	16,00 3	16,00 3	16,50 3	17,00 3	17,00 3
13,50 2	14,00 4	14,00 4	14,00 4	14,50 3	15,00 3	15,00 3	15,00 3

**CYLINDRICAL AND ANTI-SLIP SHANK TWIST DRILLS DISPLAYS**

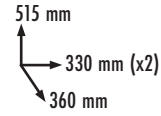


**HSS**  
**TN**

HSS + TIN DRILLS IN BLISTER

BC18B drills

$\frac{11,00}{7}$	$\frac{11,50}{7}$	$\frac{12,00}{7}$	$\frac{13,00}{7}$	$\frac{14,00}{7}$
$\frac{9,00}{10}$	$\frac{9,50}{10}$	$\frac{10,00}{8}$	$\frac{10,25}{8}$	$\frac{10,50}{8}$
$\frac{6,75}{12}$	$\frac{7,00}{12}$	$\frac{7,50}{10}$	$\frac{8,00}{10}$	$\frac{8,50}{10}$
$\frac{5,00}{12}$	$\frac{5,50}{12}$	$\frac{5,75}{12}$	$\frac{6,00}{12}$	$\frac{6,50}{12}$
$\frac{3,30}{18}$	$\frac{3,50}{18}$	$\frac{4,00}{18}$	$\frac{4,20}{12}$	$\frac{4,50}{12}$
$\frac{1,00}{18}$	$\frac{1,50}{18}$	$\frac{2,00}{18}$	$\frac{2,50}{18}$	$\frac{3,00}{18}$



Ref. 1-67

3.232,87 €



Ref. BC18B



**HSS**  
**TN**

HSS + TIN DRILLS IN POUCH

BC18F drills

$\frac{8,50}{12}$	$\frac{9,00}{12}$	$\frac{9,50}{6}$	$\frac{10,00}{12}$	$\frac{10,50}{6}$	$\frac{11,00}{10}$	$\frac{12,00}{10}$	$\frac{13,00}{6}$		
$\frac{5,00}{20}$	$\frac{5,25}{20}$	$\frac{5,50}{20}$	$\frac{5,75}{12}$	$\frac{6,00}{20}$	$\frac{6,50}{12}$	$\frac{6,75}{12}$	$\frac{7,00}{12}$	$\frac{7,50}{12}$	$\frac{8,00}{12}$
$\frac{1,00}{20}$	$\frac{1,50}{20}$	$\frac{2,00}{20}$	$\frac{2,50}{20}$	$\frac{3,00}{25}$	$\frac{3,25}{20}$	$\frac{3,50}{20}$	$\frac{4,00}{20}$	$\frac{4,25}{20}$	$\frac{4,50}{20}$



Ref. BC18F

Ref. 1-54

2.896,81 €



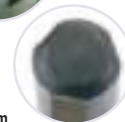
**HSS C**  
**5%**

**IN**

COBALT 5% ANTI-SLIP DRILLS IN BLISTER

BC95B drills

$\frac{6,50}{4}$	$\frac{8,00}{5}$	$\frac{9,00}{4}$	$\frac{10,00}{4}$	$\frac{DC95314}{4}$
$\frac{4,20}{3}$	$\frac{4,50}{5}$	$\frac{5,00}{5}$	$\frac{5,50}{5}$	$\frac{6,00}{5}$
$\frac{1,00}{5}$	$\frac{2,00}{5}$	$\frac{3,00}{5}$	$\frac{3,20}{3}$	$\frac{4,00}{5}$



Ref. 1-25

641,83 €



Ref. BC95B



**HSS C**  
**5%**

**IN**

COBALT 5% ANTI-SLIP DRILLS IN POUCH

BC95F drills

$\frac{9,00}{5}$	$\frac{10,00}{5}$	$\frac{10,50}{5}$	$\frac{11,00}{5}$	$\frac{11,50}{5}$	$\frac{12,00}{5}$	$\frac{12,50}{5}$	$\frac{13,00}{5}$	
$\frac{4,50}{10}$	$\frac{5,00}{10}$	$\frac{5,50}{10}$	$\frac{6,00}{10}$	$\frac{6,50}{10}$	$\frac{6,80}{10}$	$\frac{8,00}{10}$	$\frac{8,50}{5}$	
$\frac{1,00}{10}$	$\frac{1,50}{10}$	$\frac{2,00}{10}$	$\frac{2,50}{10}$	$\frac{3,00}{10}$	$\frac{3,30}{10}$	$\frac{3,50}{10}$	$\frac{4,00}{10}$	$\frac{4,20}{10}$



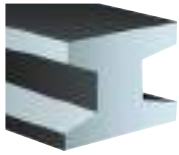
Ref. 1-34

2.115,13 €

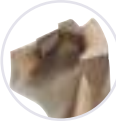


Ref. BC95F





**ANTI-SLIP SHANK TWIST DRILLS DISPLAYS**



**HSSCo**  
5%

**DIN**  
338

HSSCo 5% TWIST DRILLS IN BLISTER

BTXB drills

10,00 4	11,00 4	12,00 4	13,00 4	PTX9314 4
6,00 5	6,50 4	7,00 4	8,00 5	9,00 4
3,00 5	4,00 5	4,50 5	5,00 5	5,50 4

**TU 130**

Ref. 1-59

827,19 €



Ref. BTXB



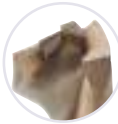
515 mm  
330 mm  
360 mm

Display  
Pink



Ref. BTXF

515 mm  
330 mm  
360 mm



**TU 130**

Ref. 1-43

938,41 €



**HSSCo**  
5%

**DIN**  
338

HSSCo 5% TWIST DRILLS IN PLASTIC POUCH

BTXF drills

10,00 5	10,20 2	10,50 2	11,00 2	11,50 2	12,00 2	12,50 2	13,00 2	
6,50 5	6,80 5	7,00 2	7,50 2	8,00 10	8,50 2	9,00 2	9,50 2	
3,00 10	3,30 5	3,50 5	4,00 10	4,20 5	4,50 5	5,00 10	5,50 5	6,00 10



**HSS**

**DIN**  
338

HSS TWIST DRILLS IN BLISTER

TTXB drills

10,00 4	11,00 4	12,00 4	13,00 4	PTTX9314 4
6,00 5	6,50 4	7,00 4	8,00 5	9,00 4
3,00 5	4,00 5	4,50 5	5,00 5	5,50 4

**TU 130**

Ref. 1-36

783,68 €



Ref. TTXB



515 mm  
330 mm  
360 mm



Ref. TTXF

515 mm  
330 mm  
360 mm



**TU 130**

Ref. 1-20

844,44 €



**HSS**

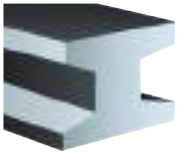
**DIN**  
338

HSS TWIST DRILLS IN PLASTIC POUCH

TTXF drills

10,00 5	10,20 2	10,50 2	11,00 2	11,50 2	12,00 2	12,50 2	13,00 2	
6,50 5	6,80 5	7,00 2	7,50 2	8,00 10	8,50 2	9,00 2	9,50 2	
3,00 10	3,30 5	3,50 5	4,00 10	4,20 5	4,50 5	5,00 10	5,50 5	6,00 10





**ANTI-SLIP SHANK TWIST DRILLS DISPLAYS**



**HSS**

**DIN 338**

DRILLING IN CURVED AND UNSTABLE SURFACES

TK02B drills

10,00 5	11,00 2	12,00 2	13,00 2	PTK029314 4
6,00 10	6,50 5	7,00 5	8,00 10	9,00 5
3,00 10	4,00 10	4,50 5	5,00 10	5,50 5



**STEP CUT**

Ref. 1-65

1.339,75 €



TK02B

515 mm  
330 mm  
360 mm



Display

Pink



TK02F

515 mm  
330 mm  
360 mm



**STEP CUT**

Ref. 1-66

1.684,30 €



**HSS**

**DIN 338**

DRILLING IN CURVED AND UNSTABLE SURFACES

TK02F drills

9,50 5	10,00 5	10,50 2	11,00 2	11,50 2	12,00 2	12,50 2	13,00 2	
5,50 5	6,00 10	6,50 5	7,00 5	7,50 5	8,00 10	8,50 5	9,00 5	
1,00 10	1,50 5	2,00 10	2,50 5	3,00 10	3,50 5	4,00 10	4,50 5	5,00 10



**HSSC**

**DIN 338**

DRILLING IN CURVED AND UNSTABLE SURFACES

TK05B drills

10,00 5	11,00 2	12,00 2	13,00 2	PTK059314 4
6,00 10	6,50 5	7,00 5	8,00 10	9,00 5
3,00 10	4,00 10	4,50 5	5,00 10	5,50 4



**STEP CUT**

**IN X**

Ref. 1-91

1.628,55 €



TK05B

515 mm  
330 mm  
360 mm



TK05F

515 mm  
330 mm  
360 mm



**STEP CUT**

**IN X**

Ref. 1-92

2.060,63 €



**HSSC**

**DIN 338**

DRILLING IN CURVED AND UNSTABLE SURFACES

TK05F drills

9,50 5	10,00 5	10,50 2	11,00 2	11,50 2	12,00 2	12,50 2	13,00 2	
5,50 5	6,00 10	6,50 5	7,00 5	7,50 5	8,00 10	8,50 5	9,00 5	
1,00 10	1,50 5	2,00 10	2,50 5	3,00 10	3,50 5	4,00 10	4,50 5	5,00 10



**COBALT 8% AND HSS LONG SERIES DRILLS DISPLAYS**



**HSSCo  
8%**

COBALT 8% DRILLS IN PLASTIC POUCH

BC58F drills

8,50 6	9,00 6	9,50 6	10,00 8	10,50 6	11,00 6	12,00 6	13,00 6			
5,00 10	5,25 10	5,50 10	5,75 6	6,00 10	6,50 6	6,75 6	7,00 6	7,50 6	8,00 6	
1,00 10	1,50 10	2,00 10	2,50 10	3,00 10	3,25 10	3,50 10	4,00 10	4,25 10	4,50 10	



Ref. BC58F

Ref. 1-41

2.864,48 €



515 mm  
330 mm  
360 mm



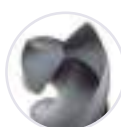
515 mm  
330 mm  
360 mm



Ref. BC4F

Ref. 1-19

2.970,05 €



**HSS**

**D IN  
340**

HSS LONG SERIES DRILL IN POUCH

BC4F drills

8,50 12	9,00 12	9,50 6	10,00 12	10,50 6	11,00 10	12,00 10	13,00 6			
5,00 20	5,25 20	5,50 20	5,75 12	6,00 20	6,50 12	6,75 12	7,00 12	7,50 12	8,00 12	
1,00 20	1,50 20	2,00 20	2,50 20	3,00 25	3,25 20	3,50 20	4,00 20	4,25 20	4,50 20	



**LOCKSMITH SPECIAL DISPLAY**



BC5

HSSCo 5%



Form C

MD



BCC06

MD



BC7

CARBIDE TIPPED



BC98



BC85

TiAlN



Form AE

MD



LOCKSMITH SPECIAL DISPLAY

Drills for metal HSSCo 5%, ref: BC5B

3,00 4	4,00 4	5,00 4	6,00 4	8,00 4
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Rotary burrs C Form, Ø 3 and Ø 6 mm Shank in Blister

3x60 2	6x50 2	6x80 2	6x100 2	6x150 2
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Drill reference: BCC06B, BC7B, BC98B, BC85B and rotary burrs A/E form in Blister

BCC06X60MDB 2	BC70600B 2	BC980600B 2	BC850600B 2	A60625-6EB 2
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515 mm  
330 mm  
360 mm

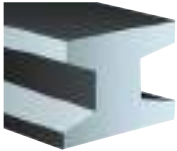
Ref. 1-86

137,85 €

1.137,38 €







**HSS HAND TAP SET IN BLISTER**



Ref. MOB

<b>M</b> <b>MF</b>	DIN 13 	60° 	<b>HSS</b>	<b>M</b> DIN 352	<b>MF</b> DIN 218	<b>TQ</b> 6H
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				MOB
			L1 x L2 x $\square$ mm	€
M3 x 0,50	3	2,50	40 x 11 x 2,7	25,08
M4 x 0,70	3	3,30	45 x 13 x 3,4	25,06
M5 x 0,80	3	4,20	50 x 16 x 4,9	26,88
M6 x 1,00	3	5,00	50 x 19 x 4,9	26,88
M8 x 1,25	3	6,75	56 x 22 x 4,9	32,19
M10 x 1,50	3	8,50	70 x 24 x 5,5	39,13
M12 x 1,75	3	10,25	75 x 29 x 7,0	54,09
M14 x 2,00	3	12,00	80 x 30 x 9,0	59,58

*Blister: 165 x 105 mm.*

**TAP HOLDER IN BLISTER**



Ref. GAB

	<b>DIN</b> <b>1814</b>
--	---------------------------



		GAB
		€
GA1B	M1 - M10	21,78
GA2B	M4 - M12	28,41

*Blister GA1B: 75x285mm GA2B: 110x275mm*

Ref. TCB

<b>HSS</b>
------------



		TCB
		€
TC1B	M3 - M8	22,25
TC2B	M5 - M12	29,84

*Blister: 165 x 105 mm.*

**HSS HAND TAP SET IN BLISTER DISPLAYS**

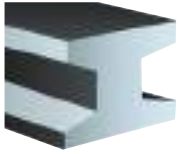


515 mm  
330 mm  
360 mm

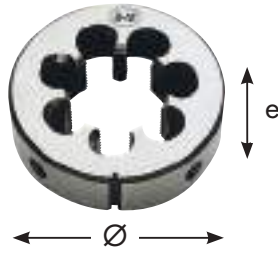
Ref. 1-78  
3.789,08 €



TAP HOLDER IN BLISTER		
MOB hand taps		
<u>M10 x 1,50</u> 12	<u>M12 x 1,75</u> 12	<u>M14 x 2,00</u> 12
<u>M6 x 1,00</u> 12	<u>M6 x 1,00</u> 12	<u>M8 x 1,25</u> 12
<u>M3 x 0,50</u> 12	<u>M4 x 0,70</u> 12	<u>M5 x 0,80</u> 12

Display  
Pink  
Green


**HAND THREADING DIES AND DIE HOLDERS IN BLISTER**

Ref. C5B

**M**  
**MF**
**HSS**
**M**  
**DIN 223D**
**MF**  
**IN 22**
**TQ**  
**6g**



			C5B
		Ø x e mm	€
M3 x 0,50	1	25 x 9	32,90
M4 x 0,70	1	25 x 9	32,90
M5 x 0,80	1	25 x 9	32,90
M6 x 1,00	1	25 x 9	32,90
M8 x 1,25	1	25 x 9	34,61
M10 x 1,50	1	38 x 10	45,52
M12 x 1,75	1	38 x 10	49,25
M14 x 2,00	1	38 x 14	48,80

Blister: 165 x 105 mm.

**DIE HOLDERS IN BLISTER**


Ref. VAB


**DIN**  
**225**


		VAB
		€
VA25B	25	15,13
VA38B	38	22,54

Blister VA25B: 75x285mm VA38B: 110x275mm

**HAND THREADING DIES AND DIE HOLDERS IN BLISTER DISPLAYS**


515 mm  
 330 mm  
 360 mm

Ref. 1-79

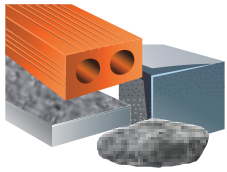
4.111,83 €



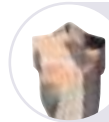
DIE HOLDERS IN BLISTER

Threading rounds C5B

<u>M10 x 1,50</u> 12	<u>M12 x 1,75</u> 12	<u>M14 x 2,00</u> 12
<u>M6 x 1,00</u> 12	<u>M6 x 1,00</u> 12	<u>M8 x 1,25</u> 12
<u>M3 x 0,50</u> 12	<u>M4 x 0,70</u> 12	<u>M5 x 0,80</u> 12



**CARBIDE TIPPED CONCRETE HAMMER DRILL EXTRA PROFESSIONAL QUALITY**

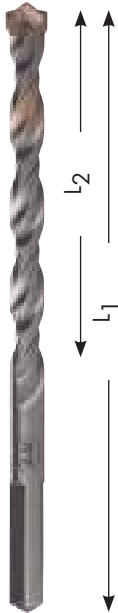


Ref. BW16B



Display

Grey

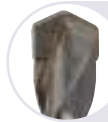


BW16B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
4,00	75 x 38	2	10,75
5,00	85 x 45	1	5,43
6,00	100 x 55	1	6,00
7,00	100 x 64	1	6,91
<i>Blister: 190x60 mm</i>			

BW16B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
8,00	120 x 70	1	7,29
9,00	120 x 80	1	8,96
10,00	120 x 90	1	10,26
12,00	150 x 110	1	15,72
<i>Blister: 230x60 mm</i>			



**CONSTRUCTION DRILLS DIN 8039 IN BLISTER**



Ref. BW6B



**DIN 8039**



BW6B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
3,00	70 x 30	2	9,27
4,00	70 x 30	2	9,27
5,00	85 x 45	1	4,92
6,00	100 x 50	1	5,39
7,00	100 x 50	1	5,96
<i>Blister: 190x60 mm</i>			

BW6B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
8,00	120 x 70	1	6,28
9,00	120 x 70	1	7,71
10,00	120 x 70	1	8,83
11,00	150 x 80	1	11,50
12,00	150 x 80	1	13,55
13,00	150 x 80	1	16,37
14,00	150 x 80	1	19,80
<i>Blister: 230x60 mm</i>			

Applications: concrete, marble, slate, granite, all type of stones.

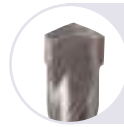
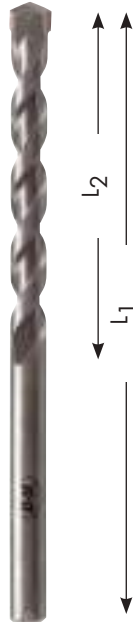
**Recommended RPM**

MATERIAL	Ø 3	Ø 5	Ø 8	Ø 10	Ø 12	Ø 13	Ø 14
Soft	3200	1900	1300	1100	900	800	700
Hard	2100	1200	900	700	600	500	400

**CONSTRUCTION DRILLS DIN 8039 IN BLISTER**


Display

Grey



Ref. BW1B

★★

**DIN  
8039**

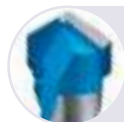
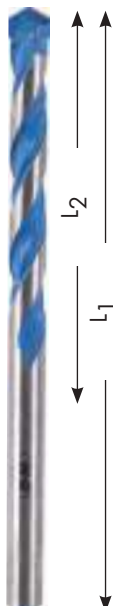

BW1B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
3,00	70 x 30	2	4,47
4,00	70 x 30	2	4,55
5,00	85 x 45	1	2,68
6,00	100 x 50	1	2,97
7,00	100 x 50	1	3,23
<i>Blister: 190x60 mm</i>			

BW1B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
8,00	120 x 70	1	3,41
9,00	120 x 70	1	3,93
10,00	120 x 70	1	4,17
11,00	150 x 80	1	6,10
12,00	150 x 80	1	7,08
13,00	150 x 80	1	8,10
14,00	150 x 80	1	10,36
<i>Blister: 230x60 mm</i>			

**Recommended RPM**

MATERIAL	Ø 3	Ø 5	Ø 8	Ø 10	Ø 12	Ø 13	Ø 14
Soft	3200	1900	1300	1100	900	800	700
Hard	2100	1200	900	700	600	500	400

Applications: Brick, Concrete, Uralita, Sandstone, Limestone

**PROFESSIONAL MULTIPURPOSE DRILL BITS DIN 8039 DOUBLE BLISTER PACKAGING**


Ref. BW8B

★★

**DIN  
8039**


BW8B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
4,00	70 x 30	2	20,70
5,00	85 x 45	1	10,50
6,00	100 x 50	1	12,04
7,00	100 x 50	1	13,82
<i>Blister: 190x60 mm.</i>			

BW8B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
8,00	120 x 70	1	15,18
9,00	120 x 70	1	17,37
10,00	120 x 70	1	22,42
12,00	150 x 80	1	24,04
<i>Blister: 230x60 mm.</i>			

**Recommended RPM**

MATERIAL	Ø 3	Ø 5	Ø 8	Ø 10
Concrete	1500	1300	900	800
Glass	800	600	500	400
Steel	2000	1800	1000	600
Wood	1600	1000	800	500
Tile	700	500	400	300
Plastic	2000	1200	750	550

**Applications:**

 • Percussion mode:  
Concrete, brick and stone

 • Rotary mode:  
Metal, ceramic, wood and plastic

**PROFESSIONAL SDS PLUS HAMMER DRILLS DOUBLE BLISTER PACKAGING**



W05B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
4x110	110 x 50	1	9,12
5x110	110 x 50	1	7,73
6x110	110 x 50	1	7,90
7x110	110 x 50	1	9,56
8x110	110 x 50	1	9,44
10x110	110 x 50	1	11,03
<i>Blister: 190x60 mm</i>			

W05B			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
5x160	160x100	1	9,31
6x160	160x100	1	8,75
7x160	160x100	1	11,46
8x160	160x100	1	10,07
10x160	160x100	1	11,54
12x160	160x100	1	12,86
14x160	160x100	1	20,20
<i>Blister: 230x60 mm</i>			

**Recommended RPM**

MATERIAL	Ø 3	Ø 5	Ø 8	Ø 10	Ø 12	Ø 14
Soft	3200	1900	1300	1100	900	700
Hard	2100	1200	900	700	600	400

Applications: Concrete, construction material, marble, granite, slate, stone.

Advantages: Self centering bit. Increased speed and durability. Low friction due to narrow lips. Bigger lifetime due to low friction at the point and flutes. Faster removal of concrete dust.



**MASONRY DRILL BITS BOXES BLISTER PACKAGING**



Cont.

15 (Ref. BW15) ★★★★★
Ø 3 (x3) - 4 (x3) - 5 (x3) - 6 (x2) - 8 (x2) - 10 (x2) mm.
<b>BW159329B</b> 116,45 €

15 (Ref. BW6) ★★★★★
Ø 3 (x3) - 4 (x3) - 5 (x3) - 6 (x2) - 8 (x2) - 10 (x2) mm.
<b>BW69329B</b> 72,15 €

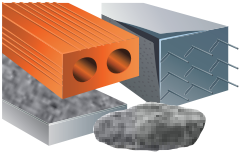
15 (Ref. BW1) ★★
Ø 3 (x3) - 4 (x3) - 5 (x3) - 6 (x2) - 8 (x2) - 10 (x2) mm.
<b>BW19329B</b> 37,59 €



**CONSTRUCTION DRILL BITS DISPLAYS**

Display

Grey



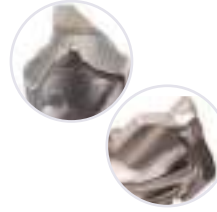
**DELTA 3 PLUS DRILL BITS BLISTER PACKAGING**

BW35 drills

$\frac{5 \times 150}{6}$	$\frac{6 \times 150}{6}$	$\frac{8 \times 200}{5}$	$\frac{10 \times 200}{5}$	$\frac{12 \times 200}{5}$
$\frac{5,00}{8}$	$\frac{6,00}{8}$	$\frac{8,00}{8}$	$\frac{10,00}{5}$	$\frac{12,00}{5}$
$\frac{5,00}{8}$	$\frac{6,00}{8}$	$\frac{8,00}{8}$	$\frac{10,00}{5}$	$\frac{12,00}{5}$



*Delta*  
**3 plus**

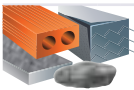


Ref. BW35B

Ref. 1-48

783,13 €

615 mm  
330 mm  
360 mm



**EXTRA PROFESSIONAL MASONRY DRILL BITS DOUBLE BLISTER**

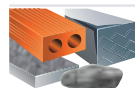
BW16 drills

$\frac{BW169325}{5}$		$\frac{BW169327}{5}$		$\frac{BW169334}{5}$	
$\frac{7,00}{10}$	$\frac{8,00}{10}$	$\frac{9,00}{10}$	$\frac{10,00}{10}$	$\frac{12,00}{10}$	
$\frac{4,00}{10}$	$\frac{5,00}{10}$	$\frac{5,00}{10}$	$\frac{6,00}{10}$	$\frac{6,00}{10}$	

Ref. 1-58

943,84 €

515 mm  
330 mm  
360 mm



**EXTRA PROFESSIONAL MASONRY DRILL BITS IN PLASTIC POUCH**

BW16 drills

$\frac{10 \times 200}{3}$	$\frac{12 \times 200}{3}$	$\frac{BW169325}{5}$	$\frac{BW169327}{5}$	$\frac{BW169434}{5}$		
$\frac{16,00}{3}$	$\frac{5 \times 150}{5}$	$\frac{6 \times 150}{5}$	$\frac{8 \times 150}{5}$	$\frac{10 \times 150}{5}$	$\frac{6 \times 200}{3}$	$\frac{8 \times 200}{3}$
$\frac{4,00}{10}$	$\frac{5,00}{10}$	$\frac{6,00}{10}$	$\frac{8,00}{10}$	$\frac{10,00}{10}$	$\frac{12,00}{5}$	$\frac{14,00}{3}$

515 mm  
330 mm  
360 mm

Ref. 2-32

1.237,50 €

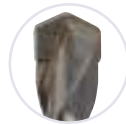
**PROFESSIONAL CONSTRUCTION DRILL BITS DISPLAYS**



PROFESSIONAL MASONRY DRILL BITS BLISTER PACKAGING

BW6B drills

$\frac{10,00}{10}$	$\frac{10,00}{10}$	$\frac{11,00}{7}$	$\frac{12,00}{7}$	$\frac{14,00}{7}$
$\frac{6,00}{15}$	$\frac{7,00}{15}$	$\frac{8,00}{10}$	$\frac{8,00}{10}$	$\frac{9,00}{10}$
$\frac{3,00}{18}$	$\frac{4,00}{18}$	$\frac{5,00}{15}$	$\frac{5,00}{15}$	$\frac{6,00}{15}$



Ref. 1-69

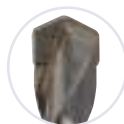
1.425,65 €



Ref. BW6B



Ref. BW6



Ref. 1-4

1.940,44 €



PROFESSIONAL MASONRY DRILL BITS IN PLASTIC POUCH

Drill bit boxes BW6

$\frac{BW69318}{4}$	$\frac{BW69327}{4}$	$\frac{BW69328}{4}$	$\frac{BW69319}{4}$
---------------------	---------------------	---------------------	---------------------

Brocas BW6

$\frac{10,00}{8}$	$\frac{10,00}{8}$	$\frac{11,00}{6}$	$\frac{12,00}{6}$	$\frac{13,00}{4}$	$\frac{14,00}{4}$	$\frac{16,00}{4}$	$\frac{18,00}{4}$		
$\frac{3,00}{10}$	$\frac{4,00}{10}$	$\frac{5,00}{30}$	$\frac{5,00}{30}$	$\frac{6,00}{30}$	$\frac{6,00}{30}$	$\frac{7,00}{10}$	$\frac{8,00}{30}$	$\frac{8,00}{30}$	$\frac{9,00}{10}$



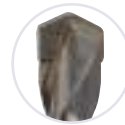
PROFESSIONAL MASONRY DRILL BITS IN PLASTIC POUCH

BW6 drills

$\frac{5 \times 150}{5}$	$\frac{6 \times 150}{5}$	$\frac{6 \times 200}{5}$	$\frac{8 \times 200}{5}$	$\frac{10 \times 200}{5}$	$\frac{12 \times 200}{5}$	$\frac{14 \times 200}{2}$	$\frac{16 \times 200}{2}$	$\frac{18 \times 200}{2}$
$\frac{3,00}{10}$	$\frac{4,00}{10}$	$\frac{5,00}{50}$	$\frac{6,00}{50}$	$\frac{7,00}{10}$	$\frac{8,00}{50}$	$\frac{9,00}{10}$	$\frac{10,00}{8}$	$\frac{12,00}{6}$

Drill bit boxes BW6

$\frac{BW69318}{4}$	$\frac{BW69327}{4}$	$\frac{BW69328}{4}$	$\frac{BW69319}{4}$
---------------------	---------------------	---------------------	---------------------



Ref. 1-5

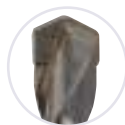
1.822,50 €



Ref. BW6



Ref. BW6



Ref. 2-6

1.746,42 €

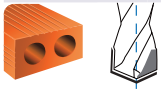


PROFESSIONAL MASONRY DRILL BITS IN PLASTIC POUCH

BW6 drills

$\frac{6 \times 400}{3}$	$\frac{8 \times 400}{3}$	$\frac{10 \times 400}{3}$	$\frac{12 \times 400}{3}$	$\frac{14 \times 400}{3}$	$\frac{16 \times 400}{2}$	$\frac{18 \times 400}{2}$		
$\frac{5 \times 150}{5}$	$\frac{6 \times 150}{5}$	$\frac{6 \times 200}{5}$	$\frac{8 \times 200}{5}$	$\frac{10 \times 200}{5}$	$\frac{12 \times 200}{5}$	$\frac{14 \times 200}{2}$	$\frac{16 \times 200}{2}$	$\frac{18 \times 200}{2}$
$\frac{3,00}{10}$	$\frac{4,00}{10}$	$\frac{5,00}{50}$	$\frac{6,00}{50}$	$\frac{7,00}{10}$	$\frac{8,00}{50}$	$\frac{9,00}{10}$	$\frac{10,00}{8}$	$\frac{12,00}{6}$

**CONSTRUCTION DRILL BITS DISPLAYS**



MASONRY DRILL BITS DOUBLE FLUTE

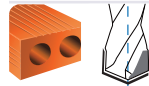
BW1B drills

$\frac{10,00}{10}$	$\frac{10,00}{10}$	$\frac{11,00}{7}$	$\frac{12,00}{7}$	$\frac{14,00}{7}$
$\frac{6,00}{15}$	$\frac{7,00}{15}$	$\frac{8,00}{10}$	$\frac{8,00}{10}$	$\frac{9,00}{10}$
$\frac{3,00}{18}$	$\frac{4,00}{18}$	$\frac{5,00}{15}$	$\frac{5,00}{15}$	$\frac{6,00}{15}$

515 mm  
330 mm  
360 mm

Ref. 1-70  
735,97 €

Ref. BW1B



MASONRY DRILL BITS IN PLASTIC POUCH

Drill bit boxes BW1

<u>BW19318</u>	<u>BW19327</u>	<u>BW19328</u>	<u>BW19319</u>
4	4	4	4

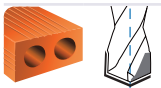
BW1 drills

$\frac{10,00}{8}$	$\frac{10,00}{8}$	$\frac{11,00}{6}$	$\frac{12,00}{6}$	$\frac{13,00}{4}$	$\frac{14,00}{4}$	$\frac{16,00}{4}$	$\frac{18,00}{4}$		
$\frac{3,00}{10}$	$\frac{4,00}{10}$	$\frac{5,00}{50}$	$\frac{5,00}{50}$	$\frac{6,00}{50}$	$\frac{6,00}{50}$	$\frac{7,00}{10}$	$\frac{8,00}{50}$	$\frac{8,00}{50}$	$\frac{9,00}{10}$

515 mm  
330 mm  
360 mm

Ref. 1-1  
1.111,37 €

Ref. BW1



MASONRY DRILL BITS IN PLASTIC POUCH

BW1 drills

$\frac{5 \times 150}{5}$	$\frac{6 \times 150}{5}$	$\frac{6 \times 200}{5}$	$\frac{8 \times 200}{5}$	$\frac{10 \times 200}{5}$	$\frac{12 \times 200}{5}$	$\frac{14 \times 200}{2}$	$\frac{16 \times 200}{2}$	$\frac{18 \times 200}{2}$
$\frac{3,00}{10}$	$\frac{4,00}{10}$	$\frac{5,00}{100}$	$\frac{6,00}{100}$	$\frac{7,00}{10}$	$\frac{8,00}{100}$	$\frac{9,00}{10}$	$\frac{10,00}{8}$	$\frac{12,00}{6}$

BW1 drill bit boxes.

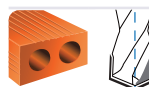
<u>BW19328</u>	<u>BW19327</u>	<u>BW19318</u>	<u>BW19319</u>
4	4	4	4

515 mm  
330 mm  
360 mm

Ref. 1-2  
1.162,31 €



Ref. BW1



MASONRY DRILL BITS IN PLASTIC POUCH

BW1 drills

$\frac{6 \times 400}{3}$	$\frac{8 \times 400}{3}$	$\frac{10 \times 400}{3}$	$\frac{12 \times 400}{3}$	$\frac{14 \times 400}{3}$	$\frac{16 \times 400}{2}$	$\frac{18 \times 400}{2}$		
$\frac{5 \times 150}{5}$	$\frac{6 \times 150}{5}$	$\frac{6 \times 200}{5}$	$\frac{8 \times 200}{5}$	$\frac{10 \times 200}{5}$	$\frac{12 \times 200}{5}$	$\frac{14 \times 200}{2}$	$\frac{16 \times 200}{2}$	$\frac{18 \times 200}{2}$
$\frac{3,00}{10}$	$\frac{4,00}{10}$	$\frac{5,00}{100}$	$\frac{6,00}{100}$	$\frac{7,00}{10}$	$\frac{8,00}{100}$	$\frac{9,00}{10}$	$\frac{10,00}{8}$	$\frac{12,00}{6}$

615 mm  
330 mm  
360 mm

Ref. 2-3  
1.154,83 €

Ref. BW1



**MASONRY DRILL BITS MIXED DISPLAYS**



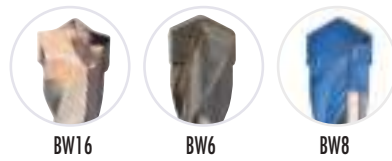
**BW16, BW6, BW1 MASONRY DRILL BITS DISPLAY**

BW16	4,00 10	5,00 10	6,00 10	7,00 10	8,00 10	9,00 6	10,00 6	12,00 6	
BW6	3,00 10	4,00 10	5,00 30	6,00 30	7,00 10	8,00 30	9,00 10	10,00 8	12,00 6
BW1	3,00 10	4,00 10	5,00 30	6,00 30	7,00 10	8,00 30	9,00 10	10,00 8	12,00 6



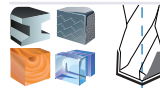
Ref. 1-8

1.347,45 €



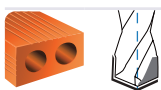
Ref. 1-12

1.675,44 €



**BW16, BW6 AND BW8 DRILL BITS MIXED DISPLAYS**

BW6	3,00 10	4,00 10	5,00 15	6,00 15	7,00 10	8,00 10	9,00 10	10,00 8	12,00 6
BW16	4,00 10	5,00 10	6,00 10	7,00 10	8,00 10	9,00 8	10,00 8	12,00 6	
BW8	4,00 10	5,00 10	6,00 10	7,00 10	8,00 10	9,00 10	10,00 8	12,00 6	



**BW16, BW6 & BW1 MASONRY DRILL BIT BOXES**

BW16	<u>BW169325</u> 4	<u>BW169327</u> 4	<u>BW169434</u> 4	
BW6	<u>BW69325</u> 5	<u>BW69327</u> 5	<u>BW69328</u> 5	<u>BW69434</u> 5
BW1	<u>BW19325</u> 5	<u>BW19327</u> 5	<u>BW19328</u> 5	<u>BW19434</u> 5



Ref. 1-14

1.354,23 €



**CONSTRUCTION DRILL BITS DISPLAYS**

Display

Grey

Pink



Ref. BW9B



Ref. 1-18

4.828,39 €



TILE DRILL BITS BLISTER PACKAGING

BW9 drill bit boxes

	BW99325	BW99325	BW99318	BW99318
	4	4	4	4

BW9 drills

$\frac{7,00}{3}$	$\frac{8,00}{10}$	$\frac{9,00}{6}$	$\frac{10,00}{6}$	$\frac{11,00}{6}$
$\frac{3,00}{10}$	$\frac{4,00}{12}$	$\frac{5,00}{10}$	$\frac{6,00}{12}$	$\frac{6,00}{12}$



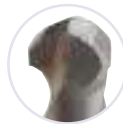
BW9



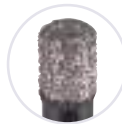
CPS



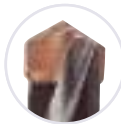
BW7



BW9



CPS



BW7



MIXED DISPLAY FOR PORCELAIN TILE

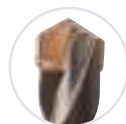
BW7	$\frac{4,00}{3}$	$\frac{5,00}{5}$	$\frac{6,00}{5}$	$\frac{8,00}{3}$	$\frac{10,00}{2}$	Plastic boxes	BW79325
							2
CPS	$\frac{5,00}{2}$	$\frac{6,00}{2}$	$\frac{8,00}{2}$	$\frac{10,00}{1}$		Water cooling guide with tank	CGB
							1
BW9	$\frac{4,00}{2}$	$\frac{5,00}{5}$	$\frac{6,00}{5}$	$\frac{8,00}{2}$	$\frac{10,00}{2}$		



Ref. 1-49

947,92 €

11,08 €



BW7



CPS



CSE



BW7



CPS



CSE



MIXED DISPLAY FOR PORCELAIN TILE



Ref. 1-27

897,03 €

936,13 €

BW7 drills

$\frac{4,00}{5}$	$\frac{5,00}{5}$	$\frac{6,00}{5}$	$\frac{8,00}{5}$	$\frac{10,00}{5}$	Box	BW79325
						2

CPS drills

$\frac{5,00}{3}$	$\frac{6,00}{3}$	$\frac{8,00}{3}$	$\frac{10,00}{3}$	$\frac{12,00}{3}$	Guide	CGB
						2

CSE Holesaws

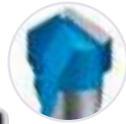
$\frac{20,00}{2}$	$\frac{25,00}{2}$	$\frac{30,00}{2}$	$\frac{35,00}{2}$	$\frac{50,00}{2}$	Arbor	ADCSE
						2



**MULTIPURPOSE DRILL BITS CONSTRUCTION DISPLAY**



Ref. BW8B



Ref. 1-74

3.098,58 €



MULTIPURPOSE DRILL BITS BLISTER

BW8B drills

$\frac{9,00}{10}$	$\frac{10,00}{10}$	$\frac{10,00}{10}$	$\frac{12,00}{7}$	$\frac{12,00}{7}$
$\frac{6,00}{15}$	$\frac{7,00}{15}$	$\frac{7,00}{15}$	$\frac{8,00}{10}$	$\frac{8,00}{10}$
$\frac{4,00}{18}$	$\frac{4,00}{18}$	$\frac{5,00}{15}$	$\frac{5,00}{15}$	$\frac{6,00}{15}$

**GLASS MIXED DISPLAY**



BC90

BC70



Ref. BC90B

Ref. BC70B



GLASS MIXED DOUBLE BLISTER DISPLAY

BC70B holesaws

$\frac{16,00}{3}$	$\frac{18,00}{3}$	$\frac{20,00}{3}$
-------------------	-------------------	-------------------

$\frac{10,00}{3}$	$\frac{12,00}{3}$	$\frac{14,00}{3}$
-------------------	-------------------	-------------------

BC90B drill bits

$\frac{3,00}{5}$	$\frac{4,00}{5}$	$\frac{5,00}{5}$	$\frac{6,00}{4}$	$\frac{8,00}{4}$
------------------	------------------	------------------	------------------	------------------

Ref. 1-24

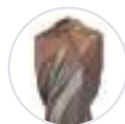
745,08 €



**HAMMER DRILL BITS DISPLAY**



Ref. W05B



HAMMER DRILLS BLISTER PACKAGING

W05B drills

$\frac{8 \times 160}{7}$	$\frac{10 \times 110}{8}$	$\frac{10 \times 160}{7}$	$\frac{12 \times 160}{7}$	$\frac{14 \times 160}{7}$
$\frac{6 \times 160}{7}$	$\frac{7 \times 110}{8}$	$\frac{7 \times 160}{7}$	$\frac{8 \times 110}{8}$	$\frac{8 \times 160}{7}$
$\frac{4 \times 110}{8}$	$\frac{5 \times 110}{8}$	$\frac{5 \times 160}{7}$	$\frac{6 \times 110}{8}$	$\frac{6 \times 160}{7}$



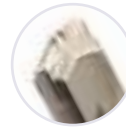
Ref. 1-72

1.159,25 €

**CONSTRUCTION DRILL BITS DISPLAYS**

Display

Grey



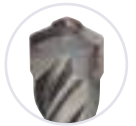
W08 RANGE UNTIL 20 X 200 MM.

W08 drills

6,5x200 3	8x200 5	10x200 5	12x200 3	14x200 3	15x250 3	16x200 2	18x200 2	20x200 2
6x160 5	6x160 5	8x160 5	10x160 5	12x160 3	14x160 3	15x160 3	5x200 5	6x200 5
4x110 5	5x110 5	5x110 5	6x110 5	6x110 5	8x110 5	10x110 5	4x160 5	5x160 5

Ref. 2-11

1.108,03 €



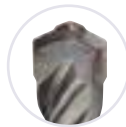
W05 RANGE UNTIL 20 X 200 MM.

W05 drills

5x200 3	6x200 3	8x200 3	10x200 3	12x200 3	14x200 3	16x200 2	18x200 2	20x200 2
5x160 5	6x160 5	6x160 5	6,5x160 5	8x160 5	10x160 5	12x160 3	14x160 3	15x160 3
4x110 5	5x110 5	5x110 5	6x110 5	6x110 5	8x110 5	10x110 5	4x160 5	5x160 5

Ref. 2-12

1.131,95 €



W05 RANGE UNTIL 20 X 200 MM.

W05 drills

7x200 3	8x200 3	9x200 3	10x200 3	12x200 3	14x200 3	16x200 2	18x200 2	20x200 2	
6,5x160 5	7x160 5	8x160 5	9x160 5	10x160 5	12x160 3	14x160 3	15x160 3	5x200 3	6x200 3
4x110 8	5x110 8	6x110 8	7x110 8	8x110 8	10x110 8	4x160 8	5x160 8	5,5x160 8	6x160 8

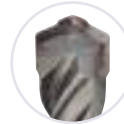


Ref. 2-19

1.481,34 €



**CONSTRUCTION DRILL BITS DISPLAYS**



W05 RANGE UNTIL 20 X 450 MM.

W05 drills

14x300	16x300	18x300	20x300	10x450	12x450	14x450	16x450	18x450	20x450
2	2	2	2	2	2	2	2	2	2
6x200	8x200	10x200	12x200	14x200	16x200	18x200	20x200	10x300	12x300
5	5	5	5	5	5	2	2	3	3
5x110	6x110	8x110	10x110	5x160	6x160	8x160	10x160	12x160	14x160
10	10	10	10	10	10	10	5	5	5

Ref. 2-20

2.191,54 €



Display

Grey



W55 RANGE UNTIL 20 X 250 MM.

W55 drills

6,5x210	8x210	10x210	12x200	14x200	16x250	18x250	20x250
2	2	2	2	2	2	2	2
6x160	6,5x160	8x160	10x160	12x160	14x160	5x210	6x210
5	5	5	5	3	3	2	2
5x110	5x110	6x110	6x110	8x110	10x110	5x160	6x160
5	5	5	5	5	5	5	5

Ref. 2-13

1.247,97 €



W88 PROFESSIONAL HAMMER DRILL BITS UNTIL 20 X 320 MM.

**DeltaTOP**  
series

W88 drills

14x270	16x270	8x320	10x320	12x320	14x320	16x320	18x320	20x320
2	2	2	2	2	2	2	2	1
8x220	10x220	12x220	14x220	16x220	6x270	8x270	10x270	12x270
3	3	2	2	2	3	3	3	2
6x120	8x120	10x120	6x170	8x170	10x170	12x170	14x170	6x220
5	5	5	5	5	3	3	2	3

Ref. 2-31

1.679,33 €



Display

Grey



**CONSTRUCTION DRILL BITS DISPLAYS**

Display

Grey



W77 RANGE PROFESSIONAL HAMMER DRILL BITS UNTIL 16 X 215 MM.

W77 drills

$\frac{14 \times 165}{1}$	$\frac{15 \times 165}{1}$	$\frac{5 \times 215}{2}$	$\frac{6 \times 215}{2}$	$\frac{8 \times 215}{2}$	$\frac{10 \times 215}{2}$	$\frac{12 \times 215}{1}$	$\frac{14 \times 215}{1}$	$\frac{16 \times 215}{1}$
$\frac{6 \times 165}{5}$	$\frac{6,5 \times 165}{2}$	$\frac{7 \times 165}{1}$	$\frac{8 \times 165}{5}$	$\frac{9 \times 165}{1}$	$\frac{10 \times 165}{5}$	$\frac{11 \times 165}{1}$	$\frac{12 \times 165}{2}$	$\frac{13 \times 165}{1}$
$\frac{5 \times 115}{5}$	$\frac{5,5 \times 115}{2}$	$\frac{6 \times 115}{5}$	$\frac{6,5 \times 115}{2}$	$\frac{7 \times 115}{2}$	$\frac{8 \times 115}{5}$	$\frac{10 \times 115}{2}$	$\frac{5 \times 165}{5}$	$\frac{5,5 \times 165}{1}$

Ref. 2-28

1.080,84 €



W77 RANGE PROFESSIONAL HAMMER DRILL BITS UNTIL 20 X 250 MM.

W77 drills

$\frac{6 \times 215}{2}$	$\frac{8 \times 215}{2}$	$\frac{10 \times 215}{2}$	$\frac{12 \times 215}{2}$	$\frac{14 \times 215}{1}$	$\frac{15 \times 265}{1}$	$\frac{16 \times 215}{1}$	$\frac{18 \times 250}{1}$	$\frac{20 \times 250}{1}$
$\frac{6 \times 165}{3}$	$\frac{6 \times 165}{3}$	$\frac{6,5 \times 165}{2}$	$\frac{8 \times 165}{3}$	$\frac{10 \times 165}{3}$	$\frac{12 \times 165}{2}$	$\frac{14 \times 165}{2}$	$\frac{15 \times 165}{2}$	$\frac{5 \times 215}{2}$
$\frac{5 \times 115}{3}$	$\frac{5 \times 115}{3}$	$\frac{6 \times 115}{3}$	$\frac{6 \times 115}{3}$	$\frac{6,5 \times 115}{2}$	$\frac{8 \times 115}{3}$	$\frac{10 \times 115}{3}$	$\frac{5 \times 165}{3}$	$\frac{5 \times 165}{3}$



Ref. 2-26

1.248,54 €

**MULTIPURPOSE DRILL BITS DISPLAY**



W99



BW8



BW8 RANGE UNTIL 12 X 150 MM.  
W99 RANGE UNTIL 16 X 260 MM.

BW8 drills

$\frac{4 \times 70}{4}$	$\frac{5 \times 85}{4}$	$\frac{6 \times 100}{4}$	$\frac{8 \times 120}{4}$	$\frac{10 \times 120}{4}$	$\frac{12 \times 150}{3}$	$\frac{BW89325}{4}$
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W99 drills

$\frac{6 \times 210}{2}$	$\frac{8 \times 210}{2}$	$\frac{10 \times 210}{2}$	$\frac{12 \times 210}{2}$	$\frac{12 \times 260}{2}$	$\frac{14 \times 260}{2}$	$\frac{16 \times 260}{2}$
$\frac{6 \times 110}{3}$	$\frac{8 \times 110}{3}$	$\frac{10 \times 110}{3}$	$\frac{6 \times 160}{3}$	$\frac{8 \times 160}{3}$	$\frac{10 \times 160}{3}$	$\frac{12 \times 160}{3}$



Ref. 2-33

1.068,29 €



**CONSTRUCTION MIXED DISPLAYS: AX DRILLS, POINTS AND CHISELS**



AX RANGE UNTIL 30 X 320 MM.

Points & Chisels

P01280	P01400	P01600	C01280	C01400	C01600
2	2	2	2	2	2

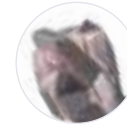
AX drills

22x320	24x320	25x320	26x320	28x320	30x320
2	2	2	2	2	2

12x340	14x340	15x340	16x340	18x340	20x320
2	2	2	2	2	2

Ref. 2-23

3.414,37 €



Display

Grey



Ref. 2-24

1.275,52 €



POINTS & CHISELS



Points & Chisels

P01280	P01400	P01600	C01280	C01400	C01600
2	2	2	2	2	2



Points & Chisels

C0150	C0175	C01115	CZ0150
2	2	2	2



Points & Chisels

P02250	P02250	C02250	C02250	CA02250	CZ02250
4	4	4	4	4	4



AX RANGE UNTIL 30 X 520 MM.

Points & Chisels

P01280	P01400	P01600	C01280	C01400	C01600
2	2	2	2	2	2

AX drills

16x540	18x540	20x520	22x520	24x520	25x520	30x520
2	2	2	2	2	2	2

12x340	14x340	16x340	18x340	20x320	22x320	24x320
2	2	2	2	2	2	2

615 mm

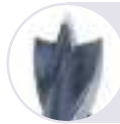


Ref. 2-22

4.052,44 €






**WOOD WORKING DRILLS DOUBLE BLISTER PACKAGING**



Ref. BMB



CV

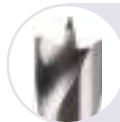


BMB			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
3,00	59 x 35	2	3,76
4,00	74 x 41	2	3,90
5,00	82 x 55	1	2,60
6,00	88 x 58	1	2,78
7,00	110 x 70	1	2,96
Blister: 190x60 mm			

BMB			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
8,00	110 x 70	1	3,46
9,00	110 x 70	1	4,05
10,00	115 x 75	1	4,30
11,00	135 x 85	1	5,36
12,00	135 x 85	1	5,86
13,00	135 x 90	1	5,69
14,00	145 x 95	1	6,23
15,00	160 x 95	1	7,35
16,00	165 x 95	1	8,59
18,00	160 x 100	1	13,80
Blister: 282x60 mm			

**Recommended RPM**

WOOD	Ø 3	Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 11
Soft	2000	1500	1300	1250	1200	1000	850
Hard	1400	1300	1100	1000	750	700	600





Ref. BMRB



HSS



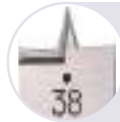
BMRB			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
3,00	59 x 35	2	5,30
4,00	74 x 41	2	5,70
5,00	82 x 55	1	3,49
6,00	88 x 58	1	4,34
7,00	110 x 70	1	5,02
Blister: 190x60 mm			

BMRB			
Ø mm	L <sub>1</sub> x L <sub>2</sub> mm		€
8,00	110 x 70	1	5,94
9,00	110 x 70	1	7,19
10,00	115 x 75	1	7,15
11,00	135 x 85	1	8,47
12,00	135 x 85	1	9,33
13,00	135 x 90	1	9,98
14,00	145 x 95	1	10,94
15,00	160 x 95	1	13,49
16,00	165 x 95	1	16,03
18,00	160 x 100	1	22,02
Blister: 282x60 mm			

**Recommended RPM**

WOOD	Ø 3	Ø 4	Ø 5	Ø 6	Ø 8	Ø 10	Ø 11
Soft	2000	1500	1300	1250	1200	1000	850
Hard	1400	1300	1100	1000	750	700	600

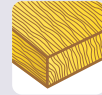
**WOOD WORKING DRILLS DOUBLE BLISTER PACKAGING**



Ref. BMPB



CV



Display

Grey

	Ø mm	L <sub>1</sub> x L <sub>2</sub> mm	BMPB	BMPB	
				€	
Blister: 230x60 mm	6,00	150	1	4,38	
	8,00	150	1	4,67	
	10,00	150	1	5,05	
	12,00	150	1	5,38	
	13,00	150	1	6,19	
	14,00	150	1	5,79	
	15,00	150	1	6,31	
	16,00	150	1	5,92	
	17,00	150	1	6,37	
	18,00	150	1	5,97	

	Ø mm	L <sub>1</sub> x L <sub>2</sub> mm	BMPB	BMPB	
				€	
Blister: 230x60 mm	19,00	150	1	6,78	
	20,00	150	1	6,44	
	22,00	150	1	7,42	
	24,00	150	1	8,00	
	25,00	150	1	9,01	
	26,00	150	1	9,36	
	28,00	150	1	9,89	
	30,00	150	1	10,65	
	32,00	150	1	11,34	
	34,00	150	1	13,73	
	35,00	150	1	13,94	
	36,00	150	1	13,24	
	38,00	150	1	13,91	
	40,00	150	1	14,21	

**Recommended RPM**

WOOD	Ø 6	Ø 14	Ø 20	Ø 28	Ø 38
Soft	1400	1100	850	700	550
Hard	700	550	400	350	300

On request, we can add convenient electromagnetic antitheft system to our blistercards, with unitary surcharge of 0,07 € We can do it to every piece or randomly.

**WOOD WORKING DRILLS BOXES BLISTER PACKAGING**



CV



HSS



Cont.

15 (Ref. BM) CV	
Ø 3 (x3) - 3,5 (x2) - 4 (x2) - 4,5 - 5 - 5,5 - 6 - 6,5 - 7 - 8 - 10 mm.	
<b>BM9337B</b>	<b>38,11 €</b>

15 (Ref. BMPR) HSS	
Ø 3 (x3) - 3,5 (x2) - 4 (x2) - 4,5 - 5 - 5,5 - 6 - 6,5 - 7 - 8 - 10 mm.	
<b>BMPR9337B</b>	<b>48,69 €</b>

**WOOD WORKING DRILLS DISPLAYS**



**CV**

**CV WOOD WORKING DRILLS DOUBLE BLISTER**

BMB drills

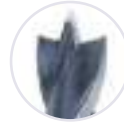
<u>13,00</u> 6	<u>14,00</u> 6	<u>15,00</u> 6	<u>16,00</u> 6	<u>18,00</u> 6
<u>8,00</u> 10	<u>9,00</u> 10	<u>10,00</u> 10	<u>11,00</u> 10	<u>12,00</u> 6
<u>3,00</u> 18	<u>4,00</u> 18	<u>5,00</u> 15	<u>6,00</u> 15	<u>7,00</u> 15

Ref. 1-76

719,86 €



Ref. BMB



Ref. BM

Ref. 1-26

1.051,86 €



**CV**

**CV WOOD WORKING DRILLS PLASTIC POUCH**

BM drills bit boxes

<u>BM9334</u> 4	<u>BM9333</u> 4	<u>BMPR9334</u> 4	<u>BMPR9333</u> 4
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BM drills

<u>12,00</u> 6	<u>13,00</u> 3	<u>14,00</u> 3	<u>15,00</u> 3	<u>16,00</u> 3	<u>18,00</u> 3	<u>20,00</u> 3	L1 standard.	
<u>3,00</u> 15	<u>4,00</u> 15	<u>5,00</u> 50	<u>6,00</u> 50	<u>7,00</u> 10	<u>8,00</u> 50	<u>9,00</u> 10	<u>10,00</u> 50	<u>11,00</u> 6



**CV**

**CV WOOD WORKING DRILLS PLASTIC POUCH**

BM drills

L1 450 mm.

<u>8x450</u> 4	<u>10x450</u> 4	<u>12x450</u> 4	<u>14x450</u> 4	<u>16x450</u> 4	<u>18x450</u> 4	<u>20x450</u> 4
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L1 300 mm.

<u>5x300</u> 4	<u>6x300</u> 4	<u>7x300</u> 4	<u>8x300</u> 4	<u>9x300</u> 4	<u>10x300</u> 4	<u>12x300</u> 4	<u>14x300</u> 4	<u>16x300</u> 4
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L1 standard

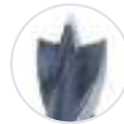
<u>3,00</u> 15	<u>4,00</u> 15	<u>5,00</u> 50	<u>6,00</u> 50	<u>7,00</u> 10	<u>8,00</u> 50	<u>9,00</u> 8	<u>10,00</u> 50	<u>12,00</u> 6
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Ref. BM

Ref. 2-25

1.452,70 €



**CASTOR TYPE WOOD WORKING DRILL BITS**

BM4P d drills

<u>30,00</u> 2	<u>32,00</u> 2	<u>35,00</u> 2	<u>40,00</u> 2	
<u>22,00</u> 4	<u>24,00</u> 4	<u>25,00</u> 3	<u>28,00</u> 3	
<u>10,00</u> 5	<u>12,00</u> 5	<u>16,00</u> 5	<u>18,00</u> 4	<u>20,00</u> 4



Ref. 1-81

1.791,51 €



Ref. BM4P





**WOOD WORKING DRILLS DISPLAYS**



**HSS**

HSS WOOD WORKING DRILLS IN PLASTIC POUCH

BMPR drills

L1 400 mm.

$\frac{6 \times 400}{3}$	$\frac{8 \times 400}{3}$	$\frac{10 \times 400}{3}$	$\frac{12 \times 400}{3}$	$\frac{14 \times 400}{3}$	$\frac{16 \times 400}{3}$	$\frac{18 \times 400}{3}$
--------------------------	--------------------------	---------------------------	---------------------------	---------------------------	---------------------------	---------------------------

L1 245 mm.

$\frac{6 \times 245}{4}$	$\frac{8 \times 245}{4}$	$\frac{10 \times 245}{4}$	$\frac{12 \times 245}{4}$	$\frac{14 \times 245}{4}$	$\frac{16 \times 245}{4}$	$\frac{18 \times 245}{4}$
--------------------------	--------------------------	---------------------------	---------------------------	---------------------------	---------------------------	---------------------------

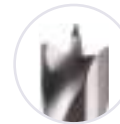
L1 standard.

$\frac{3,00}{12}$	$\frac{4,00}{12}$	$\frac{5,00}{15}$	$\frac{6,00}{15}$	$\frac{7,00}{10}$	$\frac{8,00}{10}$	$\frac{9,00}{10}$	$\frac{10,00}{8}$	$\frac{12,00}{6}$
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Ref. 2-27

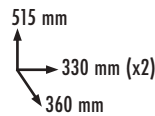
2.065,62 €



Ref. BMPR



Ref. BMPB



Ref. 1-75

2.612,12 €



WOOD WORKING FLAT DRILL BITS BLISTER PACKAGING

BMPB drills

$\frac{6,00}{12}$	$\frac{8,00}{12}$	$\frac{10,00}{12}$	$\frac{12,00}{12}$	$\frac{12,00}{12}$
$\frac{14,00}{12}$	$\frac{14,00}{12}$	$\frac{15,00}{12}$	$\frac{16,00}{12}$	$\frac{16,00}{12}$
$\frac{17,00}{12}$	$\frac{18,00}{12}$	$\frac{18,00}{12}$	$\frac{19,00}{12}$	$\frac{20,00}{12}$

BMPB drills

$\frac{20,00}{12}$	$\frac{22,00}{10}$	$\frac{22,00}{10}$	$\frac{24,00}{10}$	$\frac{24,00}{10}$
$\frac{25,00}{10}$	$\frac{26,00}{10}$	$\frac{28,00}{10}$	$\frac{30,00}{10}$	$\frac{32,00}{10}$
$\frac{34,00}{10}$	$\frac{35,00}{10}$	$\frac{36,00}{10}$	$\frac{38,00}{10}$	$\frac{40,00}{10}$



WOOD WORKING FLAT DRILL BITS IN PLASTIC POUCH

BMP drills

$\frac{26,00}{20}$	$\frac{28,00}{15}$	$\frac{30,00}{15}$	$\frac{32,00}{10}$	$\frac{35,00}{10}$	$\frac{40,00}{10}$		
$\frac{17,00}{3}$	$\frac{18,00}{20}$	$\frac{19,00}{3}$	$\frac{20,00}{20}$	$\frac{22,00}{20}$	$\frac{24,00}{20}$	$\frac{25,00}{20}$	
$\frac{6,00}{5}$	$\frac{8,00}{10}$	$\frac{10,00}{10}$	$\frac{12,00}{20}$	$\frac{13,00}{6}$	$\frac{14,00}{20}$	$\frac{15,00}{6}$	$\frac{16,00}{20}$



Ref. 1-28

1.720,75 €



Ref. BMP



**HSS**

HSS WOOD WORKING DRILLS DOUBLE BLISTER

BMPRB drills

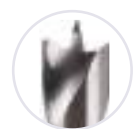
$\frac{13,00}{6}$	$\frac{14,00}{6}$	$\frac{15,00}{6}$	$\frac{16,00}{6}$	$\frac{18,00}{6}$
$\frac{8,00}{10}$	$\frac{9,00}{10}$	$\frac{10,00}{10}$	$\frac{11,00}{10}$	$\frac{12,00}{6}$
$\frac{3,00}{18}$	$\frac{4,00}{18}$	$\frac{5,00}{15}$	$\frac{6,00}{15}$	$\frac{7,00}{15}$

Ref. 1-77

1.169,10 €



Ref. BMPRB





**HSS, MASONRY AND WOOD DRILL BITS BOXES BLISTER PACKAGING**



**P0705B**

46

13 U.  
Ø 2 - 8 x 0,5 mm.

5 U.  
Ø 4 - 5 - 6 - 8 - 10 mm.

6 U.  
Ø 3 - 4 - 5 - 6 - 8 - 10 mm.

6 U.  
Ø 10 - 12 - 16 - 18 - 22 - 24 mm.



HSS

DIN 338



DIN 8039



CV



1/4"

- ⊕ 25 mm PH1 - PH2 - PH3
- ⊕ 50 mm PH1 - PH2
- ⊕ 25 mm PZ1 - PZ2 - PZ3
- ⊕ 50 mm PZ1 - PZ2
- 25 mm P0,6X4,5 - P0,8X5,5
- 50 mm P0,6X4,5
- ⊗ 25 mm T20 - T30

Ref. PMGX60 ○ ● 1/4"

96,20 €

**P0706B**

52

12 U. Ø 1,5 - 2 - 2,5 - 3 - 3,2  
3,5 - 4 - 4,5 - 5 - 6 - 8 - 10 mm.

11 U. Ø 3 - 4 - 4,5 - 5 - 5,5  
6 - 6,5 - 7 - 8 - 9 - 10 mm.

10 U. Ø 3 (x2) - 4 (x2) - 5  
6 - 7 - 8 - 9 - 10 mm.

● 1/4" • 3 U. 6-8-10 x 48 mm



HSS

DIN 338



DIN 8039



CV



1/4"

- ⊕ 25 mm PH1 - PH2 - PH3
- ⊕ 50 mm PH1 - PH2
- ⊕ 25 mm PZ1 - PZ2 - PZ3
- ⊕ 50 mm PZ1 - PZ2
- 25 mm P0,6X4,5 - P0,8X5,5
- 50 mm P0,6X4,5
- ⊗ 25 mm T20 - T30

Ref. PMGX60 ○ ● 1/4"

99,24 €

**CARBIDE TIPPED WOOD MILLING CUTTERS DISPLAY**



**SOLID CARBIDE**



**WOOD MILLING CUTTERS**

Milling Cutters FRC

FRC10500 2	FRC10600 2	FRC10800 2	FRC11000 2	FRC21600 2	FRC21800 2	FRC22000 2
FRC32860 2	FRC41270 2	FRC51900 2	FRC61270 2	FRC73200 2	FRC81270 2	
FRC92850 1	FRC103180 1	FRC113180 1	FRC123500 1	FRC133500 1	FRC143810 1	



515 mm  
330 mm  
360 mm

Ref. 1-90

1.315,58 €





**DRILL BITS MIXED DISPLAYS FOR METAL, WOOD AND CONCRETE**



515 mm  
330 mm  
360 mm

Ref. 1-82  
730,78 €



**STANDARD QUALITY MIXED DISPLAY**

BW1	$\frac{3,00}{10}$	$\frac{4,00}{10}$	$\frac{5,00}{15}$	$\frac{6,00}{15}$	$\frac{8,00}{10}$	$\frac{10,00}{10}$	boxes	<u>BW19325</u> 5		
BM	$\frac{3,00}{10}$	$\frac{4,00}{10}$	$\frac{5,00}{10}$	$\frac{6,00}{10}$	$\frac{8,00}{10}$	$\frac{10,00}{10}$	boxes	<u>BM9334</u> 5		
BC2	$\frac{3,00}{10}$	$\frac{3,50}{10}$	$\frac{4,00}{10}$	$\frac{4,50}{5}$	$\frac{5,00}{20}$	$\frac{5,50}{5}$	$\frac{6,00}{20}$	$\frac{6,50}{10}$	$\frac{8,00}{10}$	$\frac{10,00}{5}$



**PROFESSIONAL QUALITY MIXED DISPLAY**

BW6	$\frac{3,00}{10}$	$\frac{4,00}{10}$	$\frac{5,00}{10}$	$\frac{6,00}{15}$	$\frac{8,00}{10}$	$\frac{10,00}{5}$	boxes	<u>BW69325</u> 5		
BMPR	$\frac{3,00}{10}$	$\frac{4,00}{10}$	$\frac{5,00}{10}$	$\frac{6,00}{10}$	$\frac{8,00}{10}$	$\frac{10,00}{5}$	boxes	<u>BMPR9334</u> 3		
BC5	$\frac{3,00}{5}$	$\frac{3,50}{5}$	$\frac{4,00}{10}$	$\frac{4,50}{5}$	$\frac{5,00}{10}$	$\frac{5,50}{5}$	$\frac{6,00}{10}$	$\frac{6,50}{5}$	$\frac{8,00}{10}$	$\frac{10,00}{5}$

515 mm  
330 mm  
360 mm

Ref. 1-83  
1.041,86 €



**HOLESAW DOUBLE BLISTER PACKAGING DISPLAYS**


Ref. CB

**HSS**  
**M3**
**4/6**

**AI**
**Cu-Ni-La**
**CAST IRON**


ARBORS BLUEMASTER HOLESAW DISPLAY

B5519S	CB16B	CB19B	CB20B	CB22B	CB25B	CB27B	CB30B
Ø 14-30	Ø 16	Ø 19	Ø 20	Ø 22	Ø 25	Ø 27	Ø 30
5	3	3	3	3	3	3	3
B5546S	CB32B	CB35B	CB40B	CB48B	CB50B	CB60B	CB68B
Ø32-210	Ø 32	Ø 35	Ø 40	Ø 48	Ø 50	Ø 60	Ø 68
4	3	3	2	2	2	2	2

Ref. CBEXP1B

787,33 €


 530 mm  
 ↑  
 → 885 mm


Ref. COB

**HSSCo**  
**8%**
**4/6**

**IN OX**
**Cu-Ni-La**
**CAST IRON**

ARBORS BLUEMASTER HSS-CO 8% HOLESAW DISPLAY

B5519S	COB16B	COB19B	COB20B	COB22B	COB25B	COB27B	COB30B
Ø 14-30	Ø 16	Ø 19	Ø 20	Ø 22	Ø 25	Ø 27	Ø 30
5	3	3	3	3	3	3	3
B5546S	COB32B	COB35B	COB40B	COB48B	COB51B	COB60B	COB68B
Ø32-210	Ø 32	Ø 35	Ø 40	Ø 48	Ø 51	Ø 60	Ø 68
4	3	3	2	2	2	2	2

Ref. COBEXP1B

809,58 €


 530 mm  
 ↑  
 → 885 mm


Ref. MGB

**Tungsten**

**CAST IRON**


ARBORS MASTER-GRIT HOLESAW DISPLAY

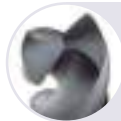
B5519-CMS	B8537S	MG19B	MG20B	MG22B	MG25B	MG29B	MG32B
Ø 14-30	Pilot drill	Ø 19	Ø 20	Ø 22	Ø 25	Ø 29	Ø 32
5	6	3	3	3	3	3	3
B5546-CMS	MG35B	MG38B	MG44B	MG48B	MG51B	MG60B	MG70B
Ø32-210	Ø 35	Ø 38	Ø 44	Ø 48	Ø 51	Ø 60	Ø 70
3	3	2	2	2	2	2	2

Ref. REMEXPB

990,04 €


 530 mm  
 ↑  
 → 885 mm

**1/4" HEXAGONAL SHANK DRILL BITS DOUBLE BLISTER PACKAGING**



Ref. BH2B



DIN 338

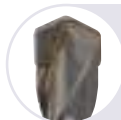
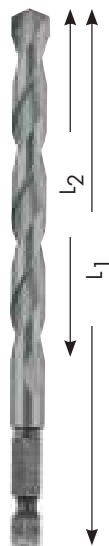
HSS



Cutting speed R.P.M.

METAL	Ø 2	Ø 4	Ø 6	Ø 8	Ø 10	Ø 12
Soft	3000	1600	950	800	630	450
Medium	2200	1200	725	625	490	375
Hard	1400	800	500	450	350	300

		BH2B			
	Ø mm	L1 x L2 mm			€
190x60 mm.	3,00	61 x 33	1/4"	1	8,58
	4,00	75 x 43	1/4"	1	9,95
	5,00	86 x 52	1/4"	1	12,38
	6,00	93 x 57	1/4"	1	13,37
	7,00	109 x 69	1/4"	1	16,84
230x60 mm.	8,00	117 x 75	1/4"	1	18,92
	9,00	125 x 81	1/4"	1	21,29
	10,00	133 x 87	1/4"	1	23,70



Ref. BWHB



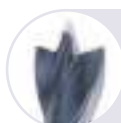
DIN 8039



Cutting speed R.P.M.

METAL	Ø 3	Ø 5	Ø 8	Ø 10	Ø 12	Ø 13	Ø 14
Soft	3200	1900	1300	1100	900	800	700
Hard	2100	1200	900	700	600	500	400

		BWHB			
	Ø mm	L1 x L2 mm			€
190x60 mm.	3,00	70x30	1/4"	1	4,06
	4,00	70x30	1/4"	1	4,39
	5,00	85x45	1/4"	1	4,75
	6,00	100x50	1/4"	1	5,29
	7,00	100x50	1/4"	1	6,20
230x60 mm.	8,00	120x70	1/4"	1	7,18
	9,00	120x70	1/4"	1	8,60
	10,00	120x70	1/4"	1	9,63
	11,00	150x80	1/4"	1	11,98
	12,00	150x80	1/4"	1	13,55
	13,00	150x80	1/4"	1	16,66
	14,00	150x80	1/4"	1	19,41



Ref. BMHB



CV



Cutting speed R.P.M.

