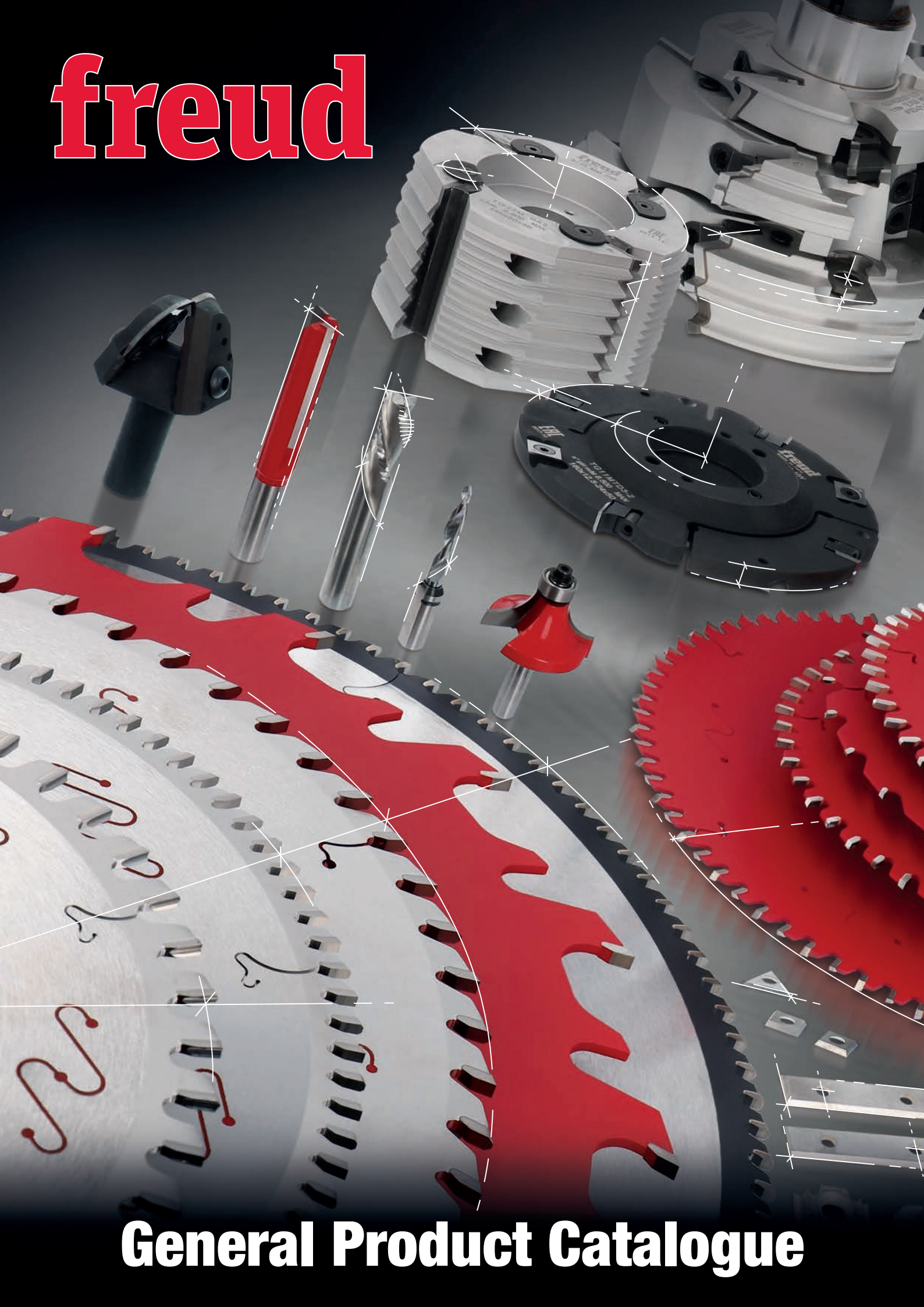


# freud



## General Product Catalogue



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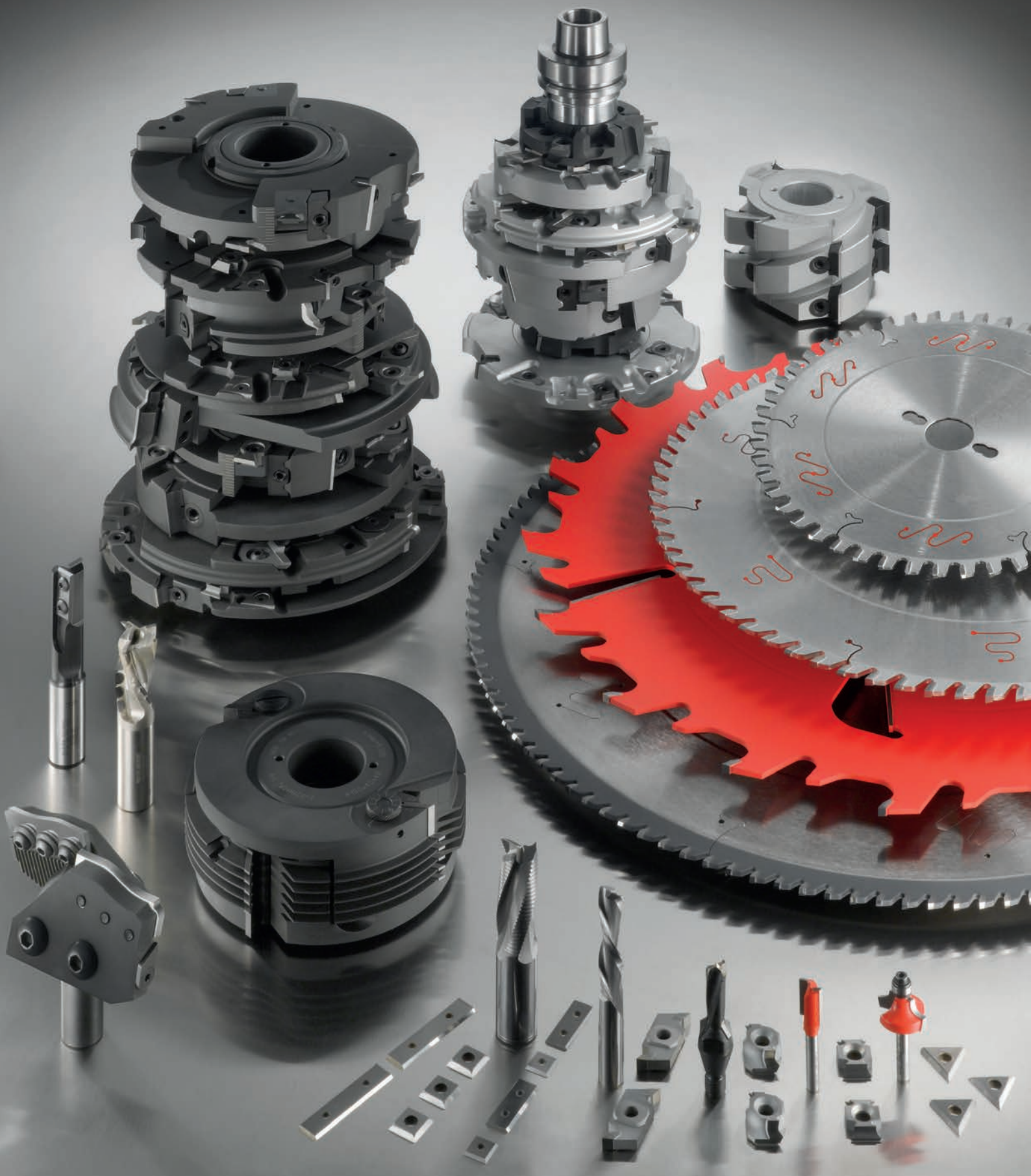
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# Precisely the best



# LEADING TECHNOLOGY



## Freud - Leading the industrial market since 1962

Freud is a worldwide leader in the cutting tool industry and the biggest manufacturer of premium circular saw blades. Since 1962, Freud designs and produces an extensive range of superior quality circular saw blades, cutter heads & router bits, drilling, routing & CNC tools as well as knives and accessories.

## Freud's technologies and solutions Perfection crafted for your needs

Freud's premium quality cutting tools are produced with unique and innovative features. The company owns and controls the entire tool manufacturing process, with a full and strict monitoring over quality, across its plants in Italy. The continuous investment in Research & Development, combined with Freud's strong engineering competence and advanced technologies, results in products with innovative features, extreme precision and extended lifetime, always offering the right solution for any application need.



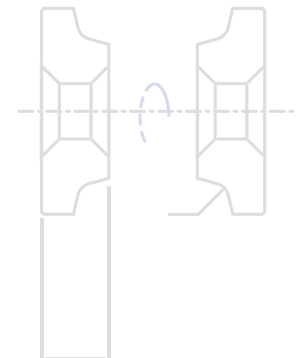
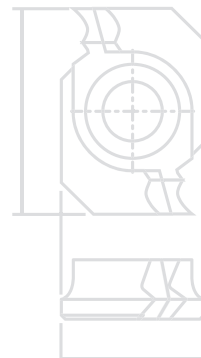
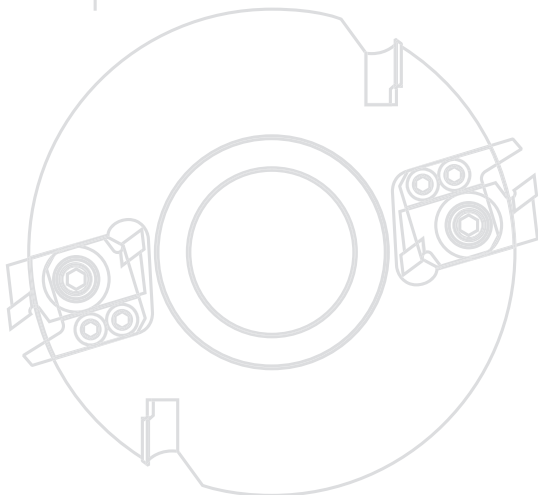
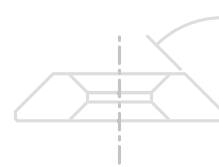
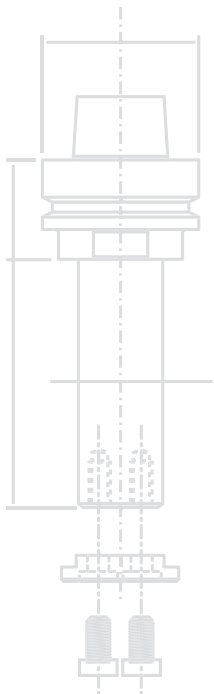
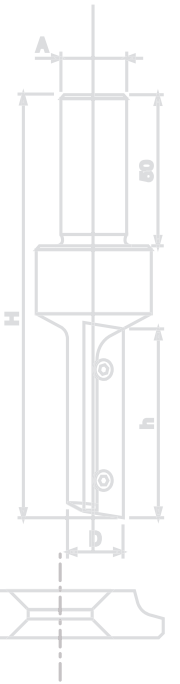
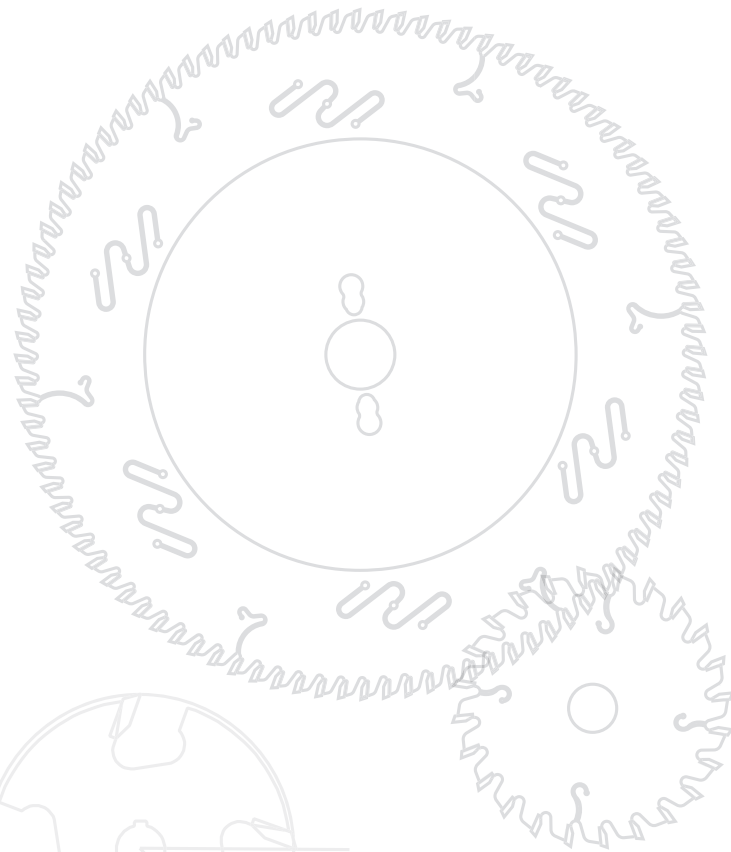
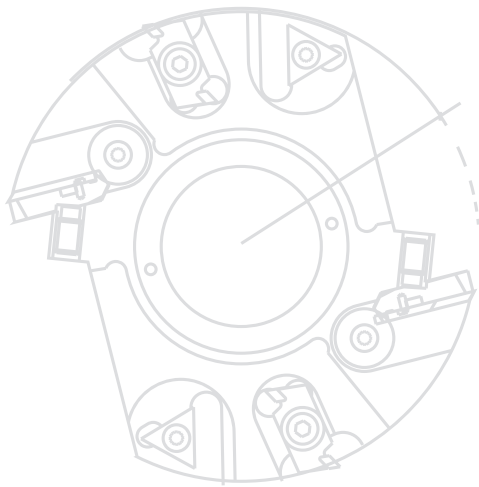
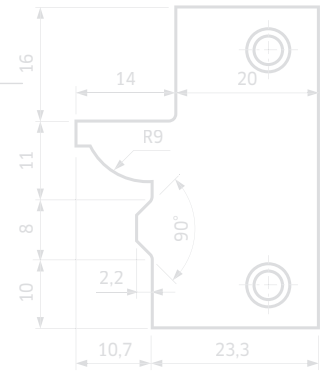
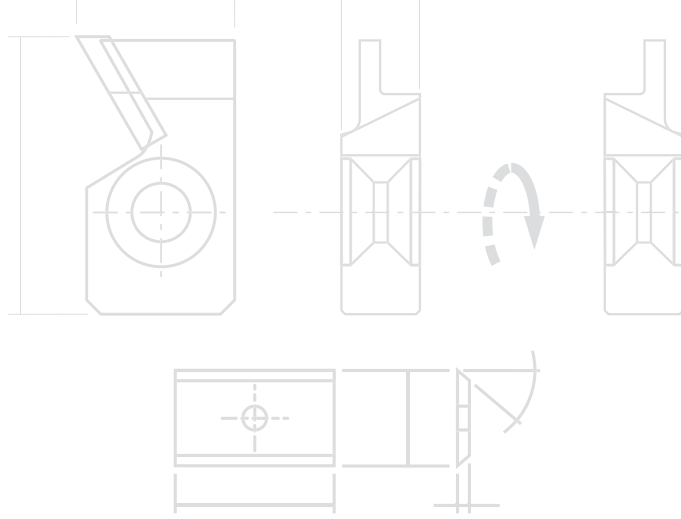
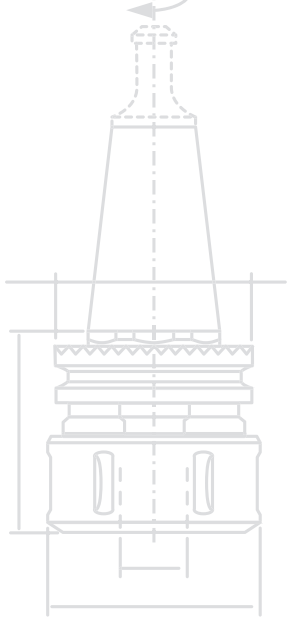
## Technological supremacy In-house Carbide production since 1980

Freud prides itself of a unique in the world in-house production and sintering of Carbide components, for superior quality cutting tools. Freud TiCo Carbide, a specially formulated, highly compact combination of Titanium and Cobalt Carbide, deliver maximum precision and long lasting sharpness of the cutting edge. The ability to formulate dedicated recipes, for standard and customised applications, grants the highest tool performance.

## Global distribution network and extensive local support

Freud's belief in 'think global and act local' led the company to develop an extensive network of selected partners and subsidiaries, in over 90 countries worldwide. This to better support its customers wherever they are.





# Circular Saw Blades for Stationary Machines

Freud's circular saw blades are crafted using premium materials, innovative designs and the industry's most sophisticated manufacturing processes and technologies.

Every blade is specifically engineered to deliver superior performance and maximum lifetime. The premium portfolio offers a wide variety of solutions for stationary machines and for specific applications, dedicated to solid wood, wood based panels, ferrous or non-ferrous metals, plastic materials and composites. All circular saw blades feature Freud's unique and industry-first attributes.

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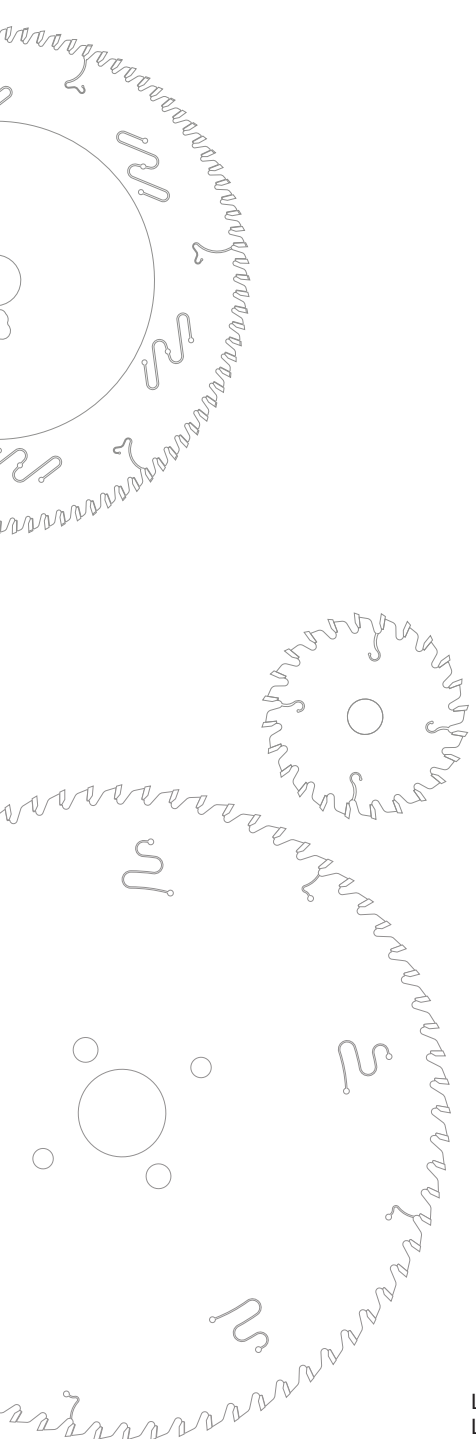
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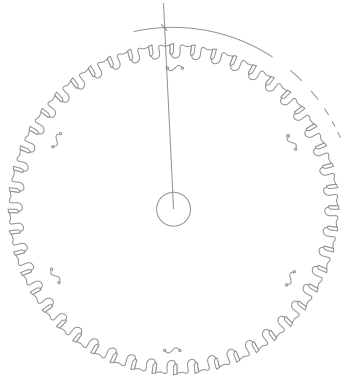
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# LEADING TECHNOLOGY

## TICO CARBIDE TECHNOLOGY

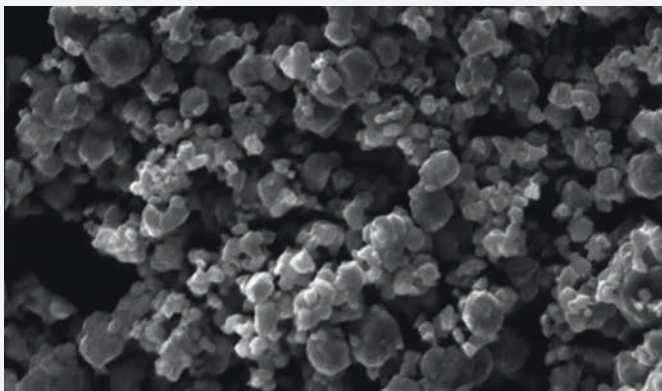
Freud's ownership and control of the entire Carbide production cycle ensures that the correct formula is used for the specific application needs, to constantly maximise the saw blade performance.



### TiCo Carbide

A specially formulated, highly compact Titanium Cobalt Carbide, engineered and manufactured by Freud.

It provides a sharper edge and flawless finish with a dramatically longer cutting life.



## DESIGN INNOVATION

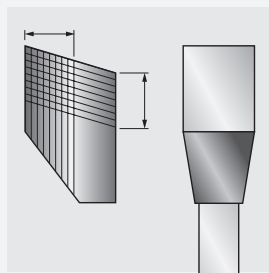
Freud's special tooth designs and geometries are engineered to perform perfect cuts and deliver extraordinary durability on industrial applications. Freud's tooth designs include: Super Square Tooth (below), Pyramid Tooth and SilenTip - each delivering outstanding precision and maximum lifetime.



### Super Square Tooth

Extended lifetime - up to 25 resharpenings.

Tip thickness higher than standard for extra value for money.

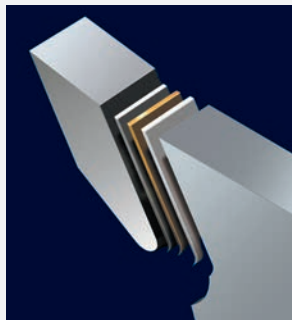


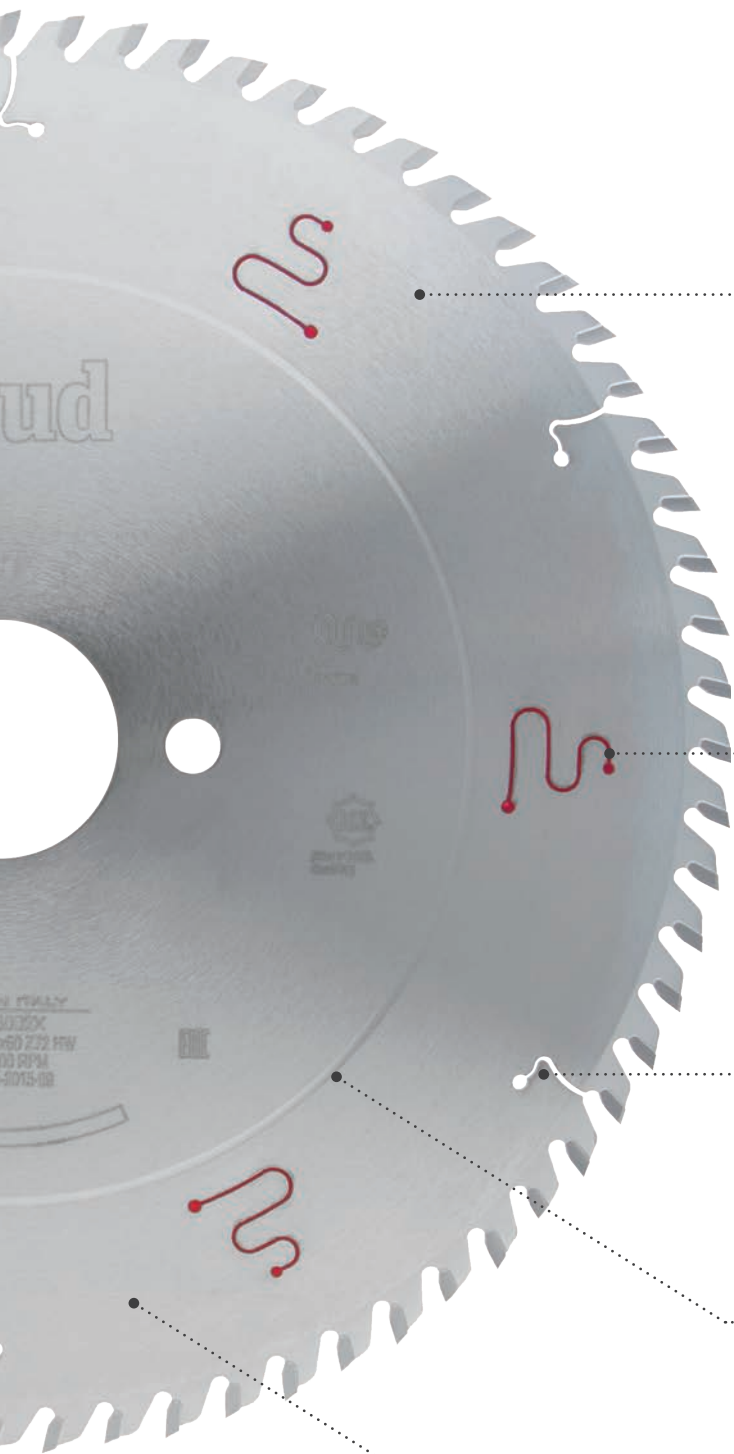
## EXTREME SHOCK RESISTANCE



All Freud's circular saw blades undergo an innovative **Tri-Metal Brazing**

process that bonds the Carbide tips to the steel blade body. This special method consists of copper alloy sandwiched between layers of silver alloy, for extra flexibility and maximum impact resistance.





## COATING TECHNOLOGY

All Freud's circular saw blades feature an industry-first premium coating for superior protection from heat, resin build-up and corrosion. Freud's coatings for industrial blades include: Silver I.C.E. (below); Perma-SHIELD and Black Exrim - each providing the highest performance on specific applications.



### Silver I.C.E. Coating

A high performing and anticorrosive coating to maintain the blade temperature low during the working process.

The non-stick feature improves chip ejection and notably reduces resin build-up, significantly reducing friction and extending the lifetime of the blade.

## ANTI-VIBRATION SOLUTIONS

A wide selection of Freud's premium circular saw blades displays advanced features for the perfect finishing.

### Anti-vibration slots

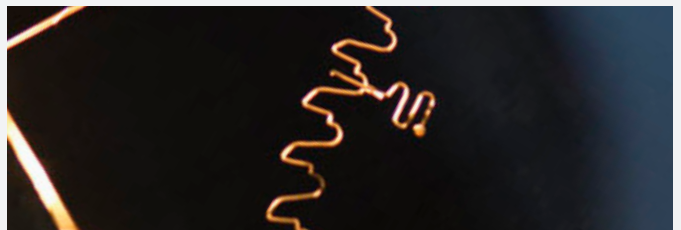


Body slots laser cut with freud innovative technology.

Also available with thermoplastic polyurethane filling, that considerably reduces vibration and minimizes noise.

## LASER-CUT EXPANSION SLOTS

Special laser-cut expansion slots enable heat dispersion and prevent the blade deformation caused by overheating, granting the greatest blade stability.



## TENSIONING



Freud's circular saw blades include a tensioning ring to maintain the blade flat, maximising cutting precision and performance.

## PREMIUM MATERIAL











### Premium Steel

Freud's circular saw blades for stationary machines are made from pre-hardened and pre-flattened superior quality steel (from 40 HRC to 48 HRC) that ensures the highest precision, performance and durability.

# Saw blades teeth shape




















FLAT TOOTH	DOUBLE TRIPLE CHIP TOOTH	CONICAL TOOTH	BEVELED TOOTH
LM01 - LM02 - LM05 - LM06 - LM07 - LM08 - LM10 - LU1E - LI20M - LI17M - LT18M - LT20M	LSC - LU4D - LU6A	LI25M - DLI25M	LU1B



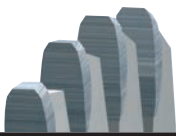
Suitable for	Suitable for	Suitable for	Suitable for
 Ripping of softwood	 Laminates / bilaminates	 Laminates (scoring saw blades)	 Ripping and crosscutting of softwood
 Ripping of hardwood	 Solid surfaces		 Ripping and crosscutting of hardwood
	 Ferrous metals		 Chipboard
			 Solid wood and composites with nails and impurities

FLAT-TRIPLE CHIP TOOTH	INCLINED TOOTH	PYRAMID TOOTH	AXIAL TOOTH
LSB X - LU3D - LU3E - LU3F - LG3D - LU4A - LU5A - LU5B - LU5C - LU5D - LU5E	LI22M - LI13M - LI14M - LT16M - LT12M - LT14M	LU5F	LU1L - LU4B



Suitable for	Suitable for	Suitable for	Suitable for
 Laminates / bilaminates	 Crosscutting of softwood	 Non-ferrous metals	 Crosscutting of softwood
 Chipboard	 Crosscutting of hardwood	 PVC	 Crosscutting of hardwood
 MDF	 Laminates / bilaminates		 Picture frames
 Plywood	 Plywood		 Plexiglas
 Plexiglas	 Scoring saw blades, for laminates		 Plastic materials
 Plastic materials			
 Non-ferrous metals			

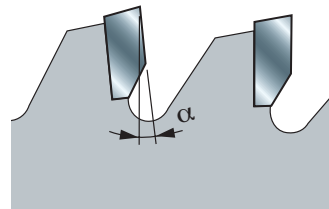
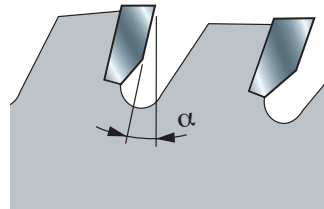
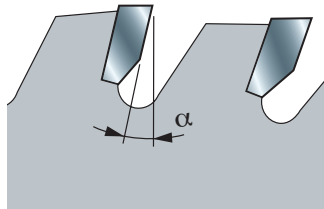
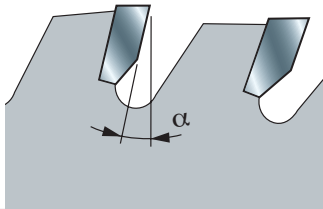
CONCAVE TOOTH	ROUNDED TOOTH	ALTERNATE TOP BEVEL TOOTH
LU3B - LU3C	LU1G	LM03 - LM04 - LM08 - LU1A/C/D/F/H/I - LU1M - LP70M - LU2A/B/C/D/E/F - LG1C - LG2A - LG2B - LG2C - LU3A - LU34M - LI16M - DL16M - LI27M -



Suitable for	Suitable for	Suitable for
Laminates / bilaminates	Ripping of softwood	Ripping and crosscutting of softwood
		Ripping and crosscutting of hardwood
		Chipboard
		MDF
		Plywood
		Picture frames

**HOOK ANGLES**

( $\alpha$ ) 15° ÷ 25°      ( $\alpha$ ) 5° ÷ 15°      ( $\alpha$ ) 0° ÷ 5°      ( $\alpha$ ) 0° ÷ -10°



Suitable for	Suitable for	Suitable for	Suitable for
Crosscutting of softwood	Chipboard	Chipboard	Plexiglas
Crosscutting of hardwood	Plywood	Non-ferrous metals	Plastic materials
Solid surfaces	Laminates / bilaminates	Ferrous metals	Non-ferrous metals
	PVC		Laminates / bilaminates

























# Circular saw blades for stationary machines

	SUITABLE FOR	PERFORMANCE		
		Ultimate	High	Good
Solid wood	 Multirip saw blades for ripping	LM01 - LM10	LM02 - LM03 - LM04 - LM05 - LM06 - LM07 - LM08	
	 Ripping	LU1F - LU1G	LU1C - LU1D - LU1E - LU2A - LU2B - LG1C	
	 Crosscutting	LU2A - LU2B - LU2C- LU2D - LU2F - LU1M	LU2E - LG2C	LU1A - LU1E
	 Ripping and crosscutting		LG2A - LG2B - LU1H - LU34M	LU1B
Laminated	 Saw blades for cutting laminates	LSB X LU3A - LU3B - LU3C - LU3D - LU3E - LU3F	LG3D - LU34M	
	 Scoring saw blades for laminates	LI13MD - LI13MS - LI14MD - LI14MS - LI16M - DLI16M - LI17M - LI20M - LI22MD - LI22MS - LI25M - DLI25M - LI27M		
Wood composites		LSB X LU2C - LU2D - LU2E - LU2F - LU3A - LU3B - LU3C - LU3D - LU3F	LU2A - LU2B - LU3E - LG2A - LG2B - LG2C - LG3D - LU34M	LU1E-LU1H
Veneered		LU3A - LU3B - LU3C - LU3D - LU3E - LU3F	LG3D - LU34M	
Picture frames		LU1I - LU1L		
Non-ferrous metals		LU5F LU5A - LU5B - LU5C - LU5D - LU5E		
Ferrous metals		LU6A		
Plexiglas		LU4A - LU4B		
Plastic materials		LU5F LU4A - LU4B - LU5D - LU5B	LU2C - LU2D - LU2F - LG2C - LU3F	
PVC		LU5F	LU5B - LU5D	
Solid surfaces		LU4D		



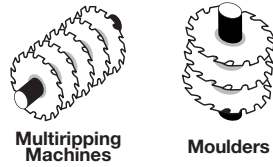
# Solid Wood





# LM01

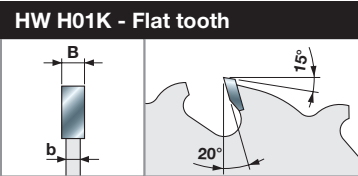
## Thin kerf multiripping saw blades with rakers



Multiripping



●●● Ultimate ●● High ● Good



**Machines:**  
Multiripping machines and moulders.

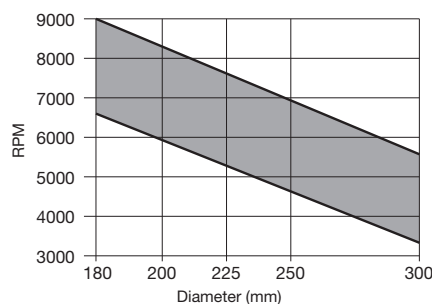
**Materials:**  
Softwood and hardwood, both dried at max 10-12% humidity rate.

**Applications:**  
Multiripping and moulding.

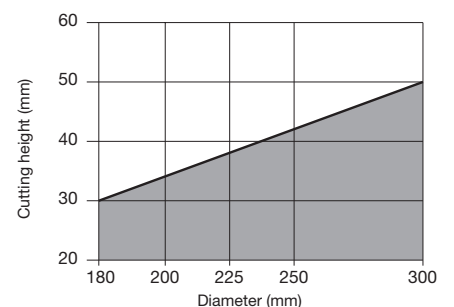
**Technical information:**  
Ripping saw blades where the thin kerf minimises material wastes.  
Not suitable for twisted timber.

D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
180	2,2	1,6	40	16+2	2CH 12x5	LM01 0100	F03FS02751
200	2,2	1,6	40	16+2	2CH 12x5	LM01 0200	F03FS02753
200	2,2	1,6	50	16+2	2CH 21x5	LM01 0250	F03FS09968
200	2,2	1,6	60	16+2	2CH 21x5	LM01 0300	F03FS02755
200	2,2	1,6	70	16+2	2CH 21x5	LM01 0400	F03FS02757
225	2,2	1,6	70	16+2	4CH 21x5	LM01 0500	F03FS02759
250	2,2	1,6	30	20+2	2CH 10x4 + FT02	LM01 0600	F03FS02763
250	2,2	1,6	60	20+2	4CH 21x5	LM01 0700	F03FS02765
250	2,2	1,6	70	20+2	4CH 21x5	LM01 0800	F03FS02767
250	2,2	1,6	80	20+2	2CH 13x5 + 2CH 21x5	LM01 0900	F03FS02769
250	2,2	1,6	50	24+2	4CH 21x5	LM01 1400	F03FS02780
250	2,2	1,6	60	24+2	4CH 21x5	LM01 1500	F03FS02781
250	2,2	1,6	70	24+2	4CH 21x5	LM01 1600	F03FS07200
300	2,5	1,8	30	24+2	2CH 10x4 + FT02	LM01 1000	F03FS02772
300	2,5	1,8	60	24+2	4CH 21x5	LM01 1100	F03FS02774
300	2,5	1,8	70	24+2	4CH 21x5	LM01 1200	F03FS02776
300	2,5	1,8	80	24+2	2CH 13x5 + 2CH 21x5	LM01 1300	F03FS02778

FT02 : 2/9/46,4 + 2/10/60



Minimum and maximum RPM based on the blade diameter.



Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood



## LM02

## Reduced kerf multiripping saw blades with rakers



Multiripping Machines



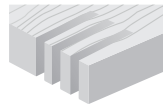
Moulders



Softwood



Hardwood



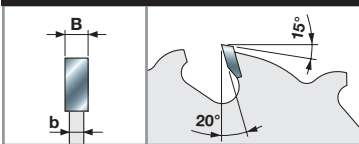
Multiripping



●●● Ultimate ●● High ● Good



### HW H01K - Flat tooth



#### Machines:

Multiripping machines and moulders.

#### Materials:

Softwood and hardwood, both dried at max 15% humidity rate.

#### Applications:

Multiripping and moulding.

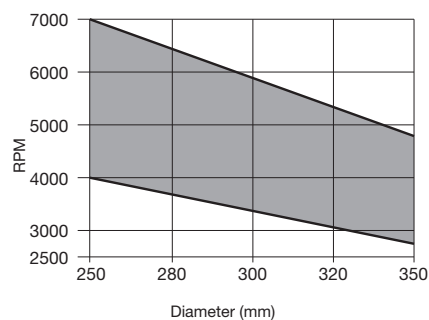
#### Technical information:

Ripping saw blades where the reduced kerf minimises material wastes.

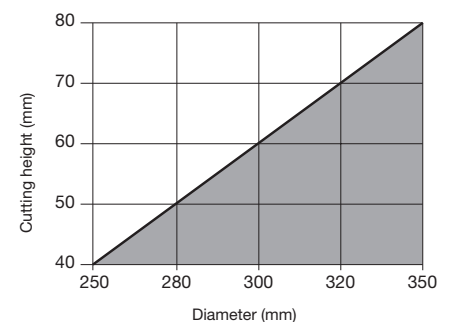
Not suitable for twisted timber.

D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
250	2,8	2,0	30	16+2	2CH 10x4 + FT02	LM02 0100	F03FS02797
250	2,8	2,0	60	16+2	4CH 21x5	LM02 0200	F03FS02799
250	2,8	2,0	70	16+2	4CH 21x5	LM02 0300	F03FS02801
250	2,8	2,0	80	16+2	2CH 13x5 + 2CH 21x5	LM02 0400	F03FS02803
280	2,8	2,0	80	18+2	2CH 13x5 + 2CH 21x5	LM02 0500	F03FS02805
300	2,8	2,0	30	20+2	2CH 10x4 + FT02	LM02 0600	F03FS02807
300	2,8	2,0	60	20+2	4CH 21x5	LM02 0700	F03FS02809
300	2,8	2,0	70	20+2	4CH 21x5	LM02 0800	F03FS02811
300	2,8	2,0	80	20+2	2CH 13x5 + 2CH 21x5	LM02 0900	F03FS02813
320	3,0	2,2	30	20+2+2	2CH 10x4 + FT02	LM02 1000	F03FS02815
320	3,0	2,2	80	20+2+2	2CH 13x5 + 2CH 21x5	LM02 1100	F03FS02817
350	3,0	2,2	30	24+2+2	2CH 10x4 + FT02	LM02 1200	F03FS02819
350	3,0	2,2	60	24+2+2	4CH 21x5	LM02 1300	F03FS02821
350	3,0	2,2	70	24+2+2	4CH 21x5	LM02 1400	F03FS02823
350	3,0	2,2	80	24+2+2	2CH 13x5 + 2CH 21x5	LM02 1500	F03FS02825

FT02 : 2/9/46,4 + 2/10/60

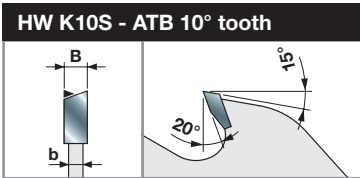
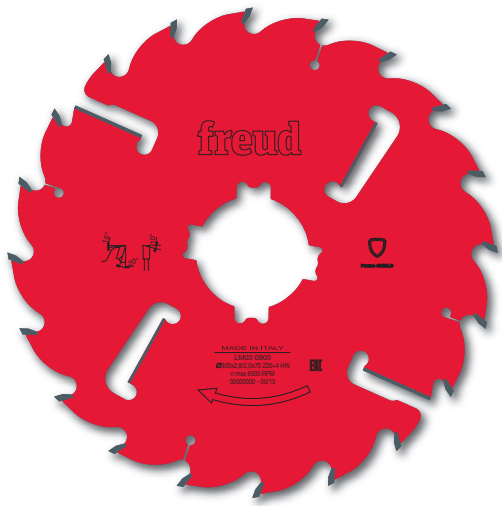


Minimum and maximum RPM based on the blade diameter.



Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood



**Machines:**  
Multiripping machines.

**Materials:**  
Softwood and hardwood, both dried at max 15% humidity rate.

**Applications:**  
Multiripping.

**Technical information:**  
Ripping saw blades where the reduced kerf minimises material wastes.  
Not suitable for cutting poplar.

## LM03

## Reduced kerf multiripping saw blades with rakers



Multiripping Machines



Softwood



Hardwood



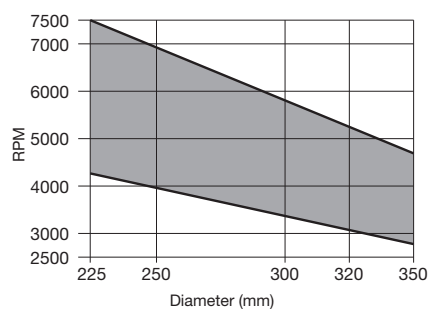
Multiripping



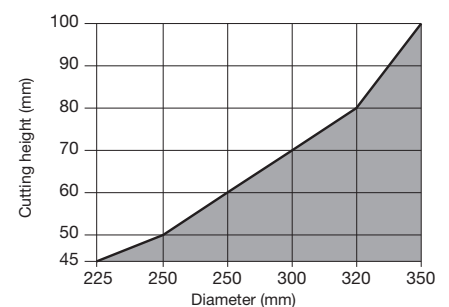
●●● Ultimate ●● High ● Good

D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
225	2,5	1,8	70	16+2+2	4CH 21x5	LM03 0100	F03FS02843
250	2,8	2,0	30	16+2+2	2CH 10x4 + FT02	LM03 0200	F03FS02845
250	2,8	2,0	60	16+2+2	4CH 21x5	LM03 0300	F03FS02847
250	2,8	2,0	70	16+2+2	4CH 21x5	LM03 0400	F03FS02849
250	2,8	2,0	80	16+2+2	2CH 13x5 + 2CH 21x5	LM03 0500	F03FS02851
280	2,8	2,0	80	18+2+2	2CH 13x5 + 2CH 21x5	LM03 0600	F03FS02853
300	2,8	2,0	30	20+2+2	2CH 10x4 + FT02	LM03 0700	F03FS02855
300	2,8	2,0	60	20+2+2	4CH 21x5	LM03 0800	F03FS02857
300	2,8	2,0	70	20+2+2	4CH 21x5	LM03 0900	F03FS02859
300	2,8	2,0	80	20+2+2	2CH 13x5 + 2CH 21x5	LM03 1000	F03FS02861
320	3,0	2,2	30	20+2+2	2CH 10x4 + FT02	LM03 1100	F03FS02863
320	3,0	2,2	80	20+2+2	2CH 13x5 + 2CH 21x5	LM03 1200	F03FS02865
350	3,0	2,2	30	24+2+2	2CH 10x4	LM03 1300	F03FS02867
350	3,0	2,2	60	24+2+2	4CH 21x5	LM03 1400	F03FS02869
350	3,0	2,2	70	24+2+2	4CH 21x5	LM03 1500	F03FS02871
350	3,0	2,2	80	24+2+2	2CH 13x5 + 2CH 21x5	LM03 1600	F03FS02873
350	3,0	2,2	90	24+2+2	4CH 20x7	LM03 1700	F03FS05808

FT02 : 2/9/46,4 + 2/10/60

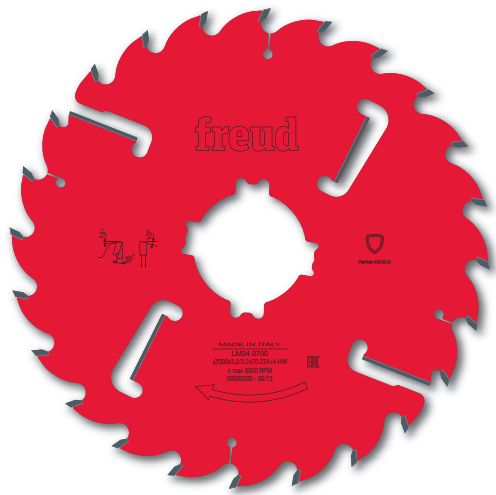


Minimum and maximum RPM based on the blade diameter.



Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood



# LM04

# Multiripping saw blades with rakers



Multiripping Machines



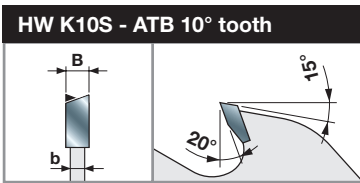
Softwood Hardwood



Multiripping



●●● Ultimate ●● High ● Good



**Machines:**  
Multiripping machines.

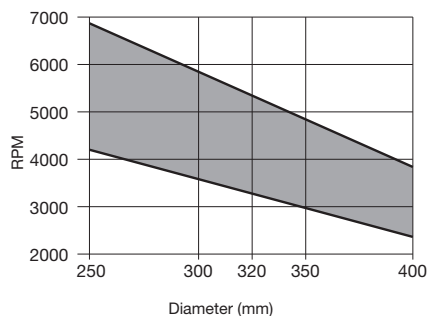
**Materials:**  
Softwood and hardwood, both dried at max 15% humidity rate.

**Applications:**  
Multiripping.

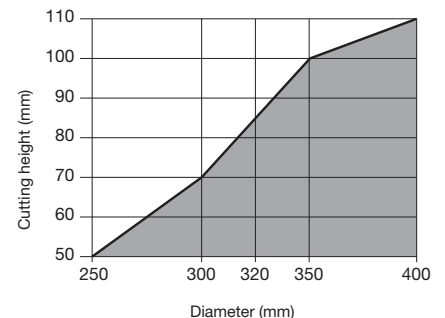
**Technical information:**  
Saw blades suitable for ripping.

D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
250	3,2	2,2	30	20+2+2	2CH 10x4 + FT02	LM04 0100	F03FS02891
250	3,2	2,2	60	20+2+2	4CH 21x5	LM04 0200	F03FS02893
250	3,2	2,2	70	20+2+2	4CH 21x5	LM04 0300	F03FS02895
250	3,2	2,2	80	20+2+2	2CH 13x5 + 2CH 21x5	LM04 0400	F03FS02897
300	3,2	2,2	30	24+2+2	2CH 10x4 + FT02	LM04 0500	F03FS02899
300	3,2	2,2	60	24+2+2	4CH 21x5	LM04 0600	F03FS02901
300	3,2	2,2	70	24+2+2	4CH 21x5	LM04 0700	F03FS02903
300	3,2	2,2	80	24+2+2	2CH 13x5 + 2CH 21x5	LM04 0800	F03FS02906
320	3,2	2,2	30	24+2+2	2CH 10x4 + FT02	LM04 0900	F03FS02908
320	3,2	2,2	80	24+2+2	2CH 13x5 + 2CH 21x5	LM04 1000	F03FS02910
350	3,5	2,5	70	24+2+4	4CH 21x5	LM04 2400	F03FS06243
350	3,5	2,5	80	24+2+4	2CH 13x5 + 2CH 21x5	LM04 2500	F03FS06244
350	3,5	2,5	30	28+2+4	2CH 10x4 + FT02	LM04 1100	F03FS02912
350	3,5	2,5	60	28+2+4	4CH 21x5	LM04 1200	F03FS02914
350	3,5	2,5	70	28+2+4	4CH 21x5	LM04 1300	F03FS02916
350	3,5	2,5	80	28+2+4	2CH 13x5 + 2CH 21x5	LM04 1400	F03FS02919
350	3,5	2,5	90	28+2+4	4CH 21x5	LM04 2200	F03FS02935
400	4,0	2,8	30	28+2+4	2CH 10x4 + FT02	LM04 1500	F03FS02921
400	4,0	2,8	70	28+2+4	4CH 21x5	LM04 1600	F03FS02923
400	4,0	2,8	80	28+2+4	2CH 13x5 + 2CH 21x5	LM04 1700	F03FS02926

FT02 : 2/9/46,4 + 2/10/60



Minimum and maximum RPM based on the blade diameter.



Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood

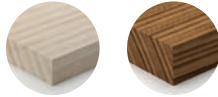


# LM05

# Multiripping saw blades with rakers



Multiripping Machines



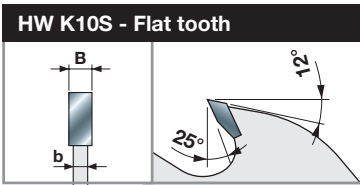
Softwood Hardwood



Multiripping



●●● Ultimate ●● High ● Good

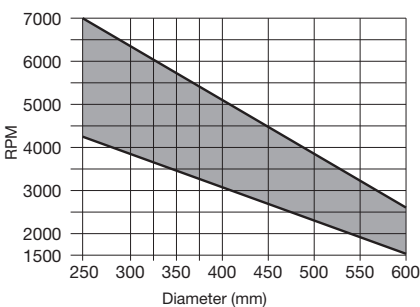


**Machines:**  
Multiripping machines.

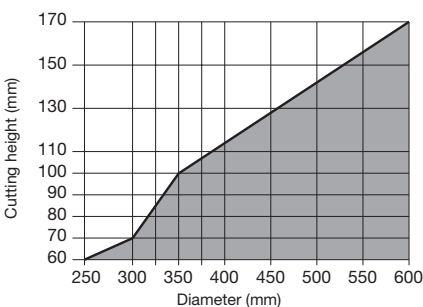
**Materials:**  
Softwood and hardwood and long fibre wood.

**Applications:**  
Multiripping.

**Technical information:**  
Saw blades for ripping extra thick timber. Most suitable for cutting wood with humidity rate over 10%.



Minimum and maximum RPM based on the blade diameter.

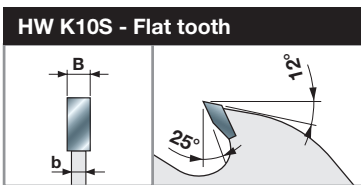
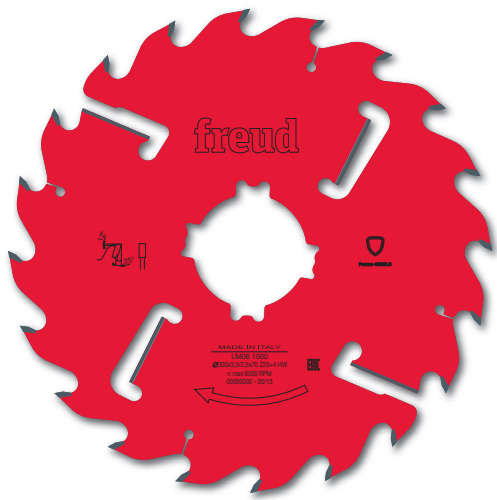


Maximum depth of rip and crosscut based on the blade diameter.

D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
250	3,4	2,2	30	16+2+2	2CH 10x4 + FT02	LM05 0100	F03FS02973
250	3,4	2,2	60	16+2+2	4CH 21x5	LM05 0200	F03FS02975
250	3,4	2,2	70	16+2+2	4CH 21x5	LM05 0300	F03FS02977
250	3,4	2,2	80	16+2+2	2CH 13x5 + 2CH 21x5	LM05 0400	F03FS02979
300	3,4	2,2	30	20+2+2	2CH 10x4 + FT02	LM05 0500	F03FS02981
300	3,4	2,2	60	20+2+2	4CH 21x5	LM05 0600	F03FS02983
300	3,4	2,2	70	20+2+2	4CH 21x5	LM05 0700	F03FS02985
300	3,4	2,2	80	20+2+2	2CH 13x5 + 2CH 21x5	LM05 0800	F03FS02990
320	3,4	2,2	30	20+2+2	2CH 10x4 + FT02	LM05 0900	F03FS02993
320	3,4	2,2	80	20+2+2	2CH 13x5 + 2CH 21x5	LM05 1000	F03FS02995
350	3,7	2,5	30	20+2+4	2CH 10x4 + FT02	LM05 1100	F03FS02997
350	3,7	2,5	50	20+2+4	2CH 10x4	LM05 1200	F03FS02999
350	3,7	2,5	60	20+2+4	4CH 21x5	LM05 1300	F03FS03001
350	3,7	2,5	70	20+2+4	4CH 21x5	LM05 1400	F03FS03003
350	3,7	2,5	80	20+2+4	2CH 13x5 + 2CH 21x5	LM05 1500	F03FS03005
350	3,7	2,5	90	20+2+4	4CH 21x5	LM05 4100	F03FS03060
380	4,0	2,8	30	20+2+4	2CH 10x4 + FT02	LM05 1600	F03FS03007
380	4,0	2,8	70	20+2+4	4CH 21x5	LM05 1700	F03FS03009
380	4,0	2,8	80	20+2+4	2CH 13x5 + 2CH 21x5	LM05 1800	F03FS03011
400	4,0	2,8	30	24+2+4	2CH 10x4 + FT02	LM05 1900	F03FS03013
400	4,0	2,8	50	24+2+4	2CH 10x4	LM05 2000	F03FS03015
400	4,0	2,8	70	24+2+4	4CH 21x5	LM05 2100	F03FS03017
400	4,0	2,8	80	24+2+4	2CH 13x5 + 2CH 21x5	LM05 2200	F03FS03019
450	4,4	3,0	30	24+2+4	2CH 10x4 + FT02	LM05 2400	F03FS03023
450	4,4	3,0	50	24+2+4	2 CH 10x4	LM05 2500	F03FS03025
450	4,4	3,0	70	24+2+4	4CH 21x5	LM05 2600	F03FS03027
450	4,4	3,0	80	24+2+4	2CH 13x5 + 2CH 21x5	LM05 2700	F03FS03029
500	4,8	3,5	30	28+2+4	FT02+2CH 10x4	LM05 2900	F03FS03033
500	4,8	3,5	50	28+2+4	2CH 10x4	LM05 3000	F03FS03036
500	4,8	3,5	70	28+2+4	4CH 21x5	LM05 3100	F03FS03039
500	4,8	3,5	80	28+2+4	2CH 13x5 + 2CH 21x5	LM05 3200	F03FS03041
550	4,8	3,5	30	28+2+4	2CH 10x4 + FT02	LM05 3400	F03FS03045
550	4,8	3,5	50	28+2+4	2CH 10x4	LM05 3500	F03FS03047
550	4,8	3,5	70	28+2+4	4CH 21x5	LM05 3600	F03FS03050
550	4,8	3,5	80	28+2+4	2CH 13x5 + 2CH 21x5	LM05 3700	F03FS03052
600	5,2	3,5	30	32+2+4	2CH 10x4	LM05 4200	F03FS05860
600	5,2	3,5	35	32+2+4	2CH 21x5	LM05 4235	F03FS09976
600	5,2	3,5	80	32+2+4	4CH 21x5	LM05 3900	F03FS03056

FT02 : 2/9/46,4 + 2/10/60

● Solid wood



**Machines:**  
Multiripping machines.

**Materials:**  
Softwood and hardwood, both with humidity rate over 10%, long fibre wood.

**Applications:**  
Multiripping.

**Technical information:**  
Saw blades for ripping extra tick timber. Suitable for cutting wet wood and wood with high resin content.

## LM06

## Increased kerf multiripping saw blades with rakers



Multiripping Machines



Softwood Hardwood



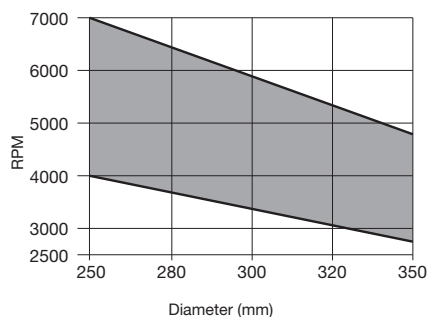
Multiripping



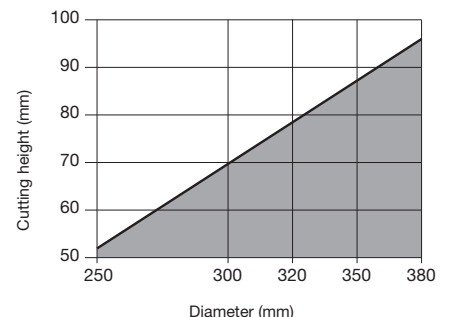
●●● Ultimate ●● High ● Good

D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
250	4,2	3,0	30	16+2+2	2CH 10x4 + FT02	LM06 0100	F03FS03104
250	4,2	3,0	60	16+2+2	4CH 21x5	LM06 0200	F03FS03106
250	4,2	3,0	70	16+2+2	4CH 21x5	LM06 0300	F03FS03108
250	4,2	3,0	80	16+2+2	2CH 21x5 + 2CH13x5	LM06 0400	F03FS03110
300	3,5	2,5	70	20+2+2	4CH 21x5	LM06 1500	F03FS03133
300	3,5	2,5	80	20+2+2	2CH 13x5 + 2CH 21x5	LM06 1600	F03FS03135
300	4,2	3,0	30	20+2+2	2CH 10x4 + FT02	LM06 0500	F03FS03113
300	4,2	3,0	60	20+2+2	4CH 21x5	LM06 0600	F03FS03115
300	4,2	3,0	70	20+2+2	4CH 21x5	LM06 0700	F03FS03117
300	4,2	3,0	80	20+2+2	2CH 13x5 + 2CH 21x5	LM06 0800	F03FS03119
320	4,2	3,0	30	20+2+2	2CH 10x4 + FT02	LM06 0900	F03FS03121
320	4,2	3,0	70	20+2+2	4CH 21x5	LM06 1900	F03FS03140
320	4,2	3,0	80	20+2+2	2CH 13x5 + 2CH 21x5	LM06 1000	F03FS03123
350	4,2	3,0	30	20+2+4	2CH 10x4 + FT02	LM06 1100	F03FS03125
350	4,2	3,0	50	20+2+4	2CH 10x4	LM06 1800	F03FS03138
350	4,2	3,0	60	20+2+4	4CH 21x5	LM06 1200	F03FS03127
350	4,2	3,0	70	20+2+4	4CH 21x5	LM06 1300	F03FS03129
350	4,2	3,0	80	20+2+4	2CH 13x5 + 2CH 21x5	LM06 1400	F03FS03131

FT02 : 2/9/46,4 + 2/10/60

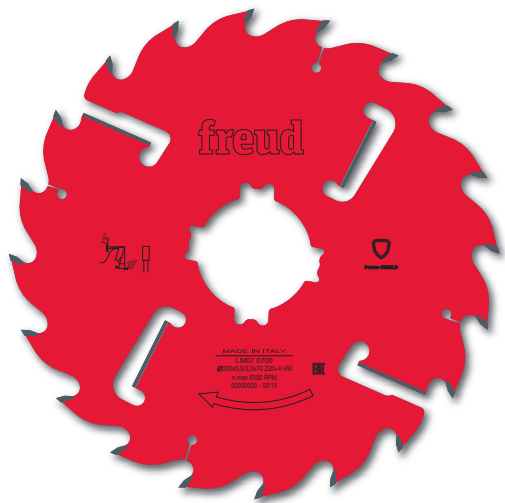


Minimum and maximum RPM based on the blade diameter.



Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood



## LM07

## Shoulder thick kerf saw blades with rakers



Multiripping  
Machines



Softwood



Hardwood



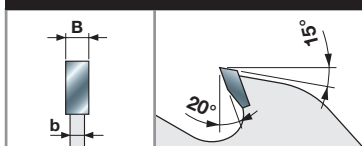
Multiripping



●●● Ultimate ●● High ● Good



### HW K10S - Flat tooth



#### Machines:

Multiripping machines.

#### Materials:

Softwood and hardwood.

#### Applications:

Multiripping.

#### Technical information:

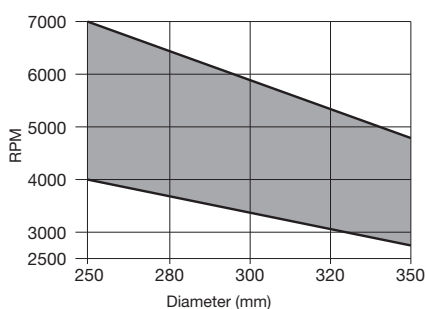
Ripping saw blades for the correct distribution of lateral forces, created by crooked plank in heavy duty use.

Mounted on multiripping machines as "shoulder blades".

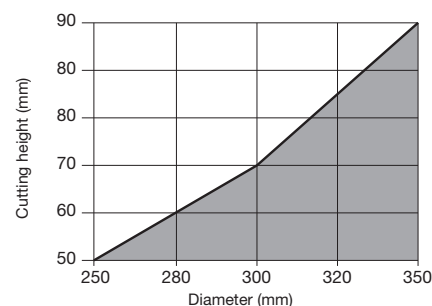
Suitable for dry and wet wood.

D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
250	5,5	3,5	30	16+2+2	2CH 10x4 + FT02	LM07 0100	F03FS03141
250	5,5	3,5	60	16+2+2	4CH 21x5	LM07 0200	F03FS03143
250	5,5	3,5	70	16+2+2	4CH 21x5	LM07 0300	F03FS03145
250	5,5	3,5	80	16+2+2	2CH 13x5 + 2CH 21x5	LM07 0400	F03FS03147
300	5,5	3,5	30	20+2+2	2CH 10x4 + FT02	LM07 0500	F03FS03149
300	5,5	3,5	60	20+2+2	4CH 21x5	LM07 0600	F03FS03151
300	5,5	3,5	70	20+2+2	4CH 21x5	LM07 0700	F03FS03153
300	5,5	3,5	80	20+2+2	2CH 13x5 + 2CH 21x5	LM07 0800	F03FS03155
320	5,5	3,5	30	20+2+2	2CH 10x4 + FT02	LM07 0900	F03FS03157
320	5,5	3,5	80	20+2+2	2CH 13x5 + 2CH 21x5	LM07 1000	F03FS03159
350	5,5	3,5	30	24+2+4	2CH 10x4 + FT02	LM07 1100	F03FS03161
350	5,5	3,5	60	24+2+4	4CH 21x5	LM07 1200	F03FS03163
350	5,5	3,5	70	24+2+4	4CH 21x5	LM07 1300	F03FS03165
350	5,5	3,5	80	24+2+4	4CH 21x5	LM07 1400	F03FS03167

FT02 : 2/9/46,4 + 2/10/60



Minimum and maximum RPM based on the blade diameter.



Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood



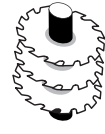


## LM08

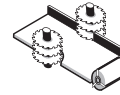
## Ultra-thin kerf multiripping saw blades



Multiripping  
Machines



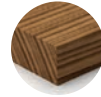
Moulders



Cleaving  
Machines



Softwood



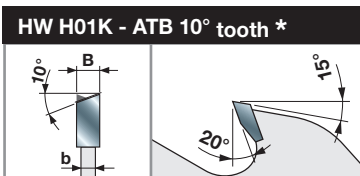
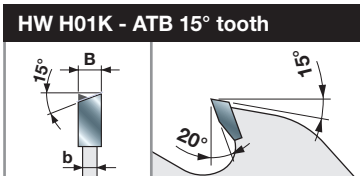
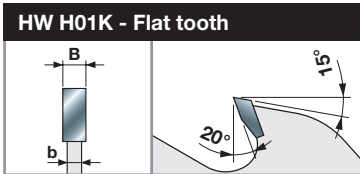
Hardwood



Multiripping



●●● Ultimate ●● High ● Good



### Machines:

Multiripping machines and cleaving machines.

### Materials:

Softwood and hardwood, both dried at max 10% humidity rate.

### Applications:

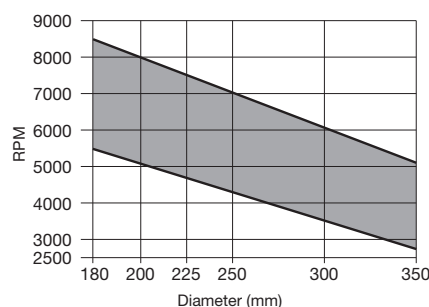
Multiripping and moulding.

### Technical information:

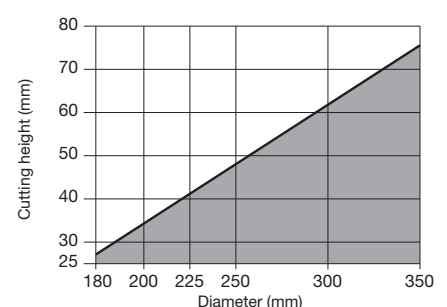
Ripping saw blades for minimum material waste. Reboring and optional keyways not available. A frequent blade cleaning is highly recommended to remove resin deposit.

D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
180	1,5	1,0	40	24 P	2CH 12x5	LM08 0100	F03FS03169
180	1,5	1,0	60	24 P	FT 3/10/75	LM08 0200	F03FS03171
200	1,5	1,0	40	28 P	2CH 12x5	LM08 0300	F03FS03173
200	1,5	1,0	60	28 P	FT 3/10/75	LM08 0400	F03FS03176
200	1,5	1,0	60	36 ATB*	FT 3/10/75	LM08 0500	F03FS03179
200	1,7	1,2	50	36 ATB*	-	LM08 0600	F03FS03182
200	1,7	1,2	60	36 ATB*	FT 3/10/75	LM08 2800	F03FS03240
225	1,5	1,0	40	28 P	2CH 12x5	LM08 0700	F03FS03185
225	1,5	1,0	60	28 P	FT 3/10/75	LM08 0800	F03FS03188
225	1,5	1,0	70	28 P	2CH 21x5	LM08 0900	F03FS03191
225	1,5	1,0	40	36 ATB	2CH 12x5	LM08 1000	F03FS03194
225	1,5	1,0	60	36 ATB	FT 3/10/75	LM08 1100	F03FS03197
225	1,5	1,0	70	36 ATB	2CH 21x5	LM08 1200	F03FS03200
225	1,7	1,2	65	36 ATB	FT 3/10/80	LM08 1300	F03FS03203
250	1,7	1,2	40	24 P	2CH 12x5	LM08 1400	F03FS03206
250	1,7	1,2	60	24 P	FT 3/10/75	LM08 1500	F03FS03209
250	1,7	1,2	70	24 P	2CH 21x5	LM08 1600	F03FS03212
250	1,7	1,2	40	36 ATB*	2CH 12x5	LM08 1700	F03FS03215
250	1,7	1,2	60	36 ATB*	FT 3/10/75	LM08 1800	F03FS03218
250	1,7	1,2	70	36 ATB*	2CH 21x5	LM08 1900	F03FS03223
250	2,2	1,6	50	30 ATB*	2CH 21x5	LM08 2500	F03FS03237
250	2,2	1,6	60	30 ATB*	2CH 21x5	LM08 2600	F03FS03238
250	2,2	1,6	70	30 ATB*	2CH 21x5	LM08 2700	F03FS03239
255	1,7	1,2	70	24 P	2CH 21x5	LM08 2400	F03FS03236
280	2,2	1,6	60	36 ATB	FT 3/10/75	LM08 2200	F03FS03232
300	2,2	1,6	50	36 ATB	-	LM08 2000	F03FS03226
300	2,2	1,6	70	36 ATB	2CH 21x5	LM08 2300	F03FS03235
350	2,5	1,8	50	40 ATB	-	LM08 2100	F03FS03229

FT03 : 2/7/42 + 2/10/60



Minimum and maximum RPM based on the blade diameter.



Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood

# LM10

## Multiripping saw blades with rakers for soft wet wood



Multiripping Machines



Softwood

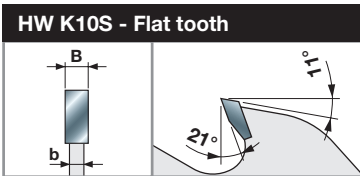
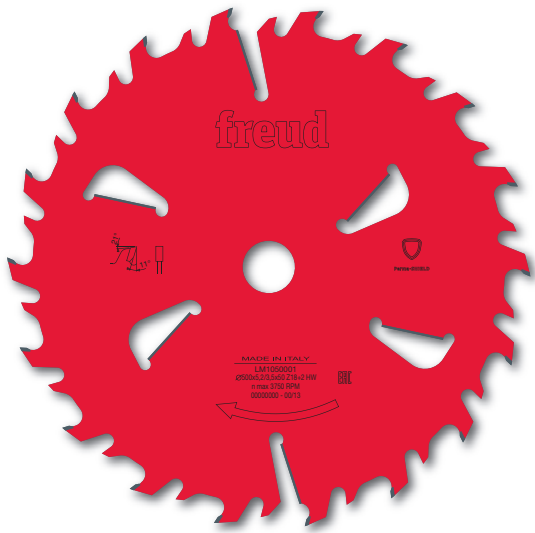


Multiripping



●●● Ultimate ●● High ● Good

D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
350	3,9	2,5	50	18+2+2	-	LM1035001	F03FS07701
400	4,4	3,0	50	18+2+2	-	LM1040001	F03FS07702
450	4,8	3,0	50	18+2+4	-	LM1045001	F03FS07703
500	5,2	3,5	50	18+2+4	-	LM1050001	F03FS07704
560	5,5	3,5	50	18+2+4	-	LM1056001	F03FS07705



**Machines:**

Multiripping machines.

**Materials:**

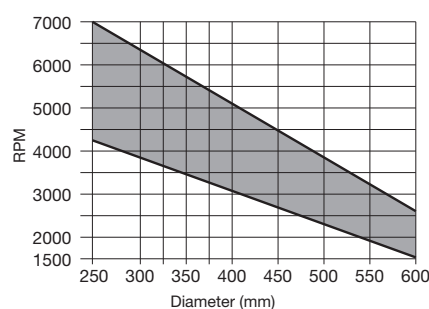
Softwood.

**Applications:**

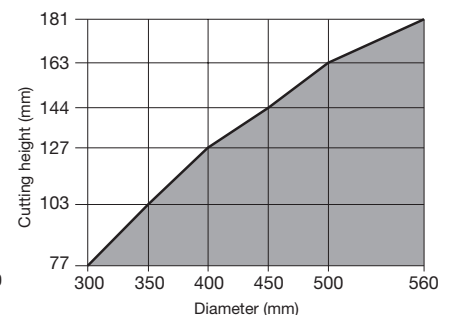
Multiripping.

**Technical information:**

Saw blades for ripping extra thick timber. Most suitable for cutting wet wood and wood with high resin content. Optimised teeth and rakers geometry for an excellent chip removal.



Minimum and maximum RPM based on the blade diameter.



Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood



# LU1A

## Saw blades for radial and pendulum machines



Radial Arm Saws



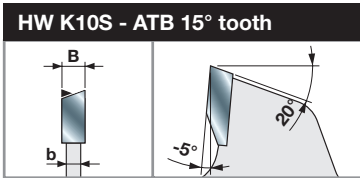
Softwood    Hardwood



Crosscutting



●●● Ultimate    ●● High    ● Good



D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
300	4,4	3,0	30	36	FT02	LU1A 0100	F03FS04572
350	4,4	3,0	30	42	2/10/60	LU1A 0200	F03FS04573
400	4,4	3,0	30	48	FT02	LU1A 0300	F03FS04574
450	4,4	3,0	30	54	FT03	LU1A 0400	F03FS04575
500	4,8	3,2	30	60	2/10/60	LU1A 0500	F03FS04576
550	4,8	3,2	30	72	FT03	LU1A 0600	F03FS04577
600	5,0	3,5	30	72	FT02	LU1A 0700	F03FS04578

FT02 : 2/9/46,4 + 2/10/60 - FT03 : 2/7/42 + 2/10/60

**Machines:**

Radial arm saws.

**Materials:**

Softwood and hardwood.

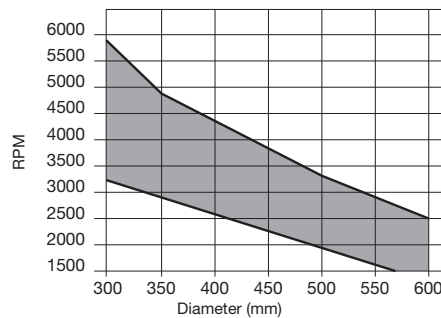
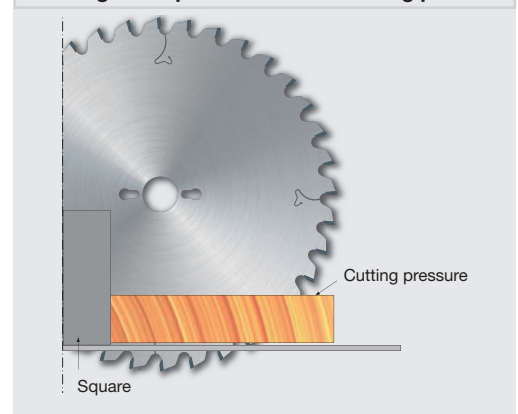
**Applications:**

Crosscutting.

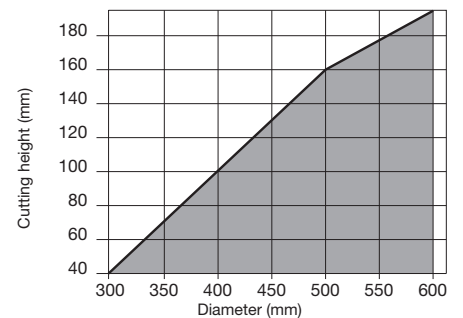
**Technical information:**

Saw blades suitable for crosscutting. To be mounted on radial saws and pendulum cutting machines.

**Working with spindle over the working plane**



Minimum and maximum RPM based on the blade diameter.

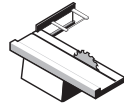


Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood



## LU1B Saw blades for carpentry works



Squaring Saws

Table Saws



Softwood



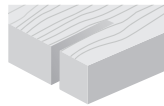
Hardwood



Construction Timber



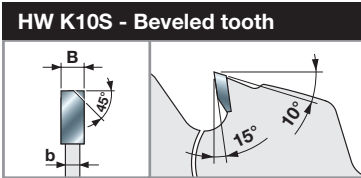
Shuttering Board



Ripping



Crosscutting



### Machines:

Table and squaring saws.

### Materials:

Softwood, hardwood and construct wood.

### Applications:

Ripping and crosscutting.

### Technical information:

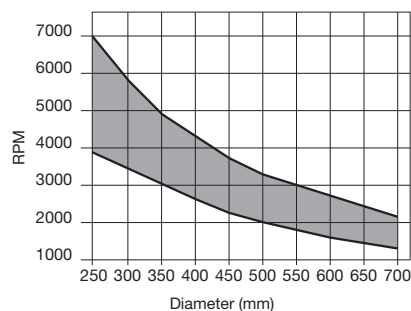
Saw blades suitable for ripping and crosscutting.

Optimised tooth shape to cut also construct wood with nails or metal clips.

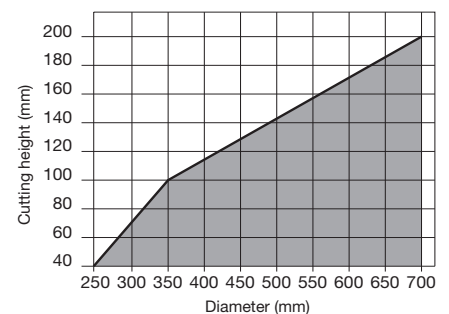
●●● Ultimate ●● High ● Good

D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
250	3,4	2,2	30	18	FT01	<b>LU1B 0100</b>	F03FS04579
300	3,4	2,2	30	20	FT01	<b>LU1B 0200</b>	F03FS04580
315	3,4	2,2	30	20	FT01	<b>LU1B 0300</b>	F03FS04582
350	3,7	2,5	30	24	FT02	<b>LU1B 0400</b>	F03FS04583
400	4,0	2,8	30	28	2/10/60	<b>LU1B 0500</b>	F03FS04585
450	4,2	3,0	30	32	FT03	<b>LU1B 0600</b>	F03FS04586
500	4,4	3,2	30	36	FT03	<b>LU1B 0700</b>	F03FS04587
550	4,8	3,5	30	44	2/10/60	<b>LU1B 0800</b>	F03FS04588
600	5,2	4,0	30	48	FT03	<b>LU1B 0900</b>	F03FS04589
650	5,6	4,2	30	54	FT02	<b>LU1B 1000</b>	F03FS08324
700	5,6	4,2	30	60	2/10/60	<b>LU1B 1100</b>	F03FS05892

**FT01:** 2/7/42 + 2/9/46,4 + 2/10/60 - **FT02:** 2/9/46,4 + 2/10/60 - **FT03:** 2/7/42 + 2/10/60



Minimum and maximum RPM based on the blade diameter.



Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood



# LP70M

# Saw blades for on-site jobs

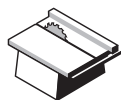


Table Saws



Softwood



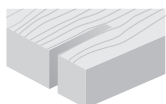
Hardwood



Construction  
Timber



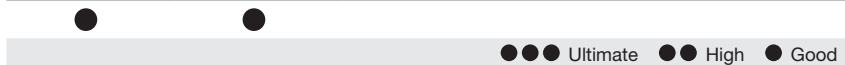
Shuttering  
Board



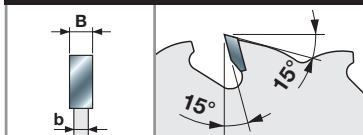
Ripping



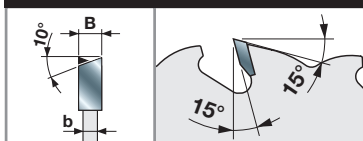
Crosscutting



### HW K10S - Flat tooth \*



### HW K10S - ATB 10° tooth



**Machines:**

Table saws.

**Materials:**

Softwood, hardwood and construct wood.

**Applications:**

Ripping and crosscutting also for on-site job.

**Technical information:**

Saw blades suitable for ripping and crosscutting, even construction wood with nails or metal clips.

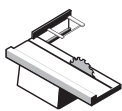
D	B	b	d	Z	NL - KN	Freud Code	Art. No.
mm	mm	mm	mm				
300	2,8	1,8	30	24	2/10/60	LP70M 001P*	F03FS03762
350	3,0	2,2	30	28	2/10/60	LP70M 002P*	F03FS03763

D	B	b	d	Z	NL - KN	Freud Code	Art. No.
mm	mm	mm	mm				
300	2,6	1,8	25	24	-	LP70M 004P	F03FS03766
315	3,2	2,2	30	24	2/10/50	LP70M 003P	F03FS03765
315	3,2	2,2	25	48	-	LP70M 006P	F03FS03768
400	3,8	2,8	30	28	2/10/60	LP70M 008P	F03FS03770
500	4,4	3,2	30	36	2/10/60	LP70M 010P	F03FS03772
600	5,2	4,0	30	48	2/10/60	LP70M 012P	F03FS03774



## LU1C

## Saw blades for solid wood ripping



Squaring Saws



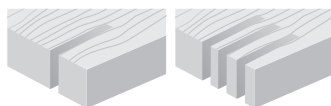
Multiripping Machines



Softwood



Hardwood

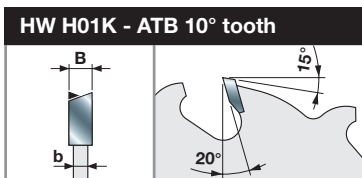


Ripping

Multiripping



●●● Ultimate ●● High ● Good



**Machines:**  
Squaring saws and multiripping machines.

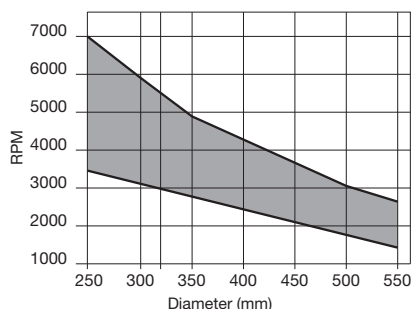
**Materials:**  
Softwood and hardwood.

**Applications:**  
Ripping and multiripping.

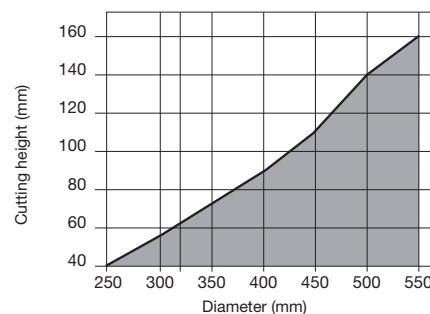
**Technical information:**  
Saw blades with anti-kickback technology, suitable for ripping soft and hardwood also with loose knots.

D	B	b	d	Z	NL - KN	Freud Code	Art. No.
mm	mm	mm	mm				
250	3,2	2,2	30	22	FT01		LU1C 0100 F03FS04590
250	3,2	2,2	70	22	4CH 21x5		LU1C 0200 F03FS04592
300	3,2	2,2	30	26	FT01		LU1C 0400 F03FS04595
300	3,2	2,2	35	26	-		LU1C 0500 F03FS04597
300	3,2	2,2	70	26	4CH 21x5		LU1C 0700 F03FS04599
315	3,2	2,2	30	28	FT01		LU1C 0800 F03FS04601
350	3,5	2,5	30	30	FT02		LU1C 1000 F03FS04603
350	3,5	2,5	35	30	-		LU1C 1100 F03FS04605
350	3,5	2,5	70	30	4CH 21x5		LU1C 1200 F03FS04607
400	4,0	2,8	30	34	2/10/60		LU1C 1300 F03FS04609
450	4,4	3,0	30	38	2/10/60		LU1C 1400 F03FS04611
500	4,4	3,2	30	42	2/10/60		LU1C 1500 F03FS04612
550	4,4	3,5	30	48	2/10/60		LU1C 1600 F03FS04613

FT01: 2/7/42 + 2/9/46,4 + 2/10/60 - FT02: 2/9/46,4 + 2/10/60



Minimum and maximum RPM based on the blade diameter.



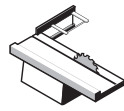
Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood



## LU1D

## Saw blades for solid wood ripping



Squaring Saws



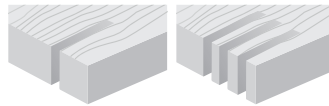
Multiripping Machines



Softwood



Hardwood



Ripping

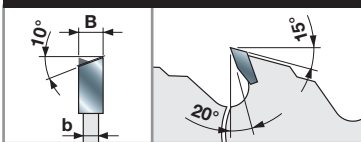
Multiripping



●●● Ultimate ●● High ● Good



### HW H01K - ATB 10° tooth



D	B	b	d	Z	NL - KN	Freud Code	Art. No.
mm	mm	mm	mm				
250	3,2	2,2	30	24	FT01		LU1D 0100 F03FS04615
250	3,2	2,2	70	24	4CH 21x5		LU1D 0200 F03FS04617
300	3,2	2,2	30	28	FT01		LU1D 0500 F03FS04620
300	3,2	2,2	60	28	4CH 21x5		LU1D 0600 F03FS04622
300	3,2	2,2	70	28	4CH 21x5		LU1D 0800 F03FS04624
350	3,5	2,5	30	32	FT02		LU1D 1100 F03FS04628
350	3,5	2,5	70	32	4CH 21x5		LU1D 1000 F03FS04626

FT01: 2/7/42 + 2/9/46,4 + 2/10/60 - FT02: 2/9/46,4 + 2/10/60

### Machines:

Squaring saws and multiripping machines.

### Materials:

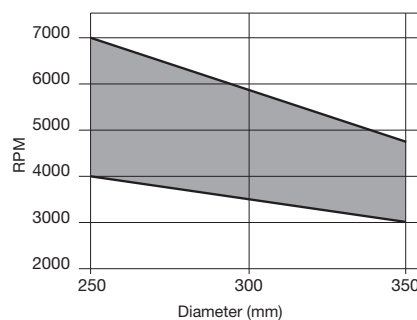
Softwood and hardwood.

### Applications:

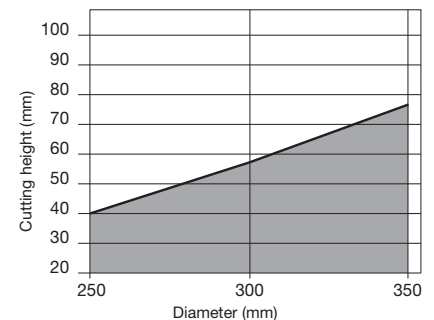
Ripping and multiripping.

### Technical information:

Saw blades suitable for ripping soft and hardwood also with loose knots.



Minimum and maximum RPM based on the blade diameter.



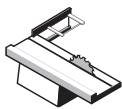
Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood



## LU1E

Think kerf saw blades for solid wood ripping



Squaring Saws

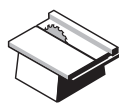
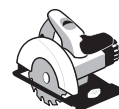


Table Saws



Hand-held Circular Saws



Softwood



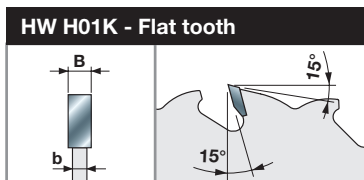
Hardwood



Ripping



●●● Ultimate ●● High ● Good



### Machines:

Squaring saws and table saws, hand-held circular saws.

### Materials:

Softwood and hardwood.

### Applications:

Ripping.

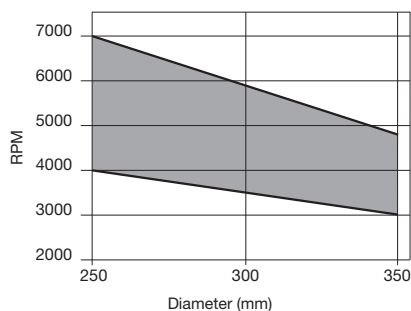
### Technical information:

The thin kerf design makes the workpiece feed easy when ripping soft and hard drywood, also with loose knots.

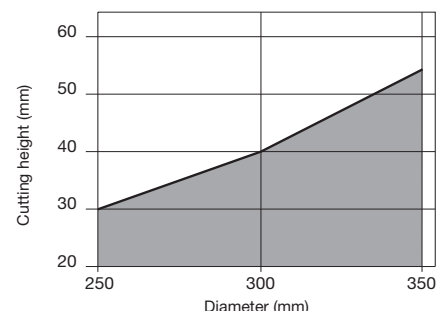
Anti-kickback technology.

D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
250	2,5	1,6	30	24	FT01	LU1E 0100	F03FS04630
300	2,6	1,8	30	24	-	LU1E 0500	F03FS04638
300	2,7	1,8	25	28	-	LU1E 0200	F03FS04632
300	2,7	1,8	30	28	FT01	LU1E 0300	F03FS04634
350	3,0	2,2	30	32	FT01	LU1E 0400	F03FS04636

FT01: 2/7/42 + 2/9/46,4 + 2/10/60



Minimum and maximum RPM based on the blade diameter.



Maximum depth of rip and crosscut based on the blade diameter.

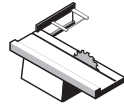
● Solid wood





## LU1F

Think kerf saw blades for solid wood ripping



Squaring Saws

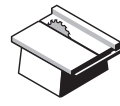
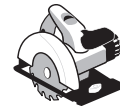


Table Saws



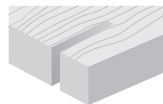
Hand-held Circular Saws



Softwood



Hardwood



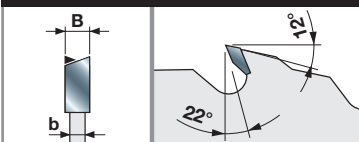
Ripping



●●● Ultimate ●● High ● Good



### HW H01K - ATB 10° tooth



#### Machines:

Squaring saws and table saws, hand-held circular saws.

#### Materials:

Softwood and hardwood.

#### Applications:

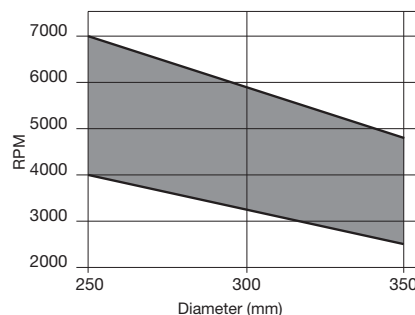
Ripping.

#### Technical information:

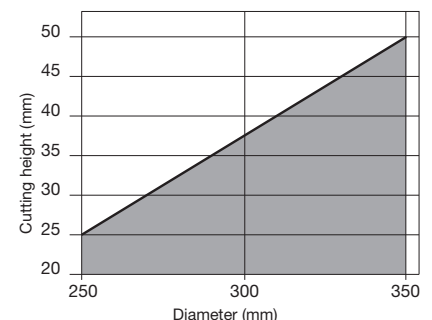
The thin kerf design makes the workpiece feed easy when ripping soft and hard drywood without loose knots.

D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
250	2,5	1,6	30	24	FT01	LU1F 0100	F03FS04640
300	2,7	1,8	30	28	FT01	LU1F 0200	F03FS04642
350	3,0	2,2	30	32	FT01	LU1F 0300	F03FS04644

FT01: 2/7/42 + 2/9/46,4 + 2/10/60



Minimum and maximum RPM based on the blade diameter.



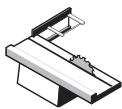
Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood



## LU1G

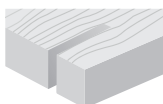
Saw blades with rounded teeth sides to cut solid wood



Squaring Saws



Softwood



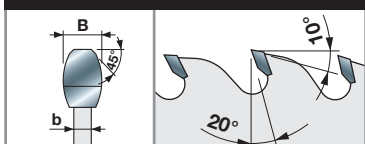
Ripping



●●● Ultimate ●● High ● Good



HW H01K - Rounded tooth



### Machines:

Squaring saws.

### Materials:

Softwood.

### Applications:

Ripping.

### Technical information:

Saw blades suitable for ripping with scratchless finishing.

Ideal to achieve a perfectly smooth surface on softwood.

D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
250	3,0	2,0	30	40	FT01	LU1G 0100	F03FS04646
300	3,0	2,0	30	48	FT01	LU1G 0200	F03FS04647
350	3,2	2,2	30	60	FT01	LU1G 0300	F03FS04648

FT01: 2/7/42 + 2/9/46,4 + 2/10/60

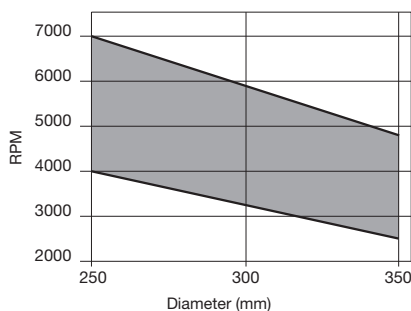
Comparison between the cut of a conventional saw blade and a saw blade equipped with teeth that are rounded on the side.



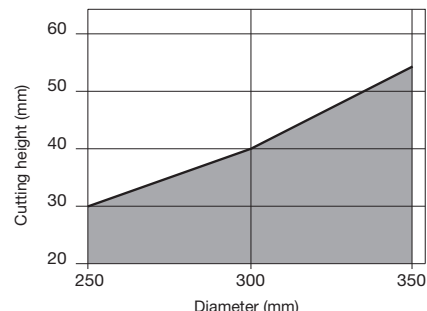
Conventional saw blades



LU1G saw blades



Minimum and maximum RPM based on the blade diameter.



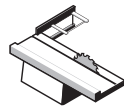
Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood



# LU1H

Think kerf saw blades for solid wood ripping and crosscutting



Squaring Saws

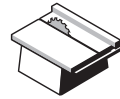
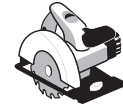


Table Saws



Multiripping Machines



Hand-held Circular Saws



Softwood



Hardwood



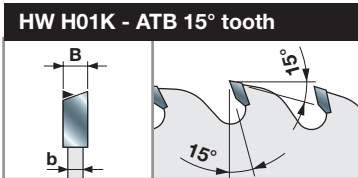
Ripping

Crosscutting

Multiripping



●●● Ultimate ●● High ● Good



**Machines:**

Squaring saws, table saws and multiripping machines, hand-held circular saws.

**Materials:**

Softwood and hardwood.

**Applications:**

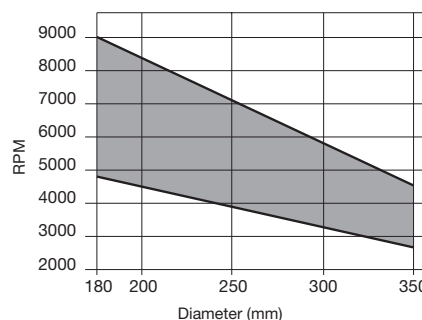
Ripping, crosscutting and multiripping.

**Technical information:**

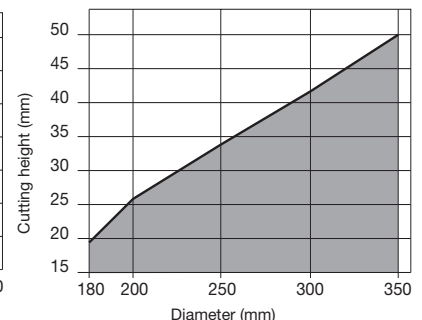
The thin kerf design makes the workpiece feed easy when ripping soft and hard drywood, minimising at the same time material waste.

D	B	b	d	Z	NL	Freud Code	Art. No.
180	1,5	1,0	30	40	2/7/42	LU1H 0100	F03FS04649
185	1,5	1,0	25,4	40	-	LU1H 0200	F03FS04650
200	1,5	1,0	30	40	2/7/42	LU1H 0300	F03FS07131
200	1,5	1,0	30	60	2/7/42	LU1H 0400	F03FS04651
205	1,5	1,0	25,4	40	-	LU1H 0500	F03FS04652
205	1,5	1,0	25,4	60	-	LU1H 0600	F03FS04653
250	2,5	1,6	30	48	FT01	LU1H 0700	F03FS04655
250	2,5	1,6	30	60	FT01	LU1H 0800	F03FS04657
250	2,8	2,0	30	30	2/10/60	LU1H 1500	F03FS04670
250	2,8	2,0	30	40	2/10/60	LU1H 1600	F03FS07127
300	2,8	2,0	30	36	FT01	LU1H 1400	F03FS04668
300	2,8	2,0	30	54	FT01	LU1H 0900	F03FS04659
300	2,8	2,0	35	54	-	LU1H 1000	F03FS04661
300	2,8	2,0	30	72	FT01	LU1H 1100	F03FS04663
350	3,0	2,2	30	60	FT01	LU1H 1200	F03FS04665
350	3,0	2,2	30	84	FT01	LU1H 1300	F03FS04667

FT01: 2/7/42 + 2/9/46,4 + 2/10/60



Minimum and maximum RPM based on the blade diameter.



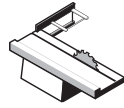
Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood

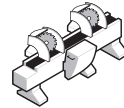


## LU11

## Saw blades to cut solid wood frames



Squaring Saws



Double Head Cutting Machines



Softwood



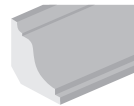
Hardwood



MDF



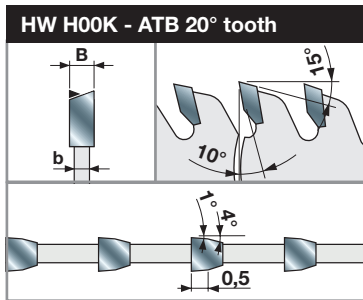
Crosscutting



Frames Cutting



●●● Ultimate ●● High ● Good



D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
200	2,95	2,5	30	64	2/7/42	LU11 0100	F03FS04673
250	2,95	2,5	20	80	2/6/32	LU11 0200	F03FS04675
250	2,95	2,5	30	80	FT02	LU11 0300	F03FS04677
250	2,95	2,5	30	96	FT02	LU11 0400	F03FS04679
275	2,95	2,5	20	84	2/6/32	LU11 0500	F03FS04681
300	2,95	2,5	30	96	FT02	LU11 0600	F03FS04682
300	2,95	2,5	30	112	FT02	LU11 0700	F03FS04684
330	3,45	3,0	30	96	FT02	LU11 0800	F03FS04686
350	3,45	3,0	30	108	FT02	LU11 0900	F03FS04688

FT02: 2/9/46,4 + 2/10/60

### Machines:

Squaring saws and double head cutting machines.

### Materials:

Softwood, hardwood and MDF.

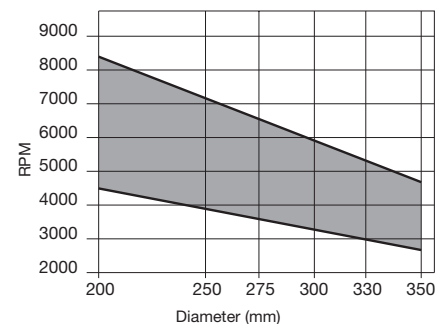
### Applications:

Crosscutting and wood frames cutting.

### Technical information:

Saw blades suitable for crosscutting of wooden frames or profiled items.

Splintering-free surface and perfect matching of the cut parts guaranteed also if painted, covered by chalk or other delicate and abrasive coatings.

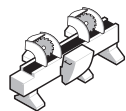


Minimum and maximum RPM based on the blade diameter.

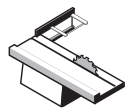


## LU1L

## Saw blades with axial angle to cut solid wood frames



Double Head Cutting Machines



Squaring Saws



Softwood



Hardwood



MDF



Plexiglas



Crosscutting



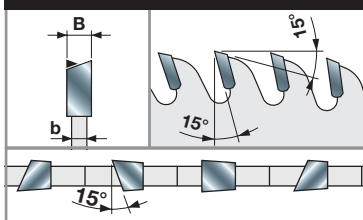
Frames Cutting



●●● Ultimate ●● High ● Good



### HW H00K - Flat-ATB 10° axial tooth



#### Machines:

Double head cutting machines and squaring saws.

#### Materials:

Softwood, hardwood, MDF and plexiglas.

#### Applications:

Crosscutting, wood and wood derivatives frames cutting.

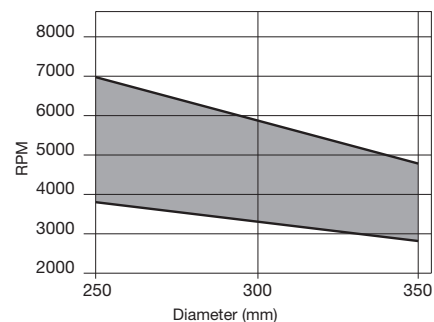
#### Technical information:

Saw blades ideal for wooden frames and profiles end trims whose front-end cut stays visible.

The axial angle grants splinter-free surfacing, with a perfect matching of the parts, also when painted or covered in chalk and abrasive coatings.

D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
250	3,0	2,2	30	100	FT01	LU1L 0100	F03FS04690
250	3,0	2,2	30	120	FT01	LU1L 0200	F03FS04691
255	3,0	2,2	25,4	100	-	LU1L 0300	F03FS04692
255	3,0	2,2	25,4	120	-	LU1L 0400	F03FS04693
300	3,0	2,2	30	100	FT01	LU1L 0500	F03FS04694
300	3,0	2,2	30	120	FT01	LU1L 0600	F03FS04695
305	3,0	2,2	25,4	100	-	LU1L 0700	F03FS04696
305	3,0	2,2	25,4	120	-	LU1L 0800	F03FS04697
305	3,0	2,2	30	100	-	LU1L 1100	F03FS06410
350	3,0	2,2	30	120	FT01	LU1L 0900	F03FS04698
355	3,0	2,2	25,4	120	-	LU1L 1000	F03FS04699

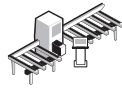
FT01: 2/7/42 + 2/9/46,4 + 2/10/60



Minimum and maximum RPM based on the blade diameter.

# LU1M

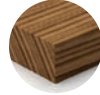
## Saw blades for optimising machines



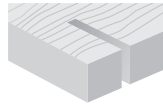
Optimising Machines



Softwood



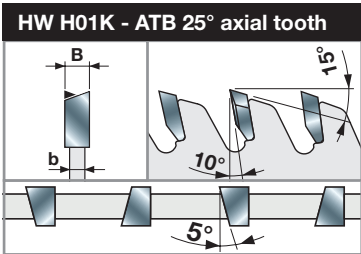
Hardwood



Crosscutting



●●● Ultimate ●● High ● Good



**Machines:**

Optimising machines.

**Materials:**

Softwood and hard drywood.

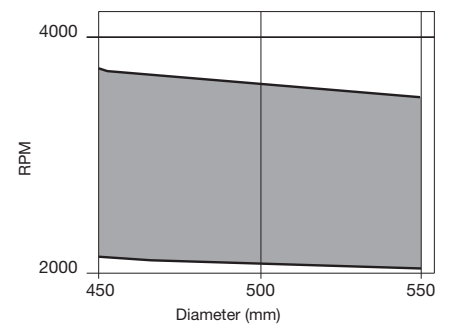
**Applications:**

Crosscutting at high feedrate.

**Technical information:**

Saw blades suitable for high feedrate and precise crosscutting of single boards of soft and hardwood.

D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
500	4,8	3,5	30	144	2/15/63	LU1M50030	F03FS09370

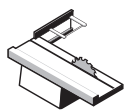


Minimum and maximum RPM based on the blade diameter.



# LG1C

## Saw blades for solid wood ripping



Squaring Saws



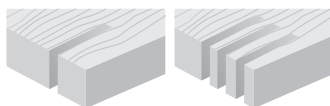
Multiripping Machines



Softwood



Hardwood

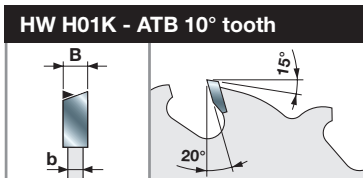


Ripping

Multiripping



●●● Ultimate ●● High ● Good



D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
250	3,2	2,2	30	22	FT01		LG1C 0100 F03FS07559
300	3,2	2,2	30	26	FT01		LG1C 0400 F03FS07560
350	3,5	2,5	30	30	FT02		LG1C 1000 F03FS07561

FT01: 2/7/42 + 2/9/46,4 + 2/10/60 - FT02: 2/9/46,4 + 2/10/60

**Machines:**

Squaring saws and multiripping machines.

**Materials:**

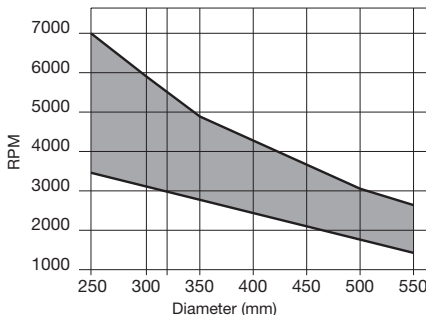
Softwood and hardwood.

**Applications:**

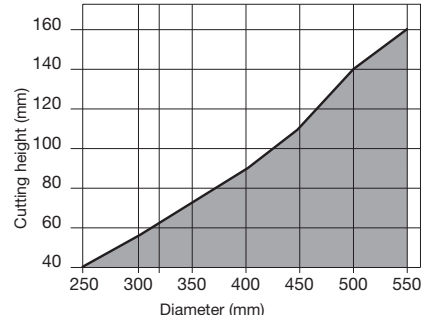
Ripping and multiripping.

**Technical information:**

Saw blades with anti-kickback technology suitable for ripping soft and hardwood also with loose knots.



Minimum and maximum RPM based on the blade diameter.



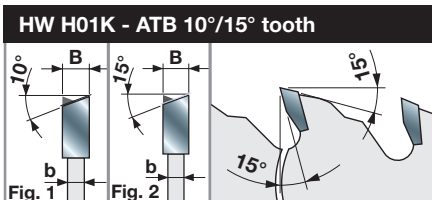
Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood

# Wood Based Panels







**Machines:**

Squaring saws and horizontal panel sizing machines, hand-held circular saws.

**Materials:**

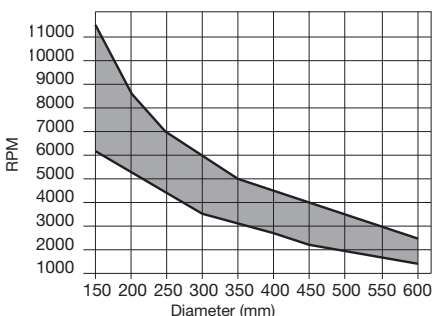
Softwood, hardwood, chipboard, plywood and MDF.

**Applications:**

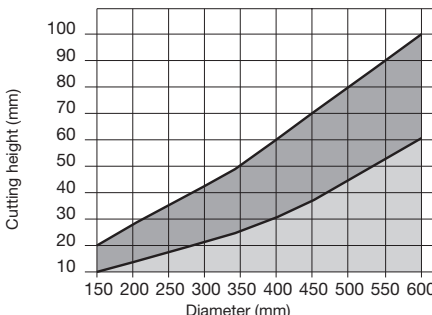
Ripping and crosscutting.

**Technical information:**

Saw blades suitable for ripping and crosscutting.



Minimum and maximum RPM based on the blade diameter.

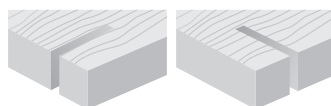
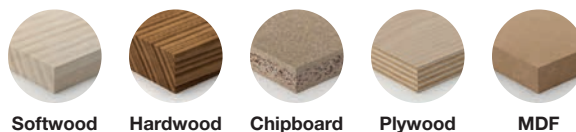


Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood      ● Wood-based materials

**LU2A**

**Saw blades for wood based panels ripping and crosscutting**



Ripping

Crosscutting



●●● Ultimate    ●● High    ● Good

**ATB 10° tooth (Fig. 1)**

D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
150	3,2	2,2	30	24	2/7/42	LU2A 0100	F03FS04806
160	3,2	2,2	20	24	2/6/32	LU2A 0300	F03FS04809
180	3,2	2,2	20	24	2/6/32	LU2A 0400	F03FS04810
180	3,2	2,2	30	30	2/7/42	LU2A 0500	F03FS04811
190	3,2	2,2	30	30	2/7/42	LU2A 0600	F03FS04813
200	3,2	2,2	30	34	2/7/42	LU2A 0800	F03FS04817
200	3,2	2,2	35	34	-	LU2A 0900	F03FS04819
210	3,2	2,2	30	34	2/7/42	LU2A 1100	F03FS04822
216	3,2	2,2	30	34	-	LU2A 1200	F03FS04823
220	3,2	2,2	30	34	2/7/42	LU2A 1300	F03FS04824
230	3,2	2,2	30	34	2/7/42	LU2A 1500	F03FS04827
250	3,2	2,2	30	30	FT01	LU2A 1600	F03FS04828
250	3,2	2,2	30	40	FT01	LU2A 1700	F03FS04830
250	3,2	2,2	35	40	-	LU2A 1800	F03FS04832
250	3,2	2,2	80	40	-	LU2A 1880	F03FS09971
300	3,2	2,2	30	36	FT01	LU2A 1900	F03FS04834
300	3,2	2,2	30	48	FT01	LU2A 2100	F03FS04840
300	3,2	2,2	35	48	-	LU2A 2300	F03FS04843
315	3,2	2,2	30	48	FT01	LU2A 2400	F03FS04844
350	3,5	2,5	30	54	FT02	LU2A 2800	F03FS04849
350	3,5	2,5	35	54	-	LU2A 3000	F03FS04851
400	4,0	2,8	30	60	2/10/60	LU2A 3300	F03FS04856
400	4,0	2,8	35	60	-	LU2A 3400	F03FS04858
450	4,4	3,0	30	54	2/10/60	LU2A 3500	F03FS04860
450	4,4	3,0	30	66	2/10/60	LU2A 3600	F03FS04862
500	4,4	3,2	30	72	2/10/60 + 2/10/80	LU2A 3800	F03FS04865
550	4,8	3,5	30	84	2/10/60 + 2/10/80	LU2A 3900	F03FS04867
600	5,4	4	30	96	2/10/80	LU2A 4000	F03FS04868
735	6,0	4,4	30	72	2/8,5/90	LU2A 4200*	F03FS05908
760	6,2	4,5	30	72	2/8,5/90	LU2A 4300*	F03FS05903

\* HW K10S

**ATB 15° tooth (Fig. 2)**

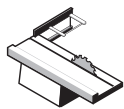
D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
160	3,2	2,2	20	18	2/6/32	LU2A 0200	F03FS04808
160	2,2	1,6	20	24	-	LU2A 0301	F03FS09233
200	3,2	2,2	30	24	2/7/42	LU2A 0700	F03FS04814
210	3,2	2,2	30	24	2/7/42	LU2A 1000	F03FS04821
230	3,2	2,2	30	24	2/7/42	LU2A 1400	F03FS04826
350	3,5	2,5	30	42	FT02	LU2A 2500	F03FS04845
350	3,5	2,5	35	42	-	LU2A 2600	F03FS04847
400	4,0	2,8	50	48	6/5,5/80 + 1/6/80	LU2A 3150	F03FS09578
400	4,0	2,8	30	48	2/10/60	LU2A 3100	F03FS04853
500	4,4	3,2	30	60	2/10/60 + 2/10/80	LU2A 3700	F03FS04864

FT01: 2/7/42 + 2/9/46,4 + 2/10/60 - FT02: 2/9/46,4 + 2/10/60



## LU2B

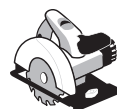
## Saw blades for wood based panels ripping & crosscutting



Squaring Saws



Horizontal Panel Sizing Machines



Hand-held Circular Saws



Softwood



Hardwood



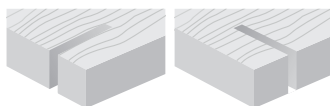
Chipboard



Plywood



MDF



Ripping

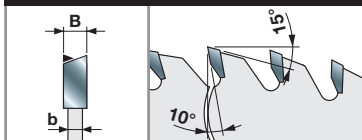
Crosscutting



●●● Ultimate ●● High ● Good



### HW H00K - ATB 15° tooth



#### Machines:

Squaring saws and horizontal panel sizing machines, hand-held circular saws.

#### Materials:

Softwood, hardwood, chipboard, plywood and MDF.

#### Applications:

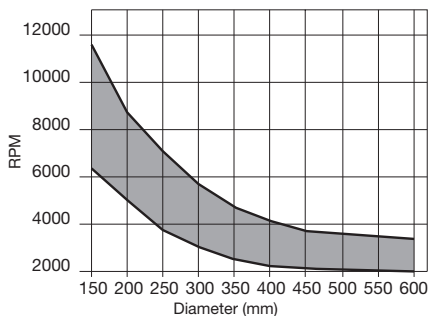
Ripping and crosscutting.

#### Technical information:

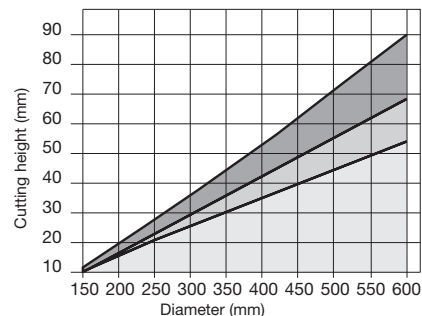
Saw blades suitable for ripping and crosscutting.

D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
150	3,2	2,2	30	36	2/7/42	LU2B 0100	F03FS04869
180	3,2	2,2	30	42	2/7/42	LU2B 0200	F03FS04871
200	3,2	2,2	30	48	2/7/42	LU2B 0300	F03FS04873
216	3,2	2,2	30	48	-	LU2B 0400	F03FS04876
250	3,2	2,2	30	48	FT01	LU2B 0500	F03FS04877
250	3,2	2,2	30	60	FT01	LU2B 0700	F03FS04880
250	3,2	2,2	35	60	-	LU2B 0800	F03FS04882
300	3,2	2,2	30	60	FT01	LU2B 0900	F03FS04884
300	3,2	2,2	30	72	FT01	LU2B 1100	F03FS04887
300	3,2	2,2	35	72	-	LU2B 1200	F03FS04889
315	3,2	2,2	30	72	FT01	LU2B 1300	F03FS04891
350	3,5	2,5	30	72	FT02	LU2B 1400	F03FS04893
350	3,5	2,5	30	84	FT02	LU2B 1600	F03FS04895
350	3,5	2,5	35	84	-	LU2B 2400	F03FS04905
400	4,0	2,8	30	96	2/10/60	LU2B 1900	F03FS04897
450	4,4	3,0	30	96	2/10/60	LU2B 2000	F03FS04899
500	4,4	3,2	30	108	2/10/60 + 2/10/80	LU2B 2100	F03FS04901
550	4,8	3,5	30	120	2/10/60 + 2/10/80	LU2B 2200	F03FS04903
600	5,4	4,0	30	132	2/10/80	LU2B 2300	F03FS04904

FT01: 2/7/42 + 2/9/46,4 + 2/10/60 - FT02: 2/9/46,4 + 2/10/60



Minimum and maximum RPM based on the blade diameter.



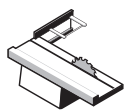
Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood ● Wood-based materials ● Plywood

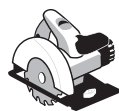


## LU2C

## Saw blades for wood based panels crosscutting



Squaring Saws



Hand-held Circular Saws



Softwood



Hardwood



Chipboard



Laminated  
MDF



Thermoplastic  
Composites



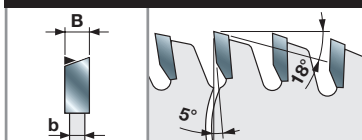
Crosscutting



●●● Ultimate ●● High ● Good



### HW H00K - ATB 15° tooth



#### Machines:

Squaring saws, hand-held circular saws.

#### Materials:

Softwood, hardwood, chipboard, laminated MDF and thermoplastic composites.

#### Applications:

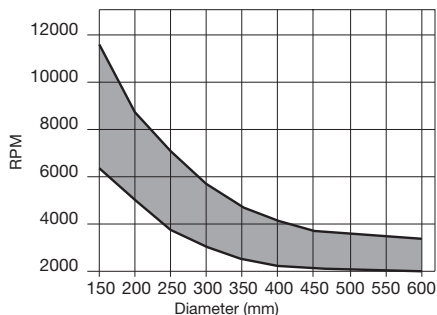
Crosscutting.

#### Technical information:

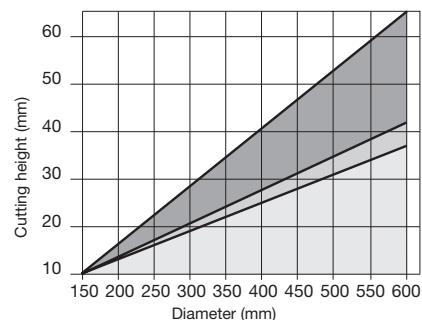
Saw blades suitable for crosscutting.

D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
150	3,2	2,2	30	48	2/7/42	LU2C 0100	F03FS04908
160	2,2	1,6	20	48	2/6/32	LU2C 0001	F03FS09065
160	3,2	2,2	20	48	2/6/32	LU2C 0200	F03FS04910
180	3,2	2,2	20	56	2/6/32	LU2C 0300	F03FS04911
180	3,2	2,2	30	56	2/7/42	LU2C 0400	F03FS04912
190	3,2	2,2	30	56	2/7/42	LU2C 0500	F03FS04914
200	3,2	2,2	30	64	2/7/42	LU2C 0600	F03FS04915
200	3,2	2,2	40	64	-	LU2C 0640	F03FS09972
210	3,2	2,2	30	64	2/7/42	LU2C 0700	F03FS04917
216	3,2	2,2	30	64	2/7/42	LU2C 0800	F03FS04918
220	3,2	2,2	30	64	2/7/42	LU2C 0900	F03FS04919
230	3,2	2,2	30	64	2/7/42	LU2C 1000	F03FS04921
250	3,2	2,2	30	80	FT01	LU2C 1200	F03FS04922
250	3,2	2,2	30	100	FT01	LU2C 1300	F03FS04924
300	3,2	2,2	30	96	FT01	LU2C 1500	F03FS04927
300	3,2	2,2	35	96	-	LU2C 1600	F03FS04930
300	3,2	2,2	30	120	FT01	LU2C 1700	F03FS04932
330	3,2	2,2	20	96	2/6/32	LU2C 1800	F03FS04934
350	3,5	2,5	30	108	FT02	LU2C 2000	F03FS04936
400	3,8	2,8	30	120	2/10/60	LU2C 2100	F03FS04938
450	4,4	3,0	30	132	FT02	LU2C 2200	F03FS04939
500	4,4	3,2	30	144	2/10/60 + 2/10/80	LU2C 2300	F03FS04940
500	4,4	3,2	35	144	-	LU2C 2335	F03FS09975
550	4,8	3,5	30	156	2/10/60 + 2/10/80	LU2C 2400	F03FS04942
600	5,4	4,0	30	168	2/10/80	LU2C 2500	F03FS04943

FT01: 2/7/42 + 2/9/46,4 + 2/10/60 - FT02: 2/9/46,4 + 2/10/60



Minimum and maximum RPM based on the blade diameter.



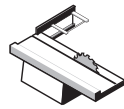
Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood ● Wood-based materials ● Plywood



# LU2D

## Thin kerf saw blades for wood based panels crosscutting



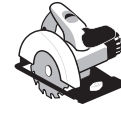
Squaring Saws



Table Saws



Multiripping Machines



Hand-held Circular Saws



Softwood



Hardwood



Chipboard



MDF



Laminated MDF



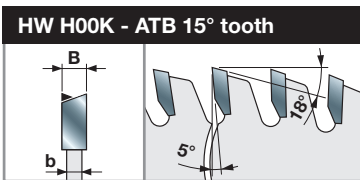
Thermoplastic Composites



Crosscutting



●●● Ultimate ●● High ● Good



D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
150	2,0	1,4	30	48	2/7/42	LU2D 0100	F03FS04944
180	2,0	1,4	30	56	2/7/42	LU2D 0200	F03FS04948
180	2,0	1,4	40	56	-	LU2D 0300	F03FS04950
200	2,2	1,6	30	64	2/7/42	LU2D 0400	F03FS04952
250	2,5	1,8	20	80	2/6/32	LU2D 0500	F03FS04954
250	2,5	1,8	30	80	FT01	LU2D 0700	F03FS04957
300	2,7	1,8	30	96	FT01	LU2D 0900	F03FS04959
350	3,0	2,2	30	108	FT01	LU2D 1100	F03FS04963

FT01: 2/7/42 + 2/9/46,4 + 2/10/60

### Machines:

Squaring saws, table saws and multiripping machines, hand-held circular saws.

### Materials:

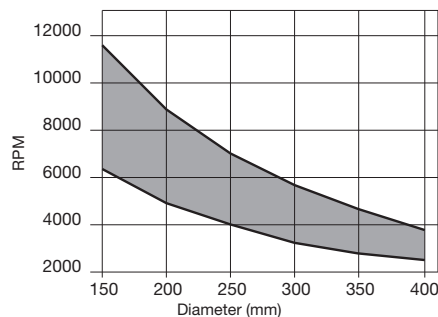
Softwood, hardwood, chipboard, laminated MDF and thermoplastic composites.

### Applications:

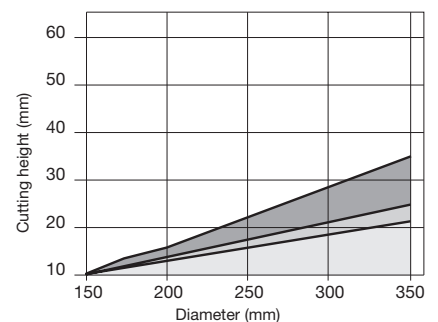
Crosscutting.

### Technical information:

The thin kerf design makes the workpiece feed easy when crosscutting soft and hard drywood, minimising at the same time material wastes.



Minimum and maximum RPM based on the blade diameter.



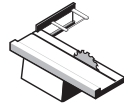
Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood ● Wood-based materials ● Plywood



## LU2E

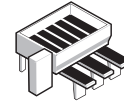
## Saw blades to cut exotic abrasive wood and panels



Squaring Saws



Table Saws



Horizontal Panel Sizing Machines



Softwood



Hardwood



Laminated Chipboard



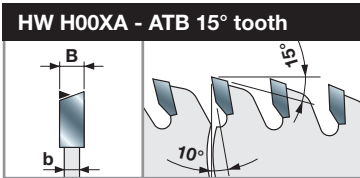
Laminated MDF



Crosscutting



●●● Ultimate ●● High ● Good



D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
300	3,2	2,2	30	60	FT01	LU2E 0200	F03FS04965
300	3,2	2,2	30	72	FT01	LU2E 0400	F03FS04967
350	3,5	2,5	30	72	FT02	LU2E 0500	F03FS04970

FT01: 2/7/42 + 2/9/46,4 + 2/10/60 - FT02: 2/9/46,4 + 2/10/60

### Machines:

Squaring saws, table saws and horizontal panel sizing machines.

### Materials:

Softwood, hardwood, laminated chipboard and laminated MDF.

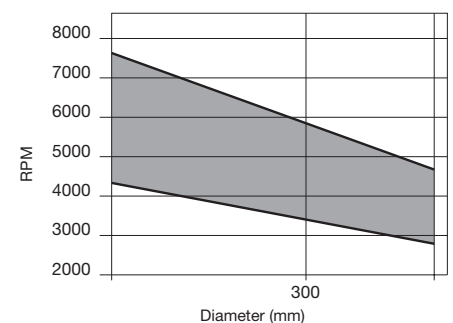
### Applications:

Crosscutting and panel sizing.

### Technical information:

Good finishing in softwood and hardwood crosscutting.

Suitable also for chipboard (up to 50 mm thickness) and single-side laminated MDF (up to 30 mm thickness).

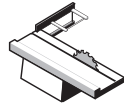


Maximum depth of rip and crosscut based on the blade diameter.



## LU2F

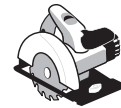
## Saw blades to cut wood based panels, composites and plastic materials



Squaring Saws



Table Saws



Hand-held Circular Saws



Mitre Saws



Softwood



Hardwood



Laminated Chipboard



Laminated MDF



Thermoplastic Composites



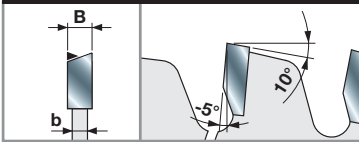
Crosscutting



●●● Ultimate ●● High ● Good



### HW H00K - ATB 10° tooth



#### Machines:

Squaring saws and table saws, hand-held circular saws and mitre saws.

#### Materials:

Softwood, hardwood, laminated chipboard panels, laminated MDF and thermoplastic composites.

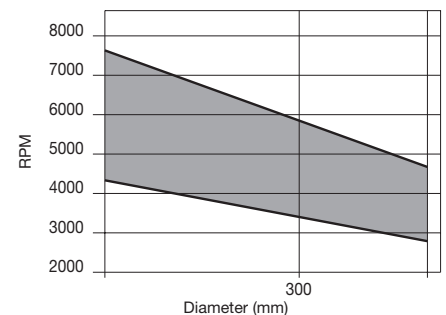
#### Applications:

Crosscutting and panel sizing.

#### Technical information:

To size bilaminated single panels without the use of the scoring saw blade, with good finishing and long cutting life.

D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
216	2,8	2,0	30	24	-	LU2F 0100	F03FS06304
216	2,8	2,0	30	48	-	LU2F 0200	F03FS04971
216	2,8	2,0	30	60	-	LU2F 0300	F03FS04972
250	2,8	2,0	30	48	-	LU2F 0400	F03FS04973
250	2,8	2,0	30	60	-	LU2F 0500	F03FS04974

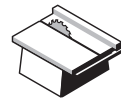
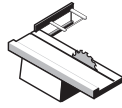


Minimum and maximum RPM based on the blade diameter.



# LG2A

## Saw blades for wood based panels ripping & crosscutting



Squaring Saws

Table Saws



Softwood



Hardwood



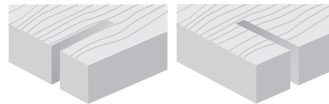
Plywood



Chipboard



MDF

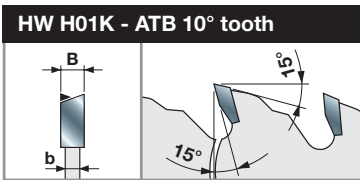


Ripping

Crosscutting



●●● Ultimate ●● High ● Good



D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
250	3,2	2,2	30	40	FT01		LG2A 1700 F03FS07562
300	3,2	2,2	30	36	FT01		LG2A 1900 F03FS07563
300	3,2	2,2	30	48	FT01		LG2A 2100 F03FS07564
350	3,5	2,5	30	54	FT02		LG2A 2800 F03FS07565

FT01: 2/7/42 + 2/9/46,4 + 2/10/60 - FT02: 2/9/46,4 + 2/10/60

**Machines:**

Squaring saws and table saws.

**Materials:**

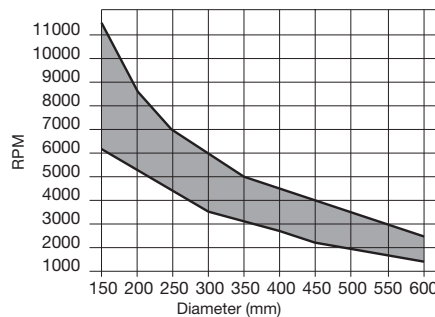
Softwood, hardwood, plywood, chipboard and MDF.

**Applications:**

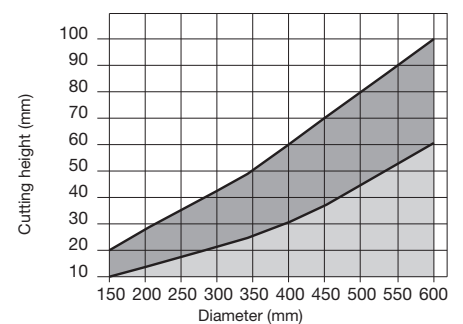
Ripping and crosscutting.

**Technical information:**

Saw blades suitable for ripping and crosscutting.



Minimum and maximum RPM based on the blade diameter.



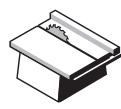
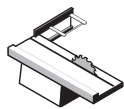
Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood



# LG2B

## Saw blades for wood based panels ripping and crosscutting



Squaring Saws

Table Saws



Softwood



Hardwood



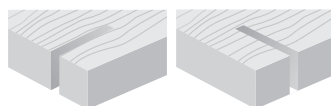
Plywood



Chipboard



MDF

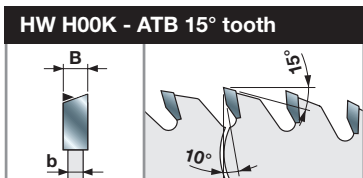


Ripping

Crosscutting



●●● Ultimate ●● High ● Good



D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
250	3,2	2,2	30	60	FT01		LG2B 0700 F03FS07566
300	3,2	2,2	30	60	FT01		LG2B 0900 F03FS07567
300	3,2	2,2	30	72	FT01		LG2B 1100 F03FS07439
350	3,5	2,5	30	72	FT02		LG2B 1400 F03FS07568
350	3,5	2,5	30	84	FT02		LG2B 1600 F03FS07569

FT01: 2/7/42 + 2/9/46,4 + 2/10/60 - FT02: 2/9/46,4 + 2/10/60

**Machines:**

Squaring saws and table saws.

**Materials:**

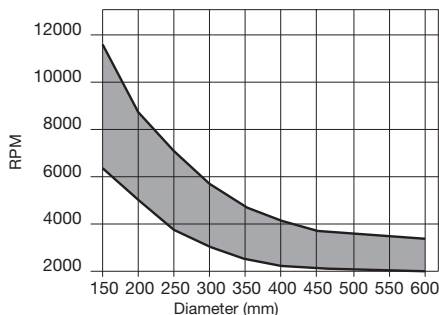
Softwood, hardwood, plywood, chipboard and MDF.

**Applications:**

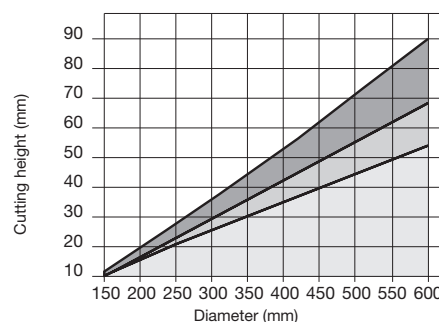
Ripping and crosscutting.

**Technical information:**

Saw blades suitable for ripping and crosscutting.



Minimum and maximum RPM based on the blade diameter.



Maximum depth of rip and crosscut based on the blade diameter.

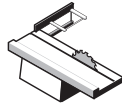
● Solid wood ● Wood-base materials ● Plywood





## LG2C

## Saw blades for wood based panels crosscutting



Squaring Saws

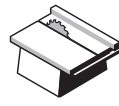


Table Saws



Softwood



Hardwood



Chipboard



MDF



Laminated  
MDF



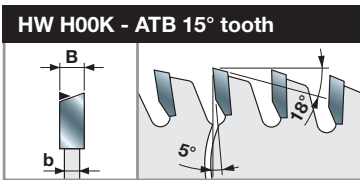
Thermoplastic  
Composites



Crosscutting



●●● Ultimate ●● High ● Good



D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
250	3,2	2,2	30	80	FT01	LG2C 1200	F03FS07570
300	3,2	2,2	30	96	FT01	LG2C 1500	F03FS07571
350	3,5	2,5	30	108	FT02	LG2C 2000	F03FS07572

FT01: 2/7/42 + 2/9/46,4 + 2/10/60 - FT02: 2/9/46,4 + 2/10/60

### Machines:

Squaring saws and table saws.

### Materials:

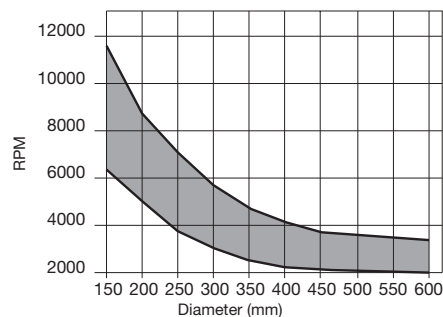
Softwood, hardwood, chipboard, MDF, laminated MDF and thermoplastic composites.

### Applications:

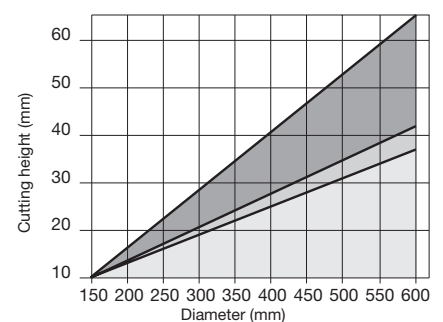
Crosscutting.

### Technical information:

The thin kerf design makes the workpiece feed easy when crosscutting soft and hard drywood, minimising at the same time material wastes.



Minimum and maximum RPM based on the blade diameter.



Maximum depth of rip and crosscut based on the blade diameter.

● Solid wood ● Wood-based materials ● Plywood

# Laminated Panels



## Reference table of saw blades for panel sizing machines

Machine type	Tool type *	D	B-B1	b	d	Z	Tooth type	$\alpha$	$\beta$	NL	Freud Code	Art. No.
		mm	mm	mm	mm							
<b>BIESSE-SELCO</b>												
<b>EB 70 (L)</b>	Main blade	300	4,4	3,0	65	60	TCG	15°	15°	2/9/110	LSB30002X	F03FS09159
	HW Scorer	200	4,3-5,5	3,2	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M43PI3	F03FS02681
	HW Scorer	300	4,3-5,5	3,0	65	48	ATB	12°	15°	2/9/100 + 2/9/110	LI25M43RX3	F03FS07616
	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH4	F03FS09625
	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH6	F03FS09626
	Postf. scorer	300	4,55	3,2	65	72	ATB	15°	15°	2/9/100 + 2/9/110	LI27M DA3	F03FS02737
<b>EB 70 (KIT 80), 75 (SEKTOR 430), 80 (SEKTOR 450), SK350, SK450</b>	Main blade	320	4,4	3,2	65	60	TCG	15°	15°	2/9/110	LSB32003X	F03FS09161
	Main blade	320	4,4	3,2	65	72	TCG	15°	15°	2/9/95 + 2/9/110	LSB32001X	F03FS07805
	HW Scorer	200	4,3-5,5	3,2	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M43PI3	F03FS02681
	HW Scorer	300	4,3-5,5	3,0	65	48	ATB	12°	15°	2/9/100 + 2/9/110	LI25M43RX3	F03FS07616
	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH4	F03FS09625
	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH6	F03FS09626
<b>WN2, WN230, SK230</b>	Postf. scorer	300	4,55	3,2	65	72	ATB	15°	15°	2/9/100 + 2/9/110	LI27M DA3	F03FS02737
	Main blade	320	4,4	3,2	65	72	TCG	15°	15°	2/9/95 + 2/9/110	LSB32001X	F03FS07805
	HW Scorer	200	4,3-5,5	3,2	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M43PI3	F03FS02681
	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH4	F03FS09625
<b>WN 250</b>	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH6	F03FS09626
	Main blade	350	4,4	3,2	65	72	TCG	15°	15°	2/9/110	LSB35013X	F03FS09659
	HW Scorer	200	4,3-5,5	3,2	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M43PI3	F03FS02681
	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH4	F03FS09625
<b>EB 95, SEKTOR 470, K470, SK370</b>	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH6	F03FS09626
	Main blade	355	4,4	3,2	65	72	TCG	15°	15°	2/9/95 + 2/9/110	LSB35508X	F03FS08740
	HW Scorer	200	4,3-5,5	3,2	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M43PI3	F03FS02681
	HW Scorer	300	4,3-5,5	3,0	65	48	ATB	12°	15°	2/9/100 + 2/9/110	LI25M43RX3	F03FS07616
	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH4	F03FS09625
	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH6	F03FS09626
<b>EB100</b>	Postf. scorer	300	4,55	3,2	65	72	ATB	15°	15°	2/9/100 + 2/9/110	LI27M DA3	F03FS02737
	Main blade	360	4,4	3,2	65	72	TCG	15°	15°	2/9/95 + 2/9/110	LSB36002X	F03FS07673
	HW Scorer	200	4,3-5,5	3,2	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M43PI3	F03FS02681
	HW Scorer	300	4,3-5,5	3,0	65	48	ATB	12°	15°	2/9/100 + 2/9/110	LI25M43RX3	F03FS07616
	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH4	F03FS09625
	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH6	F03FS09626
<b>WN-WNA 610, WN-WNA 610 (PFS)</b>	Postf. scorer	300	4,55	3,2	65	72	ATB	15°	15°	2/9/100 + 2/9/110	LI27M DA3	F03FS02737
	Main blade	380	4,4	3,2	65	72	TCG	15°	15°	2/9/110	LSB38014X	F03FS09166
	HW Scorer	200	4,3-5,5	3,2	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M43PI3	F03FS02681
	HW Scorer	300	4,3-5,5	3,0	65	48	ATB	12°	15°	2/9/100 + 2/9/110	LI25M43RX3	F03FS07616
	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH4	F03FS09625
<b>EB108, EB110, EB120</b>	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH6	F03FS09626
	Main blade	400	4,4	3,2	80	72	TCG	15°	15°	2/15/105 + 2/9/130 + 4/19/120	LSB40009X	F03FS07810
	HW Scorer	200	4,3-5,5	3,2	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M43PI3	F03FS02681
	HW Scorer	300	4,3-5,5	3,0	65	48	ATB	12°	15°	2/9/100 + 2/9/110	LI25M43RX3	F03FS07616
	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH4	F03FS09625
	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH6	F03FS09626
<b>WN-WNA 630, WN-WNA 630 (PFS)</b>	Postf. scorer	300	4,55	3,2	65	72	ATB	15°	15°	2/9/100 + 2/9/110	LI27M DA3	F03FS02737
	Main blade	400	4,4	3,2	65	72	TCG	15°	15°	2/9/110	LSB40016X	F03FS09172
	HW Scorer	200	4,3-5,5	3,2	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M43PI3	F03FS02681
	HW Scorer	300	4,3-5,5	3,0	65	48	ATB	12°	15°	2/9/100 + 2/9/110	LI25M43RX3	F03FS07616
	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH4	F03FS09625
DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH6	F03FS09626	

\* Tool type: Main saw blade, Scoring saw blade, Polycrystalline Diamond scorer and Postforming scorer.

## Reference table of saw blades for panel sizing machines

Machine type	Tool type *	D	B-B1	b	d	Z	Tooth type	$\alpha$	$\beta$	NL	Freud Code	Art. No.
		mm	mm	mm	mm							
<b>EB/EBT 120, WN 125</b>	Main blade	430	4,4	3,2	80	72	TCG	15°	15°	2/9/130 + 2/14/110 + 4/19/120	LSB43009X	F03FS07909
	HW Scorer	200	4,3-5,5	3,2	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M43PI3	F03FS02681
	HW Scorer	300	4,3-5,5	3,2	65	72	ATB	12°	15°	2/9/100 + 2/9/110	LI25M43RI3	F03FS02689
	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH4	F03FS09625
	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH6	F03FS09626
	Postf. scorer	300	4,55	3,2	65	72	ATB	15°	15°	2/9/100 + 2/9/110	LI27M DA3	F03FS02737
<b>WN-WNA 650, WN-WNA 650 (PFS)</b>	Main blade	430	4,4	3,2	65	72	TCG	15°	15°	2/9/110	LSB43012X	F03FS09178
	HW Scorer	200	4,3-5,5	3,2	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M43PI3	F03FS02681
	HW Scorer	300	4,3-5,5	3,0	65	48	ATB	12°	15°	2/9/100 + 2/9/110	LI25M43RX3	F03FS07616
	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH4	F03FS09625
	DP Scorer	200	4,3-5,1	3,2	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M43PIH6	F03FS09626
<b>WN 710, WN 710 (PFS)</b>	Main blade	430	4,8	3,5	70	72	TCG	15°	15°	4/11/130	LSB43013X	F03FS09180
	HW Scorer	200	4,7-5,9	3,5	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M47PI3	F03FS02720
	HW Scorer	300	4,7-5,9	3,5	65	48	ATB	6°	15°	2/9/110	LI25M47RX3	F03FS07744
	DP Scorer	200	4,7-5,5	3,5	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M47PIH4	F03FS09631
	DP Scorer	200	4,7-5,5	3,5	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M47PIH6	F03FS09632
<b>WN 600/132, WN 200</b>	Main blade	450	4,8	3,5	80	72	TCG	15°	15°	2/14/125 + 2/9/130 + 4/19/120	LSB45018X	F03FS07812
	HW Scorer	200	4,7-5,9	3,5	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M47PI3	F03FS02720
	DP Scorer	200	4,7-5,5	3,5	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M47PIH4	F03FS09631
	DP Scorer	200	4,7-5,5	3,5	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M47PIH6	F03FS09632
	Postf. scorer	300	4,95	3,0	65	72	ATB	15°	15°	2/9/100 + 2/9/110	LI27M DB3	F03FS02739
<b>WN 600/132, WN 200</b>	Main blade	450	4,8	3,5	80	72	TCG	15°	15°	2/14/125 + 2/9/130 + 4/19/120	LSB45018X	F03FS07812
	HW Scorer	200	4,7-5,9	3,5	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M47PI3	F03FS02720
	DP Scorer	200	4,7-5,5	3,5	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M47PIH4	F03FS09631
	DP Scorer	200	4,7-5,5	3,5	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M47PIH6	F03FS09632
	Postf. scorer	300	4,95	3,0	65	72	ATB	15°	15°	2/9/100 + 2/9/110	LI27M DB3	F03FS02739
<b>WN-WNA 730, WN-WNA 730 (PFS)</b>	Main blade	470	4,8	3,5	70	72	TCG	15°	15°	4/11/130	LSB47005X	F03FS09185
	HW Scorer	200	4,7-5,9	3,5	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M47PI3	F03FS02720
	HW Scorer	300	4,7-5,9	3,5	65	48	ATB	6°	15°	2/9/110	LI25M47RX3	F03FS07744
	DP Scorer	200	4,7-5,5	3,5	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M47PIH4	F03FS09631
	DP Scorer	200	4,7-5,5	3,5	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M47PIH6	F03FS09632
<b>WN-WNA 750, WN-WNA 750 (PFS)</b>	Main blade	470	4,8	3,5	70	72	TCG	15°	15°	4/11/130	LSB47005X	F03FS09185
	Main blade	520	4,8	3,5	70	72	TCG	15°	15°	4/11/130	LSB52006X	F03FS09193
	HW Scorer	200	5,7-6,9	3,5	65	36	ATB	8°	15°	2/9/110	LI25M57PI3BS	F03FS08165
<b>WN 600/145, WN 512</b>	Main blade	480	4,8	3,5	80	72	TCG	15°	15°	2/9/130 + 4/19/120	LSB48001X	F03FS09188
	HW Scorer	200	4,7-5,9	3,5	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M47PI3	F03FS02720
	DP Scorer	200	4,7-5,5	3,5	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M47PIH4	F03FS09631
	DP Scorer	200	4,7-5,5	3,5	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M47PIH6	F03FS09632
	Postf. scorer	300	4,55	3,2	65	72	ATB	15°	15°	2/9/100 + 2/9/110	LI27M DA3	F03FS02737
<b>WNA600/162</b>	Main blade	510	4,8	3,5	80	72	TCG	15°	15°	2/9/130 + 4/19/120	LSB51001X	F03FS09984
	HW Scorer	200	4,7-5,9	3,5	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M47PI3	F03FS02720
	DP Scorer	200	4,7-5,5	3,5	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M47PIH4	F03FS09631
	DP Scorer	200	4,7-5,5	3,5	65	36	FLAT	6°	14°	2/9/100 + 2/9/110	DLI25M47PIH6	F03FS09632
	Postf. scorer	300	4,95	3,0	65	72	ATB	15°	15°	2/9/100 + 2/9/110	LI27M DB3	F03FS02739
<b>WN-WNA 850</b>	Main blade	600	5,8	4,0	70	60	TCG	15°	15°	4/11/130	LSB60004X	F03FS10258
	Main blade	600	5,8	4,0	75	60	TCG	15°	15°	4/6,5/130 + 4/11/130	LSB60006X	F03FS10259
	HW Scorer	200	5,7-6,9	3,5	65	36	ATB	8°	15°	2/9/110	LI25M57PI3BS	F03FS08165
<b>AES</b>												
<b>ALPHA PS-03</b>	Main blade	320	4,4	3,2	30	72	TCG	15°	15°	2/10/60 + 2/13/94	LSB32009X	F03FS10296
	HW Scorer	200	4,3-5,5	3,2	20	36	ATB	8°	15°	2/10/60 + 2/9/62 + 2/11/66	LI25M43PA3	F03FS02670
<b>ALPHA PS-05</b>	Main blade	430	4,4	3,2	30	72	TCG	15°	15°	2/13/94	LSB43007X	F03FS09177
	HW Scorer	200	4,3-5,5	3,2	20	36	ATB	8°	15°	2/11/66 + 2/10/60 + 2/9/62	LI25M43PA3	F03FS02670

\* Tool type: Main saw blade, Scoring saw blade, Polycrystalline Diamond scorer and Postforming scorer.

## Reference table of saw blades for panel sizing machines

Machine type	Tool type *	D	B-B1	b	d	Z	Tooth type	α	β	NL	Freud Code	Art. No.
		mm	mm	mm	mm							
ALPHA PS-06	Main blade	460	4,4	3,2	30	72	TCG	15°	15°	2/13/94	LSB46001X	F03FS08922
	HW Scorer	200	4,3-5,5	3,2	20	36	ATB	8°	15°	2/11/66 + 2/10/60 + 2/9/62	LI25M43PA3	F03FS02670
<b>ANTHON</b>												
LN (90)	400	4,4	3,2	60	72	72	TCG	15°	15°	2/14/100 + 2/11/85	LSB40017X	F03FS09272
	180	4,3-5,5	3,2	20	28	28	ATB	8°	15°	-	LI25M43NA3	F03FS02661
	180	4,3-5,5	3,2	20	36	36	ATB	8°	15°	-	LI25M43XA3	F03FS06372
PORTA 100	400	4,4	3,2	60	72	72	TCG	15°	15°	2/14/100 + 2/11/85	LSB40017X	F03FS09272
	180	4,3-5,5	3,2	20	36	36	ATB	8°	15°	-	LI25M43XA3	F03FS06372
LNA (100), LN (120)	450	4,4	3,2	60	72	72	TCG	15°	15°	2/14/125	LSB45008X	F03FS09182
	180	4,3-5,5	3,2	20	36	36	ATB	8°	15°	-	LI25M43XA3	F03FS06372
PORTA 150	500	4,8	3,5	60	60	60	TCG	15°	15°	2/11/115	LSB50009X	F03FS09189
	180	4,3-5,5	3,2	20	36	36	ATB	8°	15°	-	LI25M43XA3	F03FS06372
<b>AYZA MIZRAK</b>												
LANZA P3	Main blade	320	4,4	3,2	65	60	TCG	15°	15°	2/9/110	LSB32003X	F03FS09161
	Main blade	320	4,4	3,2	65	72	TCG	15°	15°	2/9/95 + 2/9/110	LSB32001X	F03FS07805
	HW Scorer	200	4,3-5,5	3,2	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M43PI3	F03FS02681
	Main blade	360	4,4	3,2	65	60	TCG	15°	15°	2/9/110	LSB36001X	F03FS10227
	Main blade	360	4,4	3,2	65	72	TCG	15°	15°	2/9/95 + 2/9/110	LSB36002X	F03FS07673
	HW Scorer	200	4,3-5,5	3,2	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M43PI3	F03FS02681
LANZA P4	Main blade	380	4,4	3,2	65	72	TCG	15°	15°	2/9/110	LSB38014X	F03FS09166
	HW Scorer	200	4,3-5,5	3,2	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M43PI3	F03FS02681
LANZA P5	Main blade	400	4,4	3,2	65	72	TCG	15°	15°	2/9/110	LSB40016X	F03FS09172
	HW Scorer	200	4,3-5,5	3,2	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M43PI3	F03FS02681
LANZA P5 CARRERA	Main blade	400	4,4	3,2	65	72	TCG	15°	15°	2/9/110	LSB40016X	F03FS09172
	HW Scorer	200	4,3-5,5	3,2	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M43PI3	F03FS02681
<b>FELDER MAYER</b>												
KAPPA AUTOMATIC 80	Main blade	320	4,4	3,2	30	60	TCG	15°	15°	2/10/60	LSB32005X	F03FS09160
	Main blade	320	4,4	3,2	30	72	TCG	15°	15°	2/10/60 + 2/13/94	LSB32009X	F03FS10296
	HW Scorer	150	4,3-5,6	3,2	30	36	ATB	8°	15°	-	LI25M43KC3	F03FS02649
KAPPA AUTOMATIC 80 EDITION	Main blade	320	4,4	3,2	30	60	TCG	15°	15°	2/10/60	LSB32005X	F03FS09160
	HW Scorer	150	4,3-5,6	3,2	30	36	ATB	8°	15°	-	LI25M43KC3	F03FS02649
KAPPA AUTOMATIC CLASSIC	Main blade	320	4,4	3,2	30	60	TCG	15°	15°	2/10/60	LSB32005X	F03FS09160
	HW Scorer	150	4,3-5,6	3,2	30	36	ATB	8°	15°	-	LI25M43KC3	F03FS02649
PS80	Main blade	320	4,4	3,2	30	60	TCG	15°	15°	2/10/60	LSB32005X	F03FS09160
	HW Scorer	150	4,3-5,6	3,2	30	36	ATB	8°	15°	-	LI25M43KC3	F03FS02649
KAPPA AUTOMATIC 100	Main blade	355	4,4	3,2	30	72	TCG	15°	15°	2/10/60	LSB35504X	F03FS07674
	HW Scorer	150	4,3-5,6	3,2	30	36	ATB	8°	15°	-	LI25M43KC3	F03FS02649
PS80 PREMIUM	Main blade	355	4,4	3,2	30	72	TCG	15°	15°	2/10/60	LSB35504X	F03FS07674
	HW Scorer	150	4,3-5,6	3,2	30	36	ATB	8°	15°	-	LI25M43KC3	F03FS02649
KAPPA AUTOMATIC 120	Main blade	400	4,4	3,2	30	48	TCG	15°	15°	2/10/60	LSB40001X	F03FS09168
	Main blade	400	4,4	3,2	30	60	TCG	15°	15°	2/10/60	LSB40004X	F03FS09169
	Main blade	400	4,4	3,2	30	72	TCG	15°	15°	2/10/60 + 2/13/94	LSB40007X	F03FS07725
	HW Scorer	150	4,3-5,6	3,2	30	36	ATB	8°	15°	-	LI25M43KC3	F03FS02649
PS100	Main blade	400	4,4	3,2	30	48	TCG	15°	15°	2/10/60	LSB40001X	F03FS09168
	Main blade	400	4,4	3,2	30	60	TCG	15°	15°	2/10/60	LSB40004X	F03FS09169
	Main blade	400	4,4	3,2	30	72	TCG	15°	15°	2/10/60 + 2/13/94	LSB40007X	F03FS07725
	HW Scorer	150	4,3-5,6	3,2	30	36	ATB	8°	15°	-	LI25M43KC3	F03FS02649
PS2 Z	Main blade	450	4,4	3,2	30	72	TCG	15°	15°	2/10/60 + 2/14/95	LSB45007X	F03FS09181
	HW Scorer	150	4,3-5,6	3,2	30	36	ATB	8°	15°	-	LI25M43KC3	F03FS02649
KAPPA AUTOMATIC 140	Main blade	450	4,4	3,2	30	72	TCG	15°	15°	2/10/60 + 2/14/95	LSB45007X	F03FS09181
	HW Scorer	150	4,3-5,6	3,2	30	36	ATB	8°	15°	-	LI25M43KC3	F03FS02649

\* Tool type: Main saw blade, Scoring saw blade, Polycrystalline Diamond scorer and Postforming scorer.

## Reference table of saw blades for panel sizing machines

Machine type	Tool type *	D	B-B1	b	d	Z	Tooth type	$\alpha$	$\beta$	NL	Freud Code	Art. No.
		mm	mm	mm	mm							
<b>FIMAL</b>												
<b>CONCEPT 350</b>	Main blade	350	4,4	3,2	30	72	TCG	15°	15°	2/10/60	LSB35003X	F03FS07630
	Main blade	300	4,4	3,0	30	60	TCG	15°	15°	2/10/60	LSB30001X	F03FS07802
<b>KR32</b>	Main blade	350	4,4	3,2	30	72	TCG	15°	15°	2/10/60	LSB35003X	F03FS07630
<b>KR43</b>	Main blade	350	4,4	3,2	30	72	TCG	15°	15°	2/10/60	LSB35003X	F03FS07630
<b>GIBEN</b>												
<b>MK, GAMMA, N, ST, SE, TREND</b>	Main blade	355	4,4	3,2	75	72	TCG	15°	15°	4/15/105 + 2/7/110	LSB35505X	F03FS07633
	HW Scorer	125	4,3-5,5	3,2	45	24	ATB	0°	15°	-	LI25M43FE3	F03FS02645
<b>SMART SP105, ICON 105</b>	Main blade	380	4,4	3,2	50	72	TCG	15°	15°	4/13/80	LSB38008X	F03FS09165
	HW Scorer	250	4,3-5,5	3,2	50	48	ATB	8°	15°	3/13/80	LI25M430F3	F03FS02669
<b>G 2000 STARMATIC</b>	Main blade	400	4,4	3,2	75	72	TCG	15°	15°	4/15/105 + 2/7/110 + 2/14/100	LSB40008X	F03FS07726
	Main blade	400	4,4	3,2	75	84	TCG	15°	15°	4/15/105 + 2/7/110	LSB40019X	F03FS08990
	HW Scorer	125	4,5-5,7	3,0	45	24	ATB	0°	15°	-	LI25M45FE3	F03FS02699
<b>PRISMATIC 101</b>	Main blade	400	4,4	3,2	75	72	TCG	15°	15°	4/15/105 + 2/7/110 + 2/14/100	LSB40008X	F03FS07726
	HW Scorer	160	4,3-5,5	3,2	45	36	ATB	8°	15°	3/11/70	LI25M43LE3	F03FS02655
<b>PRISMATIC 201</b>	Main blade	400	4,4	3,2	75	72	TCG	15°	15°	4/15/105 + 2/7/110 + 2/14/100	LSB40008X	F03FS07726
	Main blade	430	4,4	3,2	75	72	TCG	15°	15°	4/15/105 + 2/7/110	LSB43008X	F03FS07908
	HW Scorer	215	4,3-5,5	3,2	50	42	ATB	8°	15°	2/7/80 + 3/15/80	LI25M430F3	F03FS02685
	HW Scorer	300	4,3-5,5	3,5	50	48	ATB	12°	15°	3/15/80	LI25M43RM3	F03FS02693
	DP Scorer	215	4,3-5,1	3,2	50	42	FLAT	6°	14°	2/7/80 + 3/15/80	DLI25M43QFH4	F03FS09633
	DP Scorer	215	4,3-5,1	3,2	50	42	FLAT	6°	14°	2/7/80 + 3/15/80	DLI25M43QFH6	F03FS09634
<b>PRISMATIC 2, 3</b>	Postf. Scorer	300	4,55	3,2	50	72	ATB	15°	15°	3/15/80	LI27M DD3	F03FS02743
	Main blade	470	4,4	3,2	75	96	TCG	15°	15°	4/15/105	LSB47004X	F03FS09184
	HW Scorer	215	4,3-5,5	3,2	50	42	ATB	8°	15°	2/7/80 + 3/15/80	LI25M430F3	F03FS02685
	HW Scorer	215	4,5-5,7	3,2	50	42	ATB	8°	15°	3/15/80	LI25M45PF3	F03FS02713
	HW Scorer	300	4,3-5,5	3,5	50	48	ATB	12°	15°	3/15/80	LI25M43RM3	F03FS02693
	DP Scorer	215	4,3-5,1	3,2	50	42	FLAT	6°	14°	2/7/80 + 3/15/80	DLI25M43QFH4	F03FS09633
<b>ICONFAST LM D-816</b>	DP Scorer	215	4,3-5,1	3,2	50	42	FLAT	6°	14°	2/7/80 + 3/15/80	DLI25M43QFH6	F03FS09634
	Postf. Scorer	300	4,55	3,2	50	72	ATB	15°	15°	3/15/80	LI27M DD3	F03FS02743
	Main blade	530	4,8	3,5	75	72	TCG	15°	15°	2/7/110	LSB53004X	F03FS09651
	HW Scorer	215	4,7-5,9	3,5	50	42	ATB	8°	15°	2/7/80	LI25M47QF3	F03FS09650
<b>HOLZHER</b>												
<b>CUT 85, 82</b>	Main blade	350	4,4	3,2	30	72	TCG	15°	15°	2/10/60	LSB35003X	F03FS07630
	HW Scorer	180	4,3-5,5	3,2	30	28	ATB	8°	15°	2/7/42 + 2/10/60	LI25M43NC3	F03FS02663
	HW Scorer	180	4,3-5,5	3,2	30	36	ATB	8°	15°	2/7/42 + 2/10/60	LI25M43XN3	F03FS06373
	Postf. scorer	250	4,60	3,0	30	48	ATB	15°	15°	-	LI27M BA3	F03FS02734
<b>TECTRA 6120 CLASSIC</b>	Main blade	350	4,4	3,2	30	72	TCG	15°	15°	2/10/60	LSB35003X	F03FS07630
	HW Scorer	180	4,3-5,5	3,2	30	36	ATB	8°	15°	2/7/42 + 2/10/60	LI25M43XN3	F03FS06373
<b>CUT 110</b>	Main blade	400	4,4	3,2	30	72	TCG	15°	15°	2/10/60 + 2/13/94	LSB40007X	F03FS07725
	HW Scorer	250	4,3-5,5	3,2	30	48	CON	8°	15°	2/10/60	LI25M430C3	F03FS02668
	Postf. scorer	250	4,60	3,0	30	48	ATB	15°	15°	-	LI27M BA3	F03FS02734
<b>ZENTREX 6220 (POWER, LIFT, DYNAMIC)</b>	Main blade	430	4,4	3,2	30	72	TCG	15°	15°	2/13/94	LSB43007X	F03FS09177
	HW Scorer	180	4,3-5,5	3,2	30	36	ATB	8°	15°	2/7/42 + 2/10/60	LI25M43XN3	F03FS06373
<b>HOLZMA</b>												
<b>HPP130</b>	Main blade	300	4,4	3,2	60	72	TCG	15°	15°	2/14/100	LSB30012X	F03FS09207
	DP Scorer	180	4,3-5,1	3,2	45	30	FLAT	6°	14°	-	DLI25M43NEH4	F03FS09621
	DP Scorer	180	4,3-5,1	3,2	45	30	FLAT	6°	14°	-	DLI25M43NEH6	F03FS09622
	HW Scorer	180	4,3-5,5	3,2	45	36	CON	8°	15°	-	LI25M43NE3	F03FS02664

\* Tool type: Main saw blade, Scoring saw blade, Polycrystalline Diamond scorer and Postforming scorer.

## Reference table of saw blades for panel sizing machines

Machine type	Tool type *	D	B-B1	b	d	Z	Tooth type	α	β	NL	Freud Code	Art. No.
		mm	mm	mm	mm							
HPP230, 250 (before 06/2014)	Main blade	300	4,4	3,2	60	72	TCG	15°	15°	2/14/100	LSB30012X	F03FS09207
	Main blade	350	4,4	3,2	60	72	TCG	15°	15°	2/14/100	LSB35004X	F03FS07636
	HW Scorer	200	4,3-5,5	3,2	45	36	ATB	8°	15°	-	LI25M43PE3	F03FS02676
	HW Scorer	180	4,3-5,5	3,2	45	36	ATB	8°	15°	-	LI25M43NE3	F03FS02664
	DP Scorer	180	4,3-5,1	3,2	45	30	FLAT	6°	14°	-	DLI25M43NEH4	F03FS09621
	DP Scorer	180	4,3-5,1	3,2	45	30	FLAT	6°	14°	-	DLI25M43NEH6	F03FS09622
SAWTEQ B-200	Main blade	310	4,4	3,2	60	72	TCG	15°	15°	2/14/100	LSB31001X	F03FS09949
	HW Scorer	200	4,3-5,5	3,2	45	36	ATB	8°	15°	-	LI25M43PE3	F03FS02676
HPP350	Main blade	350	4,4	3,2	75	72	TCG	15°	15°	-	LSB35008X	F03FS07634
	HW Scorer	180	4,3-5,5	3,2	45	36	ATB	8°	15°	-	LI25M43NE3	F03FS02664
	DP Scorer	180	4,3-5,1	3,2	45	30	FLAT	6°	14°	-	DLI25M43NEH4	F03FS09621
	DP Scorer	180	4,3-5,1	3,2	45	30	FLAT	6°	14°	-	DLI25M43NEH6	F03FS09622
	DP Scorer	180	4,3-5,1	3,2	45	30	FLAT	6°	14°	-	DLI25M43NEH6	F03FS09622
HPP180	Main blade	380	4,4	3,2	60	72	TCG	15°	15°	2/14/100	LSB38002X	F03FS07631
	HW Scorer	180	4,3-5,5	3,2	45	36	ATB	8°	15°	-	LI25M43NE3	F03FS02664
	DP Scorer	180	4,3-5,1	3,2	45	30	FLAT	6°	14°	-	DLI25M43NEH4	F03FS09621
	DP Scorer	180	4,3-5,1	3,2	45	30	FLAT	6°	14°	-	DLI25M43NEH6	F03FS09622
HPP380, 82	Main blade	380	4,4	3,2	60	72	TCG	15°	15°	2/14/100	LSB38002X	F03FS07631
	Main blade	380	4,8	3,5	60	72	TCG	15°	15°	2/14/100	LSB38004X	F03FS07632
	Main blade	380	4,8	3,5	60	84	TCG	15°	15°	2/14/100	LSB38005X	F03FS07807
	HW Scorer	180	4,3-5,5	3,2	45	36	ATB	8°	15°	-	LI25M43NE3	F03FS02664
	HW Scorer	180	4,7-5,9	3,5	45	36	ATB	8°	15°	-	LI25M47NE3	F03FS02715
	DP Scorer	180	4,3-5,1	3,2	45	30	FLAT	6°	14°	-	DLI25M43NEH4	F03FS09621
	DP Scorer	180	4,3-5,1	3,2	45	30	FLAT	6°	14°	-	DLI25M43NEH6	F03FS09622
	DP Scorer	180	4,7-5,5	3,5	45	30	FLAT	6°	14°	-	DLI25M47NEH4	F03FS09623
	DP Scorer	180	4,7-5,5	3,5	45	30	FLAT	6°	14°	-	DLI25M47NEH6	F03FS09624
	Postf. scorer	280	5,0	3,5	45	84	ATB	15°	15°	-	LI27M CA3	F03FS02736
HPL410	Main blade	420	4,8	3,5	60	60	TCG	15°	15°	2/14/125	LSB42001X	F03FS10234
	Main blade	420	4,8	3,5	60	84	TCG	15°	15°	2/14/100 + 2/14/125	LSB42002X	F03FS09176
	HW Scorer	180	4,7-5,9	3,5	45	36	ATB	8°	15°	-	LI25M47NE3	F03FS02715
	DP Scorer	180	4,7-5,5	3,5	45	30	FLAT	6°	14°	-	DLI25M47NEH4	F03FS09623
	DP Scorer	180	4,7-5,5	3,5	45	30	FLAT	6°	14°	-	DLI25M47NEH6	F03FS09624
	Postf. scorer	340	5,0	3,5	45	108	ATB	15°	15°	3/14/65	LI27M EB3	F03FS02747
HPP430, 510, 11	Main blade	450	4,8	3,5	60	72	TCG	15°	15°	2/14/125 + 2/17/100	LSB45017X	F03FS07391
	HW Scorer	180	4,7-5,9	3,5	45	36	ATB	8°	15°	-	LI25M47NE3	F03FS02715
	DP Scorer	180	4,7-5,5	3,5	45	30	FLAT	6°	14°	-	DLI25M47NEH4	F03FS09623
	DP Scorer	180	4,7-5,5	3,5	45	30	FLAT	6°	14°	-	DLI25M47NEH6	F03FS09624
	Postf. scorer	340	5,0	3,5	45	108	ATB	15°	15°	3/14/65	LI27M EB3	F03FS02747
22	Main blade	500	4,8	3,5	60	72	TCG	15°	15°	2/11/115	LSB50011X	F03FS09191
	HW Scorer	200	4,7-5,9	3,5	45	36	ATB	8°	15°	-	LI25M47PE3	F03FS02719
	DP Scorer	200	4,7-5,5	3,5	45	36	FLAT	6°	14°	-	DLI25M47PEH4	F03FS09629
	DP Scorer	200	4,7-5,5	3,5	45	36	FLAT	6°	14°	-	DLI25M47PEH6	F03FS09630
	Postf. scorer	340	5,0	3,5	45	108	ATB	15°	15°	3/14/65	LI27M EB3	F03FS02747
HPL550	Main blade	520	4,8	3,5	60	72	TCG	15°	15°	2/11/115 + 2/19/120	LSB52003X	F03FS09192
	HW Scorer	200	4,7-5,9	3,5	45	36	ATB	8°	15°	-	LI25M47PE3	F03FS02719
	DP Scorer	200	4,7-5,5	3,5	45	36	FLAT	6°	14°	-	DLI25M47PEH4	F03FS09629
	DP Scorer	200	4,7-5,5	3,5	45	36	FLAT	6°	14°	-	DLI25M47PEH6	F03FS09630
	Postf. scorer	340	5,0	3,5	45	108	ATB	15°	15°	3/14/65	LI27M EB3	F03FS02747
HPL570	Main blade	570	4,8	3,5	60	60	TCG	15°	15°	2/11/115 + 2/19/120	LSB57001X	F03FS09199
	HW Scorer	200	4,7-5,9	3,5	45	36	ATB	8°	15°	-	LI25M47PE3	F03FS02719
	DP Scorer	200	4,7-5,5	3,5	45	36	FLAT	6°	14°	-	DLI25M47PEH4	F03FS09629
	DP Scorer	200	4,7-5,5	3,5	45	36	FLAT	6°	14°	-	DLI25M47PEH6	F03FS09630
	Postf. scorer	340	5,0	3,5	45	108	ATB	15°	15°	3/14/65	LI27M EB3	F03FS02747

\* Tool type: Main saw blade, Scoring saw blade, Polycrystalline Diamond scorer and Postforming scorer.

## Reference table of saw blades for panel sizing machines

Machine type	Tool type *	D	B-B1	b	d	Z	Tooth type	$\alpha$	$\beta$	NL	Freud Code	Art. No.
		mm	mm	mm	mm							
<b>HPP42, 33</b>	Main blade	600	5,8	4,0	60	60	TCG	15°	15°	2/11/115 + 2/19/120	LSB60001X	F03FS09200
	Main blade	600	5,8	4,0	60	72	TCG	15°	15°	2/11/115 + 2/19/120	LSB60002X	F03FS09201
	HW Scorer	200	5,7-6,9	4,0	45	36	ATB	8°	15°	-	LI25M57PE3	F03FS02728
<b>HOMAG</b>												
<b>CH 3</b>	Main blade	300	4,4	3,0	75	60	TCG	15°	15°	-	LSB30003X	F03FS03916
	HW Scorer	125	4,3-5,5	3,2	45	24	ATB	0°	15°	-	LI25M43FE3	F03FS02645
<b>CH 3</b>	Main blade	300	4,4	3,0	75	60	TCG	15°	15°	-	LSB30003X	F03FS03916
	HW Scorer	125	4,3-5,5	3,2	45	24	ATB	0°	15°	-	LI25M43FE3	F03FS02645
<b>CT 04/40</b>	Main blade	300	4,4	3,0	75	60	TCG	15°	15°	-	LSB30003X	F03FS03916
	HW Scorer	150	4,3-5,6	3,2	45	36	ATB	8°	15°	-	LI25M43KE3	F03FS02651
<b>CV'S</b>	Main blade	300	4,4	3,0	75	60	TCG	15°	15°	-	LSB30003X	F03FS10218
	HW Scorer	125	4,3-5,5	3,2	45	24	ATB	0°	15°	-	LI25M43FE3	F03FS02645
<b>CH 04</b>	Main blade	355	4,4	3,2	75	72	TCG	15°	15°	3/7/100	LSB35507X	F03FS07710
	HW Scorer	180	4,3-5,5	3,2	45	36	ATB	8°	15°	-	LI25M43NE3	F03FS02664
	DP Scorer	180	4,3-5,1	3,2	45	30	FLAT	6°	14°	-	DLI25M43NEH4	F03FS09621
	DP Scorer	180	4,3-5,1	3,2	45	30	FLAT	6°	14°	-	DLI25M43NEH6	F03FS09622
<b>CH 08/12</b>	Main blade	400	4,4	3,2	75	72	TCG	15°	15°	4/15/105 + 2/7/110 + 2/14/100	LSB40008X	F03FS07726
	HW Scorer	150	4,3-5,6	3,2	45	36	ATB	8°	15°	-	LI25M43KE3	F03FS02651
<b>NANXING</b>												
<b>NPC330</b>	Main blade	380	4,4	3,2	60	72	TCG	15°	15°	2/14/100	LSB38002X	F03FS07631
	Main blade	350	4,4	3,2	60	72	TCG	15°	15°	2/14/100	LSB35004X	F03FS07636
	HW Scorer	200	4,3-5,5	3,2	45	36	ATB	8°	15°	-	LI25M43PE3	F03FS02676
<b>MJB1327B</b>	Main blade	450	4,8	3,5	60	72	TCG	15°	15°	2/14/125 + 2/17/100	LSB45017X	F03FS09272
	Main blade	400	4,4	3,2	60	84	TCG	15°	15°	2/14/100	LSB40021X	F03FS09255
	HW Scorer	180	4,3-5,5	3,2	30	36	ATB	8°	15°	2/7/42 + 2/10/60	LI25M43XN3	F03FS06373
<b>NP280FG NP280F</b>	Main blade	450	4,8	3,5	60	72	TCG	15°	15°	2/14/125 + 2/17/100	LSB45017X	F03FS09272
	Main blade	400	4,4	3,2	60	84	TCG	15°	15°	2/14/100	LSB40021X	F03FS09255
	Main blade	350	4,4	3,2	60	72	TCG	15°	15°	2/14/100	LSB35004X	F03FS07636
	HW Scorer	180	4,3-5,5	3,2	30	36	ATB	8°	15°	2/7/42 + 2/10/60	LI25M43XN3	F03FS06373
	Main blade	450	4,8	3,5	60	72	TCG	15°	15°	2/14/125 + 2/17/100	LSB45017X	F03FS07391
<b>NPL330HG NP330H NP330HG</b>	HW Scorer	180	4,7-5,9	3,5	45	36	ATB	8°	15°	-	LI25M47NE3	F03FS02715
	DP Scorer	180	4,7-5,5	3,5	45	30	FLAT	6°	14°	-	DLI25M47NEH4	F03FS09623
	DP Scorer	180	4,7-5,5	3,5	45	30	FLAT	6°	14°	-	DLI25M47NEH6	F03FS09624
<b>NP380FG NP330FG NP330F</b>	Main blade	450	4,8	3,5	60	72	TCG	15°	15°	2/14/125 + 2/17/100	LSB45017X	F03FS09272
	Main blade	400	4,4	3,2	60	84	TCG	15°	15°	2/14/100	LSB40021X	F03FS09255
	HW Scorer	180	4,7-5,9	3,5	45	36	ATB	8°	15°	-	LI25M47NE3	F03FS02715
	DP Scorer	180	4,7-5,5	3,5	45	30	FLAT	6°	14°	-	DLI25M47NEH4	F03FS09623
	DP Scorer	180	4,7-5,5	3,5	45	30	FLAT	6°	14°	-	DLI25M47NEH6	F03FS09624
<b>NZH3318 NPD380</b>	Main blade	450	4,8	3,5	60	72	TCG	15°	15°	2/14/125 + 2/17/100	LSB45017X	F03FS07391
	HW Scorer	180	4,7-5,9	3,5	45	36	ATB	8°	15°	-	LI25M47NE3	F03FS02715
	DP Scorer	180	4,7-5,5	3,5	45	30	FLAT	6°	14°	-	DLI25M47NEH4	F03FS09623
	DP Scorer	180	4,7-5,5	3,5	45	30	FLAT	6°	14°	-	DLI25M47NEH6	F03FS09624
<b>NIMAC</b>												
<b>HERMES 70 CNC</b>	Main blade	300	4,4	3,0	65	72	TCG	15°	15°	2/9/95 + 2/9/110	LSB30006X	F03FS09158
	Main blade	320	4,4	3,2	65	72	TCG	15°	15°	2/9/95 + 2/9/110	LSB32001X	F03FS07805
<b>ATLAS 80</b>	Main blade	320	4,4	3,2	65	72	TCG	15°	15°	2/9/95 + 2/9/110	LSB32001X	F03FS07805
<b>ATLAS 100/100TL</b>	Main blade	355	4,4	3,2	65	72	TCG	15°	15°	2/9/95 + 2/9/110	LSB35508X	F03FS08740
	Main blade	360	4,4	3,2	65	72	TCG	15°	15°	2/9/95 + 2/9/110	LSB36002X	F03FS07673
<b>PANHANS</b>												
<b>EURO 10 SF</b>	Main blade	300	4,4	3,0	30	60	TCG	15°	15°	2/10/60	LSB30001X	F03FS07802
	HW Scorer	250	4,3-5,5	3,2	30	48	CON	8°	15°	2/10/60	LI25M430C3	F03FS02668
	Postf. scorer	250	4,6	3,0	30	48	ATB	15°	15°	-	LI27M BA3	F03FS02734

\* Tool type: Main saw blade, Scoring saw blade, Polycrystalline Diamond scorer and Postforming scorer.



## Reference table of saw blades for panel sizing machines

Machine type	Tool type *	D	B-B1	b	d	Z	Tooth type	α	β	NL	Freud Code	Art. No.
		mm	mm	mm	mm							
<b>EURO 5 (SF, COMPACT, ECOPAN)</b>	Main blade	300	4,4	3,0	30	60	TCG	15°	15°	2/10/60	LSB30001X	F03FS07802
	HW Scorer	125	4,3-5,5	3,2	20	24	CON	0°	15°	-	LI25M43FA3	F03FS02643
<b>EURO10, 693/SH 70</b>	Main blade	300	4,4	3,0	30	60	TCG	15°	15°	2/10/60	LSB30001X	F03FS07802
	HW Scorer	125	4,3-5,5	3,2	20	24	CON	0°	15°	-	LI25M43FA3	F03FS02643
	HW Scorer	180	4,3-5,5	3,2	30	28	CON	8°	15°	2/7/42 + 2/10/60	LI25M43NC3	F03FS02663
<b>S 45</b>	Main blade	300	4,4	3,0	30	60	TCG	15°	15°	2/10/60	LSB30001X	F03FS07802
	Main blade	350	4,4	3,2	30	72	TCG	15°	15°	2/10/60	LSB35003X	F03FS07630
	HW Scorer	180	4,3-5,5	3,2	30	28	CON	8°	15°	2/7/42 + 2/10/60	LI25M43NC3	F03FS02663
<b>EURO 12, 30</b>	Main blade	350	4,4	3,2	30	72	TCG	15°	15°	2/10/60	LSB35003X	F03FS07630
	HW Scorer	180	4,3-5,5	3,2	30	28	CON	8°	15°	2/7/42 + 2/10/60	LI25M43NC3	F03FS02663
<b>EURO 12 SF</b>	Main blade	350	4,4	3,2	30	72	TCG	15°	15°	2/10/60	LSB35003X	F03FS07630
	HW Scorer	280	4,3-5,5	3,2	30	48	CON	12°	15°	2/10/60	LI25M43VC3	F03FS07419
<b>POLYPAN 47</b>	Main blade	350	4,4	3,2	30	72	TCG	15°	15°	2/10/60	LSB35003X	F03FS07630
	HW Scorer	180	4,3-5,5	3,2	30	28	CON	8°	15°	2/7/42 + 2/10/60	LI25M43NC3	F03FS02663
	Postf. scorer	300	4,55	3,0	30	72	ATB	15°	15°	-	LI27M DF3	F03FS02745
<b>EUROSTAR 2 XL, POLYSTAR</b>	Main blade	370	4,4	3,2	30	72	TCG	15°	15°	2/10/60	LSC37001	F03FS06312
	HW Scorer	180	4,3-5,5	3,2	30	28	CON	8°	15°	2/7/42 + 2/10/60	LI25M43NC3	F03FS02663
	HW Scorer	280	4,3-5,5	3,2	30	48	CON	6°	15°	2/10/60	LI25M43VC3	F03FS07419
<b>EURO 32</b>	Main blade	370	4,4	3,2	30	72	TCG	15°	15°	2/10/60	LSB37001X	F03FS10228
	HW Scorer	180	4,3-5,5	3,2	30	28	CON	8°	15°	2/7/42 + 2/10/60	LI25M43NC3	F03FS02663
<b>693/SH 110</b>	Main blade	400	4,4	3,2	30	72	TCG	15°	15°	2/10/60 + 2/13/94	LSB40007X	F03FS07725
	HW Scorer	180	4,3-5,5	3,2	30	28	CON	8°	15°	2/7/42 + 2/10/60	LI25M43NC3	F03FS02663
	Main blade	400	4,4	3,2	30	72	TCG	15°	15°	2/10/60 + 2/13/94	LSB40007X	F03FS07725
<b>EUROSTAR 2 XXL</b>	HW Scorer	180	4,3-5,5	3,2	30	28	CON	8°	15°	2/7/42 + 2/10/60	LI25M43NC3	F03FS02663
	HW Scorer	280	4,3-5,5	3,2	30	48	CON	6°	15°	2/10/60	LI25M43VC3	F03FS07419
<b>SCHEER KOCH</b>												
<b>PA 6000, 5500</b>	Main blade	350	4,4	3,2	30	72	TCG	15°	15°	2/10/60	LSB35003X	F03FS07630
	HW Scorer	200	4,3-5,5	3,2	20	36	ATB	8°	15°	2/11/66 + 2/10/60 + 2/9/62	LI25M43PA3	F03FS02670
	HW Scorer	200	4,3-5,5	3,2	30	36	ATB	8°	15°	2/9/60 + 2/10/60	LI25M43PC3	F03FS02674
<b>SCHELLING</b>												
<b>FH3</b>	Main blade	300	4,4	3,0	30	72	TCG	15°	15°	2/10/60	LSB30005X	F03FS07803
	Main blade	350	4,4	3,2	30	72	TCG	15°	15°	2/10/60	LSB35003X	F03FS07630
	HW Scorer	180	4,3-5,5	3,2	30	36	ATB	8°	15°	2/7/42 + 2/10/60	LI25M43XN3	F03FS06373
<b>FH4 (till 06/2015)</b>	Main blade	350	4,4	3,2	30	72	TCG	15°	15°	2/10/60	LSB35003X	F03FS07630
	HW Scorer	300	4,3-5,5	3,2	30	48	ATB	12°	15°	2/11/73 + 2/11/75 + 2/13/94	LI25M43RC3	F03FS07577
<b>S45</b>	Main blade	350	4,4	3,2	30	72	TCG	15°	15°	2/10/60	LSB35003X	F03FS07630
	Main blade	400	4,4	3,2	30	72	TCG	15°	15°	2/10/60 + 2/13/94	LSB40007X	F03FS07725
	HW Scorer	180	4,3-5,5	3,2	30	36	ATB	8°	15°	2/7/42 + 2/10/60	LI25M43XN3	F03FS06373
<b>SCHELLING FH4 (from 07/2015 till 07/2017)</b>	HW Scorer	300	4,3-5,5	3,2	30	48	ATB	12°	15°	2/11/73 + 2/11/75 + 2/13/94	LI25M43RC3	F03FS07577
	Main blade	360	4,4	3,2	30	72	TCG	15°	15°	2/13/94	LSB36003X	F03FS09341
	HW Scorer	200	4,3-5,5	3,2	20	36	ATB	8°	15°	2/11/66 + 2/10/60 + 2/9/62	LI25M43PA3	F03FS02670
<b>FH4 (from 07/2017)</b>	Main blade	360	4,4	3,2	30	72	TCG	15°	15°	2/13/94	LSB36003X	F03FS09341
	HW Scorer	300	4,3-5,5	3,2	30	48	ATB	12°	15°	2/11/73 + 2/11/75 + 2/13/94	LI25M43RC3	F03FS07577
<b>FH5 (from 07/2015)</b>	Main blade	400	4,4	3,2	30	72	TCG	15°	15°	2/10/60 + 2/13/94	LSB40007X	F03FS07725
	HW Scorer	300	4,3-5,5	3,2	30	48	ATB	12°	15°	2/11/73 + 2/11/75 + 2/13/94	LI25M43RC3	F03FS07577
<b>FH5 (from 07/2015)</b>	Main blade	400	4,4	3,2	30	72	TCG	15°	15°	2/10/60 + 2/13/94	LSB40007X	F03FS07725
	HW Scorer	300	4,3-5,5	3,2	30	48	ATB	12°	15°	2/11/73 + 2/11/75 + 2/13/94	LI25M43RC3	F03FS07577
<b>FH5</b>	Main blade	400	4,4	3,2	30	72	TCG	15°	15°	2/10/60 + 2/13/94	LSB40007X	F03FS07725
	HW Scorer	200	4,3-5,5	3,2	20	36	ATB	8°	15°	2/11/66 + 2/10/60 + 2/9/62	LI25M43PA3	F03FS02670
<b>FK4 (from 07/2015)</b>	Main blade	400	4,4	3,2	30	72	TCG	15°	15°	2/10/60 + 2/13/94	LSB40007X	F03FS07725
	HW Scorer	200	4,3-5,5	3,2	20	36	ATB	8°	15°	2/11/66 + 2/10/60 + 2/9/62	LI25M43PA3	F03FS02670
<b>FK4 (from 07/2017)</b>	Main blade	400	4,4	3,2	30	72	TCG	15°	15°	2/10/60 + 2/13/94	LSB40007X	F03FS07725
	HW Scorer	300	4,3-5,5	3,2	30	48	ATB	12°	15°	2/11/73 + 2/11/75 + 2/13/94	LI25M43RC3	F03FS07577

\* Tool type: Main saw blade, Scoring saw blade, Polycrystalline Diamond scorer and Postforming scorer.

## Reference table of saw blades for panel sizing machines

Machine type	Tool type *	D	B-B1	b	d	Z	Tooth type	α	β	NL	Freud Code	Art. No.
		mm	mm	mm	mm							
<b>FH6, AH6, CH6</b> (till 06/2015)	Main blade	460	4,4	3,2	30	72	TCG	15°	15°	2/13/94	LSB46001X	F03FS08922
	HW Scorer	200	4,3-5,5	3,2	20	36	ATB	8°	15°	2/11/66 + 2/10/60 + 2/9/62	LI25M43PA3	F03FS02670
<b>FK6, FP6, FM6</b>	Main blade	460	4,4	3,2	30	72	TCG	15°	15°	2/13/94	LSB46001X	F03FS08922
	HW Scorer	200	4,3-5,5	3,2	20	36	ATB	8°	15°	2/11/66 + 2/10/60 + 2/9/62	LI25M43PA3	F03FS02670
<b>FH6, AH6, CH6</b> (starting from 07/2015)	Main blade	480	4,8	3,5	30	72	TCG	15°	15°	2/10/60 + 2/13/94	LSB48004X	F03FS09187
	HW Scorer	220	4,7-5,9	3,5	20	36	ATB	8°	15°	2/9/62	LI25M47UA3	F03FS09266
	HW Scorer	200	4,7-5,9	3,5	20	36	ATB	8°	15°	2/11/66	LI25M47PA3	F03FS02716
<b>FL</b>	Main blade	480	4,4	3,2	30	72	TCG	15°	15°	2/10/60 + 2/13/94	LSB48007X	F03FS09914
	HW Scorer	200	4,3-5,5	3,2	20	36	ATB	8°	15°	2/11/66 + 2/10/60 + 2/9/62	LI25M43PA3	F03FS02670
<b>FH8, AH8, CH8</b>	Main blade	520	4,8	3,5	30	72	TCG	15°	15°	2/13/94	LSB52007X	F03FS09319
	Main blade	520	4,4	3,2	30	72	TCG	15°	15°	2/13/94	LSB52008X	F03FS09319
	HW Scorer	200	4,3-5,5	3,2	20	36	ATB	8°	15°	2/11/66 + 2/10/60 + 2/9/62	LI25M43PA3	F03FS02670
	HW Scorer	220	4,7-5,9	3,5	20	36	ATB	8°	15°	2/9/62	LI25M47UA3	F03FS09266
	HW Scorer	200	4,7-5,9	3,5	20	36	ATB	8°	15°	2/11/66	LI25M47PA3	F03FS02716
	HW Scorer	200	4,7-5,9	3,5	20	36	ATB	8°	15°	2/11/66	LI25M47PA3	F03FS02716
<b>FK8, FM8</b>	Main blade	520	4,8	3,5	30	72	TCG	15°	15°	2/13/94	LSB52007X	F03FS09319
	HW Scorer	200	4,7-5,9	3,5	20	36	ATB	8°	15°	2/11/66	LI25M47PA3	F03FS02716
	Main blade	520	4,4	3,2	30	72	TCG	15°	15°	2/13/94	LSB52008X	F03FS09319
	HW Scorer	200	4,3-5,5	3,2	20	36	ATB	8°	15°	2/11/66 + 2/10/60 + 2/9/62	LI25M43PA3	F03FS02670
<b>FK10, FM10</b>	Main blade	680	6,2	4,2	40	60	TCG	18°	13°	2/13/140 + 2/17/140 + 2/13/114	LSB68001X	F03FS09203
	HW Scorer	200	6,1-7,3	4,0	20	36	ATB	8°	15°	2/11/66	LI25M61PA3	F03FS02730
<b>ASH (FSM)</b>	Main blade	720	6,4	4,4	40	60	TCG	18°	13°	2/14/114 + 2/14/140	LSB72001X	F03FS09204
	HW Scorer	220	6,3-7,5	4,4	20	36	ATB	8°	15°	2/11/66	LI25M63UA3	F03FS02732
<b>SCM</b>												
<b>PRIMA 50</b>	Main blade	300	4,4	3,0	80	60	TCG	15°	15°	4/9/100 + 2/14/110	LSB30004X	F03FS09157
	Main blade	300	4,4	3,0	80	72	TCG	15°	15°	4/9/100 + 2/14/110	LSB30008X	F03FS07804
	HW Scorer	160	4,3-5,5	3,2	55	36	ATB	8°	15°	3/6/84 + 3/7/66	LI25M43LG3	F03FS02657
<b>PRIMA 67</b>	Main blade	320	4,4	3,2	80	60	TCG	10°	15°	4/9/100 + 2/9/110 + 2/14/110	LSB32006X	F03FS10101
	HW Scorer	160	4,3-5,5	3,2	55	36	ATB	8°	15°	3/6/84 + 3/7/66	LI25M43LG3	F03FS02657
	Postf. scorer	280	4,65	3,2	80	72	ATB	15°	15°	2/14/110	LI27M47VL3	F03FS08014
<b>IMPACT 85 K</b>	Main blade	350	4,4	3,2	80	72	TCG	15°	15°	4/9/100 + 2/9/110 + 2/14/110	LSB35005X	F03FS07635
	HW Scorer	160	4,3-5,5	3,2	55	36	ATB	8°	15°	3/6/84 + 3/7/66	LI25M43LG3	F03FS02657
<b>IMPACT 105 C/D, PLUS 105 C/D/P</b>	Main blade	380	4,4	3,2	80	72	TCG	15°	15°	4/9/100 + 2/9/110 + 2/14/110	LSB38010X	F03FS07808
	HW Scorer	160	4,3-5,5	3,2	55	36	ATB	8°	15°	3/6/84 + 3/7/66	LI25M43LG3	F03FS02657
<b>IMPACT 90</b>	Main blade	380	4,4	3,2	80	48	TCG	15°	15°	4/9/100 + 2/9/110 + 2/14/110	LSB38009X	F03FS09164
	HW Scorer	160	4,3-5,5	3,2	55	36	ATB	8°	15°	3/6/84 + 3/7/66	LI25M43LG3	F03FS02657
	HW Scorer	200	4,3-5,5	3,2	80	36	ATB	8°	15°	2/14/110	LI25M43PL3	F03FS02683
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH4	F03FS09627
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH6	F03FS09628
	Postf. scorer	300	4,70	3,2	80	72	ATB	15°	15°	2/14/110	LI27M DC3	F03FS02741
<b>IMPACT 110</b>	Main blade	400	4,4	3,2	80	72	TCG	15°	15°	4/9/100 + 2/9/110 + 2/14/110 + 2/14/125	LSB40012X	F03FS09173
	HW Scorer	160	4,3-5,5	3,2	55	36	ATB	8°	15°	3/6/84 + 3/7/66	LI25M43LG3	F03FS02657
	HW Scorer	200	4,3-5,5	3,2	80	36	ATB	8°	15°	2/14/110	LI25M43PL3	F03FS02683
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH4	F03FS09627
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH6	F03FS09628
	Postf. scorer	300	4,7	3,2	80	72	ATB	15°	15°	2/14/110	LI27M DC3	F03FS02741
<b>SCM-GABBIANI</b>												
<b>GALAXY 90</b>	Main blade	300	4,4	3,0	80	60	TCG	15°	15°	4/9/100 + 2/14/110	LSB30004X	F03FS09157
	Main blade	300	4,4	3,0	80	72	TCG	15°	15°	4/9/100 + 2/14/110	LSB30008X	F03FS07804
	HW Scorer	200	4,3-5,5	3,2	80	36	ATB	8°	15°	2/14/110	LI25M43PL3	F03FS02683
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH4	F03FS09627
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH6	F03FS09628
	Postf. scorer	300	4,70	3,2	80	72	ATB	15°	15°	2/14/110	LI27M DC3	F03FS02741

\* Tool type: Main saw blade, Scoring saw blade, Polycrystalline Diamond scorer and Postforming scorer.

## Reference table of saw blades for panel sizing machines

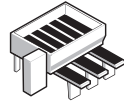
Machine type	Tool type *	D	B-B1	b	d	Z	Tooth type	α	β	NL	Freud Code	Art. No.
		mm	mm	mm	mm							
GALAXY 85	Main blade	350	4,4	3,2	80	72	TCG	15°	15°	4/9/100 + 2/9/110 + 2/14/110	LSB35005X	F03FS07635
	HW Scorer	200	4,3-5,5	3,2	80	36	ATB	8°	15°	2/14/110	LI25M43PL3	F03FS02683
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH4	F03FS09627
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH6	F03FS09628
GALAXY3 110, 110A	Main blade	400	4,4	3,2	80	72	TCG	15°	15°	4/9/100 + 2/9/110 + 2/14/110 + 2/14/125	LSB40012X	F03FS09173
	HW Scorer	200	4,3-5,5	3,2	80	36	ATB	8°	15°	2/14/110	LI25M43PL3	F03FS02683
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH4	F03FS09627
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH6	F03FS09628
	Postf. scorer	300	4,70	3,2	80	72	ATB	15°	15°	2/14/110	LI27M DC3	F03FS02741
GALAXY 115	Main blade	400	4,4	3,2	80	72	TCG	15°	15°	4/9/100 + 2/9/110 + 2/14/110 + 2/14/125	LSB40012X	F03FS09173
	HW Scorer	200	4,3-5,5	3,2	80	36	ATB	8°	15°	2/14/110	LI25M43PL3	F03FS02683
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH4	F03FS09627
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH6	F03FS09628
GALAXY3 130, 130A	Main blade	430	4,4	3,2	80	72	TCG	15°	15°	2/9/130 + 2/14/110 + 4/19/120	LSB43009X	F03FS07909
	HW Scorer	200	4,3-5,5	3,2	80	36	ATB	8°	15°	2/14/110	LI25M43PL3	F03FS02683
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH4	F03FS09627
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH6	F03FS09628
	Postf. scorer	300	4,70	3,2	80	72	ATB	15°	15°	2/14/110	LI27M DC3	F03FS02741
GALAXY3 145	Main blade	450	4,4	3,2	80	72	TCG	15°	15°	2/9/130 + 2/14/110 + 4/19/120	LSB45009X	F03FS07811
	HW Scorer	200	4,3-5,5	3,2	80	36	ATB	8°	15°	2/14/110	LI25M43PL3	F03FS02683
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH4	F03FS09627
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH6	F03FS09628
GALAXY 140, ELITE	Main blade	450	4,4	3,2	80	72	TCG	15°	15°	2/9/130 + 2/14/110 + 4/19/120	LSB45009X	F03FS07811
	HW Scorer	200	4,3-5,5	3,2	80	36	ATB	8°	15°	2/14/110	LI25M43PL3	F03FS02683
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH4	F03FS09627
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH6	F03FS09628
GALAXY3	Main blade	460	4,4	3,2	80	72	TCG	15°	15°	2/14/110 + 4/9/100	LSB46003X	F03FS09950
	HW Scorer	200	4,3-5,5	3,2	80	36	ATB	8°	15°	2/14/110	LI25M43PL3	F03FS02683
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH4	F03FS09627
	DP Scorer	200	4,3-5,1	3,2	80	36	FLAT	6°	14°	2/14/110	DLI25M43PLH6	F03FS09628
<b>TÖRK MAKİNE</b>												
MP70R	Main blade	320	4,4	3,2	75	72	TCG	15°	15°	3/7/100 + 3/13/95	LSB32002X	F03FS09162
	HW Scorer	160	4,3-5,5	3,2	55	36	ATB	8°	15°	3/6/84 + 3/7/66	LI25M43LG3	F03FS02657
<b>TURANLAR</b>												
T-PE 433	Main blade	300	4,4	3,0	30	60	TCG	15°	15°	2/10/60	LSB30001X	F03FS07802
	Main blade	300	4,4	3,0	30	72	TCG	15°	15°	2/10/60	LSB30005X	F03FS07803
	HW Scorer	150	4,3-5,6	3,2	30	36	ATB	8°	15°	-	LI25M43KC3	F03FS02649
T-PE 434 (before 2020)	Main blade	400	4,4	3,2	80	72	TCG	15°	15°	4/9/100 + 2/9/110 + 2/14/110 + 2/14/125	LSB40012X	F03FS07810
	HW Scorer	200	4,3-5,5	3,2	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M43PI3	F03FS02681
T-PE 434	Main blade	430	4,4	3,2	80	72	TCG	15°	15°	2/9/130 + 2/14/110 + 4/19/120	LSB43009X	F03FS07909
	HW Scorer	200	4,3-5,5	3,2	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M43PI3	F03FS02681
T-PE 435	Main blade	430	4,4	3,2	80	72	TCG	15°	15°	2/9/130 + 2/14/110 + 4/19/120	LSB43009X	F03FS07909
	HW Scorer	200	4,3-5,5	3,2	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M43PI3	F03FS02681
T-PE 436 (before 2020)	Main blade	450	4,8	3,5	80	72	TCG	15°	15°	2/14/125 + 2/9/130 + 4/19/120	LSB45018X	F03FS07812
	HW Scorer	200	4,7-5,9	3,5	65	36	ATB	8°	15°	2/9/100 + 2/9/110	LI25M47PI3	F03FS02720

\* Tool type: Main saw blade, Scoring saw blade, Polycrystalline Diamond scorer and Postforming scorer.



# LSB X

# Industrial panel sizing saw blades



Horizontal Panel Sizing Machines



Laminated Chipboard



Laminated MDF



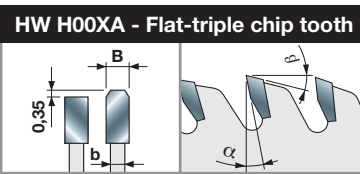
HPL



Thermoplastic Composites



Plexiglas

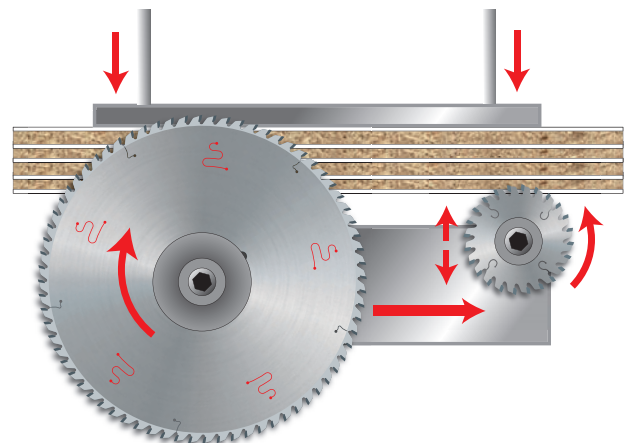


**Machines:**  
Horizontal panel sizing machines.

**Materials:**  
Laminated chipboard, laminated MDF, HPL, thermoplastic composites and plexiglas.

**Applications:**  
Industrial panel sizing.

**Technical information:**  
The LSB X range represents the ideal choice for industrial panel sizing. Saw blades suitable for chipboard and MDF bilaminated panels. Good finishing also in HPL and acrylic panel cutting.



D	B	b	d	Z	$\alpha$	$\beta$	NL	Machines	Freud Code	Art. No.
mm	mm	mm	mm		°	°				
250	4,2	3,0	30	60	15°	15°	2/10/60	SCM - Techmatic, Verry	LSB25003X	F03FS10212
250	4,2	3,0	50	60	15°	15°	-	Usikraft	LSB25005X	F03FS10214
250	4,2	3,0	55	60	15°	15°	4/10/70	Baldan, SCM - Techmatic	LSB25002X	F03FS10211
250	4,4	3,0	30	80	15°	15°	2/9/46,4 + 2/10/60		LSB25004X	F03FS10213
270	4,2	3,0	55	60	15°	15°	-	SCM - Techmatic	LSB27001X	F03FS10215
280	4,4	3,2	55	60	15°	15°	2/10/70	Baldan	LSB28001X	F03FS10216
290	4,2	3,0	55	60	15°	15°	-	SCM - Techmatic	LSB29001X	F03FS10217
300	4,4	3,0	30	60	15°	15°	2/10/60	Panhans	LSB30001X	F03FS07802
300	4,4	3,0	65	60	15°	15°	2/9/110	Selco	LSB30002X	F03FS09159
300	4,4	3,0	75	60	15°	15°	-	Homag	LSB30003X	F03FS10218
300	4,4	3,0	80	60	15°	15°	4/9/100 + 2/14/110	SCM	LSB30004X	F03FS09157
300	4,4	3,0	30	72	15°	15°	2/10/60	Panhans, Verry	LSB30005X	F03FS07803
300	4,4	3,2	60	72	15°	15°	2/14/100	Holzma	LSB30012X	F03FS09207
300	4,4	3,0	65	72	15°	15°	2/9/95 + 2/9/110	Selco	LSB30006X	F03FS09158
300	4,4	3,0	75	72	15°	15°	-	Holzma	LSB30007X	F03FS10219
300	4,4	3,0	80	72	15°	15°	4/9/100 + 2/14/110	SCM	LSB30008X	F03FS07804
300	4,4	3,0	75	96	15°	15°	-		LSB30010X	F03FS10220
305	4,4	3,0	30	60	15°	15°	2/10/60	Mayer, Panhans, SCM	LSB30501X	F03FS10221
310	4,4	3,2	60	72	15°	15°	2/14/100	Holzma	LSB31001X	F03FS09949
320	4,4	3,2	30	60	15°	15°	2/10/60		LSB32005X	F03FS09160
320	4,4	3,2	50	60	15°	15°	3/13/95 + 3/15/80	Giben	LSB32004X	F03FS10222
320	4,4	3,2	65	60	15°	15°	2/9/110	Selco	LSB32003X	F03FS09161
320	4,4	3,2	80	60	10°	15°	4/9/100 + 2/9/110 + 2/14/110		LSB32006X	F03FS10101
320	4,4	3,2	60	72	15°	15°	2/14/100		LSB32008X	F03FS10268
320	4,4	3,2	65	72	15°	15°	2/9/95 + 2/9/110	Selco	LSB32001X	F03FS07805
320	4,4	3,2	75	72	15°	15°	3/13/95 + 3/7/100	Giben	LSB32002X	F03FS09162
320	4,4	3,2	80	72	15°	15°	4/9/100 + 2/9/110 + 2/14/110		LSB32007X	F03FS10267
350	4,2	3,2	80	96	15°	15°			LSB35011X	F03FS10225







**LSC**

**“Supercut” panel sizing saw blades with variable pitch**



**Horizontal Panel Sizing Machines**



**Chipboard**



**Laminated Chipboard**



**MDF**



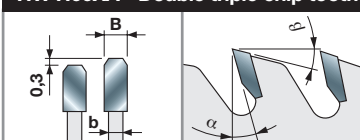
**Laminated MDF**



●●●● Ultimate ●● High ● Good



**HW H00XA - Double triple chip tooth**



**Machines:**

Horizontal panel sizing machines.

**Materials:**

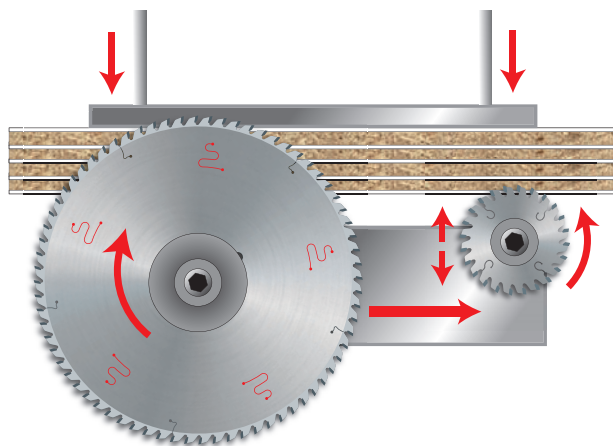
Wood based panels, laminated chipboard, MDF and laminated MDF.

**Applications:**

Panel sizing.

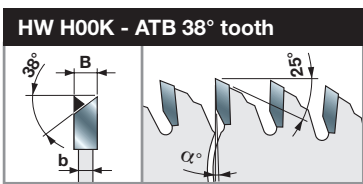
**Technical information:**

Saw blades suitable for sizing of single panels or small stacks with very good finishing, thanks to the double triple chip tooth grinding.



\*Dedicated laser marking.

D mm	B mm	b mm	d mm	Z	$\alpha$	$\beta$	NL	Machines	Freud Code	Art. No.
300	4,4	3,0	30	60	10°	15°	2/10/60	Panhans	LSC30001	F03FS06322
300	4,4	3,0	65	60	10°	15°	2/9/110	Selco	LSC30002	F03FS06325
300	4,4	3,0	75	60	10°	15°	-	Holzma	LSC30003	F03FS06326
300	4,4	3,0	80	60	10°	15°	2/14/110 + 4/9/100	SCM	LSC30004	F03FS06327
320	4,4	3,2	50	60	10°	15°	3/15/80 + 3/13/95	Giben	LSC32004	F03FS06328
320	4,4	3,2	65	60	10°	15°	2/9/110	Selco	LSC32003	F03FS06329
350	4,4	3,2	30	72	15°	15°	2/10/60	Panhans - Scheer	LSC35003	F03FS06305
350	4,4	3,2	50	72	15°	15°	4/13/80	Giben	LSC35006	F03FS06309
350	4,4	3,2	60	72	15°	15°	2/14/100	Holzma	LSC35004	F03FS06310
350	4,4	3,2	80	72	15°	15°	4/9/100 + 2/9/110 + 2/14/110	Gabbiani	LSC35005	F03FS06311
355	4,4	3,2	30	72	15°	15°	2/10/60	Panhans - SCM	LSC35504	F03FS06306
355	4,4	3,2	65	72	15°	15°	2/9/110	Selco	LSC35508BS*	F03FS07869
355	4,4	3,2	75	72	15°	15°	-	Giben	LSC35505	F03FS06307
360	4,4	3,2	65	72	15°	15°	2/9/110	Selco	LSC36002	F03FS06308
370	4,4	3,2	30	72	15°	15°	2/10/60	Schelling	LSC37001	F03FS06312
380	4,4	3,2	50	72	15°	15°	4/13/80	Giben	LSC38008	F03FS06343
380	4,4	3,2	60	72	15°	15°	2/14/100	Holzma	LSC38002	F03FS06313
380	4,4	3,2	80	72	15°	15°	4/9/100 + 2/9/110 + 2/14/110	Gabbiani	LSC38010	F03FS06314
380	4,8	3,5	60	72	15°	15°	2/14/100	Holzma	LSC38004	F03FS06332
400	4,4	3,2	30	72	15°	15°	2/10/60	Scheer	LSC40007	F03FS06315
400	4,4	3,2	65	72	15°	15°	2/9/110	Selco	LSC40016BS*	F03FS07870
400	4,4	3,2	75	72	15°	15°	4/15/105	Giben	LSC40008	F03FS06317
400	4,4	3,2	80	72	15°	15°	4/19/120 + 2/9/130	Selco	LSC40009	F03FS06319
400	4,4	3,2	80	72	15°	15°	4/9/100 + 2/9/110 + 2/14/110	Gabbiani	LSC40012	F03FS06320
430	4,4	3,2	75	72	15°	15°	4/15/105	Giben	LSC43008	F03FS06316
430	4,4	3,2	80	72	15°	15°	2/9/130 + 2/14/110 + 4/19/120	Selco - Gabbiani	LSC43009	F03FS06321
450	4,4	3,2	60	72	15°	15°	2/14/125	Holzma	LSC45008	F03FS06318
450	4,8	3,5	60	72	15°	15°	2/14/125	Holzma	LSC45017	F03FS06323
450	4,8	3,5	80	72	15°	15°	2/9/130 + 4/19/120	Selco	LSC45018	F03FS06324
520	4,8	3,5	30	72	18°	13°	2/13/94	Schelling	LSC52007	F03FS07879



**Machines:**

Squaring saws and vertical panel sizing machines, hand-held circular saws.

**Materials:**

Laminated chipboard, laminated MDF and plywood.

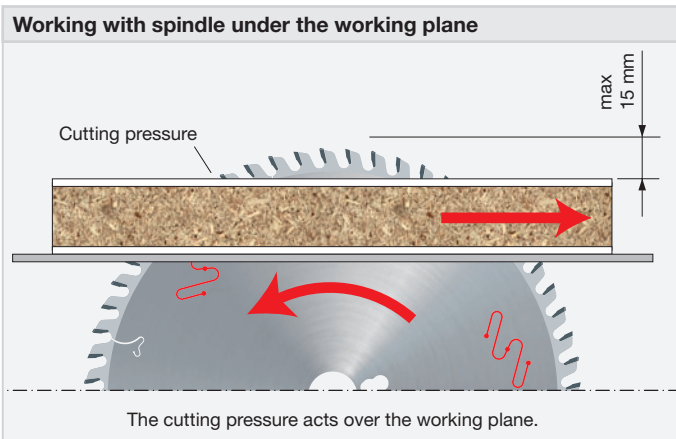
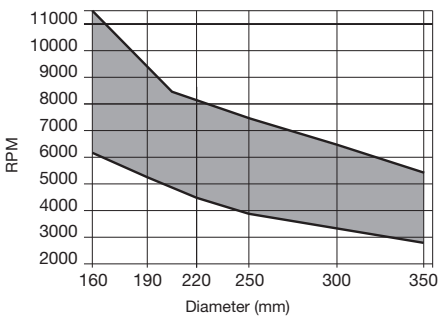
**Applications:**

Panel sizing.

**Technical information:**

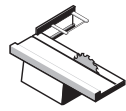
To size chipboard and MDF bilaminated panels. The ATB 38° tooth geometry grants perfect finishing on both sides.

No scoring saw blades needed.

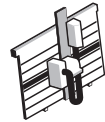


**LU3A**

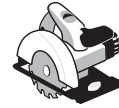
**Saw blades to cut bilaminated panels**



Squaring Saws



Vertical Panel Sizing Machines



Hand-held Circular Saws



Laminated Chipboard



Laminated MDF



Plywood

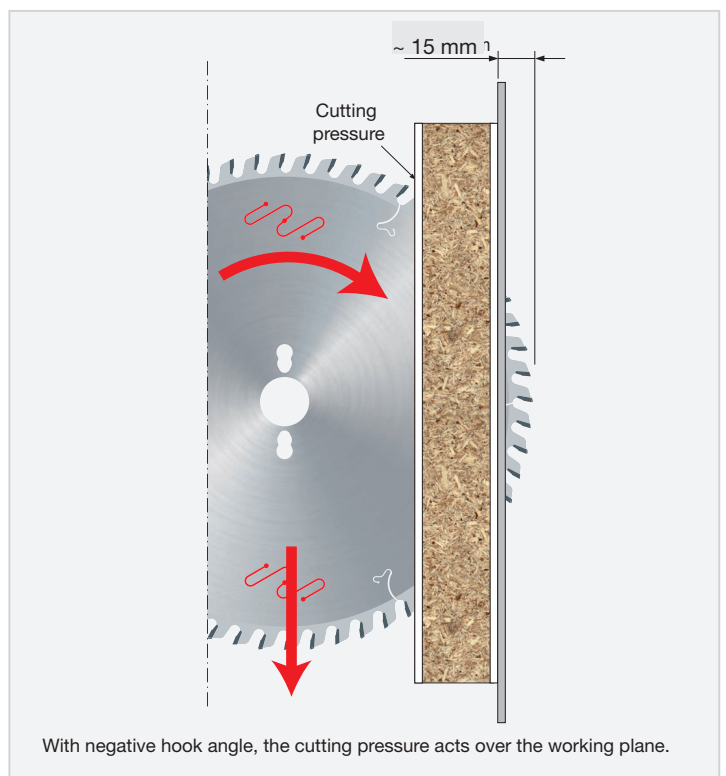
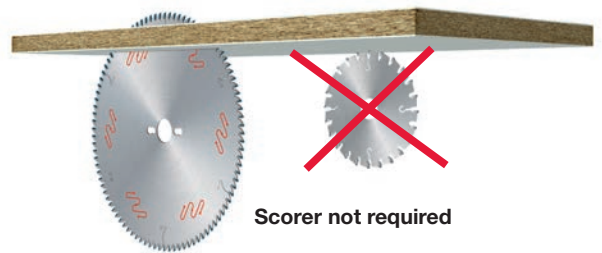


●●● Ultimate ●● High ● Good

D	B	b	d	Z	α	NL	Freud Code	Art. No.
160	2,2	1,6	20	48	-2°	-	LU3A 0001	F03FS07411
190	2,5	1,8	30	48	-2°	-	LU3A 0002	F03FS07412
210	2,5	1,8	30	54	-2°	-	LU3A 0003	F03FS07413

D	B	b	d	Z	α	NL	Freud Code	Art. No.
220	3,2	2,2	30	64	-5°	2/7/42	LU3A 0100	F03FS05059
250	3,2	2,2	30	80	-2°	FT01	LU3A 0200	F03FS05061
300	3,2	2,2	25,4	96	2°	-	LU3A 0600	F03FS05807
300	3,2	2,2	30	96	2°	FT01	LU3A 0300	F03FS05064
350	3,5	2,5	30	108	5°	FT02	LU3A 0400	F03FS05066

FT01: 2/7/42 + 2/9/46,4 + 2/10/60 - FT02: 2/9/46,4 + 2/10/60

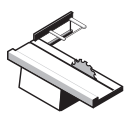




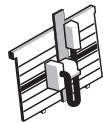


## LU3B

## Saw blades to cut bilaminated panels



Squaring Saws



Vertical Panel Sizing Machines



Plywood



Laminated Chipboard



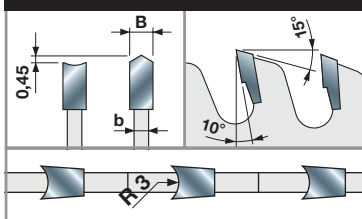
Laminated MDF



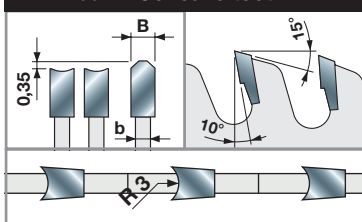
●●● Ultimate ●● High ● Good



### HW H00K - Concave tooth



### HW H00K - Concave tooth \*



#### Machines:

Squaring saws and vertical panel sizing machines.

#### Materials:

Plywood, laminated chipboard and laminated MDF.

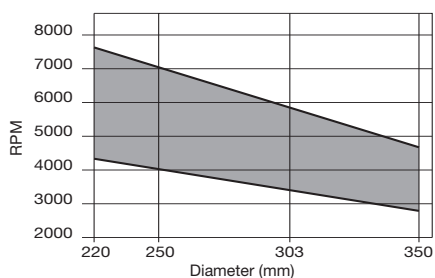
#### Applications:

Panel sizing.

#### Technical information:

To size chipboard and MDF bilaminated panels with good finishing and long cutting life.

No scoring saw blades needed.



Minimum and maximum RPM based on the blade diameter.

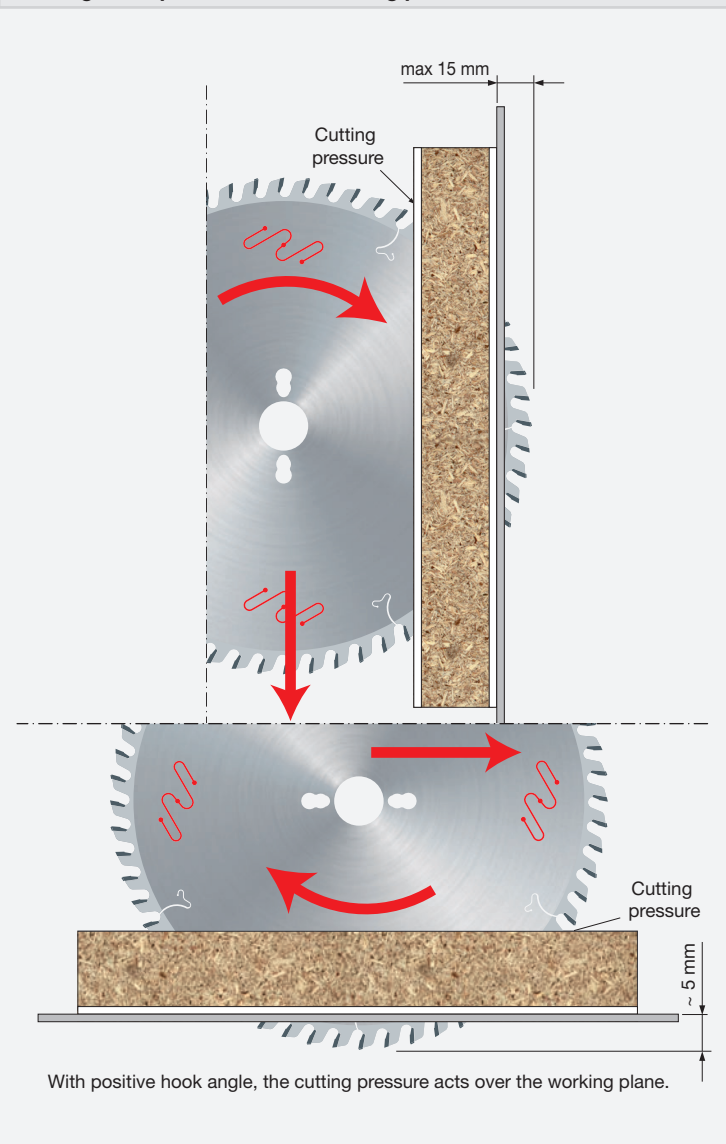
D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
220	3,2	2,2	30	42	2/7/42	LU3B 0100	F03FS05069
250	3,2	2,2	30	48	FT01	LU3B 0200	F03FS05071
303	3,2	2,2	30	60	FT01	LU3B 0300	F03FS05073
350	3,2	2,2	30	72	FT01	LU3B 0400	F03FS05075

D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
303	3,2	2,2	30	60	FT01	LU3B 1300 *	F03FS06478

**Features:** Flat - triple chip tooth with concave face and positive cutting angle.

**FT01:** 2/7/42 + 2/9/46,4 + 2/10/60

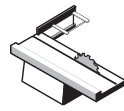
### Working with spindle over the working plane



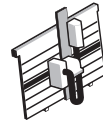


# LU3C

# Saw blades to cut bilaminated panels



Squaring Saws



Vertical Panel Sizing Machines



Plywood



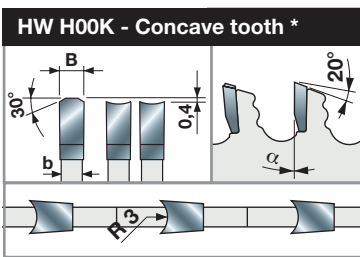
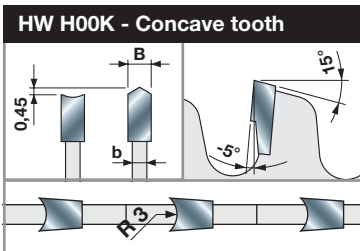
Laminated Chipboard



Laminated MDF



●●● Ultimate ●● High ● Good



D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
220	3,2	2,2	30	42	2/7/42	LU3C 0100	F03FS05076
250	3,2	2,2	30	48	FT01	LU3C 0200	F03FS05077
303	3,2	2,2	30	60	FT01	LU3C 0300	F03FS05078
350	3,2	2,2	30	72	FT01	LU3C 0400	F03FS05080

D	B	b	d	Z	$\alpha$	NL	Freud Code	Art. No.
mm	mm	mm	mm					
250	3,4	2,4	30	54	-2°	FT01	LU3C 0204 *	F03FS09537
303	3,4	2,4	30	66	0°	FT01	LU3C 0302 *	F03FS09038

FT01: 2/7/42 + 2/9/46,4 + 2/10/60

**Machines:**

Squaring saws and vertical panel sizing machines.

**Materials:**

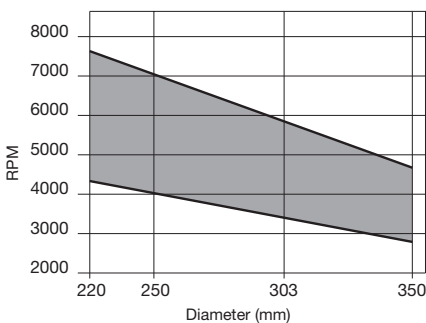
Plywood, laminated chipboard and laminated MDF.

**Applications:**

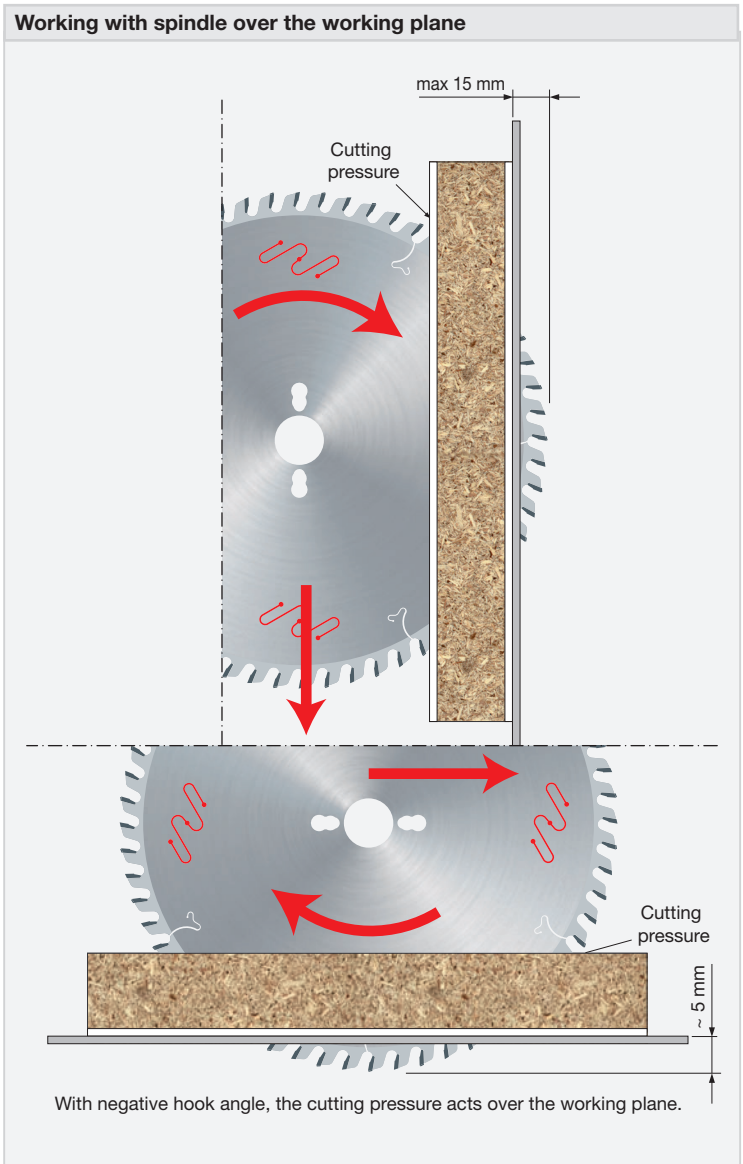
Panel sizing.

**Technical information:**

Recommended for vertical panel sizing machines. To size chipboard and MDF bilaminated panels with good finishing and long cutting life. No scoring saw blades needed.



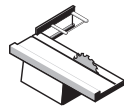
Minimum and maximum RPM based on the blade diameter.





## LU3D

## Saw blades to cut bilaminated panels



### Squaring Saws



Chipboard



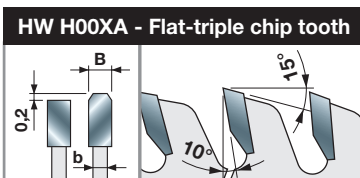
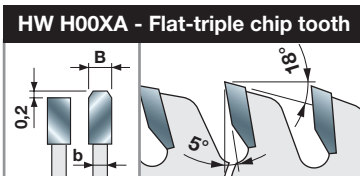
Laminated Chipboard



MDF



Laminated MDF



**Machines:**  
Squaring saws.

**Materials:**  
Wood based panels, laminated chipboard, MDF and laminated MDF.

**Applications:**  
Panel sizing.

**Technical information:**  
To size chipboard and MDF bilaminated panels with the use of the scoring saw blade, in detail melamine-coated panels, with good finishing and long cutting life.

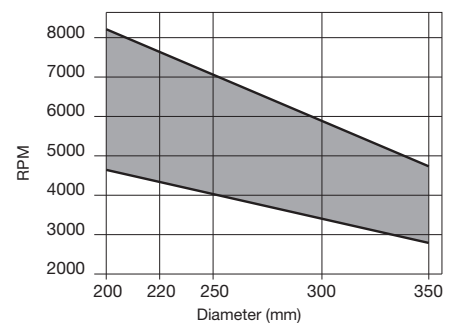
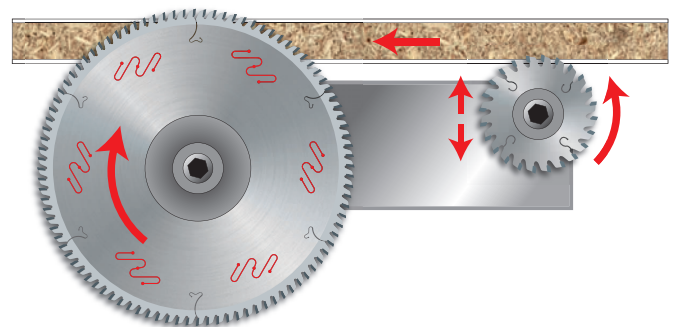
### Hook angle 5° for cutting heights up to 30 mm

D	B	b	d	Z	$\alpha$	NL	Freud Code	Art. No.
mm	mm	mm	mm					
200	3,2	2,2	30	64	5°	2/7/42	LU3D 0100	F03FS05081
220	3,2	2,2	30	64	5°	-	LU3D 0200	F03FS05083
250	3,2	2,2	30	80	5°	FT01	LU3D 0400	F03FS05088
250	3,2	2,2	55	80	5°	-	LU3D 0455	F03FS09973
300	3,2	2,2	30	96	5°	FT01	LU3D 0600	F03FS05093
300	3,2	2,2	35	96	5°	-	LU3D 0700	F03FS05096
350	3,5	2,5	30	108	5°	FT02	LU3D 0900	F03FS05098

### Hook angle 10° for cutting heights up to 40 mm

D	B	b	d	Z	$\alpha$	NL	Freud Code	Art. No.
mm	mm	mm	mm					
250	3,2	2,2	30	60	10°	FT01	LU3D 1100	F03FS05100
250	3,2	2,2	60	60	10°	2/11/85	LU3D 1160	F03FS09974
300	3,2	2,2	30	72	10°	FT01	LU3D 2100	F03FS05810
300	3,2	2,2	30	84	10°	FT01	LU3D 1300	F03FS05101
300	3,2	2,2	30	96	10°	FT01	LU3D 1500	F03FS05104
350	3,5	2,5	30	72	10°	FT02	LU3D 2000	F03FS05108
350	3,5	2,5	30	108	10°	FT02	LU3D 1700	F03FS05105

FT01: 2/7/42 + 2/9/46,4 + 2/10/60 - FT02: 2/9/46,4 + 2/10/60

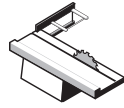


Minimum and maximum RPM based on the blade diameter.

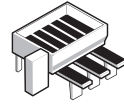


## LU3E

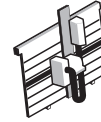
## Saw blades to cut bilaminated panels



Squaring Saws



Horizontal Panel Sizing Machines



Vertical Panel Sizing Machines



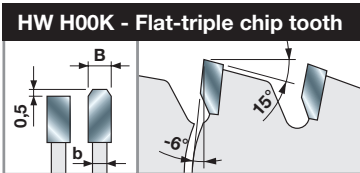
Laminated Chipboard



Laminated MDF



●●● Ultimate ●● High ● Good



### Machines:

Squaring saws, horizontal and vertical panel sizing machines.

### Materials:

Laminated chipboard and laminated MDF.

### Applications:

Panel sizing.

### Technical information:

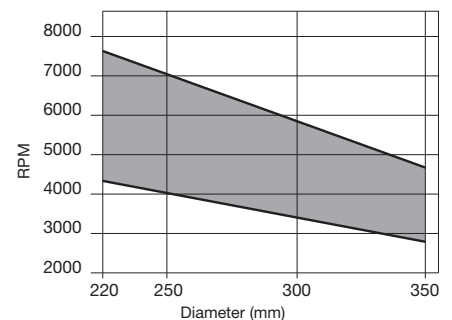
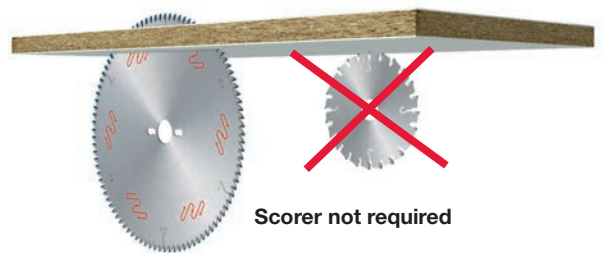
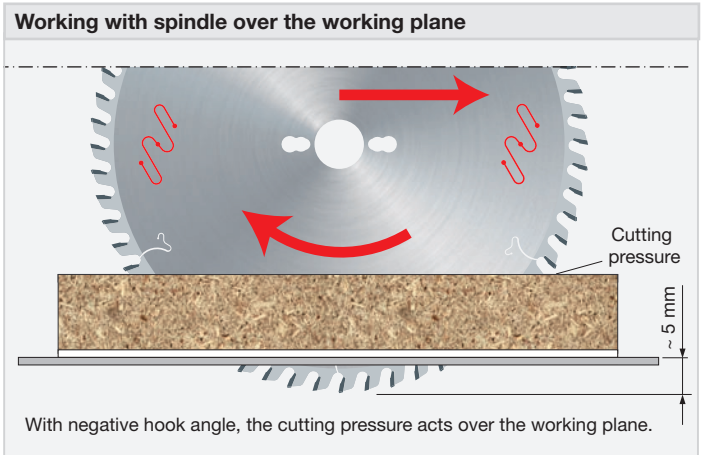
To size chipboard and MDF bilaminated panels with thickness up to 40 mm.

In detail, it is suitable to work melamine-coated panels.

No scoring saw blades needed.

D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
220	3,2	2,2	30	56	2/7/42	LU3E 0100	F03FS05109
250	3,2	2,2	30	60	FT01	LU3E 0200	F03FS05111
300	3,2	2,2	30	72	FT01	LU3E 0300	F03FS05113
350	3,5	2,5	30	84	FT02	LU3E 0400	F03FS05115

FT01: 2/7/42 + 2/9/46,4 + 2/10/60 - FT02: 2/9/46,4 + 2/10/60

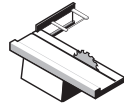


Minimum and maximum RPM based on the blade diameter.

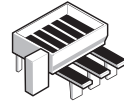


## LU3F

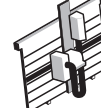
## Saw blades to cut bilaminated panels and plastic materials



Squaring Saws



Horizontal Panel Sizing Machines



Vertical Panel Sizing Machines



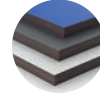
Laminated Chipboard



Laminated MDF



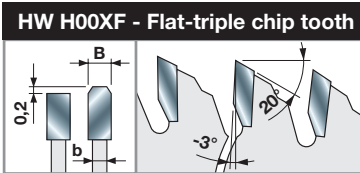
Thermoplastic Composites



HPL



Plastics



**Machines:**  
Squaring saws, horizontal and vertical panel sizing machines.

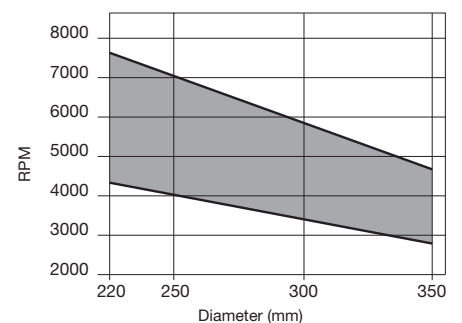
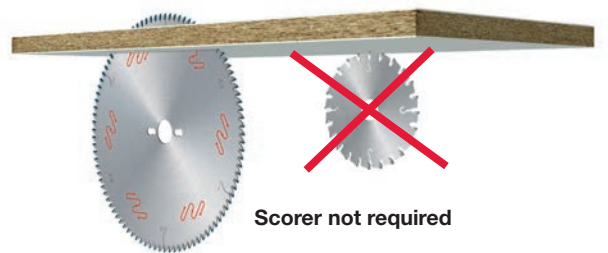
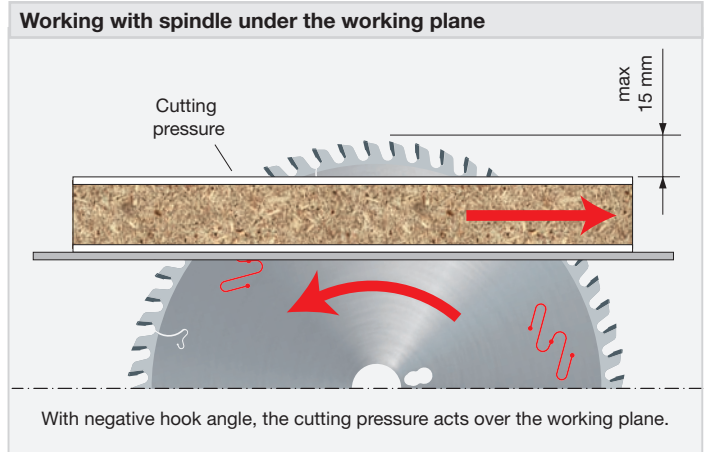
**Materials:**  
Laminated chipboard, laminated MDF, thermoplastic composites, HPL and plastics.

**Applications:**  
Panel sizing.

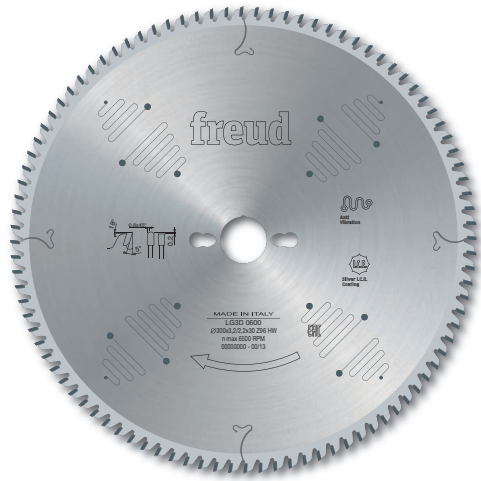
**Technical information:**  
Suitable to work melamine-coated chipboard and MDF panels and plastic materials.  
No scoring saw blades needed.  
The H00XF Carbide grants extremely long blade lifetime.

D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
220	3,2	2,2	30	64	2/7/42		LU3F 0100 F03FS05117
250	3,2	2,2	30	80	FT01		LU3F 0200 F03FS05119
300	3,2	2,2	30	96	FT01		LU3F 0300 F03FS05121
350	3,5	2,5	30	108	FT02		LU3F 0400 F03FS05124

FT01: 2/7/42 + 2/9/46,4 + 2/10/60 - FT02: 2/9/46,4 + 2/10/60

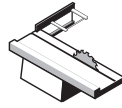


Minimum and maximum RPM based on the blade diameter.



# LG3D

## Saw blades to cut bilaminated panels



### Squaring Saws



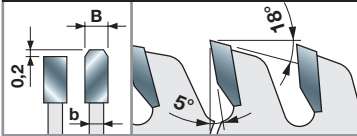
Chipboard Laminated Chipboard MDF Laminated MDF



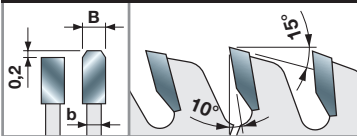
●●● Ultimate ●● High ● Good



### HW H00XA - Flat-triple chip tooth



### HW H00XA - Flat-triple chip tooth



**Machines:**  
Squaring saws.

**Materials:**  
Wood based panels, laminated chipboard, MDF and laminated MDF.

**Applications:**  
Panel sizing.

**Technical information:**  
To size chipboard and MDF bilaminated panels with the employment of the scoring saw blade, in detail melamine-coated panels, with good finishing and long cutting life.

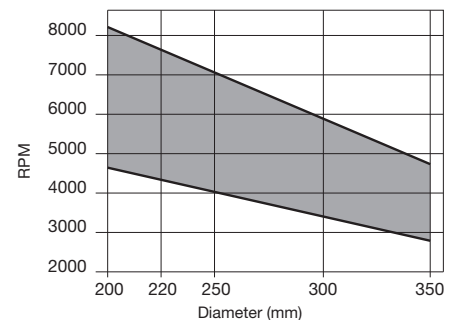
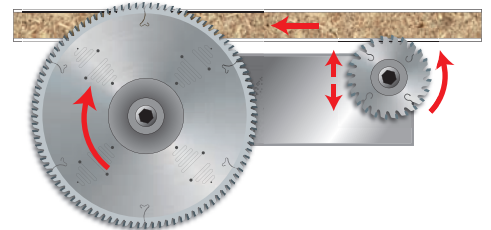
### Hook angle 5°

D	B	b	d	Z	$\alpha$	NL	Freud Code	Art. No.
mm	mm	mm	mm					
250	3,2	2,2	30	80	5°	FT01	<b>LG3D 0400</b>	F03FS07438
300	3,2	2,2	30	96	5°	FT01	<b>LG3D 0600</b>	F03FS07436
350	3,5	2,5	30	108	5°	FT02	<b>LG3D 0900</b>	F03FS07437

### Hook angle 10°

D	B	b	d	Z	$\alpha$	NL	Freud Code	Art. No.
mm	mm	mm	mm					
300	3,2	2,2	30	72	10°	FT01	<b>LG3D 2100</b>	F03FS07574
350	3,5	2,5	30	72	10°	FT02	<b>LG3D 2000</b>	F03FS07573

FT01: 2/7/42 + 2/9/46,4 + 2/10/60 - FT02: 2/9/46,4 + 2/10/60

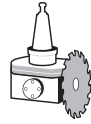


Minimum and maximum RPM based on the blade diameter.



## LU34M

## Saw blades for grooving and sizing on CNC units



### CNC Cutting Units



Softwood



Hardwood



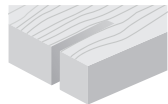
Laminated Chipboard



Laminated MDF



Plywood



Ripping



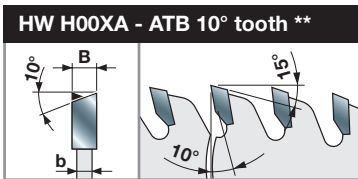
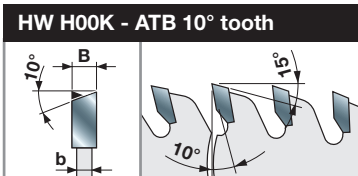
Crosscutting



Grooving

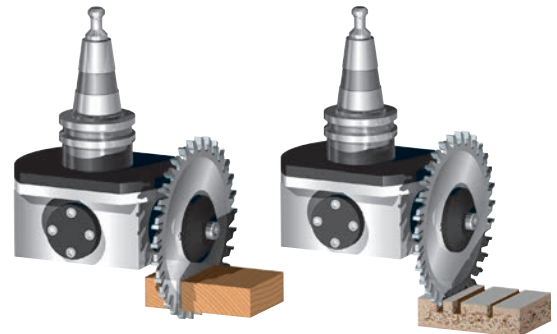


●●● Ultimate ●● High ● Good



D mm	B mm	b mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
120	4,0	3,0	30	18	12.000	LU34M40AC3	F03FS06095
120	4,0	3,0	20	30	12.000	LU34M40EA3	F03FS06367
120	4,0	3,0	35	30	12.000	LU34M40EC3*	F03FS05141
120	5,0	3,0	30	18	12.000	LU34M50AC3	F03FS06096
120	5,0	3,0	35	30	12.000	LU34M50EC3*	F03FS05143
120	6,0	3,0	30	18**	12.000	LU34M60AC3	F03FS06097
120	6,0	3,0	35	30**	12.000	LU34M60EC3*	F03FS05145
180	4,0	3,0	35	44	10.000	LU34M40NC3*	F03FS05142
180	5,0	3,0	35	44	10.000	LU34M50NC3*	F03FS05144
180	6,0	3,0	35	44**	10.000	LU34M60NC3*	F03FS05146

### Working examples



#### Machines:

CNC cutting units.

#### Materials:

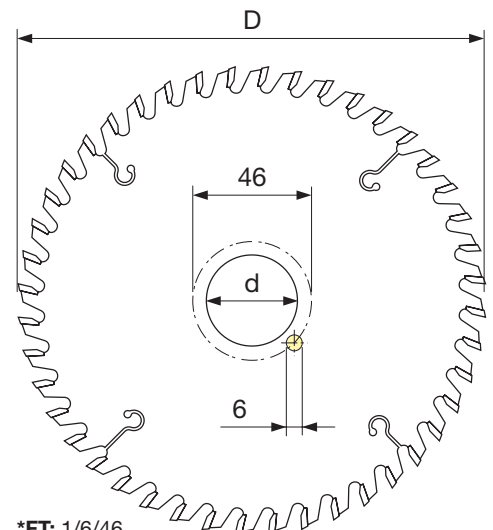
Softwood, hardwood, laminated chipboard, laminated MDF and plywood.

#### Applications:

Sizing on CNC, ripping, crosscutting, grooving on CNC.

#### Technical information:

Saw blades dedicated to CNC machines. For grooving along and across grain on softwood, hardwood and laminates.



\*FT: 1/6/46

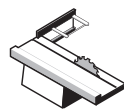


## LI25M

## Conical scoring saw blades



Horizontal Panel Sizing Machines



Squaring Saws



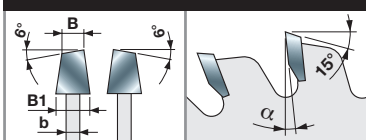
Laminated Chipboard



Laminated MDF



### HW H00XA - ATB 6° conical tooth



#### Machines:

Horizontal panel sizing machines and squaring saws.

#### Materials:

Laminated chipboard and laminated MDF.

#### Applications:

Panel scoring.

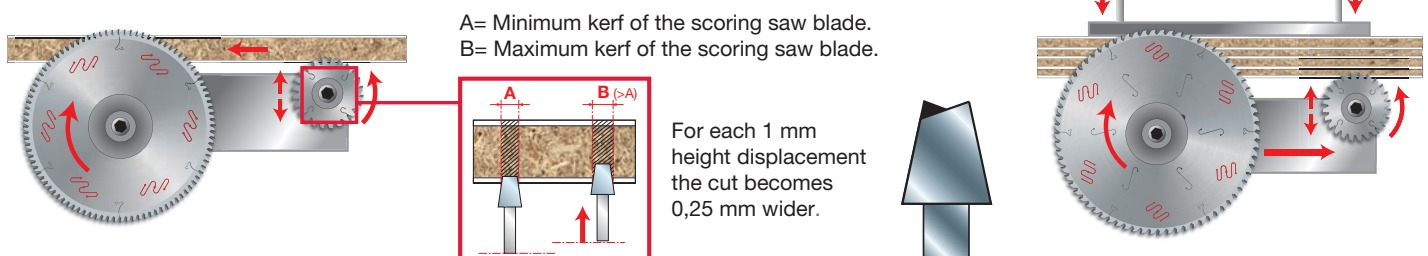
#### Technical information:

To score the coating on bilaminated panels.

D	B-B1	b	d	Z	$\alpha$	NL	Machines	Freud Code	Art. No.
mm	mm	mm	mm		°				
80	3,1 - 4,3	2,2	20	12	0°	-	Casadei	LI25M31AA3	F03FS02606
80	3,1 - 4,3	2,2	22	12	0°	-		LI25M31AB3	F03FS02608
100	3,1 - 4,3	2,5	20	20	0°	-		LI25M31BC3	F03FS06099
100	3,1 - 4,3	2,2	20	24	0°	-	Schelling	LI25M31BA3	F03FS02610
100	3,1 - 4,3	2,2	22	24	0°	-		LI25M31BB3	F03FS02612
110	3,1 - 4,3	2,2	20	24	0°	-		LI25M31CA3	F03FS02614
110	3,1 - 4,3	2,2	22	24	0°	-		LI25M31CB3	F03FS02615
115	3,1 - 4,3	2,2	20	24	0°	-		LI25M31DA3	F03FS02616
115	3,1 - 4,3	2,2	22	24	0°	-		LI25M31DB3	F03FS02618
115	4,1 - 5,3	3,0	45	24	0°	-	SCM	LI25M41DE3	F03FS08039
120	2,8 - 4,0	2,2	20	24	0°	-	Schelling	LI25M28EA3	F03FS02604
120	2,8 - 4,0	2,2	22	24	0°	-		LI25M28EB3	F03FS02605
120	3,1 - 4,3	2,2	20	24	0°	-		LI25M31EA3	F03FS02620
120	3,1 - 4,3	2,2	22	24	0°	-		LI25M31EB3	F03FS02622
120	3,1 - 4,3	2,5	20	24	0°	-		LI25M31EC3	F03FS05978
120	3,4 - 4,6	2,2	20	24	0°	-	SCM	LI25M34EA3	F03FS02632
125	3,1 - 4,3	2,2	20	24	0°	-	Panhans - Schelling	LI25M31FA3	F03FS02623
125	3,1 - 4,3	2,2	22	24	0°	-	Martin	LI25M31FB3	F03FS02625
125	3,1 - 4,3	2,5	20	24	0°	-	Panhans - Schelling	LI25M31FC3	F03FS05932
125	3,4 - 4,6	2,2	20	24	0°	-		LI25M34FA3	F03FS02634
125	3,4 - 4,6	2,2	45	24	0°	-		LI25M34FE3	F03FS02636
125	4,3 - 5,5	3,2	20	24	0°	-	Panhans - Gabbiani	LI25M43FA3	F03FS02643
125	4,3 - 5,5	3,2	45	24	0°	-	Giben - Homag	LI25M43FE3	F03FS02645
125	4,5 - 5,7	3,0	20	24	0°	-		LI25M45FA3	F03FS02697
125	4,5 - 5,7	3,0	45	24	0°	-	Giben - Homag	LI25M45FE3	F03FS02699
140	3,1 - 4,3	2,2	16	28	8°	1/6/33	Scheer	LI25M31HM3	F03FS02627
140	3,4 - 4,6	3,0	45	24	8°	-		LI25M34HE3	F03FS02638
140	4,3 - 5,5	3,2	45	28	8°	-	Euromac	LI25M43HE3	F03FS02647
140	4,5 - 5,7	3,0	45	24	8°	-		LI25M45HE3	F03FS02701
145	4,3 - 5,5	3,2	45	30	8°	-	Hansol Machine	LI25M43WE3	F03FS08015
150	3,1 - 4,3	2,2	30	36	8°	-	SCM	LI25M31KC3	F03FS02628
150	3,4 - 4,6	2,2	30	36	8°	-	SCM	LI25M34KC3	F03FS02639
150	4,3 - 5,6	3,2	30	36	8°	-	SCM, Verry	LI25M43KC3	F03FS02649
150	4,3 - 5,6	3,2	45	36	8°	-	SCM, Holzma, Homag, Haisung Woodworking Machinery	LI25M43KE3	F03FS02651
150	4,5 - 5,8	3,0	30	36	8°	-	SCM	LI25M45KC3	F03FS02702
150	4,5 - 5,8	3,0	45	36	8°	-	SCM	LI25M45KE3	F03FS02704
160	3,1 - 4,3	2,2	20	36	8°	-	Langzauner	LI25M31LA3	F03FS02630
160	3,4 - 4,6	2,2	25,4	36	8°	-		LI25M34LR3	F03FS02641
160	4,3 - 5,5	3,2	25,4	36	8°	-		LI25M43LR3	F03FS02660
160	4,3 - 5,5	3,2	30	36	8°	-	Langzauner	LI25M43LC3	F03FS02653

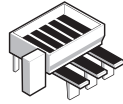


D mm	B-B1 mm	b mm	d mm	Z	$\alpha$	NL	Machines	Freud Code	Art. No.
160	4,3 - 5,5	3,2	45	36	8°	3/11/70	Giben	LI25M43LE3	F03FS02655
160	4,3 - 5,5	3,2	55	36	8°	3/6/84 + 3/7/66	Gabbiani - SCM	LI25M43LG3	F03FS02657
160	4,3 - 5,5	3,2	60	36	8°	3/7/80		LI25M43LH3	F03FS02659
160	4,5 - 5,7	3,0	45	36	8°	3/11/70	Giben	LI25M45LE3	F03FS02706
160	4,5 - 5,7	3,0	55	36	8°	3/7/66 + 3/9/72	Gabbiani	LI25M45LG3	F03FS02708
175	4,3 - 5,5	3,2	75	36	8°	-	Wonpoong	LI25M43WT3	F03FS07816
180	3,1 - 4,3	2,2	16	42	8°	1/6/33	Scheer	LI25M31NM3	F03FS02631
180	3,4 - 4,6	2,2	25,4	36	8°	-		LI25M34NR3	F03FS02642
180	4,3 - 5,5	3,2	20	28	8°	-	Schelling - Anthon	LI25M43NA3	F03FS02661
180	4,3 - 5,5	3,2	30	28	8°	2/7/42 + 2/10/60	Panhans - Holzer	LI25M43NC3	F03FS02663
180	4,3 - 5,5	3,2	20	36	8°	-	Schelling - Anthon	LI25M43XA3	F03FS06372
180	4,3 - 5,5	3,2	30	36	8°	2/7/42 + 2/10/60	Holzher, Nanxing, KDT	LI25M43XN3	F03FS06373
180	4,3 - 5,5	3,2	45	36	8°	-	Holzma	LI25M43NE3	F03FS02664
180	4,3 - 5,5	3,2	50	36	8°	8/13/80	Giben	LI25M43NF3	F03FS02666
180	4,5 - 5,7	3,0	20	36	8°	-	Schelling - Anthon	LI25M45NA3	F03FS02710
180	4,7 - 5,9	3,5	45	36	8°	-	Holzma	LI25M47NE3	F03FS02715
180	5,1 - 6,3	3,5	55	36	8°	3/7/66	Gabbiani	LI25M51NG3	F03FS02724
180	5,7 - 6,9	4,0	20	36	8°	-	Anthon - Holzma	LI25M57NA3	F03FS02727
200	4,3 - 5,5	3,2	20	36	8°	2/10/60 + 2/9/62 + 2/11/66	Schelling	LI25M43PA3	F03FS02670
200	4,3 - 5,5	3,2	22	36	8°	-		LI25M43PB3	F03FS02673
200	4,3 - 5,5	3,2	30	36	8°	2/9/60 + 2/10/60	Scheer	LI25M43PC3	F03FS02674
200	4,3 - 5,5	3,2	45	36	8°	-	Holzma, Hyundai Sangi	LI25M43PE3	F03FS02676
200	4,3 - 5,5	3,2	50	36	8°	2/7/80 + 3/13/80	Giben, KDT	LI25M43PF3	F03FS02679
200	4,3 - 5,5	3,2	65	36	8°	2/9/100 + 2/9/110	Selco	LI25M43PI3	F03FS02681
200	4,3 - 5,5	3,2	75	36	8°	-	Hyundai Sangi	LI25M43PT3	F03FS07755
200	4,3 - 5,5	3,2	80	36	8°	2/14/110	Gabbiani	LI25M43PL3	F03FS02683
200	4,5 - 5,7	3,0	22	36	8°	-		LI25M45PB3	F03FS02712
200	4,5 - 5,7	3,0	65	36	8°	2/9/110	Selco	LI25M45PI3	F03FS02714
200	4,7 - 5,9	3,5	20	36	8°	2/11/66		LI25M47PA3	F03FS02716
200	4,7 - 5,9	3,5	22	36	8°	-		LI25M47PB3	F03FS02717
200	4,7 - 5,9	3,5	30	36	8°	2/9/60	Scheer	LI25M47PC3	F03FS02718
200	4,7 - 5,9	3,5	45	36	8°	-	Holzma	LI25M47PE3	F03FS02719
200	4,7 - 5,9	3,5	65	36	8°	2/9/100 + 2/9/110	Selco	LI25M47PI3	F03FS02720
200	5,4 - 6,6	4,0	20	36	8°	-		LI25M54PA3	F03FS02726
200	5,7 - 6,9	4,0	45	36	8°	-	Holzma	LI25M57PE3	F03FS02728
200	5,7 - 6,9	3,5	65	36	8°	2/9/110		LI25M57PI3BS	F03FS08165
200	6,1 - 7,3	4,0	20	36	8°	2/11/66	Schelling, Scheer	LI25M61PA3	F03FS02730
215	4,3 - 5,5	3,2	50	42	8°	2/7/80 + 3/15/80	Giben	LI25M43QF3	F03FS02685
215	4,5 - 5,7	3,2	50	42	8°	3/15/80	Giben	LI25M45PF3	F03FS02713
220	6,3 - 7,5	4,4	20	36	8°	2/11/66	Schelling	LI25M63UA3	F03FS02732
250	3,1 - 4,3	2,2	30	54	8°	-		LI25M310C3	F03FS07595
250	4,3 - 5,5	3,2	50	48	8°	3/13/80	Giben	LI25M430F3	F03FS02669
250	4,3 - 5,5	3,2	30	48	8°	2/10/60		LI25M430C3	F03FS02668
280	4,3 - 5,5	3,2	30	48	12°	2/10/60	Panhans	LI25M43VC3	F03FS07419
300	4,3 - 5,5	3,0	65	48	12°	2/9/100 + 2/9/110	Selco	LI25M43RX3	F03FS07616
300	4,3 - 5,5	3,2	30	48	12°	2/11/73 + 2/11/75 + 2/13/94	Schelling	LI25M43RC3	F03FS07577
300	4,3 - 5,5	3,5	50	48	12°	3/15/80	Giben	LI25M43RM3	F03FS02693
300	4,3 - 5,5	3,2	65	72	12°	2/9/100 + 2/9/110	Selco	LI25M43RI3	F03FS02689
300	4,3 - 5,5	3,2	80	72	12°	2/14/110		LI25M43RL3	F03FS02691
300	4,7 - 5,9	3,5	65	48	6°	2/9/110	Selco	LI25M47RX3	F03FS07744
320	4,3 - 5,5	3,0	45	48	12°	-		LI25M43SE3	F03FS02696
320	4,3 - 5,5	3,2	45	48	12°	-		LI25M43SA3	F03FS02695
340	4,7 - 5,9	3,5	45	72	12°	3/14/65	Holzma	LI25M47TE3	F03FS02722

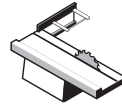




## DLI25M Polycrystalline Diamond conical scoring saw blades (H4 - H6)



Horizontal Panel Sizing Machines



Squaring Saws



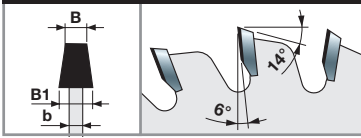
Laminated Chipboard



Laminated MDF



### DP - Conical tooth



#### Machines:

Horizontal panel sizing machines and squaring saws.

#### Materials:

Laminated chipboard and laminated MDF.

#### Applications:

Panel scoring.

#### Technical information:

Extremely longer lifetime thanks to the Polycrystalline Diamond teeth material.

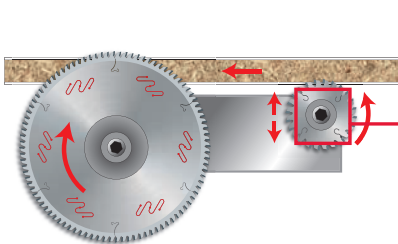
Delivered in dedicated wooden boxes.

### Polycrystalline Diamond conical scoring saw blades H4

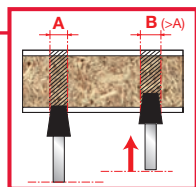
D mm	B-B1 mm	b mm	d mm	Z	NL	Machines	Freud Code	Art. No.
120	2,8 - 3,6	2,2	20	24	-	Schelling	DLI25M28EAH4	F03FS09613
120	2,8 - 3,6	2,2	22	24	-		DLI25M28EBH4	F03FS09615
120	3,1 - 3,9	2,2	20	24	-		DLI25M31EAH4	F03FS09617
125	3,1 - 3,9	2,2	20	24	-	Panhans - Schelling	DLI25M31FAH4	F03FS09619
180	4,3 - 5,1	3,2	45	30	-	Holzma	DLI25M43NEH4	F03FS09621
180	4,7 - 5,5	3,5	45	30	-	Holzma	DLI25M47NEH4	F03FS09623
200	4,3 - 5,1	3,2	65	36	2/9/100 + 2/9/110	Selco	DLI25M43PIH4	F03FS09625
200	4,3 - 5,1	3,2	80	36	2/14/110	Gabbiani	DLI25M43PLH4	F03FS09627
200	4,7 - 5,5	3,5	45	36	-	Holzma	DLI25M47PEH4	F03FS09629
200	4,7 - 5,5	3,5	65	36	2/9/100 + 2/9/110	Selco	DLI25M47PIH4	F03FS09631
215	4,3 - 5,1	3,2	50	42	2/7/80 + 3/15/80	Giben	DLI25M43QFH4	F03FS09633

### Polycrystalline Diamond conical scoring saw blades H6

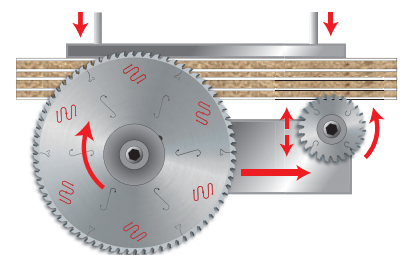
D mm	B-B1 mm	b mm	d mm	Z	NL	Machines	Freud Code	Art. No.
120	2,8 - 3,6	2,2	20	24	-	Schelling	DLI25M28EAH6	F03FS09614
120	2,8 - 3,6	2,2	22	24	-		DLI25M28EBH6	F03FS09616
120	3,1 - 3,9	2,2	20	24	-		DLI25M31EAH6	F03FS09618
125	3,1 - 3,9	2,2	20	24	-	Panhans - Schelling	DLI25M31FAH6	F03FS09620
180	4,3 - 5,1	3,2	45	30	-	Holzma	DLI25M43NEH6	F03FS09622
180	4,7 - 5,5	3,5	45	30	-	Holzma	DLI25M47NEH6	F03FS09624
200	4,3 - 5,1	3,2	65	36	2/9/100 + 2/9/110	Selco	DLI25M43PIH6	F03FS09626
200	4,3 - 5,1	3,2	80	36	2/14/110	Gabbiani	DLI25M43PLH6	F03FS09628
200	4,7 - 5,5	3,5	45	36	-	Holzma	DLI25M47PEH6	F03FS09630
200	4,7 - 5,5	3,5	65	36	2/9/100 + 2/9/110	Selco	DLI25M47PIH6	F03FS09632
215	4,3 - 5,1	3,2	50	42	2/7/80 + 3/15/80	Giben	DLI25M43QFH6	F03FS09634

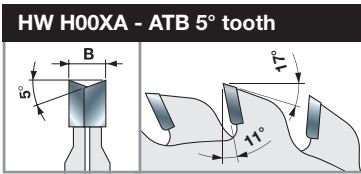


A= Minimum kerf of the scoring saw blade.  
B= Maximum kerf of the scoring saw blade.



For each 1 mm height displacement the cut becomes 0,2 mm wider for H4 and 0,15 mm wider for H6.





**Machines:**  
Squaring saws.

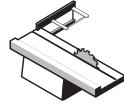
**Materials:**  
Laminated chipboard and laminated MDF.

