

Welcome to the 2016/2017 catalogue

Dear Customer,

Thank you for your interest in CMT products.

Take a moment to browse our new catalogue and choose from a wider range of innovative and state-of-the-art woodworking tools, from router bits, saw blades, jig and sabre saw blades, hole saws, and boring bits to oscillating tools, CNC cutters, cutter heads, chucks, power tools, and so much more!

A detailed list of spare parts on each product category is also provided to guide you through your purchase.

We continually strive to develop our technical know-how and invest in research and development, but our priority is customer care.

A satisfied customer is worth more than any other achievement, therefore each page of this catalog contains CMT's highest commitment to the professional woodworker.

Should you not find a product that suits your needs, please let us know.

Our highly skilled engineers and design technicians are always keen to assist you with your woodworking operations.

Thank you for your interest in CMT Orange Tools.

Your CMT Team

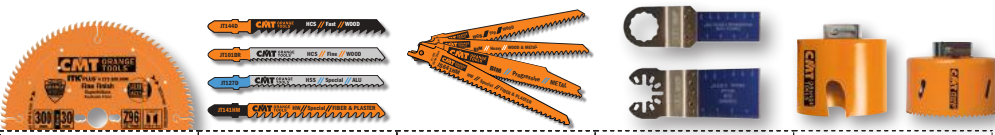


Abbreviations

A	= Cutting angle	Inches	= Inches
α	= Hook angle	K	= Kerf thickness
ATB	= Alternate top bevel grind	L	= Overall length
B	= Bore diameter	L₁	= Working length
β	= Type of grind	LB	= Adjusting length
COMBI3	= Pin-Hole 2/7/42 + 2/9/46,4 + 2/10/60	LH	= Left-hand rotation
COMBI5	= Pin-Hole 2/7/110 + 2/8,4/130 + 2/14/110 + 4/9/100 + 4/19/120	MATB	= Alternate top bevel with chamfer grind
COMBI7	= Pin-Hole 2/10/80 + 1/11/85 + 2/11/115 + 2/11/148 + 2/14/100 + 2/14/125 + 2/19/120	MTCG	= Triple chip grind (trapezoidal) with chamfer
d	= Small cutting diameter	mm	= Millimeters
D	= Diameter	P	= Plate thickness
D₂	= Overall diameter	PTFE	= Non-stick industrial coating, black and orange
D₃	= For shank diameter	R	= Radius
\emptyset	= Diameter	R₁	= Radius
FFT	= Flat flat trapezoidal	RH	= Right-hand rotation
FTG	= Flat top grind	RPM	= Round per minute
FWF	= Flat with alternate chamfer	S	= Shank diameter
H	= Cutting depth	S₁	= Shank diameter
HDF	= Hollow ground teeth	T₁	= Thickness / Maximum joint thickness
I	= Cutting length	TCG	= Triple chip grind (trapezoidal)
l₁	= Short cutting length	V	= Spurs
		Z	= Number of teeth
		\square	= On request
		\bullet	= Solid tungsten carbide

THE RIGHT TOOLS FOR THE BEST RESULTS!

Quick reference charts and pictograms help you choose the right tools for your application.



	SAW BLADES	JIG SAW BLADES	SABRE SAW BLADES	MULTI-CUTTERS	HOLE SAWS
WOOD					CARBIDE
WOOD & METAL			✓	✓	
METAL					BI-METAL
ALUMINIUM					
MULTI-MATERIAL					
PLASTIC					
MASONRY					DIAMOND
SPECIAL					

SINCE 1962 - MADE IN ITALY THEN, STILL MADE IN ITALY TODAY

By now, the story has been told. After over 50 years of success and quality in manufacturing woodworking tools - orange woodworking tools, to be precise - word just sort of gets around. We have grown and we have changed, but one thing still remains the same: our commitment to making only the highest quality woodworking tools.



Pesaro, Italy



Greensboro, United States



Valencia, Spain

NEW! CMT Global Web Site!

- Full line catalogue available on line
- Instructional video on select products
- Instruction manuals available for download
- Listing of authorized CMT distributors
- Company history, tech information, testimonials and more!

CMT ORANGE TOOLS

THE ART OF CUTTING

Market Area: Where are you from?

Language: Choose favourite:

News: IWF 2008 - August 20-23, 2008 Atlanta [More news](#)

OUR TOOLS So, what does it take to make a CMT tool? Like all things of quality, it's not only what you do but how you do it. And anyone who works wood knows that you get out of a piece only what you put into it, and it is no different when manufacturing a tool. You choose your designs and materials carefully and you work using all of your skill and know-how. You'll be happy to know that's what we do at CMT too.

DESIGN

Everything starts with a clear idea and having the potential to express it. We have both. At CMT, our technical department uses the best of both worlds - computer technology and hands-on experience - to engineer and design each tool so that it performs flawlessly each time you use it, and to guarantee that you'll be using it for a long, long time.

MATERIALS

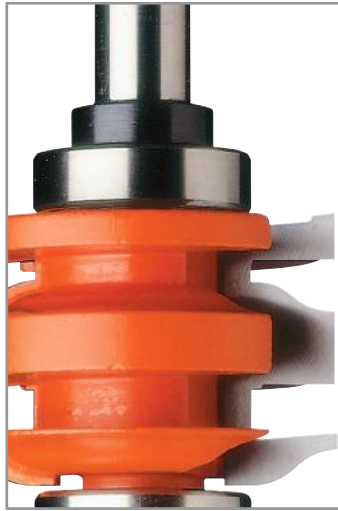
Turning a design into a finished product means finding the right material that will do the job and that lives up to the specifications set out in the design - quality performance from the final product depends on it. When it comes to selecting raw materials, we don't cut corners. At CMT, we know that high quality tools come only from high quality raw materials, so we use only solid bar stock steel and specially formulated micrograin carbide to manufacture our bits and blades.

MANUFACTURING

Like we said, it's not just what you do but how you do it. Over the years we have continuously invested in the latest technology in CNC machining equipment and innovative software to manufacture our tools. The result is that now our entire manufacturing process, from turning and milling the steel shanks to brazing and sharpening the carbide cutting tips, is completely automated. And since a machine is only as intelligent as the person using it, everything is operated by specifically trained operators.

THE FINAL TOUCH

A tool simply wouldn't be a CMT tool if it didn't have the trademark orange color non-stick PTFE coating on it. This unique industrial-strength surface coating is designed to withstand the physical stresses the tool undergoes during use while protecting it from residue build-up and burning. And we really like the orange color too.



QUALITY CONTROL

Nobody's perfect, but we're trying. CMT uses rigorous quality control programs and equipment to ensure that each bit has been manufactured with precision and accuracy and that it will give the long-lasting performance you expect from a CMT orange tool. CMT is in the process of adopting the directives set out in ISO 9001 which will give SPC quality control by an independent party under the Common Market Directives ISO 9001. Quality control is the final step of the production process, but it's just as important as the first.

WE RECYCLE

The water used during production must be pure and free from contaminants or hard minerals like iron or calcium which can build up and damage the machinery. CMT filters and purifies its water using a reverse osmosis system located inside the plant. Also the oil used in grinding and machining our tools must be clean and absolutely free of contaminants. Clean oil, after enough use, gets dirty, so we filter and reprocess dirty oil on the premises. This is our way of guaranteeing the quality of the oil we use, as well as contributing to help protect the environment.

OUR TRADEMARK COLOR ORANGE

As the story goes, we began small. We also put orange color surface coating on our tools, then we put our tools on the market and soon our orange tools were all over the world. Now, any woodworker anywhere in the world can tell you that orange tools means CMT, and that CMT means quality. Here at CMT we know we produce quality. You should too. That's why we have trademarked the color orange on woodworking tools - it's your guarantee that you are getting a genuine high-quality CMT product.



Loading the automated multi-axis CNC sharpening machines.



Fully automated assembly and marking.



INDUSTRIAL DOWEL DRILLS

PRODUCTS	PAGE
Adaptors	254~256
XTreme Solid Carbide Boring Bits	258-259
XTreme Boring Bits	260-261
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Countersinks	272
Hinge Boring Bits	273-274
Dowel Drills with Threaded Shank	275~277

Adaptors



301

RH LH

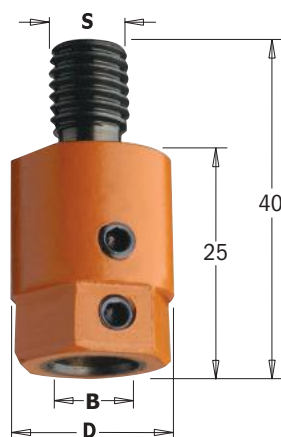
B mm	D mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
8	16	M8	301.080.01	301.080.02
10	19,5	M8	301.000.01	301.000.02

FOR USE ON THE FOLLOWING MACHINES:
Nottmeyer (older models).

Spare parts



990.006.00 991.062.00



302

RH LH

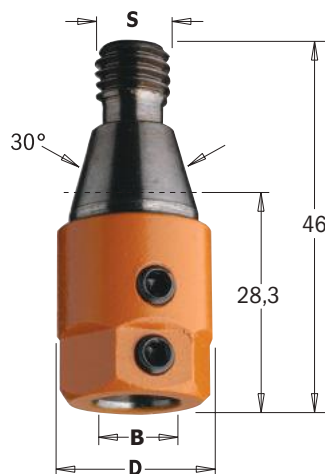
B mm	D mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
8	16	M10	302.080.01	302.080.02
10	19,5	M10	302.000.01	302.000.02

FOR USE ON THE FOLLOWING MACHINES:
Ayen, Holzma, Knoevenagel, Mayer, Torwegge.

Spare parts



990.006.00 991.062.00



303

RH LH

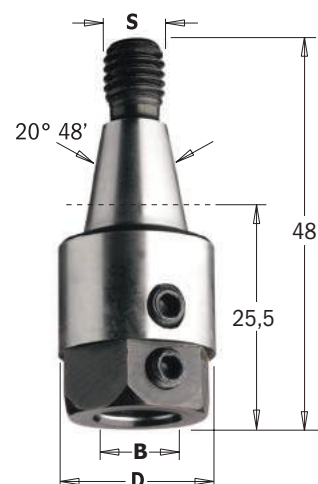
B mm	D mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
8	16	M10/30°	303.080.01	303.080.02
10	19,5	M10/30°	303.000.01	303.000.02

FOR USE ON THE FOLLOWING MACHINES:
Alberti (older models).
Balestrini, Bilek, Busellato (older models).
Schleicher, Vitap (older models).

Spare parts



990.006.00 991.062.00



304

RH LH

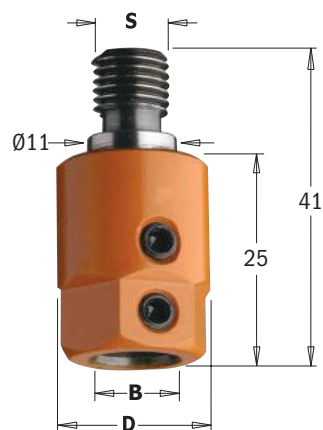
B mm	D mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
8	16	M8/20° 48'	304.080.01	304.080.02
10	19,5	M8/20° 48'	304.000.01	304.000.02

FOR USE ON THE FOLLOWING MACHINES:
Balestrini, Bilek.

Spare parts



990.006.00 991.062.00

**305**
RH **LH**

B mm	D mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
8	16	M10/11	305.080.01	305.080.02
10	19,5	M10/11	305.000.01	305.000.02

FOR USE ON THE FOLLOWING MACHINES:

Biesse (older models).
Masterwood (Zangheri & Boschetti).
Morbidelli, Torwegge, Vitap (new design).
Weeke.

Spare parts

990.006.00

991.062.00

**358**
RH **LH**

B mm	D mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
8	16	M8/9	358.080.01	358.080.02
10	19,5	M8/9	358.000.01	358.000.02

FOR USE ON THE FOLLOWING MACHINES:

Masterwood (Zangheri & Boschetti).
Morbidelli, Nottmeyer (new design).