METAL	Ø 3	Ø 5	Ø 8	Ø 10	Ø 12	Ø 13	Ø 14
Soft	2000	1500	1300	1250	1200	1000	850
Hard	1400	1300	1100	1000	750	700	600

		BMHB			
	Ø mm	L1 x L2 mm			€
190x60 mm.	3,00	59 x 35	1/4"	1	3,30
	4,00	74 x 41	1/4"	1	3,50
	5,00	82 x 55	1/4"	1	3,45
	6,00	88 x 58	1/4"	1	4,67
	7,00	110 x 70	1/4"	1	5,28
	8,00	110 x 70	1/4"	1	5,50
	9,00	110 x 70	1/4"	1	5,71
230x60 mm.	10,00	115 x 75	1/4"	1	6,32
	11,00	135 x 85	1/4"	1	7,38
	12,00	135 x 85	1/4"	1	8,66
	13,00	135 x 90	1/4"	1	13,56
	14,00	145 x 95	1/4"	1	16,86

Display

Pink

**SCREWDRIVER BIT AND HOLDER DISPLAYS**


820 mm  
 400 mm  
 220 mm

*Plus*

Ref. 5-1

1.088,10 €

**2 PIECES SCREWDRIVER BIT BOXES**

⊕ 25 mm	PH1-2 5	PH2-2 5	PH3-2 5		⊕ 50 mm	PH1X50-2 5	PH2X50-2 5	PH3X50-2 5
⊕ 25 mm	PZ1-2 5	PZ2-2 5	PZ3-2 5		⊕ 50 mm	PZ1X50-2 5	PZ2X50-2 5	PZ3X50-2 5
⊕ 25 mm	PT10-2 5	PT15-2 5	PT20-2 5	PT25-2 5	PT30-2 5	PT40-2 5		
⊕ 50 mm	PT10X50-2 5	PT15X50-2 5	PT20X50-2 5	PT25X50-2 5	PT30X50-2 5	PT40X50-2 5		
○ 25 mm	PHX2-2 5	PHX4-2 5	PHX6-2 5	PHX8-2 5				
● 25 mm	P0,6X4,5-2 5	P0,8X5,5-2 5	P1,2X6,5-2 5					

Ref. PMGX51 (x5) · Ref. PMGSDSX78 (x5) Magnetic holder

Ref. PCRX74 (x5) Magnetic holder

Ref. PCTX60 (x5) Magnetic holder with additional ring



820 mm  
 400 mm  
 220 mm

*Plus*

Ref. 5-2

1.882,60 €

**5 PIECES SCREWDRIVER BIT BOXES**

⊕ 25 mm	PH1-5 5	PH2-5 5	PH3-5 5		⊕ 50 mm	PH1X50-5 5	PH2X50-5 5	PH3X50-5 5
⊕ 25 mm	PZ1-5 5	PZ2-5 5	PZ3-5 5		⊕ 50 mm	PZ1X50-5 5	PZ2X50-5 5	PZ3X50-5 5
⊕ 25 mm	PT10-5 5	PT15-5 5	PT20-5 5	PT25-5 5	PT30-5 5	PT40-5 5		
⊕ 50 mm	PT10X50-5 5	PT15X50-5 5	PT20X50-5 5	PT25X50-5 5	PT30X50-5 5	PT40X50-5 5		
○ 25 mm	PHX2-5 5	PHX4-5 5	PHX6-5 5	PHX8-5 5				
● 25 mm	P0,6X4,5-5 5	P0,8X5,5-5 5	P1,2X6,5-5 5					

Ref. PMGX51 (x5) · Ref. PMGSDSX78 (x5) Magnetic holder

Ref. PCRX74 (x5) Magnetic holder

Ref. PCTX60 (x5) Magnetic holder with additional ring



820 mm  
 400 mm  
 220 mm

*Plus*

Ref. 5-3

1.383,97 €

**2 AND 5 PIECES SCREWDRIVER BIT BOXES**

⊕ 25 mm	PH1-5 5	PH2-5 5	PH3-5 5		⊕ 50 mm	PH1X50-2 5	PH2X50-2 5	PH3X50-2 5
⊕ 25 mm	PZ1-5 5	PZ2-5 5	PZ3-5 5		⊕ 50 mm	PZ1X50-2 5	PZ2X50-2 5	PZ3X50-2 5
⊕ 25 mm	PT10-5 5	PT15-5 5	PT20-5 5	PT25-5 5	PT30-5 5	PT40-5 5		
⊕ 50 mm	PT10X50-2 5	PT15X50-2 5	PT20X50-2 5	PT25X50-2 5	PT30X50-2 5	PT40X50-2 5		
○ 25 mm	PHX2-5 5	PHX4-5 5	PHX6-5 5	PHX8-5 5				
● 25 mm	P0,6X4,5-5 5	P0,8X5,5-5 5	P1,2X6,5-5 5					

Ref. PMGX51 (x5) · Ref. PMGSDSX78 (x5) Magnetic holder

Ref. PCRX74 (x5) Magnetic holder

Ref. PCTX60 (x5) Magnetic holder with additional ring

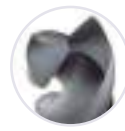




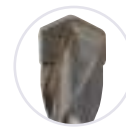
**1/4" HEXAGONAL SHANK DRILLS MIXED DISPLAYS**



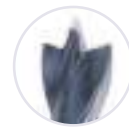
Ref. BH2B      Ref. BWHB      Ref. BMHB



BH2



BWH





BMH





**1/4" HEXAGONAL SHANK DRILLS**

Boxes

 BWH	BWH9318	BWH9327	 BMH	BMH9335	BMH9333
	4	4		4	4

Drills blister packaging

 BMHB	4,00	5,00	6,00	8,00	10,00
	8	10	10	8	5
 BWHB	4,00	5,00	6,00	8,00	10,00
	8	10	10	8	5




Ref. 1-38  
804,66 €



Ref. 1-39  
1.208,86 €



**METAL, WOOD AND MASONRY DRILL BITS**

 BH2B	4,00	5,00	6,00	8,00	10,00
	10	10	10	10	10
 BWHB	4,00	5,00	6,00	8,00	10,00
	8	10	10	8	5
 BMHB	4,00	5,00	6,00	8,00	10,00
	8	10	10	8	5





**METAL AND MASONRY DRILL BITS**

Boxes

 BWH	BWH9318	BWH9327	 BH2	BH29335	BH29333
	4	4		4	4

Drills blister packaging

 BH2B	4,00	5,00	6,00	8,00	10,00
	10	10	10	10	10
 BWHB	4,00	5,00	6,00	8,00	10,00
	8	10	10	8	5

Ref. 1-40  
1.726,85 €





**TUBE / SHEET AND STEP DRILLS MIXED DISPLAY**



Ref. AV30B

Ref. AV40B

**HSS** TUBE & SHEET AND TWO FLUTED STEP DRILLS

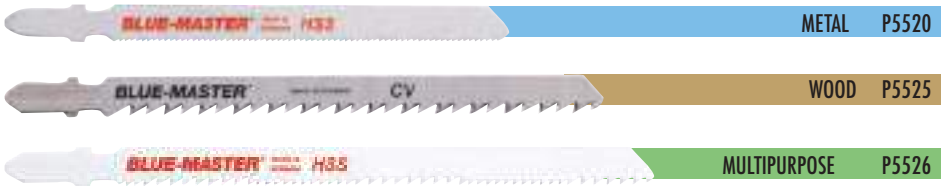
Tube & sheet drills			
AV30	<u>AV30BM0</u> 4	<u>AV30BM1</u> 4	<u>AV30BM2</u> 4
Two fluted step drills			
AV40	<u>AV40BM5</u> 4	<u>AV40BM8</u> 4	<u>AV40BM9</u> 4
AV40	<u>AV40BM2</u> 4	<u>AV40BM3</u> 4	<u>AV40BM4</u> 4

Ref. 1-47

2.874,28 €



**JIGSAW BLADES MIXED DISPLAY**



JIGSAW BLADES MIXED DISPLAY

5 jigsaw blades blister packaging

<u>P5525</u> 10	<u>P5526</u> 10	<u>P5509</u> 10	<u>P5519</u> 10
<u>P5505</u> 10	<u>P5516</u> 10	<u>P5520</u> 10	<u>P5522</u> 10
<u>P5501</u> 10	<u>P5502</u> 10	<u>P5503</u> 10	<u>P5504</u> 10



Ref. 1-33

1.426,59 €



**HA CORE BITS DISPLAY**



Ref. 1-101

1.624,88 €



HA CORE BITS DISPLAY

<u>82</u> 1	<u>68</u> 1	<u>HA11x370</u> 3	<u>HA370SDS</u> 3
<u>68</u> 1	<u>50</u> 2	<u>40</u> 2	<u>HA220SDS</u> 3
<u>35</u> 2	<u>30</u> 2	<u>25</u> 2	<u>HA8X120</u> 10
			<u>HA105SDS</u> 3

# DISPLAYS



**BLUE-MASTER<sup>®</sup>**  
by CELESA

CUTTING TECHNOLOGIES



# NEW BLUEMASTER COMMERCIAL SPACE

GENERATE NEW COMMERCIAL SPACES AND MULTIPLY CUTTING TOOL SALES



NEW DISPLAY HEAD IDENTIFYING THE CUTTING TOOL FAMILY

Front and vertical lighting of the exhibition surface.



ALL KINDS OF SOLUTIONS TO GENERATE THE MOST FAVORABLE ENVIRONMENT FOR SALE

Showcases available to safely store high value items.



CUTTING TECHNOLOGIES

CUTTING TECHNOLOGIES







GENERATE THE MOST SUITABLE COMMERCIAL SPACE WITH THE WIDEST RANGE OF DISPLAYS AVAILABLE

Create the perfect atmosphere by using aisles with displays of different heights.

WIDE RANGE OF ACCESSORIES TO POSITION EACH PRODUCT CORRECTLY

Make the best use of the area and volume of exposure for maximum profitability.



**SPECIALIZED INDUSTRIAL SUPPLIERS STORE DISPLAYS**


2.480 mm  
 1.000 mm  
 400 mm

**METAL DRILLS**

1 Ref. BC5 HSSCo 5%				2 Ref. BC2 HSS			3 Ref. BC02 HSSG		
2,00	2,25	2,50	2,75	3,00	3,25	3,50	3,75	4,00	4,25
100	50	100	30	100	50	50	30	100	50
4,50	4,75	5,00	5,25	5,50	5,75	6,00	6,25	6,50	6,75
50	30	100	50	50	50	80	20	50	20
7,00	7,25	7,50	7,75	8,00	8,25	8,50	8,75	9,00	9,25
50	20	30	20	60	20	30	20	50	10
9,50	9,75	10,00	10,50	11,00	11,50	12,00	12,50	13,00	14,00
20	10	60	20	12	6	12	6	6	6

4 Ref. BC9 HSS				Reduced shank drills					
14,00	14,50	15,00	15,50	16,00	16,50	17,00	18,00	19,00	20,00
6	2	6	2	6	2	3	4	2	3

5 Ref. BC11 HSS DIN 345				Taper shank drills					
10,00	10,50	11,00	11,50	12,00	12,50	13,00	13,50	14,00	14,50
4	2	4	2	4	2	4	2	4	2
15,00	15,50	16,00	16,50	17,00	17,50	18,00	18,50	19,00	19,50
4	2	4	2	4	2	4	2	4	2
20,00	20,50	21,00	21,50	22,00	22,50	23,00	23,50	24,00	24,50
4	2	3	1	3	1	2	1	2	1
25,00	25,50	26,00	26,50	27,00	27,50	28,00	28,50	29,00	30,00
2	1	2	1	2	1	2	1	1	2
31,00	32,00	35,00	40,00	45,00	50,00				
1	2	1	1	1	1				

**FL01**
**30.273,89 €**



**SPECIALIZED INDUSTRIAL SUPPLIERS STORE DISPLAYS**

Display

Pink Grey



2.480 mm  
1.000 mm  
400 mm

**SILVER DISPLAY**

**1** Ref. BC2B **HSS** Twist drills for metal blister packaging & boxes

$\frac{1,00}{15}$	$\frac{1,50}{15}$	$\frac{2,00}{15}$	$\frac{2,50}{15}$	$\frac{3,00}{15}$	$\frac{3,50}{15}$	$\frac{4,00}{15}$	$\frac{4,50}{15}$	$\frac{5,00}{15}$	$\frac{5,50}{15}$	$\frac{6,00}{15}$	$\frac{6,50}{15}$
$\frac{7,00}{15}$	$\frac{7,50}{10}$	$\frac{8,00}{10}$	$\frac{8,50}{10}$	$\frac{9,00}{10}$	$\frac{10,00}{10}$	$\frac{10,50}{10}$	$\frac{11,00}{10}$	$\frac{12,00}{10}$	$\frac{13,00}{10}$	DR9312 4	DR9314 4

**2** Ref. BC5B **HSSCo** Twist drills for metal blister packaging & boxes

$\frac{3,00}{15}$	$\frac{3,50}{15}$	$\frac{4,00}{15}$	$\frac{4,50}{15}$	$\frac{5,00}{15}$	$\frac{6,00}{15}$	$\frac{7,00}{15}$	$\frac{8,00}{10}$	$\frac{10,00}{10}$	$\frac{12,00}{10}$	$\frac{13,00}{10}$	DC9312 4	DC9314 4
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**3** Ref. BW6B Construction drill bits blister packaging & boxes

$\frac{3,00}{15}$	$\frac{4,00}{15}$	$\frac{5,00}{15}$	$\frac{6,00}{15}$	$\frac{7,00}{15}$	$\frac{8,00}{10}$	$\frac{9,00}{10}$	$\frac{10,00}{10}$	$\frac{11,00}{10}$	$\frac{12,00}{10}$	$\frac{14,00}{10}$	BW69325 4
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**4**  Jigsaw blades

$\frac{P5503}{6}$	$\frac{P5501}{6}$	$\frac{P5554}{6}$	$\frac{P5525}{6}$	$\frac{P5512}{6}$
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**5** Ref. BMPB **CV** Flat drill bits blister packaging

$\frac{12,00}{6}$	$\frac{14,00}{6}$	$\frac{16,00}{6}$	$\frac{18,00}{6}$	$\frac{20,00}{6}$	$\frac{22,00}{6}$	$\frac{25,00}{6}$	$\frac{28,00}{6}$	$\frac{30,00}{6}$
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**6** Ref. COB..B **HSSCo 8%**  Holesaws

$\frac{20}{2}$	$\frac{22}{2}$	$\frac{25}{2}$	$\frac{27}{2}$	$\frac{29}{2}$	$\frac{30}{2}$	$\frac{32}{2}$	$\frac{35}{2}$	$\frac{40}{1}$	$\frac{48}{1}$	$\frac{51}{1}$	$\frac{54}{1}$	$\frac{60}{1}$	$\frac{68}{1}$	$\frac{70}{1}$	B5519 2	B5546 2
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**7** Arbors

**8** Ref. BW7 Standard high performance tile bits

$\frac{4,00}{4}$	$\frac{5,00}{4}$	$\frac{6,00}{4}$	$\frac{8,00}{4}$	$\frac{10,00}{4}$	BW79325 4
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**SILVER**

5.874,65 €

**SILVER**

815,93 €

**SPECIALIZED INDUSTRIAL SUPPLIERS STORE DISPLAYS**

**GOLD DISPLAY**
**1** Ref. BC2F **HSS** Twist drills for metal plastic pouch & boxes

$\frac{1,00}{10}$	$\frac{1,50}{10}$	$\frac{2,00}{10}$	$\frac{2,50}{10}$	$\frac{3,00}{10}$	$\frac{3,50}{10}$	$\frac{4,00}{10}$	$\frac{4,50}{10}$	$\frac{5,00}{10}$	$\frac{5,50}{10}$	$\frac{6,00}{10}$	$\frac{6,50}{10}$
$\frac{7,00}{10}$	$\frac{7,50}{10}$	$\frac{8,00}{10}$	$\frac{8,50}{10}$	$\frac{9,00}{10}$	$\frac{9,50}{10}$	$\frac{10,00}{10}$	$\frac{11,00}{5}$	$\frac{12,00}{5}$	$\frac{13,00}{5}$	DR9312 2	DR9314 2

**2** Ref. BC5F **HSSCo** Twist drills for metal plastic pouch & boxes

$\frac{1,00}{10}$	$\frac{1,50}{10}$	$\frac{2,00}{10}$	$\frac{2,50}{10}$	$\frac{3,00}{10}$	$\frac{3,50}{10}$	$\frac{4,00}{10}$	$\frac{4,50}{10}$	$\frac{5,00}{10}$	$\frac{5,50}{10}$	$\frac{6,00}{10}$	$\frac{6,50}{10}$
$\frac{7,00}{10}$	$\frac{7,50}{10}$	$\frac{8,00}{10}$	$\frac{8,50}{10}$	$\frac{9,00}{10}$	$\frac{9,50}{10}$	$\frac{10,00}{10}$	$\frac{11,00}{5}$	$\frac{12,00}{5}$	$\frac{13,00}{5}$	DC9312 2	DC9314 2

**3** Ref. W05 **SDS PLUS** Construction drill bits

$\frac{4 \times 110}{6}$	$\frac{6 \times 110}{6}$	$\frac{8 \times 110}{6}$	$\frac{10 \times 110}{6}$	$\frac{4 \times 160}{6}$	$\frac{6 \times 160}{6}$	$\frac{8 \times 160}{6}$	$\frac{10 \times 160}{6}$
$\frac{12 \times 160}{6}$	$\frac{6 \times 200}{6}$	$\frac{8 \times 200}{6}$	$\frac{10 \times 200}{6}$	$\frac{12 \times 200}{6}$	$\frac{14 \times 200}{6}$	$\frac{16 \times 200}{6}$	

**4** Ref. BW6F Construction drill bits plastic pouch & boxes

$\frac{3,00}{10}$	$\frac{4,00}{10}$	$\frac{6,00}{10}$	$\frac{8,00}{10}$	$\frac{10,00}{10}$	BW69318 2	BW69319 2
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**5** Ref. BW7 Standard high performance tile bits

$\frac{4,00}{8}$	$\frac{5,00}{8}$	$\frac{6,00}{8}$	$\frac{8,00}{8}$	$\frac{10,00}{8}$
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**6** Ref. CPS Diamond tile drill bits

$\frac{5,00}{3}$	$\frac{6,00}{3}$	$\frac{8,00}{3}$	$\frac{10,00}{3}$
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**8**  Jigsaw blades

$\frac{P5525}{4}$	$\frac{P5503}{4}$	$\frac{P5524}{4}$	$\frac{P5536}{4}$
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**9** Wood sets

$\frac{BM9333}{2}$	$\frac{BM9334}{2}$
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**10** Ref. BMP **CV** Flat drill bits

$\frac{16,00}{2}$	$\frac{18,00}{2}$	$\frac{20,00}{2}$	$\frac{22,00}{2}$	$\frac{24,00}{2}$	$\frac{26,00}{2}$	$\frac{28,00}{2}$	$\frac{30,00}{2}$
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**11** Ref. COB **HSSCo 8%**  Holesaws

$\frac{16}{2}$	$\frac{19}{2}$	$\frac{21}{2}$	$\frac{25}{2}$	$\frac{27}{2}$	$\frac{30}{2}$	$\frac{32}{2}$	$\frac{35}{2}$	$\frac{40}{2}$	$\frac{48}{2}$	$\frac{51}{2}$	$\frac{60}{2}$	$\frac{70}{2}$	B5519S 4	B5546S 4
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**12** Arbors

2.480 mm  
 1.000 mm  
 550 mm

**GOLD**

5.364,46 €

**GOLD**

858,22 €

**SPECIALIZED INDUSTRIAL SUPPLIERS STORE DISPLAYS**

Display

Pink Grey



2.480 mm  
1.000 mm  
550 mm

**ELECTRICAL SUPPLIERS DISPLAY**

**1** Ref. W05 **SDS PLUS** Construction drill bits

$\frac{5 \times 110}{10}$	$\frac{6 \times 110}{10}$	$\frac{8 \times 110}{10}$	$\frac{10 \times 110}{10}$	$\frac{5 \times 160}{10}$	$\frac{6 \times 160}{10}$	$\frac{8 \times 160}{10}$	$\frac{10 \times 160}{10}$	$\frac{12 \times 160}{10}$	
$\frac{8 \times 200}{6}$	$\frac{10 \times 200}{6}$	$\frac{12 \times 200}{6}$	$\frac{14 \times 200}{5}$	$\frac{16 \times 200}{5}$	$\frac{18 \times 200}{5}$	$\frac{12 \times 450}{3}$	$\frac{14 \times 450}{3}$	$\frac{16 \times 450}{3}$	$\frac{18 \times 450}{3}$

**2** Ref. BW6F Construction drill bits plastic pouch

$\frac{3,00}{30}$	$\frac{4,00}{30}$	$\frac{5,00}{60}$	$\frac{6,00}{60}$	$\frac{7,00}{30}$	$\frac{8,00}{50}$	$\frac{9,00}{20}$	$\frac{10,00}{20}$	$\frac{12,00}{20}$	$\frac{14,00}{20}$
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**3** Ref. BC2F **HSS** Twist drills for metal in plastic pouch

$\frac{1,00}{10}$	$\frac{2,00}{10}$	$\frac{3,00}{10}$	$\frac{4,00}{10}$	$\frac{5,00}{10}$	$\frac{6,00}{10}$	$\frac{7,00}{10}$	$\frac{8,00}{10}$	$\frac{9,00}{10}$	$\frac{10,00}{10}$	$\frac{12,00}{10}$
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**4** Ref. CB..B **HSS M3**  4/6 Holesaws

$\frac{16}{4}$	$\frac{20}{4}$	$\frac{25}{4}$	$\frac{29}{4}$	$\frac{38}{3}$	$\frac{40}{3}$	$\frac{48}{3}$	$\frac{50}{3}$	$\frac{54}{3}$	$\frac{60}{2}$	$\frac{73}{2}$	$\frac{83}{2}$	$\frac{B5519S}{6}$	$\frac{B5546S}{6}$
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**5** Arbors

**6** Ref. AV30B Tube&sheet drills

$\frac{AV30BM0B}{3}$	$\frac{AV30BM1B}{3}$	$\frac{AV30BM2B}{3}$
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Ref. AV40B Step drills

$\frac{AV40BM2B}{3}$	$\frac{AV40BM4B}{3}$
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**7**  Jigsaw blades

$\frac{P5501}{10}$	$\frac{P5504}{10}$	$\frac{P5511}{10}$	$\frac{P5514}{10}$
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**8** Hacksaw blades

$\frac{1224ULBM-50}{1}$
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**9** Circle cutting holesaws

$\frac{CL220}{1}$	$\frac{CL285}{1}$
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**10** Hacksaw frames

$\frac{ASYH2009}{2}$
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EXPOSITORF

4.170,60 €

EXPOSITORF

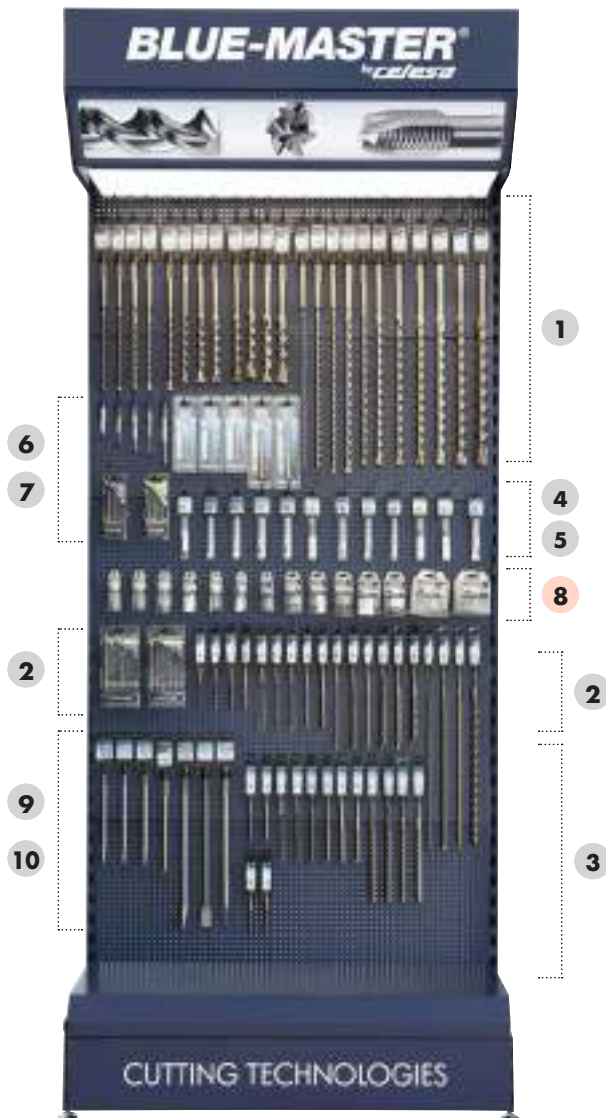
2.698,68 €

**SPECIALIZED INDUSTRIAL SUPPLIERS STORE DISPLAYS**

Display

Grey

Pink



2.480 mm  
 1.000 mm  
 550 mm

**BUILDERS SUPPLIERS**

1 Ref. AX <b>SDS MAX</b>		Construction drill bits					
$\frac{12 \times 340}{2}$	$\frac{12 \times 540}{2}$	$\frac{14 \times 340}{2}$	$\frac{14 \times 540}{2}$	$\frac{15 \times 340}{2}$	$\frac{16 \times 340}{2}$	$\frac{16 \times 540}{2}$	$\frac{18 \times 340}{2}$
$\frac{18 \times 540}{2}$	$\frac{20 \times 320}{2}$	$\frac{20 \times 520}{2}$	$\frac{22 \times 320}{1}$	$\frac{22 \times 520}{1}$	$\frac{24 \times 320}{1}$	$\frac{24 \times 520}{1}$	$\frac{25 \times 320}{1}$
$\frac{25 \times 520}{1}$	$\frac{26 \times 320}{1}$	$\frac{26 \times 520}{1}$	$\frac{28 \times 320}{1}$	$\frac{28 \times 520}{1}$	$\frac{30 \times 320}{1}$	$\frac{30 \times 520}{1}$	

2 Ref. W05 <b>SDS PLUS</b>		Construction drill bits					
$\frac{5 \times 110}{3}$	$\frac{6 \times 110}{3}$	$\frac{8 \times 110}{3}$	$\frac{10 \times 110}{3}$	$\frac{5 \times 160}{3}$	$\frac{6 \times 160}{3}$	$\frac{8 \times 160}{3}$	$\frac{10 \times 160}{3}$
$\frac{12 \times 160}{3}$	$\frac{8 \times 200}{2}$	$\frac{10 \times 200}{2}$	$\frac{12 \times 200}{2}$	$\frac{14 \times 200}{2}$	$\frac{16 \times 200}{2}$	$\frac{18 \times 200}{2}$	$\frac{12 \times 450}{2}$
$\frac{14 \times 450}{2}$	$\frac{16 \times 450}{2}$	$\frac{18 \times 450}{2}$	$\frac{W05D9412}{2}$				

3 Ref. W77 <b>SDS PLUS</b>		Construction drill bits					
$\frac{5 \times 115}{3}$	$\frac{6 \times 115}{3}$	$\frac{8 \times 115}{3}$	$\frac{10 \times 115}{3}$	$\frac{5 \times 165}{3}$	$\frac{6 \times 165}{3}$	$\frac{8 \times 165}{3}$	$\frac{10 \times 165}{3}$
$\frac{10 \times 265}{2}$	$\frac{12 \times 265}{2}$	$\frac{14 \times 265}{2}$	$\frac{16 \times 265}{2}$	$\frac{W77D9412}{2}$			

4 Ref. CPH		Diamond tile drill bits			
$\frac{5,00}{2}$	$\frac{6,00}{2}$	$\frac{8,00}{2}$	$\frac{10,00}{2}$	$\frac{12,00}{2}$	$\frac{14,00}{2}$

5 Ref. CPS		Diamond tile drill bits			
$\frac{5,00}{2}$	$\frac{6,00}{2}$	$\frac{8,00}{2}$	$\frac{10,00}{2}$	$\frac{12,00}{2}$	$\frac{14,00}{2}$

6 Ref. BW7		Construction drill bits			
$\frac{4}{5}$	$\frac{5}{5}$	$\frac{6}{5}$	$\frac{8}{5}$	$\frac{10}{5}$	$\frac{BW79325}{2}$

7 Ref. BW9		Construction drill bits			
$\frac{4}{5}$	$\frac{5}{5}$	$\frac{6}{5}$	$\frac{8}{5}$	$\frac{10}{5}$	$\frac{BW99325}{2}$

8 Ref. CSE		Diamond Holesaws					
$\frac{5}{2}$	$\frac{6}{2}$	$\frac{8}{2}$	$\frac{10}{2}$	$\frac{14}{2}$	$\frac{20}{2}$	$\frac{25}{2}$	$\frac{30}{2}$
$\frac{35}{2}$	$\frac{40}{2}$	$\frac{45}{2}$	$\frac{50}{2}$	$\frac{68}{2}$	$\frac{83}{2}$		

9 Ref. SDS PLUS		Points and chisels	
$\frac{C02250}{2}$	$\frac{CA02250}{2}$	$\frac{P02250}{2}$	

10 Ref. SDS MAX		Points and chisels	
$\frac{C01400}{2}$	$\frac{C0150}{2}$	$\frac{P01400}{2}$	$\frac{P01280}{2}$

EXPOSITORG

8.618,99 €

EXPOSITORG

2.524,56 €



**SPECIALIZED INDUSTRIAL SUPPLIERS STORE DISPLAYS**

Display

Pink Grey



2.480 mm  
1.000 mm  
550 mm

DIAMOND DISCS

**1** Ref. BW35 **DELTA 3 PLUS**

$\frac{5 \times 100}{10}$	$\frac{6 \times 100}{10}$	$\frac{8 \times 120}{10}$	$\frac{10 \times 120}{10}$	$\frac{12 \times 150}{10}$	$\frac{5 \times 150}{5}$	$\frac{6 \times 150}{5}$
$\frac{8 \times 200}{5}$	$\frac{10 \times 200}{5}$	$\frac{12 \times 200}{5}$	BW359328 4			

**2** Ref. FTK **STARLOCK CUTTERS**

$\frac{FTK5106}{5}$	$\frac{FTK5110}{5}$	$\frac{FTK5140}{5}$	$\frac{FTK5117}{5}$	$\frac{FTK5147}{5}$
$\frac{FTK5132}{5}$	$\frac{FTK5108}{5}$	$\frac{FTK5129}{5}$	$\frac{FTK5113}{5}$	

**3** Ref. BW33 **Carbide mortar rake**

$\frac{8}{2}$	$\frac{10}{2}$	$\frac{12}{2}$	ADQCA 2
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**4** Diamond discs

$\frac{DD5-115}{3}$	$\frac{DD5-125}{5}$	$\frac{DD5-180}{2}$	$\frac{DD5-230}{2}$	$\frac{DD1-115}{5}$
$\frac{DD1-125}{10}$	$\frac{DD1-180}{2}$	$\frac{DD1-230}{2}$	$\frac{DD2-115}{3}$	$\frac{DD2-125}{5}$
$\frac{DD2-180}{2}$	$\frac{DD2-230}{2}$	$\frac{DD3-115}{3}$	$\frac{DD3-125}{5}$	$\frac{DD3-180}{2}$
$\frac{DD3-230}{2}$	$\frac{DD4-115}{3}$	$\frac{DD4-125}{5}$	$\frac{DD4-180}{2}$	$\frac{DD4-230}{2}$
$\frac{DD6-115}{3}$	$\frac{DD6-125}{5}$	$\frac{DD6-180}{2}$	$\frac{DD6-230}{2}$	

**5** Ref. SCMD **MULTI-PURPOSE DISC**

$\frac{SCMD115X1,60}{2}$	$\frac{SCMD125X1,60}{2}$	$\frac{SCMD230X1,60}{2}$
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EXPOSITORH

935,70 €

EXPOSITORH

3.715,78 €



**HIGH DISPLAY STAND BLUEMASTER**



DOUBLE LIGHTING,  
PREMIUM IMAGE AT THE STORE

ILLUMINATED DISPLAY  
OF THE CORPORATIVE IMAGE

VERTICAL LIGHTING  
OF THE INTERIOR OF THE DISPLAY

CORPORATIVE SLOGAN

2.480 mm  
1.000 mm  
550 mm

**EXPOSITORBM**

933,00 €

**HIGH DISPLAY COLUMN**



LOGO IN  
SERIGRAPHY

The right accessory  
for your implementation

2.480 mm  
300 mm  
550 mm

**EXPCOLUMNABM**

384,43 €

**HIGH DISPLAY CASE FOR STAND BLUEMASTER**



HIGH RESISTANCE  
METHACRYLATE

DOUBLE-LEAF  
DOORS

HIGH-SECURITY  
LOCK

The ideal solution for displaying  
high-value items in complete security

1.900 mm  
1.000 mm  
400 mm

**EXPVITRINAALTABM**

909,67 €

Display not included

**LOW DISPLAY CASE FOR STAND BLUEMASTER**



GLASS SHELF  
WITH TOP LOCKING

HIGH RESISTANCE  
METHACRYLATE

DOUBLE-LEAF  
DOORS

HIGH-SECURITY  
LOCK

1.150 mm  
1.000 mm  
400 mm

**EXPVITRINABAJABM**

710,83 €

Display not included

**SHELF WITH DRAWER FOR BLUEMASTER DISPLAY**

LARGE STORAGE CAPACITY IN YOUR DISPLAY

INCLUDES LEG-SUPPORT FOR MOUNTING OVER THE DISPLAY



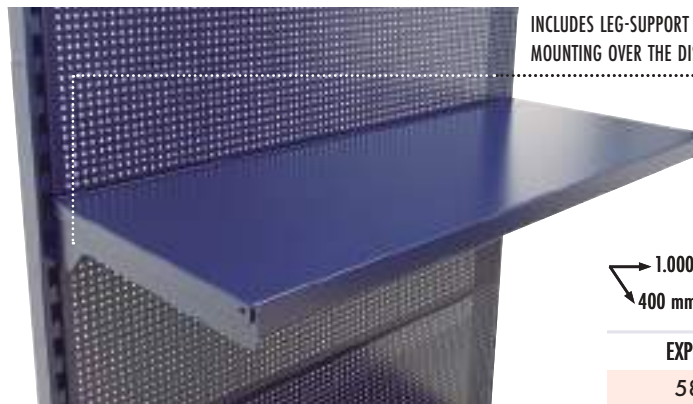
1.000 mm  
350 mm  
100 mm

EXPBANDEJAJONBM

119,80 €

**FLAT SHELF FOR BLUEMASTER DISPLAY**

INCLUDES LEG-SUPPORT FOR MOUNTING OVER THE DISPLAY

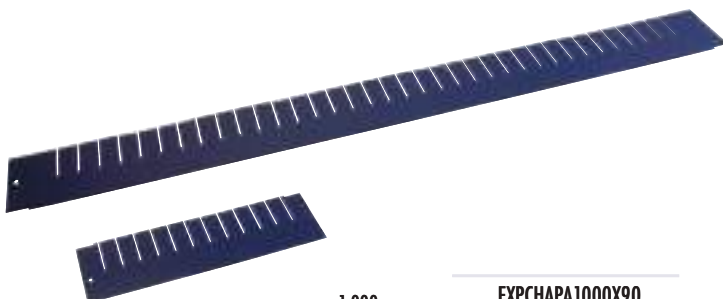


1.000 mm  
400 mm

EXPBANDEJABM

58,93 €

**DRAW DIVIDER BLUEMASTER**



1.000 mm  
90 mm

EXPCHAPA1000X90

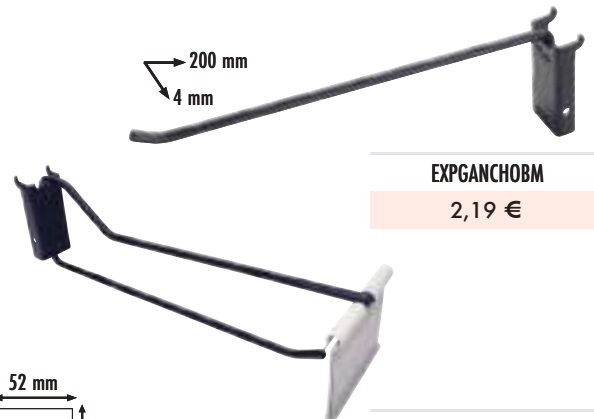
11,61 €

350 mm  
90 mm

EXPCHAPA350X90

6,43 €

**DISPLAY HOOK BLUEMASTER**



200 mm  
4 mm

EXPGANCHOBM

2,19 €

52 mm  
52 mm

EXPGANCHOBM2

4,13 €

**ONE SIDE LOW DISPLAY STAND BLUEMASTER**



CORPORATIVE IMAGE ON TOP

CORPORATIVE SLOGAN

1.680 mm  
1.000 mm  
550 mm

EXPOSITORBAJO1BM

478,92 €

**LOW DISPLAY CASE FOR STAND BLUEMASTER**



GLASS SHELF WITH TOP LOCKING

HIGH RESISTANCE METHACRYLATE

DOUBLE-LEAF DOORS

HIGH-SECURITY LOCK

1.150 mm  
1.000 mm  
400 mm

EXPVITRINABAJABM

710,83 €

Display not included

**DOUBLE SIDE LOW DISPLAY STAND BLUEMASTER**



CORPORATIVE IMAGE ON TOP

THE PERFECT SOLUTION TO SET UP DISPLAY RACKS IN THE EXHIBITION AREA

CORPORATIVE SLOGAN



1.680 mm  
1.000 mm  
550 mm

EXPOSITORBAJO2BM

778,59 €



**CORNER HIGH DISPLAY STAND BLUEMASTER**

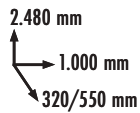


DOUBLE LIGHTING,  
PREMIUM IMAGE AT THE STORE

VERTICAL LIGHTING OF THE INTERIOR OF  
THE DISPLAY

EXPESQUINABM

714,30 €



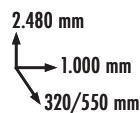
Maximize the profitability of your commercial surface.  
Bluemaster offers you the widest solution to generate the best sales space dedicated to the tools of the market.

**CORNER HIGH DISPLAY COLUMN**



LOGO IN  
SERIGRAPHY

The right accessory  
for your implementation



EXPESQCOLUMNABM

428,55 €

**CORNER FLAT SHELF FOR BLUEMASTER DISPLAY**



INCLUDES LEG-SUPPORT  
FOR MOUNTING OVER THE DISPLAY



EXPESQBANDEJABM

58,93 €

Display

Pink

**BLUEMASTER THREE LEVELS DISPLAY N° 1**



515 mm  
330 mm  
360 mm

**EXPOSITOR1V**  
95,00 €

**BLUEMASTER THREE LEVELS DISPLAY N° 2**



615 mm  
330 mm  
360 mm

**EXPOSITOR2V**  
95,00 €

**BLUEMASTER COUNTER DISPLAY DISPLAY N° 5**



820 mm  
400 mm  
220 mm

**EXPOSITOR5V**  
69,67 €

**BLUEMASTER THREE LEVELS DISPLAY HOOK**



120 mm

**GANCHO3**  
2,19 €



# THREAD RESTORATION GUIDE



**BLUE-MASTER<sup>®</sup>**  
*by celesa*

CUTTING TECHNOLOGIES



Manufactured from high quality chromium nickel stainless steel, PowerCoil Wire Thread Inserts provide high strength internal threads that resist the effects of temperature and corrosion. Their unique design ensures superior threads whose compound performance cannot be reproduced by any other single fastening method. Available in two basic forms, free running or screw locking, they are much lighter and less expensive than any other equivalent type of thread insert and because of their compact size they can generally be incorporated into existing designs where no previous provision has been made.

### Free Running

Produced from precision profiled austenitic stainless steel wire wound into a helical spiral, PowerCoil free running inserts have a spring like appearance. When installed, using any one of a variety of manual or automatic tools, they provide strong permanent internal threads which resist heat and corrosion. Once fitted, their position is maintained by the action of radial pressure between their coils and the flanks of the tapped hole. This pressure exists because their free diameter is larger by a calculated amount, than their installed diameter.

### Screw Locking

Screw locking (or prevailing torque) inserts are of particular value in applications subject to the effects of cyclic vibration or impact. In addition to the benefits afforded by free running inserts, PowerCoil screw locking inserts offer the additional security of prevailing locking torque. This is achieved by the action of one or more polygonal grip coils positioned within the insert's length, which exert radial pressure on the male thread. Each grip coil consists of a number of tangential locking chords which protrude inside the minor diameter of the normal free running coils. As the male thread passes through these grip coils, the locking flats are displaced thus exerting radial pressure or prevailing torque on the male thread. On removal of the male thread, the locking coils relax to their original form permitting repeated assembly whilst retaining a measurable level of prevailing torque.

### Features & Benefits

For many years, helically coiled wire thread inserts have been vastly underestimated. The popular misconception that they were designed for the repair of damaged threads has given this unique fastener a false image.

They are much lighter and less expensive than any other equivalent type of thread insert and because of their compact size, can generally be introduced into existing designs where no previous provision has been made. Unlike many other economic measures, their introduction increases quality and performance whilst reducing overall product cost. Their introduction may result in the use of thinner sections or lighter parent materials without sacrificing thread strength.

They protect tapped threads against failures due to stripping, seizing, corrosion and wear. PowerCoil wire thread inserts are produced from austenitic stainless steel wire which is work hardened to a tensile strength above 200,000psi and a hardness of Rc43-50. The inserts have an exceedingly smooth surface finish which virtually eliminates friction-induced thread erosion.

### Strength

Due to their flexibility, wire thread inserts create internal threads which have a much improved distribution of residual stress loading when compared with conventional tapped holes, where up to 70% of the shearing forces are carried by the first three threads in the tapped hole. The flexibility of wire thread inserts helps to compensate for pitch and flank angle errors, inherent in normal tapped holes, and significantly enhances the load bearing capacity by deflecting the residual forces into a helical hoop stress which is dispersed into the wall of the tapped hole. This enables the design to be confidently based on the bolt strength utilising smaller and shorter threads even when used in low strength materials..

The high tensile coils of a wire thread insert undergo a diameter reduction during installation. The outward spring-like force of the coils "locks" the insert into place. Each coil can flex independently to contact the greatest amount of parent material thread surface. Both static and dynamic load bearing capabilities are improved.

### Reference standards

#### SBAC AS 6734 & 8456

British Society of Aerospace Companies Standard. Specifically referring to UNC thread free inserts, a mandatory requirement of the Society. In fact, very similar to the Military Standard.

#### SBAC AS 6733 & 8455

Same requirement as above, extending to all free inserts in general.

#### BS

British Standard for Small Diameter Inserts. This is the generalised standard for all insert manufacturers, equivalent to DIN8140.

#### NASM 3279, 3280 & 3281

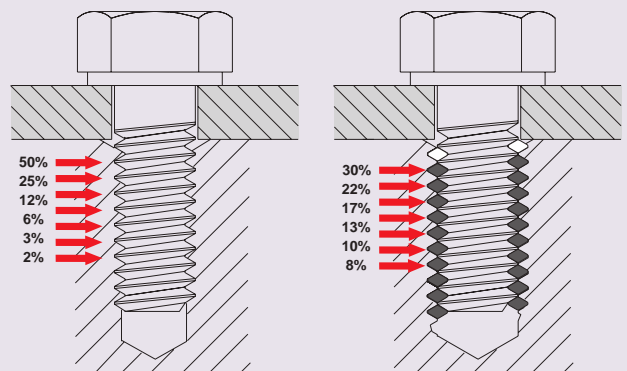
Military standard for free inserts. Military standard inserts are larger in diameter in the free state than standard inserts, making them more difficult to install and to remove. CELESA can supply and certify these inserts on request. The German DIN8140 standard for general purpose inserts has similar tolerances to the military standard inserts.

#### LN9499

German aerospace standard. No longer in use, although CELESA can supply and certify these inserts on request.

#### DIN8140

The Powercoil inserts distributed by CELESA comply with the requirements of the DIN8140 Standard.





# SCREW THREAD INSERTS



Part No. **35 20** - **12.00** X **1.5D**

- 35** PowerCoil - Stainless Steel
- 36** Loksert - Carbon Steel
- 37** Loksert - Stainless Steel

**DIAMETER**

- XX . XX** Metric
- XX / XX** Imperial

- |                           |                |
|---------------------------|----------------|
| <b>20</b> Metric Coarse   | <b>32</b> UNC  |
| <b>21</b> Metric Fine     | <b>34</b> UNF  |
| <b>22</b> Spark Plug      | <b>44</b> BA   |
| <b>23</b> Metric Fine     | <b>46</b> BSP  |
| <b>24</b> Metric Fine     | <b>52</b> NPT  |
| <b>28</b> BSW             | <b>60</b> BSB  |
| <b>30</b> BSF             | <b>70</b> 8-UN |
| <b>00</b> Multifunctional |                |

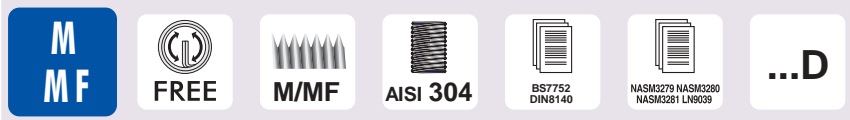
- |  |   |
|--|---|
| <b>X.XD</b> Insert length as a factor of nominal screw | <b>INC</b> Inconel X-750                  |
| <b>IR</b> PowerCoil strip-feed reel                    | <b>NM</b> Nimonic 90                      |
| <b>SL</b> PowerCoil screw locking                      | <b>NT</b> Nitronic 60                     |
| <b>K</b> PowerCoil thread repair kit                   | <b>Y</b> 316 Stainless Steel              |
| <b>P</b> PowerCoil Hang sell insert packet             | <b>CD</b> Cadmium plate                   |
| <b>WK</b> PowerCoil workshop kit                       | <b>ZN</b> Zinc plate                      |
| <b>HIT</b> Hand installation tool                      | <b>AG</b> Silver plate                    |
| <b>HIP</b> Prewinder installation tool                 | <b>FL</b> Dry film lubricant              |
| <b>MIT</b> Machine installation tool                   | <b>I</b> Tap Intermediate STI             |
| <b>HIM</b> Hex drive installation mandrel              | <b>T</b> Tap Taper STI                    |
| <b>MIP</b> Pneumatic installation tool                 | <b>B</b> Tap Bottoming STI                |
| <b>TB</b> Tang break tool                              | <b>SF</b> Tap Spiral Flute STI            |
| <b>STB</b> Spring loaded tang break tool               | <b>SP</b> Tap Spiral Point STI            |
| <b>PTB</b> Pneumatic tang break tool                   | <b>FT</b> Tap Fluteless STI               |
| <b>RT</b> Removal/extraction tool                      | <b>PD</b> Loksert Thin Wall               |
| <b>LH</b> Left Hand                                    | <b>PR</b> Loksert Heavy Duty              |
| <b>GC</b> Gauge STI 4H5H tolerance                     | <b>TT</b> Loksert Thin Wall install tool  |
| <b>GM</b> Gauge STI 6H tolerance                       | <b>HT</b> Loksert Heavy Duty install tool |
| <b>PB</b> Phosphor bronze                              | <b>T</b> Loksert Universal install tool   |





**FREE RUNNING INSERT**


			1.0D				1.5D				2.0D				
			L mm	€			L mm	€			L mm	€			
				<500	500-999	1000-...		<500	500-999	1000-...		<500	500-999	1000-...	
M 2x0.40	3520-2.00	2.10	2.00	0,46	0,43	0,41	3.00	0,47	0,45	0,42	4.00	0,48	0,47	0,46	100
M 2.20x0.45	3520-2.20	2.30	2.20	0,46	0,43	0,41	3.30	0,47	0,45	0,42	4.40	0,48	0,47	0,46	100
M 2.50x0.45	3520-2.50	2.60	2.50	0,27	0,24	0,22	3.75	0,28	0,25	0,24	5.00	0,32	0,28	0,26	100
M 3x0.50	3520-3.00	3.20	3.00	0,27	0,24	0,23	4.50	0,28	0,25	0,24	6.00	0,32	0,26	0,25	100
M 3.50x0.60	3520-3.50	3.70	3.50	0,32	0,28	0,26	5.25	0,33	0,30	0,28	7.00	0,36	0,33	0,30	100
M 4x0.70	3520-4.00	4.20	4.00	0,26	0,22	0,21	6.00	0,27	0,24	0,23	8.00	0,32	0,26	0,25	100
M 5x0.80	3520-5.00	5.20	5.00	0,32	0,26	0,25	7.50	0,26	0,25	0,24	10.00	0,36	0,29	0,27	100
M 6x1.00	3520-6.00	6.30	6.00	0,33	0,27	0,25	9.00	0,27	0,25	0,24	12.00	0,40	0,36	0,34	100
M 7x1.00	3520-7.00	7.30	7.00	0,37	0,33	0,30	10.50	0,43	0,37	0,35	14.00	0,48	0,42	0,39	100
M 8x1.00	3521-8.00	8.30	8.00	0,38	0,36	0,34	12.00	0,40	0,38	0,34	16.00	0,50	0,43	0,40	100
M 8x1.25	3520-8.00	8.30	8.00	0,33	0,29	0,27	12.00	0,36	0,30	0,28	16.00	0,48	0,40	0,38	100
M 9x1.25	3520-9.00	9.40	9.00	0,48	0,43	0,41	13.50	0,61	0,57	0,51	18.00	0,64	0,58	0,53	100
M 10x1.00	3523-10.00	10.30	10.00	0,42	0,38	0,36	15.00	0,48	0,42	0,39	20.00	0,57	0,48	0,45	100
M 10x1.25	3521-10.00	10.30	10.00	0,42	0,37	0,35	15.00	0,48	0,42	0,39	20.00	0,57	0,51	0,47	100
M 10x1.50	3520-10.00	10.40	10.00	0,42	0,36	0,34	15.00	0,48	0,40	0,38	20.00	0,57	0,47	0,44	100
M 11x1.00	3523-11.00	11.30	11.00	0,57	0,49	0,46	16.50	0,84	0,76	0,70	22.00	1,16	1,04	0,97	100
M 11x1.25	3521-11.00	11.30	11.00	0,57	0,49	0,46	16.50	0,70	0,68	0,63	22.00	1,16	1,04	0,99	100
M 11x1.50	3520-11.00	11.40	11.00	0,72	0,59	0,55	16.50	0,82	0,69	0,64	22.00	0,85	0,76	0,70	100
M 12x1.00	3524-12.00	12.30	12.00	0,60	0,58	0,55	18.00	0,71	0,70	0,68	24.00	1,17	1,11	1,02	100
M 12x1.25	3523-12.00	12.30	12.00	0,60	0,50	0,47	18.00	0,71	0,58	0,53	24.00	0,83	0,76	0,70	100
M 12x1.50	3521-12.00	12.40	12.00	0,60	0,50	0,47	18.00	0,71	0,51	0,47	24.00	0,83	0,76	0,70	100
M 12x1.75	3520-12.00	12.50	12.00	0,60	0,49	0,46	18.00	0,71	0,62	0,58	24.00	0,83	0,71	0,66	100
M 13x1.25	3523-13.00	13.25	13.00	0,88	0,82	0,76	19.50	1,35	1,27	1,17	26.00	1,83	1,69	1,55	50
M 13x1.50	3521-13.00	13.25	13.00	0,88	0,82	0,76	19.50	1,35	1,27	1,17	26.00	1,83	1,69	1,55	50
M 13x1.75	3520-13.00	13.50	13.00	0,88	0,82	0,76	19.50	1,35	1,27	1,17	26.00	1,83	1,69	1,55	50
M 14x1.00	3524-14.00	14.25	14.00	1,10	1,07	1,04	21.00	1,14	1,10	1,05	28.00	1,31	1,27	1,19	50
M 14x1.25	3523-14.00	14.25	14.00	0,92	0,84	0,78	21.00	1,05	0,91	0,84	28.00	1,10	1,03	0,96	50
M 14x1.50	3521-14.00	14.50	14.00	0,92	0,80	0,75	21.00	1,05	0,86	0,80	28.00	1,10	1,07	1,00	50
M 14x2.00	3520-14.00	14.50	14.00	0,92	0,76	0,70	21.00	1,05	0,96	0,87	28.00	1,10	1,05	0,98	50

Important note: Theoretical insert length is referred to length after insert installation.

**FREE RUNNING INSERT**



		 <b>2.5D</b>	 <b>3.0D</b>	€			€			Unit	
				L mm	<500	500-999	1000-...	L mm	<500		500-999
M 2x0.40	3520-2.00	2.10	5.00	0,55	0,50	0,48	6.00	0,60	0,58	0,55	100
M 2.20x0.45	3520-2.20	2.30	5.50	0,55	0,50	0,48	6.60	0,60	0,58	0,55	100
M 2.50x0.45	3520-2.50	2.60	6.25	0,37	0,33	0,30	7.50	0,43	0,38	0,36	100
M 3x0.50	3520-3.00	3.20	7.50	0,37	0,33	0,30	9.00	0,43	0,38	0,36	100
M 3.50x0.60	3520-3.50	3.70	8.75	0,40	0,37	0,35	10.50	0,48	0,45	0,42	100
M 4x0.70	3520-4.00	4.20	10.00	0,37	0,33	0,30	12.00	0,40	0,36	0,34	100
M 5x0.80	3520-5.00	5.20	12.50	0,42	0,36	0,34	15.00	0,49	0,42	0,39	100
M 6x1.00	3520-6.00	6.30	15.00	0,48	0,45	0,42	18.00	0,60	0,51	0,48	100
M 7x1.00	3520-7.00	7.30	17.50	0,59	0,51	0,48	21.00	0,69	0,67	0,63	100
M 8x1.00	3521-8.00	8.30	20.00	0,61	0,57	0,51	24.00	0,74	0,70	0,65	100
M 8x1.25	3520-8.00	8.30	20.00	0,59	0,51	0,48	24.00	0,69	0,62	0,58	100
M 9x1.25	3520-9.00	9.40	22.50	0,70	0,64	0,62	27.00	0,83	0,80	0,77	100
M 10x1.00	3523-10.00	10.30	25.00	0,67	0,61	0,57	30.00	0,81	0,74	0,68	100
M 10x1.25	3521-10.00	10.30	25.00	0,67	0,63	0,60	30.00	0,81	0,79	0,74	100
M 10x1.50	3520-10.00	10.40	25.00	0,67	0,60	0,56	30.00	0,81	0,71	0,66	100
M 11x1.00	3523-11.00	11.30	27.50	1,54	1,47	1,39	33.00	1,90	1,82	1,70	100
M 11x1.25	3521-11.00	11.30	27.50	1,54	1,47	1,39	33.00	1,90	1,82	1,70	100
M 11x1.50	3520-11.00	11.40	27.50	1,06	0,98	0,89	33.00	1,25	1,21	1,16	100
M 12x1.00	3524-12.00	12.30	30.00	1,47	1,43	1,37	36.00	1,80	1,72	1,59	100
M 12x1.25	3523-12.00	12.30	30.00	0,98	0,96	0,91	36.00	1,19	1,12	1,05	100
M 12x1.50	3521-12.00	12.40	30.00	0,98	0,96	0,91	36.00	1,37	1,12	1,05	100
M 12x1.75	3520-12.00	12.50	30.00	0,98	0,95	0,85	36.00	1,25	1,18	1,12	100
M 13x1.25	3523-13.00	13.25	32.50	2,47	2,27	2,10	39.00	2,84	2,61	2,42	50
M 13x1.50	3521-13.00	13.25	32.50	2,47	2,27	2,10	39.00	2,84	2,61	2,42	50
M 13x1.75	3520-13.00	13.50	32.50	2,47	2,27	2,10	39.00	2,84	2,61	2,42	50
M 14x1.00	3524-14.00	14.25	35.00	1,58	1,50	1,39	42.00	2,06	1,73	1,60	50
M 14x1.25	3523-14.00	14.25	35.00	1,30	1,23	1,13	42.00	1,59	1,40	1,29	50
M 14x1.50	3521-14.00	14.50	35.00	1,30	1,22	1,12	42.00	1,59	1,46	1,35	50
M 14x2.00	3520-14.00	14.50	35.00	1,30	1,25	1,22	42.00	1,59	1,51	1,40	50

Important note: Theoretical insert length is referred to length after insert installation.




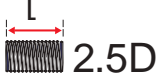
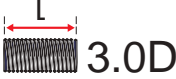
**FREE RUNNING INSERT**


			 1.0D			 1.5D			 2.0D			 Unit
			L mm	€		L mm	€		L mm	€		
				<100	100-500		<100	100-500		<100	100-500	
M 15 x 1.50	3521-15.00	15.25	15.00	1,47	1,22	22.50	1,89	1,55	30.00	2,38	2,00	50
<b>M 15 x 2.00</b>	3520-15.00	15.50	15.00	1,47	1,22	22.50	1,89	1,58	30.00	2,38	1,97	50
M 16 x 1.50	3521-16.00	16.50	16.00	1,23	0,83	24.00	1,29	0,93	32.00	1,59	1,22	50
<b>M 16 x 2.00</b>	3520-16.00	16.50	16.00	1,23	1,03	24.00	1,29	1,07	32.00	1,59	1,33	50
M 18 x 1.50	3523-18.00	18.50	18.00	1,80	1,53	27.00	2,10	1,79	36.00	2,84	2,42	50
M 18 x 2.00	3521-18.00	18.50	18.00	1,80	1,55	27.00	2,10	1,92	36.00	2,84	2,21	50
<b>M 18 x 2.50</b>	3520-18.00	19.00	18.00	1,80	1,49	27.00	2,10	1,75	36.00	2,84	2,36	50
M 20 x 1.50	3523-20.00	20.50	20.00	2,10	1,79	30.00	2,65	2,26	40.00	3,40	2,90	25
M 20 x 2.00	3521-20.00	20.50	20.00	2,10	1,49	30.00	2,65	2,11	40.00	3,40	2,90	25
<b>M 20 x 2.50</b>	3520-20.00	20.75	20.00	2,10	1,79	30.00	2,65	2,26	40.00	3,40	2,90	25
M 22 x 1.50	3523-22.00	22.50	22.00	2,27	1,93	33.00	2,84	2,42	44.00	3,59	3,06	25
M 22 x 2.00	3521-22.00	22.50	22.00	2,27	1,97	33.00	2,84	2,42	44.00	3,59	2,99	25
<b>M 22 x 2.50</b>	3520-22.00	22.75	22.00	2,27	1,92	33.00	2,84	2,42	44.00	3,59	3,06	25
M 24 x 1.50	3523-24.00	24.50	24.00	2,84	2,40	36.00	2,98	2,82	48.00	3,79	3,44	25
M 24 x 2.00	3521-24.00	24.50	24.00	2,84	2,53	36.00	2,98	2,82	48.00	3,79	3,52	25
<b>M 24 x 3.00</b>	3520-24.00	25.00	24.00	2,84	2,53	36.00	2,98	2,82	48.00	3,79	3,31	25
M 26 x 1.50	3523-26.00	26.50	26.00	4,31	3,66	39.00	4,90	4,18	52.00	6,37	5,42	10
M 27 x 1.50	3523-27.00	27.50	27.00	4,05	3,45	40.50	4,90	4,18	54.00	6,01	5,10	10
M 27 x 2.00	3521-27.00	27.50	27.00	4,17	3,55	40.50	4,90	4,21	54.00	6,01	5,05	10
<b>M 27 x 3.00</b>	3520-27.00	28.00	27.00	3,56	3,02	40.50	4,90	4,61	54.00	6,26	5,96	10
M 28 x 1.50	3523-28.00	28.50	28.00	4,13	3,52	42.00	4,90	4,18	56.00	6,37	5,42	10
M 30 x 1.50	3523-30.00	30.50	30.00	4,88	4,16	45.00	5,61	4,77	60.00	6,93	5,89	10
M 30 x 2.00	3521-30.00	30.50	30.00	4,60	3,92	45.00	5,61	4,77	60.00	7,20	6,13	10
<b>M 30 x 3.50</b>	3520-30.00	31.00	30.00	4,10	3,62	45.00	5,61	4,02	60.00	7,49	6,37	10
M 33 x 2.00	3521-33.00	33.50	33.00	6,91	5,88	49.50	7,18	6,25	66.00	8,40	7,18	10
<b>M 33 x 3.50</b>	3520-33.00	34.00	33.00	6,01	5,10	49.50	7,18	6,25	66.00	8,61	7,35	10
M 36 x 1.50	3524-36.00	36.50	36.00	5,91	5,03	54.00	7,18	6,25	72.00	8,65	8,17	10
M 36 x 2.00	3523-36.00	36.50	36.00	5,91	5,03	54.00	7,18	6,11	72.00	8,65	8,17	10
M 36 x 3.00	3521-36.00	37.00	36.00	5,91	5,03	54.00	7,18	6,89	72.00	8,77	8,17	10
<b>M 36 x 4.00</b>	3520-36.00	37.00	36.00	5,91	5,03	54.00	7,18	5,95	72.00	8,65	7,60	10
M 39 x 3,00	3521-39.00	40.00	39.00			58.50	25,68		78.00			1
<b>M 39 x 4,00</b>	3520-39.00	40.25	39.00	26,63		58.50	30,83		78.00	32,81		1
M 40 x 3,00	3523-40.00	41.00	40.00			60.00	35,96		80.00			1
M 42 x 3,00	3523-42.00	43.00	42.00			63.00	35,96		84.00			1
<b>M 42 x 4,50</b>	3520-42.00	43.50	42.00			63.00	35,96		84.00			1
M 45 x 3,00	3523-45.00	46.00	45.00			67.50	43,26		90.00			1
<b>M 45 x 4,50</b>	3520-45.00	46.50	45.00			67.50	43,26		90.00			1
M 48 x 3,00	3523-48.00	49.00	48.00			72.00	43,26		96.00			1
<b>M 48 x 5,00</b>	3520-48.00	49.50	48.00			72.00	56,78		96.00			1
M 50 x 3,00	3523-50.00	51.00	50.00			75.00	56,78		100.00			1
M 52 x 3,00	3523-52.00	53.00	52.00			78.00	60,84		104.00			1
<b>M 52 x 5,00</b>	3520-52.00	53.50	52.00			78.00	60,84		104.00			1

Important note: Theoretical insert length is referred to length after insert installation.


**FREE RUNNING INSERT**

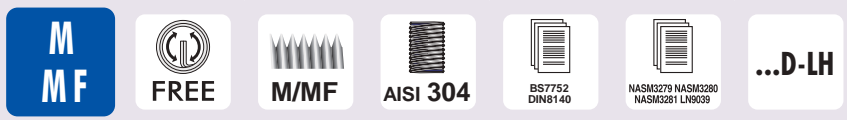







				€		€		Unit	
				L	L	L	L		
				mm	<100	100-500	mm		<100
M 15 x 1.50	3521-15.00	15.25	37.50	2,93	2,45	45.00	3,40	2,81	50
<b>M 15 x 2.00</b>	3520-15.00	15.50	37.50	2,93	2,45	45.00	3,40	2,81	50
M 16 x 1.50	3521-16.00	16.50	40.00	1,74	1,49	48.00	2,06	1,67	50
<b>M 16 x 2.00</b>	3520-16.00	16.50	40.00	1,74	1,54	48.00	2,06	1,76	50
M 18 x 1.50	3523-18.00	18.50	45.00	3,22	2,75	54.00	3,79	3,22	50
M 18 x 2.00	3521-18.00	18.50	45.00	3,22	2,58	54.00	3,79	2,97	50
<b>M 18 x 2.50</b>	3520-18.00	19.00	45.00	3,22	2,68	54.00	3,79	3,15	50
M 20 x 1.50	3523-20.00	20.50	50.00	3,79	3,22	60.00	4,35	3,70	25
M 20 x 2.00	3521-20.00	20.50	50.00	3,79	3,22	60.00	4,35	3,70	25
<b>M 20 x 2.50</b>	3520-20.00	20.75	50.00	3,79	3,22	60.00	4,35	3,70	25
M 22 x 1.50	3523-22.00	22.50	55.00	4,11	3,50	66.00	4,96	4,22	25
M 22 x 2.00	3521-22.00	22.50	55.00	4,11	3,50	66.00	4,96	4,22	25
<b>M 22 x 2.50</b>	3520-22.00	22.75	55.00	4,11	3,50	66.00	4,96	4,22	25
M 24 x 1.50	3523-24.00	24.50	60.00	4,97	4,13	72.00	5,30	4,85	25
M 24 x 2.00	3521-24.00	24.50	60.00	4,97	4,23	72.00	5,30	4,96	25
<b>M 24 x 3.00</b>	3520-24.00	25.00	60.00	4,97	4,23	72.00	6,07	5,33	25
M 26 x 1.50	3523-26.00	26.50	65.00	8,52	7,23	78.00	10,65	9,05	10
M 27 x 1.50	3523-27.00	27.50	67.50	7,80	6,63	81.00	9,21	7,83	10
M 27 x 2.00	3521-27.00	27.50	67.50	7,09	6,03	81.00	8,36	7,12	10
<b>M 27 x 3.00</b>	3520-27.00	28.00	67.50	7,37	6,27	81.00	8,70	7,41	10
M 28 x 1.50	3523-28.00	28.50	70.00	9,15	7,79	84.00	10,98	9,35	10
M 30 x 1.50	3523-30.00	30.50	75.00	9,32	7,93	90.00	11,17	9,50	10
M 30 x 2.00	3521-30.00	30.50	75.00	8,28	7,06	90.00	9,53	8,12	10
<b>M 30 x 3.50</b>	3520-30.00	31.00	75.00	8,24	7,00	90.00	9,07	7,72	10
M 33 x 2.00	3521-33.00	33.50	82.50	9,25	7,86	99.00	10,17	8,65	10
<b>M 33 x 3.50</b>	3520-33.00	34.00	82.50	10,78	9,17	99.00	12,16	10,34	10
M 36 x 1.50	3524-36.00	36.50	90.00	11,31	9,63	108.00	12,46	10,59	10
M 36 x 2.00	3523-36.00	36.50	90.00	10,67	9,07	108.00	11,69	9,94	10
M 36 x 3.00	3521-36.00	37.00	90.00	10,51	8,95	108.00	11,58	9,85	10
<b>M 36 x 4.00</b>	3520-36.00	37.00	90.00	12,18	10,36	108.00	15,70	13,35	10





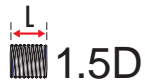

Coding example:

M 15x1.50	 1.0D	 1.5D
	3520-15.00x1.0D	3520-15.00x1.5D

**FREE RUNNING INSERT**

**LEFT HAND THREAD INSERT**


			 1.5D				€
			L mm	€			
M 3 x 0.50	3520-3.00x1.5D-LH	3.20	4.50	4,24	3520-3.00I-LH		25,31
M 4 x 0.70	3520-4.00x1.5D-LH	4.20	6.00	4,24	3520-4.00I-LH		25,31
M 5 x 0.80	3520-5.00x1.5D-LH	5.20	7.50	4,24	3520-5.00I-LH		25,31
M 6 x 1.00	3520-6.00x1.5D-LH	6.30	9.00	2,92	3520-6.00I-LH		25,31
M 8 x 1.25	3520-8.00x1.5D-LH	8.30	12.00	2,92	3520-8.00I-LH		31,52
M 10 x 1.50	3520-10.00x1.5D-LH	10.40	15.00	3,90	3520-10.00I-LH		38,63
M 12 x 1.75	3520-12.00x1.5D-LH	12.50	18.00	5,84	3520-12.00I-LH		43,72


**AISI 316**


			 1.5D			€
			L mm	€		
M 3 x 0.50	3520-3.00x1.5DY	3.20	4.50	2,18		
M 4 x 0.70	3520-4.00x1.5DY	4.20	6.00	2,29		
M 5 x 0.80	3520-5.00x1.5DY	5.20	7.50	2,37		
M 6 x 1.00	3520-6.00x1.5DY	6.30	9.00	2,42		
M 8 x 1.25	3520-8.00x1.5DY	8.30	12.00	2,91		
M 10 x 1.50	3520-10.00x1.5DY	10.40	15.00	3,00		
M 12 x 1.75	3520-12.00x1.5DY	12.50	18.00	3,27		








Coding example:

M 6 x 1.00

 1.0D  
 3520-6.00x1.5DY

**TANGLESS INSERTS**




			 1.0D			 1.5D			 2.0D			Unit			
			L mm	€			L mm	€			L mm		€		
M 3 x 0.50	3520-3.00DTL	3.20	3.00	0,42	0,37	0,36	4.50	0,44	0,39	0,37	6.00	1,08	0,40	0,39	100
M 4 x 0.70	3520-4.00DTL	4.20	4.00	0,40	0,34	0,32	6.00	0,42	0,37	0,36	8.00	0,48	0,40	0,39	100
M 5 x 0.80	3520-5.00DTL	5.20	5.00	0,48	0,40	0,39	7.50	0,40	0,39	0,37	10.00	0,56	0,45	0,42	100
M 6 x 1.00	3520-6.00DTL	6.30	6.00	0,50	0,42	0,39	9.00	0,42	0,39	0,37	12.00	0,62	0,56	0,51	100
M 8 x 1.25	3520-8.00DTL	8.30	8.00	0,50	0,45	0,42	12.00	0,56	0,47	0,44	16.00	0,76	0,62	0,59	100
M 10 x 1.50	3520-10.00DTL	10.40	10.00	0,65	0,56	0,51	15.00	0,76	0,62	0,59	20.00	0,87	0,74	0,68	100
M 12 x 1.75	3520-12.00DTL	12.50	12.00	0,92	0,77	0,72	18.00	1,10	0,96	0,89	24.00	1,29	1,10	1,02	100



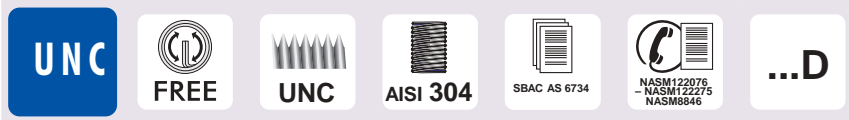
Coding example:

	 1.0D	 1.5D	 2.0D
M 3 x 0.50	3520-3.00X1.0DTL	3520-3.00X1.5DTL	3520-3.00X2.0DTL

**TANGLESS INSERTS INSTALLATION TOOL**

 TANG FREE	
	€
3520-3MITTL	579,98
3520-4MITTL	579,98
3520-5MITTL	579,98
3520-6MITTL	579,98
3520-8MITTL	579,98
3520-10MITTL	579,98
3520-12MITTL	579,98



**FREE RUNNING INSERT**


		D1 mm		L mm	1.0D			1.5D			2.0D			Unit		
					€	€	€	€	€	€						
					<500	500-999	1000-...	<500	500-999	1000-...	<500	500-999	1000-...			
UNC N°2-56	3532-2G	2.18	2.40	2.29	0,62	0,57	0,51	3.30	0,72	0,66	0,62	4.32	0,95	0,85	0,79	100
UNC N°3-48	3532-3G	2.51	2.70	2.54	0,63	0,59	0,55	3.81	0,68	0,62	0,58	5.08	0,71	0,67	0,63	100
UNC N°4-40	3532-4G	2.84	3.00	2.79	0,33	0,29	0,27	4.32	0,34	0,30	0,28	5.59	0,35	0,32	0,29	100
UNC N°5-40	3532-5G	3.17	3.40	3.30	0,36	0,32	0,29	4.83	0,37	0,33	0,30	6.35	0,39	0,36	0,34	100
UNC N°6-32	3532-6G	3.50	3.70	3.56	0,27	0,25	0,24	5.33	0,29	0,27	0,25	7.11	0,33	0,28	0,26	100
UNC N°8-32	3532-8G	4.17	4.40	4.06	0,28	0,26	0,25	6.35	0,32	0,28	0,26	8.38	0,35	0,29	0,27	100
UNC N°10-24	3532-10G	4.83	5.10	4.83	0,32	0,28	0,26	7.37	0,35	0,29	0,27	9.65	0,37	0,33	0,30	100
UNC N°12-24	3532-12G	5.49	5.70	5.59	0,36	0,32	0,29	8.13	0,39	0,36	0,34	10.92	0,42	0,38	0,36	100
UNC 1/4-20	3532-1/4	6.35	6.70	6.35	0,36	0,32	0,29	9.65	0,39	0,36	0,34	12.70	0,42	0,38	0,36	100
UNC 5/16-18	3532-5/16	7.94	8.30	7.87	0,47	0,40	0,38	11.94	0,58	0,49	0,46	15.75	0,60	0,51	0,48	100
UNC 3/8-16	3532-3/8	9.52	9.90	9.65	0,66	0,60	0,56	14.48	0,71	0,63	0,59	19.30	0,95	0,82	0,76	100
UNC 7/16-14	3532-7/16	11.11	11.60	11.18	0,80	0,70	0,65	16.76	0,96	0,84	0,78	22.35	1,08	0,96	0,87	100
UNC 1/2-13	3532-1/2	12.70	13.00	12.70	0,85	0,75	0,69	19.05	0,96	0,84	0,78	25.40	1,08	0,96	0,87	100
UNC 9/16-12	3532-9/16	14.28	15.00	14.22	1,66	1,46	1,35	21.34	1,93	1,71	1,58	28.45	2,47	2,17	2,01	50
UNC 5/8-11	3532-5/8	15.87	16.50	16.00	1,67	1,47	1,37	24.13	1,94	1,72	1,59	32.00	2,49	2,19	2,03	50
UNC 3/4-10	3532-3/4	19.05	20.00	19.05	1,84	1,63	1,49	28.70	2,29	2,03	1,87	38.10	2,74	2,42	2,23	50
UNC 7/8-9	3532-7/8	22.22	23.00	22.35	2,39	2,11	1,94	33.53	2,98	2,63	2,43	44.70	3,56	3,14	2,89	25
UNC 1-8	3532-1	25.40	26.25	25.40	3,49	3,40	3,14	38.10	5,21	5,09	4,69	50.80	6,62	6,48	5,97	25
UNC 1.1/8-7	3532-1.1/8	28.57	29.50	28.70	5,54	4,89	4,49	42.93	7,33	6,46	5,95	57.15	7,60	6,70	6,16	25
UNC 1.1/4-7	3532-1.1/4	31.75	32.50	31.75	6,05	5,32	4,90	47.75	7,68	6,76	6,22	63.50	8,66	7,62	7,01	10
UNC 1.3/8-6	3532-1.3/8	34.92	36.00	35.05	6,63	5,84	5,38	52.58	8,18	7,20	6,63	69.85	9,70	8,55	7,86	10
UNC 1.1/2-6	3532-1.1/2	38.10	39.50	38.10	7,68	6,76	6,22	57.15	10,55	9,29	8,56	76.20	12,20	10,74	9,88	10

Important note: Theoretical insert length is referred to length after insert installation.



Coding example:

UNC 1/4-20

1.0D

3532-1/4x1.0D

1.5D

3532-1/4x1.5D






2.0D

3532-1/4x2.0D



FREE RUNNING INSERT



		D1 mm		L mm	 2.5D			 3.0D			Unit		
					€	€	€	€	€	€			
UNC	N°2-56	3532-2G	2.18	2.40	5.59	1,06	0,97	0,88	6.60	1,32	1,19	1,10	100
UNC	N°3-48	3532-3G	2.51	2.70	6.35	0,75	0,69	0,64	7.62	0,83	0,76	0,70	100
UNC	N°4-40	3532-4G	2.84	3.00	9.65	0,39	0,36	0,34	8.64	0,47	0,40	0,38	100
UNC	N°5-40	3532-5G	3.17	3.40	7.87	0,47	0,40	0,38	9.65	0,58	0,49	0,46	100
UNC	N°6-32	3532-6G	3.50	3.70	8.89	0,36	0,32	0,29	10.41	0,42	0,37	0,35	100
UNC	N°8-32	3532-8G	4.17	4.40	10.41	0,37	0,34	0,32	12.45	0,44	0,39	0,37	100
UNC	N°10-24	3532-10G	4.83	5.10	12.19	0,45	0,39	0,37	14.48	0,55	0,47	0,44	100
UNC	N°12-24	3532-12G	5.49	5.70	13.72	0,50	0,46	0,43	16.51	0,63	0,57	0,51	100
UNC	1/4-20	3532-1/4	6.35	6.70	16.00	0,50	0,46	0,43	19.05	0,63	0,57	0,51	100
UNC	5/16-18	3532-5/16	7.94	8.30	19.81	0,71	0,62	0,58	23.62	0,85	0,75	0,69	100
UNC	3/8-16	3532-3/8	9.52	9.90	24.13	1,07	0,95	0,87	28.96	1,28	1,12	1,04	100
UNC	7/16-14	3532-7/16	11.11	11.60	27.94	1,30	1,14	1,06	33.53	1,59	1,40	1,29	100
UNC	1/2-13	3532-1/2	12.70	13.00	31.75	1,30	1,14	1,06	38.10	1,59	1,40	1,29	100
UNC	9/16-12	3532-9/16	14.28	15.00	35.56	3,09	2,72	2,50	42.67	3,33	2,94	2,72	50
UNC	5/8-11	3532-5/8	15.87	16.50	40.13	3,13	2,76	2,54	48.01	3,37	2,97	2,74	50
UNC	3/4-10	3532-3/4	19.05	20.00	47.75	3,57	3,15	2,90	57.15	3,93	3,47	3,19	50
UNC	7/8-9	3532-7/8	22.22	23.00	55.88	4,64	4,08	3,76	67.06	5,10	4,49	4,14	25
UNC	1-8	3532-1	25.40	26.25	63.50	7,82	7,65	7,06	76.20	9,49	9,27	8,54	25
UNC	1.1/8-7	3532-1.1/8	28.57	29.50	71.37	9,48	8,35	7,69	85.85	10,55	9,29	8,56	25
UNC	1.1/4-7	3532-1.1/4	31.75	32.50	79.50	10,86	9,57	8,80	95.25	12,21	10,75	9,89	10
UNC	1.3/8-6	3532-1.3/8	34.92	36.00	87.38	12,26	10,79	9,94	104.90	13,37	11,77	10,83	10
UNC	1.1/2-6	3532-1.1/2	38.10	39.50	95.25	15,95	14,04	12,93	114.30	18,14	15,97	14,70	10

Important note: Theoretical insert length is referred to length after insert installation.

