

SYMBOL INDEX

GENERAL ICONS



DIN Norm



Tolerance



Standard quality



Professional quality



Extra professional quality



Supreme quality

MATERIALS



High speed steel
M2 quality



High speed steel
M2 quality
Special heat treatment



M3:2 quality
3% Vanadium



Powder Steel
High performance



High speed steel
M3:1 quality



5% cobalt high speed
steel. M35 quality



8% cobalt high speed
steel. M42 quality



High performance tool



Solid carbide



Carbide insert



Carbide
Micro Grit



Powder Steel
High performance



Powder Steel
High performance
C:1,28 Cr:4,1
Mo:5,0 W:6,4 V:3,1



Powder Steel
High performance
C:2,30 Cr:4,2 Mo:7,0
W:6,5 Co:10,5 V:6,5



Carbon steel with
Vanadium



Treatise Carbon steel
X210 Cr12



Bimetal



Mix: Bimetal / Carbon
Vanadium steel



Carbide tipped point



Electroplated
Tungsten powder



Irwing drill with carbide
Insert



Diamond



Super Powder Steel
C:1,60 Cr:4,0 V:4,9
W:12,0 Co:5,0



K10 Carbide quality

TOOL COATINGS



Steamed (Black Oxide)



Bright finish



Gold finish



Titan-Aluminium-Nitride
coating for drilling and
milling



Titanium Nitride coating



Titanium Carbonitride
coating



High performance fric-
tion-reducing coating for
tapping



Supernitride high
performance coating for
hardened steel tapping
120 Kg/mm²



Chrome Nitride coating


















Special Blue coating for
hardened steel milling













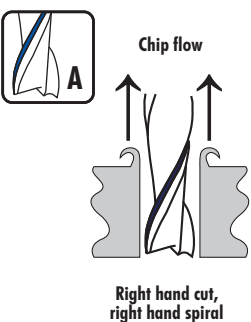
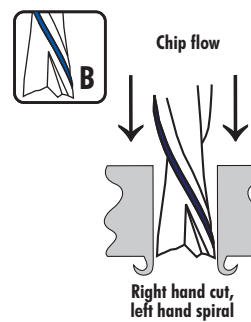
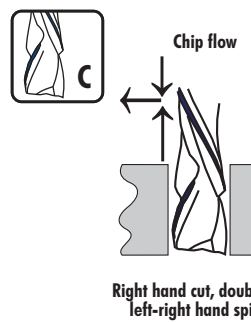
Diamond and Titanium
coating for enhanced
performance

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


POINTS AND HELIX OF DRILLS

	Conventional Point Angle 118°		Split Point		Carbide insert		4 Edges Sharpening
	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		

HELIX ANGLES

	Helix Angle for Twist Drills		Helix angle for Reamers		Straight Flute Reamer		38° Helix angle for Reamers
	Helix angle for 3 Flutes End Mills		Helix angle for 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		Helix angle for taps				
	A Chip flow ↑ ↑ Right hand cut, right hand spiral		B Chip flow ↓ ↓ Right hand cut, left hand spiral		C Chip flow ← → Right hand cut, double cut left-right hand spiral		

SHANK TYPES

	SDS PLUS shank		SDS-MAX shank		For UNEO type drilling		SDS-TOP shank (Obsolete)
	Straight shank		WELDON Flat Shank		DIN 1835B WELDON Shank		Taper shank
	Anti-slip triple flat shank for $\varnothing \geq 3$ mm		Reduced shank for chuck use		Hexagonal shank (1/4" = 6,35 mm)		Hexagonal shank

SYMBOL INDEX

TOOL APPLICATIONS

 INOX Stainless steel: AISI 304, AISI 316, AISI 316L	 INOX Plus High performance tool for stainless steel: AISI 304, AISI316, AISI316L	 Al Aluminium & its alloys	 BRASS Brass
 CAST IRON Nodular, maleable and grey cast iron	 Metal in general: Iron, Construction steel	 Métal up to - Kg/mm ²	 Tempered steel up to.. - HRC
 PRODUCTION Tool for the production of big series	 HIGH PERFORMANCE Tool for intensive production and big series	 Cu Copper & its alloys	 FORMING Forming tap
 INC INCONEL: Refractory alloy with high nickel content	 Ni Nickel alloy in general	 PVC PVC	 Ti Titane & its alloys
 Wood in general	 Drill for Squared Holes in the wood	 Hard wood	 Plywood
 Nailed wood: palets...	 Chipboard	 Agglomerated (Pressed)	 Sandwich construction
 Laminated particle board	 Plexiglas	 Steel pipes	 Cast iron pipes
 Laminated sheet	 Special saws for tree pruning	 Sheet	 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	 Marbre, Granit	 Concrete	 Uralit
 Cu-Ni-La Non ferreous steel: Copper, Nickel, Brass	 Tile		

SYMBOL INDEX

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

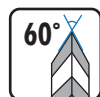


90° deburring countersink

CUTTING ANGLES: END MILLS



45° isosceles angular milling cutter



60° isosceles angular milling cutter

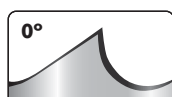


90° isosceles angular milling cutter

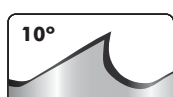


Single angle Mill

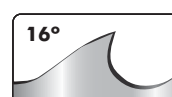
CUTTING ANGLES: BAND SAW BLADES



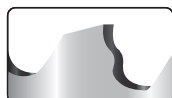
0° Teeth angle



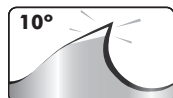
10° Teeth angle



16° Teeth angle



Special tooth profile for stricture



10° 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

SYMBOL INDEX

CUTTING N°

GENERAL



Teeth N°

END MILLS



2 Flutes end mills with center cutting



3 Flutes end mills with center cutting



4 Flutes end mills with center cutting



Multidents end mills with center cutting



4 Flutes end mills without center cutting

REAMERS



3 Fluted Drill Reamer without cutting centre



Multi-Fluted Drill Reamer without cutting centre

CONSTRUCTION DRILLS



Solid carbide heat 3 edges



Solid carbide heat 5 edges

ICONS DEFINITION BY FAMILY

TWIST DRILLS FOR METAL



Left hand drills

TAP MAGIC



Tap Magic Oil Can packaging



Tap Magic Oil Aerosol packaging



Ecological biodegradable Tap Magic

TAPS



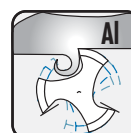
Taps with pilot for a good alignment of the first tap



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

SYMBOL INDEX

ICONS DEFINITION BY FAMILY

LATHE TOOLS



Square lathe tool



Cylindrical lathe tool



Rectangular lathe tool



Trapezoid lathe tool



Irregular trapezoidal lathe tool

CALIBRES



Thread Profile



Cl:16 Threading conicity NPT (1/16)

JIG SAW BLADES



Ground tooth profile



Carbide tipped tooth



Reverse cut:
Good finishing
in the backside

SCREWDRIVER BITS



Phillips



Pozidriv



Slot



Torx



Torx round



Robertson



Torx Tamper



Hexagonal



Tri Wing



Xzn

SAW BLADES & DRILLS FOR CONSTRUCTION



Water cooling



Rotation mode
without Percussion



Percussion mode



Teeth type



Carbide tipped tooth
8mm