

CNC ROUTER CUTTERS & CHUCKS

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Kinetic Dust Extractor



992 Removes MDF & Chipboard dust from the workpiece

DESCRIPTION	D mm		ORDER NO.
Kinetic Dust Extractor for chucks with ER20	80	1	992.081.ER20
Kinetic Dust Extractor for chucks with ER25	80	1	992.081.ER25
Kinetic Dust Extractor for chucks with DIN6388/EOC25 collets	100	1	992.101.EOC25
Kinetic Dust Extractor for chucks with ER32 collets	100	1	992.101.ER32
Kinetic Dust Extractor for chucks with ER40 collets	100	1	992.101.ER40

Spare parts: **991.285.00** C-Spanner 80-90mm (ER20/ER25)
991.284.00 C-Spanner 95-100mm (EOC25/ER32/ER40)



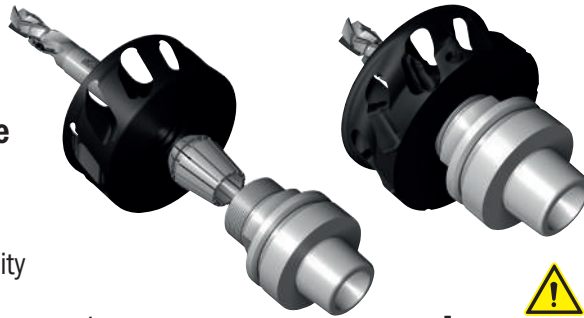
SAFETY TIPS:

The **TW-200** Torque Wrench is recommended for the proper fastening of clamping nuts (see page 406)

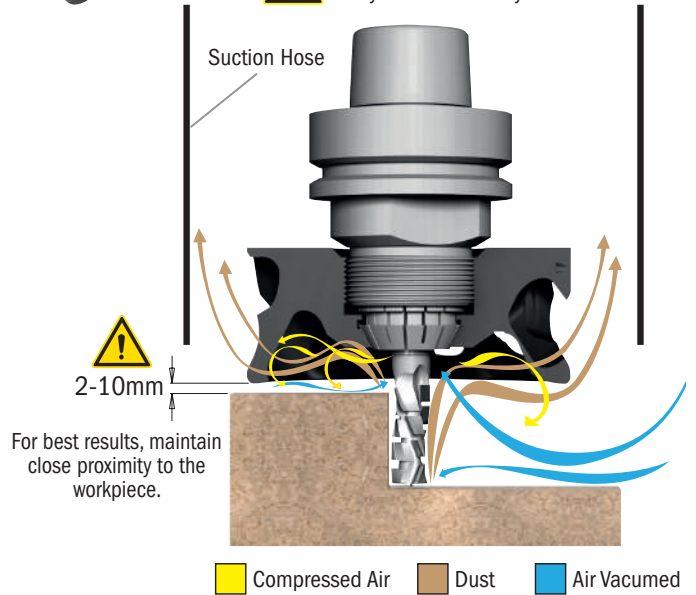
EASY TO USE!

Installation and removal just like a clamping nut

- Better health & safety on the worksite
- Better air quality on the worksite
- Improves tool performance & cut quality
- Longer tool life & reduced labor costs
- Recommended for Nesting and routing operations
- No wasted time throughout operation
- Replaces the standard clamping nut
- Suitable for any collet chucks with standard router bits
- Available for ER32 - ER40 - EOC25 (DIN6388) collets
- Tough ceramic coating offers anti-corrosion, anti-friction and anti-static protection.
- Tool body in light alloy
- Lightweight and quiet
- Performs even at low RPM: from 6,000 up to 20,000 rpm
- Materials: chipboard, coated chipboard, MDF, CORIAN®, plasterboard, OSB, HPL.



Always use vacuum system.



Download Instruction



Watch the video on
YouTube

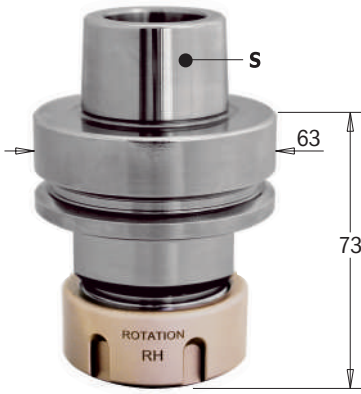
Working **WITHOUT** Kinetic Dust Extractor



Working **WITH** Kinetic Dust Extractor



HSK-63F Chuck for "ER32" Precision Collets



183.300 XTREME



S	TO BE USED WITH COLLET	ORANGE CHROME	NOTE	BOXES	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
HSK-63F	ER32	✓	Clamping nut without bearing	1	183.300.01	183.300.02
HSK-63F	ER32	✓	Clamping nut with bearing	1	183.300.11*	
HSK-63F	ER32		Clamping nut without bearing	1	183.300.91	
HSK-63F	ER32		Clamping nut with bearing	1	183.300.93*	

Optional: 990.118.00 M6x10mm screw

* Suitable for right-hand and left-hand rotation.

For HOMAG®, EIMA®, IMA® FROM 9/94, WEEKE®, BIESSE®, SCM®, MORBIDELLI® and MASTERWOOD® machines.



Non-Stick Orange Chrome® SHIELD COATING

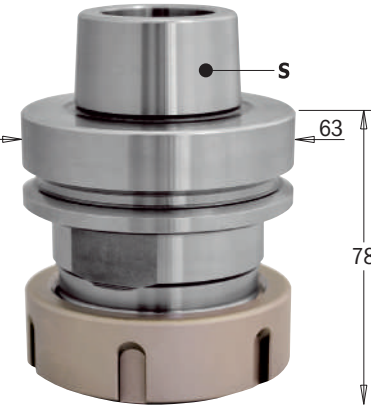
- prevents overheating
- protects against corrosion and rust
- reduces resin build-up
- longer life and greater tool performance

SAFETY TIPS:



The **TW-200** Torque Wrench is recommended for the proper fastening of clamping nuts (see page 406)

HSK-63F Chucks for "ER40" Precision Collets



183.310 XTREME



S	TO BE USED WITH COLLET	ORANGE CHROME	NOTE	BOXES	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
HSK-63F	ER40	✓	Clamping nut without bearing	1	183.310.01	183.310.02
HSK-63F	ER40	✓	Clamping nut with bearing	1	183.310.11*	
HSK-63F	ER40		Clamping nut without bearing	1	183.310.91	
HSK-63F	ER40		Clamping nut with bearing	1	183.310.93*	

Optional: 990.117.00 M6x6mm screw

* Suitable for right-hand and left-hand rotation.

For HOMAG®, EIMA®, IMA® FROM 9/94, WEEKE®, BIESSE®, SCM®, MORBIDELLI® and MASTERWOOD® machines.



Non-Stick Orange Chrome® SHIELD COATING

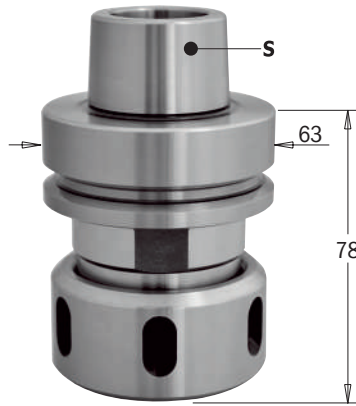
- prevents overheating
- protects against corrosion and rust
- reduces resin build-up
- longer life and greater tool performance

SAFETY TIPS:



The **TW-200** Torque Wrench is recommended for the proper fastening of clamping nuts (see page 406)

HSK-63F Chucks for "EOC25" Precision Collet "DIN6388"



183.320



S	TO BE USED WITH COLLET	NOTE	BOXES	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
HSK-63F	EOC25	Clamping nut with bearing	1	183.320.01*	
HSK-63F	EOC25	Clamping nut without bearing	1	183.320.03	

Spare parts: 992.283.01 Clamping nut without bearing
992.283.11 Clamping nut with bearing

* Suitable for left-hand rotation too.

For HOMAG®, EIMA®, IMA® FROM 9/94, WEEKE®, BIESSE®, SCM®, MORBIDELLI® and MASTERWOOD® machines.



Non-Stick Orange Chrome® SHIELD COATING

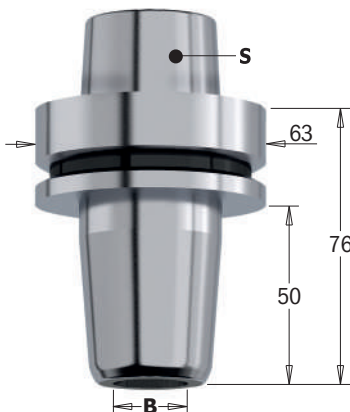
- prevents overheating
- protects against corrosion and rust
- reduces resin build-up
- longer life and greater tool performance

SAFETY TIPS:



The **TW-200** Torque Wrench is recommended for the proper fastening of clamping nuts (see page 406)

HSK-63F Chucks for Shrink Fit Holders



183.075

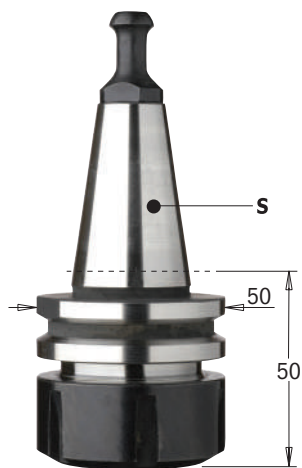


S	B mm	BOXES	ORDER NO.
HSK-63F	12	1	183.075.12
HSK-63F	16	1	183.075.16
HSK-63F	20	1	183.075.20
HSK-63F	25	1	183.075.25

SPECIAL STEEL UNI 1.2344

- prevents overheating
- protects against corrosion and rust
- longer life and greater tool performance

ISO30 Chucks for "ER32" Precision Collets



183.200

RH LH

S	TO BE USED WITH COLLET	RETAINING STUD mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
ISO30	ER32	Ø12-8	 1	183.200.01	183.200.02

995.200 For BIESSE® machines.



183.210

RH LH

S	TO BE USED WITH COLLET	RETAINING STUD mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
ISO30	ER32	Ø13-9	 1	183.210.01	183.210.02

995.201 For BIESSE® machines with OMLAT® engine, NUOVA BULLERI BREVETTI®, BUSELLATO®, CMS® and IMA® machines.



183.220

RH LH

S	TO BE USED WITH COLLET	RETAINING STUD mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
ISO30	ER32	Ø12,8-9	 1	183.220.01	183.220.02

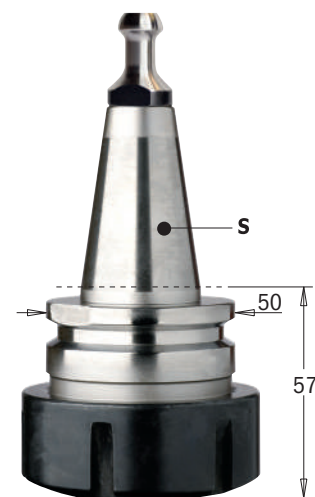
995.202 For ALBERTI® and MASTERWOOD® machines.

SAFETY TIPS:



The **TW-200** Torque Wrench is recommended for the proper fastening of clamping nuts (see page 406)

ISO30 Chucks for "ER40" Precision Collets



183.201

RH

S	TO BE USED WITH COLLET	RETAINING STUD mm		ORDER NO. Right-hand rotation	
ISO30	ER40	Ø12-8	 1	183.201.01	

995.200 For BIESSE® machines.



183.211

RH

S	TO BE USED WITH COLLET	RETAINING STUD mm		ORDER NO. Right-hand rotation	
ISO30	ER40	Ø13-9	 1	183.211.01	

995.201 For BIESSE® machines with OMLAT® engine, NUOVA BULLERI BREVETTI®, BUSELLATO®, CMS® and IMA® machines.



183.221

RH

S	TO BE USED WITH COLLET	RETAINING STUD mm		ORDER NO. Right-hand rotation	
ISO30	ER40	Ø12,8-9	 1	183.221.01	

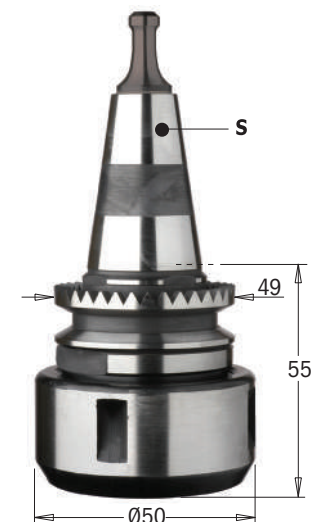
995.202 For ALBERTI® and MASTERWOOD® machines.

SAFETY TIPS:



The **TW-200** Torque Wrench is recommended for the proper fastening of clamping nuts (see page 406)

ISO30 Chucks for "ER32" Precision Collets



183.250

RH LH

S	TO BE USED WITH COLLET	RETAINING STUD mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
ISO30	ER32	Ø8,5	 1	183.250.01	183.250.02

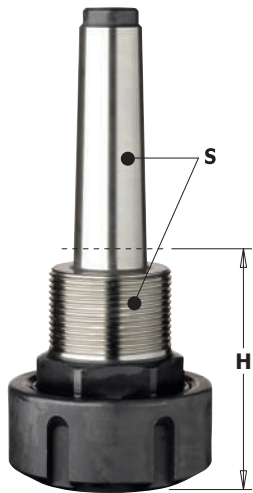
995.250 For MORBIDELLI® and SCM® machines.

SAFETY TIPS:



The **TW-200** Torque Wrench is recommended for the proper fastening of clamping nuts (see page 406)

Chucks for "ER32" Precision Collets



183.000/100

RH LH

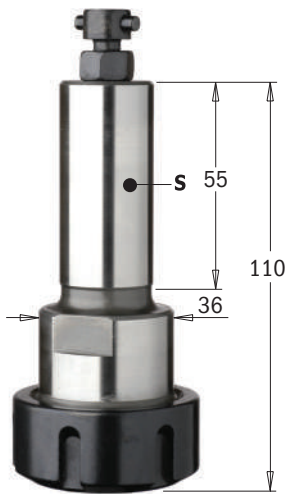
S mm	TO BE USED WITH COLLET	H mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
MK2/M30x1,5	ER32	62	1	183.000.01	183.000.02
MK3/M30x1,5	ER32	70	1	183.100.01	

MK2/MK3 tapered shank

SAFETY TIPS:

The **TW-200** Torque Wrench is recommended for the proper fastening of clamping nuts (see page 406)

Chucks for "ER32" Precision Collets



183.400

RH

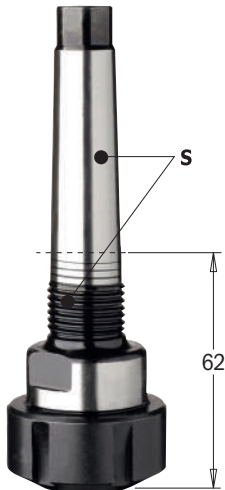
S mm	TO BE USED WITH COLLET	RETAINING STUD		ORDER NO. Right-hand rotation	
Ø25x55	ER32	LEUCO® P-SYSTEM®	1	183.400.01	

For machines with LEUCO® P-SYSTEM®.

SAFETY TIPS:

The **TW-200** Torque Wrench is recommended for the proper fastening of clamping nuts (see page 406)

Collet Chucks Clamp with MK2 Tapered Shank



123

RH LH

S		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
MK2/Ø20x14Fx1"	1	123.000.01	123.000.02

Spare parts: **992.123.01** Clamping nut RH
992.123.02 Clamping nut LH
991.123.00 C-spanner

SAFETY TIPS:

The **TW-200** Torque Wrench is recommended for the proper fastening of clamping nuts. The **TW-2836** Hook Insert can be used with this item (see page 406).

Collets for 123 Chucks



124

B mm		ORDER NO.	B mm		ORDER NO.
6	1	124.060.00	10	1	124.100.00
6,35	1	124.064.00	12,7	1	124.120.00
8	1	124.080.00	12,7	1	124.127.00
9,5	1	124.095.00	14	1	124.140.00

Precision Collets "DIN6499"



184

TECHNICAL DETAILS:

Replaceable **Standard Precision 0.015** collets. 0; -0,7mm wide clamping tolerance.
 Replaceable **High Precision 0.005** collets. 0; -1mm wide clamping tolerance.
 Suitable for most conical chucks. Fit most tapered spindle noses.

☐ Special dimensions available on request.



RUN-OUT
 This tolerance is guaranteed only on the nominal diameter



ER11

B mm	ORDER NO. STANDARD
2	184.020.11
3	184.030.11
4	184.040.11
5	184.050.11
6	184.060.11

10 pcs. Masterpack



ER16

B mm	B inches	ORDER NO. STANDARD	B mm	B inches	ORDER NO. STANDARD
2		184.020.16	7		184.070.16
3		184.030.16	8	5/16	184.080.16
4		184.040.16	9		184.090.16
5		184.050.16	10		184.100.16
6		184.060.16			

10 pcs. Masterpack



ER20

B mm	B inches	ORDER NO. STANDARD	B mm	B inches	ORDER NO. STANDARD
2	5/16	184.020.20	8	5/16	184.080.20
3		184.030.20	9		184.090.20
4		184.040.20	10		184.100.20
5		184.050.20	11		184.110.20
6		184.060.20	12		184.120.20
6,35	1/4	184.064.20	12,7	1/2	184.127.20
7		184.070.20			

10 pcs. Masterpack



ER25

B mm	B inches	ORDER NO. STANDARD
3		184.030.25
4		184.040.25
5		184.050.25
6		184.060.25
6,35	1/4	184.064.25
8	5/16	184.080.25
9		184.090.25
10		184.100.25
12		184.120.25
12,7	1/2	184.127.25
14		184.140.25
16	5/8	184.160.25

10 pcs. Masterpack



For chucks:

183.000/100/200/250/300/400

ER32



B mm	B inches	ORDER NO. STANDARD	ORDER NO. HIGH new	B mm	B inches	ORDER NO. STANDARD	ORDER NO. HIGH new
3		184.030.00		11		184.110.00	
4		184.040.00	184.040.00H	12		184.120.00	184.120.00H
5		184.050.00		12,7	1/2	184.127.00	
6		184.060.00	184.060.00H	14		184.140.00	
6,35	1/4	184.065.00		15		184.150.00	
7		184.070.00		16	5/8	184.160.00	184.160.00H
8	5/16	184.080.00	184.080.00H	17		184.170.00	
9		184.090.00		18		184.180.00	
9,52	3/8	184.095.00		19	3/4	184.190.00	
10		184.100.00		20		184.200.00	184.200.00H

10 pcs. Masterpack



For chucks:

183.201/211/221/310

ER40



B mm	B inches	ORDER NO. STANDARD	ORDER NO. HIGH new	B mm	B inches	ORDER NO. STANDARD	ORDER NO. HIGH new
3		184.032.00		12		184.122.00	184.122.00H
4		184.042.00		12,7	1/2	184.128.00	
5		184.052.00		14		184.142.00	
6		184.062.00	184.062.00H	16	5/8	184.162.00	184.162.00H
6,35	1/4	184.064.00		18		184.182.00	
7		184.072.00		19	3/4	184.192.00	
8	5/16	184.082.00	184.082.00H	20		184.202.00	184.202.00H
9,52	3/8	184.096.00		25		184.252.00	184.252.00H
10		184.102.00					

10 pcs. Masterpack

Precision Collets "DIN6388"

185

TECHNICAL DETAILS:

Replaceable **Standard Precision 0.015** collets. 0; -0,7mm wide clamping tolerance.
Suitable for most conical chucks. Fit most tapered spindle noses.

Special dimensions available on request.