**Applications:**  
Panel scoring.

**Technical information:**  
To score the coating on bilaminated panels.

## LI16M

## Adjustable scoring saw blades



### Squaring Saws



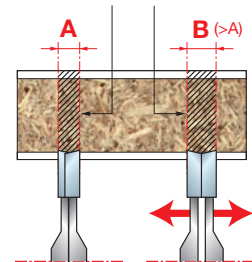
Laminated  
Chipboard

Laminated  
MDF

D mm	B mm	d mm	Z	Machines	Freud Code	Art. No.
80	2,8 - 3,6	20	10 + 10	Robland	LI16M HA3	F03FS02502
80	2,8 - 3,6	20	12 + 12	Felder	LI16M GA3	F03FS02501
100	2,8 - 3,6	20	12 + 12	Schelling - Panhans - Martin	LI16M BA3	F03FS02491
100	2,8 - 3,6	22	12 + 12	Altendorf - Striebig - Panhans	LI16M BB3	F03FS02493
100	2,8 - 3,6	25,4	12 + 12	Baldan	LI16M BR3	F03FS07433
105	2,8 - 3,6	20	10 + 10		LI16M CA3	F03FS02495
120	2,8 - 3,6	20	12 + 12	Holzher - SCM	LI16M AA3	F03FS02485
120	2,8 - 3,6	22	12 + 12	Altendorf - Martin - Mrozek	LI16M AB3	F03FS02488
120	2,8 - 3,6	50	12 + 12	Altendorf - Griggio	LI16M PF3*	F03FS02512
120	2,8 - 3,6	50	12 + 12	Felder	LI16M RF3*	F03FS06512
120	4,0 - 5,0	50	12 + 12		LI16M IF3*	F03FS02504
125	2,8 - 3,6	20	12 + 12	Paoloni	LI16M FA3	F03FS02500
125	2,8 - 3,6	20	14 + 14		LI16M EA3	F03FS02498
125	2,8 - 3,6	22	14 + 14		LI16M EB3	F03FS02499
125	4,0 - 4,7	20	20 + 20	SCM	LI16M DA3	F03FS02496
125	4,0 - 5,0	45	12 + 12	Giben - Mayer	LI16M KE3	F03FS02506
200	4,0 - 5,2	50	28 + 28	Giben	LI16M OF3	F03FS02511

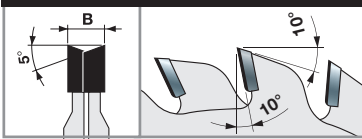
\* Thickness adjustment controlled by the machines, no spacers required.

A= Minimum kerf of the scoring saw blade.  
B= Maximum kerf of the scoring saw blade.





#### DP - ATB 5° tooth



**Machines:**  
Squaring saws.

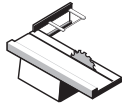
**Materials:**  
Laminated chipboard and laminated MDF.

**Applications:**  
Panel scoring.

**Technical information:**  
To score the coating on bilaminated panels.  
Extremely longer lifetime thanks to the Polycrystalline Diamond teeth material.  
Delivered in dedicated wooden boxes.

## DLI16M

## Polycrystalline Diamond adjustable scoring saw blades (H6)



### Squaring Saws



Laminated Chipboard

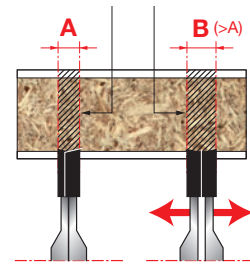


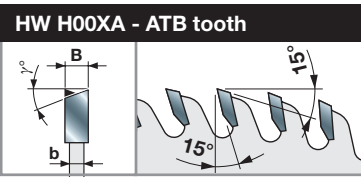
Laminated MDF

### DP - Polycrystalline Diamond adjustable scoring saw blades H6

D	B	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm			
100	2,8 - 3,6	20	12 + 12	Schelling - Panhans - Martin	<b>DLI16MBAH6</b>	F03FS09635
120	2,8 - 3,6	20	12 + 12	Holzer - SCM	<b>DLI16MAAH6</b>	F03FS09636
120	2,8 - 3,6	22	12 + 12	Altendorf - Martin - Mrozek	<b>DLI16MABH6</b>	F03FS09637

A= Minimum kerf of the scoring saw blade.  
B= Maximum kerf of the scoring saw blade.



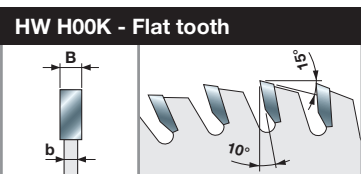


**Machines:**  
Horizontal panel sizing machines.

**Materials:**  
Laminated chipboard and laminated MDF.

**Applications:**  
Panel scoring.

**Technical information:**  
To score the coating on bilaminated panels.



**Machines:**  
Horizontal panel sizing machines.

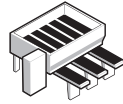
**Materials:**  
Laminated chipboard and laminated MDF.

**Applications:**  
Panel scoring.

**Technical information:**  
To score bilaminated panels with plastic coating.

## LI27M

## Postforming scoring saw blades



Horizontal Panel Sizing Machines



Laminated Chipboard Laminated MDF

D mm	B mm	b mm	d mm	Z	$\gamma$	NL	Freud Code	Art. No.
200	4,7	3,5	80	42	10°	2/14/110	LI27M FA3	F03FS02749
220	3,4	2,2	30	48	10°	-	LI27M AA3	F03FS02733
250	4,6	3,0	30	48	10°	-	LI27M BA3	F03FS02734
280	4,65	3,2	80	72	15°	2/14/110	LI27M47VL3	F03FS08014
280	5,0	3,5	45	84	30°	-	LI27M CA3	F03FS02736
300	4,55	3,0	30	72	10°	-	LI27M DF3	F03FS02745
300	4,55	3,2	65	72	10°	2/9/100+2/9/110	LI27M DA3	F03FS02737
300	4,55	3,2	50	72	10°	3/15/80	LI27M DD3	F03FS02743
300	4,7	3,2	80	72	10°	2/14/110	LI27M DC3	F03FS02741
300	4,95	3,0	65	72	10°	2/9/100+2/9/110	LI27M DB3	F03FS02739
340	5,0	3,5	45	48	30°	3/14/65	LI27M EA3	F03FS02746
340	5,0	3,5	45	108	30°	3/14/65	LI27M EB3	F03FS02747

## LI20M

## Flat tooth scoring saw blades

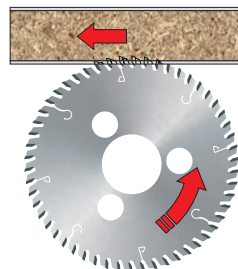


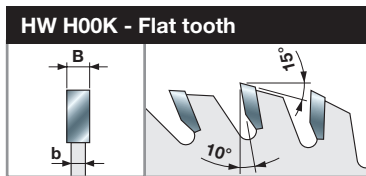
Horizontal Panel Sizing Machines



Laminated Chipboard Laminated MDF

D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
180	3,2	2,2	50	54	3/22/80	LI20M BB3	F03FS02579



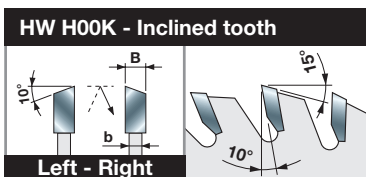


**Machines:**  
SCM horizontal panel sizing machines.

**Materials:**  
Laminated chipboard and laminated MDF.

**Applications:**  
Panel scoring.

**Technical information:**  
To score the coating on bilaminated panels.



**Machines:**  
Horizontal panel sizing machines.

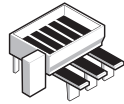
**Materials:**  
Laminated chipboard and laminated MDF.

**Applications:**  
Panel scoring.

**Technical information:**  
To score the coating on bilaminated panels.

## LI17M

## Flat tooth scoring saw blades

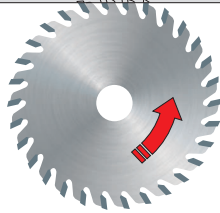


Horizontal Panel Sizing Machines



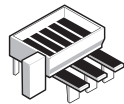
Laminated Chipboard Laminated MDF

D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
115	3,2	2,2	20	30	-	LI17M FA3	F03FS02572
120	3,2	2,2	20	30	-	LI17M GA3	F03FS02574



## LI22MD LI22MS

## Inclined tooth scoring saw blades

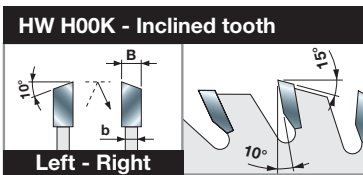


Horizontal Panel Sizing Machines



Laminated Chipboard Laminated MDF

D	B	b	d	Z	NL	Freud Code	Art. No.	Freud Code	Art. No.
mm	mm	mm	mm			Right (D)		Left (S)	
150	3,2	2,2	30	36		LI22MD KC3	F03FS02581	LI22MS KC3	F03FS02592
150	3,2	2,2	55	36		LI22MD KG3	F03FS02583	LI22MS KG3	F03FS02594
150	3,2	2,2	60	36		LI22MD KH3	F03FS02584	LI22MS KH3	F03FS02595
180	3,2	2,2	30	42		LI22MD NC3	F03FS02585	LI22MS NC3	F03FS02596
180	3,2	2,2	55	42		LI22MD NG3	F03FS02586	LI22MS NG3	F03FS02598
200	3,2	2,2	30	48		LI22MD PC3	F03FS02589	LI22MS PC3	F03FS02601
200	3,2	2,2	60	48		LI22MD PH3	F03FS02590	LI22MS PH3	F03FS02602



**Machines:**

Horizontal panel sizing machines and edge banders.

**Materials:**

Wood based panels, laminated chipboard and laminated MDF.

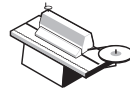
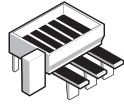
**Applications:**

Panel scoring.

**Technical information:**

To score the coating on bilaminated panels. Especially dedicated to very fragile coating.

## LI13MD LI13MS Inclined tooth scoring saw blades



Horizontal Panel Sizing Machines

Edge Banders



Chipboard



Laminated Chipboard

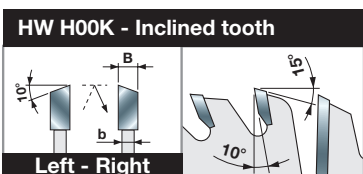


MDF

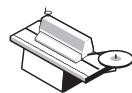


Laminated MDF

D	B	b	d	Z	NL	Freud Code	Art. No.	Freud Code	Art. No.
mm	mm	mm	mm			Right (D)		Left (S)	
100	3,2	2,2	20	24		LI13MD AA3	F03FS02452	LI13MS AA3	F03FS02466
100	3,2	2,2	22	24		LI13MD AB3	F03FS02454	LI13MS AB3	F03FS02468
125	3,2	2,2	20	30		LI13MD BA3	F03FS02455	LI13MS BA3	F03FS02470
150	3,2	2,2	30	48		LI13MD DA3	F03FS02459	LI13MS DA3	F03FS02474
150	3,2	2,2	55	48		LI13MD DB3	F03FS02461	LI13MS DB3	F03FS02476



## LI14MD LI14MS End trim unit for panels with banded edges



Edge Banders



Chipboard



Laminated Chipboard



MDF



Laminated MDF

D	B	b	d	Z	NL	Freud Code	Art. No.	Freud Code	Art. No.
mm	mm	mm	mm			Right (D)		Left (S)	
140	3,2	2,2	30	28 + 4		LI14MD CA3	F03FS02481	LI14MS CA3	F03FS02483

**Machines:**

Edge banders.

**Materials:**

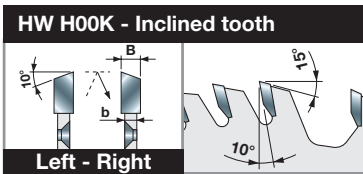
Wood based panels, laminated chipboard and laminated MDF.

**Applications:**

Panel scoring.

**Technical information:**

To score the coating on bilaminated panels. Particularly dedicated to very fragile coatings.



**Machines:**

Double end tenoners.

**Materials:**

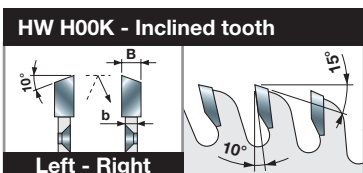
Softwood, hardwood, MDF and plywood.

**Applications:**

Hogging.

**Technical information:**

Saw blades suitable for squaring and trimming panels.



**Machines:**

Squaring edge banding machines and double end tenoners.

**Materials:**

Chipboard and MDF, laminated chipboard and laminated MDF.

**Applications:**

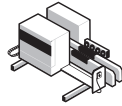
Hogging.

**Technical information:**

Saw blades suitable for squaring and trimming panels.

**LT16MD  
LT16MS**

**Saw blades for  
Freud hogging units**



Double End Tenoners



Softwood



Hardwood

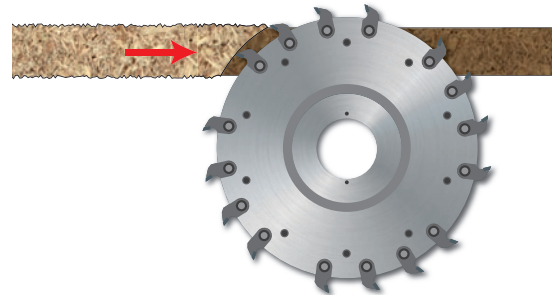


MDF



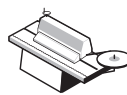
Plywood

D	B	b	d	Z	NL	Freud Code	Art. No.	Freud Code	Art. No.
mm	mm	mm	mm			Right (D)		Left (S)	
250	4,2	3,0	130	56	10/8,5/170	<b>LT16MD BD3</b>	F03FS04401	<b>LT16MS BD3</b>	F03FS04409
300	4,2	3,0	130	68	10/8,5/215	<b>LT16MD CD3</b>	F03FS04404	<b>LT16MS CD3</b>	F03FS04412

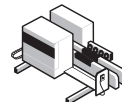


**LT12MD  
LT12MS**

**Saw blades for hogging units**



Edge Banders



Double End Tenoners



Chipboard



MDF

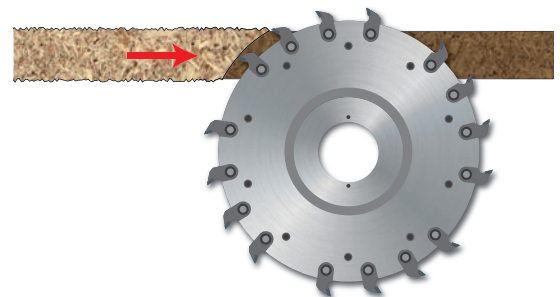


Laminated Chipboard



Laminated MDF

D	B	b	d	Z	NL	Freud Code	Art. No.	Freud Code	Art. No.
mm	mm	mm	mm			Right (D)		Left (S)	
250	4,2	3,0	130	60	4/8,5/185	<b>LT12MD BB3</b>	F03FS04372	<b>LT12MS BB3</b>	F03FS07063

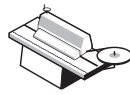




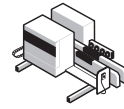


## LT14MD LT14MS

## Saw blades for hogging units - customised



Edge Banders



Double End  
Tenoners



Chipboard



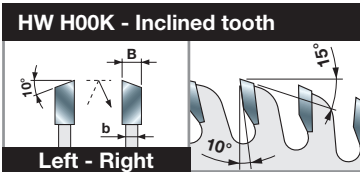
MDF



Laminated  
Chipboard



Laminated  
MDF



### Machines:

Squaring edge banding machines and double end tenoners.

### Materials:

Chipboard, MDF, laminated chipboard and laminated MDF.

### Applications:

Hogging.

### Technical information:

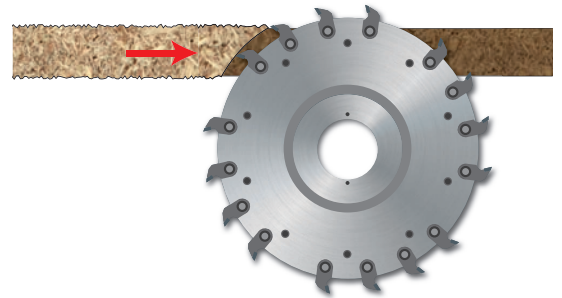
Saw blades suitable for squaring and trimming panels.

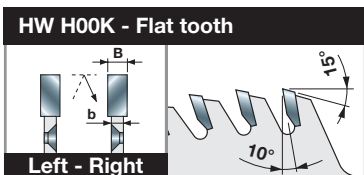
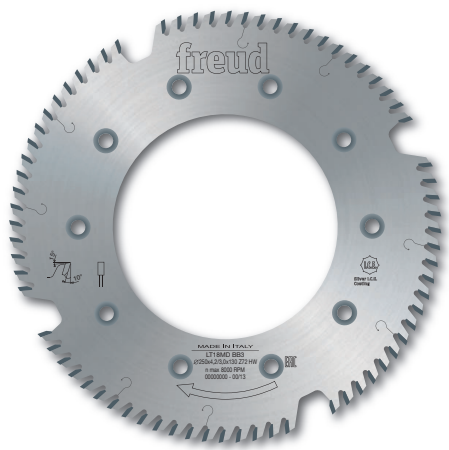
D	B	b	d	Z	NL	Freud Code	Art. No.	Freud Code	Art. No.
mm	mm	mm	mm			Right (D)		Left (S)	
200	4,2	3,0	30	48	*	LT14MD AA3	F03FS04378	LT14MS AA3	F03FS04389
250	4,2	3,0	30	60	*	LT14MD BA3	F03FS04380	LT14MS BA3	F03FS04391
250	4,2	3,0	130	60	*	LT14MD BB3	F03FS04382	LT14MS BB3	F03FS04393
255	4,2	3,0	80	60	*	LT14MD FA3	F03FS04387	LT14MS FA3	F03FS04398
350	4,2	3,0	30	84	*	LT14MD DA3	F03FS04386	LT14MS DA3	F03FS04397

### \* WHEN ORDERING, ALWAYS SPECIFY:

- OPT08 AA9 - to increase bore Ø;
- OPTFO... - for pin holes (NL\* - see page 92).

Send sample saw blade or drawing with bore size. Specify no. of pin holes, diameter of holes (D1) and the diameter of the circumference passing through the centre of the holes (D2).





**Machines:**

Double end tenoners.

**Materials:**

Softwood, hardwood, MDF and plywood.

**Applications:**

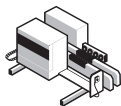
Hogging.

**Technical information:**

Saw blades suitable for squaring and trimming panels.

**LT18MD  
LT18MS**

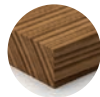
**Saw blades for Freud hogging units**



Double End Tenoners



Softwood



Hardwood

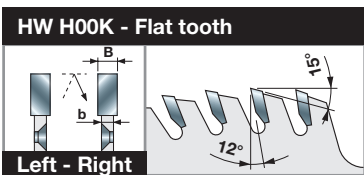


MDF



Plywood

D	B	b	d	Z	NL	Freud Code	Art. No.	Freud Code	Art. No.
mm	mm	mm	mm			Right (D)		Left (S)	
250	4,2	3,0	130	72	10/8,5/170	LT18MD BB3	F03FS04415	LT18MS BB3	F03FS04417



**Machines:**

Double end tenoners.

**Materials:**

Softwood, hardwood, MDF and plywood.

**Applications:**

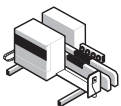
Hogging.

**Technical information:**

Saw blades suitable for squaring and trimming panels.

**LT20MD  
LT20MS**

**Saw blades for Leuco hogging units**



Double End Tenoners



Softwood



Hardwood

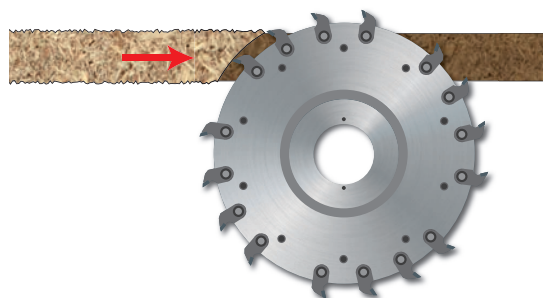


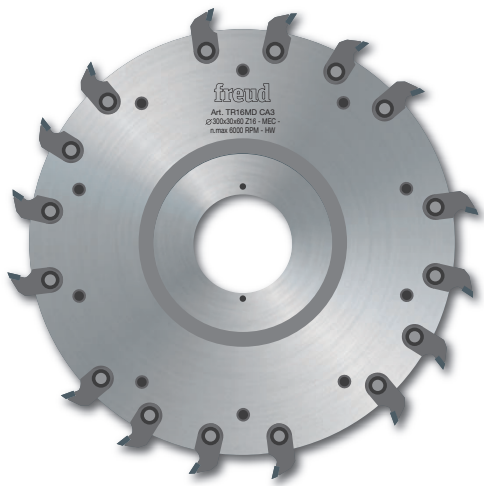
MDF



Plywood

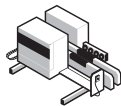
D	B	b	d	Z	NL	Freud Code	Art. No.	Freud Code	Art. No.
mm	mm	mm	mm			Right (D)		Left (S)	
250	4,0	3,0	100	72	6/7/200	LT20MD BB3	F03FS04421	LT20MS BB3	F03FS04422





## TR16MD TR16MS

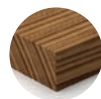
## Hogging units with SR06M interchangeable inserts



Double End  
Tenoners



Softwood



Hardwood



MDF



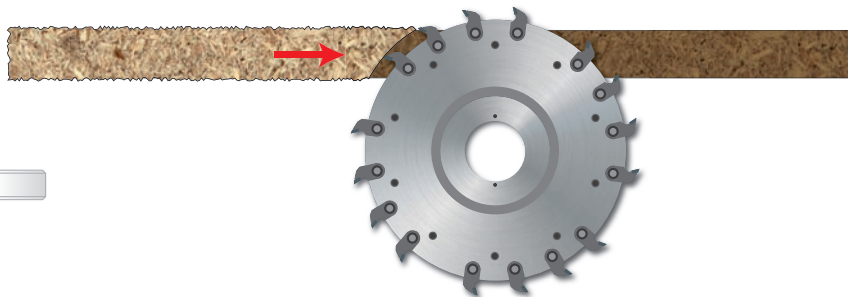
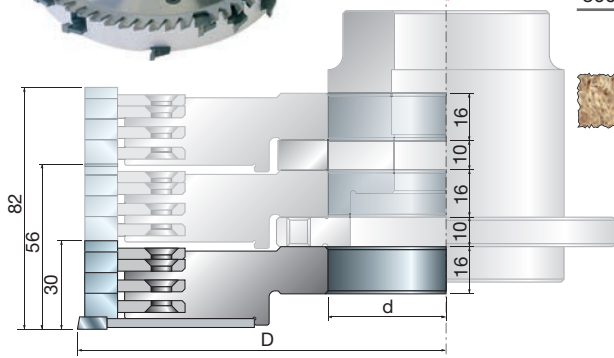
Plywood

\* Nominal saw blade diameter.

D*	B	d	Z	Freud Code	Art. No.	Freud Code	Art. No.
mm	mm	mm	mm	Right (D)		Left (S)	
200	30	80	16	TR16MD AA3	F03FC20547	TR16MS AA3	F03FC20550
250	30	60	16	TR16MD BA3	F03FC20548	TR16MS BA3	F03FC20551
250	30	80	16	TR16MD BB3	F03FC22094	TR16MS BB3	F03FC22096
300	30	60	16	TR16MD CA3	F03FC20549	TR16MS CA3	F03FC20552
300	30	80	16	TR16MD CB3	F03FC22095	TR16MS CB3	F03FC22097



TR16MS  
TR16MD



These tools can be stacked and used in multiples thus enabling the machining of a wider area.

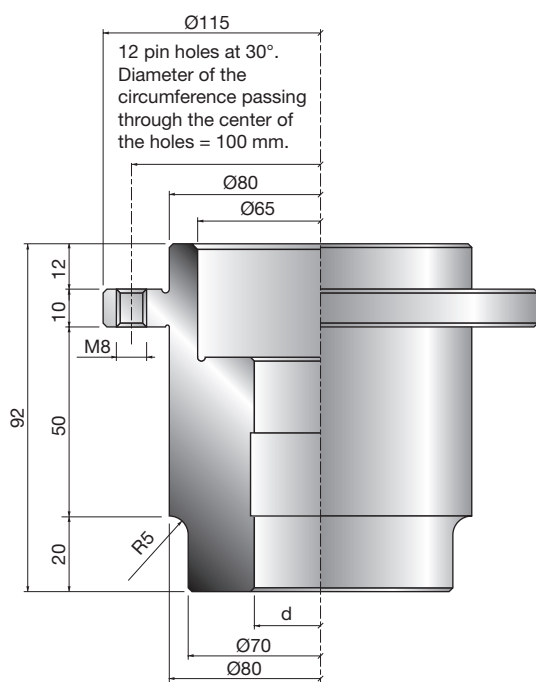
Particularly indicated for squaring solid wood panels.

Spare parts	Dimensions	Freud Code	Art. No.
Grooving inserts	34 x 9 x 16	SR06MDBB301	F03FC24198
Grooving inserts	34 x 9 x 16	SR06MSBB301	F03FC24201
Screw	M6 x 11,5	VT16M AB9	F03FA04477
Screw	M6 x 10	VT01M AA9	F03FA04429
Allen key	4	CB03M BA9	F03FA00163

## MT01M

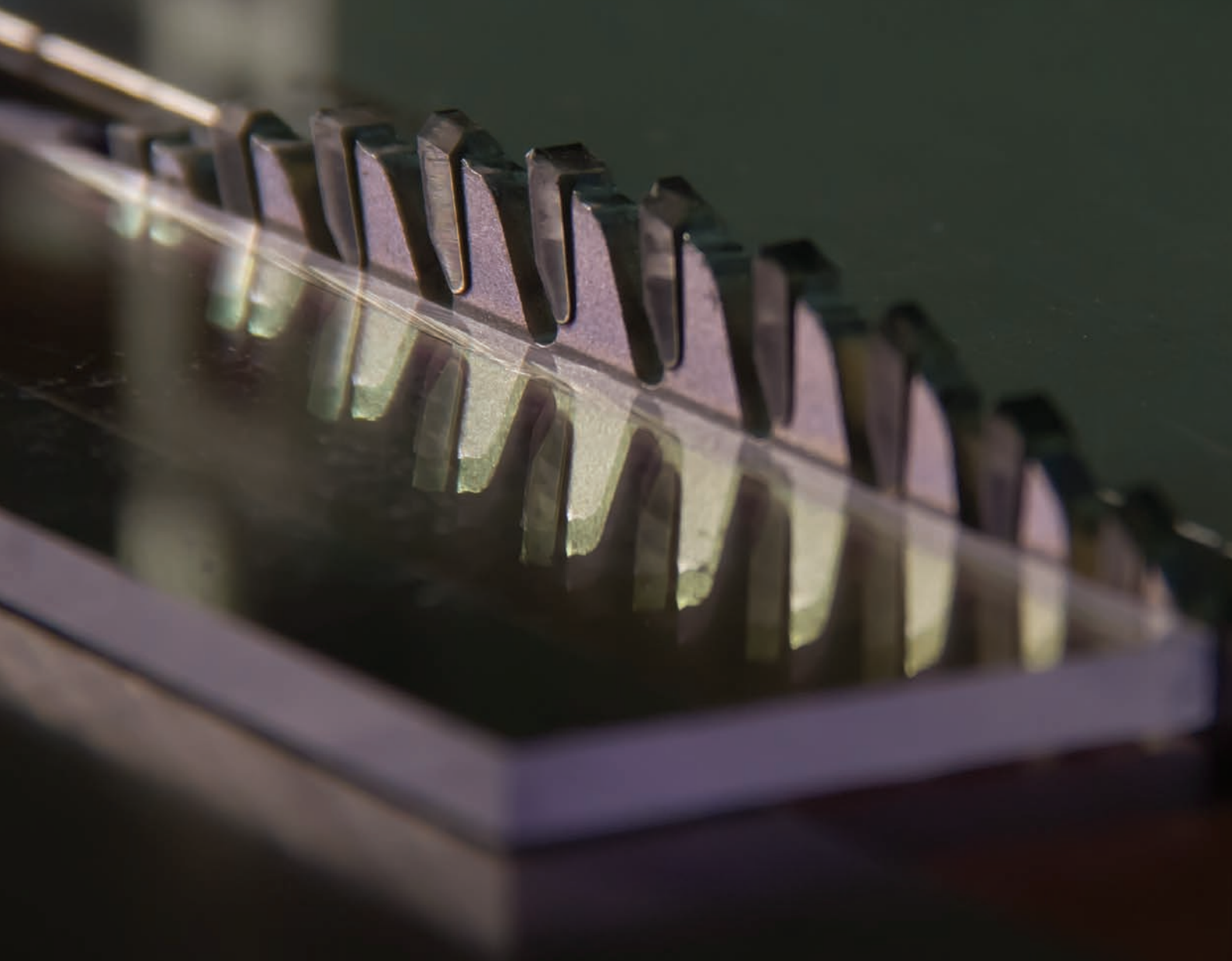
## Mounting sleeves for hogging units

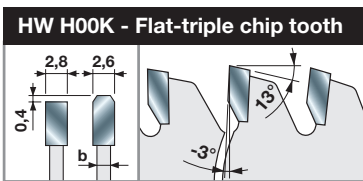
d	KN	Freud Code	Art. No.
mm			
35	10 x 4	MT01M DA9	F03FC15424



Item **MT01M** includes the fixing operation of the mounting sleeve to the hogging unit.

# Polymeric Materials





**Machines:**

Squaring saws and table saws, hand-held circular saws.

**Materials:**

Plexiglas and plastics.

**Applications:**

Plexiglas and plastic cutting.

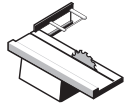
**Technical information:**

Saw blades with negative cutting angle suitable to cut plastic materials.

For a proper use, a blade projection of approximately 30 mm over the workpiece is recommended.

**LU4A**

**Saw blades to cut plastic materials**



Squaring Saws

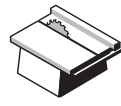


Table Saws



Hand-held Circular Saws



Plexiglas



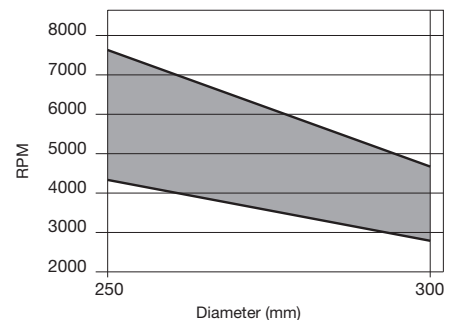
Plastics



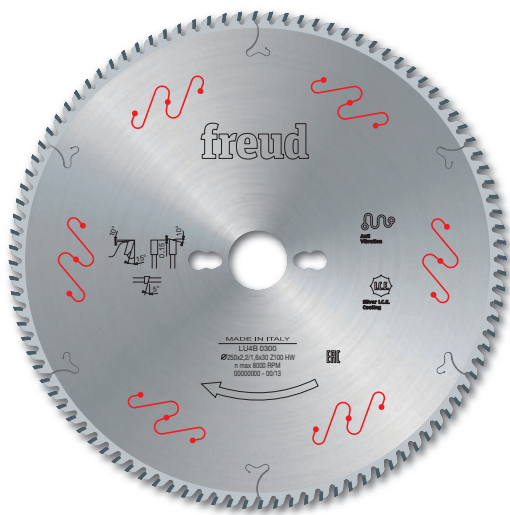
●●● Ultimate ●● High ● Good

D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
250	2,8	2,2	30	80	FT01	LU4A 0100	F03FS05163
300	2,8	2,2	30	96	FT01	LU4A 0200	F03FS05165

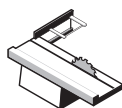
FT01: 2/7/42 + 2/9/46,4 + 2/10/60



Minimum and maximum RPM based on the blade diameter.



## LU4B Thin kerf saw blades to cut plastic materials and plexiglas - axial angle



Squaring Saws

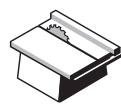


Table Saws



Hand-held Circular Saws



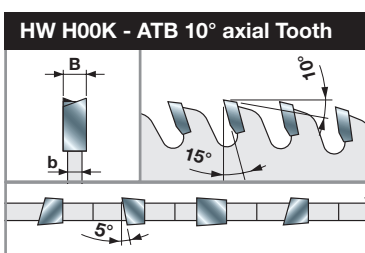
Plexiglas



Plastics



●●● Ultimate ●● High ● Good



D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
178	1,5	1,0	25,4	80	-	LU4B 0500	F03FS05173
203	2,0	1,4	25,4	90	-	LU4B 0100	F03FS05167
230	2,2	1,6	25,4	100	-	LU4B 0200	F03FS05169
250	2,2	1,6	30	100	FT01	LU4B 0300	F03FS05170
255	2,2	1,6	25,4	100	-	LU4B 0400	F03FS05172

FT01: 2/7/42 + 2/9/46,4 + 2/10/60

### Machines:

Squaring saws and table saws, hand-held circular saws.

### Materials:

Plexiglas and plastics.

### Applications:

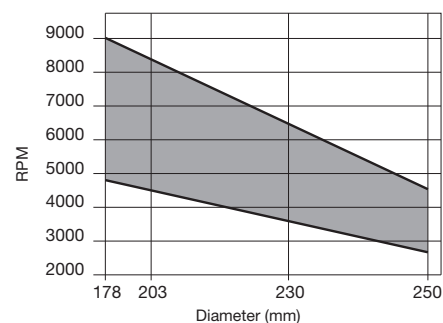
Plexiglas and plastic cutting.

### Technical information:

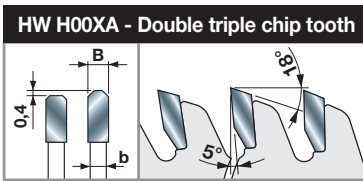
To size plexiglas and plastic panels.

The thin kerf design makes the workpiece feed easy especially when using low-power machines.

A perfect cutting finishing is granted by the 5° axial angle.



Minimum and maximum RPM based on the blade diameter.



**Machines:**

Squaring saws and table saws, mitre saws.

**Materials:**

Solid surfaces.

**Applications:**

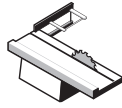
Solid surfaces cutting.

**Technical information:**

The double triple chip grinding ensures flawless finishing, moreover the H00XA Carbide grants a long blade lifetime, thanks to its extraordinary resistance to abrasive materials.

**LU4D**

**Saw blades to cut solid surfaces**



Squaring Saws

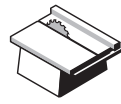


Table Saws



Mitre Saws



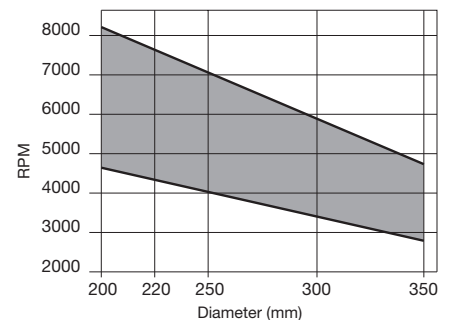
Solid Surfaces



●●● Ultimate ●● High ● Good

D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
250	3,2	2,5	30	80	FT02	LU4D 0100	F03FS07294
300	3,2	2,5	30	96	FT02	LU4D 0200	F03FS07295
350	3,5	2,8	30	108	FT02	LU4D 0300	F03FS07296

FT02: 2/9/46,4 + 2/10/60



Minimum and maximum RPM based on the blade diameter.

# Non-ferrous Metals

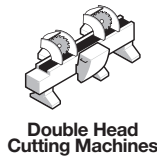




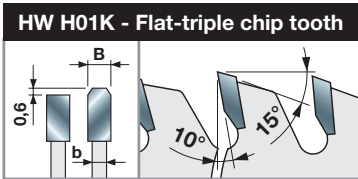


## LU5A

## Saw blades to cut non-ferrous metals



●●● Ultimate ●● High ● Good



### Machines:

Double head cutting machines and CNC cutting units.

### Materials:

Aluminium, copper and brass.

### Applications:

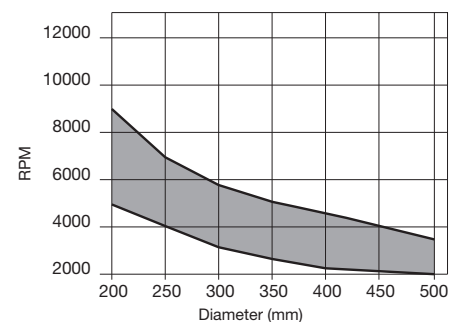
Aluminium and non-ferrous metals cutting.

### Technical information:

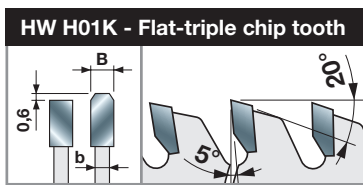
To cut solid drawn products with a thickness between 2 and 10 mm.

D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
200	2,8	2,2	30	54	-	LU5A 0100	F03FS05181
250	3,5	3,0	30	60	FT02	LU5A 0200	F03FS05182
250	3,5	3,0	32	60	2/11/63	LU5A 0300	F03FS05183
275	3,5	3,0	40	68	2/9/55 + 4/12/64	LU5A 0400	F03FS05185
300	3,5	3,0	30	72	FT02	LU5A 0500	F03FS05186
300	3,5	3,0	32	72	2/11/63	LU5A 0600	F03FS05187
330	3,5	3,0	30	84	FT02	LU5A 0800	F03FS05190
330	3,5	3,0	32	84	2/11/63	LU5A 0900	F03FS05192
350	3,5	3,0	30	84	FT02	LU5A 1000	F03FS05193
350	3,5	3,0	32	84	2/11/63	LU5A 1100	F03FS05194
350	3,5	3,0	40	84	2/9/55 + 4/12/64	LU5A 1200	F03FS05196
370	3,5	3,0	30	90	-	LU5A 1300	F03FS05197
370	3,5	3,0	50	90	4/15/80	LU5A 1400	F03FS05198
380	3,5	3,0	32	96	2/11/63	LU5A 1500	F03FS05199
400	3,5	3,0	30	96	2/11/63	LU5A 1600	F03FS05200
400	3,5	3,0	32	96	2/11/63	LU5A 1700	F03FS05202
400	3,5	3,0	40	96	2/12/64 + 2/15/80	LU5A 1800	F03FS05205
400	3,5	3,0	50	96	4/15/80	LU5A 1900	F03FS05206
420	3,5	3,0	30	96	2/11/70	LU5A 2000	F03FS05207
450	4,0	3,2	30	108	2/11/63	LU5A 2100	F03FS05208
450	4,0	3,2	32	108	2/11/63	LU5A 2200	F03FS05210
450	4,0	3,2	40	108	2/12/64 + 2/15/80	LU5A 2300	F03FS08047
450	4,0	3,2	50	108	4/15/80	LU5A 2400	F03FS07420
500	4,0	3,2	30	120	2/10,5/70	LU5A 2500	F03FS05212
500	4,0	3,2	32	120	2/11/63	LU5A 2600	F03FS05214
500	4,0	3,2	50	120	4/15/80	LU5A 2700	F03FS08244
500	4,4	3,5	30	120	-	LU5A 3000	F03FS07543
530	4,2	3,5	30	126	2/10,5/70	LU5A 2800	F03FS06607
550	4,2	3,5	30	132	2/10,5/70	LU5A 2900	F03FS06608

FT02: 2/9/46,4 + 2/10/60



Minimum and maximum RPM based on the blade diameter.



**Machines:**  
Double head cutting machines and CNC cutting units.

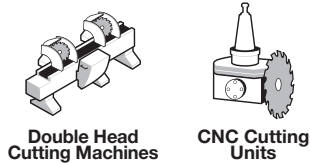
**Materials:**  
Aluminium, copper, brass, plastics and PVC.

**Applications:**  
Aluminium, non-ferrous metals and plastic cutting.

**Technical information:**  
To cut drawn products and tubes with a thickness between 2 and 5 mm, as well as polymeric panels up to 20 mm. Suitable for PVC profiles cutting.

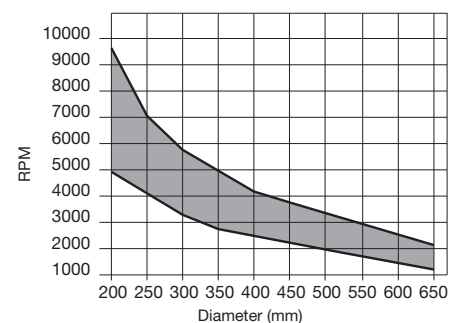
## LU5B

## Saw blades to cut non-ferrous metals and plastics

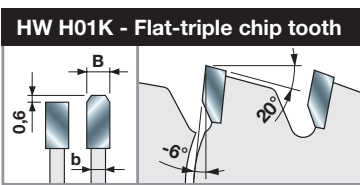
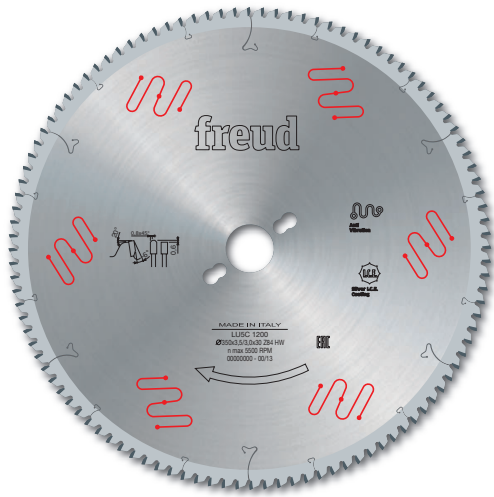


D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
200	2,8	2,2	30	64	-	LU5B 0100	F03FS05217
250	3,5	3,0	30	80	FT02	LU5B 0200	F03FS05218
250	3,5	3,0	32	80	2/11/63	LU5B 0300	F03FS05221
275	3,5	3,0	40	84	2/9/55 + 4/12/64	LU5B 0400	F03FS05223
300	3,5	3,0	30	88	FT02	LU5B 0500	F03FS05224
300	3,5	3,0	32	88	2/11/63	LU5B 0600	F03FS05225
300	3,5	3,0	40	88	2/9/55 + 4/12/64	LU5B 0700	F03FS05227
300	3,5	3,0	30	96	FT02	LU5B 0800	F03FS05228
300	3,5	3,0	32	96	2/11/63	LU5B 0900	F03FS05230
300	3,5	3,0	40	96	2/9/55 + 4/12/64	LU5B 1000	F03FS05232
330	3,5	3,0	30	104	FT02	LU5B 1100	F03FS05233
330	3,5	3,0	32	104	2/11/63	LU5B 1200	F03FS05234
350	3,5	3,0	30	96	FT02	LU5B 1300	F03FS05235
350	3,5	3,0	32	96	2/11/63	LU5B 1400	F03FS05236
350	3,5	3,0	40	96	2/9/55 + 4/12/64	LU5B 1500	F03FS05238
350	3,5	3,0	30	108	FT02	LU5B 1600	F03FS05239
350	3,5	3,0	32	108	2/11/63	LU5B 1700	F03FS05240
350	3,5	3,0	40	108	2/9/55 + 4/12/64	LU5B 1800	F03FS05242
370	3,5	3,0	30	112	-	LU5B 1900	F03FS07745
370	3,5	3,0	50	112	4/15/80	LU5B 2000	F03FS05243
380	3,5	3,0	32	112	2/11/63	LU5B 2100	F03FS05244
400	3,5	3,0	30	120	2/11/63	LU5B 2200	F03FS05245
400	3,5	3,0	32	120	2/11/63	LU5B 2300	F03FS05246
400	3,5	3,0	40	120	2/12/64 + 2/15/80	LU5B 2400	F03FS05248
400	3,5	3,0	50	120	4/15/80	LU5B 2500	F03FS05249
400	3,5	3,0	75	120	2/15/96 + 2/15/114 + 4/18/105	LU5B 2275	F03FS09967
420	3,5	3,0	30	120	2/11/70	LU5B 2600	F03FS05250
450	4,0	3,0	30	128	-	LU5B 2700	F03FS05251
450	4,0	3,0	32	128	2/11/63	LU5B 2800	F03FS05252
500	4,0	3,2	30	140	2/10,5/70	LU5B 3100	F03FS05254
500	4,0	3,2	32	140	2/11/63	LU5B 3200	F03FS05255
550	4,2	3,5	30	148	2/11/63	LU5B 3500	F03FS05257
550	4,2	3,5	32	148	2/11/63	LU5B 3800	F03FS05260
600	4,8	3,8	30	156	-	LU5B 3600	F03FS05258

FT02: 2/9/46,4 + 2/10/60



Minimum and maximum RPM based on the blade diameter.



**Machines:**

Double head cutting machines, mitre saws.

**Materials:**

Aluminium, copper and brass.

**Applications:**

Aluminium and non-ferrous metals cutting.

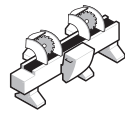
**Technical information:**

To cut solid drawn products whose thickness exceeds 3 mm.

It is recommended to use it on cutting machines where the saw blade is over the workpiece to be cut.

**LU5C**

**Saw blades to cut non-ferrous metals**



Double Head Cutting Machines



Mitre Saws



Aluminium



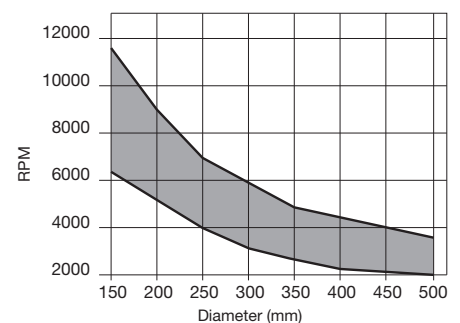
Copper and Brass



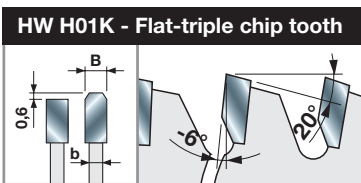
●●● Ultimate ●● High ● Good

D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
180	2,8	2,2	20	42	-	LU5C 0100	F03FS07195
180	2,8	2,2	30	42	-	LU5C 0200	F03FS05261
200	2,8	2,2	30	48	-	LU5C 0300	F03FS05262
250	3,5	3,0	30	54	-	LU5C 0400	F03FS05263
275	3,5	3,0	40	60	-	LU5C 0600	F03FS05264
300	3,5	3,0	30	72	FT02	LU5C 0700	F03FS05265
300	3,5	3,0	32	72	2/11/63	LU5C 0800	F03FS05266
300	3,5	3,0	40	72	2/9/55 + 4/12/64	LU5C 0900	F03FS05267
330	3,5	3,0	30	80	-	LU5C 1000	F03FS05268
330	3,5	3,0	32	80	2/11/63	LU5C 1100	F03FS05269
350	3,5	3,0	30	84	FT01	LU5C 1200	F03FS05270
350	3,5	3,0	32	84	2/11/63	LU5C 1300	F03FS05271
350	3,5	3,0	40	84	2/9/55 + 4/12/64	LU5C 1400	F03FS05272
370	3,5	3,0	30	90	-	LU5C 1500	F03FS05273
370	3,5	3,0	50	90	4/15/80	LU5C 1600	F03FS05274
380	3,5	3,0	32	96	2/11/63	LU5C 1700	F03FS05275
400	3,5	3,0	30	96	2/11/70	LU5C 1800	F03FS05276
400	3,5	3,0	32	96	2/11/63	LU5C 1900	F03FS05277
400	3,5	3,0	40	96	2/12/64 + 2/15/80	LU5C 2000	F03FS05278
400	3,5	3,0	50	96	4/15/80	LU5C 2100	F03FS05279
420	4,0	3,2	30	96	2/11/70	LU5C 2200	F03FS05280
420	4,0	3,2	40	96	-	LU5C 2300	F03FS05281
450	4,0	3,2	30	108	-	LU5C 2400	F03FS05282
450	4,0	3,2	32	108	2/11/63	LU5C 2500	F03FS05283
450	4,0	3,2	40	108	2/12/64 + 2/15/80	LU5C 2600	F03FS05284
450	4,0	3,2	50	108	4/15/80	LU5C 2700	F03FS05285
500	4,0	3,2	30	120	-	LU5C 2800	F03FS06110
500	4,0	3,2	32	120	2/11/63	LU5C 2900	F03FS05286

FT01: 2/7/42 + 2/9/46,4 + 2/10/60 - FT02: 2/9/46,4 + 2/10/60



Minimum and maximum RPM based on the blade diameter.



**Machines:**

Double head cutting machines, mitre saws.

**Materials:**

Aluminium, copper, brass, plastics and PVC.

**Applications:**

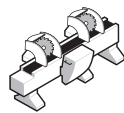
Aluminium, non-ferrous metals and plastics cutting.

**Technical information:**

To cut drawn products and tubes whose thickness does not exceed 3 mm. It is recommended to use it on cutting machines where the saw blade is over the workpiece to be cut. Suitable for PVC profiles cutting.

**LU5D**

**Saw blades to cut non-ferrous metals and plastics**



Double Head Cutting Machines



Mitre Saws



Aluminium



Copper and Brass



Plastics



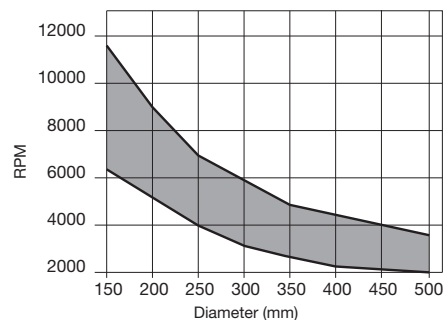
PVC



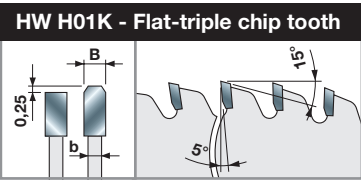
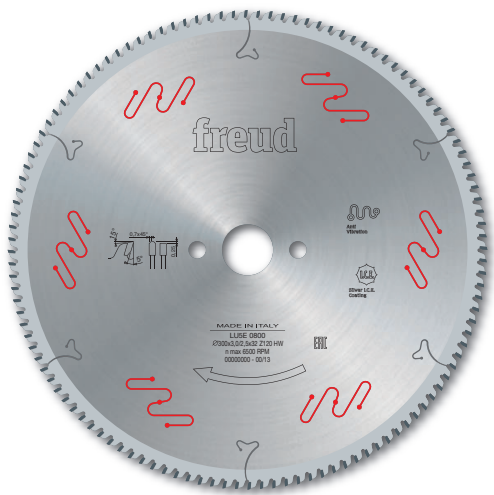
●●●● Ultimate ●● High ● Good

D mm	B mm	b mm	d mm	Z	NL	Freud Code	Art. No.
160	2,8	2,2	20	42	-	LU5D 0100	F03FS05288
190	2,8	2,2	30	54	-	LU5D 0200	F03FS05289
200	2,8	2,2	30	60	-	LU5D 0300	F03FS05290
210	2,8	2,2	30	60	-	LU5D 0400	F03FS05291
216	2,8	2,2	30	60	-	LU5D 0500	F03FS05292
220	3,0	2,5	30	64	FT02	LU5D 0600	F03FS05293
230	3,0	2,5	30	64	-	LU5D 0700	F03FS05294
250	3,5	3,0	30	80	FT02	LU5D 0800	F03FS05295
250	3,5	3,0	32	80	2/11/63	LU5D 0900	F03FS05297
250	3,5	3,0	40	80	2/9/55 + 4/12/64	LU5D 1000	F03FS05299
275	3,5	3,0	40	84	2/9/55 + 4/12/64	LU5D 1100	F03FS05300
300	3,5	3,0	30	96	FT02	LU5D 1200	F03FS05301
300	3,5	3,0	32	96	2/11/63	LU5D 1300	F03FS05303
300	3,5	3,0	40	96	2/9/55 + 4/12/64	LU5D 1400	F03FS05305
330	3,5	3,0	30	104	FT02	LU5D 1500	F03FS05306
330	3,5	3,0	32	104	2/11/63	LU5D 1600	F03FS05308
350	3,5	3,0	30	108	FT02	LU5D 1700	F03FS05309
350	3,5	3,0	32	108	2/11/63	LU5D 1800	F03FS05311
350	3,5	3,0	40	108	2/9/55 + 4/12/64	LU5D 1900	F03FS05313
370	3,5	3,0	30	108	-	LU5D 2000	F03FS05314
380	3,5	3,0	32	108	2/11/63	LU5D 2200	F03FS05315
400	3,5	3,0	30	120	-	LU5D 2300	F03FS05316
400	3,5	3,0	32	120	2/11/63	LU5D 2400	F03FS05317
400	3,5	3,0	40	120	2/15/80 + 2/12/64	LU5D 2500	F03FS05318
400	3,5	3,0	50	120	4/15/80	LU5D 2600	F03FS05319
420	4,0	3,2	30	120	2/11/70	LU5D 2700	F03FS05320
420	4,0	3,2	40	120	-	LU5D 2800	F03FS05321
450	4,0	3,2	30	128	-	LU5D 2900	F03FS05322
500	4,0	3,2	32	140	2/11/63	LU5D 3400	F03FS05323

FT02: 2/9/46,4 + 2/10/60



Minimum and maximum RPM based on the blade diameter.



**Machines:**  
Double head cutting machines, mitre saws.

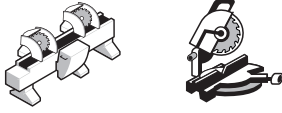
**Materials:**  
Aluminium, copper and brass.

**Applications:**  
Aluminium and non-ferrous metals cutting.

**Technical information:**  
To cut special drawn products, such as tubes and profiles with ultra-thin walls. The reduced kerf grants an excellent cutting finishing with no burns and enables the use of the blade on low-power cutting machines.

**LU5E**

**Reduced kerf saw blades to cut non-ferrous metals**



Double Head Cutting Machines    Mitre Saws

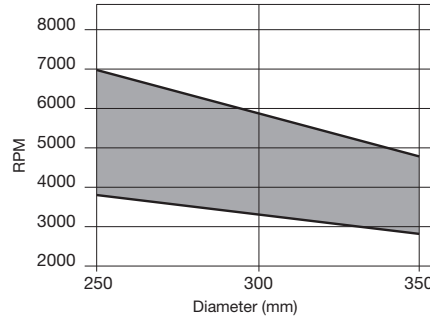


Aluminium    Copper and Brass

●●● Ultimate    ●● High    ● Good

D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
250	2,8	2,2	30	100	FT01	LU5E 0100	F03FS05324
250	2,8	2,2	32	100	2/11/63	LU5E 0200	F03FS05325
255	2,8	2,2	25,4	100	-	LU5E 0300	F03FS05327
255	2,8	2,2	25,4	120	-	LU5E 0400	F03FS05329
300	3,0	2,5	30	100	FT02	LU5E 0500	F03FS05331
300	3,0	2,5	30	120	FT02	LU5E 0700	F03FS05334
300	3,0	2,5	32	120	2/11/63	LU5E 0800	F03FS05337
305	3,0	2,5	25,4	120	-	LU5E 0600	F03FS05333
350	3,0	2,5	30	100	FT02	LU5E 0900	F03FS05339
350	3,0	2,5	32	100	2/11/63	LU5E 1000	F03FS05340
350	3,0	2,5	30	120	FT02	LU5E 1100	F03FS05341
350	3,0	2,5	32	120	2/11/63	LU5E 1200	F03FS05342

FT01: 2/7/42 + 2/9/46,4 + 2/10/60 - FT02: 2/9/46,4 + 2/10/60

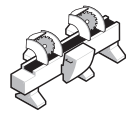


Minimum and maximum RPM based on the blade diameter.

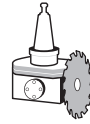


## LU5F

## Saw blades to cut non-ferrous metals and plastics



Double Head Cutting Machines



CNC Cutting Units



Aluminium



Copper and Brass



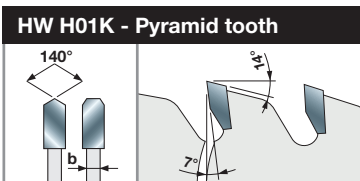
Plastics



PVC



●●● Ultimate ●● High ● Good



### Machines:

Double head cutting machines and CNC cutting units.

### Materials:

Aluminium, copper, brass, plastics and PVC.

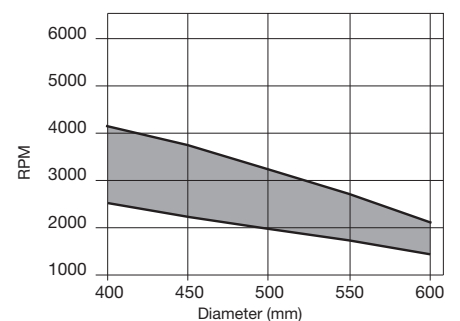
### Applications:

Aluminium, non-ferrous metals and plastics cutting.

### Technical information:

Saw blades to cut thin wall aluminium profiles up to 4,5 mm for doors and windows, also including built-in plastic profiles.

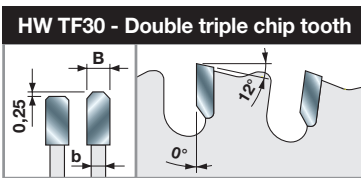
D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
400	3,5	3,0	30	96	2/11/63 + 2/11/70	LU5F40001	F03FS07683
400	3,5	3,0	32	96	2/11/63 + 2/11/70	LU5F40002	F03FS07684
400	3,5	3,0	30	120	2/11/63 + 2/11/70	LU5F40003	F03FS07685
400	3,5	3,0	32	120	2/11/63 + 2/11/70	LU5F40004	F03FS07686
420	3,5	3,0	30	100	2/11/63 + 2/11/70	LU5F42001	F03FS07687
420	3,5	3,0	32	100	2/11/63 + 2/11/70	LU5F42002	F03FS07688
450	3,5	3,0	30	108	2/11/63 + 2/11/70	LU5F45001	F03FS07689
450	3,5	3,0	32	108	2/11/63 + 2/11/70	LU5F45002	F03FS07690
500	4,0	3,5	30	120	2/11/63 + 2/11/70	LU5F50001	F03FS07691
500	4,0	3,5	32	120	2/11/63 + 2/11/70	LU5F50002	F03FS07692
530	4,0	3,5	30	126	2/11/63 + 2/11/70	LU5F53001	F03FS07693
530	4,0	3,5	32	126	2/11/63 + 2/11/70	LU5F53002	F03FS07694
550	4,0	3,5	30	132	2/11/63 + 2/11/70	LU5F55001	F03FS07695
550	4,0	3,5	32	132	2/11/63 + 2/11/70	LU5F55002	F03FS07696
600	4,7	4,0	30	144	2/11/63 + 2/11/70	LU5F60001	F03FS07697
600	4,7	4,0	32	144	2/11/63 + 2/11/70	LU5F60002	F03FS07698
600	4,7	4,0	30	156	2/11/63 + 2/11/70	LU5F60003	F03FS07699
600	4,7	4,0	32	156	2/11/63 + 2/11/70	LU5F60004	F03FS07700



Minimum and maximum RPM based on the blade diameter.

# Ferrous Metals





**Machines:**  
Dry cut mitre saws.

**Materials:**  
Steel.

**Applications:**  
Steel dry cutting.

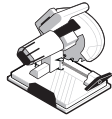
**Technical information:**  
Dry-cut saw blades for steel tubes and profiles.  
Suitable also for small-size steel bars.  
Ensure the workpiece is properly clamped when cutting.

Saw blade diameter	Maximum RPM
160 mm	3.200
184 mm	3.000
190 mm	2.600
210 mm	2.300
216 mm	2.200
230 mm	2.100
250 mm	1.900
255 mm	1.900
300 mm	1.800
305 mm	1.800
315 mm	1.700
350 mm	1.600
355 mm	1.600
400 mm	1.400

Table of maximum RPM based on the blade diameter, for saw blades to cut ferrous metals.

## LU6A

## Saw blades to cut ferrous metal



Dry cut  
Mitre Saws



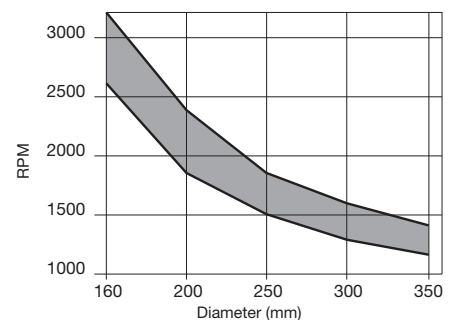
Steel



●●● Ultimate ●● High ● Good

D	B	b	d	Z	NL	Freud Code	Art. No.
mm	mm	mm	mm				
160	2,0	1,6	20	30	-	LU6A 0100	F03FS05343
184	2,0	1,6	15,88	38	-	LU6A 0200	F03FS05344
184	2,0	1,6	15,88	48	-	LU6A 1900	F03FS06586
190	2,0	1,6	30	38	-	LU6A 0300	F03FS05345
210	2,0	1,6	30	40	-	LU6A 0400	F03FS05346
216	2,0	1,6	30	40	-	LU6A 0500	F03FS05347
230	2,0	1,6	30	48	FT01	LU6A 0600	F03FS05348
230	2,4	2,0	25,4	44	-	LU6A 0700	F03FS05349
250	2,4	2,0	30	48	FT01	LU6A 0800	F03FS05350
254	2,4	2,0	25,4	50	-	LU6A 0900	F03FS05351
254	2,4	2,0	25,4	60	-	LU6A 1000	F03FS05352
300	2,6	2,2	30	60	FT01	LU6A 1700	F03FS05359
300	2,6	2,2	30	80	FT01	LU6A 1800	F03FS05360
305	2,6	2,2	25,4	60	-	LU6A 1100	F03FS05353
305	2,6	2,2	25,4	80	-	LU6A 1200	F03FS05354
350	2,6	2,2	30	72	FT01	LU6A 1300	F03FS05355
350	2,6	2,2	30	90	FT01	LU6A 1400	F03FS05356
355	2,6	2,2	25,4	72	-	LU6A 1500	F03FS05357
355	2,6	2,2	25,4	90	-	LU6A 1600	F03FS05358

FT01: 2/7/42 + 2/9/46,4 + 2/10/60



Minimum and maximum RPM based on the blade diameter.



## BLA

## Standard reduction rings for saw blades

D mm	S mm	d mm	Freud Code	Art. No.
15,88	0,8	10	BLA08158100	F03FA23018
20	1,2	12,7	BL15M20127	F03FC00694
20	1,5	16	BLA15200160V01	F03FS11956
20	1,8	16	BLA18200160V01	F03FS11960
25,4	1,0	19,05	BLA10254190V01	F03FS11954
25,4	1,2	20	BLA12254200V01	F03FS11955
30	1,5	15,88	BLA15300158	F03FA23019
30	1,8	15,88	BLA18300158	F03FA23020
30	1,5	20	BLA15300200V01	F03FS11957
30	1,8	20	BLA18300200	F03FA23021
30	1,5	25	BLA15300250V01	F03FS11958
30	1,8	25	BLA18300250	F03FA23022
30	1,5	25,4	BLA15300254V01	F03FS11959
30	1,8	25,4	BLA18300254V01	F03FS11961
35	1,8	25,4	BLA18350254	F03FA22201
35	1,8	30	BLA18350300	F03FA23023

## OPT06

## Optional workings Standard keyways

D mm	B mm	Freud Code	Art. No.
10	5	OPT06 AA9	F03FC16213
12	5	OPT06 BA9	F03FC16214
12,5	4	OPT06 CA9	F03FC16215
13	5	OPT06 DA9	F03FC16216
15	5	OPT06 EA9	F03FC16217
17	5	OPT06 FA9	F03FC16218
18	5	OPT06 GA9	F03FC16219
21	5	OPT06 HA9	F03FC16220

## OPT07

## Optional workings Special keyways

Freud Code	Art. No.
OPT07 AA9	F03FC16221

## OPT08

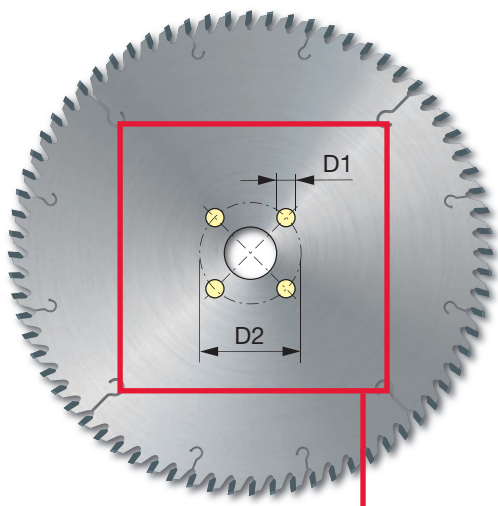
## Optional workings Special reboring

Freud Code	Art. No.
OPT08 AA9	F03FC16222

## OPTF0

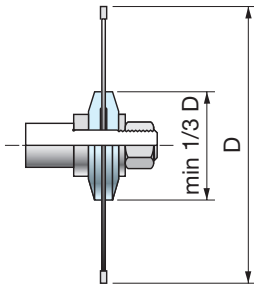
## Optional workings Safety pin holes for saw blades

	Freud Code	Art. No.
1	OPTF0 AA9	F03FC16103
2	OPTF0 AB9	F03FC16104
3	OPTF0 AC9	F03FC16105
4	OPTF0 AD9	F03FC16106
5	OPTF0 AE9	F03FC16107
6	OPTF0 AF9	F03FC16108
7	OPTF0 AG9	F03FC16109
8	OPTF0 AM9	F03FC16111
10	OPTF0 AH9	F03FC16110

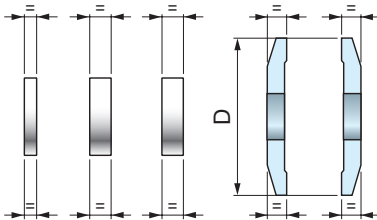


Specify no. of pin holes, diameter of holes (D1) and the diameter of the circumference passing through the centre of the holes (D2).

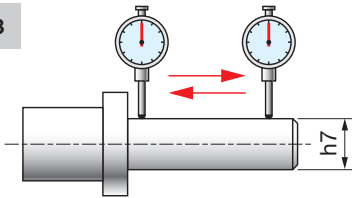
1



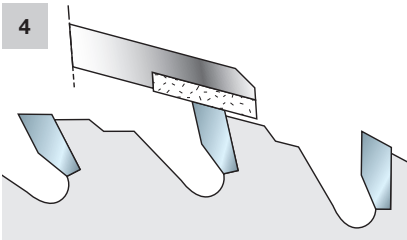
2



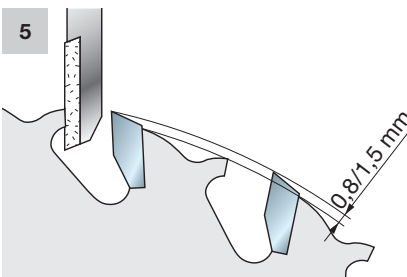
3



4



5



## TIPS FOR THE CORRECT USE OF A CIRCULAR SAW BLADE

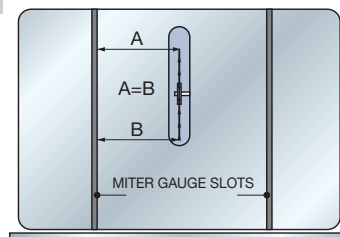
To obtain the best performance from a saw blade we suggest following these simple instructions:

- The machine must be in good condition, free from vibrations.
- The flanges used to secure the blade must be of the same diameter, at least 1/3 of the blade's diameter (Fig. 1).
- The flanges must be parallel to each other. Also check tolerances on diameters, sides and concentricity, by using a clock gauge (Fig. 2).
- The spacers must be perfectly parallel (Fig. 2).
- The spindle must be perfectly straight and with an h7 tolerance (Fig. 3).
- After continuous use, remove the blade and clean it with the appropriate solvents making sure to get rid of built up resin. For the synthetic coated (Perma-SHIELD Coating) blades, it is sufficient to use warm water. In any case, avoid using solvents containing caustic soda.
- The blades must be sharpened as soon as they become dull, maintaining the original tooth angles.
- For sharpening, always use the correct grinding wheels and plenty of cooling liquid.
- Always keep spacers and flanges clean.
- When sharpening, the shoulder of the teeth must not be lowered more than needed. This operation must be done with appropriate precision machinery and never by hand. There is the risk of breaking the tip or upsetting the blade balance (Fig. 4 - 5).
- On ripping machines, the feeding track must be levelled with the fixed table.
- Before starting the cut of the material, make sure the blade is correctly locked according to the machine specifications.

### Saw blade alignment on a table saw:

- If the saw blade and the saw are not correctly aligned to the table and the fence, then there is the possibility that a serious accident may occur (for example, violent kickbacks) or that the workpiece may scorch or splinter. The first thing you must do is read the instruction sheet carefully. This is necessary to acquire the understanding and comprehension of the corrections suggested in this section.
- Before carrying out the following instructions, make sure that the starter switch is off and that the machine is not connected to the socket.
- Mounting the saw blade onto the table:  
We advise you to use precise measuring instruments when mounting your saw blade. Clean the saw blade well, before mounting it onto the machine. Mount the saw blade onto the arbor. Adjust the arbor to its maximum height. With the aid of the most precise measuring instrument available, verify that the saw blade is parallel to the mitre gauge slots (Fig. 6). Adjust as needed. This step is necessary to obtain crosscuts with the maximum quality finish and for setting up the fence for ripping.
- Positioning the fence for ripping:  
After having positioned the saw blade so as it is parallel to the mitre gauge slots, you may proceed with setting the fence. The fence should ideally be parallel to the saw blade. However since it is impossible to position the guide "exactly" it is necessary to leave a slight margin of clearance on the exit side of the cut so as to avoid the wood becoming wedged in between the fence and the saw blade. Adjust the fence so as when it is aligned to the mitre gauge slots, there is a space of 0,1 mm (Fig. 7; for the correct adjustment, consult the machine's instruction manual).

6



7

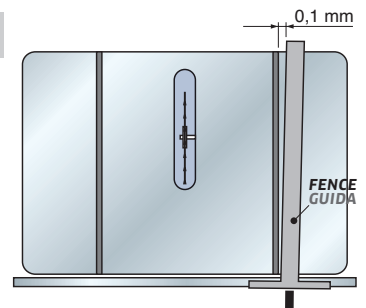


Table 1

Saw blade diameter	Maximum RPM
100 mm	23.000
125 mm	18.000
150 mm	14.500
180 mm	11.500
185 mm	11.000
200 mm	10.000
225 mm	8.500
250 mm	8.000
255 mm	7.800
280 mm	7.100
300 mm	6.500
320 mm	6.000
350 mm	5.500
380 mm	5.000
400 mm	4.700
430 mm	4.400
450 mm	4.200
500 mm	3.750
550 mm	3.400
600 mm	3.100
630 mm	2.950
650 mm	2.800
700 mm	2.600
730 mm	2.500
760 mm	2.400
800 mm	2.250

Not valid for saw blades to cut ferrous metals.

## TIPS FOR THE CORRECT USE OF A CIRCULAR SAW BLADE

- The maximum RPM of a circular saw blade varies according to the diameter of the blade itself (table 1). If you exceed this limit, the saw blade will lose its characteristics, therefore influencing the cutting quality and the work life of the blade itself, not to mention the dangers implied to the user who may incur serious injury.
- The saw blade's projection (T) with respect to the workpiece must be at least equal to the height of the blade's tooth (Fig. 8). Increase or decrease the projection of the saw blade to improve the quality of the cutting finish.
- The number of teeth cutting the wood simultaneously (Fig. 9) must be between 3 or 4. With less than three teeth cutting, the saw blade begins to vibrate leading to an uneven cut. If you want to cut workpieces with increased thicknesses (S - Fig. 11), but wish to maintain the same diameter saw blade, then use a blade with less teeth. If instead you want to cut workpieces with a reduced thickness, but also maintain the same diameter saw blade, then use a blade with more teeth.
- To obtain the pitch (P) of a blade (the distance between teeth; Fig. 10 - see formula "A") multiply the thickness of the workpiece by 1,4142 and divide by 3 (if you want 3 teeth cutting) or by 4 (if you want 4 teeth cutting).
- Formula "B": to obtain the number of teeth (Z) of the saw blade, multiply the diameter (D) of the saw blade by 3,14 (π) and divide by the pitch of the saw blade - obtained from the previous formula. The shorter formula "C" allows you to obtain the number of the saw blade's teeth, knowing its diameter and the thickness of the workpiece.

Formula A	Formula B	Formula C
$P = \frac{S \times 1,4142}{3}$	$Z = \frac{D \times 3,14}{P}$	$Z = \frac{D \times 8}{S}$

**KEY:**

P= Pitch

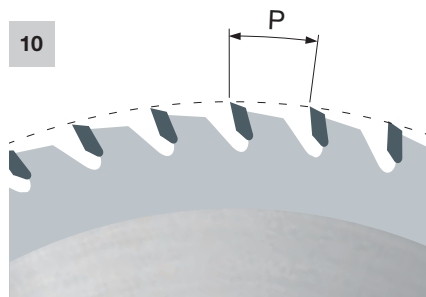
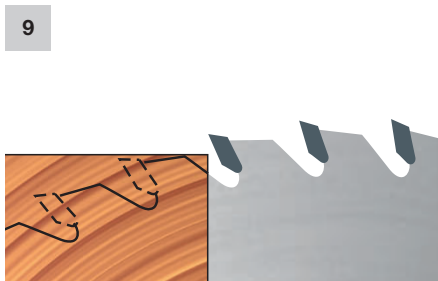
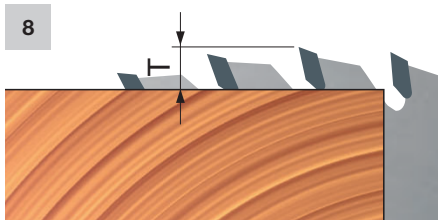
S= Thickness of the workpiece

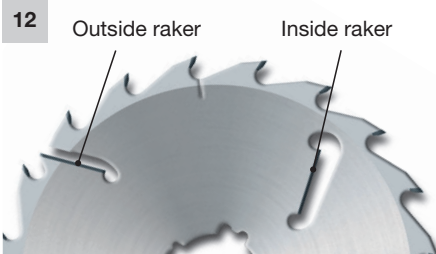
Z= Number of teeth of the saw blade

D= Diameter of the saw blade

**Attention:**

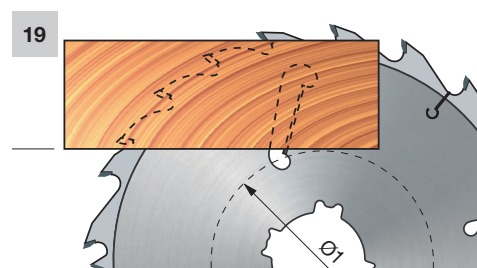
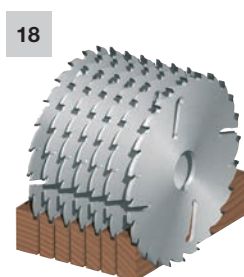
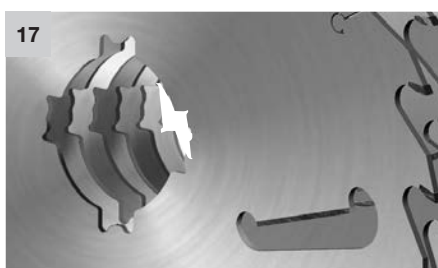
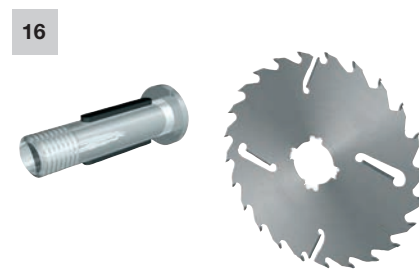
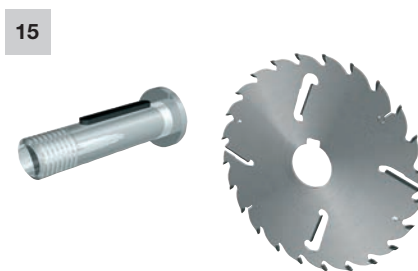
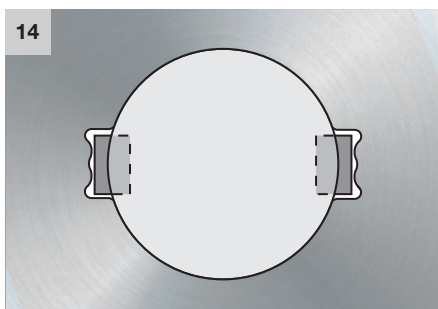
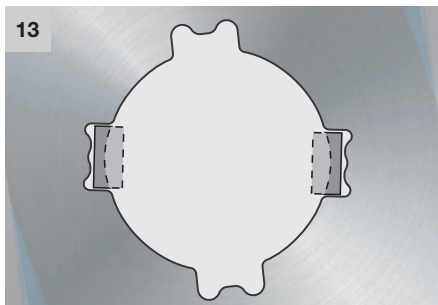
These formulas are valid for crosscutting and cutting other wood composites (MDF, plywood, chipboard and laminated panels) and cannot be applied for ripping.





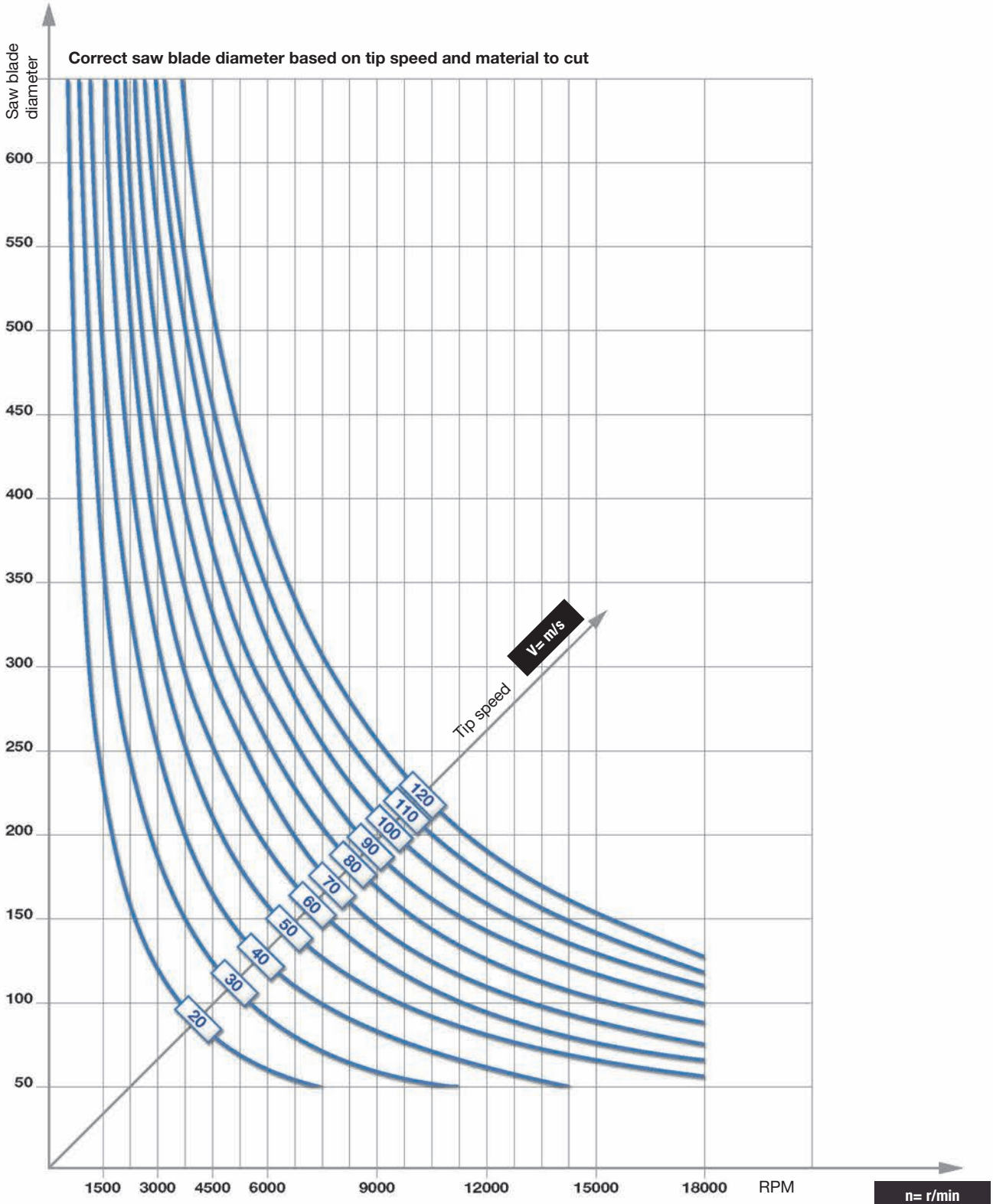
## TIPS FOR THE CORRECT USE OF A CIRCULAR SAW BLADE

- Rakers (Fig. 12) are inserts in HW that are brazed onto saw blades exclusively for cutting wood. They help keep a distance between the saw blade body and the workpiece, in order to avoid friction and overheating which cause the blade to deform.
- On saw blades for multiripping machines, the anti-kickback device is advised in cases where wood has loose knots and discards cases insert themselves underneath the saw blade.
- The pairing of blade and arbor with keyways is excellent in all cases where the keyways are the same (Fig. 13) or smaller than the blade slots (Fig. 14).
- On machines with an arbor with 1 keyway, you can only mount blades with 1 keyway slot (Fig. 15); on machines with an arbor with 2 keyways, you can only mount blades with 2 or 4 keyway slots (Fig. 16).
- You cannot mount a saw blade with 2 keyways on an arbor with 1 keyway slot, because the pairing will not be balanced.
- In case multiripping saw blades are used, it is recommendable to assembly them with alternate keyways (Fig. 17).
- Shoulder blade ensures correct distribution of lateral forces created by crooked planks in heavy duty use. The shoulder blade must be the first blade on the guide side of the multiripping machine.
- Always use shoulder blade with the set of multiripping blades (Fig. 18).
- On multiripping saw blades, the thickness of the workpiece (S) varies according to the diameter of the blade ( $\varnothing$ ) and the minimum diameter ( $\varnothing_1$ ) of the rakers (the rakers position may vary from blade to blade - Fig. 19).



# TIPS FOR THE CORRECT USE OF A CIRCULAR SAW BLADE

Tip speed (m/s)	Recommended for
50 - 90	Softwood
50 - 80	Hardwood
50 - 85	Exotic wood
60 - 80	Chipboard
60 - 80	Joinery wood
30 - 60	MDF
40 - 60	Laminated and bilaminated

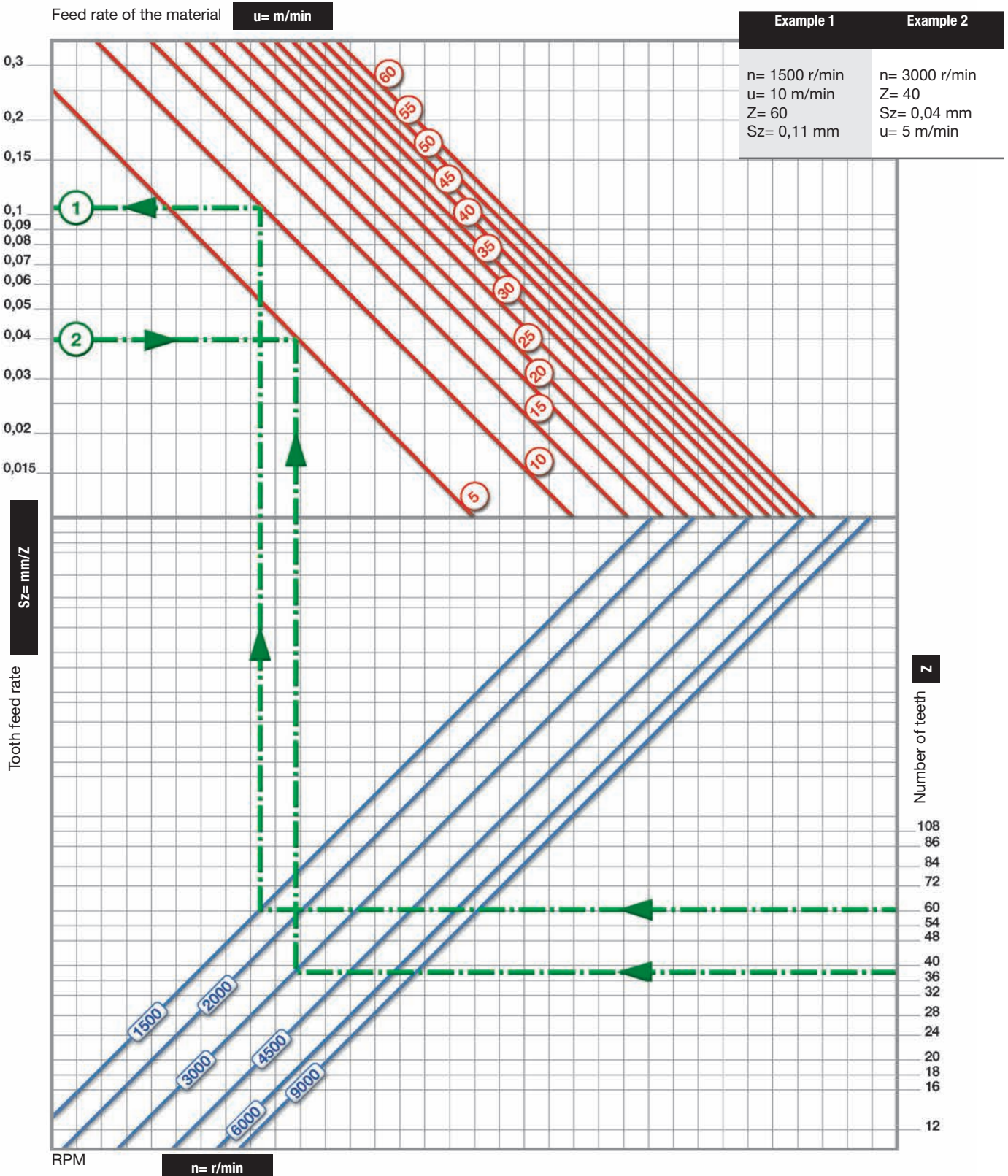


# TIPS FOR THE CORRECT USE OF A CIRCULAR SAW BLADE

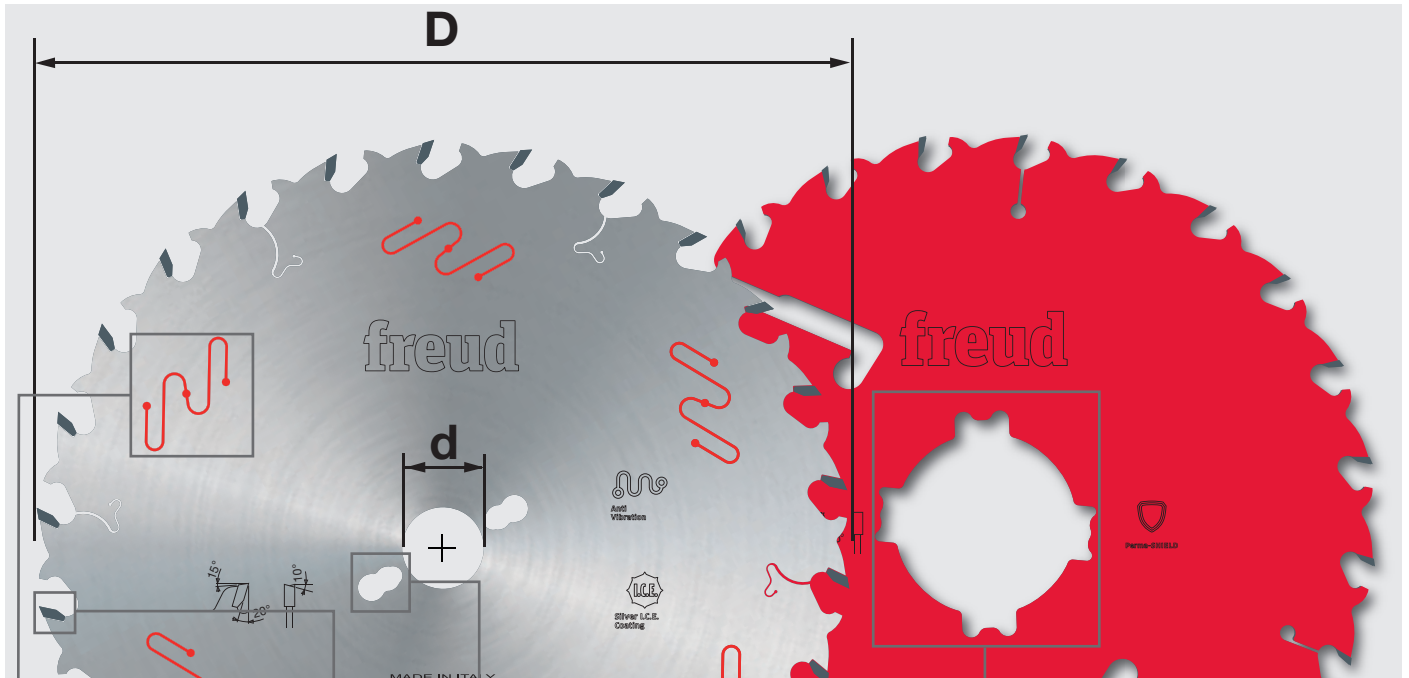
## Correct tooth feed rate, material feedrate, number of teeth and RPM

Recommended tooth feed rate (Sz= mm/tooth)	Recommended for
0,20 - 0,30	Softwood with grain
0,10 - 0,20	Softwood cross grain
0,06 - 0,15	Hardwood
0,10 - 0,25	Chipboard

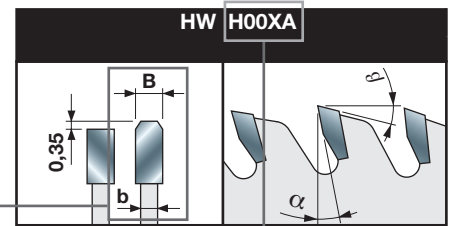
Recommended tooth feed rate (Sz= mm/tooth)	Recommended for
0,05 - 0,12	Plywood
0,05 - 0,10	Laminated board
0,02 - 0,05	Aluminium and plastic laminated chipboard



# EXPLANATION OF SYMBOLS AND ABBREVIATIONS

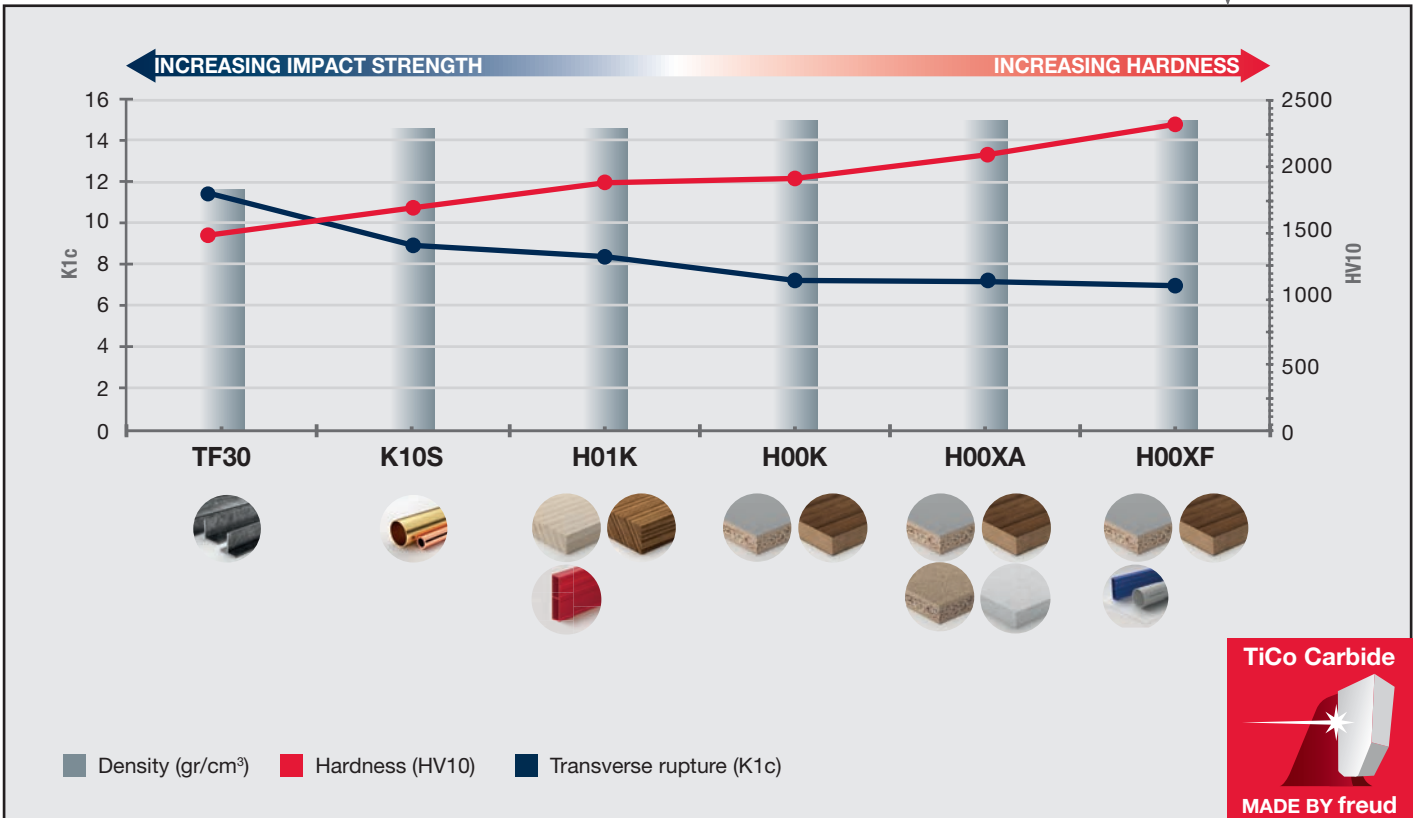


D	B	b	d	Z	NL	KN	Freud Code	Art. No.
mm	mm	mm	mm					
250	3,2	2,2	30	22		FT01	ABCD 1234	A00BC01234
250	3,2	2,2	70	22		4CH 21x5	ABCD 1234	A00BC01234
300	3,2	2,2	30	26		FT01	ABCD 1234	A00BC01234



Tooth features

MICRO-GRAIN CARBIDE (HW) HARDNESS USED FOR MANUFACTURING TIPS

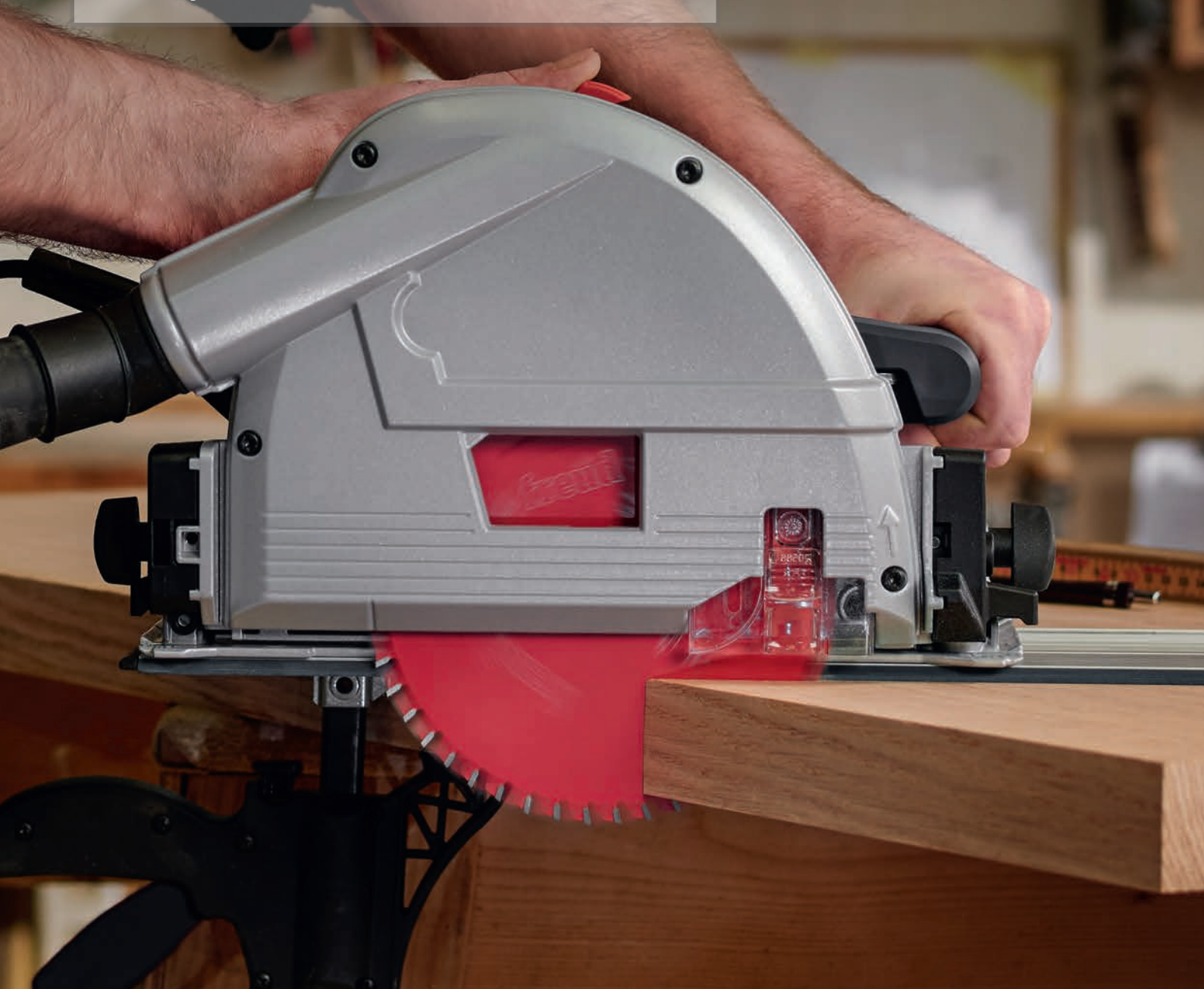


■ Density (gr/cm³) ■ Hardness (HV10) ■ Transverse rupture (K1c)

# Circular Saw Blades for Portable Machines

Freud's wide range of circular saw blades for portable machines offers dedicated solutions for all main power tool brands. Each blade is specifically engineered per application material and machine type. The portfolio includes dedicated blades designed for cordless power tools and featuring extra thin kerf teeth with optimised geometries that enable maximised cuts per battery charge, optimum ease of cut and excellent lifetime.

The range offers a wide variety of solutions dedicated to wood, laminated panel, construct wood, high pressure laminate, aluminium, fibre cement, sandwich panel and multi material. All circular saw blades feature Freud's unique and industry-first attributes.





## CIRCULAR SAW BLADES FOR PORTABLE MACHINES

Leading technology for circular saw blades.....	Page 112
The widest professional range for any application need.....	Page 114

### WOOD

For hand held and plunge circular saws .....	Page 116
For cordless hand held and plunge circular saws.....	Page 117
For mitre saws .....	Page 118
For cordless mitre saws .....	Page 118
For small table saws.....	Page 119
For cordless small table saws .....	Page 120

### CONSTRUCT WOOD

For hand held circular saws .....	Page 122
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### LAMINATED PANEL

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For cordless small table saws .....	Page 125

### HIGH PRESSURE LAMINATE

For hand held and plunge circular saws .....	Page 127
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### ALUMINIUM

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For cordless mitre saws .....	Page 134

### SANDWICH PANEL

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### MULTI MATERIAL

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For mitre saws .....	Page 138

Tips for the correct use of a circular saw blade .....	Page 139
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Explanation of symbols and abbreviations .....	Page 142
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# LEADING TECHNOLOGY

## TICO CARBIDE TECHNOLOGY

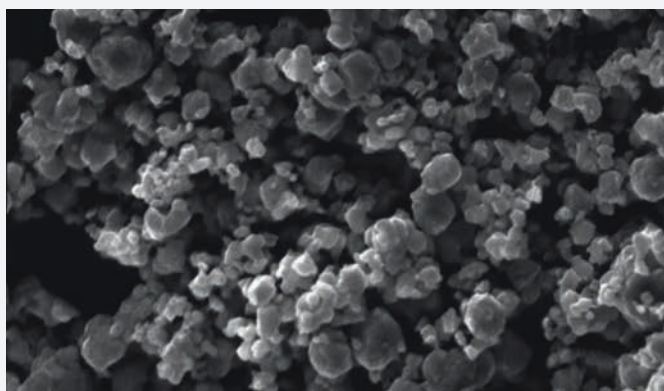
Freud's ownership and control of the entire Carbide production cycle ensures that the correct formula is used for the specific application needs, to constantly maximise the saw blade performance.



### TiCo Carbide

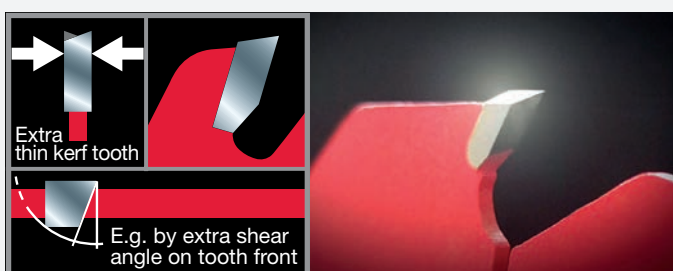
A specially formulated, highly compact Titanium Cobalt Carbide, engineered and manufactured by Freud.

It provides a sharper edge and flawless finish with a dramatically longer cutting life.



## DESIGN INNOVATION

Freud's special tooth designs and geometries are engineered to perform perfect cuts and deliver extraordinary durability. Freud's tooth designs are optimised for specific material applications and portable machine types, both corded and cordless.

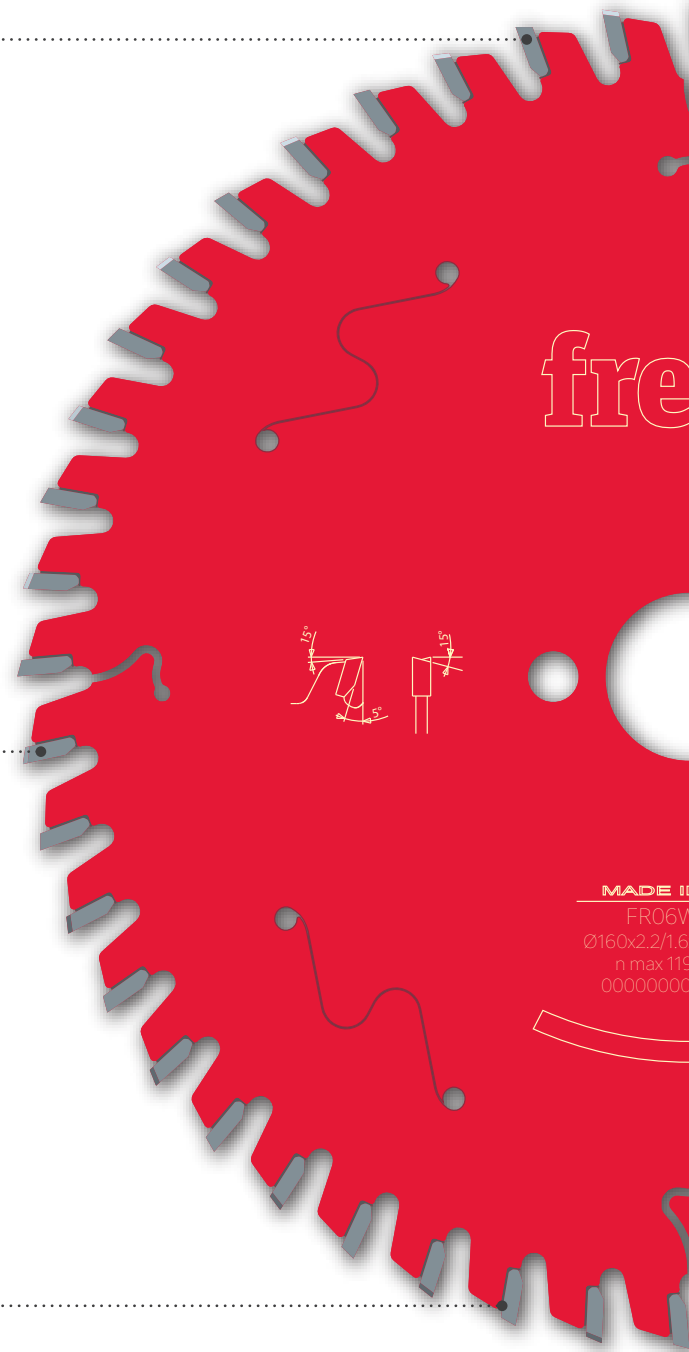
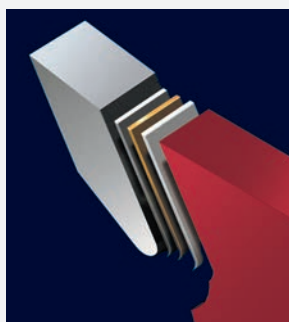


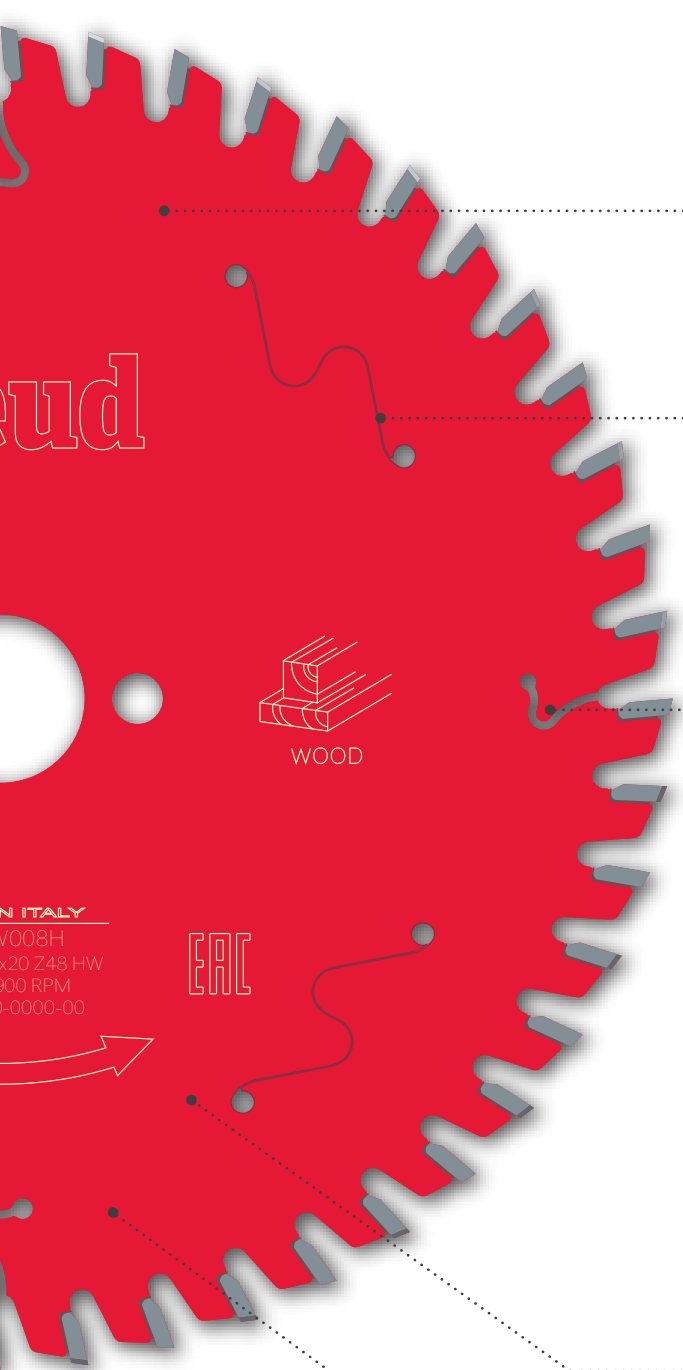
## EXTREME SHOCK RESISTANCE



All Freud's circular saw blades undergo an innovative **Tri-Metal Brazing**

process that bonds the Carbide tips to the steel blade body. This special method consists of copper alloy sandwiched between layers of silver alloy, for extra flexibility and maximum impact resistance.





## COATING TECHNOLOGY

All Freud's circular saw blades feature an industry-first premium coating for superior protection from heat, pitch build-up and corrosion.

Freud's circular saws for portable machines display Perma-SHIELD Coating for the highest performance on dedicated applications.



### Perma-SHIELD Coating

A non-stick coating formulation that withstands the toughest applications.

It provides thermal insulation, protects from corrosion and eliminates resin build-up, reducing downtime for cleaning.

## ANTI-VIBRATION SOLUTIONS



### Anti-vibration Slots

Freud's circular saw blades for portable machines display specially designed anti-vibration slots, laser cut on the blade body that enable a smooth running and minimise noise.

## LASER-CUT EXPANSION SLOTS

Special laser-cut expansion slots enable heat dispersion and prevent the blade deformation caused by overheating, granting the greatest blade stability.



## BALANCING



### Tensioning

Freud's circular saw blades ( $\geq 200\text{mm}$ ) include a tensioning ring to maintain the blade flat, maximising cutting precision and performance.

## PREMIUM MATERIALS

### Premium Steel













Freud's circular blades for portable machines are made from pre-hardened and pre-flattened superior quality steel (up to HRC 46) that delivers the highest precision, performance and durability.

# THE WIDEST PROFESSIONAL RANGE FOR ANY APPLICATION NEED

				
<b>WOOD</b>				
<b>CONSTRUCT WOOD</b>				
<b>LAMINATED PANEL</b>				
<b>HIGH PRESSURE LAMINATE</b>				
<b>SANDWICH PANEL</b>				
<b>FIBRE CEMENT</b>				
<b>ALUMINIUM</b>				
<b>MULTI MATERIAL</b>				

## OPTIMISED FOR CORDLESS POWER TOOLS



<b>WOOD</b>			
<b>LAMINATED PANEL</b>			
<b>ALUMINIUM</b>			
<b>FIBRE CEMENT</b>			



## SPECIAL RANGE FOR CORDLESS POWER TOOLS

- Maximised battery runtime
- Optimised ease of cut

### BATTERY RUNTIME

Optimised range (cordless)

Regular range (corded)

### EASE OF CUT

Optimised range (cordless)

Regular range (corded)

### BLADE LIFETIME

Optimised range (cordless)

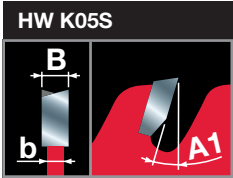
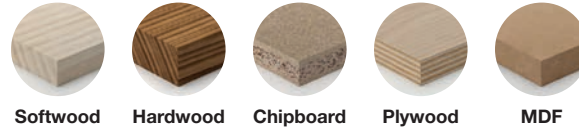
Regular range (corded)

# Wood



# CIRCULAR SAW BLADES FOR WOOD

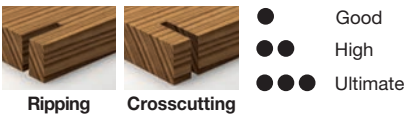
## For hand-held and plunge circular saws



**Machines:**  
Hand-held circular saws and plunge circular saws.

**Materials:**  
Soft and hard solid wood, chipboard, plywood, MDF and other wood based materials.

**Technical information:**  
ATB tooth with positive cutting angle.



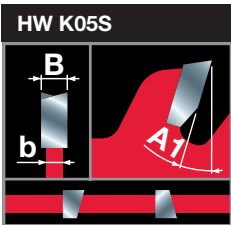
	D	B	b	d	Z	Hook A1	Rip cut quality	Cross cut quality	NL	Freud Code	Art. No.
	mm	mm	mm	mm							
	120	1,8	1,3	20	12	15°	•••	•	-	FR02W001H	F03FS09663
	120	1,8	1,3	20	40	5°	•	•••	-	FR02W002H	F03FS09664
	130	2,4	1,6	20	24	15°	••	••	2/6/32,5	FR03W001H	F03FS09665
	130	2,4	1,6	20	36	5°	•	•••	2/6/32,5	FR03W002H	F03FS09666
	140	1,8	1,3	20	24	15°	•••	•	2/6/32,5	FR04W001H	F03FS09667
	140	1,8	1,3	20	36	10°	••	••	2/6/32,5	FR04W002H	F03FS09668
	140	1,8	1,3	20	42	5°	•	•••	2/6/32,5	FR04W003H	F03FS09669
	150	2,4	1,6	16	24	15°	•••	•	2/6/32,5	FR05W001H	F03FS09670
	150	2,4	1,6	20	24	15°	•••	•	2/6/32,5	FR05W002H	F03FS09671
	150	2,4	1,6	20	42	5°	•	•••	2/6/32,5	FR05W003H	F03FS09672
	160	2,4	1,6	16	24	15°	•••	•	2/6/32,5	FR06W001H	F03FS09673
	160	2,4	1,6	16	48	5°	•	•••	2/6/32,5	FR06W002H	F03FS09674
	160	1,8	1,3	20	24	15°	•••	•	2/6/32,5	FR06W003H	F03FS09675
	160	1,8	1,3	20	36	10°	••	••	2/6/32,5	FR06W004H	F03FS09676
	160	1,8	1,3	20	48	5°	•	•••	2/6/32,5	FR06W005H	F03FS09677
	160	2,2	1,6	20	24	15°	•••	•	2/6/32,5	FR06W006H	F03FS09678
	160	2,2	1,6	20	36	10°	••	••	2/6/32,5	FR06W007H	F03FS09679
	160	2,2	1,6	20	48	5°	•	•••	2/6/32,5	FR06W008H	F03FS09680
	160	2,4	1,6	20	24	15°	•••	•	2/6/32,5	FR06W009H	F03FS09681
	160	2,4	1,6	20	36	10°	••	••	2/6/32,5	FR06W010H	F03FS09682
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	160	2,4	1,6	30	24	15°	•••	•	2/6/42	FR06W012H	F03FS09684
	160	2,4	1,6	30	48	5°	•	•••	2/6/42	FR06W013H	F03FS09685
	165	1,7	1,3	20	12	20°	•••	•	-	FR07W009H	F03FS10040
	165	1,7	1,3	20	24	15°	•••	•	-	FR07W001H	F03FS09686
	165	1,7	1,3	20	40	18°	•	•••	-	FR07W002H	F03FS09687
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	165	2,4	1,6	20	36	10°	••	••	2/6/32,5	FR07W004H	F03FS09689
	165	2,4	1,6	20	48	5°	•	•••	2/6/32,5	FR07W005H	F03FS09690
	165	2,4	1,6	20	56	5°	•	•••	2/6/32,5	FR07W013H	F03FS11505
	165	2,4	1,6	30	24	15°	•••	•	2/7/42	FR07W006H	F03FS09691
	165	2,4	1,6	30	36	10°	••	••	2/7/42	FR07W007H	F03FS09692
	165	2,4	1,6	30	48	5°	•	•••	2/7/42	FR07W008H	F03FS09693
	170	2,4	1,6	30	40	10°	••	••	2/7/42	FR08W002H	F03FS09695
	180	2,4	1,6	20	24	15°	•••	•	2/6/32,5	FR09W001H	F03FS09696
	180	2,4	1,6	20	48	5°	•	•••	2/6/32,5	FR09W002H	F03FS09697
	180	2,4	1,6	30	24	15°	•••	•	2/7/42	FR09W003H	F03FS09698
	180	2,4	1,6	30	48	5°	•	•••	2/7/42	FR09W004H	F03FS09699
	182	1,7	1,3	19,05	30	15°	•••	•	-	FR10W001H	F03FS09700
	182	1,7	1,3	19,05	40	15°	••	••	-	FR10W002H	F03FS09701
	182	1,7	1,3	19,05	60	15°	•	•••	-	FR10W003H	F03FS09702
	182	1,7	1,3	25,4	30	15°	•••	•	-	FR10W004H	F03FS11507
	182	1,7	1,3	25,4	40	15°	••	••	-	FR10W005H	F03FS11508
	182	1,7	1,3	25,4	60	15°	•	•••	-	FR10W006H	F03FS11509
	184	2,4	1,6	16	24	15°	•••	•	2/6/32,5	FR11W001H	F03FS09703
	184	2,4	1,6	16	40	10°	••	••	2/6/32,5	FR11W002H	F03FS09704
	184	2,4	1,6	16	24	15°	•••	•	-	FR11W012H	F03FS11511
	184	2,4	1,6	30	24	15°	•••	•	2/7/42	FR11W007H	F03FS09709
	185	2,4	1,6	20	24	15	•••	•	-	FR12W001H	F03FS11513
	185	2,4	1,6	20	48	10	•	•••	-	FR12W002H	F03FS11514
	190	2,4	1,6	16	24	15°	•••	•	2/6/32,5	FR13W001H	F03FS09712
	190	2,4	1,6	16	48	10°	•	•••	2/6/32,5	FR13W002H	F03FS09713

# CIRCULAR SAW BLADES FOR WOOD

D	B	b	d	Z	Hook	Rip cut	Cross cut	NL	Freud Code	Art. No.
mm	mm	mm	mm		A1	quality	quality			
190	2,4	1,6	20	24	15°	•••	•	2/6/32,5	FR13W003H	F03FS09714
190	2,4	1,6	20	48	10°	•	•••	2/6/32,5	FR13W004H	F03FS09715
190	2,4	1,6	20	56	5°	•	•••	2/6/32,5	FR13W005H	F03FS09716
190	2,4	1,6	30	24	15°	•••	•	2/7/42	FR13W006H	F03FS09717
190	2,4	1,6	30	40	10°	••	••	2/7/42	FR13W007H	F03FS09718
190	2,4	1,6	30	48	10°	•	•••	2/7/42	FR13W008H	F03FS09719
190	2,4	1,6	30	56	5°	•	•••	2/7/42	FR13W009H	F03FS09720
200	1,7	1,2	25,4	40	10°	••	••	-	FR14W003H	F03FS11515
200	2,4	1,6	30	24	15°	•••	•	2/7/42	FR14W001H	F03FS09721
200	2,4	1,6	30	48	10°	•	•••	2/7/42	FR14W002H	F03FS09722
210	2,4	1,8	30	24	15°	•••	•	2/7/42	FR15W003H	F03FS09725
210	2,4	1,8	30	40	15°	••	••	2/7/42	FR15W001H	F03FS09723
210	2,4	1,8	30	48	10°	•	•••	2/7/42	FR15W004H	F03FS09726
210	2,4	1,8	30	56	5°	•	•••	2/7/42	FR15W002H	F03FS09724
230	2,8	1,8	30	24	15°	•••	•	2/6/42	FR19W001H	F03FS09728
230	2,8	1,8	30	36	15°	••	••	2/7/42	FR19W002H	F03FS09729
230	2,8	1,8	30	48	15°	••	••	2/7/42	FR19W003H	F03FS09730
230	2,2	1,6	25,4	60	10°	•	•••	-	FR20W007H	F03FS11521
235	2,8	1,8	30	24	15°	•••	•	2/6/42	FR20W003H	F03FS09733
235	2,8	1,8	30	36	15°	••	••	2/7/42	FR20W004H	F03FS09734
235	2,8	1,8	30	48	15°	••	••	2/7/42	FR20W005H	F03FS09735
235	2,8	1,8	30	56	10°	•	•••	2/7/42	FR20W006H	F03FS09736
237	2,5	1,8	30	24	15°	•••	•	2/7/42	FR21W001H	F03FS09737
237	2,5	1,8	30	56	10°	•	•••	2/7/42	FR21W002H	F03FS09738
240	2,8	1,8	30	48	15°	••	••	2/7/42	FR22W001H	F03FS09739
270	2,8	1,8	30	60	10°	••	••	FT121	FR27W001H	F03FS09740
350	3,5	2,2	30	24	20°	•••	•	2/7/42	FR32W001H*	F03FS09742
355	3,0	2,2	30	60	15°	•••	•	FT121	FR33W001H*	F03FS09743

\*HW K10S

FT121: 2/7/42 + 2/9/46 + 2/9,5/46,5 + 2/10/60



### Machines:

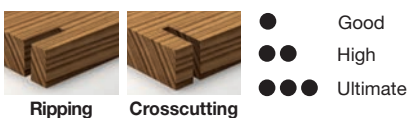
Cordless hand-held and plunge circular saws.

### Materials:

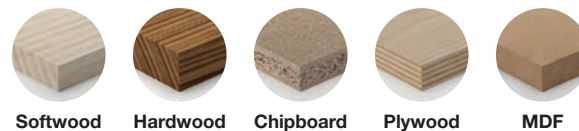
Soft and hard solid wood, chipboard, plywood, MDF and other wood based materials.

### Technical information:

Specifically designed to maximise battery runtime and optimise ease of cut on cordless saws. Thin kerf teeth and axial shear angle on tooth front. ATB tooth with positive cutting angle.



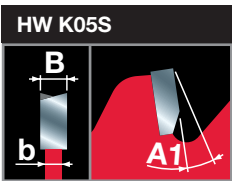
## For cordless hand-held and plunge circular saws



D	B	b	d	Z	Hook	Rip cut	Cross cut	NL	Freud Code	Art. No.
mm	mm	mm	mm		A1	quality	quality			
120	1,7	1,2	20	24	20°	••	••	-	FR02W003HC	F03FS10043
136	1,5	1,0	20	24	20°	••	••	-	FR03W003HC	F03FS10044
140	1,8	1,3	20	24	15°	•••	•	-	FR04W004HC	F03FS10045
140	1,8	1,3	20	42	5°	•	•••	-	FR04W005HC	F03FS10046
160	1,5	1,0	20	24	25°	•••	•	-	FR05W015HC	F03FS10048
160	1,5	1,0	20	36	15°	••	••	-	FR05W016HC	F03FS10049
160	1,5	1,0	20	48	10°	•	•••	-	FR05W017HC	F03FS10050
160	1,8	1,3	20	24	15°	•••	•	2/6/32,5	FR06W003H	F03FS09675
160	1,8	1,3	20	36	10°	••	••	2/6/32,5	FR06W004H	F03FS09676
160	1,8	1,3	20	48	5°	•	•••	2/6/32,5	FR06W005H	F03FS09677
160	2,2	1,6	20	24	15°	•••	•	2/6/32,5	FR06W006H	F03FS09678
160	2,2	1,6	20	36	10°	••	••	2/6/32,5	FR06W007H	F03FS09679
160	2,2	1,6	20	48	5°	•	•••	2/6/32,5	FR06W008H	F03FS09680
165	1,5	1,0	20	12	25°	•••	•	-	FR07W009HC	F03FS10051
165	1,5	1,0	20	24	25°	•••	•	-	FR07W010HC	F03FS10052
165	1,5	1,0	20	36	15°	••	••	-	FR07W011HC	F03FS10053
165	1,5	1,0	20	48	10°	•	•••	-	FR07W012HC	F03FS10054
165	1,7	1,3	20	12	20°	•••	•	-	FR07W009H	F03FS10040
165	1,7	1,3	20	24	15°	•••	•	-	FR07W001H	F03FS09686
165	1,7	1,3	20	40	18°	•	•••	-	FR07W002H	F03FS09687

# CIRCULAR SAW BLADES FOR WOOD

D mm	B mm	b mm	d mm	Z	Hook A1	Rip cut quality	Cross cut quality	NL	Freud Code	Art. No.
182	1,7	1,3	19,05	30	15°	•••	•	-	FR10W001H	F03FS09700
182	1,7	1,3	19,05	40	15°	••	••	-	FR10W002H	F03FS09701
182	1,7	1,3	19,05	60	15°	•	•••	-	FR10W003H	F03FS09702
184	1,6	1,0	20	24	25°	•••	•	-	FR11W010HC	F03FS10055
184	1,6	1,0	20	48	10°	•	•••	-	FR11W011HC	F03FS10056
190	1,5	1,0	30	18	25°	•••	•	-	FR13W010HC	F03FS10057
190	1,5	1,0	30	24	25°	•••	•	-	FR13W011HC	F03FS10058
190	1,5	1,0	30	48	15°	••	••	-	FR13W012HC	F03FS10059
190	1,5	1,0	30	60	10°	•	•••	-	FR13W013HC	F03FS10060

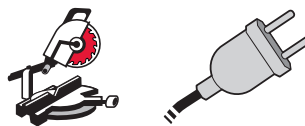


**Machines:**  
Mitre saws.

**Materials:**  
Soft and hard solid wood, chipboard, plywood, MDF and other wood based materials.

**Technical information:**  
ATB tooth with negative cutting angle.

## For mitre saws



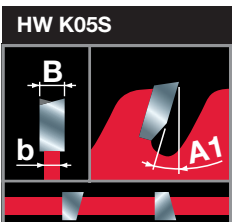
Mitre Saws Corded



Softwood Hardwood Chipboard Plywood MDF

D mm	B mm	b mm	d mm	Z	Hook A1	NL	Freud Code	Art. No.
210	2,4	1,8	25,4	24	-5°	-	FR15W002M	F03FS11566
210	2,4	1,8	25,4	48	-5°	-	FR15W003M	F03FS11517
210	2,4	1,8	30	48	-5°	2/7/42	FR15W001M	F03FS09747
216	2,4	1,8	25,4	48	-5°	2/6/42	FR16W004M	F03FS09751
216	2,4	1,8	25,4	64	-5°	2/6/42	FR16W005M	F03FS09752
216	2,4	1,8	30	24	-5°	2/6/42	FR16W001M	F03FS09748
216	2,4	1,8	30	40	-5°	2/7/42	FR16W002M	F03FS09749
216	2,4	1,8	30	48	-5°	2/7/42	FR16W003M	F03FS09750
250	2,4	1,8	30	40	-5°	FT121	FR23W001M	F03FS09753
250	2,4	1,8	30	60	-5°	FT121	FR23W002M	F03FS09754
254	2,4	1,8	30	60	-5°	FT121	FR24W001M	F03FS09755
260	2,4	1,8	30	60	-5°	FT121	FR26W001M	F03FS09760
300	2,4	1,8	30	72	-5°	FT121	FR28W001M	F03FS09761
305	2,4	1,8	30	48	-5°	-	FR29W001M	F03FS09762
305	2,4	1,8	30	72	-5°	FT121	FR29W002M	F03FS09763
315	2,4	1,8	30	72	-5°	FT121	FR30W001M	F03FS09766

FT121: 2/7/42 + 2/9/46 + 2/9,5/46,5 + 2/10/60

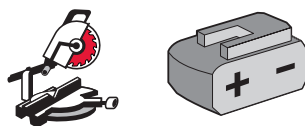


**Machines:**  
Cordless mitre saws.

**Materials:**  
Soft and hard solid wood, chipboard, plywood, MDF and other wood based materials.

**Technical information:**  
Specifically designed to maximise battery runtime and optimise ease of cut on cordless mitre saws. Thin kerf teeth and axial shear angle on tooth front. ATB tooth with positive cutting angle.

## For cordless mitre saws



Mitre Saws Cordless



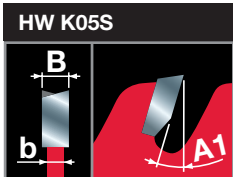
Softwood Hardwood Chipboard Plywood MDF

D mm	B mm	b mm	d mm	Z	Hook A1	NL	Freud Code	Art. No.
216	1,7	1,2	30	24	5°	-	FR16W006MC	F03FS10061
216	1,7	1,2	30	48	5°	-	FR16W007MC	F03FS10062
250	2,1	1,6	30	24	5°	-	FR23W003MC	F03FS10063
250	2,1	1,6	30	48	5°	-	FR23W004MC	F03FS10064



# CIRCULAR SAW BLADES FOR WOOD

D mm	B mm	b mm	d mm	Z	Hook A1	NL	Freud Code	Art. No.
254	2,1	1,6	30	24	5°	-	FR24W002MC	F03FS11527
254	2,1	1,6	30	48	5°	-	FR24W003MC	F03FS11528
305	2,2	1,6	30	42	5°	-	FR29W004MC	F03FS10065
305	2,2	1,6	30	60	5°	-	FR29W005MC	F03FS10066
305	2,2	1,6	30	96	5°	-	FR29W006MC	F03FS10067



**Machines:**  
Small table saws.

**Materials:**  
Soft and hard solid wood, chipboard, plywood, MDF and other wood based materials.

**Technical information:**  
ATB tooth with positive cutting angle.



## For small table saws

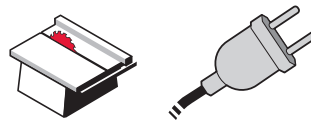


Table saws

Corded



Softwood

Hardwood

Chipboard

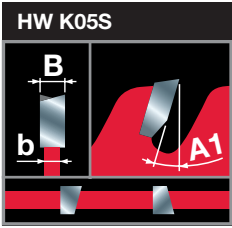
Plywood

MDF

D mm	B mm	b mm	d mm	Z	Hook A1	Rip cut quality	Cross cut quality	NL	Freud Code	Art. No.
190	2,0	1,3	30	24	15°	•••	•	2/7/42	FR13W001T	F03FS09767
190	2,0	1,3	30	48	5°	•	•••	2/7/42	FR13W002T	F03FS09768
190	2,4	1,6	Star	24	15°	•••	•	-	FR13W003T	F03FS09769
190	2,4	1,6	Star	48	5°	•	•••	-	FR13W004T	F03FS09770
216	2,4	1,8	30	24	15°	•••	•	2/6/42	FR16W003T	F03FS11519
216	2,4	1,8	30	48	10°	•	•••	2/6/42	FR16W004T	F03FS11520
220	2,6	1,6	30	48	10°	••	••	2/7/42	FR17W001T	F03FS09771
225	2,6	1,6	30	32	15°	•••	•	2/7/42	FR18W001T	F03FS09772
225	2,6	1,6	30	48	10°	••	••	2/7/42	FR18W002T	F03FS09773
250	2,4	1,8	25,4	48	15	•••	•	-	FR23W005T	F03FS11641
250	2,4	1,8	25,4	60	15	••	••	-	FR23W006T	F03FS11642
250	2,4	1,8	25,4	80	15	•	•••	-	FR23W007T	F03FS11643
250	2,4	1,8	25,4	100	15	•	•••	-	FR23W008T	F03FS11644
250	2,8	1,8	30	24	20°	•••	•	2/6/42	FR23W001T	F03FS09774
250	2,8	1,8	30	40	15°	•••	•	2/6/42	FR23W002T	F03FS09775
250	2,8	1,8	30	60	10°	••	••	2/6/42	FR23W003T	F03FS09776
250	2,8	1,8	30	80	5°	•	•••	FT121	FR23W004T	F03FS09777
254	2,6	1,8	30	24	20°	•••	•	2/6/42	FR24W001T	F03FS09778
254	2,6	1,8	30	40	15°	•••	•	2/6/42	FR24W002T	F03FS09779
254	2,6	1,8	30	60	10°	••	••	FT121	FR24W003T	F03FS09780
254	2,6	1,8	30	80	5°	•	•••	FT121	FR24W004T	F03FS09781
255	2,8	1,8	25,4	40	15°	•••	•	-	FR25W002T	F03FS10134
255	2,8	1,8	25,4	60	15°	••	••	-	FR25W003T	F03FS10135
255	2,8	1,8	25,4	80	15°	•	•••	-	FR25W004T	F03FS10136
260	2,6	1,8	30	60	10°	••	••	-	FR26W001T	F03FS09782
260	2,6	1,8	30	80	5°	•	•••	FT121	FR26W002T	F03FS09783
280	2,5	1,8	30	64	10°	••	••	2/10/60	FR27W001T	F03FS11530
300	2,5	1,8	30	48	15°	•••	•	2/10/60	FR28W001T	F03FS09784
300	2,5	1,8	30	72	10°	••	••	2/10/60	FR28W002T	F03FS09785
300	2,5	1,8	30	100	5°	•	•••	FT121	FR28W003T	F03FS09786
305	2,8	1,8	25,4	96	15°	•	•••	-	FR29W002T	F03FS10138
305	2,8	1,8	30	100	5°	•	•••	2/10/60	FR29W001T	F03FS09787
355	3,0	2,2	25,4	108	15°	•	•••	-	FR33W001T	F03FS10137

FT121: 2/7/42 + 2/9/46 + 2/9,5/46,5 + 2/10/60

# CIRCULAR SAW BLADES FOR WOOD



**Machines:**  
Cordless small table saws.

**Materials:**  
Soft and hard solid wood, chipboard, plywood, MDF and other wood based materials.

**Technical information:**  
Specifically designed to maximise battery runtime and optimise ease of cut on cordless table saws. Thin kerf teeth and axial shear angle on tooth front. ATB tooth with positive cutting angle.



## For cordless small table saws

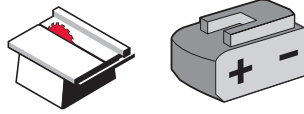


Table saws

Cordless



Softwood

Hardwood

Chipboard

Plywood

MDF

D mm	B mm	b mm	d mm	Z	Hook A1	Rip cut quality	Cross cut quality	NL	Freud Code	Art. No.
210	2,0	1,4	30	24	25°	•••	•	-	FR15W001TC	F03FS10068
210	2,0	1,4	30	48	15°	•	•••	-	FR15W002TC	F03FS10069
216	2,0	1,4	30	24	25°	•••	•	-	FR16W001TC	F03FS10070
216	2,0	1,4	30	48	15°	•	•••	-	FR16W002TC	F03FS10071
254	2,1	1,6	30	24	25°	•••	•	-	FR24W005TC	F03FS10072
254	2,1	1,6	30	40	20°	••	••	-	FR24W006TC	F03FS10073
254	2,1	1,6	30	60	15°	•	•••	-	FR24W007TC	F03FS10074

# Construct Wood



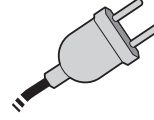


# CIRCULAR SAW BLADES FOR CONSTRUCT WOOD

## For hand-held circular saws



Hand-held  
Circular Saws



Corded



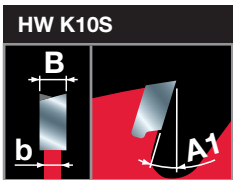
Construction  
Timber



Shuttering  
Board



Chipboard



### Machines:

Hand-held circular saws.

### Materials:

Construction timber with nails and concrete residues, chipboard and formwork boards.

### Technical information:

Special Carbide recipe and innovative tooth design ensure high cutting resistance, also when hitting nails.

ATB tooth with positive cutting angle.

D	B	b	d	Z	Hook	NL	Freud Code	Art. No.
mm	mm	mm	mm		A1			
160	2,0	1,3	20	14	18°	2/6/32,5	FR06C001H	F03FS09788
165	2,0	1,3	20	14	18°	2/6/32,5	FR07C001H	F03FS09789
180	2,0	1,3	30	14	18°	2/6/42	FR09C001H	F03FS09790
184	2,0	1,3	16	14	18°	2/6/32,5	FR11C001H	F03FS09791
190	2,0	1,3	30	14	18°	2/7/42	FR13C001H	F03FS09792
200	2,0	1,3	30	16	18°	2/7/42	FR14C001H	F03FS09793
210	2,0	1,3	30	16	18°	2/7/42	FR15C001H	F03FS09794
230	2,2	1,6	30	20	18°	2/7/42	FR19C001H	F03FS09795
235	2,2	1,6	30	20	18°	2/7/42	FR20C001H	F03FS09796

# Laminated Panel



# CIRCULAR SAW BLADES FOR LAMINATED PANEL

## For hand-held and plunge circular saws

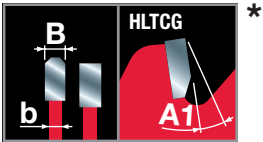
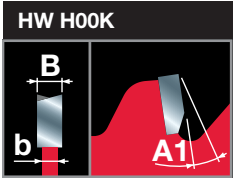


Hand-held Circular Saws    Plunge Saws    Corded



Laminated Chipboard    Laminated MDF    Chipboard    MDF

	D mm	B mm	b mm	d mm	Z	Hook A1	NL	Freud Code	Art. No.
	140	1,8	1,3	20	42	-5°	2/6/32,5	FR04L001H	F03FS09797
	160	1,8	1,2	20	48	-5°	-	FR06L003HC	F03FS10075
	160	2,2	1,6	20	48	-5°	2/6/32,5	FR06L001H	F03FS09798
	160	2,2	1,6	20	48	-5°	-	FR06L002H*	F03FS09799
	165	2,6	1,6	20	48	-5°	2/6/32,5	FR07L001H	F03FS09800
	185	2,4	1,6	20	60	-5°	-	FR12L001H	F03FS09801
	190	2,6	1,6	30	60	-5°	2/7/42	FR13L001H	F03FS09802



**Machines:**  
Hand-held and plunge circular saws.

**Materials:**  
Laminated and bilaminated panels, chipboard, MDF and fine-coated or veneered panels.

**Technical information:**  
ATB tooth with negative cutting angle.  
\*HLTGG with negative cutting angle.

## For cordless hand-held and plunge circular saws

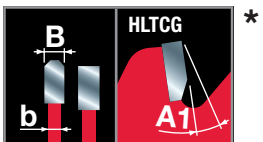
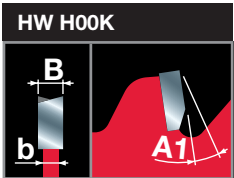


Hand-held Cordless Saws    Plunge Saws    Cordless



Laminated Chipboard    Laminated MDF    Chipboard    MDF

	D mm	B mm	b mm	d mm	Z	Hook A1	NL	Freud Code	Art. No.
	140	1,8	1,3	20	42	-5°	2/6/32,5	FR04L001H	F03FS09797
	160	1,8	1,2	20	48	-5°	-	FR06L003HC	F03FS10075
	160	2,2	1,6	20	48	-5°	2/6/32,5	FR06L001H	F03FS09798
	160	2,2	1,6	20	48	-5°	-	FR06L002H*	F03FS09799
	165	1,8	1,2	20	48	-5°	-	FR07L002HC	F03FS10076
	190	2,1	1,4	30	60	-5°	-	FR13L002HC	F03FS10077

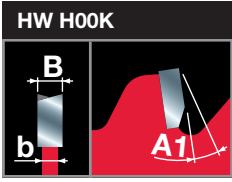


**Machines:**  
Cordless hand-held and plunge circular saws.

**Materials:**  
Laminated and bilaminated panels, chipboard, MDF and fine-coated or veneered panels.

**Technical information:**  
Specifically designed to maximise battery runtime and optimise ease of cut on cordless saws.  
Thin kerf and ATB tooth with negative cutting angle.  
\*HLTGG with negative cutting angle.

# CIRCULAR SAW BLADES FOR LAMINATED PANEL



**Machines:**  
Small table saws.

**Materials:**  
Laminated and bilaminated panels, chipboard, MDF and fine-coated or veneered panels.

**Technical information:**  
ATB tooth with negative cutting angle.

## For small table saws

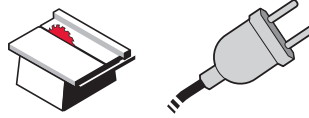
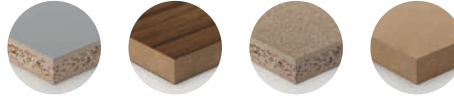
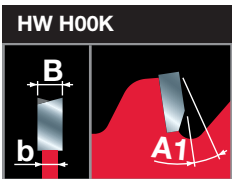


Table saws      Corded



Laminated Chipboard    Laminated MDF    Chipboard    MDF

D mm	B mm	b mm	d mm	Z	Hook A1	NL	Freud Code	Art. No.
200	2,5	1,8	30	64	-2°	-	FR14L001T	F03FS09803
216	2,5	1,8	30	60	5°	2/6/42	FR16L002T	F03FS11518
250	2,8	1,8	30	80	-2°	-	FR23L001T	F03FS09804
300	2,8	1,8	30	96	-2°	-	FR28L001T	F03FS09805
305	2,8	1,8	30	96	5°	2/10/60	FR29L001T	F03FS11533



**Machines:**  
Cordless small table saws.

**Materials:**  
Laminated and bilaminated panels, chipboard, MDF and fine-coated or veneered panels.

**Technical information:**  
Specifically designed to maximise battery runtime and optimise ease of cut on cordless table saws. Thin kerf and ATB tooth with negative cutting angle.

## For cordless small table saws

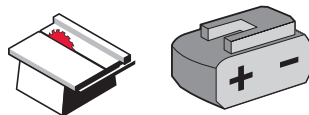


Table saws      Cordless



Laminated Chipboard    Laminated MDF    Chipboard    MDF

D mm	B mm	b mm	d mm	Z	Hook A1	NL	Freud Code	Art. No.
210	2,1	1,4	30	66	-5°	-	FR15L001TC	F03FS10078
216	2,1	1,4	30	66	-5°	-	FR16L001TC	F03FS10079

# High Pressure Laminate

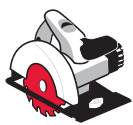






# CIRCULAR SAW BLADES FOR HIGH PRESSURE LAMINATE

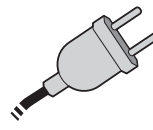
## For hand-held and plunge circular saws



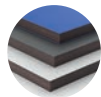
Hand-held Circular Saws



Plunge Saws



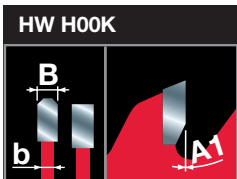
Corded



HPL



Solid surface



**Machines:**

Hand-held and plunge circular saws.

**Materials:**

High pressure laminate panels, suitable for Trespa® panels.

**Technical information:**

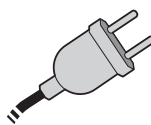
HLTCG with 0° cutting angle.

D	B	b	d	Z	Hook	NL	Freud Code	Art. No.
mm	mm	mm	mm		A1			
140	1,8	1,3	20	42	0°	2/6/32,5	<b>FR04H001H</b>	F03FS09864
160	2,2	1,6	20	48	0°	2/6/32,5	<b>FR06H001H</b>	F03FS09865
165	2,6	1,6	20	48	0°	2/6/32,5	<b>FR07H001H</b>	F03FS09866
190	2,6	1,6	20	56	0°	2/6/32,5	<b>FR13H001H</b>	F03FS09867
190	2,6	1,6	30	56	0°	2/7/42	<b>FR13H002H</b>	F03FS09868
210	2,8	1,8	30	60	0°	2/7/42	<b>FR15H001H</b>	F03FS09869
235	2,8	1,8	30	64	0°	2/7/42	<b>FR20H001H</b>	F03FS09871

## For mitre saws



Mitre saws



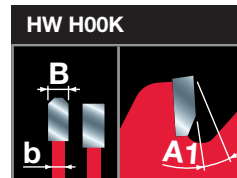
Corded



HPL



Solid surface



**Machines:**

Mitre saws.

**Materials:**

High pressure laminate panels, suitable for Trespa® panels.

**Technical information:**

HLTCG with negative cutting angle.

D	B	b	d	Z	Hook	NL	Freud Code	Art. No.
mm	mm	mm	mm		A1			
216	2,8	1,8	30	64	-3°	2/7/42	<b>FR16H001M</b>	F03FS09872
250	2,8	1,8	30	80	-3°	FT121	<b>FR23H001M</b>	F03FS09873
254	2,8	1,8	30	80	-3°	FT121	<b>FR24H001M</b>	F03FS09874
305	3,2	2,2	30	96	-3°	FT121	<b>FR29H001M</b>	F03FS09876

FT121: 2/7/42 + 2/9/46 + 2/9,5/46,5 + 2/10/60

## For small table saws

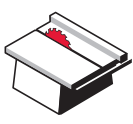
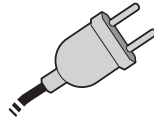
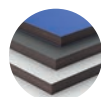


Table saws



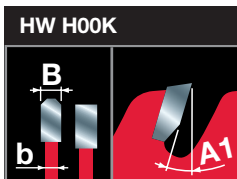
Corded



HPL



Solid surface



**Machines:**

Small table saws.

**Materials:**

High pressure laminate panels, suitable for Trespa® panels.

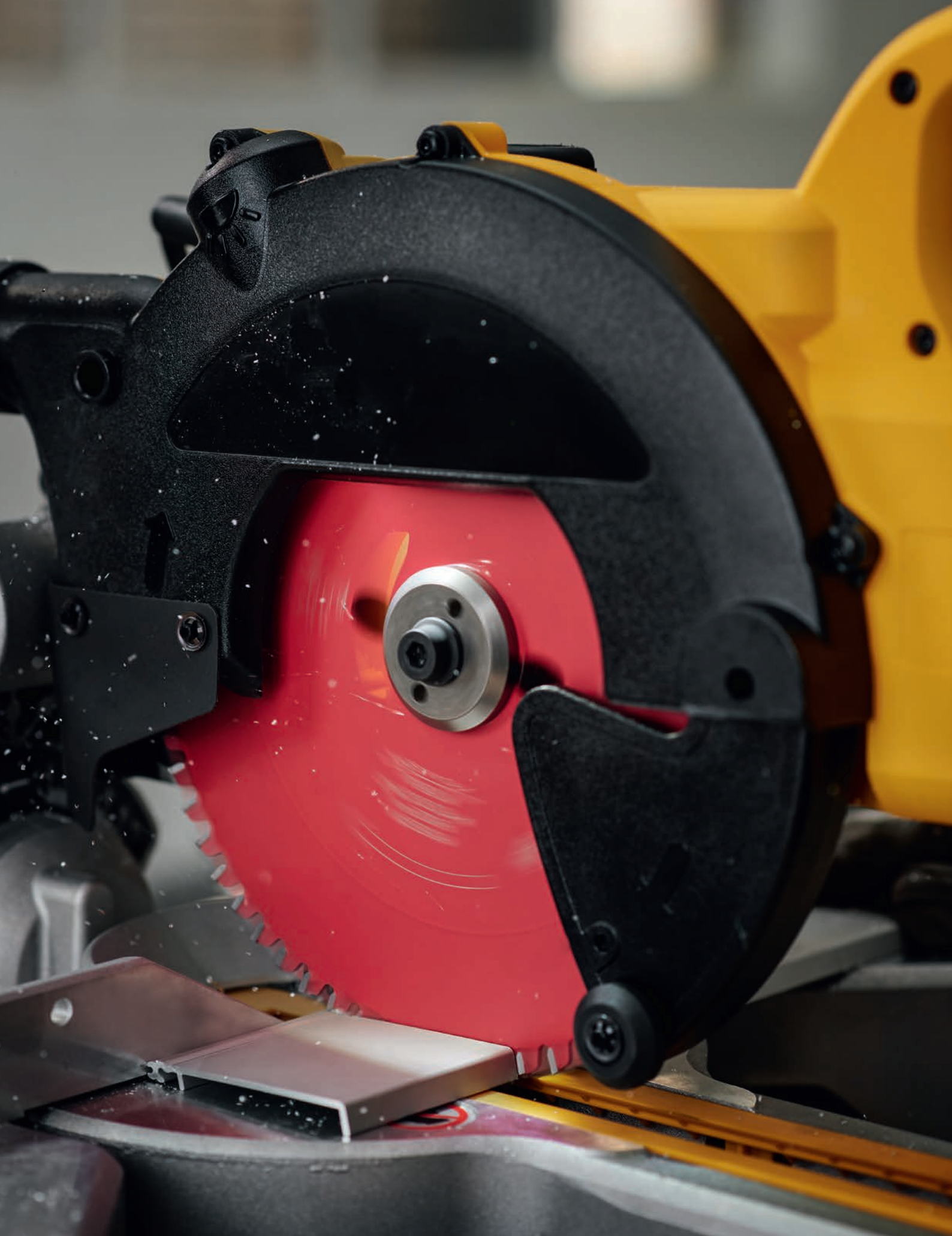
**Technical information:**

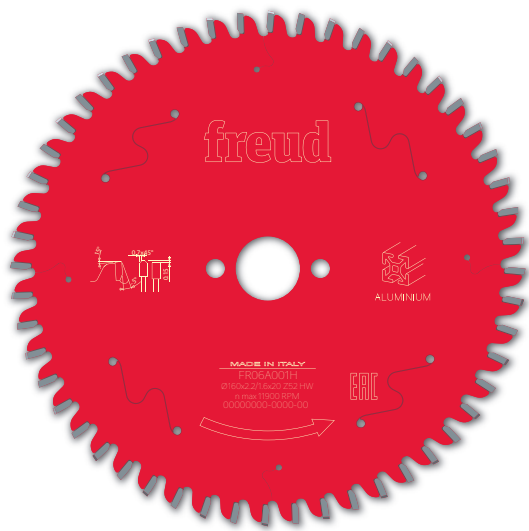
HLTCG with positive cutting angle.

D	B	b	d	Z	Hook	NL	Freud Code	Art. No.
mm	mm	mm	mm		A1			
250	2,8	1,8	30	80	10°	FT121	<b>FR23H001T</b>	F03FS09877
300	3,2	2,2	30	96	10°	FT121	<b>FR28H001T</b>	F03FS09878

FT121: 2/7/42 + 2/9/46 + 2/9,5/46,5 + 2/10/60

# Aluminium





## CIRCULAR SAW BLADES FOR ALUMINIUM

### For hand-held and plunge circular saws



Hand-held Circular Saws

Plunge Saws

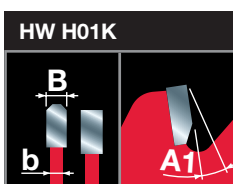
Corded



Aluminium

Copper and Brass

Plastics



#### Machines:

Hand-held and plunge circular saws.

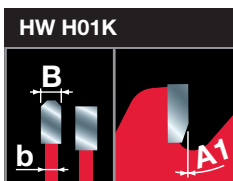
#### Materials:

Aluminium, other non-ferrous metals and plastics. Also suitable for chipboard and MDF.

#### Technical information:

HLTCG tooth with negative cutting angle.

D	B	b	d	Z	Hook	NL	Freud Code	Art. No.
mm	mm	mm	mm		A1			
140	1,8	1,3	20	42	-5°	2/6/32,5	FR04A001H	F03FS09806
150	2,5	1,6	20	42	-5°	2/6/32,5	FR05A001H	F03FS09807
160	2,2	1,6	20	52	-5°	2/6/32,5	FR06A001H	F03FS09808
165	2,5	1,6	20	52	-5°	2/6/32,5	FR07A001H	F03FS09809
165	2,5	1,6	30	52	-5°	2/7/42	FR07A002H	F03FS09810
180	2,5	1,6	30	56	-5°	2/7/42	FR09A001H	F03FS09811
190	2,5	1,6	20	56	-5°	2/6/32,5	FR13A001H	F03FS09814
190	2,5	1,6	30	56	-5°	2/7/42	FR13A002H	F03FS09815
200	2,8	1,8	30	60	-5°	2/7/42	FR14A001H	F03FS09816
210	2,3	1,8	30	72	-5°	2/7/42	FR15A001H	F03FS09817
230	2,8	1,8	30	64	-5°	2/7/42	FR19A001H	F03FS09818
235	2,5	1,8	30	80	-5°	2/7/42	FR20A001H	F03FS09819



#### Machines:

Cordless hand-held and plunge circular saws.

#### Materials:

Aluminium, other non-ferrous metals and plastics. Also suitable for chipboard and MDF.

#### Technical information:

Specifically designed to maximise battery runtime and optimise ease of cut on cordless saws. Thin kerf and HLTCG tooth with 0° or negative cutting angle.

### For cordless hand-held and plunge circular saws



Hand-held Circular Saws

Plunge Saws

Cordless



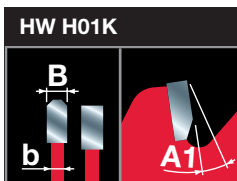
Aluminium

Copper and Brass

Plastics

D	B	b	d	Z	Hook	NL	Freud Code	Art. No.
mm	mm	mm	mm		A1			
136	1,6	1,0	20	48	0°	-	FR03A001HC	F03FS10082
140	1,8	1,3	20	48	-5°	-	FR04A002HC	F03FS10083
150	1,8	1,3	20	48	0°	-	FR05A002HC	F03FS10084
160	1,8	1,3	20	54	0°	-	FR06A002HC	F03FS10085
160	2,2	1,6	20	52	-5°	2/6/32,5	FR06A001H	F03FS09808
165	1,8	1,3	20	54	0°	-	FR07A002HC	F03FS10086
190	1,8	1,3	30	54	0°	-	FR13A003HC	F03FS10088

# CIRCULAR SAW BLADES FOR ALUMINIUM



**Machines:**  
Mitre saws.

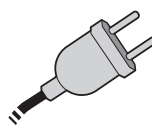
**Materials:**  
Aluminium, other non-ferrous metals and plastics.  
Also suitable for chipboard and MDF.

**Technical information:**  
HLTCG tooth with negative cutting angle.

## For mitre saws



Mitre saws



Corded



Aluminium



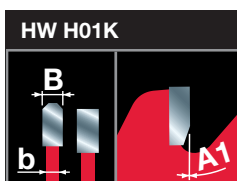
Copper and Brass



Plastics

D mm	B mm	b mm	d mm	Z	Hook A1	NL	Freud Code	Art. No.
210	2,5	1,8	30	54	-5°	FT121	FR15A001M	F03FS09820
216	2,5	1,8	30	64	-5°	FT121	FR16A001M	F03FS09821
250	2,8	2,0	30	80	-5°	FT121	FR23A001M	F03FS09822
254	2,8	2,0	30	80	-5°	FT121	FR24A001M	F03FS09823
260	2,3	1,8	30	80	-5°	FT121	FR26A001M	F03FS09827
300	2,8	2,0	30	96	-5°	FT121	FR28A001M	F03FS09828
305	2,8	2,0	30	96	-5°	FT121	FR29A001M	F03FS09829
315	2,8	2,2	30	96	-5°	FT121	FR30A001M	F03FS09832
350	3,0	2,2	30	108	5°	2/10/60	FR32A001M	F03FS11534

FT121: 2/7/42 + 2/9/46 + 2/9,5/46,5 + 2/10/60



**Machines:**  
Cordless mitre saws.

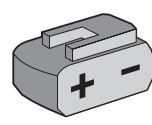
**Materials:**  
Aluminium, other non-ferrous metals and plastics.  
Also suitable for chipboard and MDF.

**Technical information:**  
Specifically designed to maximise battery runtime and optimise ease of cut on cordless mitre saws.  
Thin kerf and HLTCG tooth with 0° cutting angle.

## For cordless mitre saws



Mitre saws



Cordless



Aluminium

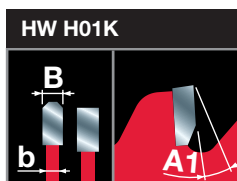


Copper and Brass



Plastics

D mm	B mm	b mm	d mm	Z	Hook A1	NL	Freud Code	Art. No.
216	2,0	1,4	30	66	0°	-	FR16A002MC	F03FS10089
250	2,4	1,8	30	78	0°	-	FR23A002MC	F03FS10090
254	2,4	1,8	30	78	0°	-	FR24A002MC	F03FS11526
305	2,4	1,8	30	96	0°	-	FR29A004MC	F03FS10091



**Machines:**  
Small table saws.

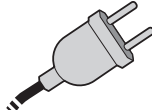
**Materials:**  
Aluminium, other non-ferrous metals and plastics.  
Also suitable for chipboard and MDF.

**Technical information:**  
HLTCG tooth with negative cutting angle.

## For small table saws



Table saws



Corded



Aluminium



Copper and Brass



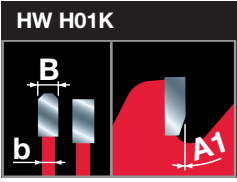
Plastics

D mm	B mm	b mm	d mm	Z	Hook A1	NL	Freud Code	Art. No.
190	2,6	1,8	Star	58	-5°	-	FR13A001T	F03FS09833
225	2,6	1,8	30	68	-5°	FT121	FR18A001T	F03FS09834
250	2,8	2,0	30	68	-5°	FT121	FR23A001T	F03FS09835
280	2,8	2,0	30	84	-5°	2/10/60	FR27A001T	F03FS11529

FT121: 2/7/42 + 2/9/46 + 2/9,5/46,5 + 2/10/60

# CIRCULAR SAW BLADES FOR ALUMINIUM

## For cordless small table saws



**Machines:**  
Cordless small table saws.

**Materials:**  
Aluminium, other non-ferrous metals and plastics.  
Also suitable for chipboard and MDF.

**Technical information:**  
Specifically designed to maximise battery runtime and optimise ease of cut on cordless table saws.  
Thin kerf and HLTG tooth with 0° cutting angle.

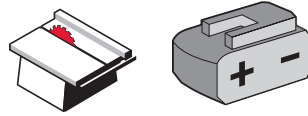


Table saws

Cordless



Aluminium

Copper and Brass

Plastics

D	B	b	d	Z	Hook	NL	Freud Code	Art. No.
mm	mm	mm	mm		A1			
210	2,0	1,4	30	66	0°	-	FR15A001TC	F03FS10092
216	2,0	1,4	30	66	0°	-	FR16A001TC	F03FS10093



## LP88M

## Saw blades to cut non-ferrous metals



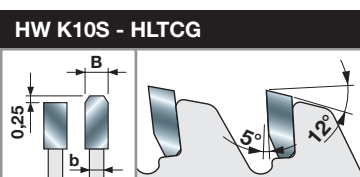
Mitre saws



Aluminium

Copper and Brass

D	B	b	d	Z	Hook	Freud Code	Art. No.
mm	mm	mm	mm		A1		
255	2,6	2,0	15,88	100	5°	LP88M 003P	F03FS09410
255	2,6	2,0	25,4	100	5°	LP88M 007P	F03FS09590
255	2,6	2,0	15,88	120	5°	LP88M 004P	F03FS09411
255	2,6	2,0	25,4	120	5°	LP88M 002P	F03FS09289
305	2,8	2,2	25,4	100	5°	LP88M 005P	F03FS09412
305	2,8	2,2	25,4	120	5°	LP88M 006P	F03FS09413



**Machines:**  
Mitre saws.

**Materials:**  
Aluminium and non-ferrous metals.

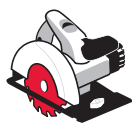
**Technical information:**  
HLTG with positive cutting angle.

# Fibre Cement

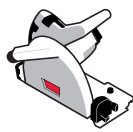


# CIRCULAR SAW BLADES FOR FIBRE CEMENT

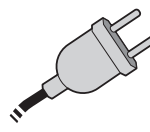
## For hand-held and plunge circular saws



Hand-held Circular Saws



Plunge Saws



Corded

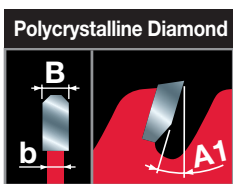


Fibre Cement



Plasterboard

	D mm	B mm	b mm	d mm	Z	Hook A1	NL	Freud Code	Art. No.
	140	1,8	1,3	20	4	10°	2/6/32,5	FR04F001H	F03FS09836
	160	1,8	1,2	20	4	10°	-	FR06F002HC	F03FS10095
	160	2,2	1,6	20	4	10°	2/6/32,5	FR06F001H	F03FS09837
	165	2,2	1,6	20	4	10°	2/6/32,5	FR07F001H	F03FS09838
	182	2,2	1,6	19,05	4	10°	-	FR10F001H	F03FS11506
	184	2,2	1,6	30	4	10°	2/7/42	FR11F001H	F03FS09840
	190	2,2	1,6	20	4	10°	2/6/32,5	FR13F001H	F03FS09841
	190	2,2	1,6	30	4	10°	2/7/42	FR13F002H	F03FS09842
	210	2,2	1,6	30	6	10°	2/7/42	FR15F001H	F03FS09843
	230	2,2	1,6	30	6	10°	2/7/42	FR19F001H	F03FS09844
	235	2,2	1,6	30	6	10°	2/7/42	FR20F001H	F03FS09845



**Machines:**  
Hand-held and plunge circular saws.

**Materials:**  
Fibre cement and plasterboard.

**Technical information:**  
Polycrystalline Diamond teeth for long lifetime in abrasive materials.  
TCG tooth with positive cutting angle.

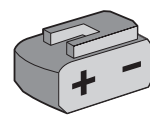
## For cordless hand-held and plunge circular saws



Hand-held Cordless Saws



Plunge Saws



Cordless

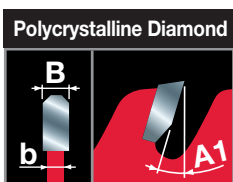


Fibre Cement



Plasterboard

	D mm	B mm	b mm	d mm	Z	Hook A1	NL	Freud Code	Art. No.
	140	1,8	1,3	20	4	10°	2/6/32,5	FR04F001H	F03FS09836
	160	1,8	1,2	20	4	10°	-	FR06F002HC	F03FS10095
	160	2,2	1,6	20	4	10°	2/6/32,5	FR06F001H	F03FS09837
	165	1,8	1,2	20	4	10°	-	FR07F002HC	F03FS10096
	190	1,8	1,2	30	4	10°	-	FR13F003HC	F03FS10097



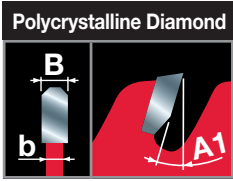
**Machines:**  
Cordless hand-held and plunge circular saws.

**Materials:**  
Fibre cement and plasterboard.

**Technical information:**  
Specifically designed to maximise battery runtime and optimise ease of cut on cordless saws.  
Thin kerf and TCG tooth with positive cutting angle.  
Polycrystalline Diamond teeth for long lifetime in abrasive materials.

# CIRCULAR SAW BLADES FOR FIBRE CEMENT

## For mitre saws



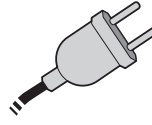
**Machines:**  
Mitre saws.

**Materials:**  
Fibre cement and plasterboard.

**Technical information:**  
Polycrystalline Diamond teeth for long lifetime in abrasive materials.  
TCG tooth with positive cutting angle.



Mitre saws



Corded



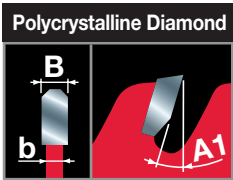
Fibre Cement



Plasterboard

D mm	B mm	b mm	d mm	Z	Hook A1	NL	Freud Code	Art. No.
216	2,2	1,6	30	6	10°	2/7/42	FR16F001M	F03FS09846
250	2,4	1,8	30	6	10°	FT121	FR23F001M	F03FS09847
254	2,4	1,8	30	6	10°	FT121	FR24F001M	F03FS09848
260	2,4	1,8	30	6	10°	FT121	FR26F001M	F03FS09849
300	2,4	1,8	30	8	10°	FT121	FR28F001M	F03FS09850
305	2,4	1,8	30	8	10°	FT121	FR29F001M	F03FS09851

FT121: 2/7/42 + 2/9/46 + 2/9,5/46,5 + 2/10/60



**Machines:**  
Cordless mitre saws.

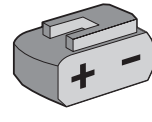
**Materials:**  
Fibre cement and plasterboard.

**Technical information:**  
Specifically designed to maximise battery runtime and optimise ease of cut on cordless mitre saws.  
Thin kerf and TCG tooth with positive cutting angle.  
Polycrystalline Diamond teeth for long lifetime in abrasive materials.

## For cordless mitre saws



Mitre saws



Cordless



Fibre Cement



Plasterboard

D mm	B mm	b mm	d mm	Z	Hook A1	NL	Freud Code	Art. No.
216	2,0	1,4	30	6	10°	-	FR16F002MC	F03FS10098
250	2,2	1,6	30	6	10°	-	FR23F002MC	F03FS10099
305	2,2	1,6	30	8	10°	-	FR29F002MC	F03FS10100

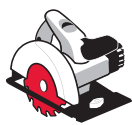


# Sandwich Panel

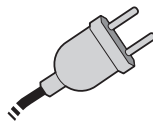


# CIRCULAR SAW BLADES FOR SANDWICH PANEL

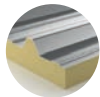
## For hand-held circular saws



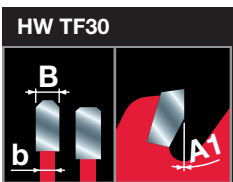
Hand-held Circular Saws



Corded



Sandwich Panel



**Machines:**  
Hand-held circular saws.

**Materials:**  
Sandwich panels with sheet steel layers.

**Technical information:**  
HLTCG with chamfer also on second tooth.  
0° cutting angle.

D	B	b	d	Z	Hook A1	NL	Freud Code	Art. No.
160	2,0	1,6	20	30	0°	2/6/32,5	FR06X001H	F03FS09852
165	2,0	1,6	20	30	0°	2/6/32,5	FR07X001H	F03FS09853
182	2,0	1,6	19,05	36	0°	-	FR10X001H	F03FS11510
190	2,0	1,6	30	36	0°	2/7/42	FR13X001H	F03FS09854
210	2,4	2,0	30	36	0°	2/7/42	FR15X001H	F03FS09855
230	2,2	1,8	30	48	0°	2/7/42	FR19X001H	F03FS09856
235	2,2	1,8	30	50	0°	2/7/42	FR20X001H	F03FS09857
240	2,6	1,6	30	48	0°	2/7/42	FR22X001H	F03FS09858
270	2,4	2,0	30	60	0°	2/7/42	FR27X001H	F03FS09859
350	2,9	2,5	30	60	0°	2/7/42	FR32X001H	F03FS09861
355	2,6	2,2	30	80	0°	2/7/42	FR33X001H	F03FS09862

# Multi Material





## CIRCULAR SAW BLADES FOR MULTI MATERIAL

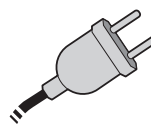
### For hand-held and plunge circular saws



Hand-held Circular Saws



Plunge Saws



Corded



Plywood



Chipboard



MDF



Aluminium



Copper and Brass

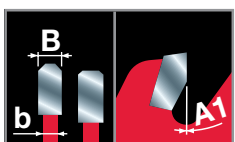


Plastics



Thin-walled Steel

D	B	b	d	Z	Hook	NL	Freud Code	Art. No.
mm	mm	mm	mm		A1			
160	2,0	1,6	20	30	0°	-	FR06M001H *	F03FS10114
184	2,0	1,6	30	36	0°	-	FR11M001H *	F03FS10113
185	2,0	1,6	20	36	0°	-	FR12M001H	F03FS11512
190	2,0	1,6	30	38	0°	-	FR13M001H *	F03FS10041
230	2,4	2,0	30	44	0°	-	FR19M001H	F03FS10042



#### Machines:

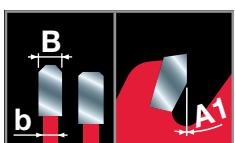
Hand-held and plunge circular saws.

#### Materials:

Wood based materials, aluminium and other non-ferrous materials, plastics and thin-walled steel profiles.

#### Technical information:

Suitable to cut a variety of different materials.  
HLTCG with chamfer also on second tooth.  
0° cutting angle.



#### Machines:

Mitre saws.

#### Materials:

Wood based materials, aluminium and other non-ferrous materials, plastics and thin-walled steel profiles.

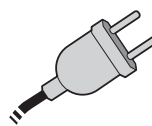
#### Technical information:

Suitable to cut a variety of different materials.  
HLTCG with chamfer also on second tooth.  
0° cutting angle.

### For mitre saws



Mitre Saws



Corded



Plywood



Chipboard



MDF



Aluminium



Copper and Brass



Plastics



Thin-walled Steel

D	B	b	d	Z	Hook	NL	Freud Code	Art. No.
mm	mm	mm	mm		A1			
210	25,4	2,0	1,6	40	0°	-	FR15M002M	F03FS11516
210	2,0	1,6	30	40	0°	-	FR15M001M *	F03FS09886
216	2,0	1,6	30	40	0°	-	FR16M001M *	F03FS09887
250	2,4	2,0	30	48	0°	-	FR23M001M	F03FS09888
254	2,4	2,0	30	48	0°	-	FR24M001M	F03FS09889
300	2,6	2,0	30	80	0°	-	FR28M001M	F03FS09890
305	2,6	2,0	30	80	0°	-	FR29M001M	F03FS09891

# TIPS FOR THE CORRECT USE OF A CIRCULAR SAW BLADE

To obtain the best performance from a saw blade we suggest following these simple instructions:

- The machine must be in good condition, free from vibrations.
- The flanges used to secure the blade must be of the same diameter, at least 1/3 of the blade diameter (Fig. 1).
- The flanges must be parallel to each other. Also check tolerances on diameters, sides and concentricity, by using a clock gauge (Fig. 2).
- After continuous use, remove the blade and clean it with the appropriate solvents making sure to get rid of built up resin. For the synthetic coated (Perma-SHIELD Coating) blades, it is sufficient to use warm water. In any case, avoid using solvents containing caustic soda.
- The blades must be sharpened as soon as they become dull, maintaining the original tooth angles.
- For sharpening, always use the correct grinding wheels and plenty of cooling liquid.
- Always keep flanges clean.
- When sharpening, the shoulder of the teeth must not be lowered more than needed. This operation must be done with appropriate precision machinery and never by hand. There is the risk of breaking the tip or upsetting the blade balance (Fig. 3 - 4).
- Before starting the cut of the material, make sure the blade is correctly locked according to the machines specifications.

## Saw blade alignment on a table saw

- If the saw blade and the saw are not correctly aligned to the table and the fence, then there is the possibility that a serious accident may occur (for example, violent kickbacks) or that the workpiece may scorch or splinter. The first thing you must do is read the instruction sheet carefully. This is necessary to acquire the understanding and comprehension of the corrections suggested in this section.
- Before carrying out the following instructions, make sure that the starter switch is off and that the machine is not connected to the socket.
- Mounting the saw blade onto the table:

We advise using precise measuring instruments when mounting a saw blade. Clean the saw blade well, before mounting it onto the machine. Mount the saw blade onto the arbor. Adjust the arbor to its maximum height. With the aid of the most precise measuring instrument available, verify that the saw blade is parallel to the mitre gauge slots (Fig. 5). Adjust as needed. This step is necessary to obtain crosscuts with the maximum in quality finish and for setting up the fence for ripping.

- Positioning the fence for ripping:

After having positioned the saw blade so as it is parallel to the mitre gauge slots, you may proceed with setting the fence. The fence should ideally be parallel to the saw blade. However since it is impossible to position the guide "exactly" it is necessary to leave a slight margin of clearance on the exit side of the cut so as to avoid the wood becoming wedged in between the fence and the saw blade.

Adjust the fence so as when it is aligned to the mitre gauge slots, there is a space of 0,1 mm (Fig. 6; for the correct adjustment, consult the machine's instruction manual).

- The maximum RPM of a circular saw blade varies according to the diameter of the blade itself (table 1). If you exceed this limit, the saw blade will lose its characteristics, therefore influencing the cutting quality and the work life of the blade itself, not to mention the dangers implied to the user who may incur serious injury.
- The saw blade's projection (T) with respect to the workpiece must be at least equal to the height of the blade's tooth (Fig. 7). Increase or decrease the projection of the saw blade to improve the quality of the cutting finish.
- The number of teeth cutting the wood simultaneously (Fig. 8) must be between 3 or 4. With less than three teeth cutting, the saw blade begins to vibrate leading to an uneven cut. If you want to cut workpieces with increased thicknesses (S - Fig. 10), but wish to maintain the same diameter saw blade, then use a blade with less teeth. If instead you want to cut workpieces with a reduced thickness, but also maintain the same diameter saw blade, then use a blade with more teeth.
- To obtain the pitch (P) of a blade (the distance between teeth: Fig. 9 - see formula "A") multiply the thickness of the workpiece by 1,4142 and divide by 3 (if you want 3 teeth cutting) or by 4 (if you want 4 teeth cutting).
- Formula "B": to obtain the number of teeth (Z) of the saw blade, multiply the diameter (D) of the saw blade by 3,14 (π) and divide by the pitch of the saw blade - obtained from the previous formula. The shorter formula "C" allows you to obtain the number of the saw blade's teeth, knowing its diameter and the thickness of the workpiece.

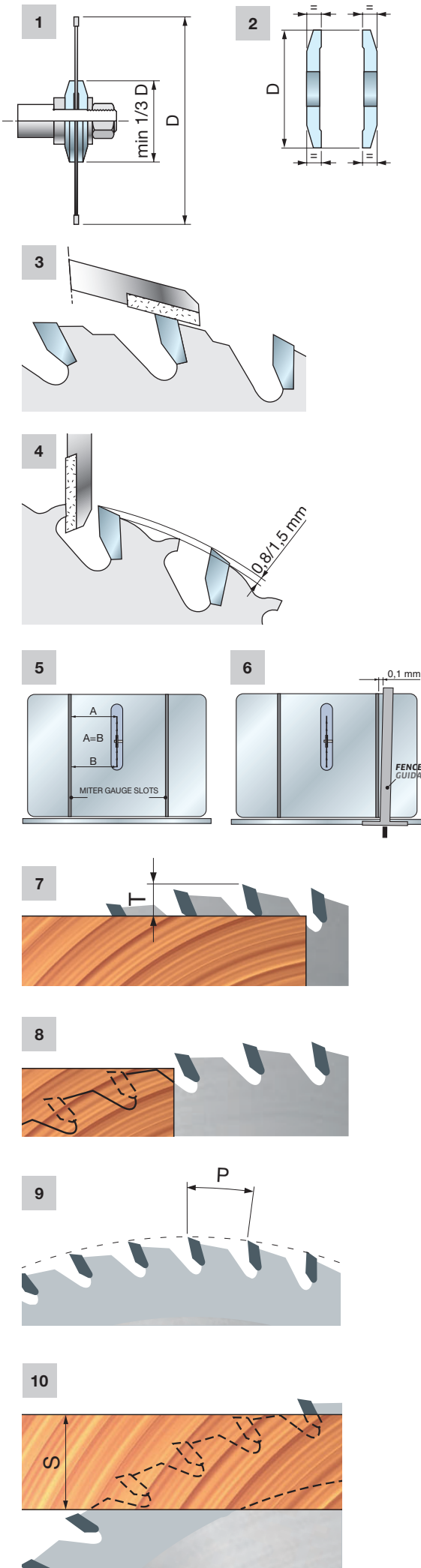
Formula A	Formula B	Formula C
$P = \frac{S \times 1,4142}{3}$	$Z = \frac{D \times 3,14}{P}$	$Z = \frac{D \times 8}{S}$

### KEY:

- P= Pitch
- S= Thickness of the workpiece
- Z= Number of teeth of the saw blade
- D= Diameter of the saw blade

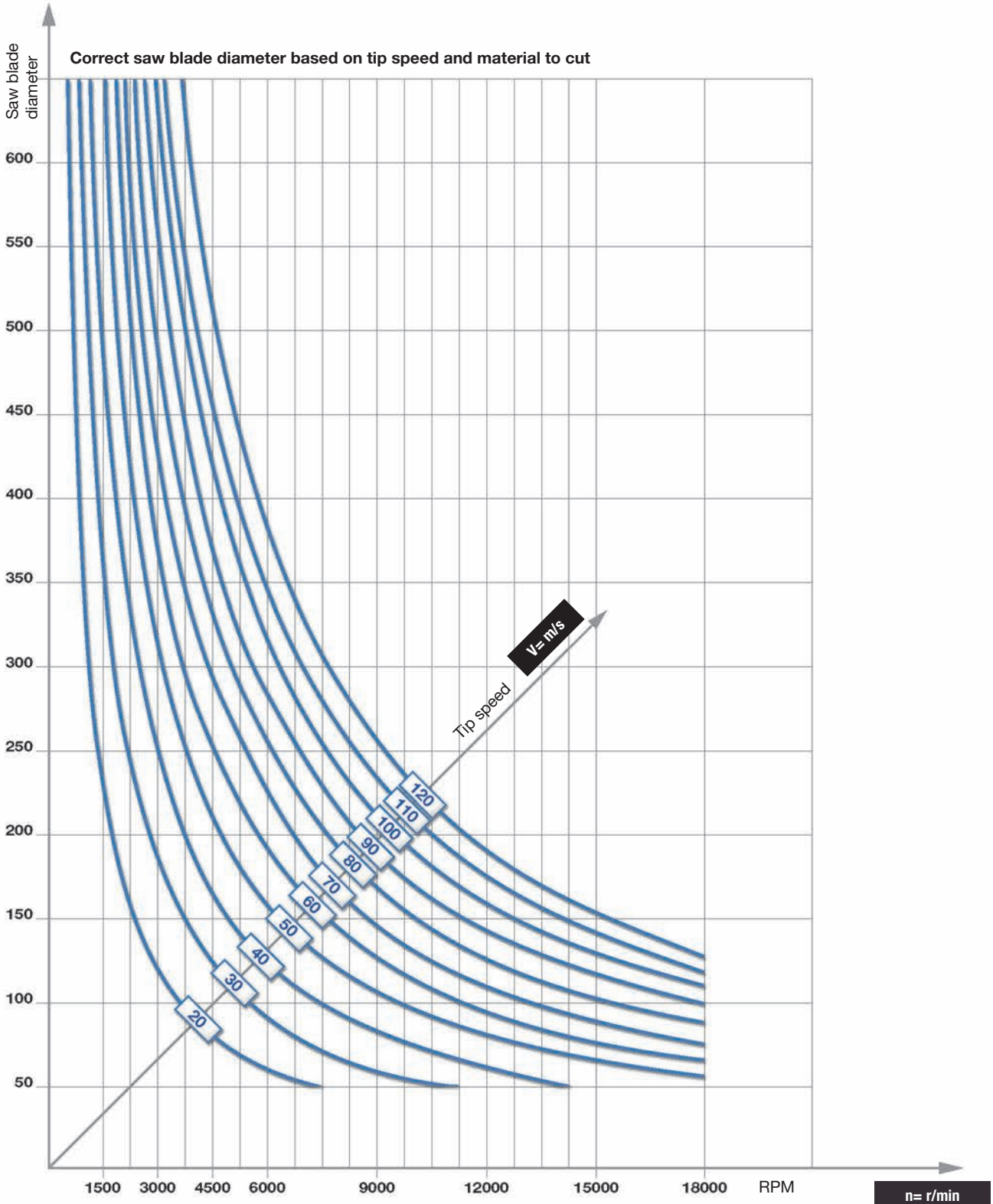
### Attention:

These formulas are valid for crosscutting and cutting other wood composites (MDF, plywood, chipboard and laminated panels) and cannot be applied for ripping.



# TIPS FOR THE CORRECT USE OF A CIRCULAR SAW BLADE

Tip speed (m/s)	Recommended for
50 - 90	Softwood
50 - 80	Hardwood
50 - 85	Exotic wood
60 - 80	Chipboard
60 - 80	Joinery wood
30 - 60	MDF
40 - 60	Laminated and bilaminated

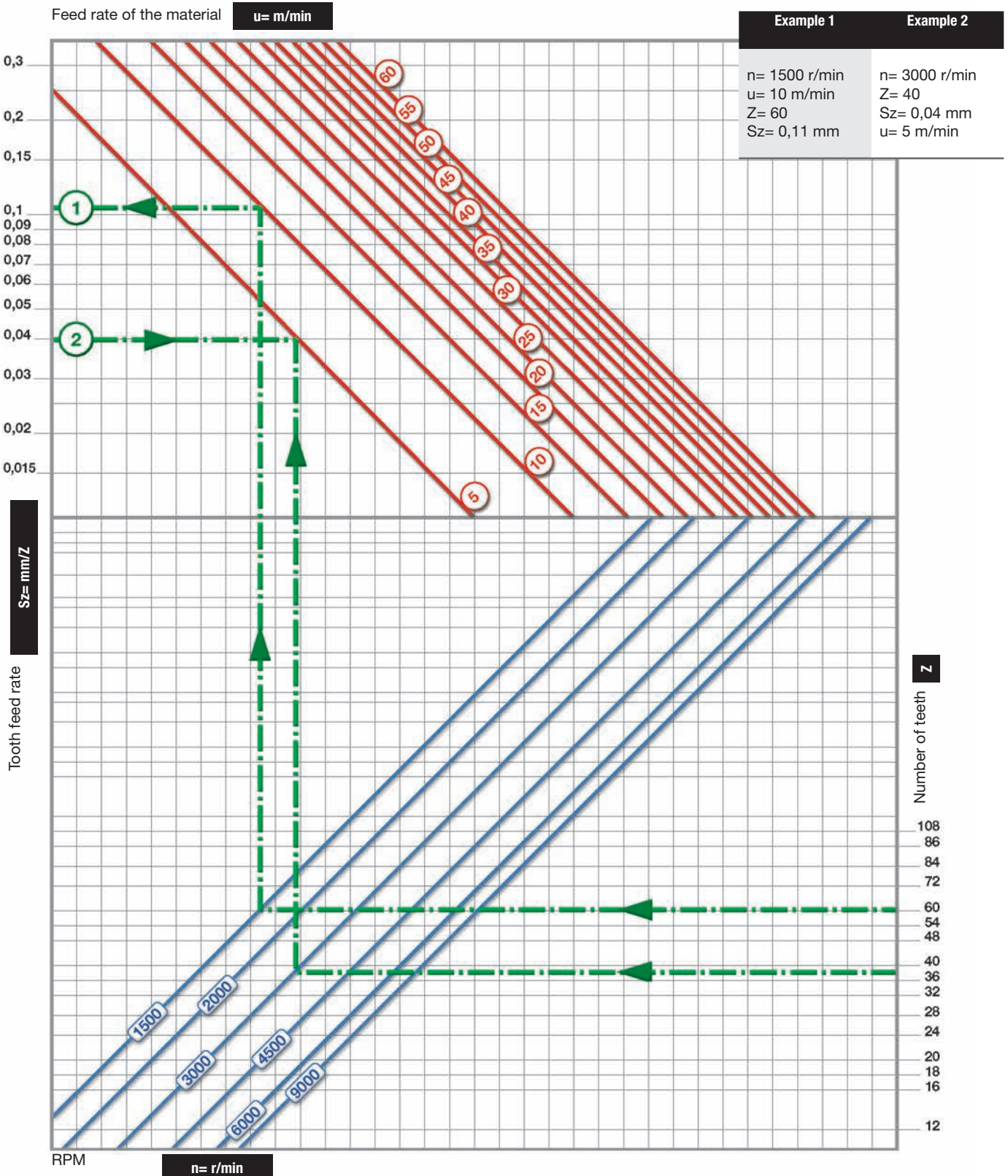


# TIPS FOR THE CORRECT USE OF A CIRCULAR SAW BLADE

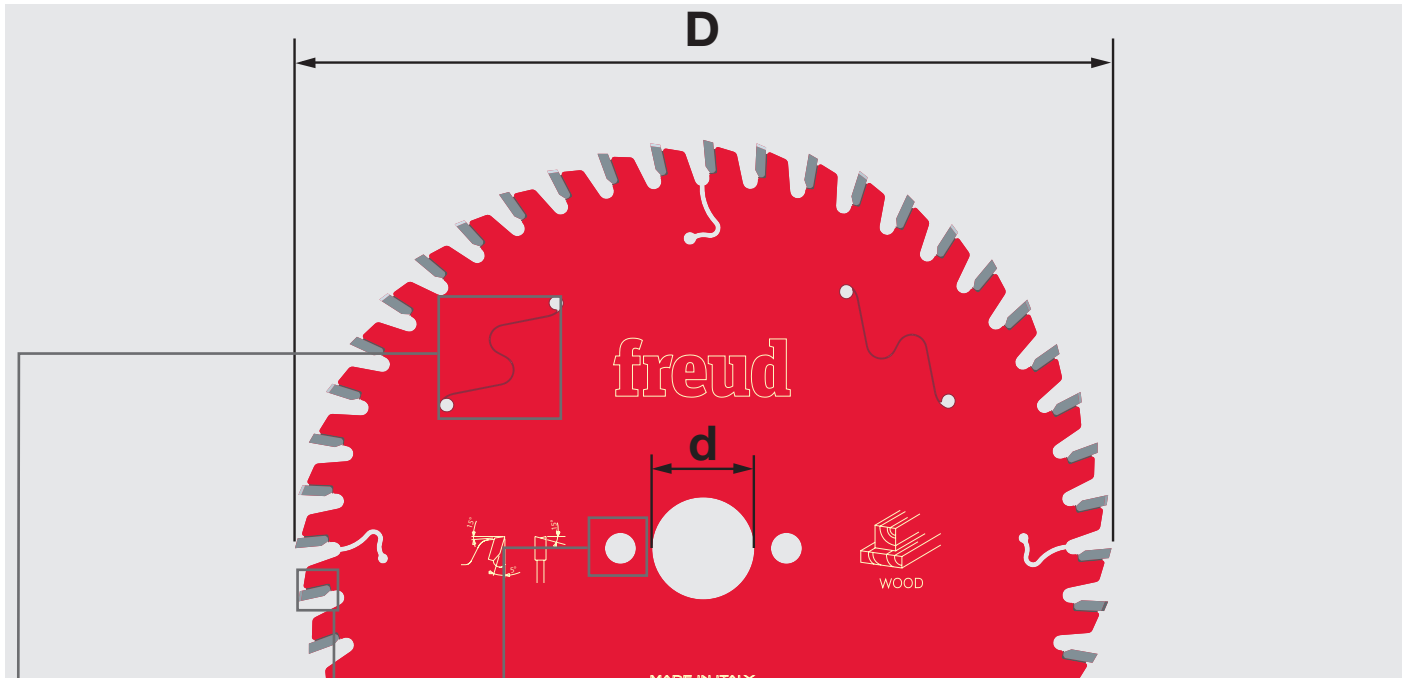
## Correct tooth feed rate, material feedrate, number of teeth and RPM

Recommended tooth feed rate (Sz= mm/tooth)	Recommended for
0,20 - 0,30	Softwood with grain
0,10 - 0,20	Softwood cross grain
0,06 - 0,15	Hardwood
0,10 - 0,25	Chipboard

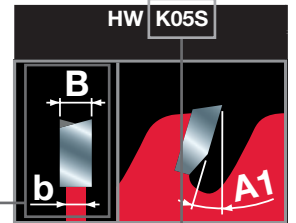
Recommended tooth feed rate (Sz= mm/tooth)	Recommended for
0,05 - 0,12	Plywood
0,05 - 0,10	Laminated board
0,02 - 0,05	Aluminium and plastic laminated chipboard



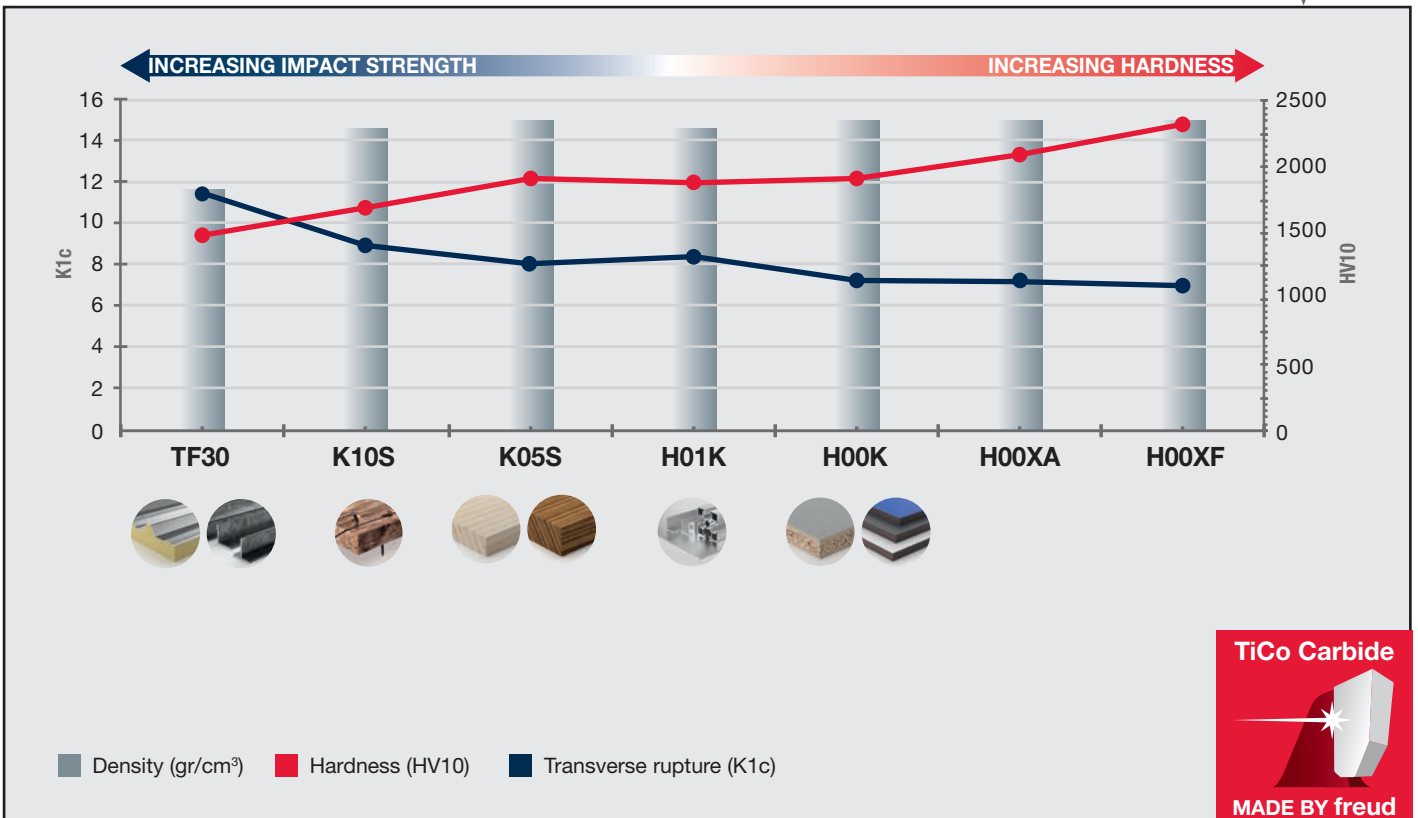
# EXPLANATION OF SYMBOLS AND ABBREVIATIONS



D mm	B mm	b mm	d mm	Z	NL	Code	SAP
250	3,2	2,2	30	22	FT01	ABCD 1234	A00BC01234
250	3,2	2,2	70	22	4CH 21x5	ABCD 1234	A00BC01234
300	3,2	2,2	30	26	FT01	ABCD 1234	A00BC01234



MICRO-GRAIN CARBIDE (HW) HARDNESS USED FOR MANUFACTURING TIPS





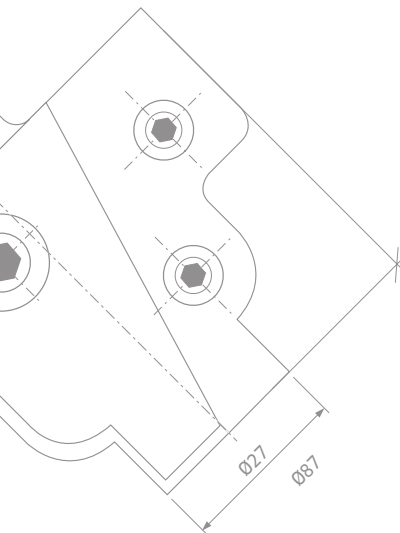
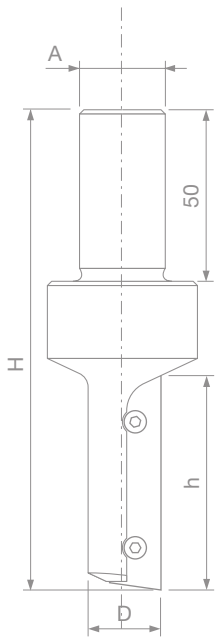
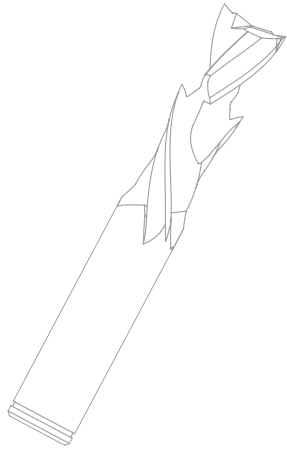
# Routing Tools for CNC Machines

Freud's wide range of superior quality routing, drilling and CNC tools for high-speed and fully automated routing machines leverages outstanding technical know-how, advanced manufacturing processes and finest quality materials.

Designed to perform precise and burn free cuts, these tools deliver superior performance, perfect finishing and maximum lifetime.

All routing tools feature Freud's unique and industry-first attributes.





Leading technology for router cutters ..... Page 147

**SIZING**

**Solid Carbide router cutters for sizing**

SCH1UF Finishing router cutter - upcut with right-hand Z1 ..... Page 149  
 SCH2UF Finishing router cutter - upcut with right-hand Z2 ..... Page 150  
 SCH3UF Finishing router cutter - upcut with right-hand Z3 ..... Page 151  
 SCH1DF Finishing router cutter - downcut with right-hand Z1 ..... Page 152  
 SCH2DF Finishing router cutter - downcut with right-hand Z2 ..... Page 153  
 SCH3DF Finishing router cutter - downcut with right-hand Z3 ..... Page 154  
 SCH2XF Finishing router cutter - compression with right-hand Z2+2 ..... Page 155  
 SCH3XF Finishing router cutter - compression with right-hand Z3+3 ..... Page 156  
 SCH3UR Roughing router cutter - upcut with right-hand Z3 ..... Page 157  
 SCH3DR Roughing router cutter - downcut with right-hand Z3 ..... Page 158

**Disposable knives router cutters for sizing**

TG62MD Disposable knives straight router cutters ..... Page 159  
 TG63MD Disposable knives straight router cutters ..... Page 159  
 TG71MD Disposable knives straight router cutters ..... Page 160  
 TG74MD Bearing disposable knives straight router cutters ..... Page 161  
 TG76MD Bearing disposable knives straight router cutters ..... Page 161

**Circular saw blades for grooving and sizing**

LU34M Circular saw blades for grooving and sizing ..... Page 162

**GROOVING**

**Solid Carbide router cutters for grooving and sizing**

SCH3 Finishing hardware slot router cutter - right-hand Z2 and Z3 ..... Page 164

**Disposable knives router cutters for grooving**

TG72MD Disposable knife straight router cutters ..... Page 166

**PLANING**

**Disposable knives router cutters for planing**

TM10MD Disposable knives straight router cutter ..... Page 168  
 NC12M Spoilboard surfacing cutters ..... Page 169  
 NC96MGC13 CNC multicut planer cutterhead ..... Page 170

**PROFILING**

**CNC router cutters for profiling**

NC01M Multiprofile router cutter - Z1 ..... Page 172  
 NC02M CNC router cutter with profiled knives ..... Page 173  
 PCN110 Customised CNC router cutter with profiled knives ..... Page 174  
 NC21MCA CNC router cutter with multiradius knives ..... Page 175  
 NC23MCA CNC router cutter with multiradius knives ..... Page 176  
 PCN121 Customised CNC router cutter with profiled knives ..... Page 177  
 NC30MCA CNC router cutter with multiradius knives ..... Page 178  
 NC30MCB CNC router cutter with multiradius knives ..... Page 179  
 PCN130 Customised CNC router cutter with profiled knives ..... Page 180  
 NC33MCA CNC router cutter with multiradius knives ..... Page 181  
 PCN133 Customised CNC router cutter with profiled knives ..... Page 182  
 NC40MCA CNC router cutter with multiradius knives ..... Page 183  
 PCN140 Customised CNC router cutter with profiled knives ..... Page 184  
 NC50MCA CNC router cutter with multiradius knives ..... Page 185  
 PCN150 Customised CNC router cutter with profiled knives ..... Page 186  
 NC60MCA CNC router cutter with multiradius knives ..... Page 187  
 NC62MCA CNC raised panel router cutter ..... Page 188  
 NC64MCA CNC raised panel router cutter ..... Page 189  
 PCN160 Customised CNC raised panel router cutter ..... Page 190  
 PCN160R Customised CNC raised panel router cutter ..... Page 191  
 NC90MCA CNC cabinet door router cutter - profile ..... Page 192  
 PCN300 Customised CNC cabinet door router cutter - profile ..... Page 194  
 NC91MCA CNC cabinet door router cutter - scribe ..... Page 196  
 PCN310 Customised CNC cabinet door router cutter - scribe ..... Page 198  
 NCSEM22 A01-A03 CNC tool for cabinet door frame profile - 22 mm ..... Page 200  
 NCSEM22 A02-A04 CNC tool for cabinet door frame scribe - 22 mm ..... Page 202  
 NCSEM30 A01-A03 CNC tool for cabinet door frame profile - 30 mm ..... Page 204  
 NCSEM30 A02-A04 CNC tool for cabinet door frame scribe - 30 mm ..... Page 206  
 TD54MD CNC multiprofile raised panel router cutter ..... Page 208  
 NC92M CNC tool with profiled knives ..... Page 210  
 NC93M CNC finger joint tool ..... Page 212  
 NC94MGC13 CNC finger joint tool ..... Page 214

## DRILLING

### Drill bits for blind holes

PF03MD - PF03MS	Solid Carbide multipurpose drilling - screw holes.....	Page 217
PF26MD - PF26MS	Dowel drills for blind holes .....	Page 218
PF04MD - PF04MS	Dowel drills with round spurs .....	Page 219
PF06MD - PF06MS	Dowel drills for blind holes .....	Page 220
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PF08MDC - PF08MSC	Dowel drills with countersink - blind holes.....	Page 222
PF08MDB - PF08MSB	Dowel drills with countersink - blind holes.....	Page 223
PF08MDA - PF08MSA	Dowel drills with countersink - blind holes.....	Page 224
PF09MDB - PF09MSB	Dowel drills without countersink - blind holes.....	Page 225
PF09MDA - PF09MSA	Dowel drills without countersink - blind holes.....	Page 226

### Drill bits for through holes

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PF31MD - PF31MS	Solid Carbide multipurpose drills .....	Page 228
PF05MD - PF05MS	Through holes drills .....	Page 229
PF10MD - PF10MS	Through holes drills .....	Page 230
PF11MD - PF11MS	Through holes drills .....	Page 231

### Countersinks for drill bits

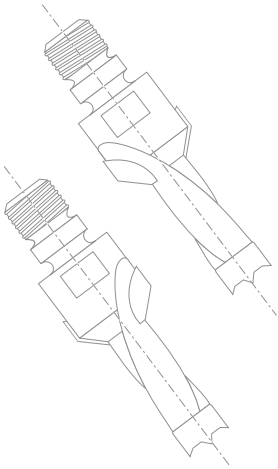
SV05MD - SV05MS	Carbide loose countersink cutters .....	Page 232
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### Boring bits for hinges

PC04MD - PC04MS	Carbide boring bits for hinges.....	Page 233
PC05MD - PC05MS	Carbide boring bits for hinges.....	Page 234

Safe working practice.....	Page 235
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Advice for correct use .....	Page 236
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# LEADING TECHNOLOGY

## TICO CARBIDE TECHNOLOGY

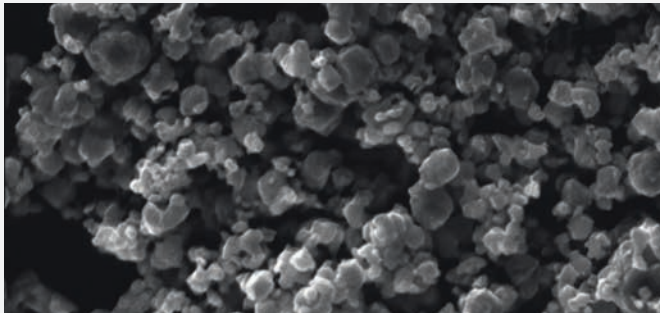
Freud's ownership and control of the entire Carbide production cycle ensures that the correct formula is used for the specific application needs, to constantly maximise the routing tool performance.



### TiCo Carbide

A specially formulated, highly compact Titanium Cobalt Carbide, engineered and manufactured by Freud.

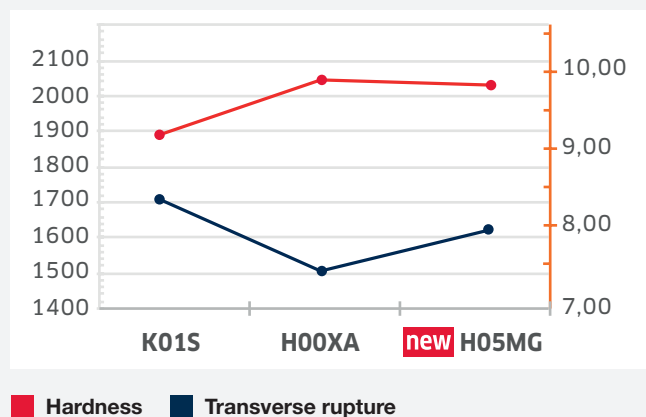
It provides a sharper edge and flawless finish with a dramatically longer cutting life.



## CARBIDE INNOVATION

The continuous investment in new Carbide recipe development maintains the router performance at unmatched quality levels.

For example, the SCH range features the new micro-grain Carbide **H05MG**, specifically formulated for a high level of hardness and tenacity, to achieve the greatest resistance to wear and impact.





## DESIGN INNOVATION

Freud leverages its market knowledge and technical know-how to constantly develop new geometries for its routing tools and guarantee superior cutting performance in demanding applications.

The new helix designs and geometries, designed for the SCH range, deliver flawless results and impeccable finishing across a number of applications:

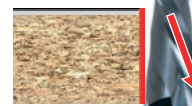
### Upcut helix

Best finishing on the lower side.  
Best chip evacuation.



### Downcut helix

Best finishing on the upper side.  
Best adhesion of the panel to the machine.



### Compression

Best finishing on both sides.  
High quality nesting application.



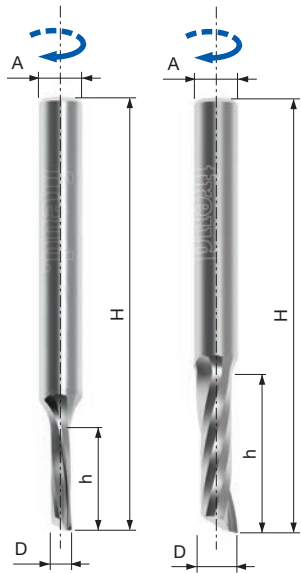
## EXTENSIVE RANGE

Freud offers different solutions for specific application needs. The wide range includes a selection of router cutters that combines the efficiency of the cutterheads with the versatility given by the shank.



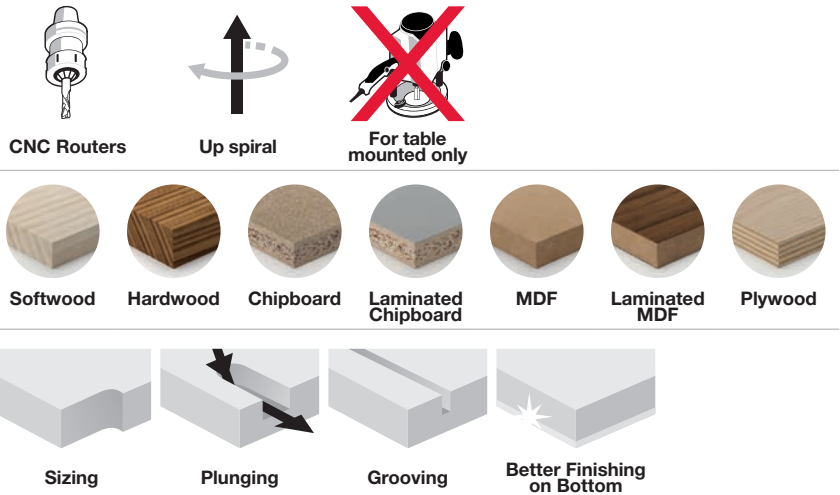
# Sizing





# SCH1UF

## Finishing router cutter upcut with right-hand Z1



### Machines:

Nesting and CNC overhead routing machines.

### Materials:

Softwood, hardwood and wood based panels.

### Applications:

Sizing, plunging and grooving.

### Technical information:

Solid Carbide bit with positive helix designed for CNC routing with large gullet space for high chips removal.

- Suitable for sizing, plunging and grooving with a perfect finishing.
- Upcut helix, good chip flow, upward chip removal for best finishing on the lower side of the panel.

D mm	h mm	H mm	A mm	Quality of HW	Z	Max RPM	Freud Code	Art. No.
3	13	60	6	MG10	1	30.000	SCH1UFN110R	F03FR03639
4	15	50	4	MG10	1	30.000	SCH1UFN210R	F03FR03645
4	16	60	6	MG10	1	30.000	SCH1UFN120R	F03FR03640
5	17	50	5	MG10	1	30.000	SCH1UFN215R	F03FR03646
5	17	60	6	MG10	1	30.000	SCH1UFN130R	F03FR03641
5	17	60	8	MG10	1	30.000	SCH1UFN160R	F03FR03644
6	17	50	6	MG10	1	30.000	SCH1UFN220R	F03FR03647
6	22	60	6	MG10	1	30.000	SCH1UFN225R	F03FR03648
8	22	70	8	MG10	1	30.000	SCH1UFN235R	F03FR03650
8	32	80	8	MG10	1	30.000	SCH1UFN240R	F03FR03651
8	42	90	8	MG10	1	30.000	SCH1UFN245R	F03FR03652
10	32	80	10	H05MG	1	30.000	SCH1UFN255R	F03FR03654
10	42	100	10	H05MG	1	30.000	SCH1UFN260R	F03FR03655
10	52	100	10	H05MG	1	30.000	SCH1UFN265R	F03FR03656
12	32	80	12	H05MG	1	30.000	SCH1UFN270R	F03FR03657
12	52	100	12	H05MG	1	30.000	SCH1UFN275R	F03FR03658

D inch	h inch	H inch	A inch	Quality of HW	Z	Max RPM	Freud Code	Art. No.
1/8	1/2	2-1/2	1/4	MG10	1	30.000	SCH1UFN140R	F03FR03642
3/16	3/4	2-1/2	1/4	MG10	1	30.000	SCH1UFN150R	F03FR03643
1/4	1	2-1/2	1/4	MG10	1	30.000	SCH1UFN230R	F03FR03649
3/8	1-1/8	3	3/8	H05MG	1	30.000	SCH1UFN250R	F03FR03653
1/2	1-5/16	3	1/2	H05MG	1	30.000	SCH1UFN280R	F03FR03659

### Working parameters

To find suggested feeding speeds see the tables below and apply the following correction factors.

### Materials:

Hardwood: 0,9

MDF, Chipboard: 1,1

### Depth of cut:

From 1 x D to 2 x D : 0,75

From 2 x D to 3 x D : 0,5

Over 3 x D : 0,4

### Rotation speed:

Suggested speeds are proportional to RPM.

### Examples:

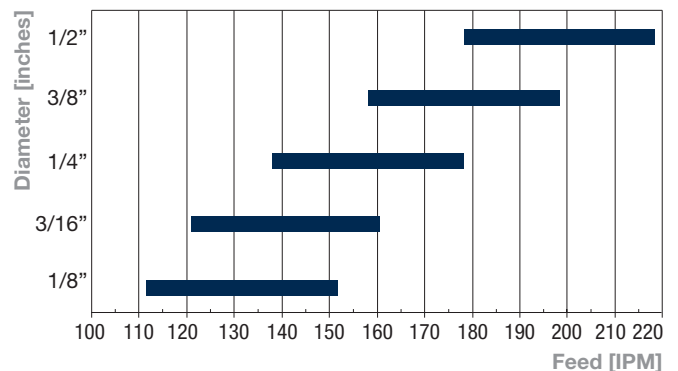
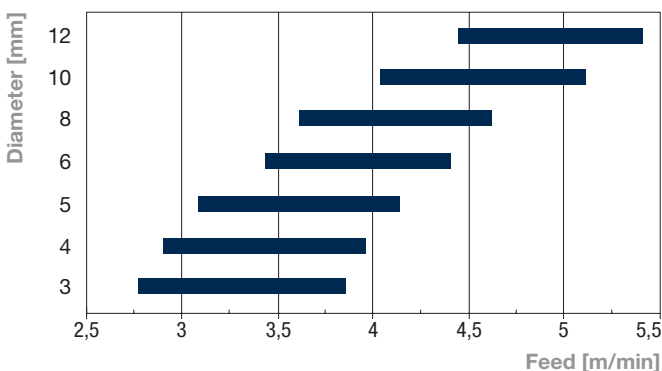
Factor for 12.000 RPM:  $12.000/18.000 = 0,66$

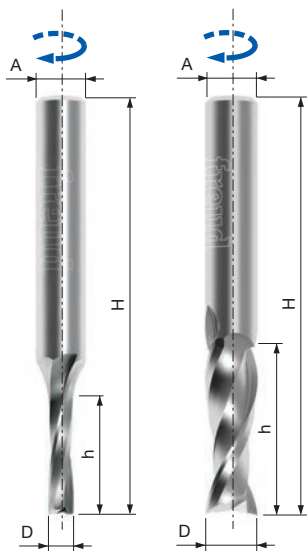
Factor for 24.000 RPM:  $24.000/18.000 = 1,33$

To maximise the tool lifetime, always set the maximum speed that delivers the needed quality of cut.

Suggested speeds for softwood: 18.000 RPM.

Depth of cut equal to cutting diameter.





# SCH2UF

## Finishing router cutter upcut with right-hand Z2



CNC Routers



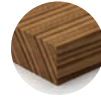
Up spiral



For table mounted only



Softwood



Hardwood



Chipboard



Laminated Chipboard



MDF



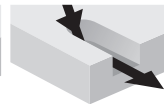
Laminated MDF



Plywood



Sizing



Plunging



Grooving



Better Finishing on Bottom

### Machines:

Nesting and CNC overhead routing machines.

### Materials:

Softwood, hardwood and wood based panels.

### Applications:

Sizing, plunging and grooving.

### Technical information:

Solid Carbide with positive helix bit designed for CNC routing for general purpose with perfect finishing.

- Suitable for sizing, plunging and grooving with a perfect finishing.
- Upcut helix, good chip flow, upward chip removal for best finishing on the lower side of the panel.

### Working parameters

To find suggested feeding speeds see the tables below and apply the following correction factors.

### Materials:

Hardwood: 0,9

MDF, Chipboard: 1,1

### Depth of cut:

From 1 x D to 2 x D : 0,75

From 2 x D to 3 x D : 0,5

Over 3 x D : 0,4

### Rotation speed:

Suggested speeds are proportional to RPM.

### Examples:

Factor for 12.000 RPM:  $12.000/18.000 = 0,66$

Factor for 24.000 RPM:  $24.000/18.000 = 1,33$

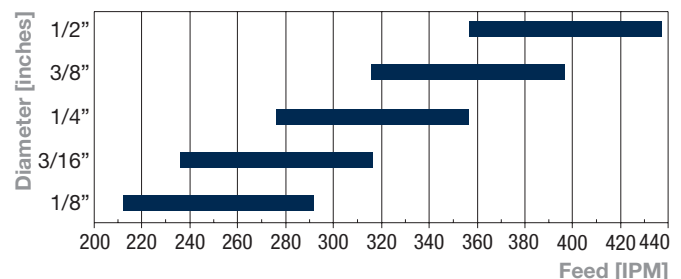
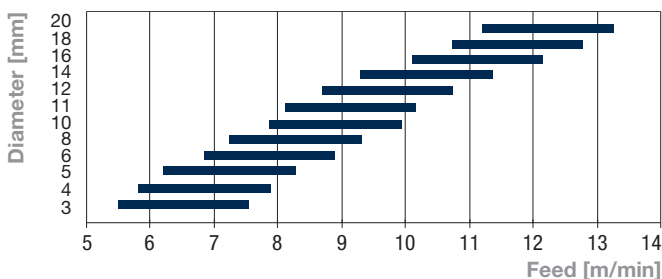
To maximise the tool lifetime, always set the maximum speed that delivers the needed quality of cut.

Suggested speeds for softwood: 18.000 RPM.

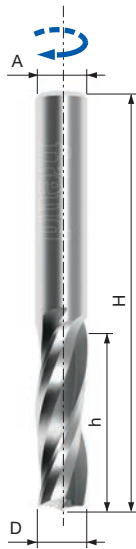
Depth of cut equal to cutting diameter.

D	h	H	A	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm					
3	13	50	6	MG10	2	30.000	SCH2UFN110R	F03FR03696
3	13	50	8	MG10	2	30.000	SCH2UFN135R	F03FR03701
4	15	50	4	MG10	2	30.000	SCH2UFN204R	F03FR03709
4	16	50	6	MG10	2	30.000	SCH2UFN115R	F03FR03697
4	16	50	8	MG10	2	30.000	SCH2UFN140R	F03FR03702
5	17	50	5	MG10	2	30.000	SCH2UFN208R	F03FR03710
5	17	60	6	MG10	2	30.000	SCH2UFN120R	F03FR03698
5	17	50	8	MG10	2	30.000	SCH2UFN145R	F03FR03703
6	17	60	6	MG10	2	30.000	SCH2UFN212R	F03FR03711
6	22	60	6	MG10	2	30.000	SCH2UFN216R	F03FR03712
6	25	60	8	MG10	2	30.000	SCH2UFN150R	F03FR03704
7	32	80	8	MG10	2	30.000	SCH2UFN155R	F03FR03705
8	22	70	8	MG10	2	30.000	SCH2UFN224R	F03FR03714
8	32	80	8	MG10	2	30.000	SCH2UFN228R	F03FR03715
8	42	90	8	MG10	2	30.000	SCH2UFN232R	F03FR03716
8	25	70	12	H05MG	2	30.000	SCH2UFN160R	F03FR03706
10	32	80	10	H05MG	2	30.000	SCH2UFN240R	F03FR03718
10	42	100	10	H05MG	2	30.000	SCH2UFN244R	F03FR03719
10	52	100	10	H05MG	2	30.000	SCH2UFN248R	F03FR03720
10	32	80	12	H05MG	2	30.000	SCH2UFN170R	F03FR03708
11	37	80	11	H05MG	2	30.000	SCH2UFN252R	F03FR03721
12	32	80	12	H05MG	2	30.000	SCH2UFN256R	F03FR03722
12	42	90	12	H05MG	2	30.000	SCH2UFN260R	F03FR03723
12	52	100	12	H05MG	2	30.000	SCH2UFN264R	F03FR03724
14	52	100	14	H05MG	2	25.000	SCH2UFN276R	F03FR03727
16	52	100	16	H05MG	2	25.000	SCH2UFN280R	F03FR03728
18	52	110	18	H05MG	2	25.000	SCH2UFN284R	F03FR03729
20	52	120	20	H05MG	2	25.000	SCH2UFN288R	F03FR03730
20	72	140	20	H05MG	2	25.000	SCH2UFN292R	F03FR03731

D	h	H	A	Quality of HW	Z	Max RPM	Freud Code	Art. No.
inch	inch	inch	inch					
1/8	1/2	2	1/4	MG10	2	30.000	SCH2UFN125R	F03FR03699
3/16	3/4	2	1/4	MG10	2	30.000	SCH2UFN130R	F03FR03700
1/4	1	2-1/2	1/4	MG10	2	30.000	SCH2UFN220R	F03FR03713
3/8	1-1/8	3	3/8	H05MG	2	30.000	SCH2UFN236R	F03FR03717
3/8	1-1/4	3	1/2	H05MG	2	30.000	SCH2UFN165R	F03FR03707
1/2	1-1/4	3	1/2	H05MG	2	30.000	SCH2UFN268R	F03FR03725
1/2	2	4	1/2	H05MG	2	30.000	SCH2UFN272R	F03FR03726







# SCH3UF

## Finishing router cutter upcut with right-hand Z3



CNC Routers



Up spiral



For table mounted only



Softwood



Hardwood



Chipboard



Laminated Chipboard



MDF



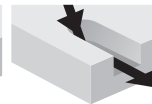
Laminated MDF



Plywood



Sizing



Plunging



Grooving



Better Finishing on Bottom

### Machines:

Nesting and CNC overhead routing machines.

### Materials:

Softwood, hardwood and wood based panels.

### Applications:

Sizing, plunging and grooving.

### Technical information:

Solid Carbide bit with positive helix designed for CNC routing for high feed rate applications.

- Suitable for: sizing, plunging and grooving with a perfect finishing.
- Upcut helix, good chip flow, upward chip removal for best finishing on the lower side of the panel.

### Working parameters

To find suggested feeding speeds see the tables below and apply the following correction factors.

#### Materials:

Hardwood: 0,9

MDF, Chipboard: 1,1

#### Depth of cut:

From 1 x D to 2 x D : 0,75

From 2 x D to 3 x D : 0,5

Over 3 x D : 0,4

#### Rotation speed:

Suggested speeds are proportional to RPM.

#### Examples:

Factor for 12.000 RPM:  $12.000/18.000 = 0,66$

Factor for 24.000 RPM:  $24.000/18.000 = 1,33$

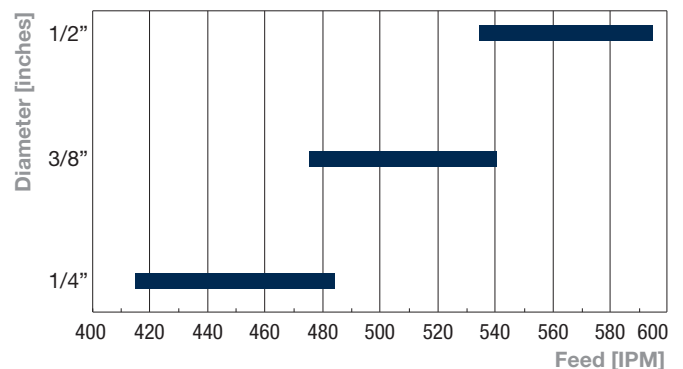
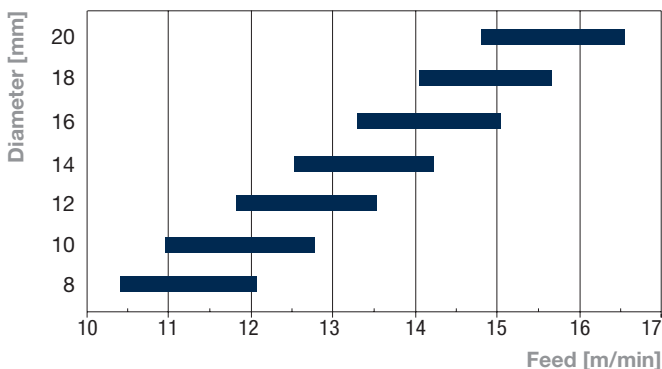
To maximise the tool lifetime, always set the maximum speed that delivers the needed quality of cut.

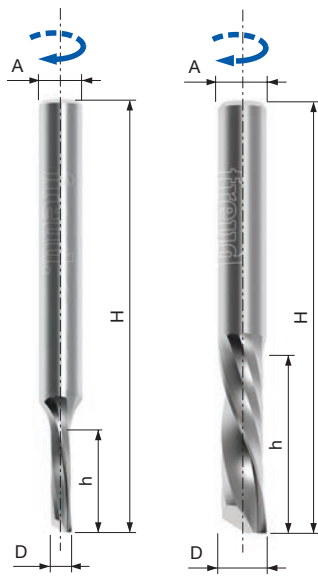
Suggested speeds for softwood: 18.000 RPM.

Depth of cut equal to cutting diameter.

D	h	H	A	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm					
8	22	70	8	MG10	3	30.000	SCH3UFN208R	F03FR03807
8	32	80	8	MG10	3	30.000	SCH3UFN212R	F03FR03808
10	32	80	10	H05MG	3	30.000	SCH3UFN220R	F03FR03810
10	42	90	10	H05MG	3	30.000	SCH3UFN224R	F03FR03811
10	52	100	10	H05MG	3	30.000	SCH3UFN228R	F03FR03812
12	32	80	12	H05MG	3	30.000	SCH3UFN232R	F03FR03813
12	42	90	12	H05MG	3	30.000	SCH3UFN236R	F03FR03814
12	52	100	12	H05MG	3	30.000	SCH3UFN240R	F03FR03815
14	42	90	14	H05MG	3	25.000	SCH3UFN248R	F03FR03817
14	52	100	14	H05MG	3	25.000	SCH3UFN252R	F03FR03818
16	42	100	16	H05MG	3	25.000	SCH3UFN256R	F03FR03819
16	52	100	16	H05MG	3	25.000	SCH3UFN260R	F03FR03820
16	62	120	16	H05MG	3	25.000	SCH3UFN264R	F03FR03821
18	52	110	18	H05MG	3	25.000	SCH3UFN268R	F03FR03822
18	72	130	18	H05MG	3	25.000	SCH3UFN272R	F03FR03823
20	52	110	20	H05MG	3	25.000	SCH3UFN276R	F03FR03824
20	72	140	20	H05MG	3	25.000	SCH3UFN280R	F03FR03825
20	92	170	20	H05MG	3	25.000	SCH3UFN284R	F03FR03826

D	h	H	A	Quality of HW	Z	Max RPM	Freud Code	Art. No.
inch	inch	inch	inch					
1/4	3/4	2-1/2	1/4	MG10	3	30.000	SCH3UFN204R	F03FR03806
3/8	1-1/8	3	3/8	H05MG	3	30.000	SCH3UFN216R	F03FR03809
1/2	2	4	1/2	H05MG	3	30.000	SCH3UFN244R	F03FR03816





# SCH1DF

## Finishing router cutter downcut with right-hand Z1



CNC Routers



Down spiral



For table mounted only



Softwood



Hardwood



Chipboard



Laminated Chipboard



MDF



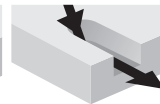
Laminated MDF



Plywood



Sizing



Plunging



Grooving



Better Finishing on Top

### Machines:

Nesting and CNC overhead routing machines.

### Materials:

Softwood, hardwood and wood based panels.

### Applications:

Sizing, plunging and grooving.

### Technical information:

Solid Carbide bit with negative helix designed for CNC routing with large gullet space for high chips removal.

- Suitable for: sizing, ramp plunging and grooving with a perfect finishing.
- Downcut helix, helps the clamping of the workpiece, downward chip removal for best finishing on the upper side of the panel.

### Working parameters

To find suggested feeding speeds see the tables below and apply the following correction factors.

#### Materials:

Hardwood: 0,9

MDF, Chipboard: 1,1

#### Depth of cut:

From 1 x D to 2 x D : 0,75

From 2 x D to 3 x D : 0,5

Over 3 x D : 0,4

#### Rotation speed:

Suggested speeds are proportional to RPM.

#### Examples:

Factor for 12.000 RPM:  $12.000/18.000 = 0,66$

Factor for 24.000 RPM:  $24.000/18.000 = 1,33$

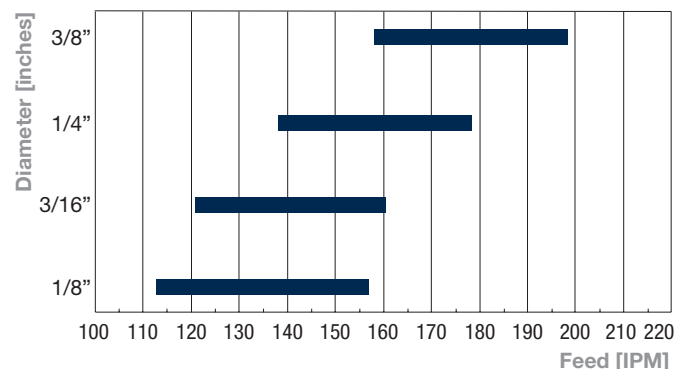
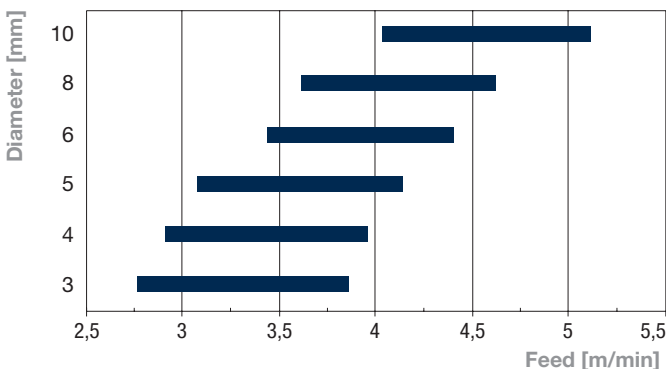
To maximise the tool lifetime, always set the maximum speed that delivers the needed quality of cut.

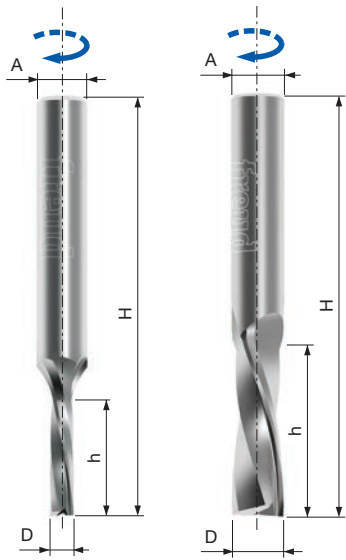
Suggested speeds for softwood: 18.000 RPM.

Depth of cut equal to cutting diameter.

D	h	H	A	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm					
3	13	60	6	MG10	1	30.000	SCH1DFN110R	F03FR03623
4	15	50	4	MG10	1	30.000	SCH1DFN210R	F03FR03629
4	16	60	6	MG10	1	30.000	SCH1DFN120R	F03FR03624
5	17	50	5	MG10	1	30.000	SCH1DFN215R	F03FR03630
5	17	60	6	MG10	1	30.000	SCH1DFN130R	F03FR03625
5	17	60	8	MG10	1	30.000	SCH1DFN160R	F03FR03628
6	17	50	6	MG10	1	30.000	SCH1DFN220R	F03FR03631
6	22	60	6	MG10	1	30.000	SCH1DFN225R	F03FR03632
8	22	70	8	MG10	1	30.000	SCH1DFN235R	F03FR03634
8	32	80	8	MG10	1	30.000	SCH1DFN240R	F03FR03635
10	32	80	10	H05MG	1	30.000	SCH1DFN255R	F03FR03637
10	42	100	10	H05MG	1	30.000	SCH1DFN260R	F03FR03638

D	h	H	A	Quality of HW	Z	Max RPM	Freud Code	Art. No.
inch	inch	inch	inch					
1/8	1/2	2-1/2	1/4	MG10	1	30.000	SCH1DFN140R	F03FR03626
3/16	3/4	2-1/2	1/4	MG10	1	30.000	SCH1DFN150R	F03FR03627
1/4	1	2-1/2	1/4	MG10	1	30.000	SCH1DFN230R	F03FR03633
3/8	1-1/8	3	3/8	H05MG	1	30.000	SCH1DFN250R	F03FR03636





# SCH2DF

## Finishing router cutter downcut with right-hand Z2



CNC Routers



Down spiral



For table mounted only



Softwood



Hardwood



Chipboard



Laminated  
Chipboard



MDF



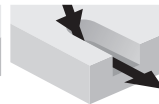
Laminated  
MDF



Plywood



Sizing



Plunging



Grooving



Better Finishing  
on Top

### Machines:

Nesting and CNC overhead routing machines.

### Materials:

Softwood, hardwood and wood based panels.

### Applications:

Sizing, plunging and grooving.

### Technical information:

Solid Carbide bit with negative helix, designed for CNC routing for general purpose with perfect finishing.

- Suitable for: sizing, ramp plunging and grooving with a perfect finishing.
- Downcut helix, helps the clamping of the workpiece, downward chip removal for best finishing on the upper side of the panel.

### Working parameters

To find suggested feeding speeds see the tables below and apply the following correction factors.

### Materials:

Hardwood: 0,9

MDF, Chipboard: 1,1

### Depth of cut:

From 1 x D to 2 x D : 0,75

From 2 x D to 3 x D : 0,5

Over 3 x D : 0,4

### Rotation speed:

Suggested speeds are proportional to RPM.

### Examples:

Factor for 12.000 RPM:  $12.000/18.000 = 0,66$

Factor for 24.000 RPM:  $24.000/18.000 = 1,33$

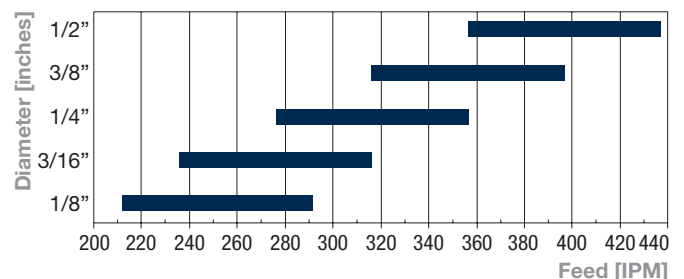
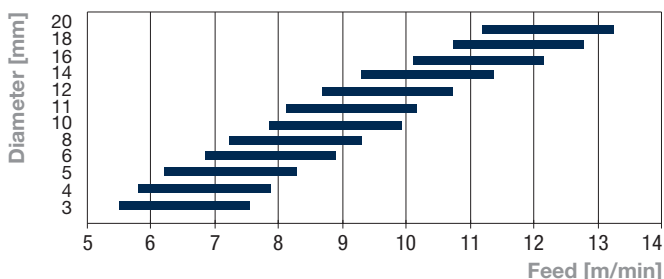
To maximise the tool lifetime, always set the maximum speed that delivers the needed quality of cut.

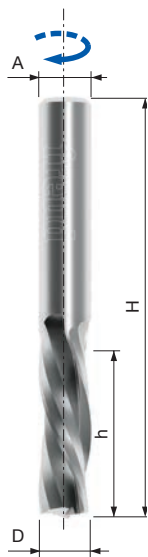
Suggested speeds for softwood: 18.000 RPM.

Depth of cut equal to cutting diameter.

D mm	h mm	H mm	A mm	Quality of HW	Z	Max RPM	Freud Code	Art. No.
3	13	50	6	MG10	2	30.000	SCH2DFN110R	F03FR03660
3	13	50	8	MG10	2	30.000	SCH2DFN135R	F03FR03665
4	15	50	4	MG10	2	30.000	SCH2DFN204R	F03FR03673
4	16	50	6	MG10	2	30.000	SCH2DFN115R	F03FR03661
4	16	50	8	MG10	2	30.000	SCH2DFN140R	F03FR03666
5	17	50	5	MG10	2	30.000	SCH2DFN208R	F03FR03674
5	17	60	6	MG10	2	30.000	SCH2DFN120R	F03FR03662
5	17	50	8	MG10	2	30.000	SCH2DFN145R	F03FR03667
6	17	60	6	MG10	2	30.000	SCH2DFN212R	F03FR03675
6	22	60	6	MG10	2	30.000	SCH2DFN216R	F03FR03676
6	25	60	8	MG10	2	30.000	SCH2DFN150R	F03FR03668
7	32	80	8	MG10	2	30.000	SCH2DFN155R	F03FR03669
8	22	70	8	MG10	2	30.000	SCH2DFN224R	F03FR03678
8	32	80	8	MG10	2	30.000	SCH2DFN228R	F03FR03679
8	42	90	8	MG10	2	30.000	SCH2DFN232R	F03FR03680
8	25	70	12	H05MG	2	30.000	SCH2DFN160R	F03FR03670
10	32	80	10	H05MG	2	30.000	SCH2DFN240R	F03FR03682
10	42	100	10	H05MG	2	30.000	SCH2DFN244R	F03FR03683
10	52	100	10	H05MG	2	30.000	SCH2DFN248R	F03FR03684
10	32	80	12	H05MG	2	30.000	SCH2DFN170R	F03FR03672
11	37	80	11	H05MG	2	30.000	SCH2DFN252R	F03FR03685
12	32	80	12	H05MG	2	30.000	SCH2DFN256R	F03FR03686
12	42	90	12	H05MG	2	30.000	SCH2DFN260R	F03FR03687
12	52	100	12	H05MG	2	30.000	SCH2DFN264R	F03FR03688
14	52	100	14	H05MG	2	25.000	SCH2DFN276R	F03FR03691
16	52	100	16	H05MG	2	25.000	SCH2DFN280R	F03FR03692
18	52	110	18	H05MG	2	25.000	SCH2DFN284R	F03FR03693
20	52	120	20	H05MG	2	25.000	SCH2DFN288R	F03FR03694
20	72	140	20	H05MG	2	25.000	SCH2DFN292R	F03FR03695

D inch	h inch	H inch	A inch	Quality of HW	Z	Max RPM	Freud Code	Art. No.
1/8	1/2	2	1/4	MG10	2	30.000	SCH2DFN125R	F03FR03663
3/16	3/4	2	1/4	MG10	2	30.000	SCH2DFN130R	F03FR03664
1/4	1	2-1/2	1/4	MG10	2	30.000	SCH2DFN220R	F03FR03677
3/8	1-1/8	3	3/8	H05MG	2	30.000	SCH2DFN236R	F03FR03681
3/8	1-1/4	3	1/2	H05MG	2	30.000	SCH2DFN165R	F03FR03671
1/2	1-1/4	3	1/2	H05MG	2	30.000	SCH2DFN268R	F03FR03689
1/2	2	4	1/2	H05MG	2	30.000	SCH2DFN272R	F03FR03690





# SCH3DF

## Finishing router cutter downcut with right-hand Z3



CNC Routers



Down spiral



For table mounted only



Softwood



Hardwood



Chipboard



Laminated Chipboard



MDF



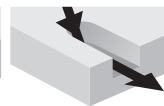
Laminated MDF



Plywood



Sizing



Plunging



Grooving



Better Finishing on Top

### Machines:

Nesting and CNC overhead routing machines.

### Materials:

Softwood, hardwood and wood based panels.

### Applications:

Sizing, plunging and grooving.

### Technical information:

Solid Carbide bit with negative helix designed for CNC routing for high feed rate applications.

- Suitable for: sizing, ramp plunging and grooving with a perfect finishing.
- Downcut helix, helps the clamping of the workpiece, downward chip removal for best finishing on the upper side of the panel.

### Working parameters

To find suggested feeding speeds see the tables below and apply the following correction factors.

### Materials:

Hardwood: 0,9

MDF, Chipboard: 1,1

### Depth of cut:

From 1 x D to 2 x D : 0,75

From 2 x D to 3 x D : 0,5

Over 3 x D : 0,4

### Rotation speed:

Suggested speeds are proportional to RPM.

### Examples:

Factor for 12.000 RPM:  $12.000/18.000 = 0,66$

Factor for 24.000 RPM:  $24.000/18.000 = 1,33$

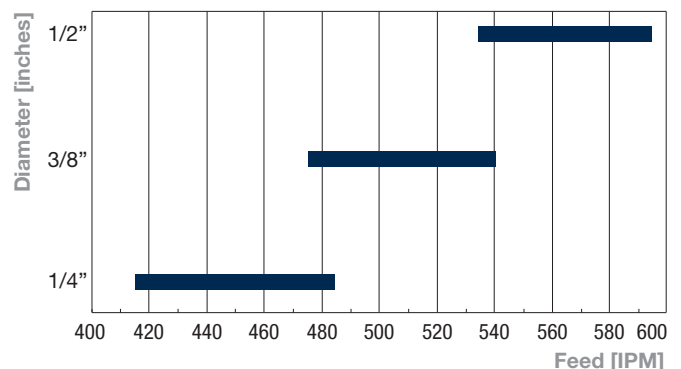
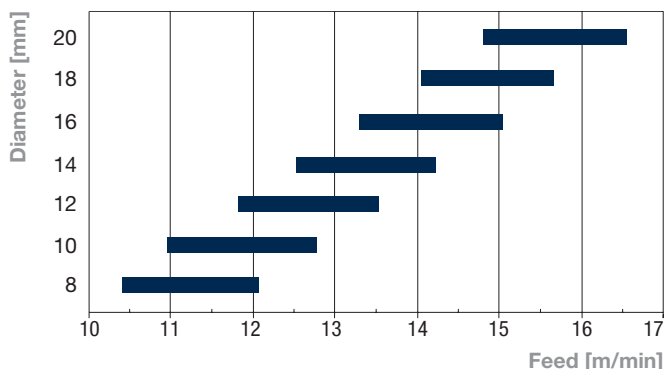
To maximise the tool lifetime, always set the maximum speed that delivers the needed quality of cut.

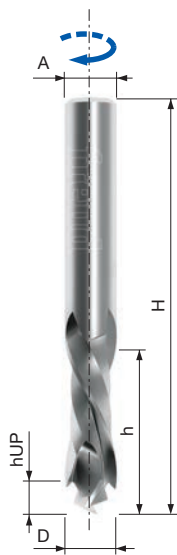
Suggested speeds for softwood: 18.000 RPM.

Depth of cut equal to cutting diameter.

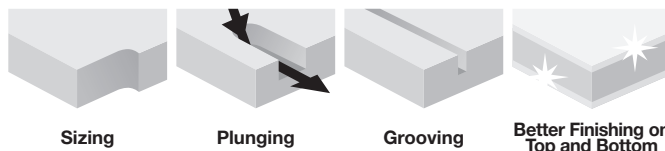
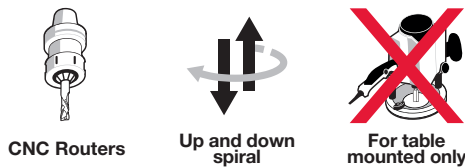
D	h	H	A	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm					
8	22	70	8	MG10	3	30.000	SCH3DFN208R	F03FR03755
8	32	80	8	MG10	3	30.000	SCH3DFN212R	F03FR03756
10	32	80	10	H05MG	3	30.000	SCH3DFN220R	F03FR03758
10	42	90	10	H05MG	3	30.000	SCH3DFN224R	F03FR03759
10	52	100	10	H05MG	3	30.000	SCH3DFN228R	F03FR03760
12	32	80	12	H05MG	3	30.000	SCH3DFN232R	F03FR03761
12	42	90	12	H05MG	3	30.000	SCH3DFN236R	F03FR03762
12	52	100	12	H05MG	3	30.000	SCH3DFN240R	F03FR03763
14	42	90	14	H05MG	3	25.000	SCH3DFN248R	F03FR03765
14	52	100	14	H05MG	3	25.000	SCH3DFN252R	F03FR03766
16	42	100	16	H05MG	3	25.000	SCH3DFN256R	F03FR03767
16	52	100	16	H05MG	3	25.000	SCH3DFN260R	F03FR03768
16	62	120	16	H05MG	3	25.000	SCH3DFN264R	F03FR03769
18	52	110	18	H05MG	3	25.000	SCH3DFN268R	F03FR03770
18	72	130	18	H05MG	3	25.000	SCH3DFN272R	F03FR03771
20	52	110	20	H05MG	3	25.000	SCH3DFN276R	F03FR03772
20	72	140	20	H05MG	3	25.000	SCH3DFN280R	F03FR03773
20	92	170	20	H05MG	3	25.000	SCH3DFN284R	F03FR03774

D	h	H	A	Quality of HW	Z	Max RPM	Freud Code	Art. No.
inch	inch	inch	inch					
1/4	3/4	2-1/2	1/4	MG10	3	30.000	SCH3DFN204R	F03FR03754
3/8	1-1/8	3	3/8	H05MG	3	30.000	SCH3DFN216R	F03FR03757
1/2	2	4	1/2	H05MG	3	30.000	SCH3DFN244R	F03FR03764





# SCH2XF Finishing router cutter compression with right-hand Z2+2



### Machines:

Nesting and CNC overhead routing machines.

### Materials:

Softwood, hardwood and wood based panels.

### Applications:

Sizing, plunging and grooving.

### Technical information:

Solid Carbide bit with negative and positive helix designed for CNC routing for general purpose with perfect finishing on both sides of the panel.

- Suitable for: nesting, sizing, ramp plunging and grooving with a perfect finishing.
- Up helix and down helix for a best finishing on both sides of the panel.

### Working parameters

To find suggested feeding speeds see the tables below and apply the following correction factors.

#### Materials:

Softwood: 0,9

Hardwood: 0,8

#### Depth of cut:

2x19 mm or 2x3/4" : 0,75

2x19 mm or 3x3/4" : 0,75

Over 3 x D : 0,4

#### Rotation speed:

Suggested speeds are proportional to RPM.

#### Examples:

Factor for 12.000 RPM:  $12.000/18.000 = 0,66$

Factor for 24.000 RPM:  $24.000/18.000 = 1,33$

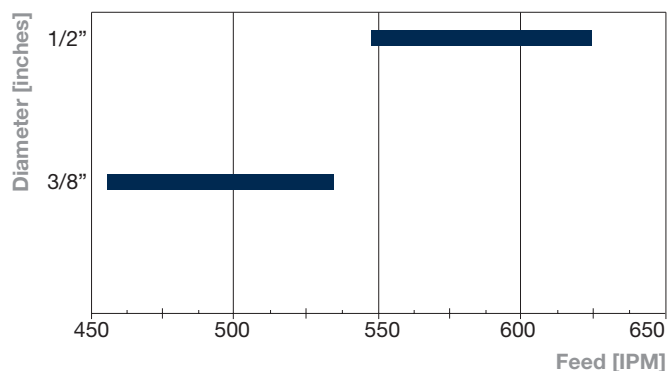
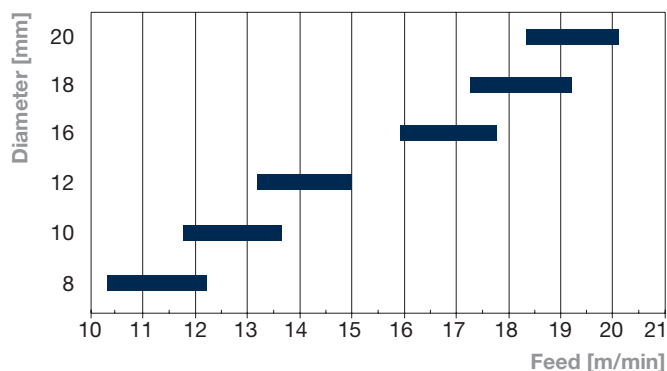
To maximise the tool lifetime, always set the maximum speed that delivers the needed quality of cut.

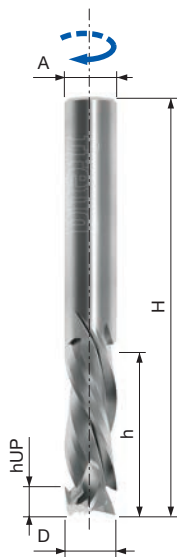
Suggested speeds for softwood: 18.000 RPM.

Depth of cut: 3/4".

D	h	hUP	H	A	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm			1/min.		
8	22	5	70	8	MG10	2+2	30.000	SCH2XFN310R	F03FR03732
8	32	10	70	8	MG10	2+2	30.000	SCH2XFN410R	F03FR03741
10	26	5	70	10	H05MG	2+2	30.000	SCH2XFN340R	F03FR03735
10	32	5	80	10	H05MG	2+2	30.000	SCH2XFN350R	F03FR03736
10	29	10	80	10	H05MG	2+2	30.000	SCH2XFN420R	F03FR03743
12	32	5	90	12	H05MG	2+2	30.000	SCH2XFN360R	F03FR03737
12	42	5	100	12	H05MG	2+2	30.000	SCH2XFN370R	F03FR03738
12	32	12	80	12	H05MG	2+2	30.000	SCH2XFN425R	F03FR03744
12	42	12	100	12	H05MG	2+2	30.000	SCH2XFN430R	F03FR03745
16	35	14	90	16	H05MG	2+2	25.000	SCH2XFN444R	F03FR04012
18	55	24	110	18	H05MG	2+2	25.000	SCH2XFN450R	F03FR03749
20	55	30	120	20	H05MG	2+2	25.000	SCH2XFN455R	F03FR03750

D	h	hUP	H	A	Quality of HW	Z	Max RPM	Freud Code	Art. No.
inch	inch	inch	inch	inch			1/min.		
3/8	1	3/16	3	3/8	H05MG	2+2	30.000	SCH2XFN320R	F03FR03733
3/8	1-1/8	3/8	3	3/8	H05MG	2+2	30.000	SCH2XFN415R	F03FR03742
3/8	1-1/4	3/16	3	3/8	H05MG	2+2	30.000	SCH2XFN330R	F03FR03734
1/2	1	3/16	3	1/2	H05MG	2+2	30.000	SCH2XFN380R	F03FR03739
1/2	1-1/2	3/16	3-1/2	1/2	H05MG	2+2	30.000	SCH2XFN390R	F03FR03740
1/2	1	9/16	3	1/2	H05MG	2+2	30.000	SCH2XFN435R	F03FR03746
1/2	1-1/2	9/16	3-1/2	1/2	H05MG	2+2	30.000	SCH2XFN440R	F03FR03747





# SCH3XF

## Finishing router cutter compression with right-hand Z3+3



CNC Routers



Up and down  
spiral



For table  
mounted only



Softwood



Hardwood



Chipboard



Laminated  
Chipboard



MDF



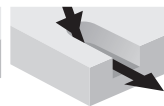
Laminated  
MDF



Plywood



Sizing



Plunging



Grooving



Better Finishing on  
Top and Bottom

### Machines:

Nesting and CNC overhead routing machines.

### Materials:

Softwood, hardwood and wood based panels.

### Applications:

Sizing, plunging and grooving.

### Technical information:

Solid Carbide bit with negative and positive helix designed for CNC routing for high speed demanding applications with perfect finishing on both sides of the panel.

- Suitable for: nesting, sizing, ramp plunging and grooving with a perfect finishing.
- Up helix and down helix for a best finishing on both sides of the panel.

### Working parameters

To find suggested feeding speeds see the tables below and apply the following correction factors.

### Materials:

Softwood: 0,9

Hardwood: 0,8

### Depth of cut:

2x19 mm or 2x3/4" : 0,75

2x19 mm or 3x3/4" : 0,75

Over 3 x D : 0,4

### Rotation speed:

Suggested speeds are proportional to RPM.

### Examples:

Factor for 12.000 RPM:  $12.000/18.000 = 0,66$

Factor for 24.000 RPM:  $24.000/18.000 = 1,33$

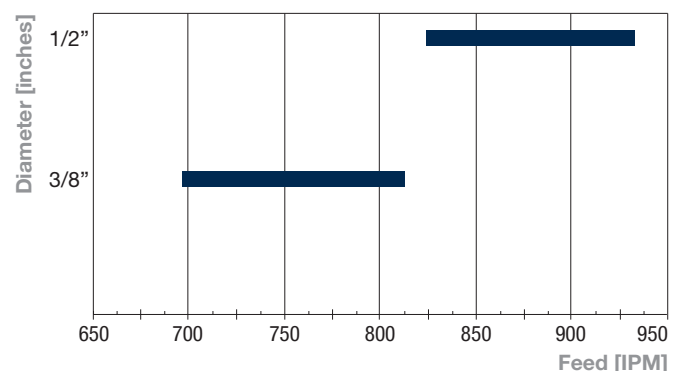
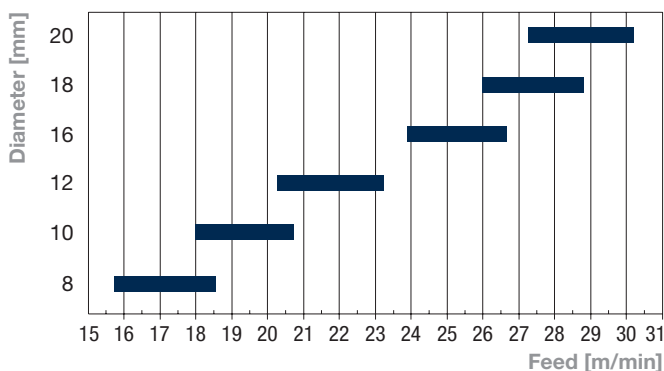
To maximise the tool lifetime, always set the maximum speed that delivers the needed quality of cut.

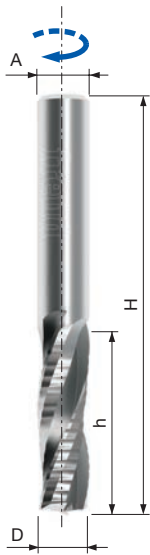
Suggested speeds for softwood: 18.000 RPM.

Depth of cut: 3/4".

D	h	hUP	H	A	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm			1/min.		
8	22	5	70	8	MG10	3+3	30.000	SCH3XFN310R	F03FR03856
8	32	10	70	8	MG10	3+3	30.000	SCH3XFN410R	F03FR03866
10	26	5	70	10	H05MG	3+3	30.000	SCH3XFN340R	F03FR04013
10	29	10	80	10	H05MG	3+3	30.000	SCH3XFN420R	F03FR04014
10	32	5	80	10	H05MG	3+3	30.000	SCH3XFN350R	F03FR03860
10	42	13	90	10	H05MG	3+3	30.000	SCH3XFN422R	F03FR03869
12	22	5	80	12	H05MG	3+3	30.000	SCH3XFN355R	F03FR03861
12	32	5	90	12	H05MG	3+3	30.000	SCH3XFN360R	F03FR03862
12	42	5	100	12	H05MG	3+3	30.000	SCH3XFN370R	F03FR03863
12	32	12	80	12	H05MG	3+3	30.000	SCH3XFN425R	F03FR03870
12	42	14	100	12	H05MG	3+3	30.000	SCH3XFN430R	F03FR03871
12	52	16	100	12	H05MG	3+3	30.000	SCH3XFN432R	F03FR03872

D	h	hUP	H	A	Quality of HW	Z	Max RPM	Freud Code	Art. No.
inch	inch	inch	inch	inch			1/min.		
3/8	1	3/16	3	3/8	H05MG	3+3	30.000	SCH3XFN320R	F03FR03857
3/8	1-1/8	3/8	3	3/8	H05MG	3+3	30.000	SCH3XFN415R	F03FR03867
3/8	1-1/4	3/16	3	3/8	H05MG	3+3	30.000	SCH3XFN330R	F03FR03858
1/2	1	3/16	3	1/2	H05MG	3+3	30.000	SCH3XFN380R	F03FR03864
1/2	1-1/8	1/2	3	1/2	H05MG	3+3	30.000	SCH3XFN436R	F03FR03873
1/2	1-1/2	3/16	3-1/2	1/2	H05MG	3+3	30.000	SCH3XFN390R	F03FR03865
1/2	1-5/8	3/4	3-1/2	1/2	H05MG	3+3	30.000	SCH3XFN438R	F03FR03874
1/2	2-1/4	3/4	4	1/2	H05MG	3+3	30.000	SCH3XFN442R	F03FR03875





# SCH3UR

## Roughing router cutter upcut with right-hand Z3



CNC Routers



Up spiral



For table mounted only



Softwood



Hardwood



Chipboard



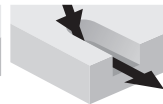
MDF



Plywood



Sizing



Plunging



Grooving

### Machines:

Nesting and CNC overhead routing machines.

### Materials:

Softwood, hardwood and wood based panels.

### Applications:

Sizing, plunging and grooving.

### Technical information:

Solid Carbide bit with positive helix designed for CNC routing with chip breaker for very high feed rate applications.

- Suitable for: sizing, plunging and grooving with a rough finishing.
- Upcut helix, good chip flow, upward chip removal.

### Working parameters

To find suggested feeding speeds see the tables below and apply the following correction factors.

### Materials:

Hardwood: 0,9

MDF, Chipboard: 1,1

### Depth of cut:

From 1 x D to 2 x D : 0,75

From 2 x D to 3 x D : 0,5

Over 3 x D : 0,4

### Rotation speed:

Suggested speeds are proportional to RPM.

### Examples:

Factor for 12.000 RPM:  $12.000/18.000 = 0,66$

Factor for 24.000 RPM:  $24.000/18.000 = 1,33$

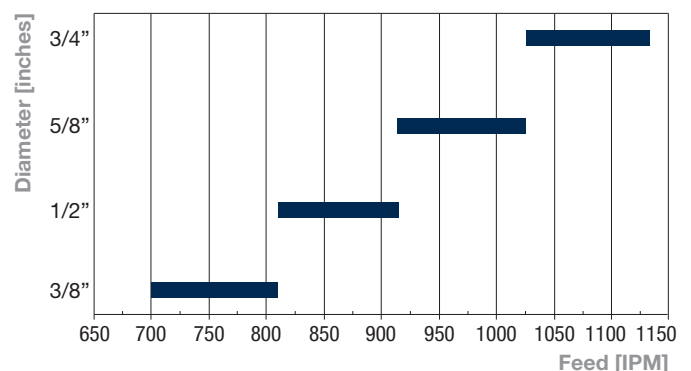
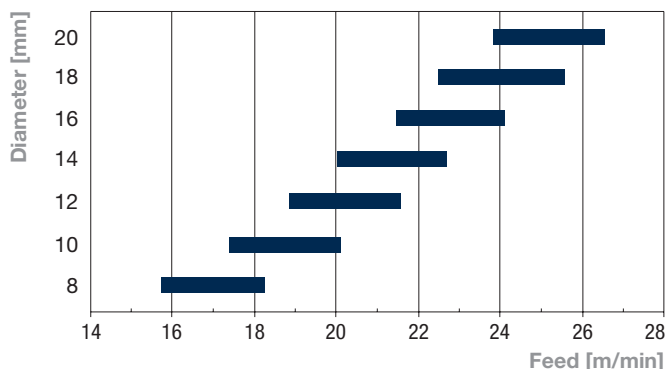
To maximise the tool lifetime, always set the maximum speed that delivers the needed quality of cut.

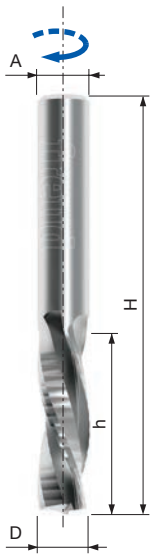
Suggested speeds for softwood: 18.000 RPM.

Depth of cut equal to cutting diameter.

D mm	h mm	H mm	A mm	Quality of HW	Z	Max RPM	Freud Code	Art. No.
8	22	70	8	MG10	3	30.000	SCH3URN504R	F03FR03830
8	32	80	8	MG10	3	30.000	SCH3URN506R	F03FR03831
8	42	90	8	MG10	3	30.000	SCH3URN508R	F03FR03832
10	32	80	10	H05MG	3	30.000	SCH3URN512R	F03FR03834
10	42	90	10	H05MG	3	30.000	SCH3URN514R	F03FR03835
10	52	100	10	H05MG	3	30.000	SCH3URN516R	F03FR03836
12	32	80	12	H05MG	3	30.000	SCH3URN518R	F03FR03837
12	42	90	12	H05MG	3	30.000	SCH3URN520R	F03FR03838
12	52	100	12	H05MG	3	30.000	SCH3URN522R	F03FR03839
14	42	90	14	H05MG	3	25.000	SCH3URN528R	F03FR03842
14	52	100	14	H05MG	3	25.000	SCH3URN530R	F03FR03843
14	60	130	14	H05MG	3	25.000	SCH3URN531R	F03FR03844
16	42	100	16	H05MG	3	25.000	SCH3URN534R	F03FR03846
16	52	110	16	H05MG	3	25.000	SCH3URN536R	F03FR03847
16	62	120	16	H05MG	3	25.000	SCH3URN538R	F03FR03848
18	52	110	18	H05MG	3	25.000	SCH3URN540R	F03FR03849
18	72	130	18	H05MG	3	25.000	SCH3URN542R	F03FR03850
20	52	120	20	H05MG	3	25.000	SCH3URN546R	F03FR03852
20	72	140	20	H05MG	3	25.000	SCH3URN548R	F03FR03853
20	85	150	20	H05MG	3	25.000	SCH3URN550R	F03FR03854
20	102	170	20	H05MG	3	25.000	SCH3URN552R	F03FR03855

D inch	h inch	H inch	A inch	Quality of HW	Z	Max RPM	Freud Code	Art. No.
3/8	1-1/8	3-1/2	3/8	H05MG	3	30.000	SCH3URN510R	F03FR03833
1/2	1-1/8	3-1/2	1/2	H05MG	3	30.000	SCH3URN524R	F03FR03840
1/2	1-5/8	4	1/2	H05MG	3	30.000	SCH3URN526R	F03FR03841
5/8	2-1/8	5	5/8	H05MG	3	25.000	SCH3URN532R	F03FR03845
3/4	2-1/8	5	3/4	H05MG	3	25.000	SCH3URN544R	F03FR03851





# SCH3DR

## Roughing router cutter downcut with right-hand Z3



CNC Routers



Down spiral



For table mounted only



Softwood



Hardwood



Chipboard



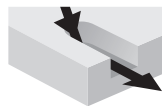
MDF



Plywood



Sizing



Plunging



Grooving

### Machines:

Nesting and CNC overhead routing machines.

### Materials:

Softwood, hardwood and wood based panels.

### Applications:

Sizing, plunging and grooving.

### Technical information:

Solid Carbide bit with negative helix designed for CNC routing with chip breaker for very high feed rate applications.

- Suitable for: sizing, ramp plunging and grooving with a rough finishing.
- Downcut helix, helps the clamping of the workpiece, downward chip removal.

### Working parameters

To find suggested feeding speeds see the tables below and apply the following correction factors.

### Materials:

Hardwood: 0,9

MDF, Chipboard: 1,1

### Depth of cut:

From 1 x D to 2 x D : 0,75

From 2 x D to 3 x D : 0,5

Over 3 x D : 0,4

### Rotation speed:

Suggested speeds are proportional to RPM.

