

# CNC ROUTER CUTTERS & CHUCKS



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# Kinetic Dust Extractor



## 992 Removes MDF & Chipboard dust from the workpiece

DESCRIPTION	D mm	PACK QTY.	ORDER NO.
Kinetic Dust Extractor for chucks with DIN6388/EOC25 collets	100	1	<b>992.101.EOC25</b>
Kinetic Dust Extractor for chucks with ER32 collets	100	1	<b>992.101.ER32</b>
Kinetic Dust Extractor for chucks with ER40 collets	100	1	<b>992.101.ER40</b>

**Spare parts** 991.284.00 C-Spanner 95-100mm  
(required for installation, not included)



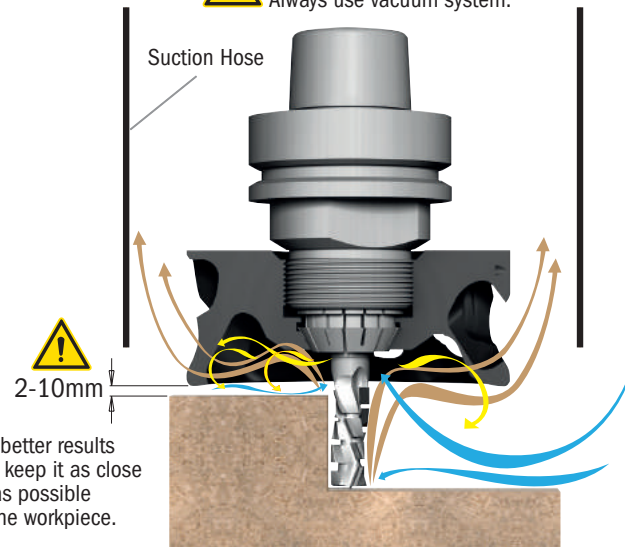
### EASY TO USE!

#### Install & remove as a clamping nut

- Health & Safety
- Tool Performance & Cut Quality
- Tool Life & Labor Costs
- Recommended for Nesting and Routing operations
- No wasted time during work process
- Replaces the standard clamping nut
- Suitable for any collet chucks with standard router bits
- Available for ER32 - ER40 - EOC25 (DIN6388) collets
- The thick ceramic coat gives to KDE an anti-corrosion, anti-friction and anti-static surface.
- Tool body in light alloy
- Better air quality
- Good performances even at low rpm: from 6,000 up to 20,000 rpm
- Material: chipboard, coated chipboard, MDF, Corian®, plasterboard, OSB, HPL.



Always use vacuum system.



Compressed Air
  Dust
  Air Vacumed



Download Instruction

Watch the video on



Watch Video

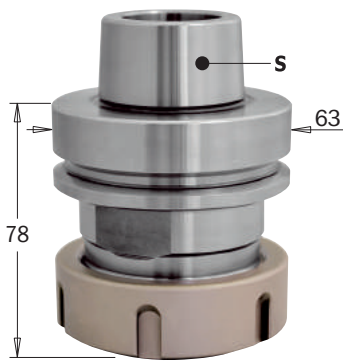
### Working **WITHOUT** Kinetic Dust Extractor



### Working **WITH** Kinetic Dust Extractor



## HSK Chucks for "ER40" Precision Collets



**183.310**



S	DESCRIPTION	TO BE USED WITH COLLET	PACK QTY.	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
HSK-F63	Clamping nut without bearing	ER40	1	<b>183.310.01</b>	<b>183.310.02</b>
HSK-F63	Clamping nut with bearing	ER40	1	<b>183.310.11*</b>	

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

For Homag, Eima, IMA from 9/94, Dubus, 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

## ISO30 Chucks for "ER40" Precision Collets



995.200

**183.201**



S	TO BE USED WITH COLLET	RETAINING STUD mm	PACK QTY.	ORDER NO. Right-hand rotation
ISO30	ER40	Ø12-8	1	<b>183.201.01</b>

For Biesse machines



995.201

**183.211**



S	TO BE USED WITH COLLET	RETAINING STUD mm	PACK QTY.	ORDER NO. Right-hand rotation
ISO30	ER40	Ø13-9	1	<b>183.211.01</b>

For Biesse machines with Omlat engine, Bulleri, Busellato, CMS and IMA machines.



995.202

**183.221**



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

For Alberti and Masterwood machines.

## Clamping Nuts for Chucks with "ER40" Precision Collets



**992.383**



DESCRIPTION	PACK QTY.	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
<b>Clamping nut without bearing</b> For 183.201/211/221/310 chucks	1	<b>992.383.01</b>	<b>992.383.02</b>
<b>Clamping nut with bearing</b> For 183.201/211/221/310 chucks	1	<b>992.383.11</b>	

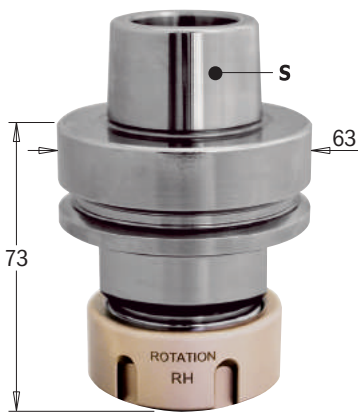
## C-spanner for "ER40" Precision Collets



**991.184**

DESCRIPTION	PACK QTY.	ORDER NO.
C-Spanner for "ER40" precision collet	1	<b>991.184.00</b>

# HSK Chuck for "ER32" Precision Collets



**183.300**



S	DESCRIPTION	TO BE USED WITH COLLET	PACK QTY.	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
HSK-F63	Clamping nut without bearing	ER32	1	<b>183.300.01</b>	<b>183.300.02</b>
HSK-F63	Clamping nut with bearing	ER32	1	<b>183.300.11*</b>	

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

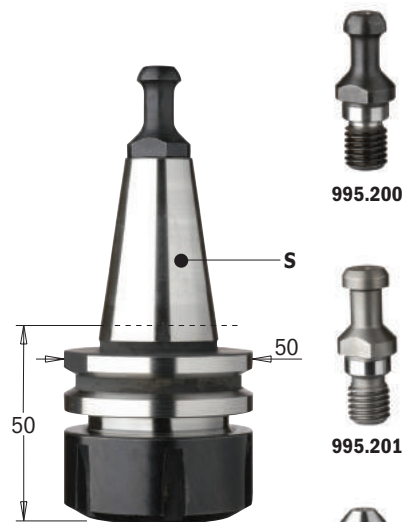
For Homag, Eima from 9/94, Dubus, Weeke, Biesse, SCM, Morbidelli and Masterwood machines.



**NON-STICK ORANGE CHROME™ SHIELD COATING**

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

# ISO30 Chucks for "ER32" Precision Collets

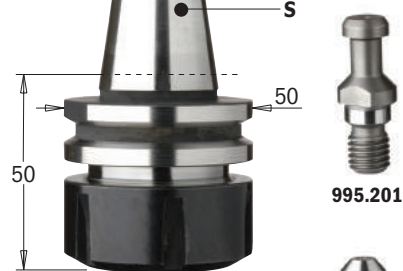


**183.200**



S	TO BE USED WITH COLLET	RETAINING STUD mm	PACK QTY.	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
ISO 30	ER32	Ø12-8	1	<b>183.200.01</b>	<b>183.200.02</b>

995.200 For Biesse machines.



**183.210**



S	TO BE USED WITH COLLET	RETAINING STUD mm	PACK QTY.	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
ISO 30	ER32	Ø13-9	1	<b>183.210.01</b>	<b>183.210.02</b>

995.201 For Biesse machines with Omlat engine, Bulleri, Busellato, CMS and IMA machines.



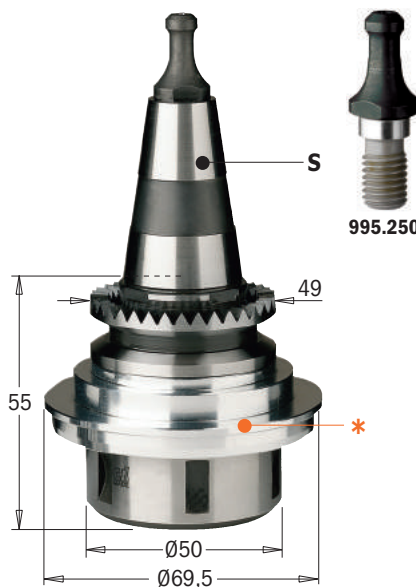
**183.220**



S	TO BE USED WITH COLLET	RETAINING STUD mm	PACK QTY.	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
ISO 30	ER32	Ø12,8-9	1	<b>183.220.01</b>	<b>183.220.02</b>

995.202 For Alberti and Masterwood machines.

# ISO30 Chucks for "ER32" Precision Collets

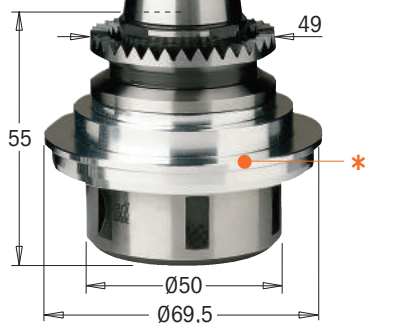


**183.250** without aluminium flange



S	TO BE USED WITH COLLET	RETAINING STUD mm	PACK QTY.	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
ISO 30	ER32	Ø8,5	1	<b>183.250.01</b>	<b>183.250.02</b>

For Morbidelli and SCM machines.



**183.251** with Ø69,5mm aluminium flange fully assembled (\*).



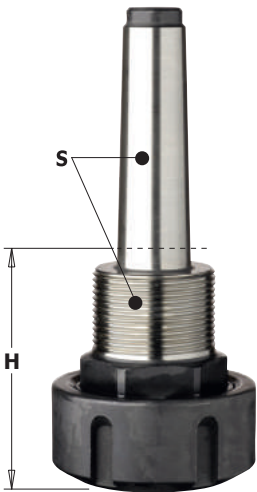
S	TO BE USED WITH COLLET	RETAINING STUD mm	PACK QTY.	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
ISO 30	ER32	Ø8,5	1	<b>183.251.01</b>	<b>183.251.02</b>

Spare parts 992.501.00 Ø69,5mm aluminium flange \*

For Morbidelli and SCM machines.



## Chucks for "ER32" Precision Collets



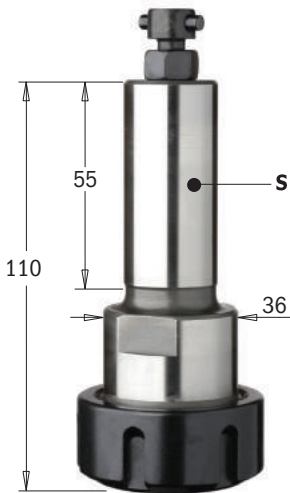
**183.000/100**

**RH LH**

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

**MK2/MK3 tapered shank**

## Chucks for "ER32" Precision Collets



**995.400**

**183.400**

**RH**

S mm	TO BE USED WITH COLLET	RETAINING STUD	PACK QTY.	ORDER NO. Right-hand rotation
Ø25x55	ER32	PS LEUCO	1	<b>183.400.01</b>

**For machines with PS Leuco system.**

## Clamping Nuts for Chucks with "ER32" Collets



**992.183**

**RH LH**

DESCRIPTION	PACK QTY.	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
<b>Clamping nut without bearing</b> For 183.000/100/200/250/300/400 chucks	1	<b>992.183.01</b>	<b>992.183.02</b>
<b>Clamping nut with bearing</b> For 183.000/100/200/250/300/400 chucks	1	<b>992.183.11</b>	<b>992.183.12</b>

## C-Spanner for "ER32" Precision Collets

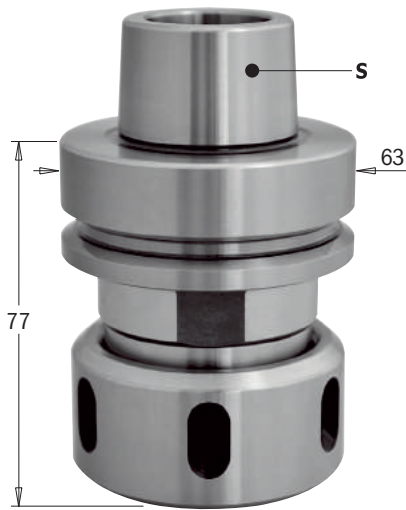


**991.183**

DESCRIPTION	PACK QTY.	ORDER NO.
C-Spanner for "ER32" precision collets	1	<b>991.183.00</b>

## HSK Chuck for "DIN6388" - EOC25 Precision Collet

**RH**



**183.320**

S	DESCRIPTION	TO BE USED WITH COLLET	PACK QTY.	ORDER NO. Right-hand rotation
HSK-F63	HSK chuck with bearing nut	EOC-25	1	<b>183.320.01*</b>

*Spare parts* 992.283.11 Clamping nut with bearing

\* Suitable for left-hand rotation too.

For Homag, Eima from 9/94, Dubus, Weeke, Biesse, SCM, Morbidelli & Masterwood machines.

## Clamping Nuts



**992.283**

**RH**

DESCRIPTION	PACK QTY.	ORDER NO. Right-hand rotation
Clamping nut without bearing	1	<b>992.283.01</b>
Clamping nut with bearing	1	<b>992.283.11</b>

For chuck 183.320.

## C-Spanner for "DIN6388" & "ER40"



**991.283**

DESCRIPTION	PACK QTY.	ORDER NO.
C-Spanner for USAG 58-62-65	1	<b>991.283.001</b>

## Precision Collets "DIN6388"



**185 - EOC-25**

mm	B inches	PACK QTY.	ORDER NO.	mm	B inches	PACK QTY.	ORDER NO.
3		10	<b>185.030.00</b>	13	1/2	10	<b>185.130.00</b>
4		10	<b>185.040.00</b>	14		10	<b>185.140.00</b>
5		10	<b>185.050.00</b>	16	5/8	10	<b>185.160.00</b>
6		10	<b>185.060.00</b>	18		10	<b>185.180.00</b>
8	5/16	10	<b>185.080.00</b>	20		10	<b>185.200.00</b>
10		10	<b>185.100.00</b>	25		10	<b>185.250.00</b>
12		10	<b>185.120.00</b>				

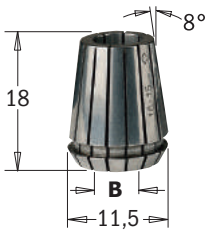
**REMARK:** special dimensions available on request.