EOC25

mm	B inches		ORDER NO.	mm	B inches		ORDER NO.
3		10	185.030.00	12		10	185.120.00
4		10	185.040.00	12,7	1/2	10	185.127.00
5		10	185.050.00	14		10	185.140.00
6		10	185.060.00	16	5/8	10	185.160.00
6,35	1/4	10	185.064.00	18		10	185.180.00
8	5/16	10	185.080.00	19	3/4	10	185.191.00
9,5	3/8	10	185.095.00	20		10	185.200.00
10		10	185.100.00	25		10	185.250.00

EOC16

mm	B inches		ORDER NO.	mm	B inches		ORDER NO.
6		10	185.060.16	12		10	185.120.16
8	5/16	10	185.080.16	14		10	185.140.16
10		10	185.100.16	16	5/8	10	185.160.16

Clamping Nuts



992.583 for «ER25»

RH LH

new

DESCRIPTION	D mm	S mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
Clamping nut without bearing					
Clamping nut with bearing ER25	42	M32x1,5	1	992.583.01	992.583.02

992.183 for «ER32»

RH LH

DESCRIPTION	D mm	S mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
Clamping nut without bearing					
For 183.000/100/200/250/300/400 chucks	50	M40x1,5	1	992.183.01	992.183.02
Clamping nut with bearing					
For 183.000/100/200/250/300/400 chucks	50	M40x1,5	1	992.183.11	992.183.12

992.383 for «ER40»

RH LH

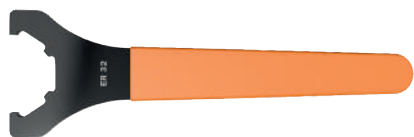
DESCRIPTION	D mm	S mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
Clamping nut without bearing					
For 183.201/211/221/310 chucks	63	M50x1,5	1	992.383.01	992.383.02
Clamping nut with bearing					
For 183.201/211/221/310 chucks	63	M50x1,5	1	992.383.11	

992.283 for «EOC25»

RH

DESCRIPTION	D mm	S mm		ORDER NO. Right-hand rotation
Clamping nut without bearing for chuck 183.320	60	M48x2	1	992.283.01
Clamping nut with bearing for chuck 183.320	60	M48x2	1	992.283.11

C-Spanner



991.183 for «ER32»

DESCRIPTION		ORDER NO.
C-Spanner for «ER32»	1	991.183.00

991.184 for «ER40»

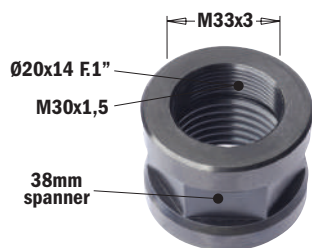
DESCRIPTION		ORDER NO.
C-Spanner for «ER40»	1	991.184.00



991.283 for «DIN6388» and «ER40»

DESCRIPTION		ORDER NO.
C-Spanner for 58-62-65	1	991.283.00

Cap Nuts for CNC Machines



993.0

RH LH

INTERNAL THREAD		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
Ø20x14F1"	1	993.020.01	993.020.02
M30x1,5	1		993.030.02

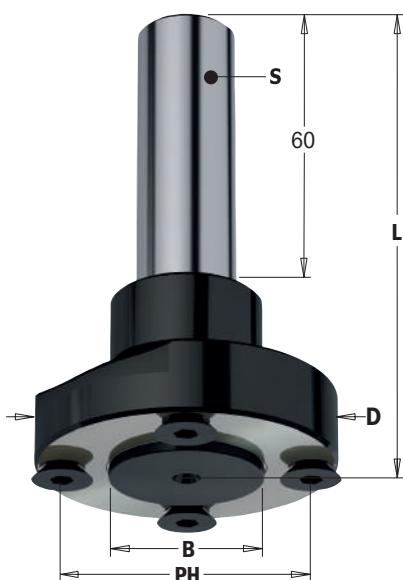
For machines with M33x3 threaded spindle nose.

ISO30 Retaining Studs



DESCRIPTION	D mm	D ₂ mm	ORDER NO.
For 183.200/201 BIESSE® chucks	8	12,8	995.200.00
For 183.210/211 BIESSE®, OMLAT®, NUOVA BULLERI BREVETTI®, BUSELLATO®, WEEKE®, IMA® chucks	9	13	995.201.00
For 183.220/221 ALBERTI® - MASTERWOOD® chucks	9	12,8	995.202.00
For 183.250/251 SCM® - MORBIDELLI® chucks	6,5	8,5	995.250.00
For LEUCO® P-SYSTEM® 183.400 chucks	M8		995.400.00

Saw Blade Arbor with Parallel Shank



183.410

LH RH

S mm	D mm	B mm	PIN HOLE	L mm		ORDER NO.
20	59	30	4/M6/48	97,5	1	183.410.30

Spare parts: 990.116.00 M6x8,7x12mm TSPEI screw (to use with Plate Thickness ≥ 2,2mm)
 991.067.00 3mm allen key
 991.064.00 4mm allen key



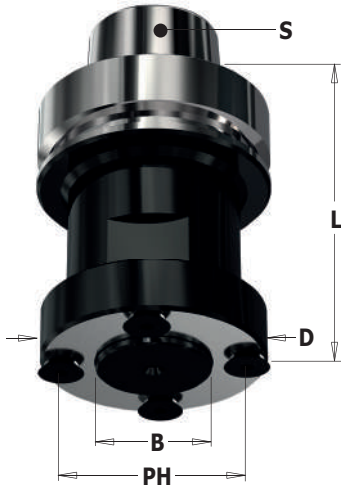
Optional: 990.083.00 M6x8x10mm TSPEI screw (to use with Plate Thickness < 2,2mm)

SAFETY TIPS:

The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 406).

Grooving saw blades available at page 60 on request.

HSK Chuck for Grooving Blade



183.420

LH RH

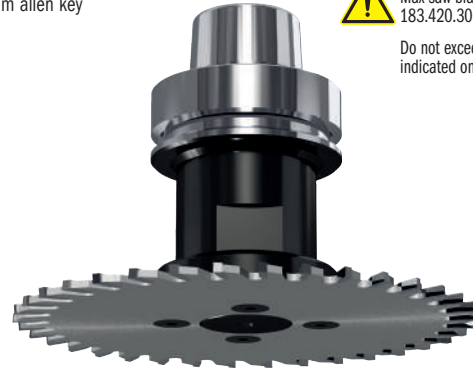
S	D mm	B mm	PIN HOLE	L mm		ORDER NO.
HSK-63F	59	30	4/M6/48	78	1	183.420.30

Spare parts: 990.116.00 M6x8,7x12mm TSPEI screw
991.064.00 4mm allen key



Max saw blade \varnothing 250mm for chuck 183.420.30

Do not exceed maximum RPM indicated on the blade.

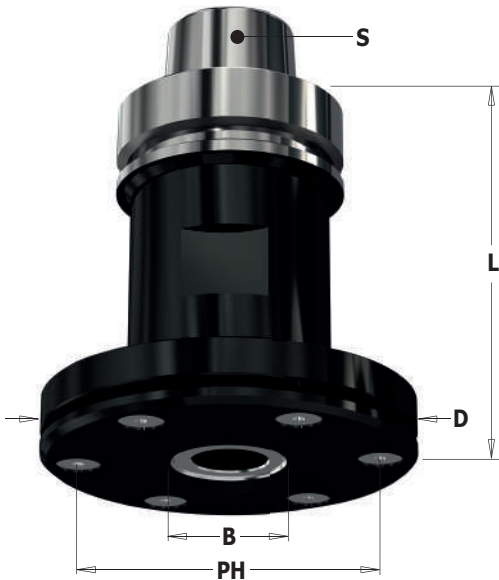


Grooving saw blades available at page 60 on request.

SAFETY TIPS:



The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 406).



183.421

LH RH

S	D mm	B mm	PIN HOLE	L mm		ORDER NO.
HSK-63F	98	30	6/M6/80	94	1	183.421.30

Spare parts: 990.119.00 M6x12x16mm TSPEI screw
991.064.00 4mm allen key



Max saw blade \varnothing 300mm for chuck 183.421.30

Do not exceed maximum RPM indicated on the blade.

with flange \varnothing 98mm

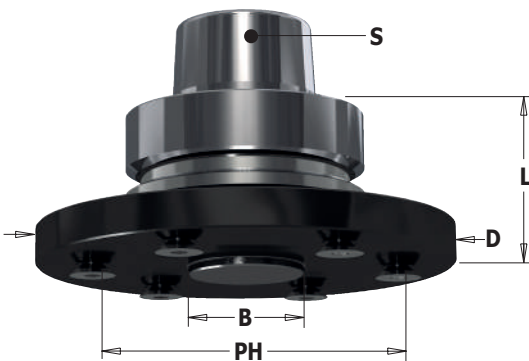


Grooving saw blades available on request.

SAFETY TIPS:



The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 406).



183.422

LH RH

S	D mm	B mm	PIN HOLE	L mm		ORDER NO.
HSK-63F	110	30	6/M6/80	40	1	183.422.30

Spare parts: 990.116.00 M6x8,7x12mm TSPEI screw
991.064.00 4mm allen key



Max saw blade \varnothing 350mm for chuck 183.422.30

Do not exceed maximum RPM indicated on the blade.



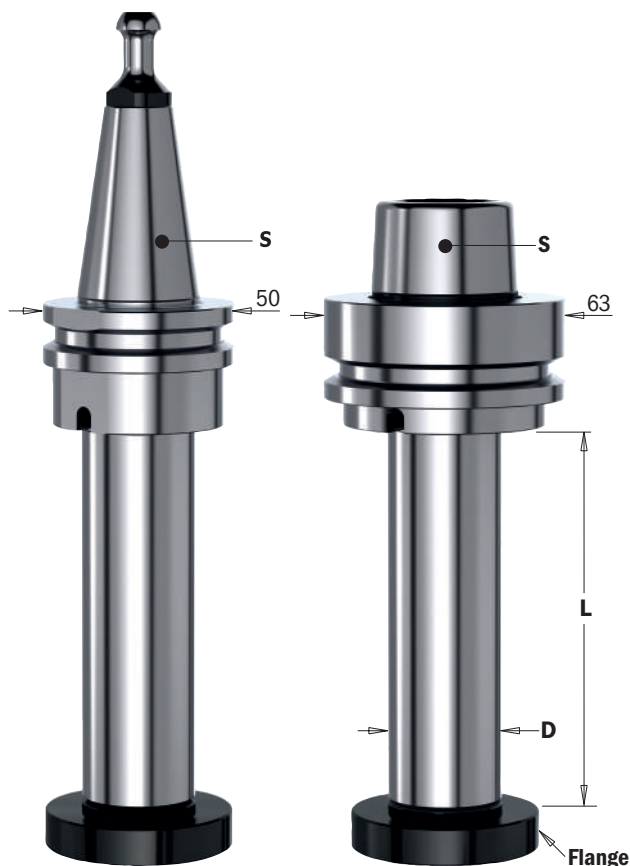
Grooving saw blades available on request.

SAFETY TIPS:



The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 406).

Cutter Arbor with HSK Tapered Shank



183.260

LH RH

S	DESCRIPTION	D x L mm		ORDER NO.
ISO30	Cutter arbor with ISO30 tapered shank	30x100	1	183.260.00

For BIESSE® machines.

REMARK: special dimensions available on request.

183.360

LH RH

S	DESCRIPTION	D x L mm		ORDER NO.
HSK-63F	Cutter arbor with HSK tapered shank	30x100	1	183.360.00
HSK-63F	Cutter arbor with HSK tapered shank	30x150	1	183.360.10
HSK-63F	Cutter arbor with HSK tapered shank	35x100	1	183.361.00
HSK-63F	Cutter arbor with HSK tapered shank	40x100	1	183.362.00

For HOMAG®, EIMA®, IMA® FROM 9/94, WEEKE®, BIESSE®, SCM®, MORBIDELLI® and MASTERWOOD® machines.

SAFETY TIPS: The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 406).

Spare Parts for Chucks



DESCRIPTION	ORDER NO.	DESCRIPTION	ORDER NO.
M6x25 TCEI screw	990.098.00	Optional Steel Flange	
Steel flange for with Ø30mm arbors - Male	992.560.30M	For with Ø30mm arbors - Female	992.560.30F
Steel flange for with Ø35mm arbors - Male	992.560.35M	For with Ø35mm arbors - Female	992.560.35F
Steel flange for with Ø40mm arbors - Male	992.560.40M	For with Ø40mm arbors - Female	992.560.40F

Universal Assembly Supports for Chucks

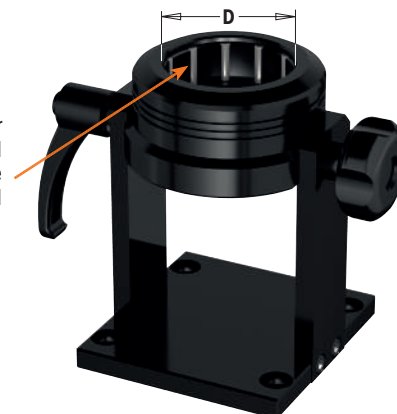


183

SUITABLE FOR	D mm		ORDER NO.
HSK-63, BT40, ISO40 DIN 2080, SK40 DIN 69871, CAPTO® C6	63	1	183-HSK
ISO30, DIN 2080, SK30 DIN 69871, HSK50, CAPTO® C5	50	1	183-ISO*

*Not compatible with chucks **183.250** and **183.251**

CMT now offers new universal assembly supports for HSK-63F and ISO30 chucks. Thanks to the bi-directional roller bearings, which clamp the Left-hand rotation to the flange, the system offers the highest protection to the tool taper and clamps are no longer needed.





XTREME COATING

THE ULTIMATE TECHNOLOGY FOR INDUSTRIAL CNC TOOLS

DLCS is a modified diamond-like carbon coating with superior load bearing capacity. This hard, durable metal-based finish (chromium nitride) provides an higher hardness surface and enhances the tribological properties of the carbon coating. Its application prevents excessive heat build up which is detrimental to performance. This means cutting tools remain fully effective after every use.

<p>Extreme Coating Hardness >HV 2.500</p> <p>Offers impressive hardness on cutting edges as well as outstanding protection against wear and tear.</p>	<p>Minimal coating thickness µm 2-4</p> <p>This micron thin finish guarantees perfectly sharpened edges for high cutting quality.</p>	<p>Provides the lowest coefficient of friction 0,1-0,2</p> <p>Very good running-in and low friction losses. Reduction of sticking. Ideal for high speeds in Nesting applications.</p>	<p>Optimal resistance to heat build up</p> <p>Reduced overheating. Cutting edges resist excessive wear up to 400°C.</p>
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BENEFITS



3X
LONGER LIFE
THAN UNCOATED

DLCS CHROME COATING
provides 3 times longer life than uncoated tools!



Test performed in U.S. with 1/2" solid carbide compression spiral bit

- MACHINE:** FELDER® Profit H10 Nested Base/Overhead CNC Router
- WORKING PARAMETERS:** RPM = 18,000 - Feed = 20 mts/minute
- MATERIAL:** 19mm Melamine Chipboard
- APPLICATION:** Nesting Full Dimensioning
- PERFORMANCE:** DLCS coated bit cut 165 melamine panels
Uncoated bit cut 56 melamine panels

FELDER® Profit H10



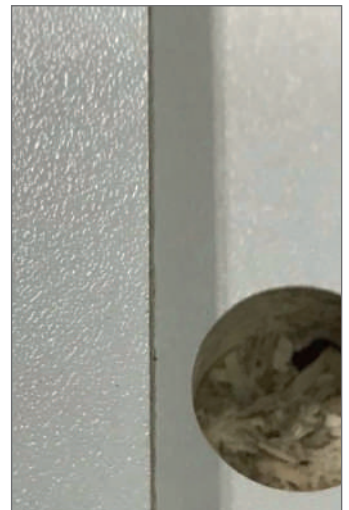
DLCS coated bit



Melamine Chipboard



Cut quality after 165 panels



Solid Carbide Upcut & Downcut Spiral Bits



NEW
NEW
NEW

190.41 DLCS Chrome Coating Long Life



D mm	I mm	I ₁ mm	L mm	S mm	Z	Box	ORDER NO. Right-hand rotation
8	32	7	80	8	2+2	10	190.080.41
9,52	28,6	7	76,2	9,52	2+2	10	190.504.41
10	32	7	80	10	2+2	10	190.100.41
10	42	7	90	10	2+2	10	190.101.41
12	42	7	90	12	2+2	10	190.120.41
12	52	7	100	12	2+2	10	190.121.41
12,7	25,4	12	76,2	12,7	2+2	10	190.505.41
12,7	28,6	12	76,2	12,7	2+2	10	190.506.41
12,7	34,9	12	88,9	12,7	2+2	10	190.507.41
12,7	41,3	12	101,6	12,7	2+2	10	190.508.41

...up & downcut mortising bits

9,52	22,2	4,8	76,2	9,52	2+2	10	190.513.41
9,52	25,4	5,2	76,2	9,52	3+3	10	190.813.41
12	25	5,2	83	12	3+3	10	190.320.41
12,7	22,2	5,2	76,2	12,7	2+2	10	190.515.41
12,7	34,9	5,2	88,9	12,7	2+2	10	190.517.41
12,7	28,5	6	76,2	12,7	3+3	10	190.815.41



190



D mm	I mm	I ₁ mm	L mm	S mm	Z	Box	ORDER NO. Right-hand rotation
4	15	5	50	4	1+1	10	190.040.11
5	22	8	60	5	1+1	10	190.050.11
6	22	8	60	6	1+1	10	190.060.11
6,35	22,2	7	63,5	6,35	2+2	10	190.008.11
8	32	7	80	8	2+2	10	190.080.11
9,52	28,6	7	76,2	9,52	2+2	10	190.504.11
10	32	7	80	10	2+2	10	190.100.11
10	42	7	90	10	2+2	10	190.101.11
12	42	7	90	12	2+2	10	190.120.11
12	52	7	100	12	2+2	10	190.121.11
12,7	25,4	12	76,2	12,7	2+2	10	190.505.11
12,7	28,6	12	76,2	12,7	2+2	10	190.506.11
12,7	34,9	12	88,9	12,7	2+2	10	190.507.11
12,7	41,3	12	101,6	12,7	2+2	10	190.508.11
16	55	24	110	16	2+2	10	190.160.11
18	55	30	110	18	2+2	10	190.180.11

...up & downcut mortising bits

9,52	22,2	4,8	76,2	9,52	2+2	10	190.513.11
9,52	25,4	5,2	76,2	9,52	3+3	10	190.813.11
12	25	5,2	83	12	3+3	10	190.320.11
12,7	22,2	5,2	76,2	12,7	2+2	10	190.515.11
12,7	34,9	5,2	88,9	12,7	2+2	10	190.517.11
12,7	28,5	6	76,2	12,7	3+3	10	190.815.11

TECHNICAL DETAILS:

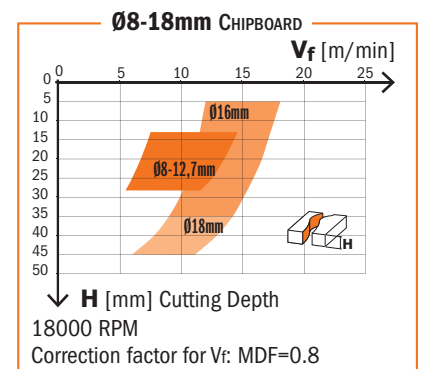
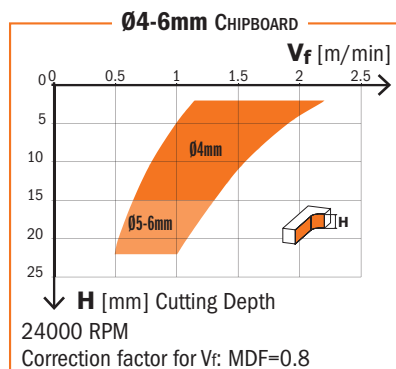
- Premium quality HWM.
- 1+1 spiral cutting edges [Z1+1].
- 2+2 spiral cutting edges [Z2+2].
- 3+3 spiral cutting edges [Z3+3].
- Provide an excellent finish on both the upper and the lower side of the workpiece.