### Examples:

Factor for 12.000 RPM:  $12.000/18.000 = 0,66$

Factor for 24.000 RPM:  $24.000/18.000 = 1,33$

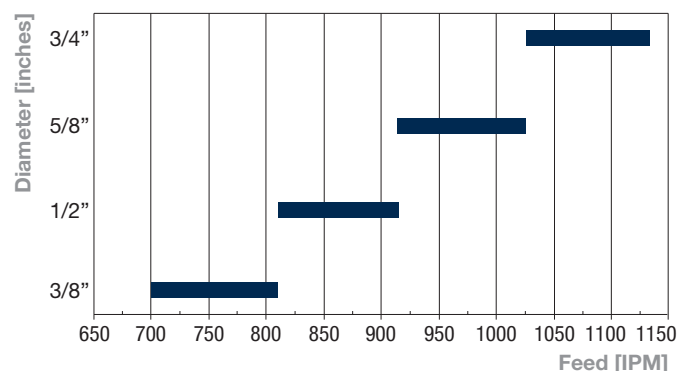
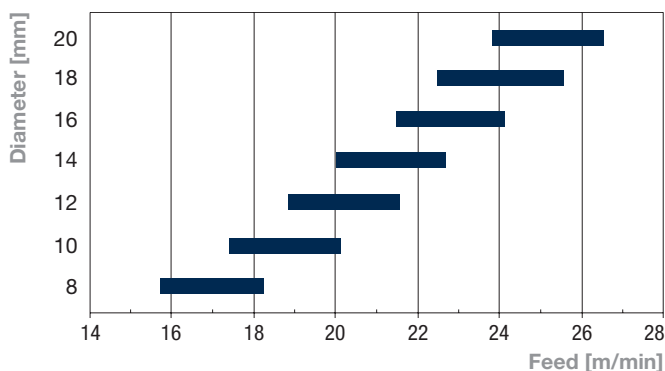
To maximise the tool lifetime, always set the maximum speed that delivers the needed quality of cut.

Suggested speeds for softwood: 18.000 RPM.

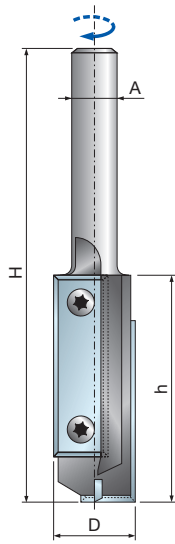
Depth of cut equal to cutting diameter.

D	h	H	A	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm					
8	22	70	8	MG10	3	30.000	SCH3DRN504R	F03FR03778
8	32	80	8	MG10	3	30.000	SCH3DRN506R	F03FR03779
8	42	90	8	MG10	3	30.000	SCH3DRN508R	F03FR03780
10	32	80	10	H05MG	3	30.000	SCH3DRN512R	F03FR03782
10	42	90	10	H05MG	3	30.000	SCH3DRN514R	F03FR03783
10	52	100	10	H05MG	3	30.000	SCH3DRN516R	F03FR03784
12	32	80	12	H05MG	3	30.000	SCH3DRN518R	F03FR03785
12	42	90	12	H05MG	3	30.000	SCH3DRN520R	F03FR03786
12	52	100	12	H05MG	3	30.000	SCH3DRN522R	F03FR03787
14	42	90	14	H05MG	3	25.000	SCH3DRN528R	F03FR03790
14	52	100	14	H05MG	3	25.000	SCH3DRN530R	F03FR03791
16	42	100	16	H05MG	3	25.000	SCH3DRN534R	F03FR03793
16	52	110	16	H05MG	3	25.000	SCH3DRN536R	F03FR03794
16	62	120	16	H05MG	3	25.000	SCH3DRN538R	F03FR03795
18	52	110	18	H05MG	3	25.000	SCH3DRN540R	F03FR03796
18	72	130	18	H05MG	3	25.000	SCH3DRN542R	F03FR03797
20	52	120	20	H05MG	3	25.000	SCH3DRN546R	F03FR03799
20	72	140	20	H05MG	3	25.000	SCH3DRN548R	F03FR03800
20	85	150	20	H05MG	3	25.000	SCH3DRN550R	F03FR03801
20	102	170	20	H05MG	3	25.000	SCH3DRN552R	F03FR03802

D	h	H	A	Quality of HW	Z	Max RPM	Freud Code	Art. No.
inch	inch	inch	inch					
3/8	1-1/8	3-1/2	3/8	H05MG	3	30.000	SCH3DRN510R	F03FR03781
1/2	1-1/8	3-1/2	1/2	H05MG	3	30.000	SCH3DRN524R	F03FR03788
1/2	1-5/8	4	1/2	H05MG	3	30.000	SCH3DRN526R	F03FR03789
5/8	2-1/8	5	5/8	H05MG	3	25.000	SCH3DRN532R	F03FR03792
3/4	2-1/8	5	3/4	H05MG	3	25.000	SCH3DRN544R	F03FR03798







**Machines:**  
CNC overhead routing machines.

**Materials:**  
Softwood and hardwood.

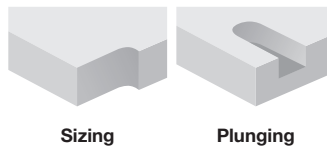
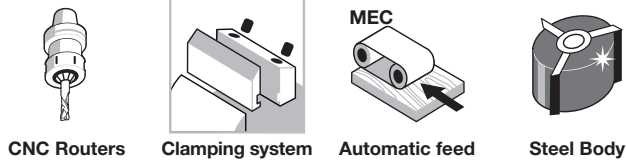
**Applications:**  
Sizing and plunging.

**Technical information:**  
For CNC machining centres or overhead routing machines.

- Suitable for plunging and sizing.
- The disposable knife guarantees a constant finish and cutting diameter.
- It is suggested a gradual feed rate when entering into the workpiece.
- Steel body.

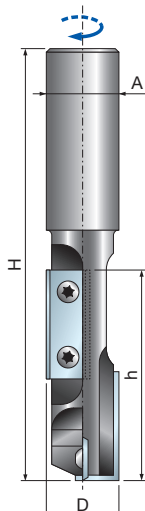
## TG62MD

### Disposable knives straight router cutters



D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Freud Code	Art. No.
16	50	105	12	2+1	-	TG62MD AD3	F03FA13927
18	50	105	20	2+1	-	TG62MD BD3	F03FA13928

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	40 x 12 x 1,5	CG44MLA310	F03FA21938
	Screw	M4 x 10 x 9	VT71M AA9	F03FA04505
	Torx key	T15	CB03M DA9	F03FA00168



**Machines:**  
CNC overhead routing machines.

**Materials:**  
Softwood and hardwood.

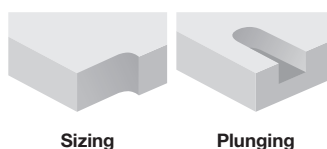
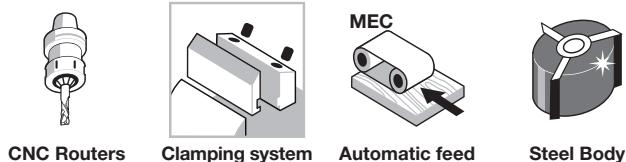
**Applications:**  
Sizing and plunging.

**Technical information:**  
For CNC machining centres or overhead routing machines.

- Suitable for plunging and sizing.
- The disposable knife guarantees a constant finish and cutting diameter.
- It is suggested a gradual feed rate when entering into the workpiece.
- Steel body.

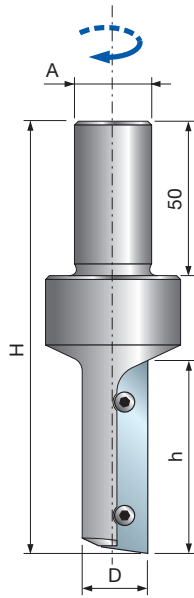
## TG63MD

### Disposable knives straight router cutters



D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Freud Code	Art. No.
20	58	115	20	2+1	-	TG63MD CD3	F03FA13937

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	30 x 12 x 1,5	CG08MEA310	F03FH02906
	Knife	9,6 x 12 x 1,5	CG08MMA310	F03FH02910
	Screw	M4 x 10 x 9	VT71M AA9	F03FA04505
	Torx key	T15	CB03M DA9	F03FA00168

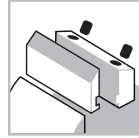


# TG71MD

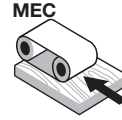
## Disposable knives straight router cutters



CNC Routers



Clamping system



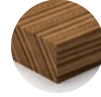
Automatic feed



Steel Body



Softwood



Hardwood



Sizing



Plunging

**Machines:**

CNC overhead routing machines.

**Materials:**

Softwood and hardwood.

**Applications:**




Sizing and plunging.

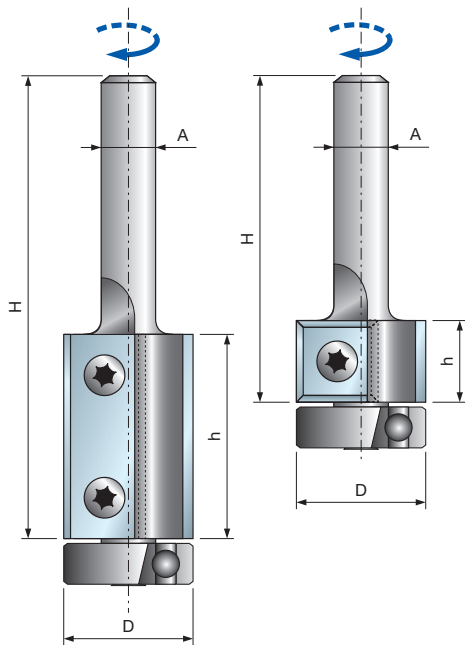
**Technical information:**

For CNC machining centres or overhead routing machines.

- The disposable knife guarantees a constant finishing and cutting diameter.
- It is suggested a gradual feed rate when entering into the workpiece.
- Steel body.

D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Freud Code	Art. No.
16	50	120	20	1	-	<b>TG71MD AD3</b>	F03FA04272
18	50	120	20	1	-	<b>TG71MD BD3</b>	F03FA04273
20	50	120	20	1	-	<b>TG71MD CD3</b>	F03FA04274

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	50 x 12 x 1,5	<b>CG71MAA310</b>	F03FC23923
	Screw	M4 x 10 x 9	<b>VT71M AA9</b>	F03FA04505
	Torx key	T15	<b>CB03M DA9</b>	F03FA00168

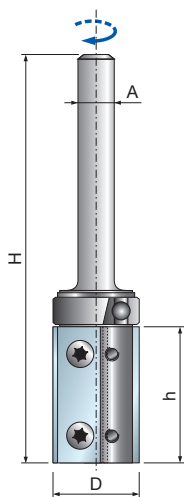


**Machines:**  
CNC routers.

**Materials:**  
Softwood and hardwood.

**Applications:**  
Sizing.

**Technical information:**  
For routers. Ideal for roughing and sizing.  
• Steel body.



**Machines:**  
CNC routers.

**Materials:**  
Softwood and hardwood.

**Applications:**  
Sizing.

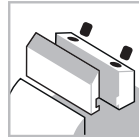
**Technical information:**  
For routers. Ideal for roughing and sizing.  
• Steel body.

## TG74MD

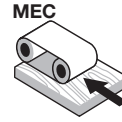
## Bearing disposable knives straight router cutters



CNC Routers



Clamping system



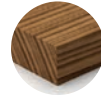
Automatic feed



Steel Body



Softwood








Hardwood



Sizing

D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Freud Code	Art. No.
19	12	55	6	2	-	TG74MD CA3	F03FA14728
19	12	70	8	2	-	TG74MD CB3	F03FA14729
19	12	70	12	2	-	TG74MD CC3	F03FA14730
19	30	75	6	2	-	TG74MD CD3	F03FA14731
19	30	90	8	2	-	TG74MD CE3	F03FA13925
19	30	90	12	2	-	TG74MD CF3	F03FA13926

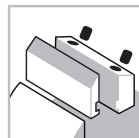
	Spare parts	Dimensions mm	Freud Code	Art. No.
	Knife	12 x 12 x 1,5	CG08MBA310	F03FH02903
	Knife	30 x 12 x 1,5	CG08MEA310	F03FH02906
	Screw	M4 x 10 x 9	VT71M AA9	F03FA04505
	Ball bearing	19 x 6 x 6	3102M CA9	F03FA14097
	Torx key	T15	CB03M DA9	F03FA00168

## TG76MD

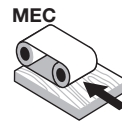
## Bearing disposable knives straight router cutters



CNC Routers



Clamping system



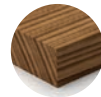
Automatic feed



Steel Body



Softwood








Hardwood



Sizing

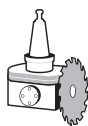
D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Freud Code	Art. No.
19	30	90	8	2	-	TG76MD CD3	F03FA13919
19	30	90	12	2	-	TG76MD CE3	F03FA13920

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Knife	30 x 12 x 1,5	CG08MEA310	F03FH02906
	Screw	M4 x 10 x 9	VT71M AA9	F03FA04505
	Torx key	T15	CB03M DA9	F03FA00168
	Retaining ring	11 x 13,9	2621M AC9	F03FA14741
	Ball bearing	19,05 x 4	3102M CB9	F03FA14098



## LU34M

## Saw blades for grooving and sizing on CNC units



CNC Cutting Units



Softwood



Hardwood



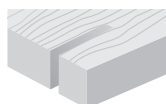
Laminated Chipboard



Laminated MDF



Plywood



Ripping



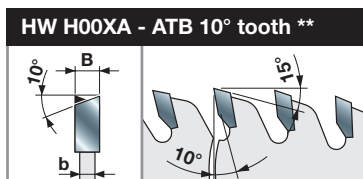
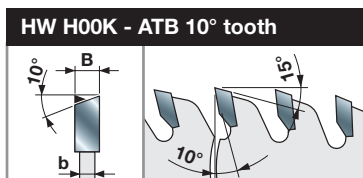
Crosscutting



Grooving



●●●● Ultimate ●● High ● Good



### Machines:

CNC cutting units.

### Materials:

Softwood, hardwood, laminated chipboard, laminated MDF and plywood.

### Applications:

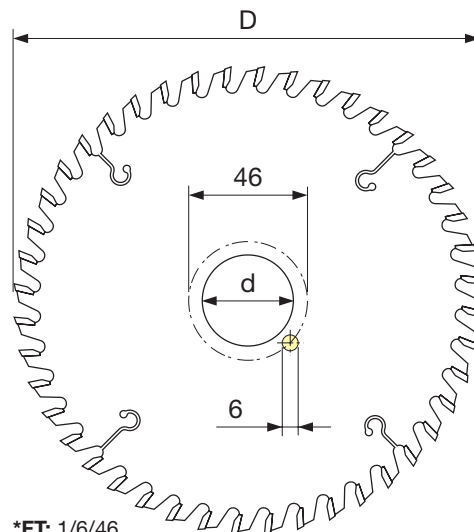
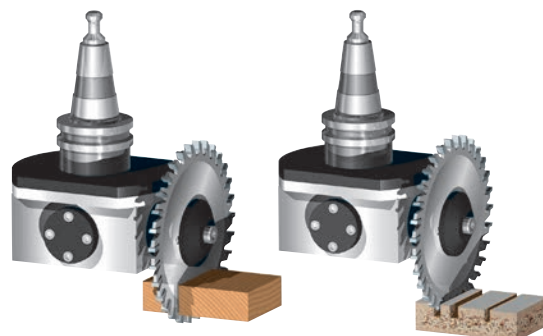
Sizing on CNC, ripping, crosscutting, grooving on CNC.

### Technical information:

Saw blades dedicated to CNC machines. For grooving along and across grain on softwood, hardwood and laminates.

D mm	B mm	b mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
120	4,0	3,0	30	18	12.000	LU34M40AC3	F03FS06095
120	4,0	3,0	20	30	12.000	LU34M40EA3	F03FS06367
120	4,0	3,0	35	30	12.000	LU34M40EC3*	F03FS05141
120	5,0	3,0	30	18	12.000	LU34M50AC3	F03FS06096
120	5,0	3,0	35	30	12.000	LU34M50EC3*	F03FS05143
120	6,0	3,0	30	18**	12.000	LU34M60AC3	F03FS06097
120	6,0	3,0	35	30**	12.000	LU34M60EC3*	F03FS05145
180	4,0	3,0	35	44	10.000	LU34M40NC3*	F03FS05142
180	5,0	3,0	35	44	10.000	LU34M50NC3*	F03FS05144
180	6,0	3,0	35	44**	10.000	LU34M60NC3*	F03FS05146

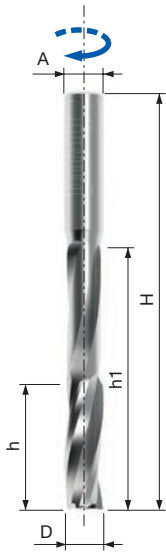
### Working examples



\*FT: 1/6/46

# Grooving





# SCH3

## Finishing hardware slot router cutter - right-hand Z2 and Z3



CNC Routers



Up spiral



Down spiral



For table mounted only



Softwood



Hardwood



Chipboard



Laminated Chipboard



MDF



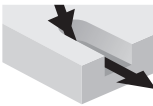
Laminated MDF



Plywood



Grooving



Plunging

### Machines:

CNC routers.

### Materials:

Softwood, hardwood and wood based panels.

### Applications:

Grooving and plunging.

### Technical information:

Solid Carbide bit with positive helix designed for CNC machines centres.

- Suitable for: windows, shutters and all hardware on laminates and solid wood.
- Upcut helix, good chip flow, upward chip removal for best finishing on the lower side.

### Upcut

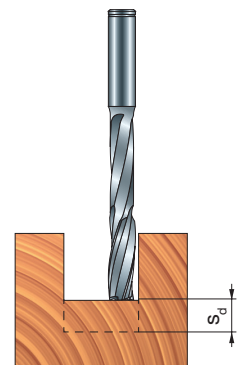
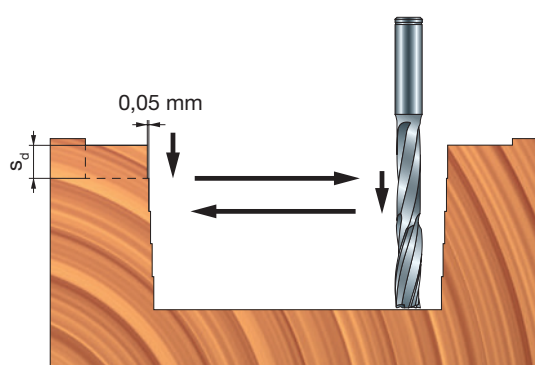


D mm	h mm	hUP mm	H mm	A mm	Quality of HW	Z	Max RPM 1/min.	Freud Code	Art. No.
14	45	95	150	14	H05MG	3	25.000	SCH3UFN102R	F03FR03803
16	45	95	150	16	H05MG	3	25.000	SCH3UFN104R	F03FR03804
18	45	95	150	18	H05MG	3	25.000	SCH3UFN106R	F03FR03805

### Downcut



D mm	h mm	hUP mm	H mm	A mm	Quality of HW	Z	Max RPM 1/min.	Freud Code	Art. No.
14	45	95	150	14	H05MG	3	25.000	SCH3DFN102R	F03FR03751
16	45	95	150	16	H05MG	3	25.000	SCH3DFN104R	F03FR03752
18	45	95	150	18	H05MG	3	25.000	SCH3DFN106R	F03FR03753



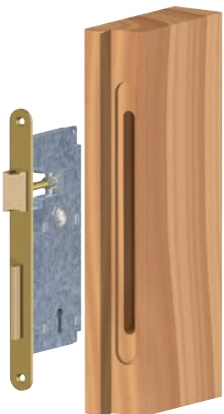
### Working parameters

#### Solid wood feed and speeds:

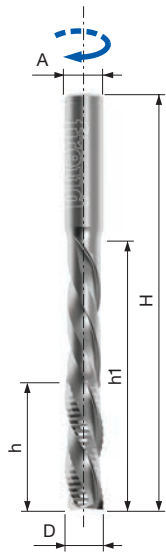
Maximum depth per stroke  $s_v$ : 8 mm  
Suggested infeed at 18.000 RPM: 15 m/min

#### Chipboard feed and speeds:

Maximum depth per stroke  $s_v$ : 15 mm  
Suggested infeed at 18.000 RPM: 12 m/min



Solid wood - Best Downcut



# SCH3

## Roughing hardware slot router cutter - right-hand Z2 and Z3



CNC Routers



Up spiral



Down spiral



For table mounted only



Softwood



Hardwood



Chipboard



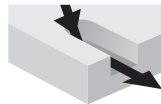
MDF



Plywood



Grooving



Plunging

### Machines:

CNC routers.

### Materials:

Softwood, hardwood and wood based panels.

### Applications:

Grooving and plunging.

### Technical information:

Available until stock sells out.

- Solid Carbide bit with positive helix designed for CNC machining centres.
- Suitable for: windows, shutters and all hardware on solid wood.
- Downcut helix, good chip flow, upward chip removal.

### Working parameters

#### Solid wood feed and speeds:

Maximum depth per stroke  $s_p$ : 8 mm

Suggested infeed at 18.000 RPM: 15 m/min

#### Chipboard feed and speed:

Maximum depth per stroke  $s_p$ : 15 mm

Suggested infeed at 18.000 RPM: 12 m/min

### Upcut

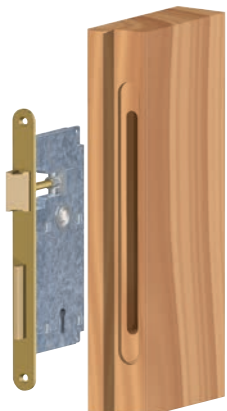
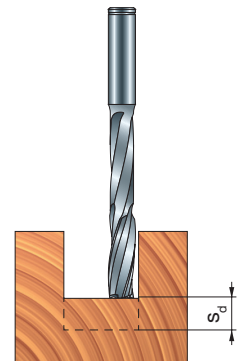
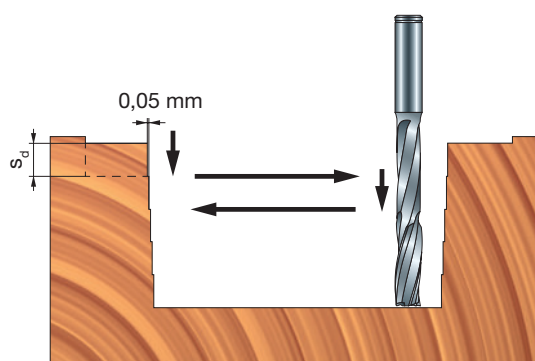


D mm	h mm	hUP mm	H mm	A mm	Quality of HW	Z	Max RPM 1/min.	Freud Code	Art. No.
14	45	95	150	14	H05MG	3	25.000	SCH3UMN102R	F03FR03827
16	45	95	150	16	H05MG	3	25.000	SCH3UMN104R	F03FR03828
18	45	95	150	18	H05MG	3	25.000	SCH3UMN106R	F03FR03829

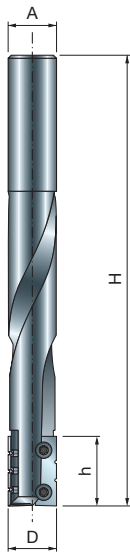
### Downcut



D mm	h mm	hUP mm	H mm	A mm	Quality of HW	Z	Max RPM 1/min.	Freud Code	Art. No.
14	45	95	150	14	H05MG	3	25.000	SCH3DMN102R	F03FR03775
16	45	95	150	16	H05MG	3	25.000	SCH3DMN104R	F03FR03776
18	45	95	150	18	H05MG	3	25.000	SCH3DMN106R	F03FR03777



Solid wood - Best Downcut

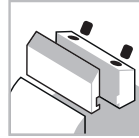


## TG72MD

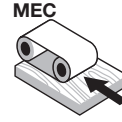
## Disposable knife straight router cutter



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Grooving



Plunging

### Machines:

CNC overhead routing machines.

### Materials:

Softwood and hardwood.

### Applications:

Grooving and plunging.

### Technical information:

For CNC machining centres or overhead routing machines.

- Suitable for plunging and sizing softwood and hardwood.
- The disposable knife guarantees a constant finishing and cutting diameter.
- It is suggested a gradual feed rate when entering into the workpiece.
- Steel body.

D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Freud Code	Art. No.
16	23	150	16	2	-	TG72MD AA3	F03FA04278

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife with 2 carvings	23 x 7 x 1,5	CG72MAB310	F03FA18190
	Knife with 3 carvings	23 x 7 x 1,5	CG72MAA310	F03FA18189
	Screw	M3 x 6 x 5	VT72M AA9	F03FA04506



# Planing



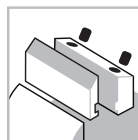


## TM10MD

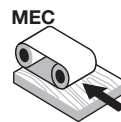
## Disposable knives straight router cutter



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Planing



Rebating



Sizing

### Machines:

CNC overhead routing machines.

### Materials:

Softwood and hardwood.

### Applications:





Planing, rebating and sizing.

### Technical information:

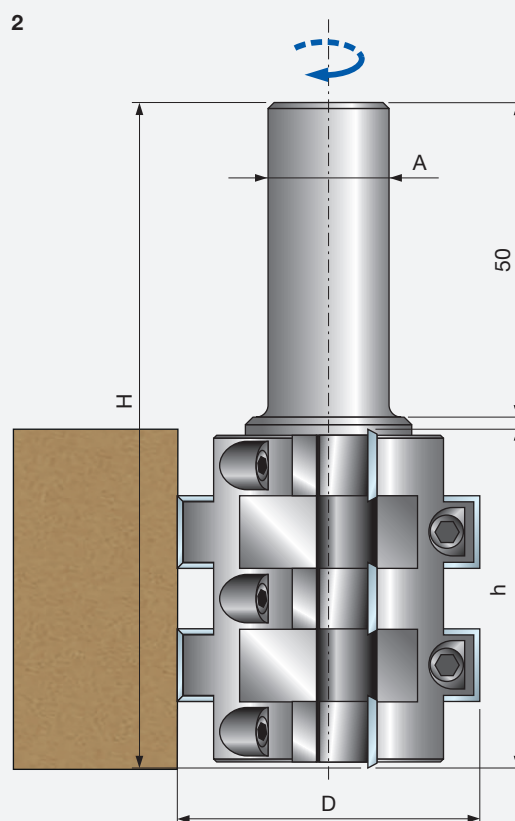
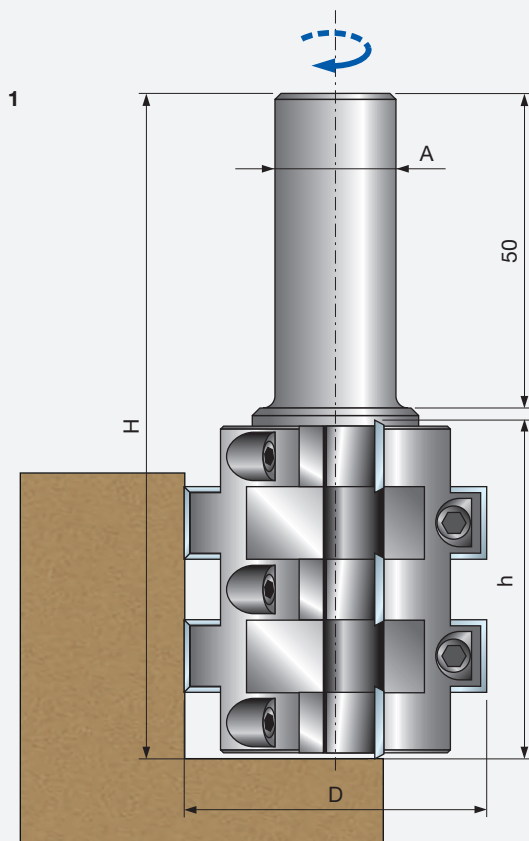
Disposable knives tool for roughing and sizing and suitable for cutting rebates.

- The multiple edge guarantees low noise running and optimum chip discharge.
- Steel body.

D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Freud Code	Art. No.
50	56	108	20	10	12.000	TM10MD AA3	F03FC20422
50	78	130	20	14	12.000	TM10MD AC3	F03FC20423

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	12 x 12 x 1,5	CG08MBA310	F03FH02903
	Wedge	15 x 10 x 8	CN01M BA9	F03FC01249
	Screw	M6 x 12	VT03M DL9	F03FA04441
	Allen key	3	CB03M AA9	F03FA00162

### Working examples



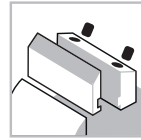


## NC12M

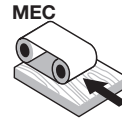
## Spoilboard surfacing cutters



CNC Routers



Clamping system



Automatic feed



Steel Body



MDF



Planing



Rebating

### Machines:

Nesting and CNC overhead routing machines.

### Materials:

MDF.

### Applications:

Planing and rebating.

### Technical information:

Spurs cutterhead for recover a spoil board.

- The cutters have 4 sides, so they can be used 4 times.
- **NC12M...** Positive shear angle - for solid wood and other board materials.
- **NC12M...N** Negative shear angle - for LDF, MDF or composite particle spoilboard for nesting.
- Steel body.

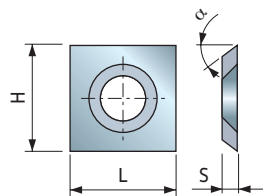
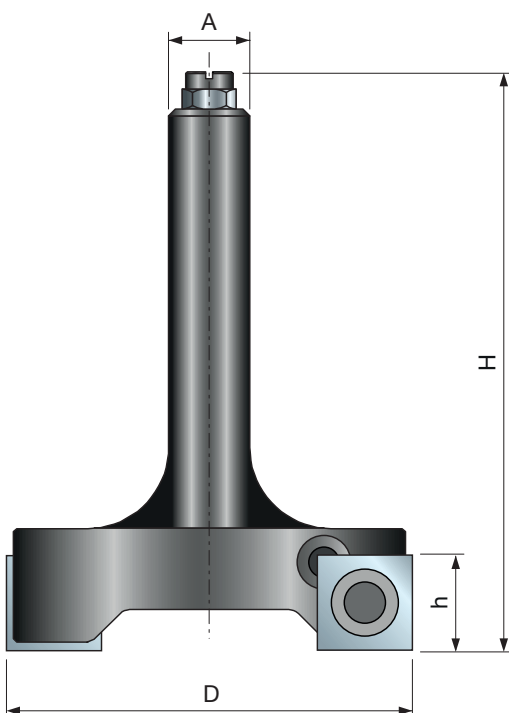
D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Freud Code	Art. No.
60	13	80	12	2	-	<b>NC12M60</b>	F03FR03949
80	13	80	20	3	-	<b>NC12M80</b>	F03FR03884
100	13	80	20	3	-	<b>NC12M100</b>	F03FR03886
60	13	80	12	2	-	<b>NC12M60N</b>	F03FR03950
80	13	80	20	3	-	<b>NC12M80N</b>	F03FR03885
100	13	80	20	3	-	<b>NC12M100N</b>	F03FR03887

D inch	h inch	H inch	A inch	Z	Max RPM 1/min.	Freud Code	Art. No.
2-1/2	1/2	3	1/2	2	-	<b>NC12M61</b>	F03FR03951
4	1/2	3	3/4	3	-	<b>NC12M101</b>	F03FR03888
2-1/2	1/2	3	1/2	2	-	<b>NC12M61N</b>	F03FR03952
4	1/2	3	3/4	3	-	<b>NC12M101N</b>	F03FR03889

Spare parts	Dimensions mm	Freud Code	Art. No.
Spur	14 x 14 x 2	<b>RG01MAI310</b>	F03FH03791
Screw	M5 x 8	<b>VT05M AA9</b>	F03FA04444
Hex nut	M4	<b>2606M CE9</b>	F03FA07360
Slotted cheese head screw	M4 x 10	<b>2611M DB9</b>	F03FA07386
Torx key	T20	<b>CB03M CC9</b>	F03FA00167

### Optional square disposable spur

L mm	H mm	S mm	Type	Quality of HW	$\alpha$	Freud Code	Art. No.
14	14	2	1	H00XA	31°	<b>RG01MAH310</b>	F03FH03037



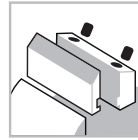


## NC96MGC13

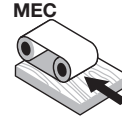
## CNC multicut planer cutterhead



CNC Machines



Clamping system



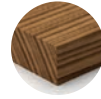
Automatic feed



Aluminium body



Softwood



Hardwood



Planing



Rebating

### Machines:

CNC overhead routing machines.

### Materials:

Softwood and hardwood.

### Applications:





Planing.

### Technical information:

Multicut CNC tool suitable for planing, rebating and roughing.

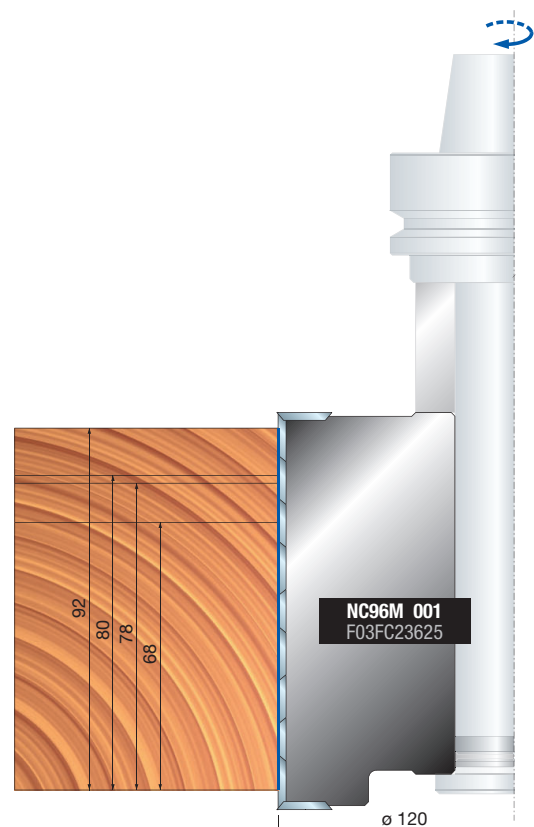
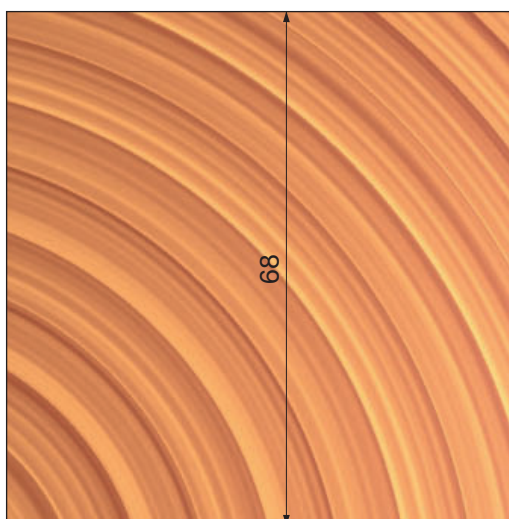
- Timber up to 92 mm thickness, tool available in left and right hand rotation.
- Chuck and knives to be ordered separately.
- Aluminium light alloy body.

D mm	B mm	d mm	Max RPM 1/min.	Freud Code	Art. No.
120	104	30	11.000	<b>NC96MGC13</b>	F03FC23630

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Spacer	50 x 33 x 30	<b>AN01MA3309</b>	F03FC00067
	Steel pin	4 x 10	<b>2601M AB9</b>	F03FA07326
	Spur	14 x 14 x 2	<b>RG01MAG310</b>	F03FC24180
	Screw	M5 x 8	<b>VT05M AA9</b>	F03FA04444

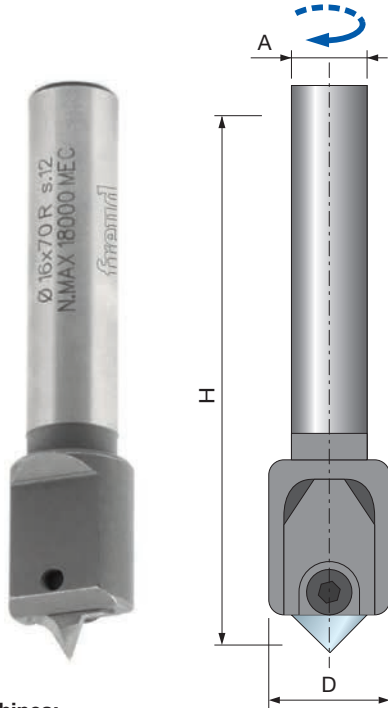
### Tools for set NC93M 100

D mm	B mm	d mm	Freud Code	Art. No.
120	101	30	<b>NC96M 001</b>	F03FC23625



# Profiling



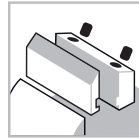


# NC01M

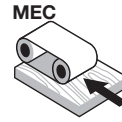
# Multiprofile router cutter - Z1



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



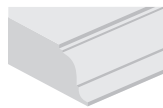
Hardwood



Chipboard



MDF



Profiling



Grooving

### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:

Profiling and grooving.

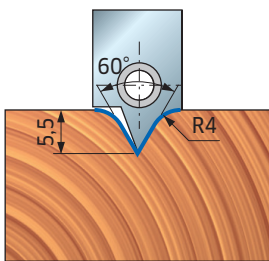
### Technical information:

Multiprofile router cutter available with 11 different shape solutions.

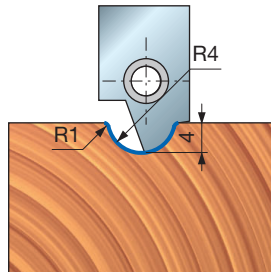
- Item **NC01MCA** includes the router cutter body and 10 knives (1 for each profile).
- For making one profile only, please order the router cutter body **NC01M-A** and 1 knife with the desired profile.
- Steel body.

D mm	H mm	A mm	Z	Max RPM 1/min.	Freud Code	Art. No.
16	70	12 x 50	1	18.000	NC01MCA	F03FA01710
16	70	12 x 50	1	18.000	NC01M-A	F03FA01709

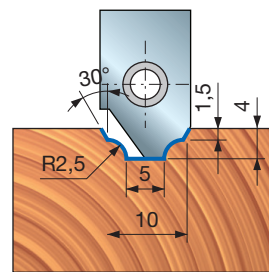
Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife	12x19 R=4	CC01MT0101	F03FA18124
2	Knife	12x19 R=4	CC01MT0201	F03FA18125
3	Knife	12x19 R=2,5	CC01MT0301	F03FA18126
4	Knife	12x19 $\alpha=90^\circ$	CC01MT0401	F03FA18127
5	Knife	12x19 R=5	CC01MT0501	F03FA18128
6	Knife	12x19 R=4	CC01MT0601	F03FA18129
7	Knife	12x19 R=2,5	CC01MT0701	F03FA18130
8	Knife	12x19 R=2,25	CC01MT0801	F03FA18131
9	Knife	12x19 R=5	CC01MT0901	F03FA18132
10	Knife	12x19 R=3	CC01MT1001	F03FA18133
11	Knife	12x19 R=3	CC01MT1101	F03FC25455



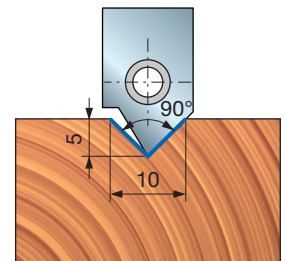
PROFILE 1



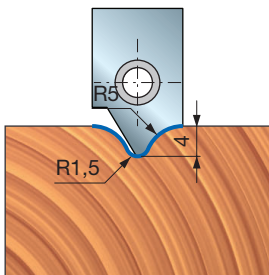
PROFILE 2



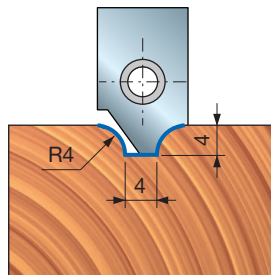
PROFILE 3



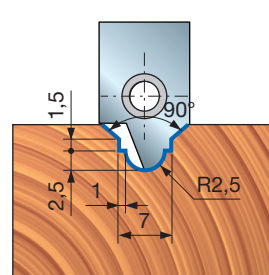
PROFILE 4



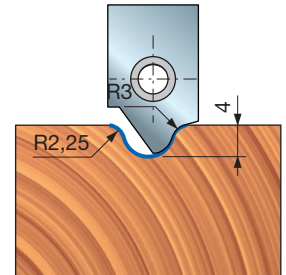
PROFILE 5



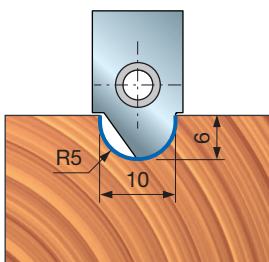
PROFILE 6



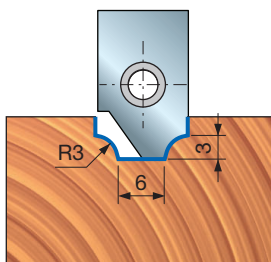
PROFILE 7



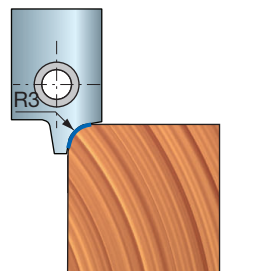
PROFILE 8



PROFILE 9



PROFILE 10



PROFILE 11

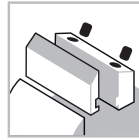


# NC02M

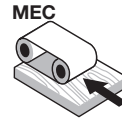
## CNC router cutter with profiled knives



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



MDF



Profiling



Grooving



### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:

Profiling and grooving.

### Technical information:

Performance knives router cutter with 6 available profiles (knives included in the box).

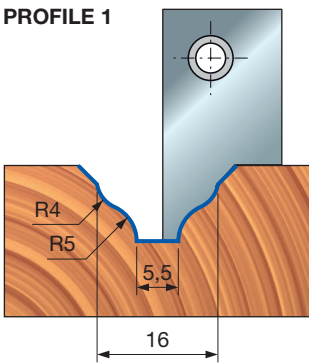
- 12x50 mm and 20x50 mm shank available.
- Steel body.

D mm	h mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
50	35	12	12.000	NC02M11012	F03FC15441
50	35	20	12.000	NC02M11020	F03FC15443

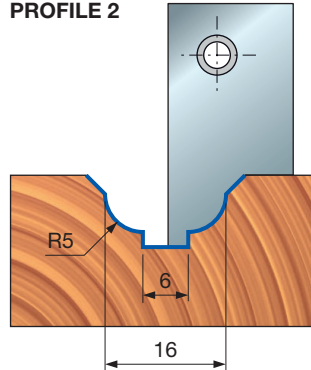
Spare parts	Dimensions mm	Freud Code	Art. No.
Screw	M6 x 12	2607M 006	F03FA07456
Screw	M5 x 5	2615M CC9	F03FA07420
Washer	14 x 2 x 6	VT18M AL9	F03FC20662
Allen key	4	CB03M BA9	F03FA00163
Allen key	2,5	2619M CA9	F03FA07432

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife	17,5 x 35 x 3	CC02M110A01	F03FC23740
2	Knife	17,5 x 35 x 3	CC02M110B01	F03FC23741
3	Knife	17,5 x 35 x 3	CC02M110C01	F03FC23742
4	Knife	17,5 x 35 x 3	CC02M110D01	F03FC23743
5	Knife	17,5 x 35 x 3	CC02M110E01	F03FC23744
6	Knife	17,5 x 35 x 3	CC02M110F01	F03FC23745

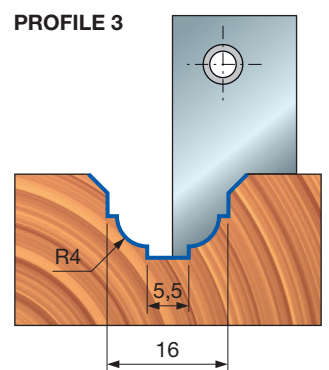
PROFILE 1



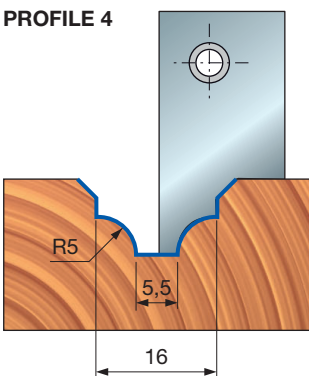
PROFILE 2



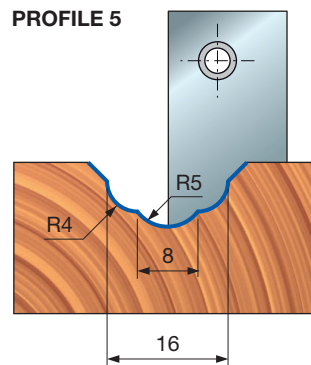
PROFILE 3



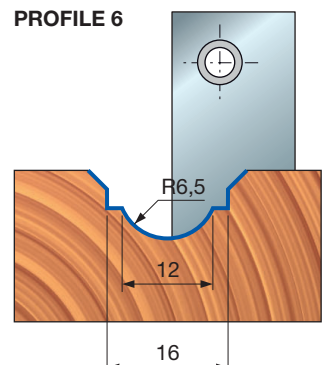
PROFILE 4

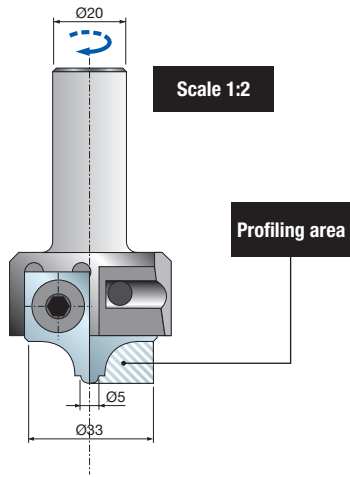


PROFILE 5



PROFILE 6





**Machines:**

CNC overhead routing machines.

**Materials:**

Softwood, hardwood, wood based panels and MDF.

**Applications:**

Profiling and grooving.

**Technical information:**

Performance CNC router cutter suitable for customised profiles.

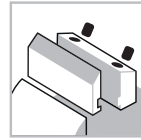
- Steel body.
- **PCN110** item includes router cutter complete of components, knives (minimum order quantity 6 pieces) and maintenance keys for orders please specify: shank dimensions, profile drawing (please refer to knife profiling area).

**PCN110**

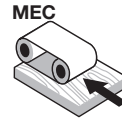
**Customised CNC router cutter with profiled knives**



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



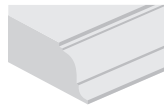
Hardwood



Chipboard



MDF



Profiling



Grooving

D	B	A	Max RPM	Freud Code	Art. No.
mm	mm	mm	1/min.		
50	33	20 x 50	25.000	PCN110	-

	Spare parts	Dimensions	Freud Code	Art. No.
		mm		
	Knife	17,5 x 35 x 3	<b>CCN110</b>	
	Screw	M5 x 5	<b>2615M CC9</b>	F03FA07420
	Screw	M6 x 12	<b>2607M 006</b>	F03FA07456
	Washer	14 x 2 x 6	<b>VT18M AL9</b>	F03FC20662
	Allen key	4	<b>CB03M BA9</b>	F03FA00163
	Allen key	2,5	<b>2619M CA9</b>	F03FA07432



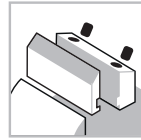


# NC21MCA

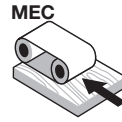
## CNC router cutter with multiradius knives



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



MDF



Profiling



Grooving



### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:

Profiling and grooving.

### Technical information:

Performance knives router cutter suitable for profiling with 3 available profiles.

- Steel body.
- 20x50 mm shank.

\***NC21MCA**: complete with all available knives.

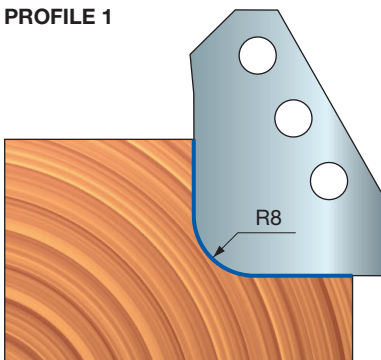
\*\***NC21M-A**: knives to be ordered separately.

D mm	h mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
48	34	20 x 50	18.000	<b>NC21MCA*</b>	F03FC15446
48	34	20 x 50	18.000	<b>NC21M-A**</b>	F03FC15445

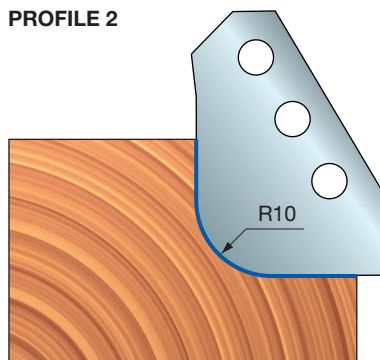
Spare parts		Dimensions mm	Freud Code	Art. No.
	Screw	M4 x 10	<b>2622M AB9</b>	F03FA07453
	Screw	M8 x 18	<b>2622M DF9</b>	F03FA07457
	Washer	9 x 1,5 x 4	<b>VT18M AH9</b>	F03FA04481
	Allen key	2,5	<b>2619M CA9</b>	F03FA07432

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
<b>1</b>	Knife	24 x 34 x 2,5 R=8	<b>CC21MT0101</b>	F03FC23746
<b>2</b>	Knife	24 x 34 x 2,5 R=10	<b>CC21MT0201</b>	F03FC23747
<b>3</b>	Knife	24 x 34 x 2,5 R=12	<b>CC21MT0301</b>	F03FC23748

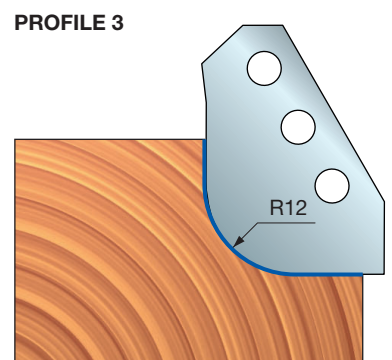
PROFILE 1



PROFILE 2



PROFILE 3



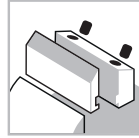


## NC23MCA

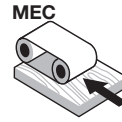
## CNC router cutter with multiradius knives



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



MDF



Profiling



Grooving



### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:

Profiling and grooving.

### Technical information:

Performance knives router cutter suitable for profiling with 3 available profiles.

- Steel body.
- 20x50 mm shank.

\***NC23MCA**: complete with all available knives.

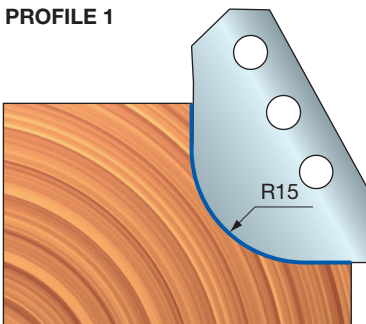
\*\***NC23M-A**: knives to be ordered separately.

D mm	h mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
48	34	20 x 50	18.000	<b>NC23MCA*</b>	F03FC15448
48	34	20 x 50	18.000	<b>NC23M-A**</b>	F03FC15447

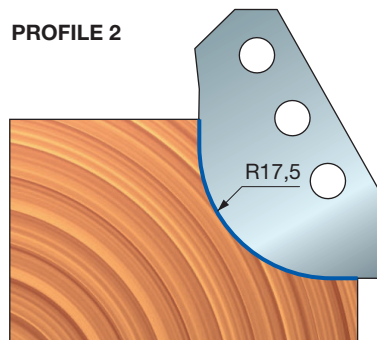
Spare parts	Dimensions mm	Freud Code	Art. No.
Screw	M4 x 10	<b>2622M AB9</b>	F03FA07453
Screw	M8 x 18	<b>2622M DF9</b>	F03FA07457
Washer	9 x 1,5 x 4	<b>VT18M AH9</b>	F03FA04481
Allen key	2,5	<b>2619M CA9</b>	F03FA07432

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
<b>1</b>	Knife	24 x 34 x 2,5 R=15	<b>CC23MT0101</b>	F03FC23749
<b>2</b>	Knife	24 x 34 x 2,5 R=17,5	<b>CC23MT0201</b>	F03FC23750
<b>3</b>	Knife	24 x 34 x 2,5 R=20	<b>CC23MT0301</b>	F03FC23751

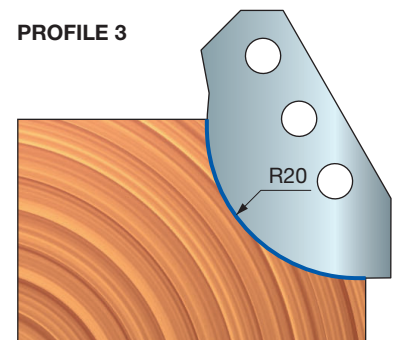
PROFILE 1

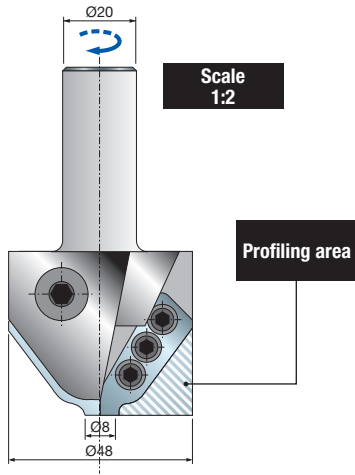


PROFILE 2



PROFILE 3



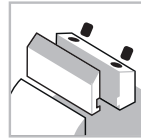


## PCN121

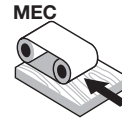
## Customised CNC router cutter with profiled knives



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



MDF



Profiling



Grooving



### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:






Profiling and grooving.

### Technical information:

Performance CNC router cutter suitable for customised profiles.

- Steel body.
- **PCN121** item includes router cutter complete of components, knives (minimum order quantity 6 pieces) and maintenance keys. For orders please specify: shank dimensions and profile drawing (please refer to knife profiling area).

D	B	A	Max RPM	Freud Code	Art. No.
mm	mm	mm	1/min.		
65	45	20 x 50	18.000	<b>PCN121</b>	-

	Spare parts	Dimensions	Freud Code	Art. No.
		mm		
	Knife	24,5 x 34 x 2,5	<b>CCN120</b>	-
	Screw	M8 x 18	<b>2622M DF9</b>	F03FA07457
	Screw	M4 x 10	<b>2622M AB9</b>	F03FA07453
	Washer	9 x 1,5 x 4	<b>VT18M AH9</b>	F03FA04481
	Allen key	2,5	<b>2619M CA9</b>	F03FA07432

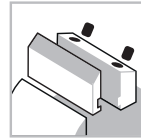


# NC30MCA

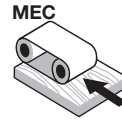
## CNC router cutter with multiradius knives



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard










MDF



### Profiling

D mm	B mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
96	55	20	11.000	NC30MCA*	F03FC15451
96	55	20	11.000	NC30M-A**	F03FC15449

Spare parts	Dimensions mm	Freud Code	Art. No.
	4	CB03M BA9	F03FA00163

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	 Knife	55 x 35 x 3 R=2	CC30MT0201	F03FC23752
2	 Knife	55 x 35 x 3 R=3	CC30MT0301	F03FC23753
3	 Knife	55 x 35 x 3 R=4	CC30MT0401	F03FC23754
4	 Knife	55 x 35 x 3 R=5	CC30MT0501	F03FC23755
5	 Knife	55 x 35 x 3 R=6	CC30MT0601	F03FC23756
6	 Knife	55 x 35 x 3 R=7	CC30MT0701	F03FC23757



**Machines:**  
CNC overhead routing machines.

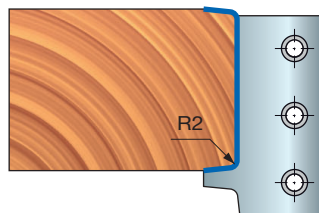
**Materials:**  
Softwood, hardwood, wood based panels and MDF.

**Applications:**  
Profiling.

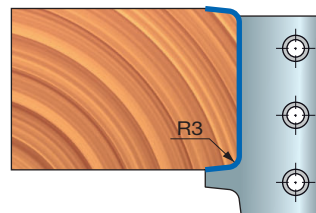
**Technical information:**  
Performance knives router cutter suitable for profiling with 6 available radius profiles.  
• Steel body.  
• 20x50 mm shank.

\*NC30MCA: complete with all available knives.  
\*\*NC30M-A: knives to be ordered separately.

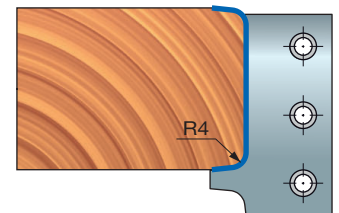
PROFILE 1



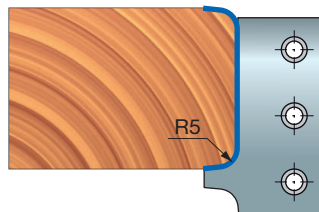
PROFILE 2



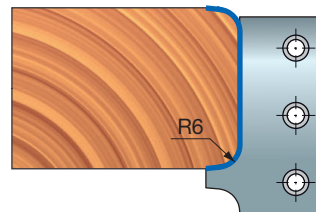
PROFILE 3



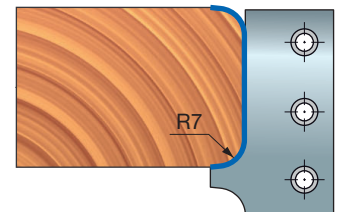
PROFILE 4



PROFILE 5



PROFILE 6



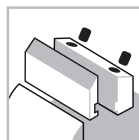


# NC30MCB

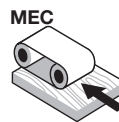
## CNC router cutter with multiradius knives



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



MDF



Profiling



### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:

Profiling.

### Technical information:


Performance knives router cutter suitable for profiling with 6 available radius profiles.







- Steel body.
- 20x50 mm shank.

\***NC30MCB**: complete with all available knives.

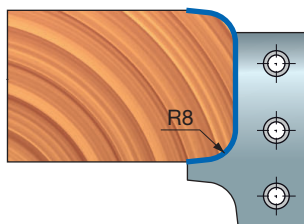
\*\***NC30M-B**: knives to be ordered separately.

D mm	B mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
96	55	20	11.000	<b>NC30MCB*</b>	F03FC15452
96	55	20	11.000	<b>NC30M-B**</b>	F03FC15450

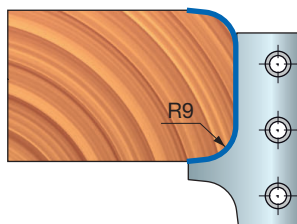
Spare parts	Dimensions mm	Freud Code	Art. No.
 Allen key	4	<b>CB03M BA9</b>	F03FA00163

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1 	Knife	55 x 35 x 3 R=8	<b>CC30MT0801</b>	F03FC23758
2 	Knife	55 x 35 x 3 R=9	<b>CC30MT0901</b>	F03FC23759
3 	Knife	55 x 35 x 3 R=10	<b>CC30MT1001</b>	F03FC23760
4 	Knife	55 x 35 x 3 R=11	<b>CC30MT1101</b>	F03FC23761
5 	Knife	55 x 35 x 3 R=12	<b>CC30MT1201</b>	F03FC23762
6 	Knife	55 x 35 x 3 R=13	<b>CC30MT1301</b>	F03FC23763

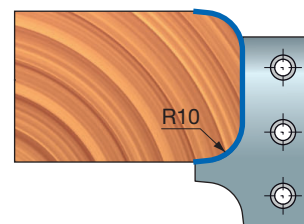
PROFILE 1



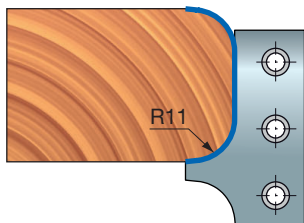
PROFILE 2



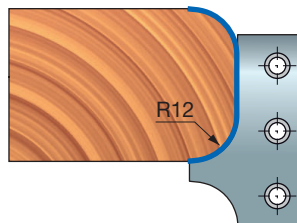
PROFILE 3



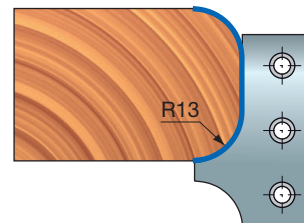
PROFILE 4

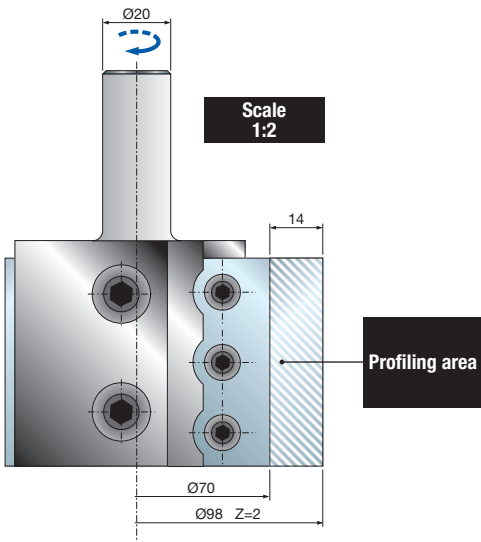


PROFILE 5



PROFILE 6



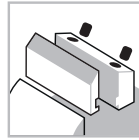


## PCN130

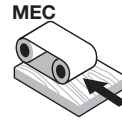
## Customised CNC router cutter with profiled knives



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



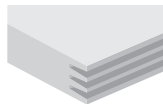
Hardwood



Chipboard



MDF



Jointing



Profiling



### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:

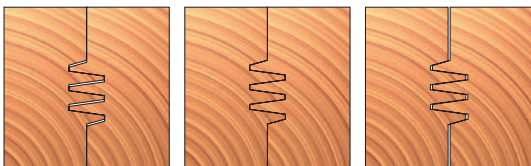
Jointing and profiling.

### Technical information:

Performance CNC router cutter suitable for customised profiles.

- Steel body.
- **PCN130** item includes router cutter complete of components, knives (minimum order quantity 6 pieces) and maintenance keys. For orders please specify: shank dimensions and profile drawing (please refer to knife profiling area).

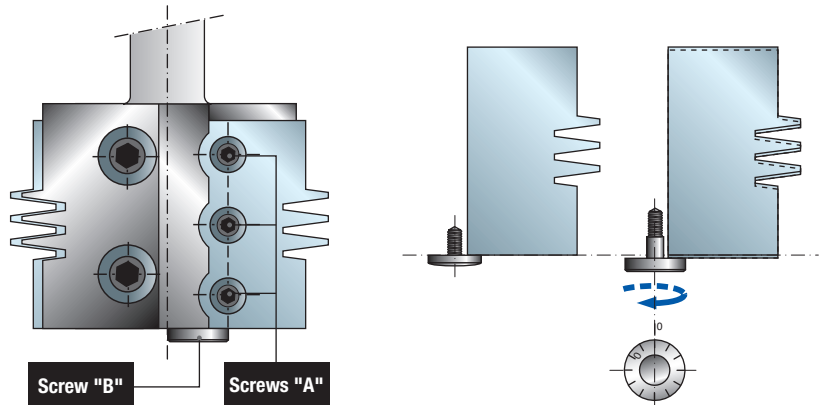
### Adjustment examples



Regular joint

Tight joint

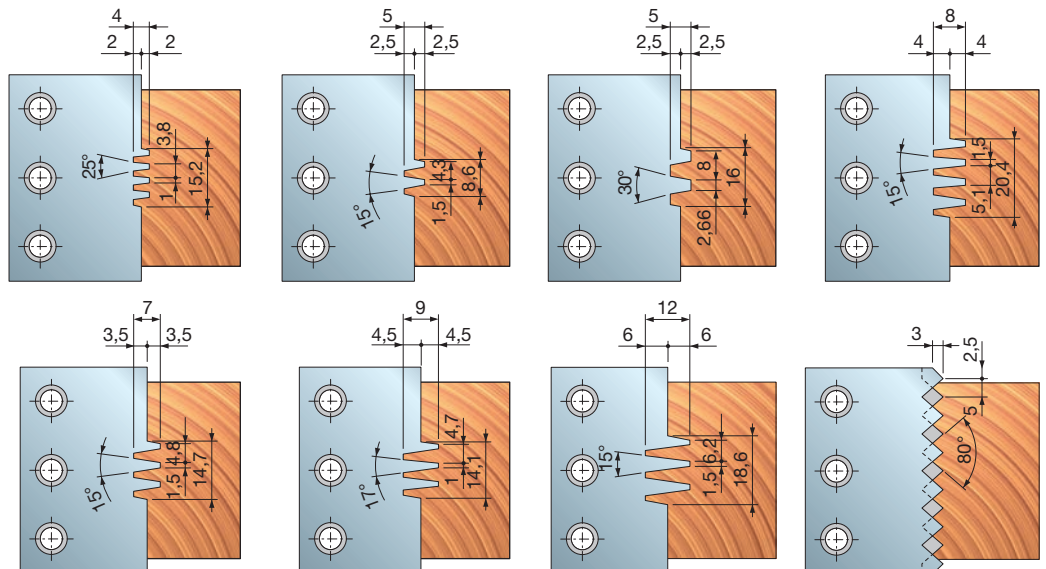
Loose joint



\*Spare parts needed in case of jointing profiles.

### How to achieve different types of joint:

- Loosen screws "A" with the key supplied.
- Loosen or tighten screw "B" to obtain the desired type of joint.
- Tighten screws "A" while pushing the knife towards screw "B" and the knife seat.



**PCN130** is suitable for jointing too, with 8 different joint proposals with adjusting system to manage regular, tight and loose joint.

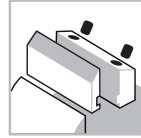


# NC33MCA

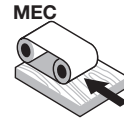
## CNC router cutter with multiradius knives



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



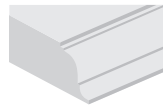
Hardwood



Chipboard



MDF



Profiling



### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:

Profiling.

### Technical information:

Performance knives router cutter suitable for profiling with 5 available radius profiles.

- Steel body.
- 20x88 mm shank.

\***NC33MCA**: complete with all available knives.

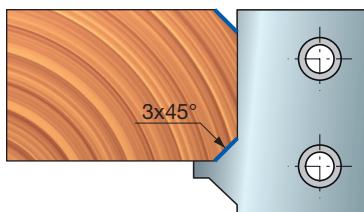
\*\***NC33M-A**: knives to be ordered separately.

D mm	h mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
87	35	20 x 88	11.000	<b>NC33MCA*</b>	F03FC15454
87	35	20 x 88	11.000	<b>NC33M-A**</b>	F03FC15453

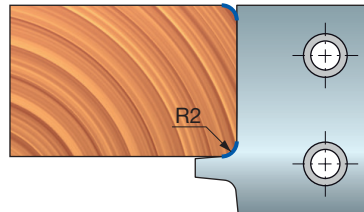
Spare parts		Dimensions mm	Freud Code	Art. No.
	Screw	M6 x 12	<b>2607M 006</b>	F03FA07456
	Screw	M10 x 25	<b>2622M EH9</b>	F03FA07459
	Washer	14 x 2 x 6	<b>VT18M AL9</b>	F03FC20662
	Allen key	4	<b>CB03M BA9</b>	F03FA00163

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
<b>1</b>	Knife	35 x 34 x 3 3x45°	<b>CC33MT0101</b>	F03FC23764
<b>2</b>	Knife	35 x 34 x 3 R=2	<b>CC33MT0201</b>	F03FC23765
<b>3</b>	Knife	35 x 34 x 3 R=3	<b>CC33MT0301</b>	F03FC23766
<b>4</b>	Knife	35 x 34 x 3 R=4	<b>CC33MT0401</b>	F03FC23767
<b>5</b>	Knife	35 x 34 x 3 R=5	<b>CC33MT0501</b>	F03FC23768

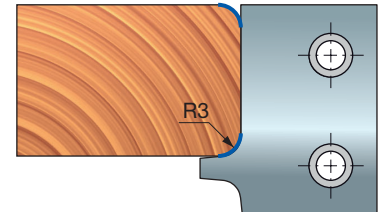
PROFILE 1



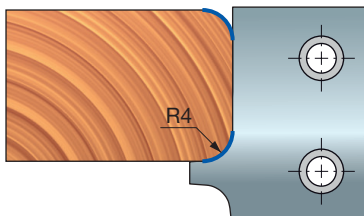
PROFILE 2



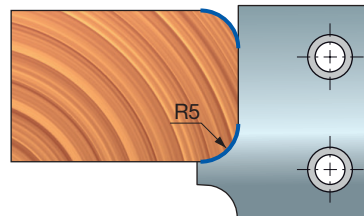
PROFILE 3

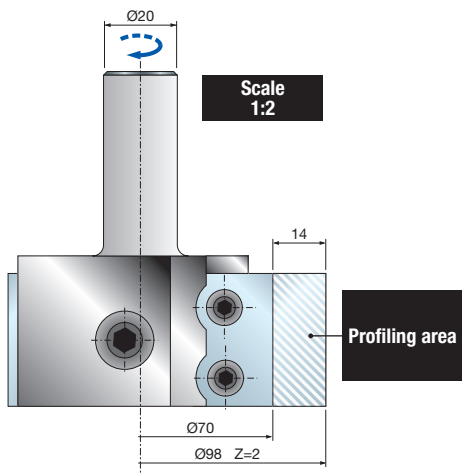


PROFILE 4



PROFILE 5



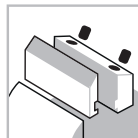


## PCN133

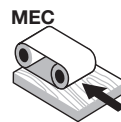
## Customised CNC router cutter with profiled knives



CNC Routers



Clamping system



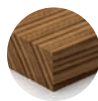
Automatic feed



Steel Body



Softwood



Hardwood



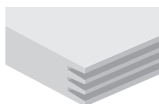
Chipboard



MDF



Profiling



Jointing



### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:






Profiling and jointing.

### Technical information:

Performance CNC router cutter suitable for customised profiles.

- Steel body.
- **PCN133** item includes router cutter complete of components, knives (minimum order quantity 6 pieces) and maintenance keys. For orders please specify: shank dimensions and profile drawing (please refer to knife profiling area).

D mm	B mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
98	35	20 x 50	11.000	PCN133	-

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	35 x 35 x 3	CCN133	
	Screw	M6 x 12	2607M 006	F03FA07456
	Screw	M10 x 25	2622M EH9	F03FA07459
	Washer	14 x 2 x 6	VT18M AL9	F03FC20662
	Allen key	4	CB03M BA9	F03FA00163



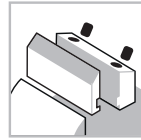


# NC40MCA

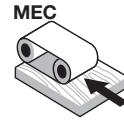
## CNC router cutter with multiradius knives



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



MDF



Profiling



Grooving



### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:

Profiling and grooving.

### Technical information:

Performance knives router cutter suitable for profiling with 4 available radius profiles.

- Steel body.
- 20x50 mm shank.

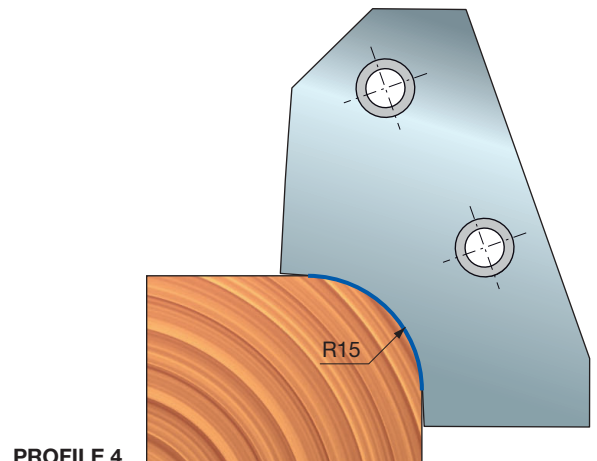
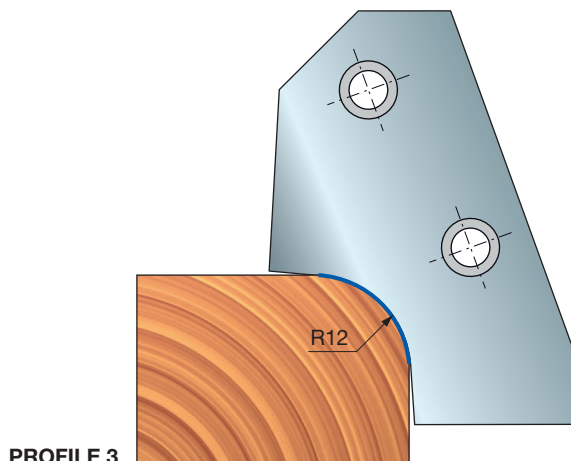
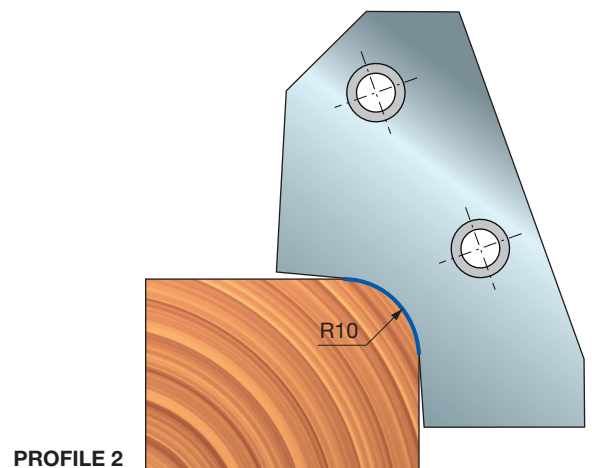
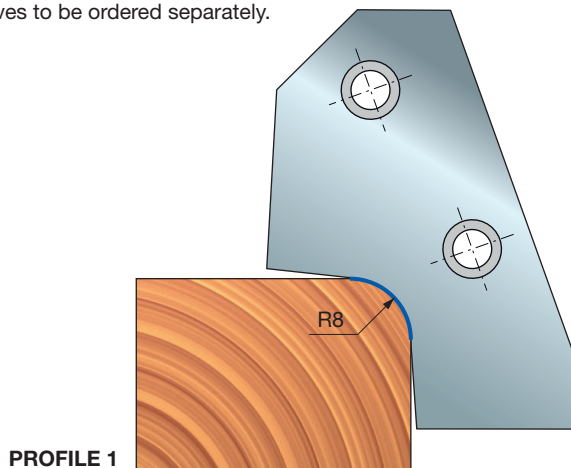
\***NC40MCA**: complete with all available knives.

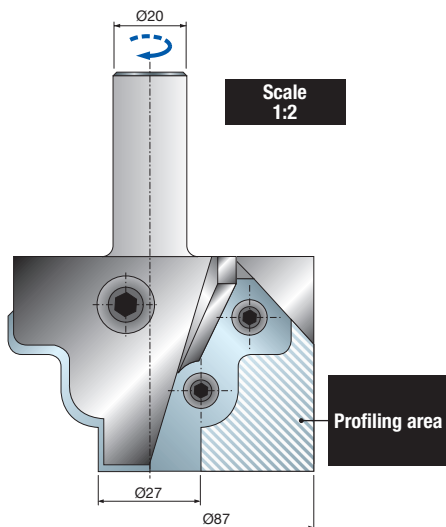
\*\***NC40M-A**: knives to be ordered separately.

D mm	h mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
76	58	20 x 50	12.000	<b>NC40MCA*</b>	F03FC15456
76	58	20 x 50	12.000	<b>NC40M-A**</b>	F03FC15455

Spare parts		Dimensions mm	Freud Code	Art. No.
	Screw	M6 x 12	<b>2607M 006</b>	F03FA07456
	Screw	M10 x 25	<b>2622M EH9</b>	F03FA07459
	Washer	14 x 2 x 6	<b>VT18M AL9</b>	F03FC20662
	Allen key	4	<b>CB03M BA9</b>	F03FA00163

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
<b>1</b>	Knife	48 x 53 x 3 R=8	<b>CC40MT0101</b>	F03FC23769
<b>2</b>	Knife	48 x 53 x 3 R=10	<b>CC40MT0201</b>	F03FC23770
<b>3</b>	Knife	48 x 53 x 3 R=12	<b>CC40MT0301</b>	F03FC23771
<b>4</b>	Knife	48 x 53 x 3 R=15	<b>CC40MT0401</b>	F03FC23772



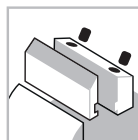


## PCN140

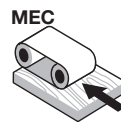
## Customised CNC router cutter with profiled knives



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



MDF



Profiling



### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:

Profiling and grooving.

### Technical information:

Performance CNC router cutter suitable for customised profiles.

- Steel body.
- **PCN140** item includes router cutter complete of components, knives (minimum order quantity 6 pieces) and maintenance keys. For orders please specify: shank dimensions and profile drawing (please refer to knife profiling area).

D mm	B mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
90	58	20 x 50	12.000	PCN140	-

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Knife	48 x 53 x 3	CCN140	
	Screw	M6 x 12	2607M 006	F03FA07456
	Screw	M10 x 25	2622M EH9	F03FA07459
	Washer	14 x 2 x 6	VT18M AL9	F03FC20662
	Allen key	4	CB03M BA9	F03FA00163

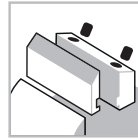


## NC50MCA

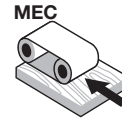
## CNC router cutter with multiradius knives



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



MDF



Profiling



Grooving



### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:

Profiling and grooving.

### Technical information:

Performance knives router cutter suitable for profiling with 3 available radius profiles.

- Steel body.
- 20x50 mm shank.

\***NC50MCA**: complete with all available knives.

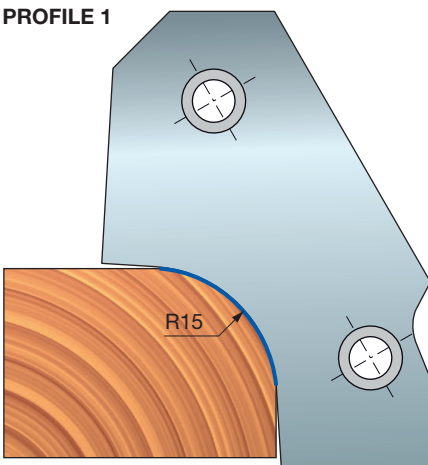
\*\***NC50M-A**: knives to be ordered separately.

D mm	h mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
72	59	20 x 50	12.000	<b>NC50MCA*</b>	F03FC15458
72	59	20 x 50	12.000	<b>NC50M-A**</b>	F03FC15457

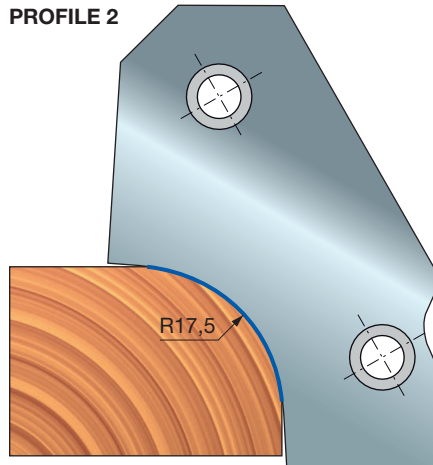
Spare parts		Dimensions mm	Freud Code	Art. No.
	Screw	M6 x 12	<b>2607M 006</b>	F03FA07456
	Screw	M10 x 25	<b>2622M EH9</b>	F03FA07459
	Washer	14 x 2 x 6	<b>VT18M AL9</b>	F03FC20662
	Allen key	4	<b>CB03M BA9</b>	F03FA00163

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
<b>1</b>	Knife	47 x 53 x 3 R=15	<b>CC50MT0101</b>	F03FC23773
<b>2</b>	Knife	47 x 53 x 3 R=17,5	<b>CC50MT0201</b>	F03FC23774
<b>3</b>	Knife	47 x 53 x 3 R=20	<b>CC50MT0301</b>	F03FC23775

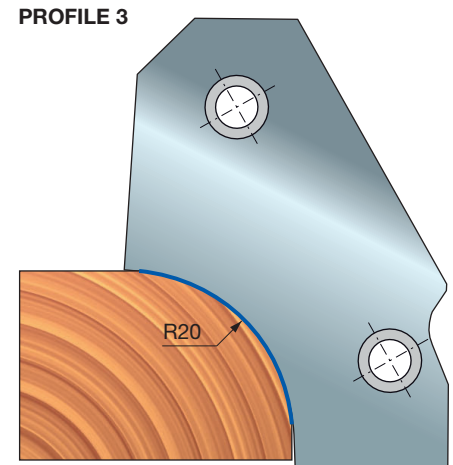
PROFILE 1

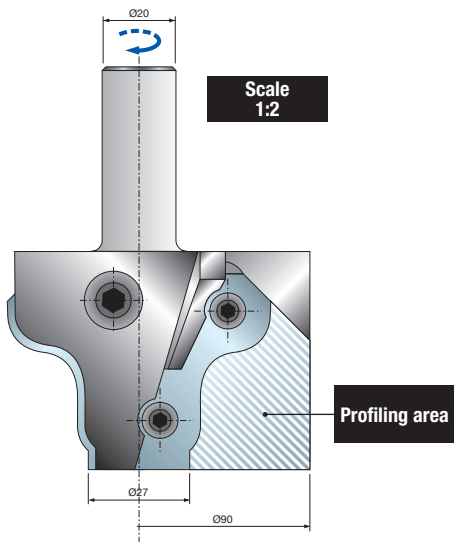


PROFILE 2



PROFILE 3





**Machines:**

CNC overhead routing machines.

**Materials:**

Softwood, hardwood, wood based panels and MDF.

**Applications:**

Profiling.

**Technical information:**

Performance CNC router cutter suitable for customised profiles.

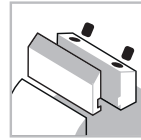
- Steel body.
- **PCN150** item includes router cutter complete of components, knives (minimum order quantity 6 pieces) and maintenance keys. For orders please specify: shank dimensions and profile drawing (please refer to knife profiling area).

**PCN150**

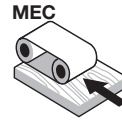
**Customised CNC router cutter with profiled knives**



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



MDF



Profiling



Grooving

D mm	B mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
90	59	20 x 50	12.000	<b>PCN150</b>	-

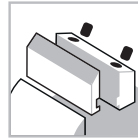
	Spare parts	Dimensions mm	Freud Code	Art. No.
	Knife	47 x 53 x 3	<b>CCN150</b>	
	Screw	M6 x 12	<b>2607M 006</b>	F03FA07456
	Screw	M10 x 25	<b>2622M EH9</b>	F03FA07459
	Washer	14 x 2 x 6	<b>VT18M AL9</b>	F03FC20662
	Allen key	4	<b>CB03M BA9</b>	F03FA00163

# NC60MCA

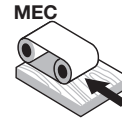
## CNC raised panel router cutter



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood

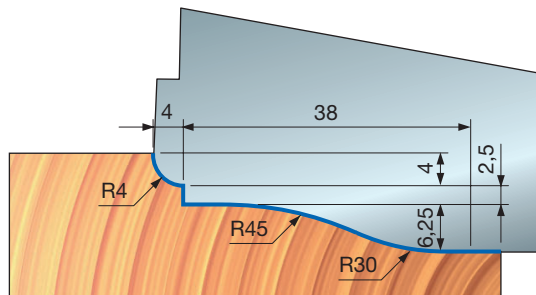


Profiling

D mm	h mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
114	54	20 x 50	9.000	NC60MCA	F03FC15459

Spare parts		Dimensions mm	Freud Code	Art. No.
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Screw	M6 x 12	2607M 006	F03FA07456
	Screw	M10 x 25	2622M EH9	F03FA07459
	Positioning plate	20 x 11,6 x 2,2	VT18M AS9	F03FC20665
	Washer	14 x 2 x 6	VT18M AL9	F03FC20662
	Allen key	4	CB03M BA9	F03FA00163

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
	Knife	60 x 36 x 3	CC60MT0101	F03FC23776



**Machines:**  
CNC overhead routing machines.

**Materials:**  
Softwood and hardwood.

**Applications:**  
Profiling.

**Technical information:**  
Performance knives raised panel cutter.

- Knives included in the tool set.
- Steel body.
- 20x50 mm shank.

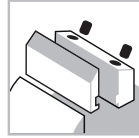


## NC62MCA

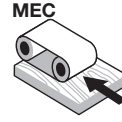
## CNC raised panel router cutter



CNC Routers



Clamping system



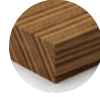
Automatic feed



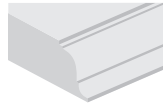
Steel Body



Softwood



Hardwood



Profiling



### Machines:

CNC overhead routing machines.

### Materials:

Softwood and hardwood.

### Applications:

Profiling.

### Technical information:

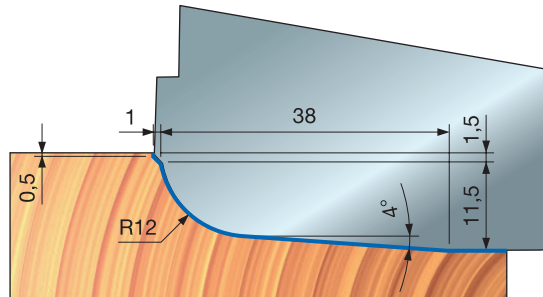
Performance knives raised panel cutter.

- Knives included in the tool set.
- Steel body.
- 20x50 mm shank.

D mm	B mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
114	54	20 x 50	9.000	NC62MCA	F03FC15460

Spare parts		Dimensions mm	Freud Code	Art. No.
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Screw	M6 x 12	2607M 006	F03FA07456
	Screw	M10 x 25	2622M EH9	F03FA07459
	Positioning plate	20 x 11,6 x 2,2	VT18M AS9	F03FC20665
	Washer	14 x 2 x 6	VT18M AL9	F03FC20662
	Allen key	4	CB03M BA9	F03FA00163

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
	Knife	60 x 36 x 3	CC62MT0101	F03FC23777



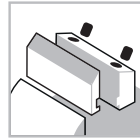


# NC64MCA

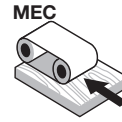
# CNC raised panel router cutter



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



MDF



### Profiling

D mm	h mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
114	54	20 x 50	9.000	<b>NC64MCA*</b>	F03FC15462
114	54	20 x 50	9.000	<b>NC64M-A**</b>	F03FC15461

Spare parts		Dimensions mm	Freud Code	Art. No.
	Screw	M6 x 12	<b>2607M 006</b>	F03FA07456
	Screw	M10 x 25	<b>2622M EH9</b>	F03FA07459
	Washer	14 x 2 x 6	<b>VT18M AL9</b>	F03FC20662
	Allen key	4	<b>CB03M BA9</b>	F03FA00163

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife	60 x 36 x 3	<b>CC64MD0101</b>	F03FC23778
2	Knife	60 x 36 x 3	<b>CC64MD0201</b>	F03FC23779
3	Knife	60 x 36 x 3	<b>CC64MD0301</b>	F03FC23780
4	Knife	60 x 36 x 3	<b>CC64MD0401</b>	F03FC23781
5	Knife	60 x 36 x 3	<b>CC64MD0501</b>	F03FC23782



### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:

Profiling.

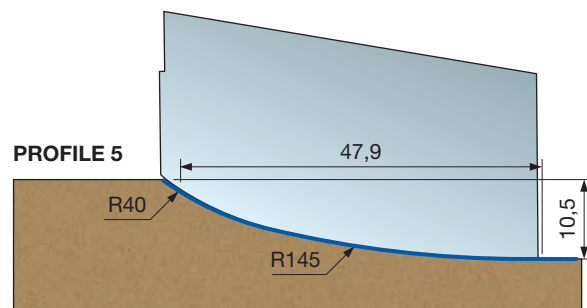
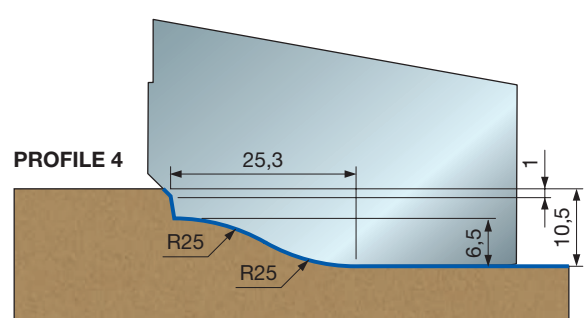
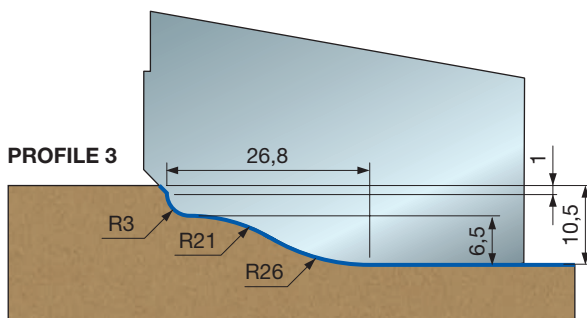
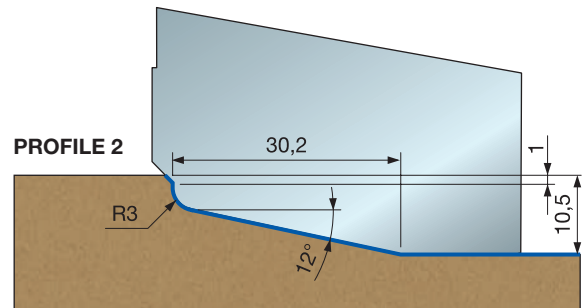
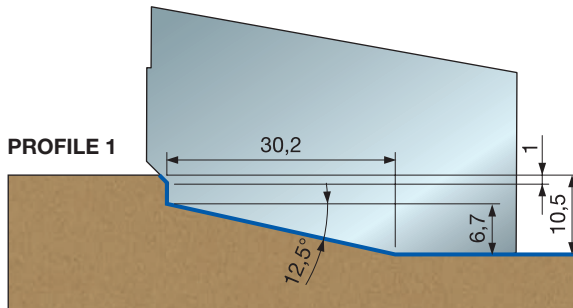
### Technical information:

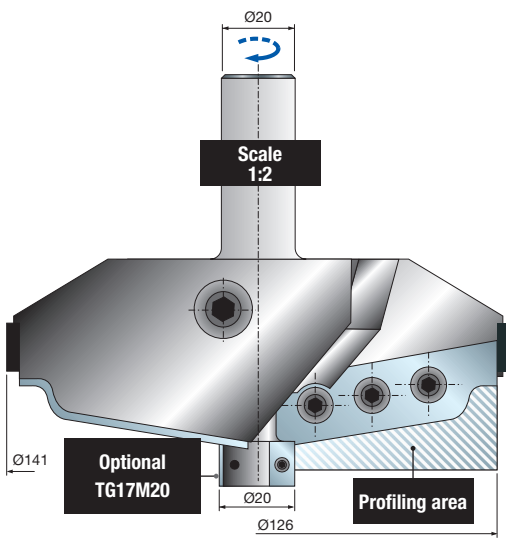
Performance knives raised panel cutter with 5 available profiles.

- Steel body.
- 20x50 mm shank.

\***NC64MCA**: complete with all available knives.

\*\***NC64M-A**: knives to be ordered separately.



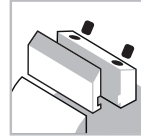


## PCN160

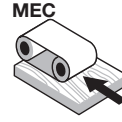
## Customised CNC raised panel router cutter



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



MDF



Profiling



### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:








Profiling.

### Technical information:

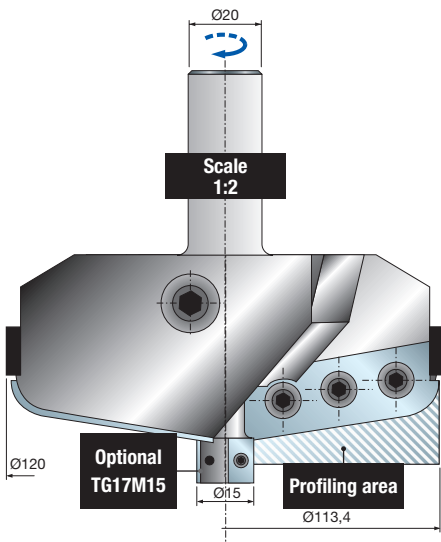
Performance CNC router cutter suitable for customised raised panels.

- Steel body.
- **PCN160** item includes router cutter complete of components, knives (minimum order quantity 6 pieces) and maintenance keys. For orders please specify: shank dimensions and profile drawing (please refer to knife profiling area).

D mm	B mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
141	54	20 x 50	9.000	<b>PCN160</b>	-

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	60 x 35 x 3	<b>CCN160</b>	
	Screw	M6 x 12	<b>2607M 006</b>	F03FA07456
	Screw	M10 x 25	<b>2622M EH9</b>	F03FA07459
	Screw	M5 x 8	<b>VT05M AA9</b>	F03FA04444
	Washer	14 x 2 x 6	<b>VT18M AL9</b>	F03FC20662
	Positioning plate	20 x 11,6 x 2,2	<b>VT18M AS9</b>	F03FC20665
	Allen key	4	<b>CB03M BA9</b>	F03FA00163

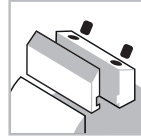




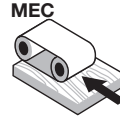
## PCN160R Customised CNC raised panel router cutter



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



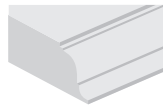
Hardwood



Chipboard



MDF



Profiling



### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:








Profiling.

### Technical information:

Performance CNC router cutter suitable for customised raised panels.

- Steel body.
- **PCN160R** item includes router cutter complete of components, knives (minimum order quantity 6 pieces) and maintenance keys. For orders please specify: shank dimensions and profile drawing (please refer to knife profiling area).

D	h	A	Max RPM	Freud Code	Art. No.
mm	mm	mm	1/min.		
120	54	20 x 50	9.000	PCN160R	-

	Spare parts	Dimensions	Freud Code	Art. No.
		mm		
	Knife	60 x 35 x 3	<b>CCN160</b>	
	Screw	M6 x 12	<b>2607M 006</b>	F03FA07456
	Screw	M10 x 25	<b>2622M EH9</b>	F03FA07459
	Screw	M5 x 8	<b>VT05M AA9</b>	F03FA04444
	Washer	14 x 2 x 6	<b>VT18M AL9</b>	F03FC20662
	Positioning plate	20 x 11,6 x 2,2	<b>VT18M AS9</b>	F03FC20665
	Allen key	4	<b>CB03M BA9</b>	F03FA00163



## NC90MCA

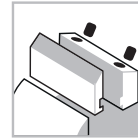
## CNC cabinet door router cutter - profile



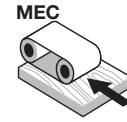
CNC Routers



CNC Machines



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



MDF



Profiling



### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:

Profiling.

### Technical information:








Performance knives raised panel cutter.

- Knives included in the tool set.
- Steel body.
- 20x50 mm shank.

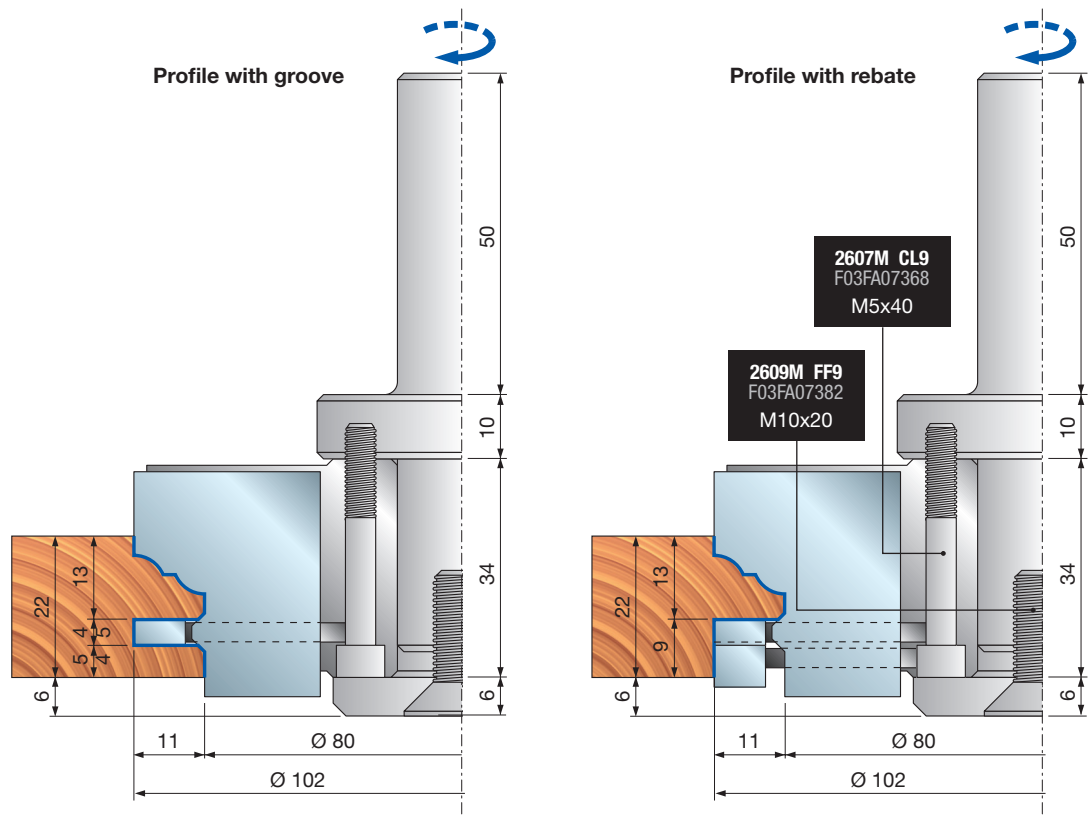
\***NC90MCA**: complete with all available knives.






\*\***NC90M-A**: knives to be ordered separately.

D mm	B mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
102	35	20 x 50	10.500	<b>NC90MCA*</b>	F03FC15465
102	35	20 x 50	10.500	<b>NC90M-A**</b>	F03FC15463

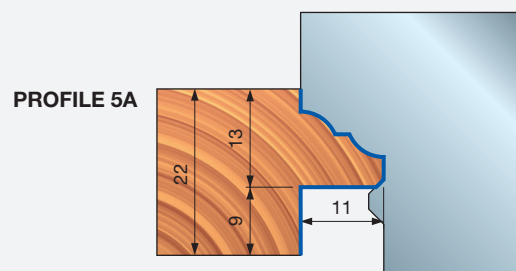
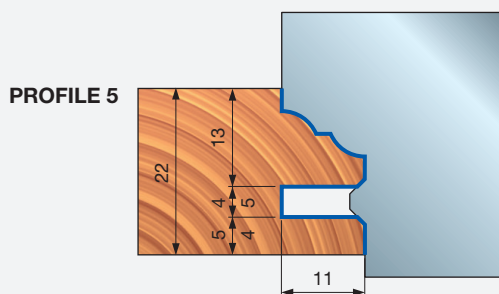
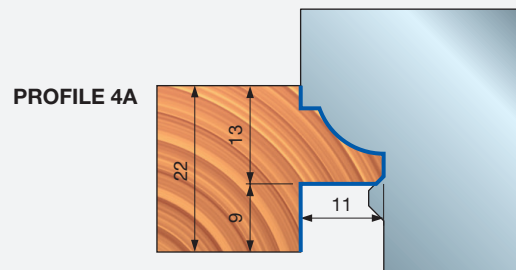
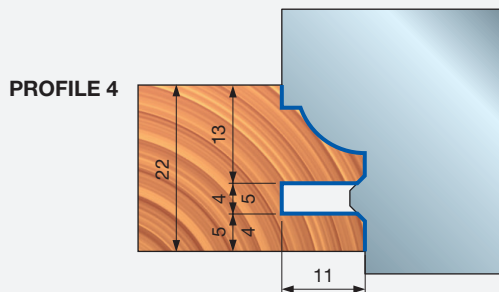
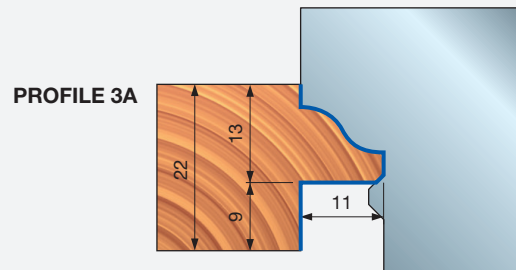
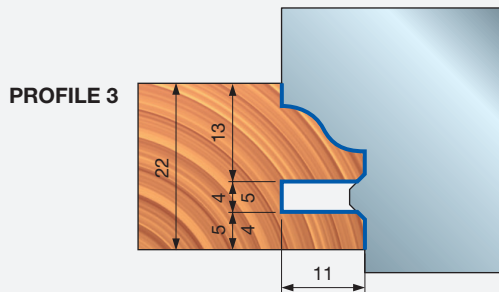
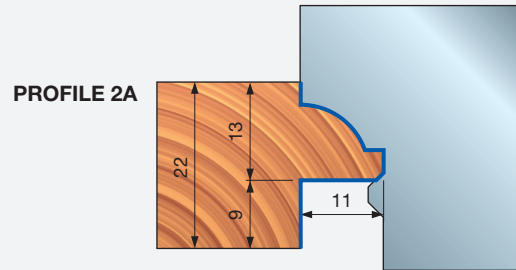
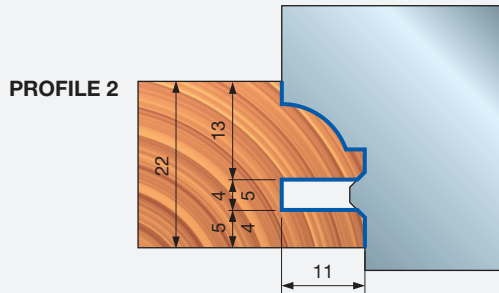
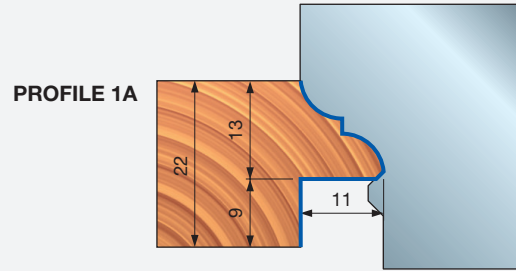
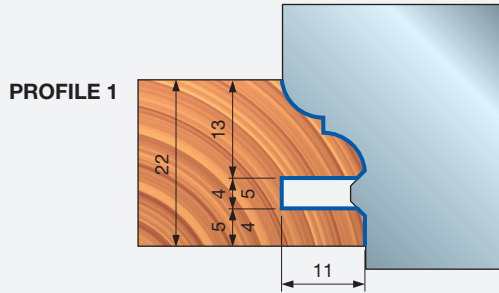
Spare parts	Dimensions mm	Freud Code	Art. No.
 Screw	M10 x 18	<b>VT03M CC9</b>	F03FA04438
 Screw	M6 x 14,5	<b>VT16M AA9</b>	F03FA04476
 Screw	M5 x 7 x 18	<b>VT08M AE9</b>	F03FA04457
 Grooving insert	34 x 4	<b>SR06MDAG302</b>	F03FC24193
 Grooving insert	34 x 7	<b>SR06MDAH302</b>	F03FC24194
 Allen key	5	<b>CB03M EA9</b>	F03FA00169
 Chuck	20 x 33 x 93	<b>AP08M DA9</b>	F03FC00579

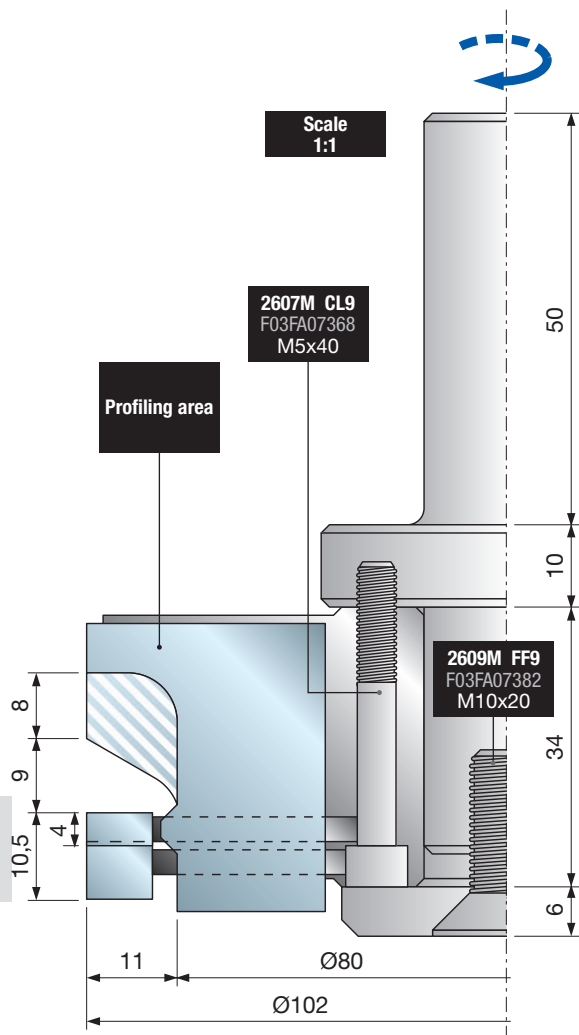
To obtain a 5 mm groove, it is necessary to replace the **SR06MDAG302** (4 mm thick) inserts with the **SR06MDAH302** (5 mm thick) inserts which must be ordered separately.



Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1/1A 	Knife	35 x 30 x 3	CC90MT0101	F03FC23783
2/2A 	Knife	35 x 30 x 3	CC90MT0201	F03FC23784
3/3A 	Knife	35 x 30 x 3	CC90MT0301	F03FC23785
4/4A 	Knife	35 x 30 x 3	CC90MT0401	F03FC23786
5/5A 	Knife	35 x 30 x 3	CC90MT0501	F03FC23787

## Example of profiles





## PCN300

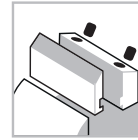
## Customised CNC cabinet door router cutter - profile



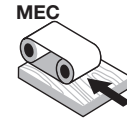
CNC Routers



CNC Machines



Clamping system



Automatic feed



Steel Body



Softwood



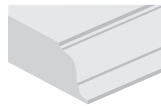
Hardwood



Chipboard



MDF



Profiling

D mm	B mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
102	35	20 x 50	10.500	PCN300	-

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	35 x 30 x 3	CK02 DC3	
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Screw	M6 x 14,5	VT16M AA9	F03FA04476
	Screw	M5 x 7 x 18	VT08M AE9	F03FA04457
	Grooving insert	34 x 4	SR06MDAG302	F03FC24193
	Grooving insert	34 x 7	SR06MDAH302	F03FC24194
	Allen key	5	CB03M EA9	F03FA00169



### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:

Profiling.

### Technical information:

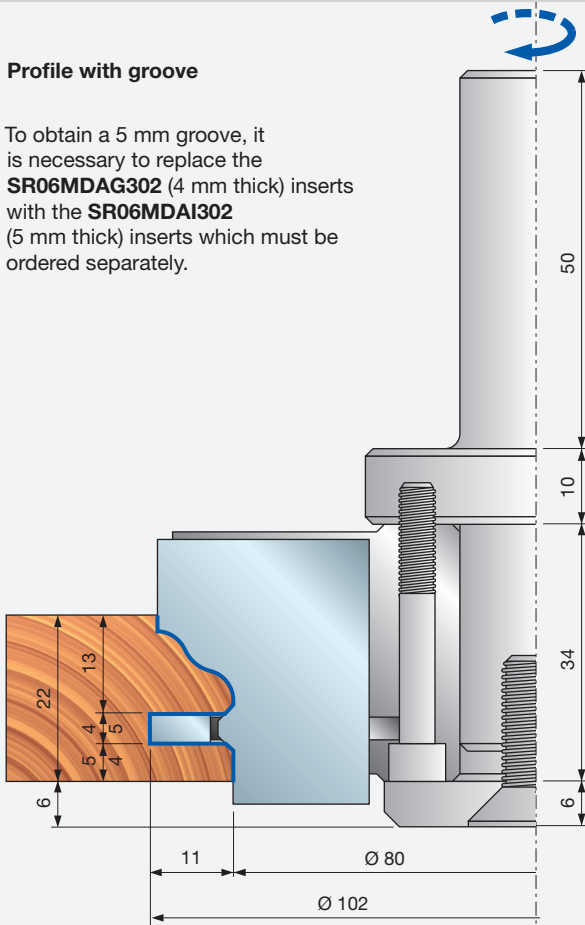
Performance CNC router cutter suitable for customised cabinet doors profiles.

- Profile available both with and without groove.
- 22 mm timber.
- Steel body.
- **PCN300** item includes router cutter complete of components, knives (minimum order quantity 6 pieces) and maintenance keys. For orders please specify: shank dimensions and profile drawing (please refer to knife profiling area).

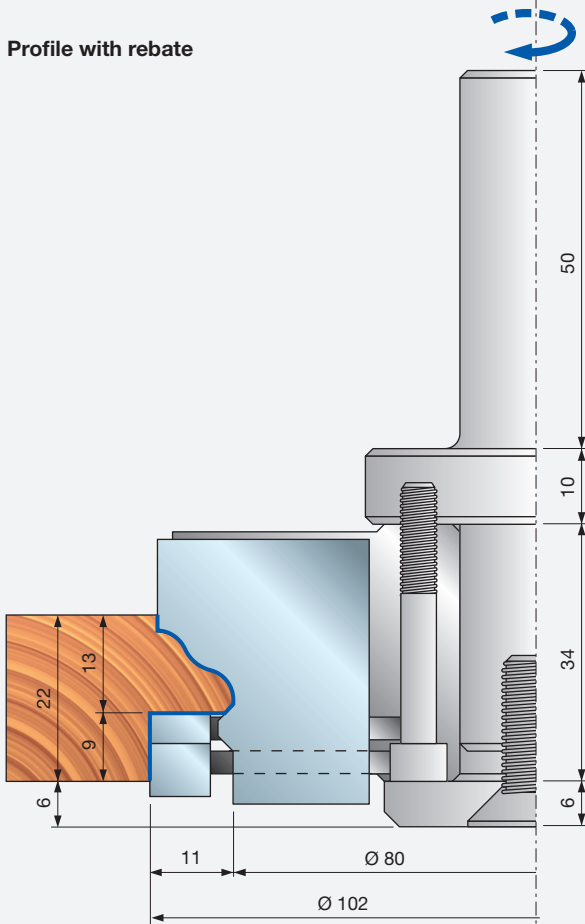
Example of profiles

Profile with groove

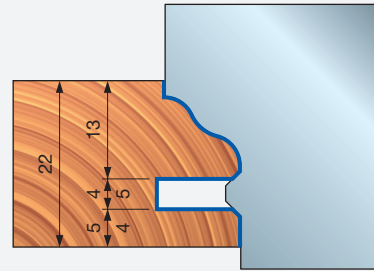
To obtain a 5 mm groove, it is necessary to replace the **SR06MDAG302** (4 mm thick) inserts with the **SR06MDAI302** (5 mm thick) inserts which must be ordered separately.



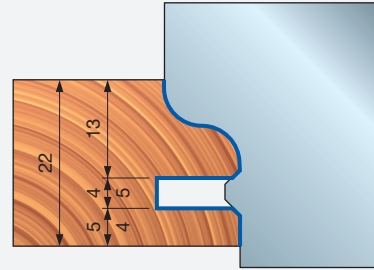
Profile with rebate



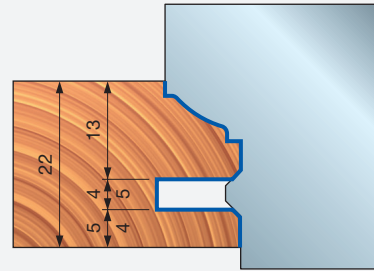
PROFILE 1



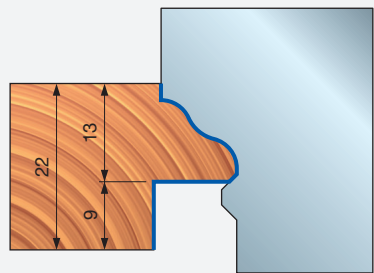
PROFILE 2



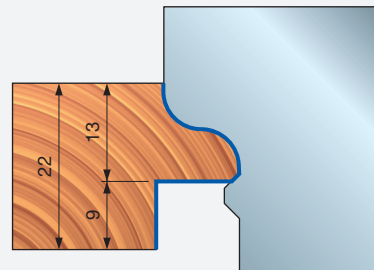
PROFILE 3



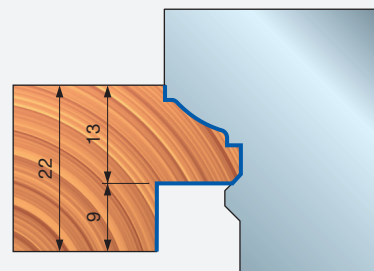
PROFILE 1



PROFILE 2



PROFILE 3





## NC91MCA

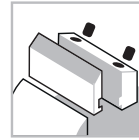
## CNC cabinet door router cutter - scribe



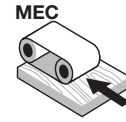
CNC Routers



CNC Machines



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



MDF



Profiling



### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:

Profiling.

### Technical information:







Performance knives cutter suitable for cabinet doors scribes with 5 available profiles (please refer to NC90M profiles).

- Profile available both with and without groove.
- Steel body.
- 20x50 mm shank.
- Chuck not included.

\***NC91MCA**: complete with all available knives.

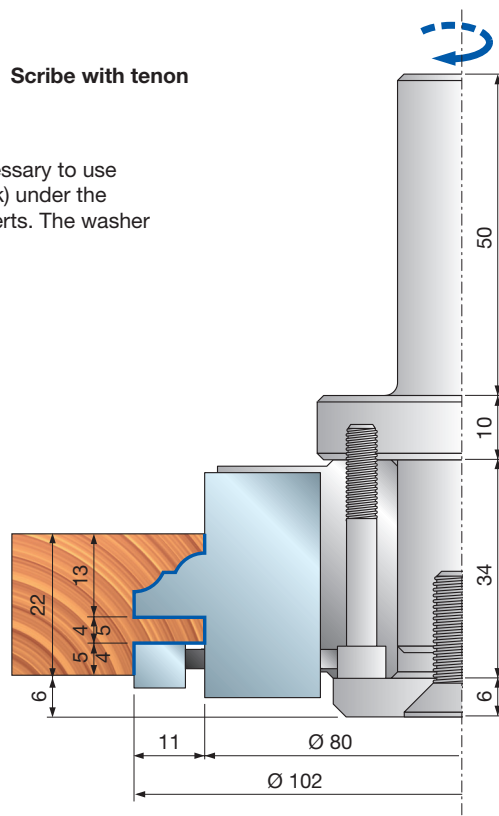
\*\***NC91M-A**: knives to be ordered separately.

D mm	B mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
102	35	20 x 50	10.500	<b>NC91MCA*</b>	F03FC15468
102	35	20 x 50	10.500	<b>NC91M-A**</b>	F03FC15466

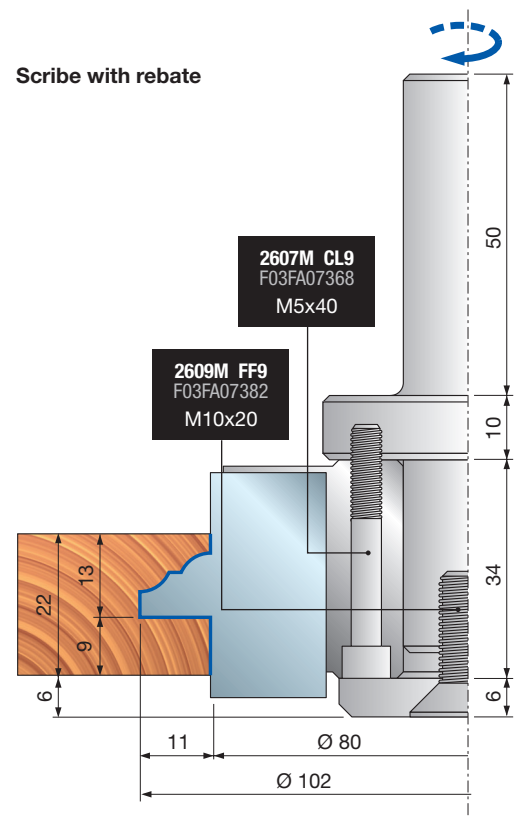
Spare parts	Dimensions mm	Freud Code	Art. No.
 Screw	M10 x 18	<b>VT03M CC9</b>	F03FA04438
 Screw	M6 x 14,5	<b>VT16M AA9</b>	F03FA04476
 Screw	M5 x 7 x 18	<b>VT08M AE9</b>	F03FA04457
 Grooving insert	34 x 7	<b>SR06MDAH302</b>	F03FC24194
 Allen key	5	<b>CB03M EA9</b>	F03FA00169
 Chuck	20 x 33 x 93	<b>AP08M DA9</b>	F03FC00579






### Scribe with tenon

To obtain a 5 mm tenon, it is necessary to use a washer **ST07M-109** (1 mm thick) under the **SR06MDAH302** (7 mm thick) inserts. The washer must be ordered separately.

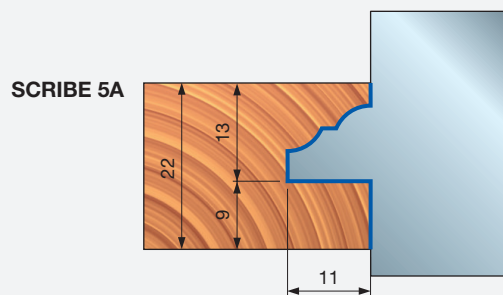
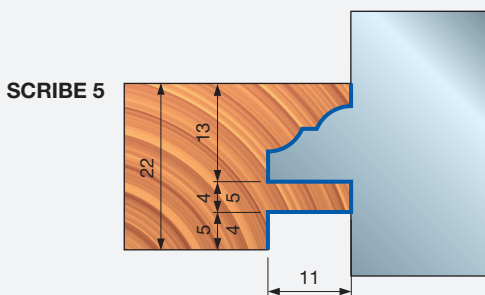
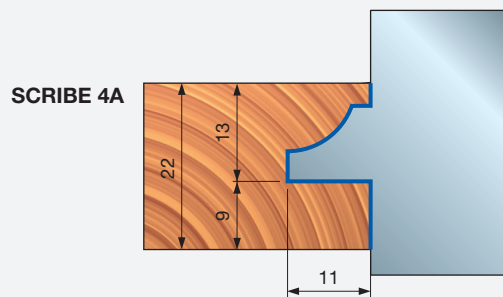
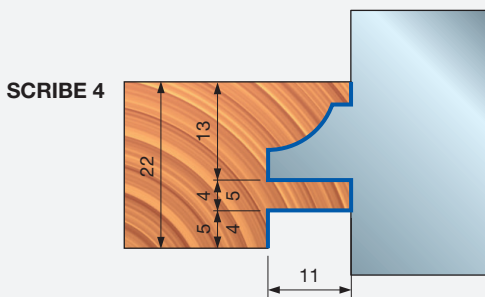
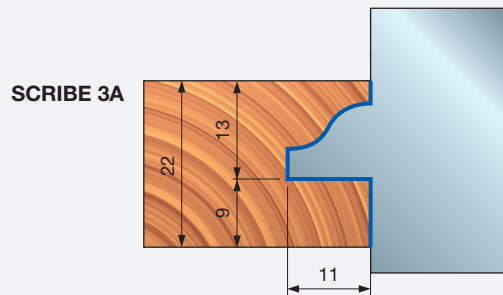
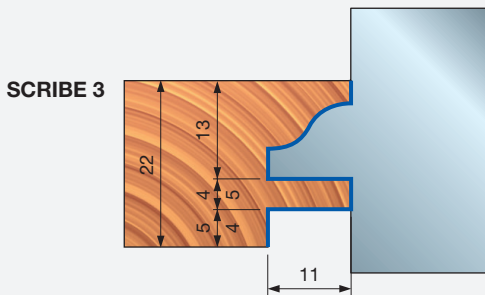
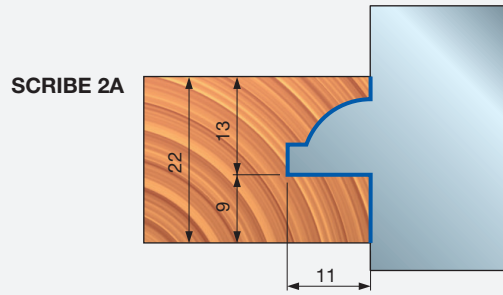
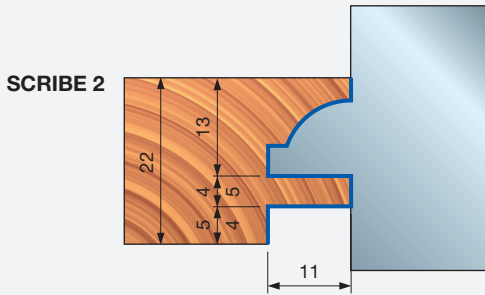
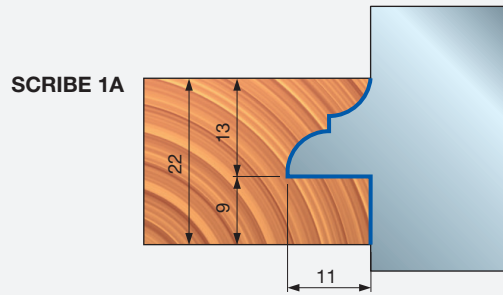
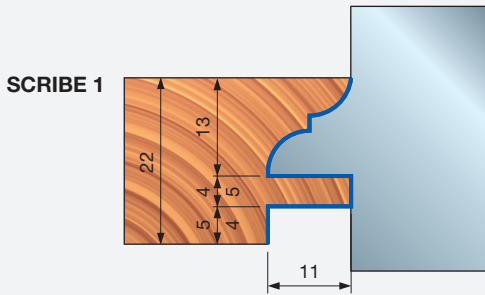


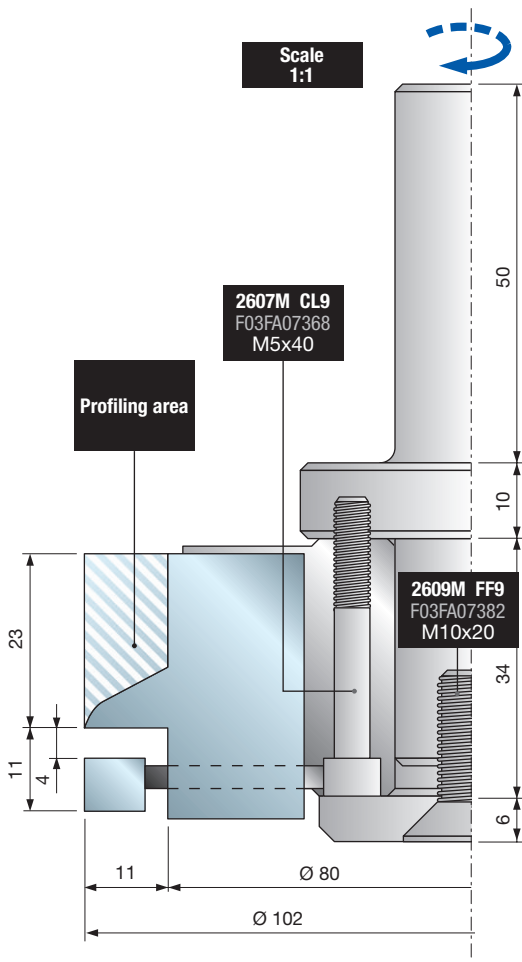
### Scribe with rebate



Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1/1A 	Knife	35 x 30 x 3	CC91MT0101	F03FC23788
2/2A 	Knife	35 x 30 x 3	CC91MT0201	F03FC23789
3/3A 	Knife	35 x 30 x 3	CC91MT0301	F03FC23790
4/4A 	Knife	35 x 30 x 3	CC91MT0401	F03FC23791
5/5A 	Knife	35 x 30 x 3	CC91MT0501	F03FC23792

### Example of profiles





## PCN310

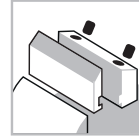
## Customised CNC cabinet door router cutter - scribe



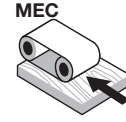
CNC Routers



CNC Machines



Clamping system



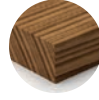
Automatic feed



Steel Body



Softwood



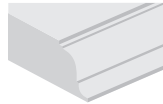
Hardwood



Chipboard



MDF



Profiling



### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:







Profiling.

### Technical information:

Performance CNC router cutter suitable for customised cabinet doors counter-profiles.

- Profile available both with and without groove.
- 22 mm timber.
- Steel body.
- **PCN310** item includes router cutter complete of components, knives (minimum order quantity 6 pieces) and maintenance keys. For orders please specify: shank dimensions and profile drawing (please refer to knife profiling area).

D mm	B mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
102	35	20 x 50	10.500	PCN310	-

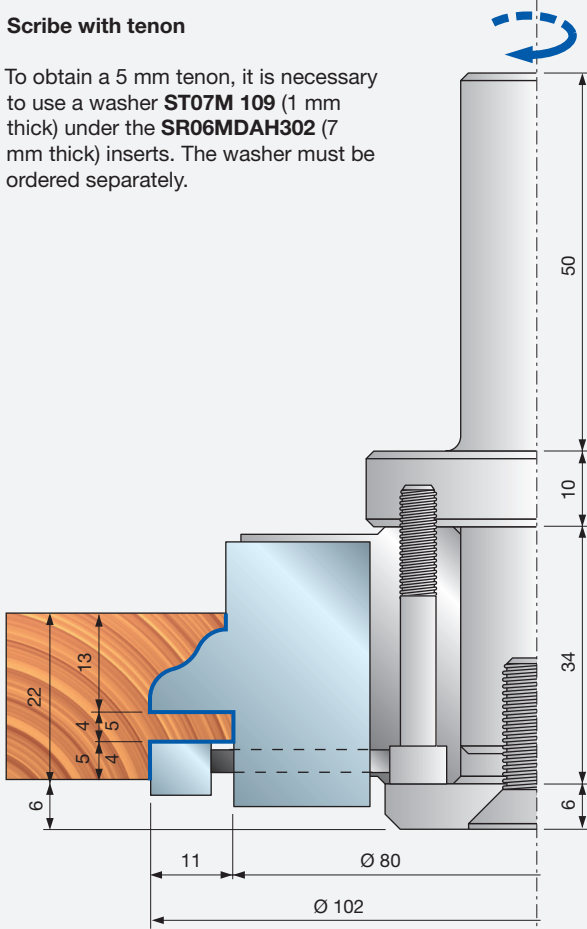
Spare parts	Dimensions mm	Freud Code	Art. No.
 Knife	35 x 30 x 3	CK02 DC3	-
 Screw	M10 x 18	VT03M CC9	F03FA04438
 Screw	M6 x 14,5	VT16M AA9	F03FA04476
 Screw	M5 x 7 x 18	VT08M AE9	F03FA04457
 Grooving insert	34 x 7	SR06MDAH302	F03FC24194
 Allen key	5	CB03M EA9	F03FA00169



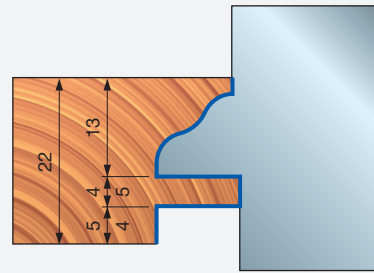
Example of scribes

Scribe with tenon

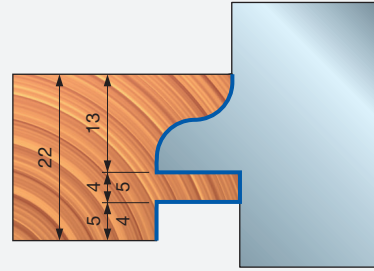
To obtain a 5 mm tenon, it is necessary to use a washer **ST07M 109** (1 mm thick) under the **SR06MDAH302** (7 mm thick) inserts. The washer must be ordered separately.



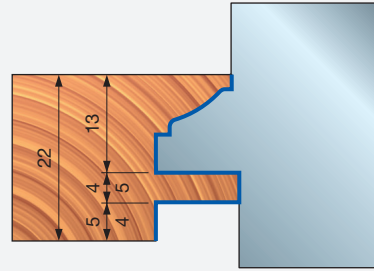
SCRIBE 1



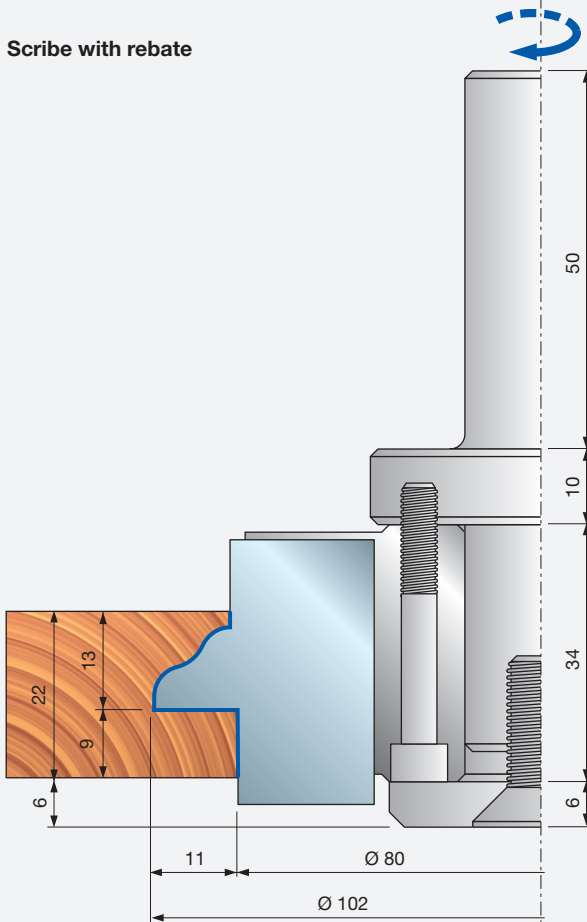
SCRIBE 2



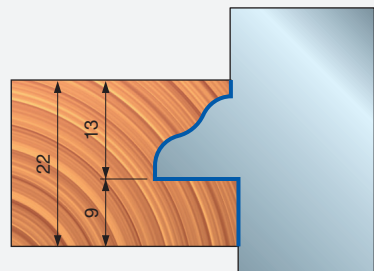
SCRIBE 3



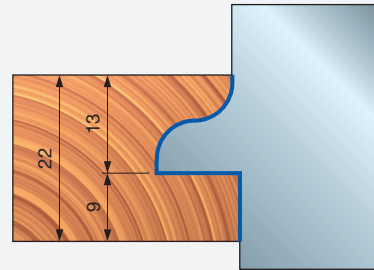
Scribe with rebate



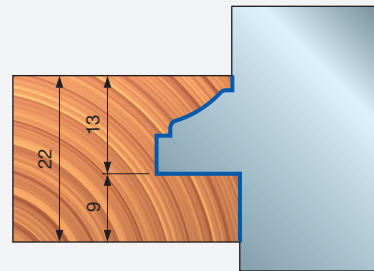
SCRIBE 1



SCRIBE 2



SCRIBE 3



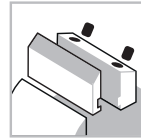


# NCSEM22

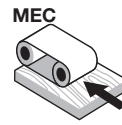
## CNC tool for cabinet door frame profile - 22 mm



CNC Machines



Clamping system



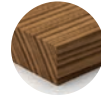
Automatic feed



Aluminium body



Softwood



Hardwood



Profiling



### Machines:

CNC overhead routing machines.

### Materials:

Softwood and hardwood.

### Applications:

Profiling.

### Technical information:

CNC tool set suitable for cabinet doors with 6 available profiles.

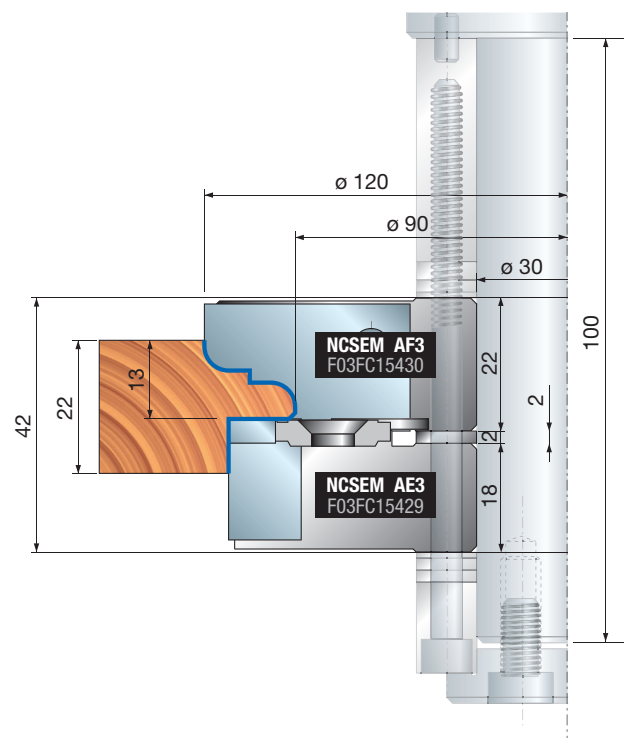
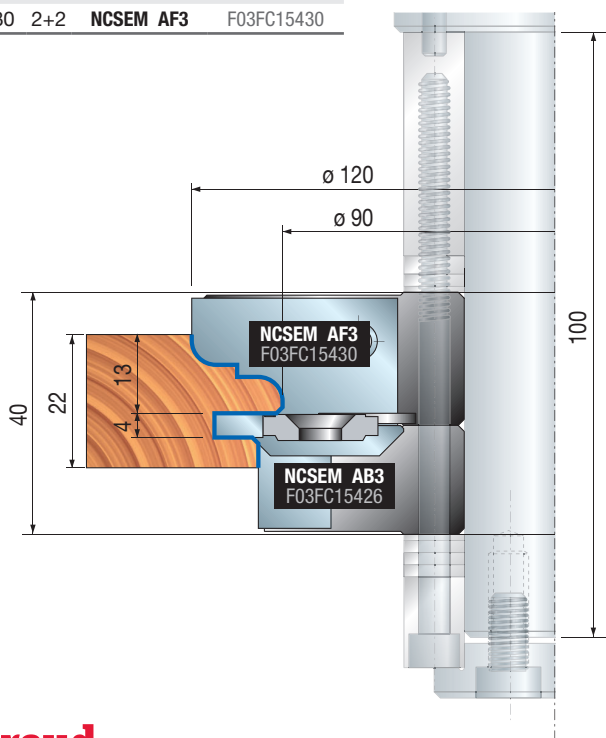
- Profile available both with and without groove.
- 22 mm timber.
- Aluminium light alloy body.
- Chuck and knives to be ordered separately.

### Tools for NCSEM22A01 and NCSEM22A03 sets

D	B	d	Z	Freud Code	Art. No.
mm	mm	mm			
112	20	30	2+2	NCSEM AE3	F03FC15429
112,5	19	30	2+4	NCSEM AB3	F03FC15426
120	22	30	2+2	NCSEM AF3	F03FC15430

D	B	d	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm		1/min.		
120	38	30	2	11.000	NCSEM22A01	F03FC15432
120	39	30	2	11.000	NCSEM22A03	F03FC15434

	Spare parts	Dimensions	Freud Code	Art. No.	
		mm			
NCSEM AB3		Knife	14,6 x 12 x 1,5	CG06MBA310	F03FH02890
		Wedge	13	CN01M CA9	F03FC01250
		Screw	M8 x 16	VT03M AA9	F03FA04435
		Beveling insert	22 x 16 x 5	IG51MBA305	F03FH03022
		Screw	M6 x 14,5	VT16M AA9	F03FA04476
NCSEM AE3		Grooving insert	27 x 4 x 16	IG04MSAA3T05	F03FC24155
		Screw	M6 x 14,5	VT16M AA9	F03FA04476
		Knife	20 x 12 x 1,5	CG06MCA310	F03FH02891
		Wedge	15 x 16 x 8	CN09MS AC9	F03FC01325
		Nut	10 x 11,5 x M6	VT20M AA9	F03FA04497
NCSEM AF3		Screw	M6 x 22	VT19M AB9	F03FA04491
		Spur	22,86 x 2,5	RG02MAA305	F03FH03041
		Screw	M5 x 8	VT05M AA9	F03FA04444
		Positioning plate	22 x 1,7 x 6,5	VT18M GA9	F03FA04488
		Screw	M10 x 16	2616M EE9	F03FA07426
		Grooving insert	27 x 4 x 16	IG04MDAA3T05	F03FC24151
		Screw	M6 x 14,5	VT16M AA9	F03FA04476
	Screw	M5 x 8	VT05M AA9	F03FA04444	

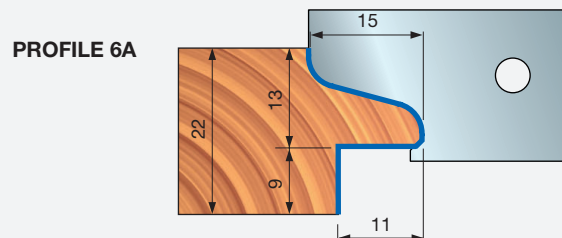
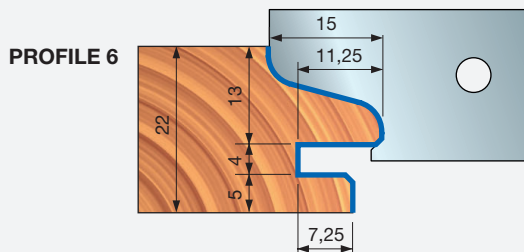
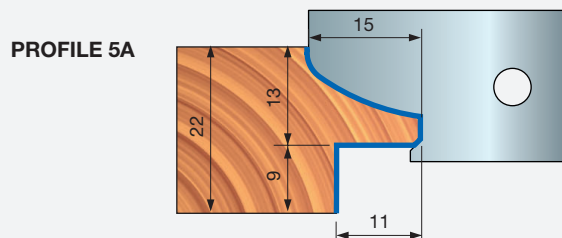
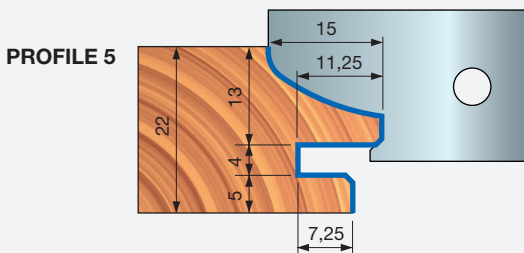
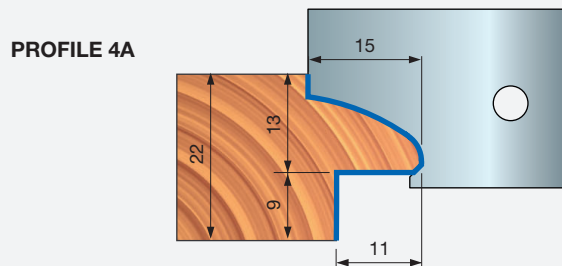
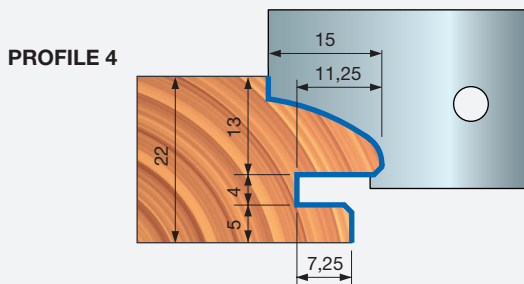
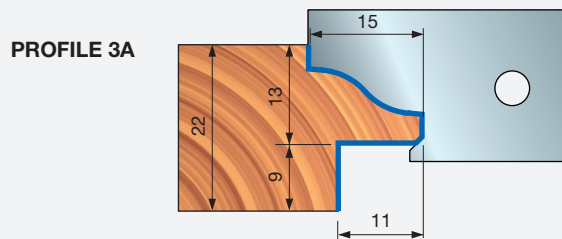
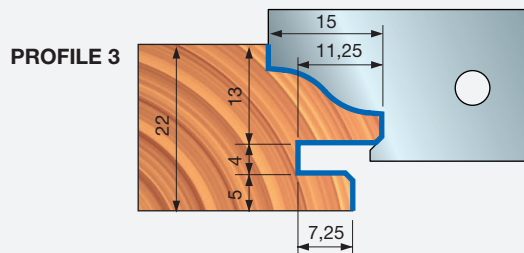
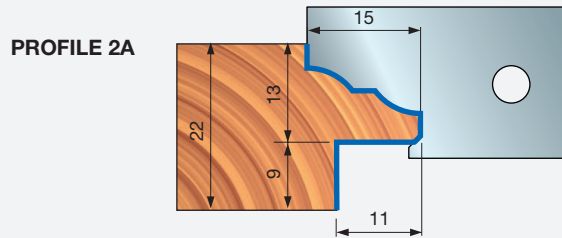
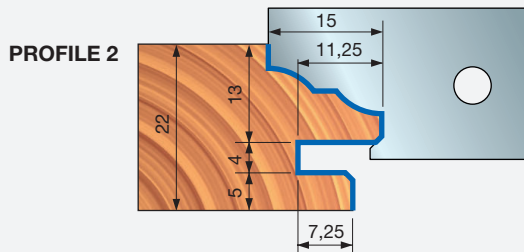
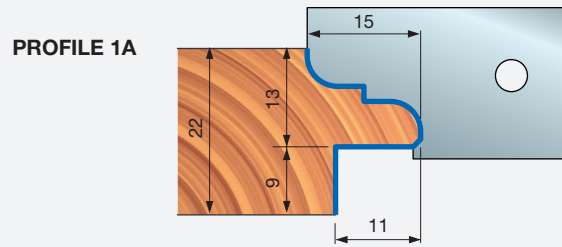
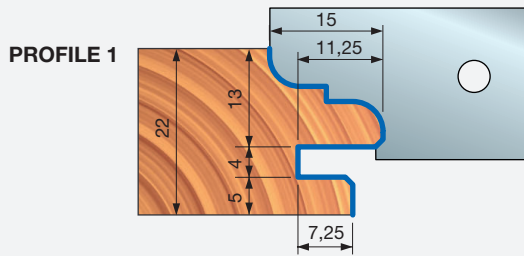


# NCSEM22

# CNC tool for cabinet door frame profile - 22 mm

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1/1A	Knife	20 x 34 x 3	CCSEMCA301	F03FC23728
2/2A	Knife	20 x 34 x 3	CCSEMCB301	F03FC23729
3/3A	Knife	20 x 34 x 3	CCSEMCC301	F03FC23730
4/4A	Knife	20 x 34 x 3	CCSEMCD301	F03FC23731
5/5A	Knife	20 x 34 x 3	CCSEMCE301	F03FC23732
6/6A	Knife	20 x 34 x 3	CCSEMCF301	F03FC23733

## Example of profiles



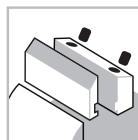


# NCSEM22

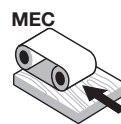
## CNC tool for cabinet door frame scribe - 22 mm



CNC Machines



Clamping system



Automatic feed



Aluminium body



Softwood



Hardwood



Profiling



D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
120	41	30	2	11.000	NCSEM22A02	F03FC15433
120	29	30	2	11.000	NCSEM22A04	F03FC15435

### Machines:

CNC overhead routing machines.

### Materials:

Softwood and hardwood.

### Applications:

Profiling.

### Technical information:

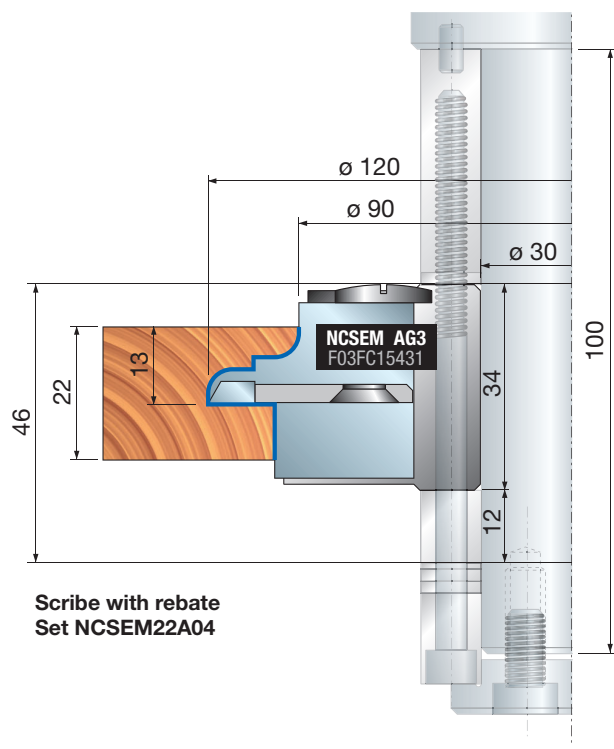
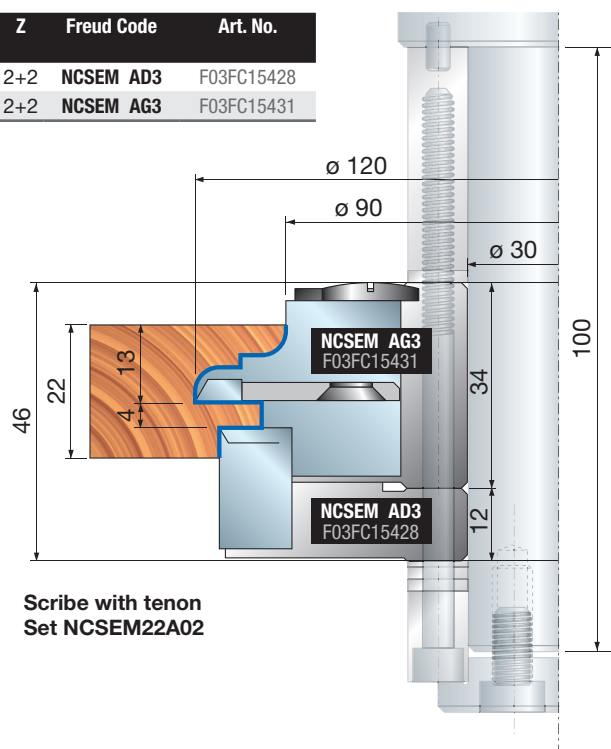
CNC tool set suitable for cabinet doors with 6 available counte-profiles (please refer to NCSEM22 profiles).







- Profile available both with and without groove.
- 22 mm timber.
- Aluminium light alloy body.
- Chuck and knives to be ordered separately.

	Spare parts	Dimensions mm	Freud Code	Art. No.
NCSEM AD3	Knife	20 x 12 x 1,5	CG06MCA310	F03FH02891
	Wedge	16	CN01MS DA9	F03FC01264
	Screw	M8 x 16	VT03M AA9	F03FA04435
NCSEM AG3	Spur	22,86 x 2,5	RG02MAA305	F03FH03041
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Positioning plate	22 x 1,7 x 6,5	VT18M GA9	F03FA04488
	Screw	M10 x 16	2616M EE9	F03FA07426
	Spur insert	34 x 3,5 x 16	SR06MDBA302	F03FC24197
	Screw	M6 x 11,5	VT16M AB9	F03FA04477
	Screw	M5 x 8	VT05M AA9	F03FA04444

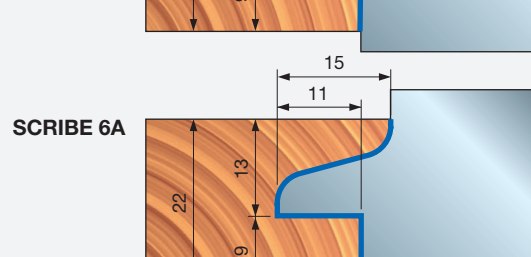
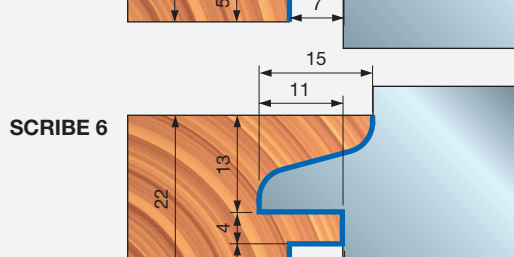
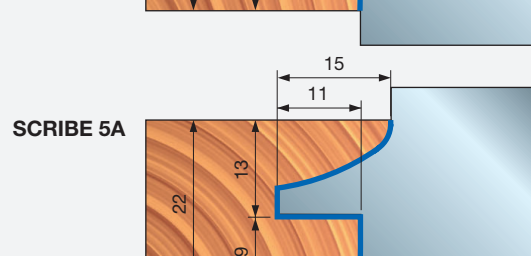
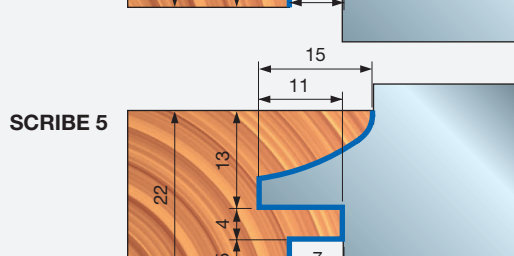
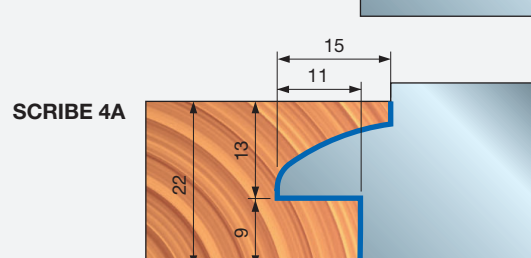
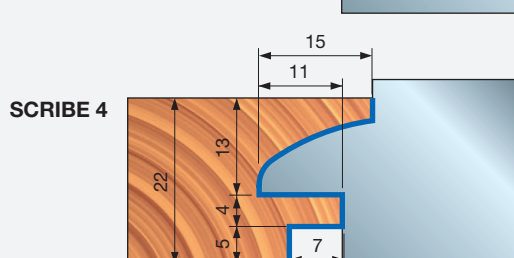
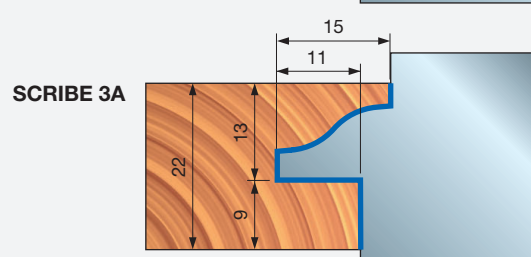
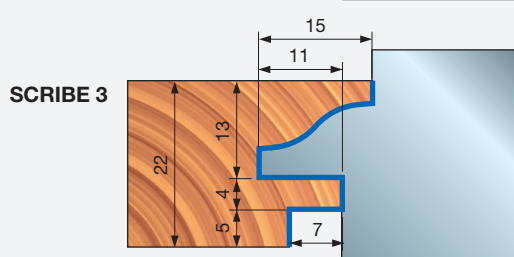
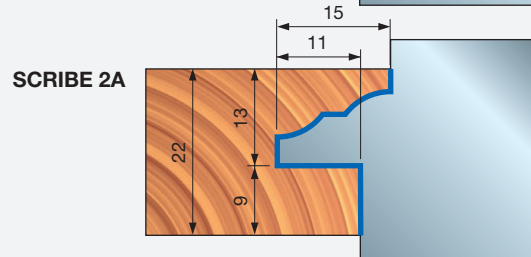
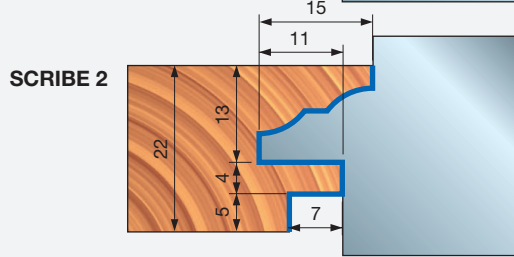
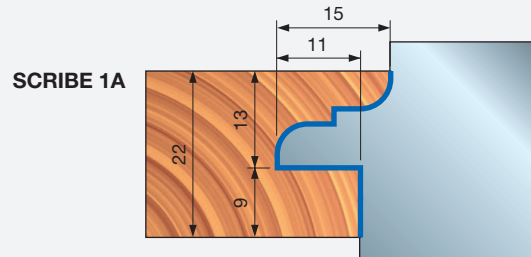
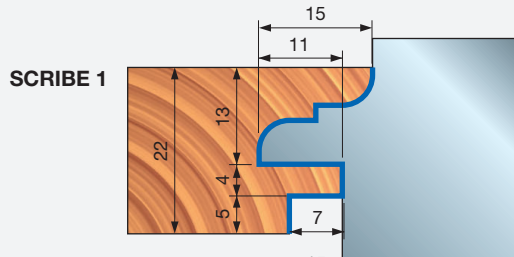
### Tools for NCSEM22A02 and NCSEM22A04 sets

D mm	B mm	d mm	Z	Freud Code	Art. No.
112	20	30	2+2	NCSEM AD3	F03FC15428
120	29	30	2+2	NCSEM AG3	F03FC15431



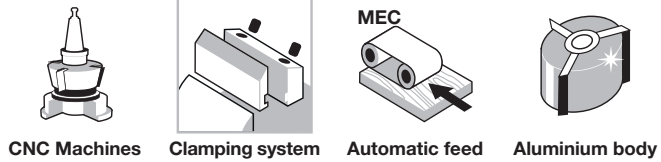
Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1/1A 	Knife	30 x 34 x 3	CCSEMDA301	F03FC23734
2/2A 	Knife	30 x 34 x 3	CCSEMDB301	F03FC23735
3/3A 	Knife	30 x 34 x 3	CCSEMDC301	F03FC23736
4/4A 	Knife	30 x 34 x 3	CCSEMDD301	F03FC23737
5/5A 	Knife	30 x 34 x 3	CCSEMDE301	F03FC23738
6/6A 	Knife	30 x 34 x 3	CCSEMDF301	F03FC23739

Example of scribes



# NCSEM30

## CNC tool for cabinet door frame profile - 30 mm



Profiling



D	B	d	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm		1/min.		
120	43	30	2	11.000	NCSEM30A01	F03FC15436
120	42	30	2	11.000	NCSEM30A03	F03FC15438

**Machines:**  
CNC overhead routing machines.

**Materials:**  
Softwood and hardwood.

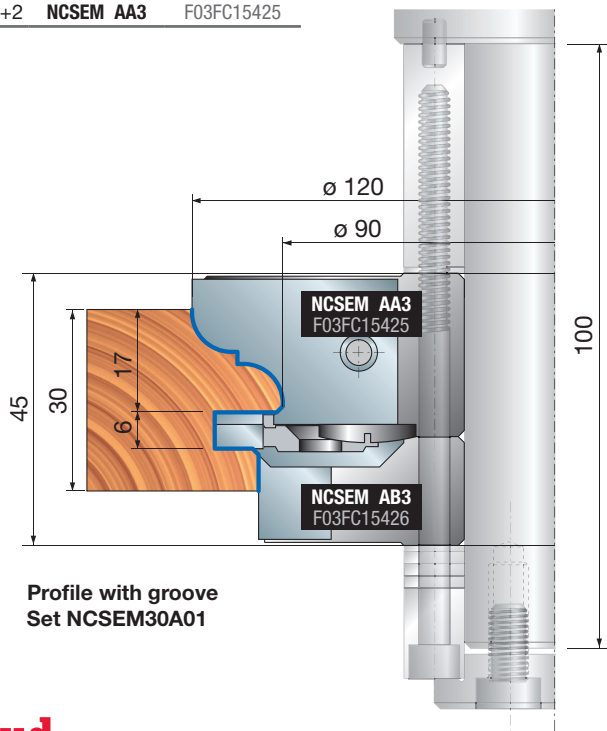
**Applications:**  
Profiling.

- Technical information:**  
CNC tool set suitable for cabinet doors with 3 available profiles.
- Profile available both with and without groove.
  - 30 mm timber.
  - Aluminium light alloy body.
  - Chuck and knives to be ordered separately.

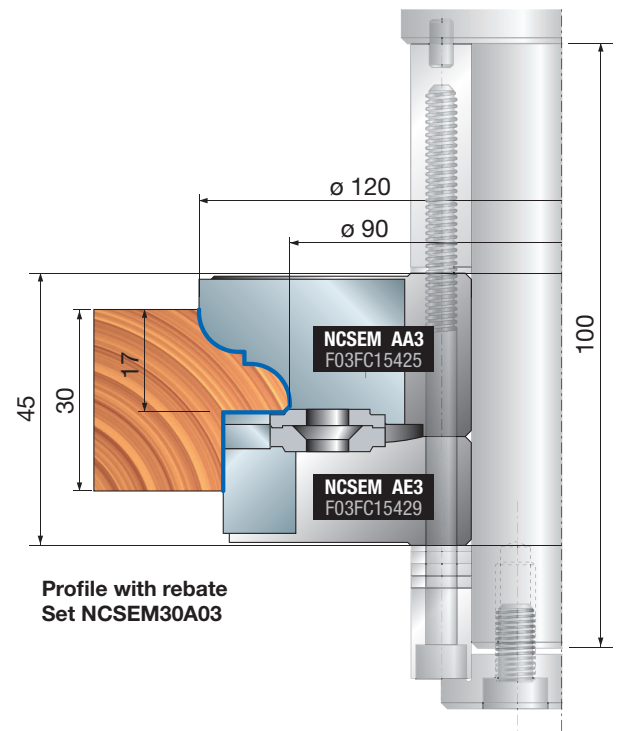
### Tools for NCSEM30A01 and NCSEM30A03 sets

D	B	d	Z	Freud Code	Art. No.
mm	mm	mm			
112	20	30	2+2	NCSEM AE3	F03FC15429
112,5	19	30	2+4	NCSEM AB3	F03FC15426
120	28	30	2+2	NCSEM AA3	F03FC15425

	Spare parts	Dimensions	Freud Code	Art. No.
NCSEM AA3	Positioning plate	22 x 1,7 x 6,5	VT18M GA9	F03FA04488
	Screw	M10 x 16	2616M EE9	F03FA07426
	Grooving insert	27 x 4 x 16	IG04MDAA3T05	F03FC24151
	Screw	M6 x 14,5	VT16M AA9	F03FA04476
NCSEM AB3	Screw	M5 x 8	VT05M AA9	F03FA04444
	Knife	14,6 x 12 x 1,5	CG06MBA310	F03FH02890
	Wedge	13	CN01M CA9	F03FC01250
	Screw	M8 x 16	VT03M AA9	F03FA04435
	Beveling insert	22 x 16 x 5	IG51MBA305	F03FH03022
NCSEM AE3	Screw	M6 x 14,5	VT16M AA9	F03FA04476
	Grooving insert	27 x 4 x 16	IG04MSAA3T05	F03FC24155
	Screw	M6 x 14,5	VT16M AA9	F03FA04476
	Knife	20 x 12 x 1,5	CG06MCA310	F03FH02891
	Wedge	15 x 16 x 8	CN09MS AC9	F03FC01325
	Nut	10 x 11,5 x M6	VT20M AA9	F03FA04497
	Screw	M6 x 22	VT19M AB9	F03FA04491
Spur	22,86 x 2,5	RG02MAA305	F03FH03041	
	Screw	M5 x 8	VT05M AA9	F03FA04444



Profile with groove  
Set NCSEM30A01



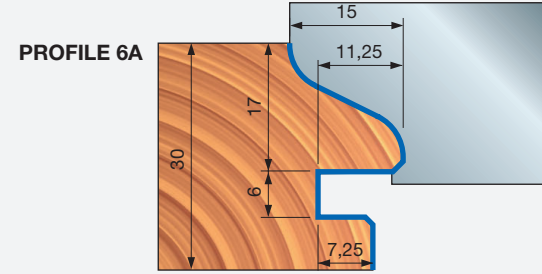
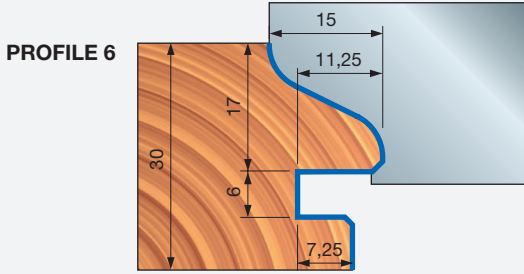
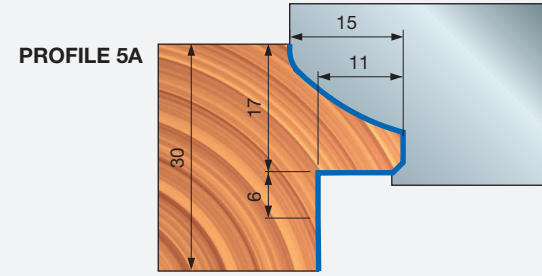
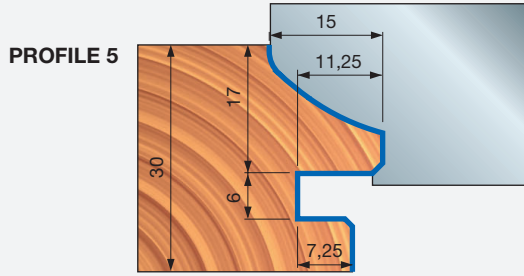
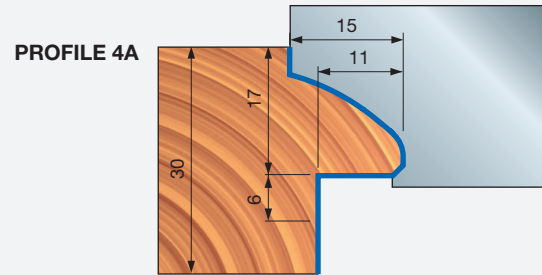
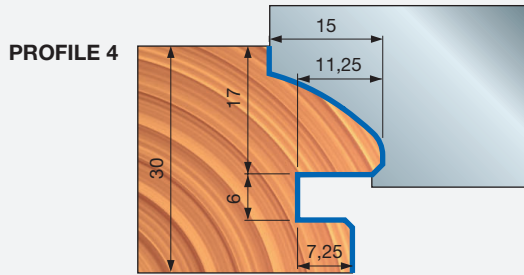
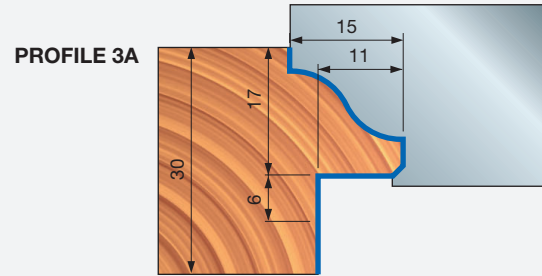
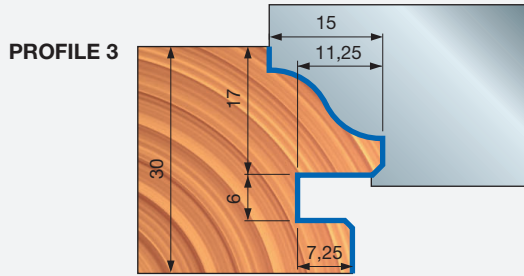
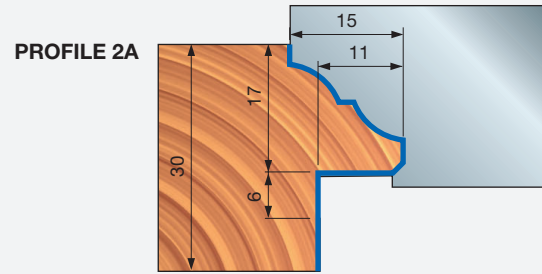
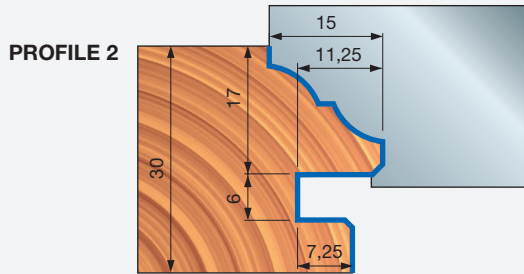
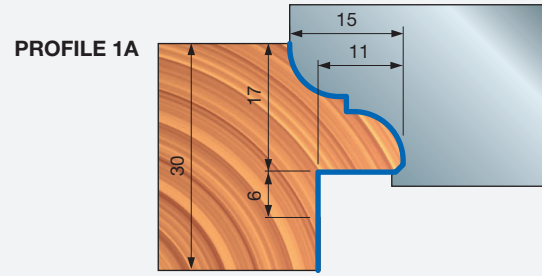
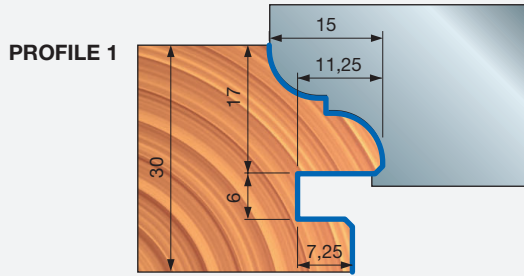
Profile with rebate  
Set NCSEM30A03

# NCSEM30

# CNC tool for cabinet door frame profile - 30 mm

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1/1A	Knife	24 x 34 x 3	CCSEMAA301	F03FC01398
2/2A	Knife	24 x 34 x 3	CCSEMAB301	F03FC23169
3/3A	Knife	24 x 34 x 3	CCSEMAC301	F03FC23657
4/4A	Knife	24 x 34 x 3	CCSEMAA301	F03FC23715
5/5A	Knife	24 x 34 x 3	CCSEMAE301	F03FC23717
6/6A	Knife	24 x 34 x 3	CCSEMAF301	F03FC23718

## Example of profiles



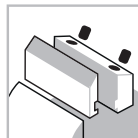


# NCSEM30

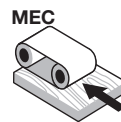
## CNC tool for cabinet door frame scribe - 30 mm



CNC Machines



Clamping system



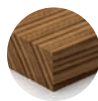
Automatic feed



Aluminium body



Softwood



Hardwood



Profiling



### Machines:

CNC overhead routing machines.

### Materials:

Softwood and hardwood.

### Applications:

Profiling.

### Technical information:

CNC tool set suitable for cabinet doors with 6 available counter profiles (please refer to NCSEM22 profiles).

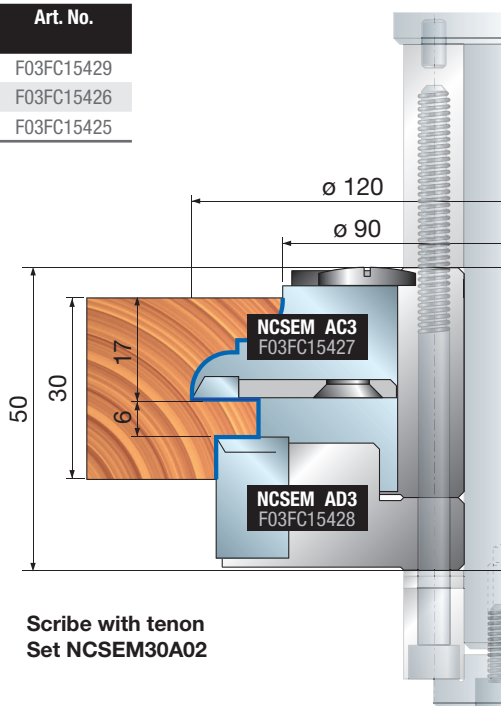
- Profile available both with and without groove.
- 30 mm timber.
- Aluminium light alloy body.
- Chuck and knives to be ordered separately.

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
120	41	30	2	11.000	NCSEM30A02	F03FC15437
120	29	30	2	11.000	NCSEM30A04	F03FC15439

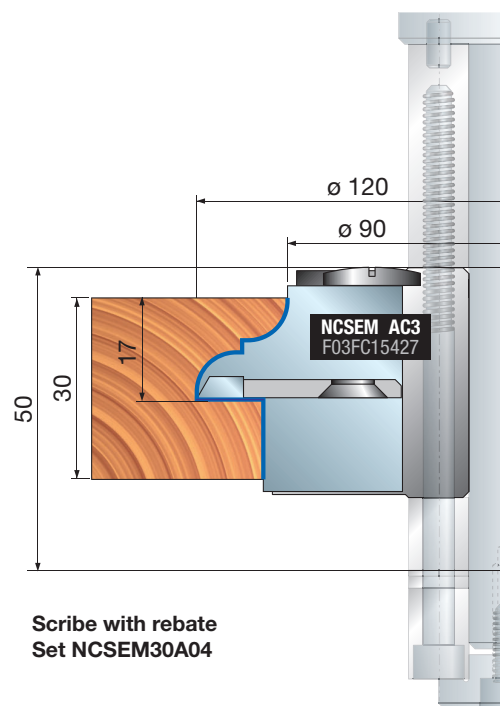
	Spare parts	Dimensions mm	Freud Code	Art. No.
NCSEM AC3	Positioning plate	22 x 1,7 x 6,5	VT18M GA9	F03FA04488
	Screw	M10 x 16	2616M EE9	F03FA07426
	Spur insert	34 x 3,5 x 16 x 3 x 3	SR06MDBA302	F03FC24197
	Screw	M6 x 11,5	VT16M AB9	F03FA04477
	Screw	M5 x 8	VT05M AA9	F03FA04444
NCSEM AD3	Knife	14,6 x 12 x 1,5	CG06MBA310	F03FH02890
	Wedge	13	CN01M CA9	F03FC01250
	Screw	M8 x 16	VT03M AA9	F03FA04435
	Beveling insert	22 x 16 x 5	IG51MBA305	F03FH03022
	Screw	M6 x 14,5	VT16M AA9	F03FA04476
	Grooving insert	27 x 4 x 16	IG04MSAA3T05	F03FC24155

### Tools for NCSEM30A02 and NCSEM30A04 sets

D mm	B mm	d mm	Z	Freud Code	Art. No.
112	20	30	2+2	NCSEM AE3	F03FC15429
112,5	19	30	2+4	NCSEM AB3	F03FC15426
120	28	30	2+2	NCSEM AA3	F03FC15425



Scribe with tenon  
Set NCSEM30A02



Scribe with rebate  
Set NCSEM30A04

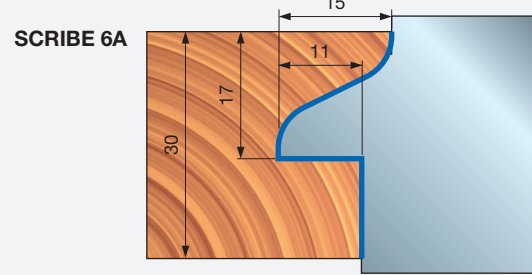
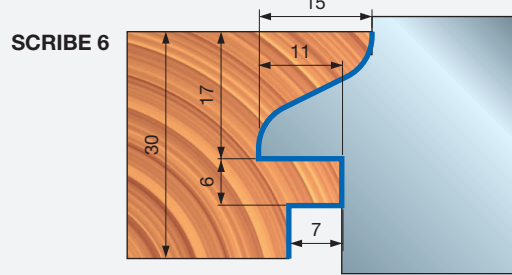
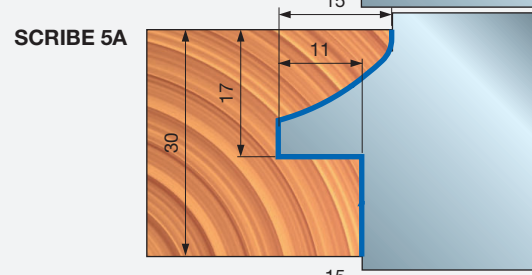
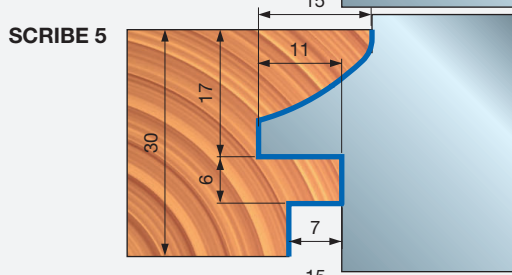
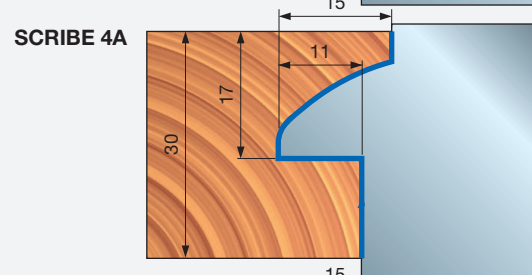
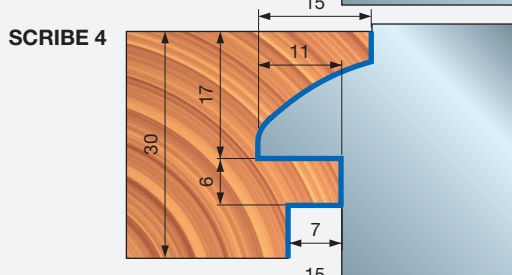
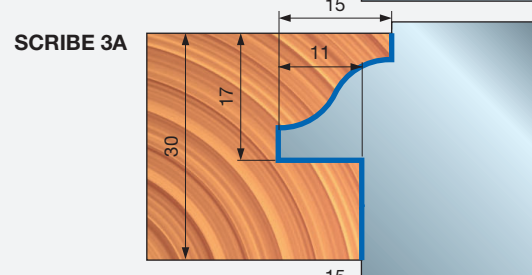
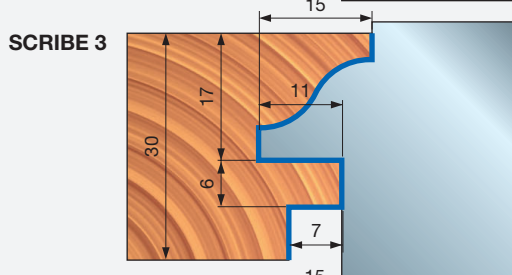
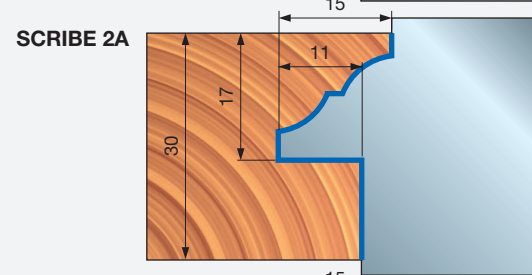
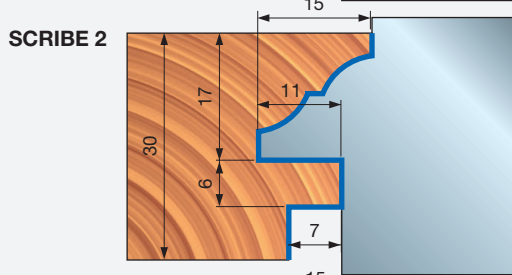
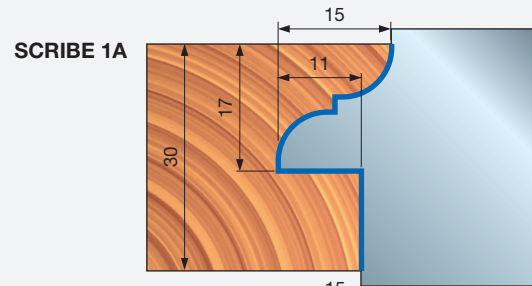
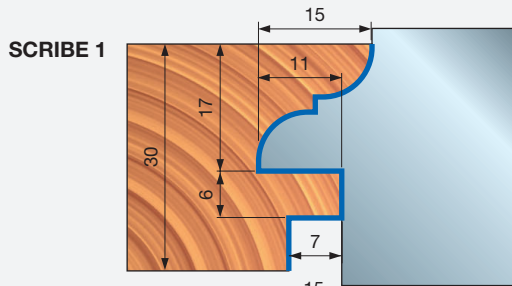


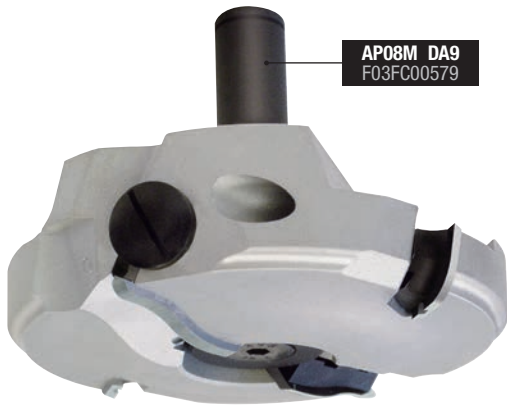
# NCSEM30

# CNC tool for cabinet door frame scribe - 30 mm

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1/1A	Knife	24 x 34 x 3	CCSEMAA301	F03FC01398
2/2A	Knife	24 x 34 x 3	CCSEMAB301	F03FC23169
3/3A	Knife	24 x 34 x 3	CCSEMAC301	F03FC23657
4/4A	Knife	24 x 34 x 3	CCSEMA301	F03FC23715
5/5A	Knife	24 x 34 x 3	CCSEMAE301	F03FC23717
6/6A	Knife	24 x 34 x 3	CCSEMAF301	F03FC23718

## Example of scribes



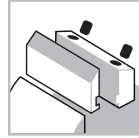


# TD54MD

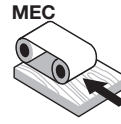
## CNC multiprofile raised panel router cutter



CNC Machines



Clamping system



Automatic feed



Aluminium body



Softwood



Hardwood



Chipboard



Profiling



**Machines:**  
CNC overhead routing machines.

**Materials:**  
Softwood, hardwood and chipboard.

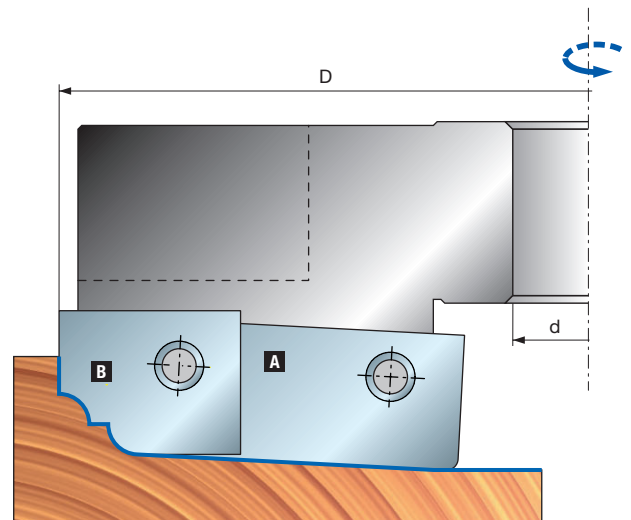
**Applications:**  
Profiling.

**Technical information:**  
Performance knives raised panel cutter with 9 available profiles.  

- 2+2 cutting design to reach maximum finishing.
- Aluminium light alloy body.
- 20x50 mm shank.
- Knives to be ordered separately.

D mm	A mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
140	20 x 50	20	2+2	9.600	TD54MD AA3	F03FC22230
140	20 x 50	20	2+2	9.600	TD54MD BA3	F03FC22204

	Spare parts	Dimensions mm	Freud Code	Art. No.
AA3	Wedge	42,9 x 18 x 7,8	CN54M AA9	F03FC22200
	Wedge	16,6 x 21,3 x 8,5	CN54M AB9	F03FC22201
BA3	Wedge	42,8 x 16,7 x 7,8	CN54M BA9	F03FC22202
	Wedge	16,5 x 21,8 x 8,5	CN54M BB9	F03FC22203
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Screw	M8 x 10 x 22	VT08M AD9	F03FA04456
	Screw	M5 x 7 x 18	VT08M AE9	F03FA04457
	Allen key	5	CB03M EA9	F03FA00169
	Chuck	20 x 33 x 93	AP08M DA9	F03FC00579



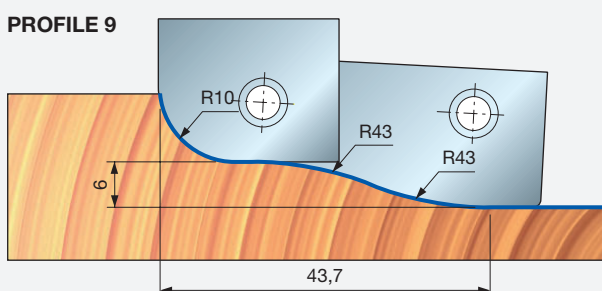
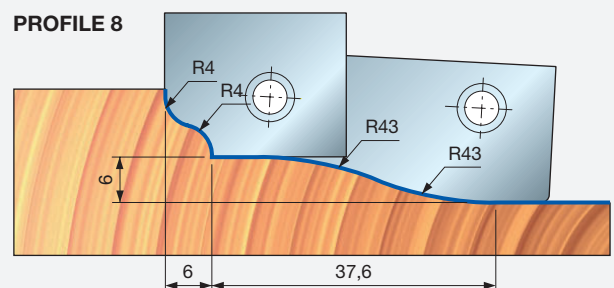
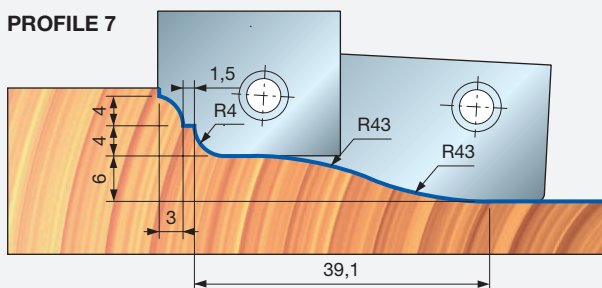
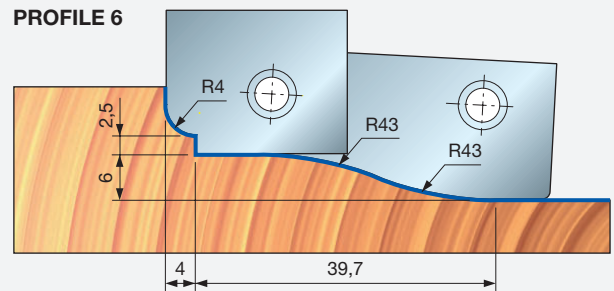
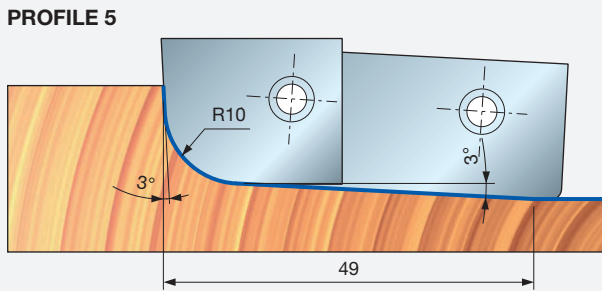
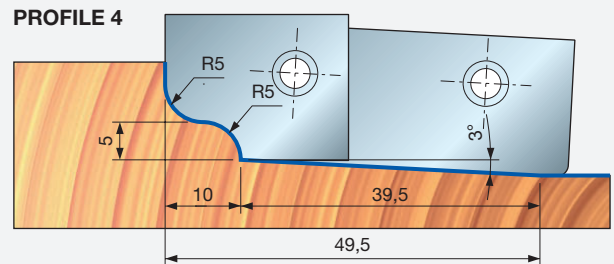
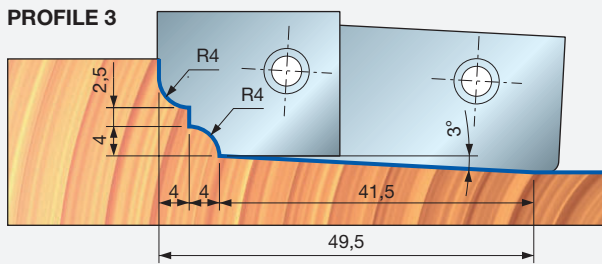
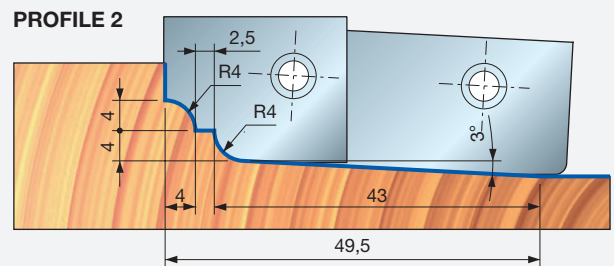
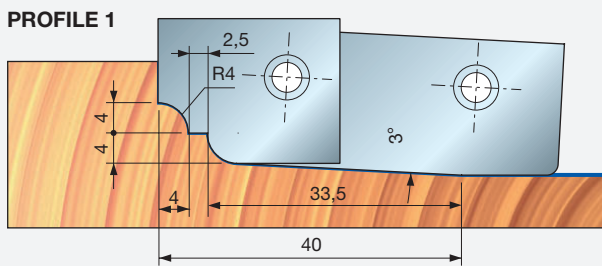
### Knives for TD54MD AA3

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife A	64 x 20 x 3	CT54MDBA301	F03FC24069
	Knife B	19 x 24 x 3	CT54MDAA301	F03FC24061
2	Knife A	64 x 20 x 3	CT54MDBB301	F03FC24070
	Knife B	19 x 24 x 3	CT54MDAA301	F03FC24061
3	Knife A	64 x 20 x 3	CT54MDBC301	F03FC24071
	Knife B	19 x 24 x 3	CT54MDAC301	F03FC24062
4	Knife A	64 x 20 x 3	CT54MDBD301	F03FC24072
	Knife B	19 x 24 x 3	CT54MDAD301	F03FC24063
5	Knife A	64 x 20 x 3	CT54MDBE301	F03FC24073
	Knife B	19 x 24 x 3	CT54MDAE301	F03FC24064

### Knives for TD54MD BA3

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
6	Knife A	64 x 20 x 3	CT54MDBF301	F03FC24074
	Knife B	19 x 24 x 3	CT54MDAF301	F03FC24065
7	Knife A	64 x 20 x 3	CT54MDBG301	F03FC24075
	Knife B	19 x 24 x 3	CT54MDAG301	F03FC24066
8	Knife A	64 x 20 x 3	CT54MDBH301	F03FC24076
	Knife B	19 x 24 x 3	CT54MDAH301	F03FC24067
9	Knife A	64 x 20 x 3	CT54MDBL301	F03FC24077
	Knife B	19 x 24 x 3	CT54MDAL301	F03FC24068

### Example of scribes



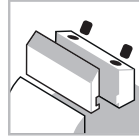


## NC92M

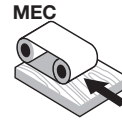
## CNC tool with profiled knives



CNC Machines



Clamping system



Automatic feed



Aluminium body



Softwood



Hardwood



Chipboard



MDF



Profiling



Planing



### Machines:

CNC overhead routing machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:






Profiling and planing.

### Technical information:

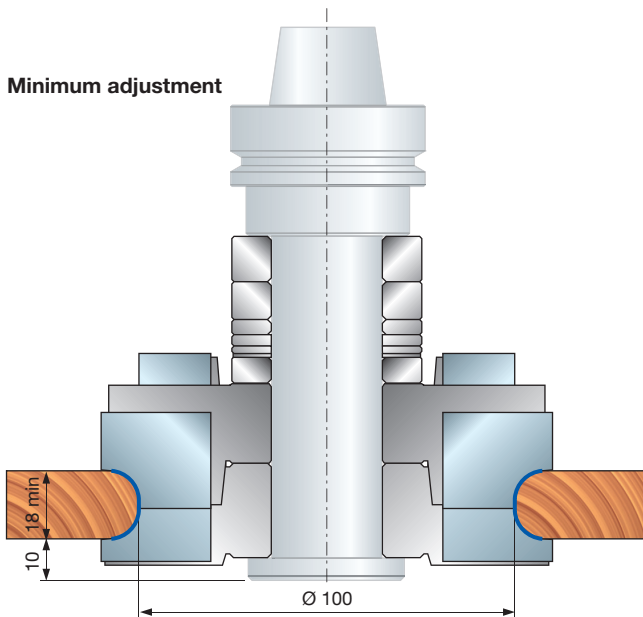
Performance CNC tool set suitable for profiling with 8 available radius and bevel profiles.

- Aluminium light alloy body.
- Chuck and knives to be ordered separately.

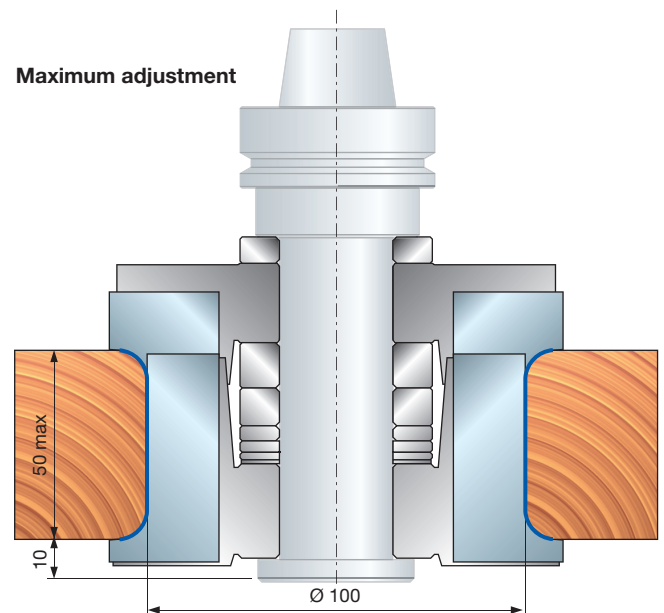
D mm	B mm	d mm	Max RPM 1/min.	Freud Code	Art. No.
120	30	30	10.000	NC92M 100*	F03FC15469

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Wedge	30,7 x 28 x 8	CN13M CC9	F03FC01391
	Wedge	50 x 28 x 8	CN13M CD9	F03FC01392
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Screw	M5 x 7 x 18	VT08M AE9	F03FA04457
	Allen key	5	CB03M EA9	F03FA00169

Minimum adjustment



Maximum adjustment



### Tools for NC92M set

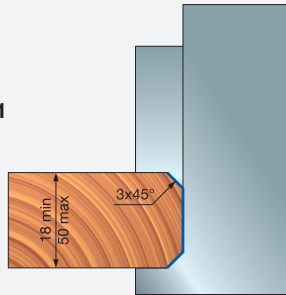
Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife	35 x 30 x 3 3x45°	CC92M1T0101	F03FC23793
2	Knife	35 x 30 x 3 5x45°	CC92M1T0201	F03FC23794
3	Knife	35 x 30 x 3 R=3	CC92M1T0301	F03FC23795
4	Knife	35 x 30 x 3 R=4	CC92M1T0401	F03FC23796
5	Knife	35 x 30 x 3 R=5	CC92M1T0501	F03FC23797
6	Knife	35 x 30 x 3 R=6	CC92M1T0601	F03FC23798
7	Knife	35 x 30 x 3 R=7	CC92M1T0701	F03FC23799
8	Knife	35 x 30 x 3 R=8	CC92M1T0801	F03FC23800

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife	55 x 30 x 3 3x45°	CC92M2T0101	F03FC23801
2	Knife	55 x 30 x 3 5x45°	CC92M2T0201	F03FC23802
3	Knife	55 x 30 x 3 R=3	CC92M2T0301	F03FC23803
4	Knife	55 x 30 x 3 R=4	CC92M2T0401	F03FC23804
5	Knife	55 x 30 x 3 R=5	CC92M2T0501	F03FC23805
6	Knife	55 x 30 x 3 R=6	CC92M2T0601	F03FC23806
7	Knife	55 x 30 x 3 R=7	CC92M2T0701	F03FC23807
8	Knife	55 x 30 x 3 R=8	CC92M2T0801	F03FC23808

### Example of scribes

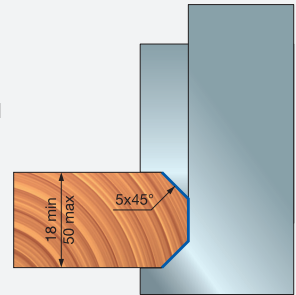
#### PROFILE 1

Obtainable with knives:  
CC92M1T0101 + CC92M2T0101



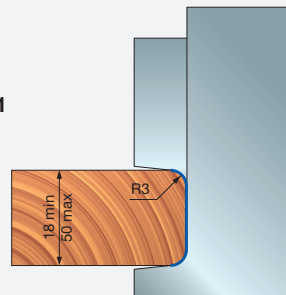
#### PROFILE 2

Obtainable with knives:  
CC92M1T0201 + CC92M2T0201



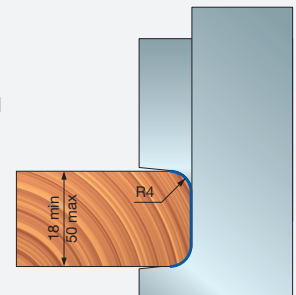
#### PROFILE 3

Obtainable with knives:  
CC92M1T0301 + CC92M2T0301



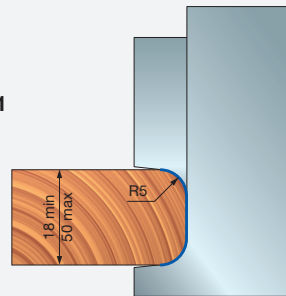
#### PROFILE 4

Obtainable with knives:  
CC92M1T0401 + CC92M2T0401



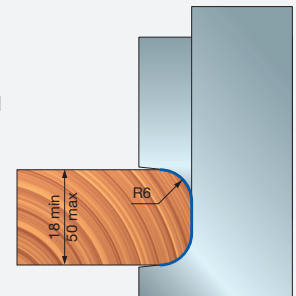
#### PROFILE 5

Obtainable with knives:  
CC92M1T0501 + CC92M2T0501



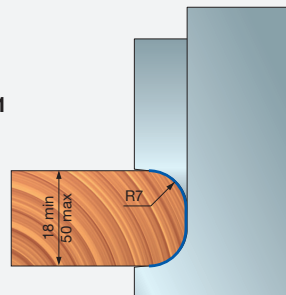
#### PROFILE 6

Obtainable with knives:  
CC92M1T0601 + CC92M2T0601



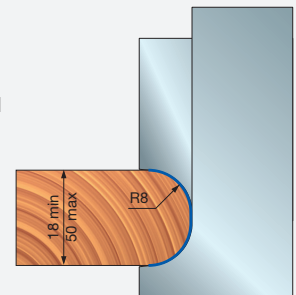
#### PROFILE 7

Obtainable with knives:  
CC92M1T0701 + CC92M2T0701



#### PROFILE 8

Obtainable with knives:  
CC92M1T0801 + CC92M2T0801



Item **NC92M 100** is supplied without chuck (for chuck ref. see the catalogue accessories).

<b>Order example:</b>	<b>NC92M 100</b>	Group	1 piece
	<b>CC92M1T0101</b>	Knives	2 pieces
	<b>CC92M2T0101</b>	Knives	2 pieces
	<b>MP05M AE9</b>	Chuck	1 piece

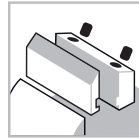


## NC93M

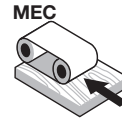
## CNC finger joint tool



CNC Machines



Clamping system



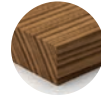
Automatic feed



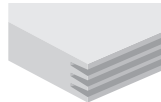
Aluminium body



Softwood



Hardwood



Jointing



### Machines:

CNC overhead routing machines.

### Materials:

Softwood and hardwood.

### Applications:

Jointing.

### Technical information:

Adjustable CNC tool set suitable for jointing.

- Timber from 40 to 80 mm.
- Adjusting system to manage regular, tight and loose joint.
- Tool available in left and right hand rotation.
- Aluminium light alloy body.
- Chuck and knives to be ordered separately.

D mm	B mm	d mm	Max RPM 1/min.	Freud Code	Art. No.
120	30	30	10.000	NC93M 100*	F03FC15472

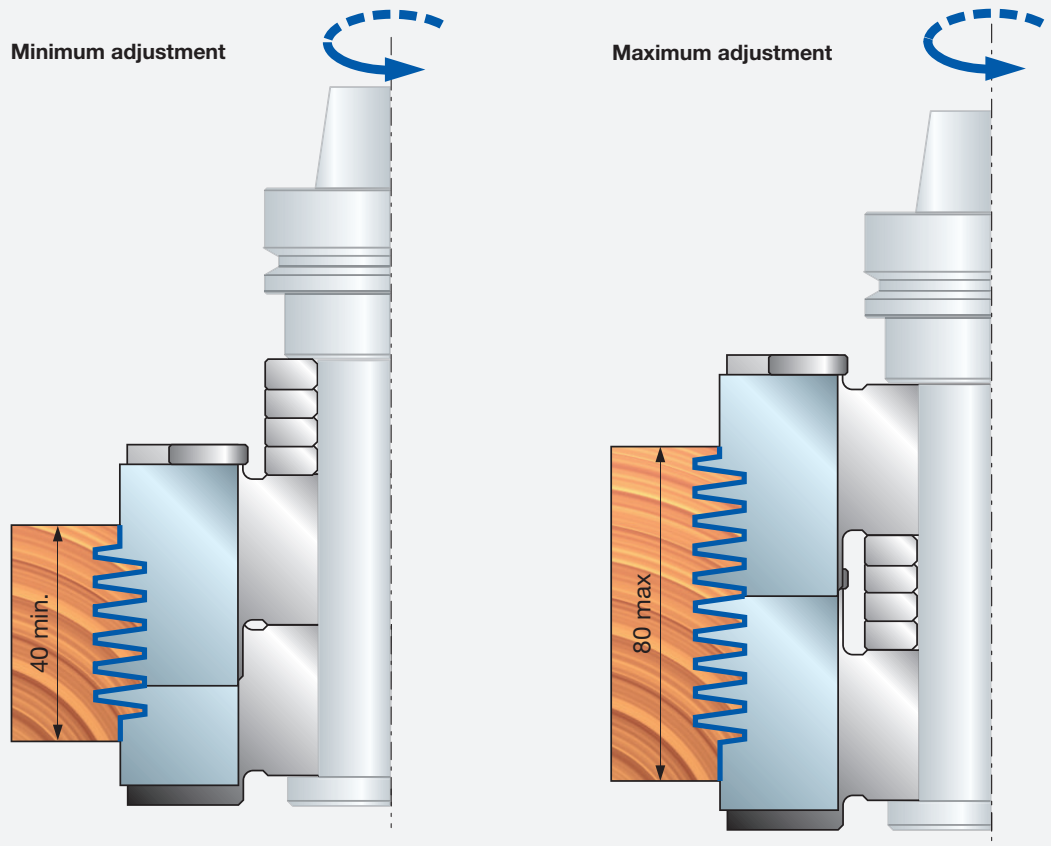
Spare parts		Dimensions mm	Freud Code	Art. No.
	Wedge	41 x 17 x 8	CN11M B410	F03FC01351
	Screw	M4 x 6	2602M CE9	F03FA07349
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Screw	M5 x 7 x 18	VT08M AE9	F03FA04457
	Screw	18 x 7 x M6	VT08M AG9	F03FC20653
	Spacer	50 x 5,8 x 30	AN04M AC9	F03FC00500
	Allen key	2	2619M BA9	F03FA07431
	Allen key	5	CB03M EA9	F03FA00169

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
	Knife	45 x 30 x 3	CW24MAAA301	F03FC24128
	Knife	45 x 30 x 3	CW24MBAA301	F03FC24129

### Tools for set NC93M 100

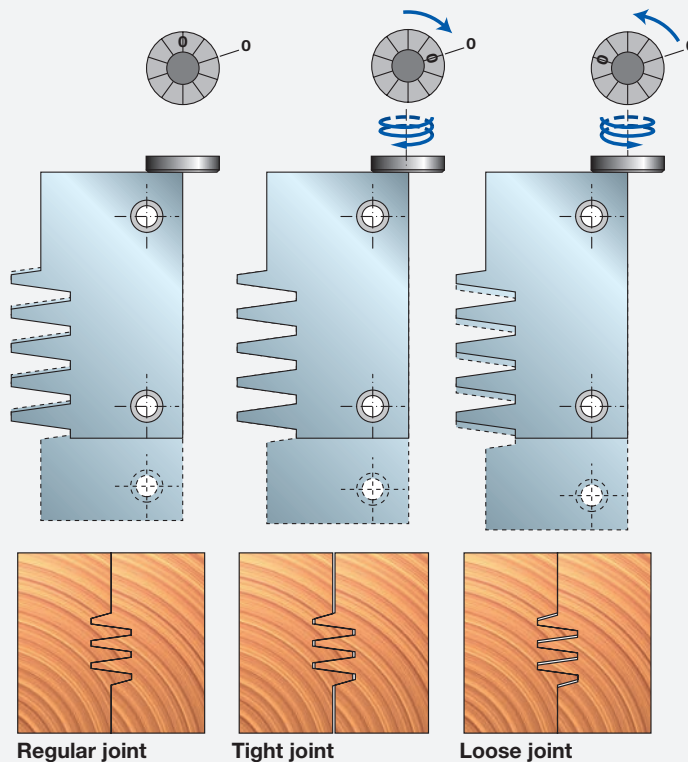
D mm	B mm	D mm	Z mm	Freud Code	Art. No.
120	52	30	2	NC93M100-1	F03FC15473
120	55	30	2	NC93M100-2	F03FC15474

Adjustment examples:



Follow below instructions:

- Before rotating the adjusting screw, the clamping screw must be loosened.
- Rotating the adjusting screw clockwise, the tightness of the screw increases progressively (every notch on the adjusting screw corresponds to a movement of 1/10 mm). The perfect alignment of the knives is 0:0 (the "0" on the adjusting screw with the "0" on the tool body). This alignment results in a tight joint.
- Rotate the adjusting screw anti-clockwise in order to loosen the joint.



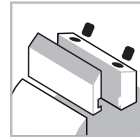


# NC94MGC13

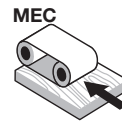
# CNC finger joint tool



CNC Machines



Clamping system



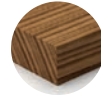
Automatic feed



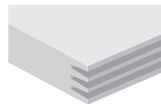
Aluminium body



Softwood



Hardwood



Jointing



### Machines:

CNC overhead routing machines.

### Materials:

Softwood and hardwood.

### Applications:

Jointing.

### Technical information:

Adjustable CNC tool set suitable for jointing.

- Timber from 44 to 92 mm.
- Adjusting system to manage regular, tight and loose joint.
- Tool available in left and right hand rotation.
- Aluminium light alloy body.
- Chuck and knives to be ordered separately.

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
120	107	30	2	11.000	NC94MGC13-D	F03FC23626
120	107	30	2	11.000	NC94MGC13-S	F03FC23627

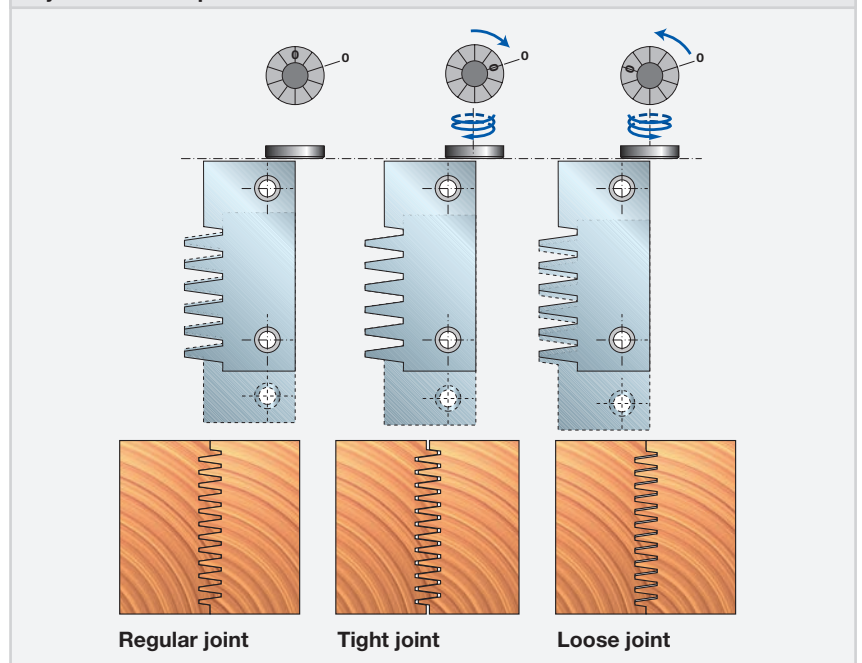
Spare parts	Dimensions mm	Freud Code	Art. No.
Spacer	50 x 5,8 x 30	AN01MA0589	F03FC00039
Spacer	50 x 23 x 30	AN01MA2309	F03FC00057
Steel pin	4 x 10	2601M AB9	F03FA07326
Steel pin	2,5 x 6	2601M AV9	F03FA07342
Screw	M5 x 90	2607M CS9	F03FA18898
Wedge	53,5 x 32,5 x 8	CN94M 001	F03FC23364
Wedge	53,5 x 32,5 x 8	CN94M 002	F03FC23365
Screw	18 x 7 x M6	VT08M AG9	F03FC20653
Screw	M4 x 6	2602M CE9	F03FA07349
Screw	M10 x 16	2616M EE9	F03FA07426

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
001	Knife	55 x 29 x 3	CW94M00101	-
002	Knife	55 x 29 x 3	CW94M00201	-

### Tools for set NC94M 100

D mm	B mm	d mm	Z	Freud Code	Art. No.
120	59	30	2	NC94M 001	F03FC23620
120	59	30	2	NC94M 002	F03FC23621

### Adjustment examples:



Regular joint

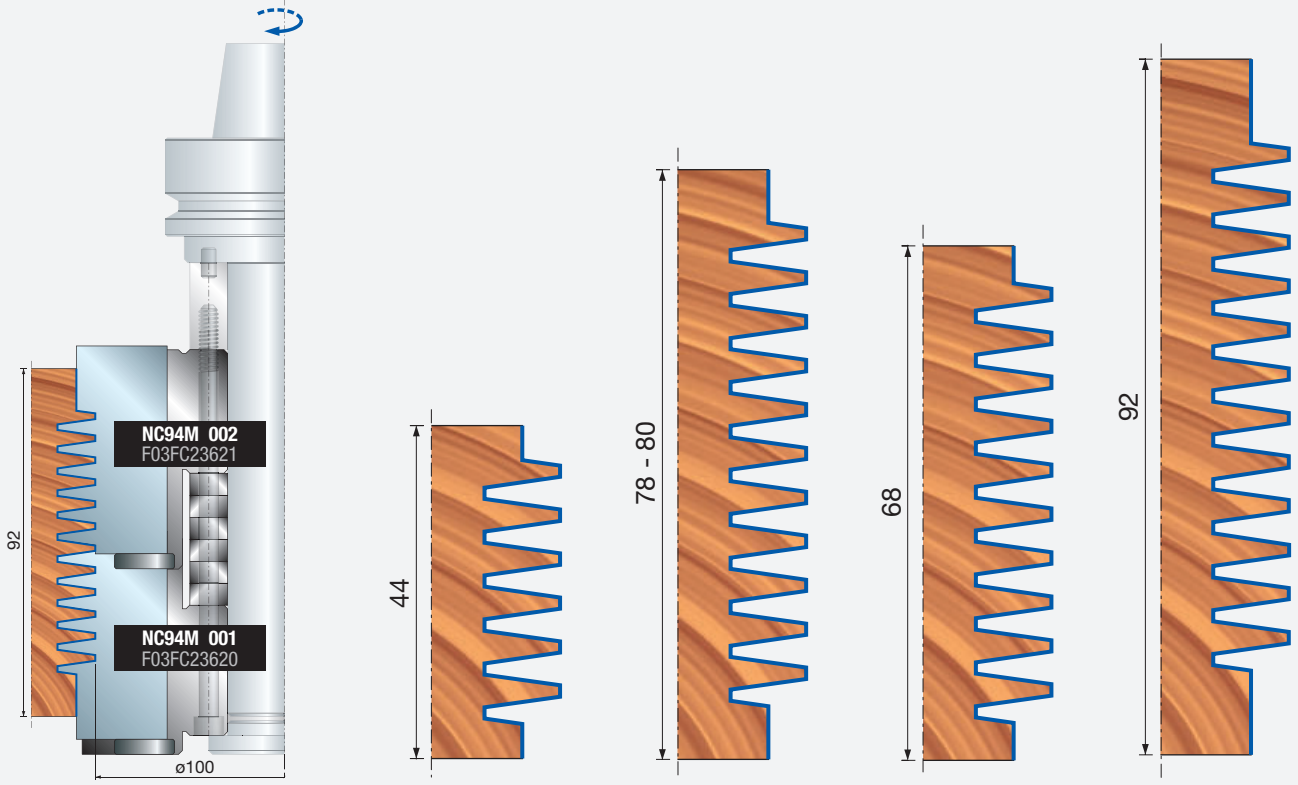
Tight joint

Loose joint



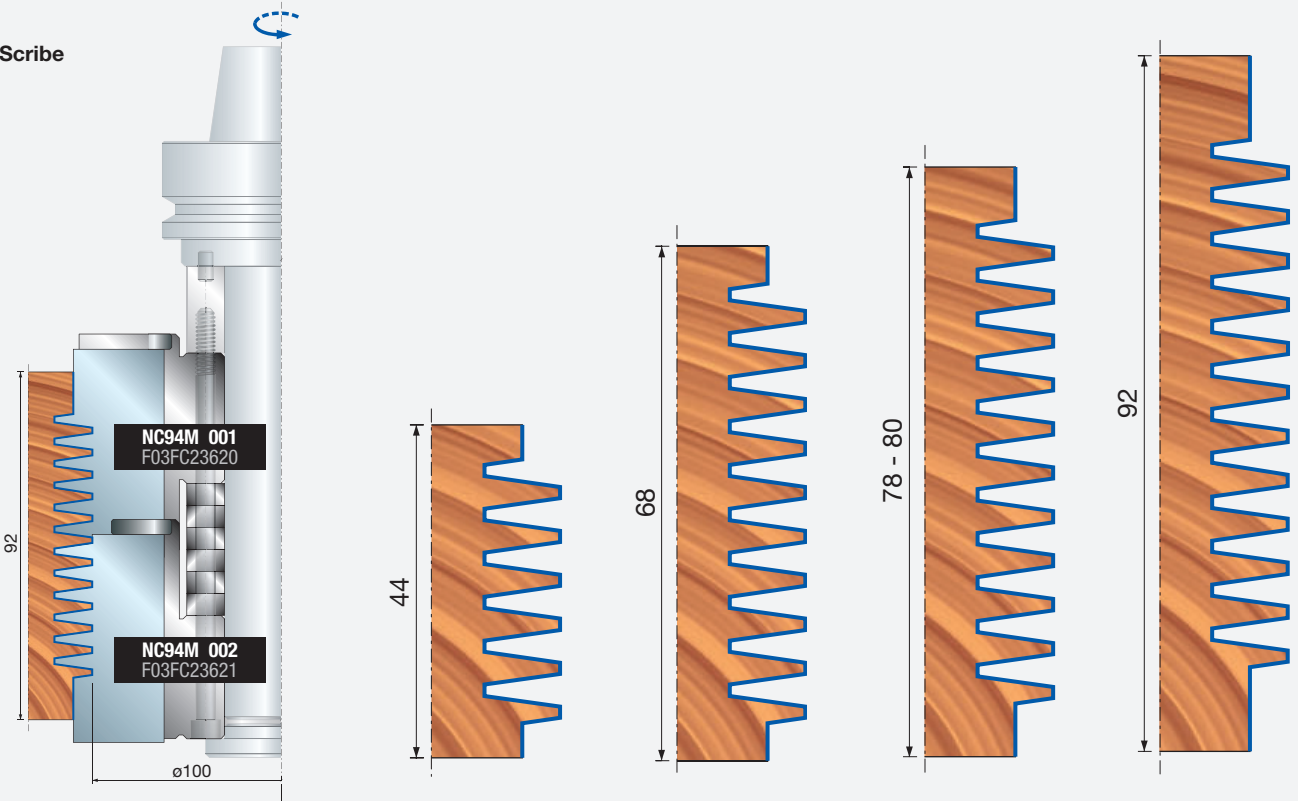
Profiles NC94MGC13-D

Profile



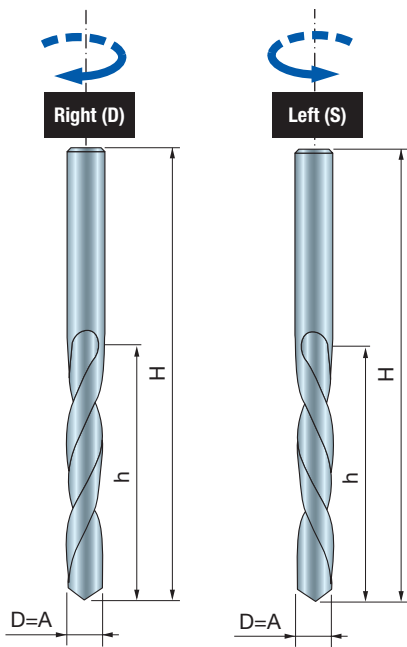
Scribes NC94MGC13-S

Scribe



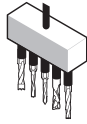
# Drilling



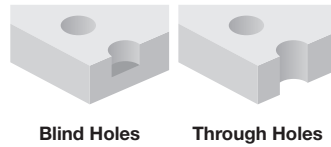


## PF03MD PF03MS

## Solid Carbide multipurpose drilling - screw holes



### Boring Machines



#### Machines:

CNC, boring and multi boring machines.

#### Materials:

Softwood, hardwood, wood based panels and MDF.

#### Applications:

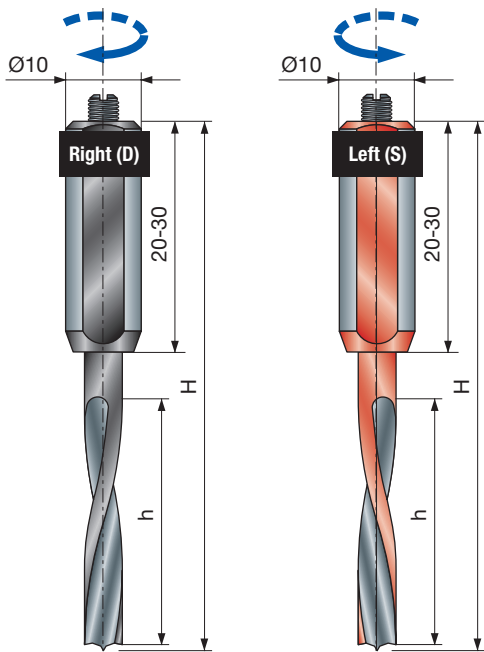
Boring and drilling.

#### Technical information:

Solid Carbide drills in HW suitable for screw holes.

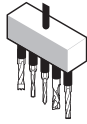
- Constructed with two spirals with back clearance angle.

D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
2	24	49	2	2	PF03MD PA3	F03FA02055
2,5	24	49	2,5	2	PF03MD QA3	F03FA02056
3	30	55	3	2	PF03MD RA3	F03FA02057
3,2	30	55	3,2	2	PF03MD SA3	F03FA02058
3,5	30	55	3,5	2	PF03MD TA3	F03FA02059
4	30	55	4	2	PF03MD ZA3	F03FA02062
4,5	35	60	4,5	2	PF03MD UA3	F03FA02060
5	35	60	5	2	PF03MD VA3	F03FA02061
2	24	49	2	2	PF03MS PA3	F03FA02063
2,5	24	49	2,5	2	PF03MS QA3	F03FA02064
3	30	55	3	2	PF03MS RA3	F03FA02065
3,2	30	55	3,2	2	PF03MS SA3	F03FA02066
3,5	30	55	3,5	2	PF03MS TA3	F03FA02067
4	30	55	4	2	PF03MS ZA3	F03FA02070
4,5	35	60	4,5	2	PF03MS UA3	F03FA02068
5	35	60	5	2	PF03MS VA3	F03FA02069



## PF26MD PF26MS

## Dowel drills for blind holes



### Boring Machines



### Blind Holes

#### Machines:

CNC, boring and multi boring machines.

#### Materials:

Softwood, hardwood, wood based panels and MDF.

#### Applications:

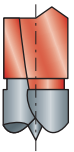
Boring.

#### Technical information:


Solid Carbide dowel drills suitable for blind holes.

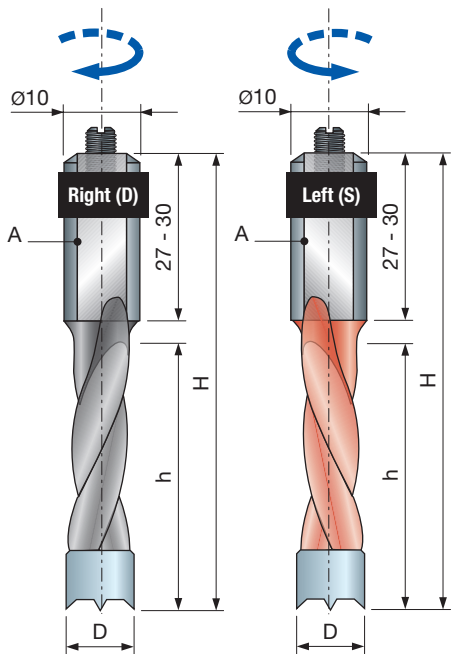
- Bit in HW with central point and cylindrical steel shank with M5 x 10 mm adjusting screw.

#### Geometry of the tip



D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
3	22	70	10 x 33	2	PF26MD VC3	F03FA13217
4	27	70	10 x 30	2	PF26MD ZC3	F03FA03016
5	33	70	10 x 30	2	PF26MD AC3	F03FA03013
6	33	70	10 x 30	2	PF26MD BC3	F03FA03014
8	33	70	10 x 20	2	PF26MD DC3	F03FA03015
3	22	70	10 x 33	2	PF26MS VC3	F03FA13218
4	27	70	10 x 30	2	PF26MS ZC3	F03FA03020
5	33	70	10 x 30	2	PF26MS AC3	F03FA03017
6	33	70	10 x 30	2	PF26MS BC3	F03FA03018
8	33	70	10 x 20	2	PF26MS DC3	F03FA03019

Spare parts	Dimensions mm	Freud Code	Art. No.
 Screw	M5x10	2602M DC9	F03FA07350



**Machines:**

CNC, boring and multi boring machines.

**Materials:**

Softwood, hardwood, wood based panels and MDF.

**Applications:**

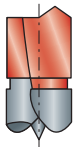
Boring.

**Technical information:**

Dowel drills HW tipped with centre point for blind holes.

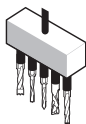
- Round edge spurs to avoid splintering.
- 10 mm cylindrical shank with M5 x 10 mm adjusting screw.

**Geometry of the tip**



**PF04MD  
PF04MS**

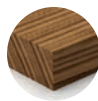
**Dowel drills with round spurs**



**Boring Machines**



Softwood



Hardwood



Chipboard



Laminated  
Chipboard



MDF



Laminated  
MDF



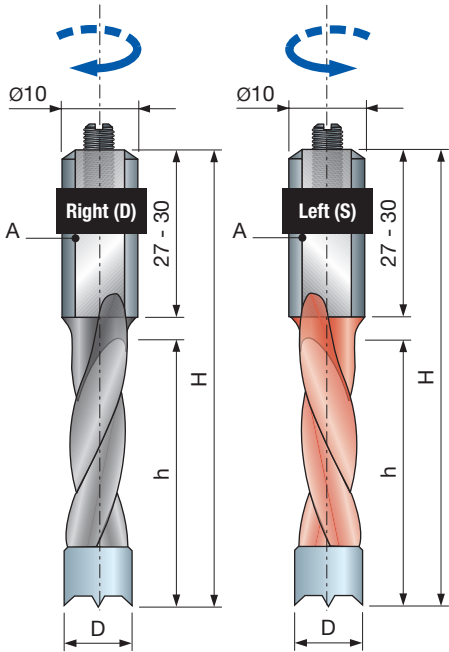
Plywood



**Blind Holes**

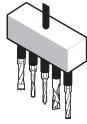
D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
5	27	57,5	10 x 27	2	PF04MD AA3	F03FA02071
6	27	57,5	10 x 27	2	PF04MD BA3	F03FA02073
8	27	57,5	10 x 27	2	PF04MD DA3	F03FA02075
10	27	57,5	10 x 27	2	PF04MD FA3	F03FA02077
5	35	70	10 x 30	2	PF04MD AC3	F03FA02072
6	35	70	10 x 30	2	PF04MD BC3	F03FA02074
8	35	70	10 x 30	2	PF04MD DC3	F03FA02076
10	35	70	10 x 30	2	PF04MD FC3	F03FA02078
5	27	57,5	10 x 27	2	PF04MS AA3	F03FA02079
6	27	57,5	10 x 27	2	PF04MS BA3	F03FA02081
8	27	57,5	10 x 27	2	PF04MS DA3	F03FA02083
10	27	57,5	10 x 27	2	PF04MS FA3	F03FA02085
5	35	70	10 x 30	2	PF04MS AC3	F03FA02080
6	35	70	10 x 30	2	PF04MS BC3	F03FA02082
8	35	70	10 x 30	2	PF04MS DC3	F03FA02084
10	35	70	10 x 30	2	PF04MS FC3	F03FA02086

Spare parts	Dimensions mm	Freud Code	Art. No.
 Screw	M5 x 10	2602M DC9	F03FA07350

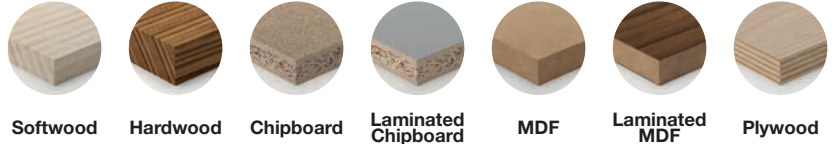


## PF06MD PF06MS

## Dowel drills for blind holes



### Boring Machines



### Blind Holes

#### Machines:

CNC, boring and multi boring machines.

#### Materials:

Softwood, hardwood, wood based panels and MDF.

#### Applications:

Boring.

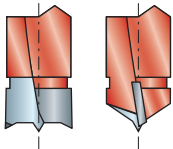
#### Technical information:

Dowel drills HW tipped with centre point for blind holes.

- 10 mm cylindrical shank with M5 x 10 mm adjusting screw.

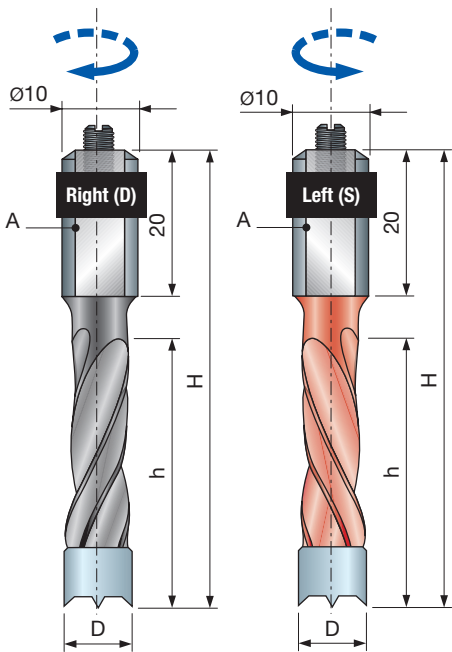
#### Geometry of the tip

#### Router bit with negative spur



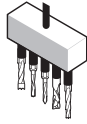
D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
5	27	57,5	10 x 27	2	PF06MD AA3	F03FA02103
6	27	57,5	10 x 27	2	PF06MD BA3	F03FA02106
7	27	57,5	10 x 27	2	PF06MD CA3	F03FA02109
8	27	57,5	10 x 27	2	PF06MD DA3	F03FA02112
9	27	57,5	10 x 27	2	PF06MD EA3	F03FA02115
10	27	57,5	10 x 27	2	PF06MD FA3	F03FA02117
12	27	57,5	10 x 27	2	PF06MD GA3	F03FA02120
14	27	57,5	10 x 27	2	PF06MD HA3	F03FA02123
15	27	57,5	10 x 27	2	PF06MD IA3	F03FA02125
16	27	57,5	10 x 27	2	PF06MD KA3	F03FA02127
4	27	57,5	10 x 27	2	PF06MD ZA3	F03FA02132
5	35	70	10 x 30	2	PF06MD AC3	F03FA02104
5	44	77	10 x 30	2	PF06MD AD3	F03FA02105
6	35	70	10 x 30	2	PF06MD BC3	F03FA02107
6	44	77	10 x 30	2	PF06MD BD3	F03FA02108
7	35	70	10 x 30	2	PF06MD CC3	F03FA02110
7	44	77	10 x 30	2	PF06MD CD3	F03FA02111
8	35	70	10 x 30	2	PF06MD DC3	F03FA02113
8	44	77	10 x 30	2	PF06MD DD3	F03FA02114
9	35	70	10 x 30	2	PF06MD EC3	F03FA02116
10	35	70	10 x 30	2	PF06MD FC3	F03FA02118
10	44	77	10 x 30	2	PF06MD FD3	F03FA02119
12	35	70	10 x 30	2	PF06MD GC3	F03FA02121
12	44	77	10 x 30	2	PF06MD GD3	F03FA02122
14	35	70	10 x 30	2	PF06MD HC3	F03FA02124
15	35	70	10 x 30	2	PF06MD IC3	F03FA02126
16	35	70	10 x 30	2	PF06MD KC3	F03FA02128
5	27	57,5	10 x 27	2	PF06MS AA3	F03FA02135
6	27	57,5	10 x 27	2	PF06MS BA3	F03FA02138
7	27	57,5	10 x 27	2	PF06MS CA3	F03FA02141
8	27	57,5	10 x 27	2	PF06MS DA3	F03FA02144
9	27	57,5	10 x 27	2	PF06MS EA3	F03FA02147
10	27	57,5	10 x 27	2	PF06MS FA3	F03FA02149
12	27	57,5	10 x 27	2	PF06MS GA3	F03FA02152
14	27	57,5	10 x 27	2	PF06MS HA3	F03FA02155
15	27	57,5	10 x 27	2	PF06MS IA3	F03FA02157
16	27	57,5	10 x 27	2	PF06MS KA3	F03FA02159
4	27	57,5	10 x 27	2	PF06MS ZA3	F03FA02164
5	35	70	10 x 30	2	PF06MS AC3	F03FA02136
5	44	77	10 x 30	2	PF06MS AD3	F03FA02137
6	35	70	10 x 30	2	PF06MS BC3	F03FA02139
6	44	77	10 x 30	2	PF06MS BD3	F03FA02140
7	35	70	10 x 30	2	PF06MS CC3	F03FA02142
7	44	77	10 x 30	2	PF06MS CD3	F03FA02143
8	35	70	10 x 30	2	PF06MS DC3	F03FA02145
8	44	77	10 x 30	2	PF06MS DD3	F03FA02146
9	35	70	10 x 30	2	PF06MS EC3	F03FA02148
10	35	70	10 x 30	2	PF06MS FC3	F03FA02150
10	44	77	10 x 30	2	PF06MS FD3	F03FA02151
12	35	70	10 x 30	2	PF06MS GC3	F03FA02153
12	44	77	10 x 30	2	PF06MS GD3	F03FA02154
14	35	70	10 x 30	2	PF06MS HC3	F03FA02156
15	35	70	10 x 30	2	PF06MS IC3	F03FA02158
16	35	70	10 x 30	2	PF06MS KC3	F03FA02160

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Screw	M5 x 10	2602M DC9	F03FA07350



## PF07MD PF07MS

## Dowel drills for blind holes



### Boring Machines



### Blind Holes

#### Machines:

CNC, boring and multi boring machines.

#### Materials:

Softwood, hardwood, wood based panels and MDF.

#### Applications:

Boring.

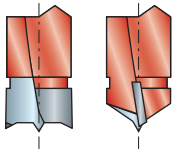
#### Technical information:

Dowel drills HW tipped with centre point for blind holes.


- Edge geometry to avoid splintering.
- 10 mm cylindrical shank with M5 x 10 mm adjusting screw.

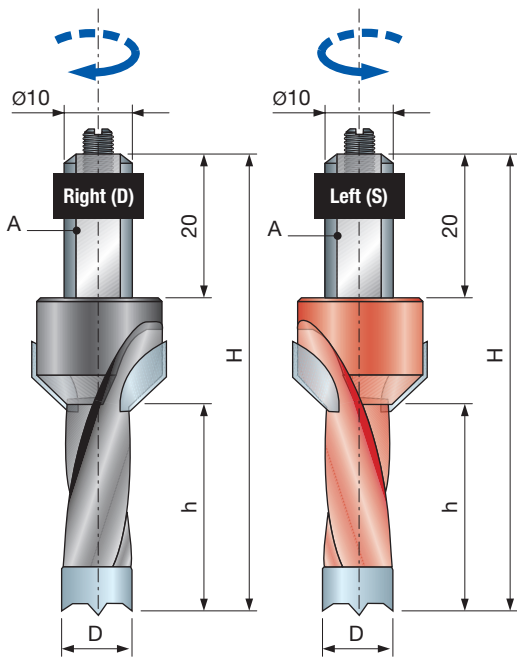
#### Geometry of the tip

#### Router bit with negative spur



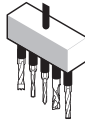
D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
4	27	57,5	10 x 20	2	PF07MD ZA3	F03FA02202
5	30	57,5	10 x 20	2	PF07MD AA3	F03FA02172
5	43	70	10 x 20	2	PF07MD AC3	F03FA02174
6	30	57,5	10 x 20	2	PF07MD BA3	F03FA02175
6	43	70	10 x 20	2	PF07MD BC3	F03FA02177
7	30	57,5	10 x 20	2	PF07MD CA3	F03FA02178
7	43	70	10 x 20	2	PF07MD CC3	F03FA02180
8	30	57,5	10 x 20	2	PF07MD DA3	F03FA02181
8	43	70	10 x 20	2	PF07MD DC3	F03FA02183
9	30	57,5	10 x 20	2	PF07MD EA3	F03FA02184
9	43	70	10 x 20	2	PF07MD EC3	F03FA02186
10	30	57,5	10 x 20	2	PF07MD FA3	F03FA02187
10	43	70	10 x 20	2	PF07MD FC3	F03FA02189
12	30	57,5	10 x 20	2	PF07MD GA3	F03FA02190
12	43	70	10 x 20	2	PF07MD GC3	F03FA02192
14	30	57,5	10 x 20	2	PF07MD HA3	F03FA02193
14	43	70	10 x 20	2	PF07MD HC3	F03FA02195
15	30	57,5	10 x 20	2	PF07MD IA3	F03FA02196
15	43	70	10 x 20	2	PF07MD IC3	F03FA02198
16	30	57,5	10 x 20	2	PF07MD KA3	F03FA02199
16	43	70	10 x 20	2	PF07MD KC3	F03FA02201
4	27	57,5	10 x 20	2	PF07MS ZA3	F03FA02235
5	30	57,5	10 x 20	2	PF07MS AA3	F03FA02205
5	43	70	10 x 20	2	PF07MS AC3	F03FA02207
6	30	57,5	10 x 20	2	PF07MS BA3	F03FA02208
6	43	70	10 x 20	2	PF07MS BC3	F03FA02210
7	30	57,5	10 x 20	2	PF07MS CA3	F03FA02211
7	43	70	10 x 20	2	PF07MS CC3	F03FA02213
8	30	57,5	10 x 20	2	PF07MS DA3	F03FA02214
8	43	70	10 x 20	2	PF07MS DC3	F03FA02216
9	30	57,5	10 x 20	2	PF07MS EA3	F03FA02217
9	43	70	10 x 20	2	PF07MS EC3	F03FA02219
10	30	57,5	10 x 20	2	PF07MS FA3	F03FA02220
10	43	70	10 x 20	2	PF07MS FC3	F03FA02222
12	30	57,5	10 x 20	2	PF07MS GA3	F03FA02223
12	43	70	10 x 20	2	PF07MS GC3	F03FA02225
14	30	57,5	10 x 20	2	PF07MS HA3	F03FA02226
14	43	70	10 x 20	2	PF07MS HC3	F03FA02228
15	30	57,5	10 x 20	2	PF07MS IA3	F03FA02229
15	43	70	10 x 20	2	PF07MS IC3	F03FA02231
16	30	57,5	10 x 20	2	PF07MS KA3	F03FA02232
16	43	70	10 x 20	2	PF07MS KC3	F03FA02234

Spare parts		Dimensions mm	Freud Code	Art. No.
	Screw	M5x10	2602M DC9	F03FA07350

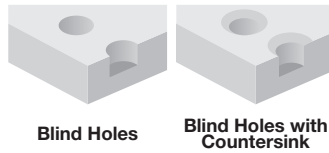


## PF08MDC PF08MSC

## Dowel drills with countersink - blind holes



### Boring Machines



### Machines:

CNC, boring and multi boring machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:

Boring.

### Technical information:

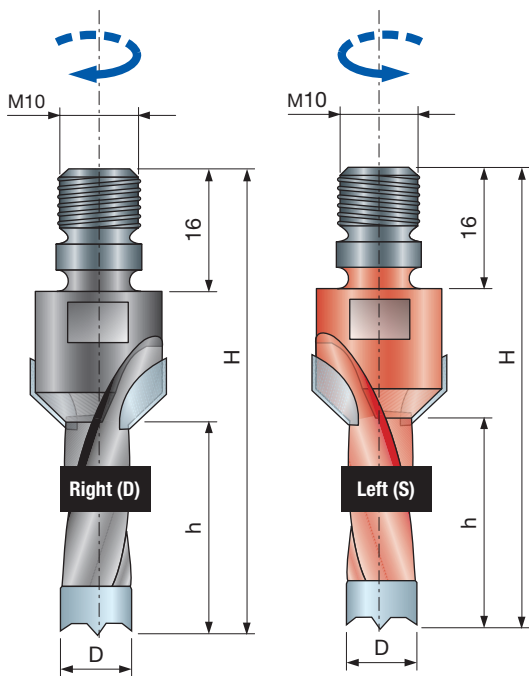
Dowel drills HW tipped with centre point for blind holes with 45° countersink.

- 10 mm cylindrical shank with M5 x 10 mm adjusting screw.

D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
5	15	57,5	10 x 20	2	PF08MDCAB3	F03FA02410
5	20	57,5	10 x 20	2	PF08MDCAC3	F03FA02411
6	15	57,5	10 x 20	2	PF08MDCBB3	F03FA02412
6	20	57,5	10 x 20	2	PF08MDCBC3	F03FA02413
8	15	57,5	10 x 20	2	PF08MDCCB3	F03FA02414
8	20	57,5	10 x 20	2	PF08MDCCC3	F03FA02415
10	15	57,5	10 x 20	2	PF08MDCDB3	F03FA02416
10	20	57,5	10 x 20	2	PF08MDCDC3	F03FA02417
5	15	57,5	10 x 20	2	PF08MSCAB3	F03FA02503
5	20	57,5	10 x 20	2	PF08MSCAC3	F03FA02504
6	15	57,5	10 x 20	2	PF08MSCBB3	F03FA02505
6	20	57,5	10 x 20	2	PF08MSCBC3	F03FA02506
8	15	57,5	10 x 20	2	PF08MSCCB3	F03FA02507
8	20	57,5	10 x 20	2	PF08MSCCC3	F03FA02508
10	15	57,5	10 x 20	2	PF08MSCDB3	F03FA02509
10	20	57,5	10 x 20	2	PF08MSCDC3	F03FA02510

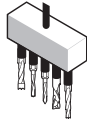
Spare parts		Dimensions mm	Freud Code	Art. No.
	Screw	M5x10	2602M DC9	F03FA07350



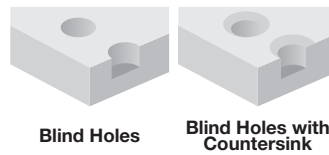


## PF08MDB PF08MSB

## Dowel drills with countersink - blind holes



### Boring Machines



### Machines:

CNC, boring and multi boring machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:

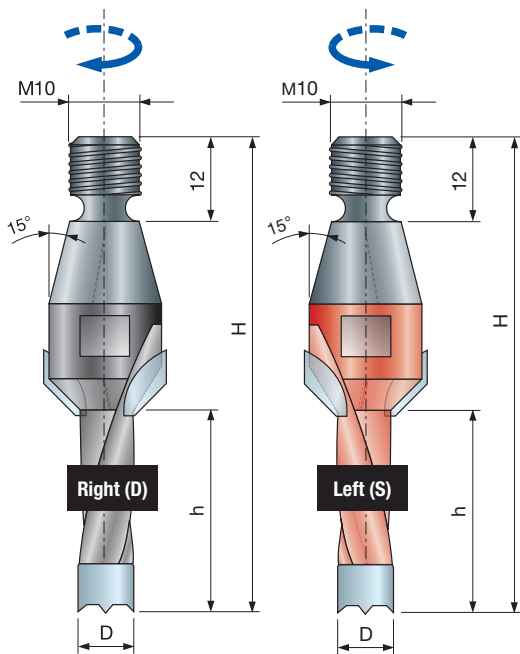
Boring.

### Technical information:

Dowel drills HW tipped with centre point for blind holes with 45° countersink.

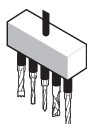
- M10 threaded shank.

D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
5	30	61	-	2	PF08MDBAB3	F03FA02368
5	40	71	-	2	PF08MDBAC3	F03FA02370
5	50	81	-	2	PF08MDBAD3	F03FA02372
6	30	61	-	2	PF08MDBBB3	F03FA02375
6	40	71	-	2	PF08MDBBC3	F03FA02377
6	50	81	-	2	PF08MDBBD3	F03FA02379
8	30	61	-	2	PF08MDBCB3	F03FA02383
8	40	71	-	2	PF08MDBCC3	F03FA02385
8	50	81	-	2	PF08MDBCD3	F03FA02387
10	30	61	-	2	PF08MDBDB3	F03FA02391
10	40	71	-	2	PF08MDBDC3	F03FA02393
10	50	81	-	2	PF08MDBDD3	F03FA02395
12	30	61	-	2	PF08MDBEB3	F03FA02398
12	40	71	-	2	PF08MDBEC3	F03FA02400
12	50	81	-	2	PF08MDBED3	F03FA02402
14	30	61	-	2	PF08MDBFB3	F03FA02405
14	40	71	-	2	PF08MDBFC3	F03FA02407
14	50	81	-	2	PF08MDBFD3	F03FA02409
5	30	61	-	2	PF08MSBAB3	F03FA02462
5	40	71	-	2	PF08MSBAC3	F03FA02464
5	50	81	-	2	PF08MSBAD3	F03FA02466
6	30	61	-	2	PF08MSBBB3	F03FA02469
6	40	71	-	2	PF08MSBBC3	F03FA02471
6	50	81	-	2	PF08MSBBD3	F03FA02473
8	30	61	-	2	PF08MSBCB3	F03FA02476
8	40	71	-	2	PF08MSBCC3	F03FA02478
8	50	81	-	2	PF08MSBCD3	F03FA02480
10	30	61	-	2	PF08MSBDB3	F03FA02484
10	40	71	-	2	PF08MSBDC3	F03FA02486
10	50	81	-	2	PF08MSBDD3	F03FA02488
12	30	61	-	2	PF08MSBEB3	F03FA02491
12	40	71	-	2	PF08MSBEC3	F03FA02493
12	50	81	-	2	PF08MSBED3	F03FA02495
14	30	61	-	2	PF08MSBFB3	F03FA02498
14	40	71	-	2	PF08MSBFC3	F03FA02500
14	50	81	-	2	PF08MSBFD3	F03FA02502



## PF08MDA PF08MSA

## Dowel drills with countersink - blind holes



### Boring Machines



Softwood    Hardwood    Chipboard    Laminated Chipboard    MDF    Laminated MDF    Plywood



Blind Holes    Blind Holes with Countersink

### Machines:

CNC, boring and multi boring machines.

### Materials:

Softwood, hardwood, wood based panels and MDF.

### Applications:

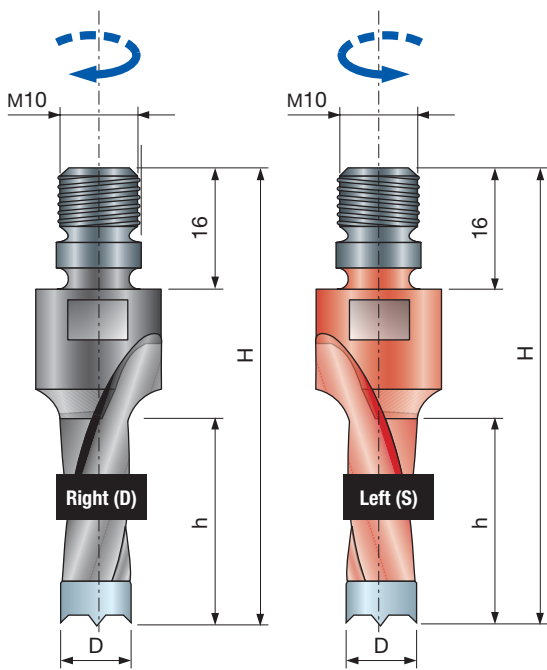
Boring.

### Technical information:

Dowel drills HW tipped with centre point for blind holes with 45° countersink.

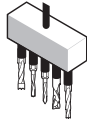
- M10 threaded shank.

D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
5	30	67	-	2	PF08MDAAB3	F03FA02325
5	40	77	-	2	PF08MDAAC3	F03FA02327
5	50	87	-	2	PF08MDAAD3	F03FA02329
6	30	67	-	2	PF08MDABB3	F03FA02332
6	40	77	-	2	PF08MDABC3	F03FA02334
6	50	87	-	2	PF08MDABD3	F03FA02336
8	30	67	-	2	PF08MDACB3	F03FA02340
8	40	77	-	2	PF08MDACC3	F03FA02342
8	50	87	-	2	PF08MDACD3	F03FA02344
10	30	67	-	2	PF08MDADB3	F03FA02347
10	40	77	-	2	PF08MDADC3	F03FA02349
10	50	87	-	2	PF08MDADD3	F03FA02351
12	30	67	-	2	PF08MDAEB3	F03FA02354
12	40	77	-	2	PF08MDAEC3	F03FA02356
12	50	87	-	2	PF08MDAED3	F03FA02358
14	30	67	-	2	PF08MDAFB3	F03FA02361
14	40	77	-	2	PF08MDAFC3	F03FA02363
14	50	87	-	2	PF08MDAFD3	F03FA02365
5	30	67	-	2	PF08MSAAB3	F03FA02420
5	40	77	-	2	PF08MSAAC3	F03FA02422
5	50	87	-	2	PF08MSAAD3	F03FA02424
6	30	67	-	2	PF08MSABB3	F03FA02427
6	40	77	-	2	PF08MSABC3	F03FA02429
6	50	87	-	2	PF08MSABD3	F03FA02431
8	30	67	-	2	PF08MSACB3	F03FA02434
8	40	77	-	2	PF08MSACC3	F03FA02436
8	50	87	-	2	PF08MSACD3	F03FA02438
10	30	67	-	2	PF08MSADB3	F03FA02441
10	40	77	-	2	PF08MSADC3	F03FA02443
10	50	87	-	2	PF08MSADD3	F03FA02445
12	30	67	-	2	PF08MSAEB3	F03FA02448
12	40	77	-	2	PF08MSAEC3	F03FA02450
12	50	87	-	2	PF08MSAED3	F03FA02452
14	30	67	-	2	PF08MSAFB3	F03FA02455
14	40	77	-	2	PF08MSAFC3	F03FA02457
14	50	87	-	2	PF08MSAFD3	F03FA02459



## PF09MDB PF09MSB

## Dowel drills without countersink - blind holes



### Boring Machines



### Blind Holes

#### Machines:

CNC, boring and multi boring machines.

#### Materials:

Softwood, hardwood, wood based panels and MDF.

#### Applications:

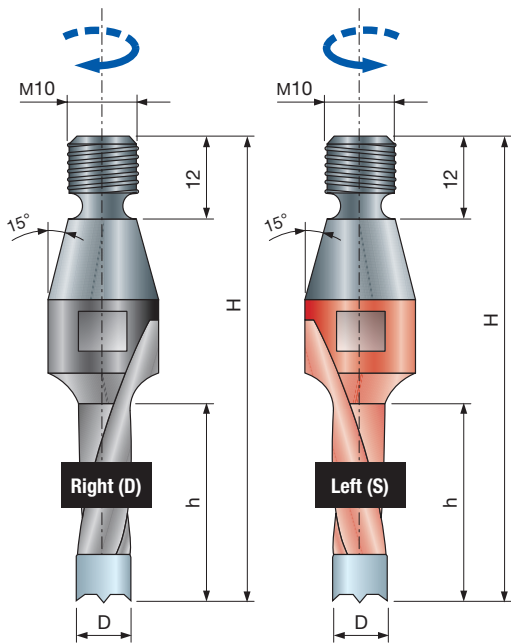
Boring.

#### Technical information:

Dowel drills HW tipped with centre point for blind holes with round countersink.

- M10 threaded shank.

D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
5	30	61	-	2	PF09MDBAB3	F03FA02719
5	40	71	-	2	PF09MDBAC3	F03FA02720
5	50	81	-	2	PF09MDBAD3	F03FA02721
6	30	61	-	2	PF09MDBBB3	F03FA02722
6	40	71	-	2	PF09MDBBC3	F03FA02723
6	50	81	-	2	PF09MDBBD3	F03FA02724
8	30	61	-	2	PF09MDBCB3	F03FA02726
8	40	71	-	2	PF09MDBCC3	F03FA02727
8	50	81	-	2	PF09MDBCD3	F03FA02728
10	30	61	-	2	PF09MDBDB3	F03FA02730
10	40	71	-	2	PF09MDBDC3	F03FA02731
10	50	81	-	2	PF09MDBDD3	F03FA02732
12	30	61	-	2	PF09MDBEB3	F03FA02734
12	40	71	-	2	PF09MDBEC3	F03FA02735
12	50	81	-	2	PF09MDBED3	F03FA02736
14	30	61	-	2	PF09MDBFB3	F03FA02737
14	40	71	-	2	PF09MDBFC3	F03FA02738
14	50	81	-	2	PF09MDBFD3	F03FA02739
5	30	61	-	2	PF09MSBAB3	F03FA02758
5	40	71	-	2	PF09MSBAC3	F03FA02759
5	50	81	-	2	PF09MSBAD3	F03FA02760
6	30	61	-	2	PF09MSBBB3	F03FA02761
6	40	71	-	2	PF09MSBBC3	F03FA02762
6	50	81	-	2	PF09MSBBD3	F03FA02763
8	30	61	-	2	PF09MSBCB3	F03FA02765
8	40	71	-	2	PF09MSBCC3	F03FA02766
8	50	81	-	2	PF09MSBCD3	F03FA02767
10	30	61	-	2	PF09MSBDB3	F03FA02769
10	40	71	-	2	PF09MSBDC3	F03FA02770
10	50	81	-	2	PF09MSBDD3	F03FA02771
12	30	61	-	2	PF09MSBEB3	F03FA02773
12	40	71	-	2	PF09MSBEC3	F03FA02774
12	50	81	-	2	PF09MSBED3	F03FA02775
14	30	61	-	2	PF09MSBFB3	F03FA02776
14	40	71	-	2	PF09MSBFC3	F03FA02777
14	50	81	-	2	PF09MSBFD3	F03FA02778



**Machines:**

CNC, boring and multi boring machines.

**Materials:**

Softwood, hardwood, wood based panels and MDF.

**Applications:**

Boring.

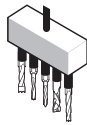
**Technical information:**

Dowel drills HW tipped with centre point for blind holes with round countersink.

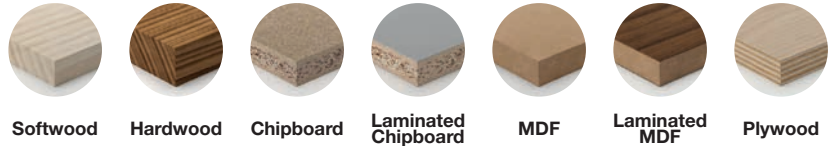
- M10 threaded shank.

**PF09MDA  
PF09MSA**

**Dowel drills without  
countersink - blind holes**

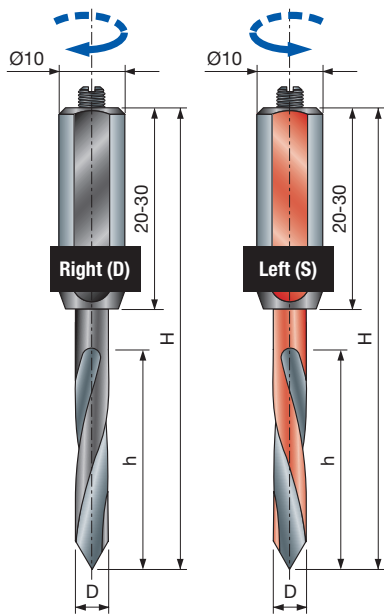


**Boring Machines**



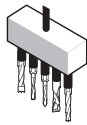
**Blind Holes**

D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
5	30	67	-	2	PF09MDAAB3	F03FA02701
5	40	77	-	2	PF09MDAAC3	F03FA02702
5	50	87	-	2	PF09MDAAD3	F03FA02703
6	30	67	-	2	PF09MDABB3	F03FA02704
6	40	77	-	2	PF09MDABC3	F03FA02705
6	50	87	-	2	PF09MDABD3	F03FA02706
8	30	67	-	2	PF09MDACB3	F03FA02707
8	40	77	-	2	PF09MDACC3	F03FA02708
8	50	87	-	2	PF09MDACD3	F03FA02709
10	30	67	-	2	PF09MDADB3	F03FA02710
10	40	77	-	2	PF09MDADC3	F03FA02711
10	50	87	-	2	PF09MDADD3	F03FA02712
12	30	67	-	2	PF09MDAEB3	F03FA02713
12	40	77	-	2	PF09MDAEC3	F03FA02714
12	50	87	-	2	PF09MDAED3	F03FA02715
14	30	67	-	2	PF09MDAFB3	F03FA02716
14	40	77	-	2	PF09MDAFC3	F03FA02717
14	50	87	-	2	PF09MDAFD3	F03FA02718
5	30	67	-	2	PF09MSAAB3	F03FA02740
5	40	77	-	2	PF09MSAAC3	F03FA02741
5	50	87	-	2	PF09MSAAD3	F03FA02742
6	30	67	-	2	PF09MSABB3	F03FA02743
6	40	77	-	2	PF09MSABC3	F03FA02744
6	50	87	-	2	PF09MSABD3	F03FA02745
8	30	67	-	2	PF09MSACB3	F03FA02746
8	40	77	-	2	PF09MSACC3	F03FA02747
8	50	87	-	2	PF09MSACD3	F03FA02748
10	30	67	-	2	PF09MSADB3	F03FA02749
10	40	77	-	2	PF09MSADC3	F03FA02750
10	50	87	-	2	PF09MSADD3	F03FA02751
12	30	67	-	2	PF09MSAEB3	F03FA02752
12	40	77	-	2	PF09MSAEC3	F03FA02753
12	50	87	-	2	PF09MSAED3	F03FA02754
14	30	67	-	2	PF09MSAFB3	F03FA02755
14	40	77	-	2	PF09MSAFC3	F03FA02756
14	50	87	-	2	PF09MSAFD3	F03FA02757

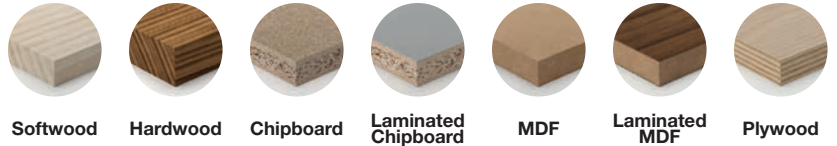


## PF33MD PF33MS

## Solid Carbide through holes drills



### Boring Machines



### Through Holes

#### Machines:

CNC, boring and multi boring machines.

#### Materials:

Softwood, hardwood, wood based panels and MDF.

#### Applications:


Boring.

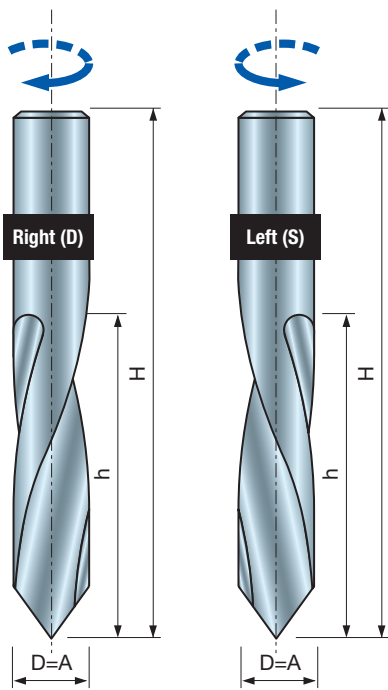
#### Technical information:

Solid Carbide drills suitable for through holes.

- Bit in HW and cylindrical steel shank with M5 x 10 mm adjusting screw.

D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
3	20	70	10 x 40	2	PF33MD VC3	F03FA13215
4	27	70	10 x 30	2	PF33MD ZC3	F03FA03025
5	35	70	10 x 30	2	PF33MD AC3	F03FA03022
6	35	70	10 x 30	2	PF33MD BC3	F03FA03023
8	35	70	10 x 20	2	PF33MD DC3	F03FA03024
3	20	70	10 x 40	2	PF33MS VC3	F03FA13216
4	27	70	10 x 30	2	PF33MS ZC3	F03FA03030
5	35	70	10 x 30	2	PF33MS AC3	F03FA03027
6	35	70	10 x 30	2	PF33MS BC3	F03FA03028
8	35	70	10 x 20	2	PF33MS DC3	F03FA03029

Spare parts	Dimensions mm	Freud Code	Art. No.
 Screw	M5 x 10	2602M DC9	F03FA07350



**Machines:**

CNC, boring and multi boring machines.

**Materials:**

Softwood, hardwood, wood based panels and MDF.

**Applications:**

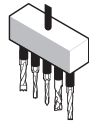
Boring.

**Technical information:**

Solid Carbide drills in HW suitable for through holes.

**PF31MD  
PF31MS**

**Solid Carbide  
multipurpose drills**



**Boring Machines**

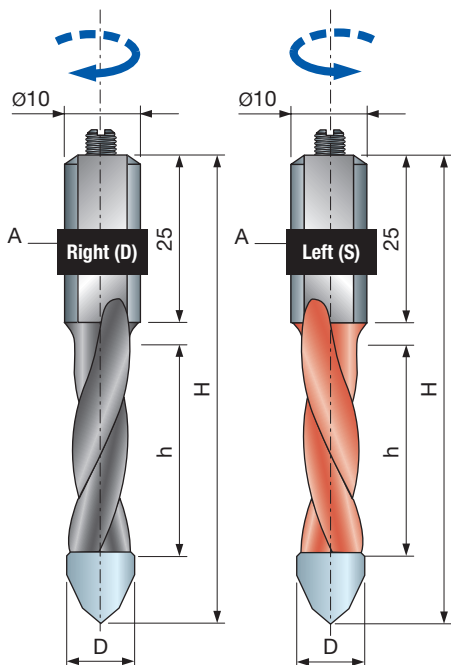


Softwood    Hardwood    Chipboard    Laminated Chipboard    MDF    Laminated MDF    Plywood



**Through Holes**

D	h	H	A	Z	Freud Code	Art. No.
mm	mm	mm	mm			
10	43	70	10	2	<b>PF31MD FC3</b>	F03FR00355
10	43	70	10	2	<b>PF31MS FC3</b>	F03FR00356



**Machines:**

CNC, boring and multi boring machines.

**Materials:**

Softwood, hardwood, wood based panels and MDF.

**Applications:**

Boring.

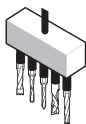
**Technical information:**

Through holes drills HW tipped.

- 10 mm cylindrical shank with M5 x 10 mm adjusting screw.

