

CNC ROUTER CUTTERS & CHUCKS

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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)



EASY TO USE!

Installation and removal just like a clamping nut

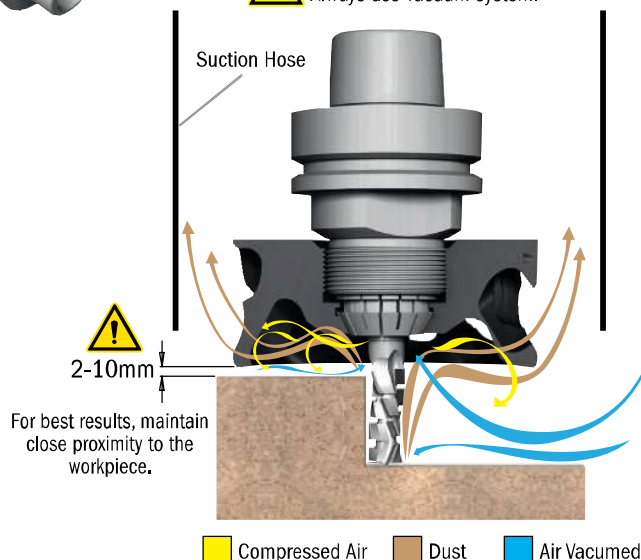
- Better health & safety on the worksite
- Better air quality on the worksite
- Improves tool performance & cut quality
- Longer tool life & reduced labor costs
- Recommended for Nesting and routing operations
- No wasted time throughout operation
- Replaces the standard clamping nut
- Suitable for any 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.



SAFETY TIPS

The **TW-200** Torque Wrench is recommended for the proper fastening of clamping nuts (see page 413).

Always use vacuum system.



Download Instruction



Watch the video on
YouTube

Working **WITHOUT** Kinetic Dust Extractor



Working **WITH** Kinetic Dust Extractor



HSK-63F Chucks for "ER32" Precision Collets



183.300 **X-TREME**



S	TO BE USED WITH COLLET	ORANGE CHROME	NOTE	Box	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

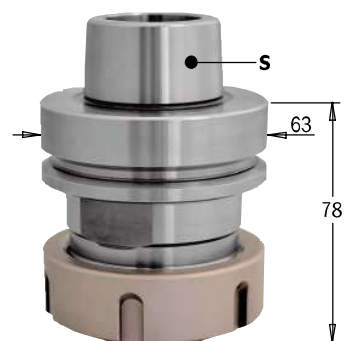
- Prevents overheating.
- Protects against corrosion and rust.
- Reduces resin build-up.
- Longer life and greater tool performance.

SAFETY TIPS



The **TW-200** Torque Wrench is recommended for the proper fastening of clamping nuts (see page 413).

HSK-63F Chucks for "ER40" Precision Collets



183.310 **X-TREME**



S	TO BE USED WITH COLLET	ORANGE CHROME	NOTE	Box	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

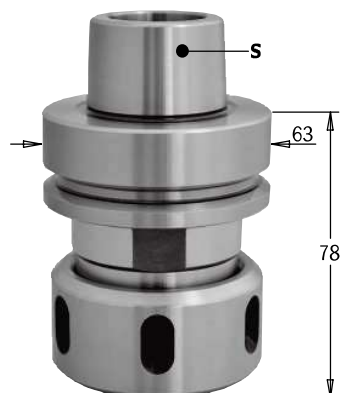
- Prevents overheating.
- Protects against corrosion and rust.
- Reduces resin build-up.
- Longer life and greater tool performance.

SAFETY TIPS



The **TW-200** Torque Wrench is recommended for the proper fastening of clamping nuts (see page 413).

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



183.320



S	TO BE USED WITH COLLET	NOTE	Box	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 413).

HSK-63F Chucks for Shrink Fit Holders



183.075

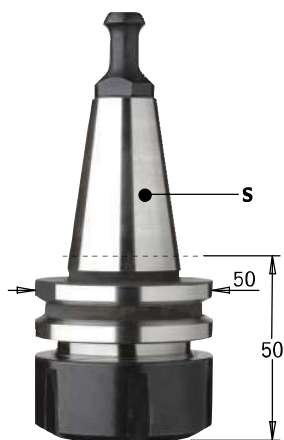


S	B mm		Box	ORDER NO.
HSK-63F	12		1	183.075.12
HSK-63F	16		1	183.075.16
HSK-63F	20		1	183.075.20
HSK-63F	25		1	183.075.25

SPECIAL STEEL UNI 1.2344

- Prevents overheating.
- Protects against corrosion and rust.
- Longer life and greater tool performance.

ISO30 Chucks for “ER32” Precision Collets



995.200

183.200

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

For BIESSE® machines.

RH **LH**



995.201

183.210

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

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

RH **LH**



995.202

183.220

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

For ALBERTI® and MASTERWOOD® machines.

RH **LH**

SAFETY TIPS



The **TW-200** Torque Wrench is recommended for the proper fastening of clamping nuts (see page 413).

ISO30 Chucks for “ER40” Precision Collets



995.200

183.201

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

For BIESSE® machines.

RH



995.201

183.211

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

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

RH



995.202

183.221

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

For ALBERTI® and MASTERWOOD® machines.

RH

SAFETY TIPS



The **TW-200** Torque Wrench is recommended for the proper fastening of clamping nuts (see page 413).

ISO30 Chucks for “ER32” Precision Collets



995.250

183.250

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

For MORBIDELLI® and SCM® machines.

RH **LH**

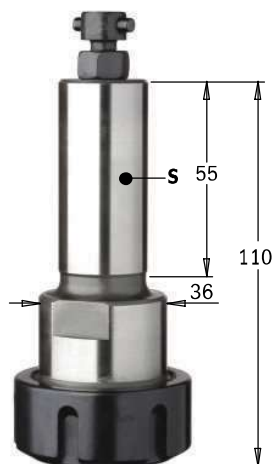
SAFETY TIPS



The **TW-200** Torque Wrench is recommended for the proper fastening of clamping nuts (see page 413).

Chucks for "ER32" Precision Collets

RH



995.400

183.400

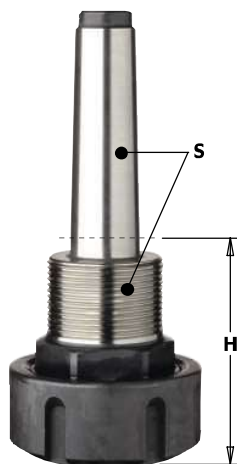
S mm	TO BE USED WITH COLLET	RETAINING STUD		ORDER NO. Right-hand rotation	
Ø25x55	ER32	LEUCO® P-SYSTEM®	1	183.400.01	

For machines with LEUCO® P-SYSTEM®.

SAFETY TIPS



The **TW-200** Torque Wrench is recommended for the proper fastening of clamping nuts (see page 413).



183.000/100 WITH MK2/MK3 TAPERED SHANK

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	

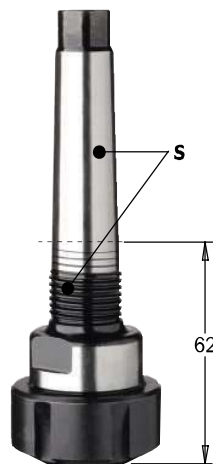
MK2/MK3 tapered shank

SAFETY TIPS



The **TW-200** Torque Wrench is recommended for the proper fastening of clamping nuts (see page 413).

Chucks for Biconical Collets 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 (see page 413).

The **TW-2836** Hook Insert can be used with this item (see page 413).

124 BICONICAL COLLETS

	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

Cap Nuts for CNC Machines



993.0

RH LH

INTERNAL THREAD		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
Ø20x14Fx1"	1	993.020.01 ■	993.020.02 ■
M30x1,5	1		993.030.02

For machines with M33x3 threaded spindle nose.

■ Until stock last

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.

STANDARD



HIGH



RUN-OUT

This tolerance is guaranteed only on the nominal diameter

TERMINI



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

BULK PACK 10 PCS.



ER16

B mm	inches	ORDER NO. STANDARD	B mm	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			

BULK PACK 10 PCS.



ER20

B mm	inches	ORDER NO. STANDARD	B mm	inches	ORDER NO. STANDARD
2		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			

BULK PACK 10 PCS.



ER25

B mm	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

BULK PACK 10 PCS.



For chucks:

183.000/100/200/250/300/400

ER32



B mm	inches	ORDER NO. STANDARD	ORDER NO. HIGH	B mm	inches	ORDER NO. STANDARD	ORDER NO. HIGH
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	184.100.00H	20		184.200.00	184.200.00H

BULK PACK 10 PCS.



For chucks:

183.201/211/221/310

ER40



B mm	inches	ORDER NO. STANDARD	ORDER NO. HIGH	B mm	inches	ORDER NO. STANDARD	ORDER NO. HIGH
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					

BULK PACK 10 PCS.