APPLICATION:

used for efficient contour cutting, end-trimming and panel sizing on solid wood, wood composites, plastic materials and laminates at high feed speed. Ensure to properly clamp workpieces. Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adapters.



Results shown in this diagram are purely empirical, based merely on informative and hypothetical calculation. Each application may require different parameters in consideration of materials in use and machining conditions. CMT is not responsible for direct, indirect, incidental or consequential damages resulting from any defect, error or failure due to this diagram.





198 Upcut Spiral



D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation
3	12	50	3	10	198.030.11
3,18	12,7	50,8	6,35	10	198.001.11
4	15	50	4	10	198.040.11
4,76	15,87	50,8	6,35	10	198.005.11
5	17	50	5	10	198.050.11
6	22	60	6	10	198.060.11
6,35	19,05	50,8	6,35	10	198.007.11
6,35	25,4	63,5	6,35	10	198.008.11
8	22	70	8	10	198.080.11
8	32	80	8	10	198.081.11
9,52	28,57	76,2	9,52	10	198.504.11
10	32	70	10	10	198.100.11
10	42	80	10	10	198.101.11
10	52	90	10	10	198.102.11
12	32	83	12	10	198.120.11

TECHNICAL DETAILS:

- Premium quality HWM.
- 1 spiral cutting edge [Z1].
- Provide an excellent finish on the lower side of the workpiece.
- **Upward chip ejection.**

APPLICATION:

used for efficient contour cutting, end-trimming and panel sizing on solid wood, wood composites, plastic materials and laminates at high feed speed. Ensure to properly clamp workpieces.
Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adapters.



198 Downcut Spiral



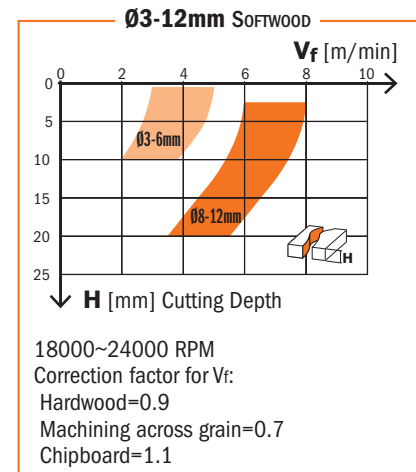
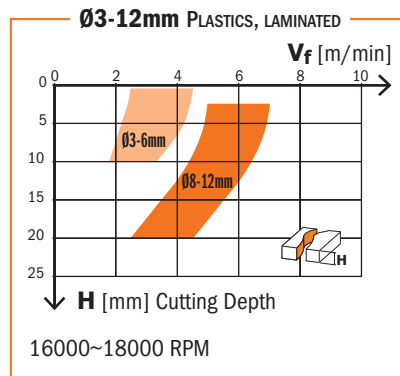
D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation
6	27	60	6	10	198.660.11

TECHNICAL DETAILS:

- Premium quality HWM.
- 1 spiral cutting edge [Z1].
- Provide an excellent finish on the top side of the workpiece.
- **Upward chip ejection.**

APPLICATION:

used for efficient contour cutting, end-trimming and panel sizing on solid wood, wood composites, plastic materials and laminates at high feed speed. Ensure to properly clamp workpieces.
Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adapters.



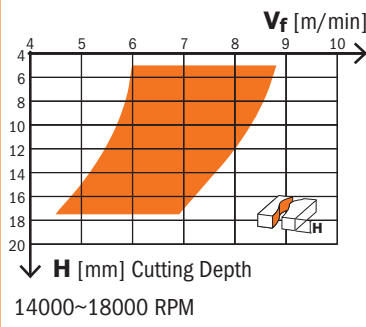
Results shown in this diagram are purely empirical, based merely on informative and hypothetical calculation. Each application may require different parameters in consideration of materials in use and machining conditions. CMT is not responsible for direct, indirect, incidental or consequential damages resulting from any defect, error or failure due to this diagram.



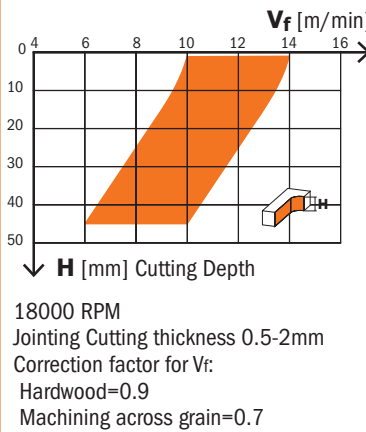
191

D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation
3	12	50	3	10	191.030.11
3	12	60	6	10	191.630.11
3	12	60	8	10	191.830.11
3,18	12,7	50,8	6,35	10	191.001.11
3,5	12	60	6	10	191.635.11
3,97	12,7	50,8	6,35	10	191.003.11
4	15	50	4	10	191.040.11
4	15	60	6	10	191.640.11
4	15	60	8	10	191.840.11
4,76	19,05	50,8	6,35	10	191.005.11
5	17	50	5	10	191.050.11
5	17	60	6	10	191.650.11
5	17	60	8	10	191.850.11
6	27	70	6	10	191.060.11
6	27	70	8	10	191.860.11
6,35	19,05	50,8	6,35	10	191.007.11
6,35	25,4	63,5	6,35	10	191.008.11
7	32	80	8	10	191.870.11
7,94	25,4	76,2	12,7	10	191.501.11
8	22	70	8	10	191.080.11
8	32	80	8	10	191.081.11
8	42	90	8	10	191.082.11
9	32	83	12	10	191.890.11
9,52	31,75	82,5	12,7	10	191.503.11
10	32	80	8	10	191.800.11
10	32	80	10	10	191.100.11
10	32	83	12	10	191.900.11
10	42	90	10	10	191.101.11
10	42	90	12	10	191.901.11
12	35	83	8	10	191.820.11
12	35	83	12	10	191.120.11
12	42	90	12	10	191.121.11
12	52	100	12	10	191.122.11
12,7	31,75	76,2	12,7	10	191.505.11
12,7	38,1	88,9	12,7	10	191.506.11
12,7	50,8	101,6	12,7	10	191.507.11
14	50	110	14	1	191.140.11
16	55	110	16	1	191.160.11
16	35	90	16	1	191.161.11
16	72	120	16	1	191.165.11
20	72	120	20	1	191.200.11

Ø12-14mm PLASTICS, LAMINATED



Ø12-20mm SOFTWOOD



TECHNICAL DETAILS:

- Premium quality HWM.
- 2 spiral cutting edges [Z2].
- Provide an excellent finish on the lower side of the workpiece.
- **Upward chip ejection.**

APPLICATION:

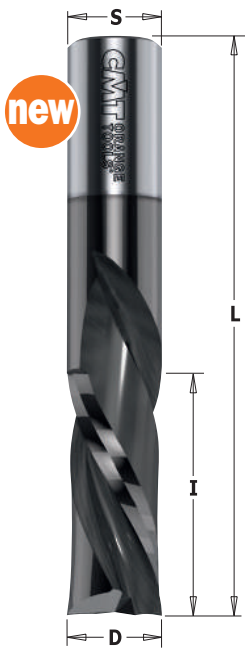
used for efficient contour cutting, end-trimming and panel sizing on solid wood, wood composites, plastic materials and laminates at high feed speed. Ensure to properly clamp workpieces.

Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adapters.



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Solid Carbide Downcut Spiral Bits



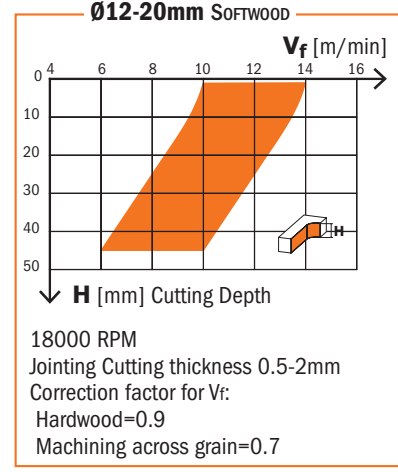
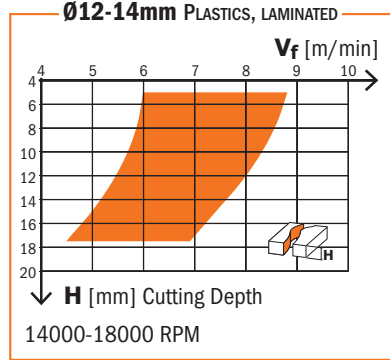
new



192.41 DLCS Chrome Coating Long Life



D mm	I mm	L mm	S mm	Box	ORDER NO. Right-hand rotation
6,35	19,05	50,8	6,35	10	192.007.41
6,35	25,4	63,5	6,35	10	192.008.41
9,52	31,75	82,5	12,7	10	192.503.41
12,7	31,75	76,2	12,7	10	192.505.41
12,7	38,1	88,9	12,7	10	192.506.41
12,7	50,8	101,6	12,7	10	192.507.41



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192



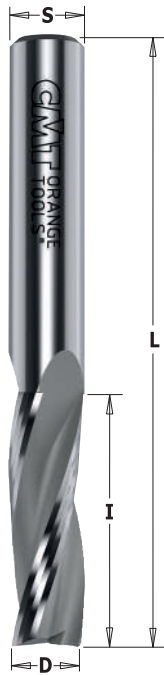
D mm	I mm	L mm	S mm	Box	ORDER NO. Right-hand rotation
3	12	50	3	10	192.030.11
3	12	60	6	10	192.630.11
3	12	60	8	10	192.830.11
3,18	12,7	50,8	6,35	10	192.001.11
3,97	12,7	50,8	6,35	10	192.003.11
4	15	50	4	10	192.040.11
4	15	60	6	10	192.640.11
4	15	60	8	10	192.840.11
4,76	19,05	50,8	6,35	10	192.005.11
5	17	50	5	10	192.050.11
5	17	60	6	10	192.650.11
5	17	60	8	10	192.850.11
6	27	70	6	10	192.060.11
6	27	70	8	10	192.860.11
6,35	19,05	50,8	6,35	10	192.007.11
6,35	25,4	63,5	6,35	10	192.008.11
7,94	25,4	76,2	12,7	10	192.501.11
8	22	70	8	10	192.080.11
8	32	80	8	10	192.081.11
8	42	90	8	10	192.082.11
9,52	31,75	82,5	12,7	10	192.503.11
10	32	80	8	10	192.800.11
10	32	80	10	10	192.100.11
10	42	90	10	10	192.101.11
10	32	83	12	10	192.900.11
12	35	83	8	10	192.820.11
12	35	83	12	10	192.120.11
12,7	31,75	76,2	12,7	10	192.505.11
12,7	38,1	88,9	12,7	10	192.506.11
12,7	50,8	101,6	12,7	10	192.507.11
14	52	110	14	1	192.140.11
16	55	110	16	1	192.160.11

TECHNICAL DETAILS:

- Premium quality HWM.
- 2 spiral edges [Z2].
- Provide an excellent finish on the upper side of the workpiece.
- **Downward chip ejection.**

APPLICATION:

used for efficient contour cutting, end-trimming and panel sizing on solid wood, wood composites, plastic materials and laminates at high feed speed. Ensure to properly clamp workpieces. Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adapters.



193



D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
8	32	80	8	10	193.081.11	193.081.12
10	32	80	10	10	193.100.11	193.100.12
10	42	90	10	10	193.101.11	
12	35	83	12	10	193.120.11	193.120.12
12	42	90	12	10	193.121.11	
12	52	100	12	10	193.122.11	
14	58	110	14	1	193.140.11	
16	55	110	16	1	193.160.11	193.160.12
16	35	90	16	1	193.161.11	
16	72	120	16	1	193.165.11	
18	55	110	18	1	193.180.11	
20	60	120	20	1	193.200.11	193.200.12
20	70	120	20	1	193.201.11	
20	102	165	20	1	193.202.11	

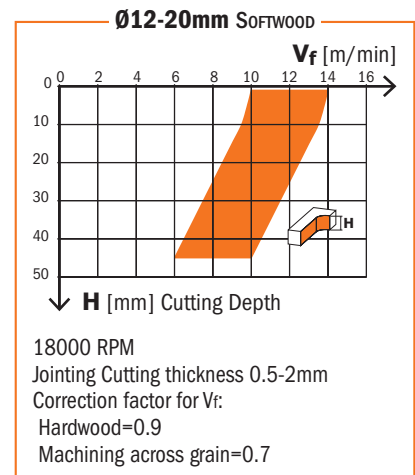
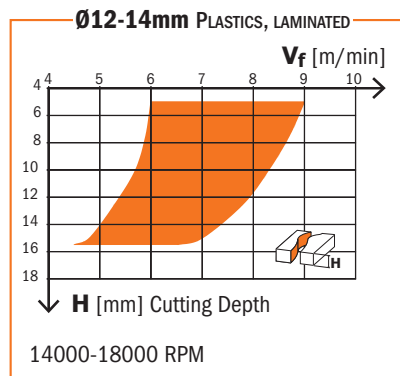
NEW

TECHNICAL DETAILS:

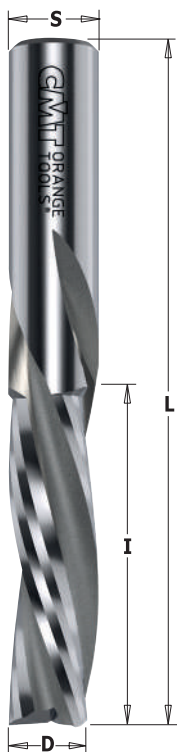
- Premium quality HWM.
- 3 spiral cutting edges [Z3].
- Provide an excellent finish on the lower side of the workpiece.
- **Upward chip ejection.**

APPLICATION:

used for efficient contour cutting, end-trimming and panel sizing on solid wood, wood composites, plastic materials and laminates at high feed speed. Ensure to properly clamp workpieces. Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adapters.



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194



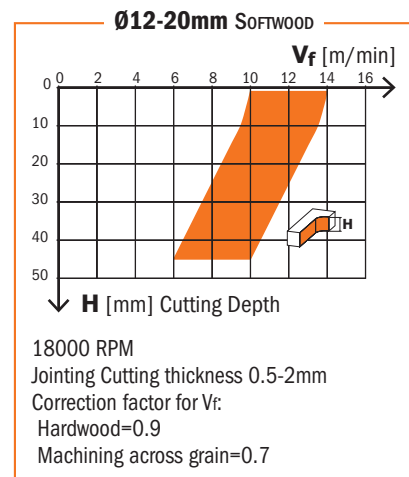
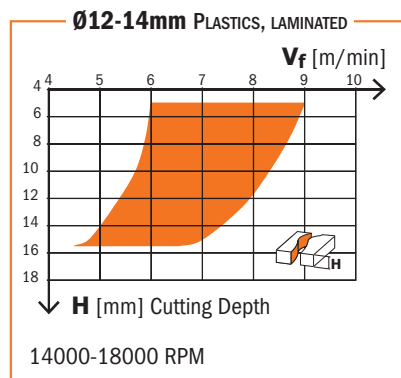
D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
10	32	80	10	10	194.100.11	
10	42	90	10	10	194.101.11	
12	35	83	12	10	194.120.11	194.120.12
12	42	90	12	10	194.121.11	
14	50	110	14	1	194.140.11	
16	55	110	16	1	194.160.11	194.160.12
16	35	90	16	1	194.161.11	
18	55	110	18	1	194.180.11	
20	60	120	20	1	194.200.11	194.200.12
20	72	120	20	1	194.201.11	
20	102	165	20	1	194.202.11	

TECHNICAL DETAILS:

- Premium quality HWM.
- 3 spiral cutting edges [Z3].
- Provide an excellent finish on the upper side of the workpiece.
- **Downward chip ejection.**

APPLICATION:

used for efficient contour cutting, end-trimming and panel sizing on solid wood, wood composites, plastic materials and laminates at high feed speed. Ensure to properly clamp workpieces. Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adapters.



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Solid Carbide Upcut Spiral Bits with Chip-Breaker



195



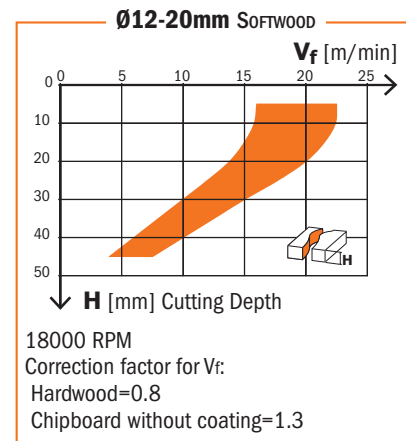
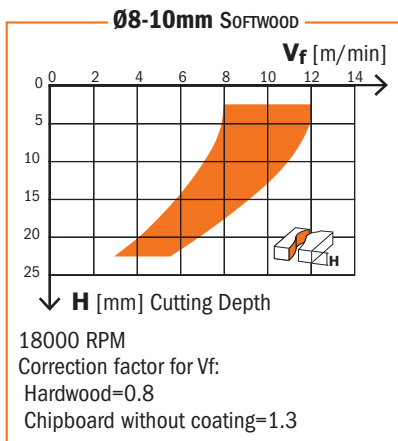
D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
8	32	80	8	10	195.081.11	195.081.12
8	42	90	8	10	195.082.11	
10	32	80	10	10	195.100.11	195.100.12
10	42	90	10	10	195.101.11	
12	35	83	12	10	195.120.11	195.120.12
12	42	90	12	10	195.121.11	
12	52	100	12	10	195.122.11	
12,7	38,1	88,9	12,7	10	195.506.11	
14	58	110	14	1	195.140.11	
16	55	110	16	1	195.160.11	195.160.12
16	35	90	16	1	195.161.11	
16	72	120	16	1	195.165.11	
18	55	110	18	1	195.180.11	
20	60	120	20	1	195.200.11	195.200.12
20	72	120	20	1	195.201.11	
20	102	165	20	1	195.202.11	

TECHNICAL DETAILS:

- Premium quality HWM.
- 3 spiral cutting edges [Z3R].
- Chip breaker teeth.
- Max 0.3mm tooth depth.
- Provide an excellent finish on the lower side of the workpiece.
- **Upward chip ejection.**

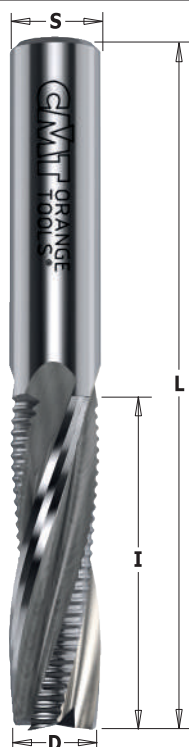
APPLICATION:

used for efficient contour cutting, end-trimming and panel sizing on solid wood, wood composites, plastic materials and laminates at high feed speed. Ensure to properly clamp workpieces. Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adapters.



Results shown in this diagram are purely empirical, based merely on informative and hypothetical calculation. Each application may require different parameters in consideration of materials in use and machining conditions. CMT is not responsible for direct, indirect, incidental or consequential damages resulting from any defect, error or failure due to this diagram.