**185 - EOC-16**

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

**REMARK:** special dimensions available on request.



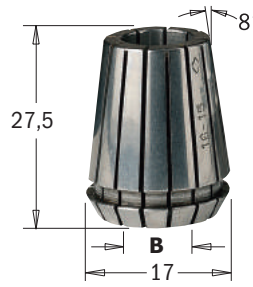
**184 - ER11**

B mm	PACK QTY.	ORDER NO.
2	10	184.020.11
3	10	184.030.11
4	10	184.040.11
5	10	184.050.11
6	10	184.060.11

**TECHNICAL DETAILS:**

- replaceable Std "ER11" collets (from 1 to 7mm)
- fit most tapered spindle noses
- +0-0,7mm wide clamping tolerance
- suitable for most conical chucks.

**REMARK:** special dimensions available on request.



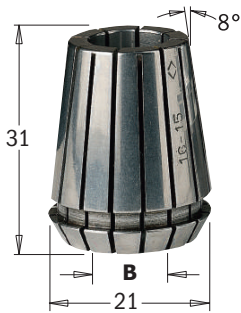
**184 - ER16**

B mm	PACK QTY.	ORDER NO.
2	10	184.020.16
3	10	184.030.16
4	10	184.040.16
5	10	184.050.16
6	10	184.060.16
7	10	184.070.16
8	10	184.080.16
9	10	184.090.16
10	10	184.100.16

**TECHNICAL DETAILS:**

- replaceable Std "ER16" collets (from 1 to 10mm)
- fit most tapered spindle noses
- +0-0,7mm wide clamping tolerance
- suitable for most conical chucks.

**REMARK:** special dimensions available on request.



**184 - ER20**

B mm	PACK QTY.	ORDER NO.
2	10	184.020.20
3	10	184.030.20
4	10	184.040.20
5	10	184.050.20
6	10	184.060.20
6,35	10	184.064.20
7	10	184.070.20
8	10	184.080.20
9	10	184.090.20
10	10	184.100.20
11	10	184.110.20
12	10	184.120.20
12,7	10	184.127.20
13	10	184.130.20

**TECHNICAL DETAILS:**

- replaceable Std "ER20" collets (from 1 to 13mm)
- fit most tapered spindle noses
- +0-0,7mm wide clamping tolerance
- suitable for most conical chucks.

**REMARK:** special dimensions available on request.



**184 - ER25**

B mm	PACK QTY.	ORDER NO.
3	10	184.030.25
4	10	184.040.25
5	10	184.050.25
6	10	184.060.25
8	10	184.080.25
9	10	184.090.25
10	10	184.100.25
12	10	184.120.25
13	10	184.130.25
14	10	184.140.25
16	10	184.160.25

**TECHNICAL DETAILS:**

- replaceable Std "ER25" collets (from 1 to 16mm)
- fit most tapered spindle noses
- +0-0,7mm wide clamping tolerance
- suitable for most conical chucks.

**REMARK:** special dimensions available on request.



**184 - ER32**

B mm	PACK QTY.	ORDER NO.
3	10	184.030.00
4	10	184.040.00
5	10	184.050.00
6	10	184.060.00
6,35	10	184.065.00
7	10	184.070.00
8	10	184.080.00
9	10	184.090.00
9,52	10	184.095.00
10	10	184.100.00
11	10	184.110.00
12	10	184.120.00
13	10	184.130.00
14	10	184.140.00
15	10	184.150.00
16	10	184.160.00
17	10	184.170.00
18	10	184.180.00
19	10	184.190.00
20	10	184.200.00

**For chucks**  
183.000/100/200/250/300/400

**TECHNICAL DETAILS:**

- replaceable Std "ER32" collets (from 3 to 20mm)
- fit most tapered spindle noses
- +0-0,7mm wide clamping tolerance
- suitable for most conical chucks.

**REMARK:** special dimensions available on request.



**184 - ER40**

B mm	PACK QTY.	ORDER NO.
3	10	184.032.00
4	10	184.042.00
5	10	184.052.00
6	10	184.062.00
<small>new</small> 6,35	10	184.064.00
7	10	184.072.00
8	10	184.082.00
9,52	10	184.096.00
10	10	184.102.00
12	10	184.122.00
13	10	184.132.00
14	10	184.142.00
16	10	184.162.00
18	10	184.182.00
19	10	184.192.00
20	10	184.202.00
25	10	184.252.00

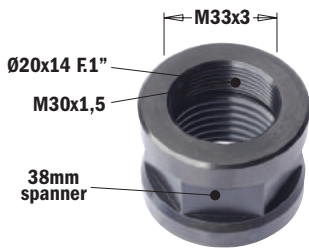
**For chucks**  
183.201/211/221/310

**TECHNICAL DETAILS:**

- replaceable Std "ER40" collets (from 3 to 25mm)
- fit most tapered spindle noses
- +0-0,7mm wide clamping tolerance
- suitable for most conical chucks.

**REMARK:** special dimensions available on request.

## Cap Nuts for CNC Machines



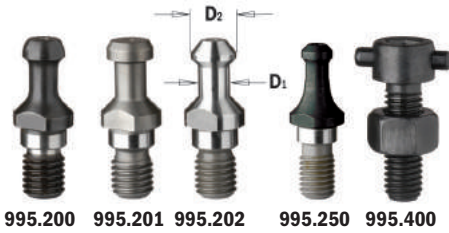
### 993.0

**RH LH**

INTERNAL THREAD	PACK QTY.	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
Ø20x14F1"	1	993.020.01	993.020.02
M30x1,5	1	993.030.01	993.030.02

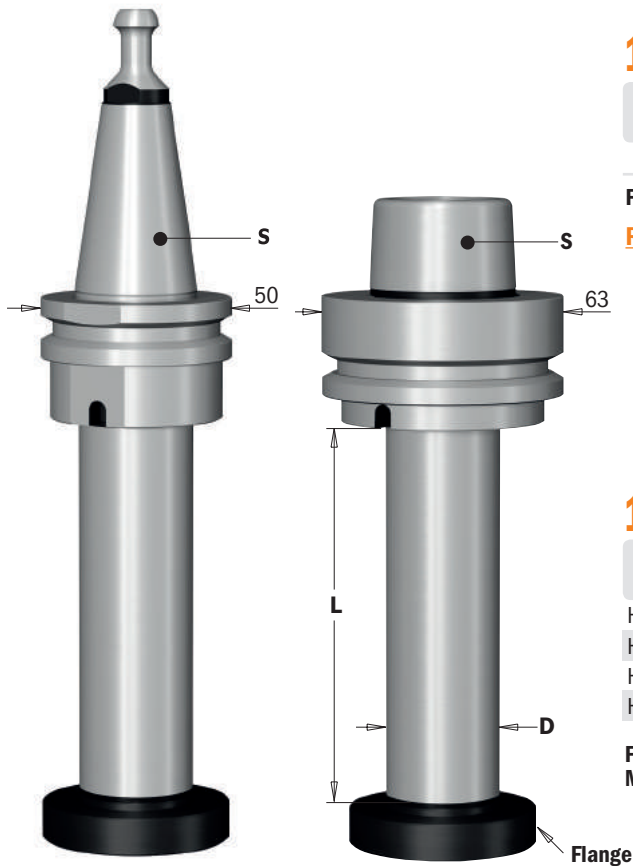
For machines with M33x3 threaded spindle nose.

## ISO30 Retaining Studs



DESCRIPTION	D <sub>1</sub> mm	D <sub>2</sub> mm	ORDER NO.
Retaining stud for 183.200/201 "Biesse" chucks	8	12	995.200.00
Retaining stud for 183.210/211 "Biesse, Omlat, Bulleri, Busellato, Weeke and IMA" chucks	9	13	995.201.00
Retaining stud for 183.220/221 "Alberti-Masterwood" chucks	9	12,8	995.202.00
Retaining stud for 183.250/251 "SCM - Morbidelli" chucks	6,5	8,5	995.250.00
Retaining stud for "PS and Leuco" 183.400 chucks	M8		995.400.00

## Cutter Arbor with HSK Tapered Shank



### 183.260

**RH LH**

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

For Biesse machines.

**REMARK:** special dimensions available on request.

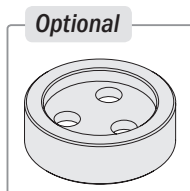
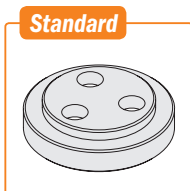
### 183.360

**RH LH**

S	DESCRIPTION	D x L mm	PACK QTY.	ORDER NO.
HSK-F63	Cutter arbor with HSK tapered shank	30x100	1	183.360.00
HSK-F63	Cutter arbor with HSK tapered shank	30x150	1	183.360.10
HSK-F63	Cutter arbor with HSK tapered shank	35x100	1	183.361.00
HSK-F63	Cutter arbor with HSK tapered shank	40x100	1	183.362.00

For Homag, Eima from 9/94, Dubus, Weeke, Biesse, SCM, Morbidelli and Masterwood machine.

## Spare Parts for Chucks



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





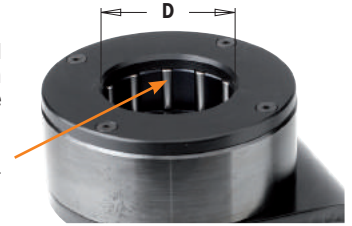
## 183

DESCRIPTION	D mm	PACK QTY.	ORDER NO.
Universal assembly supports for chucks HSK-F63	63	1	<b>183-HSK</b>
Universal assembly supports for chucks ISO30	50	1	<b>183-ISO</b>

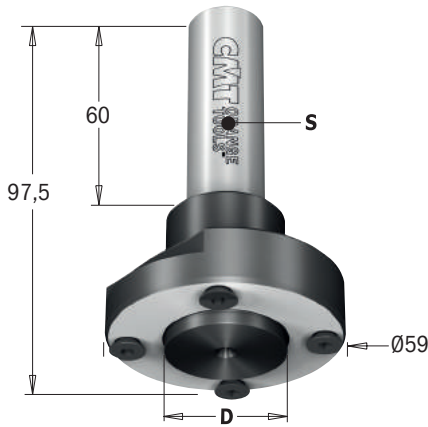
### For HSK-F63 and ISO30 chucks

CMT now offers new universal assembly supports for HSK-F63 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.

The special bidirectional roller bearing clamps the tool left-hand rotation to the flange, offering the highest protection to the tool taper.



# Saw Blade Arbor with Parallel Shank



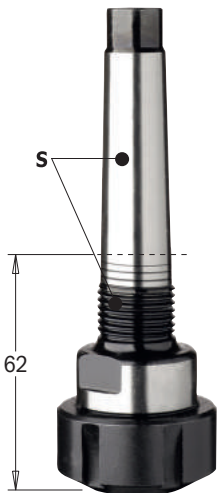
## 183.410

RH  
LH

S mm	D mm	PIN HOLE	L mm	PACK QTY.	ORDER NO.
20	30	4/M6/48	97,5	1	<b>183.410.30</b>

**Spare parts**  
 990.083.00 M6x10mm TSPEI screw  
 991.067.00 3mm allen key  
 991.064.00 4mm allen key

# Collet Chucks Clamp with MK2 Tapered Shank



## 123

RH  
LH

S	PACK QTY.	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
MK2/Ø20x14Fx1"	1	<b>123.000.01</b>	<b>123.000.02</b>

**Spare parts**  
 992.123.01 Clamping nut RH  
 992.123.02 Clamping nut LH  
 991.123.00 Type 45-50 c-spanner

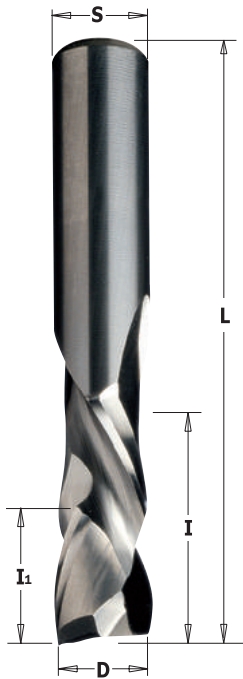
# Collets for 123 Chucks



## 124

D <sub>3</sub> mm	PACK QTY.	ORDER NO.	D <sub>3</sub> mm	PACK QTY.	ORDER NO.
6	1	<b>124.060.00</b>	10	1	<b>124.100.00</b>
6,35	1	<b>124.064.00</b>	12	1	<b>124.120.00</b>
8	1	<b>124.080.00</b>	12,7	1	<b>124.127.00</b>
9,5	1	<b>124.095.00</b>	14	1	<b>124.140.00</b>

# Solid Carbide Up & Downcut Spiral Bits



## 190



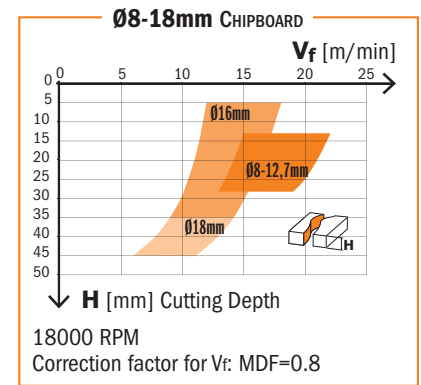
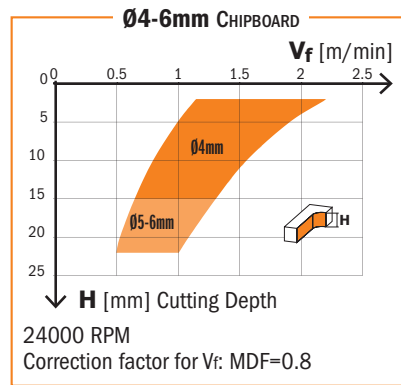
D mm	I mm	I <sub>1</sub> mm	L mm	S mm	Z	PACK QTY.	ORDER NO. Right-hand rotation
4	15	7	50	4	1+1	10	<b>190.040.11</b>
5	22	8	60	5	1+1	10	<b>190.050.11</b>
6	22	8	60	6	1+1	10	<b>190.060.11</b>
8	32	7	80	8	2+2	10	<b>190.080.11</b>
9,52	28,6	7	76,2	9,52	2+2	10	<b>190.504.11</b>
10	32	7	80	10	2+2	10	<b>190.100.11</b>
10	42	7	90	10	2+2	10	<b>190.101.11</b>
12	42	7	90	12	2+2	10	<b>190.120.11</b>
12	52	7	100	12	2+2	10	<b>190.121.11</b>
12,7	25,4	16	76,2	12,7	2+2	10	<b>190.505.11</b>
12,7	28,6	16	76,2	12,7	2+2	10	<b>190.506.11</b>
12,7	34,9	16	88,9	12,7	2+2	10	<b>190.507.11</b>
12,7	41,3	16	101,6	12,7	2+2	10	<b>190.508.11</b>
16	55	24	110	16	2+2	10	<b>190.160.11</b>
18	55	30	110	18	2+2	10	<b>190.180.11</b>
<b>...up &amp; downcut mortising bits</b>							
9,52	22,2	4,8	76,2	9,52	2+2	10	<b>190.513.11</b>
9,52	25,4	5,2	76,2	9,52	3+3	10	<b>190.813.11</b>
12	25	5,2	83	12	3+3	10	<b>190.320.11</b>
12,7	22,2	5,2	76,2	12,7	2+2	10	<b>190.515.11</b>
12,7	34,9	5,2	88,9	12,7	2+2	10	<b>190.517.11</b>

### TECHNICAL DETAILS:

- Premium quality HWM.
- 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.