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

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	

ISO30 Retaining Studs



995.200 995.201 995.202 995.250 995.400

995

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	3,5	995.250.00
For LEUCO® P-SYSTEM® 183.400 chucks	M8		995.400.00

C-Spanner



991.183 FOR «ER32»

DESCRIPTION		ORDER NO.
C-Spanner for "ER32"	1	991.183.00



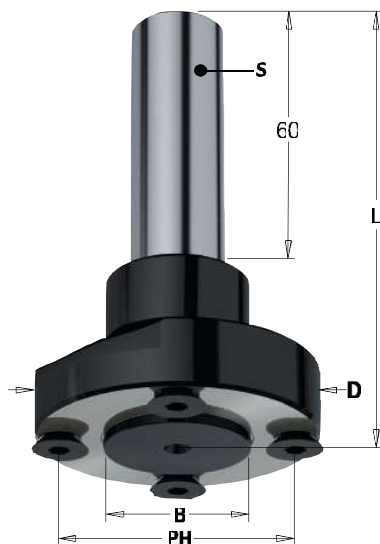
991.184 FOR «ER40»

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

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 hex key

991.064.00 4mm hex 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 413).

Grooving saw blades available at page 66 on request.

HSK Chucks 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		183.420.30

Spare parts: **990.115.00** M6x8,7x12mm TSPEI screw
991.064.00 4mm hex key



Max saw blade Ø250mm for chuck 183.420.30

Do not exceed maximum RPM indicated on the blade.



Grooving saw blades available at page 66 on request.

SAFETY TIPS



The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 413).



183.421

LH RH

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

Spare parts: **990.119.00** M6x12x16mm TSPEI screw
991.064.00 4mm hex key



Max saw blade Ø300mm for chuck 183.421.30

Do not exceed maximum RPM indicated on the blade.

with flange Ø98mm



Grooving saw blades available on request.

SAFETY TIPS



The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 413).



183.422

LH RH

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

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



Max saw blade Ø350mm for chuck 183.422.30

Do not exceed maximum RPM indicated on the blade.

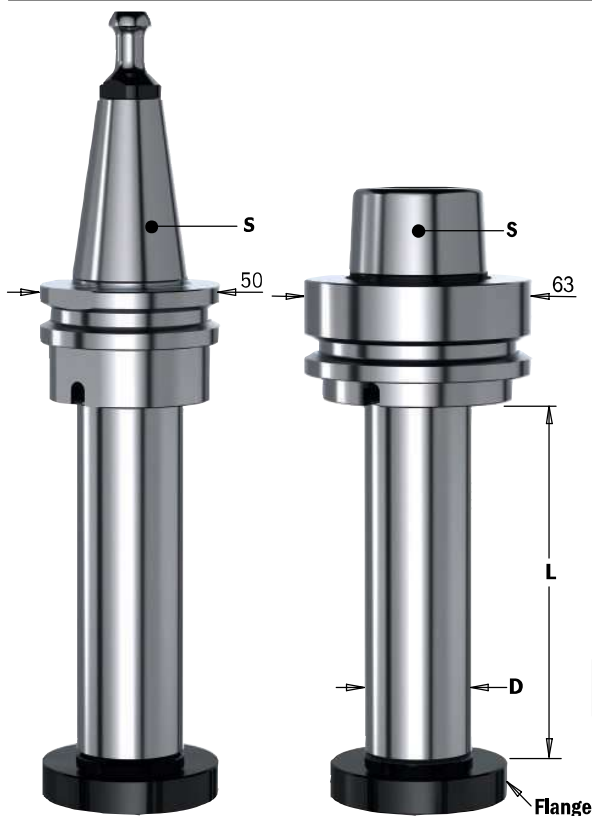


Grooving saw blades available on request.

SAFETY TIPS



The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 413).



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 413).

Spare Parts for Cutter Arbor Chucks

Standard



Optional



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

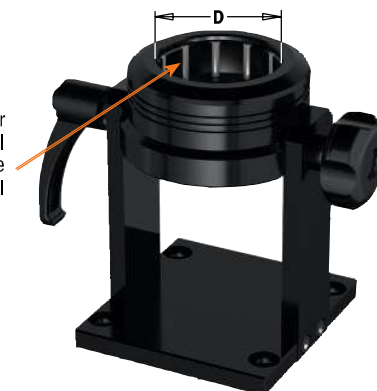


183

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.

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

BENEFITS



3X
LONGER LIFE
THAN UNCOATED

DLCS CHROME COATING
PROVIDES 3 TIMES LONGER LIFE THAN UNCOATED TOOLS!



Test performed in U.S. with ½" 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





190.41 DLCS CHROME COATING

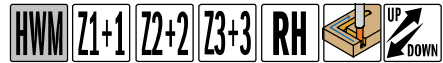


D mm	I mm	I ₁ mm	L mm	S mm	Z		ORDER NO. Right-hand rotation
8	32	7	80	8	2+2	10	190.080.41
9,52	28,6	7	76,2	9,52	2+2	10	190.504.41
10	32	7	80	10	2+2	10	190.100.41
10	42	7	90	10	2+2	10	190.101.41
12	42	7	90	12	2+2	10	190.120.41
12	52	7	100	12	2+2	10	190.121.41
12,7	25,4	12	76,2	12,7	2+2	10	190.505.41
12,7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

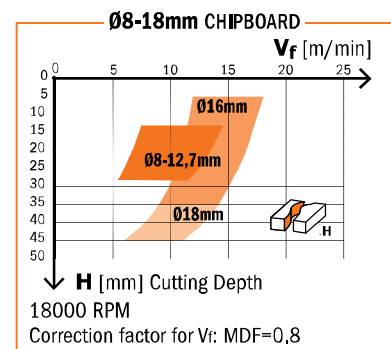
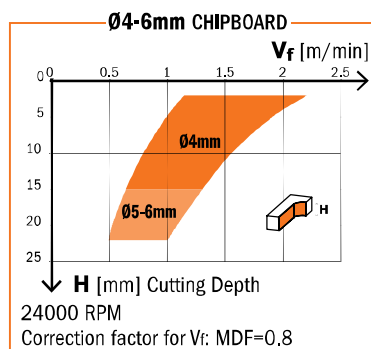
- Premium quality HWM.
- 1+1 spiral cutting edges [Z1+1].
- 2+2 spiral cutting edges [Z2+2].
- 3+3 spiral cutting edges [Z3+3].
- Provide an excellent finish on both the upper and the lower side of the workpiece.

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 adaptors.



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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 adaptors.



198 DOWNCUT SPIRAL



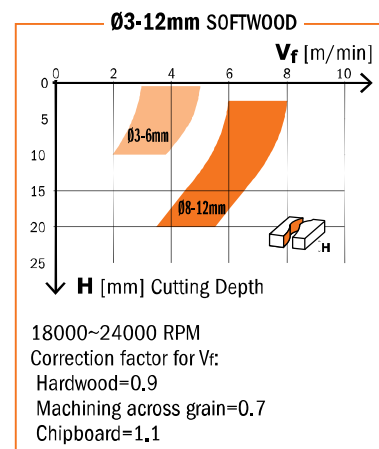
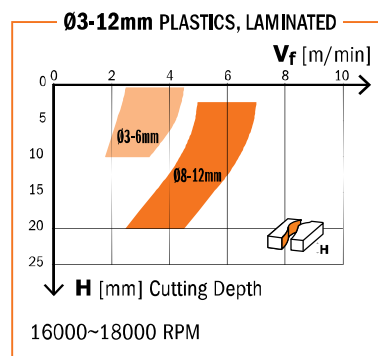
D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation
6	27	60	6	10	198.660.11

TECHNICAL DETAILS:

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

APPLICATION:

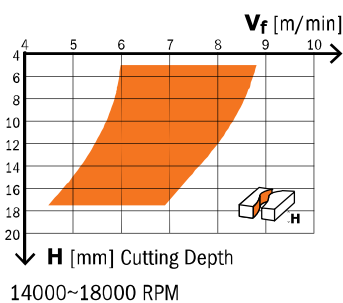
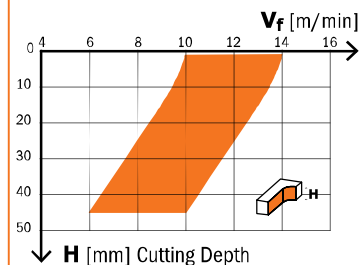
used for efficient contour cutting, end-trimming and panel sizing on solid wood, wood composites, plastic materials and laminates at high feed speed. Ensure to properly clamp workpieces.
Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with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



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**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**

Jointing Cutting thickness 0.5-2mm
Correction factor for V_r:
Hardwood=0.9
Machining across grain=0.7

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 adaptors.



