

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

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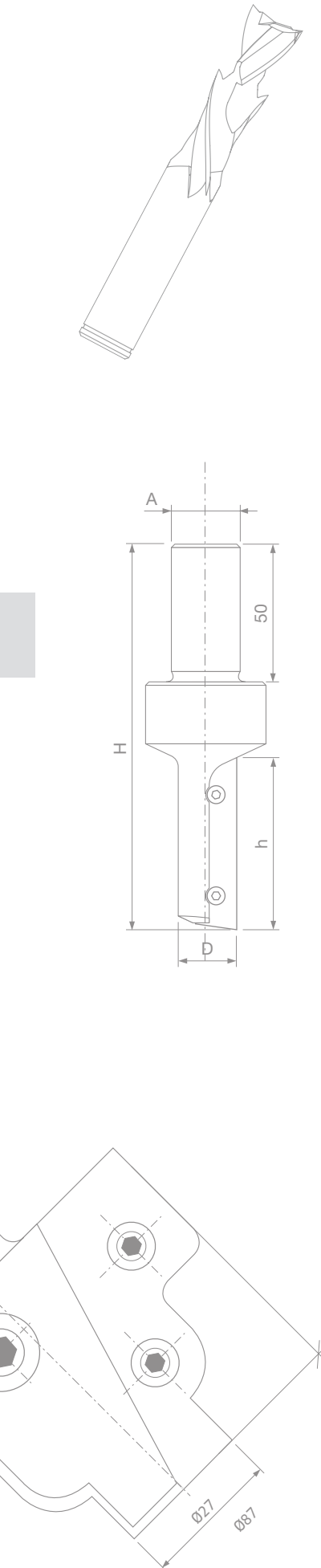
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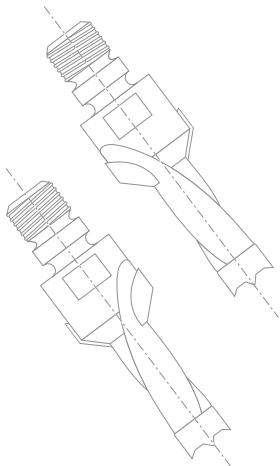
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LEADING TECHNOLOGY

TiCo CARBIDE TECHNOLOGY

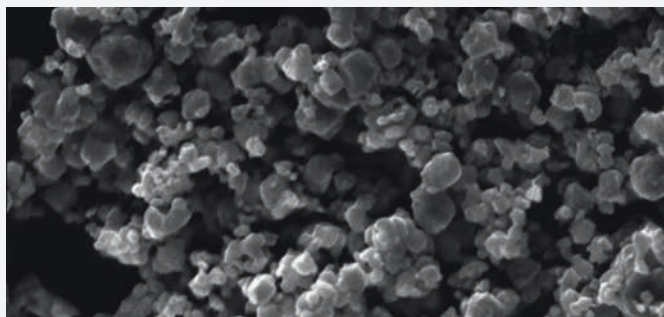
Freud's ownership and control of the entire Carbide production cycle ensures that the correct formula is used for the specific application needs, to constantly maximise the routing tool performance.



TiCo Carbide

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

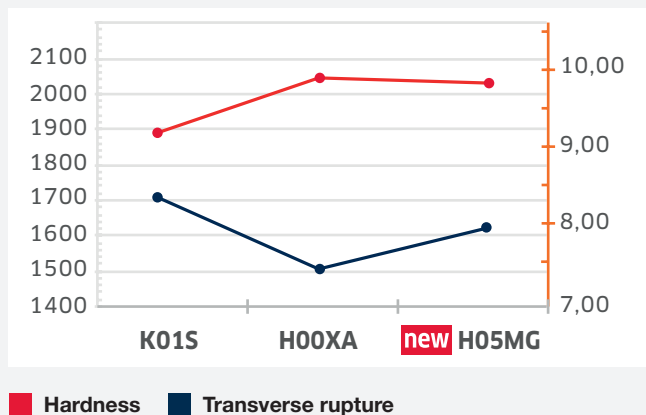
It provides a sharper edge and flawless finish with a dramatically longer cutting life.



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.





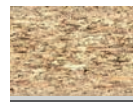
DESIGN INNOVATION

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:

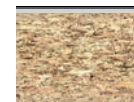
Upcut helix

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.



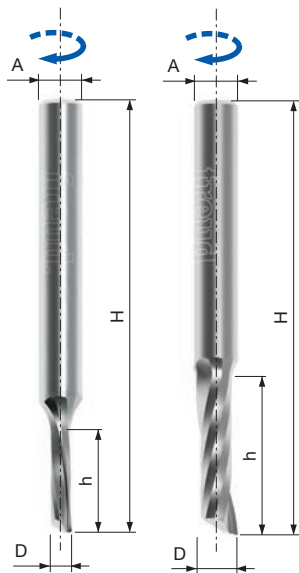
EXTENSIVE RANGE

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



CNC Routers



Up spiral



For table mounted only



Softwood



Hardwood



Chipboard



Laminated Chipboard



MDF



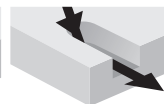
Laminated MDF



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 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.

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: $24.000/18.000 = 1,33$

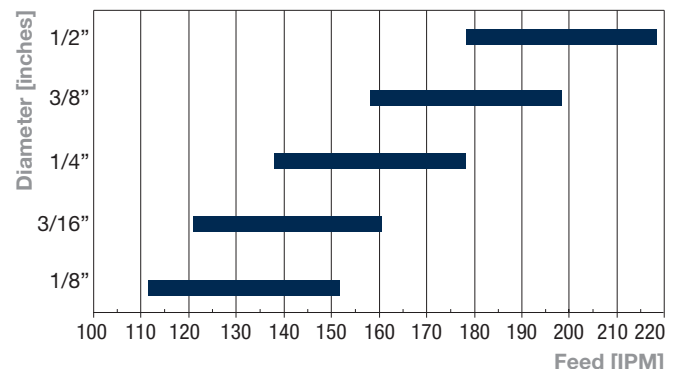
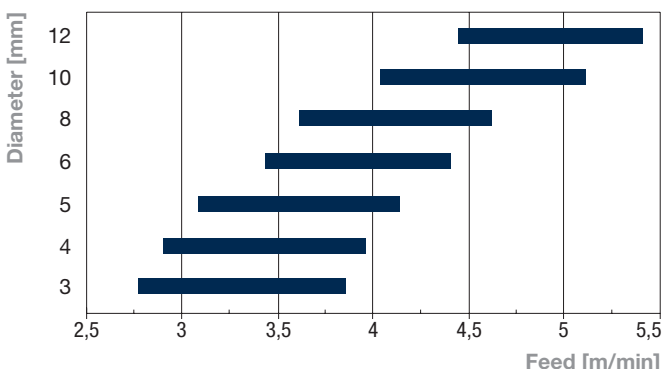
To maximise the tool lifetime, always set the maximum speed that delivers the needed quality of cut.

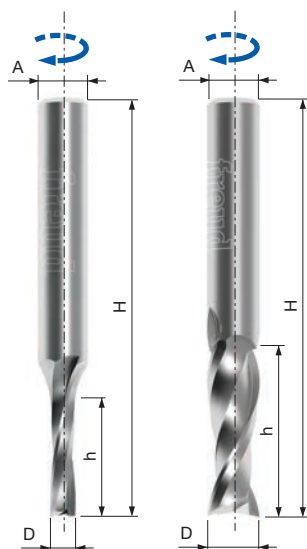
Suggested speeds for softwood: 18.000 RPM.

Depth of cut equal to cutting diameter.

D mm	h mm	H mm	A mm	Quality of HW	Z	Max RPM 1/min.	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





SCH2UF

Finishing router cutter upcut with right-hand Z2



CNC Routers



Up spiral



For table mounted only



Softwood



Hardwood



Chipboard



Laminated Chipboard



MDF



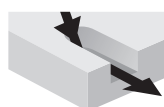
Laminated MDF



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: $24.000/18.000 = 1,33$

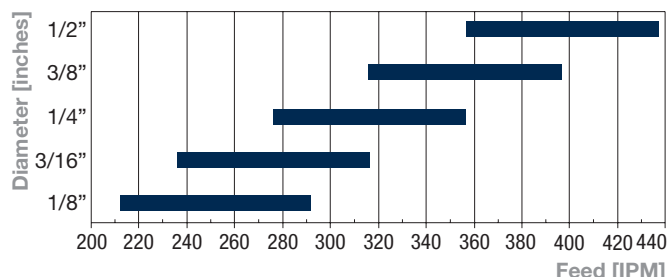
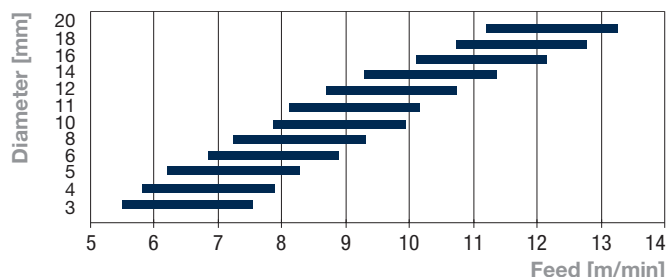
To maximise the tool lifetime, always set the maximum speed that delivers the needed quality of cut.

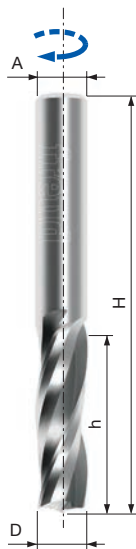
Suggested speeds for softwood: 18.000 RPM.

Depth of cut equal to cutting diameter.

D mm	h mm	H mm	A mm	Quality of HW	Z	Max RPM 1/min.	Freud Code	Art. No.
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 inch	h inch	H inch	A inch	Quality of HW	Z	Max RPM 1/min.	Freud Code	Art. No.
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



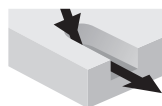
Laminated
MDF



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: $24.000/18.000 = 1,33$

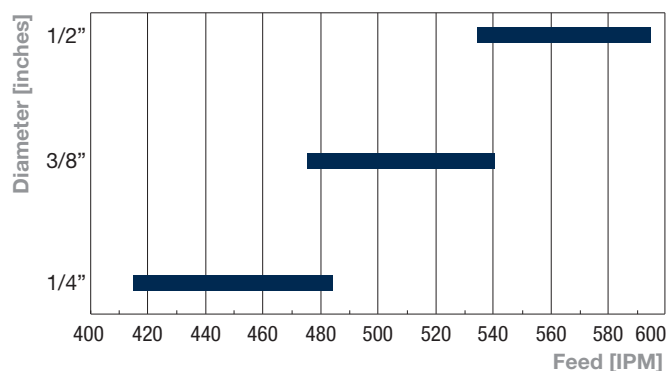
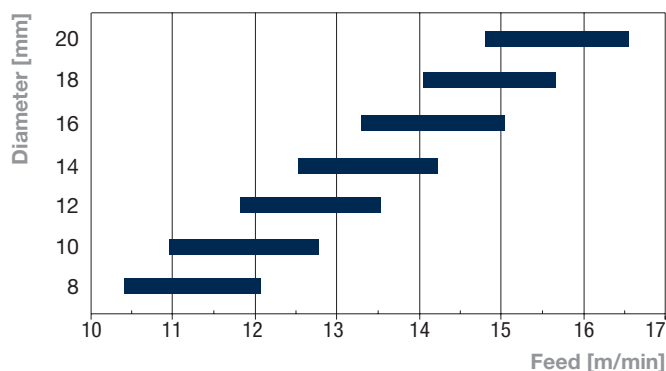
To maximise the tool lifetime, always set the maximum speed that delivers the needed quality of cut.

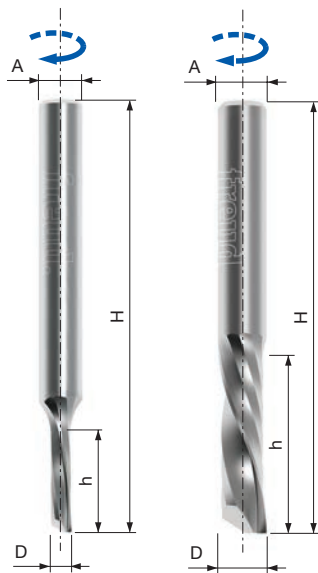
Suggested speeds for softwood: 18.000 RPM.

Depth of cut equal to cutting diameter.

D mm	h mm	H mm	A mm	Quality of HW	Z	Max RPM 1/min.	Freud Code	Art. No.
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 inch	h inch	H inch	A inch	Quality of HW	Z	Max RPM 1/min.	Freud Code	Art. No.
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:

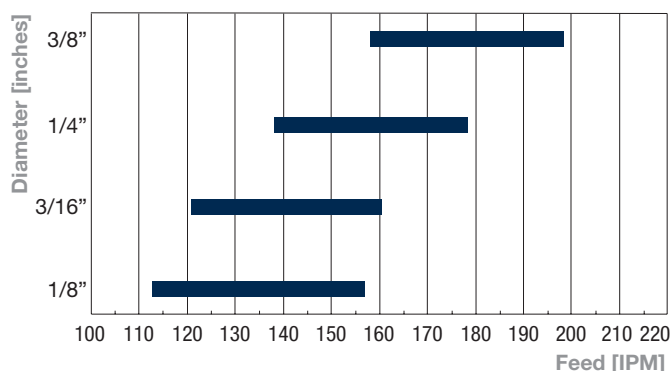
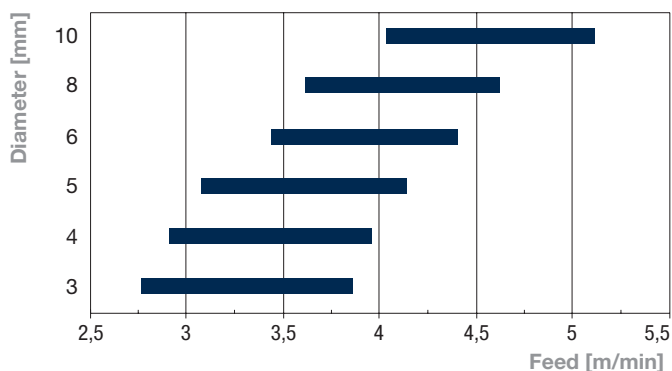
Factor for 12.000 RPM: $12.000/18.000 = 0,66$

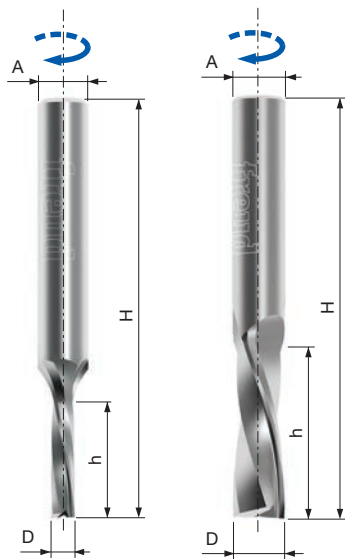
Factor for 24.000 RPM: $24.000/18.000 = 1,33$

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.





SCH2DF

Finishing router cutter downcut with right-hand Z2



CNC Routers



Down spiral



For table
mounted only



Softwood



Hardwood



Chipboard



Laminated
Chipboard



MDF



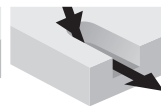
Laminated
MDF



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: $24.000/18.000 = 1,33$

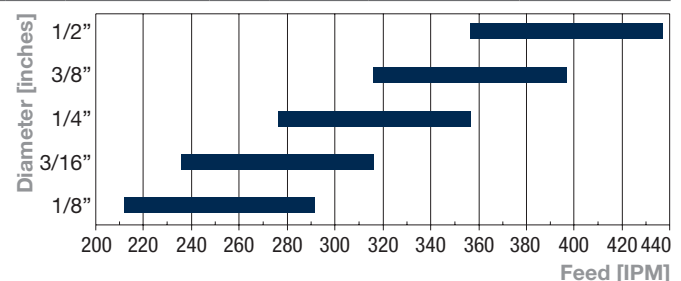
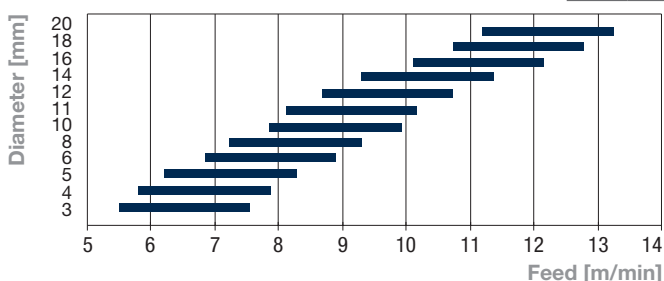
To maximise the tool lifetime, always set the maximum speed that delivers the needed quality of cut.

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 1/min.	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 1/min.	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



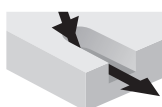
Laminated
MDF



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: $24.000/18.000 = 1,33$

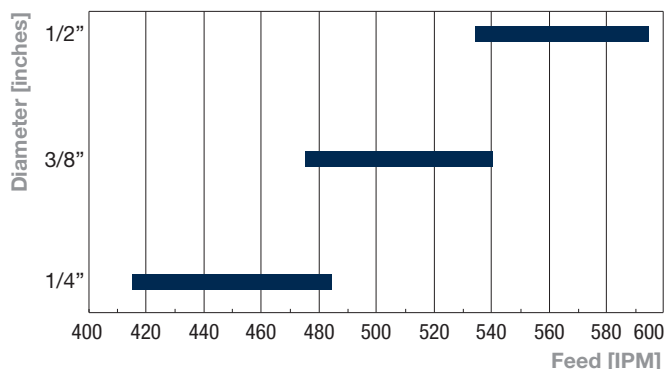
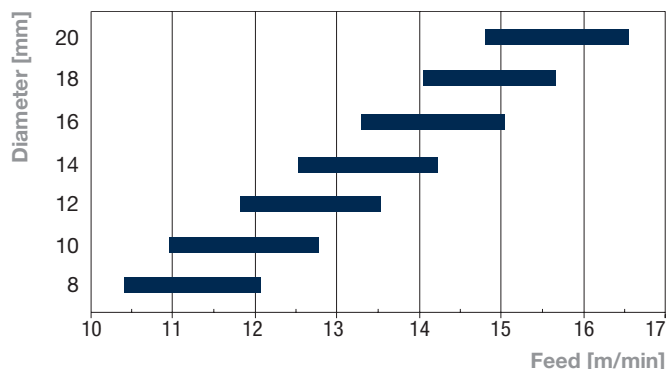
To maximise the tool lifetime, always set the maximum speed that delivers the needed quality of cut.

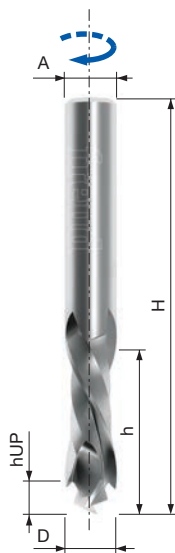
Suggested speeds for softwood: 18.000 RPM.

Depth of cut equal to cutting diameter.

D mm	h mm	H mm	A mm	Quality of HW	Z	Max RPM 1/min.	Freud Code	Art. No.
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 inch	h inch	H inch	A inch	Quality of HW	Z	Max RPM 1/min.	Freud Code	Art. No.
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



CNC Routers



Up and down spiral



For table mounted only



Softwood



Hardwood



Chipboard



Laminated Chipboard



MDF



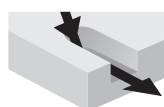
Laminated MDF



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 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: $24.000/18.000 = 1,33$

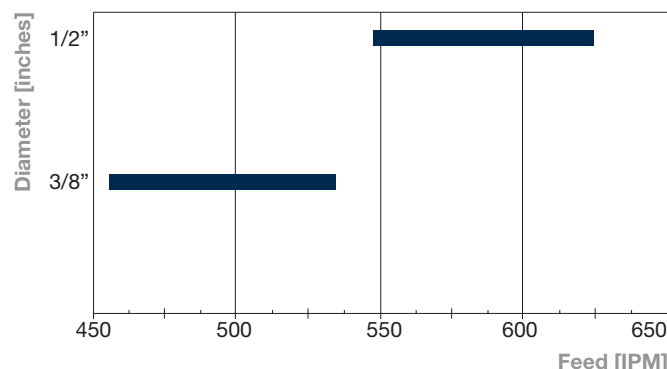
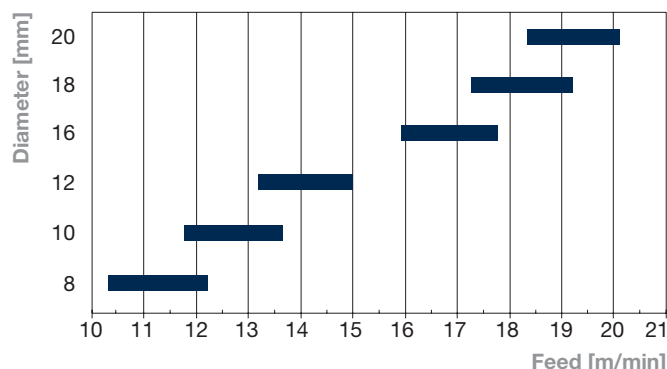
To maximise the tool lifetime, always set the maximum speed that delivers the needed quality of cut.

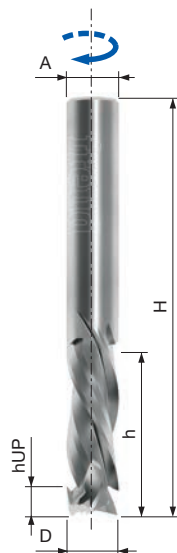
Suggested speeds for softwood: 18.000 RPM.

Depth of cut: 3/4".

D mm	h mm	hUP mm	H mm	A mm	Quality of HW	Z	Max RPM 1/min.	Freud Code	Art. No.
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 inch	h inch	hUP inch	H inch	A inch	Quality of HW	Z	Max RPM 1/min.	Freud Code	Art. No.
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



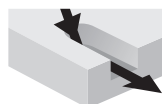
Laminated
MDF



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: $24.000/18.000 = 1,33$

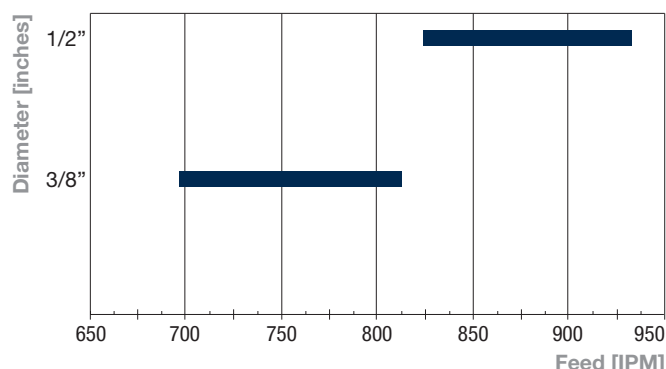
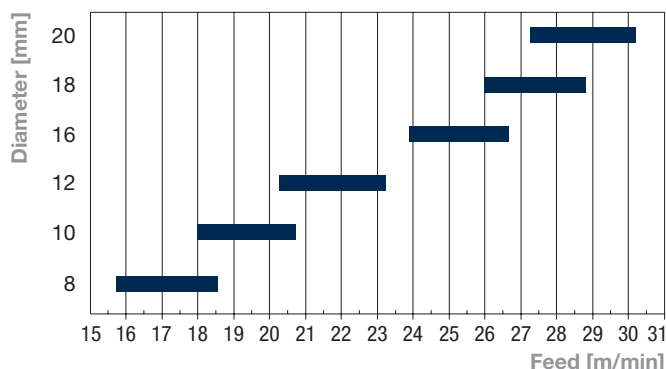
To maximise the tool lifetime, always set the maximum speed that delivers the needed quality of cut.

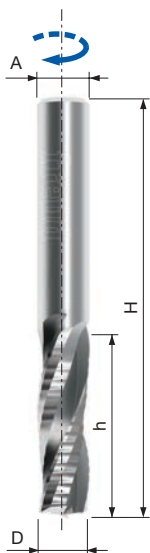
Suggested speeds for softwood: 18.000 RPM.

Depth of cut: 3/4".

D mm	h mm	hUP mm	H mm	A mm	Quality of HW	Z	Max RPM 1/min.	Freud Code	Art. No.
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 inch	h inch	hUP inch	H inch	A inch	Quality of HW	Z	Max RPM 1/min.	Freud Code	Art. No.
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



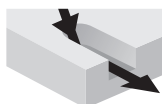
MDF



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: $24.000/18.000 = 1,33$

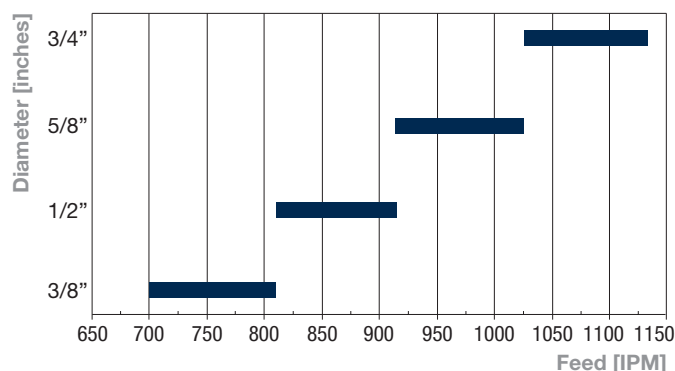
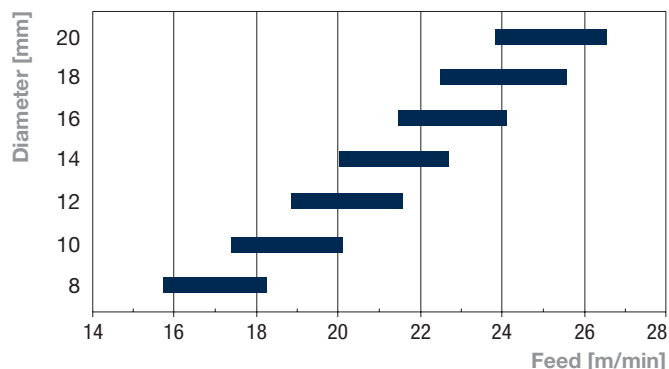
To maximise the tool lifetime, always set the maximum speed that delivers the needed quality of cut.

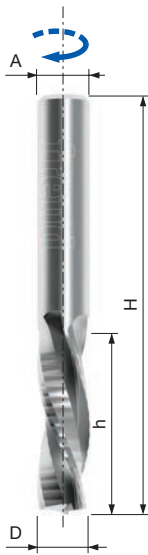
Suggested speeds for softwood: 18.000 RPM.

Depth of cut equal to cutting diameter.

D mm	h mm	H mm	A mm	Quality of HW	Z	Max RPM 1/min.	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 1/min.	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



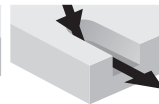
MDF



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:

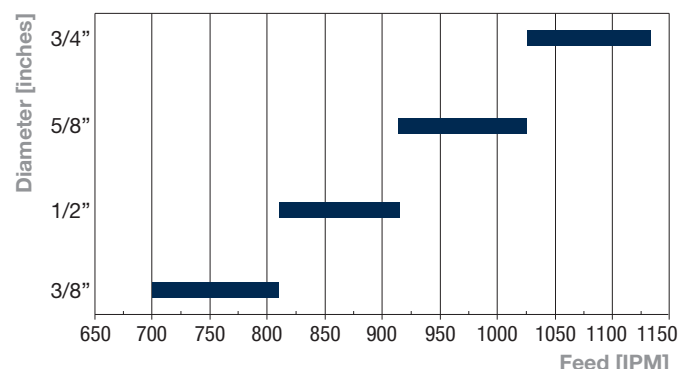
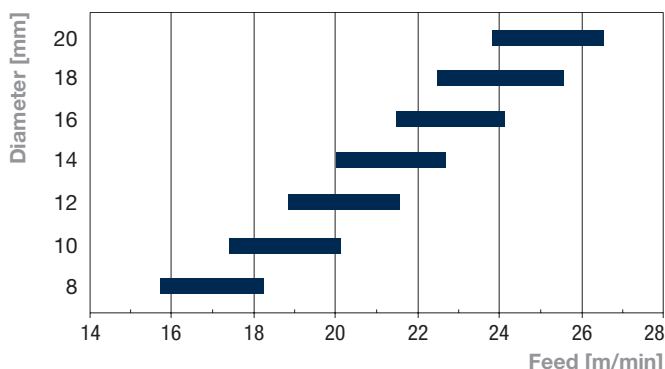
Factor for 12.000 RPM: $12.000/18.000 = 0,66$

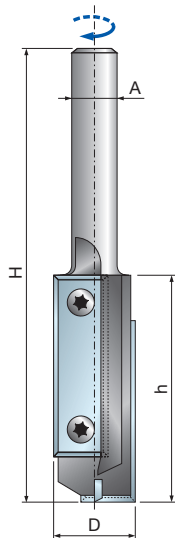
Factor for 24.000 RPM: $24.000/18.000 = 1,33$

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.





Machines:

CNC overhead routing machines.

Materials:

Softwood and hardwood.

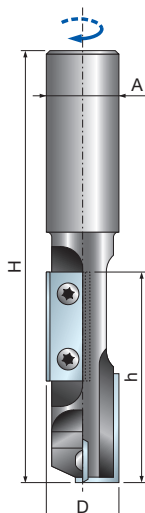
Applications:

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.



Machines:

CNC overhead routing machines.

Materials:

Softwood and hardwood.

Applications:

Sizing and plunging.

Technical information:

For CNC machining centres or overhead routing machines.

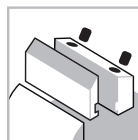
- Suitable for plunging and sizing.
- The disposable knife guarantees a constant finish and cutting diameter.
- It is suggested a gradual feed rate when entering into the workpiece.
- Steel body.

TG62MD

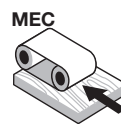
Disposable knives straight router cutters



CNC Routers



Clamping system



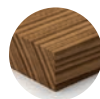
Automatic feed



Steel Body



Softwood



Hardwood



Sizing



Plunging

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

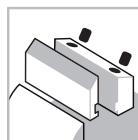
Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	40 x 12 x 1,5	CG44MLA310	F03FA21938
	Screw	M4 x 10 x 9	VT71M AA9	F03FA04505
	Torx key	T15	CB03M DA9	F03FA00168

TG63MD

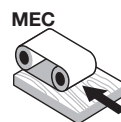
Disposable knives straight router cutters



CNC Routers



Clamping system



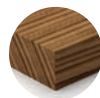
Automatic feed



Steel Body



Softwood



Hardwood



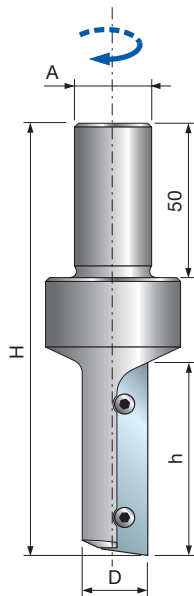
Sizing



Plunging

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



Machines:

CNC overhead routing machines.

Materials:

Softwood and hardwood.

Applications:

Sizing and plunging.

Technical information:

For CNC machining centres or overhead routing machines.

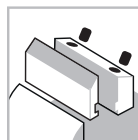
- The disposable knife guarantees a constant finishing and cutting diameter.
- It is suggested a gradual feed rate when entering into the workpiece.
- Steel body.

TG71MD

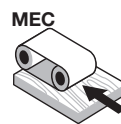
Disposable knives straight router cutters



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



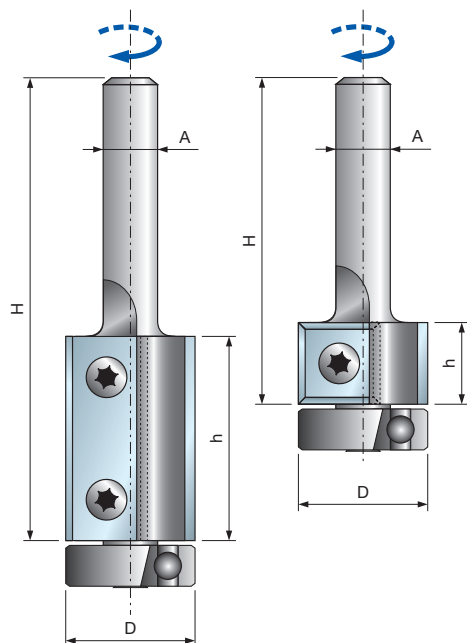
Sizing



Plunging

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

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

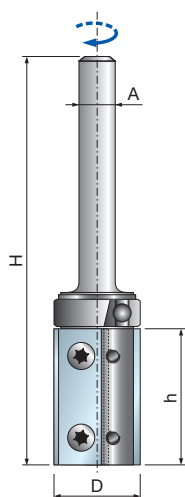


Machines:
CNC routers.

Materials:
Softwood and hardwood.

Applications:
Sizing.

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



Machines:
CNC routers.

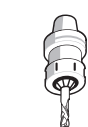
Materials:
Softwood and hardwood.

Applications:
Sizing.

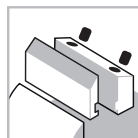
Technical information:
For routers. Ideal for roughing and sizing.
• Steel body.

TG74MD

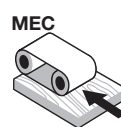
Bearing disposable knives straight router cutters



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

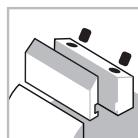
	Spare parts	Dimensions mm	Freud Code	Art. No.
	Knife	12 x 12 x 1,5	CG08MBA310	F03FH02903
	Knife	30 x 12 x 1,5	CG08MEA310	F03FH02906
	Screw	M4 x 10 x 9	VT71M AA9	F03FA04505
	Ball bearing	19 x 6 x 6	3102M CA9	F03FA14097
	Torx key	T15	CB03M DA9	F03FA00168

TG76MD

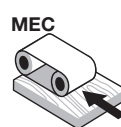
Bearing disposable knives straight router cutters



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



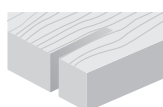
Laminated Chipboard



Laminated MDF



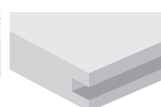
Plywood



Ripping



Crosscutting



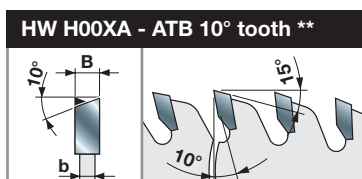
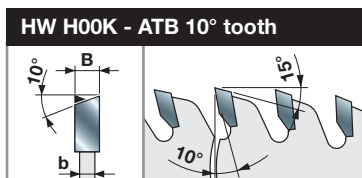
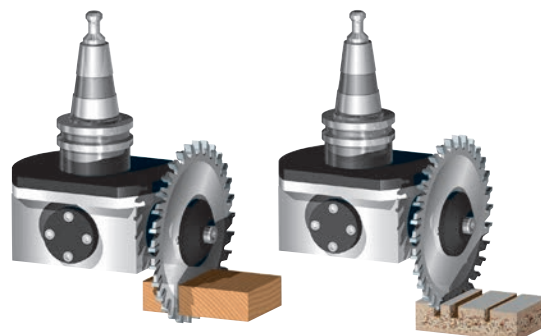
Grooving



●●● Ultimate ●● High ● Good

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:

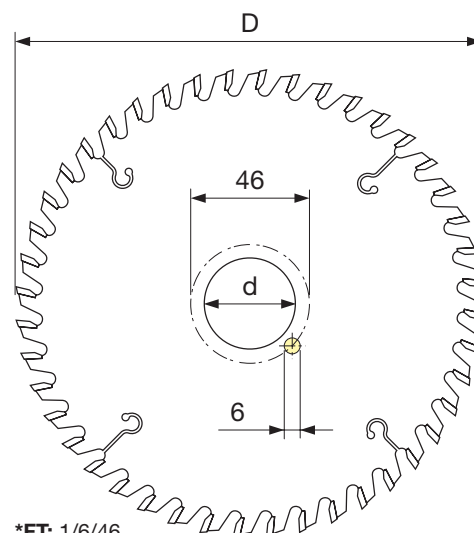
Softwood, hardwood, laminated chipboard, laminated MDF and plywood.

Applications:

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

Technical information:

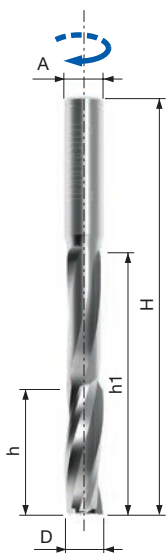
Saw blades dedicated to CNC machines. For grooving along and across grain on softwood, hardwood and laminates.



*FT: 1/6/46

Grooving





SCH3

Finishing hardware slot router cutter - right-hand Z3



CNC Routers



Up spiral



Down spiral



For table mounted only



Softwood



Hardwood



Chipboard



Laminated Chipboard



MDF



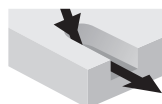
Laminated MDF



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

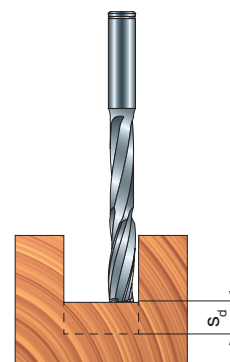
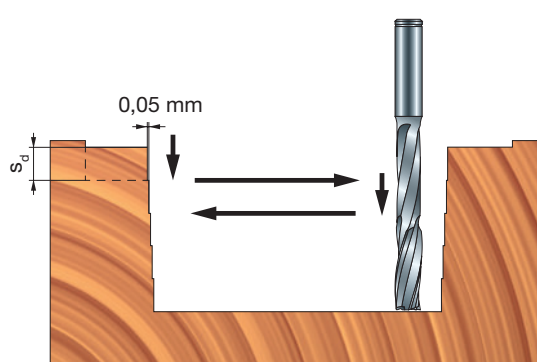


D mm	h mm	h1 mm	H mm	A mm	Quality of HW	Z	Max RPM 1/min.	Freud Code	Art. No.
14	45	95	150	14	H05MG	3	25.000	SCH3UFN102R	F03FR03803
16	45	95	150	16	H05MG	3	25.000	SCH3UFN104R	F03FR03804
18	45	95	150	18	H05MG	3	25.000	SCH3UFN106R	F03FR03805

Downcut



D mm	h mm	h1 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:

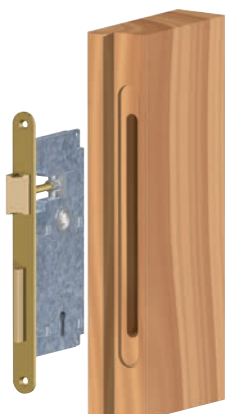
Maximum depth per stroke s_d : 8 mm

Suggested infeed at 18.000 RPM: 15 m/min

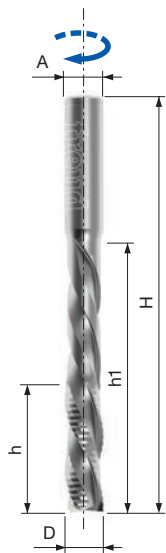
Chipboard feed and speeds:

Maximum depth per stroke s_d : 15 mm

Suggested infeed at 18.000 RPM: 12 m/min



Solid wood - Best Downcut



SCH3

Roughing hardware slot router cutter - right-hand Z3



CNC Routers



Up spiral



Down spiral



For table mounted only



Softwood



Hardwood



Chipboard



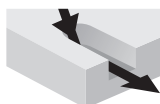
MDF



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_g : 8 mm

Suggested infeed at 18.000 RPM: 15 m/min

Chipboard feed and speed:

Maximum depth per stroke s_g : 15 mm

Suggested infeed at 18.000 RPM: 12 m/min

Upcut

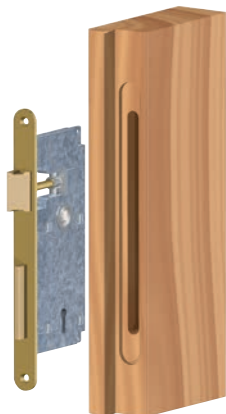
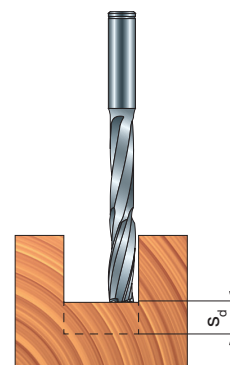
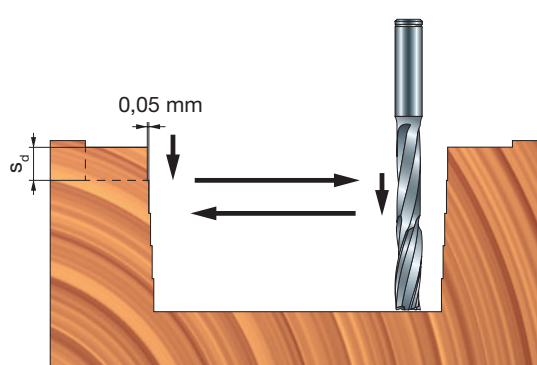


D mm	h mm	h1 mm	H mm	A mm	Quality of HW	Z	Max RPM 1/min.	Freud Code	Art. No.
14	45	95	150	14	H05MG	3	25.000	SCH3UMN102R	F03FR03827
16	45	95	150	16	H05MG	3	25.000	SCH3UMN104R	F03FR03828
18	45	95	150	18	H05MG	3	25.000	SCH3UMN106R	F03FR03829

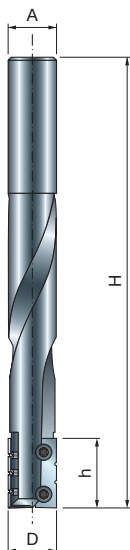
Downcut



D mm	h mm	h1 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

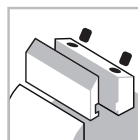


TG72MD

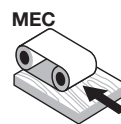
Disposable knife straight router cutter



CNC Routers



Clamping system



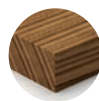
Automatic feed



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



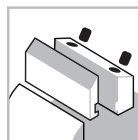


TM10MD

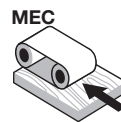
Disposable knives straight router cutter



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:

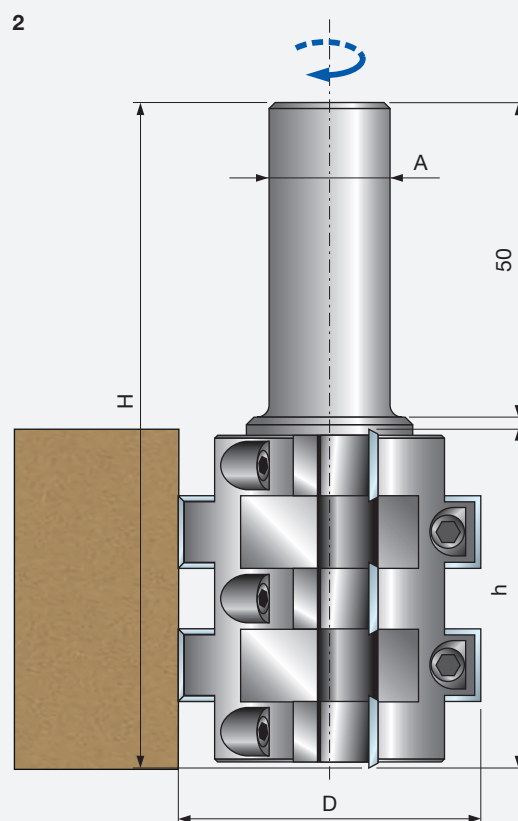
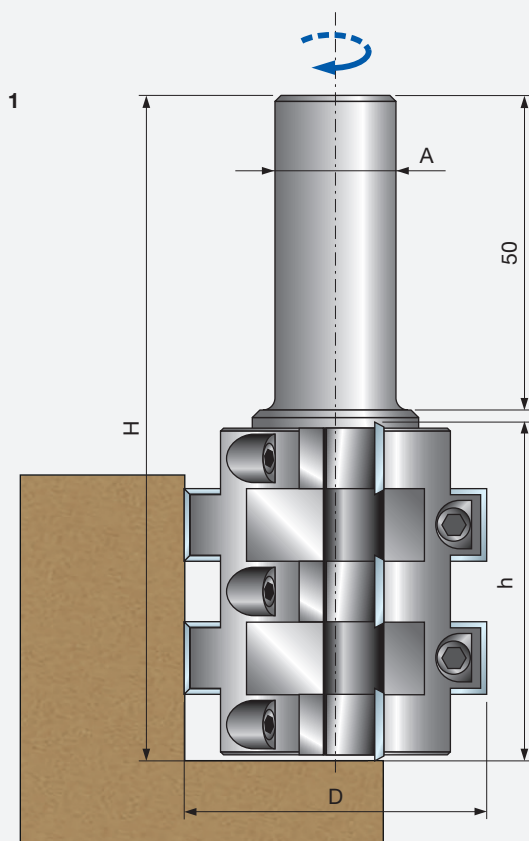
Disposable knives tool for roughing and sizing and suitable for cutting rebates.

- 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



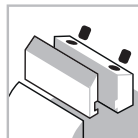


NC12M

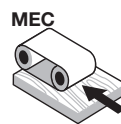
Spoilboard surfacing cutters



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.

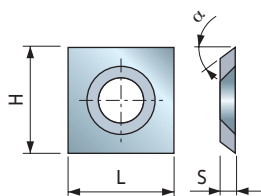
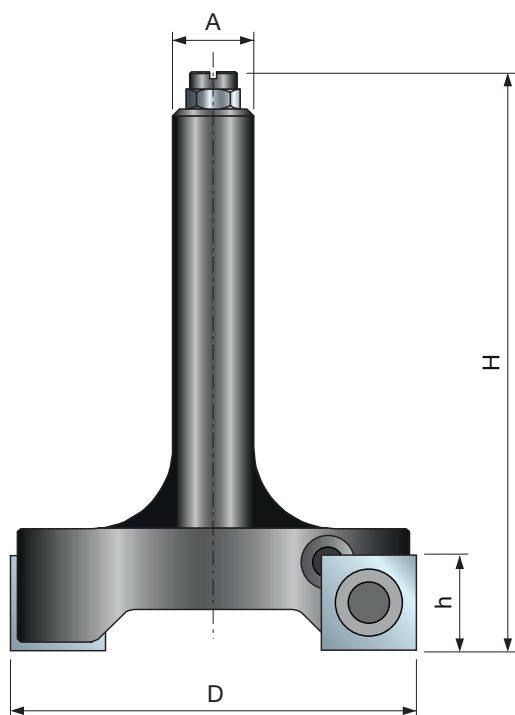
D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Freud Code	Art. No.
60	13	80	12	2	-	NC12M60	F03FR03949
80	13	80	20	3	-	NC12M80	F03FR03884
100	13	80	20	3	-	NC12M100	F03FR03886
60	13	80	12	2	-	NC12M60N	F03FR03950
80	13	80	20	3	-	NC12M80N	F03FR03885
100	13	80	20	3	-	NC12M100N	F03FR03887

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	-	NC12M61	F03FR03951
4	1/2	3	3/4	3	-	NC12M101	F03FR03888
2-1/2	1/2	3	1/2	2	-	NC12M61N	F03FR03952
4	1/2	3	3/4	3	-	NC12M101N	F03FR03889

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

Optional square disposable spur

L mm	H mm	S mm	Type	Quality of HW	α	Freud Code	Art. No.
14	14	2	1	H00XA	31°	RG01MAH310	F03FH03037



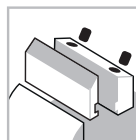


NC96MGC13

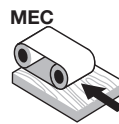
CNC multicut planer cutterhead



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.

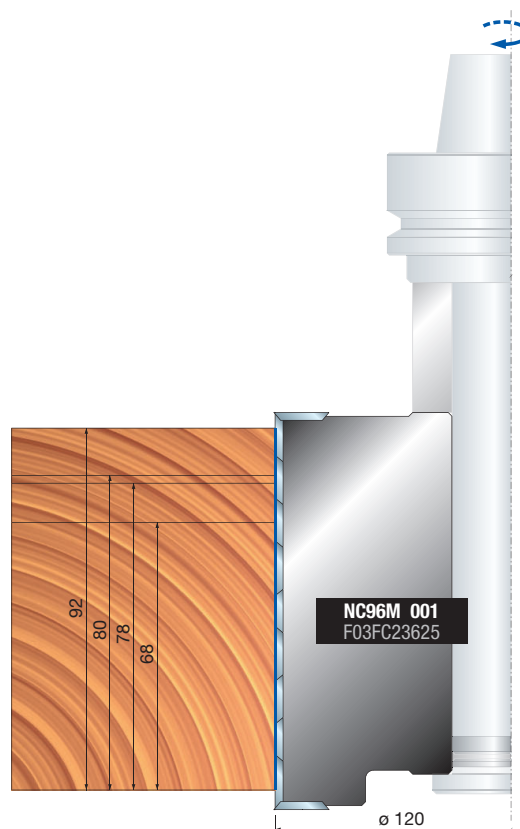
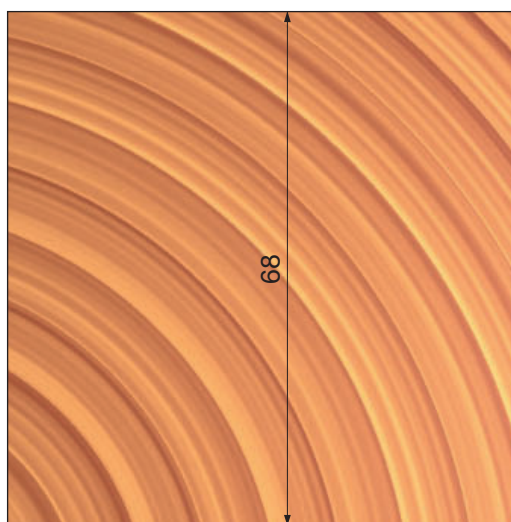
- Timber up to 92 mm thickness, tool available in left and right hand rotation.
- Chuck and knives to be ordered separately.
- Aluminium light alloy body.

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

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

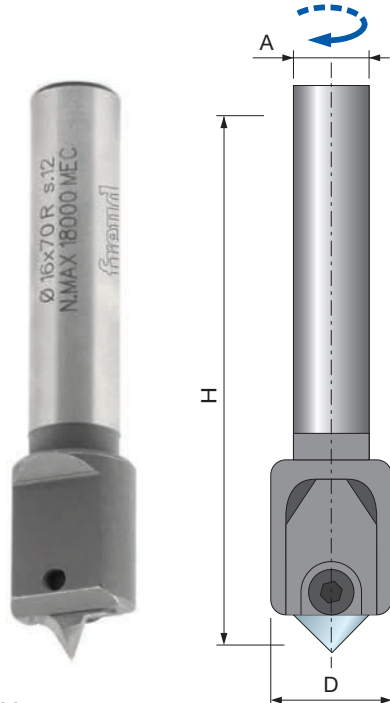
Tools for set NC96MGC13

D mm	B mm	d mm	Freud Code	Art. No.
120	101	30	NC96M 001	F03FC23625



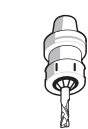
Profiling



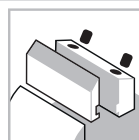


NC01M

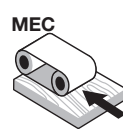
Multiprofile router cutter - Z1



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.

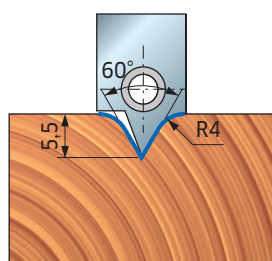
Technical information:

Multiprofile router cutter available with 11 different shape solutions.

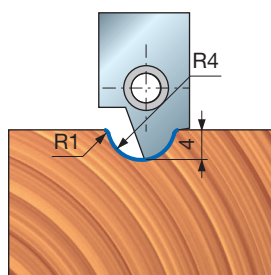
- Item **NC01MCA** includes the router cutter body and 10 knives (1 for each profile).
- For making one profile only, please order the router cutter body **NC01M-A** and 1 knife with the desired profile.
- Steel body.

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

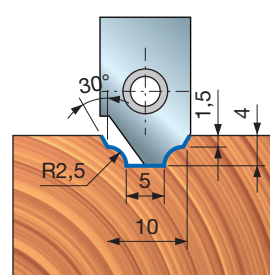
Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife	12x19 R=4	CC01MT0101	F03FA18124
2	Knife	12x19 R=4	CC01MT0201	F03FA18125
3	Knife	12x19 R=2,5	CC01MT0301	F03FA18126
4	Knife	12x19 $\alpha=90^\circ$	CC01MT0401	F03FA18127
5	Knife	12x19 R=5	CC01MT0501	F03FA18128
6	Knife	12x19 R=4	CC01MT0601	F03FA18129
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



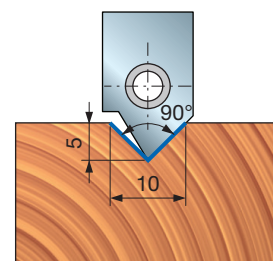
PROFILE 1



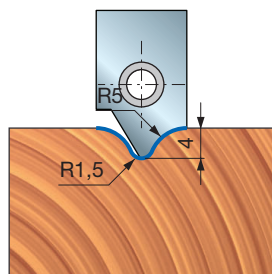
PROFILE 2



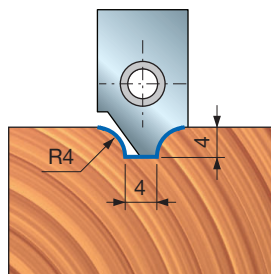
PROFILE 3



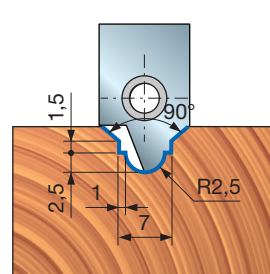
PROFILE 4



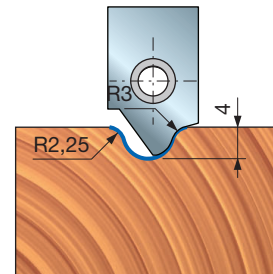
PROFILE 5



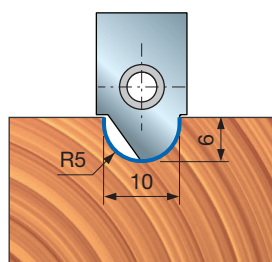
PROFILE 6



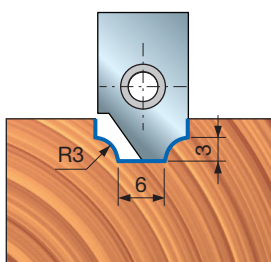
PROFILE 7



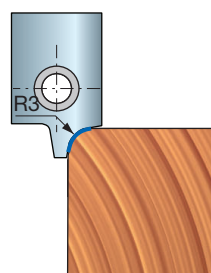
PROFILE 8



PROFILE 9



PROFILE 10



PROFILE 11

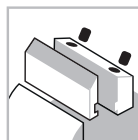


NC02M

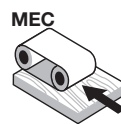
CNC router cutter with profiled knives



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).

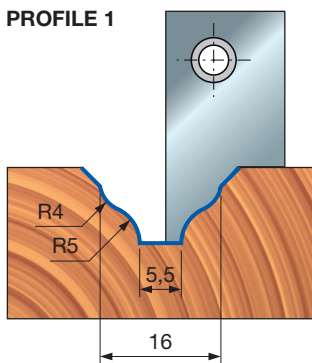
- 12x50 mm and 20x50 mm shank available.
- Steel body.