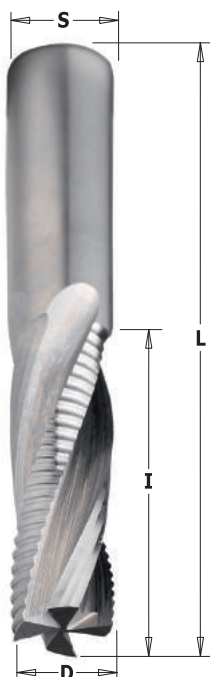
### APPLICATION:

used for cutting, copying, panel sizing and any routing application on solid wood, wood composites, plastic materials and laminates. Use a high feed speed on well-clamped 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 Spiral Bits



## 197



D mm	I mm	L mm	S mm	PACK QTY.	ORDER NO. Right-hand rotation
12	42	90	12	10	<b>197.121.11</b>
14	50	110	14	1	<b>197.140.11</b>
16	55	110	16	1	<b>197.160.11</b>
16	35	90	16	1	<b>197.161.11</b>
18	55	110	18	1	<b>197.180.11</b>
20	60	120	20	1	<b>197.200.11</b>
20	70	120	20	1	<b>197.201.11</b>

### TECHNICAL DETAILS:

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

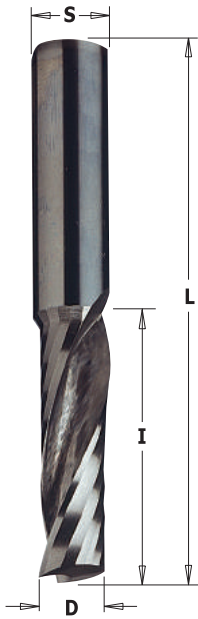


### APPLICATION:

used for ripping, template routing, panel sizing and any routing application 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 Upcut Spiral Bits



198



D mm	I mm	L mm	S mm	PACK QTY.	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

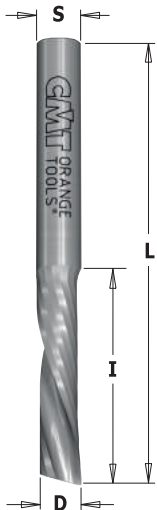
**TECHNICAL DETAILS:**

- 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 cutting, copying, panel sizing and any routing applications on solid wood, wood composites, plastic materials and laminates. Use a high feed speed on well-clamped workpieces. Can be used on machining centres, point to point machines, CNC routers and hand-held routers equipped with chucks or adaptors.

# Solid Carbide Downcut Spiral Bits



198



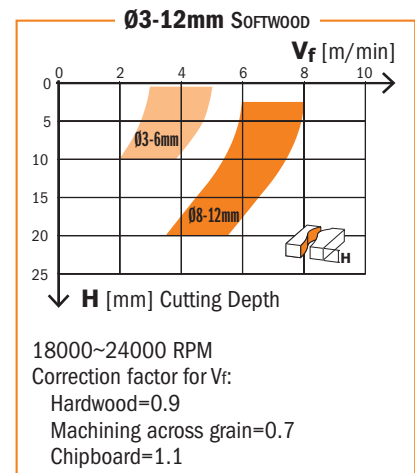
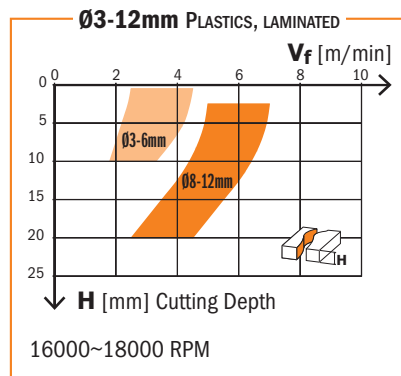
D mm	I mm	L mm	S mm	PACK QTY.	ORDER NO. Right-hand rotation
6	27	60	6	10	198.660.11

**TECHNICAL DETAILS:**

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

**APPLICATION:**

used for cutting, copying, panel sizing and any routing applications on solid wood, wood composites, plastic materials and laminates. Use a high feed speed on well-clamped workpieces. Can be used on machining centres, point to point machines, CNC routers and hand-held routers equipped with chucks or adaptors.



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# Solid Carbide Upcut Spiral Bits with Chip-Breaker



## 195

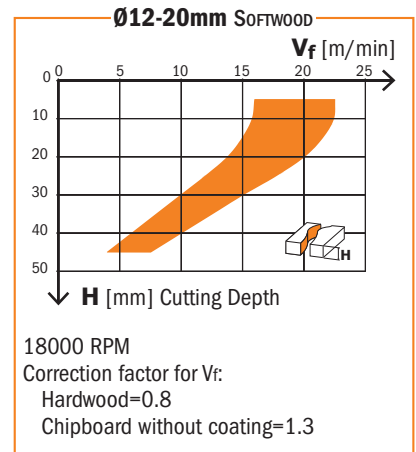
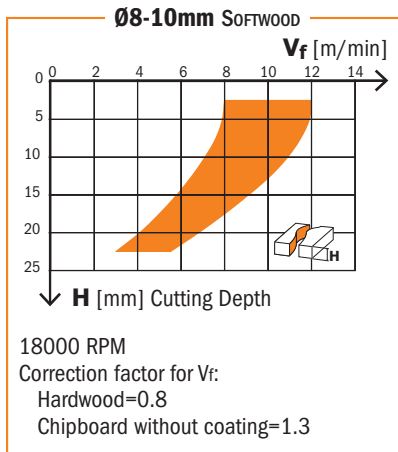
D mm	I mm	L mm	S mm	PACK QTY.	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
8	32	80	8	10	195.081.11	195.081.12
8	42	90	8	10	195.082.11	
10	32	80	10	10	195.100.11	195.100.12
10	42	90	10	10	195.101.11	
12	35	83	12	10	195.120.11	195.120.12
12	42	90	12	10	195.121.11	
12	52	100	12	10	195.122.11	
12,7	38,1	88,9	12,7	1	195.506.11	
14	58	110	14	1	195.140.11	
15,88	54	109,5	15,88	1	195.509.11	
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	
19,05	54	109,5	19,05	1	195.511.11	
20	60	120	20	1	195.200.11	195.200.12
20	72	120	20	1	195.201.11	
20	102	165	20	1	195.202.11	

### TECHNICAL DETAILS:

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

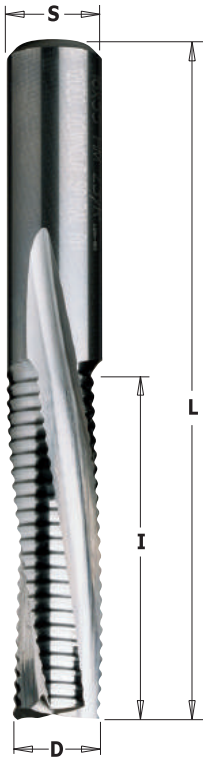
### APPLICATION:

used for ripping, template routing, panel sizing and any routing application on solid wood, or wood composites. Can be used at a high feed speed on well-clamped 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 Downcut Spiral Bits with Chip-Breaker



## 196



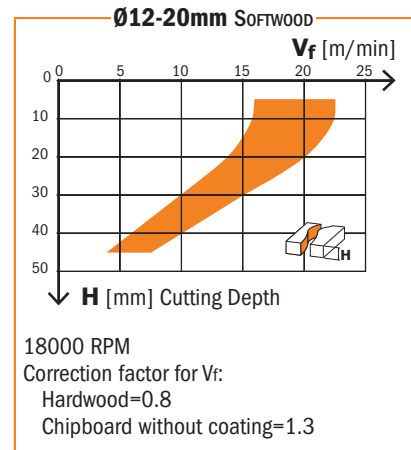
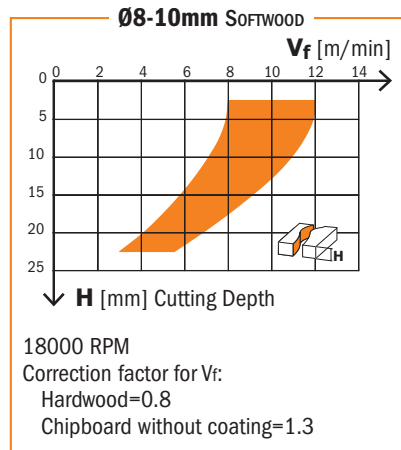
D mm	I mm	L mm	S mm	PACK Qty.	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
8	32	80	8	10	<b>196.081.11</b>	
10	42	90	10	10	<b>196.101.11</b>	
12	35	83	12	10	<b>196.120.11</b>	<b>196.120.12</b>
12	42	90	12	10	<b>196.121.11</b>	
12	52	100	12	10	<b>196.122.11</b>	
12,7	38,1	88,9	12,7	1	<b>196.506.11</b>	
14	50	110	14	1	<b>196.140.11</b>	
15,88	54	109,5	15,88	1	<b>196.509.11</b>	
16	55	110	16	1	<b>196.160.11</b>	<b>196.160.12</b>
18	55	110	18	1	<b>196.180.11</b>	
19,05	54	109,5	19,05	1	<b>196.511.11</b>	
20	60	120	20	1	<b>196.200.11</b>	<b>196.200.12</b>
20	72	120	20	1	<b>196.201.11</b>	

### TECHNICAL DETAILS:

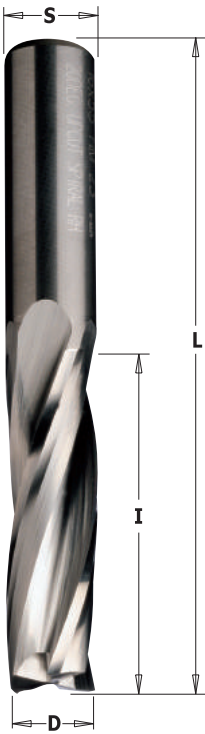
- Premium quality HWM.
- 3 spiral cutting edges [Z3R].
- Chip breaker teeth.
- Max 0.3mm tooth depth.
- Provide excellent finish on the upper side of the workpiece.
- **Downward chip ejection.**

### APPLICATION:

used for ripping, template routing, panel sizing and any routing application on solid wood and wood composites.  
Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adapters.



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## 193

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

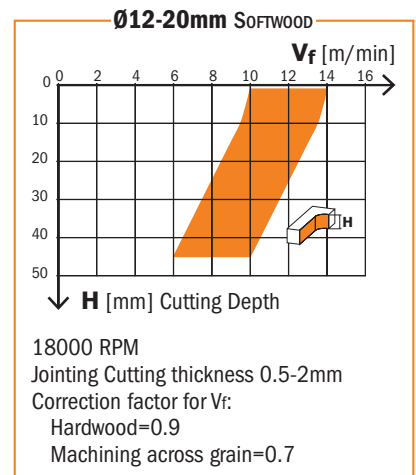
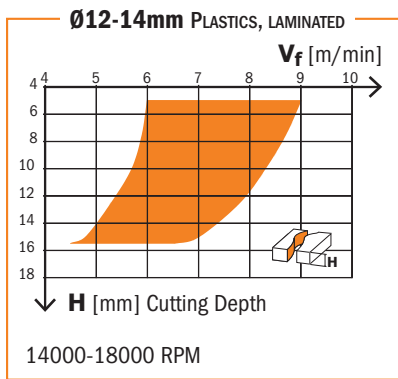
### TECHNICAL DETAILS:

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

### APPLICATION:

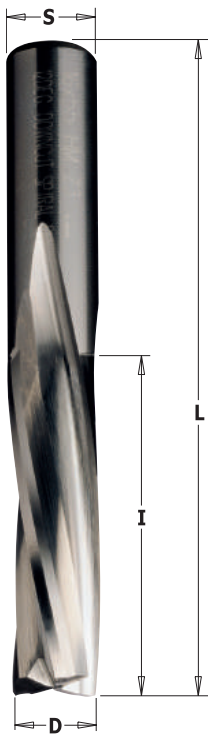
used for ripping, template routing, panel sizing and any routing application on solid wood, or wood composites. Can be used at a high feed speed on well-clamped workpieces.