Spare parts

990.006.00

991.062.00

**359**
RH **LH**

B mm	D mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
10	19,5	M10	359.000.01	359.000.02

FOR USE ON THE FOLLOWING MACHINES:

Scheer.

Spare parts

990.006.00

991.062.00

**360.001**
RH **LH**

B mm	D mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
10	20	360.001.01	360.001.02

FOR USE ON THE FOLLOWING MACHINES:

For Biesse machines with quick drill change attachment.

Spare parts

990.007.00

991.067.00

**360.101**

B mm	D mm			ORDER NO. Right-hand & Left-hand rotation
10	18			360.101.00

FOR USE ON THE FOLLOWING MACHINES:
Vitap.

Spare parts

990.015.00

991.062.00

**360.201**

B mm	D mm			ORDER NO. Right-hand & Left-hand rotation
10	19,25			360.201.00

FOR USE ON THE FOLLOWING MACHINES:
Morbideilli.

Spare parts

990.009.00

991.067.00

**360.301**

B mm	D mm			ORDER NO. Right-hand & Left-hand rotation
10	19,4			360.301.00

FOR USE ON THE FOLLOWING MACHINES:
Masterwood, Maggi, Griggio.

Spare parts

990.015.00

991.062.00

**360.401**

B mm	D mm			ORDER NO. Right-hand & Left-hand rotation
10	20			360.401.00

FOR USE ON THE FOLLOWING MACHINES:
Weeke.

Spare parts

990.009.00

991.067.00

**990.088**

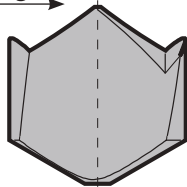
DESCRIPTION	ORDER NO. Right-hand & Left-hand rotation
Retaining screw for Weeke machines	990.088.00

X TREME BORING BITS

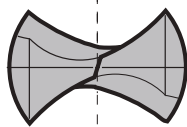
Setting a new standard for performance and value

NEW DOWNCUT ROUND SHARPENING

Angle edge



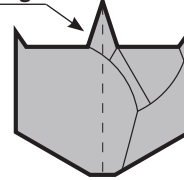
EXTRA-FINE MICROGRAIN CARBIDE



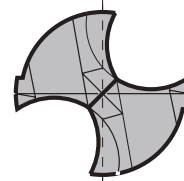
Reduced boring surface
for faster feed speed

STANDARD SHARPENING

Flat edge



STANDARD CARBIDE



Standard boring surface

The Finest Industrial Quality Micrograin Carbide

CMT makes the finest quality cutting edges. Produced by Ceratizit in Luxembourg, CMT's carbide tips are selected among many carbide grades to ensure longer endurance and higher impact resistance.

P.T.F.E. Coating

CMT's P.T.F.E. coating provides a non-stick surface preventing any residue accumulation on the bit body. Baked on at 420°, this unique industrial material is specifically designed to fit woodworking tool requirements.

Highly-Resistant Steel Body

Our bit bodies and shanks are machined from solid bar stock steel made by Von Moos Steel in Switzerland. The main mechanical properties are:

- superior strength
- high level uniformity
- minimal distortion
- exceptional resistance to fatigue and abrasion.

Micrograin Carbide Sharpening

Sharpening on the carbide cutting edges provides a 0,4µ/mm micrograin finish. This is processed on automated CNC machines equipped with as many as 6 axes for maximum accuracy

Special Metal Shock Resistant Brazing

Micrograin carbide tips are applied with a special brazing compound. This allows a higher brazing temperature than other methods and guarantees a solid bond of every tip on every bit.

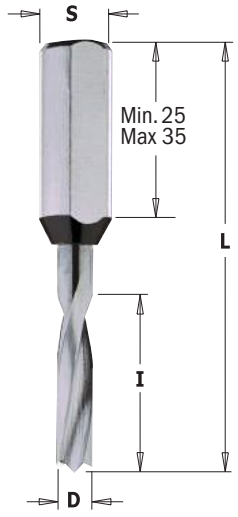
Steel Shank Grinding

CMT grinds the steel shank to a micrograin finish of 0,8µ/mm. The smooth finish on the shank determines how well the drills fit into your machine. Rough grinding results in a poor chuck grip and in a poor wobbly rotation.



SAW BLADES
JIG SAW BLADES
SABRE SAW BLADES
TOOLS FOR MULTI-CUTTERS
TOOLS WITH BORE & KNIVES
ROUTER BITS & SETS
CNC ROUTER CUTTER & CHUCKS
INDUSTRIAL DOWEL DRILLS
BITS FOR HAND POWER TOOLS
HOLE SAW BLADES
POWER TOOLS & ACCESSORIES
DISPLAY CABINETS & SPARE PARTS

Solid Carbide Dowel Drills



310.21/22 XTREME



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
1,3	5	57,5	10x30	310.013.20*	
2	12	57,5	10x27	310.020.21	310.020.22
3	9	57,5	10x35	310.530.21	310.530.22
3	18	57,5	10x25	310.030.21	310.030.22
4	20	57,5	10x25	310.040.21	310.040.22
5	22	57,5	10x27	310.050.21	310.050.22
6	22	57,5	10x25	310.060.21	310.060.22
6,35 (1/4")	22	57,5	10x25	310.064.21	310.064.22
8	22	57,5	10x25	310.080.21	310.080.22
10	22	57,5	10x25	310.100.21	310.100.22

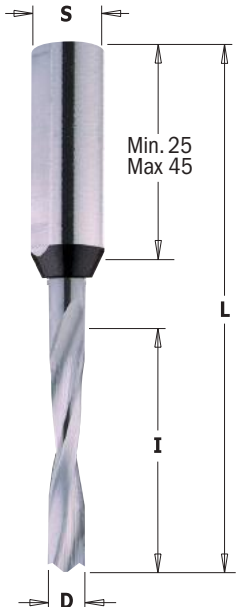
* Boring bit for panel preboring.
Suitable for both right-hand and left-hand rotation.

Spare parts

Optional

990.003.00

990.088.00



311.21/22 XTREME



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
1,3	5	70	10x45	311.013.20*	
2	12	70	10x40	311.020.21	311.020.22
3	18	70	10x40	311.030.21	311.030.22
4	27	70	10x28	311.040.21	311.040.22
5	30	70	10x30	311.050.21	311.050.22
6	30	70	10x30	311.060.21	311.060.22
6,35 (1/4")	30	70	10x30	311.064.21	311.064.22
8	35	70	10x25	311.080.21	311.080.22
10	35	70	10x25	311.100.21	311.100.22

* Boring bit for panel preboring.
Suitable for both right-hand and left-hand rotation.

TECHNICAL DETAILS:

- Premium quality super-strength steel.
- HWM spiral portion with centre point.
- 2 cutting edges [Z2].
- 2 spiral flutes.
- 2 curved, negatively ground spurs [V2].
- Parallel shank with driving flat and adjustable screw length.

APPLICATION:

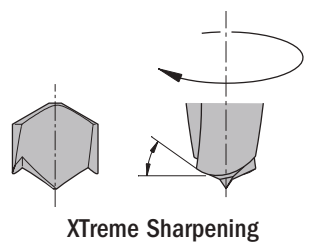
used on boring machines separately or with chucks for drilling blind holes in solid wood, wood composites, plastic and laminated materials.

Spare parts

Optional

990.003.00

990.088.00



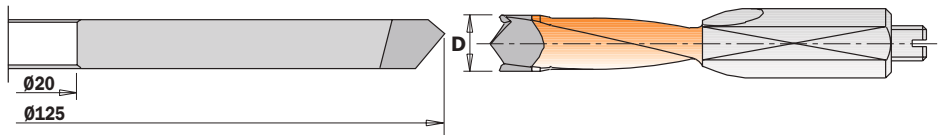
Perfect for all materials and long-lasting performance!

Grinding Wheels for XTreme Sharpening

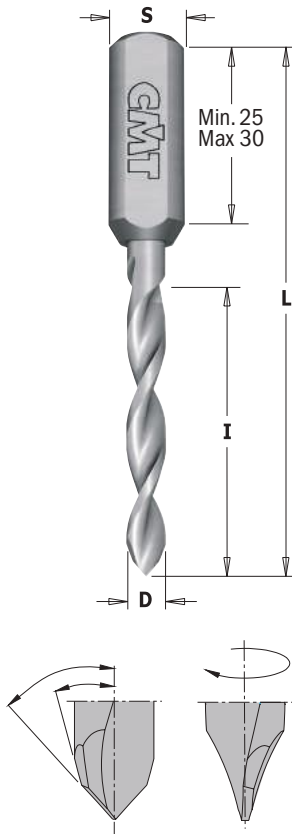


01.02

D mm	DESCRIPTION	DIMENSION mm	B mm	ORDER NO.
Ø3 a 7	Grinding wheel for sharpening	Ø125x5,5	Ø20	01.02.0316
Ø8 a 10	Grinding wheel for sharpening	Ø125x7	Ø20	01.02.0317



Solid Carbide Dowel Drills for Through Holes



Xtreme Sharpening

314.21/22 **Xtreme**



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
3	27	70	10x30	314.030.21	314.030.22
4	35	70	10x26	314.040.21	314.040.22
5	35	70	10x26	314.050.21	314.050.22
6	35	70	10x26	314.060.21	314.060.22
8	35	70	10x26	314.080.21	314.080.22
10	35	70	10x27	314.100.21	314.100.22

For panels with maximum 20-30mm in thickness

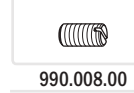
TECHNICAL DETAILS:

- Premium quality super-strength steel.
- HWM spiral portion with centre point.
- 2 precision ground cutting edges [Z2].
- Double angle.
- 2 spiral flutes.
- Parallel shank with driving flat and adjustable screw length.

APPLICATION:

used on boring machines and dowel drilling devices.
Use for drilling through holes in solid wood, wood composites, plastic and laminated materials.

Spare parts

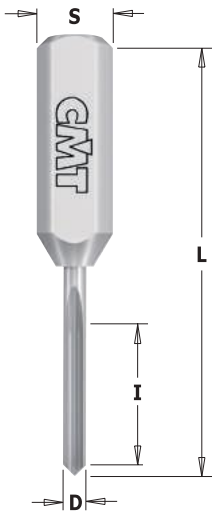


Optional



Solid Carbide Dowel Drills

new



382 **Xtreme**



D mm	I mm	L mm	S mm	ORDER NO. Right-hand & Left-hand rotation
2	12	57,5	10x30	382.2057
2	12	70	10x42,5	382.2070
2,5	16	57,5	10x24	382.2557
2,5	16	70	10x35	382.2570
3	15	57,5	10x26	382.3057
3	25	70	10x26	382.3070
3,5	18	57,5	10x24	382.3557
3,5	18	70	10x36	382.3570
5	25	57,5	10x25	382.5057
5	35	70	10x25	382.5070

TECHNICAL DETAILS:

- Premium quality HWM.
- Cutting head with precision balanced centre point.
- 1 cutting edge [Z1].
- Parallel shank with driving flat and length adjusting screw.

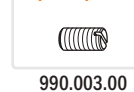
APPLICATION:

for drilling blind holes on solid wood, wood composites, plastic and laminated materials. For use on machining centres, point to point machines, CNC routers and hand-held routers equipped with chucks or adaptors.

SECURITY TIPS:

these boring bits require more power compared to tradition dowel drills. The number of boring bits to be used in a single drilling unit depends on the machine power.

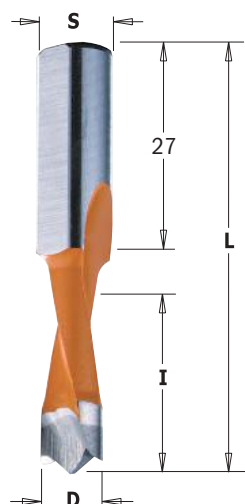
Spare parts



Optional



Dowel Drills



310.41/42 XTREME



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	27	57,5	10x27	310.050.41	310.050.42
6	27	57,5	10x27	310.060.41	310.060.42
7	27	57,5	10x27	310.070.41	310.070.42
8	27	57,5	10x27	310.080.41	310.080.42
9	27	57,5	10x27	310.090.41	310.090.42
10	27	57,5	10x27	310.100.41	310.100.42

TECHNICAL DETAILS:

- Premium quality super-strength steel.
- Spiral portion coated with orange or black P.T.F.E.
- Extra-fine micrograin carbide spiral portion with centre point.
- 2 cutting edges [Z2].
- 2 spiral flutes.
- 2 curved, negatively ground spurs [V2].
- Parallel shank with driving flat and adjustable screw length.