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

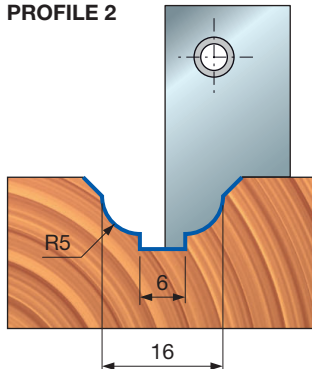
Spare parts		Dimensions mm	Freud Code	Art. No.
	Screw	M6 x 12	2607M 006	F03FA07456
	Screw	M5 x 5	2615M CC9	F03FA07420
	Washer	14 x 2 x 6	VT18M AL9	F03FC20662
	Allen key	4	CB03M BA9	F03FA00163
	Allen key	2,5	2619M CA9	F03FA07432

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

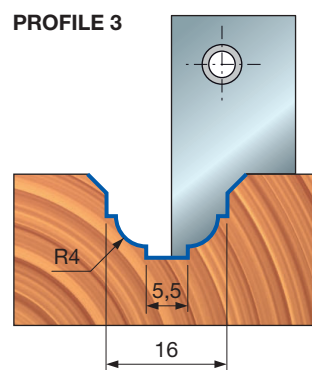
PROFILE 1



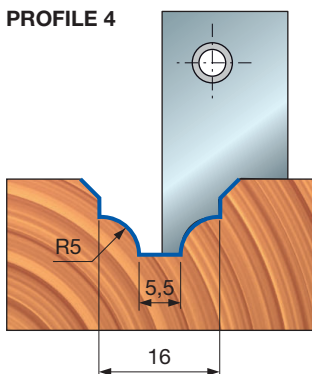
PROFILE 2



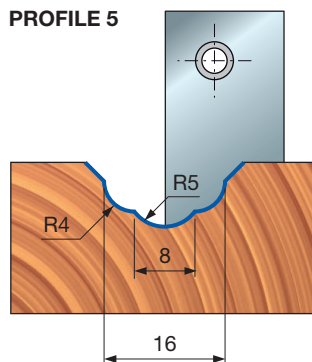
PROFILE 3



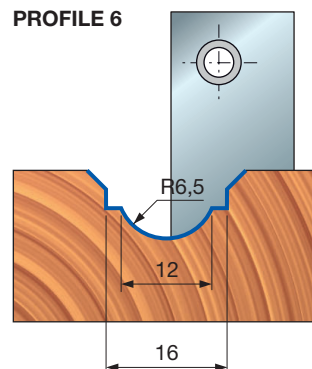
PROFILE 4

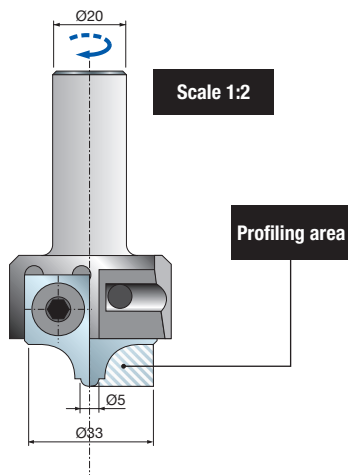


PROFILE 5



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.

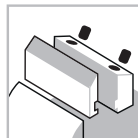
- Steel body.
- **PCN110** item includes router cutter complete of components, knives (minimum order quantity 6 pieces) and maintenance keys for orders please specify: shank dimensions, profile drawing (please refer to knife profiling area).

PCN110

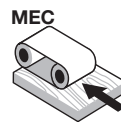
Customised CNC router cutter with profiled knives



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



MDF



Profiling



Grooving

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

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

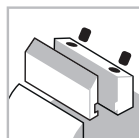


NC21MCA

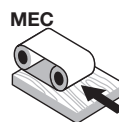
CNC router cutter with multiradius knives



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.

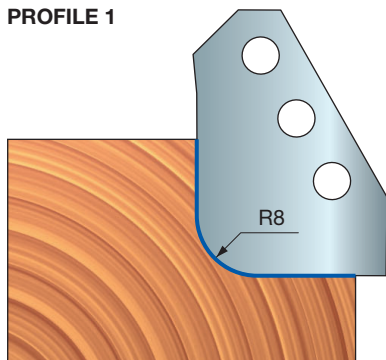
****NC21M-A**: knives to be ordered separately.

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

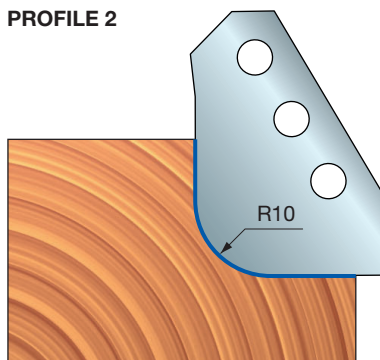
	Spare parts	Dimensions mm	Freud Code	Art. No.
	Screw	M4 x 10	2622M AB9	F03FA07453
	Screw	M8 x 18	2622M DF9	F03FA07457
	Washer	9 x 1,5 x 4	VT18M AH9	F03FA04481
	Allen key	2,5	2619M CA9	F03FA07432

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

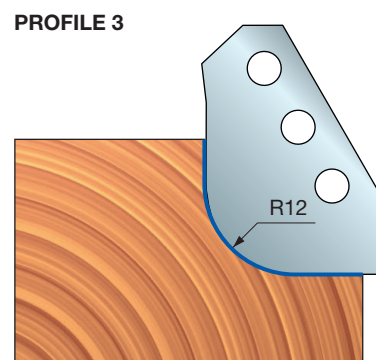
PROFILE 1



PROFILE 2



PROFILE 3



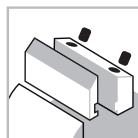


NC23MCA

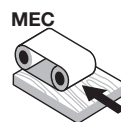
CNC router cutter with multiradius knives



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.

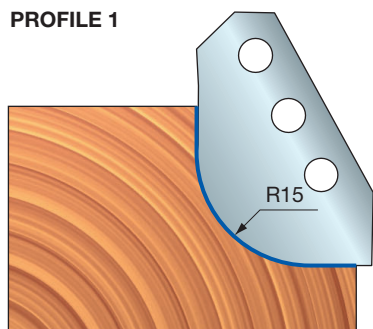
****NC23M-A**: knives to be ordered separately.

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

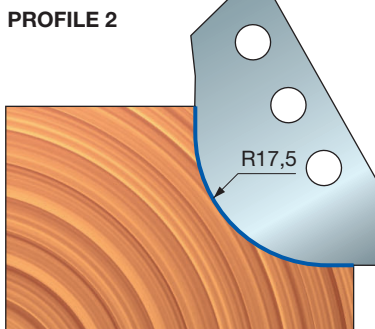
	Spare parts	Dimensions mm	Freud Code	Art. No.
	Screw	M4 x 10	2622M AB9	F03FA07453
	Screw	M8 x 18	2622M DF9	F03FA07457
	Washer	9 x 1,5 x 4	VT18M AH9	F03FA04481
	Allen key	2,5	2619M CA9	F03FA07432

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

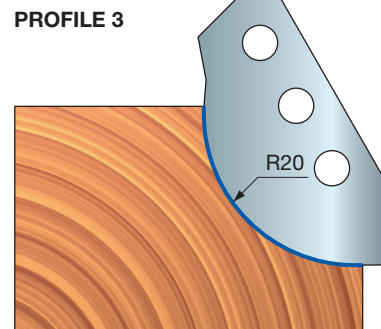
PROFILE 1

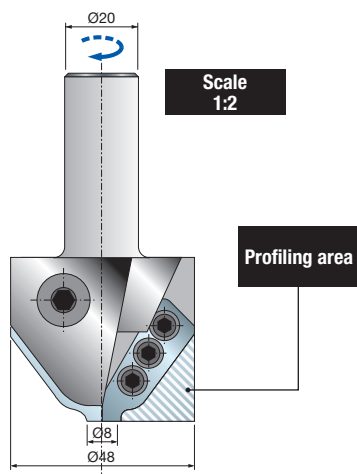


PROFILE 2



PROFILE 3





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.

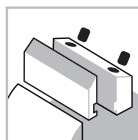
- Steel body.
- **PCN121** item includes router cutter complete of components, knives (minimum order quantity 6 pieces) and maintenance keys. For orders please specify: shank dimensions and profile drawing (please refer to knife profiling area).

PCN121

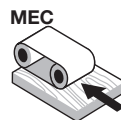
Customised CNC router cutter with profiled knives



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.
65	45	20 x 50	18.000	PCN121	-

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

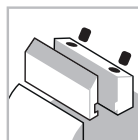


NC30MCA

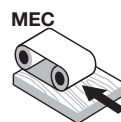
CNC router cutter with multiradius knives



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.

***NC30MCA**: complete with all available knives.

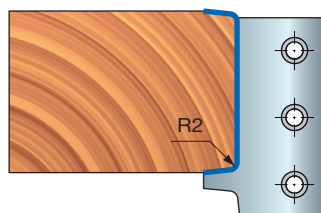
****NC30M-A**: knives to be ordered separately.

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

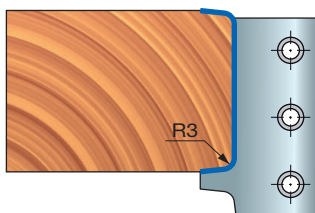
Spare parts	Dimensions mm	Freud Code	Art. No.
 Allen key	4	CB03M BA9	F03FA00163

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

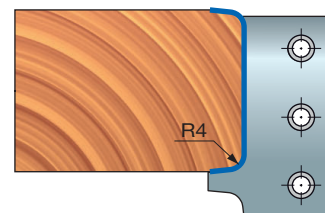
PROFILE 1



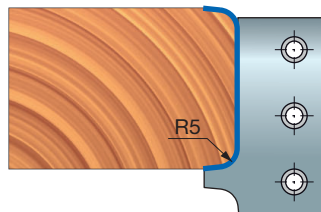
PROFILE 2



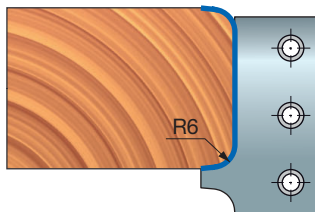
PROFILE 3



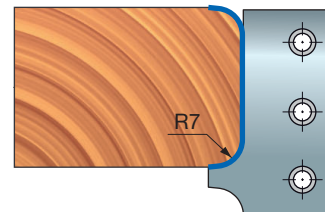
PROFILE 4



PROFILE 5



PROFILE 6



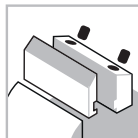


NC30MCB

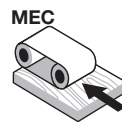
CNC router cutter with multiradius knives



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.

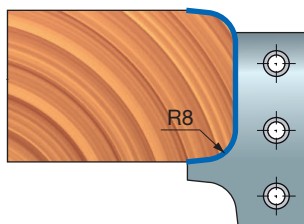
**NC30M-B: knives to be ordered separately.

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

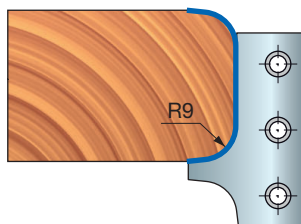
Spare parts	Dimensions mm	Freud Code	Art. No.
Allen key	4	CB03M BA9	F03FA00163

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

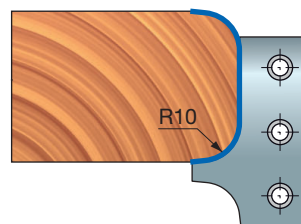
PROFILE 1



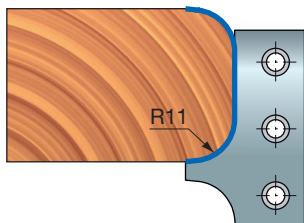
PROFILE 2



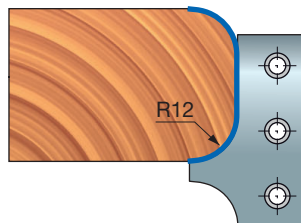
PROFILE 3



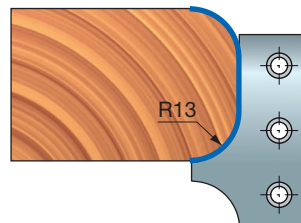
PROFILE 4

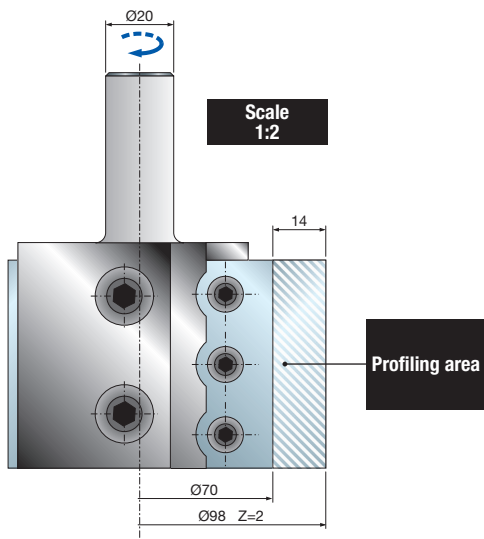


PROFILE 5



PROFILE 6



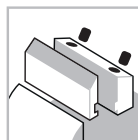


PCN130

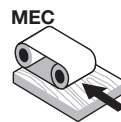
Customised CNC router cutter with profiled knives



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.

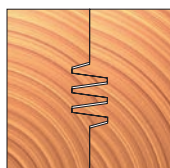
- **PCN130** item includes router cutter complete of components, knives (minimum order quantity 6 pieces) and maintenance keys. For orders please specify: shank dimensions and profile drawing (please refer to knife profiling area).

D mm	B mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
98	55	20 x 50	11.000	PCN130	-

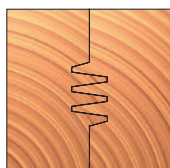
	Spare parts	Dimensions mm	Freud Code	Art. No.
	Knife	55 x 35 x 3	CCN130	-
	Screw	M6 x 12	2607M 006	F03FA07456
	Screw	M10 x 25	2622M EH9	F03FA07459
	Washer	14 x 2 x 6	VT18M AL9	F03FC20662
	Allen key	4	CB03M BA9	F03FA00163
	* Screw	M4 x 6	2602M CE9	F03FA07349
	* Screw	18 x 7 x M6	VT08M AG9	F03FC20653

*Spare parts needed in case of jointing profiles.

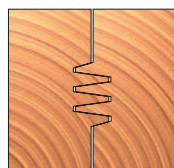
Adjustment examples



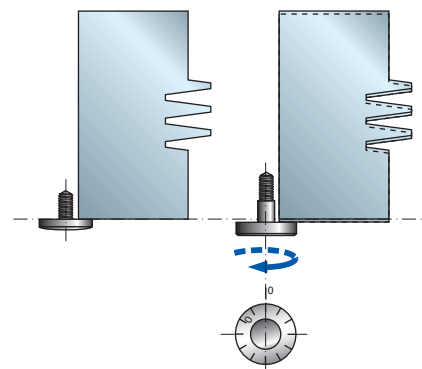
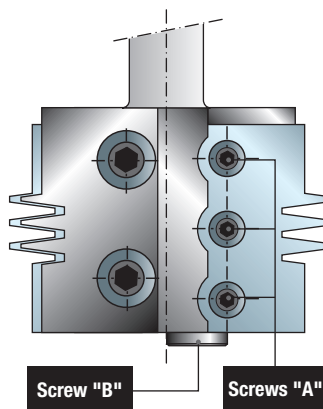
Regular joint



Tight joint

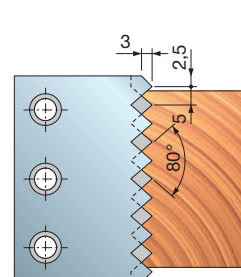
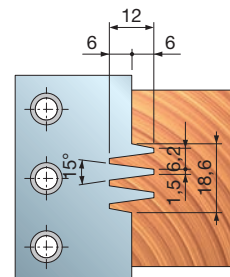
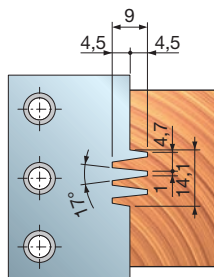
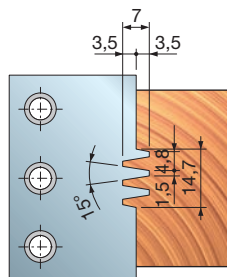
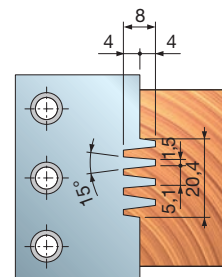
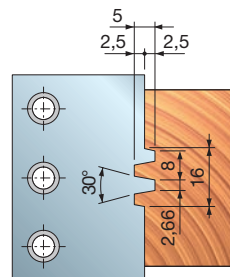
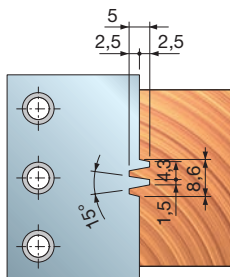
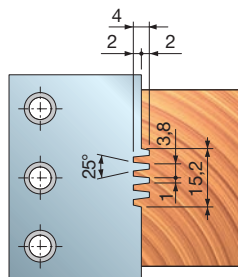


Loose joint



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.



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.

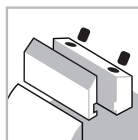
****NC33M-A**: knives to be ordered separately.

NC33MCA

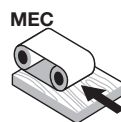
CNC router cutter with multiradius knives



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



MDF



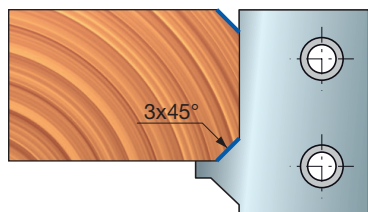
Profiling

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

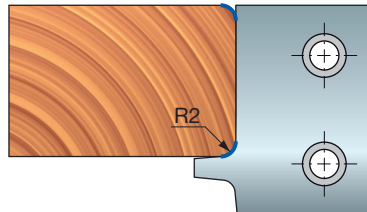
	Spare parts	Dimensions mm	Freud Code	Art. No.
	Screw	M6 x 12	2607M 006	F03FA07456
	Screw	M10 x 25	2622M EH9	F03FA07459
	Washer	14 x 2 x 6	VT18M AL9	F03FC20662
	Allen key	4	CB03M BA9	F03FA00163

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

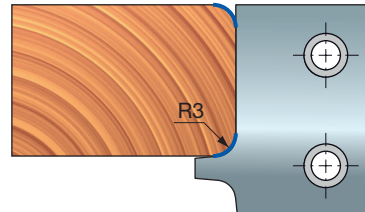
PROFILE 1



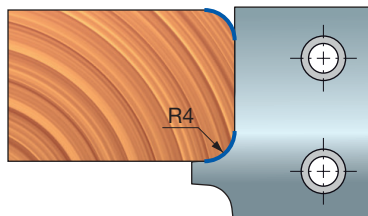
PROFILE 2



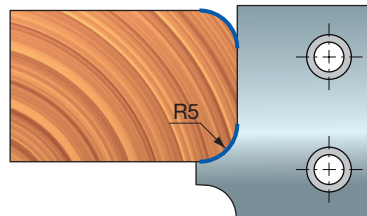
PROFILE 3

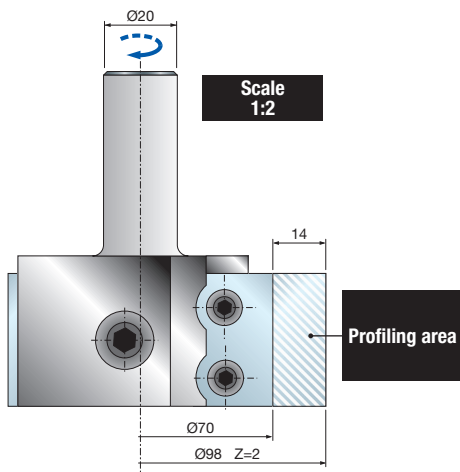


PROFILE 4



PROFILE 5





Machines:
CNC overhead routing machines.

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

Applications:
Profiling and jointing.

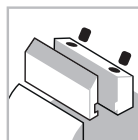
Technical information:
Performance CNC router cutter suitable for customised profiles.
• Steel body.
• **PCN133** item includes router cutter complete of components, knives (minimum order quantity 6 pieces) and maintenance keys. For orders please specify: shank dimensions and profile drawing (please refer to knife profiling area).

PCN133

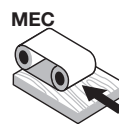
Customised CNC router cutter with profiled knives



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



MDF



Profiling



Jointing

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



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.

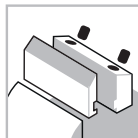
****NC40M-A**: knives to be ordered separately.

NC40MCA

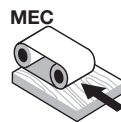
CNC router cutter with multiradius knives



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



MDF



Profiling



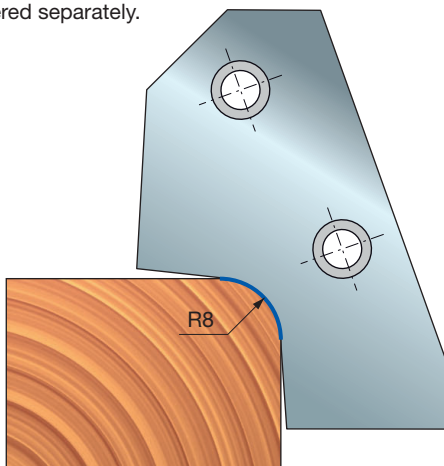
Grooving

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

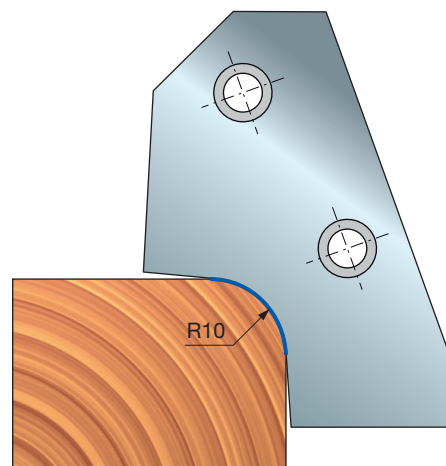
Spare parts	Dimensions mm	Freud Code	Art. No.
Screw	M6 x 12	2607M 006	F03FA07456
Screw	M10 x 25	2622M EH9	F03FA07459
Washer	14 x 2 x 6	VT18M AL9	F03FC20662
Allen key	4	CB03M BA9	F03FA00163

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

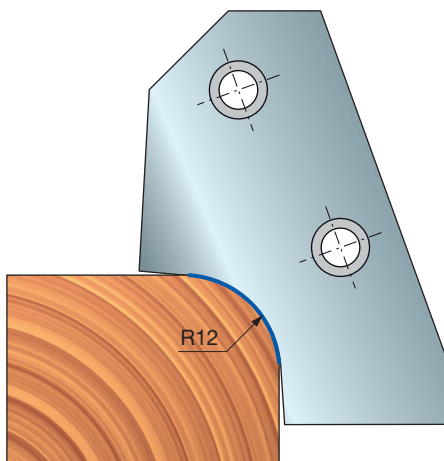
PROFILE 1



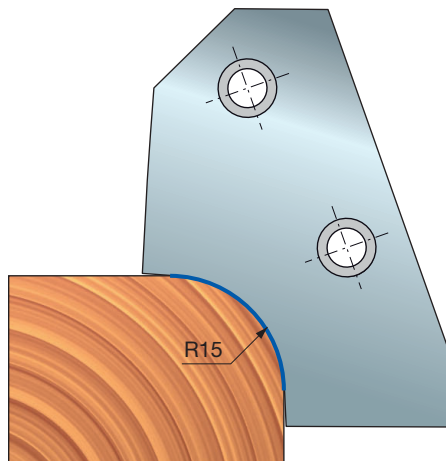
PROFILE 2

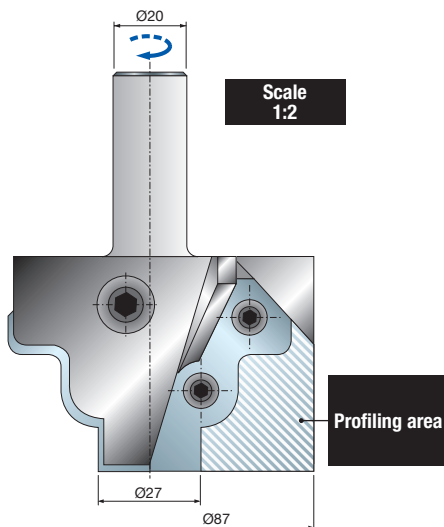


PROFILE 3



PROFILE 4





Machines:
CNC overhead routing machines.

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

Applications:
Profiling and grooving.

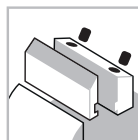
Technical information:
Performance CNC router cutter suitable for customised profiles.
• Steel body.
• **PCN140** item includes router cutter complete of components, knives (minimum order quantity 6 pieces) and maintenance keys. For orders please specify: shank dimensions and profile drawing (please refer to knife profiling area).

PCN140

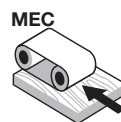
Customised CNC router cutter with profiled knives



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.
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



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.

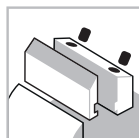
****NC50M-A**: knives to be ordered separately.

NC50MCA

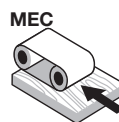
CNC router cutter with multiradius knives



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



MDF



Profiling



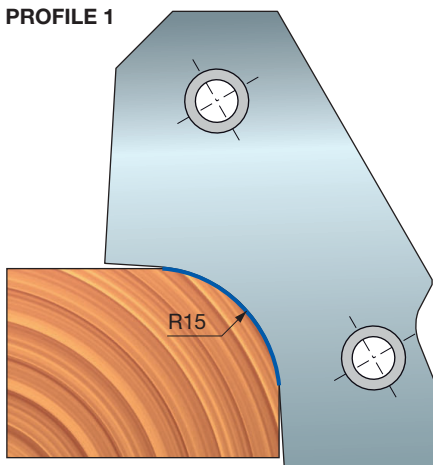
Grooving

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

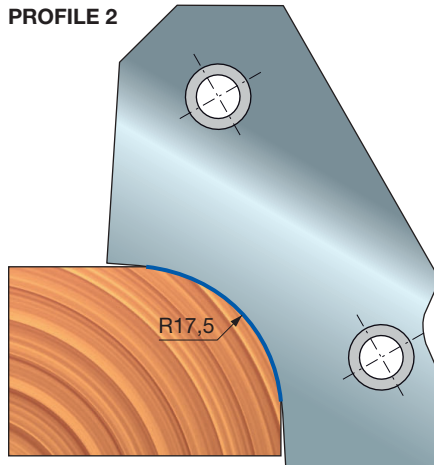
	Spare parts	Dimensions mm	Freud Code	Art. No.
	Screw	M6 x 12	2607M 006	F03FA07456
	Screw	M10 x 25	2622M EH9	F03FA07459
	Washer	14 x 2 x 6	VT18M AL9	F03FC20662
	Allen key	4	CB03M BA9	F03FA00163

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

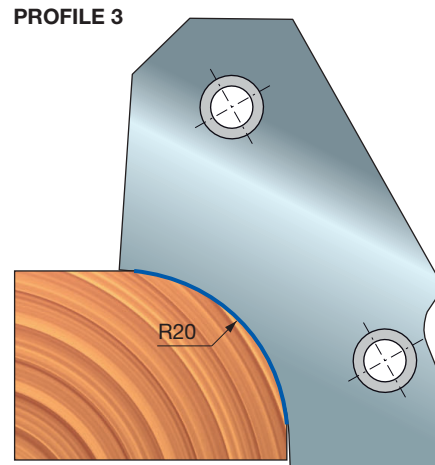
PROFILE 1

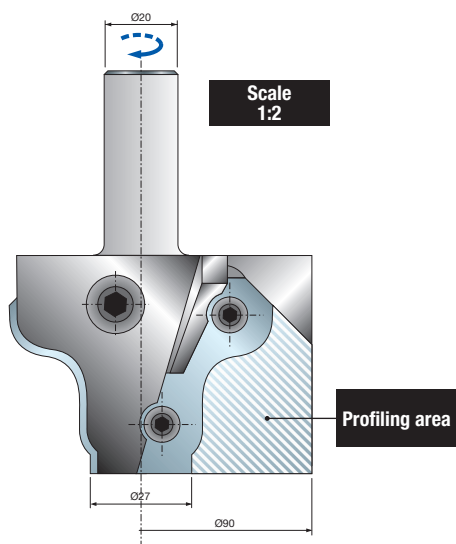


PROFILE 2



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.

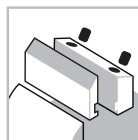
- Steel body.
- **PCN150** item includes router cutter complete of components, knives (minimum order quantity 6 pieces) and maintenance keys. For orders please specify: shank dimensions and profile drawing (please refer to knife profiling area).

PCN150

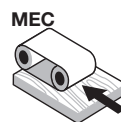
Customised CNC router cutter with profiled knives



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	PCN150	-

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Knife	47 x 53 x 3	CCN150	
	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

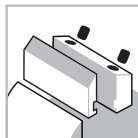


NC60MCA

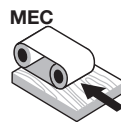
CNC raised panel router cutter



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Profiling



Machines:

CNC overhead routing machines.

Materials:

Softwood and hardwood.

Applications:

Profiling.

Technical information:

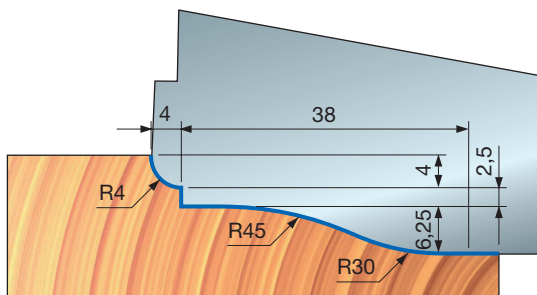
Performance knives raised panel cutter.

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

D mm	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



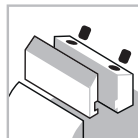


NC62MCA

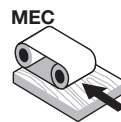
CNC raised panel router cutter



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Profiling



Machines:

CNC overhead routing machines.

Materials:

Softwood and hardwood.

Applications:

Profiling.

Technical information:

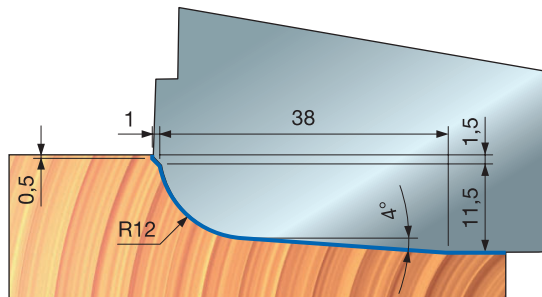
Performance knives raised panel cutter.

- 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

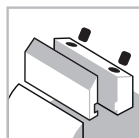


NC64MCA

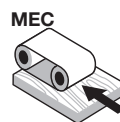
CNC raised panel router cutter



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	NC64MCA*	F03FC15462
114	54	20 x 50	9.000	NC64M-A**	F03FC15461

Spare parts	Dimensions mm	Freud Code	Art. No.
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

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



Machines:

CNC overhead routing machines.

Materials:

Softwood, hardwood, wood based panels and MDF.

Applications:

Profiling.

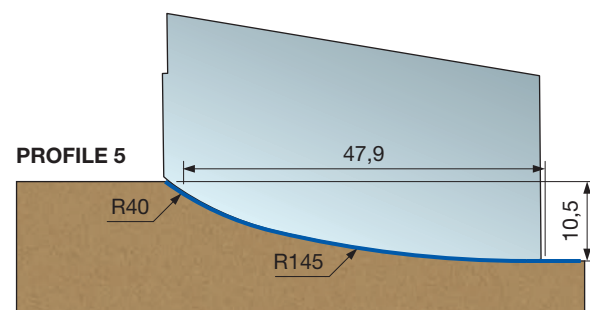
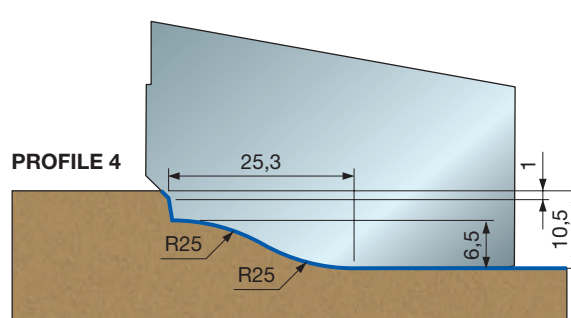
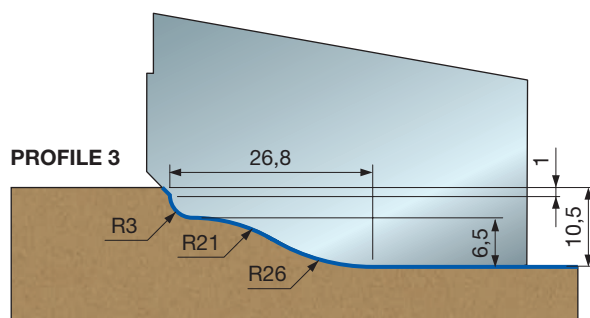
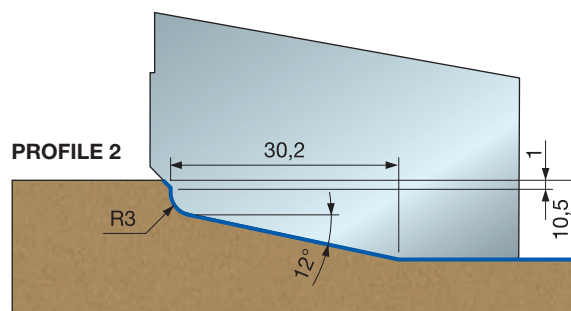
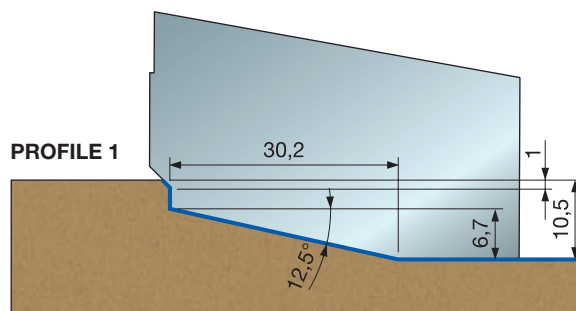
Technical information:

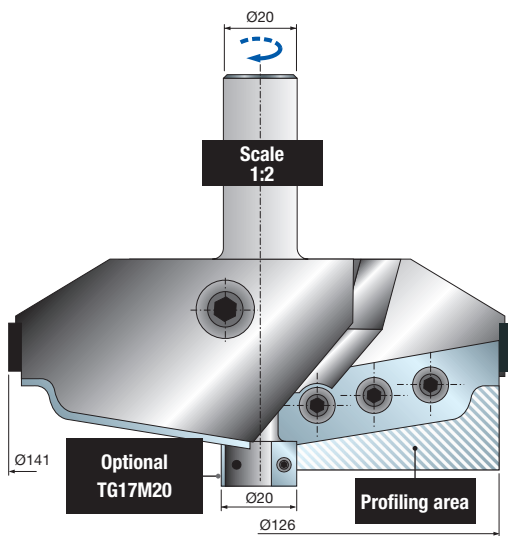
Performance knives raised panel cutter with 5 available profiles.

- Steel body.
- 20x50 mm shank.

*NC64MCA: complete with all available knives.

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





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.

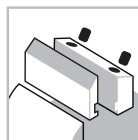
- Steel body.
- **PCN160** item includes router cutter complete of components, knives (minimum order quantity 6 pieces) and maintenance keys. For orders please specify: shank dimensions and profile drawing (please refer to knife profiling area).

PCN160

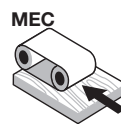
Customised CNC raised panel router cutter



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



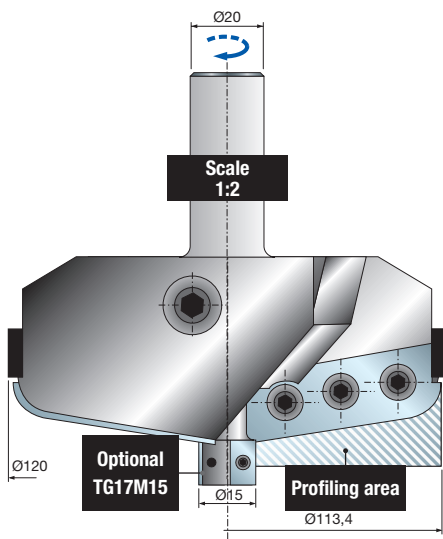
MDF



Profiling

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

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



Machines:

CNC overhead routing machines.

Materials:

Softwood, hardwood, wood based panels and MDF.

Applications:

Profiling.

Technical information:

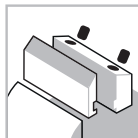
Performance CNC router cutter suitable for customised raised panels.

- 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).

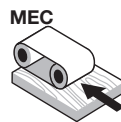
PCN160R Customised CNC raised panel router cutter



CNC Routers



Clamping system



Automatic feed



Steel Body



Softwood



Hardwood



Chipboard



MDF



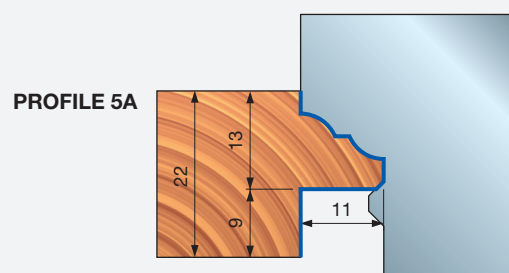
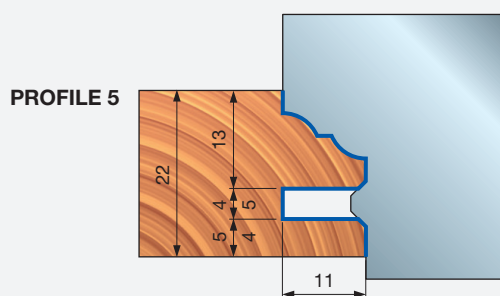
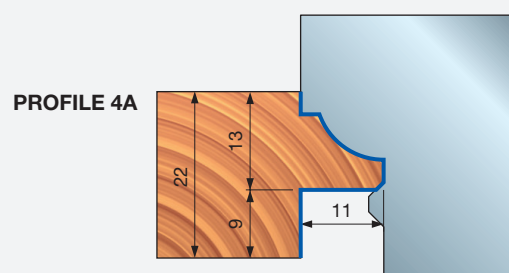
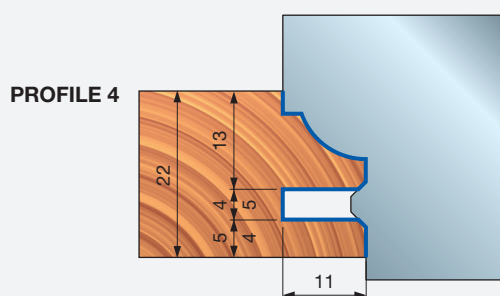
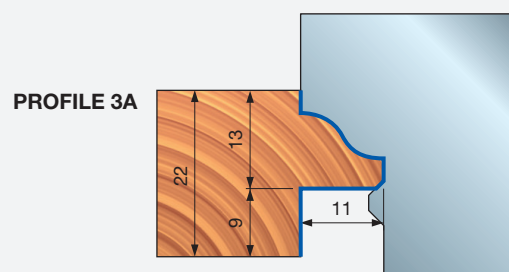
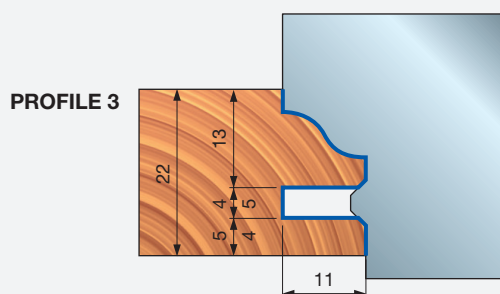
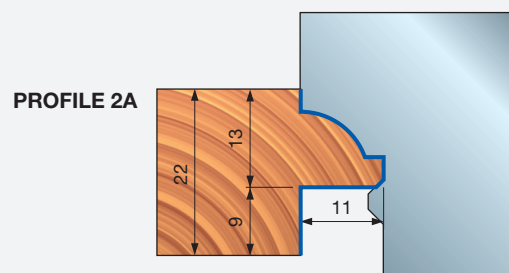
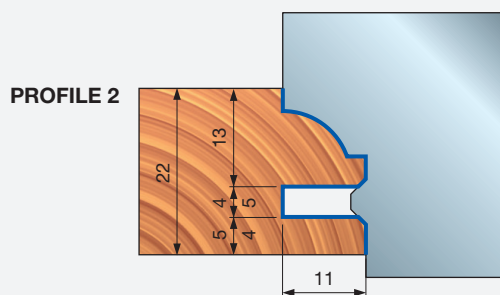
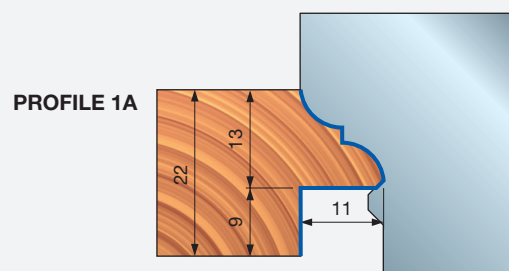
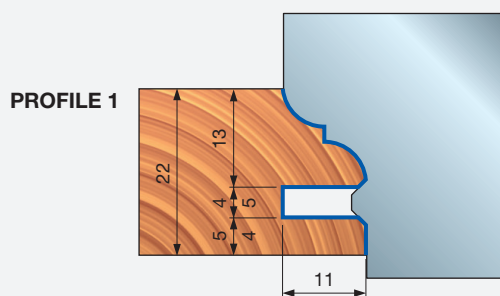
Profiling

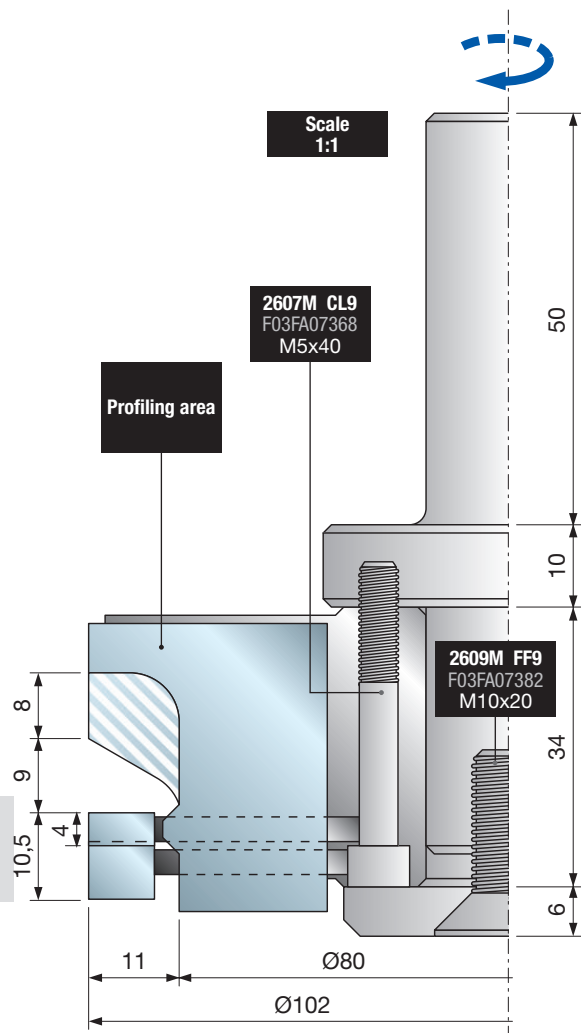
D mm	h mm	A mm	Max RPM 1/min.	Freud Code	Art. No.
120	54	20 x 50	9.000	PCN160R	-

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

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

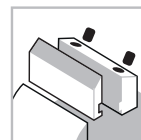
Customised CNC cabinet door router cutter - profile



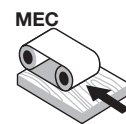
CNC Routers



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:

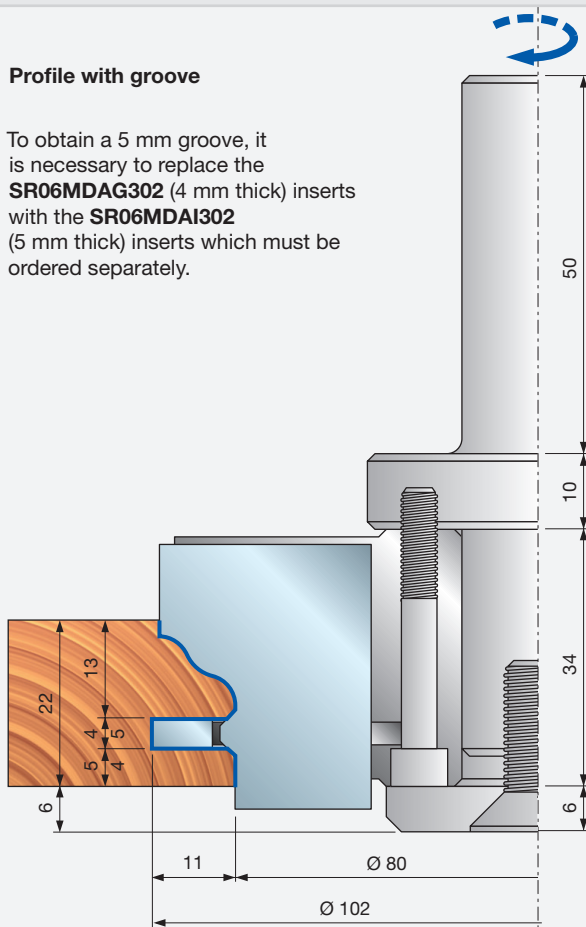
Performance CNC router cutter suitable for customised cabinet doors profiles.

- 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).

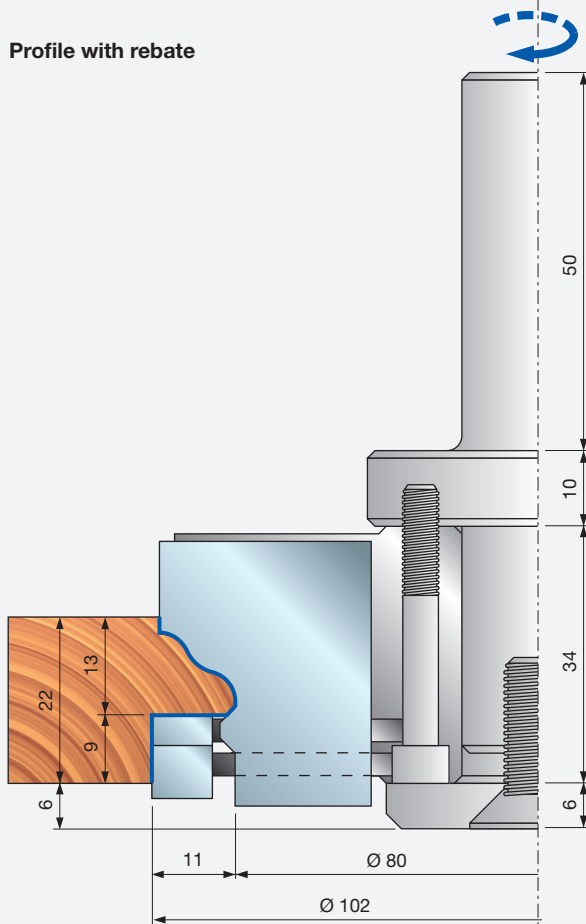
Example of profiles

Profile with groove

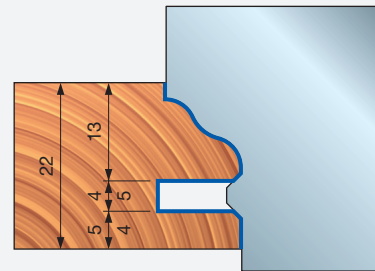
To obtain a 5 mm groove, it is necessary to replace the **SR06MDAG302** (4 mm thick) inserts with the **SR06MDAI302** (5 mm thick) inserts which must be ordered separately.



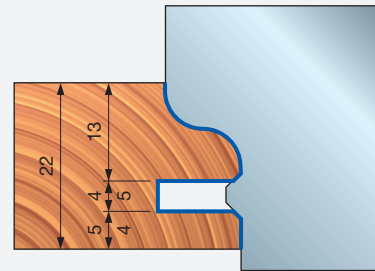
Profile with rebate



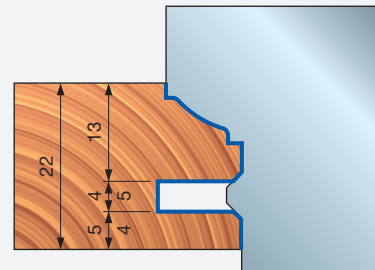
PROFILE 1



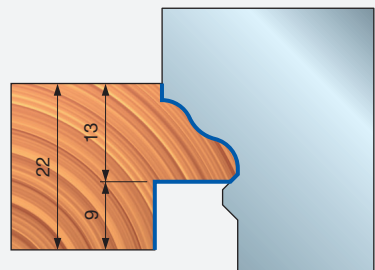
PROFILE 2



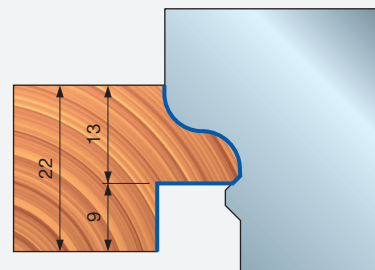
PROFILE 3



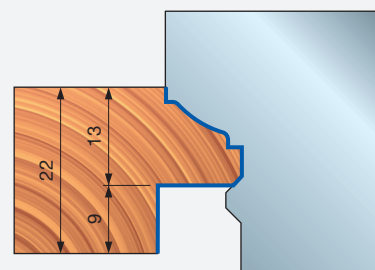
PROFILE 1



PROFILE 2



PROFILE 3





NC91MCA

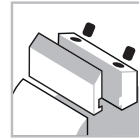
CNC cabinet door router cutter - scribe



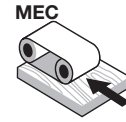
CNC Routers



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.

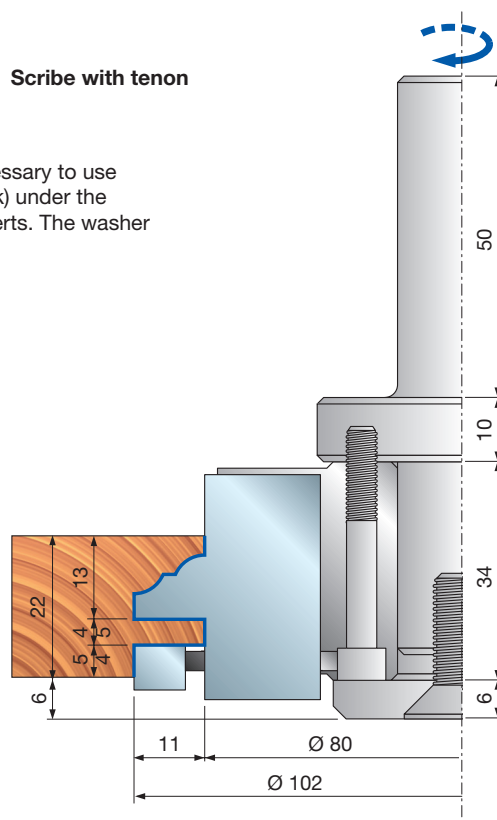
****NC91M-A**: knives to be ordered separately.

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

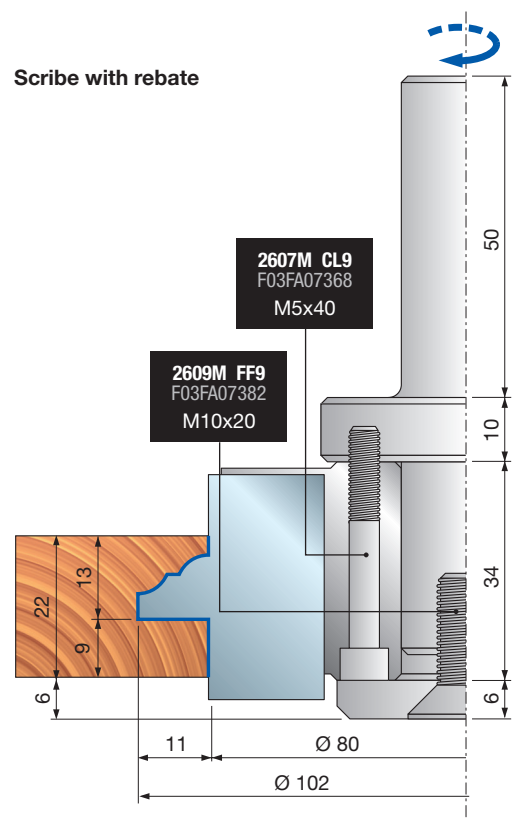
Spare parts		Dimensions mm	Freud Code	Art. No.
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Screw	M6 x 14,5	VT16M AA9	F03FA04476
	Screw	M5 x 7 x 18	VT08M AE9	F03FA04457
	Grooving insert	34 x 7	SR06MDAH302	F03FC24194
	Allen key	5	CB03M EA9	F03FA00169
	Chuck	20 x 33 x 93	AP08M DA9	F03FC00579

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.



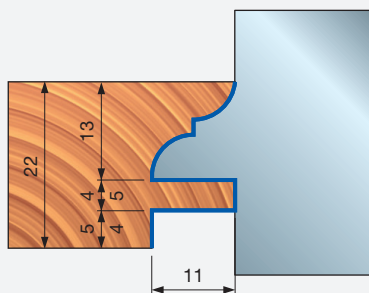
Scribe with rebate



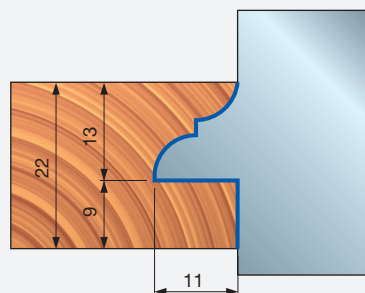
Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1/1A 	Knife	35 x 30 x 3	CC91MT0101	F03FC23788
2/2A 	Knife	35 x 30 x 3	CC91MT0201	F03FC23789
3/3A 	Knife	35 x 30 x 3	CC91MT0301	F03FC23790
4/4A 	Knife	35 x 30 x 3	CC91MT0401	F03FC23791
5/5A 	Knife	35 x 30 x 3	CC91MT0501	F03FC23792

Example of scribes

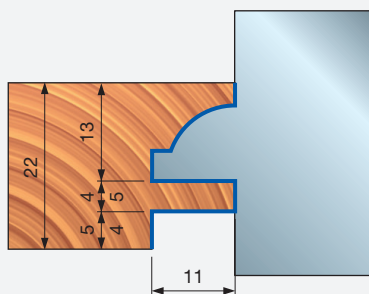
SCRIBE 1



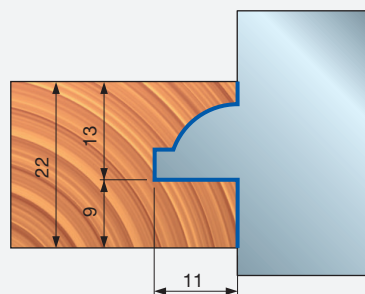
SCRIBE 1A



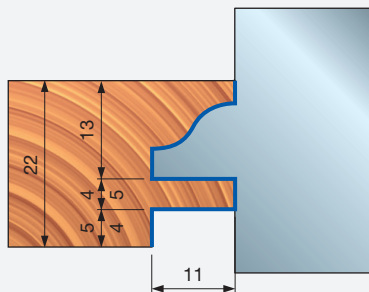
SCRIBE 2



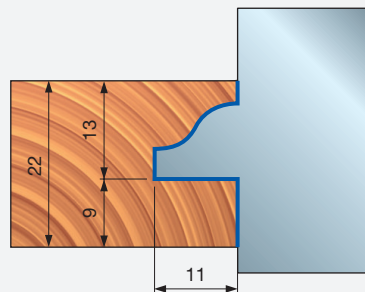
SCRIBE 2A



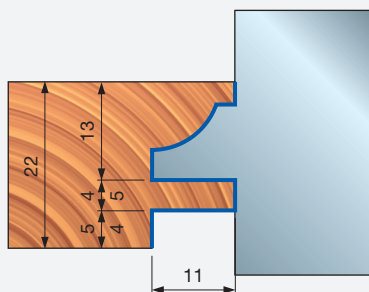
SCRIBE 3



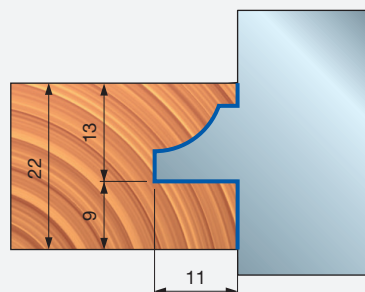
SCRIBE 3A



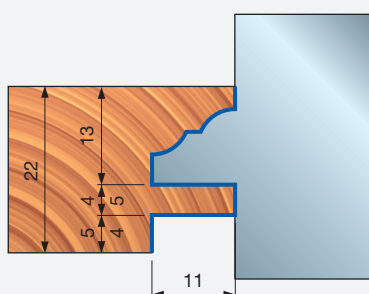
SCRIBE 4



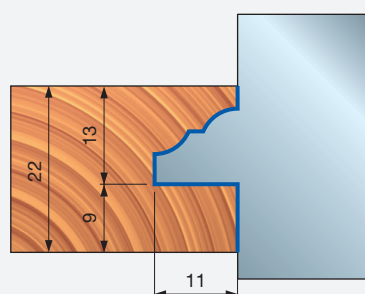
SCRIBE 4A



SCRIBE 5



SCRIBE 5A

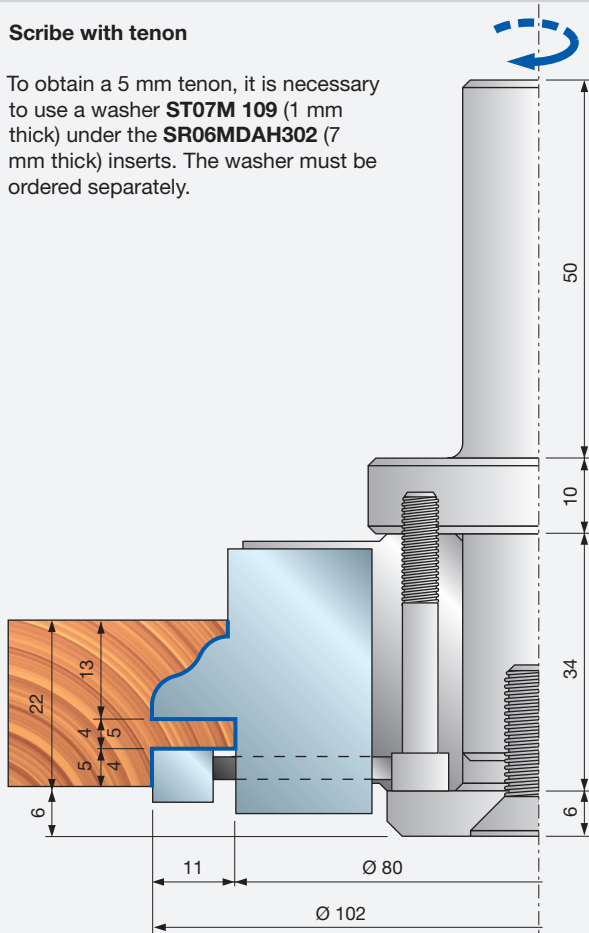




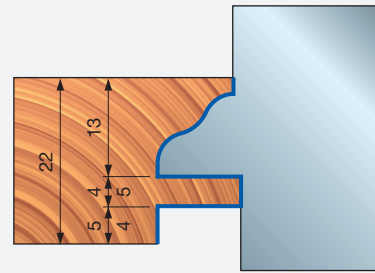
Example of scribes

Scribe with tenon

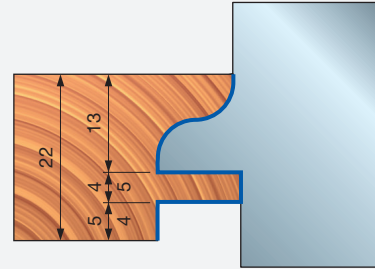
To obtain a 5 mm tenon, it is necessary to use a washer **ST07M 109** (1 mm thick) under the **SR06MDAH302** (7 mm thick) inserts. The washer must be ordered separately.