**PF05MD  
PF05MS**

**Through holes drills**



**Boring Machines**



Softwood



Hardwood



Chipboard



Laminated  
Chipboard



MDF



Laminated  
MDF



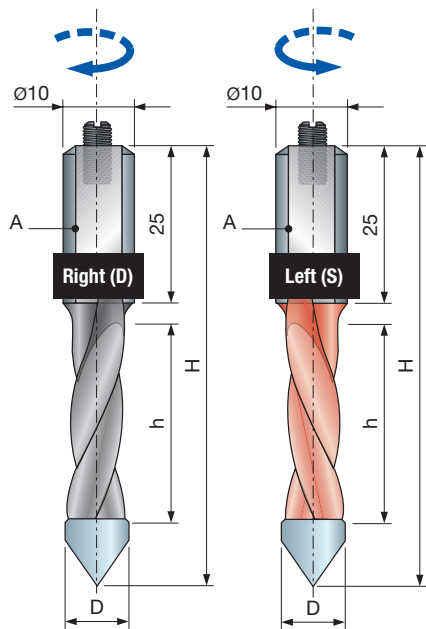
Plywood



**Through Holes**

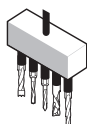
D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
5	22	57,5	10 x 25	2	PF05MD AA3	F03FA02087
5	35	70	10 x 25	2	PF05MD AC3	F03FA02088
6	22	57,5	10 x 25	2	PF05MD BA3	F03FA02089
6	35	70	10 x 25	2	PF05MD BC3	F03FA02090
8	22	57,5	10 x 25	2	PF05MD DA3	F03FA02091
8	35	70	10 x 25	2	PF05MD DC3	F03FA02092
10	22	57,5	10 x 25	2	PF05MD FA3	F03FA02093
10	35	70	10 x 25	2	PF05MD FC3	F03FA02094
5	22	57,5	10 x 25	2	PF05MS AA3	F03FA02095
5	35	70	10 x 25	2	PF05MS AC3	F03FA02096
6	22	57,5	10 x 25	2	PF05MS BA3	F03FA02097
6	35	70	10 x 25	2	PF05MS BC3	F03FA02098
8	22	57,5	10 x 25	2	PF05MS DA3	F03FA02099
8	35	70	10 x 25	2	PF05MS DC3	F03FA02100
10	22	57,5	10 x 25	2	PF05MS FA3	F03FA02101
10	35	70	10 x 25	2	PF05MS FC3	F03FA02102

Spare parts		Dimensions mm	Freud Code	Art. No.
	Screw	M5 x 10	2602M DC9	F03FA07350

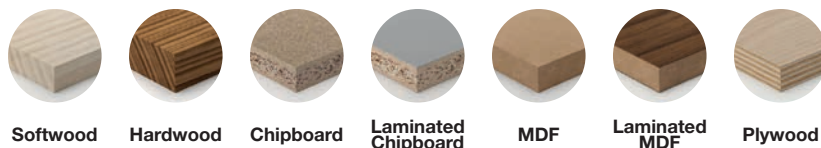


## PF10MD PF10MS

## Through holes drills



### Boring Machines



### Through Holes

#### Machines:

CNC, boring and multi boring machines.

#### Materials:

Softwood, hardwood, wood based panels and MDF.

#### Applications:


Boring.

#### Technical information:

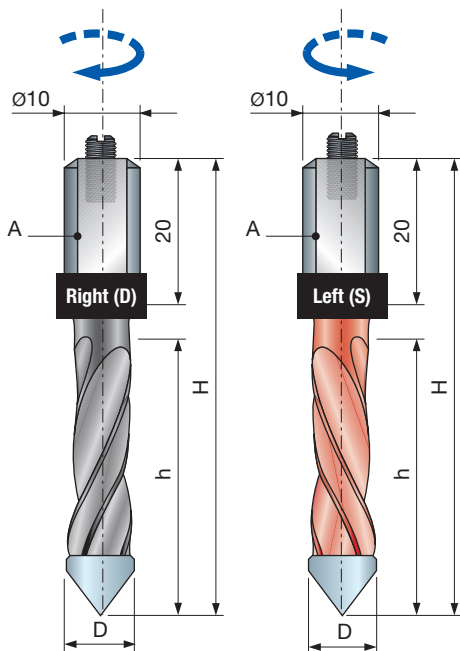
Through holes drills HW tipped.

- 10 mm cylindrical shank with M5 x 10 mm adjusting screw.

D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
4	22	57,5	10 x 25	2	PF10MD ZA3	F03FA02928
5	22	57,5	10 x 25	2	PF10MD AA3	F03FA02911
5	35	70	10 x 25	2	PF10MD AC3	F03FA02913
6	22	57,5	10 x 25	2	PF10MD BA3	F03FA02914
6	35	70	10 x 25	2	PF10MD BC3	F03FA02916
7	22	57,5	10 x 25	2	PF10MD CA3	F03FA02917
7	35	70	10 x 25	2	PF10MD CC3	F03FA02919
8	22	57,5	10 x 25	2	PF10MD DA3	F03FA02920
8	35	70	10 x 25	2	PF10MD DC3	F03FA02922
10	22	57,5	10 x 25	2	PF10MD EA3	F03FA02923
10	35	70	10 x 25	2	PF10MD EC3	F03FA02925
12	22	57,5	10 x 25	2	PF10MD GA3	F03FA02926
12	35	70	10 x 25	2	PF10MD GC3	F03FA02927
4	22	57,5	10 x 25	2	PF10MS ZA3	F03FA02947
5	22	57,5	10 x 25	2	PF10MS AA3	F03FA02930
5	35	70	10 x 25	2	PF10MS AC3	F03FA02932
6	22	57,5	10 x 25	2	PF10MS BA3	F03FA02933
6	35	70	10 x 25	2	PF10MS BC3	F03FA02935
7	22	57,5	10 x 25	2	PF10MS CA3	F03FA02936
7	35	70	10 x 25	2	PF10MS CC3	F03FA02938
8	22	57,5	10 x 25	2	PF10MS DA3	F03FA02939
8	35	70	10 x 25	2	PF10MS DC3	F03FA02941
10	22	57,5	10 x 25	2	PF10MS EA3	F03FA02942
10	35	70	10 x 25	2	PF10MS EC3	F03FA02944
12	22	57,5	10 x 25	2	PF10MS GA3	F03FA02945
12	35	70	10 x 25	2	PF10MS GC3	F03FA02946

Spare parts	Dimensions mm	Freud Code	Art. No.
 Screw	M5 x 10	2602M DC9	F03FA07350





**Machines:**

CNC, boring and multi boring machines.

**Materials:**

Softwood, hardwood, wood based panels and MDF.

**Applications:**

Boring.

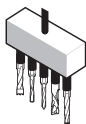
**Technical information:**

Through holes drills HW tipped.

- 10 mm cylindrical shank with M5 x 10 mm adjusting screw.

**PF11MD  
PF11MS**

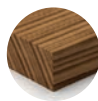
**Through holes drills**



**Boring Machines**



Softwood



Hardwood



Chipboard



Laminated  
Chipboard



MDF



Laminated  
MDF




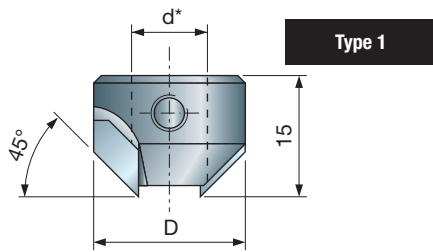
Plywood



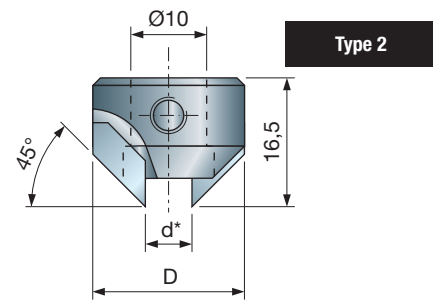
**Through Holes**

D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
5	27	57,5	10 x 20	2	PF11MD AA3	F03FA02977
5	40	70	10 x 20	2	PF11MD AC3	F03FA02979
6	27	57,5	10 x 20	2	PF11MD BA3	F03FA02980
6	40	70	10 x 20	2	PF11MD BC3	F03FA02982
8	27	57,5	10 x 20	2	PF11MD DA3	F03FA02984
8	40	70	10 x 20	2	PF11MD DC3	F03FA02986
10	27	57,5	10 x 20	2	PF11MD FA3	F03FA02987
10	40	70	10 x 20	2	PF11MD FC3	F03FA02989
12	27	57,5	10 x 20	2	PF11MD GA3	F03FA02990
12	40	70	10 x 20	2	PF11MD GC3	F03FA02992
5	27	57,5	10 x 20	2	PF11MS AA3	F03FA02993
5	40	70	10 x 20	2	PF11MS AC3	F03FA02995
6	27	57,5	10 x 20	2	PF11MS BA3	F03FA02996
6	40	70	10 x 20	2	PF11MS BC3	F03FA02998
8	27	57,5	10 x 20	2	PF11MS DA3	F03FA03000
8	40	70	10 x 20	2	PF11MS DC3	F03FA03002
10	27	57,5	10 x 20	2	PF11MS FA3	F03FA03003
10	40	70	10 x 20	2	PF11MS FC3	F03FA03005
12	27	57,5	10 x 20	2	PF11MS GA3	F03FA03006
12	40	70	10 x 20	2	PF11MS GC3	F03FA03008

Spare parts	Dimensions mm	Freud Code	Art. No.
 Screw	M5 x 10	2602M DC9	F03FA07350



Type 1



Type 2

**Machines:**

CNC, boring and multi boring machines.

**Materials:**

Softwood, hardwood, wood based panels and MDF.

**Applications:**

Boring.

**Technical information:**

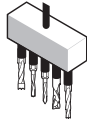
Countersink cutters HW tipped with side fixing screw.

\*Type 1 suitable for **PF11M** and **PF07M** to fix on bits helix.

\*Type 2 suitable for **PF10M** and **PF06M** to fix on bits shank.

**SV05MD  
SV05MS**

**Carbide loose  
countersink cutters**





**Boring Machines**



Blind Holes with Countersink

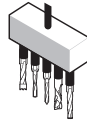
Through Holes with Countersink

D mm	d* mm	H mm	A mm	Z	Freud Code	Art. No.
14	4	15	type 1	2	<b>SV05MD ZA3</b>	F03FA03901
16	5	15	type 1	2	<b>SV05MD AA3</b>	F03FA03890
16	6	15	type 1	2	<b>SV05MD BA3</b>	F03FA03891
18	7	15	type 1	2	<b>SV05MD CA3</b>	F03FA03892
18	8	15	type 1	2	<b>SV05MD DA3</b>	F03FA03893
20	9	15	type 1	2	<b>SV05MD EA3</b>	F03FA03894
20	10	15	type 1	2	<b>SV05MD FA3</b>	F03FA03895
22	12	15	type 1	2	<b>SV05MD GA3</b>	F03FA03896
24	14	15	type 1	2	<b>SV05MD HA3</b>	F03FA03897
20	5÷10	16,5	type 2	2	<b>SV05MD TA3</b>	F03FA03899
22	11÷12	16,5	type 2	2	<b>SV05MD TB3</b>	F03FA03900
14	4	15	type 1	2	<b>SV05MS ZA3</b>	F03FA03914
16	5	15	type 1	2	<b>SV05MS AA3</b>	F03FA03902
16	6	15	type 1	2	<b>SV05MS BA3</b>	F03FA03903
18	7	15	type 1	2	<b>SV05MS CA3</b>	F03FA03904
18	8	15	type 1	2	<b>SV05MS DA3</b>	F03FA03905
20	9	15	type 1	2	<b>SV05MS EA3</b>	F03FA03906
20	10	15	type 1	2	<b>SV05MS FA3</b>	F03FA03908
22	12	15	type 1	2	<b>SV05MS GA3</b>	F03FA03909
24	14	15	type 1	2	<b>SV05MS HA3</b>	F03FA03910
20	5÷10	16,5	type 2	2	<b>SV05MS TA3</b>	F03FA03912
22	11÷12	16,5	type 2	2	<b>SV05MS TB3</b>	F03FA03913

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Screw	M5 x 5	<b>2615M CC9</b>	F03FA07420
	Screw	M6 x 6	<b>2615M DD9</b>	F03FA07423

# PC04MD PC04MS

## Carbide boring bits for hinges



### Boring Machines



Softwood



Hardwood



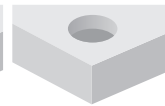
Laminated Chipboard



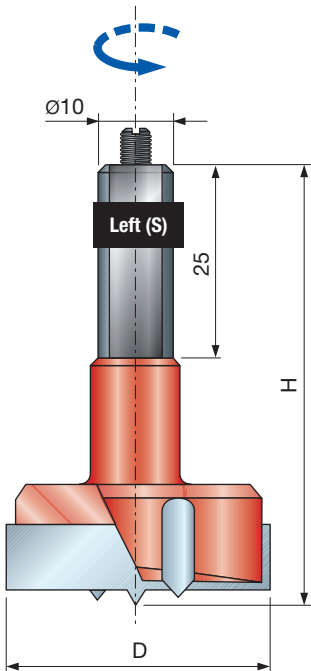
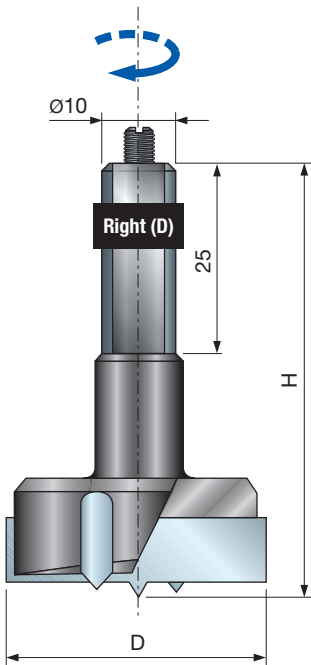
Laminated MDF



Blind Holes



Hinge Pockets



#### Machines:

CNC, boring and multi boring machines.

#### Materials:

Softwood, hardwood, wood based panels and MDF.

#### Applications:


Boring.

#### Technical information:

Boring bits HW tipped suitable for hinges.

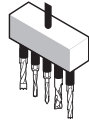
- 10 mm cylindrical shank with M5 x 10 mm adjusting screw.

D mm	H mm	A mm	Z	Freud Code	Art. No.
12	57,5	10 x 25	2+2	PC04MD 123	F03FA01782
14	57,5	10 x 25	2+2	PC04MD 143	F03FA01783
15	57,5	10 x 25	2+2	PC04MD 153	F03FA01784
16	57,5	10 x 25	2+2	PC04MD 163	F03FA01785
18	57,5	10 x 25	2+2	PC04MD 183	F03FA01786
20	57,5	10 x 25	2+2	PC04MD 203	F03FA01787
22	57,5	10 x 25	2+2	PC04MD 223	F03FA01788
25	57,5	10 x 25	2+2	PC04MD 253	F03FA01789
26	57,5	10 x 25	2+2	PC04MD 263	F03FA01790
30	57,5	10 x 25	2+2	PC04MD 303	F03FA01791
35	57,5	10 x 25	2+2	PC04MD 353	F03FA01792
38	57,5	10 x 25	2+2	PC04MD 383	F03FA01793
40	57,5	10 x 25	2+2	PC04MD 403	F03FA01794
50	57,5	10 x 25	2+2	PC04MD 503	F03FA01795
60	57,5	10 x 25	2+2	PC04MD 603	F03FA13297
12	57,5	10 x 25	2+2	PC04MS 123	F03FA01796
14	57,5	10 x 25	2+2	PC04MS 143	F03FA01797
15	57,5	10 x 25	2+2	PC04MS 153	F03FA01798
16	57,5	10 x 25	2+2	PC04MS 163	F03FA01799
18	57,5	10 x 25	2+2	PC04MS 183	F03FA01800
20	57,5	10 x 25	2+2	PC04MS 203	F03FA01801
22	57,5	10 x 25	2+2	PC04MS 223	F03FA01802
25	57,5	10 x 25	2+2	PC04MS 253	F03FA01803
26	57,5	10 x 25	2+2	PC04MS 263	F03FA01804
30	57,5	10 x 25	2+2	PC04MS 303	F03FA01805
35	57,5	10 x 25	2+2	PC04MS 353	F03FA01806
38	57,5	10 x 25	2+2	PC04MS 383	F03FA01807
40	57,5	10 x 25	2+2	PC04MS 403	F03FA01808
50	57,5	10 x 25	2+2	PC04MS 503	F03FA13296
60	57,5	10 x 25	2+2	PC04MS 603	F03FA13298

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Screw	M5 x 10	2602M DC9	F03FA07350

# PC05MD PC05MS

## Carbide boring bits for hinges



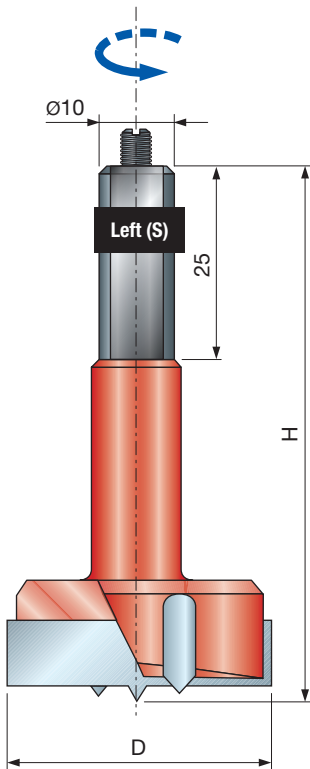
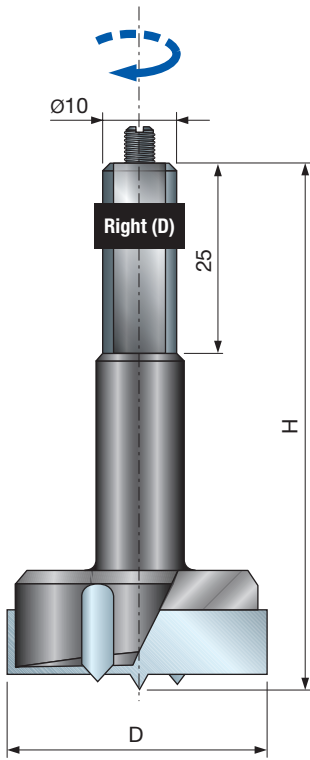
### Boring Machines



Blind Holes      Hinge Pockets

D mm	H mm	A mm	Z	Freud Code	Art. No.
12	70	10 x 25	2+2	PC05MD 123	F03FA01809
14	70	10 x 25	2+2	PC05MD 143	F03FA01810
15	70	10 x 25	2+2	PC05MD 153	F03FA01811
16	70	10 x 25	2+2	PC05MD 163	F03FA01812
18	70	10 x 25	2+2	PC05MD 183	F03FA01813
20	70	10 x 25	2+2	PC05MD 203	F03FA01814
22	70	10 x 25	2+2	PC05MD 223	F03FA01815
25	70	10 x 25	2+2	PC05MD 253	F03FA01816
26	70	10 x 25	2+2	PC05MD 263	F03FA01817
30	70	10 x 25	2+2	PC05MD 303	F03FA01818
35	70	10 x 25	2+2	PC05MD 353	F03FA01819
38	70	10 x 25	2+2	PC05MD 383	F03FA01820
40	70	10 x 25	2+2	PC05MD 403	F03FA01821
12	70	10 x 25	2+2	PC05MS 123	F03FA01822
14	70	10 x 25	2+2	PC05MS 143	F03FA01823
15	70	10 x 25	2+2	PC05MS 153	F03FA01824
16	70	10 x 25	2+2	PC05MS 163	F03FA01825
18	70	10 x 25	2+2	PC05MS 183	F03FA01826
20	70	10 x 25	2+2	PC05MS 203	F03FA01827
22	70	10 x 25	2+2	PC05MS 223	F03FA01828
25	70	10 x 25	2+2	PC05MS 253	F03FA01829
26	70	10 x 25	2+2	PC05MS 263	F03FA01830
30	70	10 x 25	2+2	PC05MS 303	F03FA01831
35	70	10 x 25	2+2	PC05MS 353	F03FA01832
38	70	10 x 25	2+2	PC05MS 383	F03FA01833
40	70	10 x 25	2+2	PC05MS 403	F03FA01834

Spare parts	Dimensions mm	Freud Code	Art. No.
Screw	M5 x 10	2602M DC9	F03FA07350



**Machines:**

CNC, boring and multi boring machines.

**Materials:**

Softwood, hardwood, wood based panels and MDF.

**Applications:**

Boring.

**Technical information:**

Boring bits HW tipped suitable for hinges.

- 10 mm cylindrical shank with M5 x 10 mm adjusting screw.

## TOOLS

Tools shall be used only by persons of training and experience who have knowledge of how to use and handle tools.

The maximum rotational speed marked on the tool shall not be exceeded.

One piece tool with visible cracks shall not be used.

Clamping surfaces shall be cleaned to remove dirt, grease, oil and water.

Resin shall only be removed from light alloys with solvents that do not affect the mechanical characteristics of these materials.

Tools and tool bodies shall be clamped in such a way, that they shall not loosen during operation.

Tools with cylindrical shank must be clamped in a way that the mark of the maximum free shank length shall be covered, at least partially, by the clamping device or by the locking collet.

Care shall be taken of mounting tools to ensure that the clamping is by the hub respectively by the clamping surface of the tool and that the cutting edges are not in contact with each other or with the clamping elements.

Fastening screws and nuts shall be tightened using the appropriate spanners etc. and to the torque value provided by the manufacturer. Extension of the spanner or tightening using hammer blows shall not be permitted.

Clamping screws shall be tightened according to instructions provided, by the manufacturer. Where instructions are not provided clamping screws shall be tightened in sequence from the centre outwards.

Use of fixed rings, e. g. pressed or held by adhesive fixing, in flanged sleeves, shall be permitted if made to the manufacturers specifications.

Repair and regrinding of tools shall only be allowed according to the tool manufacturer's instructions.

After repair and regrinding of tools it shall be ensured that the tools observe balancing requirements.

The design of composite (tipped) tools, shall not be changed in the process of repair.

Composite tools shall be repaired by a competent person, i.e. a person of training and experience, who has knowledge of the design requirements and understands the level of safety to be achieved. Repair shall therefore include, e.g. use of spare parts which are in accordance with the specification of the original parts provided by the manufacturer.

Tolerances which ensure correct clamping shall be maintained.

For one piece tools care shall be taken that regrinding of the cutting edge will not cause weakening of the hub and the connection of the cutting edge to the hub.

To avoid injuries, tools shall be handled in accordance with the guidance provided by the manufacturer. Typically, safe handling involves the use of devices such as carrying hooks, proprietary handles, frames (e. g. for circular saw blades), boxes, trolleys etc.

The wearing of protective gloves improves the grip on the tool and further reduces the risk of injury.

Maintenance and modification of milling tools and related components and circular saw blades should always be in accordance with the design requirements/the manufacturer's instructions.

Maintenance and modification of milling tools and circular saw blades should only be carried out by a competent person, i. e. a person of training and experience, who has knowledge of the design requirements and understand levels of safety to be achieved.

When regrinding milling tools and circular saw blades, the minimum requirements of cutting blade thickness and cutting blade projection should be observed.

Composite tools should be repaired by persons experienced in and with understanding of design and use of milling tools for processing wood and similar materials, e.g. an expert with a relevant education and knowledge of the brazing process, including in particular the influence of the brazing process on tension in tool body and cutting material.

When brazing off worn tips and subsequently brazing on new tips it should be made sure that the tip is correctly mounted in the tool body and that the process does not result in critical tension in the tool body. After any type of maintenance, milling tools marked with MAN should

continue to observe the requirements of the standards related to tools for hand feed.

When modifying milling tools, e. g. modification of bore diameter, modification of shank, retipping of composite tools and similar, it should be ensured that the requirements of the standard relating to balancing are still observed.

After being modified and/or retipped, milling tools and circular saw blades should be marked according to the rules applying to new tools. However, the name/logo of the company making the modification/retipping should be added.

To avoid injuries, tools shall be handled in accordance with the guidance provided by the manufacturer.

Tools which weigh more than 15 kg may require the use of special handling devices or attachments, these will depend on the features that the manufacturer has designed into the tool to allow easy handling. The manufacturer can advise on the availability of necessary devices.

## CLAMPING DEVICES

The speeds indicated on the clamping device and the tool to be clamped should be compared. For adjusting the speed on the machine the lower speed should be applied.

Screws and nuts should be tightened using the appropriate spanners; Clamping surfaces should be cleaned to remove dirt, grease, oil and water.

Clamping devices and tools should be mounted or clamped according to given torques, pressures and wrenches to be used; extension of spanners or tightening or loosening by means of hammer blows should not be permitted.

Maximum tool diameters and tool lengths should not be exceeded; Shank diameters must be in accordance with the clamping range of the clamping devices.

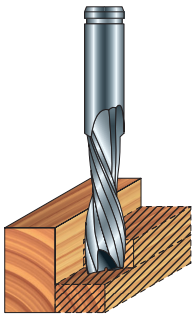
The minimum required clamping length must be kept.

Care should be taken that the data relevant to the safety of the clamped tool are always stored in the data medium.

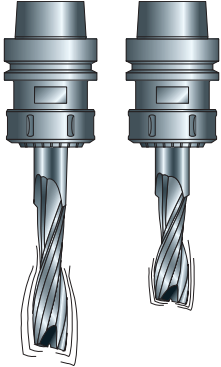
Repairs should only be carried out by a competent person, i.e. a person with professional training and experience, who has knowledge of the design, construction and safety requirements.

Repair should therefore include the use of spare parts which are in compliance with the specifications of the original parts.

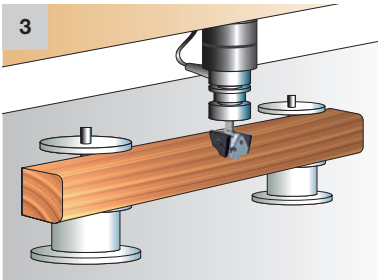
1



2



3

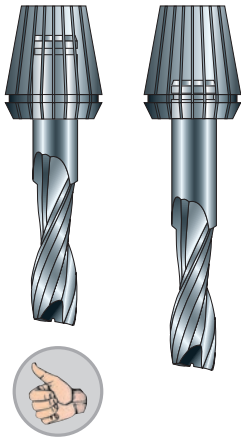


## ADVICE FOR CORRECT USE

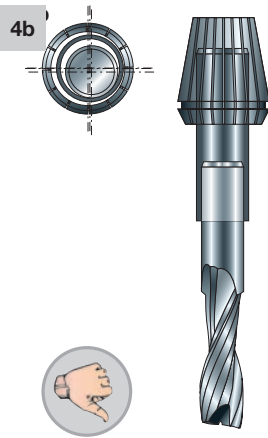
To reduce vibrations from the router bit, which can compromise the finish and cause damages to both the tool and the workpiece, it is necessary to respect the following conditions:

- For large removals, carry out more passes or proceed with a feedrate and RPM rate in proportion to the depth of cut (Fig. 1).
- A router bit with a shorter cutting height vibrates less than a router bit with the same diameter but with a longer cutting height (Fig. 2).
- Control your machine regularly (especially guides and ball bearings), making sure that there are no eccentricity problems, so as to avoid the arbor from vibrating hazardously.
- Accurately block the workpiece to the work table surface (Fig. 3).
- Respect the minimum fixing length of the shank with a preference to short chucks, with the aim of reducing eccentricity errors (Fig. 4a).
- For the same reason the use of extensions are generally avoided (Fig. 4b).
- Router bits with staggered cutters tend to leave marks caused by small eccentricity tolerances (Fig. 5).
- To identify eccentricity issues in a router bit or a chuck: make a milling on the workpiece, rotate the tool 90° on the chuck and repeat the operation. If the marks left on the wood are unvaried between the 2 processes then the tool is defective, if there's a difference the issue is probably on the chuck/collet.
- Do not exceed the maximum RPM limit marked on the tool. Higher RPM, extreme feedrate as well as an excessive cutting depth can cause the tool breakage.
- To avoid damaging router bits, we suggest controlling if the fixing surface of the chuck and the router bit are clean and that there are no imperfections (Fig. 6).
- Always choose router bits with the appropriate dimensions for the kind of work to carry out.
- Make sure that the workpiece is properly fixed to a support with appropriate dimensions. Place the locking devices (as suckers) sufficiently far from the tool path (Fig. 7).
- To avoid dangerous kick backs, we suggest fixing a spare piece of material and milling small parts of waste which have accumulated during the working process, by carrying out more passes (Fig. 8).

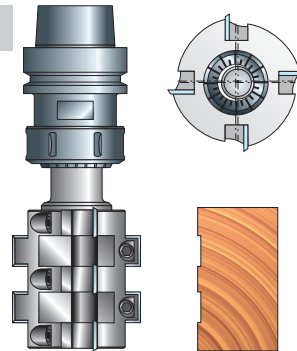
4a



4b



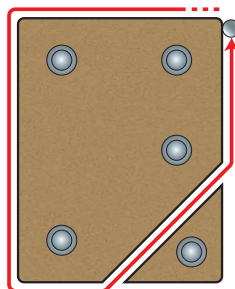
5



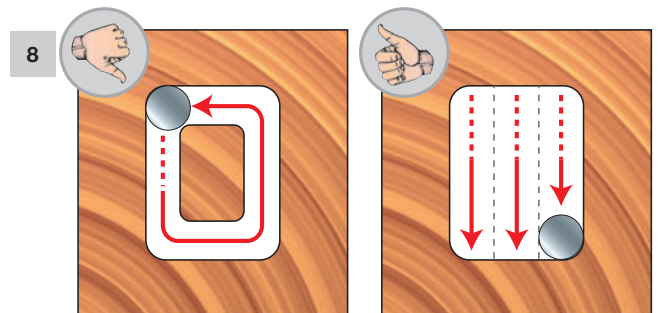
6



7



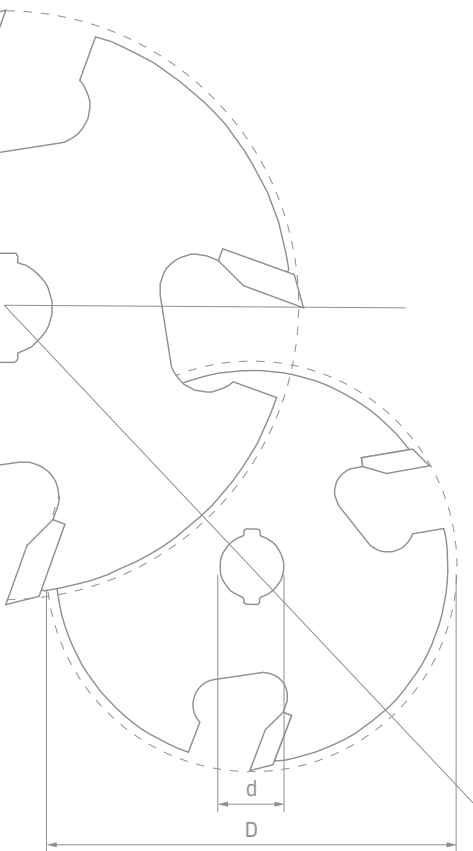
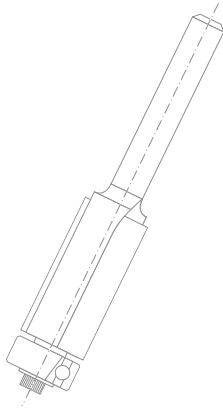
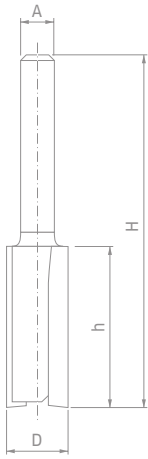
8



# Routing tools for portable machines

Freud's wide range of superior quality router bits are the result of outstanding technical expertise and know-how, advanced manufacturing processes and finest quality materials. Designed to perform precise and burn free cuts, these tools deliver flawless finishing, unmatched precision and long-lasting performance. All router bits feature Freud's unique and industry-first attributes.





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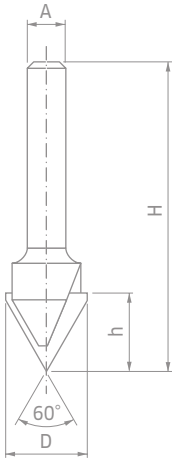
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# LEADING TECHNOLOGY

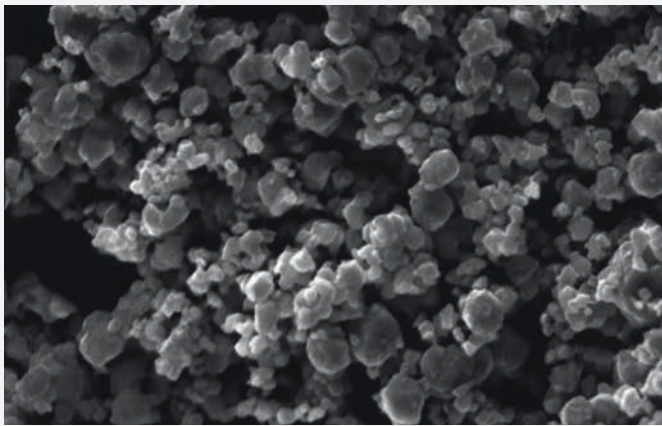
## TICO CARBIDE TECHNOLOGY



Freud's ownership and control of the entire Carbide production cycle ensures that the correct formula is used for the specific application needs, to constantly maximise the router bit performance.

### TiCo Carbide

A specially formulated, highly compact Titanium Cobalt Carbide, engineered and manufactured by Freud. It provides a sharper edge and a flawless finish with a dramatically longer cutting life.



## DESIGN INNOVATION

Freud's special tip designs and geometries are engineered to perform perfect cuts and deliver extraordinary durability.



### Shear Angle Technology

Freud's Carbide tips are angled to slice through the wood fibers similar in principle to using a hand plane at an angle to the direction of the motion.

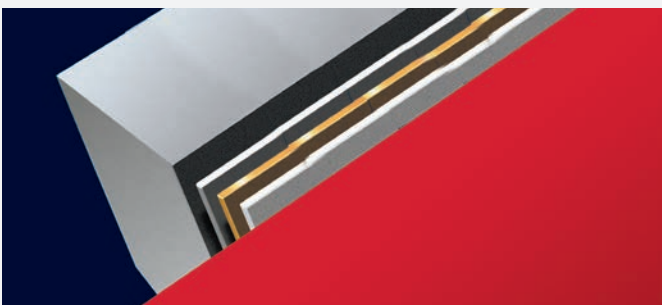
Freud's high shear angle bits leave a cross grain cut that requires virtually no sanding.

## EXTREME SHOCK RESISTANCE



Freud's innovative **Tri-Metal Brazing** process bonds the Carbide tips to the cutter body.

This special method consists of copper alloy sandwiched between layers of silver alloy, for extra flexibility and maximum impact resistance.





## COATING TECHNOLOGY

Freud's router bits feature an exclusive industry-first coating that secures a superior protection from heat, pitch build-up and corrosion.



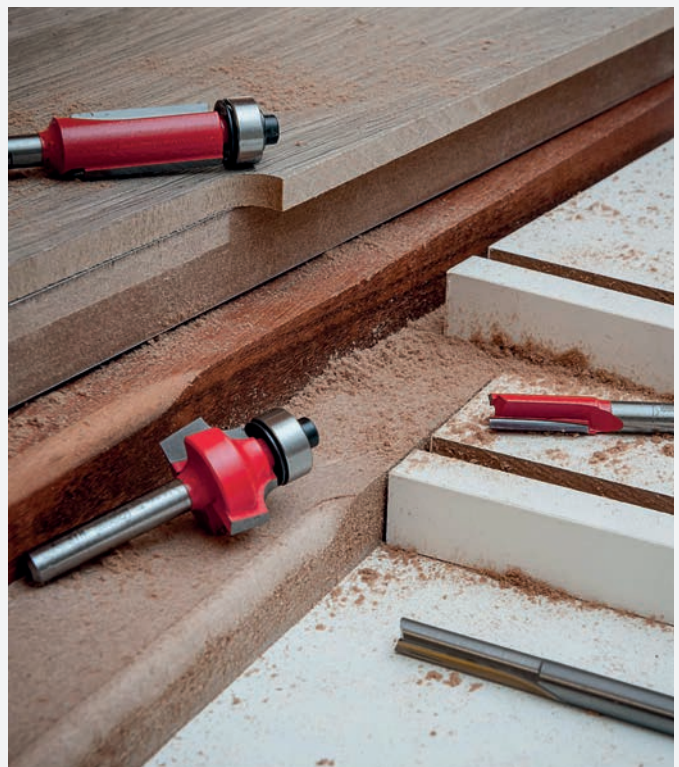
### Perma-SHIELD Coating

- A non-stick coating formulation that withstands the toughest applications.
- It provides thermal insulation, protects from corrosion and eliminates resin build-up, reducing downtime for cleaning.




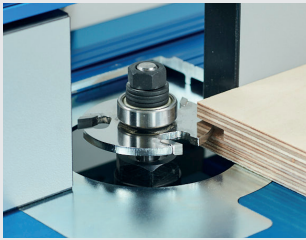




## EXTENSIVE RANGE

Freud offers different solutions for specific application needs. The wide variety of router bits includes premium straight bits, trimming bits, edge forming bits, joinery bits, surface forming bits as well as mixed sets and spare parts. Each delivers flawless results and extraordinary lifetime.



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	Application picture	Description	Page reference
<b>Straight bits</b>		Freud's straight router bits in all relevant shank diameter 6 mm, 8 mm, 12 mm, 1/4", 1/2". Cutting diameters from 2 mm up to 25 mm. Freud Straight bits are designed to deliver clean, precise, splinter free results in hardwood and softwood and in almost any composite material they cover many applications such as grooving, rebating, slots, planing and hinge cut outs.	243-249
<b>Trimming bits</b>		Freud's trimming bits range includes bits for any trimming application. Use these bits for precise trim work on laminate or veneered counter tops, to follow patterns, to create or duplicate intricate shapes or for any task requiring a clean cut-off along a flush edge with a smooth, burn free cut. Hardwood, softwood, plywood, composites and laminates on hand-held or table-mounted routers.	250-254
<b>Edge forming bits</b>		Freud's edge forming bits are designed to cover every edge profiling application, such as rounding, chamfer, ogee, cove profiles and many more.	255-275
<b>Joinery bits</b>		Freud's joinery router bits are designed to create perfect wood joints. It is possible to choose a selection ranging from slotting cutters to dovetail router bits and many more.	276-302
<b>Surface forming bits</b>		All Freud's surface forming router bits are available without ball bearing for a perfect profile grooving on wooden surfaces.	303-313
<b>Mixed sets</b>		Freud offers several different router bit sets. Mixed router bit sets are available in the most common shank diameters, along with our classical cabinet door sets.	314-326

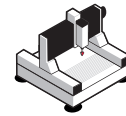
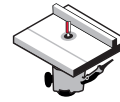
# Straight Bits



3.0

# DOUBLE FLUTE STRAIGHT BITS

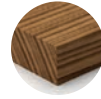
04- 12-  
MM- R006M



Hand-held Routers

Table Routers

CNC Machines

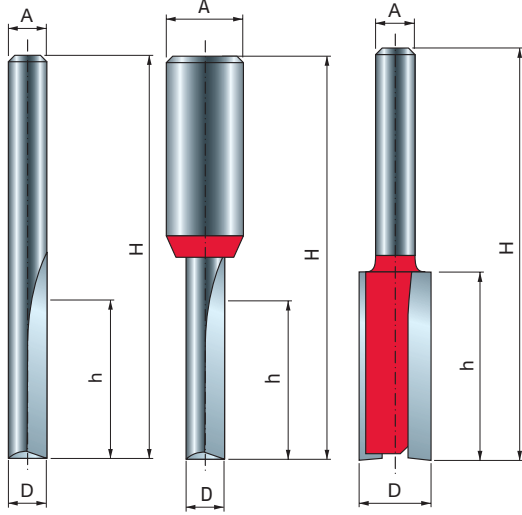


Softwood

Hardwood

Plywood

Wood Based Panels



Type A  
Solid Carbide  
bits

Type B  
Solid Carbide  
cutting parts

Type C  
HW tipped bits



**Machines:**

Hand-held routers, table routers and CNC machines.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

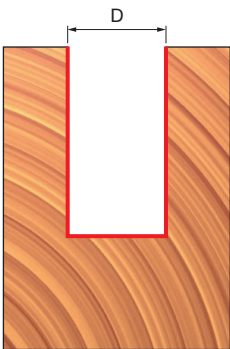
**Applications:**

**Type A:** Small cutting diameter solid Carbide double flute straight bits.

Ideal for grooving, edge-routing, plunge cuts and other general purpose routing tasks.

**Type B:** Small cutting diameter double flute straight bits, steel shank with integrated solid Carbide cutting part.

**Type C:** Ideal for grooving, edge-routing and other general purpose routing tasks.



**Type A - Solid Carbide bits**

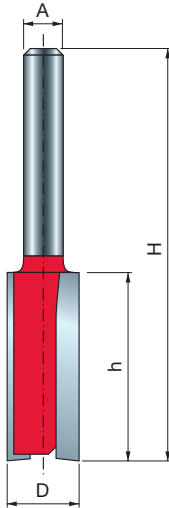
D mm	h mm	H mm	A mm	A inch	Z	Max RPM 1/min.	Freud Code	Art. No.
2	6,3	44,5	6		2	24.000	04-09706P	F03FR01413
3	9,5	44,5	6		2	24.000	04-09906P	F03FR01415
3	11	50,8	6		2	24.000	04-10006P	F03FR01418
3	12	50	6		2	24.000	R006M03006	F03FR01355
4	12	50,3	6		2	24.000	R006M05006	F03FR01356
4	12	50,8	6		2	24.000	04-10206P	F03FR01423
4	15,8	50,7	6		2	24.000	04-10106P	F03FR01420
5	12	50,3	6		2	24.000	R006M07006	F03FR01357
5	12,7	50,8	6		2	24.000	04-11306P	F03FR01437
5	16	51	6		2	24.000	R006M07406	F03FR01358
6	16	50,8	6		2	24.000	04-11406P	F03FR01440
6	16	57	6		2	24.000	R006M09406	F03FR01359
6	25	63	6		2	24.000	R006M10206	F03FR01360
6	25,4	76,2	6		2	24.000	04-11006P	F03FR01431
3	9,5	44,5	8		2	24.000	04-09908P	F03FR01416
4	15,8	50,7	8		2	24.000	04-10108P	F03FR01421
5	12,7	50,8	8		2	24.000	04-11308P	F03FR01438
6	16	50,8	8		2	24.000	04-11408P	F03FR01441
6	25,4	76,2	8		2	24.000	04-11008P	F03FR01432
1,58	6,4	44,5		1/4	2	24.000	04-09625P	F03FR01412
2	4	38,1		1/4	2	24.000	04-50225P	F03FR01502
2,38	9,5	38,1		1/4	2	24.000	04-09825P	F03FR01414
3	8	44,5		1/4	2	24.000	04-50825P	F03FR01503
3,18	9,5	44,5		1/4	2	24.000	04-10025P	F03FR01419
4	15,77	50,8		1/4	2	24.000	04-10125P	F03FR01422
4,76	12,7	49,2		1/4	2	24.000	04-10225P	F03FR01424
5	11,9	50,8		1/4	2	24.000	04-51225P	F03FR01504
6,35	12,7	50,5		1/4	2	24.000	04-10425P	F03FR01426
6,35	15,9	50,8		1/4	2	24.000	04-10525P	F03FR01427
6,35	19	57,1		1/4	2	24.000	04-10625P	F03FR01428
6,35	22,2	57,1		1/4	2	24.000	04-10725P	F03FR01429
6,35	25,4	63,5		1/4	2	24.000	04-10825P	F03FR01430
6,35	25,4	76,2		1/4	2	24.000	04-11025P	F03FR01433
6,35	19	61		1/2	2	24.000	12-10050P	F03FR01521
6,35	23	73		1/2	2	24.000	12-10250P	F03FR01522

**Type B - Solid Carbide cutting parts**

D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Freud Code	Art. No.
3	8	58	12	2	24.000	12-09612P	F03FR01517
4	10	58	12	2	24.000	12-09712P	F03FR01518
5	12,7	57	12	2	24.000	12-09812P	F03FR01519
6	19	64	12	2	24.000	12-09912P	F03FR01520

# DOUBLE FLUTE STRAIGHT BITS

04- 12-  
MM- R006M



**Type C**  
HW tipped bits

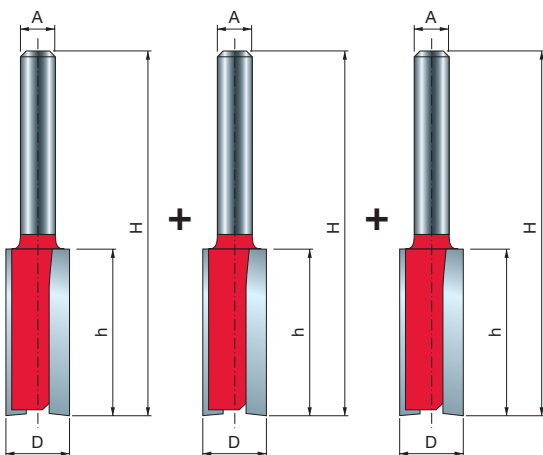
## Type C - HW tipped bits

D	h	H	A	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm inch		1/min.		
7	25,4	63,5	6	2	24.000	04-11206P	F03FR01434
8	19,1	52	6	2	24.000	04-11506P	F03FR01443
8	31,8	70	6	2	24.000	04-11906P	F03FR01447
9	25	63	6	2	24.000	04-12406P	F03FR01450
10	25,4	62,4	6	2	24.000	MM-01006P	F03FR00330
10	31,8	69	6	2	24.000	MM-11006P	F03FR00333
11	25,4	62	6	2	24.000	04-13306P	F03FR01458
12	19	55,5	6	2	24.000	04-13506P	F03FR01460
12	31,8	68	6	2	24.000	04-13706P	F03FR01464
13	25,4	62,4	6	2	24.000	04-14206P	F03FR01470
14	19	56	6	2	24.000	04-14306P	F03FR01472
14	31,8	68,2	6	2	24.000	04-14506P	F03FR01475
15	20	57,2	6	2	24.000	04-14606P	F03FR01478
15	31,8	68,2	6	2	24.000	04-14706P	F03FR01480
16	19	51	6	2	24.000	04-14906P	F03FR01483
16	31,8	66	6	2	24.000	04-15006P	F03FR01486
18	20	52	6	2	24.000	04-15106P	F03FR01488
19	19	54	6	2	24.000	04-14006P	F03FR01468
20	19	56	6	2	24.000	04-15506P	F03FR01492
22	19	51	6	2	24.000	04-15706P	F03FR01495
24	20	52	6	2	24.000	04-15806P	F03FR01498
25	19	56	6	2	24.000	04-15906P	F03FR01500
7	25,4	63,5	8	2	24.000	04-11208P	F03FR01435
8	19	52	8	2	24.000	04-11508P	F03FR01444
8	31,8	70	8	2	24.000	04-11908P	F03FR01448
9	25	63	8	2	24.000	04-12408P	F03FR01451
10	25,4	62,4	8	2	24.000	MM-01008P	F03FR00331
10	31,8	69	8	2	24.000	MM-11008P	F03FR00334
12	19	55,5	8	2	24.000	04-13508P	F03FR01461
12	31,8	63,8	8	2	24.000	04-13708P	F03FR01465
14	19	56	8	2	24.000	04-14308P	F03FR01473
14	31,8	68,2	8	2	24.000	04-14508P	F03FR01476
15	20	57,2	8	2	24.000	04-14608P	F03FR01479
15	31,8	68,2	8	2	24.000	04-14708P	F03FR01481
16	19	51	8	2	24.000	04-14908P	F03FR01484
16	31,8	66	8	2	24.000	04-15008P	F03FR01487
18	20	52	8	2	24.000	04-15108P	F03FR01489
20	19	56	8	2	24.000	04-15508P	F03FR01493
22	19	51	8	2	24.000	04-15708P	F03FR01496
24	20	52	8	2	24.000	04-15808P	F03FR01499
25	19	56	8	2	24.000	04-15908P	F03FR01501
7	18	67	12	2	24.000	12-10312P	F03FR01523
8	31,8	76	12	2	24.000	12-10712P	F03FR01525
9	31,8	76	12	2	24.000	12-11012P	F03FR01528
10	31,8	76	12	2	24.000	12-11212P	F03FR01530
12	38,1	80	12	2	24.000	12-12212P	F03FR01534
12	50,5	98	12	2	24.000	12-12812P	F03FR01537
13	25,4	66,7	12	2	24.000	12-11612P	F03FR01531
14	31,8	73	12	2	24.000	12-13412P	F03FR01540
15	31,8	69,8	12	2	24.000	12-13512P	F03FR01541
16	38,1	76,1	12	2	24.000	12-14012P	F03FR01544
18	38,1	80	12	2	24.000	12-14312P	F03FR01547
19	25,4	63,4	12	2	24.000	12-15212P	F03FR01548
20	38,1	80	12	2	24.000	12-15912P	F03FR01553
22	38,1	80	12	2	24.000	12-16912P	F03FR01556
7,14	25,4	65,4	1/4	2	24.000	04-11225P	F03FR01436
7,94	25,4	71,4	1/4	2	24.000	04-11825P	F03FR01446
9,53	22,2	59,2	1/4	2	24.000	04-12025P	F03FR01449
9,53	25,4	62,4	1/4	2	24.000	04-12425P	F03FR01452
9,53	31,8	68,7	1/4	2	24.000	04-12625P	F03FR01453
10	25,4	62,4	1/4	2	24.000	MM-01025P	F03FR00332
10	31,8	63,8	1/4	2	24.000	04-52025P	F03FR01505
11,11	25,4	62,4	1/4	2	24.000	04-12925P	F03FR01454
12	31,8	63,8	1/4	2	24.000	04-52825P	F03FR01506

# DOUBLE FLUTE STRAIGHT BITS

04- 12-  
MM- R006M

D mm	h mm	H mm	A mm	inch	Z	Max RPM 1/min.	Freud Code	Art. No.
12,7	19	55,5		1/4	2	24.000	04-13025P	F03FR01455
12,7	22,2	59,2		1/4	2	24.000	04-13125P	F03FR01456
12,7	25,4	62,4		1/4	2	24.000	04-13225P	F03FR01457
12,7	31,8	69,9		1/4	2	24.000	04-13325P	F03FR01459
15	31,8	66,7		1/4	2	24.000	04-53625P	F03FR01507
15,88	19	51		1/4	2	24.000	04-13625P	F03FR01463
15,88	31,8	69,9		1/4	2	24.000	04-13725P	F03FR01466
16	31,8	66,7		1/4	2	24.000	04-54425P	F03FR01508
17,46	19,1	56,1		1/4	2	24.000	04-13825P	F03FR01467
18	19,1	51,1		1/4	2	24.000	04-54825P	F03FR01509
19	19	57		1/4	2	24.000	04-14025P	F03FR01469
20	19,1	51,1		1/4	2	24.000	04-55225P	F03FR01510
22,23	19,1	56,1		1/4	2	24.000	04-14825P	F03FR01482
25,4	19,1	56,1		1/4	2	24.000	04-15225P	F03FR01491
7,94	25,4	78,9		1/2	2	24.000	12-10650P	F03FR01524
9,53	25,4	73,6		1/2	2	24.000	12-10850P	F03FR01526
9,53	31,8	82		1/2	2	24.000	12-11050P	F03FR01529
10	31,8	75		1/2	2	24.000	12-52050P	F03FR01558
12	31,8	75		1/2	2	24.000	12-53050P	F03FR01559
12,7	25,4	66,7		1/2	2	24.000	12-11650P	F03FR01532
12,7	31,8	77		1/2	2	24.000	12-11850P	F03FR01533
12,7	38,1	80,4		1/2	2	24.000	12-12250P	F03FR01535
12,7	38,1	108		1/2	2	24.000	12-12450P	F03FR01536
12,7	50,5	98		1/2	2	24.000	12-12850P	F03FR01538
12,7	63,2	110,7		1/2	2	24.000	12-13050P	F03FR01539
15,88	25,4	62,4		1/2	2	24.000	12-13650P	F03FR01542
15,88	31,8	71,8		1/2	2	24.000	12-13850P	F03FR01543
15,88	38,1	76,1		1/2	2	24.000	12-14050P	F03FR01545
15,88	50,8	103		1/2	2	24.000	12-14250P	F03FR01546
16	31,8	69,8		1/2	2	24.000	12-54450P	F03FR01560
19	25,4	63,4		1/2	2	24.000	12-15250P	F03FR01549
19	31,8	69,8		1/2	2	24.000	12-15450P	F03FR01550
19	38,1	76,1		1/2	2	24.000	12-15650P	F03FR01551
19,05	50,8	88,8		1/2	2	24.000	12-15850P	F03FR01552
20,63	31,8	76		1/2	2	24.000	12-16250P	F03FR01554
22,23	31,8	76		1/2	2	24.000	12-16850P	F03FR01555
25,4	31,8	69,8		1/2	2	24.000	12-17250P	F03FR01557



## 3 PIECE DOUBLE FLUTE STRAIGHT BIT SET

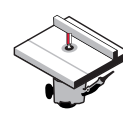
FR-TP



Hand-held Routers



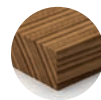
Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels



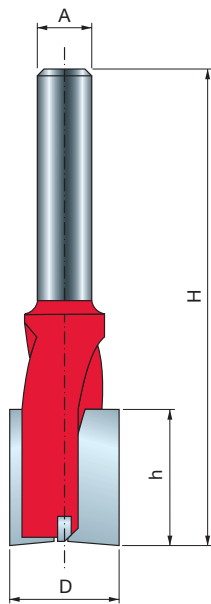
Type C  
HW tipped bits

D mm	h mm	H mm	A inch	Z	Max RPM 1/min.	Freud Code	Art. No.
12,5	50,5	98	1/2	2	24.000	FR-TP	F03FR03268



# DOUBLE FLUTE STRAIGHT BITS WITH BOTTOM TIP

17-



Hand-held Routers

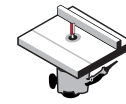
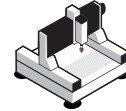


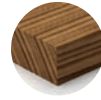
Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels



D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Freud Code	Art. No.
16	45	85	8	2+1	24.000	17-10008P	F03FR01577
18	18	70	8	2+1	24.000	17-10208P	F03FR01578
20	18	70	8	2+1	24.000	17-10408P	F03FR01579
22	25	70	8	2+1	24.000	17-10608P	F03FR01580
16	60	110	12	2+1	24.000	17-10112P	F03FA13994



**Machines:**

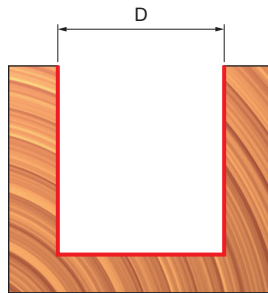
Hand-held routers, table routers and CNC machines.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

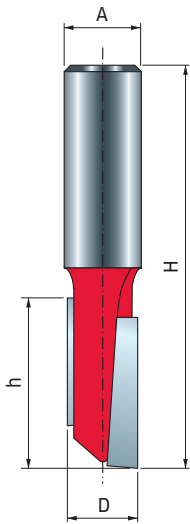
**Applications:**

Ideal for grooving, edge-routing, plunge cuts and other general purpose routing tasks. The additional centred tip provides a smoother plunge cut with a clean bottom finish.



# STAGGER BITS

14-



Hand-held Routers

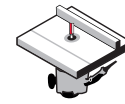
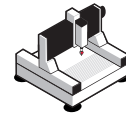


Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels



D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Freud Code	Art. No.
9,53	37,8	82	12	2	24.000	<b>14-10212P</b>	F03FR01561
12,7	38,1	82	12	2	24.000	<b>14-10412P</b>	F03FR01562
12,7	37,8	79	12	2	24.000	<b>14-20412P</b>	F03FR01564
12,7	54	98,3	12	2	24.000	<b>14-10612P</b>	F03FR01563



**Machines:**

Hand-held routers, table routers and CNC machines.

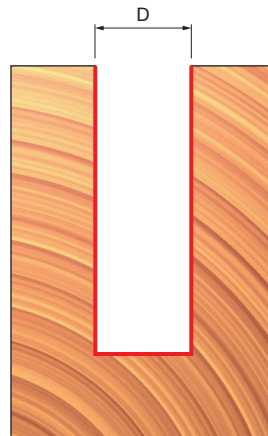
**Materials:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

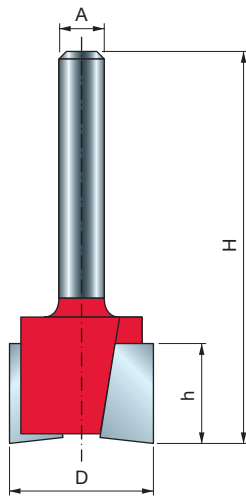
Stagger bits combine the balance of a double fluted bit with the speed and versatility of a single flute bit.

Ideal for grooving, edge-routing, plunge cuts and other general purpose routing tasks.



# MORTISING BITS

16-



Hand-held Routers

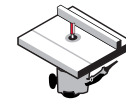
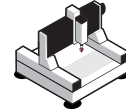


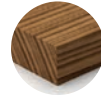
Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels



Wood Based Panels



Wood Based Panels



**Machines:**

Hand-held routers, table routers and CNC machines.

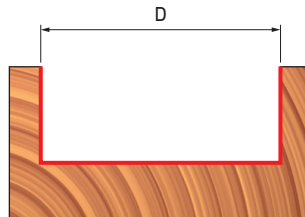
**Materials:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

Down shear design for clean top surfaces.

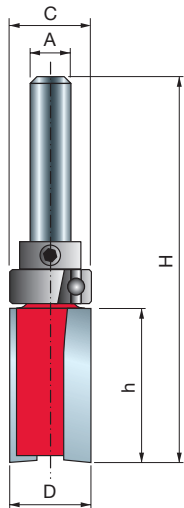
D	h	H	A	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	inch	1/min.		
12,7	12,5	51	6	2	24.000	16-10006P	F03FR01565
19	12,5	51	6	2	24.000	16-10406P	F03FR01568
19	19	62,15	6	2	24.000	16-50406P	F03FR01576
12,7	12,5	50,8	8	2	24.000	16-10008P	F03FR01566
19	12,5	50,8	8	2	24.000	16-10408P	F03FR01569
12,7	12,5	60,5	12	2	24.000	16-11012P	F03FR01573
31,75	12,1	56,2	12	2	24.000	16-11812P	F03FR01575
12,7	12,5	51	1/4	2	24.000	16-10025P	F03FR01567
19	12,5	51	1/4	2	24.000	16-10425P	F03FR01570
12,7	12,5	60,5	1/2	2	24.000	16-11050P	F03FR01574
31,75	12,7	56,2	1/2	2	18.000	16-10850P	F03FR01572



# Trimming Bits



# TOP BEARING FLUSH TRIM BITS 50-



**Machines:**

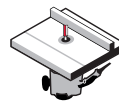
Hand-held routers and table routers.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

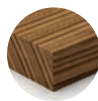
**Applications:**

Ideal for following templates and for other tasks where the pattern is placed on top of the workpiece.



Hand-held Routers

Table Routers



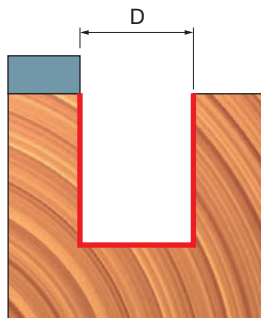
Softwood

Hardwood

Plywood

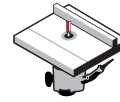
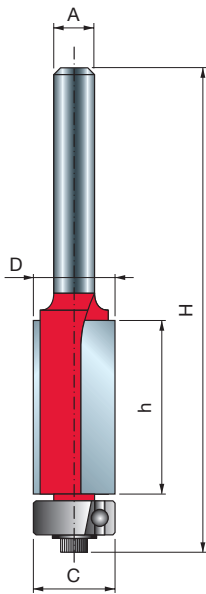
Wood Based Panels

D	h	H	A	C	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	inch	mm	1/min.		
13	20	60	6		13	24.000	50-10206P	F03FR02003
15	20	60	6		15	24.000	50-10406P	F03FR02006
19	25,4	67,5	6		19	24.000	50-10606P	F03FR02008
16	20	60	8		16	24.000	50-10308P	F03FR02005
22	20	60	8		22	24.000	50-10808P	F03FR02010
12,7	25,4	65,4		1/4	12,7	24.000	50-10225P	F03FR02004
15,88	25,4	65,4		1/4	15,88	24.000	50-10425P	F03FR02007
19	25,4	68,5		1/4	19	24.000	50-10625P	F03FR02009



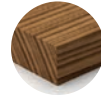
# FLUSH TRIM BITS

42- 44-



Hand-held Routers

Table Routers



Softwood

Hardwood

Plywood

Wood Based Panels



**Machines:**

Hand-held routers and table routers.

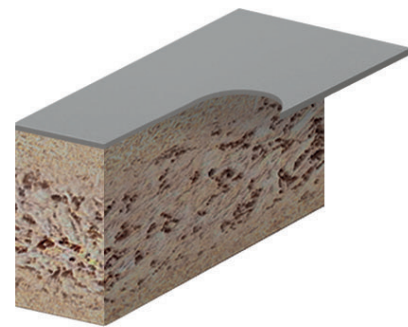
**Materials:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

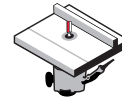
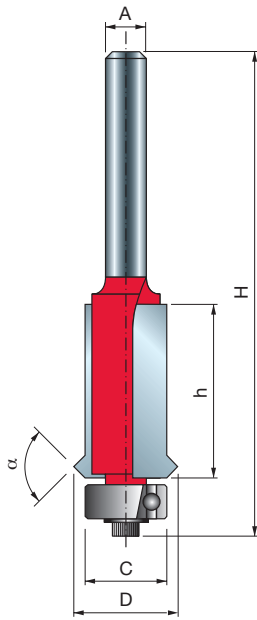
Use these bits for precise trim work on laminated counter tops, to follow patterns and to create or duplicate complex shapes.

D mm	h mm	H mm	mm	A inch	C mm	Z	Max RPM 1/min.	Freud Code	Art. No.
9,53	12,7	60,9	6		9,53	2	24.000	42-10206P	F03FR01935
9,53	25,8	72,4	6		9,53	2	24.000	42-10006P	F03FR01932
12,7	25,7	72,9	6		12,7	2	24.000	42-10406P	F03FR01938
9,53	12,7	60,9	8		9,53	2	24.000	42-10208P	F03FR01936
9,53	25,8	72,4	8		9,53	2	24.000	42-10008P	F03FR01933
12,7	25,7	72,9	8		12,7	2	24.000	42-10408P	F03FR01939
12,7	40	84	8		12,7	2	24.000	42-11508P	F03FR02771
12,7	25,4	82,5	12		12,7	2	24.000	42-11012P	F03FR01942
12,7	38,5	94,1	12		12,7	2	24.000	42-11412P	F03FR01944
12,7	50,8	106,8	12		12,7	2	24.000	42-11612P	F03FR01946
9,53	12,7	60,9		1/4	9,53	2	24.000	42-10225P	F03FR01937
9,53	25,8	72,4		1/4	9,53	2	24.000	42-10025P	F03FR01934
12,7	12,7	60,2		1/4	12,7	2	24.000	42-10625P	F03FR01941
12,7	25,7	72,9		1/4	12,7	2	24.000	42-10425P	F03FR01940
12,7	25,7	82,5		1/2	12,7	2	24.000	42-11050P	F03FR01943
12,7	38,5	94,1		1/2	12,7	2	24.000	42-11450P	F03FR01945
12,7	50,8	109,8		1/2	12,7	2	24.000	42-11650P	F03FR01947
12,7	38,5	94,1		1/2	12,7	3	24.000	44-10850P	F03FR01952



# FLUSH TRIM "V" GROOVE BITS

48-



Hand-held Routers

Table Routers



Softwood

Hardwood

Plywood

Wood Based Panels

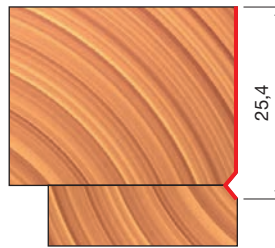
D mm	h mm	H mm	A mm	C mm	$\alpha$	Z	Max RPM 1/min.	Freud Code	Art. No.
15,88	25,4	76,2	6	12,7	90°	2	20.000	<b>48-10206P</b>	F03FR02000
15,88	25,4	76,2	8	12,7	90°	2	24.000	<b>48-10208P</b>	F03FR02001
15,88	25,4	87,2	12	12,7	90°	2	24.000	<b>48-11212P</b>	F03FR02002



**Machines:**  
Hand-held routers and table routers.

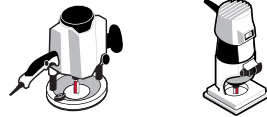
**Materials:**  
Softwood, hardwood, plywood and wood based panels.

**Applications:**  
Flush trimming bits rout a small, decorative "V" groove on the workpiece.

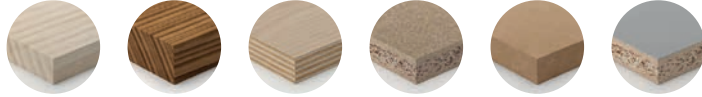


# PANEL PILOT BITS

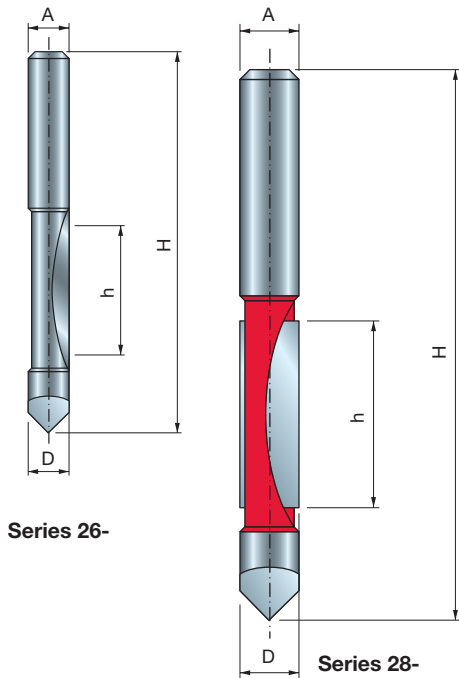
26- 28-



Hand-held Routers



Softwood    Hardwood    Plywood    Wood Based Panels



Series 26-

Series 28-

D mm	h mm	H mm	A mm	A inch	Z	Max RPM 1/min.	Freud Code	Art. No.
6	19	57	6		1	24.000	<b>26-10006P</b>	F03FR01664
8	19	75	8		1	24.000	<b>26-10008P</b>	F03FR01665
12,7	31,75	96,2	12		2	24.000	<b>28-10412P</b>	F03FR01692
6,35	19	57		1/4	1	24.000	<b>26-10025P</b>	F03FR01666
12,7	31,75	96,2		1/2	2	24.000	<b>28-10450P</b>	F03FR01693

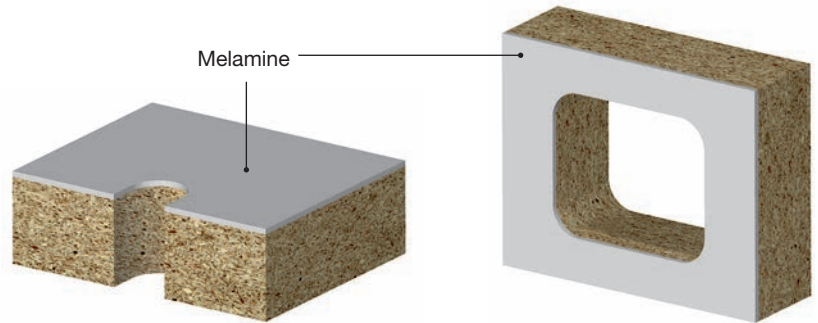
- Solid Carbide Bits



**Machines:**  
Hand-held routers.

**Materials:**  
Softwood, hardwood, plywood and wood based panels.

**Applications:**  
Panel pilot bits are a fast, efficient solution for cutting openings and trimming in panelling and other applications.



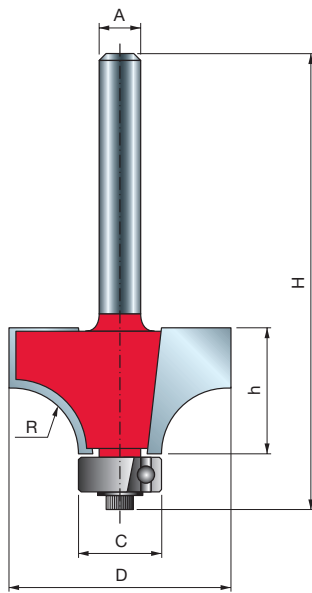


# Edge Forming Bits



# ROUNDING OVER BITS

34- 36-



**Machines:**

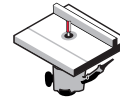
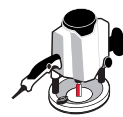
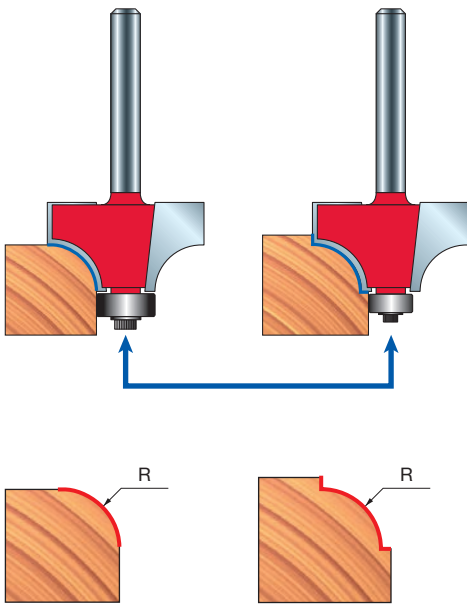
Hand-held routers and table routers.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

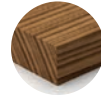
**Applications:**

Rounding over bits soften sharp edges of any workpiece.



Hand-held Routers

Table Routers



Softwood

Hardwood

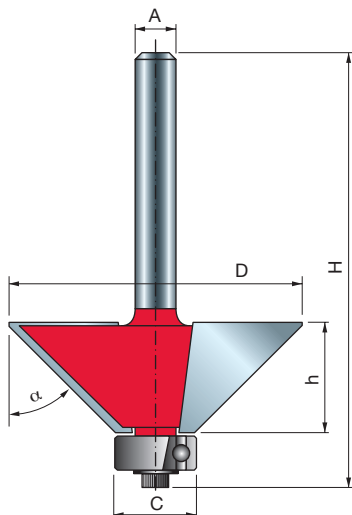
Plywood

Wood Based Panels

D	h	H	A	C	R	Z	Max RPM	Freud Code	Art. No.	
mm	mm	mm	mm	inch	mm	mm	1/min.			
15,88	12,7	54,9	6		12,7	1,59	2	24.000	34-10006P	F03FR01763
16,7	12,7	54,9	6		12,7	2	2	24.000	34-10106P	F03FR02766
19,05	12,7	55,2	6		12,7	3,18	2	24.000	34-10406P	F03FR01768
22,22	12,7	54,9	6		12,7	4,8	2	24.000	34-10806P	F03FR01771
25,4	12,7	54,7	6		9,53	6,35	2	24.000	36-11006P	F03FR01803
25,4	12,7	55,2	6		12,7	6,35	2	24.000	34-11006P	F03FR01774
28,58	12,7	55,2	6		12,7	8	2	18.000	34-11206P	F03FR01777
31,75	18	59,7	6		12,7	9,53	2	18.000	34-11406P	F03FR01780
31,75	18	59,2	6		9,53	9,53	2	18.000	36-11406P	F03FR01804
38,1	19,1	61,25	6		12,7	12,7	2	16.000	34-11606P	F03FR01783
15,88	12,7	54,9	8		12,7	1,59	2	24.000	34-10008P	F03FR01764
16,7	12,7	54,9	8		12,7	2	2	24.000	34-10108P	F03FR01766
18,7	12,7	54,9	8		12,7	3	2	24.000	34-10308P	F03FR01767
19,05	12,7	55,2	8		12,7	3,18	2	24.000	34-10408P	F03FR01769
22,22	13,2	54,9	8		12,7	4,75	2	24.000	34-10808P	F03FR01772
25,4	12,7	55,2	8		12,7	6,35	2	24.000	34-11008P	F03FR01775
28,58	12,7	55,2	8		12,7	7,94	2	18.000	34-11208P	F03FR01778
31,75	18	59,7	8		12,7	9,5	2	18.000	34-11408P	F03FR01781
38,1	19,1	61,25	8		12,7	12,7	2	16.000	34-11608P	F03FR01784
44,44	22,2	64,72	8		12,7	15,8	2	16.000	34-12708P	F03FR01793
25,4	12,7	61,2	12		12,7	6,35	2	24.000	34-12012P	F03FR01786
31,75	18	65,7	12		12,7	9,53	2	18.000	34-12412P	F03FR01788
38,1	19,05	67,25	12		12,7	12,7	2	16.000	34-12612P	F03FR01791
44,44	22,22	70,72	12		12,7	15,8	2	16.000	34-12712P	F03FR01794
50,8	25,4	73,9	12		12,7	19	2	16.000	34-12812P	F03FR01796
57,15	31,4	79,85	12		12,7	22,2	2	16.000	34-13012P	F03FR01798
63,5	31,3	79,75	12		12,7	25,4	2	12.000	34-13212P	F03FR01799
69,85	34,9	83,3	12		12,7	28,6	2	12.000	34-13412P	F03FR01801
76,2	38,1	86,6	12		12,7	31,8	2	12.000	34-13612P	F03FR01802
15,88	12,7	54,9		1/4	12,7	1,59	2	24.000	34-10025P	F03FR01765
19,05	12,7	55,2		1/4	12,7	3,18	2	24.000	34-10425P	F03FR01770
22,22	13,2	54,9		1/4	12,7	4,25	2	24.000	34-10825P	F03FR01773
25,4	12,7	55,2		1/4	12,7	6,35	2	24.000	34-11025P	F03FR01776
28,58	12,7	55,2		1/4	12,7	7,94	2	18.000	34-11225P	F03FR01779
31,75	18	59,7		1/4	12,7	9,53	2	18.000	34-11425P	F03FR01782
38,1	19,1	61,25		1/4	12,7	12,7	2	16.000	34-11625P	F03FR01785
25,4	12,7	61,2		1/2	12,7	6,35	2	24.000	34-12050P	F03FR01787
31,75	18	65,7		1/2	12,7	9,53	2	18.000	34-12450P	F03FR01790
38,1	19,1	67,25		1/2	12,7	12,7	2	16.000	34-12650P	F03FR01792
44,44	22,2	70,7		1/2	12,7	15,87	2	16.000	34-12750P	F03FR01795
50,8	25,4	73,9		1/2	12,7	19,05	2	16.000	34-12850P	F03FR01797
63,5	31,25	79,8		1/2	12,7	25,4	2	12.000	34-13250P	F03FR01800

By ordering a smaller ball bearing and step washer you will be able to obtain a different profile:

- The Ball bearing **3102M AA9** (Ø 9,53 mm) and the Step washer **FX07M AA9** for series 34-
- The Ball bearing **3102M AB9** (Ø 12,7 mm) and the Step washer **FX07M AB9** for series 36-



**Machines:**

Hand-held routers, table routers and CNC machines.

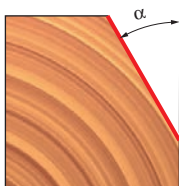
Bits with ball bearing are not recommended to be used on CNC machines.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

Easing edges, chamfer bits create a uniform chamfer on the edge of any workpiece.



# CHAMFER BITS

40-



Hand-held Routers

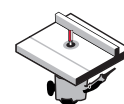
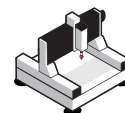


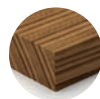
Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels



Wood Based Panels



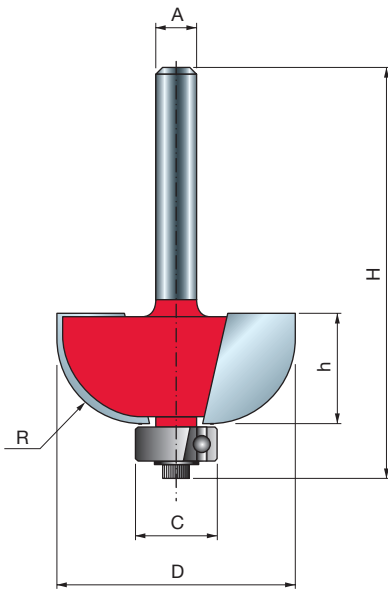
Wood Based Panels

D	h	H	A	C	α	Z	Max RPM	Freud Code	Art. No.	
mm	mm	mm	mm	inch	mm		1/min.			
18,15	12,7	54,9	6		12,7	15°	2	24.000	40-10006P	F03FR01906
21,77	25	67,3	6		12,7	11.3°	2	24.000	40-09406P	F03FR01900
23,6	12,7	54,9	6		12,7	25°	2	24.000	40-10206P	F03FR01912
24	12	44	6		•	30°	2	24.000	40-90206P	F03FR01929
24	14	46	6		•	15°	2	24.000	40-90006P	F03FR01927
25	8	40,3	6		•	45°	2	24.000	40-90406P	F03FR01931
25,4	25,1	67,25	6		12,7	15°	2	24.000	40-09806P	F03FR01903
30,1	22,5	64,7	6		12,7	22.5°	2	18.000	40-10106P	F03FR01909
31	9,5	52,3	6		12,7	45°	2	18.000	40-10506P	F03FR01917
33	11,5	54	6		12,7	45°	2	16.000	40-10406P	F03FR01914
33	19	61,6	6		12,7	30°	2	16.000	40-20206P	F03FR01925
44	18,5	61	6		12,7	45°	2	16.000	40-10606P	F03FR01919
18,15	12,7	54,9	8		12,7	15°	2	24.000	40-10008P	F03FR01907
21,77	25	67,3	8		12,7	11.3°	2	24.000	40-09408P	F03FR01901
23,6	12,7	54,9	8		12,7	25°	2	24.000	40-10208P	F03FR01913
24	12	44	8		•	30°	2	24.000	40-90208P	F03FR01930
24	14	46	8		•	15°	2	24.000	40-90008P	F03FR01928
25	8	40,3	8		•	45°	2	24.000	40-90408P	F03FR03255
25,4	25,1	67,25	8		12,7	15°	2	24.000	40-09808P	F03FR01904
30,1	22,5	64,7	8		12,7	22.5°	2	18.000	40-10108P	F03FR01910
31	9,5	52,3	8		12,7	45°	2	18.000	40-10508P	F03FR01918
33	11,5	54	8		12,7	45°	2	16.000	40-10408P	F03FR01915
33	19	61,6	8		12,7	30°	2	16.000	40-20208P	F03FR01926
44	18,5	61	8		12,7	45°	2	16.000	40-10608P	F03FR01920
21,77	25	73,3	12		12,7	11.3°	2	24.000	40-09412P	F03FR01902
25,4	25,1	73,25	12		12,7	15°	2	24.000	40-09812P	F03FR01905
30,1	22,5	70,7	12		12,7	22.5°	2	18.000	40-10112P	F03FR01911
44	18,5	67	12		12,7	45°	2	16.000	40-11412P	F03FR01922
62,1	25,5	74	12		12,7	45°	2	12.000	40-11812P	F03FR01924
18,15	12,7	54,9		1/4	12,7	15°	2	24.000	40-10025P	F03FR01908
33	11,5	53,9		1/4	12,7	45°	2	24.000	40-10425P	F03FR01916
41,5	15,9	58,4		1/4	12,7	45°	2	16.000	40-10625P	F03FR01921
43	18,5	67		1/2	12,7	45°	2	16.000	40-11450P	F03FR01923

- Without ball bearing.

# COVE BITS

30-



**Machines:**

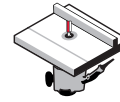
Hand-held routers and table routers.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

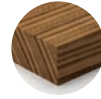
**Applications:**

Decorative concave edge for traditional furniture.



Hand-held Routers

Table Routers



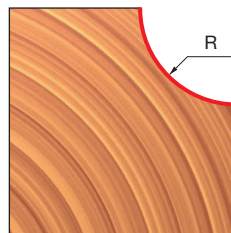
Softwood

Hardwood

Plywood

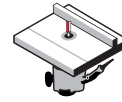
Wood Based Panels

D mm	h mm	H mm	A mm	inch	C mm	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
19,05	14	56	6		9,53	4,76	2	24.000	30-10006P	F03FR01694
22,23	13,2	54,7	6		9,53	6,35	2	24.000	30-10206P	F03FR01697
25,4	12,7	54,7	6		9,53	8	2	24.000	30-10306P	F03FR01700
31,75	12,7	55,2	6		12,7	9,53	2	18.000	30-10406P	F03FR01703
38,1	16,4	58,9	6		12,7	12,7	2	16.000	30-10606P	F03FR01706
19,05	14	56	8		9,53	4,75	2	24.000	30-10008P	F03FR01695
22,23	13,2	54,7	8		9,53	6,35	2	24.000	30-10208P	F03FR01698
25,4	12,7	54,7	8		9,53	8	2	24.000	30-10308P	F03FR01701
31,75	12,7	55,2	8		12,7	9,53	2	18.000	30-10408P	F03FR01704
38,1	16,4	58,9	8		12,7	12,7	2	16.000	30-10608P	F03FR01707
19,05	14	62,4	12		9,53	4,75	2	24.000	30-10012P	F03FR01696
22,23	12,7	60,7	12		9,53	6,35	2	24.000	30-11012P	F03FR01709
25,4	12,7	60,7	12		9,53	8	2	24.000	30-11112P	F03FR01710
31,75	12,7	61,2	12		12,7	9,5	2	18.000	30-11212P	F03FR01711
38,1	16,4	64,9	12		12,7	12,7	2	16.000	30-11412P	F03FR01713
22,23	13,2	54,7		1/4	9,53	6,35	2	24.000	30-10225P	F03FR01699
25,4	12,7	54,7		1/4	9,53	7,94	2	24.000	30-10325P	F03FR01702
31,75	12,7	55,2		1/4	12,7	9,5	2	18.000	30-10425P	F03FR01705
38,1	16,4	58,9		1/4	12,7	12,7	2	16.000	30-10625P	F03FR01708
31,75	12,7	61,2		1/2	12,7	9,53	2	18.000	30-11250P	F03FR01712
38,1	16,4	64,9		1/2	12,7	12,7	2	16.000	30-11450P	F03FR01714



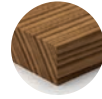
# CLASSICAL COVE BITS

30-



Hand-held Routers

Table Routers



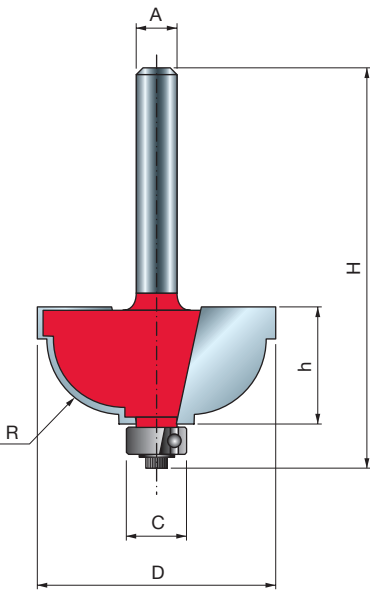
Softwood

Hardwood

Plywood

Wood Based Panels

D mm	h mm	H mm	A mm	C mm	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
28,58	13	54,2	6	9,53	4,8	2	18.000	<b>30-30406P</b>	F03FR01719
31,75	15,1	56,8	6	9,53	4,8	2	18.000	<b>30-20206P</b>	F03FR01715
28,58	13	54,2	8	9,53	4,8	2	18.000	<b>30-30408P</b>	F03FR01720
31,75	15,1	56,8	8	9,53	8	2	18.000	<b>30-20208P</b>	F03FR01716
28,58	13	60,2	12	9,53	4,8	2	18.000	<b>30-32412P</b>	F03FR01722
31,75	15,1	62,8	12	9,53	8	2	18.000	<b>30-22212P</b>	F03FR01718



**Machines:**

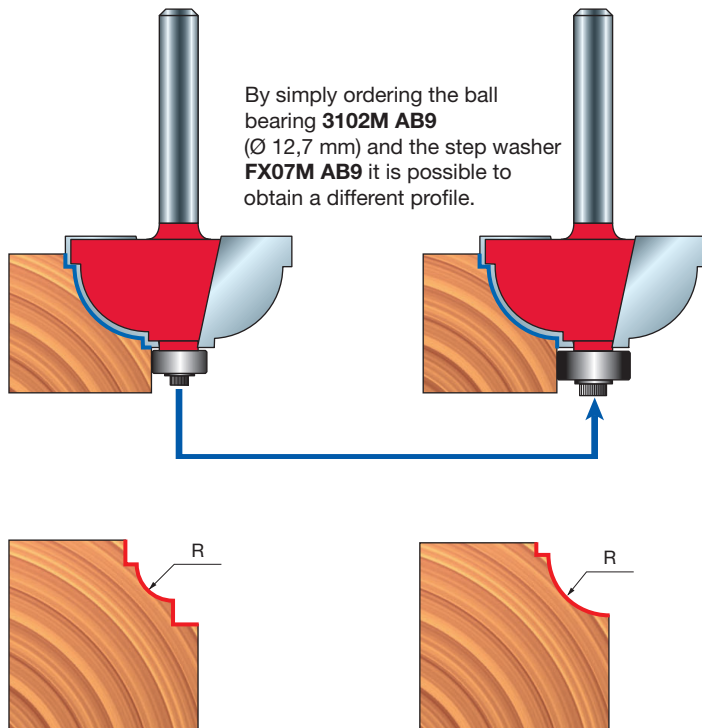
Hand-held routers and table routers.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

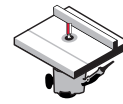
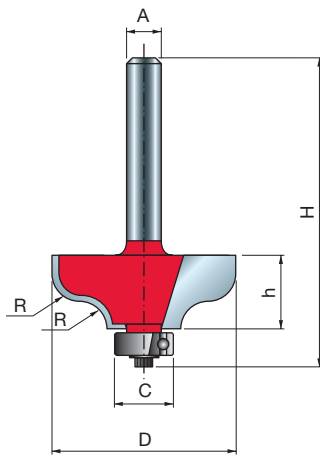
**Applications:**

Enhance edges and corners by adding an attractive cove profile, with a small fillet at the top and bottom.



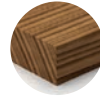
# OGEE FILLET BITS

38- 99-



Hand-held Routers

Table Routers



Softwood

Hardwood

Plywood

Wood Based Panels



**Machines:**

Hand-held routers and table routers.

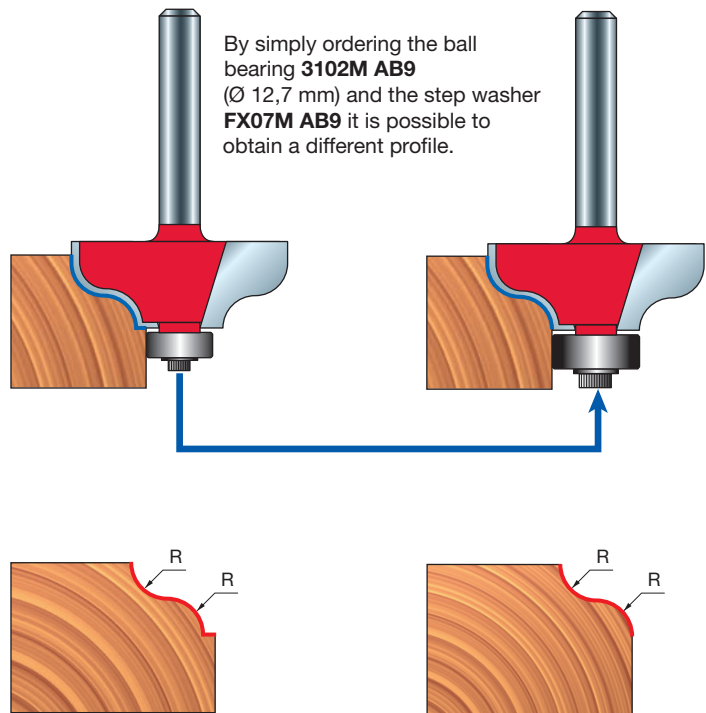
**Materials:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

Decorative edge detail on any workpiece.

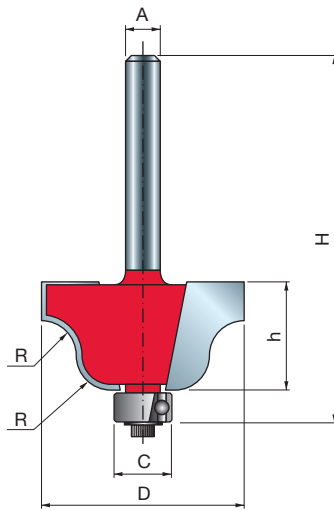
D mm	h mm	H mm	A mm	inch	C mm	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
31,75	12,2	53,9	6		9,53	4,8	2	18.000	<b>38-20206P</b>	F03FR01815
38,1	16,2	57,4	6		9,53	6,35	2	16.000	<b>38-20406P</b>	F03FR01818
31,75	12,2	53,9	8		9,53	4,8	2	18.000	<b>38-20208P</b>	F03FR01816
38,1	16,2	57,4	8		9,53	6,35	2	16.000	<b>38-20408P</b>	F03FR01819
31,75	12,2	59,9	12		9,53	4,8	2	18.000	<b>38-21212P</b>	F03FR01821
38,1	16,2	63,4	12		9,53	6,35	2	16.000	<b>38-21412P</b>	F03FR01822
31,75	12,2	53,9		1/4	9,53	4,76	2	18.000	<b>38-20225P</b>	F03FR01817
31,75	12,2	54,4		1/4	12,7	4,76	2	18.000	<b>38-15225P</b>	F03FR01814
38,1	16,2	57,4		1/4	9,53	6,35	2	16.000	<b>38-20425P</b>	F03FR01820
38,1	16,5	64,7		1/2	12,7	8,25	2	16.000	<b>99-00650P</b>	F03FR02412



By simply ordering the ball bearing **3102M AB9** (Ø 12,7 mm) and the step washer **FX07M AB9** it is possible to obtain a different profile.

# ROMAN OGEE BITS

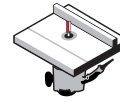
38-



**Machines:**  
Hand-held routers and table routers.

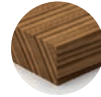
**Material:**  
Softwood, hardwood, plywood and wood based panels.

**Applications:**  
Decorative edge detail on any workpiece.



Hand-held Routers

Table Routers



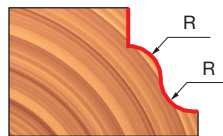
Softwood

Hardwood

Plywood

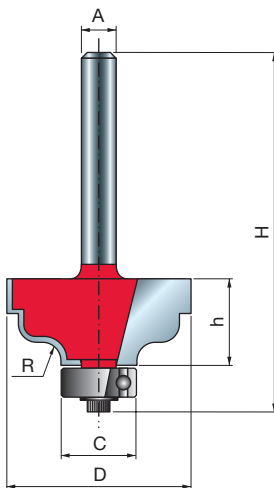
Wood Based Panels

D	h	H	A	C	R	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	inch	mm	mm	1/min.		
27	13,3	55,3	6	9,53	4	2	18.000	<b>38-10006P</b>	F03FR01805
35	18,5	60,5	6	9,53	6,35	2	16.000	<b>38-10206P</b>	F03FR01808
27	13,3	55,3	8	9,53	4	2	18.000	<b>38-10008P</b>	F03FR01806
35	18,5	60,5	8	9,53	6,35	2	16.000	<b>38-10208P</b>	F03FR01809
27	13,3	61,31	12	9,53	4	2	18.000	<b>38-10412P</b>	F03FR01811
35	18,5	66,5	12	9,53	6,35	2	16.000	<b>38-10612P</b>	F03FR01812
27	13,3	55,3	1/4	9,53	4	2	18.000	<b>38-10025P</b>	F03FR01807
35	18,5	66,5	1/4	9,53	6,35	2	16.000	<b>38-10225P</b>	F03FR01810
35	18,5	66,5	1/2	9,53	6,35	2	16.000	<b>38-10650P</b>	F03FR01813



# CLASSICAL ROMAN OGEE BITS

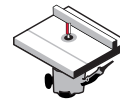
38- 99-



**Machines:**  
Hand-held routers and table routers.

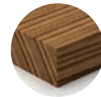
**Materials:**  
Softwood, hardwood, plywood and wood based panels.

**Applications:**  
Decorative edge detail on any workpiece.



Hand-held Routers

Table Routers



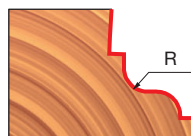
Softwood

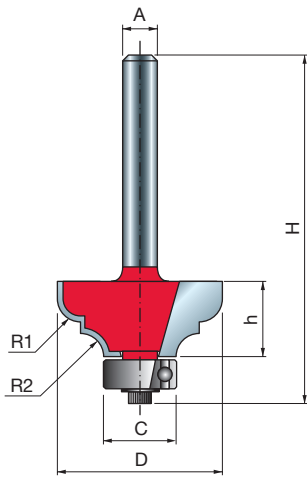
Hardwood

Plywood

Wood Based Panels

D	h	H	A	C	R	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	inch	mm	mm	1/min.		
31,75	15	56,7	6	12,7	3,18	2	18.000	<b>38-40206P</b>	F03FR01832
31,75	15	56,7	8	12,7	3,18	2	18.000	<b>38-40208P</b>	F03FR01833
34,92	14,3	62,8	12	12,7	4,8	2	16.000	<b>99-00512P</b>	F03FR02411
31,75	15	56,7	1/4	12,7	3,18	2	18.000	<b>38-40225P</b>	F03FR01834





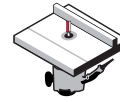
**Machines:**  
Hand-held routers and table routers.

**Materials:**  
Softwood, hardwood, plywood and wood based panels.

**Applications:**  
Decorative edge detail on any workpiece.

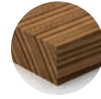
## CLASSICAL OGEE BITS

38- 99-



Hand-held Routers

Table Routers



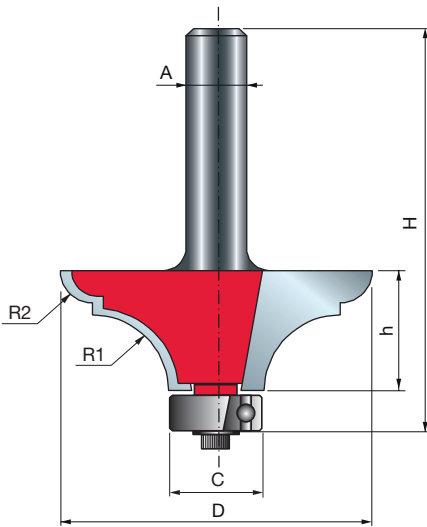
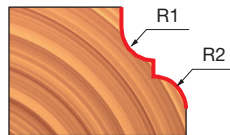
Softwood

Hardwood

Plywood

Wood Based Panels

D	h	H	A	C	R1	R2	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	inch	mm	mm		1/min.		
28,58	12,7	54,9	6	12,7	4	4	2	18.000	38-60206P	F03FR01838
34,92	18,3	60	6	12,7	6,35	4,76	2	16.000	38-60406P	F03FR01841
28,58	12,7	54,9	8	12,7	4	4	2	18.000	38-60208P	F03FR01839
34,92	18,3	60	8	12,7	6,35	4,76	2	16.000	38-60408P	F03FR01842
28,58	12,7	61,2	12	12,7	4	4	2	18.000	38-61212P	F03FR01843
34,92	17,5	65,7	12	12,7	6,35	4,76	2	16.000	38-61412P	F03FR01844
28,58	12,7	54,9		1/4	12,7	3,97	2	18.000	38-60225P	F03FR01840
34,93	14,7	62,4		1/2	9,53	5,35	2	16.000	99-00950P	F03FR02415
34,92	17,5	65,7		1/2	12,7	6,35	2	16.000	38-61450P	F03FR01845



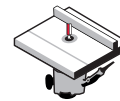
**Machines:**  
Hand-held routers and table routers.

**Materials:**  
Softwood, hardwood, plywood and wood based panels.

**Applications:**  
Create a bold effect on furniture of all types.

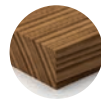
## TABLE TOP CLASSICAL BOLD BITS

99-



Hand-held Routers

Table Routers



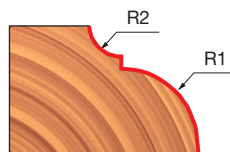
Softwood

Hardwood

Plywood

Wood Based Panels

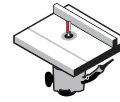
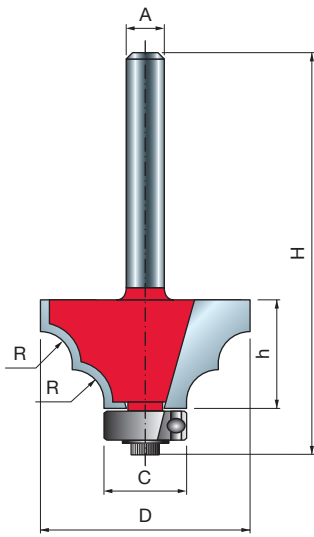
D	h	H	A	C	R1	R2	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm	mm	mm		1/min.		
41,3	15,9	58,4	8	12,7	10	4,3	2	16.000	99-01108P	F03FR02416
41,3	15,9	64,4	12	12,7	10	4,3	2	16.000	99-01112P	F03FR02417





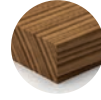
# DOUBLE BEAD BITS

38-



Hand-held Routers

Table Routers



Softwood

Hardwood

Plywood

Wood Based Panels



D	h	H	A	C	R	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm	mm		1/min.		
32,7	15	57,2	6	12,7	5	2	16.000	38-90006P	F03FR01852
32,7	15	57,2	8	12,7	5	2	16.000	38-90008P	F03FR01853

**Machines:**

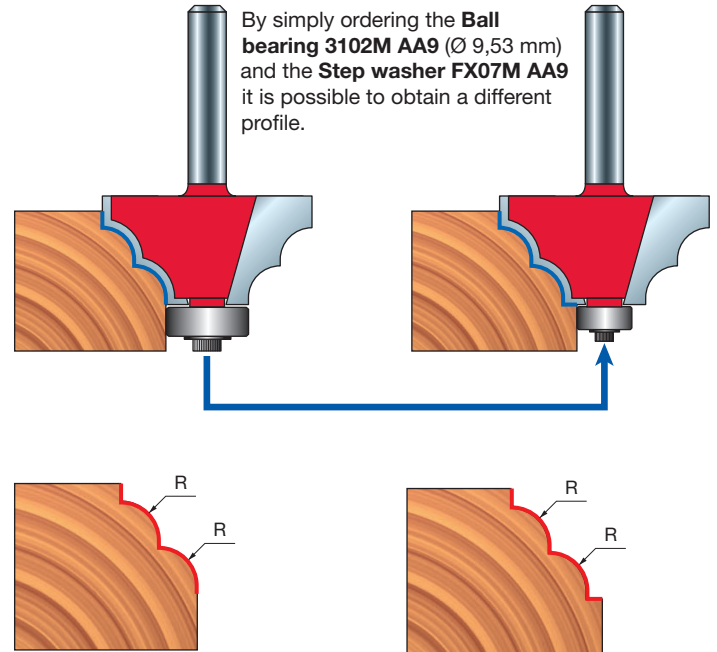
Hand-held routers and table routers.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

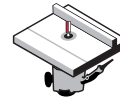
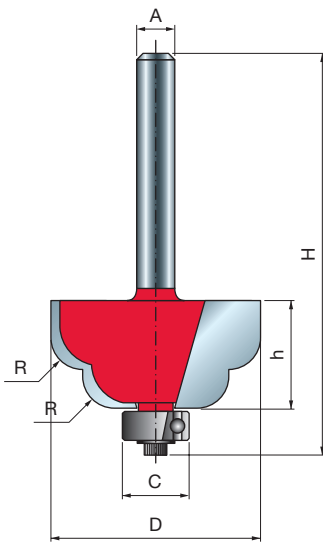
**Applications:**

Create two beads in one pass in the surface of the workpiece.



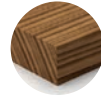
# DOUBLE COVE BITS

38-



Hand-held Routers

Table Routers



Softwood

Hardwood

Plywood

Wood Based Panels



**Machines:**

Hand-held routers and table routers.

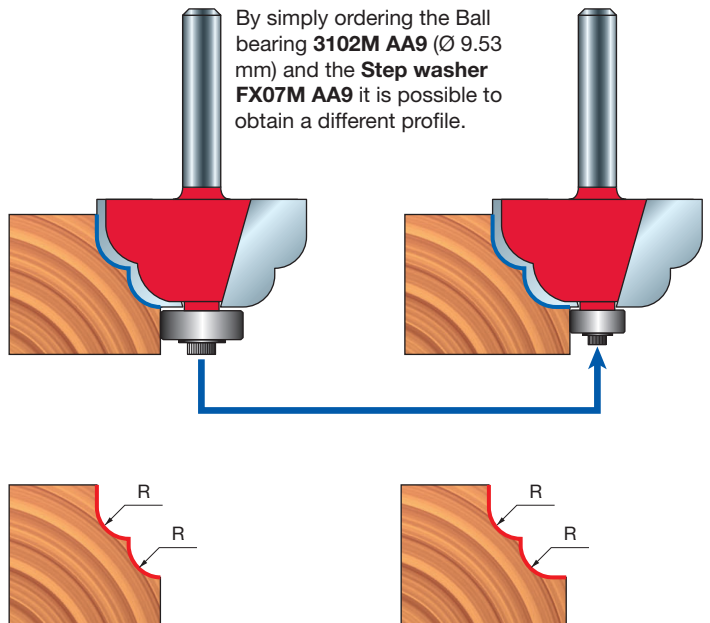
**Materials:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

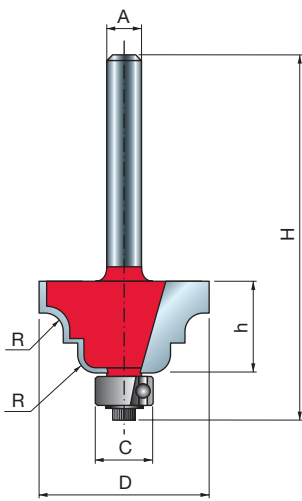
Create two graceful curves to add character to the workpiece.

D	h	H	A	C	R	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	inch	mm	mm	1/min.		
32,7	15	57,2	6	12,7	5	2	16.000	<b>38-95006P</b>	F03FR01854
32,7	15	57,2	8	12,7	5	2	16.000	<b>38-95008P</b>	F03FR01855
38,9	18,3	60,8	1/4	9,53	6,35	2	16.000	<b>38-30425P</b>	F03FR01825



## COVE AND BEAD BITS

38-



**Machines:**

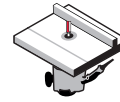
Hand-held routers and table routers.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

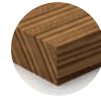
**Applications:**

Decorative edge detail on any workpiece.



Hand-held Routers

Table Routers



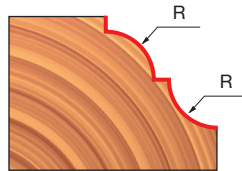
Softwood

Hardwood

Plywood

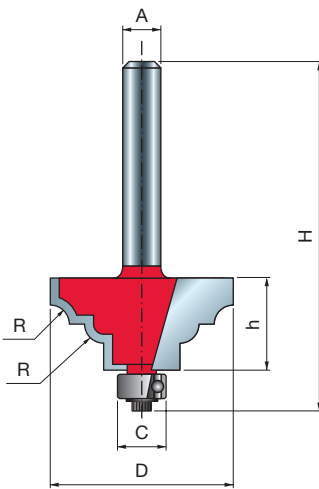
Wood Based Panels

D mm	h mm	H mm	A mm	C mm	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
29,38	13,5	55,5	6	9,53	3,97	2	18.000	<b>38-30606P</b>	F03FR01826
38,9	18,3	60	6	9,53	6,35	2	16.000	<b>38-30406P</b>	F03FR01823
29,38	13,5	55,5	8	9,53	3,97	2	18.000	<b>38-30608P</b>	F03FR01827
38,9	18,3	60	8	9,53	6,35	2	16.000	<b>38-30408P</b>	F03FR01824
29,38	13,5	61,2	12	9,53	3,97	2	18.000	<b>38-31212P</b>	F03FR01829
38,92	18,3	66	12	9,53	6,35	2	16.000	<b>38-31412P</b>	F03FR01831



## FILLET COVE AND BEAD BITS

38-



**Machines:**

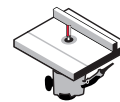
Hand-held routers and table routers.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

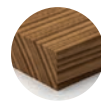
**Applications:**

Decorative edge detail on any workpiece.



Hand-held Routers

Table Routers



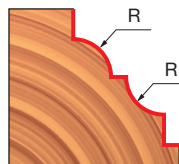
Softwood

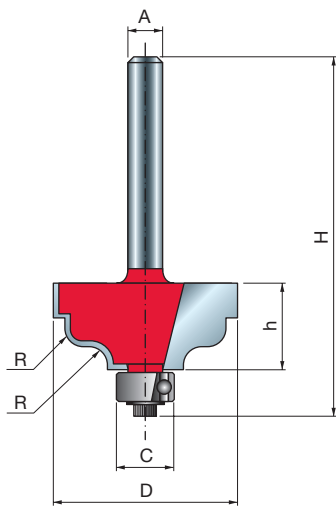
Hardwood

Plywood

Wood Based Panels

D mm	h mm	H mm	A mm	C mm	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
32,7	14,5	56,7	6	12,7	3	2	16.000	<b>38-80006P</b>	F03FR01846
36,7	16,5	58,7	6	12,7	4	2	16.000	<b>38-80206P</b>	F03FR01848
40,7	18	60,2	6	12,7	5	2	16.000	<b>38-80406P</b>	F03FR01850
32,7	14,5	56,7	8	12,7	3	2	16.000	<b>38-80008P</b>	F03FR01847
36,7	16,5	58,7	8	12,7	4	2	16.000	<b>38-80208P</b>	F03FR01849
40,7	18	60,2	8	12,7	5	2	16.000	<b>38-80408P</b>	F03FR01851





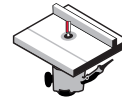
**Machines:**  
Hand-held routers and table routers.

**Materials:**  
Softwood, hardwood, plywood and wood based panels.

**Applications:**  
Decorative edge detail on any workpiece.

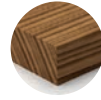
## DOUBLE FILLET OGEE BITS

38-



Hand-held Routers

Table Routers



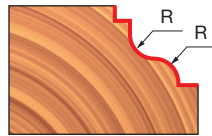
Softwood

Hardwood

Plywood

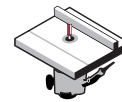
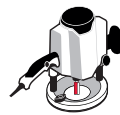
Wood Based Panels

D mm	h mm	H mm	A mm	A inch	C mm	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
31,75	15	56,2	6		9,53	3,18	2	18.000	38-45206P	F03FR01835
31,75	15	56,2	8		9,53	3,18	2	18.000	38-45208P	F03FR01836
31,75	15	56,2		1/4	9,53	3,18	2	18.000	38-45225P	F03FR01837



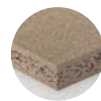
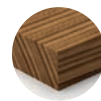
## TRADITIONAL BEADING BITS

80-



Hand-held Routers

Table Routers

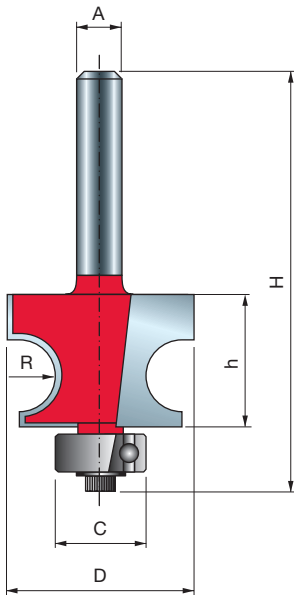


Softwood

Hardwood

Plywood

Wood Based Panels

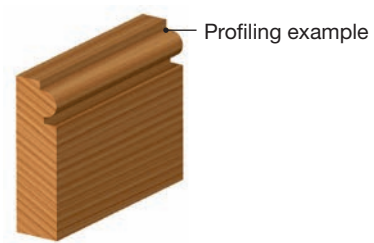
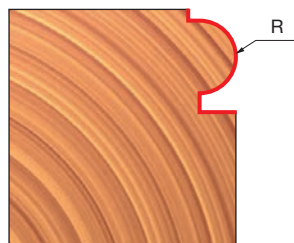


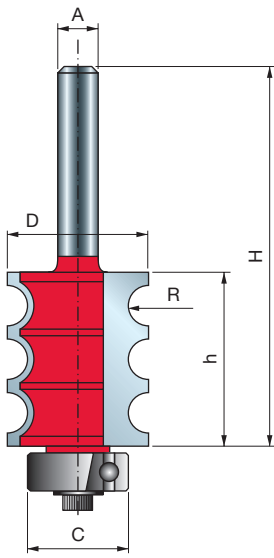
**Machines:**  
Hand-held routers and table routers.

**Materials:**  
Softwood, hardwood, plywood and wood based panels.

**Applications:**  
Create single beads in one pass in the surface of the workpiece.

D mm	h mm	H mm	A mm	C mm	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
22,23	14,3	56,9	6	12,7	3,18	2	24.000	80-10206P	F03FR02192
25,4	17,5	60	6	12,7	4,76	2	24.000	80-10406P	F03FR02195
30,17	22,2	64,2	6	12,7	7,14	2	18.000	80-10806P	F03FR02198
22,23	14,3	57,1	8	12,7	3,18	2	24.000	80-10208P	F03FR02193
25,4	17,5	60	8	12,7	4,76	2	24.000	80-10408P	F03FR02196
30,17	22,2	64,2	8	12,7	7,14	2	18.000	80-10808P	F03FR02199
22,23	14,3	62,9	12	12,7	3,18	2	24.000	80-12212P	F03FR02201
25,4	17,5	66,4	12	12,7	4,76	2	24.000	80-12412P	F03FR02203
30,17	22,2	70,6	12	12,7	7,14	2	18.000	80-12812P	F03FR02204





**Machines:**

Hand-held routers and table routers.

**Materials:**

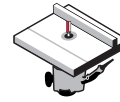
Softwood, hardwood, plywood and wood based panels.

**Applications:**

Create three beads in one pass in the surface of the workpiece.

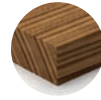
## TRIPLE BEADING BITS

80-



Hand-held Routers

Table Routers



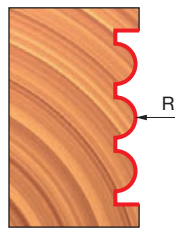
Softwood

Hardwood

Plywood

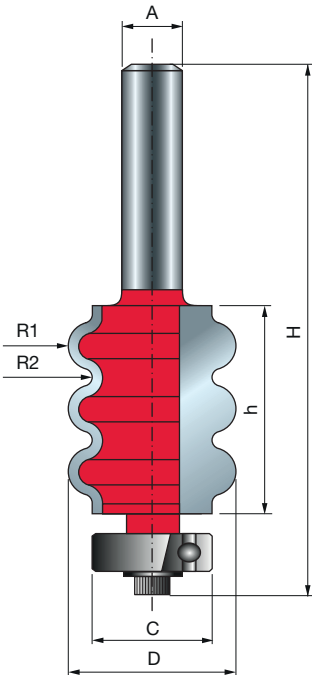
Wood Based Panels

D mm	h mm	H mm	A mm	C mm	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
22,24	27,4	70,9	6	15,88	3,18	2	18.000	80-55206P	F03FR02205
22,24	27,4	70,9	8	15,88	3,18	2	24.000	80-55208P	F03FR02206
22,24	27,4	76,9	12	15,88	3,18	2	24.000	80-57212P	F03FR02207



## TRIPLE FLUTING BITS

84-



**Machines:**

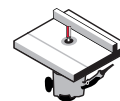
Hand-held routers and table routers.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

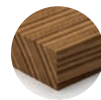
**Applications:**

Produce multiple flutes on the workpiece.



Hand-held Routers

Table Routers



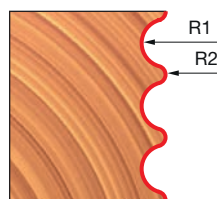
Softwood

Hardwood

Plywood

Wood Based Panels

D mm	h mm	H mm	A mm	C mm	R1 mm	R2 mm	Z	Max RPM 1/min.	Freud Code	Art. No.
22,24	27,4	70,9	6	15,88	3,18	1,16	2	24.000	84-10606P	F03FR02220
22,24	27,4	70,9	8	15,88	3,18	1,16	2	24.000	84-10608P	F03FR02221
22,24	27,4	76,9	12	15,88	3,18	1,16	2	24.000	84-12612P	F03FR02222





# TOP BEARING OGEE AND COVE MOULDING BITS

23-

**Machines:**  
Table routers.

**Materials:**  
Softwood, hardwood, plywood and wood based panels.

**Applications:**  
Decorative edge detail on any workpiece.

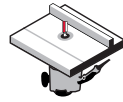
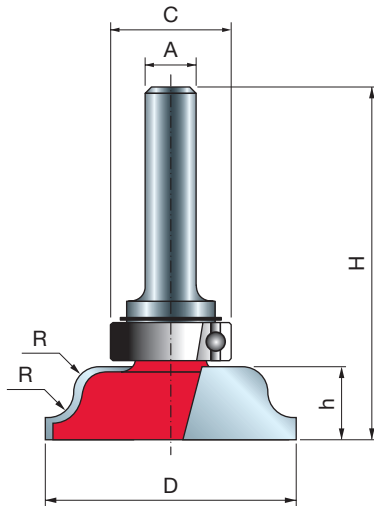


Table Routers

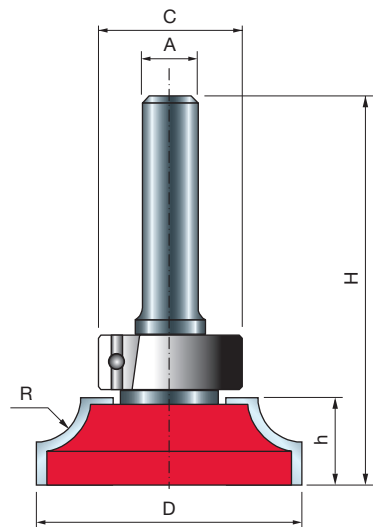
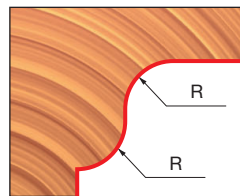


Softwood    Hardwood    Plywood    Wood Based Panels



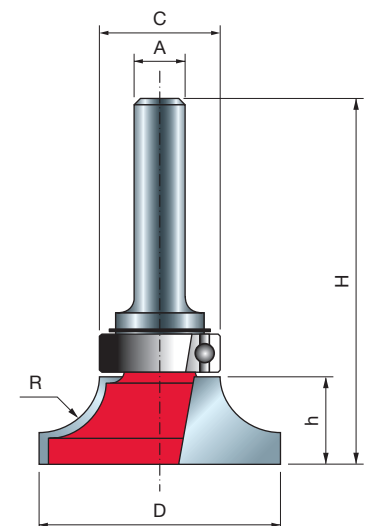
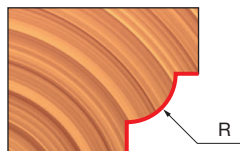
Type A

D mm	h mm	H mm	A mm	C mm	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
39,5	11,5	54,6	8	19	4	2	16.000	23-10008P	F03FR01654
39,5	11,5	58	12	19	4	2	16.000	23-10012P	F03FR01655
54	11,5	58	12	19	4	2	16.000	23-10212P	F03FR01656
60,5	17,3	63,8	12	19	6,35	2	12.000	23-10412P	F03FR01657



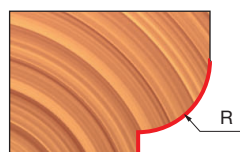
Type B

D mm	h mm	H mm	A mm	C mm	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
38	12,5	55,6	8	19	6,35	2	16.000	23-20008P	F03FR01658
38	12,5	59	12	19	6,35	2	16.000	23-20012P	F03FR01659



Type C

D mm	h mm	H mm	A mm	C mm	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
35	13,2	56,3	8	19	8	2	16.000	23-20208P	F03FR01660
38	14,5	57,6	8	19	9,53	2	16.000	23-20408P	F03FR01662
35	13,2	59,7	12	19	8	2	16.000	23-20212P	F03FR01661
38	14,5	61	12	19	9,53	2	16.000	23-20412P	F03FR01663





# TABLE EDGE AND HAND RAIL BITS

99-

**Machines:**  
Table routers.

**Materials:**  
Softwood, hardwood, plywood and wood based panels.

**Applications:**  
Rout elegant table and furniture detail, hand rail shapes and much more.

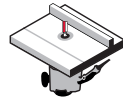


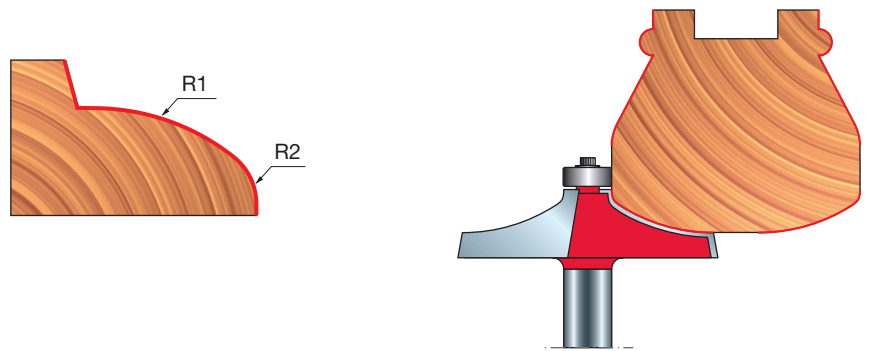
Table Routers



Softwood    Hardwood    Plywood    Wood Based Panels

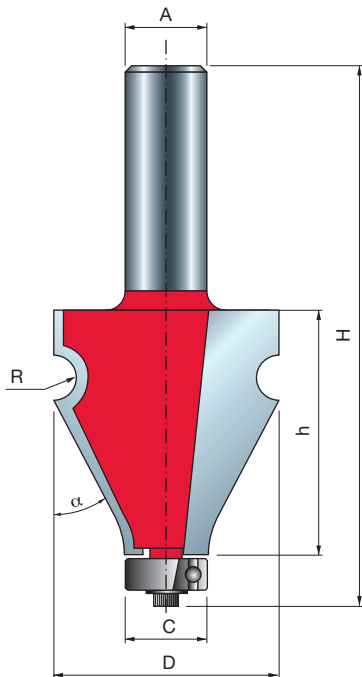
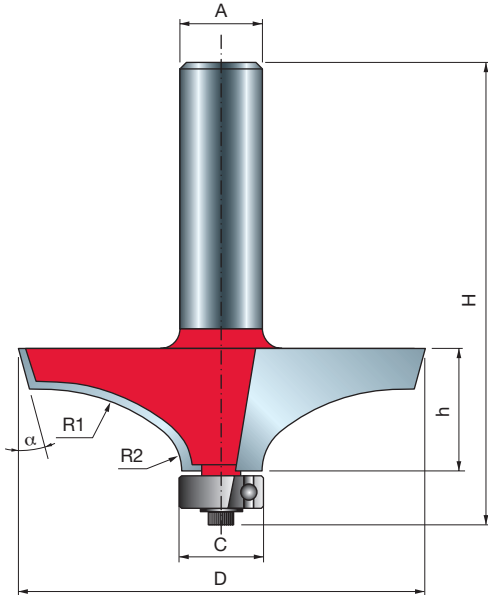
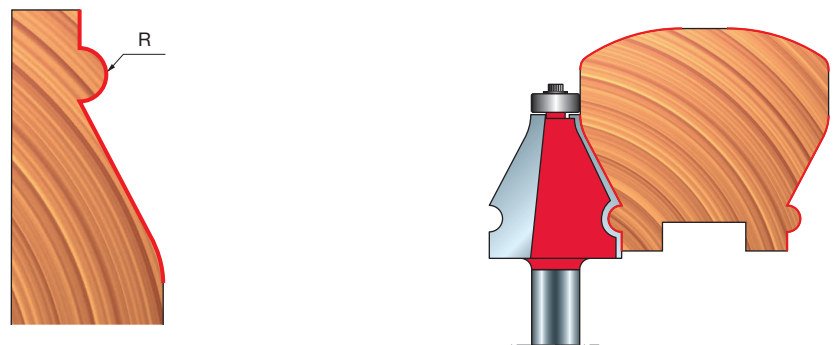
Type A

D mm	h mm	H mm	A mm	C mm	R1 mm	R2 mm	$\alpha$	Z	Max RPM 1/min.	Freud Code	Art. No.
63,5	18	66,2	12	12,7	30	8	15°	2	12.000	99-02712P	F03FR02421



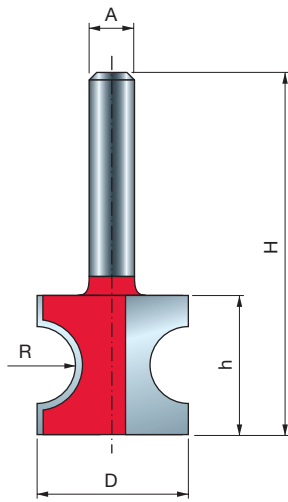
Type B

D mm	h mm	H mm	A mm	C mm	R mm	$\alpha$	Z	Max RPM 1/min.	Freud Code	Art. No.
35	38,5	86,6	12	12,7	3,18	25°	2	16.000	99-07212P	F03FR02456



# HALF ROUND BITS

82-



Hand-held Routers

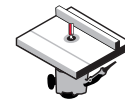
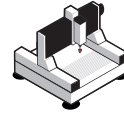


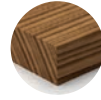
Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels



**Machines:**

Hand-held routers, table routers and CNC machines.

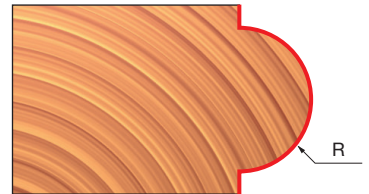
**Materials:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

Perform fully rounded semicircular edge on any workpiece.

D	h	H	A	R	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	inch		1/min.		
19	12,4	44,4	6	3,18	2	24.000	<b>82-10206P</b>	F03FR02208
22,22	19,5	51,5	6	4,8	2	24.000	<b>82-10406P</b>	F03FR02210
25,4	22,9	54,9	6	6,35	2	24.000	<b>82-10606P</b>	F03FR02213
19	12,4	44,4	8	3,18	2	24.000	<b>82-10208P</b>	F03FR02209
22,22	19,5	51,5	8	4,76	2	24.000	<b>82-10408P</b>	F03FR02211
25,4	22,9	54,9	8	6,35	2	24.000	<b>82-10608P</b>	F03FR02214
19	12,4	53,4	12	3,2	2	24.000	<b>82-11012P</b>	F03FR02215
22,22	19,5	60,5	12	4,76	2	24.000	<b>82-11212P</b>	F03FR02216
25,4	22,9	64,9	12	6,35	2	24.000	<b>82-11412P</b>	F03FR02217
37	29,05	71,05	12	9,5	2	16.000	<b>82-11612P</b>	F03FR02218
45,9	35,4	73,4	12	12,7	2	16.000	<b>82-11812P</b>	F03FR02219
22	19,5	51,5		1/4	2	24.000	<b>82-10425P</b>	F03FR02212







# MULTI-PROFILE BITS

99-

**Machines:**  
Table routers.

**Materials:**  
Softwood, hardwood, plywood and wood based panels.

**Applications:**  
Produce an endless number of profile designs by varying the height and fence settings and making multiple passes.

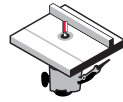
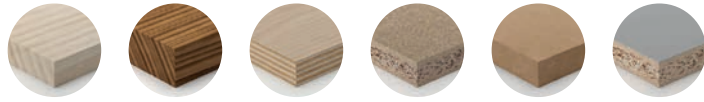
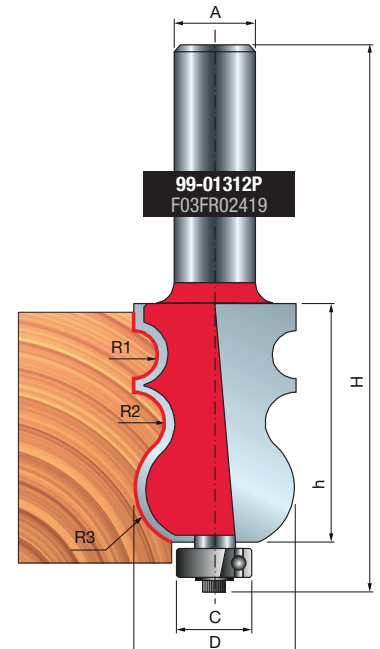
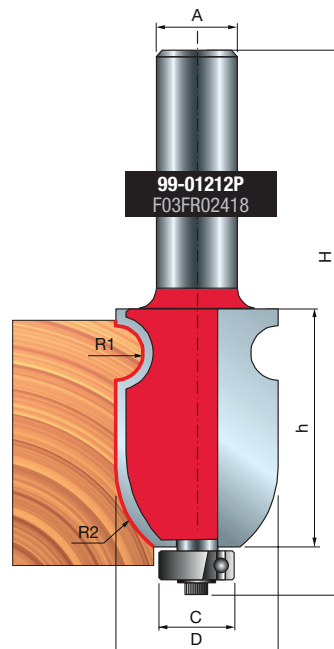
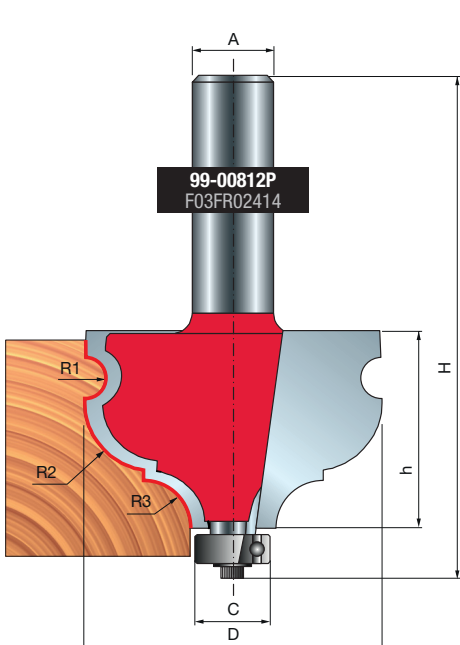
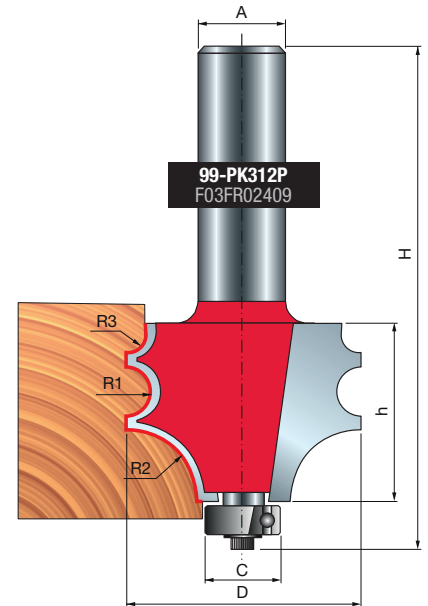
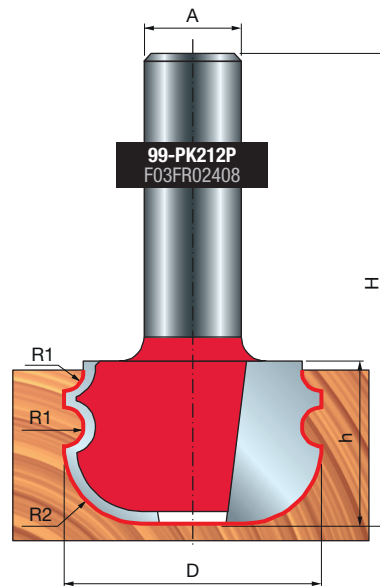
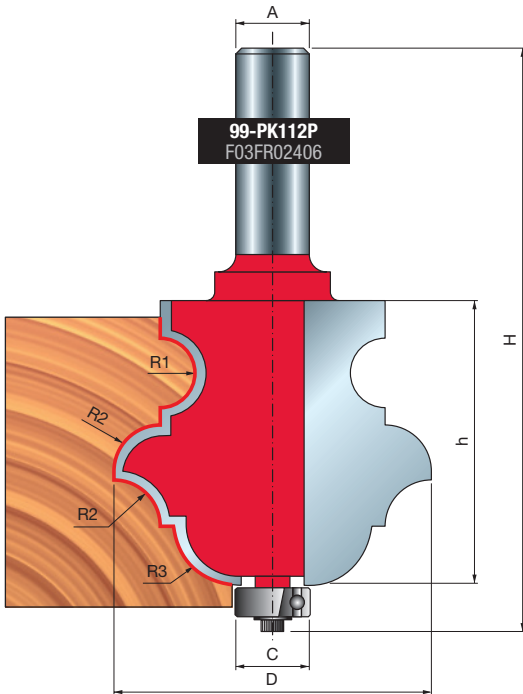


Table Routers



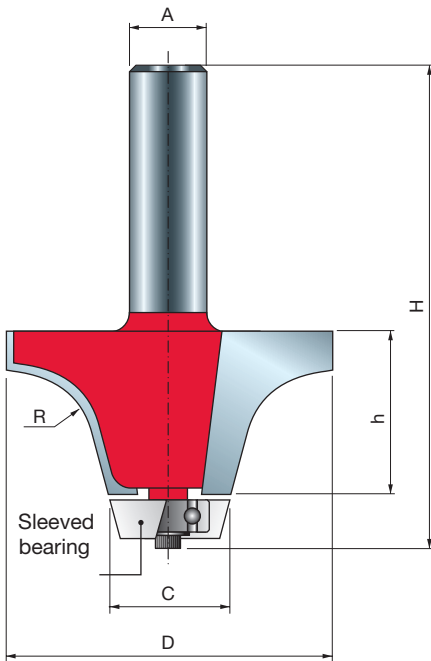
Softwood    Hardwood    Plywood    Wood Based Panels

D	h	H	A	C	R1	R2	R3	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm	mm	mm	mm		1/min.		
54,7	49	102	12	12,7	6	8	10	2	10.000	99-PK112P	F03FR02406
31,75	20	58	12	-	2,4	9,53	-	2	18.000	99-PK212P	F03FR02408
31,75	23,8	72	12	12,7	3,2	9,53	2,4	2	18.000	99-PK312P	F03FR02409
44,44	29	77,1	12	12,7	3	10,5	7	2	16.000	99-00812P	F03FR02414
23,8	35	83,5	12	12,7	4	15	-	2	24.000	99-01212P	F03FR02418
23,8	35	83,5	12	12,7	3,5	4,5	8,5	2	24.000	99-01312P	F03FR02419



# ROUND OVER BOWL BITS

85-



Hand-held Routers

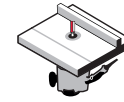


Table Routers



Softwood



Hardwood



Plywood



Wood Based Panels



Wood Based Panels



Solid Surfaces

D	h	H	A	C	R	Z	Max RPM	Freud Code	Art. No.	
mm	mm	mm	mm	inch	mm		1/min.			
54	25,4	74,6	12		22,2	12,7	2	16.000	85-00112P	F03FR02223
57,2	31,8	81	12		22,2	12,7	2	12.000	85-00312P	F03FR02225
50,8	25,4	73,6		1/2	19,1	12,7	2	16.000	85-00150P	F03FR02224



**Machines:**

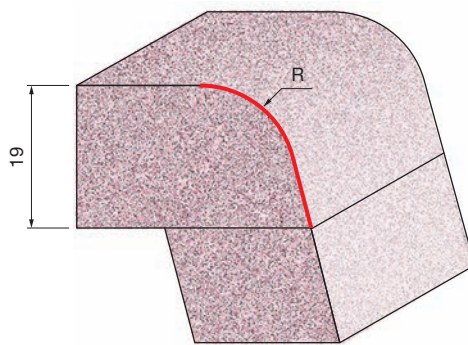
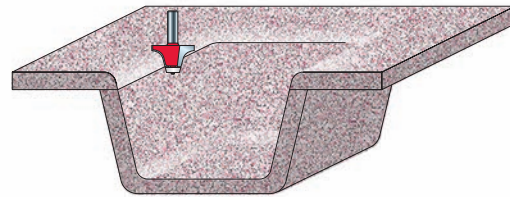
Hand-held routers and table routers.

**Materials:**

Softwood, hardwood, plywood, wood composites and all solid surface materials.

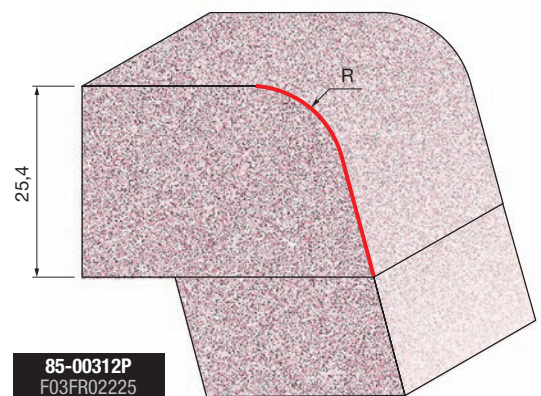
**Applications:**

Designed to trim the joint between solid surface countertops and solid surface sink bowls, in order to create a smooth, rounded edge.



85-00112P  
F03FR02223

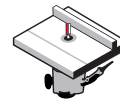
85-00150P  
F03FR02224



85-00312P  
F03FR02225

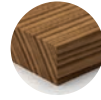
# OGEE BOWL BITS

85-



Hand-held Routers

Table Routers



Softwood

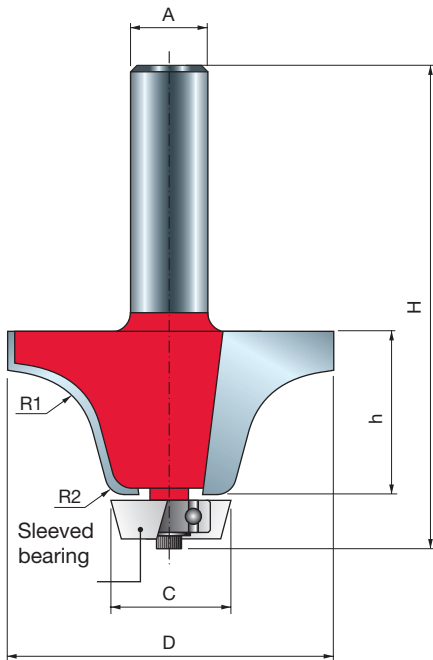
Hardwood

Plywood

Wood Based Panels

Solid Surfaces

D mm	h mm	H mm	A mm	C mm	R1 mm	R2 mm	Z	Max RPM 1/min.	Freud Code	Art. No.
54	25,4	74,6	12	19,2	12,7	6,35	2	16.000	85-00512P	F03FR02226
57,2	31,8	80,9	12	19,2	12,7	6,35	2	12.000	85-00712P	F03FR02227



**Machines:**

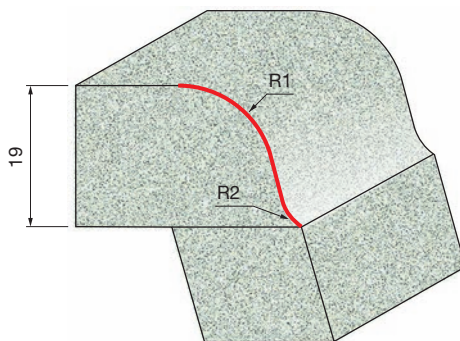
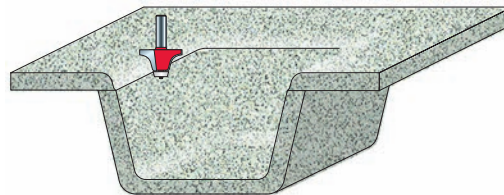
Hand-held routers and table routers.

**Materials:**

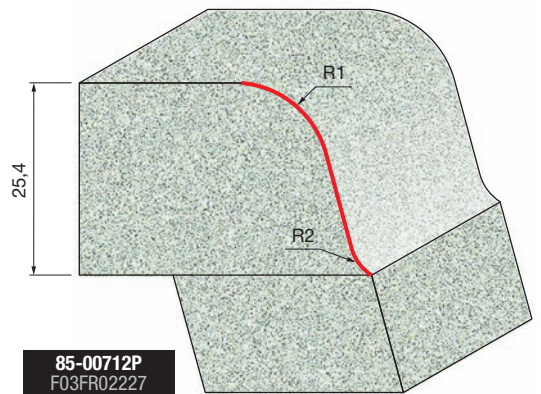
Softwood, hardwood, plywood, wood based panels and all solid surface materials.

**Applications:**

Trim the counter flush with the bowl while creating an ogee edge.



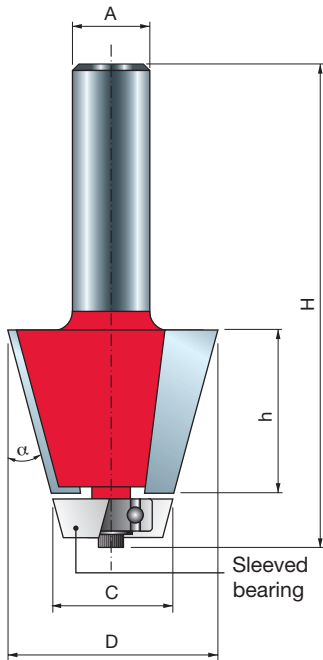
85-00512P  
F03FR02226



85-00712P  
F03FR02227

# BEVEL BOWL BIT

85-



Hand-held Routers

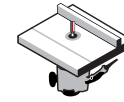
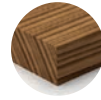


Table Routers



Softwood



Hardwood



Plywood



Wood Based Panels



Wood Based Panels



Solid Surfaces

D	h	H	A	C	$\alpha$	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm			1/min.		
35,6	25,4	78,1	12	22,2	15°	2	16.000	85-00912P	F03FR02228



**Machines:**

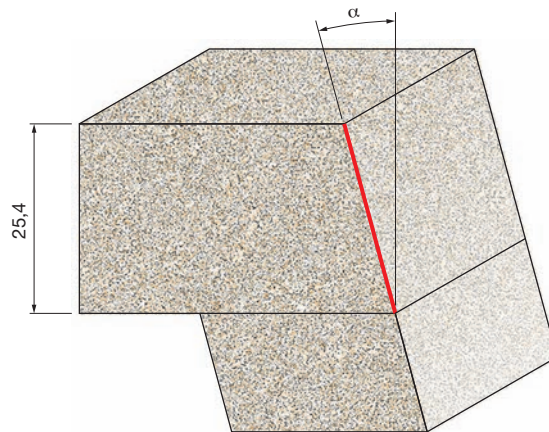
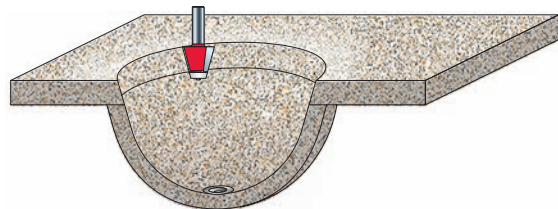
Hand-held routers and table routers.

**Materials:**

Softwood, hardwood, plywood, wood based panels and all solid surface materials.

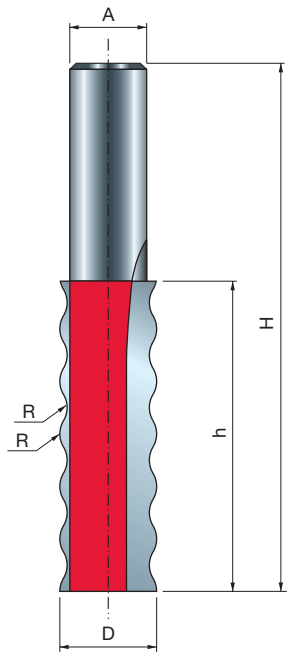
**Applications:**

Designed to trim the joint between solid surface countertops and solid surface sink bowls to create a smooth, chamfered edge.



# WAVY JOINT BIT

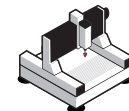
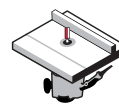
85-



Hand-held Routers



Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels



Solid Surfaces

D	h	H	A	R	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm		1/min.		
16	51,3	88	12	4	2	24.000	85-03312P	F03FR02229



**Machines:**

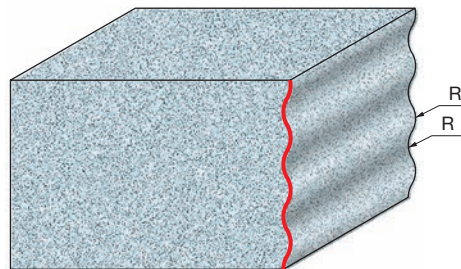
Hand-held routers, table routers and CNC machines.

**Materials:**

Softwood, hardwood, plywood, wood based panels and all solid surface materials.

**Applications:**

Increase gluing area for a stronger joint.

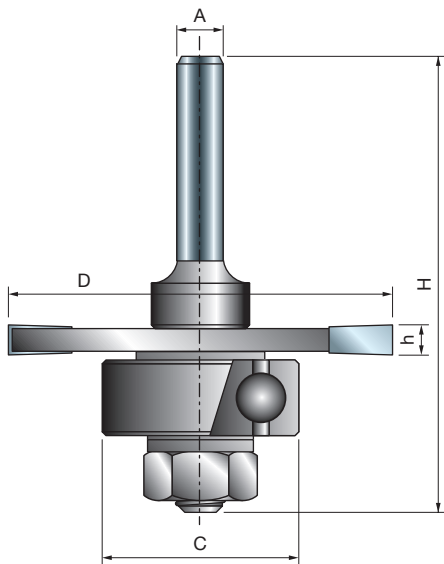


# Joinery Bits



# WING SLOTTING CUTTERS

63-



**Machines:**

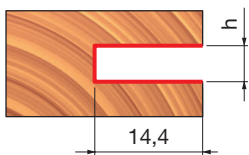
Hand-held routers and table routers.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

A great choice to mill slots and grooves for T-moldings, spline joints, tongue and groove joints and many other applications.



Hand-held Routers

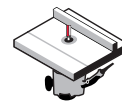


Table Routers



Softwood



Hardwood






Plywood



Wood Based Panels

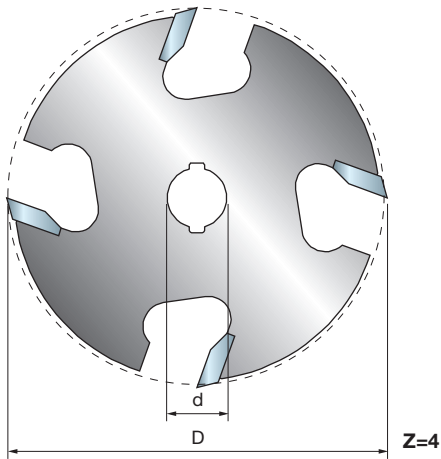
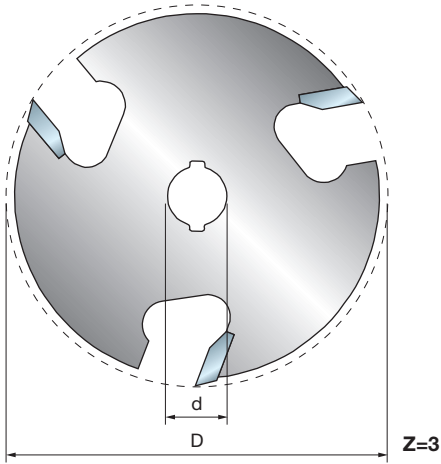


D mm	h mm	H mm	A mm	C mm	Z	Max RPM 1/min.	Freud Code	Art. No.
50,8	1,5	60,3	6	22	3	24.000	63-09906P	F03FR02049
50,8	1,6	60,3	6	22	3	24.000	63-10006P	F03FR02055
50,8	2	60,3	6	22	3	24.000	63-10406P	F03FR02058
50,8	2,4	60,3	6	22	3	24.000	63-10606P	F03FR02061
50,8	2,5	60,3	6	22	3	24.000	63-11306P	F03FR02079
50,8	3	60,3	6	22	3	24.000	63-11406P	F03FR02085
50,8	3,2	60,3	6	22	3	24.000	63-10806P	F03FR02064
50,8	3,5	60,3	6	22	3	24.000	63-11506P	F03FR02091
50,8	4	60,3	6	22	3	24.000	63-10906P	F03FR02067
50,8	4,8	60,3	6	22	3	24.000	63-11006P	F03FR02070
50,8	5	60,3	6	22	3	24.000	63-11606P	F03FR02097
50,8	6	60,3	6	22	3	24.000	63-11106P	F03FR02073
50,8	6,4	60,3	6	22	3	24.000	63-11206P	F03FR02076
50,8	1,5	60,3	8	22	3	24.000	63-09908P	F03FR02052
50,8	2,5	60,3	8	22	3	24.000	63-11308P	F03FR02082
50,8	3	60,3	8	22	3	24.000	63-11408P	F03FR02088
50,8	3,5	60,3	8	22	3	24.000	63-11508P	F03FR02094
50,8	5	60,3	8	22	3	24.000	63-11608P	F03FR02100
50,8	1,5	60,3	12	22	3	24.000	63-14912P	F03FR02105
50,8	1,6	60,3	12	22	3	24.000	63-15012P	F03FR02108
50,8	2	60,3	12	22	3	24.000	63-15412P	F03FR02111
50,8	2,4	60,3	12	22	3	24.000	63-15612P	F03FR02114
50,8	2,5	60,3	12	22	3	24.000	63-16312P	F03FR02132
50,8	3	60,3	12	22	3	24.000	63-16412P	F03FR03241
50,8	3,2	60,3	12	22	3	24.000	63-15812P	F03FR02117
50,8	3,5	60,3	12	22	3	24.000	63-16512P	F03FR02137
50,8	4	60,3	12	22	3	24.000	63-15912P	F03FR02120
50,8	4,8	60,3	12	22	3	24.000	63-16012P	F03FR02123
50,8	5	60,3	12	22	3	24.000	63-16612P	F03FR02140
50,8	6	60,3	12	22	3	24.000	63-16112P	F03FR02126
50,8	6,4	60,3	12	22	3	24.000	63-16212P	F03FR02129

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Washer	17 x 8,4 x 1,6	2617M AG9	F03F010005
	Hex nut	7,94 x 6,75	2610M BB9	F03F010003
	Ball bearing	22 x 8 x 7,1	3102M AC9	F03F010008

# SLOTING CUTTERS

56- 58-



**Machines:**

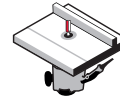
Hand-held routers and table routers.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

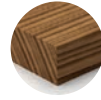
**Applications:**

Produce slots and grooves on the workpiece. Slotting cutters are to be used with Freud's arbors series 60 (page 279) which come separately.



Hand-held Routers

Table Routers



Softwood

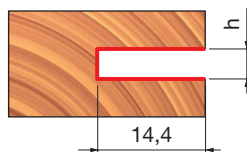
Hardwood

Plywood

Wood Based Panels

D mm	h mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
50,8	1,5	8	3	24.000	56-09908P	F03FR02014
50,8	1,6	8	3	16.000	56-10008P	F03FR02015
50,8	2	8	3	24.000	56-10408P	F03FR02016
50,8	2,4	8	3	16.000	56-10608P	F03FR02017
50,8	2,5	8	3	24.000	56-11308P	F03FR02028
50,8	3	8	3	24.000	56-11408P	F03FR02029
50,8	3,2	8	3	24.000	56-10808P	F03FR02019
50,8	3,5	8	3	24.000	56-11508P	F03FR02030
50,8	4	8	3	24.000	56-10908P	F03FR02021
50,8	4,8	8	3	24.000	56-11008P	F03FR02023
50,8	5	8	3	24.000	56-11608P	F03FR02031
50,8	6	8	3	24.000	56-11108P	F03FR02025
50,8	6,4	8	3	24.000	56-11208P	F03FR02026

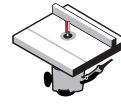
D mm	h mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
50,8	1,5	8	4	16.000	58-09908P	F03FR02032
50,8	2	8	4	16.000	58-10408P	F03FR02033
50,8	2,5	8	4	16.000	58-11308P	F03FR02036
50,8	3	8	4	16.000	58-11408P	F03FR02037
50,8	5	8	4	24.000	58-11608P	F03FR02038
50,8	6	8	4	16.000	58-11108P	F03FR02034





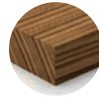
# SLOTING CUTTER ARBORS

60-



Hand-held Routers

Table Routers

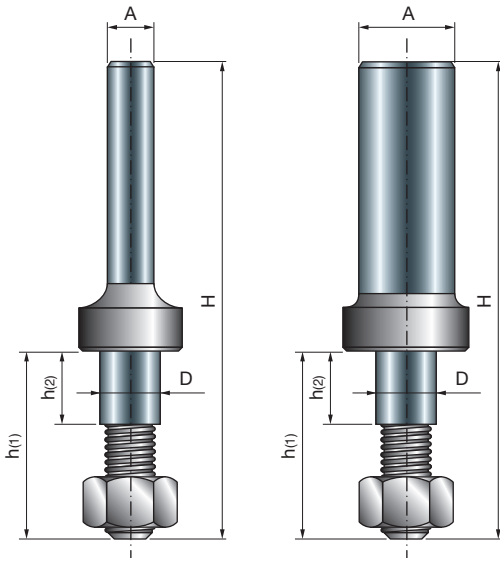


Softwood

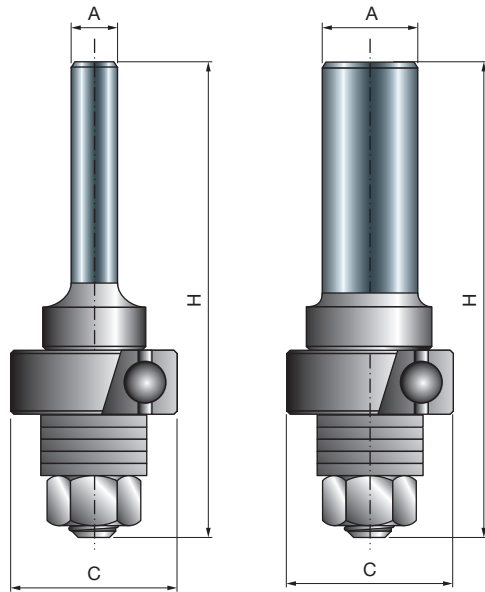
Hardwood

Plywood

Wood Based Panels



Type A



Type B

**Machines:**

Hand-held routers and table routers.

**Applications:**

The perfect complement to Freud's slotting cutters. Compatible with any 8 mm bore hole slotting cutter.

D mm	h1 mm	h2 mm	H mm	C mm	A mm	A inch	Max RPM 1/min.	Freud Code	Art. No.
7,94	24,6	10	60,3	-	6		24.000	<b>60-10006P</b>	F03FR02039
7,94	24,6	10	60,3	22	6		24.000	<b>60-12006P</b>	F03FR02044
7,94	24,6	10	60,3	-	8		24.000	<b>60-10008P</b>	F03FR02040
7,94	24,6	10	60,3	22	8		24.000	<b>60-12008P</b>	F03FR02045
7,94	24,6	10	60,3	-	12		24.000	<b>60-10212P</b>	F03FR02042
7,94	24,6	10	60,3	22	12		24.000	<b>60-12212P</b>	F03FR02046
7,94	24,6	10	60,3	-		1/4	24.000	<b>60-10025P</b>	F03FR02041
7,94	24,6	10	60,3	-		1/2	24.000	<b>60-10250P</b>	F03FR02043

**Type A**

60-10006P - 60-10008P - 60-10212P - 60-10025P - 60-10250P

	Quantity	Spare parts	Dimensions mm	Freud Code	Art. No.
	7	Washer	17 x 8,4 x 1,6	<b>2617M AG9</b>	F03F010005
	1	Hex nut	7,94 x 6,75	<b>2610M BB9</b>	F03F010003

**Type B**

60-12006P - 60-12008P - 60-12212P

	Quantity	Spare parts	Dimensions mm	Freud Code	Art. No.
	5	Washer	17 x 8,4 x 1,6	<b>2617M AG9</b>	F03F010005
	1	Hex nut	7,94 x 6,75	<b>2610M BB9</b>	F03F010003
	1	Ball bearing	22 x 8 x 7	<b>3102M AC9</b>	F03F010008

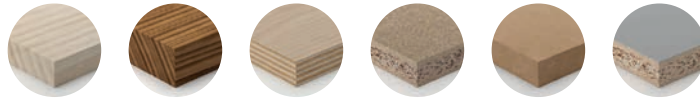
# BISCUIT JOINT SLOT CUTTER

63-



Hand-held Routers

Table Routers



Softwood

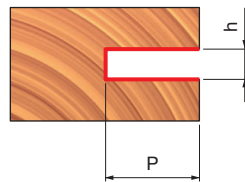
Hardwood

Plywood

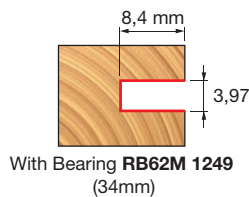
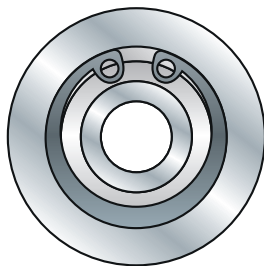
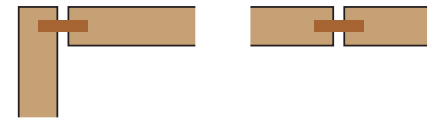
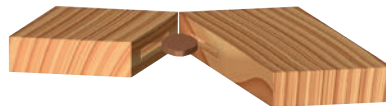
Wood Based Panels

D	h	H	C	P	A	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm	mm inch		1/min.		
50,8	3,97	60,3	26-30-34	12,4-10,4-8,4	6	3	24.000	<b>63-60906P</b>	F03FR02143
50,8	3,97	60,3	26-30-34	12,4-10,4-8,4	8	3	24.000	<b>63-60908P</b>	F03FR02146
50,8	3,97	60,3	26-30-34	12,4-10,4-8,4	12	3	24.000	<b>63-60912P</b>	F03FR02149
50,8	3,97	60,3	26-30-34	12,4-10,4-8,4	1/4	3	24.000	<b>63-60925P</b>	F03FR02152
50,8	3,97	60,3	26-30-34	12,4-10,4-8,4	1/2	3	24.000	<b>63-60950P</b>	F03FR02155

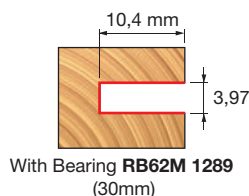
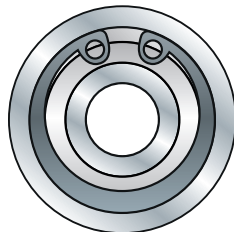
Spare parts	Dimensions	Freud Code	Art. No.
	mm		
	Hex nut	2610M BB9	F03F010003
	Washer	2617M AG9	F03F010005
	Washer	2617M BG9	F03FR01668
	Ball bearing	RB62M 1249	F03F011417
	Ball bearing	RB62M 1289	F03F011418
	Ball bearing	RB62ME DA9	F03FR01146



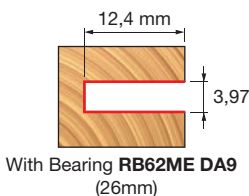
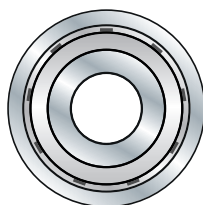
C	P
mm	mm
Ø 26	12,4
Ø 30	10,4
Ø 34	8,4



Biscuit Size-00  
47mm x 15mm



Biscuit Size-10  
54mm x 19mm



Biscuit Size-20  
59mm x 22mm



**Machines:**

Hand-held routers and table routers.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

Biscuit joining is one of the easiest and most economical methods of wood joinery. Each biscuit joint slot cutter is delivered with 3 different diameter ball bearings.

# ADJUSTABLE TONGUE AND GROOVE CUTTER SET

99-

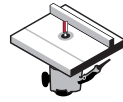
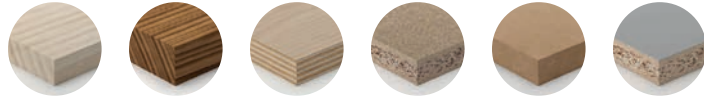


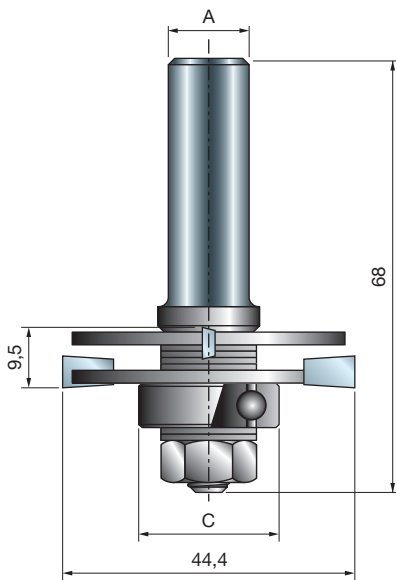
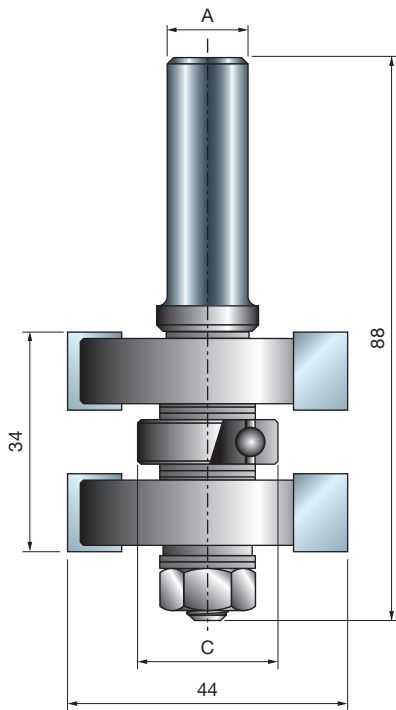
Table Routers



Softwood    Hardwood    Plywood    Wood Based Panels

D mm	h mm	H mm	A mm	C mm	Z	Max RPM 1/min.	Freud Code	Art. No.
44	34	88	12	22	2	16.000	99-03612P	F03FR02432
44,4	9,5	68	12	22	2			

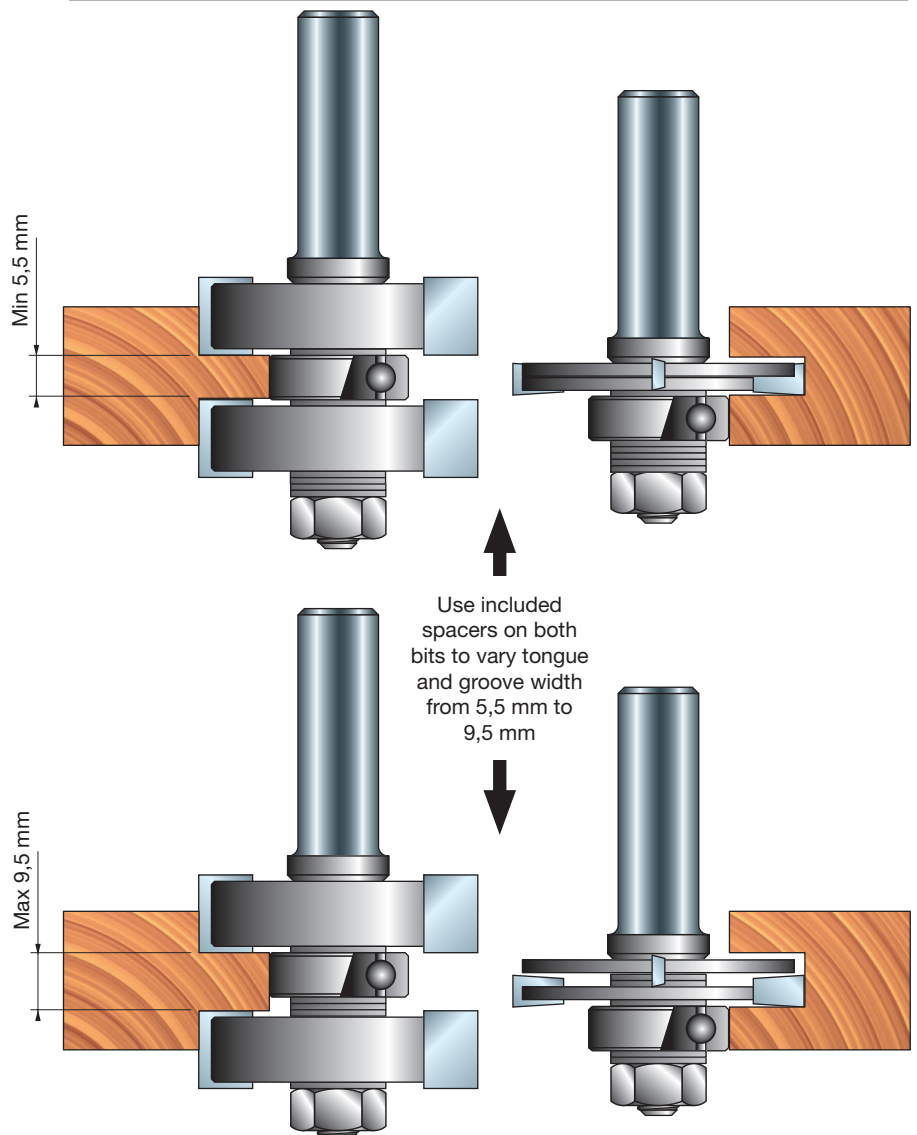
Qty	Spare parts	Dimensions mm	Freud Code	Art. No.
2	Hex nut	7,94 x 6,75	2610M BB9	F03F010003
2	Washer	14 x 8,4 x 1,6	2617M BG9	F03FR01668
2	Ball bearing	22 x 8 x 7,1	3102M AC9	F03F010008
4	Spacer	18 x 0,1 x 8	AN01MP0019	F03FC00392
4	Spacer	18 x 0,2 x 8	AN01MP0029	F03FC00393
2	Spacer	18 x 0,5 x 8	AN01MP0059	F03FC00395
8	Spacer	18 x 1 x 8	AN01MP0109	F03FC00396
4	Spacer	18 x 0,15 x 8	AN01MPAA99	F03FC00391

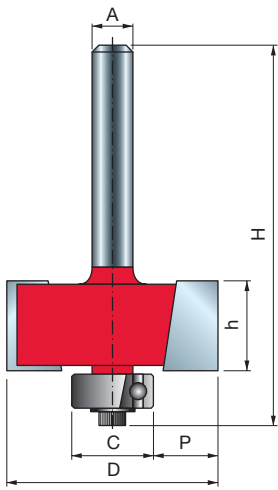


**Machines:**  
Table routers.

**Materials:**  
Softwood, hardwood, plywood and wood based panels.

**Applications:**  
Suitable for any project requiring precise tongue and groove joints with perfectly finished surfaces.  
The set includes one tongue and one grooving bit.





**Machines:**

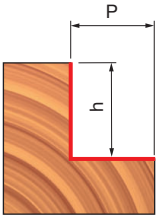
Hand-held routers and table routers.

**Material:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

Use to make strong lap joints, cut recesses to let in the back panels of cabinets or create an interesting detail on built-up moulding.

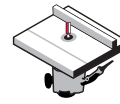


Set of 4 ball bearings	
C	P
mm	mm
9,53	12,7
12,7	11,1
15,88	9,53
19,05	7,94

Set of 7 ball bearings	
C	P
mm	mm
9,53	12,7
12,7	11,1
15,88	9,53
19,05	7,94
22,22	6,35
28,58	3,18
34,92	0

# RABBETING BITS

32-



Hand-held Routers

Table Routers



Softwood

Hardwood

Plywood

Wood Based Panels

D	h	H	A	C	P	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm	mm		1/min.		
31,75	13,2	55,7	6	12,7	9,52	2	18.000	<b>32-10006P</b>	F03FR01745
34,92	12,7	54,4	6	12,7	11,1	2	16.000	<b>32-50006P</b>	F03FR01750
31,75	13,2	55,7	8	12,7	9,52	2	18.000	<b>32-10008P</b>	F03FR01746
34,92	12,7	54,7	8	12,7	11,1	2	16.000	<b>32-50008P</b>	F03FR01751
31,75	13,2	61,7	12	12,7	9,52	2	18.000	<b>32-10212P</b>	F03FR01748
34,92	12,7	60,7	12	12,7	11,1	2	16.000	<b>32-52012P</b>	F03FR01758
31,75	13,2	55,7	1/4	12,7	9,52	2	18.000	<b>32-10025P</b>	F03FR01747
31,75	13,2	61,7	1/2	12,7	9,52	2	18.000	<b>32-10250P</b>	F03FR01749

# RABBETING BITS WITH BEARING SET

32-

**Rabbeting bits with a set of 4 ball bearings**

D	h	H	A	C	P	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm	mm		1/min.		
34,92	12,7	54,4	6	9,53-19,05	7,94-12,7	2	16.000	<b>32-50206P</b>	F03FR01752
34,92	12,7	54,4	8	9,53-19,05	7,94-12,7	2	16.000	<b>32-50208P</b>	F03FR01753
34,92	12,7	60,7	12	9,53-19,05	7,94-12,7	2	16.000	<b>32-52212P</b>	F03FR01759
34,92	12,7	60,7	1/2	9,53-15,88	9,53-12,7	2	16.000	<b>32-52250P</b>	F03FR01760

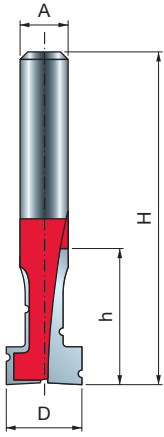
**Rabbeting bits with a set of 7 ball bearings**

D	h	H	A	C	P	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm	mm		1/min.		
34,92	12,7	54,7	6	9,53-34,92	0-12,7	2	16.000	<b>32-50406P</b>	F03FR01755
34,92	12,7	54,4	8	9,53-34,92	0-12,7	2	16.000	<b>32-50408P</b>	F03FR01756
34,92	12,7	60,7	12	9,53-34,92	0-12,7	2	16.000	<b>32-52412P</b>	F03FR01761

	Spare parts	Dimensions	Freud Code	Art. No.
		mm		
	Screw	M3 x 7,6	<b>2607M 001</b>	F03F010000
	Allen key	2,5	<b>2619M CA9</b>	F03FA07432
	Washer	9 x 2 x 6	<b>FX07M AA9</b>	F03F010158
	Washer	12 x 1,1 x 4,8	<b>FX07M AB9</b>	F03F010159
<b>32-5206P</b> <b>32-5208P</b> <b>32-52212P</b>	Ball bearing	9,53 x 3,2 x 4,76	<b>3102M AA9</b>	F03F010006
	Ball bearing	12,7 x 4,98 x 4,76	<b>3102M AB9</b>	F03F010007
	Ball bearing	15,88 x 4,97 x 4,76	<b>3102M AJ9</b>	F03F010014
<b>32-50406P</b> <b>32-50408P</b> <b>32-52412P</b>	Ball bearing	9,53 x 3,2 x 4,76	<b>3102M AA9</b>	F03F010006
	Ball bearing	12,7 x 4,98 x 4,76	<b>3102M AB9</b>	F03F010007
	Ball bearing	15,88 x 4,97 x 4,76	<b>3102M AJ9</b>	F03F010014
	Ball bearing	19,05 x 8 x 4,76	<b>RB62M 1509</b>	F03F011422
	Ball bearing	9,53 x 3,2 x 4,76	<b>3102M AA9</b>	F03F010006
	Ball bearing	12,7 x 4,98 x 4,76	<b>3102M AB9</b>	F03F010007
	Ball bearing	15,88 x 4,97 x 4,76	<b>3102M AJ9</b>	F03F010014
	Ball bearing	19,05 x 8 x 4,76	<b>RB62M 1509</b>	F03F011422
	Ball bearing	22,22 x 8 x 4,76	<b>RB62M 1529</b>	F03F011423
	Ball bearing	28,58 x 8 x 4,76	<b>RB62M 1549</b>	F03F011424
	Ball bearing	34,92 x 8 x 4,76	<b>RB62M 1569</b>	F03F011425

# KEYHOLE BIT

70-



Hand-held Routers

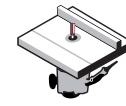
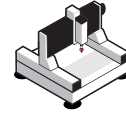


Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels



**Machines:**

Hand-held routers, table routers and CNC machines.

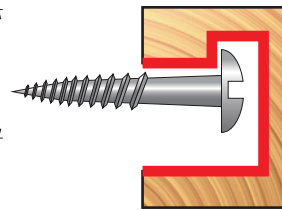
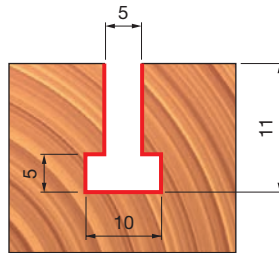
**Materials:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

The perfect way to hang flat workpieces. The large diameter bore hole allows nail or screw heads to enter the slot and the smaller diameter groove gives space for the shank of the nail or screw.

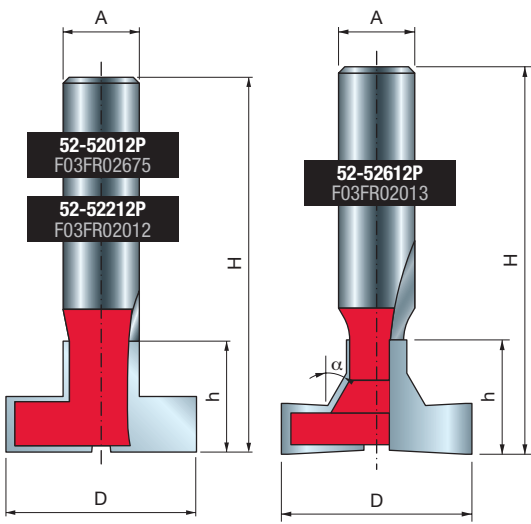
D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Freud Code	Art. No.
10	17	48,2	6	2	24.000	70-10406P	F03FR02159



Example of keyhole

# T - SLOTTING BITS

52-



Hand-held Routers

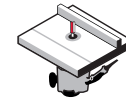
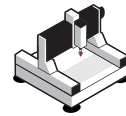


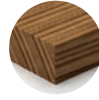
Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels



D mm	h mm	H mm	A mm	$\alpha$	Z	Max RPM 1/min.	Freud Code	Art. No.
28	16	59	12	-	2	22.000	52-52012P	F03FR02675
28,58	20,6	63,5	12	-	2	18.000	52-52212P	F03FR02012
30	18	61	12	30°	2	18.000	52-52612P	F03FR02013

**Machines:**

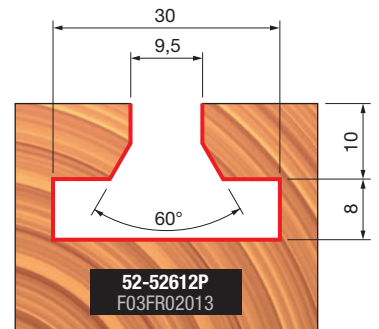
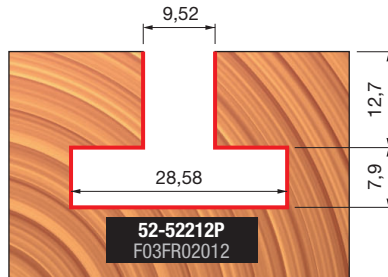
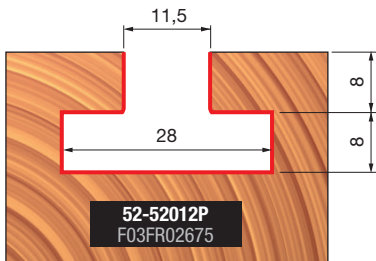
Hand-held routers, table routers and CNC machines.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

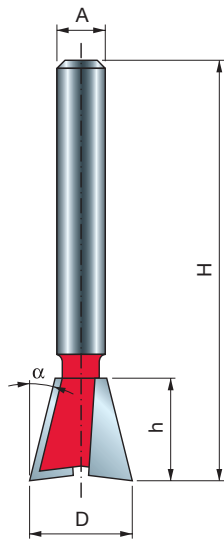
**Applications:**

Cut T shaped slots, used for many purposes.



# DOVETAIL BITS

22-



Hand-held Routers

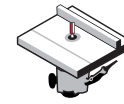
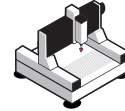


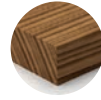
Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels



**Machines:**

Hand-held routers, table routers and CNC machines.

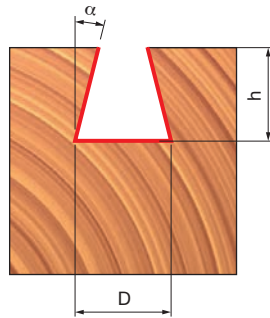
**Materials:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

Dovetail joints are the traditional choice for strong, attractive joints for drawers, boxes and exposed furniture joints.

D	h	H	A	$\alpha$	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	inch		1/min.		
9,52	10,5	47,5	6			24.000	<b>22-10206P</b>	F03FR01640
12,7	12,7	50,7	6			24.000	<b>22-10406P</b>	F03FR01643
15,88	22,2	54,2	6			24.000	<b>22-10506P</b>	F03FR01646
19,05	22,2	54,2	6			24.000	<b>22-10606P</b>	F03FR01648
9,52	10,5	47,5	8			24.000	<b>22-10208P</b>	F03FR01641
12,7	12,7	50,7	8			24.000	<b>22-10408P</b>	F03FR01644
15,88	22,2	54,2	8			24.000	<b>22-10508P</b>	F03FR01647
19,05	22,2	54,2	8			24.000	<b>22-10608P</b>	F03FR01649
12,7	12,7	59,7	12			24.000	<b>22-11212P</b>	F03FR01650
19,05	22,2	66,7	12			24.000	<b>22-11412P</b>	F03FR01653
9,52	9,9	44,9		1/4		24.000	<b>22-10225P</b>	F03FR01642
12,7	12,7	50,7		1/4		24.000	<b>22-10425P</b>	F03FR01645
12,7	12,7	59,7		1/2		24.000	<b>22-11250P</b>	F03FR01651



# LOCK MITRE BITS 45°

99-

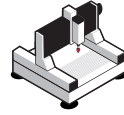
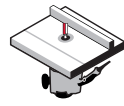
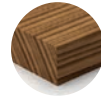


Table Routers

CNC Machines



Softwood

Hardwood

Plywood

Wood Based Panels

D mm	h mm	H mm	A mm	$\alpha$	Z	Max RPM 1/min.	Freud Code	Art. No.
55	23	61	12	45°	2	16.000	99-03512P	F03FR02425
70	29,5	67,5	12	45°	2	12.000	99-03412P	F03FR02424



**Machines:**

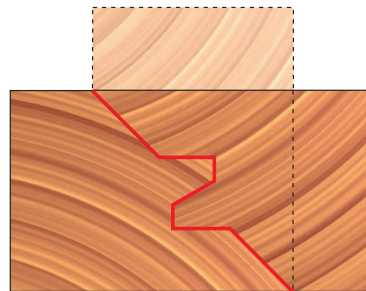
Table routers and CNC machines.

**Materials:**

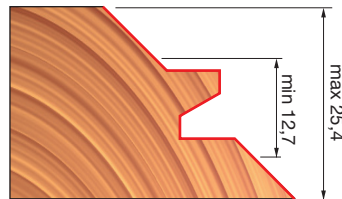
Softwood, hardwood, plywood and wood based panels.

**Applications:**

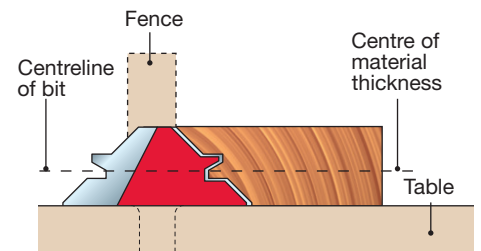
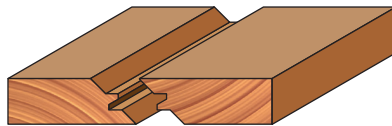
Create remarkably strong interlocking joints.



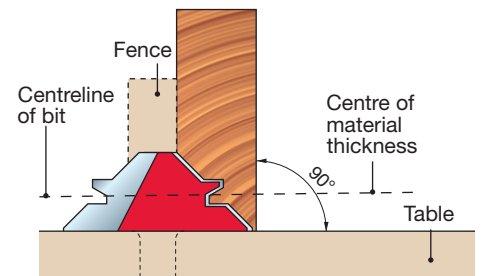
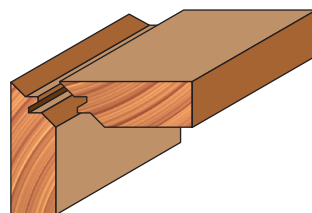
99-03412P  
F03FR02424



**Simple Joint**



**45° Mitre Join**





# 2 PIECE LOCK MITRE BIT SET 22,5°

99-

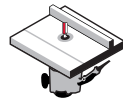
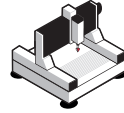


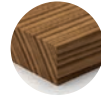
Table Routers



CNC Machines



Softwood



Hardwood



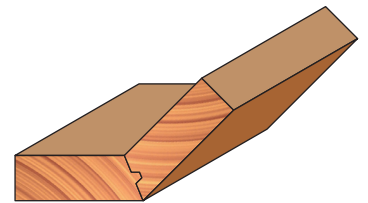
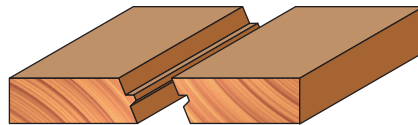
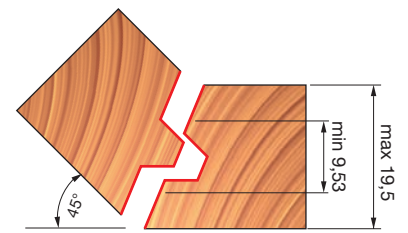
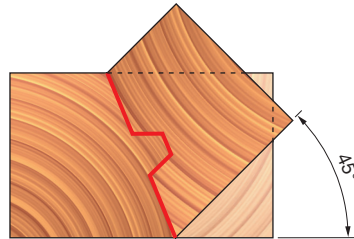
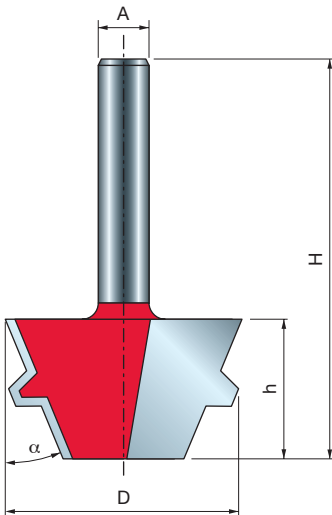
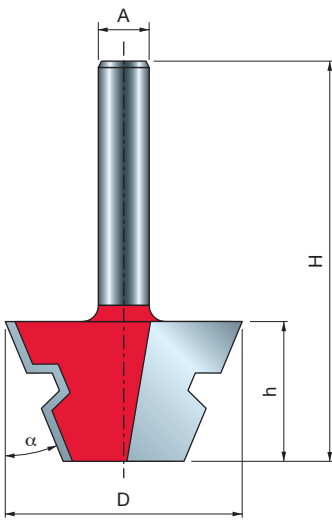
Plywood



Wood Based Panels



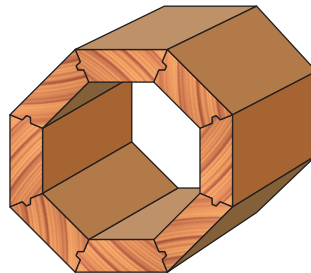
D	h	H	A	$\alpha$	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm			1/min.		
37,3	22,2	54,2	8	22,5°	2	24.000	99-04308P	F03FR02450



**Machines:**  
Table routers and CNC machines.

**Materials:**  
Softwood, hardwood, plywood and wood based panels.

**Applications:**  
Create remarkably strong interlocking joints.



# REVERSIBLE GLUE JOINT BITS

99-

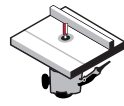
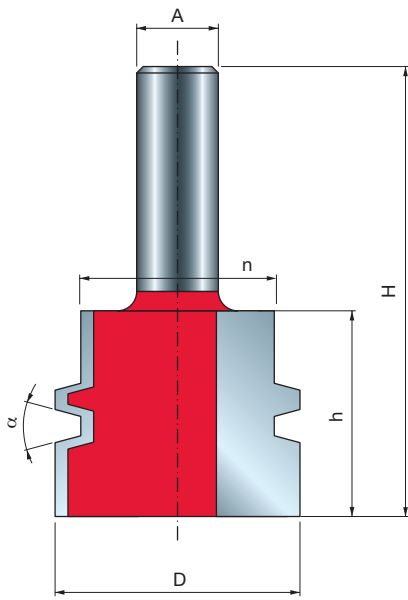
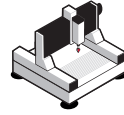


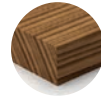
Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels



**Machines:**

Table routers and CNC machines.

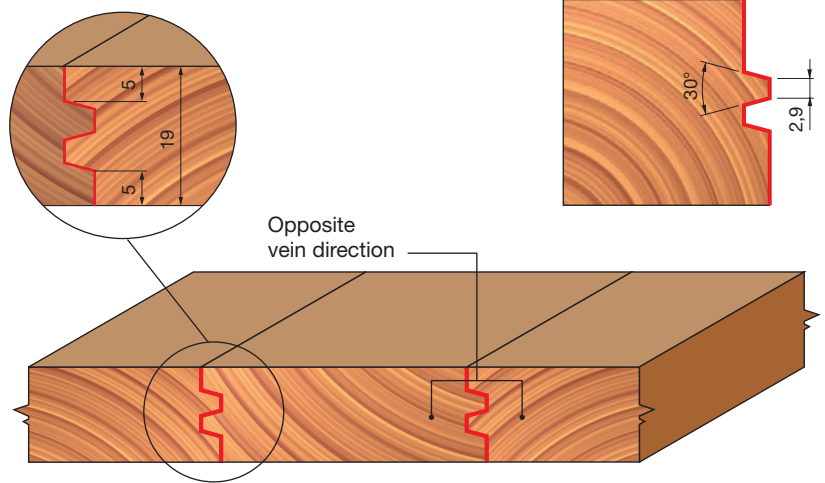
**Materials:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

Provide a stronger joint by increasing the gluing area.

D	h	H	n	A	$\alpha$	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm	inch		1/min.		
38	32	70	30,2	12	15°	2	16.000	99-03112P	F03FR02422
38	32	70	30,2		15°	2	16.000	99-03150P	F03FR02423



# FINGER JOINT BIT

99-

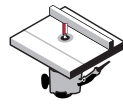
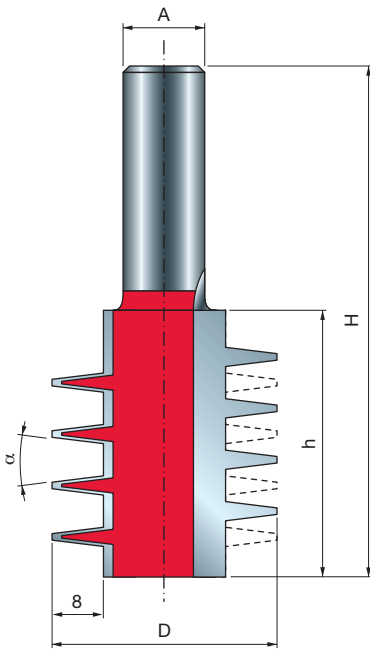
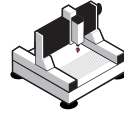


Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels

D	h	H	A	$\alpha$	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm			1/min.		
35	41,5	79,5	12	14°	2	16.000	99-03712P	F03FR02440



**Machines:**

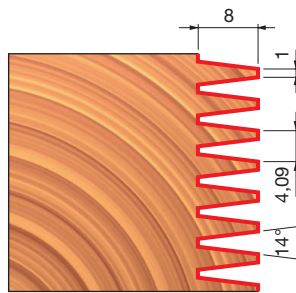
Table routers and CNC machines.

**Materials:**

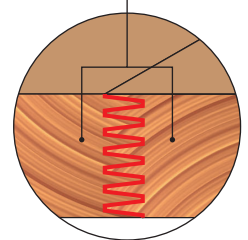
Softwood, hardwood, plywood and wood based panels.

**Applications:**

Create perfectly flat even surface and increase gluing area for a stronger joint.



Opposite vein direction



# TOP BEARING FINGER JOINT BIT - TYPE A

99-

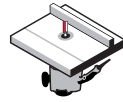
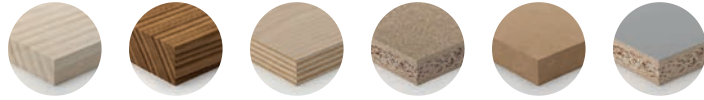
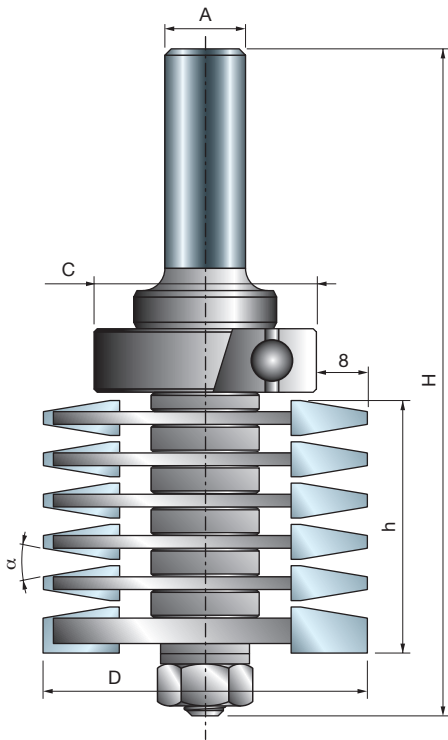


Table Routers



Softwood    Hardwood    Plywood    Wood Based Panels



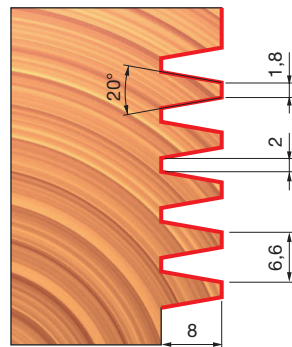
**Machines:**  
Table routers.

**Materials:**  
Softwood, hardwood, plywood and wood based panels.

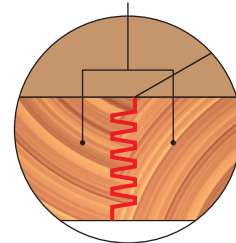
**Applications:**  
Provide a stronger joint by increasing the surface area for gluing.

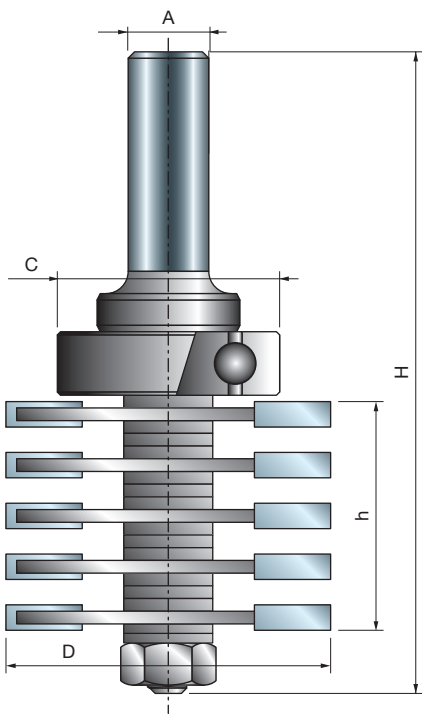
D	h	H	A	C	$\alpha$	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm			1/min.		
50,8	45,2	108	12	35	20°	2	24.000	99-03912P	F03FR02444

Spare parts		Dimensions	Freud Code	Art. No.
		mm		
	Hex nut	7,94 x 6,75	2610M BB9	F03F010003
	Washer	14 x 8,4 x 1,6	2617M BG9	F03FR01668
	Ball bearing	35 x 15 x 11	3102M AI9	F03F012285
	Spacer	18 x 0,1 x 8	AN01MP0019	F03FC00392
	Spacer	18 x 1 x 8	AN01MP0109	F03FC00396
	Spacer	18 x 2,5 x 8	AN01MP0259	F03FC00398
	Spacer	18 x 4,4 x 8	AN01MP0449	F03FC00399



Opposite vein direction





**Machines:**  
Table routers.

**Materials:**  
Softwood, hardwood, plywood and wood based panels.

**Applications:**  
Create perfectly flat even surface and increase gluing area for a stronger joint.

## TOP BEARING FINGER JOINT BIT - TYPE B

99-

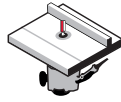


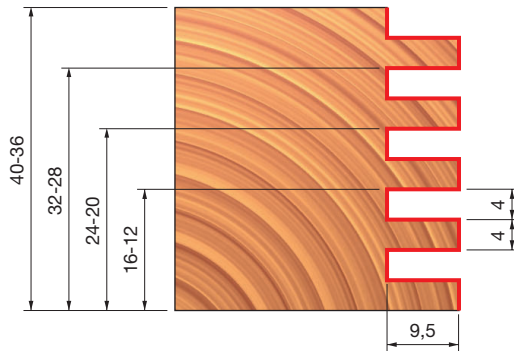
Table Routers



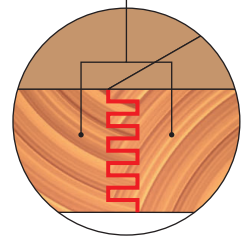
Softwood    Hardwood    Plywood    Wood Based Panels

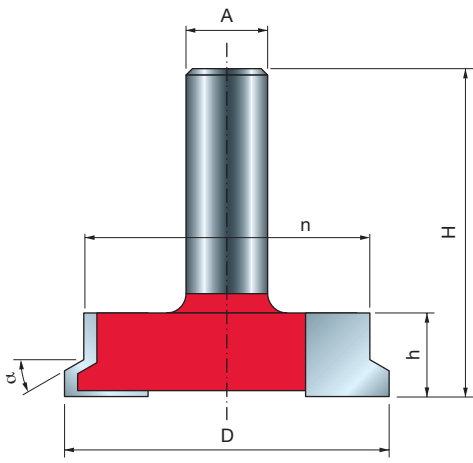
D mm	h mm	H mm	A mm	C mm	Z	Max RPM 1/min.	Freud Code	Art. No.
47	36	101	12	28	2	24.000	99-04212P	F03FR02447

Spare parts	Dimensions mm	Freud Code	Art. No.
Hex nut	7,94 x 6,75	2610M BB9	F03F010003
Washer	14 x 8,4 x 1,6	2617M BG9	F03FR01668
Ball bearing	28 x 12 x 8	3102M AH9	F03F010013
Spacer	18 x 0,2 x 8	AN01MP0029	F03FC00393
Spacer	18 x 1 x 8	AN01MP0109	F03FC00396
Spacer	18 x 0,5 x 8	AN01MP0059	F03FC00395
Spacer	18 x 4,4 x 8	AN01MP0449	F03FC00399



Opposite vein direction





# DRAWER LOCK BIT

99-

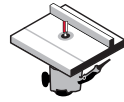
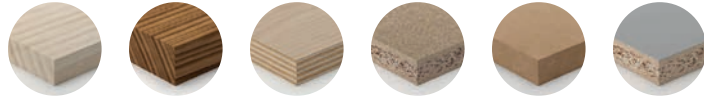


Table Routers



Softwood    Hardwood    Plywood    Wood Based Panels



D mm	h mm	H mm	A mm	n mm	$\alpha$	Z	Max RPM 1/min.	Freud Code	Art. No.
50,5	13	49	12	44,5	30°	2	16.000	99-24012P	F03FR02463

**Machines:**

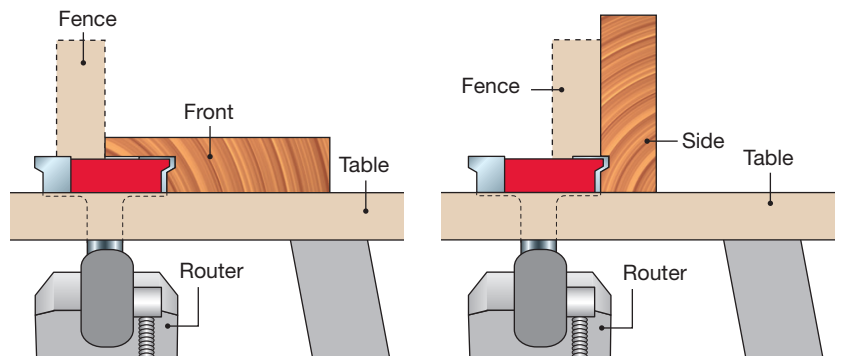
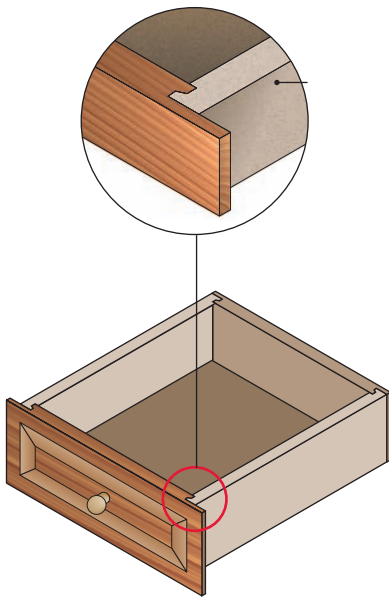
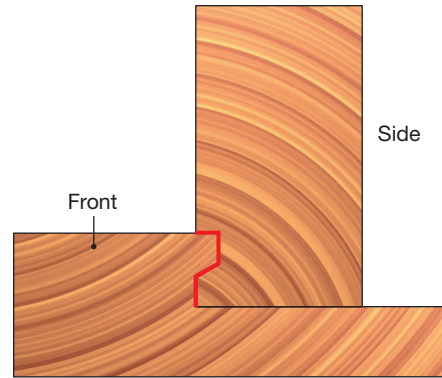
Table routers.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

One bit produces both the front and side drawer joints.



# DOOR PULL BIT

99-

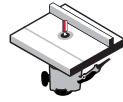
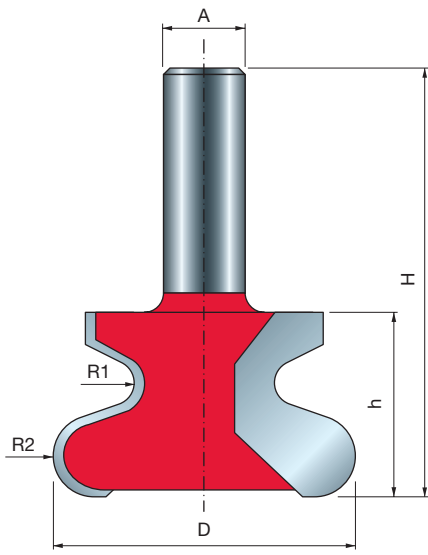


Table Routers



Softwood    Hardwood    Plywood    Wood Based Panels

D	h	H	A	R1	R2	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm	mm		1/min.		
47	28,7	66,7	12	3,2	6,35	2	16.000	99-00712P	F03FR02413



**Machines:**

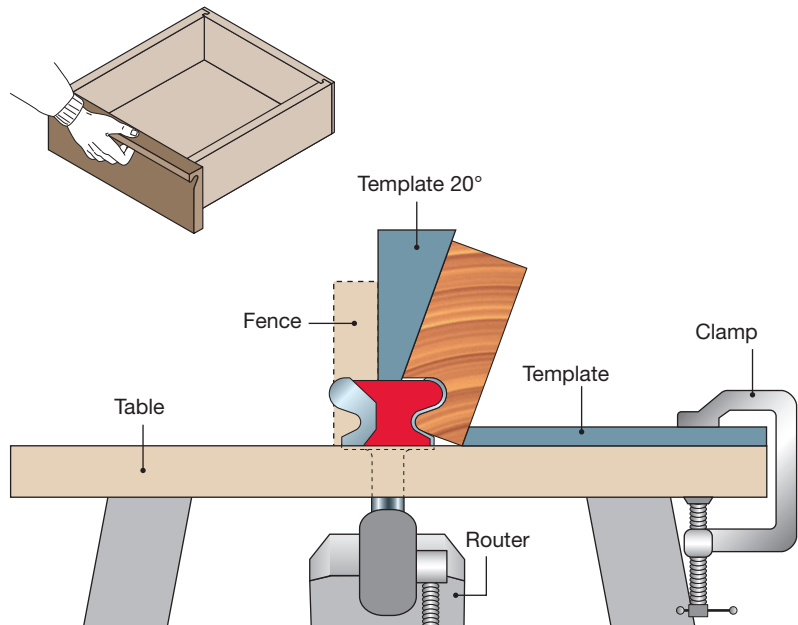
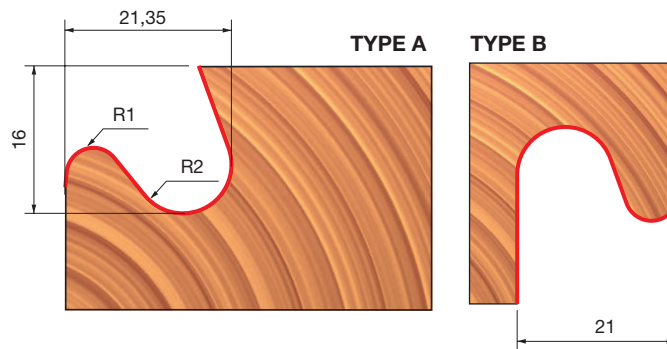
Table routers.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

Produce the finger pull groove found on popular contemporary cabinet doors.



# MATCHED PROFILE AND SCRIBE BITS

99-

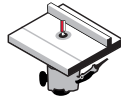


Table Routers



Softwood    Hardwood    Plywood    Wood Based Panels



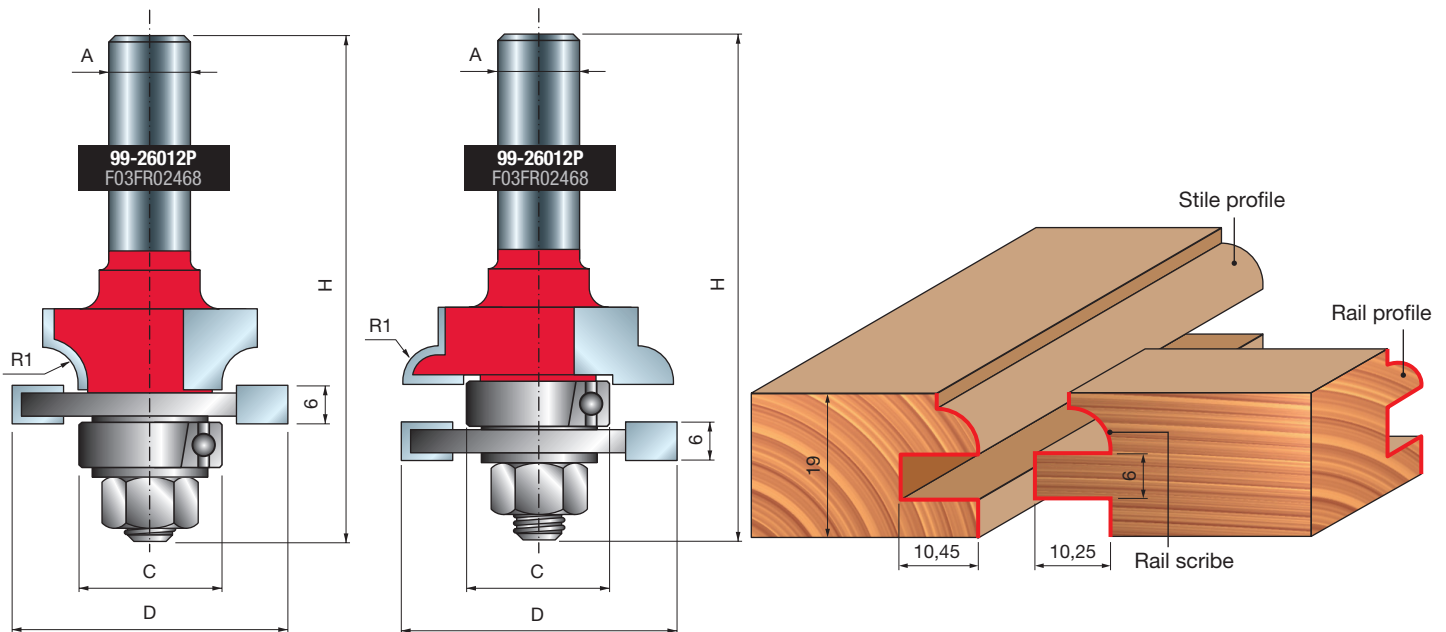
**Machines:**  
Table routers.

**Materials:**  
Softwood, hardwood, plywood and wood based panels.

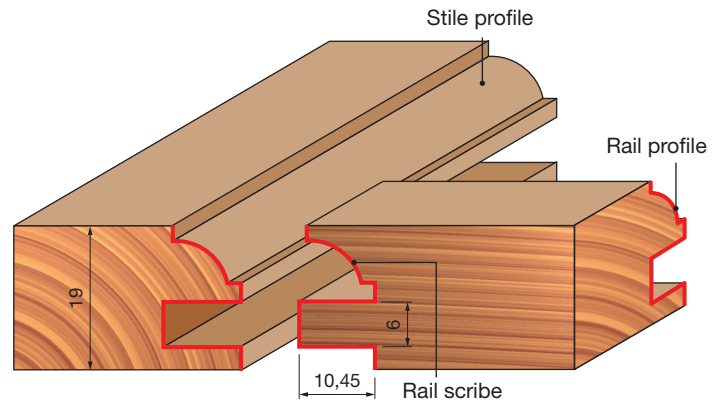
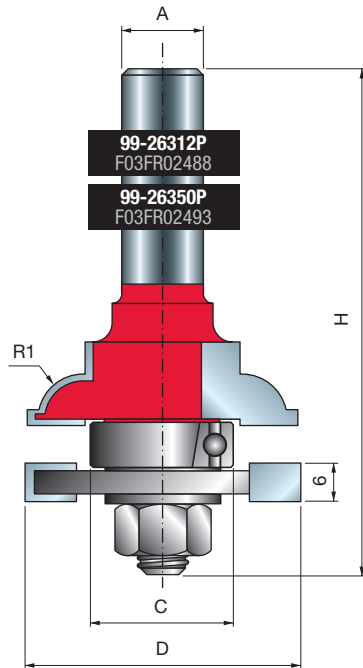
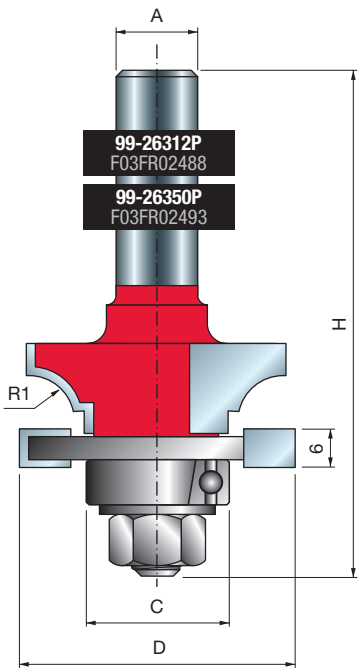
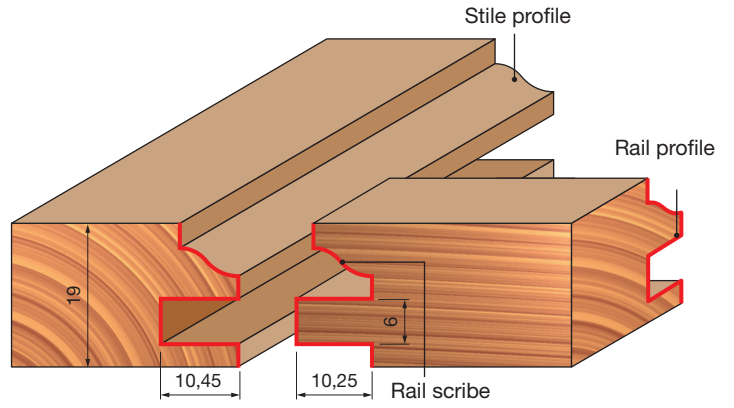
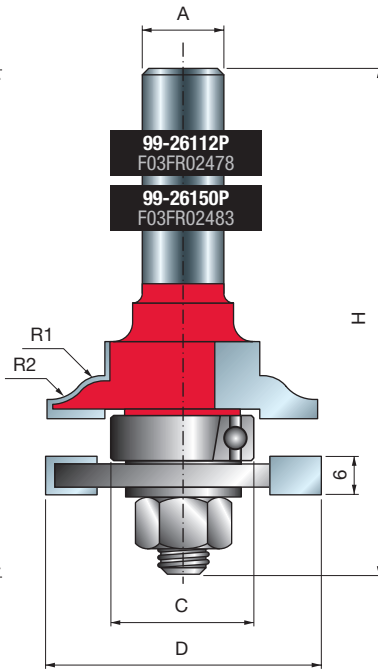
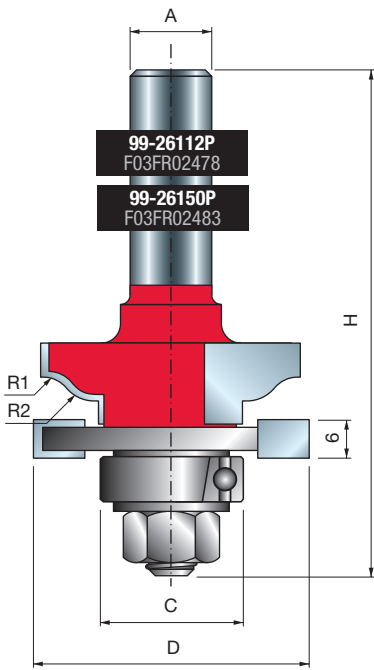
**Applications:**  
These sets include rail and stile bits that are perfectly matched to produce perfect joints out of the box.  
Each article number contains two items.

D	H	A	R1	R2	C	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	inch	mm	mm		1/min.		
42,9	77	12	5,5	-	22	2	24.000	<b>99-26012P</b>	F03FR02468
42,9	77	12	4,5	5,5	22	2	24.000	<b>99-26112P</b>	F03FR02478
42,9	77	12	7	-	22	2	24.000	<b>99-26312P</b>	F03FR02488
42,9	77	1/2	4,5	5,5	22	2	24.000	<b>99-26150P</b>	F03FR02483
42,9	77	1/2	7	-	22	2	24.000	<b>99-26350P</b>	F03FR02493

Spare parts	Dimensions	Freud Code	Art. No.
	mm		
Hex nut	7,94 x 6,75	<b>2610M BB9</b>	F03F010003
Spacer	18 x 0,1 x 8	<b>AN01MP0019</b>	F03FC00392
Spacer	18 x 0,2 x 8	<b>AN01MP0029</b>	F03FC00393
Spacer	18 x 0,5 x 8	<b>AN01MP0059</b>	F03FC00395
Spacer	18 x 1 x 8	<b>AN01MP0109</b>	F03FC00396
Ball bearing	22 x 8 x 7,1	<b>3102M AC9</b>	F03F010008







# MATCHED PROFILE AND SCRIBE BITS

99-

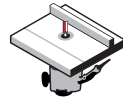
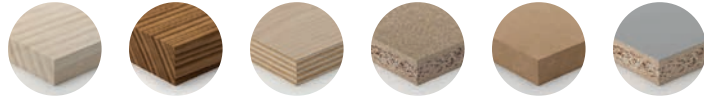


Table Routers



Softwood    Hardwood    Plywood    Wood Based Panels



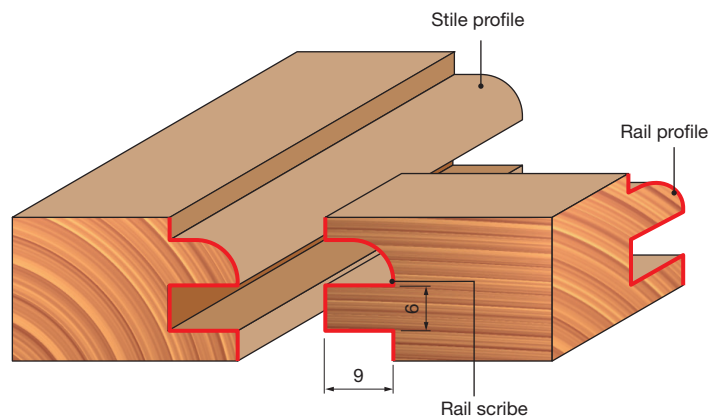
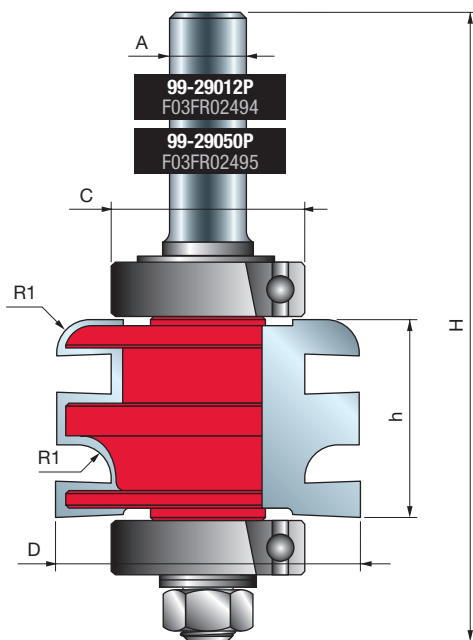
**Machines:**  
Table routers.

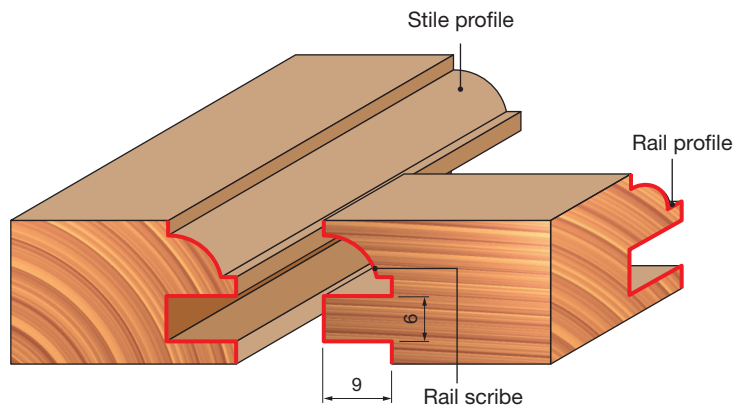
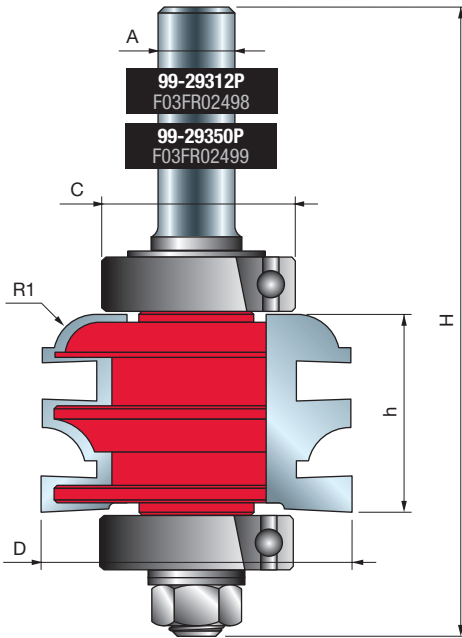
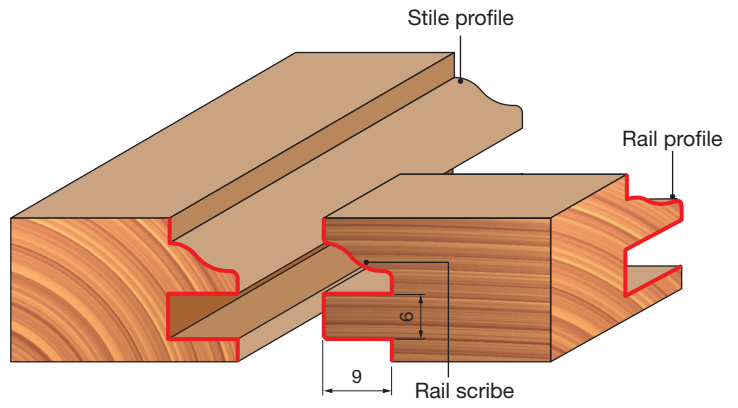
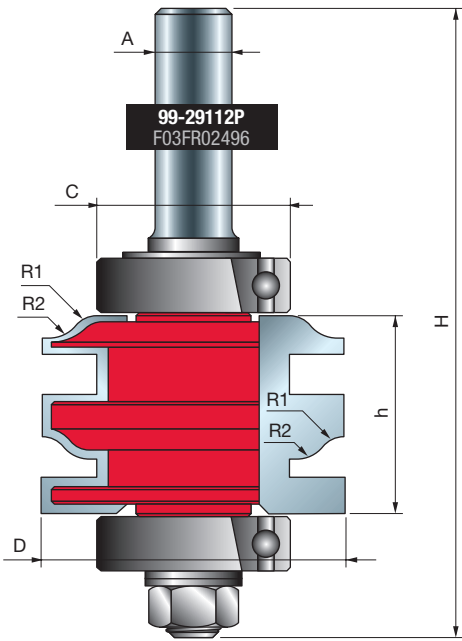
**Materials:**  
Softwood, hardwood, plywood and wood based panels.

**Applications:**  
A simple, efficient method to create beautiful cabinet doors without having to reconfigure or change cutters or fence settings.

D	h	H	A	R1	R2	C	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	inch	mm	mm	mm	1/min.		
50,4	32,7	104	12	5,5	-	32	2	14.000	<b>99-29012P</b>	F03FR02494
50,4	32,7	104	12	5,5	4,5	32	2	14.000	<b>99-29112P</b>	F03FR02496
50,4	32,7	104	12	7	-	32	2	14.000	<b>99-29312P</b>	F03FR02498
50,4	32,7	104	1/2	5,5	-	32	2	14.000	<b>99-29050P</b>	F03FR02495
50,4	32,7	104	1/2	7	-	32	2	14.000	<b>99-29350P</b>	F03FR02499

Spare parts	Dimensions mm	Freud Code	Art. No.
	Hex nut	7,94 x 6,75	<b>2610M BB9</b> F03F010003
	Retaining ring	15 x 13,9	<b>2621ME 015</b> F03FA07444
	Ball bearing	32 x 15 x 9	<b>3102M AN9</b> F03F010016
	Spacer	18 x 1 x 8	<b>AN01MP0109</b> F03FC00396





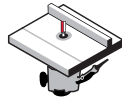
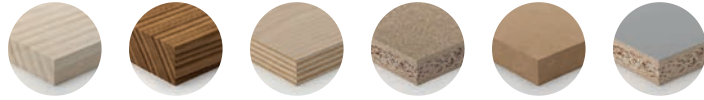


Table Routers



Softwood    Hardwood    Plywood    Wood Based Panels



**Machines:**

Table routers.

**Materials:**

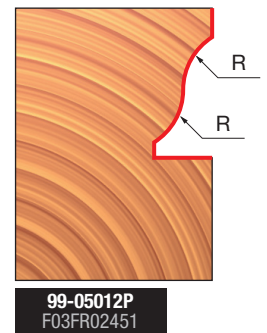
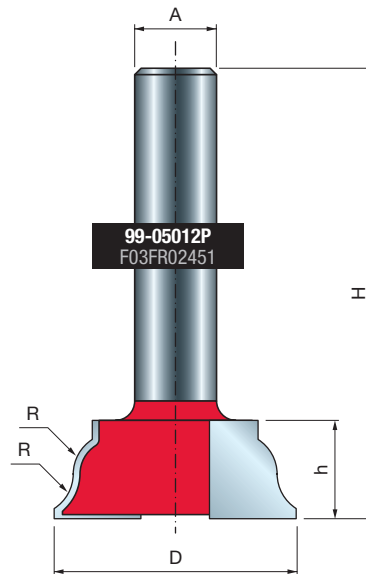
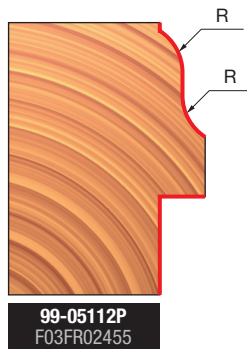
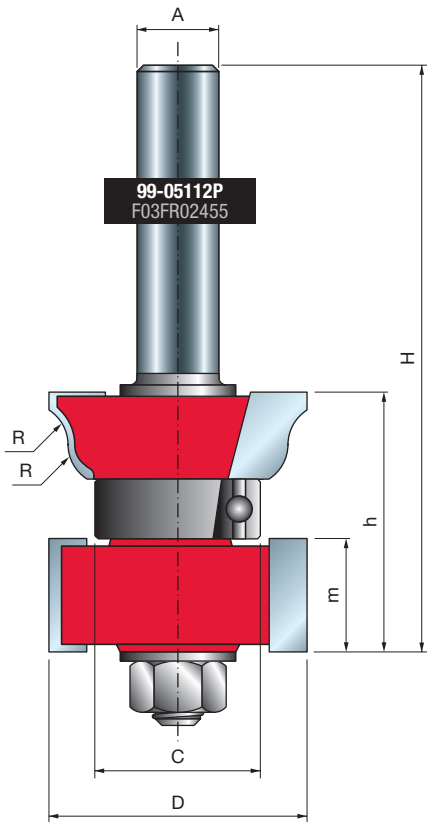
Softwood, hardwood, plywood and wood based panels.

**Applications:**

The two bits work together to produce a completely divided lite sash.

D	h	H	A	m	C	R	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm	mm	mm		1/min.		
34	35,9	78,4	12	14,5	22	6	2	16.000	99-05112P	F03FR02455
38	15,5	53,5	12	-	-	6	2	16.000	99-05012P	F03FR02451

Spare parts	Dimensions	Freud Code	Art. No.
	mm		
Hex nut	7,94 x 6,75	2610M BB9	F03F010003
Washer	14 x 8,4 x 1,6	2617M BG9	F03FR01668
Ball bearing	22 x 8 x 7,1	3102M AC9	F03F010008
Spacer	18 x 0,1 x 8	AN01MP0019	F03FC00392





# RAISED PANEL BITS

99-

**Machines:**

Table routers.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

Create beautiful raised panels for cabinet doors or wall panelling.

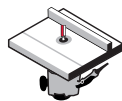
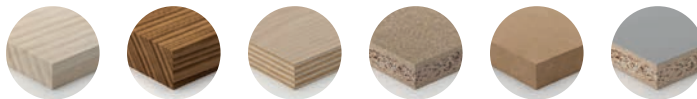
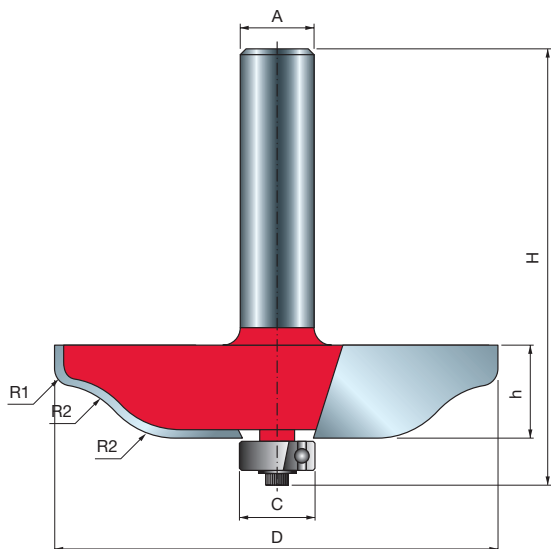


Table Routers



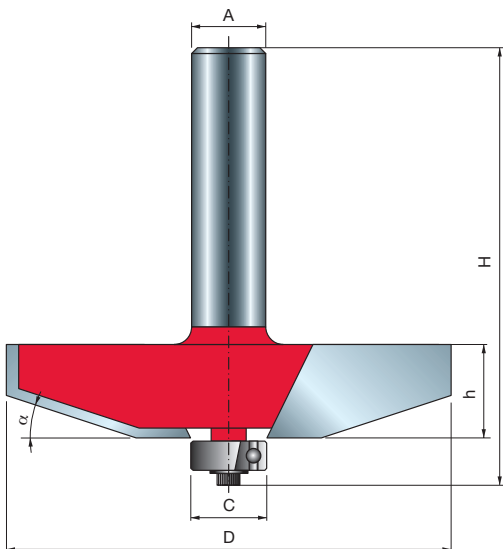
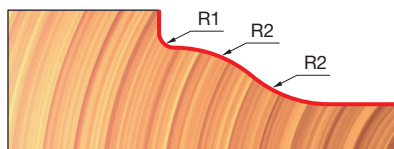
Softwood    Hardwood    Plywood    Wood Based Panels



**Type A**

D	h	H	A	C	R1	R2	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	inch	mm	mm		1/min.		
76,2	16	64,7	12	12,7	2	16	2	12.000	99-22112P	F03FR02458
70	16	64,5	1/2	12,7	14	3	4	12.000	99-51050P	F03FR02504
89	16	64,5	1/2	12,7	20	4	4	10.000	99-52050P	F03FR02512

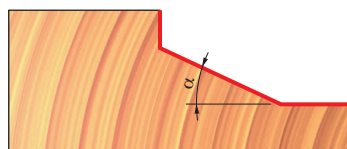
Spare parts	Dimensions	Freud Code	Art. No.
	mm		
Screw	M3 x 7,6	2607M 001	F03F010000
Ball bearing	12,7 x 4,98 x 4,76	3102M AB9	F03F010007
Washer	12 x 1,1 x 4,8	FX07M AB9	F03F010159

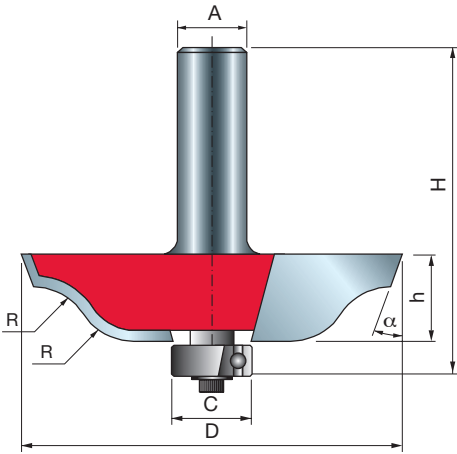


**Type B**

D	h	H	A	C	α	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	inch	mm		1/min.		
63,5	16	60	12	12,7	25°	2	12.000	99-22212P	F03FR02459
76,2	16	60	12	12,7	18°	2	12.000	99-22312P	F03FR02460
89	16,1	64,5	1/2	12,7	16,5°	4	10.000	99-51550P	F03FR02508

Spare parts	Dimensions	Freud Code	Art. No.
	mm		
Screw	M3 x 7,6	2607M 001	F03F010000
Ball bearing	12,7 x 4,98 x 4,76	3102M AB9	F03F010007
Washer	12 x 1,1 x 4,8	FX07M AB9	F03F010159

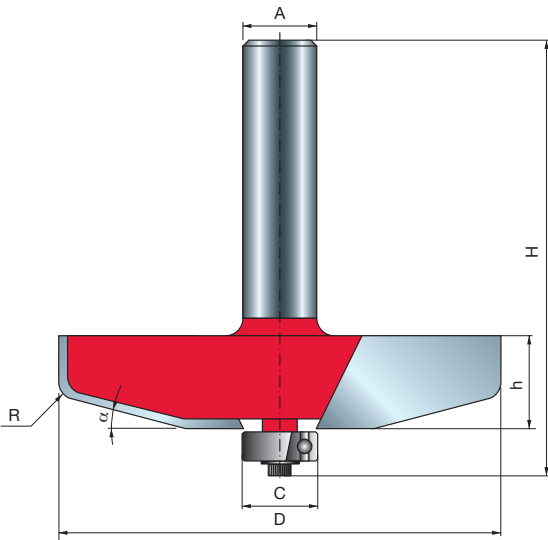
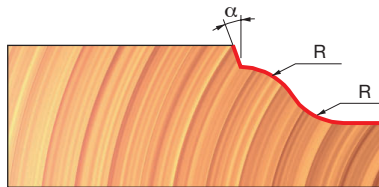




Type C

D	h	H	A	C	$\alpha$	R	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	inch	mm		mm		1/min.		
70	16	64,5	1/2	12,7	20°	11	4	12.000	99-51350P	F03FR02507

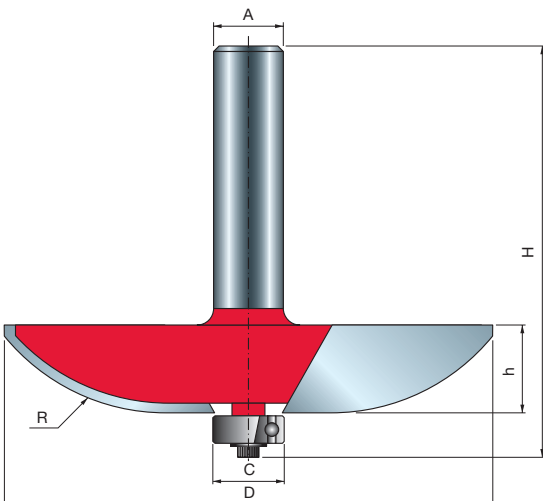
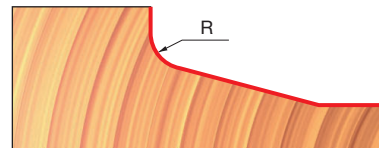
Spare parts	Dimensions	Freud Code	Art. No.
	mm		
Screw	M3 x 7,6	2607M 001	F03F010000
Ball bearing	12,7 x 4,98 x 4,76	3102M AB9	F03F010007
Washer	12 x 1,1 x 4,8	FX07M AB9	F03F010159



Type D

D	h	H	A	C	$\alpha$	R	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm		mm		1/min.		
76,2	16	60	12	12,7	15°	4,8	2	12.000	99-22412P	F03FR02461

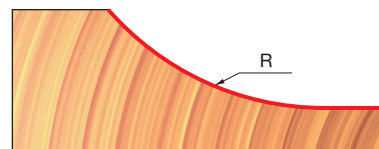
Spare parts	Dimensions	Freud Code	Art. No.
	mm		
Screw	M3 x 7,6	2607M 001	F03F010000
Ball bearing	12,7 x 4,98 x 4,76	3102M AB9	F03F010007
Washer	12 x 1,1 x 4,8	FX07M AB9	F03F010159



Type E

D	h	H	A	C	R	Z	Max RPM	Freud Code	Art. No.	
mm	mm	mm	mm	inch	mm		1/min.			
89	16	64,7	12		12,7	38,1	2	10.000	99-22512P	F03FR02462
89	16	64,5	1/2		12,7	38	4	10.000	99-51850P	F03FR02510

Spare parts	Dimensions	Freud Code	Art. No.
	mm		
Screw	M3 x 7,6	2607M 001	F03F010000
Ball bearing	12,7 x 4,98 x 4,76	3102M AB9	F03F010007
Washer	12 x 1,1 x 4,8	FX07M AB9	F03F010159





# RAISED PANEL BITS WITH BACK CUTTERS

99-

**Machines:**

Table routers.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

Create beautiful raised panels for cabinet doors or wall panelling. These raised panel bits include a backcutter that routs a rabbet on the back of the door panel.

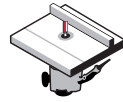
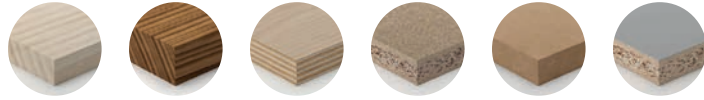
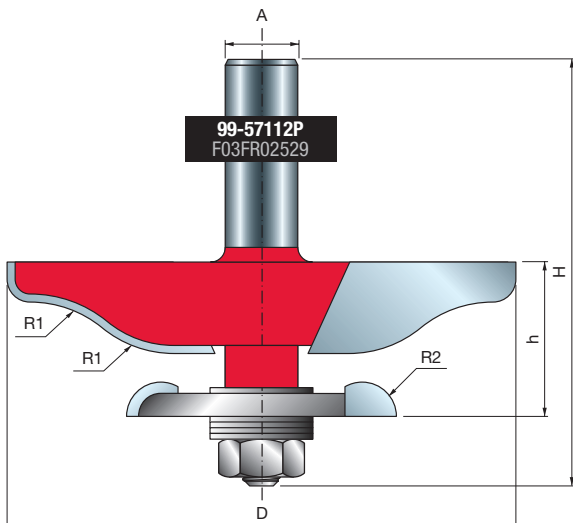
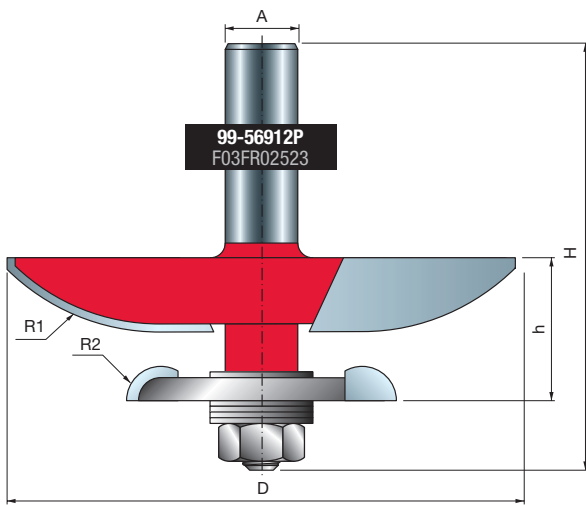
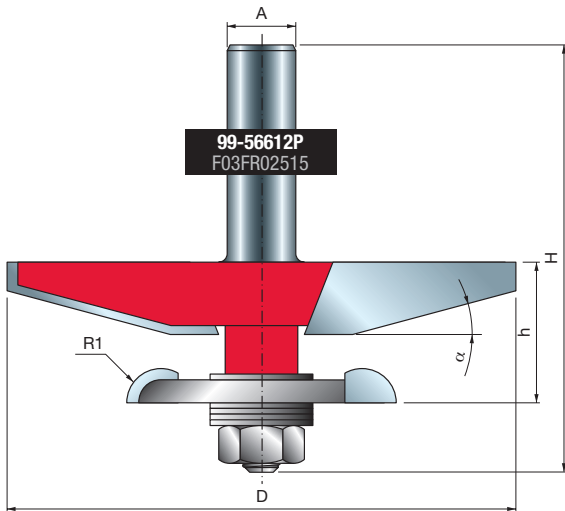


Table Routers

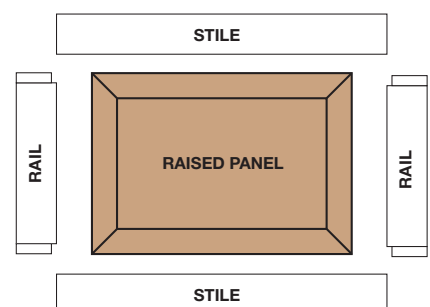
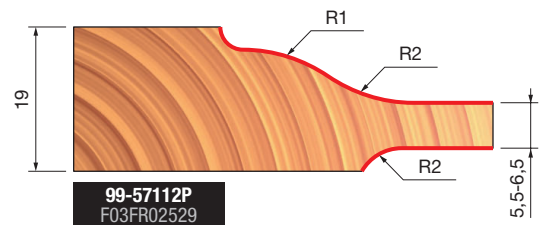
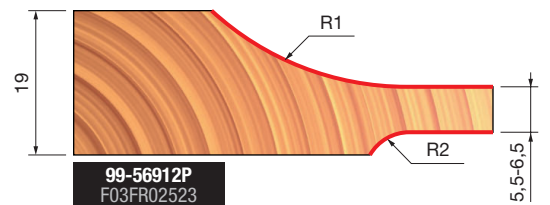
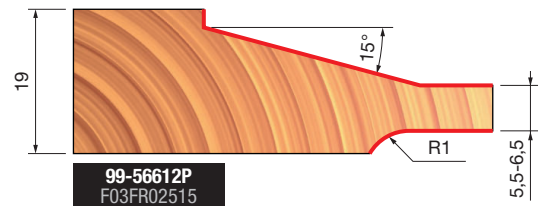


Softwood    Hardwood    Plywood    Wood Based Panels



D mm	h mm	H mm	A mm	$\alpha$	R1 mm	R2 mm	Z	Max RPM 1/min.	Freud Code	Art. No.
89	25	75	12	15°	6	-	2	14.000	<b>99-56612P</b>	F03FR02515
89	25	75	12	15°	38	6	2	14.000	<b>99-56912P</b>	F03FR02523
89	25	75	12	15°	30	6	2	14.000	<b>99-57112P</b>	F03FR02529

Spare parts	Dimensions mm	Freud Code	Art. No.
	Hex nut	7,94 x 6,75	<b>2610M BB9</b> F03F010003
	Spacer	18 x 0,1 x 8	<b>AN01MP0019</b> F03FC00392
	Spacer	18 x 0,2 x 8	<b>AN01MP0029</b> F03FC00393
	Spacer	18 x 0,5 x 8	<b>AN01MP0059</b> F03FC00395
	Spacer	18 x 1 x 8	<b>AN01MP0109</b> F03FC00396
	Spacer	18 x 0,15 x 8	<b>AN01MPAA99</b> F03FC00391



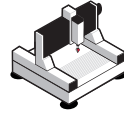
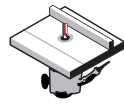
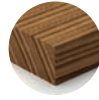


Table Routers

CNC Machines



Softwood

Hardwood

Plywood

Wood Based Panels

**Machines:**

Table routers and CNC machines.

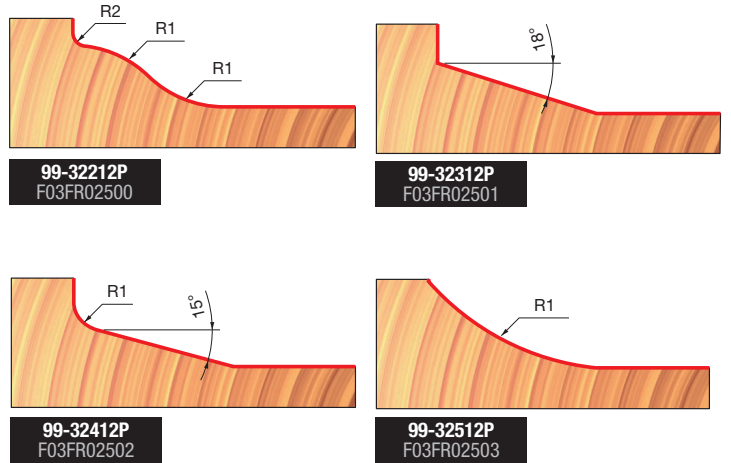
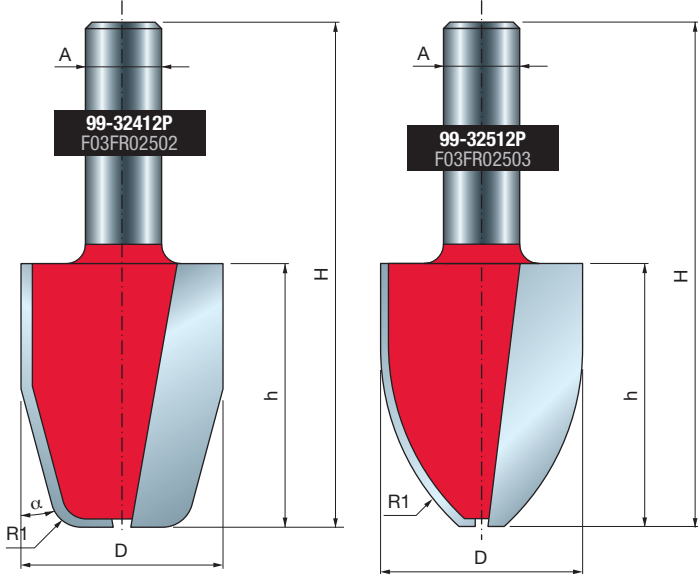
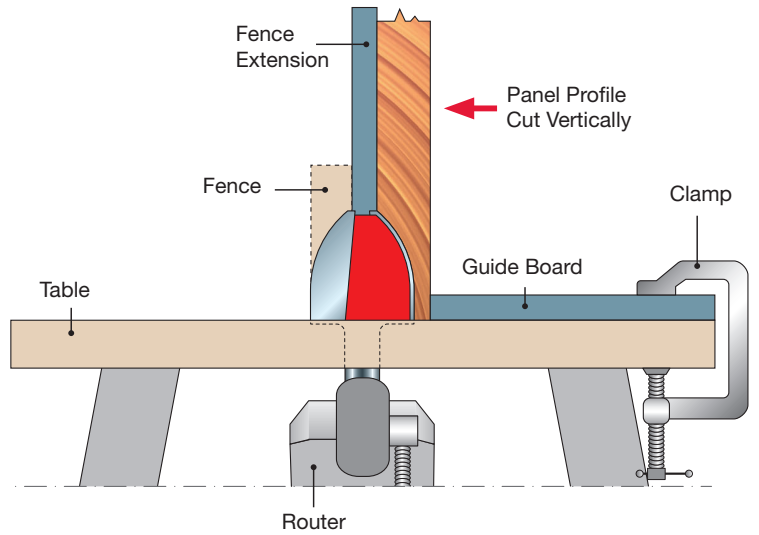
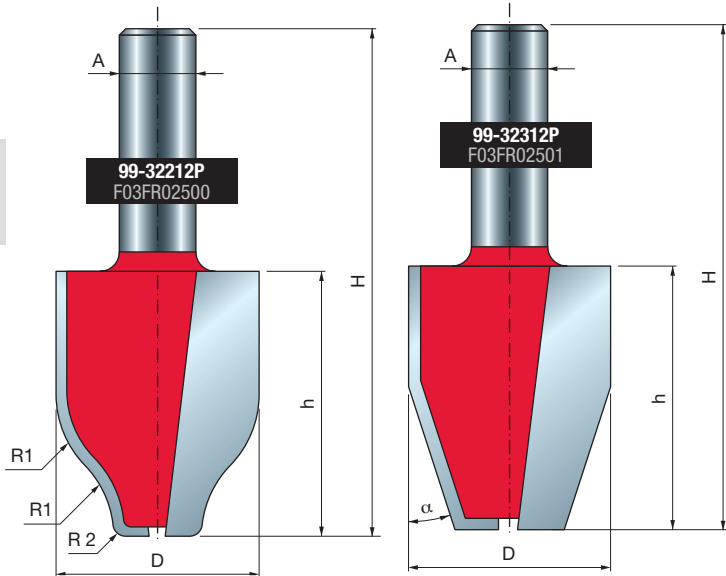
**Materials:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

Create beautiful raised panels for cabinet doors or wall panelling.

D mm	h mm	H mm	A	$\alpha$	R1 mm	R2 mm	Z	Max RPM 1/min.	Freud Code	Art. No.
31,8	41,5	79,5	12	-	2	16	2	16.000	99-32212P	F03FR02500
31,8	41,5	79,5	12	18°	-	-	2	16.000	99-32312P	F03FR02501
31,8	41,5	79,5	12	15°	4,8	-	2	16.000	99-32412P	F03FR02502
31,8	41,5	79,5	12	-	38,1	-	2	16.000	99-32512P	F03FR02503





# Surface Forming Bits





# V-GROOVE BITS

20- PI01

**Machines:**

Hand-held routers, table routers and CNC machines.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

Perfect for V shaped grooves, signmaking, engraving and decorative details.



Hand-held Routers

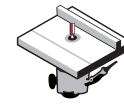
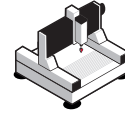


Table Routers



CNC Machines



Softwood



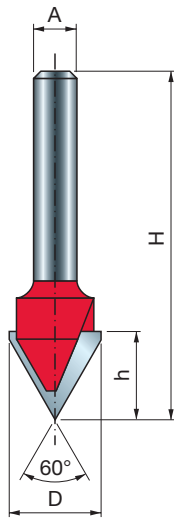
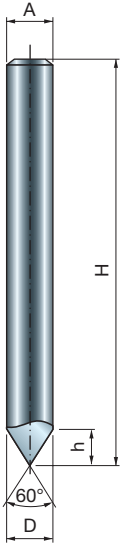
Hardwood



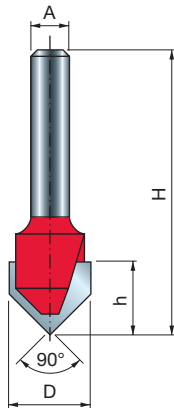
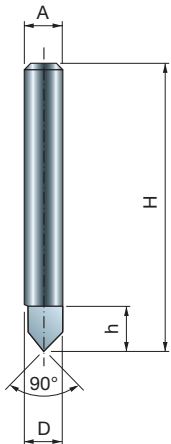
Plywood



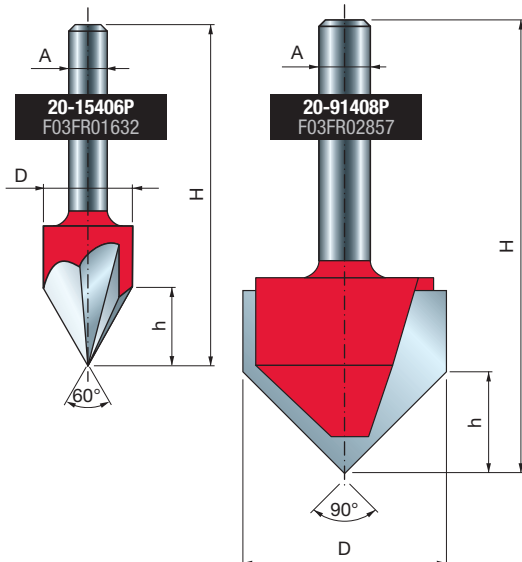
Wood Based Panels



• Solid Carbide Bit

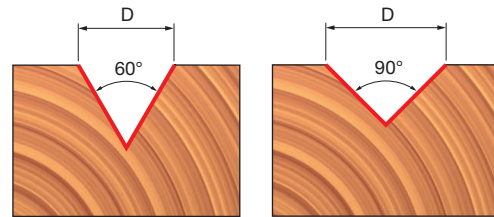


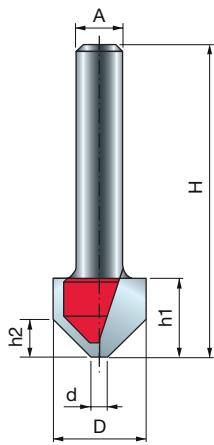
• Solid Carbide Bit



D	h	H	A	$\alpha$	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	inch		1/min.		
6	6	38,1	6	90°	1	24.000	20-10006P	F03FR01617
9,5	10	44,4	6	90°	2	24.000	20-10206P	F03FR01619
12,7	10	44,4	6	90°	2	24.000	20-10406P	F03FR01622
12,7	12,7	49,2	6	60°	2	24.000	20-15206P	F03FR01629
12,7	11	57,3	6	60°	3	24.000	20-15406P	F03FR01632
6	6	38,1	8	90°	1	24.000	20-10008P	F03FR01618
8	6	70	8	60°	1	30.000	PI01MD6083	F03FR00382
8	8	70	8	60°	1	24.000	20-16008P	F03FR01634
9,5	10	44,4	8	90°	2	24.000	20-10208P	F03FR01620
12,7	10	44,4	8	90°	2	24.000	20-10408P	F03FR01623
12,7	12,7	50,8	8	60°	2	24.000	20-15208P	F03FR01630
12,7	11	54	8	60°	3	24.000	20-15408P	F03FR01633
31,75	16	51	8	90°	2	24.000	20-91408P	F03FR02857
15,88	12,5	56,5	12	90°	2	24.000	20-10612P	F03FR01625
19,05	12,5	57,2	12	90°	2	24.000	20-10812P	F03FR01626
9,53	10	44,4	1/4	90°	2	24.000	20-10225P	F03FR01621
12,7	10	44,4	1/4	90°	2	24.000	20-10425P	F03FR01624
12,7	12,7	47,5	1/4	60°	2	24.000	20-15225P	F03FR01631
12,7	12,7	54,7	1/2	90°	2	24.000	20-10950P	F03FR01628

• Solid Carbide Bit





**Machines:**

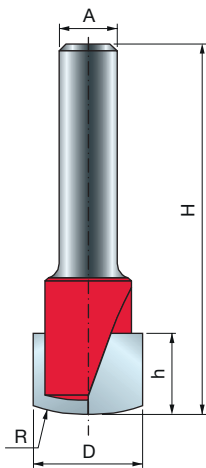
Hand-held routers, table routers and CNC machines.

**Materials:**

ACM (Aluminium Composite Material) panels, softwood, hardwood, plywood and wood based panels.

**Applications:**

Designed to create a V groove on ACM panels, ensuring an easy bending of the panel without fractures.



**Machines:**

Hand-held routers, table routers and CNC machines.

**Materials:**

ACM (Aluminium Composite Material) panels, softwood, hardwood, plywood and wood based panels.

**Applications:**

Designed to create a rectangular groove on thick ACM panels, ensuring an easy bending of the panel without fractures.

## V-GROOVE BITS FOR ACM PANEL FOLDING

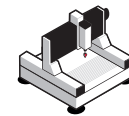
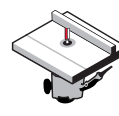
21-



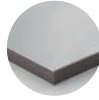
Hand-held Routers



Table Routers



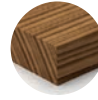
CNC Machines



ACM



Softwood



Hardwood

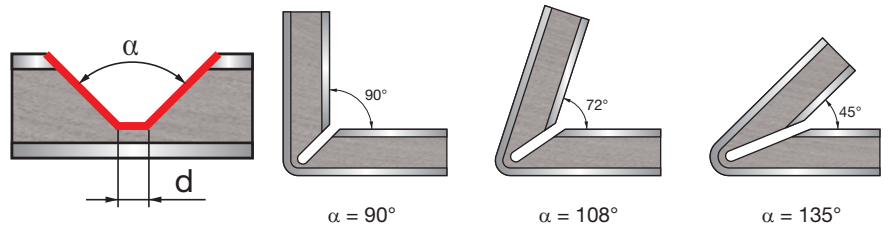


Plywood



Wood Based Panels

D	h1	h2	H	A	d	$\alpha$	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm	inch	mm		1/min.		
16	12,5	6,8	50,8	6		2,5	90°	2	24.000	21-11206P F03FR04018
19,05	12,5	6	50,8	6		2,5	108°	2	24.000	21-14606P F03FR04021
22,23	12,5	4,2	50,8	6		2,29	135°	2	24.000	21-18206P F03FR04024
16	12,5	6,8	50,8	8		2,5	90°	2	24.000	21-11208P F03FR04019
19,05	12,5	6	50,8	8		2,5	108°	2	24.000	21-14608P F03FR04022
22,23	12,5	4,2	50,8	8		2,29	135°	2	24.000	21-18208P F03FR04025
12,7	10,8	5,2	50,8		1/4	2,29	90°	2	24.000	21-11025P F03FR04017
16	12,7	6,8	50,8		1/4	2,5	90°	2	24.000	21-11225P F03FR04020
19,05	12,7	6	50,8		1/4	2,5	108°	2	24.000	21-14625P F03FR04023
22,23	12,7	4,2	50,8		1/4	2,29	135°	2	24.000	21-18225P F03FR04026



## RECTANGULAR GROOVE BITS FOR ACM PANEL FOLDING

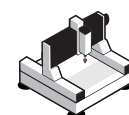
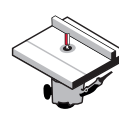
21-



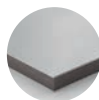
Hand-held Routers



Table Routers



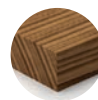
CNC Machines



ACM



Softwood



Hardwood

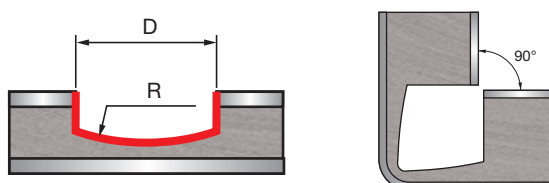


Plywood



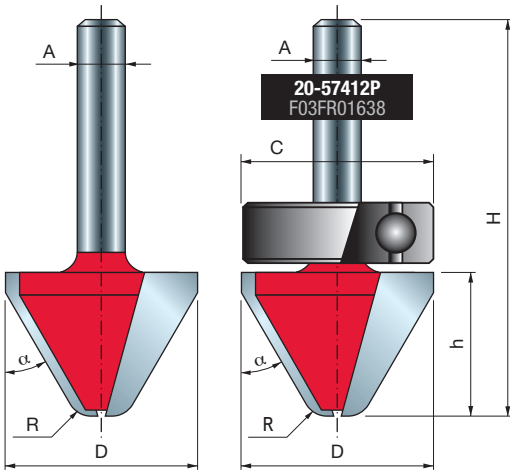
Wood Based Panels

D	h	H	A	R	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	inch	mm	1/min.		
15,88	11	50	8		23,8	2	24.000	21-20008P F03FR03967
15,88	11	50,8		1/4	23,8	2	24.000	21-20025P F03FR03963



# LETTERING BITS

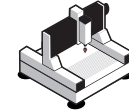
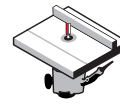
20-



Hand-held Routers



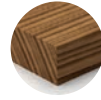
Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels



D mm	h mm	H mm	A mm	C mm	R mm	$\alpha$	Z	Max RPM 1/min.	Freud Code	Art. No.
25,4	19	51,05	6	-	3	60°	2	24.000	20-17206P	F03FR01635
25,4	19	51,05	8	-	3	60°	2	24.000	20-17208P	F03FR01636
28,57	19	57	12	-	3	60°	2	18.000	20-17412P	F03FR01637
28	19	67,15	12	28	3	60°	2	18.000	20-57412P	F03FR01638

**Machines:**

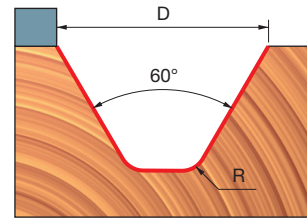
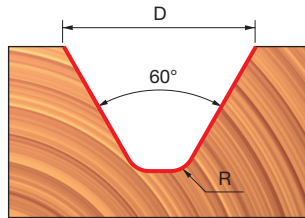
Hand-held routers, table routers and CNC machines.  
Bits with ball bearing are not recommended to be used on CNC machines.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

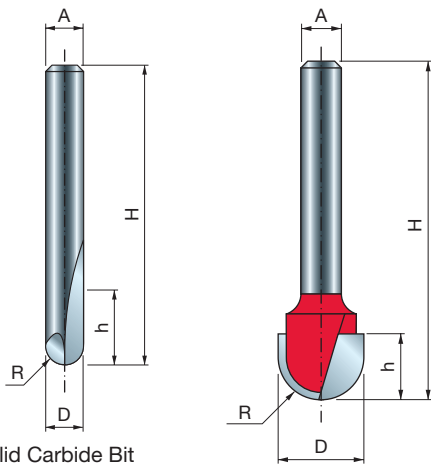
**Applications:**

Produce a 60° angle V shape groove with a flat bottom for highly readable relief lettering.



# ROUND NOSE BITS

18-



• Solid Carbide Bit



**Machines:**

Hand-held routers, table routers and CNC machines.

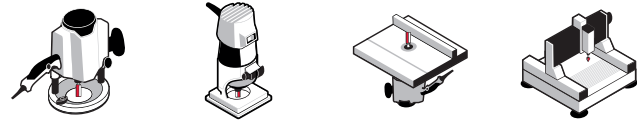
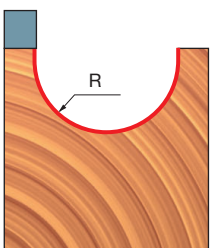
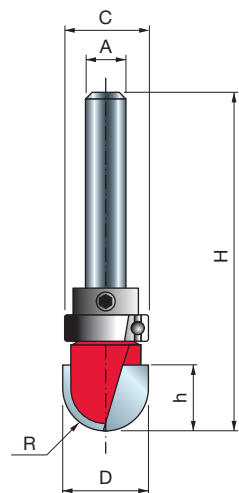
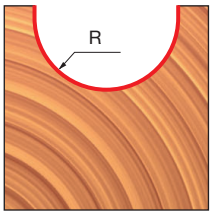
Bits with ball bearing are not recommended to be used on CNC machines.

**Materials:**

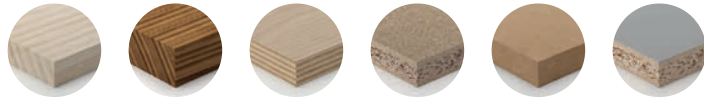
Softwood, hardwood, plywood and wood based panels.

**Applications:**

Perform beautiful semicircular engraved grooves in the workpiece.



Hand-held Routers      Table Routers      CNC Machines



Softwood      Hardwood      Plywood      Wood Based Panels

D	h	H	A	R	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	inch	mm	1/min.		
• 3,2	9,5	50,5	6	1,6	2	24.000	<b>18-10006P</b>	F03FR01581
• 4,8	9,5	50,5	6	2,4	2	24.000	<b>18-10206P</b>	F03FR01584
• 6	12,7	50,8	6	3	2	24.000	<b>18-10406P</b>	F03FR01587
• 9,52	9	46	6	4,8	2	24.000	<b>18-10606P</b>	F03FR01590
• 12	9	46	6	6	2	24.000	<b>18-10806P</b>	F03FR01593
• 15,88	11	50,8	6	8	2	24.000	<b>18-11006P</b>	F03FR01596
• 19,05	11	50,8	6	9,5	2	24.000	<b>18-11206P</b>	F03FR01599
• 3,2	9,5	50,5	8	1,6	2	24.000	<b>18-10008P</b>	F03FR01582
• 4,8	9,5	50,5	8	2,4	2	24.000	<b>18-10208P</b>	F03FR01585
• 6	12,7	50,8	8	3	2	24.000	<b>18-10408P</b>	F03FR01588
• 9,52	9	46	8	4,8	2	24.000	<b>18-10608P</b>	F03FR01591
• 12	9	46	8	6	2	24.000	<b>18-10808P</b>	F03FR01594
• 15,88	11	50,8	8	8	2	24.000	<b>18-11008P</b>	F03FR01597
• 19,05	11	50,8	8	9,5	2	24.000	<b>18-11208P</b>	F03FR01600
• 6	9,5	57	12	3	2	24.000	<b>18-11412P</b>	F03FR01602
• 12,7	31,7	71,5	12	6,35	2	24.000	<b>18-11612P</b>	F03FR01604
• 19,05	31,7	73	12	9,5	2	24.000	<b>18-12212P</b>	F03FR01606
• 25,4	31,7	73	12	12,7	2	24.000	<b>18-12612P</b>	F03FR01608
• 3,18	9,5	50,5		1/4	2	24.000	<b>18-10025P</b>	F03FR01583
• 4,76	6,4	50,5		1/4	2	24.000	<b>18-10225P</b>	F03FR01586
• 6,35	12,7	50,5		1/4	2	24.000	<b>18-10425P</b>	F03FR01589
• 9,52	9	45		1/4	2	24.000	<b>18-10625P</b>	F03FR01592
• 12,7	9	45,5		1/4	2	24.000	<b>18-10825P</b>	F03FR01595
• 15,88	11	48		1/4	2	24.000	<b>18-11025P</b>	F03FR01598
• 19,05	11	48		1/4	2	24.000	<b>18-11225P</b>	F03FR01601
• 6,35	12,7	61		1/2	2	24.000	<b>18-11450P</b>	F03FR01603
• 12,7	31,7	72,7		1/2	2	24.000	<b>18-11650P</b>	F03FR01605
• 19	31,7	73		1/2	2	24.000	<b>18-12250P</b>	F03FR01607

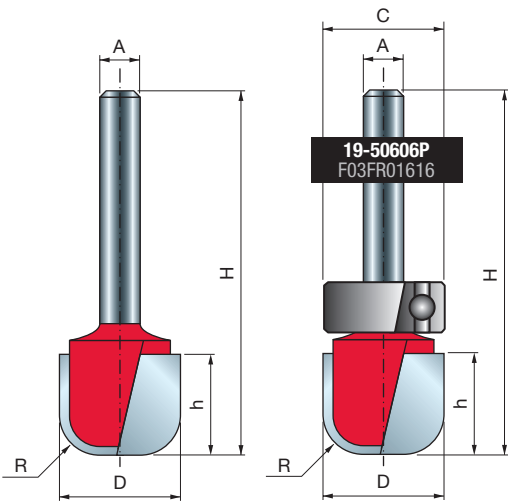
• Solid Carbide Bits

**Bits with ball bearing (not suitable for CNC machines)**

D	h	H	A	R	C	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm	mm		1/min.		
15,88	11	59,5	6	8	15,8	2	24.000	<b>18-51006P</b>	F03FR01609
19,05	11,1	59,5	6	9,5	19	2	24.000	<b>18-51206P</b>	F03FR01611
15,88	11	59,5	8	8	15,8	2	24.000	<b>18-51008P</b>	F03FR01610
19,05	11	59,5	8	9,5	19,05	2	24.000	<b>18-51208P</b>	F03FR01612

# WOOD BOWL BITS

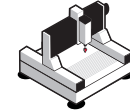
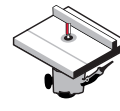
19- 99-



Hand-held Routers



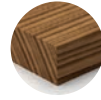
Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels



Wood Based Panels



Wood Based Panels

D mm	h mm	H mm	A mm	R mm	C mm	Z	Max RPM 1/min.	Freud Code	Art. No.
19	15,9	64,1	6	6,35	19	2	24.000	<b>19-50606P</b>	F03FR01616
19,05	15,9	47,5	6	6,35	-	2	24.000	<b>19-10606P</b>	F03FR01613
19,05	15,9	47,5	8	6,35	-	2	24.000	<b>19-10608P</b>	F03FR01614
19,05	15,9	67	12	6,35	-	2	24.000	<b>19-12612P</b>	F03FR01615
31,75	15,8	53	12	6,35	-	2	18.000	<b>99-02612P</b>	F03FR02420

**Machines:**

Hand-held routers, table routers and CNC machines.