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Solid Carbide Downcut Spiral Bits - LONG LIFE

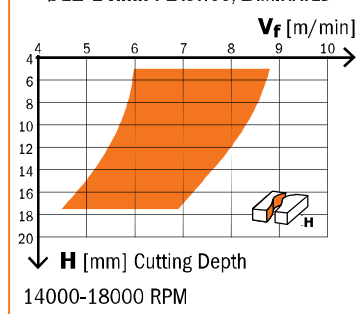


192.41 DLCS CHROME COATING

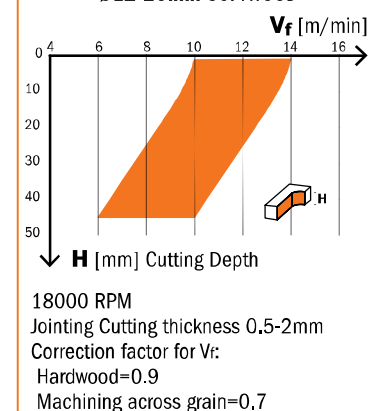


D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation
6,35	19,05	50,8	6,35	10	192.007.41
6,35	25,4	63,5	6,35	10	192.008.41
9,52	31,75	82,5	12,7	10	192.503.41
12,7	31,75	76,2	12,7	10	192.505.41
12,7	38,1	88,9	12,7	10	192.506.41
12,7	50,8	101,6	12,7	10	192.507.41

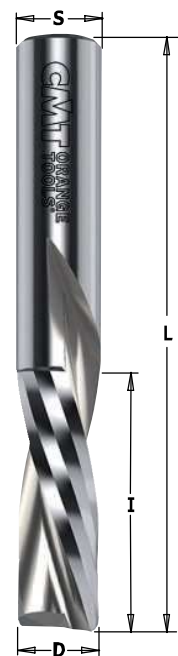
Ø12-14mm PLASTICS, LAMINATED



Ø12-20mm SOFTWOOD



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192



D mm	I mm	L mm	S mm		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 adaptors.



193



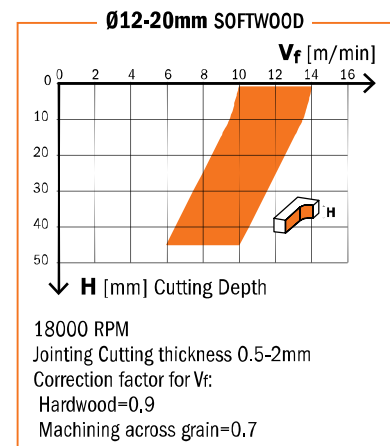
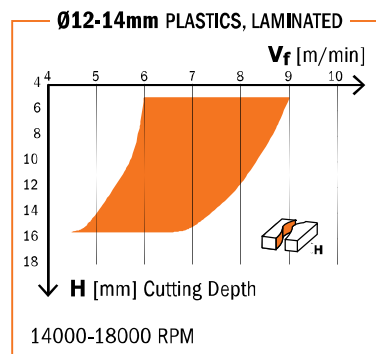
D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
8	32	80	8	10	193.081.11	193.081.12
10	32	80	10	10	193.100.11	193.100.12
10	42	90	10	10	193.101.11	
12	35	83	12	10	193.120.11	193.120.12
12	42	90	12	10	193.121.11	
12	52	100	12	10	193.122.11	
14	58	110	14	1	193.140.11	
16	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	

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 adaptors.



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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	140	20	1	194.201.11	
20	102	165	20	1	194.202.11	

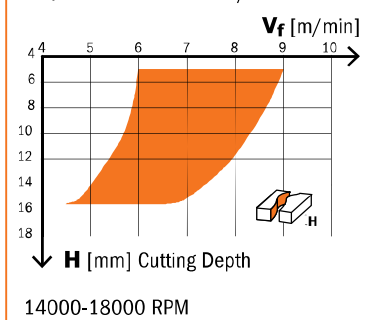
TECHNICAL DETAILS:

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

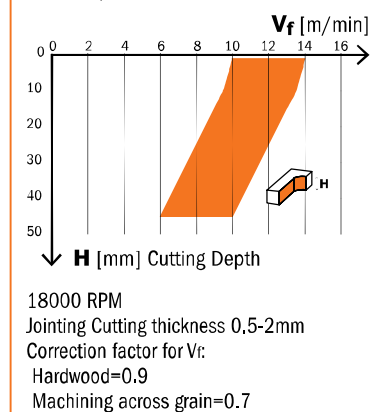
APPLICATION:

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 adaptors.

Ø12-14mm PLASTICS, LAMINATED



Ø12-20mm SOFTWOOD



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Solid Carbide Upcut Spiral Bits with Chipbreaker



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	

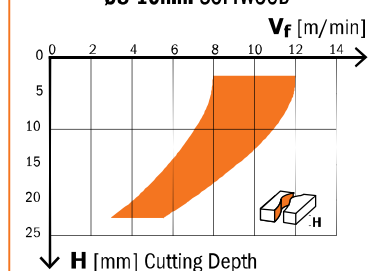
TECHNICAL DETAILS:

- Premium quality HWM.
- 3 spiral cutting edges [Z3R].
- Chipbreaker teeth.
- Max 0,3mm tooth depth.
- **Provide an excellent finish on the lower side of the workpiece.**
- Upward chip ejection.

APPLICATION:

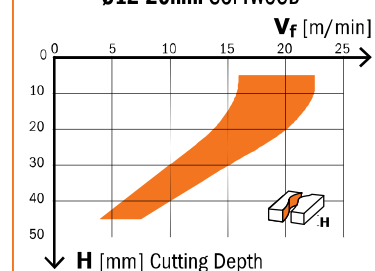
used for efficient contour cutting, end-trimming and panel sizing on solid wood, wood composites, plastic materials and laminates at high feed speed. Ensure to properly clamp workpieces.
Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with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

Ø8-10mm SOFTWOOD



18000 RPM
Correction factor for V_f:
Hardwood=0,8
Chipboard without coating=1,3

Ø12-20mm SOFTWOOD



18000 RPM
Correction factor for V_f:
Hardwood=0,8
Chipboard without coating=1,3



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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 chipbreaker) [Z2+2R].
- Max 0,1mm tooth depth.
- **Provide excellent finish on the lower side of the workpiece.**
- Upward chip ejection.

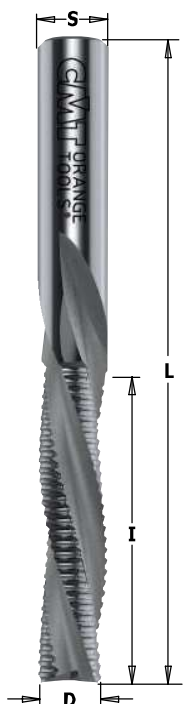
APPLICATION:

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 adaptors.



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 Chipbreaker



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	140	20	1	196.201.11	

TECHNICAL DETAILS:

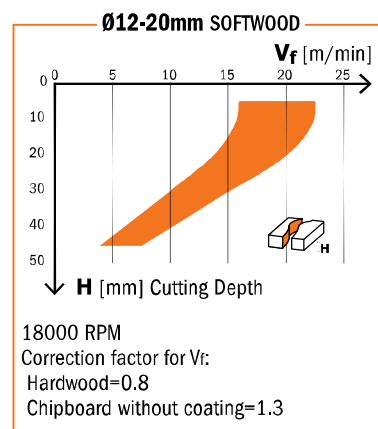
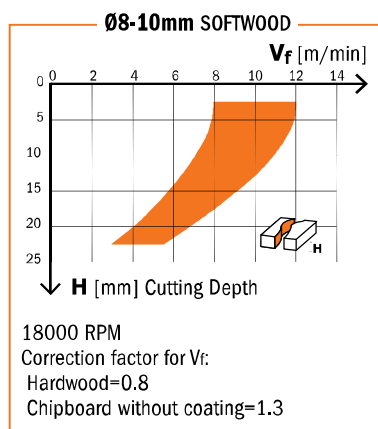
- Premium quality HWM.
- 3 spiral cutting edges [Z3R].
- Chipbreaker teeth.
- Max 0,3mm tooth depth.
- **Provide excellent finish on the upper side of the workpiece.**
- Downward chip ejection.

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 adaptors.



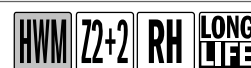
Results shown in this diagram are purely empirical, based merely on informative and hypothetical calculation. Each application may require different parameters in consideration of materials in use and machining conditions. CMT is not responsible for direct, indirect, incidental or consequential damages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



Solid Carbide Upcut & Downcut Spiral Bit with DLCS Chrome Coating - LONG LIFE



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.

P-System



For use only on 5 axis CNC machines.

1



2



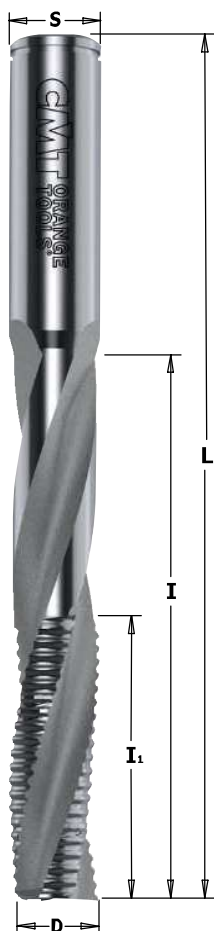
3



4



Solid Carbide Upcut Spiral Bits for Locksets



195



D mm	I mm	I ₁ mm	L mm	S mm		ORDER NO. Right-hand rotation	
WITH CHIPBREAKER							
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 CHIPBREAKER							
16	95*	45	150	16	1	193.162.11	

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

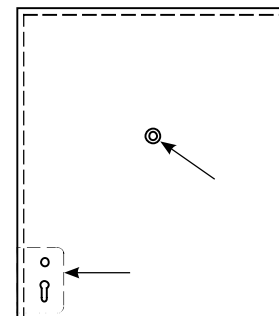
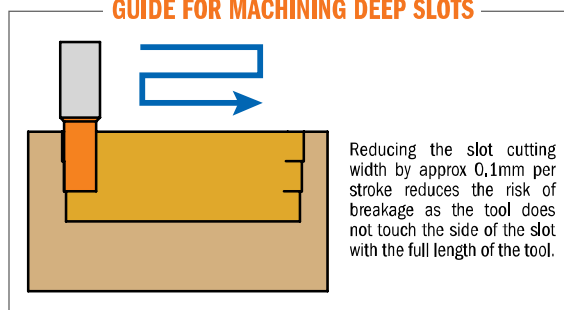
TECHNICAL DETAILS:

- 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 adaptors.