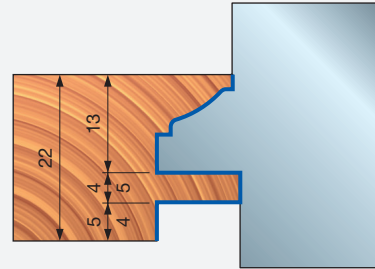
SCRIBE 1



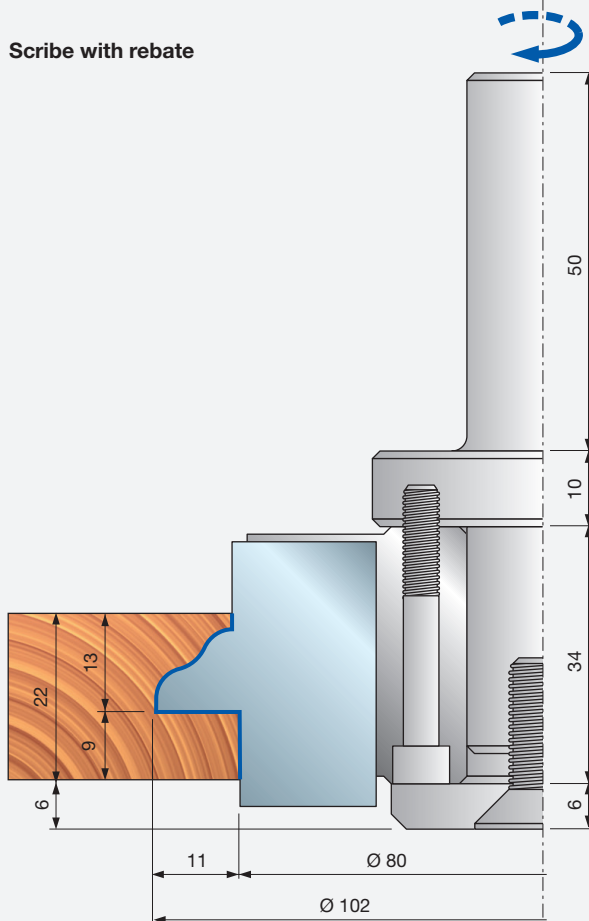
SCRIBE 2



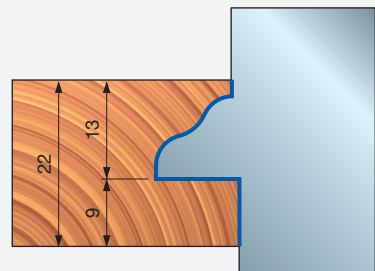
SCRIBE 3



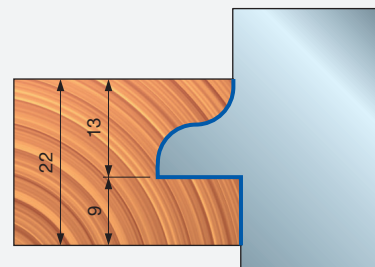
Scribe with rebate



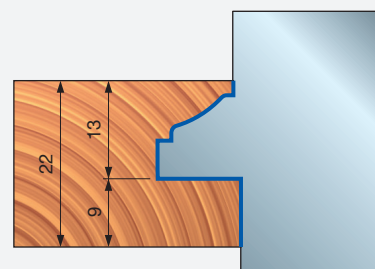
SCRIBE 1



SCRIBE 2



SCRIBE 3

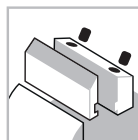


NCSEM22

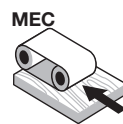
CNC tool for cabinet door frame profile - 22 mm



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.

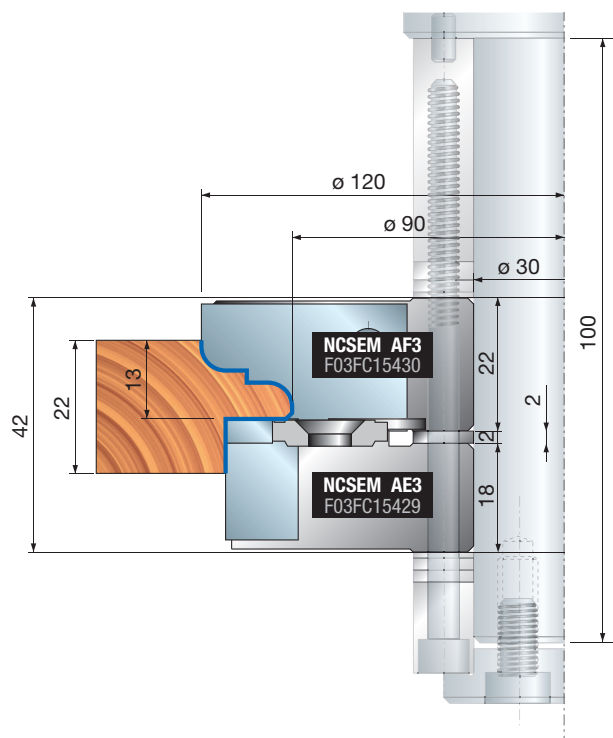
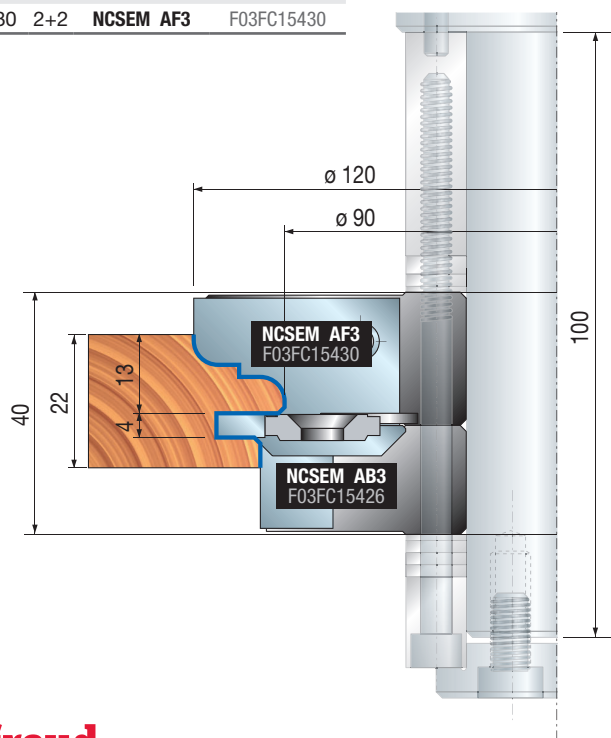
- Profile available both with and without groove.
- 22 mm timber.
- Aluminium light alloy body.
- Chuck and knives to be ordered separately.

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

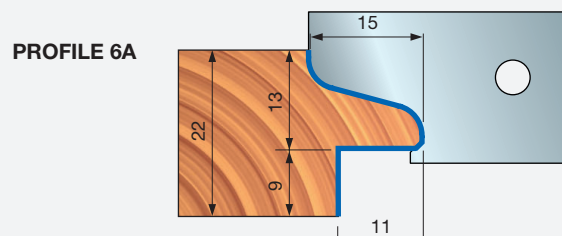
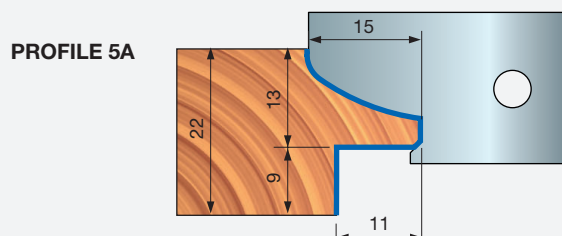
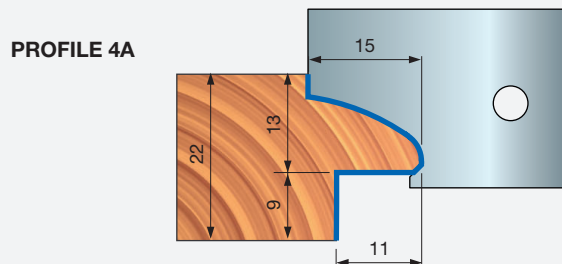
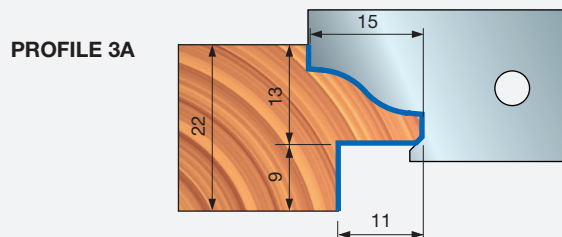
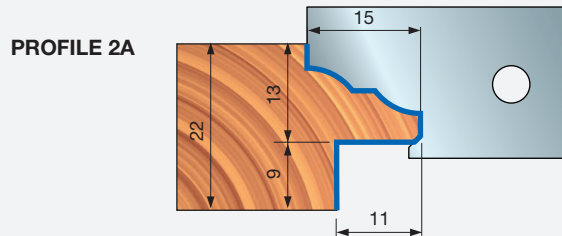
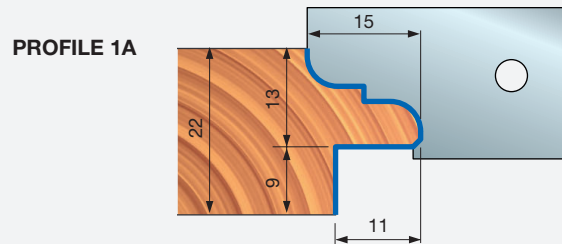
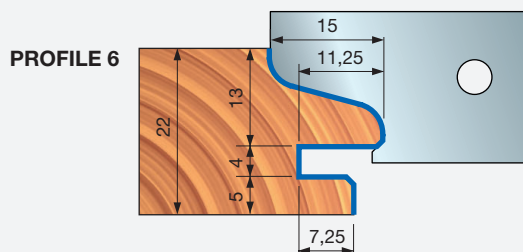
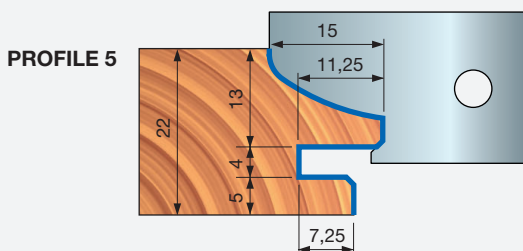
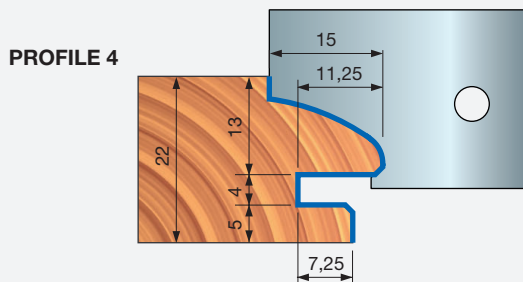
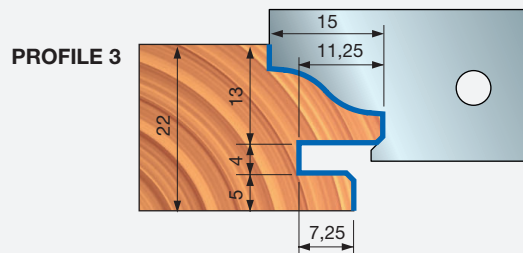
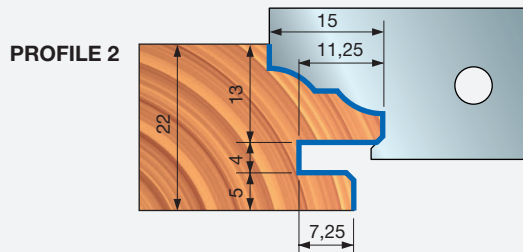
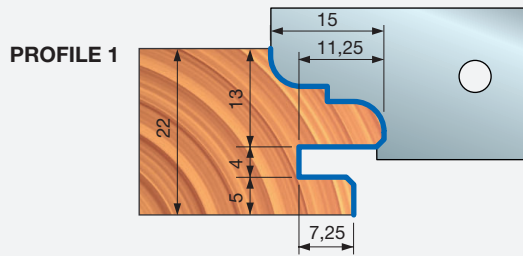
D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
120	38	30	2	11.000	NCSEM22A01	F03FC15432
120	39	30	2	11.000	NCSEM22A03	F03FC15434

	Spare parts		Dimensions mm	Freud Code	Art. No.
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
		Grooving insert	27 x 4 x 16	IG04MSAA3T05	F03FC24155
NCSEM AE3		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
NCSEM AF3		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



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



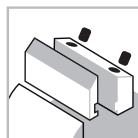


NCSEM22

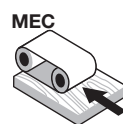
CNC tool for cabinet door frame scribe - 22 mm



CNC Machines



Clamping system



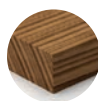
Automatic feed



Aluminium body



Softwood



Hardwood



Profiling



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).

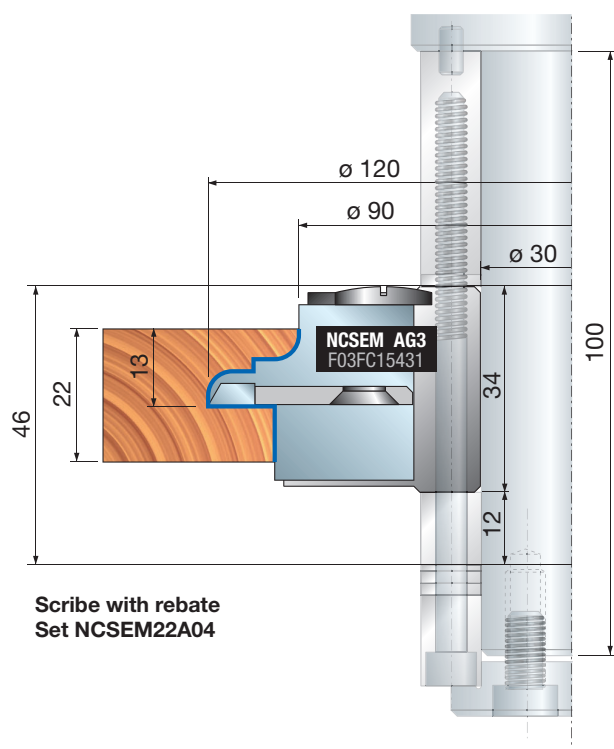
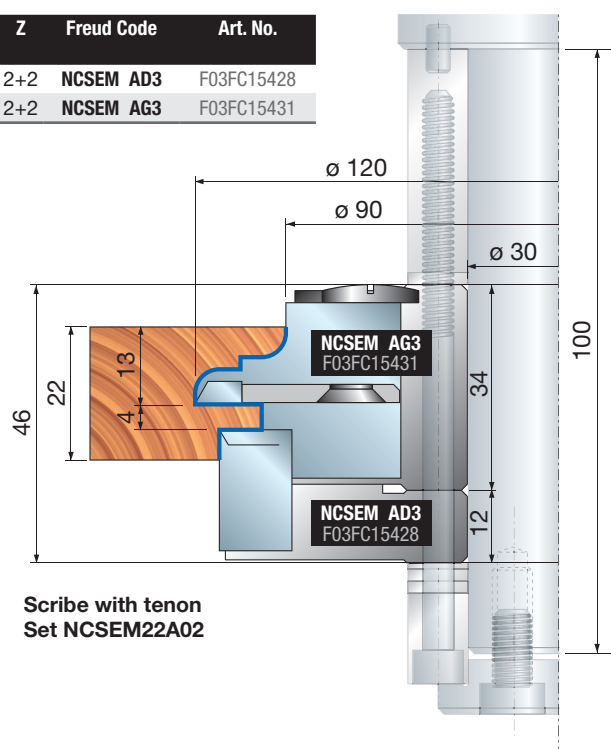
- Profile available both with and without groove.
- 22 mm timber.
- Aluminium light alloy body.
- Chuck and knives to be ordered separately.

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

	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
	Spur	22,86 x 2,5	RG02MAA305	F03FH03041
NCSEM AG3	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

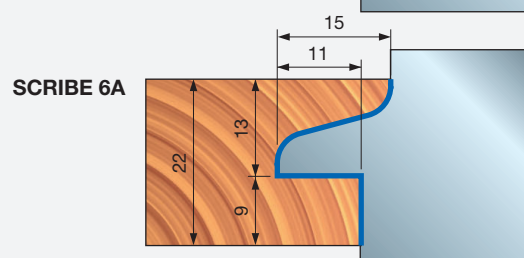
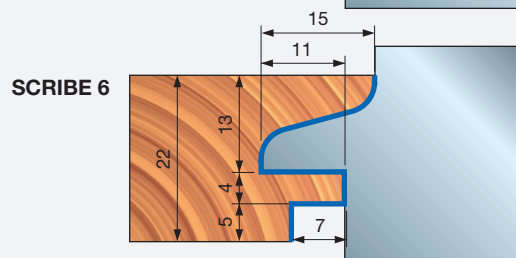
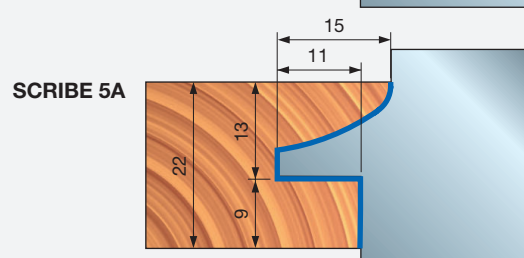
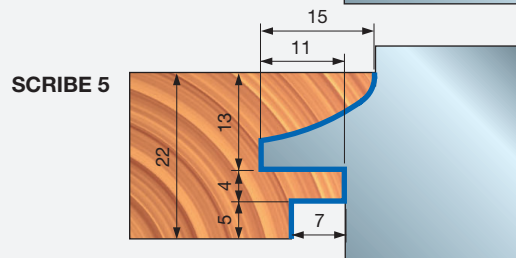
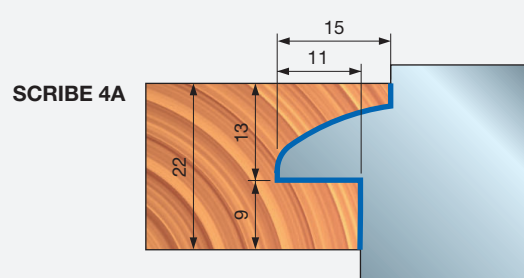
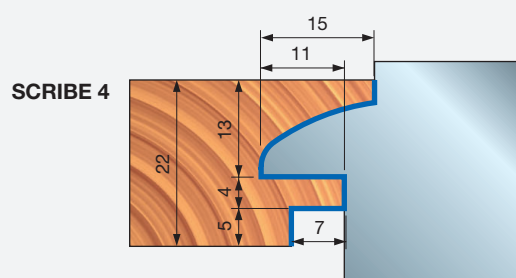
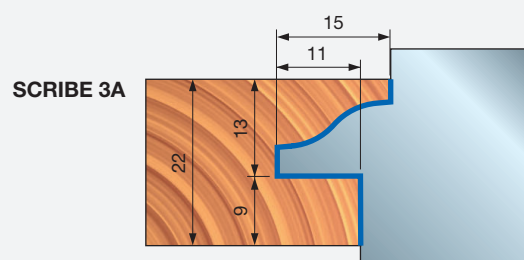
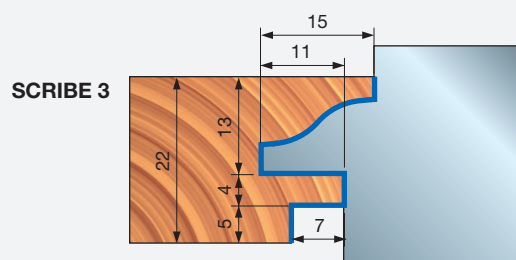
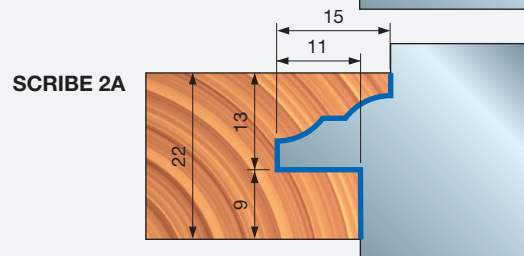
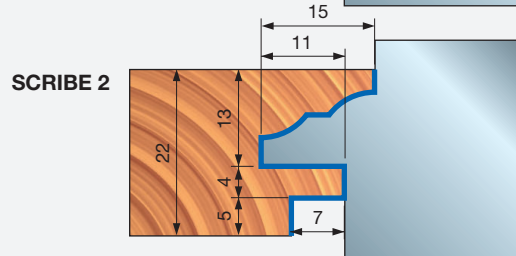
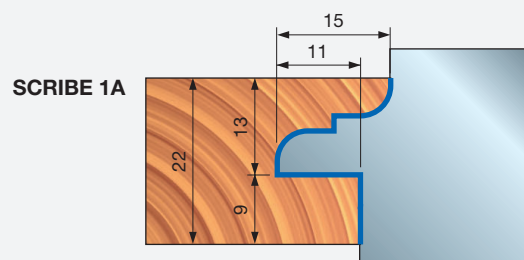
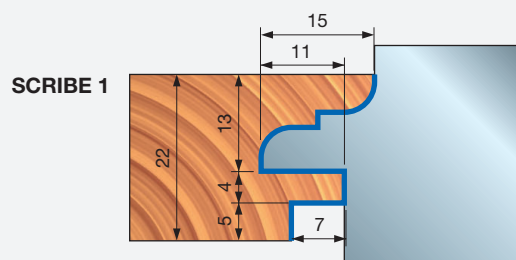
Tools for NCSEM22A02 and NCSEM22A04 sets

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



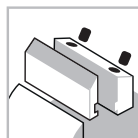


NCSEM30

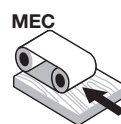
CNC tool for cabinet door frame profile - 30 mm



CNC Machines



Clamping system



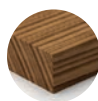
Automatic feed



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.

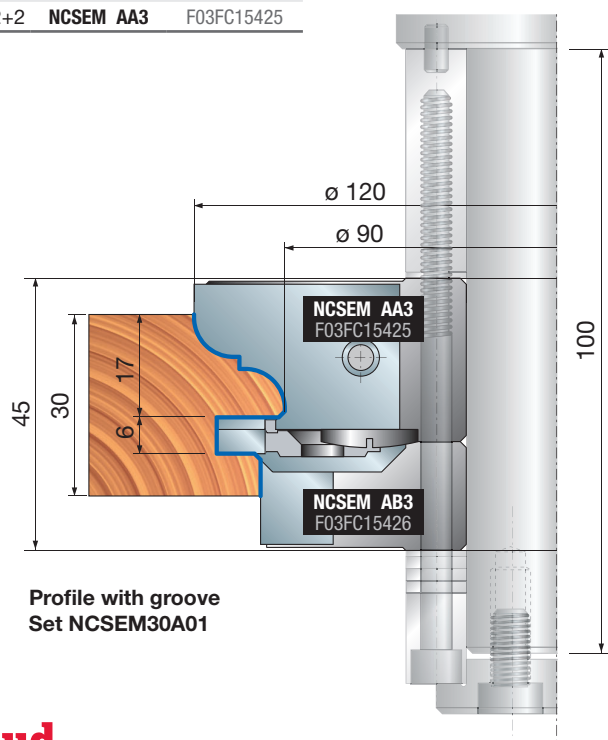
- Profile available both with and without groove.
- 30 mm timber.
- Aluminium light alloy body.
- Chuck and knives to be ordered separately.

Tools for NCSEM30A01 and NCSEM30A03 sets

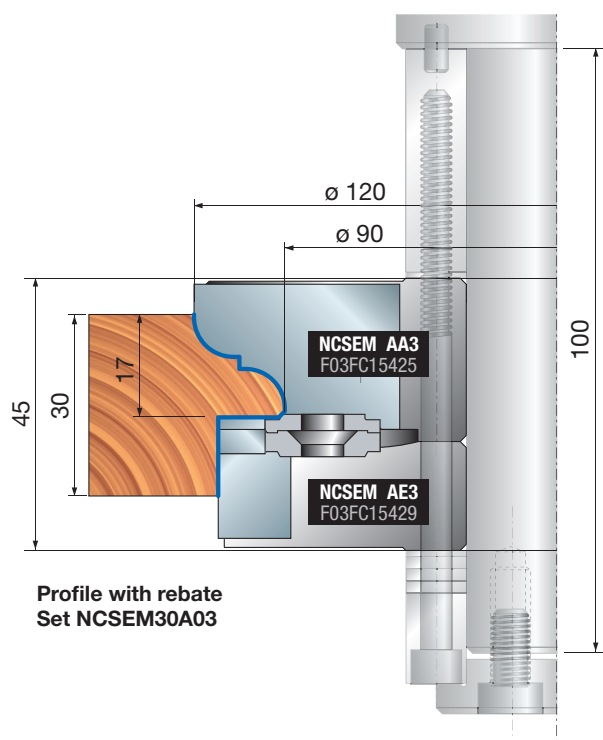
D mm	B mm	d mm	Z	Freud Code	Art. No.
112	20	30	2+2	NCSEM AE3	F03FC15429
112,5	19	30	2+4	NCSEM AB3	F03FC15426
120	28	30	2+2	NCSEM AA3	F03FC15425

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

	Spare parts	Dimensions mm	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
NCSEM AE3	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
	Screw	M6 x 14,5	VT16M AA9	F03FA04476
NCSEM AE3	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
NCSEM AE3	Spur	22,86 x 2,5	RG02MAA305	F03FH03041
	Screw	M5 x 8	VT05M AA9	F03FA04444



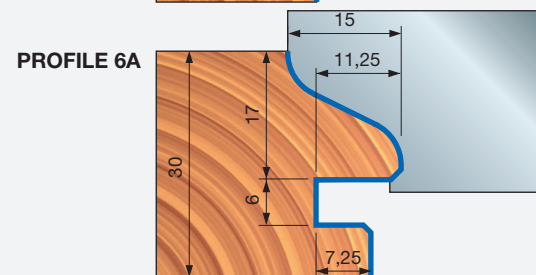
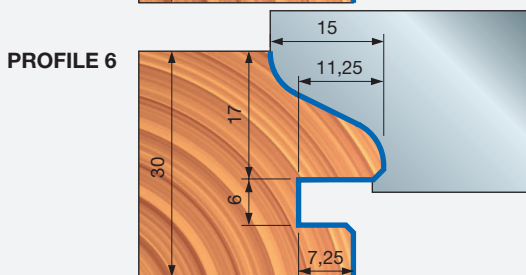
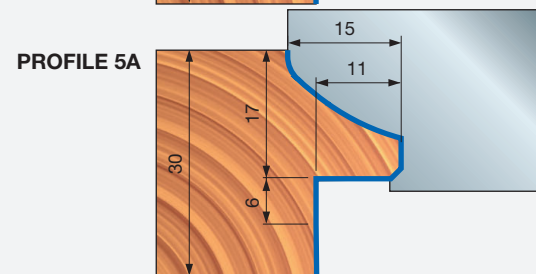
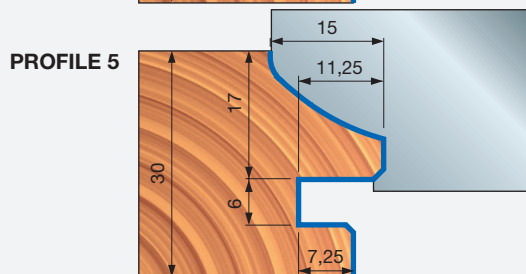
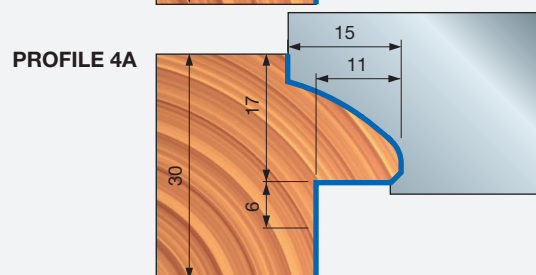
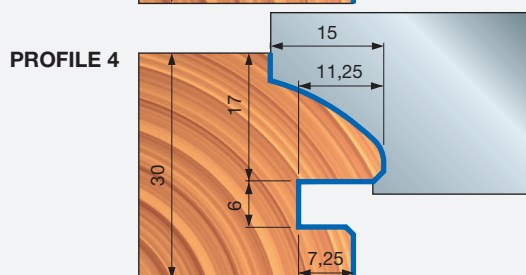
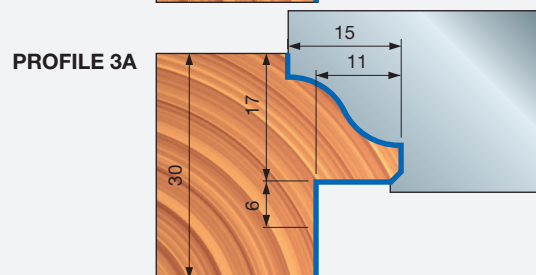
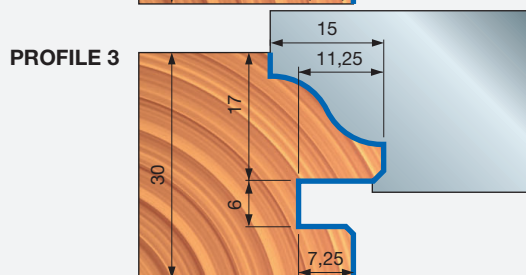
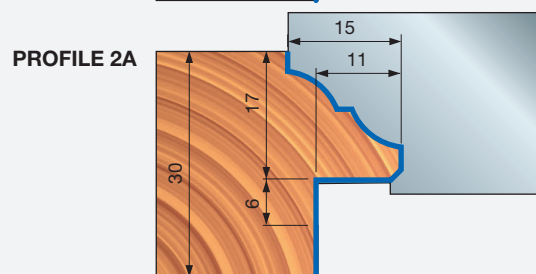
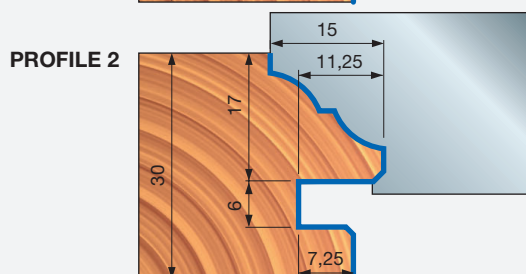
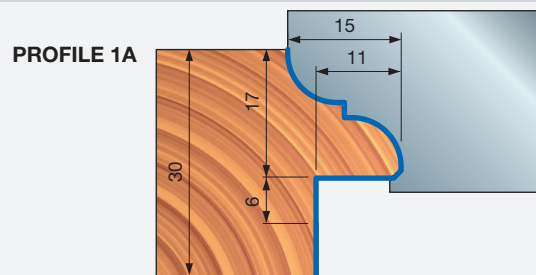
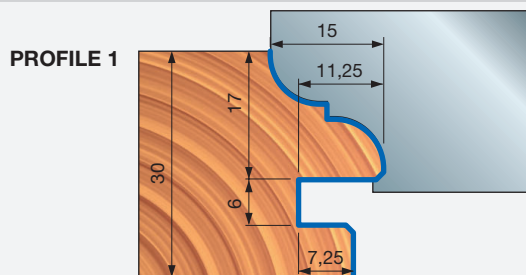
Profile with groove
Set NCSEM30A01



Profile with rebate
Set NCSEM30A03

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 profiles



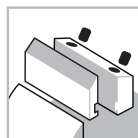


NCSEM30

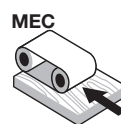
CNC tool for cabinet door frame scribe - 30 mm



CNC Machines



Clamping system



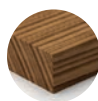
Automatic feed



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).

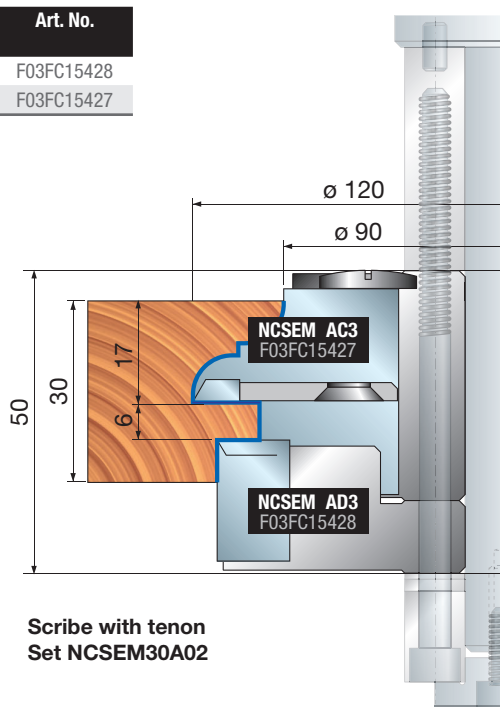
- Profile available both with and without groove.
- 30 mm timber.
- Aluminium light alloy body.
- Chuck and knives to be ordered separately.

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

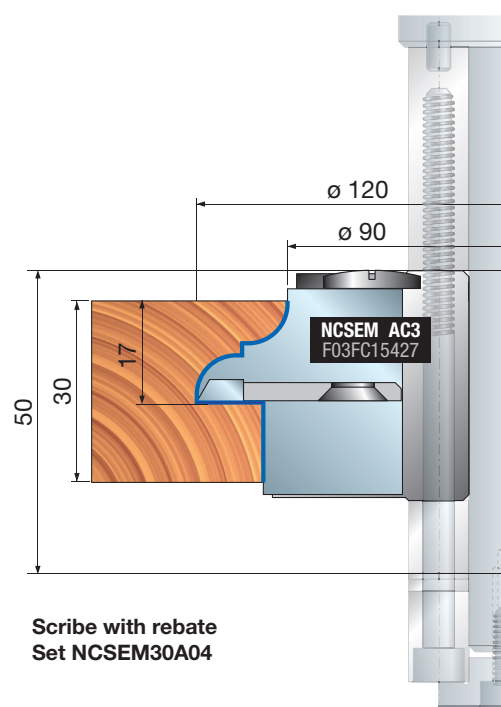
	Spare parts	Dimensions mm	Freud Code	Art. No.
NCSEM AC3	Positioning plate	22 x 1,7 x 6,5	VT18M GA9	F03FA04488
	Screw	M10 x 16	2616M EE9	F03FA07426
	Spur insert	34 x 3,5 x 16 x 3 x 3	SR06MBA302	F03FC24197
	Screw	M6 x 11,5	VT16M AB9	F03FA04477
	Screw	M5 x 8	VT05M AA9	F03FA04444
NCSEM AD3	Knife	14,6 x 12 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 AD3	F03FC15428
120	34	30	2+2	NCSEM AC3	F03FC15427



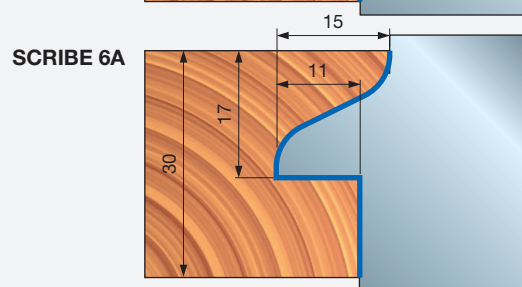
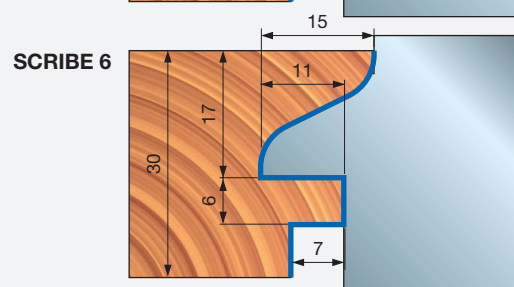
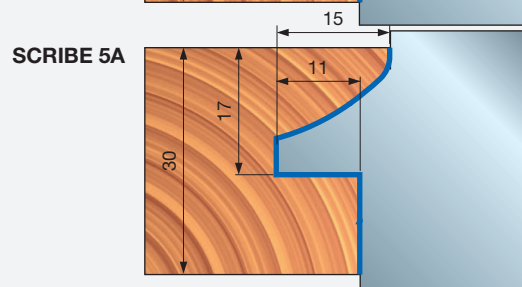
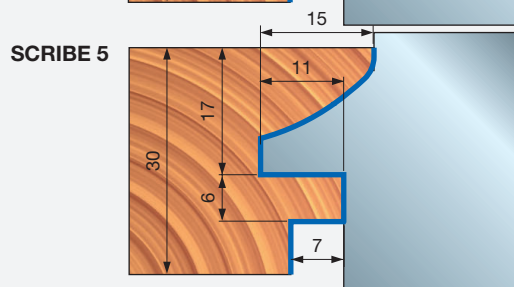
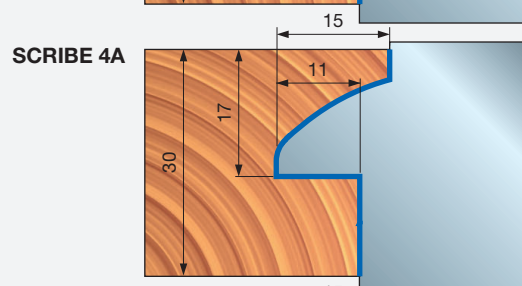
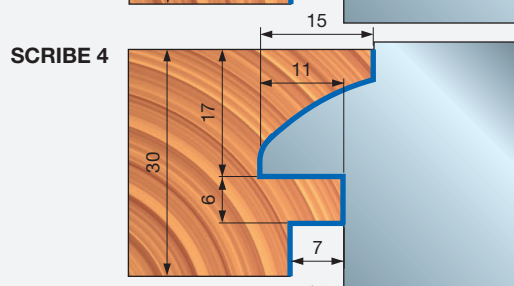
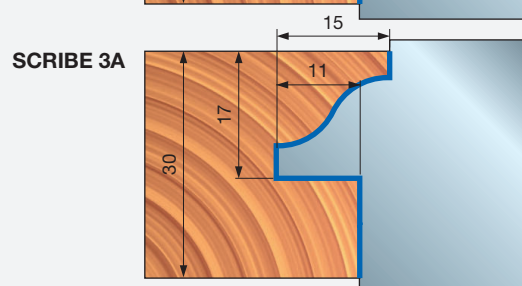
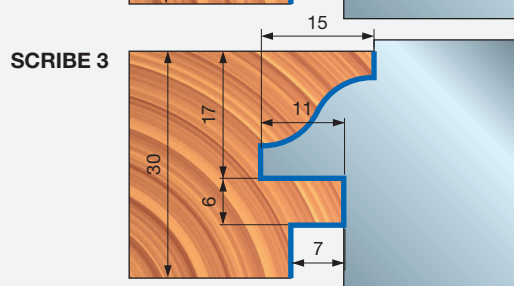
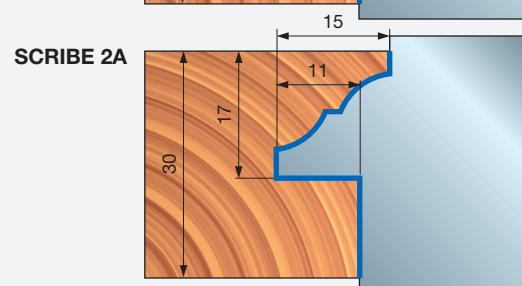
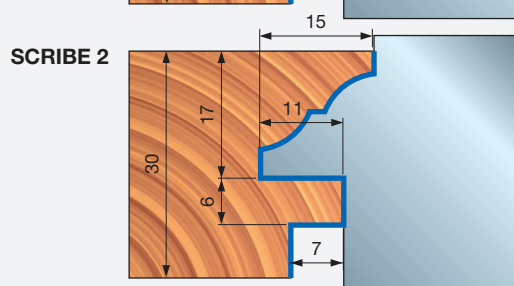
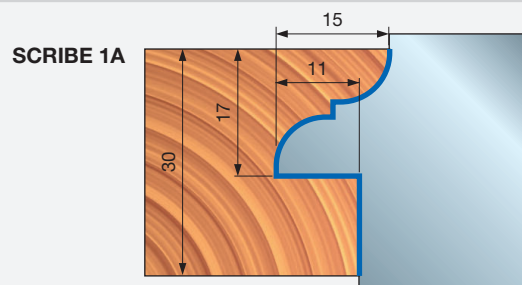
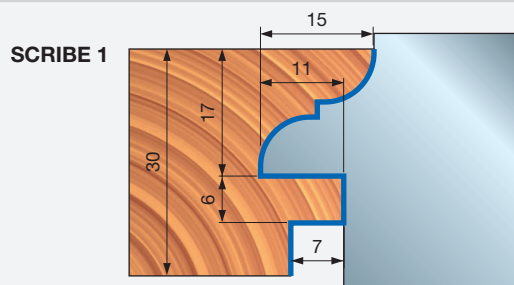
Scribe with tenon
Set NCSEM30A02



Scribe with rebate
Set NCSEM30A04

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



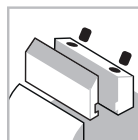


TD54MD

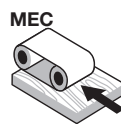
CNC multiprofile raised panel router cutter



CNC Machines



Clamping system



Automatic feed



Aluminium body



Softwood



Hardwood



Chipboard



Profiling



Machines:

CNC overhead routing machines.

Materials:

Softwood, hardwood and chipboard.

Applications:

Profiling.

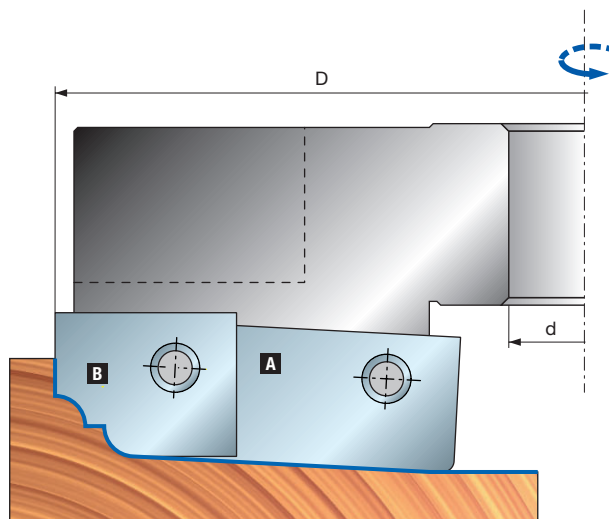
Technical information:

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.
BA3 AA3	Wedge	42,9 x 18 x 7,8	CN54M AA9	F03FC22200
	Wedge	16,6 x 21,3 x 8,5	CN54M AB9	F03FC22201
	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

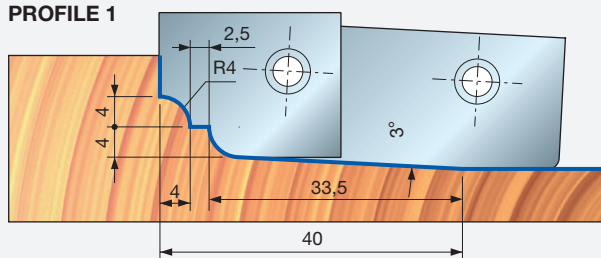
Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife A	64 x 20 x 3	CT54MDBA301	F03FC24069
	Knife B	19 x 24 x 3	CT54MDAA301	F03FC24061
2	Knife A	64 x 20 x 3	CT54MDBB301	F03FC24070
	Knife B	19 x 24 x 3	CT54MDAA301	F03FC24061
3	Knife A	64 x 20 x 3	CT54MDBC301	F03FC24071
	Knife B	19 x 24 x 3	CT54MDAC301	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

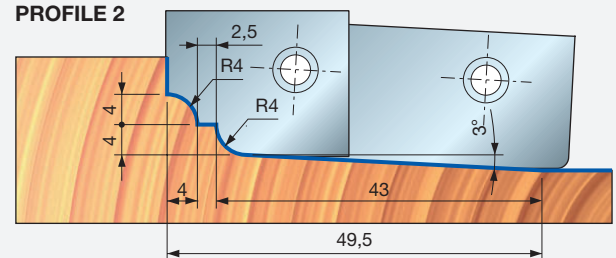
Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
6	Knife A	64 x 20 x 3	CT54MDBF301	F03FC24074
	Knife B	19 x 24 x 3	CT54MDAF301	F03FC24065
7	Knife A	64 x 20 x 3	CT54MDBG301	F03FC24075
	Knife B	19 x 24 x 3	CT54MDAG301	F03FC24066
8	Knife A	64 x 20 x 3	CT54MDBH301	F03FC24076
	Knife B	19 x 24 x 3	CT54MDAH301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

Example of scribes

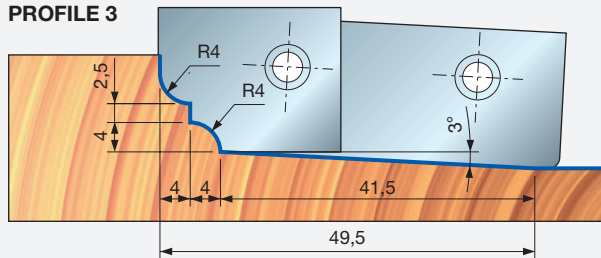
PROFILE 1



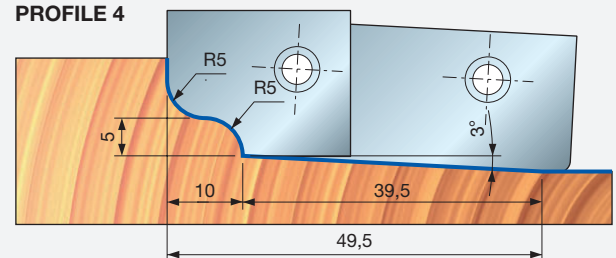
PROFILE 2



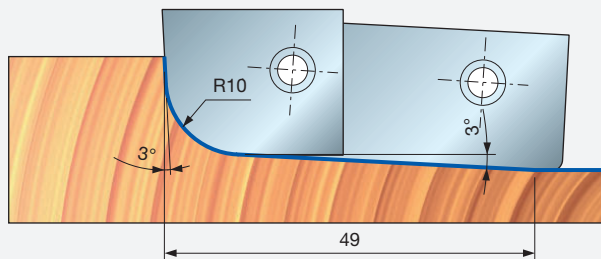
PROFILE 3



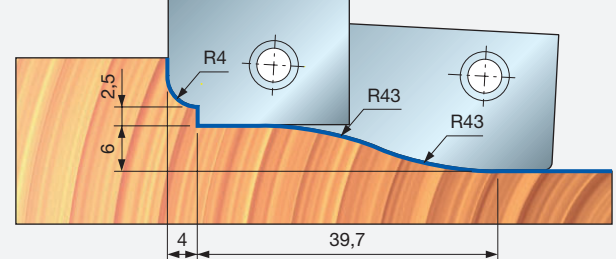
PROFILE 4



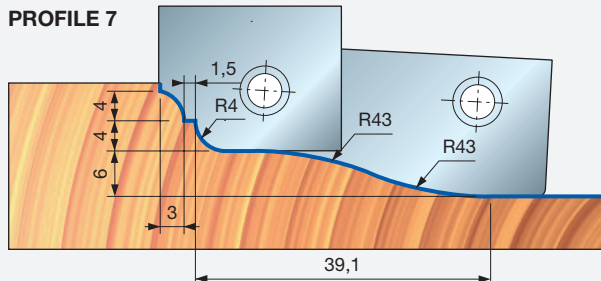
PROFILE 5



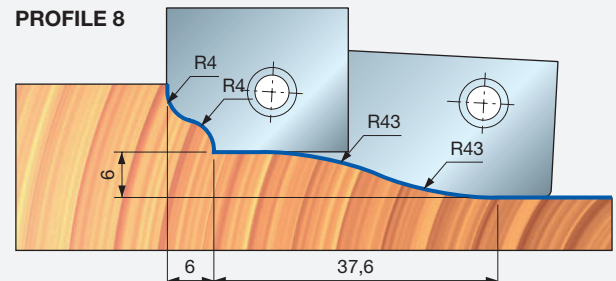
PROFILE 6



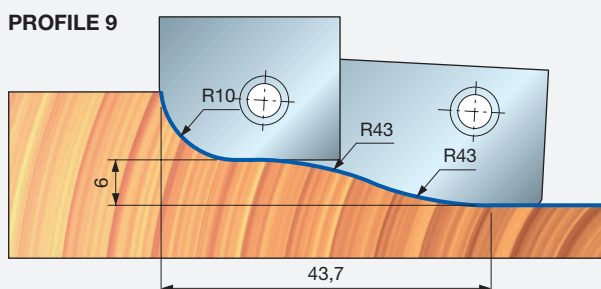
PROFILE 7



PROFILE 8



PROFILE 9



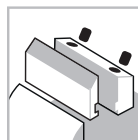


NC92M

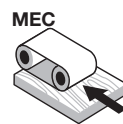
CNC tool with profiled knives



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:

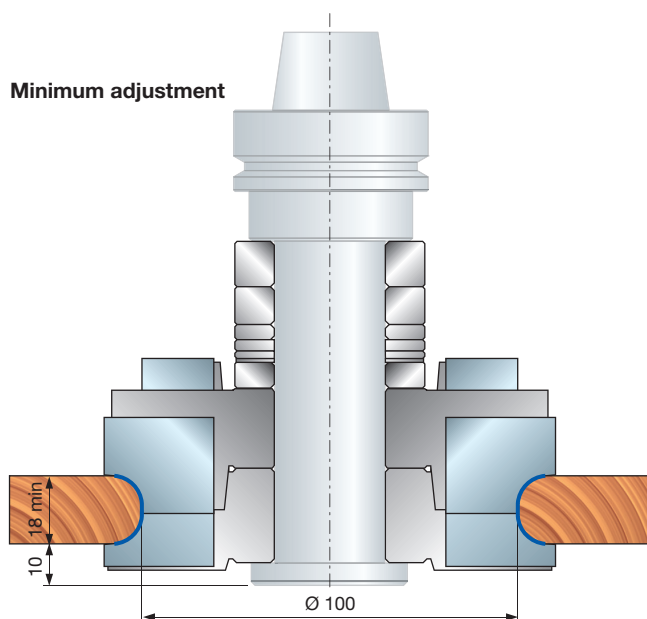
Performance CNC tool set suitable for profiling with 8 available radius and bevel profiles.

- Aluminium light alloy body.
- Chuck and knives to be ordered separately.

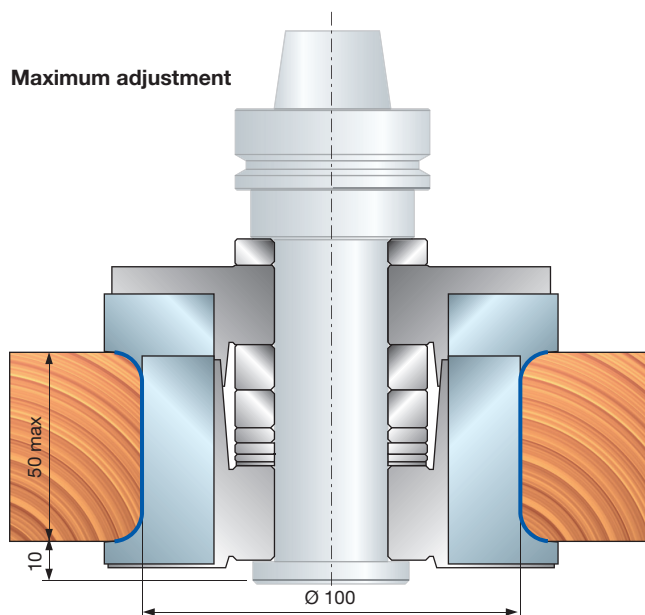
D mm	B mm	d mm	Max RPM 1/min.	Freud Code	Art. No.
120	30	30	10.000	NC92M 100*	F03FC15469

	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

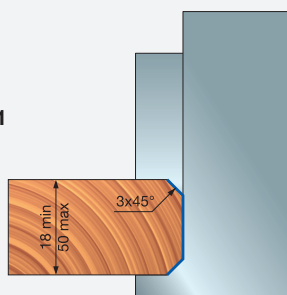
Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife	35 x 30 x 3 3x45°	CC92M1T0101	F03FC23793
2	Knife	35 x 30 x 3 5x45°	CC92M1T0201	F03FC23794
3	Knife	35 x 30 x 3 R=3	CC92M1T0301	F03FC23795
4	Knife	35 x 30 x 3 R=4	CC92M1T0401	F03FC23796
5	Knife	35 x 30 x 3 R=5	CC92M1T0501	F03FC23797
6	Knife	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

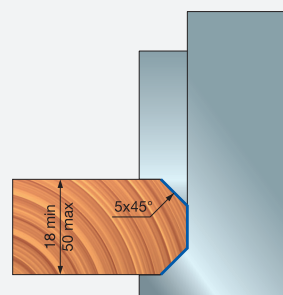
PROFILE 1

Obtainable with knives:
CC92M1T0101 + CC92M2T0101



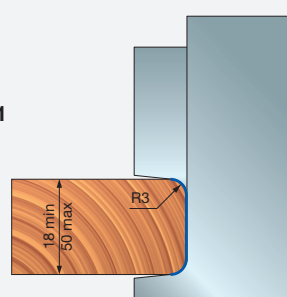
PROFILE 2

Obtainable with knives:
CC92M1T0201 + CC92M2T0201



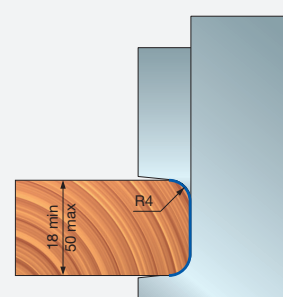
PROFILE 3

Obtainable with knives:
CC92M1T0301 + CC92M2T0301



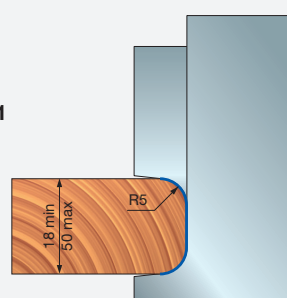
PROFILE 4

Obtainable with knives:
CC92M1T0401 + CC92M2T0401



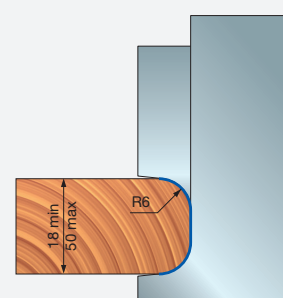
PROFILE 5

Obtainable with knives:
CC92M1T0501 + CC92M2T0501



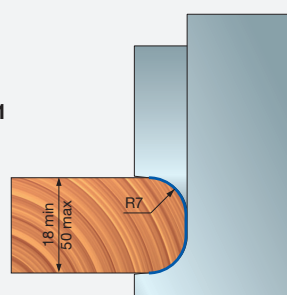
PROFILE 6

Obtainable with knives:
CC92M1T0601 + CC92M2T0601



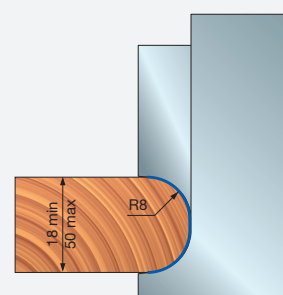
PROFILE 7

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).