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



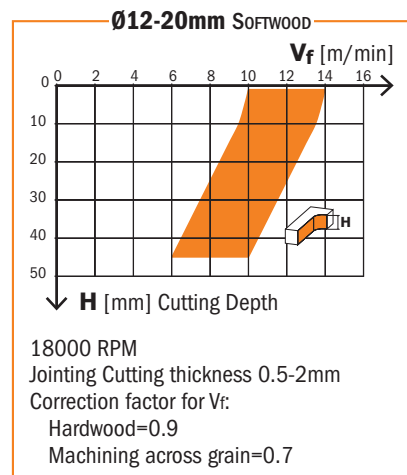
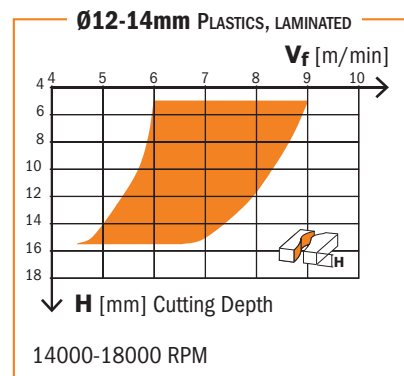
D mm	I mm	L mm	S mm	PACK Qty.	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
10	32	80	10	10	<b>194.100.11</b>	
10	42	90	10	10	<b>194.101.11</b>	
12	35	83	12	10	<b>194.120.11</b>	<b>194.120.12</b>
12	42	90	12	10	<b>194.121.11</b>	
14	50	110	14	1	<b>194.140.11</b>	
16	55	110	16	1	<b>194.160.11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

### TECHNICAL DETAILS:

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

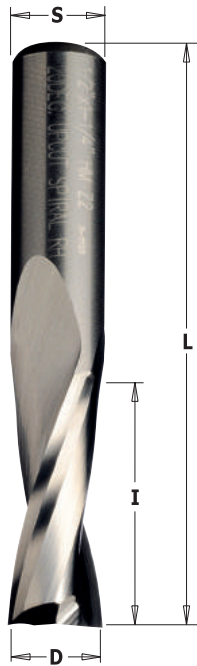
### APPLICATION:

used for ripping, template routing, panel sizing and any routing application on solid wood, wood composites, plastic materials and laminates. Can be used at a high feed speed on small, difficult to 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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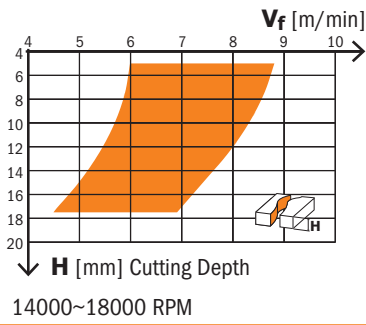
Solid Carbide Upcut Spiral Bits



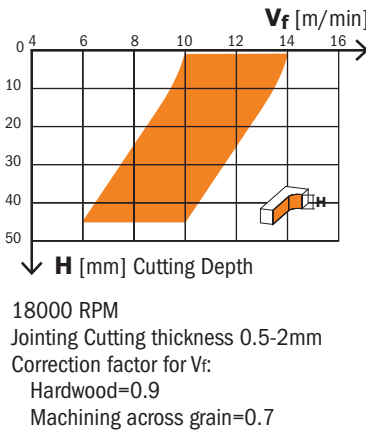
**191**

D mm	I mm	L mm	S mm	Pack Qty.	ORDER NO. Right-hand rotation
3	12	50	3	10	<b>191.030.11</b>
3	12	60	6	10	<b>191.630.11</b>
3	12	60	8	10	<b>191.830.11</b>
3,18	12,7	50,8	6,35	10	<b>191.001.11</b>
3,5	12	60	6	10	<b>191.635.11</b>
3,97	12,7	50,8	6,35	10	<b>191.003.11</b>
4	15	50	4	10	<b>191.040.11</b>
4	15	60	6	10	<b>191.640.11</b>
4	15	60	8	10	<b>191.840.11</b>
4,76	19,05	50,8	6,35	10	<b>191.005.11</b>
5	17	50	5	10	<b>191.050.11</b>
5	17	60	6	10	<b>191.650.11</b>
5	17	60	8	10	<b>191.850.11</b>
6	27	70	6	10	<b>191.060.11</b>
6	27	70	8	10	<b>191.860.11</b>
6,35	19,05	50,8	6,35	10	<b>191.007.11</b>
6,35	25,4	63,5	6,35	10	<b>191.008.11</b>
7	32	80	8	10	<b>191.870.11</b>
7,94	25,4	76,2	12,7	1	<b>191.501.11</b>
8	22	70	8	10	<b>191.080.11</b>
8	32	80	8	10	<b>191.081.11</b>
8	42	90	8	10	<b>191.082.11</b>
9	32	83	12	10	<b>191.890.11</b>
9,52	31,75	76,2	12,7	10	<b>191.503.11</b>
10	32	80	8	10	<b>191.800.11</b>
10	32	80	10	10	<b>191.100.11</b>
10	32	83	12	10	<b>191.900.11</b>
10	42	90	10	10	<b>191.101.11</b>
10	42	90	12	10	<b>191.901.11</b>
12	35	83	8	10	<b>191.820.11</b>
12	35	83	12	10	<b>191.120.11</b>
12	42	90	12	10	<b>191.121.11</b>
12	52	100	12	10	<b>191.122.11</b>
12,7	31,75	76,2	12,7	10	<b>191.505.11</b>
12,7	38,1	88,9	12,7	10	<b>191.506.11</b>
12,7	50,8	101,6	12,7	10	<b>191.507.11</b>
14	50	110	14	1	<b>191.140.11</b>
15,88	55	109,5	15,88	1	<b>191.509.11</b>
16	55	110	16	1	<b>191.160.11</b>
16	35	90	16	1	<b>191.161.11</b>
16	72	120	16	1	<b>191.165.11</b>
19,05	55	109,5	19,05	1	<b>191.511.11</b>
20	72	120	20	1	<b>191.200.11</b>

**Ø12-14mm PLASTICS, LAMINATED**



**Ø12-20mm SOFTWOOD**



**TECHNICAL DETAILS:**

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

**APPLICATION:**

used for ripping, template routing, panel sizing and any routing application on solid wood, wood composites, plastic materials and laminates. Can be used at a high feed speed on well-clamped workpieces. Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adaptors.

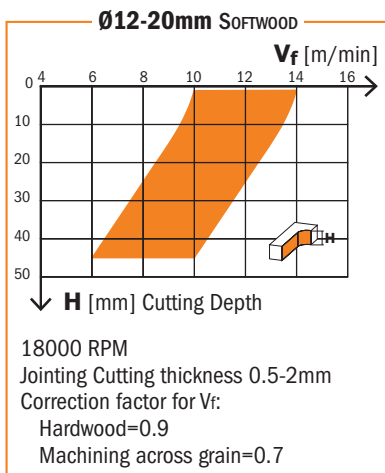
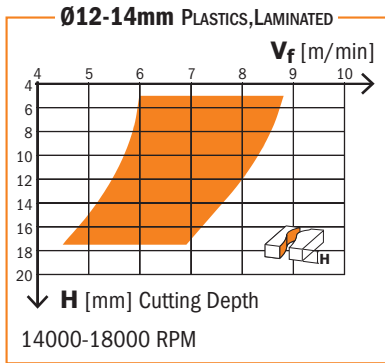


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## 192

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



### TECHNICAL DETAILS:

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

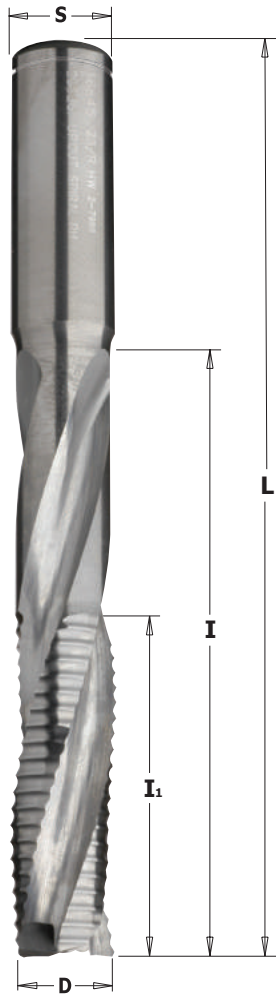
### APPLICATION:

used for ripping, template routing, panel sizing and any routing application on solid wood, wood composites, plastic materials and laminates. Can be used at a high feed speed on small, difficult to clamp work pieces. 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 Upcut Spiral Bits for Locksets



## 195



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

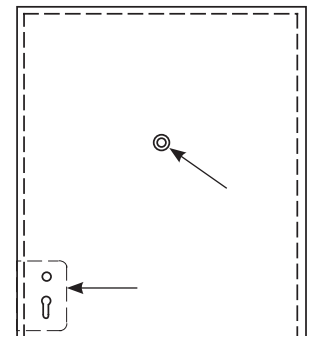
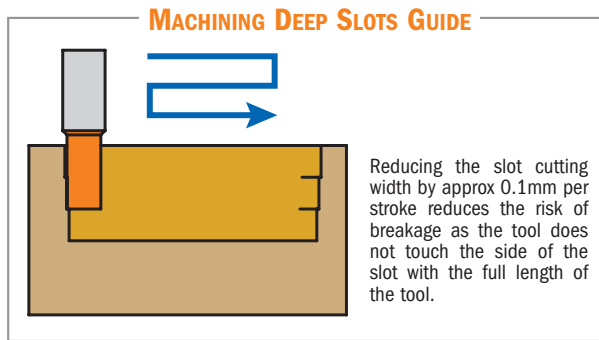
\* The maximum cutting length is achieved in 2-3 passes.

### TECHNICAL DETAILS:

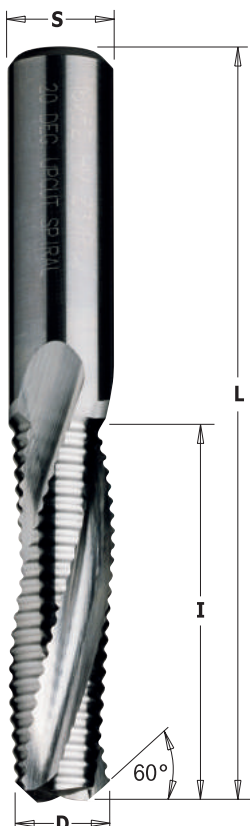
- Premium quality HWM.
- 3 spiral cutting edges [Z3] and [Z3R].
- Max 0.3mm tooth depth.
- Provide an excellent finish on the lower side of the workpiece.
- Seat for seeger ring (not included).
- **Upward chip ejection.**

### APPLICATION:

used for ripping, template routing, panel sizing and any routing application on solid wood, or wood composites. Can be used at a high feed speed on well-clamped workpieces. Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adaptors.



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



## 195.143/163



D mm	I mm	L mm	S mm	PACK QTY.	ORDER NO. Right-hand rotation
14	58	110	14	1	<b>195.143.11</b>
16	55	110	16	1	<b>195.163.11</b>

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

## 191.143/163



D mm	I mm	L mm	S mm	PACK QTY.	ORDER NO. Right-hand rotation
14	50	110	14	1	<b>191.143.11</b>
16	55	110	16	1	<b>191.163.11</b>

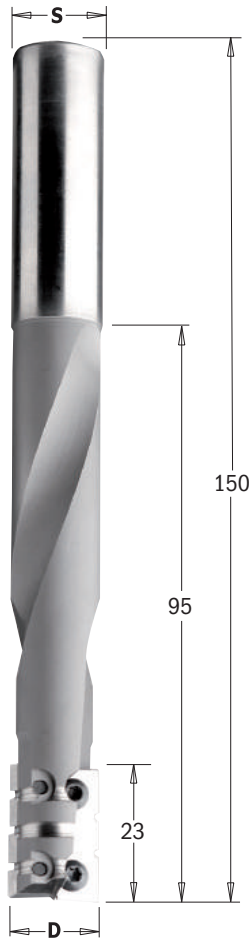
### TECHNICAL DETAILS:

- 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 ripping, template routing, panel sizing and any routing application on solid wood, or wood composites. Can be used at a high feed speed on well-clamped 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 & Chip-Breaker for Locksets



**662**



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

**Spare parts**

790.230.2R	23x7x1.5mm 2-RT HWM knives
790.230.3R	23x7x1.5mm 3-RT HWM knives
990.082.00	M3x4mm T9 Torx screw
991.069.00	T9 Torx key

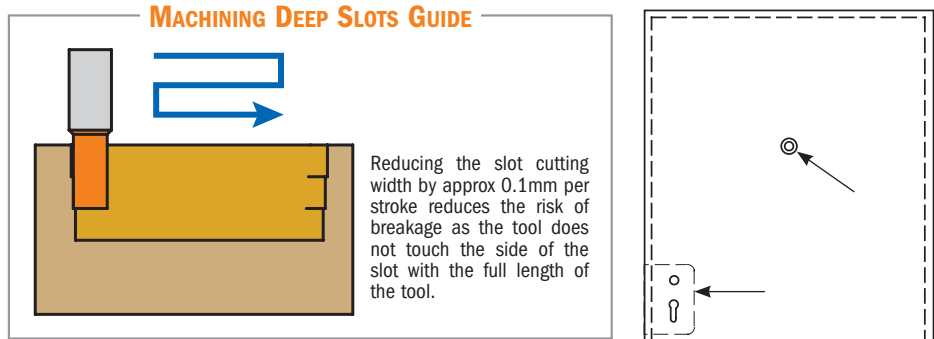
\* The 95mm length is achieved in 4-5 passes.

**TECHNICAL DETAILS:**

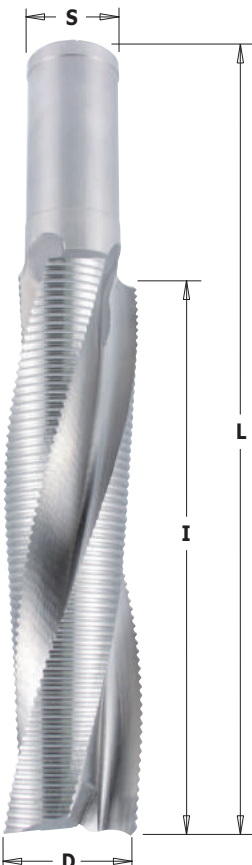
- Densimet® tungsten heavy metal alloys for low-vibration.
- 2 cutting edges [Z2R].
- Chip-breaker teeth.

**APPLICATION:**

used for ripping, template routing, panel sizing and any routing application on solid wood, or wood composites. Can be used at a high feed speed on well-clamped workpieces. Can be used on machining centres, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adaptors.



# Upcut Spiral Bits with Chipbreaker for Glue-Laminated Wooden Beams



**195**



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

□ **On request**

We manufacture bits without chipbreaker, with left-hand rotation and also in custom dimensions.

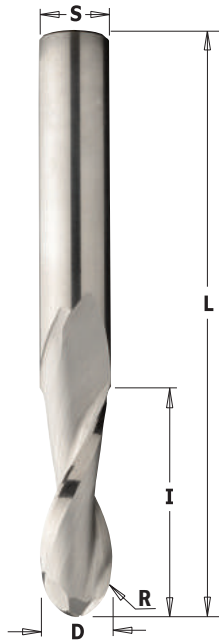
**TECHNICAL DETAILS:**

- 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.