GUIDE FOR MACHINING DEEP SLOTS



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



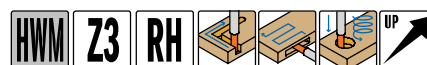
195.143/163



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 Chipbreaker 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	

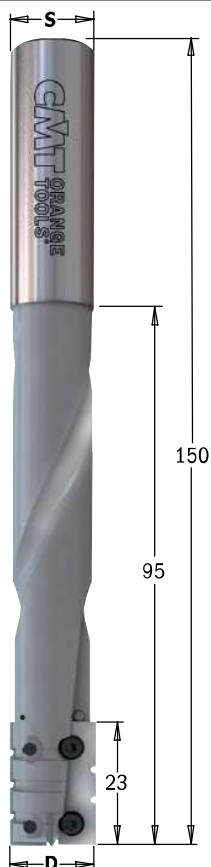
TECHNICAL DETAILS:

- 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, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adaptors.

Spiral Bits with Insert Knives & Chipbreaker for Locksets



662



D mm	I mm	L mm	S mm	ORDER NO.
16	23/95*	150	16	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 chipbreakers.

APPLICATION:

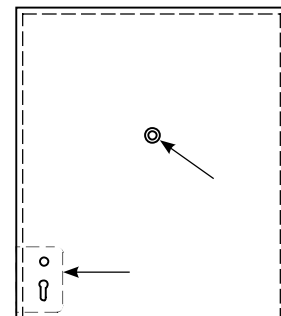
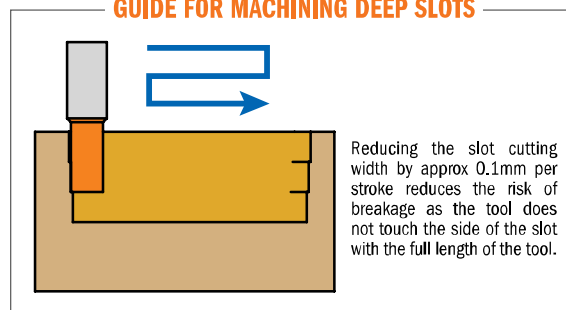
used for efficient contour cutting, end-trimming and panel sizing on solid wood, wood composites, plastic materials and laminates at high feed speed. Ensure to properly clamp workpieces. Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adaptors. 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 413).

GUIDE FOR MACHINING DEEP SLOTS



Upcut Spiral Bits with Chipbreaker for Glue-Laminated Wooden Beams



195



D mm	I mm	L mm	S mm	ORDER NO.
30	170	235	30	Y195.300.51
40	165	235	30	195.400.51
50	215	295	30	195.500.51

On request

Available by special request bits without chipbreaker, 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.**

EXCELLENT 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 EXCELLENT 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 adaptors. Cost-effective solution with respect to brazed and spiral in tungsten carbide.

**151 X-TRIME 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 adaptors.

**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!

**151 X-TRIME 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:

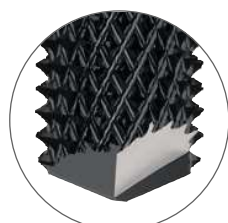
- Premium quality HWM.
- Special positively ground cutting edge sharpening for excellent finish.

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 adaptors.

**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!



40X
LONGER LIFE
THAN CARBIDE

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 micrograin carbide formulation.
- Straight cutting edge.
- DP (H3).
- Resharpenable 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.



NEGATIVE CUTTING EDGE

DP - Router Cutters - LONG LIFE



40X
LONGER LIFE
THAN CARBIDE

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:

- Strength steel.
- DP cutting edge (H2,5).
- HW plunging tip for diagonal plunge-cutting.
- Resharpenable 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.



* CONSTRUCTION Z1+1
FOR 141.101.61 ITEM



40X
LONGER LIFE
THAN CARBIDE

140



D mm	I mm	L mm	S mm	Z		ORDER NO. Right-hand rotation
10	25	75	12x40	1+1 (3 DP+1 HW)	1	140.03956
12	25	76	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	25	76	12,7x40	1+1 (3 DP+1 HW)	1	140.127.61
12,7	35	84	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	25	85	16x50	1+1 (3 DP+1 HW)	1	140.160.61
16	35	95	16x50	1+1 (4 DP+1 HW)	1	140.161.61
18	25	87	20x50	1+1 (3 DP+1 HW)	1	140.180.61
18	35	97	20x50	1+1 (4 DP+1 HW)	1	140.181.61
18	45	107	20x50	1+1 (5 DP+1 HW)	1	140.182.61
19,05	25	85	19,05x50	1+1 (3 DP+1 HW)	1	140.190.61
19,05	45	104	19,05x50	1+1 (5 DP+1 HW)	1	140.192.61
20	25	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	104	20x50	1+1 (5 DP+1 HW)	1	140.202.61
20	55	113	20x50	1+1 (6 DP+1 HW)	1	140.203.61

TECHNICAL DETAILS:

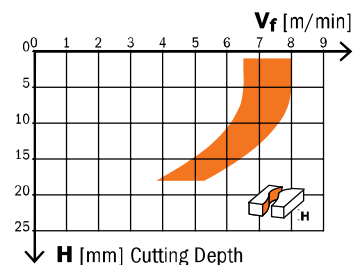
- Strength steel.
- Shear angle. - DP cutting edge (H2,5).
- HW plunging tip for diagonal plunge-cutting.
- Resharpenable (max 3 times).
- Max feed speed 5 m/min.

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.



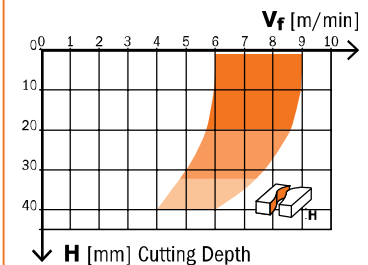
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Ø10-12,7mm PLASTIC COATED CHIPBOARD



24000 RPM
Correction factor for Vr: MDF=0,8
Veneer across grain=0,7
Chipboard without coating=1,1

Ø15,87-20mm PLASTIC COATED CHIPBOARD



18000 RPM
Correction factor for Vr: MDF=0,8
Veneer across grain=0,7
Chipboard without coating=1,1



40X
LONGER LIFE
THAN CARBIDE

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

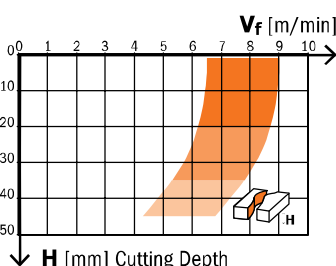
TECHNICAL DETAILS:

- 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.

Ø20mm PLASTIC COATED CHIPBOARD



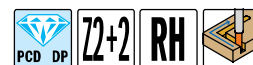
18000 RPM
Correction factor for Vr: MDF=0,8
Veneer across grain=0,7
Chipboard without coating=1,1

DP - Router Cutters with Shear Angle - LONG LIFE



40X
LONGER LIFE
THAN CARBIDE

142



D mm	I mm	L mm	S mm	Z		ORDER NO. Right-hand rotation
20	25	85	20x50	2+2 (6 DP+1 HW)	1	142.200.61
20	35	95	20x50	2+2 (8 DP+1 HW)	1	142.201.61
20	45	104	20x50	2+2 (10 DP+1 HW)	1	142.202.61
20	55	113	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

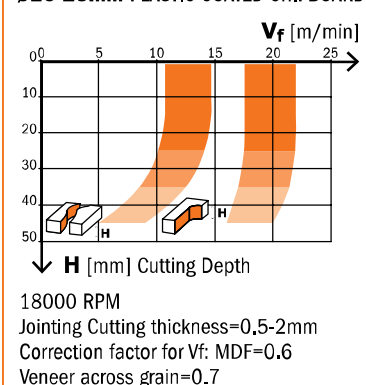
TECHNICAL DETAILS:

- Strength steel.
- DP cutting edge (H2,5").
- HW plunging tip for diagonal plunge-cutting (Z-axis tool entrance).
- Resharpenable 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