**FREE RUNNING INSERT**


	D1 mm		 1.0D				 1.5D				 2.0D				Unit	
			L mm	€			L mm	€			L mm	€				
				<500	500-999	1000-...		<500	500-999	1000-...		<500	500-999	1000-...		
UNF N°3 - 56	3534-3G	2.51	2.70	2.54	0,48	0,43	0,40	3.81	0,60	0,53	0,49	5.08	0,72	0,64	0,60	100
UNF N°4 - 48	3534-4G	2.84	3.00	2.79	0,48	0,43	0,40	4.32	0,60	0,53	0,49	5.59	0,72	0,64	0,60	100
UNF N°6 - 40	3534-6G	3.50	3.70	3.56	0,48	0,43	0,40	5.33	0,60	0,53	0,49	7.11	0,72	0,64	0,60	100
UNF N°8 - 36	3534-8G	4.17	4.40	4.06	0,48	0,43	0,40	6.35	0,60	0,53	0,49	8.38	0,72	0,64	0,60	100
UNF N°10 - 32	3534-10G	4.83	5.10	4.83	0,35	0,29	0,27	7.37	0,36	0,32	0,29	9.65	0,42	0,37	0,35	100
UNF N°12 - 28	3534-12G	5.49	5.70	5.59	0,57	0,49	0,46	8.13	0,59	0,55	0,49	10.92	0,61	0,58	0,53	100
UNF 1/4 - 28	3534-1/4	6.35	6.60	6.35	0,35	0,29	0,27	9.65	0,36	0,32	0,29	12.70	0,42	0,37	0,35	100
UNF 5/16 - 24	3534-5/16	7.94	8.20	7.87	0,46	0,40	0,38	11.94	0,49	0,43	0,40	15.75	0,60	0,50	0,47	100
UNF 3/8 - 24	3534-3/8	9.52	9.80	9.65	0,69	0,60	0,56	14.48	0,71	0,62	0,58	19.30	0,85	0,75	0,69	100
UNF 7/16 - 20	3534-7/16	11.11	11.50	11.18	0,84	0,74	0,68	16.76	0,96	0,83	0,77	22.35	1,07	0,95	0,87	100
UNF 1/2 - 20	3534-1/2	12.70	13.00	12.70	0,84	0,74	0,68	19.05	0,96	0,83	0,77	25.40	1,07	0,95	0,87	100
UNF 9/16 - 18	3534-9/16	14.29	14.70	14.22	1,89	1,67	1,53	21.34	2,00	1,76	1,63	28.45	2,38	2,11	1,94	50
UNF 5/8 - 18	3534-5/8	15.87	16.30	16.00	1,93	1,71	1,58	24.13	2,10	1,85	1,71	32.00	2,38	2,11	1,94	50
UNF 3/4 - 16	3534-3/4	19.05	19.50	19.05	2,13	1,88	1,74	28.70	2,29	2,03	1,87	38.10	2,61	2,30	2,12	50
UNF 7/8 - 14	3534-7/8	22.22	22.50	22.35	4,44	3,91	3,60	33.53	6,54	5,76	5,31	44.70	8,33	7,33	6,75	25
UNF 1-12	3534-1	25.40	26.00	25.40	4,44	3,91	3,60	38.10	6,54	5,76	5,31	50.80	8,33	7,33	6,75	25
UNF 1-14	3535-1	25.40	26.00	25.40	4,62	4,05	3,73	38.10	6,81	6,00	5,51	50.80	8,66	7,61	7,00	25
UNF 1.1/8 - 12	3534-1.1/8	28.57	29.50	28.70	6,36	5,61	5,16	43.18	8,40	7,40	6,81	57.15	8,72	7,68	7,08	10
UNF 1.1/4 - 12	3534-1.1/4	31.75	32.50	31.75	6,91	6,09	5,61	47.75	9,14	8,04	7,41	63.50	9,92	8,73	8,03	10
UNF 1.3/8 - 12	3534-1.3/8	34.92	35.50	35.05	7,58	6,68	6,14	52.58	9,38	8,25	7,59	69.85	11,11	9,78	9,00	10
UNF 1.1/2 - 12	3534-1.1/2	38.10	38.50	38.10	8,78	7,73	7,12	57.15	11,42	11,09	10,20	76.20	13,97	12,30	11,32	10

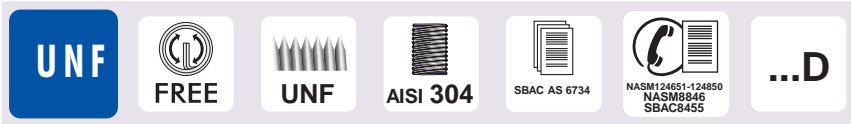
Important note: Theoretical insert length is referred to length after insert installation.




Coding example:

	 1.0D	 1.5D	 2.0D
UNF N°3 - 56	3534-3Gx1.0D	3534-3Gx1.5D	3534-3Gx2.0D

**FREE RUNNING INSERT**



	D1 mm		L mm	 2.5D			 3.0D			Unit		
				€	€	€	€	€	€			
UNF N°3 - 56	3534-3G	2.51	2.70	6.35	0,83	0,74	0,68	7.62	0,97	0,85	0,79	100
UNF N°4 - 48	3534-4G	2.84	3.00	7.11	0,83	0,74	0,68	8.64	0,97	0,85	0,79	100
UNF N°6 - 40	3534-6G	3.50	3.70	8.89	0,83	0,74	0,68	10.41	0,97	0,85	0,79	100
UNF N°8 - 36	3534-8G	4.17	4.40	10.41	0,83	0,74	0,68	12.45	0,97	0,85	0,79	100
UNF N°10 - 32	3534-10G	4.83	5.10	12.19	0,55	0,47	0,44	14.48	0,63	0,57	0,51	100
UNF N°12 - 28	3534-12G	5.49	5.70	13.72	0,64	0,60	0,56	16.51	0,71	0,67	0,63	100
UNF 1/4 - 28	3534-1/4	6.35	6.60	16.00	0,55	0,47	0,44	19.05	0,63	0,57	0,51	100
UNF 5/16 - 24	3534-5/16	7.94	8.20	19.81	0,72	0,64	0,60	23.62	0,85	0,75	0,69	100
UNF 3/8 - 24	3534-3/8	9.52	9.80	24.13	1,08	0,96	0,87	28.96	1,28	1,12	1,04	100
UNF 7/16 - 20	3534-7/16	11.11	11.50	27.94	1,33	1,17	1,08	33.53	1,59	1,40	1,29	100
UNF 1/2 - 20	3534-1/2	12.70	13.00	31.75	1,33	1,17	1,08	38.10	1,59	1,40	1,29	100
UNF 9/16 - 18	3534-9/16	14.29	14.70	35.56	3,02	2,66	2,46	42.67	3,39	2,98	2,75	50
UNF 5/8 - 18	3534-5/8	15.87	16.30	40.13	2,84	2,50	2,30	48.01	3,39	2,98	2,75	50
UNF 3/4 - 16	3534-3/4	19.05	19.50	47.75	3,57	3,15	2,90	57.15	3,93	3,47	3,19	50
UNF 7/8 - 14	3534-7/8	22.22	22.50	55.88	9,95	8,76	8,06	67.06	11,59	10,20	9,39	25
UNF 1 - 12	3534-1	25.40	26.00	63.50	9,95	8,76	8,06	76.20	11,59	10,20	9,39	25
UNF 1 - 14	3535-1	25.40	26.00	63.50	9,95	8,76	8,06	76.20	11,93	10,50	9,67	25
UNF 1.1/8 - 12	3534-1.1/8	28.57	29.50	71.37	10,86	9,57	8,80	85.85	12,10	10,65	9,80	10
UNF 1.1/4 - 12	3534-1.1/4	31.75	32.50	79.50	12,41	10,93	10,07	95.25	13,99	12,31	11,32	10
UNF 1.3/8 - 12	3534-1.3/8	34.92	35.50	87.38	14,04	12,36	11,38	104.90	15,30	13,47	12,40	10
UNF 1.1/2 - 12	3534-1.1/2	38.10	38.50	95.25	18,25	16,07	14,78	114.30	20,78	18,29	16,83	10



Other contents available on demand.

**FREE RUNNING INSERT**
**BSW**

**...D**


	D1 mm		1.0D		1.5D		2.0D		2.5D		3.0D		Unit	
			L mm	€	L mm	€	L mm	€	L mm	€	L mm	€		
BSW 1/8 - 40	3528-1/8	3.17	3.40	3.30	0,42	5.08	0,46	6.60	0,55	8.38	0,70	9.91	0,91	100
BSW 3/16 - 24	3528-3/16	4.76	5.00	4.83	0,42	7.37	0,46	9.65	0,55	12.19	0,70	14.48	0,91	100
BSW 1/4 - 20	3528-1/4	6.35	6.70	6.35	0,38	9.65	0,42	12.70	0,48	16.00	0,63	19.05	0,68	100
BSW 5/16 - 18	3528-5/16	7.94	8.30	7.87	0,44	11.94	0,50	15.75	0,56	19.81	0,66	23.62	0,81	100
BSW 3/8 - 16	3528-3/8	9.52	10.00	9.65	0,79	14.48	0,84	19.30	1,00	24.13	1,17	28.96	1,40	100
BSW 7/16 - 14	3528-7/16	11.11	11.60	11.18	0,96	16.76	1,05	22.35	1,21	27.94	1,43	33.53	1,75	100
BSW 1/2 - 12	3528-1/2	12.70	13.00	12.70	0,96	19.05	1,05	25.40	1,21	31.75	1,43	38.10	1,75	100
BSW 9/16 - 12	3528-9/16	14.29	14.75	14.22	2,38	21.34	3,33	28.45	3,91	35.56	4,65	42.67	5,69	50
BSW 5/8 - 11	3528-5/8	15.87	16.50	16.00	2,38	24.13	3,33	32.00	3,91	40.13	4,65	48.01	5,69	50
BSW 3/4 - 10	3528-3/4	19.05	20.00	19.05	3,09	28.70	3,96	38.10	4,82	47.75	5,79	57.15	6,93	50
BSW 7/8 - 9	3528-7/8	22.22	23.25	22.35	3,96	33.53	5,52	44.70	6,91	55.88	8,32	67.06	9,98	25
BSW 1 - 8	3528-1	25.40	26.50	25.40	4,27	38.10	6,33	50.80	6,91	63.50	8,32	76.20	9,98	25

**BSF**

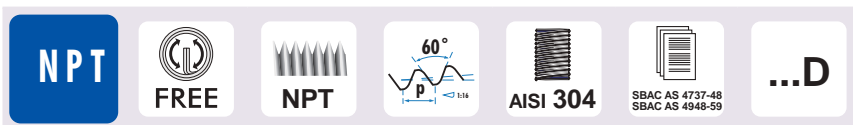
**...D**

	D1 mm		1.0D		1.5D		2.0D		2.5D		3.0D		Unit	
			L mm	€	L mm	€	L mm	€	L mm	€	L mm	€		
BSF 3/16 - 32	3530-3/16	4.76	5.00	4.83	0,42	7.37	0,46	9.65	0,56	12.19	0,65	14.48	0,77	100
BSF 1/4 - 26	3530-1/4	6.35	6.60	6.35	0,40	9.65	0,42	12.70	0,49	16.00	0,60	19.05	0,69	100
BSF 5/16 - 22	3530-5/16	7.94	8.30	7.87	0,42	11.94	0,51	15.75	0,57	19.81	0,69	23.62	0,83	100
BSF 3/8 - 20	3530-3/8	9.52	9.80	9.65	0,80	14.48	0,86	19.30	1,02	24.13	1,19	28.96	1,43	100
BSF 7/16 - 18	3530-7/16	11.11	11.60	11.18	0,98	16.76	1,07	22.35	1,23	27.94	1,46	33.53	1,79	100
BSF 1/2 - 16	3530-1/2	12.70	13.25	12.70	0,98	19.05	1,07	25.40	1,23	31.75	1,46	38.10	1,79	100
BSF 9/16 - 16	3530-9/16	14.29	14.75	14.22	2,44	21.34	3,23	28.45	3,99	35.56	4,75	42.67	6,46	50
BSF 5/8 - 14	3530-5/8	15.88	16.50	16.00	2,44	24.13	3,23	32.00	3,99	40.13	4,75	48.01	5,82	50
BSF 3/4 - 12	3530-3/4	19.05	19.50	19.05	3,15	28.70	4,04	38.10	4,94	47.75	5,91	57.15	7,10	50
BSF 7/8 - 11	3530-7/8	22.23	22.75	22.35	4,04	33.53	5,66	44.70	7,07	55.88	8,51	67.06	10,19	25
BSF 1 - 10	3530-1	25.40	26.25	25.40	4,04	38.10	5,66	50.80	7,07	63.50	8,51	76.20	10,19	25

**FREE RUNNING INSERT**



		D1 mm		1.0D		1.5D		2.0D		Unit	
				L mm	€	L mm	€	L mm	€		
BSP	1/8 - 28	3546-1/8	9.73	10.00	3.30	0,59	4.83	0,83	6.35	0,92	100
BSP	1/4 - 19	3546-1/4	13.16	13.75	6.35	0,79	9.65	1,13	12.70	1,28	100
BSP	3/8 - 19	3546-3/8	16.66	17.00	9.65	0,70	14.22	1,29	19.05	1,46	100
BSP	1/2 - 14	3546-1/2	20.95	21.50	12.70	1,83	19.05	1,85	25.40	2,93	50
BSP	5/8 - 14	3546-5/8	22.91	23.50	16.00	2,80	23.88	4,13	31.75	4,31	50
BSP	3/4 - 14	3546-3/4	26.44	27.00	19.05	2,80	28.70	4,13	38.10	4,31	50
BSP	7/8 - 14	3546-7/8	30.20	30.50	22.35	7,19	33.53	12,64	44.45	15,76	25
BSP	1 - 11	3546-1	33.25	33.75	25.40	8,06	38.10	14,15	50.80	16,21	25



		L mm	€	Unit	
					1.5D
NPT	1/8 - 27	3552-1/8	4.78	1,18	100
NPT	1/4 - 18	3552-1/4	9.53	1,70	100
NPT	3/8 - 18	3552-3/8	14.30	2,14	100
NPT	1/2 - 14	3552-1/2	19.05	3,51	50
NPT	3/4 - 14	3552-3/4	28.58	5,04	50
NPT	1 - 11.1/2	3552-1	38.10	6,76	25



Coding example:

BSP 1/8-28	1.0D	1.5D
3546-1/8x1.0D		3546-1/8x1.5D



**FREE RUNNING INSERT**
**UN x 8**

**...D**


		D1 mm		1.0D		1.5D		2.0D		Unit
				L mm	€	L mm	€	L mm	€	
UN 1.1/8 - 8	3570-1.1/8	28.57	28.50	28.70	10,61	42.93	12,51	57.15	13,35	10
UN 1.1/4 - 8	3570-1.1/4	31.75	32.00	31.75	12,71	47.75	15,34	63.50	17,36	10
UN 1.3/8 - 8	3570-1.3/8	34.92	35.00	35.05	14,35	52.32	19,07	69.85	20,99	10
UN 1.1/2 - 8	3570-1.1/2	38.10	38.00	38.10	16,01	57.15	21,25	76.20	24,92	10
UN 1.5/8 - 8	3570-1.5/8	41.27	41.00	41.40	17,54	61.98	22,54	82.55	27,78	10
UN 1.3/4 - 8	3570-1.3/4	44.45	44.50	44.45	19,01	66.80	24,49	88.90	28,16	10
UN 1.7/8 - 8	3570-1.7/8	47.62	47.50	47.75	20,52	71.37	26,27	95.25	32,42	10
UN 2 - 8	3570-2	50.80	51.00	50.80	21,96	76.20	28,21	101.60	34,74	10

**BA**

**...D**

		D1 mm		1.0D		1.5D		2.0D		2.5D		3.0D		Unit
				L mm	€	L mm	€	L mm	€	L mm	€	L mm	€	
BA 0	3544-0	6.00	6.20	6.10	2,63	8.89	3,48	11.94	4,17	14.99	4,79	18.03	5,51	100
BA 2	3544-2	4.70	4.90	4.83	1,37	7.11	1,52	9.40	1,68	11.68	1,97	14.22	2,13	100
BA 4	3544-4	3.60	3.80	3.56	1,37	5.33	1,52	7.11	1,68	8.89	1,97	10.92	2,13	100
BA 6	3544-6	2.80	2.90	2.79	1,37	4.32	1,52	5.59	1,68	7.11	1,97	8.38	2,13	100



Coding example:

UN 1.1/8 - 8

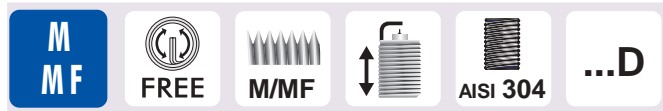
 1.0D  
 3570-1.1/8x1.0D

 1.5D  
 3570-1.1/8x1.5D

**FREE RUNNING INSERT**



D	Pitch	Part No.	D1 mm	Drill Ø	1.0D		1.5D		2.0D		Unit
					L mm	€	L mm	€	L mm	€	
BSB	1/4 - 26	3560-1/4	6,35	6.60	6,35	1,61	9,53	2,22	12,70	2,22	100
BSB	5/16 - 26	3560-5/16	7,94	8.20	7,95	0,72	11,91	0,87	15,88	1,17	100
BSB	3/8 - 26	3560-3/8	9,52	9.80	9,53	0,84	14,30	1,01	19,05	1,37	100
BSB	7/16 - 26	3560-7/16	11,11	11.30	11,13	0,89	16,66	1,37	22,23	1,86	100
BSB	1/2 - 26	3560-1/2	12,70	12.70	12,70	1,82	19,05	2,30	25,40	2,93	50



D	Pitch	Part No.	Drill Ø	Lengths			Unit
				8.40mm	12.40mm	16.40mm	
14x1.25		3522-14.00	14.25	0,98	0,98	0,98	50

D	Pitch	Part No.	Drill Ø	Lengths		Unit
				1/2"	3/4"	
10x1.00		3522-10.00	10.30	0,49		100
12x1.25		3522-12.00	12.30	0,59	0,71	100
14x1.25		3522-14.00	14.25	0,85	1,31	50
18x1.50		3522-18.00	18.50	1,14		50



D	Pitch	Part No.	Drill Ø	Lengths			Unit
				0.339"	3/8"	7/16"	
10x1.00		3522-10.00	10.30	0,41		100	
14x1.25		3522-14.00	14.25		0,92	1,01	50

**M**  
**M F**

**FREE**

**M/MF**

**AISI 304**

**BS7752  
DIN8140**
**...DP**
**FREE RUNNING INSERT**

		€	D1 mm	L mm		mm	Accessories			
M 3 x 0.50	3520-3.00X1.0DP	3,84	1.00	3.00	10	3.20	3520-3.00I	3500-HIT4	3500-TB4	
<b>M 3 x 0.50</b>	3520-3.00X1.5DP	4,01	1.50	4.50	10	3.20	3520-3.00I	3500-HIT4	3500-TB4	
M 3 x 0.50	3520-3.00X2.0DP	4,54	2.00	6.00	10	3.20	3520-3.00I	3500-HIT4	3500-TB4	
M 4 x 0.70	3520-4.00X1.0DP	3,65	1.00	4.00	10	4.20	3520-4.00I	3500-HIT6	3500-TB6	
<b>M 4 x 0.70</b>	3520-4.00X1.5DP	3,84	1.50	6.00	10	4.20	3520-4.00I	3500-HIT6	3500-TB6	
M 4 x 0.70	3520-4.00X2.0DP	4,54	2.00	8.00	10	4.20	3520-4.00I	3500-HIT6	3500-TB6	
M 5 x 0.80	3520-5.00X1.0DP	4,54	1.00	5.00	10	5.20	3520-5.00I	3500-HIT8	3500-TB8	
<b>M 5 x 0.80</b>	3520-5.00X1.5DP	3,65	1.50	7.50	10	5.20	3520-5.00I	3500-HIT8	3500-TB8	
M 5 x 0.80	3520-5.00X2.0DP	5,05	2.00	10.00	10	5.20	3520-5.00I	3500-HIT8	3500-TB8	
M 6 x 1.00	3520-6.00X1.0DP	4,70	1.00	6.00	10	6.30	3520-6.00I	3500-HIT9	3500-TB9	
<b>M 6 x 1.00</b>	3520-6.00X1.5DP	3,84	1.50	9.00	10	6.30	3520-6.00I	3500-HIT9	3500-TB9	
M 6 x 1.00	3520-6.00X2.0DP	5,75	2.00	12.00	10	6.30	3520-6.00I	3500-HIT9	3500-TB9	
M 6 x 1.00	3520-6.00X2.5DP	6,96	2.50	15.00	10	6.30	3520-6.00I	3500-HIT9	3500-TB9	
M 8 x 1.00	3521-8.00X1.0DP	5,40	1.00	8.00	10	8.30	3521-8.00I	3500-HIT11	3500-TB12	
M 8 x 1.00	3521-8.00X1.5DP	5,75	1.50	12.00	10	8.30	3521-8.00I	3500-HIT11	3500-TB12	
M 8 x 1.00	3521-8.00X2.0DP	7,31	2.00	16.00	10	8.30	3521-8.00I	3500-HIT11	3500-TB12	
M 8 x 1.25	3520-8.00X1.0DP	4,70	1.00	8.00	10	8.30	3520-8.00I	3500-HIT11	3500-TB12	
<b>M 8 x 1.25</b>	3520-8.00X1.5DP	5,05	1.50	12.00	10	8.30	3520-8.00I	3500-HIT11	3500-TB12	
M 8 x 1.25	3520-8.00X2.0DP	6,96	2.00	16.00	10	8.30	3520-8.00I	3500-HIT11	3500-TB12	
M 10 x 1.25	3521-10.00X1.5DP	6,73	1.50	15.00	10	10.30	3521-10.00I	3500-HIT13	3500-TB13	
M 10 x 1.50	3520-10.00X1.0DP	5,88	1.00	10.00	10	10.40	3520-10.00I	3500-HIT13	3500-TB13	
<b>M 10 x 1.50</b>	3520-10.00X1.5DP	6,73	1.50	15.00	10	10.40	3520-10.00I	3500-HIT13	3500-TB13	
M 10 x 1.50	3520-10.00X2.0DP	7,73	2.00	20.00	10	10.40	3520-10.00I	3500-HIT13	3500-TB13	
M 12 x 1.50	3521-12.00X1.5DP	9,92	1.50	18.00	10	12.40	3521-12.00I	3500-HIT15	3500-TB15	
M 12 x 1.75	3520-12.00X1.0DP	8,24	1.00	12.00	10	12.50	3520-12.00I	3500-HIT15	3500-TB15	
<b>M 12 x 1.75</b>	3520-12.00X1.5DP	9,92	1.50	18.00	10	12.50	3520-12.00I	3500-HIT15	3500-TB15	
M 12 x 1.75	3520-12.00X2.0DP	11,66	2.00	24.00	10	12.50	3520-12.00I	3500-HIT15	3500-TB15	
M 14 x 1.50	3521-14.00X1.5DP	7,31	1.50	21.00	5	14.40	3521-14.00I	3500-HIT16	-	
M 14 x 2.00	3520-14.00X1.0DP	6,39	1.00	14.00	5	14.50	3520-14.00I	3500-HIT16	-	
<b>M 14 x 2.00</b>	3520-14.00X1.5DP	7,31	1.50	21.00	5	14.50	3520-14.00I	3500-HIT16	-	
M 14 x 2.00	3520-14.00X2.0DP	7,65	2.00	28.00	5	14.50	3520-14.00I	3500-HIT16	-	
M 16 x 1.50	3521-16.00X1.5DP	9,00	1.50	24.00	5	16.50	3521-16.00I	3500-HIT18	-	
M 16 x 2.00	3520-16.00X1.0DP	8,58	1.00	16.00	5	16.50	3520-16.00I	3500-HIT18	-	
<b>M 16 x 2.00</b>	3520-16.00X1.5DP	9,00	1.50	24.00	5	16.50	3520-16.00I	3500-HIT18	-	
M 16 x 2.00	3520-16.00X2.0DP	11,10	2.00	32.00	5	16.50	3520-16.00I	3500-HIT18	-	
M 18 x 2.00	3521-18.00X1.5DP	14,63	1.50	27.00	5	18.50	3521-18.00I	3500-HIT20	-	
M 18 x 2.50	3520-18.00X1.0DP	11,63	1.00	18.00	5	19.00	3520-18.00I	3500-HIT20	-	
<b>M 18 x 2.50</b>	3520-18.00X1.5DP	13,59	1.50	27.00	5	19.00	3520-18.00I	3500-HIT20	-	
M 18 x 2.50	3520-18.00X2.0DP	18,42	2.00	36.00	5	19.00	3520-18.00I	3500-HIT20	-	
M 20 x 2.50	3520-20.00X1.0DP	13,59	1.00	20.00	5	20.75	3520-20.00I	3500-HIT21	-	
<b>M 20 x 2.50</b>	3520-20.00X1.5DP	17,18	1.50	30.00	5	20.75	3520-20.00I	3500-HIT21	-	
M 20 x 2.50	3520-20.00X2.0DP	22,08	2.00	40.00	5	20.75	3520-20.00I	3500-HIT21	-	
<b>M 22 x 2.50</b>	3520-22.00X1.5DP	11,06	1.50	33.00	3	22.75	3520-22.00I	3500-HIT22	-	
M 22 x 2.50	3520-22.00X2.0DP	14,01	2.00	44.00	3	22.75	3520-22.00I	3500-HIT22	-	
<b>M 24 x 3.00</b>	3520-24.00X1.5DP	17,45	1.50	36.00	3	24.50	3520-24.00I	3500-HIT23	-	

Accessories not included in listed price



		€	D1 mm	L		mm	Accessories			
M 12 x 1.25	3522-12.00X1/2P	8,06	-	1/2"	10	12.30	3522-12.00PN	3500-HIT15	3500-TB15	
M 12 x 1.25	3522-12.00X3/4P	9,92	-	3/4"	10	12.30	3522-12.00PN	3500-HIT15	3500-TB15	
M 14 x 1.25	3522-14.00X3/8P	12,84	-	3/8"	10	14.30	3522-14.00PN	3500-HIT17	3500-HIT17	
M 14 x 1.25	3522-14.00X1/2P	11,94	-	1/2"	10	14.30	3522-14.00PN	3500-HIT17	3500-HIT17	
M 14 x 1.25	3522-14.00X3/4P	18,18	-	3/4"	10	14.30	3522-14.00PN	3500-HIT17	3500-HIT17	
M 14 x 1.25	3522-14.00X8.4P	6,81	-	8.4 mm	5	14.30	3522-14.00PN	3500-HIT17	3500-HIT17	
M 14 x 1.25	3522-14.00X12.4P	6,81	-	12.4"	5	14.30	3522-14.00PN	3500-HIT17	3500-HIT17	
M 14 x 1.25	3522-14.00X16.4P	6,81	-	16.4"	5	14.30	3522-14.00PN	3500-HIT17	3500-HIT17	

Accessories not included in listed price

M14x1,25

M12x1,25

**FREE RUNNING INSERT**

		€	D1 mm	L mm		mm	Accessories		
									
UNC N°6 - 32	3532-6GX1.5DP	4,03	1.50	5.33	10	3.80	3532-6GI	3500-HIT5	3500-TB5
UNC N°8 - 32	3532-8GX1.5DP	4,25	1.50	6.35	10	4.40	3532-8GI	3500-HIT6	3500-TB6
UNC N°10 - 24	3532-10GX1.5DP	4,71	1.50	7.11	10	5.20	3532-10GI	3500-HIT7	3500-TB8
UNC 1/4 - 20	3532-1/4X1.5DP	5,39	1.50	9.65	10	6.70	3532-1/4I	3500-HIT9	3500-TB9
UNC 5/16 - 18	3532-5/16X1.0DP	6,56	1.00	7.87	10	8.30	3532-5/16I	3500-HIT10	3500-TB12
UNC 5/16 - 18	3532-5/8X1.5DP	7,91	1.50	11.94	10	8.30	3532-5/16I	3500-HIT10	3500-TB12
UNC 3/8 - 16	3532-3/8X1.5DP	9,92	1.50	14.22	10	9.90	3532-3/8I	3500-HIT13	3500-TB12
UNC 3/8 - 16	3532-3/8X2.0DP	13,11	2.00	19.05	10	9.90	3532-3/8I	3500-HIT13	3500-TB12
UNC 7/16 - 14	3532-7/16X1.5DP	13,28	1.50	16.76	10	11.60	3532-7/16I	3500-HIT14	3500-TB14
UNC 1/2 - 13	3532-1/2X1.5DP	13,28	1.50	19.05	10	13.00	3532-1/2I	3500-HIT15	3500-TB15
UNC 5/8 - 11	3532-5/8X1.5DP	13,63	1.50	23.88	5	16.50	3532-5/8I	3500-HIT18	-
UNC 3/4 - 10	3532-3/4X1.5DP	16,05	1.50	28.70	5	20.00	3532-3/4I	3500-HIT20	-
UNC 7/8 - 9	3532-7/8X1.5DP	12,53	1.50	33.27	3	23.00	3532-7/8I	3500-HIT22	-
UNC 1 - 8	3532-1X1.5DP	21,90	1.50	38.10	3	26.25	3532-1I	3500-HIT23	-

		€	D1 mm	L mm		mm	Accessories		
									
UNF N°10 - 32	3534-10GX1.5DP	4,88	1.50	7.11	10	5.10	3534-10GI	3500-HIT8	3500-TB8
UNF 1/4 - 28	3534-1/4X1.5DP	4,88	1.50	9.65	10	6.70	3534-1/4I	3500-HIT9	3500-TB9
UNF 5/16 - 24	3534-5/16X1.5DP	6,90	1.50	11.94	10	8.30	3534-5/16I	3500-HIT11	3500-TB12
UNF 3/8 - 24	3534-3/8X1.5DP	9,92	1.50	14.22	10	9.80	3534-3/8I	3500-HIT13	3500-TB13
UNF 7/16 - 20	3534-7/16X1.5DP	13,28	1.50	16.76	10	11.50	3534-7/16I	3500-HIT14	3500-TB14
UNF 1/2 - 20	3534-1/2X1.5DP	13,28	1.50	19.05	10	13.00	3534-1/2I	3500-HIT15	3500-TB15
UNF 5/8 - 18	3534-5/8X1.5DP	14,69	1.50	24.13	5	16.50	3534-5/8I	3500-HIT18	-
UNF 3/4 - 16	3534-3/4X1.5DP	16,05	1.50	28.70	5	19.50	3534-3/4I	3500-HIT21	-

Accessories not included in listed price

**UNC UNF**

**FREE**

**UNC/UNF**

**AISI 304**

SBAC AS 6734  
SBAC AS 8456

SBAC AS 6733  
SBAC AS 8455

**...DP**

**BSP (GAS)** **FREE** **BSP** **AISI 304** **BS84** **...DP**








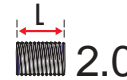

		€	D1 mm	L mm		mm	Accessories		
									
BSP 1/8 - 28	3546-1/8X1.5DP	11,58	1.50	4.83	10	10.00	3546-1/8I	3500-HIT14	
BSP 1/4 - 19	3546-1/4X1.5DP	15,87	1.50	9.65	10	13.75	3546-1/4I	3500-HIT16	
BSP 3/8 - 19	3546-3/8X1.5DP	18,00	1.50	14.22	10	17.00	3546-3/8I	3500-HIT20	
BSP 1/2 - 14	3546-1/2X1.5DP	25,84	1.50	19.05	10	21.50	3546-1/2I	3500-HIT23	
BSP 3/4 - 14	3546-3/4X1.5DP	28,86	1.50	28.70	5	27.00	3546-3/4I	3500-HIT24	
BSP 1 - 11	3546-1X1.5DP	53,08	1.50	38.10	3	33.75	3546-1I	3500-HIT27	

Accessories not included in listed price





**SCREW LOCKING INSERTS**


			 <b>1.0D</b>				 <b>1.5D</b>				 <b>2.0D</b>				
			L mm	€			L mm	€			L mm	€			
				<500	500-999	1000-...		<500	500-999	1000-...		<500	500-999	1000-...	Unit
M 2 x 0.40	3520-2.00	2.10	2.00	0,63	0,57	0,51	3.00	0,82	0,72	0,67	4.00	0,96	0,84	0,78	100
M 2.20 x 0.45	3520-2.20	2.30	2.20	0,60	0,53	0,49	3.30	0,78	0,69	0,64	4.40	0,89	0,80	0,75	100
M 2.50 x 0.45	3520-2.50	2.60	2.50	0,40	0,35	0,33	3.75	0,41	0,38	0,36	5.00	0,42	0,39	0,37	100
M 3 x 0.50	3520-3.00	3.20	3.00	0,30	0,27	0,25	4.50	0,35	0,30	0,28	6.00	0,36	0,33	0,30	100
M 3.50 x 0.60	3520-3.50	3.70	3.50	0,36	0,33	0,30	5.25	0,38	0,36	0,34	7.00	0,40	0,38	0,36	100
M 4 x 0.70	3520-4.00	4.20	4.00	0,30	0,28	0,26	6.00	0,35	0,30	0,28	8.00	0,36	0,32	0,29	100
M 5 x 0.80	3520-5.00	5.20	5.00	0,36	0,32	0,29	7.50	0,37	0,33	0,30	10.00	0,40	0,36	0,34	100
M 6 x 1.00	3520-6.00	6.30	6.00	0,39	0,35	0,33	9.00	0,41	0,36	0,34	12.00	0,46	0,41	0,38	100
M 7 x 1.00	3520-7.00	7.30	7.00	0,46	0,41	0,38	10.50	0,55	0,48	0,45	14.00	0,61	0,55	0,49	100
M 8 x 1.00	3521-8.00	8.30	8.00	0,49	0,44	0,41	12.00	0,53	0,45	0,42	16.00	0,62	0,53	0,49	100
M 8 x 1.25	3520-8.00	8.30	8.00	0,40	0,36	0,34	12.00	0,46	0,41	0,38	16.00	0,55	0,46	0,43	100
M 9 x 1.25	3520-9.00	9.40	9.00	0,99	0,88	0,82	13.50	1,27	1,05	0,98	18.00	1,33	1,11	1,03	100
M 10 x 1.00	3523-10.00	10.30	10.00	0,53	0,46	0,43	15.00	0,65	0,56	0,50	20.00	0,67	0,60	0,55	100
M 10 x 1.25	3521-10.00	10.30	10.00	0,50	0,45	0,42	15.00	0,64	0,59	0,55	20.00	0,66	0,63	0,59	100
M 10 x 1.50	3520-10.00	10.40	10.00	0,53	0,45	0,42	15.00	0,64	0,55	0,49	20.00	0,67	0,60	0,56	100
M 11 x 1.50	3520-11.00	11.40	11.00	1,04	0,87	0,81	16.50	1,05	0,89	0,83	22.00	1,06	0,97	0,88	100
M 12 x 1.25	3523-12.00	12.30	12.00	0,85	0,70	0,65	18.00	0,92	0,77	0,71	24.00	1,00	0,89	0,82	100
M 12 x 1.50	3521-12.00	12.40	12.00	0,86	0,75	0,69	18.00	0,93	0,81	0,75	24.00	1,03	0,96	0,87	100
M 12 x 1.75	3520-12.00	12.50	12.00	0,77	0,65	0,61	18.00	0,92	0,78	0,72	24.00	1,00	0,87	0,81	100
M 14 x 1.50	3521-14.00	14.50	14.00	1,18	1,05	0,98	21.00	1,37	1,11	1,03	28.00	1,50	1,25	1,17	50
M 14 x 2.00	3520-14.00	14.50	14.00	1,08	0,96	0,87	21.00	1,24	1,16	1,07	28.00	1,52	1,45	1,34	50
M 16 x 1.50	3521-16.00	16.50	16.00	1,60	1,43	1,35	24.00	1,72	1,54	1,43	32.00	2,08	1,91	1,76	50
M 16 x 2.00	3520-16.00	16.50	16.00	1,49	1,33	1,23	24.00	1,55	1,44	1,33	32.00	1,92	1,79	1,65	50
M 18 x 1.50	3523-18.00	18.50	18.00	2,59	2,15	2,00	27.00	2,63	2,27	2,10	36.00	4,02	3,30	3,03	50
M 18 x 2.00	3521-18.00	18.50	18.00	2,21	1,97	1,83	27.00	2,47	2,30	2,19	36.00	3,36	2,94	2,72	50
M 18 x 2.50	3520-18.00	19.00	18.00	2,23	1,97	1,83	27.00	2,53	2,24	2,07	36.00	3,45	3,11	2,87	50
M 20 x 1.50	3523-20.00	20.50	20.00	2,93	2,55	2,36	30.00	3,47	3,13	2,88	40.00	4,05	3,52	3,23	25
M 20 x 2.00	3521-20.00	20.50	20.00	2,55	2,21	2,04	30.00	3,13	2,77	2,55	40.00	4,02	3,51	3,23	25
M 20 x 2.50	3520-20.00	20.75	20.00	2,68	2,36	2,17	30.00	3,23	2,88	2,65	40.00	4,17	3,69	3,39	25
M 22 x 1.50	3523-22.00	22.50	22.00	2,97	2,82	2,52	33.00	3,33	3,17	2,76	44.00	4,44	4,29	3,34	25
M 22 x 2.00	3521-22.00	22.50	22.00	2,69	2,45	2,25	33.00	3,36	3,03	2,76	44.00	4,26	3,94	3,71	25
M 22 x 2.50	3520-22.00	22.75	22.00	2,79	2,58	2,38	33.00	3,49	3,17	2,92	44.00	4,41	4,03	3,72	25
M 24 x 1.50	3523-24.00	24.50	24.00	3,41	3,23	2,72	36.00	3,90	3,41	3,27	48.00	4,64	4,03	3,80	25
M 24 x 2.00	3521-24.00	24.50	24.00	3,36	3,10	2,90	36.00	4,04	3,71	3,45	48.00	4,47	4,22	4,07	25
M 24 x 3.00	3520-24.00	25.00	24.00	3,52	3,29	3,02	36.00	4,22	3,94	3,62	48.00	4,67	4,38	4,03	25



Coding example:

M 14 x 2.00





 1.0D  
 3520-14.00x1.0DSL


 1.5D  
 3520-14.00x1.5DSL



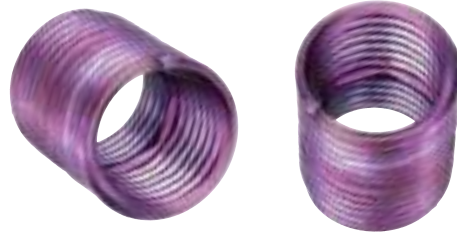
**SCREW LOCKING INSERTS**



			2.5D				3.0D				Unit
			L mm	€			L mm	€			
				<500	500-999	1000-...		<500	500-999	1000-...	
M 2 x 0.40	3520-2.00	2.10	5.00	1,08	0,96	0,87	6.00	1,35	1,19	1,10	100
M 2.20 x 0.45	3520-2.20	2.30	5.50	1,02	0,89	0,83	6.60	1,28	1,12	1,04	100
M 2.50 x 0.45	3520-2.50	2.60	6.25	0,44	0,41	0,38	9.00	0,53	0,50	0,47	100
M 3 x 0.50	3520-3.00	3.20	7.50	0,41	0,39	0,37	9.00	0,49	0,45	0,42	100
M 3.50 x 0.60	3520-3.50	3.70	8.75	0,46	0,44	0,41	10.50	0,57	0,51	0,48	100
M 4 x 0.70	3520-4.00	4.20	10.00	0,41	0,39	0,37	12.00	0,46	0,42	0,39	100
M 5 x 0.80	3520-5.00	5.20	12.50	0,48	0,45	0,42	15.00	0,59	0,53	0,49	100
M 6 x 1.00	3520-6.00	6.30	15.00	0,57	0,51	0,48	18.00	0,67	0,61	0,57	100
M 7 x 1.00	3520-7.00	7.30	17.50	0,66	0,63	0,59	21.00	0,79	0,75	0,69	100
M 8 x 1.00	3521-8.00	8.30	20.00	0,71	0,64	0,60	24.00	0,87	0,82	0,78	100
M 8 x 1.25	3520-8.00	8.30	20.00	0,66	0,61	0,57	24.00	0,79	0,71	0,66	100
M 9 x 1.25	3520-9.00	9.40	22.50	1,48	1,31	1,21	27.00	1,92	1,76	1,63	100
M 10 x 1.00	3523-10.00	10.30	25.00	0,79	0,68	0,63	30.00	1,08	0,97	0,88	100
M 10 x 1.25	3521-10.00	10.30	25.00	0,80	0,76	0,70	30.00	1,10	1,06	0,99	100
M 10 x 1.50	3520-10.00	10.40	25.00	0,79	0,70	0,65	30.00	1,08	0,99	0,91	100
M 11 x 1.50	3520-11.00	11.40	27.50	1,31	1,20	1,11	33.00	1,61	1,54	1,43	100
M 12 x 1.25	3523-12.00	12.30	30.00	1,29	1,24	1,14	36.00	1,61	1,53	1,50	100
M 12 x 1.50	3521-12.00	12.40	30.00	1,29	1,09	1,01	36.00	1,66	1,64	1,50	100
M 12 x 1.75	3520-12.00	12.50	30.00	1,29	1,23	1,13	36.00	1,61	1,58	1,46	100
M 14 x 1.50	3521-14.00	14.50	35.00	1,84	1,46	1,35	42.00	3,06	3,01	2,78	50
M 14 x 2.00	3520-14.00	14.50	35.00	1,84	1,74	1,61	42.00	2,21	2,14	1,97	50
M 16 x 1.50	3521-16.00	16.50	40.00	2,28	2,13	1,96	48.00	2,94	2,86	2,63	50
M 16 x 2.00	3520-16.00	16.50	40.00	2,31	2,23	2,06	48.00	2,87	2,81	2,59	50
M 18 x 1.50	3523-18.00	18.50	45.00	4,29	3,63	3,35	54.00	4,80	4,22	3,89	50
M 18 x 2.00	3521-18.00	18.50	45.00	3,82	3,37	3,12	54.00	4,47	4,22	3,89	50
M 18 x 2.50	3520-18.00	19.00	45.00	3,92	3,56	3,28	54.00	4,60	4,44	3,98	50
M 20 x 1.50	3523-20.00	20.50	50.00	4,46	4,10	3,77	60.00	5,69	5,20	4,79	25
M 20 x 2.00	3521-20.00	20.50	50.00	4,47	4,12	3,85	60.00	5,69	5,39	5,25	25
M 20 x 2.50	3520-20.00	20.75	50.00	4,63	4,34	3,99	60.00	5,79	5,61	5,16	25
M 22 x 1.50	3523-22.00	22.50	55.00	5,19	4,56	4,20	66.00	6,59	6,32	5,74	25
M 22 x 2.00	3521-22.00	22.50	55.00	5,21	4,95	4,81	66.00	7,49	6,97	6,68	25
M 22 x 2.50	3520-22.00	22.75	55.00	5,40	5,05	4,65	66.00	7,30	6,77	6,23	25
M 24 x 1.50	3523-24.00	24.50	60.00	6,38	5,36	4,94	72.00	8,05	6,81	6,27	25
M 24 x 2.00	3521-24.00	24.50	60.00	6,49	5,87	5,33	72.00	7,74	7,40	7,30	25
M 24 x 3.00	3520-24.00	25.00	60.00	6,77	6,09	5,61	72.00	7,32	7,12	6,55	25



Important note: Theoretical insert length is referred to length after insert installation.

**SCREW LOCKING INSERTS**


	D1 mm		 <b>1.0D</b>							 <b>1.5D</b>				 <b>2.0D</b>				Unit
			L mm	€			L mm	€			L mm	€						
				<500	500-999	1000-...		<500	500-999	1000-...		<500	500-999	1000-...				
UNC N°2 - 56	3532-2G	2.18	2.40	2.29	0,78	0,68	0,63	3.30	0,91	0,79	0,74	4.32	1,18	1,02	0,95	100		
UNC N°4 - 40	3532-4G	2.84	3.00	2.79	0,35	0,30	0,28	4.32	0,38	0,33	0,30	5.59	0,40	0,35	0,33	100		
UNC N°5 - 40	3532-5G	3.17	3.40	3.30	0,47	0,41	0,38	4.83	0,49	0,44	0,41	6.35	0,51	0,46	0,43	100		
UNC N°6 - 32	3532-6G	3.50	3.70	3.56	0,30	0,27	0,25	5.33	0,36	0,32	0,29	7.11	0,38	0,34	0,32	100		
UNC N°8 - 32	3532-8G	4.17	4.40	4.06	0,30	0,27	0,25	6.35	0,36	0,32	0,29	8.38	0,38	0,34	0,32	100		
UNC N°10 - 24	3532-10G	4.83	5.10	4.83	0,37	0,33	0,30	7.37	0,40	0,35	0,33	9.65	0,44	0,38	0,36	100		
UNC N°12 - 24	3532-12G	5.49	5.70	5.59	0,41	0,36	0,34	8.13	0,46	0,40	0,38	10.92	0,49	0,42	0,39	100		
UNC 1/4 - 20	3532-1/4	6.35	6.70	6.35	0,41	0,36	0,34	9.65	0,46	0,40	0,38	12.70	0,49	0,42	0,39	100		
UNC 5/16 - 18	3532-5/16	7.94	8.30	7.87	0,57	0,47	0,44	11.94	0,66	0,57	0,51	15.75	0,69	0,61	0,57	100		
UNC 3/8 - 16	3532-3/8	9.52	9.90	9.65	0,80	0,69	0,64	14.48	0,84	0,74	0,68	19.05	1,10	0,97	0,88	100		
UNC 7/16 - 14	3532-7/16	11.11	11.60	11.18	0,93	0,81	0,75	16.76	1,12	0,98	0,89	22.35	1,28	1,10	1,02	100		
UNC 1/2 - 13	3532-1/2	12.70	13.00	12.70	1,01	0,87	0,81	19.05	1,12	0,98	0,89	25.40	1,28	1,10	1,02	100		
UNC 9/16 - 12	3532-9/16	14.28	15.00	14.22	2,49	2,15	2,00	21.34	3,31	2,86	2,63	28.45	4,25	3,68	3,38	50		
UNC 5/8 - 11	3532-5/8	15.87	16.50	16.00	2,26	1,94	1,80	23.88	3,01	2,60	2,40	31.75	3,74	3,24	2,98	50		
UNC 3/4 - 10	3532-3/4	19.05	19.80	19.05	2,61	2,27	2,10	28.70	3,55	3,08	2,84	38.10	4,43	3,84	3,54	50		
UNC 7/8 - 9	3532-7/8	22.22	23.00	22.35	3,63	3,15	2,90	33.53	5,44	4,69	4,33	44.45	6,90	5,97	5,49	25		
UNC 1 - 8	3532-1	25.40	26.20	25.40	4,92	4,25	3,92	38.10	7,36	6,36	5,85	50.80	9,35	8,06	7,43	25		

Important note: Theoretical insert length is referred to length after insert installation.



Coding example:




UNC 1/4 - 20

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 3532-1/4x1.0DSL

 1.5D  
 3532-1/4x1.5DSL

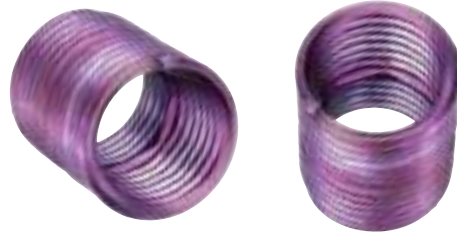
SCREW LOCKING INSERTS



		D1 mm		 2.5D					 3.0D					Unit
				L mm	€			L mm	€					
			∅		<500	500-999	1000-...		<500	500-999	1000-...			
UNC N°2 - 56	3532-2G	2.18	2.40	5.59	1,33	1,14	1,06	6.60	1,43	1,23	1,13	100		
UNC N°4 - 40	3532-4G	2.84	3.00	7.11	0,46	0,40	0,38	8.64	0,57	0,47	0,44	100		
UNC N°5 - 40	3532-5G	3.17	3.40	7.87	0,57	0,47	0,44	9.65	0,78	0,67	0,63	100		
UNC N°6 - 32	3532-6G	3.50	3.70	8.89	0,41	0,36	0,34	10.41	0,48	0,42	0,39	100		
UNC N°8 - 32	3532-8G	4.17	4.40	10.41	0,41	0,36	0,34	12.45	0,48	0,42	0,39	100		
UNC N°10 - 24	3532-10G	4.83	5.10	12.19	0,51	0,45	0,42	14.48	0,63	0,56	0,50	100		
UNC N°12 - 24	3532-12G	5.49	5.70	13.72	0,61	0,53	0,49	16.51	0,74	0,64	0,60	100		
UNC 1/4 - 20	3532-1/4	6.35	6.70	16.00	0,61	0,53	0,49	19.05	0,74	0,64	0,60	100		
UNC 5/16 - 18	3532-5/16	7.94	8.30	19.81	0,83	0,71	0,66	23.62	1,01	0,87	0,81	100		
UNC 3/8 - 16	3532-3/8	9.52	9.90	23.88	1,27	1,09	1,01	28.70	1,49	1,29	1,19	100		
UNC 7/16 - 14	3532-7/16	11.11	11.60	27.94	1,52	1,32	1,22	33.53	1,86	1,61	1,49	100		
UNC 1/2 - 13	3532-1/2	12.70	13.00	31.75	1,52	1,32	1,22	38.10	1,86	1,61	1,49	100		
UNC 9/16 - 12	3532-9/16	14.28	15.00	35.56	4,87	4,21	3,87	42.93	5,87	5,07	4,67	50		
UNC 5/8 - 11	3532-5/8	15.87	16.50	39.62	4,47	3,87	3,57	47.75	5,34	4,62	4,25	50		
UNC 3/4 - 10	3532-3/4	19.05	19.80	47.75	5,27	4,55	4,19	57.15	6,30	5,45	5,02	50		
UNC 7/8 - 9	3532-7/8	22.22	23.00	55.63	8,18	7,06	6,49	66.80	9,92	8,57	7,89	25		
UNC 1 - 8	3532-1	25.40	26.20	63.50	11,07	9,54	8,79	76.20	13,42	11,59	10,68	25		

Important note: Theoretical insert length is referred to length after insert installation.



**SCREW LOCKING INSERTS**


		D1 mm		 1.0D				 1.5D				 2.0D				Unit
				L mm	€			L mm	€			L mm	€			
			∅		<500	500-999	1000-...		<500	500-999	1000-...		<500	500-999	1000-...	
UNF N°4 - 48	3534-4G	2.84	3.00	2.79	0,70	0,63	0,59	4.32	0,81	0,71	0,66	5.59	0,95	0,83	0,77	100
UNF N°6 - 40	3534-6G	3.50	3.70	3.56	0,70	0,63	0,59	5.33	0,81	0,71	0,66	7.11	0,95	0,83	0,77	100
UNF N°8 - 36	3534-8G	4.17	4.40	4.06	0,70	0,63	0,59	6.35	0,81	0,71	0,66	8.38	0,95	0,83	0,77	100
UNF N°10 - 32	3534-10G	4.83	5.10	4.83	0,40	0,35	0,33	7.37	0,41	0,36	0,34	9.65	0,49	0,42	0,39	100
UNF 1/4 - 28	3534-1/4	6.35	6.60	6.35	0,40	0,35	0,33	9.65	0,41	0,36	0,34	12.70	0,49	0,42	0,39	100
UNF 5/16 - 24	3534-5/16	7.94	8.20	7.87	0,57	0,47	0,44	11.94	0,60	0,49	0,46	16.00	0,69	0,61	0,57	100
UNF 3/8 - 24	3534-3/8	9.52	9.80	9.65	0,81	0,69	0,64	14.48	0,84	0,74	0,68	19.05	1,01	0,87	0,81	100
UNF 7/16 - 20	3534-7/16	11.11	11.50	11.18	1,01	0,87	0,81	16.76	1,12	0,98	0,89	22.35	1,28	1,10	1,02	100
UNF 1/2 - 20	3534-1/2	12.70	13.00	12.70	1,01	0,87	0,81	19.05	1,12	0,98	0,89	25.40	1,28	1,10	1,02	100
UNF 9/16 - 18	3534-9/16	14.29	14.75	14.22	2,22	1,90	1,75	21.34	2,36	1,96	1,82	28.70	2,84	2,44	2,24	50
UNF 5/8 - 18	3534-5/8	15.87	16.50	16.00	2,26	1,91	1,76	23.88	2,36	2,04	1,87	31.75	2,84	2,44	2,24	50
UNF 3/4 - 16	3534-3/4	19.05	19.50	19.05	2,97	2,56	2,37	28.70	4,14	3,57	3,29	38.10	5,01	4,31	3,97	50
UNF 7/8 - 14	3534-7/8	22.22	22.50	22.35	5,06	4,36	4,01	33.27	7,47	6,44	5,92	44.45	9,49	8,18	7,53	25
UNF 1 - 12	3534-1	25.40	26.00	25.40	5,06	4,36	4,01	38.10	7,47	6,44	5,92	50.80	9,49	8,18	7,53	25
UNS 1 - 14	3535-1	25.40	26.00	25.40	5,06	4,41	4,06	38.10	7,47	6,51	6,00	50.80	9,49	8,28	7,62	25

Important note: Theoretical insert length is referred to length after insert installation.



Coding example:


UNF N°4 - 48

 1.0D  
 3534-4Gx1.0DSL

 1.5D  
 3534-4Gx1.5DSL

**SCREW LOCKING INSERTS**



		D1 mm	 Ø	 2.5D				 3.0D				Unit
				L mm	€			L mm	€			
					<500	500-999	1000-...		<500	500-999	1000-...	
UNF N°4 - 48	3534-4G	2.84	3.00	7.11	1,07	0,96	0,87	8.64	1,50	1,33	1,23	100
UNF N°6 - 40	3534-6G	3.50	3.70	8.89	1,07	0,96	0,87	10.41	1,50	1,33	1,23	100
UNF N°8 - 36	3534-8G	4.17	4.40	10.41	1,07	0,96	0,87	12.45	1,50	1,33	1,23	100
UNF N°10 - 32	3534-10G	4.83	5.10	12.19	0,61	0,53	0,49	14.48	0,74	0,64	0,60	100
UNF 1/4 - 28	3534-1/4	6.35	6.60	16.00	0,61	0,53	0,49	19.05	0,74	0,64	0,60	100
UNF 5/16 - 24	3534-5/16	7.94	8.20	19.81	0,83	0,74	0,68	23.88	1,01	0,87	0,81	100
UNF 3/8 - 24	3534-3/8	9.52	9.80	23.88	1,24	1,09	1,01	28.70	1,49	1,29	1,19	100
UNF 7/16 - 20	3534-7/16	11.11	11.50	27.69	1,52	1,33	1,23	33.27	1,86	1,61	1,49	100
UNF 1/2 - 20	3534-1/2	12.70	13.00	31.75	1,52	1,33	1,23	38.10	1,86	1,61	1,49	100
UNF 9/16 - 18	3534-9/16	14.29	14.75	35.81	3,45	3,01	2,78	42.93	3,98	3,44	3,17	50
UNF 5/8 - 18	3534-5/8	15.87	16.50	39.62	3,62	3,19	2,94	47.75	3,98	3,44	3,17	50
UNF 3/4 - 16	3534-3/4	19.05	19.50	47.75	6,06	5,29	4,87	57.15	7,26	6,27	5,78	50
UNF 7/8 - 14	3534-7/8	22.22	22.50	55.63	10,91	9,50	8,75	66.80	13,07	11,29	10,40	25
UNF 1 - 12	3534-1	25.40	26.00	63.50	13,01	11,34	10,45	76.20	15,66	13,53	12,45	25
UNS 1 - 14	3535-1	25.40	26.00	63.50	13,01	11,34	10,45	76.20	15,66	13,66	12,57	25

Important note: Theoretical insert length is referred to length after insert installation.



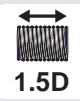


**FREE RUNNING INSERT KITS**


**M**  
**M F**
  
**FREE**
  
**M/MF**
  
**1.5D**
  
**AISI 304**
  
**HSS**
  
**HSS**
**...K**



 <b>M D x L</b>	 Code	€	 D L mm		 Content				
			D	L	mm	°			
M 2 x 0.40	3520-2.00K	52,41	1.50	3.00	20	2.10	3520-2.00I	3500-HIT2	3500-TB2
M 2.20 x 0.45	3520-2.20K	70,16	1.50	3.30	20	2.30	3520-2.20I	3500-HIT2	3500-TB2
M 2.50 x 0.45	3520-2.50K	48,45	1.50	3.75	20	2.60	3520-2.50I	3500-HIT3	3500-TB3
M 3 x 0.50	3520-3.00K	48,45	1.50	4.50	20	3.20	3520-3.00I	3500-HIT4	3500-TB4
M 3.50 x 0.60	3520-3.50K	48,45	1.50	5.25	20	3.70	3520-3.50I	3500-HIT5	3500-TB5
M 4 x 0.70	3520-4.00K	48,45	1.50	6.00	20	4.20	3520-4.00I	3500-HIT6	3500-TB6
M 5 x 0.80	3520-5.00K	48,21	1.50	7.50	20	5.20	3520-5.00I	3500-HIT8	3500-TB8
M 6 x 1.00	3520-6.00K	51,92	1.50	9.00	20	6.30	3520-6.00I	3500-HIT9	3500-TB9
M 7 x 1.00	3520-7.00K	66,02	1.50	10.50	20	7.30	3520-7.00I	3500-HIT10	3500-TB11
M 8 x 1.00	3521-8.00K	66,02	1.50	12.00	20	8.30	3521-8.00I	3500-HIT11	3500-TB12
M 8 x 1.25	3520-8.00K	66,02	1.50	12.00	20	8.30	3520-8.00I	3500-HIT11	3500-TB12
M 9 x 1.25	3520-9.00K	73,23	1.50	13.50	15	9.40	3520-9.00I	3500-HIT13	3500-TB12
M 10 x 1.00	3523-10.00K	70,70	1.50	15.00	15	10.30	3523-10.00I	3500-HIT13	3500-TB13
M 10 x 1.25	3521-10.00K	70,70	1.50	15.00	15	10.30	3521-10.00I	3500-HIT13	3500-TB13
M 10 x 1.50	3520-10.00K	70,70	1.50	15.00	15	10.40	3520-10.00I	3500-HIT13	3500-TB13
M 11 x 1.00	3523-11.00K	97,99	1.50	16.50	10	11.30	3523-11.00I	3500-HIT14	3500-TB14
M 11 x 1.25	3521-11.00K	97,99	1.50	16.50	10	11.30	3521-11.00I	3500-HIT14	3500-TB14
M 11 x 1.50	3520-11.00K	81,06	1.50	16.50	10	11.40	3520-11.00I	3500-HIT14	3500-TB14
M 12 x 1.00	3524-12.00K	81,06	1.50	18.00	10	12.30	3524-12.00I	3500-HIT15	3500-TB15
M 12 x 1.25	3523-12.00K	81,06	1.50	18.00	10	12.30	3523-12.00I	3500-HIT15	3500-TB15
M 12 x 1.50	3521-12.00K	81,06	1.50	18.00	10	12.40	3521-12.00I	3500-HIT15	3500-TB15
M 12 x 1.75	3520-12.00K	81,06	1.50	18.00	10	12.50	3520-12.00I	3500-HIT15	3500-TB15
M 13 x 1.25	3523-13.00K	116,66	1.50	19.50	10	-	3523-13.00I	3500-HIT15	-
M 13 x 1.50	3521-13.00K	116,66	1.50	19.50	10	-	3521-13.00I	3500-HIT15	-
M 13 x 1.75	3520-13.00K	116,66	1.50	19.50	10	-	3520-13.00I	3500-HIT15	-
M 14 x 1.00	3524-14.00K	93,18	1.50	21.00	10	-	3524-14.00I	3500-HIT16	-
M 14 x 1.25	3523-14.00K	93,18	1.50	21.00	10	-	3523-14.00I	3500-HIT16	-
M 14 x 1.50	3521-14.00K	93,18	1.50	21.00	10	-	3521-14.00I	3500-HIT16	-
M 14 x 2.00	3520-14.00K	93,18	1.50	21.00	10	-	3520-14.00I	3500-HIT16	-
M 15 x 1.50	3521-15.00K	139,43	1.50	22.50	10	-	3521-15.00I	3500-HIT16	-
M 15 x 2.00	3520-15.00K	139,43	1.50	22.50	10	-	3520-15.00I	3500-HIT16	-
M 16 x 1.50	3521-16.00K	109,75	1.50	24.00	10	-	3521-16.00I	3500-HIT18	-
M 16 x 2.00	3520-16.00K	109,75	1.50	24.00	10	-	3520-16.00I	3500-HIT18	-
M 18 x 1.50	3523-18.00K	130,37	1.50	27.00	5	-	3523-18.00I	3500-HIT20	-


**FREE RUNNING INSERT KITS**



		€	D	L mm
M 18 x 2.00	3521-18.00K	130,37	1.50	27.00
<b>M 18 x 2.50</b>	3520-18.00K	132,90	1.50	27.00
M 20 x 1.50	3523-20.00K	142,12	1.50	30.00
M 20 x 2.00	3521-20.00K	142,12	1.50	30.00
<b>M 20 x 2.50</b>	3520-20.00K	142,12	1.50	30.00
M 22 x 1.50	3523-22.00K	163,22	1.50	33.00
M 22 x 2.00	3521-22.00K	163,22	1.50	33.00
<b>M 22 x 2.50</b>	3520-22.00K	163,22	1.50	33.00
M 24 x 1.50	3523-24.00K	187,24	1.50	36.00
M 24 x 2.00	3521-24.00K	187,24	1.50	36.00
<b>M 24 x 3.00</b>	3520-24.00K	187,24	1.50	36.00

	Content	
5	3521-18.00I	3500-HIT20
5	3520-18.00I	3500-HIT20
5	3523-20.00I	3500-HIT21
5	3521-20.00I	3500-HIT21
5	3520-20.00I	3500-HIT21
5	3523-22.00I	3500-HIT22
5	3521-22.00I	3500-HIT22
5	3520-22.00I	3500-HIT22
5	3523-24.00I	3500-HIT23
5	3521-24.00I	3500-HIT23
5	3520-24.00I	3500-HIT23




		€	D	L mm
M 26 x 1.50	3523-26.00K	378,90	1.50	39.00
M 27 x 1.50	3523-27.00K	378,90	1.50	40.50
M 27 x 2.00	3521-27.00K	378,90	1.50	40.50
<b>M 27 x 3.00</b>	3520-27.00K	378,90	1.50	40.50
M 28 x 1.50	3523-28.00K	439,06	1.50	42.00
M 30 x 1.50	3523-30.00K	459,36	1.50	45.00
M 30 x 2.00	3521-30.00K	483,43	1.50	45.00
<b>M 30 x 3.50</b>	3520-30.00K	459,36	1.50	45.00
M 33 x 2.00	3521-33.00K	479,68	1.50	49.50
<b>M 33 x 3.50</b>	3520-33.00K	479,68	1.50	49.50
M 36 x 1.50	3524-36.00K	532,32	1.50	54.00
M 36 x 2.00	3523-36.00K	532,32	1.50	54.00
M 36 x 3.00	3521-36.00K	532,32	1.50	54.00
<b>M 36 x 4.00</b>	3520-36.00K	532,32	1.50	54.00
M 39 x 3.00	3521-39.00K	536,43	1.50	58.50
<b>M 39 x 4.00</b>	3520-39.00K	544,99	1.50	58.50
M 40 x 3.00	3523-40.00K	578,99	1.50	60.00
M 42 x 3.00	3523-42.00K	599,82	1.50	63.00
<b>M 42 x 4.50</b>	3520-42.00K	599,82	1.50	63.00
M 45 x 3.00	3523-45.00K	773,55	1.50	67.50
<b>M 45 x 4.50</b>	3520-45.00K	668,94	1.50	67.50
M 48 x 3.00	3523-48.00K	761,63	1.50	72.00
<b>M 48 x 5.00</b>	3520-48.00K	802,18	1.50	72.00
M 50 x 3.00	3523-50.00K	849,37	1.50	75.00
M 52 x 3.00	3523-52.00K	889,94	1.50	78.00
<b>M 52 x 5.00</b>	3520-52.00K	889,94	1.50	78.00



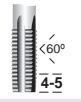

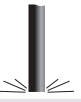
	Content	
5	3523-26.00I	3500-HIT24
5	3523-27.00I	3500-HIT24
5	3521-27.00I	3500-HIT24
5	3520-27.00I	3500-HIT24
5	3523-28.00I	3500-HIT24
5	3523-30.00I	3500-HIT26
5	3521-30.00I	3500-HIT26
5	3520-30.00I	3500-HIT25
5	3521-33.00I	3500-HIT26
5	3520-33.00I	3500-HIT26
3	3524-36.00I	3500-HIT28
3	3523-36.00I	3500-HIT28
3	3521-36.00I	3500-HIT28
3	3520-36.00I	3500-HIT28
3	3521-39.00I	3521-39.00HIM
3	3520-39.00I	3520-39.00HIM
3	3523-40.00I	3523-40.00HIM
3	3523-42.00I	3523-42.00HIM
3	3520-42.00I	3520-42.00HIM
3	3523-45.00I	3523-45.00HIM
3	3520-45.00I	3520-45.00HIM
3	3523-48.00I	3523-48.00HIM
3	3520-48.00I	3520-48.00HIM
3	3523-50.00I	3523-50.00HIM
3	3520-52.00I	3520-52.00HIM








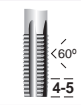


**FREE RUNNING INSERT KITS**

**UNC**
  
**FREE**
  
**UNC**
  
**1.5D**
  
**AISI 304**
  
**HSS**
  
**HSS**
**...K**

		€	 D L mm	
UNC N°2 - 56	3532-2GK	<b>68,74</b>	1.50	<b>3.30</b>
UNC N°3 - 48	3532-3GK	<b>65,84</b>	1.50	<b>3.81</b>
UNC N°4 - 40	3532-4GK	<b>62,35</b>	1.50	<b>4.32</b>
UNC N°5 - 40	3532-5GK	<b>62,35</b>	1.50	<b>4.83</b>
UNC N°6 - 32	3532-6GK	<b>62,35</b>	1.50	<b>5.33</b>
UNC N°8 - 32	3532-8GK	<b>62,35</b>	1.50	<b>6.35</b>
UNC N°10 - 24	3532-10GK	<b>62,35</b>	1.50	<b>7.11</b>
UNC N°12 - 24	3532-12GK	<b>62,35</b>	1.50	<b>8.38</b>
UNC 1/4 - 20	3532-1/4K	<b>56,18</b>	1.50	<b>9.65</b>
UNC 5/16 - 18	3532-5/16K	<b>68,74</b>	1.50	<b>11.94</b>
UNC 3/8 - 16	3532-3/8K	<b>73,48</b>	1.50	<b>14.22</b>
UNC 7/16 - 14	3532-7/16K	<b>82,50</b>	1.50	<b>16.76</b>
UNC 1/2 - 13	3532-1/2K	<b>90,54</b>	1.50	<b>19.05</b>
UNC 9/16 - 12	3532-9/16K	<b>120,88</b>	1.50	<b>21.34</b>
UNC 5/8 - 11	3532-5/8K	<b>120,88</b>	1.50	<b>23.88</b>
UNC 3/4 - 10	3532-3/4K	<b>154,07</b>	1.50	<b>28.70</b>
UNC 7/8 - 9	3532-7/8K	<b>187,24</b>	1.50	<b>33.27</b>
UNC 1 - 8	3532-1K	<b>186,03</b>	1.50	<b>38.10</b>

	 mm	 <60° 4-5			Content
20	2.40	3532-2GI	3500-HIT2	3500-TB2	
20	2.70	3532-3GI	3500-HIT3	3500-TB3	
20	3.10	3532-4GI	3500-HIT4	3500-TB4	
20	3.40	3532-5GI	3500-HIT4	3500-TB4	
20	3.80	3532-6GI	3500-HIT5	3500-TB5	
20	4.40	3532-8GI	3500-HIT6	3500-TB6	
20	5.20	3532-10GI	3500-HIT7	3500-TB8	
20	5.80	3532-12GI	3500-HIT8	3500-TB8	
20	6.70	3532-1/4I	3500-HIT9	3500-TB9	
20	8.30	3532-5/16I	3500-HIT10	3500-TB12	
15	9.90	3532-3/8I	3500-HIT13	3500-TB12	
10	11.60	3532-7/16I	3500-HIT14	3500-TB14	
10	13.00	3532-1/2I	3500-HIT15	3500-TB15	
10	-	3532-9/16I	3500-HIT16	-	
10	-	3532-5/8I	3500-HIT18	-	
5	-	3532-3/4I	3500-HIT20	-	
5	-	3532-7/8I	3500-HIT22	-	
5	-	3532-1I	3500-HIT23	-	

		€	 D L mm	
UNC 1.1/8 - 7	3532-1.1/8K	<b>375,00</b>	1.50	<b>42.93</b>
UNC 1.1/4 - 7	3532-1.1/4K	<b>417,18</b>	1.50	<b>47.75</b>
UNC 1.3/8 - 6	3532-1.3/8K	<b>501,54</b>	1.50	<b>52.32</b>
UNC 1.1/2 - 6	3532-1.1/2K	<b>584,36</b>	1.50	<b>57.15</b>

	 mm	 <60° 4-5			Content
3	-	3532-1.1/8I	3500-HIT25	-	
3	-	3532-1.1/4I	3500-HIT26	-	
3	-	3532-1.3/8I	3500-HIT27	-	
3	-	3532-1.1/2I	3500-HIT28	-	

**FREE RUNNING INSERT KITS**



**UNF**

**FREE**

**UNF**

**1.5D**

**AINI 304**

**HSS**



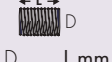
**HSS**

**...K**



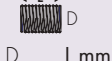
		€				mm				Content		
			D	L mm								
UNF N°3 - 56	3534-3GK	68,62	1.50	3.30	20	2.70	3534-3GI	3500-HIT3	3500-TB3			
UNF N°4 - 48	3534-4GK	62,35	1.50	3.81	20	3.00	3534-4GI	3500-HIT4	3500-TB4			
UNF N°6 - 40	3534-6GK	62,35	1.50	4.32	20	3.80	3534-6GI	3500-HIT5	3500-TB5			
UNF N°8 - 36	3534-8GK	62,35	1.50	4.83	20	4.40	3534-8GI	3500-HIT6	3500-TB6			
UNF N°10 - 32	3534-10GK	62,35	1.50	5.33	20	5.10	3534-10GI	3500-HIT8	3500-TB8			
UNF N°12 - 28	3534-12GK	68,30	1.50	6.35	20	5.60	3534-12GI	3500-HIT8	3500-TB8			
UNF 1/4 - 28	3534-1/4K	56,18	1.50	7.11	20	6.70	3534-1/4I	3500-HIT9	3500-TB9			
UNF 5/16 - 24	3534-5/16K	68,74	1.50	8.38	20	8.30	3534-5/16I	3500-HIT11	3500-TB12			
UNF 3/8 - 24	3534-3/8K	73,48	1.50	9.65	15	9.80	3534-3/8I	3500-HIT13	3500-TB13			
UNF 7/16 - 16	3534-7/16-16K	99,96	1.50	11.94	10	11.50	3534-7/16-16I	3500-HIT14	3500-TB14			
UNF 7/16 - 20	3534-7/16K	82,50	1.50	14.22	10	11.50	3534-7/16I	3500-HIT14	3500-TB14			
UNF 1/2 - 20	3534-1/2K	90,54	1.50	16.76	10	13.00	3534-1/2I	3500-HIT15	3500-TB15			
UNF 9/16 - 18	3534-9/16K	120,88	1.50	19.05	10	-	3534-9/16I	3500-HIT16	-			
UNF 5/8 - 18	3534-5/8K	120,88	1.50	21.34	10	-	3534-5/8I	3500-HIT18	-			
UNF 3/4 - 16	3534-3/4K	154,07	1.50	23.88	5	-	3534-3/4I	3500-HIT21	-			
UNF 7/8 - 14	3534-7/8K	187,24	1.50	28.70	5	-	3534-7/8I	3500-HIT22	-			
UNF 1 - 12	3534-1K	183,48	1.50	33.27	5	-	3534-1I	3500-HIT23	-			
UNF 1 - 14	3535-1K	205,39	1.50	38.10	5	-	3535-1I	3500-HIT23	-			