Spare parts



990.003.00

Optional

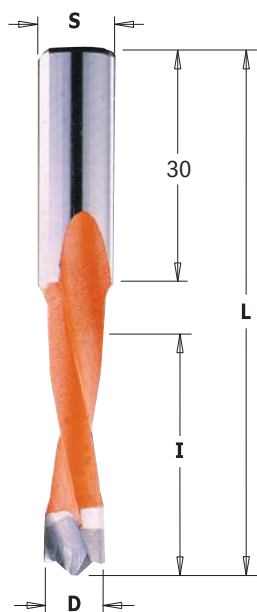


990.088.00

APPLICATION:

used on boring machines separately or with chucks for drilling blind holes in solid wood, wood composites, plastic and laminated materials.

Dowel Drills



311.41/42 XTREME



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	35	70	10x30	311.050.41	311.050.42
6	35	70	10x30	311.060.41	311.060.42
7	35	70	10x30	311.070.41	311.070.42
8	35	70	10x30	311.080.41	311.080.42
9	35	70	10x30	311.090.41	311.090.42
10	35	70	10x30	311.100.41	311.100.42

TECHNICAL DETAILS:

- Premium quality super-strength steel.
- Spiral portion coated with orange or black P.T.F.E.
- Extra-fine micrograin carbide spiral portion with centre point.
- 2 cutting edges [Z2].
- 2 spiral flutes.
- 2 curved, negatively ground spurs [V2].
- Parallel shank with driving flat and adjustable screw length.

Spare parts



990.003.00

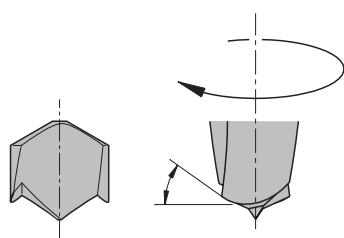
Optional



990.088.00

APPLICATION:

used on boring machines separately or with chucks for drilling blind holes in solid wood, wood composites, plastic and laminated materials.



Xtreme Sharpening

Perfect for all materials and long-lasting performance!

CMT announces the new series of solid carbide boring bits, now available from their extensive industrial line. These bits are entirely made of premium quality super micrograin carbide from Ceratizit in Luxembourg.

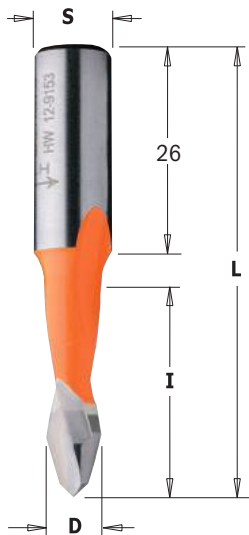
The entire series offers several design features:

- the unique tip has curved, negatively ground spurs to produce exceptionally clear bores with no rough edges. Centre point balanced;
- the cylindrical head is bigger than traditional tips and is extremely resistant to prolonged use.

It lasts longer between sharpenings;

- the plunge edge runs all the way to the centre of the bit to reduce drilling resistance and increase production speed;
- the solid carbide construction guarantees an almost infinite number of resharpenings, and since it is a solid unit of carbide, it offers extra safety features;
- ideal for hardwood and difficult composites such as particle boards, MDF and veneered wood.
- excellent performance on high-speed boring units and CNC routers.

Dowel Drills for Through Holes



313.41/42

XTREME



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	27	57,5	10x26	313.050.41	313.050.42
8	27	57,5	10x26	313.080.41	313.080.42

For panels with maximum 20mm in thickness

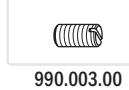
TECHNICAL DETAILS:

- Super-strength steel.
- Spiral portion coated with orange or black P.T.F.E.
- Extra-fine micrograin carbide spiral portion with centre point.
- HW head with precision balanced centre point.
- 2 precision ground cutting edges [Z2].
- Double angle.
- 2 spiral flutes.
- Parallel shank with driving flat and length adjusting screw.

APPLICATION:

used on boring machines and dowel drilling devices. Use for drilling through holes in solid wood, wood composites, plastic and laminated materials.

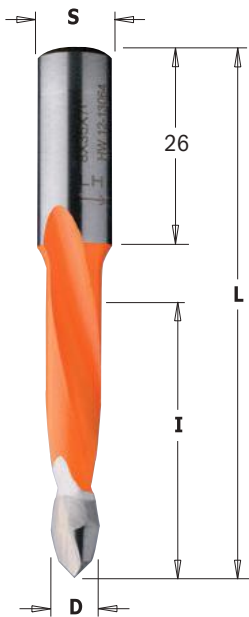
Spare parts



Optional



Dowel Drills for Through Holes



314.41/42

XTREME



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	35	70	10x26	314.050.41	314.050.42
6	35	70	10x26	314.060.41	314.060.42
7	35	70	10x26	314.070.41	314.070.42
8	35	70	10x26	314.080.41	314.080.42
10	35	70	10x26	314.100.41	314.100.42

For panels with maximum 30mm in thickness

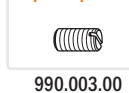
TECHNICAL DETAILS:

- Super-strength steel.
- Spiral portion coated with orange or black P.T.F.E.
- Extra-fine micrograin carbide spiral portion with centre point.
- HW head with precision balanced centre point.
- 2 precision ground cutting edges [Z2].
- Double angle.
- 2 spiral flutes.
- Parallel shank with driving flat and length adjusting screw.

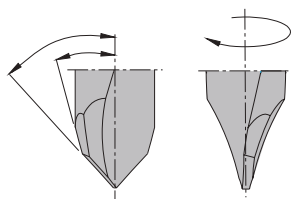
APPLICATION:

used on boring machines and dowel drilling devices. Use for drilling through holes in solid wood, wood composites, plastic and laminated materials.

Spare parts



Optional



XTreme Sharpening

Perfect for all materials and long-lasting performance!

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The entire series offers several design features:

- the unique tip has curved, negatively ground spurs to produce exceptionally clear bores with no rough edges. Centre point balanced;
- the cylindrical head is bigger than traditional tips and is extremely resistant to prolonged use.

It lasts longer between sharpenings;

- the plunge edge runs all the way to the centre of the bit to reduce drilling resistance and increase production speed;
- the solid carbide construction guarantees an almost infinite number of resharpenings, and since it is a solid unit of carbide, it offers extra safety features;
- ideal for hardwood and difficult composites such as particle boards, MDF and veneered wood.
- excellent performance on high-speed boring units and CNC routers.



364

B mm	L mm	S mm	ORDER NO.
2	38	10x20	364.020.00
2,5	38	10x20	364.025.00
3	38	10x20	364.030.00
3,2	38	10x20	364.032.00
3,5	38	10x20	364.035.00
4	38	10x20	364.040.00
4,5	38	10x20	364.045.00
5	38	10x20	364.050.00

For use with the following items: 363 HWM

TECHNICAL DETAILS:

- Super-strength steel.
- Quick and secure assembly on twist drills.
- Precision relief.
- Parallel shank with driving flat and length adjusting screw.

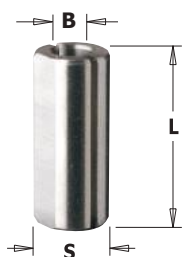
APPLICATION:

for use with twist drills with common shank and bushing diameter.
Used on boring machines equipped with adaptor chucks.

Spare parts

990.001.00	991.062.00

Bushings for Twist Drills



365

B mm	L mm	S mm	ORDER NO.
2	23	10	365.020.00
2,5	23	10	365.025.00
3	23	10	365.030.00
3,2	23	10	365.032.00
3,5	23	10	365.035.00
4	23	10	365.040.00
4,5	23	10	365.045.00
5	23	10	365.050.00

For use with the following items: 363 HWM

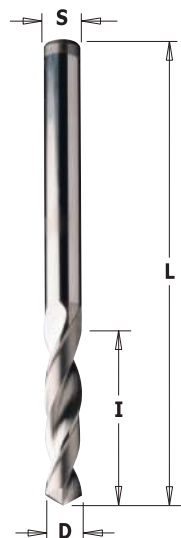
TECHNICAL DETAILS:

- Super-strength steel.
- Shank with driving flat.
- Axial cuttings for cylindrical drill clamps.

APPLICATION:

used with spiral boring bits with shank diameters equal to the bushing diameter.
Used on boring machines equipped with adaptors.

Solid Carbide Twist Drills "V" Point Sharpening



"V" Point
120°



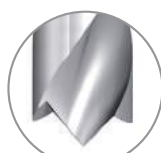
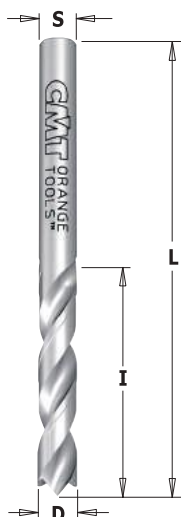
"V" Point
60°

363

S=D mm	I mm	L mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
120° Through Holes					
2	25	50		363.020.11	363.020.12
2,5	27	55		363.025.11	363.025.12
3	27	55		363.030.11	363.030.12
3,2	27	55		363.032.11	363.032.12
3,5	27	55		363.035.11	363.035.12
4	27	55		363.040.11	363.040.12
4,5	28	60		363.045.11	363.045.12
5	28	60		363.050.11	363.050.12
60° Through Hole					
new 2,5	27	55		363.025.41	363.025.42
new 3	27	55		363.030.41	363.030.42
new 3,5	27	55		363.035.41	363.035.42
new 4	27	55		363.040.41	363.040.42

HWM LONG LIFE Z2 RH LH

Solid Carbide Twist Drills Negatively Ground Spurs Sharpening



X-Treme
Sharpening

363

S=D mm	I mm	L mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
2,5	27	55		363.025.21	363.025.22
3	27	55		363.030.21	363.030.22
4	27	55		363.040.21	363.040.22
5	28	60		363.050.21	363.050.22

HWM LONG LIFE Z2 RH LH

For use with the following items: 364-365

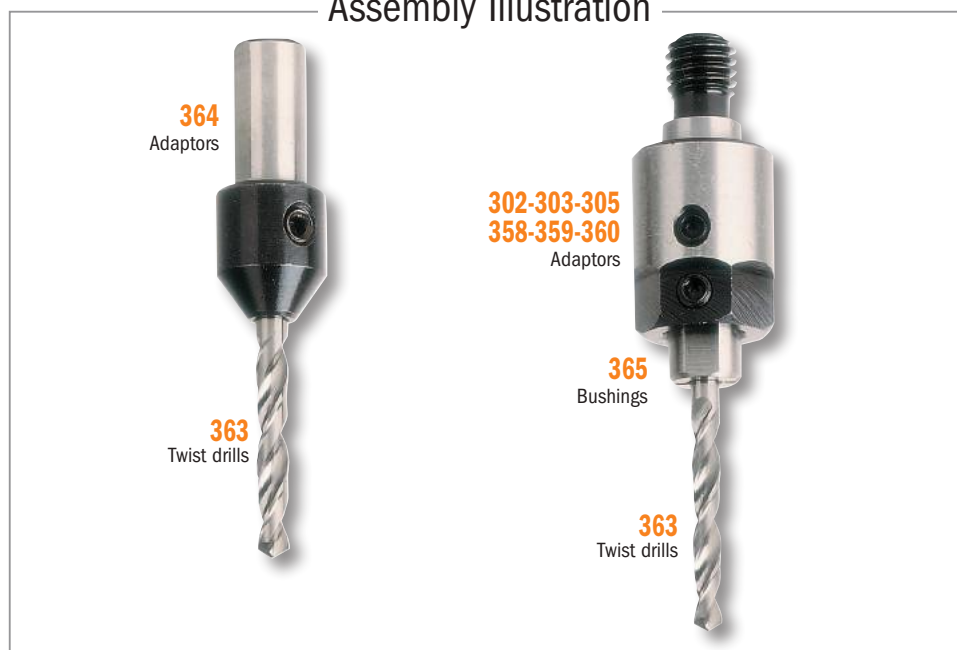
TECHNICAL DETAILS:

- Premium quality HWM.
- 2 precision ground cutting edges [Z2].
- 2 spiral flutes.
- Common shank and drilling diameter (S=D).