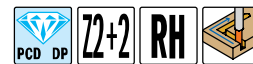


DP - Router Cutters with 20° Shear Angle - LONG LIFE



40X
LONGER LIFE
THAN CARBIDE

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

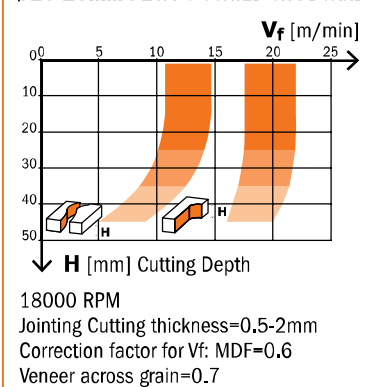
TECHNICAL DETAILS:

- Strength steel.
- Diamond cutting edges featuring 20° shear angle (H4).
- HW plunging tip for diagonal plunge-cutting (Z-axis tool entrance).
- Resharpenable 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



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 - LONG LIFE (DENSIMET® Tungsten Heavy Metal Alloys)



143

40X
LONGER LIFE
THAN CARBIDE

D mm	I mm	L mm	S mm	Z		ORDER NO. Right-hand rotation
12	25	75	12x40	3 (9 DP)	1	143.120.61
12	31	79	12x40	3 (10 DP)	1	143.121.61

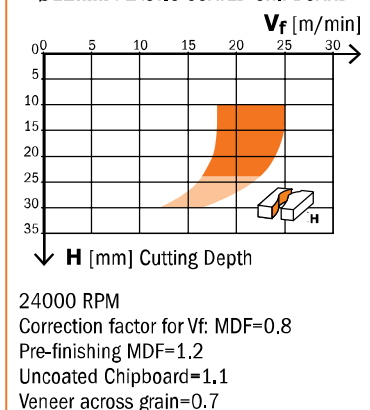
TECHNICAL DETAILS:

- 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.

Ø12mm PLASTIC COATED CHIPBOARD



DP - Spiral Router Cutters with Shear Angle - LONG LIFE



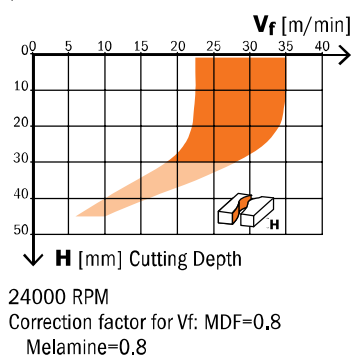
143

40X
LONGER LIFE
THAN CARBIDE

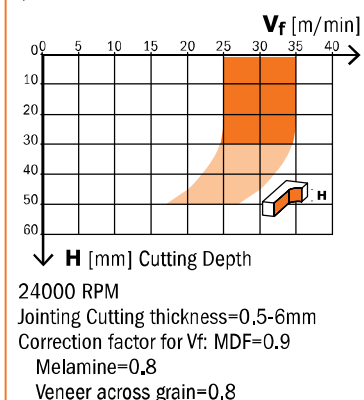
D mm	I mm	L mm	S mm	Z		ORDER NO. Right-hand rotation
18	25	82	20x50	3 (10 DP+1 HW)	1	143.180.61
18	30	87	20x50	3 (13 DP+1 HW)	1	143.181.61
18	35	92	20x50	3 (15 DP+1 HW)	1	143.182.61
20	25	82	20x50	3 (10 DP+1 HW)	1	143.200.61
20	30	85	20x50	3 (13 DP+1 HW)	1	143.201.61
20	35	92,5	20x50	3 (15 DP+1 HW)	1	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

Ø18-20mm PLASTIC COATED CHIPBOARD



Ø20-22mm PLASTIC COATED CHIPBOARD



TECHNICAL DETAILS:

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

APPLICATION:

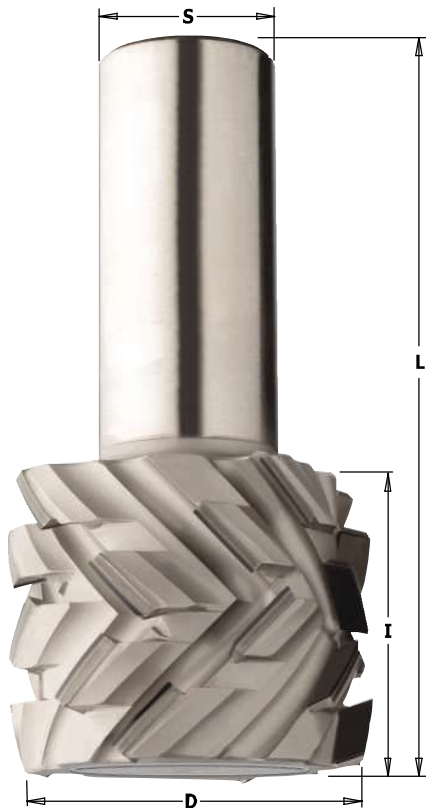
for use on CNC routers for jointing, rabbeting, grooving, on laminates, MDF, HPL, veneer and melamine-faced panels. High performance pre-finishing and finish-routing.



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 - LONG LIFE

CMT ORANGE TOOLS®



145



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

On request

TECHNICAL DETAILS:

- 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.

40X
LONGER LIFE
THAN CARBIDE

Straight Bits for Industrial Nesting Application **DLCS Chrome Coating** - LONG LIFE SHARPENING



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		

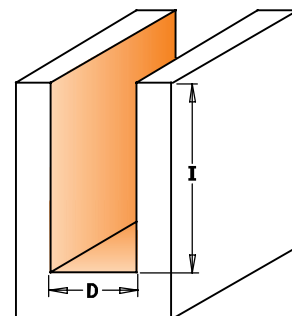
TECHNICAL DETAILS:

- 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!

Solid Carbide Router Cutters



174

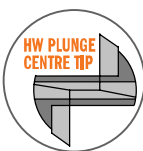
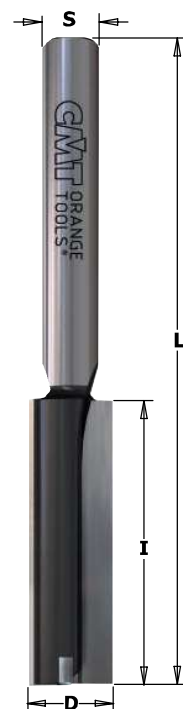


D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation	
3	10	55	8	10	174.030.11	
4	10	55	8	10	174.040.11	
5	12	55	8	10	174.050.11	
6	14	55	8	10	174.060.11	
7	20	55	8	10	174.070.11	

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:

- 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 adaptors.



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	

Router Cutters



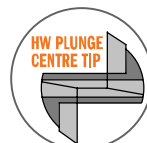
112



D mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation	
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	

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	

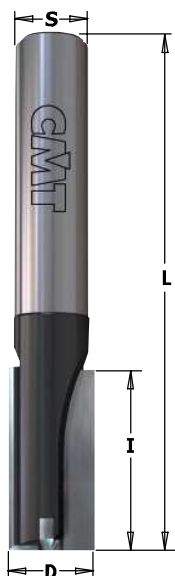


TECHNICAL DETAILS:

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

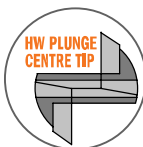
APPLICATION:

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 adaptors.



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 adaptors.

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:

- 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:

- Strength steel.
- 4 cutting edges [Z2+2]

APPLICATION:

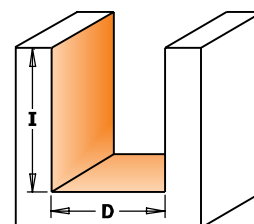
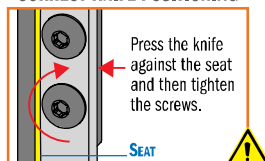
the new CNC cutter is designed with 2 plunging knives and two-sided knives fixed by special TORX® screws. It is ideal for direct plunge into the material and fast removal over a large surface area leaving an improved finish at the bottom of the cut. For cutting soft/hard wood, chipboard, melamine, MDF.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

SAFETY TIPS



The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 413).

CORRECT KNIFE POSITIONING



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

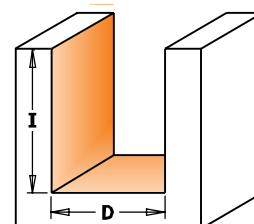
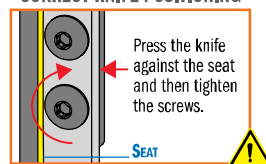
TECHNICAL DETAILS:

- 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



Drawing is 1:1 scale

SAFETY TIPS



The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 413).

Spoilboard Surfacing Router Cutters with Insert Knives



663.0

INSERT CARBIDE

MEC

Z3

Z4

RH

4X CUTTING

D mm	I mm	L mm	Z	S mm	Box	ORDER NO. Right-hand rotation
35	10,5	60	3	8x38	10	663.007.11
38	12	60	3	12x38	10	663.005.11
38	12	60	3	12,7x38	10	663.015.11
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

Part	Price
790.105.03*	990.078.00
790.120.03*	990.075.00
790.120.03*	990.075.00
790.120.03*	990.075.00
790.120.03*	990.075.00
790.120.03*	990.075.00
790.120.03*	990.075.00
790.120.03*	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:

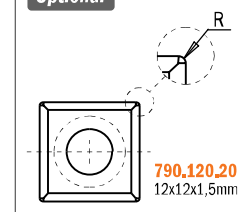
- Strength steel.
- 3 cutting edges [Z3].
- 4 cutting edges [Z4].