		€				mm				Content		
			D	L mm								
UNF 1.1/8 - 12	3534-1.1/8K	375,00	1.50	42.93	3	-	3534-1.1/8I	3500-HIT25	-			
UNF 1.1/4 - 12	3534-1.1/4K	417,18	1.50	47.75	3	-	3534-1.1/4I	3500-HIT26	-			
UNF 1.3/8 - 12	3534-1.3/8K	501,54	1.50	52.32	3	-	3534-1.3/8I	3500-HIT27	-			
UNF 1.1/2 - 12	3534-1.1/2K	584,36	1.50	57.15	3	-	3534-1.1/2I	3500-HIT28	-			

**FREE RUNNING INSERT KITS**
**BSW**
  
**FREE**
  
**BSW**
  
**1.5D**
  
**AISI 304**
  
**HSS**
  
**HSS**
**...K**


 D L mm		€	 D L mm		Content				
			mm	mm	mm	mm	mm	mm	
BSW 1/8 - 40	3528-1/8K	64,02	1.50	4.83	20	3.40	3528-1/8I	3500-HIT4	3500-TB4
BSW 3/16 - 24	3528-3/16K	62,35	1.50	7.11	20	5.00	3528-3/16I	3500-HIT7	3500-TB8
BSW 1/4 - 20	3528-1/4K	57,68	1.50	9.65	20	6.70	3528-1/4I	3500-HIT9	3500-TB9
BSW 5/16 - 18	3528-5/16K	68,74	1.50	11.94	20	8.30	3528-5/16I	3500-HIT10	3500-TB11
BSW 3/8 - 16	3528-3/8K	73,48	1.50	14.22	15	9.90	3528-3/8I	3500-HIT11	3500-TB12
BSW 7/16 - 14	3528-7/16K	82,50	1.50	16.76	10	11.50	3528-7/16I	3500-HIT14	3500-TB14
BSW 1/2 - 12	3528-1/2K	90,54	1.50	19.05	10	13.00	3528-1/2I	3500-HIT15	3500-TB15
BSW 9/16 - 12	3528-9/16K	120,88	1.50	21.34	10	-	3528-9/16I	3500-HIT16	-
BSW 5/8 - 11	3528-5/8K	120,88	1.50	23.88	10	-	3528-5/8I	3500-HIT18	-
BSW 3/4 - 10	3528-3/4K	154,07	1.50	28.70	5	-	3528-3/4I	3500-HIT20	-
BSW 7/8 - 9	3528-7/8K	187,24	1.50	33.27	5	-	3528-7/8I	3500-HIT22	-
BSW 1 - 8	3528-1K	186,03	1.50	38.10	5	-	3528-1I	3500-HIT23	-

**BSF**
  
**FREE**
  
**BSF**
  
**1.5D**
  
**AISI 304**
  
**HSS**
  
**HSS**
**...K**

 D L mm		€	 D L mm		Content				
			mm	mm	mm	mm	mm	mm	
BSF 3/16 - 32	3530-3/16K	62,35	1.50	7.11	20	5.0	3530-3/16I	3500-HIT8	3500-TB6
BSF 1/4 - 26	3530-1/4K	56,18	1.50	9.65	20	6.6	3530-1/4I	3500-HIT9	3500-TB9
BSF 5/16 - 22	3530-5/16K	68,74	1.50	11.94	20	8.3	3530-5/16I	3500-HIT11	3500-TB11
BSF 3/8 - 20	3530-3/8K	73,48	1.50	14.22	15	9.9	3530-3/8I	3500-HIT13	3500-TB12
BSF 7/16 - 18	3530-7/16K	82,50	1.50	16.76	10	11.5	3530-7/16I	3500-HIT14	3500-TB14
BSF 1/2 - 16	3530-1/2K	90,54	1.50	19.05	10	13.0	3530-1/2I	3500-HIT15	3500-TB15
BSF 9/16 - 16	3530-9/16K	120,88	1.50	21.34	10	-	3530-9/16I	3500-HIT16	-
BSF 5/8 - 14	3530-5/8K	120,88	1.50	23.88	10	-	3530-5/8I	3500-HIT18	-
BSF 3/4 - 12	3530-3/4K	154,07	1.50	28.70	5	-	3530-3/4I	3500-HIT20	-
BSF 7/8 - 11	3530-7/8K	187,24	1.50	33.27	5	-	3530-7/8I	3500-HIT22	-
BSF 1 - 10	3530-1K	188,95	1.50	38.10	5	-	3530-1I	3500-HIT23	-



**FREE RUNNING INSERT KITS**



**BSP  
(GAS)**

**FREE**

**BSP**

**1.5D**



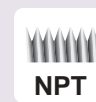

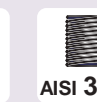



**AISI 304**

**HSS**

**HSS**

**...K**

		€						Content	
			D	L mm					
BSP 1/8 - 28	3546-1/8K	100,01	1.50	4.83	10	3546-1/8I	3500-HIT14		
BSP 1/4 - 19	3546-1/4K	105,61	1.50	9.65	10	3546-1/4I	3500-HIT16		
BSP 3/8 - 19	3546-3/8K	121,38	1.50	14.22	10	3546-3/8I	3500-HIT20		
BSP 1/2 - 14	3546-1/2K	159,55	1.50	19.05	10	3546-1/2I	3500-HIT23		
BSP 5/8 - 14	3546-5/8K	327,54	1.50	23.88	10	3546-5/8I	3500-HIT23		
BSP 3/4 - 14	3546-3/4K	343,19	1.50	28.70	10	3546-3/4I	3500-HIT24		
BSP 7/8 - 14	3546-7/8K	459,36	1.50	33.27	5	3546-7/8I	3500-HIT27		
BSP 1 - 11	3546-1K	459,36	1.50	38.10	5	3546-1I	3500-HIT27		

		€						Content	
			D	L mm					
NPT 1/8 - 27	3552-1/8K	243,18	1.50	4,78	10	3552-1/8I	3500-HIT13		
NPT 1/4 - 18	3552-1/4K	274,89	1.50	9,53	10	3552-1/4I	3500-HIT16		
NPT 3/8 - 18	3552-3/8K	348,92	1.50	14,30	10	3552-3/8I	3500-HIT18		
NPT 1/2 - 14	3552-1/2K	456,12	1.50	19,05	10	3552-1/2I	3500-HIT22		
NPT 3/4 - 14	3552-3/4K	557,48	1.50	28,58	10	3552-3/4I	3500-HIT24		
NPT 1 - 11.1/2	3552-1K	739,90	1.50	38,10	10	3552-1I	3500-HIT27		

**FREE RUNNING INSERT KITS**
**UNx8**

**FREE**

**8-UN**

**1.5D**

**AISI 304**

**HSS**

**HSS**
**...K**


		€		
			D	L mm
UN 1.1/8 - 8	3570-1.1/8K	557,48	1.50	42.88
UN 1.1/4 - 8	3570-1.1/4K	679,11	1.50	47.63
UN 1.3/8 - 8	3570-1.3/8K	841,28	1.50	52.37
UN 1.1/2 - 8	3570-1.1/2K	739,90	1.50	57.15
UN 1.5/8 - 8	3570-1.5/8K	1.043,99	1.50	61.93
UN 1.3/4 - 8	3570-1.3/4K	1.084,53	1.50	66.68
UN 1.7/8 - 8	3570-1.7/8K	1.226,43	1.50	71.42
UN 2 - 8	3570-2K	1.368,35	1.50	76.20

Content		
3	3570-1.1/8I	3500-HIT25
3	3570-1.1/4I	3500-HIT26
3	3570-1.3/8I	3500-HIT27
3	3570-1.1/2I	3500-HIT28
3	3570-1.5/8I	3500-HIT28
3	3570-1.3/4I	3500-HIT28
3	3570-1.7/8I	3500-HIT30
3	3570-2I	3500-HIT30


**BA**

**FREE**

**BA**

**1.5D**

**AISI 304**

**HSS**

**HSS**
**...K**

		€		
			D	L mm
BA 0	3544-0K	119,04	1.50	8.99
BA 2	3544-2K	119,04	1.50	7.06
BA 4	3544-4K	119,04	1.50	5.41
BA 6	3544-6K	130,80	1.50	4.19


Content				
20	6.20	3544-0I	3500-HIT9	3500-TB11
20	4.90	3544-2I	3500-HIT7	3500-TB8
20	3.80	3544-4I	3500-HIT5	3500-TB5
20	2.90	3544-6I	3500-HIT3	3500-TB3


**FREE RUNNING INSERT KITS**





		€							
			D	L mm	Content				
BSB 1/4/26	3560-1/4K	145,69	1.50	9,53	20	6.6	3560-1/4I	3500-HIT10	3500-TB9
BSB 5/16 - 26	3560-5/16K	115,77	1.50	11,91	20	8.0	3560-5/16I	3500-HIT11	3500-TB12
BSB 3/8/26	3560-3/8K	125,42	1.50	14,30	15	9.8	3560-3/8I	3500-HIT13	3500-TB13
BSB 7/16 - 26	3560-7/16K	135,08	1.50	16,66	10	11.1	3560-7/16I	3500-HIT14	3500-TB14
BSB 1/2/26	3560-1/2K	144,73	1.50	19,05	10	12.7	3560-1/2I	3500-HIT15	3500-TB15


**BSB**


 FREE

 BSB

 1.5D

 AISI 304

 HSS

 HSS

**...K**

**M MF**

 FREE

 M/MF



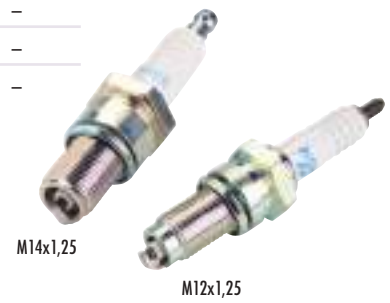
 AISI 304

 HSS

 HSS

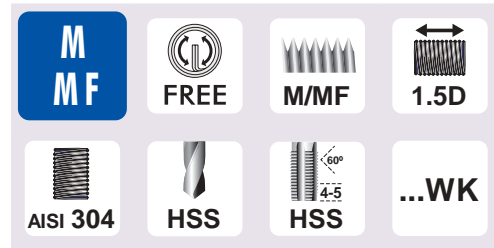
**...K**

		€						
			D	L mm	Content			
M 10 x 1.00	3522-10.00K	105,67	-	1/2"	5	3522-10.00PN	3500-HIT13	3500-TB13
			-	0.339 mm	5	-	-	-
M 12 x 1.25	3522-12.00K	128,79	-	1/2"	5	3522-12.00PN	3500-HIT15	3500-TB15
			-	3/4"	5	-	-	-
M 14 x 1.25	3522-14.00K	138,15	-	3/8"	5	3522-14.00PN	3500-HIT17	-
			-	1/2"	5	-	-	-
			-	3/4"	5	-	-	-
M 18 x 1.50	3522-18.00K	209,08	-	1/2"	5	3522-18.00PN	3500-HIT20	-
M 14 x 1.25	3522-14.00K1	111,41	8.40	-	5	3522-14.00PN	3500-HIT17	-
			12.40	-	5	-	-	-
			16.40	-	5	-	-	-



M14x1,25

M12x1,25

**FREE RUNNING INSERT KITS**


		D	L mm	SET M5 - M12				
	M 5 x 0.80	1.50	7.50	25	5.20	3520-5.00I	3500-HIT8	3500-TB8
	M 6 x 1.00	1.50	9.00	25	6.30	3520-6.00I	3500-HIT9	3500-TB9
	M 8 x 1.25	1.50	12.00	25	8.30	3520-8.00I	3500-HIT11	3500-TB12
3520-WK1	M 10 x 1.50	1.50	15.00	25	10.40	3520-10.00I	3500-HIT13	3500-TB13
341,40 €	M 12 x 1.75	1.50	18.00	10	12.50	3520-12.00I	3500-HIT15	3500-TB15



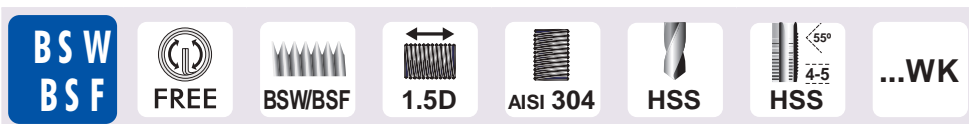
M14x1,25

		D	L mm	SPARK PLUG		M6 - M12 + M14 X 1.25			
	M 6 x 1.00	1.50	9.00	25	6.30	3520-6.00I	-	3500-HIT9	3500-TB9
	M 8 x 1.25	1.50	12.00	25	8.30	3520-8.00I	-	3500-HIT11	3500-TB12
	M 10 x 1.50	1.50	15.00	25	10.40	3520-10.00I	-	3500-HIT13	3500-TB13
	M 12 x 1.75	1.50	18.00	10	12.50	3520-12.00I	-	3500-HIT15	3500-TB15
	M 14 x 1.25	-	8.40	5	14.25	-	3522-14.00PN	3500-HIT17	-
3522-WK4		-	12.40	5	-	-	-	-	-
393,41 €		-	16.40	5	-	-	-	-	-

**FREE RUNNING INSERT KITS**



			D	L mm	SET UNC 1/4" - 1/2"				
		UNC 1/4 - 20	1.50	9.65	25	6.70	3532-1/4I	3500-HIT9	3500-TB9
		UNC 5/16 - 18	1.50	11.94	25	8.30	3532-5/16I	3500-HIT10	3500-TB12
		UNC 3/8 - 16	1.50	14.48	25	9.90	3532-3/8I	3500-HIT13	3500-TB12
3532-WK1		UNC 7/16 - 14	1.50	16.76	10	11.60	3532-7/16I	3500-HIT14	3500-TB14
<b>426,64 €</b>		UNC 1/2 - 13	1.50	19.05	10	13.00	3532-1/2I	3500-HIT15	3500-TB15
			D	L mm	SET UNF 1/4" - 1/2"				
		UNF 1/4 - 28	1.50	9.65	25	6.70	3534-1/4I	3500-HIT9	3500-TB9
		UNF 5/16 - 24	1.50	11.94	25	8.30	3534-5/16I	3500-HIT11	3500-TB12
		UNF 3/8 - 24	1.50	14.48	25	9.80	3534-3/8I	3500-HIT13	3500-TB12
3534-WK1		UNF 7/16 - 20	1.50	16.76	10	11.50	3534-7/16I	3500-HIT14	3500-TB14
<b>426,64 €</b>		UNF 1/2 - 20	1.50	19.05	10	13.00	3534-1/2I	3500-HIT15	3500-TB15



			D	L mm	SET BSW 1/4" - 1/2"				
		BSW 1/4 - 20	1.50	9.65	25	6.70	3528-1/4I	3500-HIT9	3500-TB9
		BSW 5/16 - 18	1.50	11.94	25	8.30	3528-5/16I	3500-HIT10	3500-TB11
		BSW 3/8 - 16	1.50	14.48	25	10.00	3528-3/8I	3500-HIT11	3500-TB12
3528-WK1		BSW 7/16 - 14	1.50	16.76	10	11.60	3528-7/16I	3500-HIT14	3500-TB14
<b>426,64 €</b>		BSW 1/2 - 12	1.50	19.05	10	13.00	3528-1/2I	3500-HIT15	3500-TB15
			D	L mm	SET BSF 1/4" - 1/2"				
		BSF 1/4 - 26	1.50	9.65	25	6.60	3530-1/4I	3500-HIT9	3500-TB9
		BSF 5/16 - 22	1.50	11.94	25	8.30	3530-5/16I	3500-HIT11	3500-TB11
		BSF 3/8 - 20	1.50	14.48	25	9.80	3530-3/8I	3500-HIT13	3500-TB12
3530-WK1		BSF 7/16 - 18	1.50	16.76	10	11.60	3530-7/16I	3500-HIT14	3500-TB14
<b>426,64 €</b>		BSF 1/2 - 16	1.50	19.05	10	13.25	3530-1/2I	3500-HIT15	3500-TB15



**FREE RUNNING INSERT DISPLAYS**


330 x 360 x 515 mm







**DISPLAY CONTENT**
**SETS**

		
4	M 3x0.5	3520-3.00K
4	M 4x0.7	3520-4.00K
4	M 5x0.8	3520-5.00K
3	M 6x1.0	3520-6.00K
3	M 8x1.25	3520-8.00K
3	M 10x1.5	3520-10.00K
2	M 12x1.75	3520-12.00K
2	M 14x2.0	3520-14.00K
<b>SPARK PLUG</b>		
2	M 14x1.25	3522-14.00K

1-87

1.771,14 €

**DISPLAY CONTENT**
**SETS**
**BLISTERS**

					
4	M 3x0.5	3520-3.00K	5	M 4x0.7-1.5D	3520-4.00x1.5DP
4	M 4x0.7	3520-4.00K	5	M 5x0.8-1.5D	3520-5.00x1.5DP
4	M 5x0.8	3520-5.00K	5	M 6x1.0-1.5D	3520-6.00x1.5DP
4	M 6x1.0	3520-6.00K	5	M 8x1.25-1.5D	3520-8.00x1.5DP
3	M 8x1.25	3520-8.00K	5	M 10x1.50-1.5D	3521-10.00x1.5DP
3	M 10x1.5	3520-10.00K	5	M 12x1.75-1.5D	3520-12.00x1.5DP

1-88

1.363,43 €



330 x 360 x 515 mm

**FREE RUNNING INSERT DISPLAYS**



330 x 360 x 515 mm




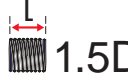
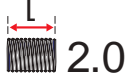
**DISPLAY CONTENT**

SETS			BLISTERS		
			5	M 3x0.5-1.5D	3520-3.00x1.5DP
			5	M 4x0.7-1.5D	3520-4.00x1.5DP
4	M5x0.8	3520-5.00K	5	M 5x0.8-1.5D	3520-5.00x1.5DP
			5	M 6x1.0-1.0D	3520-6.00x1.0DP
4	M6x1.0	3520-6.00K	5	M 6x1.0-1.5D	3520-6.00x1.5DP
			3	M 8x1.25-1.0D	3520-8.00x1.0DP
3	M8x1.25	3520-8.00K	5	M 8x1.25-2.0D	3520-8.00x2.0DP
			5	M 10x1.5-1.5D	3520-10.00x1.5DP
			5	M 10x1.5-2.0D	3521-10.00x2.0DP
			5	M 12x1.75-1.5D	3520-12.00x1.5DP
			3	M 16x2.0-1.5D	3520-16.00x1.5DP
<b>SPARK PLUG</b>					
			5	M 14x1.25-1/2"	M14x1.25-1/2P

1-89

**965,68 €**

**FREE RUNNING INSERTS IN REEL**


			 1.0D		 1.5D		 2.0D	
			L mm	€	L mm	€	L mm	€
M 2.20 x 0.45	3520-2.20	1000	2.20	412,98	3.30	418,96	4.40	451,88
M 2.50 x 0.45	3520-2.50	1000	2.50	197,81	3.75	212,48	5.00	239,41
M 3 x 0.50	3520-3.00	1000	3.00	185,55	4.50	212,48	6.00	230,42
M 4 x 0.70	3520-4.00	1000	4.00	182,55	6.00	194,51	8.00	215,46
M 5 x 0.80	3520-5.00	1000	5.00	182,55	7.50	215,76	10.00	233,88
M 6 x 1.00	3520-6.00	500	6.00	113,03	9.00	121,34	12.00	157,71
M 8 x 1.00	3521-8.00	250	8.00	84,92	12.00	90,64	16.00	115,13
M 8 x 1.25	3520-8.00	250	8.00	71,44	12.00	78,39	16.00	107,78
M 10 x 1.50	3520-10.00	250	10.00	95,03	15.00	107,78	20.00	124,94
M 12 x 1.75	3520-12.00	125	12.00	67,40	18.00	79,87	24.00	94,30



Coding example:

M 6 x 1.00

 1.0D  
 3520-6.00x1.0DIR

 1.5D  
 3520-6.00x1.5DIR

 2.0D  
 3520-6.00x2.0DIR

**FREE RUNNING INSERTS IN REEL**



				1.0D		1.5D		2.0D	
				L mm	€	L mm	€	L mm	€
UNC	N°2 - 56	3532-2G	1000	2.29	546,80	3.30	640,15	4.32	826,85
UNC	N°4 - 40	3532-4G	1000	2.79	200,09	4.32	208,82	5.59	213,38
UNC	N°5 - 40	3532-5G	1000	3.30	220,05	4.83	233,38	6.35	246,73
UNC	N°6 - 32	3532-6G	1000	3.56	198,27	5.33	222,05	7.11	237,92
UNC	N°8 - 32	3532-8G	1000	4.06	198,27	6.35	222,05	8.38	237,92
UNC	N°10 - 24	3532-10G	1000	4.83	213,38	7.37	224,00	9.65	233,38
UNC	1/4 - 20	3532-1/4	500	6.35	138,33	9.65	155,09	12.70	167,66
UNC	5/16 - 18	3532-5/16	250	7.87	104,79	11.94	126,22	15.75	133,36
UNC	3/8 - 16	3532-3/8	250	9.65	161,94	14.48	185,38	19.30	211,96



				1.0D		1.5D		2.0D	
				L mm	€	L mm	€	L mm	€
UNF	N°4 - 48	3534-4G	1000	2.79	488,28	4.32	554,26	5.59	739,02
UNF	N°6 - 40	3534-6G	1000	3.56	488,28	5.33	554,26	7.11	739,02
UNF	N°8 - 36	3534-8G	1000	4.06	488,28	6.35	554,26	8.38	739,02
UNF	N°10 - 32	3534-10G	1000	4.83	211,14	7.37	217,75	9.65	263,94
UNF	1/4 - 28	3534-1/4	500	6.35	136,85	9.65	147,21	12.70	165,90
UNF	5/16 - 24	3534-5/16	250	7.87	103,69	11.94	110,75	15.75	131,96
UNF	3/8 - 24	3534-3/8	250	9.65	153,18	14.48	160,25	19.30	193,24



Coding example:

	1.0D	1.5D	2.0D
UNC 1/4 - 20	3532-1/4x1.0DIR	3532-1/4x1.5DIR	3532-1/4x2.0DIR

**SCREW LOCKING INSERTS IN REEL**


			1.0D		1.5D		2.0D	
			L mm	€	L mm	€	L mm	€
M 2.20 x 0.45	3520-2.20	1000	2.20	511,76	3.30	598,50	4.40	628,44
M 2.50 x 0.45	3520-2.50	1000	2.50	264,14	3.75	270,77	5.00	359,11
M 3 x 0.50	3520-3.00	1000	3.00	227,46	4.50	261,49	6.00	299,25
M 4 x 0.70	3520-4.00	1000	4.00	255,90	6.00	269,33	8.00	275,34
M 5 x 0.80	3520-5.00	1000	5.00	255,90	7.50	284,30	10.00	329,18
M 6 x 1.00	3520-6.00	500	6.00	151,79	9.00	158,42	12.00	192,68
M 8 x 1.00	3521-8.00	250	8.00	108,86	12.00	121,32	16.00	138,16
M 8 x 1.25	3520-8.00	250	8.00	90,76	12.00	107,78	16.00	126,03
M 10 x 1.50	3520-10.00	250	10.00	114,04	15.00	148,27	20.00	149,91
M 12 x 1.75	3520-12.00	125	12.00	83,79	18.00	104,46	24.00	113,90



Coding example:

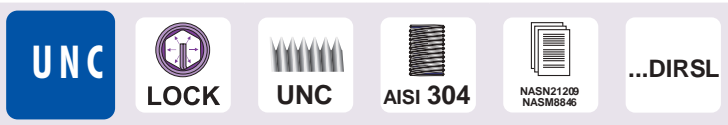
**M 3 x 0.50**
 1.0D  
 3520-3.00x1.0DIRSL




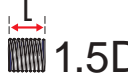
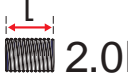
 1.5D  
 3520-3.00x1.5DIRSL

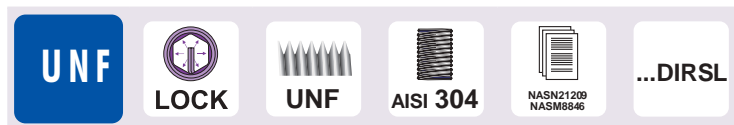
 2.0D  
 3520-3.00x2.0DIRSL



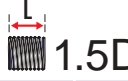



**SCREW LOCKING INSERTS IN REEL**






			 1.0D		 1.5D		 2.0D	
			L mm	€	L mm	€	L mm	€
UNC N°2 - 56	3532-2G	1000	2.29	656,16	3.30	768,18	4.32	992,24
UNC N°4 - 40	3532-4G	1000	2.79	256,05	4.32	269,38	5.59	292,49
UNC N°5 - 40	3532-5G	1000	3.30	296,08	4.83	312,43	6.35	323,75
UNC N°6 - 32	3532-6G	1000	3.56	237,92	5.33	266,46	7.11	285,51
UNC N°8 - 32	3532-8G	1000	4.06	237,92	6.35	266,46	8.38	285,51
UNC N°10 - 24	3532-10G	1000	4.83	256,05	7.37	264,96	9.65	280,07
UNC 1/4 - 20	3532-1/4	500	6.35	167,64	9.65	187,95	12.70	203,19
UNC 5/16 - 18	3532-5/16	250	7.87	129,34	11.94	155,80	15.75	164,61
UNC 3/8 - 16	3532-3/8	250	9.65	199,89	14.48	207,44	19.30	261,62




			 1.0D		 1.5D		 2.0D	
			L mm	€	L mm	€	L mm	€
UNF N°4 - 48	3534-4G	1000	2.79	585,94	4.32	665,12	5.59	886,83
UNF N°6 - 40	3534-6G	1000	3.56	585,94	5.33	665,12	7.11	886,83
UNF N°8 - 36	3534-8G	1000	4.06	585,94	6.35	665,12	8.38	886,83
UNF N°10 - 32	3534-10G	1000	4.83	253,38	7.37	261,30	9.65	316,72
UNF 1/4 - 28	3534-1/4	500	6.35	167,76	9.65	179,91	12.70	202,48
UNF 5/16 - 24	3534-5/16	250	7.87	129,34	11.94	138,16	15.75	164,61
UNF 3/8 - 24	3534-3/8	250	9.65	191,07	14.48	199,89	19.30	241,04



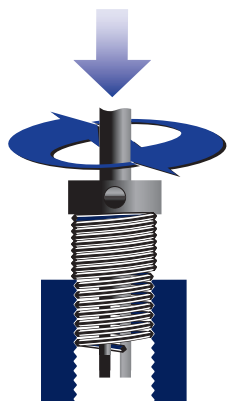
Coding example:

	 1.0D	 1.5D	 2.0D
UNF 1/4 - 28	3534-1/4x1.0DIRSL	3534-1/4x1.5DIRSL	3534-1/4x2.0DIRSL

**PNEUMATIC TOOL**


		€		€		€		€		€
M 2.20 x 0.45	3520-2.20MIP	431,98	3520-2.20MIPM	157,67	3520-2.20MIPN	275,38	3500-MIP1	1.693,84	-	
M 2.50 x 0.45	3520-2.50MIP	275,38	3520-2.50MIPM	99,36	3520-2.50MIPN	177,10	3500-MIP1	1.693,84	-	
M 3 x 0.50	3520-3.00MIP	275,38	3520-3.00MIPM	99,36	3520-3.00MIPN	177,10	3500-MIP1	1.693,84	-	
M 3.50 x 0.60	3520-3.50MIP	431,98	3520-3.50MIPM	157,67	3520-3.50MIPN	275,38	3500-MIP1	1.693,84	-	
M 4 x 0.70	3520-4.00MIP	275,38	3520-4.00MIPM	99,36	3520-4.00MIPN	177,10	3500-MIP1	1.693,84	-	
M 5 x 0.80	3520-5.00MIP	275,38	3520-5.00MIPM	99,36	3520-5.00MIPN	177,10	3500-MIP1	1.693,84	-	
M 6 x 1.00	3520-6.00MIP	275,38	3520-6.00MIPM	99,36	3520-6.00MIPN	177,10	3500-MIP1	1.693,84	-	
M 8 x 1.00	3521-8.00MIP	588,56	3521-8.00MIPM	215,99	3521-8.00MIPN	373,66	-		3500-MIP2	2.021,19
M 8 x 1.25	3520-8.00MIP	588,56	3520-8.00MIPM	215,99	3520-8.00MIPN	373,66	-		3500-MIP2	2.021,19
M 10 x 1.00	3523-10.00MIP	588,56	3523-10.00MIPM	215,99	3523-10.00MIPN	373,66	-		3500-MIP2	2.021,19
M 10 x 1.25	3521-10.00MIP	588,56	3521-10.00MIPM	215,99	3521-10.00MIPN	373,66	-		3500-MIP2	2.021,19
M 10 x 1.50	3520-10.00MIP	588,56	3520-10.00MIPM	215,99	3520-10.00MIPN	373,66	-		3500-MIP2	2.021,19
M 12 x 1.25	3523-12.00MIP	667,40	3523-12.00MIPM	255,95	3523-12.00MIPN	412,53	-		3500-MIP2	2.021,19
M 12 x 1.50	3521-12.00MIP	667,40	3521-12.00MIPM	255,95	3521-12.00MIPN	412,53	-		3500-MIP2	2.021,19
M 12 x 1.75	3520-12.00MIP	667,40	3520-12.00MIPM	255,95	3520-12.00MIPN	412,53	-		3500-MIP2	2.021,19

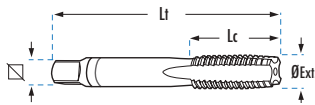
**PNEUMATIC TOOL**



		€		€		€		€		€
UNC N°2 - 56	3532-2GMIP	406,06	3532-2GMIPM	157,67	3532-2GMIPN	249,46	3500-MIP1	1.693,84	-	-
UNC N°4 - 40	3532-4GMIP	275,38	3532-4GMIPM	99,36	3532-4GMIPN	177,10	3500-MIP1	1.693,84	-	-
UNC N°5 - 40	3532-5GMIP	431,98	3532-5GMIPM	157,67	3532-5GMIPN	275,38	3500-MIP1	1.693,84	-	-
UNC N°6 - 32	3532-6GMIP	275,38	3532-6GMIPM	99,36	3532-6GMIPN	177,10	3500-MIP1	1.693,84	-	-
UNC N°8 - 32	3532-8GMIP	275,38	3532-8GMIPM	99,36	3532-8GMIPN	177,10	3500-MIP1	1.693,84	-	-
UNC N°10 - 24	3532-10GMIP	275,38	3532-10GMIPM	99,36	3532-10GMIPN	177,10	3500-MIP1	1.693,84	-	-
UNC N°12 - 24	3532-12GMIP	275,38	3532-12GMIPM	99,36	3532-12GMIPN	177,10	3500-MIP1	1.693,84	-	-
UNC 1/4 - 20	3532-1/4MIP	275,38	3532-1/4MIPM	99,36	3532-1/4MIPN	177,10	3500-MIP1	1.693,84	-	-
UNC 5/16 - 18	3532-5/16MIP	588,56	3532-5/16MIPM	215,99	3532-5/16MIPN	373,66	-	-	3500-MIP2	2.021,19
UNC 3/8 - 16	3532-3/8MIP	588,56	3532-3/8MIPM	215,99	3532-3/8MIPN	373,66	-	-	3500-MIP2	2.021,19
UNC 7/16 - 14	3532-7/16MIP	667,40	3532-7/16MIPM	255,95	3532-7/16MIPN	412,53	-	-	3500-MIP2	2.021,19
UNC 1/2 - 13	3532-1/2MIP	667,40	3532-1/2MIPM	255,95	3532-1/2MIPN	412,53	-	-	3500-MIP2	2.021,19



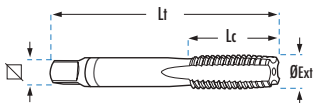
		€		€		€		€		€
UNF N°6 - 40	3534-6GMIPM	431,98	3534-6GMIPM	157,67	3534-6GMIPN	275,38	3500-MIP1	1.693,84	-	-
UNF N°8 - 36	3534-8GMIPM	431,98	3534-8GMIPM	157,67	3534-8GMIPN	275,38	3500-MIP1	1.693,84	-	-
UNF N°10 - 32	3534-10GMIPM	275,38	3534-10GMIPM	99,36	3534-10GMIPN	177,10	3500-MIP1	1.693,84	-	-
UNF 1/4 - 28	3534-1/4MIPM	275,38	3534-1/4MIPM	99,36	3534-1/4MIPN	177,10	3500-MIP1	1.693,84	-	-
UNF 5/16 - 24	3534-5/16MIPM	588,56	3534-5/16MIPM	215,99	3534-5/16MIPN	373,66	-	-	3500-MIP2	2.021,19
UNF 3/8 - 24	3534-3/8MIPM	588,56	3534-3/8MIPM	215,99	3534-3/8MIPN	373,66	-	-	3500-MIP2	2.021,19
UNF 7/16 - 20	3534-7/16MIPM	667,40	3534-7/16MIPM	255,95	3534-7/16MIPN	412,53	-	-	3500-MIP2	2.021,19
UNF 1/2 - 20	3534-1/2MIPM	667,40	3534-1/2MIPM	255,95	3534-1/2MIPN	412,53	-	-	3500-MIP2	2.021,19

**STI HAND & MACHINE TAPS & GAUGES**


TOLERANCE			TOL 5H-6H		TOL 5H-6H		TOL 5H-6H		TOL 5H-6H		
MATERIAL			HSS		HSS-V3		HSS-V3		Gauge		
FORM			Hand		B FORM		35°		Gauge		
Ø Int.	Ø Ext.	Lt x Lc x Ø		€		€		€		€	
M 2 x 0.40	2.10	2.52	44x9.5x2.2	3520-2.00I	14,50	3520-2.00SP	19,13	3520-2.00SF	19,13	3520-2.00GC	213,30
M 2.20 x 0.45	2.30	2.78	48x11x2.5	3520-2.20I	17,22	3520-2.20SP	19,13	3520-2.20SF	19,13	3520-2.20GC	238,48
M 2.50 x 0.45	2.60	3.08	48x11x2.5	3520-2.50I	14,50	3520-2.50SP	19,13	3520-2.50SF	19,13	3520-2.50GC	238,48
M 3 x 0.50	3.20	3.65	53x13x3.15	3520-3.00I	12,65	3520-3.00SP	14,50	3520-3.00SF	14,50	3520-3.00GC	172,67
M 3.50 x 0.60	3.70	4.27	53x13x3.55	3520-3.50I	12,65	3520-3.50SP	14,50	3520-3.50SF	14,50	3520-3.50GC	167,58
M 4 x 0.70	4.20	4.90	58x16x4	3520-4.00I	12,65	3520-4.00SP	14,50	3520-4.00SF	14,50	3520-4.00GC	162,52
M 5 x 0.80	5.20	6.03	66x19x5	3520-5.00I	12,65	3520-5.00SP	14,50	3520-5.00SF	14,50	3520-5.00GC	157,45
M 6 x 1.00	6.30	7.29	72x22x6.3	3520-6.00I	12,65	3520-6.00SP	14,50	3520-6.00SF	14,50	3520-6.00GC	152,36
M 7 x 1.00	7.30	8.29	72x22x7.1	3520-7.00I	15,77	3520-7.00SP	18,18	3520-7.00SF	18,18	3520-7.00GC	175,20
M 8 x 1.00	8.30	9.29	80x24x8	3521-8.00I	15,77	3521-8.00SP	18,18	3521-8.00SF	18,18	3521-8.00GC	187,52
M 8 x 1.25	8.30	9.62	80x24x8	3520-8.00I	15,77	3520-8.00SP	18,18	3520-8.00SF	18,18	3520-8.00GC	157,45
M 9 x 1.25	9.40	10.62	85x25x6.3	3520-9.00I	19,32	3520-9.00SP	28,02	3520-9.00SF	28,02	3520-9.00GC	162,52
M 10 x 1.00	10.30	11.29	85x25x6.3	3523-10.00I	19,32	3523-10.00SP	21,87	3523-10.00SF	21,87	3523-10.00GC	213,30
M 10 x 1.25	10.30	11.62	85x25x6.3	3521-10.00I	19,32	3521-10.00SP	27,01	3521-10.00SF	27,01	3521-10.00GC	218,38
M 10 x 1.50	10.40	11.94	89x29x7.1	3520-10.00I	19,32	3520-10.00SP	21,87	3520-10.00SF	21,87	3520-10.00GC	167,58
M 11 x 1.00	11.30	12.29	89x29x7.1	3523-11.00I	26,17	3523-11.00SP	29,13	3523-11.00SF	29,13	3523-11.00GC	223,45
M 11 x 1.25	11.30	12.62	89x29x7.1	3521-11.00I	26,27	3521-11.00SP	29,13	3521-11.00SF	29,13	3521-11.00GC	217,79
M 11 x 1.50	11.40	12.94	89x29x7.1	3520-11.00I	21,87	3520-11.00SP	29,13	3520-11.00SF	29,13	3520-11.00GC	172,67
M 12 x 1.00	12.30	13.29	95x30x9	3524-12.00I	26,70	3524-12.00SP	33,22	3524-12.00SF	33,22	3524-12.00GC	227,02
M 12 x 1.25	12.30	13.62	95x30x9	3523-12.00I	26,70	3523-12.00SP	28,99	3523-12.00SF	28,99	3523-12.00GC	227,02
M 12 x 1.50	12.40	14.13	95x30x9	3521-12.00I	26,70	3521-12.00SP	32,66	3521-12.00SF	32,66	3521-12.00GC	203,13
M 12 x 1.75	12.50	14.27	95x30x9	3520-12.00I	21,87	3520-12.00SP	28,63	3520-12.00SF	28,63	3520-12.00GC	177,75
M 13 x 1.25	13.25	14.62	95x30x9	3521-13.00I	30,63	3521-13.00SP	41,39	3521-13.00SF	41,39	3521-13.00GC	218,38
M 13 x 1.75	13.50	15.27	102x32x10	3520-13.00I	30,63	3520-13.00SP	41,39	3520-13.00SF	41,39	3520-13.00GC	203,36
M 14 x 1.00	14.25	15.29	102x32x10	3524-14.00I	30,37	3524-14.00SP	50,91	3524-14.00SF	50,91	3524-14.00GC	243,78
M 14 x 1.25	14.25	15.62	102x32x10	3523-14.00I	30,37	3523-14.00SP	40,05	3523-14.00SF	40,05	3523-14.00GC	243,78
M 14 x 1.50	14.50	15.94	102x32x10	3521-14.00I	30,37	3521-14.00SP	40,05	3521-14.00SF	40,05	3521-14.00GC	223,45
M 14 x 2.00	14.50	16.59	102x32x10	3520-14.00I	30,37	3520-14.00SP	40,05	3520-14.00SF	40,05	3520-14.00GC	187,92
M 15 x 1.50	15.25	16.94	102x32x10	3521-15.00I	36,27	3521-15.00SP	57,10	3521-15.00SF	57,10	3521-15.00GC	233,63
M 15 x 2.00	15.50	17.59	112x37x11.2	3520-15.00I	36,27	3520-15.00SP	57,10	3520-15.00SF	57,10	3520-15.00GC	219,42
M 16 x 1.50	16.50	17.94	112x37x11.2	3521-16.00I	36,36	3521-16.00SP	50,55	3521-16.00SF	50,55	3521-16.00GC	238,70
M 16 x 2.00	16.50	18.59	112x37x11.2	3520-16.00I	36,36	3520-16.00SP	42,34	3520-16.00SF	42,34	3520-16.00GC	208,23

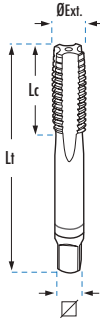
Overall dimensions for hand and machine taps are the same. Taps produced with further chamfers (2-3h and 6-8) or other special sizes are available upon request.

**STI HAND & MACHINE TAPS & GAUGES**



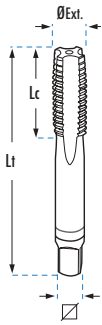
TOLERANCE				TOL 5H-6H		TOL 5H-6H		TOL 5H-6H		TOL 5H-6H	
MATERIAL				HSS		HSS-V3		HSS-V3		Gauge	
FORM				Hand		B FORM		35°		Gauge	
Ø	Ø Ext.	Lt	Lc x Ø	€	€	€	€	€	€	€	
M 18 x 1.50	18.50	19.94	112x37x11.2	3523-18.00I	46,03	3523-18.00SP	63,77	3523-18.00SF	63,77	3523-18.00GC	242,82
M 18 x 2.00	18.50	20.59	112x37x11.2	3521-18.00I	46,03	3521-18.00SP	63,77	3521-18.00SF	63,77	3521-18.00GC	248,84
<b>M 18 x 2.50</b>	19.00	21.24	118x38x12.5	3520-18.00I	46,03	3520-18.00SP	63,77	3520-18.00SF	63,77	3520-18.00GC	223,45
M 20 x 1.50	20.50	21.94	118x38x12.5	3523-20.00I	50,62	3523-20.00SP	75,12	3523-20.00SF	75,12	3523-20.00GC	289,50
M 20 x 2.00	20.50	22.59	118x38x12.5	3521-20.00I	50,62	3521-20.00SP	75,12	3521-20.00SF	75,12	3521-20.00GC	264,10
<b>M 20 x 2.50</b>	20.75	23.24	118x38x12.5	3520-20.00I	50,62	3520-20.00SP	75,12	3520-20.00SF	75,12	3520-20.00GC	238,70
M 22 x 1.50	22.50	23.94	130x45x14	3523-22.00I	58,23	3523-22.00SP	106,25	3523-22.00SF	106,25	3523-22.00GC	309,55
M 22 x 2.00	22.50	24.59	130x45x14	3521-22.00I	58,23	3521-22.00SP	106,25	3521-22.00SF	106,25	3521-22.00GC	299,63
<b>M 22 x 2.50</b>	22.75	25.24	130x45x14	3520-22.00I	58,23	3520-22.00SP	106,25	3520-22.00SF	106,25	3520-22.00GC	253,91
M 24 x 1.50	24.50	25.94	130x45x14	3523-24.00I	73,63	3523-24.00SP	127,50	3523-24.00SF	127,50	3523-24.00GC	329,54
M 24 x 2.00	24.50	26.59	127x37x16	3521-24.00I	73,63	3521-24.00SP	127,50	3521-24.00SF	127,50	3521-24.00GC	299,88
<b>M 24 x 3.00</b>	25.00	27.89	135x45x16	3520-24.00I	73,63	3520-24.00SP	127,50	3520-24.00SF	127,50	3520-24.00GC	284,40
M 26 x 1.50	26.50	27.94	127x37x16	3523-26.00I	138,34	-	-	-	-	-	-
M 27 x 1.50	27.50	28.97	127x37x16	3523-27.00I	163,11	-	-	-	-	-	-
M 27 x 2.00	27.50	29.59	127x37x16	3521-27.00I	163,11	-	-	-	-	-	-
<b>M 27 x 3.00</b>	28.00	30.89	151x51x18	3520-27.00I	163,11	-	-	-	-	-	-
M 28 x 1.50	28.50	29.99	137x37x18	3523-28.00I	181,83	-	-	-	-	-	-
M 30 x 1.50	30.50	31.96	137x37x18	3523-30.00I	194,03	-	-	-	-	-	-
M 30 x 2.00	30.50	32.59	137x37x18	3521-30.00I	194,03	-	-	-	-	-	-
<b>M 30 x 3.50</b>	31.00	34.54	162x57x20	3520-30.00I	194,03	-	-	-	-	-	-
M 33 x 2.00	33.50	35.59	144x39x20	3521-33.00I	235,60	-	-	-	-	-	-
<b>M 33 x 3.50</b>	34.00	37.54	170x60x22.4	3520-33.00I	235,60	-	-	-	-	-	-
M 36 x 1.50	36.50	37.92	149x39x22.4	3524-36.00I	270,88	-	-	-	-	-	-
M 36 x 2.00	36.50	38.55	149x39x22.4	3523-36.00I	270,88	-	-	-	-	-	-
M 36 x 3.00	37.00	39.89	170x60x22.4	3521-36.00I	270,88	-	-	-	-	-	-
<b>M 36 x 4.00</b>	37.00	41.19	170x60x22.4	3520-36.00I	270,88	-	-	-	-	-	-
M 39x3,00	40.00	42.90	149x39x26	3521-39.00I	373,39	-	-	-	-	-	-
<b>M 39x4,00</b>	40.25	44.20	187x67x28	3520-39.00I	373,39	-	-	-	-	-	-
M 40x3,00	41.00	43.90	149x39x26	3523-40.00I	395,02	-	-	-	-	-	-
M 42x3,00	43.00	45.90	165x45x28	3523-42.00I	405,95	-	-	-	-	-	-
<b>M 42x4,50</b>	43.50	47.90	187x67x28	3520-42.00I	405,95	-	-	-	-	-	-
M 45x3,00	46.00	48.90	175x45x31	3523-45.00I	432,23	-	-	-	-	-	-
<b>M 45x4,50</b>	46.50	50.90	200x70x31	3520-45.00I	432,23	-	-	-	-	-	-
M 48x3,00	49.00	51.90	175x45x31	3523-48.00I	524,92	-	-	-	-	-	-
<b>M 48x5,00</b>	49.50	54.50	200x70x31	3520-48.00I	524,92	-	-	-	-	-	-
M 50x3,00	51.00	53.90	175x45x31	3523-50.00I	567,95	-	-	-	-	-	-
M 52x3,00	53.00	55.90	193x48x34	3523-52.00I	600,51	-	-	-	-	-	-
<b>M 52x5,00</b>	53.50	58.50	221x76x34	3520-52.00I	600,51	-	-	-	-	-	-



**STI HAND & MACHINE TAPS & GAUGES**


TOLERANCE				TOL 2B-3B		TOL 2B-3B		TOL 2B-3B		TOL 2B-3B	
MATERIAL				HSS		HSS-V3		HSS-V3		Gauge	
FORM											
					€		€		€		€
Ø	Ø Ext.	Lt x Lc x ø									
UNC N°2 - 56	2.40	2.77	44x9.5x2.2	3532-2GI	19,32	3532-2GSP	26,38	3532-2GSF	26,38	3532-2GGC	303,37
UNC N°3 - 48	2.70	3.02	44x9.5x2.2	3532-3GI	19,32	3532-3GSP	27,91	3532-3GSF	27,91	3532-3GGC	303,37
UNC N°4 - 40	3.00	3.67	53x13x3.15	3532-4GI	19,32	3532-4GSP	26,38	3532-4GSF	26,38	3532-4GGC	304,71
UNC N°5 - 40	3.40	4.00	53x13x3.15	3532-5GI	19,32	3532-5GSP	26,38	3532-5GSF	26,38	3532-5GGC	303,40
UNC N°6 - 32	3.70	4.53	58x16x4	3532-6GI	19,32	3532-6GSP	26,38	3532-6GSF	26,38	3532-6GGC	184,67
UNC N°8 - 32	4.40	5.19	62x17x4.5	3532-8GI	19,32	3532-8GSP	26,38	3532-8GSF	26,38	3532-8GGC	180,05
UNC N°10 - 24	5.10	6.20	66x19x5	3532-10GI	19,32	3532-10GSP	24,18	3532-10GSF	24,18	3532-10GGC	175,43
UNC N°12 - 24	5.70	6.86	66x19x5.6	3532-12GI	19,32	3532-12GSP	24,18	3532-12GSF	24,18	3532-12GGC	175,43
UNC 1/4 - 20	6.70	8.00	72x22x6.3	3532-1/4I	12,65	3532-1/4SP	17,60	3532-1/4SF	17,60	3532-1/4GC	166,22
UNC 5/16 - 18	8.30	9.77	80x24x8	3532-5/16I	15,69	3532-5/16SP	20,88	3532-5/16SF	20,88	3532-5/16GC	175,43
UNC 3/8 - 16	9.90	11.58	85x25x6.3	3532-3/8I	14,50	3532-3/8SP	26,38	3532-3/8SF	26,38	3532-3/8GC	175,43
UNC 7/16 - 14	11.60	13.47	95x30x9	3532-7/16I	19,32	3532-7/16SP	30,00	3532-7/16SF	30,00	3532-7/16GC	184,67
UNC 1/2 - 13	13.00	15.23	102x32x10	3532-1/2I	21,87	3532-1/2SP	32,97	3532-1/2SF	32,97	3532-1/2GC	198,52
UNC 9/16 - 12	15.00	17.03	112x37x11.2	3532-9/16I	36,36	3532-9/16SP	54,95	3532-9/16SF	54,95	3532-9/16GC	212,37
UNC 5/8 - 11	16.50	18.87	112x37x11.2	3532-5/8I	44,89	3532-5/8SP	76,59	3532-5/8SF	76,59	3532-5/8GC	221,62
UNC 3/4 - 10	20.00	22.34	118x38x12.5	3532-3/4I	54,54	3532-3/4SP	77,68	3532-3/4SF	77,68	3532-3/4GC	253,91
UNC 7/8 - 9	23.00	25.89	130x45x14	3532-7/8I	63,65	3532-7/8SP	112,64	3532-7/8SF	112,64	3532-7/8GC	286,25
UNC 1 - 8	26.25	29.52	138x48x16	3532-1I	63,65	3532-1SP	131,88	3532-1SF	131,88	3532-1GC	323,18
UNC 1.1/8 - 7	29.50	33.28	151x51x18	3532-1.1/8I	192,72	-	-	-	-	-	-
UNC 1.1/4 - 7	32.50	36.46	162x57x20	3532-1.1/4I	231,22	-	-	-	-	-	-
UNC 1.3/8 - 6	36.00	40.42	170x60x22.4	3532-1.3/8I	289,05	-	-	-	-	-	-
UNC 1.1/2 - 6	39.50	43.59	187x67x25	3532-1.1/2I	374,63	-	-	-	-	-	-

**STI HAND & MACHINE TAPS & GAUGES**



TOLERANCE				TOL 2B-3B		TOL 2B-3B		TOL 2B-3B		TOL 2B-3B	
MATERIAL				HSS		HSS-V3		HSS-V3		Gauge	
FORM				Hand		B FORM		35°		Gauge	
		Ø Ext.	Lt x Lc x Ø		€		€		€		€
UNF N°3 - 56	2.70	3.09	44x9.5x2.2	3534-3GI	20,22	3534-3GSP	27,91	3534-3GSF	27,91	3534-3GGC	304,71
UNF N°4 - 48	3.00	3.53	50x13x2.80	3534-4GI	19,32	3534-4GSP	26,38	3534-4GSF	26,38	3534-4GGC	304,71
UNF N°6 - 40	3.70	4.33	53x13x3.55	3534-6GI	19,32	3534-6GSP	26,38	3534-6GSF	26,38	3534-6GGC	184,67
UNF N°8 - 36	4.40	5.08	62x17x4.50	3534-8GI	19,32	3534-8GSP	26,38	3534-8GSF	26,38	3534-8GGC	180,05
UNF N°10 - 32	5.10	5.85	66x19x5.00	3534-10GI	19,32	3534-10GSP	24,18	3534-10GSF	24,18	3534-10GGC	175,43
UNF N°12 - 28	5.80	6.75	66x19x5.60	3534-12GI	22,14	3534-12GSP	24,21	3534-12GSF	24,21	3534-12GGC	295,47
UNF 1/4 - 28	6.60	7.52	72x22x6.30	3534-1/4I	12,65	3534-1/4SP	17,60	3534-1/4SF	17,60	3534-1/4GC	166,22
UNF 5/16 - 24	8.20	9.31	80x24x8.00	3534-5/16I	13,93	3534-5/16SP	20,88	3534-5/16SF	20,88	3534-5/16GC	175,43
UNF 3/8 - 24	9.80	10.89	85x25x6.30	3534-3/8I	14,50	3534-3/8SP	26,38	3534-3/8SF	26,38	3534-3/8GC	175,43
UNF 7/16 - 20	11.50	12.76	89x29x7.10	3534-7/16I	19,32	3534-7/16SP	30,00	3534-7/16SF	30,00	3534-7/16GC	184,67
UNF 1/2 - 20	13.00	14.35	95x30x9.00	3534-1/2I	19,88	3534-1/2SP	32,97	3534-1/2SF	32,97	3534-1/2GC	198,52
UNF 9/16 - 18	14.75	16.12	102x32x10	3534-9/16I	36,36	3534-9/16SP	54,95	3534-9/16SF	54,95	3534-9/16GC	212,37
UNF 5/8 - 18	16.50	17.00	112x37x11.2	3534-5/8I	44,89	3534-5/8SP	76,59	3534-5/8SF	76,59	3534-5/8GC	216,99
UNF 3/4 - 16	19.50	21.11	112x37x11.2	3534-3/4I	54,54	3534-3/4SP	77,68	3534-3/4SF	77,68	3534-3/4GC	175,43
UNF 7/8 - 14	22.50	24.58	130x45x14	3534-7/8I	71,27	3534-7/8SP	112,64	3534-7/8SF	112,64	3534-7/8GC	263,18
UNF 1 - 12	26.00	28.15	127x37x16	3534-1I	63,29	3534-1SP	131,88	3534-1SF	131,88	3534-1GC	240,08
UNS 1 - 14	26.00	27.76	127x37x16	3535-1I	63,29	3535-1SP	131,88	3535-1SF	131,88	3535-1GC	240,08
UNF 1.1/8 - 12	29.50	31.32	137x37x18	3534-1.1/8I	192,72	-	-	-	-	-	-
UNF 1.1/4 - 12	32.50	34.50	144x39x20	3534-1.1/4I	231,22	-	-	-	-	-	-
UNF 1.3/8 - 12	35.50	37.67	149x39x22.4	3534-1.3/8I	289,05	-	-	-	-	-	-
UNF 1.1/2 - 12	38.50	40.85	149x39x22.4	3534-1.1/2I	374,63	-	-	-	-	-	-

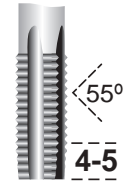
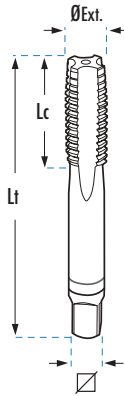
**STI HAND TAP**
**BSW**




**BSW**

**TOL (3B)**

**HSS**


STI-ISO529



			Ø Ext.	Lt x Lc x Ø		€	
BSW	1/8 - 40		3.40	3.93	53x13x3.15	3528-1/8I	12,65
BSW	3/16 - 24		5.00	6.00	66x19x5	3528-3/16I	12,65
BSW	1/4 - 20		6.70	7.84	72x22x6.3	3528-1/4I	12,65
BSW	5/16 - 18		8.30	9.59	80x24x8	3528-5/16I	13,93
BSW	3/8 - 16		10.00	11.38	85x25x6.3	3528-3/8I	14,50
BSW	7/16 - 14		11.60	13.23	95x30x9	3528-7/16I	19,32
BSW	1/2 - 12		13.00	15.17	102x32x10	3528-1/2I	22,41
BSW	9/16 - 12		14.75	16.76	102x32x10	3528-9/16I	36,36
BSW	5/8 - 11		16.50	18.57	112x37x11.2	3528-5/8I	44,89
BSW	11/16 - 11		17.50	19.60	112x37x11.2	3528-11/16I	54,54
BSW	3/4 - 10		20.00	22.01	118x38x12.5	3528-3/4I	54,54
BSW	7/8 - 9		23.25	25.52	130x45x14	3528-7/8I	63,29
BSW	1 - 8		26.50	29.10	138x48x16	3528-1I	63,29

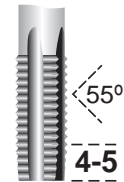
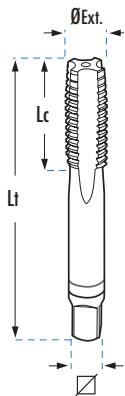
**BSF**

**BSF**

**TOL (3B)**

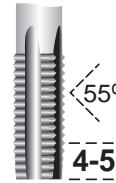
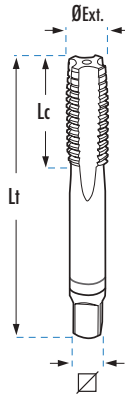
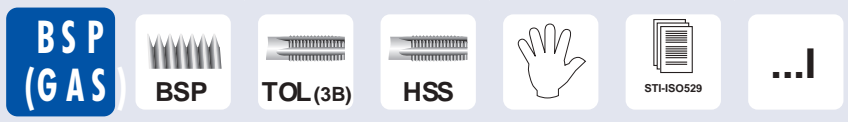
**HSS**


STI-ISO529

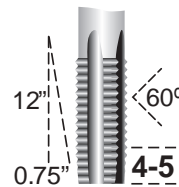
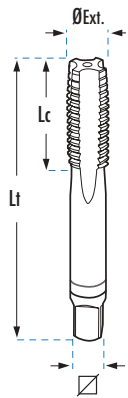


			Ø Ext.	Lt x Lc x Ø		€	
BSF	3/16 - 32		5.00	5.70	66x19x5	3530-3/16I	12,65
BSF	1/4 - 26		6.60	7.51	72x22x6.3	3530-1/4I	12,65
BSF	5/16 - 22		8.30	9.30	80x24x8	3530-5/16I	13,93
BSF	3/8 - 20		9.80	11.02	85x25x6.3	3530-3/8I	14,50
BSF	7/16 - 18		11.60	12.77	89x29x7.1	3530-7/16I	19,32
BSF	1/2 - 16		13.25	14.56	95x30x9	3530-1/2I	22,41
BSF	9/16 - 16		14.75	16.15	102x32x10	3530-9/16I	36,36
BSF	5/8 - 14		16.50	18.01	112x37x11.2	3530-5/8I	44,89
BSF	11/16 - 14		17.50	19.60	112x37x11.2	3530-11/16I	54,54
BSF	3/4 - 12		19.50	21.53	118x38x12.5	3530-3/4I	54,54
BSF	7/8 - 11		22.75	24.93	130x45x14	3530-7/8I	63,29
BSF	1 - 10		26.25	28.37	138x48x16	3530-1I	63,29

STI HAND TAP



				Ø Ext.	Lt x Lc x Ø		€
BSP	1/8	- 28	10.00	10.81	85x25x6.3	3546-1/8I	19,17
BSP	1/4	- 19	13.75	14.73	95x30x9	3546-1/4I	21,76
BSP	3/8	- 19	17.00	18.24	112x37x11.2	3546-3/8I	28,63
BSP	1/2	- 14	21.50	23.09	118x38x12.5	3546-1/2I	46,39
BSP	5/8	- 14	23.50	25.05	130x45x14	3546-5/8I	68,17
BSP	3/4	- 14	27.00	28.58	127x37x16	3546-3/4I	68,17
BSP	1	- 11	33.75	35.96	162x57x20	3546-1I	106,51



			Ø Ext.	Lt x Lc x Ø		€
NPT	1/8	- 27	10.43	54x19x8.3	3552-1/8I	92,99
NPT	1/4	- 18	13.95	62x27x10.7	3552-1/4I	104,61
NPT	3/8	- 18	17.37	65x27x13.5	3552-3/8I	139,48
NPT	1/2	- 14	21.65	80x35x13.1	3552-1/2I	168,55
NPT	3/4	- 14	26.96	83x35x17.2	3552-3/4I	220,85
NPT	1	- 11.1/2	33.75	95x44x22.7	3552-1I	302,19

## STI HAND TAPS

UN x 8



8-UN



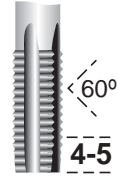
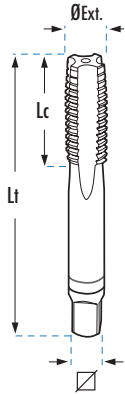
TOL (3B)






HSS



... |



			Ø Ext.	Lt x Lc x Ø		€	
UN 1.1/8 - 8			28.50	1.26	5.9x2.0x0.7	3570-1.1/8I	331,36
UN 1.1/4 - 8			32.00	1.38	6.3x2.2x0.7	3570-1.1/4I	381,70
UN 1.3/8 - 8			35.00	1.51	6.6x2.3x0.8	3570-1.3/8I	433,19
UN 1.1/2 - 8			38.00	1.63	6.6x2.3x0.8	3570-1.1/2I	475,84
UN 1.5/8 - 8			41.00	1.76	7.3x2.6x0.9	3570-1.5/8I	556,63
UN 1.3/4 - 8			44.50	1.88	7.3x2.6x0.9	3570-1.3/4I	602,87
UN 1.7/8 - 8			47.50	2.01	7.8x2.7x1.1	3570-1.7/8I	700,86
UN 2 - 8			51.00	2.13	7.8x2.7x1.1	3570-2I	728,03

BA



BA



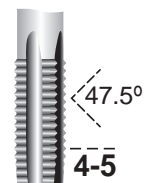
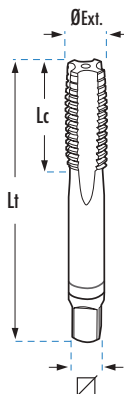
TOL (3B)





HSS



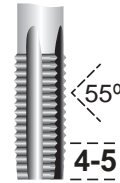
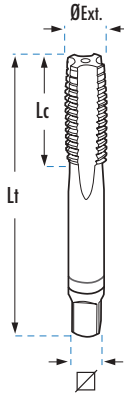
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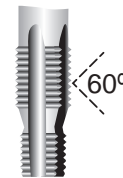
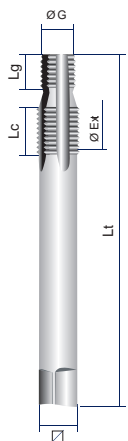
		Ø Ext.	Lt x Lc x Ø		€	
BA 0		6.20	7.12	66x19x5.6	3544-0I	12,87
BA 2		4.90	5.60	62x17x4.5	3544-2I	12,87
BA 4		3.80	4.34	53x13x3.5	3544-4I	12,87
BA 6		2.90	3.40	50x13x2.8	3544-6I	12,87



**STI HAND TAPS**



			Ø Ext.	Lt x Lc x Ø		€
BSB	1/4 - 26	6.60	7.72	72x22x6.3	3560-1/4I	14,26
BSB	5/16 - 26	8.00	9.30	72x22x7.1	3560-5/16I	15,69
BSB	3/8 - 26	9.80	10.89	85x25x6.3	3560-3/8I	16,33
BSB	7/16 - 26	11.10	12.48	89x29x7.1	3560-7/16I	21,76
BSB	1/2 - 26	12.70	14.07	95x30x9	3560-1/2I	24,62



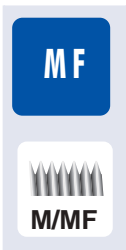
			Ø Ext.	Lg	Ø G	Lt x Lc x Ø		€
M	6 x 1.00	6.30	7.29	7	6	70x28x6.3	3520-6.00PN	24,60
M	8 x 1.25	8.30	9.62	9	8	75x32x6.3	3520-8.00PN	24,60
M	10 x 1.00	10.30	11.29	8	10	74x30x6.3	3522-10.00PN	30,77
M	10 x 1.50	10.40	11.94	9	10	89x29x7.1	3520-10.00PN	30,77
M	12 x 1.25	12.30	13.62	9	12	75x32x7.1	3522-12.00PN	43,71
M	14 x 1.25	14.25	15.62	10	14	90x45x9.2	3522-14.00PN	50,87
M	18 x 1.50	18.50	19.94	10	18	116x47x12.5	3522-18.00PN	72,73

**INSTALLATION TOOLS**
**MF**

**M/MF**



















	FREE	LOCK	FREE	LOCK	FREE	LOCK	FREE	LOCK	FREE	LOCK
	€	€	€	€	€	€	€	€	€	€
M 2 x 0.40	3500-HIT2	12,65	3520-2.00HIP	122,07	-	-	3520-2.00MIT	77,12	-	-
M 2.20 x 0.45	3500-HIT2	12,65	3520-2.20HIP	122,07	-	-	3520-2.20MIT	77,12	-	-
M 2.50 x 0.45	3500-HIT3	12,65	3520-2.50HIP	122,07	-	-	3520-2.50MIT	77,12	-	-
M 3 x 0.50	3500-HIT4	12,65	3520-3.00HIP	91,00	-	-	3520-3.00MIT	70,96	-	-
M 3.50 x 0.60	3500-HIT5	12,65	3520-3.50HIP	91,00	-	-	3520-3.50MIT	70,96	-	-
M 4 x 0.70	3500-HIT6	12,65	3520-4.00HIP	91,00	-	-	3520-4.00MIT	70,96	-	-
M 5 x 0.80	3500-HIT8	12,65	3520-5.00HIP	91,00	-	-	3520-5.00MIT	70,96	-	-
M 6 x 1.00	3500-HIT9	12,65	3520-6.00HIP	94,64	-	-	3520-6.00MIT	70,96	-	-
M 7 x 1.00	3500-HIT10	14,50	3520-7.00HIP	94,64	-	-	3520-7.00MIT	70,96	-	-
M 8 x 1.00	3500-HIT11	14,50	3521-8.00HIP	90,56	-	-	3521-8.00MIT	70,96	-	-
M 8 x 1.25	3500-HIT11	14,50	3520-8.00HIP	77,03	-	-	3520-8.00MIT	70,96	-	-
M 9 x 1.25	3500-HIT13	14,50	3520-9.00HIP	76,47	-	-	3520-9.00MIT	70,95	-	-
M 10 x 1.00	3500-HIT13	14,50	3523-10.00HIP	103,43	-	-	3523-10.00MIT	77,12	-	-
M 10 x 1.25	3500-HIT13	14,50	3521-10.00HIP	112,99	-	-	3521-10.00MIT	77,12	-	-
M 10 x 1.50	3500-HIT13	14,50	3520-10.00HIP	102,63	-	-	3520-10.00MIT	77,12	-	-
M 11 x 1.00	3500-HIT14	18,18	-	-	-	-	-	-	-	-
M 11 x 1.25	3500-HIT14	18,18	-	-	-	-	-	-	-	-
M 11 x 1.50	3500-HIT14	18,18	3520-11.00HIP	114,83	-	-	3520-11.00MIT	82,27	-	-
M 12 x 1.00	3500-HIT15	18,18	-	-	-	-	-	-	-	-
M 12 x 1.25	3500-HIT15	18,18	3523-12.00HIP	107,02	-	-	3523-12.00MIT	82,27	-	-
M 12 x 1.50	3500-HIT15	18,18	3521-12.00HIP	100,44	-	-	3521-12.00MIT	82,27	-	-
M 12 x 1.75	3500-HIT15	18,18	3520-12.00HIP	98,79	-	-	3520-12.00MIT	82,27	-	-
M 13 x 1.25	3500-HIT16	21,87	-	-	-	-	-	-	-	-
M 13 x 1.50	3500-HIT15	18,18	-	-	-	-	-	-	-	-
M 13 x 1.75	3500-HIT15	18,18	-	-	-	-	3520-13.00MIT	82,26	-	-
M 14 x 1.00	3500-HIT16	21,87	-	-	-	-	-	-	-	-
M 14 x 1.25	3500-HIT16	21,87	3523-14.00HIP	208,52	-	-	3523-14.00MIT	87,40	-	-
M 14 x 1.50	3500-HIT16	21,87	3521-14.00HIP	114,78	-	-	3521-14.00MIT	87,40	-	-
M 14 x 2.00	3500-HIT16	21,87	3520-14.00HIP	87,89	-	-	3520-14.00MIT	87,40	-	-
M 15 x 1.50	3500-HIT16	21,87	-	-	-	-	-	-	-	-
M 15 x 2.00	3500-HIT16	21,87	-	-	-	-	-	-	-	-
M 16 x 1.50	3500-HIT18	24,16	3521-16.00HIP	107,02	-	-	3521-16.00MIT	87,40	-	-
M 16 x 2.00	3500-HIT18	24,16	-	-	-	-	3520-16.00MIT	87,40	-	-
M 18 x 1.50	3500-HIT20	24,16	-	-	-	-	-	-	3523-18.00HIP	200,94
M 18 x 2.00	3500-HIT20	24,16	-	-	-	-	-	-	3521-18.00HIP	200,94
M 18 x 2.50	3500-HIT20	24,16	-	-	-	-	-	-	3520-18.00HIP	96,72

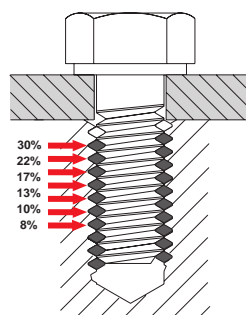
**INSTALLATION TOOLS**



		€		€		€		€		€
M 20 x 1.50	3500-HIT21	24,16	-	-	-	-	-	-	3523-20.00HIP	250,39
M 20 x 2.00	3500-HIT21	24,16	-	-	-	-	-	-	3521-20.00HIP	250,39
<b>M 20 x 2.50</b>	3500-HIT21	24,16	-	-	-	-	-	-	3520-20.00HIP	113,34
M 22 x 1.50	3500-HIT22	30,37	-	-	-	-	-	-	3523-22.00HIP	306,26
M 22 x 2.00	3500-HIT22	30,37	-	-	-	-	-	-	3521-22.00HIP	306,26
<b>M 22 x 2.50</b>	3500-HIT22	30,37	-	-	-	-	-	-	3520-22.00HIP	100,05
M 24 x 1.50	3500-HIT23	30,37	-	-	-	-	-	-	3523-24.00HIP	357,29
M 24 x 2.00	3500-HIT23	30,37	-	-	-	-	-	-	3521-24.00HIP	357,29
<b>M 24 x 3.00</b>	3500-HIT23	30,37	-	-	-	-	-	-	3520-24.00HIP	126,33
M 26 x 1.50	3500-HIT24	54,53	-	-	3523-26.00HIM	30,42	-	-	-	-
M 27 x 1.50	3500-HIT24	54,53	-	-	3523-27.00HIM	30,42	-	-	-	-
M 27 x 2.00	3500-HIT24	54,53	-	-	3521-27.00HIM	30,42	-	-	-	-
<b>M 27 x 3.00</b>	3500-HIT24	54,53	-	-	3520-27.00HIM	30,42	-	-	-	-
M 28 x 1.50	3500-HIT24	54,53	-	-	3523-28.00HIM	30,42	-	-	-	-
M 30 x 1.50	3500-HIT26	85,86	-	-	3523-30.00HIM	36,51	-	-	-	-
M 30 x 2.00	3500-HIT26	85,86	-	-	3521-30.00HIM	36,51	-	-	-	-
<b>M 30 x 3.50</b>	3500-HIT25	54,53	-	-	3520-30.00HIM	36,51	-	-	-	-
M 33 x 2.00	3500-HIT26	85,86	-	-	3521-33.00HIM	42,60	-	-	-	-
<b>M 33 x 3.50</b>	3500-HIT26	85,86	-	-	3520-33.00HIM	42,60	-	-	-	-
M 36 x 1.50	3500-HIT28	86,00	-	-	3524-36.00HIM	42,60	-	-	-	-
M 36 x 2.00	3500-HIT28	86,00	-	-	3523-36.00HIM	42,60	-	-	-	-
M 36 x 3.00	3500-HIT28	86,00	-	-	3521-36.00HIM	42,60	-	-	-	-
<b>M 36 x 4.00</b>	3500-HIT28	86,00	-	-	3520-36.00HIM	42,60	-	-	-	-
M 39x3,00	3500-HIT28	86,00	-	-	3521-39.00HIM	79,50	-	-	-	-
<b>M 39x4,00</b>	3500-HIT28	86,00	-	-	3520-39.00HIM	79,50	-	-	-	-
M 40 x 3,00	3500-HIT28	86,00	-	-	3523-40.00HIM	79,50	-	-	-	-
M 42 x 3,00	3500-HIT28	86,00	-	-	3523-42.00HIM	92,86	-	-	-	-
<b>M 42 x 4,50</b>	3500-HIT28	86,00	-	-	3520-42.00HIM	92,86	-	-	-	-
M 45 x 3,00	3500-HIT30	106,93	-	-	3523-45.00HIM	92,86	-	-	-	-
<b>M 45 x 4,50</b>	3500-HIT30	106,93	-	-	3520-45.00HIM	92,86	-	-	-	-
M 48 x 3,00	3500-HIT30	106,93	-	-	3523-48.00HIM	98,42	-	-	-	-
<b>M 48 x 5,00</b>	3500-HIT30	106,93	-	-	3520-48.00HIM	98,42	-	-	-	-
M 50 x 3,00	3500-HIT30	106,93	-	-	3523-50.00HIM	112,30	-	-	-	-
M 52 x 3,00	3500-HIT30	106,93	-	-	3523-52.00HIM	112,30	-	-	-	-
<b>M 52 x 5,00</b>	3500-HIT30	106,93	-	-	3520-52.00HIM	112,30	-	-	-	-

**INSTALLATION TOOLS**


			 				 		 	
									€	€
UNC N°2 - 56	3500-HIT2	12,65	3532-2GHIP	127,28	-	-	3532-2GMIT	77,12	-	-
UNC N°3 - 48	3500-HIT3	12,65	-	-	-	-	3532-3GMIT	77,12	-	-
UNC N°4 - 40	3500-HIT4	12,65	3532-4GHIP	127,28	-	-	3532-4GMIT	77,12	-	-
UNC N°5 - 40	3500-HIT4	12,65	3532-5GHIP	127,28	-	-	3532-5GMIT	77,12	-	-
UNC N°6 - 32	3500-HIT5	12,65	3532-6GHIP	123,81	-	-	3532-6GMIT	70,96	-	-
UNC N°8 - 32	3500-HIT6	12,65	3532-8GHIP	123,81	-	-	3532-8GMIT	70,96	-	-
UNC N°10 - 24	3500-HIT7	12,65	3532-10GHIP	123,81	-	-	3532-10GMIT	70,96	-	-
UNC N°12 - 24	3500-HIT8	12,65	3532-12GHIP	123,81	-	-	3532-12GMIT	70,95	-	-
UNC 1/4 - 20	3500-HIT9	12,65	3532-1/4HIP	84,16	-	-	3532-1/4MIT	70,96	-	-
UNC 5/16 - 18	3500-HIT10	14,50	3532-5/16HIP	84,22	-	-	3532-5/16MIT	70,96	-	-
UNC 3/8 - 16	3500-HIT13	14,50	3532-3/8HIP	97,78	-	-	3532-3/8MIT	77,12	-	-
UNC 7/16 - 14	3500-HIT14	18,18	3532-7/16HIP	97,78	-	-	3532-7/16MIT	77,12	-	-
UNC 1/2 - 13	3500-HIT15	18,18	3532-1/2HIP	113,05	-	-	3532-1/2MIT	82,27	-	-
UNC 9/16 - 12	3500-HIT16	21,87	-	-	-	-	-	-	3532-9/16HIP	102,19
UNC 5/8 - 11	3500-HIT18	24,16	-	-	-	-	-	-	3532-5/8HIP	107,37
UNC 3/4 - 10	3500-HIT20	24,16	-	-	-	-	-	-	3532-3/4HIP	120,76
UNC 7/8 - 9	3500-HIT22	30,37	-	-	-	-	-	-	3532-7/8HIP	130,05
UNC 1 - 8	3500-HIT23	30,37	-	-	-	-	-	-	3532-1HIP	148,63
UNC 1.1/8 - 7	3500-HIT24	54,53	-	-	3532-1.1/8HIM	36,51	-	-	3532-1.1/8HIP	169,70
UNC 1.1/4 - 7	3500-HIT25	54,53	-	-	3532-1.1/4HIM	36,51	-	-	3532-1.1/4HIP	177,78
UNC 1.3/8 - 6	3500-HIT26	85,86	-	-	3532-1.3/8HIM	42,60	-	-	3532-1.3/8HIP	180,93
UNC 1.1/2 - 6	3500-HIT27	86,00	-	-	3532-1.1/2HIM	42,60	-	-	3532-1.1/2HIP	183,45


**TECHNICAL RECOMMENDATION:**

Install the insert pitch and half deep at the workpiece.