Solid Carbide Upcut Spiral Bits



197



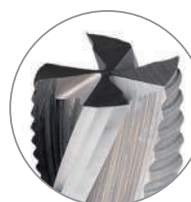
D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation	
12	42	90	12	10	197.121.11	
14	50	110	14	1	197.140.11	
16	55	110	16	1	197.160.11	
16	35	90	16	1	197.161.11	
18	55	110	18	1	197.180.11	
20	60	120	20	1	197.200.11	
20	72	120	20	1	197.201.11	

TECHNICAL DETAILS:

- Premium quality HWM.
- 4 spiral cutting edges (2 with chip-breaker) [Z2+2R].
- Max 0.1mm tooth depth.
- Provide excellent finish on the lower side of the workpiece.
- **Upward chip ejection.**

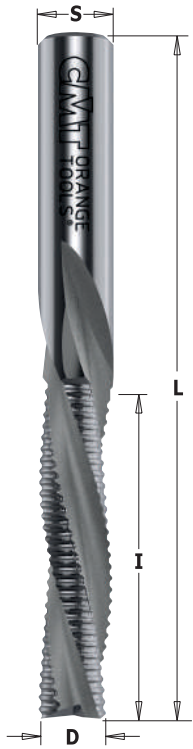
APPLICATION:

used for efficient contour cutting, end-trimming and panel sizing on solid wood and wood composites. Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adapters.



The special 4 flute design (Z2 finishing + Z2R with chipbreaker) allows high speed with excellent finish on the workpiece.

Solid Carbide Downcut Spiral Bits with Chip-Breaker



196



D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
8	32	80	8	10	196.081.11	
10	42	90	10	10	196.101.11	
12	35	83	12	10	196.120.11	196.120.12
12	42	90	12	10	196.121.11	
12	52	100	12	10	196.122.11	
12,7	38,1	88,9	12,7	10	196.506.11	
14	50	110	14	1	196.140.11	
16	55	110	16	1	196.160.11	196.160.12
18	55	110	18	1	196.180.11	
20	60	120	20	1	196.200.11	
20	72	120	20	1	196.201.11	

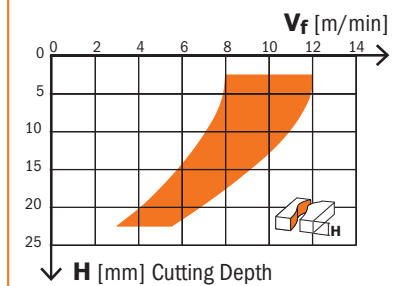
TECHNICAL DETAILS:

- Premium quality HWM.
- 3 spiral cutting edges [Z3R].
- Chip breaker teeth.
- Max 0.3mm tooth depth.
- Provide excellent finish on the upper side of the workpiece.
- **Downward chip ejection.**

APPLICATION:

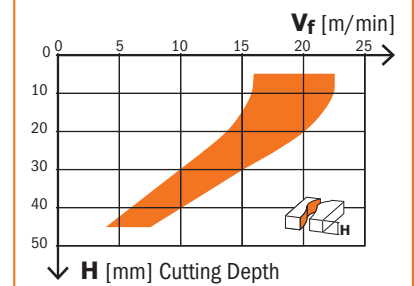
used for efficient contour cutting, end-trimming and panel sizing on solid wood, wood composites, plastic materials and laminates at high feed speed. Ensure to properly clamp workpieces. Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adapters.

Ø8-10mm SOFTWOOD



18000 RPM
Correction factor for Vr:
Hardwood=0.8
Chipboard without coating=1.3

Ø12-20mm SOFTWOOD



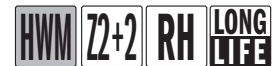
18000 RPM
Correction factor for Vr:
Hardwood=0.8
Chipboard without coating=1.3

Results shown in this diagram are purely empirical, based merely on informative and hypothetical calculation. Each application may require different parameters in consideration of materials in use and machining conditions. CMT is not responsible for direct, indirect, incidental or consequential damages resulting from any defect, error or failure due to this diagram.

Solid Carbide Upcut & Downcut Spiral Bit with DLCS Chrome Coating



190.04



D mm	d mm	I mm	L mm	S mm	Z		ORDER NO. Right-hand rotation
9,8	7	25	83	12	2+2	10	190.001.04

LAMELLO® P-SYSTEM® components can be crafted on a CNC machining center. Groovework is carried out along the edge workpiece with a spiral cutter coated with DLCS for long life.



For use only on 5 axis CNC machines.



1



2

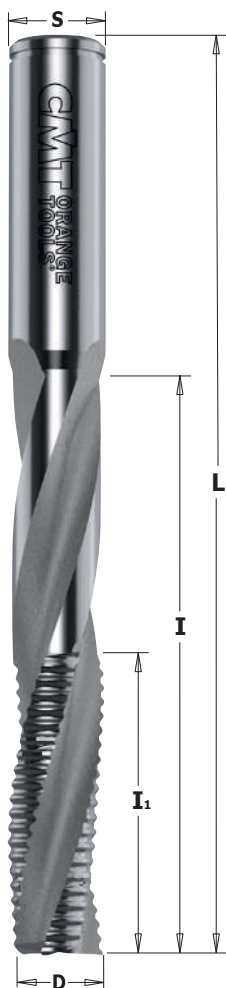


3



4





195



D mm	I mm	I ₁ mm	L mm	S mm		ORDER NO. Right-hand rotation
With Chip-Breaker						
14	95*	45	150	14	1	195.142.11
14	125*	45	170	14	1	195.144.11
16	95*	45	150	16	1	195.162.11
16	120*	50	170	16	1	195.164.11
18	95*	45	150	18	1	195.182.11
Without Chip-Breaker						
16	95*	45	150	16	1	193.162.11

* The maximum cutting length is achieved in 2-3 passes.

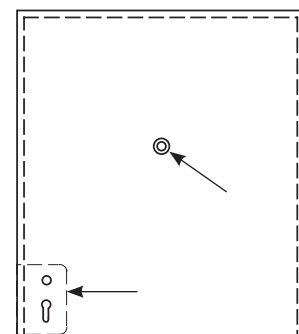
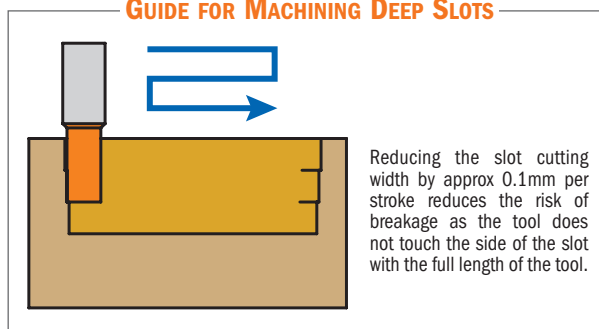
TECHNICAL DETAILS:

- Premium quality HWM.
- 3 spiral cutting edges [Z3] and [Z3R].
- Max 0.3mm tooth depth.
- Provide an excellent finish on the lower side of the workpiece.
- Seat for seeger ring (*not included*).
- **Upward chip ejection.**

APPLICATION:

used for efficient contour cutting, end-trimming and panel sizing on solid wood, wood composites, plastic materials and laminates at high feed speed. Ensure to properly clamp workpieces. Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adapters.

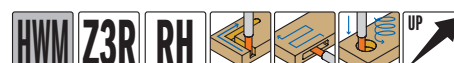
GUIDE FOR MACHINING DEEP SLOTS



Solid Carbide Upcut Spiral Bits with Chip-Breaker for 60° V-Point Locksets



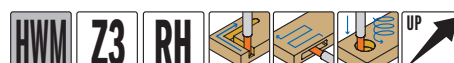
195.143/163



D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation
14	58	110	14	1	195.143.11
16	55	110	16	1	195.163.11

Solid Carbide Upcut Spiral Bits without Chip-Breaker for 60° V-Point Locksets

191.143/163



D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation
14	50	110	14	1	191.143.11
16	55	110	16	1	191.163.11

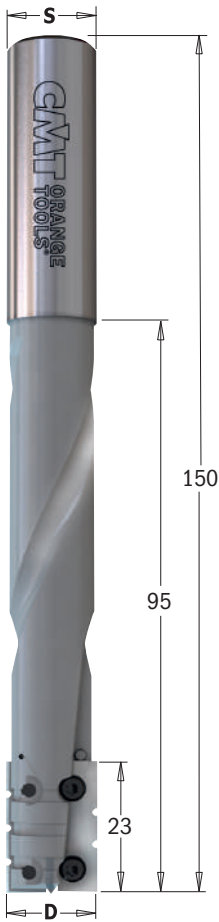
TECHNICAL DETAILS:

- Premium quality HWM.
- 3 spiral cutting edges [Z3].
- Provide an excellent finish on the lower side of the workpiece.
- **Upward chip ejection.**

APPLICATION:

used for efficient contour cutting, end-trimming and panel sizing on solid wood, wood composites, plastic materials and laminates at high feed speed. Ensure to properly clamp workpieces. Can be used on machining centres, CNC routers and hand-held routers equipped with chucks or adapters.

Spiral Bits with Insert Knives & Chip-Breaker for Locksets



662

D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation
16	23/95*	150	16	1	662.160.11



Spare parts

790.230.2R - 790.230.3R	990.082.00	991.063.00

Spare parts: **790.230.2R** 23x7x1.5mm 2-RT HWM K2020 knives (Minimum 10 pieces or multiple)
790.230.3R 23x7x1.5mm 3-RT HWM K2020 knives (Minimum 10 pieces or multiple)

* The 95mm length is achieved in 4-5 passes.

TECHNICAL DETAILS:

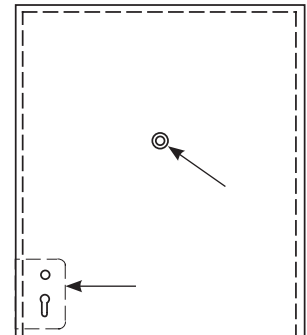
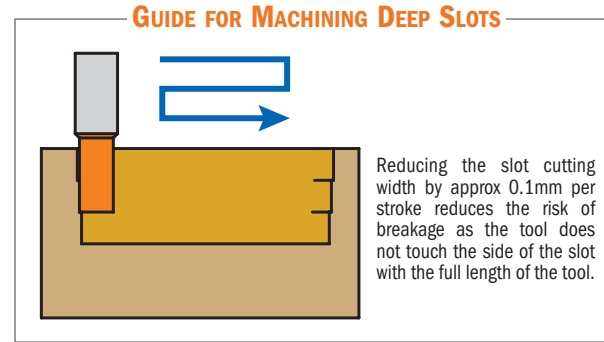
- DENSIMET® high density tungsten alloy for low-vibration.
- 2 cutting edges [Z2R] with chip-breakers

APPLICATION:

used for efficient contour cutting, end-trimming and panel sizing on solid wood, wood composites, plastic materials and laminates at high feed speed. Ensure to properly clamp workpieces. Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adapters. Cost-effective solution with respect to brazed and spiral in tungsten carbide.

SAFETY TIPS:

The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 406).

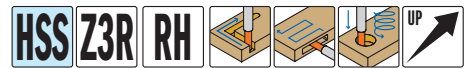


Upcut Spiral Bits with Chipbreaker for Glue-Laminated Wooden Beams



195

D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation
□ 30	170	235	30	1	Y195.300.51
40	165	235	30	1	195.400.51
50	215	295	30	1	195.500.51



□ On request

Available by special request bits without chip breaker, with left-hand rotation and/or custom dimensions.

TECHNICAL DETAILS:

- High speed cobalt steel.
- 3 upcut spiral cutting edges with chipbreaker [Z3R].
- Resharpenable cutters.
- Max 6000~10000 RPM.
- Maximum feed speed 2m/minute.
- **Upward chip ejection.**

APPLICATION:

used for cutting, copying, and routing on glue-laminated wooden beams. For use on HUNDEGGER® machines.

Solid Carbide Upcut 2D/3D Carving Tapered Ball Nose Spiral Bits



152



D mm	R mm	A	I mm	L mm	S mm	Z		ORDER NO. Right-hand rotation
0,8	0,4	5,5°	25	70	6	3	10	152.060.082
0,8	0,4	6,2°	25,4	76,2	6,35	3	10	152.064.082
1,6	0,8	4,5°	25	70	6	3	10	152.060.162
1,6	0,8	5,4°	25,4	76,2	6,35	3	10	152.064.162
1,6	0,8	5,5°	30	80	8	3	10	152.080.163
2	1	3°	80	120	12	2	10	152.120.208
3,2	1,6	2,5°	30	70	6	3	10	152.060.323
3,2	1,6	3,6°	25,4	76,2	6,35	3	10	152.064.322
3,2	1,6	2,5°	50	90	8	3	10	152.080.325
6	3	3°	50	100	12	2	10	152.120.605
6,4	3,2	3°	50,8	101,6	12,7	2	10	152.127.635

TECHNICAL DETAILS:

- Premium quality HWM.
- Upcut spiral cutting edges [Z2/Z3].
- **Excellent finish on the lower side of the work piece.**
- Upward chip ejection.

APPLICATION:

- specially designed for 2D and 3D CNC profiling and carving in plastic, aluminum & wood for several uses like:
- A perfect bit for 3D carving
 - Precision 2D and 3D large scale carving
 - Great for deep profiling
 - Dimensional signage
 - 3D millwork
 - 2D and 3D contouring, profiling, modeling and pattern making for cabinetry, sign making, furniture making and jewelry mold making
 - Perfect for model-makers on large 3D milling profiles in abrasive EPS foam and other materials.
 - **Ideal on aluminum, plastic and wood-based materials.**

EXCELLENCE FOR CUTTING

- Acrylonitrile-Butadiene-Styrene (ABS)
- Acrylic
- Acrylic Stone
- Aluminum
- Brass
- Bronze
- Composite
- Copper
- Ethylene-vinyl Acetate Foam (EVA)
- Expanded Polypropylene (EPP)
- Expanded Polystyrene Foam (EPS)
- Extruded Polystyrene Foam (XPS)
- Fiberglass
- Fiberglass PCB Board
- Foam Board

- Graphite
- HDPE
- HDU
- 20lbs High Density Urethane
- MDF/HDF
- Phenolics
- Phenolic Composites
- Plastics
- Poly (methyl methacrylate) (PMMA)
- Polyethylene Foam
- Polyurethane Foam
- PVC
- PVC Foam Board
- Sign Board
- Sign Foam

- Titanium
- Tooling Board
- Wood
- XPE (Cross Linked Polyethylene) Foam

ALSO EXCELLENCE FOR

- CORIAN®
- COROPLAST®
- DIBOND®
- ETHAFOAM®
- LEXAN®
- PALFOAM®
- POLYLAM®

TIPS FOR MILLING PLASTICS

- pay attention to heat input
- pay attention to chip-loads when using small diameters
- use air-blast to keep chip away and cooling the tool

Round Nose Solid Carbide Upcut Spiral Bits



199



D mm	R mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation
3,18	1,6	12,7	50,8	6,35	10	199.001.11
6	3	27	70	6	10	199.060.11
6,35	3,18	25,4	63,5	6,35	10	199.008.11
8	4	32	80	8	10	199.081.11
9,52	4,76	28,57	76,2	9,52	10	199.504.11
10	5	32	80	10	10	199.100.11
12	6	35	80	12	10	199.120.11
12,7	6,35	31,75	76,2	12,7	10	199.505.11
15,88	7,94	57,15	109,5	15,88	1	199.509.11
16	8	55	110	16	1	199.160.11
19,05	9,52	57,15	109,5	19,05	1	199.511.11

TECHNICAL DETAILS:

- Premium quality HWM.
- 2 upcut spiral cutting edges [Z2].
- Excellent finish on the lower side of the work piece.
- **Upward chip ejection.**

APPLICATION:

used for efficient contour cutting, end-trimming and panel sizing on solid wood, wood composites, plastic materials and laminates at high feed speed. Ensure to properly clamp workpieces. Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adapters. Cost-effective solution with respect to brazed and spiral in tungsten carbide.

Solid Surface and Fiberglass Bit with DLCS Chrome Coating



151 XTREME PERFORMANCE



D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation
6	19	60	6	10	151.060.19E
6,35	25,4	63,5	6,35	10	151.064.25E
8	25	60	8	10	151.080.25E
12	25	75	12	10	151.120.25E
12,7	38	89	12,7	10	151.127.38E

TECHNICAL DETAILS:

- Premium quality HWM
- Special positively ground cutting edge sharpening for excellent finish

APPLICATION:

used for efficient contour cutting, end-trimming and panel sizing on glass fiber and fiberglass, phenolic and composite material.
For use on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adapters.



DLCS CHROME COATING:

- Superb wear resistance
- Better chip clearance
- Superior cutting quality
- Less overheating
- More productivity



DLCS CHROME COATING provides 3 times longer life than uncoated tools!

Solid Surface and Fiberglass Bit with DLCS Chrome Coating



151 XTREME PERFORMANCE



D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation
6	19	60	6	10	151.060.19D
6,35	25,4	63,5	6,35	10	151.064.25D
8	25	60	8	10	151.080.25D
12	25	75	12	10	151.120.25D
12,7	38	89	12,7	10	151.127.38D

TECHNICAL DETAILS:

- Premium quality HWM
- Special positively ground cutting edge sharpening for excellent finish

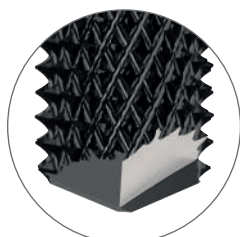
APPLICATION:

used for efficient contour cutting, end-trimming and panel sizing on fiberglass, glass fiber phenolic and composite material. The 135° tooth geometry allows vertical feeding minimizing the bending of the workpiece. To be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adapters.



DLCS CHROME COATING:

- Superb wear resistance
- Better chip clearance
- Superior cutting quality
- Less overheating
- More productivity

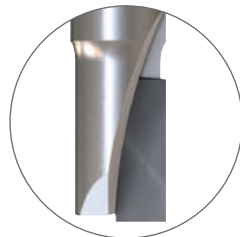


Sharpening 135°



DLCS CHROME COATING provides 3 times longer life than uncoated tools!

DP - Router Cutters with Negative Shear Angle



Negative Cutting Edge

141 (HWM tool body)



D mm	I mm	L mm	S mm	Z		ORDER NO. Right-hand rotation
6	10	60	6	1 neg.	1	141.260.61
8	15	65	8	1 neg.	1	141.280.61
10	15	65	10	1 neg.	1	141.300.61
12	20	70	12	1 neg.	1	141.320.61

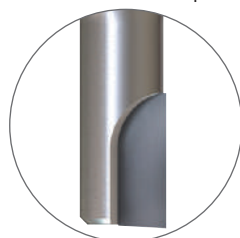
TECHNICAL DETAILS:

- Special super-micrograin carbide formulation
- Straight cutting edge.
- DP (H3).
- Resharpener cutter (max 3 times).
- Feed speed on MDF 3-4 m/min for cutter Ø6 and Ø8mm and 4-5m/minute for Ø10 and Ø12mm

APPLICATION:

for boring, contour cutting and panel sizing on veneered and wood-based materials. For use on machining centers, point to point boring machines and CNC pantographs equipped with adaptors and chucks.

DP - Router Cutters



* Construction Z1+1
for 141.101.61 item

141



D mm	I mm	L mm	S mm	Z		ORDER NO. Right-hand rotation
6	8	65	12x40	1	1	141.060.61
8	12	65	12x40	1	1	141.080.61
*10	22	75	12x40	1+1	1	141.101.61

TECHNICAL DETAILS:

- Super strength steel.
- DP cutting edge (H2,5).
- HW plunging tip for diagonal plunge-cutting.
- Resharpener cutter (max 3 times).
- Max feed speed 4 m/min.

APPLICATION:

for boring, contour cutting and panel sizing on veneered and wood-based materials. For use on machining centers, point to point boring machines and CNC pantographs equipped with adaptors and chucks.