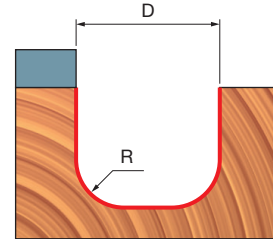
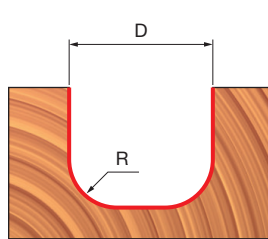
Bits with ball bearing are not recommended to be used on CNC machines.

**Materials:**

Softwood, hardwood, plywood and wood based panels.

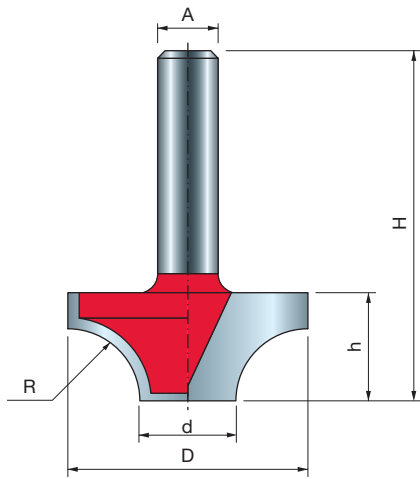
**Applications:**

Perform beautiful bowl shaped engraved grooves with a flat bottom in the workpiece.



# OVOLO BITS

39-



Hand-held Routers

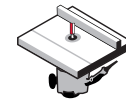
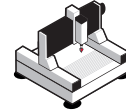


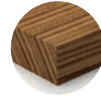
Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels



**Machines:**

Hand-held routers, table routers and CNC machines.

**Material:**

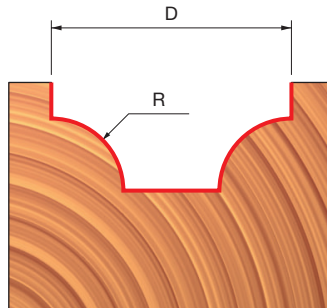
Softwood, hardwood, plywood and wood based panels.

**Applications:**

Create decorative grooves in moulding and furniture.

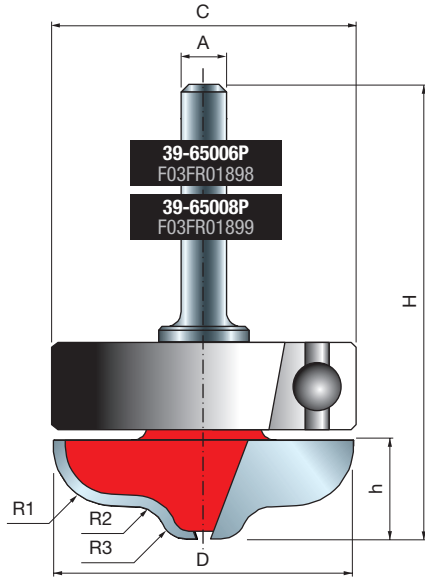
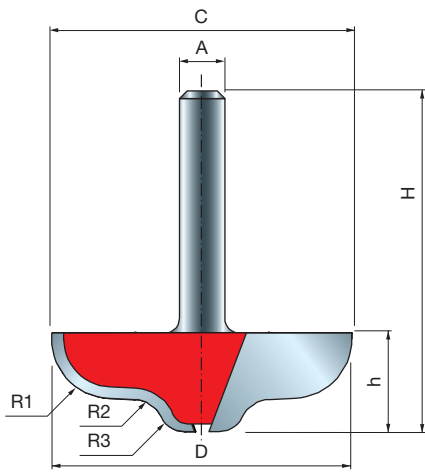
D mm	h mm	H mm	A mm	R mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
12,7	8	40	6	3,2	6,35	2	24.000	39-20206P	F03FR01871
24,7	12,7	44,7	8	6	12,7	2	24.000	39-20908P	F03FR01873
31,75	14,3	46,3	8	9,53	12,7	2	18.000	39-20808P	F03FR01872
63,5	33,3	71,3	12	25,4	12,7	2	12.000	39-23812P*	F03FR01874

\* Not suitable for hand-held machines



# DOUBLE COVE AND BEAD GROOVE BITS

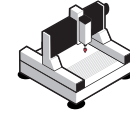
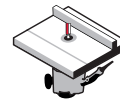
39-



Hand-held Routers



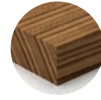
Table Routers



CNC Machines



Softwood



Hardwood



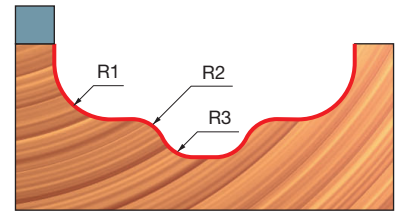
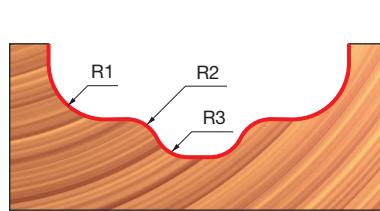
Plywood



Wood Based Panels



D mm	h mm	H mm	A mm	C mm	R1 mm	R2 mm	R3 mm	Z	Max RPM 1/min.	Freud Code	Art. No.
39,6	13	45	6	-	7,9	4,2	3,4	2	16.000	<b>39-60006P</b>	F03FR01896
39,6	13	60,1	6	39,6	7,9	4,2	3,4	2	16.000	<b>39-65006P</b>	F03FR01898
39,6	13	45	8	-	7,9	4,2	3,4	2	16.000	<b>39-60008P</b>	F03FR01897
39,6	13	60,1	8	39,6	7,9	4,2	3,4	2	16.000	<b>39-65008P</b>	F03FR01899



**Machines:**

Hand-held routers, table routers and CNC machines.

Bits with ball bearing are not recommended to be used on CNC machines.

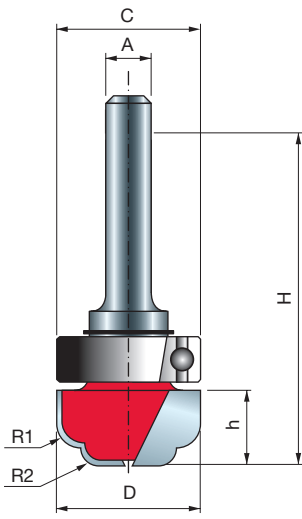
**Materials:**

Softwood, hardwood, plywood and wood based panels.

**Applications:**

Create decorative grooves in moulding and furniture.





**Machines:**

Hand-held routers and table routers.

**Materials:**

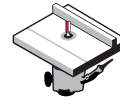
Softwood, hardwood, plywood and wood based panels.

**Applications:**

Use with templates to create decorative grooves in moulding and furniture.

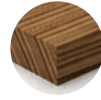
## TOP BEARING DOUBLE COVE GROOVE BIT

39-



Hand-held Routers

Table Routers



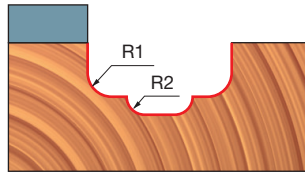
Softwood

Hardwood

Plywood

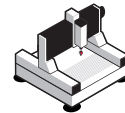
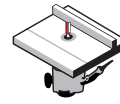
Wood Based Panels

D	h	H	A	C	R1	R2	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm	mm	mm		1/min.		
19	9,6	53	6	19	3,2	2,4	2	24.000	39-51206P	F03FR01887



## COVE AND BEAD GROOVE BITS

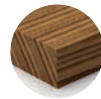
39-



Hand-held Routers

Table Routers

CNC Machines

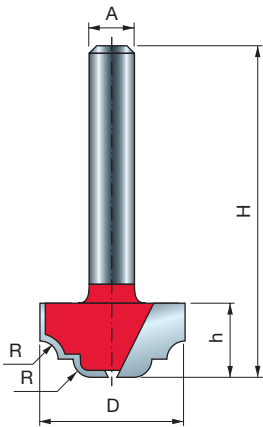


Softwood

Hardwood

Plywood

Wood Based Panels



**Machines:**

Hand-held routers, table routers and CNC machines.

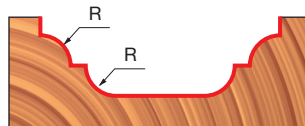
**Materials:**

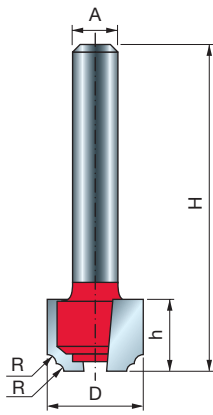
Softwood, hardwood, plywood and wood based panels.

**Applications:**

Create decorative grooves in moulding and furniture.

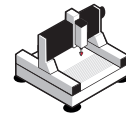
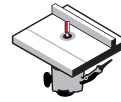
D	h	H	A	R	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	inch	mm	1/min.		
19,05	9,8	41,8	6		2,38	2	24.000	39-10006P F03FR01856
25,4	12,7	44,7	6		3,18	2	24.000	39-10206P F03FR01860
19,05	9,8	41,8	8		2,38	2	24.000	39-10008P F03FR01857
19	12,7	44,7	8		4	2	24.000	39-10108P F03FR01859
25,4	12,7	44,7	8		3,18	2	24.000	39-10208P F03FR01861
31,75	12,7	44,7	8		4	2	18.000	39-11408P F03FR01863
31,75	12,7	50,7	12		4	2	18.000	39-11412P F03FR01864
19,05	9,8	41,8		1/4	2,38	2	24.000	39-10025P F03FR01858
25,4	12,7	44,7		1/4	3,18	2	24.000	39-10225P F03FR01862





## CLASSICAL BEADING GROOVE BITS

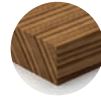
39-



Hand-held Routers

Table Routers

CNC Machines



Softwood

Hardwood

Plywood

Wood Based Panels



### Machines:

Hand-held routers, table routers and CNC machines.

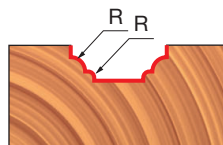
### Materials:

Softwood, hardwood, plywood and wood based panels.

### Applications:

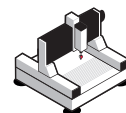
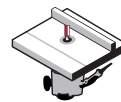
Create decorative grooves in moulding and furniture.

D mm	h mm	H mm	A mm	inch	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
12,7	9,5	41,2	6		1,2	2	24.000	39-30206P	F03FR01878
15,88	9,5	41,2	6		2,38	2	24.000	39-30406P	F03FR01881
22,22	12	43,7	6		3,18	2	24.000	39-30606P	F03FR01884
12,7	9,5	41,2	8		1,2	2	24.000	39-30208P	F03FR01879
15,88	9,5	41,2	8		2,38	2	24.000	39-30408P	F03FR01882
22,22	12	43,7	8		3,2	2	24.000	39-30608P	F03FR01885
12,7	9,5	41,2		1/4	1,2	2	24.000	39-30225P	F03FR01880
15,88	9,5	41,2		1/4	2,38	2	24.000	39-30425P	F03FR01883
22,22	12	43,7		1/4	3,18	2	24.000	39-30625P	F03FR01886



## OGEE GROOVE BITS

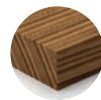
39-



Hand-held Routers

Table Routers

CNC Machines



Softwood

Hardwood

Plywood

Wood Based Panels



### Machines:

Hand-held routers, table and CNC machines.

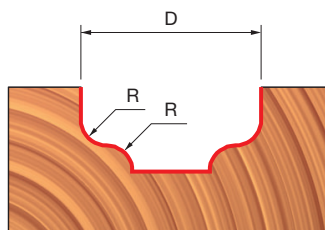
### Materials:

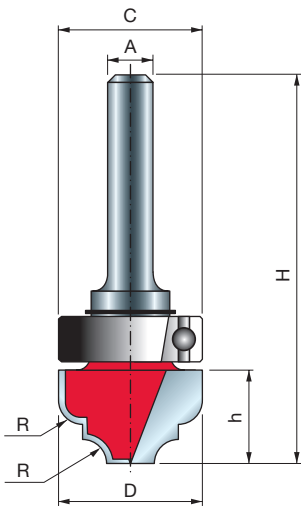
Softwood, hardwood, plywood and wood based panels.

### Applications:

Create decorative grooves in moulding and furniture.

D mm	h mm	H mm	A mm	inch	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
12,7	8	40	6		1,59	2	24.000	39-15206P	F03FR01865
19,05	12,7	44,7	6		6,35	2	24.000	39-24006P	F03FR01875
22,23	10,36	42,4	6		3,18	2	24.000	39-15406P	F03FR01868
12,7	8	40	8		1,6	2	24.000	39-15208P	F03FR01866
19,05	12,7	44,7	8		6,4	2	24.000	39-24008P	F03FR01876
22,23	10,36	42,4	8		3,2	2	24.000	39-15408P	F03FR01869
19,05	12,7	50,7	12		6,4	2	24.000	39-24012P	F03FR01877
12,7	8	40		1/4	1,59	2	24.000	39-15225P	F03FR01867
22,23	10,4	42,4		1/4	3,18	2	24.000	39-15425P	F03FR01870





**Machines:**

Hand-held routers and table routers.

**Materials:**

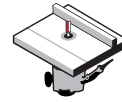
Softwood, hardwood, plywood and wood based panels.

**Applications:**

Use with templates to create decorative grooves in moulding and furniture.

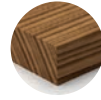
## TOP BEARING COVE AND BEAD GROOVE BITS

39-



Hand-held Routers

Table Routers



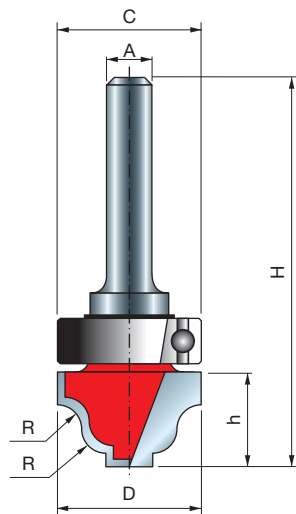
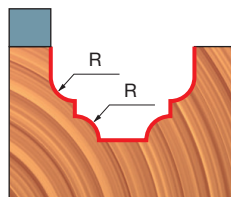
Softwood

Hardwood

Plywood

Wood Based Panels

D	h	H	A	C	R	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	inch	mm		1/min.		
19	12,7	55,5	6		19	3,18	24.000	39-53206P	F03FR01892
28	14	58,1	8		28	3,18	18.000	39-53808P	F03FR01894
28	14	64,1	12		28	3,18	18.000	39-53812P	F03FR01895
19	12,7	55,5		1/4	19	3,18	24.000	39-53225P	F03FR01893



**Machines:**

Hand-held routers and table routers.

**Materials:**

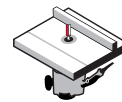
Softwood, hardwood, plywood and wood based panels.

**Applications:**

Use with templates to create decorative grooves in moulding and furniture.

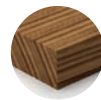
## TOP BEARING FILLET OGEE GROOVE BITS

39-



Hand-held Routers

Table Routers



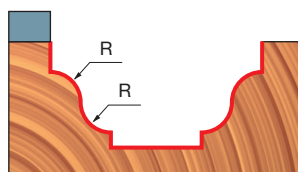
Softwood

Hardwood

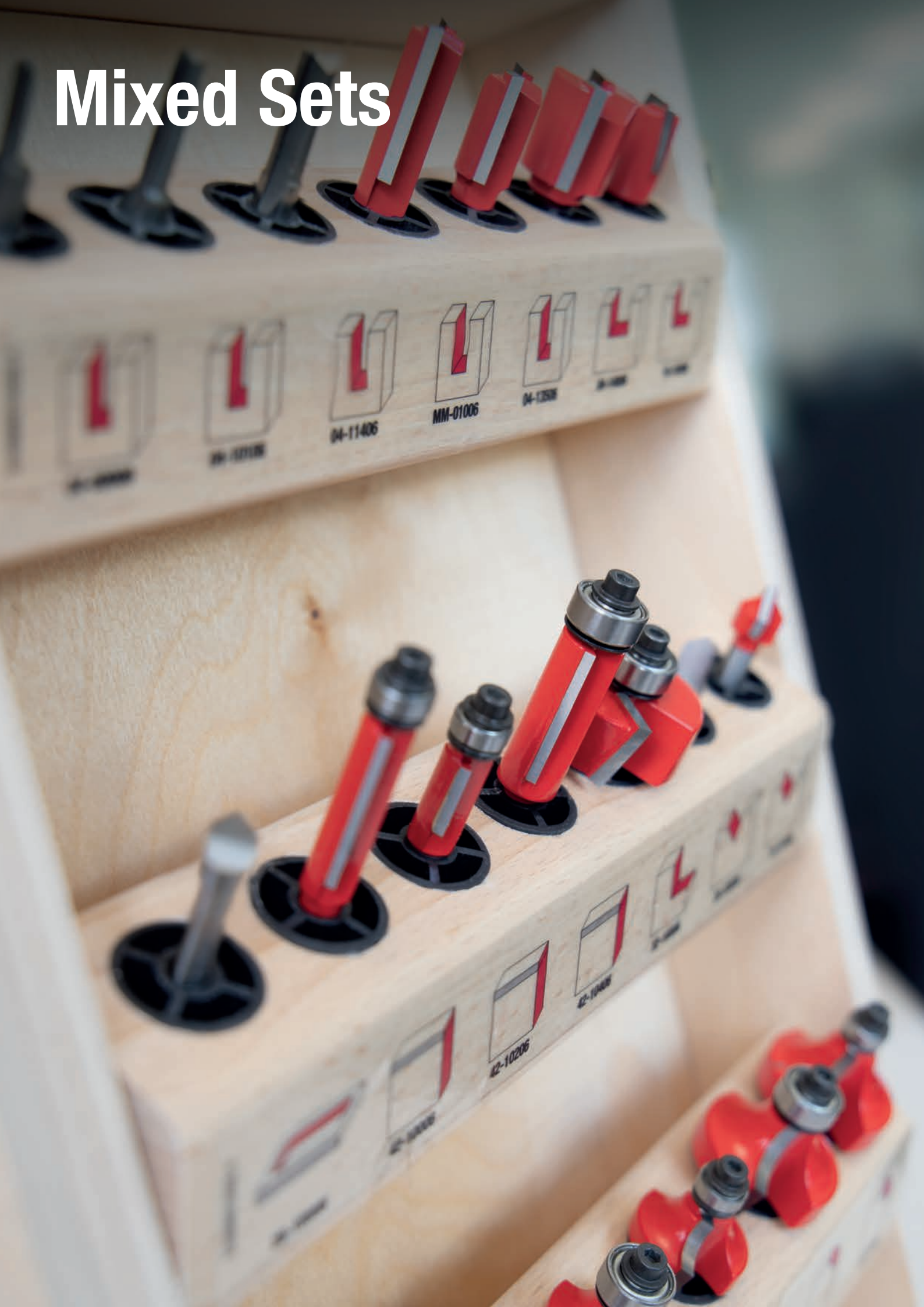
Plywood

Wood Based Panels

D	h	H	A	C	R	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	inch	mm		1/min.		
19	12,5	55,5	6		19	3,18	24.000	39-52206P	F03FR01888
28	14,4	58,1	8		28	4	18.000	39-52808P	F03FR01890
28	14,4	64,1	12		28	4	18.000	39-52812P	F03FR01891
19	12,5	55,5		1/4	19	3,18	24.000	39-52225P	F03FR01889



# Mixed Sets





## BASIC SET 4 ROUTER BITS

88-10606P (F03FR02255)



Hand-held Routers

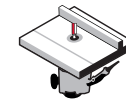
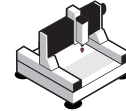


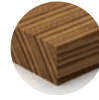
Table Routers



CNC Machines\*



Softwood



Hardwood



Plywood



Wood Based Panels






Set code 88-10606P (F03FR02255)

Bit type	Page reference	D mm	h mm	H mm	A mm	C mm	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
• Double flute straight bit	244	6	16	50,8	6	-	-	2	24.000	04-11406P	F03FR01440
Flush trim bit	252	12,7	25,7	72,9	6	12,7	-	2	24.000	42-10406P	F03FR01938
Roman ogee bit	261	27	13,3	55,3	6	9,53	4	2	18.000	38-10006P	F03FR01805
Rounding over bit	256	31,75	18	59,7	6	12,7	9,53	2	18.000	34-11406P	F03FR01780

• Solid Carbide Bit



### Additional spare parts included

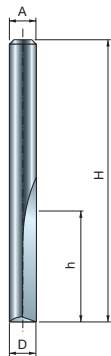
Spare parts	Dimensions mm	Freud Code	Art. No.
 Allen key	2,5	2619M CA9	F03FA07432
 Ball bearing	9,53 x 3,2 x 4,76	3102M AA9P	F03F010006
 Washer	9 x 2 x 6	FX07M AA9P	F03F010158

### Machines:

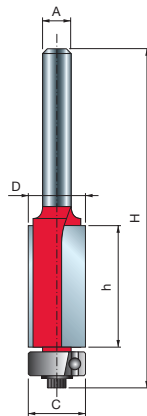
To identify the correct machine for each router bit, refer to the corresponding page reference of each router bit.

### Materials:

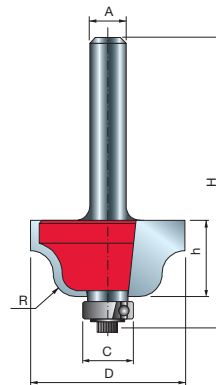
Softwood, hardwood, plywood and wood based panels.



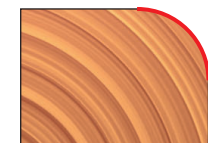
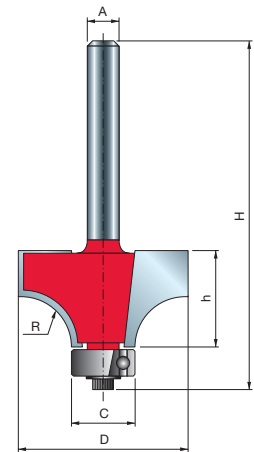
04-11406P  
F03FR01440



42-10406P  
F03FR01938



38-10006P  
F03FR01805



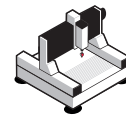
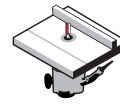
34-11406P  
F03FR01780



# STARTER 6 PIECE ROUTER BIT SET

**91-10408P** (F03FR02293)

**91-10412P** (F03FR02294)



Hand-held Routers

Table Routers

CNC Machines\*



Softwood

Hardwood

Plywood

Wood Based Panels

## Set code 91-10408P (F03FR02293)

Bit type	Page reference	D mm	h mm	H mm	A mm	C mm	P mm	$\alpha$	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
Rabbeting bit	282	31,75	13,2	55,7	8	12,7	9,52	-	-	2	18.000	<b>32-10008P</b>	F03FR01746
Chamfer bit	257	44	18,5	61	8	12,7	-	45°	-	2	16.000	<b>40-10608P</b>	F03FR01920
Rounding over bit	256	31,75	18	59,7	8	12,7	-	-	9,5	2	18.000	<b>34-11408P</b>	F03FR01781
Round nose bit	307	12	9	46	8	-	-	-	6	2	24.000	<b>18-10808P</b>	F03FR01594
Cove bit	258	38,1	16,4	58,9	8	12,7	-	-	12,7	2	16.000	<b>30-10608P</b>	F03FR01707
Roman ogee bit	261	35	18,5	60,5	8	9,53	-	-	6,35	2	16.000	<b>38-10208P</b>	F03FR01809

## Set code 91-10412P (F03FR02294)

Bit type	Page reference	D mm	h mm	H mm	A mm	C mm	P mm	$\alpha$	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
Rabbeting bit	282	31,75	13,2	61,7	12	12,7	9,52	-	-	2	18.000	<b>32-10212P</b>	F03FR01748
Chamfer bit	257	44	18,5	67	12	12,7	-	45°	-	2	16.000	<b>40-11412P</b>	F03FR01922
Rounding over bit	256	31,75	18	65,7	12	12,7	-	-	9,53	2	18.000	<b>34-12412P</b>	F03FR01788
Round nose bit	307	12,7	31,7	71,5	12	-	-	-	6,35	2	24.000	<b>18-11612P</b>	F03FR01604
Cove bit	258	38,1	16,4	64,9	12	12,7	-	-	12,7	2	16.000	<b>30-11412P</b>	F03FR01713
Roman ogee bit	261	35	18,5	66,5	12	9,53	-	-	6,35	2	16.000	<b>38-10612P</b>	F03FR01812

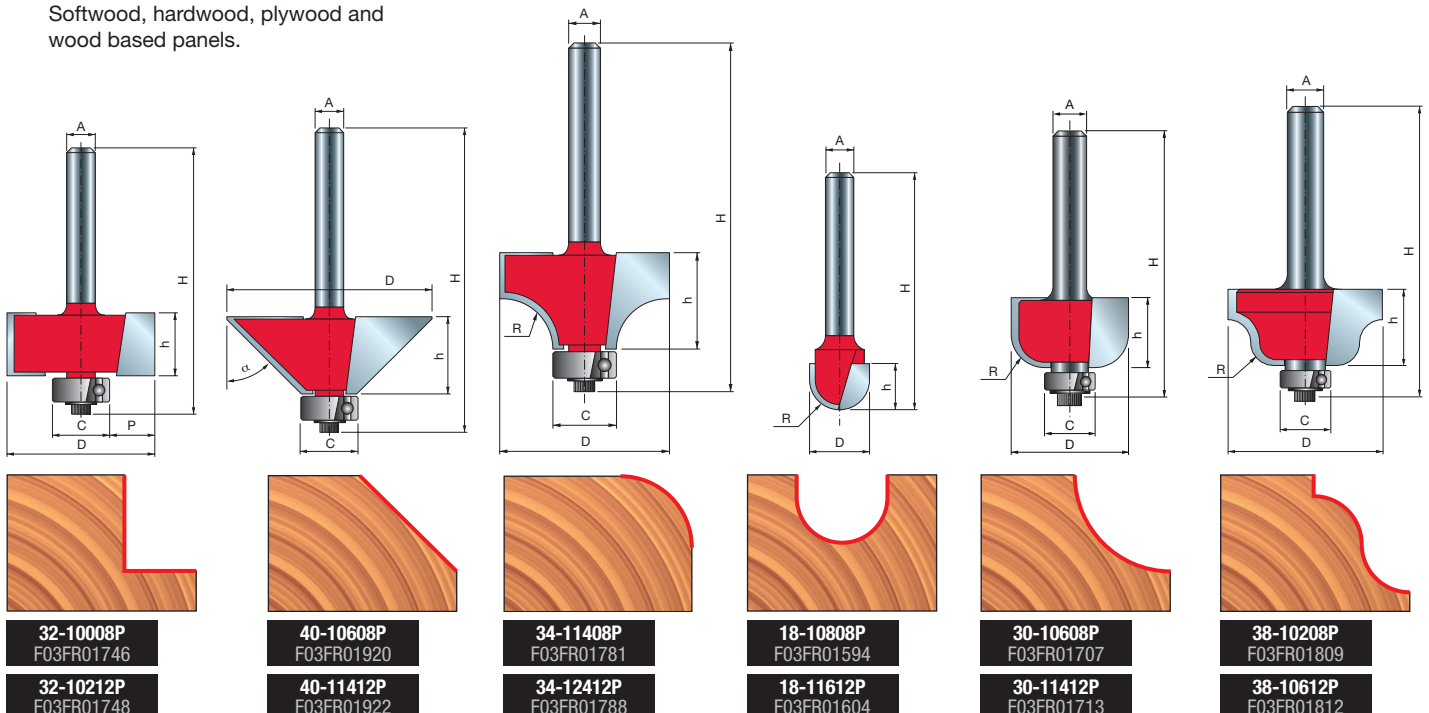


### Machines:

To identify the correct machine for each router bit, refer to the corresponding page reference of each router bit.

### Materials:

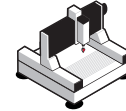
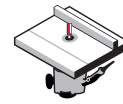
Softwood, hardwood, plywood and wood based panels.





# INTERMEDIATE 9 PIECE ROUTER BIT SET

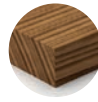
**88-10206P**  
(F03FR02250)



Hand-held Routers

Table Routers

CNC Machines\*



Softwood

Hardwood

Plywood

Wood Based Panels

Set code 88-10206P (F03FR02250)

Bit type	Page reference	D mm	h mm	H mm	A mm	C mm	S mm	R mm	P mm	$\alpha$	Z	Max RPM 1/min.	Freud Code	Art. No.
• Double flute straight bit	244	6	16	50,8	6	-	-	-	-	-	2	24.000	04-11406P	F03FR01440
Double flute straight bit	244	9	25	63	6	-	-	-	-	-	2	24.000	04-12406P	F03FR01450
Flush trim bit	252	12,7	25,7	72,9	6	12,7	25,4	-	-	-	2	24.000	42-10406P	F03FR01938
Mortising bit	249	12,7	12,5	51	6	-	-	-	-	-	2	24.000	16-10006P	F03FR01565
Rabbeting bit	282	31,75	13,2	55,7	6	12,7	-	-	9,52	-	2	18.000	32-10006P	F03FR01745
Dovetail bit	285	12,7	12,7	50,7	6	-	-	-	-	14°	2	24.000	22-10406P	F03FR01643
Rounding over bit	256	31,75	18	59,7	6	12,7	-	9,53	-	-	2	18.000	34-11406P	F03FR01780
• Round nose bit	307	6	12,7	50,8	6	-	-	3	-	-	2	24.000	18-10406P	F03FR01587
Roman ogee bit	261	27	13,3	54,7	6	9,53	-	4	-	-	2	18.000	38-10006P	F03FR01805

• Solid Carbide Bit

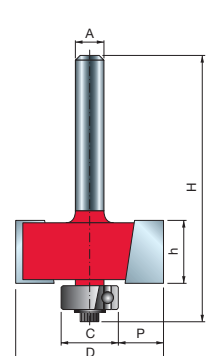
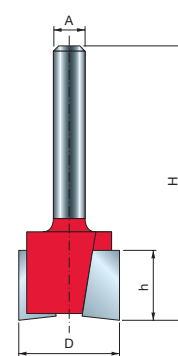
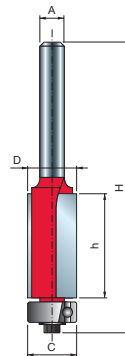
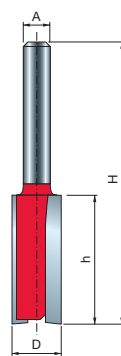
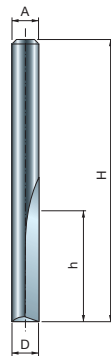


**Machines:**

To identify the correct machine for each router bit, refer to the corresponding page reference of each router bit.

**Materials:**

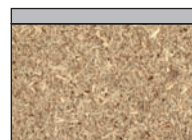
Softwood, hardwood, plywood and wood based panels.



04-11406P  
F03FR01440



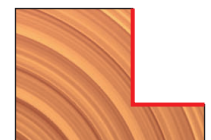
04-12406P  
F03FR01450



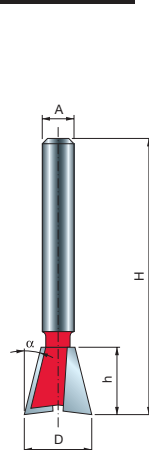
42-10406P  
F03FR01938



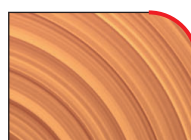
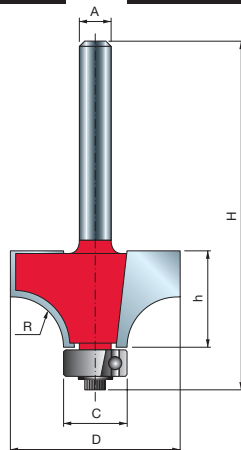
16-10006P  
F03FR01565



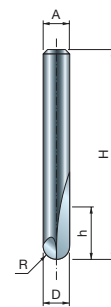
32-10006P  
F03FR01745



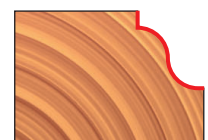
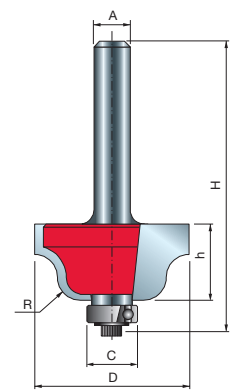
22-10406P  
F03FR01643



34-11006P  
F03FR01774



18-10406P  
F03FR01587



38-10006P  
F03FR01805



## SUPER 13 PIECE ROUTER BIT SET

91-10008P (F03FR02275)

91-10012P (F03FR02277)



Hand-held Routers

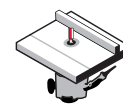
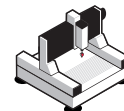


Table Routers



CNC Machines\*



Softwood



Hardwood



Plywood



Wood Based Panels



### Set code 91-10008P (F03FR02275)

Bit type	Page reference	D mm	h mm	H mm	A mm	C mm	R mm	P mm	$\alpha$	Z	Max RPM 1/min.	Freud Code	Art. No.
• Double flute straight bit	244	6	16	50,8	8	-	-	-	-	2	24.000	04-11408P	F03FR01441
Double flute straight bit	245	12	31,8	63,8	8	-	-	-	-	2	24.000	04-13708P	F03FR01465
Double flute straight bit	245	20	19	56	8	-	-	-	-	2	24.000	04-15508P	F03FR01493
Flush trim bit	252	12,7	25,7	72,9	8	12,7	-	-	-	2	24.000	42-10408P	F03FR01939
Mortising bit	249	12,7	12,5	50,8	8	-	-	-	-	2	24.000	16-10008P	F03FR01566
Rabbeting bit	282	31,75	12,7	55,2	6	12,7	-	9,52	-	2	18.000	32-10008P	F03FR01746
V-groove bit	304	12,7	10	44,4	8	-	-	-	90°	2	24.000	20-10408P	F03FR01623
Chamfer bit	257	44	18,5	61	8	12,7	-	-	45°	2	16.000	40-10608P	F03FR01920
Dovetail bit	285	12,7	12,7	50,7	8	-	-	-	14°	2	24.000	22-10408P	F03FR01644
Rounding over bit	256	31,75	18	59,7	8	12,7	9,53	-	-	2	18.000	34-11408P	F03FR01781
• Round nose bit	307	6	12,7	50,8	8	-	3	-	-	2	24.000	18-10408P	F03FR01588
Cove bit	258	38,1	16,4	58,9	8	12,7	12,7	-	-	2	16.000	30-10608P	F03FR01707
Roman ogee bit	261	35	18,5	60,5	8	9,53	6,35	-	2	2	16.000	38-10208P	F03FR01809

### Set code 91-10012P (F03FR02277)

Bit type	Page reference	D mm	h mm	H mm	A mm	C mm	R mm	P mm	$\alpha$	Z	Max RPM 1/min.	Freud Code	Art. No.
• Double flute straight bit	244	6	19	64	12	-	-	-	-	2	24.000	12-09912P	F03FR01520
Double flute straight bit	245	13	25,4	66,7	12	-	-	-	-	2	24.000	12-11612P	F03FR01531
Double flute straight bit	245	19	25,4	63,4	12	-	-	-	-	2	24.000	12-15212P	F03FR01548
Flush trim bit	252	12,7	25,4	82,5	12	12,7	-	-	-	2	24.000	42-11012P	F03FR01942
Mortising bit	249	12,7	12,5	60,5	12	-	-	-	-	2	24.000	16-11012P	F03FR01573
Rabbeting bit	282	31,75	13,2	61,7	12	12,7	-	9,53	-	2	18.000	32-10212P	F03FR01748
V-groove bit	304	19,05	12,5	57,2	12	-	-	-	90°	2	24.000	20-10812P	F03FR01626
Chamfer bit	257	44	18,5	67	12	12,7	-	-	45°	2	16.000	40-11412P	F03FR01922
Dovetail bit	285	12,7	12,7	59,7	12	-	-	-	14°	2	24.000	22-11212P	F03FR01650
Rounding over bit	156	31,75	18	65,7	12	12,7	9,53	-	-	2	18.000	34-12412P	F03FR01788
• Round nose bit	307	6	9,5	57	12	-	3	-	-	2	24.000	18-11412P	F03FR01602
Cove bit	258	38,1	16,4	64,9	12	12,7	12,7	-	-	2	16.000	30-11412P	F03FR01713
Roman ogee bit	261	35	18,5	66	12	9,53	6,35	-	-	2	16.000	38-10612P	F03FR01812

• Solid Carbide Bit



#### Machines:

To identify the correct machine for each router bit, refer to the corresponding page reference of each router bit.

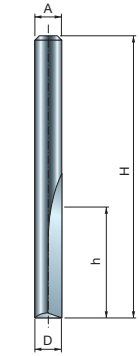
#### Materials:

Softwood, hardwood, plywood and wood based panels.



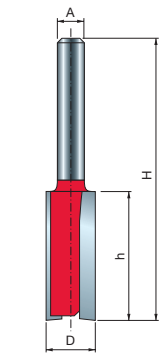
# SUPER 13 PIECE ROUTER BIT SET

91-10008P (F03FR02275)  
91-10012P (F03FR02277)



**04-11408P**  
F03FR01441

**12-09912P**  
F03FR01520

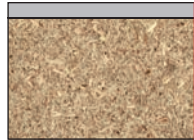
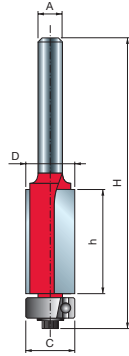


**04-13708P**  
F03FR01465

**12-11612P**  
F03FR01531

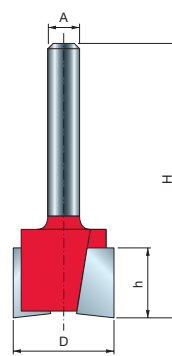
**04-15508P**  
F03FR01493

**12-15212P**  
F03FR01548



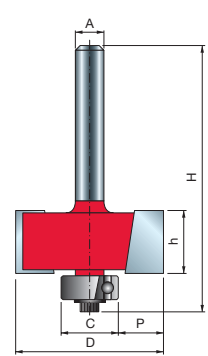
**42-10408P**  
F03FR01939

**42-11012P**  
F03FR01942



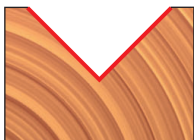
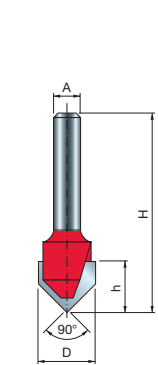
**16-10008P**  
F03FR01566

**16-11012P**  
F03FR01573



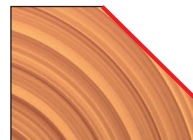
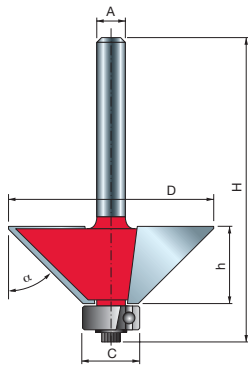
**32-10008P**  
F03FR01746

**32-10212P**  
F03FR01748



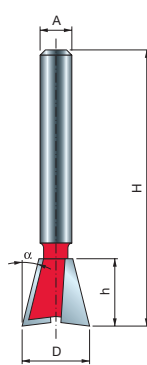
**20-10812P**  
F03FR01626

**20-10408P**  
F03FR01623



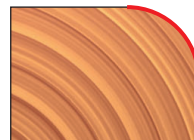
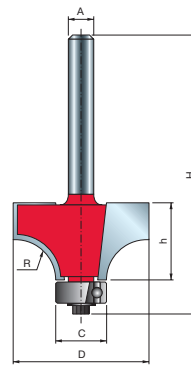
**40-10608P**  
F03FR01920

**40-11412P**  
F03FR01922



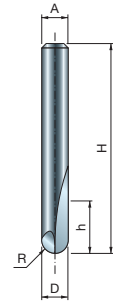
**22-10408P**  
F03FR01644

**22-11212P**  
F03FR01650



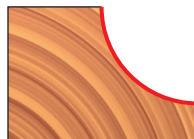
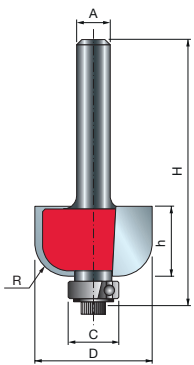
**34-11408P**  
F03FR01781

**34-12412P**  
F03FR01788



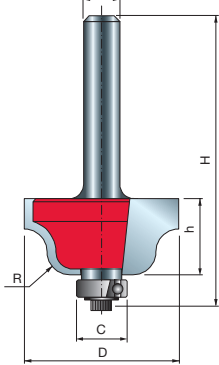
**18-10408P**  
F03FR01588

**18-11412P**  
F03FR01602



**30-10608P**  
F03FR01707

**30-11412P**  
F03FR01713



**38-10208P**  
F03FR01809

**38-10612P**  
F03FR01812



# ADVANCED 15 PIECE ROUTER BIT SET

**90-10006P**  
(F03FR02256)



Hand-held Routers

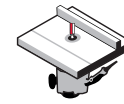
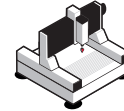


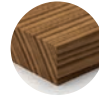
Table Routers



CNC Machines\*



Softwood



Hardwood



Plywood



Wood Based Panels



Set code 90-10006P (F03FR02256)

Bit type	Page reference	D mm	h mm	H mm	A mm	C mm	R mm	P mm	$\alpha$	Z	Max RPM 1/min.	Freud Code	Art. No.
• Double flute straight bit	244	4	15,8	50,7	6	-	-	-	-	2	24.000	<b>04-10106P</b>	F03FR01420
• Double flute straight bit	244	6	16	50,8	6	-	-	-	-	2	24.000	<b>04-11406P</b>	F03FR01440
• Double flute straight bit	245	12	19	55,5	6	-	-	-	-	2	24.000	<b>04-13506P</b>	F03FR01460
• Double flute straight bit	245	19	19	54	6	-	-	-	-	2	24.000	<b>04-14006P</b>	F03FR01468
• Panel pilot bit	254	6	19	57	6	-	-	-	-	1	24.000	<b>26-10006P</b>	F03FR01664
• Flush trim bit	252	9,53	12,7	60,9	6	9,53	-	-	-	2	24.000	<b>42-10206P</b>	F03FR01935
• Mortising bit	249	12,7	12,5	51	6	-	-	-	-	2	24.000	<b>16-10006P</b>	F03FR01565
• Rabbeting bit	282	31,75	13,2	55,7	6	12,7	-	9,52	-	2	18.000	<b>32-10006P</b>	F03FR01745
• V-groove bit	304	12,7	10	44,4	6	-	-	-	90°	2	24.000	<b>20-10406P</b>	F03FR01622
• Chamfer bit	257	44	18,5	61	6	12,7	-	-	45°	2	16.000	<b>40-10606P</b>	F03FR01919
• Dovetail bit	285	12,7	12,7	47,5	6	-	-	-	14°	2	24.000	<b>22-10406P</b>	F03FR01643
• Rounding over bit	256	31,75	18	59,7	6	12,7	9,53	-	-	2	18.000	<b>34-11406P</b>	F03FR01780
• Round nose bit	307	6	12,7	50,8	6	-	3	-	-	2	24.000	<b>18-10406P</b>	F03FR01587
• Cove bit	258	38,1	16,4	58,9	6	12,7	12,7	-	-	2	16.000	<b>30-10606P</b>	F03FR01706
• Roman ogee bit	261	27	13,3	54,7	6	9,53	4	-	-	2	18.000	<b>38-10006P</b>	F03FR01805

• Solid Carbide Bit



### Machines:

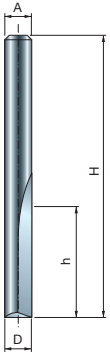
To identify the correct machine for each router bit, refer to the corresponding page reference of each router bit.

### Materials:

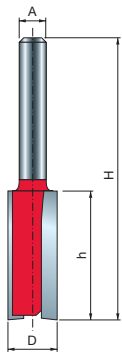
Softwood, hardwood, plywood and wood based panels.

# ADVANCED 15 PIECE ROUTER BIT SET

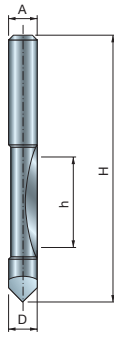
**90-10006P**  
(F03FR02256)



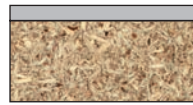
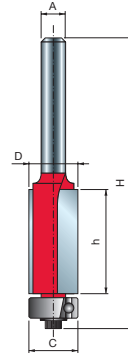
**04-10106P**  
F03FR01420



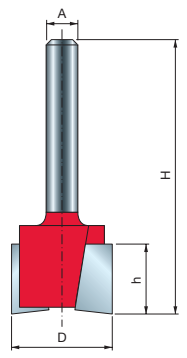
**04-11406P**  
F03FR01440



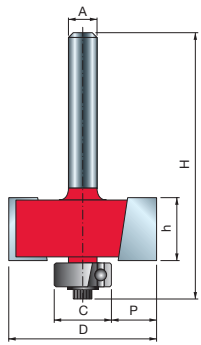
**26-10006P**  
F03FR01664



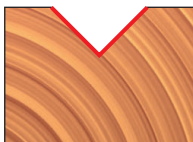
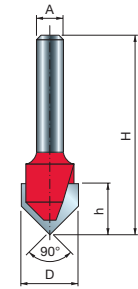
**42-10206P**  
F03FR01935



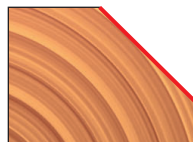
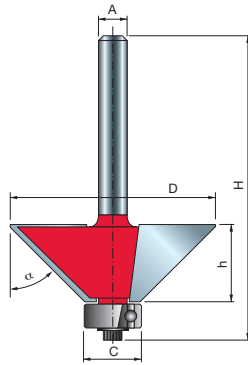
**16-10006P**  
F03FR01565



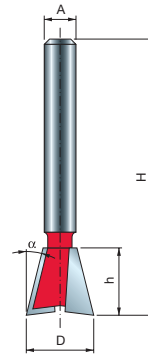
**32-10006P**  
F03FR01745



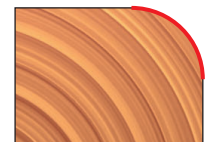
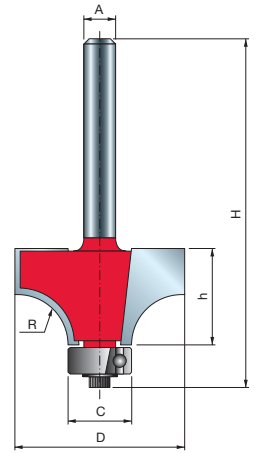
**20-10406P**  
F03FR01622



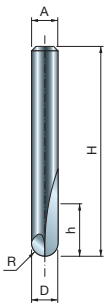
**40-10606P**  
F03FR01919



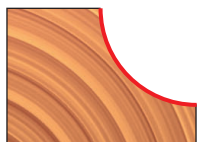
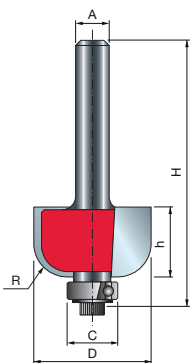
**22-10406P**  
F03FR01643



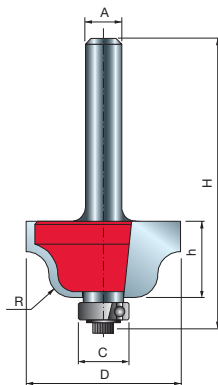
**34-11406P**  
F03FR01780



**18-10406P**  
F03FR01587



**30-10606P**  
F03FR01706



**38-10006P**  
F03FR01805



# PROFESSIONAL 26 PIECE ROUTER BIT SET

**92-10006P**  
(F03FR02308)



Hand-held Routers

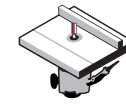
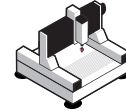


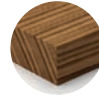
Table Routers



CNC Machines\*



Softwood



Hardwood



Plywood



Wood Based Panels



Set code **92-10006P** (F03FR02308)

Bit type	Page reference	D mm	h mm	H mm	A mm	C mm	R mm	P mm	$\alpha$	Z	Max RPM 1/min.	Freud Code	Art. No.
• Double flute straight bit	244	3	9,5	44,5	6	-	-	-	-	2	24.000	<b>04-09906P</b>	F03FR01415
• Double flute straight bit	244	4	15,8	50,7	6	-	-	-	-	2	24.000	<b>04-10106P</b>	F03FR01420
• Double flute straight bit	244	6	16	50,8	6	-	-	-	-	2	24.000	<b>04-11406P</b>	F03FR01440
• Double flute straight bit	244	10	25,4	62,4	6	-	-	-	-	2	24.000	<b>MM-01006P</b>	F03FR00330
• Double flute straight bit	245	12	19	55,5	6	-	-	-	-	2	24.000	<b>04-13506P</b>	F03FR01460
• Double flute straight bit	245	19	19	54	6	-	-	-	-	2	24.000	<b>04-14006P</b>	F03FR01468
• Panel pilot bit	254	6	19	57	6	-	-	-	-	1	24.000	<b>26-10006P</b>	F03FR01664
• Flush trim bit	252	9,53	25,8	72,4	6	9,53	-	-	-	2	24.000	<b>42-10006P</b>	F03FR01932
• Flush trim bit	252	9,53	12,7	60,9	6	9,53	-	-	-	2	24.000	<b>42-10206P</b>	F03FR01935
• Flush trim bit	252	12,7	25,7	72,9	6	12,7	-	-	-	2	24.000	<b>42-10406P</b>	F03FR01938
• Mortising bit	249	12,7	12,5	51	6	-	-	-	-	2	24.000	<b>16-10006P</b>	F03FR01565
• Rabbeting bit	282	31,75	13,2	55,7	6	12,7	-	9,5	-	2	18.000	<b>32-10006P</b>	F03FR01745
• V-groove bit	304	6	6	38,1	6	-	-	-	90°	1	24.000	<b>20-10006P</b>	F03FR01617
• V-groove bit	304	12,7	10	44,4	6	-	-	-	90°	2	24.000	<b>20-10406P</b>	F03FR01622
• Chamfer bit	257	44	18,5	61	6	12,7	-	-	45°	2	16.000	<b>40-10606P</b>	F03FR01919
• Dovetail bits	285	12,7	12,7	47,5	6	-	-	-	14°	2	24.000	<b>22-10406P</b>	F03FR01643
• Rounding over bit	256	25,4	12,7	55,2	6	12,7	6,35	-	-	2	24.000	<b>34-11006P</b>	F03FR01774
• Rounding over bit	256	31,75	18	59,7	6	12,7	9,53	-	-	2	18.000	<b>34-11406P</b>	F03FR01780
• Rounding over bit	256	25,4	12,7	54,7	6	9,53	6,35	-	-	2	24.000	<b>36-11006P</b>	F03FR01803
• Rounding over bit	256	31,75	18	59,2	6	9,53	9,53	-	-	2	18.000	<b>36-11406P</b>	F03FR01804
• Round nose bit	307	6	12,7	50,8	6	-	3	-	-	2	24.000	<b>18-10406P</b>	F03FR01587
• Round nose bit	307	9,52	9	46	6	-	4,8	-	-	2	24.000	<b>18-10606P</b>	F03FR01590
• Cove bit	258	22,23	13,2	54,7	6	9,53	6,35	-	-	2	24.000	<b>30-10206P</b>	F03FR01697
• Cove bit	258	38,1	16,4	58,9	6	12,7	12,7	-	-	2	16.000	<b>30-10606P</b>	F03FR01706
• Roman ogee bit	261	27	13,3	54,7	6	9,53	4	-	-	2	18.000	<b>38-10006P</b>	F03FR01805
• Roman ogee bit	261	35	18,5	60,5	6	9,53	6,4	-	-	2	16.000	<b>38-10206P</b>	F03FR01808

•- Solid Carbide Bit



### Machines:

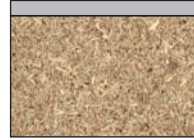
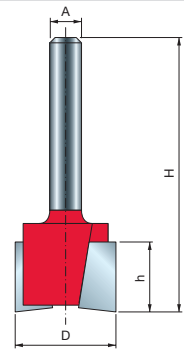
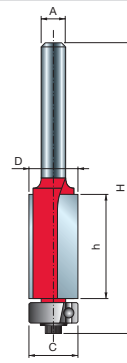
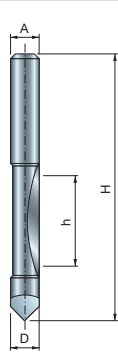
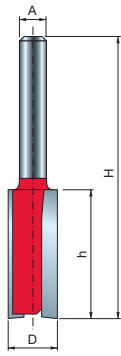
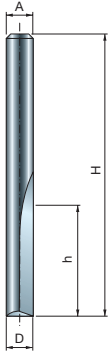
To identify the correct machine for each router bit, refer to the corresponding page reference of each router bit.

### Materials:

Softwood, hardwood, plywood and wood based panels.

# PROFESSIONAL 26 PIECE ROUTER BIT SET

**92-10006P**  
(F03FR02308)



**04-09906P**  
F03FR01415

**04-09906P**  
F03FR01415

**26-10006P**  
F03FR01664

**42-10006P**  
F03FR01932

**16-10006P**  
F03FR01565

**04-10106P**  
F03FR01420

**MM-01006P**  
F03FR00330

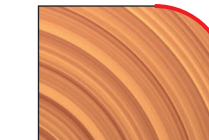
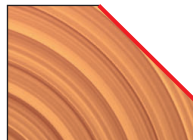
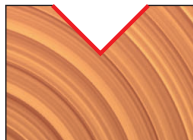
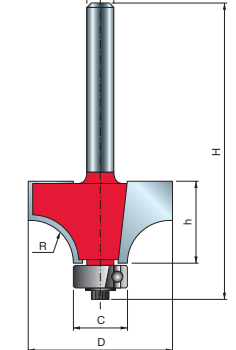
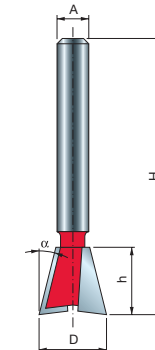
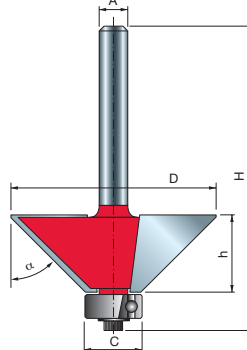
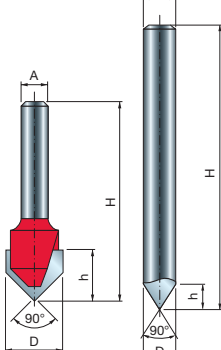
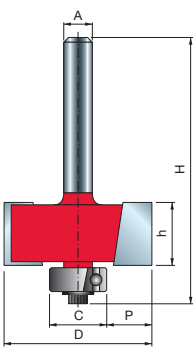
**42-10206P**  
F03FR01935

**04-11406P**  
F03FR01420

**MM-13506P**  
F03FR01460

**42-10406P**  
F03FR01938

**MM-14006P**  
F03FR01468



**32-10006P**  
F03FR01745

**20-10006P**  
F03FR01617

**40-10606P**  
F03FR01919

**22-10406P**  
F03FR01643

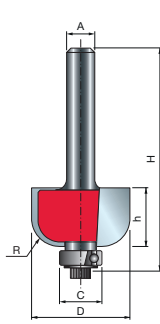
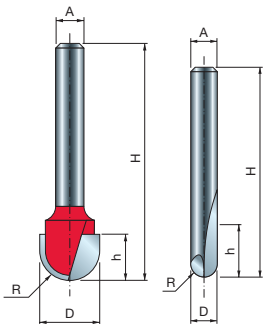
**34-11006P**  
F03FR01774

**20-10406P**  
F03FR01622

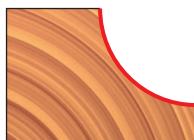
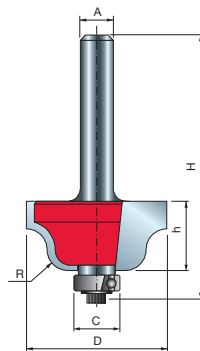
**34-11406P**  
F03FR01780

**36-11006P**  
F03FR01803

**36-11406P**  
F03FR01804



\*



**18-10406P**  
F03FR01587

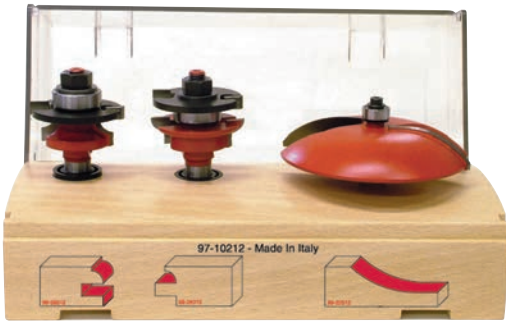
**30-10206P**  
F03FR01697

**38-10006P**  
F03FR01805

**18-10606P\***  
F03FR01590

**30-10606P**  
F03FR01706

**38-10206P**  
F03FR01808



# CABINET DOOR SET 3 ROUTER BITS

**97-10212P**  
(F03FR02382)

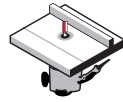
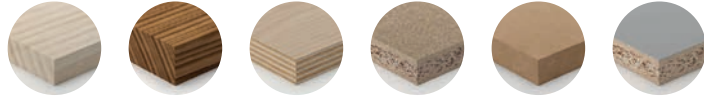


Table Routers



Softwood    Hardwood    Plywood    Wood Based Panels

Set Freud Code 97-10212P (F03FR02382)

Bit type	Page reference	D mm	h mm	H mm	A mm	C mm	R1 mm	Z	Max RPM 1/min.	Freud Code	Art. No.
Raised panel bit	300	89	16	64,7	12	12,7	38,1	2	10.000	99-22512P	F03FR02462
Matched profile and scribe bits	294	42,9	-	77	12	22	5,5	2	24.000	99-26012P	F03FR02468

The set includes one raised panel bit and two matched profile and scribe bits.

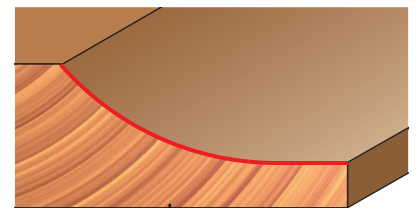
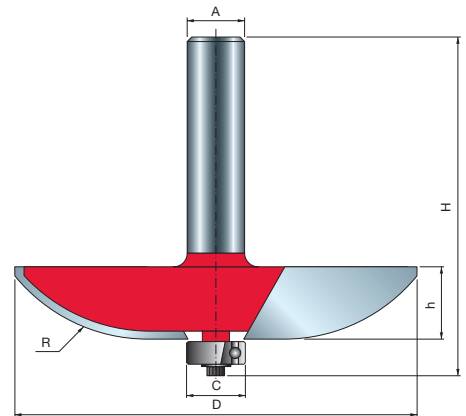
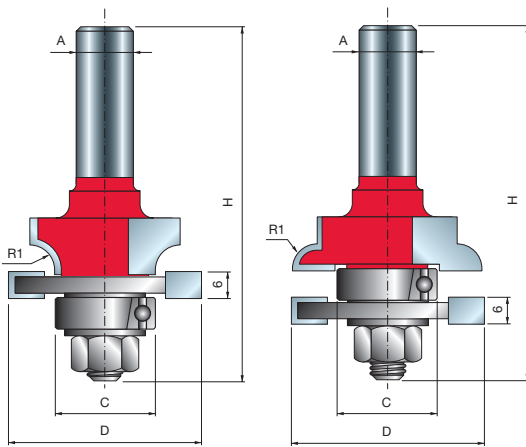


**Machines:**

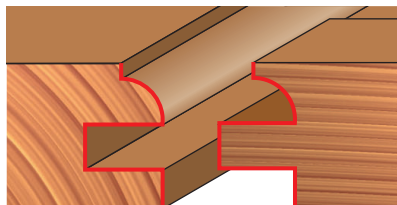
Table mounted routers.

**Materials:**

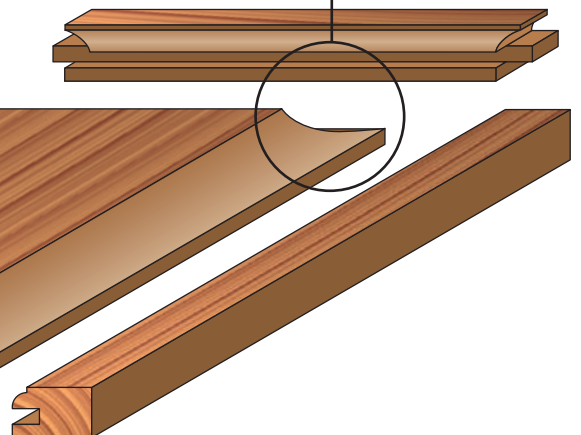
Softwood, hardwood, plywood and wood based panels.



99-22512P  
F03FR02462



99-26012P  
F03FR02468





# CABINET DOOR SET 3 ROUTER BITS

**97-10412P**  
(F03FR02396)

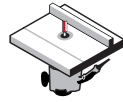
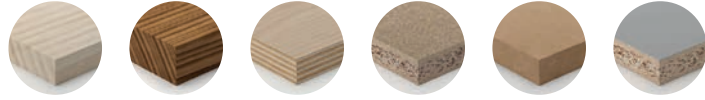


Table Routers



Softwood    Hardwood    Plywood    Wood Based Panels

Set code 97-10412P (F03FR02396)

Bit type	Page reference	D mm	h mm	H mm	A mm	C mm	R1 mm	R2 mm	Z	Max RPM 1/min.	Freud Code	Art. No.
Raised panel bit	299	76,2	16	64,7	12	12,7	2	16	2	12.000	99-22112P	F03FR02458
Matched profile and scribe bits	294	42,9	-	77	12	22	4,5	5,5	2	24.000	99-26112P	F03FR02478

The set includes one raised panel bit and two matched profile and scribe bits.

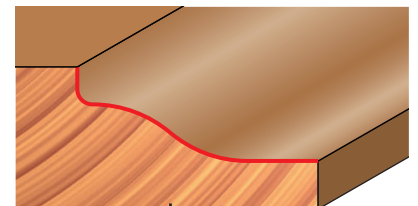
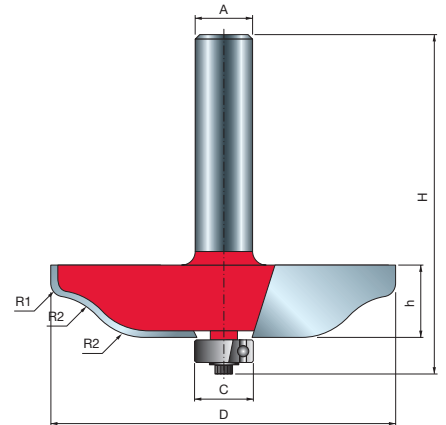
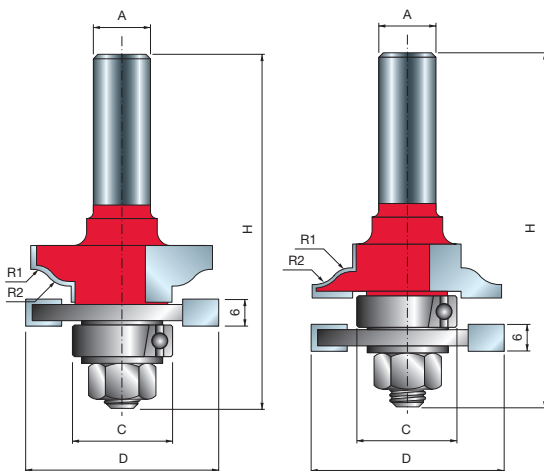


**Machines:**

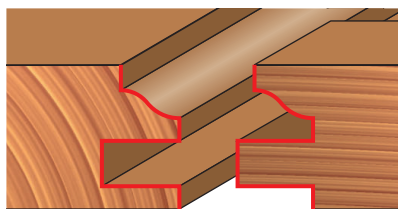
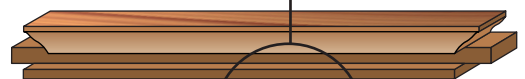
Table mounted routers.

**Materials:**

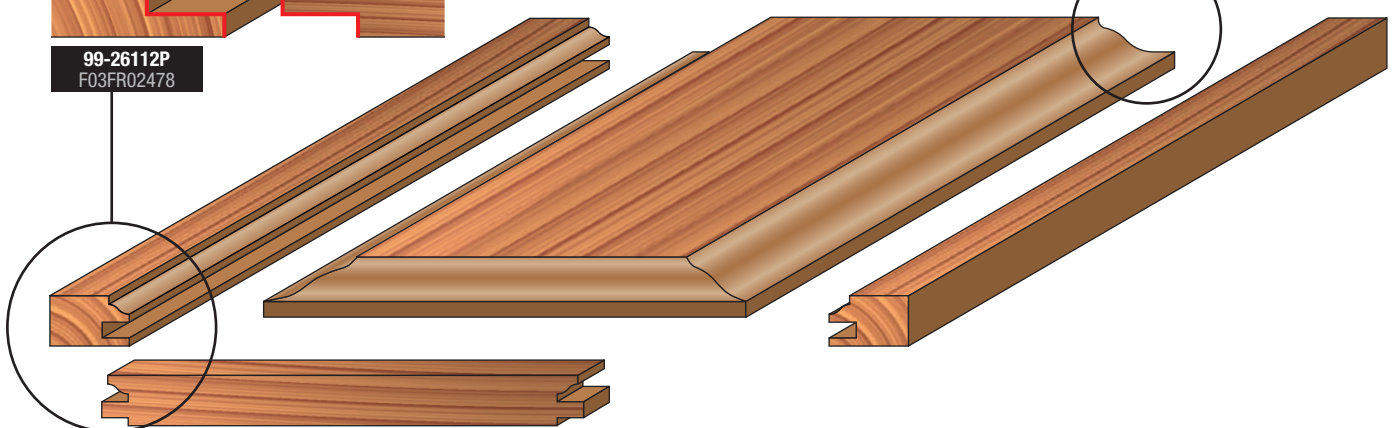
Softwood, hardwood, plywood and wood based panels.

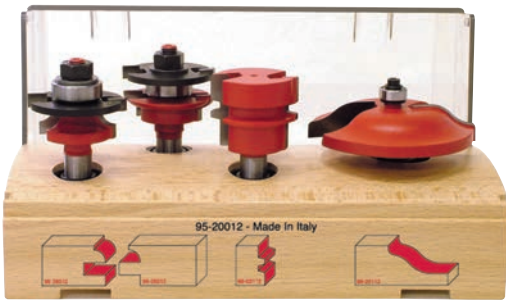


99-22112P  
F03FR02458



99-26112P  
F03FR02478





# CABINET DOOR SET 4 ROUTER BITS

**95-20012P**  
(F03FR02368)

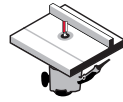


Table Routers



Softwood    Hardwood    Plywood    Wood Based Panels

Set code **95-20012P** (F03FR02368)

Bit type	Page reference	D mm	h mm	H mm	A mm	C mm	R1 mm	R2 mm	$\alpha$	Z	Max RPM 1/min.	Freud Code	Art. No.
Reversible glue joint bit	288	38	32	70	12	-	-	-	15°	2	16.000	<b>99-03112P</b>	F03FR02422
Raised panel bit	299	76,2	16	64,7	12	12,7	2	16	-	2	12.000	<b>99-22112P</b>	F03FR02458
Matched profile and scribe bits	294	42,9	-	77	12	22	5,5	-	-	2	24.000	<b>99-26012P</b>	F03FR02468

The set includes one reversible glue joint bit, one raised panel bit and two matched profile and scribe bits.

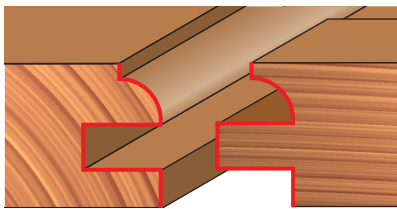


**Machines:**

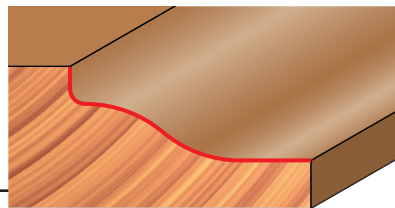
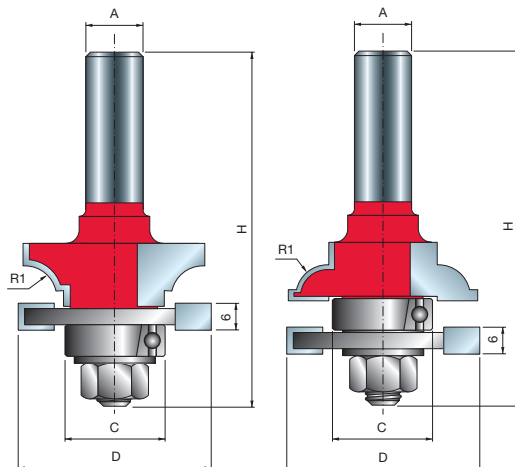
Hand-held routers and table routers.

**Materials:**

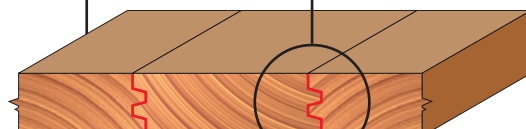
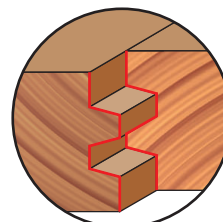
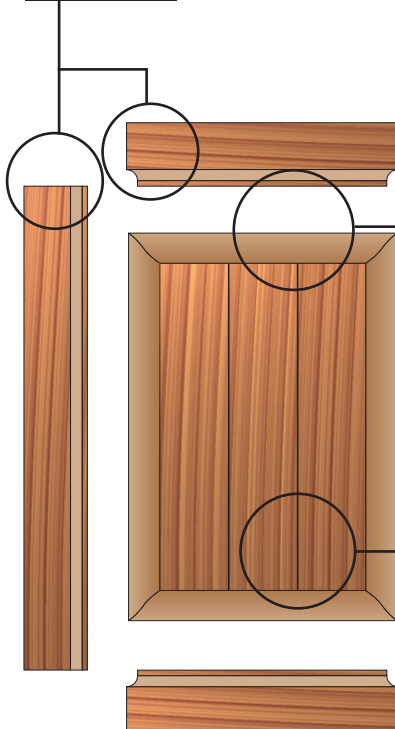
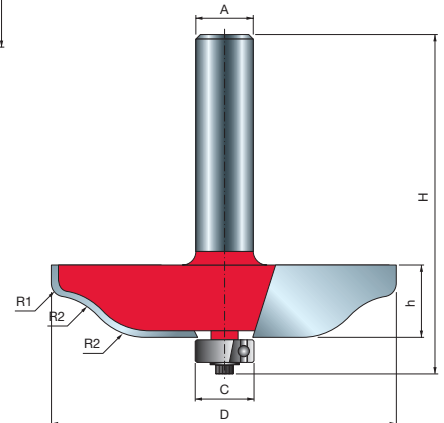
Softwood, hardwood, plywood and wood based panels.



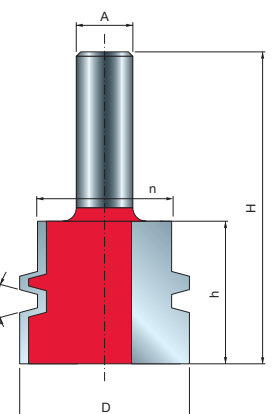
**99-26012P**  
F03FR02468



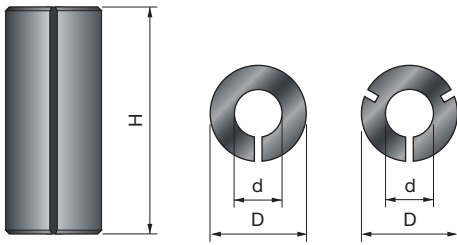
**99-22112P**  
F03FR02458



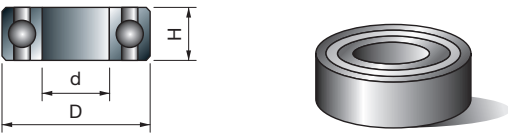
**99-03112P**  
F03FR02422



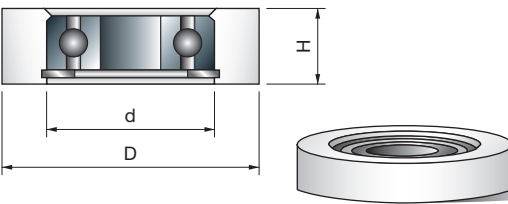




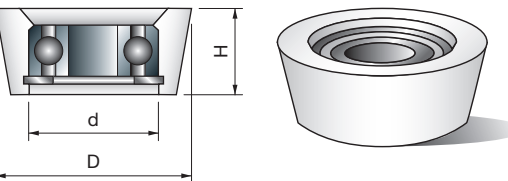
Reducing bushes for router bits.



Ball bearing for router bits.



Cylindrical rub collars for ball bearing.



Conical rub collars for ball bearing.

## 3105M

## Reducing bushes

D mm	H mm	d mm	Freud Code	Art. No.
8	25	6	3105MVY250	F03FA10588
8	25	6,35	3105MVX250	F03FA10587
9,5	25	6	3105MUY250	F03FA10586
9,5	25	6,35	3105MUX250	F03FA10585
9,5	25	8	3105MUV250	F03FA10584
10	25	8	3105MTV250	F03FA10582
12	25	6	3105MSY250	F03FA10581
12	25	8	3105MSV250	F03FA10580
12	25	10	3105MST250	F03FA10579
12,7	25	6	3105MRY250	F03FA10578
12,7	25	6,35	3105MRX250	F03FA10577
12,7	25	8	3105MRV250	F03FA10576
12,7	25	9,53	3105MRU250	F03FA10575
16	25	13	3105MQ250	F03FA10574

## 3102M

## Ball bearings

D mm	H mm	d mm	Freud Code	Art. No.
9,53	3,2	4,76	3102M AA9	F03F010006
12,7	4,98	4,76	3102M AB9	F03F010007
13	5	4	3102M CD9	F03FA14096
13	5	6	3102M AP9	F03FA10558
15	5	6	3102M AQ9	F03FA10559
15,88	4,98	4,76	3102M AJ9	F03F010014
16	5	5	3102M CC9	F03FA14095
16	5	8	3102M AS9	F03FA10561
19	6	6	3102M CA9	F03FA14097
19	7	10	3102M AG9	F03F010012
19,05	3,97	12,7	3102M CB9	F03FA14098
19,05	6,35	12,7	3102M AV9	F03F012286
22	7	8	3102M AC9	F03F010008
28	8	12	3102M AH9	F03F010013
32	9	15	3102M AN9	F03F010016
35	11	15	3102M AI9	F03F012285

## RB62M

## Sleeved bearings

D mm	H mm	d mm	Freud Code	Art. No.
19,05	8	4,8	RB62M 1509	F03F011422
22,22	8	4,8	RB62M 1529	F03F011423
26	10	8	RB62M 1249	F03F011417
28,58	8	4,8	RB62M 1549	F03F011424
30	10	8	RB62M 1289	F03F011418
34	10	8	RB62ME DA9	F03FR01146
34,92	8	4,8	RB62M 1569	F03F011425
39,6	11,2	12	RB62ME FB9	F03FR01147

## 3103MC

## Sleeved bearings with angle

D mm	H mm	d mm	$\alpha$	Freud Code	Art. No.
19,05	6,35	4,8	10°	3103MC HB9	F03F010019
22,2	9	12,7	15°	3103MC HC9	F03FR01724

## TOOLS

Tools shall be used only by persons of training and experience who have knowledge of how to use and handle tools.

The maximum rotational speed marked on the tool shall not be exceeded.

One piece tools with visible cracks shall not be used.

Clamping surfaces shall be cleaned to remove dirt, grease, oil and water.

Resin shall only be removed from light alloys with solvents that do not affect the mechanical characteristics of these materials.

Tools and tool bodies shall be clamped in such a way, that they shall not loosen during operation.

Tools with cylindrical shank must be clamped in a way that the mark of the maximum free shank length shall be covered, at least partially, by the clamping device or by the locking collet.

Care shall be taken of mounting tools to ensure that the clamping is by the hub respectively by the clamping surface of the tool and that the cutting edges are not in contact with each other or with the clamping elements.

Fastening screws and nuts shall be tightened using the appropriate spanners etc. and to the torque value provided by the manufacturer. Extension of the spanner or tightening using hammer blows shall not be permitted.

Clamping screws shall be tightened according to instructions provided by the manufacturer. Where instructions are not provided clamping screws shall be tightened in sequence from the centre outwards.

Use of fixed rings, e. g. pressed or held by adhesive fixing, in flanged sleeves, shall be permitted if made to the manufacturers specifications.

Repair and regrinding of tools shall only be allowed according to the tool manufacturer's instructions.

After repair and regrinding of tools it shall be ensured that the tools observe balancing requirements.

The design of composite (tipped) tools shall not be changed in the process of repair.

Composite tools shall be repaired by a competent person, i.e. a person of training and experience, who has knowledge of the design requirements and understands the level of safety to be achieved. Repair shall therefore include, e.g. use of spare parts which are in accordance with the specification of the original parts provided by the manufacturer.

Tolerances which ensure correct clamping shall be maintained.

For one piece tools care shall be taken that regrinding of the cutting edge will not cause weakening of the hub and the connection of the cutting edge to the hub.

To avoid injuries, tools shall be handled in accordance with the guidance provided by the manufacturer. Typically, safe handling involves the use of devices such as carrying hooks, proprietary handles, frames (e. g. for circular saw blades), boxes, trolleys etc.

The wearing of protective gloves improves the grip on the tool and further reduces the risk of injury.

Maintenance and modification of milling tools and related components and circular saw blades should always be in accordance with the design requirements/the manufacturer's instructions.

Maintenance and modification of milling tools and circular saw blades should only be carried out by a competent person, i. e. a person of training and experience, who has knowledge of the design requirements and understand levels of safety to be achieved.

When regrinding milling tools and circular saw blades, the minimum requirements of cutting blade thickness and cutting blade projection should be observed.

Composite tools should be repaired by persons experienced in and with understanding of design and use of milling tools for processing wood and similar materials, e.g. an expert with a relevant education and knowledge of the brazing process, including in particular the influence of the brazing process on tension in tool body and cutting material.

When brazing off worn tips and subsequently brazing on new tips it should be made sure that the tip is correctly mounted in the tool body and that the process does not result in critical tension in the tool body. After any type of maintenance, milling tools marked with MAN should

continue to observe the requirements of the standards related to tools for hand feed.

When modifying milling tools, e. g. modification of bore diameter, modification of shank, retipping of composite tools and similar, it should be ensured that the requirements of the standard relating to balancing are still observed.

After being modified and/or retipped, milling tools and circular saw blades should be marked according to the rules applying to new tools. However, the name/logo of the company making the modification/retipping should be added.

To avoid injuries, tools shall be handled in accordance with the guidance provided by the manufacturer.

Tools which weigh more than 15 kg may require the use of special handling devices or attachments, these will depend on the features that the manufacturer has designed into the tool to allow easy handling. The manufacturer can advise on the availability of necessary devices.

## CLAMPING DEVICES

The speeds indicated on the clamping device and the tool to be clamped should be compared. For adjusting the speed on the machine the lower speed should be applied.

Screws and nuts should be tightened using the appropriate spanners; Clamping surfaces should be cleaned to remove dirt, grease, oil and water.

Clamping devices and tools should be mounted or clamped according to given torques, pressures and wrenches to be used; extension of spanners or tightening or loosening by means of hammer blows should not be permitted.

Maximum tool diameters and tool lengths should not be exceeded.

Shank diameters must be in accordance with the clamping range of the clamping devices.

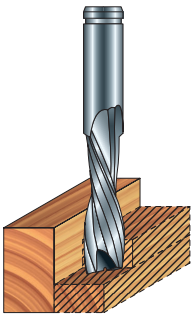
The minimum required clamping length must be kept.

Care should be taken that the data relevant to the safety of the clamped tool are always stored in the data medium.

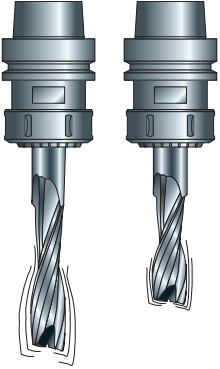
Repairs should only be carried out by a competent person, i.e. a person with professional training and experience, who has knowledge of the design, construction and safety requirements.

Repair should therefore include the use of spare parts which are in compliance with the specifications of the original parts.

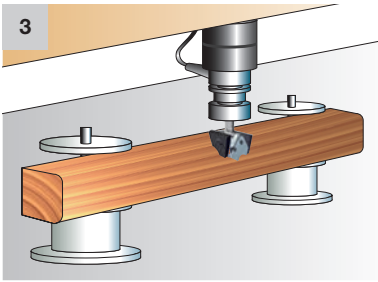
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2



3

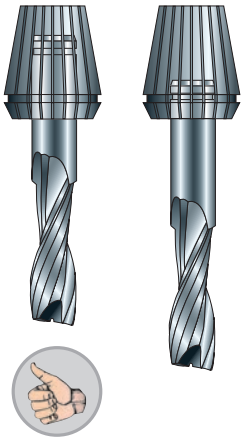


## ADVICE FOR CORRECT USE

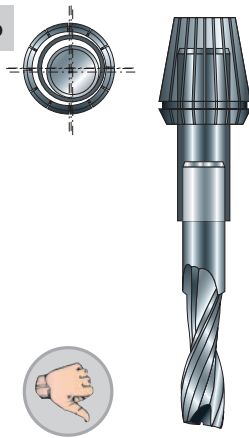
To reduce vibrations from the router bit, which can compromise the finish and cause damages to both the tool and the workpiece, it is necessary to respect the following conditions:

- For large removals, carry out more passes or proceed with a feedrate and RPM rate in proportion to the depth of cut (Fig. 1).
- A router bit with a shorter cutting height vibrates less than a router bit with the same diameter but with a longer cutting height (Fig. 2).
- Control your machine regularly (especially guides and ball bearings), making sure that there are no eccentricity problems, so as to avoid the arbor from vibrating hazardously.
- Accurately block the workpiece to the work table surface (Fig. 3).
- Respect the minimum fixing length of the shank with a preference to short chucks, with the aim of reducing eccentricity errors (Fig. 4a).
- For the same reason the use of extensions are generally avoided (Fig. 4b).
- Router bits with staggered cutters tend to leave marks caused by small eccentricity tolerances (Fig. 5).
- To identify eccentricity issues in a router bit or a chuck: make a milling on the workpiece, rotate the tool 90° on the chuck and repeat the operation. If the marks left on the wood are unvaried between the 2 processes then the tool is defective, if there's a difference the issue is probably on the chuck/collet.
- Do not exceed the maximum RPM limit marked on the tool. Higher RPM, extreme feedrate as well as an excessive cutting depth can cause the tool breakage.
- To avoid damaging router bits, we suggest controlling if the fixing surface of the chuck and the router bit are clean and that there are no imperfections (Fig. 6).
- Always choose router bits with the appropriate dimensions for the kind of work to carry out.
- Make sure that the workpiece is properly fixed to a support with appropriate dimensions. Place the locking devices (as suckers) sufficiently far from the tool path (Fig. 7).
- To avoid dangerous kick backs, we suggest fixing a spare piece of material and milling small parts of waste which have accumulated during the working process, by carrying out more passes (Fig. 8).

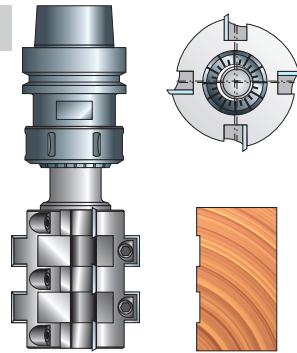
4a



4b



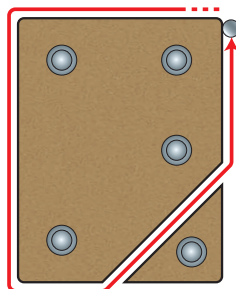
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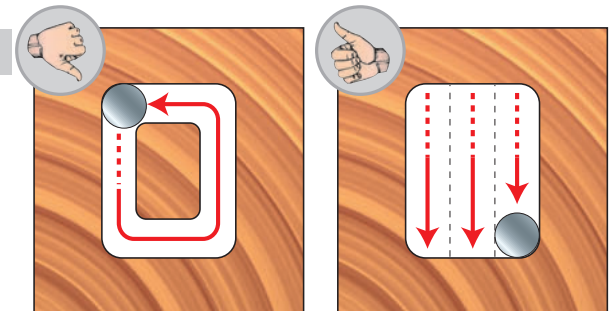
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7



8



# ROUTER BIT FEED AND SPEED FOR CNC

## GET THE MOST OUT OF YOUR FREUD BITS BY ROUTING AT IDEAL FEED RATES AND SPEEDS

**Read all safety warnings and all instructions provided with the router bit and in the machine manual.** Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

**To reduce the risk of injury, always check to ensure the rated speed of the router bit is higher than or equal to the maximum speed marked on the CNC machine.** Router bits running faster than their RATED SPEED can break and fly apart.

To get the longest life and the best cut quality from your bits, you need to match the feed rate of your CNC and the speed (RPM) of your router spindle to the material you are routing and the bit you are using. Routing at the best combination of feed rate and RPM is critical to quality of your work and the durability of your Freud router bits.

**1)** There is no hard-and-fast rule for precisely what feed rate and speed will be best for your project and your CNC. The formulas and chip load values in the chart below provide a good range of feeds and speeds for you to start with, but you should always make some test cuts with your bits in scrap material to be sure you get the best possible results. As you make your test cuts, observe the following best practices:

- Always consult your machine's operation manual for bit capacities and recommended feed rates.
- Always start with shallow passes in your test cuts to reduce strain on your bit and your CNC.
- You should start your tests with the lower feed rates yielded by our formulas to reduce the chance of bit breakage. (Freud's chart contains recommended starting points, and does not warranty against tool breakage).
- Carbide tipped bits should not be used to drill directly into the workpiece.

**2)** Second, you need to consider the design of the bit you are using:

- **Number of flutes, or cutting edges:** more flutes on a bit may produce a finer finish on the workpiece than a bit with fewer cutting edges, but only if your feed and speed are set correctly. Our formulas include a variable where you will enter the number of flutes of your bit so you can consider this factor.
- **Cutting depth:** this is the depth that will be routed in a single pass. Our feed and speed recommendations are based on a depth of cut that is no greater than the bit diameter, such as a 12 mm diameter bit routing a 12 mm deep pass. If you plan to rout deeper than this in a single pass, you must reduce your feed rate.
- If cut depth is 2X the bit diameter, reduce the chip load by at least 25%.
- If cut depth is 3X the bit diameter, reduce the chip load by at least 50%.

Please see example 3 on next page for more information.

**Never exceed the recommended cutting depth listed on the router bit package or the bit's safety instructions!**

**3)** Next, use the formulas below to calculate starting points for your test cuts. You will notice that our formulas use values called "**chip loads**" to determine the feed rates and speeds. The chip load is the size (thickness) of the chip produced as your bit cuts. Why does this matter? If your chip is very small, or just sawdust, then it will not carry enough heat away from the edge of the bit. Excessive heat will prematurely dull the edge of the solid Carbide or Carbide tipped router bit. If the chip is too large, it will leave a rough surface or edge on your workpiece.

# ROUTER BIT FEED AND SPEED FOR CNC

## \* RECOMMENDED CHIP LOADS FOR FREUD CARBIDE TIPPED STRAIGHT AND PROFILE BITS

Tool Diameter	MDF / Particle Board	Laminated Particle Board	Hardwood	Softwood	Acrylics / Plastics	Solid Surface / Hard Plastic	Plywood	Aluminum
mm	mm	mm	mm	mm	mm	mm	mm	mm
3	0.05 - 0.10	0.08 - 0.15	0.05 - 0.10	0.08 - 0.13	0.08 - 0.15	0.05 - 0.10	0.08 - 0.13	N/A
3,18	0.05 - 0.10	0.08 - 0.15	0.05 - 0.10	0.08 - 0.13	0.08 - 0.15	0.05 - 0.10	0.08 - 0.13	N/A
6	0.10 - 0.15	0.15 - 0.20	0.13 - 0.18	0.15 - 0.20	0.15 - 0.20	0.10 - 0.15	0.13 - 0.15	N/A
6,35	0.10 - 0.15	0.15 - 0.20	0.13 - 0.18	0.15 - 0.20	0.15 - 0.20	0.10 - 0.15	0.13 - 0.15	N/A
8	0.12 - 0.17	0.17 - 0.22	0.14 - 0.19	0.18 - 0.22	0.17 - 0.22	0.12 - 0.17	0.14 - 0.18	N/A
9,53	0.13 - 0.18	0.18 - 0.23	0.15 - 0.20	0.20 - 0.25	0.18 - 0.23	0.13 - 0.18	0.15 - 0.20	N/A
10	0.13 - 0.18	0.18 - 0.23	0.15 - 0.20	0.20 - 0.25	0.18 - 0.23	0.13 - 0.18	0.15 - 0.20	N/A
12	0.14 - 0.18	0.20 - 0.25	0.20 - 0.25	0.20 - 0.30	0.20 - 0.25	0.15 - 0.18	0.18 - 0.23	N/A
12,7	0.15 - 0.18	0.20 - 0.25	0.20 - 0.25	0.20 - 0.30	0.20 - 0.25	0.15 - 0.18	0.18 - 0.23	N/A
14	0.15 - 0.18	0.22 - 0.27	0.20 - 0.28	0.20 - 0.30	0.22 - 0.27	0.15 - 0.18	0.18 - 0.23	N/A
15,88	0.15 - 0.18	0.23 - 0.28	0.20 - 0.30	0.23 - 0.33	0.23 - 0.28	0.15 - 0.18	0.20 - 0.25	N/A
16	0.15 - 0.18	0.23 - 0.28	0.20 - 0.30	0.23 - 0.33	0.23 - 0.28	0.15 - 0.18	0.20 - 0.25	N/A
18	0.17 - 0.22	0.25 - 0.30	0.22 - 0.32	0.23 - 0.35	0.24 - 0.30	0.16 - 0.20	0.22 - 0.28	N/A
19,05	0.18 - 0.23	0.25 - 0.30	0.23 - 0.33	0.25 - 0.30	0.25 - 0.30	0.18 - 0.23	0.23 - 0.28	N/A
20	0.20 - 0.25	0.27 - 0.33	0.22 - 0.35	0.23 - 0.40	0.25 - 0.35	0.16 - 0.20	0.25 - 0.30	N/A

\*This chart is a recommended starting point and does not warranty against tool breakage. Consult your machine's owners manual for bit capacities and recommended feed rates. Always make test cuts with shallow passes in scrap material to verify your feed & speed rates and cutting depths. Start your tests with the lower feed rates yielded by our formulas.

Here are the formulas to make feed and speed calculations using these values:

$$\text{Chip load} = \text{Feed rate} \div (\text{RPM} \times \text{number of flutes})$$

$$\text{Feed rate} = \text{RPM} \times \text{number of flutes} \times \text{chip load}$$

$$\text{RPM} = \text{Feed rate} \div (\text{number of flutes} \times \text{chip load})$$

### Note:

Feed rate will be expressed in meters per minute.

Here are some examples:

- You decide to test a chip load of 0,20 mm for your cut. Your CNC spins the bit at 18,000 RPM, and the bit has 2 flutes (cutting edges). To determine the feed rate:  
**Feed Rate = 18.000 x 2 x 0,20 mm.** Therefore, your feed rate should be 7,2 meters per minute.
- You already know that you want to use a feed rate of 7,2 meters per minute, and a speed of 18,000 RPM. Your bit has 2 flutes. To verify that the chip load will be within the recommended range:  
**chip load = 7,2 meters per minute ÷ (18.000 RPM x 2 flutes).** Therefore, your chip load is 0,20 mm.
- Adjusting feed and speed for bit diameter: the chip loads in the table above are based a cutting depth that is equal to or less than the bit diameter. For deeper cuts, you need to adjust the chip load as follows:  
If cut depth is 2X the bit diameter, reduce the chip load by at least 25%  
If cut depth is 3X the bit diameter, reduce the chip load by at least 50%  
For example, let's say that our chart calls for a chip load of 0,20 mm for your application, BUT you decide to use a 12 mm diameter bit routing 24 mm deep. Since your cutting depth is now 2X the bit diameter, you must reduce the chip load as follows: **0,2 mm x 0,75 = 0,15 mm chip load.**

# Cutterheads and Brazed Cutters



Freud's cutterheads and brazed cutters are carefully crafted, using the finest materials and the most advanced technologies. Designed for the profile processing and window tooling industry, these tools deliver perfect finishing and unmatched precision in demanding applications. The portfolio includes the most comprehensive range of solutions and the greatest variety of profiles produced, always with flawless results. All cutterheads and brazed cutters contain Freud's unique and industry-first features.

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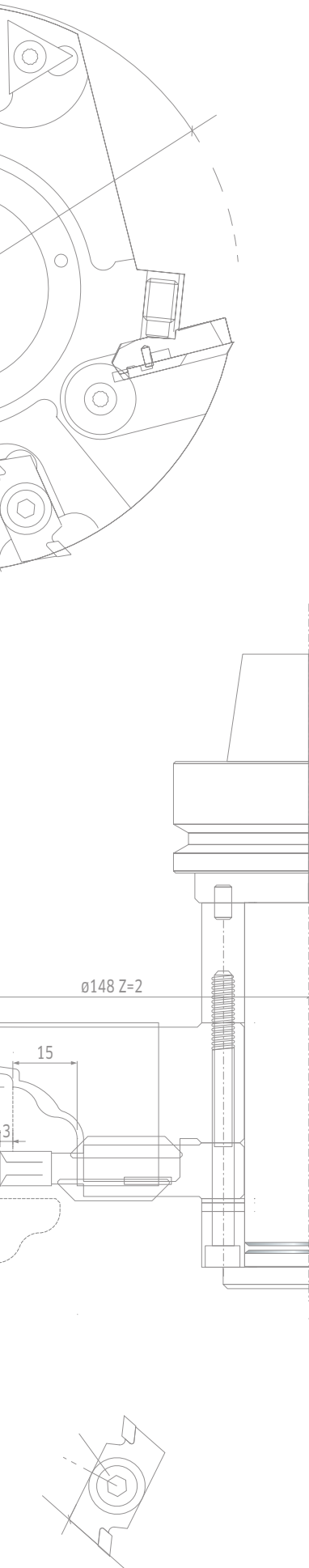
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# LEADING TECHNOLOGY

## TICO CARBIDE TECHNOLOGY

Freud's ownership and control of the entire Carbide manufacturing cycle ensures that the correct formula is used for every application, to constantly maximise the knives performance. For its universal knives Freud engineered 20 different Carbide recipes to achieve the highest performance on specific application needs.



### TiCo Carbide

A specially formulated, highly compact Titanium Cobalt Carbide, engineered and manufactured by Freud.

It provides a sharper edge and flawless finish with a dramatically longer cutting life.

## PREMIUM MATERIALS

Freud always selects the finest materials for its cutterheads.



### Steel body

The cutter body in high quality Steel ensures maximum efficiency and performance in demanding applications, for the greatest results and durability.



### Aluminium body

The cutter body in superior quality Ergal light alloy provides higher resistance and demands a lower machine engine power, for a maximised performance and efficiency.

## DESIGN INNOVATION

Freud's special tooth designs and geometries are engineered to perform perfect cuts and deliver extraordinary durability.



### Performance System Technology

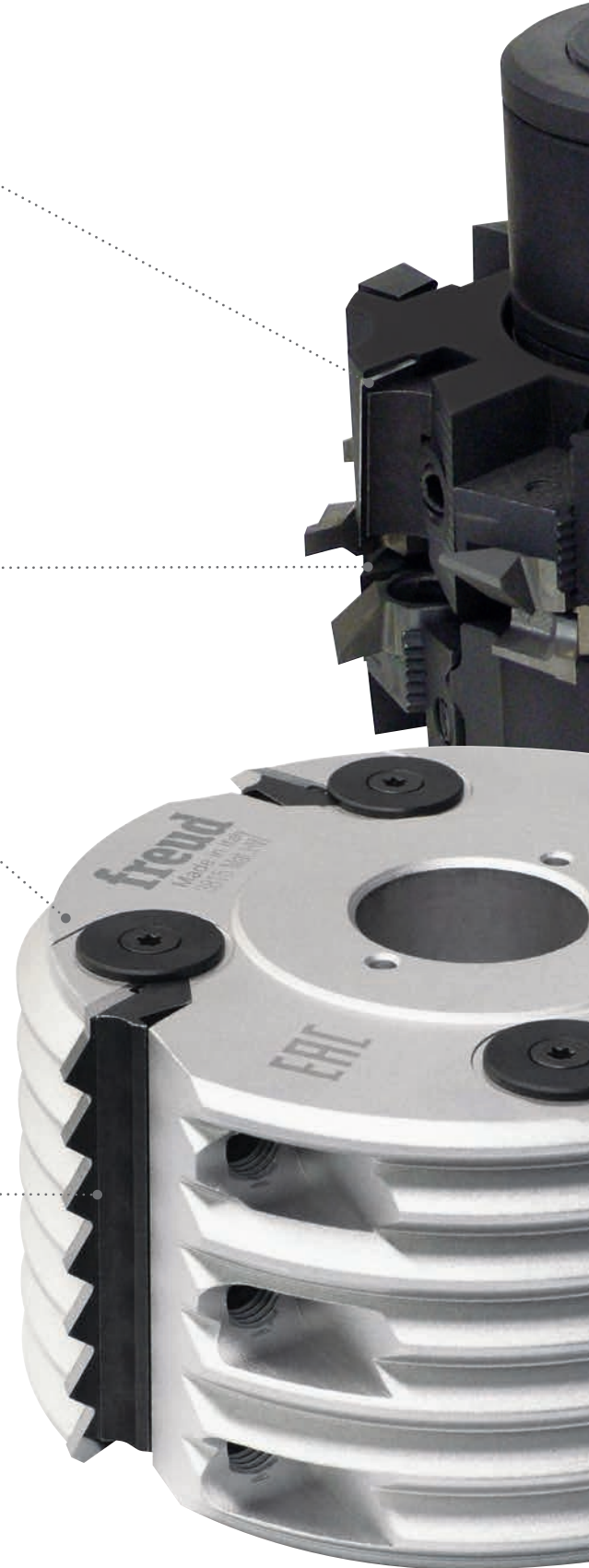
Freud's Performance System Technology knives are designed with extra thickness – 3mm – for up to 6 x resharpening cycles and a prolonged

durability.

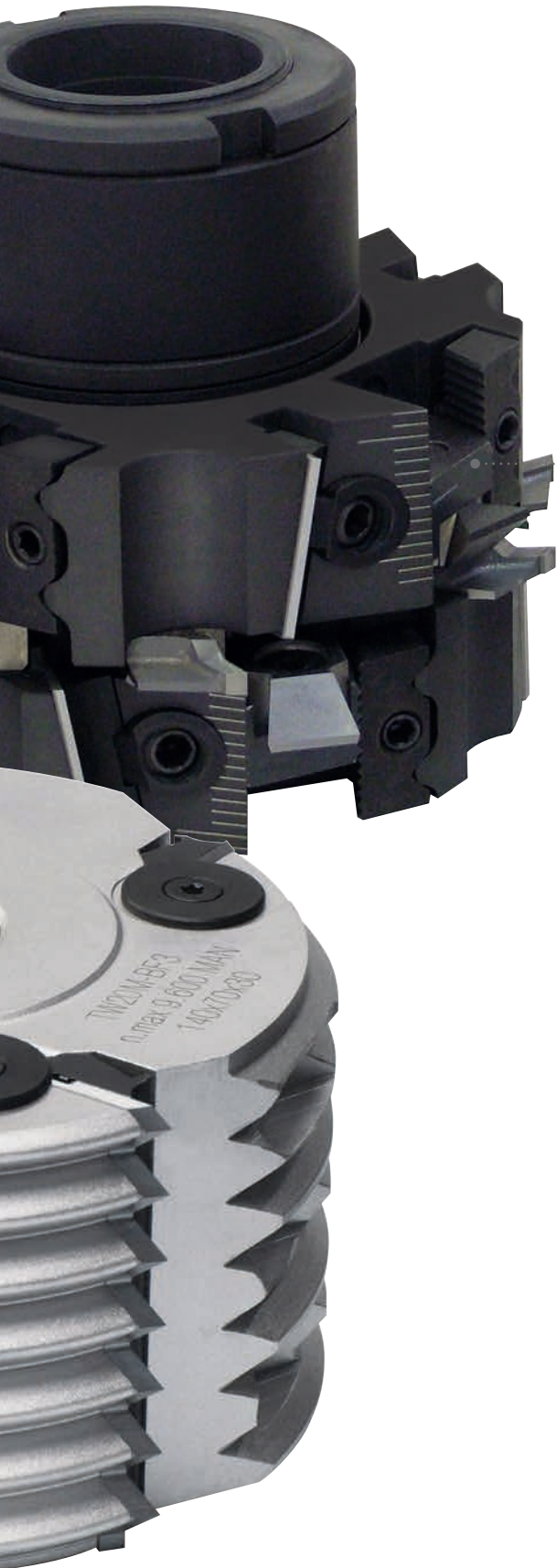
These knives are available in a wide range of sizes.

## EXTENSIVE RANGE

Freud offers the versatility to choose from a wide range of standard and custom cutterheads & brazed cutters, designed for automatic and manual feed machines that perform a great variety of profiles and material thicknesses.







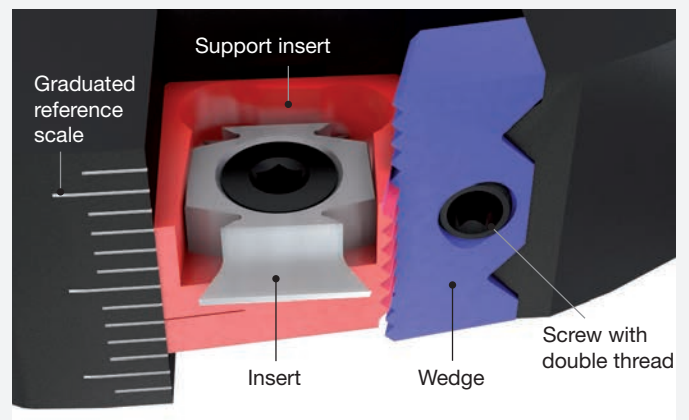
## PIONEERING SOLUTIONS

Freud leverages its long-term expertise, engineering know-how and industrial competence to offer safer, faster and more efficient solutions to fulfill the most challenging market needs.

### NSR - Regulation System

Freud's innovative system enables the replacement of the inserts directly on the machine.

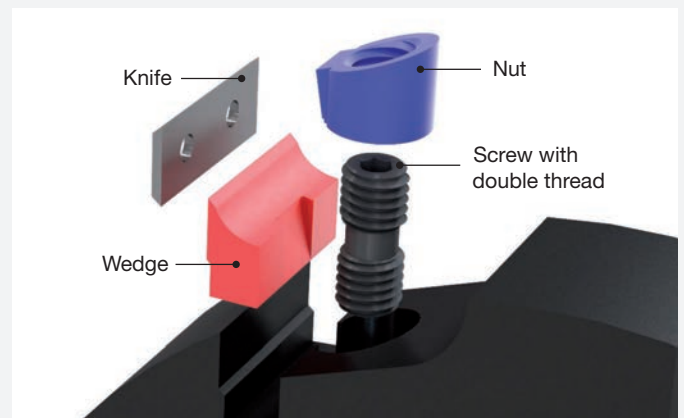
The NSR grants extraordinary precision – with no need for measuring instruments - leveraging Freud's specially grained set, for the perfect adjustment of the insert, with 1 mm steps and precision up to 1/100 of a mm.



### HRL - High Resistant Locking System

Freud's innovative system maximises the productivity, thanks to the fast knife removal, enabled by the front screw that reduces the machine downtime.

This system ensures extra safety through a double thread that prevents accidental breakage.



### Optimised chip flow concept

Freud's cutterheads are designed to produce chips, larger in size and smaller in weight, for the optimal chip discharge. The quick removal of the material waste from the gullets results in an extended tool lifetime.

# Planing

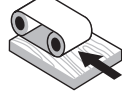




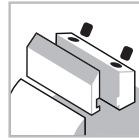
## TM06M

## Helical planer cutterheads with disposable knives

MEC



Automatic Feed



Clamping System



Aluminium Body



Softwood



Hardwood



Planing

### Machines:

Moulders, automatic and throughfeed machines.

### Materials:

Softwood and hardwood.

### Applications:

Planing, moulding and roughing.






### Technical information:

Planer cutterhead with good finish when cutting a maximum depth of 20 mm.

- Dimension "B" indicates effective cutting length. The maximum tool length is B + 3,5 mm.
- Use in combination with item **T182M** to cut guiding rebates.
- Aluminium light alloy body.
- Rebore not available.
- Equipped with disposable knives with bevels (CG18M).

Item	In conjunction with item:	Art. No.
TM06M Ø125	T182M AB3	F03FC20584
TM06M Ø125	T182M AA3	F03FC20583
TM06M PC3	T182M CB3	F03FC20586
TM06M PH3	T182M DB3	F03FC20587

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
100	113	35	12	10.300	TM06M PC3	F03FC20384
100	183	35	20	10.300	TM06M PH3	F03FC20385
125	78,5	40	12	10.300	TM06M AB3	F03FC20371
125	130	40	21	10.300	TM06M AD3	F03FC20372
125	148,5	40	24	10.300	TM06M AF3	F03FC20373
125	183,5	40	30	10.300	TM06M AH3	F03FC20374
125	201	40	33	10.300	TM06M AI3	F03FC20375
125	236	40	39	10.300	TM06M AM3	F03FC20377

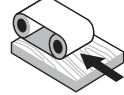
	Spare parts	Dimensions	Freud Code	Art. No.
	Knife	24 x 12 x 1,5	CG18MBC310	F03FH02919
	Wedge	15 x 19,3 x 8	CN09M AM9	F03FC01288
	Screw	M10 x 22	VT19M MA9	F03FA04496
	Nut	15 x 13,3 x M10	VT20M MA9	F03FC20670
	Allen key	5	CB03M EA9	F03FA00169



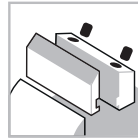
## TM07M

## Planer cutterheads with disposable knives

MEC



Automatic Feed



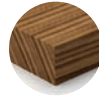
Clamping System



Aluminium Body



Softwood



Hardwood



Planing

### Machines:

Moulders, automatic and throughfeed machines.

### Materials:

Softwood and hardwood.

### Applications:






Planing, moulding and finishing.

### Technical information:

Planer cutterhead with good finish when cutting a maximum depth of 5 - 6 mm.

- Use in combination with item **T182M** to cut guiding rebates.
- Aluminium light alloy body.
- Rebore not available.
- Equipped with disposable knives with bevels (CG18M).

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
100	120	35	9	10.300	<b>TM07M AE3</b>	F03FC20416
100	180	35	12	10.300	<b>TM07M AF3</b>	F03FC20417
125	130	40	9	10.300	<b>TM07M GD3</b>	F03FC20418
125	138	40	9	10.300	<b>TM07M GE3</b>	F03FC20419
125	180	40	12	10.300	<b>TM07M GF3</b>	F03FC20420
125	226	40	15	10.300	<b>TM07M GG3</b>	F03FC20421

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Knife	50 x 12 x 1,5	<b>CG18MFC310</b>	F03FH02921
	Wedge	15 x 46 x 8	<b>CN09M AP9</b>	F03FC01290
	Screw	M10 x 22	<b>VT19M MA9</b>	F03FA04496
	Nut	15 x 13,3 x M10	<b>VT20M MA9</b>	F03FC20670
	Allen key	5	<b>CB03M EA9</b>	F03FA00169

Item	In conjunction with item:	Art. No.
<b>TM07M Ø125</b>	<b>T182M AB3</b>	F03FC20584
<b>TM07M</b>	<b>T182M AA3</b>	F03FC20583
<b>TM07M</b>	<b>T182M DB3</b>	F03FC20587

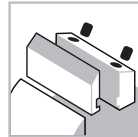


## TM20M

## Multicut planer cutterheads with ball bearing



Manual Feed



Clamping System



Aluminium Body



Softwood



Hardwood



Planing

### Machines:

Spindle moulders and manual feed machines.

### Materials:

Softwood and hardwood.

### Applications:




Planing and roughing.

### Technical information:

Planer cutterhead with helical design ideal for roughing.

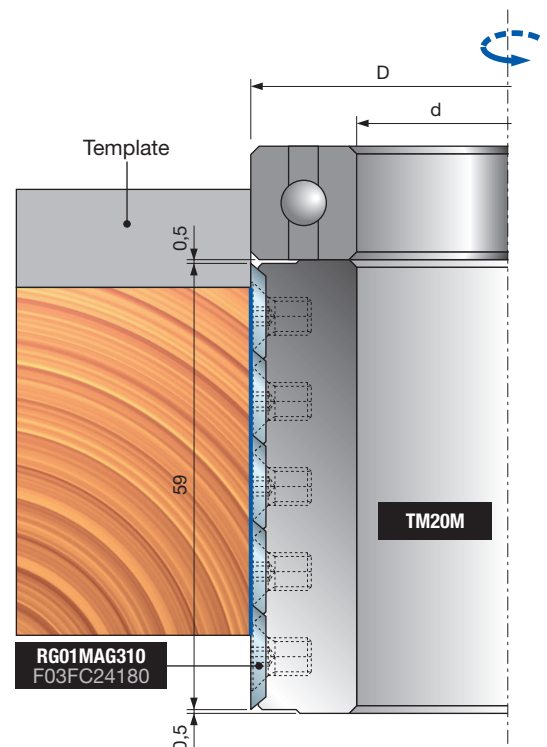
- Use in combination with ballbearing for round timbers.
- Aluminium light alloy body.
- Rebore not available.
- Equipped with 4 sides disposable spurs.

D mm	B mm	d mm	Z	R	Max RPM 1/min.	Freud Code	Art. No.
55	59	30		10	16.000	<b>TM20M ACC</b>	F03FC22098
62	59	35		10	16.000	<b>TM20M BCD</b>	F03FC22099
68	59	40		10	16.000	<b>TM20M CCE</b>	F03FC22100
80	59	50		10	16.000	<b>TM20M DCF</b>	F03FC21977

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Spur	14 x 14 x 2	<b>RG01MAG310</b>	F03FC24180
	Screw	M5 x 8	<b>VT05M AA9</b>	F03FA04444
	Torx key	T20	<b>CB03M CC9</b>	F03FA00167

### Bearings for cutterheads TM20M (not included)

For cutterhead	Art. No.	Dimensions mm	Freud Code	Art. No.
<b>TM20M ACC</b>	F03FC22098	55 x 13 x 30	<b>3101M AC9</b>	F03FA10543
<b>TM20M BCD</b>	F03FC22099	62 x 14 x 35	<b>3101M AD9</b>	F03FA10544
<b>TM20M CCE</b>	F03FC22100	68 x 15 x 40	<b>3101M AE9</b>	F03FA10545
<b>TM20M DCF</b>	F03FC21977	80 x 16 x 50	<b>3101M AG9</b>	F03FA10547

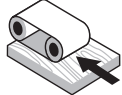




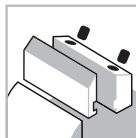
## TM21M

## Multicut planer cutterheads

MEC



Automatic Feed



Clamping System



Aluminium Body



Softwood



Hardwood



Planing

### Machines:

Moulders, automatic and throughfeed machines.

### Materials:

Softwood and hardwood.

### Applications:




Planing, moulding and roughing.

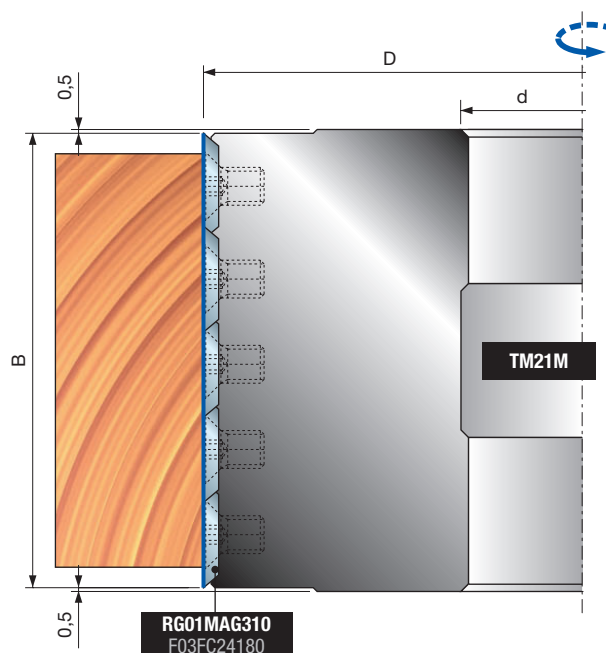
### Technical information:

Planer cutterhead for automatic machines with helical design ideal for roughing.

- It can be used in combination with ballbearing for round timbers.
- Aluminium light alloy body.
- Rebore not available.
- Equipped with 4 sides disposable spurs.

D mm	B mm	d mm	Z	R mm	Max RPM 1/min.	Freud Code	Art. No.
100	60	30	15	10.300	10.300	TM21M ECC	F03FC20458
100	100	30	27	10.300	10.300	TM21M EEC	F03FC20459
125	130	40	33	10.300	10.300	TM21M HGE	F03FC20460
125	150	40	39	10.300	10.300	TM21M HHE	F03FC20461
125	180	40	45	10.300	10.300	TM21M HIE	F03FC20462

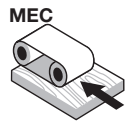
	Spare parts	Dimensions mm	Freud Code	Art. No.
	Spur	14 x 14 x 2	RG01MAG310	F03FC24180
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Torx key	T20	CB03M CC9	F03FA00167



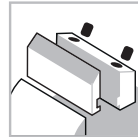


# TP05M

## Planer cutterheads with HSS knives



Automatic Feed



Clamping System



Aluminium Body



Softwood



Hardwood



Planing

**Machines:**

Moulders, automatic and throughfeed machines.

**Materials:**

Softwood and hardwood.

**Applications:**

Planing, moulding and finishing.

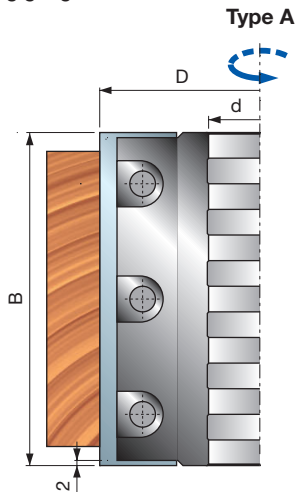
**Technical information:**

Planer cutterhead particularly indicated for softwood, maximum cutting depth 15 mm.

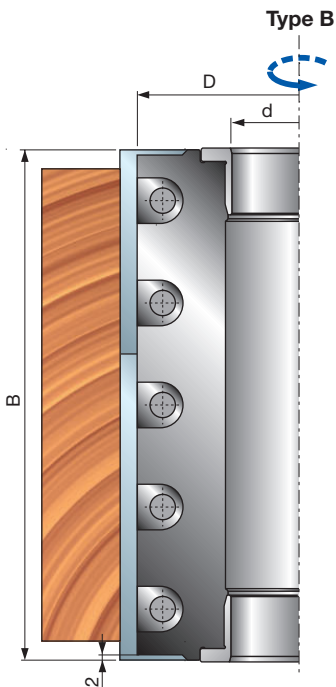
**Type A:** Cutterheads with traditional bore.

**Type B:** Bore realised on two side steel flanges fitted on Aluminium body:

- Better bore tolerances.
- Easy dismantling from the spindle.
- Rebore not available.
- Position the knives at the correct diameter with setting gauges.



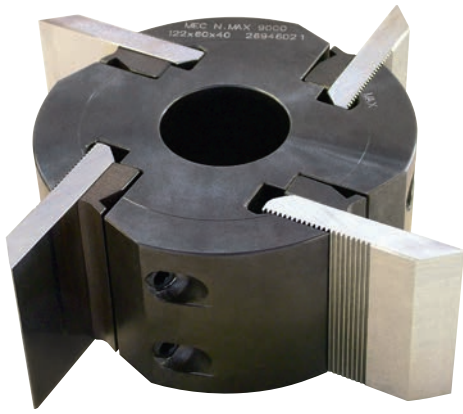
Type A



Type B

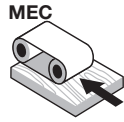
	D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
Type A	125	100	40	4	10.300	TP05M 100	F03FC23661
	125	130	40	4	10.300	TP05M 130	F03FC21889
	125	150	40	4	10.300	TP05M 150	F03FC23663
	125	180	40	4	10.300	TP05M 180	F03FC24438
	125	200	40	4	10.300	TP05M 200	F03FC24439
	125	230	40	4	10.300	TP05M 230	F03FC21891
Type B	125	100	40	4	10.300	TP05M 100B	F03FC24440
	125	130	40	4	10.300	TP05M 130B	F03FC24442
	125	150	40	4	10.300	TP05M 150B	F03FC24444
	125	180	40	4	10.300	TP05M 180B	F03FC24446
	125	200	40	4	10.300	TP05M 200B	F03FC23134
	125	230	40	4	10.300	TP05M 230B	F03FC23135
	140	100	50	4	9.600	TP05M 100C	F03FC24441
	140	130	50	4	9.600	TP05M 130C	F03FC24443
	140	150	50	4	9.600	TP05M 150C	F03FC24445
	140	180	50	4	9.600	TP05M 180C	F03FC24447
	140	200	50	4	9.600	TP05M 200C	F03FC23665
	140	230	50	4	9.600	TP05M 230C	F03FC23666

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Screw	M10 x 25	2602M F19	F03FA07353
	Allen key	5	CB03M EA9	F03FA00169
100	Knife	100 x 30 x 3	CT01MDA202	F03FA18167
	Wedge	96 x 19 x 8,5	CN11M 096	F03FC23670
130	Knife	130 x 30 x 3	CT01MHA202	F03FA18169
	Wedge	126 x 19 x 8,5	CN11M 126	F03FC21964
150	Knife	150 x 30 x 3	CT01MLA202	F03FA18171
	Wedge	146 x 19 x 8,5	CN11M 146	F03FC23672
180	Knife	180 x 30 x 3	CT01MOA202	F03FA18173
	Wedge	176 x 19 x 8,5	CN11M 176	F03FC24448
200	Knife	200 x 30 x 3	CT01MPA202	F03FA18174
	Wedge	196 x 19 x 8	CN11M 196	F03FC23132
230	Knife	230 x 30 x 3	CT01MRA202	F03FA18175
	Wedge	226 x 19 x 8,5	CN11M 226	F03FC21966

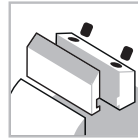


## TPCZM

## Cutterheads with serrated profilable knives



Automatic Feed



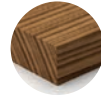
Clamping System



Steel Body



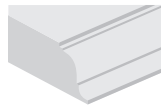
Softwood



Hardwood



Planing



Profiling

### Machines:

Moulders, automatic and throughfeed machines.

### Materials:

Softwood and hardwood.

### Applications:

Planing, moulding and profiling.

### Technical information:

Suitable for profiling all softwoods and hardwoods.

- The serrated surface ensures a perfect knife placement and lock.
- This item is supplied without knives.
- Do not exceed the number of knives regrindings that leaves a maximum distance between the seat and the knife of 6,4 mm.
- Steel body.
- Rebore not available.

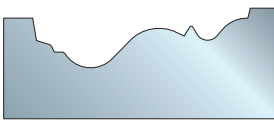
D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
122	60	40	4	9.000	TPCZM CB9	F03FC22116
122	80	40	4	9.000	TPCZM CC9	F03FC22117
122	100	40	4	9.000	TPCZM CD9	F03FC22119
122	150	40	4	9.000	TPCZM CF9	F03FC22223

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Allen key	5	CB03M EA9	F03FA00169
	Screw	M10 x 18	VT03M CC9	F03FA04438
CB9	Wedge	60 x 23,5 x 9,6	CNB4M BA9	F03FC21984
CC9	Wedge	80 x 23,5 x 9,6	CNB4M CA9	F03FC21986
CD9	Wedge	100 x 23,5 x 9,6	CNB4M DA9	F03FC21987
CF9	Wedge	150 x 23,5 x 9,6	CNB4M FA9	F03FC21989

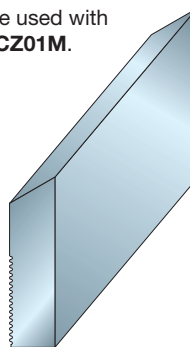
Raw knife



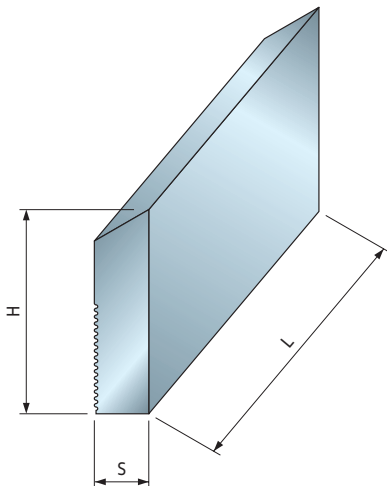
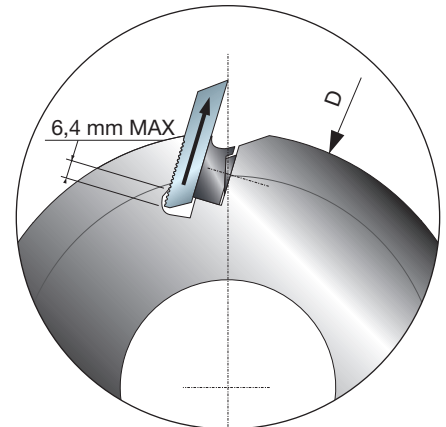
Profiled knife



It can be used with knives CZ01M.



Knife placement



Profilable HSS knives with serrated surface.

- Suitable for Freud TPCZM planners.
- Suitable for cutting all softwoods and hardwoods.

## CZ01M

## HSS serrated back knives

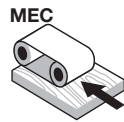
L mm	H mm	S mm	Freud Code	Art. No.
60	50	8	CZ01MDB202	F03FA21895
80	50	8	CZ01MDC202	F03FA21896
100	50	8	CZ01MDD202	F03FA21897
150	50	8	CZ01MDF202	F03FA21898
60	60	8	CZ01MHB202	F03FA21899
80	60	8	CZ01MHC202	F03FA21900
100	60	8	CZ01MHD202	F03FA21901
150	60	8	CZ01MHF202	F03FA21902
60	70	8	CZ01MNB202	F03FA21903
80	70	8	CZ01MNC202	F03FA21904
100	70	8	CZ01MND202	F03FA21905
150	70	8	CZ01MNF202	F03FA21906



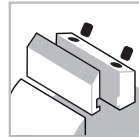


# TM28M

## ISOprofil planer cutterheads with alternating shear angle



Automatic Feed



Clamping System



Aluminium Body



Softwood



Hardwood



Planing



### Machines:

Moulders, automatic and throughfeed machines.

### Materials:

Softwood and hardwood.

### Applications:

Planing and finishing.

### Technical information:

ISOprofil locking system planer head.

- Z2+2 alternative shear angle system, tool body in light Aluminium alloy.
- Available with both HM or HSS knives.
- Max thickness to be removed 3 mm, ideal for top finishing.
- Use in combination with **T182M** rebate cutterhead.
- Aluminium light alloy body.
- Rebore not available.
- HM and HSS knives can be resharpened up to 3 mm.

### Tools supplied with HW knives

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
125	80	40	4	10.300	TM28M AA3	F03FC22081
125	130	40	4	10.300	TM28M AD3	F03FC22083
125	150	40	4	10.300	TM28M AF3	F03FC22085
125	180	40	4	10.300	TM28M AH3	F03FC22086
125	240	40	4	10.300	TM28M AM3	F03FC22089

### Tools supplied with HSS knives

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
125	80	40	4	10.300	TM28M AA2	F03FC22080
125	130	40	4	10.300	TM28M AD2	F03FC22082
125	150	40	4	10.300	TM28M AF2	F03FC22084
125	180	40	4	10.300	TM28M AH2	F03FC22087
125	240	40	4	10.300	TM28M AM2	F03FC22088

### ATB 15° tooth (Fig. 2)

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Positioning plate	22 x 1,7 x 6,5	VT18M GB9	F03FA04489
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Allen key	5	CB03M EA9	F03FA00169
	Screw	M10 x 16	2616M EE9	F03FA07426
AA2 - AA3	Wedge	76 x 19,5 x 11,5	CN28M 080	F03FC24599
	HSS right knife	82 x 19 x 4,5	CP28MDAA201	F03FC23958
	HSS left knife	82 x 19 x 4,5	CP28MSAA201	F03FC23968
	HW right knife	82 x 19 x 4,5	CP28MDAA301	F03FC23959
	HW left knife	82 x 19 x 4,5	CP28MSAA301	F03FC23969
AD2 - AD3	Wedge	126 x 19,5 x 11,5	CN28M 130	F03FC24600
	HSS right knife	132 x 4,5 x 19	CP28MDAD201	F03FC23960
	HSS left knife	132 x 4,5 x 19	CP28MSAD201	F03FC23970
	HW right knife	132 x 4,5 x 19	CP28MDAD301	F03FC23961
	HW left knife	132 x 4,5 x 19	CP28MSAD301	F03FC23971
AF2 - AF3	Wedge	146 x 19,5 x 11,5	CN28M 150	F03FC24601
	HSS right knife	152 x 4,5 x 19	CP28MDAF201	F03FC23962
	HSS left knife	152 x 4,5 x 19	CP28MSAF201	F03FC23972
	HW right knife	152 x 4,5 x 19	CP28MDAF301	F03FC23963
	HW left knife	152 x 4,5 x 19	CP28MSAF301	F03FC23973
AH2 - AH3	Wedge	176 x 19,5 x 11,5	CN28M 180	F03FC24602
	HSS right knife	182 x 4,5 x 19	CP28MDAH201	F03FC23964
	HSS left knife	182 x 4,5 x 19	CP28MSAH201	F03FC23974
	HW right knife	182 x 4,5 x 19	CP28MDAH301	F03FC23965
	HW left knife	182 x 4,5 x 19	CP28MSAH301	F03FC23975
AM2 - AM3	Wedge	236 x 19,5 x 11,5	CN28M 240	F03FC24603
	HSS right knife	242 x 4,5 x 19	CP28MDAM201	F03FC23966
	HSS left knife	242 x 4,5 x 19	CP28MSAM201	F03FC23976
	HW right knife	242 x 4,5 x 19	CP28MDAM301	F03FC23967
	HW left knife	242 x 4,5 x 19	CP28MSAM301	F03FC23977

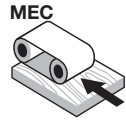
### Groove bead cutters

Item	In conjunction with item:	Art. No.
TM28M	T182M EA3	F03FC20588
TM28M	T182M EB3	F03FC20589

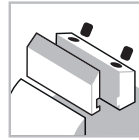
Aluminium light alloy body. For cleaning do not use products containing caustic soda. Can be used in combination with item T182M to cut guiding rebates.

# T102M

## Modular planer cutterheads with disposable knives



Automatic Feed



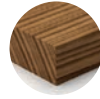
Clamping System



Aluminium Body



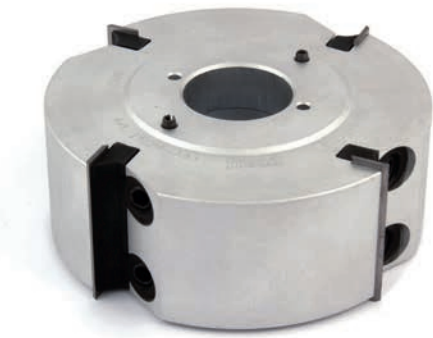
Softwood



Hardwood



Planing



### Machines:

Moulders, automatic and throughfeed machines.

### Materials:

Softwood and hardwood.

### Applications:

Planing and finishing.

### Technical information:

Modular tool can be stacked and used in multiples thus enabling the machining of a wider area. Furthermore, one can either stack and use tool bearing the same identical knives (Picture A) or tool equipped with knives of different sizes, for example 50 mm - 30 mm (Picture B).

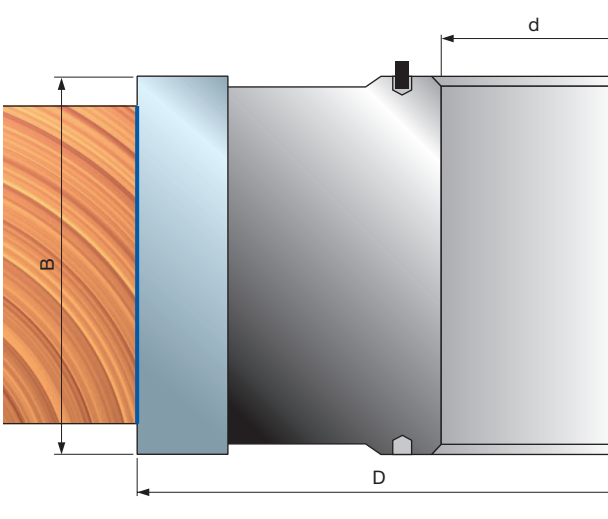
- Aluminium light alloy body.
- Rebore not available.
- Can be used in combination with item T182M to cut guiding rebates.

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
125	30	32	4	10.300	<b>T102M AL3</b>	F03F668305
125	30	40	4	10.300	<b>T102M AF3</b>	F03FC20577
125	50	32	4	10.300	<b>T102M AI3</b>	F03F668304
125	50	40	4	10.300	<b>T102M AC3</b>	F03FC20575
125	50	50	4	10.300	<b>T102M AD3</b>	F03FC20576

	Spare parts	Dimensions mm	Freud Code	Art. No.	
	Screw	M10 x 22	<b>VT19M MA9</b>	F03FA04496	
	Nut	15 x 13,3 x M10	<b>VT20M MA9</b>	F03FC20670	
	Allen key	5	<b>CB03M EA9</b>	F03FA00169	
<b>AC3 - AD3 AI3</b>		Knife	50 x 12 x 1,5	<b>CG08MFA310</b>	F03FH02907
		Wedge	15 x 46 x 8	<b>CN09M AP9</b>	F03FC01290
<b>AB3 - AE3 AF3 - AL3</b>		Knife	30 x 12 x 1,5	<b>CG08MEA310</b>	F03FH02906
		Wedge	15 x 26 x 8	<b>CN09M AD9</b>	F03FC01283

### Groove bead cutters

Item	In conjunction with item:	Art. No.
<b>T102M AC3 - AF3</b>	<b>T182M EA3</b>	F03FC20588
<b>T102M AC3 - AF3</b>	<b>T182M EB3</b>	F03FC20589



### Application examples

Fig. A

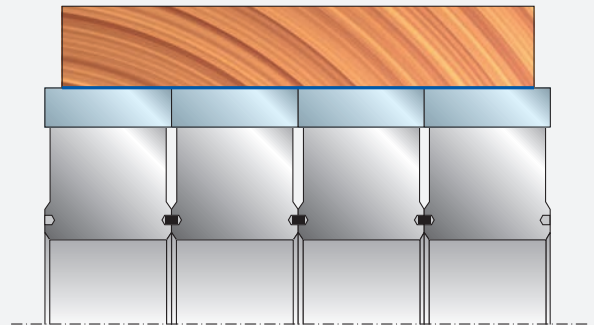
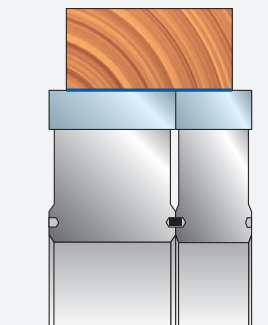


Fig. B

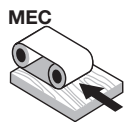


# Rebating

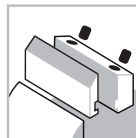


# T182M

## Groove bead cutterheads with disposable knives



Automatic Feed



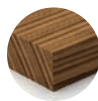
Clamping System



Steel Body



Softwood



Hardwood



### Rebating

	D mm	B mm	d mm	Z	R mm	Max RPM 1/min.	Freud Code	Art. No.
Type A	120	12	35	3	3	11.000	<b>T182M BB3</b>	F03FC20585
	120	12	35	2	2	11.000	<b>T182M CB3</b>	F03FC20586
	145	10	40	3	3	9.000	<b>T182M AB3*</b>	F03FC20584
	150	10	40	4	2	9.000	<b>T182M EB3</b>	F03FC20589
Type B	150	10	40	3	3	9.000	<b>T182M DB3</b>	F03FC20587
	145	12	40	4	2	9.000	<b>T182M EA3</b>	F03FC20588
	145	12	40	3	3	9.000	<b>T182M AA3</b>	F03FC20583

### Machines:

Moulders, automatic and throughfeed machines.

### Materials:

Softwood and hardwood.

### Applications:

Rebating.

### Technical information:

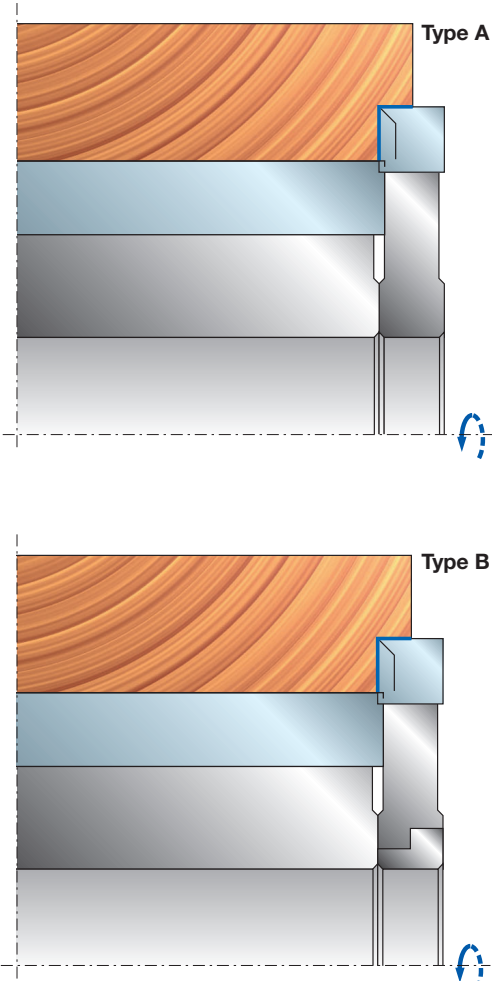
Tool to use in combination with **TM06M-TM07M** to cut guiding rebates.

- Item **T182M AB3**: suitable for Casadei and S.C.M. moulders.
- Steel body.
- Rebore not available.

Item	Art. No.	In conjunction with item:
<b>T182M AB3*</b>	F03FC20584	<b>TM06M - TM07M 0125</b>
<b>T182M AA3</b>	F03FC20583	<b>TM06M - TM07M 0125</b>
<b>T182M CB3</b>	F03FC20586	<b>TM06M PC3 - TM06M PH3</b>
<b>T182M DB3</b>	F03FC20587	<b>TM06M - TM07M</b>
<b>T182M EA3</b>	F03FC20588	<b>TM28M - T102M</b>
<b>T182M EB3</b>	F03FC20589	<b>TM28M - T102M</b>

Item **T182M**: use in combination with **TM06M-TM07M** to cut guiding rebates.

\* For use on Casadei and S.C.M. moulders.

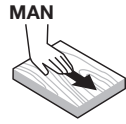


	Spare parts	Dimensions mm	Freud Code	Art. No.
	Torx key	T20	<b>CB03M CC9</b>	F03FA00167
	Spur	14 x 14 x 2	<b>RG01MAA310</b>	F03FH03034
	Screw	M5 x 8	<b>VT05M AA9</b>	F03FA04444
AA3	Knife	12 x 12 x 1,5	<b>CG08MBA310</b>	F03FH02903
	Wedge	15 x 10 x 8	<b>CN01M BA9</b>	F03FC01249
	Flange	68 x 10 x 40	<b>FX01M HC9</b>	F03FC15041
	Screw	M6 x 16	<b>VT03M DI9</b>	F03FA04440
	Allen key	3	<b>CB03M AA9</b>	F03FA00162
AB3	Knife	9,6 x 12 x 1,5	<b>CG08MMA310</b>	F03FH02910
	Wedge	15 x 8 x 8	<b>CN09M DB9</b>	F03FC01296
	Screw	M5 x 16	<b>VT03M BB9</b>	F03FA04437
	Allen key	2,5	<b>2619M CA9</b>	F03FA07432
BB3	Knife	11 x 12 x 1,5	<b>CG08MNA310</b>	F03FH03254
	Wedge	15 x 10 x 8	<b>CN01M BA9</b>	F03FC01249
	Screw	M6 x 16	<b>VT03M DI9</b>	F03FA04440
	Allen key	3	<b>CB03M AA9</b>	F03FA00162
CB3	Knife	12 x 12 x 1,5	<b>CG06MAA310</b>	F03FH02889
	Wedge	15 x 10 x 8	<b>CN01M BA9</b>	F03FC01249
	Screw	M6 x 16	<b>VT03M DI9</b>	F03FA04440
	Allen key	3	<b>CB03M AA9</b>	F03FA00162
DB3	Knife	9,6 x 12 x 1,5	<b>CG08MBA310</b>	F03FH02903
	Wedge	15 x 8 x 8	<b>CN09M DB9</b>	F03FC01296
	Screw	M5 x 16	<b>VT03M BB9</b>	F03FA04437
	Allen key	2,5	<b>2619M CA9</b>	F03FA07432
EA3	Knife	12 x 12 x 1,5	<b>CG08MBA310</b>	F03FH02903
	Wedge	15 x 10 x 8	<b>CN09MS AA9</b>	F03FC01323
	Flange	68 x 10 x 40	<b>FX01M HC9</b>	F03FC15041
	Screw	M6 x 22	<b>VT19M AB9</b>	F03FA04491
	Nut	10 x 11,5 x 6	<b>VT20M AA9</b>	F03FA04497
EB3	Allen key	3	<b>CB03M AA9</b>	F03FA00162
	Knife	9,6 x 12 x 1,5	<b>CG08MBA310</b>	F03FH02903
	Wedge	15 x 8 x 8	<b>CN09M AH9</b>	F03FC01285
	Screw	M6 x 22	<b>VT19M AB9</b>	F03FA04491
	Nut	9 x 10,5 x 6	<b>VT20M GA9</b>	F03FC20669
	Allen key	3	<b>CB03M AA9</b>	F03FA00162

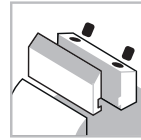


# T111M - T112M

## Disposable knives cutterheads for rebates



Manual Feed



Clamping System



Aluminium Body



Softwood



Hardwood



Chipboard



Laminated Chipboard



MDF



Laminated MDF



Planing



Rebating

**Machines:**

Spindle moulders and manual feed machines.

**Materials:**

Softwood, hardwood and wood based panels.

**Applications:**

Planing and rebating.

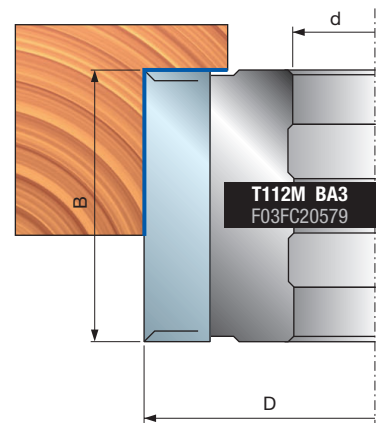
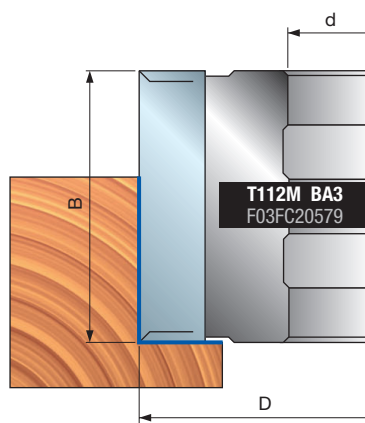
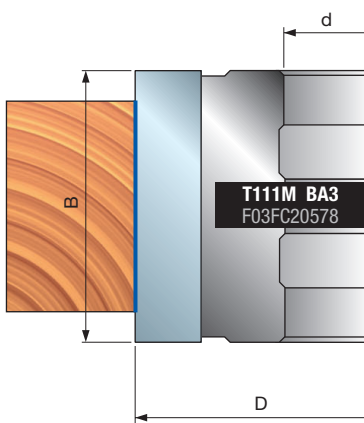
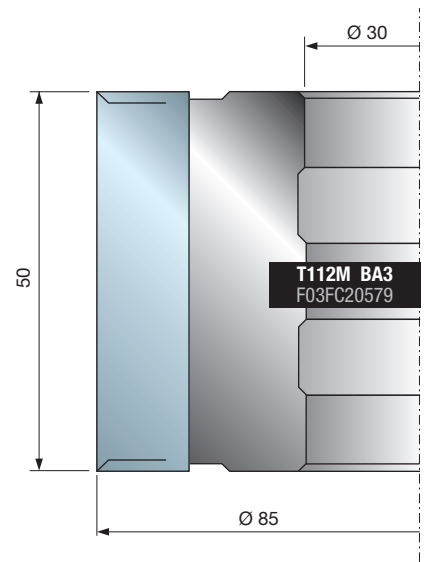
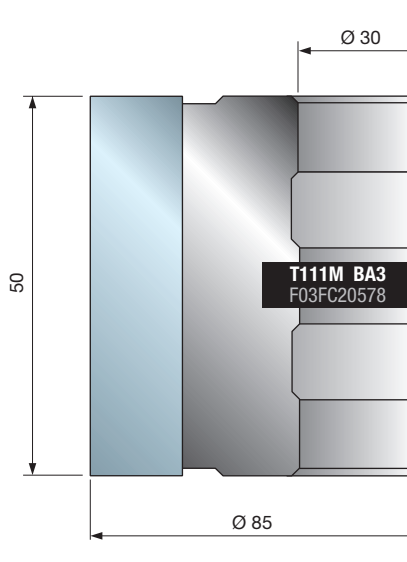
**Technical information:**

Disposable knives tool for planing and rebating.

- Aluminium light alloy body.
- Rebore not available.

D mm	B mm	d mm	Z	R mm	Max RPM 1/min.	Freud Code	Art. No.
85	50	30	4		12.000	<b>T111M BA3</b>	F03FC20578
85	50	30	4	4	12.000	<b>T112M BA3</b>	F03FC20579

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	50 x 12 x 1,5	<b>CG08MFA310</b>	F03FH02907
	Screw	M8 x 16	<b>VT03M AA9</b>	F03FA04435
	Wedge	46	<b>CN01M KA9</b>	F03FC01255
	Allen key	4	<b>2619M EA9</b>	F03FA07434
	Torx key	T20	<b>CB03M CC9</b>	F03FA00167
	Spur	14 x 14 x 2	<b>RG01MAA310</b>	F03FH03034
	Screw	M5 x 8	<b>VT05M AA9</b>	F03FA04444



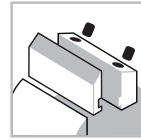


## T191M - T192M

## Disposable knives cutterheads for rebates



Manual Feed



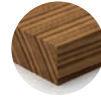
Clamping System



Steel Body



Softwood



Hardwood



Planing



Rebating



### Machines:

Spindle moulders and manual feed machines.

### Materials:

Softwood and hardwood.

### Applications:

Planing and rebating.

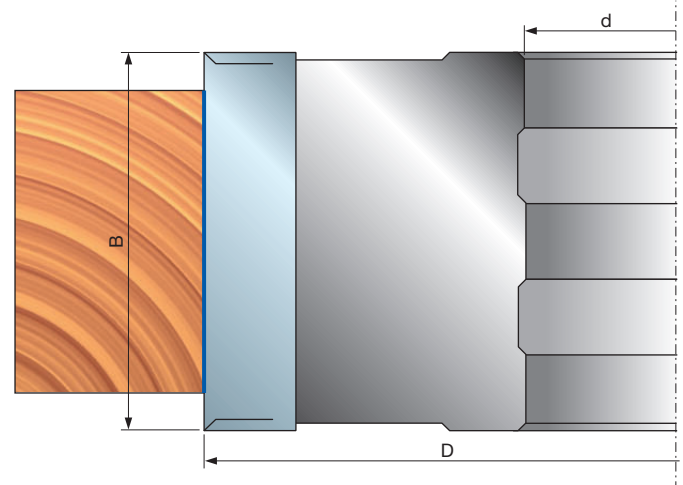
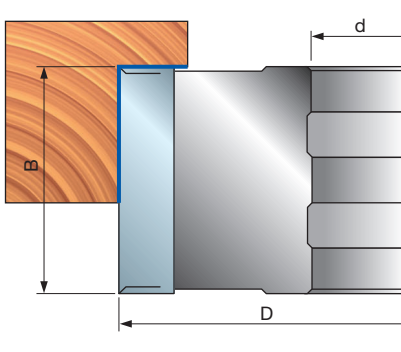
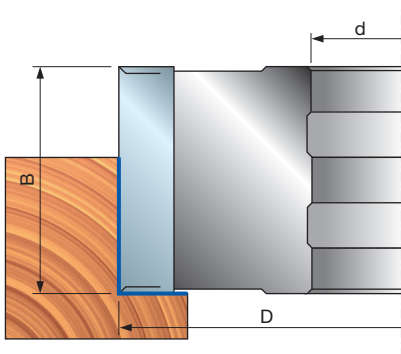
### Technical information:

Disposable knives tool for planing and rebating with alternate shear angle.

- Steel body.
- Rebore not available.

D mm	B mm	d mm	Z	R mm	Max RPM 1/min.	Freud Code	Art. No.
125	50,4	30	4	4	10.300	<b>T191M BA3</b>	F03FC20600
125	50,4	35	4	4	10.300	<b>T191M BB3</b>	F03FC20601
125	50,4	40	4	4	10.300	<b>T191M BC3</b>	F03FC20602
125	50,4	50	4	4	10.300	<b>T191M BD3</b>	F03FC20603
125	50,4	30	2	4	10.300	<b>T192M BA3</b>	F03FC20604
125	50,4	35	2	4	10.300	<b>T192M BB3</b>	F03FC24963
125	50,4	40	2	4	10.300	<b>T192M BC3</b>	F03FC20605
125	50,4	50	2	4	10.600	<b>T192M VC3</b>	F03F703931

	Spare parts	Dimensions mm	Freud Code	Art. No.	
	Knife	50 x 12 x 1,5	<b>CG08MFA310</b>	F03FH02907	
	Wedge	15 x 46 x 8	<b>CN09M AP9</b>	F03FC01290	
	Screw	M10 x 22	<b>VT19M MA9</b>	F03FA04496	
	Screw	M5 x 8	<b>VT05M AA9</b>	F03FA04444	
	Nut	15 x 13,3 x M10	<b>VT20M MA9</b>	F03FC20670	
	Spur	14 x 14 x 2	<b>RG01MAA310</b>	F03FH03034	
<b>T112M</b>		Allen key	5	<b>CB03M EA9</b>	F03FA00169
		Torx key	T20	<b>CB03M CC9</b>	F03FA00167



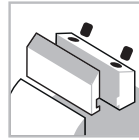


# T194M - T195M

## Disposable knives cutterheads for rebates



Manual Feed



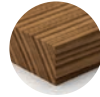
Clamping System



Aluminium Body



Softwood



Hardwood



Planing



Rebating



### Machines:

Spindle moulders and manual feed machines.

### Materials:

Softwood and hardwood.

### Applications:

Planing and rebating.

### Technical information:

Disposable knives tool for planing and rebating with alternate shear angle.

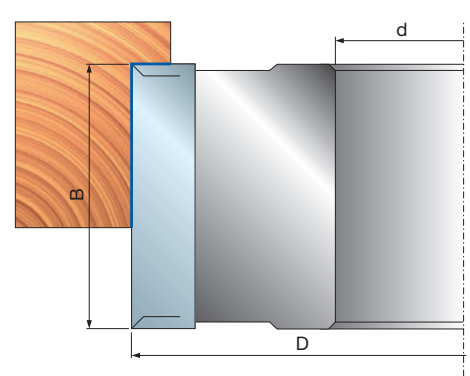
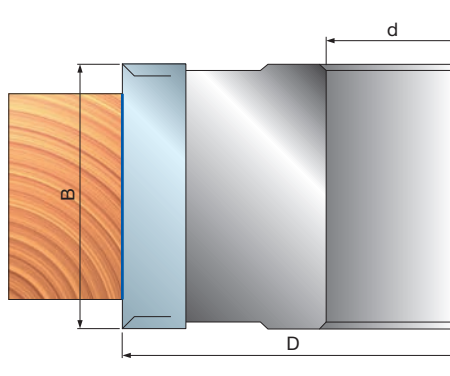
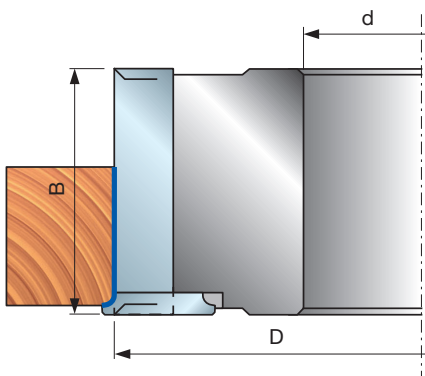
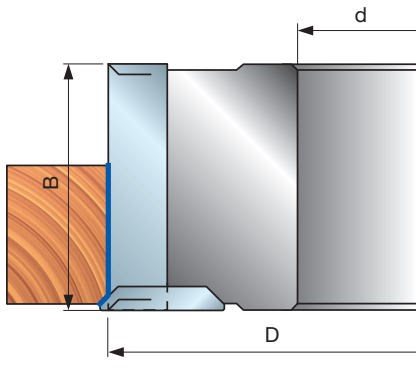
- Seat pockets for chamfering and rounding inserts (not included).
- Aluminium light alloy body.
- Rebore not available.

D mm	B mm	d mm	Z	R mm	Max RPM 1/min.	Freud Code	Art. No.
125	30,4	32	4	4	10.300	T194M AC3	F03F668307
125	30,4	35	4	4	10.300	T194M AB3	F03FC20607
125	30,4	50	4	4	10.300	T194M AD3	F03FC25546
125	50,4	32	4	4	10.300	T194M BC3	F03F668308
125	50,4	35	4	4	10.300	T194M BB3	F03FC20608
125	50,4	50	4	4	10.300	T194M BD3	F03FC23634
125	50,4	35	2	4	10.300	T195M BB3	F03FC20610
125	30,4	50	2	4	10.300	T195M BD3	F03FC23582

Spare parts		Dimensions mm	Freud Code	Art. No.
	Spur	14 x 14 x 2	RG01MAA310	F03FH03034
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Screw	M10 x 22	VT19M MA9	F03FA04496
	Nut	15 x 13,3 x M10	VT20M MA9	F03FC20670
	Allen key	5	CB03M EA9	F03FA00169
	Torx key	T20	CB03M CC9	F03FA00167
	Knife	30 x 12 x 1,5	CG08MEA310	F03FH02907
	Wedge	15 x 26 x 8	CN09M AD9	F03FC01283
	Knife	50 x 12 x 1,5	CG08MFA310	F03FH02907
	Wedge	15 x 46 x 8	CN09M AP9	F03FC01290

Tool with seat pockets for the following inserts (not included):

Inserts		Dimensions mm	Freud Code	Art. No.
	Knife	26 x 16 x 5 45°	IG61MSBA305	F03FH03027
	Knife	26 x 16 x 5 R=1,5	IG62MSAB305	F03FH03031
	Knife	26 x 16 x 5 R=2	IG62MSAC305	F03FH03032
	Knife	26 x 16 x 5 R=3	IG62MSAE305	F03FH03033
	Screw	M6 x 14,5	VT16M AA9	F03FA04476



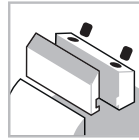


# T193M

## Disposable knives cutterheads for rebates



Manual Feed



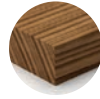
Clamping System



Aluminium Body



Softwood



Hardwood



Planing



Rebating



### Machines:

Spindle moulders and manual feed machines.

### Materials:

Softwood and hardwood.

### Applications:

Planing and rebating.

### Technical information:

Disposable knives tool for planing and rebating with alternate shear angle.

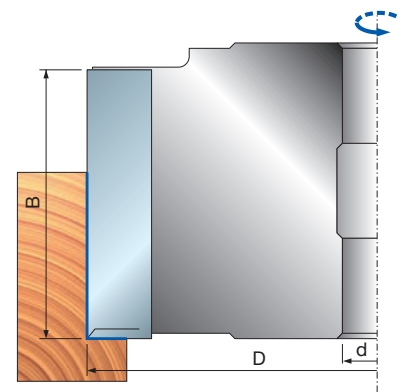
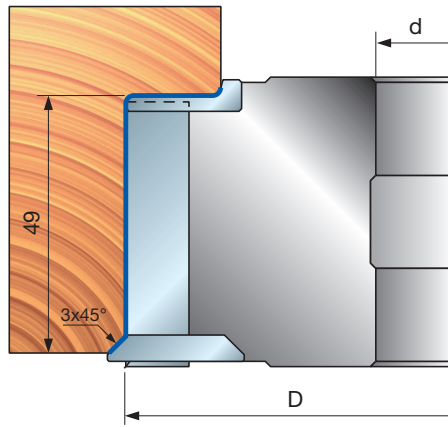
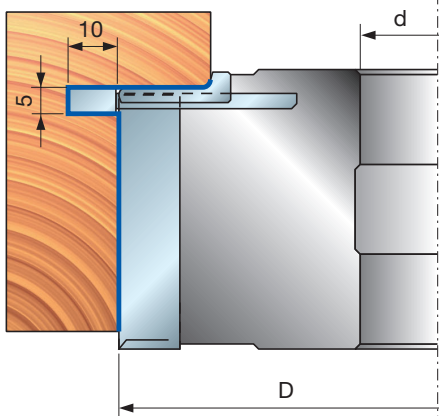
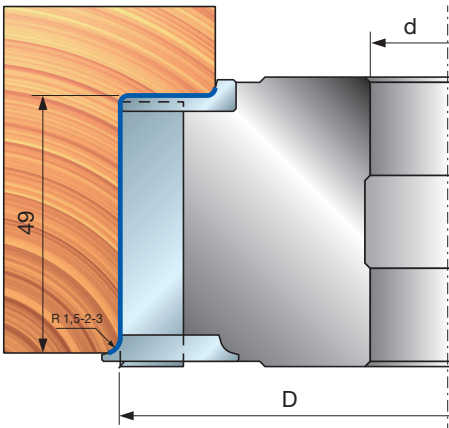
- Seat pockets for chamfering, rounding and grooving inserts (not included).
- Aluminium light alloy body.
- Rebore not available.

D mm	B mm	d mm	Z	R mm	Max RPM 1/min.	Freud Code	Art. No.
125	50	30	4	2	10.300	<b>T193M BA3</b>	F03FC20606
125	50	32	4	2	10.300	<b>T193M BC3</b>	F03F668306
140	50	50	4	2	9.600	<b>T193M BD3</b>	F03FC25545

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	50 x 12 x 1,5	<b>CG08MFA310</b>	F03FH02907
	Wedge	15 x 46 x 8	<b>CN09M AP9</b>	F03FC01290
	Nut	15 x 13,3 x M10	<b>VT20M MA9</b>	F03FC20670
	Screw	M10 x 22	<b>VT19M MA9</b>	F03FA04496
	Spur	14 x 14 x 2	<b>RG01MAA310</b>	F03FH03034
	Screw	M5 x 8	<b>VT05M AA9</b>	F03FA04444
	Adjustment ring	16 x 11,9 x 2,6	<b>VT18M AG9</b>	F03FC20660
	Screw	M6 x 10	<b>2622M CB9</b>	F03FA07455
	Allen key	5	<b>CB03M EA9</b>	F03FA00169
	Allen key	4	<b>CB03M BA9</b>	F03FA00163
	Torx key	T20	<b>CB03M CC9</b>	F03FA00167

### Tool with seat pockets for the following inserts (not included):

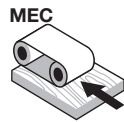
Inserts		Dimensions mm	Freud Code	Art. No.
	Multipurpose insert	15	<b>IG25MD15302</b>	F03FC24169
	Multipurpose insert	16	<b>IG25MD16302</b>	F03FC24170
	Multipurpose insert	18	<b>IG25MD18302</b>	F03FC24171
	Screw	M6 x 10	<b>2622M CB9</b>	F03FA07455
	Knife	26 x 16 x 5 45°	<b>IG61MSBA305</b>	F03FH03027
	Knife	26 x 16 x 5 R=1,5	<b>IG62MSAB305</b>	F03FH03031
	Knife	26 x 16 x 5 R=2	<b>IG62MSAC305</b>	F03FH03032
	Knife	26 x 16 x 5 R=3	<b>IG62MSAE305</b>	F03FH03033
	Screw	M6 x 14,5	<b>VT16M AA9</b>	F03FA04476
	Sector	25 x 45 x 5 Z1	<b>SR11MDBD301</b>	F03FC24206
	Screw	M5 x 8	<b>VT05M AA9</b>	F03FA04444



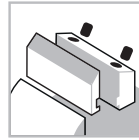


# T198M

## Adjustable rebate and groove cutterhead sets with disposable knives



Automatic Feed



Clamping System



Steel Body



Softwood



Hardwood



Planing



Rebating



Grooving



### Machines:

Moulders, automatic and throughfeed machines.

### Materials:

Softwood and hardwood.

### Applications:

Planing, rebating and grooving.

### Technical information:

Disposable knives tool set with alternate shear angle.

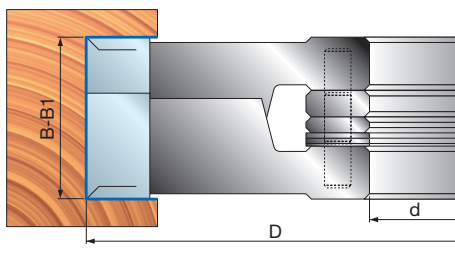
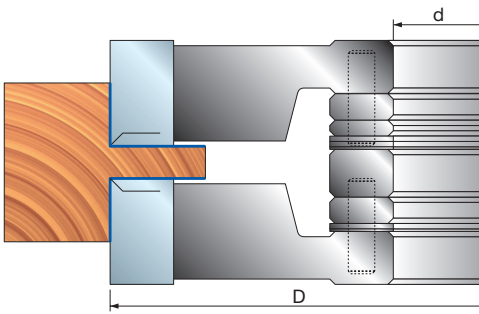
- Rebore not available.
- Seat pockets for chamfering, rounding and grooving inserts (not included).
- Steel body.
- Rebore not available.

D	B-B1	d	Z	R	Max RPM	Freud Code	Art. No.
mm	mm	mm		mm	1/min.		
140	20,5-39	30	2+2	2+2	9.600	<b>T198M FA3</b>	F03FC22428
140	20,5-39	32	2+2	2+2	9.600	<b>T198M FD3</b>	F03FC24270
140	20,5-39	35	2+2	2+2	9.600	<b>T198M FB3</b>	F03FC20612
140	20,5-39	40	2+2	2+2	9.600	<b>T198M FC3</b>	F03FC20613
140	30,4-59	30	2+2	2+2	9.600	<b>T198M GA3</b>	F03FC22590
140	30,4-59	32	2+2	2+2	9.600	<b>T198M GD3</b>	F03FC24271
140	30,4-59	35	2+2	2+2	9.600	<b>T198M GB3</b>	F03FC20614
140	30,4-59	40	2+2	2+2	9.600	<b>T198M GC3</b>	F03FC20615

	Spare parts	Dimensions	Freud Code	Art. No.
		mm		
	Spur	14 x 14 x 2	<b>RG01MAA310</b>	F03FH03034
	Nut	15 x 13,3 x M10	<b>VT20M NA9</b>	F03FC20671
	Screw	M10 x 22	<b>VT19M MA9</b>	F03FA04496
	Screw	M6 x 14,5	<b>VT16M AA9</b>	F03FA04476
	Screw	M5 x 8	<b>VT05M AA9</b>	F03FA04444
	Allen key	5	<b>CB03M EA9</b>	F03FA00169
	Torx key	T20	<b>CB03M CC9</b>	F03FA00167
<b>FA3</b>	Spacers set	50 x 20 x 30	<b>AN13M BA9</b>	F03FC22427
<b>FB3</b>	Spacers set	55 x 20 x 35	<b>AN13M BB9</b>	F03FC00543
<b>FC3</b>	Spacers set	60 x 20 x 40	<b>AN13M CB9</b>	F03FC00545
<b>FD3</b>	Spacers set	52 x 21,1 x 32	<b>AN13M BE9</b>	F03FC24531
<b>FA3</b>	Knife	20 x 12 x 1,5	<b>CG08MDA310</b>	F03FH02905
<b>FB3</b>	Wedge	15 x 16 x 8	<b>CN09MD A09</b>	F03FC01306
<b>FC3</b>	Wedge	15 x 16 x 8	<b>CN09MS A09</b>	F03FC01331
<b>GA3</b>	Spacers set	50 x 30 x 30	<b>AN13M BD9</b>	F03FC22591
<b>GB3</b>	Spacers set	55 x 30 x 35	<b>AN13M BC9</b>	F03FC00544
<b>GC3</b>	Spacers set	60 x 30 x 40	<b>AN13M CC9</b>	F03FC00546
<b>GD3</b>	Spacers set	52 x 31,1 x 32	<b>AN13M BF9</b>	F03FC24532
<b>GA3</b>	Knife	30 x 12 x 1,5	<b>CG08MEA310</b>	F03FH02906
<b>GB3</b>	Wedge	15 x 26 x 8	<b>CN09MD AD9</b>	F03FC01300
<b>GC3</b>	Wedge	15 x 26 x 8	<b>CN09MS AD9</b>	F03FC01326

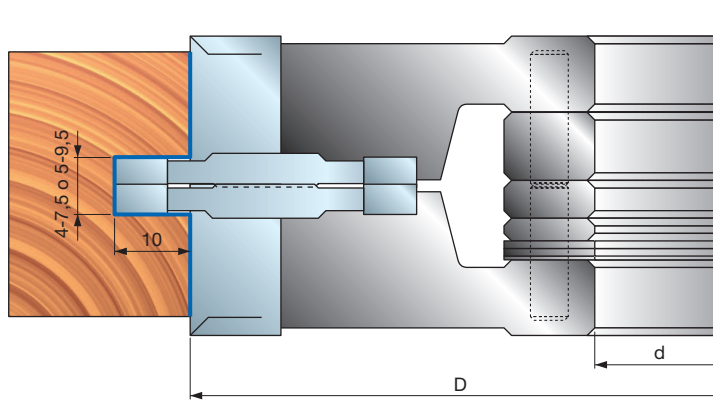
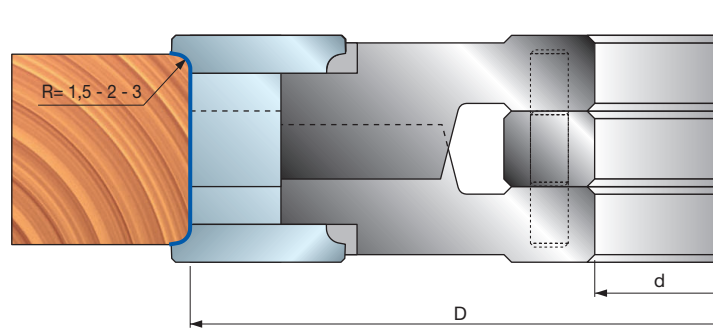
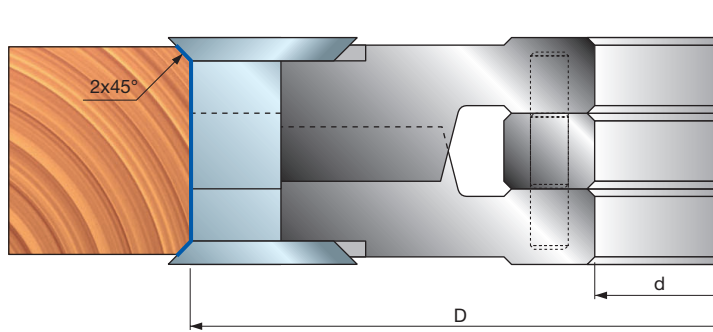
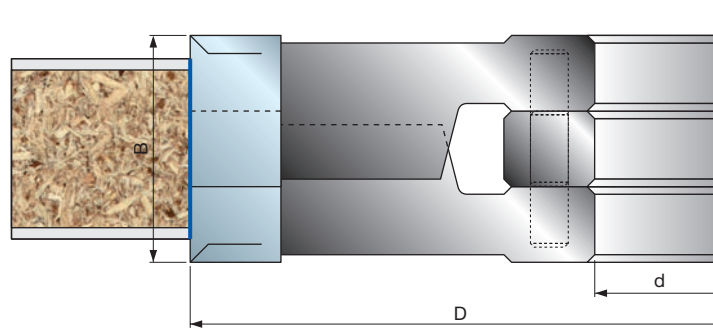
### Tool with seat pockets for the following inserts (not included):

	Inserts	Dimensions	Freud Code	Art. No.
		mm		
	Grooving insert	40 x 16 x 4	<b>IG04MDAA305</b>	F03FH03409
	Grooving insert	40 x 16 x 4	<b>IG04MSAA305</b>	F03FH02994
	Screw	M6 x 14,5	<b>VT16M AA9</b>	F03FA04476
	Knife	26 x 16 x 5 45°	<b>IG61MDBA305</b>	F03FH03026
	Knife	26 x 16 x 5 45°	<b>IG61MSBA305</b>	F03FH03027
	Knife	26 x 16 x 5 R=1,5	<b>IG62MDAB305</b>	F03FH03028
	Knife	26 x 16 x 5 R=2	<b>IG62MDAC305</b>	F03FH03029
	Knife	26 x 16 x 5 R=3	<b>IG62MDAE305</b>	F03FH03030
	Knife	26 x 16 x 5 R=1,5	<b>IG62MSAB305</b>	F03FH03031
	Knife	26 x 16 x 5 R=2	<b>IG62MSAC305</b>	F03FH03032
	Knife	26 x 16 x 5 R=3	<b>IG62MSAE305</b>	F03FH03033
	Screw	M6 x 14,5	<b>VT16M AA9</b>	F03FA04476



T198M

Adjustable rebate and grooves  
cutterhead sets with disposable knives



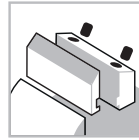


# T199M

## Adjustable rebate and groove cutterhead sets with disposable knives



Manual Feed



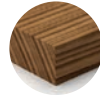
Clamping System



Steel Body



Softwood



Hardwood



Planing



Rebating



Grooving



### Machines:

Moulders, automatic and throughfeed machines.

### Materials:

Softwood and hardwood.

### Applications:

Planing, rebating and grooving.

### Technical information:

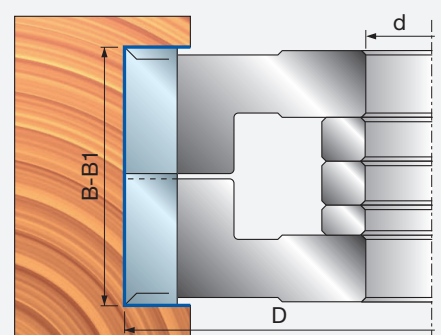
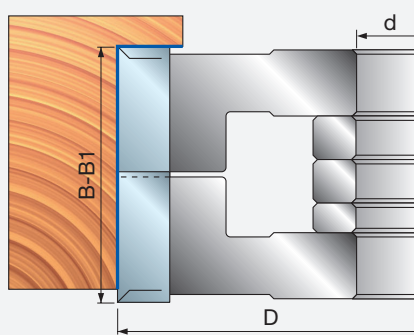
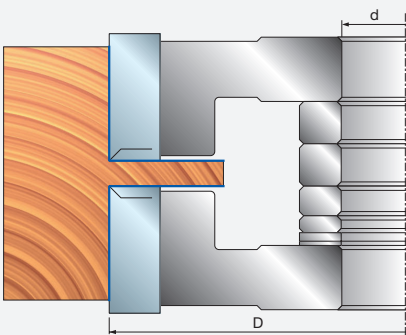
Disposable knives tool set with alternate shear angle.

- Seat pockets for chamfering, rounding and grooving inserts (not included).
- Steel body.
- Rebore not available.

D mm	B-B1 mm	d mm	Z	R	Max RPM 1/min.	Freud Code	Art. No.
140	30,4-59	30	2+2	2+2	9.600	<b>T199M GA3</b>	F03FC20624
140	30,4-59	32	2+2	2+2	9.600	<b>T199M GD3</b>	F03FC24474
140	30,4-59	35	2+2	2+2	9.600	<b>T199M GB3</b>	F03FC20625
140	30,4-59	40	2+2	2+2	9.600	<b>T199M GC3</b>	F03FC20626
140	30,4-59	50	2+2	2+2	9.600	<b>T199M GE3</b>	F03FC25267

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Knife	30 x 12 x 1,5	<b>CG08MEA310</b>	F03FH02906
	Wedge	12,3 x 26 x 8	<b>CN01MD GA9</b>	F03FC01263
	Wedge	12,3 x 26 x 8	<b>CN01MS GA9</b>	F03FC01266
	Screw	M5 x 8	<b>VT05M AA9</b>	F03FA04444
	Spur	14 x 14 x 2	<b>RG01MAA310</b>	F03FH03034
	Screw	M8 x 16	<b>VT03M AA9</b>	F03FA04435
	Allen key	4	<b>CB03M BA9</b>	F03FA00163
	Allen key	5	<b>CB03M EA9</b>	F03FA00169
	Torx key	T20	<b>CB03M CC9</b>	F03FA00167
<b>GA3</b>	Spacer set	50 x 30 x 30	<b>AN03M AC9</b>	F03FC00446
<b>GB3</b>	Spacer set	55 x 30 x 35	<b>AN03M BC9</b>	F03FC00456
<b>GC3</b>	Spacer set	60 x 30 x 40	<b>AN03M CC9</b>	F03FC00467
<b>GD3</b>	Spacer set	52 x 30 x 32	<b>AN03M DC9</b>	F03FC00475

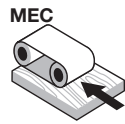
**A 10 pieces set of spacers:** Thickness: 0,1 - 0,2 - 0,3 - 0,5 - 1 - 2 - 3 - 6 - 8 - 10 mm



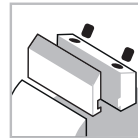


# TP48M

# ISOprofil cutterheads for door frames



Automatic Feed



Clamping System



Steel Body



Softwood



Hardwood



Rebating

Tool suitable for solid wood jamb board rebate machining.



### Machines:

Moulders, automatic and throughfeed machines.

### Materials:

Softwood and hardwood.

### Applications:

Rebating.

### Technical information:

Performance tool for door rebating, front shear angle to guarantee a perfect step surface and a body able to reach 65 mm step depth.

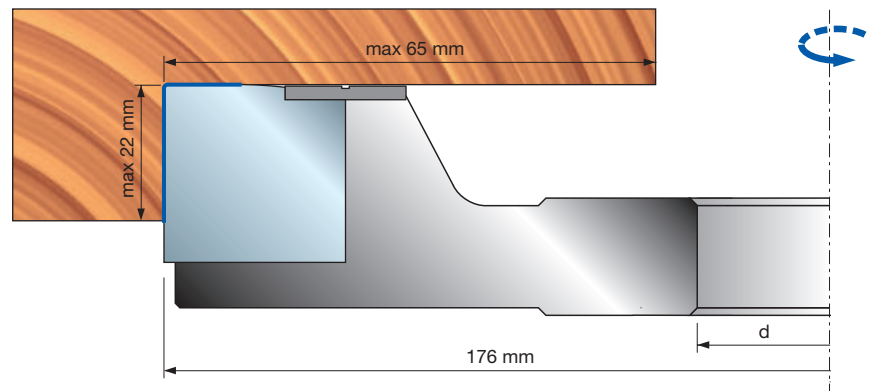
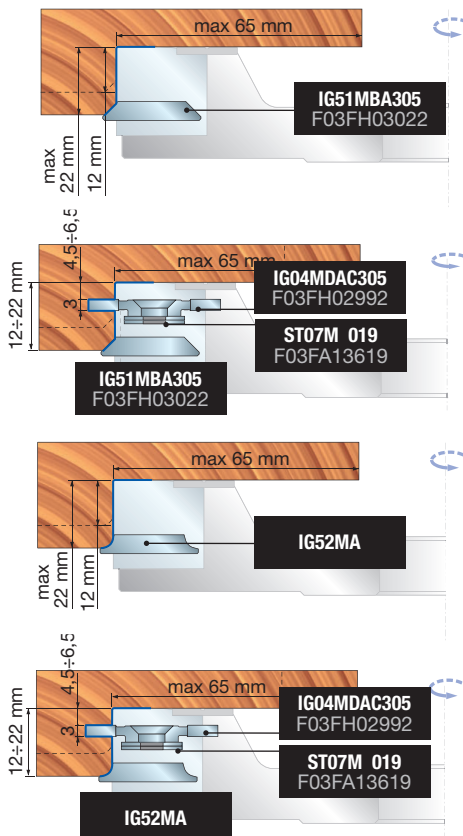
- Rounding and beveling insert to offer different solutions on step corners.
- Steel body.
- Rebore not available.
- Inserts to be ordered separately.

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
176	23,5	35	2	8.000	TP48M AB3	F03F664005
176	23,5	50	2	8.000	TP48M AD3	F03FC25547

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	24 x 24 x 3	CP48MAA301	F03FC24310
	Positioning plate	22 x 1,7 x 6,5	VT18M GA9	F03FA04488
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Screw	M10 x 16	2616M EE9	F03FA07426
	Wedge	28 x 9,5 x 8	CN03M BB9	F03FA00585
	Screw	M8 x 22	VT19M BB9	F03FA04493
	Allen key	4	CB03M BA9	F03FA00163
	Allen key	5	CB03M EA9	F03FA00169
	Torx key	T9	CB03M CA9	F03FA00165

Tool with seat pockets for the following inserts (not included):

Spare parts		Dimensions mm	Freud Code	Art. No.
	Rounding insert	22 x 16 x 5 R=1,5	IG52MAB305	F03FH03023
	Rounding insert	22 x 16 X 5 R=2	IG52MAC305	F03FH03024
	Rounding insert	22 x 16 X 5 R=3	IG52MAE305	F03FH03025
	Beveling insert	22 x 16 x 5 45°	IG51MBA305	F03FH03022
	Spacer for inserts	13,6 x 0,1 x 7	ST07M 019	F03FA13619
	Grooving insert	40 x 16 x 3	IG04MDAC305	F03FH02992
	Screw for IG51-IG52	M6 x 13	VT16M AE9	F03FC20658
	Screw for IG04MD	M6 x 14,5	VT16M AA9	F03FA04476



# Jointing

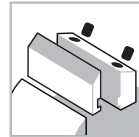




## TW23M - TW20M Jointing cutterheads



Manual Feed



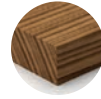
Clamping System



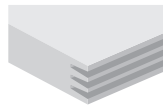
Aluminium Body



Softwood



Hardwood



Jointing



### Machines:

Spindle moulders and manual feed machines.

### Materials:

Softwood and hardwood.

### Applications:

Jointing.

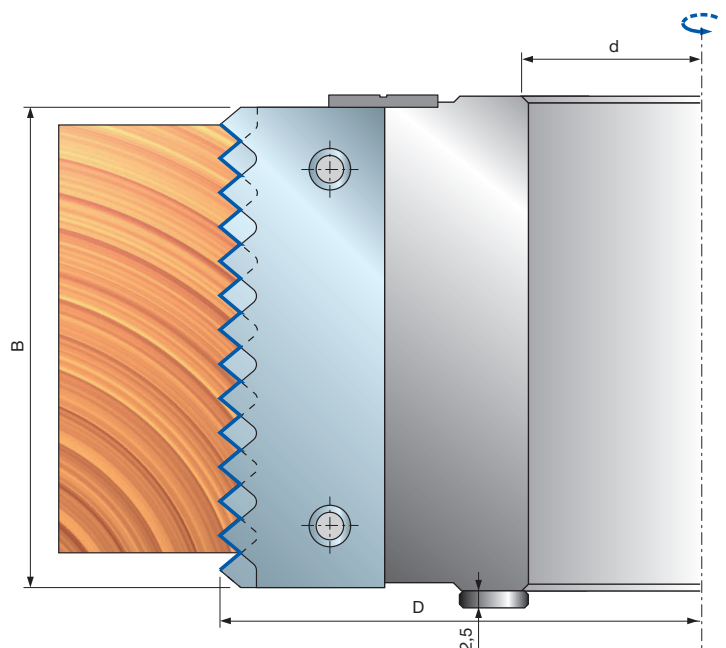
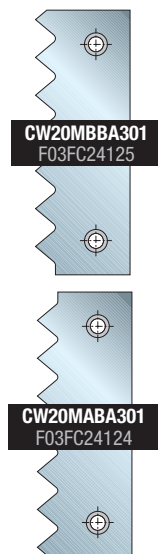
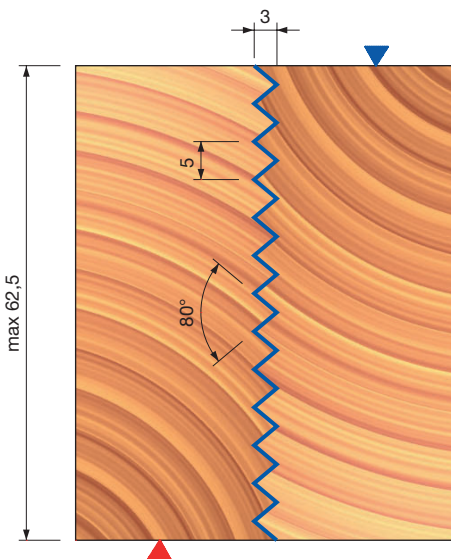
### Technical information:

Performance knives tool to work long grain on short workpieces.

- Two different types of knives are fitted on the cutterhead to obtain a perfect joint with a 90° sharp edge.
- The max. timber thickness possible is 62,5 mm.
- Aluminium light alloy body.
- Rebore not available.

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
140	70	30	4	9.600	<b>TW20M BA3</b>	F03FC22727
140	70	32	4	9.600	<b>TW20M BG3</b>	F03F676528
140	70	35	4	9.600	<b>TW20M BF3</b>	F03FC20564
140	70	50	4	9.600	<b>TW20M BD3</b>	F03FC25548
140	70	30	2	9.600	<b>TW23M BE3</b>	F03FC24404
140	70	32	2	9.600	<b>TW23M BG3</b>	F03F668303
140	70	35	2	9.600	<b>TW23M BF3</b>	F03FC20567
140	70	50	2	9.600	<b>TW23M BD3</b>	F03FC25549

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	70 x 25 x 3	<b>CW20MABA301</b>	F03FC24124
	Knife	70 x 25 x 3	<b>CW20MBBA301</b>	F03FC24125
	Wedge	68 x 19 x 8	<b>CN11M C660A</b>	F03FC01354
	Screw	M10 x 18	<b>VT03M CC9</b>	F03FA04438
	Screw	M5 x 8	<b>VT05M AA9</b>	F03FA04444
	Positioning plate	22 x 1,7 x 6,5	<b>VT18M GB9</b>	F03FA04489
	Allen key	5	<b>CB03M EA9</b>	F03FA00169
	Spacer	50 x 2,5 x 30	<b>AN20M AI9</b>	F03FC00552
	Spacer	55 x 2,5 x 35	<b>AN20M BI9</b>	F03FC00553
	Spacer	52 x 2,5 x 32	<b>AN20M EI9</b>	F03FC24411



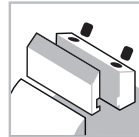


# TW22M

# Jointing cutterheads



Manual Feed



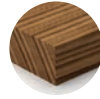
Clamping System



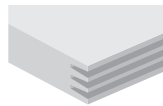
Aluminium Body



Softwood



Hardwood



Jointing



**Machines:**

Spindle moulders and manual feed machines.

**Materials:**

Softwood and hardwood.

**Applications:**

Jointing.

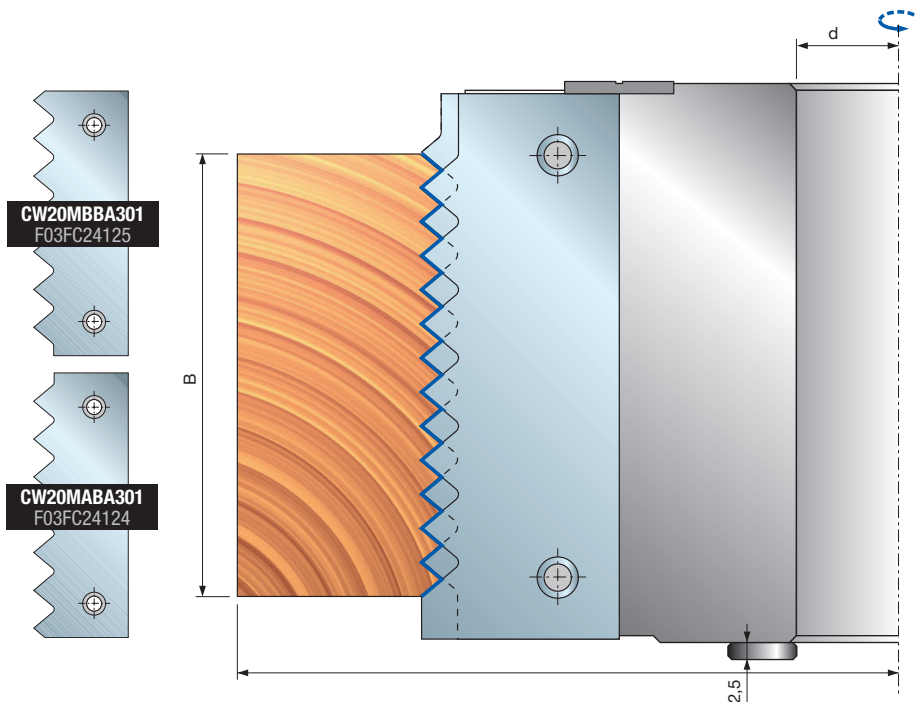
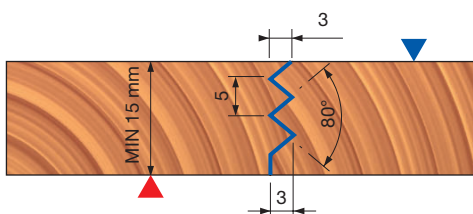
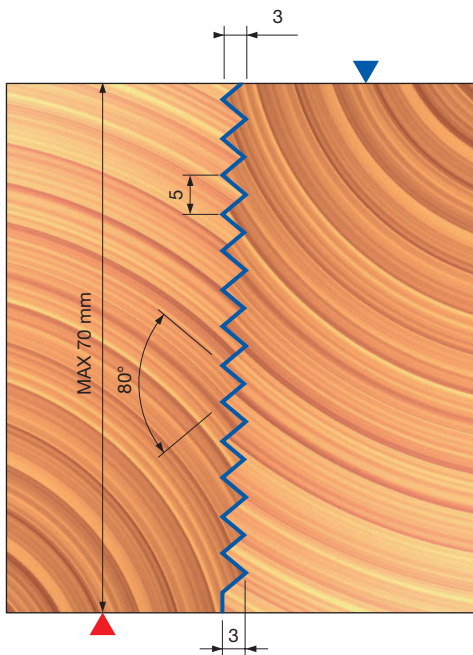
**Technical information:**

Performance knives tool to work long grain on short workpieces.

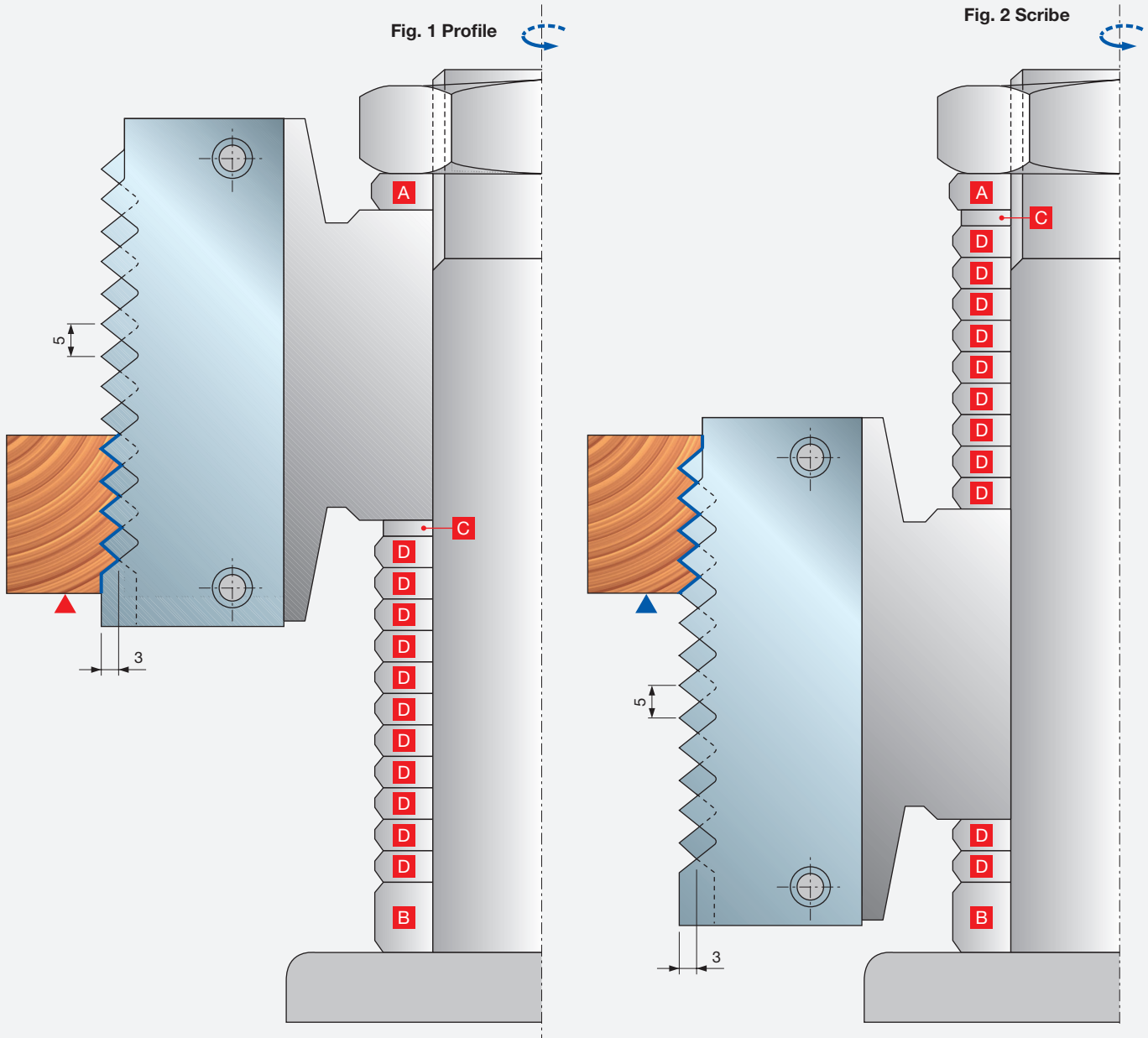
- Two different types of knives are fitted on the cutterhead to obtain a perfect joint with a 90° sharp edge.
- The max. timber thickness possible is 70 mm.
- Aluminium light alloy body.
- Rebore not available.

D mm	B mm	d mm	Z	R mm	Max RPM 1/min.	Freud Code	Art. No.
140	80	30	4	-	9.600	TW22M BA3	F03FC23047
140	80	32	4	-	9.600	TW22M BG3	F03FC24406
140	80	35	4	-	9.600	TW22M BB3	F03FC20566
140	80	50	4	2	9.600	TW22M BD3	F03FC24941

	Spare parts	Dimensions mm	Freud Code	Art. No.	
	Knife	80 x 29 x 3	CW22MAAA301	F03FC24126	
	Knife	80 x 29 x 3	CW22MBAA301	F03FC24127	
	Wedge	76 x 24 x 8	CN13M AG9	F03FC01388	
	Screw	M10 x 18	VT03M CC9	F03FA04438	
	Screw	M5 x 8	VT05M AA9	F03FA04444	
	Positioning plate	22 x 1,7 x 6,5	VT18M GB9	F03FA04489	
	Allen key	5	CB03M EA9	F03FA00169	
TW22M BA3		Spacer	50 x 2,5 x 30	AN20M AI9	F03FC00552
TW22M BG3		Spacer	52 x 2,5 x 32	AN20M EI9	F03FC24411
TW22M BB3		Spacer	55 x 2,5 x 35	AN20M BI9	F03FC00553



Application examples

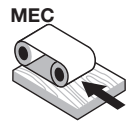


- 1: To obtain the profile, insert all spacers "C" and "D" below the tool as indicated in figure A.
  - 2: To achieve the counterprofile remove spacer "C" and as many spacers "D" as the number of teeth "C" and in use, placing them above the tool as indicated in figure B. In the example above there are 9 teeth not used (Fig. A), so 9 spacers "D" will be removed together with spacer "C" and placed above the tool (Fig. B).
- Spacers "A-B": supplied with machine.
  - Spacer "C": 2,5 mm thickness, equal to 1/2 the tooth's pitch, for the exactpositioning of the tool, in order to carry out the counter profile.
  - Spacers "D": 5 mm thickness, (equal to the tooth's pitch) supplied onrequest; cod: **AN04M BB9**.

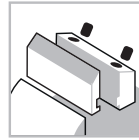


# TW01M

# Finger joint cutterheads



Automatic Feed



Clamping System



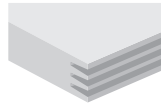
Steel Body



Softwood



Hardwood



Jointing



### Machines:

Moulders, automatic and throughfeed machines.

### Materials:

Softwood and hardwood.

### Applications:

Jointing.

### Technical information:

Performance knives tool able to produce different jointing profiles on the same tool body.

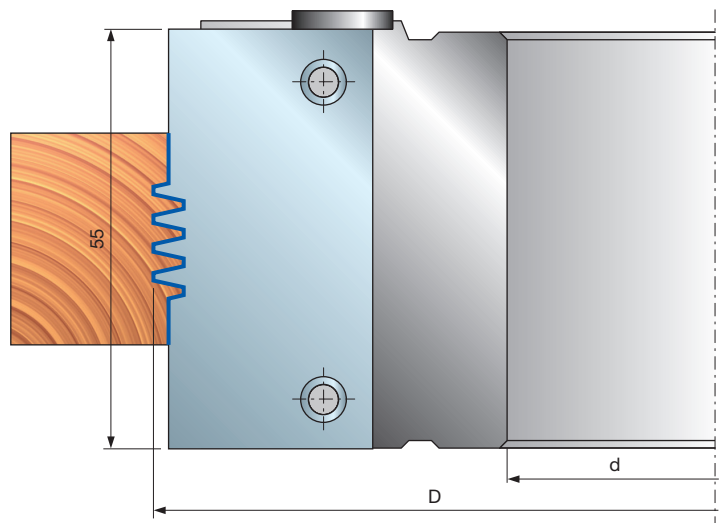
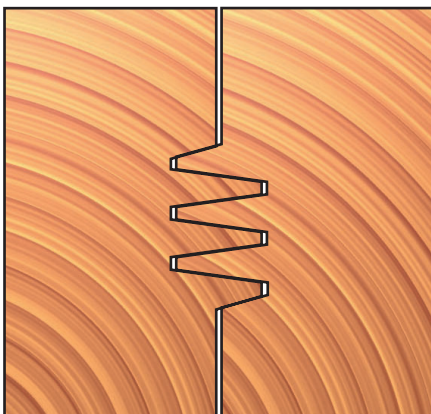
- Possible to adjust the type of joint (tight, regular, loose) by means of a thumb screw mechanism.
- Tool to work long and cross grain on short workpieces.
- The item does not include knives and support plates.
- Steel body.
- Rebore not available.

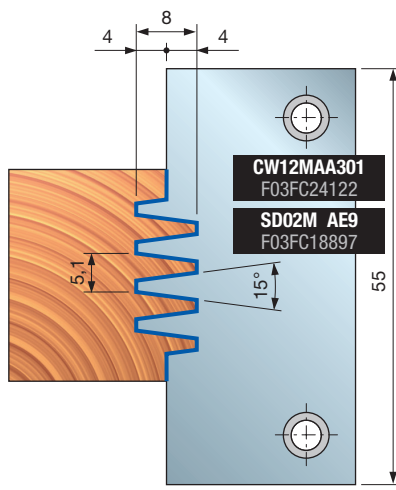
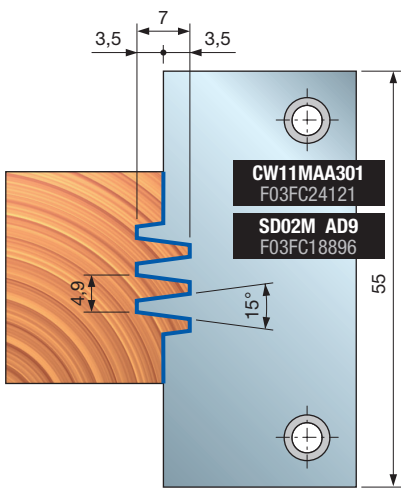
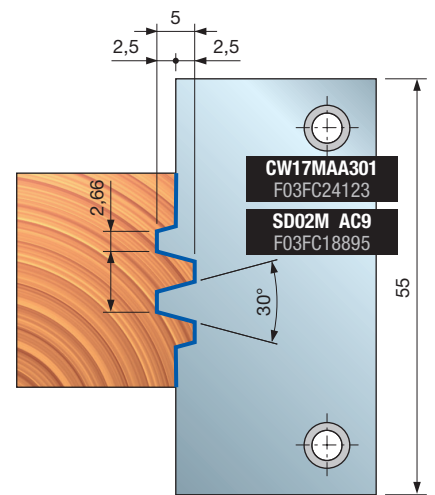
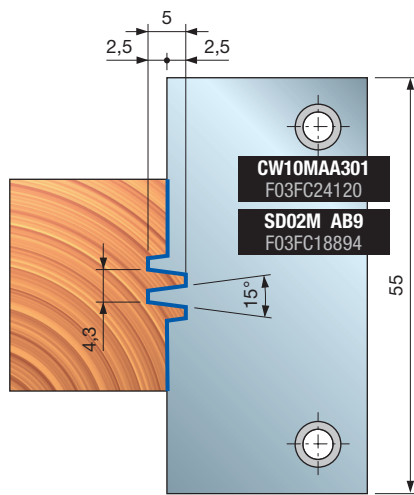
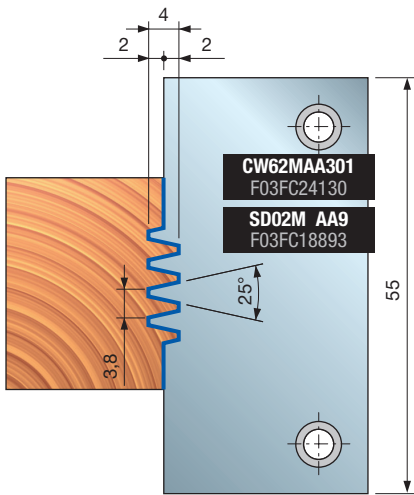
D	B	d	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm		1/min.		
150	55	35	4	9.600	TW01M AB3	F03FC20555

Spare parts		Dimensions	Freud Code	Art. No.
		mm		
	Wedge	53 x 19 x 8,5	CN11M C510A	F03FC24405
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Screw	M5 x 8	VT08M AC9	F03FC20652
	Positioning plate	22 x 1,7 x 6,5	VT18M GB9	F03FA04489
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Screw	M4 x 6	2602M CE9	F03FA07349
	Screw	M3 x 8	2607M AB9	F03F010001
	Allen key	5	CB03M EA9	F03FA00169

### Order example

Item	Art. No.	Dimensions	Quantity
		mm	PCS.
TW01M AB3	F03FC20555	150 x 55 x 35 Z4	1
CW10MAA301	F03FC24120	55 x 29 x 3	4
SD02M AB9	F03FC18894	55 x 27 x 5,5	4

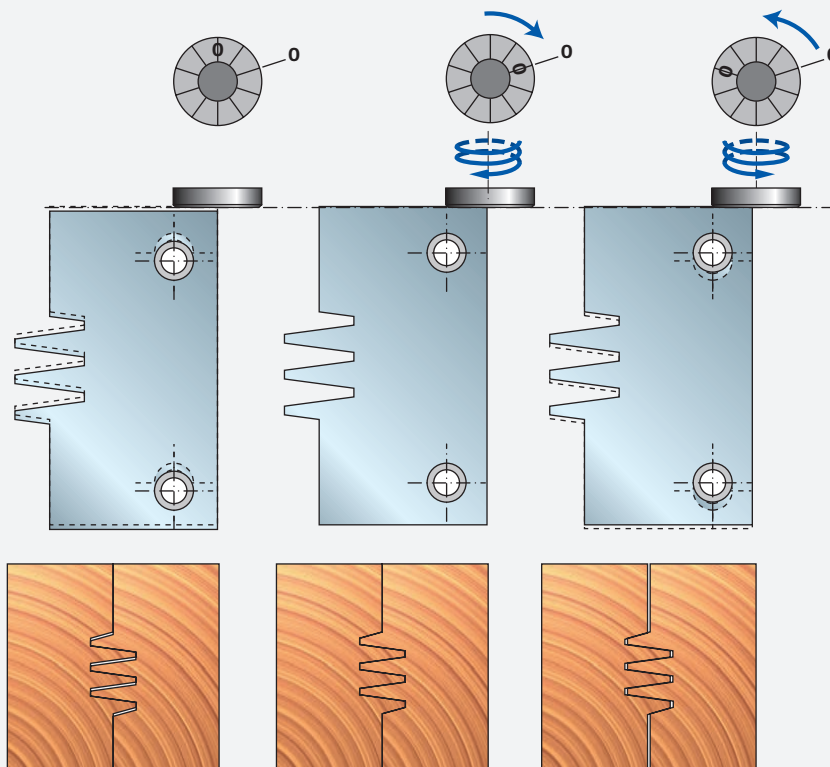




Dimensions	Spare knives	Art. No.
55 x 29 x 3	CW62MAA301	F03FC24130
55 x 29 x 3	CW10MAA301	F03FC24120
55 x 29 x 3	CW17MAA301	F03FC24123
55 x 29 x 3	CW11MAA301	F03FC24121
55 x 29 x 3	CW12MAA301	F03FC24122

Dimensions	Spare support plates	Art. No.
55 x 27 x 5,5	SD02M AA9	F03FC18893
55 x 27 x 5,5	SD02M AB9	F03FC18894
55 x 27 x 5,5	SD02M AC9	F03FC18895
55 x 27 x 5,5	SD02M AD9	F03FC18896
55 x 27 x 5,5	SD02M AE9	F03FC18897

Adjustment examples:



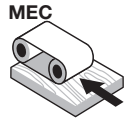
Regular joint

Tight joint

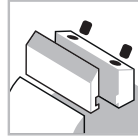
Loose joint

# TW24M

# Adjustable finger joint cutterheads set



Automatic Feed



Clamping System



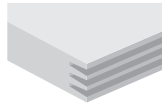
Steel Body



Softwood



Hardwood



Jointing



**Machines:**

Moulders, automatic and throughfeed machines.

**Materials:**

Softwood and hardwood.

**Applications:**

Jointing.

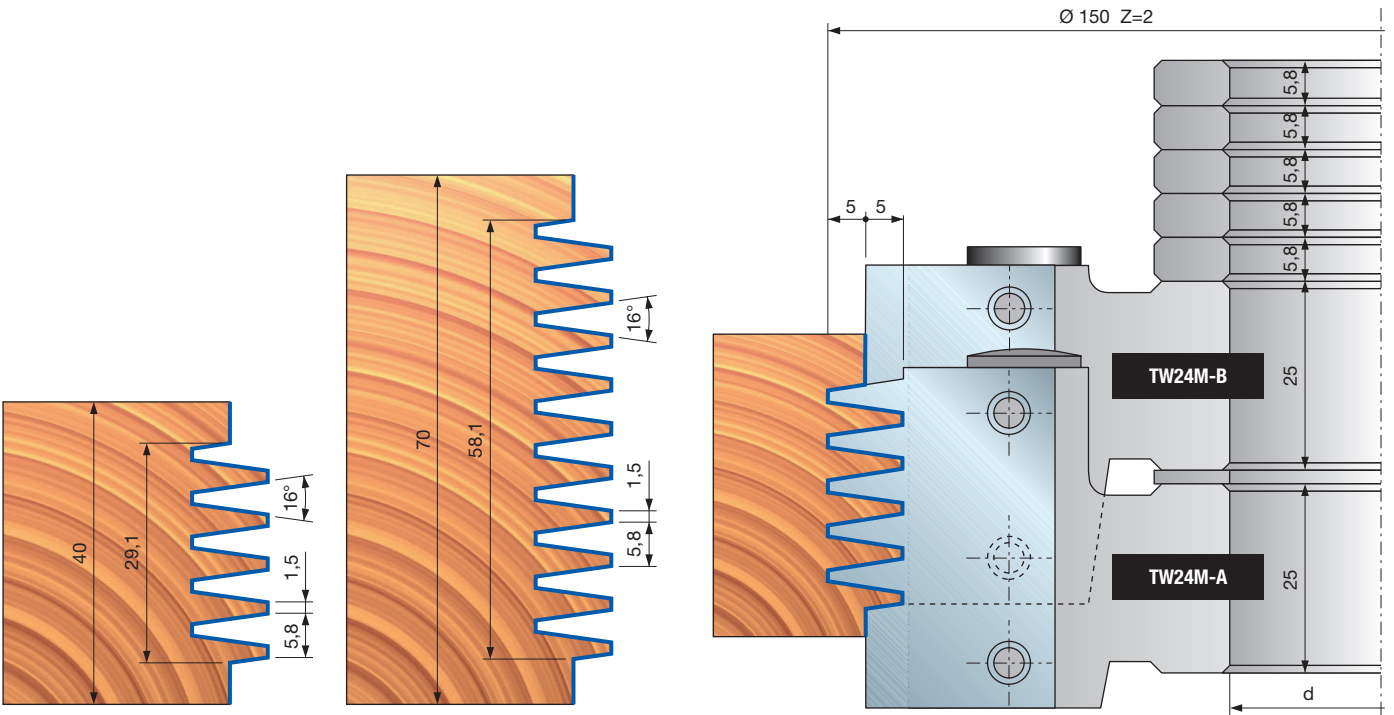
**Technical information:**

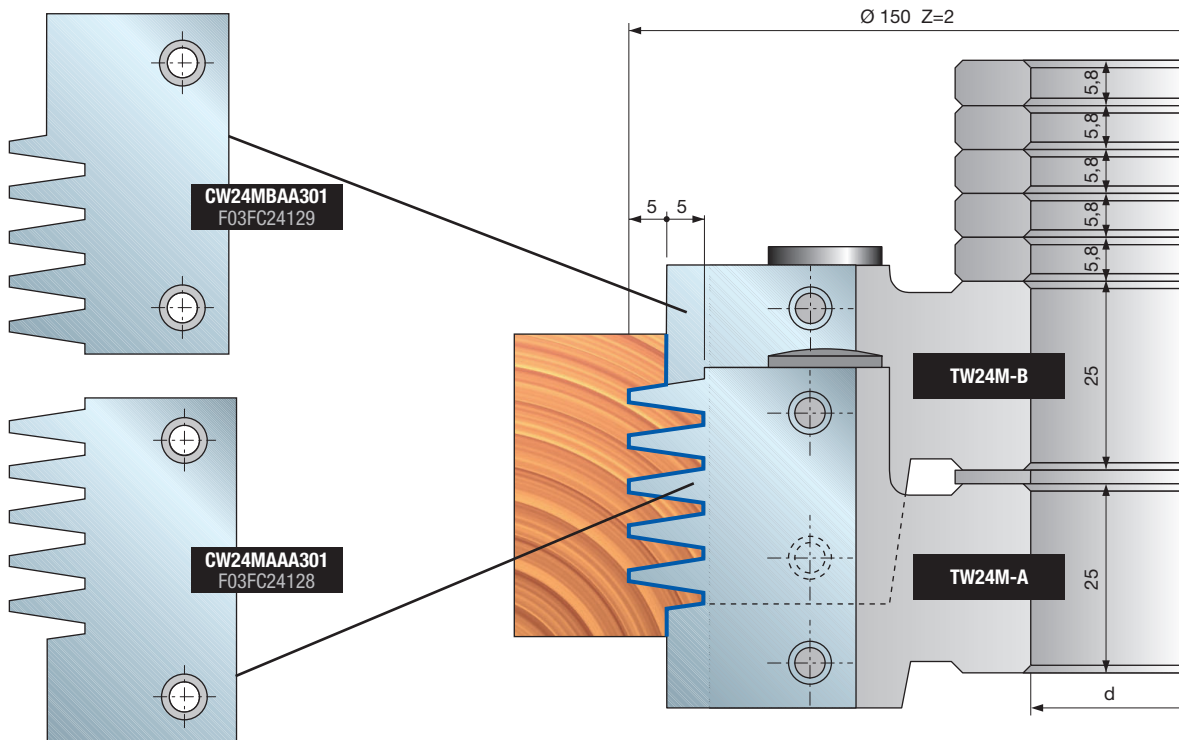
Adjustable tool to work long and cross grain on short workpieces.

- Adjustable for wood thicknesses between 40 and 70 mm.
- Cutterhead supplied with resharpenable HW knives and spacers.
- Steel body.
- Rebore not available.

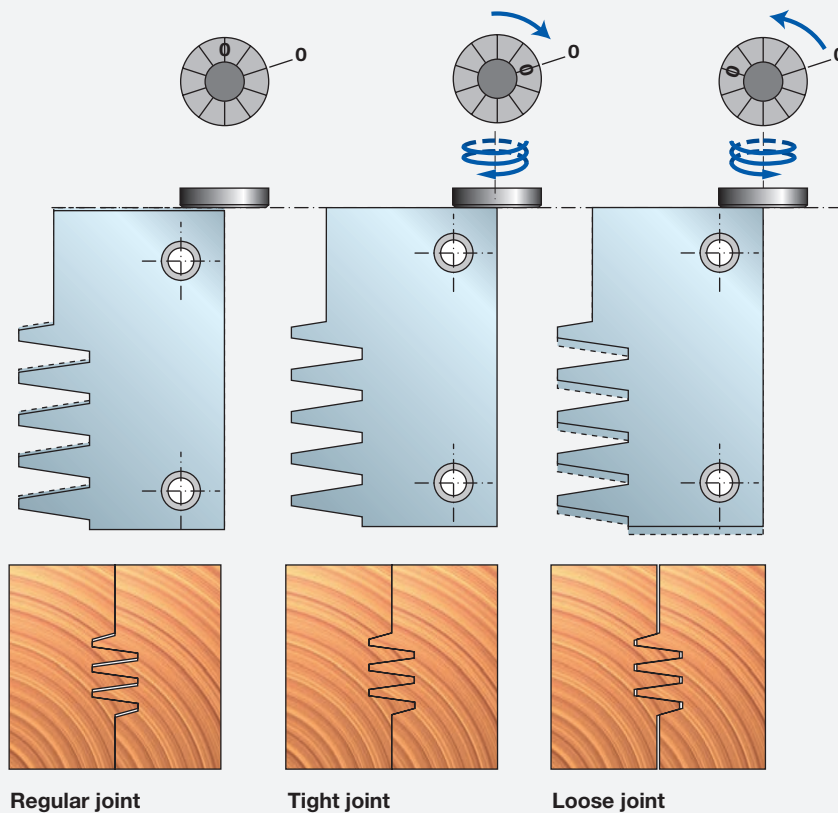
D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
150	-	30	2	9.000	<b>TW24M AA3</b>	F03FC24412
150	-	32	2	9.000	<b>TW24M AE3</b>	F03FC24413
150	-	35	2	9.000	<b>TW24M AB3</b>	F03FC20568
150	-	40	2	9.000	<b>TW24M AC3</b>	F03FC20569

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Knife for tool. "A"	45 x 30 x 3	<b>CW24MAAA301</b>	F03FC24128
	Knife for tool. "B"	45 x 30 x 3	<b>CW24MBAA301</b>	F03FC24129
	Screw	M5 x 7 x 16	<b>VT08M AE9</b>	F03FA04457
	Screw	M6 x 7 x 18	<b>VT08M AG9</b>	F03FC20653
	Wedge	41 x 17 x 8	<b>CN11M B410A</b>	F03FC01352
	Screw	M10 x 18	<b>VT03M CC9</b>	F03FA04438
	Screw	M4 x 6	<b>2602M CE9</b>	F03FA07349
	Allen key	5	<b>CB03M EA9</b>	F03FA00169
	Allen key	2	<b>2619M BA9</b>	F03FA07431
<b>AA3</b>	Set spacers	50 x 5,8 x 30	<b>AN04M AC9</b>	F03FC00500
<b>AB3</b>	Set spacers	55 x 5,8 x 35	<b>AN04M BC9</b>	F03FC00502
<b>AC3</b>	Set spacers	60 x 5,8 x 40	<b>AN04M CC9</b>	F03FC00503
<b>AE3</b>	Set spacers	82 x 5,8 x 32	<b>AN04M EC9</b>	F03FC24414





Adjustment examples:



Follow instructions below:

- Before rotating the adjusting screw, the clamping screw must be loosened.
- Rotating the adjusting screw clockwise, the tightness of the screw increases progressively (every notch on the adjusting screw corresponds to a movement of 1/10mm).
- The perfect alignment of the knives is 0:0 (the "0" on the adjusting screw with the "0" on the tool body). This alignment results in a tight joint.
- Rotate the adjusting screw anti-clockwise in order to loosen the joint.

# Grooving



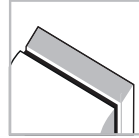


## FI22M

## Brazed cutters for pockets



Manual Feed



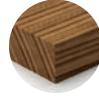
Brazed Cutters



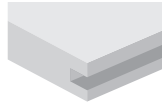
Steel Body



Softwood



Hardwood



Grooving

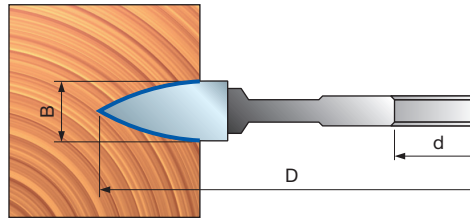
**Machines:**  
Biscuit jointer.

**Materials:**  
Softwood and hardwood.

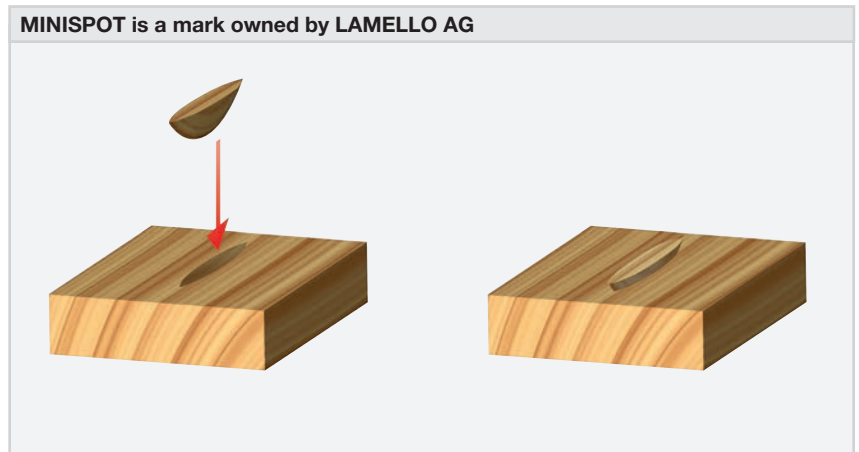
**Applications:**  
Grooving.

- Technical information:**  
Brazed cutter with non-stick coated body.
- Device for patching resin pockets, cracks, damaged edges and other wood flaws.
  - Steel body.
  - Rebore not available.

D	B	d	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm		1/min.		
100	8	22	2+2	13.300	FI22M AB3	F03FS00680

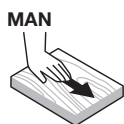


MINISPOT is a mark owned by LAMELLO AG

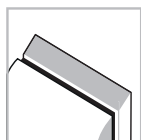




## FI02M Brazen cutters for biscuit jointers



Manual Feed



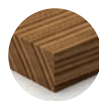
Brazen Cutters



Steel Body



Softwood



Hardwood



Chipboard



Laminated  
Chipboard



MDF

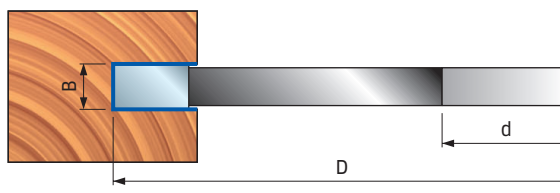


Laminated  
MDF



Grooving

D	B	d	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm		1/min.		
100	3,95	22	6	23.000	FI02M BX3	F03FS00656



### Machines:

Biscuit jointer.

### Materials:

Softwood, hardwood and wood based panels.

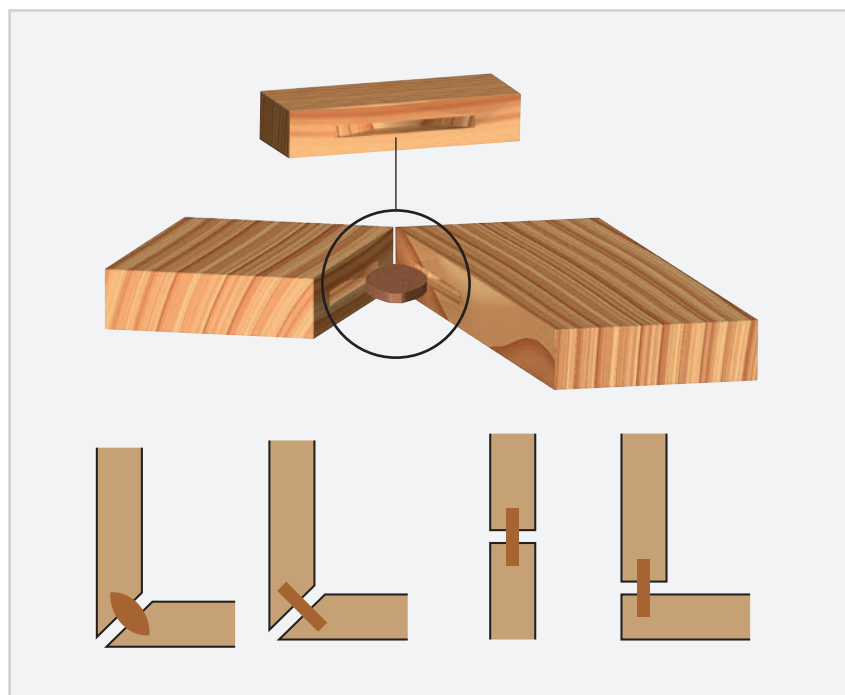
### Applications:

Grooving.

### Technical information:

Brazen cutter for corner joints with anti-kickback technology.

- Good quality grooving on softwood and hardwood, both cross cutting and ripping, on chipboard, compressed laminated woods and MDF.
- Steel body.
- Rebore not available.

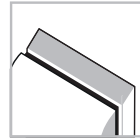


# FI02M

## Grooving brazed cutters for biscuit jointers with spurs



Manual Feed



Brazed Cutters



Steel Body



Softwood



Hardwood



Chipboard



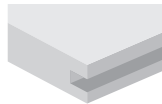
Laminated chipboard



MDF



Laminated MDF



Grooving



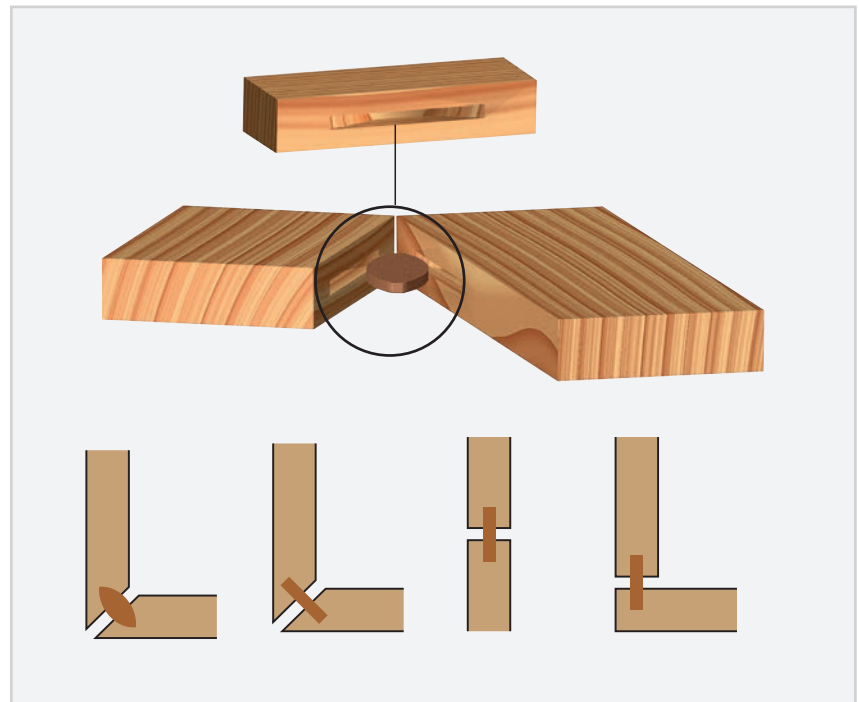
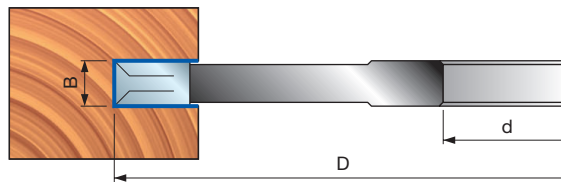
**Machines:**  
Biscuit jointer.

**Materials:**  
Softwood, hardwood and wood based panels.

**Applications:**  
Grooving.

- Technical information:**  
Brazed cutters for corner joints.
- Good quality grooving on softwood and hardwood, both cross cutting and ripping, on chipboard, compressed laminated woods and MDF.
  - Steel body.
  - Rebore not available.

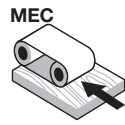
D	B	d	Z	R	Max RPM	Freud Code	Art. No.
mm	mm	mm		mm	1/min.		
100	4	22	2	4	13.300	FI02M BZ3	F03FS00658



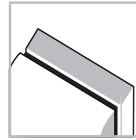


# FI02M

# Grooving brazed cutters



Automatic Feed



Brazed Cutter



Steel Body



Softwood



Hardwood



Chipboard



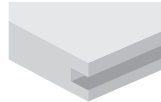
Laminated chipboard



MDF



Laminated MDF



Grooving

**Machines:**

Moulders, automatic and throughfeed machines.

**Materials:**

Softwood, hardwood and wood based panels.

**Applications:**

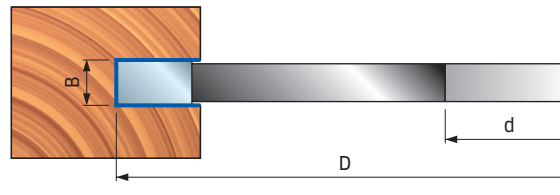
Grooving.

**Technical information:**

Brazed cutters for good quality grooving on softwood and hardwood, both cross cutting and ripping, on chipboard, compressed laminated woods and MDF.

- Steel body.
- Rebore not available.

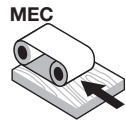
D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
120	4	35 (50)	6	12.000	FI02M CD3	F03FS00659
120	6	35 (50)	6	12.000	FI02M CI3	F03FS00660
140	4	35 (50)	6	10.000	FI02M FE3	F03FS00661
140	6	35 (50)	6	10.000	FI02M FN3	F03FS00662
140	8	35 (50)	6	10.000	FI02M FS3	F03FS00663
140	10	35 (50)	6	10.000	FI02M FY3	F03FS00664
140	12	35 (50)	6	10.000	FI02M GB3	F03FC07393
140	14	35 (50)	6	10.000	FI02M GF3	F03FC07400
140	16	35 (50)	6	10.000	FI02M GK3	F03FC07406
140	18	35 (50)	6	10.000	FI02M GN3	F03FC07409
140	20	35 (50)	6	10.000	FI02M GP3	F03FC07413



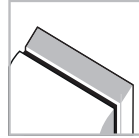


## FI05M

## Grooving brazen cutters



Automatic Feed



Brazen Cutter



Steel Body



Softwood



Hardwood



Chipboard



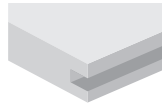
Laminated chipboard



MDF



Laminated MDF



Grooving

### Machines:

Moulders, automatic and throughfeed machines.

### Materials:

Softwood, hardwood and wood based panels.

### Applications:

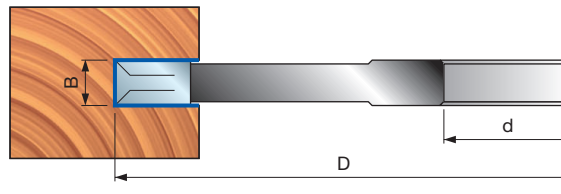
Grooving.

### Technical information:

Brazen cutters for good quality grooving on softwood and hardwood, both cross cutting and ripping, on chipboard, compressed laminated woods and MDF.

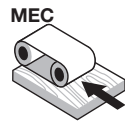
- Steel body.
- Rebore not available.

D mm	B mm	d mm	Z	V mm	Max RPM 1/min.	Freud Code	Art. No.
140	4	35	3		10.000	FI05M EB3	F03FC07525
140	6	35	3		10.000	FI05M EH3	F03FC07533
140	8	35	3		10.000	FI05M EN3	F03FC07539
140	10	35	3		10.000	FI05M ER3	F03FC07545

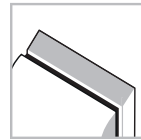


# FI14M

# Grooving brazed cutters



Automatic Feed



Brazed Cutter



Steel Body



Softwood



Hardwood



Chipboard



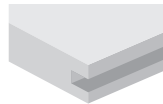
Laminated chipboard



MDF



Laminated MDF



Grooving



**Machines:**

Moulders, automatic and throughfeed machines.

**Materials:**

Softwood, hardwood and wood based panels.

**Applications:**

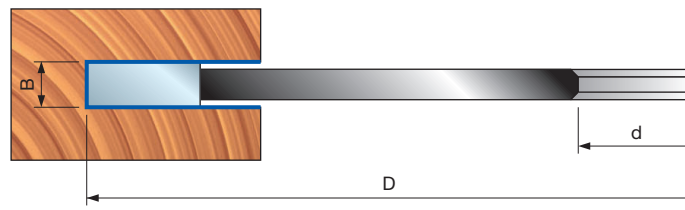
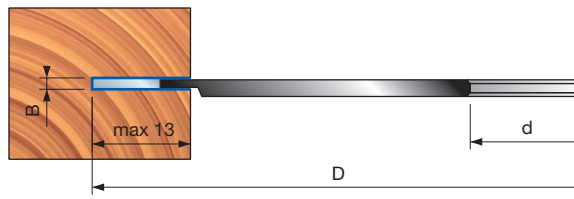
Grooving.

**Technical information:**

Brazed cutters for good quality grooving on softwood and hardwood, both cross cutting and ripping, on chipboard, compressed laminated woods and MDF.

- Steel body.

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
150	1,5	30 (50)	18	14.500	<b>FI14M AA3</b>	F03FS00665
150	2	30 (50)	18	14.500	<b>FI14M AE3</b>	F03FS00667
150	2,5	30 (50)	18	14.500	<b>FI14M AH3</b>	F03FS00668
150	3	30 (50)	18	14.500	<b>FI14M AM3</b>	F03FS00669
150	4	30 (50)	18	14.500	<b>FI14M AR3</b>	F03FS00670
150	5	30 (50)	18	14.500	<b>FI14M AZ3</b>	F03FS00673
180	3	30 (50)	24	11.500	<b>FI14M DA3</b>	F03FS00677
180	4	30 (50)	24	11.500	<b>FI14M DC3</b>	F03FS00678

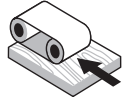




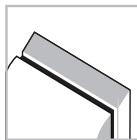
# FI07M

## Adjustable grooving cutters with spurs

MEC



Automatic Feed



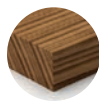
Brazed Cutter



Steel Body



Softwood



Hardwood



Chipboard



Laminated chipboard



MDF



Laminated MDF



Grooving

**Machines:**

Moulders, automatic and throughfeed machines.

**Materials:**

Softwood, hardwood and wood based panels.

**Applications:**

Grooving.

**Technical information:**

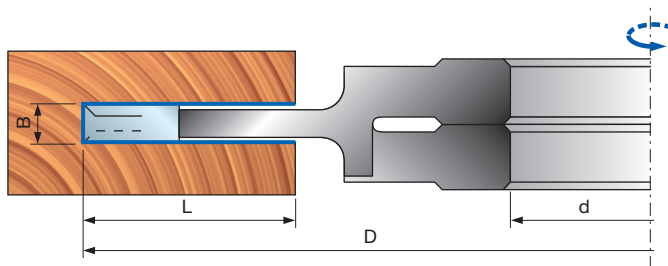
Brazed cutters for good quality adjustable grooving on softwood and hardwood, both cross cutting and ripping, on chipboard, compressed laminated woods and MDF.

- Adjustable with spacers.
- Steel body.
- Rebore not available.

D mm	B-B1 mm	d mm	Z	V	Max RPM 1/min.	Freud Code	Art. No.
150	3-5,5	35	2+2	2+2	9.000	<b>FI07M AB3</b>	F03FC07629
150	4-7,5	35	2+2	2+2	9.000	<b>FI07M AE3</b>	F03FC07634
150	7,5-14,5	35	2+2	2+2	9.000	<b>FI07M AL3</b>	F03FC07643
160	10-19,5	35	2+2	2+2	9.000	<b>FI07M BB3</b>	F03FC07655

**Depth of cut**

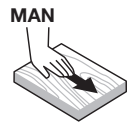
L mm	D mm
27	150
32	160



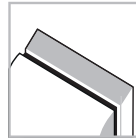


# GL207M

# Dado set



Manual Feed



Brazed Cutter



Steel Body



Softwood



Hardwood



Chipboard



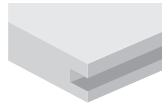
Laminated chipboard



MDF



Laminated MDF



Grooving

D mm	B-B1 mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
207,1	6-22	30	34	8.500	GL20701M	F03FS09237



**Machines:**

Spindle moulders and manual feed machines.

**Materials:**

Softwood, hardwood and wood based panels.

**Applications:**

Grooving.

**Technical information:**

Tool set including 2 blades, 5 chippers and a spacers set for grooving thickness fine adjustment (Fig. 1).

- Steel body.

With 16 different combinations of the elements, it is possible to obtain a range of grooving thicknesses from 6 mm to 22 mm (7 mm excluded).

The matching pins in the set elements are preventing their mutual rotation (Fig. 2).

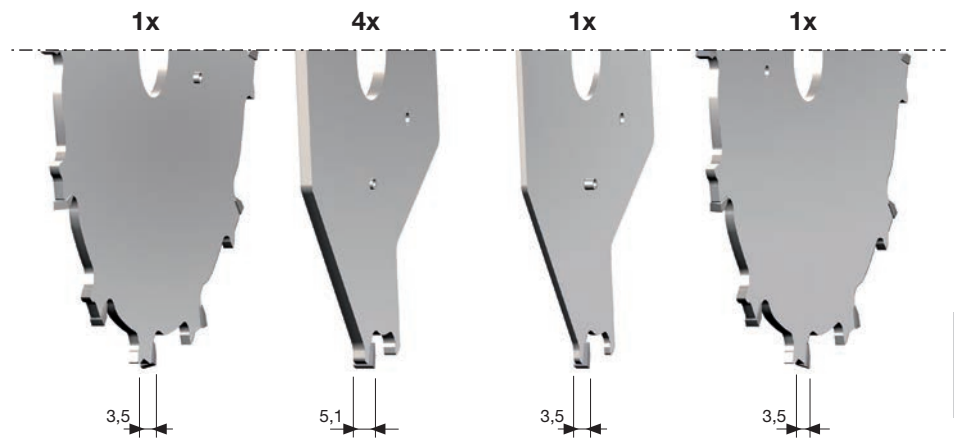
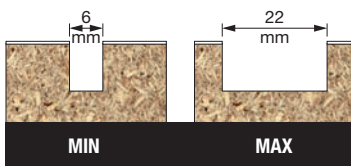


Fig. 1

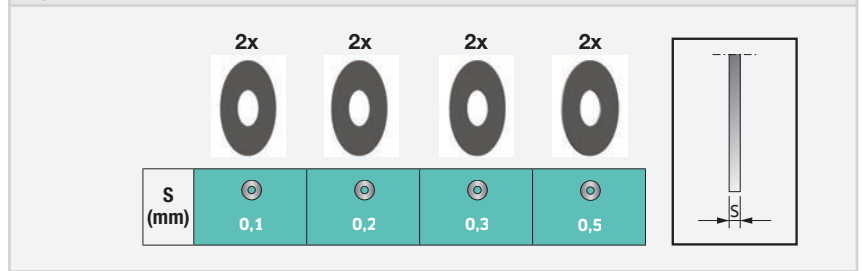
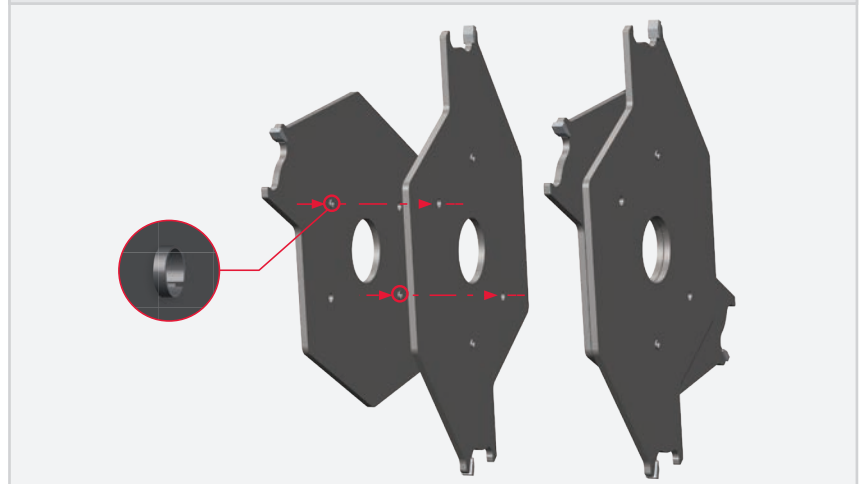


Fig. 2



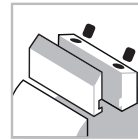


## TG13M

## Grooving cutterheads for biscuit jointers



Manual Feed



Clamping System



Steel Body



Softwood



Hardwood



Chipboard



Laminated chipboard



MDF



Laminated MDF



Grooving

### Machines:

Biscuit jointer.

### Materials:

Softwood, hardwood and wood based panels.

### Applications:

Grooving.

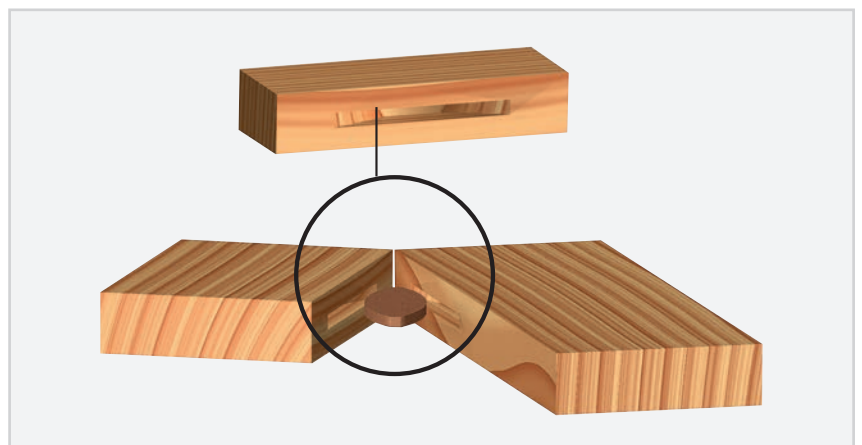
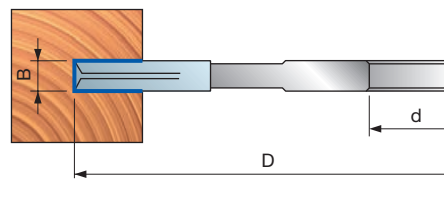
### Technical information:

Disposable insert cutterhead for corner joints.

- Ideal for softwood and hardwood, both cross cutting and ripping, on chipboard, compressed laminated woods and MDF.
- Steel body.
- Rebore not available.

D	B	d	Z	R	Max RPM	Freud Code	Art. No.
mm	mm	mm		mm	1/min.		
100	4	22	4	4	10.500	TG13M AA3	F03FC20271

Spare parts		Dimensions	Freud Code	Art. No.
		mm		
	Knife	18 x 1,9 x 18	CG03MAA310	F03FH02876
	Threaded ring	11,6 x 1,5 x 4	VT18M BA9	F03FA04483
	Spur	14 x 14 x 2	RG01MAA310	F03FH03034
	Threaded ring	9,4 x 1,7 x 4	VT18M DA9	F03FA04487
	Screw	M4 x 3,2	VT05M BB9	F03FA04447
	Torx key	T9	CB03M CA9	F03FA00165

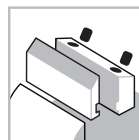


# TG11M

## Adjustable grooving cutterhead sets



Manual Feed



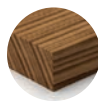
Clamping System



Steel Body



Softwood



Hardwood



Chipboard



Laminated chipboard



MDF



Laminated MDF



Grooving

### Machines:

Spindle moulders and manual feed machines.

### Materials:

Softwood, hardwood and wood based panels.

### Applications:

Grooving.

### Technical information:

Disposable knives and insert set for adjustable grooves.

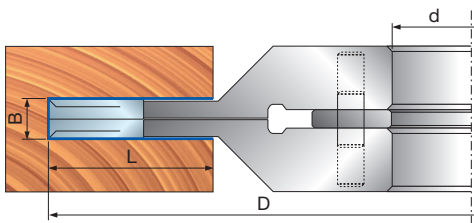
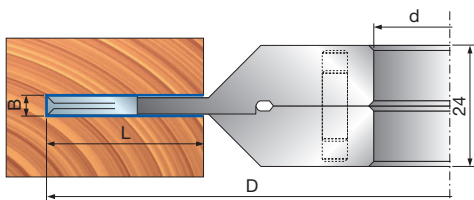
- Steel body.
- Rebore not available.

### Depth of cut

L mm	D mm
30	160
40	200

### Spare spacers set

Dimensions mm	Code	Art. No.
50 x 8 x 30	AN03M AH9	F03FC00451
50 x 4 x 30	AN03M AF9	F03FC00449
50 x 12 x 30	AN03M AI9	F03FC00452
52 x 8 x 32	AN03M GF9	F03FC24529
52 x 4 x 32	AN03M GE9	F03FC24528
52 x 12 x 32	AN03M GG9	F03FC24530
55 x 8 x 35	AN03M BH9	F03FC00461
55 x 4 x 35	AN03M BF9	F03FC00459
55 x 12 x 35	AN03M BI9	F03FC00462
60 x 8 x 40	AN11M CH9	F03FC00532
60 x 4 x 40	AN11M CF9	F03FC00531
60 x 12 x 40	AN11M CI9	F03FC00533



D mm	B-B1 mm	d mm	Z	R mm	Max RPM 1/min.	Freud Code	Art. No.
160	4 - 7,5	30	4+4	2+2	8.300	TG11M AA3	F03FC20228
160	4 - 7,5	32	4+4	2+2	8.300	TG11M AE3	F03FC24417
160	4 - 7,5	35	4+4	2+2	8.300	TG11M AB3	F03FC20229
160	4 - 7,5	40	4+4	2+2	8.300	TG11M AC3	F03FC20230
160	4 - 7,5	50	4+4	2+2	8.300	TG11M AD3	F03FC20231
160	8 - 15,5	30	2+2	2+2	8.300	TG11M DA3	F03FC20232
160	8 - 15,5	32	2+2	2+2	8.300	TG11M DE3	F03FC24418
160	8 - 15,5	35	2+2	2+2	8.300	TG11M DB3	F03FC20233
160	8 - 15,5	40	2+2	2+2	8.300	TG11M DC3	F03FC20234
160	8 - 15,5	50	2+2	2+2	8.300	TG11M DD3	F03FC23206
160	12,5 - 24	30	2+2	2+2	8.300	TG11M TA3	F03FC20237
160	12,5 - 24	32	2+2	2+2	8.300	TG11M TE3	F03FC24419
160	12,5 - 24	35	2+2	2+2	8.300	TG11M TB3	F03FC20238
160	12,5 - 24	40	2+2	2+2	8.300	TG11M TC3	F03FC20239
160	12,5 - 24	50	2+2	2+2	8.300	TG11M TD3	F03FC23207
200	4 - 7,5	32	4+4	2+2	6.600	TG11M FE3	F03FC24420
200	4 - 7,5	35	4+4	2+2	6.600	TG11M FB3	F03FC20235
200	8 - 15,5	35	2+2	2+2	7.000	TG11M HB3	F03FC20236
200	12,5 - 24	35	2+2	2+2	7.000	TG11M VB3	F03FC20240
200	12,5 - 24	50	2+2	2+2	7.000	TG11M VD3	F03FC25050

Spare parts	Dimensions mm	Freud Code	Art. No.
Knife	18 x 1,9 x 18	CG03MAA310	F03FH02876
Spur	14 x 14 x 2	RG01MAA310	F03FH03034
Screw	M4 x 3,2	VT05M BB9	F03FA04447
Threaded ring	11,6 x 1,5 x 4	VT18M BA9	F03FA04483
Threaded ring	9,4 x 1,7 x 4	VT18M DA9	F03FA04487
Torx key	T9	CB03M CA9	F03FA00165
Knife	7,6 x 12 x 1,5	CG08MAA310	F03FH02902
Wedge	15 x 7,2 x 8	CN09M DA9	F03FC01295
Spur	14 x 14 x 2	RG01MAA310	F03FH03034
Screw	M5 x 6	VT05M AC9	F03FA04446
Screw	M5 x 16	VT03M BB9	F03FA04437
Screw	M5 x 9,5	VT08M AH9	F03FC20654
Allen key	2,5	2619M CA9	F03FA07432
Torx key	T20	CB03M CC9	F03FA00167
Knife	12 x 12 x 1,5	CG08MBA310	F03FH02903
Wedge	15 x 10 x 8	CN09M AA9	F03FC01280
Spur	14 x 14 x 2	RG01MAA310	F03FH03034
Screw	M5 x 8	VT05M AA9	F03FA04444
Screw	M6 x 22	VT19M AB9	F03FA04491
Nut	10 x 11,5 x 6	VT20M AA9	F03FA04497
Allen key	3	CB03M AA9	F03FA00162
Torx key	T20	CB03M CC9	F03FA00167

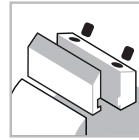


# TG18MG

## Adjustable grooving cutterhead sets



Manual Feed



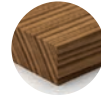
Clamping System



Steel Body



Softwood



Hardwood



Chipboard



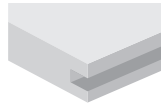
Laminated chipboard



MDF



Laminated MDF



Grooving

**Machines:**

Spindle moulders and manual feed machines.

**Materials:**

Softwood, hardwood and wood based panels.

**Applications:**

Grooving.

**Technical information:**

Disposable knives and insert set for adjustable grooves.

- Steel body.
- Rebore not available.

D mm	B-B1 mm	d mm	R mm	Max RPM 1/min.	Freud Code	Art. No.
160	4-15	30	2+2	8.500	TG18MG AA3	F03FC24546
160	4-15	32	2+2	8.500	TG18MG AE3	F03FC24549
160	4-15	35	2+2	8.500	TG18MG AB3	F03FC24547
160	4-15	40	2+2	8.500	TG18MG AC3	F03FC24548
160	4-15	50	2+2	8.500	TG18MG AD3	F03FC25051
160	8-23	30	2+2	8.500	TG18MG DA3	F03FC24550
160	8-23	32	2+2	8.500	TG18MG DE3	F03FC24553
160	8-23	35	2+2	8.500	TG18MG DB3	F03FC24551
160	8-23	40	2+2	8.500	TG18MG DC3	F03FC24552
160	8-23	50	2+2	8.500	TG18MG DD3	F03FC25052
160	12,5-31,5	30	2+2	8.500	TG18MG TA3	F03FC24554
160	12,5-31,5	32	2+2	8.500	TG18MG TE3	F03FC24557
160	12,5-31,5	35	2+2	8.500	TG18MG TB3	F03FC24555
160	12,5-31,5	40	2+2	8.500	TG18MG TC3	F03FC24556
160	12,5-31,5	50	2+2	8.500	TG18MG TD3	F03FC25053

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Knife	7,6 x 12 x 1,5	CG08MAA310	F03FH02902
	Wedge	15 x 7,2 x 8	CN09M DA9	F03FC01295
	Screw	M5 x 16	VT03M BB9	F03FA04437
	Spur	14 x 14 x 2	RG01MAA310	F03FH03034
	Screw	M5 x 9,5	VT08M AH9	F03FC20654
AA3 - ABS AC3 - AE3	Knife	18 x 1,9 x 18	CG03MAA310	F03FH02876
	Screw	M4 x 3,2	VT05M BB9	F03FA04447
	Threaded ring	11,6 x 1,5 x 4	VT18M BA9	F03FA04483
	Threaded ring	9,4 x 1,7 x 4	VT18M DA9	F03FA04487
DA3 - DB3 DC3 - DE3	Torx key	T9	CB03M CA9	F03FA00165
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Torx key	T20	CB03M CC9	F03FA00167
TA3 - TB3 TC3 - TE3	Knife	12 x 12 x 1,5	CG08MBA310	F03FH02903
	Wedge	15 x 10 x 8	CN09M AA9	F03FC01280
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Screw	M6 x 22	VT19M AB9	F03FA04491
	Nut	10 x 11,5 x 6	VT20M AA9	F03FA04497
	Allen key	3	CB03M AA9	F03FA00162
	Torx key	T20	CB03M CC9	F03FA00167



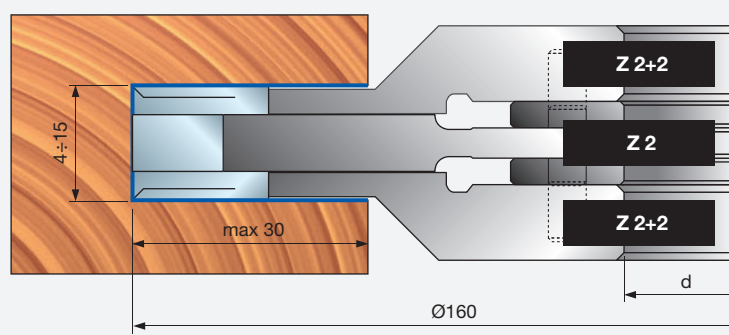
# TG18MG

## Adjustable grooving cutterheads sets

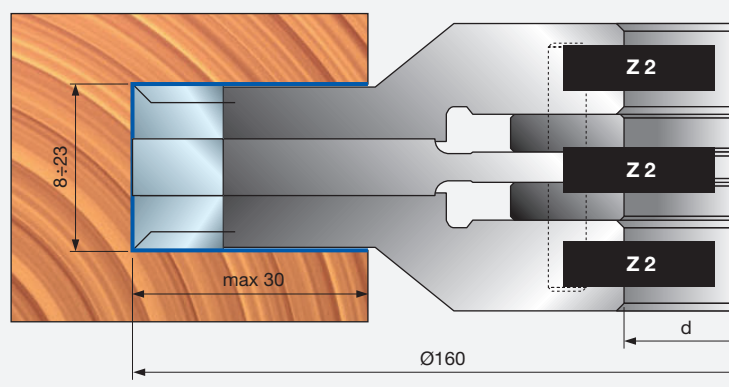
	Spare spacers set	Dimensions mm	Freud Code	Art. No.
⊙	Spacers set	50 x 7,6 x 30	AN03M AN9	F03FC24566
⊙	Spacers set	52 x 7,6 x 32	AN03M GH9	F03FC24569
⊙	Spacers set	55 x 7,6 x 35	AN03M BQ9	F03FC24567
⊙	Spacers set	55 x 7,6 x 40	AN11M CL9	F03FC24568
⊙	Spacers set	50 x 11,6 x 30	AN03M A09	F03FC24570
⊙	Spacers set	52 x 11,6 x 32	AN03M GI9	F03FC24573
⊙	Spacers set	55 x 11,6 x 35	AN03M BR9	F03FC24571
⊙	Spacers set	55 x 11,6 x 40	AN11M CM9	F03FC24572
⊙	Spacers set	50 x 15,6 x 30	AN03M AP9	F03FC24574
⊙	Spacers set	52 x 15,6 x 32	AN03M GL9	F03FC24577
⊙	Spacers set	55 x 15,6 x 35	AN03M BS9	F03FC24575
⊙	Spacers set	55 x 15,6 x 40	AN11M CN9	F03FC24576

### Example of profiles

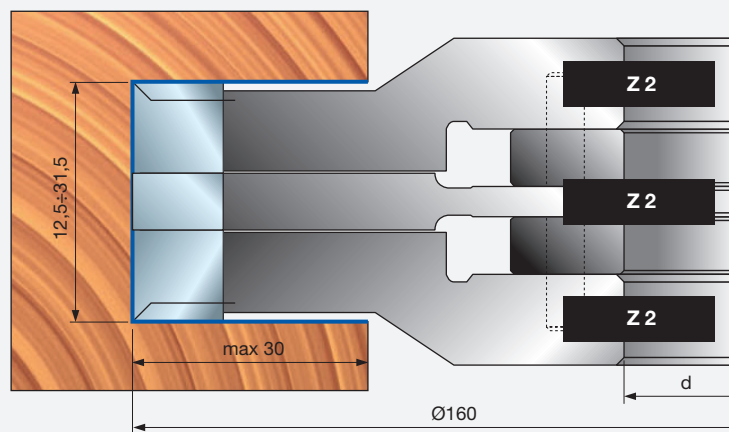
TG18MG  
AA3 - AE3 - AB3 - AC3



TG18MG  
DA3 - DE3 - DB3 - DC3



TG18MG  
TA3 - TE3 - TB3 - TC3



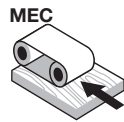
# Profiling



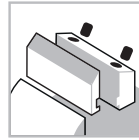


# T135M - TG35M

# Post forming cutterhead sets with disposable knives



Automatic Feed



Clamping System



Steel Body



Softwood



Hardwood



Chipboard



Laminated chipboard



MDF



Laminated MDF



Profiling

### T135M for planing

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
125	30	40	3	10.300	<b>T135M AC3</b>	F03FC20580
125	50	40	3	10.300	<b>T135M BC3</b>	F03FC20581

Spare parts		Dimensions mm	Freud Code	Art. No.
	Screw	M10 x 22	<b>VT19M MA9</b>	F03FA04496
	Nut	15 x 13,3 x M10	<b>VT20M MA9</b>	F03FC20670
	Allen key	5	<b>CB03M EA9</b>	F03FA00169
<b>AC3</b>		30 x 12 x 1,5	<b>CG08MEA310</b>	F03FH02906
		15 x 26 x 8	<b>CN09M AD9</b>	F03FC01283
<b>BC3</b>		50 x 12 x 1,5	<b>CG08MFA310</b>	F03FH02907
		15 x 46 x 8	<b>CN09M AP9</b>	F03FC01290

### TG35MD - TG35MS for rounding

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
140	13	40	3	10.300	<b>TG35MD EC3</b>	F03FC20280
148,6	20	40	3	10.300	<b>TG35MD CC3</b>	F03FC20278
156,2	26	40	3	10.300	<b>TG35MD DC3</b>	F03FC20279
140	13	40	3	10.300	<b>TG35MS EC3</b>	F03FC20283
148,6	20	40	3	10.300	<b>TG35MS CC3</b>	F03FC20281
156,2	26	40	3	10.300	<b>TG35MS DC3</b>	F03FC20282

Spare parts		Dimensions mm	Freud Code	Art. No.
<b>EC3</b>		12 x 11 x 8	<b>CN21M AC9</b>	F03FC01408
		M6 x 22	<b>VT19M AB9</b>	F03FA04491
		10 x 11,5 x 6	<b>VT20M AA9</b>	F03FA04497
<b>CC3</b>		3	<b>CB03M AA9</b>	F03FA00162
		18 x 18 x 8	<b>CN21M AA9</b>	F03FC01406
		M10 x 22	<b>VT19M MA9</b>	F03FA04496
		15 x 13,3 x M10	<b>VT20M MA9</b>	F03FC20670
<b>DC3</b>		5	<b>CB03M EA9</b>	F03FA00169
		M5 x 7 x 16	<b>VT08M AE9</b>	F03FA04457
		18 x 24 x 8	<b>CN21M AB9</b>	F03FC01407
		M10 x 22	<b>VT19M MA9</b>	F03FA04496
		15 x 13,3 x M10	<b>VT20M MA9</b>	F03FC20670
<b>DC3</b>		5	<b>CB03M EA9</b>	F03FA00169
		M5 x 7 x 16	<b>VT08M AE9</b>	F03FA04457

### Machines:

Moulders, automatic and throughfeed machines.

### Materials:

Softwood, hardwood and wood based panels.

### Applications:

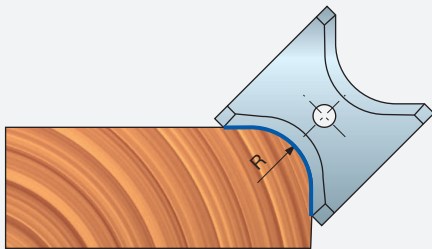
Profiling.

### Technical information:

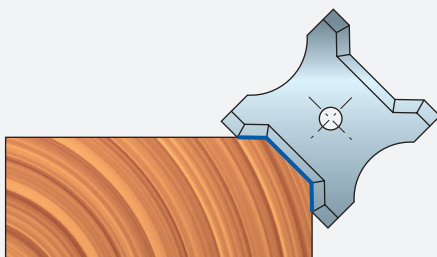
Disposable knives cutterheads set indicated to work hardwood, melamine chipboard panels, veneer, bilaminated panels and MDF.

- Adjustable in terms of timber thickness and profile.
- Steel body.
- Rebore not available.
- Profile knives not included.
- Series of spacers (item AN03M CC9 - not included) with the following thicknesses: 0,1 - 0,2 - 0,3 - 0,5 - 1 - 2 - 3 - 6 - 8 - 10 mm.

### Knives for rounding



### Knives for chamfering



# T135M - TG35M

## Post forming cutterhead sets with disposable knives

TG35MD EC3  
TG35MS EC3

S mm	
T135M AC3	T135M BC3
4÷30	24÷50

### Spare knives

Dimensions mm	Radius mm	Freud Code	Art. No.
13 x 16 x 2	45°	CG50MCE305	F03FC23920
13 x 16 x 2	1	CG50MCD305	F03FC23919
13 x 16 x 2	2	CG50MCA305	F03FC23916
13 x 16 x 2	3	CG50MCB305	F03FC23917
13 x 16 x 2	4	CG50MCC305	F03FC23918

TG35MD CC3  
TG35MS CC3

S mm	
T135M AC3	T135M BC3
10÷40	30÷60

### Spare knives

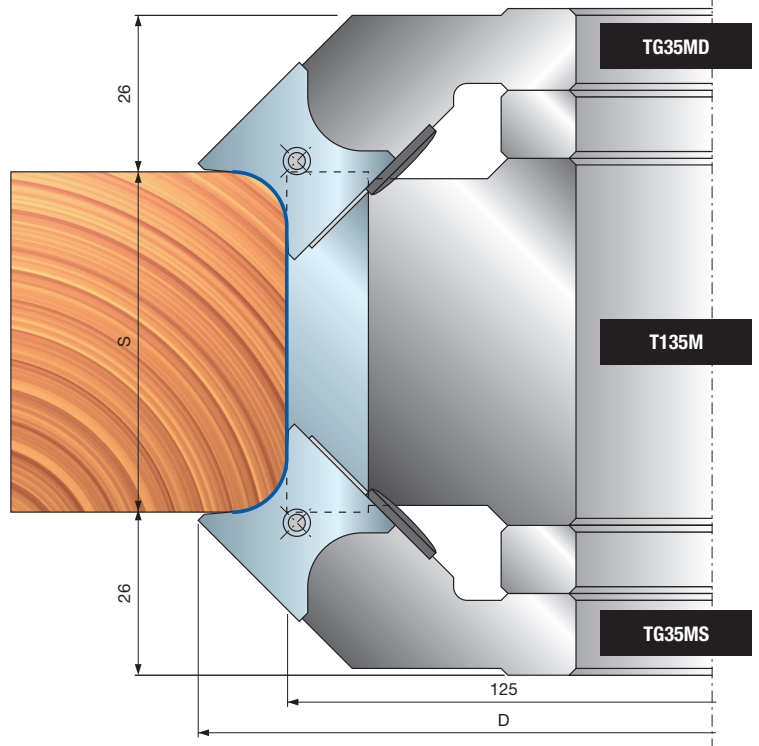
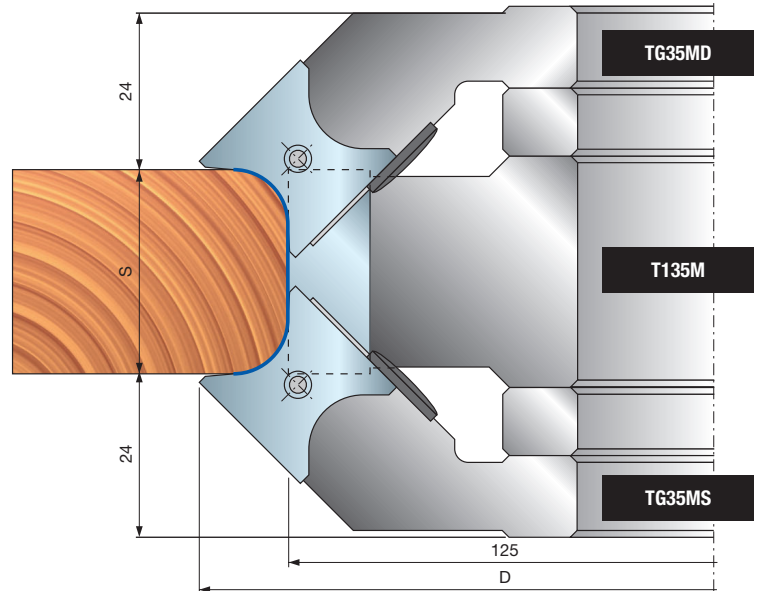
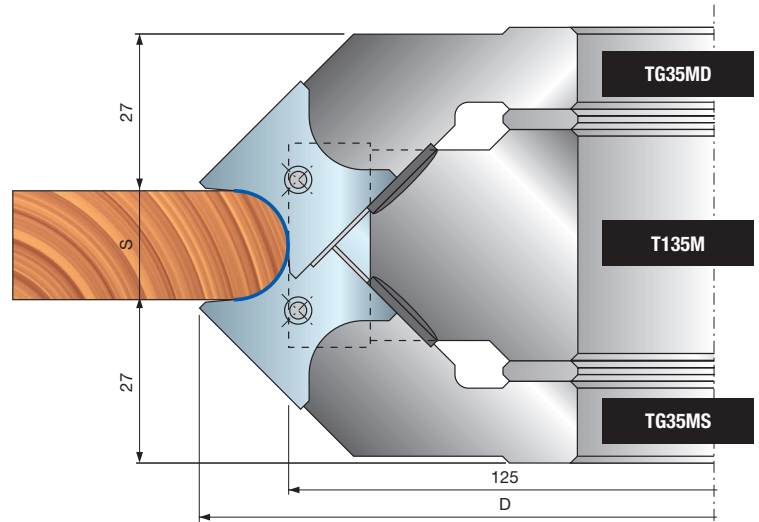
Dimensions mm	Radius mm	Freud Code	Art. No.
20 x 21 x 2	45°	CG50MAE305	F03FC23910
20 x 21 x 2	5	CG50MAA305	F03FC23906
20 x 21 x 2	6	CG50MAB305	F03FC23907
20 x 21 x 2	7	CG50MAC305	F03FC23908
20 x 21 x 2	8	CG50MAD305	F03FC23909

TG35MD DC3  
TG35MS DC3

S mm	
T135M AC3	T135M BC3
18÷48	36÷68

### Spare knives

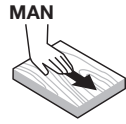
Dimensions mm	Radius mm	Freud Code	Art. No.
26 x 24 x 2	45°	CG50MBE305	F03FC23915
26 x 24 x 2	9	CG50MBA305	F03FC23911
26 x 24 x 2	10	CG50MBB305	F03FC23912
26 x 24 x 2	11	CG50MBC305	F03FC23913
26 x 24 x 2	12	CG50MBD305	F03FC23914



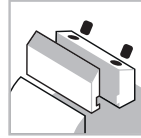


# TP22M

# Multi radius cutterheads



Manual Feed



Clamping System



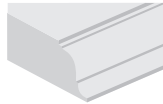
Aluminium Body



Softwood



Hardwood



Profiling



**Machines:**

Spindle moulders and manual feed machines.