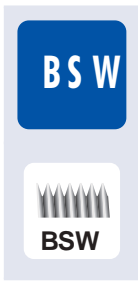
**INSTALLATION TOOLS**



		€		€		€		€		€
UNF N°3 - 56	3500-HIT3	12,65	3534-3GHIP	113,31	-	-	-	-	-	-
UNF N°4 - 48	3500-HIT4	12,65	3534-4GHIP	115,62	-	-	3534-4GMIT	77,12	-	-
UNF N°6 - 40	3500-HIT5	12,65	3534-6GHIP	101,30	-	-	3534-6GMIT	70,96	-	-
UNF N°8 - 36	3500-HIT6	12,65	3534-8GHIP	101,30	-	-	3534-8GMIT	70,96	-	-
UNF N°10 - 32	3500-HIT8	12,65	3534-10GHIP	101,30	-	-	3534-10GMIT	70,96	-	-
UNF N°12 - 28	3500-HIT8	12,65	3534-12GHIP	101,30	-	-	3534-12GMIT	70,95	-	-
UNF 1/4 - 28	3500-HIT9	12,65	3534-1/4HIP	68,86	-	-	3534-1/4MIT	70,96	-	-
UNF 5/16 - 24	3500-HIT11	14,50	3534-5/16HIP	68,91	-	-	3534-5/16MIT	70,96	-	-
UNF 3/8 - 24	3500-HIT13	14,50	3534-3/8HIP	80,01	-	-	3534-3/8MIT	77,12	-	-
UNF 7/16 - 20	3500-HIT14	18,18	3534-7/16HIP	80,01	-	-	3534-7/16MIT	77,12	-	-
UNF 1/2 - 20	3500-HIT15	18,18	3534-1/2HIP	92,51	-	-	3534-1/2MIT	82,27	-	-
UNF 9/16 - 18	3500-HIT16	21,87	-	-	-	-	-	-	3534-9/16HIP	83,61
UNF 5/8 - 8	3500-HIT18	24,16	-	-	-	-	-	-	3534-5/8HIP	87,84
UNF 3/4 - 16	3500-HIT21	24,16	-	-	-	-	-	-	3534-3/4HIP	98,82
UNF 7/8 - 14	3500-HIT22	30,37	-	-	-	-	-	-	3534-7/8HIP	106,42
UNF 1-12	3500-HIT23	30,37	-	-	-	-	-	-	3534-1HIP	121,60
UNS 1-14	3500-HIT23	30,37	-	-	-	-	-	-	3535-1HIP	121,60
UNF 1.1/8 - 12	3500-HIT25	54,53	-	-	3534-1.1/8HIM	36,51	-	-	3534-1.1/8HIP	456,02
UNF 1.1/4 - 12	3500-HIT26	85,86	-	-	3534-1.1/4HIM	36,51	-	-	3534-1.1/4HIP	532,02
UNF 1.3/8 - 12	3500-HIT27	86,00	-	-	3534-1.3/8HIM	42,60	-	-	3534-1.3/8HIP	608,03
UNF 1.1/2 - 12	3500-HIT28	86,00	-	-	3534-1.1/2HIM	42,60	-	-	3534-1.1/2HIP	684,02





**INSTALLATION TOOLS**


		€
BSW 1/8 - 40	3500-HIT4	12,65
BSW 3/16 - 24	3500-HIT7	12,65
BSW 1/4 - 20	3500-HIT9	12,65
BSW 5/16 - 18	3500-HIT10	14,50
BSW 3/8 - 16	3500-HIT11	14,50
BSW 7/16 - 14	3500-HIT14	18,18
BSW 1/2 - 12	3500-HIT15	18,18
BSW 9/16 - 12	3500-HIT16	21,87
BSW 5/8 - 11	3500-HIT18	24,16
BSW 3/4 - 10	3500-HIT20	24,16
BSW 7/8 - 9	3500-HIT22	30,37
BSW 1 - 8	3500-HIT23	30,37



		€		€
BSP 1/8 - 28	3500-HIT14	18,18	3546-1/8HIM	18,26
BSP 1/4 - 19	3500-HIT16	21,87	3546-1/4HIM	18,26
BSP 3/8 - 19	3500-HIT20	24,16	3546-3/8HIM	21,30
BSP 1/2 - 14	3500-HIT23	30,37	3546-1/2HIM	24,36
BSP 5/8 - 14	3500-HIT23	30,37	3546-5/8HIM	30,42
BSP 3/4 - 14	3500-HIT24	54,53	3546-3/4HIM	30,42
BSP 7/8 - 14	3500-HIT27	86,00	3546-7/8HIM	42,60
BSP 1 - 11	3500-HIT27	86,00	3546-1HIM	42,60



		€
BSF 3/16 - 32	3500-HIT8	12,65
BSF 1/4 - 26	3500-HIT9	12,65
BSF 5/16 - 22	3500-HIT11	14,50
BSF 3/8 - 20	3500-HIT13	14,50
BSF 7/16 - 18	3500-HIT14	18,18
BSF 1/2 - 16	3500-HIT15	18,18
BSF 9/16 - 16	3500-HIT16	21,87
BSF 5/8 - 14	3500-HIT18	24,16
BSF 3/4 - 12	3500-HIT20	24,16
BSF 7/8 - 11	3500-HIT22	30,37
BSF 1 - 10	3500-HIT23	30,37




		€
NPT 1/8 - 27	3500-HIT13	14,50
NPT 1/4 - 18	3500-HIT16	21,87
NPT 3/8 - 18	3500-HIT18	24,16
NPT 1/2 - 14	3500-HIT22	30,37
NPT 3/4 - 14	3500-HIT24	54,53
NPT 1 - 11.1/2	3500-HIT27	86,00





**INSTALLATION TOOLS**

powercoil  
by CEESA  
Pink



UN x 8





8-UN





FREE





FREE





		€		€			€
UN 1.1/8 - 8	3500-HIT24	<b>54,53</b>	3570-1.1/8HIM	<b>71,04</b>			
UN 1.1/4 - 8	3500-HIT25	<b>54,53</b>	3570-1.1/4HIM	<b>71,04</b>			
UN 1.3/8 - 8	3500-HIT26	<b>85,86</b>	3570-1.3/8HIM	<b>82,44</b>			
UN 1.1/2 - 8	3500-HIT27	<b>86,00</b>	3570-1.1/2HIM	<b>82,44</b>			
UN 1.5/8 - 8	3500-HIT27	<b>86,00</b>	3570-1.5/8HIM	<b>85,27</b>			
UN 1.3/4 - 8	3500-HIT28	<b>86,00</b>	3570-1.3/4HIM	<b>90,95</b>			
UN 1.7/8 - 8	3500-HIT30	<b>106,93</b>	3570-1.7/8HIM	<b>105,16</b>			
UN 2 - 8	3500-HIT30	<b>106,93</b>	3570-2HIM	<b>105,16</b>			



BSB





BSB




FREE

FREE

		€		€	
BSB 1/4 - 26	3500-HIT9	<b>12,65</b>			
BSB 5/16 - 26	3500-HIT11	<b>14,50</b>			
BSB 3/8 - 26	3500-HIT13	<b>14,50</b>			
BSB 7/16 - 26	3500-HIT14	<b>18,18</b>			
BSB 1/2 - 26	3500-HIT15	<b>18,18</b>			

BA



BA



FREE




		€		€
BA 0	3500-HIT9	<b>12,65</b>		
BA 2	3500-HIT7	<b>12,65</b>		
BA 4	3500-HIT5	<b>12,65</b>		
BA 6	3500-HIT3	<b>12,65</b>		

MF





FREE




		€		€	
10x1.00	3500-HIT13	<b>14,50</b>			
12x1.25	3500-HIT15	<b>18,18</b>			
14x1.25	3500-HIT17	<b>21,87</b>			
18x1.50	3500-HIT20	<b>24,16</b>			

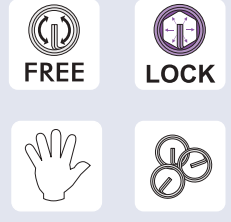



M14x1,25

M12x1,25





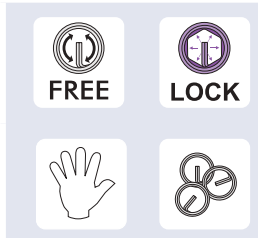
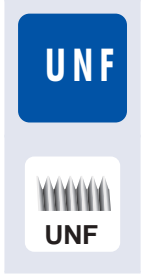
**INSTALLATION TOOL, TANG BREAKER, EXTRACTOR**
**UNC**
  
**UNC**



		€
UNC N°2 - 56	3500-TB2	5,43
UNC N°3 - 48	3500-TB3	5,43
UNC N°4 - 40	3500-TB4	5,43
UNC N°5 - 40	3500-TB4	5,43
UNC N°6 - 32	3500-TB5	5,43
UNC N°8 - 32	3500-TB6	5,43
UNC N°10 - 24	3500-TB8	5,43
UNC N°12 - 24	3500-TB8	5,43
UNC 1/4 - 20	3500-TB9	5,43
UNC 5/16 - 18	3500-TB12	6,01
UNC 3/8 - 16	3500-TB12	6,01
UNC 7/16 - 14	3500-TB14	7,28
UNC 1/2 - 13	3500-TB15	7,28
UNC 9/16 - 12	3500-HIT16	21,87
UNC 5/8 - 11	3500-HIT18	24,16
UNC 3/4 - 10	3500-HIT20	24,16
UNC 7/8 - 9	3500-HIT22	30,37
UNC 1 - 8	3500-HIT23	30,37
UNC 1.1/8 - 7	-	-
UNC 1.1/4 - 7	-	-
UNC 1.3/8 - 6	-	-
UNC 1.1/2 - 6	-	-

	€
3500-RT1	24,83
3500-RT1	24,83
3500-RT1	24,83
3500-RT1	24,83
3500-RT1	24,83
3500-RT1	24,83
3500-RT2	26,81
3500-RT2	26,81
3500-RT2	26,81
3500-RT3	32,81
3500-RT3	32,81
3500-RT3	32,81
3500-RT3	32,81
3500-RT3	32,81
3500-RT3	32,81
3500-RT4	60,05
3500-RT4	60,05
3500-RT4	60,05
3500-RT4	60,05

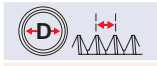
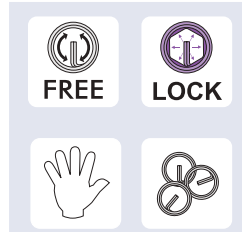
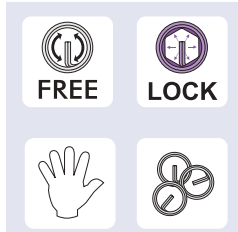
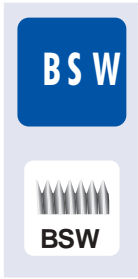


**INSTALLATION TOOL, TANG BREAKER, EXTRACTOR**

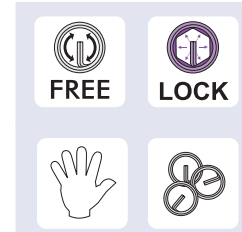
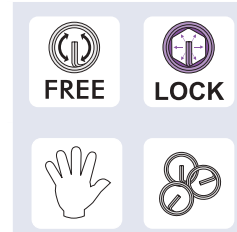


		€
UNF N°3 - 56	3500-TB3	5,43
UNF N°4 - 48	3500-TB4	5,43
UNF N°6 - 40	3500-TB5	5,43
UNF N°8 - 36	3500-TB6	5,43
UNF N°10 - 32	3500-TB8	5,43
UNF N°12 - 28	3500-TB8	5,43
UNF 1/4 - 28	3500-TB9	5,43
UNF 5/16 - 24	3500-TB12	6,01
UNF 3/8 - 24	3500-TB13	6,01
UNF 7/16 - 20	3500-TB14	7,28
UNF 1/2 - 20	3500-TB15	7,28
UNF 9/16 - 18	3500-HIT16	21,87
UNF 5/8 - 18	3500-HIT18	24,16
UNF 3/4 - 16	3500-HIT21	24,16
UNF 7/8 - 14	3500-HIT22	30,37
UNF 1 - 12	3500-HIT23	30,37
UNF 1 - 14	3500-HIT23	30,37
UNF 1.1/8 - 12	-	-
UNF 1.1/4 - 12	-	-
UNF 1.3/8 - 12	-	-
UNF 1.1/2 - 12	-	-

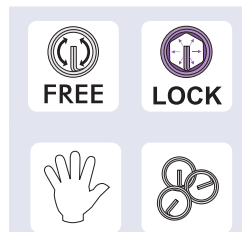
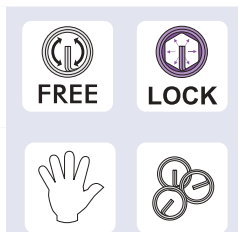
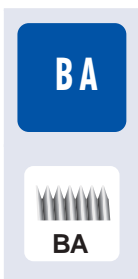
	€
3500-RT1	24,83
3500-RT1	24,83
3500-RT1	24,83
3500-RT1	24,83
3500-RT2	26,81
3500-RT2	26,81
3500-RT2	26,81
3500-RT2	26,81
3500-RT3	32,81
3500-RT3	32,81
3500-RT3	32,81
3500-RT3	32,81
3500-RT3	32,81
3500-RT3	32,81
3500-RT3	32,81
3500-RT3	32,81
3500-RT3	32,81
3500-RT4	60,05
3500-RT4	60,05
3500-RT4	60,05
3500-RT4	60,05

**INSTALLATION TOOL, TANG BREAKER, EXTRACTOR**


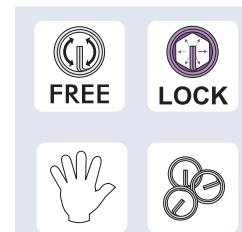
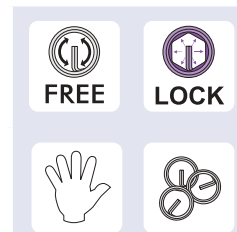
		€		€
BSW 1/8 - 40	3500-TB4	5,43	3500-RT1	24,83
BSW 3/16 - 24	3500-TB8	5,43	3500-RT2	26,81
BSW 1/4 - 20	3500-TB9	5,43	3500-RT2	26,81
BSW 5/16 - 18	3500-TB11	6,01	3500-RT2	26,81
BSW 3/8 - 16	3500-TB12	6,01	3500-RT3	32,81
BSW 7/16 - 14	3500-TB14	7,28	3500-RT3	32,81
BSW 1/2 - 12	3500-TB15	7,28	3500-RT3	32,81
BSW 9/16 - 12	3500-HIT16	21,87	3500-RT3	32,81
BSW 5/8 - 11	3500-HIT18	24,16	3500-RT3	32,81
BSW 3/4 - 10	3500-HIT20	24,16	3500-RT3	32,81
BSW 7/8 - 9	3500-HIT22	30,37	3500-RT3	32,81
BSW 1 - 8	3500-HIT23	30,37	3500-RT3	32,81



		€		€
BSF 3/16 - 32	3500-TB6	5,43	3500-RT2	26,81
BSF 1/4 - 26	3500-TB9	5,43	3500-RT2	26,81
BSF 5/16 - 22	3500-TB11	6,01	3500-RT2	26,81
BSF 3/8 - 20	3500-TB12	6,01	3500-RT3	32,81
BSF 7/16 - 18	3500-TB14	7,28	3500-RT3	32,81
BSF 1/2 - 16	3500-TB15	7,28	3500-RT3	32,81
BSF 9/16 - 16	3500-HIT16	21,87	3500-RT3	32,81
BSF 5/8 - 14	3500-HIT18	24,16	3500-RT3	32,81
BSF 3/4 - 12	3500-HIT20	24,16	3500-RT3	32,81
BSF 7/8 - 11	3500-HIT22	30,37	3500-RT3	32,81
BSF 1 - 10	3500-HIT23	30,37	3500-RT3	32,81



		€		€
BA 0	3500-TB11	6,01	3500-RT2	26,81
BA 2	3500-TB8	5,43	3500-RT2	26,81
BA 4	3500-TB5	5,43	3500-RT1	24,83
BA 6	3500-TB3	5,43	3500-RT1	24,83



		€		€
BSB 1/4 - 26	3500-TB9	5,43	3500-RT2	26,81
BSB 5/16 - 26	3500-TB12	6,01	3500-RT2	26,81
BSB 3/8 - 26	3500-TB13	6,01	3500-RT3	32,81
BSB 7/16 - 26	3500-TB14	7,28	3500-RT3	32,81
BSB 1/2 - 26	3500-TB15	7,28	3500-RT3	32,81

**SOLID CARBIDE DRILLS FOR HARDENED AND HIGH RESISTANCE STEEL**

Ref. BC85

**70  
HRC**

**SOLID  
CARBIDE**

**TO L Ø  
h7**

**TO L Ø  
h6**

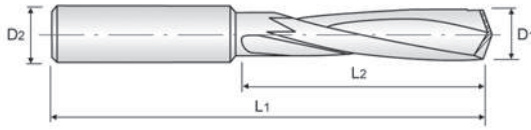



**TiA IN**

**HARDX  
600**

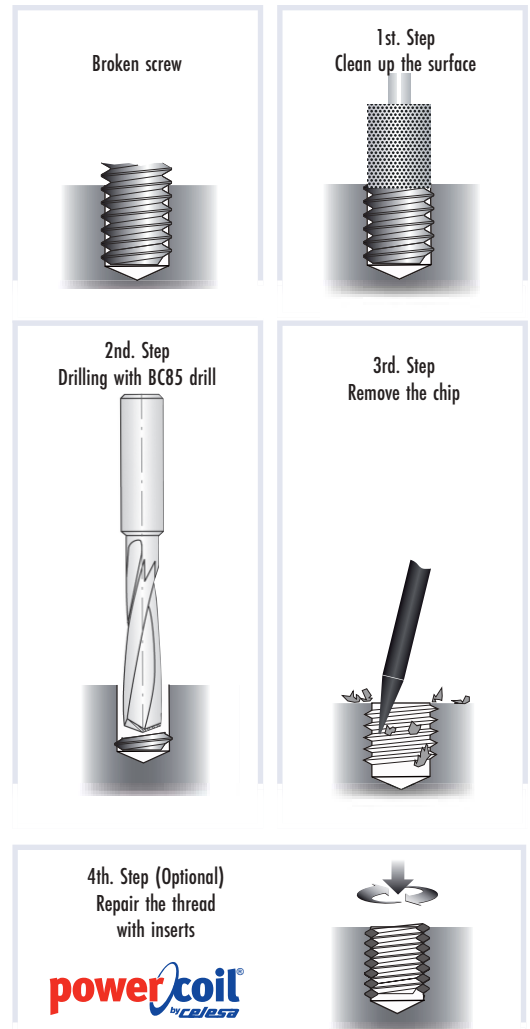
**HIGH  
PERFORMANCE**

Recommended for HARDOX 600



BC85						
	D1 mm	D2 mm	L1 mm	L2 mm		
BC850300	3,0	3	46	16		48,34
BC850330	3,3	4	48	18	M4	55,48
BC850340	3,4	4	50	20		55,48
BC850350	3,5	4	50	20		55,48
BC850400	4,0	4	52	22		56,60
BC850420	4,2	6	65	25	M5	80,37
BC850430	4,3	6	68	28		80,37
BC850440	4,4	6	68	28		80,37
BC850450	4,5	6	68	28		80,37
BC850500	5,0	6	72	32	M6	80,37
BC850510	5,1	6	72	32		80,37
BC850520	5,2	6	72	32		80,37
BC850550	5,5	6	75	35		80,37
BC850600	6,0	6	75	35		80,37
BC850650	6,5	8	80	40		93,35
BC850680	6,8	8	85	45	M8	93,35
BC850690	6,9	8	85	45		93,35
BC850700	7,0	8	85	45		93,35
BC850750	7,5	8	85	45		93,35
BC850800	8,0	8	98	50		93,35
BC850850	8,5	10	98	50	M10	142,67
BC850860	8,6	10	105	57		142,67
BC850880	8,8	10	105	57		142,67
BC850900	9,0	10	105	57		142,67
BC850950	9,5	10	105	57		142,67
BC851000	10,0	10	111	63		142,67
BC851020	10,2	12	111	63	M12	184,78
BC851030	10,3	12	111	63		216,81
BC851050	10,5	12	111	63		216,81
BC851080	10,8	12	119	71		216,81
BC851100	11,0	12	119	71		216,81
BC851150	11,5	12	119	71		216,81
BC851200	12,0	12	119	71	M14	216,81
BC851400	14,0	14	125	77	M16	246,37

**DRILLING THROUGH BROKEN SCREWS**



HRC	50-55		55-60		60-70	
	VC (R.P.M.)	(mm/min)	VC (R.P.M.)	(mm/min)	VC (R.P.M.)	(mm/min)
3	1900	0.04	1330	0.04	1000	0.04
4	1430	0.04	1000	0.04	750	0.04
5	1150	0.04	800	0.04	600	0.04
6	960	0.04	670	0.04	500	0.04
8	720	0.04	500	0.04	370	0.04
10	570	0.04	400	0.04	300	0.04
12	480	0.04	330	0.04	250	0.04
14	438	0.04	282	0.04	210	0.04

VC: Cutting Speed

**FULLY GROUND TWIST DRILLS**
**HSSC**  
 5%

**DIN**  
 338

**GOLD**


	Ø mm.	Ø"	L1 x L2 mm	€
3520-0210	2.10	-	49x24	2,67
3520-0230	2.30	3/32	53x27	2,67
3520-0240	2.40	-	57x30	2,67
3520-0260	2.60	-	57x30	2,56
3520-0270	2.70	-	61x33	2,56
3520-0290	2.90	-	61x33	2,56
3520-0300	3.00	-	61x33	2,04
3520-0320	3.20	1/8	65x36	2,46
3520-0340	3.40	-	70x39	2,56
3520-0370	3.70	-	70x39	3,09
3520-0380	3.80	-	75x43	3,09
3520-0420	4.20	-	75x43	2,91
3520-0430	4.30	-	80x47	3,09
3520-0440	4.40	11/64	80x47	3,09
3520-0480	4.80	-	86x52	3,43
3520-0490	4.90	-	86x52	3,43
3520-0500	5.00	-	86x52	3,12
3520-0510	5.10	-	86x52	3,75
3520-0520	5.20	13/64	86x52	3,75
3520-0550	5.50	7/32	93x57	3,96
3520-0570	5.70	15/64	93x57	4,69
3520-0620	6.20	-	101x63	5,22
3520-0630	6.30	1/4	101x63	5,22
3520-0660	6.60	-	101x63	6,27
3520-0670	6.70	17/64	101x63	6,27
3520-0690	6.90	-	109x69	6,27
3520-0730	7.30	9/32	109x69	7,98
3520-0760	7.60	-	117x75	9,60
3520-0800	8.00	5/16	117x75	6,90
3520-0820	8.20	-	117x75	9,21
3520-0830	8.30	21/64	117x75	9,21

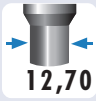
	Ø mm.	Ø"	L1 x L2 mm	€
3520-0840	8.40	-	117x75	9,21
3520-0880	8.80	-	125x81	11,70
3520-0930	9.30	23/64	125x81	12,96
3520-0940	9.40	3/8	125x81	12,92
3520-0980	9.80	-	133x87	15,19
3520-0990	9.90	25/64	133x87	15,19
3520-1000	10.00	-	133x87	10,44
3520-1010	10.10	-	133x87	17,47
3520-1030	10.30	13/32	133x87	17,50
3520-1040	10.40	-	133x87	17,47
3520-1080	10.80	-	142x94	20,31
3520-1110	11.10	7/16	142x94	23,17
3520-1130	11.30	-	142x94	23,17
3520-1140	11.40	-	142x94	23,17
3520-1150	11.50	29/64	142x94	19,50
3520-1160	11.60	-	142x94	23,94
3520-1230	12.30	-	151x101	27,79
3520-1240	12.40	31/64	151x101	27,79
3520-1250	12.50	-	151x101	25,38
3520-1270	12.70	1/2	151x101	28,92
3520-1280	12.80	-	151x101	28,92
3520-1300	13.00	33/64	151x101	25,94
3520-1325	13.25	-	160x108	35,91
3520-1350	13.50	-	160x108	28,60
3520-1375	13.75	-	160x108	35,91
3520-1425	14.25	9/16	169x114	47,19
3520-1450	14.50	-	169x114	40,11
3520-1475	14.75	-	169x114	47,19
3520-1500	15.00	19/32	169x114	40,71
3520-1525	15.25	-	178x120	65,10



**FULLY GROUND REDUCED SHANK TWIST DRILLS**

**HSS C**  
5%

**DIN**  
**338**



**GOLD**



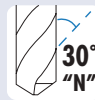
	Ø mm.	Ø"	L1 x L2 mm	€
3520-1550	15.50	39/64	178x120	60,84
3520-1650	16.50	-	184x125	71,47
3520-1675	16.75	-	184x125	95,79
3520-1700	17.00	-	184x125	71,93
3520-1750	17.50	-	191x130	79,17
3520-1850	18.50	23/32	198x135	96,81
3520-1875	18.75	-	198x135	121,38
3520-1900	19.00	3/4	198x135	95,97
3520-1950	19.50	49/64	205x140	106,33
3520-2000	20.00	-	205x240	113,93
3520-2050	20.50	13/16	205x140	135,63



**MORSE TAPER SHANK DRILLS**

**HSS**

**DIN**  
**345**



**OX**



	Ø mm.	Ø"	L1 x L2 mm	€
3520-2075	20.75	-	243x145	73,47
3520-2100	21.00	-	243x145	70,21
3520-2150	21.50	27/32	248x150	70,21
3520-2250	22.50	57/64	253x155	76,97
3520-2275	22.75	-	253x155	88,73
3520-2300	23.00	29/32	253x155	76,80
3520-2325	23.25	-	276x155	97,83
3520-2350	23.50	-	276x155	85,23
3520-2450	24.50	31/32	281x160	92,82
3520-2500	25.00	-	281x160	92,44
3520-2575	25.75	1.1/64	286x165	116,10
3520-2600	26.00	-	286x165	100,59
3520-2625	26.25	-	286x165	125,73
3520-2650	26.50	-	286x165	108,89
3520-2700	27.00	1.1/16	291x170	108,99
3520-2750	27.50	1.5/64	291x170	116,59
3520-2800	28.00	1.3/32	291x170	116,94
3520-2850	28.50	1.1/8	296x175	124,99
3520-2950	29.50	1.5/32	296x175	137,62
3520-3000	30.00	1.11/64	296x175	137,73
3520-3050	30.50	1.3/16	301x180	153,66
3520-3100	31.00	1.7/32	301x180	153,79
3520-3200	32.00	1.1/4	334x185	162,02
3520-3250	32.50	1.9/32	334x185	186,10
3520-3300	33.00	1.19/64	334x185	184,98
3520-3325	33.25	-	334x185	228,17
3520-3350	33.50	1.5/16	334x185	201,81
3520-3375	33.75	-	339x190	229,39
3520-3400	34.00	1.21/64	339x190	201,18
3520-3500	35.00	1.3/8	339x190	220,82
3520-3550	35.50	1.13/32	339x190	235,73
3520-3600	36.00	-	344x195	236,32
3520-3650	36.50	-	344x195	249,94
3520-3700	37.00	1.29/64	344x195	249,59
3520-3800	38.00	1.1/2	349x200	262,15
3520-3850	38.50	-	349x200	278,95
3520-3900	39.00	1.17/32	349x200	279,20
3520-3950	39.50	1.35/64	349x200	295,68
3520-3975	39.75	-	349x200	328,48
3520-4000	40.00	1.9/16	349x200	295,30
3520-4100	41.00	1.5/8	354x205	309,93
3520-4250	42.50	1.43/64	354x205	345,49
3520-4300	43.00	1.11/16	359x210	345,52
3520-4450	44.50	1.3/8	359x210	378,57
3520-4600	46.00	-	364x215	392,01
3520-4750	47.50	1.7/8	364x215	423,47
3520-4850	48.50	1.29/32	369x220	440,27
3520-5100	51.00	2	412x225	535,96



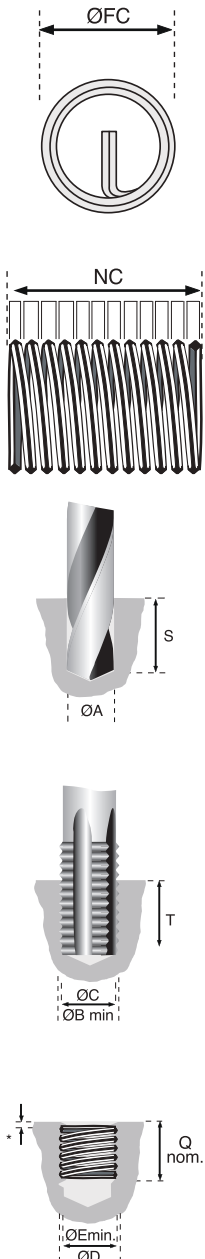




**TECHNICAL INFORMATION FOR FREE RUNNING INSERTS**

M/MF	
<b>A</b>	Minor Diameter
<b>B</b>	Major Diameter
<b>C</b>	Pitch Diameter of Tapped Hole (Class 5H)
<b>D</b>	Pitch Diameter of Installed Insert (Class 4H)
<b>E</b>	Installed Insert Internal Diameter - min.
<b>FC</b>	Free Coil Diameter of Uninstalled Insert
<b>S</b>	Drilling Length - minimum
<b>T</b>	Tapping Length - minimum
<b>Q</b>	Nominal Length
<b>NC</b>	Number of Coils in Uninstalled Insert counted 90° from tang.

SIZE M/MF	Drill		A max/min mm	FC min/max mm	NC max/min				
	mm	"			1.0D	1.5D	2.0D	2.5D	3.0D
M2 X 0.40	2.10	#45	2.177 / 2.087	2.49 / 2.70	3.30 / 3.00	5.70 / 5.20	8.10 / 7.40	10.50 / 9.60	13.00 / 11.80
M2.2 X 0.45	2.30	3/32	2.397 / 2.297	2.76 / 3.00	3.20 / 2.90	5.50 / 5.00	7.90 / 7.10	10.30 / 9.30	12.60 / 11.40
M2.5 X 0.45	2.60	#37	2.697 / 2.597	3.05 / 3.70	3.80 / 3.10	6.50 / 5.20	9.20 / 7.40	11.90 / 9.50	14.60 / 11.70
M3 X 0.50	3.20	1/8	3.220 / 3.108	3.61 / 4.35	4.30 / 3.40	7.20 / 5.80	10.10 / 8.20	13.10 / 10.50	16.00 / 12.90
M3.5 X 0.60	3.70	#27	3.755 / 3.630	4.24 / 4.95	4.10 / 3.40	7.00 / 5.80	9.80 / 8.20	12.60 / 10.50	15.50 / 12.90
M4 x 0.70	4.20	-	4.292 / 4.152	4.86 / 5.60	4.00 / 3.40	6.80 / 5.70	9.60 / 8.10	12.30 / 10.50	15.10 / 12.80
M5 X 0.80	5.20	13/64	5.333 / 5.173	5.98 / 6.80	4.50 / 3.90	7.60 / 6.50	10.60 / 9.20	13.70 / 11.80	16.70 / 14.40
M6 X 1.00	6.30	1/4	6.406 / 6.216	7.23 / 7.95	4.30 / 3.80	7.20 / 6.40	10.10 / 9.10	13.10 / 11.70	16.00 / 14.30
M7 X 1.00	7.30	9/32	7.406 / 7.216	8.22 / 9.20	5.30 / 4.60	8.70 / 7.70	12.10 / 10.70	15.60 / 13.70	19.00 / 16.70
M8 X 1.25	8.30	21/64	8.483 / 8.271	9.53 / 10.35	4.70 / 4.20	7.80 / 7.10	10.90 / 9.90	14.10 / 12.80	17.20 / 15.60
M8 X 1.00	8.30	21/64	8.406 / 8.216	9.39 / 10.25	6.10 / 5.60	10.00 / 9.10	13.80 / 12.50	17.70 / 16.00	21.50 / 19.50
M9 X 1.25	9.40	3/8	9.483 / 9.271	10.52 / 11.16	5.50 / 5.10	9.00 / 8.40	12.50 / 11.70	16.10 / 15.00	19.60 / 18.30
M9 x 1.00	9.30	23/64	9.406 / 9.216	10.40 / 11.23	7.10 / 6.50	11.50 / 10.50	15.80 / 14.50	20.20 / 18.50	24.50 / 22.50
M10 X 1.50	10.40	-	10.561 / 10.325	11.83 / 12.50	4.90 / 4.60	8.20 / 7.70	11.50 / 10.80	14.70 / 13.80	18.00 / 16.90
M10 X 1.25	10.30	13/32	10.483 / 10.271	11.74 / 12.65	6.10 / 5.60	10.00 / 9.20	13.80 / 12.70	17.70 / 16.30	21.50 / 19.80
M10 x 1.00	10.30	13/32	10.406 / 10.216	11.41 / 12.50	8.10 / 7.30	12.90 / 11.70	17.80 / 16.10	22.60 / 20.50	27.50 / 24.90
M11 X 1.50	11.40	-	11.561 / 11.325	12.82 / 13.59	5.60 / 5.20	9.20 / 8.60	12.80 / 12.00	16.40 / 15.40	20.00 / 18.70
M11 X 1.25	11.30	-	11.483 / 11.271	12.75 / 13.76	6.90 / 6.40	11.20 / 10.30	15.40 / 14.20	19.70 / 18.10	23.90 / 22.00
M11 X 1.00	11.30	-	11.406 / 11.216	12.42 / 13.41	9.10 / 8.40	14.40 / 13.30	19.80 / 18.20	25.10 / 23.10	30.40 / 28.00
M12 X 1.75	12.50	-	12.644 / 12.379	14.13 / 15.00	5.10 / 4.80	8.50 / 7.90	11.90 / 11.10	15.20 / 14.20	18.60 / 17.30
M12 X 1.50	12.40	31/64	12.561 / 12.325	14.09 / 15.20	6.10 / 5.60	10.00 / 9.20	13.80 / 12.70	17.70 / 16.20	21.50 / 19.80
M12 X 1.25	12.30	-	12.483 / 12.271	13.76 / 15.00	7.70 / 7.00	12.40 / 11.20	17.00 / 15.50	21.60 / 19.70	26.30 / 23.90
M12 X 1.00	12.30	-	12.406 / 12.216	13.43 / 14.49	10.10 / 9.30	15.90 / 14.70	21.70 / 20.00	27.60 / 25.40	33.40 / 30.80
M13 X 1.75	13.50	-	13.644 / 13.379	15.12 / 16.04	5.70 / 5.30	9.40 / 8.70	13.00 / 12.20	16.70 / 15.60	20.30 / 19.00
M13 X 1.50	13.25	-	13.561 / 13.325	15.10 / 16.29	6.80 / 6.20	11.00 / 10.10	15.20 / 13.90	19.30 / 17.80	23.50 / 21.60
M13 X 1.25	13.25	-	13.483 / 13.271	14.77 / 15.94	8.50 / 7.80	13.50 / 12.50	18.60 / 17.10	23.60 / 21.70	28.70 / 26.40
M14 X 2.00	14.50	-	14.733 / 14.433	16.43 / 17.35	5.30 / 5.00	8.70 / 8.20	12.10 / 11.40	15.60 / 14.60	19.00 / 17.90
M14 X 1.50	14.50	-	14.561 / 14.325	16.11 / 17.25	7.50 / 6.90	12.00 / 11.10	16.50 / 15.30	21.00 / 19.40	25.50 / 23.60
M14 X 1.25	14.25	9/16	14.483 / 14.271	15.78 / 17.03	9.30 / 8.60	14.70 / 13.60	20.20 / 18.60	25.60 / 23.60	31.00 / 28.60
M14 X 1.00	14.25	9/16	14.406 / 14.216	15.45 / 16.68	12.10 / 11.10	18.90 / 17.40	25.70 / 23.70	32.50 / 30.00	39.30 / 36.20
M15 X 2.00	15.50	39/64	15.733 / 15.433	17.42 / 18.48	5.80 / 5.40	9.50 / 8.80	13.10 / 12.30	16.80 / 15.70	20.50 / 19.20
M15 X 1.50	15.25	-	15.561 / 15.325	17.12 / 18.47	8.10 / 7.50	12.90 / 11.90	17.80 / 16.40	22.60 / 20.80	27.50 / 25.30
M16 X 2.00	16.50	-	16.733 / 16.433	18.41 / 19.60	6.30 / 5.90	10.20 / 9.50	14.20 / 13.20	18.10 / 16.90	22.00 / 20.50
M16 X 1.50	16.50	-	16.561 / 16.325	18.13 / 19.60	8.80 / 8.00	13.90 / 12.80	19.10 / 17.50	24.30 / 22.30	29.40 / 27.00
M18 X 2.50	19.00	3/4	18.896 / 18.541	21.04 / 22.00	5.50 / 5.20	9.00 / 8.60	12.50 / 11.90	16.10 / 15.30	19.60 / 18.60
M18 X 2.00	18.50	23/32	18.733 / 18.433	20.80 / 21.85	7.10 / 6.70	11.50 / 10.90	15.80 / 15.00	20.20 / 19.10	24.50 / 23.20
M18 X 1.50	18.50	23/32	18.561 / 18.325	20.15 / 21.75	10.10 / 9.30	15.90 / 14.60	21.70 / 20.00	27.60 / 25.40	33.40 / 30.70
M20 X 2.50	20.75	-	20.896 / 20.541	23.02 / 24.40	6.30 / 5.90	10.20 / 9.60	14.20 / 13.30	18.10 / 16.90	22.00 / 20.60
M20 X 2.00	20.50	13/16	20.733 / 20.433	22.82 / 24.05	8.10 / 7.70	12.90 / 12.20	17.80 / 16.80	22.60 / 21.40	27.50 / 25.90
M20 X 1.50	20.50	13/16	20.561 / 20.325	22.17 / 24.00	11.40 / 10.50	17.90 / 16.40	24.40 / 22.40	30.90 / 28.30	37.40 / 34.30
M22 X 2.50	22.75	-	22.896 / 22.541	25.00 / 26.90	7.10 / 6.50	11.40 / 10.50	15.80 / 14.50	20.10 / 18.50	24.50 / 22.50
M22 X 1.50	22.50	57/64	22.733 / 22.433	24.84 / 26.50	9.10 / 8.50	14.40 / 13.40	19.80 / 18.40	25.10 / 23.40	30.40 / 28.40
M22 X 1.00	22.50	57/64	22.561 / 22.325	24.19 / 26.45	12.70 / 11.60	19.90 / 18.10	27.00 / 24.60	34.20 / 31.10	41.30 / 37.60
M24 X 3.00	25.00	-	25.050 / 24.650	27.62 / 29.00	6.30 / 5.90	10.20 / 9.70	14.20 / 13.40	18.10 / 17.10	22.00 / 20.90
M24 X 2.00	24.50	31/32	24.733 / 24.433	26.86 / 29.10	10.10 / 9.20	15.90 / 14.60	21.70 / 19.90	27.60 / 25.30	33.40 / 30.60
M24 X 1.50	24.50	31/32	24.561 / 24.325	26.21 / 28.28	14.00 / 12.90	21.80 / 20.10	29.70 / 27.30	37.50 / 34.50	45.30 / 41.70
M26 X 1.50	26.50	-	26.561 / 26.325	28.23 / 30.46	15.40 / 14.20	23.80 / 22.00	32.30 / 29.80	40.80 / 37.60	49.20 / 45.40
M27 X 3.00	28.00	1.3/32	28.050 / 27.650	30.59 / 32.40	7.30 / 6.80	11.70 / 11.00	16.20 / 15.20	20.60 / 19.30	25.10 / 23.50
M27 X 2.00	27.50	1.5/64	27.733 / 27.433	29.89 / 32.30	11.60 / 10.60	18.10 / 16.70	24.70 / 22.70	31.30 / 28.80	37.90 / 34.80
M30 X 3.50	31.00	1.7/32	31.208 / 30.758	34.20 / 35.81	6.90 / 6.50	11.10 / 10.50	15.30 / 14.50	19.50 / 18.60	23.80 / 22.60
M30 X 3.00	31.00	1.7/32	31.050 / 30.650	34.24 / 36.10	8.10 / 7.60	12.90 / 12.20	17.80 / 16.80	22.60 / 21.30	27.50 / 25.90
M30 X 2.00	30.50	1.3/16	30.733 / 30.433	32.92 / 35.70	13.00 / 12.00	20.40 / 18.70	27.70 / 25.40	35.00 / 32.10	42.30 / 38.80
M33 X 3.50	34.00	1.21/64	34.208 / 33.758	37.17 / 38.80	7.70 / 7.40	12.40 / 11.80	17.00 / 16.20	21.70 / 20.70	26.40 / 25.10
M33 X 3.00	33.50	1.5/16	34.050 / 33.650	37.27 / 39.50	9.10 / 8.50	14.40 / 13.50	19.80 / 18.50	25.10 / 23.60	30.40 / 28.60
M33 X 2.00	33.50	1.5/16	33.733 / 33.433	35.95 / 39.20	14.50 / 13.30	22.60 / 20.60	30.60 / 28.00	38.70 / 35.30	46.80 / 42.70
M36 X 4.00	37.00	1.29/64	37.341 / 36.866	40.78 / 42.67	7.30 / 6.90	11.70 / 11.20	16.20 / 15.40	20.60 / 19.60	25.10 / 23.80
M36 X 3.00	37.00	1.29/64	37.050 / 36.650	40.30 / 42.70	10.10 / 9.50	15.90 / 14.90	21.70 / 20.40	27.60 / 25.90	33.40 / 31.40
M39 X 4.00	40.00	1.9/16	40.341 / 39.866	43.75 / 45.75	8.00 / 7.70	12.90 / 12.20	17.70 / 16.80	22.50 / 21.40	27.30 / 26.00
M42 X 4.50	43.00	1.11/16	43.505 / 42.975	47.37 / 49.00	7.60 / 7.30	12.20 / 11.80	16.80 / 16.20	21.50 / 20.70	26.10 / 25.10
M42 X 3.00	42.50	1.43/64	43.050 / 42.650	46.36 / 49.00	12.10 / 11.40	18.90 / 17.80	25.70 / 24.20	32.50 / 30.60	39.30 / 37.10





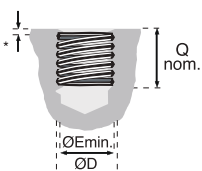
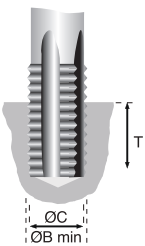
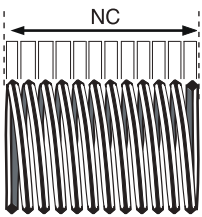
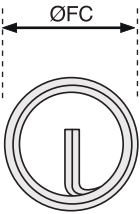
**TECHNICAL INFORMATION FOR FREE RUNNING INSERTS**

B mm	C (5H) mm	D (4H) mm	C (6H) mm	D (5H) mm	E mm	S					T					Q				
						1.0D	1.5D	2.0D	2.5D	3.0D	1.0D	1.5D	2.0D	2.5D	3.0D	1.0D	1.5D	2.0D	2.5D	3.0D
2.520	2.296 / 2.260	1.796 / 1.740	2.311 / 2.260	1.811 / 1.740	1.567	3.80	4.80	5.80	6.80	7.80	3.40	4.40	5.40	6.40	7.40	2.00	3.00	4.00	5.00	6.00
2.785	2.532 / 2.492	1.968 / 1.908	2.547 / 2.492	1.983 / 1.908	1.713	4.23	5.33	6.43	7.53	8.63	3.78	4.88	5.98	7.08	8.18	2.20	3.30	4.40	5.50	6.60
3.085	2.832 / 2.792	2.268 / 2.208	2.847 / 2.792	2.283 / 2.208	2.013	4.53	5.78	7.03	8.28	9.53	4.08	5.33	6.58	7.83	9.08	2.50	3.75	5.00	6.25	7.50
3.650	3.367 / 3.325	2.738 / 2.675	3.384 / 3.325	2.755 / 2.675	2.459	5.25	6.75	8.25	9.75	11.25	4.75	6.25	7.75	9.25	10.75	3.00	4.50	6.00	7.50	9.00
4.279	3.940 / 3.890	3.181 / 3.110	3.959 / 3.890	3.200 / 3.110	2.850	6.20	7.95	9.70	11.45	13.20	5.60	7.35	9.10	10.85	12.60	3.50	5.25	7.00	8.75	10.50
4.909	4.509 / 4.455	3.620 / 3.545	4.529 / 4.455	3.640 / 3.545	3.242	7.15	9.15	11.15	13.15	15.15	6.45	8.45	10.45	12.45	14.45	4.00	6.00	8.00	10.00	12.00
6.039	5.577 / 5.520	4.560 / 4.480	5.597 / 5.520	4.580 / 4.480	4.134	8.60	11.10	13.60	16.10	18.60	7.80	10.30	12.80	15.30	17.80	5.00	7.50	10.00	12.50	15.00
7.299	6.719 / 6.650	5.445 / 5.350	6.742 / 6.650	5.468 / 5.350	4.917	10.50	13.50	16.50	19.50	22.50	9.50	12.50	15.50	18.50	21.50	6.00	9.00	12.00	15.00	18.00
8.299	7.719 / 7.650	6.445 / 6.350	7.742 / 7.650	6.468 / 6.350	5.917	11.50	15.00	18.50	22.00	25.50	10.50	14.00	17.50	21.00	24.50	7.00	10.50	14.00	17.50	21.00
9.624	8.886 / 8.812	7.288 / 7.188	8.912 / 8.812	7.313 / 7.188	6.647	13.63	17.63	21.63	25.63	29.63	12.38	16.38	20.38	24.38	28.38	8.00	12.00	16.00	20.00	24.00
9.299	8.719 / 8.650	7.445 / 7.350	8.742 / 8.650	7.468 / 7.350	6.917	12.50	16.50	20.50	24.50	28.50	11.50	15.50	19.50	23.50	27.50	8.00	12.00	16.00	20.00	24.00
10.624	9.886 / 9.812	8.288 / 8.188	9.912 / 9.812	8.313 / 8.188	7.647	14.63	19.13	23.63	28.13	32.63	13.38	17.88	22.38	26.88	31.38	9.00	13.50	18.00	22.50	27.00
10.299	9.719 / 9.650	8.445 / 8.350	9.742 / 9.650	8.468 / 8.350	7.917	13.50	18.00	22.50	27.00	31.50	12.50	17.00	21.50	26.00	30.50	9.00	13.50	18.00	22.50	27.00
11.949	11.061 / 10.974	9.138 / 9.026	11.089 / 10.974	9.166 / 9.026	8.376	16.75	21.75	26.75	31.75	36.75	15.25	20.25	25.25	30.25	35.25	10.00	15.00	20.00	25.00	30.00
11.624	10.886 / 10.812	9.288 / 9.188	10.912 / 10.812	9.313 / 9.188	8.647	15.63	20.63	25.63	30.63	35.63	14.38	19.38	24.38	29.38	34.38	10.00	15.00	20.00	25.00	30.00
11.299	10.724 / 10.650	9.445 / 9.350	10.742 / 10.650	9.468 / 9.350	8.917	14.50	19.50	24.50	29.50	34.50	13.50	18.50	23.50	28.50	33.50	10.00	15.00	20.00	25.00	30.00
12.949	12.061 / 11.974	10.138 / 10.026	12.089 / 11.974	10.166 / 10.026	9.376	17.75	23.25	28.75	34.25	39.75	16.25	21.75	27.25	32.75	38.25	11.00	16.50	22.00	27.50	33.00
12.624	11.898 / 11.812	10.300 / 10.188	11.926 / 11.812	10.328 / 10.188	9.647	16.63	22.13	27.63	33.13	38.63	15.38	20.88	26.38	31.88	37.38	11.00	16.50	22.00	27.50	33.00
12.299	11.724 / 11.650	10.445 / 10.350	11.742 / 11.650	10.468 / 10.350	9.917	15.50	21.00	26.50	32.00	37.50	14.50	20.00	25.50	31.00	36.50	11.00	16.50	22.00	27.50	33.00
14.273	13.236 / 13.137	10.988 / 10.863	13.271 / 13.137	11.023 / 10.863	10.106	19.88	25.88	31.88	37.88	43.88	18.13	24.13	30.13	36.13	42.13	12.00	18.00	24.00	30.00	36.00
13.949	13.067 / 12.974	11.144 / 11.026	13.099 / 12.974	11.176 / 11.026	10.376	18.75	24.75	30.75	36.75	42.75	17.25	23.25	29.25	35.25	41.25	12.00	18.00	24.00	30.00	36.00
13.624	12.898 / 12.812	11.300 / 11.188	12.926 / 12.812	11.328 / 11.188	10.647	17.63	23.63	29.63	35.63	41.63	16.38	22.38	28.38	34.38	40.38	12.00	18.00	24.00	30.00	36.00
13.299	12.724 / 12.649	11.450 / 11.350	12.749 / 12.649	11.475 / 11.350	10.917	16.50	22.50	28.50	34.50	40.50	15.50	21.50	27.50	33.50	39.50	12.00	18.00	24.00	30.00	36.00
15.273	14.236 / 14.137	11.988 / 11.863	14.271 / 14.137	12.023 / 11.863	11.106	20.88	27.38	33.88	40.38	46.88	19.13	25.63	32.13	38.63	45.13	13.00	19.50	26.00	32.50	39.00
14.949	14.067 / 13.974	12.144 / 12.026	14.099 / 13.974	12.176 / 12.026	11.376	19.75	26.25	32.75	39.25	45.75	18.25	24.75	31.25	37.75	44.25	13.00	19.50	26.00	32.50	39.00
14.624	13.898 / 13.812	12.300 / 12.188	13.926 / 13.812	12.328 / 12.188	11.647	18.63	25.13	31.63	38.13	44.63	17.38	23.88	30.38	36.88	43.38	13.00	19.50	26.00	32.50	39.00
16.598	15.406 / 15.299	12.833 / 12.701	15.444 / 15.299	12.871 / 12.701	11.835	23.00	30.00	37.00	44.00	51.00	21.00	28.00	35.00	42.00	49.00	14.00	21.00	28.00	35.00	42.00
15.949	15.067 / 14.974	13.144 / 13.026	15.099 / 14.974	13.176 / 13.026	12.376	20.75	27.75	34.75	41.75	48.75	19.25	26.25	33.25	40.25	47.25	14.00	21.00	28.00	35.00	42.00
15.624	14.898 / 14.812	13.300 / 13.188	14.926 / 14.812	13.328 / 13.188	12.674	19.63	26.63	33.63	40.63	47.63	18.38	25.38	32.38	39.38	46.38	14.00	21.00	28.00	35.00	42.00
15.299	14.724 / 14.649	13.450 / 13.350	14.749 / 14.649	13.475 / 13.350	12.917	18.50	25.50	32.50	39.50	46.50	17.50	24.50	31.50	38.50	45.50	14.00	21.00	28.00	35.00	42.00
17.598	16.406 / 16.299	13.833 / 13.701	16.444 / 16.299	13.871 / 13.701	12.835	24.00	31.50	39.00	46.50	54.00	22.00	29.50	37.00	44.50	52.00	15.00	22.50	30.00	37.50	45.00
16.949	16.067 / 15.974	14.144 / 14.026	16.099 / 15.974	14.176 / 14.026	13.376	21.75	29.25	36.75	44.25	51.75	20.25	27.75	35.25	42.75	50.25	15.00	22.50	30.00	37.50	45.00
18.598	17.406 / 17.299	14.833 / 14.701	17.444 / 17.299	14.871 / 14.701	13.835	25.00	33.00	41.00	49.00	57.00	23.00	31.00	39.00	47.00	55.00	16.00	24.00	32.00	40.00	48.00
17.949	17.067 / 16.974	15.144 / 15.026	17.099 / 16.974	15.176 / 15.026	14.376	22.75	30.75	38.75	46.75	54.75	21.25	29.25	37.25	45.25	53.25	16.00	24.00	32.00	40.00	48.00
21.248	19.738 / 19.624	16.516 / 16.376	19.778 / 19.624	16.556 / 16.376	15.294	29.25	38.25	47.25	56.25	65.25	26.75	35.75	44.75	53.75	62.75	18.00	27.00	36.00	45.00	54.00
20.598	19.406 / 19.299	16.833 / 16.701	19.444 / 19.299	16.871 / 16.701	15.835	27.00	36.00	45.00	54.00	63.00	25.00	34.00	43.00	52.00	61.00	18.00	27.00	36.00	45.00	54.00
19.949	19.067 / 18.974	17.144 / 17.026	19.099 / 18.974	17.176 / 17.026	16.376	24.75	33.75	42.75	51.75	60.75	23.25	32.25	41.25	50.25	59.25	18.00	27.00	36.00	45.00	54.00
23.248	21.738 / 21.624	18.516 / 18.376	21.778 / 21.624	18.556 / 18.376	17.294	31.25	41.25	51.25	61.25	71.25	28.75	38.75	48.75	58.75	68.75	20.00	30.00	40.00	50.00	60.00
22.598	21.406 / 21.299	18.833 / 18.701	21.444 / 21.299	18.871 / 18.701	17.835	29.00	39.00	49.00	59.00	69.00	27.00	37.00	47.00	57.00	67.00	20.00	30.00	40.00	50.00	60.00
21.949	21.067 / 20.974	19.144 / 19.026	21.099 / 20.974	19.176 / 19.026	18.376	26.75	36.75	46.75	56.75	66.75	25.25	35.25	45.25	55.25	65.25	20.00	30.00	40.00	50.00	60.00
25.248	23.738 / 23.624	20.516 / 20.376	23.778 / 23.624	20.556 / 20.376	19.294	33.25	44.25	55.25	66.25	77.25	30.75	41.75	52.75	63.75	74.75	22.00	33.00	44.00	55.00	66.00
24.598	23.406 / 23.299	20.833 / 20.701	23.444 / 23.299	20.871 / 20.701	19.835	31.00	42.00	53.00	64.00	75.00	29.00	40.00	51.00	62.00	73.00	22.00	33.00	44.00	55.00	66.00
23.949	23.067 / 22.974	21.144 / 21.026	23.099 / 22.974	21.176 / 21.026	20.376	28.75	39.75	50.75	61.75	72.75	27.25	38.25	49.25	60.25	71.25	22.00	33.00	44.00	55.00	66.00
27.897	26.093 / 25.948	22.221 / 22.051	26.135 / 25.948	22.263 / 22.051	20.752	37.50	49.50	61.50	73.50	85.50	34.50	46.50	58.50	70.50	82.50	24.00	36.00	48.00	60.00	72.00
26.598	25.414 / 25.299	22.841 / 22.701	25.454 / 25.299	22.881 / 22.701	21.835	33.00	45.00	57.00	69.00	81.00	31.00	43.00	55.00	67.00	79.00	24.00	36.00	48.00	60.00	72.00
25.949	25.044 / 24.975	23.121 / 23.026	25.135 / 24.975	23.186 / 23.026	22.376	30.75	42.75	54.75	66.75	78.75	29.25	41.25	53.25	65.25	77.25	24.00	36.00	48.00	60.00	72.00
27.949	27.044 / 26.975	25.121 / 25.026	27.135 / 26.975	25.186 / 25.026	24.376	32.75	45.75	58.75	71.75	84.75	31.25	44.25	57.25	70.25	83.25	26.00	39.00	52.00	65.00	78.00
30.897	29.093 / 28.948	25.221 / 25.051	29.135 / 28.948	25.263 / 25.051	23.752	40.5														



**TECHNICAL INFORMATION FOR FREE RUNNING INSERTS**

	UNF/UNC	BSF
<b>A</b>	Minor Diameter	
<b>B</b>	Major Diameter	
<b>C</b>	Pitch Diameter of Tapped Hole (Class 5H)	
<b>D</b>	Pitch Diameter of Installed Insert (Class 4H)	
<b>E</b>	Installed Insert Internal Diameter - min.	
<b>FC</b>	Free Coil Diameter of Uninstalled Insert	
<b>S</b>	Drilling Length - minimum	
<b>T</b>	Tapping Length - minimum	
<b>Q</b>	Nominal Length	
<b>NC</b>	Number of Coils in Uninstalled Insert counted 90° from tang.	



SIZE UNF	Drill		A max/min mm	FC min/max mm	NC max/min					
	mm	"			1.0D	1.5D	2.0D	2.5D	3.0D	
No 2 - 64	2.30	3/32	2.36/2.27	2.79/3.05	3.70 / 3.40	6.30 / 5.80	8.90 / 8.20	11.60 / 10.50	14.20 / 12.90	
No 3 - 56	2.70	#37	2.71/2.61	3.05/3.81	3.70 / 3.10	6.40 / 5.20	9.00 / 7.40	11.60 / 9.60	14.30 / 11.80	
No 4 - 48	3.00	#31	3.07/2.96	3.56/4.06	3.70 / 3.20	6.40 / 5.40	9.00 / 7.60	11.60 / 9.80	14.20 / 12.10	
No 5 - 44	3.40	#30	3.41/3.3	4.06/4.32	3.70 / 3.40	6.30 / 5.80	8.90 / 8.20	11.50 / 10.60	14.20 / 13.00	
No 6 - 40	3.70	#27	3.75/3.64	4.32/4.83	3.70 / 3.20	6.30 / 5.50	9.00 / 7.80	11.60 / 10.10	14.20 / 12.40	
No 8 - 36	4.40	11/64	4.43/4.32	5.08/5.59	4.10 / 3.60	6.90 / 6.10	9.70 / 8.60	12.50 / 11.10	15.30 / 13.60	
No 10 - 32	5.10	-	5.12/5	5.84/6.6	4.30 / 3.80	7.20 / 6.40	10.10 / 9.00	13.00 / 11.60	15.90 / 14.20	
1/4 X 28	6.60	-	6.72/6.55	7.62/8.38	5.20 / 4.70	8.50 / 7.70	11.90 / 10.80	15.20 / 13.80	18.60 / 16.90	
5/16 X 24	8.20	-	8.35/8.17	9.4/10.16	5.60 / 5.10	9.20 / 8.50	12.80 / 11.70	16.40 / 15.00	20.00 / 18.30	
3/8 X 24	9.80	-	9.93/9.75	10.92/11.94	7.10 / 6.50	11.40 / 10.50	15.80 / 14.50	20.10 / 18.50	24.50 / 22.50	
7/16 X 20	11.50	29/64	11.58/11.39	12.95/13.97	6.90 / 6.30	11.10 / 10.20	15.30 / 14.00	19.50 / 17.90	23.70 / 21.70	
1/2 X 20	13.00	33/64	13.16/12.97	14.48/15.75	8.10 / 7.40	12.90 / 11.90	17.80 / 16.30	22.60 / 20.80	27.50 / 25.20	
9/16 X 18	14.75	-	14.79/14.59	16.26/17.53	8.30 / 7.60	13.30 / 12.20	18.20 / 16.80	23.10 / 21.30	28.10 / 25.90	
5/8 X 18	16.50	-	16.38/16.18	17.78/19.3	9.40 / 8.70	14.90 / 13.80	20.50 / 18.90	26.00 / 24.00	31.50 / 29.10	
3/4 X 16	19.50	49/64	19.6/19.39	21.34/22.86	10.10 / 9.30	15.90 / 14.70	21.70 / 20.10	27.60 / 25.50	33.40 / 30.90	
7/8 X 14	22.50	57/64	22.84/22.62	24.89/26.67	10.30 / 9.60	16.30 / 15.10	22.20 / 20.60	28.20 / 26.10	34.20 / 31.60	
1 X 12	26.00	-	26.11/25.86	28.45/30.48	10.10 / 9.40	16.00 / 14.80	21.80 / 20.30	27.70 / 25.70	33.50 / 31.10	
1 X 14	26.00	-	26.02/25.79	27.94/30.23	12.10 / 11.20	18.90 / 17.50	25.70 / 23.80	32.50 / 30.10	39.40 / 36.40	
1-1/8 X 12	29.50	1.5/32	29.32/29.03	31.75/33.78	11.60 / 10.80	18.20 / 16.90	24.80 / 23.00	31.40 / 29.20	38.00 / 35.30	
1-1/4 X 12	32.50	1.9/32	32.49/32.21	34.8/37.34	13.10 / 12.20	20.40 / 19.00	27.80 / 25.80	35.10 / 32.70	42.50 / 39.50	
1-3/8 X 12	35.50	1.13/32	35.67/35.38	38.1/40.89	14.60 / 13.50	22.70 / 21.00	30.80 / 28.50	38.80 / 36.00	46.90 / 43.50	
1-1/2 X 12	38.50	-	38.84/38.56	41.15/44.45	16.10 / 14.90	24.90 / 23.10	33.70 / 31.30	42.60 / 39.50	51.40 / 47.70	
<b>UNC</b>										
No 2 - 56	2.40	#41	2.39/2.28	2.79/3.05	3.10 / 2.80	5.40 / 4.80	7.80 / 6.90	10.10 / 9.00	12.50 / 11.10	
No 3 - 48	2.70	#37	2.74/2.63	3.05/3.56	3.20 / 2.80	5.50 / 4.90	7.90 / 7.00	10.30 / 9.00	12.70 / 11.20	
No 4 - 40	3.00	#31	3.11/2.98	3.56/4.06	2.80 / 2.40	4.90 / 4.30	7.10 / 6.20	9.20 / 8.10	11.40 / 10.00	
No 5 - 40	3.40	#30	3.44/3.31	4.06/4.32	3.30 / 2.90	5.70 / 5.00	8.10 / 7.20	10.50 / 9.30	13.00 / 11.50	
No 6 - 32	3.70	#27	3.82/3.68	4.57/4.83	2.70 / 2.40	4.80 / 4.30	7.00 / 6.20	9.10 / 8.20	11.20 / 10.10	
No 8 - 32	4.40	11/64	4.47/4.34	5.08/5.59	3.50 / 3.20	6.10 / 5.50	8.60 / 7.80	11.20 / 10.10	13.70 / 12.40	
No 10 - 24	5.10	-	5.21/5.05	6.1/6.6	2.80 / 2.60	5.00 / 4.60	7.20 / 6.70	9.40 / 8.70	11.60 / 10.70	
No 12 - 24	5.70	15/64	5.86/5.72	6.86/7.11	3.50 / 3.20	6.00 / 5.60	8.50 / 7.90	11.00 / 10.30	13.50 / 12.60	
1/4 X 20	6.70	17/64	6.87/6.62	7.87/8.38	3.30 / 3.10	5.70 / 5.30	8.10 / 7.60	10.50 / 9.90	13.00 / 12.10	
5/16 X 18	8.30	21/64	8.49/8.24	9.65/10.16	3.90 / 3.70	6.70 / 6.30	9.50 / 8.90	12.20 / 11.50	15.00 / 14.10	
3/8 X 16	9.90	25/64	10.12/9.87	11.43/11.94	4.30 / 4.10	7.20 / 6.80	10.10 / 9.60	13.10 / 12.40	16.00 / 15.20	
7/16 X 14	11.60	-	11.78/11.51	13.21/13.97	4.40 / 4.10	7.40 / 7.00	10.40 / 9.80	13.40 / 12.60	16.30 / 15.50	
1/2 X 13	13.00	33/64	13.4/13.12	14.99/15.75	4.80 / 4.50	8.00 / 7.50	11.10 / 10.60	14.30 / 13.60	17.50 / 16.60	
9/16 X 12	15.00	19/32	15.03/14.74	16.76/17.53	5.00 / 4.80	8.40 / 7.90	11.70 / 11.10	15.00 / 14.20	18.30 / 17.40	
5/8 X 11	16.50	-	16.68/16.38	18.8/19.56	5.10 / 4.90	8.50 / 8.10	11.90 / 11.30	15.20 / 14.50	18.60 / 17.70	
3/4 X 10	20.00	-	19.91/19.6	22.1/23.11	5.80 / 5.50	9.50 / 9.00	13.10 / 12.60	16.80 / 16.10	20.50 / 19.60	
7/8 X 9	23.00	29/32	23.17/22.84	25.65/26.67	6.20 / 5.90	10.00 / 9.60	13.90 / 13.30	17.80 / 17.00	21.70 / 20.70	
1 X 8	26.25	-	26.47/26.09	29.21/30.48	6.30 / 6.00	10.20 / 9.80	14.20 / 13.60	18.10 / 17.30	22.00 / 21.10	
1-1/8 X 7	29.50	1.5/32	29.74/29.36	33.02/34.54	6.20 / 5.90	10.10 / 9.60	14.00 / 13.30	17.90 / 17.00	21.80 / 20.70	
1-1/4 X 7	32.50	1.9/32	32.92/32.53	36.07/37.59	7.10 / 6.70	11.40 / 10.90	15.80 / 15.00	20.10 / 19.20	24.40 / 23.30	
1-3/8 X 6	36.00	-	36.35/35.84	40.13/41.66	6.50 / 6.20	10.60 / 10.10	14.60 / 14.00	18.70 / 17.80	22.70 / 21.70	
1-1/2 X 6	39.50	1.35/64	39.52/39.02	43.18/44.96	7.30 / 6.90	11.70 / 11.20	16.10 / 15.40	20.60 / 19.60	25.00 / 23.90	
<b>BSF</b>										
3/16 X 32	5.00	-	5.03/4.88	5.84/6.35	4.30 / 3.90	7.20 / 6.50	10.20 / 9.20	13.10 / 11.90	16.00 / 14.50	
1/4 X 26	6.60	-	6.71/6.53	7.62/8.38	4.80 / 4.30	7.90 / 7.10	11.20 / 9.90	14.40 / 12.70	17.50 / 15.60	
5/16 X 22	8.30	21/64	8.38/8.2	9.4/10.16	5.20 / 4.70	8.50 / 7.70	11.90 / 10.70	15.30 / 13.80	18.70 / 16.80	
3/8 X 20	9.80	-	9.96/9.78	11.18/12.19	5.80 / 5.30	9.40 / 8.60	13.20 / 12.00	16.90 / 15.30	20.50 / 18.70	
7/16 X 18	11.60	-	11.63/11.43	12.95/14.22	6.20 / 5.60	10.00 / 9.10	13.90 / 12.60	17.80 / 16.10	21.60 / 19.60	
1/2 X 16	13.25	-	13.26/13.03	14.73/16	6.30 / 5.70	10.20 / 9.30	14.20 / 12.90	18.10 / 16.50	22.00 / 20.00	
9/16 X 16	14.75	-	14.88/14.66	16.26/17.78	7.30 / 6.60	11.70 / 10.60	16.10 / 14.70	20.60 / 18.70	25.00 / 22.70	
5/8 X 14	16.30	41/64	16.48/16.26	18.29/19.56	7.10 / 6.50	11.30 / 10.40	15.70 / 14.30	20.00 / 18.30	24.30 / 22.20	
3/4 X 12	19.50	49/64	19.69/19.43	21.84/23.37	7.30 / 6.70	11.70 / 10.80	16.20 / 14.90	20.70 / 19.00	25.10 / 23.00	
7/8 X 11	22.75	-	22.86/22.61	25.15/27.18	7.90 / 7.20	12.60 / 11.60	17.40 / 15.90	22.10 / 20.30	26.90 / 24.60	
1 X 10	26.25	-	26.52/26.19	28.7/30.99	8.30 / 7.60	13.20 / 12.10	18.10 / 16.60	23.10 / 21.20	28.00 / 25.70	
1-1/8 X 9	29.50	1.5/32	29.72/29.36	32.26/34.8	8.40 / 7.80	13.30 / 12.30	18.40 / 17.00	23.40 / 21.50	28.40 / 26.10	
1-1/4 X 9	32.50	1.9/32	32.89/32.54	35.31/38.1	9.50 / 8.80	15.00 / 13.90	20.60 / 19.00	26.20 / 24.20	31.70 / 29.30	
1-3/8 X 8	36.00	-	36.07/35.71	39.12/42.16	9.30 / 8.50	14.60 / 13.50	20.10 / 18.50	25.50 / 23.50	31.00 / 28.50	
1-1/2 X 8	39.00	1.17/32	39.24/38.89	42.16/45.97	10.30 / 9.40	16.10 / 14.80	22.10 / 20.10	28.00 / 25.50	33.90 / 30.90	



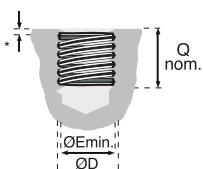
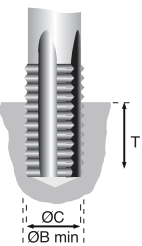
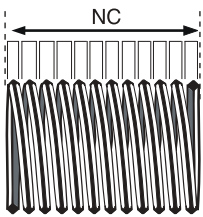
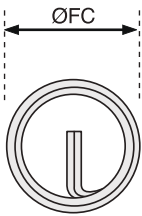
TECHNICAL INFORMATION FOR FREE RUNNING INSERTS