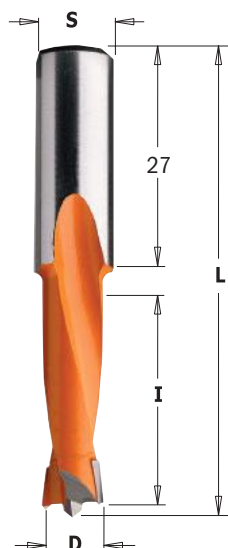
APPLICATION:

used in adaptor bushings.

Assembly Illustration



2 Flute Dowel Drills



310

HW Z2 V2 RH LH

D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
4	27	57,5	10x27	310.040.11	310.040.12
4,5	27	57,5	10x27	310.045.11	310.045.12
4,76	27	57,5	10x27	310.047.11	310.047.12
5	27	57,5	10x27	310.050.11	310.050.12
5,1	27	57,5	10x27	310.051.11	310.051.12
5,2	27	57,5	10x27	310.052.11	310.052.12
5,55	27	57,5	10x27	310.055.11	310.055.12
6	27	57,5	10x27	310.060.11	310.060.12
6,35	27	57,5	10x27	310.064.11	310.064.12
6,5	27	57,5	10x27	310.065.11	310.065.12
7	27	57,5	10x27	310.070.11	310.070.12
8	27	57,5	10x27	310.080.11	310.080.12
8,2	27	57,5	10x27	310.082.11	310.082.12
9	27	57,5	10x27	310.090.11	310.090.12
9,52	27	57,5	10x27	310.095.11	310.095.12
10	27	57,5	10x27	310.100.11	310.100.12
11	27	57,5	10x27	310.110.11	310.110.12
12	27	57,5	10x27	310.120.11	310.120.12
12,7	27	57,5	10x27	310.127.11	310.127.12
13	27	57,5	10x27	310.130.11	310.130.12
14	27	57,5	10x27	310.140.11	310.140.12
15	27	57,5	10x27	310.150.11	310.150.12
16	27	57,5	10x27	310.160.11	310.160.12

Spare parts



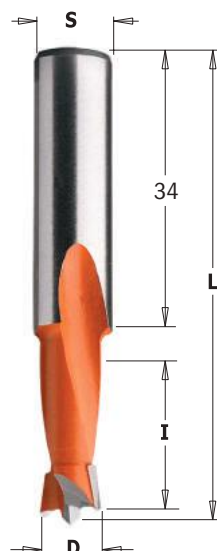
990.003.00

Optional



990.088.00

2 Flute Dowel Drills



361

HW Z2 V2 RH LH

D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	18	57,5	10x34	361.050.11	361.050.12
6	18	57,5	10x34	361.060.11	361.060.12
7	18	57,5	10x34	361.070.11	361.070.12
8	18	57,5	10x34	361.080.11	361.080.12
10	18	57,5	10x34	361.100.11	361.100.12

TECHNICAL DETAILS:

- Super-strength steel.
- Spiral portion coated with orange or black P.T.F.E.
- HW head with precision balanced centre point.
- 2 HW precision ground cutting edges [Z2].
- 2 negatively ground spurs [V2]
- 2 spiral flutes.
- Parallel shank with driving flat and length adjusting screw.

APPLICATION:

used on boring machines equipped with adaptors or chucks.
Used to drill blind holes in solid wood, wood composites, plastic and laminated materials.

Spare parts

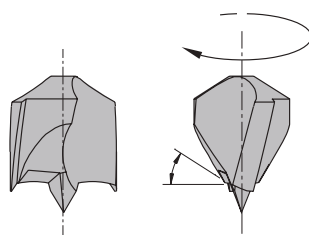


990.003.00

Optional

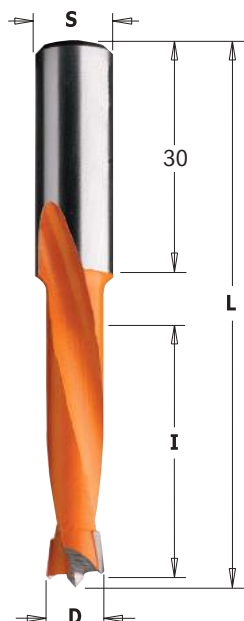


990.088.00



Negatively Ground Spurs

2 Flute Dowel Drills



311



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
4	35	70	10x30	311.040.11	311.040.12
4,5	35	70	10x30	311.045.11	311.045.12
4,76	35	70	10x30	311.047.11	311.047.12
5	35	70	10x30	311.050.11	311.050.12
5,1	35	70	10x30	311.051.11	311.051.12
5,2	35	70	10x30	311.052.11	311.052.12
5,55	35	70	10x30	311.055.11	311.055.12
6	35	70	10x30	311.060.11	311.060.12
6,35	35	70	10x30	311.064.11	311.064.12
6,5	35	70	10x30	311.065.11	311.065.12
7	35	70	10x30	311.070.11	311.070.12
8	35	70	10x30	311.080.11	311.080.12
8,2	35	70	10x30	311.082.11	311.082.12
9	35	70	10x30	311.090.11	311.090.12
9,52	35	70	10x30	311.095.11	311.095.12
10	35	70	10x30	311.100.11	311.100.12
11	35	70	10x30	311.110.11	311.110.12
11,1	35	70	10x30	311.111.11	311.111.12
12	35	70	10x30	311.120.11	311.120.12
12,7	35	70	10x30	311.127.11	311.127.12
13	35	70	10x30	311.130.11	311.130.12
14	35	70	10x30	311.140.11	311.140.12
15	35	70	10x30	311.150.11	311.150.12
16	35	70	10x30	311.160.11	311.160.12

Spare parts



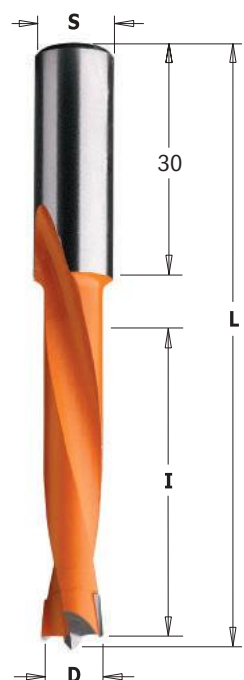
990.003.00

Optional



990.088.00

2 Flute Dowel Drills



362



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	44	77	10x30	362.050.11	362.050.12
6	44	77	10x30	362.060.11	362.060.12
7	44	77	10x30	362.070.11	362.070.12
8	44	77	10x30	362.080.11	362.080.12
10	44	77	10x30	362.100.11	362.100.12
12	44	77	10x30	362.120.11	362.120.12

TECHNICAL DETAILS:

- Super-strength steel.
- Spiral portion coated with orange or black P.T.F.E.
- HW head with precision balanced centre point.
- 2 HW precision ground cutting edges [Z2].
- 2 negatively ground spurs [V2].
- 2 spiral flutes.
- Parallel shank with driving flat and length adjusting screw.

APPLICATION:

used on boring machines equipped with adaptors or chucks.
Used to drill blind holes in solid wood, wood composites, plastic and laminated materials.

Spare parts

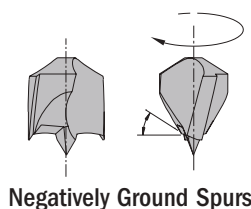


990.003.00

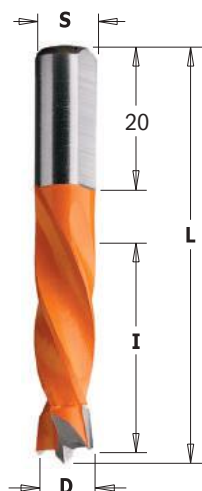
Optional



990.088.00



4 Flute Dowel Drills



306



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
• 3	18	55,5	8x20	306.030.21	
5	30	55,5	8x20	306.050.11	306.050.12
5,55	30	55,5	8x20	306.055.11	306.055.12
6	30	55,5	8x20	306.060.11	306.060.12
6,35	30	55,5	8x20	306.064.11	306.064.12
7	30	55,5	8x20	306.070.11	306.070.12
8	30	55,5	8x20	306.080.11	306.080.12
9	30	55,5	8x20	306.090.11	306.090.12
10	30	55,5	8x20	306.100.11	306.100.12
12	30	55,5	8x20	306.120.11	306.120.12

• HWM

Spare parts



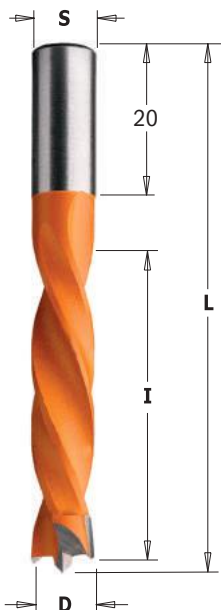
990.003.00

Optional



990.088.00

4 Flute Dowel Drills



307



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	40	67	8x20	307.050.11	307.050.12
5,55	40	67	8x20	307.055.11	307.055.12
6	40	67	8x20	307.060.11	307.060.12
6,35	40	67	8x20	307.064.11	307.064.12
7	40	67	8x20	307.070.11	307.070.12
8	40	67	8x20	307.080.11	307.080.12
9	40	67	8x20	307.090.11	307.090.12
9,52	40	67	8x20	307.095.11	307.095.12
10	40	67	8x20	307.100.11	307.100.12
12	40	67	8x20	307.120.11	307.120.12

TECHNICAL DETAILS:

- Super-strength steel.
- Cutter portion coated with black or orange P.T.F.E.
- HW head with precision balanced centre point.
- 2 HW precision ground cutting edges [Z2].
- Negatively ground spurs [V2].
- 4 spiral flutes.
- Parallel shank with driving flat and length adjusting screw.

Spare parts



990.003.00

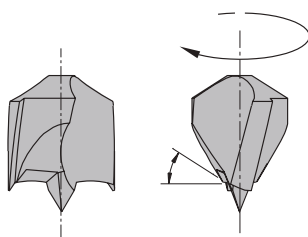
Optional



990.088.00

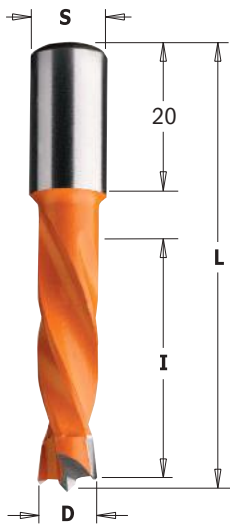
APPLICATION:

used on boring machines equipped with adaptors or chucks.
Used to drill blind holes in solid wood, wood composites, plastic and laminated materials.