DP - Router Cutters with Shear Angle



140

D mm	I mm	L mm	S mm	Z		ORDER NO. Right-hand rotation
10	25	72	12x40	1+1 (3 DP+1 HW)	1	140.03956
12	27	75	12x40	1+1 (3 DP+1 HW)	1	140.120.61
12	35	85	12x40	1+1 (4 DP+1 HW)	1	140.121.61
12,7	27	75	12,7x40	1+1 (3 DP+1 HW)	1	140.127.61
12,7	35	85	12,7x40	1+1 (4 DP+1 HW)	1	140.128.61
15,87	27	85	15,87x50	1+1 (3 DP+1 HW)	1	140.158.61
15,87	45	103	15,87x50	1+1 (5 DP+1 HW)	1	140.159.61
16	27	85	16x50	1+1 (3 DP+1 HW)	1	140.160.61
16	35	93	16x50	1+1 (4 DP+1 HW)	1	140.161.61
18	27	85	20x50	1+1 (3 DP+1 HW)	1	140.180.61
18	35	95	20x50	1+1 (4 DP+1 HW)	1	140.181.61
18	45	105	20x50	1+1 (5 DP+1 HW)	1	140.182.61
19,05	27	85	19,05x50	1+1 (3 DP+1 HW)	1	140.190.61
19,05	45	105	19,05x50	1+1 (5 DP+1 HW)	1	140.192.61
20	27	85	20x50	1+1 (3 DP+1 HW)	1	140.200.61
20	35	95	20x50	1+1 (4 DP+1 HW)	1	140.201.61
20	45	105	20x50	1+1 (5 DP+1 HW)	1	140.202.61
20	55	115	20x50	1+1 (6 DP+1 HW)	1	140.203.61

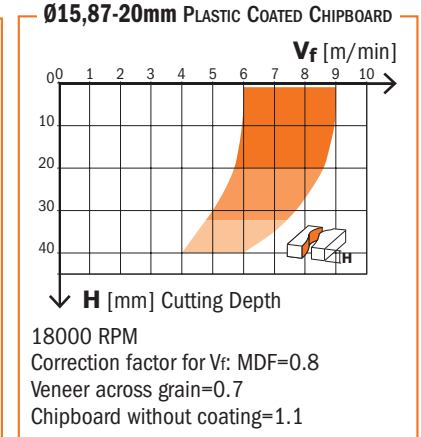
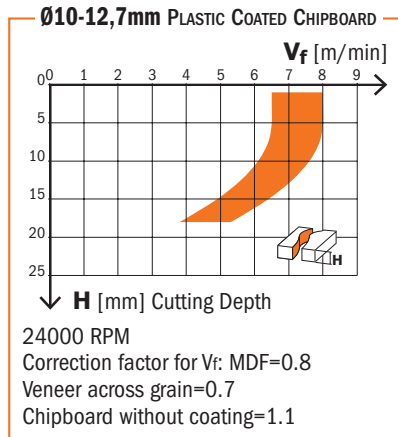
CARACTÉRISTIQUES TECHNIQUES:

- Super strength steel.
- Shear angle. - DP cutting edge (H2,5).
- HW plunging tip for diagonal plunge-cutting.
- Resharpeable (max 3 times).
- Max feed speed 5 m/min.

UTILISATION: for contour cutting and panel sizing on hard and abrasive materials such as laminates, MDF and melamine. For use on machining centers, point to point boring machines and CNC pantographs equipped with adaptors and chucks.



Results shown in this diagram are purely empirical, based merely on informative and hypothetical calculation. Each application may require different parameters in consideration of materials in use and machining conditions. CMT is not responsible for direct, indirect, incidental or consequential damages resulting from any defect, error or failure due to this diagram.



DP - Router Cutters with 45° Shear Angle

140



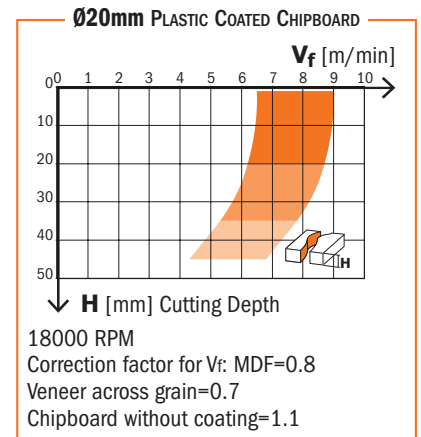
D mm	I mm	L mm	S mm	Z		ORDER NO. Right-hand rotation
20	25	85	20x50	1+1 (6 DP+1 HW)	1	140.720.61
20	35	95	20x50	1+1 (8 DP+1 HW)	1	140.721.61
20	45	105	20x50	1+1 (9 DP+1 HW)	1	140.722.61

TECHNICAL DETAILS:

- Super strength steel.
- Diamond cutting edges featuring 45° shear angle (H4).
- HW plunging tip for plunge cutting.
- Resharpenable cutters (max 8-9 times).
- Max feed speed 5 m/min.

APPLICATION:

for contour cutting and panel sizing on hard and abrasive materials such as laminates, MDF and melamine. For use on machining centers, point to point boring machines and CNC pantographs equipped with adaptors and chucks.



DP - Router Cutters with Shear Angle



142



D mm	I mm	L mm	S mm	Z		ORDER NO. Right-hand rotation
20	27	85	20x50	2+2 (6 DP+1 HW)	1	142.200.61
20	36	95	20x50	2+2 (8 DP+1 HW)	1	142.201.61
20	45	105	20x50	2+2 (10 DP+1 HW)	1	142.202.61
20	55	115	20x50	2+2 (12 DP+1 HW)	1	142.203.61
25	27	90	25x55	2+2 (6 DP+1 HW)	1	142.250.61
25	36	100	25x55	2+2 (8 DP+1 HW)	1	142.251.61
25	45	110	25x55	2+2 (10 DP+1 HW)	1	142.252.61
25	55	120	25x55	2+2 (12 DP+1 HW)	1	142.253.61

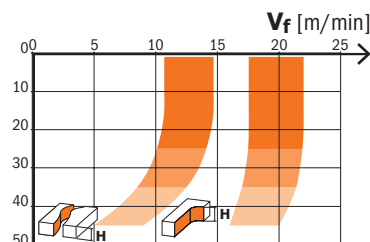
TECHNICAL DETAILS:

- Super strength steel.
- DP cutting edge (H2,5").
- HW plunging tip for diagonal plunge-cutting (Z-axis tool entrance).
- Resharpener cutter (max 3 times).
- Feed speed: max 10m/min

APPLICATION:

for use on CNC routers for jointing, rabbeting, grooving, on laminates, MDF, HPL, veneer and melamine-faced panels.

Ø20-25mm PLASTIC COATED CHIPBOARD



↓ **H [mm] Cutting Depth**

18000 RPM
 Jointing Cutting thickness=0.5-2mm
 Correction factor for Vf: MDF=0.6
 Veneer across grain=0.7

DP - Router Cutters with 20° Shear Angle



142



D mm	I mm	L mm	S mm	Z		ORDER NO. Right-hand rotation
20	25	85	20x45	2+2 (8 DP+1 HW)	1	142.720.61
20	30	90	20x45	2+2 (10 DP+1 HW)	1	142.721.61
20	35	95	20x45	2+2 (12 DP+1 HW)	1	142.722.61
20	40	100	20x45	2+2 (14 DP+1 HW)	1	142.723.61
20	45	105	20x45	2+2 (16 DP+1 HW)	1	142.724.61
20	50	110	20x45	2+2 (18 DP+1 HW)	1	142.725.61
20	55	115	20x45	2+2 (20 DP+1 HW)	1	142.726.61

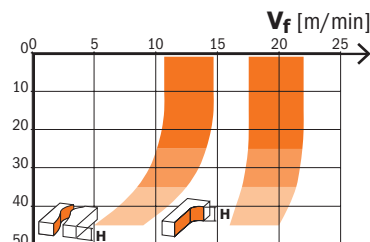
TECHNICAL DETAILS:

- Super strength steel.
- Diamond cutting edges featuring 20° shear angle (H4).
- HW plunging tip for diagonal plunge-cutting (Z-axis tool entrance).
- Resharpener cutters (max 8-10 times).
- Max feed speed 20 m/min.

APPLICATION:

for use on CNC routers for jointing, rabbeting, grooving, on laminates, MDF, HPL, veneer and melamine-faced panels.

Ø20-25mm PLASTIC COATED CHIPBOARD



↓ **H [mm] Cutting Depth**

18000 RPM
 Jointing Cutting thickness=0.5-2mm
 Correction factor for Vf: MDF=0.6
 Veneer across grain=0.7



Results shown in this diagram are purely empirical, based merely on informative and hypothetical calculation. Each application may require different parameters in consideration of materials in use and machining conditions. CMT is not responsible for direct, indirect, incidental or consequential damages resulting from any defect, error or failure due to this diagram.

DP - Router Cutters with Shear Angle for Nesting (DENSIMET® Tungsten Heavy Metal Alloys)



143



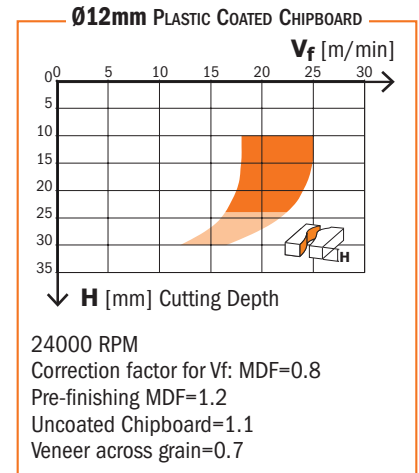
D mm	I mm	L mm	S mm	Z		ORDER NO. Right-hand rotation
12	25	70	12x40	3 (9 DP)	1	143.120.61
12	31	80	12x40	3 (12 DP)	1	143.121.61

TECHNICAL DETAILS:

- DENSIMET® tungsten heavy metal alloys for low-vibration.
- DP cutting edge (H3).
- Resharpenable cutter (max 6 times).
- Max feed speed 25 m/min.

APPLICATION:

for use on CNC routers for jointing, rabbeting, grooving, on laminates, MDF, HPL, veneer and melamine-faced panels. High performance pre-finishing and finish-routing.



DP - Spiral Router Cutters with Shear Angle



143



D mm	I mm	L mm	S mm	Z		ORDER NO. Right-hand rotation	
18	25	82	20x50	3 (10 DP+1 HW)	1	143.180.61	
18	30	87	20x50	3 (13 DP+1 HW)	1	143.181.61	
18	35	92	20x50	3 (15 DP+1 HW)	1	143.182.61	
20	25	82	20x50	3 (10 DP+1 HW)	1	143.200.61	
20	30	85	20x50	3 (13 DP+1 HW)	1	143.201.61	
20	35	92,5	20x50	3 (15 DP+1 HW)	1	143.202.61	
20	40	97	20x50	3 (18 DP+1 HW)	1	143.203.61	
20	45	102	20x50	3 (21 DP+1 HW)	1	143.204.61	
20	50	106,5	20x50	3 (24 DP+1 HW)	1	143.205.61	
20	55	111	20x50	3 (27 DP+1 HW)	1	143.206.61	
20	60	116,5	20x50	3 (30 DP+1 HW)	1	143.207.61	
20	65	121,5	20x50	3 (31 DP+1 HW)	1	143.208.61	
22	30	92	25x50	3 (13 DP+1 HW)	1	143.220.61	
	22	35	97	25x50	3 (15 DP+1 HW)	1	143.221.61
	22	40	102	25x50	3 (18 DP+1 HW)	1	143.222.61
	22	45	107	25x50	3 (21 DP+1 HW)	1	143.223.61
	22	50	112	25x50	3 (24 DP+1 HW)	1	143.224.61
	22	55	117	25x50	3 (27 DP+1 HW)	1	143.225.61
	22	60	122	25x50	3 (30 DP+1 HW)	1	143.226.61
	22	65	127	25x50	3 (31 DP+1 HW)	1	143.227.61
	22	70	132	25x50	3 (36 DP+1 HW)	1	143.228.61

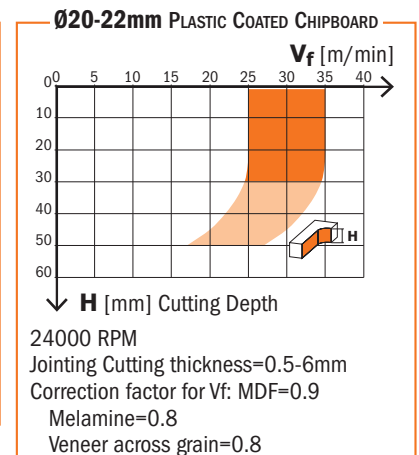
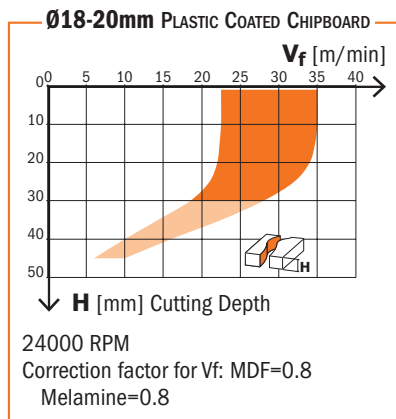
On request

TECHNICAL DETAILS:

- Super strength steel.
- DP cutting edge (H4).
- HW plunging tip for diagonal plunge-cutting (Z-axis tool entrance).
- Resharpenable cutter (max 8-10 times).

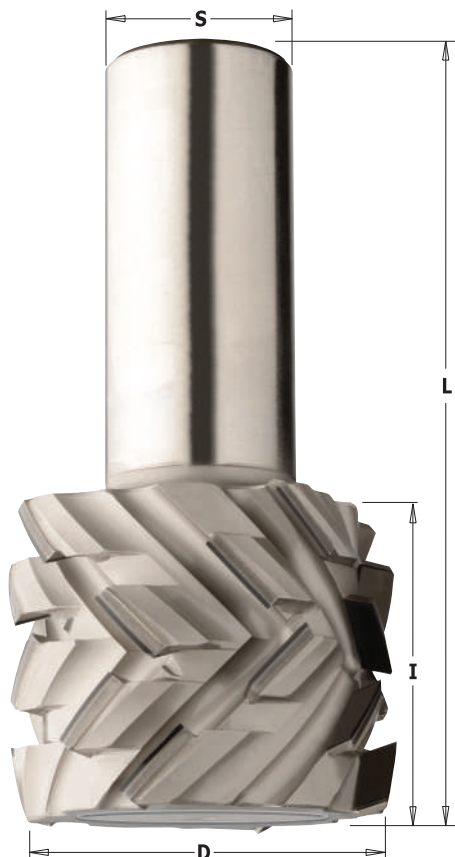
APPLICATION:

for use on CNC routers for jointing, rabbeting, grooving, on laminates, MDF, HPL, veneer and melamine-faced panels. High performance pre-finishing and finish-routing.



Results shown in this diagram are purely empirical, based merely on informative and hypothetical calculation. Each application may require different parameters in consideration of materials in use and machining conditions. CMT is not responsible for direct, indirect, incidental or consequential damages resulting from any defect, error or failure due to this diagram.

DP - Router Cutters with 40° Shear Angle



145

D mm	I mm	L mm	S mm	Z		ORDER NO. Right-hand rotation
<input type="checkbox"/> 50	23	80	25x55	3+3 (9 DP)	1	145.501.61
<input type="checkbox"/> 50	23	80	25x55	4+4 (12 DP)	1	145.511.61
<input type="checkbox"/> 50	28	85	25x55	3+3 (12 DP)	1	145.502.61
<input type="checkbox"/> 50	28	85	25x55	4+4 (16 DP)	1	145.512.61
<input type="checkbox"/> 50	38	95	25x55	3+3 (18 DP)	1	145.503.61
<input type="checkbox"/> 50	38	95	25x55	4+4 (24 DP)	1	145.513.61

On request

TECHNICAL DETAILS:

- Super strength steel.
- "H4" diamond cutting edges featuring 40° shear angle.
- Resharpenable cutters (max 10 times).
- Maximum feed speed 30m/minute.

APPLICATION:

used on all CNC routers for jointing, rabbeting, grooving, copying and dividing raw material, melamine, laminated, MDF, HPL and veneered panels. High performance routing.

Straight Bits for Industrial Nesting Application **DLCS Chrome Coating**

new



8/912



D mm	I mm	L mm		ORDER NO. S=Ø10mm	ORDER NO. S=Ø12mm	ORDER NO. S=Ø12,7mm
6	21	73	10		912.561.11	
6	26	73	10		912.560.11	
6,35	26	73	10			812.564.11
8	21	73	10		912.582.11	
8	28,7	76	10		912.581.11	
8	28,7	76	10			812.581.11
8	32	76	10		912.583.11	
10	21	75	10	912.610.11		
10	32	75	10	912.611.11		

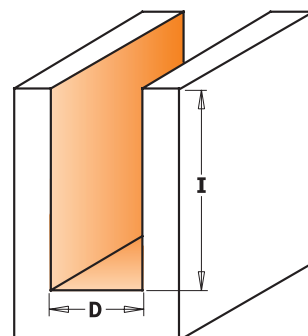
TECHNICAL DETAILS:

- Premium quality HWM.
- Special positively ground cutting edge sharpening for excellent finish.



DLCS CHROME COATING:

- Superb wear resistance
- Better chip clearance
- Superior cutting quality
- Less overheating
- More productivity



Drawing is 1:1 scale

3X
LONGER LIFE
THAN UNCOATED

DLCS CHROME COATING

provides 3 times longer life than uncoated tools!



174

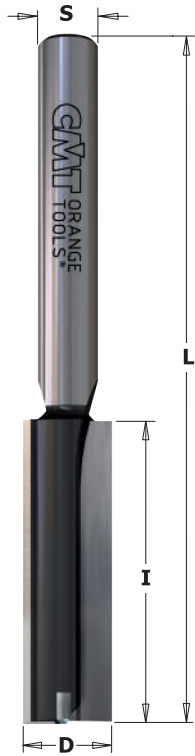


D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation
3	10	55	8	10	174.030.11
4	10	55	8	10	174.040.11
5	12	55	8	10	174.050.11
6	14	55	8	10	174.060.11
7	20	55	8	10	174.070.11

TECHNICAL DETAILS:

- Premium quality HWM.
- 2 radial relief cutting edges [Z2].
- 1 HW [Z1] plunge cutting edge.

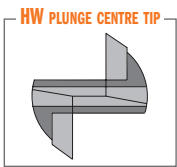
Router Cutters



174



D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation
8	20	55	8	10	174.080.11
8	30	70	8	10	174.081.11
8	40	90	8	10	174.082.11
9	20	55	8	10	174.090.11
10	20	60	8	10	174.100.11
10	30	70	8	10	174.102.11
10	40	90	8	10	174.101.11
11	20	60	8	10	174.110.11
12	20	60	8	10	174.120.11
12	30	70	8	10	174.122.11
12	40	90	8	10	174.121.11
13	20	60	8	10	174.130.11
14	20	60	8	10	174.140.11
14	30	70	8	10	174.142.11
14	40	90	8	10	174.141.11
15	20	60	8	10	174.150.11
16	20	70	8	10	174.160.11
16	30	70	8	10	174.162.11
16	40	90	8	10	174.161.11
18	20	70	8	10	174.180.11
18	30	70	8	10	174.181.11
18	40	80	8	10	174.182.11
19	20	70	8	10	174.190.11
20	20	70	8	10	174.200.11
20	30	70	8	10	174.201.11
20	40	90	8	10	174.202.11
22	20	70	8	10	174.220.11
22	30	70	8	10	174.221.11
22	40	90	8	10	174.222.11
23,5	20	70	8	10	174.235.11
24	20	70	8	10	174.240.11
24	30	70	8	10	174.241.11
24	40	90	8	10	174.242.11
25	20	70	8	10	174.250.11
26	20	70	8	10	174.260.11
26	30	70	8	10	174.261.11
28	20	70	8	10	174.280.11
28	30	70	8	10	174.281.11
29	20	70	8	10	174.290.11
30	20	70	8	10	174.300.11
32	20	70	8	10	174.320.11



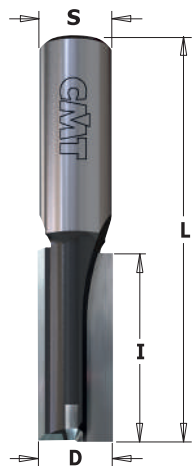
TECHNICAL DETAILS:

- Super strength steel.
- 2 precision ground HW cutting edges and 1 HW plunge centre tip [Z2+1].