B mm	C (5H) mm	D (4H) mm	C (6H) mm	D (5H) mm	E mm	S					T					Q				
						1.0D	1.5D	2.0D	2.5D	3.0D	1.0D	1.5D	2.0D	2.5D	3.0D	1.0D	1.5D	2.0D	2.5D	3.0D
0.106	0.0974 / 0.0962	0.0779 / 0.0759	0.0980 / 0.0962	0.0786 / 0.0759	0.0691	0.156	0.199	0.242	0.285	0.328	0.141	0.184	0.227	0.270	0.313	0.086	0.129	0.172	0.215	0.258
0.122	0.1119 / 0.1106	0.0895 / 0.0874	0.1126 / 0.1106	0.0902 / 0.0874	0.0797	0.179	0.229	0.278	0.328	0.377	0.161	0.210	0.260	0.310	0.359	0.099	0.148	0.198	0.247	0.297
0.139	0.1270 / 0.1255	0.1008 / 0.0985	0.1278 / 0.1255	0.1016 / 0.0985	0.0894	0.206	0.262	0.318	0.374	0.430	0.185	0.241	0.297	0.353	0.409	0.112	0.168	0.224	0.280	0.336
0.155	0.1414 / 0.1398	0.1126 / 0.1102	0.1422 / 0.1398	0.1134 / 0.1102	0.1004	0.227	0.290	0.352	0.414	0.477	0.204	0.267	0.329	0.391	0.454	0.125	0.187	0.250	0.312	0.375
0.171	0.1559 / 0.1542	0.1243 / 0.1218	0.1568 / 0.1542	0.1252 / 0.1218	0.111	0.250	0.319	0.388	0.457	0.526	0.225	0.294	0.363	0.432	0.501	0.138	0.207	0.276	0.345	0.414
0.200	0.1839 / 0.1820	0.1487 / 0.1460	0.1848 / 0.1820	0.1496 / 0.1460	0.134	0.289	0.371	0.453	0.535	0.617	0.261	0.343	0.425	0.507	0.589	0.164	0.246	0.328	0.410	0.492
0.231	0.2123 / 0.2103	0.1726 / 0.1697	0.2133 / 0.2103	0.1736 / 0.1697	0.156	0.331	0.426	0.521	0.616	0.711	0.299	0.394	0.489	0.584	0.679	0.190	0.285	0.380	0.475	0.570
0.296	0.2754 / 0.2732	0.2300 / 0.2268	0.2765 / 0.2732	0.2311 / 0.2268	0.2113	0.411	0.536	0.661	0.786	0.911	0.375	0.500	0.625	0.750	0.875	0.250	0.375	0.500	0.625	0.750
0.367	0.3421 / 0.3395	0.2890 / 0.2854	0.3433 / 0.3395	0.2902 / 0.2854	0.2674	0.500	0.656	0.812	0.969	1.125	0.458	0.614	0.771	0.927	1.083	0.312	0.469	0.625	0.781	0.937
0.429	0.4047 / 0.4020	0.3516 / 0.3479	0.4059 / 0.4020	0.3528 / 0.3479	0.3299	0.562	0.750	0.937	1.124	1.312	0.521	0.708	0.896	1.083	1.271	0.375	0.562	0.750	0.937	1.125
0.503	0.4731 / 0.4700	0.4091 / 0.4050	0.4744 / 0.4700	0.4104 / 0.4050	0.3834	0.662	0.881	1.100	1.319	1.537	0.612	0.831	1.050	1.269	1.487	0.437	0.656	0.875	1.094	1.312
0.565	0.5357 / 0.5325	0.4717 / 0.4675	0.5371 / 0.5325	0.4731 / 0.4675	0.4459	0.725	0.975	1.225	1.475	1.725	0.675	0.925	1.175	1.425	1.675	0.500	0.750	1.000	1.250	1.500
0.635	0.6020 / 0.5986	0.5308 / 0.5264	0.6035 / 0.5986	0.5323 / 0.5264	0.5024	0.811	1.093	1.374	1.655	1.936	0.756	1.038	1.319	1.600	1.881	0.562	0.844	1.125	1.406	1.687
0.697	0.6646 / 0.6611	0.5934 / 0.5889	0.6661 / 0.6611	0.5949 / 0.5889	0.5649	0.874	1.187	1.500	1.812	2.124	0.819	1.132	1.444	1.757	2.069	0.625	0.937	1.250	1.562	1.875
0.831	0.7945 / 0.7906	0.7143 / 0.7094	0.7961 / 0.7906	0.7159 / 0.7094	0.6823	1.031	1.406	1.781	2.156	2.531	0.969	1.344	1.719	2.094	2.469	0.750	1.125	1.500	1.875	2.250
0.968	0.9257 / 0.9214	0.8339 / 0.8286	0.9274 / 0.9214	0.8356 / 0.8286	0.7977	1.196	1.634	2.071	2.509	2.946	1.125	1.562	2.000	2.437	2.875	0.875	1.312	1.750	2.187	2.625
1.108	1.0589 / 1.0542	0.9516 / 0.9459	1.0608 / 1.0542	0.9535 / 0.9459	0.9098	1.375	1.875	2.375	2.875	3.375	1.292	1.792	2.292	2.792	3.292	1.000	1.500	2.000	2.500	3.000
1.093	1.0508 / 1.0464	0.9590 / 0.9536	1.0527 / 1.0464	0.9609 / 0.9536	0.9277	1.32	1.82	2.32	2.82	3.32	1.25	1.75	2.25	2.75	3.25	1.000	1.500	2.000	2.500	3.000
1.233	1.1841 / 1.1792	1.0768 / 1.0709	1.1860 / 1.1792	1.0787 / 1.0709	1.0348	1.500	2.062	2.625	3.187	3.750	1.417	1.979	2.542	3.104	3.667	1.125	1.687	2.250	2.812	3.375
1.358	1.3092 / 1.3042	1.2019 / 1.1950	1.3112 / 1.3042	1.2039 / 1.1959	1.1598	1.625	2.250	2.875	3.500	4.125	1.542	2.167	2.792	3.417	4.042	1.250	1.875	2.500	3.125	3.750
1.483	1.4343 / 1.4292	1.3270 / 1.3209	1.4364 / 1.4292	1.3291 / 1.3209	1.2848	1.750	2.438	3.125	3.813	4.500	1.667	2.354	3.042	3.729	4.417	1.375	2.062	2.750	3.437	4.125
1.608	1.5595 / 1.5542	1.4522 / 1.4459	1.5615 / 1.5542	1.4542 / 1.4459	1.4098	1.875	2.625	3.375	4.125	4.875	1.792	2.542	3.292	4.042	4.792	1.500	2.250	3.000	3.750	4.500
0.109	0.0989 / 0.0976	0.0765 / 0.0744	0.0996 / 0.0976	0.0772 / 0.0744	0.0667	0.166	0.209	0.252	0.295	0.338	0.148	0.191	0.234	0.277	0.320	0.086	0.129	0.172	0.215	0.258
0.126	0.1139 / 0.1125	0.0877 / 0.0855	0.1147 / 0.1125	0.0885 / 0.0855	0.0764	0.193	0.242	0.292	0.341	0.391	0.172	0.221	0.271	0.320	0.370	0.099	0.148	0.198	0.247	0.297
0.145	0.1298 / 0.1282	0.0982 / 0.0958	0.1307 / 0.1282	0.0991 / 0.0958	0.0849	0.224	0.280	0.336	0.392	0.448	0.199	0.255	0.311	0.367	0.423	0.112	0.168	0.224	0.280	0.336
0.158	0.1429 / 0.1412	0.1113 / 0.1088	0.1437 / 0.1412	0.1121 / 0.1088	0.0979	0.237	0.300	0.362	0.425	0.487	0.212	0.275	0.337	0.400	0.462	0.125	0.187	0.250	0.312	0.375
0.179	0.1601 / 0.1583	0.1204 / 0.1177	0.1611 / 0.1583	0.1214 / 0.1177	0.1040	0.279	0.348	0.417	0.486	0.555	0.247	0.316	0.385	0.454	0.523	0.138	0.207	0.276	0.345	0.414
0.205	0.1862 / 0.1843	0.1465 / 0.1437	0.1872 / 0.1843	0.1475 / 0.1437	0.1300	0.305	0.387	0.469	0.551	0.633	0.273	0.355	0.437	0.519	0.601	0.164	0.246	0.328	0.410	0.492
0.244	0.2193 / 0.2171	0.1661 / 0.1629	0.2204 / 0.2171	0.1672 / 0.1629	0.1450	0.377	0.472	0.567	0.662	0.757	0.336	0.431	0.526	0.621	0.716	0.190	0.285	0.380	0.475	0.570
0.270	0.2454 / 0.2431	0.1922 / 0.1889	0.2465 / 0.2431	0.1933 / 0.1889	0.1710	0.403	0.511	0.619	0.727	0.835	0.362	0.470	0.578	0.686	0.794	0.216	0.324	0.432	0.540	0.648
0.315	0.2851 / 0.2825	0.2211 / 0.2175	0.2863 / 0.2825	0.2223 / 0.2175	0.1959	0.475	0.600	0.725	0.850	0.975	0.425	0.550	0.675	0.800	0.925	0.250	0.375	0.500	0.625	0.750
0.385	0.3515 / 0.3486	0.2803 / 0.2764	0.3529 / 0.3486	0.2817 / 0.2764	0.2524	0.562	0.718	0.875	1.031	1.187	0.507	0.663	0.819	0.975	1.132	0.312	0.469	0.625	0.781	0.937
0.456	0.4189 / 0.4156	0.3387 / 0.3344	0.4203 / 0.4156	0.3401 / 0.3344	0.3073	0.656	0.844	1.031	1.219	1.406	0.594	0.781	0.969	1.156	1.344	0.375	0.562	0.750	0.937	1.125
0.530	0.4875 / 0.4839	0.3957 / 0.3911	0.4890 / 0.4839	0.3972 / 0.3911	0.3602	0.758	0.977	1.196	1.415	1.633	0.687	0.906	1.125	1.344	1.562	0.437	0.656	0.875	1.094	1.312
0.600	0.5537 / 0.5499	0.4548 / 0.4500	0.5554 / 0.5499	0.4565 / 0.4500	0.4167	0.846	1.096	1.346	1.596	1.846	0.769	1.019	1.269	1.519	1.769	0.500	0.750	1.000	1.250	1.500
0.671	0.6208 / 0.6167	0.5135 / 0.5084	0.6225 / 0.6167	0.5152 / 0.5084	0.4723	0.937	1.219	1.500	1.781	2.062	0.854	1.135	1.417	1.698	1.979	0.562	0.844	1.125	1.406	1.687
0.743	0.6885 / 0.6841	0.5714 / 0.5660	0.6903 / 0.6841	0.5732 / 0.5660	0.5266	1.034	1.347	1.659	1.972	2.284	0.943	1.256	1.568	1.881	2.193	0.625	0.937	1.250	1.562	1.875
0.880	0.8196 / 0.8149	0.6907 / 0.6850	0.8216 / 0.8149	0.6927 / 0.6850	0.6417	1.200	1.575	1.950	2.325	2.700	1.100	1.475	1.850	2.225	2.600	0.750	1.125	1.500	1.875	2.250
1.019	0.9522 / 0.9471	0.8089 / 0.8028	0.9543 / 0.9471	0.8110 / 0.8028	0.7547	1.375	1.812	2.250	2.687	3.125	1.264	1.701	2.139	2.576	3.014	0.875	1.312	1.750	2.187	2.625
1.162	1.0868 / 1.0812	0.9254 / 0.9188	1.0890 / 1.0812	0.9276 / 0.9188	0.8647	1.562	2.062	2.562	3.062	3.562	1.437	1.937	2.437	2.937	3.437	1.000	1.500	2.000	2.500	3.000
1.311	1.2239 / 1.2178	1.0393 / 1.0322	1.2262 / 1.2178	1.0416 / 1.0322	0.9704	1.768	2.330	2.893	3.455	4.018	1.625	2.187	2.750	3.312	3.875	1.125	1.687	2.250	2.812	3.375
1.436	1.3490 / 1.3428	1.1644 / 1.1572	1.3514 / 1.3428	1.1668 / 1.1572	1.0954	1.893	2.518	3.143	3.768	4.393	1.750	2.375	3.000	3.625	4.250	1.250	1.875	2.500	3.125	3.750
1.591	1.4900 / 1.4832	1.2745 / 1.2667	1.4926 / 1.4832	1.2771 / 1.2667	1.1946	2.125	2.812	3.500	4.187	4.875	1.958	2.646	3.333	4.021	4.708	1.375	2.062	2.750	3.437	4.125
1.716	1.6151 / 1.6082	1.3996 / 1.3917	1.6177 / 1.6082	1.4022 / 1.3917	1.3196	2.250	3.000	3.750	4.500	5.250	2.083	2.833	3.583	4.333	5.083	1.500	2.250	3.000	3.750	4.500
0.225	0.2087 / .2075	0.1697 / 0.1675	0.2098 / 0.2075	0.1708 / 0.1675	0.1475	0.328	0.422	0.515	0.609	0.703	0.297	0.390	0.484	0.578	0.672	0.187	0.281	0.375	0.469	0.562
0.296	0.2762 / 0.2747	0.2279 / 0.2254	0.2774 / 0.2747	0.2291 / 0.2254	0.2008	0.423	0.548	0.673	0.798	0.923	0.385	0.510	0.635	0.760	0.885	0.250	0.375	0.500	0.625	0.750
0.366	0.3433 / 0.3416	0.2861 / 0.2834	0.3447 / 0.3416	0.2875 / 0.2834	0.2543	0.517	0.673	0.829	0.986	1.142	0.472	0.628	0.784	0.94						




**TECHNICAL INFORMATION FOR FREE RUNNING INSERTS**
**BSW / BSP BA / BSB / UN-8 PITCH**

<b>A</b>	Minor Diameter
<b>B</b>	Major Diameter
<b>C</b>	Pitch Diameter of Tapped Hole (Class 5H)
<b>D</b>	Pitch Diameter of Installed Insert (Class 4H)
<b>E</b>	Installed Insert Internal Diameter - min.
<b>FC</b>	Free Coil Diameter of Uninstalled Insert
<b>S</b>	Drilling Length - minimum
<b>T</b>	Tapping Length - minimum
<b>Q</b>	Nominal Length
<b>NC</b>	Number of Coils in Uninstalled Insert counted 90° from tang.



BSW	mm	"	A max/min mm	FC min/max mm	1.0D	1.5D	NC max/min		
							2.0D	2.5D	3.0D
1/8 X 40	3.40	#30	3.43/3.28	3.81/4.32	3.40 / 3.00	5.80 / 5.10	8.40 / 7.30	10.90 / 9.40	13.40 / 11.60
3/16 X 24	2.70	#37	2.71/2.61	3.05/3.81	3.70 / 3.10	6.40 / 5.20	9.00 / 7.40	11.60 / 9.60	14.30 / 11.80
1/4 X 20	6.70	17/64	6.78/6.63	7.87/8.38	3.40 / 3.10	5.90 / 5.40	8.50 / 7.70	11.00 / 9.90	13.50 / 12.20
5/16 X 18	8.30	21/64	8.48/8.33	9.4/10.16	4.10 / 3.80	6.90 / 6.40	9.80 / 9.00	12.60 / 11.60	15.50 / 14.20
3/8 X 16	10.00	-	10.11/9.91	11.18/11.94	4.40 / 4.10	7.40 / 6.90	10.50 / 9.70	13.50 / 12.50	16.50 / 15.30
7/16 X 14	11.60	-	11.76/11.51	13.21/13.97	4.60 / 4.20	7.60 / 7.10	10.70 / 9.90	13.80 / 12.80	16.90 / 15.60
1/2 X 12	13.00	33/64	13.34/13.08	14.99/16	4.50 / 4.10	7.40 / 7.00	10.50 / 9.80	13.60 / 12.60	16.60 / 15.40
9/16 X 12	14.75	-	14.94/14.68	16.51/17.53	5.20 / 4.90	8.60 / 8.00	12.00 / 11.20	15.40 / 14.40	18.80 / 17.60
5/8 X 11	16.50	-	16.84/16.59	18.29/19.56	5.30 / 5.00	8.70 / 8.20	12.20 / 11.50	15.70 / 14.70	19.20 / 17.90
3/4 X 10	20.00	-	20.09/19.84	21.84/22.86	6.00 / 5.60	9.70 / 9.20	13.50 / 12.70	17.30 / 16.30	21.10 / 19.80
7/8 X 9	23.25	-	23.27/23.01	25.15/26.67	6.30 / 6.00	10.20 / 9.70	14.30 / 13.40	18.20 / 17.10	22.20 / 20.90
1 X 8	26.50	-	26.52/26.187.4	28.7/30.48	6.50 / 6.10	10.40 / 9.90	14.50 / 13.70	18.60 / 17.50	22.60 / 21.20
1-1/8 X 7	30.00	1.11/64	30.12/29.743.4	32.51/34.29	6.30 / 5.90	10.20 / 9.60	14.30 / 13.40	18.20 / 17.10	22.20 / 20.80
1-1/4 X 7	33.00	1.19/64	33.3/32.918.4	35.56/37.59	7.20 / 6.80	11.60 / 10.90	16.00 / 15.00	20.40 / 19.20	24.90 / 23.30
1-1/2 X 6	39.50	1.35/64	39.9/39.268.4	42.67/45.21	7.50 / 7.00	11.90 / 11.30	16.50 / 15.50	21.10 / 19.80	25.60 / 24.00

**BSP**

1/8 X 28	10.00	-	10.16/9.91	10.92/11.94	1.90 / 1.70	3.60 / 3.20	5.30 / 4.80	7.00 / 6.40	8.80 / 7.90
1/4 X 19	13.75	-	13.72/13.46	14.99/16.26	3.10 / 2.80	5.40 / 5.00	7.80 / 7.10	10.10 / 9.20	12.50 / 11.40
3/8 X 19	17.00	-	17.27/17.02	18.54/20.07	5.50 / 5.00	8.90 / 8.20	12.50 / 11.40	16.00 / 14.60	19.50 / 17.90
1/2 X 14	21.50	27/32	21.59/21.34	23.37/25.15	5.30 / 4.90	8.80 / 8.10	12.20 / 11.20	15.70 / 14.40	19.10 / 17.60
5/8 X 14	23.50	-	23.55/23.24	25.4/27.43	7.10 / 6.50	11.30 / 10.40	15.70 / 14.40	20.00 / 18.40	24.30 / 22.30
3/4 X 14	27.00	1.1/16	27.08/26.75	28.96/31.24	8.80 / 8.10	13.90 / 12.90	19.20 / 17.60	24.30 / 22.40	29.50 / 27.20
7/8 X 14	30.50	1.13/16	30.81/30.48	32.77/35.31	10.50 / 9.70	16.50 / 15.30	22.60 / 20.80	28.70 / 26.40	34.70 / 32.00
1 X 11	33.75	-	33.91/33.53	36.32/39.12	9.30 / 8.60	14.70 / 13.60	20.10 / 18.60	25.60 / 23.60	31.00 / 28.60
1-1/4 X 11	42.50	1.43/64	42.67/42.29	44.96/48.51	12.00 / 11.10	18.70 / 17.40	25.60 / 23.70	32.40 / 30.00	39.20 / 36.20
1-1/2 X 11	48.50	1.29/32	48.79/48.41	51.05/54.86	14.70 / 13.60	22.80 / 21.20	31.00 / 28.70	39.20 / 36.30	47.30 / 43.80

**BA**

BA 6	2.90	#33	2.95/2.87	3.56/3.81	3.60 / 3.30	6.20 / 5.60	8.70 / 7.90	11.20 / 10.20	13.80 / 12.50
BA 5	3.40	#30	3.43/3.28	3.81/4.32	3.80 / 3.40	6.40 / 5.80	9.00 / 8.10	11.60 / 10.50	14.20 / 12.90
BA 4	3.80	#25	3.86/3.73	4.32/4.83	3.80 / 3.50	6.40 / 5.80	9.10 / 8.20	11.70 / 10.60	14.40 / 13.00
BA 3	4.30	-	4.34/4.22	5.08/5.33	3.90 / 3.60	6.70 / 6.00	9.40 / 8.50	12.10 / 10.90	14.80 / 13.40
BA 2	4.90	#10	4.98/4.85	5.59/6.1	4.20 / 3.80	6.90 / 6.30	9.80 / 8.80	12.60 / 11.40	15.40 / 13.90
BA 1	5.50	7/32	5.59/5.41	6.35/6.86	4.20 / 3.80	7.10 / 6.40	9.90 / 9.00	12.80 / 11.60	15.60 / 14.10
BA 0	6.20	C	6.25/6.12	7.11/7.87	4.30 / 3.90	7.20 / 6.60	10.10 / 9.20	13.00 / 11.80	16.00 / 14.50

**BSB**

3/16 X 32	5.10	-	5.21/4.95	5.84/6.6	4.10/3.70	6.90/6.20	9.70/8.70	12.50/11.20	15.30/13.70
1/4 X 26	6.60	-	6.86/6.55	7.87/8.64	4.60/4.10	7.60/6.90	10.70/9.60	13.80/12.30	16.80/15.10
5/16 X 26	8.00	5/16	8.43/8.13	9.4/10.41	6.20/5.50	10.00/9.00	13.90/12.50	17.80/16.00	21.60/19.40
3/8 X 26	9.80	-	10.03/9.73	10.92/12.19	7.80/7.00	12.40/11.20	17.10/15.40	21.70/19.60	26.40/23.80
7/16 X 26	11.10	7/16	11.61/11.33	12.7/13.97	9.40/8.40	14.80/13.40	20.30/18.30	25.80/23.30	31.20/28.20
1/2 X 26	12.70	1/2	13.21/12.9	14.22/15.49	11.00/9.90	17.20/15.60	23.50/21.20	29.80/26.90	36.00/32.60
9/16 X 26	14.75	-	14.78/14.5	15.75/17.27	12.60/11.40	19.70/17.80	26.70/24.20	33.80/30.50	40.90/36.90
5/8 X 26	16.50	-	16.38/16.08	17.53/19.05	14.20/12.80	22.00/19.90	29.90/27.10	37.80/34.20	45.70/41.30
3/4 X 26	19.50	49/64	19.53/19.25	20.57/22.61	17.40/15.70	26.90/24.30	36.30/32.90	45.80/41.50	55.30/50.10
1 X 24	25.75	1.1/64	25.91/25.63	27.18/29.72	21.80/19.80	33.50/30.40	45.30/41.00	57.00/51.60	68.70/62.20

**UN-8 PITCH**

1.1/8 X 8	28.50	1.1/8	29.34/28.7	31.75/33.02	7.50/7.10	12.00/11.50	16.60/15.80	21.10/20.10	25.60/24.50
1.1/4 X 8	32.00	1.1/4	32.51/31.88	35.31/36.32	8.30/8.10	13.30/12.90	18.30/17.70	23.30/22.60	28.20/27.40
1.3/8 X 8	35.00	1.3/8	35.69/35.05	38.61/39.88	9.30/9.00	14.80/14.30	20.20/19.60	25.70/24.90	31.20/30.20
1.1/2 X 8	38.00	1.1/2	38.86/38.23	41.91/42.93	10.30/10.00	16.20/15.80	22.20/21.50	28.10/27.30	34.10/33.10
1.5/8 X 8	41.00	1.5/8	42.04/41.4	45.21/48.26	11.20/10.50	17.70/16.40	24.10/22.40	30.50/28.40	37.00/34.30
1.3/4 X 8	44.50	1.3/4	45.21/44.58	48.26/51.82	12.20/11.40	19.20/17.80	26.10/24.20	33.00/30.70	39.90/37.10
1.7/8 X 8	47.50	1.7/8	48.39/47.75	51.56/54.86	13.20/12.40	20.60/19.30	28.10/26.20	35.50/33.20	42.90/40.10
2 X 8	51.00	2	51.56/50.93	54.86/57.91	14.20/13.40	22.10/20.90	30.00/28.40	38.00/35.90	45.90/43.30





**TECHNICAL INFORMATION FOR FREE RUNNING INSERTS**

B mm	C (5H) mm	D (4H) mm	C (6H) mm	D (5H) mm	E mm	S					T					Q				
						1.0D	1.5D	2.0D	2.5D	3.0D	1.0D	1.5D	2.0D	2.5D	3.0D	1.0D	1.5D	2.0D	2.5D	3.0D
0.155	0.1420 / 0.1410	0.1109 / 0.1090	0.1430 / 0.1410	0.1119 / 0.1090	0.0930	0.237	0.300	0.362	0.425	0.487	0.212	0.275	0.337	0.400	0.462	0.125	0.187	0.250	0.312	0.375
0.237	0.2154 / 0.2142	0.1631 / 0.1608	0.2166 / 0.2142	0.1643 / 0.1608	0.1341	0.375	0.469	0.562	0.656	0.750	0.333	0.427	0.521	0.614	0.708	0.187	0.281	0.375	0.469	0.562
0.309	0.2836 / 0.2820	0.2206 / 0.2180	0.2849 / 0.2820	0.2219 / 0.2180	0.1860	0.475	0.600	0.725	0.850	0.975	0.425	0.550	0.675	0.800	0.925	0.250	0.375	0.500	0.625	0.750
0.378	0.3498 / 0.3480	0.2797 / 0.2769	0.3512 / 0.3480	0.2811 / 0.2769	0.2413	0.562	0.718	0.875	1.031	1.187	0.507	0.663	0.819	0.975	1.132	0.312	0.469	0.625	0.781	0.937
0.448	0.4170 / 0.4150	0.3380 / 0.3350	0.4185 / 0.4150	0.3395 / 0.3350	0.2950	0.656	0.844	1.031	1.219	1.406	0.594	0.781	0.969	1.156	1.344	0.375	0.562	0.750	0.937	1.125
0.521	0.4855 / 0.4833	0.3950 / 0.3918	0.4871 / 0.4833	0.3966 / 0.3918	0.3461	0.758	0.977	1.196	1.415	1.633	0.687	0.906	1.125	1.344	1.562	0.437	0.656	0.875	1.094	1.312
0.597	0.5557 / 0.5533	0.4500 / 0.4466	0.5575 / 0.5533	0.4518 / 0.4466	0.3932	0.875	1.125	1.375	1.625	1.875	0.792	1.042	1.292	1.542	1.792	0.500	0.750	1.000	1.250	1.500
0.660	0.6184 / 0.6158	0.5127 / 0.5091	0.6201 / 0.6158	0.5144 / 0.5091	0.4557	0.937	1.219	1.500	1.781	2.062	0.854	1.135	1.417	1.698	1.979	0.562	0.844	1.125	1.406	1.687
0.731	0.6859 / 0.6832	0.5705 / 0.5668	0.6878 / 0.6832	0.5724 / 0.5668	0.5086	1.034	1.347	1.659	1.972	2.284	0.943	1.256	1.568	1.881	2.193	0.625	0.937	1.250	1.562	1.875
0.867	0.8171 / 0.8141	0.6900 / 0.6860	0.8191 / 0.8141	0.6920 / 0.6860	0.6220	1.200	1.575	1.950	2.325	2.700	1.100	1.475	1.850	2.225	2.600	0.750	1.125	1.500	1.875	2.250
1.005	0.9495 / 0.9462	0.8082 / 0.8039	0.9516 / 0.9462	0.8103 / 0.8039	0.7328	1.375	1.812	2.250	2.687	3.125	1.264	1.701	2.139	2.576	3.014	0.875	1.312	1.750	2.187	2.625
1.146	1.0836 / 1.0801	0.9245 / 0.9200	1.0859 / 1.0801	0.9268 / 0.9200	0.8400	1.562	2.062	2.562	3.062	3.562	1.437	1.937	2.437	2.937	3.437	1.000	1.500	2.000	2.500	3.000
1.291	1.2203 / 1.2165	1.0383 / 1.0335	1.2227 / 1.2165	1.0407 / 1.0335	0.9420	1.768	2.330	2.893	3.455	4.018	1.625	2.187	2.750	3.312	3.875	1.125	1.687	2.250	2.812	3.375
1.416	1.3454 / 1.3415	1.1634 / 1.1585	1.3479 / 1.3415	1.1659 / 1.1585	1.0670	1.893	2.518	3.143	3.768	4.393	1.750	2.375	3.000	3.625	4.250	1.250	1.875	2.500	3.125	3.750
1.694	1.6110 / 1.6067	1.3986 / 1.3933	1.6137 / 1.6067	1.4013 / 1.3933	1.2866	2.250	3.000	3.750	4.500	5.250	2.083	2.833	3.583	4.333	5.083	1.500	2.250	3.000	3.750	4.500
0.426	0.4076 / 0.4058	0.3629 / 0.3601	0.4090 / 0.4058	0.3643 / 0.3601	0.3372	0.286	0.348	0.411	0.437	0.536	0.250	0.312	0.375	0.437	0.500	0.125	0.187	0.250	0.312	0.375
0.580	0.5539 / 0.5517	0.4875 / 0.4843	0.5556 / 0.5517	0.4892 / 0.4843	0.4506	0.487	0.612	0.737	0.862	0.987	0.434	0.559	0.684	0.809	0.934	0.250	0.375	0.500	0.625	0.750
0.718	0.6920 / 0.6897	0.6256 / 0.6223	0.6937 / 0.6897	0.6273 / 0.6223	0.5886	0.612	0.799	0.987	1.174	1.362	0.559	0.747	0.934	1.122	1.309	0.375	0.562	0.750	0.937	1.125
0.909	0.8735 / 0.8708	0.7830 / 0.7793	0.8754 / 0.8708	0.7849 / 0.7793	0.7336	0.821	1.071	1.321	1.571	1.821	0.750	1.000	1.250	1.500	1.750	0.500	0.750	1.000	1.250	1.500
0.986	0.9506 / 0.9478	0.8601 / 0.8563	0.9524 / 0.9478	0.8619 / 0.8563	0.8106	0.946	1.258	1.571	1.883	2.196	0.875	1.187	1.500	1.812	2.125	0.625	0.937	1.250	1.562	1.875
1.126	1.0898 / 1.0868	0.9993 / 0.9953	1.0918 / 1.0868	1.0013 / 0.9953	0.9496	1.071	1.446	1.821	2.196	2.571	1.000	1.375	1.750	2.125	2.500	0.750	1.125	1.500	1.875	2.250
1.274	1.2378 / 1.2348	1.1473 / 1.1433	1.2399 / 1.2348	1.1494 / 1.1433	1.0976	1.196	1.634	2.071	2.509	2.946	1.125	1.562	2.000	2.437	2.875	0.875	1.312	1.750	2.187	2.625
1.416	1.3705 / 1.3673	1.2551 / 1.2508	1.3727 / 1.3673	1.2573 / 1.2508	1.1926	1.409	1.909	2.409	2.909	3.409	1.318	1.818	2.318	2.818	3.318	1.000	1.500	2.000	2.500	3.000
1.757	1.7118 / 1.7083	1.5964 / 1.5918	1.7141 / 1.7083	1.5987 / 1.5918	1.5336	1.660	2.284	2.909	3.534	4.159	1.568	2.193	2.818	3.443	4.068	1.250	1.875	2.500	3.125	3.750
1.989	1.9440 / 1.9403	1.8286 / 1.8238	1.9464 / 1.9403	1.8310 / 1.8238	1.7656	1.909	2.659	3.409	4.159	4.909	1.818	2.568	3.318	4.068	4.818	1.500	2.250	3.000	3.750	4.500
0.134	0.1252 / 0.1226	0.1014 / 0.0976			0.0850	0.204	0.259	0.314	0.369	0.424	0.183	0.238	0.293	0.348	0.404	0.110	0.165	0.220	0.275	0.331
0.152	0.1426 / 0.1399	0.1159 / 0.1120			0.0980	0.230	0.293	0.356	0.419	0.482	0.207	0.270	0.333	0.396	0.459	0.126	0.189	0.252	0.315	0.378
0.171	0.1605 / 0.1574	0.1305 / 0.1262			0.1106	0.259	0.329	0.400	0.471	0.542	0.233	0.303	0.374	0.445	0.516	0.142	0.212	0.283	0.354	0.425
0.194	0.1821 / 0.1786	0.1488 / 0.1441			0.1268	0.291	0.371	0.452	0.533	0.613	0.262	0.343	0.423	0.504	0.585	0.161	0.242	0.323	0.403	0.484
0.221	0.2079 / 0.2042	0.1709 / 0.1659			0.1468	0.328	0.421	0.513	0.606	0.698	0.297	0.389	0.482	0.574	0.667	0.185	0.277	0.370	0.462	0.555
0.249	0.2342 / 0.2299	0.1929 / 0.1874			0.1661	0.368	0.472	0.576	0.681	0.785	0.333	0.437	0.541	0.644	0.750	0.209	0.313	0.417	0.522	0.626
0.281	0.2645 / 0.2598	0.2185 / 0.2126			0.1890	0.413	0.531	0.649	0.768	0.886	0.374	0.492	0.610	0.728	0.846	0.236	0.354	0.472	0.590	0.709
0.232	0.2112 / 0.2136	0.1738 / 0.1709			0.1543	0.33	0.42	0.52	0.61	0.70	0.30	0.39	0.48	0.58	0.67	0.187	0.281	0.375	0.469	0.562
0.304	0.2790 / 0.2817	0.2328 / 0.2295			0.2090	0.42	0.55	0.67	0.80	0.92	0.38	0.51	0.63	0.76	0.88	0.250	0.375	0.500	0.625	0.750
0.367	0.3415 / 0.3444	0.2965 / 0.2920			0.2715	0.49	0.64	0.80	0.95	1.11	0.45	0.60	0.76	0.92	1.07	0.312	0.469	0.625	0.781	0.937
0.429	0.4040 / 0.4070	0.3583 / 0.3545			0.3340	0.55	0.74	0.92	1.11	1.30	0.51	0.70	0.88	1.07	1.26	0.375	0.562	0.750	0.937	1.125
0.492	0.4665 / 0.4697	0.4210 / 0.4170			0.3965	0.61	0.83	1.05	1.27	1.49	0.57	0.79	1.01	1.23	1.45	0.437	0.656	0.875	1.094	1.312
0.554	0.5290 / 0.5323	0.4837 / 0.4795			0.4590	0.67	0.92	1.17	1.42	1.67	0.63	0.88	1.13	1.38	1.63	0.500	0.750	1.000	1.250	1.500
0.617	0.5915 / 0.5945	0.5464 / 0.5420			0.5215	0.74	1.02	1.30	1.58	1.86	0.70	0.98	1.26	1.54	1.82	0.562	0.844	1.125	1.406	1.687
0.679	0.6540 / 0.6575	0.6090 / 0.6045			0.5840	0.80	1.11	1.42	1.74	2.05	0.76	1.07	1.38	1.70	2.01	0.625	0.937	1.250	1.562	1.875
0.804	0.7790 / 0.7827	0.7343 / 0.7295			0.7090	0.92	1.30	1.67	2.05	2.42	0.88	1.26	1.63	2.01	2.38	0.750	1.125	1.500	1.875	2.250
1.059	1.0314 / 1.0355	0.9828 / 0.9778			0.9556	1.19	1.69	2.19	2.69	3.19	1.15	1.65	2.15	2.65	3.15	1.000	1.500	2.000	2.500	3.000
1.261	1.1757 / 1.1688	1.1/4	1.0528 / 1.0438			1.69	2.25	2.81	3.38	3.94	1.56	2.13	2.69	3.25	3.81	1.125	1.688	2.250	2.81	3.38
1.386	1.3008 / 1.2938	1.3/8	1.1780 / 1.1688			1.81	2.44	3.06	3.69	4.31	1.69	2.31	2.94	3.56	4.19	1.250	1.875	2.500	3.13	3.75
1.511	1.4259 / 1.4188	1.1/2	1.3031 / 1.2938			1.94	2.62	3.31	4.00	4.69	1.81	2.50	3.19	3.88	4.56	1.375	2.062	2.750	3.44	4.13
1.636	1.5510 / 1.5438	1.5/8	1.4283 / 1.4188			2.06	2.81	3.56	4.31	5.06	1.94	2.69	3.44	4.19	4.94	1.500	2.250	3.000	3.75	4.50
1.761	1.6762 / 1.6688	1.3/4	1.5535 / 1.5438			2.19	3.00	3.81	4.63	5.44	2.06	2.88	3.69	4.50	5.31	1.625	2.438	3.250	4.06	4.88
1.886	1.8013 / 1.7938	1.7/8	1.6786 / 1.6688			2.31	3.19	4.06	4.94	5.81	2.19	3.06	3.94	4.81	5.69	1.750	2.625	3.500	4.38	5.25
2.011	1.9264 / 1.9188	2	1.8038 / 1.7938			2.44	3.37	4.31	5.25	6.19	2.31	3.25	4.19	5.13	6.06	1.875	2.812	3.750	4.69	5.63
2.136	2.0515 / 2.0438	2.1/8	1.9289 / 1.9188			2.56	3.56	4.56	5.56	6.56	2.44	3.44	4.44	5.44	6.44	2.000	3.000	4.000	5.00	6.00


**TABLEAU POUR LA RECHERCHE D'OUTILS DE POSE DE FILETS RAPPORTÉS**


MC	MF	SPARK	UNC	UNF	BSW	BSF	BA	BSC	NPT	BSP	UN-8	Ref.	Ref.	Ref.
2X0.40	-	-	-	-	-	-	-	-	-	-	-	3500-HIT2	3500-TB1	3500-RT1
2.20X0.45	-	-	2GX56	-	-	-	-	-	-	-	-	3500-HIT2	3500-TB2	3500-RT1
2.50X0.45	-	-	3GX48	3GX56	-	-	#6	-	-	-	-	3500-HIT3	3500-TB3	3500-RT1
-	-	-	4GX40	4GX48	1/8X40	-	-	-	-	-	-	3500-HIT4	3500-TB4	3500-RT1
3X0.50	-	-	4GX40	4GX48	1/8X40	-	-	-	-	-	-	3500-HIT4	3500-TB4	3500-RT2
-	-	-	5GX40	-	-	-	-	-	-	-	-	3500-HIT4	3500-TB4	3500-RT1
3.50X0.60	-	-	-	-	-	-	-	-	-	-	-	3500-HIT5	3500-TB5	3500-RT2
-	-	-	6GX32	6GX40	-	-	#4	-	-	-	-	3500-HIT5	3500-TB5	3500-RT1
4X0.70	-	-	8GX32	8GX36	-	3/16X32	-	-	-	-	-	3500-HIT6	3500-TB6	3500-RT2
-	-	-	8GX32	8GX36	-	-	-	-	-	-	-	3500-HIT6	3500-TB6	3500-RT1
5X0.80	-	-	12GX24	10GX32	3/16X24	3/16X32	#1	-	-	-	-	3500-HIT8	3500-TB8	3500-RT2
-	-	-	12GX24	12GX28	-	-	-	-	-	-	-	3500-HIT8	3500-TB8	3500-RT2
6X1.00	-	-	1/4X20	1/4X28	1/4X20	1/4X26	#0	1/4X26	-	-	-	3500-HIT9	3500-TB9	3500-RT2
7X1.00	-	-	5/16X18	-	5/16X18	5/16X22	#0	-	1/16X27	-	-	3500-HIT10	3500-TB11	3500-RT2
8X1.25	8X1.00	-	5/16X18	5/16X24	3/8X16	5/16X22	-	5/16X26	-	-	-	3500-HIT11	3500-TB12	3500-RT2
9X1.25	9X1.00	10X1.00	3/8X16	3/8X24	-	3/8X20	-	3/8X26	-	-	-	3500-HIT13	3500-TB12	3500-RT2
-	10X1.00	-	3/8X16	-	3/8X16	3/8X20	-	-	-	-	-	3500-HIT13	3500-TB12	3500-RT3
10X1.50	10X1.25	-	-	-	-	-	-	-	1/8X27	-	-	3500-HIT13	3500-TB13	3500-RT2
-	-	-	-	3/8X24	-	-	-	3/8X26	-	-	-	3500-HIT13	3500-TB13	3500-RT3
-	10X1.00	-	-	-	-	-	-	-	-	-	-	3500-HIT13	3500-TB13	3500-RT2
11X1.50	11X1.25	-	7/16X14	7/16X20	7/16X14	7/16X18	-	7/16X26	-	1/8X28	-	3500-HIT14	3500-TB14	3500-RT3
-	11X1.00	-	-	-	-	-	-	-	-	-	-	3500-HIT14	3500-TB14	3500-RT3
12X1.75	12X1.50	10X1.25	1/2X13	1/2X20	1/2X12	1/2X16	-	1/2X26	-	-	-	3500-HIT15	3500-TB15	3500-RT3
-	12X1.25	-	-	-	-	-	-	-	-	-	-	3500-HIT15	-	-
-	12X1.00	12X1.25	-	-	-	-	-	-	-	-	-	3500-HIT15	3500-TB15	3500-RT3
13X1.75	13X1.50	-	-	-	-	-	-	-	-	-	-	3500-HIT15	3500-TB15	3500-RT3
-	13X1.25	-	-	-	-	-	-	-	-	-	-	3500-HIT16	-	3500-RT3
14X2.00	14X1.50	14X1.25	9/16X12	9/16X18	9/16X12	9/16X16	-	-	-	1/4X18	-	3500-HIT16	-	3500-RT3
-	14X1.00	-	-	-	-	-	-	-	-	-	-	3500-HIT16	-	3500-RT3
15X2.00	15X1.50	-	-	-	-	-	-	-	1/4X18	-	-	3500-HIT16	-	3500-RT3
-	-	14X1.25	-	-	-	-	-	-	-	-	-	3500-HIT17	-	-
16X2.00	16X1.50	-	5/8X11	5/8X18	5/8X11	5/8X14	-	-	3/8X18	-	-	3500-HIT18	-	3500-RT3
18X2.50	18X2.00	18X1.50	3/4X10	-	3/4X10	3/4X12	-	-	-	3/8X19	-	3500-HIT20	-	3500-RT3
-	18X1.50	-	-	-	-	-	-	-	-	-	-	3500-HIT20	-	-
20X2.50	20X2.00	-	-	3/4X16	-	-	-	-	-	-	-	3500-HIT21	-	3500-RT3
-	20X1.50	-	-	-	-	-	-	-	-	-	-	3500-HIT21	-	3500-RT3
22X2.50	22X2.00	-	7/8X9	7/8X14	7/8X9	7/8X11	-	-	1/2X14	-	-	3500-HIT22	-	3500-RT3
-	22X1.50	-	-	-	-	-	-	-	-	-	-	3500-HIT22	-	3500-RT3
24X3.00	24X2.00	-	1X8	1X12	1X8	1X10	-	-	-	1/2X14	-	3500-HIT23	-	3500-RT3
-	24X1.50	-	-	1X14	-	-	-	-	-	5/8X14	-	3500-HIT23	-	3500-RT3
-	26X1.50	-	-	-	-	-	-	-	-	-	-	3500-HIT24	-	3500-RT4
27X3.00	27X2.00	-	-	-	-	-	-	-	-	-	-	3500-HIT24	-	3500-RT4
-	27X1.50	-	-	-	-	-	-	-	-	-	-	3500-HIT24	-	3500-RT4
-	28X1.50	-	-	-	-	-	-	-	-	-	-	3500-HIT24	-	3500-RT4
30X3.50	30X2.00	-	1.1/8X7	1.1/8X12	-	-	-	-	-	-	-	3500-HIT25	-	3500-RT4
-	30X3.00	-	1.1/8-7	1.1/8-12	-	-	-	-	-	-	1.1/8X8	3500-HIT25	-	-
-	30X1.50	-	1.1/4X7	1.1/4X12	-	-	-	-	-	-	-	3500-HIT26	-	3500-RT4
33X3.50	33X2.00	-	1.3/8X6	1.3/8X12	-	-	-	-	-	3/4X14	1.1/4X8	3500-HIT26	-	3500-RT4
-	-	-	1.3/8-6	1.3/8-12	-	-	-	-	1X11.5	7/8X14	1.3/8X8	3500-HIT27	-	-
-	-	-	-	-	-	-	-	-	-	1X11	-	3500-HIT27	-	-
36X4.00	36X3.00	-	1.1/2X6	1.1/2X12	-	-	-	-	-	-	1.1/2X8	3500-HIT28	-	3500-RT4
39X4.00	36X2.00	-	-	-	-	-	-	-	-	-	-	3500-HIT28	-	3500-RT4
-	36X1.50	-	-	-	-	-	-	-	-	-	-	3500-HIT28	-	3500-RT4
42X4.50	-	-	-	-	-	-	-	-	-	-	1.5/8X8	3500-HIT28	-	-
-	44X3.00	-	-	-	-	-	-	-	-	-	1.3/4X8	3500-HIT28	-	-
48X5.00	-	-	-	-	-	-	-	-	-	-	1.7/8X8	3500-HIT30	-	-
-	50X2.00	-	-	-	-	-	-	-	-	-	2X8	3500-HIT30	-	-

## KEY LOCK INSERTS



**MS51831F, MILITARY SPECIFICATION**

Loksert solid keylocking inserts are an easy installation thread assembly that is ideal for replacing damaged or worn threads in almost all kinds of materials – ferrous, non-ferrous and non-metallic. They are constructed from high quality carbon steel or extremely hardwearing stainless steel. A loksert insert is supplied with the dove-tailed locking keys pre-assembled. The pre-positioned keys automatically position the insert at the correct depth below the surface of the parent material. Lokserts are suitable for repairing and creating threads in a wide range of applications including forgings and castings and are especially suited to situations that experience heavy wear and vibration - such as mining, construction and earthmoving equipment.

### Features and Benefits

- Solid bushing utilising locking keys provides positive mechanical lock against rotation.
- Installed using standard drills and taps.
- Simple installation - no special skills required.
- Suitable for use in a wide range of parent materials.
- Impossible to cross thread during installation.
- Simple removal process if required.
- No tang to break and remove.
- Available in metric sizes, inch sizes and spark plug sizes.
- Available in Thinwall and Heavy Duty.



**M/MF** Metric course and metric fine



**UNC** Unified National Course



**UNF** Unified National Fine



Keylocking insert



**PD** Thin wall insert



**PR** Heavy duty insert



**AC** Carbon steel insert



**INOX** Stainless steel insert



**...X** Group Code



Insert **internal** Thread



Insert **external** Thread



Pitch (mm)



Insert Length



**KEY LOCK INSERTS**



				AC	INOX
				€	€
M 5 x 0.80	8 x 1.25	8.00	6.90	3620-5.00TW 5,88	3720-5.00TW 12,82
M 6 x 1.00	10 x 1.25	10.00	8.80	3620-6.00TW 6,26	3720-6.00TW 13,08
M 8 x 1.00	12 x 1.25	12.00	10.80	3621-8.00TW 8,37	3721-8.00TW 13,93
M 8 x 1.25	12 x 1.25	12.00	10.80	3620-8.00TW 7,05	3720-8.00TW 13,58
M 10 x 1.25	14 x 1.50	14.00	12.80	3621-10.00TW 10,35	3721-10.00TW 15,84
M 10 x 1.50	14 x 1.50	14.00	12.80	3620-10.00TW 10,35	3720-10.00TW 15,84
M 12 x 1.25	16 x 1.50	16.00	14.75	3621-12.00TW 12,93	3721-12.00TW 20,42
M 12 x 1.75	16 x 1.50	16.00	14.75	3620-12.00TW 12,71	3720-12.00TW 19,93

UNC					€	€
UNC (J) N°10 - 24	5/16 x 18	7.87	6.90	3632-10GTW 4,41	3732-10GTW 11,09	
UNC (J) 1/4 - 20	3/8 x 16	9.40	8.40	3632-1/4TW 4,71	3732-1/4TW 12,17	
UNC (J) 5/16 - 18	7/16 x 14	10.92	10.10	3632-5/16TW 5,03	3732-5/16TW 13,55	
UNC (J) 3/8 - 16	1/2 x 13	12.70	11.50	3632-3/8TW 5,64	3732-3/8TW 13,93	
UNC (J) 7/16 - 14	9/16 x 12	14.22	13.00	3632-7/16TW 7,31	3732-7/16TW 16,94	
UNC (J) 1/2 - 13	5/8 x 11	15.75	14.75	3632-1/2TW 8,53	3732-1/2TW 19,54	

UNF					€	€
UNF (J) N°10 - 32	5/16 x 18	7.87	6.90	3634-10GTW 4,41	3734-10GTW 11,09	
UNF (J) 1/4 - 28	3/8 x 16	9.40	8.40	3634-1/4TW 4,71	3734-1/4TW 12,17	
UNF (J) 5/16 - 24	7/16 x 14	10.92	10.10	3634-5/16TW 5,03	3734-5/16TW 13,55	
UNF (J) 3/8 - 24	1/2 x 13	12.70	11.50	3634-3/8TW 5,64	3734-3/8TW 13,93	
UNF (J) 7/16 - 20	9/16 x 12	14.22	13.00	3634-7/16TW 7,31	3734-7/16TW 16,94	
UNF (J) 1/2 - 20	5/8 x 11	15.75	14.75	3634-1/2TW 8,53	3734-1/2TW 19,54	

- 1 Drill
- 2 Tap
- 3 Insert
- 4



**KEY LOCK INSERTS**



				AC	INOX	
				€	€	€
M 4 x 0.70	8 x 1.25	8.00	6.90	3620-4.00HD	11,12	3720-4.00HD 14,56
M 5 x 0.80	10 x 1.25	10.00	8.80	3620-5.00HD	6,48	3720-5.00HD 15,69
M 6 x 1.00	12 x 1.25	12.00	10.80	3620-6.00HD	6,76	3720-6.00HD 15,82
M 8 x 1.00	14 x 1.50	14.00	12.80	3621-8.00HD	8,54	3721-8.00HD 16,58
M 8 x 1.25	14 x 1.50	14.00	12.80	3620-8.00HD	7,18	3720-8.00HD 16,58
M 10 x 1.25	16 x 1.50	16.00	14.75	3621-10.00HD	10,54	3721-10.00HD 19,19
M 10 x 1.50	16 x 1.50	16.00	14.75	3620-10.00HD	10,54	3720-10.00HD 18,86
M 12 x 1.25	18 x 1.50	18.00	16.75	3621-12.00HD	13,19	3721-12.00HD 20,82
M 12 x 1.75	18 x 1.50	18.00	16.75	3620-12.00HD	13,14	3720-12.00HD 20,82
M 14 x 1.50	20 x 1.50	20.00	18.75	3621-14.00HD	15,82	3721-14.00HD 23,81
M 14 x 2.00	20 x 1.50	20.00	18.75	3620-14.00HD	15,82	3720-14.00HD 23,81
M 16 x 1.50	22 x 1.50	22.00	20.50	3621-16.00HD	18,87	3721-16.00HD 26,89
M 16 x 2.00	22 x 1.50	22.00	20.50	3620-16.00HD	18,55	3720-16.00HD 26,25
M 18 x 1.50	24 x 1.50	24.00	22.50	3621-18.00HD	27,69	3721-18.00HD 41,53
M 20 x 1.50	30 x 2.00	30.00	28.00	3621-20.00HD	33,41	3721-20.00HD 49,27
M 20 x 2.50	30 x 2.00	30.00	28.00	3620-20.00HD	32,25	3720-20.00HD 48,37
M 22 x 1.50	32 x 2.00	32.00	30.00	3621-22.00HD	39,24	3721-22.00HD 58,85
M 24 x 2.00	33 x 2.00	33.00	31.00	3621-24.00HD	59,76	3721-24.00HD 89,64
M 24 x 3.00	33 x 2.00	33.00	31.00	3620-24.00HD	58,71	3720-24.00HD 88,05















**KEY LOCK INSERTS**
**UNC**
**UNF**

**UNC/UNF**






**PR**
**...HD**


									
					€			€	
UNC (J) N°8 - 32	5/16x18	7.87	6.90	3632-8GHD	6,09	3732-8GHD	12,17		
UNC (J) N°10 - 24	3/8x16	7.87	8.40	3632-10GHD	4,41	3732-10GHD	11,09		
UNC (J) 1/4 - 20	7/16x14	9.40	10.10	3632-1/4HD	4,71	3732-1/4HD	12,17		
UNC (J) 5/16 - 18	1/2x13	10.92	11.50	3632-5/16HD	5,02	3732-5/16HD	13,63		
UNC (J) 3/8 - 16	9/16x12	12.70	13.00	3632-3/8HD	5,63	3732-3/8HD	14,45		
UNC (J) 7/16 - 14	5/8x11	15.75	14.75	3632-7/16HD	7,30	3732-7/16HD	20,99		
UNC (J) 1/2 - 13	3/4x16	15.75	17.75	3632-1/2HD	8,53	3732-1/2HD	21,60		
UNC (J) 9/16 - 12	3/4x16	20.57	17.75	3632-9/16HD	11,71	3732-9/16HD	22,88		
UNC (J) 5/8 - 11	7/8x14	22.10	21.00	3632-5/8HD	13,55	3732-5/8HD	26,01		
UNC (J) 3/4 - 10	1-1/8x12	28.45	27.00	3632-3/4HD	19,32	3732-3/4HD	33,86		
UNC (J) 7/8 - 9	1-1/4x12	31.75	30.00	3632-7/8HD	25,10	3732-7/8HD	52,92		
UNC (J) 1 - 8	1-3/8x12	34.80	33.25	3632-1HD	50,80	3732-1HD	106,68		
UNC (J) 1.1/8 - 7	1-1/2x12	41.15	36.50	3632-1.1/8HD	243,62	3732-1.1/8HD	-		
UNC (J) 1.1/4 - 7	1-5/8x12	45.97	39.50	3632-1.1/4HD	303,09	3732-1.1/4HD	-		
UNC (J) 1.1/2 - 6	1-7/8x12	50.80	46.00	3632-1.1/2HD	525,97	3732-1.1/2HD	-		

					€		€
UNF (J) N°10 - 32	3/8x16	7.87	8.40	3634-10GHD	4,41	3734-10GHD	11,09
UNF (J) 1/4 - 28	7/16x14	7.87	10.10	3634-1/4HD	4,71	3734-1/4HD	12,17
UNF (J) 5/16 - 24	1/2x13	9.40	11.50	3634-5/16HD	5,02	3734-5/16HD	13,63
UNF (J) 3/8 - 24	9/16x12	10.92	13.00	3634-3/8HD	5,63	3734-3/8HD	14,45
UNF (J) 7/16 - 20	5/8x11	12.70	14.75	3634-7/16HD	7,30	3734-7/16HD	20,99
UNF (J) 1/2 - 20	3/4x16	15.75	17.75	3634-1/2HD	8,53	3734-1/2HD	21,60
UNF (J) 9/16 - 18	3/4x16	15.75	17.75	3634-9/16HD	11,71	3734-9/16HD	22,88
UNF (J) 5/8 - 18	7/8x14	20.57	21.00	3634-5/8HD	13,55	3734-5/8HD	26,01
UNF (J) 3/4 - 16	1-1/8x12	22.10	27.00	3634-3/4HD	19,32	3734-3/4HD	33,86
UNF (J) 7/8 - 14	1-1/4x12	28.45	30.00	3634-7/8HD	25,10	3734-7/8HD	52,92
UNF (J) 1 - 12	1-3/8x12	31.75	33.25	3634-1HD	50,80	3734-1HD	106,68
UNF (J) 1 - 14	1-3/8x12	34.80	33.25	3635-1HD	92,20	3735-1HD	-
UNF (J) 1.1/8 - 12	1-1/2x12	41.15	36.50	3634-1.1/8HD	243,62	3734-1.1/8HD	-
UNF (J) 1.1/4 - 12	1-5/8x12	45.97	39.50	3634-1.1/4HD	303,09	3734-1.1/4HD	-
UNF (J) 1.1/2 - 12	1-7/8x12	45.97	46.00	3634-1.1/2HD	525,97	3734-1.1/2HD	-

INSTALLING TOOLS



	 PD	...TT	 PR	...HT	 PD	 PR	...T
		€		€			€
M 4	-	-	3600-4.00HT	93,64	-	-	-
M 5	3600-5.00TT	95,13	3600-5.00HT	95,13	3600-190T	-	53,15
M 6	3600-6.00TT	97,86	3600-6.00HT	97,86	3600-250T	-	48,69
M 8	3600-8.00TT	101,60	3600-8.00HT	101,60	3600-312T	-	58,38
M 10	3600-10.00TT	109,80	3600-10.00HT	109,80	3600-375T	-	58,38
M 12	3600-12.00TT	117,74	3600-12.00HT	117,74	3600-500T	-	63,83
M 14	-	-	3600-14.00HT	128,17	-	-	-
M 16	-	-	3600-16.00HT	132,64	3600-625T	-	63,83
M 18	-	-	3600-18.00HT	136,11	-	-	-
M 20	-	-	3600-20.00HT	141,33	3600-875T	-	75,26
M 22	-	-	3600-22.00HT	145,79	3600-875T	-	75,26
M 24	-	-	3600-24.00HT	161,21	3600-875T	-	75,26



		€		€		€
8G	-	-	3600-8GHT	111,80	-	-
10G	3600-10GTT	101,55	3600-10GHT	111,80	3600-190T	53,15
1/4	3600-1/4TT	105,15	3600-1/4HT	116,50	3600-250T	48,69
5/16	3600-5/16TT	116,50	3600-5/16HT	116,50	3600-312T	58,38
3/8	3600-3/8TT	132,71	3600-3/8HT	123,69	3600-375T	58,38
7/16	3600-7/16TT	122,59	3600-7/16HT	126,67	3600-375T	58,38
1/2	3600-1/2TT	126,67	3600-1/2HT	138,35	3600-500T	63,83
9/16	-	-	3600-9/16HT	138,35	3600-500T	63,83
5/8	-	-	3600-5/8HT	159,72	3600-625T	63,83
3/4	-	-	3600-3/4HT	184,80	3600-875T	75,26
7/8	-	-	3600-7/8HT	195,72	3600-875T	75,26
1	-	-	3600-1HT	194,25	3600-100T	75,26
1-1/8	-	-	3600-1.1/8HT	544,46	-	-
1-1/4	-	-	3600-1.1/4HT	588,67	-	-
1-1/2	-	-	3600-1.1/2HT	692,50	-	-



**KEY LOCK INSERTS SETS**


M	M/MF	UNC/UNF	AC	INOX	€	€	mm	mm	mm	mm	mm	mm	
M 5 x 0.80	8.00 x 1.25	8.00	3620-5.00TWK	3720-5.00TWK	146,40	176,94	5	6.9	M03M08X1,25	3600-190T			
M 6 x 1.00	10.00 x 1.25	10.00	3620-6.00TWK	3720-6.00TWK	185,49	215,52	5	8.8	M03M10X1,25	3600-250T			
M 8 x 1.25	12.00 x 1.25	12.00	3620-8.00TWK	3720-8.00TWK	234,98	262,94	5	10.8	M03M12X1,25	3600-312T			
M 10 x 1.50	14.00 x 1.50	14.00	3620-10.00TWK	3720-10.00TWK	292,14	311,67	5	12.8	M03M14X1,50	3600-375T			
M 12 x 1.75	16.00 x 1.50	16.00	3620-12.00TWK	3720-12.00TWK	311,06	334,45	5	14.75	M03M16X1,50	3600-500T			

MF	M/MF	UNC/UNF	AC	INOX	€	€	mm	mm	mm	mm	mm	mm
MF 8 x 1.00	12.00 x 1.25	12.00	3621-8.00TWK	3721-8.00TWK	234,98	262,94	5	10.8	M03M12X1,25	3600-312T		
MF 10 x 1.25	14.00 x 1.50	14.00	3621-10.00TWK	3721-10.00TWK	292,14	311,67	5	12.8	M03M14X1,50	3600-375T		
MF 12 x 1.25	16.00 x 1.50	16.00	3621-12.00TWK	3721-12.00TWK	317,52	340,90	5	14.75	M03M16X1,50	3600-500T		

UNC	M/MF	UNC/UNF	AC	INOX	€	€	mm	mm	mm	mm	mm	mm
UNC N°10 x 24	UNC 5/16 x 18	7,87	3632-10GTWK	3732-10GTWK	151,89	196,77	5	6.90	M03NC5/16X18	3600-190T		
UNC 1/4 x 20	UNC 3/8 x 16	9,40	3632-1/4TWK	3732-1/4TWK	173,68	219,62	5	8.40	M03NC3/8X16	3600-250T		
UNC 5/16 x 18	UNC 7/16 x 14	10,92	3632-5/16TWK	3732-5/16TWK	229,28	276,33	5	10.10	M03NC7/16X14	3600-312T		
UNC 3/8 x 16	UNC 1/2 x 13	12,70	3632-3/8TWK	3732-3/8TWK	199,40	245,98	5	11.50	M03NC1/2X13	3600-375T		
UNC 7/16 x 14	UNC 9/16 x 12	14,22	3632-7/16TWK	3732-7/16TWK	258,90	303,53	5	13.00	M03NC9/16X12	3600-375T		
UNC 1/2 x 13	UNC 5/8 x 11	15,75	3632-1/2TWK	3732-1/2TWK	287,56	336,39	5	14.75	M03NC5/8X11	3600-500T		

UNF	M/MF	UNC/UNF	AC	INOX	€	€	mm	mm	mm	mm	mm	mm
UNF N°10 x 32	UNC 5/16 x 18	7,87	3634-10GTWK	3734-10GTWK	151,89	196,77	5	6.90	M03NC5/16X18	3600-190T		
UNF 1/4 x 28	UNC 3/8 x 16	9,40	3634-1/4TWK	3734-1/4TWK	173,68	219,62	5	8.40	M03NC3/8X16	3600-250T		
UNF 5/16 x 24	UNC 7/16 x 14	10,92	3634-5/16TWK	3734-5/16TWK	232,64	279,69	5	10.10	M03NC7/16X14	3600-312T		
UNF 3/8 x 24	UNC 1/2 x 13	12,70	3634-3/8TWK	3734-3/8TWK	199,40	245,98	5	11.50	M03NC1/2X13	3600-375T		
UNF 7/16 x 20	UNC 9/16 x 12	14,22	3634-7/16TWK	3734-7/16TWK	258,90	303,53	5	13.00	M03NC9/16X12	3600-375T		
UNF 1/2 x 20	UNC 5/8 x 11	15,75	3634-1/2TWK	3734-1/2TWK	287,56	336,39	5	14.75	M03NC5/8X11	3600-500T		

**KEY LOCK INSERTS SETS**

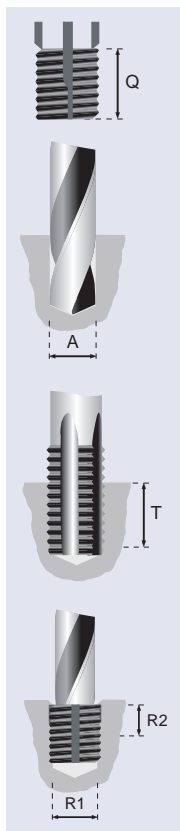


Diagram			AC	INOX	mm	mm	mm	mm
M	mm	mm	€	€	mm	mm	mm	mm
M 5 x 0.80	10.00 x 1.25	10.00	3620-5.00HDK 192,83	3720-5.00HDK 237,47	5	8.80	MO3M10X1,25	3600-190T
M 6 x 1.00	12.00 x 1.25	12.00	3620-6.00HDK 228,10	3720-6.00HDK 275,40	5	10.80	MO3M12X1,25	3600-250T
M 8 x 1.25	14.00 x 1.50	14.00	3620-8.00HDK 287,33	3720-8.00HDK 335,71	5	12.80	MO3M14X1,25	3600-312T
M 10 x 1.50	16.00 x 1.50	16.00	3620-10.00HDK 314,23	3720-10.00HDK 357,26	5	14.75	MO3M16X1,50	3600-375T
M 12 x 1.75	18.00 x 1.50	18.00	3620-12.00HDK 463,98	3720-12.00HDK 497,85	5	16.75	MO3M18X1,50	3600-500T
M 16 x 2.00	22.00 x 1.50	22.00	3620-16.00HDK 623,30	3720-16.00HDK 651,46	5	20.50	MO3M22X1,50	3600-625T

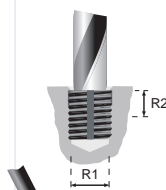
Diagram			AC	INOX	mm	mm	mm	mm
M	mm	mm	€	€	mm	mm	mm	mm
M 8 x 1.00	14.00 x 1.50	14.00	3621-8.00HDK 287,33	3721-8.00HDK 335,71	5	12.80	MO3M14X1,50	3600-312T
M 10 x 1.25	16.00 x 1.50	16.00	3621-10.00HDK 314,23	3721-10.00HDK 357,26	5	14.75	MO3M16X1,50	3600-375T
M 12 x 1.25	18.00 x 1.50	18.00	3621-12.00HDK 463,98	3721-12.00HDK 497,85	5	16.75	MO3M18X1,50	3600-500T
M 16 x 1.50	22.00 x 1.50	22.00	3621-16.00HDK 623,30	3721-16.00HDK 651,46	5	20.50	MO3M22X1,50	3600-625T

Diagram			AC	INOX	mm	mm	mm	mm
UNC	mm	mm	€	€	mm	mm	mm	mm
UNC N°10 x 24	UNC 3/8 x 16	7.87	3632-10GHDK 182,58	3732-10GHDK 241,55	5	8.40	M03NC3/8X16	3600-190T
UNC 1/4 x 20	UNC 7/16 x 14	9.40	3632-1/4HDK 225,54	3732-1/4HDK 288,74	5	10.10	M03NC7/16X14	3600-250T
UNC 5/16 x 18	UNC 1/2 x 13	10.92	3632-5/16HDK 202,58	3732-5/16HDK 270,02	5	11.50	M03NC1/2X13	3600-312T
UNC 3/8 x 16	UNC 9/16 x 12	12.70	3632-3/8HDK 261,95	3732-3/8HDK 332,04	5	13.00	M03NC9/16X12	3600-375T
UNC 7/16x14	UNC 5/8 x 11	14.22	3632-7/16HDK 250,88	3732-7/16HDK 269,80	5	14.75	M03NC5/8X11	3600-375T
UNC 1/2x13	UNF 3/4 x 16	15.75	3632-1/2HDK 381,68	3732-1/2HDK 410,49	5	17.75	M03NF3/4X16	3600-500T
UNC 9/16x12	UNF 3/4 x 16	20.57	3632-9/16HDK 381,68	3732-9/16HDK 410,49	5	17.75	M03NF3/4X16	3600-500T
UNC 5/8x11	UNF 7/8 x 14	22.10	3632-5/8HDK 516,15	3732-5/8HDK 572,96	5	21.00	M03NF7/8X14	3600-625T

Diagram			AC	INOX	mm	mm	mm	mm
UNF	mm	mm	€	€	mm	mm	mm	mm
UNF N°10 x 32	UNC 3/8 x 16	7.87	3634-10GHDK 182,58	3734-10GHDK 241,55	5	8.40	M03NC3/8X16	3600-190T
UNF 1/4 x 28	UNC 7/16 x 14	9.40	3634-1/4HDK 225,54	3734-1/4HDK 288,74	5	10.10	M03NC7/16X14	3600-250T
UNF 5/16 x 24	UNC 1/2 x 13	10.92	3634-5/16HDK 202,58	3734-5/16HDK 270,02	5	11.50	M03NC1/2X13	3600-312T
UNF 3/8 x 24	UNC 9/16 x 12	12.70	3634-3/8HDK 261,95	3734-3/8HDK 332,04	5	13.00	M03NC9/16X12	3600-375T
UNF 7/16 x 20	UNC 5/8 x 11	14.22	3634-7/16HDK 292,23	3734-7/16HDK 356,61	5	14.75	M03NC5/8X11	3600-375T
UNF 1/2 x 20	UNF 3/4 x 16	15.75	3634-1/2HDK 430,96	3734-1/2HDK 490,32	5	17.75	M03NF3/4X16	3600-500T
UNF 9/16 x 18	UNF 3/4 x 16	20.57	3634-9/16HDK 448,48	3734-9/16HDK 503,88	5	17.75	M03NF3/4X16	3600-500T
UNF 5/8 x 18	UNF 7/8 x 14	22.10	3634-5/8HDK 516,15	3734-5/8HDK 572,96	5	21.00	M03NF7/8X14	3600-625T



### REMOVAL


**1**

#### Drilling

Drill out the material between the locking keys and the internal thread to the specified depth. Note: Drill size and drilling depth are shown in the loksert technical tables.

**2**

#### Deflect

Deflect locking keys inward and break off.


**3**

#### Remove

Remove the insert from the hole by winding it out using a screw extractor or similar type tool.


**4**

#### Instal

A new loksert insert of exactly the same size can be installed in the original hole.



### Internal Thread External Thread

				Tap					
	Tol 6H mm	Tol 6G mm	Q mm	Hta de Instalación	A mm	Tol 6H mm	T Min. mm	R1 mm	R2 mm
<b>THIN WALL</b>	M 5 X 0.8	M8 X 1.25	8.0	3600-190T	6.9	M8 X 1.25	9.5	5.50	4.00
	M 6 X 1.0	M10 X 1.25	10.0	3600-250T	8.8	M10 x 1.25	11.5	7.50	4.75
	M 8 X 1.25	M12 x 1.25	12.0	3600-312T	10.8	M12 x 1.25	13.5	9.50	4.75
	M 8 X 1.0	M12 x 1.25	12.0	3600-312T	10.8	M12 x 1.25	13.5	9.50	4.75
	M 10 X 1.5	M14 x 1.5	14.0	3600-375T	12.8	M14 x 1.5	15.5	11.50	4.75
	M 10 X 1.25	M14 x 1.5	14.0	3600-375T	12.8	M14 x 1.5	15.5	11.50	4.75
	M 12 X 1.75	M16 x 1.5	16.0	3600-500T	14.75	M16 x 1.5	17.5	13.50	4.75
M 12 X 1.25	M16 x 1.5	16.0	3600-500T	14.75	M16 x 1.5	17.5	13.50	4.75	
<b>HEAVY DUTY</b>	M 4 X 0.7	M8 X 1.25	8.0	3600-4.00HT	6.9	M8 X 1.25	9.5	5.50	4.00
	M 5 X 0.8	M10 X 1.25	10.0	3600-190T	8.8	M10 x 1.25	12.5	7.50	4.75
	M 6 X 1.0	M12 x 1.25	12.0	3600-250T	10.8	M12 x 1.25	14.5	9.50	4.75
	M 8 X 1.25	M14 x 1.5	14.0	3600-312T	12.8	M14 x 1.5	16.5	11.50	4.75
	M 8 X 1.0	M14 x 1.5	14.0	3600-312T	12.8	M14 x 1.5	16.5	11.50	4.75
	M 10 X 1.5	M16 x 1.5	16.0	3600-375T	14.75	M16 x 1.5	18.5	13.50	4.75
	M 10 X 1.25	M16 x 1.5	16.0	3600-375T	14.75	M16 x 1.5	18.5	13.50	4.75
	M 12 X 1.75	M18 X 1.5	18.0	3600-500T	16.75	M18 X 1.5	20.5	15.50	4.75
	M 12 X 1.25	M18 X 1.5	18.0	3600-500T	16.75	M18 X 1.5	20.5	15.50	4.75
	M 14 X 2.0	M20 X 1.5	20.0	3600-14.00HT	18.75	M20 X 1.5	22.5	17.50	4.75
	M 14 X 1.5	M20 X 1.5	20.0	3600-14.00HT	18.75	M20 X 1.5	22.5	17.50	4.75
	M 16 X 2.0	M22 X 1.5	22.0	3600-625T	20.5	M22 X 1.5	24.5	17.75	6.35
	M 16 X 1.5	M22 X 1.5	22.0	3600-625T	20.5	M22 X 1.5	24.5	17.75	6.35
	M 18 X 1.5	M24 X 1.5	24.0	3600-18.00HT	22.5	M24 X 1.5	26.5	19.75	6.35
	M 20 X 2.5	M30 X 2.0	30.0	3600-875T	28.0	M30 X 2.0	34.5	25.75	6.35
	M 20 X 1.5	M30 X 2.0	30.0	3600-875T	28.0	M30 X 2.0	34.5	25.75	6.35
	M 22 X 1.5	M32 X 2.0	32.0	3600-22.00HT	30.0	M32 X 2.0	36.5	27.75	6.35
	M 24 X 3.0	M33 X 2.0	33.0	3600-24.00HT	31.0	M33 X 2.0	37.5	28.75	6.35
	M 24 X 2.0	M33 X 2.0	33.0	3600-24.00HT	31.0	M33 X 2.0	37.5	28.75	6.35

				Tap						
	Tol 6H mm	Tol 6G mm	Q mm	Hta de Instalación	A mm	Tol 2B "	T Min. mm	R1 mm	R2 mm	
<b>THIN WALL</b>	Nº10 X 24	5/16 X 18	7.87	3600-190T	6.90	UNC 5/16X18	9.40	5.56	3.20	
	Nº10 X 32	5/16 X 18	7.87	3600-190T	6.90	UNC 5/16X18	9.40	5.56	3.20	
	1/4 X 20	3/8 X 16	9.40	3600-250T	8.40	UNC 3/8X16	10.92	7.14	4.75	
	1/4 X 28	3/8 X 16	9.40	3600-250T	8.40	UNC 3/8X16	10.92	7.14	4.75	
	5/16 X 18	7/16 X 14	10.92	3600-312T	10.10	UNC 7/16X14	12.70	8.73	4.75	
	5/16 X 24	7/16 X 14	10.92	3600-312T	10.10	UNC 7/16X14	12.70	8.73	4.75	
	3/8 X 16	1/2 X 13	12.70	3600-375T	11.50	UNC 1/2X13	14.22	10.32	4.75	
	3/8 X 24	1/2 X 13	12.70	3600-375T	11.50	UNC 1/2X13	14.22	10.32	4.75	
	7/16 X 14	9/16 X 12	14.22	3600-375T	13.10	UNC 9/16X12	15.75	11.91	4.75	
	7/16 X 20	9/16 X 12	14.22	3600-375T	13.10	UNC 9/16X12	15.75	11.91	4.75	
	1/2 X 13	5/8 X 11	15.75	3600-500T	14.75	UNC 5/8X11	17.27	13.49	4.75	
	1/2 X 20	5/8 X 11	15.75	3600-500T	14.75	UNC 5/8X11	17.27	13.49	4.75	
	<b>HEAVY DUTY</b>	Nº8 X 32	5/16 X 18	7.87	3600-86HT	6.90	UNC 5/16X18	9.40	5.56	3.20
		Nº10 X 24	3/8 X 16	7.87	3600-190T	8.40	UNC 3/8X16	9.40	7.14	3.20
Nº10 X 32		3/8 X 16	7.87	3600-190T	8.40	UNC 3/8X16	9.40	7.14	3.20	
1/4 X 20		7/16 X 14	9.40	3600-250T	10.10	UNC 7/16X14	10.92	8.73	4.75	
1/4 X 28		7/16 X 14	9.40	3600-250T	10.10	UNC 7/16X14	10.92	8.73	4.75	
5/16 X 18		1/2 X 13	10.92	3600-312T	11.50	UNC 1/2X13	12.70	10.32	4.75	
5/16 X 24		1/2 X 13	10.92	3600-312T	11.50	UNC 1/2X13	12.70	10.32	4.75	
3/8 X 16		9/16 X 12	12.70	3600-375T	13.10	UNC 9/16X12	14.22	11.91	4.75	
3/8 X 24		9/16 X 12	12.70	3600-375T	13.10	UNC 9/16X12	14.22	11.91	4.75	
7/16 X 14		5/8 X 11	15.75	3600-375T	14.75	UNC 5/8X11	17.27	13.49	4.75	
7/16 X 20		5/8 X 11	15.75	3600-375T	14.75	UNC 5/8X11	17.27	13.49	4.75	
1/2 X 13		3/4 X 16	15.75	3600-500T	17.50	UNF 3/4X16	17.27	16.67	4.75	
1/2 X 20		3/4 X 16	15.75	3600-500T	17.50	UNF 3/4X16	17.27	16.67	4.75	
9/16 X 12		3/4 X 16	20.57	3600-500T	17.50	UNF 3/4X16	23.88	16.67	4.75	
9/16 X 18		3/4 X 16	20.57	3600-500T	17.50	UNF 3/4X16	23.88	16.67	4.75	
5/8 X 11		7/8 X 14	22.10	3600-625T	21.00	UNF 7/8X14	25.40	19.84	7.90	
5/8 X 18		7/8 X 14	22.10	3600-625T	21.00	UNF 7/8X14	25.40	19.84	7.90	
3/4 X 10		1-1/8 X 12	28.45	3600-875T	27.00	UNF 1-1/8X12	33.27	24.61	7.90	
3/4 X 16		1-1/8 X 12	28.45	3600-875T	27.00	UNF 1-1/8X12	33.27	24.61	7.90	
7/8 X 9		1-1/4 X 12	31.75	3600-875T	30.00	UNF 1-1/4X12	36.58	27.75	7.90	
7/8 X 14		1-1/4 X 12	31.75	3600-875T	30.00	UNF 1-1/4X12	36.58	27.75	7.90	
1 X 8		1-3/8 X 12	34.80	3600-100T	33.25	UNF 1-3/8X12	39.62	31	7.90	
1 X 12		1-3/8 X 12	34.80	3600-100T	33.25	UNF 1-3/8X12	39.62	31	7.90	
1 X 14		1-3/8 X 12	34.80	3600-100T	33.25	UNF 1-3/8X12	39.62	31	7.90	
1-1/8 X 7		1-1/2 X 12	41.15	3600-1.1/8HT	36.50	UNF 1-1/2X12	46.74	34	7.90	
1-1/8 X 12		1-1/2 X 12	41.15	3600-1.1/8HT	36.50	UNF 1-1/2X12	46.74	34	7.90	
1-1/4 X 7		1-5/8 X 12	45.97	3600-1.1/4HT	39.75	UNF 1-5/8X12	52.32	37.25	7.90	
1-1/4 X 12		1-5/8 X 12	45.97	3600-1.1/4HT	39.75	UNF 1-5/8X12	52.32	37.25	7.90	
1-1/2 X 6		1-7/8 X 12	50.80	3600-1.1/2HT	46.00	UNF 1-7/8X12	57.91	43.50	7.90	
1-1/2 X 12		1-7/8 X 12	50.80	3600-1.1/2HT	46.00	UNF 1-7/8X12	57.91	43.50	7.90	

### THIN WALL & HEAVY DUTY

Insert Material	Carbon Steel – C1215. Stainless Steel – AISI 303	Nº Keys	Inserts with internal thread of 5/16" (M7) or larger have 4 locking keys. Smaller sizes have 2 keys.
Keys	AISI 302		
Tolerances	Carbon Steel - Zinc Phosphate; Stainless Steel – Passivated	Tap Drill Hole	6.90 - 10.80 = +0.100 / -0.025      +12.80 = +0.130 / -0.025





# SELF TAPPING INSERTS



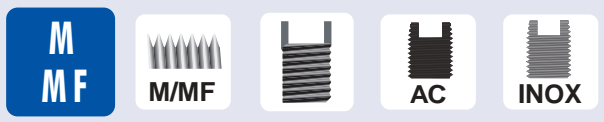
**TAPSERTS** are self cutting threaded inserts that feature both external and internal threads. They are driven into a pre-formed or pre-drilled retaining hole and the cutting slots (or cutting bores) effectively tap the hole as the insert is wound into the parent material. TAPSERTS are ideal for use in low shear strength materials (such as alloys, plastics and castings) which require threaded seats with high load capacity and wear resistance.