Order example:	NC92M 100	Group	1 piece
	CC92M1T0101	Knives	2 pieces
	CC92M2T0101	Knives	2 pieces
	MP05M AE9	Chuck	1 piece



Machines:

CNC overhead routing machines.

Materials:

Softwood and hardwood.

Applications:

Jointing.

Technical information:

Adjustable CNC tool set suitable for jointing.

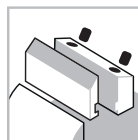
- Timber from 40 to 80 mm.
- Adjusting system to manage regular, tight and loose joint.
- Tool available in left and right hand rotation.
- Aluminium light alloy body.
- Chuck and knives to be ordered separately.

NC93M

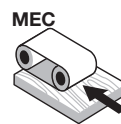
CNC finger joint tool



CNC Machines



Clamping system



Automatic feed



Aluminium body



Softwood



Hardwood



Jointing

D mm	B mm	d mm	Max RPM 1/min.	Freud Code	Art. No.
120	30	30	10.000	NC93M 100*	F03FC15472

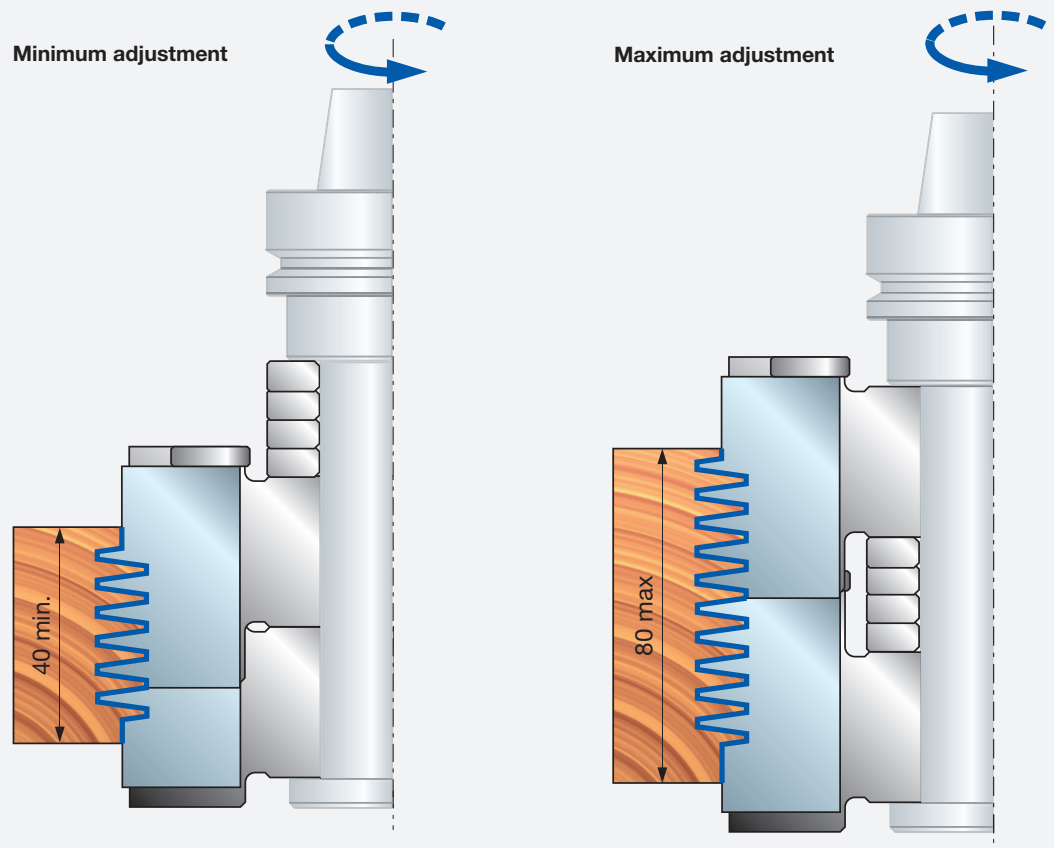
	Spare parts	Dimensions mm	Freud Code	Art. No.
	Wedge	41 x 17 x 8	CN11M B410	F03FC01351
	Screw	M4 x 6	2602M CE9	F03FA07349
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Screw	M5 x 7 x 18	VT08M AE9	F03FA04457
	Screw	18 x 7 x M6	VT08M AG9	F03FC20653
	Spacer	50 x 5,8 x 30	AN04M AC9	F03FC00500
	Allen key	2	2619M 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

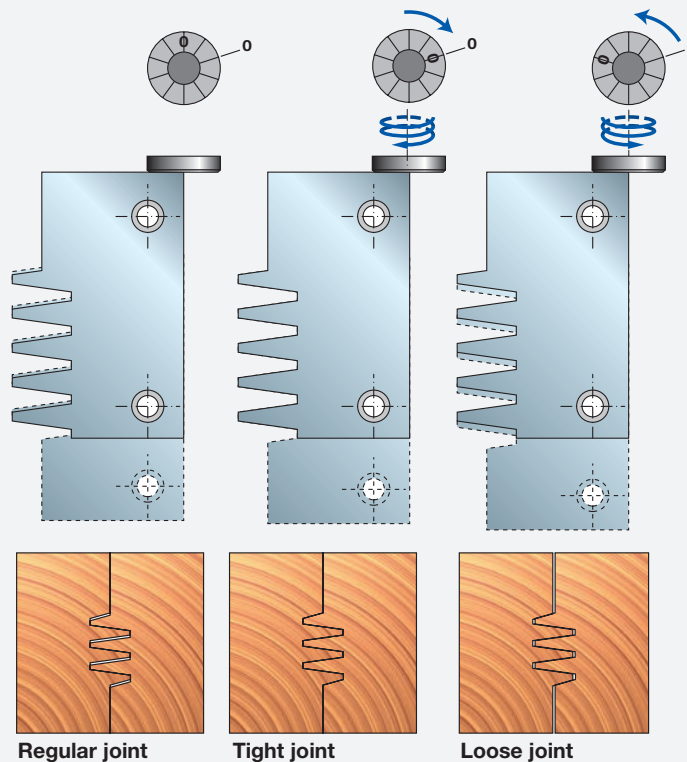
Tools for set NC93M 100

D mm	B mm	D mm	Z	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.



Regular joint

Tight joint

Loose joint

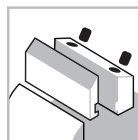


NC94MGC13

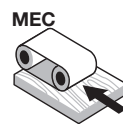
CNC finger joint tool



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

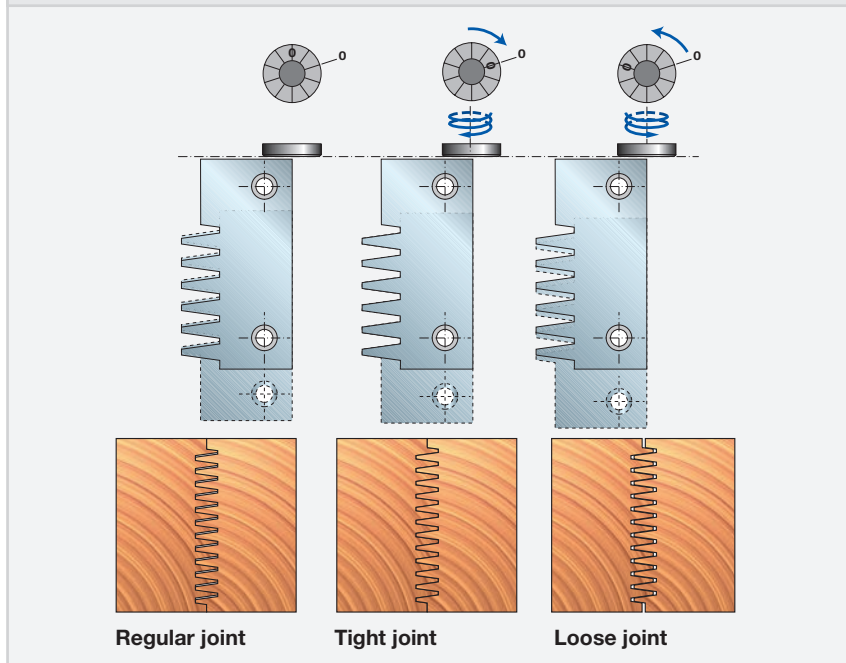
	Spare parts	Dimensions mm	Freud Code	Art. No.
	Spacer	50 x 5,8 x 30	AN01MA0589	F03FC00039
	Spacer	50 x 23 x 30	AN01MA2309	F03FC00057
	Steel pin	4 x 10	2601M AB9	F03FA07326
	Steel pin	2,5 x 6	2601M AV9	F03FA07342
	Screw	M5 x 90	2607M CS9	F03FA18898
	Wedge	53,5 x 32,5 x 8	CN94M 001	F03FC23364
	Wedge	53,5 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

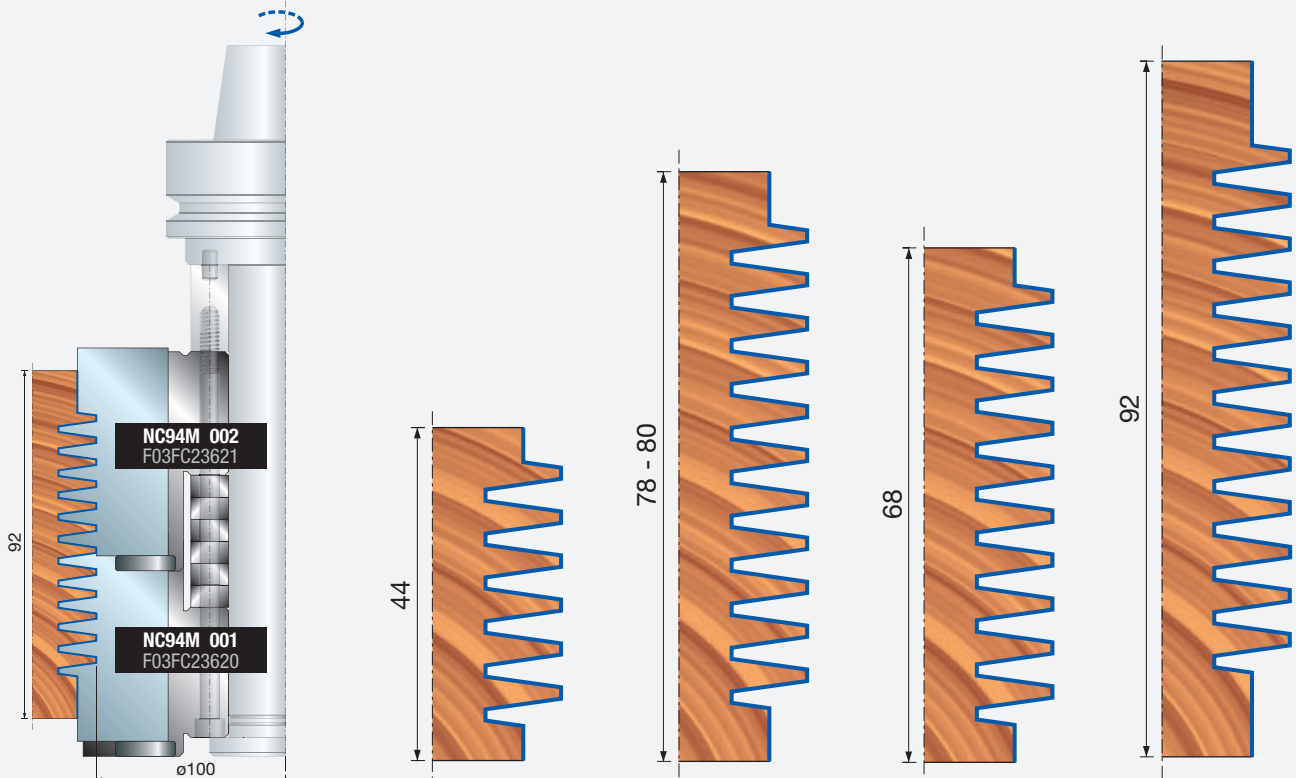
D mm	B mm	d mm	Z	Freud Code	Art. No.
120	59	30	2	NC94M 001	F03FC23620
120	59	30	2	NC94M 002	F03FC23621

Adjustment examples:



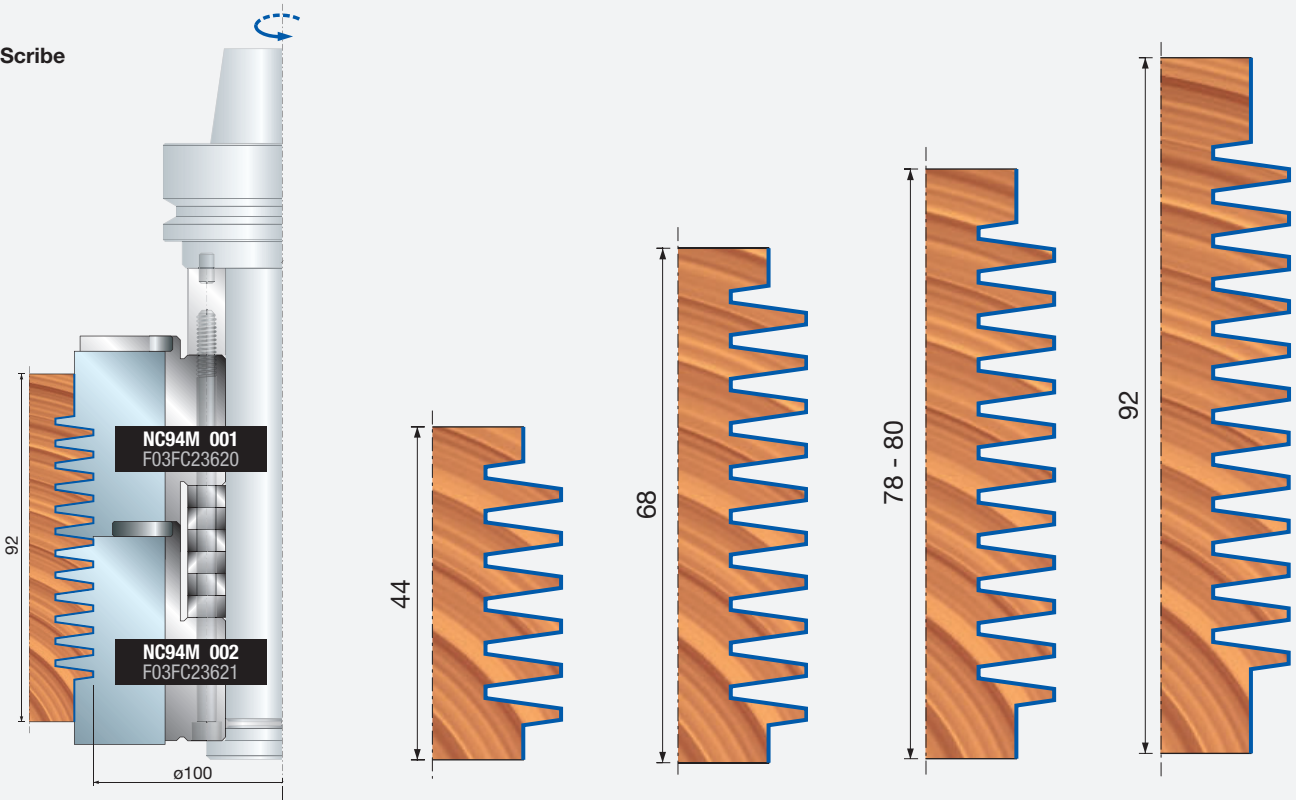
Profiles NC94MGC13-D

Profile



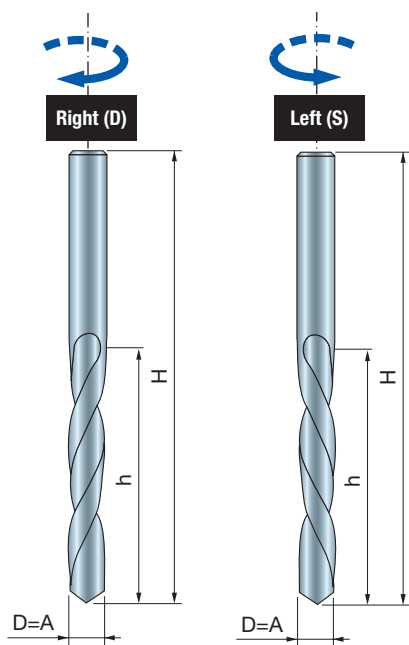
Scribes NC94MGC13-S

Scribe



Drilling





Machines:

CNC, boring and multi boring machines.

Materials:

Softwood, hardwood, wood based panels and MDF.

Applications:

Boring and drilling.

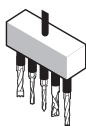
Technical information:

Solid Carbide drills in HW suitable for screw holes.

- Constructed with two spirals with back clearance angle.

PF03MD PF03MS

Solid Carbide multipurpose drilling - screw holes



Boring Machines



Softwood



Hardwood



Chipboard



Laminated
Chipboard



MDF



Laminated
MDF



Plywood

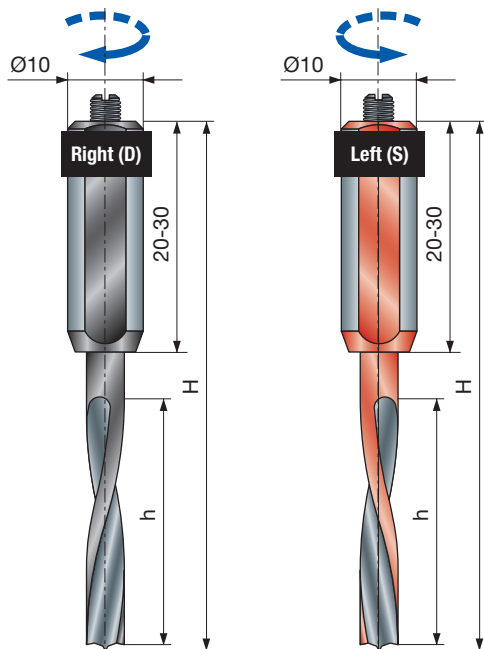


Blind Holes



Through Holes

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



Machines:

CNC, boring and multi boring machines.

Materials:

Softwood, hardwood, wood based panels and MDF.

Applications:

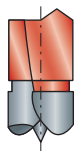
Boring.

Technical information:

Solid Carbide dowel drills suitable for blind holes.

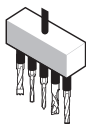
- Bit in HW with central point and cylindrical steel shank with M5 x 10 mm adjusting screw.

Geometry of the tip



PF26MD PF26MS

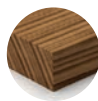
Dowel drills for blind holes



Boring Machines



Softwood



Hardwood



Chipboard



Laminated
Chipboard



MDF



Laminated
MDF



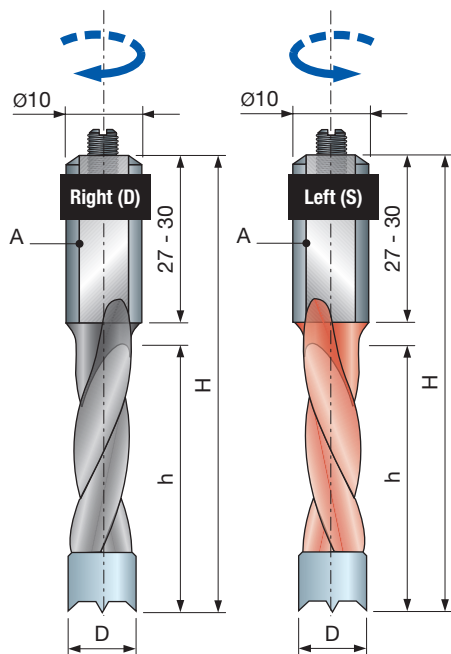
Plywood



Blind Holes

D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
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:

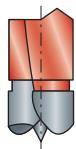
Boring.

Technical information:

Dowel drills HW tipped with centre point for blind holes.

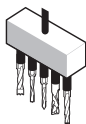
- Round edge spurs to avoid splintering.
- 10 mm cylindrical shank with M5 x 10 mm adjusting screw.

Geometry of the tip



PF04MD PF04MS

Dowel drills with round spurs



Boring Machines



Softwood



Hardwood



Chipboard



Laminated
Chipboard



MDF



Laminated
MDF



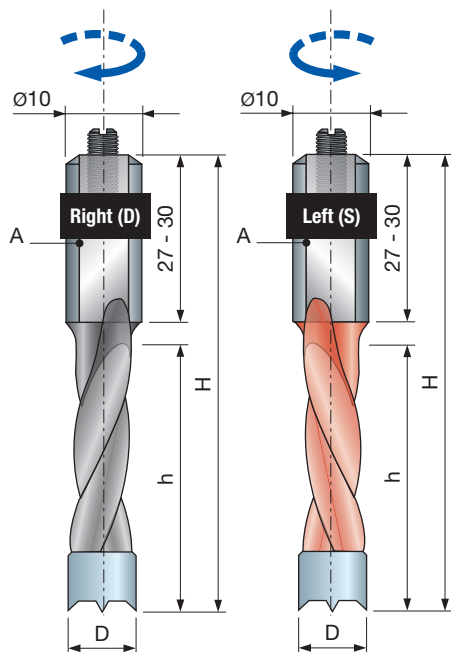
Plywood



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



Machines:

CNC, boring and multi boring machines.

Materials:

Softwood, hardwood, wood based panels and MDF.

Applications:

Boring.

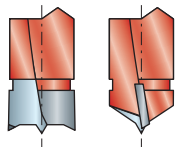
Technical information:

Dowel drills HW tipped with centre point for blind holes.

- 10 mm cylindrical shank with M5 x 10 mm adjusting screw.

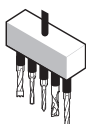
Geometry of the tip

Router bit with negative spur



PF06MD PF06MS

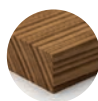
Dowel drills for blind holes



Boring Machines



Softwood



Hardwood



Chipboard



Laminated
Chipboard



MDF



Laminated
MDF



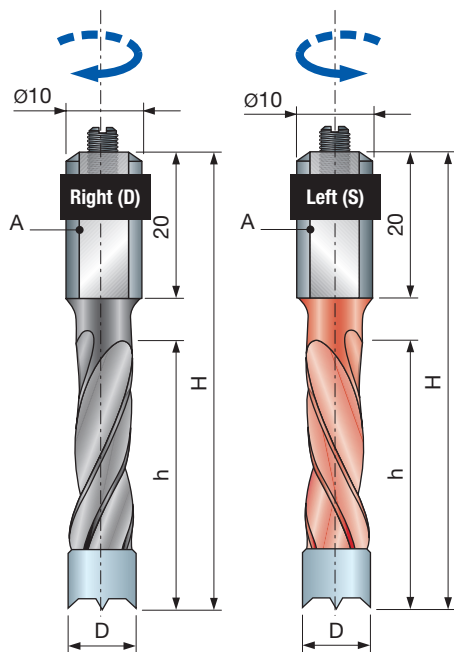
Plywood



Blind Holes

D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
5	27	57,5	10 x 27	2	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



Machines:

CNC, boring and multi boring machines.

Materials:

Softwood, hardwood, wood based panels and MDF.

Applications:

Boring.

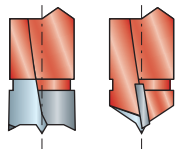
Technical information:

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.

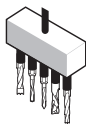
Geometry of the tip

Router bit with negative spur



PF07MD PF07MS

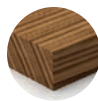
Dowel drills for blind holes



Boring Machines



Softwood



Hardwood



Chipboard



Laminated
Chipboard



MDF



Laminated
MDF



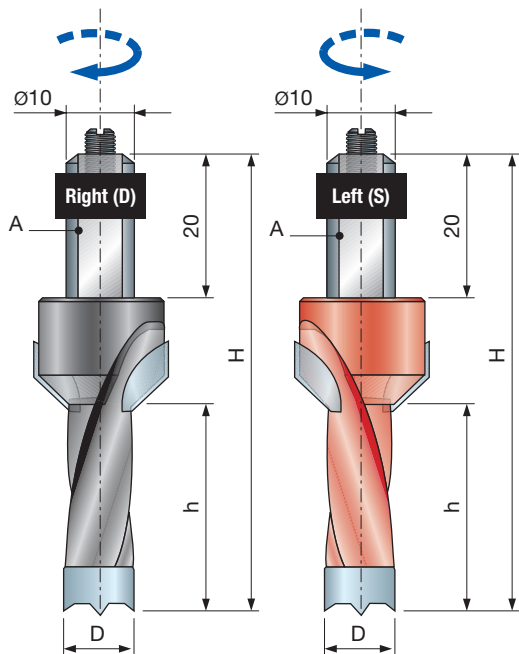
Plywood



Blind Holes

D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
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



Machines:

CNC, boring and multi boring machines.

Materials:

Softwood, hardwood, wood based panels and MDF.

Applications:

Boring.

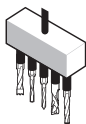
Technical information:

Dowel drills HW tipped with centre point for blind holes with 45° countersink.

- 10 mm cylindrical shank with M5 x 10 mm adjusting screw.

PF08MDC PF08MSC

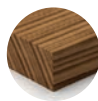
Dowel drills with countersink - blind holes



Boring Machines



Softwood



Hardwood



Chipboard



Laminated
Chipboard



MDF



Laminated
MDF



Plywood



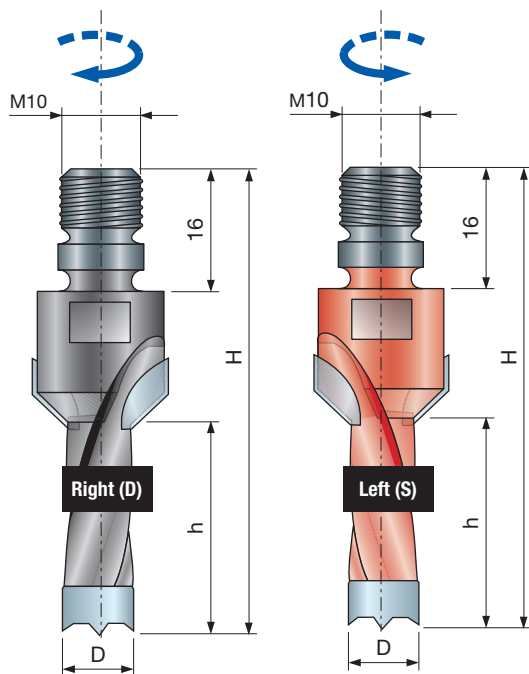
Blind Holes



Blind Holes with
Countersink

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



Machines:

CNC, boring and multi boring machines.

Materials:

Softwood, hardwood, wood based panels and MDF.

Applications:

Boring.

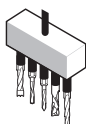
Technical information:

Dowel drills HW tipped with centre point for blind holes with 45° countersink.

- M10 threaded shank.

PF08MDB PF08MSB

Dowel drills with countersink - blind holes



Boring Machines



Softwood



Hardwood



Chipboard



Laminated
Chipboard



MDF



Laminated
MDF



Plywood

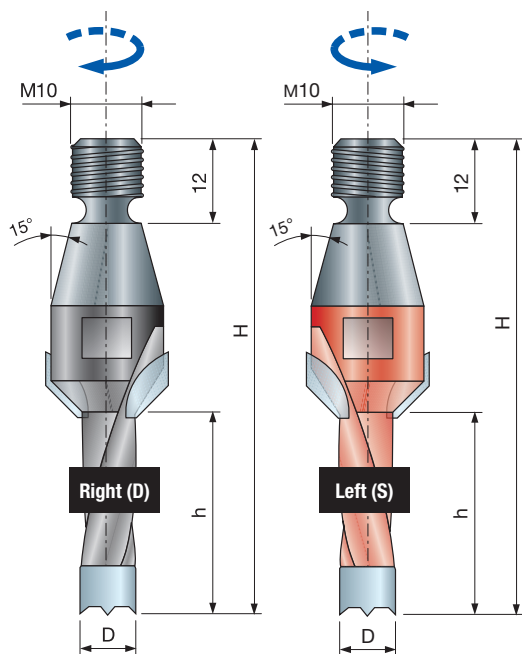


Blind Holes



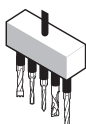
Blind Holes with
Countersink

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

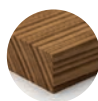
Dowel drills with countersink - blind holes



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:

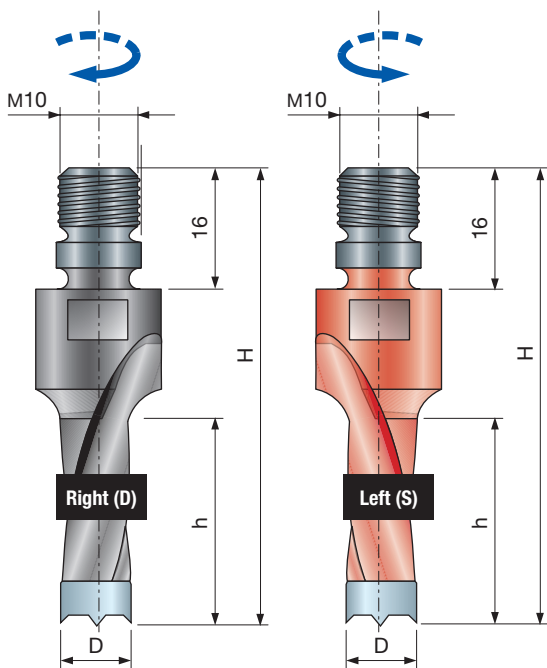
Boring.

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



Machines:

CNC, boring and multi boring machines.

Materials:

Softwood, hardwood, wood based panels and MDF.

Applications:

Boring.

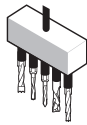
Technical information:

Dowel drills HW tipped with centre point for blind holes with round countersink.

- M10 threaded shank.

PF09MDB PF09MSB

Dowel drills without countersink - blind holes



Boring Machines



Softwood



Hardwood



Chipboard



Laminated
Chipboard



MDF



Laminated
MDF

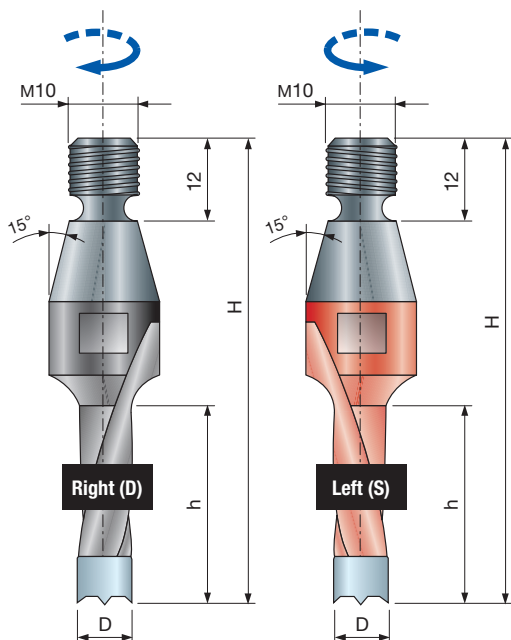


Plywood



Blind Holes

D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
5	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.

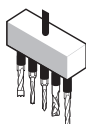
Technical information:

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



Softwood



Hardwood



Chipboard



Laminated
Chipboard



MDF



Laminated
MDF

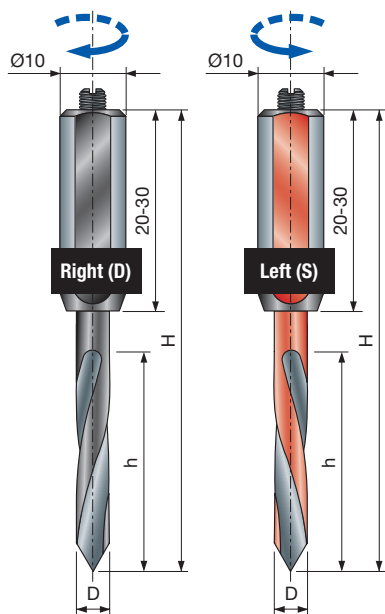


Plywood



Blind Holes

D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
5	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



Machines:

CNC, boring and multi boring machines.

Materials:

Softwood, hardwood, wood based panels and MDF.

Applications:

Boring.

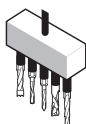
Technical information:

Solid Carbide drills suitable for through holes.

- Bit in HW and cylindrical steel shank with M5 x 10 mm adjusting screw.

PF33MD PF33MS

Solid Carbide through holes drills



Boring Machines



Softwood



Hardwood



Chipboard



Laminated
Chipboard



MDF



Laminated
MDF



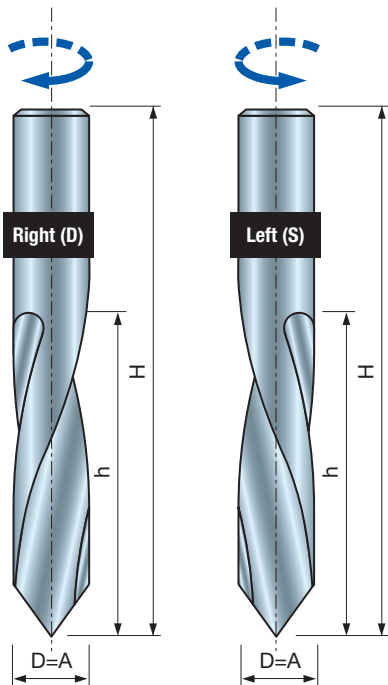
Plywood



Through Holes

D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
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:

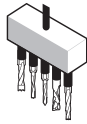
Boring.

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

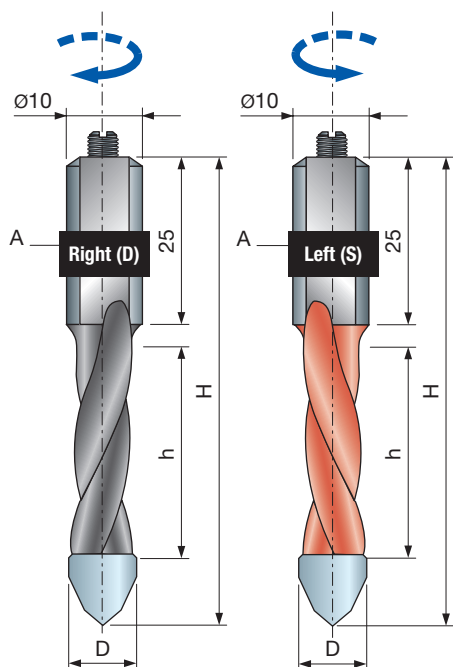


Plywood



Through Holes

D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
10	43	70	10	2	PF31MD FC3	F03FR00355
10	43	70	10	2	PF31MS FC3	F03FR00356



Machines:

CNC, boring and multi boring machines.

Materials:

Softwood, hardwood, wood based panels and MDF.

Applications:

Boring.

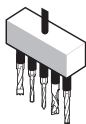
Technical information:

Through holes drills HW tipped.

- 10 mm cylindrical shank with M5 x 10 mm adjusting screw.

PF05MD PF05MS

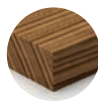
Through holes drills



Boring Machines



Softwood



Hardwood



Chipboard



Laminated
Chipboard



MDF



Laminated
MDF



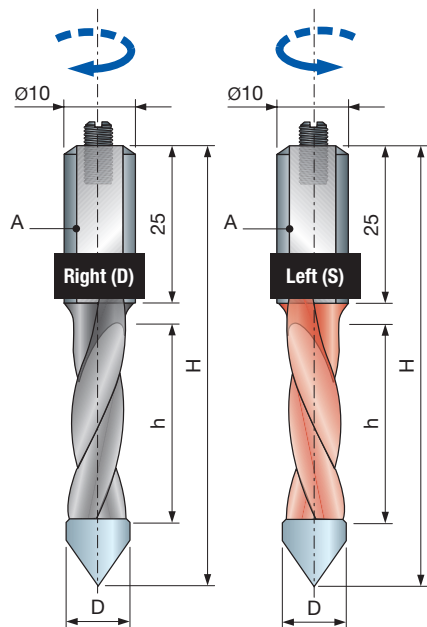
Plywood



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



Machines:

CNC, boring and multi boring machines.

Materials:

Softwood, hardwood, wood based panels and MDF.

Applications:

Boring.

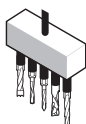
Technical information:

Through holes drills HW tipped.

- 10 mm cylindrical shank with M5 x 10 mm adjusting screw.

PF10MD PF10MS

Through holes drills



Boring Machines



Softwood



Hardwood



Chipboard



Laminated
Chipboard



MDF



Laminated
MDF



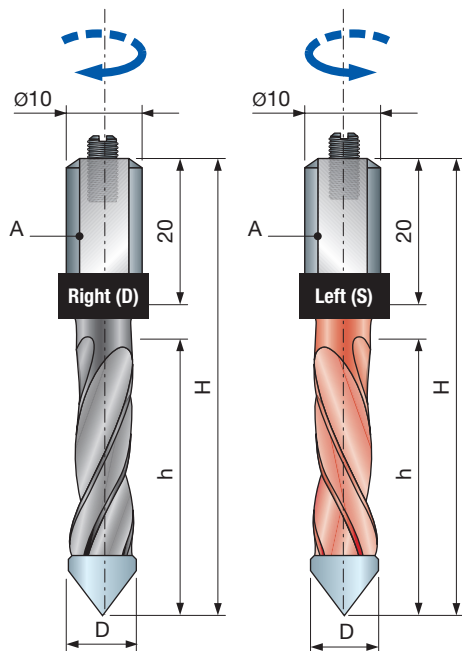
Plywood



Through Holes

D mm	h mm	H mm	A mm	Z	Freud Code	Art. No.
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.

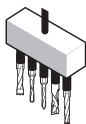
Technical information:

Through holes drills HW tipped.

- 10 mm cylindrical shank with M5 x 10 mm adjusting screw.

PF11MD PF11MS

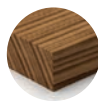
Through holes drills



Boring Machines



Softwood



Hardwood



Chipboard



Laminated
Chipboard



MDF



Laminated
MDF



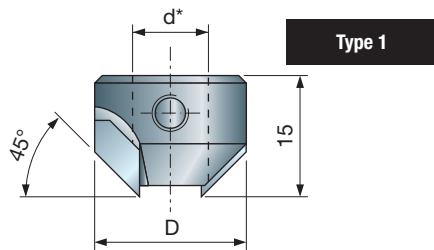
Plywood



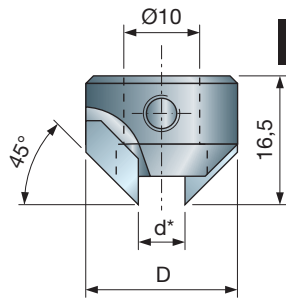
Through Holes

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:

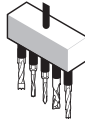
Countersink cutters HW tipped with side fixing screw.

*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



Softwood



Hardwood



Chipboard



Laminated
Chipboard



MDF



Laminated
MDF



Plywood



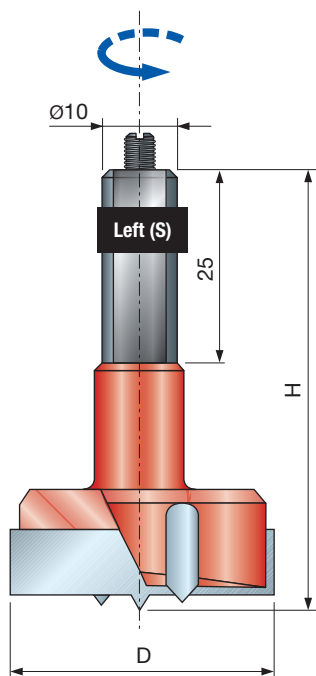
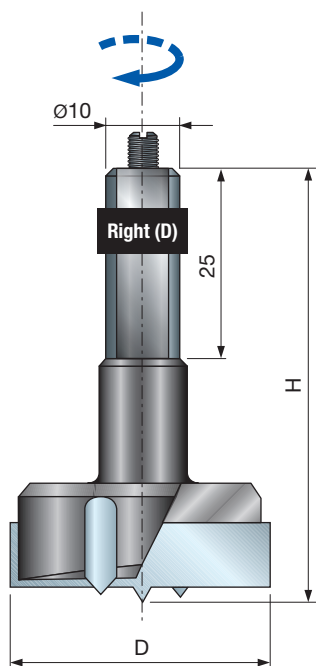
Blind Holes with
Countersink



Through Holes
with Countersink

D mm	d* mm	H mm	A mm	Z	Freud Code	Art. No.
14	4	15	type 1	2	SV05MD ZA3	F03FA03901
16	5	15	type 1	2	SV05MD AA3	F03FA03890
16	6	15	type 1	2	SV05MD BA3	F03FA03891
18	7	15	type 1	2	SV05MD CA3	F03FA03892
18	8	15	type 1	2	SV05MD DA3	F03FA03893
20	9	15	type 1	2	SV05MD EA3	F03FA03894
20	10	15	type 1	2	SV05MD FA3	F03FA03895
22	12	15	type 1	2	SV05MD GA3	F03FA03896
24	14	15	type 1	2	SV05MD HA3	F03FA03897
20	5÷10	16,5	type 2	2	SV05MD TA3	F03FA03899
22	11÷12	16,5	type 2	2	SV05MD TB3	F03FA03900
14	4	15	type 1	2	SV05MS ZA3	F03FA03914
16	5	15	type 1	2	SV05MS AA3	F03FA03902
16	6	15	type 1	2	SV05MS BA3	F03FA03903
18	7	15	type 1	2	SV05MS CA3	F03FA03904
18	8	15	type 1	2	SV05MS DA3	F03FA03905
20	9	15	type 1	2	SV05MS EA3	F03FA03906
20	10	15	type 1	2	SV05MS FA3	F03FA03908
22	12	15	type 1	2	SV05MS GA3	F03FA03909
24	14	15	type 1	2	SV05MS HA3	F03FA03910
20	5÷10	16,5	type 2	2	SV05MS TA3	F03FA03912
22	11÷12	16,5	type 2	2	SV05MS TB3	F03FA03913

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Screw	M5 x 5	2615M CC9	F03FA07420
	Screw	M6 x 6	2615M DD9	F03FA07423



Machines:

CNC, boring and multi boring machines.

Materials:

Softwood, hardwood, wood based panels and MDF.

Applications:

Boring.

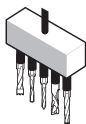
Technical information:

Boring bits HW tipped suitable for hinges.

- 10 mm cylindrical shank with M5 x 10 mm adjusting screw.

PC04MD PC04MS

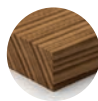
Carbide boring bits for hinges



Boring Machines



Softwood



Hardwood



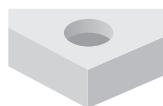
Laminated
Chipboard



Laminated
MDF



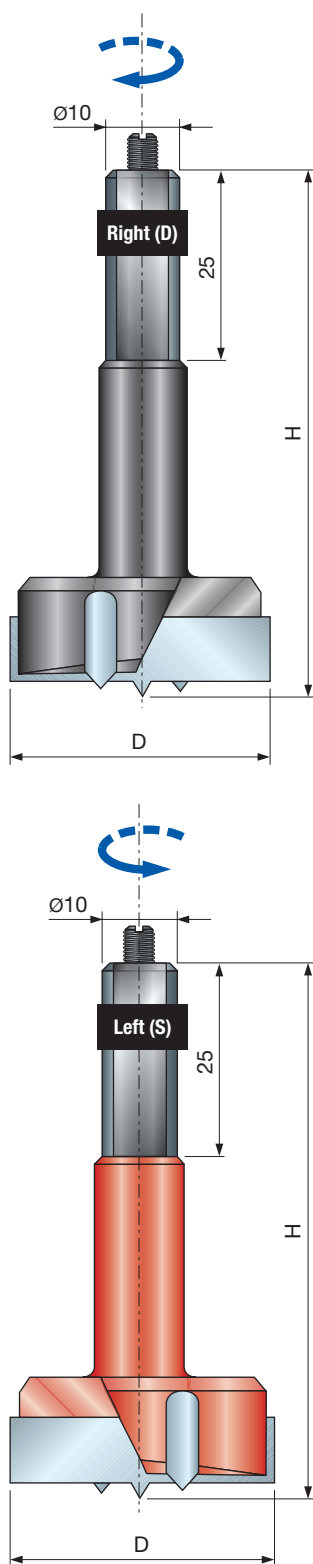
Blind Holes



Hinge Pockets

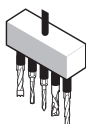
D mm	H mm	A mm	Z	Freud Code	Art. No.
12	57,5	10 x 25	2+2	PC04MD 123	F03FA01782
14	57,5	10 x 25	2+2	PC04MD 143	F03FA01783
15	57,5	10 x 25	2+2	PC04MD 153	F03FA01784
16	57,5	10 x 25	2+2	PC04MD 163	F03FA01785
18	57,5	10 x 25	2+2	PC04MD 183	F03FA01786
20	57,5	10 x 25	2+2	PC04MD 203	F03FA01787
22	57,5	10 x 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

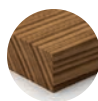
Carbide boring bits for hinges



Boring Machines



Softwood



Hardwood



Chipboard



Laminated
Chipboard



MDF



Laminated
MDF



Plywood



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.

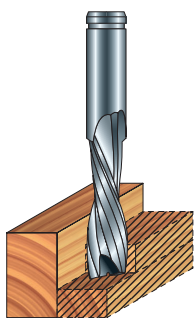
The minimum required clamping length must be kept.

Care should be taken that the data relevant to the safety of the clamped tool are always stored in the data medium.

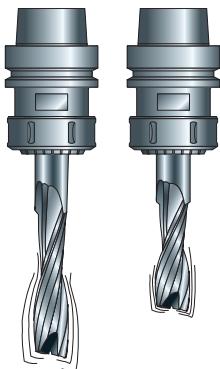
Repairs should only be carried out by a competent person, i.e. a person with professional training and experience, who has knowledge of the design, construction and safety requirements.

Repair should therefore include the use of spare parts which are in compliance with the specifications of the original parts.

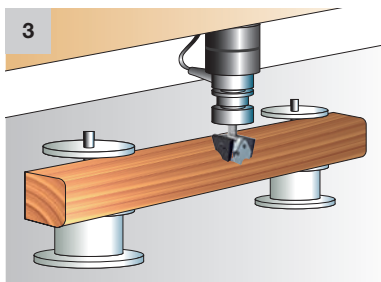
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2



3

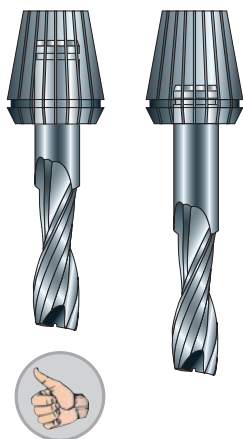


ADVICE FOR CORRECT USE

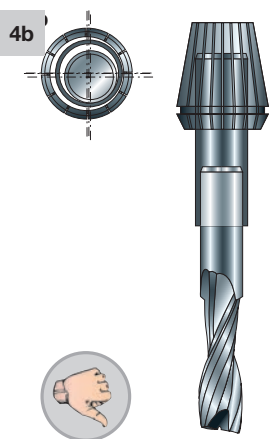
To reduce vibrations from the router bit, which can compromise the finish and cause damages to both the tool and the workpiece, it is necessary to respect the following conditions:

- 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 hazardingly.
- 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).

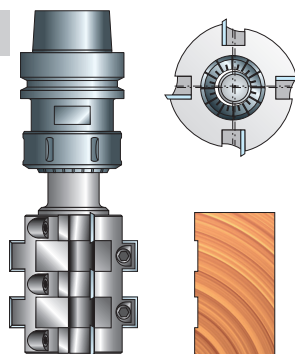
4a



4b



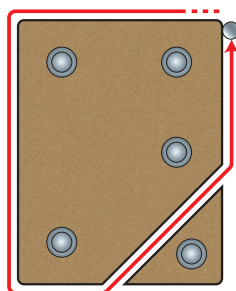
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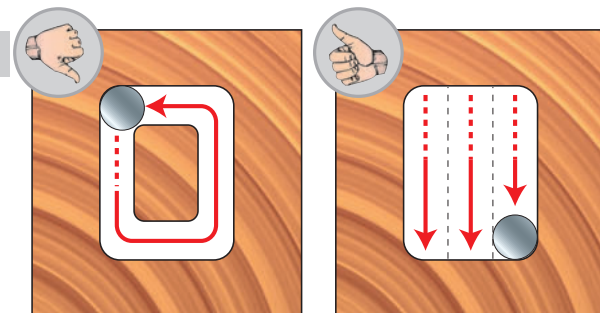
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7



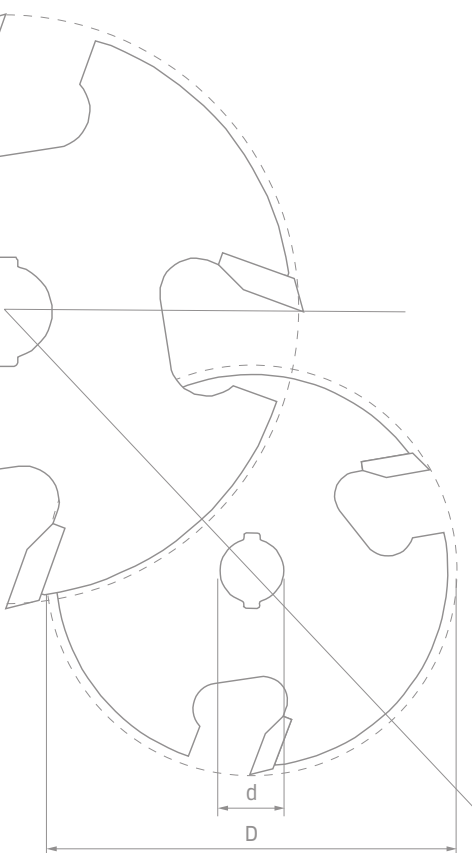
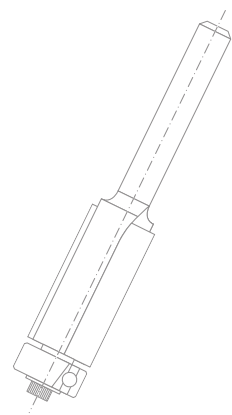
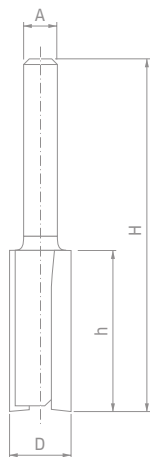
8



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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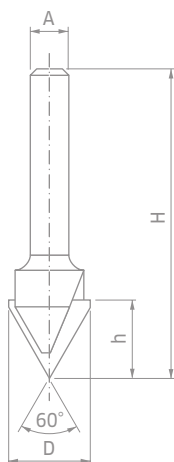
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RB62M	Sleeved bearings.....	Page 327
3103MC	Sleeved bearings with angle	Page 327

Safe working practice.....	Page 328
Advice for correct use	Page 329

LEADING TECHNOLOGY

TiCo CARBIDE TECHNOLOGY

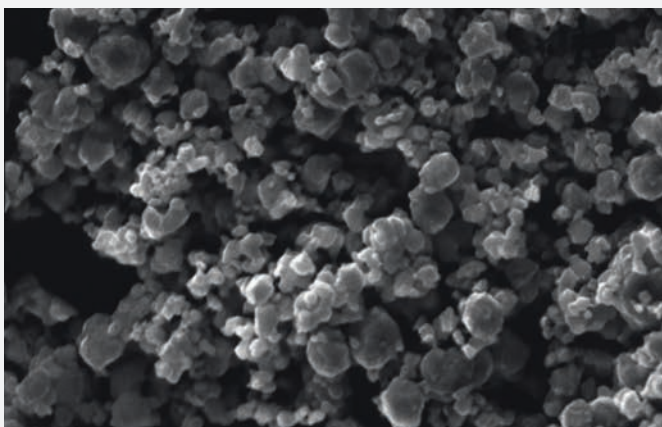
Freud's ownership and control of the entire Carbide production cycle ensures that the correct formula is used for the specific application needs, to constantly maximise the router bit performance.



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.

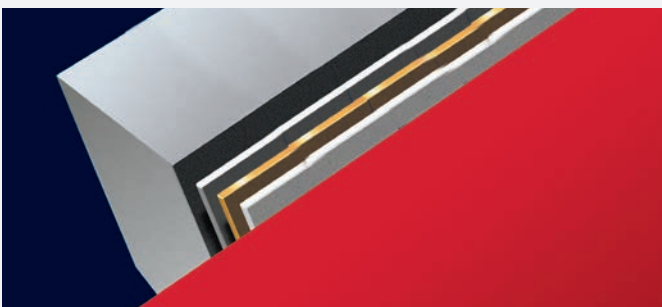
Freud's high shear angle bits leave a cross grain cut that requires virtually no sanding.

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.

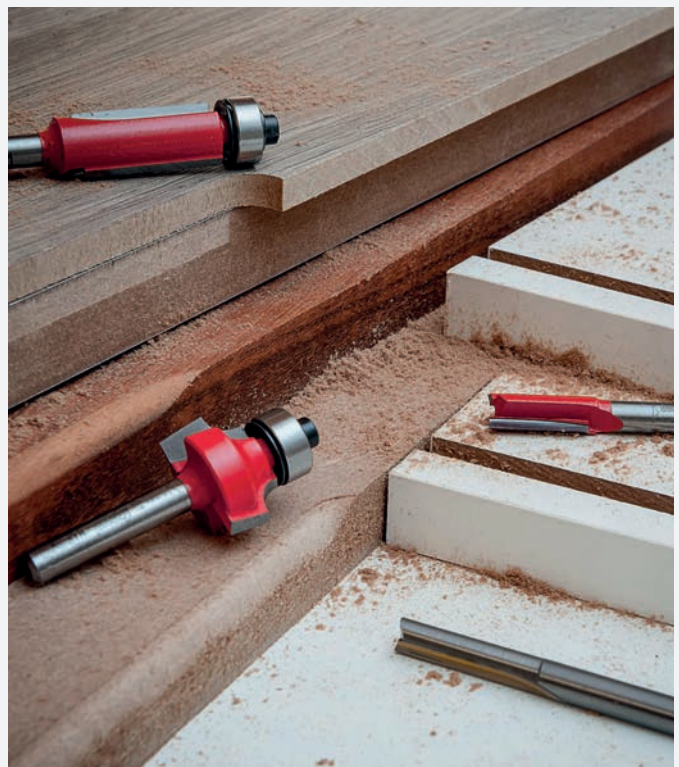
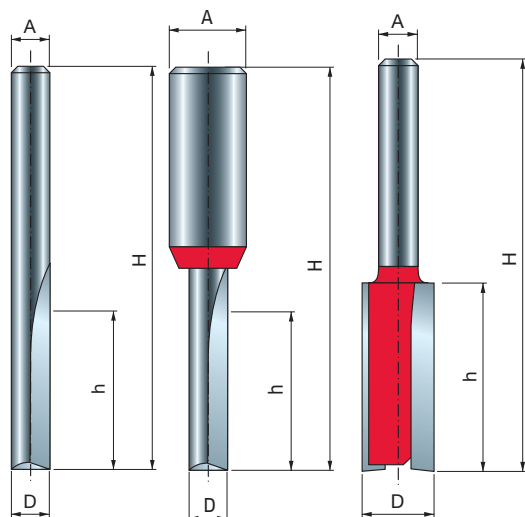


Table of content

	Application picture	Description	Page reference
Straight bits		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, planning and hinge cut outs.	243-249
Trimming bits		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
Edge forming bits		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
Joinery bits		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
Surface forming bits		All Freud's surface forming router bits are available without ball bearing for a perfect profile grooving on wooden surfaces.	303-313
Mixed sets		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





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.

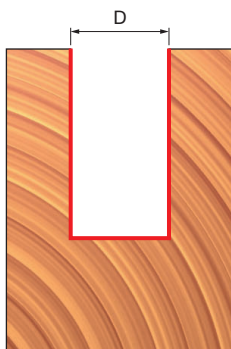
Applications:

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.