Negatively Ground Spurs

4 Flute Dowel Drills



308



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
4	26	57,5	10x20	308.040.11	308.040.12
5	30	57,5	10x20	308.050.11	308.050.12
6	30	57,5	10x20	308.060.11	308.060.12
6,35	30	57,5	10x20	308.064.11	308.064.12
7	30	57,5	10x20	308.070.11	308.070.12
8	30	57,5	10x20	308.080.11	308.080.12
9	30	57,5	10x20	308.090.11	308.090.12
9,52	30	57,5	10x20	308.095.11	308.095.12
10	30	57,5	10x20	308.100.11	308.100.12
11	30	57,5	10x20	308.110.11	308.110.12
12	30	57,5	10x20	308.120.11	308.120.12
12,7	30	57,5	10x20	308.127.11	308.127.12
13	30	57,5	10x20	308.130.11	308.130.12
14	30	57,5	10x20	308.140.11	308.140.12
15	30	57,5	10x20	308.150.11	308.150.12
16	30	57,5	10x20	308.160.11	308.160.12

Spare parts



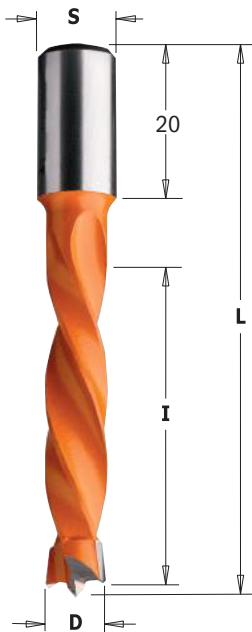
990.003.00

Optional



990.088.00

4 Flute Dowel Drills



309



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
4	43	70	10x20	309.040.11	309.040.12
5	43	70	10x20	309.050.11	309.050.12
6	43	70	10x20	309.060.11	309.060.12
6,35	43	70	10x20	309.064.11	309.064.12
7	43	70	10x20	309.070.11	309.070.12
7,5	43	70	10x20	309.075.11	309.075.12
8	43	70	10x20	309.080.11	309.080.12
9	43	70	10x20	309.090.11	309.090.12
9,52	43	70	10x20	309.095.11	309.095.12
10	43	70	10x20	309.100.11	309.100.12
11	43	70	10x20	309.110.11	309.110.12
12	43	70	10x20	309.120.11	309.120.12
12,7	43	70	10x20	309.127.11	309.127.12
13	43	70	10x20	309.130.11	309.130.12
14	43	70	10x20	309.140.11	309.140.12
15	43	70	10x20	309.150.11	309.150.12
16	43	70	10x20	309.160.11	309.160.12

TECHNICAL DETAILS:

- Super-strength steel.
- Cutter portion coated with black or orange P.T.F.E.
- HW head with precision balanced centre point.
- 2 HW precision ground cutting edges [Z2].
- Negatively ground spurs [V2].
- 4 spiral flutes.
- Parallel shank with driving flat and length adjusting screw.

APPLICATION:

used on boring machines equipped with adaptors or chucks.
Used to drill blind holes in solid wood, wood composites, plastic and laminated materials.

Spare parts

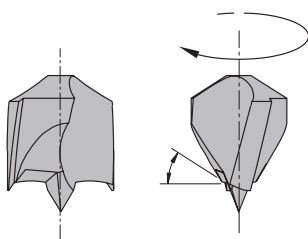


990.003.00

Optional

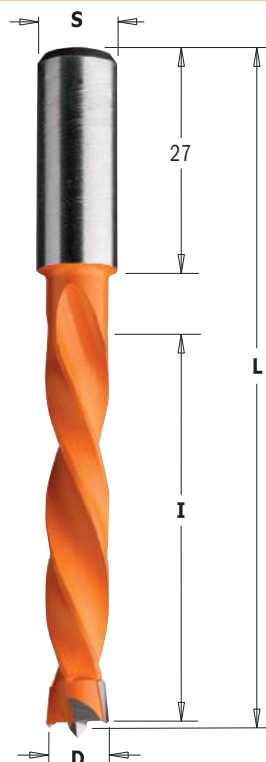


990.088.00



Negatively Ground Spurs

4 Flute Dowel Drills



373

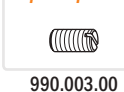
HW **Z2** **V2** **RH** **LH**

D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	50	85	10x27	373.050.11	373.050.12
6	50	85	10x27	373.060.11	373.060.12
7	50	85	10x27	373.070.11	373.070.12
8	50	85	10x27	373.080.11	373.080.12
10	50	85	10x27	373.100.11	373.100.12
12	50	85	10x27	373.120.11	373.120.12

TECHNICAL DETAILS:

- Super-strength steel.
- Cutter portion coated with black or orange P.T.F.E.
- HW head with precision balanced centre point.
- 2 HW precision ground cutting edges [Z2].
- Negatively ground spurs [V2].
- 4 spiral flutes.
- Parallel shank with driving flat and length adjusting screw.

Spare parts



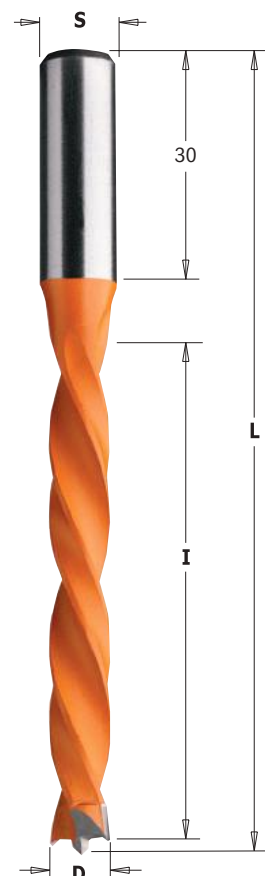
Optional



APPLICATION:

used on boring machines equipped with adaptors or chucks.
Used to drill blind holes in solid wood, wood composites, plastic and laminated materials.

4 Flute Dowel Drills



372

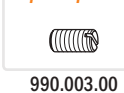
HW **Z2** **V2** **RH** **LH**

D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	65	105	10x30	372.050.11	372.050.12
6	65	105	10x30	372.060.11	372.060.12
7	65	105	10x30	372.070.11	372.070.12
8	65	105	10x30	372.080.11	372.080.12
10	65	105	10x30	372.100.11	372.100.12
12	65	105	10x30	372.120.11	372.120.12

TECHNICAL DETAILS:

- Super-strength steel.
- Cutter portion coated with black or orange P.T.F.E.
- HW head with precision balanced centre point.
- 2 HW precision ground cutting edges [Z2].
- Negatively ground spurs [V2].
- 4 spiral flutes.
- Parallel shank with driving flat and length adjusting screw.

Spare parts

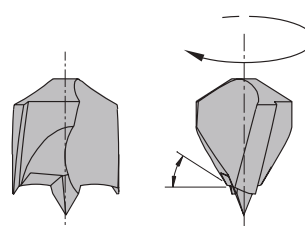


Optional



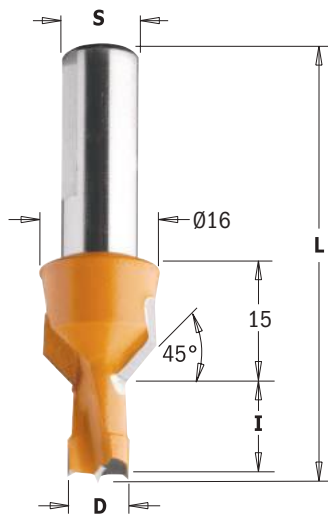
APPLICATION:

used on boring machines equipped with adaptors or chucks.
Used to drill blind holes in solid wood, wood composites, plastic and laminated materials.



Negatively Ground Spurs

Dowel Drills with Countersink



376-377



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
8	12	57,5	10	376.080.11	376.080.12
8	13	57,5	10	376.083.11	376.083.12
8	15	57,5	10	376.081.11	376.081.12
8	20	57,5	10	376.082.11	376.082.12
10	12	57,5	10	376.100.11	376.100.12
10	13	57,5	10	376.103.11	376.103.12
10	15	57,5	10	376.101.11	376.101.12
10	20	57,5	10	376.102.11	376.102.12
8	12	70	10	377.080.11	377.080.12
8	13	70	10	377.083.11	377.083.12
8	15	70	10	377.081.11	377.081.12
8	20	70	10	377.082.11	377.082.12
10	12	70	10	377.100.11	377.100.12
10	13	70	10	377.103.11	377.103.12
10	15	70	10	377.101.11	377.101.12
10	20	70	10	377.102.11	377.102.12

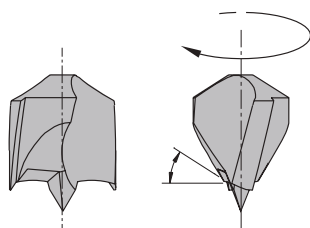
TECHNICAL DETAILS:

- Super-strength steel.
- Spiral portion coated with orange or black P.T.F.E.
- HW head with precision balanced centre point.
- 2 precision ground cutting edges [Z2].
- 2 ground spurs [V2].
- 2 spiral flutes.
- Parallel shank with driving flat and length adjusting screw.

Spare parts



Optional

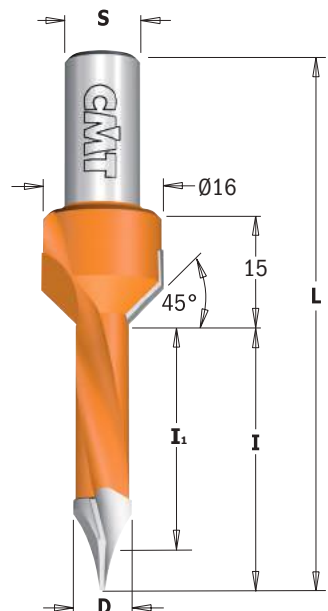


Negatively Ground Spurs

APPLICATION:

used for drilling and countersinking in solid wood, wood composites, plastic and laminated materials. Suitable for high performance speed on boring machines equipped with adaptors or chucks.

Dowel Drills for Through Holes with Countersink



378



D mm	I mm	I ₁ mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	35	31	70	10	378.052.11	378.052.12
7	35	29,5	70	10	378.072.11	378.072.12
8	35	29	70	10	378.082.11	378.082.12
10	35	26,5	70	10	378.102.11	378.102.12

TECHNICAL DETAILS:

- Super-strength steel.
- Spiral portion coated with orange or black P.T.F.E.
- HW head with precision balanced centre point.
- 2 precision ground cutting edges [Z2].
- 2 ground spurs [V2].
- 2 spiral flutes.
- Parallel shank with driving flat and length adjusting screw.

Spare parts

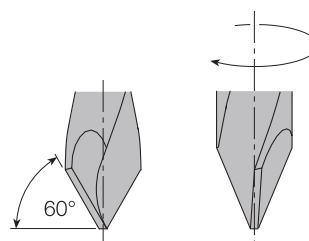


Optional



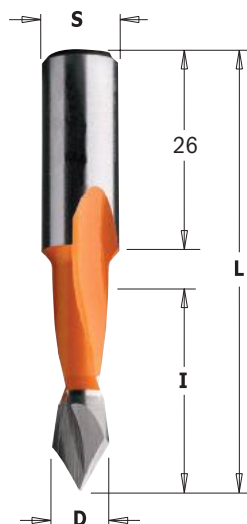
APPLICATION:

used for drilling and countersinking in solid wood, wood composites, plastic and laminated materials. Suitable for high performance speed on boring machines equipped with adaptors or chucks.



60° Through Holes

2 Flute Dowel Drills for Through Holes



313

HW Z2 RH LH

D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	27	57,5	10x26	313.050.11	313.050.12
6	27	57,5	10x26	313.060.11	313.060.12
8	27	57,5	10x26	313.080.11	313.080.12
10	27	57,5	10x26	313.100.11	313.100.12

For panels with maximum 20mm in thickness.

TECHNICAL DETAILS:

- Super-strength steel.
- Spiral portion coated with orange or black P.T.F.E.
- HW head with precision balanced centre point.
- 2 precision ground cutting edges [Z2].
- 2 spiral flutes.
- Parallel shank with driving flat and length adjusting screw.

APPLICATION:

used on boring machines and dowel drilling devices.
Use for drilling through holes in solid wood, wood composites, plastic and laminated materials.