APPLICATION:

used for drilling, grooving or jointing on solid wood and wood composites. Can be used on machining centres, CNC routers and hand-held routers equipped with chucks or adapters.

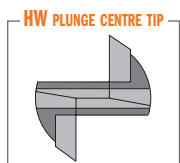
new



112



D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation
• 3	10	48	9,5	50	112.030.11
• 4	10	48	9,5	50	112.040.11
• 5	12	48	9,5	50	112.050.11
• 6	14	41	9,5	50	112.060.11
• 7	16	43	9,5	50	112.070.11
• 8	18	48	9,5	50	112.080.11
• 8	30	60	9,5	50	112.081.11
• 9	20	55	9,5	50	112.090.11
10	22	52	9,5	50	112.100.11
10	35	65	9,5	50	112.101.11
11	26	52	9,5	10	112.110.11
12	26	52	9,5	10	112.120.11



• **HWM**

TECHNICAL DETAILS:

- Super strength steel.
- 2 precision ground HW cutting edges
- 1 HW plunge centre tip [Z2+1].

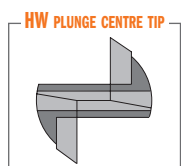
Router Cutters



113



D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation
12	26	52	12	10	113.120.11
12	40	70	12	10	113.121.11
13	26	52	12	10	113.130.11
14	28	56	12	10	113.140.11
14	40	72	12	10	113.141.11
15	32	60	12	10	113.150.11
16	32	60	12	10	113.160.11
16	40	72	12	10	113.161.11
18	35	64	12	10	113.180.11
19	38	68	12	1	113.190.11
20	38	68	12	1	113.200.11
22	40	72	12	1	113.220.11
24	40	72	12	1	113.240.11
25	40	72	12	1	113.250.11
26	42	74	12	1	113.260.11
28	42	74	12	1	113.280.11
30	42	74	12	1	113.300.11

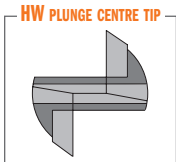
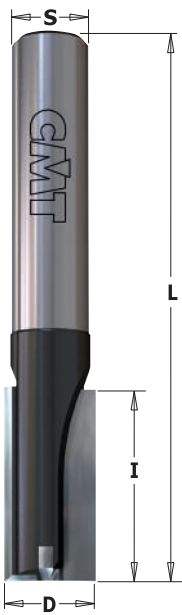


TECHNICAL DETAILS:

- Super strength steel.
- 2 precision ground HW cutting edges
- 1 HW plunge centre tip [Z2+1].

APPLICATION:

used for plunging cutting and grooving on solid wood and wood derivatives as well as laminates and plastic materials. For use on CNC machining centres, CNC routers, hand-held routers and point-to-point machines equipped with chucks or adapters.

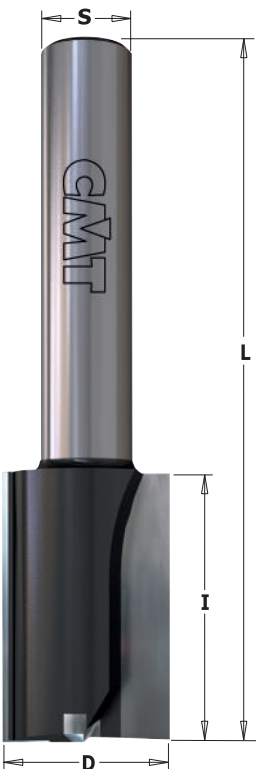


TECHNICAL DETAILS:

- Premium quality HWM.
- 2 radial relief cutting edges [Z2].
- 1 HW [Z1] plunge centre tip.

APPLICATION:

used for plunging cutting and grooving on solid wood and wood derivatives as well as laminates and plastic materials. For use on CNC machining centres, CNC routers, hand-held routers and point-to-point machines equipped with chucks or adapters.



175



D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation
• 4	10	65	10	50	175.040.11
• 5	12	65	10	50	175.050.11
• 6	14	65	10	50	175.060.11
• 7	16	65	10	50	175.070.11
8	20	65	10	50	175.080.11
10	25	70	10	50	175.100.11
12	25	70	10	10	175.120.11
14	25	70	10	10	175.140.11
15	25	70	10	10	175.150.11
16	25	70	10	10	175.160.11
18	25	70	10	10	175.180.11
20	25	70	10	10	175.200.11
22	25	70	10	10	175.220.11
24	25	70	10	10	175.240.11
25	25	70	10	10	175.250.11
26	25	70	10	10	175.260.11
30	25	70	10	10	175.300.11
35	25	70	10	10	175.350.11

• HWM

176



D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation
10	40	87	10	10	176.100.11
12	40	87	10	10	176.120.11
14	40	87	10	10	176.140.11
15	40	87	10	10	176.150.11
16	40	87	10	10	176.160.11
18	40	87	10	10	176.180.11
20	40	87	10	10	176.200.11

177



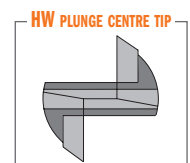
D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation
10	35	90	12	10	177.100.11
12	35	90	12	10	177.120.11
12	50	100	12	10	177.121.11
14	35	90	12	10	177.140.11
16	35	90	12	10	177.160.11
16	60	110	12	10	177.161.11
18	35	90	12	10	177.180.11
18	60	110	12	10	177.181.11
20	35	90	12	10	177.200.11
22	35	90	12	10	177.220.11
24	35	90	12	10	177.240.11
25	35	90	12	10	177.250.11
26	35	90	12	10	177.260.11
28	35	90	12	10	177.280.11
30	35	90	12	10	177.300.11
35	35	90	12	10	177.350.11

TECHNICAL DETAILS:

- Super strength steel.
- 2 precision ground HW cutting edges
- 1 HW plunge centre tip [Z2+1].

APPLICATION:

used for plunge cutting and grooving on solid wood, wood derivatives as well as laminates and plastic materials. For use on CNC machining centres, CNC routers and hand-held routers.



XTreme Plunge CNC Cutters with Insert Knives



653 XTREME



D mm	I mm	L mm	S mm	Box	ORDER NO. Right-hand rotation	Spare parts	
40	29,5	100	20	10	653.001.11		
						790.295.12	790.120.00

Spare parts: **990.075.00** M4x6mm TORX® screw
991.061.00 T15 TORX® key
990.036.00 M8x25mm TE screw
990.020.00 Hex nut for threaded arbors M8

TECHNICAL DETAILS:
 - Super strength steel.
 - 4 cutting edges [Z2+2]

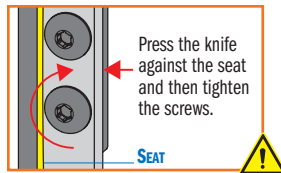
APPLICATION:
 the new CNC cutter is designed with 2 plunging knives and two-sided knives fixed by special TORX® screws. It is ideal for direct plunge into the material and fast removal over a large surface area leaving an improved finish at the bottom of the cut. For cutting soft/hard wood, chipboard, melamine, MDF. For use on pantograph CNC machines.

SAFETY TIPS:



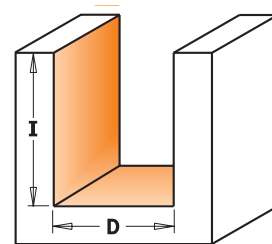
The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 406).

CORRECT KNIFE POSITIONING



Press the knife against the seat and then tighten the screws.

SEAT



Drawing is 1:2 scale

Straight Router Cutters with Insert Knives



653



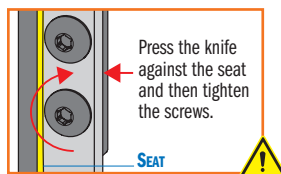
D mm	I mm	L mm	S mm	Box	ORDER NO. Right-hand rotation	Spare parts	
16	28,3	92	20	10	653.661.11		
16	48,3	111,5	20	10	653.662.11	790.283.12	790.075.00
18	48,3	111,5	20	10	653.681.11	790.483.12	790.075.00
20	48,3	111,5	20	10	653.701.11	790.483.12	790.075.00

Spare parts: **990.072.00** M3,5x3,5mm TORX® screw
990.074.00 M4x3,5mm TORX® screw
990.075.00 M4x6mm TORX® screw
991.061.00 T15 TORX® key

TECHNICAL DETAILS:
 - Super strength steel.
 - 2 cutting edges [Z1+1].

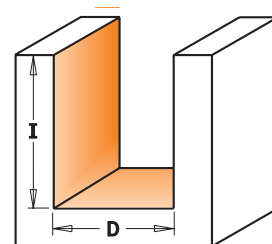
APPLICATION:
 straight router bits with on replaceable plunging knife and side knife fixed by a special TORX® screw. The tool bodies are precisely balanced. For finishing, routing, plunging and grooving on board materials (laminated chipboards and MDF) and hardwood. For use on portable routers or CNC machining centres.

CORRECT KNIFE POSITIONING



Press the knife against the seat and then tighten the screws.

SEAT



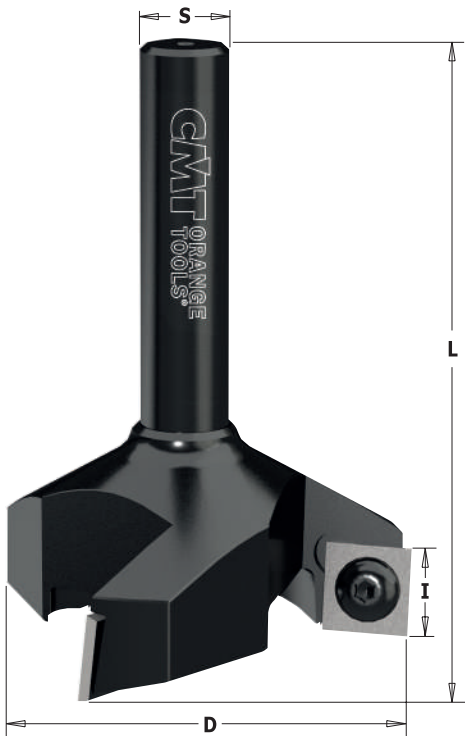
Drawing is 1:1 scale

SAFETY TIPS:



The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 406).

Spoilboard Surfacing Router Cutters with Insert Knives



663

INSERT CARBIDE
MEC
Z3
Z4
RH
NO HANDS
NO OIL
NO DUST
4X CUTTING

D mm	I mm	L mm	Z	S mm		ORDER NO. Right-hand rotation
35	10,5	60	3	8x38	10	663.007.11
38	12	60	3	12x38	10	663.005.11
new 38	12	60	3	12,7x38	10	663.015.11
new 60	12	80	3	12x50	10	663.004.11
60	12	80	3	12,7x50	10	663.014.11
80	12	90	3	20x60	10	663.003.11
100	12	90	4	20x50	1	663.006.11

Spare parts

	990.078.00
	990.075.00
	990.075.00
	990.075.00
	990.075.00
	990.075.00
	990.075.00
	990.075.00
	990.075.00

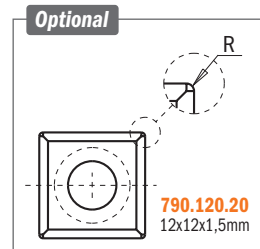
Spare parts: 991.061.00 T15 TORX® key
 990.036.00 M8x25mm TE screw (for 663.003.11 and 663.006.11)
 990.020.00 Hex nut for threaded arbors M8 (for 663.003.11 and 663.006.11)

*Minimum 10 pieces or multiple

TECHNICAL DETAILS:

- Super strength steel.
- 3 cutting edges [Z3].
- 4 cutting edges [Z4].

APPLICATION:
 the new router bit for CNC routers is ideal for fast removal of material over a large surface area leaving an improved finish at the bottom of the cut. Used on soft and hardwood, particle board and MDF. The cutter uses 4-sided inserts in super micrograin carbide.

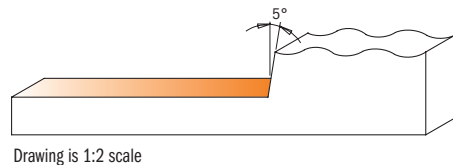
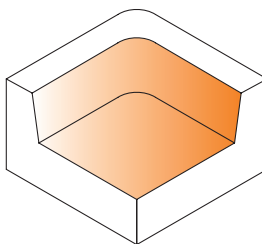


A cost effective solution compared to brazed router bits and solid carbide spiral bits.

SAFETY TIPS:



The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 406).



Spoilboard Surfacing Router Cutters

new



178

HW
Z3
Z4
RH

D mm	I mm	L mm	Z	S mm		ORDER NO. Right-hand rotation
25,4	6,35	41	3	6,35	1	178.701.11
34,9	9,5	57	3	8	1	178.702.11
50,8	12,7	63,5	4	12	1	178.703.11
50,8	12,7	63,5	4	12,7	1	178.704.11

TECHNICAL DETAILS:

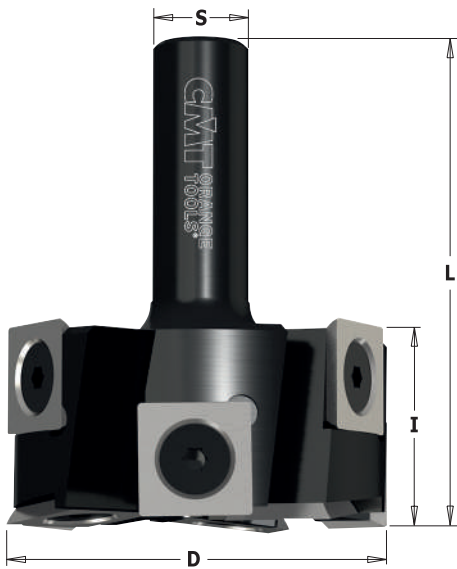
- Super-strength steel.
- 3 cutting edge [Z3]
- 4 cutting edge [Z4]

APPLICATION:
 The new router bit for CNC routers is ideal for fast removal of material over a large surface area leaving an improved finish at the bottom of the cut. Used on soft and hardwood, particle board and MDF. The cutter uses 4-sided inserts in super micrograin carbide. A cost effective solution compared to brazed router bits and solid carbide spiral bits.

XTreme Spoilboard Surfacing Router Cutter with Insert Knives

new

CMT ORANGE TOOLS®



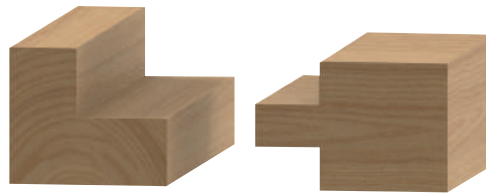
663.5 XTREME

INSERT CARBIDE MEC Z6+3 RH 4X CUTTING

D mm	I mm	L mm	S mm	Box	ORDER NO. Right-hand rotation	Spare parts	
50,8	25,4	63,5	12	10	663.502.11		
50,8	25,4	63,5	12,7	10	663.501.11	790.140.20*	990.080.00
						790.140.20*	990.080.00

TECHNICAL DETAILS:
 - Super strength steel
 - 6 + 3 cutting edges [Z6+V3]

APPLICATION: this new router bit designed for CNC router machines and stationary router machine work centers are ideal for rabbeting joints and for quick chip removal on large surface areas and leaves a good finish at the bottom of the cut. Ideal for soft and hard wood, particle board and MDF. This bit is equipped with 4 sided insert knives in super micrograin carbide - an economical solution for brazed and solid carbide spiral bits.



SAFETY TIPS:
 The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 406).

NOTE: for optimum finish, radius inserts **790.140.20** are recommended.

790.140.20
14x14x2mm

Universal Profile Cutter for CNC Machines



KNIVES NOT INCLUDED

663.301

SP MEC Z2 RH

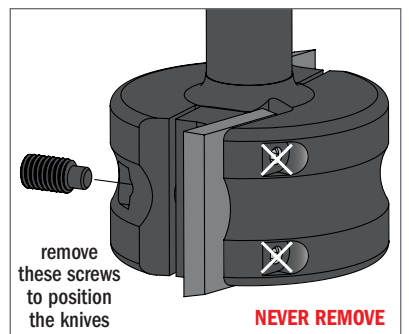
D mm	I mm	L mm	S mm	Box	ORDER NO. Right-hand rotation
65	40-50	93	20	1	663.301.11

Spare parts: **692.999.01** 38x15x16mm wedge for cutter
990.064.00 M8x16mm STEI screw
991.064.00 Hex key 4mm

TECHNICAL DETAILS:
 - Super Strength steel.
 - 2 cutting edges [Z2] for knives 40x4mm and 50x4mm.

APPLICATION: for universal profiling of solid wood on CNC router machines. For cutting width 40mm and 50mm (serie **690**). Profile knives may only be ordered and used in pairs.

USEFUL TIPS: for enhanced safety, when using 50mm knives, it is recommended to carry out the cut in several passes.



SAFETY TIPS:
 The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 406).

Suggested MAX RPM 12.000

TO BE USED WITH SP KNIVES SERIES 690 (SEE PAGE 118~131)

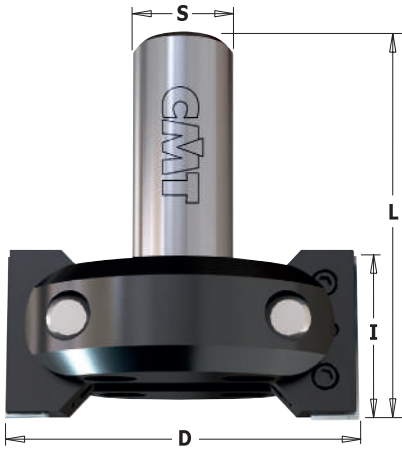
690.000 **690.001** **690.002**

Profile knives cutting length=40mm (serie **690**)

690.500 **690.501** **690.502**

Profile knives cutting length=50mm (serie **690.5**)

Adjustable Chamfering CNC Cutter



663.201



D mm	D_Max 45° mm	I mm	A	L mm	S mm	ORDER NO.
85	102	39,5	0°-45° - 0°+90°	92	20	Right-hand rotation 663.201.11

- Spare parts:**
- 790.395.12** 39,5x12x1,5mm knife (Minimum 10 pieces or multiple)
 - 663.999.01** 38x6x12mm wedge
 - 990.087.00** M6x8mm STEI screw (4x2mm threaded pin)
 - 991.067.00** 3mm hex key
 - 663.999.02** Kit with 2 wedges and 1 screw for blocking rotation
 - 990.099.00** M8x25mm TCEI screw
 - 990.023.00** M8 (4mm) nut
 - 991.081.00** 4mm "T" hex key

SAFETY TIPS:

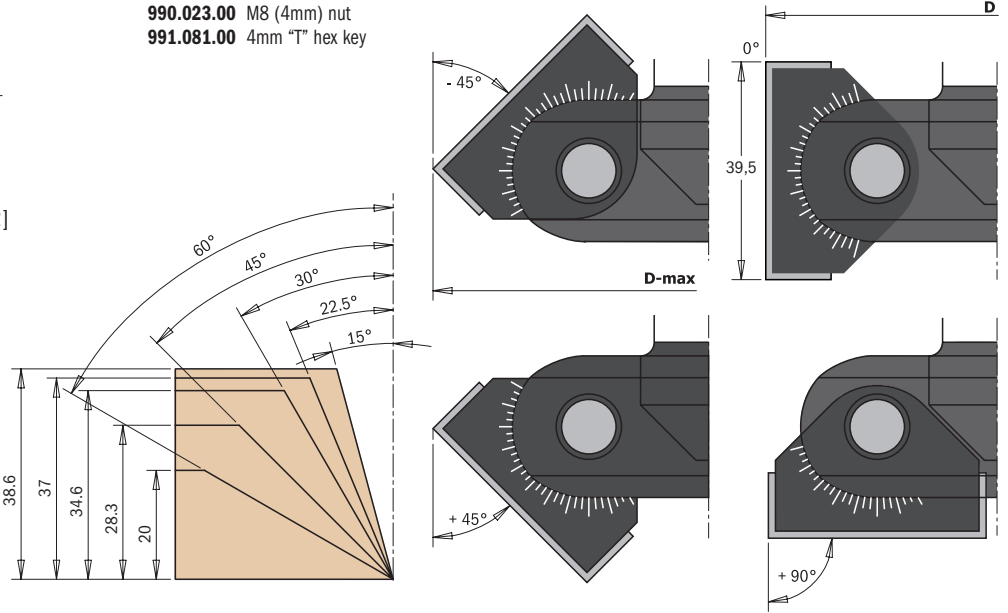
The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 406).