DOUBLE FLUTE STRAIGHT BITS

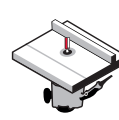
**04- 12-
MM- R006M**



Hand-held Routers



Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels



Wood Based Panels



Wood Based Panels

Type A - Solid Carbide bits

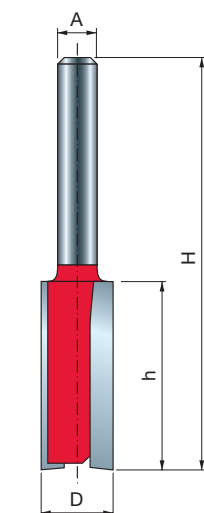
D mm	h mm	H mm	A mm	A inch	Z	Max RPM 1/min.	Freud Code	Art. No.
2	6,3	44,5	6		2	24.000	04-09706P	F03FR01413
3	9,5	44,5	6		2	24.000	04-09906P	F03FR01415
3	11	50,8	6		2	24.000	04-10006P	F03FR01418
3	12	50	6		2	24.000	R006M03006	F03FR01355
4	12	50,3	6		2	24.000	R006M05006	F03FR01356
4	12	50,8	6		2	24.000	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

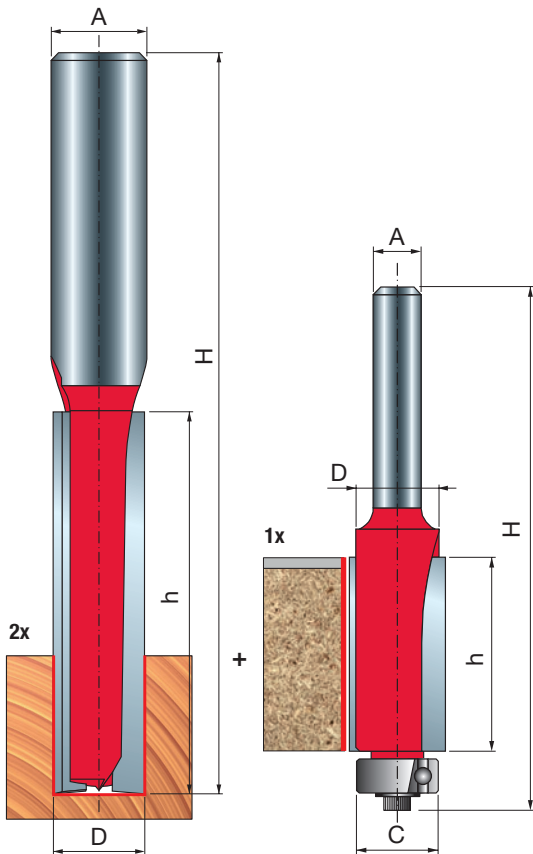
Type C - HW tipped bits

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

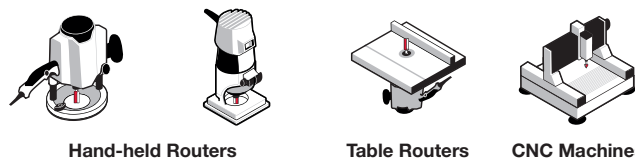
04- 12-
MM- R006M

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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



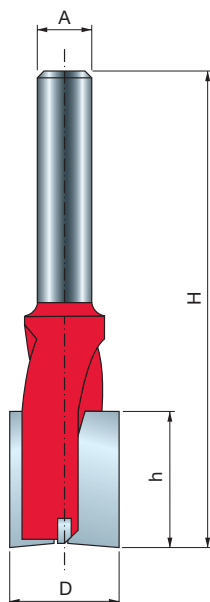
KITCHEN FITTER SET

88-



Softwood Hardwood Plywood Wood Based Panels

	A	Max RPM	Freud Code	Art. No.
	inch	1/min.		
2x Straight bit and 1x flush trim bit set	1/2 1/4	24.000	88-20075P	F03FR04370



DOUBLE FLUTE STRAIGHT BITS WITH BOTTOM TIP

17-



Hand-held Routers

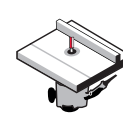
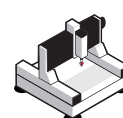


Table Routers



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:

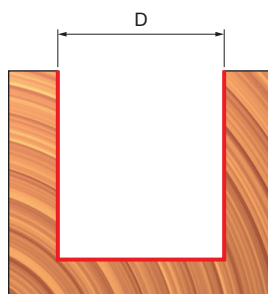
Hand-held routers, table routers and CNC machines.

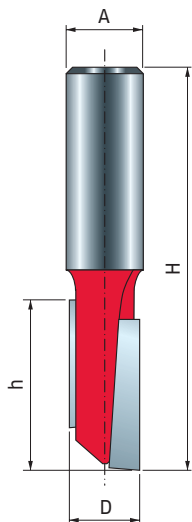
Materials:

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.





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.

STAGGER BITS

14-



Hand-held Routers

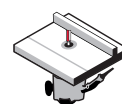
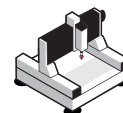


Table Routers



CNC Machines



Softwood



Hardwood



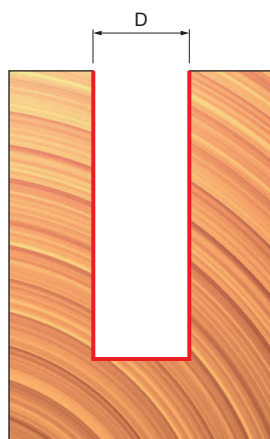
Plywood

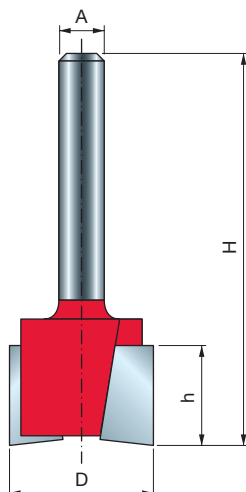


Wood Based Panels



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	14-10212P	F03FR01561
12,7	38,1	82	12	2	24.000	14-10412P	F03FR01562
12,7	37,8	79	12	2	24.000	14-20412P	F03FR01564
12,7	54	98,3	12	2	24.000	14-10612P	F03FR01563





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.

MORTISING BITS

16-



Hand-held Routers

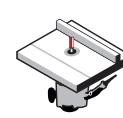
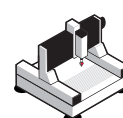


Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels

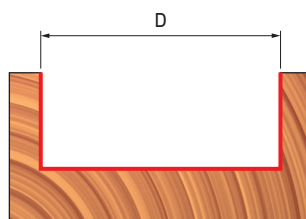


Wood Based Panels



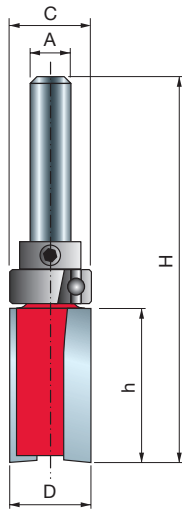
Wood Based Panels

D mm	h mm	H mm	A mm	inch	Z	Max RPM 1/min.	Freud Code	Art. No.
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





Machines:

Hand-held routers and table routers.

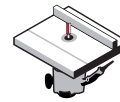
Materials:

Softwood, hardwood, plywood and wood based panels.

Applications:

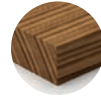
Ideal for following templates and for other tasks where the pattern is placed on top of the workpiece.

TOP BEARING FLUSH TRIM BITS 50-



Hand-held Routers

Table Routers



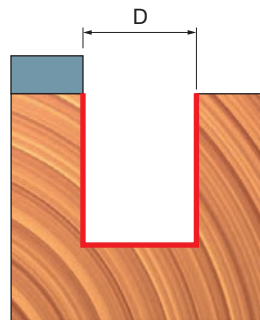
Softwood

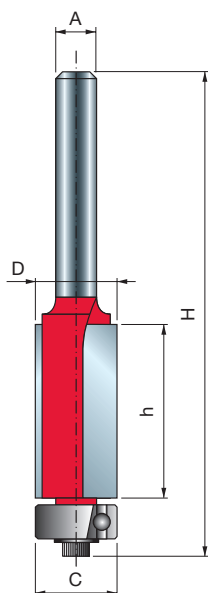
Hardwood

Plywood

Wood Based Panels

D mm	h mm	H mm	A mm	inch	C mm	Z	Max RPM 1/min.	Freud Code	Art. No.
13	20	60	6		13	2	24.000	50-10206P	F03FR02003
15	20	60	6		15	2	24.000	50-10406P	F03FR02006
19	25,4	67,5	6		19	2	24.000	50-10606P	F03FR02008
16	20	60	8		16	2	24.000	50-10308P	F03FR02005
22	20	60	8		22	2	24.000	50-10808P	F03FR02010
12,7	25,4	65,4		1/4	12,7	2	24.000	50-10225P	F03FR02004
15,88	25,4	65,4		1/4	15,88	2	24.000	50-10425P	F03FR02007
19	25,4	68,5		1/4	19	2	24.000	50-10625P	F03FR02009





Machines:

Hand-held routers and table routers.

Materials:

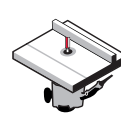
Softwood, hardwood, plywood and wood based panels.

Applications:

Use these bits for precise trim work on laminated counter tops, to follow patterns and to create or duplicate complex shapes.

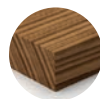
FLUSH TRIM BITS

42- 44-



Hand-held Routers

Table Routers



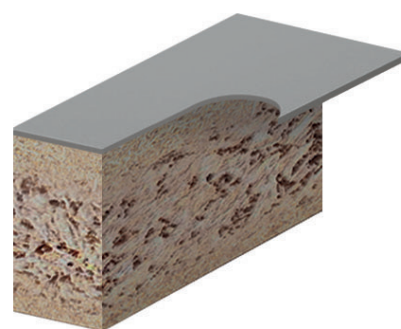
Softwood

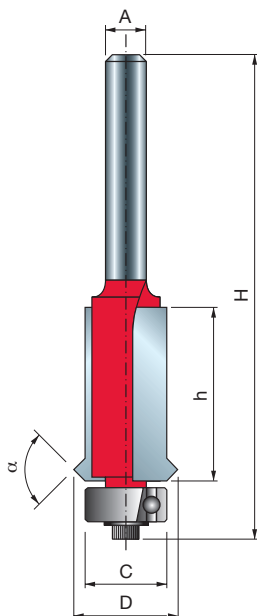
Hardwood

Plywood

Wood Based Panels

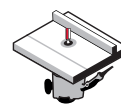
D mm	h mm	H mm	A mm	A inch	C mm	Z	Max RPM 1/min.	Freud Code	Art. No.
9,53	12,7	60,9	6		9,53	2	24.000	42-10206P	F03FR01935
9,53	25,8	72,4	6		9,53	2	24.000	42-10006P	F03FR01932
12,7	25,7	72,9	6		12,7	2	24.000	42-10406P	F03FR01938
9,53	12,7	60,9	8		9,53	2	24.000	42-10208P	F03FR01936
9,53	25,8	72,4	8		9,53	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



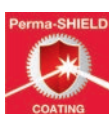
Softwood

Hardwood

Plywood

Wood Based Panels

D mm	h mm	H mm	A mm	C mm	α	Z	Max RPM 1/min.	Freud Code	Art. No.
15,88	25,4	76,2	6	12,7	90°	2	20.000	48-10206P	F03FR02000
15,88	25,4	76,2	8	12,7	90°	2	24.000	48-10208P	F03FR02001
15,88	25,4	87,2	12	12,7	90°	2	24.000	48-11212P	F03FR02002



Machines:

Hand-held routers and table routers.

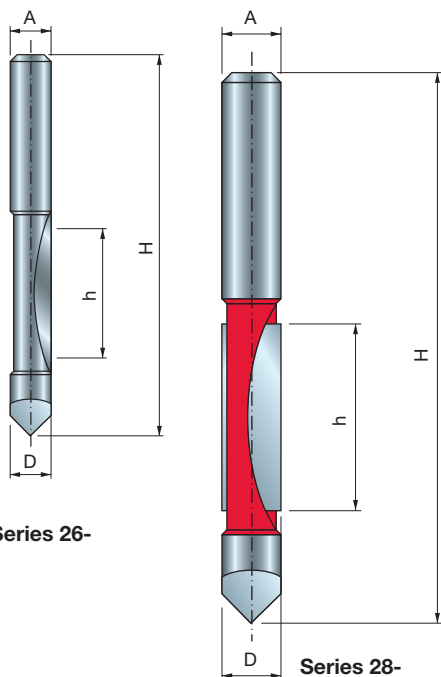
Materials:

Softwood, hardwood, plywood and wood based panels.

Applications:

Flush trimming bits rout a small, decorative "V" groove on the workpiece.





Series 26-

Series 28-



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.

PANEL PILOT BITS

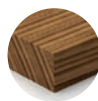
26- 28-



Hand-held Routers



Softwood



Hardwood



Plywood

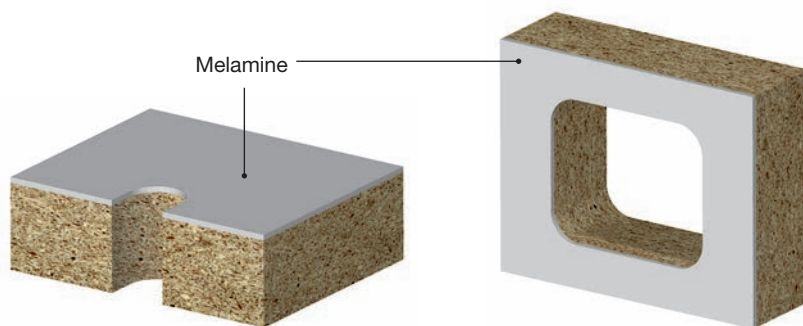


Wood Based Panels



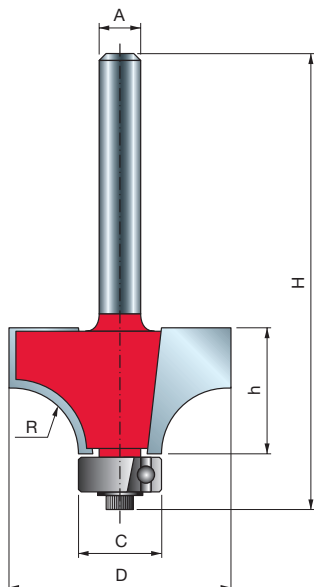
D mm	h mm	H mm	A mm	A inch	Z	Max RPM 1/min.	Freud Code	Art. No.
6	19	57	6		1	24.000	26-10006P	F03FR01664
8	19	75	8		1	24.000	26-10008P	F03FR01665
12,7	31,75	96,2	12		2	24.000	28-10412P	F03FR01692
6,35	19	57		1/4	1	24.000	26-10025P	F03FR01666
12,7	31,75	96,2		1/2	2	24.000	28-10450P	F03FR01693

- Solid Carbide Bits



Edge Forming Bits





Machines:

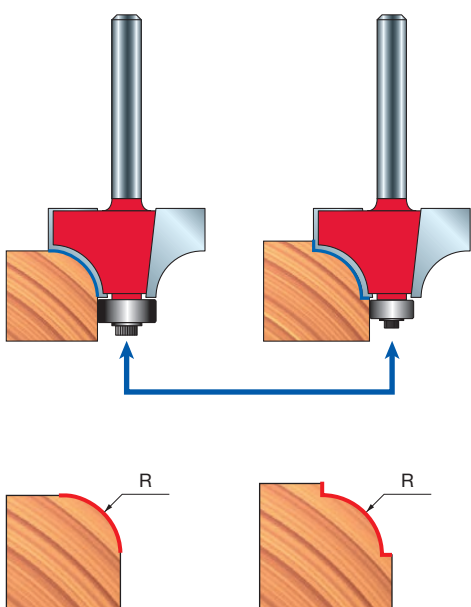
Hand-held routers and table routers.

Materials:

Softwood, hardwood, plywood and wood based panels.

Applications:

Rounding over bits soften sharp edges of any workpiece.

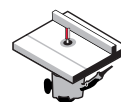


By ordering a smaller ball bearing and step washer you will be able to obtain a different profile:

- 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-

ROUNDING OVER BITS

34- 36-



Hand-held Routers

Table Routers



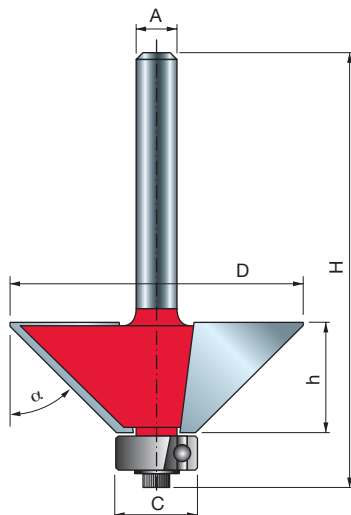
Softwood

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.
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



Machines:

Hand-held routers, table routers and CNC machines.

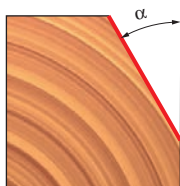
Bits with ball bearing are not recommended to be used on CNC machines.

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

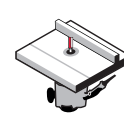
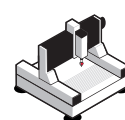


Table Routers



CNC Machines



Softwood



Hardwood



Plywood

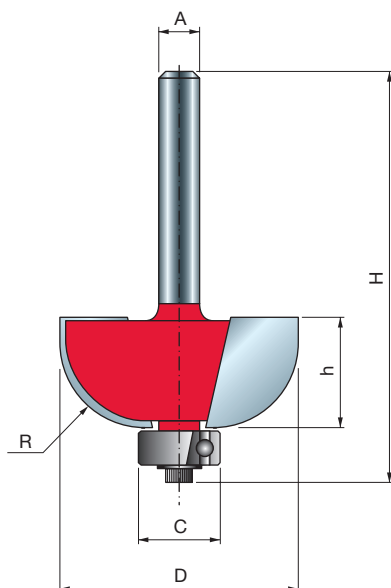


Wood Based Panels



D mm	h mm	H mm	A mm	inch	C mm	α	Z	Max RPM 1/min.	Freud Code	Art. No.
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.



Machines:

Hand-held routers and table routers.

Materials:

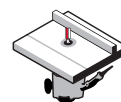
Softwood, hardwood, plywood and wood based panels.

Applications:

Decorative concave edge for traditional furniture.

COVE BITS

30-



Hand-held Routers

Table Routers



Softwood



Hardwood



Plywood



Wood Based Panels

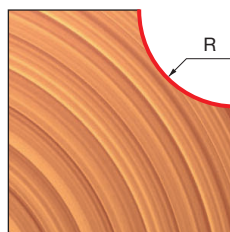


Wood Based Panels



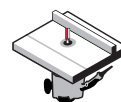
Wood Based Panels

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



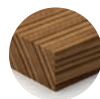
CLASSICAL COVE BITS

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	30-30406P	F03FR01719
31,75	15,1	56,8	6	9,53	4,8	2	18.000	30-20206P	F03FR01715
28,58	13	54,2	8	9,53	4,8	2	18.000	30-30408P	F03FR01720
31,75	15,1	56,8	8	9,53	8	2	18.000	30-20208P	F03FR01716
28,58	13	60,2	12	9,53	4,8	2	18.000	30-32412P	F03FR01722
31,75	15,1	62,8	12	9,53	8	2	18.000	30-22212P	F03FR01718



Machines:

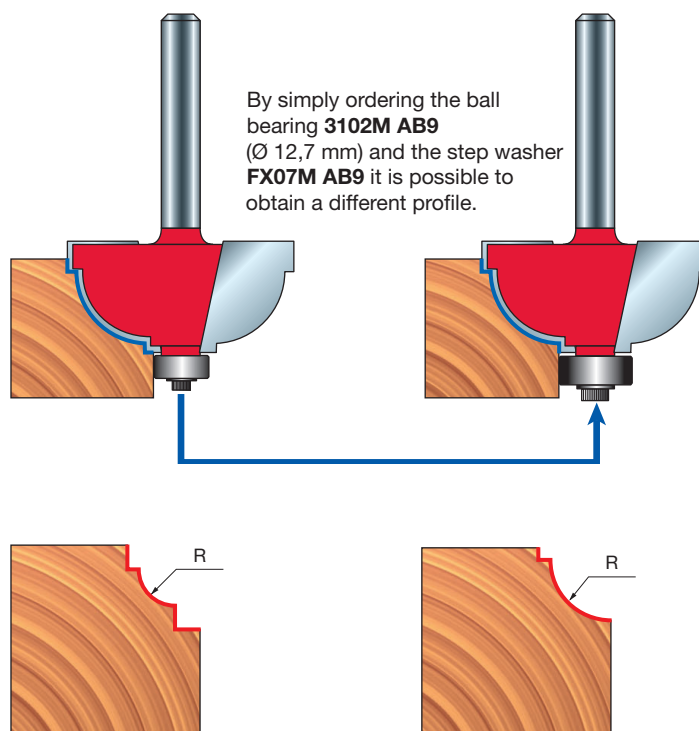
Hand-held routers and table routers.

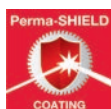
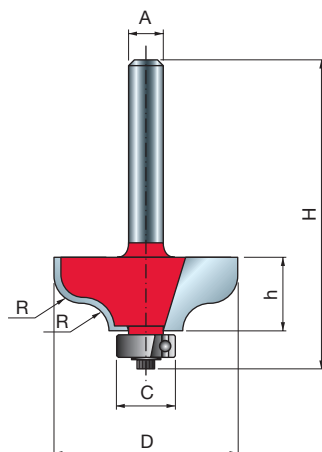
Materials:

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.





Machines:

Hand-held routers and table routers.

Materials:

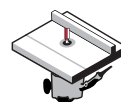
Softwood, hardwood, plywood and wood based panels.

Applications:

Decorative edge detail on any workpiece.

OGEE FILLET BITS

38- 99-



Hand-held Routers

Table Routers



Softwood



Hardwood



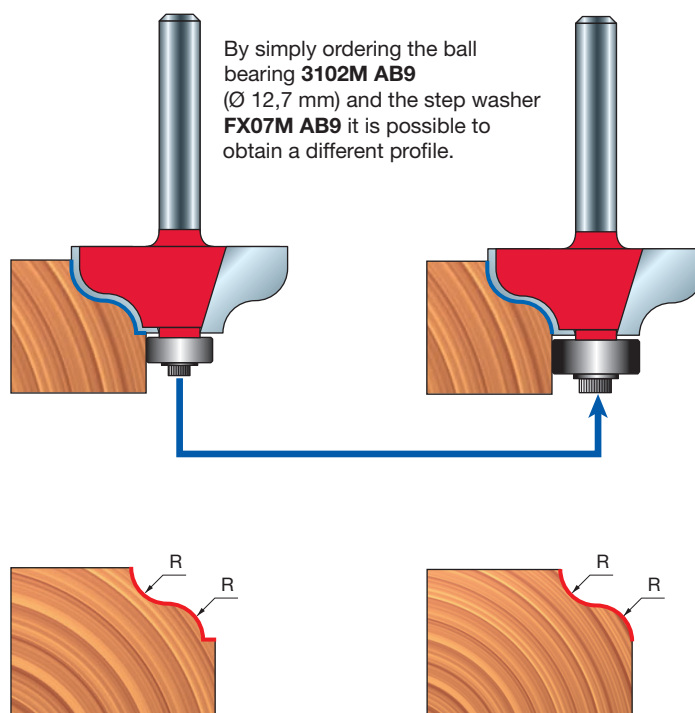
Plywood

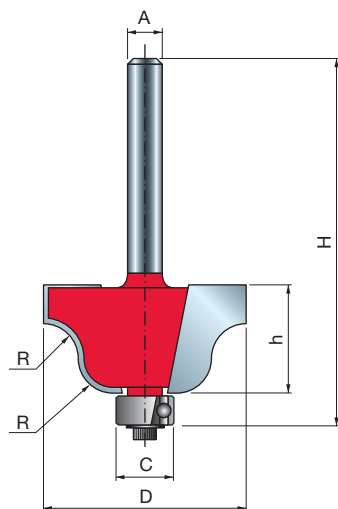


Wood Based Panels



D mm	h mm	H mm	A mm inch	C mm	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
31,75	12,2	53,9	6	9,53	4,8	2	18.000	38-20206P	F03FR01815
38,1	16,2	57,4	6	9,53	6,35	2	16.000	38-20406P	F03FR01818
31,75	12,2	53,9	8	9,53	4,8	2	18.000	38-20208P	F03FR01816
38,1	16,2	57,4	8	9,53	6,35	2	16.000	38-20408P	F03FR01819
31,75	12,2	59,9	12	9,53	4,8	2	18.000	38-21212P	F03FR01821
38,1	16,2	63,4	12	9,53	6,35	2	16.000	38-21412P	F03FR01822
31,75	12,2	53,9	1/4	9,53	4,76	2	18.000	38-20225P	F03FR01817
31,75	12,2	54,4	1/4	12,7	4,76	2	18.000	38-15225P	F03FR01814
38,1	16,2	57,4	1/4	9,53	6,35	2	16.000	38-20425P	F03FR01820
38,1	16,5	64,7	1/2	12,7	8,25	2	16.000	99-00650P	F03FR02412





Machines:

Hand-held routers and table routers.

Material:

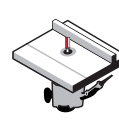
Softwood, hardwood, plywood and wood based panels.

Applications:

Decorative edge detail on any workpiece.

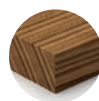
ROMAN OGEE BITS

38-



Hand-held Routers

Table Routers



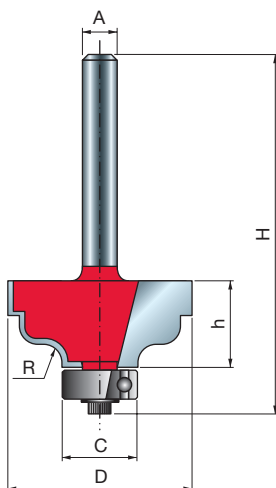
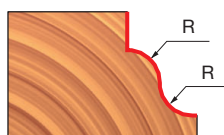
Softwood

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.
27	13,3	55,3	6	9,53	4	2	18.000	38-10006P	F03FR01805
35	18,5	60,5	6	9,53	6,35	2	16.000	38-10206P	F03FR01808
27	13,3	55,3	8	9,53	4	2	18.000	38-10008P	F03FR01806
35	18,5	60,5	8	9,53	6,35	2	16.000	38-10208P	F03FR01809
27	13,3	61,31	12	9,53	4	2	18.000	38-10412P	F03FR01811
35	18,5	66,5	12	9,53	6,35	2	16.000	38-10612P	F03FR01812
27	13,3	55,3	1/4	9,53	4	2	18.000	38-10025P	F03FR01807
35	18,5	66,5	1/4	9,53	6,35	2	16.000	38-10225P	F03FR01810
35	18,5	66,5	1/2	9,53	6,35	2	16.000	38-10650P	F03FR01813



Machines:

Hand-held routers and table routers.

Materials:

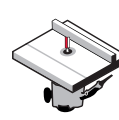
Softwood, hardwood, plywood and wood based panels.

Applications:

Decorative edge detail on any workpiece.

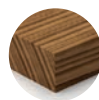
CLASSICAL ROMAN OGEE BITS

38- 99-



Hand-held Routers

Table Routers



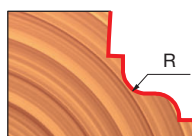
Softwood

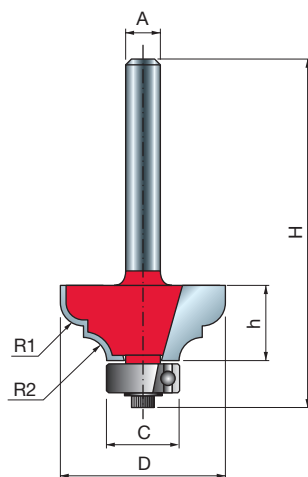
Hardwood

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.
31,75	15	56,7	6	12,7	3,18	2	18.000	38-40206P	F03FR01832
31,75	15	56,7	8	12,7	3,18	2	18.000	38-40208P	F03FR01833
34,92	14,3	62,8	12	12,7	4,8	2	16.000	99-00512P	F03FR02411
31,75	15	56,7	1/4	12,7	3,18	2	18.000	38-40225P	F03FR01834





Machines:

Hand-held routers and table routers.

Materials:

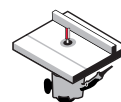
Softwood, hardwood, plywood and wood based panels.

Applications:

Decorative edge detail on any workpiece.

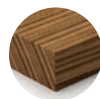
CLASSICAL OGEE BITS

38- 99-



Hand-held Routers

Table Routers



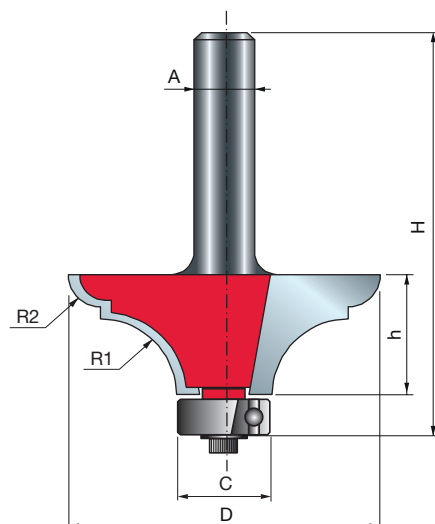
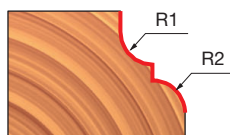
Softwood

Hardwood

Plywood

Wood Based Panels

D mm	h mm	H mm	A mm inch	C mm	R1 mm	R2 mm	Z	Max RPM 1/min.	Freud Code	Art. No.
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	3,97	2	18.000	38-60225P	F03FR01840
34,93	14,7	62,4	1/2	9,53	5,35	5,35	2	16.000	99-00950P	F03FR02415
34,92	17,5	65,7	1/2	12,7	6,35	4,76	2	16.000	38-61450P	F03FR01845



Machines:

Hand-held routers and table routers.

Materials:

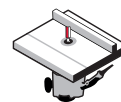
Softwood, hardwood, plywood and wood based panels.

Applications:

Create a bold effect on furniture of all types.

TABLE TOP CLASSICAL BOLD BITS

99-



Hand-held Routers

Table Routers



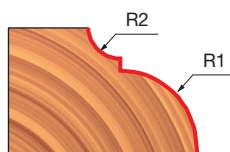
Softwood

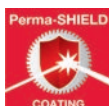
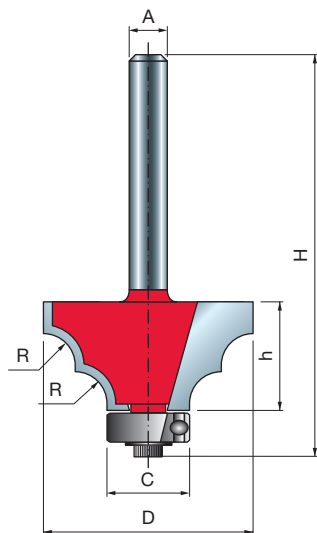
Hardwood

Plywood

Wood Based Panels

D mm	h mm	H mm	A mm	C mm	R1 mm	R2 mm	Z	Max RPM 1/min.	Freud Code	Art. No.
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

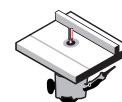


Table Routers



Softwood



Hardwood



Plywood



Wood Based Panels



D mm	h mm	H mm	A mm	C mm	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
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:

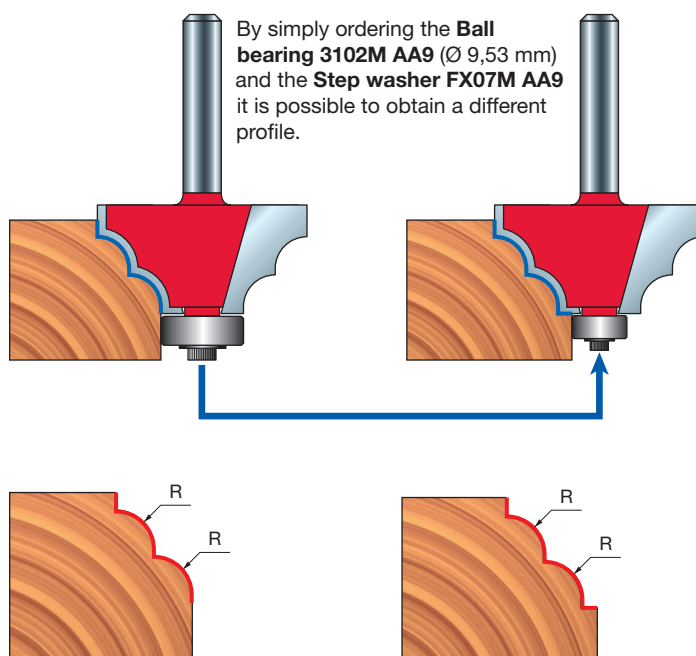
Hand-held routers and table routers.

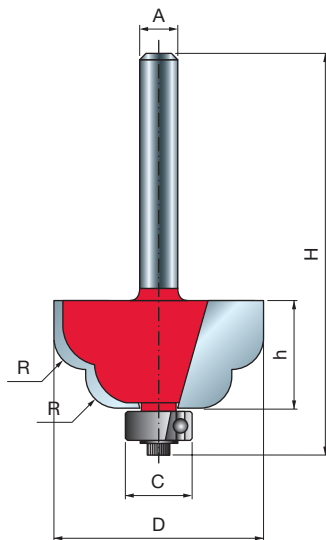
Materials:

Softwood, hardwood, plywood and wood based panels.

Applications:

Create two beads in one pass in the surface of the workpiece.





Machines:

Hand-held routers and table routers.

Materials:

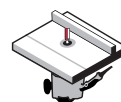
Softwood, hardwood, plywood and wood based panels.

Applications:

Create two graceful curves to add character to the workpiece.

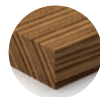
DOUBLE COVE BITS

38-



Hand-held Routers

Table Routers



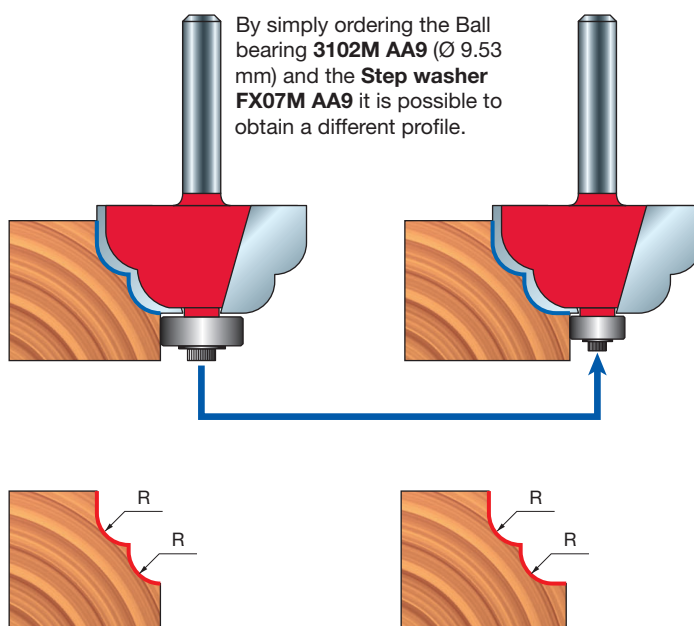
Softwood

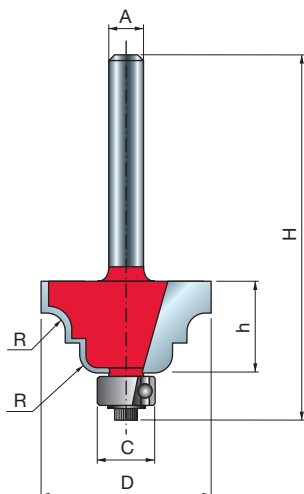
Hardwood

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	15	57,2	6	12,7	5	2	16.000	38-95006P	F03FR01854
32,7	15	57,2	8	12,7	5	2	16.000	38-95008P	F03FR01855





Machines:

Hand-held routers and table routers.

Materials:

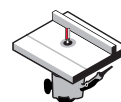
Softwood, hardwood, plywood and wood based panels.

Applications:

Decorative edge detail on any workpiece.

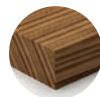
COVE AND BEAD BITS

38-



Hand-held Routers

Table Routers



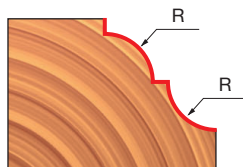
Softwood

Hardwood

Plywood

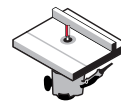
Wood Based Panels

D mm	h mm	H mm	A mm inch	C mm	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
29,38	13,5	55,5	6	9,53	3,97	2	18.000	38-30606P	F03FR01826
38,9	18,3	60	6	9,53	6,35	2	16.000	38-30406P	F03FR01823
29,38	13,5	55,5	8	9,53	3,97	2	18.000	38-30608P	F03FR01827
38,9	18,3	60	8	9,53	6,35	2	16.000	38-30408P	F03FR01824
29,38	13,5	61,2	12	9,53	3,97	2	18.000	38-31212P	F03FR01829
38,92	18,3	66	12	9,53	6,35	2	16.000	38-31412P	F03FR01831
38,9	18,3	60,8	1/4	9,53	6,35	2	16.000	38-30425P	F03FR01825



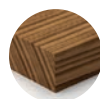
FILLET COVE AND BEAD BITS

38-



Hand-held Routers

Table Routers



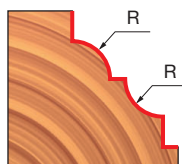
Softwood

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	38-80006P	F03FR01846
36,7	16,5	58,7	6	12,7	4	2	16.000	38-80206P	F03FR01848
40,7	18	60,2	6	12,7	5	2	16.000	38-80406P	F03FR01850
32,7	14,5	56,7	8	12,7	3	2	16.000	38-80008P	F03FR01847
36,7	16,5	58,7	8	12,7	4	2	16.000	38-80208P	F03FR01849
40,7	18	60,2	8	12,7	5	2	16.000	38-80408P	F03FR01851



Machines:

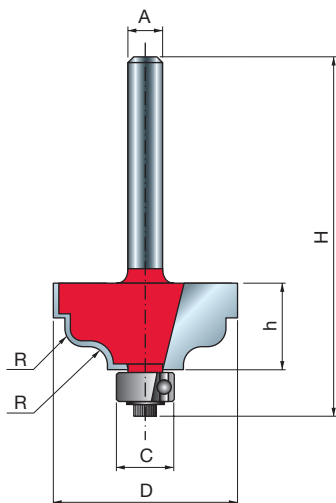
Hand-held routers and table routers.

Materials:

Softwood, hardwood, plywood and wood based panels.

Applications:

Decorative edge detail on any workpiece.



Machines:

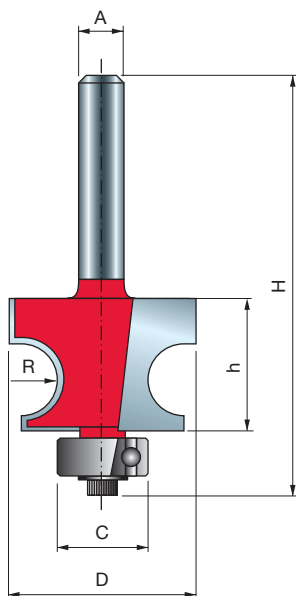
Hand-held routers and table routers.

Materials:

Softwood, hardwood, plywood and wood based panels.

Applications:

Decorative edge detail on any workpiece.



Machines:

Hand-held routers and table routers.

Materials:

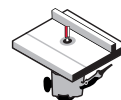
Softwood, hardwood, plywood and wood based panels.

Applications:

Create single beads in one pass in the surface of the workpiece.

DOUBLE FILLET OGEE BITS

38-



Hand-held Routers

Table Routers



Softwood



Hardwood

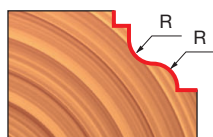


Plywood



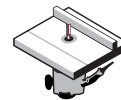
Wood Based Panels

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

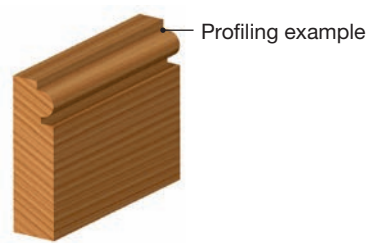
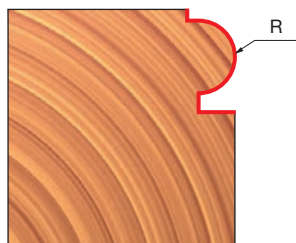


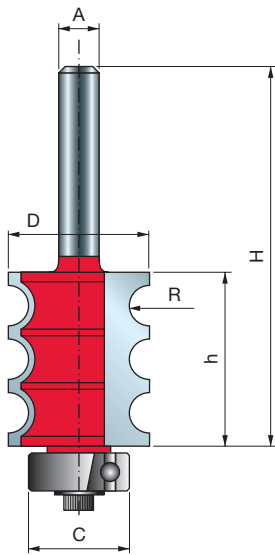
Plywood



Wood Based Panels

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:

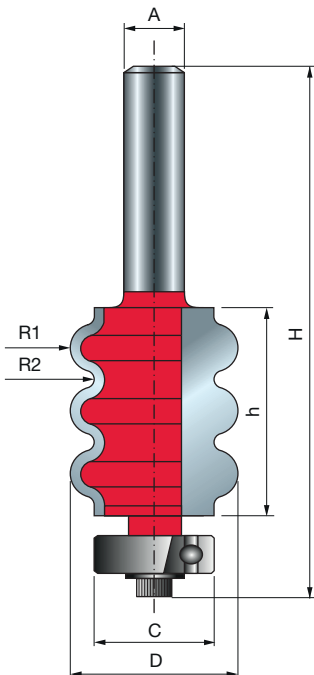
Hand-held routers and table routers.

Materials:

Softwood, hardwood, plywood and wood based panels.

Applications:

Create three beads in one pass in the surface of the workpiece.



Machines:

Hand-held routers and table routers.

Materials:

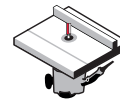
Softwood, hardwood, plywood and wood based panels.

Applications:

Produce multiple flutes on the workpiece.

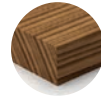
TRIPLE BEADING BITS

80-



Hand-held Routers

Table Routers



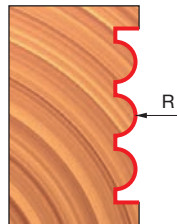
Softwood

Hardwood

Plywood

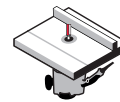
Wood Based Panels

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



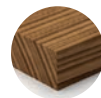
TRIPLE FLUTING BITS

84-



Hand-held Routers

Table Routers



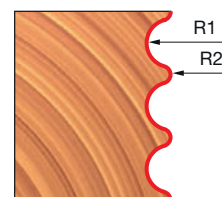
Softwood

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





Machines:

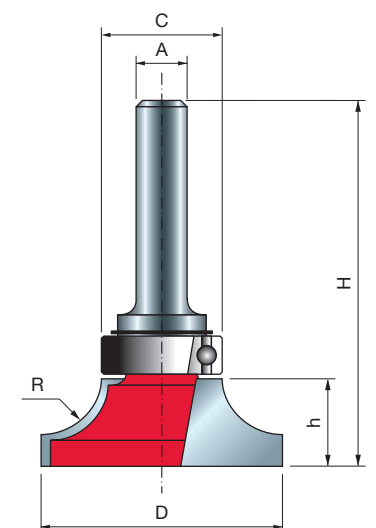
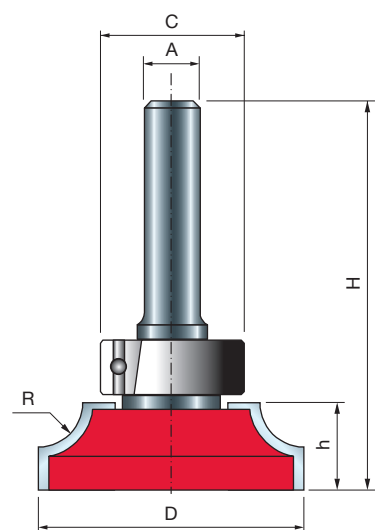
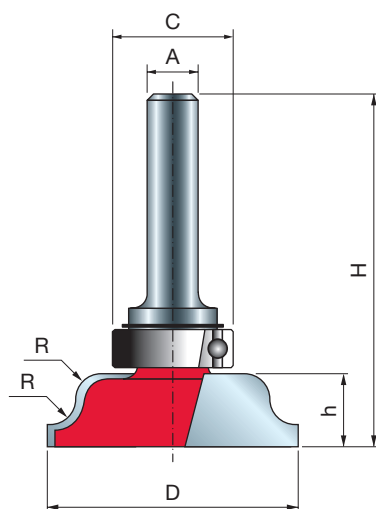
Table routers.

Materials:

Softwood, hardwood, plywood and wood based panels.

Applications:

Decorative edge detail on any workpiece.



TOP BEARING OGEE AND COVE MOULDING BITS

23-

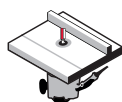
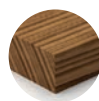


Table Routers



Softwood



Hardwood



Plywood

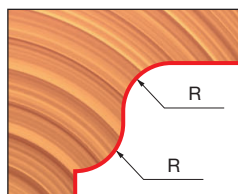


Wood Based Panels



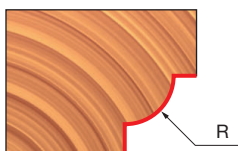
Type A

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



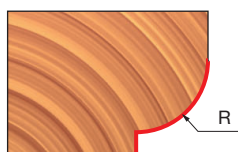
Type B

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





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 EDGE AND HAND RAIL BITS

99-

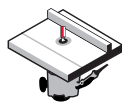
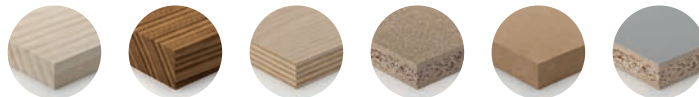


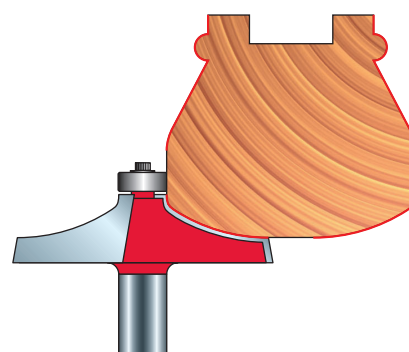
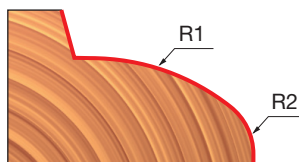
Table Routers



Softwood Hardwood Plywood Wood Based Panels

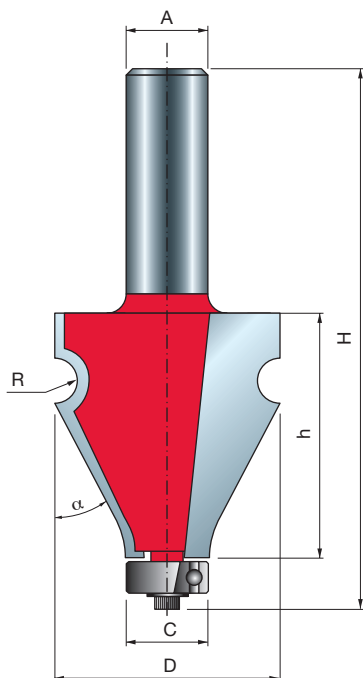
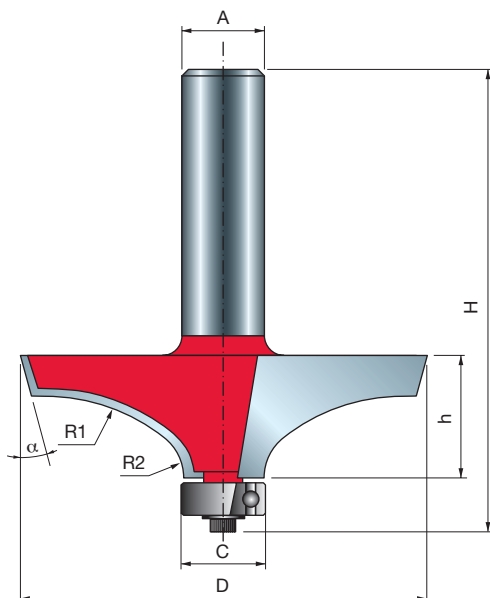
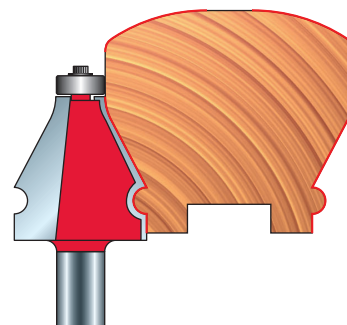
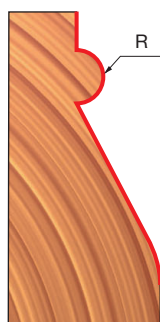
Type A

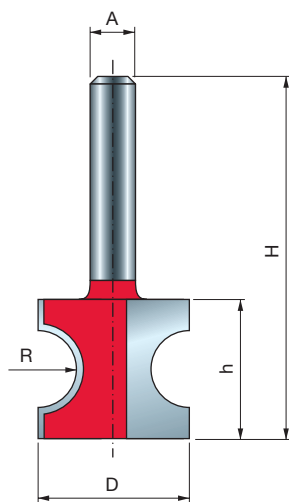
D mm	h mm	H mm	A mm	C mm	R1 mm	R2 mm	α	Z	Max RPM 1/min.	Freud Code	Art. No.
63,5	18	66,2	12	12,7	30	8	15°	2	12.000	99-02712P	F03FR02421



Type B

D mm	h mm	H mm	A mm	C mm	R mm	α	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





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.

HALF ROUND BITS

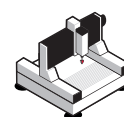
82-



Hand-held Routers



Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels

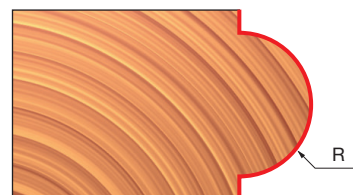


Wood Based Panels



Wood Based Panels

D mm	h mm	H mm	A mm	A inch	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
19	12,4	44,4	6		3,18	2	24.000	82-10206P	F03FR02208
22,22	19,5	51,5	6		4,8	2	24.000	82-10406P	F03FR02210
25,4	22,9	54,9	6		6,35	2	24.000	82-10606P	F03FR02213
19	12,4	44,4	8		3,18	2	24.000	82-10208P	F03FR02209
22,22	19,5	51,5	8		4,76	2	24.000	82-10408P	F03FR02211
25,4	22,9	54,9	8		6,35	2	24.000	82-10608P	F03FR02214
19	12,4	53,4	12		3,2	2	24.000	82-11012P	F03FR02215
22,22	19,5	60,5	12		4,76	2	24.000	82-11212P	F03FR02216
25,4	22,9	64,9	12		6,35	2	24.000	82-11412P	F03FR02217
37	29,05	71,05	12		9,5	2	16.000	82-11612P	F03FR02218
45,9	35,4	73,4	12		12,7	2	16.000	82-11812P	F03FR02219
22	19,5	51,5		1/4	4,76	2	24.000	82-10425P	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.

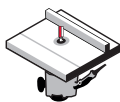


Table Routers



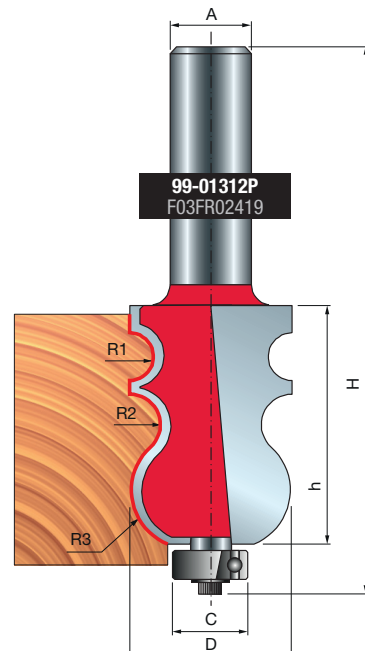
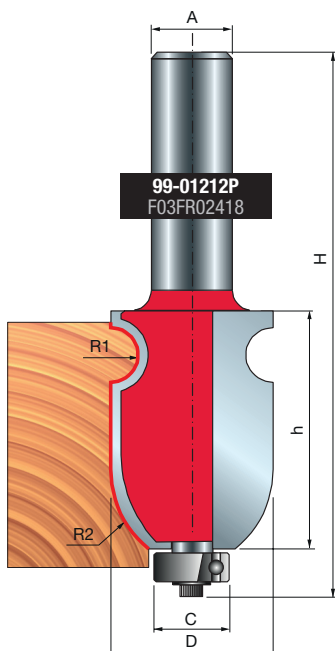
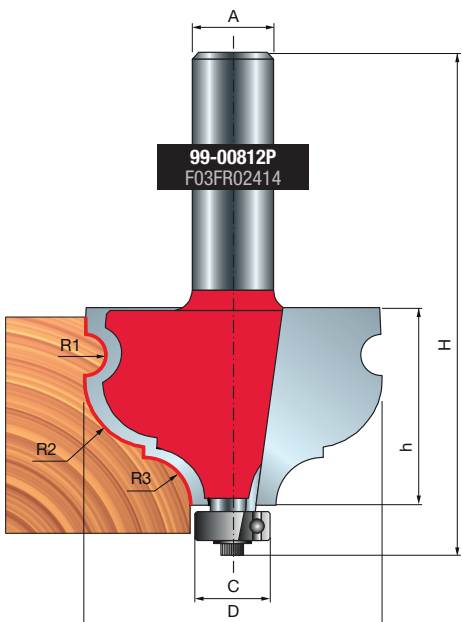
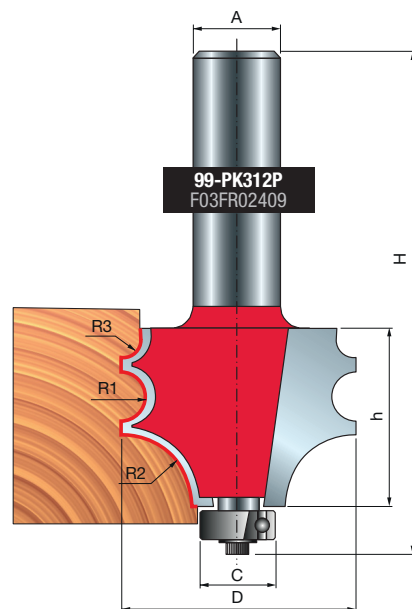
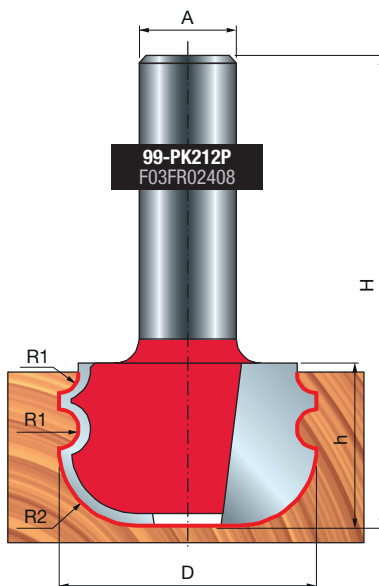
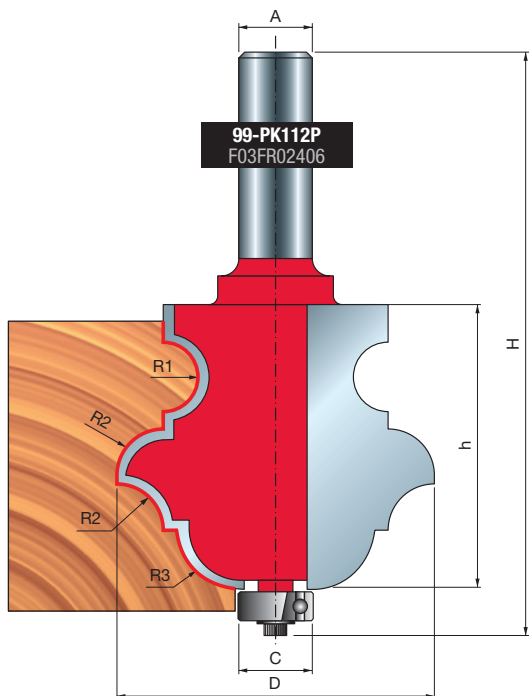
Softwood

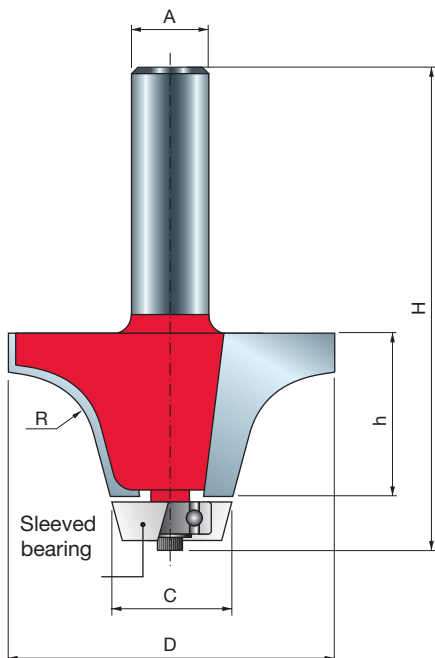
Hardwood

Plywood

Wood Based Panels

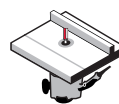
D	h	H	A	C	R1	R2	R3	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm	mm	mm	mm		1/min.		
54,7	49	102	12	12,7	6	8	10	2	10.000	99-PK112P	F03FR02406
31,75	20	58	12	-	2,4	9,53	-	2	18.000	99-PK212P	F03FR02408
31,75	23,8	72	12	12,7	3,2	9,53	2,4	2	18.000	99-PK312P	F03FR02409
44,44	29	77,1	12	12,7	3	10,5	7	2	16.000	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 mm	h mm	H mm	A mm	inch	C mm	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
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:

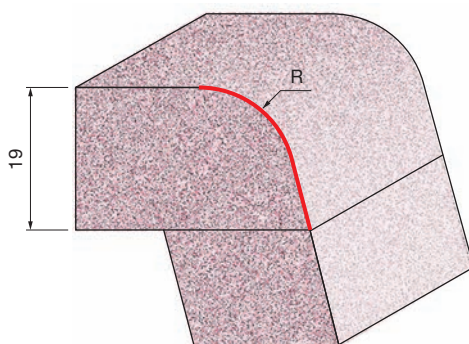
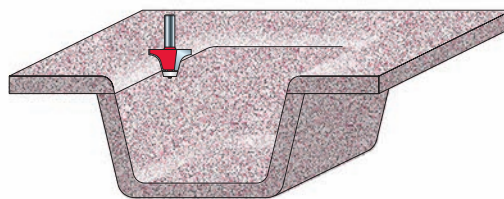
Hand-held routers and table routers.