Spare parts



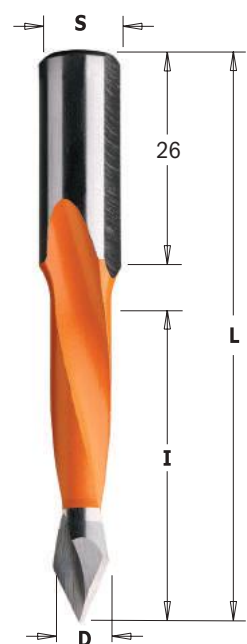
990.003.00

Optional



990.088.00

2 Flute Dowel Drills for Through Holes



314

HW Z2 RH LH

D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
4	30	70	10x26	314.040.11	314.040.12
4,76	35	70	10x26	314.047.11	314.047.12
5	35	70	10x26	314.050.11	314.050.12
5,55	35	70	10x26	314.055.11	314.055.12
6	35	70	10x26	314.060.11	314.060.12
6,35	35	70	10x26	314.064.11	314.064.12
7	35	70	10x26	314.070.11	314.070.12
8	35	70	10x26	314.080.11	314.080.12
9	35	70	10x26	314.090.11	314.090.12
9,52	35	70	10x26	314.095.11	314.095.12
10	35	70	10x26	314.100.11	314.100.12
12	35	70	10x26	314.120.11	314.120.12
12,7	35	70	10x26	314.127.11	314.127.12

For panels with maximum 25-30mm in thickness.

366

5	44	77	10x26	366.050.11	366.050.12
6	44	77	10x26	366.060.11	366.060.12
8	44	77	10x26	366.080.11	366.080.12
10	44	77	10x26	366.100.11	366.100.12
12	44	77	10x26	366.120.11	366.120.12

For panels with maximum 30-40mm in thickness.

TECHNICAL DETAILS:

- Super-strength steel.
- Spiral portion coated with orange or black P.T.F.E.
- HW head with precision balanced centre point.
- 2 precision ground cutting edges [Z2].
- 2 spiral flutes.
- Parallel shank with driving flat and length adjusting screw.

APPLICATION:

used on boring machines and dowel drilling devices.
Use for drilling through holes in solid wood, wood composites, plastic and laminated materials.

Spare parts

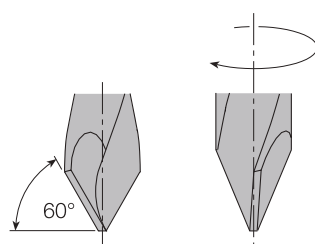


990.003.00

Optional

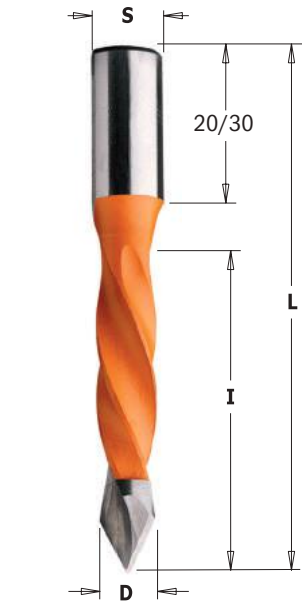


990.088.00



60° Through Holes

4 Flute Dowel Drills for Through Holes



60° Through Holes

374 For panels with maximum 20-25mm in thickness.



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	30	57,5	10x20	374.050.11	374.050.12
8	30	57,5	10x20	374.080.11	374.080.12

375 For panels with maximum 30-35mm in thickness.

new

D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
4	40	70	10x20	375.040.11	375.040.12
5	40	70	10x20	375.050.11	375.050.12
6	40	70	10x20	375.060.11	375.060.12
7	40	70	10x20	375.070.11	375.070.12
8	40	70	10x20	375.080.11	375.080.12
9	40	70	10x20	375.090.11	375.090.12
10	40	70	10x20	375.100.11	375.100.12

381 For panels with maximum 60-65mm in thickness.

D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	70	115	10x30	381.050.11	381.050.12
6	70	115	10x30	381.060.11	381.060.12
8	70	115	10x30	381.080.11	381.080.12
10	70	115	10x30	381.100.11	381.100.12

TECHNICAL DETAILS:

- Super-strength steel
- Spiral portion coated with orange or black P.T.F.E.
- HW head with precision balanced centre point
- 2 precision ground cutting edges [Z2]
- 4 spiral flutes
- Parallel shank with driving flat and length adjusting screw.

Spare parts



990.003.00

Optional

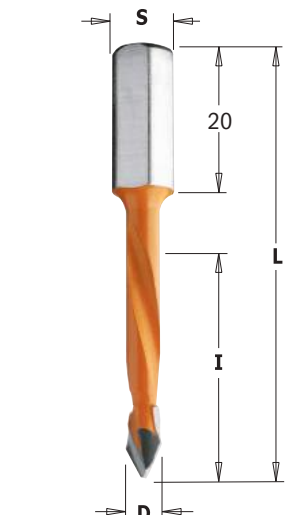


990.088.00

APPLICATION:

used on boring machines and dowel drilling devices.
Use for drilling through holes in solid wood, wood composites, plastic and laminated materials.

2 Flute Dowel Drills for Through Holes



60° Through Holes

367



D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	30	56	8x20	367.050.11	367.050.12
8	30	56	8x20	367.080.11	367.080.12

For panels with maximum 20-25mm in thickness.

368

D mm	I mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	43	70	8x20	368.050.11	368.050.12
6	43	70	8x20	368.060.11	368.060.12
7	43	70	8x20	368.070.11	368.070.12
8	43	70	8x20	368.080.11	368.080.12

For panels with maximum 35-40mm in thickness

TECHNICAL DETAILS:

- Super-strength steel
- Spiral portion coated with orange or black P.T.F.E.
- HW head with precision balanced centre point
- 2 precision ground cutting edges [Z2]
- 2 spiral flutes
- Parallel shank with driving flat and length adjusting screw.

Spare parts



990.003.00

Optional

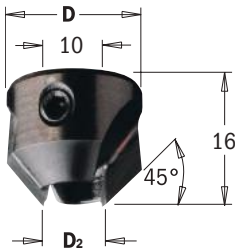


990.088.00

APPLICATION:

used on boring machines and dowel drilling devices.
Use for drilling through holes in solid wood, wood composites, plastic and laminated materials.

Countersinks for 2 Flutes Dowel Drills



315

D ₂ mm	D mm		
5 ~ 10	20		
11 ~ 12	22		

**For assembly on the shank of the drill.
For use with the following parts: 310-311-362-313-314-366 HW**

TECHNICAL DETAILS:
 - Super-strength steel.
 - 2 precision ground carbide tipped cutting edges [Z2].
 - Direct clamp on the shank of the drills.

APPLICATION:
 used for chamfering and drilling in solid wood, wood composites, plastic and laminated materials.

HW

Z2

RH

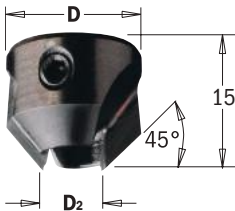
LH

ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
315.200.11	315.200.12
315.220.11	315.220.12

Spare parts

	
990.006.00	991.062.00

Countersinks for 4 Flutes Dowel Drills



316

D ₂ mm	D mm			ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
4	16			316.040.11	316.040.12
5	16			316.050.11	316.050.12
6	16			316.060.11	316.060.12
7	16			316.070.11	316.070.12
8	18			316.080.11	316.080.12
9	18			316.090.11	316.090.12
10	20			316.100.11	316.100.12
12	20			316.120.11	316.120.12

**For assembly on the spiral head of the bit.
Adjustable depth.
For use with the following parts:
306-307-308-309-373-374-375-338-339-
340-341-342-343-344-346-352-353 HW**

TECHNICAL DETAILS:
 - Super-strength steel.
 - 2 HW precision ground cutting edges [Z2].

APPLICATION:
 used for drilling and chamfering in solid wood,
 wood composites, plastic and laminated materials.

HW

Z2

RH

LH

ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
316.040.11	316.040.12
316.050.11	316.050.12
316.060.11	316.060.12
316.070.11	316.070.12
316.080.11	316.080.12
316.090.11	316.090.12
316.100.11	316.100.12
316.120.11	316.120.12

Spare parts

	
990.002.00	991.062.00

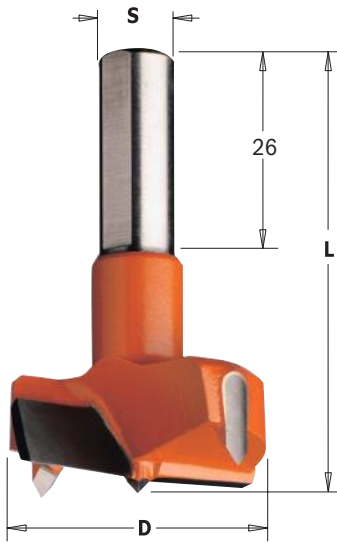
315 Assembly Illustration



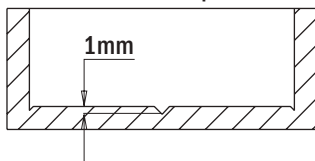
316 Assembly Illustration



Hinge Boring Bits



New construction with
1mm centre point



317

HW Z2 V2 RH LH

D mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
14	57,5	10x26	317.140.11	317.140.12
15	57,5	10x26	317.150.11	317.150.12
16	57,5	10x26	317.160.11	317.160.12
17	57,5	10x26	317.170.11	317.170.12
18	57,5	10x26	317.180.11	317.180.12
19	57,5	10x26	317.190.11	317.190.12
20	57,5	10x26	317.200.11	317.200.12
22	57,5	10x26	317.220.11	317.220.12
24	57,5	10x26	317.240.11	317.240.12
25	57,5	10x26	317.250.11	317.250.12
26	57,5	10x26	317.260.11	317.260.12
28	57,5	10x26	317.280.11	317.280.12
30	57,5	10x26	317.300.11	317.300.12
32	57,5	10x26	317.320.11	317.320.12
34	57,5	10x26	317.340.11	317.340.12
35	57,5	10x26	317.350.11	317.350.12
38	57,5	10x26	317.380.11	317.380.12
40	57,5	10x26	317.400.11	317.400.12
42	57,5	10x26	317.420.11	317.420.12
45	57,5	10x26	317.450.11	317.450.12
50	57,5	10x26	317.500.11	317.500.12
55	57,5	10x26	317.550.11	317.550.12
60	57,5	10x26	317.600.11	317.600.12

TECHNICAL DETAILS:

- Super-strength steel.
- Cutter portion coated with orange or black P.T.F.E.
- HW head with precision balanced centre point.
- 2 HW precision ground cutting edges [Z2].
- 2 negatively ground spurs [V2].
- Parallel shank with driving flat and length adjusting screw.

Spare parts



990.003.00

Optional



990.088.00

APPLICATION:

ideal for hinges. Use on boring machines equipped with adaptors or chucks.

Use for drilling accurate and clean-cut blind holes in solid wood, wood composites, plastic and laminated materials.

DP Hinge Boring Bits



317-369

DP LONG LIFE Z2 V2 RH LH

D mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
15	57,5	10x26	317.150.61	317.150.62
35	57,5	10x26	317.350.61	317.350.62
15	70	10x26	369.150.61	369.150.62
35	70	10x26	369.350.61	369.350.62

TECHNICAL DETAILS:

- Super-strength steel.
- DP head with precision balanced centre point.
- 2 DP precision ground cutting edges [Z2].
- 2 DP negatively ground spurs [V2].
- Parallel shank with driving flat and length adjusting screw.

Spare parts



990.003.00

Optional



990.088.00

APPLICATION:

ideal for hinges. Use on boring machines equipped with adaptors or chucks.

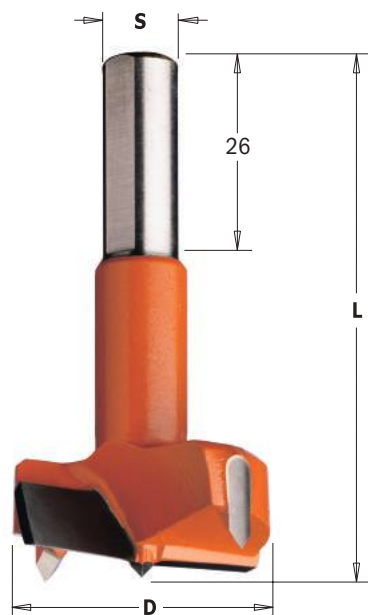
Use for drilling accurate and clean-cut blind holes in wood composites, plastic and laminated materials. Boring performance 20 times longer than HW materials.