## Features and Advantages

- Easy to install by using a bolt in prior hole made by standard drill. Thread the insert on to the bolt ensuring the slot side is down.
- The use of threads when installing is not needed. The insert taps the hole.
- Suitable to resist high compression and tensile loads.
- Extremely high tightening torques are allowed in soft materials as plastic, wood, aluminium.
- The pitch tolerance is conserved despite multiple uses, low wear.



**Thread the Tapsert on to the bolt ensuring the slot side is down.  
Thread the nut down the bolt until it sits firmly against the top of the Tapsert.**

**SELF TAPPING INSERTS WITH CUTTING SLOT**


AC 302



INOX 302



Diagram	Diagram	mm	Diagram	Diagram	AC	€			INOX	€		
						100-499	500-1999	2000-...		AISI 303	25-499	500-1999
M 2.50 x 0.45	M 4.50 x 0.50	6.00	4.30	8.00	3920-2.5X6	0,42	0,40	0,35	3920-2.5X6SS	0,79	0,75	0,67
M 3 x 0.50	M 5 x 0.50	6.00	4.80	8.00	3920-3X6	0,47	0,43	0,40	3920-3X6SS	0,80	0,76	0,68
M 4 x 0.70	M 6.50 x 0.75	8.00	6.20	10.00	3920-4X8	0,49	0,47	0,44	3920-4X8SS	1,07	1,02	0,91
M 5 x 0.80	M 8 x 1.00	10.00	7.60	13.00	3920-5X10	0,61	0,58	0,54	3920-5X10SS	1,39	1,32	1,19
M 6 x 1.00	M 10 x 1.50	14.00	9.40	17.00	3920-6X14	0,78	0,74	0,67	3920-6X14SS	1,72	1,63	1,47
M 8 x 1.25	M 12 x 1.50	15.00	11.40	18.00	3920-8X15	0,95	0,90	0,82	3920-8X15SS	2,17	2,04	1,85
M 10 x 1.50	M 14 x 1.50	18.00	13.50	22.00	3920-10X18	1,38	1,31	1,19	3920-10X18SS	3,17	2,99	2,70
						25-499	500-1999	2000-...		1-499	500-1999	2000-...
M 12 x 1.75	M 16 x 1.50	22.00	15.50	26.00	3920-12X22	2,17	2,04	1,87	3920-12X22SS	4,28	4,02	3,63
M 14 x 2.00	M 18 x 1.50	24.00	17.50	28.00	3920-14X24	2,95	2,78	2,54	3920-14X24SS	5,62	5,29	4,76
M 16 x 2.00	M 20 x 1.50	22.00	19.50	26.00	3920-16X22	3,96	3,61	3,28	3920-16X22SS	6,89	6,28	5,66
						5-499	500-1999	2000-...		1-499	500-1999	2000-...
M 18 x 2.50	M 22 x 1.50	24.00	21.50	29.00	3920-18X24	5,95	5,41	4,94	3920-18X24SS	7,55	6,88	6,20
M 20 x 2.50	M 26 x 1.50	27.00	25.50	32.00	3920-20X26	6,69	6,10	5,55	3920-20X26SS	8,71	7,94	7,15
M 22 x 2.50	M 26 x 1.50	30.00	25.50	36.00	3920-22X30	7,97	7,25	6,60	3920-22X30SS	9,68	8,82	7,94
M 24 x 3.00	M 30 x 1.50	30.00	29.50	36.00	3920-24X30	9,85	8,99	8,18	3920-24X30SS	11,07	10,08	9,08



3920-6X14P

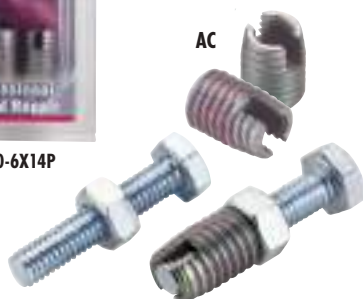
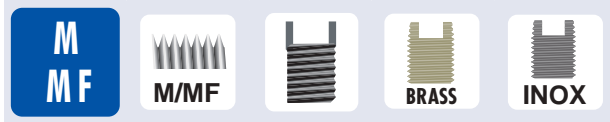


Diagram	Diagram	mm	Diagram	Diagram	Diagram	€	AC
M 2.50 x 0.45	M 4.50 x 0.50	6.00	4.30*	8.00	3920-2.5X6P	11,16	2
M 3 x 0.50	M 5 x 0.50	6.00	4.80*	8.00	3920-3X6P	11,16	2
M 4 x 0.70	M 6.50 x 0.75	8.00	6.20*	10.00	3920-4X8P	10,14	2
M 5 x 0.80	M 8 x 1.00	10.00	7.60*	13.00	3920-5X10P	10,14	2
M 6 x 1.00	M 10 x 1.50	14.00	9.40*	17.00	3920-6X14P	10,14	2
M 8 x 1.25	M 12 x 1.50	15.00	11.40*	18.00	3920-8X15P	11,16	2
M 10 x 1.50	M 14 x 1.50	18.00	13.50*	22.00	3920-10X18P	12,17	2
M 12 x 1.75	M 16 x 1.50	22.00	15.50*	26.00	3920-12X22P	14,19	2
M 14 x 2.00	M 18 x 1.50	24.00	17.50*	28.00	3920-14X24P	14,84	2
M 16 x 2.00	M 20 x 1.50	22.00	19.50*	26.00	3920-16X22P	21,29	2

\* Prior drill not included in kit.

SELF TAPPING INSERTS WITH CUTTING SLOT



BRASS 302



INOX AISI 316L



Diagram	Diagram	mm	Diagram	Diagram	BRASS	€			INOX AISI 316L	€		
						100-499	500-1999	2000-...		25-499	500-1999	2000-...
M 3 x 0.50	M 5 x 0.50	6.00	4.80	8.00	3920-3X6LAT	0,46	0,44	0,40	-			
M 4 x 0.70	M 6.5 x 0.75	8.00	6.20	10.00	3920-4X8LAT	0,52	0,49	0,46	3920-4X8DY	1,39	1,32	1,19
M 5 x 0.80	M 8 x 1.00	10.00	7.60	13.00	3920-5X10LAT	0,65	0,61	0,56	3920-5X10DY	1,81	1,70	1,54
M 6 x 1.00	M 10 x 1.50	14.00	9.40	17.00	3920-6X14LAT	0,82	0,78	0,72	3920-6X14DY	2,24	2,11	1,90
M 8 x 1.25	M 12 x 1.50	15.00	11.40	18.00	3920-8X15LAT	1,11	1,04	0,95	3920-8X15DY	3,08	2,90	2,62
M 10 x 1.50	M 14 x 1.50	18.00	13.50	22.00	3920-10X18LAT	1,96	1,85	1,69	-			
						25-499	500-1999	2000-...		1-499	500-1999	2000-...
M 12 x 1.75	M 16 x 1.50	22.00	15.50	26.00	3920-12X22LAT	2,51	2,37	2,16				

APPLICATIONS

- Hard Wood
- Soft Wood
- Soft Thermoplastic
- Composite materials



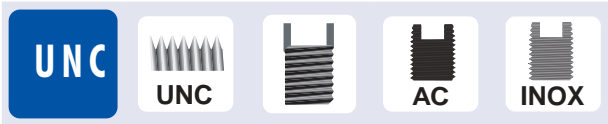
BRASS 309

Diagram	Diagram	mm	SOFT		Diagram	Diagram	BRASS	€		
			Diagram	Diagram				100-499	500-1999	2000-...
M 3 x 0.50	M 5.5 x 1.60	6.00	4.10	4.20-4.30	9.00	3925-3X6	0,84	0,79	0,75	
M 4 x 0.70	M 7 x 2.50	10.00	5.10	5.20-5.30	13.00	3925-4X10	1,13	1,08	1,02	
M 5 x 0.80	M 9 x 3.00	12.00	6.60	6.70-6.90	15.00	3925-5X12	1,30	1,24	1,18	
M 6 x 1.00	M 10 x 4.00	14.00	7.60	7.70-7.90	17.00	3925-6X14	1,45	1,38	1,31	
M 8 x 1.25	M 13 x 4.00	20.00	9.90	10.10-10.30	23.00	3925-8X20	1,98	1,88	1,79	
M 10 x 1.50	M 16 x 5.00	23.00	12.40	12.60-12.80	26.00	3925-10X23	2,96	2,81	2,67	
							25-499	500-1999	2000-...	
M 12 x 1.75	M 19 x 5.00	26.00	15.40	15.60-15.80	30.00	3925-12X26	4,95	4,70	4,46	

Hard Material

Soft Material



**SELF TAPPING INSERTS WITH CUTTING SLOT**


AC 302



INOX 302



						€		€
		mm			AC		INOX AISI 303	
UNC N°4 x 40	M 5 x 0.50	6.00	4.80	8.00	3932-4GX6	1,28	3932-4GX6SS	2,35
UNC N°6 x 32	M 6 x 0.75	8.00	5.70	10.00	3932-6GX8	1,64	3932-6GX8SS	3,07
UNC N°8 x 32	M 6.50 x 0.75	8.00	6.20	10.00	3932-8GX8	2,21	3932-8GX8SS	3,99
UNC N°10 x 24	M 8 x 1.00	10.00	7.60	13.00	3932-10GX10	2,50	3932-10GX10SS	4,64
UNC 1/4 x 20	M 10 x 1.50	14.00	9.40	17.00	3932-1/4X14	3,07	3932-1/4X14SS	5,92
UNC 5/16 x 18	M 12 x 1.50	15.00	11.40	18.00	3932-5/16X15	3,99	3932-5/16X15SS	7,85
UNC 3/8 x 16	M 14 x 1.50	18.00	13.50	22.00	3932-3/8X18	5,64	3932-3/8X18SS	11,20
UNC 7/16 x 14	M 16 x 1.50	22.00	15.50	26.00	3932-7/16X22	8,27	3932-7/16X22SS	16,34
UNC 1/2 x 13	M 18 x 1.50	22.00	17.50	26.00	3932-1/2X22	10,41	3932-1/2X22SS	21,76
UNC 5/8 x 11	M 20 x 1.50	22.00	19.50	26.00	3932-5/8X22	11,91	3932-5/8X22SS	21,76



AC 302



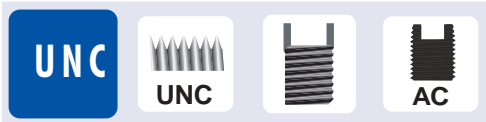
INOX 302



						€		€
		mm			AC		INOX AISI 303	
UNF N°10 x 32	M 8 x 1.00	10.00	7.60	13.00	3934-10GX10	2,50	3934-10GX10SS	4,64
UNF 1/4 x 28	M 10 x 1.50	14.00	9.40	17.00	3934-1/4X14	3,07	3934-1/4X14SS	5,92
UNF 5/16 x 24	M 12 x 1.50	15.00	11.40	18.00	3934-5/16X15	3,99	3934-5/16X15SS	7,85
UNF 3/8 x 24	M 14 x 1.50	18.00	13.50	22.00	3934-3/8X18	5,64	3934-3/8X18SS	11,20
UNF 7/16 x 20	M 16 x 1.50	22.00	15.50	26.00	3934-7/16X22	8,27	3934-7/16X22SS	16,34
UNF 1/2 x 20	M 18 x 1.50	22.00	17.50	26.00	3934-1/2X22	10,41	3934-1/2X22SS	21,76
UNF 5/8 x 18	M 20 x 1.50	22.00	19.50	26.00	3934-5/8X22	11,91	3934-5/8X22SS	21,76



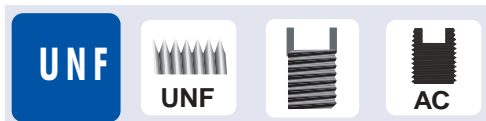
SELF TAPPING INSERTS WITH CUTTING SLOT



		mm				€	
UNC N°4 x 40	M 5 x 0.50	6.00	4.80*	8.00	3932-4GX6P	21,76	2
UNC N°6 x 32	M 6 x 0.75	8.00	5.70*	10.00	3932-6GX8P	21,76	2
UNC N°8 x 32	M 6.50 x 0.75	8.00	6.20*	10.00	3932-8GX8P	21,76	2
UNC N°10 x 24	M 8 x 1.00	10.00	7.60*	13.00	3932-10GX10P	21,76	2
UNC 1/4 x 20	M 10 x 1.50	14.00	9.40*	17.00	3932-1/4X14P	24,62	2
UNC 5/16 x 18	M 12 x 1.50	15.00	11.40*	18.00	3932-5/16X15P	27,07	2
UNC 3/8 x 16	M 14 x 1.50	18.00	13.50*	22.00	3932-3/8X18P	29,52	2
UNC 7/16 x 14	M 16 x 1.50	22.00	15.50*	26.00	3932-7/16X22P	31,97	2
UNC 1/2 x 13	M 18 x 1.50	24.00	17.50*	26.00	3932-1/2X22P	34,42	2
UNC 5/8 x 11	M 20 x 1.50	22.00	19.50*	26.00	3932-5/8X22P	38,38	2



3932-4GX6P



		mm				€	
UNF N°10 x 32	M 8 x 1.00	10.00	7.60*	13.00	3934-10GX10P	21,76	2
UNF 1/4 x 28	M 10 x 1.50	14.00	9.40*	17.00	3934-1/4X14P	24,62	2
UNF 5/16 x 24	M 12 x 1.50	15.00	11.40*	18.00	3934-5/16X15P	27,07	2
UNF 3/8 x 24	M 14 x 1.50	18.00	13.50*	22.00	3934-3/8X18P	29,52	2
UNF 7/16 x 20	M 16 x 1.50	22.00	15.50*	26.00	3934-7/16X22P	31,97	2
UNF 1/2 x 20	M 18 x 1.50	22.00	17.50*	26.00	3934-1/2X22P	34,42	2
UNF 5/8 x 18	M 20 x 1.50	22.00	19.50*	26.00	3934-5/8X22P	38,38	2



3934-1/4X14P



\* Prior drill not included in kit.

REMOVAL





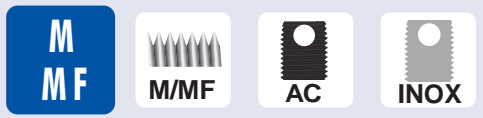
**SELF TAPPING INSERTS WITH 3 CUTTING BORES**


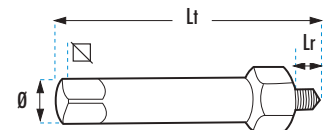
Diagram	Diagram	Diagram	Diagram	Diagram	AC	€			INOX AISI 303	€		
						100-499	500-1999	2000-...		25-499	500-1999	2000-...
M 4 x 0.70	M 6.50 x 0.80	6.00	6.00-6.10	8.00	3333-M4X6	0,64	0,61	0,56	3333-M4X6SS	1,20	1,13	1,04
M 5 x 0.80	M 8 x 1.00	7.00	7.40-7.50	9.00	3333-M5X7	0,85	0,81	0,74	3333-M5X7SS	1,48	1,40	1,28
M 6 x 1.00	M 10 x 1.25	8.00	9.30-9.40	10.00	3333-M6X8	0,98	0,92	0,85	3333-M6X8SS	1,85	1,74	1,59
M 8 x 1.25	M 12 x 1.50	9.00	11.10-11.20	11.00	3333-M8X9	1,17	1,10	1,02	3333-M8X9SS	2,35	2,23	2,02
M 10 x 1.50	M 14 x 1.50	10.00	13.10-13.20	13.00	3333-M10X10	1,73	1,64	1,49	3333-M10X10SS	3,54	3,33	3,04
						25-499	500-1999	2000-...		1-499	500-1999	2000-...
M 12 x 1.75	M 16 x 1.75	12.00	15.00-15.10	15.00	3333-M12X12	2,73	2,57	2,34	3333-M12X12SS	5,67	5,34	4,86
M 14 x 2.00	M 18 x 2.00	14.00	17.00-17.10	17.00	3333-M14X14	3,56	3,35	3,05	3333-M14X14SS	6,51	6,12	5,57
M 16 x 2.00	M 20 x 2.00	14.00	19.00-19.10	17.00	3333-M16X14	4,84	4,55	4,15	3333-M16X14SS	8,78	8,26	7,52



Diagram	Diagram	Diagram	Diagram	Diagram	AC	€			INOX AISI 303	€		
						100-499	500-1999	2000-...		25-499	500-1999	2000-...
M 4 x 0.70	M 6.50 x 0.80	8.00	6.10-6.20	10.00	3333-M4X8	0,80	0,75	0,69	3333-M4X8SS	1,35	1,27	1,16
M 5 x 0.80	M 8 x 1.00	10.00	7.60-7.70	13.00	3333-M5X10	1,01	0,96	0,88	3333-M5X10SS	1,70	1,61	1,47
M 6 x 1.00	M 10 x 1.25	12.00	9.50-9.60	15.00	3333-M6X12	1,28	1,21	1,11	3333-M6X12SS	2,03	1,93	1,75
M 8 x 1.25	M 12 x 1.50	14.00	11.30-11.15	17.00	3333-M8X14	1,65	1,56	1,43	3333-M8X14SS	2,66	2,50	2,28
M 10 x 1.50	M 14 x 1.50	18.00	13.30-13.50	22.00	3333-M10X18	2,38	2,23	2,05	3333-M10X18SS	4,04	3,81	3,47
						25-499	500-1999	2000-...		1-499	500-1999	2000-...
M 12 x 1.75	M 16 x 1.75	22.00	15.20-15.40	26.00	3333-M12X22	3,60	3,39	3,09	3333-M12X22SS	8,69	8,17	7,45
M 14 x 2.00	M 18 x 2.00	24.00	17.20-17.40	28.00	3333-M14X24	5,17	4,87	4,43	3333-M14X24SS	10,29	9,68	8,82
M 16 x 2.00	M 20 x 2.00	24.00	19.20-19.10	28.00	3333-M16X24	6,03	5,67	5,17	3333-M16X24SS	12,19	11,46	10,44

**SELF TAPPING INSERTS INSTALLATION TOOL**

Diagram	L mm	Lr mm	Ø mm	mm	Image	€
M 3 x 0.50	73.00	6.00	12.00	12.00	3920-M3	57,96
M 4 x 0.70	75.00	7.00	12.00	12.00	3920-M4	57,96
M 5 x 0.80	77.00	9.00	12.00	12.00	3920-M5	57,96
M 6 x 1.00	78.00	11.00	12.00	12.00	3920-M6	57,96
M 8 x 1.25	80.00	12.00	12.00	12.00	3920-M8	57,96
M 10 x 1.50	80.00	16.00	18.00	14.00	3920-M10	57,96
M 12 x 1.75	83.50	20.00	18.00	14.00	3920-M12	65,52
M 14 x 2.00	83.50	20.00	22.00	22.00	3920-M14	72,45
M 16 x 2.00	83.50	20.00	22.00	22.00	3920-M16	86,94
M 18 x 2.50	85.50	21.50	26.00	26.00	3920-M18	108,99
M 20 x 2.50	85.50	21.50	26.00	26.00	3920-M20	108,99
M 22 x 2.50	85.50	21.50	30.00	30.00	3920-M22	115,92
M 24 x 3.00	87.50	23.50	30.00	30.00	3920-M24	130,41



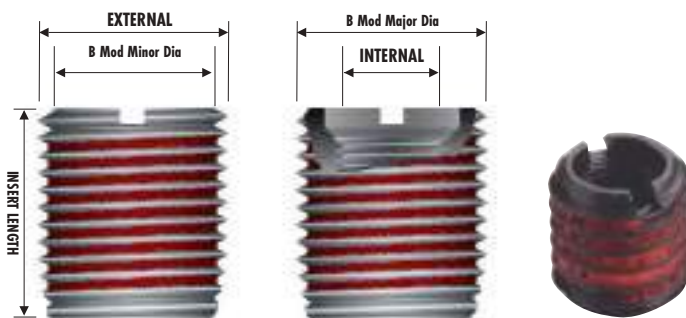


## SOLID INSERTS WITH ANAEROBIC THREADLOCKER



### Features and Benefits

- E-Z SERTs can be installed with a screwdriver, bolt/jam nut, or optional power drive tool.
- Installed using standard drills and taps.
- E-Z SERTs will not back out or vibrate loose. Immediately upon installation, microencapsulated adhesive begins to set and the newly installed inserts are fastener-ready in 3-5 minutes.
- The adhesive seals against liquids and gases to 6,000 psi when fully cured (72 hours).



### REMOVAL






- **NOTE:** The EZ SERT design requires a modified external thread. While the external thread pitch is standard, the minor diameter is larger than normal. So standard drill/tap combination does not apply. Preparing the hole for installation requires an oversize drill. For example, if a Thin Wall with a 5/8-11 external thread is being installed, a standard 37/64 drill is used as opposed to the typical 17/32, and tapped with a standard 5/8-11 tap.



**SOLID INSERTS WITH ANAEROBIC THREADLOCKER**
**M**  
**M F**

 PD

**THIN WALL**

		L mm				€
M 4 x 0.70	UNC 5/16 x 18h	7.92	6,90	9.52	3320-4.00TWF	4,87
M 5 x 0.80	UNC 5/16 x 18h	7.92	6,90	9.52	3320-5.00TWF	4,87
M 6 x 1.00	UNC 3/8 x 16h	9.52	8,40	11.10	3320-6.00TWF	6,13
M 8 x 1.25	UNC 7/16 x 14h	11.10	10,10	12.70	3320-8.00TWF	6,97
M 10 x 1.50	UNC 1/2 x 13h	12.70	11,50	14.22	3320-10.00TWF	9,85
M 12 x 1.75	UNC 5/8 x 11h	15.75	14,50	17.27	3320-12.00TWF	11,06









AISI 303

AC


 PR



**HEAVY WALL**

		L mm				€		€
M 3 x 0.50	M6 x 1.00	6.50	5.10	7.80	3320-3.00HWM	3,00	3320-3.00HWSS	6,60
M 4 x 0.70	M8 x 1.25	7.50	6.90	9.00	3320-4.00HWM	3,20	3320-4.00HWSS	8,02
M 5 x 0.80	M8 x 1.25	7.50	6.90	9.00	3320-5.00HWM	3,61	3320-5.00HWSS	8,75
M 6 x 1.00	M10 x 1.50	10.50	8.60	12.00	3320-6.00HWM	4,06	3320-6.00HWSS	6,83
M 8 x 1.25	M12 x 1.75	12.50	10.40	14.50	3320-8.00HWM	4,58	3320-8.00HWSS	10,85
M 10 x 1.50	M16 x 2.00	17.00	14.00	19.00	3320-10.00HWM	7,06	3320-10.00HWSS	10,82
M 12 x 1.75	M16 x 2.00	17.00	14.00	19.00	3320-12.00HWM	7,93	3320-12.00HWSS	12,34
M 16 x 2.00	M24 x 3.00	20.00	21.00	24.00	3320-16.00HWM	9,56	3320-16.00HWSS	20,64
M 20 x 2.50	M36 x 4.00	30.00	33.00	35.00	3320-20.00HWM	28,18		

**HEAVY WALL**

M 6 x 1.00	UNC 3/8 x 16h	10.31	8.00	11.90	3320-6.00HWF	2,29	3320-6.00HWSSF	9,48
M 8 x 1.25	UNC 1/2 x 13h	12.29	10.70	14.29	3320-8.00HWF	2,80	3320-8.00HWSSF	10,90
M 10 x 1.50	UNC 9/16 x 12h	13.08	12.30	15.08	3320-10.00HWF	3,20	3320-10.00HWSSF	12,46
M 10 x 1.25	UNC 9/16 x 12h	13.08	12.30	15.08	3321-10.00HWF	4,71	3321-10.00HWSSF	-
M 12 x 1.75	UNC 3/4 x 10h	16.66	16.60	19.05	3320-12.00HWF	4,12	3320-12.00HWSSF	17,76
M 14 x 2.00	UNC 7/8 x 9h	17.45	19.50	20.64	3320-14.00HWF	8,28	3320-14.00HWSSF	21,89
M 16 x 2.00	UNC 1 x 8h	19.84	22.00	22.25	3320-16.00HWF	8,25	3320-16.00HWSSF	-

\* Material safety data sheet available.

	
M3 x 0.50	M6 x 1.00
M4 x 0.70	M8 x 1.25
M5 x 0.80	M8 x 1.25
M6 x 1.00	M10 x 1.50
M8 x 1.25	M12 x 1.75

SET 50 Unit M3-M8
10 3320-3.00HW
10 3320-4.00HW
10 3320-5.00HW
10 3320-6.00HW
10 3320-8.00HW


 AC

3320-WK0

289,91 €

SET 50 Unit M3-M8
10 3320-3.00HWSS
10 3320-4.00HWSS
10 3320-5.00HWSS
10 3320-6.00HWSS
10 3320-8.00HWSS


 AISI 303

3320-SSWK0

542,42 €

M8 x 1.25	M12 x 1.75
M10 x 1.50	M16 x 2.00
M12 x 1.75	M16 x 2.00
M16 x 2.00	M 24 x 3.00

SET 33 Unit M8-M16
10 3320-8.00HW
10 3320-10.00HW
8 3320-12.00HW
5 3320-16.00HW


 AC

3320-WK1

332,01 €

SET 33 Unit M8-M16
10 3320-8.00HWSS
10 3320-10.00HWSS
8 3320-12.00HWSS
5 3320-16.00HWSS


 AISI 303

3320-SSWK1

573,41 €

M5 x 0.80	M8 x 1.25
M6 x 1.00	M10 x 1.50
M8 x 1.25	M12 x 1.75
M10 x 1.50	M16 x 2.00
M12 x 1.75	M16 x 2.00

SET 46 Unit M5-M12
10 3320-5.00HWSS
10 3320-6.00HWSS
10 3320-8.00HWSS
10 3320-10.00HWSS
6 3320-12.00HWSS


 AISI 303

3320-SSWK2

557,92 €


**REMOVAL**


# T-SERT INSERTS WITH COUNTERSINK HEAD



## Features and Benefits

- T-SERT is a solid bushing insert for universal use. Easy installation.
- T-SERT is thin walled due to synchronized internal/external threads. Thin cross sectional area allows the installation in areas of limited space and clearance material.
- T-SERT provides fully sealed threads: oil, water,...
- T-SERT is self locked insert. On installation the bottom internal threads of the insert are cold rolled to expand the mating external threads into the base material locking the insert in place. Locking mechanism is at the bottom of insert.
- Having a flange on the top of the insert will insure that the insert will have positive placement and cannot wind down into the newly repaired hole.
- This guarantees easy installation and allows a full load use of tapped hole, ensuring protection against stress and vibration.
- T-SERT inserts are installed using specific tap, countersink and installation tooling.





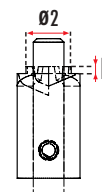
**T-SERT INSERTS WITH COUNTERSINK HEAD**

**INSERTS**

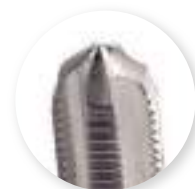
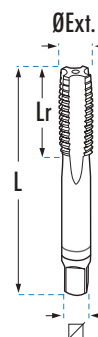
									€
M 3 x 0.50	M5 x 0.50	4.30	6.00	0.50	3.10	3.80	3910-3.00x4.3	3,85	
M 4 x 0.70	M6 x 0.70	6.00	7.00	0.50	4.20	5.50	3910-4.00x6.0	3,85	
M 5 x 0.80	M7 x 0.80	7.60	8.00	0.50	5.10	7.20	3910-5.00x7.6	3,85	
M 6 x 1.00	M8 x 1.00	9.40	9.00	0.70	6.30	8.90	3910-6.00x9.4	4,15	
M 8 x 1.25	M10 x 1.25	11.70	12.00	0.80	8.20	11.20	3910-8.00x11.7	4,29	
M 10 x 1.50	M12 x 1.50	14.00	14.00	1.00	10.30	13.50	3910-10.00x14.0	5,25	
M 12 x 1.75	M14 x 1.75	16.00	16.00	1.00	12.70	15.50	3910-12.00x16.2	5,79	

**SEAT CUTTER**

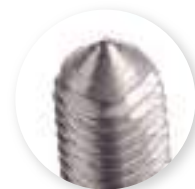
	∅ mm	L mm	∅ mm	∅2 mm	h mm		€
M 3 x 0.50	6.50	60.00	3.50	6.50	1.00	3910-3.00AVELL	69,36
M 4 x 0.70	7.50	65.00	3.80	7.50	1.00	3910-4.00AVELL	70,25
M 5 x 0.80	8.50	70.00	5.00	8.50	1.00	3910-5.00AVELL	74,25
M 6 x 1.00	9.50	70.00	5.00	9.50	1.20	3910-6.00AVELL	76,25
M 8 x 1.25	12.50	79.00	7.00	12.50	1.30	3910-8.00AVELL	77,92
M 10 x 1.50	14.50	89.00	8.00	14.50	1.50	3910-10.00AVELL	83,33
M 12 x 1.75	16.50	80.00	9.00	16.50	1.50	3910-12.00AVELL	88,25


**THREADING TAP**

	∅Ext.	L mm	Lr mm	∅ mm	∅ mm		€
M 3 x 0.50	M5 x 0.50	60.00	20.00	5.08	4.00	3910-3.00I	64,89
M 4 x 0.70	M6 x 0.70	70.00	22.00	6.09	4.90	3910-4.00I	64,89
M 5 x 0.80	M7 x 0.80	68.00	22.00	7.10	4.50	3910-5.00I	69,33
M 6 x 1.00	M8 x 1.00	72.00	22.00	8,12	4.90	3910-6.00I	72,44
M 8 x 1.25	M10 x 1.25	80.00	24.00	10,12	6.00	3910-8.00I	78,67
M 10 x 1.50	M12 x 1.50	88.00	29.00	12,14	7.10	3910-10.00I	97,78
M 12 x 1.75	M14 x 1.75	90.00	30.00	14,15	8.70	3910-12.00I	108,44


**INSTALLATION TOOL**

	L mm	Lr mm	∅ mm	∅ mm		€
M 3 x 0.50	54.00	15.00	3.50	3.80	3910-3.00HIP	58,25
M 4 x 0.70	62.00	18.00	5.00	3.80	3910-4.00HIP	59,69
M 5 x 0.80	71.00	30.00	5.80	5.00	3910-5.00HIP	60,00
M 6 x 1.00	72.00	22.00	7.60	5.00	3910-6.00HIP	65,25
M 8 x 1.25	79.00	25.00	10.00	6.00	3910-8.00HIP	68,00
M 10 x 1.50	90.00	30.00	12.00	7.00	3910-10.00HIP	72,00
M 12 x 1.75	95.00	30.00	15.00	9.00	3910-12.00HIP	84,00





# RIVET NUTS



## Features and Benefits

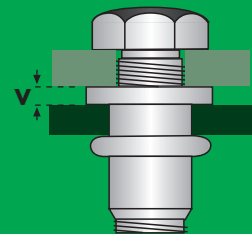
RIVETSERT Rivet nut provides strong, longlife and reliable threads into a variety of different materials including metal, plastic, fiberglass and carbon fiber. It is used in a wide array of applications in the automotive, heavy truck, and manufacturing industries as they move toward making their products both lightweight and easier to make, but guaranteeing strong threads.

Being **FLAT HEAD RIVET NUT** the most universal one, RIVETSERT Rivet nuts have been designed to work on high torques when installed in mechanic components:

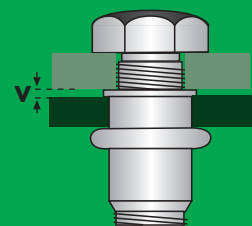
- Provides reliable threads in extra thin metal Sheets. (0,5 mm)
- Double function: Riveting two thin pieces by creating a strong thread.
- Three different heads available: **FLAT**, **REDUCED** AND **SUNK HEAD**.
- Easy and ergonomic installation by manual, automatic or pneumatic tools.

## FLAT, REDUCED & SUNK HEADS.

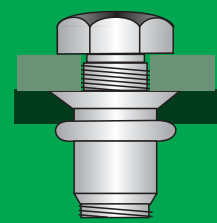
- **FLAT:** This is the most universal and useful Rivet Nut. The head provides enough surface extension for being tightened into any material unless fragile or easy breaking ones, guaranteeing high working torque. "V" space must be taken into consideration.
- **REDUCED:** These rivets have been designed to create a very strong connecting between fragile and very hard thin pieces. "V" space is insignificant but provides lower working torque than Flat Head rivets nuts.
- **SUNK:** This rivet nut provides strong and fully flat connection in any material in high thickness sheets. "V" space does not exist and working torque is high, but previous countersinking is needed.



**FLAT**



**REDUCED**



**SUNK**

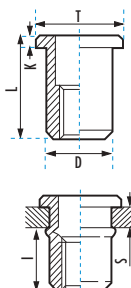
**CYLINDRICAL THREADED INSERTS**

**M**  
**MF**

**HCS**
**FLAT HEAD - SHORT TYPE**

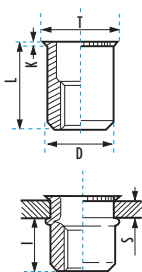
	S mm	D mm +0,07/-0,1	 T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€/100 Unit		
M 3x0.50	0.50 - 1.50	4.90	5.00	7.20	0.80	8.50	4.70	2.00	3850-M3	6,62	100
M 4x0.70	0.50 - 2.00	5.90	6.00	8.50	0.80	10.50	6.00	5.00	3850-M4	6,76	100
M 5x0.80	0.50 - 2.50	6.90	7.00	10.00	1.00	13.00	7.50	8.50	3850-M5	6,91	100
M 6x1.00	0.50 - 3.00	8.90	9.00	12.30	1.30	15.50	9.20	15.00	3850-M6	8,34	100
M 8x1.25	1.00 - 3.50	10.90	11.00	15.00	1.50	18.50	11.50	26.00	3850-M8	13,98	50
M 10x1.50	1.00 - 3.50	11.90	12.00	16.00	1.50	19.00	11.00	50.00	3850-M10	22,86	50
M 10x1.50	1.00 - 2.50	12.90	13.00	16.30	1.60	17.00	11.50	50.00	3850-M10E1	23,05	50
M 12x1.75	1.00 - 4.00	14.90	15.00	18.00	1.70	22.00	13.50	80.00	3850-M12	41,79	50
M 12x1.75	1.00 - 4.00	15.90	16.00	22.00	2.00	25.00	16.00	80.00	3850-M12E1	42,94	50





\* The prices of the list are related to packs of 100 units


**REDUCED COUNTERSINK HEAD - SHORT TYPE**

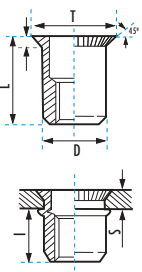
	S mm	D mm +0,07/-0,1	 T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€/100 Unit		
M 3x0.50	0.50 - 2.00	4.90	5.00	6.00	0.50	9.00	6.20	1.00	3851-M3	6,62	100
M 4x0.70	0.50 - 2.00	5.90	6.00	7.00	0.50	10.50	6.50	3.00	3851-M4	6,76	100
M 5x0.80	0.50 - 2.00	6.90	7.00	8.00	0.50	11.50	7.00	6.00	3851-M5	6,91	100
M 6x1.00	0.50 - 2.50	8.90	9.00	10.00	0.60	14.00	8.50	11.00	3851-M6	8,34	100
M 8x1.25	1.00 - 3.00	10.90	11.00	12.00	0.60	16.50	10.00	20.00	3851-M8	13,98	100
M 10x1.50	0.50 - 3.50	11.90	12.00	13.00	0.85	18.00	13.00	32.00	3851-M10	22,86	50
M 10x1.50	1.00 - 3.00	12.90	13.00	14.00	0.70	17.70	12.00	32.00	3851-M10E1	23,05	50
M 12x1.75	0.50 - 3.50	14.90	15.00	16.50	0.85	22.50	16.00	50.00	3851-M12	41,79	50

\* The prices of the list are related to packs of 100 units


**COUNTERSINK HEAD - SHORT TYPE**

	S mm	D mm +0,07/-0,1	 T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€/100 Unit		
M 3x0.50	1.60 - 3.50	4.90	5.00	7.20	1.50	9.50	4.50	1.00	3852-M3	6,62	100
M 4x0.70	1.50 - 3.00	5.90	6.00	9.00	1.50	12.00	6.50	4.00	3852-M4	6,76	100
M 5x0.80	1.50 - 3.50	6.90	7.00	10.00	1.50	13.00	7.50	8.00	3852-M5	6,91	100
M 6x1.00	1.50 - 4.00	8.90	9.00	12.00	1.50	15.50	9.00	15.00	3852-M6	8,34	100
M 8x1.25	2.00 - 4.50	10.90	11.00	14.00	1.50	18.50	10.00	26.00	3852-M8	13,98	100
M 10x1.50	1.60 - 5.00	11.90	12.00	15.00	1.50	21.00	11.50	45.00	3852-M10	22,86	50
M 10x1.50	1.60 - 5.00	12.90	13.00	16.00	1.50	21.00	11.50	45.00	3852-M10E1	23,05	50

\* The prices of the list are related to packs of 100 units

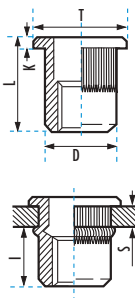








KNURLED CYLINDRICAL THREADED INSERTS



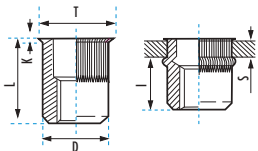
FLAT HEAD







	S mm	D mm +0,07/-0,1		T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm			€/100 Unit	
			+0,1/-0					Nm			
M 3x0.50	0.50 - 1.50	4.90	5.00	8.00	0.80	10.00	6.00	2.00	3853-M3	6,62	100
M 3x0.50	1.50 - 3.00	4.90	5.00	7.00	0.80	11.50	8.00	2.00	3853-M3E1	7,14	100
M 4x0.70	0.50 - 2.00	5.90	6.00	9.00	0.80	10.50	6.00	5.00	3853-M4	6,76	100
M 4x0.70	2.00 - 3.50	5.90	6.00	9.00	0.80	12.00	6.00	5.00	3853-M4E1	7,89	100
M 5x0.80	0.50 - 2.50	6.90	7.00	10.00	1.00	13.00	7.50	8.50	3853-M5	6,91	100
M 5x0.80	2.50 - 5.00	6.90	7.00	10.00	1.00	16.50	8.50	8.50	3853-M5E1	8,06	100
M 6x1.00	0.50 - 3.00	8.90	9.00	12.30	1.30	15.50	9.20	15.00	3853-M6	8,34	100
M 6x1.00	3.00 - 5.50	8.90	9.00	12.30	1.30	19.50	10.50	15.00	3853-M6E1	10,88	100
M 8x1.25	1.00 - 3.50	10.90	11.00	14.50	1.50	18.50	11.50	26.00	3853-M8	13,98	100
M 8x1.25	3.50 - 6.00	10.90	11.00	14.50	1.50	21.00	11.50	26.00	3853-M8E1	16,92	100
M 10x1.50	1.00 - 3.50	11.90	12.00	16.00	1.70	19.00	12.50	50.00	3853-M10	22,86	50
M 10x1.50	3.00 - 6.00	11.90	12.00	16.00	1.60	24.00	18.50	50.00	3853-M10E1	24,17	50
M 10x1.50	1.00 - 4.00	12.90	13.00	17.00	1.70	21.50	13.50	50.00	3853-M10E2	23,05	50
M 10x1.50	4.00 - 6.50	12.90	13.00	17.00	1.70	24.00	13.50	50.00	3853-M10E3	27,11	50
M 12x1.75	1.00 - 4.00	14.90	15.00	18.00	1.70	22.00	13.50	80.00	3853-M12	41,79	50
M 12x1.75	4.00 - 6.50	14.90	15.00	18.00	1.70	25.00	14.00	80.00	3853-M12E1	53,54	50
M 12x1.75	1.00 - 3.50	15.90	16.00	22.00	2.00	25.00	15.00	80.00	3853-M12E2	54,98	50
M 12x1.75	3.50 - 6.00	15.90	16.00	22.00	2.00	28.00	16.50	80.00	3853-M12E3	56,99	50

\* The prices of the list are related to packs of 100 units

REDUCED COUNTERSINK HEAD



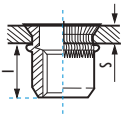
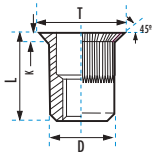
	S mm	D mm +0,07/-0,1		T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm			€/100 Unit	
			+0,1/-0					Nm			
M 3x0.50	0.50 - 2.00	4.90	5.00	6.00	0.50	9.00	6.50	1.00	3854-M3	6,62	100
M 3x0.50	2.00 - 3.50	4.90	5.00	6.00	0.50	11.50	5.50	1.00	3854-M3E1	7,14	100
M 4x0.70	0.50 - 2.00	5.90	6.00	7.00	0.50	11.20	7.00	3.00	3854-M4	6,76	100
M 4x0.70	2.00 - 4.00	5.90	6.00	7.00	0.50	13.00	7.00	3.00	3854-M4E1	7,89	100
M 5x0.80	0.50 - 2.50	6.90	7.00	8.00	0.50	11.50	7.00	6.00	3854-M5	6,91	100
M 5x0.80	2.00 - 4.00	6.90	7.00	8.00	0.50	13.00	7.00	6.00	3854-M5E1	8,06	100
M 6x1.00	0.50 - 2.50	8.90	9.00	10.00	0.60	14.00	8.50	11.00	3854-M6	8,34	100
M 6x1.00	2.50 - 4.50	8.90	9.00	10.00	0.60	16.00	8.50	11.00	3854-M6E1	10,88	100
M 8x1.25	1.00 - 3.00	10.90	11.00	12.00	0.60	16.50	10.00	20.00	3854-M8	13,98	100
M 8x1.25	3.00 - 5.00	10.90	11.00	12.00	0.60	18.50	10.00	20.00	3854-M8E1	16,92	100
M 10x1.50	1.00 - 3.50	11.90	12.00	13.00	0.70	19.50	13.00	32.00	3854-M10	22,86	50
M 10x1.50	3.50 - 6.00	11.90	12.00	13.00	0.70	22.00	17.00	32.00	3854-M10E1	24,17	50
M 10x1.50	1.00 - 3.50	12.90	13.00	14.00	0.70	19.50	12.50	32.00	3854-M10E2	25,32	50
M 10x1.50	3.50 - 6.00	12.90	13.00	14.00	0.70	22.00	12.50	32.00	3854-M10E3	27,11	50
M 12x1.75	0.50 - 3.50	14.90	15.00	16.50	0.85	22.50	16.00	50.00	3854-M12	41,79	50
M 12x1.75	1.00 - 4.00	15.90	16.00	17.60	0.75	24.20	16.00	50.00	3854-M12E1	42,94	50
M 12x1.75	4.00 - 6.00	15.90	16.00	17.15	0.60	27.00	16.00	50.00	3854-M12E2	56,99	50

\* The prices of the list are related to packs of 100 units

**KNURLED CYLINDRICAL THREADED INSERTS**

**rivetsert**  
 by CELESA

**M**  
**M F**

**HCS**
**COUNTERSINK HEAD**


	S mm	D mm +0,07/-0,1		T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm			€/100 Unit	
M 3x0.50	1.60 - 2.50	4.90	5.00	6.60	1.05	9.50	4.50	1.00	3855-M3	8,46	100
M 3x0.50	2.50 - 4.00	4.90	5.00	6.60	1.50	10.50	4.50	1.00	3855-M3E1	10,08	100
M 4x0.70	1.50 - 3.00	5.90	6.00	9.00	1.50	12.00	6.50	4.00	3855-M4	8,66	100
M 4x0.70	3.00 - 5.00	5.90	6.00	9.00	1.50	14.00	6.00	4.00	3855-M4E1	11,04	100
M 5x0.80	1.50 - 3.50	6.90	7.00	10.00	1.50	13.00	7.50	8.00	3855-M5	8,69	100
M 5x0.80	3.50 - 6.00	6.90	7.00	10.00	1.50	16.50	8.50	8.00	3855-M5E1	12,15	100
M 6x1.00	1.50 - 4.00	8.90	9.00	12.00	1.50	15.50	9.00	15.00	3855-M6	9,61	100
M 6x1.00	4.00 - 6.00	8.90	9.00	12.00	1.50	18.00	9.00	15.00	3855-M6E1	18,02	100
M 8x1.25	2.00 - 4.50	10.90	11.00	14.00	1.50	18.50	10.00	26.00	3855-M8	18,22	100
M 8x1.25	4.00 - 6.50	10.90	11.00	14.00	1.50	21.00	10.00	26.00	3855-M8E1	18,30	100
M 10x1.50	1.60 - 5.00	11.90	12.00	15.00	1.50	19.00	11.50	45.00	3855-M10	24,17	50
M 10x1.50	5.00 - 7.50	11.90	12.00	15.00	1.50	24.00	11.50	45.00	3855-M10E1	37,12	50
M 10x1.50	2.00 - 5.00	12.90	13.00	16.00	1.50	21.00	11.50	45.00	3855-M10E2	37,12	50
M 10x1.50	5.00 - 7.50	12.90	13.00	16.00	1.50	24.00	11.50	45.00	3855-M10E3	37,12	50
M 12x1.75	1.60 - 5.00	14.90	15.00	18.00	1.50	22.50	14.50	70.00	3855-M12	45,76	50
M 12x1.75	1.70 - 4.50	15.90	16.00	19.00	1.90	24.00	17.50	70.00	3855-M12E1	53,54	50
M 12x1.75	4.00 - 7.50	15.90	16.00	19.00	1.90	29.00	17.50	70.00	3855-M12E2	97,13	50

\* The prices of the list are related to packs of 100 units

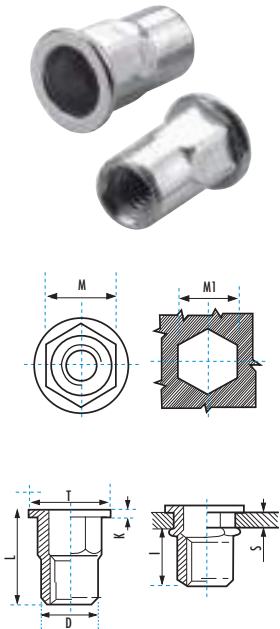







SEMI-HEXAGONAL THREADED INSERTS



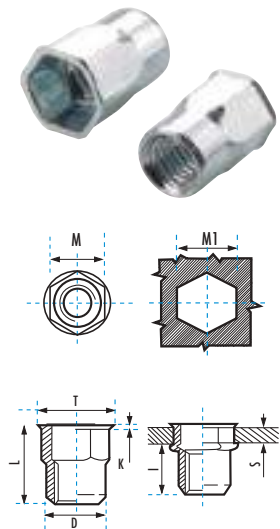
FLAT HEAD






	S mm	M mm	M1 mm	T mm	K mm	L mm	I mm			€/100 Unit	
M 3x0.50	0.50 - 1.50	4.90	5.00	7.20	0.80	8.50	5.50	2.00	3856-M3	9,21	100
M 4x0.70	0.50 - 2.00	5.90	6.00	9.00	0.80	11.00	6.50	5.00	3856-M4	9,32	100
M 4x0.70	2.50 - 4.00	5.90	6.00	9.00	0.80	13.50	6.50	5.00	3856-M4E1	16,70	100
M 5x0.80	0.50 - 3.00	6.90	7.00	10.00	1.00	13.00	8.00	8.50	3856-M5	10,08	100
M 5x0.80	3.00 - 5.50	6.90	7.00	10.00	0.80	16.00	11.00	8.50	3856-M5E1	16,70	100
M 6x1.00	0.50 - 4.00	8.90	9.00	12.00	1.50	16.50	8.50	15.00	3856-M6	11,39	100
M 6x1.00	3.00 - 5.50	8.90	9.00	13.00	1.50	18.50	10.50	15.00	3856-M6E1	28,21	100
M 8x1.25	1.00 - 4.00	10.90	11.00	15.90	1.50	18.20	10.50	20.00	3856-M8	16,17	100
M 8x1.25	4.00 - 6.00	10.90	11.00	15.00	1.50	20.50	12.50	26.00	3856-M8E1	30,28	100
M 10x1.50	1.00 - 3.50	11.90	12.00	17.00	1.60	19.00	12.00	50.00	3856-M10	25,84	50
M 10x1.50	0.50 - 3.50	12.90	13.00	17.00	1.80	21.00	12.00	50.00	3856-M10E1	26,43	50
M 12x1.75	2.00 - 5.00	15.90	16.00	23.00	2.20	27.50	16.50	80.00	3856-M12	56,99	50

\* The prices of the list are related to packs of 100 units

REDUCED COUNTERSINK HEAD






	S mm	M mm	M1 mm	T mm	K mm	L mm	I mm			€/100 Unit	
M 3x0.50	0.30 - 1.50	4.90	5.00	6.00	0.50	9.00	5.50	1.00	3857-M3	13,93	100
M 3x0.50	1.50 - 2.50	4.90	5.00	6.00	0.50	10.00	5.50	1.00	3857-M3E1	16,00	100
M 4x0.70	0.50 - 2.00	5.90	6.00	7.00	0.50	12.00	8.30	3.00	3857-M4	8,06	100
M 5x0.80	0.50 - 2.50	6.90	7.00	8.00	0.50	13.00	8.70	6.00	3857-M5	9,04	100
M 6x1.00	1.00 - 3.50	8.90	9.00	10.00	0.60	16.00	10.50	11.00	3857-M6	10,19	100
M 8x1.25	1.00 - 3.50	10.90	11.00	12.00	0.65	17.50	11.30	20.00	3857-M8	13,81	100
M 10x1.50	1.00 - 4.00	11.90	12.00	13.25	0.70	18.30	12.80	32.00	3857-M10	22,16	50
M 10x1.50	1.00 - 4.00	12.90	13.00	14.50	0.75	21.00	12.80	32.00	3857-M10E1	22,46	50
M 12x1.75	1.50 - 4.00	15.90	16.00	17.50	0.80	24.00	16.00	50.00	3857-M12	56,46	50

\* The prices of the list are related to packs of 100 units

REDUCED COUNTERSINK HEAD - SPECIAL HOLE



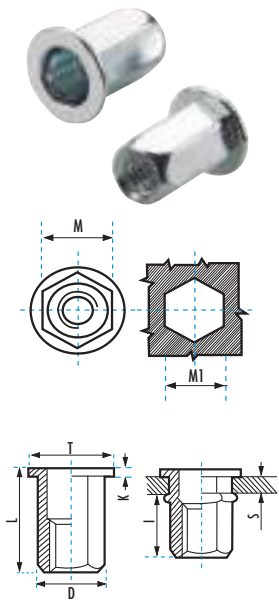
	S mm	M mm	M1 mm	T mm	K mm	L mm	I mm			€/100 Unit	
M 4x0.70	0.50 - 2.00	6.30	6.40	7.40	0.50	10.50	6.50	3.00	3858-M4	9,21	100
M 5x0.80	0.50 - 2.50	7.10	7.20	8.20	0.50	12.00	7.50	6.00	3858-M5	10,94	100
M 6x1.00	1.00 - 3.00	9.50	9.60	10.60	0.60	15.00	9.20	11.00	3858-M6	11,80	100
M 8x1.25	1.00 - 3.50	10.50	10.60	11.60	0.60	16.50	10.50	20.00	3858-M8	16,28	100




\* The prices of the list are related to packs of 100 units



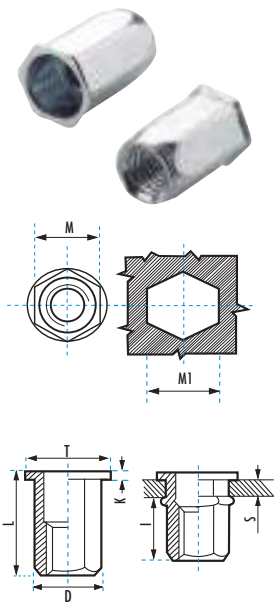
**HEXAGONAL THREADED INSERTS**


**M**  
**M F**

**HCS**
**FLAT HEAD**


	S mm	M mm	M1 mm	T mm	K mm	L mm	I mm	 Nm		€/100 Unit	
M 4x0.70	0.50 - 2.00	5.90	6.00	9.00	0.80	11.00	6.50	5.00	3859-M4	9,21	100
M 4x0.70	2.00 - 5.00	5.90	6.00	9.00	0.80	13.50	6.50	5.00	3859-M4E1	14,96	100
M 5x0.80	0.50 - 3.00	6.90	7.00	10.00	1.00	14.00	8.00	8.50	3859-M5	10,08	100
M 5x0.80	3.00 - 6.00	6.90	7.00	10.00	1.00	16.50	8.00	8.50	3859-M5E1	15,83	100
M 6x1.00	0.50 - 3.00	8.90	9.00	13.00	1.20	16.00	9.50	15.00	3859-M6	11,39	100
M 6x1.00	3.00 - 5.00	8.90	9.00	13.00	1.50	19.50	8.50	15.00	3859-M6E1	16,70	100
M 8x1.25	1.00 - 3.50	10.90	11.00	16.00	1.50	17.00	9.50	26.00	3859-M8	16,17	100
M 8x1.25	3.50 - 6.00	10.90	11.00	15.00	1.50	21.50	10.50	26.00	3859-M8E1	21,87	100
M 10x1.50	1.00 - 3.50	11.90	12.00	18.00	1.70	21.00	13.50	50.00	3859-M10	25,84	50
M 10x1.50	1.00 - 3.50	12.90	13.00	18.00	1.70	21.00	13.50	50.00	3859-M10E1	26,43	50
M 10x1.50	3.50 - 6.50	12.90	13.00	17.00	1.50	24.00	14.50	50.00	3859-M10E2	40,64	50
M 12x1.75	1.00 - 3.50	14.90	15.00	19.00	2.00	24.30	16.00	80.00	3859-M12	66,20	50
M 12x1.75	2.00 - 5.00	15.90	16.00	23.00	2.00	27.00	16.50	80.00	3859-M12E1	56,99	50

\* The prices of the list are related to packs of 100 units

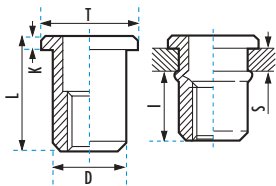
**REDUCED COUNTERSINK HEAD**


	S mm	M mm	M1 mm	T mm	K mm	L mm	I mm	 Nm		€/100 Unit	
M 3x0.50	0.50 - 1.50	4.90	5.00	6.00	0.45	8.50	5.00	1.00	3860-M3	13,93	100
M 4x0.70	0.50 - 2.50	5.90	6.00	7.00	0.50	11.00	6.70	3.00	3860-M4	8,06	100
M 4x0.70	2.50 - 5.00	5.90	6.00	7.00	0.50	13.50	6.70	3.00	3860-M4E1	12,10	100
M 5x0.80	0.50 - 3.00	6.90	7.00	8.00	0.50	14.50	9.00	6.00	3860-M5	9,04	100
M 5x0.80	3.00 - 5.00	6.90	7.00	8.00	0.50	16.00	9.00	6.00	3860-M5E1	12,95	100
M 6x1.00	1.00 - 3.50	8.90	9.00	10.00	0.60	16.00	10.00	11.00	3860-M6	10,19	100
M 6x1.00	3.50 - 6.00	8.90	9.00	10.00	0.60	18.00	10.00	11.00	3860-M6E1	13,81	100
M 8x1.25	1.00 - 4.00	10.90	11.00	12.00	0.65	18.00	11.50	20.00	3860-M8	13,81	100
M 8x1.25	4.00 - 6.00	10.90	11.00	12.00	0.65	20.00	11.50	20.00	3860-M8E1	20,25	100
M 10x1.50	0.50 - 3.50	11.90	12.00	14.50	1.00	19.00	12.50	32.00	3860-M10	22,16	50
M 10x1.50	1.00 - 3.50	12.90	13.00	14.50	0.75	19.00	12.50	32.00	3860-M10E1	22,46	50
M 10x1.50	3.50 - 6.00	12.90	13.00	14.50	0.75	23.50	14.50	32.00	3860-M10E2	35,69	50
M 12x1.75	1.00 - 4.00	14.90	15.00	17.50	1.10	22.50	-	50.00	3860-M12	71,96	50
M 12x1.75	1.00 - 5.00	15.90	16.00	17.80	1.10	25.00	-	50.00	3860-M12E1	71,37	50
M 12x1.75	5.00 - 7.50	15.90	16.00	17.80	1.10	28.00	-	50.00	3860-M12E2	71,37	50





\* The prices of the list are related to packs of 100 units



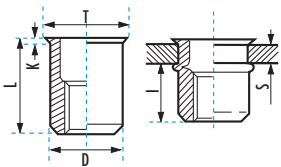
CYLINDRICAL THREADED INSERTS



FLAT HEAD

	S mm	D mm +0,07/-0,1	 +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€/100 Unit	
M 3x0.50	0.30 - 1.80	4.90	5.00	8.00	0.75	9.00	5.50	2.00	3950-M3	-	25
M 4x0.70	0.50 - 2.00	5.90	6.00	8.50	0.80	10.50	6.00	5.00	3950-M4	0,27	25
M 5x0.80	0.50 - 2.50	6.90	7.00	10.00	1.00	13.00	7.50	8.50	3950-M5	0,31	25
M 6x1.00	0.50 - 3.00	8.90	9.00	12.30	1.30	15.50	9.20	15.00	3950-M6	0,51	25
M 8x1.25	1.00 - 3.50	10.90	11.00	15.00	1.50	18.50	11.50	26.00	3950-M8	0,77	25
M 10x1.50	0.80 - 3.50	11.90	12.00	16.00	1.70	19.00	10.50	50.00	3950-M10	-	1
M 10x1.50	1.00 - 4.00	12.90	13.00	17.00	1.60	21.00	12.50	50.00	3950-M10E1	1,19	1
M 12x1.75	1.00 - 4.00	14.90	15.00	18.00	1.70	22.00	13.50	80.00	3950-M12	-	1
M 12x1.75	1.00 - 4.00	15.90	16.00	23.00	2.00	26.00	16.50	80.00	3950-M12E1	-	1

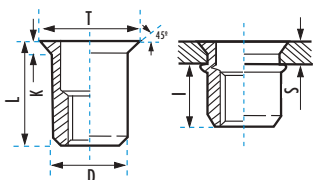
- Check price and availability







REDUCED COUNTERSINK HEAD

	S mm	D mm +0,07/-0,1	 +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€/100 Unit	
M 3x0.50	0.30 - 1.50	4.90	5.00	5.60	0.35	8.50	5.50	1.00	3951-M3	-	25
M 4x0.70	0.50 - 2.00	5.90	6.00	7.00	0.50	10.50	6.50	3.00	3951-M4	0,25	25
M 5x0.80	0.50 - 2.00	6.90	7.00	8.00	0.50	11.50	7.00	6.00	3951-M5	0,29	25
M 6x1.00	0.50 - 2.50	8.90	9.00	10.00	0.60	14.00	8.50	11.00	3951-M6	0,48	25
M 8x1.25	0.50 - 3.00	10.90	11.00	12.00	0.50	16.50	10.50	20.00	3951-M8	0,69	25
M 10x1.50	0.80 - 3.00	11.90	12.00	13.50	0.80	18.00	10.20	32.00	3951-M10	-	1
M 10x1.50	1.00 - 3.50	12.90	13.00	14.10	0.60	19.50	11.50	32.00	3951-M10E1	1,16	1
M 12x1.75	0.5 - 3.5	14.90	15.00	16.50	0.85	22.50	16.00	49.00	3951-M12	-	1

- Check price and availability








COUNTERSINK HEAD


	S mm	D mm +0,07/-0,1	 +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€/100 Unit	
M 3x0.50	1.70 - 3.00	4.90	5.00	8.00	1.50	11.50	5.50	1.00	3952-M3	-	25
M 4x0.70	1.50 - 3.00	5.90	6.00	9.00	1.50	12.00	7.50	4.00	3952-M4	0,33	25
M 5x0.80	1.50 - 3.50	6.90	7.00	10.00	1.50	13.00	7.80	8.00	3952-M5	0,38	25
M 6x1.00	1.50 - 4.00	8.90	9.00	12.00	1.50	15.50	9.00	15.00	3952-M6	0,53	25
M 8x1.25	2.00 - 4.50	10.90	11.00	14.00	1.50	18.50	12.00	26.00	3952-M8	0,80	25
M 10x1.50	1.00 - 4.00	11.90	12.00	15.00	1.50	18.00	10.50	45.00	3952-M10	-	1
M 10x1.50	2.00 - 5.00	12.90	13.00	16.00	1.50	21.00	13.00	45.00	3952-M10E1	1,19	1





- Check price and availability


INOX





**KNURLED CYLINDRICAL THREADED INSERTS**
**FLAT HEAD**


	S mm	D mm +0,07/-0,1	 +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€	
M 3x0.50	0.50 - 1.50	4.90	5.00	7.00	0.80	10.00	5.00	2.00	3953-M3	-	25
M 3x0.50	1.50 - 3.00	4.90	5.00	8.00	0.75	10.00	5.50	2.00	3953-M3E1	-	25
M 4x0.70	0.50 - 2.00	5.90	6.00	9.00	0.80	10.50	6.50	5.00	3953-M4	0,27	25
M 4x0.70	2.50 - 4.00	5.90	6.00	9.00	0.75	12.50	6.50	5.00	3953-M4E1	-	25
M 5x0.80	0.50 - 2.50	6.90	7.00	10.00	1.00	13.00	8.00	8.50	3953-M5	0,31	25
M 5x0.80	2.00 - 4.00	6.90	7.00	10.00	1.00	16.00	8.00	8.50	3953-M5E1	-	25
M 6x1.00	0.50 - 3.00	8.90	9.00	12.30	1.30	15.50	9.20	15.00	3953-M6	0,51	25
M 6x1.00	3.50 - 6.00	8.90	9.00	13.00	1.50	19.00	9.00	15.00	3953-M6E1	0,71	25
M 8x1.25	1.00 - 3.50	10.90	11.00	14.50	1.50	18.50	11.50	26.00	3953-M8	0,77	25
M 8x1.25	3.00 - 6.00	10.90	11.00	14.50	1.50	21.00	11.50	26.00	3953-M8E1	0,97	25
M 10x1.50	0.80 - 3.50	11.90	12.00	16.00	1.70	19.00	10.50	50.00	3953-M10	1,41	1
M 10x1.50	3.50 - 6.00	11.90	12.00	16.00	1.70	22.00	10.50	50.00	3953-M10E1	-	1
M 10x1.50	1.00 - 4.00	12.90	13.00	17.00	1.60	21.00	13.50	50.00	3953-M10E2	1,19	1
M 10x1.50	3.00 - 6.00	12.90	13.00	19.00	2.00	26.00	14.50	50.00	3953-M10E3	1,69	1
M 12x1.75	1.00 - 4.00	14.90	15.00	18.00	1.70	22.00	13.50	80.00	3953-M12	-	1
M 12x1.75	4.00 - 6.50	14.90	15.00	18.00	1.70	25.00	14.00	80.00	3953-M12E1	-	1
M 12x1.75	1.00 - 4.00	15.90	16.00	23.00	2.00	25.00	16.50	80.00	3953-M12E2	2,01	1
M 12x1.75	3.50 - 7.00	15.90	16.00	23.00	1.60	29.00	16.50	80.00	3953-M12E3	-	1

**REDUCED COUNTERSINK HEAD**


	S mm	D mm +0,07/-0,1	 +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€	
M 3x0.50	0.50 - 2.00	4.90	5.00	6.00	0.40	9.00	5.50	1.00	3954-M3	-	25
M 3x0.50	1.50 - 2.50	4.90	5.00	5.80	0.50	10.00	5.50	1.00	3954-M3E1	-	25
M 4x0.70	0.50 - 2.00	5.90	6.00	7.00	0.50	10.50	6.50	3.00	3954-M4	0,25	25
M 4x0.70	2.50 - 4.00	5.90	6.00	7.00	0.50	12.50	6.50	3.00	3954-M4E1	0,49	25
M 5x0.80	0.50 - 2.00	6.90	7.00	8.00	0.50	11.50	7.20	6.00	3954-M5	0,29	25
M 5x0.80	2.50 - 4.50	6.90	7.00	8.00	0.50	13.00	6.80	6.00	3954-M5E1	0,59	25
M 6x1.00	0.50 - 3.00	8.90	9.00	10.00	0.60	14.00	9.00	11.00	3954-M6	0,48	25
M 6x1.00	3.00 - 6.00	8.90	9.00	10.00	0.50	17.50	8.60	11.00	3954-M6E1	0,73	25
M 8x1.25	1.00 - 3.50	10.90	11.00	12.00	0.50	16.50	10.50	20.00	3954-M8	0,69	25
M 8x1.25	3.50 - 6.00	10.90	11.00	12.00	0.65	19.50	10.00	20.00	3954-M8E1	1,03	25
M 10x1.50	0.80 - 3.00	11.90	12.00	13.50	0.80	18.00	11.20	32.00	3954-M10	1,41	1
M 10x1.50	2.00 - 4.50	11.90	12.00	13.50	0.80	19.50	11.20	32.00	3954-M10E1	-	1
M 10x1.50	1.00 - 3.50	12.90	13.00	14.00	0.70	17.70	10.70	32.00	3954-M10E2	1,41	1
M 10x1.50	3.00 - 6.00	12.90	13.00	14.00	0.50	23.00	13.30	32.00	3954-M10	-	1
M 12x1.75	0.50 - 3.50	14.90	15.00	16.50	0.85	22.50	16.00	50.00	3954-M12	-	1
M 12x1.75	1.00 - 4.00	15.90	16.00	17.60	0.75	24.20	14.00	50.00	3954-M12E1	2,01	1
M 12x1.75	4.00 - 6.00	15.90	16.00	17.50	0.60	27.00	16.00	50.00	3954-M12E2	-	1

**COUNTERSINK HEAD**


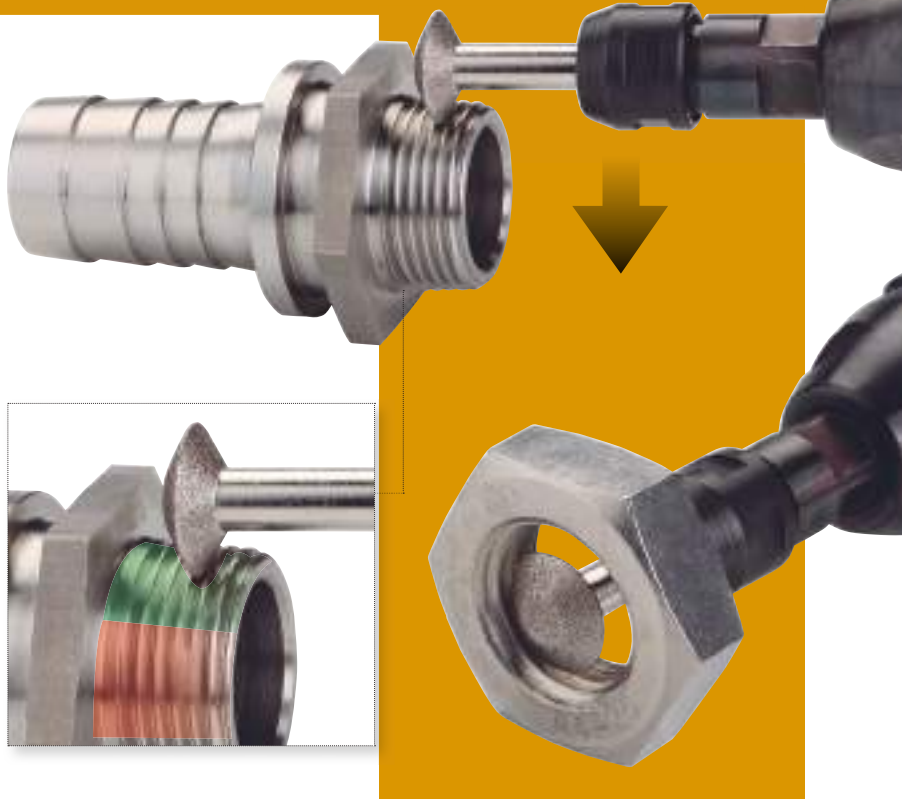
	S mm	D mm +0,07/-0,1	 +0,1/-0	T mm +/-0,3	K mm +/-0,15	L mm +/-0,3	I mm	 Nm		€	
M 3x0.50	1.70 - 3.00	4.90	5.00	8.00	1.50	11.50	11.50	1.00	3955-M3	0,33	25
M 3x0.50	3.00 - 4.00	4.90	5.00	8.00	1.50	12.50	11.50	1.00	3955-M3E1	-	25
M 4x0.70	1.50 - 3.00	5.90	6.00	9.00	1.50	12.00	7.50	4.00	3955-M4	0,35	25
M 4x0.70	3.50 - 5.00	5.90	6.00	9.00	1.50	13.00	7.50	4.00	3955-M4E1	0,47	25
M 5x0.80	1.50 - 3.50	6.90	7.00	10.00	1.50	13.00	7.00	8.00	3955-M5	0,38	25
M 5x0.80	4.00 - 6.00	6.90	7.00	10.00	1.50	15.00	7.00	8.00	3955-M5E1	0,58	25
M 6x1.00	1.50 - 4.00	8.90	9.00	12.00	1.50	15.50	9.00	15.00	3955-M6	0,53	25
M 6x1.00	4.50 - 6.50	8.90	9.00	12.00	1.50	19.00	9.00	15.00	3955-M6E1	0,90	25
M 8x1.25	2.00 - 4.50	10.90	11.00	14.00	1.50	18.50	12.00	26.00	3955-M8	0,80	25
M 8x1.25	3.50 - 6.50	10.90	11.00	13.70	1.50	21.00	12.00	26.00	3955-M8E1	1,10	25
M 10x1.50	1.50 - 4.00	11.90	12.00	15.00	1.50	18.00	10.50	45.00	3955-M10	-	1
M 10x1.50	3.00 - 6.00	11.90	12.00	15.00	1.50	20.00	10.50	45.00	3955-M10E1	-	1
M 10x1.50	2.00 - 5.00	12.90	13.00	16.00	1.50	21.00	13.00	45.00	3955-M10E2	1,19	1
M 10x1.50	3.50 - 6.50	12.90	13.00	15.70	1.60	25.00	14.50	45.00	3955-M10E3	1,92	1
M 12x1.75	1.60 - 5.00	14.90	15.00	18.00	1.50	22.50	14.50	50.00	3955-M12	-	1
M 12x1.75	1.50 - 4.50	15.90	16.00	19.00	1.70	24.00	14.00	50.00	3955-M12E1	2,01	1
M 12x1.75	4.00 - 7.50	15.90	16.00	19.00	1.90	29.00	17.50	50.00	3955-M12E2	-	1

- Check price and availability

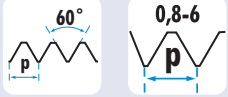
## THREAD RESTORING CBN ROTARY BURRS



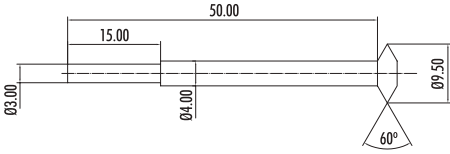
- Start tooling in good thread area (GREEN) and work into damaged area (RED). Moving along the thread profile over damaged area (RED) staying in thread path with light tool pressure. Let the tool do the Work.
- Keep tool clean & use cutting oil in order to improve performance and tool life.
- Repeat steps on needed areas.