Materials:

Softwood, hardwood, plywood, wood composites and all solid surface materials.

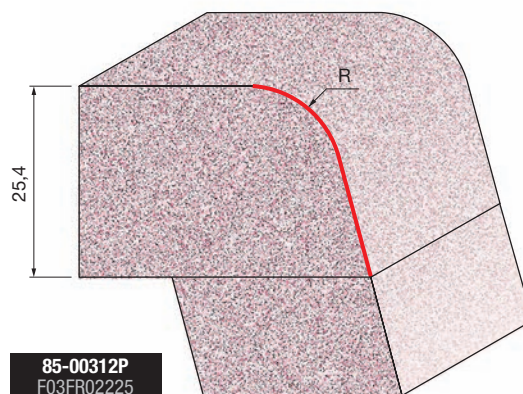
Applications:

Designed to trim the joint between solid surface countertops and solid surface sink bowls, in order to create a smooth, rounded edge.

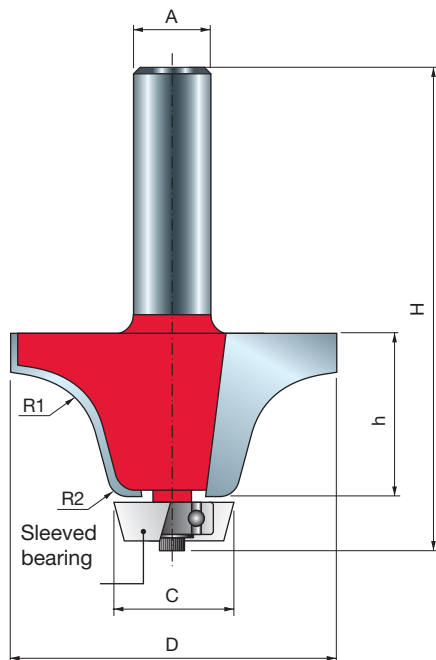


85-00112P
F03FR02223

85-00150P
F03FR02224

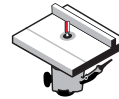


85-00312P
F03FR02225



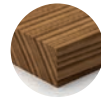
OGEE BOWL BITS

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:

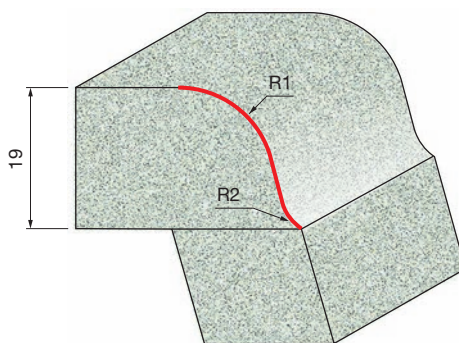
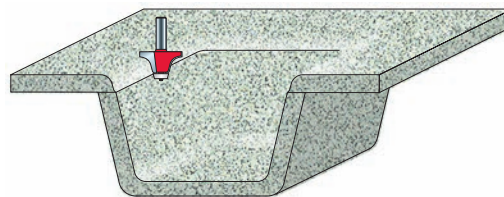
Hand-held routers and table routers.

Materials:

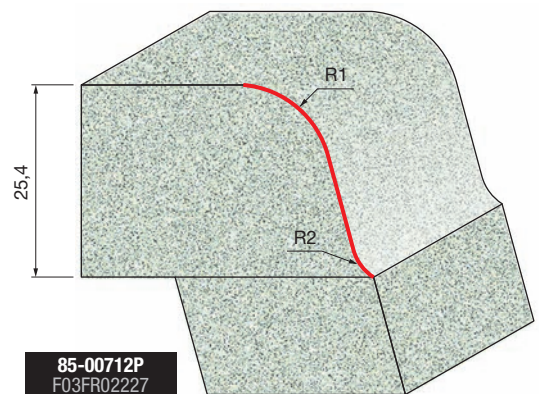
Softwood, hardwood, plywood, wood based panels and all solid surface materials.

Applications:

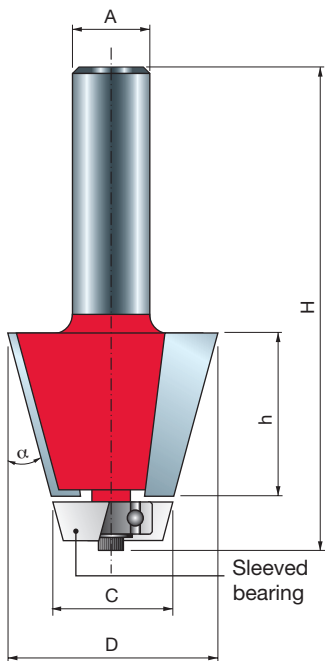
Trim the counter flush with the bowl while creating an ogee edge.



85-00512P
F03FR02226



85-00712P
F03FR02227



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.

BEVEL BOWL BIT

85-



Hand-held Routers

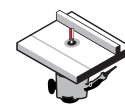
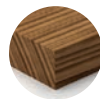


Table Routers



Softwood



Hardwood



Plywood

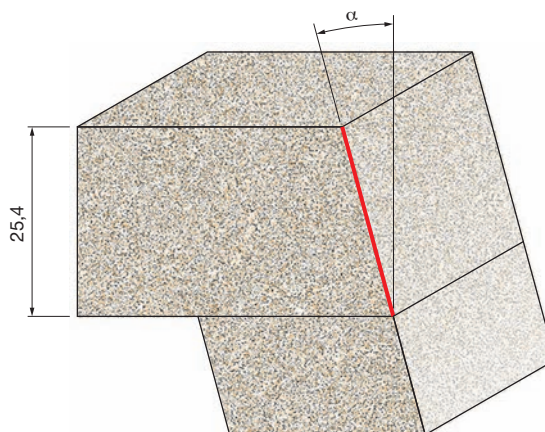
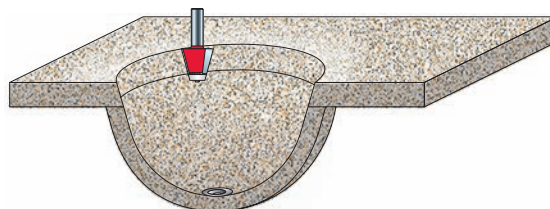


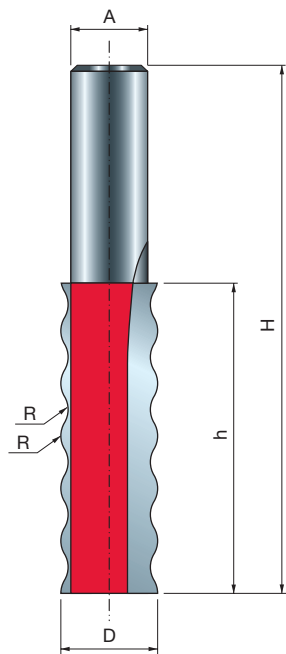
Wood Based Panels



Solid Surfaces

D	h	H	A	C	α	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





WAVY JOINT BIT

85-



Hand-held Routers

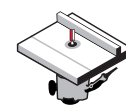
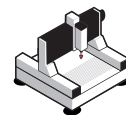


Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels



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:

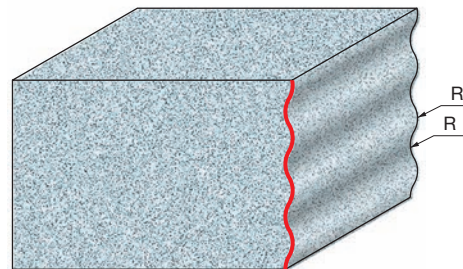
Hand-held routers, table routers and CNC machines.

Materials:

Softwood, hardwood, plywood, wood based panels and all solid surface materials.

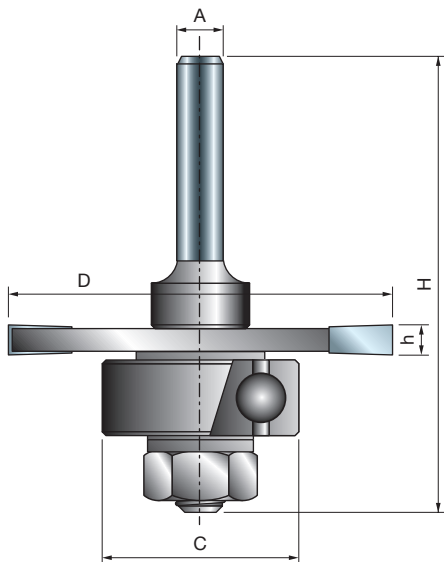
Applications:

Increase gluing area for a stronger joint.



Joinery Bits





Machines:

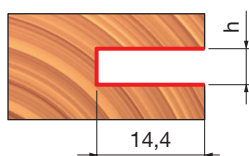
Hand-held routers and table routers.

Materials:

Softwood, hardwood, plywood and wood based panels.

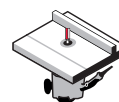
Applications:

A great choice to mill slots and grooves for T-moldings, spline joints, tongue and groove joints and many other applications.



WING SLOTTING CUTTERS

63-



Hand-held Routers

Table Routers



Softwood

Hardwood

Plywood

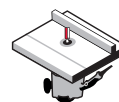
Wood Based Panels

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-



Hand-held Routers

Table Routers

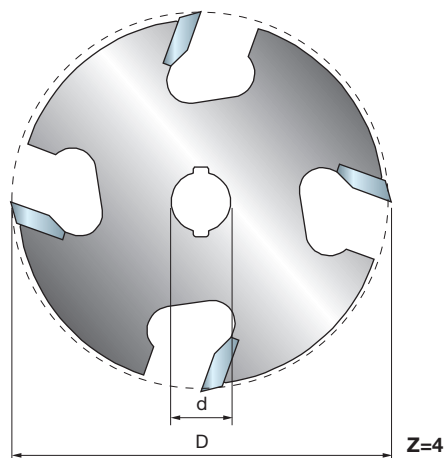
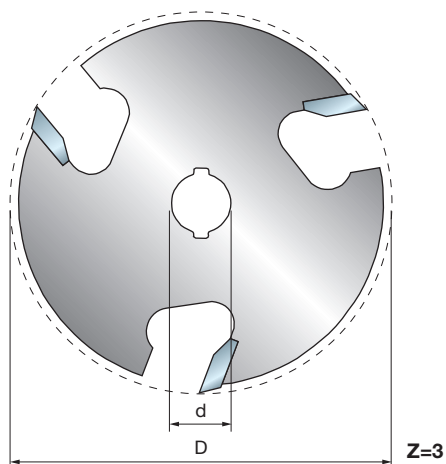


Softwood

Hardwood

Plywood

Wood Based Panels



Machines:

Hand-held routers and table routers.

Materials:

Softwood, hardwood, plywood and wood based panels.

Applications:

Produce slots and grooves on the workpiece. Slotting cutters are to be used with Freud's arbors series 60 (page 279) which come separately.

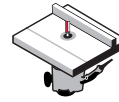


D mm	h mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
50,8	1,5	8	3	24.000	56-09908P	F03FR02014
50,8	1,6	8	3	16.000	56-10008P	F03FR02015
50,8	2	8	3	24.000	56-10408P	F03FR02016
50,8	2,4	8	3	16.000	56-10608P	F03FR02017
50,8	2,5	8	3	24.000	56-11308P	F03FR02028
50,8	3	8	3	24.000	56-11408P	F03FR02029
50,8	3,2	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

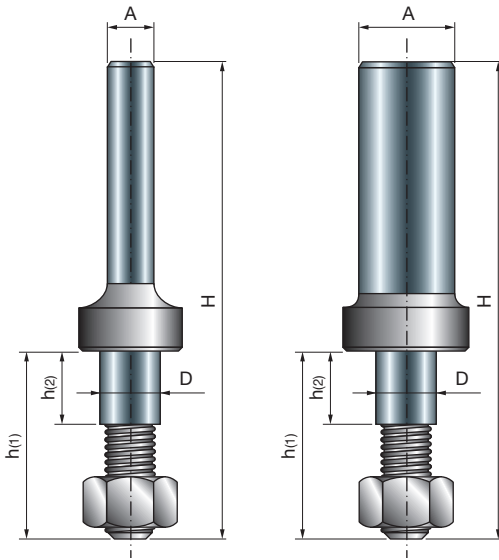


Softwood

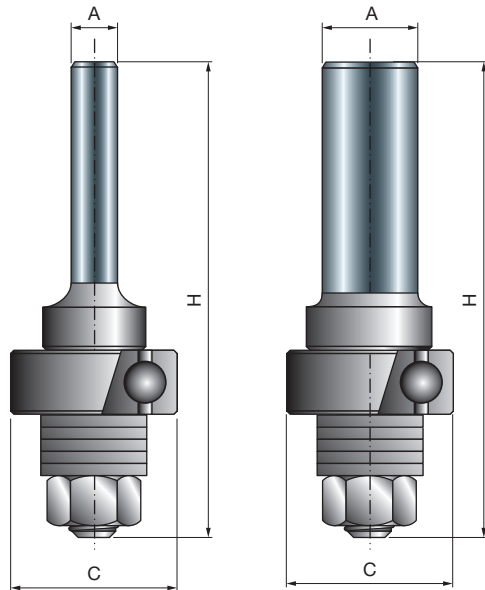
Hardwood

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	inch	Max RPM 1/min.	Freud Code	Art. No.
7,94	24,6	10	60,3	-	6		24.000	60-10006P	F03FR02039
7,94	24,6	10	60,3	22	6		24.000	60-12006P	F03FR02044
7,94	24,6	10	60,3	-	8		24.000	60-10008P	F03FR02040
7,94	24,6	10	60,3	22	8		24.000	60-12008P	F03FR02045
7,94	24,6	10	60,3	-	12		24.000	60-10212P	F03FR02042
7,94	24,6	10	60,3	22	12		24.000	60-12212P	F03FR02046
7,94	24,6	10	60,3	-		1/4	24.000	60-10025P	F03FR02041
7,94	24,6	10	60,3	-		1/2	24.000	60-10250P	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	2617M AG9	F03F010005
	1	Hex nut	7,94 x 6,75	2610M BB9	F03F010003

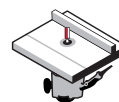
Type B

60-12006P - 60-12008P - 60-12212P

	Quantity	Spare parts	Dimensions mm	Freud Code	Art. No.
	5	Washer	17 x 8,4 x 1,6	2617M AG9	F03F010005
	1	Hex nut	7,94 x 6,75	2610M BB9	F03F010003
	1	Ball bearing	22 x 8 x 7	3102M AC9	F03F010008

BISCUIT JOINT SLOT CUTTER

63-



Hand-held Routers

Table Routers



Softwood

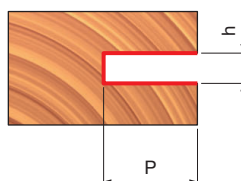
Hardwood

Plywood

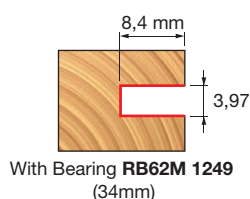
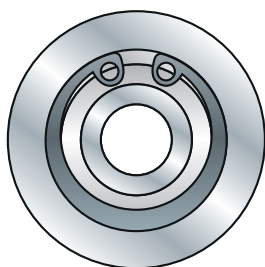
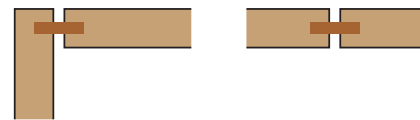
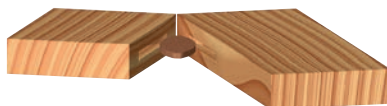
Wood Based Panels

D mm	h mm	H mm	C mm	P mm	A mm	Z inch	Max RPM 1/min.	Freud Code	Art. No.
50,8	3,97	60,3	26-30-34	12,4-10,4-8,4	6	3	24.000	63-60906P	F03FR02143
50,8	3,97	60,3	26-30-34	12,4-10,4-8,4	8	3	24.000	63-60908P	F03FR02146
50,8	3,97	60,3	26-30-34	12,4-10,4-8,4	12	3	24.000	63-60912P	F03FR02149
50,8	3,97	60,3	26-30-34	12,4-10,4-8,4	1/4	3	24.000	63-60925P	F03FR02152
50,8	3,97	60,3	26-30-34	12,4-10,4-8,4	1/2	3	24.000	63-60950P	F03FR02155

Spare parts	Dimensions mm	Freud Code	Art. No.
Hex nut	7,94 x 6,75	2610M BB9	F03F010003
Washer	17 x 8,4 x 1,6	2617M AG9	F03F010005
Washer	14 x 8,4 x 1,6	2617M BG9	F03FR01668
Ball bearing	26 x 10 x 8	RB62M 1249	F03F011417
Ball bearing	30 x 10 x 8	RB62M 1289	F03F011418
Ball bearing	34 x 10 x 8	RB62ME DA9	F03FR01146



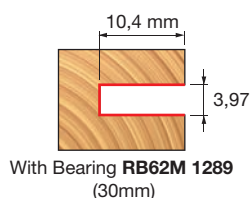
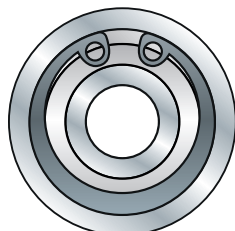
C mm	P mm
Ø 26	12,4
Ø 30	10,4
Ø 34	8,4



With Bearing **RB62M 1249**
(34mm)



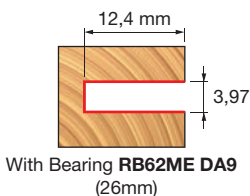
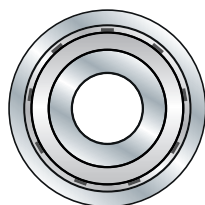
Biscuit Size-00
47mm x 15mm



With Bearing **RB62M 1289**
(30mm)



Biscuit Size-10
54mm x 19mm



With Bearing **RB62ME DA9**
(26mm)



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-

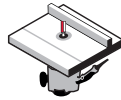
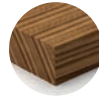


Table Routers



Softwood



Hardwood



Plywood

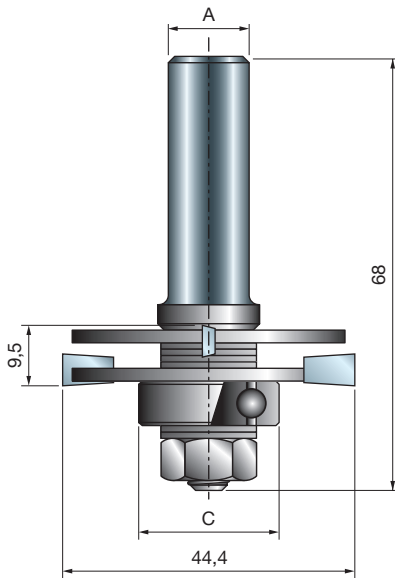
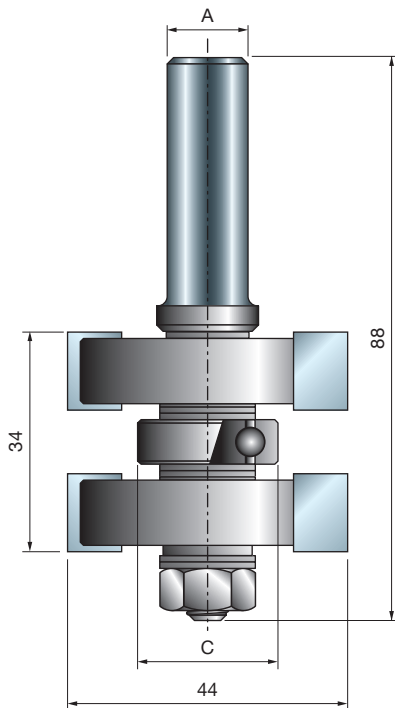


Wood Based Panels



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.

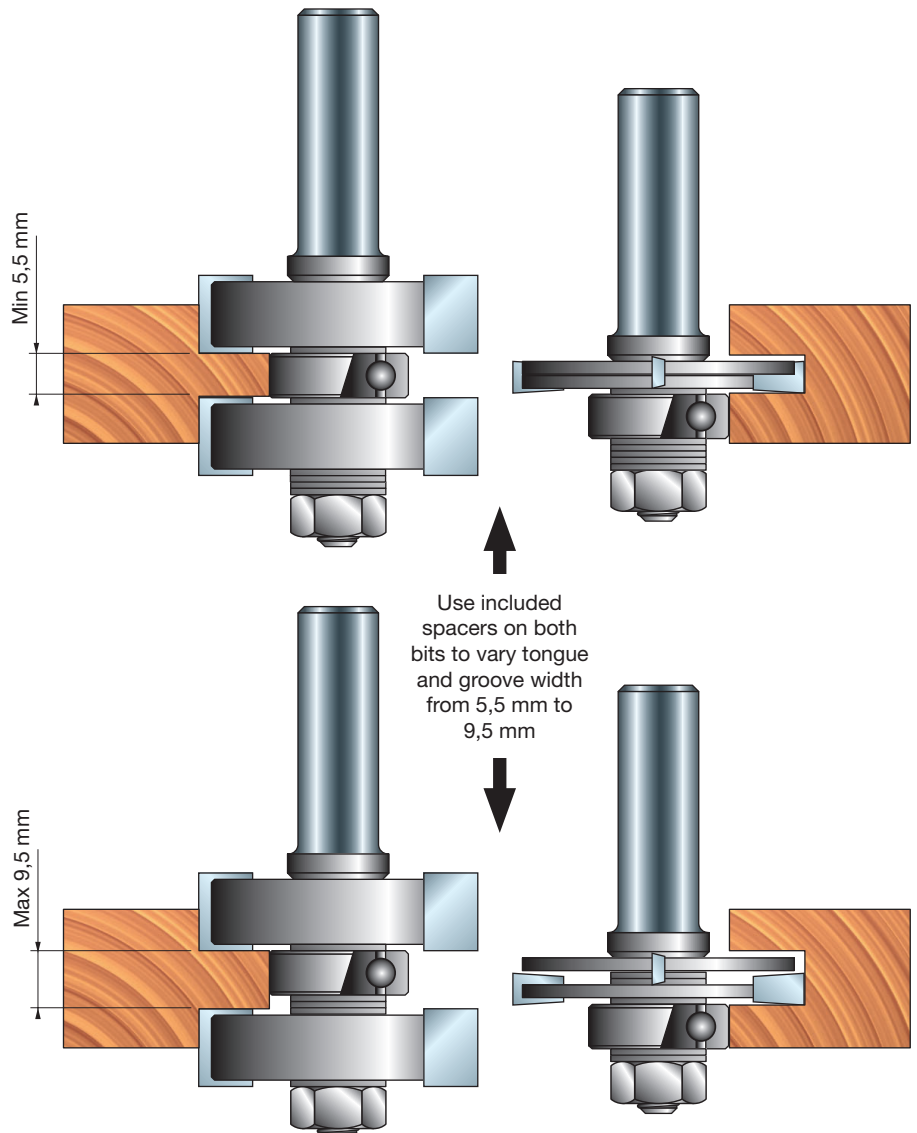
Materials:

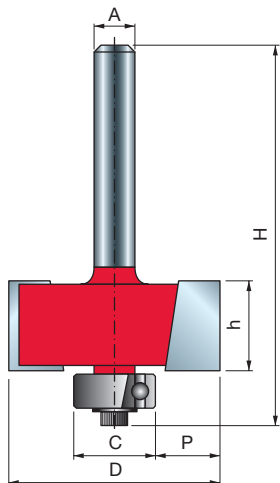
Softwood, hardwood, plywood and wood based panels.

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:

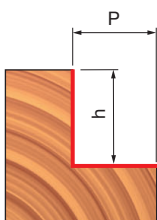
Hand-held routers and table routers.

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.

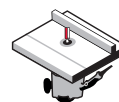


Set of 4 ball bearings	
C mm	P mm
9,53	12,7
12,7	11,1
15,88	9,53
19,05	7,94

Set of 7 ball bearings	
C mm	P 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 mm	h mm	H mm	A mm	inch	C mm	P mm	Z	Max RPM 1/min.	Freud Code	Art. No.
31,75	13,2	55,7	6		12,7	9,52	2	18.000	32-10006P	F03FR01745
34,92	12,7	54,4	6		12,7	11,1	2	16.000	32-50006P	F03FR01750
31,75	13,2	55,7	8		12,7	9,52	2	18.000	32-10008P	F03FR01746
34,92	12,7	54,7	8		12,7	11,1	2	16.000	32-50008P	F03FR01751
31,75	13,2	61,7	12		12,7	9,52	2	18.000	32-10212P	F03FR01748
34,92	12,7	60,7	12		12,7	11,1	2	16.000	32-52012P	F03FR01758
31,75	13,2	55,7		1/4	12,7	9,52	2	18.000	32-10025P	F03FR01747
31,75	13,2	61,7		1/2	12,7	9,52	2	18.000	32-10250P	F03FR01749

RABBETING BITS WITH BEARING SET

32-

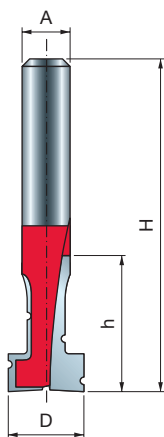
Rabbeting bits with a set of 4 ball bearings

D mm	h mm	H mm	A mm	inch	C mm	P mm	Z	Max RPM 1/min.	Freud Code	Art. No.
34,92	12,7	54,4	6		9,53-19,05	7,94-12,7	2	16.000	32-50206P	F03FR01752
34,92	12,7	54,4	8		9,53-19,05	7,94-12,7	2	16.000	32-50208P	F03FR01753
34,92	12,7	60,7	12		9,53-19,05	7,94-12,7	2	16.000	32-52212P	F03FR01759
34,92	12,7	60,7		1/2	9,53-15,88	9,53-12,7	2	16.000	32-52250P	F03FR01760

Rabbeting bits with a set of 7 ball bearings

D mm	h mm	H mm	A mm	C mm	P mm	Z	Max RPM 1/min.	Freud Code	Art. No.
34,92	12,7	54,7	6	9,53-34,92	0-12,7	2	16.000	32-50406P	F03FR01755
34,92	12,7	54,4	8	9,53-34,92	0-12,7	2	16.000	32-50408P	F03FR01756
34,92	12,7	60,7	12	9,53-34,92	0-12,7	2	16.000	32-52412P	F03FR01761

		Spare parts	Dimensions mm	Freud Code	Art. No.	
			Screw	M3 x 7,6	2607M 001	F03F010000
			Allen key	2,5	2619M CA9	F03FA07432
			Washer	9 x 2 x 6	FX07M AA9	F03F010158
			Washer	12 x 1,1 x 4,8	FX07M AB9	F03F010159
32-52250P		Ball bearing	9,53 x 3,2 x 4,76	3102M AA9	F03F010006	
		Ball bearing	12,7 x 4,98 x 4,76	3102M AB9	F03F010007	
		Ball bearing	15,88 x 4,97 x 4,76	3102M AJ9	F03F010014	
32-50206P 32-50208P 32-52212P		Ball bearing	9,53 x 3,2 x 4,76	3102M AA9	F03F010006	
		Ball bearing	12,7 x 4,98 x 4,76	3102M AB9	F03F010007	
		Ball bearing	15,88 x 4,97 x 4,76	3102M AJ9	F03F010014	
32-50406P 32-50408P 32-52412P		Ball bearing	19,05 x 8 x 4,76	RB62M 1509	F03F011422	
		Ball bearing	9,53 x 3,2 x 4,76	3102M AA9	F03F010006	
		Ball bearing	12,7 x 4,98 x 4,76	3102M AB9	F03F010007	
		Ball bearing	15,88 x 4,97 x 4,76	3102M AJ9	F03F010014	
		Ball bearing	19,05 x 8 x 4,76	RB62M 1509	F03F011422	
		Ball bearing	22,22 x 8 x 4,76	RB62M 1529	F03F011423	
		Ball bearing	28,58 x 8 x 4,76	RB62M 1549	F03F011424	
		Ball bearing	34,92 x 8 x 4,76	RB62M 1569	F03F011425	



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.

KEYHOLE BIT

70-



Hand-held Routers

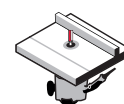
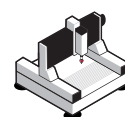


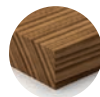
Table Routers



CNC Machines



Softwood



Hardwood



Plywood



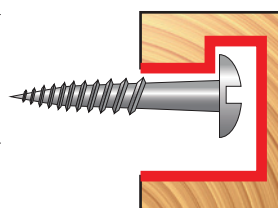
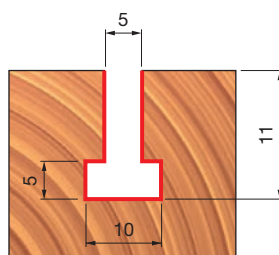
Wood Based Panels



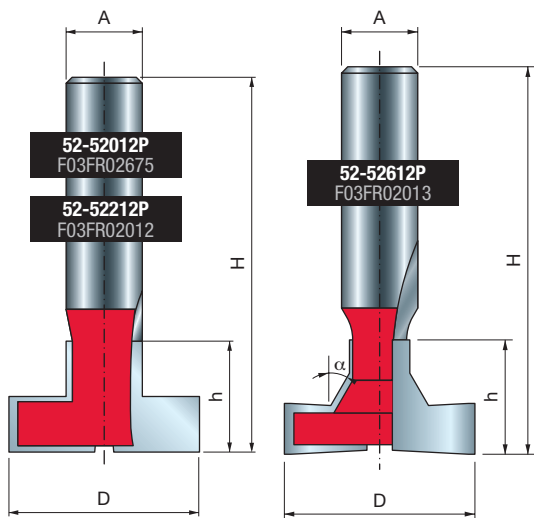
Wood Based Panels



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

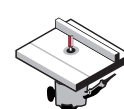
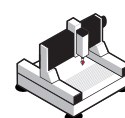


Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels



D mm	h mm	H mm	A mm	α	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:

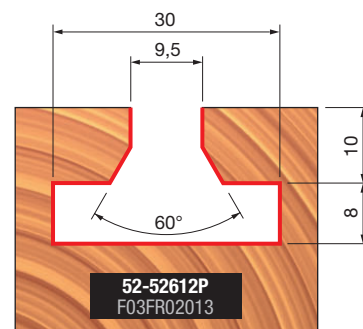
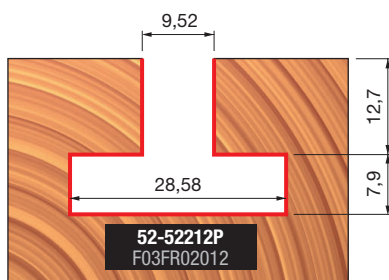
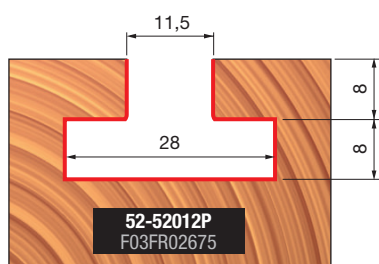
Hand-held routers, table routers and CNC machines.

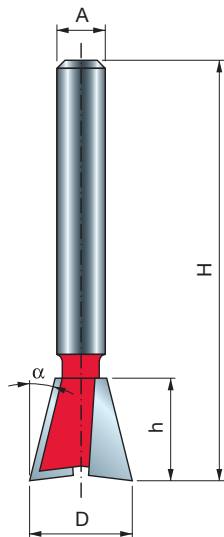
Materials:

Softwood, hardwood, plywood and wood based panels.

Applications:

Cut T shaped slots, used for many purposes.





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.

DOVETAIL BITS

22-



Hand-held Routers

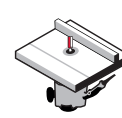
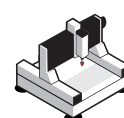


Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels

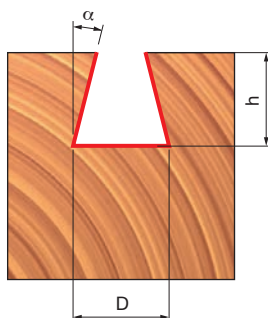


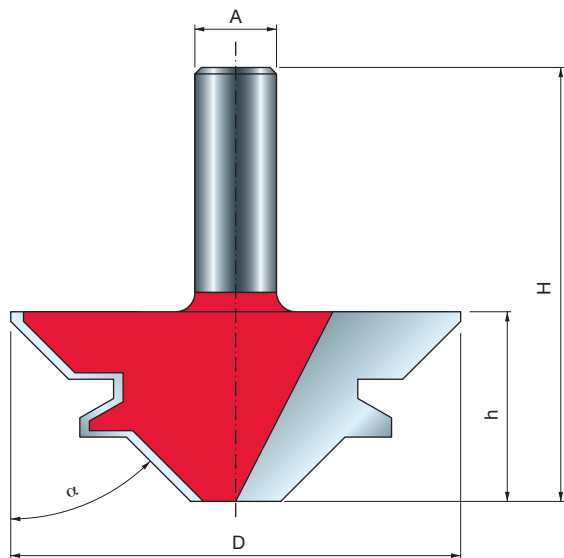
Wood Based Panels



Wood Based Panels

D mm	h mm	H mm	A mm	inch	α	Z	Max RPM 1/min.	Freud Code	Art. No.
9,52	10,5	47,5	6		9°	2	24.000	22-10206P	F03FR01640
12,7	12,7	50,7	6		14°	2	24.000	22-10406P	F03FR01643
15,88	22,2	54,2	6		7°	2	24.000	22-10506P	F03FR01646
19,05	22,2	54,2	6		7°	2	24.000	22-10606P	F03FR01648
9,52	10,5	47,5	8		9°	2	24.000	22-10208P	F03FR01641
12,7	12,7	50,7	8		14°	2	24.000	22-10408P	F03FR01644
15,88	22,2	54,2	8		7°	2	24.000	22-10508P	F03FR01647
19,05	22,2	54,2	8		7°	2	24.000	22-10608P	F03FR01649
12,7	12,7	59,7	12		14°	2	24.000	22-11212P	F03FR01650
19,05	22,2	66,7	12		7°	2	24.000	22-11412P	F03FR01653
9,52	9,9	44,9		1/4	9°	2	24.000	22-10225P	F03FR01642
12,7	12,7	50,7		1/4	14°	2	24.000	22-10425P	F03FR01645
12,7	12,7	59,7		1/2	14°	2	24.000	22-11250P	F03FR01651





LOCK MITRE BITS 45°

99-

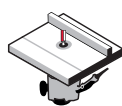
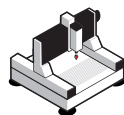


Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels



Wood Based Panels



D mm	h mm	H mm	A mm	α	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:

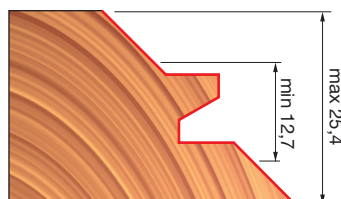
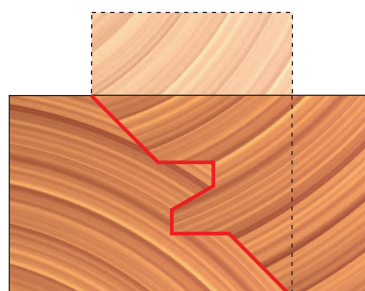
Table routers and CNC machines.

Materials:

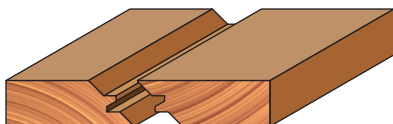
Softwood, hardwood, plywood and wood based panels.

Applications:

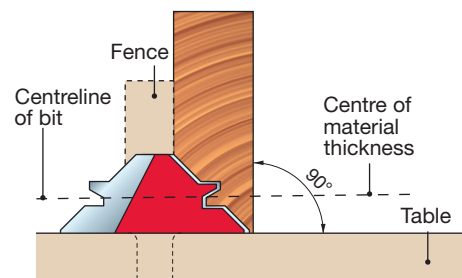
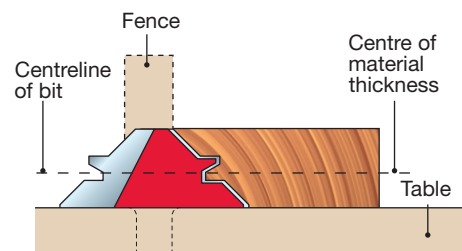
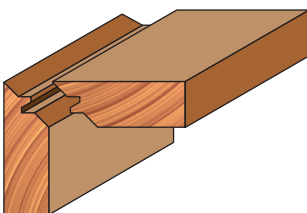
Create remarkably strong interlocking joints.



Simple Joint



45° Mitre Join



2 PIECE LOCK MITRE BIT SET 22,5°

99-

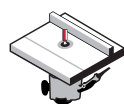
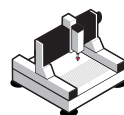


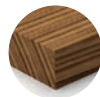
Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels

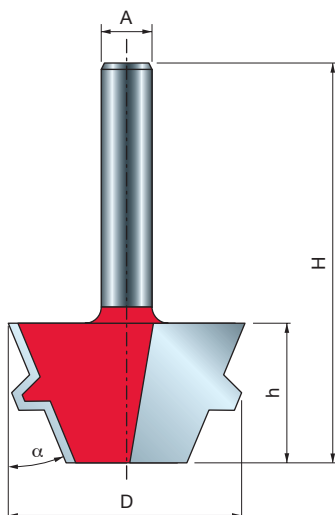
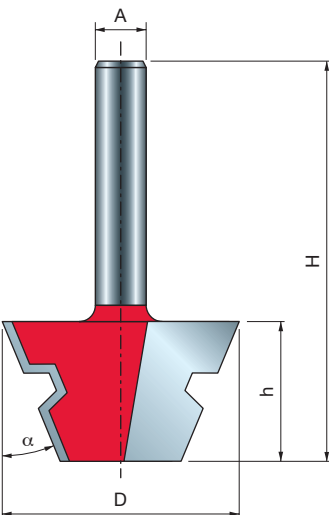
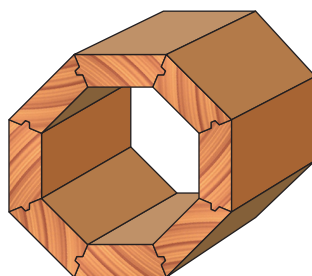
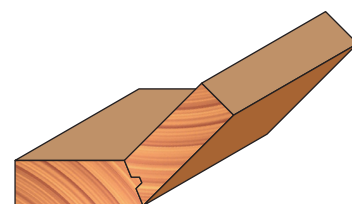
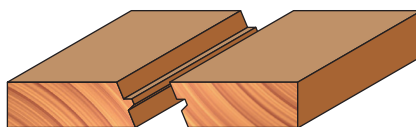
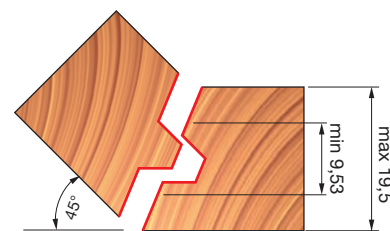
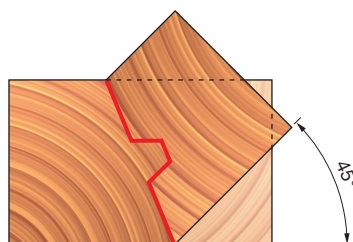


Wood Based Panels



Wood Based Panels

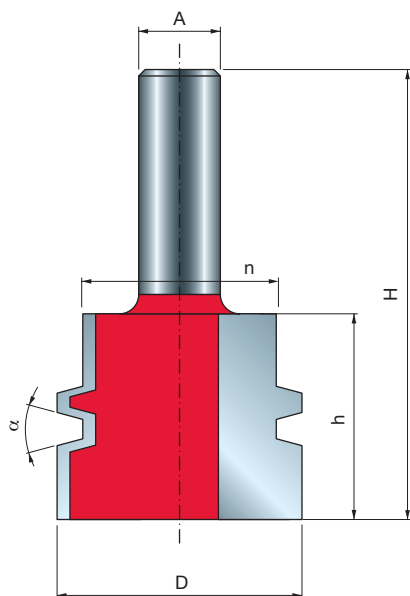
D mm	h mm	H mm	A mm	α	Z	Max RPM 1/min.	Freud Code	Art. No.
37,3	22,2	54,2	8	22,5°	2	24.000	99-04308P	F03FR02450



Machines:
Table routers and CNC machines.

Materials:
Softwood, hardwood, plywood and wood based panels.

Applications:
Create remarkably strong interlocking joints.



Machines:

Table routers and CNC machines.

Materials:

Softwood, hardwood, plywood and wood based panels.

Applications:

Provide a stronger joint by increasing the gluing area.

REVERSIBLE GLUE JOINT BITS

99-

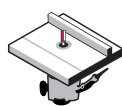
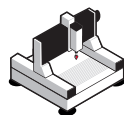


Table Routers



CNC Machines



Softwood



Hardwood



Plywood



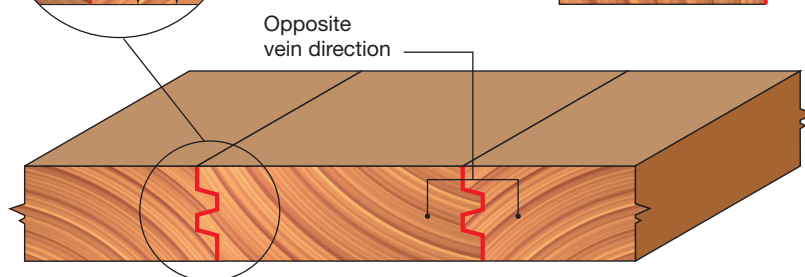
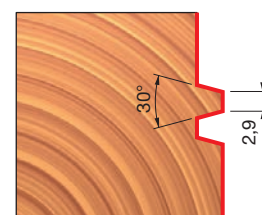
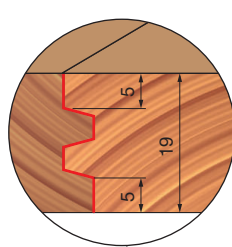
Wood Based Panels

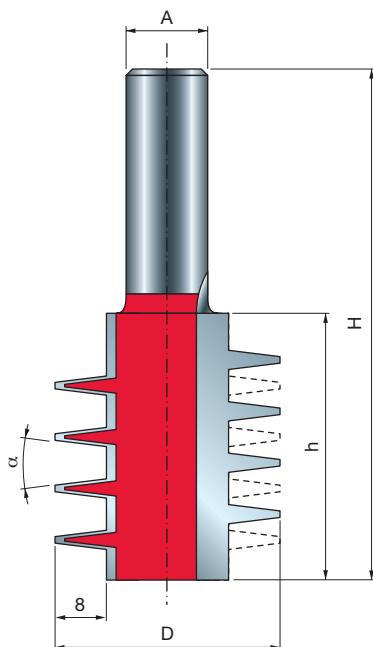


Wood Based Panels



D	h	H	n	A	α	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		1/2	15°	16.000	99-03150P	F03FR02423





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.

FINGER JOINT BIT

99-

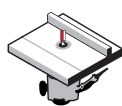
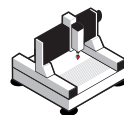


Table Routers



CNC Machines



Softwood



Hardwood



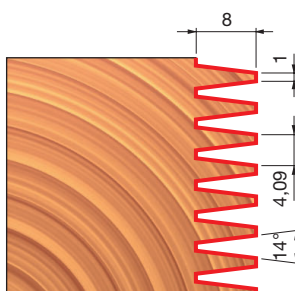
Plywood



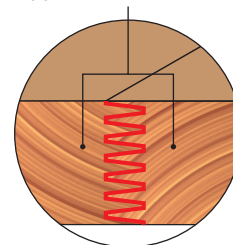
Wood Based Panels

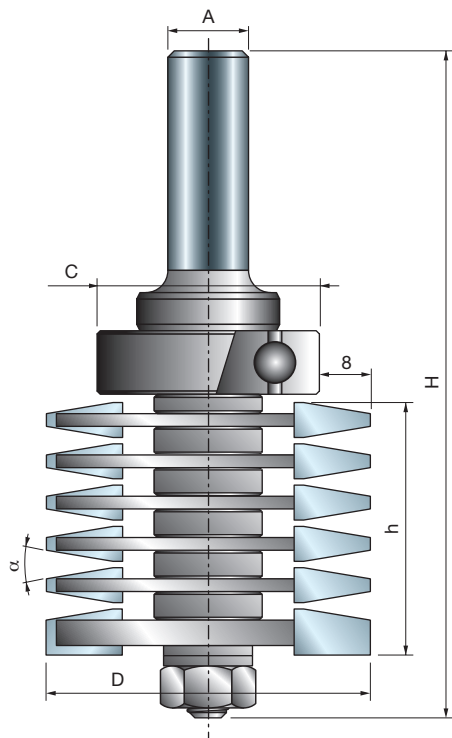


D	h	H	A	α	Z	Max RPM 1/min.	Freud Code	Art. No.
mm	mm	mm	mm					
35	41,5	79,5	12	14°	2	16.000	99-03712P	F03FR02440



Opposite vein direction





Machines:

Table routers.

Materials:

Softwood, hardwood, plywood and wood based panels.

Applications:

Provide a stronger joint by increasing the surface area for gluing.

TOP BEARING FINGER JOINT BIT - TYPE A

99-

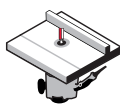


Table Routers



Softwood



Hardwood



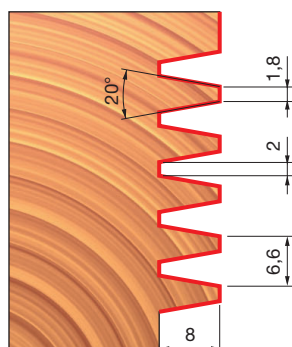
Plywood



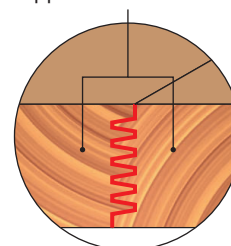
Wood Based Panels

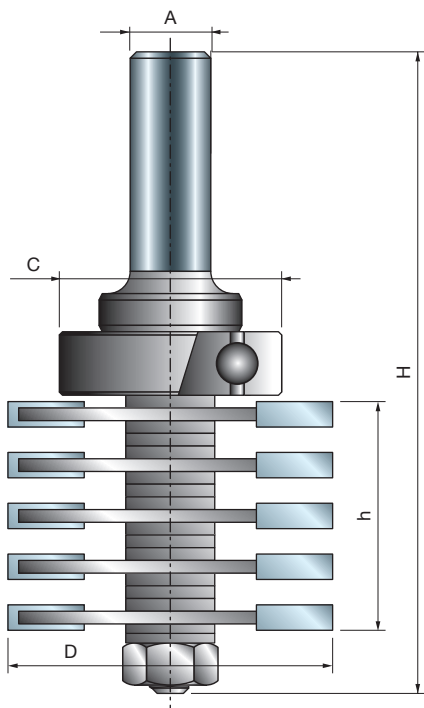
D mm	h mm	H mm	A mm	C mm	α	Z	Max RPM 1/min.	Freud Code	Art. No.
50,8	45,2	108	12	35	20°	2	24.000	99-03912P	F03FR02444

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	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-

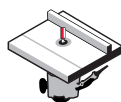


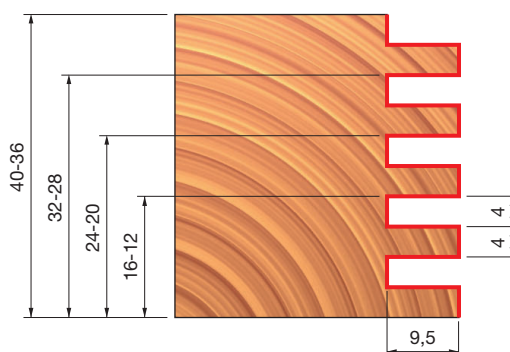
Table Routers



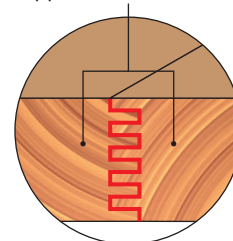
Softwood Hardwood Plywood Wood Based Panels

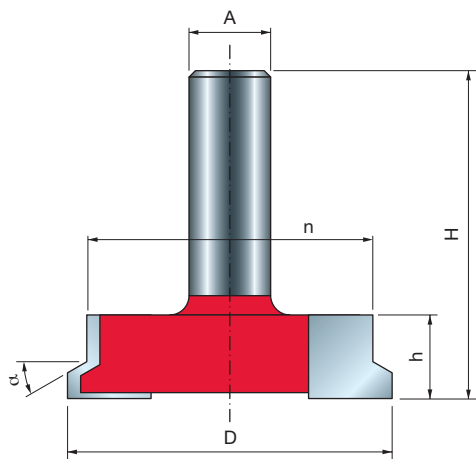
D mm	h mm	H mm	A mm	C mm	Z	Max RPM 1/min.	Freud Code	Art. No.
47	36	101	12	28	2	24.000	99-04212P	F03FR02447

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





Machines:

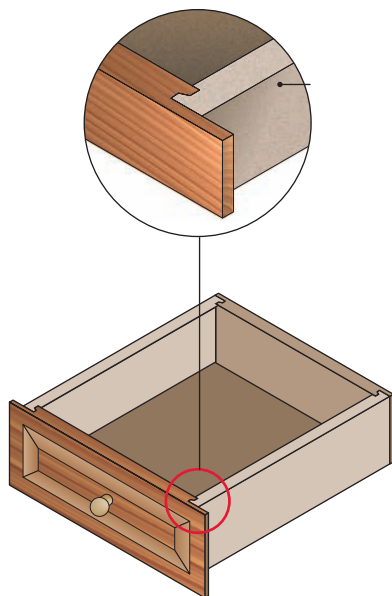
Table routers.

Materials:

Softwood, hardwood, plywood and wood based panels.

Applications:

One bit produces both the front and side drawer joints.



DRAWER LOCK BIT

99-

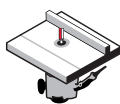


Table Routers



Softwood



Hardwood



Plywood



Wood Based Panels

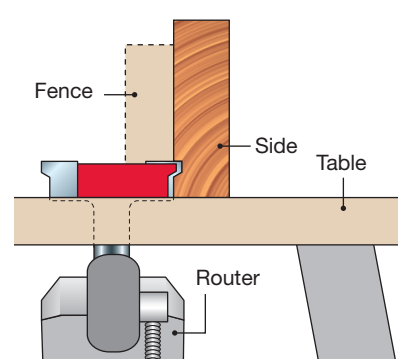
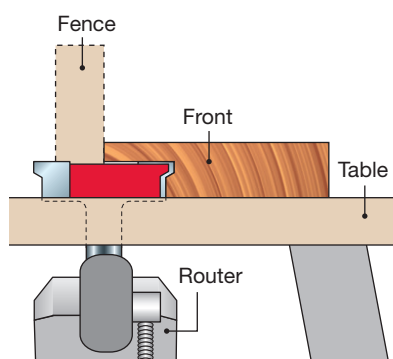
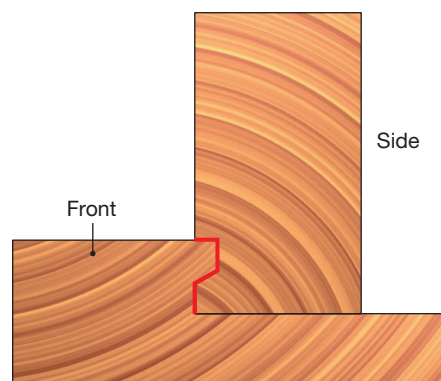


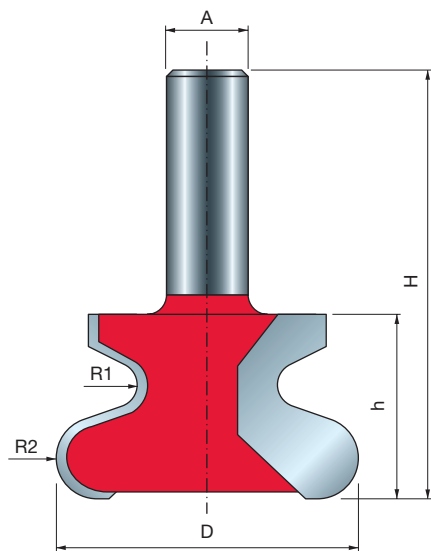
Wood Based Panels



Wood Based Panels

D mm	h mm	H mm	A mm	n mm	α	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:

Produce the finger pull groove found on popular contemporary cabinet doors.

DOOR PULL BIT

99-

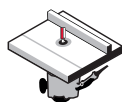
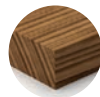


Table Routers



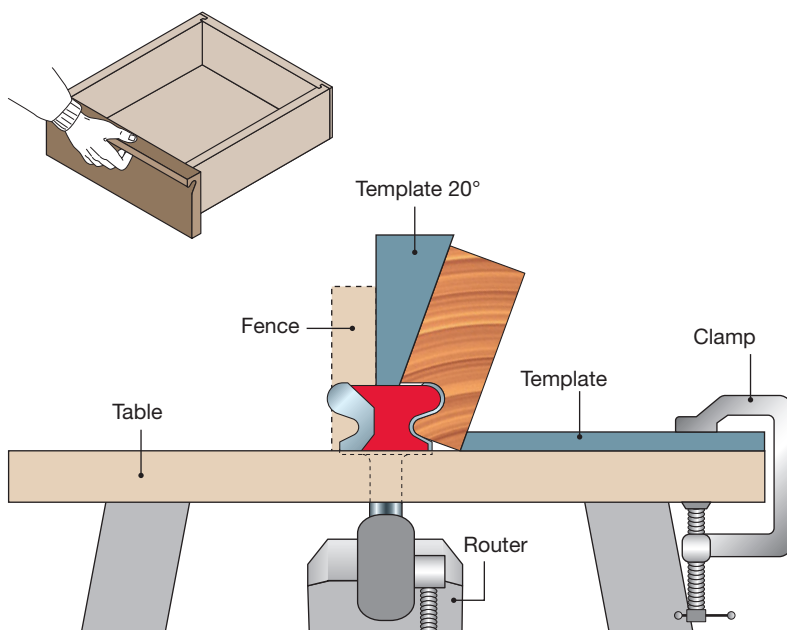
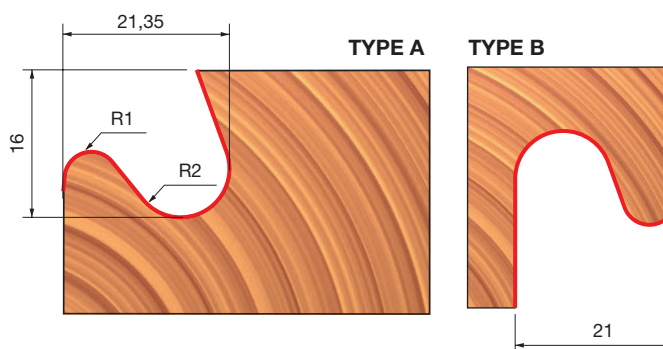
Softwood

Hardwood

Plywood

Wood Based Panels

D mm	h mm	H mm	A mm	R1 mm	R2 mm	Z	Max RPM 1/min.	Freud Code	Art. No.
47	28,7	66,7	12	3,2	6,35	2	16.000	99-00712P	F03FR02413



MATCHED PROFILE AND SCRIBE BITS

99-

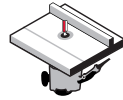
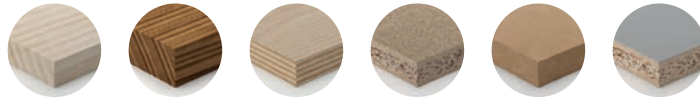


Table Routers



Softwood Hardwood Plywood Wood Based Panels



Machines:

Table routers.