Round Nose Solid Carbide Upcut Spiral Bits



**199**



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

**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 ripping, template routing, panel sizing and any routing application on solid wood, wood composites, plastic materials and laminates. Can be used at a high feed speed on well-clamped workpieces. For use on machining centers, point-to-point boring machines, CNC routers and hand-held routers equipped with chucks or adaptors.

DP Router Cutters with 40° Shear Angle



**145**



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

□ On request

**TECHNICAL DETAILS:**

- Super strength steel.
- "H4" diamond cutting edges featuring 40° shear angle.
- Resharpenable cutters (max 8-10 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.

# DP Router Cutters with Shear Angle for Nesting (Densimet® Tungsten Heavy Metal Alloys)



**143**



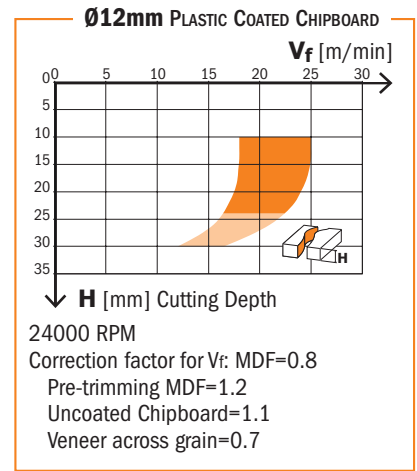
D mm	I mm	L mm	S mm	Z	PACK QTY.	ORDER NO. Right-hand rotation
12	25	70	12x40	3 (9 DP)	1	<b>143.120.61</b>
12	31	80	12x40	3 (12 DP)	1	<b>143.121.61</b>

**TECHNICAL DETAILS:**

- Densimet® tungsten heavy metal alloys for low-vibration.
- DP cutting edge.
- Resharpenable cutter (max 6 times).

**APPLICATION:**

to be used on all CNC routers for jointing, rabbeting, grooving, copying and dividing cuts of raw material, melamine and laminates, MDF, HPL and veneered panels. High performance on pre-and finish-routing.



# DP Spiral Router Cutters with Shear Angle

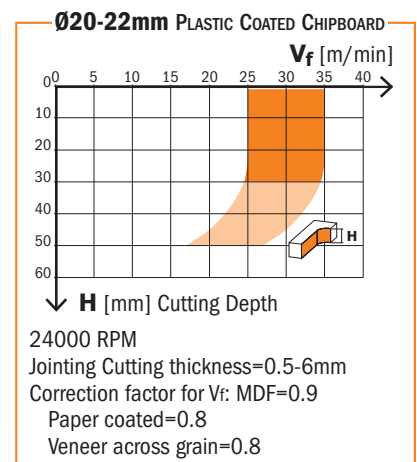
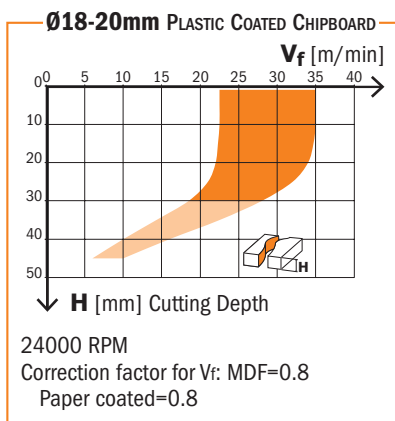


**143**



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

□ On request



**TECHNICAL DETAILS:**

- Super strength steel. - DP cutting edge.
- HW plunging tip for diagonal plunge-cutting (Z-axis tool entrance).
- Resharpenable cutter (max 10/12 times).

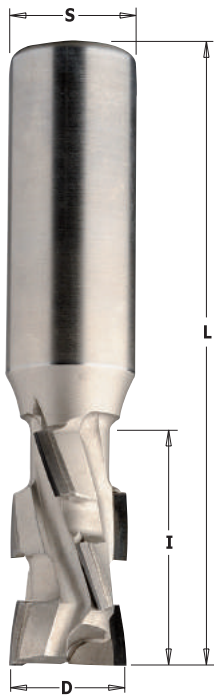
**APPLICATION:**

to be used on all CNC routers for jointing, rabbeting, grooving, copying and dividing cuts of raw material, melamine and laminates, MDF, HPL and veneered panels. High performance on pre-and finish-routing.

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# DP Router Cutters with Shear Angle



142

DP
Z2+2
RH
40X

LONGER LIFE THAN CARBIDE

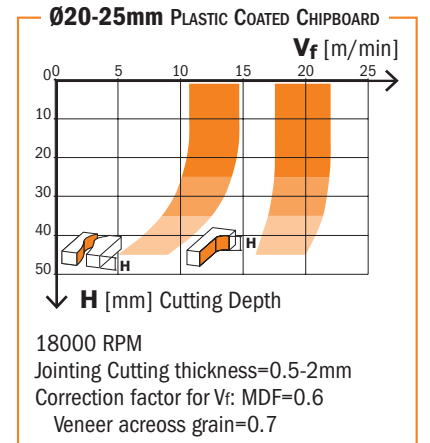
D mm	I mm	L mm	S mm	Z	PACK QTY.	ORDER NO. Right-hand rotation
20	27	85	20x50	2+2 (6 DP+1 HW)	1	142.200.61
20	36	95	20x50	2+2 (8 DP+1 HW)	1	142.201.61
20	45	105	20x50	2+2 (10 DP+1 HW)	1	142.202.61
20	55	115	20x50	2+2 (12 DP+1 HW)	1	142.203.61
25	27	90	25x55	2+2 (6 DP+1 HW)	1	142.250.61
25	36	100	25x55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

**TECHNICAL DETAILS:**

- Super strength steel.
- DP cutting edge.
- HW plunging tip for diagonal plunge-cutting (Z-axis tool entrance).
- Resharpenable cutter (max 3 times).

**APPLICATION:**

to be used on all CNC routers for jointing, rabbeting, grooving, copying and dividing cuts of raw material, melamine and laminates, MDF, HPL and veneered panels.



# DP Router Cutters with 20° Shear Angle



142

DP
Z2+2
RH
40X

LONGER LIFE THAN CARBIDE

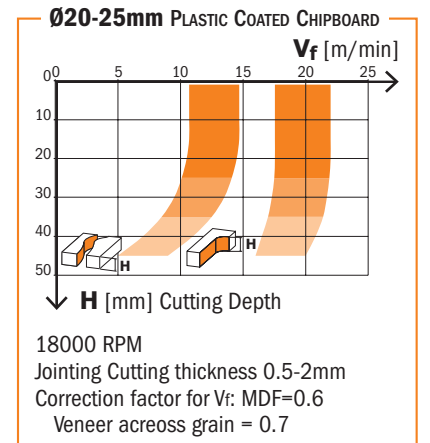
D mm	I mm	L mm	S mm	Z	PACK QTY.	ORDER NO. Right-hand rotation
20	25	85	20x45	2+2 (8 DP+1 HW)	1	142.720.61
20	30	90	20x45	2+2 (10 DP+1 HW)	1	142.721.61
20	35	95	20x45	2+2 (12 DP+1 HW)	1	142.722.61
20	40	100	20x45	2+2 (14 DP+1 HW)	1	142.723.61
20	45	105	20x45	2+2 (16 DP+1 HW)	1	142.724.61
20	50	110	20x45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

**TECHNICAL DETAILS:**

- Super strength steel.
- "H4" diamond cutting edges featuring 20° shear angle.
- HW plunging tip for diagonal plunge-cutting (Z-axis tool entrance).
- Resharpenable cutters (max 8-10 times).

**APPLICATION:**

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



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# DP Router Cutters with Shear Angle



**140**

DP
Z1+1
RH
40X LONGER LIFE THAN CARBIDE

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

**TECHNICAL DETAILS:**

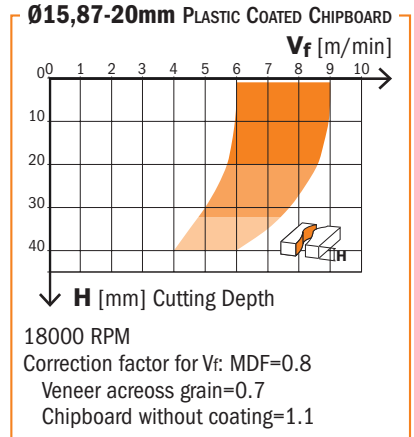
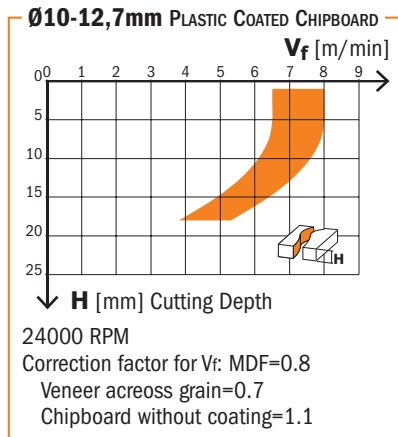
- Super strength steel.
- DP cutting edge.
- HW plunging tip for diagonal plunge-cutting (Z-axis tool entrance).
- Resharpener cutter (max 3 times).

**APPLICATION:**

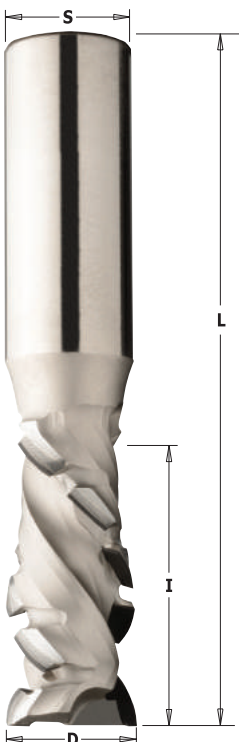
to be used on all CNC routers for jointing, rabbeting, grooving and copying of raw material, melamine and laminates, MDF, HPL and veneered panels.



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# DP Router Cutters with 45° Shear Angle



**140**

DP
Z1+1
RH
40X LONGER LIFE THAN CARBIDE

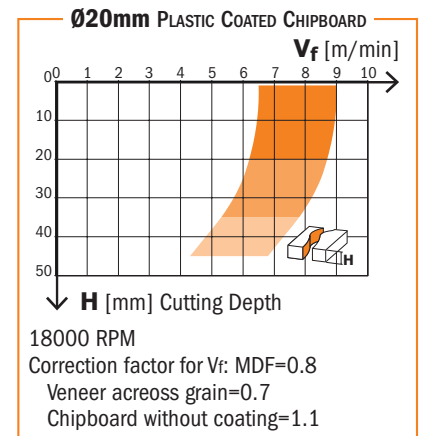
D mm	I mm	L mm	S mm	Z	PACK QTY.	ORDER NO. Right-hand rotation
20	25	85	20x50	1+1 (6 DP+1 HW)	1	140.720.61
20	35	95	20x50	1+1 (8 DP+1 HW)	1	140.721.61
20	45	105	20x50	1+1 (9 DP+1 HW)	1	140.722.61

**TECHNICAL DETAILS:**

- Super strength steel.
- "H4" diamond cutting edges featuring 45° shear angle.
- HW plunging tip for plunge cutting.
- Resharpener cutters (max 8-9 times).

**APPLICATION:**

to be used on all CNC routers for jointing, rabbeting, grooving and copying of raw material, melamine and laminates, MDF, HPL and veneered panels.



# DP Router Cutters with Negative Shear Angle



new

**CMT ORANGE TOOLS®**

DP Z1 RH **40X**  
LONGER LIFE THAN CARBIDE



## 141 (HWM tool body)

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

### TECHNICAL DETAILS:

- Special super-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 Ø10and Ø12mm

### APPLICATION:

to be used on all CNC routers for jointing and sizing of solid wood and wood-based panels.



Negative Cutting Edge

# DP Router Cutters



## 141

DP Z1+1 Z1 RH **40X**  
LONGER LIFE THAN CARBIDE

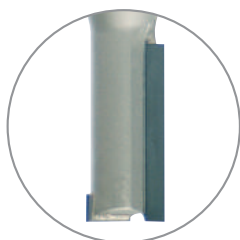
D mm	I mm	L mm	S mm	Z	PACK QTY.	ORDER NO. Right-hand rotation
6	8	65	12x40	1	1	<b>141.060.61</b>
8	12	65	12x40	1	1	<b>141.080.61</b>
*10	22	75	12x40	1+1	1	<b>141.101.61</b>

### TECHNICAL DETAILS:

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

### APPLICATION:

to be used on all CNC routers for jointing and sizing of solid wood and wood-based panels.



\* Construction Z1+1 for 141.101.61 item



## 174



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

**TECHNICAL DETAILS:**

- Premium quality HWM.
- 2 radial relief cutting edges [Z2].