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.

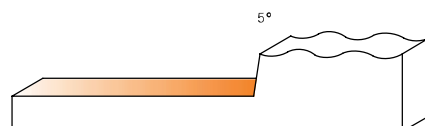
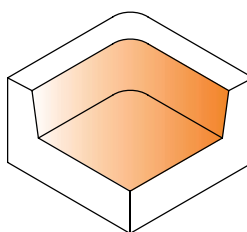
Optional



SAFETY TIPS



The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 413).



Drawing is 1:2 scale

Spoilboard Surfacing Router Cutters



178

HW

Z3

Z4

RH

D mm	I mm	L mm	Z	S mm	Box	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:

- 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



663.5 XTREME



D mm	I mm	L mm	S mm	ORDER NO.
50,8	25,4	63,5	12	Right-hand rotation
50,8	25,4	63,5	12,7	663.502.11
				663.501.11

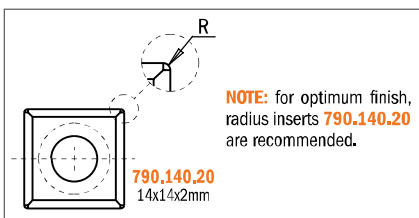
Spare parts	
790.140.20*	990.080.00
790.140.20*	990.080.00

*Minimum 10 pieces or multiple

TECHNICAL DETAILS:

- 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.



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

SAFETY TIPS

The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 413).

Universal Profile Cutter for CNC Machines



KNIVES NOT INCLUDED

Suggested MAX RPM 12.000

663.301



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

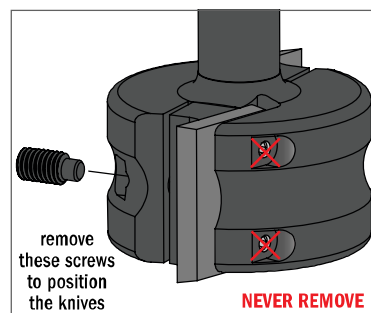
Spare parts: **692.999.01** 38x15x16mm wedge for cutter
990.064.00 M8x16mm STEI screw
991.064.00 Hex key 4mm

TECHNICAL DETAILS:

- 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.

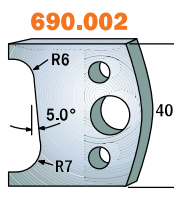
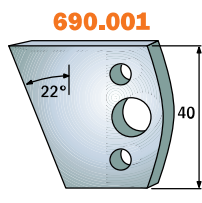
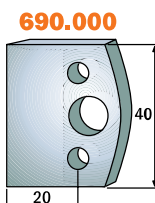
USEFUL TIPS: for enhanced safety, when using 50mm knives, it is recommended to carry out the cut in several passes.



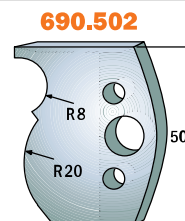
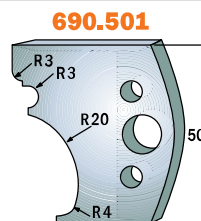
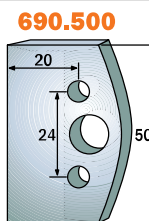
SAFETY TIPS

The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 413).

TO BE USED WITH SP KNIVES SERIES 690 (SEE PAGE 154~166)



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



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	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



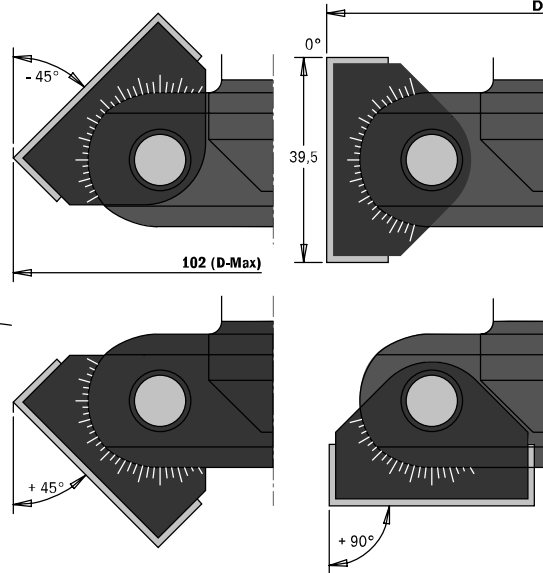
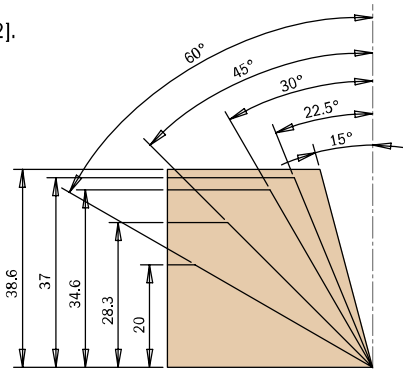
The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 413).

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: **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

Spare parts



790.580.01*

790.580.01*

790.360.01*

790.360.01*

790.496.01*

790.496.01*

790.496.01*

790.496.01*

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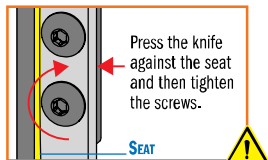
790.496.01*

790.496.01*

790.496.01*

790.496.01*

CORRECT KNIFE POSITIONING



TECHNICAL DETAILS:

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

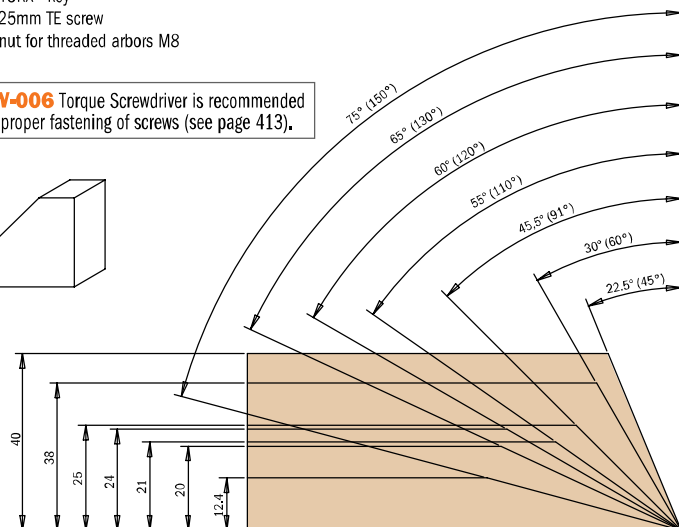
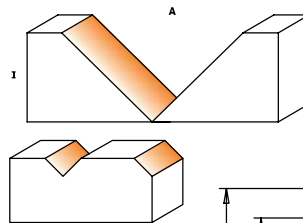
APPLICATION:

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.

SAFETY TIPS



The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 413).





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

Complete Set for Decorating on MDF

CMT ORANGE TOOLS



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:

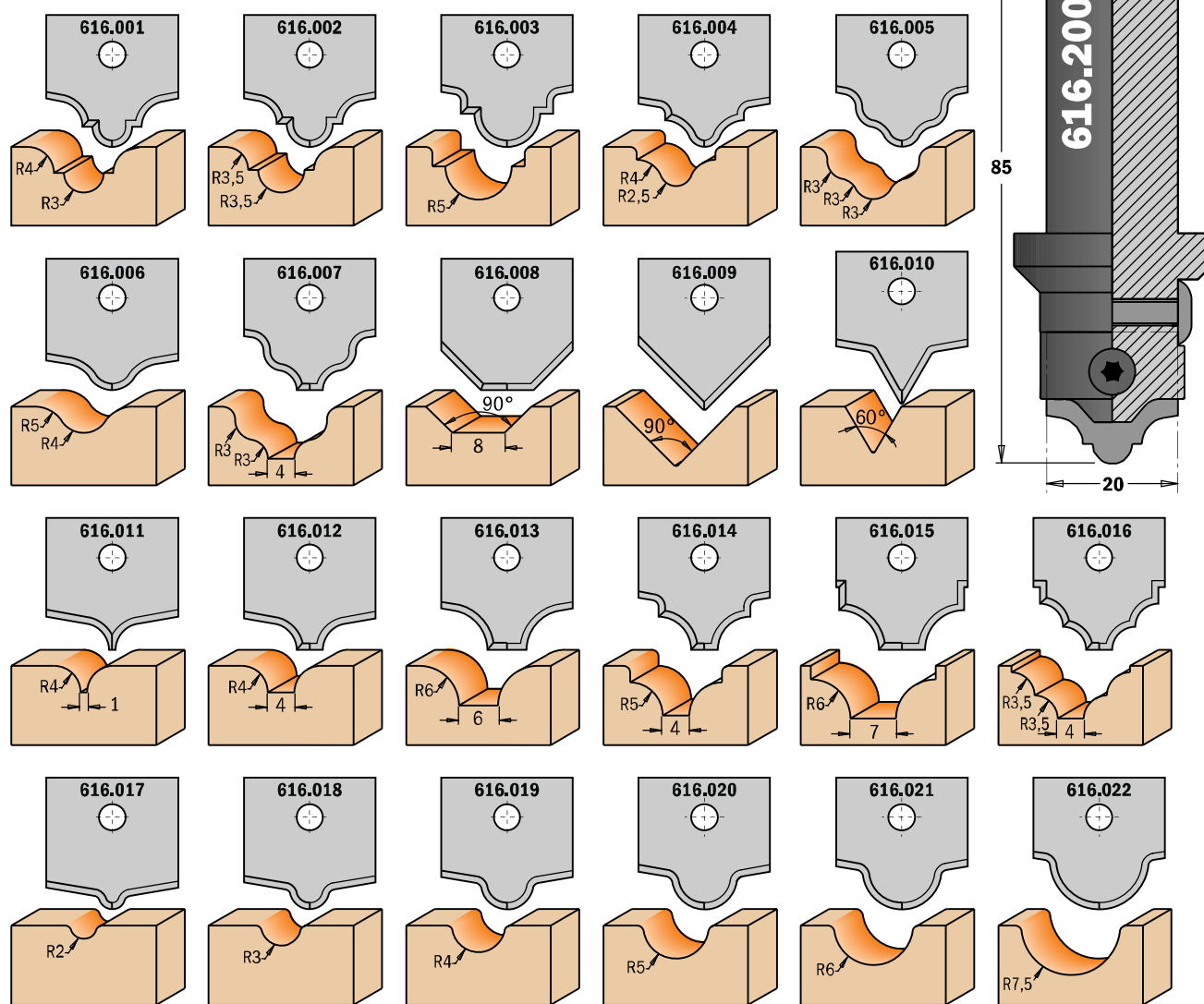
Knives 20x20x2mm.

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 413).



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	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

CMT ORANGE TOOLS®



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.

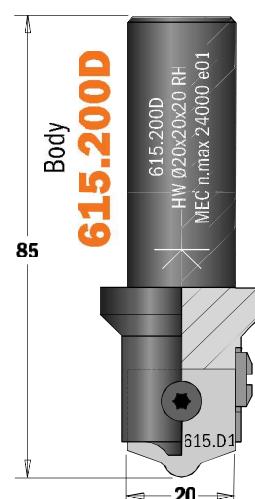
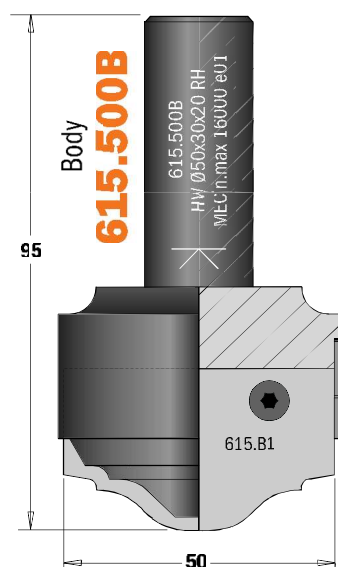
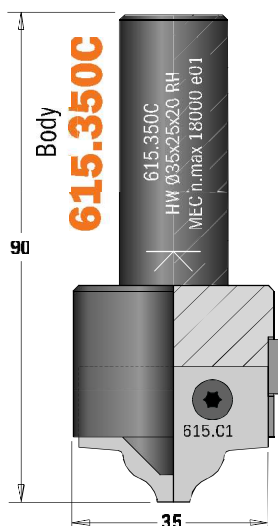
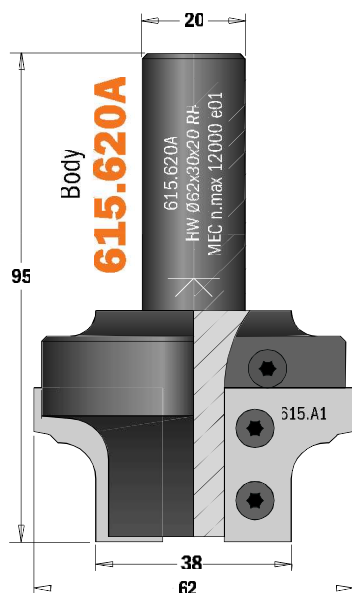
SAFETY TIPS



The **TW-006** Torque Screwdriver is recommended for the proper fastening of screws (see page 413).

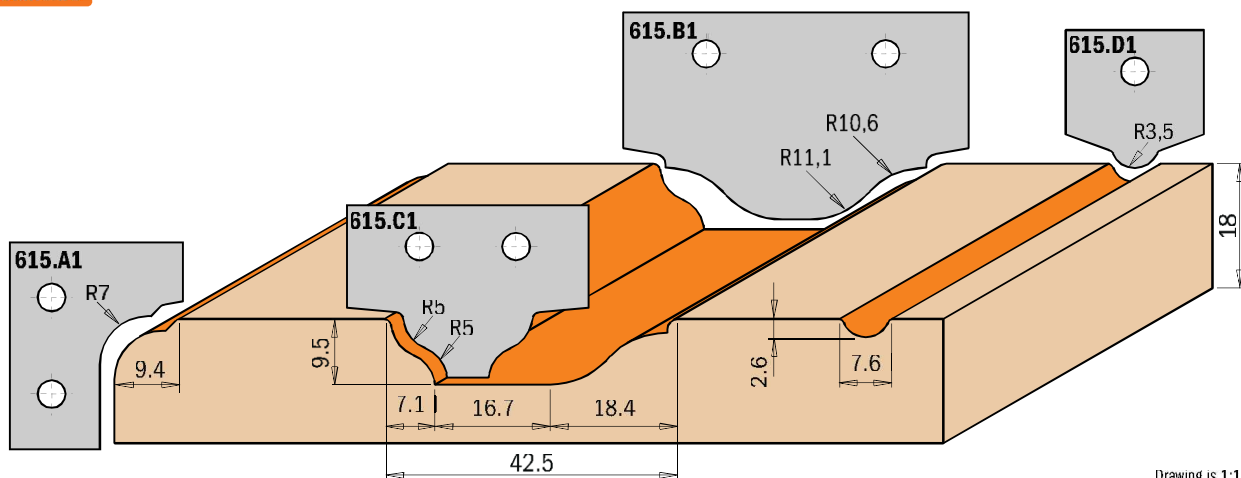


DESCRIPTION	S mm		ORDER NO. Right-hand rotation	Spare parts	
Complete Set for MDF Doors (Profile no. 1)	20	1	615.004.01	990.077.00	991.061.00