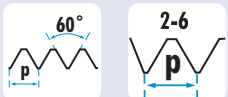
**THREAD RESTORING CBN ROTARY BURRS**



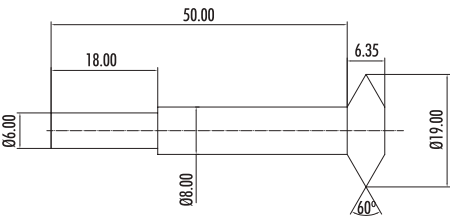
- This Tool restores both internal and external threads precisely.
- **Limitation:** Minimal pitch 0.80mm or 28tpi. In case of internal threads, minimal size to be restored is M12 or 1/2".



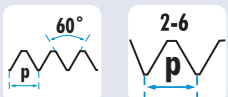
Ref. LRR1  
53,20 €



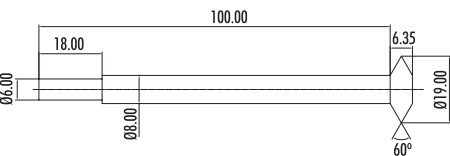
- This Tool restores both internal and external threads precisely. Specially designed for large pitches
- **Limitation:** Minimal pitch 2mm or 12tpi. In case of internal threads, minimal size to be restored is M22 or 7/8.



Ref. LRR2  
67,39 €



- This Tool restores both internal and external threads precisely. Specially designed for large pitches. LONG REACH TOOL.
- **Limitation:** Minimal pitch 2mm or 12tpi. In case of internal threads, minimal size to be restored is M22 or 7/8.



Ref. LRR3  
76,26 €

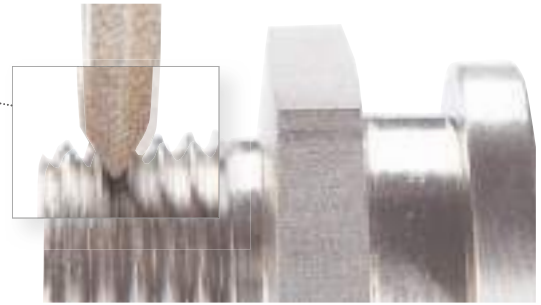


ROTA THREAD  
Pink



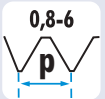
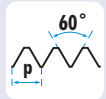


# ROTA THREAD<sup>®</sup> by CELESA

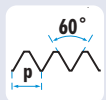
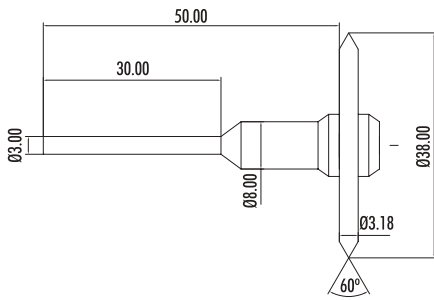


Ø3 mm

Ref. LRR4  
81,57 €



- This Tool restores both internal and external threads precisely. The 38mm diameter offers clearance when working on the threads that are damaged closer to the head of the fasteners.
- **Limitation:** Minimal pitch 0.80mm or 28tpi

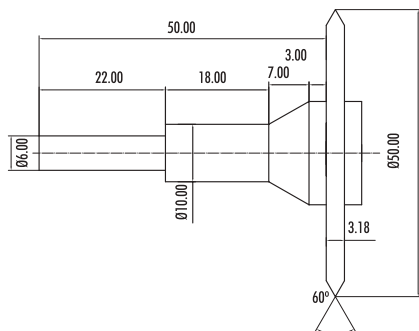


- This Tool restores both internal and external threads precisely. The 50mm diameter offers clearance when working on the threads that are damaged closer to the head of the fasteners.
- **Limitation:** Minimal pitch 2mm or 12tpi



Ø6 mm

Ref. LRR5  
97,53 €



## EXTERNAL COUNTERSINKS FOR RESTORING STARTING THREADS



### External Countersink

These external countersinks quickly repair starting damaged thread of screws and threaded rods. Those starting threads are usually hit or cut off with a die grinder so burr generated in those threads do not let the nut start. These countersinks shear off those threads and chamfer the thread 60° in order to make a smooth start of the nut.

- This tool does not over heat or spark.
- This tool must be used in low cutting speed. (Max 500RPM).
- Cut magic metalworking fluid makes operation easier.
- Use hand power Tools, especially battery mode ones.

HSS



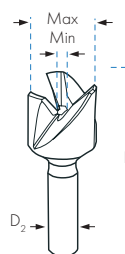
60°



HSS



60°



AV

MIN.-MAX.	D1 mm	D2 mm	L1 mm		€
M3-M8	3,0	8,0	55	AVX1-60	61,55
M6-M14	6,0	10,0	60	AVX2-60	118,12
M10-M27	10,0	13,0	75	AVX3-60	177,02

MIN.-MAX.		L1 mm	AVEXT	€
M8-M18	1/4"	75	AVEXT	37,48

## THREAD RESTORING FILES

**Easy**  
 to use

### Do not buy, just repair.

**Pitch identification:** If you are not sure of the thread size, match up the bolt thread to one of the file sides. Some of the thread sizes may appear similar, so double-check with the file firmly engaged with the section of good threads placed in front of a bright light to highlight that the file is correct for the thread.

**Reparation:** Once you are sure you have the correct side, gently stoke the threads just like doing a finish filing job on a piece of metal. Not too hard and not too soft. Don't worry about cutting too deep or flattening the cylindrical bolt shape, the file limits the cut depth. Start with the good section of thread just next to the bugged part and start filing around the bolt toward the known bad section. After one file pass, spritz some CUT MAGIC fluid and try the nut for smooth spin-on. If it binds don't force it, make another pass instead.

For external threads

Metric pitches:

0,75 - 1,00 - 1,25 - 1,50 - 1,75 - 2,00 - 2,50 - 3,00



Ref. LR1

38,18 €

For external and internal threads

Metric pitches:

0,80 - 1,00 - 1,25 - 1,50 - 1,75 - 2,00 - 2,50 - 3,00



Ref. LR2

57,33 €

## EXTERNAL THREAD REPAIR ROLLING TOOL



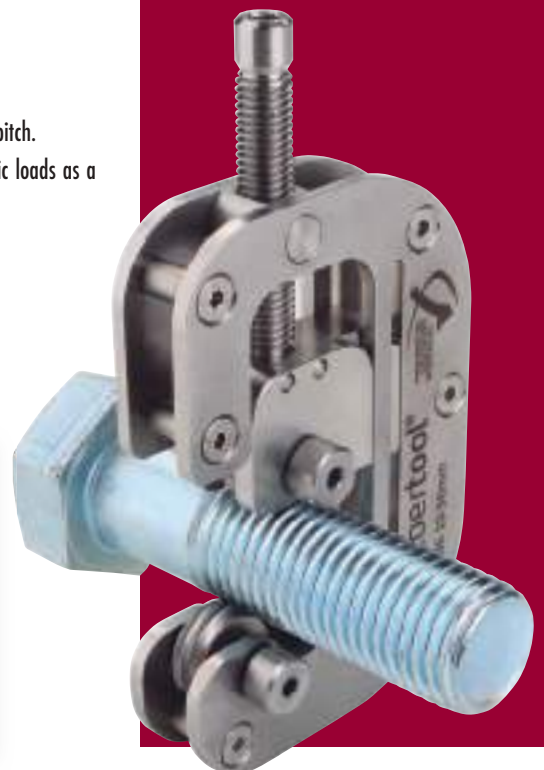
Silbertool repairing tool is the perfect solution for extremely damaged threads where removal of material (like happens with threading dies or other external repairing tools) becomes the thread irreversibly weak and render it useless right away. A wide range of rollers offers versatility because just replacing rollers plenty of different sizes could be repaired. Installing one pitch, many threads in that pitch are workable. For Example M6X1, M8X1, M10X1, M12X1, M14X1, etc... versatile, easy... very useful.

### Advantages

- External threads are repaired without removal of material so the thread does not become weaker.
- Only one Silbertool® Thread - Repair Tools is needed to repair any pitch. Each roller repair one pitch.
- It has been proven that a thread repaired with Silbertool® withstands the same static and dynamic loads as a new undamaged thread. Moreover, they showed a higher fatigue endurance limit.
- During repairing process the surface of the thread becomes perfectly clean; without any burr.
- Use Cut Magic metalworking fluid in order to reduce repairing effort.



**NON-INVASIVE RESTORING**



**EXTERNAL THREAD REPAIR ROLLING TOOL**



Ref. R16



R16			
M / MF			€/ Unit
M5 - M16	0,50 - 2,00	R16	375,41

Rollers not included.



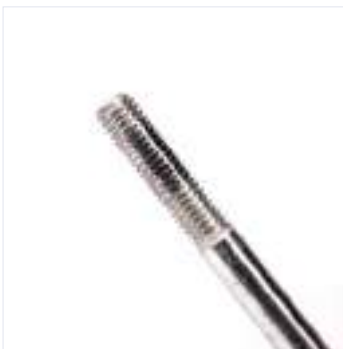
Ref. R160175



Ref. R160125

**SET OF ROLLERS**

M / MF			€/Unit		€/Unit
M5 - M16	0.50	R160050	80,24	R1610050	107,07
M5 - M16	0.75	R160075	80,24	R1610075	107,07
M5 - M16	0.80	R160080	80,24	R1610080	107,07
M5 - M16	1.00	R160100	80,24	R1610100	107,07
M5 - M16	1.25	R160125	80,24	R1610125	107,07
M5 - M16	1.50	R160150	80,24	R1610150	107,07
M5 - M16	1.75	R160175	80,24	R1610175	107,07
M5 - M16	2.00	R160200	80,24	R1610200	107,07





EXTERNAL THREAD REPAIR ROLLING TOOL



Ref. R360250



SET OF ROLLERS

M / MF			€/Unit		€/Unit
M10 - M36	0.50	R360050	122,26	R36I0050	146,76
M10 - M36	0.75	R360075	122,26	R36I0075	146,76
M10 - M36	1.00	R360100	122,26	R36I0100	146,76
M10 - M36	1.25	R360125	122,26	R36I0125	146,76
M10 - M36	1.50	R360150	122,26	R36I0150	146,76
M10 - M36	1.75	R360175	122,26	R36I0175	146,76
M10 - M36	2.00	R360200	122,26	R36I0200	146,76
M10 - M36	2.50	R360250	122,26	R36I0250	146,76
M10 - M36	3.00	R360300	122,26	R36I0300	146,76
M10 - M36	3.50	R360350	122,26	R36I0350	146,76
M10 - M36	4.00	R360400	122,26	R36I0400	146,76



Ref. R36

R36			
M / MF			€/Unit
M10 - M36	0.50 - 4.00	R36	857,26

Rollers not included.



Ref. R600050



SET OF ROLLERS

M / MF			€/Unit		€/Unit
M10 - M60 - M110	0.50	R600050	220,26	R60I0050	244,76
M10 - M60 - M110	0.80	R600080	220,26	R60I0080	244,76
M10 - M60 - M110	1.00	R600100	220,26	R60I0100	244,76
M10 - M60 - M110	1.25	R600125	220,26	R60I0125	244,76
M10 - M60 - M110	1.50	R600150	220,26	R60I0150	244,76
M10 - M60 - M110	1.75	R600175	220,26	R60I0175	244,76
M10 - M60 - M110	2.00	R600200	220,26	R60I0200	244,76
M10 - M60 - M110	2.50	R600250	220,26	R60I0250	244,76
M10 - M60 - M110	3.00	R600300	220,26	R60I0300	244,76

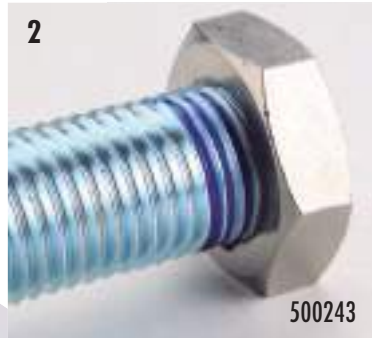


Ref. R60

R60/110			
M / MF			€/Unit
M10 - M60	0.50 - 3.00	R60	1.102,26
M50 - M110	0.50 - 3.00	R110	1.714,76

Rollers not included.





## Anaerobic adhesives and sealants. Threadlocking

This product has been specially designed for Industrial threadlocking, retaining and sealing of threaded connections in order to get higher mechanical resistance.

### Advantages

- The characteristic feature of POWERLOCK is the curing in contact with metal while deprived of air.
- It provides a shock- and vibration resistant joint with an excellent resistance to chemicals and solvents.
- Due to its liquid consistency POWERLOCK completely fills the gaps, thus giving protection against leakage and fretting corrosion.
- POWERLOCK is simple, easy to use and very economical. Handling strength is reached within a few minutes and final strength within a few hours at room temperature.
- POWERLOCK is suitable for all metals and certain plastics.

### Main applications

- For locking, fastening and sealing of screw connections from M5 to M36.
- For reliable retaining of bearings, bushings, bolts and other press or slip fitted connections.
- For sealing and locking hydraulic and pneumatic pipe connections.

### Active and passive materials

Active Materials (Fast curing)	Passive Materials (Slower curing)
<ul style="list-style-type: none"> <li>• Bronze</li> <li>• Iron</li> <li>• Cooper</li> <li>• Brass</li> <li>• Steel</li> </ul>	<ul style="list-style-type: none"> <li>• High-alloyed steel</li> <li>• Aluminium, nickel, zinc, gold</li> <li>• Oxid layers</li> </ul>



	Colour	Application range	Viscosity at +25°C	Max. gap filling	Breakaway strength	Prevailing strength	Shear Strength (N/mm <sup>2</sup> )	Handling strength at room temperature	Final strength at room temperature	Operation temperature	€
500222 *		M1-M36	1.000 mPa-s	0,20 mm	4-8 Nm	2-4 Nm	3-5 N/mm <sup>2</sup> (435-725 psi)	10-20 min.	3-6 h.	-60 - +150°C (-76 - +302°F)	40,94
500243 **		M1-M36	2.000 - 7.000 mPa-s	0,25 mm	17-22 Nm	8-12 Nm	9-13 N/mm <sup>2</sup> (1.305-1.885 psi)	10-20 min.	1-3 h.	-60 - +150°C (-76 - +302°F)	40,94
500270 ***		M1-M20	500 mPa-s	0,15 mm	28-35 Nm	50-65 Nm	15-20 N/mm <sup>2</sup> (2.175-2.900 psi)	10-20 min.	3-6 h.	-60 - +150°C (-76 - +302°F)	40,94

\* Low Strength (easy disassembling)    \*\* Medium Strength (disassembling with regular tools)    \*\*\* High strength (disassembling only with heat)



### Cleaning of bonding surfaces before using adhesives and sealants

Surface Cleaner is used for cleaning and degreasing of surfaces to be joined or sealed with POWELOCK adhesives and sealants. It cleans and evaporates leaving no residue.



500001
15,25 €



## Hydraulic and pneumatic threaded pipe systems sealant

POWERLOCK pipe and thread sealing types have especially been formulated to prevent the escape of gaseous and liquid substances and they seal up to burst point and resist almost all substances used in industry

### Advantages

- The use of POWERLOCK prevents clogging and contamination of fittings as well as the blockage of hydraulic and pneumatic valves as may occur with conventional sealing methods (e.g. hemp or Teflon tape).
- Connections sealed with POWERLOCK are protected against seizing and fretting corrosion. The available different strength grades allow dismantling even after years. POWERLOCK Pipe
- POWERLOCK Pipe and thread sealing is the best solution to create fully sealed threaded connections which totally avoid any leakage.

### Recommendations for User




#### Application

POWERLOCK is ready for use and should be applied evenly direct from the bottle/tube with the dispensing tip (avoid direct contact of dispensing tip with metal). On press fitted parts and larger cylindrical assemblies a thin and uniform layer should be applied on both surfaces. In the case of threaded blind holes fill sufficient quantity in the bore hole. On screws and bolts, apply POWERLOCK around the thread.

Do not pour back into the bottle any POWERLOCK fluid which had contact with metal; even smallest metal particles will cause the content of the bottle to cure.



500542

	Colour	Application range	Viscosity at +25°C	Max. gap filling	Breakaway strength	Prevailing strength	Shear Strength (N/mm <sup>2</sup> )	Handling strength at room temperature	Final strength at room temperature	Operation temperature	€
500542 		G 1/8"-3/4"	500 mPa·s	0,15 mm	12-15 Nm	18-22 Nm	8-12 N/mm <sup>2</sup> (1.160-1.740 psi)	10-20 min.	2-4 h.	-60 - +150°C (-76 - +302°F)	40,94
500572 ** 		G 1/8"-3"	17.000-50.000 mPa·s	0,40 mm	7-10 Nm	2-4 Nm	4-6 N/mm <sup>2</sup> (580-870 psi)	20-40 min.	5-10 h.	-60 - +150°C (-76 - +302°F)	24,61

\*\* PTFE

\* Material safety data sheet available.



<b>FREE</b>	Free running insert	<b>...X</b>	Group Code	<b>HSS</b>	High Speed Steel STI Tap
<b>LOCK</b>	Screw Locking Insert	<b>1.0D</b>	Installed Insert Length = $\varnothing \times 1.0$	<b>HSS</b>	HSS STI Tap M/MF, UNC, UNF, 8 UN, NPT
<b>M/MF</b>	Metric course and metric fine	<b>1.5D</b>	Installed Insert Length = $\varnothing \times 1.5$	<b>HSS</b>	HSS STI Tap BSW, BSF, BSP, BSB
<b>UNC</b>	Unified National Course	<b>2.0D</b>	Installed Insert Length = $\varnothing \times 2.0$	<b>HSS</b>	HSS STI Tap BA
<b>UNF</b>	Unified National Fine	<b>2.5D</b>	Installed Insert Length = $\varnothing \times 2.5$	<b>HSS-V3</b>	Spark Plug - HSS Pilot Nose STI Tap
<b>BSW</b>	British Standard Whitworth	<b>3.0D</b>	Installed Insert Length = $\varnothing \times 3.0$	<b>HSS-V3</b>	HSS - V3 (3%V) Spiral Flute STI Tap
<b>BSF</b>	British Standard Fine	<b>3.5D</b>	Installed Insert Length = $\varnothing \times 3.5$	<b>HSS-V3</b>	HSS - V3 (3%V) Spiral Point (Gun Nose) STI Tap
<b>BSP</b>	British Standard Pipe	<b>X.XD</b>	Installed Insert length Codification = $\varnothing \times "D"$	<b>TOL5H-6H</b>	STI Tap 5H/6H Tolerance
<b>NPT</b>	National Pipe Taper	<b>AISI 304</b>	304 Stainless steel insert	<b>TOL (2B-3B)</b>	STI Tap 2B-3B Tolerance
<b>8-UN</b>	8-UN Constant Pitch	<b>Spark plug</b>	Spark plug Installed insert Length	<b>Strip Feed Inserts</b>	Strip Feed Inserts
<b>BA</b>	British Association	<b>Standard Compliance</b>	Standard Compliance By Special Order	<b>Low Volume</b>	Low Volume
<b>BSB</b>	British Standard Brass	<b>Insert Standard Compliance</b>	Insert Standard Compliance	<b>Low - Medium Volume</b>	Low - Medium Volume
		<b>HSS</b>	High Speed Steel Drill	<b>High Volume</b>	High Volume
		<b>STI Go No - Go Gauges</b>	STI Go No - Go Gauges	<b>Hand Installation Tool</b>	Hand Installation Tool



Insert Diameter

Pitch (mm & TPI)

Installed Length

Units of packing

No of inserts

Drill Diameter

Tap

Instal Toll Part No

Tang Break Part No

# TECHNICAL INFORMATION






























**BLUE-MASTER<sup>®</sup>**  
*by CELESA*

CUTTING TECHNOLOGIES

**SYMBOL INDEX**
**GENERAL ICONS**

 <b>DIN</b> -	DIN Norm	 <b>TQ</b> -	Tolerance	 <i>Plus</i>	High Performance Tool
 ★★	Standard Quality	 ★★★	Professional Quality	 ★★★★	Extra Professional Quality
				 ★★★★★	Supreme Quality
					Premium Quality

**MATERIALS**

 <b>HSS</b>	High Speed Steel M2 Quality	 <b>HSS G</b>	High Speed Steel M2 Quality Special heat treatment	 <b>HSS V3</b>	M3:2 Quality 3% Vanadium	 <b>HSS PM</b>	Powder Steel High performance
 <b>HSS M3</b>	High Speed Steel M3:1 Quality	 <b>HSS C 5%</b>	5% Cobalt High Speed Steel. M35 Quality	 <b>HSS Co 8%</b>	8% Cobalt High Speed Steel. M42 Quality	 <b>HCS</b>	Carbon Steel
 <b>SOLID CARBIDE</b>	Solid Carbide	 <b>CARBIDE TIPPED</b>	Carbide Insert	 <b>MG CARBIDE</b>	Carbide Micro Grit		
 <b>ASP</b>	Powder Steel High performance	 <b>ASP 23</b>	Powder Steel High performance C:1,28 Cr:4,1 Mo:5,0 W:6,4 V:3,1	 <b>ASP 60</b>	Powder Steel High performance C:2,30 Cr:4,2 Mo:7,0 Co:10,5 V:6,5 V:3,1	 <b>CV</b>	Carbon Steel with Vanadium
 <b>X210 Cr12</b>	Teatrise Carbon Steel X210 Cr12	 <b>BI</b>	Bimetal	 <b>BI/CoV</b>	Mix: Bimetal/Carbon Vanadium steel	 <b>PCD</b>	Polycrystalline
	Carbide tipped point	 <b>TUNGSTEN</b>	Electroplated Tungsten powder		Irwing drill with carbide Insert		Diamond
 <b>T15</b>	Super Powder Steel C:1,60 Cr:4,0 V:4,9 W:12,0 Co:5,0	 <b>K-10</b>	K10 Carbide Quality	 <b>P-20</b>	P10 Carbide Quality	 <b>Cu-Be</b>	Copper Beryllium


















**TOOL COATINGS**

 <b>OX</b>	Steamed (Black Oxide)	 <b>BRIGHT</b>	Bright finish	 <b>GOLD</b>	Gold finish	 <b>TiAlN</b>	Titan-Aluminium-Nitride coating for drilling and milling
 <b>TN</b>	Titanium Nitride coating	 <b>TiCN</b>	Titanium Carbonitride coating	 <b>HARD LUBE</b>	High performance friction-reducing coating for tapping	 <b>TiAlN</b>	Supernitride high performance coating for hardened steel tapping 120 kg/mm <sup>2</sup>
 <b>CrN</b>	Chrome Nitride coating	 <b>BLUE</b>	Special Blue coating for hardened steel milling	 <b>DIAM</b>	Diamond and Titanium coating for enhanced performance	 <b>TiAlSiN</b>	High performance coating for stainless steel and nickel alloys machining
 <b>HARD P</b>	High hardness coating and resistance to wear and abrasion						





















## SYMBOL INDEX














### POINTS AND HELIX OF DRILLS

	Conventional Point Angle 118°		Split Point		Carbide insert		X Turbo self-centering sharp
	Conventional Sharpening		Split Point		S Sharpening		Carbide Insert for Concrete
	Split Point with Internal Cooling		Triple-Facet sharpening for Stainless Steel		Special All-Road Cut		Chip-Breaker for Stainless Steel Cutting
	Special Point Angle for Hardened Steels 70HRc		Slim Point		Slim Point with Internal Cooling		4 Edges Sharpening
	Square sharpening						

### HELIX ANGLES

	Helix Angles for Twist Drills		Helix angle for Reamers		Straight Flute Reamer		Helix angle for Reamers
	Helix angle for 3 Flutes End Mills		Helix angle Multi-Flutes End Mills		Helix angle for 2 Flutes Cutting Centre End Mills		Helix angle for 2 Flutes Ball Nose End Mills
	Helix angle for 2 Flutes End Mills		Variable helix improve performance by reducing vibrations		Helix angle for taps		Helix angle for drill, for wood and metal
	Chip flow A		Chip flow B		Chip flow C		
	Right hand cut, right hand spiral		Right hand cut, left hand spiral		Right hand cut, double cut left-right hand spiral		

### SHANK TYPES

	SDS PLUS shank		SDS-MAX shank		For UNEO type drilling		
	STRAIGHT Straight shank		WELDON Flat Shank		DIN1835B WELDON Shank		TAPER Taper Shank
	Anti-slip triple flat shank		Reduced shank for chuck use		Hexagonal shank (1/4" = 6,35 mm)		Hexagonal shank
	GAMMO GAMMON shank		Reduced shank for chuck use				

**SYMBOL INDEX**
**TOOL APPLICATIONS**

 <b>IN X</b> Stainless steel: AISI 304, AISI 316, AISI 316L	 <b>IN X Plus</b> High performance tool for stainless steel: AISI 304, AISI316, AISI316L	 <b>Al</b> Aluminium & its alloys	 <b>BRASS</b> Brass
 <b>CAST IRON</b> Nodular, maleable and grey cast iron	 Metal in general: Iron, Construction steel	 <b>Kg/m<sup>3</sup></b> Metal up to - Kg/mm <sup>2</sup>	 <b>HR c</b> Tempered steel up to..
 <b>PRODUCTION</b> Tool for the production of big series	 <b>HIGH PERFORMANCE</b> Tool for intensive production and big series	 <b>Cu</b> Copper & its alloys	 <b>FORMING</b> Forming tap
 <b>INC</b> INCONEL: Refractory alloy with high nickel content	 <b>Ni</b> Nickel alloy in general	 <b>Ex</b> Suitable for machining in explosive atmospheres	 <b>Ti</b> Titane & its alloys
 Wood in general	 Drill fro Squared Holes in the wood	 Hard Wood	 Plywood
 Nailed wood: palets...	 Chipboard	 Agglomerated (Pressed))	 Sandwich construction
 Laminated partide board	 Plexiglas	 Steel pipes	 Cast iron pipes
 Laminated sheet	 Special saws for tree pruning	 Sheet	 <b>PVC</b> Plastic in general
 Saw blade for curve cutting in wood	 Saw blade for curve cutting in metal	 Fiberglass	 Crystal & glass
 Profiles for windows in Alumium & PVC	 Marble, Granite	 <b>IN X DUPE</b> Excellent wear resistance and very high mechanical resistance Stainless steel	 Uralit
 <b>Cu-Ni-La</b> Non ferreous steel: Copper, Nickel, Brass	 Tile	 Food	 Plastic pipe o flexible rubber insulating materials
 Carton, rubber, leather	 Leather	 Metal profile	 Polystyrene
 Brick	 <b>BLINDADO</b> Armor	 <b>LARGE SERIES</b> High production & performance	 <b>CNC Machines</b> Tool for a CNC use
 Pallets	 Cell Concrete	 Plaster Board	 <b>HARD</b> High hardness and wear and abrasion resistance Steel

**SYMBOL INDEX**

**TOOL APPLICATIONS**



Natural wood and other materials



Grooving use exclusively



Plaster



Carbon fiber and composite materials



Hydraulic Hoses Cutting



Hard ceramics



Stoneware



Stone



Reinforced concrete



Tile



White marble



Black marble



Concrete celular



Concrete



Asphalt, pavement.



Calcareous stones



Paving stone, floor tile.



Vault and concrete blocks



Soils



PVC Tubes



Wood strip, profile, skirting, handrail



Explosive atmospheres



Aircraft industry



Scratching and preparation of surfaces



Prepare of a surface for later paint.



Prepare and polish of a surface for later wallpaper or paint



Tile removal



Carpet and adhesive removal

**SYMBOL EXPLANATION**
**CUTTING ANGLES**
**CENTER DRILLS**


DIN333A Norm



DIN333B Norm



DIN333R Norm

**COUNTERSINKS**


60° Countersink



75° Countersink



90° Countersink



120° Countersink


 60° Multicutting  
Countersink

 90° Multicutting  
Countersink

 120° Multicutting  
Countersink

 90° External  
chamfering countersink

 60° external  
chamfering countersink

 60° deburring  
countersink

 90° deburring  
countersink

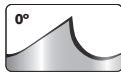
**CUTTING ANGLES: END MILLS**

 45° isosceles angular  
milling cutter

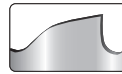
 60° isosceles angular  
milling cutter

 90° isosceles angular  
milling cutter

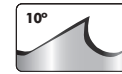

Single angle Mill

**CUTTING ANGLES: BAND SAW BLADES**


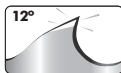
0° Teeth angle



Reinforced teeth



10° Teeth angle



12° Ground tooth angle

**END MILLS ROUGHING AND GRIT TYPES OF BAND SAWS**

 Fine roughing  
NF Type

 Medium roughing  
NM Type

 Coarse roughing  
NR Type

 Tungsten carbide  
electro-deposited  
Fine

 Tungsten carbide  
electro-deposited  
Medium

 Tungsten carbide  
electro-deposited  
Coarse

**CUTTING No.**
**GENERAL**


Teeths N°



Multi cut

**END MILLS**

 2 Flutes end mills with center  
cutting

 3 Flutes end mills with center  
cutting

 4 Flutes end mills with center  
cutting

 Multi-fluted end mills  
with center cutting

 4 Flutes end mills  
without center cutting

## SYMBOL EXPLANATION

### CUTTING N°

#### REAMERS



3 Fluted Drill Reamer  
without cutting centre



Multi-Fluted Drill Reamer  
without cutting centre



Solid carbide heat 3 edges

#### CONSTRUCTION DRILLS

### ICONS DEFINITION BY FAMILY

#### TWIST DRILLS FOR METAL



Left hand drills

#### DRILL CHUCK



Auto-lock



Light weight

#### TAPS



Taps with pilot for a good  
alignment of the first tap



Forming machine taps with oil  
grooves



Forming machine taps without  
oil grooves



Hand taps for aluminium &  
its alloys



Taps alternating teeth  
for through holes in the  
aluminium



Two flutes machine tap for  
blind holes in aluminium



Left-hand cutting

#### LATHE TOOLS



Square  
lathe tool



Cylindrical  
lathe tool



Rectangular  
lathe tool



Trapezoid  
lathe tool



Irregular  
trapezoidal  
lathe tool

#### THREAD GAUGES



Thread Profile



C1:16 Threading conicity NPT  
(1/16)



Certificate

#### JIG SAW BLADES



Ground tooth profile



Carbide tipped tooth



Reverse cut: Good finishing  
in the backside



Teeth type

#### SCREWDRIVER BITS



Phillips



Pozidriv



Slot



Torx



Torx round



Robertson



Torx Tamper



Hexagonal



Tri Wing



Xzn

#### SAW BLADES & DRILLS FOR CONSTRUCTION



Water cooling



Dry work



Percussion mode



Rotation mode without  
percussion



**CHART OF REVOLUTIONS PER MINUTE (R.P.M.) ACCORDING TO THE DIAMETER OF THE DRILL**
**CUTTING SPEED DRILL Ø AND REVOLUTIONS PER MINUTE**

C <sub>s</sub> (m/min)	2	2,5	3	4	5	6,5	8	10	13	16	20	25	30	40	50	63	80
3	477	382	318	238	190	147	119	95	73	60	48	38	32	24	19	15	12
5	796	636	530	398	318	245	198	159	122	99	80	64	53	40	32	25	20
8	1.273	1.018	848	636	509	392	318	254	195	159	127	102	85	64	50	40	32
10	1.592	1.273	1.061	795	636	490	398	318	245	199	159	127	106	80	64	50	40
12	1.910	1.528	1.273	955	764	588	477	382	294	238	190	152	127	95	76	60	48
15	2.387	1.910	1.592	1.194	955	735	596	477	367	298	138	190	159	119	95	75	60
20	3.183	2.546	2.122	1.592	1.273	979	795	636	490	398	318	255	212	159	127	101	80
25	3.979	3.183	2.652	1.989	1.592	1.224	995	795	612	497	398	318	165	198	159	126	99
30	4.775	3.820	3.183	2.387	1.910	1.469	1.194	995	735	596	477	382	318	238	190	151	119
35	5.570	4.456	3.714	2.785	2.228	1.714	1.393	1.114	857	696	557	445	371	278	222	176	139
40	6.366	5.092	4.245	3.183	2.456	1.958	1.592	1.273	979	795	636	509	424	318	255	202	159
45	7.162	5.730	4.775	3.581	2.865	2.204	1.790	1.432	1.102	895	716	572	477	358	286	227	179
50	7.958	6.366	5.305	3.978	3.183	2.448	1.990	1.592	1.224	995	795	636	530	398	318	252	198
55	8.754	7.002	5.836	4.376	3.501	2.693	2.188	1.750	1.346	1.094	875	700	584	438	350	277	218
60	9.550	7.639	6.366	4.775	3.820	2.938	2.388	1.910	1.469	1.194	955	764	636	477	382	303	238
70	11.142	8.912	7.428	5.570	4.456	3.428	2.785	2.228	1.714	1.392	1.114	891	742	557	445	354	278
75	11.937	9.549	7.958	5.968	4.775	3.672	2.981	2.387	1.836	1.492	1.194	955	795	594	477	378	298
80	12.732	10.185	8.488	6.366	5.092	3.918	3.183	2.546	1.958	1.592	1.273	1.018	848	636	509	404	318
90	14.324	11.459	9.550	7.162	5.730	4.407	1.581	2.865	2.204	1.790	1.432	1.145	955	716	572	455	358
100	15.915	12.732	10.611	7.958	6.366	4.897	3.978	3.183	2.448	1.989	1.592	1.273	1.061	795	636	505	398

**FEED CHART**

Ø mm	A	B	C	D	E	F
2,0	0,020	0,025	0,032	0,040	0,050	0,063
2,5	0,025	0,032	0,040	0,050	0,063	0,080
3,0	0,030	0,040	0,050	0,060	0,080	0,100
4,0	0,040	0,050	0,063	0,080	0,100	0,125
5,0	0,040	0,050	0,063	0,080	0,100	0,125
6,5	0,050	0,063	0,080	0,100	0,125	0,160
8,0	0,063	0,080	0,100	0,125	0,160	0,200
10,0	0,080	0,100	0,125	0,160	0,200	0,250
13,0	0,090	0,110	0,130	0,180	0,220	0,270
16,0	0,100	0,125	0,160	0,200	0,250	0,315
20,0	0,125	0,160	0,200	0,250	0,315	0,400
25,0	0,160	0,200	0,250	0,315	0,100	0,500
30,0	0,160	0,200	0,250	0,315	0,100	0,500
40,0	0,200	0,250	0,315	0,400	0,500	0,630
50,0	0,250	0,315	0,400	0,500	0,630	0,800
63,0	0,315	0,400	0,500	0,630	0,800	1,000
80,0	0,400	0,500	0,630	0,800	1,000	1,250

NOTICE: These values are guidance, valid under the following conditions of use

Constant drilling advance

Use of drills of dimensions according to DIN 338 or DIN 345

HSS or HSSCo qualities

Maximum drilling length equal to three times the drill diameter

Good stability and rigidity in the power tool and in the clamping of the piece.

Without pilot pins.

Good refrigeration (coolant, flow, pressure)

Vertical drilling and incoming and outgoing of the drill perpendicular to the surface

In the case the above-mentioned conditions are not fulfilled the cutting speed and / or the feed values must be modified, reducing or increasing them.

**CUTTING SPEED CONDITIONS FOR COUNTERSINKS**



MATERIAL	Steel <700 N/mm <sup>2</sup>	Steel >700 N/mm <sup>2</sup>	Steel 1000 N/mm <sup>2</sup>	Cast Iron <250 N/mm <sup>2</sup>	Cast Iron >250 N/mm <sup>2</sup>	Stainless Steel <1000 N/mm <sup>2</sup>	Soft Brass	Hard Brass	Aluminium < 11 %	Soft Plastic	Hard Plastic
COOLANTS	X	X	X	X	X	X	X	X	X	Water	Air
Cs (m/min)	15	10	6	12	8	6	20	15	25	20	15
Diam. mm	U/min R.P.M.	U/min R.P.M.	U/min R.P.M.	U/min R.P.M.	U/min R.P.M.	U/min R.P.M.	U/min R.P.M.	U/min R.P.M.	U/min R.P.M.	U/min R.P.M.	U/min R.P.M.
4,3	1100	740	440	890	590	444	1480	1110	1850	1480	1110
5,0	950	640	380	760	510	382	1270	950	1590	1270	950
5,3	900	600	360	720	480	360	1200	900	1500	1200	900
5,8	820	550	330	660	440	329	1100	820	1370	1100	820
6,0	800	530	320	640	420	318	1060	800	1330	1060	800
6,3	760	510	300	610	400	303	1010	760	1260	1010	760
7,0	680	450	270	550	360	273	910	680	1140	910	680
7,3	650	440	260	520	350	262	870	650	1090	870	650
8,0	600	400	240	480	320	239	800	600	990	800	600
8,3	580	380	230	460	310	230	770	580	960	770	580
9,4	510	340	200	410	270	203	680	510	850	680	510
10,0	480	320	190	380	250	191	640	480	800	640	480
10,4	460	310	180	370	240	184	610	460	770	610	460
11,5	420	280	170	330	220	166	550	420	690	550	420
12,4	390	260	150	310	210	154	510	390	640	510	390
13,4	360	240	140	290	190	143	480	360	590	480	360
14,4	340	220	130	270	170	133	450	320	550	450	320
15,0	320	210	130	250	170	127	420	320	530	420	320
16,5	290	190	120	230	150	116	390	290	480	390	290
19,0	250	170	100	200	130	101	340	250	420	340	250
20,5	230	160	90	190	120	93	310	230	360	310	230
23,0	210	140	80	170	110	83	280	210	350	280	210
25,0	190	130	80	150	100	76	250	190	320	250	190
26,0	180	120	70	150	100	73	240	180	310	240	180
28,0	170	110	70	140	90	68	230	170	280	230	170
30,0	160	110	60	130	80	64	210	160	270	210	160
31,0	150	100	60	120	80	62	210	150	260	210	150
32,0	150	100	60	120	80	60	210	150	260	210	150
34,0	140	90	60	110	70	56	190	140	230	190	140
37,0	130	90	50	100	70	52	170	130	220	170	130
40,0	120	80	50	100	60	48	160	150	200	160	120
50,0	100	60	40	80	50	38	130	100	160	130	100
63,0	80	50	30	60	40	30	100	80	130	100	80
80,0	60	40	20	50	30	24	80	60	100	80	60

**CONVERSION FORMULA**

$$R.P.M = \frac{Cs \times 1.000}{\emptyset \times TT}$$

$$Cs = \frac{R.P.M \times \emptyset \times TT}{1.000}$$

R.P.M. = REVOLUTION PER MINUTE

Cs. = CUTTING SPEED IN METER/MIN

∅ = DRILL DIAMETER

÷ = 3,1416

**EXAMPLE :**

- Material : ALUMINIUM
- ALU < 11%
- Drill ∅: 10 mm
- Cs: 25 m / min (Chart)

$$R.P.M : \frac{Cs \times 1.000}{\emptyset \times TT} = \frac{25 \times 1.000}{10 \times TT} = 800$$

**CUTTING CONDITIONS FOR HSS / HSS-CO / ASP END MILLS**

	Hardness (N/m <sup>2</sup> )	Ø Mill (mm)	Cutting speed (m./min.)	Feed Teeth Fz (mm)	Coated end mills
<b>BUILDING STEELS</b>	< 400	4 - 8		0.01 - 0.03	
		8 - 12	--38 - 42	0.03 - 0.05	
		12 - 20		0.05 - 0.07	
		20 - 32	65 - 75	0.07 - 0.10	
		32 - 50		0.10 - 0.12	
<b>ALLOYED STEEL</b>	< 700	--4 - 8		0.01 - 0.04	
		8 - 12	32-36	0.04 - 0.05	
		12 - 20		0.05 - 0.07	
		20 - 32	55-65	0.07 - 0.10	
		32 - 50		0.10 - 0.12	
<b>ALLOYED STEEL</b>	< 950	4 - 8		0.02 - 0.04	
		8 - 12	30 - 34	0.04 - 0.05	
		12 - 20		0.05 - 0.07	
		20 - 32	50 - 60	0.07 - 0.09	
		32 - 50		0.09 - 0.11	
<b>ALLOYED STEEL</b>	< 1400	4 - 8		0.01 - 0.03	
		8 - 12	16 - 20	0.03 - 0.04	
		12 - 20		0.04 - 0.06	
		20 - 32	30 - 40	0.06 - 0.07	
		32 - 50		0.07 - 0.09	
<b>STAINLESS STEELS</b>	< 700	4 - 8		0.01 - 0.03	
		8 - 12	14 - 18	0.03 - 0.05	
		12 - 20		0.05 - 0.07	
		20 - 32	22 - 26	0.07 - 0.10	
		32 - 50		0.10 - 0.13	
<b>CAST IRON</b>	100 - 800	4 - 8		0.02 - 0.04	
		8 - 12	20 - 24	0.04 - 0.06	
		12 - 20		0.06 - 0.08	
		20 - 32	38 - 42	0.08 - 0.11	
		32 - 50		0.11 - 0.13	
<b>ALUMINIUM ALLOY (SI &lt; 10%)</b>	140 - 610	4 - 8		0.03 - 0.06	
		8 - 12	100 - 150	0.06 - 0.07	
		12 - 20		0.07 - 0.10	
		20 - 32	150 - 200	0.10 - 0.14	
		32 - 50		0.14 - 0.17	
<b>ALUMINIUM ALLOY (SI &gt; 10%)</b>	160 - 420	4 - 8		0.03 - 0.06	
		8 - 12	60 - 100	0.06 - 0.08	
		12 - 20		0.08 - 0.11	
		20 - 32	80 - 120	0.11 - 0.15	
		32 - 50		0.15 - 0.19	
<b>LONG CHIP BRASS-BRONZE</b>	< 500	4 - 8		0.01 - 0.03	
		8 - 12	50 - 70	0.03 - 0.05	
		12 - 20		0.05 - 0.08	
		20 - 32	80 - 120	0.08 - 0.09	
		32 - 50		0.09 - 0.11	
<b>TITANIUM ALLOY</b>	< 1100	4 - 8		0.01 - 0.03	
		8 - 12	12 - 16	0.03 - 0.05	
		12 - 20		0.05 - 0.07	
		20 - 32	22 - 26	0.07 - 0.09	
		32 - 50		0.09 - 0.10	
<b>REFRACTORY ALLOYS CO, NI</b>	< 1100	4 - 8		0.01 - 0.03	
		8 - 12	6 - 14	0.03 - 0.05	
		12 - 20		0.05 - 0.07	
		20 - 32	12 - 24	0.07 - 0.09	
		32 - 50		0.09 - 0.10	

**CONVERSION FORMULA**

$$\text{R.P.M.} = \frac{\text{Cs} \times 1.000}{\text{TT} \times \text{Ø}}$$

$$\text{FEED SPEED} = \text{R.P.M.} \times \text{Z} \times \text{Fz (mm/min.)}$$

R.P.M. = REVOLUTIONS PER MINUTE

Cs. = CUTTING SPEED (m./min.)

Ø = END MILL DIAMETER

TT = 3,1416

Z = TEETH N°

Fz = FEED x TEETH

**CUTTING CONDITIONS FOR CARBIDE END MILLS**

	Hardness (N/m <sup>2</sup> )	Ø Mill (mm)	Cutting speed (m./min.)	Feed Teeth Fz (mm)
<b>BUILDING STEELS</b>	< 400	2 - 4		0.01 - 0.02
		4 - 8	80 - 120	0.02 - 0.05
		8 - 12	96 - 144	0.05 - 0.06
		12 - 16		0.06 - 0.08
		16 - 25		0.08 - 0.10
<b>ALLOYED STEEL</b>	< 700	2 - 4		0.01 - 0.02
		4 - 8	60 - 100	0.02 - 0.04
		8 - 12	72 - 120	0.04 - 0.05
		12 - 16		0.05 - 0.06
		16 - 25		0.06 - 0.08
<b>ALLOYED STEEL</b>	< 950	2 - 4		0.01 - 0.02
		4 - 8	60 - 80	0.02 - 0.04
		8 - 12	72 - 96	0.04 - 0.05
		12 - 16		0.05 - 0.06
		16 - 25		0.06 - 0.08
<b>ALLOYED STEEL</b>	< 1400	2 - 4		0.005 - 0.015
		4 - 8	20 - 60	0.015 - 0.02
		8 - 12	24 - 72	0.02 - 0.03
		12 - 16		0.03 - 0.05
		16 - 25		0.05 - 0.08
<b>STAINLESS STEELS</b>	< 700	2 - 4		0.005 - 0.015
		4 - 8	40 - 80	0.015 - 0.02
		8 - 12	48 - 96	0.02 - 0.03
		12 - 16		0.03 - 0.05
		16 - 25		0.05 - 0.08
<b>CAST IRON</b>	100 - 800	2 - 4		0.01 - 0.03
		4 - 8	50 - 100	0.03 - 0.05
		8 - 12	60 - 120	0.05 - 0.06
		12 - 16		0.06 - 0.08
		16 - 25		0.08 - 0.12
<b>ALUMINIUM ALLOY (SI &lt; 10%)</b>	140 - 610	2 - 4		0.02 - 0.05
		4 - 8	240 - 400	0.05 - 0.08
		8 - 12	290 - 480	0.08 - 0.12
		12 - 16		0.12 - 0.15
		16 - 25		0.15 - 0.20
<b>ALUMINIUM ALLOY (SI &gt; 10%)</b>	160 - 420	2 - 4		0.02 - 0.05
		4 - 8	125 - 300	0.05 - 0.08
		8 - 12	150 - 360	0.08 - 0.12
		12 - 16		0.12 - 0.15
		16 - 25		0.15 - 0.20
<b>LONG CHIP BRASS-BRONZE</b>	< 500	2 - 4		0.15 - 0.03
		4 - 8	100 - 200	0.03 - 0.04
		8 - 12	120 - 240	0.04 - 0.06
		12 - 16		0.06 - 0.08
		16 - 25		0.08 - 0.10
<b>TITANIUM ALLOY</b>	< 1100	2 - 4		0.005 - 0.015
		4 - 8	20 - 40	0.015 - 0.02
		8 - 12	24 - 48	0.02 - 0.03
		12 - 16		0.03 - 0.05
		16 - 25		0.05 - 0.08
<b>REFRACTORY ALLOYS CO, NI</b>	< 1100	2 - 4		0.005 - 0.015
		4 - 8	20 - 50	0.015 - 0.02
		8 - 12	24 - 60	0.02 - 0.03
		12 - 16		0.03 - 0.05
		16 - 25		0.05 - 0.08

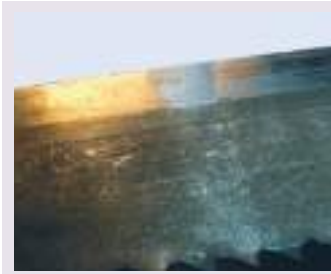
Coated end mills

**CONVERSION FORMULA**

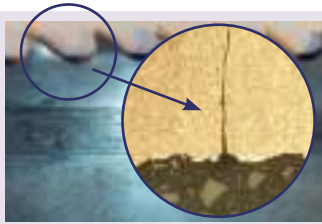
$$R.P.M. = \frac{Cs \times 1.000}{TT \times \emptyset}$$

FEED SPEED = R.P.M. x Z x Fz (mm/min.)

R.P.M. = REVOLUTIONS PER MINUTE  
 Cs. = CUTTING SPEED (m./min.)  
 Ø = END MILL DIAMETER  
 TT = 3,1416  
 Z = TEETH N°  
 Fz = FEED x TEETH

**BAND SAW BLADES TROUBLESHOOTER AND CLAIM ACCEPTANCE**

**CRACKS  
ORIGINATING  
FROM THE BACK  
EDGE**
**Causes:**

- Guides are faulty (crushing the back).
- The back edge of the blade is touching the rolling guides.
- Blade to tightly fitted in the machine's arm guide when mounted.

**NON-ACCEPTABLE CLAIM**

**CRACKS  
ORIGINATING  
FROM THE TOOTH**
**Causes:**

- Tooth pitch is too short: chips get stuffed.
- Tooth pitch is too large: excessive vibrations.
- Feeding is too high in comparison with cutting speed.

**NON-ACCEPTABLE CLAIM**

**STREAK  
ON THE BACK**
**Causes:**

- Back rolling guide is faulty.
- The back edge of the blade is touching the rolling guides.

**NON-ACCEPTABLE CLAIM**

**DEEP SCRATCH  
ON THE SIDES OF  
THE BLADE**
**Causes:**

- Lateral guides are faulty.
- Tooth pitch is too large: excessive vibrations.
- Cutting speed is not adapted to the material (too high).
- The work piece isn't sufficiently fastened during the cutting operation.

**NON-ACCEPTABLE CLAIM**

**BROCKEN OR  
CRUSHED TOOTH**
**Causes:**

- Tooth pitch is too short: chips get stuffed.
- Tooth pitch is too large: excessive vibrations.
- Cutting speed is not adapted to the material (too high).
- The work piece isn't sufficiently fastened during the cutting operation.

**NON-ACCEPTABLE CLAIM**

**CLEAR BREACH AT WELDING POINT**
**Causes:**

- Manufacturing default: faulty welding.

**ACCEPTABLE CLAIM**

**BROKEN BLADE,  
TOOTH IN OPPOSITE  
DIRECTION**
**Causes:**

- Lateral guides too tight.
- Saw guide arms too far apart from piece.
- Wheels and groups of guides are not aligned.

**NON-ACCEPTABLE CLAIM**

**UNSTRAIGHT CUT**
**Causes:**

- Normal tooth wear.
- Cutting speed and feed are not adapted to the material.
- The tooth pattern is rubbing against the guide side.

**NON-ACCEPTABLE CLAIM**







# IDENTIFICATION OF THE TYPES OF CIRCULAR SAW BLADES

## TYPE OF ABRASIVE

- A**: Aluminium Oxide
- AX**: High Resistance Aluminium Oxide
- AC**: Aluminium Oxide and Silicon Carbide
- C**: Silicon Carbide
- Z**: Zirconium

## SHAPE OF THE CIRCULAR SAW BLADE

-  **T 41**  
Flat for cutting
-  **T 42**  
Centre low-profiled for cutting
-  **T 27**  
Centre low-profiled flap for polishing

**AX 60 SBF T41**

## GRAIN

- 30-36**: Medium
- 40-60**: Fine
- 80-120**: Extra fine

## HARDNESS

- Q**: Soft
- R**: Medium
- S**: Hard

## TYPE OF CIRCULAR SAW BLADE (BINDER)

- BF**: Fibre-reinforced resin bond



Technical information



90°

Circular Saw Blades for  
**Cutting**



15°

Circular Saw Blades for  
**Polishing and Roughing**



Iron, Sulphur and Chloride free

## A: Aluminium Oxide.

The aluminium oxide is resistant and durable, for cutting and roughing of high-resistance materials as carbon steel, stainless steel and all type of metals.

## AX: High-Resistance Aluminium Oxide

The high-resistance aluminium oxide is a top class abrasive, its grain microstructure allows its breaking when cutting and roughing and generating multiple cutting edges. It is typically used in high production and hardness. Recommended for stainless steel, carbon steel and forged steel.

## AC: Aluminium Oxide + Silicon Carbide

### C: Silicon Carbide:

The Silicon Carbide is the hardest and sharpest mineral. It is ideal for cutting, sanding and polishing all kind of materials, non-ferrous metals: aluminium, brass, bronze, rubber, glass, plastics, fibrous wood, enamel... The silicon carbide is superior to any other abrasive concerning its penetration and cutting capacity, faster and with less effort.

### Z: Zirconium:

The zirconium self-sharpening quality allows a long working life in high performance works and materials disposal. It is ideal for high performance roughing and polishing in stainless steel, steel carbon and all kind of materials.

## HOW TO DIFFERENTIATE THE ABRASIVE CIRCULAR SAW BLADES

The abrasive circular saw blades cut, polish and rough with different force due to the abrasive grains that compound them, and joint together because of the binder. According to this material and the binder they have different variations of hardness, speed, cut depth and wear resistance.

Based on these parameters the components must be selected with the specific characteristics for cut, polish or rough according to the application and the material of the piece. Whether it be due to the type of tool to be used (angle grinder, grooving machine, slitting machine or fixed machine), by the material to cut (metal, stainless steel, steel, stone) or by the operation (cut or rough) the characteristics of the circular saw blade will be different for an optimum performance.

### AB05:

Abrasive Circular Saw blade for general use in metal cutting. Diameters of 115mm and 125mm. Flat Centre geometry (T41), composed of Aluminium Oxide. Metallic set of 10 units for a perfect conservation.



### AB11:

High performance Abrasive Circular Saw blade for stainless steel, steel and metal cutting. Diameters of 115mm, 125mm and 230mm. Available in two disc geometries; Flat Centre geometry (T41) and Depressed Centre (T42). High hardness, made in high resistance Aluminium Oxide fiber resin. OSA certificate guaranteed.

### AB17:

STONE. High performance Abrasive Circular Saw blade for construction materials cutting. . Diameters of 115mm, 125mm and 230mm. Depressed Centre (T42) disc geometry. Medium hardness. Manufactured in Silicon Carbide fiber resin. OSA certificate guaranteed.



### AB18:

MULTIFUNCTION. High performance Abrasive Circular Saw blade for all kind of materials. . Diameters of 115mm, 125mm and 230mm. Flat Centre geometry (T41). Soft hardness. Manufactured in Aluminium Oxide + Silicon Carbide fiber resin. OSA certificate guaranteed.

### AB15:

High performance Flap Abrasive Circular Saw blade for stainless steel, steel and metal polishing. Diameters of 115mm and 125mm. Depressed Centre geometry with flaps for polishing (T27). Four grain qualities. Manufactured in zirconium joined to flaps of reinforced fiber-glass for a maximum productivity and security. Front working of the disc at a maximum angle of 15°.



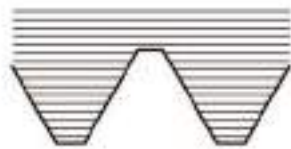
### AB20:

High performance Flap Abrasive Circular Saw blade for roughing and polishing of stainless steel, steel and metal. Diameters of 115mm and 125mm. Depressed Centre geometry with flaps for polishing (T27). Four grain qualities available. Manufactured in Aluminium Oxide. Light, flexible and noiseless due to its multi-layer body. Front working of the disc at a maximum angle of 15°.

## FORMING TAPPING

One of the methods to make threads is the forming thread tapping  
This method can be used in materials having a minimum ductility of 10%

ADVANTAGES	USING CONDITIONS
<ul style="list-style-type: none"> <li>- No chip generation during the tapping process</li> <li>- Better surface finish on the flanks</li> <li>- Homogeneous thread perfectly calibrated</li> <li>- Stronger thread able to support higher torque</li> <li>- Higher tool lifetime</li> <li>- Higher speed</li> <li>- Higher productivity</li> </ul>	<ul style="list-style-type: none"> <li>- Accurate prior hole diameter</li> <li>- Plenty of lubrication</li> <li>- RPM's High Enough</li> </ul>



Thread obtained with a metal cutting tap



Thread obtained with a forming tap

## GEOMETRY OF THE MACHINE TAPS ACCORDING TO THE NORM


RANGE	POINT	SQUARE
M3-M6      DIN 371 M3-M6      DIN 376 M3-M6      DIN 374 M3-M6      DIN 352 M3-M6      DIN 2181 M3-M6      DIN 357 M3-M10     DIN 2174	<b>ENTIRE POINT</b> 	<b>EXTERNAL ENTIRE POINT</b> 
M8; M10     DIN 371 M7; M12     DIN 376	<b>REDUCED POINT</b> 	<b>CHAMFER</b> 
M7; M9      DIN 371 ≥ M14        DIN 376 ≥ M7         DIN 374 ≥ M7         DIN 352 ≥ M7         DIN 2181 ≥ M7         DIN 357 ≥ M12        DIN 2174	<b>INTERNAL CENTRE POINT</b> 	<b>INTERNAL CENTRE POINT</b> 




**DIE THREADING RECOMMENDED EXTERNAL DIAMETER**


<b>M</b>			
Ø d <sub>1</sub>	p		
M 1	0,25	0,97	
M 1,1	0,25	1,07	
M 1,2	0,25	1,17	
M 1,4	0,3	1,36	
M 1,6	0,35	1,54	
M (1,7)	0,35	1,64	
M 1,8	0,35	1,74	
M 2	0,4	1,93	
M 2,2	0,45	2,13	
M (2,3)	0,4	2,23	
M 2,5	0,45	2,43	
M (2,6)	0,45	2,53	
M 3	0,5	2,92	
M 3,5	0,6	3,41	
M 4	0,7	3,91	
M 4,5	0,75	4,41	
M 5	0,8	4,90	
M 6	1	5,88	
M 7	1	6,88	
M 8	1,25	7,87	
M 9	1,25	8,87	
M 10	1,5	9,85	
M 11	1,5	10,85	
M 12	1,75	11,83	
M 14	2	13,82	
M 16	2	15,82	
M 18	2,5	17,79	
M 20	2,5	19,79	
M 22	2,5	21,79	
M 24	3	23,77	
M 27	3	26,77	
M 30	3,5	29,73	
M 33	3,5	32,73	
M 36	4	35,70	
M 39	4	38,70	
M 42	4,5	41,69	
M 45	4,5	44,69	
M 48	5	47,66	
M 52	5	51,66	
M 56	5,5	55,65	
M 60	5,5	59,65	
M 64	6	63,62	
M 68	6	67,62	
M 3 x	0,6	2,91	
M 3,5 x	0,75	3,41	
M 4 x	0,75	3,91	
M 5 x	0,9	4,89	


<b>MF</b>			
Ø d <sub>1</sub>	x p		
M 3 x	0,35	2,94	
M 3,5 x	0,35	3,44	
M 4 x	0,35	3,94	
M 4 x	0,5	3,93	
M 5 x	0,5	4,93	
M 6 x	0,5	5,93	
M 6 x	0,75	5,90	
M 7 x	0,75	6,90	
M 8 x	0,5	7,93	
M 8 x	0,75	7,90	
M 8 x	1	7,88	
M 9 x	1	8,88	
M 10 x	0,5	9,93	
M 10 x	0,75	9,90	
M 10 x	1	9,88	
M 10 x	1,25	9,86	
M 11 x	1	10,88	
M 12 x	0,75	11,90	
M 12 x	1	11,88	
M 12 x	1,25	11,86	
M 12 x	1,5	11,85	
M 13 x	1	12,88	
M 13 x	1,5	12,85	
M 14 x	1	13,88	
M 14 x	1,25	13,86	
M 14 x	1,5	13,85	
M 15 x	1	14,88	
M 15 x	1,5	14,85	
M 16 x	1	15,88	
M 16 x	1,5	15,85	
M 16 x	1	15,85	
M 18 x	1	17,88	
M 18 x	1,5	17,85	
M 18 x	2	17,82	
M 20 x	1	19,88	
M 20 x	1,5	19,85	
M 20 x	2	19,82	
M 22 x	1	21,88	
M 22 x	1,5	21,85	
M 22 x	2	21,82	
M 24 x	1	23,88	
M 24 x	1,5	23,85	
M 24 x	2	23,82	


<b>MF</b>			
Ø d <sub>1</sub>	x p		
M 25 x	1	24,88	
M 25 x	1,5	24,85	
M 26 x	1	25,88	
M 26 x	1,5	25,85	
M 27 x	1	26,88	
M 27 x	1,5	26,85	
M 27 x	2	26,82	
M 28 x	1,5	27,85	
M 28 x	2	27,82	
M 30 x	1	29,88	
M 30 x	1,5	29,85	
M 30 x	2	29,82	
M 32 x	1,5	31,85	
M 33 x	1,5	32,85	
M 33 x	2	32,82	
M 34 x	1,5	33,85	
M 35 x	1,5	34,85	
M 36 x	1,5	35,85	
M 36 x	2	35,82	
M 36 x	3	35,76	
M 38 x	1,5	37,85	
M 39 x	1,5	38,85	
M 39 x	2	38,82	
M 39 x	3	38,76	
M 40 x	1,5	39,85	
M 40 x	2	39,82	
M 40 x	3	39,76	
M 42 x	1,5	41,85	
M 42 x	2	41,82	
M 42 x	3	41,76	
M 45 x	1,5	44,85	
M 45 x	2	44,82	
M 45 x	3	44,76	
M 48 x	1,5	47,85	
M 48 x	2	47,82	
M 48 x	3	47,76	
M 50 x	1,5	49,85	
M 50 x	2	49,82	
M 50 x	3	49,76	
M 52 x	1,5	51,85	
M 52 x	2	51,82	
M 52 x	3	51,76	


<b>W (BSW)</b>				
Ø d <sub>1</sub>		p		
W 3/32	48	2,26		
W 1/8	40	3,12		
W 5/32	32	3,82		
W 3/16	24	4,69		
W 7/32	24	5,39		
W 1/4	20	6,16		
W 5/16	18	7,76		
W 3/8	16	9,30		
W 7/16	14	10,89		
W 1/2	12	12,43		
W 9/16	12	13,92		
W 5/8	11	15,62		
W 3/4	10	18,76		
W 7/8	9	21,89		
W 1	8	25,06		
W 1 1/8	7	28,21		
W 1 1/4	7	31,35		
W 1 3/8	6	34,48		
W 1 1/2	6	37,67		
W 1 3/4	5	43,94		
W 2	4,5	50,26		


<b>BSF</b>				
Ø d <sub>1</sub>		p		
BSF 3/16	32	4,67		
BSF 1/4	20	6,25		
BSF 5/16	22	7,82		
BSF 3/8	20	9,39		
BSF 7/16	18	10,97		
BSF 1/2	16	12,54		
BSF 9/16	16	14,12		
BSF 5/8	14	15,71		
BSF 3/4	12	18,85		
BSF 7/8	11	22,02		
BSF 1	10	25,17		

<b>UNC</b>			
Ø d <sub>1</sub>	- p		
No. 1 - 64	UNC	1,79	
No. 2 - 56	UNC	2,12	
No. 3 - 48	UNC	2,44	
No. 4 - 40	UNC	2,76	
No. 5 - 40	UNC	3,09	
No. 6 - 32	UNC	3,41	
No. 8 - 32	UNC	4,07	
No. 10 - 24	UNC	4,71	
No. 12 - 24	UNC	5,37	
1/4 - 20	UNC	6,22	
5/16 - 18	UNC	7,80	
3/8 - 16	UNC	9,37	
7/16 - 14	UNC	10,95	
1/2 - 13	UNC	12,52	
9/16 - 12	UNC	14,10	
5/8 - 11	UNC	15,68	
3/4 - 10	UNC	18,84	
7/8 - 9	UNC	22	
1 - 8	UNC	25,16	
1 1/8 - 7	UNC	28,31	
1 1/4 - 7	UNC	31,49	
1 3/8 - 6	UNC	34,63	
1 1/2 - 6	UNC	37,81	
1 3/4 - 5	UNC	44,12	
2 - 4,5	UNC	50,45	

<b>UNF</b>			
Ø d <sub>1</sub>	- p		
No. 0 - 80	UNF	1,47	
No. 1 - 72	UNF	1,79	
No. 2 - 64	UNF	2,12	
No. 3 - 56	UNF	2,44	
No. 4 - 48	UNF	2,77	
No. 5 - 44	UNF	3,10	
No. 6 - 40	UNF	3,42	
No. 8 - 36	UNF	4,08	
No. 10 - 32	UNF	4,73	
No. 12 - 28	UNF	5,38	
1/4 - 28	UNF	6,24	
5/16 - 24	UNF	7,82	
3/8 - 24	UNF	9,41	
7/16 - 20	UNF	10,98	
1/2 - 20	UNF	12,56	
9/16 - 18	UNF	14,14	
5/8 - 18	UNF	15,73	
3/4 - 16	UNF	18,89	
7/8 - 14	UNF	22,05	
1 - 12	UNF	25,21	
1 1/8 - 12	UNF	28,38	
1 1/4 - 12	UNF	31,56	
1 3/8 - 12	UNF	34,73	
1 1/2 - 12	UNF	37,91	

<b>G (BSP)</b>			
Ø d <sub>1</sub>	p		
G 1/16	28	7,61	
G 1/8	26	9,62	
G 1/4	19	13,03	
G 3/8	19	16,53	
G 1/2	14	20,81	
G 5/8	14	22,77	
G 3/4	14	26,30	
G 7/8	14	30,06	
G 1	11	33,07	
G 1 1/8	11	37,71	
G 1 1/4	11	41,73	
G 1 3/8	11	44,14	
G 1 1/2	11	47,62	
G 1 3/4	11	53,56	
G 2	11	59,43	

<b>NPSM</b>				
Ø d <sub>1</sub>		p		
1/8	NPSM	27	4,99	
1/4	NPSM	18	13,24	
3/8	NPSM	18	16,70	
1/2	NPSM	14	20,77	
3/4	NPSM	14	26,13	
1	NPSM	11,5	32,68	
1 1/4	NPSM	11,5	41,45	
1 1/2	NPSM	11,5	47,52	
2	NPSM	11,5	68,66	

<b>PG</b>				
Ø d <sub>1</sub>		p		
PG 7	20	12,40		
PG 9	18	15,10		
PG 11	18	18,50		
PG 13,5	18	20,30		
PG 16	18	22,40		
PG 21	16	28,15		
PG 29	16	36,85		
PG 36	16	46,85		
PG 42	16	53,85		
PG 48	16	59,15		

**THREAD TYPE IDENTIFICATION AND EQUIVALENCIES**

ROSCA Ø	AMERICAN THREADS							ENGLISH THREAD					
	Ø mm	UNC (NC)	UNF (NF)	UNEF (NEF)	UN	UNS	NPS NPT API	BSW	BSF	BRASS	SBS 6n	WHIT	BSP BSPT
1/16	1,588	--	--	--	--	--	27	60	--	--	--	--	--
3/32	2,381	--	--	--	--	--	--	48	--	--	--	--	--
1/8	3,175	--	--	--	--	--	27	40	--	--	--	--	28
5/32	3,969	--	--	--	--	--	--	32	--	--	--	--	--
3/16	4,763	--	--	--	--	--	--	24	32	--	--	--	--
7/32	5,556	--	--	--	--	--	--	24	28	--	--	--	--
No 0		--	80	--	--	--	--	--	--	--	--	--	--
No 1	1,854	64	72	--	--	--	--	--	--	--	--	--	--
No 2	2,184	56	64	--	--	--	--	--	--	--	--	--	--
No 3	2,515	48	56	--	--	--	--	--	--	--	--	--	--
No 4	2,845	40	48	--	--	--	--	--	--	--	--	--	--
No 5	3,175	40	44	--	--	--	--	--	--	--	--	--	--
No 6	3,505	32	40	--	--	--	--	--	--	--	--	--	--
No 8	4,166	32	36	--	--	--	--	--	--	--	--	--	--
No 10	4,826	24	32	--	--	28-36-40-48-56	--	--	--	--	--	--	--
No 12	5,486	24	28	32	--	36-40-48-56	--	--	--	--	--	--	--
1/4	6,350	20	28	32	--	24-27-36-40-48-56	18	20	26	26	--	32	19
9/32	7,14	--	--	--	--	--	--	20	26	--	--	--	--
5/16	7,938	18	24	32	20-28	27-36-40-48	--	18	22	26	--	32	--
3/8	9,525	16	24	32	20-28	18-27-36-40	18	16	20	26	--	32	19
7/16	11,11	14	20	28	16-32	18-24-27	--	14	18	26	--	--	--
1/2	12,7	13	20	28	16-32	12-14-18-24-27	14	12	16	26	18	20	14
9/16	14,29	12	18	24	16-20-28-32	14-27	--	12	16	26	--	20	--
5/8	15,87	11	18	24	12-16-20-28-32	14-27	--	11	14	26	18	20	14
11/16	17,46	--	--	24	12-16-20-28-32	--	--	11	14	26	--	16-20	--
3/4	19,05	10	16	20	12-28-32	14-18-24-27	14	10	12	26	16	16-20	14
13/16	20,64	--	--	20	12-16-28-32	--	--	10	12	--	--	16-20-26	--
7/8	22,22	9	14	20	12-16-28-32	10-18-24-27	--	9	11	26	--	20	14
15/16	23,81	--	--	20	12-16-28-32	--	--	--	--	--	--	12-20	--
1"	25,40	8	12	20	16-28-32	10-14-18-24-27	11/2	8	10	26	16	12-20	11
1" 1/16	26,98	--	--	18	8-12-16-20-28	--	--	--	--	--	--	12-20	--
1" 1/8	28,57	7	12	18	8-16-20-28	10-14-24	--	7	9	26	--	12-20	11
1" 3/16	30,16	--	--	18	8-12-16-20-28	--	--	--	--	--	--	12-20	--
1" 1/4	31,75	7	12	18	8-16-20-28	10-14-24	11/2	7	9	26	16	12-20	11
1" 5/16	33,34	--	--	18	8-12-16-20-28	--	--	--	--	--	--	12-20	--
1" 3/8	34,92	6	12	18	8-16-20-28	10-14-24	--	6	8	--	--	12-20	11
1" 7/16	36,51	--	--	18	6-8-12-16-20-28	--	--	--	--	--	--	12-20	--
1" 1/2	38,10	6	12	18	8-16-20-28	10-14-24	11/2	6	8	26	14	12-20	11
1" 9/16	39,69	--	--	18	6-8-12-16-20-28	--	--	--	--	--	--	--	--
1" 5/8	41,27	--	--	18	6-8-12-16-20	--	--	5	8	26	--	12-16-20	11
1" 11/16	42,86	--	--	18	6-8-12-16-20	--	--	--	--	--	--	--	--
1" 3/4	44,45	5	--	--	6-8-12-16-20	10-14-18	--	5	7	26	--	12-16-20	11
1" 13/16	46,04	--	--	--	6-8-12-16-20	--	--	--	--	--	--	--	--
1" 7/8	47,62	--	--	--	6-8-12-16-20	10-14-18	--	4 1/2	--	26	--	12-16-20	--
1" 15/16	49,21	--	--	--	6-8-12-16-20	--	--	--	--	--	--	--	--
2"	50,80	4 1/2	--	--	6-8-12-16-20	10-14-18	11 1/2	4 1/2	7	26	14	12-16-20	11

**EQUIVALENCES BETWEEN PITCHES IN INCHES AND METRIC**

N	mm	N	mm	N	mm	N	mm
80	0,317	28	0,907	13	1,953	4 1/2	5,644
72	0,352	27	0,940	12	2,116	4	6,349
64	0,396	26	0,976	11 1/2	2,208	3 1/2	7,257
60	0,423	24	1,058	11	2,309	3 1/4	7,815
56	0,453	22	1,154	10	2,540	3	8,466
48	0,529	20	1,270	9	2,822	2 7/8	8,834
44	0,577	19	1,336	8	3,174	2 3/4	9,236
40	0,635	18	1,411	7	3,628	2 5/8	9,676
36	0,705	16	1,587	6	4,233	2 1/2	10,160
32	0,793	14	1,814	5	5,080	---	---



# GENERAL SALES CONDITIONS

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## INTRODUCTION

Present commercial terms will apply from the 20<sup>th</sup> of March of 2023. That means that previously applied terms will not be in effect any more, unless permanence of any specific agreement is strictly allowed.

## PAYMENT TERMS

- According to permission of Account Department.
- Breach of payment terms means cutting off following shipments dispatch.

## INSURANCE

In case customer requires any insurance, correspondent premium must be paid by him.

## CLAIMS

Customers must check receiving goods once they get them in order to ensure that shipment has been correctly completed. Any claim placed from customers within 8 days will be analyzed, evaluated and explained and CELESA will not accept any returning goods without previous communication.

## RETURNING GOODS

CELESA will accept returning goods just in case they are considered defective or in cases that mistaken shipment are on fault by CELESA. Goods must be always returned under freight cost paid by sender, with original invoice or packing list.

CELESA must be immediately informed about any returning good, directly or through our sales network. Quality Department will check goods and shortly, a technical or quality report will be completed. If no mistake would be found, CELESA will deduct 15% from the correspondent credit note in concept of handle cost. If customer would be right, goods will be immediately replaced or a credit note would be immediately submitted.

## GUARANTEE

CELESA guarantees that all goods available in the range fulfil all technical requirements regarding Geometrical parameters and Material Treatment without any responsibility in bad using cases. In any case, our responsibility will be limited up to repair or replacement of goods, without any further compensation or punishment. CELESA reserves the right to modify any good without any previous warning in case of Technical Department considers it an improvement in cutting tool life.

CELESA will never proceed with replacement of any tools without favourable report from Quality Department.

CELESA will never admit any punishment from customers for delays in any shipment.

## MINIMUM ORDER TOTAL AMOUNT

Minimum order total amount is 60 € Net.

## PRICE LIST IN FORCE

CELESA will apply current price list without any responsibility for customers misunderstanding beyond our content of BLUEMASTER catalogue.

## CONDITIONAL TERMS

Acceptance of goods shipped by CELESA without immediate rejection from customer, means approval of above mentioned Commercial terms and any modification will be allowed just in case of written authorization from CELESA.

## TAXES

Orders are not subject to VAT.

## RETENTION OF TITLE

CELESA sales are subject to retention of title according to Art. 1506 of CC, until any invoice pending payment is completed.

## COMPETENT JURISDICTION

In case of any misunderstanding in interpretation of these Commercial terms or non-fulfilment from any side may be appealed to the Bilbao Court.



# 2023

## CATALOGUE



**BLUE-MASTER<sup>®</sup>**  
*by CELESA*

CELESA S.A.

POLÍGONO INDUSTRIAL ARRIANDI  
C/TABERNABARRI Nº5

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