# Router Cutters



## 174



D mm	I mm	L mm	S mm	PACK QTY.	ORDER NO. Right-hand rotation
8	20	55	8	10	<b>174.080.11</b>
8	30	70	8	10	<b>174.081.11</b>
8	40	90	8	10	<b>174.082.11</b>
9	20	55	8	10	<b>174.090.11</b>
10	20	60	8	10	<b>174.100.11</b>
10	30	70	8	10	<b>174.102.11</b>
10	40	90	8	10	<b>174.101.11</b>
11	20	60	8	10	<b>174.110.11</b>
12	20	60	8	10	<b>174.120.11</b>
12	30	70	8	10	<b>174.122.11</b>
12	40	90	8	10	<b>174.121.11</b>
13	20	60	8	10	<b>174.130.11</b>
14	20	60	8	10	<b>174.140.11</b>
14	30	70	8	10	<b>174.142.11</b>
14	40	90	8	10	<b>174.141.11</b>
15	20	60	8	10	<b>174.150.11</b>
16	20	70	8	10	<b>174.160.11</b>
16	30	70	8	10	<b>174.162.11</b>
16	40	90	8	10	<b>174.161.11</b>
18	20	70	8	10	<b>174.180.11</b>
18	30	70	8	10	<b>174.181.11</b>
18	40	80	8	10	<b>174.182.11</b>
19	20	70	8	10	<b>174.190.11</b>
20	20	70	8	10	<b>174.200.11</b>
20	30	70	8	10	<b>174.201.11</b>
20	40	90	8	10	<b>174.202.11</b>
22	20	70	8	10	<b>174.220.11</b>
22	30	70	8	10	<b>174.221.11</b>
22	40	90	8	10	<b>174.222.11</b>
<sup>new</sup> 23,5	20	70	8	10	<b>Y174.235.11</b>
24	20	70	8	10	<b>174.240.11</b>
24	30	70	8	10	<b>174.241.11</b>
24	40	90	8	10	<b>174.242.11</b>
25	20	70	8	10	<b>174.250.11</b>
26	20	70	8	10	<b>174.260.11</b>
26	30	70	8	10	<b>174.261.11</b>
28	20	70	8	10	<b>174.280.11</b>
28	30	70	8	10	<b>174.281.11</b>
29	20	70	8	10	<b>174.290.11</b>
30	20	70	8	10	<b>174.300.11</b>

**HW plunge centre tip**



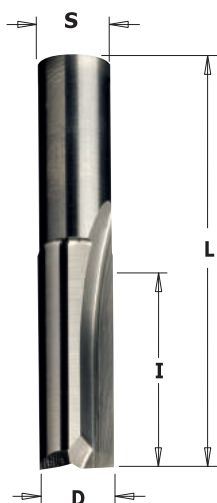
**TECHNICAL DETAILS:**

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

**APPLICATION:**

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



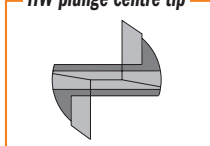


## 112



D mm	I mm	L mm	S mm	PACK Qty.	ORDER NO. Right-hand rotation
3	10	48	9,5	50	<b>112.030.11</b>
4	10	48	9,5	50	<b>112.040.11</b>
5	12	39	9,5	50	<b>112.050.11</b>
6	14	41	9,5	50	<b>112.060.11</b>
7	16	43	9,5	50	<b>112.070.11</b>
8	18	48	9,5	50	<b>112.080.11</b>
8	30	60	9,5	50	<b>112.081.11</b>
9	20	52	9,5	50	<b>112.090.11</b>
10*	22	52	9,5	50	<b>112.100.11</b>
10*	35	65	9,5	50	<b>112.101.11</b>
11*	26	52	9,5	10	<b>112.110.11</b>
12*	26	52	9,5	10	<b>112.120.11</b>

HW plunge centre tip



\* Super strength steel  
2 precision ground HW cutting edges [Z2+1]

**TECHNICAL DETAILS:**

- Premium quality HWM.
- 2 radial relief cutting edges [Z2+1].

# Router Cutters

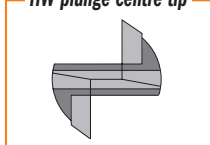


## 113



D mm	I mm	L mm	S mm	PACK Qty.	ORDER NO. Right-hand rotation
12	26	52	12	10	<b>113.120.11</b>
12	40	70	12	10	<b>113.121.11</b>
13	26	52	12	10	<b>113.130.11</b>
14	28	56	12	10	<b>113.140.11</b>
14	40	72	12	10	<b>113.141.11</b>
15	32	60	12	10	<b>113.150.11</b>
16	32	60	12	10	<b>113.160.11</b>
16	40	72	12	10	<b>113.161.11</b>
17	35	64	12	10	<b>113.170.11</b>
18	35	64	12	10	<b>113.180.11</b>
19	38	68	12	1	<b>113.190.11</b>
20	38	68	12	1	<b>113.200.11</b>
22	40	72	12	1	<b>113.220.11</b>
24	40	72	12	1	<b>113.240.11</b>
25	40	72	12	1	<b>113.250.11</b>
26	42	74	12	1	<b>113.260.11</b>
28	42	74	12	1	<b>113.280.11</b>
30	42	74	12	1	<b>113.300.11</b>

HW plunge centre tip

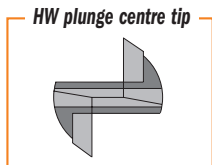
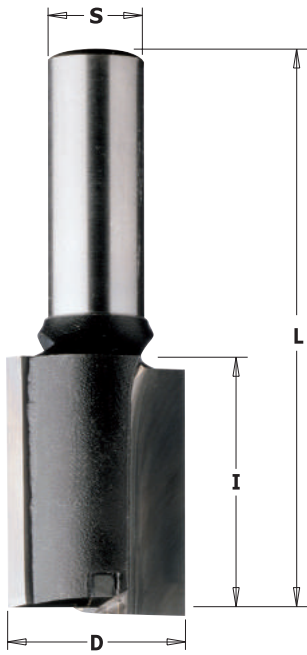


**TECHNICAL DETAILS:**

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

**APPLICATION:**

used for grooving, jointing and routing on solid wood, wood composites, plastic materials and laminates.



**TECHNICAL DETAILS:**

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

**APPLICATION:**

for grooving, jointing and routing on solid wood, wood composites, plastic materials and laminates.

**175**



D mm	I mm	L mm	S mm	PACK QTY.	ORDER NO. Right-hand rotation
• 4	10	65	10	50	<b>175.040.11</b>
• 5	12	65	10	50	<b>175.050.11</b>
• 6	14	65	10	50	<b>175.060.11</b>
• 7	17	65	10	50	<b>175.070.11</b>
8	20	65	10	50	<b>175.080.11</b>
10	25	70	10	50	<b>175.100.11</b>
12	25	70	10	10	<b>175.120.11</b>
14	25	70	10	10	<b>175.140.11</b>
15	25	70	10	10	<b>175.150.11</b>
16	25	70	10	10	<b>175.160.11</b>
18	25	70	10	10	<b>175.180.11</b>
20	25	70	10	10	<b>175.200.11</b>
22	25	70	10	10	<b>175.220.11</b>
24	25	70	10	10	<b>175.240.11</b>
25	25	70	10	10	<b>175.250.11</b>
26	25	70	10	10	<b>175.260.11</b>
30	25	70	10	10	<b>175.300.11</b>
35	25	70	10	10	<b>175.350.11</b>

• HWM

**176**



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

**177**



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

**TECHNICAL DETAILS:**

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

**APPLICATION:**

used for grooving, jointing and general routing operation on solid wood, wood composites, plastics and laminates. Can be used on machining centres, CNC routers and hand-held routers.



# Straight Router Cutters with Insert Knives



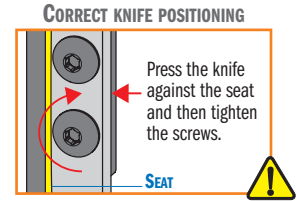
**653**



D mm	I mm	L mm	S mm	Spare Knives		PACK QTY.	ORDER NO. Right-hand rotation
				side	top		
16	28,3	92	20	790.283.12	790.075.00	10	<b>653.661.11</b>
16	48,3	111,5	20	790.483.12	790.075.00	10	<b>653.662.11</b>
18	48,3	111,5	20	790.483.12	790.075.00	10	<b>653.681.11</b>
20	48,3	111,5	20	790.483.12	790.096.00	10	<b>653.701.11</b>

**Spare parts**

790.075.00	7,5x12x1,5mm knife
790.096.00	9,6x12x1,5mm knife
790.283.12	28,3x12x1,5mm knife
790.483.12	48,3x12x1,5mm knife
990.072.00	M3,5x3,5mm Torx screw
990.074.00	M4x3,5mm Torx screw
990.075.00	M4x6mm Torx screw
991.061.00	T15 Torx key



**TECHNICAL DETAILS:**

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

**APPLICATION:**

straight router bit with one replaceable plunging knife and one-sided knife fixed by special Torx screws. The body is precision balanced. For finishing and routing, plunge cutting and grooving in board materials (laminated chipboards, MDF) and hardwood. For use on CNC machining centres.

# Spoilboard Surfacing Router Cutters with Insert Knives



**663**



D mm	I mm	L mm	S mm	PACK QTY.	ORDER NO. Right-hand rotation	Spare parts	
60	12	80	12x50	1	<b>663.004.11</b>	790.120.03	990.075.00
80	12	90	20x60	1	<b>663.003.11</b>	790.120.03	990.075.00

**Spare parts**

991.061.00	T15 Torx key
990.036.00	M8x25mm TE screw (only for 663.003.11)
990.020.00	Hex nut for threaded arbors M8 (only for 663.003.11)

The screw 990.036.00 and the nut 990.020.00 (on the shank) only fit item 663.003.11

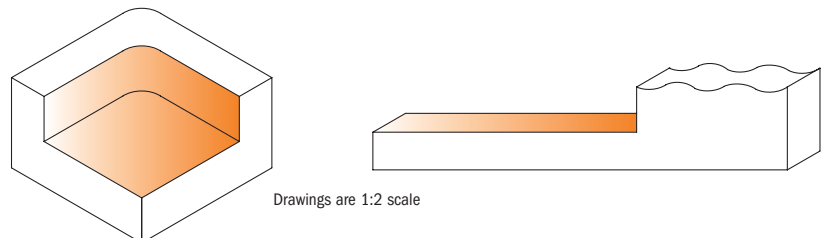
**TECHNICAL DETAILS:**

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

**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.



Drawings are 1:2 scale

# Mini Spoilboard Surfacing Cutters with Insert Knives

new

**CMT ORANGE TOOLS®**



**663**

INSERT CARBIDE
MEC
Z3
RH
4X LONGER LIFE

D mm	I mm	L mm	S mm	PACK QTY.	ORDER NO. Right-hand rotation	Spare parts	
38	12	60	12x35	1	<b>663.005.11</b>	790.120.03	990.075.00

Spare parts 991.061.00 T15 Torx key

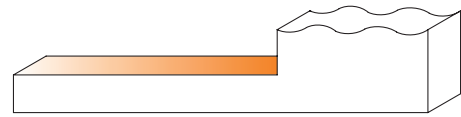
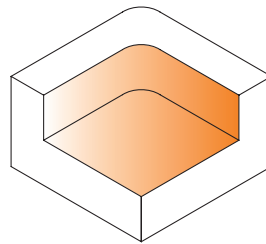
**TECHNICAL DETAILS:**

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

**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.



Drawings are 1:2 scale

# Universal Profile Cutter for CNC Machines



**663.301**

SP
MEC
Z2
RH

D mm	I mm	L mm	S mm	PACK QTY.	ORDER NO. Right-hand rotation
65	40-50	93	20	1	<b>663.301.11</b>

Spare parts 692.999.01 38x15x16mm wedge for cutter  
990.068.00 M5x5mm TCEI screw  
991.064.00 Hex key 4mm

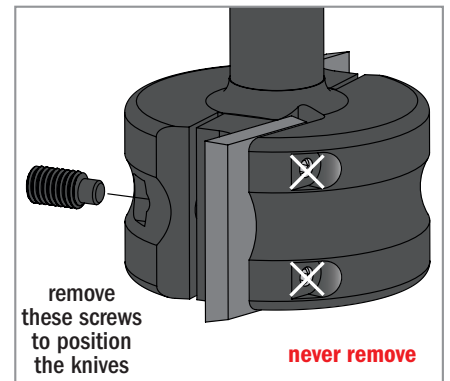
**TECHNICAL DETAILS:**

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

**APPLICATION:**

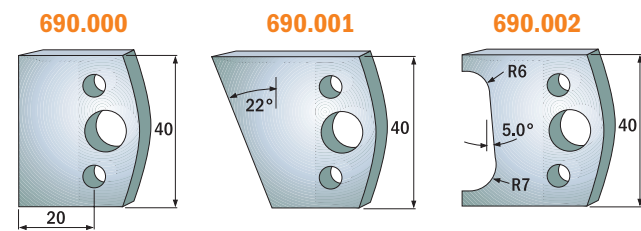
for universal profiling of solid wood on CNC router machines. For cutting width 40mm and 50mm (serie 690). Profile knives may only be ordered and used in pairs. For router machines with mechanical feed.

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

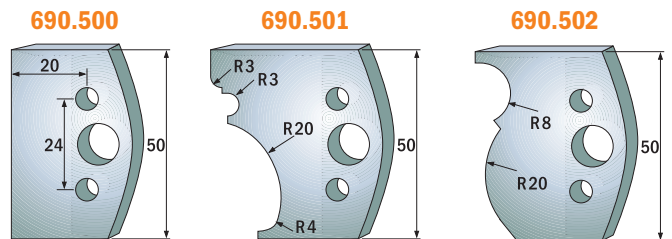


**TO BE USED WITH SP KNIVES SERIES 690 (SEE PAGE 116~129)**

Knives not included in cutter package.