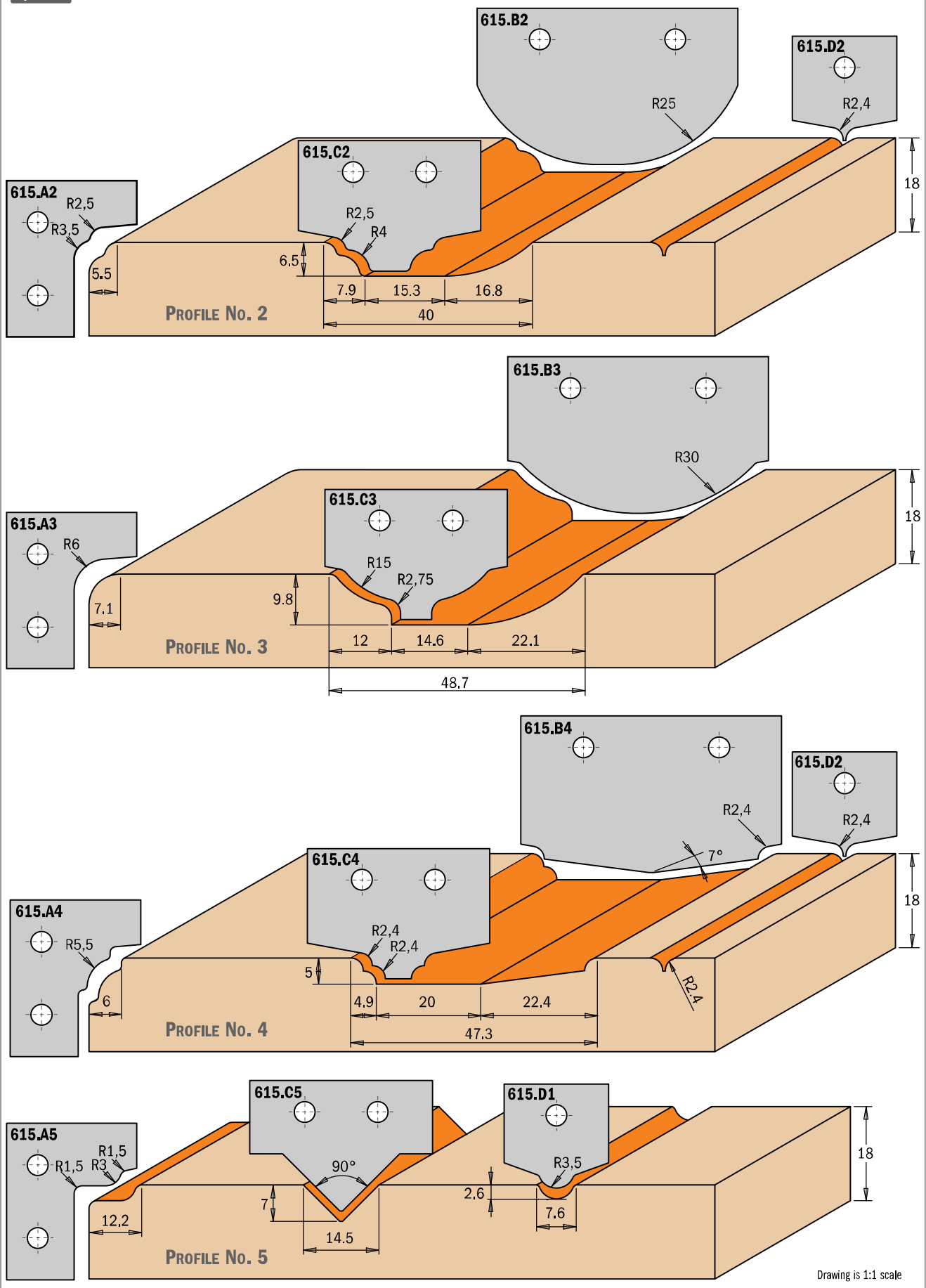
Standard

Profile No. 1



Drawing is 1:1 scale

Optional



Slot Mortising Bits with Chipbreaker



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

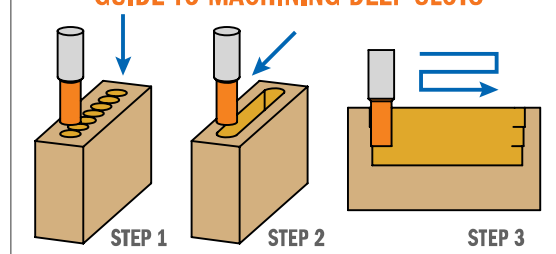
TECHNICAL DETAILS:

- Long-lasting cutting performance.
- 2 HL precision ground straight cutting edges with chipbreaker 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

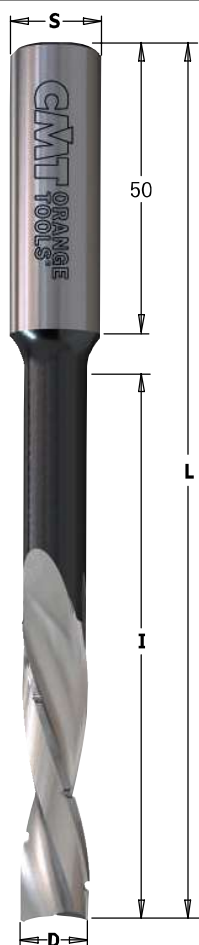


Our classic set of 6 spiral mortising bits with both Ø16mm and Ø13mm shanks made of super strength high speed steel and available in left-hand or right-hand rotation. Safely packaged in a plastic box for protection, these sets are economical and a perfect addition to any workshop.



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

Twisted Slot Mortising Bits with Chipbreaker



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

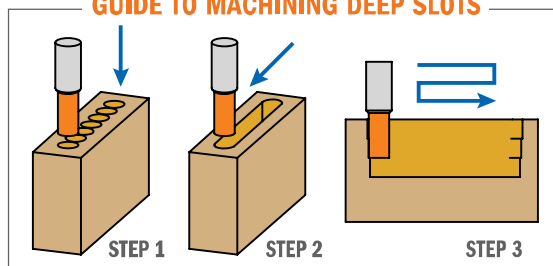
TECHNICAL DETAILS:

- Long-lasting cutting performance.
- 2 HSS precision ground spiral cutting edges with chipbreaker 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

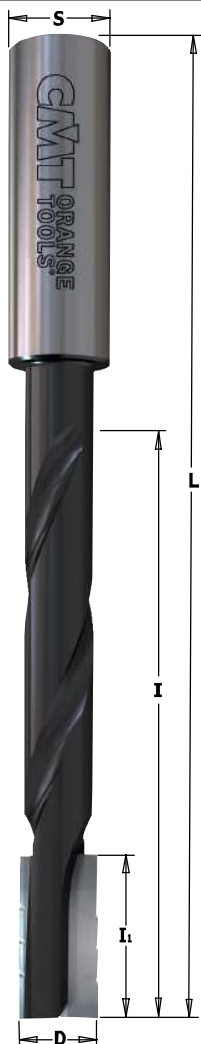


Ideal for heavy mortise jobs, Made of super strength high speed steel and available in left-hand or right-hand rotation. Safely packaged in a plastic box for protection, these sets are economical and a perfect addition to any workshop.



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 Chipbreaker



161



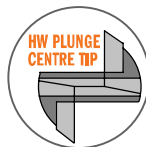
D mm	I ₁ mm	I mm	L mm	S mm		ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
12	25	75	150	16x50	10	161.120.11	161.120.12
16	25	95	170	16x50	10	161.160.11	161.160.12

TECHNICAL DETAILS:

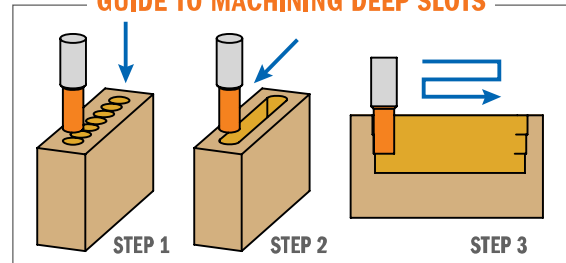
- Strength steel.
- Long-lasting cutting performance.
- 2 precision ground HW cutting edges with chipbreaker teeth.
- 1 HW plunge centre tip [Z2R+1]

APPLICATION:

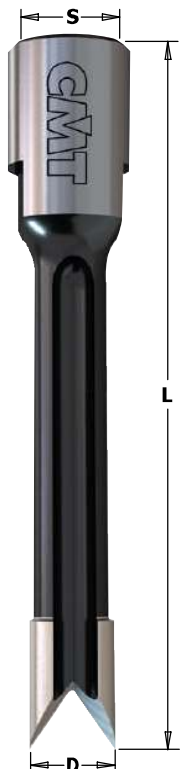
for cutting deep mortise slots in natural soft or medium density wood. For use on machining centres equipped with chucks, RPM 3000~5000



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:

- 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	

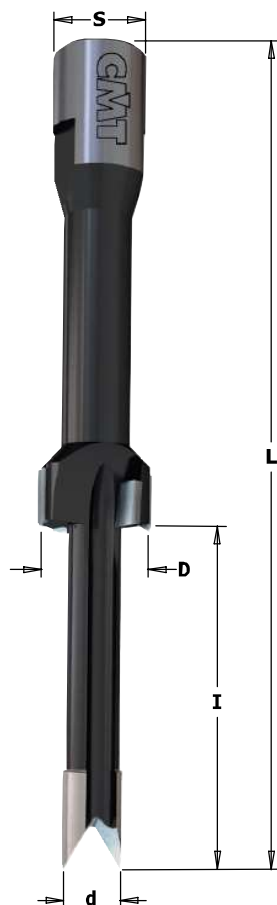
TECHNICAL DETAILS:

- 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:

- 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

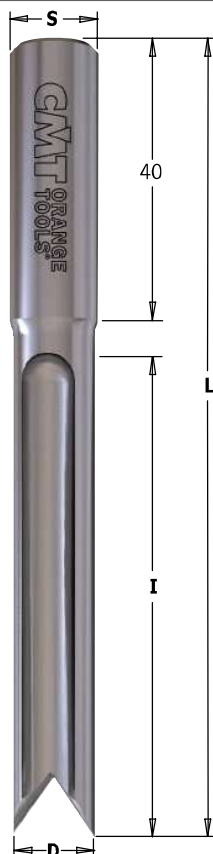
TECHNICAL DETAILS:

- 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

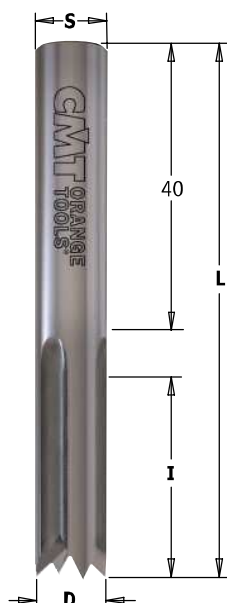
TECHNICAL DETAILS:

- 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

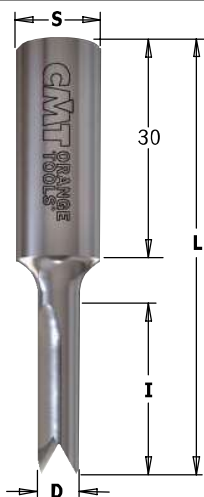
TECHNICAL DETAILS:

- 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.

Reciprocating Slot Mortising Bits



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.



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