**Materials:**

Softwood and hardwood.

**Applications:**

Profiling.

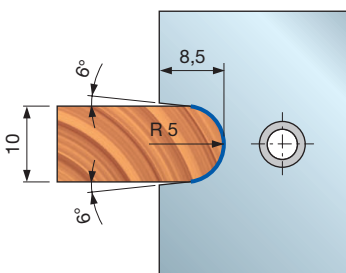
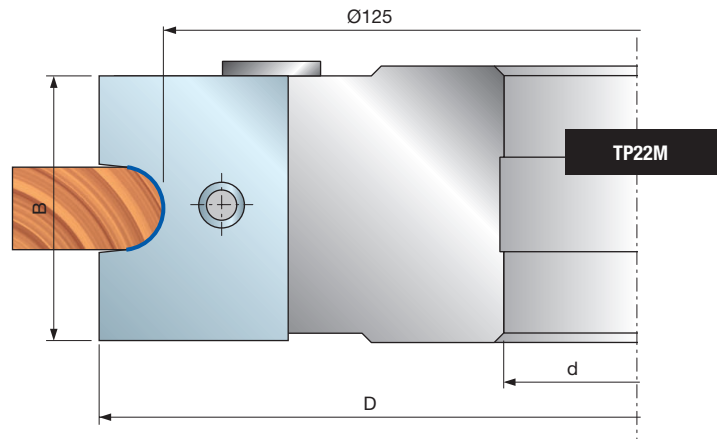
**Technical information:**

Performance knives tool for multiradius profiles.

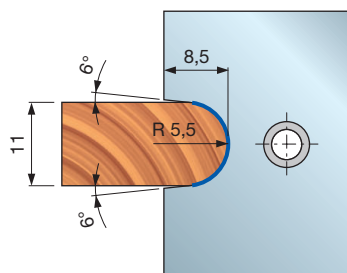
- Knives included.
- Aluminium light alloy body.
- Rebore not available.

D	B	d	Z	Radius	Max RPM	Freud Code	Art. No.
mm	mm	mm		mm	1/min.		
142	35	30	2	5 - 5,5 - 6	9.000	TP22M MA3	F03F668939
142	35	32	2	5 - 5,5 - 6	9.000	TP22M MB3	F03F668633
142	35	40	2	5 - 5,5 - 6	9.000	TP22M MC3	F03FC20480

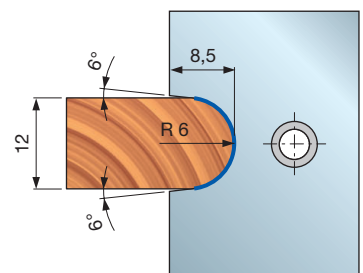
Spare parts		Dimensions	Freud Code	Art. No.
		mm		
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Positioning plate	22 x 1,7 x 6,5	VT18M GA9	F03FA04488
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Allen key	5	CB03M EA9	F03FA00169
	Wedge	33 x 23 x 8,5	CN13M CI9A	F03FC23042
	Knife	35 x 24 x 3 R5	CP22MM05001	F03FC23952
	Knife	35 x 24 x 3 R5,5	CP22MM05501	F03FC23953
	Knife	35 x 24 x 3 R6	CP22MM06001	F03FC23954



CP22MM05001  
F03FC23952



CP22MM05501  
F03FC23953



CP22MM06001  
F03FC23954

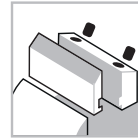


# TP22M

# Multi radius cutterheads



Manual Feed



Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



**Machines:**

Spindle moulders and manual feed machines.

**Materials:**

Softwood and hardwood.

**Applications:**

Profiling.

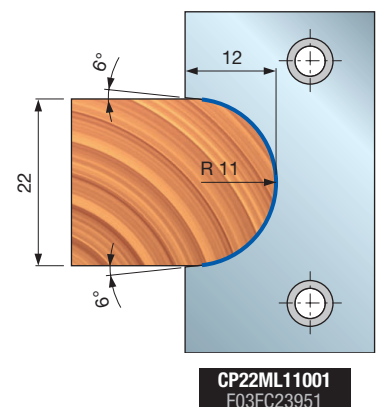
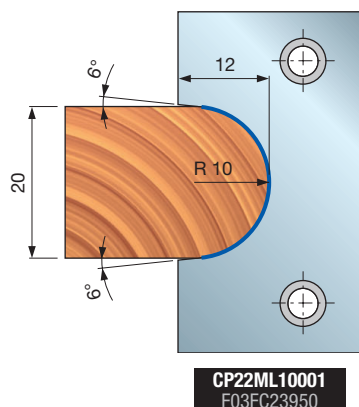
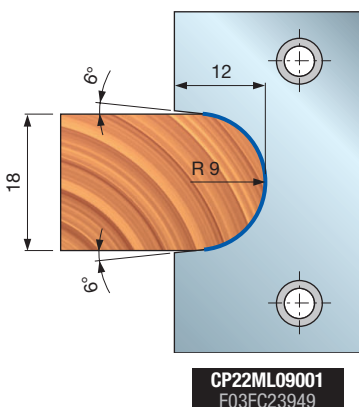
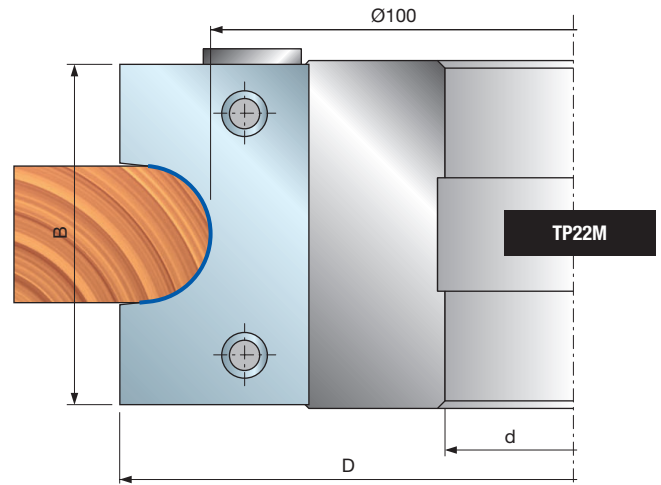
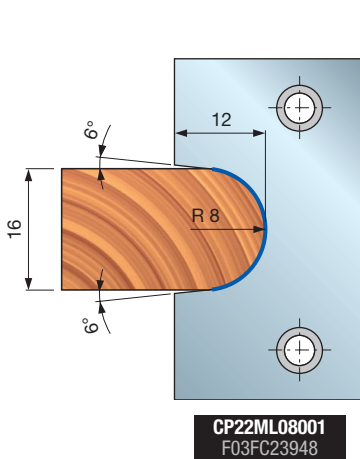
**Technical information:**

Performance knives tool for multiradius profiles.

- Knives included.
- Aluminium light alloy body.
- Rebore not available.

D mm	B mm	d mm	Z	Radius mm	Max RPM 1/min.	Freud Code	Art. No.
124	45	30	2	8-9-10-11	10.300	TP22M LA3	F03F668938
124	45	32	2	8-9-10-11	10.300	TP22M LC3	F03F668632
124	45	35	2	8-9-10-11	10.300	TP22M LB3	F03FC20479

Spare parts		Dimensions mm	Freud Code	Art. No.
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Positioning plate	22 x 1,7 x 6,5	VT18M GB9	F03FA04489
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Allen key	5	CB03M EA9	F03FA00169
	Wedge	43 x 28 x 8,5	CN13M CH9A	F03FC24449
	Knife	45 x 29 x 3 R8	CP22ML08001	F03FC23948
	Knife	45 x 29 x 3 R9	CP22ML09001	F03FC23949
	Knife	45 x 29 x 3 R10	CP22ML10001	F03FC23950
	Knife	45 x 29 x 3 R11	CP22ML11001	F03FC23951



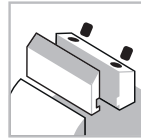


# TP23M

# Multi radius cutterheads



Manual Feed



Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



**Machines:**

Spindle moulders and manual feed machines.

**Materials:**

Softwood and hardwood.

**Applications:**

Profiling.

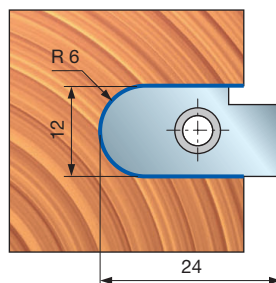
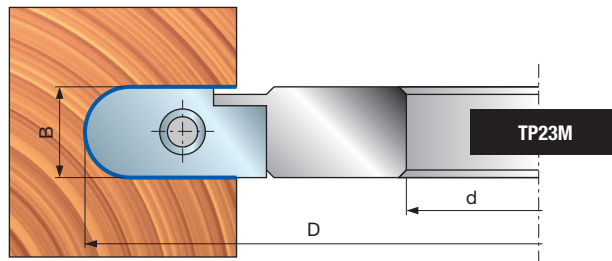
**Technical information:**

Performance knives tool for multiradius profiles.

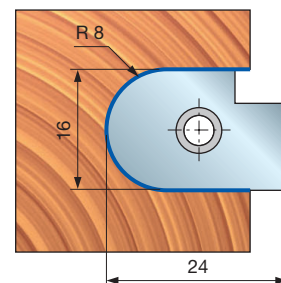
- Knives included.
- Aluminium light alloy body.
- Rebore not available.

D mm	B mm	d mm	Z	Radius mm	Max RPM 1/min.	Freud Code	Art. No.
120	12	30	2	6-8	9.500	TP23M AA3	F03FC24450
120	12	32	2	6-8	9.500	TP23M AC3	F03FC24451
120	12	35	2	6-8	9.500	TP23M AB3	F03FC20481

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	12 x 24 x 3,5 R6	CP23MA06001	F03FC23955
	Knife	16 x 24 x 3,5 R8	CP23MA08001	F03FC23956
	Screw	M6 x 10	2622M CB9	F03FA07455
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Positioning plate	20 x 11,6 x 2,2	VT18M AQ9	F03FC21917
	Allen key	4	CB03M BA9	F03FA00163



CP23MA06001  
F03FC23955



CP23MA08001  
F03FC23956

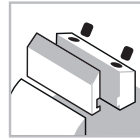


## TP31M

## Multi radius cutterheads



Manual Feed



Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



### Machines:

Spindle moulders and manual feed machines.

### Materials:

Softwood and hardwood.

### Applications:

Profiling.

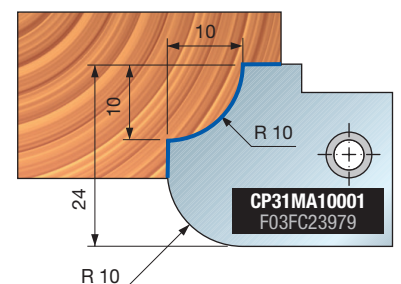
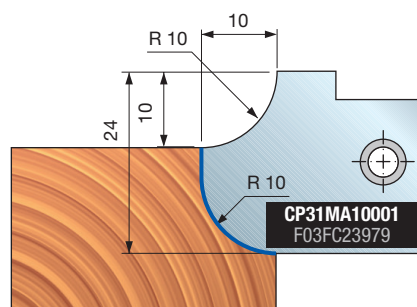
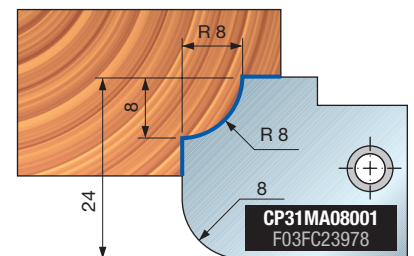
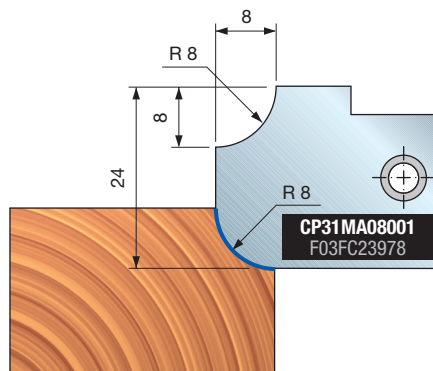
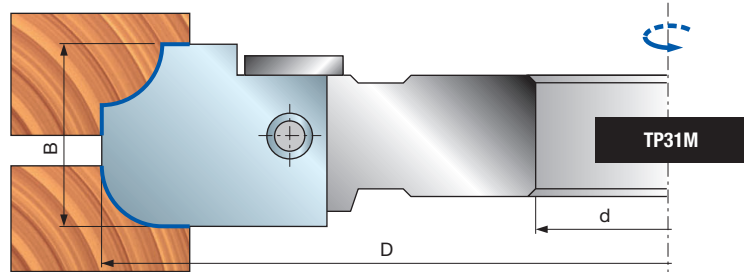
### Technical information:

Performance knives tool for multiradius profiles.

- Knives included.
- Aluminium light alloy body.
- Rebore not available.

D	B	d	Z	Radius	Max RPM	Freud Code	Art. No.
mm	mm	mm		mm	1/min.		
150	24	30	2	8-10	9.000	TP31M AA3	F03FC22683
150	24	32	2	8-10	9.000	TP31M AC3	F03FC24558
150	24	35	2	8-10	9.000	TP31M AB3	F03FC20482

Spare parts		Dimensions	Freud Code	Art. No.
	Knife	24 x 30 x 3 R8	CP31MA08001	F03FC23978
	Knife	24 x 30 x 3 R10	CP31MA10001	F03FC23979
	Wedge	18 x 17 x 8	CN11M B180A	F03FC23171
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Positioning plate	22 x 1,7 x 6,5	VT18M GB9	F03FA04489
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Allen key	5	CB03M EA9	F03FA00169





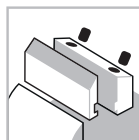


# TP31M

# Multi radius cutterheads



Manual Feed



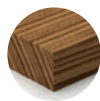
Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



**Machines:**

Spindle moulders and manual feed machines.

**Materials:**

Softwood and hardwood.

**Applications:**

Profiling.

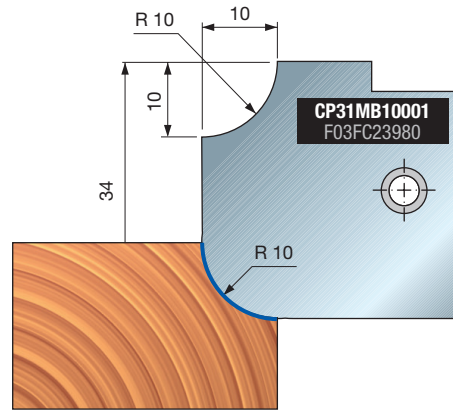
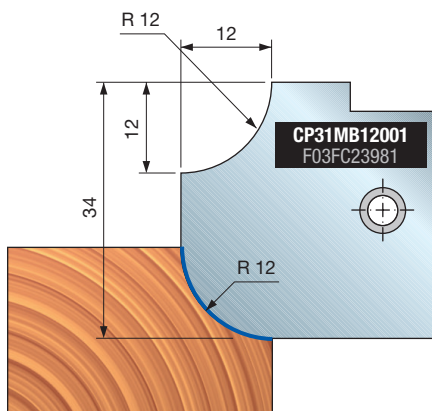
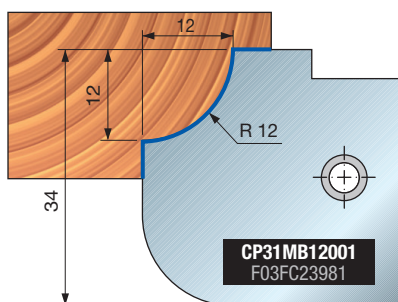
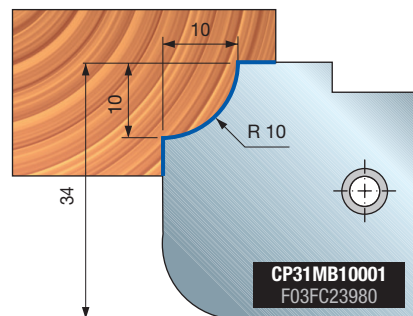
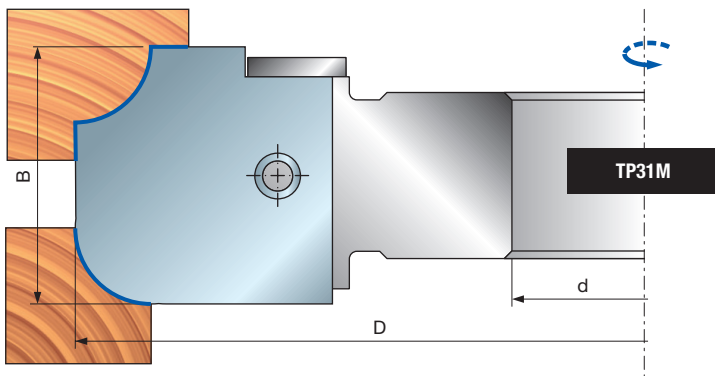
**Technical information:**

Performance knives tool for multiradius profiles.

- Knives included.
- Aluminium light alloy body.
- Rebore not available.

D	B	d	Z	Radius	Max RPM	Freud Code	Art. No.
mm	mm	mm		mm	1/min.		
150	34	30	2	10-12	9.000	TP31M EA3	F03F668940
150	34	32	2	10-12	9.000	TP31M EC3	F03F668636
150	34	35	2	10-12	9.000	TP31M EB3	F03FC20484

Spare parts		Dimensions	Freud Code	Art. No.
		mm		
	Knife	34 x 34 x 3 R10	CP31MB10001	F03FC23980
	Knife	34 x 34 x 3 R12	CP31MB12001	F03FC23981
	Wedge	32 x 32 x 8,5	CN13M CF9A	F03FC01393
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Positioning plate	22 x 1,7 x 6,5	VT18M GB9	F03FA04489
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Allen key	5	CB03M EA9	F03FA00169



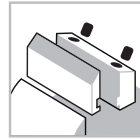


# TP31M

# Multi radius cutterheads



Manual Feed



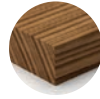
Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



**Machines:**

Spindle moulders and manual feed machines.

**Materials:**

Softwood and hardwood.

**Applications:**

Profiling.

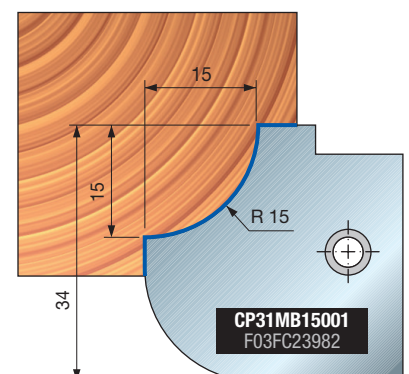
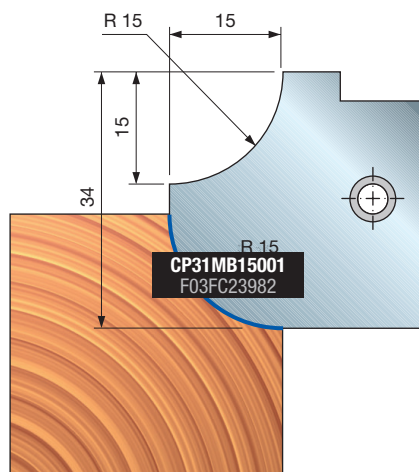
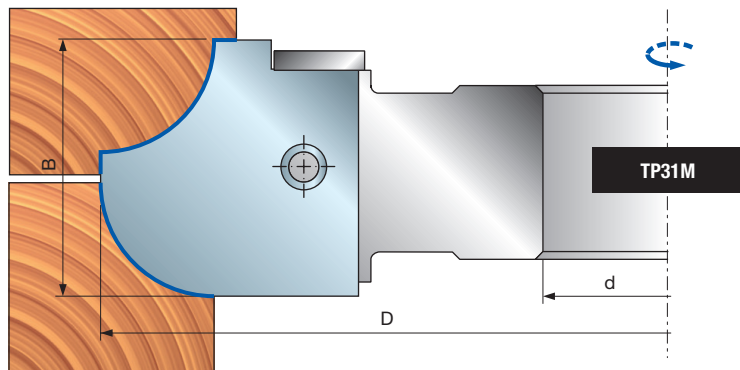
**Technical information:**

Performance knives tool for multiradius profiles.

- Knives included.
- Aluminium light alloy body.
- Rebore not available.

D	B	d	Z	Radius	Max RPM	Freud Code	Art. No.
mm	mm	mm		mm	1/min.		
150	34	30	2	15	9.000	<b>TP31M FA3</b>	F03F668941
150	34	32	2	15	9.000	<b>TP31M FC3</b>	F03F668637
150	34	35	2	15	9.000	<b>TP31M FB3</b>	F03FC20485

Spare parts		Dimensions	Freud Code	Art. No.
		mm		
	Knife	34 x 34 x 3 R15	<b>CP31MB15001</b>	F03FC23982
	Wedge	32 x 32 x 8,5	<b>CN13M CF9A</b>	F03FC01393
	Screw	M10 x 18	<b>VT03M CC9</b>	F03FA04438
	Positioning plate	22 x 1,7 x 6,5	<b>VT18M GB9</b>	F03FA04489
	Screw	M5 x 8	<b>VT05M AA9</b>	F03FA04444
	Allen key	5	<b>CB03M EA9</b>	F03FA00169

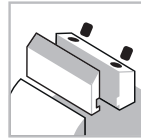


# TP31M

# Multi radius cutterheads



Manual Feed



Clamping System



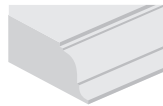
Aluminium Body



Softwood



Hardwood



Profiling



**Machines:**

Spindle moulders and manual feed machines.

**Materials:**

Softwood and hardwood.

**Applications:**

Profiling.

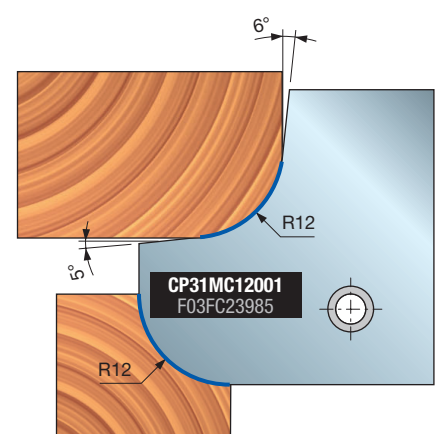
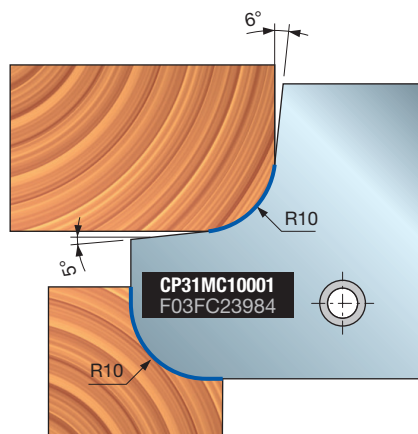
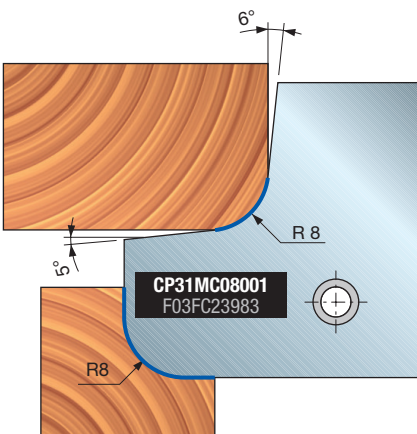
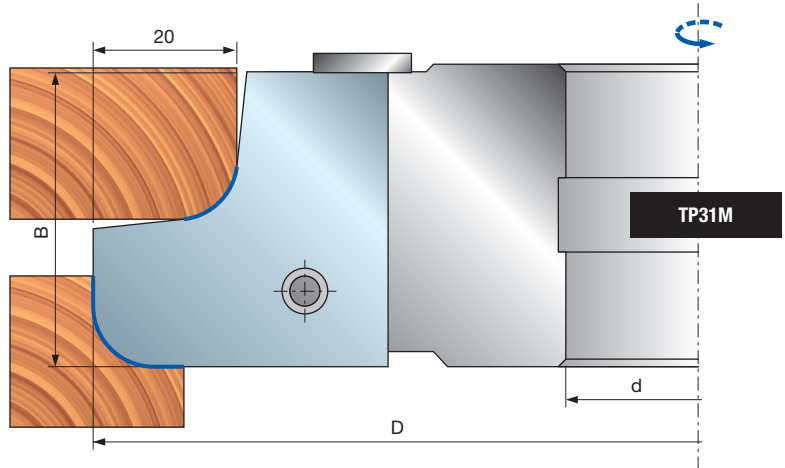
**Technical information:**

Performance knives tool for multiradius profiles.

- Knives included.
- Aluminium light alloy body.
- Rebore not available.

D mm	B mm	d mm	Z	Radius mm	Max RPM 1/min.	Freud Code	Art. No.
160	40	30	2	8-10-12	8.500	TP31M GA3	F03F668942
160	40	32	2	8-10-12	8.500	TP31M GC3	F03F668638
160	40	35	2	8-10-12	8.500	TP31M GB3	F03FC20486

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	40 x 40 x 3 R8	CP31MC08001	F03FC23983
	Knife	40 x 40 x 3 R10	CP31MC10001	F03FC23984
	Knife	40 x 40 x 3 R12	CP31MC12001	F03FC23985
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Positioning plate	22 x 1,7 x 6,5	VT18M GA9	F03FA04488
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Allen key	5	CB03M EA9	F03FA00169



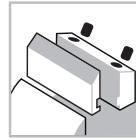


## TP31M

## Multi radius cutterheads



Manual Feed



Clamping System



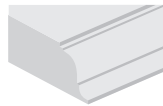
Aluminium Body



Softwood



Hardwood



Profiling



### Machines:

Spindle moulders and manual feed machines.

### Materials:

Softwood and hardwood.

### Applications:

Profiling.

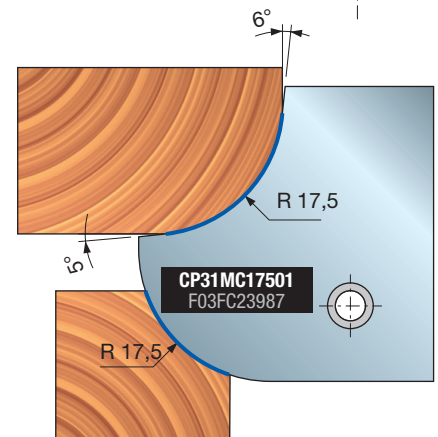
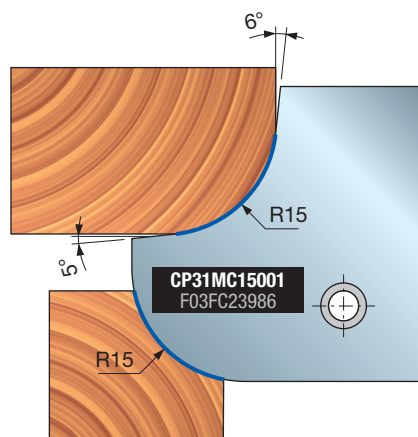
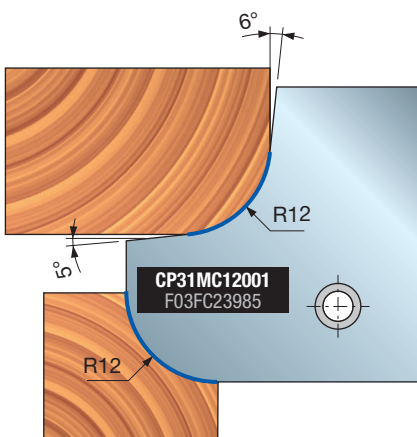
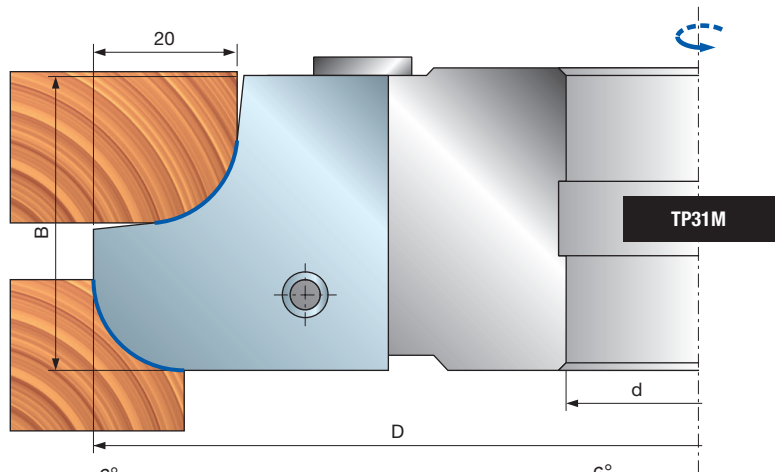
### Technical information:

Performance knives tool for multiradius profiles.

- Knives included.
- Aluminium light alloy body.
- Rebore not available.

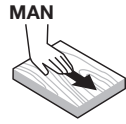
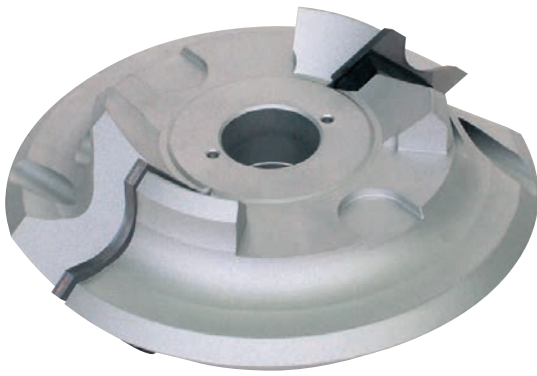
D mm	B mm	d mm	Z	Radius mm	Max RPM 1/min.	Freud Code	Art. No.
160	40	30	2	12-15-17,5	8.500	TP31M HA3	F03F668943
160	40	32	2	12-15-17,5	8.500	TP31M HC3	F03F668639
160	40	35	2	12-15-17,5	8.500	TP31M HB3	F03FC20487

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	40 x 40 x 3 R12	CP31MC12001	F03FC23985
	Knife	40 x 40 x 3 R15	CP31MC15001	F03FC23986
	Knife	40 x 40 x 3 R17,5	CP31MC17501	F03FC23987
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Positioning plate	22 x 1,7 x 6,5	VT18M GA9	F03FA04488
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Allen key	5	CB03M EA9	F03FA00169

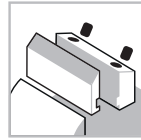


# TP31M - TP31MS

## Multi radius cutterheads



Manual Feed



Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



### Machines:

Spindle moulders and manual feed machines.

### Materials:

Softwood and hardwood.

### Applications:

Profiling.

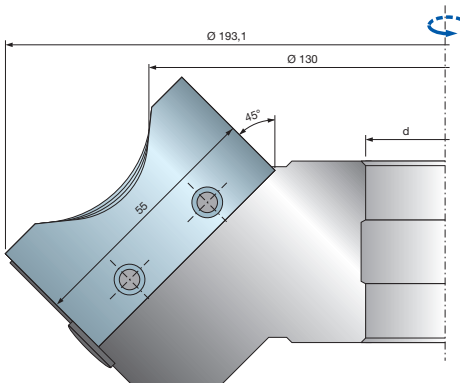
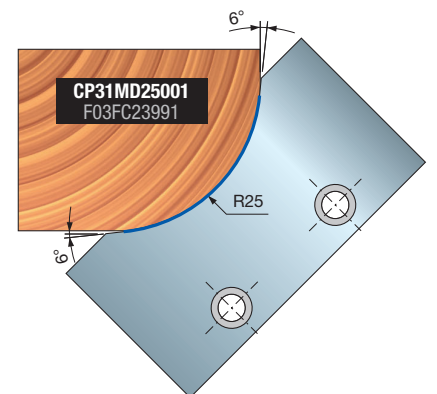
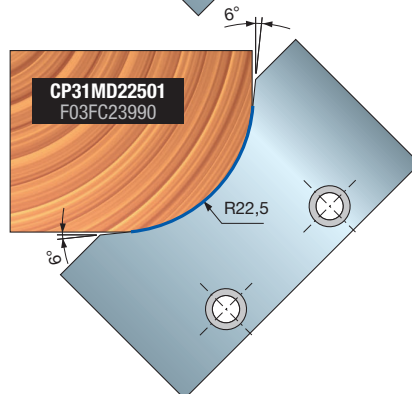
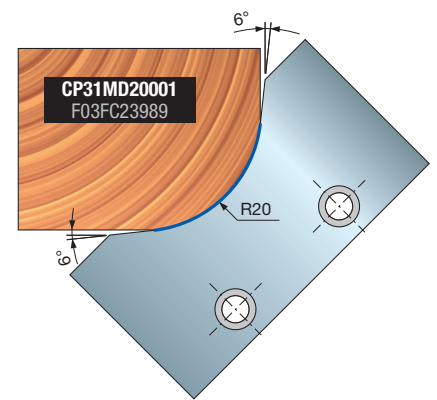
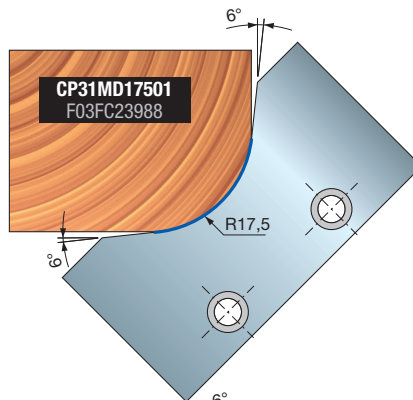
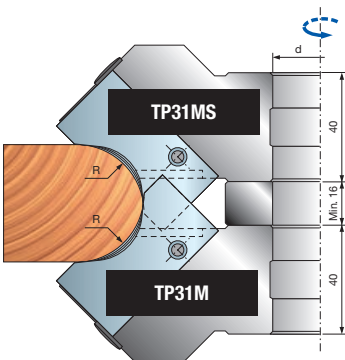
### Technical information:

Performance knives tool for multiradius profiles.

- Knives included.
- Left and right hand tools can be combined in 1 set.
- Aluminium light alloy body.
- Rebore not available.

D mm	B mm	d mm	Z	Radius mm	Max RPM 1/min.	Freud Code	Art. No.
193,1	55	30	2	17,5-20-22,5-25	7.000	TP31M DA3	F03F668634
193,1	55	32	2	17,5-20-22,5-25	7.000	TP31M DC3	F03F668635
193,1	55	35	2	17,5-20-22,5-25	7.000	TP31M DB3	F03FC20483
193,1	55	30	2	17,5-20-22,5-25	7.000	TP31MS DA3	F03F668640
193,1	55	32	2	17,5-20-22,5-25	7.000	TP31MS DC3	F03F668641
193,1	55	35	2	17,5-20-22,5-25	7.000	TP31MS DB3	F03FC20488

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	55 x 29 x 3 R17,5	CP31MD17501	F03FC23988
	Knife	55 x 29 x 3 R20	CP31MD20001	F03FC23989
	Knife	55 x 29 x 3 R22,5	CP31MD22501	F03FC23990
	Knife	55 x 29 x 3 R25	CP31MD25001	F03FC23991
	Wedge	51 x 19 x 8	CN11M C510	F03FC23658
	Screw	M5 x 7 x 16	VT08M AE9	F03FA04457
	Screw	M10 x 25	2602M FI9	F03FA07353
	Allen key	5	CB03M EA9	F03FA00169

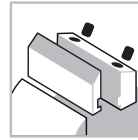


# TP40M

# Multiprofile cutterheads



Manual Feed



Clamping System



Steel Body



Softwood



Hardwood



Profiling



**Machines:**

Spindle moulders and manual feed machines.

**Materials:**

Softwood and hardwood.

**Applications:**

Profiling.

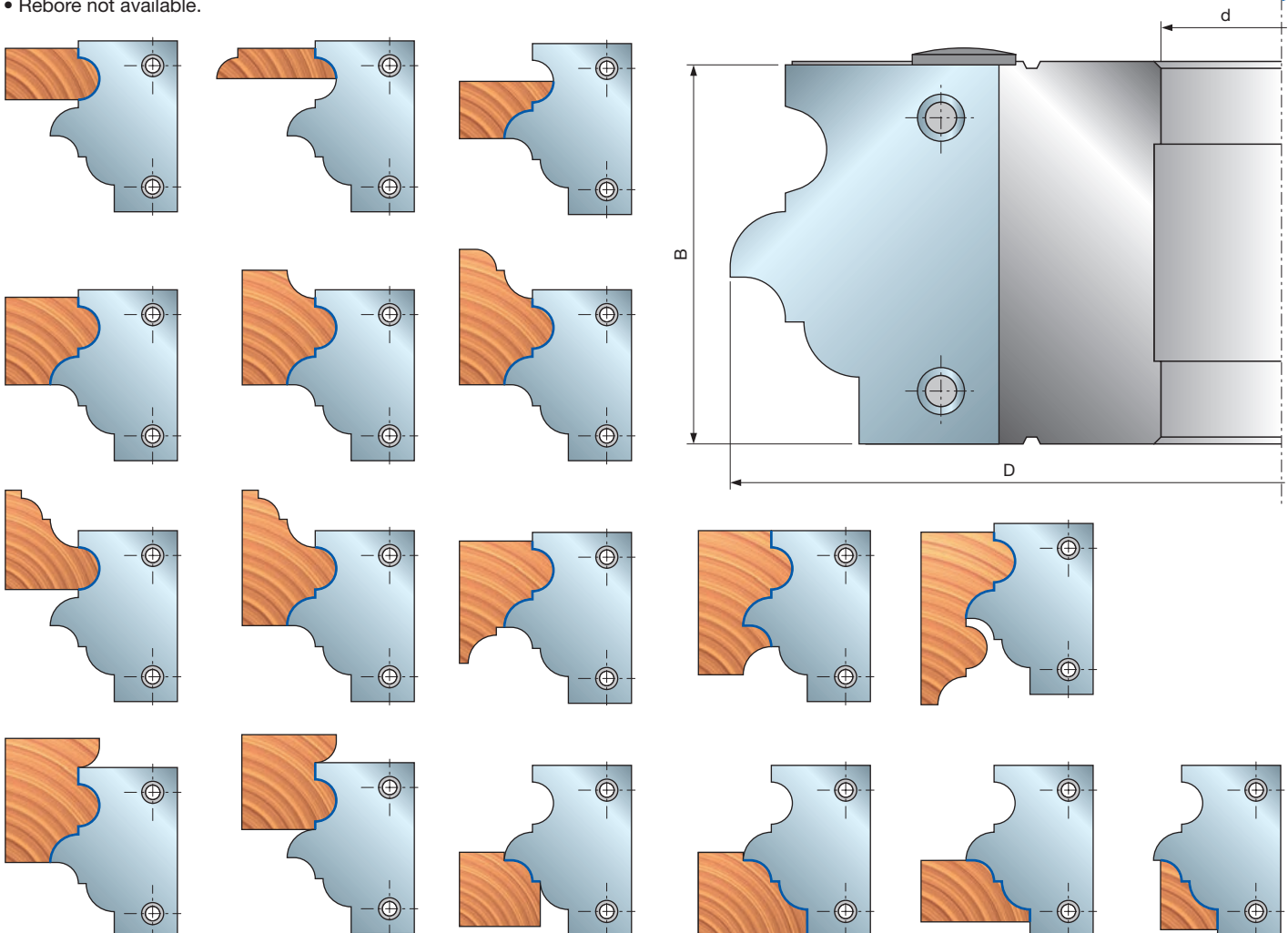
**Technical information:**

Multiprofile cutterhead with Performance knives.

- Steel body.
- Rebore not available.

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
160	55	35	2	8.000	TP40M AB3	F03FC20493
160	55	50	2	8.000	TP40M AD3	F03FC24314

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	55 x 39 x 3	CP40MAA301	F03FC24002
	Wedge	51 x 35 x 8	CN13M AH9	F03FC23048
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Screw	M5 x 7 x 16	VT08M AE9	F03FA04457
	Allen key	5	CB03M EA9	F03FA00169



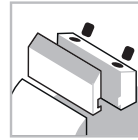


## TP44M

## Multiprofile cutterheads for flooring and cabinet doors



Manual Feed



Clamping System



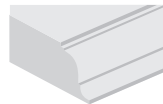
Aluminium Body



Softwood



Hardwood



Profiling



### Machines:

Spindle moulders and manual feed machines.

### Materials:

Softwood and hardwood.

### Applications:

Profiling.

### Technical information:

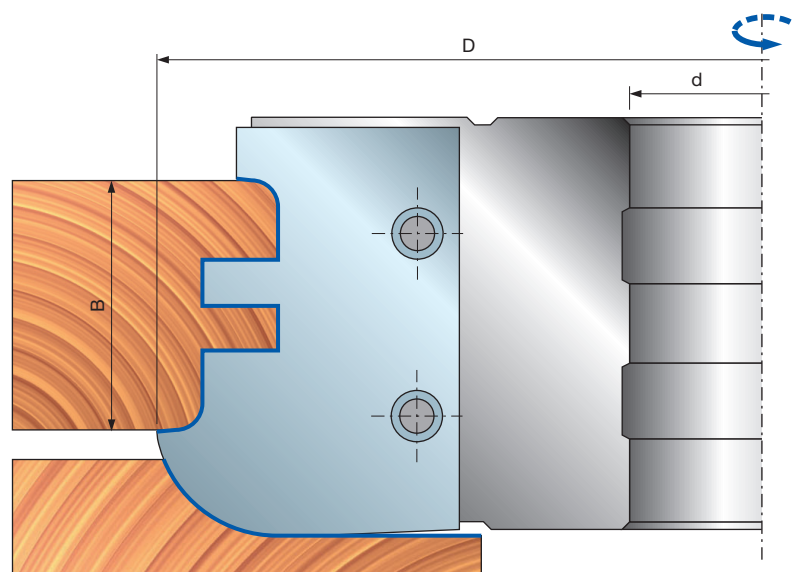
Multiprofile cutterhead with Performance knives for tongue, groove panels, flooring and cabinet doors.

- Mostly suitable for profiling on softwood, hardwood and exotic wood, with a top quality finish.
- The tool versatility allows the production of 20-22 mm thick cabinet doors, 13-17 mm and 20-22 mm thick floor boards and 26 or 33 mm thick shutters.
- The variously profiled knives are perfectly interchangeable and do not affect the minimum tool diameter.
- This item is supplied with knives.
- Aluminium light alloy body.
- Rebore not available.

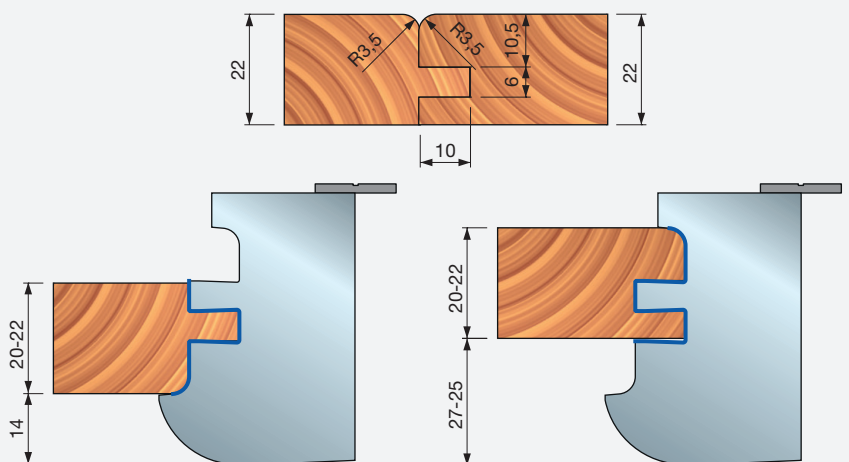
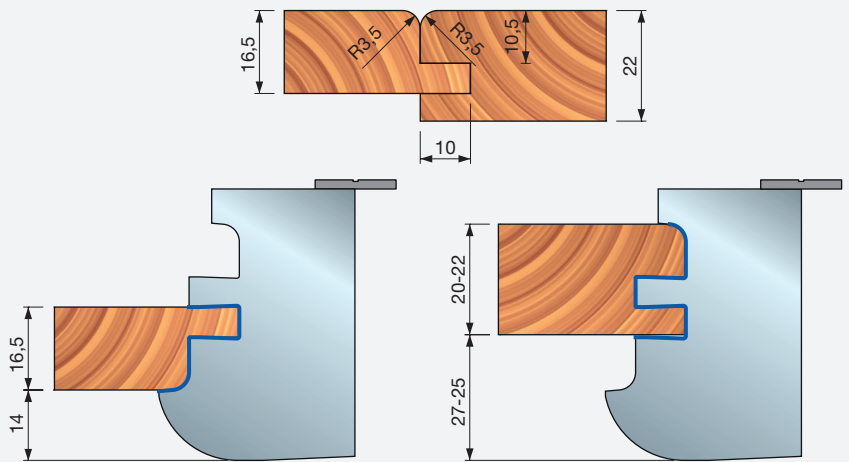
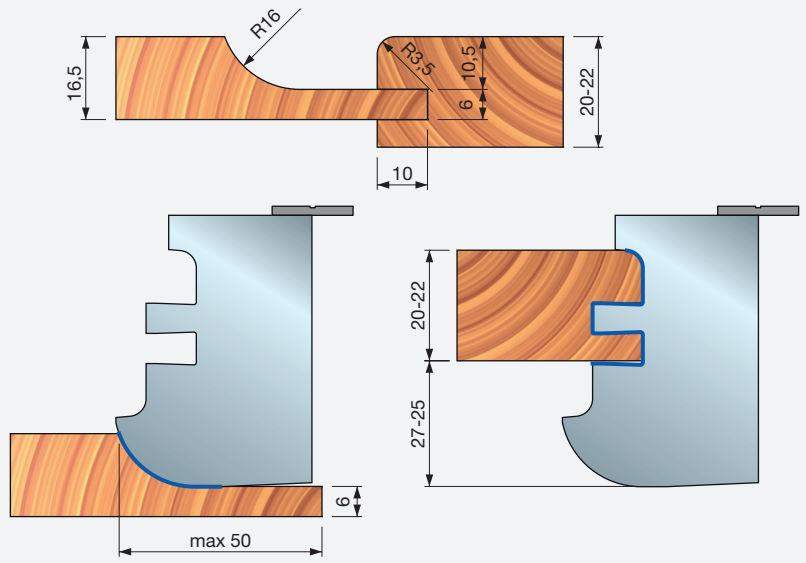
D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
160	55	30	2	8.500	TP44M AA3	F03F668643
160	55	32	2	8.500	TP44M AC3	F03F668644
160	55	35	2	8.500	TP44M AB3	F03FC20502
160	55	50	2	8.500	TP44M AD3	F03FC25268

Spare parts		Dimensions mm	Freud Code	Art. No.
	Wedge	38 x 51 x 8	CN13M CE9A	F03FC24964
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Positioning plate	22 x 1,7 x 6,5	VT18M GA9	F03FA04488
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Allen key	5	CB03M EA9	F03FA00169

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife	55 x 40 x 3	CP44MAA301	F03FC24012
2	Knife	55 x 40 x 3	CP44MBA301	F03FC24013

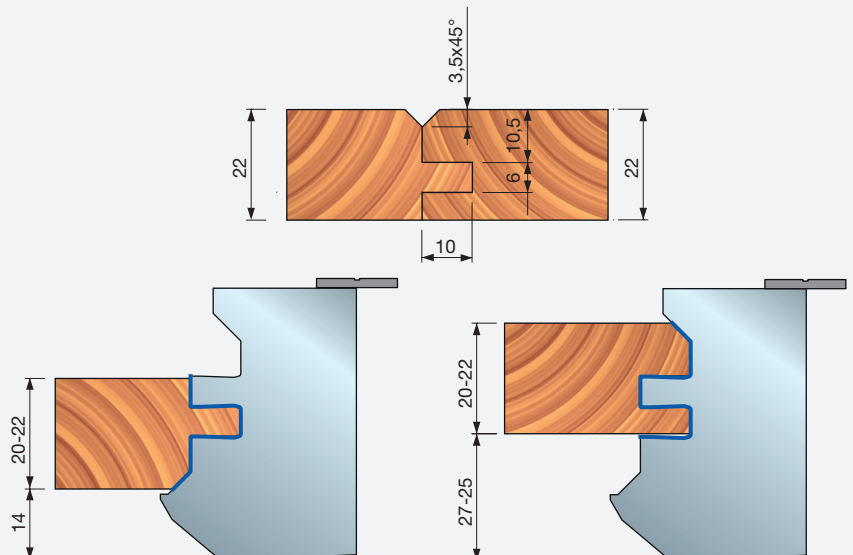
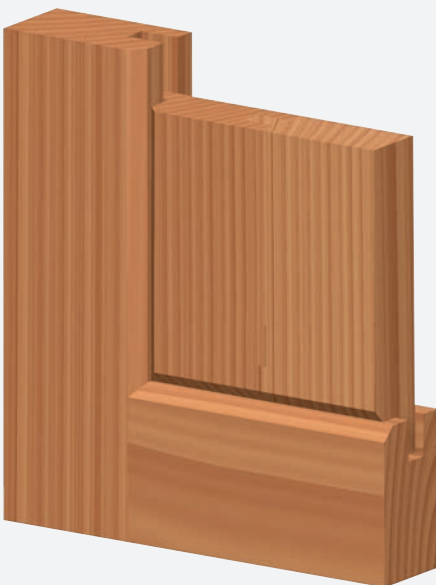
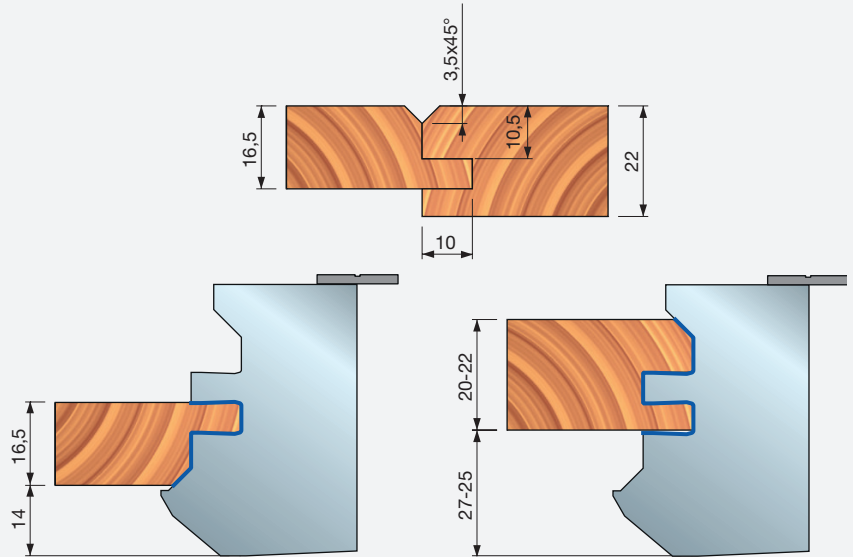
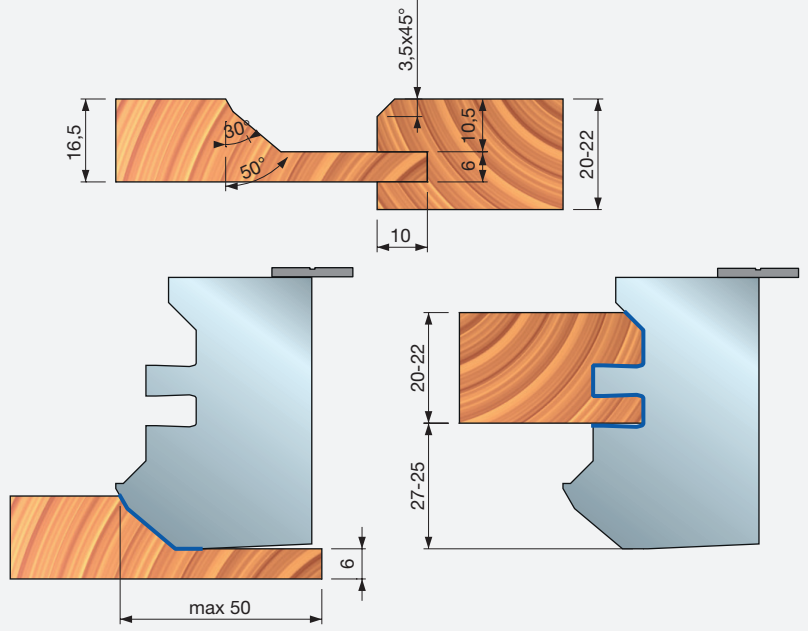


Profile 1





Profile 2

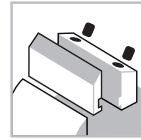




## TP32M Cutterhead sets for cabinet doors



Manual Feed



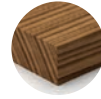
Clamping System



Steel Body



Softwood



Hardwood



### Machines:

Spindle moulders and manual feed machines.

### Materials:

Softwood and hardwood.

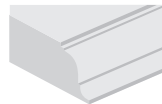
### Applications:

Profiling.

### Technical information:

Performance knives tool set for cabinet doors adjustable timber thickness 22-24 mm.

- Profile and counter-profile are both available with the same set (and different 0-point).
- The cutterhead set includes knives for tool B and mandatory flanges to work on manual feed machines.
- Profile knives and grooving inserts for tool A are not included, to be ordered separately.
- Steel body.
- Rebore not available.

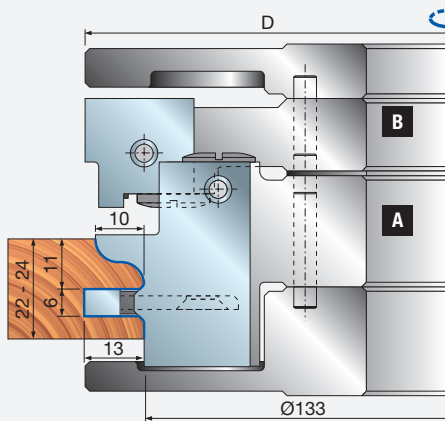


### Profiling

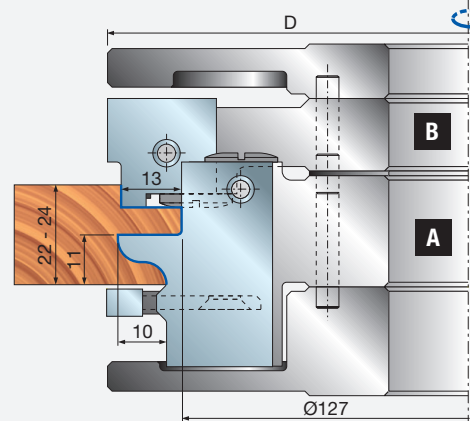
D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
159	-	30	2+2	8.500	TP32M AA3	F03FC24452
159	-	35	2+2	8.500	TP32M AB3	F03FC20489

	Spare parts	Dimensions mm	Freud Code	Art. No.
AD2 - AD3	Wedge	43 x 19 x 8,5	CN11M C410A	F03FC23536
	Grooving insert	34 x 6 x 16	SR06MAB302	F03FC24191
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Screw	M6 x 13	VT16M AE9	F03FC20658
	Positioning plate	22 x 1,7 x 6,5	VT18M GB9	F03FA04489
	Wedge	16 x 17 x 8	CN11M B160A	F03FC24539
	Allen key	5	CB03M EA9	F03FA00169
	Allen key	4	CB03M BA9	F03FA00163
	Upper flange	159 x 12 x 30	FX32M AA9	F03FC24578
Lower flange	159 x 24 x 30	FX32M BA9	F03FC24579	
Upper flange	159 x 12 x 35	FX32M AB9	F03FC15078	
Lower flange	159 x 24 x 35	FX32M BB9	F03FC15079	

### Carrying out a groove

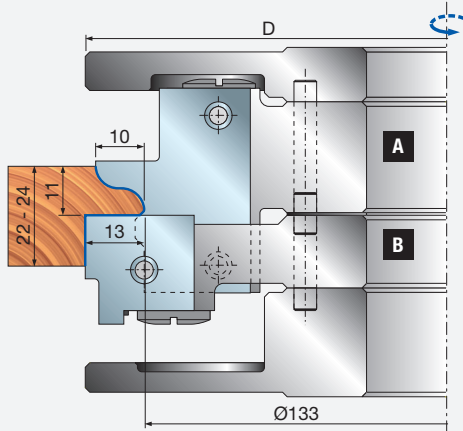


### Carrying out a rebate

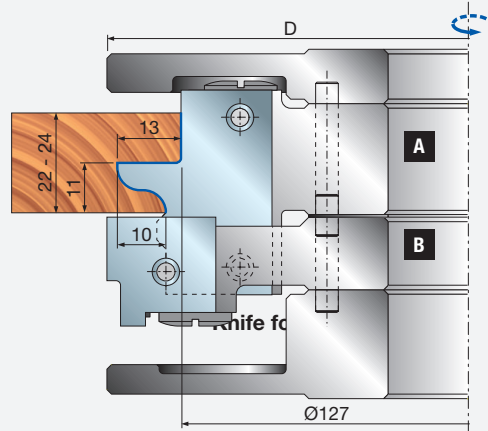


	Spare knives	Dimensions mm	Freud Code	Art. No.
	Knife	45 x 34 x 3	CP32MAA301	F03FC23992
	Knife	45 x 34 x 3	CP32MBA301	F03FC23993
	Knife	45 x 34 x 3	CP32MCA301	F03FC23994
	Knife	45 x 34 x 3	CP32MDA301	F03FC23995
	Knife	45 x 34 x 3	CP32MEA301	F03FC23996
	Knife	45 x 34 x 3	CP32MFA301	F03FC23997
	Knife	45 x 34 x 3	CP32MGA301	F03FC23998
	Knife	45 x 34 x 3	CP32MHA301	F03FC23999
	Knife	45 x 34 x 3	CP32MIA301	F03FC24000
	Knife	24 x 24 x 3	CP32MLA301	F03FC24001

Carrying out a groove



Carrying out a rebate



Order example for the profiles shown

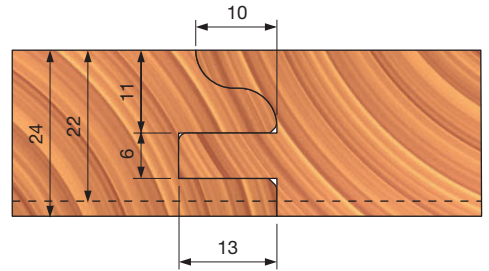
Pieces	Dimensions mm	Freud Code	Art. No.
1	159 x 30	TP32M AA3	F03FC24452
2	45 x 34 x 3	CP32MAA301	F03FC23992



Knives for  
TP32M - A  
Not included



Insert for  
TP32M - B

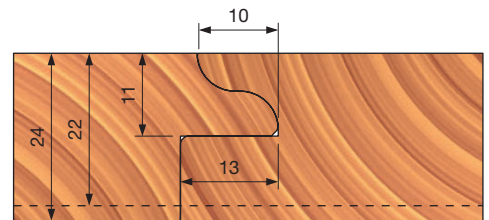


Order example for the profiles shown

Pieces	Dimensions mm	Freud Code	Art. No.
1	159 x 30	TP32M AA3	F03FC24452
2	45 x 34 x 3	CP32MAA301	F03FC23992



Knives for  
TP32M - A  
Not included



Order example for the profiles shown

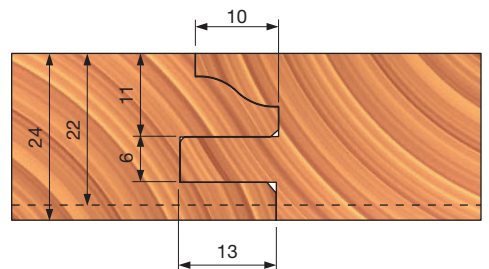
Pieces	Dimensions mm	Freud Code	Art. No.
1	159 x 30	TP32M AA3	F03FC24452
2	45 x 34 x 3	CP32MBA301	F03FC23993



Knives for  
TP32M - A  
Not included



Insert for  
TP32M - B



# CP32M

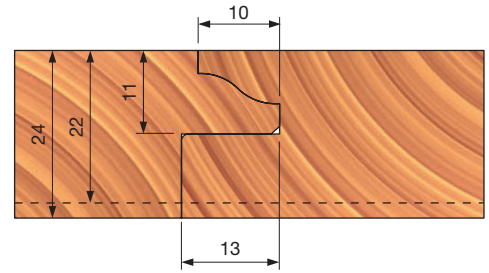
# Knives for TP32M AA3 - TP32M AB3

Order example for the profiles shown

Pieces	Dimensions mm	Freud Code	Art. No.
1	159 x 30	TP32M AA3	F03FC24452
2	45 x 34 x 3	CP32MBA301	F03FC23993



Knives for TP32M - A  
Not included



Order example for the profiles shown

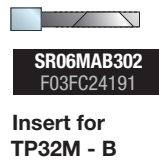
Pieces	Dimensions mm	Freud Code	Art. No.
1	159 x 30	TP32M AA3	F03FC24452
2	45 x 34 x 3	CP32MCA301	F03FC23994
2	45 x 34 x 3	CP32MDA301	F03FC23995



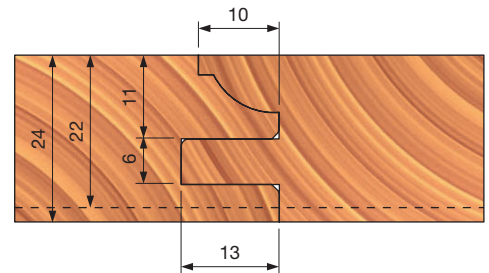
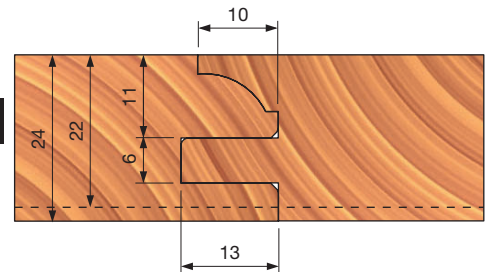
Knives for TP32M - A  
Not included



Knives for TP32M - A  
Not included



Insert for TP32M - B



Order example for the profiles shown

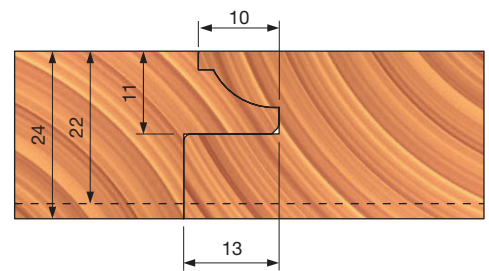
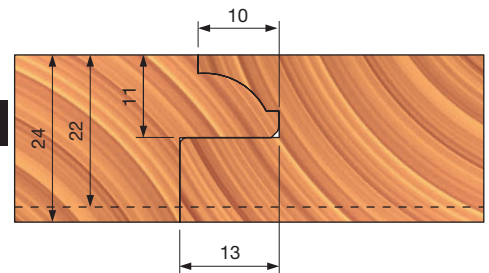
Pieces	Dimensions mm	Freud Code	Art. No.
1	159 x 30	TP32M AA3	F03FC24452
2	45 x 34 x 3	CP32MCA301	F03FC23994
2	45 x 34 x 3	CP32MDA301	F03FC23995



Knives for TP32M - A  
Not included

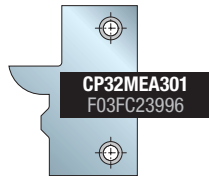


Knives for TP32M - A  
Not included

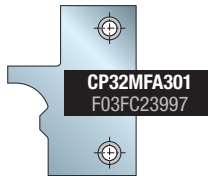


Order example for the profiles shown

Pieces	Dimensions mm	Freud Code	Art. No.
1	159 x 30	TP32M AA3	F03FC24452
2	45 x 34 x 3	CP32MEA301	F03FC23996
2	45 x 34 x 3	CP32MFA301	F03FC23997



Knives for TP32M - A  
Not included

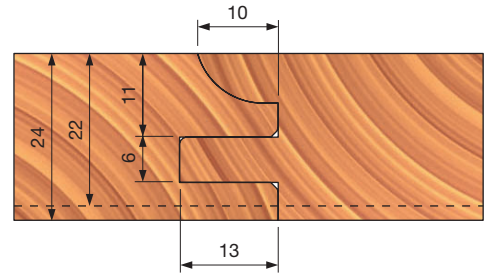
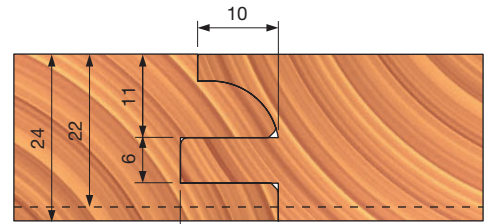


Knives for TP32M - A  
Not included



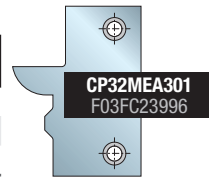
SR06MAB302  
F03FC24191

Insert for TP32M - B

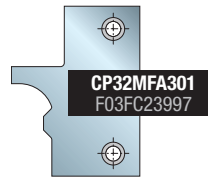


Order example for the profiles shown

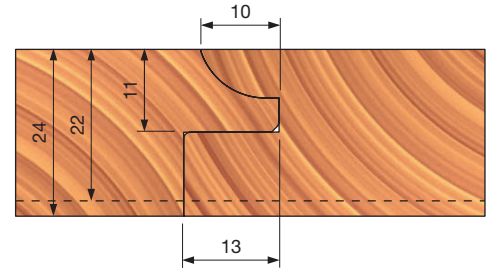
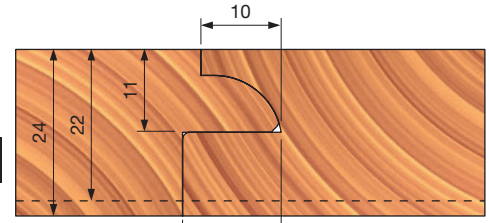
Pieces	Dimensions mm	Freud Code	Art. No.
1	159 x 30	TP32M AA3	F03FC24452
2	45 x 34 x 3	CP32MEA301	F03FC23996
2	45 x 34 x 3	CP32MFA301	F03FC23997



Knives for TP32M - A  
Not included



Knives for TP32M - A  
Not included



Order example for the profiles shown

Pieces	Dimensions mm	Freud Code	Art. No.
1	159 x 30	TP32M AA3	F03FC24452
2	45 x 34 x 3	CP32MGA301	F03FC23998
2	45 x 34 x 3	CP32MHA301	F03FC23999



Knives for TP32M - A  
Not included

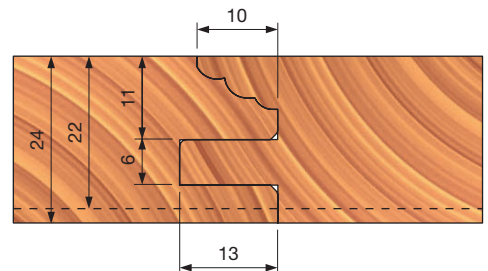
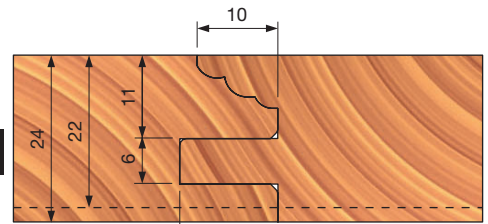


Knives for TP32M - A  
Not included



SR06MAB302  
F03FC24191

Insert for TP32M - B

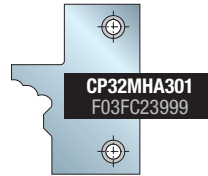


Order example for the profiles shown

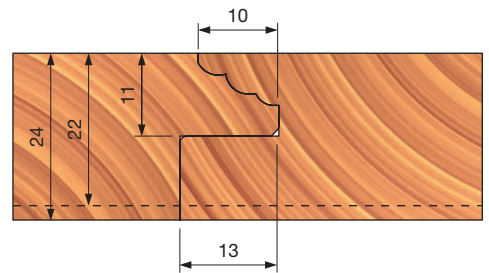
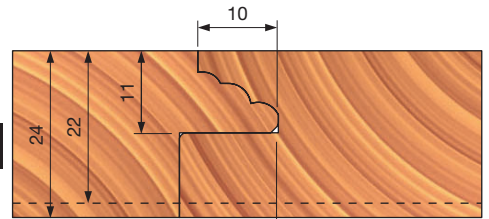
Pieces	Dimensions mm	Freud Code	Art. No.
1	159 x 30	TP32M AA3	F03FC24452
2	45 x 34 x 3	CP32MGA301	F03FC23998
2	45 x 34 x 3	CP32MHA301	F03FC23999



Knives for TP32M - A  
Not included



Knives for TP32M - A  
Not included



Order example for the profiles shown

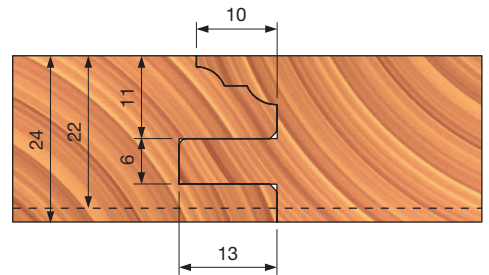
Pieces	Dimensions mm	Freud Code	Art. No.
1	159 x 30	TP32M AA3	F03FC24452
2	45 x 34 x 3	CP32MIA301	F03FC24000



Knives for TP32M - A  
Not included



Insert for TP32M - B

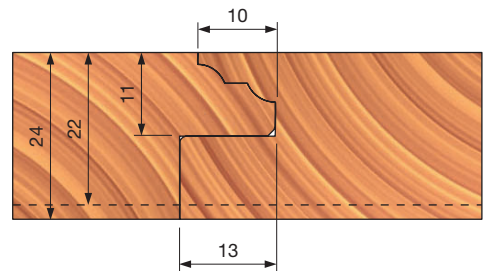


Order example for the profiles shown

Pieces	Dimensions mm	Freud Code	Art. No.
1	159 x 30	TP32M AA3	F03FC24452
2	45 x 34 x 3	CP32MIA301	F03FC24000



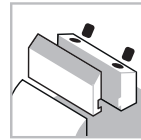
Knives for TP32M - A  
Not included



# TPSEM Cutterhead sets for cabinet doors



Manual Feed



Clamping System



Steel Body



Softwood



Hardwood



Profiling



### Machines:

Spindle moulders and manual feed machines.

### Materials:

Softwood and hardwood.

### Applications:

Profiling.

### Technical information:

Performance knives tool set for cabinet doors. adjustable timber thickness 22-30 mm.

- Profile and counter-profile are both available with the same set (and different 0-point).
- The cutterhead set includes knives for tool B and mandatory flanges to work on manual feed machines.
- Profile knives and grooving inserts for tool A are not included, to be ordered separately.
- Steel body.
- Rebore not available.

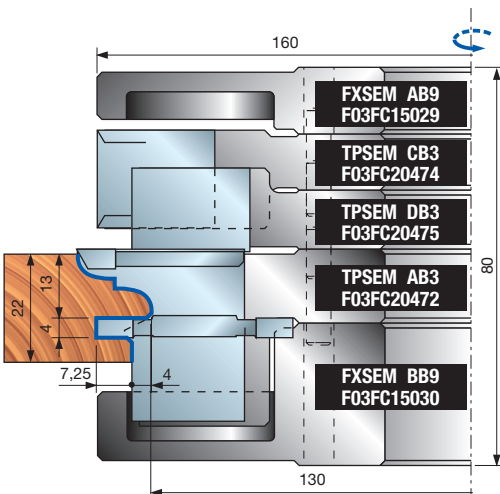
D mm	B mm	d mm	Max RPM 1/min.	Freud Code	Art. No.
160	-	30	8.500	TPSEM22GA3	F03FC23021
160	-	32	8.500	TPSEM22GC3	F03FC24432
160	-	35	8.500	TPSEM22GB3	F03FC20476
160	-	30	8.500	TPSEM30GA3	F03FC23024
160	-	32	8.500	TPSEM30GC3	F03FC24433
160	-	35	8.500	TPSEM30GB3	F03FC20477

### Tools for TPSEM sets

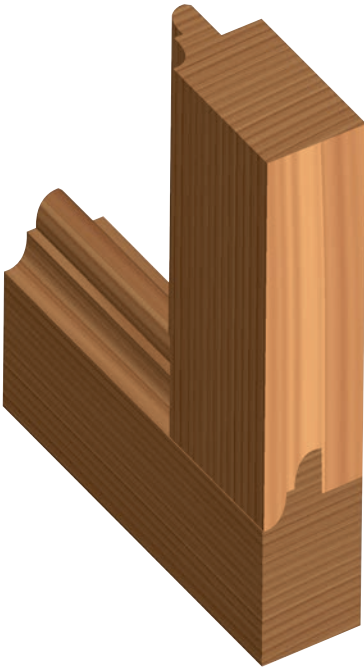
	D mm	B mm	d mm	Z	R mm	Freud Code	Art. No.
22GA3	135	-	30	2		TPSEM DA3	F03FC22726
	152	-	30	2	4	TPSEM CA3	F03FC22725
	160	-	30	2	4	TPSEM AA3*	F03FC22723
22GB3	138	-	35	2		TPSEM DB3	F03FC20475
	152	-	35	2	4	TPSEM CB3	F03FC20474
	160	-	35	2	4	TPSEM AB3*	F03FC20472
22GC3	138	-	32	2		TPSEM DC3	F03FC24431
	152	-	32	2	4	TPSEM CC3	F03FC24430
	160	-	32	2	4	TPSEM AC3*	F03FC24428
30GA3	135	-	30	2		TPSEM DA3	F03FC22726
	152	-	30	2	4	TPSEM CA3	F03FC22725
	160	-	30	2	4	TPSEM BA3*	F03FC22724
30GB3	138	-	35	2		TPSEM DB3	F03FC20475
	152	-	35	2	4	TPSEM CB3	F03FC20474
	160	-	35	2	4	TPSEM BB3*	F03FC20473
30GC3	138	-	32	2		TPSEM DC3	F03FC24431
	152	-	32	2	4	TPSEM CC3	F03FC24430
	160	-	32	2	4	TPSEM BC3*	F03FC24429

### Knives for TPSEM sets

	Spare knives	Dimensions mm	Freud Code	Art. No.
	Knife	35 x 34 x 3	CPSEMAB301	F03FC23924
	Knife	35 x 34 x 3	CPSEMAC301	F03FC23925
	Knife	35 x 34 x 3	CPSEMAD301	F03FC23926
	Knife	35 x 34 x 3	CPSEMAE301	F03FC23927
	Knife	35 x 34 x 3	CPSEMAF301	F03FC23928
	Knife	35 x 34 x 3	CPSEMAG301	F03FC23929
	Knife	35 x 34 x 3	CPSEMBB301	F03FC23930
	Knife	35 x 34 x 3	CPSEMBC301	F03FC23931
	Knife	35 x 34 x 3	CPSEMBD301	F03FC23932
	Knife	35 x 34 x 3	CPSEMBE301	F03FC23933
	Knife	35 x 34 x 3	CPSEMBF301	F03FC23934
	Knife	35 x 34 x 3	CPSEMBG301	F03FC23935
	Knife	20 x 24 x 3	CPSEMCA301	F03FC23936
	Knife	17 x 24 x 3	CPSEMDA301	F03FC23937

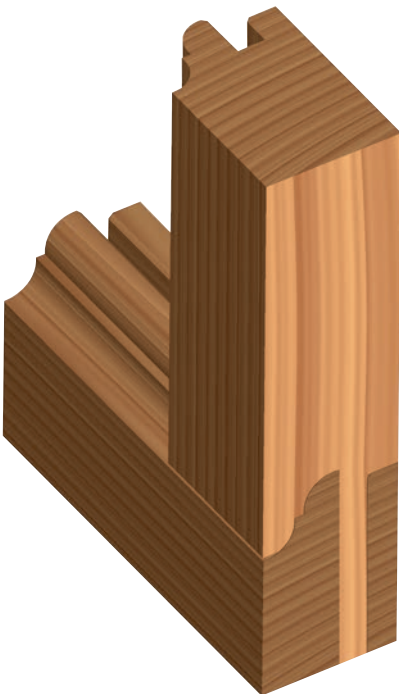


# TPSEM Cutterheads sets for cabinet doors



## Spare parts for sets TPSEM22 - TPSEM30

	Spare parts	Dimensions mm	Freud Code	Art. No.
AA3-AB3-AC3	Deflector	30,8 x 7 x 24,5	ID04MSAA901	F03FC24137
	Grooving insert	40 x 16 x 4	IG04MSAA305	F03FH02994
	Spur insert	34 x 4 x 16	SR06MDAL302	F03FC24196
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Screw for ID04M	M4 x 12	VT05M DA9	F03FC20647
	Screw	M6 x 14,5	VT16M AA9	F03FA04476
	Screw	M6 x 13	VT16M AE9	F03FC20658
	Positioning plate	20 x 11,6 x 2,2	VT18M AS9	F03FC20665
	BA3-BB3-BC3	Deflector	30,8 x 8 x 24,5	IDO4MSAD901
Grooving insert		40 x 16 x 6	IG04MSAD305	F03FH02997
Spur insert		34 x 4 x 16	SR06MDAL302	F03FC24196
Screw		M10 x 18	VT03M CC9	F03FA04438
Screw		M5 x 8	VT05M AA9	F03FA04444
Screw for ID04M		M4 x 12	VT05M DA9	F03FC20647
Screw		M6 x 15,5	VT16M AD9	F03FC20657
Screw		M6 x 13	VT16M AE9	F03FC20658
Positioning plate		20 x 11,6 x 2,2	VT18M AS9	F03FC20665
CA3-CB3-CC3		Wedge	16 x 17 x 8	CN11M B160A
	Knife	20 x 24 x 3	CPSEMCA301	F03FC23936
	Spur	22,86 x 2,5	RG02MAA305	F03FH03041
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Screw	M5 x 8	VT05M AA9	F03FA04444
	DA3-DB3-DC3	Wedge	16 x 17 x 8	CN11M B130A
Knife		17 x 24 x 3	CPSEMCA301	F03FC23937
Screw		M10 x 18	VT03M CC9	F03FA04438
Screw		M5 x 8	VT05M AA9	F03FA04444
Positioning plate		20 x 11,6 x 2,2	VT18M AR9	F03FC20664

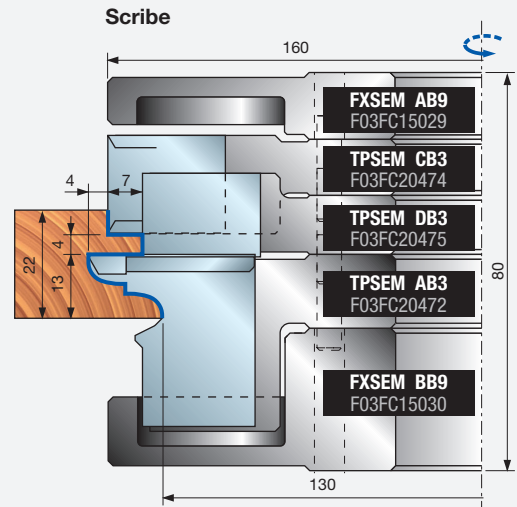
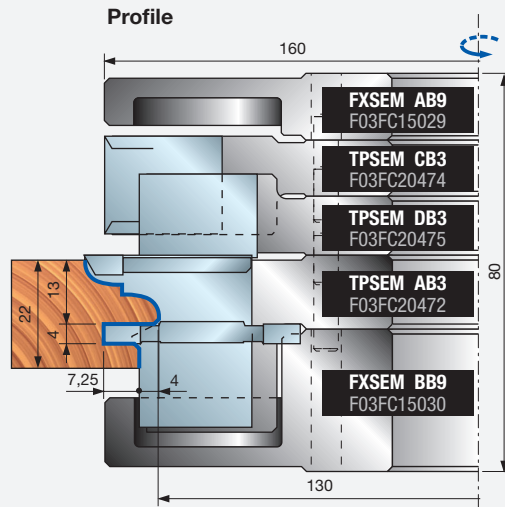
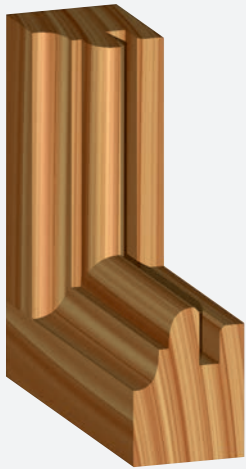


## Spare parts for sets TPSEM22 - TPSEM30

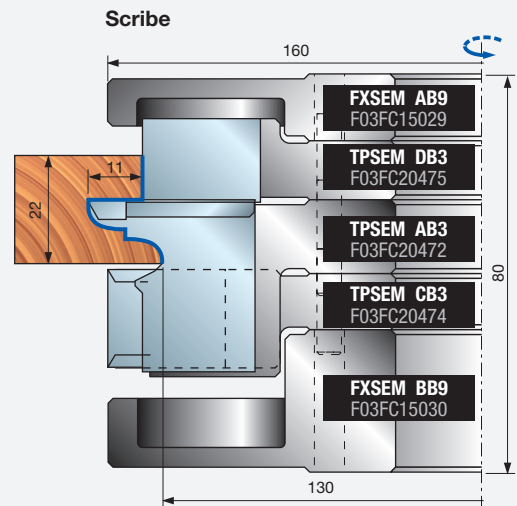
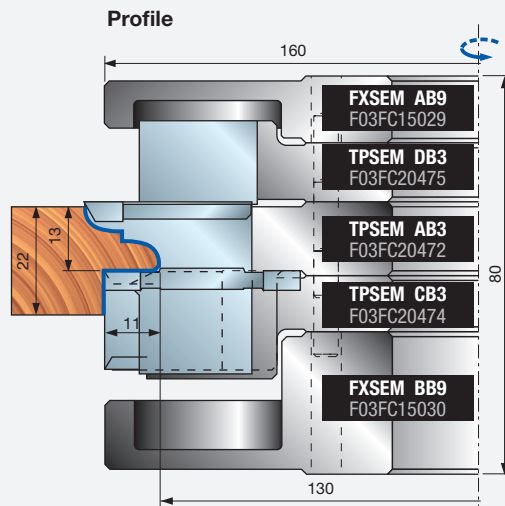
	Spare parts	Dimensions mm	Freud Code	Art. No.
	Torx key	T20	CB03M CC9	F03FA00167
	Allen key	4	CB03M BA9	F03FA00163
	Allen key	5	CB03M EA9	F03FA00169
22GA3	Spacer set	50 x 6,7 x 30	AN03M BM9	F03FC23022
	Upper flange	152 x 13,6 x 30	FXSEM AA9	F03FC23019
	Lower flange	152 x 28 x 30	FXSEM BA9	F03FC23020
22GB3	Spacer set	55 x 6,7 x 35	AN03M BK9	F03FC00463
	Upper flange	152 x 13,6 x 35	FXSEM AB9	F03FC15029
	Lower flange	152 x 28 x 35	FXSEM BB9	F03FC15030
22GC3	Spacer set	52 x 6,7 x 32	AN03M B09	F03FC24434
	Upper flange	152 x 13,6 x 32	FXSEM AC9	F03FC24436
	Lower flange	152 x 28 x 32	FXSEM BC9	F03FC24437
30GA3	Spacer set	50 x 7,7 x 30	AN03M BN9	F03FC23023
	Upper flange	152 x 13,6 x 30	FXSEM AA9	F03FC23019
	Lower flange	152 x 28 x 30	FXSEM BA9	F03FC23020
30GB3	Spacer set	55 x 7,7 x 35	AN03M BL9	F03FC00464
	Upper flange	152 x 13,6 x 35	FXSEM AB9	F03FC15029
	Lower flange	152 x 28 x 35	FXSEM BB9	F03FC15030
30GC3	Spacer set	52 x 7,7 x 32	AN03M BP9	F03FC24435
	Upper flange	152 x 13,6 x 32	FXSEM AC9	F03FC24436
	Lower flange	152 x 28 x 32	FXSEM BC9	F03FC24437



### Carrying out a groove

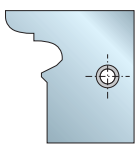


### Carrying out a rebate



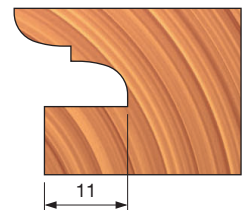
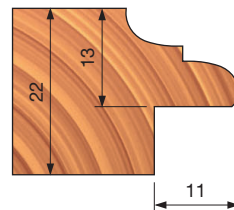
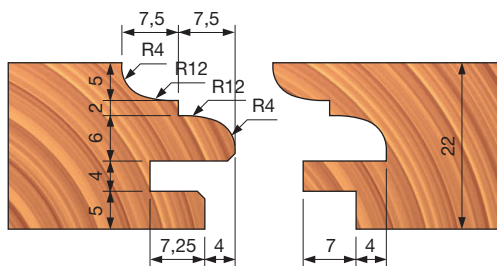
Order example for the profiles shown

Pieces	Dimensions mm	Freud Code	Art. No.
1	160 x 35	TPSEM22GB3	F03FC20476
2	35 x 34 x 3	CPSEMAB301	F03FC23924

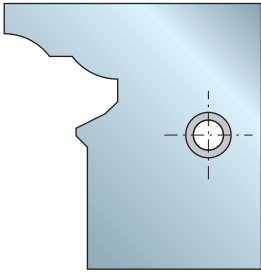


**CPSEMAB301**  
F03FC23924

for TPSEM  
AA3 - AB3 - AC3

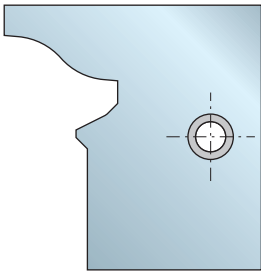
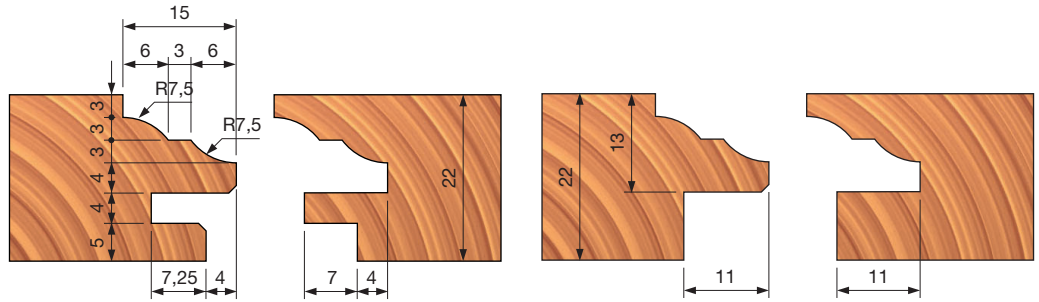


# CPSEM Knives for TPSEM AA3 - AB3 - AC3 (Wood thickness: 22 mm)



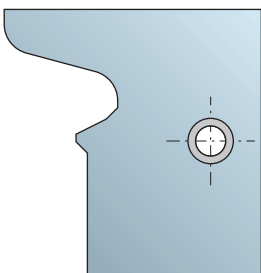
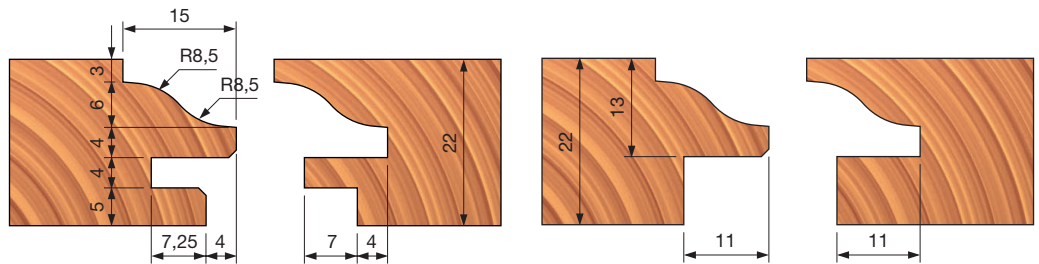
**CPSEMAC301**  
F03FC23925

for TPSEM  
AA3 - AB3 - AC3



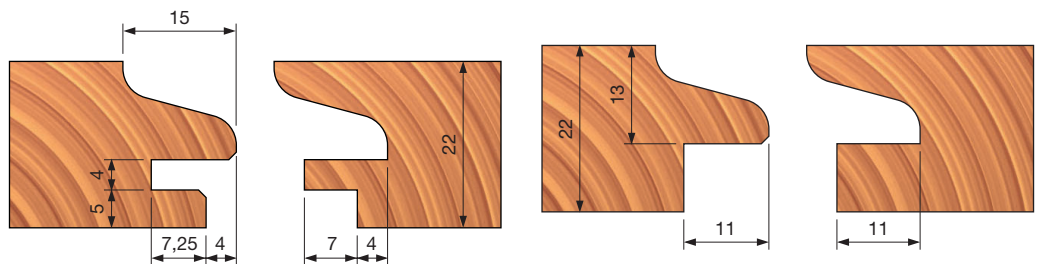
**CPSEMAD301**  
F03FC23926

for TPSEM  
AA3 - AB3 - AC3



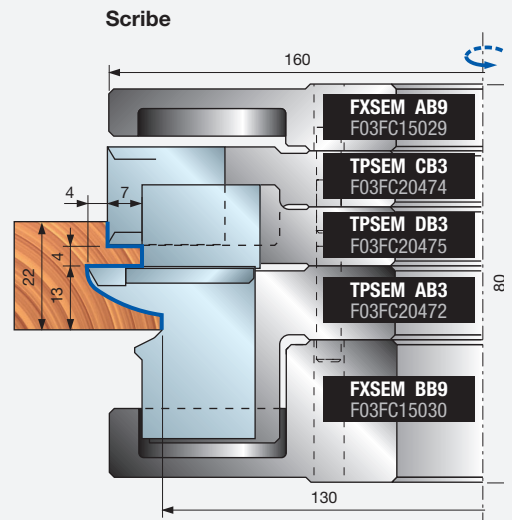
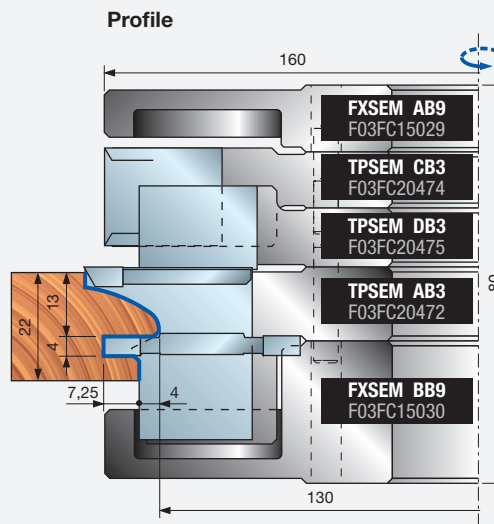
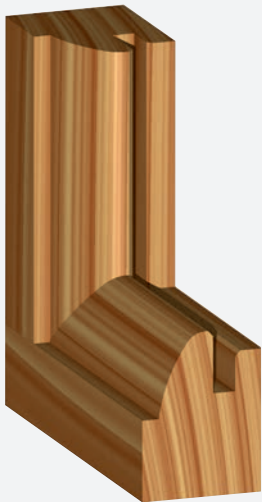
**CPSEMAG301**  
F03FC23929

for TPSEM  
AA3 - AB3 - AC3

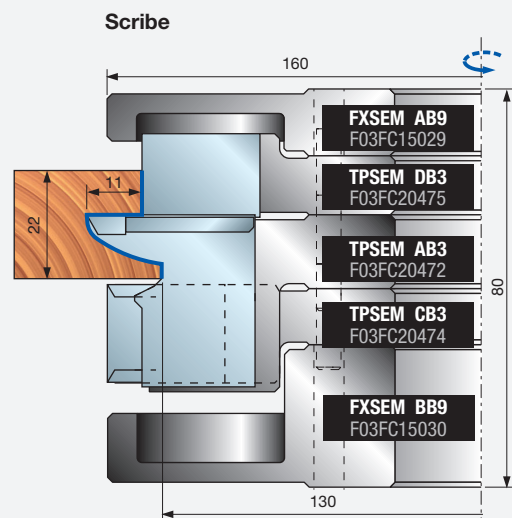
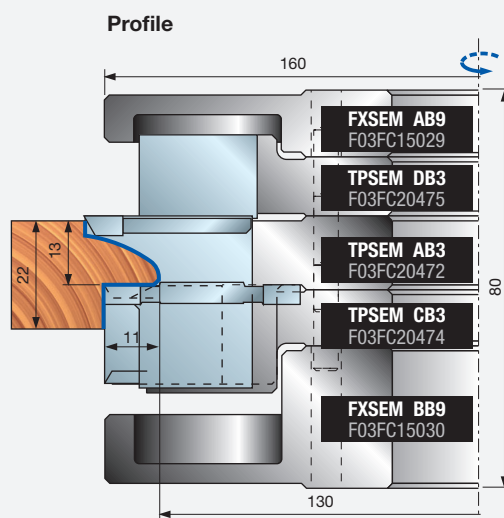


# CPSEM Knives for TPSEM AA3 - AB3 - AC3 (Wood thickness: 22 mm)

## Carrying out a groove

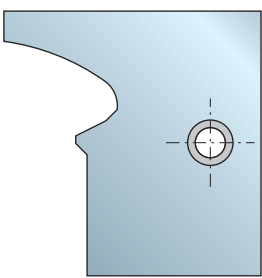


## Carrying out a rebate



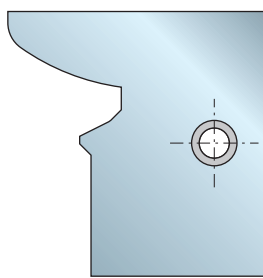
### Order example for the profiles shown

Pieces	Dimensions mm	Freud Code	Art. No.
1	160 x 35	TPSEM22GB3	F03FC20476
2	35 x 34 x 3	CPSEMAE301	F03FC23927
2	35 x 34 x 3	CPSEMAF301	F03FC23928



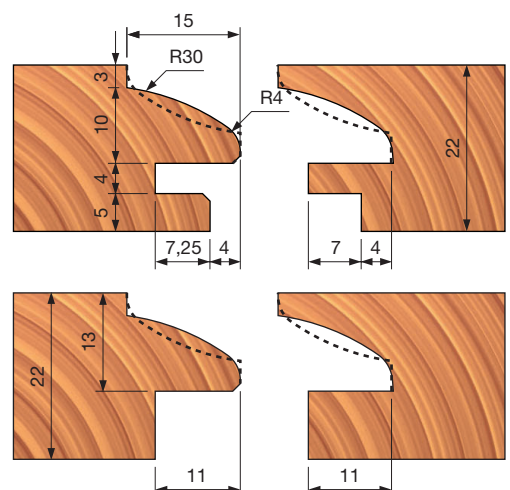
**CPSEMAF301**  
F03FC23928

for TPSEM  
AA3 - AB3 - AC3



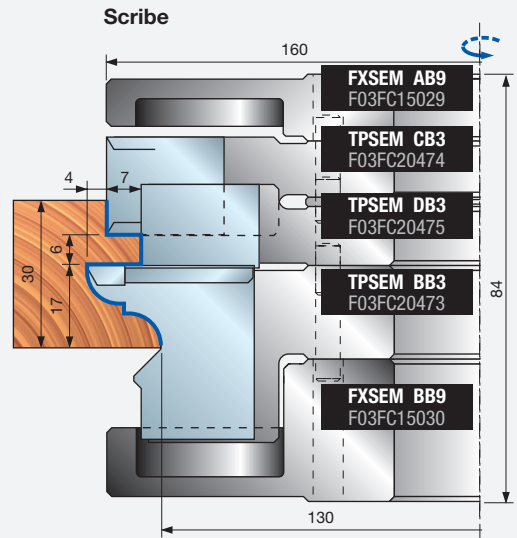
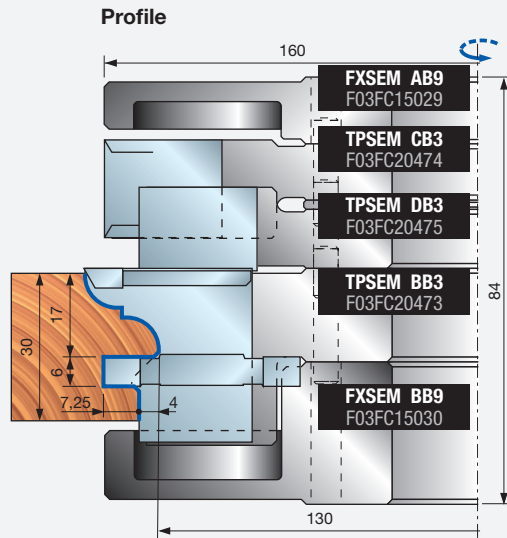
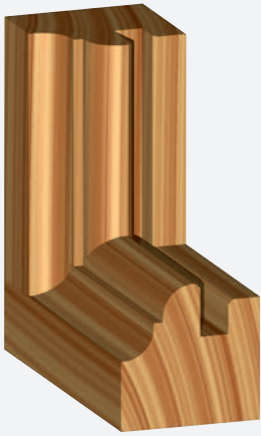
**CPSEMAE301**  
F03FC23927

for TPSEM  
AA3 - AB3 - AC3

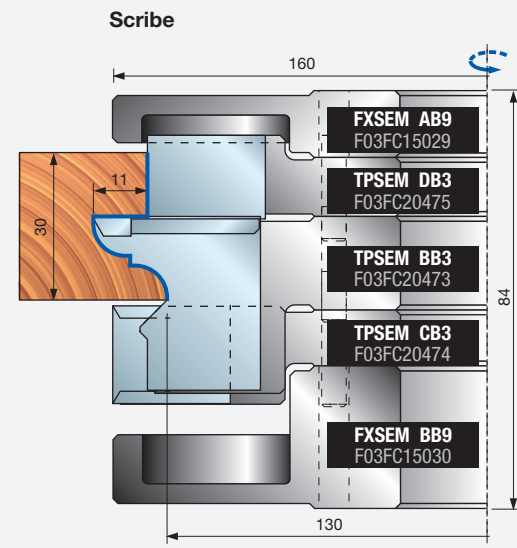
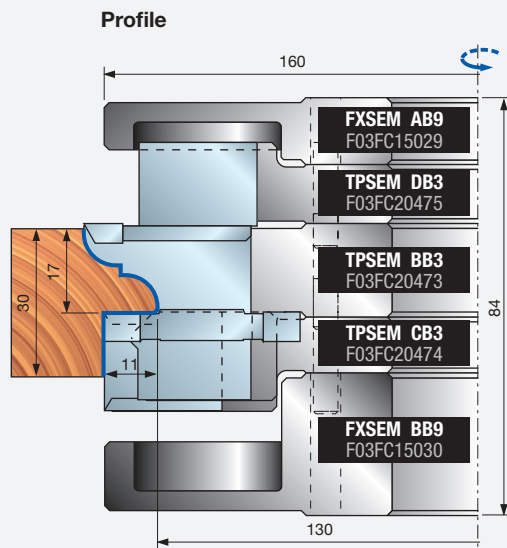
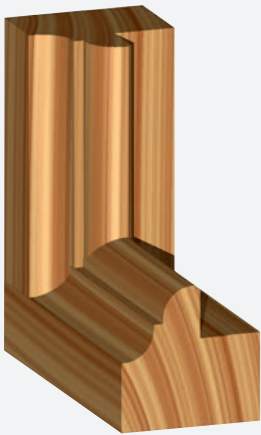


# CPSEM Knives for TPSEM BA3 - BB3 - BC3 (Wood thickness: 30 mm)

## Carrying out a groove

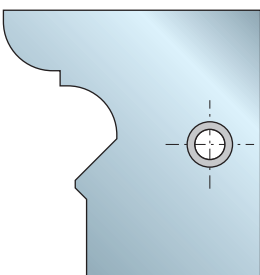


## Carrying out a rebate



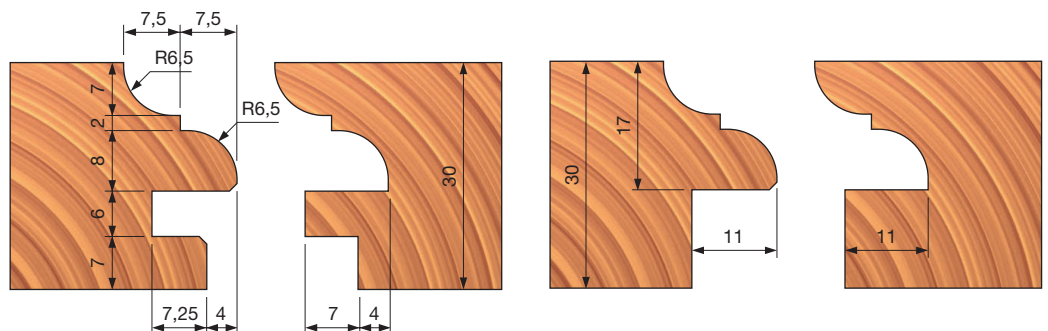
### Order example for the profiles shown

Pieces	Dimensions mm	Freud Code	Art. No.
1	160 x 35	TPSEM30GB3	F03FC20477
2	35 x 34 x 3	CPSEMBB301	F03FC23930

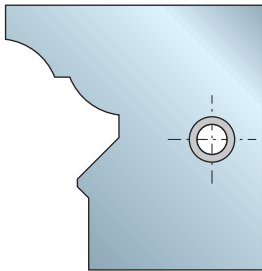


**CPSEMBB301**  
F03FC23930

for TPSEM  
BA3 - BB3 - BC3

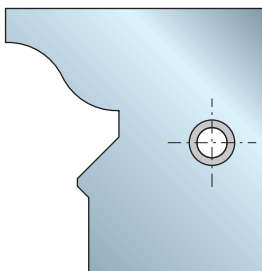
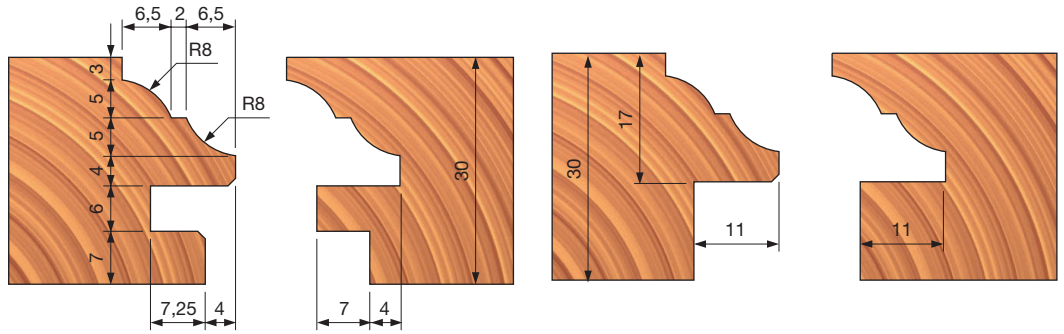


# CPSEM Knives for TPSEM AA3 - AB3 - AC3 (Wood thickness: 30 mm)



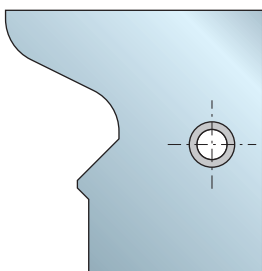
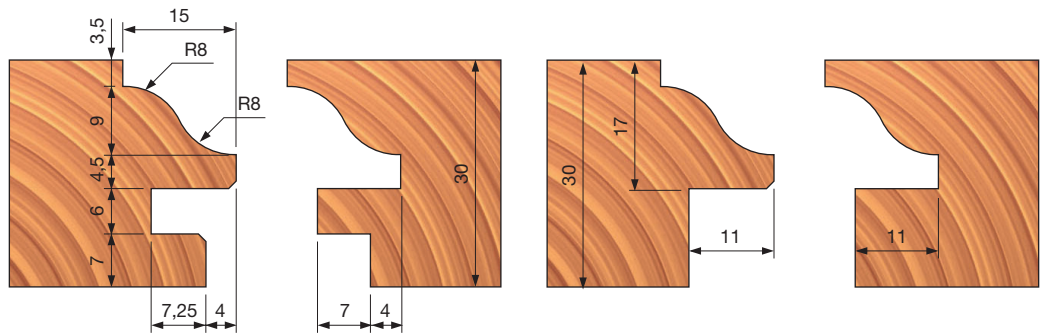
**CPSEMBC301**  
F03FC23931

for TPSEM  
BA3 - BB3 - BC3



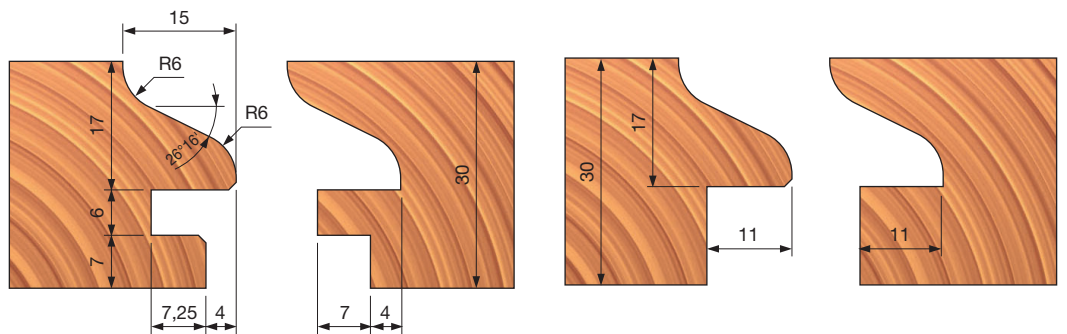
**CPSEMBD301**  
F03FC23932

for TPSEM  
BA3 - BB3 - BC3



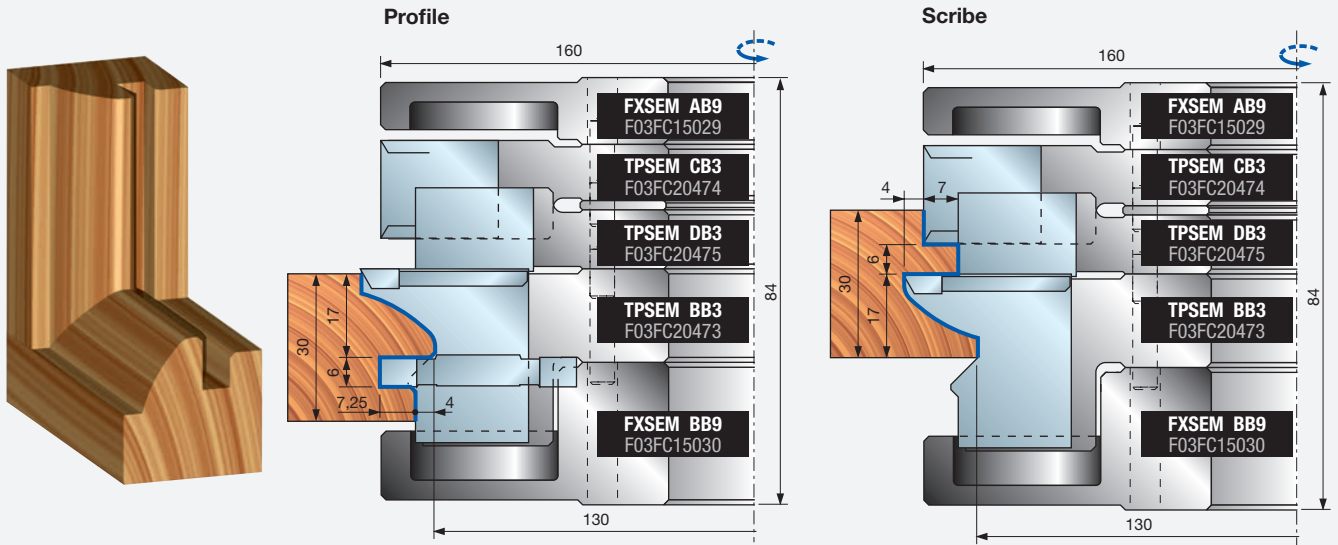
**CPSEMBG301**  
F03FC23935

for TPSEM  
BA3 - BB3 - BC3

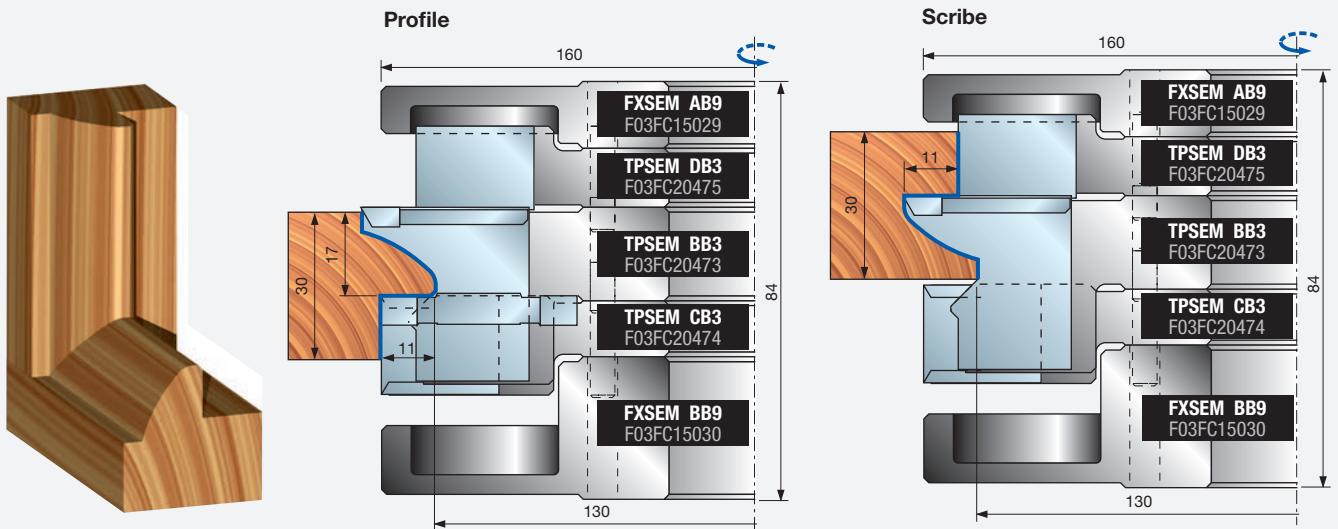


# CPSEM Knives for TPSEM BA3 - BB3 - BC3 (Wood thickness: 30 mm)

## Carrying out a groove

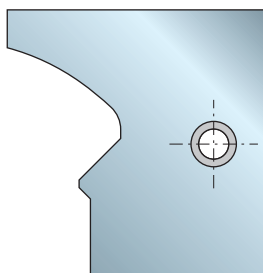


## Carrying out a rebate



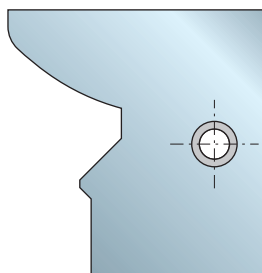
Order example for the profiles shown

Pieces	Dimensions mm	Freud Code	Art. No.
1	160 x 35	TPSEM30GB3	F03FC20477
2	35 x 34 x 3	CPSEMBE301	F03FC23933
2	35 x 34 x 3	CPSEMBF301	F03FC23934



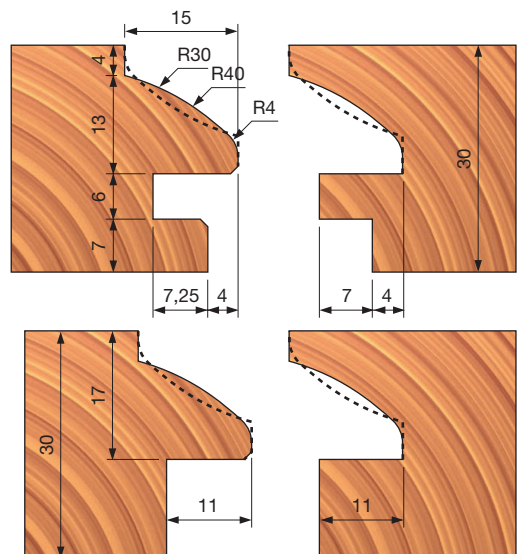
**CPSEMBF301**  
F03FC23934

for TPSEM  
BA3 - BB3 - BC3



**CPSEMBE301**  
F03FC23933

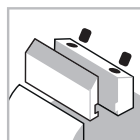
for TPSEM  
BA3 - BB3 - BC3



# TP42M Multiprofile cutterheads for doors



Manual Feed



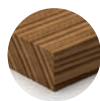
Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



### Machines:

Spindle moulders and manual feed machines.

### Materials:

Softwood and hardwood.

### Applications:

Profiling.

### Technical information:

Performance knives tool set for doors.

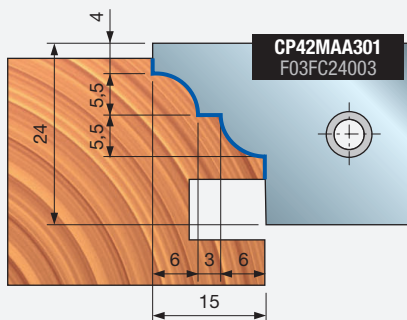
- Mostly suitable for profiling on softwood, hardwood and exotic wood, with a top quality finish.
- The tool versatility allows the production of 44-52 mm thick doors in 2 steps, taking care to adjust the tool programmed height accordingly.
- The variously profiled knives are perfectly interchangeable and do not affect the minimum tool diameter.
- This item is supplied without knives.
- Aluminium light alloy body.
- Rebore not available.

D mm	B mm	d mm	Z	R mm	Max RPM 1/min.	Freud Code	Art. No.
180	27	32	2	4	8.000	TP42M AC3	F03F676527
180	27	35	2	4	8.000	TP42M AB3	F03FC20494

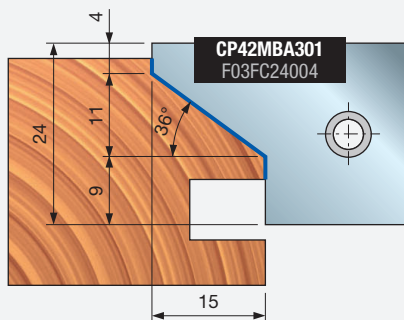
Spare parts		Dimensions mm	Freud Code	Art. No.
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Positioning plate	22 x 1,7 x 6,5	VT18M GA9	F03FA04488
	Wedge	21 x 19 x 8	CN13M AS9A	F03FC24221
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Spur insert	40 x 16 x 4	IG05MDAA305	F03FH02998
	Screw	M6 x 13	VT16M AE9	F03FC20658
	Grooving insert	34 x 8 x 16	SR06MAM301	F03FC24192
	Screw	M6 x 11,5	VT16M AB9	F03FA04477
	Allen key	4	CB03M BA9	F03FA00163
	Allen key	5	CB03M EA9	F03FA00169

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife	24 x 34 x 3	CP42MAA301	F03FC24003
2	Knife	24 x 34 x 3	CP42MBA301	F03FC24004
3	Knife	24 x 34 x 3	CP42MCA301	F03FC24005

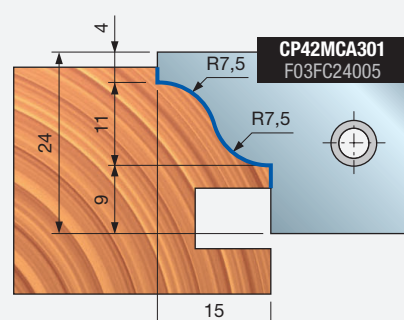
Profile 1



Profile 2

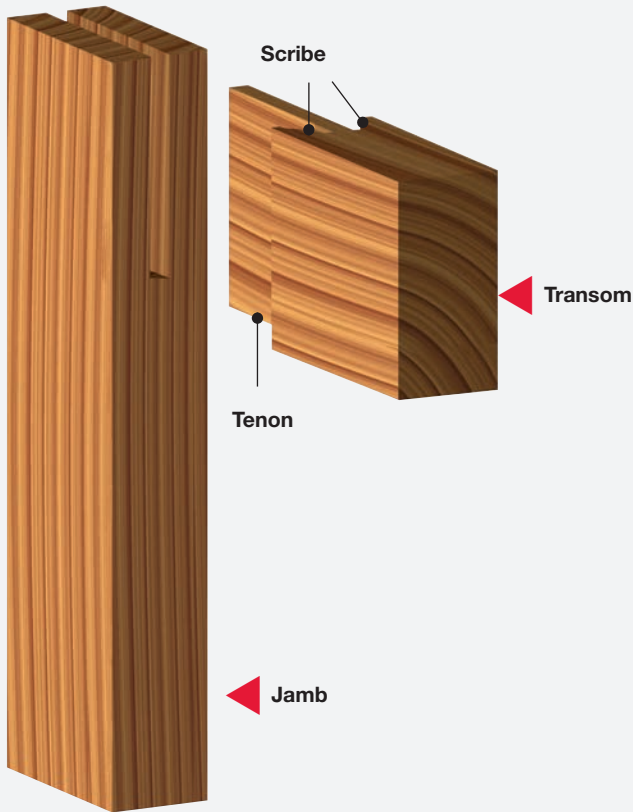


Profile 3

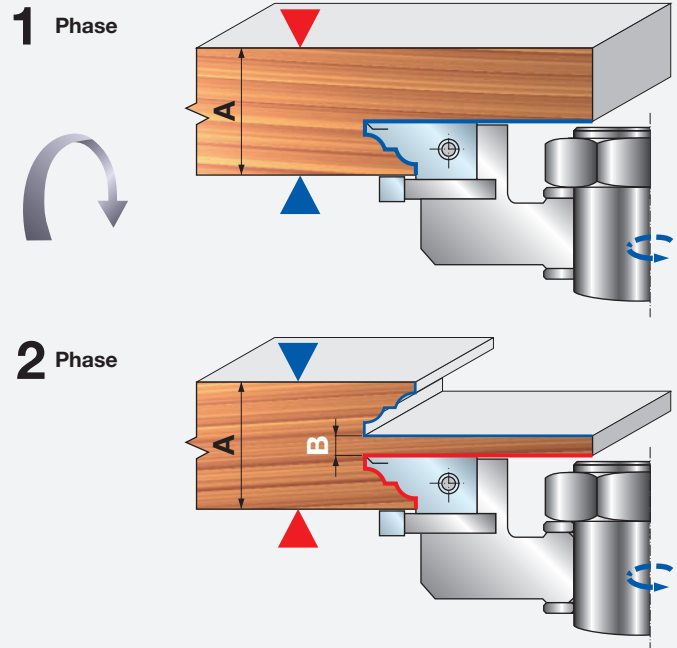


# TP42M Multiprofile cutterheads for doors

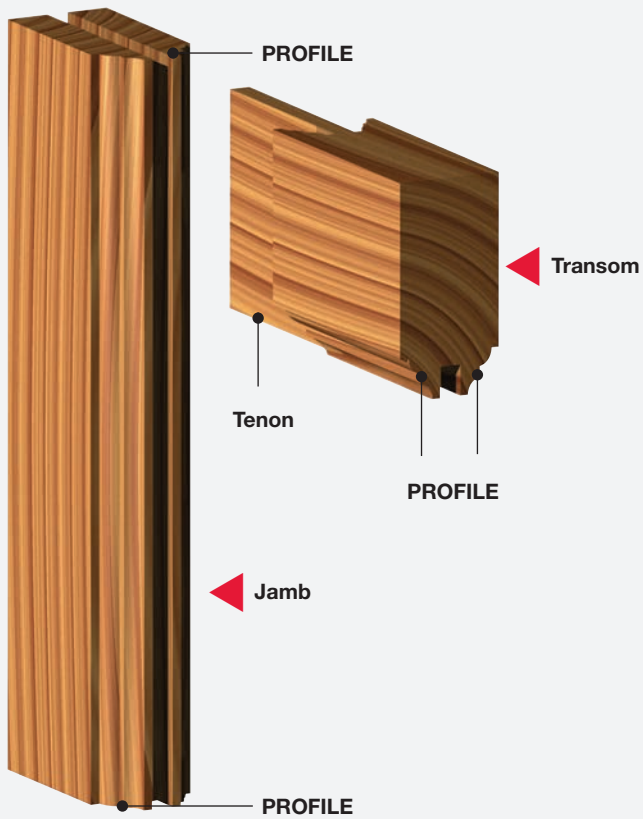
## 1 Door tenoning



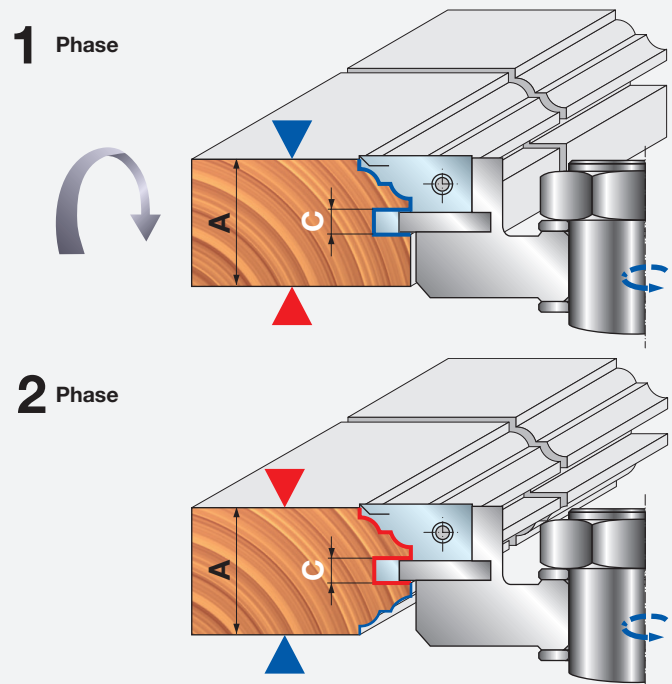
A	Door thickness mm	B	Tenon thickness mm
	44		8
	46		10
	50		14
	52		16



## 2 Door frame profiling



A	Door thickness mm	C	Groove thickness mm
	44		8
	46		10
	50		14
	52		16





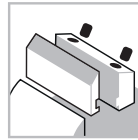


# TP46MAN

## Multiprofile cutterhead sets for doors (38-40 mm)



Manual Feed



Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



**Machines:**

Moulders, automatic and throughfeed machines.

**Materials:**

Softwood and hardwood.

**Applications:**

Profiling.

**Technical information:**

Performance knives tool set for doors.

Adjustable timber thickness 38-40 mm.

- Profile and counter profile are both available with the same set (and same 0-point).
- The cutterhead set includes knives.
- Aluminium light alloy body.
- Rebore not available.

**Flanges for TP46MAN sets**

D mm	S mm	d mm	Freud Code	Art. No.
174	18	30	TP46M AA3	F03FC20506
174	18	30	TP46M AD3	F03FC20509
174	18	32	TP46M AE3	F03FC24454
174	18	32	TP46M AH3	F03FC24457

**TP46MAN sets for manual feed**

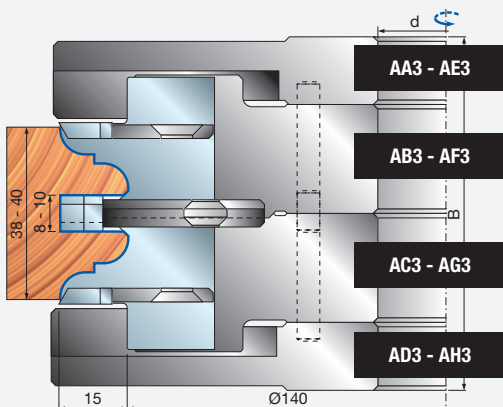
Profile	D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
1	174	78	30	2	7.500	TP46MAN001	F03FC20510
2	174	78	30	2	7.500	TP46MAN002	F03FC20511
3	174	78	30	2	7.500	TP46MAN003	F03FC20512
4	174	78	30	2	7.500	TP46MAN004	F03FC20513
5	174	78	30	2	7.500	TP46MAN005	F03FC20514
6	174	78	30	2	7.500	TP46MAN006	F03FC20515
7	174	78	30	2	7.500	TP46MAN007	F03FC20516
8	174	78	30	2	7.500	TP46MAN008	F03FC20517
1	174	78	32	2	7.500	TP46MAN321	F03FC24458
2	174	78	32	2	7.500	TP46MAN322	F03FC24459
3	174	78	32	2	7.500	TP46MAN323	F03FC24460
4	174	78	32	2	7.500	TP46MAN324	F03FC24461
5	174	78	32	2	7.500	TP46MAN325	F03FC24462
6	174	78	32	2	7.500	TP46MAN326	F03FC24463
7	174	78	32	2	7.500	TP46MAN327	F03FC24464
8	174	78	32	2	7.500	TP46MAN328	F03FC24465

**Cutterheads for TP46M sets**

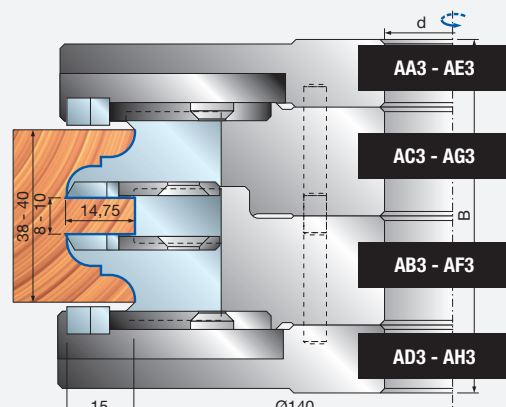
D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
174	31,5	30	2	8.300	TP46M AB3	F03FC20507
174	31,5	30	2	8.300	TP46M AC3	F03FC20508
174	31,5	32	2	8.300	TP46M AF3	F03FC24455
174	31,5	32	2	8.300	TP46M AG3	F03FC24456

See page 408-409 for spare parts.

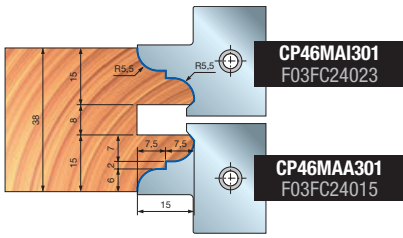
**Example of profile**



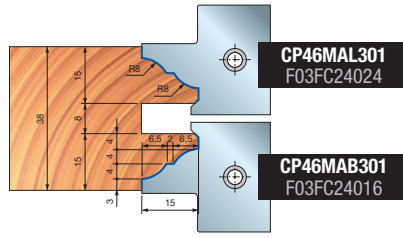
**Example of scribe**



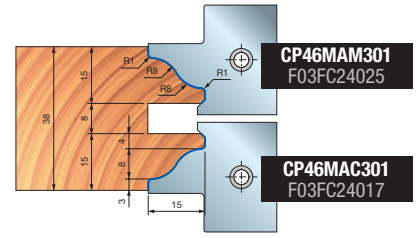
PROFILE 1



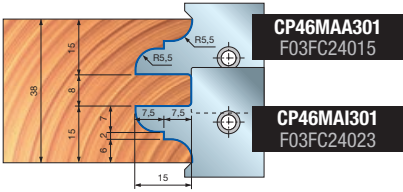
PROFILE 2



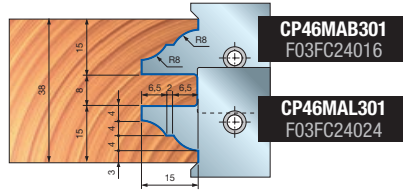
PROFILE 3



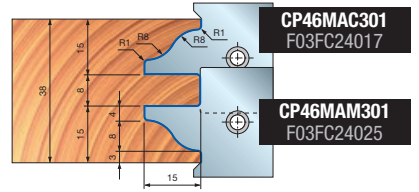
SCRIBE 1



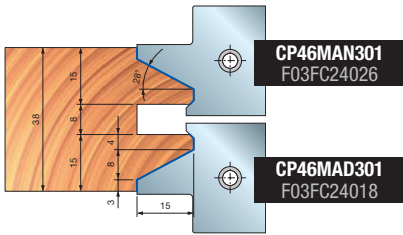
SCRIBE 2



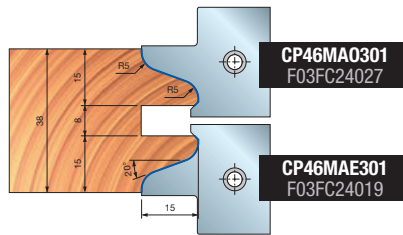
SCRIBE 3



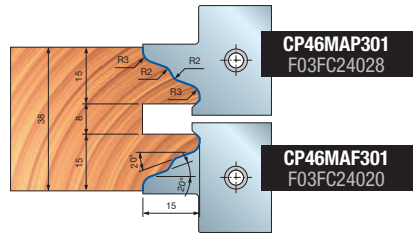
PROFILE 4



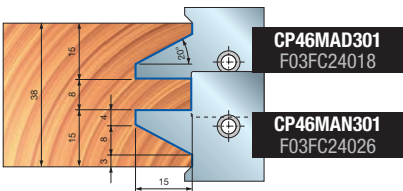
PROFILE 5



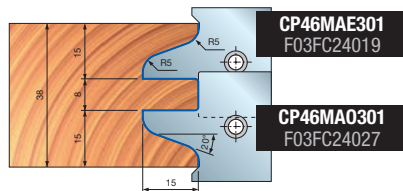
PROFILE 6



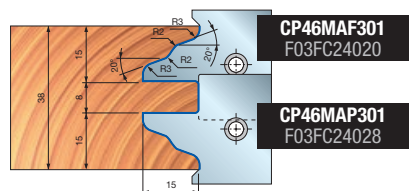
SCRIBE 4



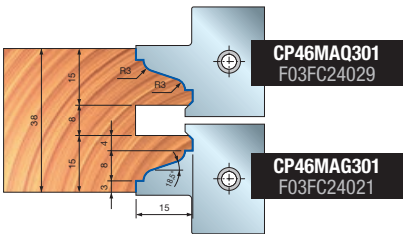
SCRIBE 5



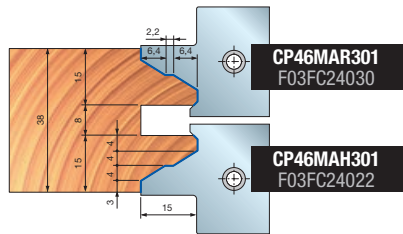
SCRIBE 6



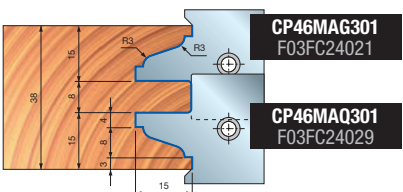
PROFILE 7



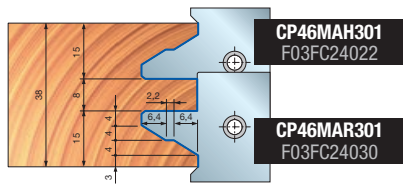
PROFILE 8



SCRIBE 7



SCRIBE 8

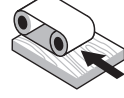




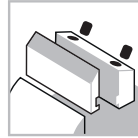
## TP46MEC

## Multiprofile cutterhead sets for doors (38-40 mm)

MEC



Automatic Feed



Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



### Machines:

Moulders, automatic and throughfeed machines.

### Materials:

Softwood and hardwood.

### Applications:

Profiling.

### Technical information:

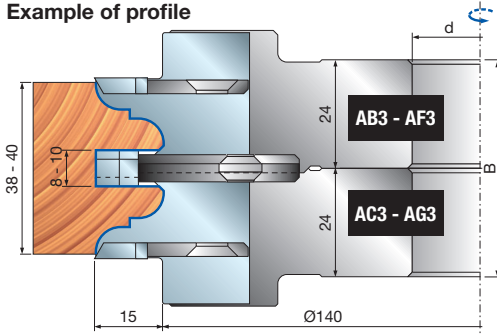
Performance knives tool set for doors.

Adjustable timber thickness 38-40 mm.

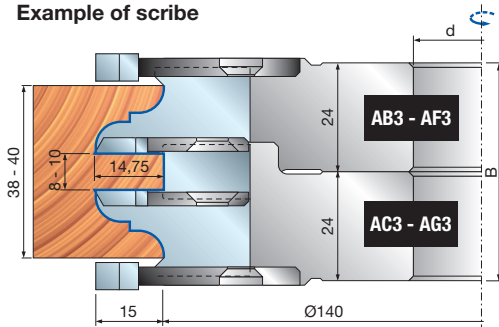
- Profile and counter profile are both available with the same set (and same 0-point).
- The cutterhead set includes knives.
- Aluminium light alloy body.
- Rebore not available.

Profile	D mm	B mm	d mm	Max RPM 1/min.	Freud Code	Art. No.
1	170	48	30	7.500	TP46MEC001	F03FC20518
2	170	48	30	7.500	TP46MEC002	F03FC20519
3	170	48	30	7.500	TP46MEC003	F03FC20520
4	170	48	30	7.500	TP46MEC004	F03FC20521
5	170	48	30	7.500	TP46MEC005	F03FC20522
6	170	48	30	7.500	TP46MEC006	F03FC20523
7	170	48	30	7.500	TP46MEC007	F03FC20524
8	170	48	30	7.500	TP46MEC008	F03FC20525
1	170	48	32	7.500	TP46MEC321	F03FC24466
2	170	48	32	7.500	TP46MEC322	F03FC24467
3	170	48	32	7.500	TP46MEC323	F03FC24468
4	170	48	32	7.500	TP46MEC324	F03FC24469
5	170	48	32	7.500	TP46MEC325	F03FC24470
6	170	48	32	7.500	TP46MEC326	F03FC24471
7	170	48	32	7.500	TP46MEC327	F03FC24472
8	170	48	32	7.500	TP46MEC328	F03FC24473

### Example of profile



### Example of scribe



### ATB 15° tooth (Fig. 2)

	Spare parts	Dimensions mm	Freud Code	Art. No.
AB3 - AF3		Spacer	50 x 2 x 30	AN01MA0209 F03FC00035
		Spacer	52 x 2 x 32	AN01MX0209 F03FC24489
		Allen key	4	CB03M BA9 F03FA00163
		Allen key	5	CB03M EA9 F03FA00169
		Wedge	28 x 34,5 x 8	CN46M 001 F03FC01438
		Spur insert	34 x 3,5 x 16	SR06MDBA302 F03FC24197
		Sector	25 x 45 x 6 Z1	SR11MSBE301 F03FC24212
		Screw	M5 x 8	VT05M AA9 F03FA04444
		Screw	M6 x 13	VT16M AE9 F03FC20658
		Positioning plate	22 x 1,7 x 6,5	VT18M GA9 F03FA04488
AC3 - AG3		Screw	M10 x 16	2616M EE9 F03FA07426
		Wedge	28 x 34,5 x 8	CN46M 002 F03FC01439
		Spur insert	34 x 3,5 x 16	SR06MSBA302 F03FC24200
		Sector	25 x 45 x 6 Z1	SR11MDBE301 F03FC24207
		Screw	M5 x 8	VT05M AA9 F03FA04444
		Screw	M6 x 11,5	VT16M AB9 F03FA04477
		Positioning plate	22 x 1,7 x 6,5	VT18M GA9 F03FA04488
		Screw	M10 x 16	2616M EE9 F03FA07426

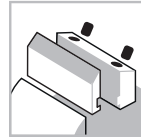


# TD60M

## Door frames profile cutterheads



Manual Feed



Clamping System



Aluminium Body



Softwood








Hardwood



Profiling

D	B	d	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm		1/min.		
200	55	32	3	7.000	TD60M AC3	F03F668631
200	55	35	3	7.000	TD60M AB3	F03FC20222

Spare parts		Dimensions	Freud Code	Art. No.
		mm		
	Knife	55 x 35 x 3	CT60MAA301	F03FC24114
	Wedge	50 x 23 x 8	CN60M AA9	F03FC01446
	Screw	M10 x 25	2602M FI9	F03FA07353
	Screw	M8 x 10 x 22	VT08M AD9	F03FA04456
	Allen key	5	CB03M EA9	F03FA00169



### Machines:

Spindle moulders and manual feed machines.

### Materials:

Softwood and hardwood.

### Applications:

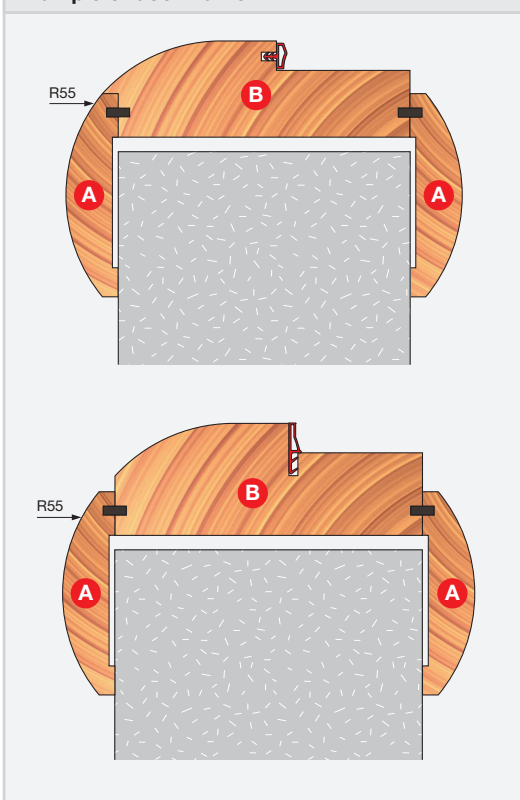
Profiling.

### Technical information:

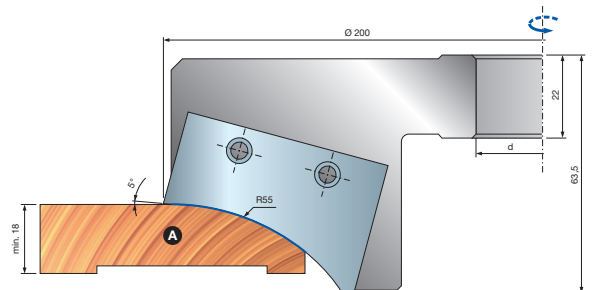
Panel sizing cutterhead with profiled knives suitable for door frames and door frame covers profiles.

- This tool is particularly suitable for profiling on hardwood and exotic wood, to produce door frames with rounded profile.
- Aluminium light alloy body.
- Rebore not available.

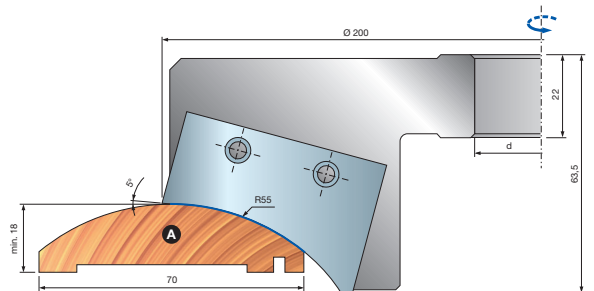
### Example of door frame



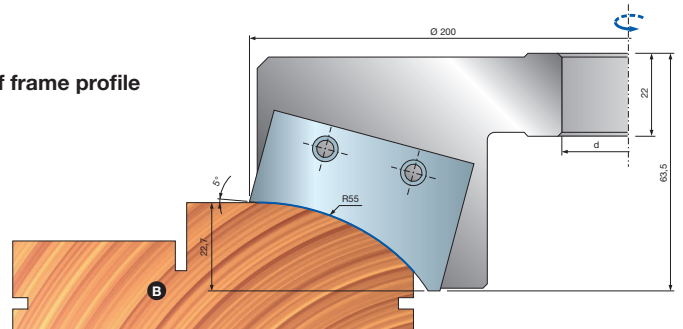
### Step 1



### Step 2



### Example of frame profile



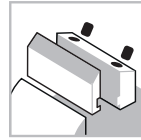


# TD61M

## Door frame profiles cutterhead set



Manual Feed



Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



**Machines:**

Spindle moulders and manual feed machines.

**Materials:**

Softwood and hardwood.

**Applications:**

Profiling.

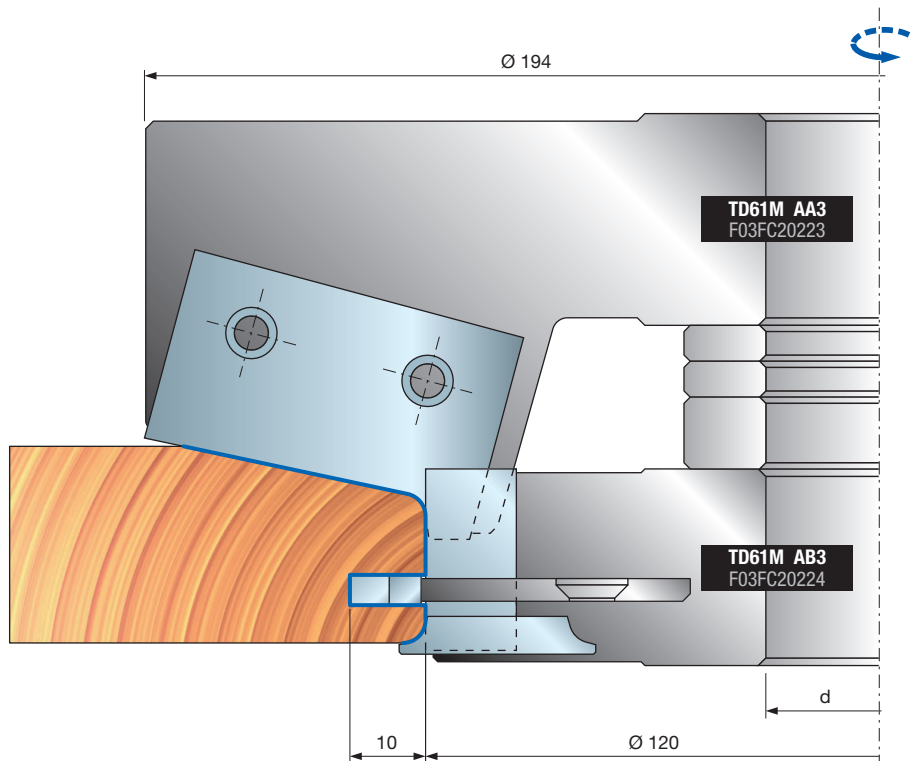
**Technical information:**

Multiple profile tools set for door frames.

- Aluminium light alloy body.
- Rebore not available.
- Performance knives to be ordered separately.

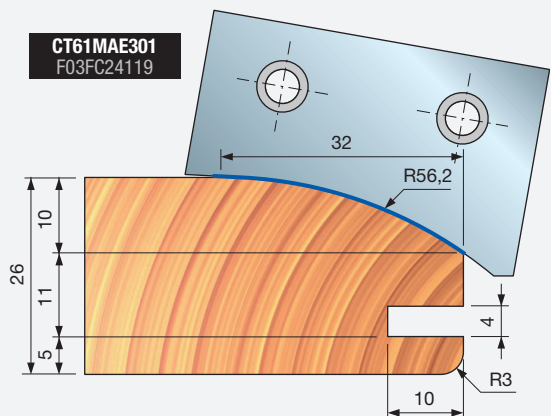
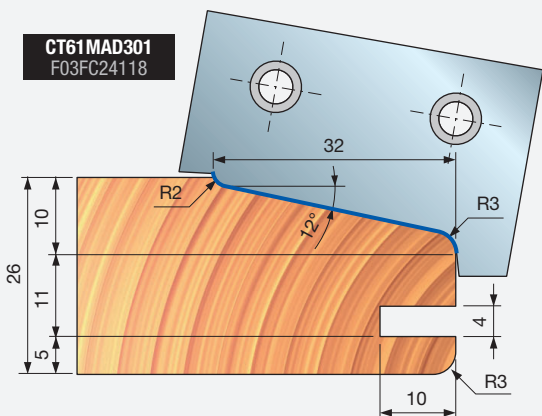
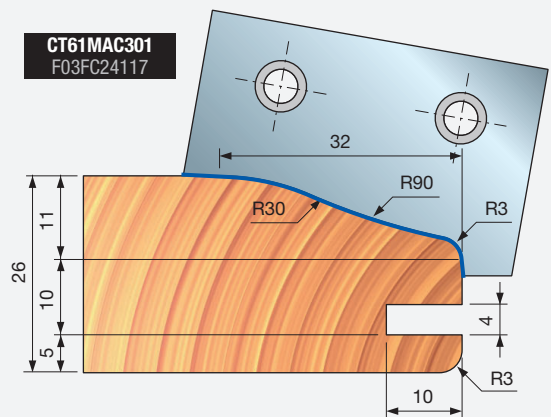
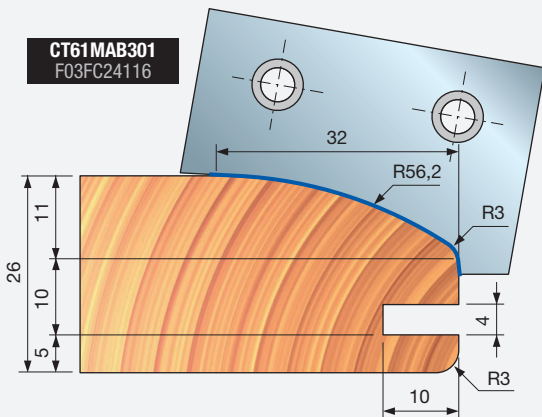
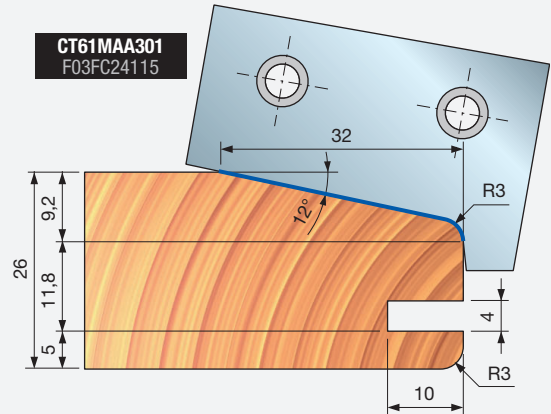
D	B	d	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm		1/min.		
194	59	30	2	7.000	TD61M AA3	F03FC20223
140	25	30	2	8.800	TD61M AB3	F03FC20224

	Spare parts	Dimensions	Freud Code	Art. No.
		mm		
AA3		Screw	M10 x 18	VT03M CC9 F03FA04438
		Screw	M8 x 10 x 22	VT08M AD9 F03FA04456
		Allen key	5	CB03M EA9 F03FA00169
AB3		Knife	24 x 12 x 1,5	CG08MOA310 F03FH02911
		Wedge	15 x 20 x 8	CN09MD AK9 F03FC01304
		Nut	15 x 13,3 x M10	VT20M MA9 F03FC20670
		Screw	M10 x 22	VT19M MA9 F03FA04496
		Sector	25 x 45 x 4 Z1	SR11MDBC301 F03FC24205
		Screw	M5 x 8	VT05M AA9 F03FA04444
		Rounding insert	26 x 16 x 5 R3	IG62MSAE305 F03FH03033
		Screw for IG62MS	M6 x 14,5	VT16M AA9 F03FA04476
		Allen key	4	CB03M BA9 F03FA00163
		Torx key	T20	CB03M CC9 F03FA00167



Dimensions mm	Spare knives	Art. No.
45 x 30 x 3	<b>CT61MAA301</b>	F03FC24115
45 x 30 x 3	<b>CT61MAB301</b>	F03FC24116
45 x 30 x 3	<b>CT61MAC301</b>	F03FC24117
45 x 30 x 3	<b>CT61MAD301</b>	F03FC24118
45 x 30 x 3	<b>CT61MAE301</b>	F03FC24119

Profiles obtainable using both the cutterheads TD61M AA3 and TD61M AB3



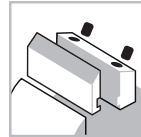


# TD21M

# Raised panel cutterheads



Manual Feed



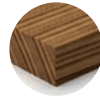
Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



**Machines:**

Spindle moulders and manual feed machines.

**Materials:**

Softwood and hardwood.

**Applications:**

Profiling.

**Technical information:**

Performance knives raised panel with 5 different profiles available.

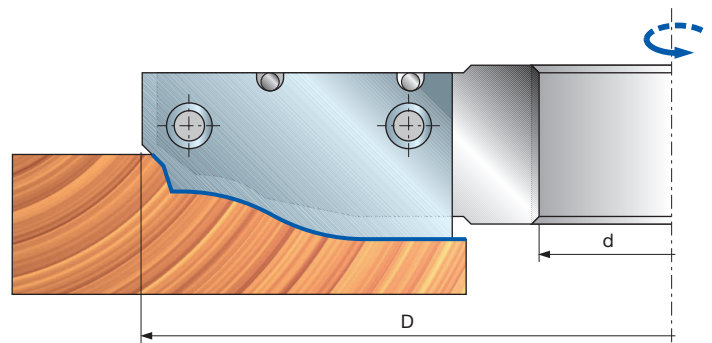
- Aluminium light alloy body.
- Rebore not available.
- Knives to be ordered separately.

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
140	-	30	2	9.600	<b>TD21M HA3</b>	F03FC24421
140	-	32	2	9.600	<b>TD21M HC3</b>	F03FC24422
140	-	35	2	9.600	<b>TD21M HB3</b>	F03FC23145

Spare parts		Dimensions mm	Freud Code	Art. No.
	Screw	M6 x 10	<b>2622M CB9</b>	F03FA07455
	Screw	M6 x 12	<b>2607M 006</b>	F03FA07456
	Washer	14 x 2 x 6	<b>VT18M AL9</b>	F03FC20662
	Positioning plate	33 x 3 x 16	<b>VT18M AI9</b>	F03FC20661
	Allen key	4	<b>CB03M BA9</b>	F03FA00163

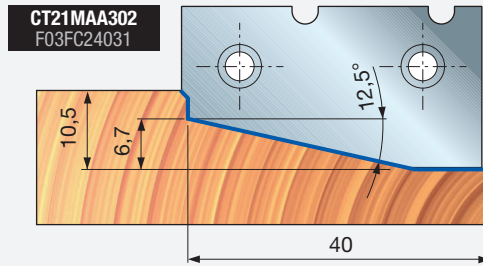
**Profiled knives**

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
<b>1</b>	Knife	41 x 22 x 3,5	<b>CT21MAA302</b>	F03FC24031
<b>2</b>	Knife	41 x 22 x 3,5	<b>CT21MBA302</b>	F03FC24032
<b>3</b>	Knife	41 x 22 x 3,5	<b>CT21MCA302</b>	F03FC24033
<b>4</b>	Knife	41 x 22 x 3,5	<b>CT21MDA302</b>	F03FC24034
<b>5</b>	Knife	41 x 22 x 3,5	<b>CT21MEA302</b>	F03FC24035

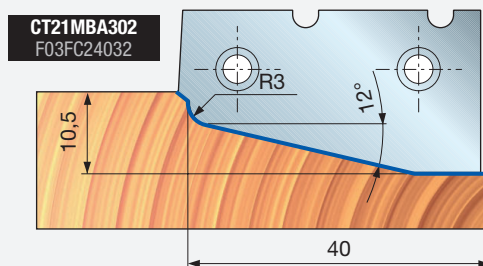


Example of profiles

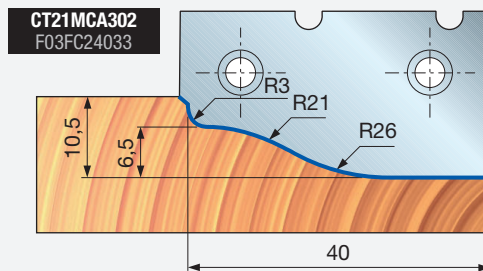
PROFILE 1



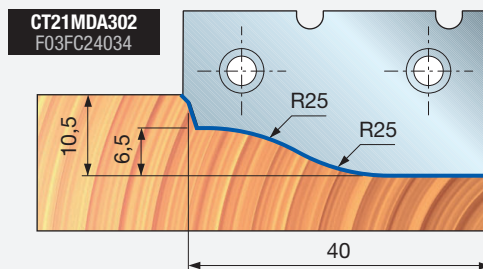
PROFILE 2



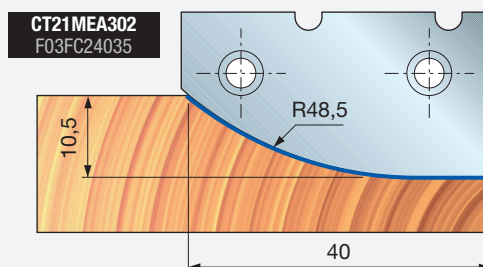
PROFILE 3



PROFILE 4



PROFILE 5





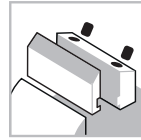


# TD51M

## Raised panel cutterheads for softwood and hardwood



Manual Feed



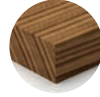
Clamping System



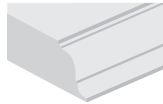
Aluminium Body



Softwood



Hardwood



Profiling



**Machines:**

Spindle moulders and manual feed machines.

**Materials:**

Softwood and hardwood.

**Applications:**

Profiling.

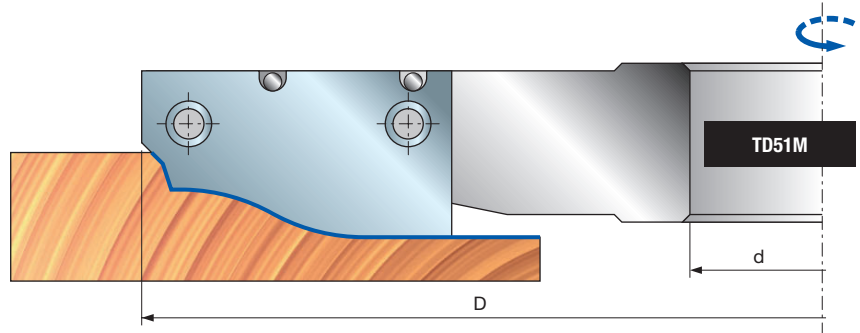
**Technical information:**

Performance knives raised panel with 5 different profiles available designed to fit knives for softwood and hardwood.

- Designed to perfectly cut softwood or hardwood with two knives, with both along the grain or end grain feeding.
- This result has been achieved by choosing different cutting angles according to the type of wood to be machined.
- Only two knives are to be fitted on the tool at one time, in opposite direction.
- The dimensions of the knives for cutting hardwood and softwood are different but the same profile is achieved.
- This item is supplied without knives.
- Aluminium light alloy body.
- Rebore not available.

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
180	-	30	2+2	7.500	TD51M AA3	F03FC20209
180	-	32	2+2	7.500	TD51M AC3	F03FC24423
180	-	35	2+2	7.500	TD51M AB3	F03FC20210
180	-	50	2+2	7.500	TD51M AD3	F03FC20211

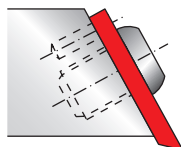
Spare parts		Dimensions mm	Freud Code	Art. No.
	Washer	14 x 2 x 6	VT18M AL9	F03FC20662
	Screw	M6 x 12	2607M 006	F03FA07456
	Torx key	4	CB03M BB9	F03FA00164



**1 Knife**



2 Knife



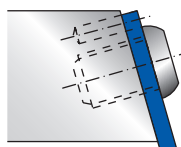
**2 Knives for Softwood**

Profile	Dimensions mm	Freud Code	Art. No.
1	41 x 28 x 3,5	CT51MAA302	F03FC24036
2	41 x 28 x 3,5	CT51MBA302	F03FC24037
3	41 x 28 x 3,5	CT51MCA302	F03FC24038
4	41 x 28 x 3,5	CT51MDA302	F03FC24039
5	41 x 28 x 3,5	CT51MEA302	F03FC24040

**2 Knife**



1 Knife

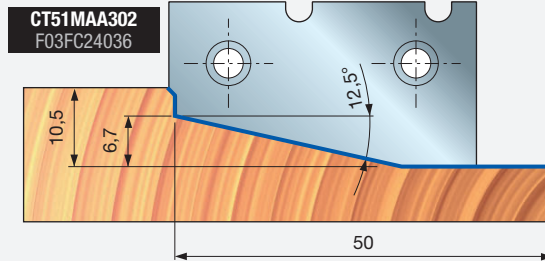


**2 Knives for Hardwood**

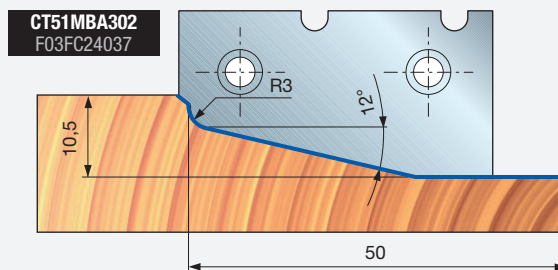
Profile	Dimensions mm	Freud Code	Art. No.
1	41 x 22 x 3,5	CT21MAA302	F03FC24031
2	41 x 22 x 3,5	CT21MBA302	F03FC24032
3	41 x 22 x 3,5	CT21MCA302	F03FC24033
4	41 x 22 x 3,5	CT21MDA302	F03FC24034
5	41 x 22 x 3,5	CT21MEA302	F03FC24035

Example of profiles

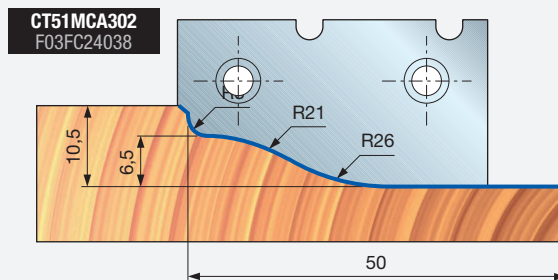
PROFILE 1



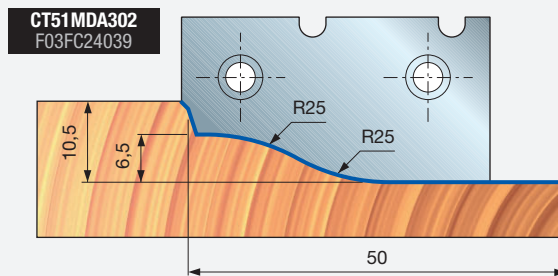
PROFILE 2



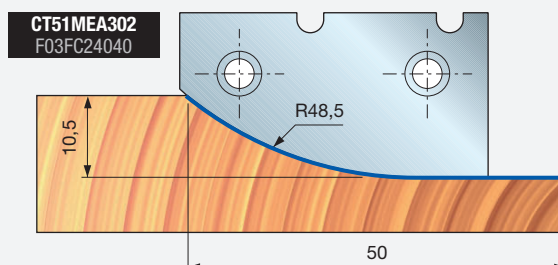
PROFILE 3

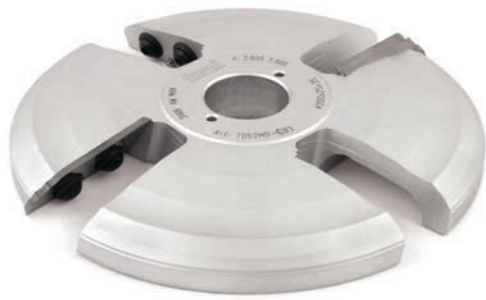


PROFILE 4



PROFILE 5



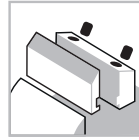


# TD52M TD52MD

# Raised panel cutterheads for softwood and hardwood



Manual Feed



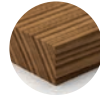
Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



### Machines:

Spindle moulders and manual feed machines.

### Materials:

Softwood and hardwood.

### Applications:

Profiling.

### Technical information:

Performance knives raised panel with 5 different profiles available designed to fit knives for softwood and hardwood.

- This tool is designed to perfectly cut softwood or hardwood with two knives, with both along the grain or end grain feeding.
- This result has been achieved by choosing different cutting angles according to the type of wood to be machined.
- Only two knives are to be fitted on the tool at one time, in opposite direction.
- The dimensions of the knives for cutting hardwood and softwood are different but the same profile is achieved.
- This item is supplied without knives.
- Aluminium light alloy body. For cleaning do not use products containing caustic soda.
- Rebore not available.

### Items are supplied with knives

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
200	25	30	2+2	7.000	TD52M CA3	F03FC24424
200	25	30	2+2	7.000	TD52MD CA3	F03FC24426
200	25	32	2+2	7.000	TD52M CC3	F03FC24425
200	25	32	2+2	7.000	TD52MD CC3	F03FC24427
200	25	35	2+2	7.000	TD52M CB3	F03FC20212
200	25	35	2+2	7.000	TD52MD CB3	F03FC20214

### Items are supplied without knives

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
200	25	30	2+2	7.000	TD52M HA3	F03F668623
200	25	30	2+2	7.000	TD52MD HA3	F03F668625
200	25	32	2+2	7.000	TD52M HC3	F03F668624
200	25	32	2+2	7.000	TD52MD HC3	F03F668626
200	25	35	2+2	7.000	TD52M HB3	F03FC20213
200	25	35	2+2	7.000	TD52MD HB3	F03FC20215

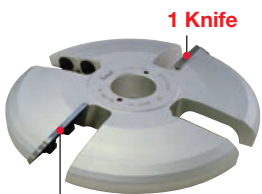
Spare parts		Dimensions mm	Freud Code	Art. No.
	Washer	14 x 2 x 6	VT18M AL9	F03FC20662
	Screw	M6 x 12	2607M 006	F03FA07456
	Torx key	4	CB03M BB9	F03FA00164

### 2 Knives for Softwood

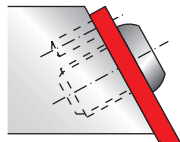
Profile	Dimensions mm	Freud Code	Art. No.
2	55 x 30 x 3,5	CT52MTB301	F03FC24057
		CT52MDTB301	F03FC24052
3	55 x 30 x 3,5	CT52MTC301	F03FC24058
		CT52MDTC301	F03FC24053
4	55 x 30 x 3,5	CT52MTD301	F03FC24059
		CT52MDTD301	F03FC24054
5	55 x 30 x 3,5	CT52MTE301	F03FC24060
		CT52MDTE301	F03FC24055

### 2 Knives for Hardwood

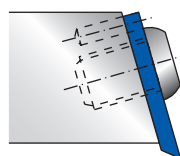
Profile	Dimensions mm	Freud Code	Art. No.
2	55 x 25 x 3,5	CT52MDB301	F03FC24042
		CT52MDD301	F03FC24045
3	55 x 25 x 3,5	CT52MDC301	F03FC24043
		CT52MDDC301	F03FC24046
4	55 x 25 x 3,5	CT52MDD301	F03FC24049
		CT52MDD301	F03FC24047
5	55 x 25 x 3,5	CT52MDE301	F03FC24050
		CT52MDDE301	F03FC24048

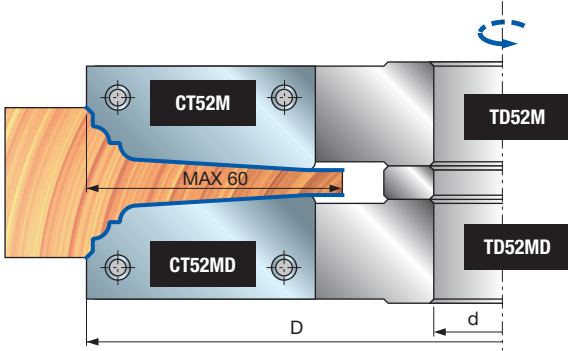


2 Knife



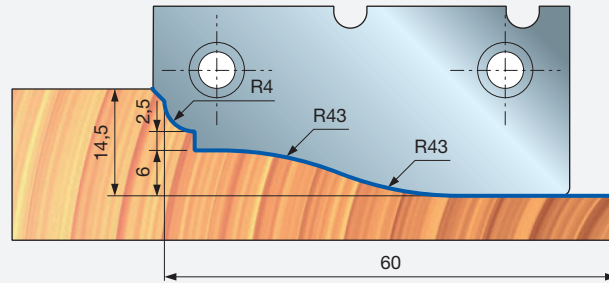
1 Knife



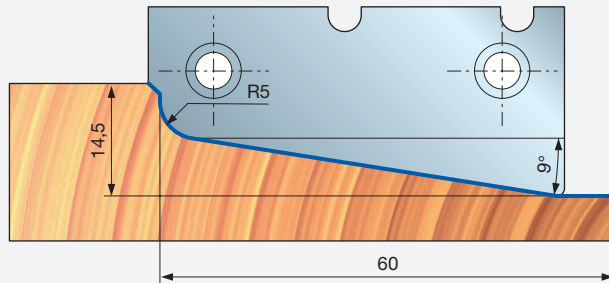


Example of profiles

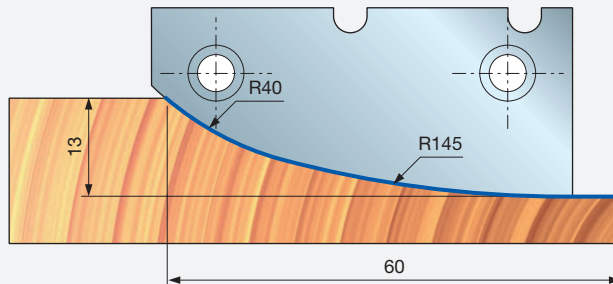
PROFILE 2



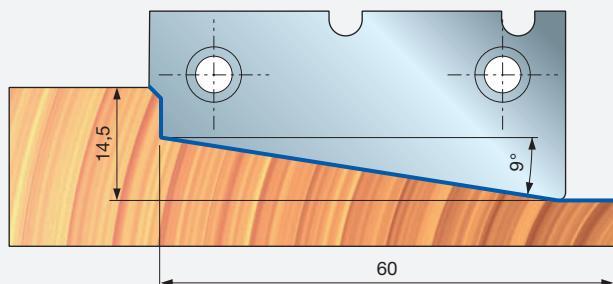
PROFILE 3

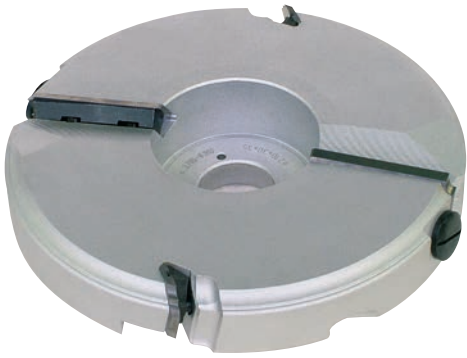


PROFILE 4



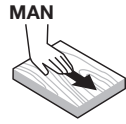
PROFILE 5



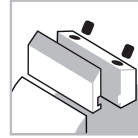


# TD55MD TD55MS

## Raised panel cutterheads



Manual Feed



Clamping System



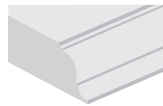
Aluminium Body



Softwood



Hardwood



Profiling



### Machines:

Spindle moulders and manual feed machines.

### Materials:

Softwood and hardwood.

### Applications:

Profiling.

### Technical information:

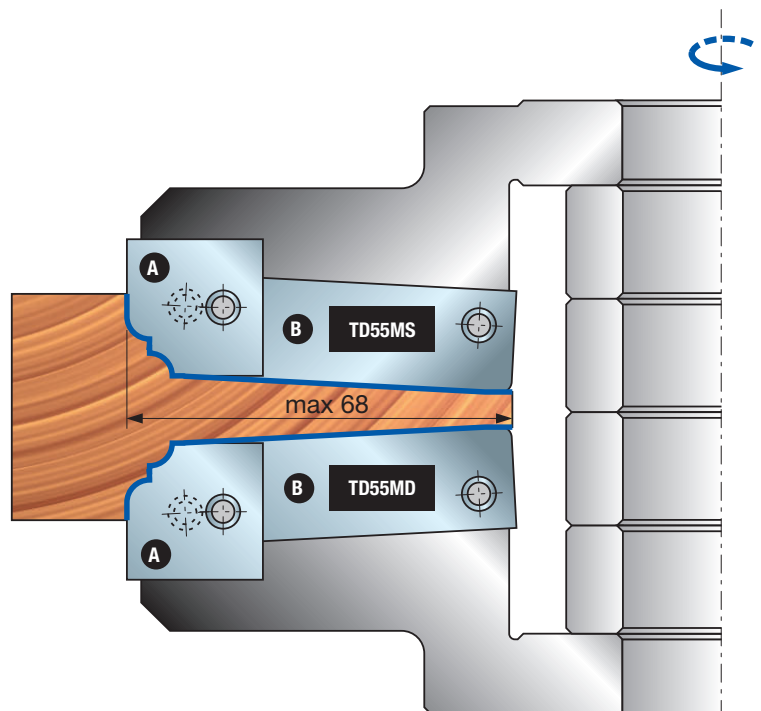
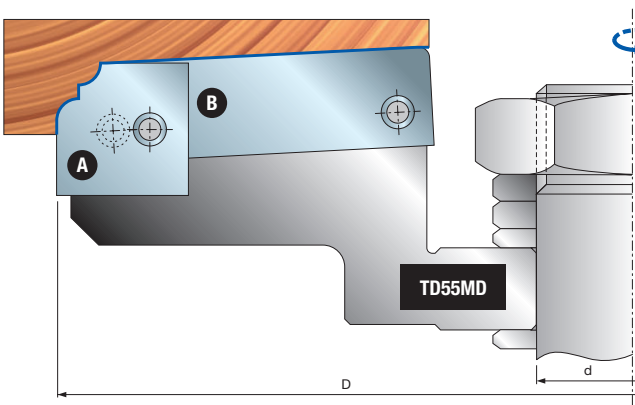
Performance knives raised panel with 4 different profiles available.

- The Z 2+2 design allows the tool to impact the wood perfectly along the entire depth profile (max 65mm).
- Raised panels are available in left and right hand and both can work combined for a one step profile.
- It is possible to fit 4 types of standard knives for machining 4 different profiles (see drawings).
- Due to the particular tool geometry, this item is particularly indicated for cutting deep profiles.
- These items are supplied without knives.
- Aluminium light alloy body. For cleaning do not use products containing caustic soda.
- Rebore not available.

D	B	d*	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm		1/min.		
210	-	30	2+2	6.500	<b>TD55MD BA3</b>	F03F668627
210	-	32	2+2	6.500	<b>TD55MD BC3</b>	F03F668628
210	-	35	2+2	6.500	<b>TD55MD BB3</b>	F03FC20217
210	-	30	2+2	6.500	<b>TD55MS BA3</b>	F03F668629
210	-	32	2+2	6.500	<b>TD55MS BC3</b>	F03F668630
210	-	35	2+2	6.500	<b>TD55MS BB3</b>	F03FC20219

\* Size shown between brackets is the max. rebore possible

	Spare parts	Dimensions	Freud Code	Art. No.
		mm		
	Screw	M10 x 25	<b>2602M FI9</b>	F03FA07353
	Screw	M8 x 10 x 22	<b>VT08M AD9</b>	F03FA04456
	Screw	M5 x 7 x 16	<b>VT08M AE9</b>	F03FA04457
	Allen key	5	<b>CB03M EC9</b>	F03FA00171
TD55MS TD55MD	Wedge A	21 x 23 x 8	<b>CN55MD AA9A</b>	F03FC24544
	Wedge B	61 x 18 x 8	<b>CN55MD BA9</b>	F03FC01441
	Wedge A	21 x 23 x 8	<b>CN55MS AA9A</b>	F03FC24545
	Wedge B	61 x 18 x 8	<b>CN55MS BA9</b>	F03FC01443



**Knives for TD55MD**

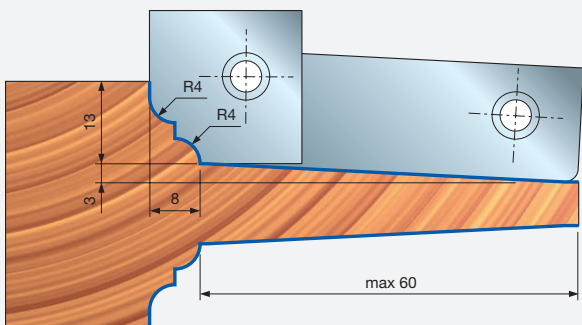
Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife A	23 x 24 x 3	CT55MDAA301	F03FC24078
	Knife B	65 x 20 x 3	CT55MDBA301	F03FC24087
2	Knife A	23 x 24 x 3	CT55MDAB301	F03FC24079
	Knife B	65 x 20 x 3	CT55MDBB301	F03FC24088
3	Knife A	23 x 24 x 3	CT55MDAC301	F03FC24080
	Knife B	65 x 20 x 3	CT55MDBC301	F03FC24089
4	Knife A	23 x 24 x 3	CT55MDAE301	F03FC24082
	Knife B	65 x 20 x 3	CT55MDBE301	F03FC24091

**Knives for TD55MS**

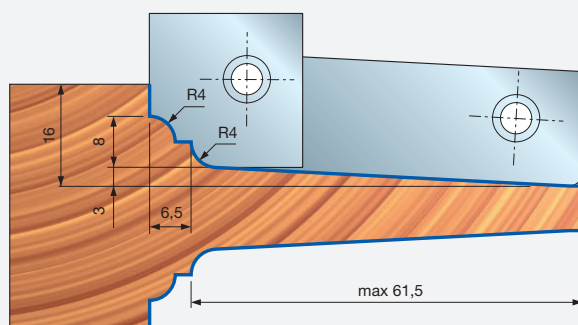
Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife A	23 x 24 x 3	CT55MSAA301	F03FC24096
	Knife B	65 x 20 x 3	CT55MSBA301	F03FC24105
2	Knife A	23 x 24 x 3	CT55MSAB301	F03FC24097
	Knife B	65 x 20 x 3	CT55MSBB301	F03FC24106
3	Knife A	23 x 24 x 3	CT55MSAC301	F03FC24098
	Knife B	65 x 20 x 3	CT55MSBC301	F03FC24107
4	Knife A	23 x 24 x 3	CT55MSAE301	F03FC24100
	Knife B	65 x 20 x 3	CT55MSBE301	F03FC24109

**Example of profiles**

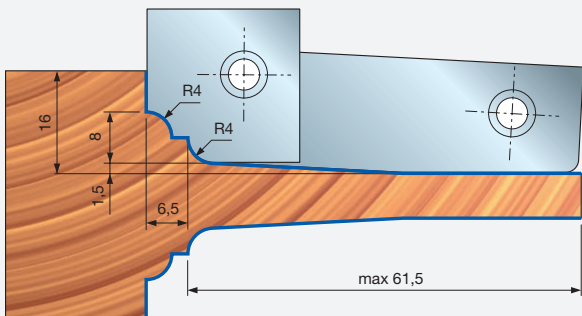
**PROFILE 1**



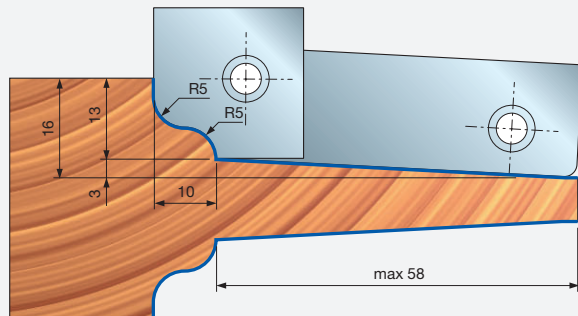
**PROFILE 2**



**PROFILE 3**



**PROFILE 4**



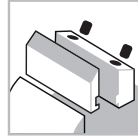


# TD55MD TD55MS

## Raised panel cutterheads



Manual Feed



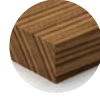
Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



**Machines:**

Spindle moulders and manual feed machines.

**Materials:**

Softwood and hardwood.

**Applications:**

Profiling.

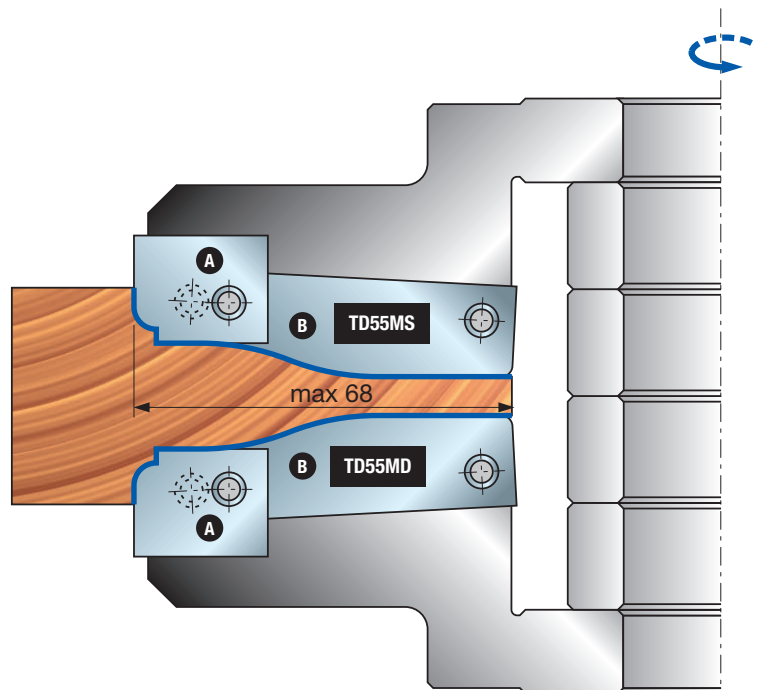
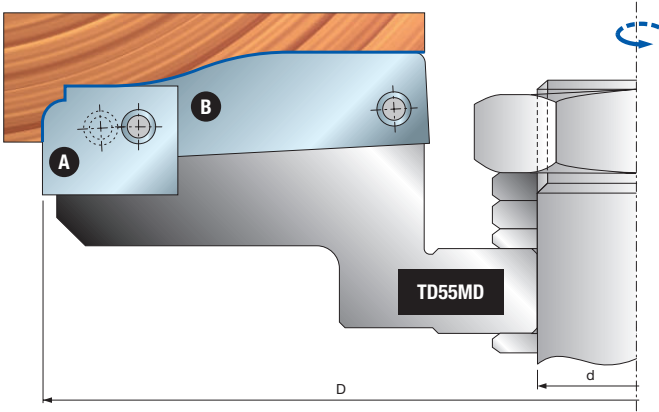
**Technical information:**

Performance knives raised panel with 4 different profiles available.

- The Z 2+2 design allows the tool to impact the wood perfectly along the entire depth profile (max 65mm).
- Raised panels are available in left and right hand and both can work combined for a one step profile.
- Is possible to fit 4 types of standard knives for machining 4 different profiles (see drawings).
- Due to the particular tool geometry, this item is particularly indicated for cutting deep profiles.
- These items are supplied without knives.
- Aluminium light alloy body.
- Rebore not available.

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
210	-	30	2+2	6.500	<b>TD55MD CA3</b>	F03F668934
210	-	32	2+2	6.500	<b>TD55MD CC3</b>	F03F668935
210	-	35	2+2	6.500	<b>TD55MD CB3</b>	F03FC20218
210	-	30	2+2	6.500	<b>TD55MS CA3</b>	F03F668936
210	-	32	2+2	6.500	<b>TD55MS CC3</b>	F03F668937
210	-	35	2+2	6.500	<b>TD55MS CB3</b>	F03FC20220

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Screw	M10 x 25	<b>2602M FI9</b>	F03FA07353
	Screw	M8 x 10 x 22	<b>VT08M AD9</b>	F03FA04456
	Screw	M5 x 7 x 16	<b>VT08M AE9</b>	F03FA04457
	Allen key	5	<b>CB03M EC9</b>	F03FA00171
TD55MD TD55MS	Wedge A	21 x 23 x 8	<b>CN55MD AA9A</b>	F03FC24544
	Wedge B	61 x 18 x 8	<b>CN55MD BA9</b>	F03FC01441
	Wedge A	21 x 23 x 8	<b>CN55MS AA9A</b>	F03FC24545
	Wedge B	61 x 18 x 8	<b>CN55MS BA9</b>	F03FC01443



**Knives for TD55MD**

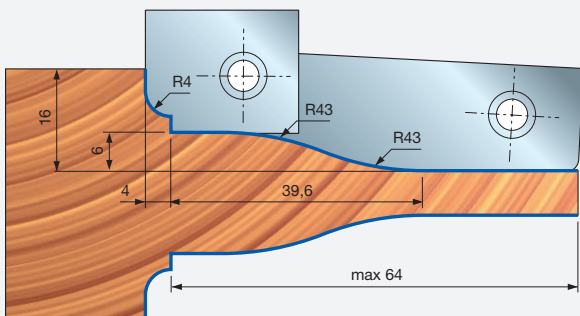
Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife A	20 x 24 x 3	CT55MDAD301	F03FC24081
	Knife B	65 x 20 x 3	CT55MDBD301	F03FC24090
2	Knife A	20 x 24 x 3	CT55MDAG301	F03FC24084
	Knife B	65 x 20 x 3	CT55MDBG301	F03FC24093
3	Knife A	20 x 24 x 3	CT55MDAH301	F03FC24085
	Knife B	65 x 20 x 3	CT55MDBH301	F03FC24094
4	Knife A	20 x 24 x 3	CT55MDAI301	F03FC24086
	Knife B	65 x 20 x 3	CT55MDBI301	F03FC24095

**Knives for TD55MS**

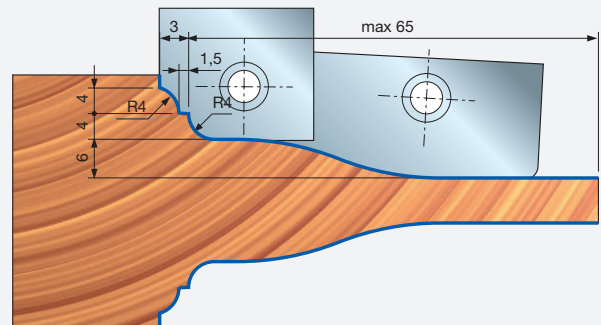
Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife A	20 x 24 x 3	CT55MSAD301	F03FC24099
	Knife B	65 x 20 x 3	CT55MSBD301	F03FC24108
2	Knife A	20 x 24 x 3	CT55MSAG301	F03FC24102
	Knife B	65 x 20 x 3	CT55MSBG301	F03FC24111
3	Knife A	20 x 24 x 3	CT55MSAH301	F03FC24103
	Knife B	65 x 20 x 3	CT55MSBH301	F03FC24112
4	Knife A	20 x 24 x 3	CT55MSAI301	F03FC24104
	Knife B	65 x 20 x 3	CT55MSBI301	F03FC24113

**Example of profiles**

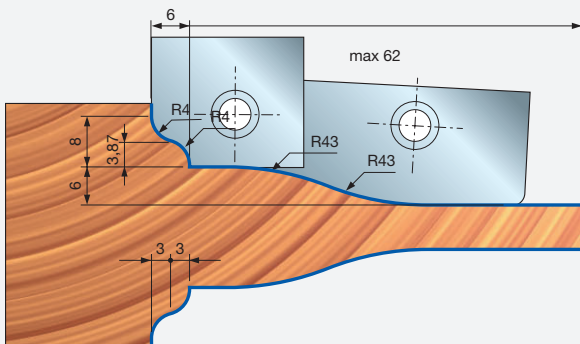
**PROFILE 1**



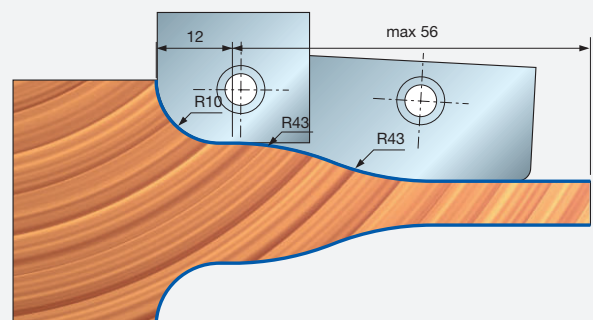
**PROFILE 2**



**PROFILE 3**



**PROFILE 4**





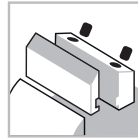


## TG79MG

## Cutterhead sets for panelling and flooring



Manual Feed



Clamping System



Steel Body



Softwood



Hardwood

### Machines:

Moulders, automatic and throughfeed machines.

### Materials:

Softwood and hardwood.

### Applications:

Profiling.

### Technical information:

Z2 cutterhead sets for panelling and flooring; tongue and groove both available.

- 16 different combinations available in terms of profile and timber thickness (from 12 to 38 mm) tools sets provided with sleeves to fit different machine spindles.
- Steel body.
- Rebore not available.
- Optional inserts to be ordered separately.

### Sleeves for off side spindle

Dimensions mm	Sleeve code	Art. No.
Ø50 x 110 x 30	BF10MS AA9	F03FC00661
Ø50 x 110 x 32	BF10MS AL9	F03FC24538
Ø50 x 110 x 35	BF10MS AB9	F03FC00662
Ø50 x 110 x 40	BF10MS AC9	F03FC00663

### Sleeves for fence side spindle

Dimensions mm	Sleeve code	Art. No.
Ø50 x 110 x 30	BF10MD AA9	F03FC00616
Ø50 x 110 x 32	BF10MD AL9	F03FC24533
Ø50 x 110 x 35	BF10MD AB9	F03FC00617
Ø50 x 110 x 40	BF10MD AC9	F03FC00618

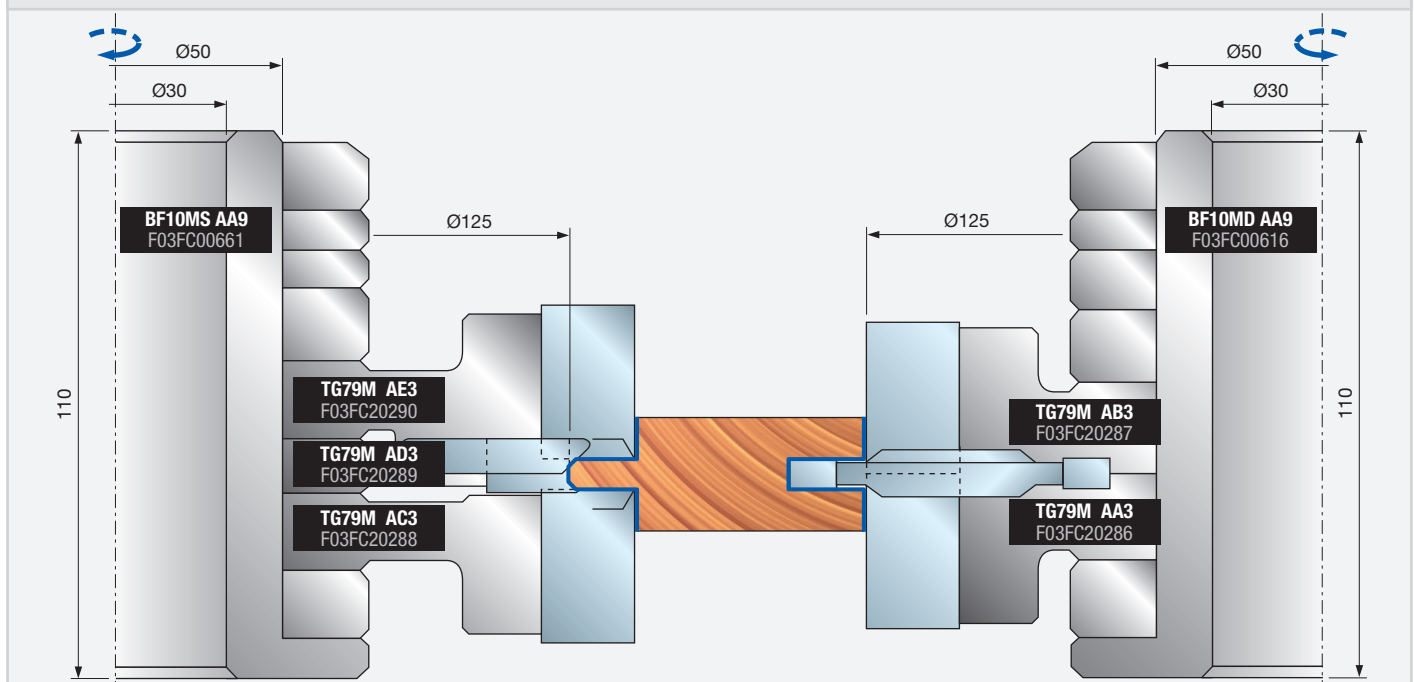


Profiling

Profile	Tongue set	Art. No.	Groove set	Art. No.
1	TG79MG 002	F03FC20305	TG79MG 001	F03FC20304
2	TG79MG 003	F03FC20306	TG79MG 001	F03FC20304
3	TG79MG 006	F03FC20309	TG79MG 004	F03FC20307
4	TG79MG 025	F03FC20320	TG79MG 020	F03FC20315
5	TG79MG 007	F03FC20310	TG79MG 005	F03FC20308
6	TG79MG 026	F03FC20321	TG79MG 021	F03FC20316
7	TG79MG 027	F03FC20322	TG79MG 022	F03FC20317
8	TG79MG 028	F03FC20323	TG79MG 023	F03FC20318
9	TG79MG 029	F03FC20324	TG79MG 024	F03FC20319
10	TG79MG 010	F03FC20313	TG79MG 008	F03FC20311
11	TG79MG 035	F03FC20330	TG79MG 030	F03FC20325
12	TG79MG 011	F03FC20314	TG79MG 009	F03FC20312
13	TG79MG 036	F03FC20331	TG79MG 031	F03FC20326
14	TG79MG 037	F03FC20332	TG79MG 032	F03FC20327
15	TG79MG 038	F03FC20333	TG79MG 033	F03FC20328
16	TG79MG 039	F03FC20334	TG79MG 034	F03FC20329

### Cutterhead set TG79MG 002

### Cutterhead set TG79MG 001



# TG79MG

## Cutterheads sets for panelling and flooring

### Tools for TG79MG sets

D mm	B mm	d mm	Z	R	Max RPM 1/min.	Freud Code	Art. No.
125	20	50	2	-	9.000	<b>TG79M AA3</b>	F03FC20286
125	20	50	2	-	9.000	<b>TG79M AB3</b>	F03FC20287
143	20	50	2	2	9.000	<b>TG79M AC3</b>	F03FC20288
128	8	50	2	-	9.000	<b>TG79M AD3</b>	F03FC20289
143	20	50	2	2	9.000	<b>TG79M AE3</b>	F03FC20290
144	20	50	2	2	9.000	<b>TG79M AF3</b>	F03FC20291
125	20	50	-	-	9.000	<b>TG79M AG3</b>	F03FC20292
125	20	50	-	-	9.000	<b>TG79M AI3</b>	F03FC20294
143	20	50	-	-	9.000	<b>TG79M AM3</b>	F03FC20296
143	20	50	-	-	9.000	<b>TG79M A03</b>	F03FC20298

The above codes are intended without sleeve, which should be ordered separately.

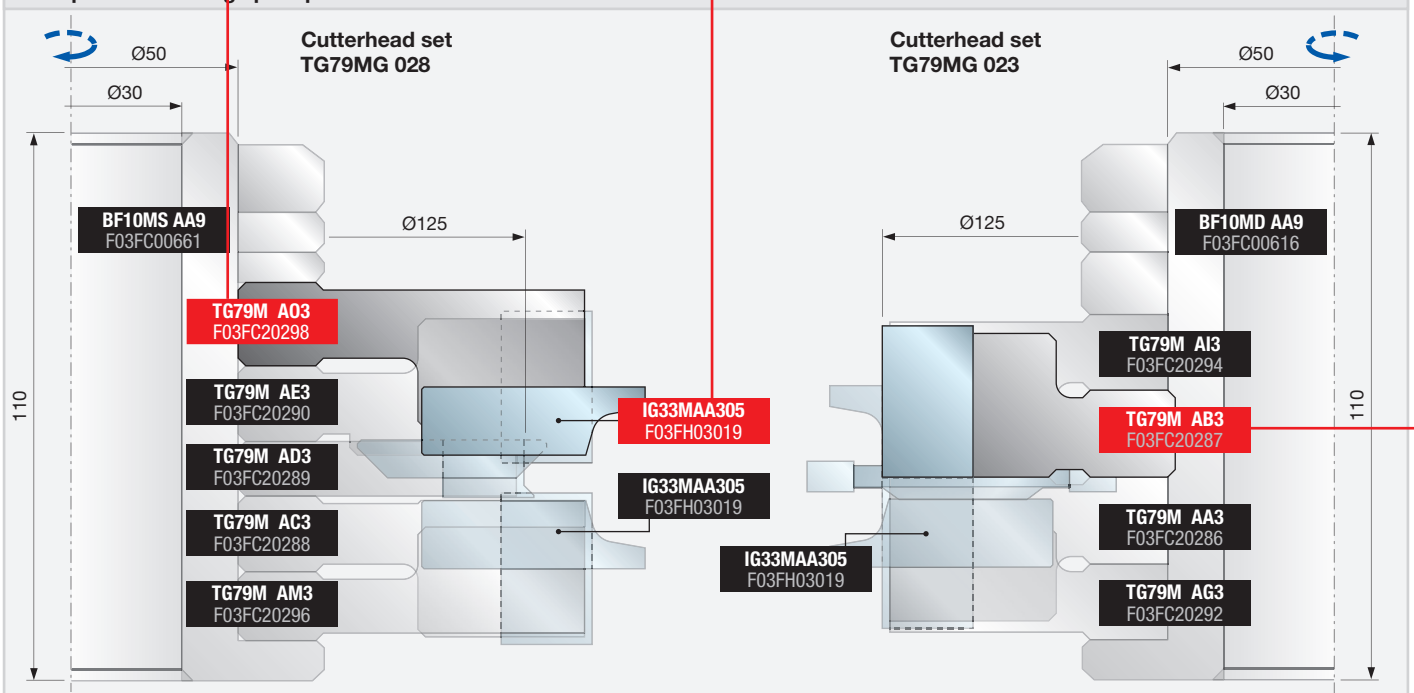
### Spare parts for TG79MG tools

Spare parts		Dimensions mm	Freud Code	Art. No.
AA3	Knife	20 x 12 x 1,5	<b>CG08MDA310</b>	F03FH02905
	Wedge	16	<b>CN01M DA9</b>	F03FC01251
	Screw	M8 x 16	<b>VT03M AA9</b>	F03FA04435
	Grooving insert	40 x 16 x 4	<b>IG04MDAA305</b>	F03FH03409
	Screw	M6 x 14,5	<b>VT16M AA9</b>	F03FA04476
AB3	Knife	20 x 12 x 1,5	<b>CG08MDA310</b>	F03FH02905
	Wedge	16	<b>CN01M DA9</b>	F03FC01251
	Screw	M8 x 16	<b>VT03M AA9</b>	F03FA04435
	Grooving insert	40 x 16 x 4	<b>IG04MSAA305</b>	F03FH02994
	Screw	M6 x 14,5	<b>VT16M AA9</b>	F03FA04476
AC3	Knife	20 x 12 x 1,5	<b>CG08MDA310</b>	F03FH02905
	Wedge	16	<b>CN01M DA9</b>	F03FC01251
	Screw	M8 x 16	<b>VT03M AA9</b>	F03FA04435
	Spur	22,86 x 2,5	<b>RG02MAA305</b>	F03FH03041
	Screw	M5 x 8	<b>VT05M AA9</b>	F03FA04444
AD3	Knife	7,5 x 12 x 1,5	<b>CG01MOB310</b>	F03FC23814
	Wedge	14 x 7,2 x 8	<b>CN09M AT9</b>	F03FC01294
	Screw	M5 x 19	<b>VT11M AA9</b>	F03FA04468
AE3 - AF3	Knife	20 x 12 x 1,5	<b>CG08MDA310</b>	F03FH02905
	Wedge	16	<b>CN01M DA9</b>	F03FC01251
	Screw	M8 x 16	<b>VT03M AA9</b>	F03FA04435
	Spur	22,86 x 2,5	<b>RG02MAA305</b>	F03FH03041
	Screw	M5 x 8	<b>VT05M AA9</b>	F03FA04444
AE3 - AF3	Beveled insert	22 x 16 x 5 45°	<b>IG51MBA305</b>	F03FH03022
	Screw	M6 x 14,5	<b>VT16M AA9</b>	F03FA04476

### Optional inserts for TG79MG tools

Spare parts		Dimensions mm	Freud Code	Art. No.
AG3 - AI3 - AM3 - A03	Beveled insert	22 x 16 x 5 45°	<b>IG51MBA305</b>	F03FH03022
	Rounding insert	22 x 16 x 5 R=1,5	<b>IG52MAB305</b>	F03FH03023
	Rounding insert	22 x 16 X 5 R=2	<b>IG52MAC305</b>	F03FH03024
	Rounding insert	22 x 16 X 5 R=3	<b>IG52MAE305</b>	F03FH03025
	Screw	M6 x 14,5	<b>VT16M AA9</b>	F03FA04476
AG3 - AI3 - AM3 - A03	Rounding insert	25,5 x 16 x 9 R3	<b>IG33MAA305</b>	F03FH03019
	Rounding insert	25,5 x 16 x 9 R=5	<b>IG33MAB305</b>	F03FH03020
	Beveling insert	25,5 x 16 x 9 45°	<b>IG33MAD305</b>	F03FH03021
AG3 - AI3 - AM3 - A03	Screw	M6 x 15,5	<b>VT16M AD9</b>	F03FC20657

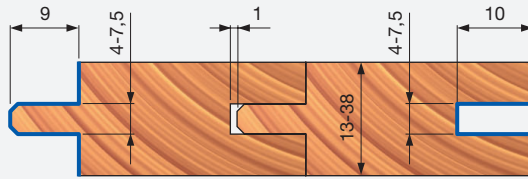
### Example for choosing spare parts



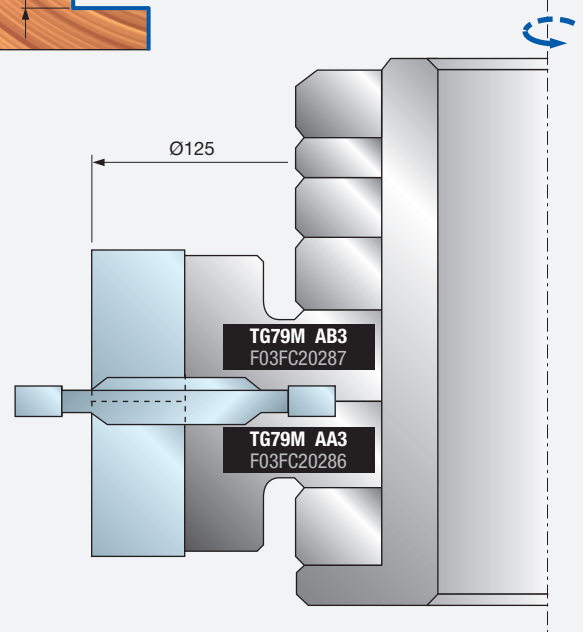
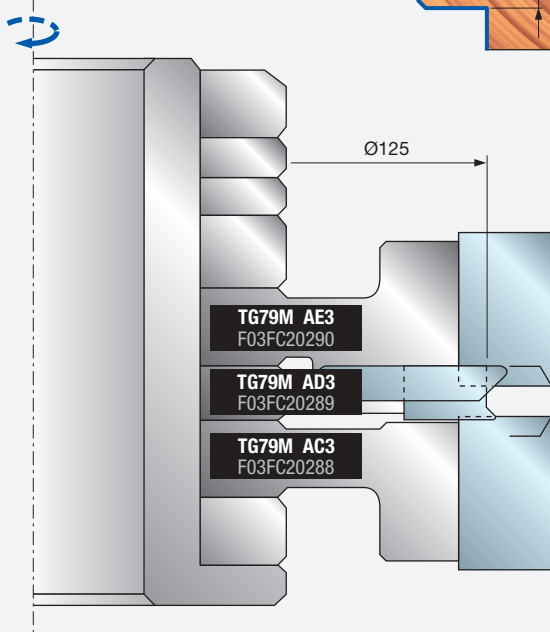
## Examples of programming

### PROFILE 1

Cutterhead set  
TG79MG 002

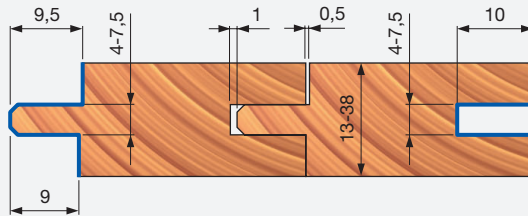


Cutterhead set  
TG79MG 001

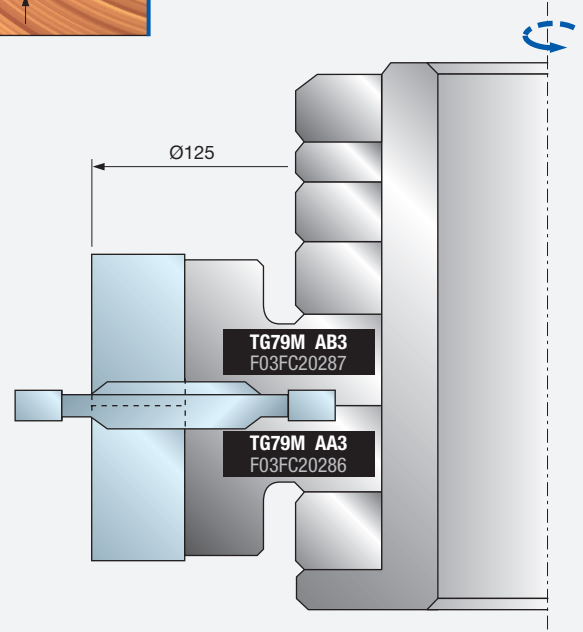
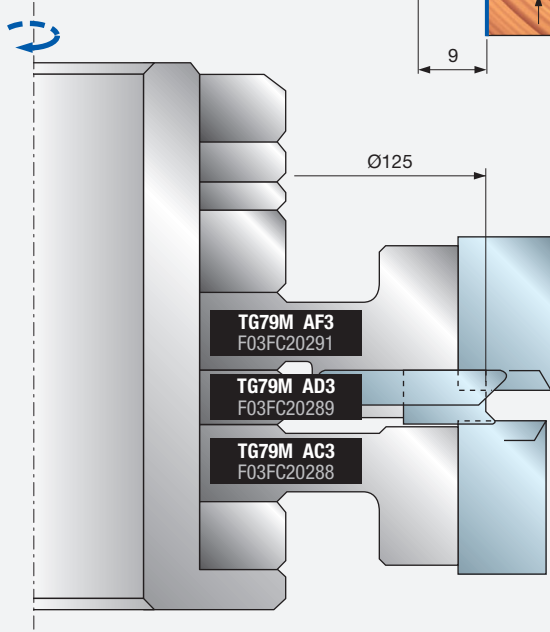


### PROFILE 2

Cutterhead set  
TG79MG 003



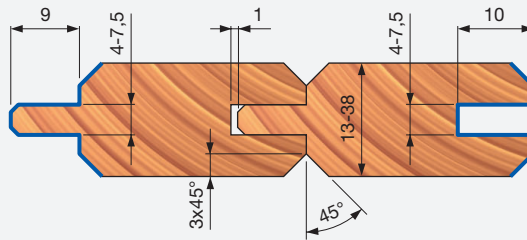
Cutterhead set  
TG79MG 001



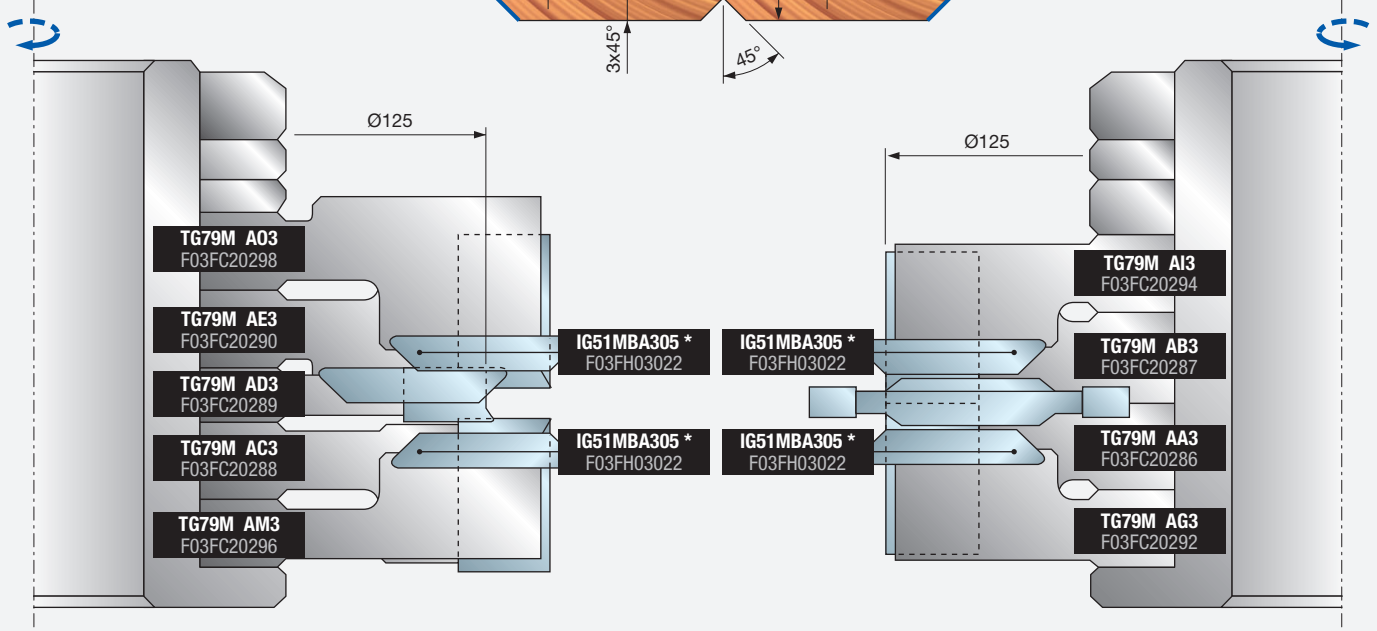
## Examples of programming

### PROFILE 3

Cutterhead set  
TG79MG 006

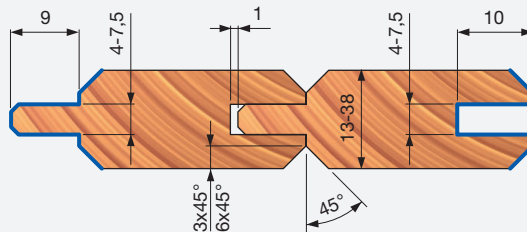


Cutterhead set  
TG79MG 004

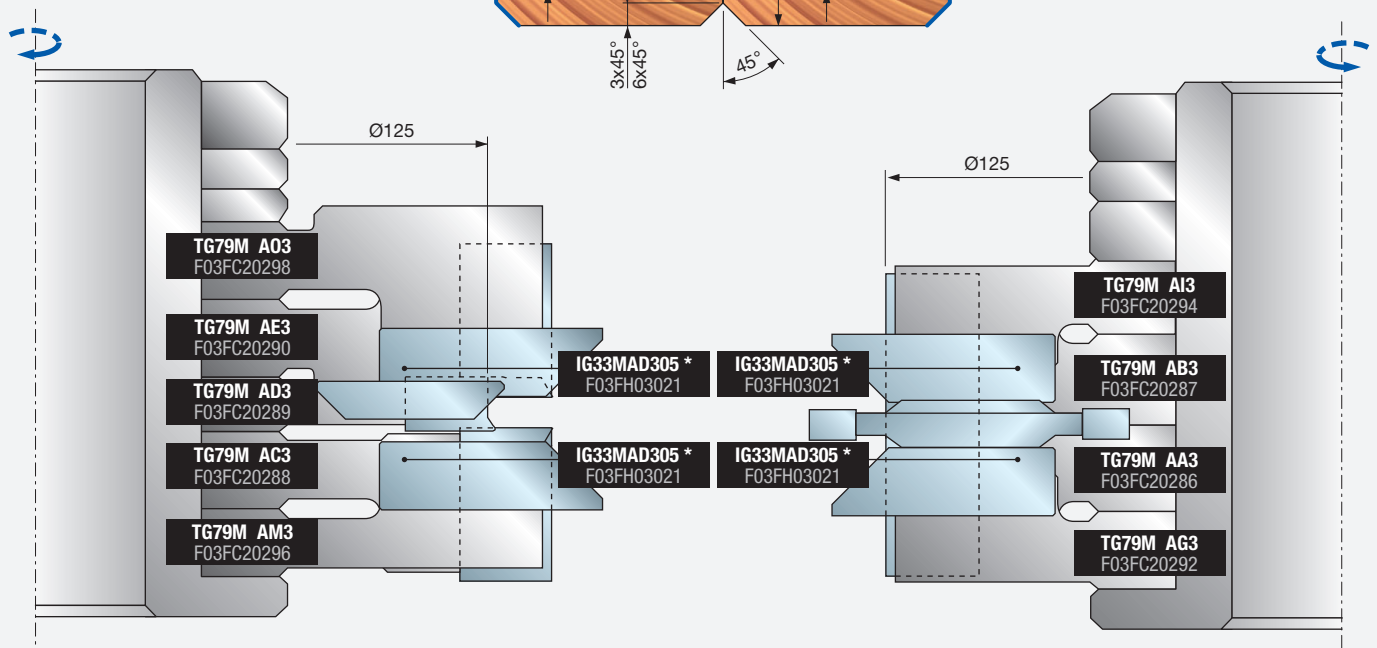


### PROFILE 4

Cutterhead set  
TG79MG 025



Cutterhead set  
TG79MG 020

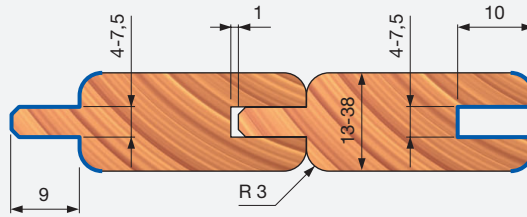


\* Inserts are not included

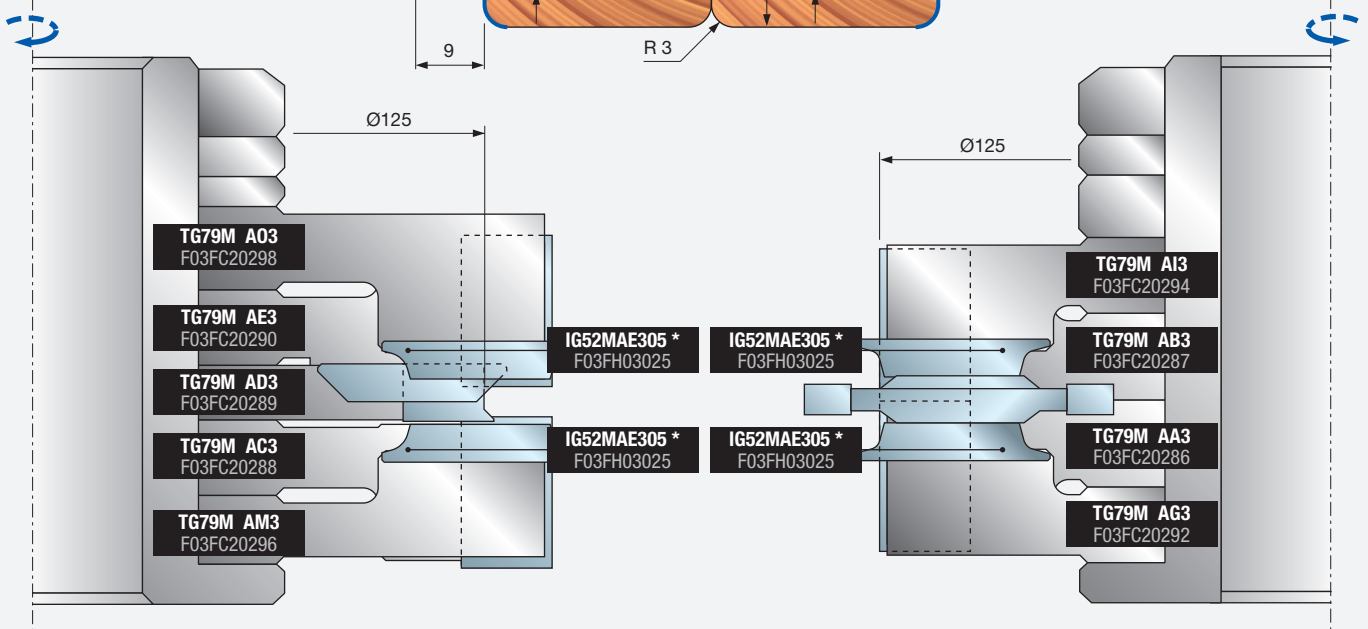
## Examples of programming

### PROFILE 5

Cutterhead set  
TG79MG 007

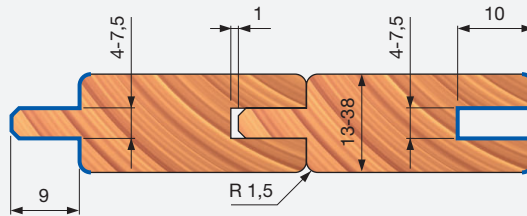


Cutterhead set  
TG79MG 005

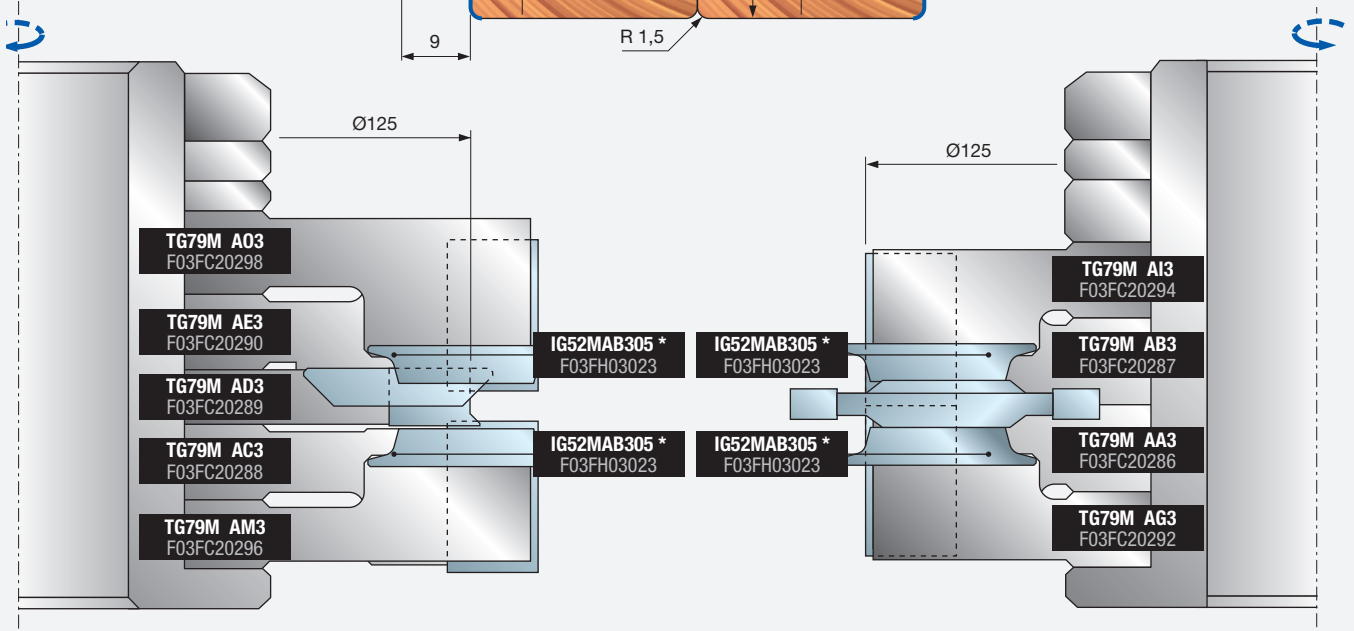


### PROFILE 6

Cutterhead set  
TG79MG 026



Cutterhead set  
TG79MG 021

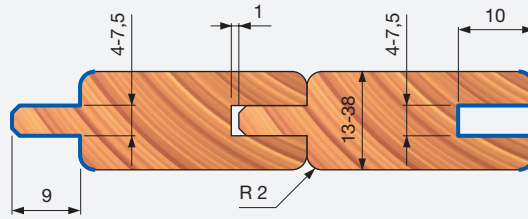


\* Inserts are not included

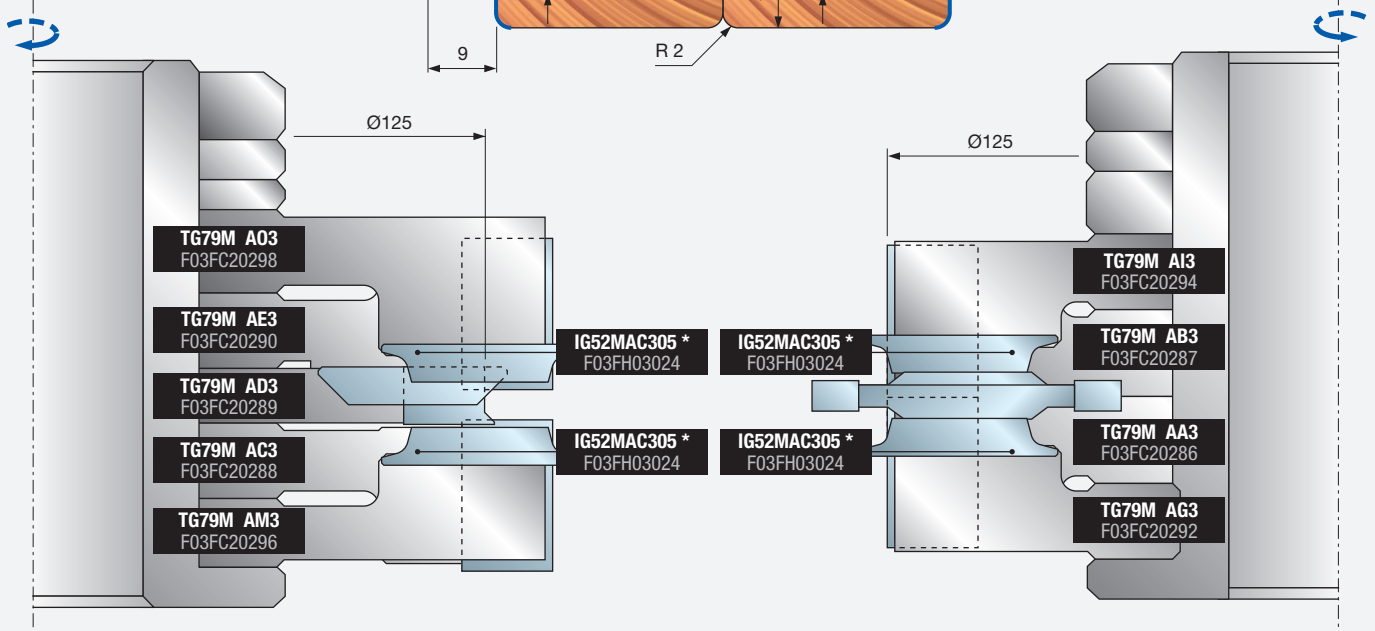
## Examples of programming

### PROFILE 7

Cutterhead set  
TG79MG 027

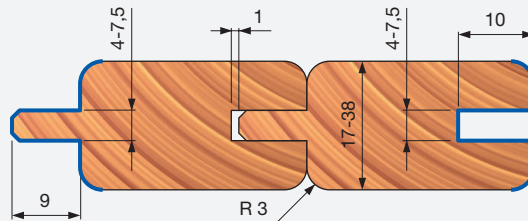


Cutterhead set  
TG79MG 022

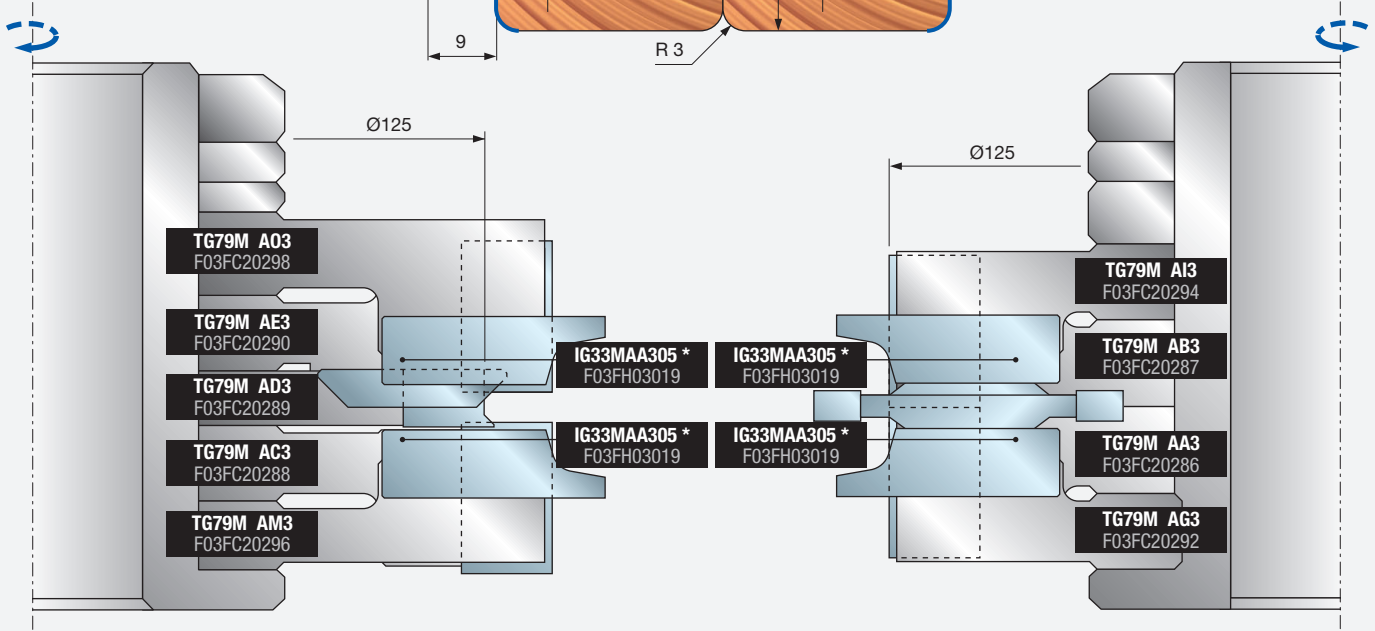


### PROFILE 8

Cutterhead set  
TG79MG 028



Cutterhead set  
TG79MG 023

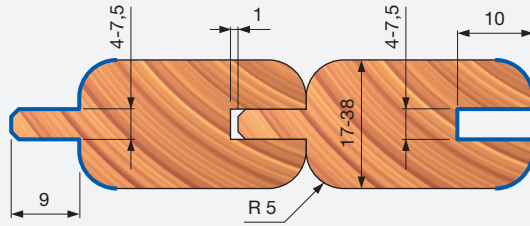


\* Inserts are not included

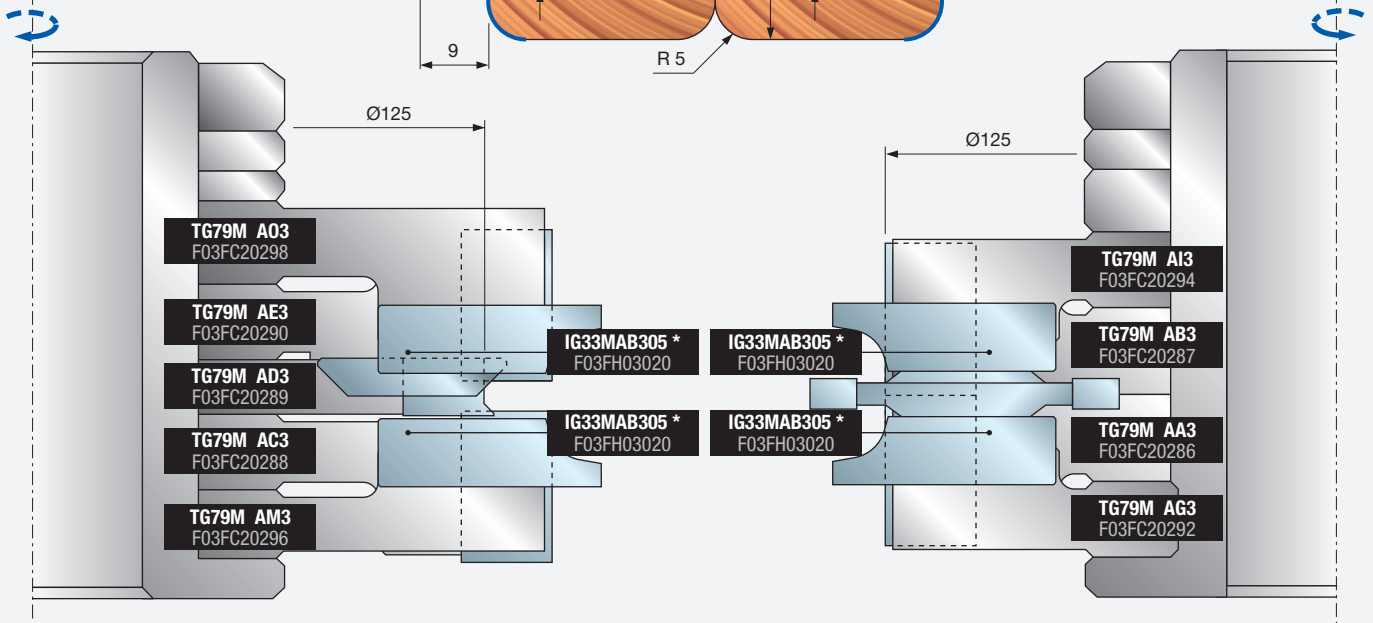
## Examples of programming

### PROFILE 9

Cutterhead set  
TG79MG 029

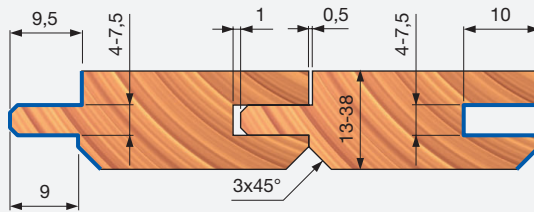


Cutterhead set  
TG79MG 024

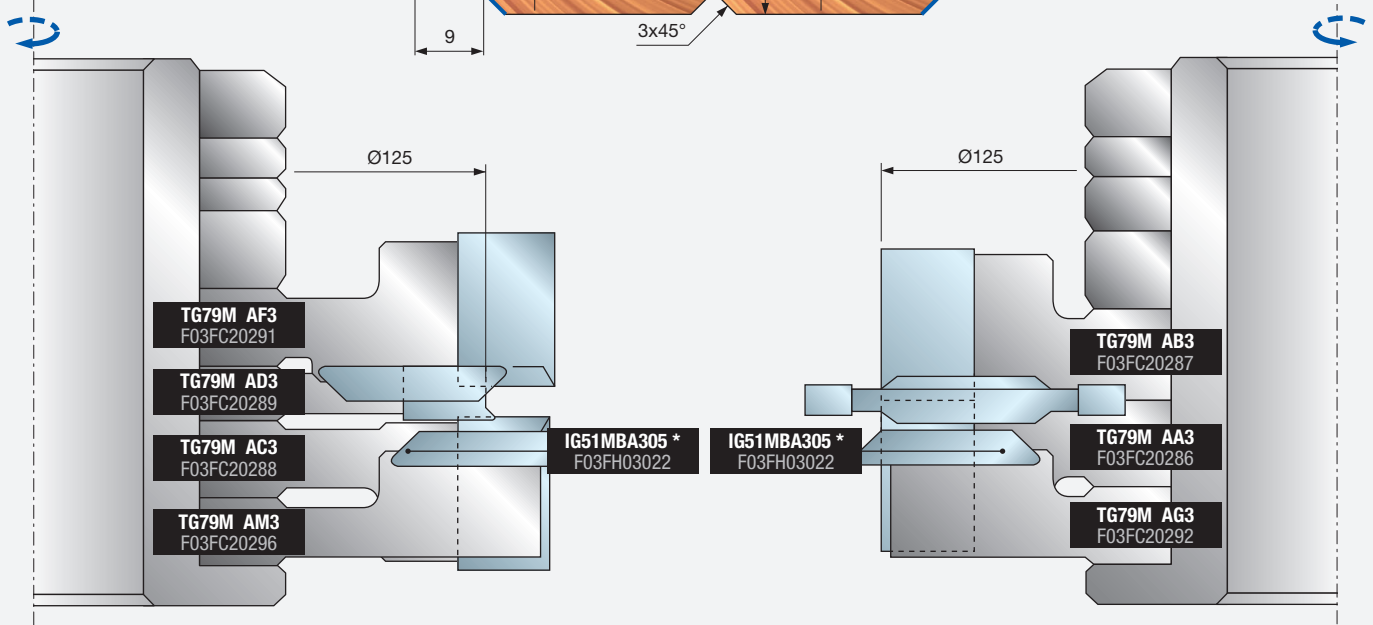


### PROFILE 10

Cutterhead set  
TG79MG 010



Cutterhead set  
TG79MG 008

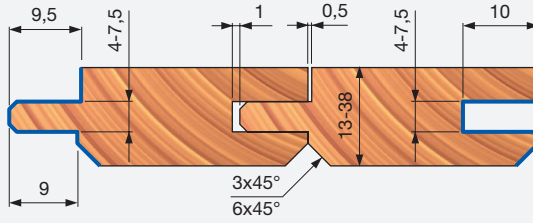


\* Inserts are not included

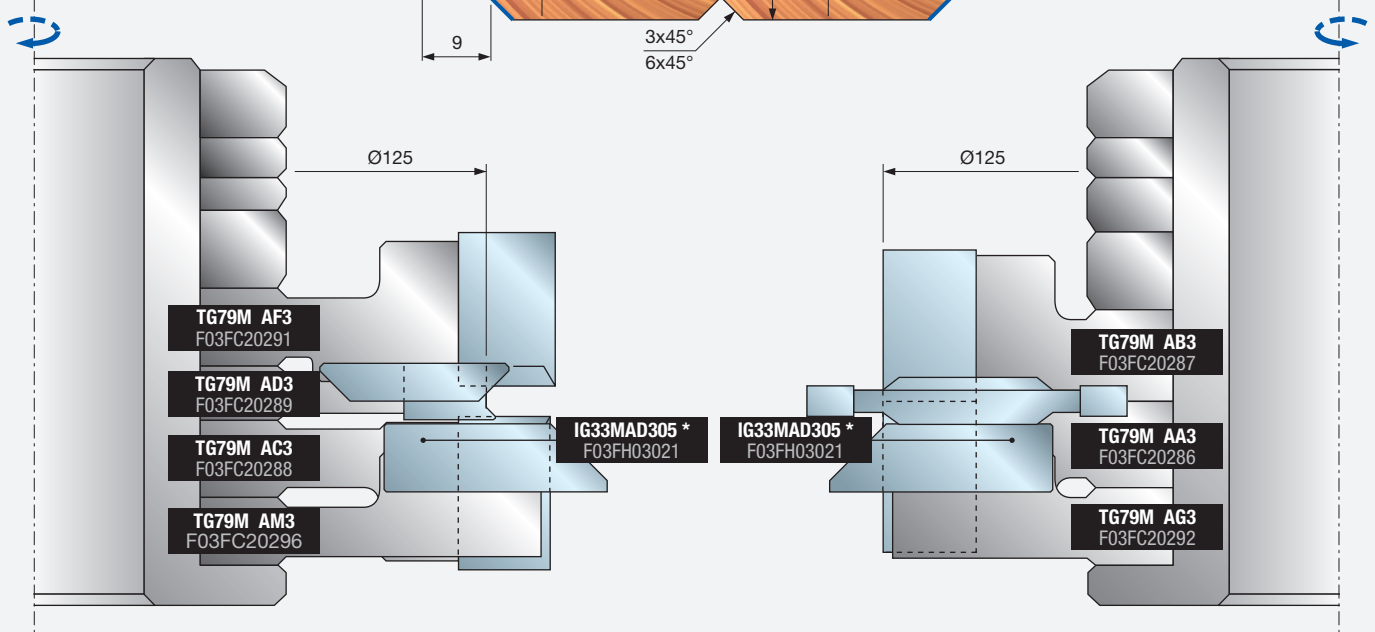
## Examples of programming

### PROFILE 11

Cutterhead set  
TG79MG 035

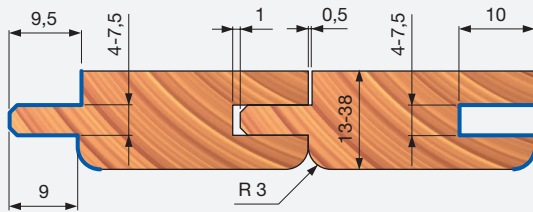


Cutterhead set  
TG79MG 030

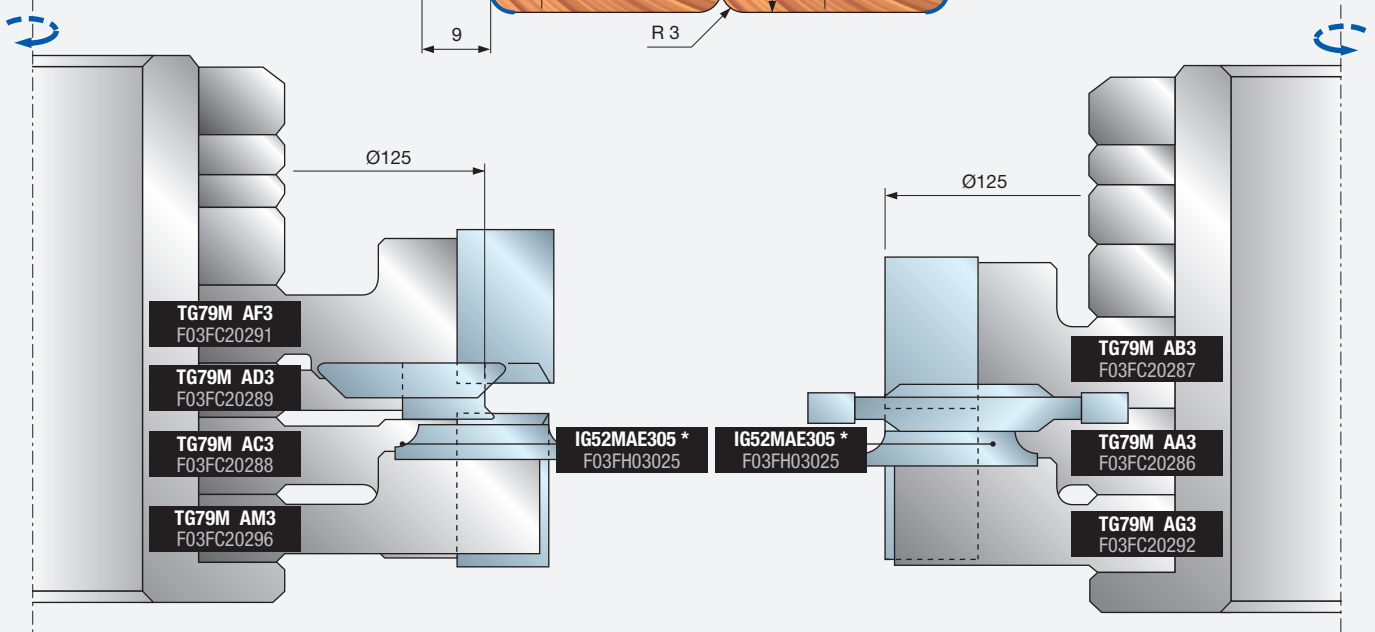


### PROFILE 12

Cutterhead set  
TG79MG 011



Cutterhead set  
TG79MG 009



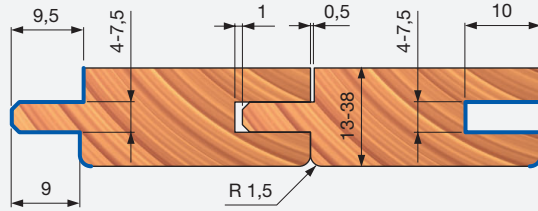
\* Inserts are not included



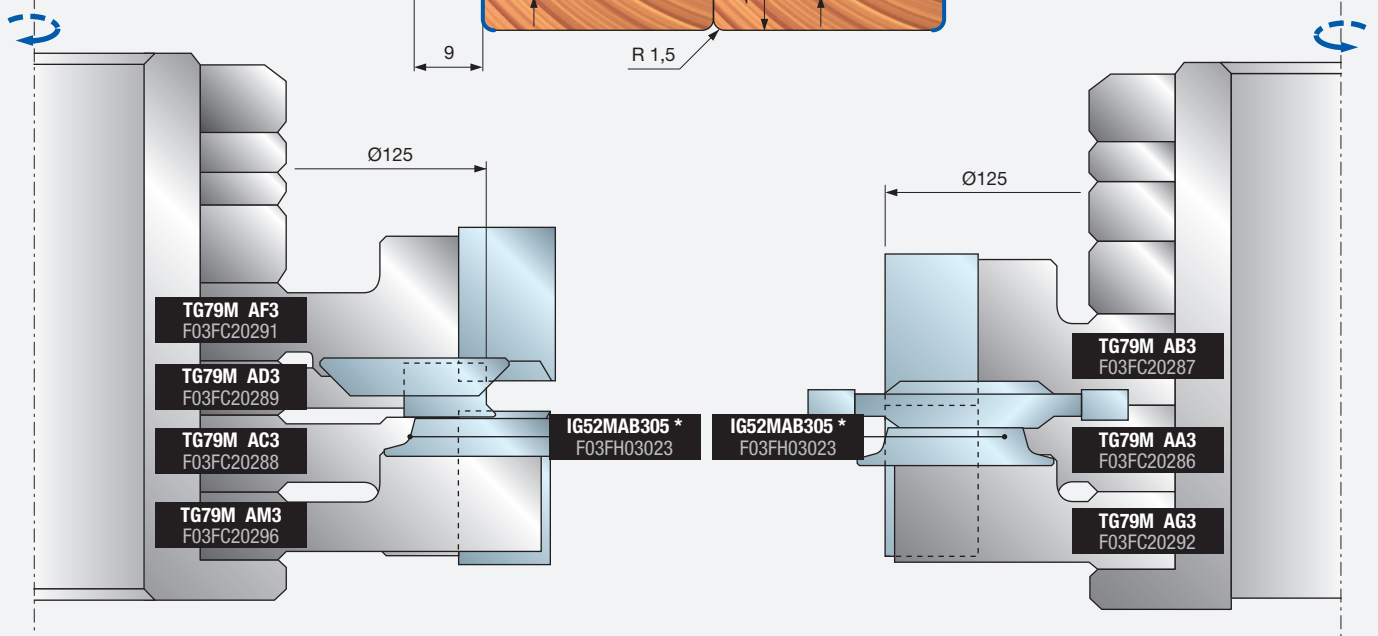
## Examples of programming

### PROFILE 13

Cutterhead set  
TG79MG 036

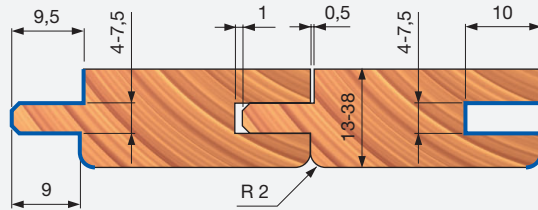


Cutterhead set  
TG79MG 031

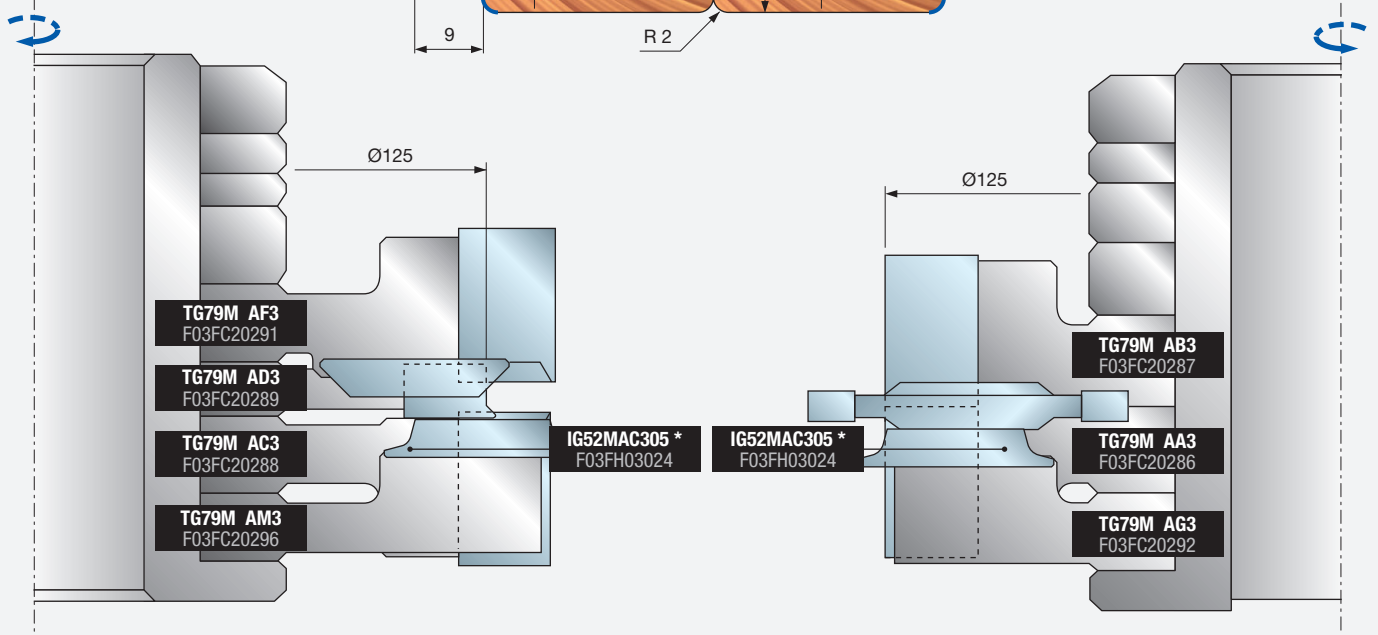


### PROFILE 14

Cutterhead set  
TG79MG 037



Cutterhead set  
TG79MG 032

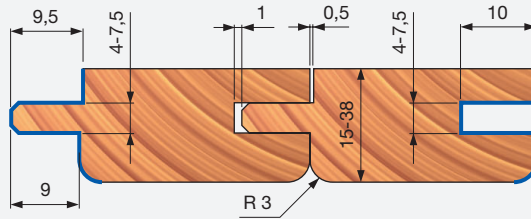


\* Inserts are not included

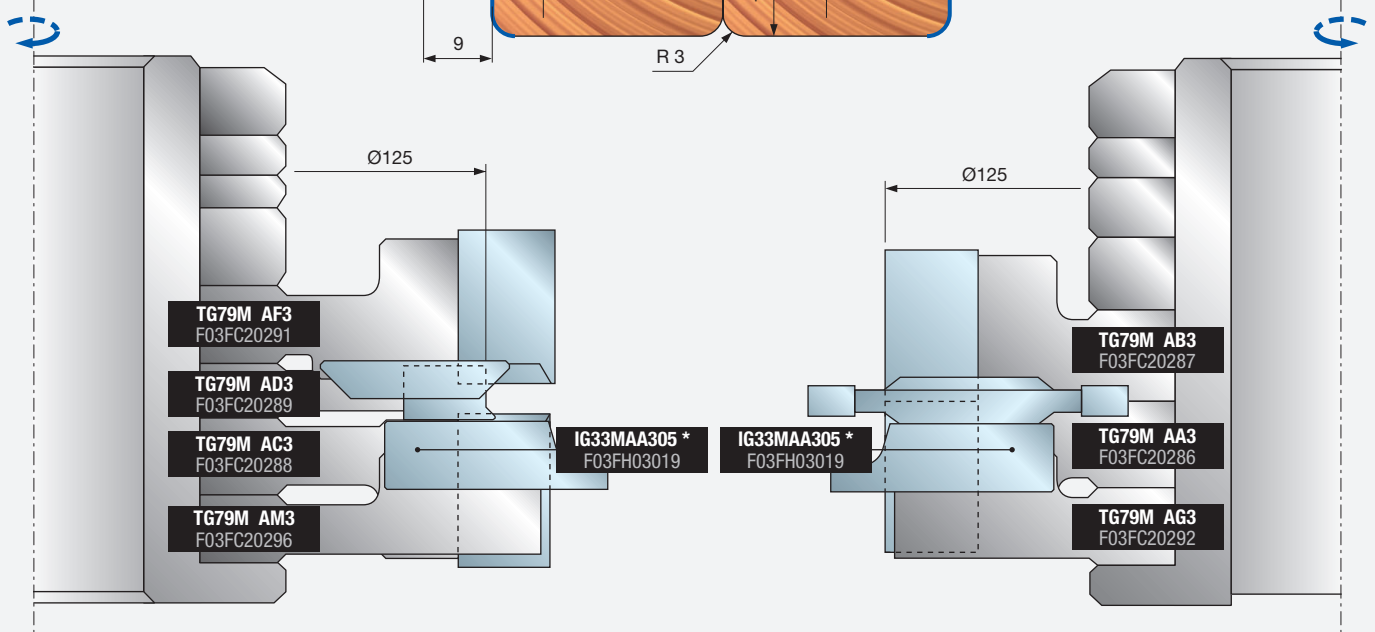
## Examples of programming

### PROFILE 15

Cutterhead set  
TG79MG 038

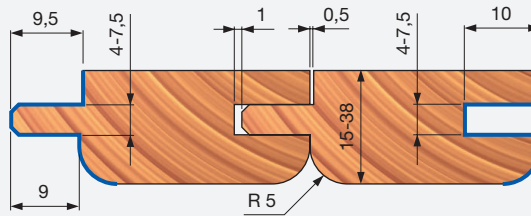


Cutterhead set  
TG79MG 033

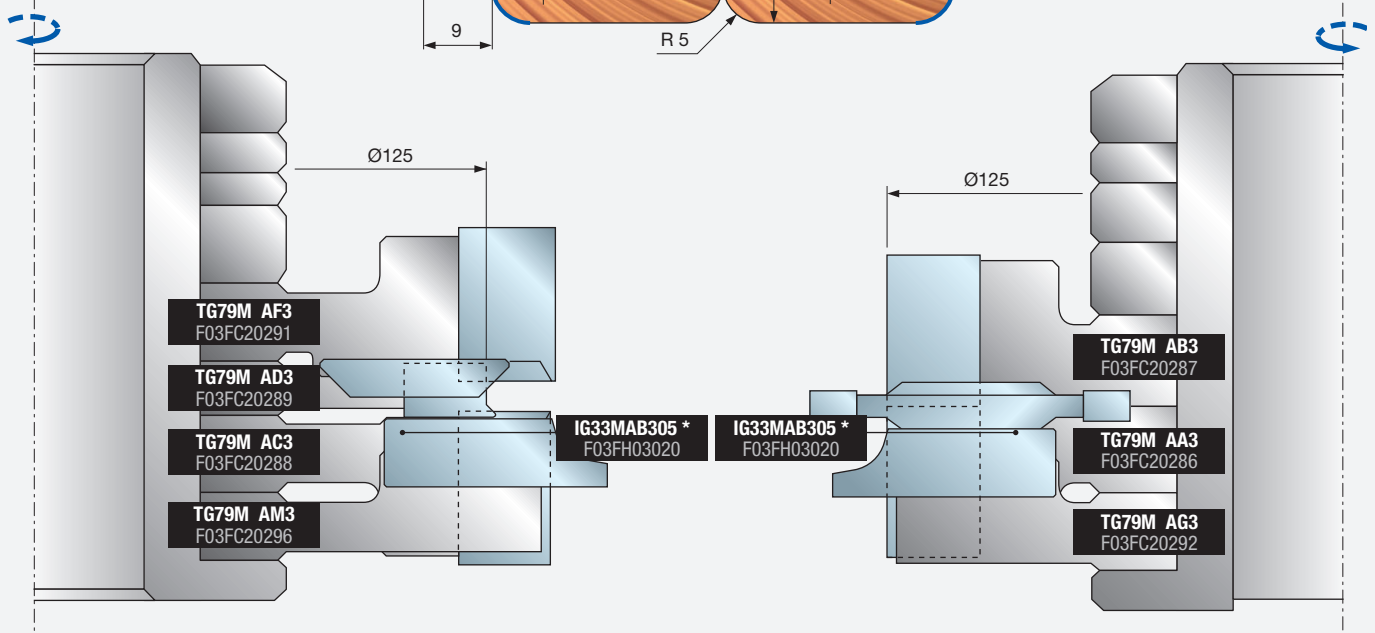


### PROFILE 16

Cutterhead set  
TG79MG 039



Cutterhead set  
TG79MG 034

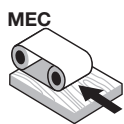


\* Inserts are not included

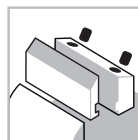


## TG99MG

## Cutterheads sets for panelling and flooring



Automatic Feed



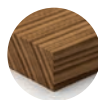
Clamping System



Steel Body



Softwood



Hardwood



Profiling

### Machines:

Moulders, automatic and throughfeed machines.

### Materials:

Softwood and hardwood.

### Applications:

Profiling.

### Technical information:

Z4 cutterhead sets for panelling and flooring; tongue and groove both available.

- 16 different combinations available in terms of profile and timber thickness (from 12 to 38 mm) tools sets provided with sleeves to fit different machine spindles.
- Steel body.
- Rebore not available.
- Optional inserts to be ordered separately.

### Sleeves for fence side spindle

Dimensions mm	Sleeve code	Art. No.
Ø50 x 110 x 30	BF10MD AA9	F03FC00616
Ø50 x 110 x 32	BF10MD AL9	F03FC24533
Ø50 x 110 x 35	BF10MD AB9	F03FC00617
Ø50 x 110 x 40	BF10MD AC9	F03FC00618

### Sleeves for off side spindle

Dimensions mm	Sleeve code	Art. No.
Ø50 x 110 x 30	BF10MS AA9	F03FC00661
Ø50 x 110 x 32	BF10MS AL9	F03FC24538
Ø50 x 110 x 35	BF10MS AB9	F03FC00662
Ø50 x 110 x 40	BF10MS AC9	F03FC00663

Profile	Tongue set	Art. No.	Groove set	Art. No.
A	TG99MG002	F03FC22132	TG99MG001	F03FC22131
B	TG99MG003	F03FC22133	TG99MG001	F03FC22131
C	TG99MG009	F03FC22140	TG99MG008	F03FC22139
D	TG99MG011	F03FC22142	TG99MG010	F03FC22141
E	TG99MG005	F03FC22135	TG99MG004	F03FC22134
F	TG99MG007	F03FC22137	TG99MG006	F03FC22136
G	TG99MG013	F03FC22145	TG99MG012	F03FC22143
H	TG99MG015	F03FC22146	TG99MG014	F03FC22144

The above codes are intended without sleeve, which should be ordered separately.