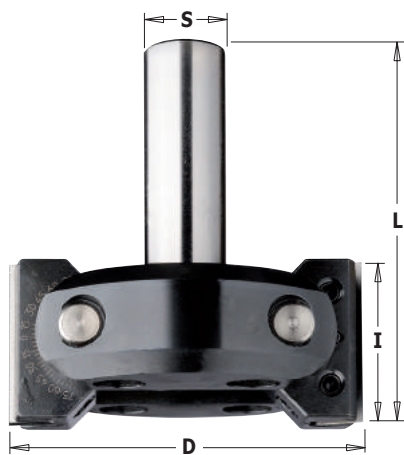
Profile knives cutting length=40mm (serie 690)



Profile knives cutting length=50mm (serie 690.5)



# Adjustable Chamfering CNC Cutter



## 663.201

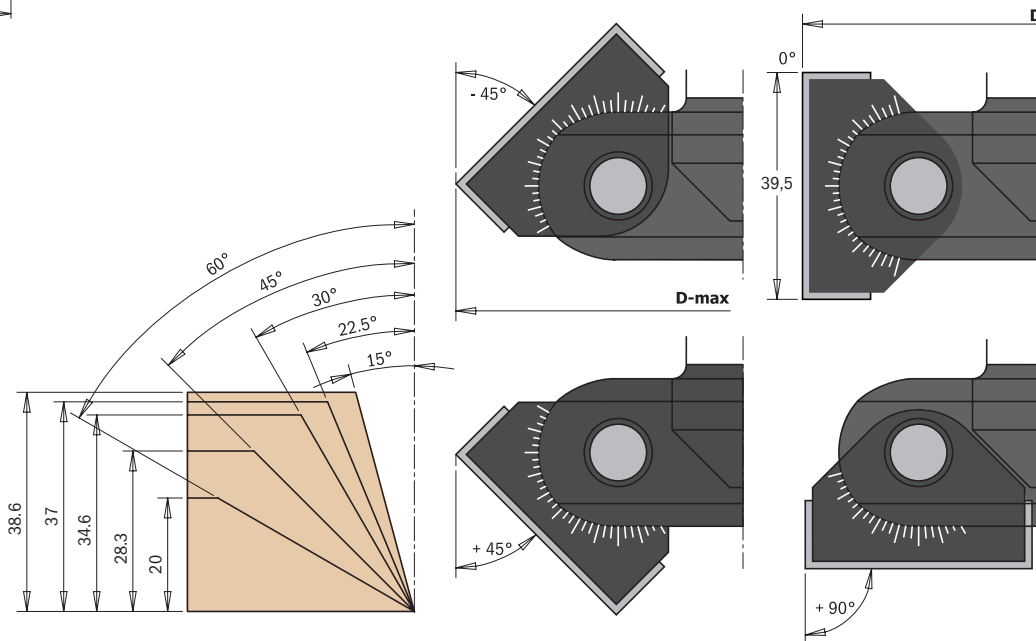


D mm	D_Max 45° mm	I mm	A	L mm	S mm	PACK QTY.	ORDER NO. Right-hand rotation
85	102	39,5	0°-45° - 0°+90°	92	20	1	663.201.11

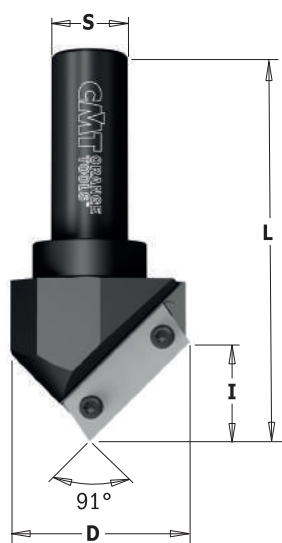
- Spare parts**
- 790.395.12 39,5x12x1,5mm knife
  - 663.999.01 38x6x12mm wedge
  - 990.087.00 M6x8mm STEI screw (4x2mm threaded pin)
  - 991.067.00 3mm hex key
  - 663.999.02 Kit with 2 wedges and 1 screw for blocking rotation
  - 990.099.00 M8x25mm TCEI screw
  - 990.023.00 M8 (4mm) nut
  - 991.081.00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

**TECHNICAL DETAILS:** tool body in steel, two TC reversible knives in swiveling blade carriers. Cutting on periphery and both sides. Swiveling range towards top 0-45°, toward bottom 0-90°, infinitely variable adjustment according to precise scale. With positive stops at 7,5° through adjustment aide. No displacement of adjusted beveling angle when replacing blades. Right-hand rotation.

**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.



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



## 663.101



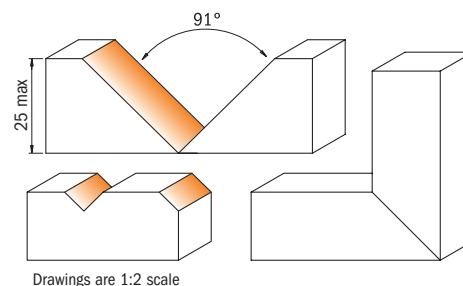
D mm	I mm	L mm	S mm	PACK QTY.	ORDER NO. Right-hand rotation
52	25	100	20	1	663.101.11

- Spare parts**
- 790.360.01 36x12x1,5mm knife
  - 990.077.00 M3,5x7mm Torx screw
  - 991.061.00 T15 Torx key
- Optional**
- S790.360.03 36x12x1,5mm HW-SMG replaceable knife (4 cutting edges 35°)

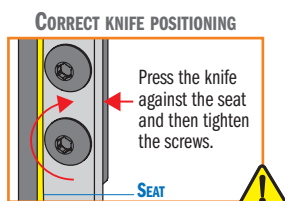
**TECHNICAL DETAILS:**

- Super Strength steel.
- 1 cutting edges [Z1].

**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 a higher quality is available for laminated and MDF material.



Drawings are 1:2 scale





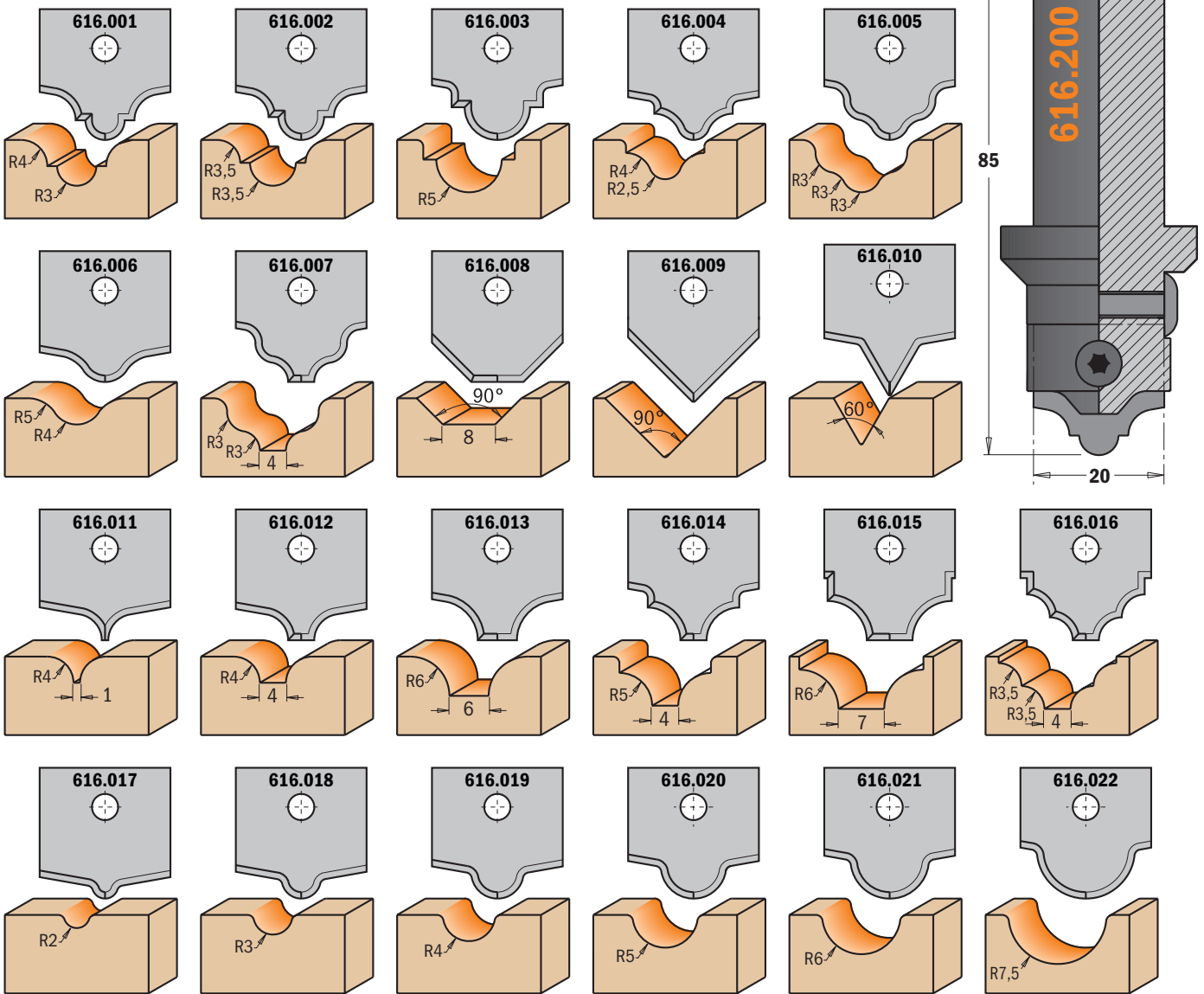
**616.000.01**

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.



Drawings are 1:1 scale

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

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

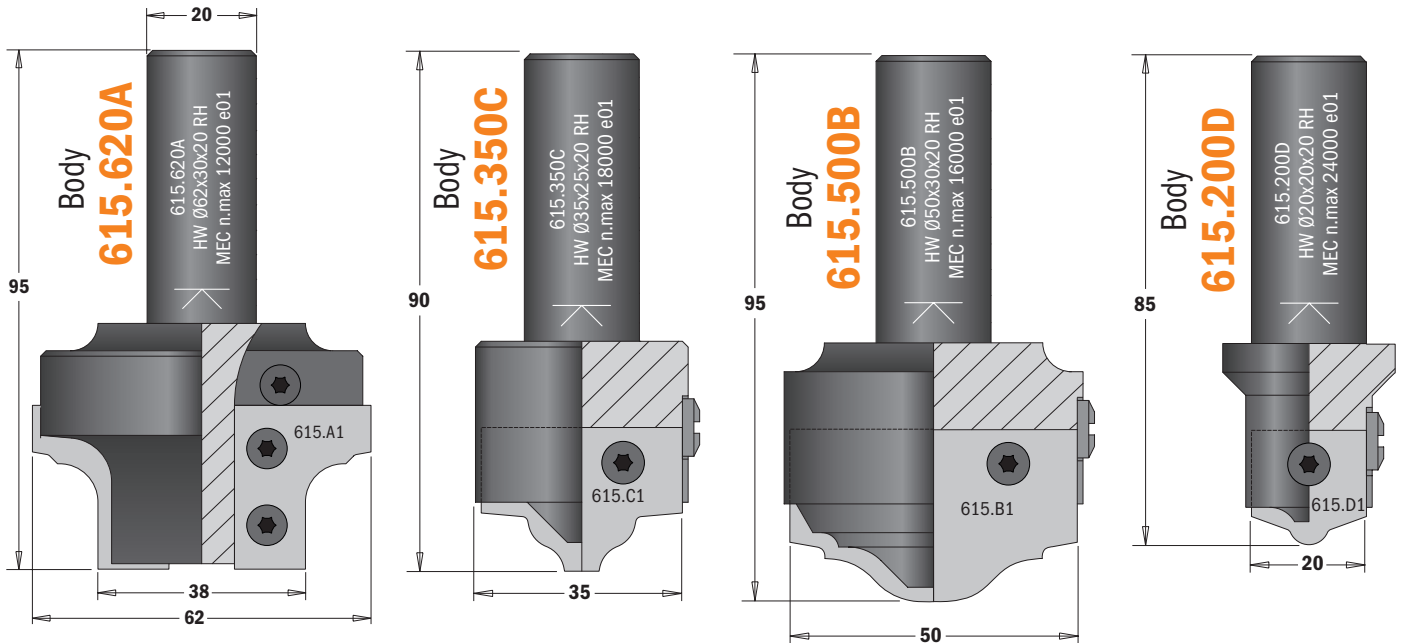


### 615.004.01

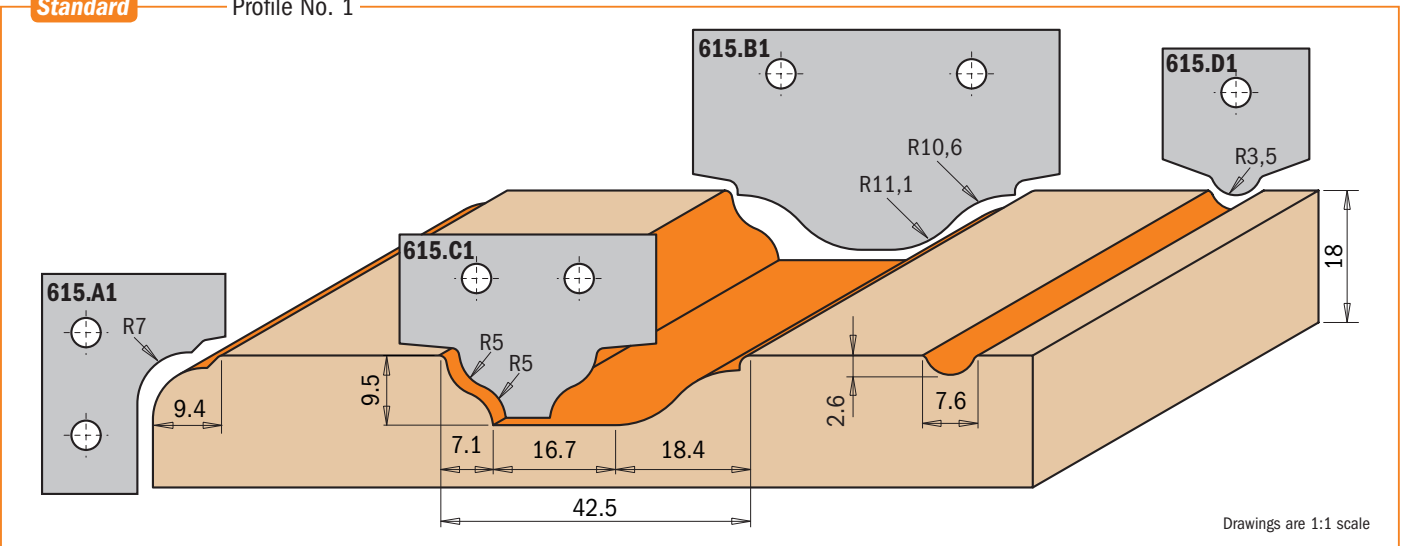


Open some new doors with CMT. Our 4-piece set includes the most popular profile to make MDF panel doors for kitchens and bathrooms. Each bit is made from bar stock steel and is equipped with 5 different profile knives allowing enormous possibilities for easy and economical construction. The highest materials,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

- Spare parts**
- 991.061.00 T15 Torx key
  - 990.073.00 M3,5x5mm Torx screw
  - 990.075.00 M4x6mm Torx screw
  - 990.077.00 M3,5x7mm Torx screw