REMARK: special dimensions available on request.

20X
LONGER LIFE
THAN CARBIDE

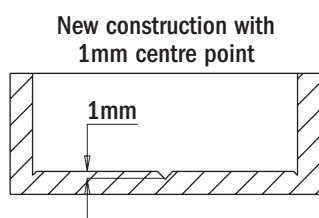
Hinge Boring Bits

HW Z2 V2 RH LH



369

D mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
14	70	10x26	369.140.11	369.140.12
15	70	10x26	369.150.11	369.150.12
16	70	10x26	369.160.11	369.160.12
18	70	10x26	369.180.11	369.180.12
20	70	10x26	369.200.11	369.200.12
22	70	10x26	369.220.11	369.220.12
25	70	10x26	369.250.11	369.250.12
26	70	10x26	369.260.11	369.260.12
30	70	10x26	369.300.11	369.300.12
35	70	10x26	369.350.11	369.350.12
40	70	10x26	369.400.11	369.400.12
45	70	10x26	369.450.11	369.450.12
50	70	10x26	369.500.11	369.500.12
55	70	10x26	369.550.11	369.550.12
60	70	10x26	369.600.11	369.600.12



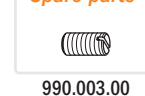
370

D mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
18	77	10x30	370.180.11	370.180.12
20	77	10x30	370.200.11	370.200.12
25	77	10x30	370.250.11	370.250.12
30	77	10x30	370.300.11	370.300.12
35	77	10x30	370.350.11	370.350.12

TECHNICAL DETAILS:

- Super-strength steel.
- Cutter portion coated with orange or black P.T.F.E.
- HW head with precision balanced centre point.
- 2 HW precision ground cutting edges [Z2].
- 2 negatively ground spurs [V2].
- Parallel shank with driving flat and length adjusting screw.

Spare parts



990.003.00

Optional

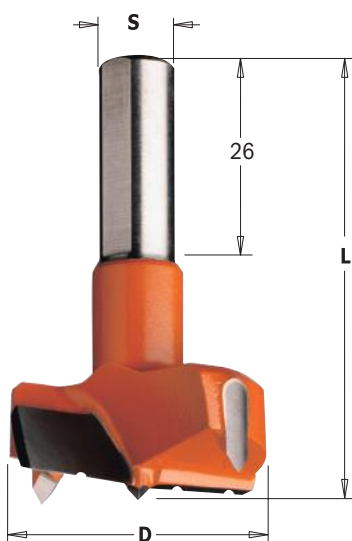


990.088.00

APPLICATION:

ideal for hinges. Use on boring machines equipped with adaptors or chucks. Use for drilling accurate and clean-cut blind holes in solid wood, wood composites, plastic and laminated materials.

Hinge Boring Bits with Chipbreaker for Boring Machines



317C - 369C

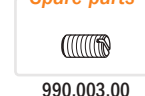
HW Z2R V2 RH LH

D mm	L mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
35	57,5	10x26	317.350.11C	317.350.12C
40	57,5	10x26	317.400.11C	317.400.12C
45	57,5	10x26	317.450.11C	317.450.12C
35	70	10x26	369.350.11C	369.350.12C
40	70	10x26	369.400.11C	369.400.12C
45	70	10x26	369.450.11C	369.450.12C

TECHNICAL DETAILS:

- Super-strength steel.
- Cutter portion coated with orange or black P.T.F.E.
- HW head with precision balanced centre point.
- 2 HW precision ground cutting edges with chipbreaker [Z2R].
- 2 negatively ground spurs [V2].
- Parallel shank with driving flat and length adjusting screw.

Spare parts



990.003.00

Optional



990.088.00

APPLICATION:

ideal for hinges. Used on boring machines equipped with adaptors or chucks. For drilling accurate and clean-cut blind holes in solid wood.

Dowel Drills with Threaded Shank



344

HW Z2 V2 RH LH

D mm	I mm	LB mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	43	63	M8	344.050.11	344.050.12
6	43	63	M8	344.060.11	344.060.12
8	43	63	M8	344.080.11	344.080.12
10	43	63	M8	344.100.11	344.100.12
12	43	63	M8	344.120.11	344.120.12

FOR USE ON THE FOLLOWING MACHINES:
Nottmeyer (older models)

346

HW Z2 V2 RH LH

D mm	I mm	LB mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	43	63	M10	346.050.11	346.050.12
6	43	63	M10	346.060.11	346.060.12
8	43	63	M10	346.080.11	346.080.12
10	43	63	M10	346.100.11	346.100.12
12	43	63	M10	346.120.11	346.120.12

FOR USE ON THE FOLLOWING MACHINES:
Ayen, Holzma, Knoevenagel, Mayer, Torwegge.

TECHNICAL DETAILS:

- Super-strength steel.
- HW head with precision balanced centre point.
- 2 precision ground cutting edges [Z2].
- 2 ground spurs [V2].
- 4 spiral flutes.

APPLICATION:

used on boring machines equipped with chucks. Used to drill blind holes in solid wood, wood composites, plastic and laminated materials.

Dowel Drills with Threaded Shank



352-353

HW Z2 V2 RH LH

D mm	I mm	LB mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	30	45	M8/9	352.050.11	352.050.12
6	30	45	M8/9	352.060.11	352.060.12
8	30	45	M8/9	352.080.11	352.080.12
10	30	45	M8/9	352.100.11	352.100.12
12	30	45	M8/9	352.120.11	352.120.12
5	40	55	M8/9	353.050.11	353.050.12
6	40	55	M8/9	353.060.11	353.060.12
8	40	55	M8/9	353.080.11	353.080.12
10	40	55	M8/9	353.100.11	353.100.12
12	40	55	M8/9	353.120.11	353.120.12

FOR USE ON THE FOLLOWING MACHINES:
Masterwood (Zangheri & Boschetti)
Morbideilli, Nottmeyer (new design)

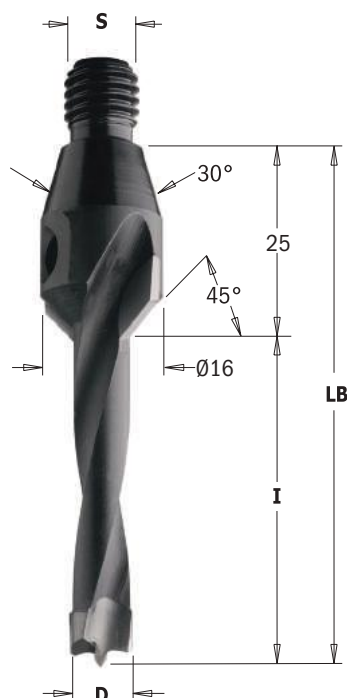
TECHNICAL DETAILS:

- Super-strength steel.
- HW head with precision balanced centre point.
- 2 precision ground cutting edges [Z2].
- 2 ground spurs [V2].
- 4 spiral flutes.

APPLICATION:

used on boring machines equipped with chucks. Used to drill blind holes in solid wood, wood composites, plastic and laminated materials.

Dowel Drills with Threaded Shank with Countersink



332-334-336-337

D mm	I mm	LB mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	20	45	M10/30°	332.050.11	332.050.12
6	20	45	M10/30°	332.060.11	332.060.12
8	20	45	M10/30°	332.080.11	332.080.12
10	20	45	M10/30°	332.100.11	332.100.12
12	20	45	M10/30°	332.120.11	332.120.12
5	30	55	M10/30°	334.050.11	334.050.12
6	30	55	M10/30°	334.060.11	334.060.12
8	30	55	M10/30°	334.080.11	334.080.12
10	30	55	M10/30°	334.100.11	334.100.12
12	30	55	M10/30°	334.120.11	334.120.12
5	40	65	M10/30°	336.050.11	336.050.12
6	40	65	M10/30°	336.060.11	336.060.12
8	40	65	M10/30°	336.080.11	336.080.12
10	40	65	M10/30°	336.100.11	336.100.12
12	40	65	M10/30°	336.120.11	336.120.12
5	50	75	M10/30°	337.050.11	337.050.12
6	50	75	M10/30°	337.060.11	337.060.12
8	50	75	M10/30°	337.080.11	337.080.12
10	50	75	M10/30°	337.100.11	337.100.12
12	50	75	M10/30°	337.120.11	337.120.12

TECHNICAL DETAILS:

- Super-strength steel.
- HW head with precision balanced centre point.
- 2 precision ground cutting edge [Z2].
- 2 ground spurts [V2].
- 2 spiral flutes.

APPLICATION:

used on boring machines equipped with chucks. Used to drill blind holes in solid wood, wood composites, plastic and laminated materials.

Dowel Drills with Threaded Shank without Countersink



341-342-343

D mm	I mm	LB mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	30	55	M10/30°	341.050.11	341.050.12
6	30	55	M10/30°	341.060.11	341.060.12
8	30	55	M10/30°	341.080.11	341.080.12
10	30	55	M10/30°	341.100.11	341.100.12
12	30	55	M10/30°	341.120.11	341.120.12
5	40	65	M10/30°	342.050.11	342.050.12
6	40	65	M10/30°	342.060.11	342.060.12
8	40	65	M10/30°	342.080.11	342.080.12
10	40	65	M10/30°	342.100.11	342.100.12
12	40	65	M10/30°	342.120.11	342.120.12
5	50	75	M10/30°	343.050.11	343.050.12
6	50	75	M10/30°	343.060.11	343.060.12
8	50	75	M10/30°	343.080.11	343.080.12
10	50	75	M10/30°	343.100.11	343.100.12
12	50	75	M10/30°	343.120.11	343.120.12

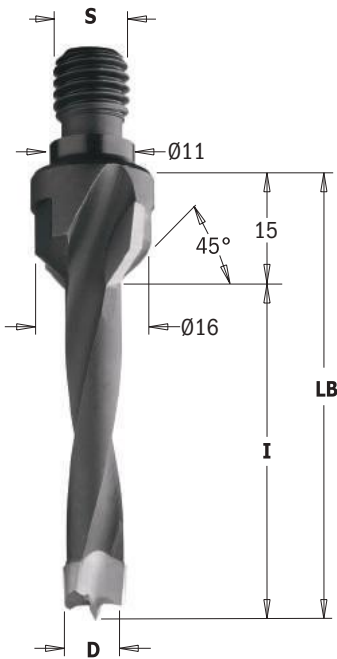
TECHNICAL DETAILS:

- Super-strength steel.
- HW head with precision balanced centre point.
- 2 precision ground cutting edges [Z2].
- 2 ground spurs [V2].
- 4 spiral flutes.

APPLICATION:

used on boring machines equipped with chucks. Used to drill blind holes in solid wood, wood composites, plastic and laminated materials.

Dowel Drills with Threaded Shank with Countersink



325-327-329-330



D mm	I mm	LB mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	20	35	M10/11x4	325.050.11	325.050.12
6	20	35	M10/11x4	325.060.11	325.060.12
8	20	35	M10/11x4	325.080.11	325.080.12
10	20	35	M10/11x4	325.100.11	325.100.12
12	20	35	M10/11x4	325.120.11	325.120.12
5	30	45	M10/11x4	327.050.11	327.050.12
6	30	45	M10/11x4	327.060.11	327.060.12
8	30	45	M10/11x4	327.080.11	327.080.12
10	30	45	M10/11x4	327.100.11	327.100.12
12	30	45	M10/11x4	327.120.11	327.120.12
5	40	55	M10/11x4	329.050.11	329.050.12
6	40	55	M10/11x4	329.060.11	329.060.12
8	40	55	M10/11x4	329.080.11	329.080.12
10	40	55	M10/11x4	329.100.11	329.100.12
12	40	55	M10/11x4	329.120.11	329.120.12
5	50	65	M10/11x4	330.050.11	330.050.12
6	50	65	M10/11x4	330.060.11	330.060.12
8	50	65	M10/11x4	330.080.11	330.080.12
10	50	65	M10/11x4	330.100.11	330.100.12
12	50	65	M10/11x4	330.120.11	330.120.12

TECHNICAL DETAILS:

- Super-strength steel.
- HW head with precision balanced centre point.
- 2 precision ground cutting edges [Z2].
- 2 spiral flutes.
- 2 ground spurs [V2].