### Tools for TG99MG sets

D mm	B mm	d mm	Z	R	Max RPM 1/min.	Freud Code	Art. No.
125	30	50	4	-	10.300	TG99M EA3	F03FC22120
125	30	50	4	-	10.300	TG99M EB3	F03FC22121
137	30	50	4	2	9.600	TG99M EC3	F03FC22122
137	30	50	4	2	9.600	TG99M ED3	F03FC22123
138	20	50	4	2	9.600	TG99M EE3	F03FC22124
137	12	50	4	-	9.600	TG99M EF3	F03FC22125
125	30	50	4	-	10.300	TG99M EG3	F03FC22126
149	12	50	4	2	9.000	TG99M EH3	F03FC22127
143	20	50	4	2	9.000	TG99M EI3	F03FC22128
142	12	50	4	-	9.000	TG99M EK3	F03FC22129
169	12	50	4	2	8.300	TG99M EL3	F03FC22130

### Cutterhead set TG99MG002

### Cutterhead set TG99MG001

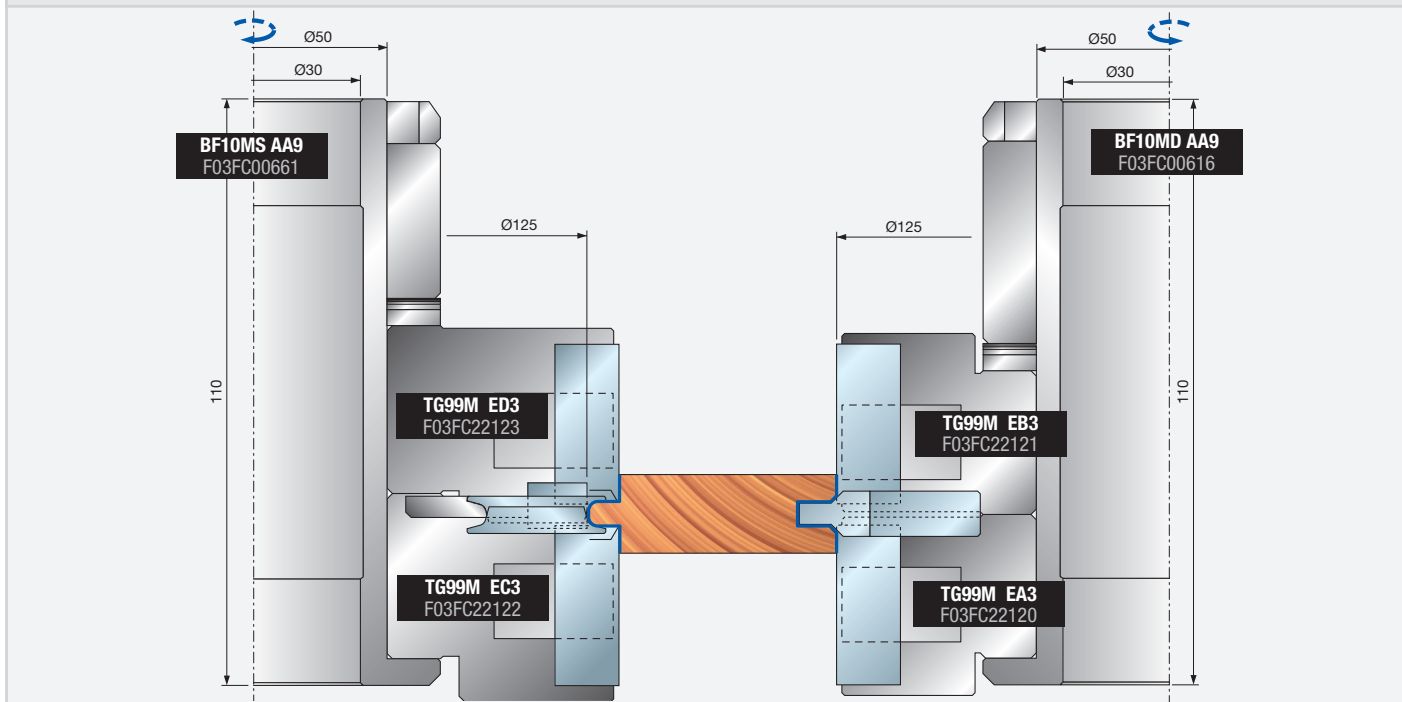
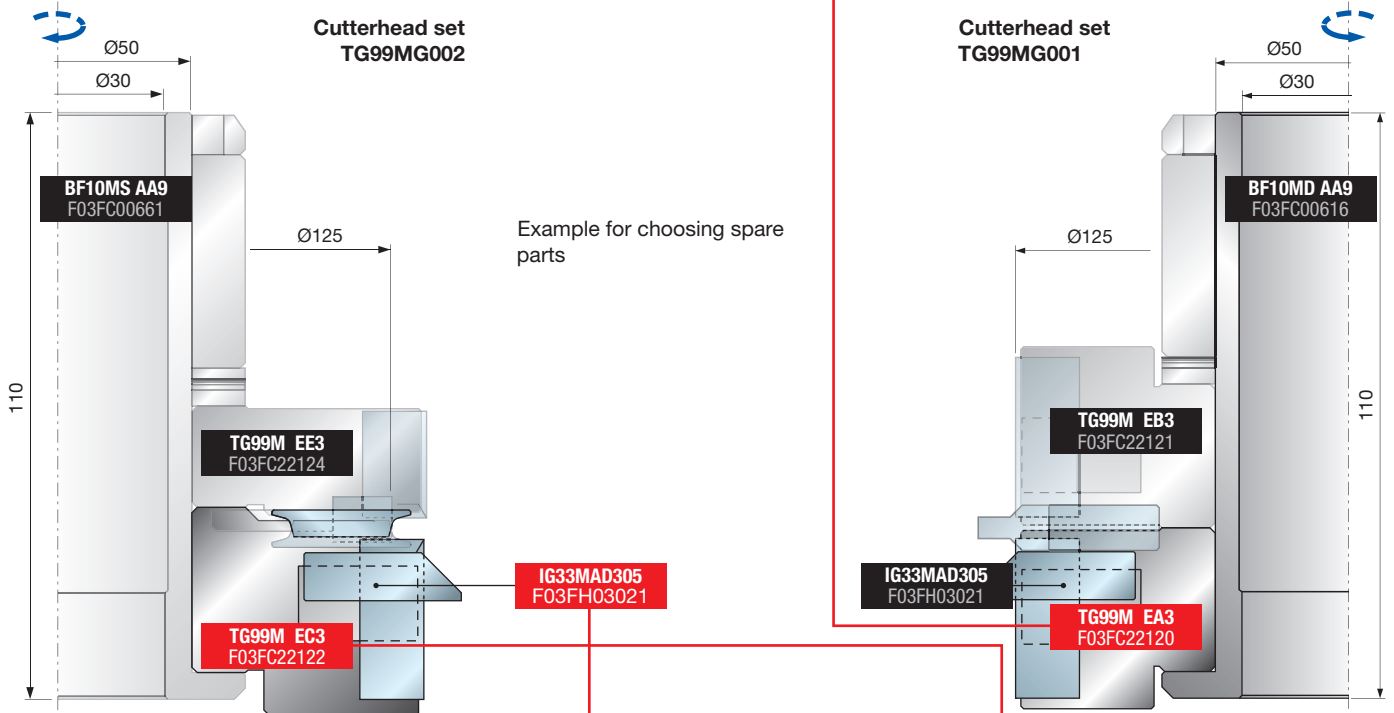


Chart for choosing spare parts

Spare parts	Dimensions mm	Freud Code	Art. No.	For cutterheads TG99M											
				EA3	EB3	EC3	ED3	EE3	EF3	EG3	EH3	EI3	EK3	EL3	
Knife	12 x 12 x 1,5	CG26MBA310	F03FH02937							•				•	•
Wedge	15 x 10 x 8	CN09M AA9	F03FC01280											•	•
Nut	10 x 11,5 x 6	VT20M AA9	F03FA04497							•				•	•
Screw	M6 x 22	VT19M AB9	F03FA04491							•				•	•
Knife	20 x 12 x 1,5	CG26MDA310	F03FH02939											•	
Wedge	15 x 16 x 8	CN09MD A09	F03FC01306											•	
Screw	M10 x 22	VT19M MA9	F03FA04496	•	•	•	•	•		•				•	
Nut	15 x 13,3 x M10	VT20M MA9	F03FC20670			•	•	•						•	
Knife	30 x 12 x 1,5	CG26MEA310	F03FH02940	•	•	•	•			•					
Wedge	15 x 26 x 8	CN09MD AD9	F03FC01300	•				•							
Wedge	15 x 26 x 8	CN09MS AD9	F03FC01326			•				•					
Nut	15 x 13,3 x M10	VT20M NA9	F03FC20671	•	•					•					
Nut	15 x 13,3 x M10	VT20M MA9	F03FC20670			•	•	•						•	
Screw	M10 x 22	VT19M MA9	F03FA04496	•	•	•	•	•		•				•	
Wedge	28 x 9,5 x 8	CN03M BB9	F03FA00585	•	•	•	•								
Screw	M8 x 22	VT19M BB9	F03FA04493	•	•	•	•								
Wedge	14 x 21,5 x 22	CN03M BA9	F03FA00584	•	•	•	•								
Spur	22,86 x 2,5	RG02MAA305	F03FH03041			•	•	•					•	•	•
Screw	M5x8	VT05M AA9	F03FA04444			•	•	•					•	•	•
Spur insert	34 x 9 x 16	SR06MSBB301	F03FC24201			•							•		•
Screw	M6 x 13	VT16M AE9	F03FC20658			•							•		•
Beveled grooves ins.	32,7 x 16 x 8,5	IG16MAA301	F03FC24161	•	•										
Screw	M6 x 15,5	VT16M AD9	F03FC20657	•	•										
Grooving insert	40 x 16 x 4	IG04MSAA305	F03FH02994							•					
Beveled insert	35 x 4 x 7	IG17MDAA305	F03FC24162												•
Beveled insert	22 x 16 x 5 45°	IG51MBA305	F03FH03022							•					
Rounding insert	22 x 16 x 5 R=1,5	IG52MAB305	F03FH03023			•	•	•	•				•	•	•
Screw	M6 x 14,5	VT16M AA9	F03FA04476	•	•										
Torx key	T9	CB03M CA9	F03FA00165	•	•	•	•	•	•	•	•	•	•	•	•
Allen key	3	CB03M AA9	F03FA00162	•	•	•	•	•	•	•	•	•	•	•	•
Allen key	4	CB03M BA9	F03FA00163	•	•	•	•	•	•	•	•	•	•	•	•

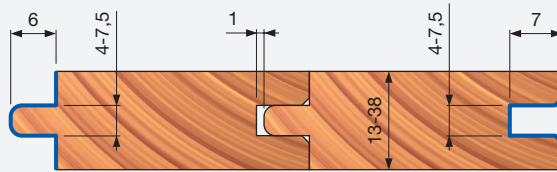


Optional spare parts	Dimensions mm	Freud Code	Art. No.	For cutterheads TG99M			
				EA3	EB3	EC3	ED3
Beveling insert	25,5 x 16 x 9 45°	IG33MAD305	F03FH03021	•	•	•	•
Rounding insert	25,5 x 16 x 9 R3	IG33MAA305	F03FH03019	•	•	•	•
Rounding insert	25,5 x 16 x 9 R5	IG33MAB305	F03FH03020	•	•	•	•
Screw	M6x15,5	VT16M AD9	F03FC20657	•	•	•	•

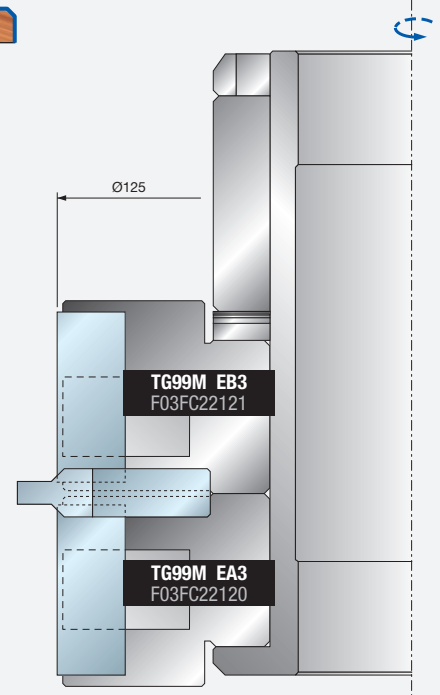
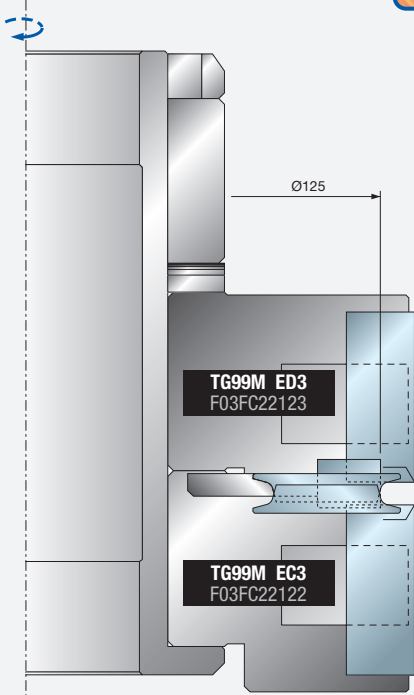
## Examples of programming

### PROFILE A

Cutterhead set  
TG99MG002

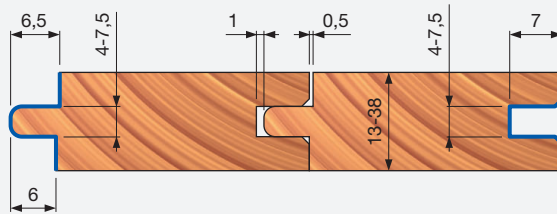


Cutterhead set  
TG99MG001

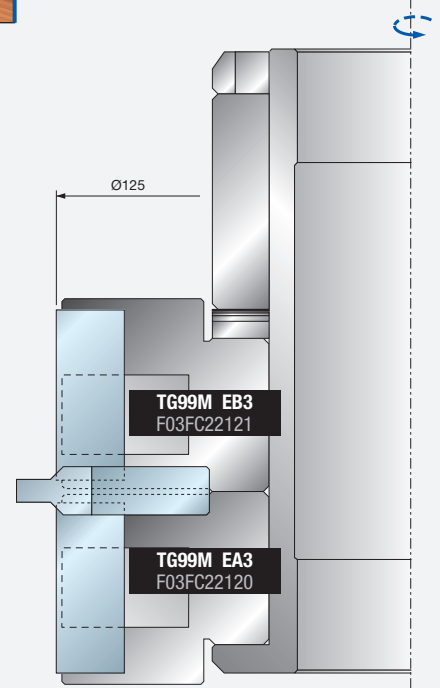
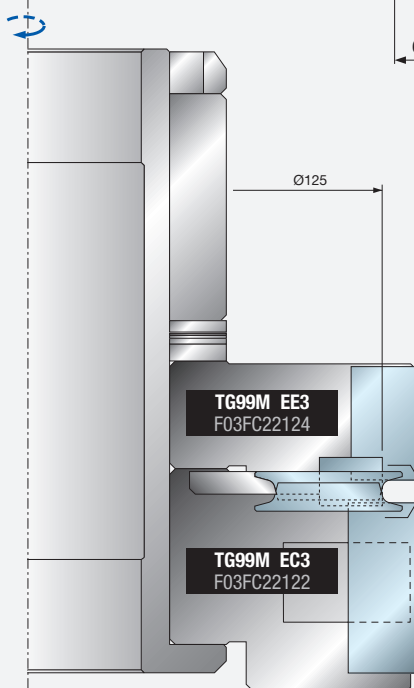


### PROFILE B

Cutterhead set  
TG99MG003



Cutterhead set  
TG99MG001

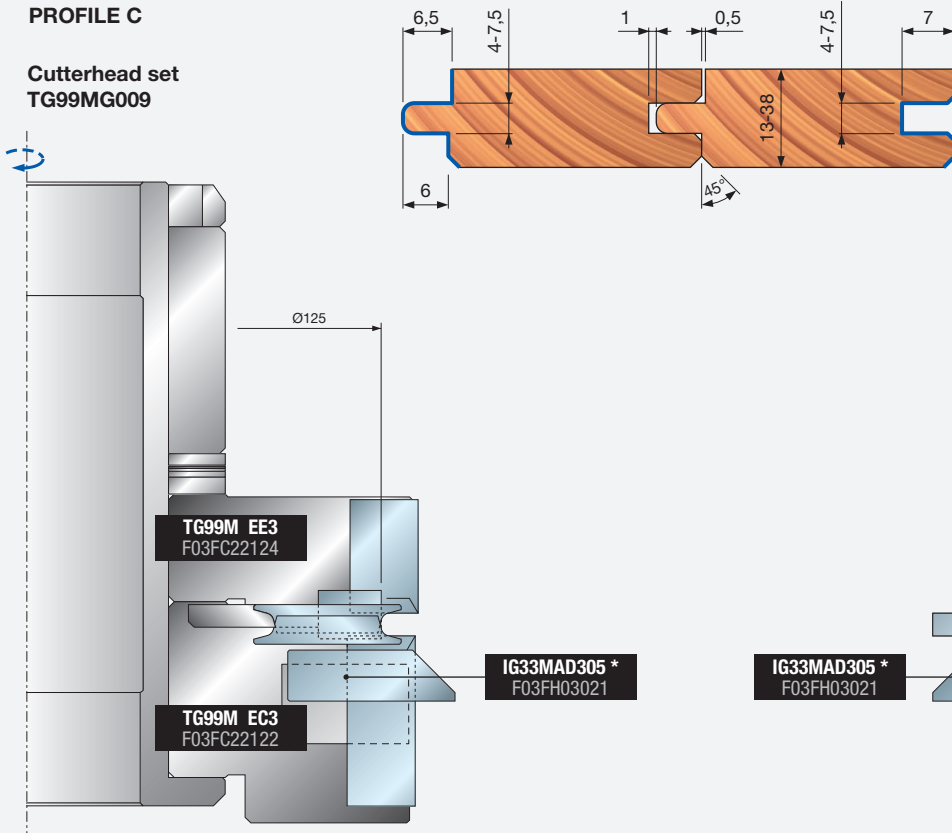


\* Inserts are not included

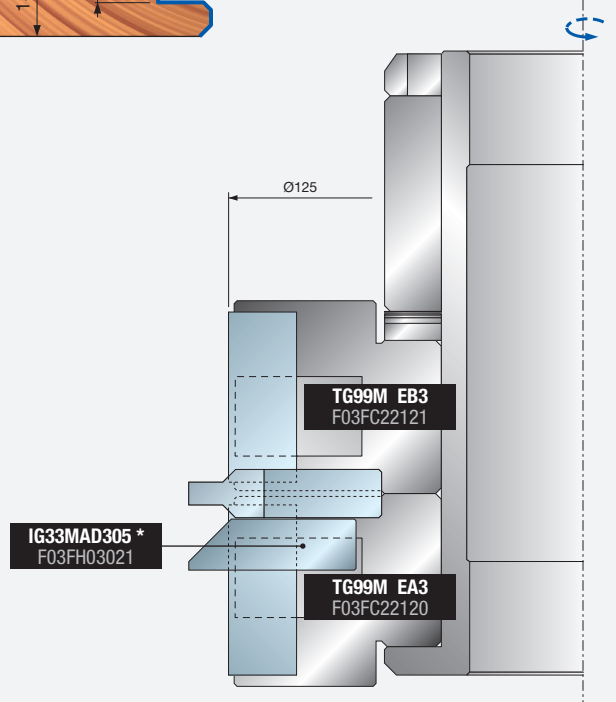
## Examples of programming

### PROFILE C

Cutterhead set  
TG99MG009

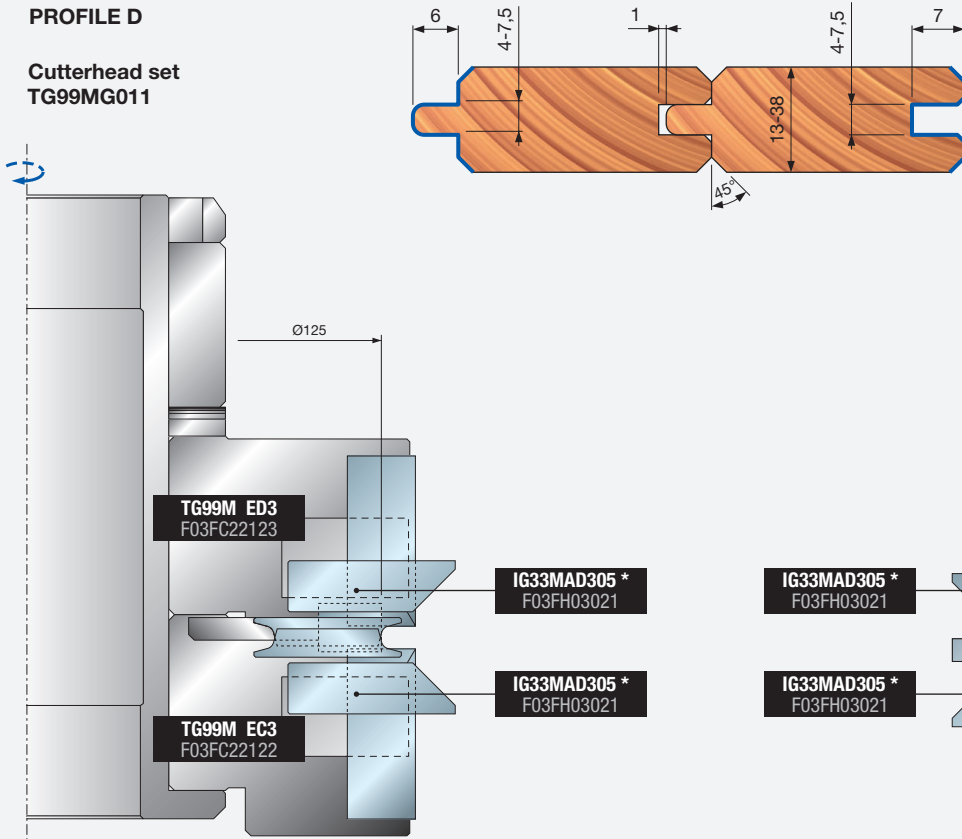


Cutterhead set  
TG99MG008

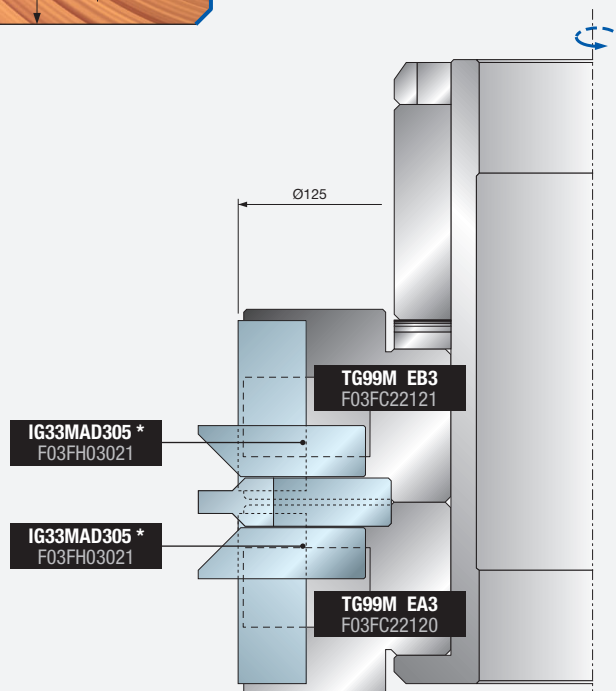


### PROFILE D

Cutterhead set  
TG99MG011



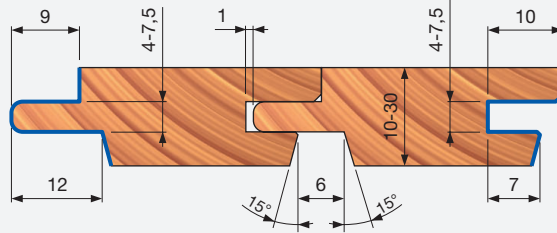
Cutterhead set  
TG99MG010



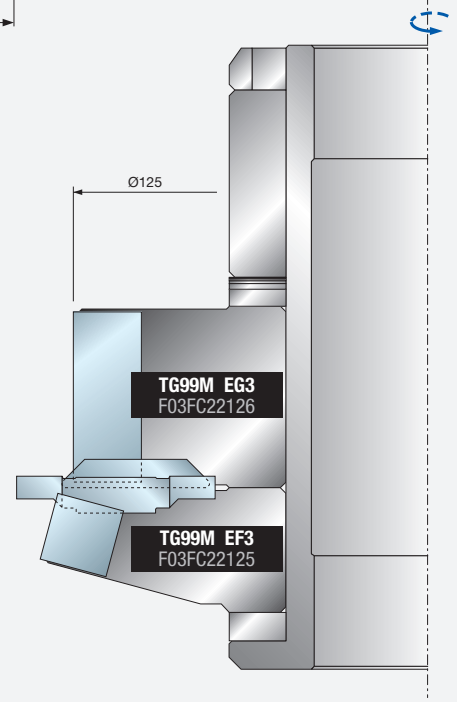
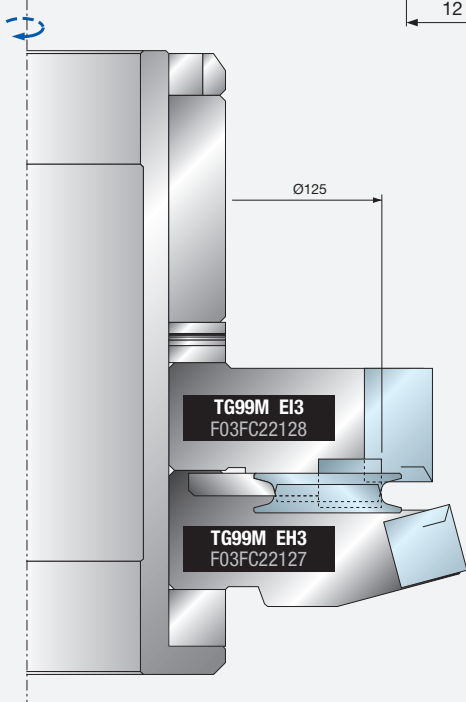
## Examples of programming

### PROFILE E

Cutterhead set  
TG99MG005

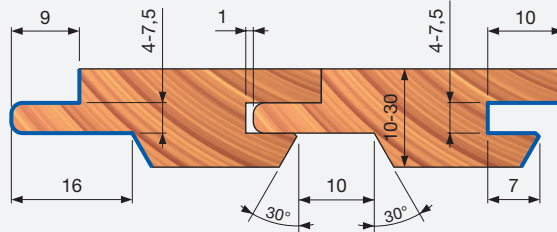


Cutterhead set  
TG99MG004

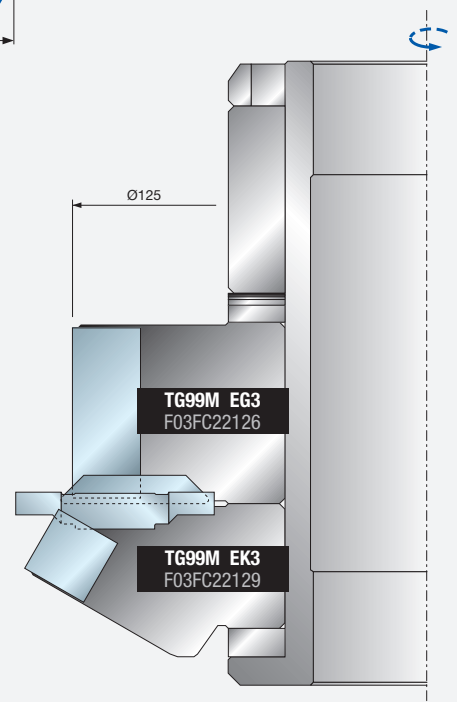
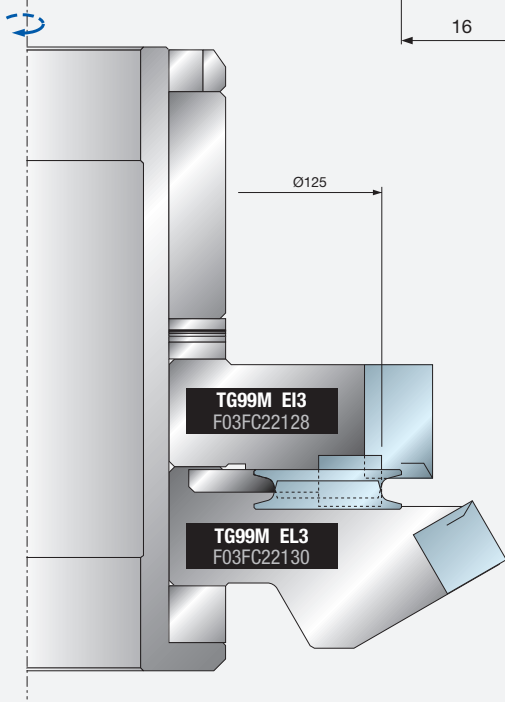


### PROFILE F

Cutterhead set  
TG99MG007



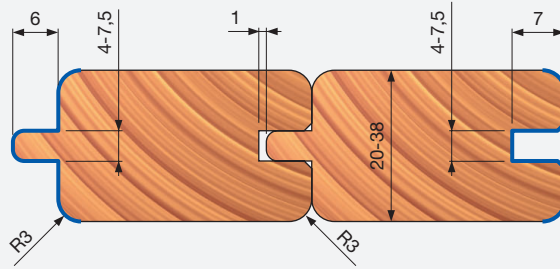
Cutterhead set  
TG99MG006



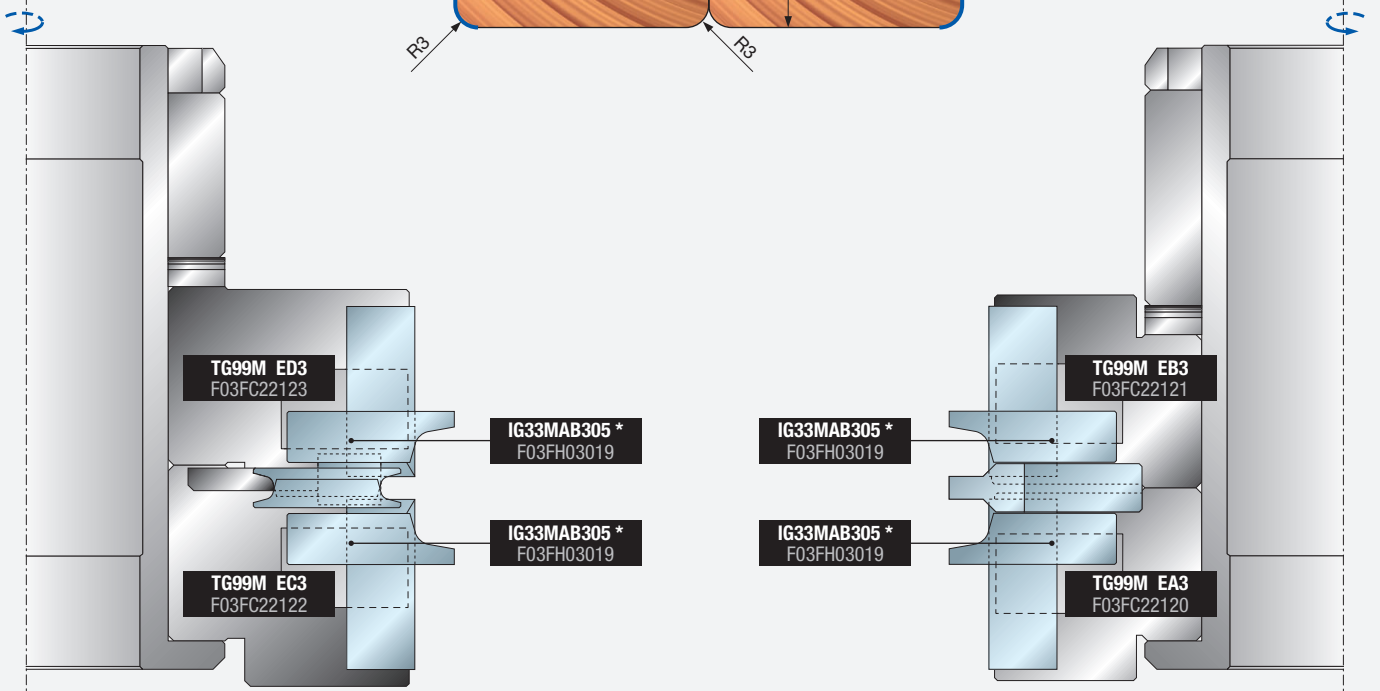
### Examples of programming

#### PROFILE G

Cutterhead set  
TG99MG013

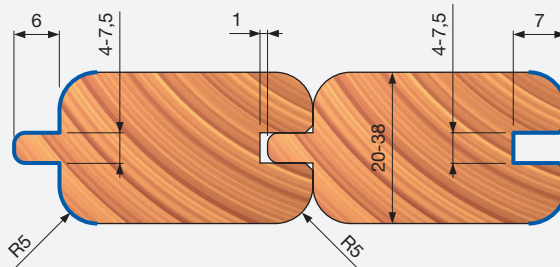


Cutterhead set  
TG99MG012

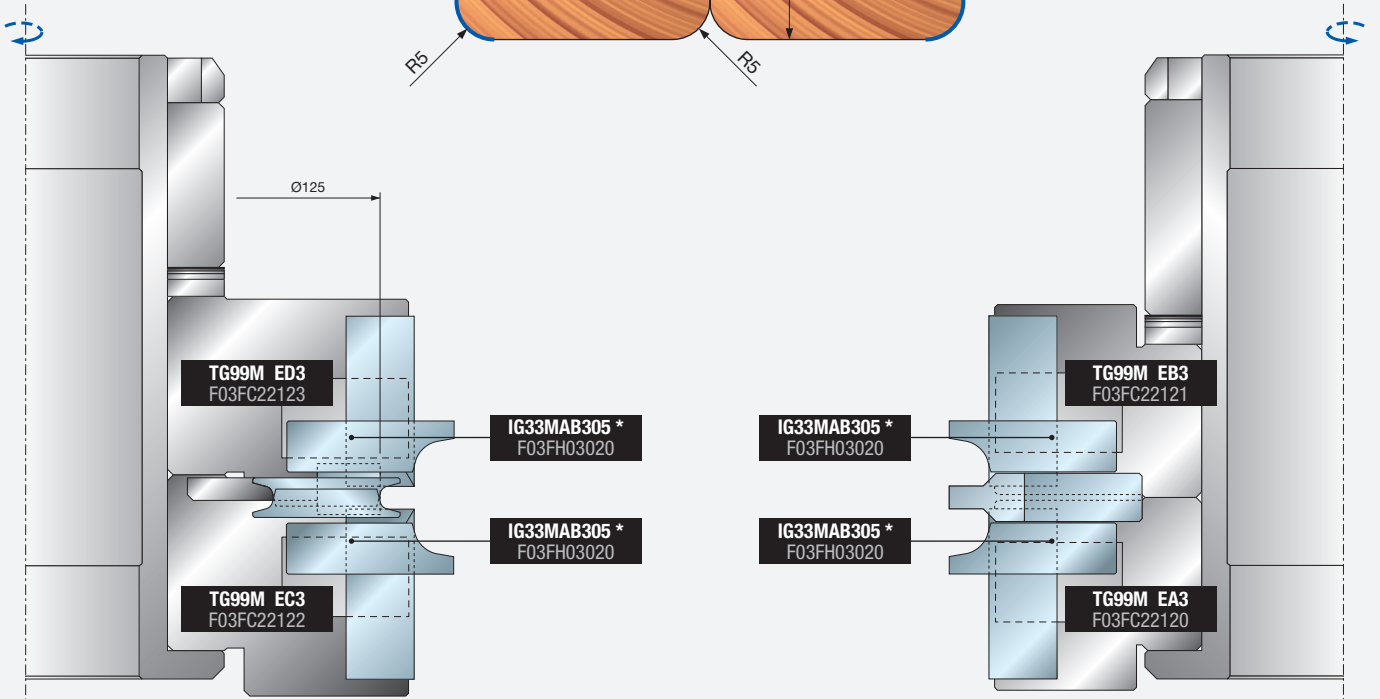


#### PROFILE H

Cutterhead set  
TG99MG015



Cutterhead set  
TG99MG014





## The tools have been designed and manufactured in accordance with the European Safety Standard EN-847

### TOOLS

Tools shall be used only by persons of training and experience who have knowledge of how to use and handle tools.

The maximum rotational speed marked on the tool shall not be exceeded.

Circular saw blades, the bodies of which are cracked, shall be scrapped (repairing is not permitted).

One piece tool with visible cracks shall not be used.

Clamping surfaces shall be cleaned to remove dirt, grease, oil and water.

- Resin shall only be removed from light alloys with solvents that do not affect the mechanical characteristics of these materials.

Tools and tool bodies shall be clamped in such a way that they shall not loosen during operation. Tools with cylindrical shank must be clamped in a way that the mark of the maximum free shank length shall be covered, at least partially, by the clamping device or by the locking collet.

- During assembly procedures, attention must be paid that knives, inserts and spurs do not collide with other elements. Fastening screws and nuts shall be tightened using the appropriate spanners etc. and to the torque value provided by the manufacturer. Extension of the spanner or tightening using hammer blows shall not be permitted.

Clamping screws shall be tightened according to instructions provided by the manufacturer. Where instructions are not provided clamping screws shall be tightened in sequence from the centre outwards.

Use of fixed rings, e. g. pressed or held by adhesive fixing, in flanged sleeves, shall be permitted if made to the manufacturers specifications.

- Repair and regrinding of tools shall only be allowed according to the tool manufacturer's instructions.

After repair and regrinding of tools it shall be ensured that the tools observe balancing requirements.

The design of composite (tipped) tools shall not be changed in the process of repair.

- Composite tools shall be repaired by a competent person, i.e. a person of training and experience, who has knowledge of the design requirements and understands the level of safety to be achieved. Repair shall therefore include, e.g. use of spare parts which are in accordance with the specification of the original parts provided by the manufacturer.

- Tolerances which ensure correct clamping shall be maintained. For one piece tools care shall be taken that regrinding of the cutting edge will not cause weakening of the hub and the connection of the cutting edge to the hub.

To avoid injuries, tools shall be handled in accordance with the guidance provided by the manufacturer. Typically, safe handling involves the use of devices such as carrying hooks, proprietary handles, frames (e. g. for circular saw blades), boxes, trolleys etc. The wearing of protective gloves improves the grip on the tool and further reduces the risk of injury.

Maintenance and modification of milling tools and related components and circular saw blades should always be in accordance with the design requirements/the manufacturer's instructions.

Maintenance and modification of milling tools and circular saw blades should only be carried out by a competent person, i. e. a person of training and experience, who has knowledge of the design requirements and understand levels of safety to be achieved.

When regrinding milling tools and circular saw blades, the minimum requirements of cutting blade thickness and cutting blade projection should be observed.

Composite tools should be repaired by persons experienced in and with understanding of design and use of milling tools for processing wood and similar materials, e.g. an expert with a relevant education and knowledge of the brazing process, including in particular the influence of the brazing process on tension in tool body and cutting material. When brazing off worn tips and subsequently brazing on new tips it should be made sure that the tip is correctly mounted in the tool body and that the process does not result in critical tension in the tool body.

- After any type of maintenance, milling tools marked with MAN should continue to observe the requirements of the standards related to tools for hand feed.

When modifying milling tools, e. g. modification of bore diameter, modification of shank, retipping of composite tools and similar, it should be ensured that the requirements of the standard relating to balancing are still observed.

After being modified and/or retipped, milling tools and circular saw blades should be marked according to the rules applying to new tools. However, the name/logo of the company making the modification/ retipping should be added.

To avoid injuries, tools shall be handled in accordance with the guidance provided by the manufacturer. Tools which weigh more than 15 kg may require the use of special handling devices or attachments, these will depend on the features that the manufacturer has designed into the tool to allow easy handling. The manufacturer can advise on the availability of necessary devices.

### CLAMPING DEVICES

The speeds indicated on the clamping device and the tool to be clamped should be compared. For adjusting the speed on the machine the lower speed should be applied.

Screws and nuts should be tightened using the appropriate spanners. Clamping surfaces should be cleaned to remove dirt, grease, oil and water.

Clamping devices and tools should be mounted or clamped according to given torques, pressures and wrenches to be used.

Extension of spanners or tightening or loosening by means of hammer blows should not be permitted.

Maximum tool diameters and tool lengths should not be exceeded.

Shank diameters must be in accordance with the clamping range of the clamping devices.

The minimum required clamping length must be kept.

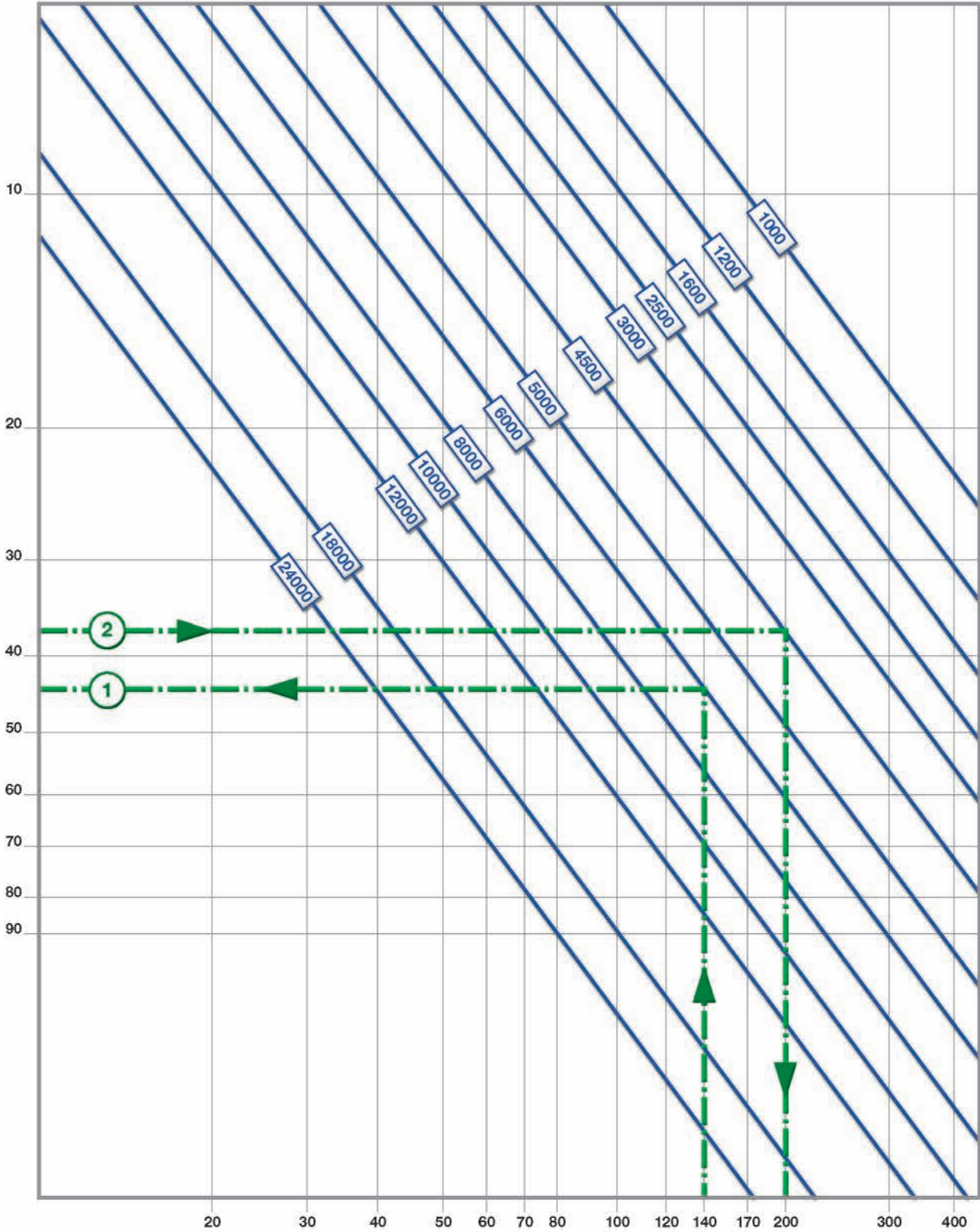
Care should be taken that the data relevant to the safety of the clamped tool are always stored in the data medium.

Repairs should only be carried out by a competent person, i.e. a person with professional training and experience, who has knowledge of the design, construction and safety requirements.

Repair should therefore include the use of spare parts which are in compliance with the specifications of the original parts.

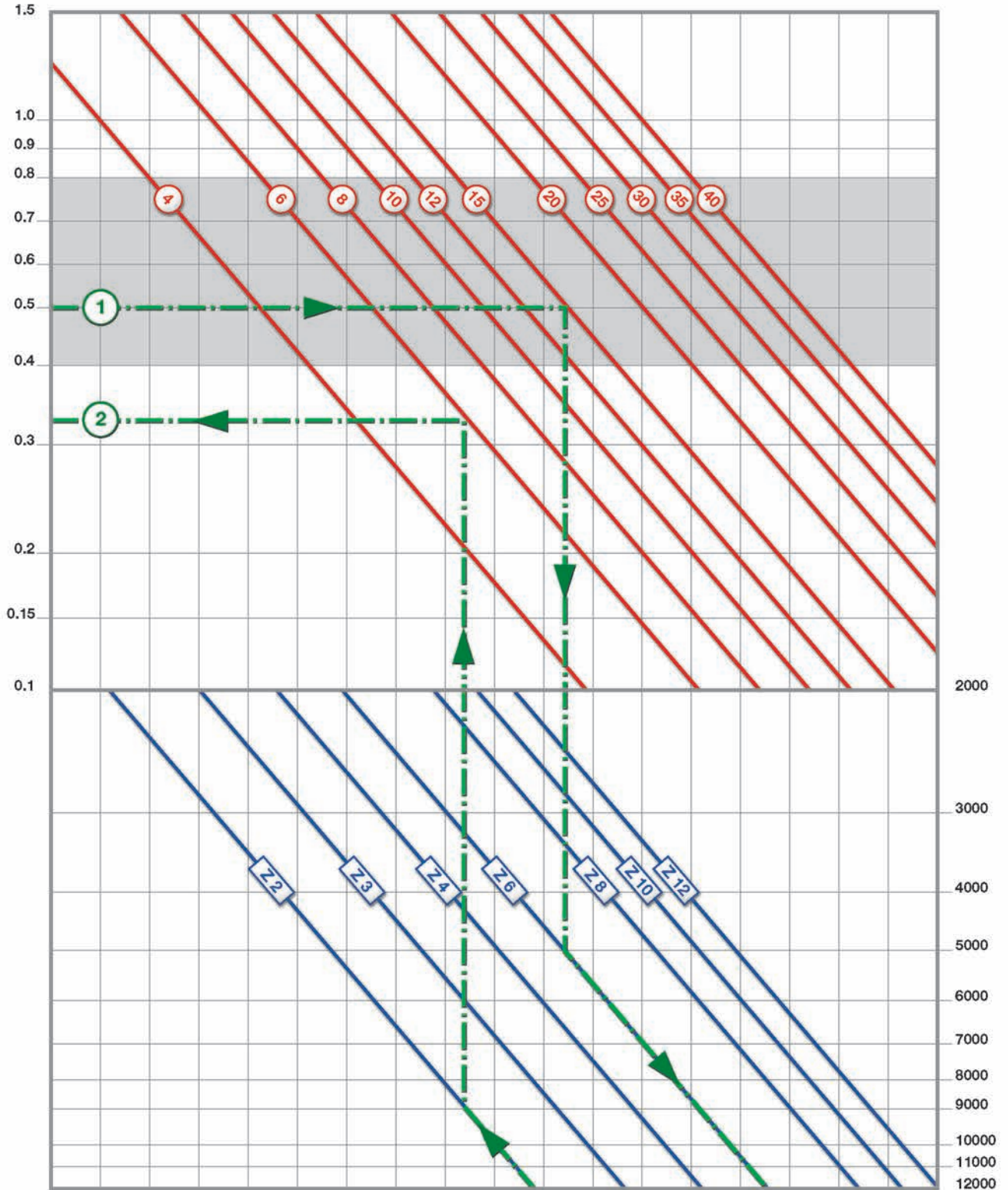
# TECHNOLOGICAL FEATURES

Technical diagram to obtain tip speed, diameter and RPM of a cutting tool



# TECHNOLOGICAL FEATURES

Technical diagram to obtain number of teeth, feed rate, RPM and grade of finish of a cutting tool

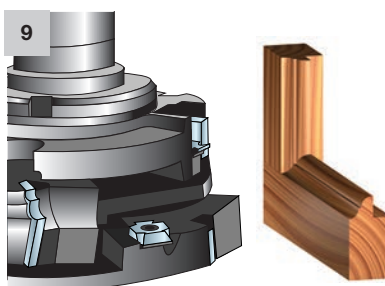
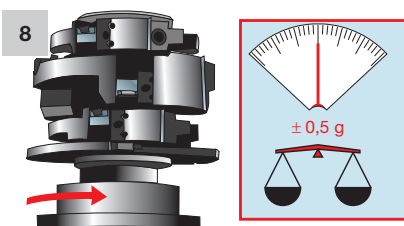
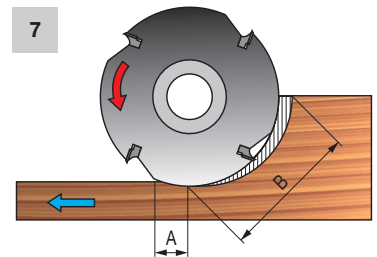
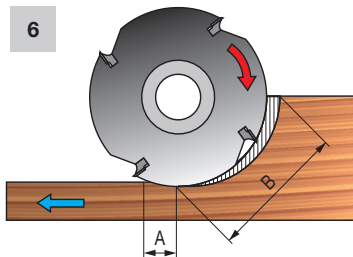
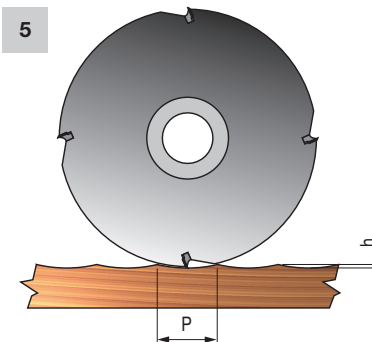
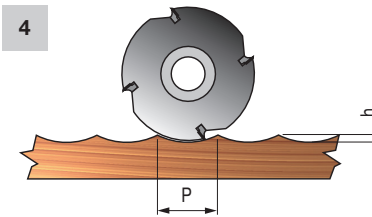
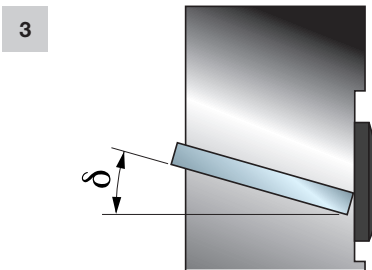
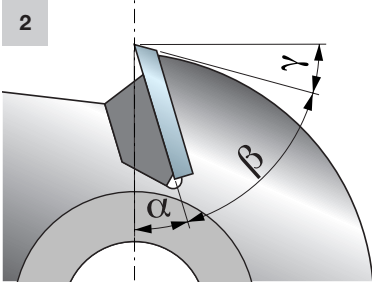


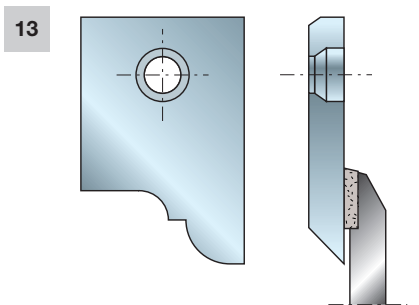
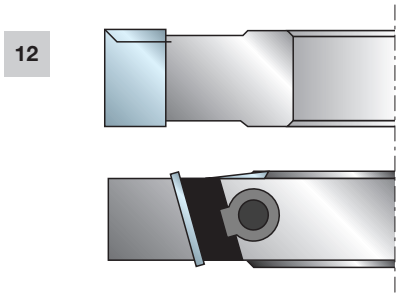
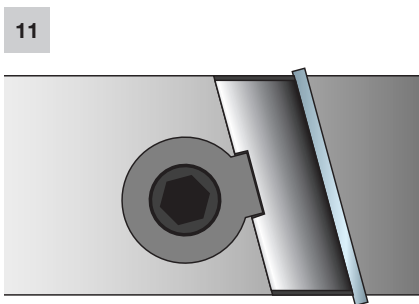
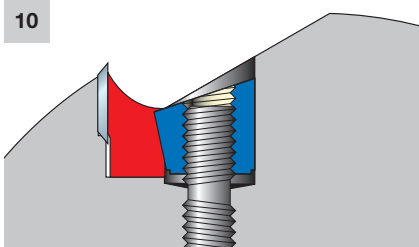


# TECHNOLOGICAL FEATURES

## TECHNICAL FEATURES OF TRADITIONAL CUTTERHEADS

- Freud's exclusive HW used to construct each cutter, is produced according to the kind of work which the tool will undergo, in order to obtain the best duration and quality finish possible. Special instruments guarantee precision and therefore perfect replacement of the knives we produce without the need to modify the cutterhead even after prolonged use (Fig. 1 shows hard metal under the microscope).
- The most characteristic angles of a cutterhead are (Fig. 2 and 3):
  - **Hook angle ( $\alpha$ ):** depends on the type of material to be cut.
  - **Wedge angle ( $\beta$ ):** this angle is a direct consequence of angles  $\alpha$  and  $\gamma$ .
  - **Clearance angle ( $\gamma$ ):** depends on the material to be cut and the thickness of the cutting edge.
  - **Shear angle ( $\delta$ ):** necessary to obtain a better penetration into the material to be cut and a gradual removal of the chips. When the tools have different diameters, this angle allows the hook angle to remain constant.
- The work piece finish is given by the surface roughness and depends on many factors: the feed rate, the tool's RPM, if the tool cuts against or with the feed and the tool's general geometry such as the hook, wedge and shear angles.
- The tool's diameter also influences the work piece finish (Fig. 4 and 5). If the feed rate and the tool's RPM are the same, the pitch (P) will also be the same, therefore the depth and the surface roughness (h) is reduced as the diameter of the tool increases.
- The tool cuts "with the feed" when the rotation and feed direction are the same (Fig. 6), the tool cuts "against the feed" when the rotation and feed direction are opposite (Fig. 7).
- During the removal of the chips, two areas can be distinguished: A and B (Fig. 6 and 7): area A is where the material is compressed if the rotation is "against the feed"; area B is where the tool penetrates the material and removes the chips.
- Every tool is designed by our research and development department based on the clients specific needs and the same technology is applied to manufacturing machines that, combined with highly specialised workers, allow precision levels never reached before in the woodworking field.
- Every tool is balanced to remove vibrations caused by bizarre distribution of the tool's mass, harmful during the woodworking process. Three balancing operations are done: first on the single tool, second on the set and finally, the third, on the entire group of tools that will be fitted on the same spindle (Fig. 8).
- The final tuning operation is done in the testing room and consists of simulating actual working conditions: each set is used to cut a wood sample of the requested profile. All of these testing phases allow Freud to supply the client with a product that is ready for use and immediately operational, allowing added savings for the client (Fig.9).

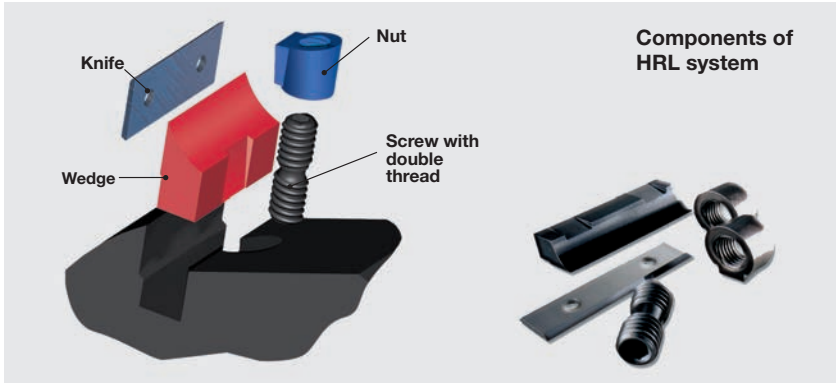




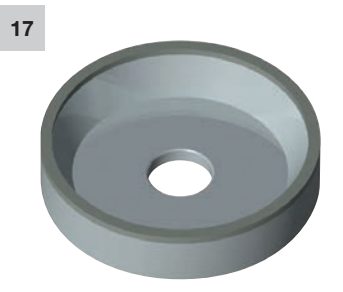
# TECHNOLOGICAL FEATURES

## ADVANTAGES OF TRADITIONAL CUTTERHEADS

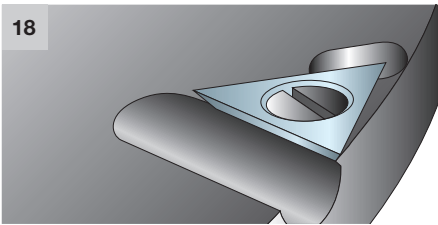
- A cutterhead is a rotating tool consisting of various cutting edges, geometrically fitted on its circumference. The cutting edges are 1,5 mm thick disposable knives, mechanically locked to the tool's body (Fig. 12). With respect to brazed cutters, cutterheads with disposable knives have numerous advantages, in fact, to change a used or damaged knife it is not necessary to dismount the cutterhead from the machine, but simply loosen the screw that holds it in its seat. On the other hand a brazed cutter must be changed altogether and a substitute available so as to avoid time wastage.
- The HRL Locking System takes advantage of the centrifugal forces generated by the tool rotation in order to block itself. This characteristic, along with other single elements avoid the risk of accidental breakage or expulsion of the knives. The HRL Locking System is also synonymous of strength; the use of only specially treated components and the precision of this method guarantees a practically unlimited number of locking and unlocking operations without compromising the efficiency. (Fig. 10 and 11).



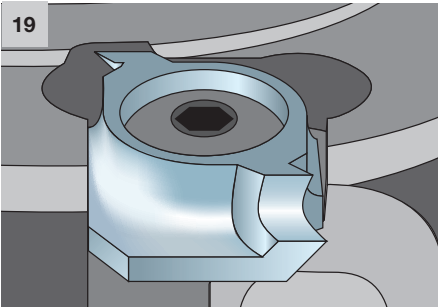
- Performance System knives are constructed in hard metal, which Freud produces in 6 grades of hardness, second to the material to be worked: softwoods and hardwoods, heavy, abrasive, chipboard, melamine, laminated, MDF etc. It is possible to use HW with a high grade of hardness, so as to permit a superior hold of 30% more with respect to the HW used for brazed cutting edges destined to work very abrasive materials.
- Other than being a solution that practically substitutes brazed cutters, thanks to the interchangeability of the profiles on the same tool and the duration of the tool itself, there is a notable advantage and convenience when working on overhead CNC router machines, where machine downtimes can result costly: in fact the changing of a used or damaged knife does not require the dismounting of the cutterhead from the machine, since it is sufficient to loosen the screw that holds it in place. Instead a brazed cutter must be completely changed and a substitute available to avoid time wastage.
- Freud has an entire range of tools with performance, standard or personalised knives for manual or overhead CNC router machines (Fig. 14).
- The Performance System results advantageous, even when confronted to traditional cutterheads, thanks to the easiness of sharpening, low operational cost and the need of no particular machinery (the use of a flat grinding wheel or surface grinding machine is sufficient - see Fig. 15) or specialised personnel.
- Even after sharpening, performance knives maintain their original profile (Fig.16) and the tool's cutting diameter, considering maximum loses of 0,15-0,20 mm.
- Suggestions for correct sharpening on surface grinding machine or flat grinding machine:
  - 1) Fix support TA01M or TAO2M (Fig. 16) onto the surface grinding machine or flat grinding machine.
  - 2) Fix the knives with the screws that are supplied.
  - 3) Proceed with the sharpening of the entire set of knives.
 Use of abundant cooling liquid during sharpening is recommended. Use diamond grinding wheels (Fig. 17) with the following characteristics: D6A2-C100-054.
- On request, sharpening can be carried out at our premises by simply sending us the complete set of knives and indicating on the order the code OPTAFF AA9.



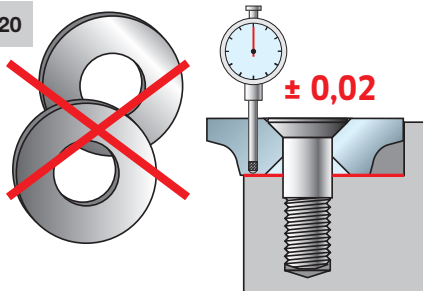
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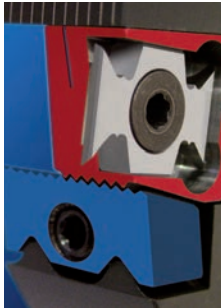


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R = 1,5 - 2 - 3



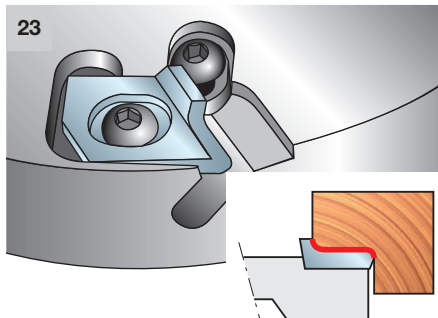
3 x 45°



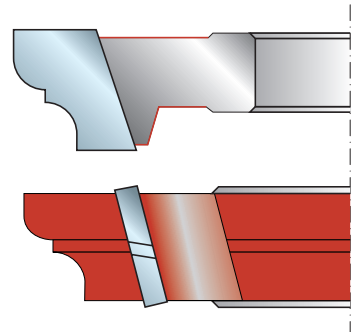
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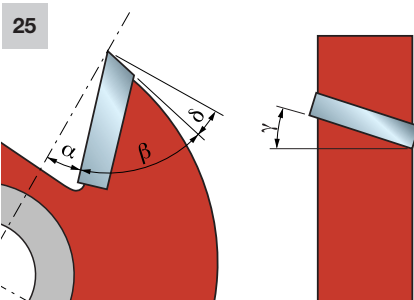
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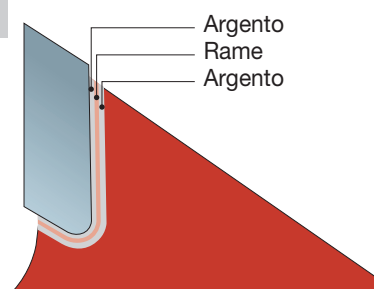
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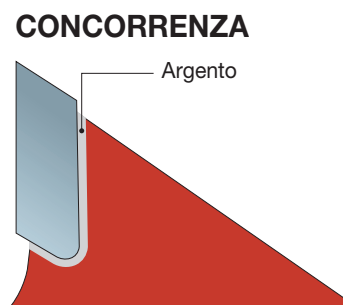
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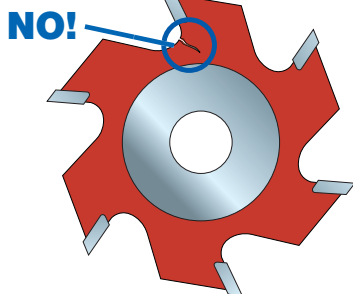


## TECHNOLOGICAL FEATURES

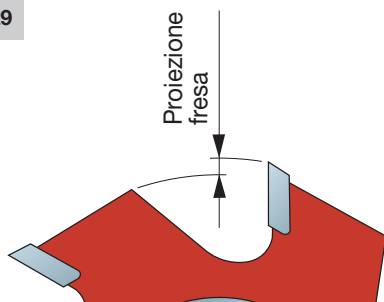
### INSERTS AND SPURS

- The triangular spur (Fig. 18) is a component produced in HW to give the cutting edge a long life, used on cutterheads and on Performance tools to give a better finish on rebates. The width of the cutting surface (22 mm) and the position of the spur (positive hook angle) guarantees a perfect finish without leaving a trace (the length of the rebate is less than the length of the spur).  
Another important characteristic is the size of the chip discharge area in front of the spur: this allows excellent chip discharge and therefore the spur is more efficient (Fig. 19).
- The rounding and beveling inserts are used to remove sharp angles from the work piece. These inserts give a better quality finish allowing various wood coatings to deposit more uniformly.  
Inserts with a shear angle allow a better finish when the wood is cut across the grain. Inserts and their seats are manufactured with extreme precision and this allows them to be replaced without the need of spacing rings (Fig. 20).
- The new NSR Adjustable Insert System is the only one that allows adjustments without the need of measuring instruments. This particular system allows the inserts to be adjusted with precision of a hundredth of a millimetre on the entire length of the tool. The indelible reference marks are etched with extreme precision by lasers and allow a rapid and simple repositioning of the insert (Fig. 21). Fig. 22 shows the components. The inserts have a positive hook angle and a shear angle that allows an excellent finish on any type of material. The same seat can be fitted with rounding inserts or beveling inserts.
- The rounding spur combines the characteristics of a rounding insert and a spur. With a single operation, the rebate is internally and externally rounded and finished. These solid carbide inserts are manufactured with various rebate depths to satisfy clients needs. Extremely good finish is guaranteed by the inserts shear - hook angle combination.  
In the same seats, different inserts can be fitted so that the same tool can cut rebates of different depths (Fig. 23).
- A cutter is a rotating tool consisting of various cutting edges, geometrically fitted on its circumference (Fig. 24). The cutting edges are HW or HSS inserts, fixed to the tool's body in a definitive way (brazed).
- Brazed cutterhead angles (Fig. 25) are similar to those described on the technical pages relative to the cutterheads and have much the same function (see page 97).
- The teeth in hard metal are brazed on to the cutters body with a special tn-metal alloy of copper-silver-copper, insuring a resistant soldering, permitting the teeth to absorb eventual blows due to kick-back and guaranteeing a longer duration of both the teeth and the cutter itself (Fig. 26-27).
- With regards to rotation and feed rate, for working in concordance or discordance, see page 98.
- Other than standard products, Freud offers personalised tools based on the client's needs.

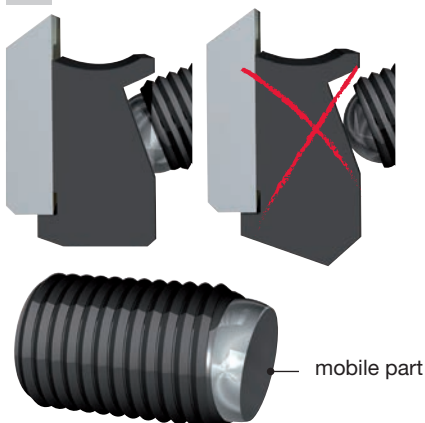
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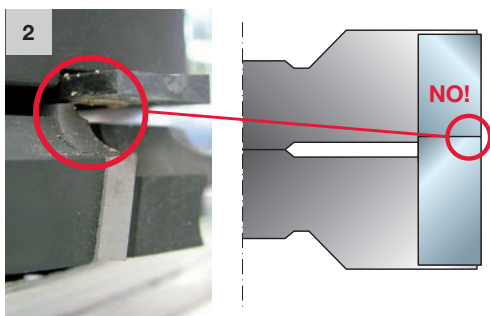


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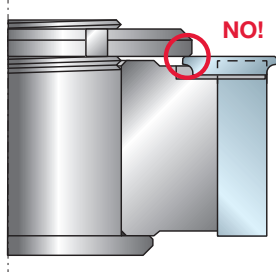


Screws with spherical insert, for ISOprofil System

2



3



## TECHNOLOGICAL FEATURES

For the use of brazed cutters, return to the norms already described in the section relative to cutterheads (page 97). Furthermore:

- Tools with visible cracks cannot be used (Fig. 28).
- The maintenance, repairing and modification of brazed cutters must be carried out in accordance with the manufacturers specific instructions. Furthermore they must always be carried out by competent and qualified personnel with the right understanding of the kind of safety levels to be reached.
- When sharpening brazed cutters, always respect the minimum projection foreseen for the cutting edges (Fig. 29).
- For the removal of used parts or the soldering of new cutting edges, insure that these are correctly mounted so as to avoid creating critical tension points on the tool's body.
- Modifying a brazed cutter, e.g. the diameter of the bore, or applying cutting edges, insure that the requirements applied by the norm relative to dynamic balancing are still respected.

## MAINTENANCE OF TOOLS

- On ISOprofil clamping system, proper locking is obtained when the flat surface of the spherical insert completely adheres to the wedge (Fig. 1).
- When mounting tools, insure that locking reacts against the body and the cutting edges are not in contact with each other (Fig. 2) or with any other locking elements (Fig. 3).
- Tools compiling a set, must be repaired by experienced and fully trained personnel, with the knowledge of the design requirements and security levels to be reached
- After any type of maintenance work, a tool marked "MAN" must continue to respect the requirements imposed by the norm relative to tools with manual feed. The use of tools for manual feed without deflectors if originally provided is not allowed.
- Wearing gloves increases grip and reduces the risk of injury. Tools for manual feed without deflectors if originally provided is not allowed.
- To avoid injury, tools must be handled with care using special appliances so as to transport them without exposing the user to injuries.

### INSTRUCTIONS FOR CLEANING

Clamping surfaces must be free of dirt, grease, oil and water (Fig. 4). Resins must be removed from tools with light alloy bodies using cleaners that do not damage the aluminium and compromise the materials mechanical features. Accurately clean the tool after every knife change.

**Washing:** Tools must be washed with water and an appropriate cleaning product (contact local dealer if more info needed) that doesn't affect the body materials (manganese phosphated steel or aluminium alloy) burnished steel components (screws, washers) and carbide inserts (titanium, cobalt carbide). Use of ultrasonic machines decrease washing time and improves cleaning in the inner parts of the tools.

**Drying:** After the washing operations, tools must be dried by means of drainage and/or compressed air.

**Oiling:** If the tools are ready to be immediately used or stored for future use, always oil all the parts with a layer of an anti-rust protective fluid.

Before storing the tools always clean them from dirt and resin by washing, drying and oiling operations. Store the tools in a dry place.

4



# Window Tooling

Freud produces a comprehensive range of standard and custom window systems, engineered and designed with advanced technologies and cutting-edge solutions. This increases the window & door efficiency levels and guarantees compliance to the latest energy regulations for buildings.

The superior quality solutions include a number of innovative projects and designs to produce windows & doors CE certified, via Freud Cascading Service.





## WINDOW TOOLING

Leading technology for window tooling .....	Pag. 448
Cascading Service .....	Pag. 450

### PROFILING

#### Throughfeed machines tool sets

ST12MG 800-801	Profiling cutterhead sets for internal and external doors .....	Pag. 453
ST12MG 820-821-822	Tenoning cutterhead sets .....	Pag. 455
ST12MG 840-841-842	Cutterhead sets for doors rebates .....	Pag. 458
ST12MG 302	Bead recovery cutterhead sets .....	Pag. 460
ST12MG 830	Cutterhead sets for door frames .....	Pag. 461
TP43M	Cutterhead sets for vertical slat shutters .....	Pag. 462
TP45M	Cutterhead sets for lifting-sliding doors .....	Pag. 464

#### CNC tool sets

ST16MGC13 700-701	Profiling CNC sets for internal doors without bead recovery .....	Pag. 465
ST16MG 702-703-704	CNC Set for internal doors profiling with bead recovery .....	Pag. 467
ST16MG 705-706-707-708	CNC Scribing sets for internal doors .....	Pag. 469
ST16MG 820-821	CNC Sets for door rebates .....	Pag. 471
ST16MG 830	Window tooling set for door frame internal profiling .....	Pag. 472

#### Router bits for bead recovery

PR01MD	Bead profiling router bits .....	Pag. 473
PCARM	Bead recovering router bits .....	Pag. 474

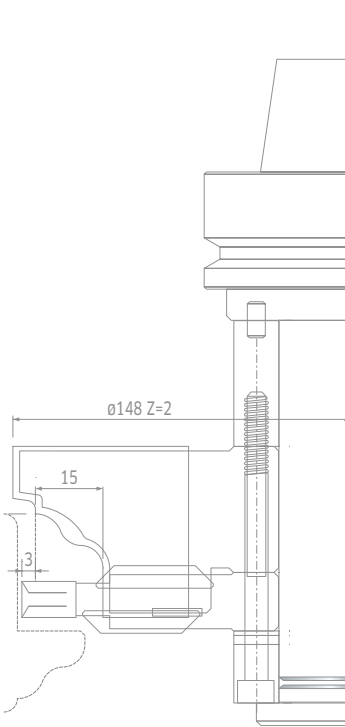
### BORING

#### Drill bits for hinges

PA01MD	HS Stepped drill for hinges .....	Pag. 476
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Safe working practice.....	Pag. 477
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HRL - High Resistance Locking System .....	Pag. 478
NSR Regulation System .....	Pag. 479
Profiled and resharpenable Performance System knives .....	Pag. 479
Automatic diameter recovery system.....	Pag. 480



# LEADING TECHNOLOGY

## TiCo CARBIDE TECHNOLOGY

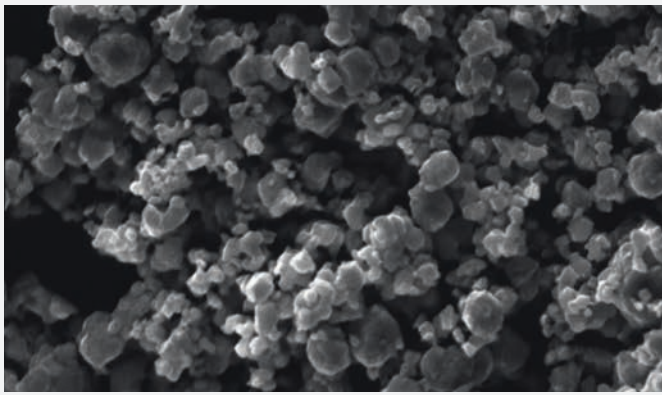
Freud ownership and control of the entire Carbide manufacturing cycle ensures that the correct formula is used for every application, to constantly maximise the knives performance.



### TiCo Carbide

A specially formulated, highly compact Titanium Cobalt Carbide, engineered and manufactured by Freud.

It provides a sharper edge and flawless finish with a dramatically longer cutting life.



## DESIGN INNOVATION

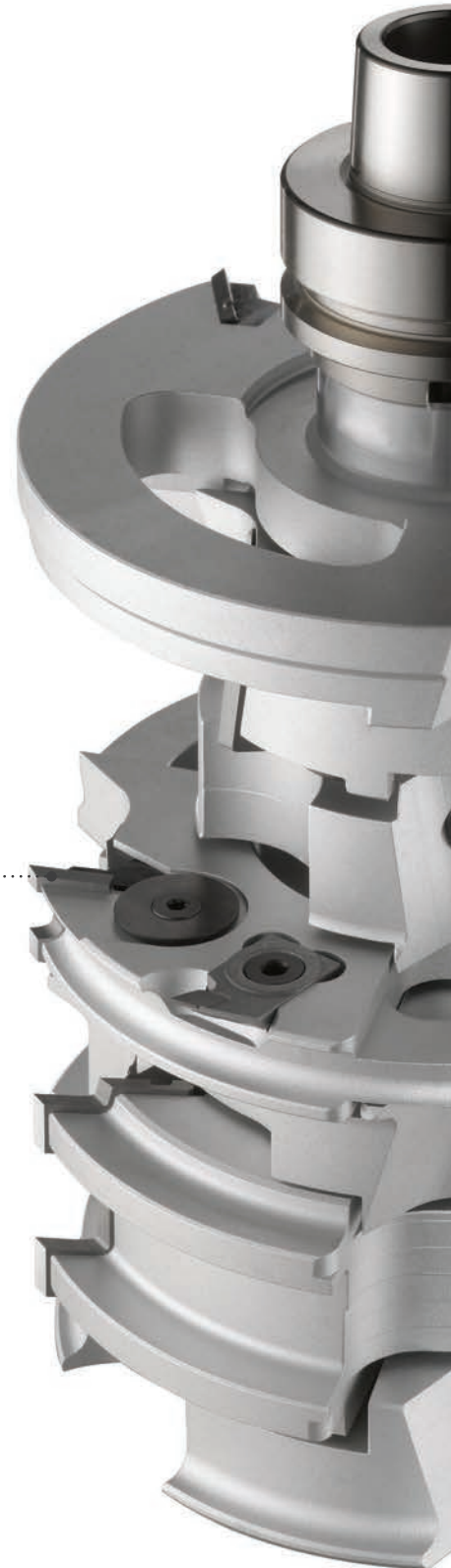
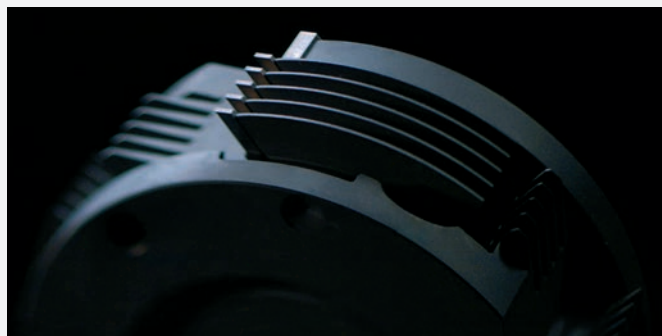
The design of Freud's special knives is engineered to perform perfect cuts and deliver extraordinary durability. The ISOprofil cutterheads are developed to work with 17 different knives.

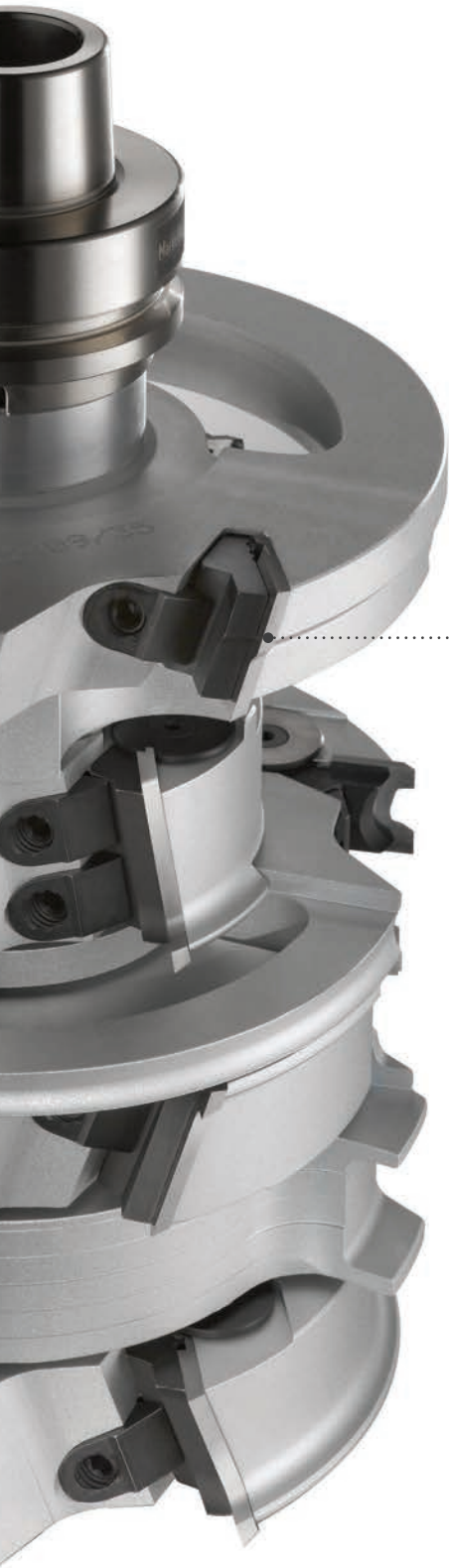
### Split Edge knives

Freud Split Edge knives reduce cutting pressure and prevent edge chip out. These knives, resharpenable up to 6 times, both enhance the productivity and increase profitability, always delivering a flawless door and window joint profiling.

### Performance System knives

Freud Performance System knives are designed with extra thickness - 3 mm - for up to 6 x resharpening cycles and a prolonged durability. These knives are available in a wide range of sizes.





## PIONEERING SOLUTIONS

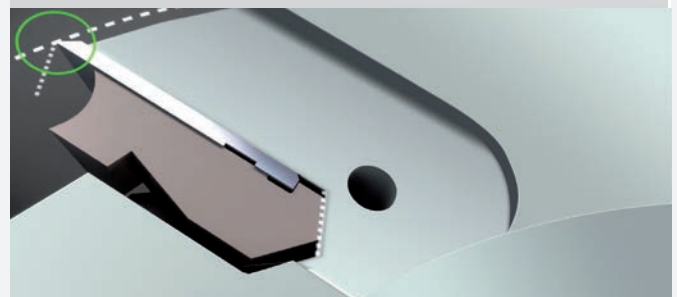
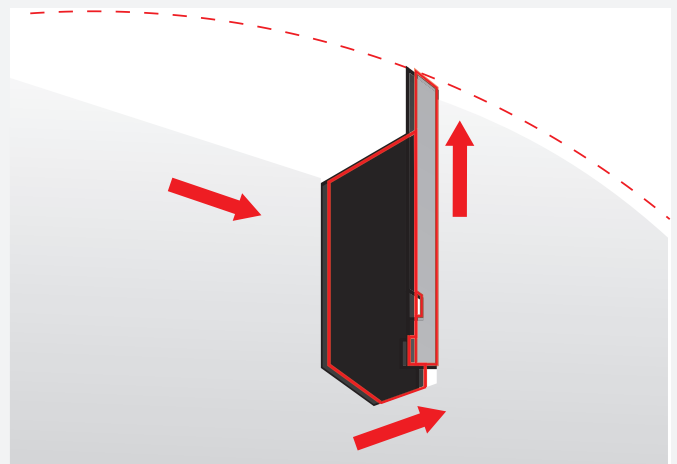
Freud's continuous investment in R&D and its superior knowledge of the industry provide cutting-edge and patented solutions, for maximum production efficiency and increased safety.



### ISOprofil technologies

Freud's **ISOprofil** is the only patented system in the world, with an automatic cutting profile recovery, at a rotating speed of 70 m/s.

The **High Speed ISOprofil (H.S.I.)** leverages this innovative technology at higher speed - 100 m/s - offering a solution for automated CNC machines as well as automated and throughfeed machines.



The ISOprofil solutions feature an exclusive and extra safe locking system that allows the use of resharpenable knives, also at high rotating speed and feed-rates, delivering higher production in a shorter time.



The easy access to knives and their fast repositioning after sharpening reduce the set-up & maintenance time and, consequently, the machine downtime.

### Hybrid technologies

Freud leverages the Hybrid technology, a combination of property and tested locking systems that processes, in one step only, the two-step phases of pre-cutting and finishing.

This results in an impeccable finishing and in an increased productivity.

# Cascading Service



# CE CERTIFICATION FREUD CASCADING



Freud is a “System House“ certified by the prestigious IFT Rosenheim Institute.

The offer to customers is more than a selection of premium cutting tools and it is enriched by a comprehensive Cascading Service.

Freud has developed a wide range of innovative projects and design solutions to produce windows & doors CE certified, leveraging a solid technical know-how, mastered over decades of experience in the window tooling industry.

The systems are tested and released using the designs and the window components (gaskets, hardware, Aluminium profiles etc.) of the main Italian and European System Houses.

Therefore, customers have access to a 100% turnkey solution, inclusive of all components and work cycles and completed by the competent assistance of Freud Customer Service, available also to fulfill specific needs.

In addition, Freud offers a broad ST12MG range for standard CNC tools to create tilt & turn, lift & slide, pivot windows as well as internal & external doors.

## Freud Cascading Service includes:

- Documentation management via Freud's Quasar software.
- Training, technical support and post sales assistance.
- Factory Production Control (FPC) to manufacture products compliant to the stated performance parameters.
- Freud's Customer Service assistance.

## Wood Window

System	Frame thickness mm	Sash Thickness mm	Hardware axis mm
Ermetic	56-58-64	56-58-64	9
Ermetic 17	58-64-68	58-64-68	9
Eurost	56-58-64-68	56-58-64-68	9
Eurost 17	58-64-68	58-64-68	9
Freumex	56-58-64-68	56-58-64-68	9
Freumex 17	58-64-68	58-64-68	9
Euronorm	68-70	68-70	9
Freumex C13	68-78-80	68-78-80-92	13
Euronorm C13	68 - 78 - 80	68 - 78 - 80	13
Freumex HP	80-92	80-92	13
Euronorm HP	80-92	80-92	13
Ghost	68-80	68-80	13
Luce	80	68	13
Fox 92	92	92	13
Excellence	68-78-88-98	68-78-88-98	13

## Wood/Aluminium Window

System	Frame thickness mm	Sash Thickness mm	Hardware axis mm
Ermetic	56-56	56-64	9
Ermetic 17	58-58	58-68	9
Eurost	58-61	58-68	9
Eurost 17	58-63	58-68	9
Freumex	56-61	56-68	9
Freumex 17	58-63	58-68	9
Euronorm	63	68	9
Freumex C13	65	68	13
Euronorm C13	68	68	13
Freumex HP	77	80	13
Euronorm HP	77-79	80	13
Ghost	68-80	68-80	13
Luce Freumex	74	68	13
Luce Euronorm	73	68	13
Easy slim	58	68	13
Excellence	68-72-82-92	68-78-88-98	13

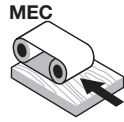
# Profiling



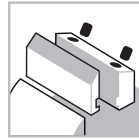


# ST12MG

## Profiling cutterhead sets for internal and external doors



Automatic Feed



Clamping System



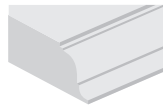
Steel Body



Softwood



Hardwood



Profiling



### Machines:

Automatic feed and window tooling machines.

### Materials:

Softwood and hardwood.

### Applications:

Profiling.

### Technical information:

Tool set for internal door profile with a 140 mm zero diameter.

- Performance cutterheads are designed to work with 17 different knives.
- Adjustable timber thickness from 44 to 70 mm. tool set is provided on sleeve to fit every machine spindle dimension.
- Steel body.
- Sleeve and Performance knives to be ordered separately.

### Groove bead cutters

Dimensions mm	Sleeve code	Art. No.
Ø70 x 90 x 30	BF10MD EA9	F03FC24536
Ø70 x 90 x 32	BF10MD EL9	F03FC24537
Ø70 x 90 x 35	BF10MD EB9	F03FC00633
Ø70 x 90 x 40	BF10MD EC9	F03FC00634
Ø70 x 90 x 50	BF10MD ED9	F03FC00635

Wood thickness mm	Double-glazing thickness adj. mm
44	5 ÷ 8
56	13 ÷ 20
58	15 ÷ 22
64	21 ÷ 28
68	25 ÷ 32
70	27 ÷ 34

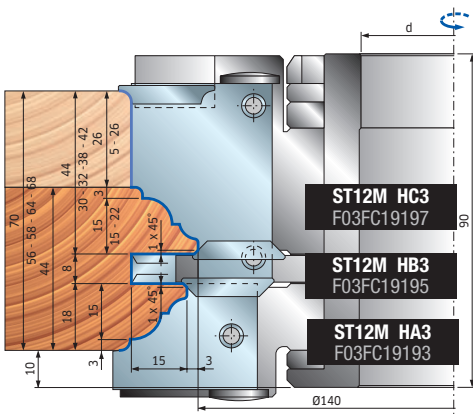
### Tool set zero diameter: 140 mm

D mm	B mm	d mm	Z	R	Max RPM 1/min.	Freud Code	Art. No.
186	-	-	2	-	7.300	ST12MG 800	F03FC19647
186	-	-	2	-	7.300	ST12MG 801	F03FC19648

### Tools for ST12MG-800 and ST12MG-801 sets

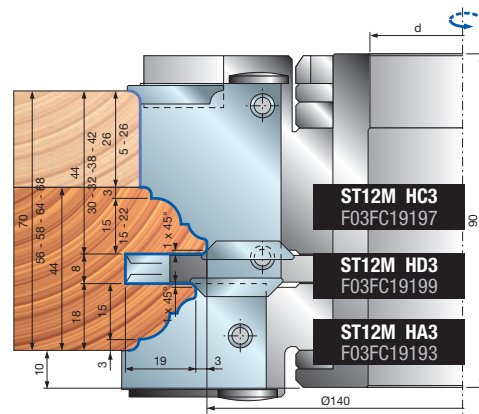
D mm	B mm	d mm	Z	R	Max RPM 1/min.	Freud Code	Art. No.
186	29	70	2	-		ST12M HA3	F03FC19193
176	8	70	2	4		ST12M HB3	F03FC19195
176	58,5	70	2	-		ST12M HC3	F03FC19197
184	8	70	2	4		ST12M HD3	F03FC19199

	Spare parts	Dimensions mm	Freud Code	Art. No.
HA3	Screw	M10 x 18	VT03M CC9	F03FA04438
	Screw	M5 x 7 x 16	VT08M AE9	F03FA04457
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Screw	M5 x 7 x 16	VT08M AE9	F03FA04457
HC3	Rounding insert	22 x 16 x 5 R=3	IG52MAE305	F03FH03025
	Screw	M6 x 13	VT16M AE9	F03FC20658
	Wedge	28 x 9,5 x 8	CN03M BB9	F03FA00585
	Screw	M8 x 22	VT19M BB9	F03FA04493
HB3 - HD3	Knife	7,6 x 12 x 1,5	CG06MHA310	F03FH02897
	Wedge	15 x 7,2 x 8	CN09M DA9	F03FC01295
	Screw	M5 x 19	VT11M AA9	F03FA04468
	Spur	22,86 x 2,5	RG02MAA305	F03FH03041
	Screw	M5 x 6	VT05M AC9	F03FA04446
	Beveling insert	22 x 16 x 5	IG51MBA305	F03FH03022
	Screw	M6 x 11,5	VT16M AB9	F03FA04477



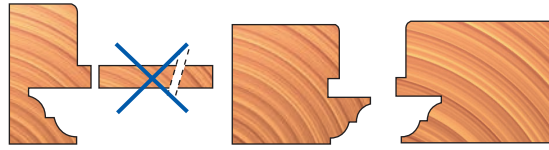
### Set ST12MG-800

No. 7+7 interchangeable profiles.



### Set ST12MG-801

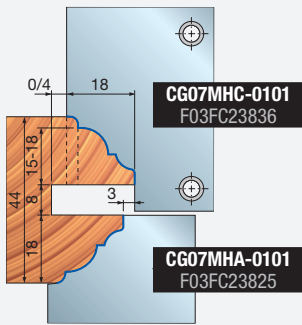
No. 7+7 interchangeable profiles. With anti-torsion pin for assembly of elements with counter profile.



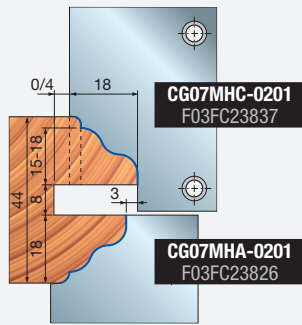
Jamb and transom with ST12MG-801 set: by cutting the tenon as shown, the counter profile with anti-torsion pin is obtained.

### Profiles with 3 mm external rounding for cutterheads: ST12M HC3 - ST12M HA3

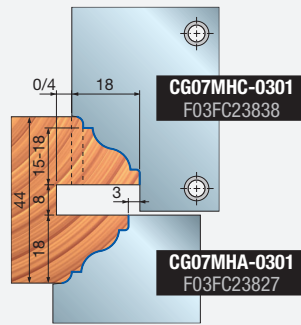
**PROFILE 1**



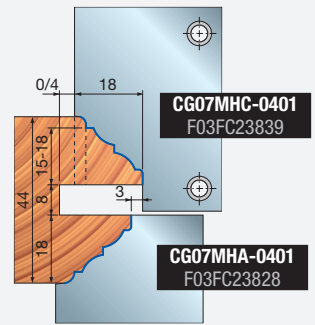
**PROFILE 2**



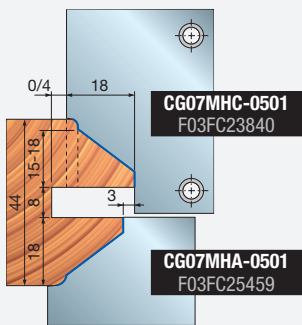
**PROFILE 3**



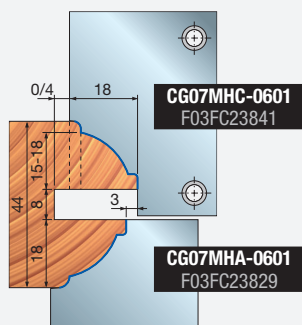
**PROFILE 4**



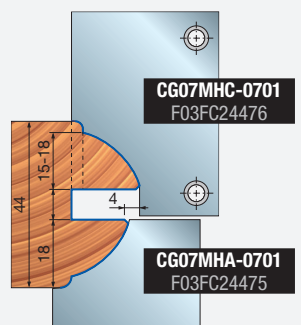
**PROFILE 5**



**PROFILE 6**

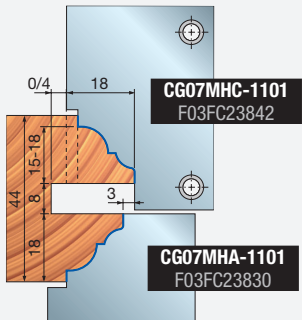


**PROFILE 7**

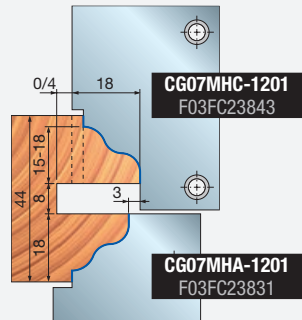


### Profiles without external rounding for cutterheads: ST12M HC3 - ST12M HA3

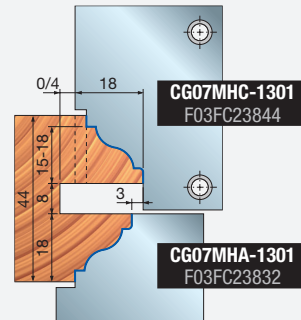
**PROFILE 11**



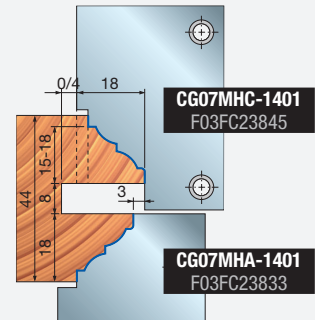
**PROFILE 12**



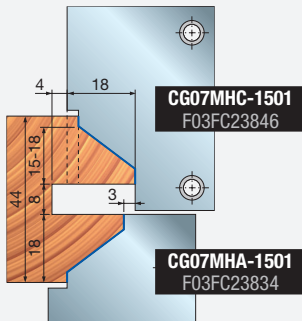
**PROFILE 13**



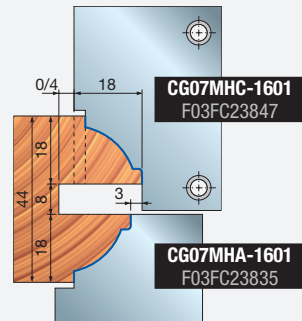
**PROFILE 14**



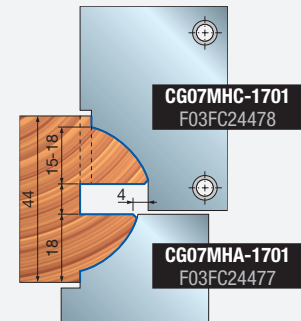
**PROFILE 15**



**PROFILE 16**



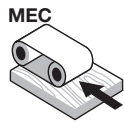
**PROFILE 17**



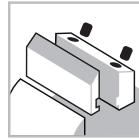


# ST12MG

# Tenoning cutterhead sets



Automatic Feed



Clamping System



Steel Body



Softwood



Hardwood



Profiling

Tool set zero diameter: 300 mm

D mm	B mm	d mm	Z	R	Max RPM 1/min.	Freud Code	Art. No.
294	-	-	-	-	5.000	ST12MG 820	F03FC19649
294	-	-	-	-	5.000	ST12MG 821	F03FC19650
294	-	-	-	-	5.000	ST12MG 822	F03FC19651

Tools for ST12MG-820, ST12MG-821, ST12MG-822 sets

D mm	B mm	d mm	Z	R	Max RPM 1/min.	Freud Code	Art. No.
264	8	70	2	4		ST12M DB3	F03FC19081
294	26	70	2	-		ST12M HF3	F03FC19200
300	26	70	2	-		ST12M HG3	F03FC19201
264	30	70	2	2		ST12M HH3	F03FC19202



### Machines:

Automatic feed and window tooling machines.

### Materials:

Softwood and hardwood.

### Applications:

Scriming.

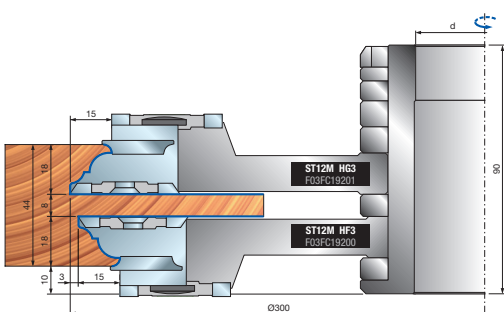
### Technical information:

Tool set for internal door profile with a 300 mm zero diameter.

- Performance cutterheads are designed to work with 17 different knives (to be combined with ST12MG 800-801 profiles).
- Adjustable timber thickness from 44 to 70 mm, tool set is both available with and without bead recovery version and provided on sleeve to fit every machine spindle dimension.
- Steel body.
- Sleeve and Performance knives to be ordered separately.

Dimensions mm	Sleeve code	Art. No.
Ø70 x 90 x 30	BF10MD EA9	F03FC24536
Ø70 x 90 x 32	BF10MD EL9	F03FC24537
Ø70 x 90 x 35	BF10MD EB9	F03FC00633
Ø70 x 90 x 40	BF10MD EC9	F03FC00634
Ø70 x 90 x 50	BF10MD ED9	F03FC00635

BF10MD sleeves and knives for cutterheads HF3 and HG3 are not included.

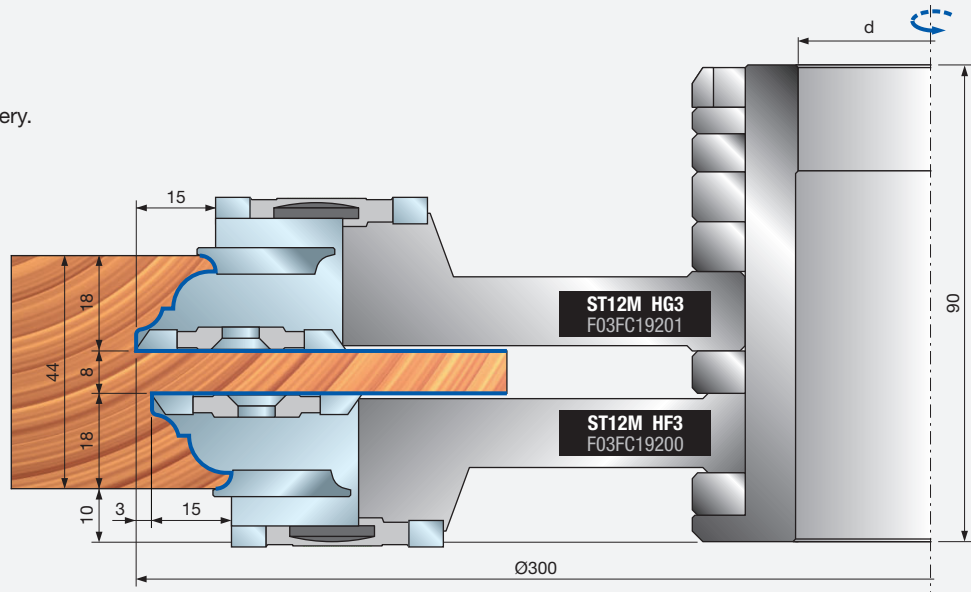


	Spare parts	Dimensions mm	Freud Code	Art. No.
DB3	Knife	7,6 x 12 x 1,5	CG06MHA310	F03FH02897
	Wedge	15 x 7,2 x 8	CN09M DA9	F03FC01295
	Screw	M5 x 19	VT11M AA9	F03FA04468
	Spur	22,86 x 2,5	RG02MAA305	F03FH03041
	Grooving insert	40 x 5 x 8	SR01MSAA301	F03FC24186
	Screw	M6 x 10	VT01M AA9	F03FA04429
	Threaded ring	11,7 x 2,5 x 4	VT18M BB9	F03FA04484
	Screw	M4 x 6,5	VT05M BD9	F03FA04449
	Screw	M5 x 6	VT05M AC9	F03FA04446
	Screw	M5 x 7 x 16	VT08M AE9	F03FA04457
HF3	Screw	M10 x 18	VT03M CC9	F03FA04438
	Spur insert	40 x 16 x 4	IG05MDAA305	F03FH02998
	Screw	M6 x 11,5	VT16M AB9	F03FA04477
	Rounding insert	22 x 16 X 5 R=3	IG52MAE305	F03FH03025
	Screw	M6 x 14,5	VT16M AA9	F03FA04476
	Screw	M5 x 7 x 16	VT08M AE9	F03FA04457
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Spur insert	40 x 16 x 4	IG05MSAA305	F03FH02999
	Screw	M6 x 11,5	VT16M AB9	F03FA04477
	Rounding insert	22 x 16 X 5 R=3	IG52MAE305	F03FH03025
HG3	Screw	M6 x 14,5	VT16M AA9	F03FA04476
	Knife	30 x 12 x 15	CG06MDA310	F03FH02892
	Wedge	15 x 26 x 8	CN09MS AD9	F03FC01326
	Nut	15 x 13,3 x M10	VT20M MA9	F03FC20670
	Screw	M10 x 22	VT19M MA9	F03FA04496
	Spur	22,86 x 2,5	RG02MAA305	F03FH03041
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Rounding insert	22 x 16 X 5 R=3	IG52MAE305	F03FH03025
	Screw	M6 x 13	VT16M AE9	F03FC20658
	Wedge	14 x 21,5 x 22	CN03M BA9	F03FA00584
HH3	Wedge	28 x 9,5 x 8	CN03M BB9	F03FA00585
	Screw	M8 x 22	VT19M BB9	F03FA04493

Profiles with 3 mm external rounding for cutterheads: ST12M HC3 - ST12M HA3

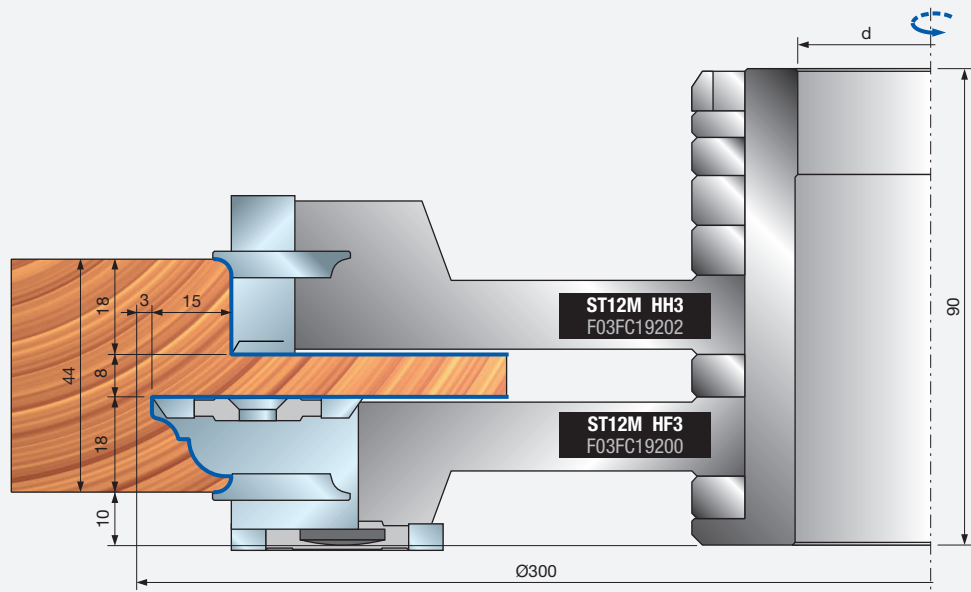
### Set ST12MG-820

Single tenon.  
For profile without bead recovery.



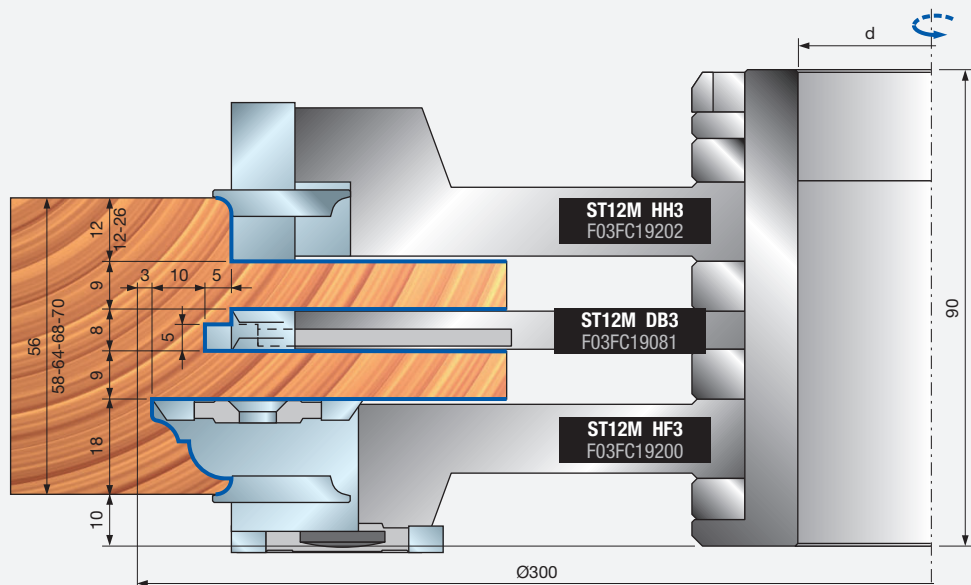
### Set ST12MG-821

Single tenon.  
For profile with bead recovery.



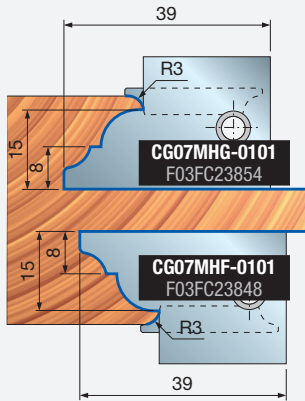
### Set ST12MG-822

Double tenon.  
For profile with bead recovery.

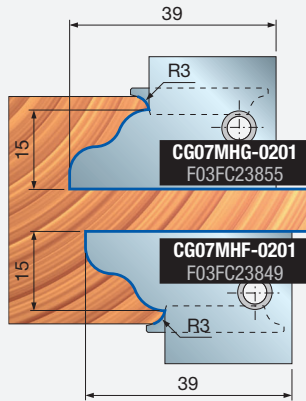


Scribes with 3 mm external rounding for cutterheads: ST12M HG3 - ST12M HF3

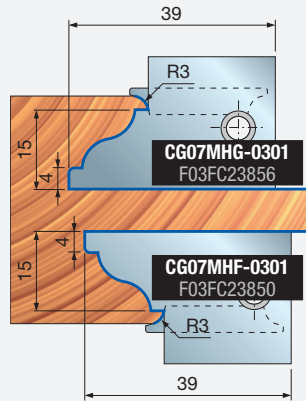
SCRIBE 1



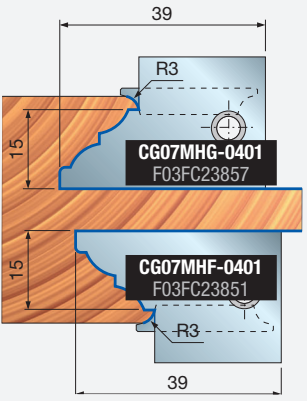
SCRIBE 2



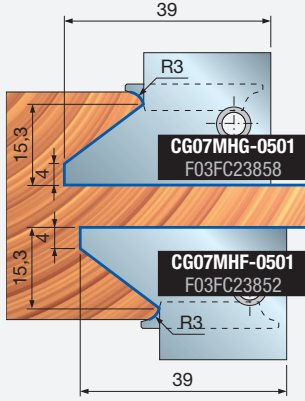
SCRIBE 3



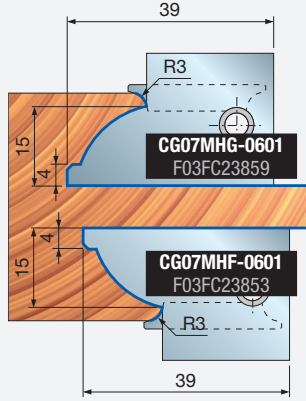
SCRIBE 4



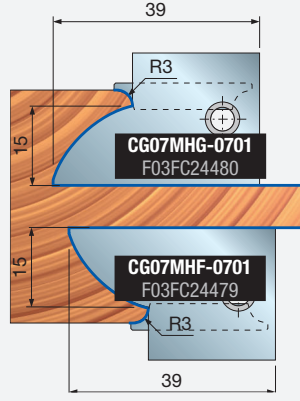
SCRIBE 5



SCRIBE 6

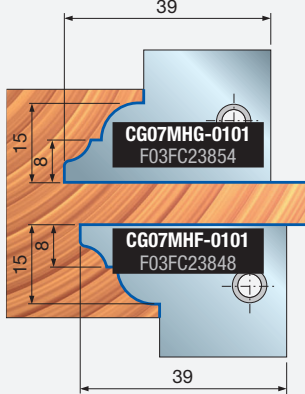


SCRIBE 7

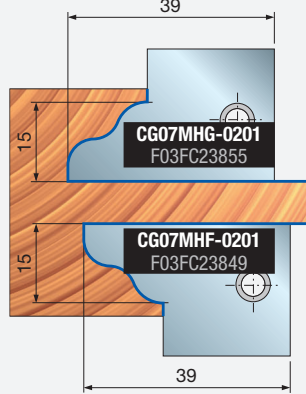


Scribes without external rounding for cutterheads: ST12M HG3 - ST12M HF3

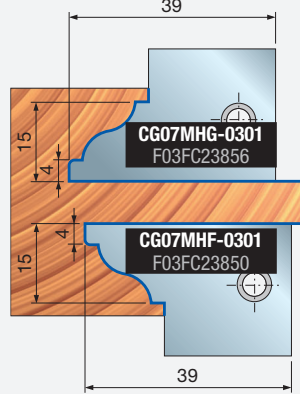
SCRIBE 11



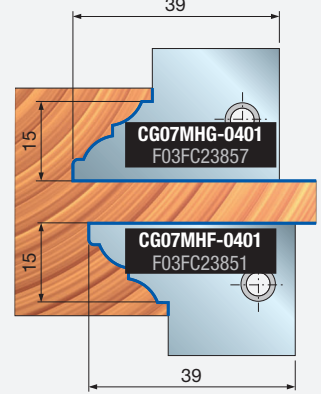
SCRIBE 12



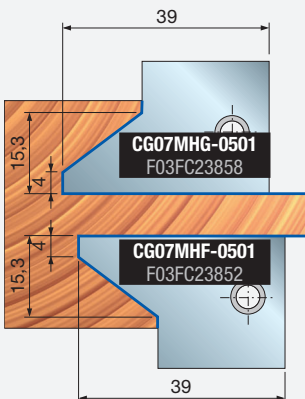
SCRIBE 13



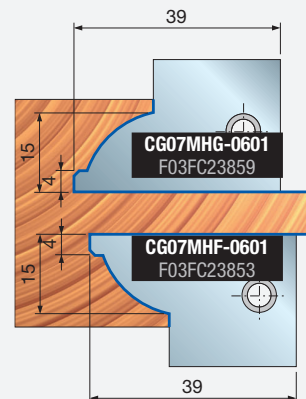
SCRIBE 14



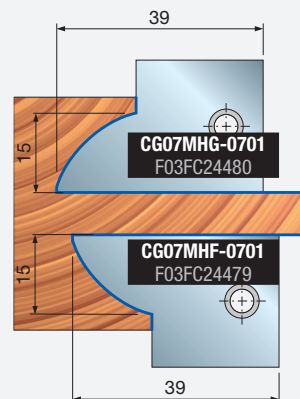
SCRIBE 15



SCRIBE 16



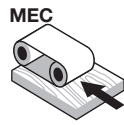
SCRIBE 17



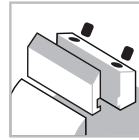


# ST12MG

## Cutterhead sets for doors rebates



Automatic Feed



Clamping System



Steel Body



Softwood



Hardwood



Profiling



Rebating

Tool set zero diameter: 140 mm

D mm	B mm	d mm	Max RPM 1/min.	Freud Code	Art. No.
162	-	-	8.300	ST12MG 840	F03FC19653
162	-	-	8.300	ST12MG 841	F03FC19654
162	-	-	8.300	ST12MG 842	F03FC19655

Tools for ST12MG-840, ST12MG-841, ST12MG-842 sets

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
161,8	41	70	2		ST12M HL3	F03FC19208
147	33	70	2		ST12M HM3	F03FC19209
140	30	70	2		ST12M HN3	F03FC19210
166	35	70	2		ST12M HR3	F03FC19214



### Machines:

Automatic feed and window tooling machines.

### Materials:

Softwood and hardwood.

### Applications:

Profiling and rebating.

### Technical information:

Tool set for internal door profile with a 140 mm zero diameter.

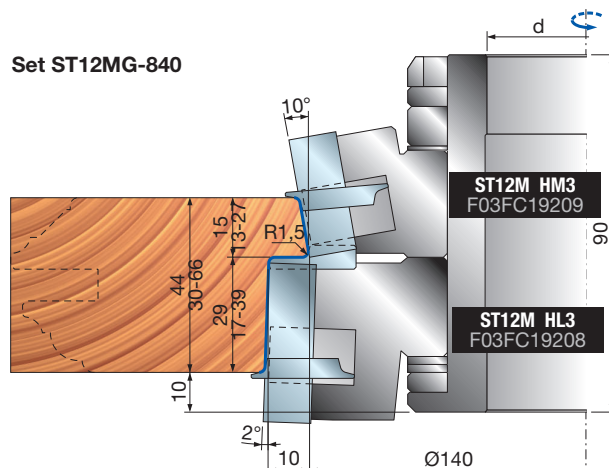
- Tool set can execute 5 different profiles.
- Adjustable timber thickness from 30 to 66 mm.
- Tool set is provided on sleeve to fit every machine spindle dimension.
- Steel body.
- Sleeve and Performance knives to be ordered separately.

Dimensions mm	Sleeve code	Art. No.
Ø70 x 90 x 30	BF10MD EA9	F03FC24536
Ø70 x 90 x 32	BF10MD EL9	F03FC24537
Ø70 x 90 x 35	BF10MD EB9	F03FC00633
Ø70 x 90 x 40	BF10MD EC9	F03FC00634
Ø70 x 90 x 50	BF10MD ED9	F03FC00635

BF10MD sleeves and knives for cutterheads HR3 are not included.

	Spare parts	Dimensions mm	Freud Code	Art. No.
HL3	Knife	40 x 12 x 1,5	CG08MLA310	F03FH02909
	Wedge	15 x 36 x 8	CN09MD AR9	F03FC01309
	Screw	M10 x 22	VT19M MA9	F03FA04496
	Nut	15 x 13,3 x M10	VT20M NA9	F03FC20671
	Multipurpose insert	10	IG25MD10302	F03FC24164
	Screw	M6 x 10	2622M CB9	F03FA07455
	Screw	M6 x 13	VT16M AE9	F03FC20658
	Wedge	28 x 9,5 x 8	CN03M BB9	F03FA00585
	Screw	M8 x 22	VT19M BB9	F03FA04493
	HM3 - HN3	Knife	30 x 12 x 1,5	CG08MEA310
Wedge		15 x 26 x 8	CN09MD AD9	F03FC01300
Screw		M10 x 22	VT19M MA9	F03FA04496
Nut		15 x 13,3 x M10	VT20M NA9	F03FC20671
Rounding insert		22 x 16 x 5 R=1,5	IG52MAB305	F03FH03023
Screw		M6 x 13	VT16M AE9	F03FC20658
Wedge		28 x 9,5 x 8	CN03M BB9	F03FA00585
HR3	Screw	M8 x 22	VT19M BB9	F03FA04493
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Screw	M5 x 7 x 16	VT08M AE9	F03FA04457

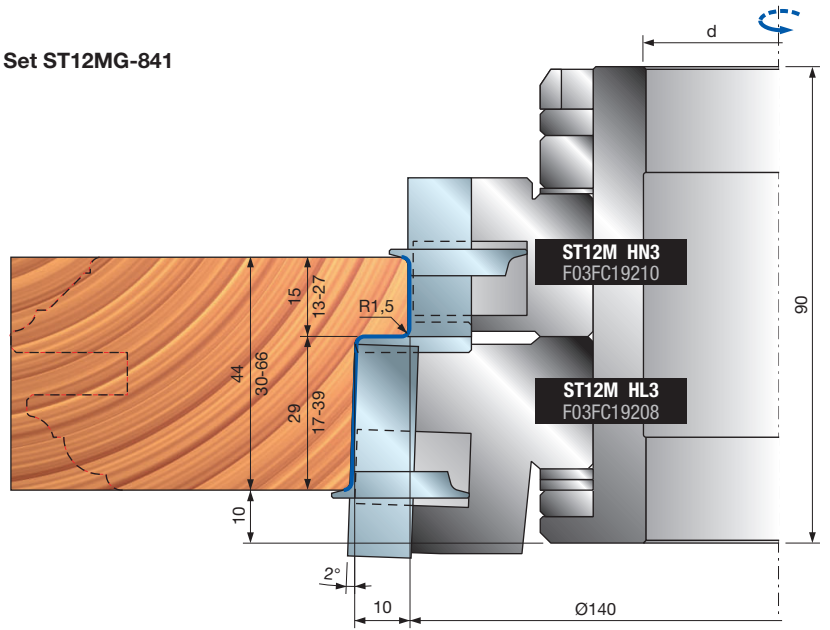
Set ST12MG-840



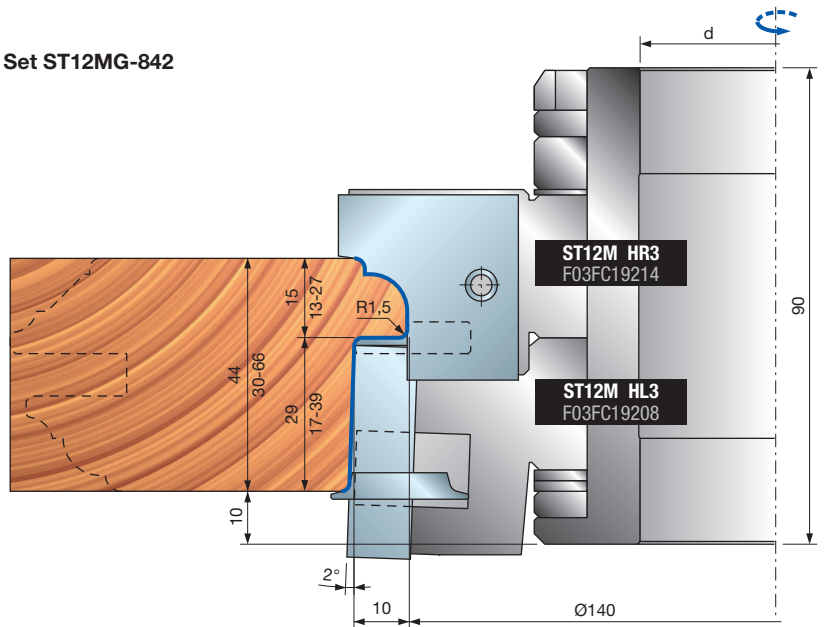
# ST12MG

## Cutterhead sets for door rebates

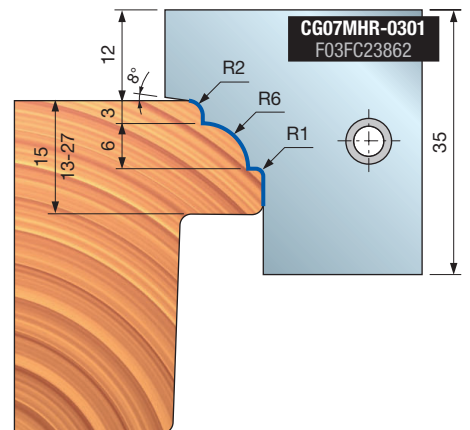
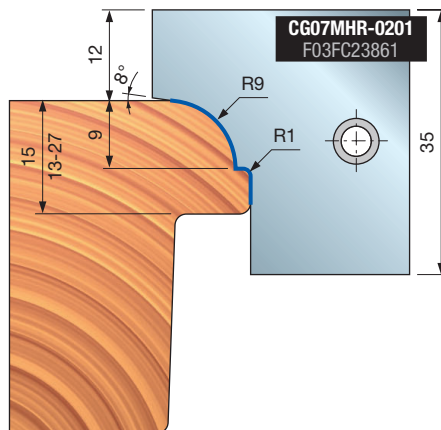
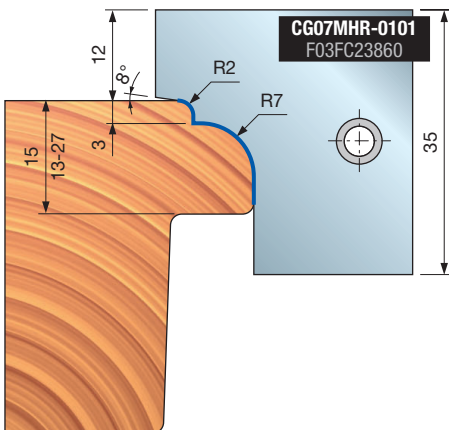
Set ST12MG-841



Set ST12MG-842

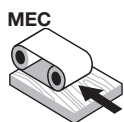


Knives for cutterhead ST12M HR3

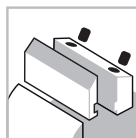




## ST12MG Bead recovery cutterhead sets



Automatic Feed



Clamping System



Steel Body



Softwood



Hardwood



Profiling

### Machines:

Automatic feed and window tooling machines.

### Materials:

Softwood and hardwood.

### Applications:

Bead recovering.

### Technical information:

Cutterhead for bead recovery with a 140 mm zero diameter.

- Adjustable Timber thickness from 44 to 70 mm.
- Bead thickness from 15 to 22 mm.
- Tool set is provided on sleeve to fit every machine spindle dimension.
- Steel body.

Dimensions mm	Sleeve code	Art. No.
Ø60 x 90 x 30	BF10MD DA9	F03FC24534
Ø60 x 90 x 32	BF10MD DL9	F03FC24535
Ø60 x 90 x 35	BF10MD DB9	F03FC00630
Ø60 x 90 x 40	BF10MD DC9	F03FC00631
Ø60 x 90 x 50	BF10MD DD9	F03FC00632

Tool set zero diameter: 140 mm

D mm	B mm	d mm	Max RPM 1/min.	Freud Code	Art. No.
200	-	-	9.000	ST12MG 302	F03FC19584

Tools for ST12MG-302

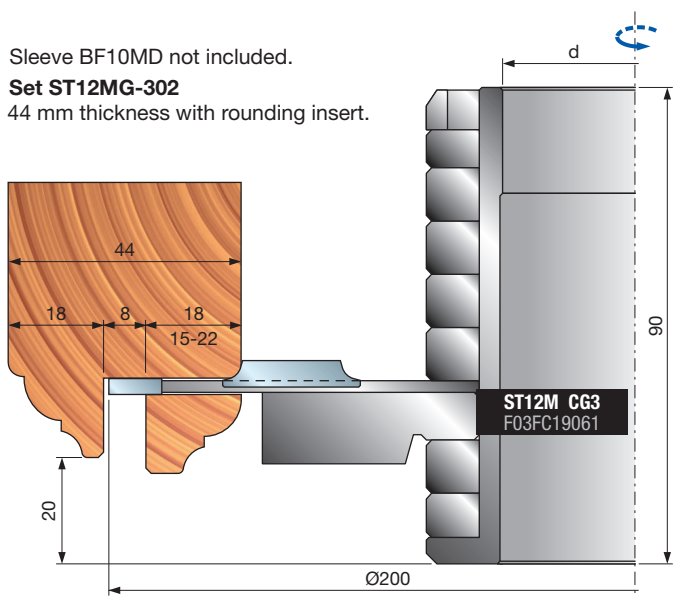
D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
144	13,5	60	2		ST12M CG3	F03FC19061

Spare parts		Dimensions mm	Freud Code	Art. No.
	Saw blade	200 x 3 x 60 Z34	LL02M20060	F03FC15418
	Screw	M6 x 10	VT01M AA9	F03FA04429
	Rounding insert	22 x 16 X 5 R=3	IG52MAE305	F03FH03025
	Screw	M6 x 14,5	VT16M AA9	F03FA04476
	Rounding insert	18 x 26 x 8,5	IG23MDAE305	F03FC24163
	Screw	M6 x 15,5	VT16M AD9	F03FC20657

Sleeve BF10MD not included.

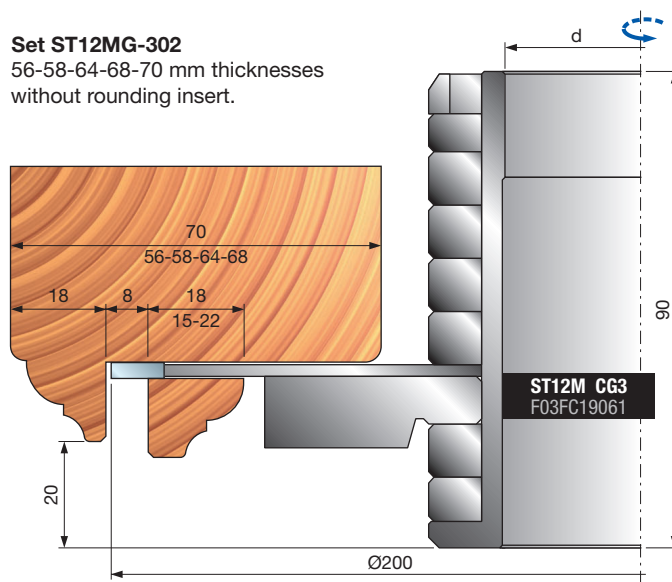
### Set ST12MG-302

44 mm thickness with rounding insert.



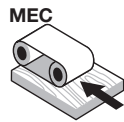
### Set ST12MG-302

56-58-64-68-70 mm thicknesses without rounding insert.

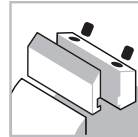


# ST12MG

## Cutterhead sets for door frames



Automatic Feed



Clamping System



Steel Body



Softwood



Hardwood



Rebating



### Machines:

Automatic feed and window tooling machines.

### Materials:

Softwood and hardwood.

### Applications:

Rebating.

### Technical information:

Performance tool for door rebating, front shear angle to guarantee a perfect step surface, rounding and beveling insert to offer different solutions on step corners.

- Cutterhead is provided on sleeve to fit every machine spindle dimension.
- Steel body.
- Sleeve and inserts to be ordered separately.

**BF10MD sleeve is not included.**

Dimensions mm	Sleeve code	Art. No.
Ø70 x 90 x 30	<b>BF10MD EA9</b>	F03FC24536
Ø70 x 90 x 32	<b>BF10MD EL9</b>	F03FC24537
Ø70 x 90 x 35	<b>BF10MD EB9</b>	F03FC00633
Ø70 x 90 x 40	<b>BF10MD EC9</b>	F03FC00634
Ø70 x 90 x 50	<b>BF10MD ED9</b>	F03FC00635

### Tools supplied with HW knives

D mm	B mm	d mm	Max RPM 1/min.	Freud Code	Art. No.
218	-	-	6.500	<b>ST12MG 830</b>	F03FC19652

### Tools supplied with HSS knives

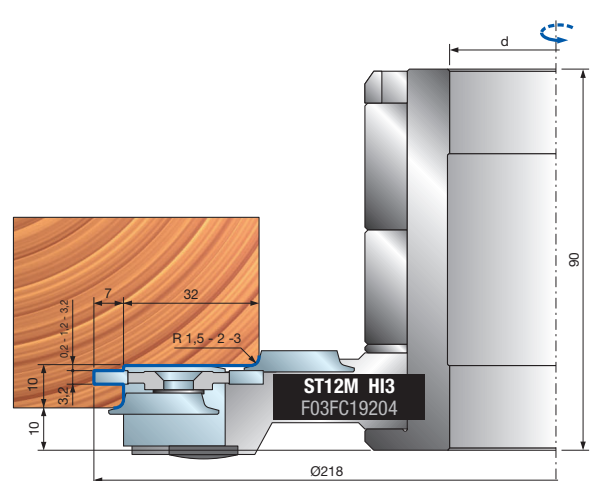
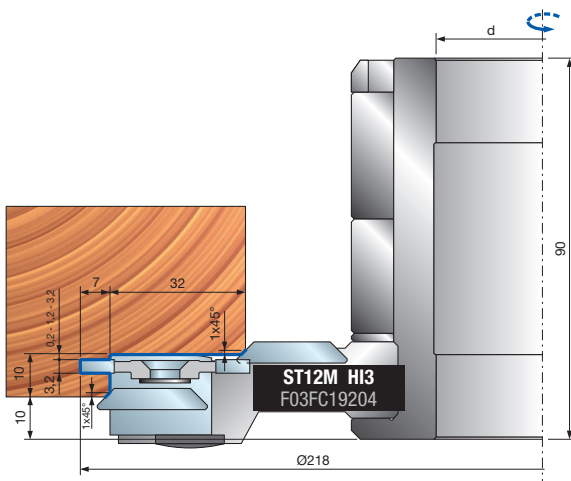
D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
204	24	70	2		<b>ST12M HI3</b>	F03FC19204

Spare parts	Dimensions mm	Freud Code	Art. No.
Knife	20 x 25 x 3	<b>CG07MDHI301</b>	F03FC23824
Screw	M10 x 18	<b>VT03M CC9</b>	F03FA04438
Screw	M5 x 7 x 16	<b>VT08M AE9</b>	F03FA04457
Grooving insert	40 x 16 x 3	<b>IG04MDAC305</b>	F03FH02992
Screw IG04MD	M6 x 14,5	<b>VT16M AA9</b>	F03FA04476
Screw for IG51M and IG52M	M6 x 11,5	<b>VT16M AB9</b>	F03FA04477

Spare parts	Dimensions mm	Freud Code	Art. No.
Knife	20 x 25 x 3	<b>CG07MDHI301</b>	F03FC23824
Screw	M10 x 18	<b>VT03M CC9</b>	F03FA04438
Screw	M5 x 7 x 16	<b>VT08M AE9</b>	F03FA04457
Grooving insert	40 x 16 x 3	<b>IG04MDAC305</b>	F03FH02992
Screw IG04MD	M6 x 14,5	<b>VT16M AA9</b>	F03FA04476
Screw for IG51M and IG52M	M6 x 11,5	<b>VT16M AB9</b>	F03FA04477

With seat pockets for beveling inserts IG51M or radius inserts IG52M (R= 1,5 - 2 - 3 mm). (Not included).

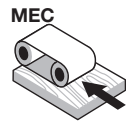
Spare parts	Dimensions mm	Freud Code	Art. No.
Rounding insert	22 x 16 X 5 R=3	<b>IG52Mi</b>	F03FH03025
Beveling insert	22 x 16 x 5 45°	<b>IG51Mi</b>	F03FH03022
Screw for IG51-IG52	M6 x 13	<b>VT16M AE9</b>	F03FC20658



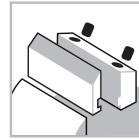


## TP43M

## Cutterhead sets for vertical slat shutters



Automatic Feed



Clamping System



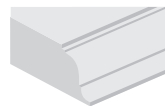
Steel Body



Softwood













Hardwood



Profiling

Tool set zero diameter: 125 mm

D	B	d	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm		1/min.		
139	-	-	2+2	9.600	TP43M MD3	F03FC20497
147	-	-	2+2	9.000	TP43M FD3	F03FC20496

Tool	Spare parts	Dimensions	Freud Code	Art. No.	
		mm			
	Screw	M10 x 18	VT03M CC9	F03FA04438	
	Screw	M5 x 7 x 16	VT08M AE9	F03FA04457	
	Set of spacers	70 x 5 x 50	AN01MD0509	F03FC00175	
	Set of spacers	70 x 17 x 50	AN04MTP43	F03FC00517	
	Set of spacers	70 x 22 x 50	AN01MD2209	F03FC00194	
MD3		Knife	34 x 24 x 3	CP43M1MD301	F03FC24009
		Knife	34 x 24 x 3	CP43M2MD301	F03FC24011
FD3		Knife	35 x 29 x 3	CP43M1FD301	F03FC24008
		Knife	35 x 29 x 3	CP43M2FD301	F03FC24010
		Spacer	70 x 10 x 50	AN01MD1009	F03FC00182



### Machines:

Moulders, automatic and throughfeed machines.

### Materials:

Softwood and hardwood.

### Applications:

Profiling.

### Technical information:

Performance cutterheads set for vertical slat shutters.

- Profile and counterprofile set can perfectly work as a left and right hand rotation tool (with different sleeves). Tools are provided on sleeve (to be ordered separately) to fit every machine spindle dimension.
- Steel body.
- Performance System knives included.

### Right-hand sleeves

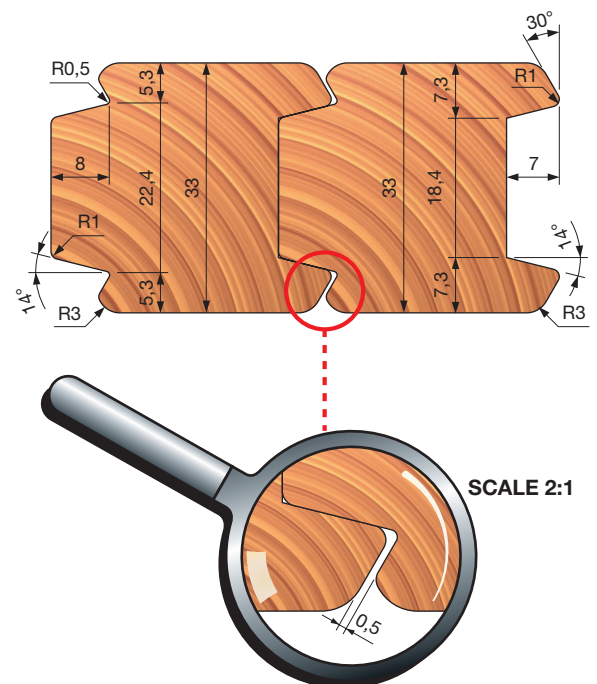
Dimensions	Sleeve code	Art. No.
mm		
Ø50 x 110 x 30	BF10MD AA9	F03FC00616
Ø50 x 110 x 32	BF10MD AL9	F03FC24533
Ø50 x 110 x 35	BF10MD AB9	F03FC00617
Ø50 x 110 x 40	BF10MD AC9	F03FC00618

### Left-hand sleeves

Dimensions	Sleeve code	Art. No.
mm		
Ø50 x 110 x 30	BF10MS AA9	F03FC00661
Ø50 x 110 x 32	BF10MS AL9	F03FC24538
Ø50 x 110 x 35	BF10MS AB9	F03FC00662
Ø50 x 110 x 40	BF10MS AC9	F03FC00663

Sleeves must be ordered separately.

**Please note:** The sets can be ordered with clockwise rotation with BF10MS sleeve.



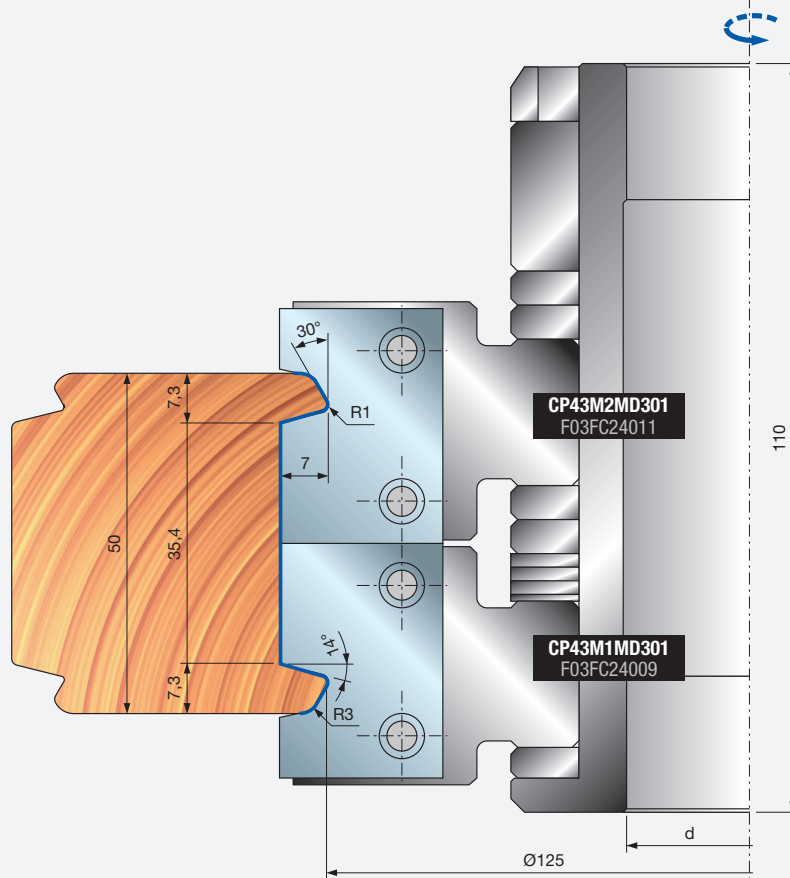


# TP43M

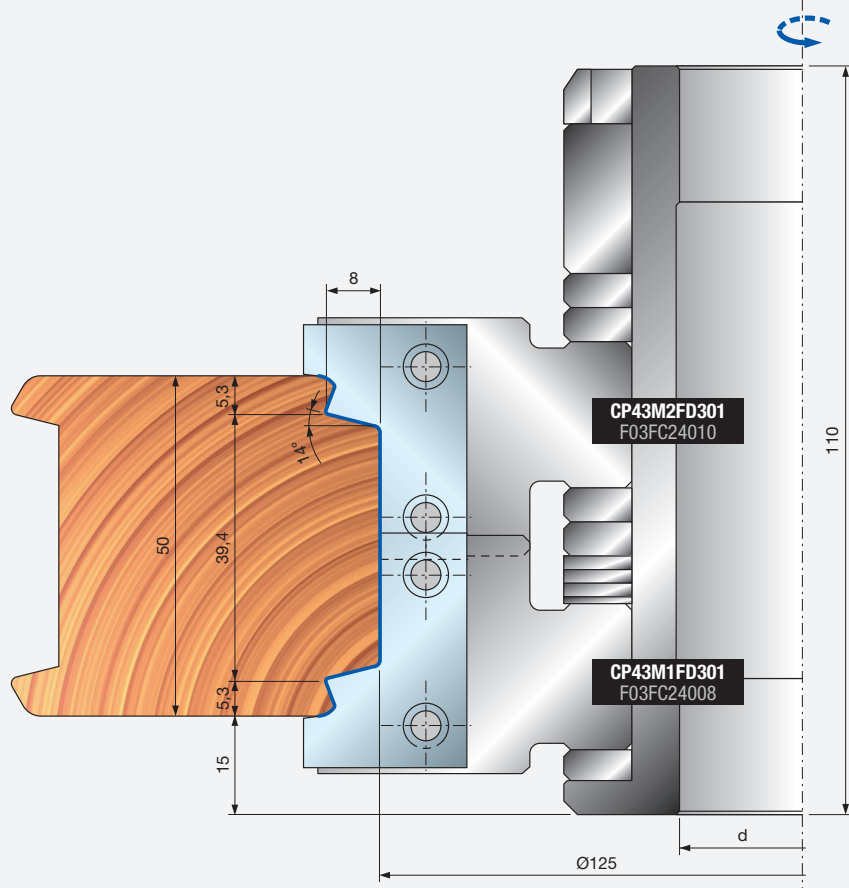
## Cutterhead sets for vertical slat shutters

Cutterheads sets for vertical slat shutters

Set TP43M MD3



Set TP43M FD3



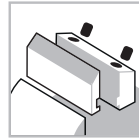


# TP45M

## Cutterhead sets for lifting-sliding doors



Manual Feed



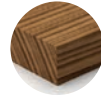
Clamping System



Steel Body



Softwood



Hardwood



Profiling



### Machines:

Spindle moulders and manual feed machines.

### Materials:

Softwood and hardwood.

### Applications:

Profiling.

### Technical information:

Cutterhead tool set for lift and sliding doors with maximum weight of 250 Kg using hardware.

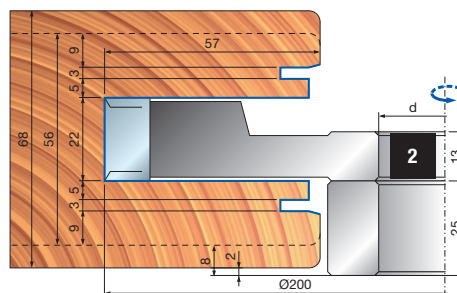
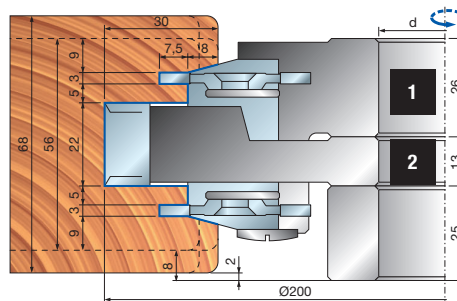
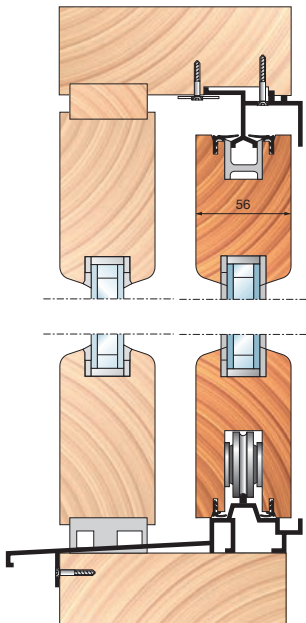
- HS25 from MAICO, AGB or G.U.
- Steel body.
- Knives included.

D	B	d	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm		1/min.		
200	45	30	2	7.000	TP45M AA3	F03FC23136
200	45	32	2	7.000	TP45M AC3	F03FC24453
200	45	35	2	7.000	TP45M AB3	F03FC20503

	Spare parts	Dimensions	Freud Code	Art. No.	
		mm			
1		T20	CB03M CC9	F03FA00167	
		4	CB03M BA9	F03FA00163	
		5	CB03M EA9	F03FA00169	
		45 x 25 x 3	CP45MAA301	F03FC24014	
		M5 x 16 x 7	VT08M AE9	F03FA04457	
		M10 x 18	VT03M CC9	F03FA04438	
		40 x 16 x 3	IG04MDAC305	F03FH02992	
		40 x 16 x 3	IG04MSAC305	F03FH02996	
		M6 x 14,5	VT16M AA9	F03FA04476	
		30,8 x 6 x 24,5	ID04MDAC901	F03FC24135	
2		30,8 x 6 x 24,5	ID04MSAC901	F03FC24139	
		M4 x 12	VT05M DA9	F03FC20647	
		21,6 x 12 x 1,5	CG06MTA310	F03FC23821	
		15 x 20 x 8	CN09M A09	F03FC01289	
		15 x 13,3 x M10	VT20M MA9	F03FC20670	
		M10 x 22	VT19M MA9	F03FA04496	
		22,86 x 2,5	RG02MAA305	F03FH03041	
		M5 x 8	VT05M AA9	F03FA04444	
	AB3		50 x 25 x 30	AN01MB2509	F03FC00110
	AC3		52 x 25 x 32	AN01MX2509	F03FC24512
AA3		55 x 25 x 35	AN01MA2509	F03FC00059	

This item is supplied with 25 mm thick ring for base programming.

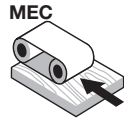
For doors with maximum weight of 250 Kg using hardware HS25 from MAICO, AGB or G.U.





# ST16MG

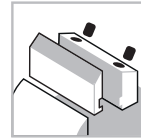
## Profiling CNC sets for internal doors without bead recovery



Automatic Feed



CNC Machines



Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



### Machines:

CNC overhead routing machines.

### Materials:

Softwood and hardwood.

### Applications:

Internal door profiling.

### Technical information:

CNC tool set for internal door profile without bead recovery.

- ISOprofil cutterheads are designed to work with 17 different knives.
- Timber thickness 44 mm.
- Chuck and Performance knives to be ordered separately.
- Aluminium light alloy body.

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
154	123	-	2	8.500	ST16MGC13700	F03FC23497
154	123	-	2	8.500	ST16MGC13701	F03FC23498

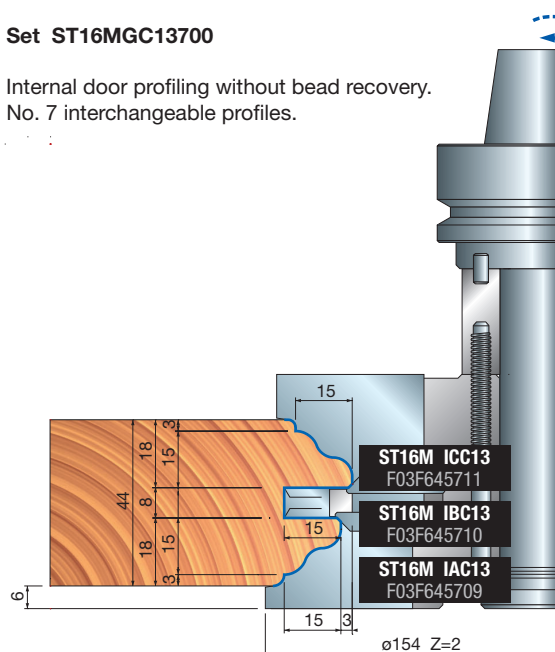
### Cutterheads for ST16MGC13700 and ST16MGC13701 sets

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
144	15	30	2		ST16M IBC13	F03F645710
148	38	30	2		ST16M ICC13	F03F645711
152	15	30	2		ST16M IDC13	F03F645712
154	23,7	30	2		ST16M IAC13	F03F645709

Spare parts		Dimensions mm	Freud Code	Art. No.
IAC13 ICC13		Screw	M5 x 8	VT05M AA9 F03FA04444
		Positioning plate	22 x 1,7 x 6,5	VT18M GB9 F03FA04489
		Screw	M10 x 16	2616M EE9 F03FA07426
IAC13 ICC13		Wedge	21 x 42,5 x 8	CN33M IA9 F03FC23308
		Wedge	34,5 x 42,5 x 8	CN33M IC9 F03FC23309
IBC13 IDC13		Knife	7,6 x 12 x 1,5	CG62MHA310 F03FH02956
		Wedge	15 x 7,2 x 8	CN09M DA9 F03FC01295
		Beveling insert	22 x 16 x 5	IG51MBA305 F03FH03022
		Spur	22,86 x 2,5	RG02MAA305 F03FH03041
		Screw	M5 x 6	VT05M AC9 F03FA04446
		Screw	M5 x 19	VT11M AA9 F03FA04468
	Screw	M6 x 13	VT16M AE9 F03FC20658	

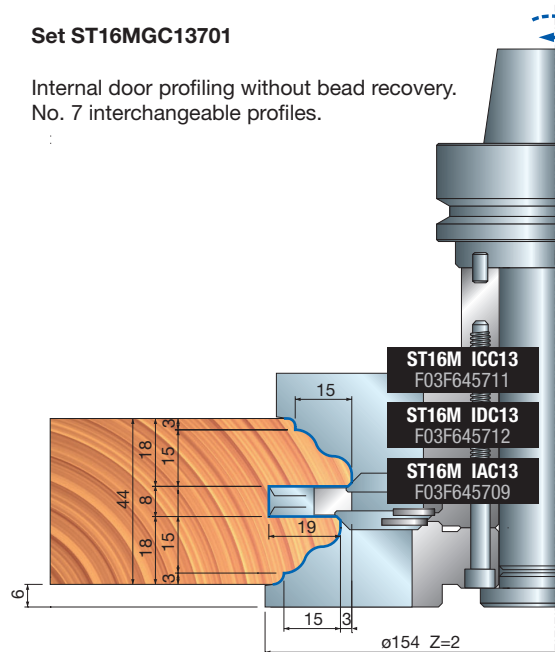
### Set ST16MGC13700

Internal door profiling without bead recovery.  
No. 7 interchangeable profiles.

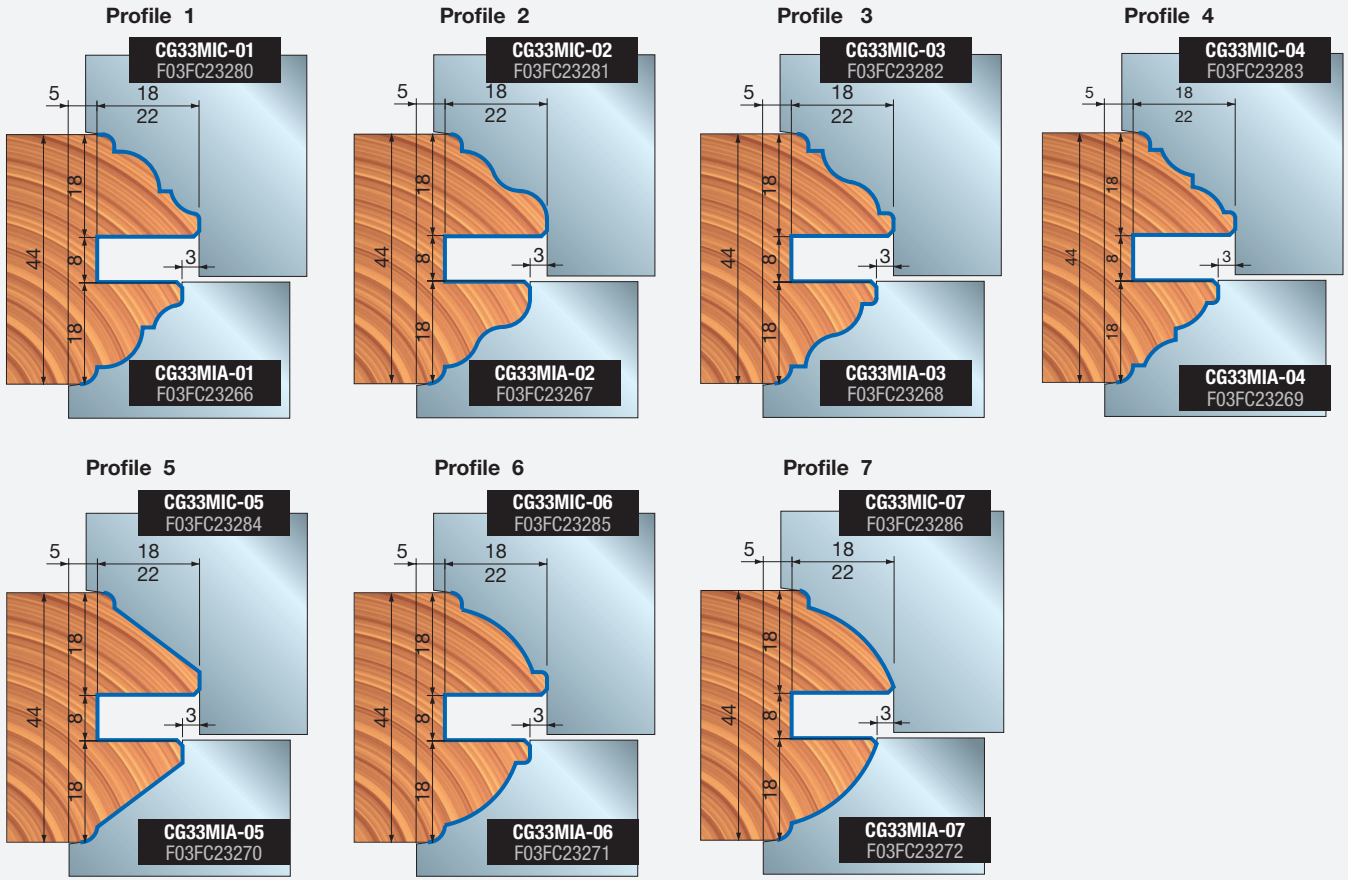


### Set ST16MGC13701

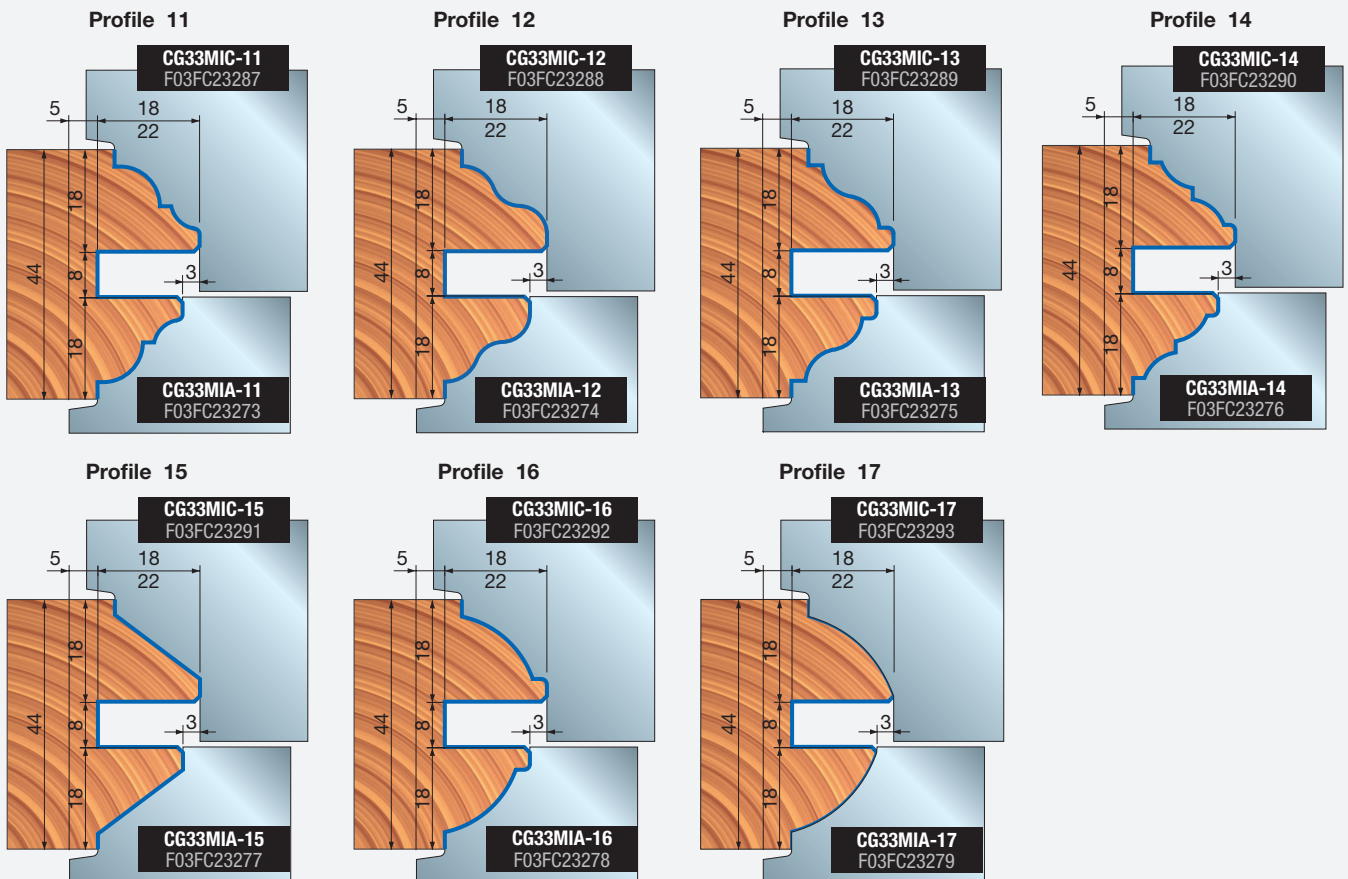
Internal door profiling without bead recovery.  
No. 7 interchangeable profiles.



## Profiling with external rounding - Knives for cutterheads ST16MIAC13 - ST16MICC13



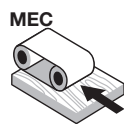
## Profiling without external rounding - Knives for cutterheads ST16MIAC13 - ST16MICC13





# ST16MG

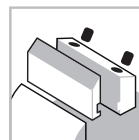
## CNC sets for internal doors profiling with bead recovery



Automatic Feed



CNC Machines



Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



Rebating



### Machines:

CNC overhead routing machines.

### Materials:

Softwood and hardwood.

### Applications:

Internal door profiling.

### Technical information:

CNC tool set for internal door profile with bead recovery.

- ISOprofil cutterheads are designed to work with 17 different knives.
- Timber thickness 44 mm.
- Chuck and Performance knives to be ordered separately.
- Aluminium light alloy body.

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
148	123	-	2	9.000	<b>ST16MGC13702</b>	F03FC23499
154	123	-	2	8.500	<b>ST16MGC13703</b>	F03FC23500
154	123	-	2	8.500	<b>ST16MGC13704</b>	F03FC23501

### Tools for ST16MGC13702, ST16MGC13703 and ST16MGC13704 sets

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
144	15	30	2		<b>ST16M IBC13</b>	F03F645710
148	38	30	2		<b>ST16M ICC13</b>	F03F645711
151	22	30	2		<b>ST16M IFC13</b>	F03F645714
151	33	30	2		<b>ST16M IEC13</b>	F03F645713
152	15	30	2		<b>ST16M IDC13</b>	F03F645712
154	23,7	30	2		<b>ST16M IAC13</b>	F03F645709

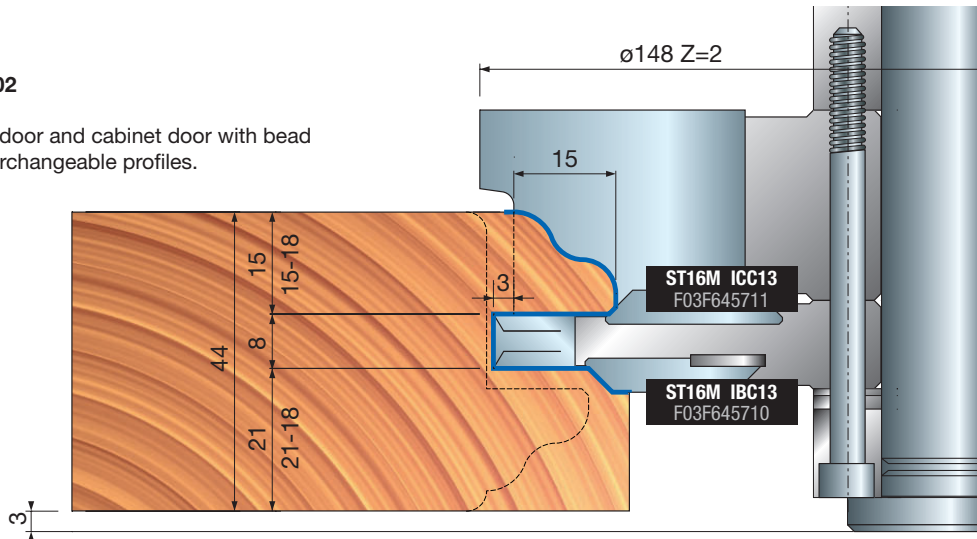
		Spare parts	Dimensions mm	Freud Code	Art. No.
IAC13 ICC13		Screw	M5 x 8	<b>VT05M AA9</b>	F03FA04444
		Positioning plate	22 x 1,7 x 6,5	<b>VT18M GB9</b>	F03FA04489
		Screw	M10 x 16	<b>2616M EE9</b>	F03FA07426
ICC13		Wedge	34,5 x 42,5 x 8	<b>CN33M IC9</b>	F03FC23309
		Wedge	15 x 7,2 x 8	<b>CN09M DA9</b>	F03FC01295
AA2 - AA3		Beveling insert	22 x 16 x 5	<b>IG51MBA305</b>	F03FH03022
		Spur	22,86 x 2,5	<b>RG02MAA305</b>	F03FH03041
AA2 - AA3		Knife	7,6 x 12 x 1,5	<b>CG62MHA310</b>	F03FH02956
		Screw	M5 x 6	<b>VT05M AC9</b>	F03FA04446
		Screw	M5 x 19	<b>VT11M AA9</b>	F03FA04468
		Screw	M6 x 13	<b>VT16M AE9</b>	F03FC20658
AA2 - AA3		Knife	30 x 12 x 1,5	<b>CG62MDA310</b>	F03FH02951
		Screw	M5 x 8	<b>VT05M AA9</b>	F03FA04444
AA2 - AA3		Knife	21,6 x 12 x 1,5	<b>CG62MTA310</b>	F03FC25458
		Wedge	15 x 20 x 8	<b>CN09MD AK9</b>	F03FC01304
AA2 - AA3		Rounding insert	22 x 16 x 5 R=3	<b>IG52MAE305</b>	F03FH03025
		Screw	M6 x 14,5	<b>VT16M AA9</b>	F03FA04476
		Screw	M10 x 22	<b>VT19M MA9</b>	F03FA04496
		Nut	15 x 13,3 x M10	<b>VT20M MA9</b>	F03FC20670

# ST16MG

## CNC set for internal doors profiling with bead recovery

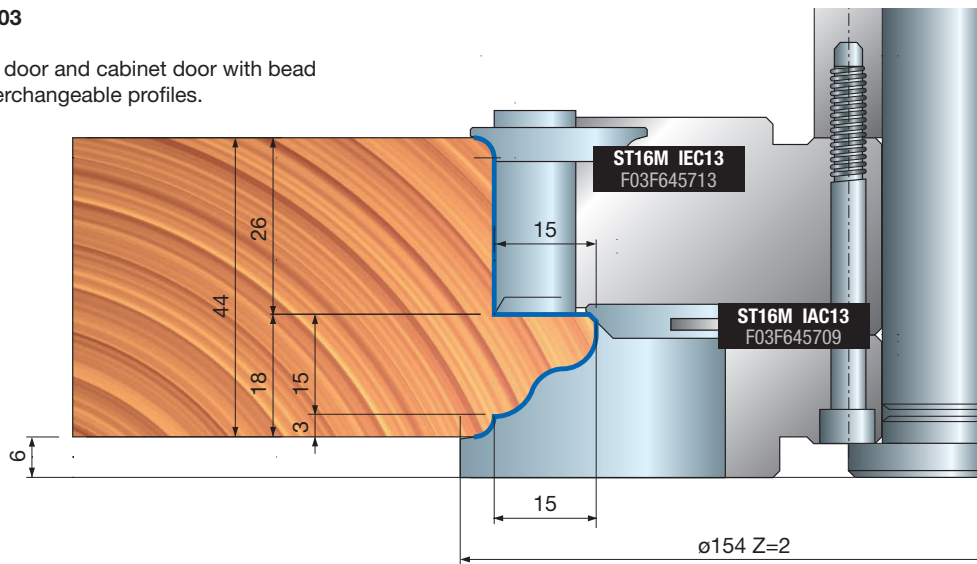
### Set ST16MGC13702

Internal profiling of door and cabinet door with bead recovery. No. 7 interchangeable profiles.



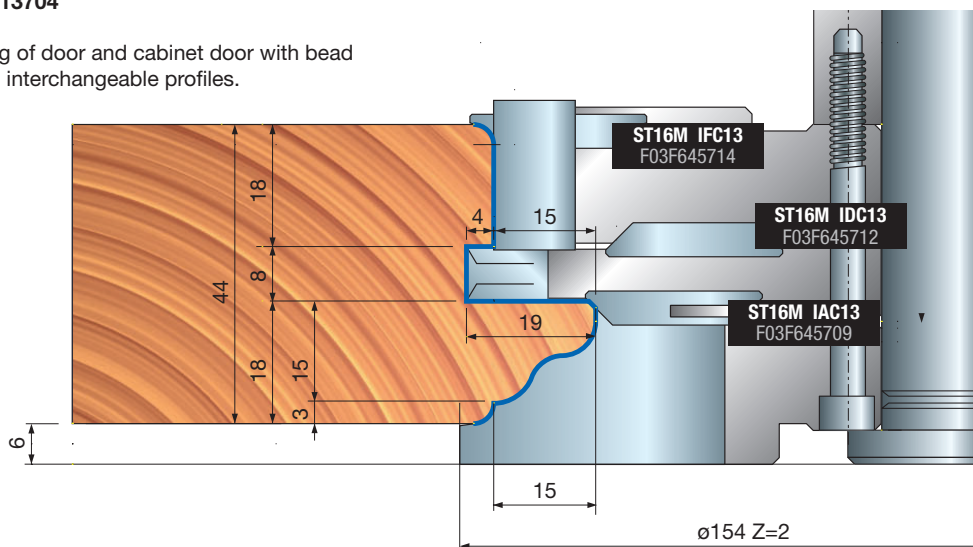
### Set ST16MGC13703

Internal profiling of door and cabinet door with bead recovery. No. 7 interchangeable profiles.



### Set ST16MGC13704

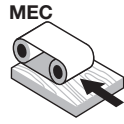
Internal profiling of door and cabinet door with bead recovery. No. 7 interchangeable profiles.





# ST16MG

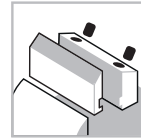
## CNC scribing sets for internal doors



Automatic Feed



CNC Machines



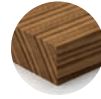
Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



Rebating



### Machines:

CNC overhead routing machines.

### Materials:

Softwood and hardwood.

### Applications:

Door profile scribing.

### Technical information:

CNC tool set for internal door counterprofile.

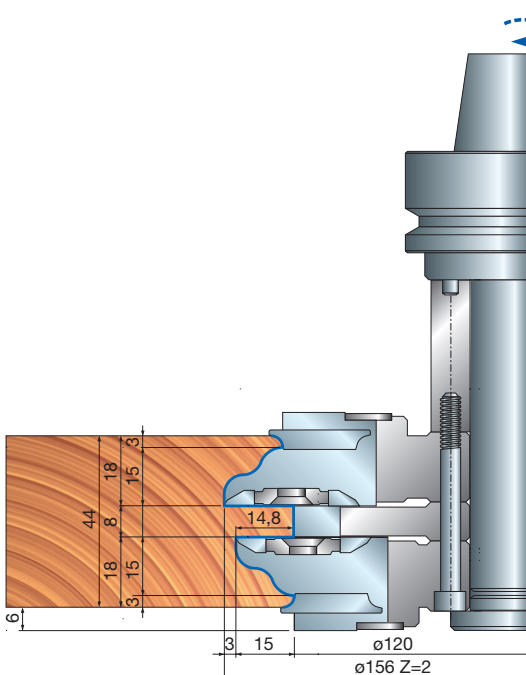
- ISOprofil cutterheads are designed to work with 6 different knives (please refer to ST16MGC13 700-701-702-703-704 profiles).
- Timber thickness 44 mm.
- Chuck and Performance knives to be ordered separately.
- Aluminium light alloy body.

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
156	123	-	2	8.500	ST16MGC13705	F03FC23502
156	123	-	2	8.500	ST16MGC13706	F03FC23503
150	123	-	2	9.000	ST16MGC13707	F03FC23504
150	123	-	2	9.000	ST16MGC13708	F03FC23505

### Tools for ST16MGC13705, ST16MGC13706, ST16MGC13707 and ST16MGC13708 sets

D mm	B mm	d mm	Z	R mm	Max RPM 1/min.	Freud Code	Art. No.
112,4	10	30	2	-		ST16M IJC13	F03F645718
120,4	10	30	2	-		ST16M IHC13	F03F645716
127	22	30	2	4		ST16M ILC13	F03F645720
127	30,5	30	2	2		ST16M IKC13	F03F645719
150	24	30	2	4		ST16M IGC13	F03F645715
156	24	30	2	4		ST16M IIC13	F03F645717

	Spare parts	Dimensions mm	Freud Code	Art. No.
IGC13	Screw	M10 x 16	2616M EE9	F03FA07426
	Wedge	20,5 x 42,5 x 8	CN33M IG9	F03FC23310
	Spur insert	40 x 16 x 4	IG05MSAA305	F03FH02999
	Rounding insert	22 x 16 x 5 R=3	IG52MAE305	F03FH03025
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Screw	M6 x 14,5	VT16M AA9	F03FA04476
IHC13 IJC13	Screw	M6 x 11,5	VT16M AB9	F03FA04477
	Positioning plate	22 x 1,7 x 6,5	VT18M GA9	F03FA04488
	Knife	8,6 x 12 x 1,5	CG62MJA310	F03FH02958
	Wedge	15 x 7,2 x 8	CN09M DA9	F03FC01295
	Screw	M5 x 19	VT11M AA9	F03FA04468
	IIC13	Screw	M10 x 16	2616M EE9
Wedge		20,5 x 42,5 x 8	CN33M IIG9	F03FC23311
Spur insert		40 x 16 x 4	IG05MDAA305	F03FH02998
Rounding insert		22 x 16 x 5 R=3	IG52MAE305	F03FH03025
Screw		M5 x 8	VT05M AA9	F03FA04444
Screw		M6 x 14,5	VT16M AA9	F03FA04476
IKC13	Screw	M6 x 11,5	VT16M AB9	F03FA04477
	Positioning plate	22 x 1,7 x 6,5	VT18M GA9	F03FA04488
	Knife	30 x 12 x 1,5	CG62MDA310	F03FH02951
	Wedge	15 x 26 x 8	CN09MD AD9	F03FC01300
	Rounding insert	22 x 16 x 5 R=3	IG52MAE305	F03FH03025
	Screw	M6 x 14,5	VT16M AA9	F03FA04476
ILC13	Screw	M10 x 22	VT19M MA9	F03FA04496
	Nut	15 x 13,3 x M10	VT20M MA9	F03FC20670
	Knife	21,6 x 12 x 1,5	CG62MTA310	F03FC25458
	Wedge	15 x 20 x 8	CN09MD AK9	F03FC01304
	Rounding insert	22 x 16 x 5 R=3	IG52MAE305	F03FH03025
	Spur	22,86 x 2,5	RG02MAA305	F03FH03041
ILC13	Screw	M5 x 8	VT05M AA9	F03FA04444
	Screw	M6 x 14,5	VT16M AA9	F03FA04476
	Screw	M10 x 22	VT19M MA9	F03FA04496
	Reduced nuts	15 x 13,3 x M10	VT20M NA9	F03FC20671

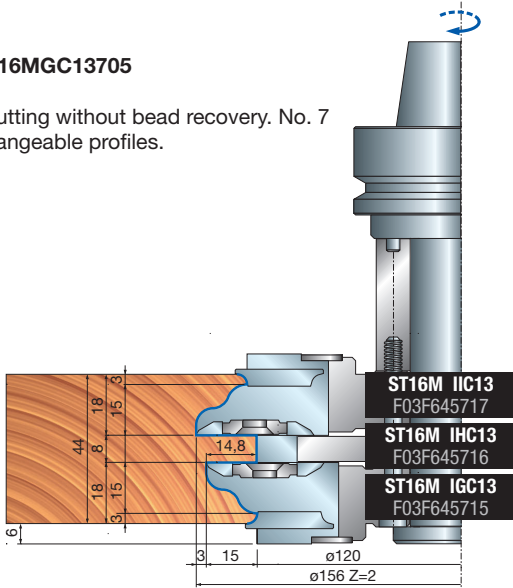


# ST16MG

# CNC scribing sets for internal doors

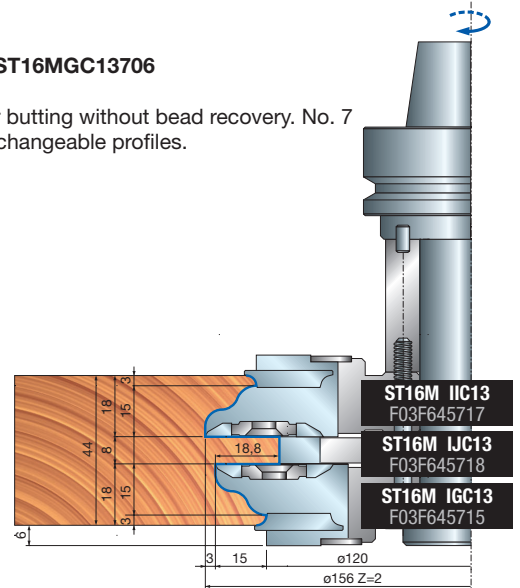
## Set ST16MGC13705

Door butting without bead recovery. No. 7 interchangeable profiles.



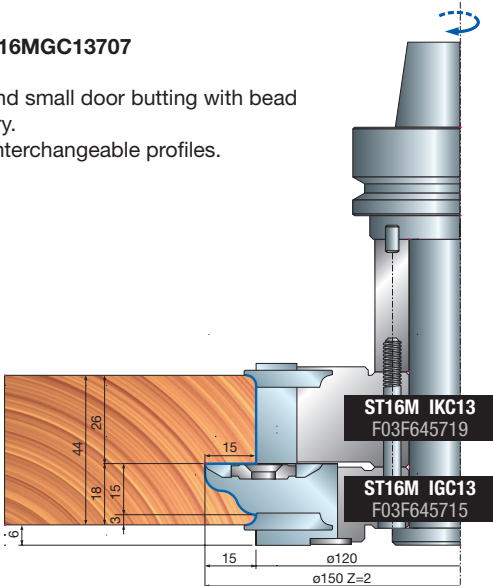
## Set ST16MGC13706

Door butting without bead recovery. No. 7 interchangeable profiles.



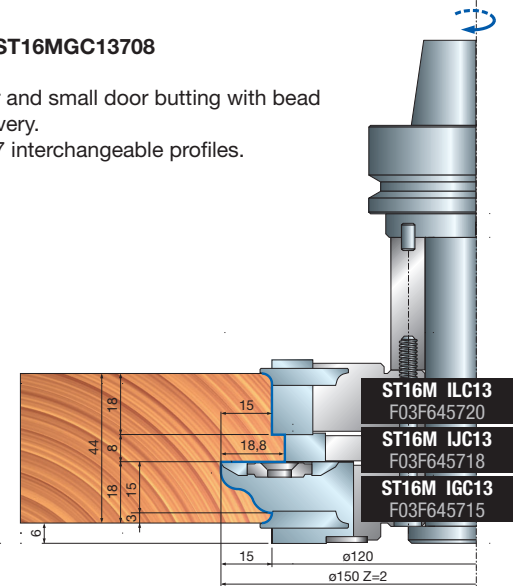
## Set ST16MGC13707

Door and small door butting with bead recovery. No. 7 interchangeable profiles.

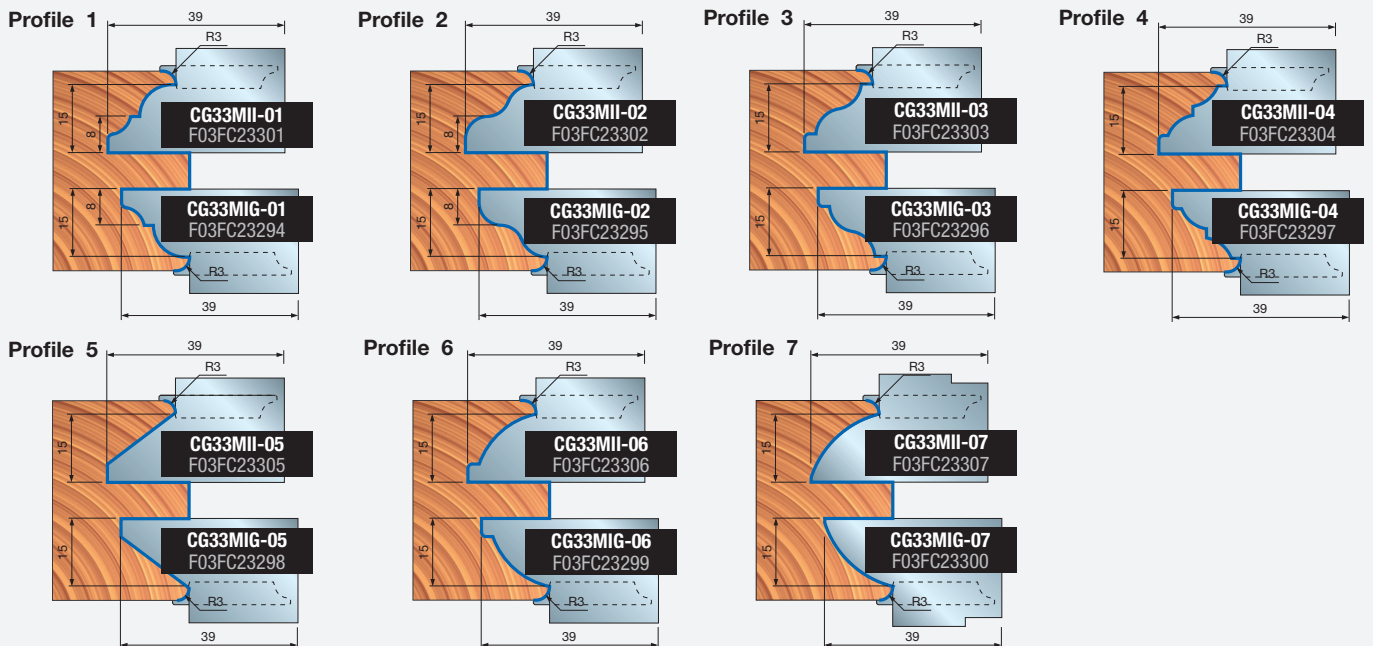


## Set ST16MGC13708

Door and small door butting with bead recovery. No. 7 interchangeable profiles.



## Profiling with 3 mm external rounding - Knives for cutterheads ST16M IGC13 - ST16M IIC13

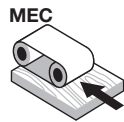






## ST16MG

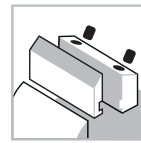
## CNC sets for door rebates



Automatic Feed



CNC Machines



Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



Rebating

### Machines:

CNC overhead routing machines.

### Materials:

Softwood and hardwood.

### Applications:

Door rebate profiling.

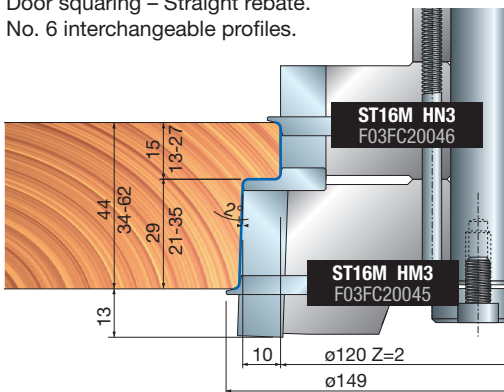
### Technical information:

Adjustable CNC tool set for internal door rebates.

- Adjustable rebate dimension with NSR system
- Chuck to be ordered separately.
- Aluminium light alloy body. For cleaning do not use products containing caustic soda.
- The tools for **ST16MG 820** and **ST16MG 821** are supplied without chuck.

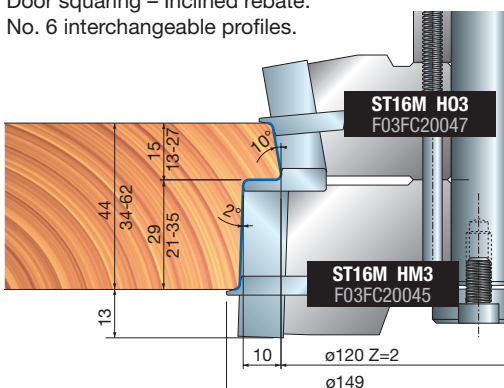
### Set ST16MG 820

Door squaring – Straight rebate.  
No. 6 interchangeable profiles.



### Set ST16MG 821

Door squaring – Inclined rebate.  
No. 6 interchangeable profiles.



D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
149	127	-	2	9.000	<b>ST16MG 820</b>	F03FC20127
149	127	-	2	9.000	<b>ST16MG 821</b>	F03FC20128

### Tools for ST16MG 820 and ST16MG 821 sets

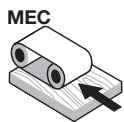
D mm	B mm	d mm	Z	l	Freud Code	Art. No.
120	30	30	2	2	<b>ST16M HN3</b>	F03FC20046
128,4	30	30	2	2	<b>ST16M H03</b>	F03FC20047
141,8	40	30	2	4	<b>ST16M HM3</b>	F03FC20045

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	40 x 12 x 1,5	<b>CG08MLA310</b>	F03FH02909
	Wedge	15 x 36 x 8	<b>CN09MS AR9</b>	F03FC01334
	Nut	15 x 13,3 x M10	<b>VT20M MA9</b>	F03FC20670
	Screw	M10 x 22	<b>VT19M MA9</b>	F03FA04496
	Multipurpose insert	10	<b>IG25MS10302</b>	F03FC24172
	Screw	M6 x 10	<b>2622M CB9</b>	F03FA07455
	Adjustment ring	16 x 11,9 x 2,6	<b>VT18M AG9</b>	F03FC20660
	Wedge	28 x 9,5 x 8	<b>CN03M BB9</b>	F03FA00585
	Screw	M8 x 22	<b>VT19M BB9</b>	F03FA04493
	Rounding insert	22 x 16 x 5 R=1,5	<b>IG52MAB305</b>	F03FH03023
	Screw	M6 x 13	<b>VT16M AE9</b>	F03FC20658
	Knife	30 x 12 x 1,5	<b>CG08MEA310</b>	F03FH02906
	Wedge	15 x 26 x 8	<b>CN09MD AD9</b>	F03FC01300
	Nut	15 x 13,3 x M10	<b>VT20M MA9</b>	F03FC20670
	Screw	M10 x 22	<b>VT19M MA9</b>	F03FA04496
	Rounding insert	22 x 16 x 5 R=1,5	<b>IG52MAB305</b>	F03FH03023
	Screw	M6 x 13	<b>VT16M AE9</b>	F03FC20658
	Wedge	28 x 9,5 x 8	<b>CN03M BB9</b>	F03FA00585
	Screw	M8 x 22	<b>VT19M BB9</b>	F03FA04493
	Knife	30 x 12 x 1,5	<b>CG08MEA310</b>	F03FH02906
	Wedge	15 x 26 x 8	<b>CN09MS AD9</b>	F03FC01326
	Nut	15 x 13,3 x M10	<b>VT20M MA9</b>	F03FC20670
	Screw	M10 x 22	<b>VT19M MA9</b>	F03FA04496
	Rounding insert	22 x 16 x 5 R=1,5	<b>IG52MAB305</b>	F03FH03023
	Screw	M6 x 13	<b>VT16M AE9</b>	F03FC20658
	Wedge	28 x 9,5 x 8	<b>CN03M BB9</b>	F03FA00585
	Screw	M8 x 22	<b>VT19M BB9</b>	F03FA04493



# ST16MG

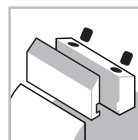
## Window tooling set for door frame internal profiling



Automatic Feed



CNC Machines



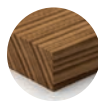
Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



Rebating



### Machines:

CNC overhead routing machines.

### Materials:

Softwood and hardwood.

### Applications:

Door frame profiling.

### Technical information:

Performance CNC tool set suitable for door frames.

- Front shear angle to guarantee a perfect step surface, rounding and beveling insert to offer different solutions on step corners chuck and radius/chamfer inserts to be ordered separately.
- Aluminium light alloy body. For cleaning do not use products containing caustic soda.

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
158	123	-	2	9.000	ST16MG 830	F03FC20129

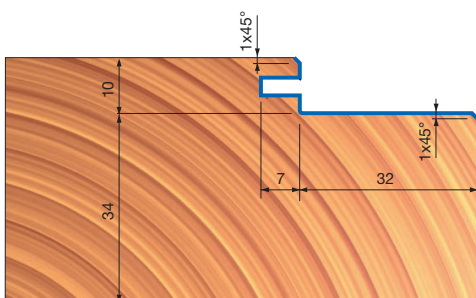
### Tools for ST16MG 830 set

D mm	B mm	d mm	Z	R mm	Max RPM 1/min.	Freud Code	Art. No.
141	29	30	2	2		ST16M HP3	F03FC20048

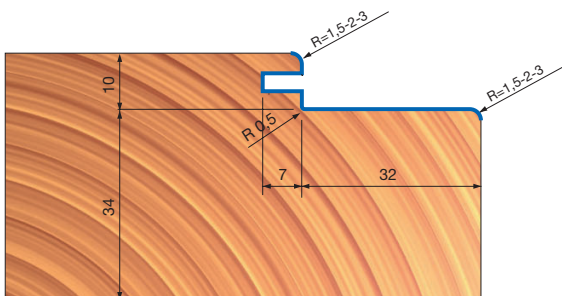
Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	18,5 x 24 x 3	CG30M02401	F03FC23905
	Screw	5 x 7 x 18	VT08M AE9	F03FA04457
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Grooving insert	40 x 16 x 3	IG04MDAC305	F03FH02992
	Screw	M6 x 14,5	VT16M AA9	F03FA04476

Optional inserts		Dimensions mm	Freud Code	Art. No.
	Beveling insert	22 x 16 x 5 45°	IG51MBA305	F03FH03022
	Rounding insert	22 x 16 x 5 R=1,5	IG52MAB305	F03FH03023
	Rounding insert	22 x 16 x 5 R=2	IG52MAC305	F03FH03024
	Rounding insert	22 x 16 x 5 R=3	IG52MAE305	F03FH03025

### With Beveling inserts

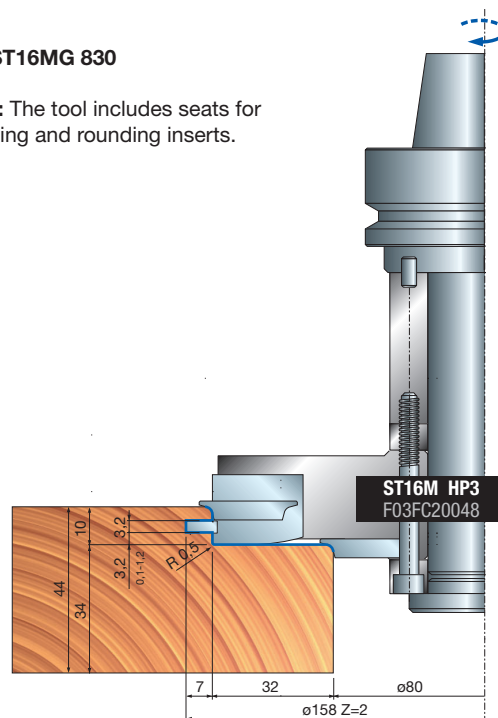


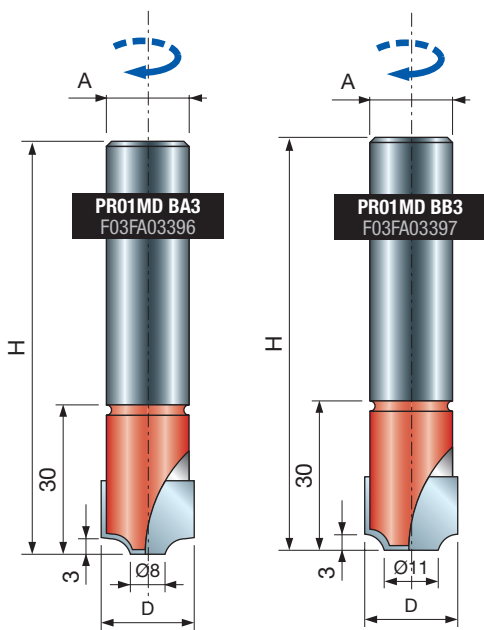
### With Rounding inserts



### Set ST16MG 830

**Note:** The tool includes seats for beveling and rounding inserts.





## PR01MD

## Bead profiling router bits



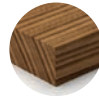
CNC Router



Brazed Cutters



Softwood



Hardwood



Profiling

D	h	H	A	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm		1/min.		
20	-	80	20	2	18.000	PR01MD BA3	F03FA03396
20	-	80	20	2	18.000	PR01MD BB3	F03FA03397

### Machines:

CNC machines.

### Materials:

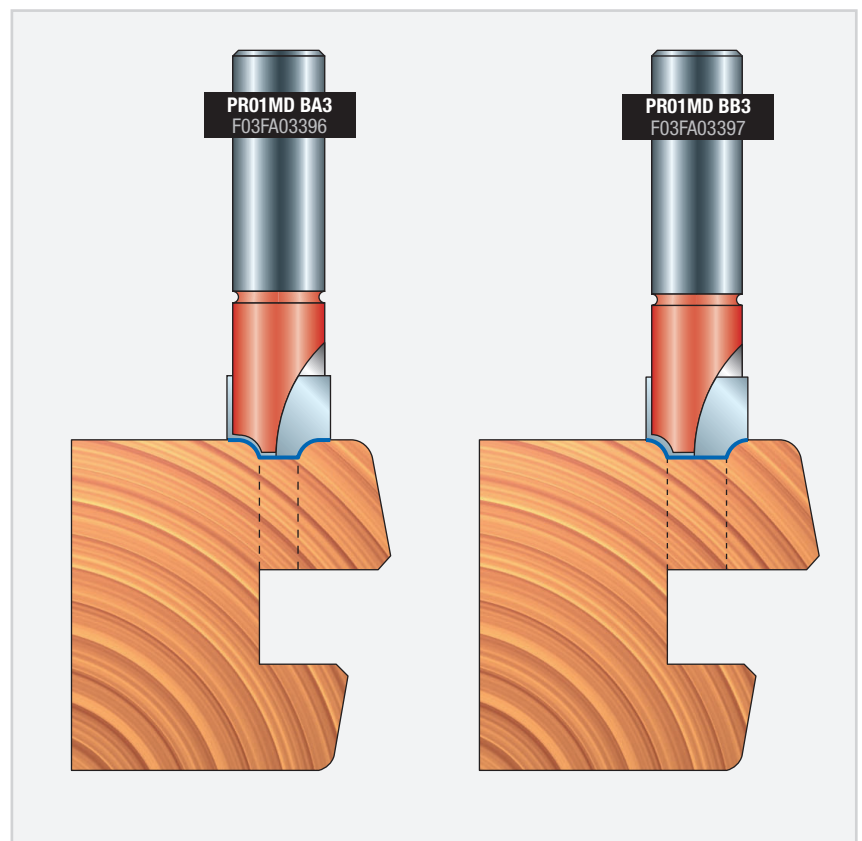
Softwood and hardwood.

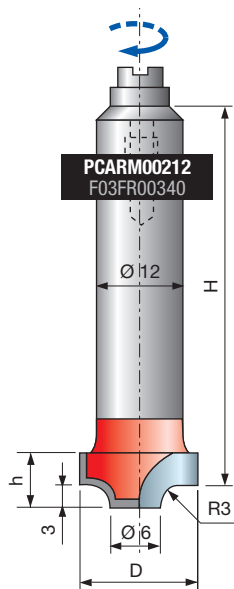
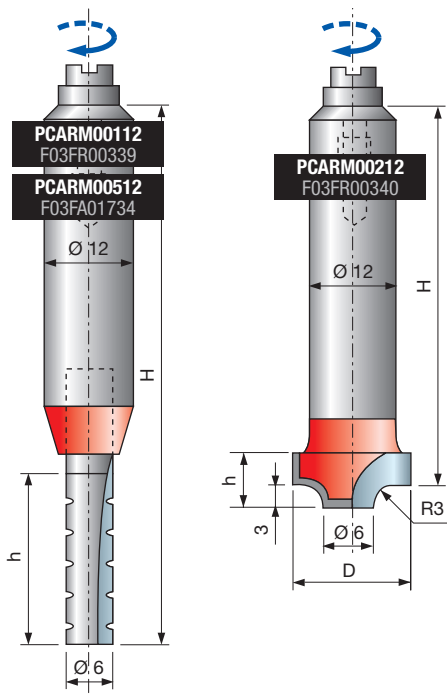
### Applications:

Profiling.

### Technical information:

Suitable for window bead recovery operations.  
Manufactured in steel with brazed HW tips.



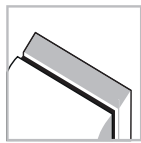


## PCARM

## Bead recovering router bits



CNC Routers



Brazed Cutters



Softwood



Hardwood



Profiling

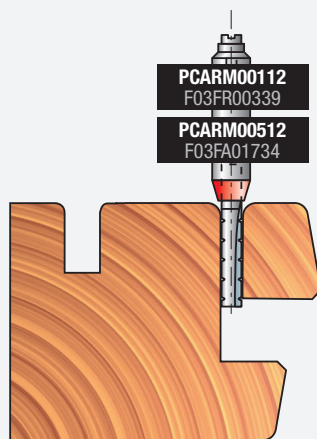
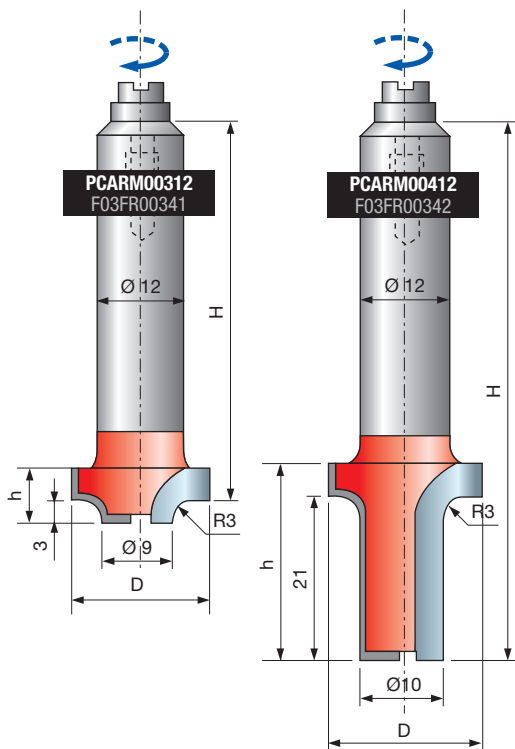
D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Freud Code	Art. No.
6	23,5	71	12	1	24.000	PCARM00112	F03FR00339
6	30	80	12	1	24.000	PCARM00512	F03FA01734
16	8	56	12	2	24.000	PCARM00212	F03FR00340
19	8	56	12	2	24.000	PCARM00312	F03FR00341
20	26	71	12	2	24.000	PCARM00412	F03FR00342

**Machines:**  
CNC machines.

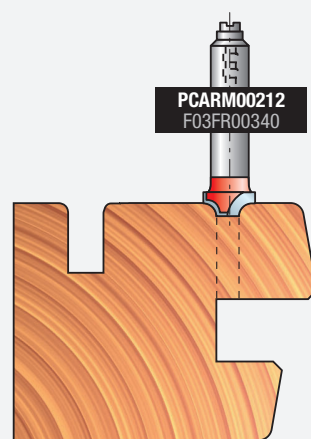
**Materials:**  
Softwood and hardwood.

**Applications:**  
Profiling.

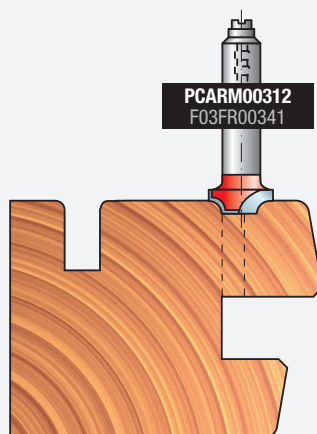
**Technical information:**  
Suitable for arch window bead recovery operations.  
• Manufactured in steel with brazed HW tips.



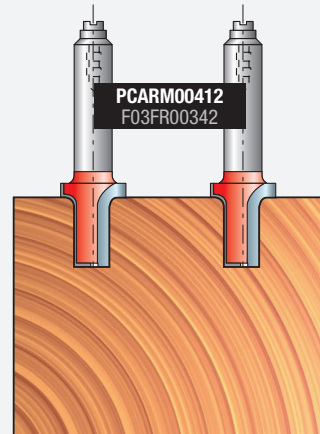
20-28 mm bead recovery bit.



Bead profiling bit.



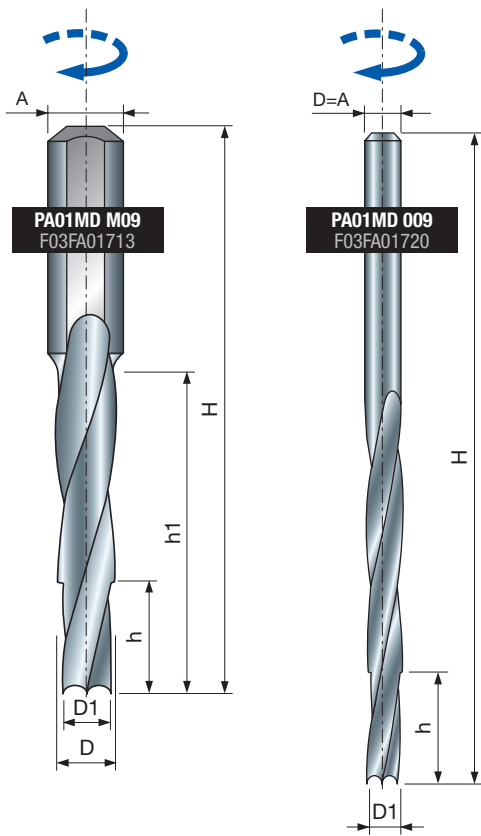
Bead profiling bit.



Arch tracing bit.

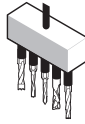
# Boring





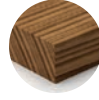
## PA01MD

## HS stepped drill for hinges



Boring Machines

CNC Routers



Softwood

Hardwood

D1	D	h	h1	H	A	d	Freud Code	Art. No.
mm	mm	mm	mm	mm	mm	mm		
3,8	5	20	40	75	10	9	PA01MD M09	F03FA01713
5,2	6,5	15	50	85	10	13	PA01MD M13	F03FA01715
5,5	7	15	55	90	10	14	PA01MD M14	F03FA01716
6	7,7	15	60	95	10	16	PA01MD M16	F03FA01717
6,6	8,2	20	70	105	10	18	PA01MD M18	F03FA01718
6,7	8,7	20	80	115	10	20	PA01MD M20	F03FA01719

D1	D	h	h1	H	A	d	Freud Code	Art. No.
mm	mm	mm	mm	mm	mm	mm		
4,5	5,25	10	45	83	5,25	9	PA01MD 009	F03FA01720
5,8	6,75	20	85	155	6,75	13	PA01MD 013	F03FA01722
6,3	7,25	19	95	165	7,25	14	PA01MD 014	F03FA01723
6,7	7,75	25	100	165	7,75	16	PA01MD 016	F03FA01724
7,7	8,75	20	70	121	8,75	18	PA01MD 018	F03FA01725

### Machines:

Boring and CNC machines.

### Materials:

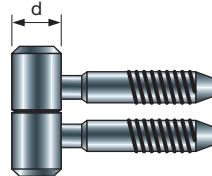
Softwood and hardwood.

### Applications:

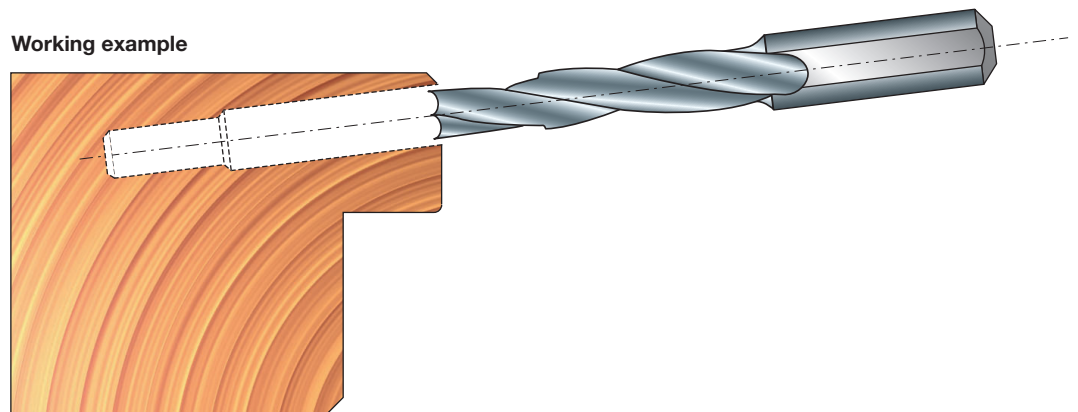
Boring.

### Technical information:

Right hand rotation router bit with double diameter for window hinges.



### Working example



**The tools have been designed and manufactured in accordance with the European Safety Standard EN-847**

## TOOLS

Tools shall be used only by persons of training and experience who have knowledge of how to use and handle tools.

The maximum rotational speed marked on the tool shall not be exceeded.

Circular saw blades, the bodies of which are cracked, shall be scrapped (repairing is not permitted).

One piece tool with visible cracks shall not be used.

Clamping surfaces shall be cleaned to remove dirt, grease, oil and water.

- Resin shall only be removed from light alloys with solvents that do not affect the mechanical characteristics of these materials.

Tools and tool bodies shall be clamped in such a way that they shall not loosen during operation. Tools with cylindrical shank must be clamped in a way that the mark of the maximum free shank length shall be covered, at least partially, by the clamping device or by the locking collet.

- During assembly procedures, attention must be paid that knives, inserts and spurs do not collide with other elements.

Fastening screws and nuts shall be tightened using the appropriate spanners etc. and to the torque value provided by the manufacturer. Extension of the spanner or tightening using hammer blows shall not be permitted.

Clamping screws shall be tightened according to instructions provided by the manufacturer. Where instructions are not provided clamping screws shall be tightened in sequence from the centre outwards.

Use of fixed rings, e. g. pressed or held by adhesive fixing, in flanged sleeves, shall be permitted if made to the manufacturers specifications.

- Repair and regrinding of tools shall only be allowed according to the tool manufacturer's instructions.

After repair and regrinding of tools it shall be ensured that the tools observe balancing requirements.

The design of composite (tipped) tools shall not be changed in the process of repair.

- Composite tools shall be repaired by a competent person, i.e. a person of training and experience, who has knowledge of the design requirements and understands the level of safety to be achieved. Repair shall therefore include, e.g. use of spare parts which are in accordance with the specification of the original parts provided by the manufacturer.

- Tolerances which ensure correct clamping shall be maintained.

For one piece tools care shall be taken that regrinding of the cutting edge will not cause weakening of the hub and the connection of the cutting edge to the hub.

To avoid injuries, tools shall be handled in accordance with the guidance provided by the manufacturer. Typically, safe handling involves the use of devices such as carrying hooks, proprietary handles, frames (e. g. for circular saw blades), boxes, trolleys etc. The wearing of protective gloves improves the grip on the tool and further reduces the risk of injury.

Maintenance and modification of milling tools and related components and circular saw blades should always be in accordance with the design requirements/the manufacturer's instructions.

Maintenance and modification of milling tools and circular saw blades should only be carried out by a competent person, i. e. a person of training and experience, who has knowledge of the design requirements and understand levels of safety to be achieved.

When regrinding milling tools and circular saw blades, the minimum requirements of cutting blade thickness and cutting blade projection should be observed.

Composite tools should be repaired by persons experienced in and with understanding of design and use of milling tools for processing wood and similar materials, e.g. an expert with a relevant education and knowledge of the brazing process, including in particular the influence of the brazing process on tension in tool body and cutting material. When brazing off worn tips and subsequently brazing on new tips it should be made sure that the tip is correctly mounted in the tool body and that the process does not result in critical tension in the tool body.

- After any type of maintenance, milling tools marked with MAN should continue to observe the requirements of the standards related to tools for hand feed.

When modifying milling tools, e. g. modification of bore diameter, modification of shank, retipping of composite tools and similar, it should be ensured that the requirements of the standard relating to balancing are still observed.

After being modified and/or retipped, milling tools and circular saw blades should be marked according to the rules applying to new tools. However, the name/logo of the company making the modification/ retipping should be added.

To avoid injuries, tools shall be handled in accordance with the guidance provided by the manufacturer. Tools which weigh more than 15 kg may require the use of special handling devices or attachments, these will depend on the features that the manufacturer has designed into the tool to allow easy handling. The manufacturer can advise on the availability of necessary devices.

## CLAMPING DEVICES

The speeds indicated on the clamping device and the tool to be clamped should be compared. For adjusting the speed on the machine the lower speed should be applied.

Screws and nuts should be tightened using the appropriate spanners. Clamping surfaces should be cleaned to remove dirt, grease, oil and water.

Clamping devices and tools should be mounted or clamped according to given torques, pressures and wrenches to be used.

Extension of spanners or tightening or loosening by means of hammer blows should not be permitted.

Maximum tool diameters and tool lengths should not be exceeded.

Shank diameters must be in accordance with the clamping range of the clamping devices.

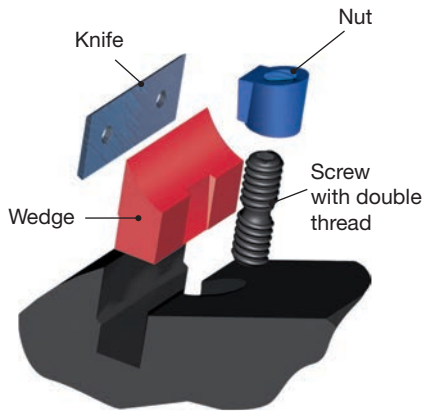
The minimum required clamping length must be kept.

Care should be taken that the data relevant to the safety of the clamped tool are always stored in the data medium.

Repairs should only be carried out by a competent person, i.e. a person with professional training and experience, who has knowledge of the design, construction and safety requirements.

Repair should therefore include the use of spare parts which are in compliance with the specifications of the original parts.

# HRL HIGH RESISTANCE LOCKING SYSTEM



Components of HRL system



## THE MOST TRIED AND TESTED SYSTEM:

Refined after many years of continuous improvements, both technologically as well as in the materials used to construct each component, without, however, losing sight of the functionality and security of the product. Furthermore, the HRL Locking System has undergone accurate controls, even from the mechanical and technological point of view.

## THE SAFEST SYSTEM:

Thanks to its wedge shaped design, the HRL Locking System takes advantage of centrifugal forces determined by the tool's rotation in order to block itself. For this reason as well as the oversized components, there is no risk of accidental breakage or expulsion of the knife.

## THE MOST PRECISE SYSTEM:

All seats and components are constructed using precision levels never before reached in the woodworking tools industry, guaranteeing an always perfect and efficient positioning.

## THE SIMPLEST SYSTEM:

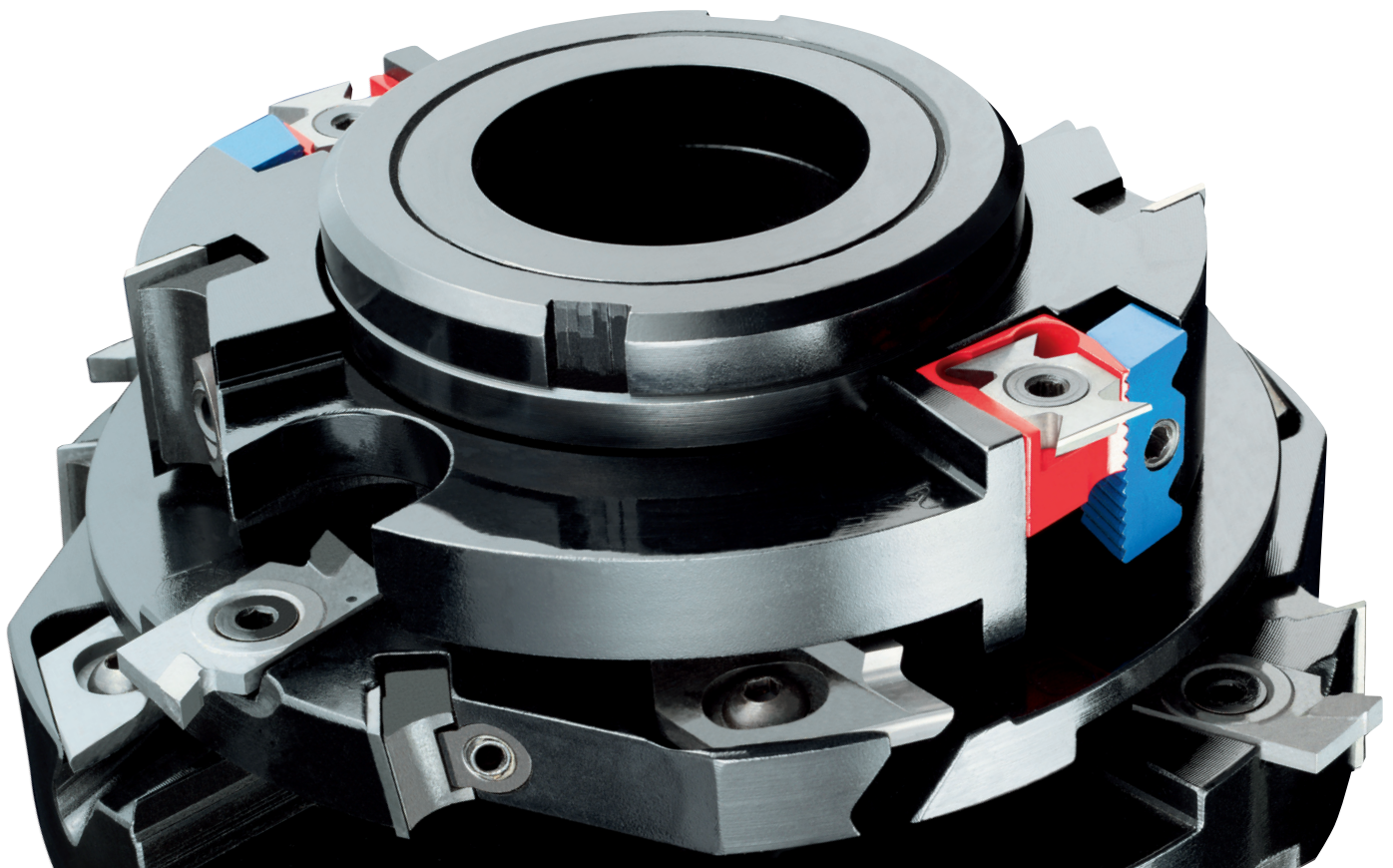
Complexity is not always synonymous of efficiency! There are other more complex locking methods than ours, but none as efficient. Our research centre has been able to carry out its realisation whilst keeping in consideration 2 fundamental points: have as few components as possible so as to be able to change knives quickly, even in the most difficult conditions.

## THE STRONGEST SYSTEM:

The use of wedges which have undergone special thermic treatment, the oversized screws and the precision of the HRL Locking System, guarantee an almost unlimited number of changes, without reducing its efficiency and in the most difficult conditions.

## THE EASIEST SYSTEM TO MAINTAIN:

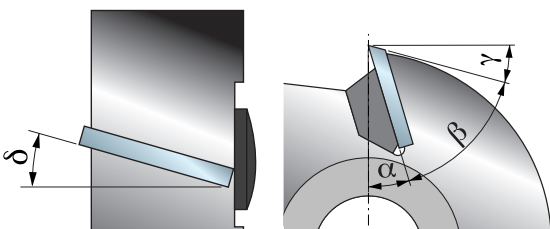
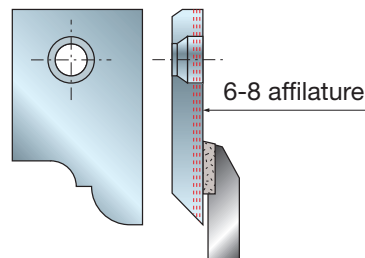
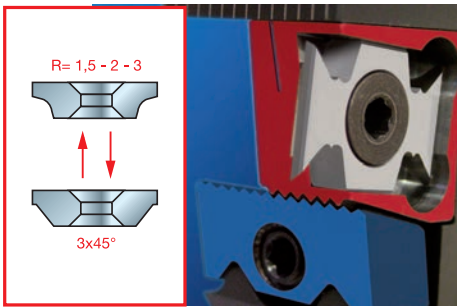
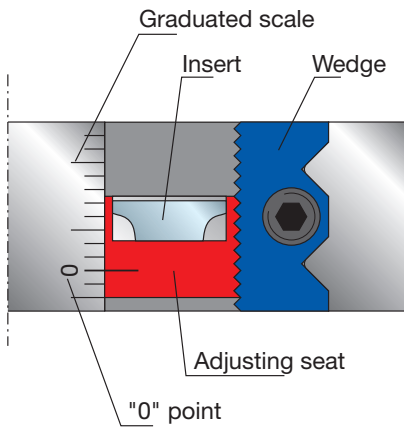
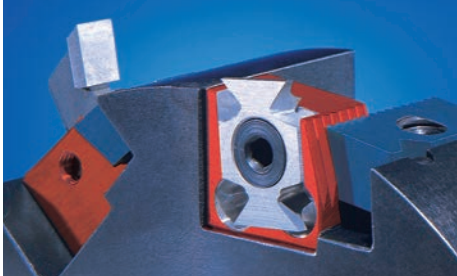
The use of only frontal screws, allow knife changes, without taking the tool off the operating machine, therefore reducing actual machine stoppages. It has been demonstrated by repeated tests, that a large frontal screw is less likely to become clogged up compared to a small one, whatever may be its position.







Components of NSR system



## NSR REGULATION SYSTEM

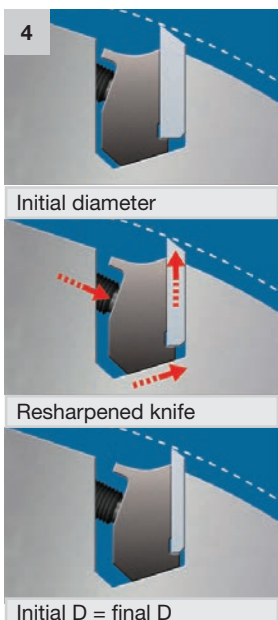
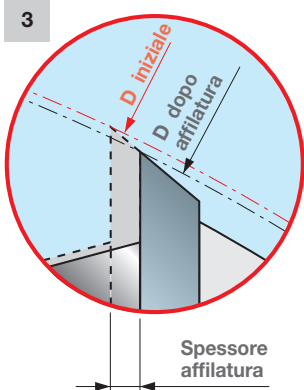
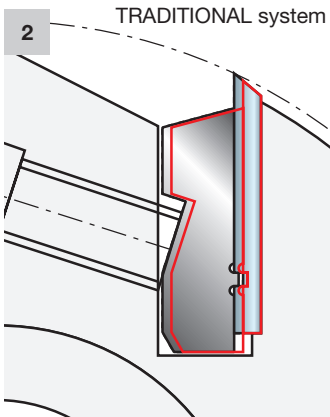
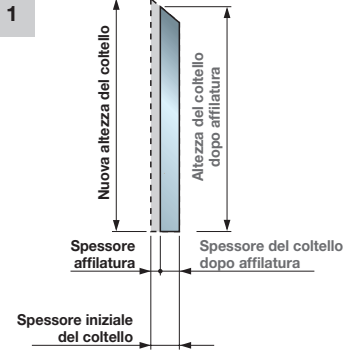
- The NSR system, is currently the only one on the market which allows you to regulate and change the inserts directly on to the machine and without the need of any particular measuring instruments thanks to its particular technological characteristics and not to mention its constructive precision. The specially grained surface allows you to regulate the insert's height with increments of 1 mm and with precision of up to 1/100 of a mm, which in time will remain constant even after hundreds of changes. Furthermore the regulation is continuous along the thickness of the tool and not limited to fixed positions as happens with older systems.
- Special reference marks are incisioned using laser technology at intervals of 2 mm, in correspondence to the grain's pass, allowing the user to carry out the easiest and most rapid positioning with absolute precision.
- Special incisioned markings consent a safe reference even after years of use. In the same seat and changing only the serrated support, it is possible to mount certain elements: rounding inserts, beveling inserts, inserts for grooves and spurs second to the necessity of use. Furthermore the insert has a positive cutting angle (hook angle) and a shear angle so as to consent the maximum finish possible on any type of workpiece.
- The insert's position with the NSR system is simple and requires the use of only a key. The very same key is also used to change the insert and is made up of very few components. With a simple gestic, it is possible to take the insert off the serrated support or modify its position without even taking the tool of the operating machine, therefore avoiding useless and damaging machine stoppages.
- The exclusive type of hard metal used is produced directly by our own company. The hard metal is accurately controlled and its microstructure is modified second to the kind of use it will have to undergo, so as to obtain the best possible duration in correspondence to the kind of finish required.

## PROFILED AND RESHARPENABLE PERFORMANCE SYSTEM KNIVES

- Whereas on a traditional cutterhead, disposable blades are mounted with a thickness of 1.5 mm, on a Performance System cutter head, blades are mounted that can be sharpened 6 to 8 times, with a thickness of 3 mm, with straight or shaped profile. The second kind of tool undergoes more complex working to allow housing of blades with different profiles on the same body.
- Performance System knives are constructed in hard metal, which Freud produces in 6 grades of hardness, second to the material to be worked: softwoods and hardwoods, heavy, abrasive, chipboard, melamine, laminated, MDF etc. It is possible to use HW with a high grade of hardness, so as to permit a superior hold of 30% more with respect to the HW used for brazed cutting edges destined to work very abrasive materials.
- Other than being a solution that practically substitutes brazed cutters, thanks to the interchangeability of the profiles on the same tool and the duration of the tool itself, there is a notable advantage and convenience when working on overhead CNC router machines, where machine stoppages can result costly: infact the changing of a used or damaged knife does not require the dismounting of the cutterhead from the machine, since it is sufficient to loosen the screw that holds it in place. Instead a brazed cutter must be completely changed and a substitute available to avoid time wastage.
- Freud has an entire range of tools with performance, standard or personalised knives for manual or overhead CNC router machines.
- Even after sharpening, performance knives maintain their original profile and the tool's cutting diameter, considering maximum loses of 0,15-0,20 mm.
- We have already seen the economic advantage as compared to braze-welded tools. But the Performance System is also advantageous if compared to traditional cutterheads, thanks to the ease with which blades can be sharpened and the low cost of this operations, since no special machinery is required (all that is required is a grinder or a sharpener). Specialised personnel is also not required.

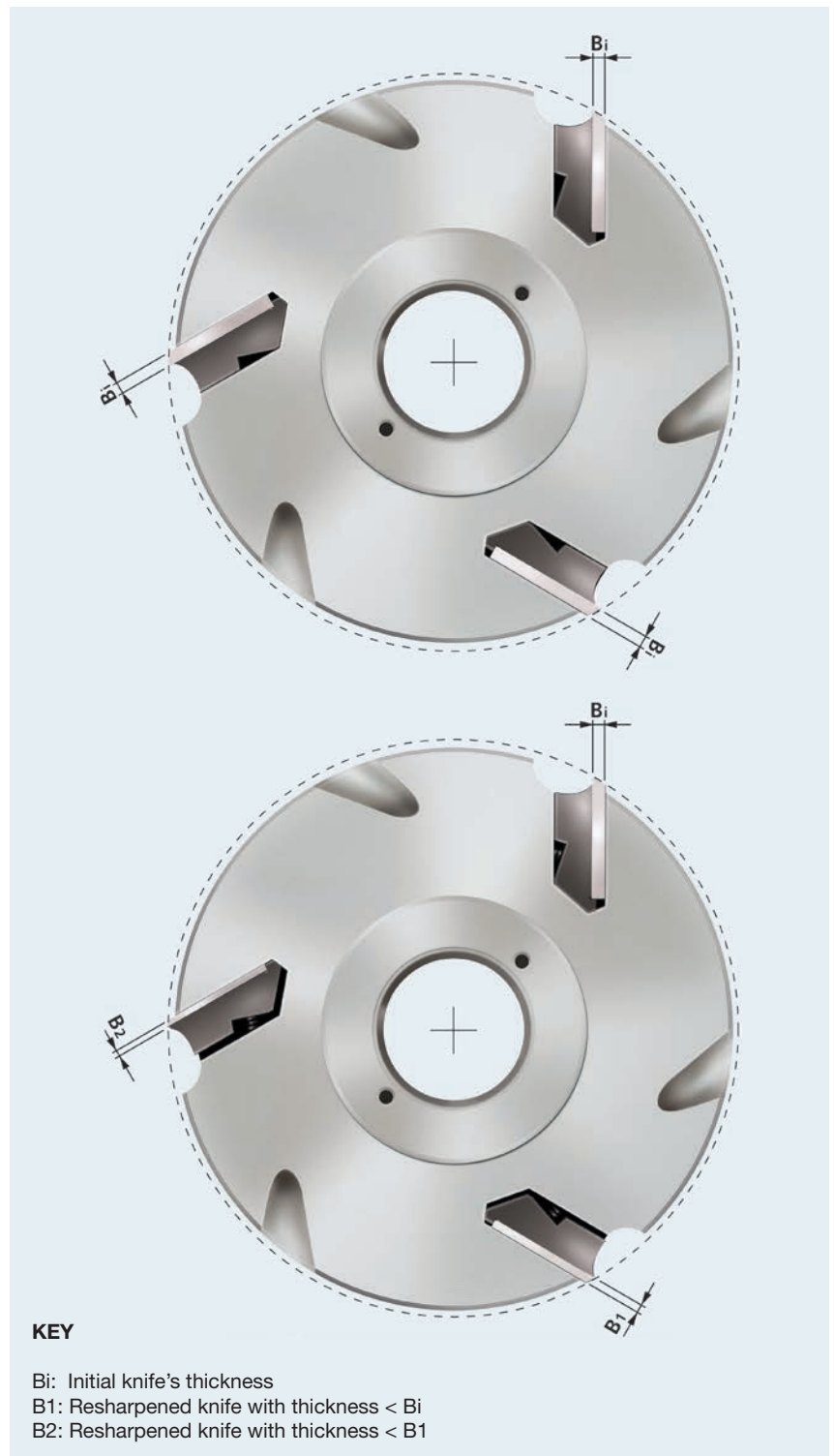
### THE MOST CHARACTERISTIC ANGLES OF A CUTTERHEAD ARE:

- **Hook angle ( $\alpha$ ):** depends on the type of material to be cut.
- **Wedge angle ( $\beta$ ):** this angle is a direct consequence of angles  $\alpha$  and  $\gamma$ .
- **Clearance angle ( $\gamma$ ):** depends on the material to be cut and the thickness of the cutting edge.
- **Shear angle ( $\delta$ ):** necessary to obtain a better penetration into the material to be cut and a gradual removal of the chips. When the tools have different diameters, this angle allows the hook angle to remain constant.



## AUTOMATIC DIAMETER RECOVERY SYSTEM

As is known, sharpening Performance System knives implicates variations in the tool cutting diameter that cause the tool to carry out an incorrect profile. The removal of material parallel to the knife surface causes a reduction in its thickness, its height (Fig. 1 and 2) and therefore in the diameter of the tool itself (Fig. 3). The introduction of this ISOprofil system consents us to avoid in a definitive way the reduction of the diameter, with extreme operative simplicity and without the need of auxiliary measuring instruments to verify the correct functionality of the knife after sharpening. The idea is fundamentally based on the geometrical form of the wedge and its positioning seats on the tool (Fig. 4). Tightning the locking screw, pushes the wedge until it locks the knife on to the tool. The wedge running on the inclined surface blocks the knife and rises until it compensates the reduction in the cutting diameter, determined by the sharpening. Those liable to draw particular advantage, are those who use numerically controlled machines with the necessity of maintaining a tool with a constant diameter, without having to intervene on the reprogramming of the operating machine, so as to compensate dimensional errors that may derive from sharpening.

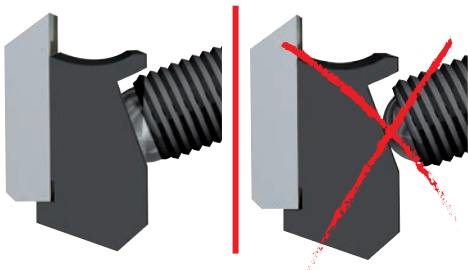


# AUTOMATIC DIAMETER RECOVERY SYSTEM

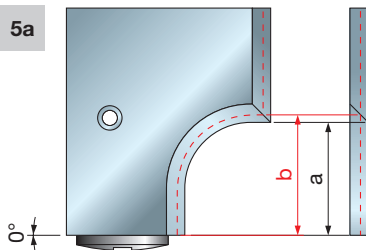
Furthermore, in order to maintain the profile of Performance knives even after several resharpenings, Freud has invented and adopted a simple but determined device, by also creating a relief angle on the support side of the knife on the positioning screw (Fig. 5a). In this way whilst sharpening is carried out, the profile does not vary, as would happen with a traditional knife. The user is surely to gain an advantage from the new system. Carrying out work where there are resharpenable knives to create the profile and the scribe (Fig. 6), it is evident that the maintenance of original shape allows to obtain a perfect fitting all through the knives' life, even after 8-10 sharpenings, without regulation of guides or CNC axes. In this way you can enjoy the reduced operating costs of "Performance" knives, without any limitation in comparison to disposable knives. In the second example (Fig. 5b), thanks to the clearance angle on the underside, the sharpened knife would move to the value  $\Delta S$ , until it rests on the positioning screw, maintaining an unaltered width  $a$ .



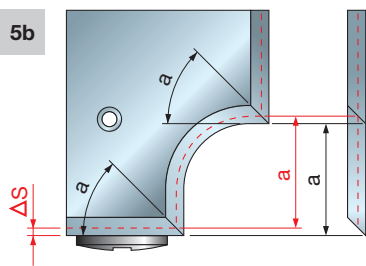
Screws with spherical insert, for ISOprofil System



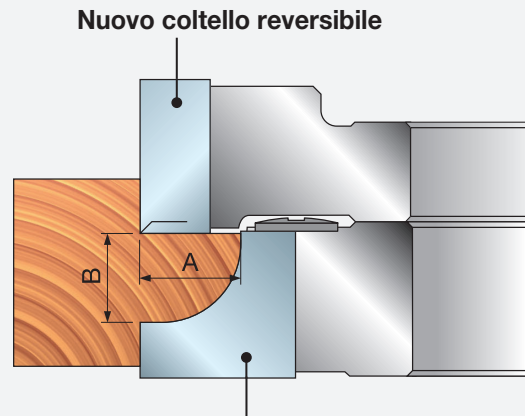
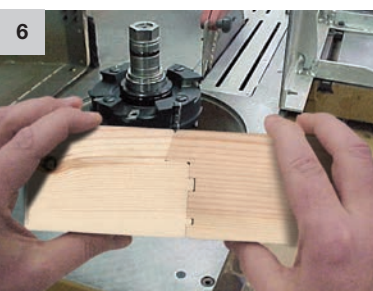
Proper locking is obtained when the flat surface of the spherical insert completely adheres to the wedge.



Traditional knife

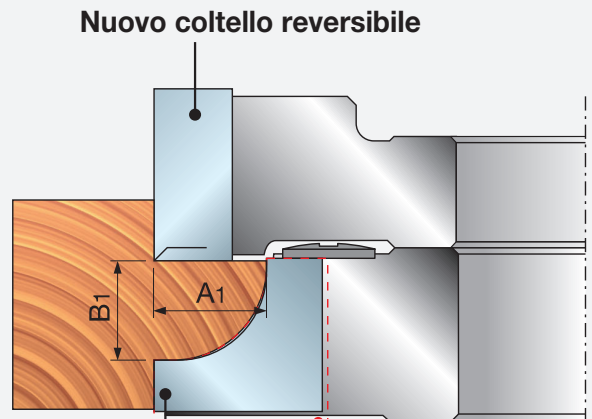


New type of knife



Nuovo coltello Performance

$A = A_1$   
 $B = B_1$

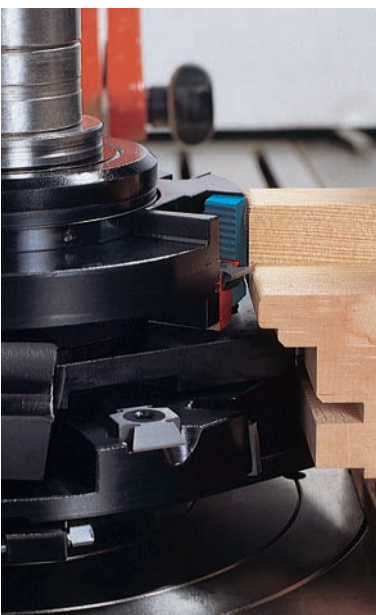
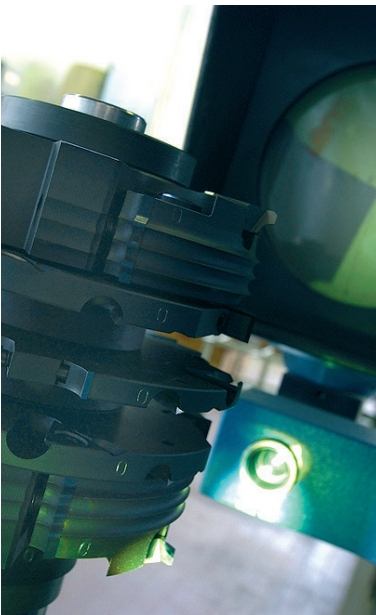


Coltello Performance

Nuovo coltello Performance

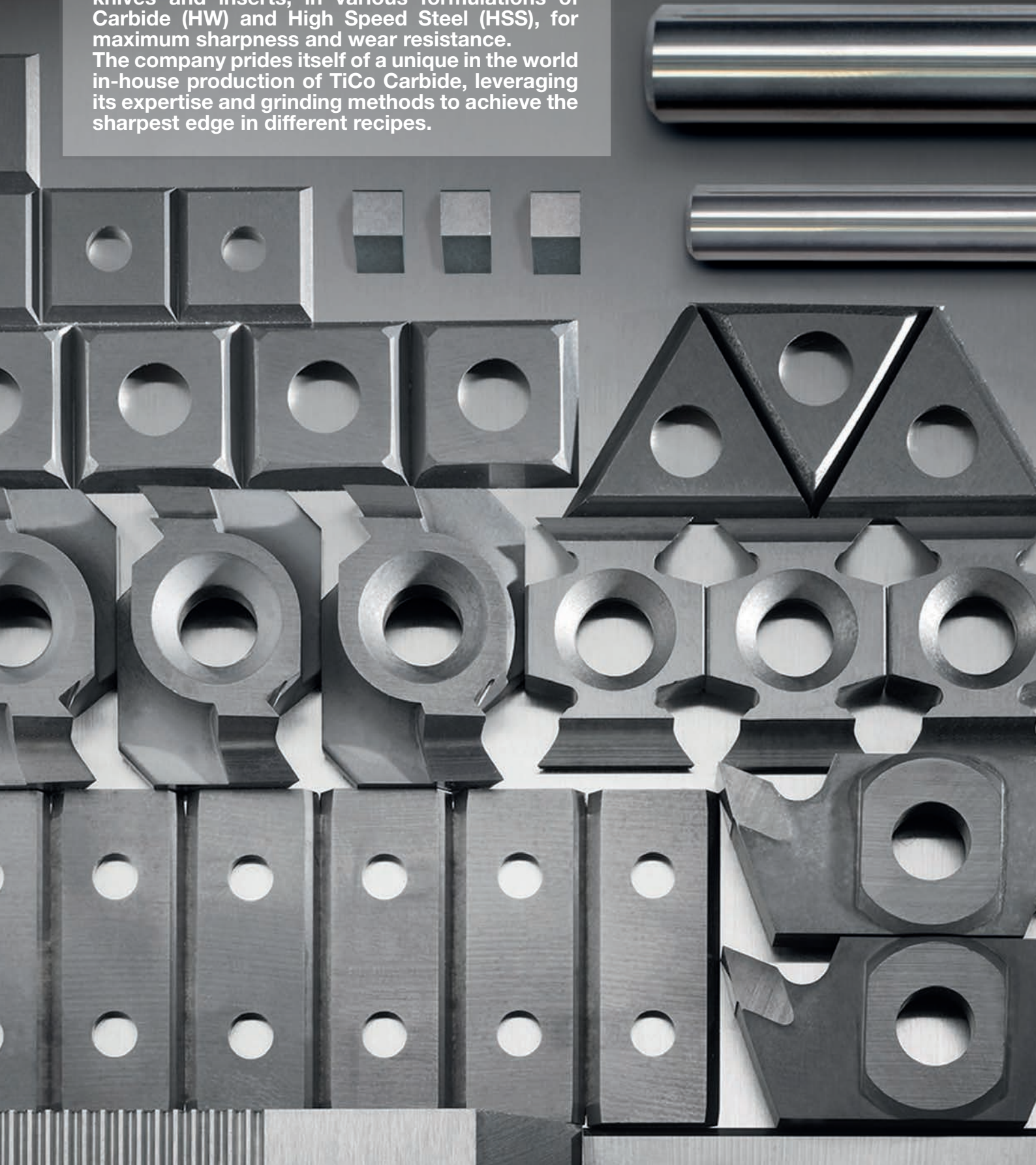
## ABSOLUTE QUALITY

- The use of smart machines connected to a complex information system and the use of highly specialised personnel makes it possible to achieve a level of precision never before seen in the field of woodworking tools.
- Each tool is computer-designed in our design department, optimising characteristics based on customer needs. This leads to a tool with the utmost in performance for the desired applications.
- Each tool is then balanced to eliminate vibrations due to uneven distribution of the ferrous mass that would occur during work. Three different balancing operations are performed. The first is on the single tool, and the second is on the complete group. The third, of extreme importance, is on the set of groups that will be assembled on the machine shaft.
- Each tool is checked with a computerised system that makes it possible to verify, even before final testing, the precision of the required group.
- All of these working and verification phases mean that Freud can provide clients with a turnkey product that is immediately productive and therefore economically profitable.
- Fine tuning is performed by the testing department, where a production simulation is carried out. For each single group, a wood sample is worked with the requested profile. In this way, the customer is provided with a system that can be used right away without the need for any further adaptation.



# Knives and Inserts in HW and HSS

Freud offers the most comprehensive range of knives and inserts, in various formulations of Carbide (HW) and High Speed Steel (HSS), for maximum sharpness and wear resistance. The company prides itself of a unique in the world in-house production of TiCo Carbide, leveraging its expertise and grinding methods to achieve the sharpest edge in different recipes.



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**KNIVES**

**Disposable knives in HW for planing & rebating**

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 CG01M HW - 35° Disposable knives..... Page 491  
 CG10M HW - 35° Disposable knives..... Page 492  
 CG26M HW - 35° Disposable knives..... Page 492  
 CG05M HW - 35° Disposable knives..... Page 492  
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 CG20M HW - 35° Disposable knives..... Page 493  
 CG06M HW - 40° Disposable knives..... Page 493  
 CG66M HW - 40° Disposable knives..... Page 494  
 CG76M HW - 40° Disposable knives..... Page 494  
 CG62M HW - 45° Disposable knives..... Page 495  
 CG22M HW - 45° Disposable knives..... Page 495  
 CG17M HW - 40° Disposable knives with end bevels..... Page 495  
 CG18M HW - 40° Disposable knives with end bevels..... Page 496  
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 CG50M HW - 35° Disposable knives for TG35M ..... Page 499  
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**Customised knives in HW**

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 CT010S 18%W HSS knives - Special dimensions..... Page 505  
 CZ01M HSS serrated back knives ..... Page 505  
 CP01M 18%W HSS planing knives - Standard dimensions..... Page 506  
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**SPURS**

**Spurs in HW for roughing and rebating**

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 RG01M HW - Square disposable spurs - Type B..... Page 508  
 RG01M HW - Square disposable spurs - Type C..... Page 508  
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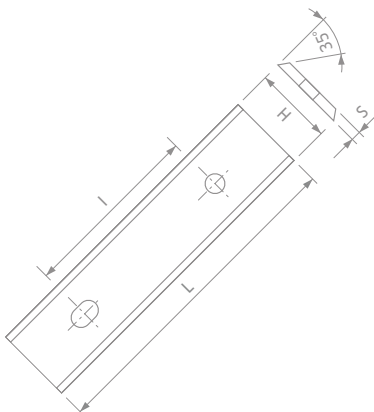
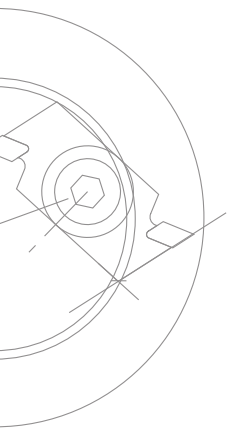
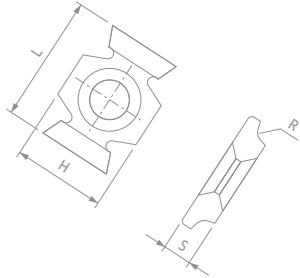
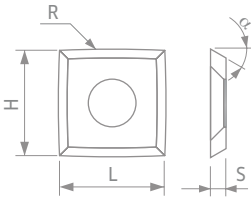
**Spurs in HW for planing and finishing**

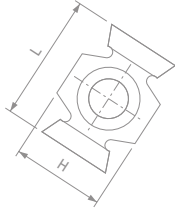
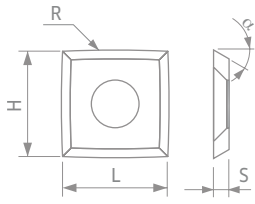
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**Inserts in HW for beveling & rounding**

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# LEADING TECHNOLOGY

## TiCO CARBIDE TECHNOLOGY



For its premium cutters Freud offers more than 20 Carbide blends, formulated both for standard and custom applications, crafted to deliver the correct grade, an optimised relief angle and maximum sharpness.

### TiCo Carbide

A specially formulated, highly compact Titanium Cobalt Carbide, engineered and manufactured by Freud. It provides a sharper edge and flawless finish with a dramatically longer cutting life.



## CARBIDE INNOVATION

The continuous investment in new Carbide recipe development maintains the knives performance at unmatched quality levels.

For its new Carbide Rounded Razors, Freud has formulated a dedicated fine-grain Carbide (**K01S**), specifically engineered to achieve a high level of hardness and tenacity. The formula guarantees the greatest resistance to wear and impact.



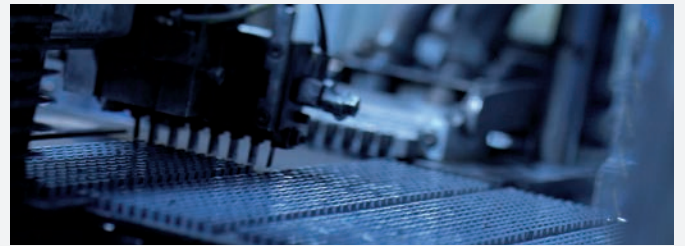




## PIONEERING SOLUTIONS

Freud's production process, from raw material selection to final grinding, is based on the industry's most sophisticated manufacturing technologies, for knives and inserts with superior wear resistance.

Advanced testing methods and strict controls, throughout the entire cycle, guarantee 100% product compliance to quality parameters.



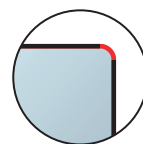
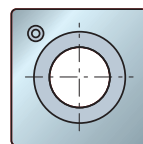
Freud takes pride in producing the sharpest knives in the world, in different Carbide formulas (cutting edge minimum roughness  $\mu\text{m}$  0.12-0.15). This remarkable result is achieved leveraging a solid know-how and the most advanced grinding methods.

The sharpness of the cutting edge provides higher resistance to cutting pressure and abrasion, delivering extended lifetime and perfect finishing on wood and wood derivatives.

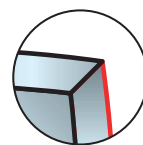
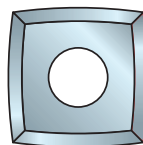
## DESIGN INNOVATION

Freud leverages its market knowledge and technical know-how to constantly develop new geometries and shapes for its knives and inserts.

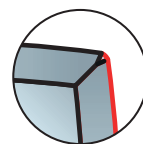
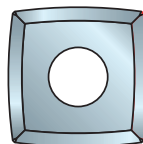
For its new range of Carbide Rounded Razors, for example, Freud has developed designs with rounded corners, rounded edges and with a combination of both, to achieve the highest results in demanding applications that require a perfect quality of cut.



**RR01**  
razor with rounded  
corners










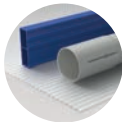
**RR10**  
razor with rounded  
edges



**RR11**  
razor with both  
rounded corners and  
edges

# HW - INDUSTRIAL QUALITY KNIVES

## CHOOSE THE RIGHT TOOL

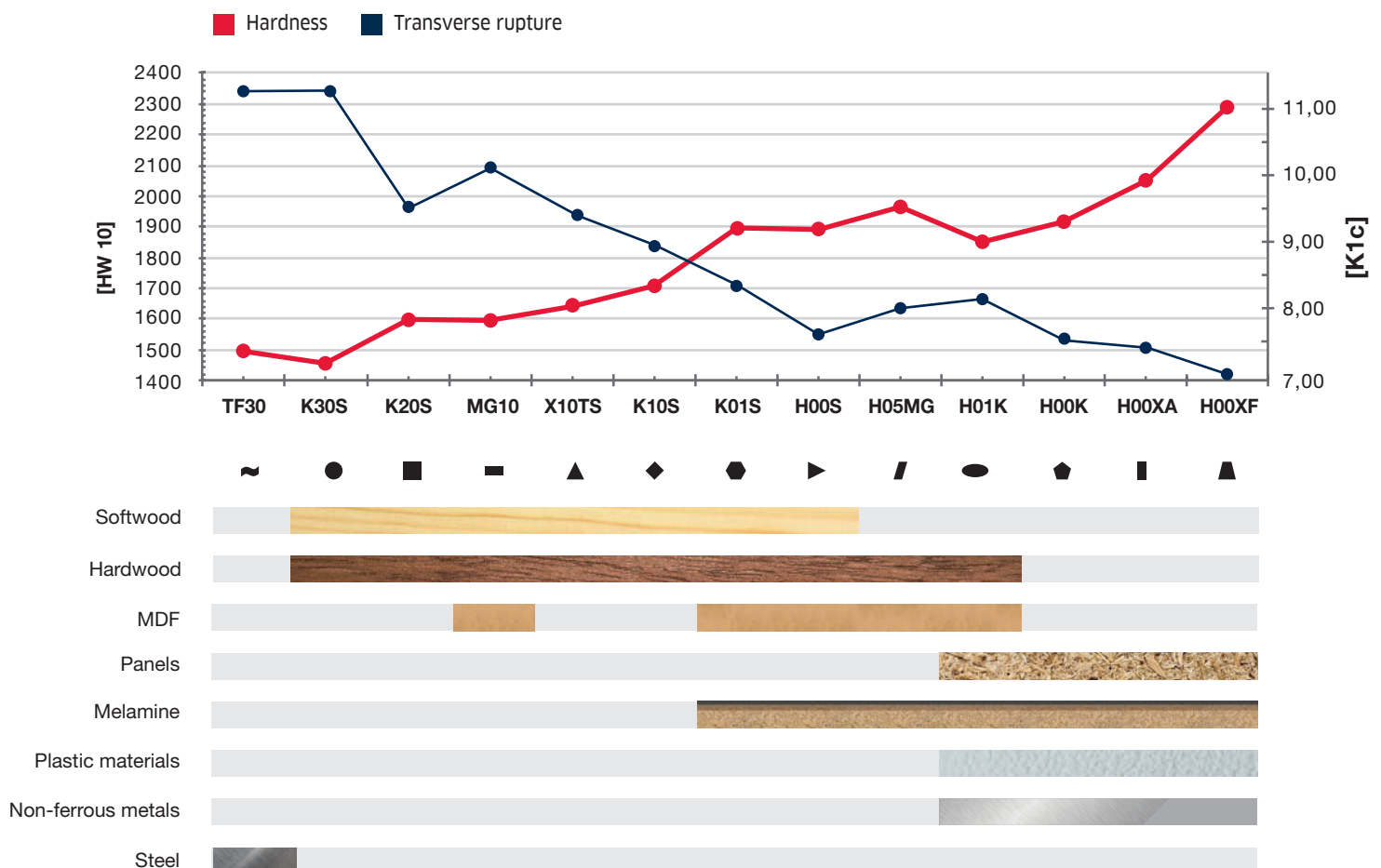
APPLICATION		PERFORMANCE	RELIEF ANGLES	FREUD CODE
	Universal	●	35°	CG26M
		●	35°	CG01M - CG10M
		●	35°	CG08M
		●	35°	CG19M
	Softwood	●	35°	CG26M
		●	35°	CG01M - CG10M
		●	35°	CG08M
		●	35°	CG19M
		●	40°	CG76M
		●	40°	CG66M
		●	40°	CG06M
		●	40°	CG18M
		●	45°	CG62M
●	45°	CG22M		
	Hardwood	●	35°	CG26M
		●	35°	CG01M - CG10M
		●	35°	CG08M
		●	35°	CG19M
		●	40°	CG76M
		●	40°	CG66M
		●	40°	CG06M
		●	40°	CG17M
		●	40°	CG18M
●	45°	CG62M		
●	45°	CG22M		
	Plywood panels	●	35°	CG04M*
		●	35°	CG05M
		●	35°	CG01M - CG10M
		●	35°	CG08M
		●	35°	CG19M
	Laminate chipboard	●	35°	CG20M*
		●	35°	CG04M*
		●	35°	CG05M
		●	35°	CG26M
		●	35°	CG01M - CG10M
		●	35°	CG08M
		●	35°	CG19M
	MDF	●	35°	CG20M*
		●	35°	CG04M*
		●	35°	CG05M
		●	35°	CG26M
		●	35°	CG01M - CG10M
		●	35°	CG08M
		●	35°	CG19M
		●	40°	CG76M
●	40°	CG66M		
	HDF	●	35°	CG20M*
		●	35°	CG04M*
	Plastics	●	35°	CG20M*
		●	35°	CG26M
		●	35°	CG01M - CG10M
		●	35°	CG08M
		●	35°	CG19M

# HW - INDUSTRIAL QUALITY KNIVES CHOOSE THE RIGHT TOOL

RELIEF ANGLE	CODE	APPLICATION								HW	HARDNESS	
		Universal	Softwood	Hardwood	Plywood	Laminated	MDF	HDF	Plastics			
35°	CG20M*	-	-	-	-	●	●	●	●	H00XF	▲	2300
35°	CG04M*	-	-	-	◐	◑	◑	◑	-	H00XA	■	2070
35°	CG05M	-	-	-	◐	◑	◑	-	-	H00K	▲	1960
35°	CG26M	◐	◑	◑	-	◑	◑	-	◑	H01K	●	1870
35°	CG01M - CG10M	◑	◑	◑	◑	◑	◑	-	◑	H00S	▶	1860
35°	CG08M	◑	◑	◑	◑	◑	◑	-	◑	K01S	◆	1850
35°	CG19M	◑	◑	◑	◑	◑	◑	-	◑	H00S	▶	1860
40°	CG76M	-	◑	●	-	-	◑	-	-	H01K	●	1870
40°	CG66M	-	◑	◑	-	-	◑	-	-	X10TS	▲	1650
40°	CG06M	-	◑	◑	-	-	-	-	-	K30S	●	1430
40°	CG17M	-	-	●	-	-	-	-	-	K10S	◆	1620
40°	CG18M	-	◑	◑	-	-	-	-	-	K30S	●	1430
45°	CG62M	-	●	◑	-	-	-	-	-	X10TS	▲	1650
45°	CG22M	-	◑	◑	-	-	-	-	-	K30S	●	1430

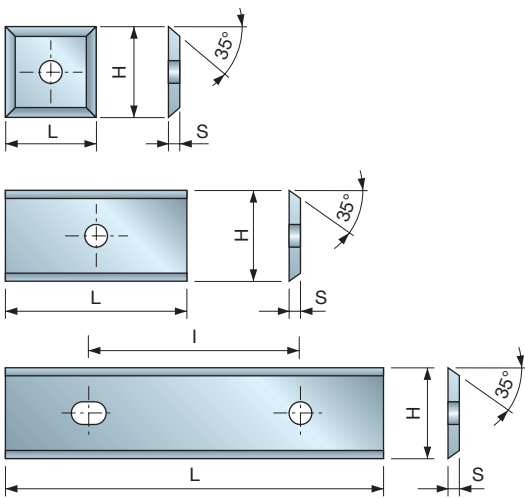
\* Not for board containing foreign materials

● Ultimate performance  
 ◑ High performance  
 ◐ Standard performance  
 ◒ Basic performance  
 - Not recommended



# Knives





**HW  
K01S**

12 mm disposable knives made by K01S  
Freud's Carbide with 35° relief angle.

- Ideal for a universal use.

## CG08M

## HW - 35° Disposable knives



L mm	H mm	S mm	I mm	Freud Code	Art. No.
7,6	12	1,5	-	CG08MAA310	F03FH02902
8,6	12	1,5	-	CG08MJA310	F03FH03349
9,6	12	1,5	-	CG08MMA310	F03FH02910
11,6	12	1,5	-	CG08MNA310	F03FH03254
12	12	1,5	-	CG08MBA310	F03FH02903
15	12	1,5	-	CG08MCA310	F03FH02904
15,6	12	1,5	-	CG08MGB310	F03FH03350
16,3	12	1,5	-	CG08MJD310	F03FH03351
16,6	12	1,5	-	CG08MJB310	F03FH03352
20	12	1,5	-	CG08MDA310	F03FH02905
24	12	1,5	-	CG08MOA310	F03FH02911
25,8	12	1,5	14	CG08MJC310	F03FH03353
30	12	1,5	14	CG08MEA310	F03FH02906
40	12	1,5	26	CG08MLA310	F03FH02909
50	12	1,5	26	CG08MFA310	F03FH02907
60	12	1,5	26	CG08MGA310	F03FH02908

## CG01M

## HW - 35° Disposable knives



### Type A

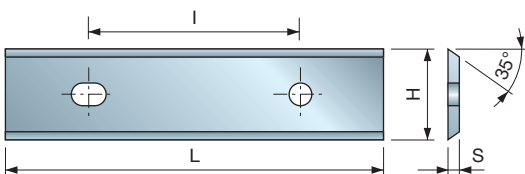
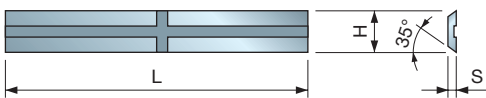
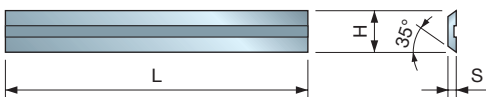
L mm	H mm	S mm	I mm	Freud Code	Art. No.
20	5,5	1,1	-	CG01MDB310	F03FH02735
30	5,5	1,1	-	CG01MEB310	F03FH02850
40	5,5	1,1	-	CG01MFJ310	F03FH02853
50	5,5	1,1	-	CG01MFB310	F03FH02852

### Type B

L mm	H mm	S mm	I mm	Freud Code	Art. No.
20	5,5	1,1	-	CG01MBX310	F03FH03713
25	5,5	1,1	-	CG01MCX310	F03FH03715
30	5,5	1,1	-	CG01MEX310	F03FH03717
40	5,5	1,1	-	CG01MDX310	F03FH03719
50	5,5	1,1	-	CG01MFX310	F03FH03721

### Type C

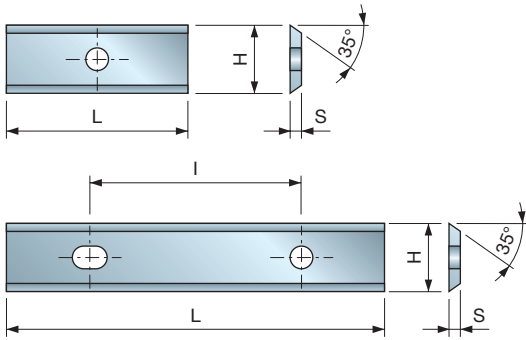
L mm	H mm	S mm	I mm	Freud Code	Art. No.
80	13	2,2	60	CG01MHA301	F03FA18134
100	13	2,2	60	CG01MIA301	F03FA18182
120	13	2,2	60	CG01MKA301	F03FA18183



**HW  
H00S**

12 mm Disposable knives made by H00S  
Freud's Carbide with 35° relief angle.

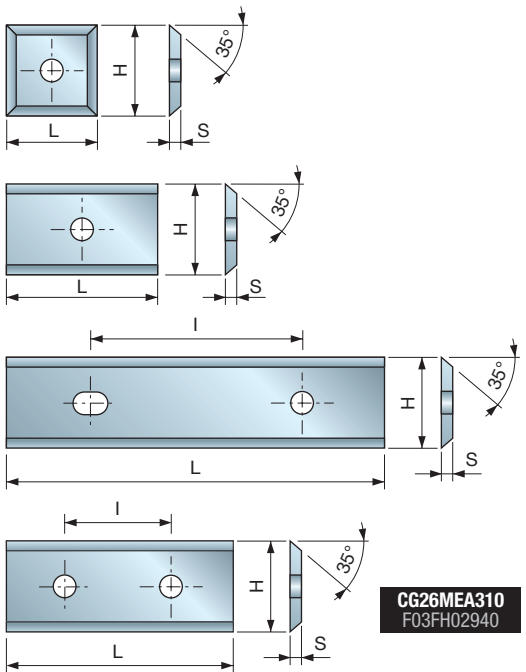
- Ideal for a universal use.



**HW  
H00S**

12 mm Disposable knives made by H00S  
Freud's Carbide with 35° relief angle.

- Ideal for a universal use.

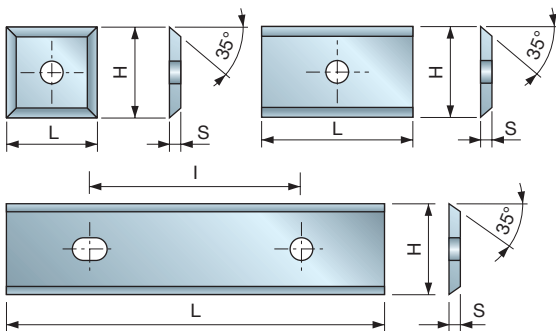


**CG26MEA310  
F03FH02940**

**HW  
H01K**

12 mm Disposable knives made by H01K  
Freud's Carbide with 35° relief angle.

- Ideal for a universal use.



**HW  
H00K**

12 mm Disposable knives made by H00K  
Freud's Carbide with 35° relief angle.

- Ideal for wood composites

## CG10M

## HW - 35° Disposable knives



L mm	H mm	S mm	I mm	Freud Code	Art. No.
7,5	9	1,5	-	CG10MAA310	F03FC23863
9,6	9	1,5	-	CG10MBA310	F03FC23864
12	9	1,5	-	CG10MCA310	F03FC23865
14,6	9	1,5	-	CG10MEA310	F03FH02912
20	9	1,5	-	CG10MGA310	F03FH02913
30	9	1,5	14	CG10MHA310	F03FH02914
40	9	1,5	26	CG10MIB310	F03FH02916
50	9	1,5	26	CG10MIA310	F03FH02915
60	9	1,5	26	CG10MKA310	F03FH02917

## CG26M

## HW - 35° Disposable knives



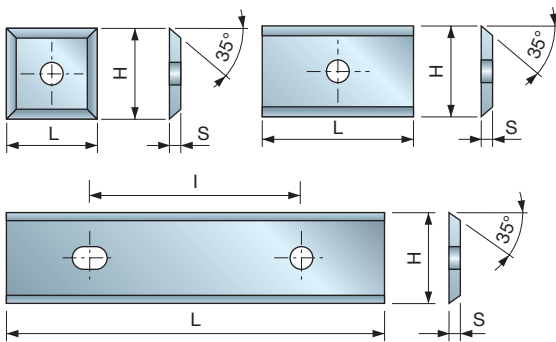
L mm	H mm	S mm	I mm	Freud Code	Art. No.
7,6	12	1,5	-	CG26MAA310	F03FH02936
8,6	12	1,5	-	CG26MJA310	F03FH04114
9,6	12	1,5	-	CG26MMA310	F03FH02944
10,6	12	1,5	-	CG26MUE310	F03FH02947
11,6	12	1,5	-	CG26MNA310	F03FH02945
12	12	1,5	-	CG26MBA310	F03FH02937
15	12	1,5	-	CG26MCA310	F03FH02938
18,6	12	1,5	-	CG26MJE310	F03FC23866
20	12	1,5	-	CG26MDA310	F03FH02939
20,6	12	1,5	-	CG26MJF310	F03FC23867
22,6	12	1,5	-	CG26MJG310	F03FC23868
24	12	1,5	-	CG26MOA310	F03FH02946
30	12	1,5	14	CG26MEA310	F03FH02940
40	12	1,5	26	CG26MLA310	F03FH02943
50	12	1,5	26	CG26MFA310	F03FH02941
60	12	1,5	26	CG26MGA310	F03FH02942

## CG05M

## HW - 35° Disposable knives



L mm	H mm	S mm	I mm	Freud Code	Art. No.
12	12	1,5	-	CG05MBA310	F03FH02885
20	12	1,5	-	CG05MDA310	F03FH02886
30	12	1,5	14	CG05MEA310	F03FH02887
50	12	1,5	26	CG05MFA310	F03FH02888



**HW  
H00XA**

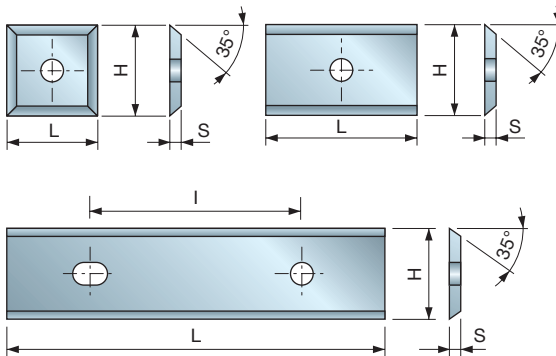
12 mm Disposable knives made by H00XA  
Freud's Carbide with 35° relief angle.  
• Ideal for wood composites.

**CG04M**

**HW - 35° Disposable knives**



L mm	H mm	S mm	I mm	Freud Code	Art. No.
12	12	1,5	-	CG04MBA310	F03FH02880
15	12	1,5	-	CG04MCA310	F03FH02881
20	12	1,5	-	CG04MDA310	F03FH02882
30	12	1,5	14	CG04MEA310	F03FH02883
50	12	1,5	26	CG04MFA310	F03FH02884



**HW  
H00XF**

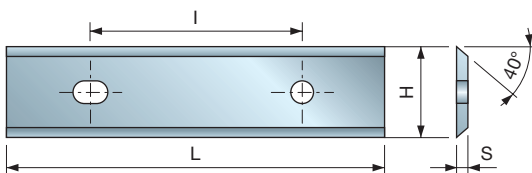
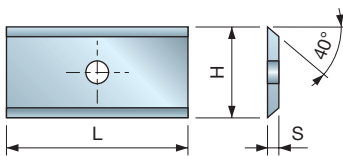
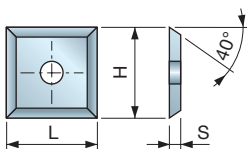
12 mm Disposable knives made by H00XF  
Freud's Carbide with 35° relief angle.  
• Especially indicated to work melamine  
chipboard panels, MDF, HDF wood  
composites and plastic materials.