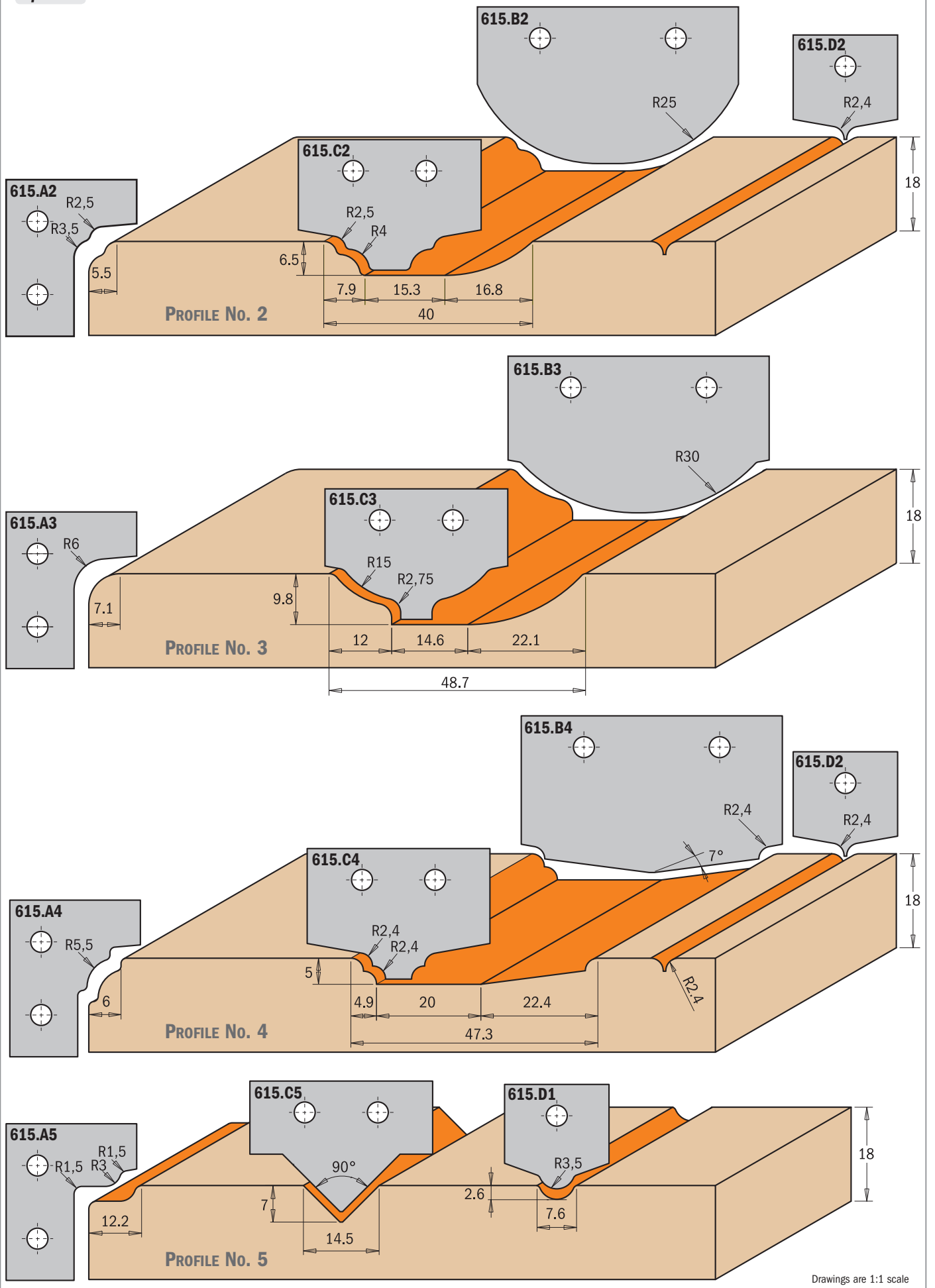
**Standard** Profile No. 1



Drawings are 1:1 scale

DESCRIPTION	S mm	PACK QTY.	ORDER NO.
Complete Set for MDF Doors (Profile no. 1)	20	1	615.004.01

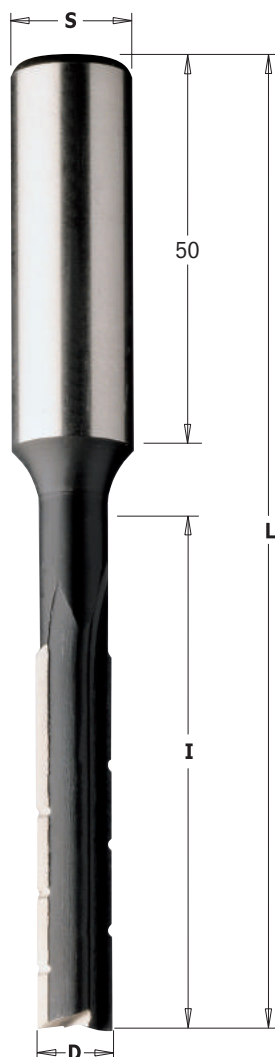
Optional



Drawings are 1:1 scale



# Slot Mortising Bits with Chip-Breaker



## 102

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

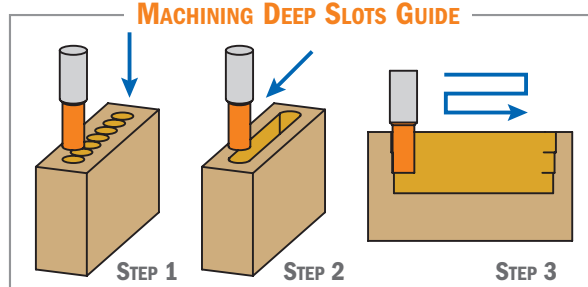
**TECHNICAL DETAILS:**

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

**APPLICATION:**

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

**MACHINING DEEP SLOTS GUIDE**



## 6-Piece Mortising Bit Sets

### 102-172

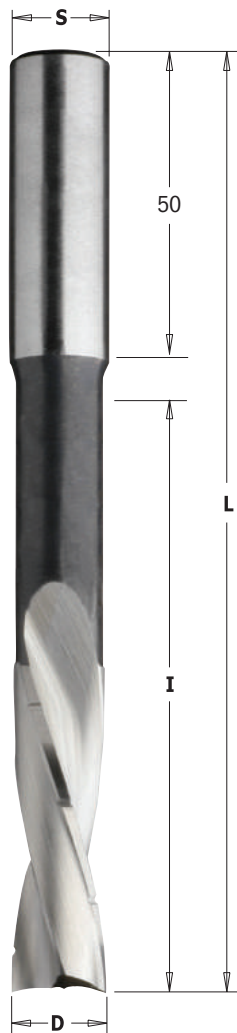


Ideal for heavy mortise jobs. Made of super strength high speed steel and available in left-hand or right-hand rotation. Safely packaged in a hardwood and glass box for protection, these sets are economical and a perfect addition to any workshop.

S mm	D mm	PACK Qty.	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 Chip-Breaker



## 161



D mm	I mm	L mm	S mm	PACK QTY.	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	PACK QTY.	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

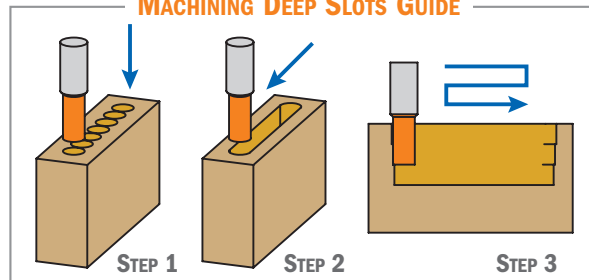
### TECHNICAL DETAILS:

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

### APPLICATION:

for cutting mortise slots in soft and hardwood. Used on machining centres equipped with chucks. RPM 3000~5000

### MACHINING DEEP SLOTS GUIDE



## 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 hardwood and glass box for protection, these sets are economical and a perfect addition to any workshop.

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

## Slot & Mortise Boring Bits



### 164



D mm	L mm	S mm	PACK QTY.	ORDER NO. Right-hand rotation
18	100	M12x1	1	<b>164.180.11</b>
20	100	M12x1	1	<b>164.200.11</b>
22	100	M12x1	1	<b>164.220.11</b>

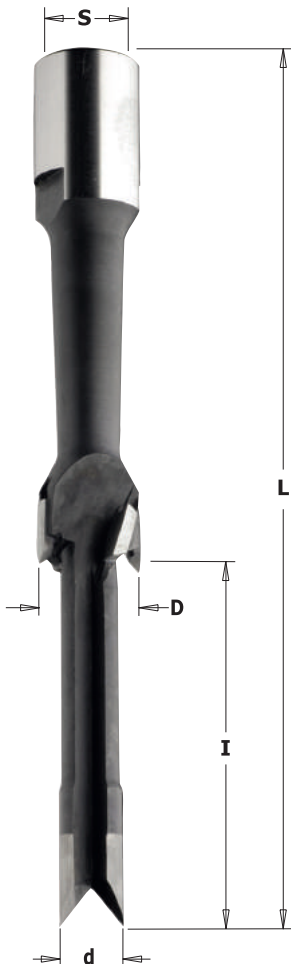
#### TECHNICAL DETAILS:

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

#### APPLICATION:

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

## Slot & Mortise Boring Bits



### 166-167



d mm	D mm	I mm	L mm	S mm	PACK QTY.	ORDER NO. Right-hand rotation
11	22	62	155	M12x1	1	<b>166.220.11</b>
12	19	62	155	M12x1	1	<b>167.190.11</b>

#### TECHNICAL DETAILS:

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

#### APPLICATION:

used for drilling and cutting mortise slots in solid wood, wood composites, plastic and laminated materials.



## 163



D mm	L mm	S mm	PACK QTY.	ORDER NO. Right-hand rotation
12	100	M12x1	1	<b>163.120.11</b>
14	100	M12x1	1	<b>163.140.11</b>
16	100	M12x1	1	<b>163.160.11</b>

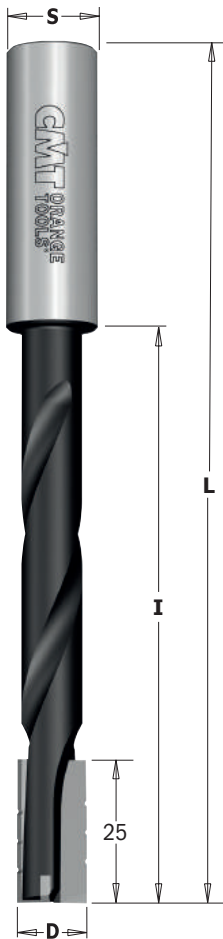
### TECHNICAL DETAILS:

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

### APPLICATION:

used for cutting mortises and slots in solid wood and wood composites. Assembled in chucks.

# Carbide Spiral Slot Mortising Bits with Chip-Breaker



## 161



D mm	I <sub>1</sub> mm	I mm	L mm	S mm	PACK QTY.	ORDER NO. Right-hand rotation	ORDER NO. Left-hand rotation
12	25	75	150	16x50	10	<b>161.120.11</b>	<b>161.120.12</b>
16	25	95	170	16x50	10	<b>161.160.11</b>	<b>161.160.12</b>

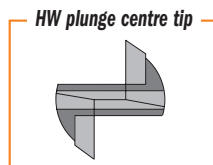
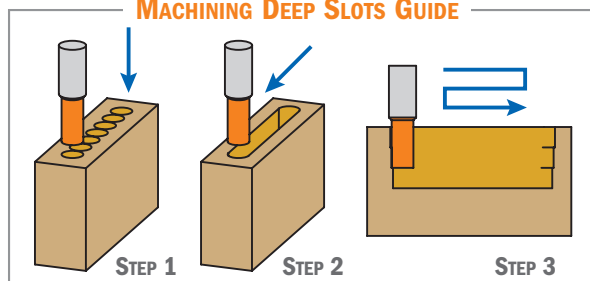
### TECHNICAL DETAILS:

- Long-lasting cutting performance.
- Super strength steel.
- 2 precision ground HW cutting edges with chip-breaker teeth and 1 HW plunge centre tip [Z2+1].

### APPLICATION:

for cutting mortise slots in soft and hardwood. Used on machining centres equipped with chucks. RPM 3000~5000

### MACHINING DEEP SLOTS GUIDE





## Reciprocating Slot Mortising Bits



### 103



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

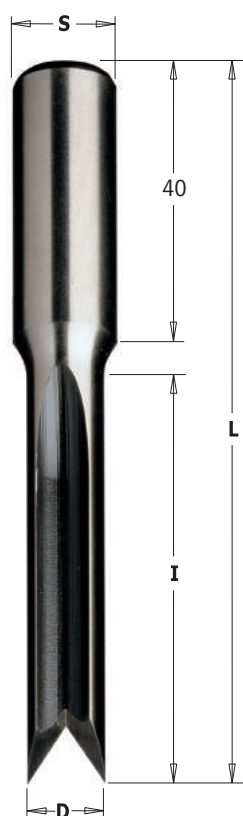
**TECHNICAL DETAILS:**

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

**APPLICATION:**

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

## Reciprocating Slot Mortising Bits



### 179



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

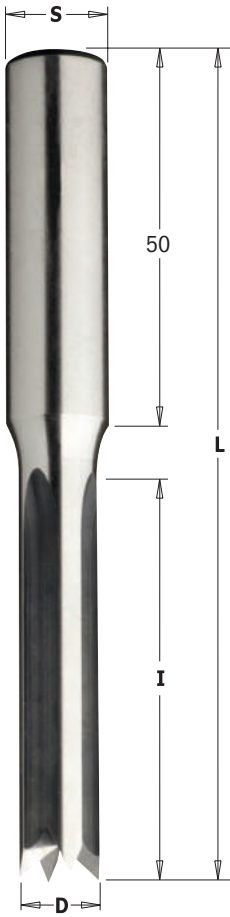
**TECHNICAL DETAILS:**

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

**APPLICATION:**

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

# Reciprocating Slot Mortising Bits



## 104



D mm	I mm	L mm	S mm	PACK QTY.	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

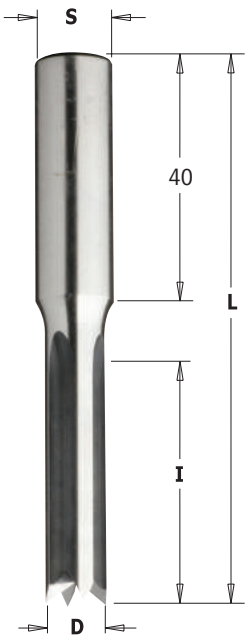
**TECHNICAL DETAILS:**

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

**APPLICATION:**

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

# Reciprocating Slot Mortising Bits



## 105



D mm	I mm	L mm	S mm	PACK QTY.	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:**

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