TECHNICAL DETAILS:

- Tool body in steel
- 2 reversible HWM knives 39,5x12x1,5mm [Z2]
- Peripheral cutting on both sides
- Adjustable swivelling blade (Rotates at 7,5° intervals; Precision = 7,5°)
- Swivelling range 0-45° towards top, and 0-90° towards bottom

APPLICATION:

for jointing, rebating and chamfering of solid wood and wooden boards. Suitable for CNC router machines and stationary router machine with manual or mechanical feed. Never modify the chamfering angle whilst changing the knives. RH rotation.



V-Groove - Folding - Signmaking CNC Router Cutters with Insert Knives



663.1



D mm	I mm	L mm	A	S mm	Z	ORDER NO.
34	40	115	45°	20	1	663.103.11
44	38	115	60°	20	1	663.102.11
52	25	102	91°	20	1	663.101.11
60	21	95	110°	20	1	663.110.11
87,5	24	95	120°	20	2	663.120.11
91	20	95	130°	20	2	663.130.11
96,5	12,4	95	150°	20	2	663.150.11

Spare parts

790.580.01*	
790.580.01*	
790.360.01*	
790.360.01*	
790.496.01*	
790.496.01*	
790.496.01*	

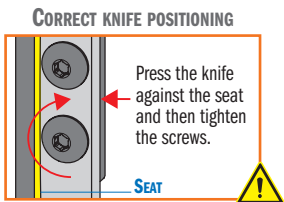
- Spare parts:**
- 990.073.00** M3,5x5x7,2mm TORX® T15 screw (for 790.580.01 and 790.360.01)
 - 990.075.00** M4x6x8,2mm TORX® T15 screw (for 790.496.01)
 - 991.061.00** T15 TORX® key
 - 990.036.00** M8x25mm TE screw
 - 990.020.00** Hex nut for threaded arbors M8

Optional 5790.360.03* 36x12x1,5mm HW-SMG replaceable knife (4 cutting edges 35°)

*Minimum 10 pieces or multiple

SAFETY TIPS:

The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 406).

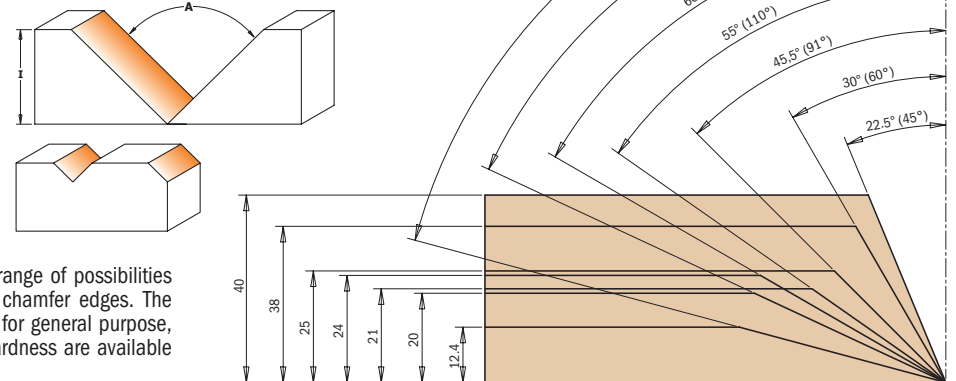


TECHNICAL DETAILS:

- Super strength steel.
- 1 cutting edge [Z1]
- 2 cutting edges [Z2]

APPLICATION:

this innovative CNC router bit offers you an endless range of possibilities for V-Groove, miter folds, signmaking, lettering and chamfer edges. The tool mounts a high grade HWM reversible knife ideal for general purpose, chipboard and plywood, but knives with increased hardness are available for laminated and MDF material.





300.023.01 Basic CNC Kit

DESCRIPTION	Q.TY	ORDER NO.
CHUCK -XTREME- HSK-63F (H73) "ER32" PRECISION COLLET RH	1	183.300.01
C-SPANNER FOR "ER32" PRECISION COLLET	1	991.183.00
PRECISION COLLET DIN6499 "ER32" (33x40mm) D=12mm	1	184.120.00
PRECISION COLLET DIN6499 "ER32" (33x40mm) D=20mm	1	184.200.00
STRAIGHT ROUTER CUTTER WITH INSERT KNIVES HW Z1+1 S=20 D=18x48.3mm RH	1	653.681.11
HWM REVERSIBLE KNIVES STD (4/35°) 48.3x12x1.5mm RH	10	790.483.12
HWM REVERSIBLE KNIVES STD (2/35°) 7.5x12x1.5mm	10	790.075.00
KEY TORX® T15	1	991.061.00
SOLID CARBIDE UPCUT SPIRAL BITS Z3 POS. HWM D=12x42x90mm RH	1	193.121.11
2 FLUTE DOWEL DRILL HW S=10x30mm D=5x35x70mm RH	2	311.050.11
2 FLUTE DOWEL DRILL HW S=10x30mm D=5x35x70mm LH	2	311.050.12
2 FLUTE DOWEL DRILL HW S=10x30mm D=8x35x70mm RH	4	311.080.11
2 FLUTE DOWEL DRILL HW S=10x30mm D=8x35x70mm LH	4	311.080.12
HINGE BORING BITS HW Z2+2 S=10x26mm D=15x70mm RH	1	369.150.11
HINGE BORING BITS HW Z2+2 S=10x26mm D=35x70mm RH	1	369.350.11

At request available with ER40



300.025.01 Expert for "Nesting" CNC Kit

DESCRIPTION	Q.TY	ORDER NO.
CHUCK -XTREME- HSK-63F (H73) "ER32" PRECISION COLLET RH	2	183.300.01
C-SPANNER FOR "ER32" PRECISION COLLET	1	991.183.00
PRECISION COLLET DIN6499 "ER32" (33x40mm) D=12mm	1	184.120.00
PRECISION COLLET DIN6499 "ER32" (33x40mm) D=20mm	1	184.200.00
KINETIC DUST EXTRACTOR FOR CHUCK WITH "ER32" D=100mm RH	1	992.101.ER32
C-SPANNER 95-100mm FOR KINETIC "ER32"/"ER40"	1	991.284.00
SPOILBOARD SURFACING ROUTER CUTTER W/INSERT KNIVES HW Z3 S=20x50mm D=80x12x90mm	1	663.003.11
HWM REVERSIBLE KNIVES STD (4/35°) 12x12x1.5mm	10	790.120.03
KEY TORX® T15	1	991.061.00
ROUTER CUTTERS WITH SHEAR ANGLE FOR NESTING Z3 9DP S=12mm D=12x25x70mm RH	1	143.120.61
2 FLUTE DOWEL DRILL HW S=10x30mm D=5x35x70mm RH	2	311.050.11
2 FLUTE DOWEL DRILL HW S=10x30mm D=5x35x70mm LH	2	311.050.12
2 FLUTE DOWEL DRILL HW S=10x30mm D=8x35x70mm RH	4	311.080.11
2 FLUTE DOWEL DRILL HW S=10x30mm D=8x35x70mm LH	4	311.080.12
HINGE BORING BITS HW Z2+2 S=10x26mm D=15x70mm RH	1	369.150.11
HINGE BORING BITS HW Z2+2 S=10x26mm D=35x70mm RH	1	369.350.11



Includes:

At request available with ER40



616.000.01

This unique system includes a tool body with 22 profile knives designed for multiple applications on your CNC routers. Ideal for MDF, laminates, veneers, plastic, wood and solid surface materials.

TECHNICAL DETAILS:

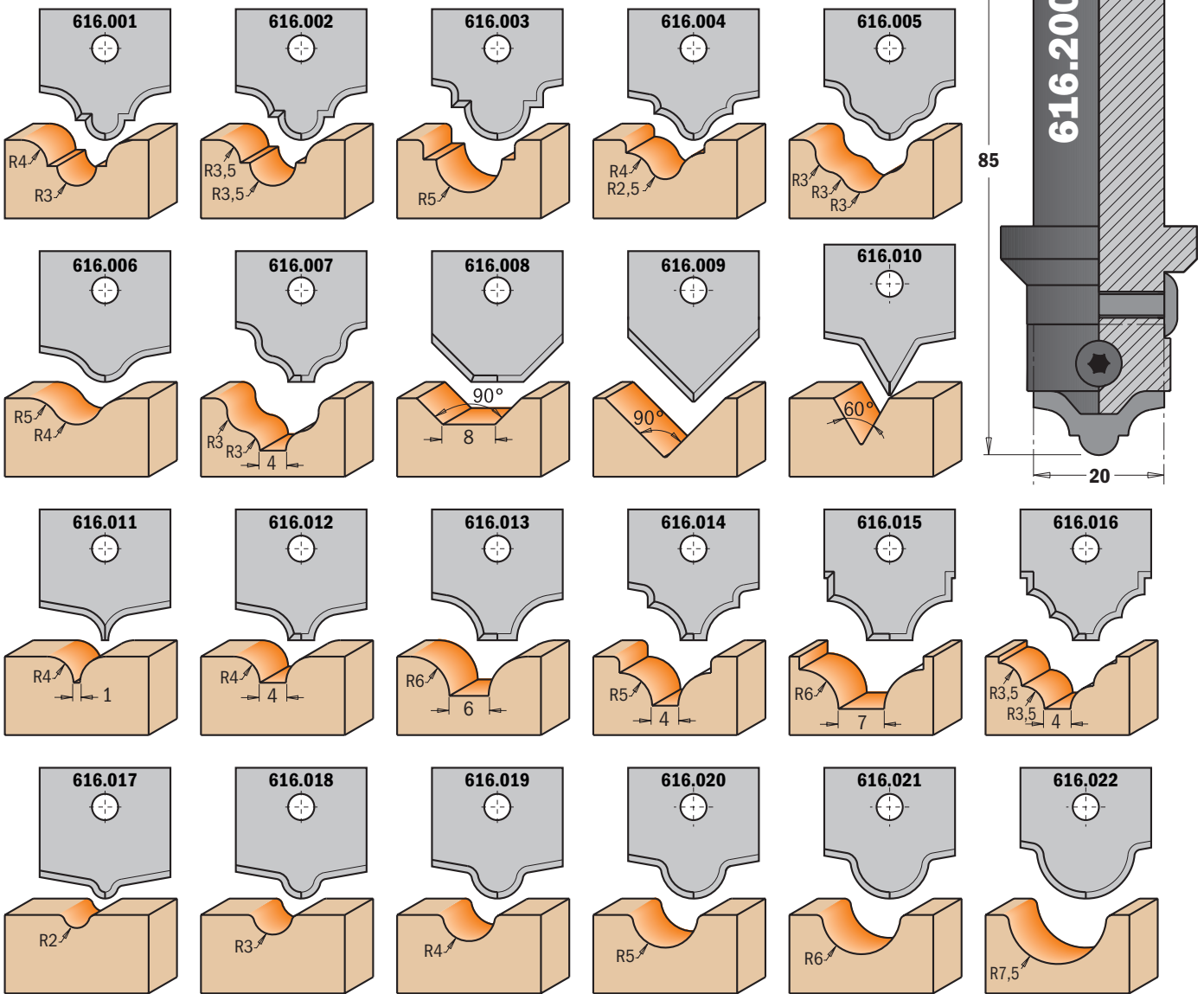
Knives 20x20x2mm.

We recommend re-sharpening the knives on profile cutting edge.

SAFETY TIPS:



The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 406).



Drawing is 1:1 scale

DESCRIPTION	S mm		ORDER NO. Right-hand rotation	Spare parts		
Complete Set for Decorating on MDF	20	10	616.000.01			
Router cutter body with shank Ø20mm (insert knives not included)	20	10	616.200		990.077.00	991.061.00
Router cutter body with shank Ø12mm (insert knives not included)	12	10	616.120		990.077.00	991.061.00

REMARK: tool body and insert knives can be sold individually.

Complete Set for MDF Doors



615.004.01

Open some new doors with CMT. Our 4-piece set includes the most popular profile to make MDF panel doors for kitchens and bathrooms. Each bit is made from bar stock steel and is equipped with 5 different profile knives allowing enormous possibilities for easy and economical construction. The highest materials, the lowest tolerance in balancing and the precision in the sharpening of the knives let you obtain a smooth finish on your CNC machine.

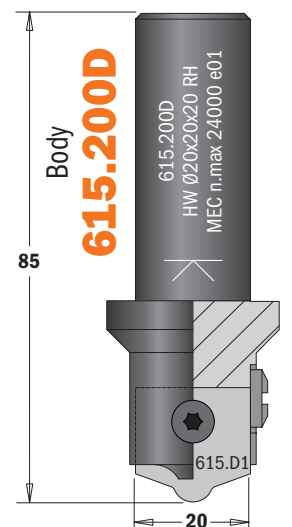
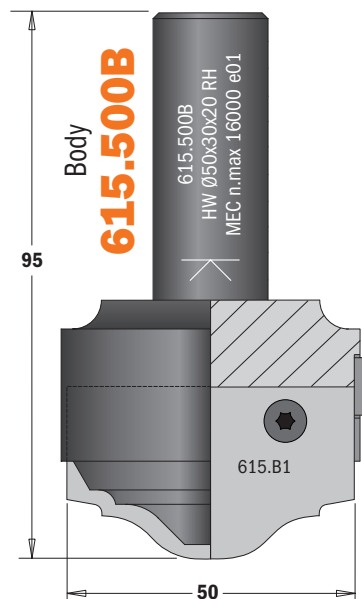
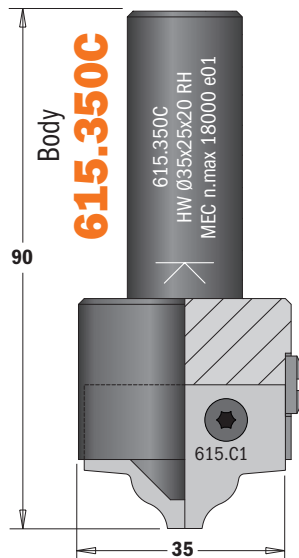
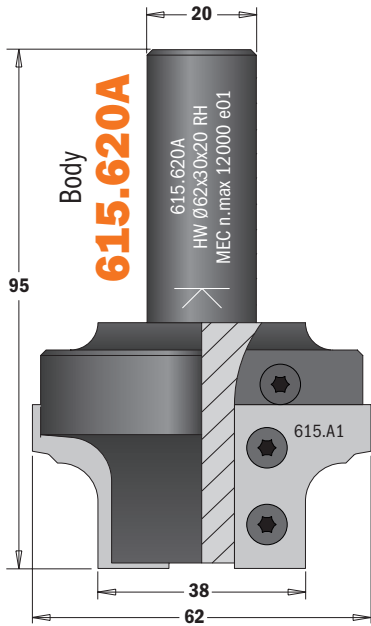
SAFETY TIPS:



The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 406).

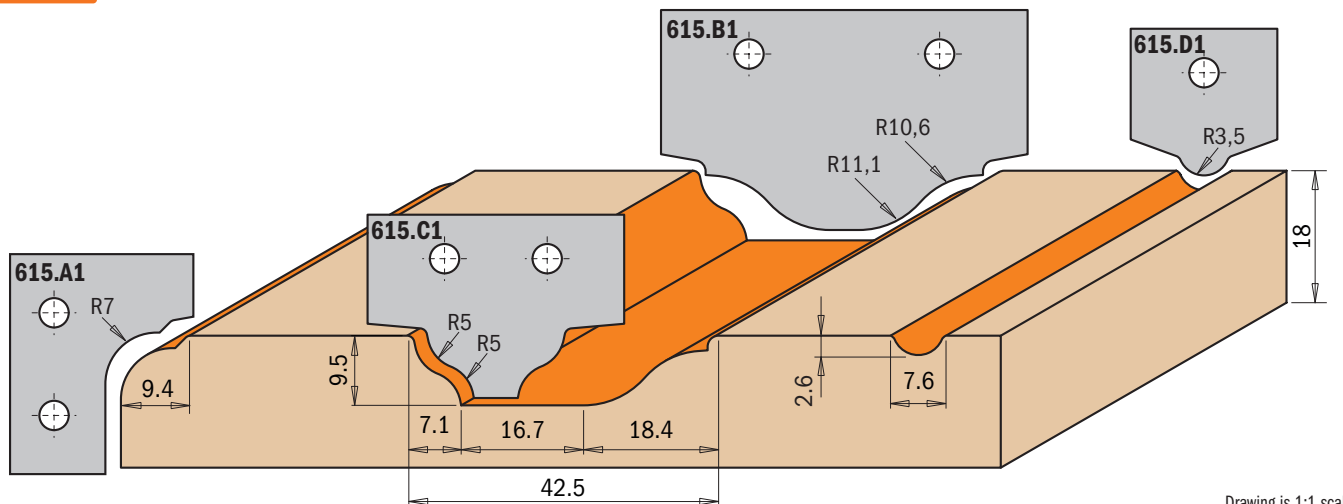


DESCRIPTION	S mm	ORDER NO.	Spare parts	
Complete Set for MDF Doors (Profile no. 1)	20	Right-hand rotation 615.004.01	990.077.00	991.061.00