Materials:

Softwood, hardwood, plywood and wood based panels.

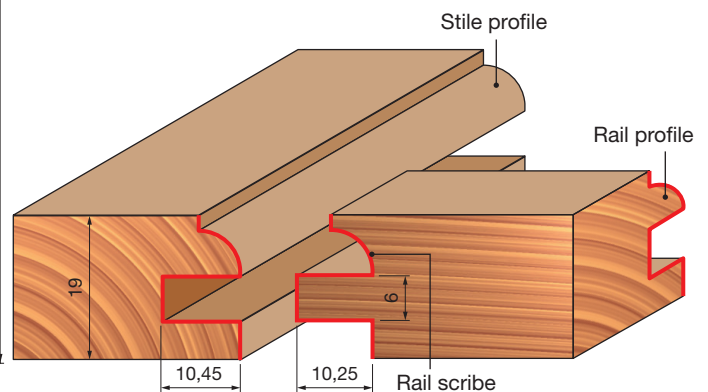
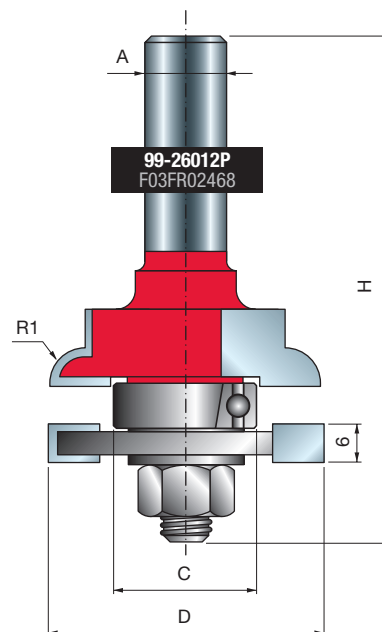
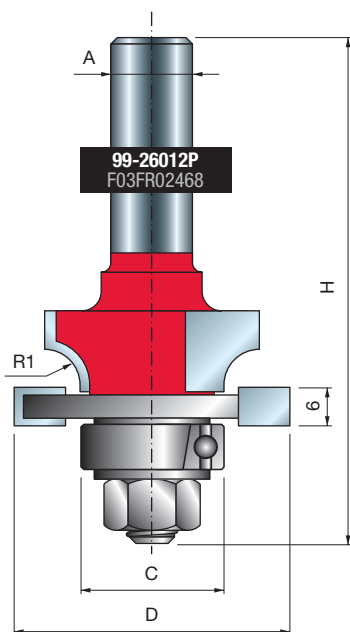
Applications:

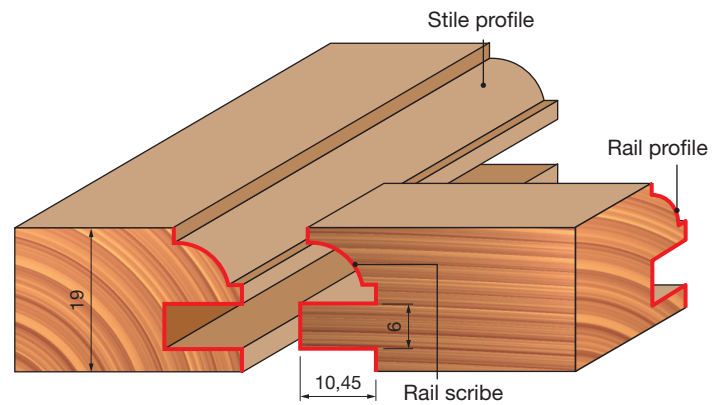
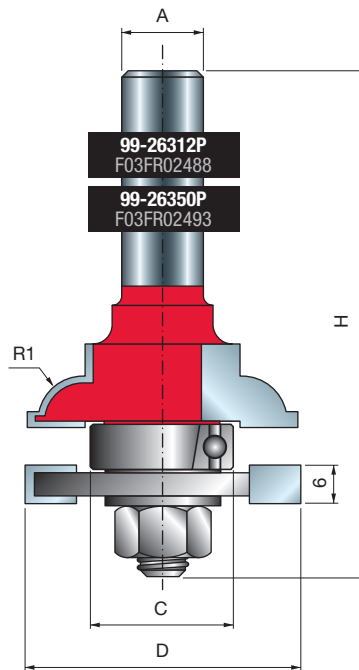
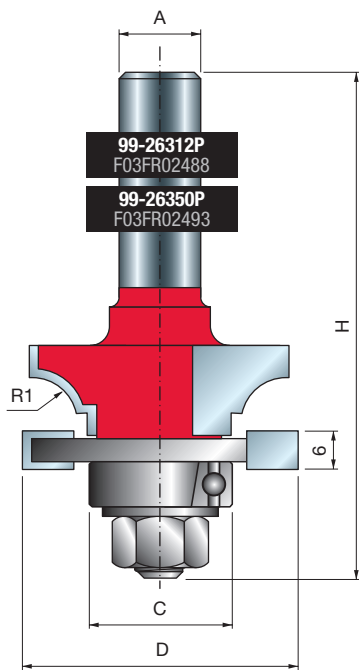
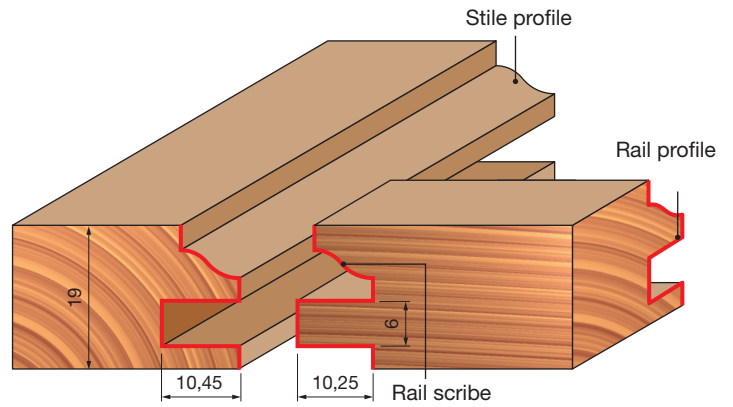
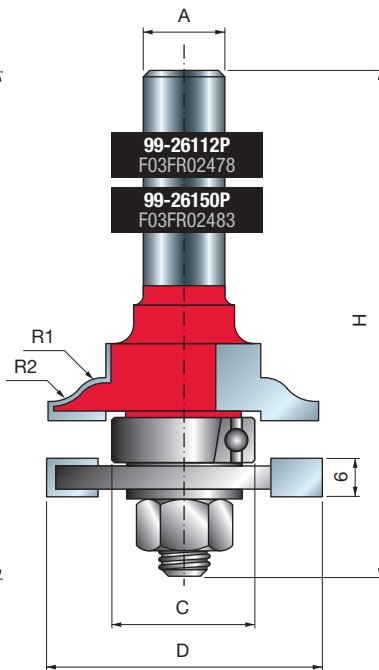
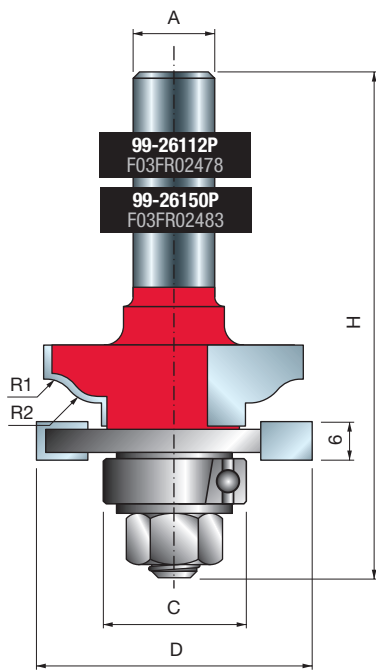
These sets include rail and stile bits that are perfectly matched to produce perfect joints out of the box.

Each article number contains two items.

D mm	H mm	A mm	inch	R1 mm	R2 mm	C mm	Z	Max RPM 1/min.	Freud Code	Art. No.
42,9	77	12		5,5	-	22	2	24.000	99-26012P	F03FR02468
42,9	77	12		4,5	5,5	22	2	24.000	99-26112P	F03FR02478
42,9	77	12		7	-	22	2	24.000	99-26312P	F03FR02488
42,9	77		1/2	4,5	5,5	22	2	24.000	99-26150P	F03FR02483
42,9	77		1/2	7	-	22	2	24.000	99-26350P	F03FR02493

Spare parts	Dimensions mm	Freud Code	Art. No.
Hex nut	7,94 x 6,75	2610M BB9	F03F010003
Spacer	18 x 0,1 x 8	AN01MP0019	F03FC00392
Spacer	18 x 0,2 x 8	AN01MP0029	F03FC00393
Spacer	18 x 0,5 x 8	AN01MP0059	F03FC00395
Spacer	18 x 1 x 8	AN01MP0109	F03FC00396
Ball bearing	22 x 8 x 7,1	3102M AC9	F03F010008





MATCHED PROFILE AND SCRIBE BITS

99-

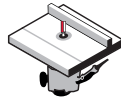
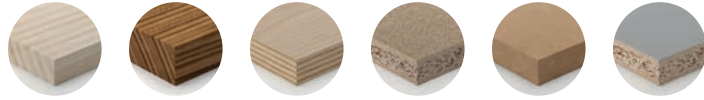


Table Routers



Softwood Hardwood Plywood Wood Based Panels



Machines:

Table routers.

Materials:

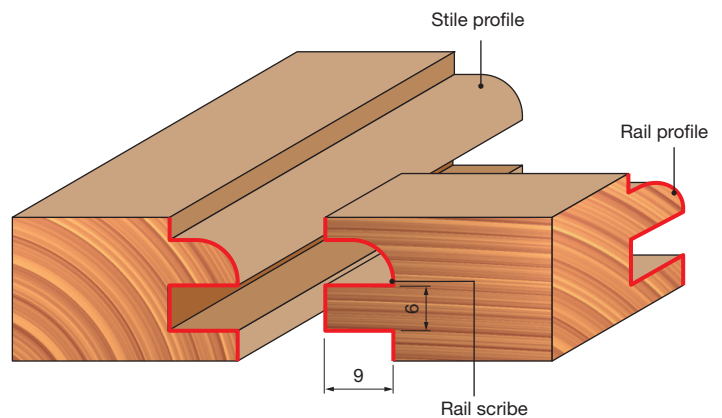
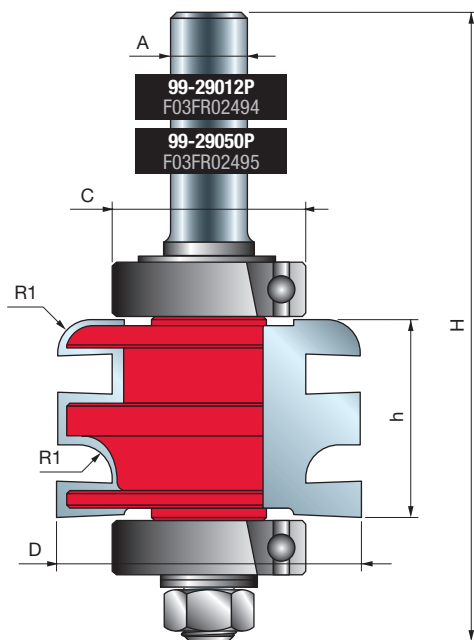
Softwood, hardwood, plywood and wood based panels.

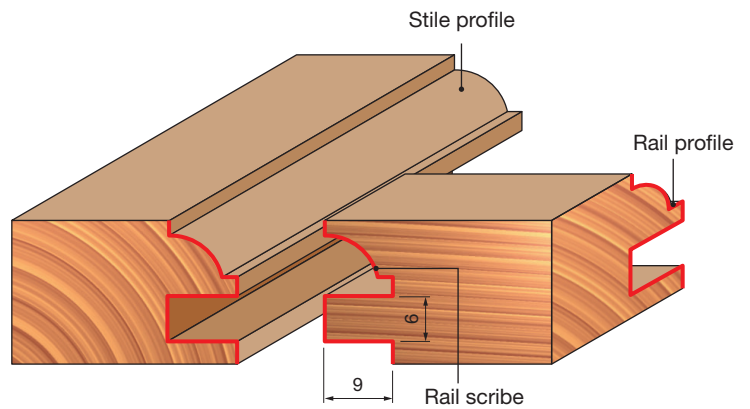
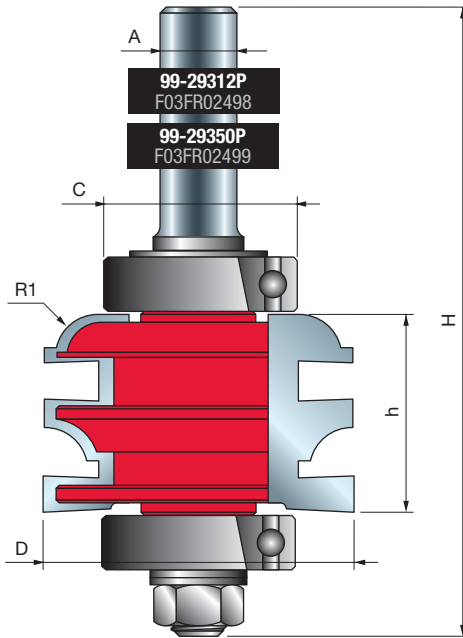
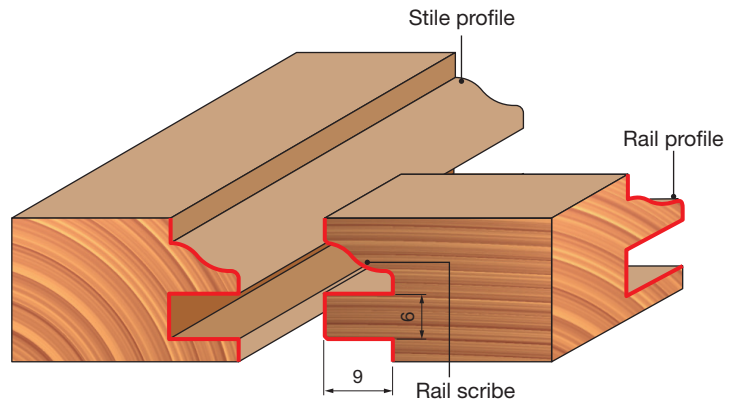
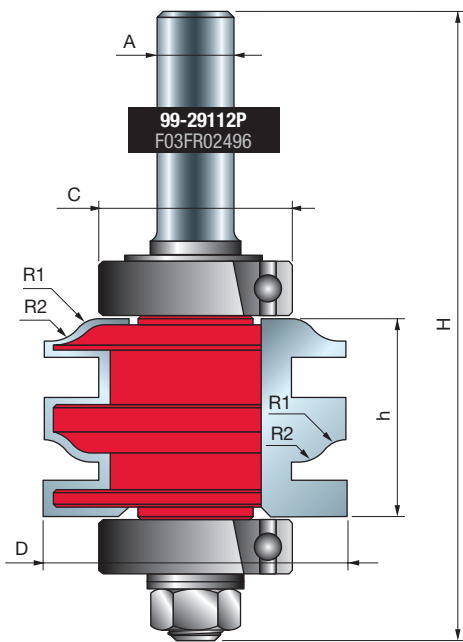
Applications:

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	99-29012P	F03FR02494
50,4	32,7	104	12	5,5	4,5	32	2	14.000	99-29112P	F03FR02496
50,4	32,7	104	12	7	-	32	2	14.000	99-29312P	F03FR02498
50,4	32,7	104	1/2	5,5	-	32	2	14.000	99-29050P	F03FR02495
50,4	32,7	104	1/2	7	-	32	2	14.000	99-29350P	F03FR02499

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Hex nut	7,94 x 6,75	2610M BB9	F03F010003
	Retaining ring	15 x 13,9	2621ME 015	F03FA07444
	Ball bearing	32 x 15 x 9	3102M AN9	F03F010016
	Spacer	18 x 1 x 8	AN01MP0109	F03FC00396





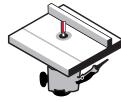
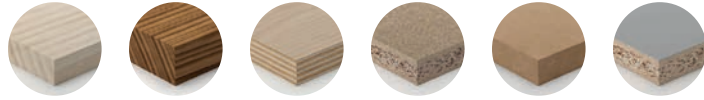


Table Routers



Softwood Hardwood Plywood Wood Based Panels



Machines:

Table routers.

Materials:

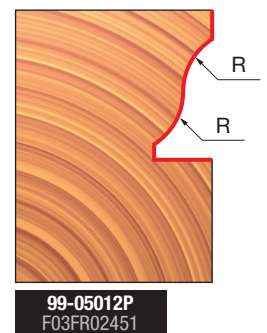
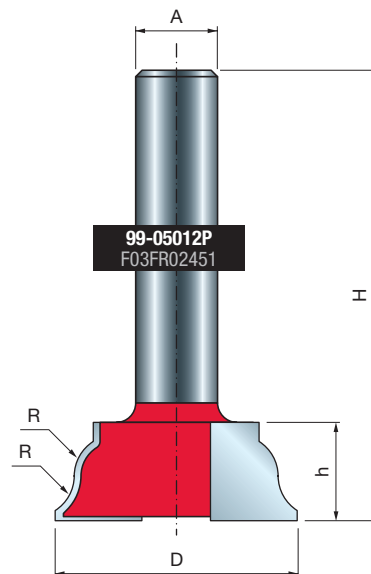
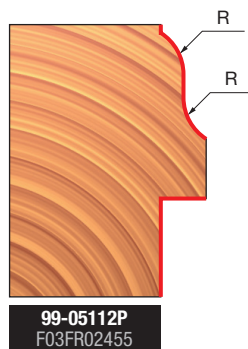
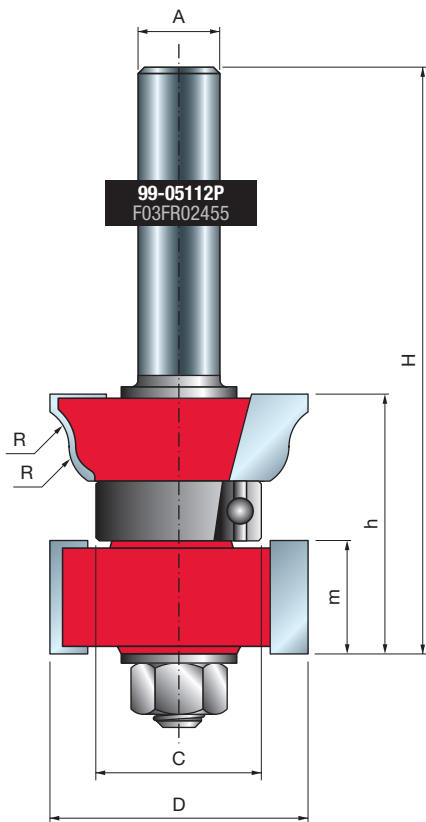
Softwood, hardwood, plywood and wood based panels.

Applications:

The two bits work together to produce a completely divided lite sash.

D mm	h mm	H mm	A mm	m mm	C mm	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
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 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	22 x 8 x 7,1	3102M AC9	F03F010008
Spacer	18 x 0,1 x 8	AN01MP0019	F03FC00392





Machines:

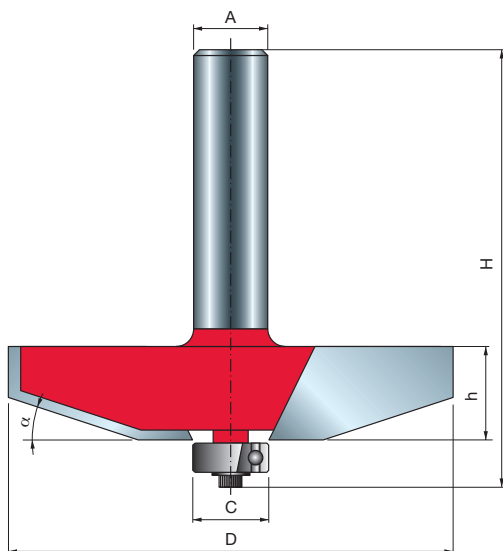
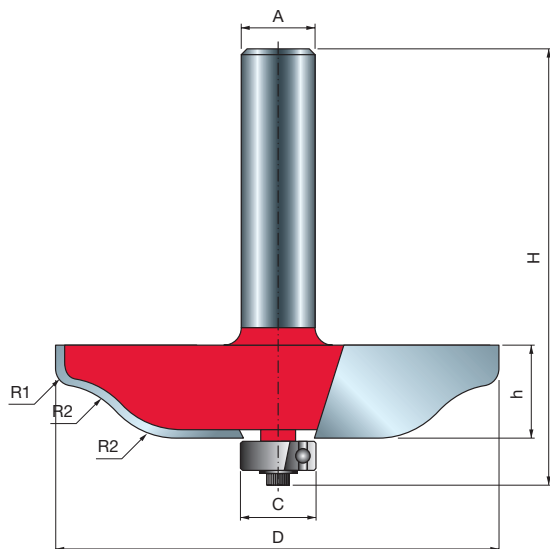
Table routers.

Materials:

Softwood, hardwood, plywood and wood based panels.

Applications:

Create beautiful raised panels for cabinet doors or wall panelling.



RAISED PANEL BITS

99-

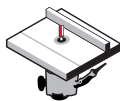


Table Routers



Softwood



Hardwood



Plywood



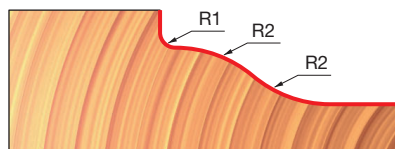
Wood Based Panels



Type A

D mm	h mm	H mm	A mm	inch	C mm	R1 mm	R2 mm	Z	Max RPM 1/min.	Freud Code	Art. No.
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

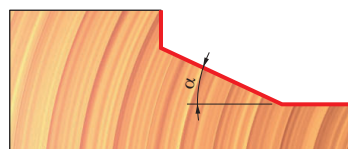
Spare parts	Dimensions mm	Freud Code	Art. No.
Screw	M3 x 7,6	2607M 001	F03F010000
Ball bearing	12,7 x 4,98 x 4,76	3102M AB9	F03F010007
Washer	12 x 1,1 x 4,8	FX07M AB9	F03F010159

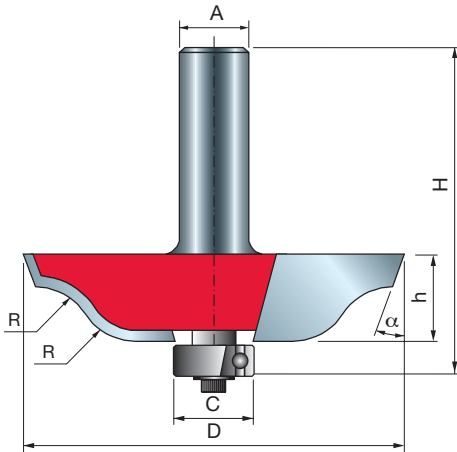


Type B

D mm	h mm	H mm	A mm	inch	C mm	α	Z	Max RPM 1/min.	Freud Code	Art. No.
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 mm	Freud Code	Art. No.
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

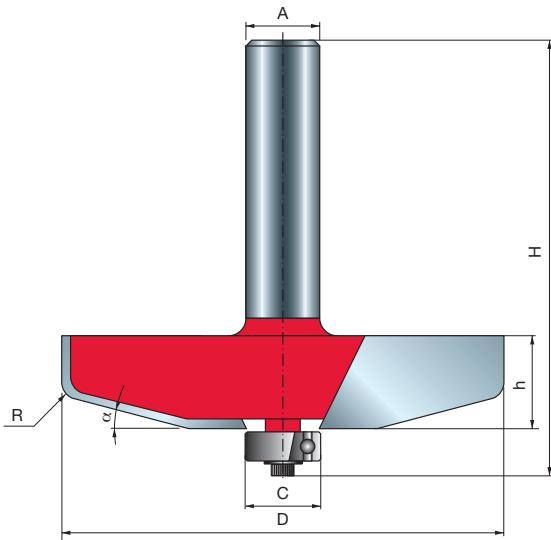
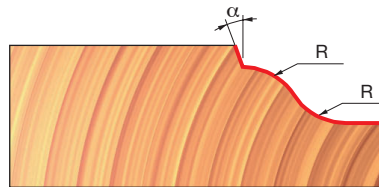




Type C

D	h	H	A	C	α	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

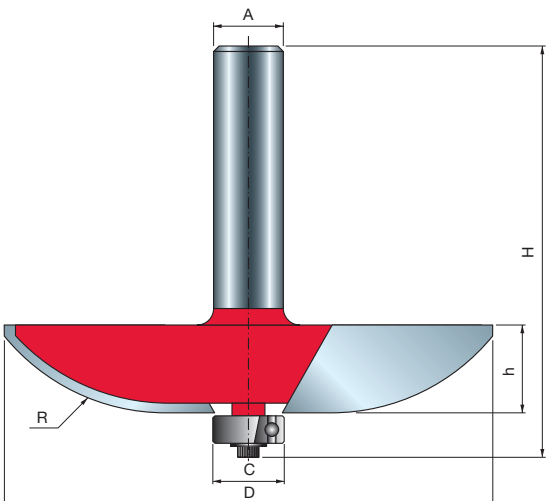
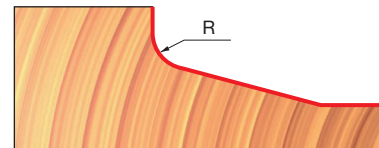
Spare parts	Dimensions	Freud Code	Art. No.
	mm		
Screw	M3 x 7,6	2607M 001	F03F010000
Ball bearing	12,7 x 4,98 x 4,76	3102M AB9	F03F010007
Washer	12 x 1,1 x 4,8	FX07M AB9	F03F010159



Type D

D	h	H	A	C	α	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

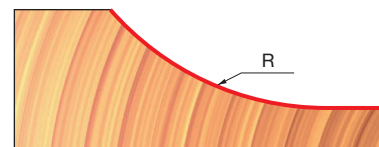
Spare parts	Dimensions	Freud Code	Art. No.
	mm		
Screw	M3 x 7,6	2607M 001	F03F010000
Ball bearing	12,7 x 4,98 x 4,76	3102M AB9	F03F010007
Washer	12 x 1,1 x 4,8	FX07M AB9	F03F010159



Type E

D	h	H	A	C	R	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm	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



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.

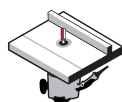
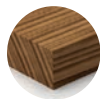


Table Routers



Softwood



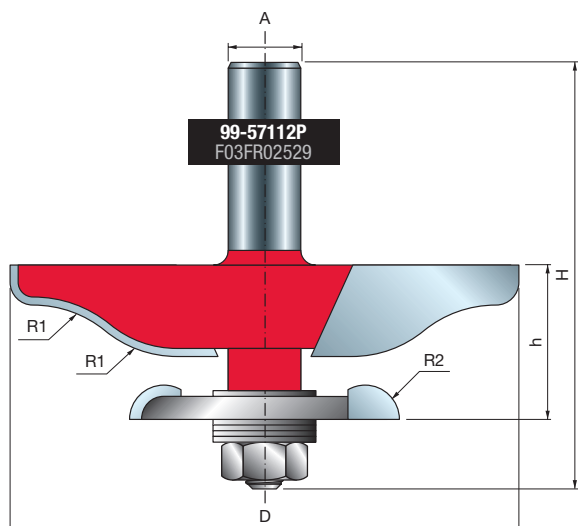
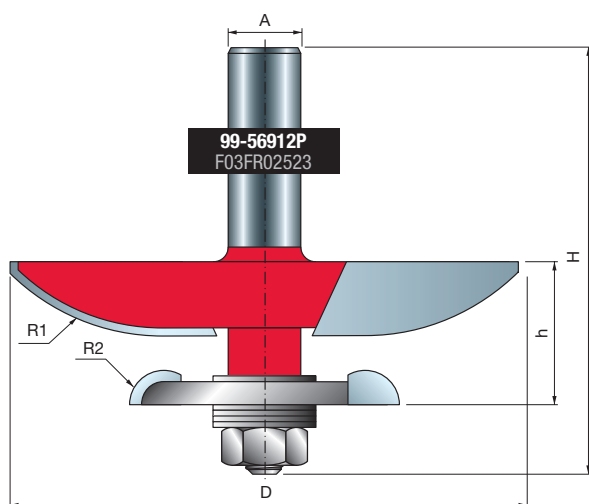
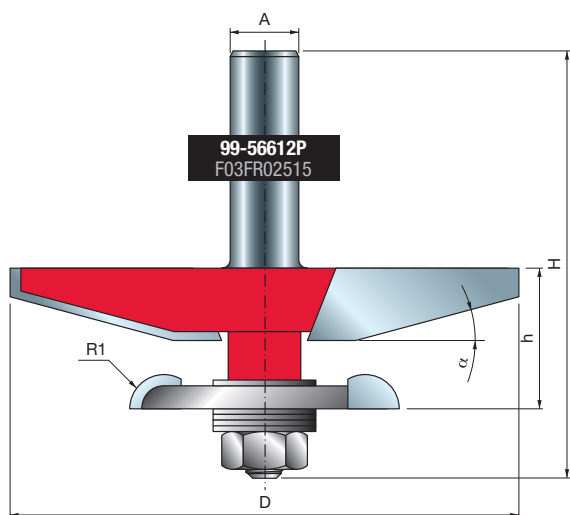
Hardwood



Plywood

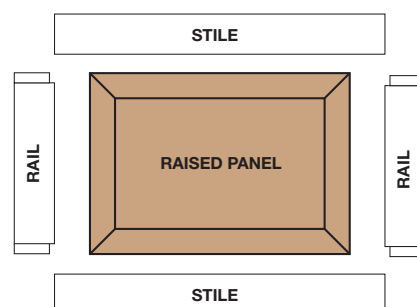
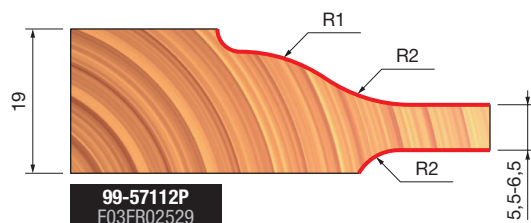
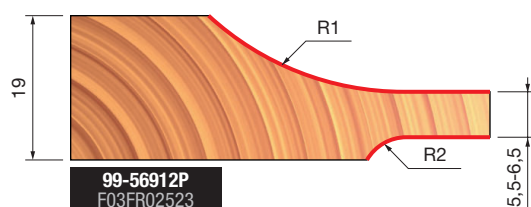
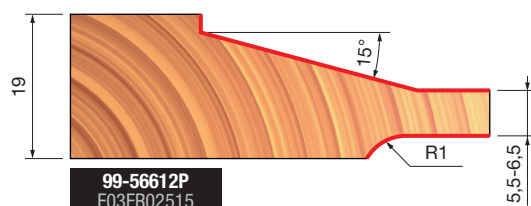


Wood Based Panels



D mm	h mm	H mm	A mm	α	R1 mm	R2 mm	Z	Max RPM 1/min.	Freud Code	Art. No.
89	25	75	12	15°	6	-	2	14.000	99-56612P	F03FR02515
89	25	75	12	15°	38	6	2	14.000	99-56912P	F03FR02523
89	25	75	12	15°	30	6	2	14.000	99-57112P	F03FR02529

Spare parts	Dimensions mm	Freud Code	Art. No.
Hex nut	7,94 x 6,75	2610M BB9	F03F010003
Spacer	18 x 0,1 x 8	AN01MP0019	F03FC00392
Spacer	18 x 0,2 x 8	AN01MP0029	F03FC00393
Spacer	18 x 0,5 x 8	AN01MP0059	F03FC00395
Spacer	18 x 1 x 8	AN01MP0109	F03FC00396
Spacer	18 x 0,15 x 8	AN01MPAA99	F03FC00391



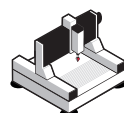
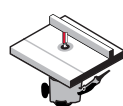


Table Routers

CNC Machines



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.



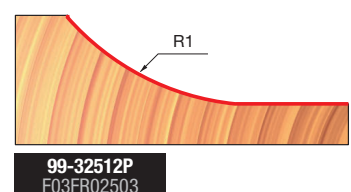
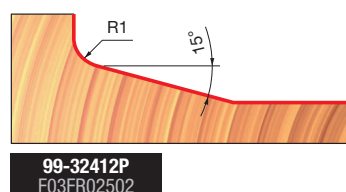
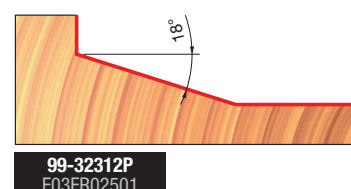
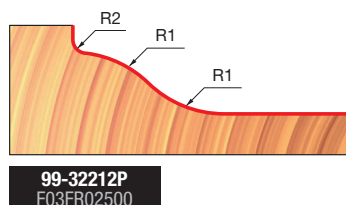
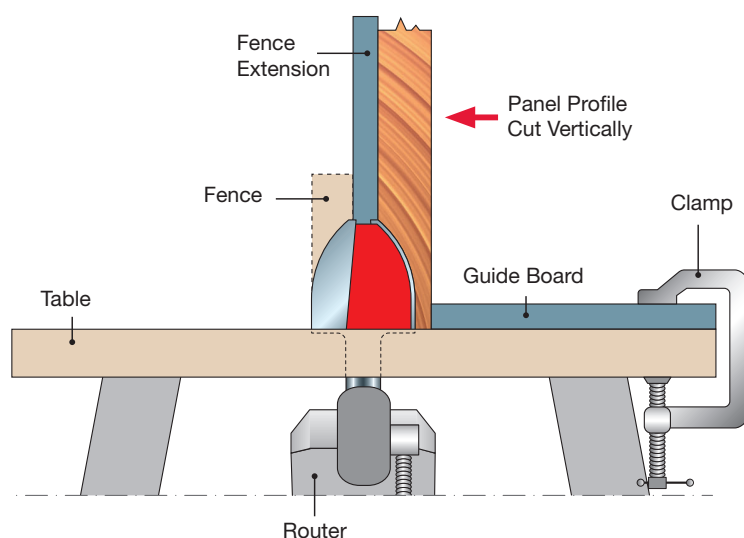
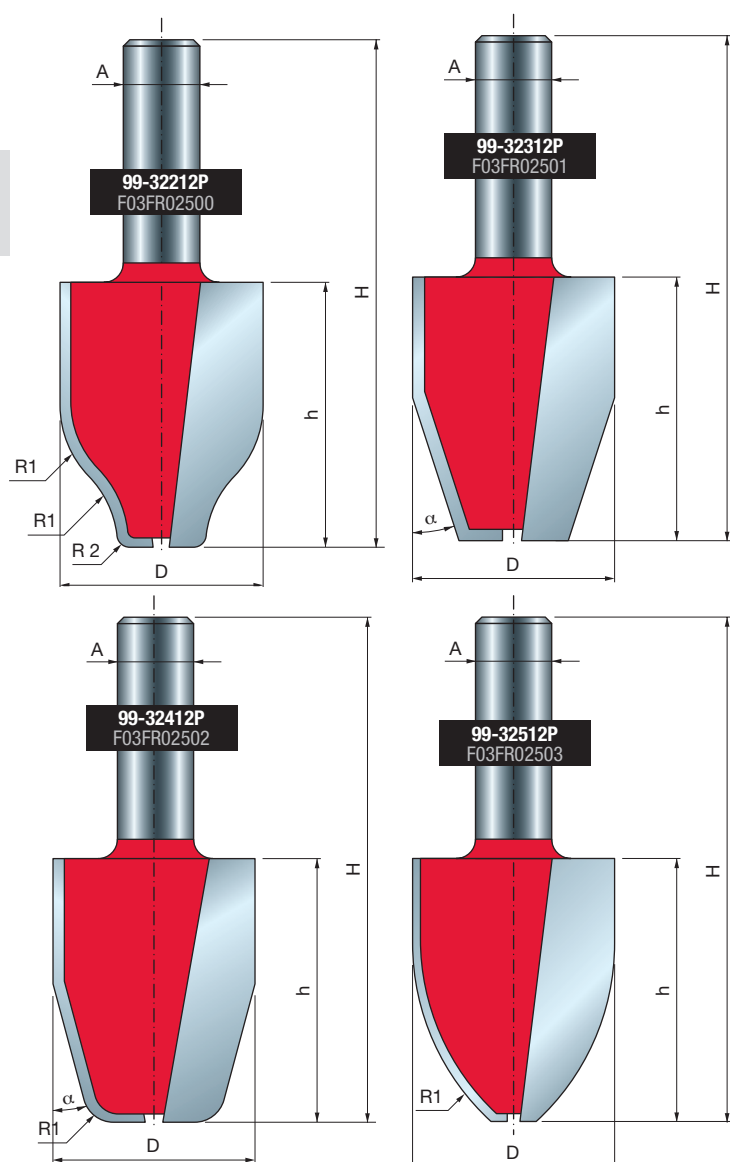
Softwood

Hardwood

Plywood

Wood Based Panels

D mm	h mm	H mm	A mm	α	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

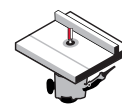
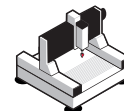


Table Routers



CNC Machines



Softwood



Hardwood



Plywood

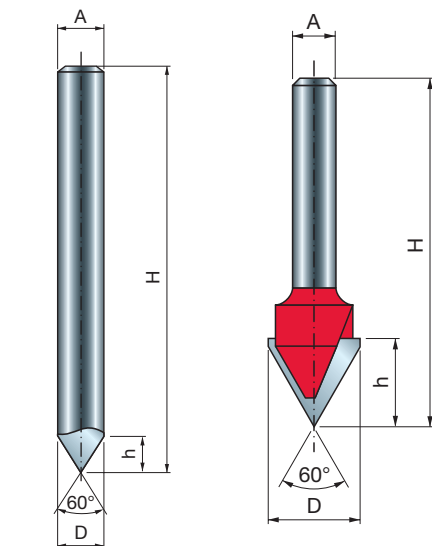
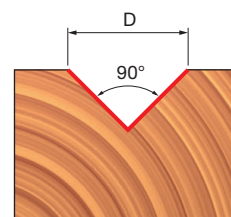
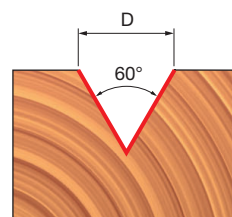


Wood Based Panels

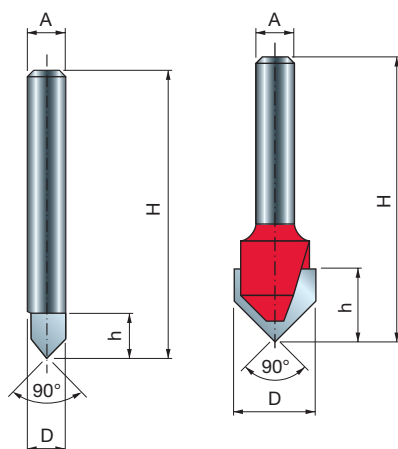


D	h	H	A	α	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	inch		1/min.		
6	6	38,1	6	90°	1	24.000	20-10006P	F03FR01617
9,5	10	44,4	6	90°	2	24.000	20-10206P	F03FR01619
12,7	10	44,4	6	90°	2	24.000	20-10406P	F03FR01622
12,7	12,7	49,2	6	60°	2	24.000	20-15206P	F03FR01629
12,7	11	57,3	6	60°	3	24.000	20-15406P	F03FR01632
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

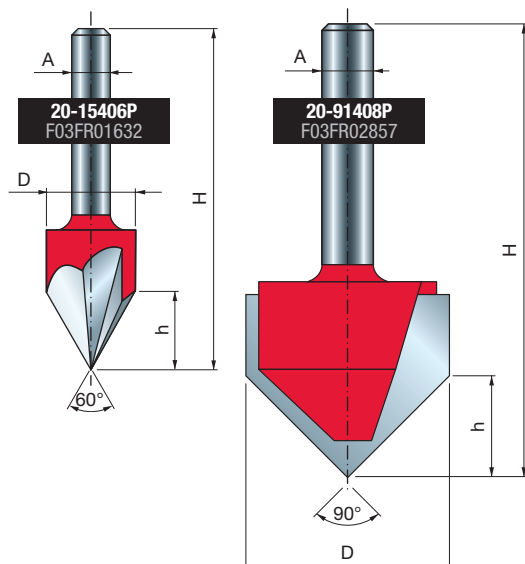
• Solid Carbide Bit

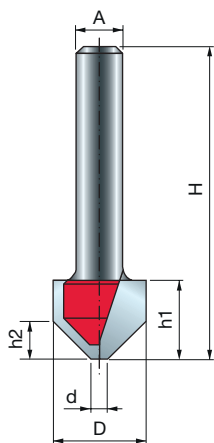


• Solid Carbide Bit



• Solid Carbide Bit





Machines:

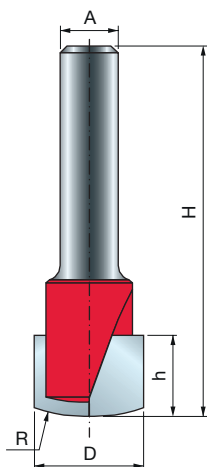
Hand-held routers, table routers and CNC machines.

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

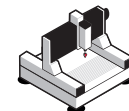
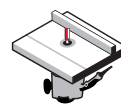
21-



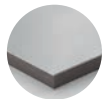
Hand-held Routers



Table Routers



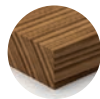
CNC Machines



ACM



Softwood



Hardwood

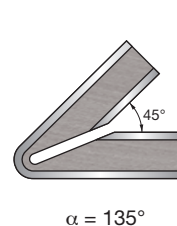
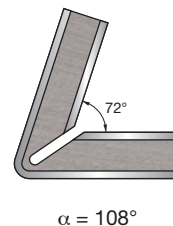
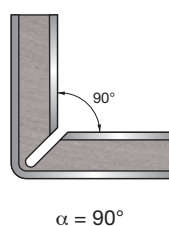
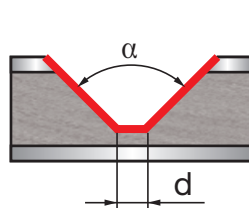


Plywood



Wood Based Panels

D mm	h1 mm	h2 mm	H mm	A mm	inch	d mm	α	Z	Max RPM 1/min.	Freud Code	Art. No.
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

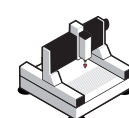
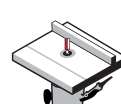
21-



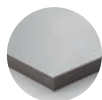
Hand-held Routers



Table Routers



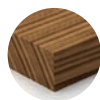
CNC Machines



ACM



Softwood



Hardwood

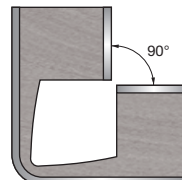
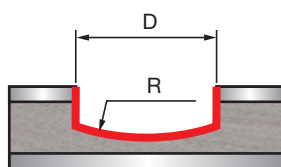


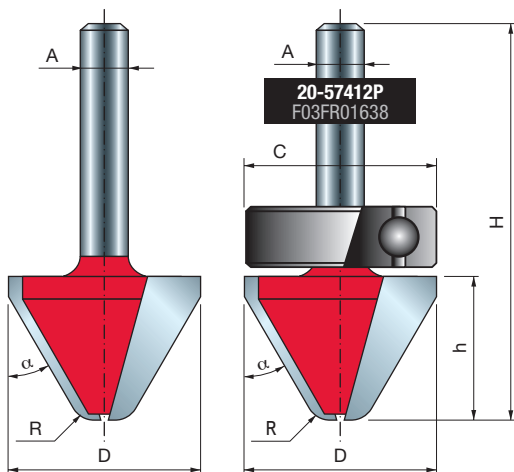
Plywood



Wood Based Panels

D mm	h mm	H mm	A mm	inch	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
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





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.

LETTERING BITS

20-



Hand-held Routers

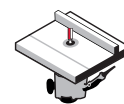
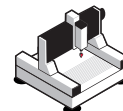


Table Routers



CNC Machines



Softwood



Hardwood



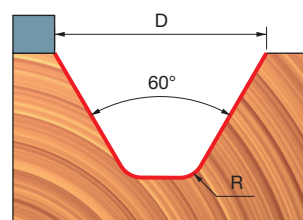
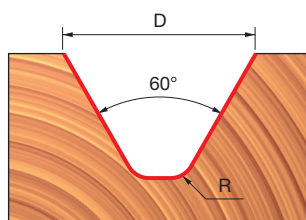
Plywood



Wood Based Panels

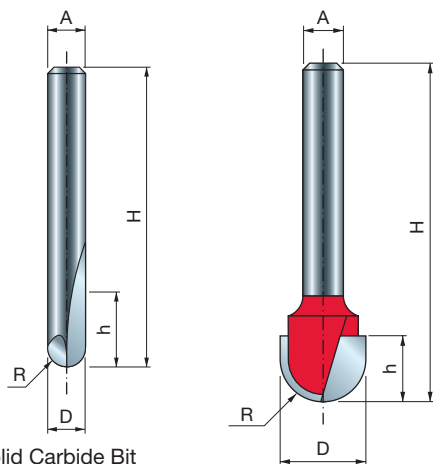


D mm	h mm	H mm	A mm	C mm	R mm	α	Z	Max RPM 1/min.	Freud Code	Art. No.
25,4	19	51,05	6	-	3	60°	2	24.000	20-17206P	F03FR01635
25,4	19	51,05	8	-	3	60°	2	24.000	20-17208P	F03FR01636
28,57	19	57	12	-	3	60°	2	18.000	20-17412P	F03FR01637
28	19	67,15	12	28	3	60°	2	18.000	20-57412P	F03FR01638



ROUND NOSE BITS

18-



• Solid Carbide Bit



Machines:

Hand-held routers, table routers and CNC machines.

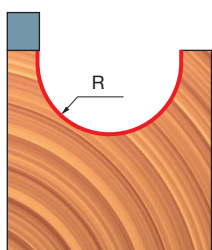
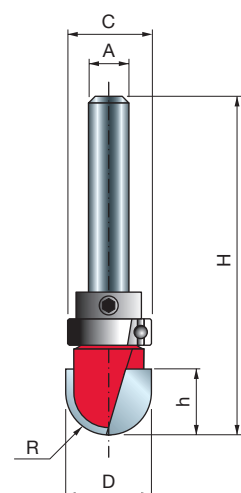
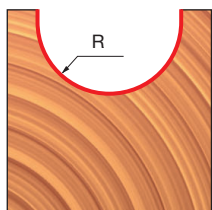
Bits with ball bearing are not recommended to be used on CNC machines.

Materials:

Softwood, hardwood, plywood and wood based panels.

Applications:

Perform beautiful semicircular engraved grooves in the workpiece.



Hand-held Routers

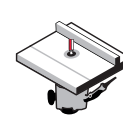
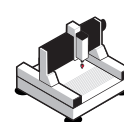


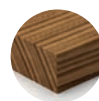
Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels



Wood Based Panels



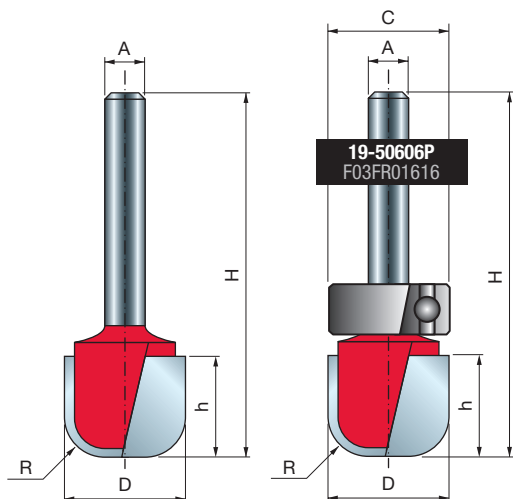
Wood Based Panels

	D mm	h mm	H mm	A mm inch	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
•	3,2	9,5	50,5	6	1,6	2	24.000	18-10006P	F03FR01581
•	4,8	9,5	50,5	6	2,4	2	24.000	18-10206P	F03FR01584
•	6	12,7	50,8	6	3	2	24.000	18-10406P	F03FR01587
	9,52	9	46	6	4,8	2	24.000	18-10606P	F03FR01590
	12	9	46	6	6	2	24.000	18-10806P	F03FR01593
	15,88	11	50,8	6	8	2	24.000	18-11006P	F03FR01596
	19,05	11	50,8	6	9,5	2	24.000	18-11206P	F03FR01599
•	3,2	9,5	50,5	8	1,6	2	24.000	18-10008P	F03FR01582
•	4,8	9,5	50,5	8	2,4	2	24.000	18-10208P	F03FR01585
•	6	12,7	50,8	8	3	2	24.000	18-10408P	F03FR01588
	9,52	9	46	8	4,8	2	24.000	18-10608P	F03FR01591
	12	9	46	8	6	2	24.000	18-10808P	F03FR01594
	15,88	11	50,8	8	8	2	24.000	18-11008P	F03FR01597
	19,05	11	50,8	8	9,5	2	24.000	18-11208P	F03FR01600
•	6	9,5	57	12	3	2	24.000	18-11412P	F03FR01602
	12,7	31,7	71,5	12	6,35	2	24.000	18-11612P	F03FR01604
	19,05	31,7	73	12	9,5	2	24.000	18-12212P	F03FR01606
	25,4	31,7	73	12	12,7	2	24.000	18-12612P	F03FR01608
•	3,18	9,5	50,5	1/4	1,59	2	24.000	18-10025P	F03FR01583
•	4,76	6,4	50,5	1/4	2,38	2	24.000	18-10225P	F03FR01586
•	6,35	12,7	50,5	1/4	3,18	2	24.000	18-10425P	F03FR01589
	9,52	9	45	1/4	4,77	2	24.000	18-10625P	F03FR01592
	12,7	9	45,5	1/4	6,35	2	24.000	18-10825P	F03FR01595
	15,88	11	48	1/4	7,94	2	24.000	18-11025P	F03FR01598
	19,05	11	48	1/4	9,53	2	24.000	18-11225P	F03FR01601
	6,35	12,7	61	1/2	3,18	2	24.000	18-11450P	F03FR01603
	12,7	31,7	72,7	1/2	6,35	2	24.000	18-11650P	F03FR01605
	19	31,7	73	1/2	9,5	2	24.000	18-12250P	F03FR01607

• Solid Carbide Bits

Bits with ball bearing (not suitable for CNC machines)

	D mm	h mm	H mm	A mm	R mm	C mm	Z	Max RPM 1/min.	Freud Code	Art. No.
	15,88	11	59,5	6	8	15,8	2	24.000	18-51006P	F03FR01609
	19,05	11,1	59,5	6	9,5	19	2	24.000	18-51206P	F03FR01611
	15,88	11	59,5	8	8	15,8	2	24.000	18-51008P	F03FR01610
	19,05	11	59,5	8	9,5	19,05	2	24.000	18-51208P	F03FR01612



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.

WOOD BOWL BITS

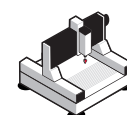
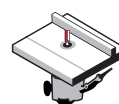
19- 99-



Hand-held Routers



Table Routers



CNC Machines



Softwood



Hardwood



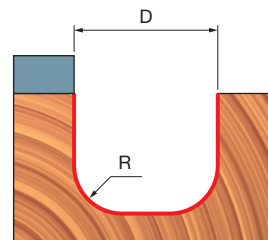
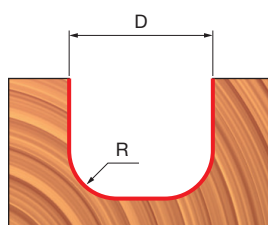
Plywood

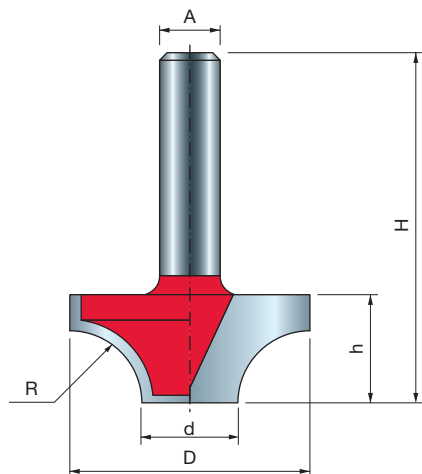


Wood Based Panels



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	19-50606P	F03FR01616
19,05	15,9	47,5	6	6,35	-	2	24.000	19-10606P	F03FR01613
19,05	15,9	47,5	8	6,35	-	2	24.000	19-10608P	F03FR01614
19,05	15,9	67	12	6,35	-	2	24.000	19-12612P	F03FR01615
31,75	15,8	53	12	6,35	-	2	18.000	99-02612P	F03FR02420





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.

OVOLO BITS

39-



Hand-held Routers

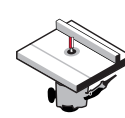
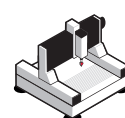


Table Routers



CNC Machines



Softwood



Hardwood



Plywood

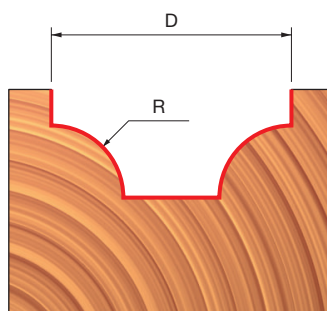


Wood Based Panels



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

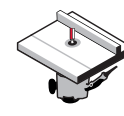
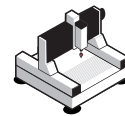


Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels

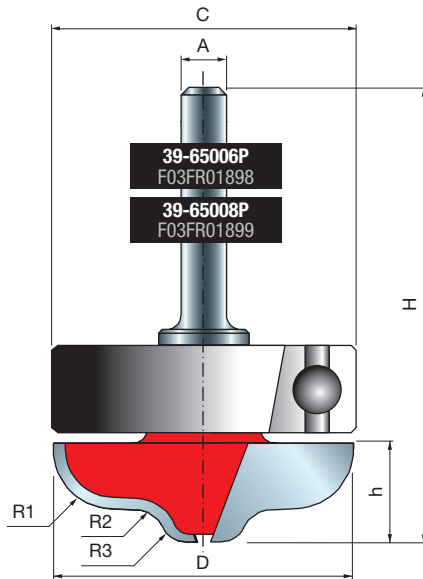
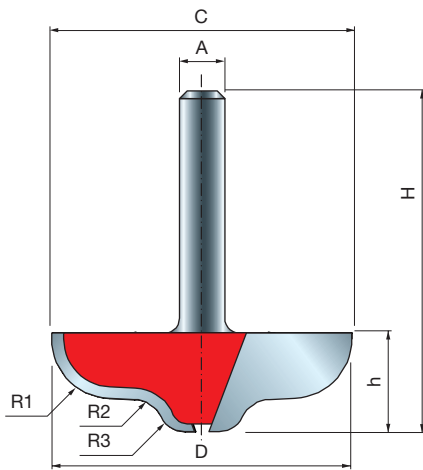
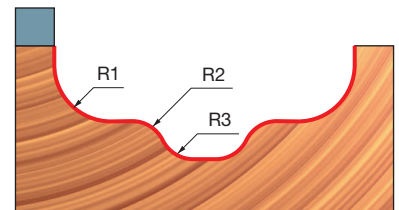
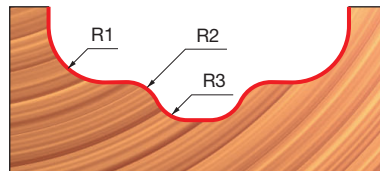


Wood Based Panels



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	39-60006P	F03FR01896
39,6	13	60,1	6	39,6	7,9	4,2	3,4	2	16.000	39-65006P	F03FR01898
39,6	13	45	8	-	7,9	4,2	3,4	2	16.000	39-60008P	F03FR01897
39,6	13	60,1	8	39,6	7,9	4,2	3,4	2	16.000	39-65008P	F03FR01899



Machines:

Hand-held routers, table routers and CNC machines.