**CG20M**

**HW - 35° Disposable knives**



L mm	H mm	S mm	I mm	Freud Code	Art. No.
9,6	12	1,5	-	CG20MMA310	F03FH03354
12	12	1,5	-	CG20MBA310	F03FH02923
15	12	1,5	-	CG20MCA310	F03FH03355
20	12	1,5	-	CG20MDA310	F03FH02924
30	12	1,5	14	CG20MEA310	F03FH02925
40	12	1,5	26	CG20MLA310	F03FH03356
50	12	1,5	26	CG20MFA310	F03FH02926
60	12	1,5	26	CG20MGA310	F03FH03357



**HW  
K30S**

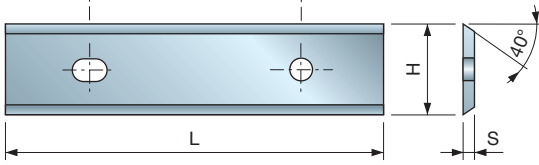
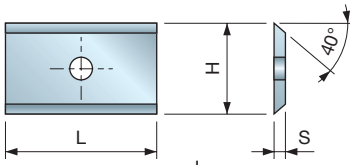
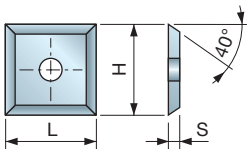
12 mm Disposable knives made by K30S  
Freud's Carbide with 40° relief angle.  
• Particularly indicated for natural softwood and  
hardwood.

**CG06M**

**HW - 40° Disposable knives**



L mm	H mm	S mm	I mm	Freud Code	Art. No.
7,6	12	1,5	-	CG06MHA310	F03FH02897
8,6	12	1,5	-	CG06MJA310	F03FH02899
9,6	12	1,5	-	CG06MIA310	F03FH02898
11	12	1,5	-	CG06MUE310	F03FC23822
11,6	12	1,5	-	CG06MLA310	F03FH02901
12	12	1,5	-	CG06MAA310	F03FH02889
12,6	12	1,5	-	CG06MLB310	F03FC23819
13,6	12	1,5	-	CG06MOZ310	F03FC23820
14,6	12	1,5	-	CG06MBA310	F03FH02890
15,6	12	1,5	-	CG06MGB310	F03FH02896
16,3	12	1,5	-	CG06MJD310	F03FC23817
16,6	12	1,5	-	CG06MJB310	F03FC23815
18	12	1,5	-	CG06MUF310	F03FC23823
20	12	1,5	-	CG06MCA310	F03FH02891
24	12	1,5	-	CG06MKA310	F03FH02900
25,8	12	1,5	14	CG06MJC310	F03FC23816
26,6	12	1,5	14	CG06MKB310	F03FC23818
30	12	1,5	14	CG06MDA310	F03FH02892
40	12	1,5	26	CG06MEA310	F03FH02893
50	12	1,5	26	CG06MFA310	F03FH02894
60	12	1,5	26	CG06MGA310	F03FH02895



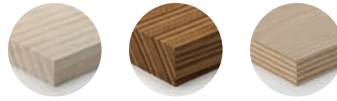
**HW  
X10TS**

12 mm Disposable knives made by X10TS  
Freud's Carbide with 40° relief angle.

- Suitable for natural softwood, hardwood and plywood.
- Not suitable for chipboard and laminates.

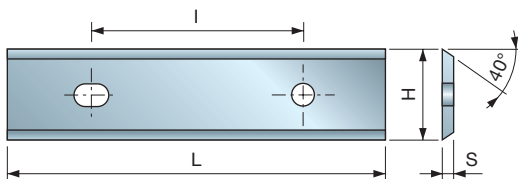
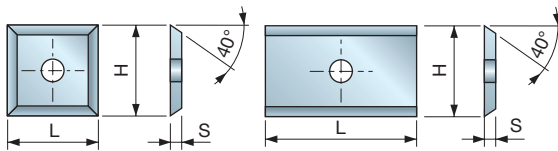
**CG66M**

**HW - 40° Disposable knives**



Softwood    Hardwood    Plywood

L mm	H mm	S mm	I mm	Freud Code	Art. No.
7,6	12	1,5	-	CG66MHA310	F03FH02969
8,6	12	1,5	-	CG66MJA310	F03FH02971
9,6	12	1,5	-	CG66MIA310	F03FH02970
11	12	1,5	-	CG66MUE310	F03FH03814
11,6	12	1,5	-	CG66MLA310	F03FH02973
12	12	1,5	-	CG66MAA310	F03FH02961
13	12	1,5	-	CG66MLB310	F03FH03815
13,6	12	1,5	-	CG66MOZ310	F03FC23922
14,6	12	1,5	-	CG66MBA310	F03FH02962
15,6	12	1,5	-	CG66MGB310	F03FH02968
16,3	12	1,5	-	CG66MJD310	F03FH03816
17	12	1,5	-	CG66MJB310	F03FH03817
18	12	1,5	-	CG66MJG310	F03FH03818
18	12	1,5	-	CG66MUF310	F03FH03819
19	12	1,5	-	CG66MJE310	F03FH03820
20	12	1,5	-	CG66MCA310	F03FH02963
21	12	1,5	-	CG66MJF310	F03FH03821
22	12	1,5	-	CG66MTA310	F03FH03822
24	12	1,5	-	CG66MKA310	F03FH02972
27	12	1,5	14	CG66MKB310	F03FH03823
30	12	1,5	14	CG66MDA310	F03FH02964
40	12	1,5	26	CG66MEA310	F03FH02965
50	12	1,5	26	CG66MFA310	F03FH02966
60	12	1,5	26	CG66MGA310	F03FH02967



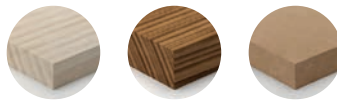
**HW  
H01K**

12 mm Disposable knives made by H01K  
Freud's Carbide with 40° relief angle.

- Particularly indicated for hardwood and abrasive wood.
- Not ideal for chipboard.

**CG76M**

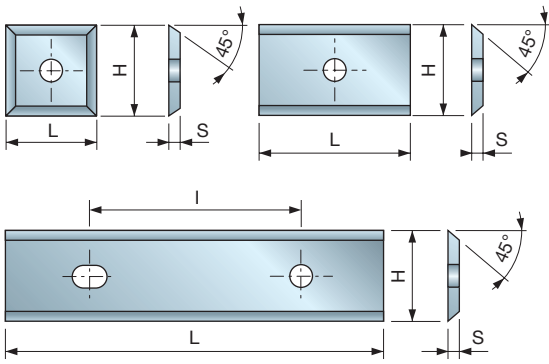
**HW - 40° Disposable knives**



Softwood    Hardwood    MDF

L mm	H mm	S mm	I mm	Freud Code	Art. No.
12	12	1,5	-	CG76MAA310	F03FH02975
14,6	12	1,5	-	CG76MBA310	F03FH02976
20	12	1,5	-	CG76MCA310	F03FH02977
24	12	1,5	-	CG76MKA310	F03FH02982
30	12	1,5	14	CG76MDA310	F03FH02978
40	12	1,5	26	CG76MEA310	F03FH02979
50	12	1,5	26	CG76MFA310	F03FH02980
60	12	1,5	26	CG76MGA310	F03FH02981



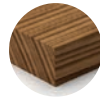


## CG62M

## HW - 45° Disposable knives



Softwood



Hardwood



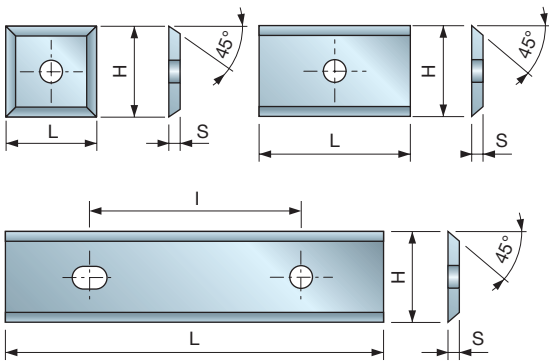
Plywood

### HW X10TS

12 mm Disposable knives made by X10TS  
Freud's Carbide with 45° relief angle.

- Suitable for natural softwood, hardwood and plywood.
- Not suitable for chipboard and laminates.

L mm	H mm	S mm	I mm	Freud Code	Art. No.
7,6	12	1,5	-	CG62MHA310	F03FH02956
8,6	12	1,5	-	CG62MJA310	F03FH02958
9,6	12	1,5	-	CG62MIA310	F03FH02957
11,6	12	1,5	-	CG62MLA310	F03FH02960
12	12	1,5	-	CG62MAA310	F03FH02948
13,6	12	1,5	-	CG62MOZ310	F03FC23921
14,6	12	1,5	-	CG62MBA310	F03FH02949
15,6	12	1,5	-	CG62MGB310	F03FH02955
20	12	1,5	-	CG62MCA310	F03FH02950
24	12	1,5	-	CG62MKA310	F03FH02959
30	12	1,5	14	CG62MDA310	F03FH02951
40	12	1,5	26	CG62MEA310	F03FH02952
50	12	1,5	26	CG62MFA310	F03FH02953
60	12	1,5	26	CG62MGA310	F03FH02954

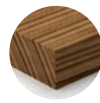


## CG22M

## HW - 45° Disposable knives



Softwood



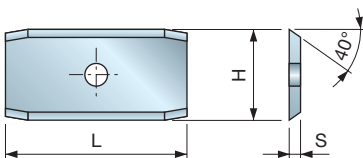
Hardwood

### HW K30S

12 mm Disposable knives made by K30S  
Freud's Carbide with 45° relief angle.

- Particularly indicated for natural softwood.

L mm	H mm	S mm	I mm	Freud Code	Art. No.
7,6	12	1,5	-	CG22MHA310	F03FH02933
9,6	12	1,5	-	CG22MIA310	F03FH02934
14,6	12	1,5	-	CG22MBA310	F03FH02927
20	12	1,5	-	CG22MCA310	F03FH02928
25	12	1,5	14	CG22MVB310	F03FH02935
30	12	1,5	14	CG22MDA310	F03FH02929
40	12	1,5	26	CG22MEA310	F03FH02930
50	12	1,5	26	CG22MFA310	F03FH02931
60	12	1,5	26	CG22MGA310	F03FH02932

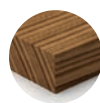


## CG17M

## HW - 40° Disposable knives with end bevels



Softwood



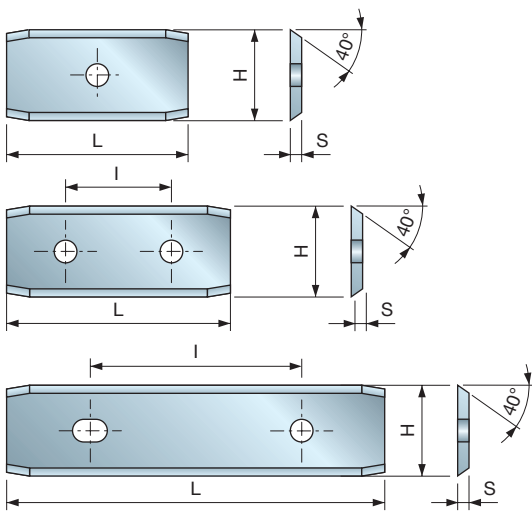
Hardwood

### HW K10S

12 mm Disposable knives made by K10S  
Freud's Carbide with 40° relief angle and bevel  
on both cutting edges.

- Suitable for hardwood with particularly sandy  
and abrasive surfaces (exotic woods).

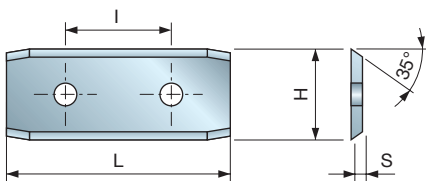
L mm	H mm	S mm	Freud Code	Art. No.
24	12	1,5	CG17MBC310	F03FH02918



**HW  
K30S**

12 mm Disposable knives made by K30S Freud's Carbide with 40° relief angle and bevel on both cutting edges.

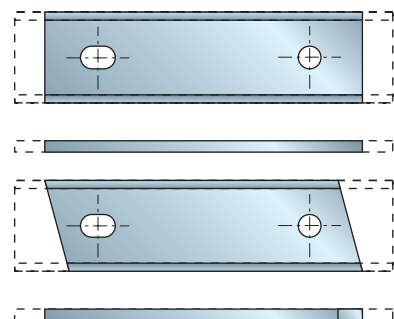
- Particularly indicated for natural softwood and hardwood.



**HW  
H00S**

12mm Disposable knives made by H00S Freud's Carbide with 35° relief angle and bevel on both cutting edges.

- Ideal for universal use.



Disposable knives with 2 cutting edges without side clearance.

- Minimum order quantity: 1 set of 10 knives of the same type.
- The codes are just a guideline and should be used for ordering purposes only.
- In case of orders specify type of Carbide.

**CG18M**

**HW - 40° Disposable knives with end bevels**

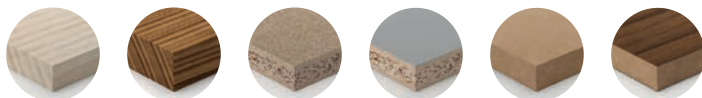


Softwood    Hardwood

L mm	H mm	S mm	I mm	Freud Code	Art. No.
24	12	1,5	-	CG18MBC310	F03FH02919
30	12	1,5	14	CG18MDC310	F03FH02920
50	12	1,5	26	CG18MFC310	F03FH02921

**CG19M**

**HW - 35° Disposable knives with end bevels**



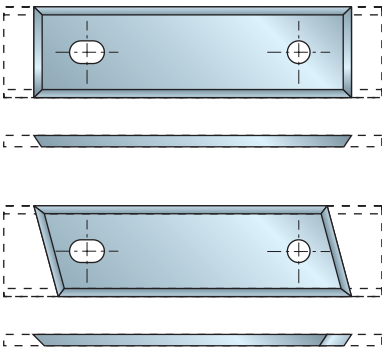
Softwood    Hardwood    Chipboard    Laminated Chipboard    MDF    Laminated MDF

L mm	H mm	S mm	I mm	Freud Code	Art. No.
30	12	1,5	14	CG19M35EC310	F03FH02922

**CG400**

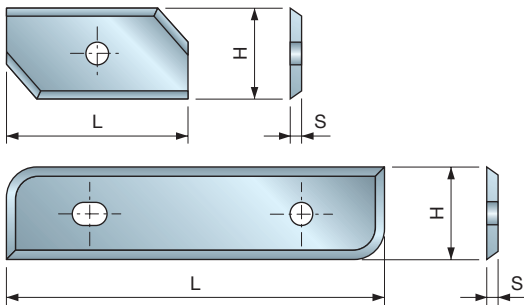
**HW - Customised knives**

L mm	H mm	S mm	Freud Code	Art. No.
12	12	1,5	CG400 BA3	
15	12	1,5	CG400 CA3	
20	12	1,5	CG400 DA3	
30	12	1,5	CG400 EA3	
50	12	1,5	CG400 FA3	
60	12	1,5	CG400 GA3	
80	13	2,2	CG400 HA3	



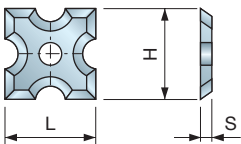
Disposable knives with 2 cutting edges with side clearance.

- Minimum order quantity: 1 set of 10 knives of the same type.
- The codes are just a guideline and should be used for ordering purposes only.
- In case of orders specify type of Carbide.



Shaped knives with 2 cutting edges.

- Minimum order quantity: 1 set of 10 knives of the same type.
- The codes are just a guideline and should be used for ordering purposes only.
- In case of orders specify type of Carbide.



Shaped knives with 4 cutting edges.

- Minimum order quantity: 1 set of 10 knives of the same type.
- The codes are just a guideline and should be used for ordering purposes only.

## CG401

## HW - Customised knives

L mm	H mm	S mm	Freud Code	Art. No.
12	12	1,5	CG401 BA3	
15	12	1,5	CG401 CA3	
20	12	1,5	CG401 DA3	
30	12	1,5	CG401 EA3	
50	12	1,5	CG401 FA3	
60	12	1,5	CG401 GA3	
80	13	2,2	CG401 HA3	

## CG402

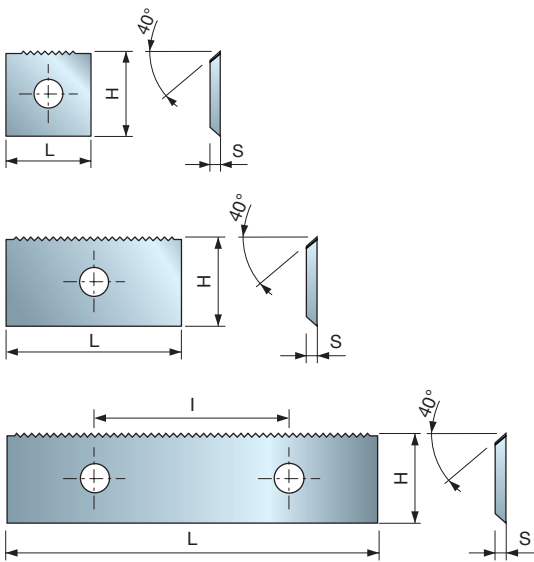
## HW - Customised profiled knives

L mm	H mm	S mm	Freud Code	Art. No.
12	12	1,5	CG402 BA3	
15	12	1,5	CG402 CA3	
20	12	1,5	CG402 DA3	
30	12	1,5	CG402 EA3	
50	12	1,5	CG402 FA3	
60	12	1,5	CG402 GA3	

## CG403

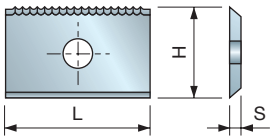
## HW - Customised profiled knives

L mm	H mm	S mm	Freud Code	Art. No.
12	12	1,5	CG403 BA3	



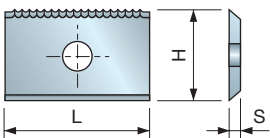
Disposable knives with Split Edge profile

- Suitable for cutterhead with dedicated knife seat.
- Particularly indicated for natural softwood, hardwood and plywood.
- The profiled knives have a Split-Edge profile only on one side (Z1 not reversible) and the height is 12 mm.



Customised knives with Split-Edge design.

- Suitable for original Split edge tools.
- Minimum order quantity: 1 set of 10 knives of the same type.
- The codes are just a guideline and should be used for ordering purpose only.

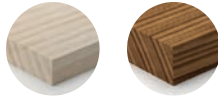


Knives with 1 cutting edge, Split-Edge design.

- Suitable for no-Split edge tools.
- Minimum order quantity: 1 set of 10 knives of the same type.
- The codes are just a guideline and should be used for ordering purpose only.

## CGSEM

## HW - Split-Edge knives



Softwood Hardwood

L mm	H mm	S mm	Freud Code	Art. No.
7,6	12	1,5	CGSEMHA310	F03FH03824
8,6	12	1,5	CGSEMJA310	F03FH03825
9,6	12	1,5	CGSEMIA310	F03FH03826
10,6	12	1,5	CGSEMUE310	F03FH03827
11,6	12	1,5	CGSEMLA310	F03FH03828
12	12	1,5	CGSEMAA310	F03FH03829
12,6	12	1,5	CGSEMIB310	F03FH03830
13,6	12	1,5	CGSEM0Z310	F03FH03831
14,6	12	1,5	CGSEMBA310	F03FH03832
15,6	12	1,5	CGSEMGB310	F03FH03833
16,3	12	1,5	CGSEMJD310	F03FH03834
16,6	12	1,5	CGSEMJB310	F03FH03835
17,6	12	1,5	CGSEMJG310	F03FH03836
17,8	12	1,5	CGSEMUF310	F03FH03837
18,6	12	1,5	CGSEMJE310	F03FH03838
20	12	1,5	CGSEMCA310	F03FH03839
20,6	12	1,5	CGSEMJF310	F03FH03840
21,6	12	1,5	CGSEMTA310	F03FH03841
24	12	1,5	CGSEMKA310	F03FH03842
26,6	12	1,5	CGSEMKB310	F03FH03844
30	12	1,5	CGSEMDA310	F03FH03845
40	12	1,5	CGSEMEA310	F03FH03846
50	12	1,5	CGSEMFA310	F03FH03847
60	12	1,5	CGSEMGA310	F03FH03848

## CG501

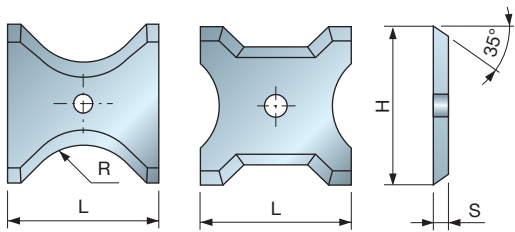
## HW - Customised Split-Edge knives

L mm	H mm	S mm	I mm	Freud Code	Art. No.
12	12	1,5	-	CG501 BA3	
15	12	1,5	-	CG501 CA3	
20	12	1,5	-	CG501 DA3	
30	12	1,5	14	CG501 EA3	
50	12	1,5	26	CG501 FA3	
60	12	1,5	26	CG501 GA3	

## CG502

## HW - Customised Split-Edge knives

L mm	H mm	S mm	I mm	Freud Code	Art. No.
12	12,33	1,5	-	CG502 BA3	
15	12,33	1,5	-	CG502 CA3	
20	12,33	1,5	-	CG502 DA3	
30	12,33	1,5	14	CG502 EA3	
50	12,33	1,5	26	CG502 FA3	
60	12,33	1,5	26	CG502 GA3	



## CG50M

## HW - 35° Disposable knives for TG35M



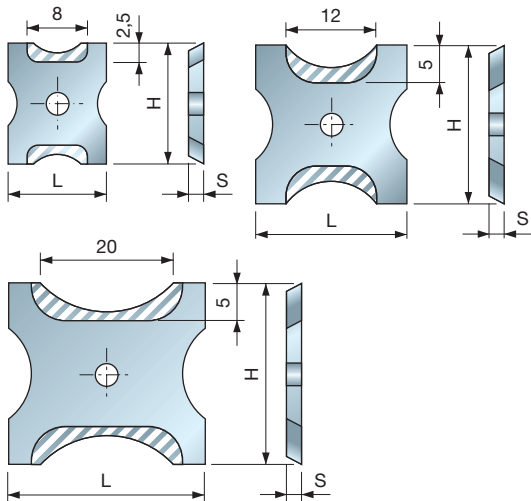
Softwood    Hardwood    Chipboard    Laminated Chipboard    MDF    Laminated MDF    Plywood

### HW H00S

Disposable knives made of H00S Freud's Carbide with 35° relief angle.

- Suitable for TG35M tools set.
- Ideal for universal use.

L mm	H mm	S mm	R mm	Freud Code	Art. No.
13	16	2	45°	CG50MCE305	F03FC23920
13	16	2	1	CG50MCD305	F03FC23919
13	16	2	2	CG50MCA305	F03FC23916
13	16	2	3	CG50MCB305	F03FC23917
13	16	2	4	CG50MCC305	F03FC23918
20	21	2	45°	CG50MAE305	F03FC23910
20	21	2	5	CG50MAA305	F03FC23906
20	21	2	6	CG50MAB305	F03FC23907
20	21	2	7	CG50MAC305	F03FC23908
20	21	2	8	CG50MAD305	F03FC23909
26	24	2	45°	CG50MBE305	F03FC23915
26	24	2	9	CG50MBA305	F03FC23911
26	24	2	10	CG50MBB305	F03FC23912
26	24	2	11	CG50MBC305	F03FC23913
26	24	2	12	CG50MBD305	F03FC23914

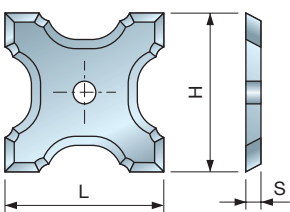


Shaped knives with 2 cutting edges.

- Minimum order quantity: 1 set of 10 knives of the same type.
- The codes are just a guideline and should be used for ordering purposes only.

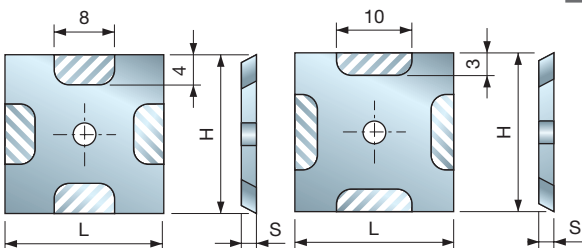
## CG404 HW - Customised profiled knives

L mm	H mm	S mm	Freud Code	Art. No.
13	16	2	CG404 ZA3	
20	21	2	CG404 ZB3	
26	24	2	CG404 ZC3	



## CG405 HW - Customised profiled knives

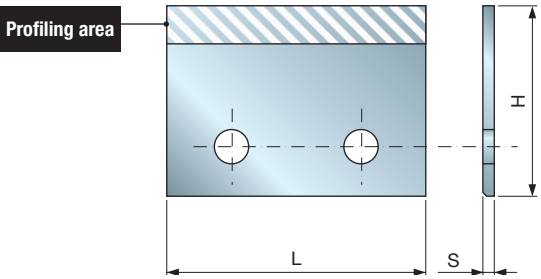
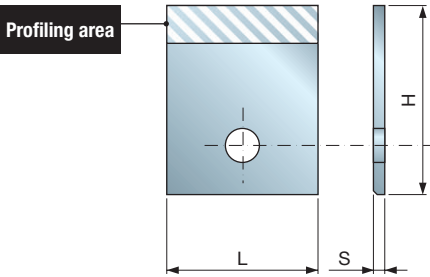
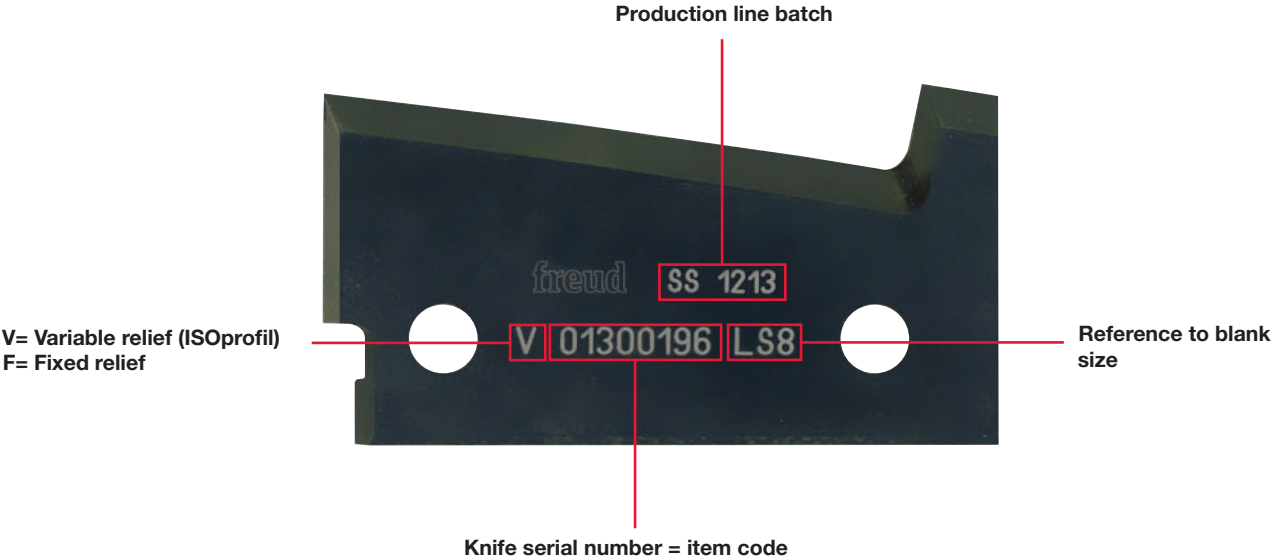
L mm	H mm	S mm	Freud Code	Art. No.
21	21	2	CG405 DA3	



Shaped knives with 4 cutting edges.

- Minimum order quantity: 1 set of 10 knives of the same type.
- The codes are just a guideline and should be used for ordering purposes only.

# Meaning of the codes

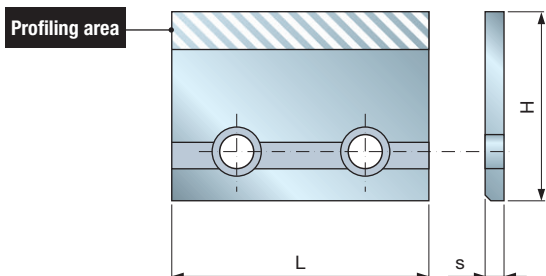
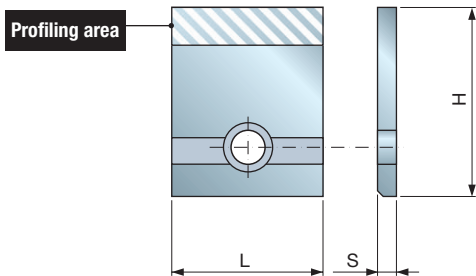


Profiled knives with 2 mm thickness.

The codes are just a guideline and should be used for ordering purpose only.

## CK01 HW - Knives 2 mm thickness - special profiling

L mm	H mm	S mm	Freud Code	Art. No.
20	20	2	CK01 AA3	
30	20	2	CK01 CA3	
40	20	2	CK01 EA3	
20	25	2	CK01 AB3	
25	25	2	CK01 BB3	
30	25	2	CK01 CB3	
35	25	2	CK01 DB3	
40	25	2	CK01 EB3	
50	25	2	CK01 GB3	
20	30	2	CK01 AC3	
25	30	2	CK01 BC3	
30	30	2	CK01 CC3	
35	30	2	CK01 DC3	
40	30	2	CK01 EC3	
50	30	2	CK01 GC3	
80	30	2	CK01 OC3	
25	35	2	CK01 BD3	
30	35	2	CK01 CD3	
35	35	2	CK01 DD3	
40	35	2	CK01 ED3	
50	35	2	CK01 GD3	
80	35	2	CK01 OD3	
25	40	2	CK01 BE3	
35	40	2	CK01 DE3	
40	40	2	CK01 EE3	
30	45	2	CK01 CF3	
35	50	2	CK01 HG3	



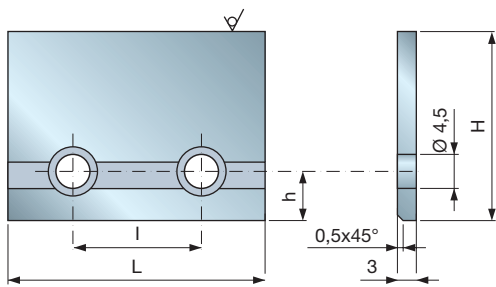
Performance System profiled knives with 3 mm thickness.

The codes are just a guideline and should be used for ordering purpose only.

## CK02

## HW - Performance knives 3 mm thickness - special profiling

L mm	H mm	S mm		Freud Code	Art. No.
65	20	3	HU7	CK02 LA3	
65	20	3	HU8	CK02 LA3	
20	25	3	LH7	CK02 AB3	
20	25	3	LH8	CK02 AB3	
25	25	3	LL7	CK02 BB3	
25	25	3	LL8	CK02 BB3	
30	25	3	LN7	CK02 CB3	
30	25	3	LN8	CK02 CB3	
35	25	3	LP7	CK02 DB3	
35	25	3	LP8	CK02 DB3	
45	25	3	LS7	CK02 FB3	
45	25	3	LS8	CK02 FB3	
55	25	3	LT7	CK02 HB3	
55	25	3	LT8	CK02 HB3	
70	25	3	LV7	CK02 MB3	
70	25	3	LV8	CK02 MB3	
21	30	3	NA7	CK02 GC3	
21	30	3	NA8	CK02 GC3	
25	30	3	NL7	CK02 BC3	
25	30	3	NL8	CK02 BC3	
35	30	3	NP7	CK02 DC3	
35	30	3	NP8	CK02 DC3	
45	30	3	NS7	CK02 FC3	
45	30	3	NS8	CK02 FC3	
55	30	3	NT7	CK02 HC3	
55	30	3	NT8	CK02 HC3	
80	30	3	NZ7	CK02 OC3	
80	30	3	NZ8	CK02 OC3	
14,4	35	3	PG8	CK02 ID3	
21	35	3	PA7	CK02 GD3	
21	35	3	PA8	CK02 GD3	
25	35	3	PL7	CK02 BD3	
25	35	3	PL8	CK02 BD3	
30	35	3	PN7	CK02 CD3	
30	35	3	PN8	CK02 CD3	
35	35	3	PP7	CK02 DD3	
35	35	3	PP8	CK02 DD3	
45	35	3	PS7	CK02 FD3	
45	35	3	PS8	CK02 FD3	
55	35	3	PT7	CK02 HD3	
55	35	3	PT8	CK02 HD3	
80	35	3	PZ7	CK02 OD3	
80	35	3	PZ8	CK02 OD3	
25	40	3	RL7	CK02 BE3	
25	40	3	RL8	CK02 BE3	
30	40	3	RN7	CK02 CE3	
30	40	3	RN8	CK02 CE3	
40	40	3	RR7	CK02 EE3	
40	40	3	RR8	CK02 EE3	
55	40	3	RT7	CK02 HE3	
55	40	3	RT8	CK02 HE3	



**0317M**

**HW - Blanks for profiling  
3 mm thickness**



Chipboard



Laminated  
Chipboard



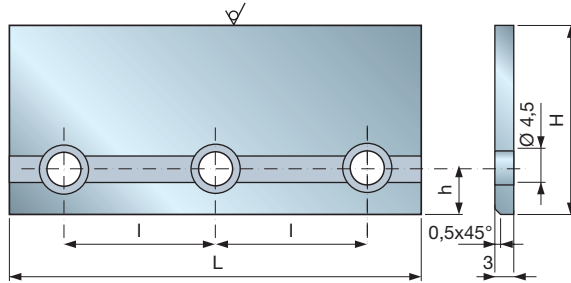
MDF



Laminated  
MDF



Plywood



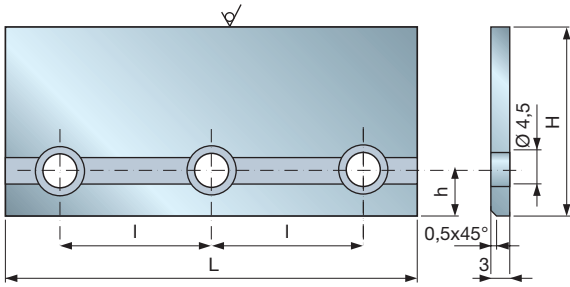
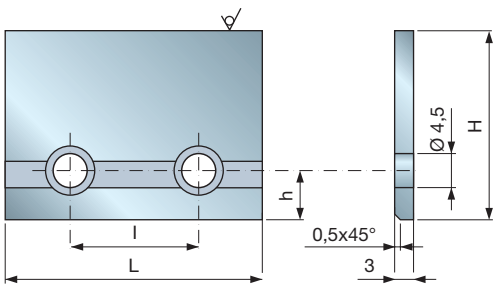
**HW  
H00S**

Standard blanks made by H00S Freud's  
standard Carbide with 3 mm thickness.

- Suitable for hardwood and wood composites.

L mm	H mm	S mm	NL	I mm	Freud Code	Art. No.
65	20	3	-	-	<b>0317M HU3</b>	F03FH00685
20	25	3	1	-	<b>0317M LH3A</b>	F03FH00686
25	25	3	1	-	<b>0317M LL3A</b>	F03FH00687
30	25	3	1	-	<b>0317M LN3A</b>	F03FH02515
35	25	3	1	-	<b>0317M LP3A</b>	F03FH00688
45	25	3	2	28	<b>0317M LS3A</b>	F03FH00689
55	25	3	3	20,5	<b>0317M LT3A</b>	F03FH00690
70	25	3	2	41	<b>0317M LV3A</b>	F03FH00691
21	30	3	1	-	<b>0317M21030A</b>	F03FH00708
25	30	3	1	-	<b>0317M NL3A</b>	F03FH00692
35	30	3	1	-	<b>0317M NP3A</b>	F03FH00693
45	30	3	2	28	<b>0317M NS3A</b>	F03FH00694
55	30	3	2	41	<b>0317M NT3A</b>	F03FH00695
80	30	3	3	33	<b>0317M NZ3A</b>	F03FH00696
21	35	3	1	-	<b>0317M21035A</b>	F03FH00709
25	35	3	1	-	<b>0317M PL3A</b>	F03FH00697
30	35	3	1	-	<b>0317M PN3A</b>	F03FH00698
35	35	3	1	-	<b>0317M PP3A</b>	F03FH00699
45	35	3	2	28	<b>0317M PS3A</b>	F03FH00700
55	35	3	3	20,5	<b>0317M PT3A</b>	F03FH00701
80	35	3	3	33	<b>0317M PZ3A</b>	F03FH00702
25	40	3	1	-	<b>0317M RL3A</b>	F03FH00703
30	40	3	1	-	<b>0317M RN3A</b>	F03FH00704
40	40	3	-	-	<b>0317M RR3</b>	F03FH00705
40	40	3	1	-	<b>0317M RR3A</b>	F03FH00706
55	40	3	3	20,5	<b>0317M RT3A</b>	F03FH00707





HW  
**X10TS**

Standard blanks made by X10TS Freud's standard Carbide with 3 mm thickness.

- Suitable for natural softwood and hardwood.

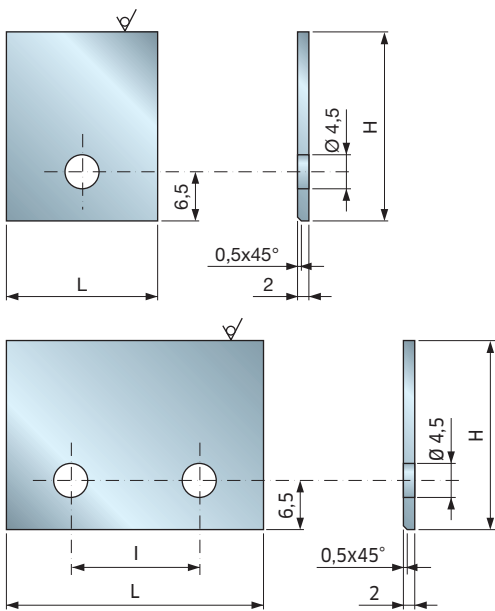
## 0318M

## HW - Blanks for profiling 3 mm thickness



Softwood    Hardwood

L mm	H mm	S mm	NL	I mm	Freud Code	Art. No.
65	20	3	2	28	0318M HU3	F03FH00710
20	25	3	1	-	0318M LH3A	F03FH00711
25	25	3	1	-	0318M LL3A	F03FH00712
30	25	3	1	-	0318M LN3A	F03FH02514
35	25	3	1	-	0318M LP3A	F03FH00713
45	25	3	2	28	0318M LS3A	F03FH00714
55	25	3	3	20,5	0318M LT3A	F03FH00715
70	25	3	2	41	0318M LV3A	F03FH00716
21	30	3	1	-	0318M21030A	F03FH00734
25	30	3	1	-	0318M NL3A	F03FH00717
35	30	3	1	-	0318M NP3A	F03FH00718
45	30	3	2	28	0318M NS3A	F03FH00719
55	30	3	3	20,5	0318M NT3A	F03FH00720
80	30	3	3	33	0318M NZ3A	F03FH00721
14,4	35	3	1	-	0318M PG3A	F03FH00722
21	35	3	1	-	0318M21035A	F03FH00735
25	35	3	1	-	0318M PL3A	F03FH00723
30	35	3	1	-	0318M PN3A	F03FH00724
35	35	3	1	-	0318M PP3A	F03FH00725
45	35	3	2	28	0318M PS3A	F03FH00726
55	35	3	3	20,5	0318M PT3A	F03FH00727
80	35	3	3	33	0318M PZ3A	F03FH00728
25	40	3	1	-	0318M RL3A	F03FH00729
30	40	3	1	-	0318M RN3A	F03FH00730
40	40	3	1	-	0318M RR3	F03FH00731
40	40	3	1	-	0318M RR3A	F03FH00732
55	40	3	3	20,5	0318M RT3A	F03FH00733



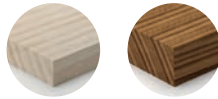
**HW**  
**X10TS**

Standard blanks made by X10TS Freud's standard Carbide with 2 mm thickness.

- Suitable for natural softwood and hardwood.

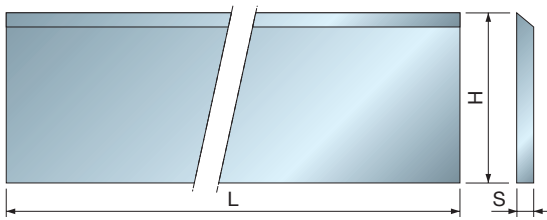
**0339M**

**HW - Blanks for profiling**  
**2 mm thickness - mirror finished**



**Softwood    Hardwood**

L mm	H mm	S mm	NL	I mm	Freud Code	Art. No.
15	15,3	2	1	-	0339M3WW2W	F03FH02551
16	15,3	2	1	-	0339M3XW2W	F03FH02537
15	20,3	2	1	-	0339M3WA2W	F03FH02548
16	20,3	2	1	-	0339M3XA2W	F03FH02552
20	20,3	2	1	-	0339M3AA2W	F03FH02560
25	20,3	2	1	-	0339M3BA2W	F03FH02557
30	20,3	2	1	-	0339M3DA2W	F03FH02538
30	20,3	2	2	14	0339M3DA2X	F03FH02587
35	20,3	2	1	-	0339M3FA2W	F03FH02559
35	20,3	2	2	14	0339M3FA2X	F03FH02585
40	20,3	2	2	26	0339M3GA2Y	F03FH02565
50	20,3	2	2	26	0339M3KA2Y	F03FH02563
60	20,3	2	2	26	0339M3LA2Y	F03FH02598
80	20,3	2	2	26	0339M3OA2Y	F03FH02602
15	25,3	2	1	-	0339M3WB2W	F03FH02549
16	25,3	2	1	-	0339M3XB2W	F03FH02536
20	25,3	2	1	-	0339M3AB2W	F03FH02571
25	25,3	2	1	-	0339M3BB2W	F03FH02572
30	25,3	2	1	-	0339M3DB2W	F03FH02573
30	25,3	2	2	14	0339M3DB2X	F03FH02574
35	25,3	2	1	-	0339M3FB2W	F03FH02541
35	25,3	2	2	14	0339M3FB2X	F03FH02590
40	25,3	2	2	26	0339M3GB2Y	F03FH02594
50	25,3	2	2	26	0339M3KB2Y	F03FH02597
60	25,3	2	2	26	0339M3LB2Y	F03FH02584
80	25,3	2	2	26	0339M3OB2Y	F03FH02544
15	30,3	2	1	-	0339M3WD2W	F03FH02550
16	30,3	2	1	-	0339M3XD2W	F03FH02553
20	30,3	2	1	-	0339M3AD2W	F03FH02579
25	30,3	2	1	-	0339M3BD2W	F03FH02580
30	30,3	2	1	-	0339M3DD2W	F03FH02539
30	30,3	2	2	14	0339M3DD2X	F03FH02581
35	30,3	2	1	-	0339M3FD2W	F03FH02591
35	30,3	2	2	14	0339M3FD2X	F03FH02575
40	30,3	2	2	26	0339M3GD2Y	F03FH02562
50	30,3	2	2	26	0339M3KD2Y	F03FH02564
60	30,3	2	2	26	0339M3LD2Y	F03FH02543
80	30,3	2	2	26	0339M3OD2Y	F03FH02569
20	35,3	2	1	-	0339M3AF2W	F03FH02554
25	35,3	2	1	-	0339M3BF2W	F03FH02561
30	35,3	2	1	-	0339M3DF2W	F03FH02540
30	35,3	2	2	14	0339M3DF2X	F03FH02582
35	35,3	2	1	-	0339M3FF2W	F03FH02583
35	35,3	2	2	14	0339M3FF2X	F03FH02576
40	35,3	2	2	26	0339M3GF2Y	F03FH02566
50	35,3	2	2	26	0339M3KF2Y	F03FH02577
60	35,3	2	2	26	0339M3LF2Y	F03FH02599
80	35,3	2	2	26	0339M3OF2Y	F03FH02601
20	40,3	2	1	-	0339M3AG2W	F03FH02555
25	40,3	2	1	-	0339M3BG2W	F03FH02586
30	40,3	2	1	-	0339M3DG2W	F03FH02588
30	40,3	2	2	14	0339M3DG2X	F03FH02558
35	40,3	2	1	-	0339M3FG2W	F03FH02592
35	40,3	2	2	14	0339M3FG2X	F03FH02593
40	40,3	2	2	26	0339M3GG2Y	F03FH02567
50	40,3	2	2	26	0339M3KG2Y	F03FH02542
60	40,3	2	2	26	0339M3LG2Y	F03FH02568
80	40,3	2	2	26	0339M3OG2Y	F03FH02545
30	45,3	2	1	-	0339M3DI2W	F03FH02589
40	45,3	2	2	26	0339M3GI2Y	F03FH02595
35	50,3	2	1	-	0339M3FK2W	F03FH02570
40	50,3	2	2	26	0339M3GK2Y	F03FH02596



## CT01M

### 18%W HSS knives Standard dimensions

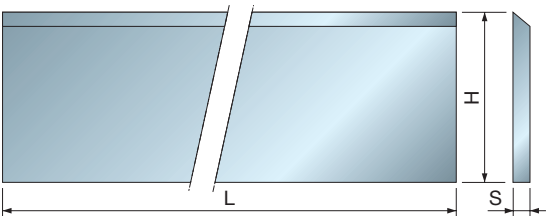


Softwood

Standard planerhead knives with 18% HSS.

- Box contains 2 pieces with same weight.
- Per balancing reasons fit same box knives in opposite tools seats.

L mm	H mm	S mm	Freud Code	Art. No.
60	30	3	CT01MAA202	
80	30	3	CT01MBA202	
100	30	3	CT01MDA202	
120	30	3	CT01MGA202	
130	30	3	CT01MHA202	
140	30	3	CT01MIA202	
150	30	3	CT01MLA202	
160	30	3	CT01MMA202	
180	30	3	CT01MOA202	
200	30	3	CT01MPA202	
230	30	3	CT01MRA202	
410	30	3	CT01MTB202	



## CT010S

### 18%W HSS knives Special dimensions



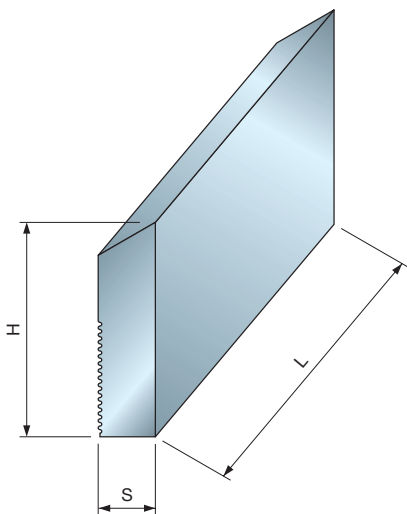
Softwood

Special planerhead knives with 18% HSS.

- Box contains 2 pieces with same weight.
- Per balancing reasons fit same box knives in opposite tools seats.

The codes are just a guideline and should be used for ordering purpose only.

L mm	H mm	S mm	Freud Code	Art. No.
<59	30	3	CT010S AA2	
61-79	30	3	CT010S BA2	
81-99	30	3	CT010S CA2	
101-119	30	3	CT010S DA2	
121-129	30	3	CT010S EA2	
131-149	30	3	CT010S FA2	
151-159	30	3	CT010S GA2	
161-179	30	3	CT010S HA2	
181-199	30	3	CT010S IA2	
201-209	30	3	CT010S LA2	
211-229	30	3	CT010S MA2	



## CZ01M

### HSS serrated back knives

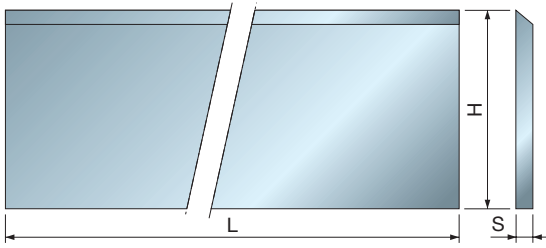
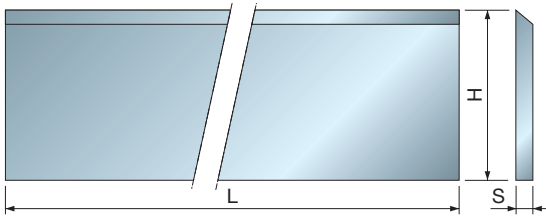


Softwood

Profiling HSS knives with serrated surface.

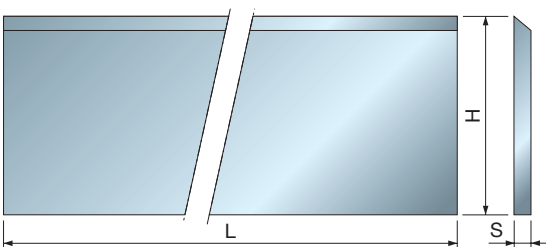
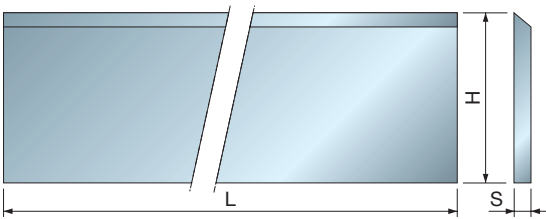
- Suitable for Freud **TPCZM** planners.
- Suitable for cutting all softwood and hardwood.

L mm	H mm	S mm	Freud Code	Art. No.
60	50	8	CZ01MDB202	F03FA21895
80	50	8	CZ01MDC202	F03FA21896
100	50	8	CZ01MDD202	F03FA21897
150	50	8	CZ01MDF202	F03FA21898
60	60	8	CZ01MHB202	F03FA21899
80	60	8	CZ01MHC202	F03FA21900
100	60	8	CZ01MHD202	F03FA21901
150	60	8	CZ01MHF202	F03FA21902
60	70	8	CZ01MNB202	F03FA21903
80	70	8	CZ01MNC202	F03FA21904
100	70	8	CZ01MND202	F03FA21905
150	70	8	CZ01MNF202	F03FA21906



Standard planerhead knives with 18% HSS.

- Box contains 2 pieces with same weight.
- Per balancing reasons fit same box knives in opposite tools seats.



Special planerhead knives with 18% HSS.

- Box contains 2 pieces with same weight.
- Per balancing reasons fit same box knives in opposite tools seats.

The codes are just a guideline and should be used for ordering purpose only.

## CP01M

### 18%W HSS planing knives Standard dimensions



Softwood

L mm	H mm	S mm	Freud Code	Art. No.
250	30	3	CP01MAB202	F03FA18136
300	30	3	CP01MCB202	F03FA18139
350	30	3	CP01MDB202	F03FA18141
400	30	3	CP01MEB202	F03FA18143
500	30	3	CP01MGB202	F03FA18147
510	30	3	CP01MHB202	F03FA18149
530	30	3	CP01MIB402	F03FA18151
600	30	3	CP01MKB202	F03FA18154
610	30	3	CP01MLB202	F03FA18156
630	30	3	CP01MMB202	F03FA18158
640	30	3	CP01MNB402	F03FA18160
710	30	3	CP01MOB202	F03FA18162
1010	30	3	CP01MTB202	F03FA18164

L mm	H mm	S mm	Freud Code	Art. No.
280	35	3	CP01MBA202	F03FA18137
300	35	3	CP01MCA202	F03FA18138
350	35	3	CP01MDA202	F03FA18140
400	35	3	CP01MEA202	F03FA18142
410	35	3	CP01MFA202	F03FA18144
450	35	3	CP01MFB202	F03FA18145
500	35	3	CP01MGA202	F03FA18146
510	35	3	CP01MHA202	F03FA18148
520	35	3	CP01MJA202	F03FA18152
530	35	3	CP01MIA202	F03FA18150
600	35	3	CP01MKA202	F03FA18153
610	35	3	CP01MLA202	F03FA18155
630	35	3	CP01MMA202	F03FA18157
640	35	3	CP01MNA202	F03FA18159
710	35	3	CP01MOA202	F03FA18161
1010	35	3	CP01MTA202	F03FA18163

## CP010S

### 18%W HSS planing knives Special dimensions

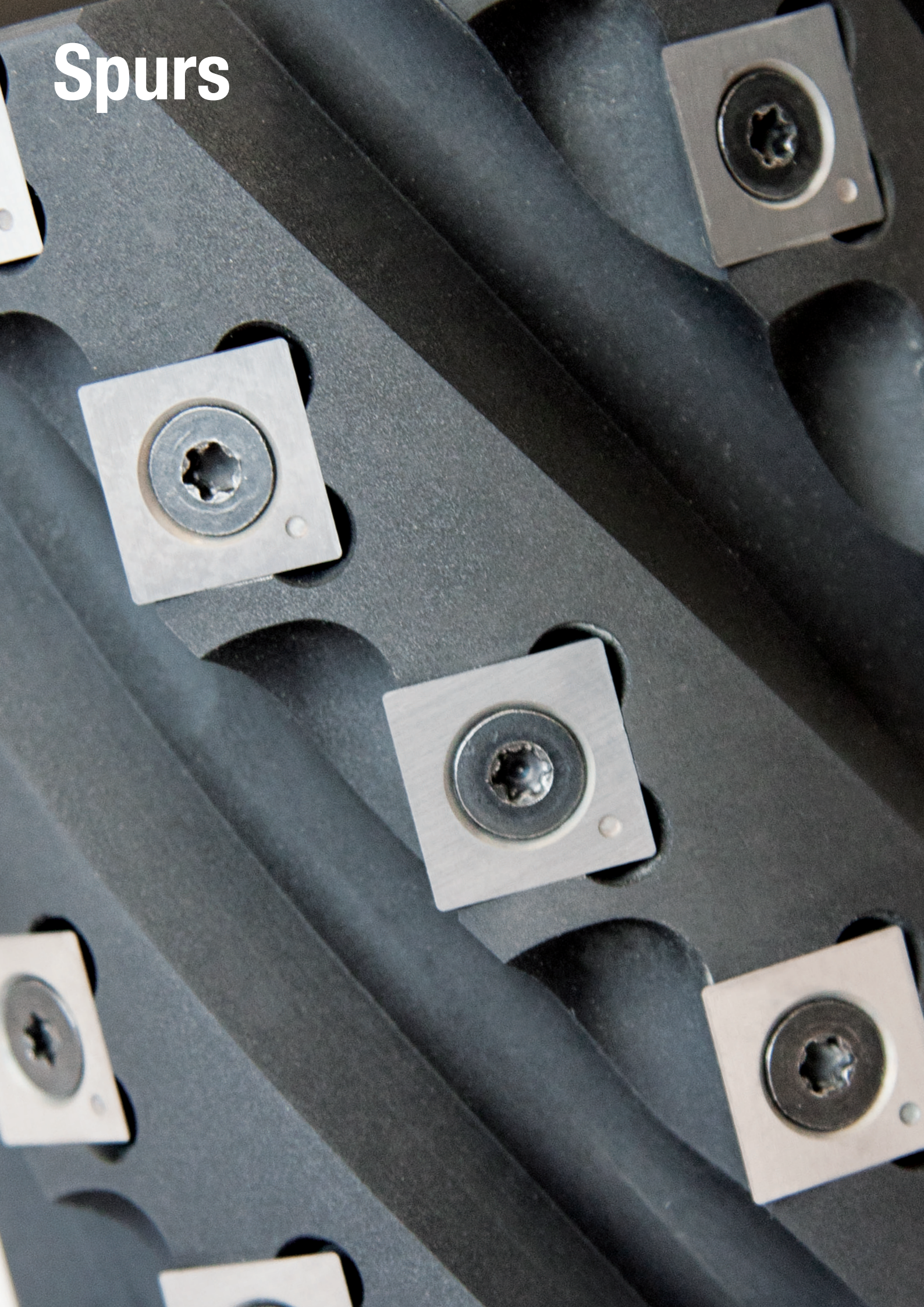


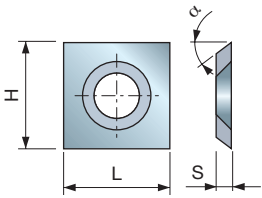
Softwood

L mm	H mm	S mm	Freud Code	Art. No.
231-249	30	3	CP010S AB2	
251-299	30	3	CP010S BB2	
301-349	30	3	CP010S CB2	
351-399	30	3	CP010S DB2	
401-499	30	3	CP010S EB2	
501-599	30	3	CP010S FB2	
601-699	30	3	CP010S GB2	
701-799	30	3	CP010S HB2	

L mm	H mm	S mm	Freud Code	Art. No.
< 299	35	3	CP010S AA2	
301-349	35	3	CP010S BA2	
351-399	35	3	CP010S CA2	
411-499	35	3	CP010S DA2	
511-529	35	3	CP010S EA2	
531-599	35	3	CP010S FA2	
611-629	35	3	CP010S GA2	
641-709	35	3	CP010S HA2	

# Spurs





Wide range of squared spurs with 4 cutting sides with variable Carbide types and relief angle to cover all available materials.

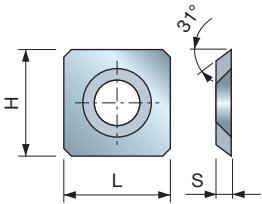
## RG01M

## HW - Square disposable spurs - Type A



Softwood    Hardwood    Chipboard    MDF    Plywood    Plastics

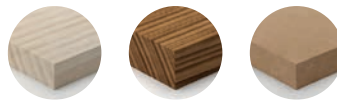
L mm	H mm	S mm	Quality of HW		Freud Code	Art. No.
13,5	13,5	3	H00S	30°	<b>RG01MDA310</b>	F03FH03582
14	14	1,2	K20S	31°	<b>RG01MAB310</b>	F03FH03035
14	14	2	K20S	30°	<b>RG01MAF310</b>	F03FH03285
14	14	2	MG10	31°	<b>RG01MAE310</b>	F03FH04113
14	14	2	K01S	30°	<b>RG01MAL310</b>	F03FH03777
14	14	2	K20S	31°	<b>RG01MAA310</b>	F03FH03034
14	14	2	H00S	31°	<b>RG01MAI310</b>	F03FH03791
14	14	2	H00XA	31°	<b>RG01MAH310</b>	F03FH03037
14	14	2	MG10	37°	<b>RG01MAD310</b>	F03FH03036
15	15	2,5	K01S	30°	<b>RG01MBE310</b>	F03FH03723



Range of squared spurs with 4 cutting sides and 4 beveled corners.

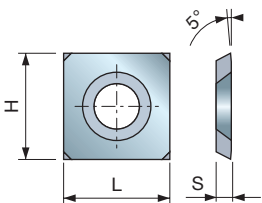
## RG01M

## HW - Square disposable spurs - Type B



Softwood    Hardwood    MDF

L mm	H mm	S mm	Quality of HW		Freud Code	Art. No.
15	15	2,5	K20S	31°	<b>RG01MBA310</b>	F03FH03038
14,6	14,6	2,5	MG10	31°	<b>RG01MCA310</b>	F03FH03040
15	15	2,5	MG10	37°	<b>RG01MBD310</b>	F03FH03039



Range of squared spurs with 4 cutting sides and 4 beveled corners.

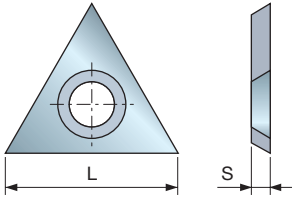
## RG01M

## HW - Square disposable spurs - Type C



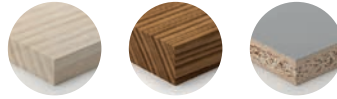
Softwood    Hardwood

L mm	H mm	S mm	Quality of HW		Freud Code	Art. No.
14	14	2	K20S	31°	<b>RG01MAG310</b>	F03FC24180



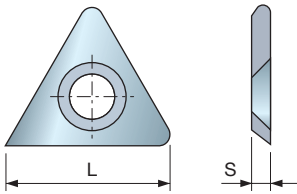
Triangular spurs with sharp edge.

## RG02M HW - Triangular disposable spurs



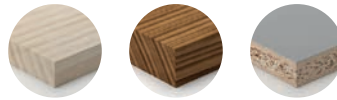
Softwood    Hardwood    Laminated Chipboard

L mm	H mm	S mm	Quality of HW	$\alpha$	Freud Code	Art. No.
22,86	-	2,5	K20S	31°	RG02MAA305	F03FH03041
22,86	-	2,5	K01S	31°	RG02MBE305	F03FH03725



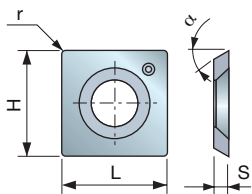
Triangular spurs with radius edge.

## RG03M HW - Triangular disposable spurs with radius



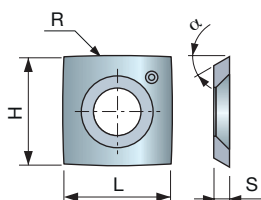
Softwood    Hardwood    Laminated Chipboard

L mm	H mm	S mm	Quality of HW	$\alpha$	Freud Code	Art. No.
21,9	-	2,5	K20S	31°	RG03MAA305	F03FH03042
21,9	-	2,5	K01S	31°	RG03MBE305	F03FH03727



**HW  
K01S**

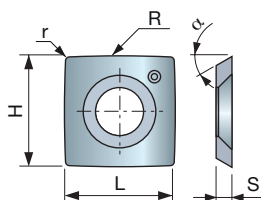
Razors made by K01S Freud's Carbide with rounded corners improve the quality of cut on spiral cutterheads, avoiding the lines left by the sharp edges of conventional square spurs.



**HW  
K01S**

Razors made by K01S Freud's Carbide with rounded edges greatly reduce tear-out on helical cutterheads and planers.

- Their design prevents from wave generation otherwise created by the shear angle positioning.

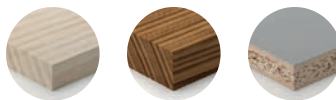


**HW  
K01S**

Razors made by K01S Freud's Carbide with rounded edges and corners greatly reduce tear-out on helical cutterheads and planers.

- Their design prevents from wave generation otherwise created by the shear angle positioning.

## RR01 HW - Razor with rounded corners

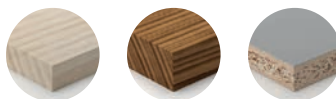


Softwood    Hardwood    Laminated Chipboard

L mm	H mm	S mm	r mm	Quality of HW	$\alpha$	Freud Code	Art. No.
14	14	2	0,5	K01S	30°	RR01MAA310	F03FH04007
14	14	2	0,5	K01S	37°	RR01MAB310	F03FH04008
14,6	14,6	2,5	0,5	K01S	30°	RR01MBA310	F03FH04009
15	15	2,5	0,5	K01S	30°	RR01MCA310	F03FH04010
15	15	2,5	0,5	K01S	37°	RR01MCB310	F03FH04011

## RR10

## HW - 30° razor with rounded edges



Softwood    Hardwood    Laminated Chipboard

L mm	H mm	S mm	R mm	Quality of HW	$\alpha$	Freud Code	Art. No.
14	14	2	150	K01S	30°	RR10MAA310	F03FH04012
14,6	14,6	2,5	150	K01S	30°	RR10MBA310	F03FH04043
15	15	2,5	150	K01S	30°	RR10MCA310	F03FH04014
15	15	2,5	50	K01S	30°	RR10MCB310	F03FH04015

## RR11

## HW - 30° razor with both rounded corners and edges

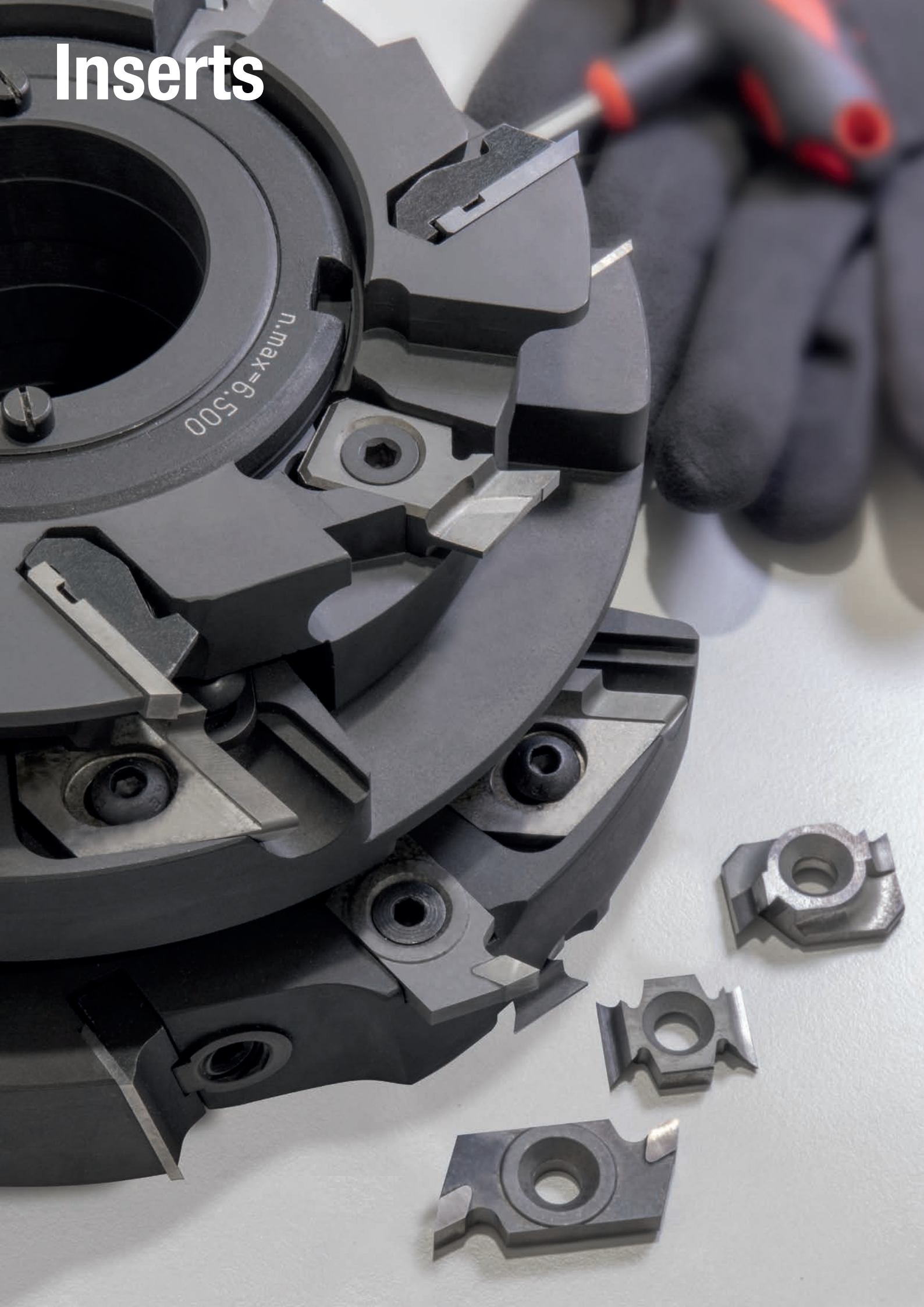


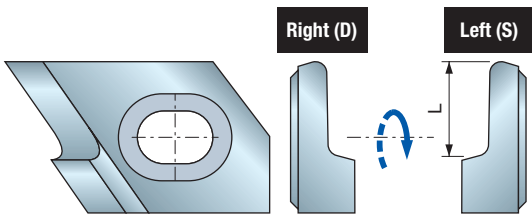
Softwood    Hardwood    Laminated Chipboard

L mm	H mm	S mm	R mm	r mm	Quality of HW	$\alpha$	Freud Code	Art. No.
14	14	2	150	0,5	K01S	30°	RR11MAA310	F03FH04016
14,6	14,6	2,5	150	0,5	K01S	30°	RR11MBA310	F03FH04017
15	15	2,5	150	0,5	K01S	30°	RR11MCA310	F03FH04018
15	15	2,5	50	0,5	K01S	30°	RR11MCB310	F03FH04020
15	15	2,5	115	0,5	K01S	30°	RR11MCC310	F03FH04019



# Inserts





## IG25MD IG25MS

## HW - Multipurpose inserts



Softwood    Hardwood

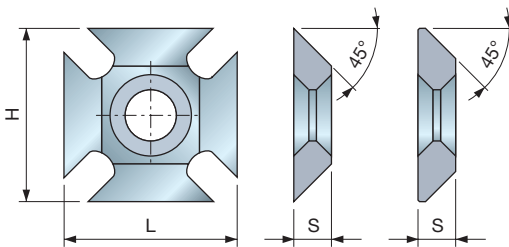
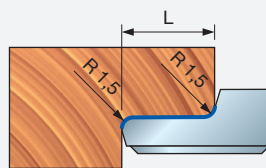
L mm	H mm	S mm	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
10	-	-	IG25MD10302	F03FC24164	IG25MS10302	F03FC24172
11	-	-	IG25MD11302	F03FC24165	IG25MS11302	F03FC24173
12	-	-	IG25MD12302	F03FC24166	IG25MS12302	F03FC24174
13	-	-	IG25MD13302	F03FC24167	IG25MS13302	F03FC24175
14	-	-	IG25MD14302	F03FC24168	IG25MS14302	F03FC24176
15	-	-	IG25MD15302	F03FC24169	IG25MS15302	F03FC24177
16	-	-	IG25MD16302	F03FC24170	IG25MS16302	F03FC24178
18	-	-	IG25MD18302	F03FC24171	IG25MS18302	F03FC24179

HW  
K20S

Resharpenable inserts made by K20S Freud's Carbide.

- Suitable for rounded rebates.
- Available in both left and right rotation.

### Example of application of inserts IG25M

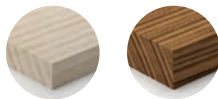


IG01MAA305  
F03FH02983

IG01MBA305  
F03FH02984

## IG01M

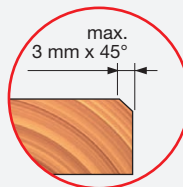
## HW - 45° Beveling inserts



Softwood    Hardwood

L mm	H mm	S mm	Freud Code	Art. No.
23	23	5	IG01MAA305	F03FH02983
23	23	5	IG01MBA305	F03FH02984

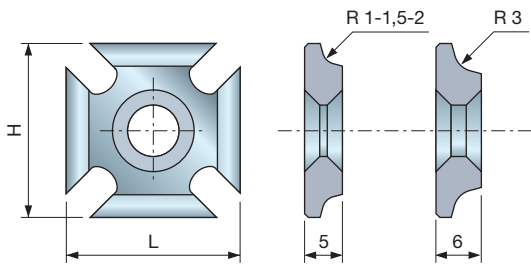
### Example of application of inserts IG01M



HW  
K20S

Beveling inserts made by K20S Freud's Carbide and 8 cutting edges.

- It can be used reversibly and with rotation in both senses.
- Particularly indicated for natural softwood and hardwood.
- Perfectly interchangeable with the rounding inserts **IG02M**.



## IG02M

## HW - Rounding inserts



Softwood    Hardwood

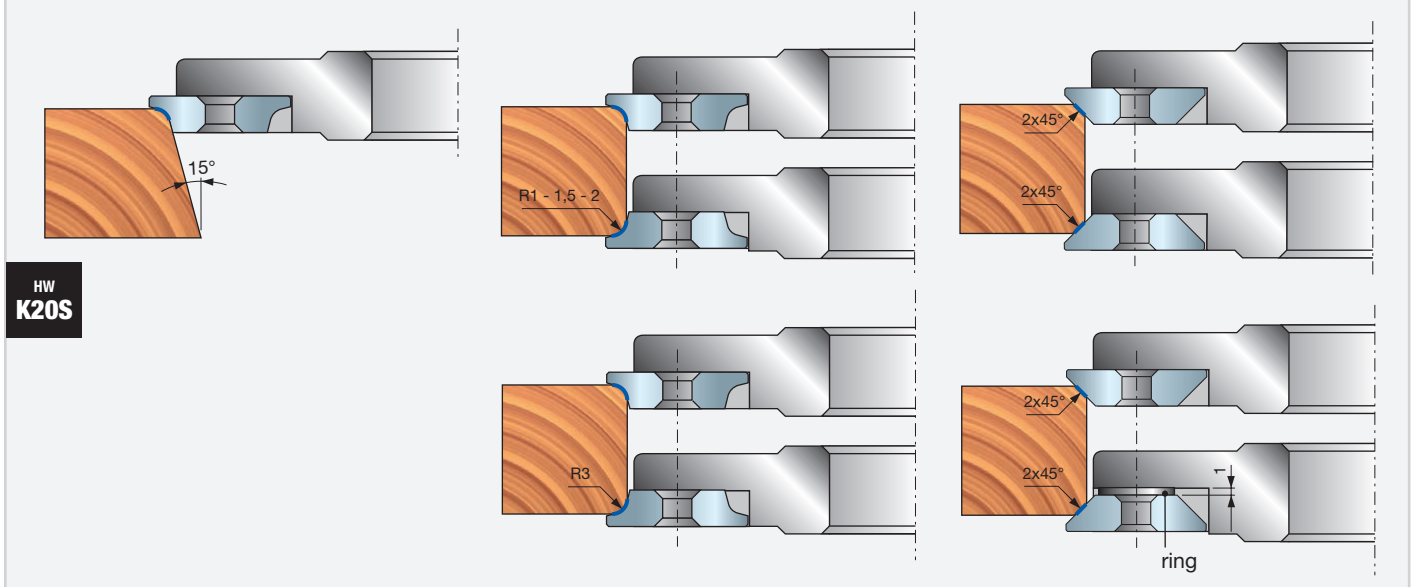
L mm	H mm	S mm	I mm	Freud Code	Art. No.
23	23	5	1	IG02MAA305	F03FH02985
23	23	5	1,5	IG02MAB305	F03FH02986
23	23	5	2	IG02MAC305	F03FH02987
23	23	6	3	IG02MAE305	F03FH02988

Rounding inserts made by K20S Freud's Carbide and 8 cutting edges.

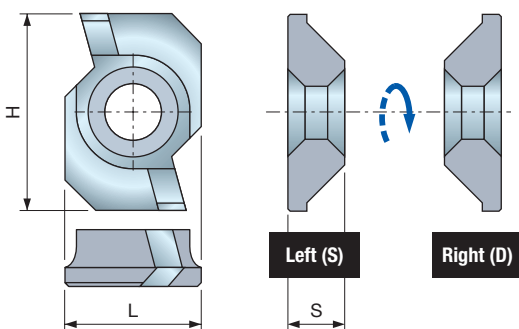
- It can be used reversibly and with rotation in both senses.
- Particularly indicated for natural softwood and hardwood.
- Perfectly interchangeable with the rounding inserts **IG01M**.

**Note:** Rounding insert **IG02MAE305** is interchangeable with insert **IG01MBA305**, for carrying out bevels with a 2 mm x 45°, only if a 1 mm ring is used (see example).

### Example of application of inserts IG01M and IG02M

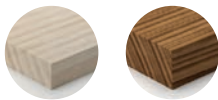


HW  
K20S



## IG21MD IG21MS

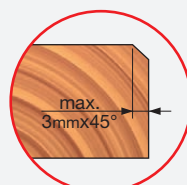
## HW - 45° Beveling inserts with shear angle



Softwood    Hardwood

L mm	H mm	S mm	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
18	26	7,5	IG21MDAA305	F03FH03005	IG21MSAA305	F03FH03006

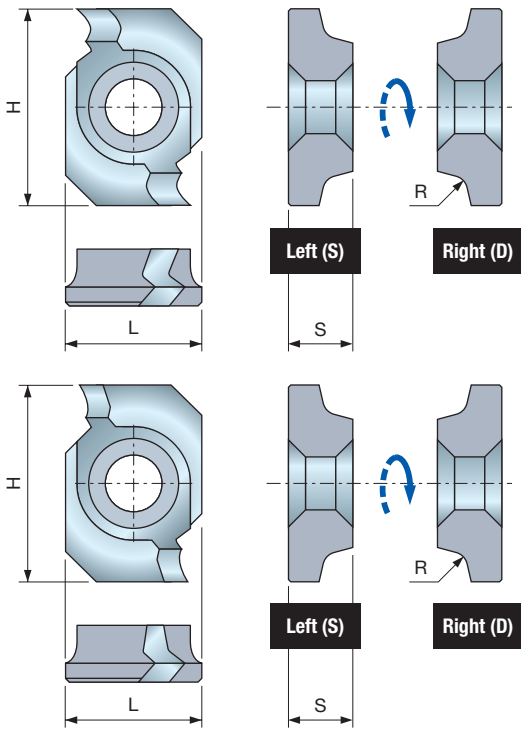
### Example of application of inserts IG21MD/S



HW  
K20S

Beveling inserts made by K20S Freud's Carbide and designed with a shear angle.

- Particularly indicated for natural softwood and hardwood.
- Perfectly interchangeable with rounding inserts **IG22M**.



## IG22MD IG22MS

## HW - Rounding inserts with shear angle



Softwood Hardwood

### Inserts with positive shear angle

L mm	H mm	S mm	R mm	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
18	26	8,5	1,5	IG22MDAB305	F03FH03007	IG22MSAB305	F03FH03013
18	26	8,5	2	IG22MDAC305	F03FH03008	IG22MSAC305	F03FH03014
18	26	8,5	3	IG22MDAE305	F03FH03009	IG22MSAE305	F03FH03015

### Inserts with negative shear angle

L mm	H mm	S mm	R mm	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
18	26	8,5	1,5	IG22MDZB305	F03FH03010	IG22MSZB305	F03FH03016
18	26	8,5	2	IG22MDZC305	F03FH03011	IG22MSZC305	F03FH03017
18	26	8,5	3	IG22MDZE305	F03FH03012	IG22MSZE305	F03FH03018

HW  
K20S

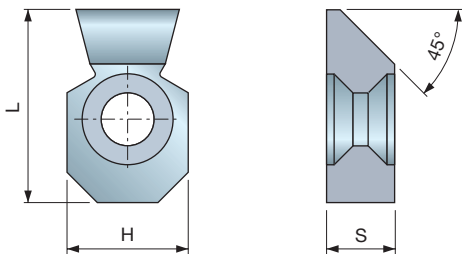
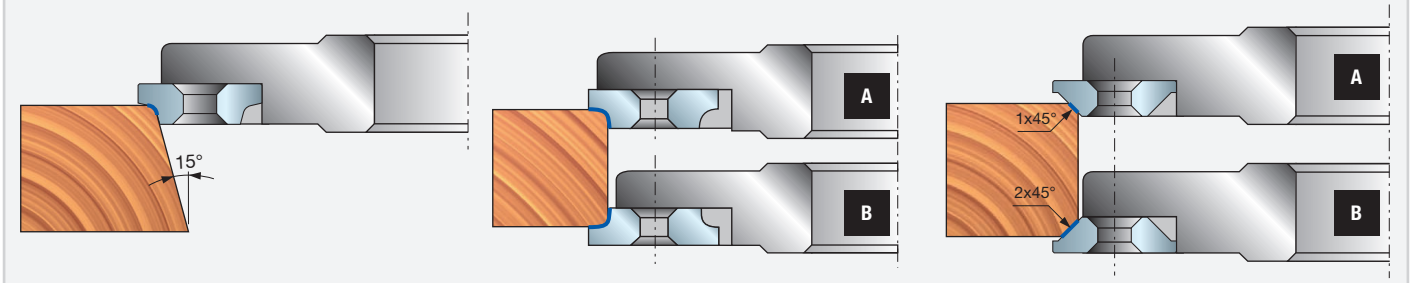
Rounding inserts made by K20S Freud's Carbide and designed with a shear angle.

- Particularly indicated for natural softwood and hardwood.
- Perfectly interchangeable with rounding inserts IG21M.

IG22MDA-MSA... Inserts with positive shear angle.

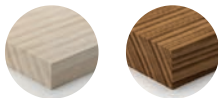
IG22MDZ-MSZ... Inserts with negative shear angle.

### Example of application of inserts IG21MD/S and IG22MD/S



## IG33M

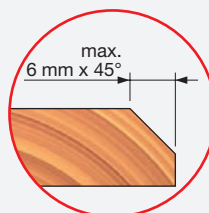
## HW - 45° Beveling inserts with shear angle



Softwood Hardwood

L mm	H mm	S mm	Chamfer	Freud Code	Art. No.
25,5	16	9	45°	IG33MAD305	F03FH03021

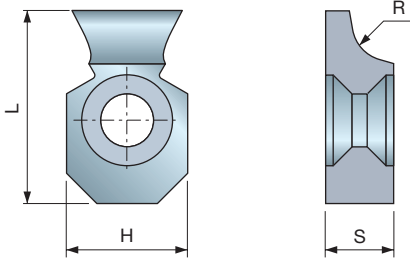
### Example of application of inserts IG33M



HW  
K20S

Beveling inserts made by K20S Freud's Carbide suitable for both rotation sense and 2 cutting edges (1 for right hand rotation and 1 for left hand rotation).

- Indicated for natural softwood and hardwood.
- Perfectly interchangeable with rounding inserts IG33MAA305 and IG33MAB305.



## IG33M

## HW - Rounding inserts with shear angle



Softwood Hardwood

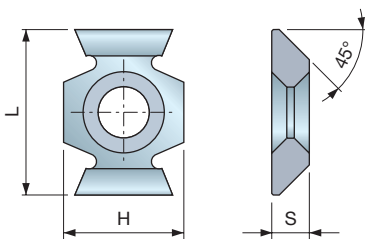
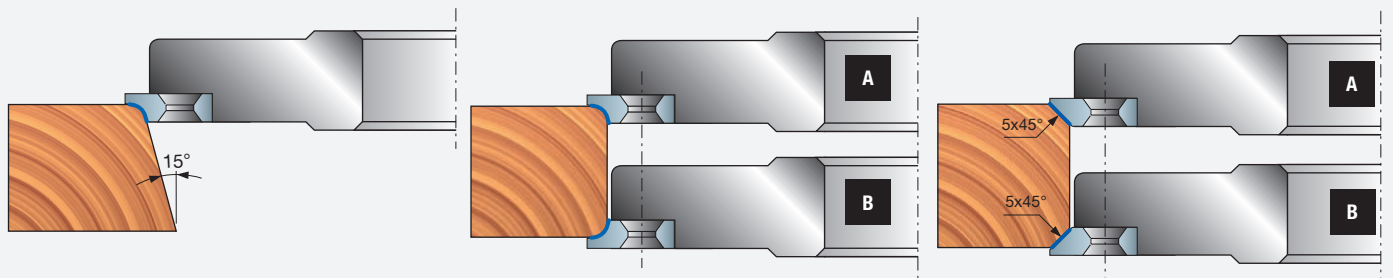
HW  
K20S

Rounding inserts made by K20S Freud's Carbide suitable for both rotation sense and 2 cutting edges (1 for right hand rotation and 1 for left hand rotation).

- Indicated for natural softwood and hardwood.
- Perfectly interchangeable with beveling inserts **IG33MAD305**.

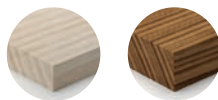
L mm	H mm	S mm	R mm	Freud Code	Art. No.
25,5	16	9	3	<b>IG33MAA305</b>	F03FH03019
25,5	16	9	5	<b>IG33MAB305</b>	F03FH03020

### Example of application of inserts IG33M



## IG51M

## HW - 45° Beveling inserts with shear angle



Softwood Hardwood

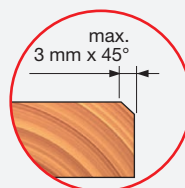
HW  
K20S

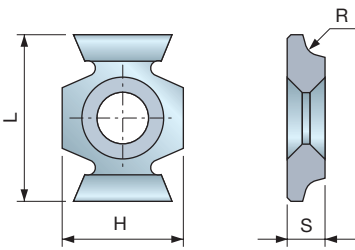
Beveling insert made by K20S Freud's Carbide suitable for both rotation sense and 4 cutting edges (2 for right hand rotation and 2 for left hand rotation).

- Indicated for natural softwood and hardwood.
- Perfectly interchangeable with rounding inserts **IG52M**.

L mm	H mm	S mm	Freud Code	Art. No.
22	16	5	<b>IG51MBA305</b>	F03FH03022

### Example of application of inserts IG51M





**HW  
K20S**

Rounding inserts made by K20S Freud's Carbide suitable for both rotation sense and 4 cutting edges (2 for right hand rotation and 2 for left hand rotation).

- Indicated for natural softwood and hardwood.
- Perfectly interchangeable with rounding inserts **IG52M**.

## IG52M

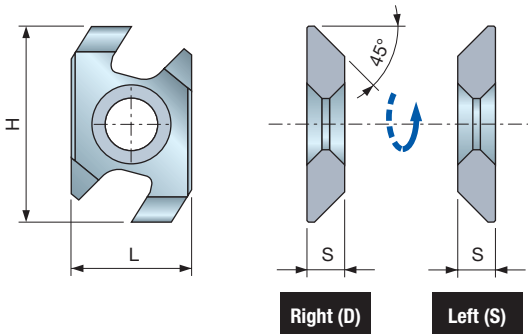
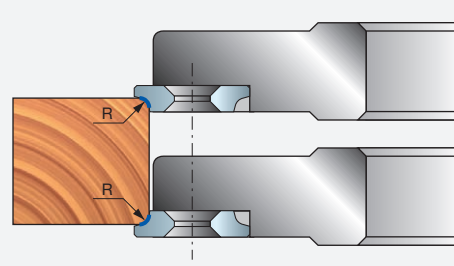
## HW - Rounding inserts with shear angle



Softwood    Hardwood

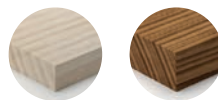
L mm	H mm	S mm	R mm	Freud Code	Art. No.
22	16	5	1,5	<b>IG52MAB305</b>	F03FH03023
22	16	5	2	<b>IG52MAC305</b>	F03FH03024
22	16	5	3	<b>IG52MAE305</b>	F03FH03025

### Example of application of inserts IG52M



## IG61MD IG61MS

## HW - Beveling inserts with anti-kickback technology



Softwood    Hardwood

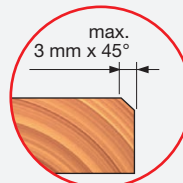
L mm	H mm	S mm	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
26	16	5	<b>IG61MDBA305</b>	F03FH03026	<b>IG61MSBA305</b>	F03FH03027

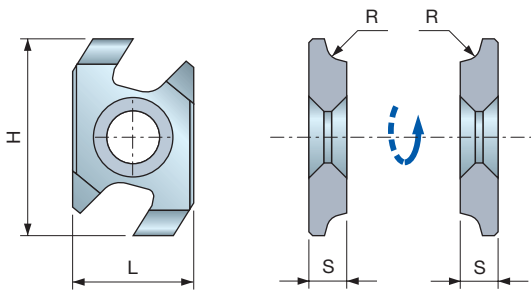
**HW  
K20S**

Beveling inserts in K20S Freud's Carbide with anti-kickback technology for MAN feed tools.

- Indicated for natural softwood and hardwood.
- Perfectly interchangeable with rounding inserts **IG62M**.

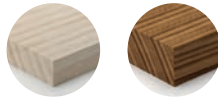
### Example of application of inserts IG61MD/S





## IG62MD IG62MS

## HW - Rounding inserts with anti-kickback technology



Softwood Hardwood

HW  
K20S

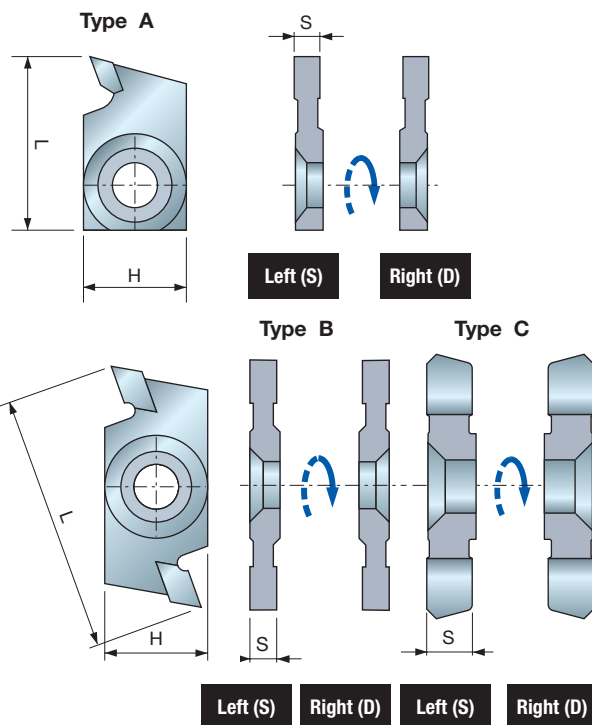
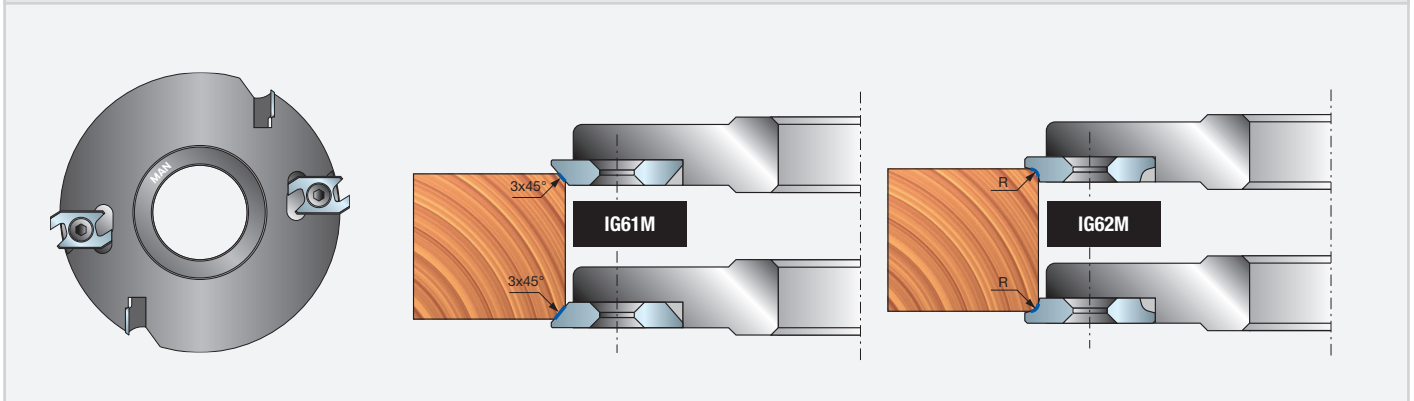
Right (D)

Left (S)

- Rounding inserts in K20S Freud's Carbide with anti-kickback technology for MAN feed tools.
- Indicated for natural softwood and hardwood.
  - Perfectly interchangeable with rounding inserts **IG61M**.

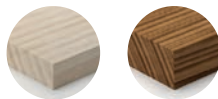
L mm	H mm	S mm	R mm	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
26	16	5	1,5	<b>IG62MDAB305</b>	F03FH03028	<b>IG62MSAB305</b>	F03FH03031
26	16	5	2	<b>IG62MDAC305</b>	F03FH03029	<b>IG62MSAC305</b>	F03FH03032
26	16	5	3	<b>IG62MDAE305</b>	F03FH03030	<b>IG62MSAE305</b>	F03FH03033

### Example of application of inserts IG61MD/S and IG62MD/S



## IG04MD IG04MS

## HW - Grooving inserts



Softwood Hardwood

L mm	H mm	S mm	Type	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
27	16	3	A	<b>IG04MDAC3T05</b>	F03FC24153	<b>IG04MSAC3T05</b>	F03FC24153
27	16	4	A	<b>IG04MDAA3T05</b>	F03FC24151	<b>IG04MSAA3T05</b>	F03FC24151
27	16	5	A	<b>IG04MDAB3T05</b>	F03FC24152	<b>IG04MSAB3T05</b>	F03FC24152
27	16	6	A	<b>IG04MDAD3T05</b>	F03FC24154	<b>IG04MSAD3T05</b>	F03FC24154

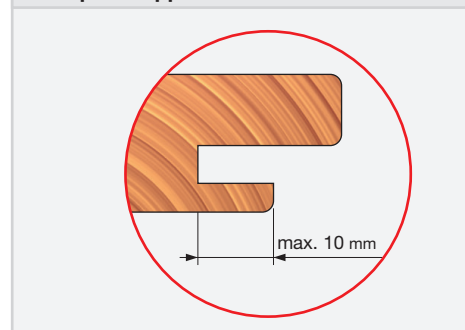
L mm	H mm	S mm	Type	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
40	16	3	B	<b>IG04MDAC305</b>	F03FH02992	<b>IG04MSAC305</b>	F03FH02996
40	16	4	B	<b>IG04MDAA305</b>	F03FH03409	<b>IG04MSAA305</b>	F03FH02994
40	16	5	B	<b>IG04MDAB305</b>	F03FH02991	<b>IG04MSAB305</b>	F03FH02995
40	16	6	B	<b>IG04MDAD305</b>	F03FH02993	<b>IG04MSAD305</b>	F03FH02997

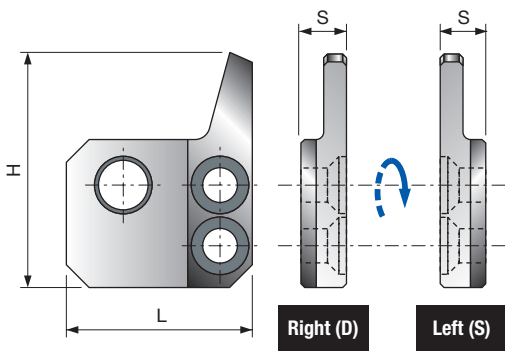
L mm	H mm	S mm	Type	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
12	12	1,5	C	<b>IG04MDAL305</b>	F03FH03358	<b>IG04MSAL305</b>	F03FH03359

HW  
K30S

- Grooving inserts made with K30S Freud's Carbide tips.
- Available in left and right rotation version.
  - Max groove depth 10 mm.
  - Indicated for natural softwood and hardwood.

### Example of application of inserts IG04MD/S





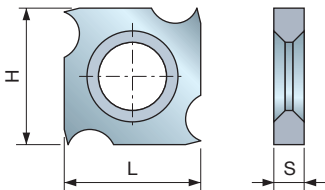
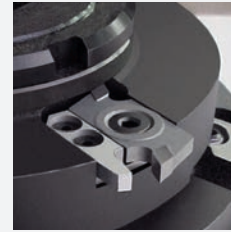
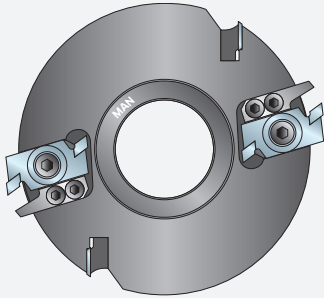
Deflectors suitable for standard **IG04M** grooving inserts as anti-kickback device.  
 • Component for MAN feed tools.

## ID04MD ID04MS

## Deflectors for inserts IG04MD and IG04MS

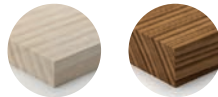
L mm	H mm	S mm	Use for	Freud Code	Art. No.
24,5	30,8	6	IG04MDAA305	ID04MDAA901	F03FC24133
24,5	30,8	7	IG04MDAB305	ID04MDAB901	F03FC24134
24,5	30,8	6	IG04MDAC305	ID04MDAC901	F03FC24135
24,5	30,8	8	IG04MDAD305	ID04MDAD901	F03FC24136
24,5	30,8	6	IG04MSAA305	ID04MSAA901	F03FC24137
24,5	30,8	7	IG04MSAB305	ID04MSAB901	F03FC24138
24,5	30,8	6	IG04MSAC305	ID04MSAC901	F03FC24139
24,5	30,8	8	IG04MSAD305	ID04MSAD901	F03FC24140

### Example of application of deflector ID04MD/S



## CG03M

## HW - Disposable four cutting edges knives

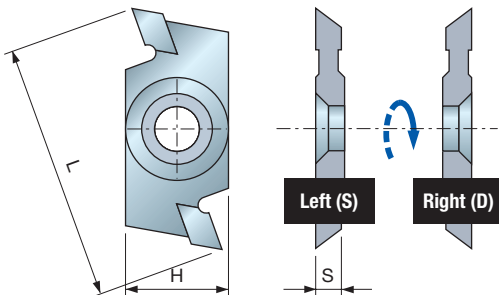


Softwood    Hardwood

HW  
**K20S**

Disposable knives in K20S Freud's Carbide with 4 cutting edges.  
 • Indicated for softwood and hardwood.

L mm	H mm	S mm	Freud Code	Art. No.
18	18	1,9	CG03MAA310	F03FH02876
18	18	2,9	CG03MAB310	F03FH02877
18	18	4	CG03MAC310	F03FH02878
18	18	5,5	CG03MAD310	F03FH02879

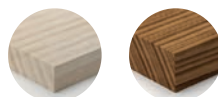


HW  
**K30S**

Spurs inserts made with K30S Freud's Carbide tips.  
 • Available in left and right rotation version.  
 • Indicated for natural softwood and hardwood.

## IG05MD IG05MS

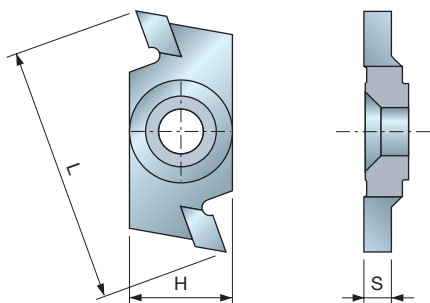
## HW - Spur inserts



Softwood    Hardwood

L mm	H mm	S mm	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
40	16	4	IG05MDAA305	F03FH02998	IG05MSAA305	F03FH02999



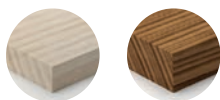


**HW**  
**K30S**

Grooving insert made with K30S Freud's Carbide tips and designed for beveled grooves.

- Available in left and right rotation version.
- Max groove depth 6,5 mm.
- Indicated for natural softwood and hardwood.

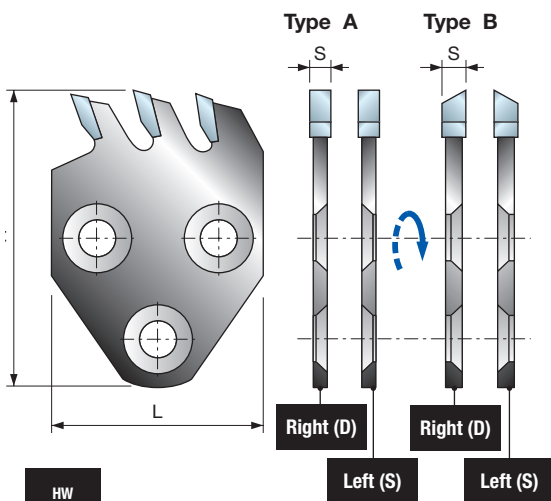
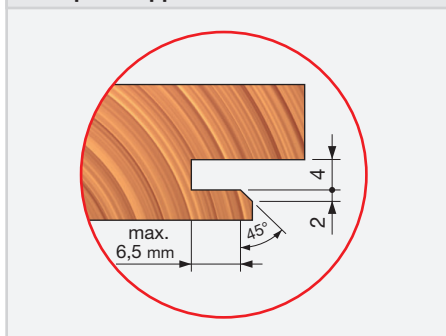
## IG17MD HW - Insert for beveled grooves



Softwood Hardwood

L mm	H mm	S mm	Freud Code	Art. No.
40	16	3	IG17MDAA305	F03FC24162

### Example of application of inserts IG17MD



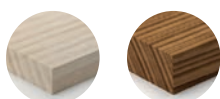
**HW**  
**H00S**

Grooving inserts made with H00S Freud's Carbide tips and 3 cutting edges.

- Max groove depth 25 mm.
- Available in left and right rotation version.
- Indicated for natural softwood and hardwood.

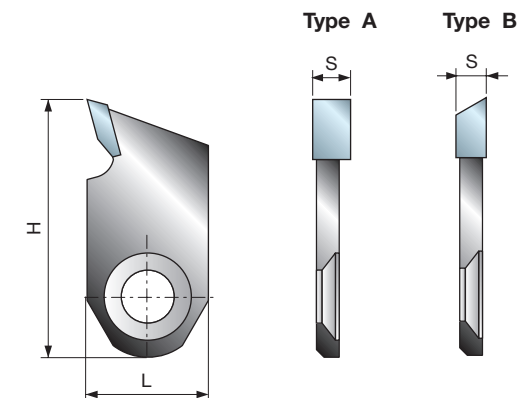
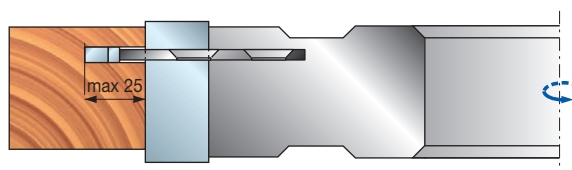
## SR01MD SR01MS

## HW - Grooving inserts



Softwood Hardwood

L mm	H mm	S mm	Type	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
40	58	2,6	A	SR01MDAE301	F03FC24185	SR01MSAE301	F03FC24189
40	58	3	A	SR01MDAB301	F03FC24182	SR01MSAB301	F03FC24187
40	58	4	A	SR01MDAC301	F03FC24183	SR01MSAC301	F03FC24188
40	58	5	A	SR01MDAA301	F03FC24181	SR01MSAA301	F03FC24186
40	58	6	B	SR01MDAD301	F03FC24184	SR01MSAF301	F03FC24190



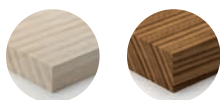
**HW**  
**H00S**

Grooving and spurs inserts made with H00S Freud's Carbide tips.

- Max groove depth 17 mm.
- Available in left and right rotation version.
- Indicated for natural softwood and hardwood.

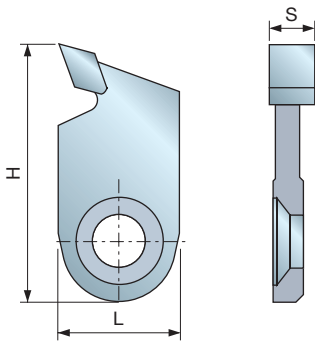
## SR06MD

## HW - Multipurpose inserts



Softwood Hardwood

L mm	H mm	S mm	Type	Freud Code	Art. No.
16	34	4	A	SR06MDAG302	F03FC24193
16	34	7	A	SR06MDAH302	F03FC24194
16	34	5	A	SR06MDAI302	F03FC24195
16	34	4	B	SR06MDAL302	F03FC24196



**HW  
K30S**

Grooving inserts made with K30S Freud's Carbide tips.

- Max groove depth 17 mm.
- Indicated for natural softwood and hardwood.

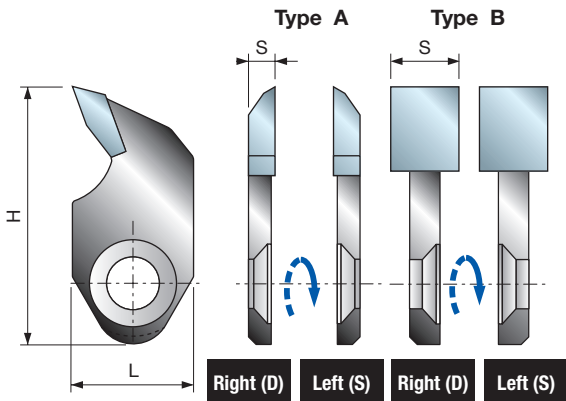
## SR06M

## HW - Grooving inserts



Softwood    Hardwood

L mm	H mm	S mm	Freud Code	Art. No.
16	34	6	SR06MAB302	F03FC24191
16	34	6	SR06MAM301	F03FC24192



## SR06MD SR06MS

## HW - Multipurpose inserts



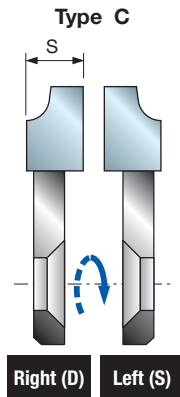
Softwood    Hardwood

L mm	H mm	S mm	Type	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
16	34	3,5	A	SR06MDBA302	F03FC24197	SR06MSBA302	F03FC24200
16	34	9	B	SR06MDBB301	F03FC24198	SR06MSBB301	F03FC24201
16	34	9	C	SR06MDBG301	F03FC24391	SR06MSBG301	F03FC24392
16	34	11	B	SR06MDBC301	F03FC24199	SR06MSBC301	F03FC24202

**HW  
H00S**

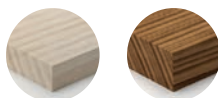
Grooving inserts made with H00S Freud's Carbide tips.

- Max groove depth 17 mm.
- Indicated for natural softwood and hardwood.



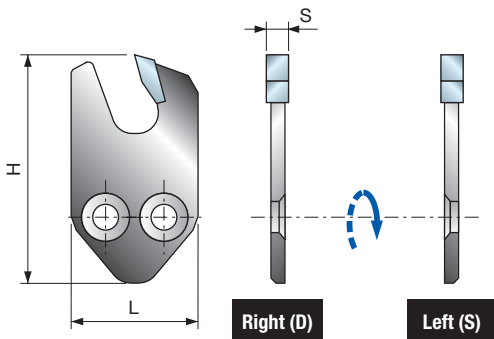
## SR11MD SR11MS

## HW - Grooving inserts



Softwood    Hardwood

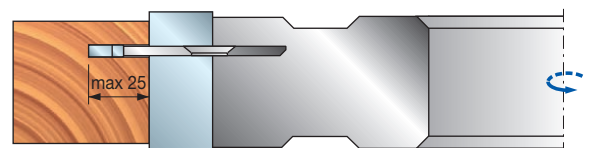
L mm	H mm	S mm	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
25	45	2	SR11MDBA301	F03FC24203	SR11MSBA301	F03FC24208
25	45	3	SR11MDBB301	F03FC24204	SR11MSBB301	F03FC24209
25	45	4	SR11MDBC301	F03FC24205	SR11MSBC301	F03FC24210
25	45	5	SR11MDBD301	F03FC24206	SR11MSBD301	F03FC24211
25	45	6	SR11MDBE301	F03FC24207	SR11MSBE301	F03FC24212

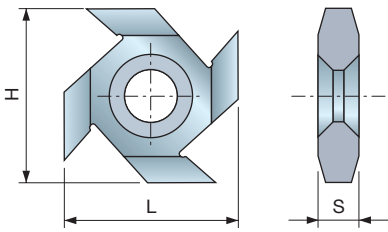


**HW  
H00S**

Grooving inserts made with H00S Freud's Carbide tips and 3 cutting edges.

- Max groove depth 25 mm.
- With anti-kickback technology for MAN feed tools.
- Available in left and right rotation version.
- Indicated for natural softwood and hardwood.





**HW**  
**K20S**

Anti-capillary inserts made by K20S Freud's Carbide with 4 cutting edges.  
 • Suitable for natural softwood and hardwood.

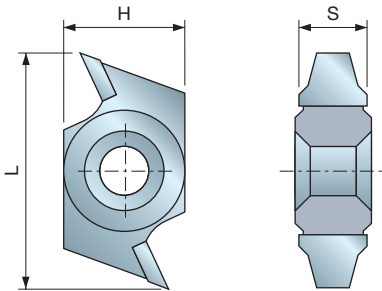
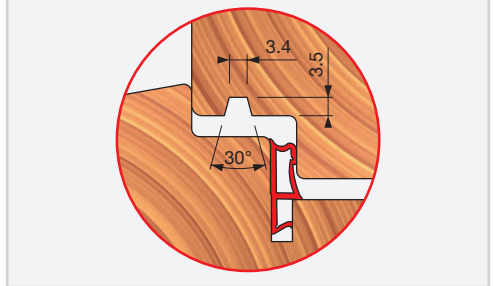
## IG03M HW - Anti capillary groove inserts



Softwood    Hardwood

L mm	H mm	S mm	Freud Code	Art. No.
23	23	5,4	IG03MAA305	F03FH02989

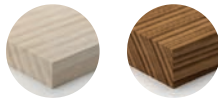
Example of application of inserts IG03M



**HW**  
**K20S**

Anti-capillary inserts made by K20S Freud's Carbide with 2 cutting edges.  
 • Suitable for natural softwood and hardwood.

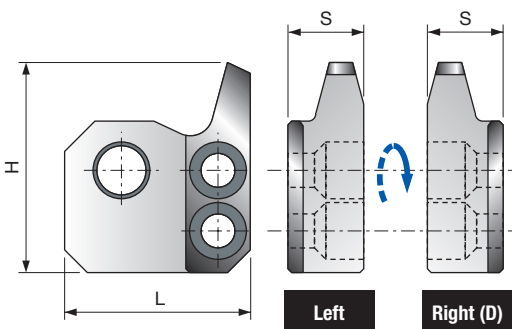
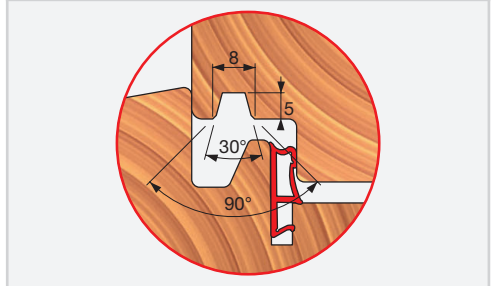
## IG11M HW - Anti capillary groove inserts



Softwood    Hardwood

L mm	H mm	S mm	Freud Code	Art. No.
33,2	16	10	IG11MAA301	F03FH03002

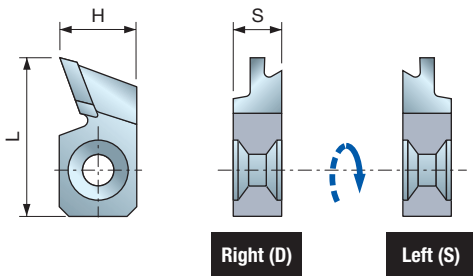
Example of application of inserts IG11M



## ID11MD ID11MS Deflectors for inserts IG11M

L mm	H mm	S mm	Use for	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
25	45	6	IG11MAA301	ID11MDAA901	F03FC24145	ID11MSAA901	F03FC24146

Deflectors suitable for standard **IG11M** anti-capillary inserts as anti-kickback device.  
 • Component for MAN feed tools.



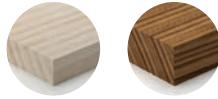
**HW**  
**K20S**

Shaped inserts made by K20S Freud's Carbide for gasket seats, available in left and right rotation version.

- Suitable for natural softwood and hardwood.

## IG10MD IG10MS

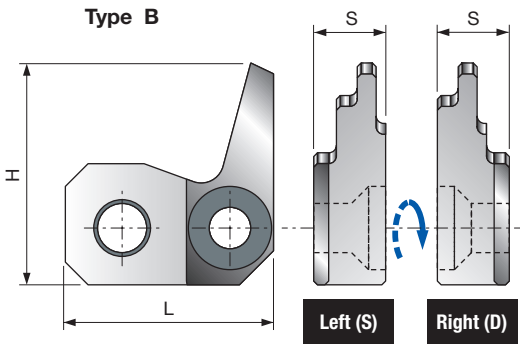
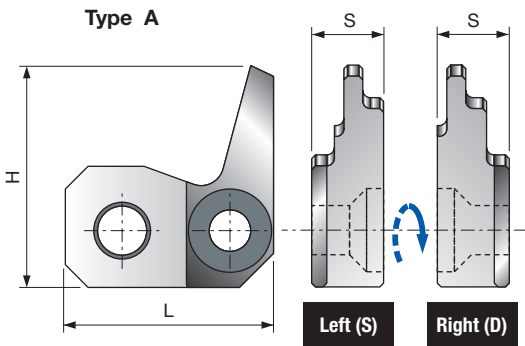
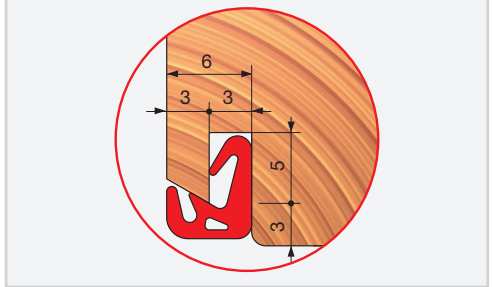
### HW - Inserts for gasket seats



Softwood    Hardwood

L mm	H mm	S mm	Freud Code		Art. No.		
			Right (D)	Left (S)	Right (D)	Left (S)	
32,7	16	10	<b>IG10MDGA301</b>		F03FH03000	<b>IG10MSGGA301</b>	F03FH03001

#### Example of application of inserts IG10MD/S



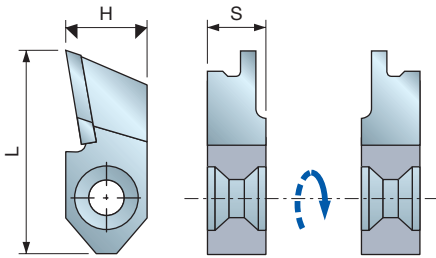
## ID10MD ID10MS

### Deflectors for inserts IG10MD and IG10MS

L mm	H mm	S mm	Type	Use for	Freud Code		Art. No.	
					Right (D)	Left (S)	Right (D)	Left (S)
27,5	29,3	11	A	<b>IG10MDGA301</b>	<b>ID10MDDGA901</b>	F03FC24141	<b>ID10MDSGA901</b>	F03FC24142
27,5	29,3	11	B	<b>IG10MSGGA301</b>	<b>ID10MSDGA901</b>	F03FC24143	<b>ID10MSSGA901</b>	F03FC24144

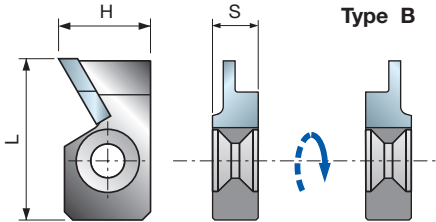
Deflectors suitable for standard **IG10M** sealing inserts as anti-kickback device.

- Component for MAN feed tools.



Right (D)

Left (S)



Type B

Right (D)

Left (S)

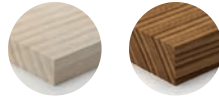
HW  
K30S

Shaped inserts made by K30S Freud's Carbide for gasket seats.

- Available in left and right rotation version.
- Suitable for natural softwood and hardwood.

## IG13MD IG13MS

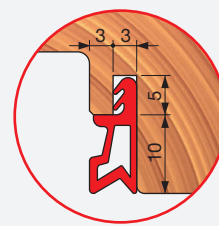
## HW - Inserts for sealing strip seats



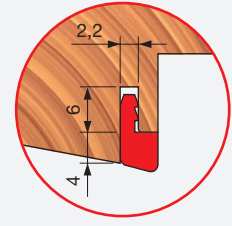
Softwood    Hardwood

L mm	H mm	S mm	Type	Freud Code		Art. No.	
				Right (D)	Left (S)	Right (D)	Left (S)
41,5	16	11,5	A	IG13MDAA301	F03FH03003	IG13MSAA301	F03FH03004
30	16	8,5	B	IG13MDBA301	F03FC24159	IG13MSBA301	F03FC24160

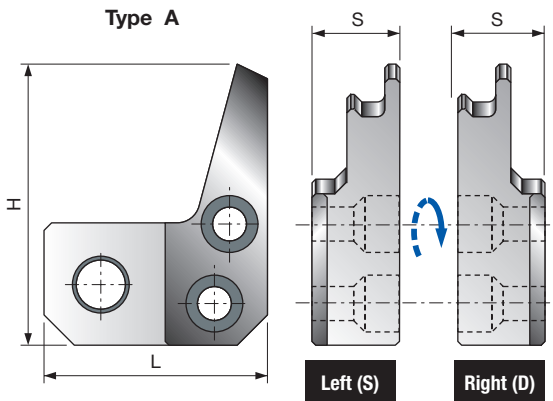
### Examples of application of inserts IG13MD/S



AA3

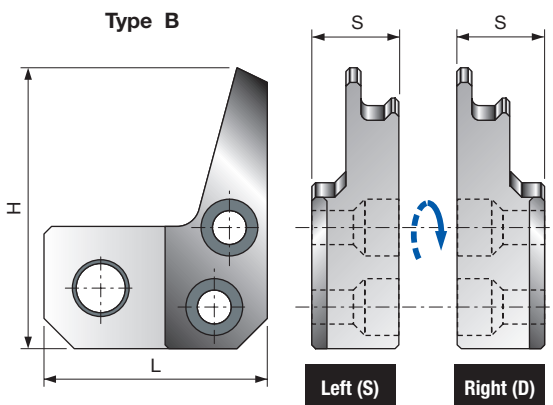


BA3



Left (S)

Right (D)



Left (S)

Right (D)

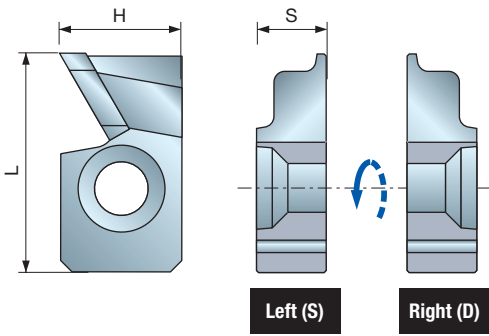
Deflectors suitable for standard IG13M sealing inserts as anti-kickback device.

- Component for MAN feed tools.

## ID13MD ID13MS

## Deflectors for inserts IG13MD and IG13MS

L mm	H mm	S mm	Type	Use for	Freud Code		Art. No.	
					Right (D)	Left (S)	Right (D)	Left (S)
29,9	37,1	12,5	A	IG13MDAA301	ID13MDDAA901	F03FC24147	ID13MDSAA901	F03FC24148
29,9	37,1	12,5	B	IG13MSAA301	ID13MSDAA901	F03FC24149	ID13MSSAA901	F03FC24150



**HW  
K20S**

Shaped inserts made by K20S Freud's Carbide for frame rebates (Euronorm C13 Freud systems 78/80 mm).

- Available in left and right rotation version.
- Suitable for natural softwood and hardwood.

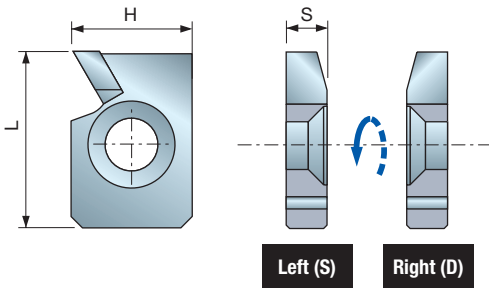
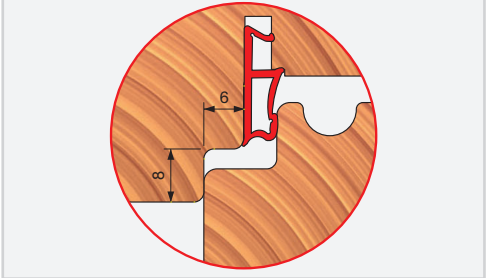
## IG14MD IG14MS HW - Inserts for frame rebates



Softwood    Hardwood

L mm	H mm	S mm	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
28,9	16	10	IG14MD AA3	F03FC15370	IG14MS AA3	F03FC15371

Example of application of inserts IG14MD/S

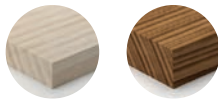


**HW  
K20S**

Shaped inserts made by K20S Freud's Carbide for glass sealing, available in left and right rotation version.

- Suitable for natural softwood and hardwood.

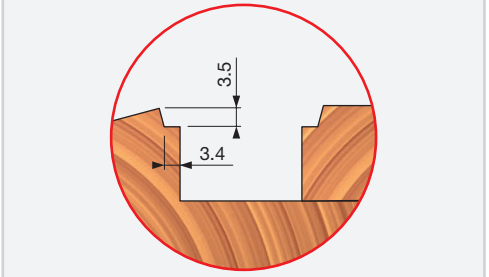
## IG15MD IG15MS HW - Inserts for glass sealing

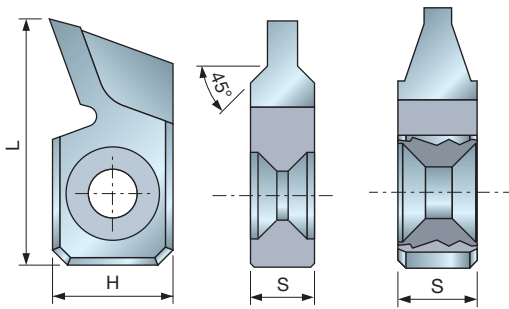


Softwood    Hardwood

L mm	H mm	S mm	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
23,3	16	6	IG15MD AA3	F03FC15372	IG15MS AA3	F03FC15373

Example of application of inserts IG15MD/S





**IG16MAA301**  
F03FC24161

**IG16MAB301**  
F03FC24381

**HW**  
**K20S**

Shaped inserts made by K20S Freud's Carbide for glass sealing.

- Suitable for natural softwood and hardwood.

## IG16M

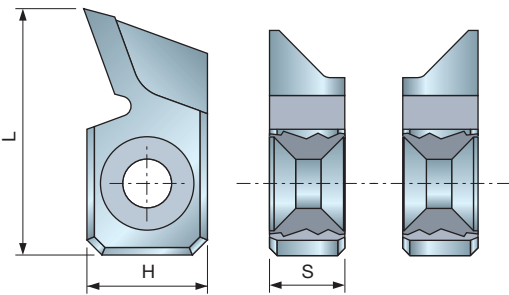
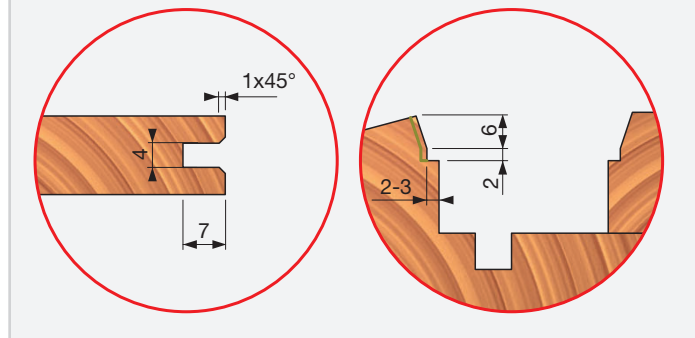
## HW - Inserts for glass sealing



Softwood    Hardwood

L	H	S	Freud Code	Art. No.
mm	mm	mm		
32,7	16	8,5	<b>IG16MAA301</b>	F03FC24161
32,7	16	10	<b>IG16MAB301</b>	F03FC24381

### Examples of application of inserts IG16M



**Right (D)**

**Left (S)**

**HW**  
**K20S**

Shaped inserts made by K20S Freud's Carbide for glass sealing.

- Suitable for natural softwood and hardwood.

## IG16MD IG16MS

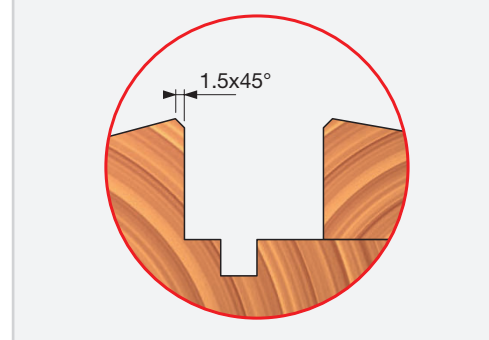
## HW - Inserts for glass sealing



Softwood    Hardwood

L	H	S	Freud Code	Art. No.	Freud Code	Art. No.
mm	mm	mm	Right (D)		Left (S)	
32,7	16	6	<b>IG16MDAC301</b>	F03FC24382	<b>IG16MSAC301</b>	F03FC24383

### Examples of application of inserts IG16MD/S



## TOOLS

Tools shall be used only by persons of training and experience who have knowledge of how to use and handle tools.

The maximum rotational speed marked on the tool shall not be exceeded.

One piece tools with visible cracks shall not be used.

Clamping surfaces shall be cleaned to remove dirt, grease, oil and water.

Resin shall only be removed from light alloys with solvents that do not affect the mechanical characteristics of these materials.

Tools and tool bodies shall be clamped in such a way, that they shall not loosen during operation.

Tools with cylindrical shank must be clamped in a way that the mark of the maximum free shank length shall be covered, at least partially, by the clamping device or by the locking collet.

Care shall be taken of mounting tools to ensure that the clamping is by the hub respectively by the clamping surface of the tool and that the cutting edges are not in contact with each other or with the clamping elements.

Fastening screws and nuts shall be tightened using the appropriate spanners etc. and to the torque value provided by the manufacturer.

Extension of the spanner or tightening using hammer blows shall not be permitted.

Clamping screws shall be tightened according to instructions provided by the manufacturer. Where instructions are not provided clamping screws shall be tightened in sequence from the centre outwards.

Use of fixed rings, e. g. pressed or held by adhesive fixing, in flanged sleeves, shall be permitted if made to the manufacturers specifications.

Repair and regrinding of tools shall only be allowed according to the tool manufacturer's instructions.

After repair and regrinding of tools it shall be ensured that the tools observe balancing requirements.

The design of composite (tipped) tools shall not be changed in the process of repair.

Composite tools shall be repaired by a competent person, i.e. a person of training and experience, who has knowledge of the design requirements and understands the level of safety to be achieved.

Repair shall therefore include, e.g. use of spare parts which are in accordance with the specification of the original parts provided by the manufacturer.

Tolerances which ensure correct clamping shall be maintained.

For one piece tools care shall be taken that regrinding of the cutting edge will not cause weakening of the hub and the connection of the cutting edge to the hub.

To avoid injuries, tools shall be handled in accordance with the guidance provided by the manufacturer. Typically, safe handling involves the use of devices such as carrying hooks, proprietary handles, frames (e. g. for circular saw blades), boxes, trolleys etc.

The wearing of protective gloves improves the grip on the tool and further reduces the risk of injury.

Maintenance and modification of milling tools and related components and circular saw blades should always be in accordance with the design requirements/the manufacturer's instructions.

Maintenance and modification of milling tools and circular saw blades should only be carried out by a competent person, i. e. a person of training and experience, who has knowledge of the design requirements and understand levels of safety to be achieved.

When regrinding milling tools and circular saw blades, the minimum requirements of cutting blade thickness and cutting blade projection should be observed.

Composite tools should be repaired by persons experienced in and with understanding of design and use of milling tools for processing wood and similar materials, e.g. an expert with a relevant education and knowledge of the brazing process, including in particular the influence of the brazing process on tension in tool body and cutting material. When brazing off worn tips and subsequently

brazing on new tips it should be made sure that the tip is correctly mounted in the tool body and that the process does not result in critical tension in the tool body.

After any type of maintenance, milling tools marked with MAN should continue to observe the requirements of the standards related to tools for hand feed.

When modifying milling tools, e. g. modification of bore diameter, modification of shank, retipping of composite tools and similar, it should be ensured that the requirements of the standard relating to balancing are still observed.

After being modified and/or retipped, milling tools and circular saw blades should be marked according to the rules applying to new tools. However, the name/logo of the company making the modification/retipping should be added.

To avoid injuries, tools shall be handled in accordance with the guidance provided by the manufacturer.

Tools which weigh more than 15 kg may require the use of special handling devices or attachments, these will depend on the features that the manufacturer has designed into the tool to allow easy handling. The manufacturer can advise on the availability of necessary devices.

## CLAMPING DEVICES

The speeds indicated on the clamping device and the tool to be clamped should be compared. For adjusting the speed on the machine the lower speed should be applied.

Screws and nuts should be tightened using the appropriate spanners; Clamping surfaces should be cleaned to remove dirt, grease, oil and water.

Clamping devices and tools should be mounted or clamped according to given torques, pressures and wrenches to be used; extension of spanners or tightening or loosening by means of hammer blows should not be permitted.

Maximum tool diameters and tool lengths should not be exceeded; Shank diameters must be in accordance with the clamping range of the clamping devices.

The minimum required clamping length must be kept;

Care should be taken that the data relevant to the safety of the clamped tool are always stored in the data medium.

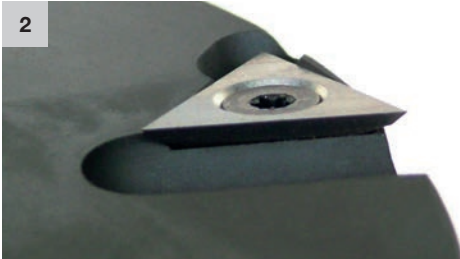
Repairs should only be carried out by a competent person, i.e. a person with professional training and experience, who has knowledge of the design, construction and safety requirements; Repair should therefore include the use of spare parts which are in compliance with the specifications of the original parts.



1



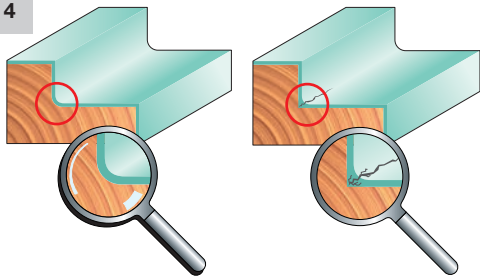
2



3



4



5



## TECHNICAL FEATURES

Spurs are inserts laterally positioned on a cutterheads body. They give a better finish on the side rebates of a profile. For this aim, Freud uses a **triangular insert (RG02M - Fig. 1 and 2)**, constructed in Hard metal to obtain a longer duration of the cutting edge, mounted on cutterheads with disposable knives and Performance cutterheads. The 22 mm cutting edge allows the spur to work the rebate's whole depth, which generally and particularly in the case of windows, doesn't exceed 18 mm of depth. The triangular spur's particular conformation, allows a positioning on the tool so as to obtain a positive hook angle, which combined with the scale of work just described, guarantees an excellent finish on the work surface.

The front of the spur gives a uniform distribution of the shavings for a better finish. Competitors generally use a **square shaped spur** (dimensions: 14 x 14 x 2 mm), with naturally limited efficiency, caused by its geometry as well as by its reduced size. These characteristics and the negative hook angle conferred by the positioning of the spur on the tool, do not allow it to work the whole depth of the rebate.

The surface obtained, will therefore have a precarious finish with possible signs of marking. Freud occasionally uses this type of spur (**RG01M - Fig. 3**), for objective reasons such as insufficient space for the positioning of the spur.

**Beveling and rounding inserts** are used to eliminate hard edges from work pieces. Other than giving a better aesthetic finish, they also allow paint and varnish to be distributed in a more uniform way. Infact, paint and other coating substances, tend to accumulate and become clogged between the hard edges and once dry, tend to peel and lose their protective qualities, exposing the wood to all types of atmospheric conditions (Fig. 4).

**TRIANGULAR ROUNDING SPUR (RG03M - Fig. 5):** this spur carries out the same function as the triangular spur, but possesses a rounded side and carries out a rounding joint of the hard edge on the inside of the rebate. Suitable for carrying out casings or when the material has to be painted or varnished.

**45° BEVELING INSERT (IG01M - Fig. 6):** this insert in hard metal has, thanks to a particular geometry 8 cutting edges. Can be used reversibly and with a double rotation sense (right and left hand), it is particularly indicated for carrying out beveling with dimensions no greater than 3 mm at 45° and to be mounted on tools with a reduced body thickness, where it is not possible to carry out seats for the housing of inserts.

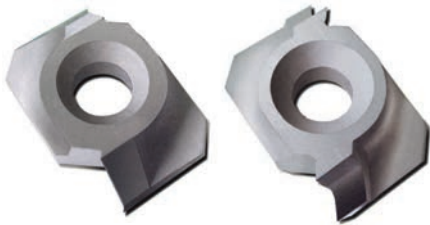
**ROUNDING INSERT (IG02M - Fig. 7):** is constructed with the same technology as the beveling insert (**IG01M**), therefore with 8 cutting edges with a double rotation sense (right and left hand), but also rounds hard edges.



7



8



IG21MD

IG22MD

## TECHNICAL FEATURES

**BEVELING INSERT WITH SHEAR ANGLE (IG21MD/S - Fig. 8):** insert produced in hard metal with 2 cutting edges, constructed with a shear angle, obtained directly from the sintering process. This type of insert guarantees a better finish of the hard edge long grain but most of all cross grain, where working is more difficult.

**ROUNDING INSERT WITH SHEAR ANGLE (IG22MD/S - Fig. 8):** insert produced with the same technology, both in its construction as well as in its geometry, as beveling inserts (IG21MD/S). In more can carry out the rounding of hard edges. Beveling can be carried out by tilting the workpiece a maximum of 15° (corresponding to the grade of the exit angle of the insert); beyond this limit, the workpiece would become marked by the very same insert. The IG21MD/S beveling inserts and IG22MD/S rounding inserts have the advantage of being perfectly interchangeable between themselves.

**45° BEVELING INSERT WITH SHEAR ANGLE (IG51M - Fig. 9 AND 10):** insert produced in hard metal, in which characteristics have been improved from the previous inserts. Has 4 cutting edges whose geometrical configuration permits both right and left hand rotation. The shear angle consents a better finish in the various woodworking conditions, for both long grain and cross grain. The reduced dimensions with respect to the previous inserts allow the insert to be positioned more easily and efficiently.

**ROUNDING INSERT WITH SHEAR ANGLE (IG52M - Fig. 9 and 10):** produced with the same technology, both in its construction as well as in its geometry as the IG51M beveling

inserts, with the only variant of carrying out the rounding of the hard edges. Even these inserts are interchangeable with the IG52M beveling inserts, always keeping in consideration the operational combinations already valued for articles IG21MD/S and IG22MD/S (see example Fig. 6).

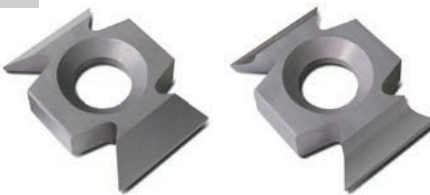
**MULTIPURPOSE INSERT (IG25M - Fig. 11):** produced in hard metal, carries out both the function of a rounding insert and rounding spur, obtaining both operational as well as economical advantages. With this spur and with a single pass, you obtain the finished rebate with the desired depth and the rounding of the hard edges internally as well as externally. These inserts are available with various rebate depths to satisfy all the working processess. Furthermore, being interchangeable between themselves it is possible to carry out rebates with various depths, using the same tool.

**GROOVING INSERT (IG04MD/S - Fig. 12):** produced in hard metal and particularly usefull for carrying out seats and canals for the application of rubber seals and aluminium profiles. The maximum groove depth obtainable is 11 mm. In certain situations it is possible to obtain a greater depth, but limited to only one side of the groove and only if the cutterhead has spurs that intervene on the part exceeding 11 mm, so as to insure a good finish on the work surface.

9



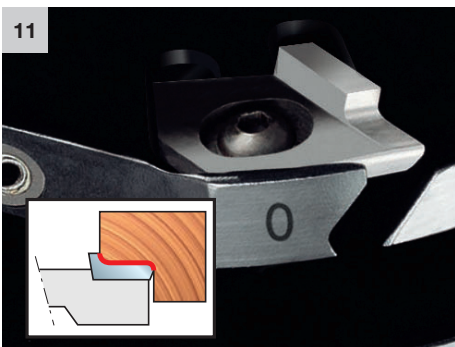
10



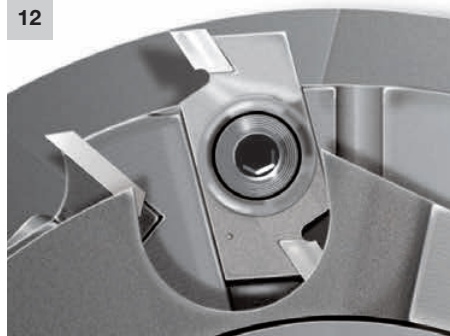
IG51MD

IG52MD

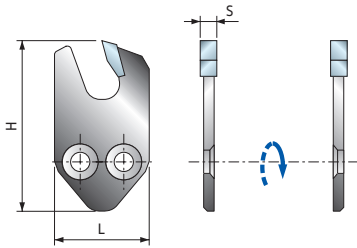
11



12



13



## TECHNICAL FEATURES

**GROOVING INSERTS (SR11MD/S - Fig. 13):** are used for carrying out grooves with a depth of up to 25 mm. These grooving inserts are produced and cut with the same laser technology as that used for the circular saw blades.

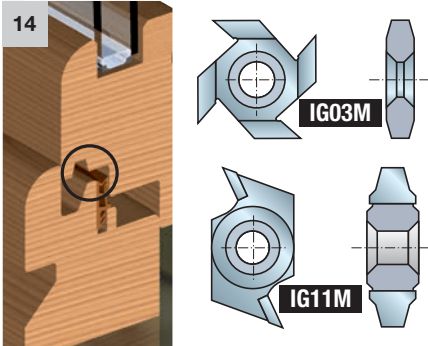
**ANTI CAPILLARY GROOVE INSERTS (IG03M, IG11M - Fig. 14):** produced integrally in hard metal for carrying out grooves for various applications. They possess technical characteristics and different dimensions to satisfy specific necessities for various sectors.

**INSERTS FOR SEALING STRIP SEATS (IG10MD/S - IG13MD/S - Fig. 15):** these articles are constructed in hard metal, used in the window production sector for carrying out grooves to house certain thermic and acoustic rubber seals (Fig. 16).

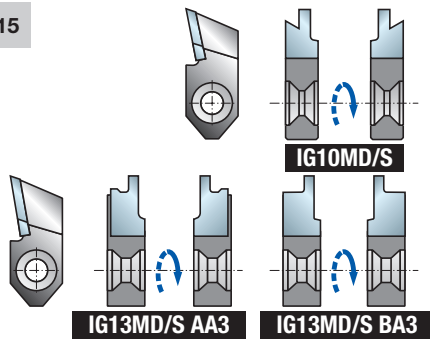
**INSERTS ACCORDING TO THE NORM UNI EN 847-1 (IG61MD/S, IG62MD/S - Fig. 17 AN 18):** the new European Norm UNI EN 847-1 states, that tools destined to be used with manual feed must adopt specific designs, to reduce to the minimum, dangers that may occur to the user. In particular, tools with a non circular form, deflectors must not exceed 1,1 mm in size with respect to the protrusion of the cutting edge. To conform to these new regulations we have produced new beveling inserts (**IG61MD/S**) and new rounding inserts (**IG62MD/S**) which act as deflectors to reduce anti-kickback as imposed by the current norms. Produced in hard metal with a constructive geometry that consents interchangeability between beveling and rounding inserts, using the very same tool's positioning seats. The maximum bevel obtainable is 3 mm x 45°.

**SUPPORTS WITH DEFLECTORS (ID04MD/S - Fig. 19 AND 20):** to adapt the other more common inserts to the new European Norm and render them ideal for working with manual feed, they have been adapted with deflectors which reduce the possibility of anti-kickback. The insert is housed on the very same deflector, made in various versions, so as to combine different inserts which trace the profile. The chosen solution is surely more advantageous for the client, who will be able to use the very same standard insert with both manual and mechanical feed, without having to acquire a double set of spares. The supports with deflector have been studied to be compatible with the following inserts: **IG04MD/S, IG10MD/S, IG11M, IG13MD/S.**

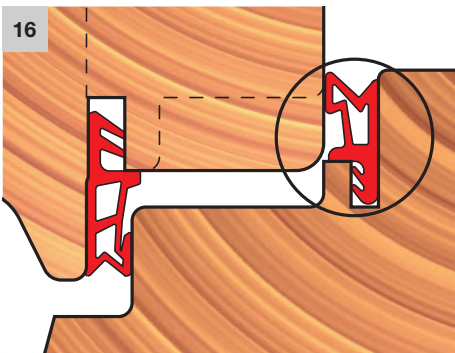
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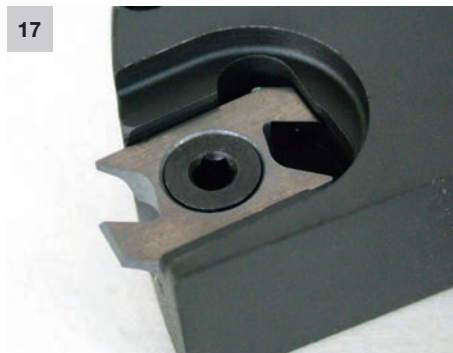
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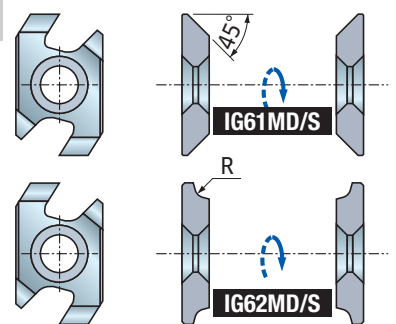
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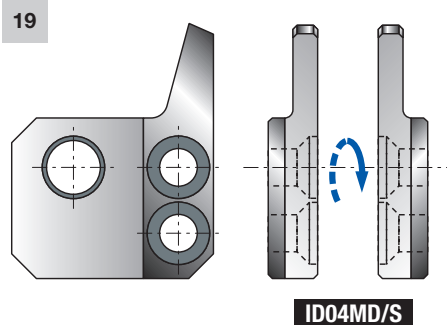
17



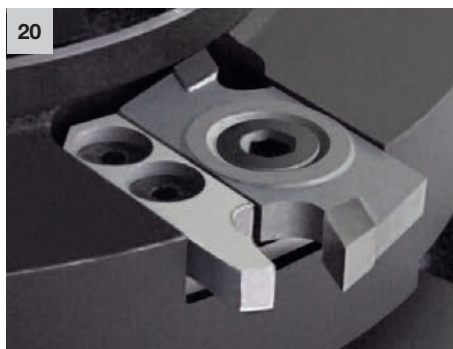
18



19



20

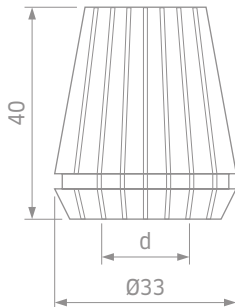
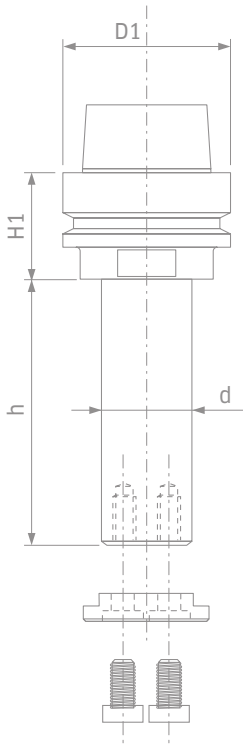


# Accessories and Spare Parts

Freud offers the most complete range of industrial quality accessories and spare parts, suitable for all machine types, both stationary and portable. The portfolio includes an extensive selection of tool holders, spacers, screws and accessories designed to fulfill the demands of the industry.

Users benefit from a broad range of standard products, for cost effective solutions and custom accessories, for more specific needs. Standard or custom, Freud's solutions always grant the greatest precision and outstanding performance.





Leading technology for accessories and spare parts ..... Page 532

**COMPONENTS**

**Chucks for boring machines**

MP01MD-MP01MS Chucks for bits for multiboring machines ..... Page 535  
 MP20M Spring adaptors for twist drills ..... Page 535

**Chucks and accessories for CNC routers**

AP08M Spindle for overhead routers ..... Page 536  
 MP05M High precision spindles - ISO30 ..... Page 537  
 MP06MD High precision chucks - ISO30 ..... Page 537  
 MP07M High precision Nickel coated spindles - HSK 63 E ..... Page 538  
 MP08M High precision Nickel coated chucks - HSK 63 E ..... Page 538  
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 CD01M Pull studs for chucks ISO30 ..... Page 540  
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**Bushes and accessories**

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 BLA Standard reduction rings for saw blades ..... Page 543  
 BF01M Standard reduction rings for cutterhead ..... Page 543  
 3105M Reducing bushes ..... Page 544  
 FX01M Reducing bushes ..... Page 544  
 FX02M Reducing bushes ..... Page 544  
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 AN01M Spacers ..... Page 545  
 AN01 Special spacers ..... Page 548  
 AN03M Standard spacer set ..... Page 548  
 CC01 Ball bearing guide for moulding ..... Page 549  
 3102M Ball bearing ..... Page 549  
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 3103MC Sleeved speciality bearings ..... Page 549

**KEYS AND DEVICES**

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 OPT04 Standard keyway ..... Page 557  
 OPT09 Re-boring for cutterheads and brazed cutters ..... Page 557

**Maintenance tools**

SAG1M Maintenance tool for cutterhead sets ..... Page 557  
 SAG2M Clamping device with rolling bearing ..... Page 558  
 TA01M Device for grinding Performance knives ..... Page 558  
 TA02M Device for grinding Performance knives ..... Page 558  
 TA03M Support for grinding Performance knives ..... Page 558

Torque values for screws and grub screws used for tightening Freud's knives and inserts ..... Page 559

Tips for the correct use ..... Page 560

Technical features ..... Page 561

# LEADING TECHNOLOGY

## EXTENSIVE RANGE

Freud provides a comprehensive range of premium accessories and spare parts, standard and custom. The wide range of bore sizes provides a suitable option for all machine types, both traditional and automated CNC machines.

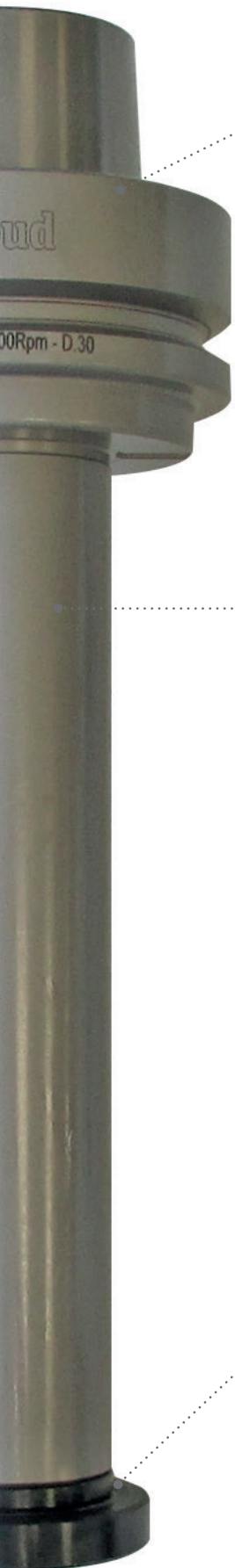


## MAINTENANCE KEYS & ACCESSORIES

Tool maintenance represents the best practice to maintain cutting edges sharp and ensure the proper tool alignment. Cutting tools for wood applications require special care, beyond regular cleaning. Clamping surfaces must be free of dirt, grease, oil and water to perform efficiently.

For this reason, Freud has specifically designed a range of accessories (including keys, wrenches and clamping devices) to perform the most accurate tool maintenance and provide the perfect solution to reach the highest results in the woodworking processes.





## PIONEERING SOLUTIONS

Freud leverages its long-term expertise, engineering know-how and industrial competence to offer safer, faster and more efficient solutions to the most challenging market needs.

To achieve maximum results in all applications, Freud employs the most advanced technologies. For its new Nickel Coated Mandrel range - for example - cementing and hardening treatments are used to withstand higher temperatures and improve wear resistance, for an extended lifetime and improved performance.

In addition to achieve the highest rust protection, the tools undergo a series of acid baths and ultrasonic cleaning before receiving the final nickel-plating treatment (nickel depth 7  $\mu\text{m}$ ).

## FINEST BALANCING - G2.5



ISO 1940-1 G2.5 grades at maximum RPM.

An accurate balancing at maximum speed (G2.5 ISO 1940-1), combined with the excellent rust protection, ensures an ideal and durable clamping of the tools, in the most demanding CNC routing applications.

All Freud's tool holders are designed to be equipped with a microchip, ready to be programmed for tool management systems.

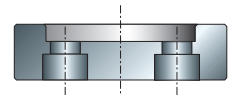
## FLANGES

Freud provides different flange types.

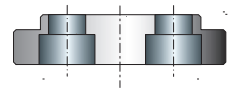
Flange **Type B** is the standard.

Flange **Type A** is the optional with no. 3 M6 fixing screws.

Available on request.



Flange Type A

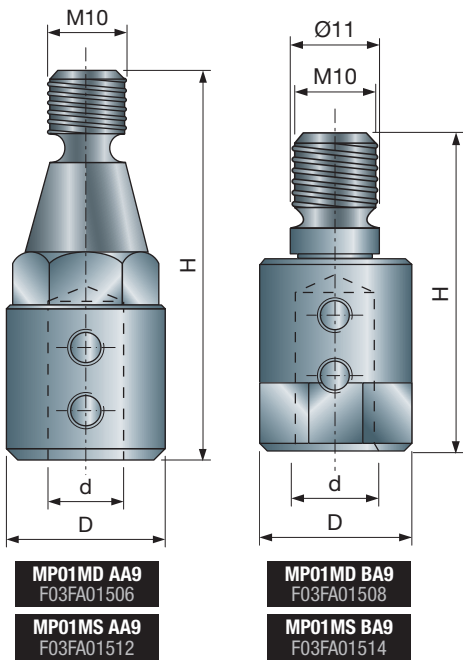


Flange Type B

# Components







## MP01MD MP01MS

## Chucks for bits for multiboring machines

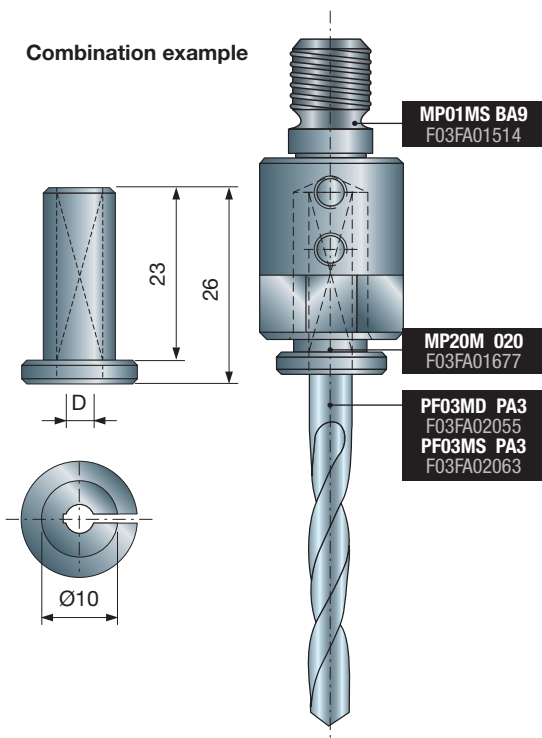
D mm	H mm	d mm	Rotation	Freud Code	Art. No.	Freud Code	Art. No.	
				Right (D)		Left (S)		
*	19	47	10	RH	MP01MD AA9	F03FA01506	MP01MS AA9	F03FA01512
				Right (D)		Left (S)		
**	19	41	10	LH	MP01MD BA9	F03FA01508	MP01MS BA9	F03FA01514
Spare parts				Dimensions	Freud Code	Art. No.		
Screw				mm	2615M DD9	F03FA07423		
				M6 x 6				

Freud standard chucks for router bits.

\* **MP...AA9:** Shanks for: Alberti, Balestrini, Bilek, Busellato, Ompec, Reimall, Schlicher, SCM, Tanzani, Viciani, Vitap, Weingärter.

\*\* **MP...BA9:** Shanks for: Alberti, Balestrini, Biesse, Busellato, Gessner, Morbidelli, Torwegge, Weeke.

### Combination example

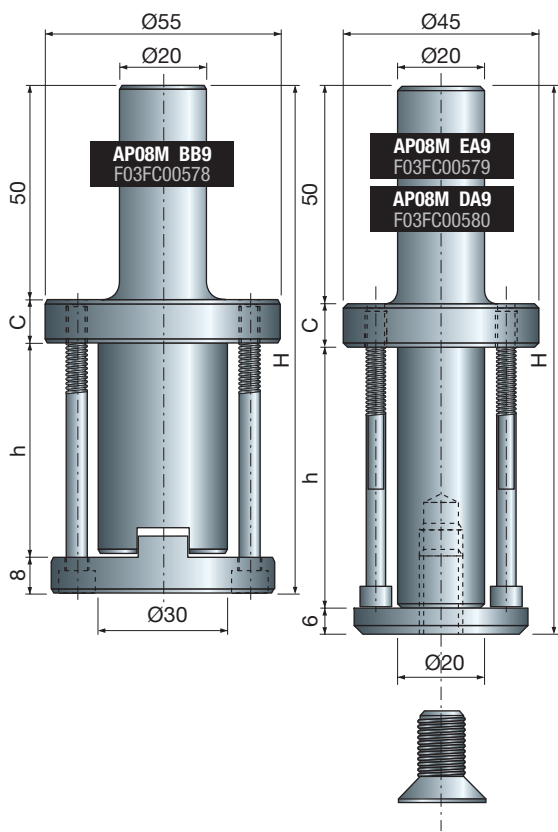


## MP20M

## Spring adaptors for twist drills

D mm	Freud Code	Art. No.
2	MP20M 020	F03FA01677
2,5	MP20M 025	F03FA01678
3	MP20M 030	F03FA01679
3,2	MP20M 032	F03FA01680
3,5	MP20M 035	F03FA01681
4	MP20M 040	F03FA01682
4,5	MP20M 045	F03FA01683
5	MP20M 050	F03FA01684
6	MP20M 060	F03FA01686
8	MP20M 080	F03FA01690

Adaptors for drill bits (as PF03MD/S) suitable for **MP01MD/S** chucks.



## AP08M

## Spindle for overhead routers

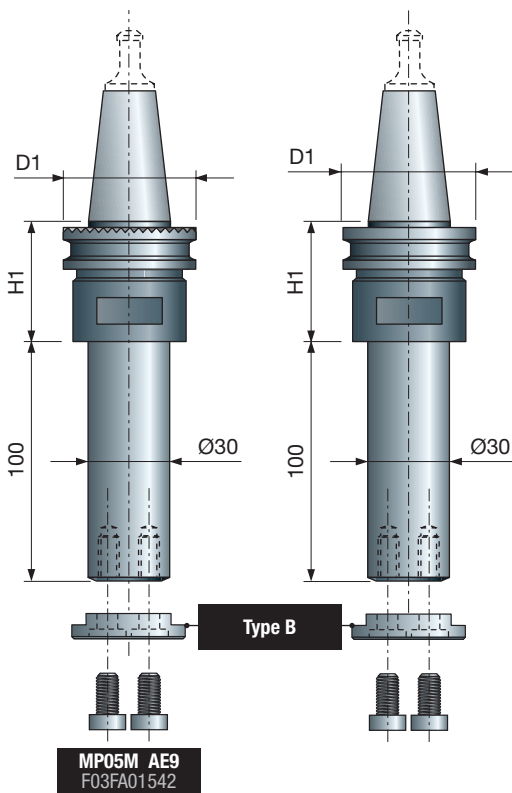
D	h	H	C	Freud Code	Art. No.
mm	mm	mm			
20	33	93	12	AP08M DA9	F03FC00579
20	60	120	10	AP08M EA9	F03FC00580
30	50	118	12	AP08M BB9	F03FC00578

Spindles for manual or overhead CNC router machines with 20x50 mm shank.

**AP08M DA3** and **AP08M EA9** suitable for mounting tool with bore Ø20 mm, while the **AP08M BB9** is suitable for mounting tool with bore Ø30 mm.

- The **AP08M BB9** includes an anti-rotation ring nut and the housing for the screws that fasten the tool to the chuck.

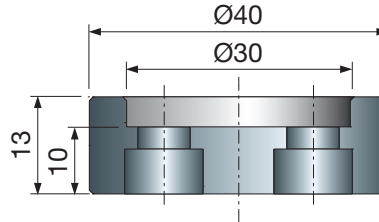
## MP05M High precision spindles - ISO30



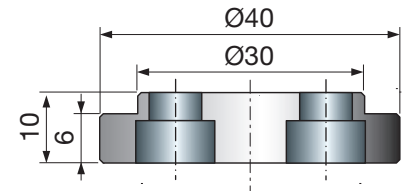
D1 mm	H1 mm	Router	Freud Code	Art. No.
50	35	Universal	MP05M AA9	F03FA01538
50	35	Biesse	MP05M AB9	F03FA01539
46	35	CMS	MP05M AC9	F03FA01540
49	41	SCM - Morbidelli	MP05M AE9	F03FA01542

Flange Type A

**FX09M AA9**  
F03FA13481



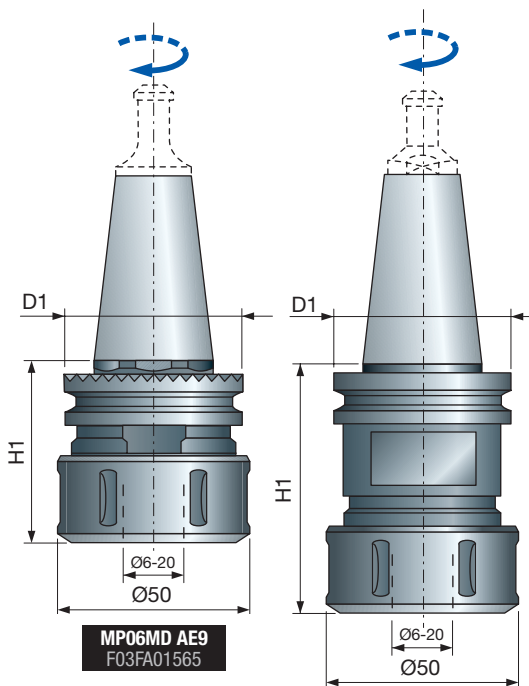
Flange Type B



Spindles for overhead CNC machines with **ISO30** shank for Ø30 mm tools bore.

- Standard chucks are provided with **Type B** flange **Type A** flange **Type A** is supplied on demand.
- Terminal pin **CD01M** is not included.

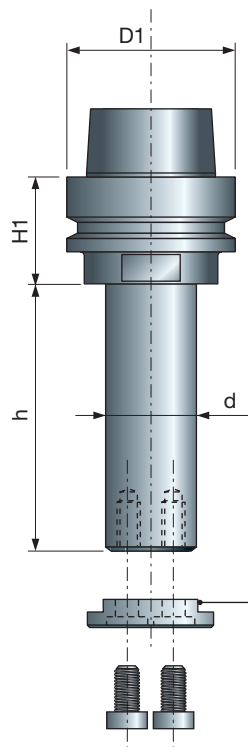
## MP06MD High precision chucks - ISO30



D mm	H mm	Router	Freud Code	Art. No.
50	67	Universal	MP06MD AA9	F03FA01561
50	50	Biesse	MP06MD AB9	F03FA01562
46	60	CMS	MP06MD AC9	F03FA01563
58	50	Esseteam	MP06MD AD9	F03FA01564
49	55	SCM - Morbidelli	MP06MD AE9	F03FA01565

Chucks for overhead CNC machines with **ISO30** shank.

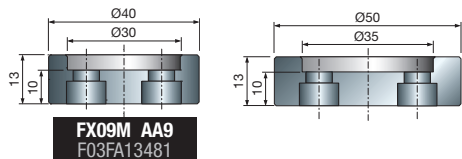
- Locking ring **ER32 RH**.
- Ideal for router bits with cylindrical shank.
- Terminal pin **CD01M** and **MP06M** collet not included.



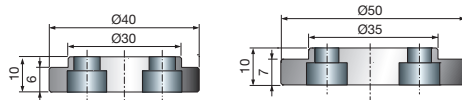
Spindles for CNC overhead CNC machines with **HSK 63 E** shank.

- Nickel coating treatment to prevent rust.
- G2,5 balancing for high speed applications.
- Standard spindles with **Type B** flange, **Type A** on demand.

#### Flange Type A



#### Flange Type B



## MP07M

### High precision Nickel coated spindles - HSK 63 E

h mm	H1 mm	d mm	D1 mm	Freud Code	Art. No.
50	33	30	63	MP07M30050	F03FB22386
60	33	30	63	MP07M30060	F03FB22387
70	33	30	63	MP07M30070	F03FB22388
80	33	30	63	MP07M30080	F03FB22389
90	33	30	63	MP07M30090	F03FB22390
100	33	30	63	MP07M30100	F03FB22391
110	33	30	63	MP07M30110	F03FB22392
120	33	30	63	MP07M30120	F03FB22393
130	33	30	63	MP07M30130	F03FB22394
140	33	30	63	MP07M30140	F03FB22395
150	33	30	63	MP07M30150	F03FB22396
160	33	30	63	MP07M30160	F03FB22397
170	33	30	63	MP07M30170	F03FB22398
180	33	30	63	MP07M30180	F03FB22399
190	33	30	63	MP07M30190	F03FB22400
200	33	30	63	MP07M30200	F03FB22401
210	33	30	63	MP07M30210	F03FB22402
220	33	30	63	MP07M30220	F03FB22403
230	33	30	63	MP07M30230	F03FB22404
50	33	35	63	MP07M35050	F03FB22405
60	33	35	63	MP07M35060	F03FB22406
70	33	35	63	MP07M35070	F03FB22407
80	33	35	63	MP07M35080	F03FB22408
90	33	35	63	MP07M35090	F03FB22409
100	33	35	63	MP07M35100	F03FB22410
110	33	35	63	MP07M35110	F03FB22411
120	33	35	63	MP07M35120	F03FB22412
130	33	35	63	MP07M35130	F03FB22413
140	33	35	63	MP07M35140	F03FB22414
150	33	35	63	MP07M35150	F03FB22415
160	33	35	63	MP07M35160	F03FB22416
170	33	35	63	MP07M35170	F03FB22417
180	33	35	63	MP07M35180	F03FB22418
190	33	35	63	MP07M35190	F03FB22419
200	33	35	63	MP07M35200	F03FB22420
210	33	35	63	MP07M35210	F03FB22421
220	33	35	63	MP07M35220	F03FB22422
230	33	35	63	MP07M35230	F03FB22423
245	33	35	63	MP07M35245	F03FB22424
245	33	40	63	MP07M40245	F03FB22425

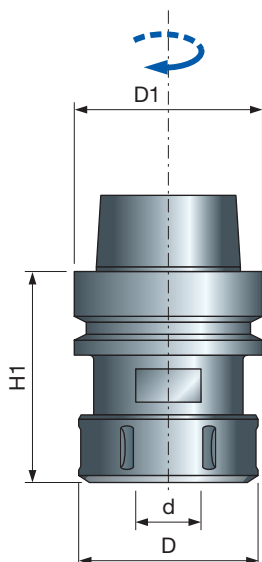
## MP08M

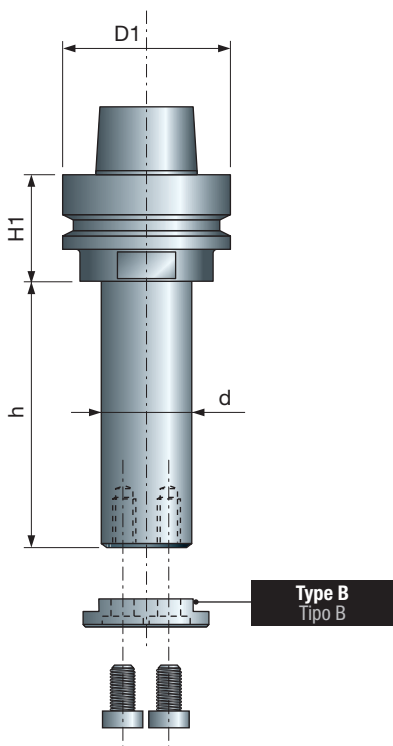
### High precision Nickel coated chucks - HSK 63 E

H1 mm	D mm	d mm	D1 mm	Freud Code	Art. No.
73	50	4-20	63	MP08MDC AA9	F03FA19217
78	63	6-25	63	MP08MDC BA9	F03FA19218

Chucks for CNC overhead CNC machines with **HSK 63 E** shank.

- Nickel coating treatment to prevent rust.
- G2,5 balancing for high speed applications.
- **ER32 RH** locking ring for item **MP08MDC AA9**.
- **ER40 RH** for **MP08MDC BA9**.
- Collet not included.

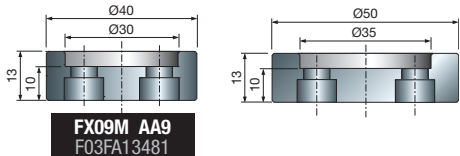




Spindles for CNC overhead CNC machines with **HSK 63 F** shank.

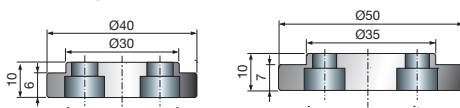
- Nickel coating treatment to prevent rust.
- G2,5 balancing for high speed applications.
- Standard spindles with **Type B** flange, **Type A** on demand.

#### Flange Type A



**FX09M AA9**  
F03FA13481

#### Flange Type B



## MP09M

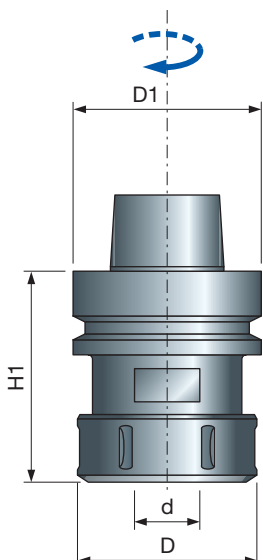
### High precision Nickel coated spindles - HSK 63 F

h mm	H1 mm	d mm	D1 mm	Freud Code	Art. No.
50	33	30	63	MP09M30050	F03FB22426
60	33	30	63	MP09M30060	F03FB22427
70	33	30	63	MP09M30070	F03FB22428
80	33	30	63	MP09M30080	F03FB22429
90	33	30	63	MP09M30090	F03FB22430
100	33	30	63	MP09M30100	F03FB22431
110	33	30	63	MP09M30110	F03FB22432
120	33	30	63	MP09M30120	F03FB22433
130	33	30	63	MP09M30130	F03FB22434
140	33	30	63	MP09M30140	F03FB22435
150	33	30	63	MP09M30150	F03FB22436
160	33	30	63	MP09M30160	F03FB22437
170	33	30	63	MP09M30170	F03FB22438
180	33	30	63	MP09M30180	F03FB22439
190	33	30	63	MP09M30190	F03FB22440
200	33	30	63	MP09M30200	F03FB22441
50	33	35	63	MP09M35050	F03FB22442
60	33	35	63	MP09M35060	F03FB22443
70	33	35	63	MP09M35070	F03FB22444
80	33	35	63	MP09M35080	F03FB22445
90	33	35	63	MP09M35090	F03FB22446
100	33	35	63	MP09M35100	F03FB22447
110	33	35	63	MP09M35110	F03FB22448
120	33	35	63	MP09M35120	F03FB22449
130	33	35	63	MP09M35130	F03FB22450
140	33	35	63	MP09M35140	F03FB22451
150	33	35	63	MP09M35150	F03FB22452
160	33	35	63	MP09M35160	F03FB22453
170	33	35	63	MP09M35170	F03FB22454
180	33	35	63	MP09M35180	F03FB22455
190	33	35	63	MP09M35190	F03FB22456
200	33	35	63	MP09M35200	F03FB22457

## MP10M

### High precision Nickel coated chucks - HSK 63 E

H1 mm	D mm	d mm	D1 mm	Freud Code	Art. No.
73	50	4-20	63	MP10MDC AA9	F03FA19227
78	63	6-25	63	MP10MDC BA9	F03FA19228



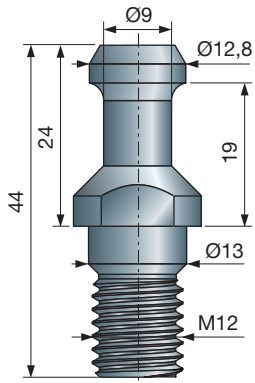
Chucks for CNC overhead CNC machines with **HSK 63 E** shank.

- Nickel coating treatment to prevent rust.
- G2,5 balancing for high speed applications.
- **ER32 RH** locking ring for item **MP10MDC AA9**.
- **ER40 RH** for **MP10MDC BA9**.
- Collet not included.

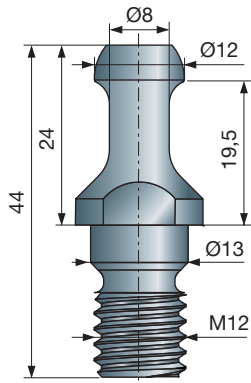
## CD01M

## Pull studs for chucks ISO30

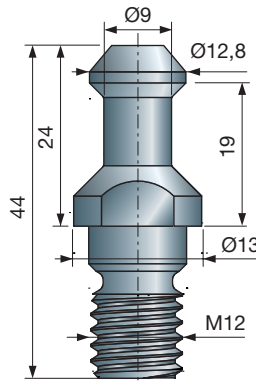
Terminal pins for ISO30 chucks and spindles.



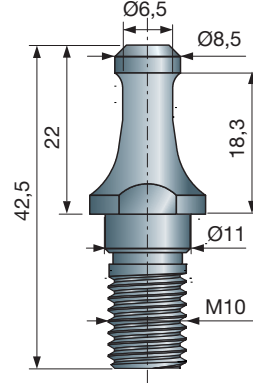
**CD01M AA9**  
F03FA00537



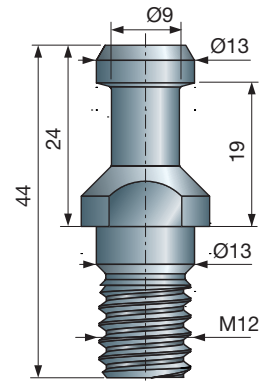
**CD01M BA9**  
F03FA00538



**CD01M CA9**  
F03FA00539

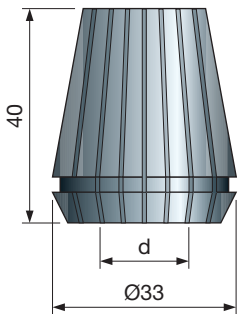


**CD01M DA9**  
F03FA00540



**CD01M EA9**  
F03FA00541

For routers:	Freud Code	Art. No.
CMS	<b>CD01M AA9</b>	F03FA00537
Biesse, Masterwood	<b>CD01M BA9</b>	F03FA00538
Alberti, Masterwood	<b>CD01M CA9</b>	F03FA00539
SCM, Morbidelli	<b>CD01M DA9</b>	F03FA00540
Busellato, IMA, Weeke, Maka	<b>CD01M EA9</b>	F03FA00541

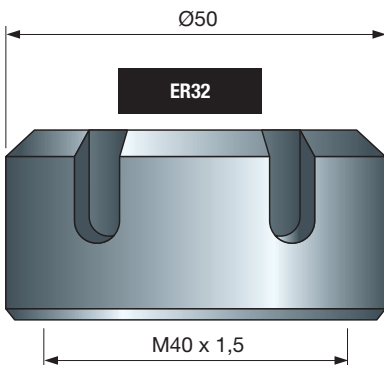


Collet for router bits with cylindrical shank.  
Suitable for **MP06MD**, **MP08MDC AA9** and  
**MP10MDC AA9** chucks.

## MP06M

## High precision collet for ER32 locking rings

d	H	Clamping range	Freud Code	Art. No.
4	40	4÷3	<b>MP06M 049</b>	F03FA01550
6	40	6÷5	<b>MP06M 069</b>	F03FA01551
8	40	8÷7	<b>MP06M 089</b>	F03FA01553
10	40	10÷9	<b>MP06M 109</b>	F03FA01554
12	40	12÷11	<b>MP06M 129</b>	F03FA01555
14	40	14÷13	<b>MP06M 149</b>	F03FA01557
16	40	16÷15	<b>MP06M 169</b>	F03FA01558
18	40	18÷17	<b>MP06M 189</b>	F03FA01559
20	40	20÷19	<b>MP06M 209</b>	F03FA01560

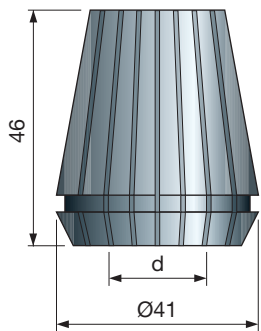


Locking rings suitable for universal high precision chucks with **MP06M** collet.

## GH32M

## High precision locking ring

D	Locking ring	Freud Code	Art. No.
50	ER32	<b>GH32M AA9</b>	F03FA01400

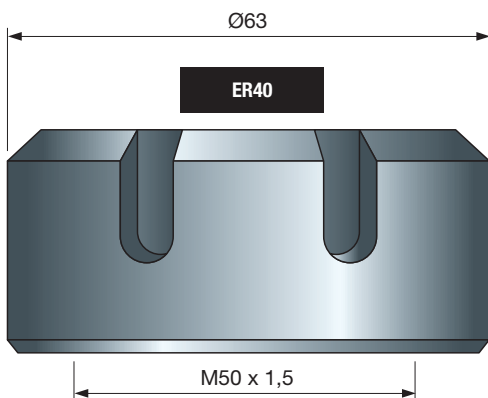


Collets for router bits with cylindrical shank.  
Suitable for **MP08MDC BA9** and **MP10MDC BA9** chucks.

## MP16M

### High precision collet for ER40 locking rings

d mm	H mm	Clamping range	Freud Code	Art. No.
6	46	6÷5	<b>MP16M 069</b>	F03FA01666
8	46	8÷7	<b>MP16M 089</b>	F03FA01667
10	46	10÷9	<b>MP16M 109</b>	F03FA01668
12	46	12÷11	<b>MP16M 129</b>	F03FA01669
14	46	14÷13	<b>MP16M 149</b>	F03FA01670
16	46	16÷15	<b>MP16M 169</b>	F03FA01671
18	46	18÷17	<b>MP16M 189</b>	F03FA01672
20	46	20÷19	<b>MP16M 209</b>	F03FA01673
25	46	25÷24	<b>MP16M 259</b>	F03FA01675

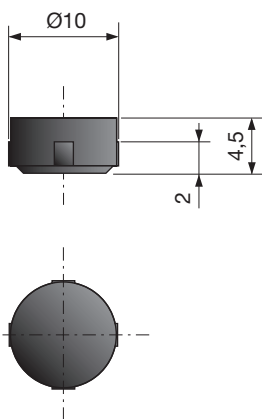


Locking rings suitable for universal high precision chucks with **MP16M** collet.

## GH40M

### High precision locking ring

D mm	Locking ring	Freud Code	Art. No.
63	ER40	<b>GH40M AA9</b>	F03FA01401



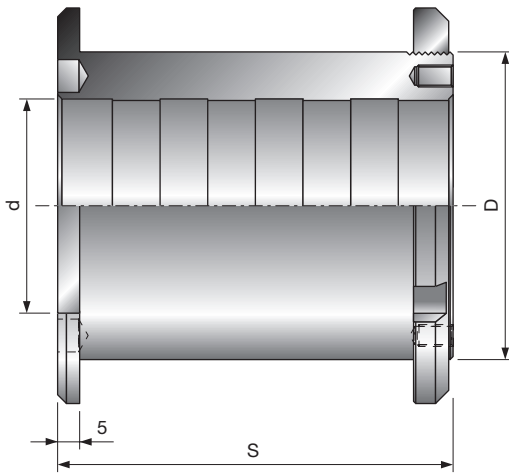
## MC01M

### Encoding microchip for smart tools

D mm	H mm	h mm	Freud Code	Art. No.
10	4,5	2	<b>MC01M 010</b>	F03FB01638

Microchip suitable for machines set up to read and write data for tool recognition.

- Circular in shape, it has storage capacity of 511 bytes.
- To be used at temperatures from 0° to + 70°.



Standard Freud's sleeves for complex tools with threaded locking nut.

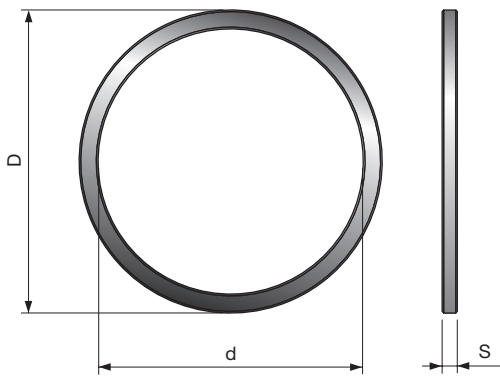
## BF10MD BF10MS

## Sleeves with locking nut

D mm	S mm	d mm	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
50	110	30	<b>BF10MD AA9</b>	F03FC00616	<b>BF10MS AA9</b>	F03FC00661
50	130	30	<b>BF10MD AD9</b>	F03FC00619	<b>BF10MS AD9</b>	F03FC00664
50	60	35	<b>BF10MD AG9</b>	F03FC00622	-	-
50	110	35	<b>BF10MD AB9</b>	F03FC00617	<b>BF10MS AB9</b>	F03FC00662
50	130	35	<b>BF10MD AE9</b>	F03FC00620	-	-
50	110	40	<b>BF10MD AC9</b>	F03FC00618	<b>BF10MS AC9</b>	F03FC00663
50	130	40	<b>BF10MD AF9</b>	F03FC00621	<b>BF10MS AF9</b>	F03FC00665
55	110	35	<b>BF10MD BA9</b>	F03FC00625	<b>BF10MS BA9</b>	F03FS07470
55	130	35	<b>BF10MD BC9</b>	F03FS07469	<b>BF10MS BC9</b>	F03FS07471
55	110	40	<b>BF10MD BB9</b>	F03FS07468	-	-
55	130	40	<b>BF10MD BD9</b>	F03FC00626	<b>BF10MS BD9</b>	F03FC00668
60	90	32	<b>BF10MD DL9</b>	F03FC24537	-	-
60	85	35	<b>BF10MD KB9</b>	F03FC00643	-	-
60	90	35	<b>BF10MD DB9</b>	F03FC00630	-	-
60	110	35	<b>BF10MD CB9</b>	F03FC00627	-	-
60	85	40	<b>BF10MD KC9</b>	F03FC00644	-	-
60	90	40	<b>BF10MD DC9</b>	F03FC00631	<b>BF10MS DC9</b>	F03FC00669
60	110	40	<b>BF10MD CC9</b>	F03FC00628	-	-
60	85	50	<b>BF10MD KD9</b>	F03FC00645	-	-
60	90	50	<b>BF10MD DD9</b>	F03FC00632	-	-
60	110	50	<b>BF10MD CD9</b>	F03FC00629	-	-
70	75	30	<b>BF10MD LA9</b>	F03FC00646	-	-
70	85	30	-	-	<b>BF10MS HA9</b>	F03FC00676
70	90	30	<b>BF10MD EA9</b>	F03FC24536	-	-
70	90	32	<b>BF10MD EL9</b>	F03FC24537	<b>BF10MS EL9</b>	-
70	85	35	<b>BF10MD HB9</b>	F03FC00638	-	-
70	90	35	<b>BF10MD EB9</b>	F03FC00633	<b>BF10MS EB9</b>	F03FC00671
70	75	40	<b>BF10MD LC9</b>	F03FC00647	-	-
70	85	40	<b>BF10MD HC9</b>	F03FC00639	-	-
70	90	40	<b>BF10MD EC9</b>	F03FC00634	<b>BF10MS EC9</b>	F03FC00672
*	70	40	<b>BF10MD QD9</b>	F03FC00653	<b>BF10MS QD9</b>	F03FC00685
*	70	45	<b>BF10MD PD9</b>	F03FC00652	<b>BF10MS PD9</b>	F03FC00684
*	70	50	<b>BF10MD OD9</b>	F03FC00651	<b>BF10MS OD9</b>	F03FC00683
*	70	55	<b>BF10MD ND9</b>	F03FC00650	<b>BF10MS ND9</b>	F03FC00682
*	70	60	<b>BF10MD MD9</b>	F03FC00649	<b>BF10MS MD9</b>	F03FC00681
*	70	65	<b>BF10MD ID9</b>	F03FC00641	<b>BF10MS ID9</b>	F03FC00679
*	70	70	<b>BF10MD GD9</b>	F03FC00637	<b>BF10MS GD9</b>	F03FC00675
*	70	75	<b>BF10MD LD9</b>	F03FC00648	<b>BF10MS LD9</b>	F03FC00680
*	70	80	<b>BF10MD FD9</b>	F03FC00636	<b>BF10MS FD9</b>	F03FC00674
*	70	85	<b>BF10MD HD9</b>	F03FC00640	<b>BF10MS HD9</b>	F03FC00678
*	70	90	<b>BF10MD ED9</b>	F03FC00635	<b>BF10MS ED9</b>	F03FC00673

\* Item already fitted with pin holes.



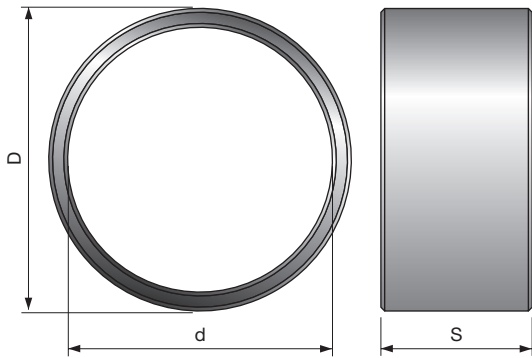


Standard reduction rings suitable for circular saw blades.

## BLA

### Standard reduction rings for saw blades

D mm	S mm	d mm	Freud Code	Art. No.
15.88	0.8	10	BLA08158100	F03FA23018
20	1.2	12.7	BL15M20127	F03FC00694
20	1.5	16	BLA15200160V01	F03FS11956
20	1.8	16	BLA18200160V01	F03FS11960
25.4	1.0	19.05	BLA10254190V01	F03FS11954
25.4	1.2	20	BLA12254200V01	F03FS11955
30	1.5	15.88	BLA15300158	F03FA23019
30	1.8	15.88	BLA18300158	F03FA23020
30	1.5	20	BLA15300200V01	F03FS11957
30	1.8	20	BLA18300200	F03FA23021
30	1.5	25	BLA15300250V01	F03FS11958
30	1.8	25	BLA18300250	F03FA23022
30	1.5	25.4	BLA15300254V01	F03FS11959
30	1.8	25.4	BLA18300254V01	F03FS11961
35	1.8	25.4	BLA18350254	F03FA22201
35	1.8	30	BLA18350300	F03FA23023

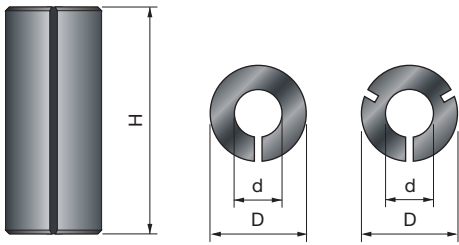


Standard reduction rings suitable for cutterheads.

## BF01M

### Standard reduction rings for cutterheads

D mm	S mm	d mm	Freud Code	Art. No.
35	5	30	BF01M AA9	F03FC00604
35	10	30	BF01M AB9	F03FC00605
35	15	30	BF01M AC9	F03FC00606
35	20	30	BF01M AD9	F03FC00607
35	25	30	BF01M AE9	F03FC00608
35	50	30	BF01M AF9	F03FC00609
40	5	35	BF01M BA9	F03FC00610
40	10	35	BF01M BB9	F03FC00611
40	15	35	BF01M BC9	F03FC00612
40	20	35	BF01M BD9	F03FC00613
40	25	35	BF01M BE9	F03FC00614
40	50	35	BF01M BF9	F03FC00615

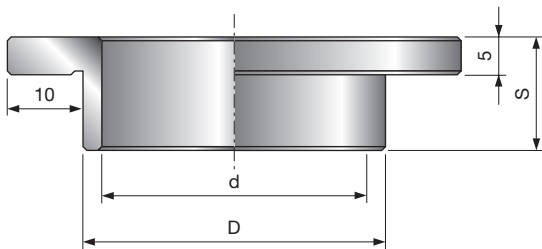


Reducing bushes for router bits.

## 3105M

## Reducing bushes

D mm	S mm	d mm	Freud Code	Art. No.
8	25	6	3105MVY250	F03FA10588
8	25	6,35	3105MVX250	F03FA10587
9,5	25	6	3105MUY250	F03FA10586
9,5	25	6,35	3105MUX250	F03FA10585
9,5	25	8	3105MUV250	F03FA10584
10	25	8	3105MTV250	F03FA10582
12	25	6	3105MSY250	F03FA10581
12	25	8	3105MSV250	F03FA10580
12	25	10	3105MST250	F03FA10579
12,7	25	6	3105MRY250	F03FA10578
12,7	25	6,35	3105MRX250	F03FA10577
12,7	25	8	3105MRV250	F03FA10576
12,7	25	9,5	3105MRU250	F03FA10575
16	25	13	3105MQQ250	F03FA10574

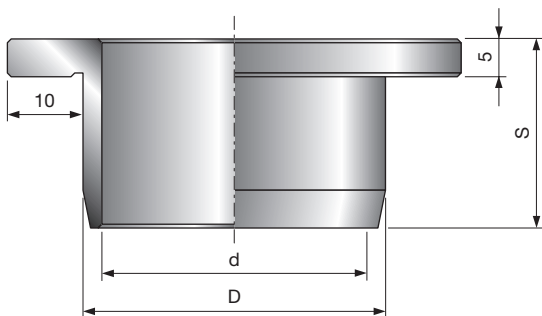


Reducing bushes for cutterheads with shoulder.

## FX01M

## Reducing bushes

D mm	S mm	d mm	Freud Code	Art. No.
30	15	25	FX01M AA9	F03FC15031
35	15	30	FX01M BA9	F03FC15033
40	15	30	FX01M CA9	F03FC15035
40	15	35	FX01M CB9	F03FC15036
50	15	30	FX01M DA9	F03FC15037
50	15	35	FX01M DB9	F03FC15038
50	15	40	FX01M DC9	F03FC15039
68	10	40	FX01M HC9	F03FC15041

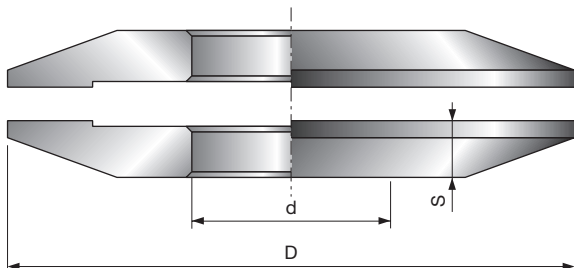


Reducing bushes for cutterheads with shoulder.  
• Suitable for planer heads **TM06M** and **TM07M**.

## FX02M

## Reducing bushes

D mm	S mm	d mm	Freud Code	Art. No.
40	25	35	FX02M CB9	F03FC15043

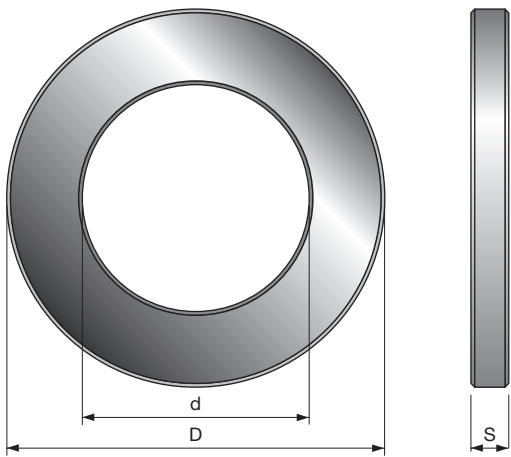


Stiffening collars suitable for circular saw blades.

## FX03M

## Stiffening collars for saw blades

D mm	S mm	d mm	Freud Code	Art. No.
80	10	30	FX03M AA9	F03FC15045
80	10	35	FX03M AB9	F03FC15047
100	10	30	FX03M BA9	F03FC15049
100	10	35	FX03M BB9	F03FC15051
100	10	40	FX03M BC9	F03FC15053
125	10	30	FX03M CA9	F03FC15055
125	10	35	FX03M CB9	F03FC15057



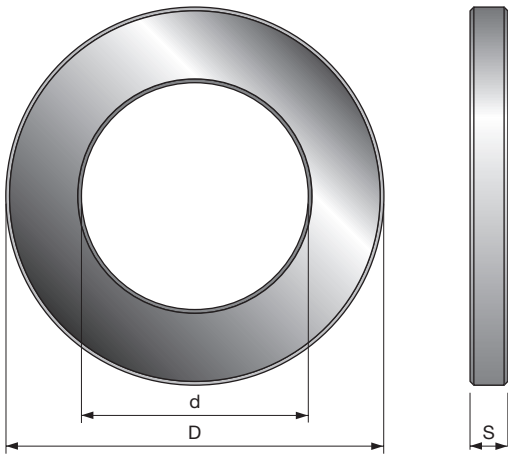
Standard spacers suitable for cutterheads.

# AN01M

# Spacers

D mm	S mm	d mm	Freud Code	Art. No.
48	24,6	31,75	AN01MM2469	F03FC00385
48	99	31,75	AN01MM9909	F03FC00386
50	0,1	30	AN01MA0019	F03FC00030
50	0,2	30	AN01MA0029	F03FC00031
50	0,3	30	AN01MA0039	F03FC00032
50	0,5	30	AN01MA0059	F03FC00033
50	1	30	AN01MA0109	F03FC00034
50	2	30	AN01MA0209	F03FC00035
50	3	30	AN01MA0309	F03FC00036
50	4	30	AN01MA0409	F03FC00037
50	5	30	AN01MA0509	F03FC00038
50	6	30	AN01MA0609	F03FC00040
50	7	30	AN01MA0709	F03FC00041
50	8	30	AN01MA0809	F03FC00042
50	9	30	AN01MA0909	F03FC00043
50	10	30	AN01MA1009	F03FC00044
50	11	30	AN01MA1109	F03FC00045
50	12	30	AN01MA1209	F03FC00046
50	13	30	AN01MA1309	F03FC00047
50	14	30	AN01MA1409	F03FC00048
50	15	30	AN01MA1509	F03FC00049
50	16	30	AN01MA1609	F03FC00050
50	17	30	AN01MA1709	F03FC00051
50	18	30	AN01MA1809	F03FC00052
50	19	30	AN01MA1909	F03FC00053
50	20	30	AN01MA2009	F03FC00054
50	21	30	AN01MA2109	F03FC00055
50	22	30	AN01MA2209	F03FC00056
50	23	30	AN01MA2309	F03FC00057
50	24	30	AN01MA2409	F03FC00058
50	25	30	AN01MA2509	F03FC00059
50	26	30	AN01MA2609	F03FC00060
50	27	30	AN01MA2709	F03FC00061
50	28	30	AN01MA2809	F03FC00062
50	29	30	AN01MA2909	F03FC00063
50	30	30	AN01MA3009	F03FC00064
50	31	30	AN01MA3109	F03FC00065
50	32	30	AN01MA3209	F03FC00066
50	33	30	AN01MA3309	F03FC00067
50	34	30	AN01MA3409	F03FC00068
50	35	30	AN01MA3509	F03FC00069
50	36	30	AN01MA3609	F03FC00070
50	37	30	AN01MA3709	F03FC00071
50	38	30	AN01MA3809	F03FC00072
50	40	30	AN01MA4009	F03FC00073
50	41	30	AN01MA4109	F03FC00074
50	42	30	AN01MA4209	F03FC00075
50	53	30	AN01MA5309	F03FC00076
50	60	30	AN01MA6009	F03FC00077
50	93	30	AN01MA9309	F03FC00079
50	99	30	AN01MA9909	F03FC00080
55	0,1	35	AN01MB0019	F03FC00081
55	0,2	35	AN01MB0029	F03FC00082
55	0,3	35	AN01MB0039	F03FC00083
55	0,5	35	AN01MB0059	F03FC00084
55	1	35	AN01MB0109	F03FC00085
55	2	35	AN01MB0209	F03FC00086
55	3	35	AN01MB0309	F03FC00087
55	4	35	AN01MB0409	F03FC00088
55	5	35	AN01MB0509	F03FC00089
55	6	35	AN01MB0609	F03FC00091
55	7	35	AN01MB0709	F03FC00092
55	8	35	AN01MB0809	F03FC00093
55	9	35	AN01MB0909	F03FC00094
55	10	35	AN01MB1009	F03FC00095

D mm	S mm	d mm	Freud Code	Art. No.
30	0,1	20	AN01MG0019	F03FC00247
30	0,2	20	AN01MG0029	F03FC00248
30	0,3	20	AN01MG0039	F03FC00249
30	0,5	20	AN01MG0059	F03FC00250
30	1	20	AN01MG0109	F03FC00251
30	3	20	AN01MG0309	F03FC00252
30	6	20	AN01MG0609	F03FC00253
30	10	20	AN01MG1009	F03FC00254
33	0,1	19,05	AN01ML0019	F03FC00358
33	0,2	19,05	AN01ML0029	F03FC00359
33	0,3	19,05	AN01ML0039	F03FC00360
33	0,5	19,05	AN01ML0059	F03FC00361
33	1	19,05	AN01ML0109	F03FC00362
33	3,6	19,05	AN01ML0369	F03FC00363
33	6,8	19,05	AN01ML0689	F03FC00365
33	7,3	19,05	AN01ML0739	F03FC00366
48	0,1	31,75	AN01MM0019	F03FC00371
48	0,2	31,75	AN01MM0029	F03FC00372
48	0,3	31,75	AN01MM0039	F03FC00373
48	0,5	31,75	AN01MM0059	F03FC00374
48	1	31,75	AN01MM0109	F03FC00375
48	3,2	31,75	AN01MM0329	F03FC00376
48	3,6	31,75	AN01MM0369	F03FC00377
48	4	31,75	AN01MM0409	F03FC00378
48	5,5	31,75	AN01MM0559	F03FC00379
48	6,8	31,75	AN01MM0689	F03FC00380
48	7,3	31,75	AN01MM0739	F03FC00381
48	8,05	31,75	AN01MM0809	F03FC00382
48	8,35	31,75	AN01MM0839	F03FC24743
48	8,35	31,75	AN01MM0849	F03FC00383
48	9,4	31,75	AN01MM0949	F03FC00384

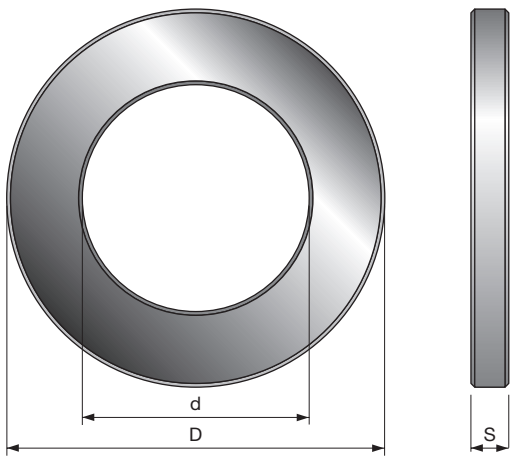


# AN01M

# Spacers

D mm	S mm	d mm	Freud Code	Art. No.
60	1	40	AN01MC0109	F03FC00127
60	2	40	AN01MC0209	F03FC00128
60	3	40	AN01MC0309	F03FC00129
60	4	40	AN01MC0409	F03FC00130
60	5	40	AN01MC0509	F03FC00131
60	6	40	AN01MC0609	F03FC00133
60	7	40	AN01MC0709	F03FC00134
60	8	40	AN01MC0809	F03FC00135
60	9	40	AN01MC0909	F03FC00136
60	10	40	AN01MC1009	F03FC00137
60	11	40	AN01MC1109	F03FC00138
60	12	40	AN01MC1209	F03FC00139
60	13	40	AN01MC1309	F03FC00140
60	14	40	AN01MC1409	F03FC00141
60	15	40	AN01MC1509	F03FC00142
60	16	40	AN01MC1609	F03FC00143
60	17	40	AN01MC1709	F03FC00144
60	18	40	AN01MC1809	F03FC00145
60	19	40	AN01MC1909	F03FC00146
60	20	40	AN01MC2009	F03FC00147
60	21	40	AN01MC2109	F03FC00148
60	22	40	AN01MC2209	F03FC00149
60	23	40	AN01MC2309	F03FC00150
60	24	40	AN01MC2409	F03FC00151
60	25	40	AN01MC2509	F03FC00152
60	26	40	AN01MC2609	F03FC00153
60	27	40	AN01MC2709	F03FC00154
60	28	40	AN01MC2809	F03FC00155
60	29	40	AN01MC2909	F03FC00156
60	30	40	AN01MC3009	F03FC00157
60	31	40	AN01MC3109	F03FC00158
60	32	40	AN01MC3209	F03FC00159
60	33	40	AN01MC3309	F03FC00160
60	34	40	AN01MC3409	F03FC00161
60	35	40	AN01MC3509	F03FC00162
60	40	40	AN01MC4009	F03FC00163
60	42	40	AN01MC4209	F03FC00164
60	99	40	AN01MC9909	F03FC00165
70	0,1	50	AN01MD0019	F03FC00166
70	0,2	50	AN01MD0029	F03FC00167
70	0,3	50	AN01MD0039	F03FC00168
70	0,5	50	AN01MD0059	F03FC00169
70	1	50	AN01MD0109	F03FC00170
70	2	50	AN01MD0209	F03FC00171
70	3	50	AN01MD0309	F03FC00173
70	4	50	AN01MD0409	F03FC00174
70	5	50	AN01MD0509	F03FC00175
70	6	50	AN01MD0609	F03FC00178
70	7	50	AN01MD0709	F03FC00179
70	8	50	AN01MD0809	F03FC00180
70	9	50	AN01MD0909	F03FC00181
70	10	50	AN01MD1009	F03FC00182
70	11	50	AN01MD1109	F03FC00183
70	12	50	AN01MD1209	F03FC00184
70	13	50	AN01MD1309	F03FC00185
70	14	50	AN01MD1409	F03FC00186
70	15	50	AN01MD1509	F03FC00187
70	16	50	AN01MD1609	F03FC00188
70	17	50	AN01MD1709	F03FC00189
70	18	50	AN01MD1809	F03FC00190
70	19	50	AN01MD1909	F03FC00191
70	20	50	AN01MD2009	F03FC00192
70	21	50	AN01MD2109	F03FC00193
70	22	50	AN01MD2209	F03FC00194
70	23	50	AN01MD2309	F03FC00195

D mm	S mm	d mm	Freud Code	Art. No.
55	11	35	AN01MB1109	F03FC00096
55	12	35	AN01MB1209	F03FC00097
55	13	35	AN01MB1309	F03FC00098
55	14	35	AN01MB1409	F03FC00099
55	15	35	AN01MB1509	F03FC00100
55	16	35	AN01MB1609	F03FC00101
55	17	35	AN01MB1709	F03FC00102
55	18	35	AN01MB1809	F03FC00103
55	19	35	AN01MB1909	F03FC00104
55	20	35	AN01MB2009	F03FC00105
55	21	35	AN01MB2109	F03FC00106
55	22	35	AN01MB2209	F03FC00107
55	23	35	AN01MB2309	F03FC00108
55	24	35	AN01MB2409	F03FC00109
55	25	35	AN01MB2509	F03FC00110
55	26	35	AN01MB2609	F03FC00111
55	27	35	AN01MB2709	F03FC00112
55	28	35	AN01MB2809	F03FC00113
55	29	35	AN01MB2909	F03FC00114
55	30	35	AN01MB3009	F03FC00115
55	31	35	AN01MB3109	F03FC00116
55	32	35	AN01MB3209	F03FC00117
55	33	35	AN01MB3309	F03FC00118
55	34	35	AN01MB3409	F03FC00119
55	35	35	AN01MB3509	F03FC00120
55	40	35	AN01MB4009	F03FC00121
55	99	35	AN01MB9909	F03FC00122
60	0,1	40	AN01MC0019	F03FC00123
60	0,2	40	AN01MC0029	F03FC00124
60	0,3	40	AN01MC0039	F03FC00125
60	0,5	40	AN01MC0059	F03FC00126

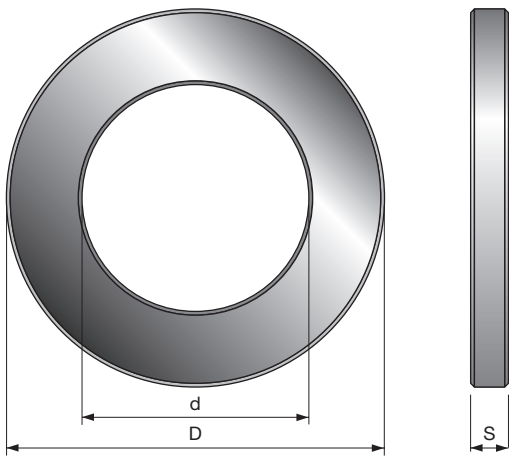


# AN01M

# Spacers

D mm	S mm	d mm	Freud Code	Art. No.
70	24	50	AN01MD2409	F03FC00196
70	25	50	AN01MD2509	F03FC00197
70	26	50	AN01MD2609	F03FC00198
70	27	50	AN01MD2709	F03FC00199
70	28	50	AN01MD2809	F03FC00200
70	29	50	AN01MD2909	F03FC00201
70	30	50	AN01MD3009	F03FC00202
70	31	50	AN01MD3109	F03FC00203
70	32	50	AN01MD3209	F03FC00204
70	33	50	AN01MD3309	F03FC00205
70	34	50	AN01MD3409	F03FC00206
70	35	50	AN01MD3509	F03FC00207
70	38	50	AN01MD3809	F03FC00208
70	40	50	AN01MD4009	F03FC00209
70	99	50	AN01MD9909	F03FC00210
80	0,1	60	AN01MK0019	F03FC00311
80	0,2	60	AN01MK0029	F03FC00312
80	0,3	60	AN01MK0039	F03FC00313
80	0,5	60	AN01MK0059	F03FC00314
80	1	60	AN01MK0109	F03FC00315
80	2	60	AN01MK0209	F03FC00316
80	3	60	AN01MK0309	F03FC00318
80	4	60	AN01MK0409	F03FC00319
80	5	60	AN01MK0509	F03FC00321
80	6	60	AN01MK0609	F03FC00322
80	7	60	AN01MK0709	F03FC00324
80	8	60	AN01MK0809	F03FC00325
80	9	60	AN01MK0909	F03FC00326
80	10	60	AN01MK1009	F03FC00327
80	11	60	AN01MK1109	F03FC00328
80	12	60	AN01MK1209	F03FC00329
80	13	60	AN01MK1309	F03FC00330
80	14	60	AN01MK1409	F03FC00331

D mm	S mm	d mm	Freud Code	Art. No.
80	15	60	AN01MK1509	F03FC00333
80	16	60	AN01MK1609	F03FC00334
80	17	60	AN01MK1709	F03FC00335
80	18	60	AN01MK1809	F03FC00336
80	19	60	AN01MK1909	F03FC00338
80	20	60	AN01MK2009	F03FC00339
80	21	60	AN01MK2109	F03FC00340
80	22	60	AN01MK2209	F03FC00341
80	23	60	AN01MK2309	F03FC00342
80	24	60	AN01MK2409	F03FC00343
80	25	60	AN01MK2509	F03FC00344
80	26	60	AN01MK2609	F03FC00345
80	27	60	AN01MK2709	F03FC00346
80	28	60	AN01MK2809	F03FC00347
80	29	60	AN01MK2909	F03FC00348
80	30	60	AN01MK3009	F03FC00349
80	31	60	AN01MK3109	F03FC00350
80	32	60	AN01MK3209	F03FC00351
80	33	60	AN01MK3309	F03FC00352
80	34	60	AN01MK3409	F03FC00353
80	35	60	AN01MK3509	F03FC00354
80	39,7	60	AN01MK3979	F03FC00355
80	40	60	AN01MK4009	F03FC00356
80	99	60	AN01MK9909	F03FC00357
90	0,1	70	AN01MH0019	F03FC00255
90	0,2	70	AN01MH0029	F03FC00256
90	0,3	70	AN01MH0039	F03FC00257
90	0,5	70	AN01MH0059	F03FC00258
90	1	70	AN01MH0109	F03FC00259
90	2	70	AN01MH0209	F03FC00260
90	3	70	AN01MH0309	F03FC00261
90	4	70	AN01MH0409	F03FC00262
90	5	70	AN01MH0509	F03FC00263
90	6	70	AN01MH0609	F03FC00264
90	7	70	AN01MH0709	F03FC00265
90	8	70	AN01MH0809	F03FC00267
90	9	70	AN01MH0909	F03FC00270
90	10	70	AN01MH1009	F03FC00272
90	11	70	AN01MH1109	F03FC00276
90	12	70	AN01MH1209	F03FC00278
90	13	70	AN01MH1309	F03FC00279
90	14	70	AN01MH1409	F03FC00280
90	15	70	AN01MH1509	F03FC00282
90	16	70	AN01MH1609	F03FC00284
90	17	70	AN01MH1709	F03FC00285
90	18	70	AN01MH1809	F03FC00286
90	19	70	AN01MH1909	F03FC00287
90	20	70	AN01MH2009	F03FC00288
90	21	70	AN01MH2109	F03FC00289
90	22	70	AN01MH2209	F03FC00291
90	23	70	AN01MH2309	F03FC00294
90	24	70	AN01MH2409	F03FC00295
90	25	70	AN01MH2509	F03FC00296
90	26	70	AN01MH2609	F03FC00297
90	27	70	AN01MH2709	F03FC00298
90	28	70	AN01MH2809	F03FC00299
90	29	70	AN01MH2909	F03FC00300
90	30	70	AN01MH3009	F03FC00301
90	31	70	AN01MH3109	F03FC00302
90	32	70	AN01MH3209	F03FC00303
90	33	70	AN01MH3309	F03FC00304
90	34	70	AN01MH3409	F03FC00305
90	35	70	AN01MH3509	F03FC00306
90	40	70	AN01MH4009	F03FC00307
90	99	70	AN01MH9909	F03FC00308



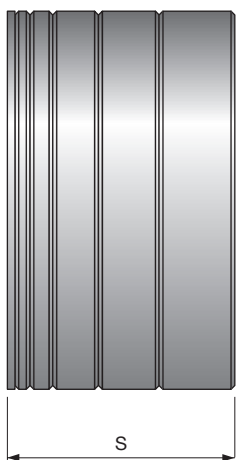
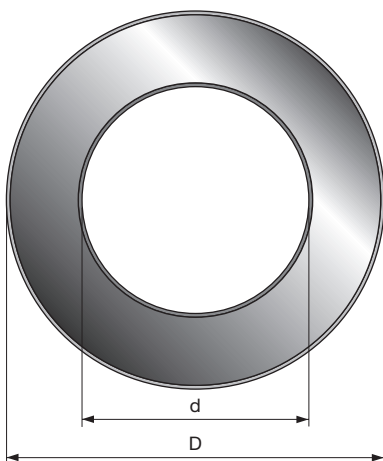
Special spacers suitable for cutterheads; minimum thickness 1mm.

- Please refer to the code as a guideline, applicable only while the order is processed.

## AN01

## Special spacers

D mm	S mm	d mm	Freud Code	Art. No.
-	5	30 ÷ 40	AN01	
-	10	30 ÷ 40	AN01	
-	20	30 ÷ 40	AN01	
-	40	30 ÷ 40	AN01	
-	99	30 ÷ 40	AN01	
-	5	50 ÷ 70	AN01	
-	10	50 ÷ 70	AN01	
-	20	50 ÷ 70	AN01	
-	40	50 ÷ 70	AN01	
-	99	50 ÷ 70	AN01	

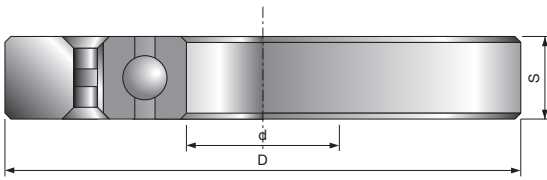


## AN03M

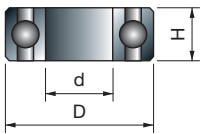
## Standard spacer set

D mm	S mm	d mm	Freud Code	Art. No.
50	10	30	AN03M AA9	F03FC00444
50	20	30	AN03M AB9	F03FC00445
50	30	30	AN03M AC9	F03FC00446
50	40	30	AN03M AD9	F03FC00447
50	50	30	AN03M AE9	F03FC00448
55	10	35	AN03M BA9	F03FC00454
55	20	35	AN03M BB9	F03FC00455
55	30	35	AN03M BC9	F03FC00456
55	40	35	AN03M BD9	F03FC00457
55	50	35	AN03M BE9	F03FC00458
60	10	40	AN03M CA9	F03FC00465
60	20	40	AN03M CB9	F03FC00466
60	30	40	AN03M CC9	F03FC00467
60	40	40	AN03M CD9	F03FC00468
60	50	40	AN03M CE9	F03FC00469
70	10	50	AN03M DA9	F03FC00473
70	20	50	AN03M DB9	F03FC00474
70	30	50	AN03M DC9	F03FC00475
70	40	50	AN03M DD9	F03FC00476
70	50	50	AN03M DE9	F03FC00477
80	10	60	AN03M EA9	F03FC00484
80	20	60	AN03M EB9	F03FC00485
80	30	60	AN03M EC9	F03FC00486
80	40	60	AN03M ED9	F03FC00487
80	50	60	AN03M EE9	F03FC00488
90	10	70	AN03M FA9	F03FC00490
90	20	70	AN03M FB9	F03FC00491
90	30	70	AN03M FC9	F03FC00492
90	40	70	AN03M FD9	F03FC00493
90	50	70	AN03M FE9	F03FC00494

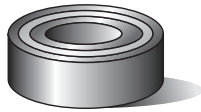
Standard spacers sets suitable for cutterheads.



Ball bearing guide for cutterheads: please refer to the code as a guideline, applicable only while the order is processed.



Ball bearing for router bits.



## CC01

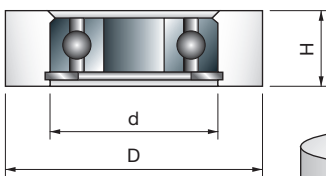
## Ball bearing guide for moulding

D mm	S mm	d mm	Freud Code	Art. No.
-	12	20	CC01 AA9	
-	12	25	CC01 BA9	
-	13	30	CC01 CA9	
-	14	35	CC01 DA9	
-	15	40	CC01 EA9	
-	16	45	CC01 FA9	
-	16	50	CC01 GA9	
-	18	55	CC01 HA9	
-	18	60	CC01 IA9	
-	20	70	CC01 LA9	

## 3102M

## Ball bearing

D mm	S mm	d mm	Freud Code	Art. No.
9,53	3,2	4,76	3102M AA9	F03F010006
12,7	4,98	4,76	3102M AB9	F03F010007
13	5	4	3102M CD9	F03FA14096
13	5	6	3102M AP9	F03FA10558
15	5	6	3102M AQ9	F03FA10559
15,88	4,97	4,76	3102M AJ9	F03F010014
16	5	5	3102M CC9	F03FA14095
16	5	8	3102M AS9	F03FA10561
19	6	6	3102M CA9	F03FA14097
19	7	10	3102M AG9	F03F010012
19,05	3,97	12,7	3102M CB9	F03FA14098
19,05	6,35	12,7	3102M AV9	F03F012286
22	7	8	3102M AC9	F03F010008
28	8	12	3102M AH9	F03F010013
32	9	15	3102M AN9	F03F010016
35	11	15	3102M AI9	F03F012285



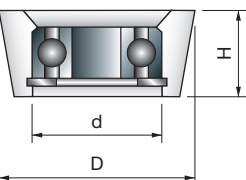
Cylindrical rub collars for ball bearing.



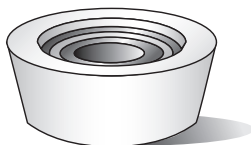
## RB62M

## Ball bearing rub collars

D mm	S mm	d mm	Freud Code	Art. No.
19,05	8	4,76	RB62M 1509	F03F011422
22,22	8	4,76	RB62M 1529	F03F011423
26	10	8	RB62M 1249	F03F011417
28,58	8	4,76	RB62M 1549	F03F011424
30	10	8	RB62M 1289	F03F011418
34	10	8	RB62ME DA9	F03FR01146
34,92	8	4,76	RB62M 1569	F03F011425
39,6	11,2	12	RB62ME FB9	F03FR01147



Conical rub collars for ball bearing.



## 3103MC

## Sleeved speciality bearings

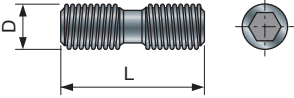
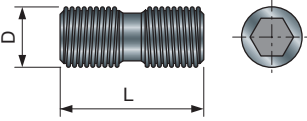
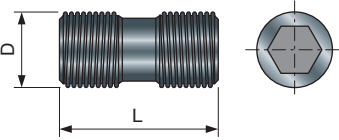
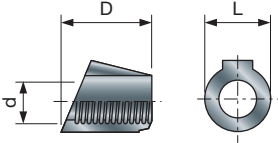
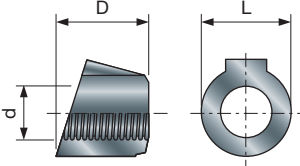
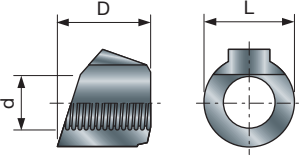
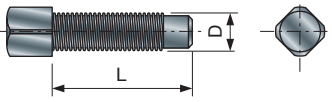
D mm	S mm	d mm	Freud Code	Art. No.
19,05	6,35	4,76	3103MC HB9	F03F010019
22,2	9	12,7	3103MC HC9	F03FR01724

# Keys and devices

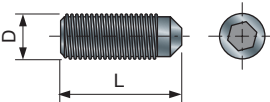
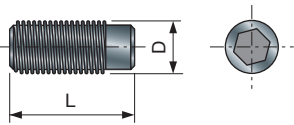
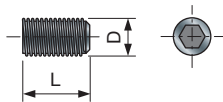
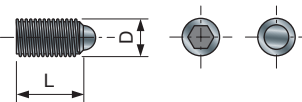
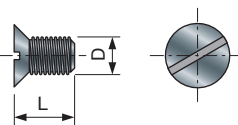
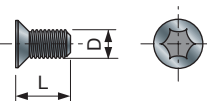
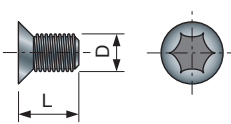




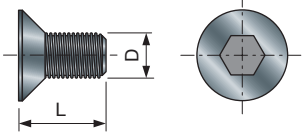
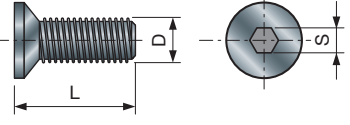
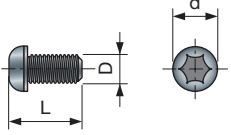
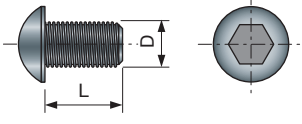
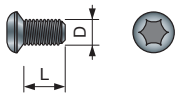
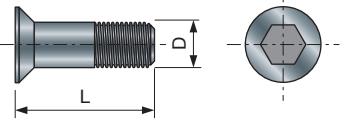
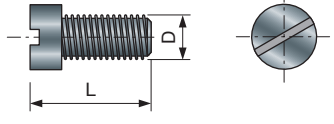
# Spare screws, nuts, washers and keys

Spare parts	Description	Dimensions D/L x L/H x d/S (mm)	Freud Code	Art. No.
	RH-LH Hex print screws for disposable knives	M6 x 22	<b>VT19M AB9</b>	F03FA04491
	RH-LH Hex print screws for H.S.I. knives	M8 x 22	<b>VT19M BB9</b>	F03FA04493
	RH-LH Hex print screws for disposable knives	M10 x 22	<b>VT19M MA9</b>	F03FA04496
	Nuts for VT19M AB9 screws	10 x 11,5 x M6 9 x 10,5 x M6	<b>VT20M AA9</b> <b>VT20M GA9</b>	F03FA04497 F03FC20669
	Nuts for VT19M MA9-MB9 screws	15 x 13,3 x M10	<b>VT20M MA9</b>	F03FC20670
	Nuts for VT19M MA9-MB9 screws	15 x 13,3 x M10	<b>VT20M NA9</b>	F03FC20671
	Squared head screws for disposable knives	M5 x 19	<b>VT11M AA9</b>	F03FA04468

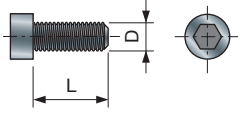
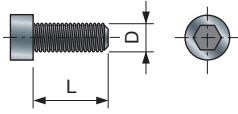
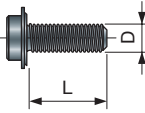
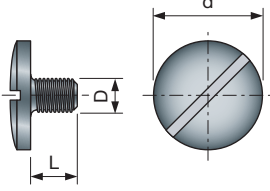
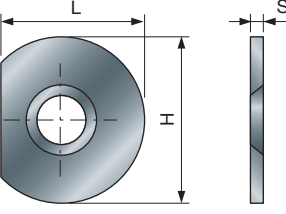
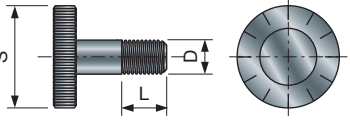
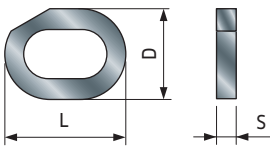
# Spare screws, nuts, washers and keys

Spare parts	Description	Dimensions D/L x L/H x d/S (mm)	Freud Code	Art. No.
	Hex print screws for disposable knives	M6 x 8	<b>VT03M DE9</b>	F03FA04439
		M6 x 12	<b>VT03M DL9</b>	F03FA04441
		M6 x 16	<b>VT03M DI9</b>	F03FA04440
		M8 x 16	<b>VT03M AA9</b>	F03FA04435
	Hex print screws for disposable knives	M4 x 10	<b>2602M CB9</b>	F03FA07346
		M5 x 12	<b>VT03M BA9</b>	F03FA04436
		M5 x 16	<b>VT03M BB9</b>	F03FA04437
		M8 x 16	<b>2602M BB9</b>	F03FA07344
		M8 x 25	<b>2602M EI9</b>	F03FA07352
		M10 x 18	<b>VT03M CC9</b>	F03FA04438
		M10 x 25	<b>2602M FI9</b>	F03FA07353
	Hex print screws	M3 x 3	<b>2615M AA9</b>	F03FA07418
		M4 x 6	<b>2602M CE9</b>	F03FA07349
		M5 x 5	<b>2615M CC9</b>	F03FA07420
		M5 x 10	<b>2602M DC9</b>	F03FA07350
		M6 x 6	<b>2615M DD9</b>	F03FA07423
		M8 x 8	<b>2615M EE9</b>	F03FA07424
		M8 x 10	<b>2602M CC9</b>	F03FA07347
	Hex print screws with semi-sphere for ISOprofil Technology	M8 x 16	<b>2616M DE9</b>	F03FA07425
		M10 x 16	<b>2616M EE9</b>	F03FA07426
	Countersink screws for TA01-02 grinding devices	M4 x 6	<b>VT05M AB9</b>	F03FA04445
	Countersink Torx screws for IG03 inserts	M4 x 3,2	<b>VT05M BB9</b>	F03FA04447
		M4 x 4,2	<b>VT05M BC9</b>	F03FA04448
		M4 x 6,5	<b>VT05M BD9</b>	F03FA04449
	Countersink Torx screws for RG and RR spurs	M4 x 12	<b>VT71M AC9</b>	F03FA14740
		M5 x 6	<b>VT05M AC9</b>	F03FA04446
		M5 x 8	<b>VT05M AA9</b>	F03FA04444

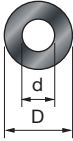
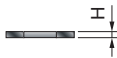
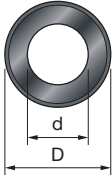

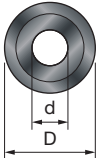

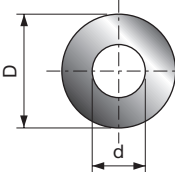
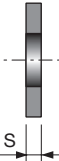
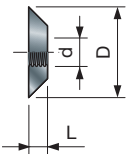
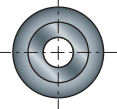
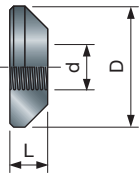
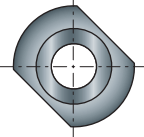
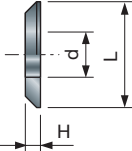
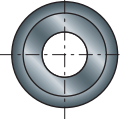
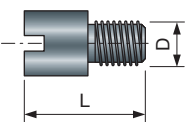
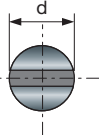
# Spare screws, nuts, washers and keys

Spare parts	Description	Dimensions D/L x L/H x d/S (mm)	Freud Code	Art. No.
	Countersink Hex print screws	M5 x 8	<b>VT05M CA9</b>	F03FA04451
		M6 x 8	<b>VT01M AB9</b>	F03FA04430
		M6 x 10	<b>VT01M AA9</b>	F03FA04429
	Countersink Hex print screws for ID deflectors	M4 x 12	<b>VT05M DA9</b>	F03FC20647
		M4 x 14	<b>VT05M DB9</b>	F03FC20648
		M4 x 16	<b>2609M BD9</b>	F03FA07379
		M6 x 16	<b>VT05M DC9</b>	F03FC20649
		M6 x 16	<b>2609M DD9</b>	F03FA07381
		M8 x 40	<b>2609M EK9</b>	F03FB04618
		M10 x 20	<b>2609M FF9</b>	F03FA07382
		M10 x 35	<b>2609M FI9</b>	F03FA07383
	Round head Torx screw for disposable knives router cutters	M3 x 6 x 5	<b>VT72M AA9</b>	F03FA04506
		M4 x 8 x 6	<b>VT70M AA9</b>	F03FA04504
		M4 x 10 x 9	<b>VT71M AA9</b>	F03FA04505
	Round head Hex print screw	M4 x 10	<b>2622M AB9</b>	F03FA07453
		M6 x 8	<b>2622M CA9</b>	F03FA07454
		M6 x 10	<b>2622M CB9</b>	F03FA07455
		M6 x 12	<b>2622M CC9</b>	F03FA07456
		M8 x 18	<b>2622M DF9</b>	F03FA07457
		M8 x 30	<b>2622M DI9</b>	F03FA07458
		M10 x 25	<b>2622M EH9</b>	F03FA07459
	Round head Torx screw for scorers	M4 x 6	<b>VT71M AB9</b>	F03FA14739
	Countersink Hex print screws for IG inserts	M6 x 11,5	<b>VT16M AB9</b>	F03FA04477
		M6 x 13	<b>VT16M AE9</b>	F03FC20658
		M6 x 14,5	<b>VT16M AA9</b>	F03FA04476
		M6 x 15,5	<b>VT16M AD9</b>	F03FC20657
		M6 x 18,5	<b>VT16M AC9</b>	F03FC20656
		M6 x 20	<b>VT16M AF9</b>	F03FC20659
	Slotted screws	M4 x 10	<b>2611M DB9</b>	F03FA07386
		M5 x 10	<b>2606M DE9</b>	F03FA07361

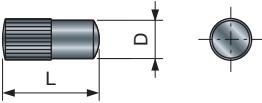

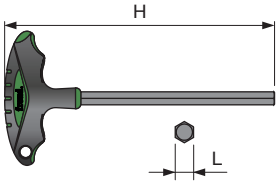
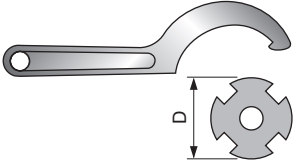


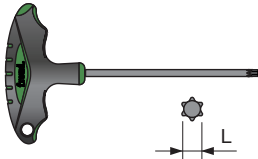

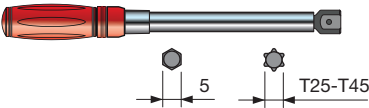
# Spare screws, nuts, washers and keys

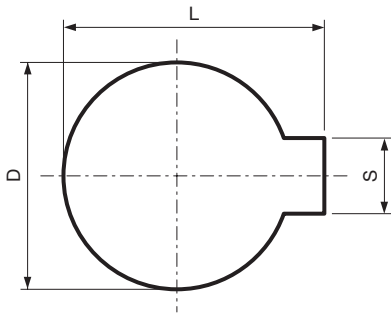
Spare parts	Description	Dimensions D/L x L/H x d/S (mm)	Freud Code	Art. No.
	Hex print allen screws	M3 x 6	<b>2607M AA9</b>	F03FA07362
		M3 x 8	<b>2607M AB9</b>	F03F010001
		M3 x 10	<b>2607M AC9</b>	F03FA07363
		M4 x 8	<b>2607M BB9</b>	F03FA07365
		M5 x 16	<b>2607M CF9</b>	F03FA07367
		M5 x 20	<b>2607M CH9</b>	F03FA17148
		M5 x 40	<b>2607M CL9</b>	F03FA07368
		M5 x 60	<b>2607M CP9</b>	F03FA07369
		M5 x 90	<b>2607M CS9</b>	F03FA18898
	Hex print allen screws	M6 x 16	<b>2607M AF9</b>	F03FB04614
		M8 x 16	<b>VT02M AA9</b>	F03FA04432
		M8 x 35	<b>2607M EK9</b>	F03FB04615
		M10 x 20	<b>2607M FH9</b>	F03FB04616
		M10 x 30	<b>2607M FJ9</b>	F03FB04617
	Flanged screws for router bits	M3 x 7,6	<b>2607M 001</b>	F03F010000
	Reference screws for cutterheads	M5 x 7 x 18	<b>VT08M AE9</b>	F03FA04457
		M5 x 8,8 x 18	<b>VT08M AM9</b>	F03FA04462
		M8 x 10 x 22	<b>VT08M AD9</b>	F03FA04456
	Reference plates for cutterheads	22 x 1,7 x 6,5	<b>VT18M GB9</b>	F03FA04489
	Adjustment screws for jointing cutterheads	M5 x 8 x 25	<b>VT08M AC9</b>	F03FC20652
		M6 x 7 x 18	<b>VT08M AG9</b>	F03FC20653
		M6 x 8 x 25	<b>VT08M AB9</b>	F03FC20651
	Adjustment shaped rings for IG25 inserts	16 x 11,9 x 2,6	<b>VT18M AG9</b>	F03FC20660

# Spare screws, nuts, washers and keys

Spare parts	Description	Dimensions D/L x L/H x d/S (mm)	Freud Code	Art. No.
 	Washer	14 x 1,6 x 8,4	<b>2617M BG9</b>	F03FR01668
		16 x 1,6 x 8,4	<b>2617M AG9</b>	F03F010005
		16 x 2 x 4	<b>VT18M AB9</b>	F03FA04480
 	Stop collars for drill bits	12 x 4 x 6,05	<b>3102M BB9</b>	F03FA10568
		14 x 4 x 8,05	<b>3102M BC9</b>	F03FA10569
 	Step washers	9 x 2 x 4,76	<b>FX07M AA9</b>	F03F010158
		12 x 1,1 x 4,76	<b>FX07M AB9</b>	F03F010159
 	Spacers for inserts	13,6 x 0,1 x 7	<b>ST07M 019</b>	F03FA13619
		13,6 x 0,2 x 7	<b>ST07M 029</b>	F03FA13620
		13,6 x 0,5 x 7	<b>ST07M 059</b>	F03FA13621
		15 x 1 x 7	<b>ST07M 109</b>	F03FA03865
		15 x 2 x 7	<b>ST07M 209</b>	F03FA03867
 	Threaded rings for locking screws	10,2 x 1 x M4	<b>VT18M AA9</b>	F03FA04479
		11,6 x 1,5 x M4	<b>VT18M BA9</b>	F03FA04483
		11,6 x 2,5 x M4	<b>VT18M BB9</b>	F03FA04484
		9,4 x 1,7 x M4	<b>VT18M DA9</b>	F03FA04487
		8 x 5 x M4	<b>VT18M CB9</b>	F03FA04486
 	Threaded nuts for RH and LH VT19M AB9-IA9 screws	16 x 4 x M6	<b>VT18M CC9</b>	F03FC20666
		16 x 5 x M6	<b>VT18M CA9</b>	F03FA04485
 	Washers for knives	16 x 2 x 4	<b>VT18M AB9</b>	F03FA04480
		14 x 2 x 6	<b>VT18M AL9</b>	F03FC20662
		9 x 1,5 x 4	<b>VT18M AH9</b>	F03FA04481
 	Threaded pins for sleeves	M5 x 9,5 x 7	<b>VT08M AH9</b>	F03FC20654
		M6 x 15,5 x 8	<b>VT08M AI9</b>	F03FA04461

# Spare screws, nuts, washers and keys

Spare parts	Description	Dimensions D/L x L/H x d/S (mm)	Freud Code	Art. No.
	Steel pins for tools	4 x 10	<b>2601M AB9</b>	F03FA07326
	L-shape Hex allen key	2 2,5 3 4 5 6 8	<b>2619M BA9</b> <b>2619M CA9</b> <b>2619M DA9</b> <b>2619M EA9</b> <b>2619M FA9</b> <b>2619M GA9</b> <b>2619M HA9</b>	F03FA07431 F03FA07432 F03FA07433 F03FA07434 F03FA07435 F03FA07436 F03FA07437
	T-shape Hex allen key with handle	3 x 110 4 x 110 5 x 110	<b>CB03M AA9</b> <b>CB03M BA9</b> <b>CB03M EA9</b>	F03FA00162 F03FA00163 F03FA00169
	C-spanners for shanks and sleeves locking rings	45 - 50 (ER32) 58 - 62 (ER40) 68 - 75 80 - 90	<b>CB07M 4550</b> <b>CB07M 5862</b> <b>CB02M BA9</b> <b>CB02M CA9</b>	F03FB00145 F03FB00146 F03FA00160 F03FA00161
	Socket wrench for sleeves locking rings - Ø40/50	70 x 95 x 50	<b>CB02M 6070</b>	F03FC00720
	Socket wrench for sleeves locking rings Ø60/70	88,9 x 95 x 68,9	<b>CB02M 8090</b>	F03FC00721
	T-shape Torx allen key with handle	T9 x 100 T15 x 100 T20 x 100 T25 x 100	<b>CB03M CA9</b> <b>CB03M DA9</b> <b>CB03M CC9</b> <b>CB03M BB9</b>	F03FA00165 F03FA00168 F03FA00167 F03FA00164
	Fork wrench	5	<b>CB04M 059</b>	F03FA00172
	Torque wrench	10-60 Nm	<b>CB06M106001</b>	F03FC25296
<ul style="list-style-type: none"> <li>• 1/4 L-Lock-ratchet insert</li> <li>• Exagon insert 5mm</li> <li>• Torx insert T25 (long and short version)</li> <li>• Torx insert T45 (long and short version)</li> </ul>	Inserts set fo torque wrench		<b>CB0BITSIMB01</b>	F03FC25602



Standard keyway for existing cutterheads.

- For other keyway sizes, use code **OPT05 AA9** and specify the necessary dimensions.
- Please refer to the code as a guideline, only applicable while order is processed.

## OPT04

## Standard keyway

D mm	S mm	L mm	Freud Code	Art. No.
12	5	13,8	OPT04 AA9	F03FC16203
14	5	16,3	OPT04 BA9	F03FC16204
16	5	18,3	OPT04 CA9	F03FC16205
18	6	20,8	OPT04 DA9	F03FC16206
20	6	22,8	OPT04 EA9	F03FC16207
25	8	28,3	OPT04 FA9	F03FC16208
30	8	33,3	OPT04 GA9	F03FC16209
35	10	38,3	OPT04 HA9	F03FC16210
40	10	43,3	OPT04 IA9	F03FC16211

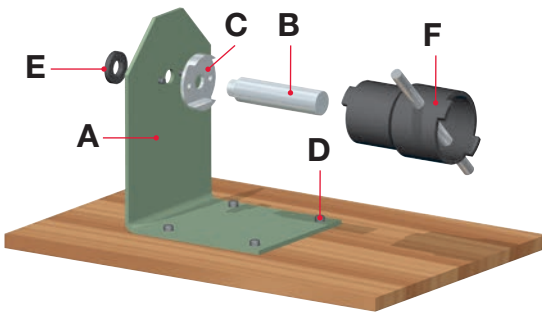
## OPT09

## Re-boring for cutterheads and brazed cutters

Re-boring for existing cutterheads and brazed cutters.

- Please refer to the code as a guideline, only applicable while the order is processed.

Freud Code	Art. No.
OPT09 AA9	F03FC16223



The maintenance tool consists of:

- A:** Steel support plate.
- B:** Replaceable arbor (diameter 35/40/50 mm based on sets bore diameter).
- C:** Replaceable coupling disk for jamming the base of the toolsets' sleeve (65/75/85 mm).
- D:** Screws for mounting support plate "A" to the workbench.
- E:** Locking ring pin "B" to support plate "A".
- F:** Coupling key for the sleeves threaded ring available in the following sizes:
  - $\varnothing 60/70$  mm for sleeves with external diameter 40/50 mm.
  - $\varnothing 80/90$  mm for sleeves with external diameter 60/70 mm.

## SAG1M

## Maintenance tool for cutterhead sets

Freud Code	Art. No.
SAG1M AA9	F03FC18870
SAG1M AB9	F03FC18871

### Item code SAG1M AA9 components

	Spare parts		Dimensions mm	Freud Code	Art. No.
<b>A</b>	Support plate		150 x 230 x 250	SAG1M BA9	F03FA03851
<b>E</b>	Self-locking nut		50 x 8 x 30	SAG1M DA9	F03FA03852
<b>C</b>	Coupling disk		65 x 20 x 30 $\varnothing 50$	SAG1M F65	F03FC18872
<b>C</b>	Coupling disk		75 x 20 x 30 $\varnothing 60$	SAG1M F75	F03FC18873
<b>C</b>	Coupling disk		85 x 20 x 30 $\varnothing 70$	SAG1M F85	F03FC18874
<b>B</b>	Arbor		$\varnothing 35$ x 122	SAG1M 035	F03FC18875
<b>B</b>	Arbor		$\varnothing 40$ x 122	SAG1M 040	F03FC18876
<b>B</b>	Arbor		$\varnothing 50$ x 122	SAG1M 050	F03FC18877
<b>F</b>	Key $\varnothing 40/50$		70 x 95 x 50	CB02M 6070	F03FC00720
<b>F</b>	Key $\varnothing 60/70$		88,9 x 95 x 68,9	CB02M 8090	F03FC00721

### Item code SAG1M AB9 components

	Spare parts		Dimensions mm	Freud Code	Art. No.
<b>A</b>	Support plate		150 x 230 x 250	SAG1M BA9	F03FA03851
<b>E</b>	Self-locking nut		50 x 8 x 30	SAG1M DA9	F03FA03852
<b>C</b>	Coupling disk		65 x 20 x 30 $\varnothing 50$	SAG1M F65	F03FC18872
<b>C</b>	Coupling disk		75 x 20 x 30 $\varnothing 60$	SAG1M F75	F03FC18873
<b>C</b>	Coupling disk		85 x 20 x 30 $\varnothing 70$	SAG1M F85	F03FC18874

### Optional items

	Spare parts		Dimensions mm	Freud Code	Art. No.
<b>B</b>	Arbor		$\varnothing 35$ x 122	SAG1M 035	F03FC18875
<b>B</b>	Arbor		$\varnothing 40$ x 122	SAG1M 040	F03FC18876
<b>B</b>	Arbor		$\varnothing 50$ x 122	SAG1M 050	F03FC18877
<b>F</b>	Key $\varnothing 40/50$		70 x 95 x 50	CB02M 6070	F03FC00720
<b>F</b>	Key $\varnothing 60/70$		88,9 x 95 x 68,9	CB02M 8090	F03FC00721



## SAG2M

## Clamping device with rolling bearing

Freud Code

Art. No.

SAG2M AA9

F03FB22530



## TA01M

## Device for grinding Performance knives

L mm	H mm	S mm	Freud Code	Art. No.
260	60	15	TA01M AA9	F03FC20198

Freud's standard device for knives to fit on horizontal grinding machines. This device must be fitted on the **TA03M** support to work on grinding machines.

Spare parts	Dimensions mm	Freud Code	Art. No.
Screw	M4 x 6,5	VT05M BD9	F03FA04449
Screw	M4 x 6	VT05M AB9	F03FA04445
Torx key	T9	CB03M CA9	F03FA00165



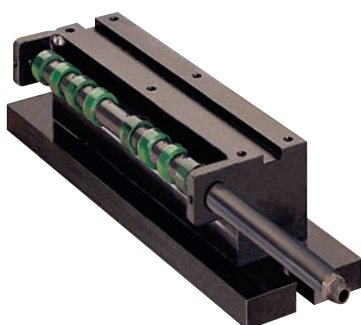
## TA02M

## Device for grinding Performance knives

L mm	H mm	S mm	Freud Code	Art. No.
220	100	100	TA02M AA9	F03FC20199

Freud standard device for knives to fit on vertical grinding machines.

Spare parts	Dimensions	Freud Code	Art. No.
Screw	M4 x 6,5	VT05M BD9	F03FA04449
Screw	M4 x 6	VT05M AB9	F03FA04445
Torx key	T9	CB03M CA9	F03FA00165
Allen key	4 x 110	CB03M BA9	F03FA00163



## TA03M

## Support for grinding Performance knives

L mm	H mm	S mm	Freud Code	Art. No.
340	98	90	TA03M AA9	F03FC20202

Support for **TA01M** device



## Torque values for screws and grub screws used for tightening Freud knives and inserts

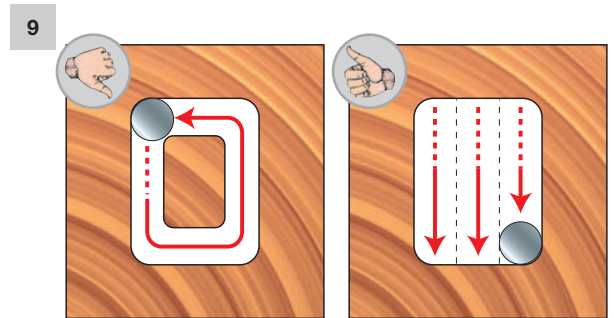
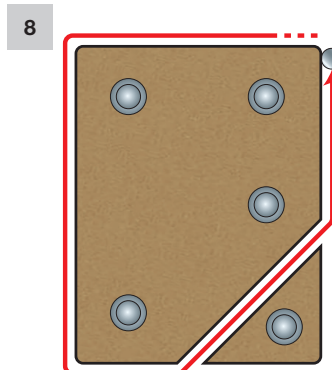
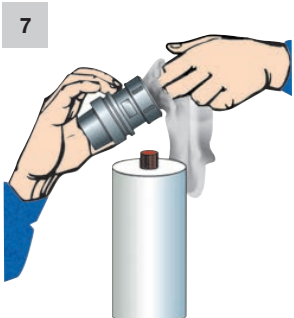
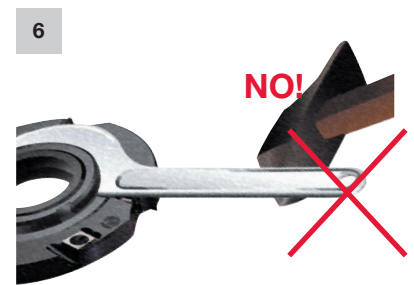
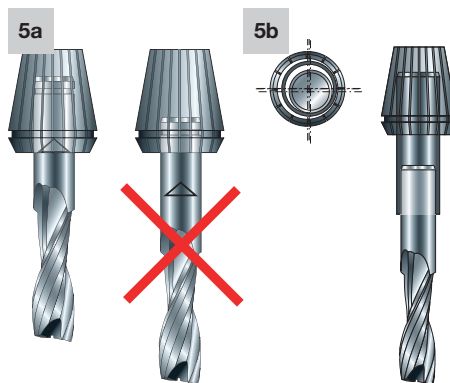
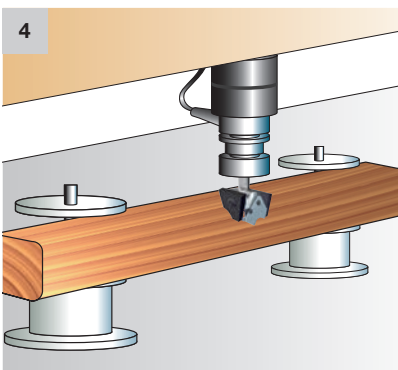
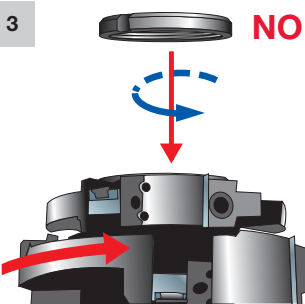
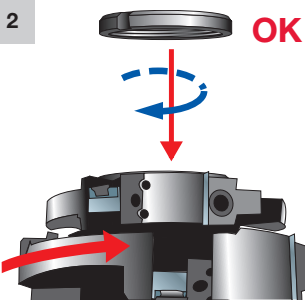
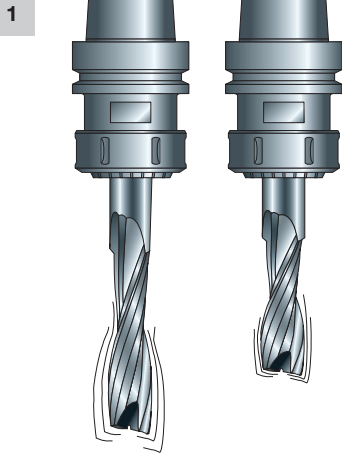
To avoid insufficient clamping forces or screw rupture due to overload, all the screws must be tightened with the required torque. If not differently stated on the instruction manual or marked on the tools, use the following torque values.

Spare parts	Description	Screw thread mm	Key (S) mm	Tightening torques 45H (Nm)
	Hexagon grub screws	M4	2	1,9
		M5	2,5	3,5
		M6	3	5,5
		M8	4	9,5
		M10	5	18
		M12	6	30

Spare parts	Description	Screw thread mm	Key (S) mm	Tightening torques 8,8 (Nm)
	Hex print screws	M3	2,5	1
		M4	3	2
		M5	4	5
		M6	5	8
		M8	6	12
		M10	8	30

Spare parts	Description	Screw thread mm	Key  (mm)	Tightening torques (Nm)
	Torx screws	M4 x 0,5	T9	2
		M4	T15	5,2
		M5	T20	8,6
		M6	T25	15

## TIPS FOR THE CORRECT USE



Tools must be used and handled by experienced and trained personnel, in possession of the necessary understanding.

A router bit with a shorter cutting height vibrates less than a router bit with the same diameter but with a longer cutting height (Fig. 1).

Control your machine regularly (especially guides and ball bearings), making sure that there are no eccentricity problems, so as to avoid the arbor from vibrating hazardously, particularly dangerous for router bits with tips in Polycrystalline Diamond.

Tools and tool bodies must be locked correctly, so they do not loosen during operation (Fig. 2 - 3).

Accurately block the workpiece to the work table surface (Fig. 4).

Respect the minimum fixing length of the shank with a preference to short chucks, with the aim of reducing eccentricity errors (Fig. 5a). For the same reason the use of extensions are generally avoided (Fig. 5b).

To identify eccentricity defects in a router bit or a chuck: rotate the router bit by 90° in the chuck, carry out a moulding and observe the marks left on the workpiece. If they are invaried with respect to the previous moulding, then the tool is defective, if instead the marks vary, then it is possible that the error lies in the chuck.

Screws and nuts shall be tightened using the appropriate spanners etc. and to the torque value provided by the manufacturer.

Spanner extensions or tightening using hammer blows is strictly forbidden (see Fig. 6).

Do not use reduction rings with a bore different to those specified by the constructor. Clamping surfaces must be free of dirt, grease, oil and water. Resins must be removed from tools with light alloy bodies using cleaners that do not damage the aluminium and compromise the materials mechanical features. Accurately clean the tool after every knife change.

Tools compiling a set, must be repaired by experienced and fully trained personnel, with the knowledge of the design requirements and security levels to be reached Repairing tools is allowed only in accordance to the tool manufacturer's instructions.

Particular attention is drawn to the following:

- Repair shall therefore include e. g. use of parts which are in accordance with the specification of the original parts provided by the manufacturer.
- Tolerances which ensure correct locking shall be maintained.

Do not exceed the maximum RPM limit marked on the tool. With too high an advancement rate, or an excessive cutting depth, there is the possibility that the tool may break.

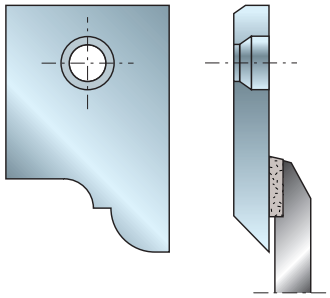
To avoid damaging router bits, we suggest controlling if the fixing surface of the chuck and the router bit are clean and that there are no imperfections (Fig. 7).

To avoid dangerous kick backs, we suggest fixing a spare piece of material and moulding small parts of waste which have accumulated during the working process, by carrying out more passes (Fig. 8 - 9).

Wearing gloves increases grip and reduces the risk of injury.

To avoid injury, tools must be handled with care using special appliances so as to transport them without incurring injury to the user.

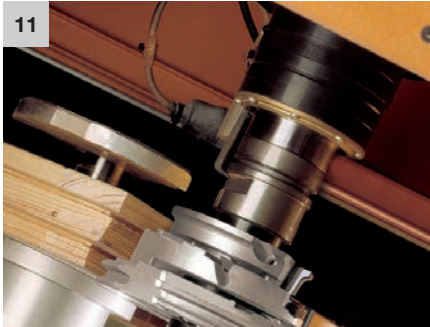
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## TECHNOLOGICAL FEATURES

- Performance system knives are constructed in hard metal, which Freud produces in 6 grades of hardness, second to the material to be worked: softwood and hardwood, heavy, abrasive, chipboard, melamine, laminated, M.D.F. etc. It is possible to use NW with a high grade of hardness, so as to permit a superior hold of 30% more with respect to the NW used for brazed cutting edges destined to work very abrasive materials.
- Other than being a solution that practically substitutes brazed cutters, thanks to the interchangeability of the profiles on the same tool and the duration of the tool itself, there is a notable advantage and convenience when working on overhead CNC router machines, where machine stoppages can result costly: in fact the changing of a used or damaged knife does not require the dismounting of the cutterhead from the machine, since it is sufficient to loosen the screw that holds it in place. Instead a brazed cutter must be completely changed and a substitute available to avoid time wastage.
- Freud has an entire range of tools with performance, standard or personalised knives for manual or overhead CNC router machines (Fig. 11).
- The performance system results advantageous, even when confronted to traditional cutterheads, thanks to the easiness of sharpening, low operational cost and the need of no particular machinery (the use of a flat grinding wheel or surface grinding machine is sufficient - see Fig. 12) or specialised personnel.
- Even after sharpening, performance knives maintain their original profile (Fig.13) and the tool's cutting diameter, considering maximum loses of 0,15~0,20 mm.
- Suggestions for correct sharpening on surface grinding machine or flat grinding machine:
  - 1) Fix support TA01M or TAO2M (Fig. 13) onto the surface grinding machine or flat grinding machine.
  - 2) Fix the knives with the screws that are supplied.
  - 3) Proceed with the sharpening of the entire set of knives. Use of abundant cooling liquid during sharpening is recommended. Use diamond grinding wheels (Fig. 14) with the following characteristics: D6A2-C100-054.
- On request, sharpening can be carried out at our premises by simply sending us the complete set of knives and indicating on the order the code OPTAFF AA9.

11



12



13



14



# EXPLANATION OF SYMBOLS AND ABBREVIATIONS

















PERFORMANCE		
Ultimate	High	Standard
●		

CHART ABOUT THE SAW BLADE'S PERFORMANCE
























## SYMBOLS TO READ THE PRODUCT TABLES

<b>h1</b>	Actual height	<b>B-B1</b>	Adjustable cutting thickness	$\gamma$	ATB angle	$\beta$	Back relief angle
<b>C</b>	Bearing diameter	<b>d</b>	Bore	<b>h</b>	Cutting height	<b>B</b>	Cutting thickness
<b>D</b>	Diameter	$\alpha$	Hook angle	<b>l</b>	Interaxial distance (Inserts in RB section)	<b>KN</b>	Keyways
<b>L</b>	Length	<b>Max RPM</b>	Max RPM	<b>Z</b>	Number of teeth	<b>H</b>	Overall height
<b>NL</b>	Pin holes	<b>R</b>	Radius (Spurs in RB section)	<b>R1</b>	Radius	<b>b</b>	Saw blade body thickness
<b>A</b>	Shank	<b>S</b>	Thickness	<b>hUP</b>	UP cut length	<b>L.U.</b>	Working length

## FEATURE ICONS





























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	ISOprofil Technology		Performance System Technology		Perma-SHIELD Coating		Polycrystalline Diamond Technology
	Radial Access Design		Shear Angle Technology		Silver I.C.E. Coating		Split Edge Design
	Super Square Tooth Design		Tensioning Technology		TiCo Carbide Technology		Tri-metal Brazing Technology

## MATERIALS











	ACM		Aluminium		Chipboard		Construct Wood
	Copper and Brass		Fibre Cement		Hardwood		HPL
	Laminated Chipboard		Laminated MDF		Laminates (scoring saw blades)		MDF
	Plasterboard		Plastics		Plexiglas		Plywood
	PVC		Sandwich Panel		Shuttering Board		Softwood
	Solid Surfaces		Steel		Thermoplastic Composites		

# EXPLANATION OF SYMBOLS AND ABBREVIATIONS





















## MACHINES

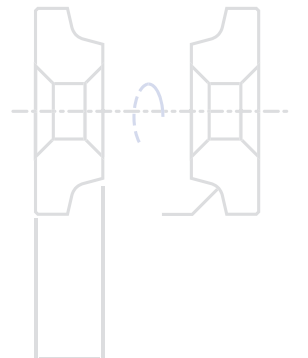
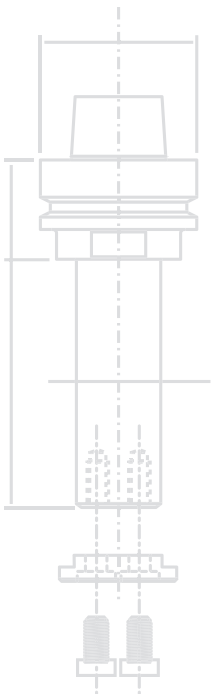
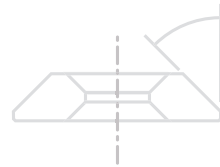
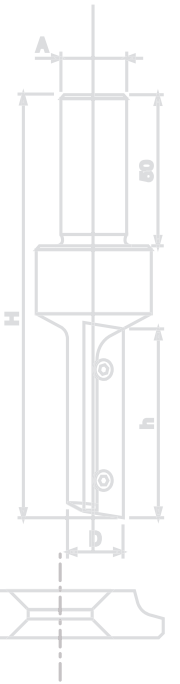
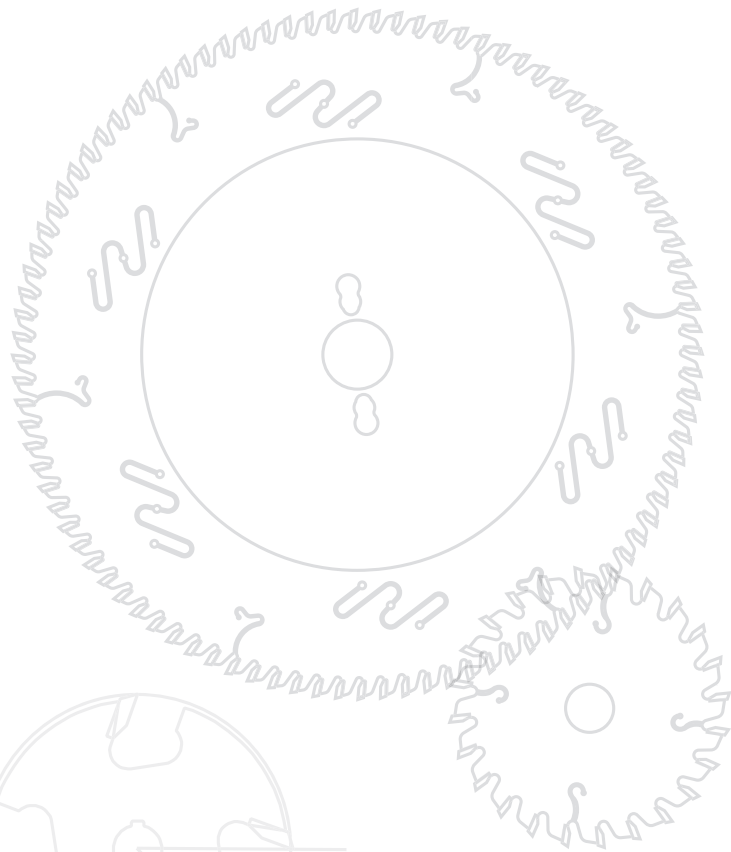
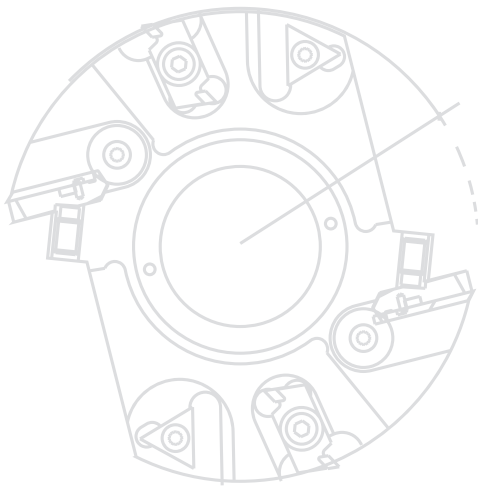
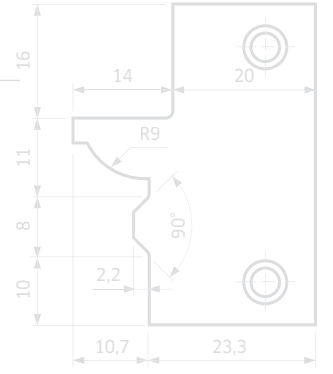
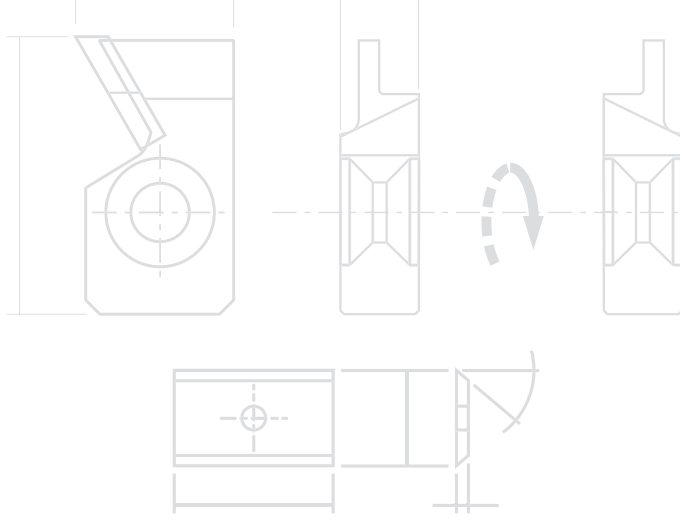
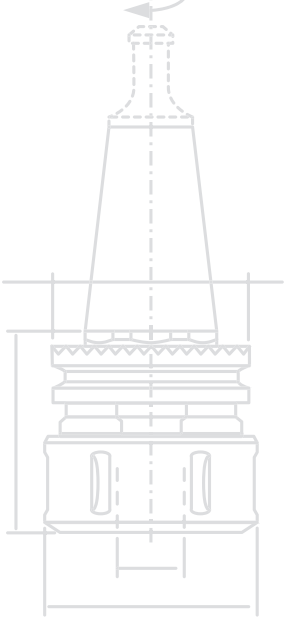
	Boring Machines		Cleaving Machines		CNC Cutting Units		CNC Machines
	CNC Machines		CNC Router		Corded		Cordless
	Cordless		Double End Tenoners		Double Head Cutting Machines		Dry-Cut Mitre Saw
	Edge Banders		For Table Mounted Only		Hand-Held Circular Saws		Hand-Held Routers
	Horizontal Panel Sizing Machines		Mitre Saws		Moulders		Multiripping Machines
	Optimising Machines		Palm Routers		Plunge Saws		Radial Arm Saws
	Squaring Saws		Table Routers		Table Saws		Vertical Panel Sizing Machines

## MECHANICAL FEATURES

	Aluminium Body		Automatic Feed		Brazed Cutters		Clamping System
	Down Spiral		Manual Feed		Boring Machines		Steel Body
	Up and Down Spiral		Up Spiral				

## APPLICATIONS

	Better Finishing on Bottom		Better Finishing on Top		Better Finishing on Top and Bottom		Blind Hole
	Blind Hole with Countersink		Crosscutting		Frames Cutting		Grooving
	Hinge Pockets		Jointing		Multiripping		Planing
	Plunging		Profiling		Ramp Plunging		Rebating
	Ripping		Sizing		Through Hole		Through Hole with Countersink





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**ACCESSORIES AND SPARE PARTS**



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