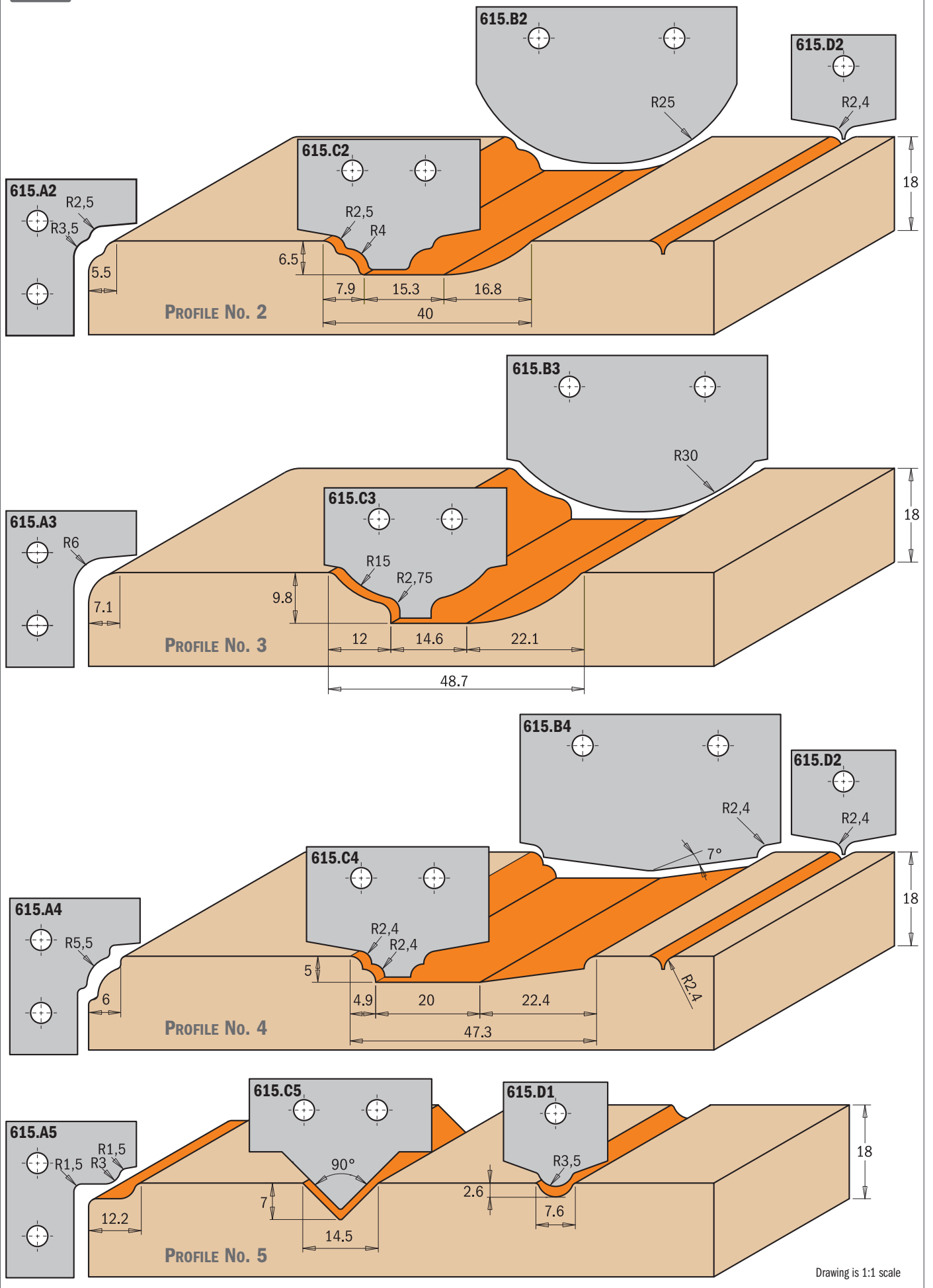
Standard

Profile No. 1



Drawing is 1:1 scale

Optional



Drawing is 1:1 scale



102



D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
6	50	105	16	10	102.060.31	102.060.32
7	55	110	16	10	102.070.31	102.070.32
8	60	115	16	10	102.080.31	102.080.32
9	65	120	16	10	102.090.31	102.090.32
10	70	125	16	10	102.100.31	102.100.32
11	75	130	16	10	102.110.31	102.110.32
12	80	135	16	10	102.120.31	102.120.32
13	85	140	16	10	102.130.31	102.130.32
14	90	145	16	10	102.140.31	102.140.32
15	95	150	16	10	102.150.31	102.150.32
16	100	155	16	10	102.160.31	102.160.32
17	105	160	16	10	102.170.31	102.170.32
18	110	165	16	10	102.180.31	102.180.32
19	115	170	16	10	102.190.31	102.190.32
20	120	175	16	10	102.200.31	102.200.32
22	125	180	16	10	102.220.31	102.220.32
24	125	180	16	10	102.240.31	102.240.32

172

D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
6	50	105	13	10	172.060.31	172.060.32
7	55	110	13	10	172.070.31	172.070.32
8	60	115	13	10	172.080.31	172.080.32
9	65	120	13	10	172.090.31	172.090.32
10	70	125	13	10	172.100.31	172.100.32
11	75	130	13	10	172.110.31	172.110.32
12	80	135	13	10	172.120.31	172.120.32
13	85	140	13	10	172.130.31	172.130.32
14	90	145	13	10	172.140.31	172.140.32
15	95	150	13	10	172.150.31	172.150.32
16	100	155	13	10	172.160.31	172.160.32
18	110	165	13	10	172.180.31	172.180.32
20	120	175	13	10	172.200.31	172.200.32

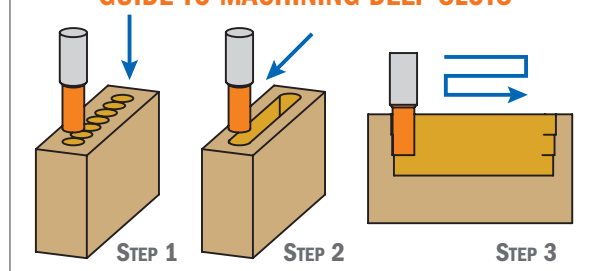
TECHNICAL DETAILS:

- Long-lasting cutting performance.
- 2 HL precision ground straight cutting edges with chip-breaker teeth [Z2R].

APPLICATION:

for cutting deep mortise slots in natural soft and medium density wood. For use on combination machining centres equipped with adaptors and/or chucks.

GUIDE TO MACHINING DEEP SLOTS



6-Piece Mortising Bit Sets

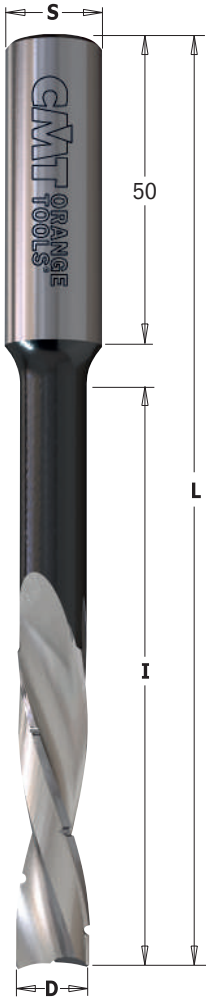
102 - 172



Our classic set of 6 spiral mortising bits with both Ø16mm and Ø13mm shanks made of super strength high speed steel and available in left-hand or right-hand rotation. Safely packaged in a plastic box for protection, these sets are economical and a perfect addition to any workshop.



S mm	D mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
16	6-8-10-12-14-16	1	102.001.00	102.001.10
13	6-8-10-12-14-16	1	172.001.00	172.001.10



161



D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
6	60	120	16	10	161.060.31	161.060.32
8	70	130	16	10	161.080.31	161.080.32
10	80	140	16	10	161.100.31	161.100.32
12	90	150	16	10	161.120.31	161.120.32
14	100	160	16	10	161.140.31	161.140.32
16	110	170	16	10	161.160.31	161.160.32

160



D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
6	60	120	13	10	160.060.31	160.060.32
8	70	130	13	10	160.080.31	160.080.32
10	80	140	13	10	160.100.31	160.100.32
12	90	150	13	10	160.120.31	160.120.32
14	100	160	13	10	160.140.31	160.140.32
16	110	170	13	10	160.160.31	160.160.32

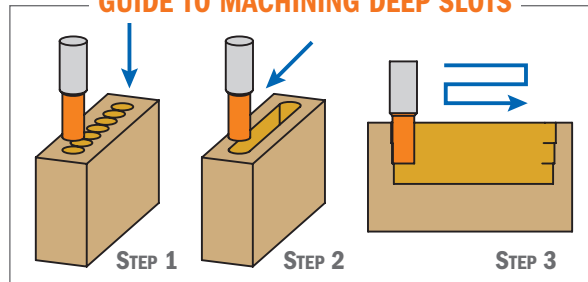
TECHNICAL DETAILS:

- Long-lasting cutting performance.
- 2 HSS precision ground spiral cutting edges with chip-breaker teeth [Z2R].

APPLICATION:

for cutting mortise slots in soft and hardwood. Used on combined machining centres equipped with chucks.

GUIDE TO MACHINING DEEP SLOTS



6-Piece Mortising Bit Sets

160 - 161



Ideal for heavy mortise jobs. Made of super strength high speed steel and available in left-hand or right-hand rotation. Safely packaged in a plastic box for protection, these sets are economical and a perfect addition to any workshop.



S mm	D mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
16	6-8-10-12-14-16	1	161.001.00	161.001.10
13	6-8-10-12-14-16	1	160.001.00	160.001.10

Carbide Spiral Slot Mortising Bits with Chip-Breaker



161



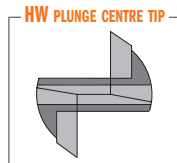
D mm	I ₁ mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
12	25	75	150	16x50	10	161.120.11	161.120.12
16	25	95	170	16x50	10	161.160.11	161.160.12

TECHNICAL DETAILS:

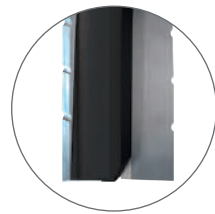
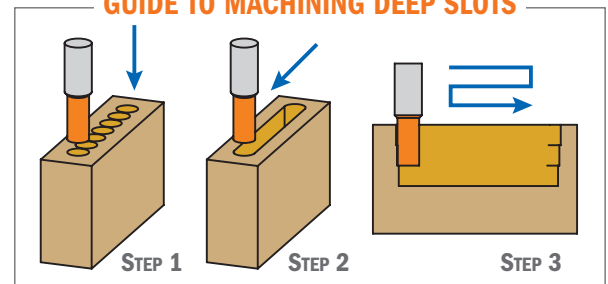
- Super strength steel
- Long-lasting cutting performance.
- 2 precision ground HW cutting edges with chip-breaker teeth
- 1 HW plunge centre tip [Z2R+1]

APPLICATION:

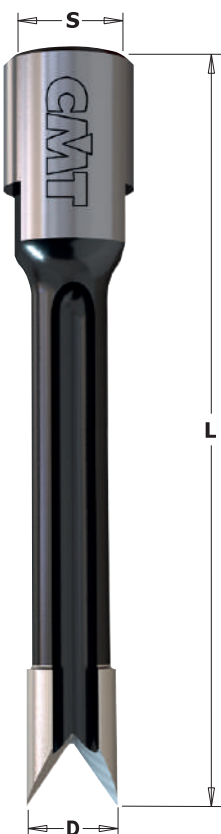
for cutting deep mortise slots in natural soft or medium density wood. For use on machining centres equipped with chucks. RPM 3000~5000



GUIDE TO MACHINING DEEP SLOTS



Slot & Mortise Boring Bits



163



D mm	L mm	S mm		ORDER NO. Right-hand rotation
12	100	M12x1	1	163.120.11
14	100	M12x1	1	163.140.11
16	100	M12x1	1	163.160.11

TECHNICAL DETAILS:

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

APPLICATION:


for cutting slots and mortises in solid wood, wood derivatives and laminates. For use on mortising machines equipped with chucks.

Slot & Mortise Boring Bits



164



D mm	L mm	S mm			ORDER NO. Right-hand rotation	
18	100	M12x1		1	164.180.11	
20	100	M12x1		1	164.200.11	
22	100	M12x1		1	164.220.11	

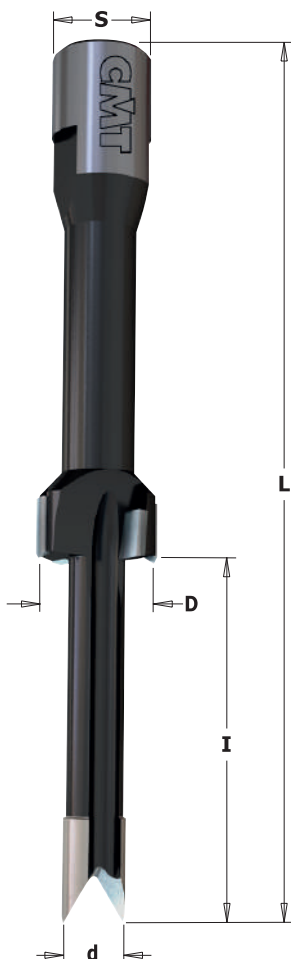
TECHNICAL DETAILS:

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

APPLICATION:


for drilling blind holes in solid wood, wood composites, plastic and laminated materials. For use on slot and mortise machines equipped with chucks.

Slot & Mortise Boring Bits



166 - 167



d mm	D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation	
11	22	62	155	M12x1	1	166.220.11	
12	19	62	155	M12x1	1	167.190.11	

TECHNICAL DETAILS:

- Super strength steel.
- 2 HW precision ground cutting edges [Z2].
- 2 negatively HW ground spurs [V2].

APPLICATION:

for creating mortise slots in solid wood, wood derivatives and laminates. For use on slot and mortise machines equipped with chucks.

Reciprocating Slot Mortising Bits



103



D mm	I mm	L mm	S mm		ORDER NO. Right-hand & Left-hand rotation
6	45	100	16	1	103.060.30
7	45	100	16	1	103.070.30
8	45	100	16	1	103.080.30
9	45	100	16	1	103.090.30
10	55	110	16	1	103.100.30
11	55	110	16	1	103.110.30
12	55	110	16	1	103.120.30
13	55	110	16	1	103.130.30
14	55	110	16	1	103.140.30
15	55	110	16	1	103.150.30
16	55	110	16	1	103.160.30

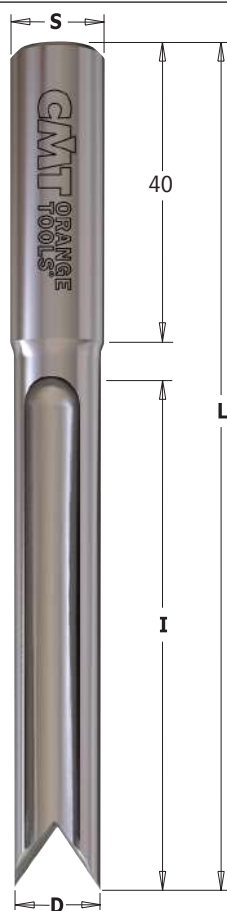
TECHNICAL DETAILS:

- Long-lasting cutter performance.
- 2 HL precision ground cutting edges [Z2].

APPLICATION:

for cutting deep mortise slots in soft and hardwood. For use on combination machining centres equipped with adaptors and/or chucks.

Reciprocating Slot Mortising Bits



179



D mm	I mm	L mm	S mm		ORDER NO. Right-hand & Left-hand rotation
6	45	90	13	1	179.060.50
7	50	95	13	1	179.070.50
8	50	95	13	1	179.080.50
9	55	100	13	1	179.090.50
10	60	105	13	1	179.100.50
11	65	110	13	1	179.110.50
12	70	115	13	1	179.120.50
13	75	120	13	1	179.130.50

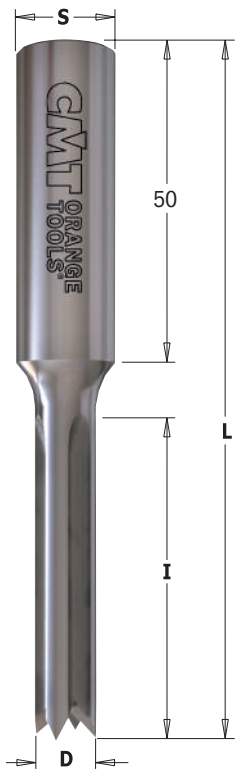
TECHNICAL DETAILS:

- Long-lasting cutter performance.
- 2 HSS precision ground cutting edges [Z2].

APPLICATION:

for cutting deep mortise slots in natural soft or medium density wood. For use on combination machining centres equipped with adaptors and/or chucks.

Reciprocating Slot Mortising Bits



104



D mm	I mm	L mm	S mm		ORDER NO. Right-hand & Left-hand rotation
6	45	100	13	1	104.060.30
7	45	100	13	1	104.070.30
8	45	100	13	1	104.080.30
9	45	100	13	1	104.090.30
10	55	110	13	1	104.100.30
11	55	110	13	1	104.110.30
12	55	110	13	1	104.120.30
13	55	110	13	1	104.130.30
14	55	110	13	1	104.140.30
15	55	110	13	1	104.150.30
16	55	110	13	1	104.160.30

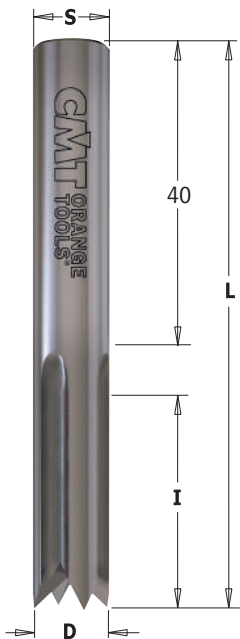
TECHNICAL DETAILS:

- Long-lasting cutting performance
- 4 HL precision ground cutting edges [Z4].

APPLICATION:

for cutting deep mortise slots in soft and medium density wood. For use on mortising machine centres equipped with chucks.

Reciprocating Slot Mortising Bits



105



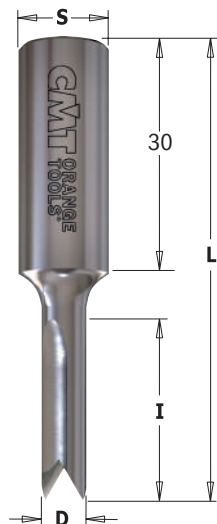
D mm	I mm	L mm	S mm		ORDER NO. Right-hand & Left-hand rotation
6	28	73	10	1	105.060.30
7	28	73	10	1	105.070.30
8	28	73	10	1	105.080.30
9	28	73	10	1	105.090.30
10	28	73	10	1	105.100.30
11	28	73	10	1	105.110.30
12	28	73	10	1	105.120.30
13	28	73	10	1	105.130.30
14	28	73	10	1	105.140.30
15	28	73	10	1	105.150.30
16	28	73	10	1	105.160.30

TECHNICAL DETAILS:

- Long-lasting cutting performance
- 4 HL precision ground cutting edges [Z4].

APPLICATION:

for cutting deep mortise slots in natural soft and medium density wood. For use on mortising machine centres equipped with chucks.



106



D mm	I mm	L mm	S mm	Z		ORDER NO. Right-hand & Left-hand rotation
6	25	60	12	2	1	106.060.30
7	25	60	12	2	1	106.070.30
8	25	60	12	2	1	106.080.30
9	25	60	12	2	1	106.090.30
10	25	60	12	4	1	106.100.30
11	25	60	12	4	1	106.110.30
12	25	60	12	4	1	106.120.30
13	25	60	12	4	1	106.130.30
14	25	60	12	4	1	106.140.30
15	25	60	12	4	1	106.150.30

TECHNICAL DETAILS:

- Long-lasting cutter performance.
- 2 or 4 HL precision ground cutting edges [Z2-Z4].

Slot Mortising Bits



107



D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
6	55	110	16	1	107.060.31	107.060.32
8	55	110	16	1	107.080.31	107.080.32
10	55	110	16	1	107.100.31	107.100.32
12	55	110	16	1	107.120.31	107.120.32
14	60	115	16	1	107.140.31	107.140.32
16	60	115	16	1	107.160.31	107.160.32
18	60	115	16	1	107.180.31	107.180.32
20	60	115	16	1	107.200.31	107.200.32

TECHNICAL DETAILS:

- Long-lasting cutter performance.
- 3 HL precision ground cutting edges [Z3].

APPLICATION:

for cutting mortise slots in natural soft and medium density wood. For use on combination machining centres equipped with chucks.