APPLICATION:

used on boring machines equipped with chucks. Used to drill blind holes in solid wood, wood composites, plastic and laminated materials.

Dowel Drills with Threaded Shank without Countersink



338-339-340



D mm	I mm	LB mm	S mm	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
5	30	45	M10/11x4	338.050.11	338.050.12
6	30	45	M10/11x4	338.060.11	338.060.12
8	30	45	M10/11x4	338.080.11	338.080.12
10	30	45	M10/11x4	338.100.11	338.100.12
12	30	45	M10/11x4	338.120.11	338.120.12
5	40	55	M10/11x4	339.050.11	339.050.12
6	40	55	M10/11x4	339.060.11	339.060.12
8	40	55	M10/11x4	339.080.11	339.080.12
10	40	55	M10/11x4	339.100.11	339.100.12
12	40	55	M10/11x4	339.120.11	339.120.12
5	50	65	M10/11x4	340.050.11	340.050.12
6	50	65	M10/11x4	340.060.11	340.060.12
8	50	65	M10/11x4	340.080.11	340.080.12
10	50	65	M10/11x4	340.100.11	340.100.12
12	50	65	M10/11x4	340.120.11	340.120.12

TECHNICAL DETAILS:

- Super-strength steel.
- HW head with precision balanced centre point.
- 2 precision ground cutting edges [Z2].
- 2 ground spurs [V2].
- 4 spiral flutes.

APPLICATION:

used on boring machines equipped with chucks. Used to drill blind holes in solid wood, wood composites, plastic and laminated materials.

TOOL FEATURES

TOOL MATERIAL

- ☐ HW ☐ SP steel

QUANTITY AND ROTATION

Nr. RH Bits Nr. LH Bits

SHANK

- PARALLEL SHANK WITH DRIVING FLAT

- ☐ Ø8x20mm with driving flat and length adjusting screw
☐ Ø10x20mm with driving flat and length adjusting screw

- THREADED SHANK

- ☐ M8
☐ M10
☐ M8 with seating Ø9x4mm
☐ M10 with seating Ø11x4mm
☐ M 8 with 20° 48' centring cone
☐ M10 with 30° centring cone

- PARALLEL SHANK

- ☐ S x A =
(Specify diameter and shank length)
- ☐
(Specify other shank types)

HOLE FEATURES

HOLE TO PRODUCE

- ☐ Drawing 1 - Blind hole with more than one diameter
☐ Drawing 2 - Blind hole with counter
☐ Drawing 3 - Through hole with more than one diameter
☐ Drawing 4 - Through hole with countersink

DIMENSIONS

d x C
(Specify diameter and depth of first hole)

D x B
(Specify diameter and depth of second hole)

.....
(Specify countersink-angle) "standard 45°"

WORK MATERIAL

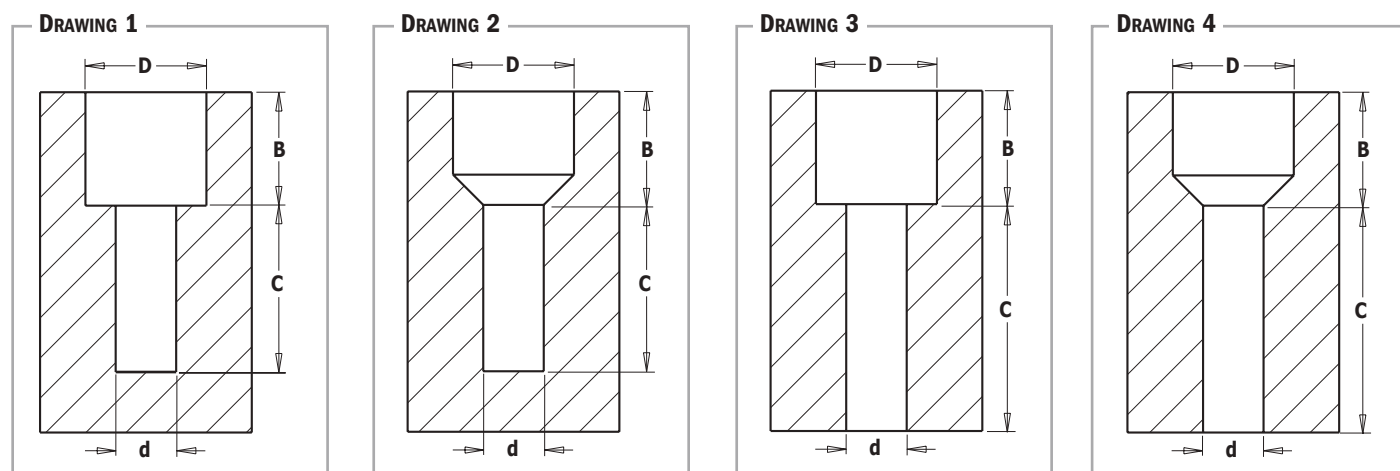
- ☐ Solid wood
☐ MDF/Melamine panels
☐ Chipboard panels and hardwood
☐
(Specify other materials)

MACHINE DATA

Manufacturer/Model

RPM

Feed speed (metres/minute)



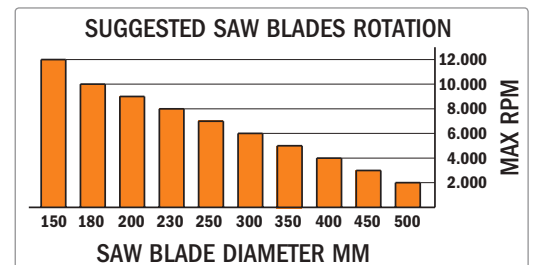
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#39 0721 481021 or mail to:

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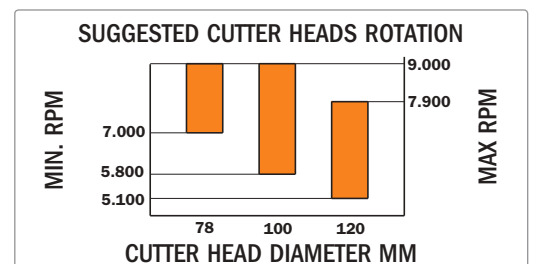
Saw blade safety

- ALWAYS** thoroughly check all blades for damage and flaws before using. Do not use blades with missing or damaged teeth.
- ALWAYS** wear safety glasses and ear protection when using power tools.
- ALWAYS** thoroughly read the owners manual and manufacturer's instructions before working with tools.
- ALWAYS** use a fence and splitter when using the table saw. Do not make freehand cuts.
- ALWAYS** use pusher blocks or a pusher stick, especially when working with small or narrow pieces.
- ALWAYS** unplug your saw before cleaning or adjusting the tool, or before making blade changes.
- ALWAYS** keep your tools sharpened, clean and stored in a safe place to avoid breakage and accidents and to extend the life of your bits and blades.
- ALWAYS** feed the work against the rotation of the blade on table saws.
- ALWAYS** be sure your workpiece is completely supported, before and after the cut.
- NEVER** remove guards from radial arm saws and miter saws.
- NEVER** remove the splitter or anti-kickback devices from table saws.
- NEVER** use dull or damaged blades.
- NEVER** use blades with missing or chipped teeth.
- NEVER** force the cut or overload the saw.
- NEVER** change blades with the saw plugged in.
- NEVER** make adjustments to any saw while the blade is turning.



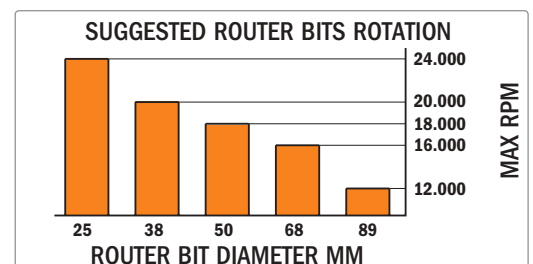
Cutter head safety

- ALWAYS** thoroughly check all cutters for damage and flaws before using.
- ALWAYS** wear safety glasses and ear protection when using power tools.
- ALWAYS** thoroughly read the owners manual and manufacturer's instructions before working with tools.
- ALWAYS** use guards that were supplied with your shaper.
- ALWAYS** use a fence with your shaper. Do not make freehand cuts.
- ALWAYS** use pusher blocks, especially when working with small or narrow pieces.
- ALWAYS** unplug your shaper before cleaning or adjusting the tool, or before making cutter or knife changes.
- ALWAYS** be sure the spindle nut is tight before plugging in the shaper.
- ALWAYS** check that knives are properly and securely installed in the cutterhead when using interchangeable-knife systems.
- ALWAYS** keep your tools sharpened, clean and stored in a safe place to avoid breakage and accidents and to extend the life of your bits and blades.
- ALWAYS** feed the work against the rotation of the knives.
- ALWAYS** be sure your workpiece is completely supported, before and after the cut.
- NEVER** remove guards or any other safety devices from your shaper.
- NEVER** use dull or damaged knives.
- NEVER** force the cut or overload the shaper.
- NEVER** change cutters or knives or make adjustments with the shaper plugged in.
- NEVER** make adjustments to the shaper while the cutter is turning.

















Router bits safety

- ALWAYS** thoroughly check all tools for possible flaws before using.
- ALWAYS** wear safety glasses and ear protection.
- ALWAYS** thoroughly read the owners manual and manufacturer instructions before using.
- ALWAYS** check that at least 75% of the shank is securely inserted into the collet of the router.
- ALWAYS** use template guide collars when possible to absorb lateral bit deflection.
- ALWAYS** use a fence when working on the router table.
- ALWAYS** reduce the router speed when working with larger diameter bits.
- ALWAYS** keep your fence adjusted so there is some clearance between the bearing guide and the workpiece.
- ALWAYS** take care to remove large quantities of stock (cross section > 10mm) in more than one run.
- ALWAYS** keep your tools sharpened, clean and stored in a safe place to avoid breakage and accidents and to extend the life of your bits and blades.
- NEVER** use dull or defective, even suspiciously defective, tools.
- NEVER** force the shank entirely into the collet (bottoming out). Leave about a 3,2mm (1/8") space from the bottom.
- NEVER** force the bit into your router or overload the router.



Explanation of symbol

	Tungsten carbide tipped		Solid tungsten carbide		High speed steel		Alloyed tools steel
	High-alloyed tool steel		High performance steel		High carbon steel		Bimetal
	High speed steel		TiN coated bimetal with 8% cobalt teeth		Cermet Carbide		Insert carbide
	Carbide grit		Polycrystalline diamond		Polycrystalline diamond		Diamond grit
	One cutting edge		One + one cutting edges		Two cutting edges		Two + one cutting edges
	Two + two cutting edges		Three cutting edges		Three + three cutting edges		Three cutting edges with chipbreaker
	Four cutting edges		Twelve cutting edges		One spur		Two spur
	Four spur		Right-hand rotation		Left-hand rotation		Right-hand & Left-hand rotation
	Antikick-back		Radial relief		Tool with plunging capacity		Axial angle
	Mechanical feed		Manual feed		Grooving, sizing		Rebating
	Slotting		Non-axial boring		Spiral boring		Tool with bearing
	Plastic box for cutter head		Plastic carry case for saw blades		Clamshell carry case for saw blades		Cardboard box for saw blades
	Industrial Thin-kerf blade		ORANGE CHROME		High-Density Carbide		High performance tool
	Non-Stick Orange Shield Coating™		Shear Angle Grind		Saw blade with dampening slots with fill		Saw blade with dampening slots without fill
	Warning		Not for hand held use for router table only		Wear safety shoes		Wear five finger gloves
	Wear safety glasses		Wear ear protection		Wear dust mask		Wear safety helmet

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