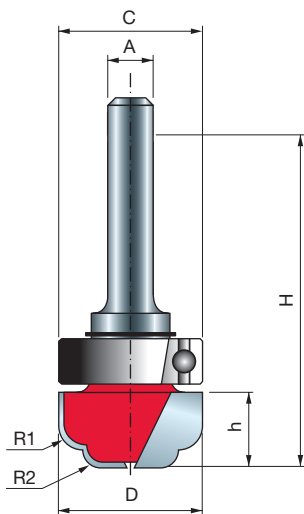
Bits with ball bearing are not recommended to be used on CNC machines.

Materials:

Softwood, hardwood, plywood and wood based panels.

Applications:

Create decorative grooves in moulding and furniture.



Machines:

Hand-held routers and table routers.

Materials:

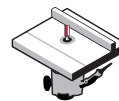
Softwood, hardwood, plywood and wood based panels.

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

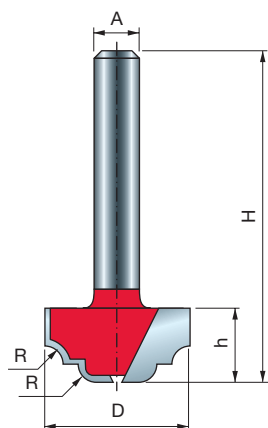
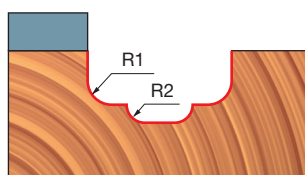


Plywood



Wood Based Panels

D mm	h mm	H mm	A mm	C mm	R1 mm	R2 mm	Z	Max RPM 1/min.	Freud Code	Art. No.
19	9,6	53	6	19	3,2	2,4	2	24.000	39-51206P	F03FR01887



Machines:

Hand-held routers, table routers and CNC machines.

Materials:

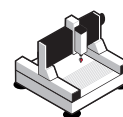
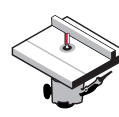
Softwood, hardwood, plywood and wood based panels.

Applications:

Create decorative grooves in moulding and furniture.

COVE AND BEAD GROOVE BITS

39-



Hand-held Routers

Table Routers

CNC Machines



Softwood



Hardwood

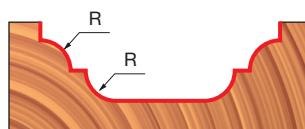


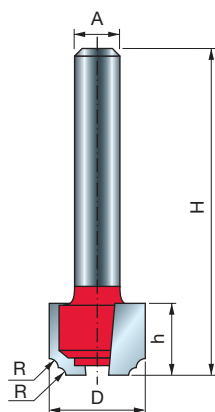
Plywood



Wood Based Panels

D mm	h mm	H mm	A mm	A inch	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
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





Machines:

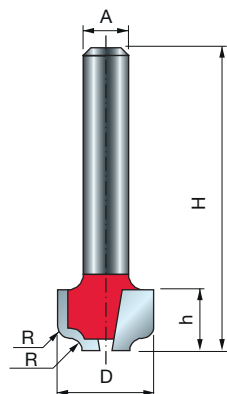
Hand-held routers, table routers and CNC machines.

Materials:

Softwood, hardwood, plywood and wood based panels.

Applications:

Create decorative grooves in moulding and furniture.



Machines:

Hand-held routers, table and CNC machines.

Materials:

Softwood, hardwood, plywood and wood based panels.

Applications:

Create decorative grooves in moulding and furniture.

CLASSICAL BEADING GROOVE BITS

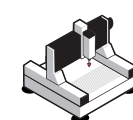
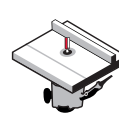
39-



Hand-held Routers



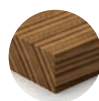
Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels

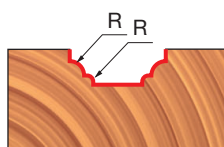


Wood Based Panels



Wood Based Panels

D mm	h mm	H mm	A mm	A 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

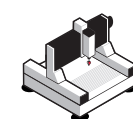
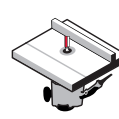
39-



Hand-held Routers



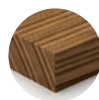
Table Routers



CNC Machines



Softwood



Hardwood



Plywood



Wood Based Panels

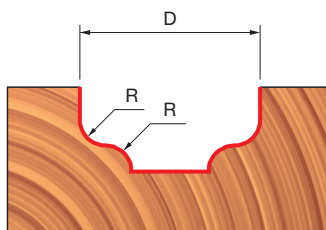


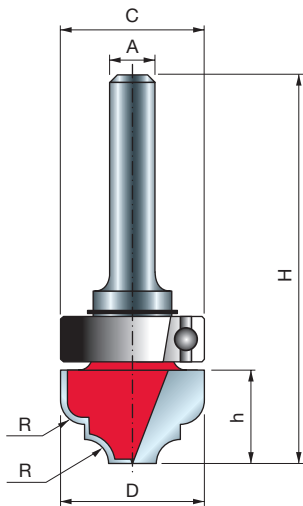
Wood Based Panels



Wood Based Panels

D mm	h mm	H mm	A mm	A 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:

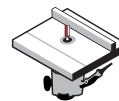
Softwood, hardwood, plywood and wood based panels.

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



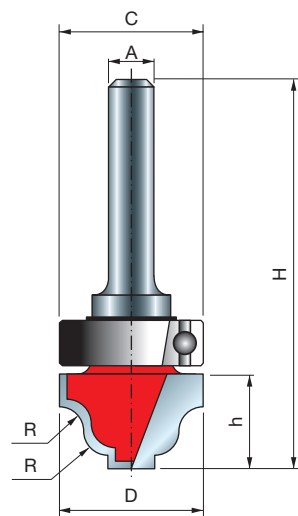
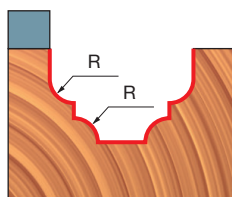
Softwood

Hardwood

Plywood

Wood Based Panels

D mm	h mm	H mm	A mm	inch	C mm	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
19	12,7	55,5	6		19	3,18	2	24.000	39-53206P	F03FR01892
28	14	58,1	8		28	3,18	2	18.000	39-53808P	F03FR01894
28	14	64,1	12		28	3,18	2	18.000	39-53812P	F03FR01895
19	12,7	55,5		1/4	19	3,18	2	24.000	39-53225P	F03FR01893



Machines:

Hand-held routers and table routers.

Materials:

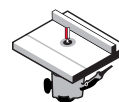
Softwood, hardwood, plywood and wood based panels.

Applications:

Use with templates to create decorative grooves in moulding and furniture.

TOP BEARING FILLET OGEE GROOVE BITS

39-



Hand-held Routers

Table Routers



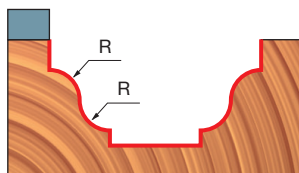
Softwood

Hardwood

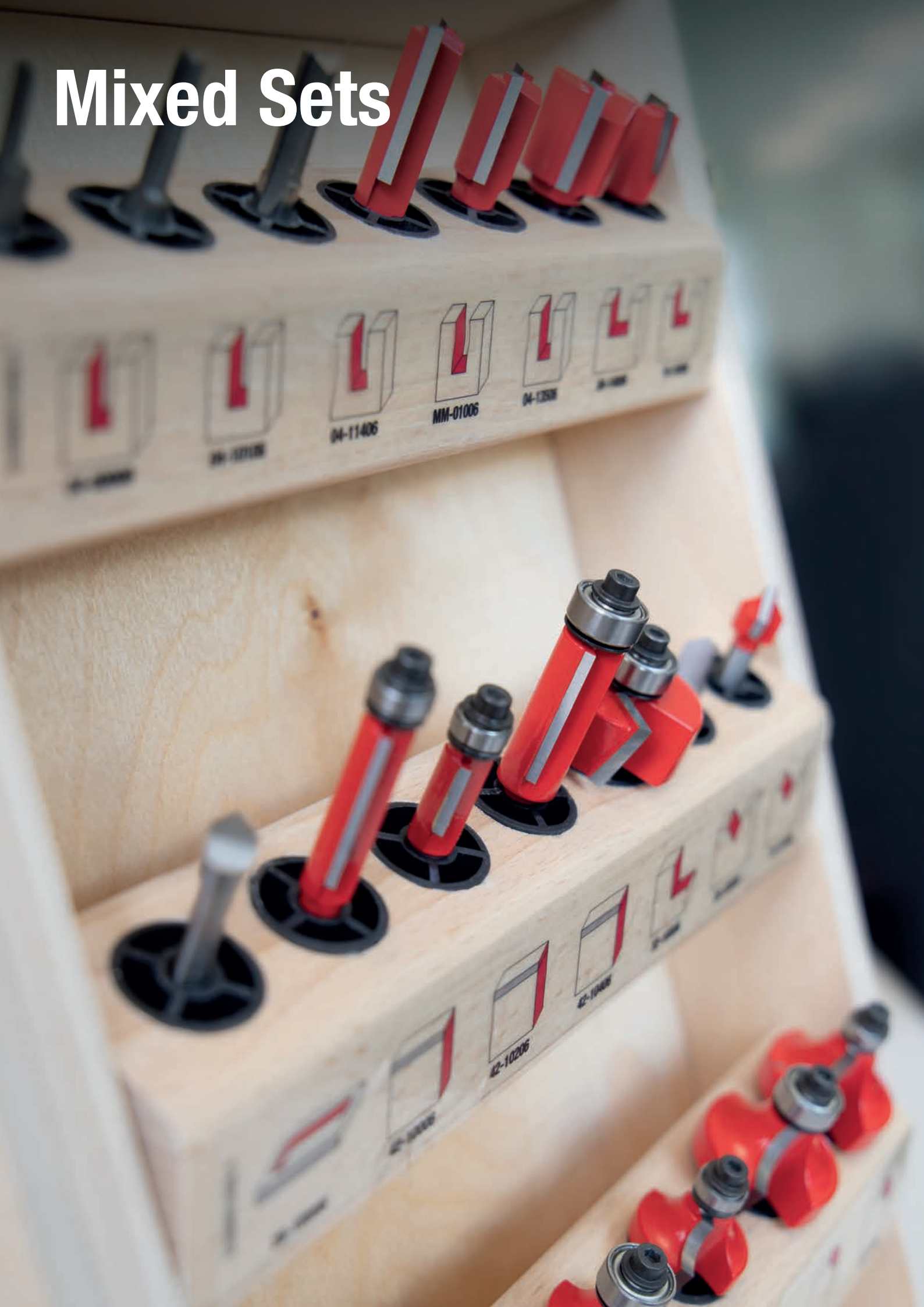
Plywood

Wood Based Panels

D mm	h mm	H mm	A mm	inch	C mm	R mm	Z	Max RPM 1/min.	Freud Code	Art. No.
19	12,5	55,5	6		19	3,18	2	24.000	39-52206P	F03FR01888
28	14,4	58,1	8		28	4	2	18.000	39-52808P	F03FR01890
28	14,4	64,1	12		28	4	2	18.000	39-52812P	F03FR01891
19	12,5	55,5		1/4	19	3,18	2	24.000	39-52225P	F03FR01889



Mixed Sets





BASIC SET 4 ROUTER BITS

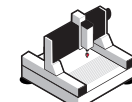
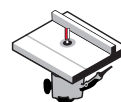
88-10606P (F03FR02255)



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

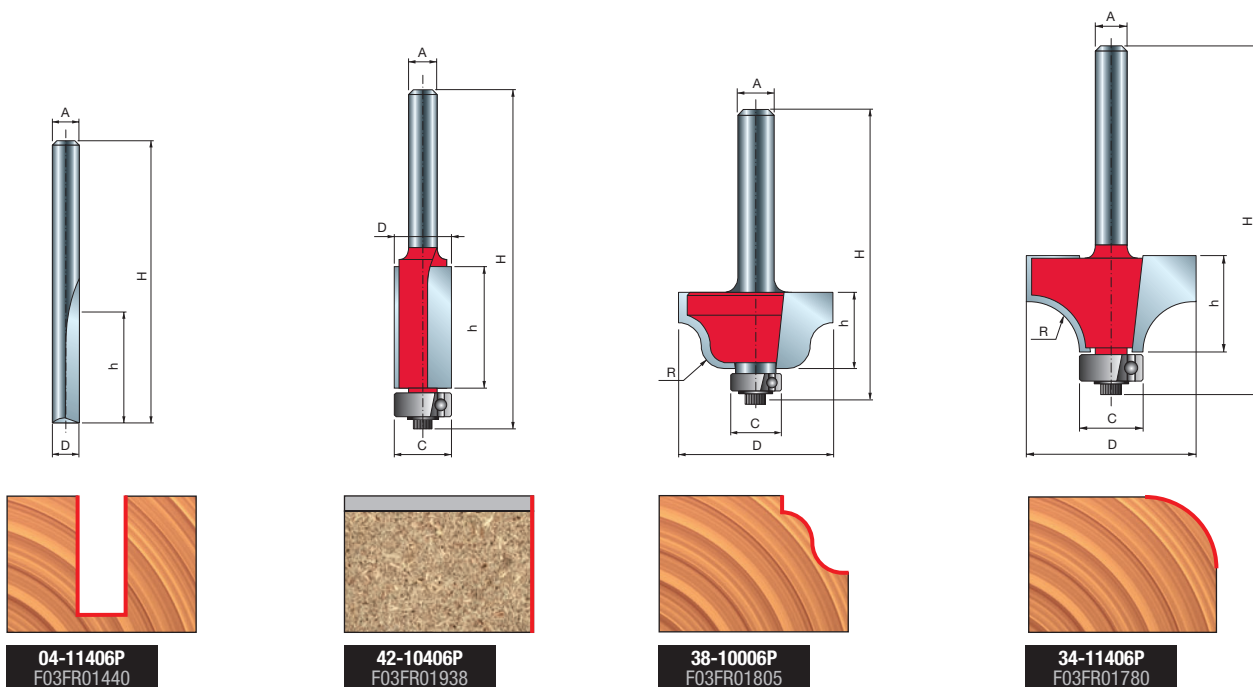
Spare parts	Dimensions mm	Freud Code	Art. No.
Allen key	2,5	2619M CA9	F03FA07432
Ball bearing	9,53 x 3,2 x 4,76	3102M AA9P	F03F010006
Washer	9 x 2 x 6	FX07M AA9P	F03F010158

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.

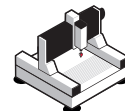
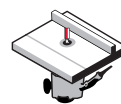




STARTER 6 PIECE ROUTER BIT SET

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	α	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	32-10008P	F03FR01746
Chamfer bit	257	44	18,5	61	8	12,7	-	45°	-	2	16.000	40-10608P	F03FR01920
Rounding over bit	256	31,75	18	59,7	8	12,7	-	-	9,5	2	18.000	34-11408P	F03FR01781
Round nose bit	307	12	9	46	8	-	-	-	6	2	24.000	18-10808P	F03FR01594
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	16.000	38-10208P	F03FR01809

Set code 91-10412P (F03FR02294)

Bit type	Page reference	D mm	h mm	H mm	A mm	C mm	P mm	α	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	32-10212P	F03FR01748
Chamfer bit	257	44	18,5	67	12	12,7	-	45°	-	2	16.000	40-11412P	F03FR01922
Rounding over bit	256	31,75	18	65,7	12	12,7	-	-	9,53	2	18.000	34-12412P	F03FR01788
Round nose bit	307	12,7	31,7	71,5	12	-	-	-	6,35	2	24.000	18-11612P	F03FR01604
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	66,5	12	9,53	-	-	6,35	2	16.000	38-10612P	F03FR01812

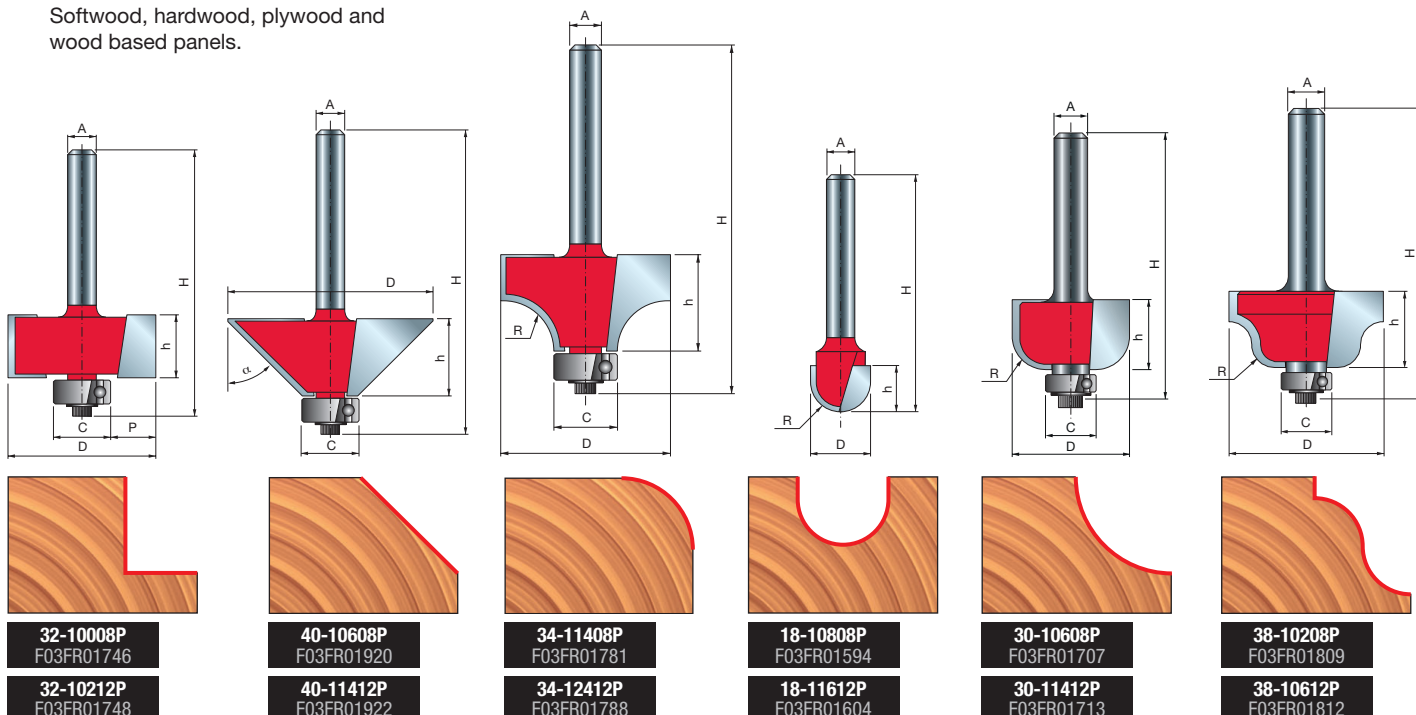


Machines:

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

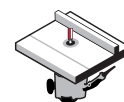
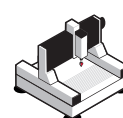


Table Routers



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	α	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

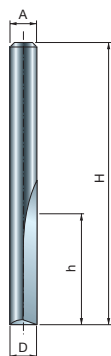


Machines:

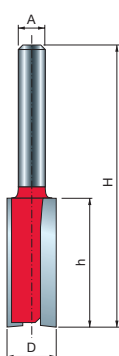
To identify the correct machine for each router bit, refer to the corresponding page reference of each router bit.

Materials:

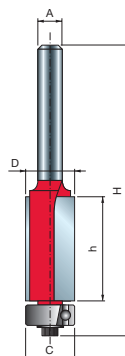
Softwood, hardwood, plywood and wood based panels.



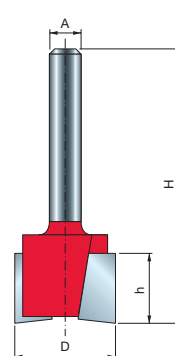
04-11406P
F03FR01440



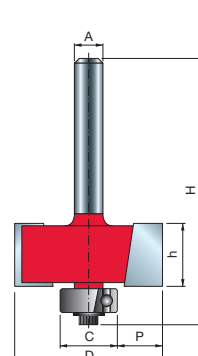
04-12406P
F03FR01450



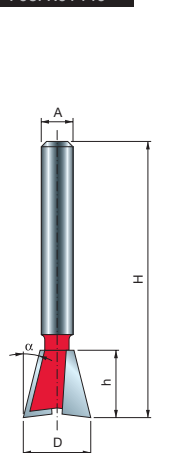
42-10406P
F03FR01938



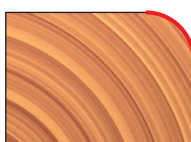
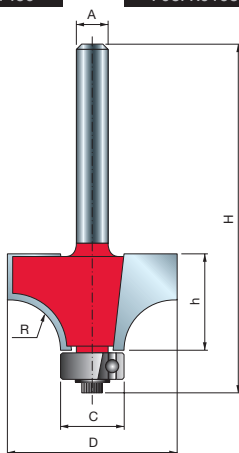
16-10006P
F03FR01565



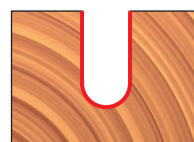
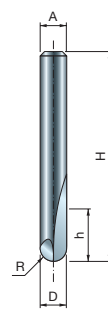
32-10006P
F03FR01745



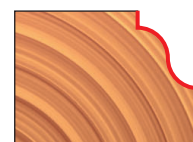
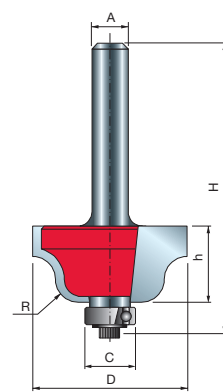
22-10406P
F03FR01643



34-11006P
F03FR01774



18-10406P
F03FR01587



38-10006P
F03FR01805



SUPER 13 PIECE ROUTER BIT SET

91-10008P (F03FR02275)

91-10012P (F03FR02277)



Hand-held Routers

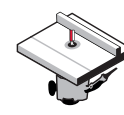
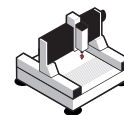


Table Routers



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	α	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	8	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	α	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:

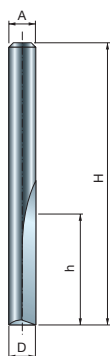
To identify the correct machine for each router bit, refer to the corresponding page reference of each router bit.

Materials:

Softwood, hardwood, plywood and wood based panels.

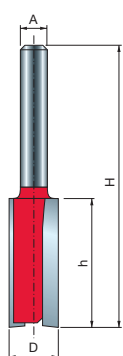
SUPER 13 PIECE ROUTER BIT SET

91-10008P (F03FR02275)
91-10012P (F03FR02277)



04-11408P
F03FR01441

12-09912P
F03FR01520

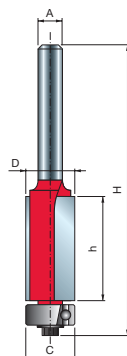


04-13708P
F03FR01465

12-11612P
F03FR01531

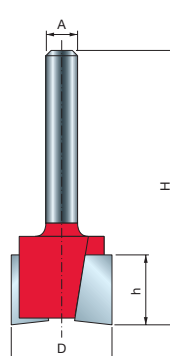
04-15508P
F03FR01493

12-15212P
F03FR01548



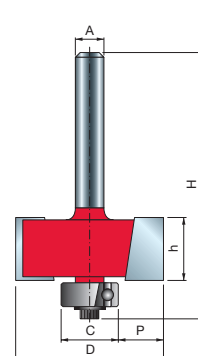
42-10408P
F03FR01939

42-11012P
F03FR01942



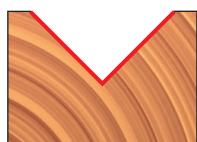
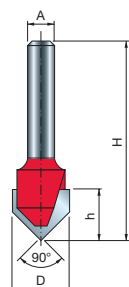
16-10008P
F03FR01566

16-11012P
F03FR01573



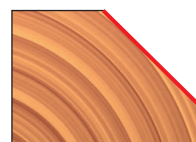
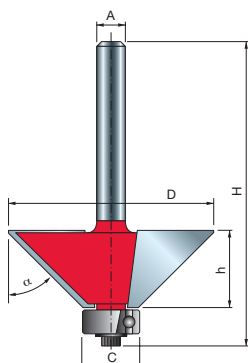
32-10008P
F03FR01746

32-10212P
F03FR01748



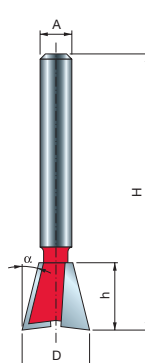
20-10812P
F03FR01626

20-10408P
F03FR01623



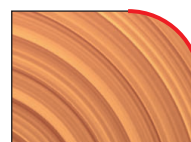
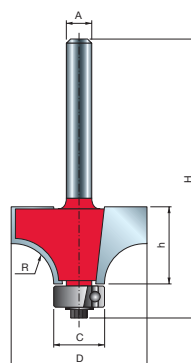
40-10608P
F03FR01920

40-11412P
F03FR01922



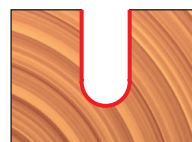
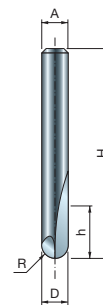
22-10408P
F03FR01644

22-11212P
F03FR01650



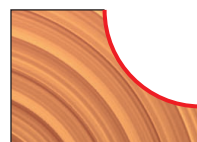
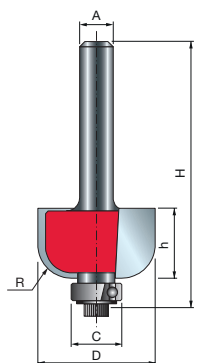
34-11408P
F03FR01781

34-12412P
F03FR01788



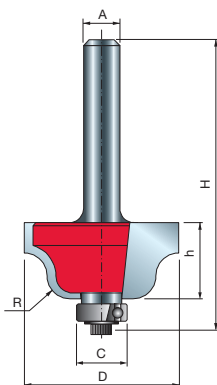
18-10408P
F03FR01588

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

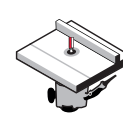
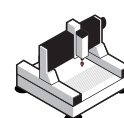


Table Routers



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	α	Z	Max RPM 1/min.	Freud Code	Art. No.
•	Double flute straight bit	244	4	15,8	50,7	6	-	-	-	-	2	24.000	04-10106P	F03FR01420
•	Double flute straight bit	244	6	16	50,8	6	-	-	-	-	2	24.000	04-11406P	F03FR01440
	Double flute straight bit	245	12	19	55,5	6	-	-	-	-	2	24.000	04-13506P	F03FR01460
	Double flute straight bit	245	19	19	54	6	-	-	-	-	2	24.000	04-14006P	F03FR01468
•	Panel pilot bit	254	6	19	57	6	-	-	-	-	1	24.000	26-10006P	F03FR01664
	Flush trim bit	252	9,53	12,7	60,9	6	9,53	-	-	-	2	24.000	42-10206P	F03FR01935
	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
	V-groove bit	304	12,7	10	44,4	6	-	-	-	90°	2	24.000	20-10406P	F03FR01622
	Chamfer bit	257	44	18,5	61	6	12,7	-	-	45°	2	16.000	40-10606P	F03FR01919
	Dovetail bit	285	12,7	12,7	47,5	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
	Cove bit	258	38,1	16,4	58,9	6	12,7	12,7	-	-	2	16.000	30-10606P	F03FR01706
	Roman ogee bit	261	27	13,3	54,7	6	9,53	4	-	-	2	18.000	38-10006P	F03FR01805

• Solid Carbide Bit



Machines:

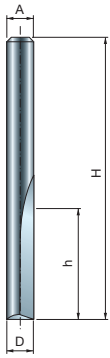
To identify the correct machine for each router bit, refer to the corresponding page reference of each router bit.

Materials:

Softwood, hardwood, plywood and wood based panels.

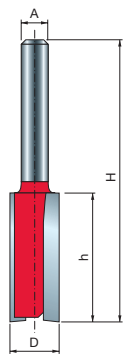
ADVANCED 15 PIECE ROUTER BIT SET

90-10006P
(F03FR02256)



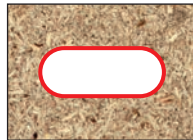
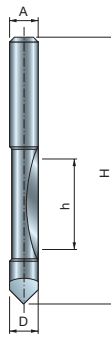
04-10106P
F03FR01420

04-11406P
F03FR01440

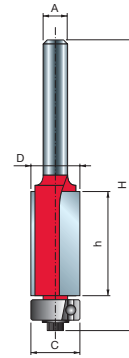


04-11406P
F03FR01440

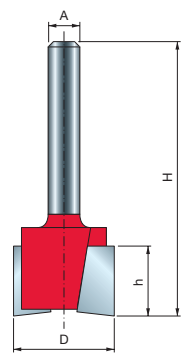
04-14006P
F03FR01468



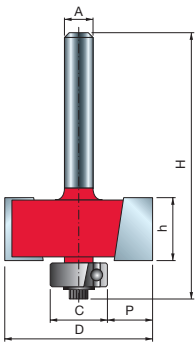
26-10006P
F03FR01664



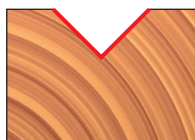
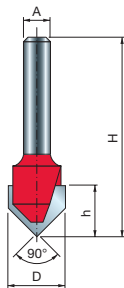
42-10206P
F03FR01935



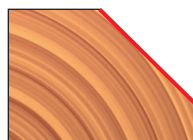
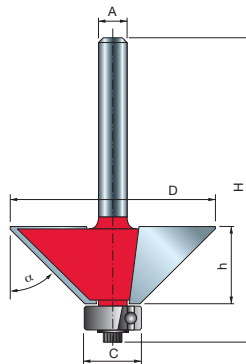
16-10006P
F03FR01565



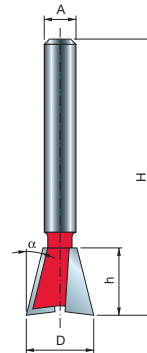
32-10006P
F03FR01745



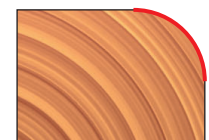
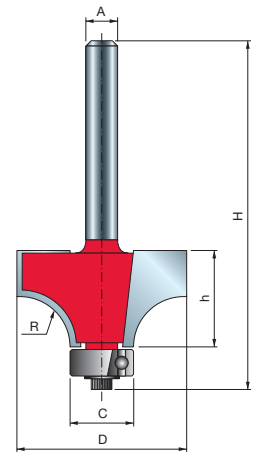
20-10406P
F03FR01622



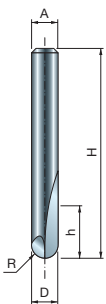
40-10606P
F03FR01919



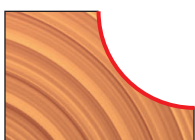
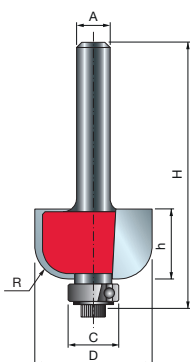
22-10406P
F03FR01643



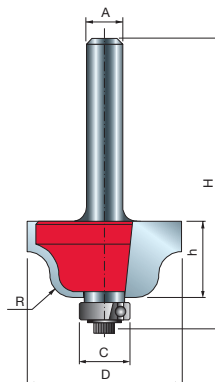
34-11406P
F03FR01780



18-10406P
F03FR01587



30-10606P
F03FR01706



38-10006P
F03FR01805



PROFESSIONAL 26 PIECE ROUTER BIT SET

92-10006P
(F03FR02308)



Hand-held Routers

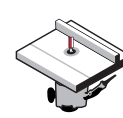
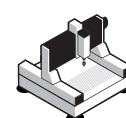


Table Routers



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	α	Z	Max RPM 1/min.	Freud Code	Art. No.
•	Double flute straight bit	244	3	9,5	44,5	6	-	-	-	-	2	24.000	04-09906P	F03FR01415
•	Double flute straight bit	244	4	15,8	50,7	6	-	-	-	-	2	24.000	04-10106P	F03FR01420
•	Double flute straight bit	244	6	16	50,8	6	-	-	-	-	2	24.000	04-11406P	F03FR01440
	Double flute straight bit	244	10	25,4	62,4	6	-	-	-	-	2	24.000	MM-01006P	F03FR00330
	Double flute straight bit	245	12	19	55,5	6	-	-	-	-	2	24.000	04-13506P	F03FR01460
	Double flute straight bit	245	19	19	54	6	-	-	-	-	2	24.000	04-14006P	F03FR01468
•	Panel pilot bit	254	6	19	57	6	-	-	-	-	1	24.000	26-10006P	F03FR01664
	Flush trim bit	252	9,53	25,8	72,4	6	9,53	-	-	-	2	24.000	42-10006P	F03FR01932
	Flush trim bit	252	9,53	12,7	60,9	6	9,53	-	-	-	2	24.000	42-10206P	F03FR01935
	Flush trim bit	252	12,7	25,7	72,9	6	12,7	-	-	-	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	-	9,5	-	2	18.000	32-10006P	F03FR01745
•	V-groove bit	304	6	6	38,1	6	-	-	-	90°	1	24.000	20-10006P	F03FR01617
	V-groove bit	304	12,7	10	44,4	6	-	-	-	90°	2	24.000	20-10406P	F03FR01622
	Chamfer bit	257	44	18,5	61	6	12,7	-	-	45°	2	16.000	40-10606P	F03FR01919
	Dovetail bits	285	12,7	12,7	47,5	6	-	-	-	14°	2	24.000	22-10406P	F03FR01643
	Rounding over bit	256	25,4	12,7	55,2	6	12,7	6,35	-	-	2	24.000	34-11006P	F03FR01774
	Rounding over bit	256	31,75	18	59,7	6	12,7	9,53	-	-	2	18.000	34-11406P	F03FR01780
	Rounding over bit	256	25,4	12,7	54,7	6	9,53	6,35	-	-	2	24.000	36-11006P	F03FR01803
	Rounding over bit	256	31,75	18	59,2	6	9,53	9,53	-	-	2	18.000	36-11406P	F03FR01804
•	Round nose bit	307	6	12,7	50,8	6	-	3	-	-	2	24.000	18-10406P	F03FR01587
	Round nose bit	307	9,52	9	46	6	-	4,8	-	-	2	24.000	18-10606P	F03FR01590
	Cove bit	258	22,23	13,2	54,7	6	9,53	6,35	-	-	2	24.000	30-10206P	F03FR01697
	Cove bit	258	38,1	16,4	58,9	6	12,7	12,7	-	-	2	16.000	30-10606P	F03FR01706
	Roman ogee bit	261	27	13,3	54,7	6	9,53	4	-	-	2	18.000	38-10006P	F03FR01805
	Roman ogee bit	261	35	18,5	60,5	6	9,53	6,4	-	-	2	16.000	38-10206P	F03FR01808

-- Solid Carbide Bit



Machines:

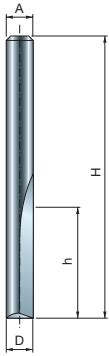
To identify the correct machine for each router bit, refer to the corresponding page reference of each router bit.

Materials:

Softwood, hardwood, plywood and wood based panels.

PROFESSIONAL 26 PIECE ROUTER BIT SET

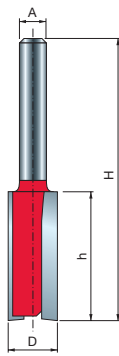
92-10006P
(F03FR02308)



04-09906P
F03FR01415

04-10106P
F03FR01420

04-11406P
F03FR01420

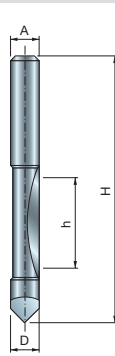


04-09906P
F03FR01415

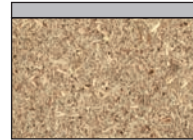
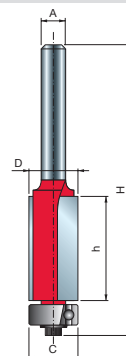
MM-01006P
F03FR00330

MM-13506P
F03FR01460

MM-14006P
F03FR01468



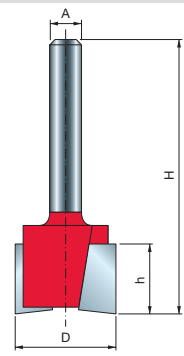
26-10006P
F03FR01664



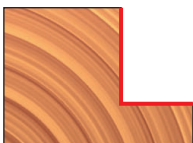
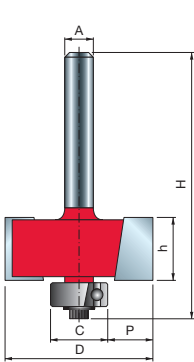
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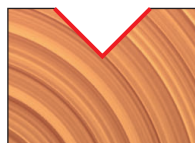
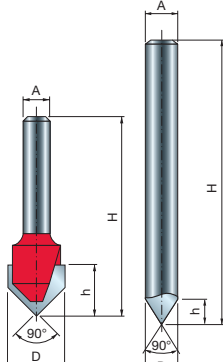
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F03FR01938



16-10006P
F03FR01565

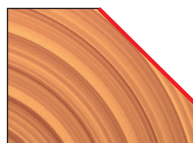
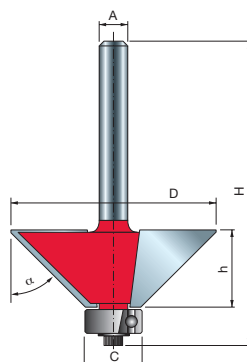


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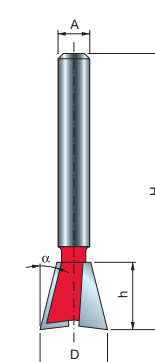


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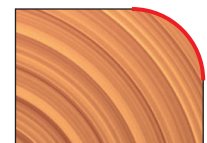
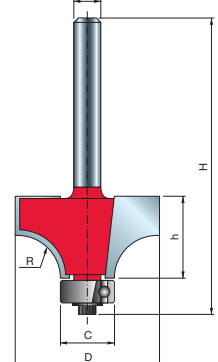
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F03FR01622



40-10606P
F03FR01919



22-10406P
F03FR01643

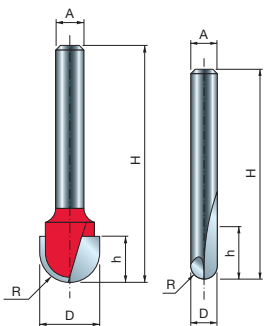


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F03FR01774

34-11406P
F03FR01780

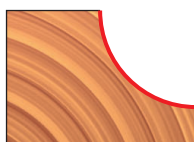
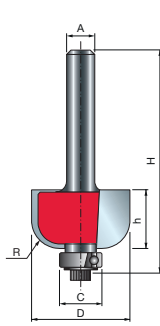
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36-11406P
F03FR01804



18-10406P
F03FR01587

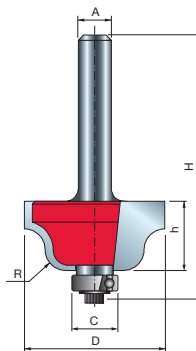
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F03FR01590



30-10206P
F03FR01697

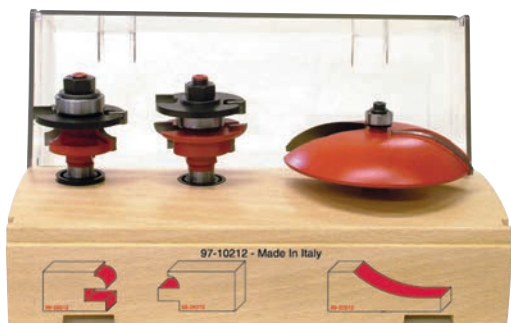
30-10606P
F03FR01706

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38-10006P
F03FR01805

38-10206P
F03FR01808



CABINET DOOR SET 3 ROUTER BITS

97-10212P
(F03FR02382)

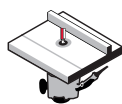


Table Routers



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.

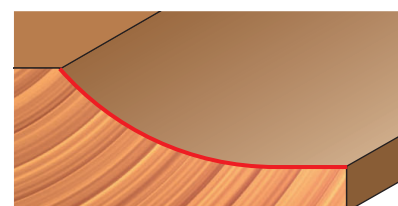
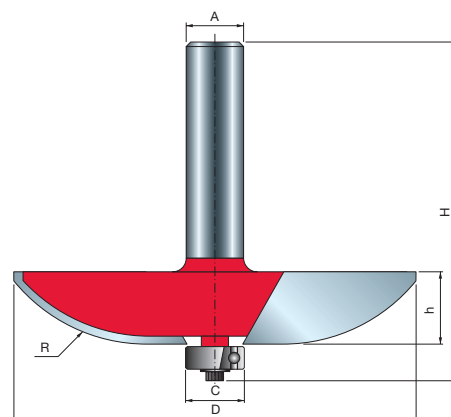
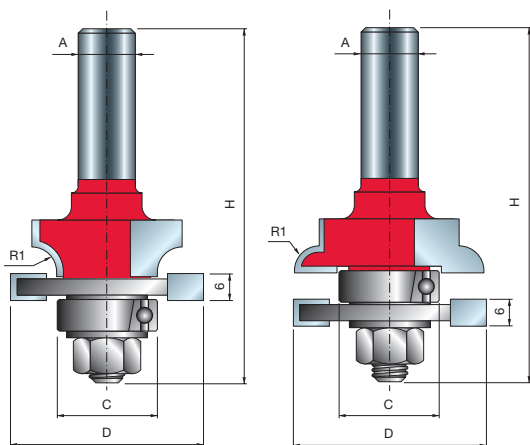


Machines:

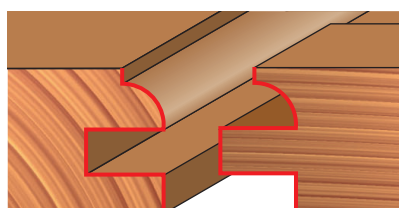
Table mounted routers.

Materials:

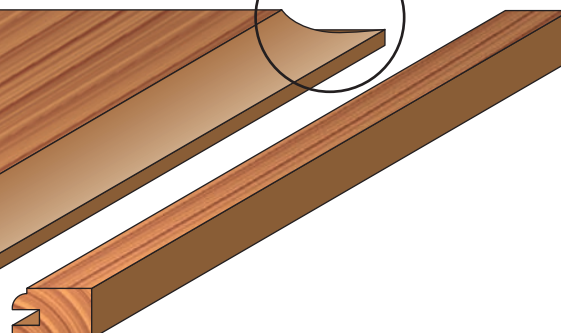
Softwood, hardwood, plywood and wood based panels.

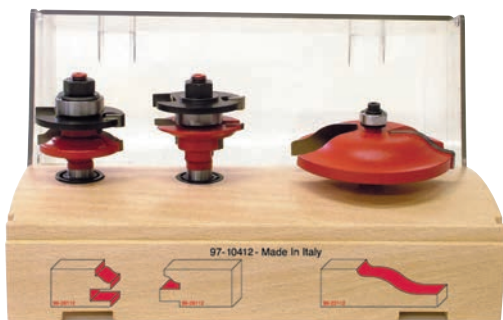


99-22512P
F03FR02462



99-26012P
F03FR02468





CABINET DOOR SET 3 ROUTER BITS

97-10412P
(F03FR02396)

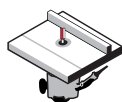


Table Routers



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.

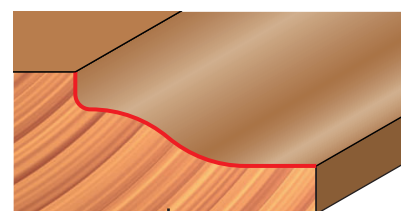
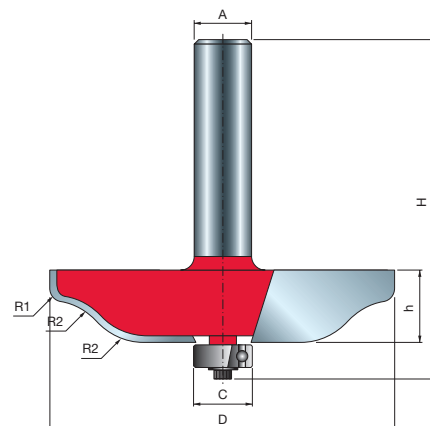
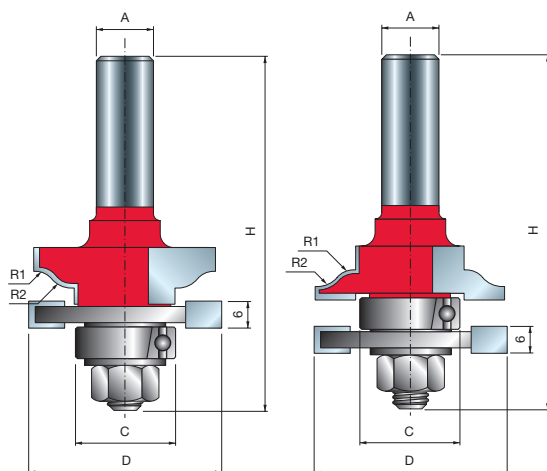


Machines:

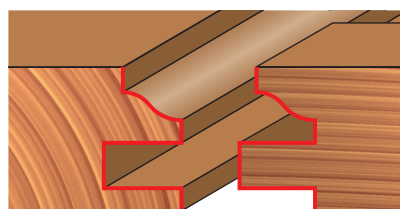
Table mounted routers.

Materials:

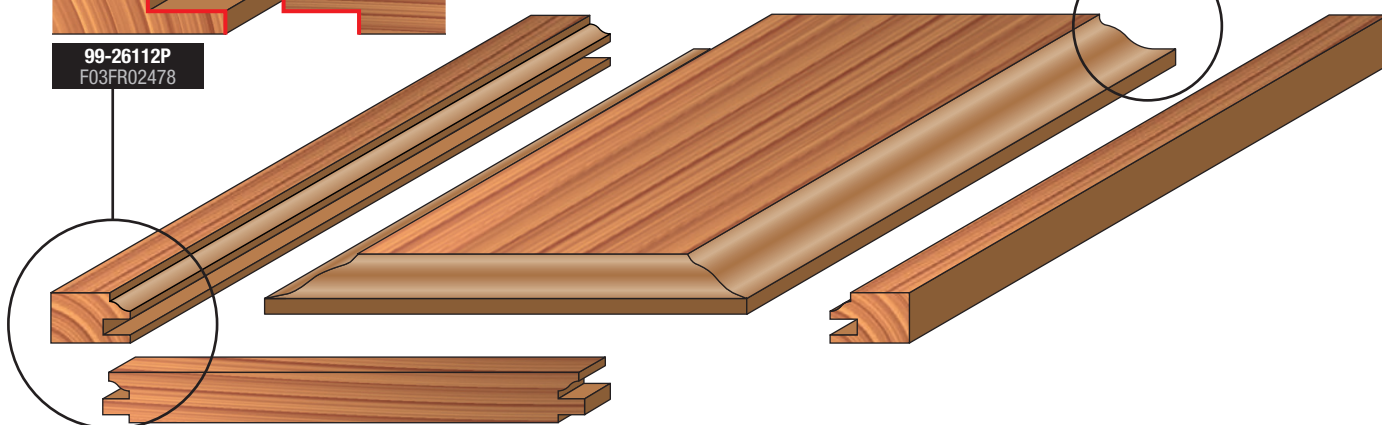
Softwood, hardwood, plywood and wood based panels.

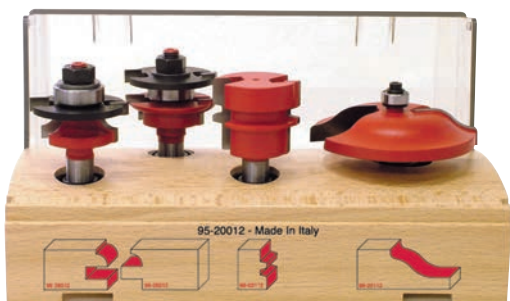


99-22112P
F03FR02458



99-26112P
F03FR02478





CABINET DOOR SET 4 ROUTER BITS

95-20012P
(F03FR02368)

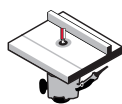
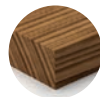


Table Routers



Softwood



Hardwood



Plywood



Wood Based Panels



Wood Based Panels



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	α	Z	Max RPM 1/min.	Freud Code	Art. No.
Reversible glue joint bit	288	38	32	70	12	-	-	-	15°	2	16.000	99-03112P	F03FR02422
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	5,5	-	-	2	24.000	99-26012P	F03FR02468

The set includes one reversible glue joint bit, one raised panel bit and two matched profile and scribe bits.

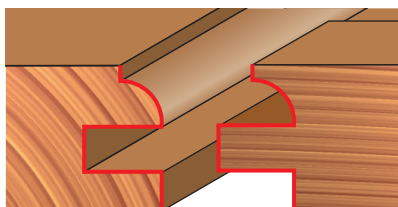


Machines:

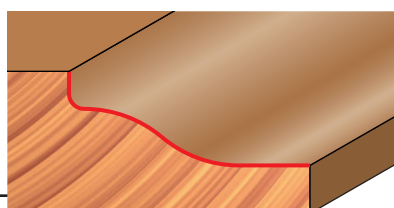
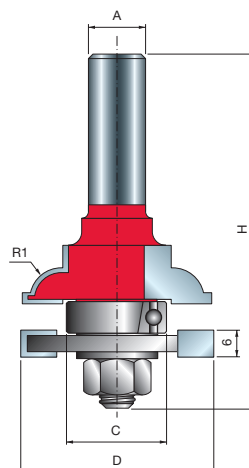
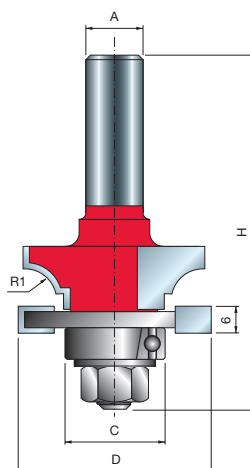
Hand-held routers and table routers.

Materials:

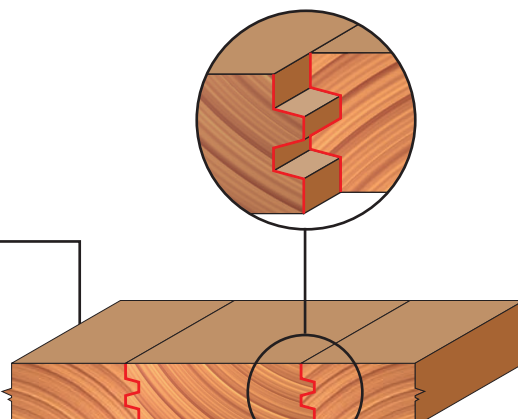
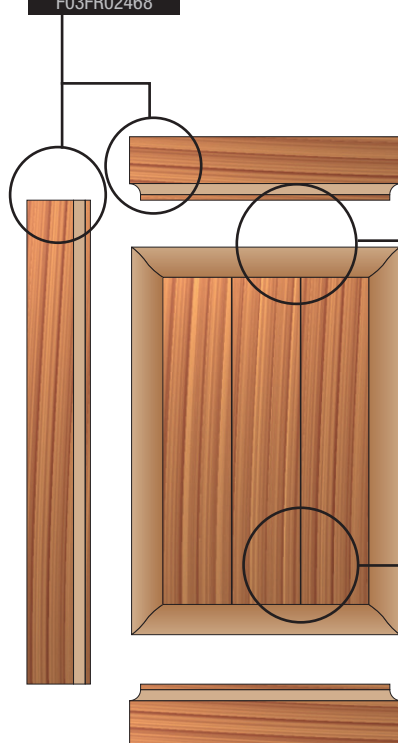
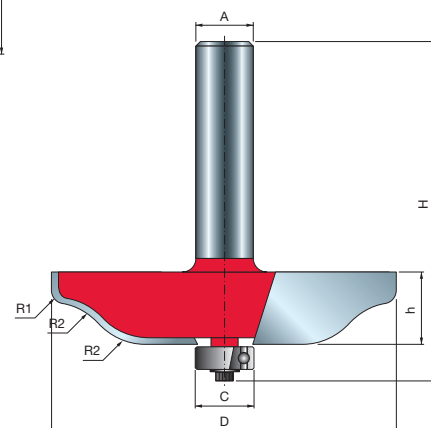
Softwood, hardwood, plywood and wood based panels.



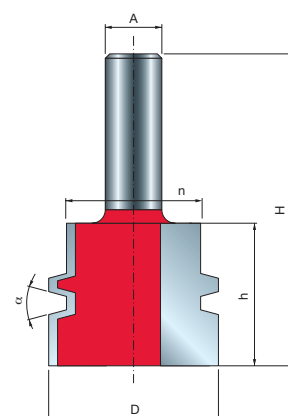
99-26012P
F03FR02468

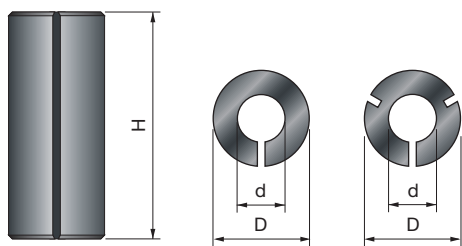


99-22112P
F03FR02458

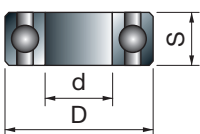


99-03112P
F03FR02422

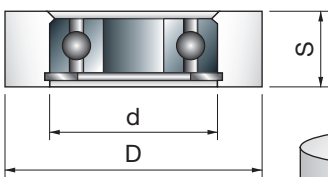




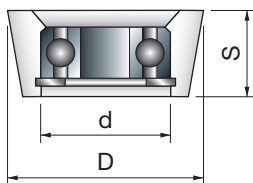
Reducing bushes for router bits.



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	S mm	d mm	Freud Code	Art. No.
9,53	3,2	4,76	3102M AA9	F03F010006
12	4	6,05	3102M BB9	F03FA10568
12,7	4,98	4,76	3102M AB9	F03F010007
13	5	4	3102M CD9	F03FA14096
13	5	6	3102M AP9	F03FA10558
14	4	8,05	3102M BC9	F03FA10569
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

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

3103MC

Sleeved bearings with angle

D mm	S mm	d mm	α	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.

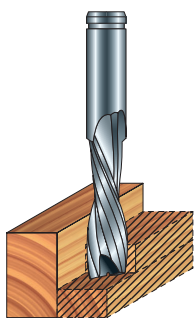
The minimum required clamping length must be kept.

Care should be taken that the data relevant to the safety of the clamped tool are always stored in the data medium.

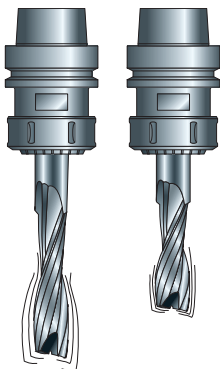
Repairs should only be carried out by a competent person, i.e. a person with professional training and experience, who has knowledge of the design, construction and safety requirements.

Repair should therefore include the use of spare parts which are in compliance with the specifications of the original parts.

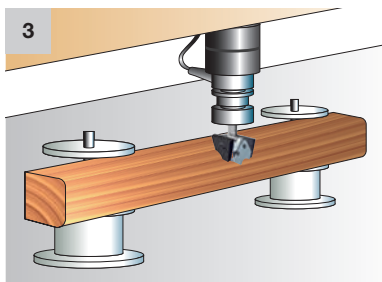
1



2



3

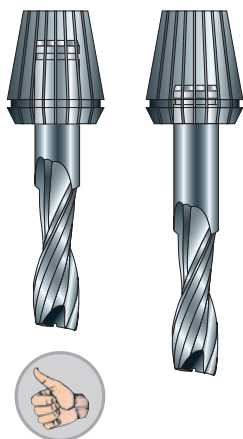


ADVICE FOR CORRECT USE

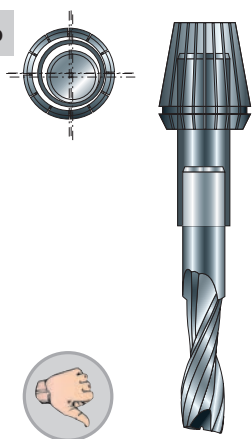
To reduce vibrations from the router bit, which can compromise the finish and cause damages to both the tool and the workpiece, it is necessary to respect the following conditions:

- 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).

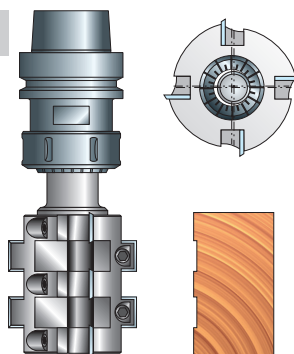
4a



4b



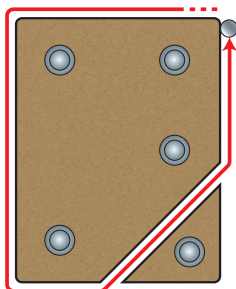
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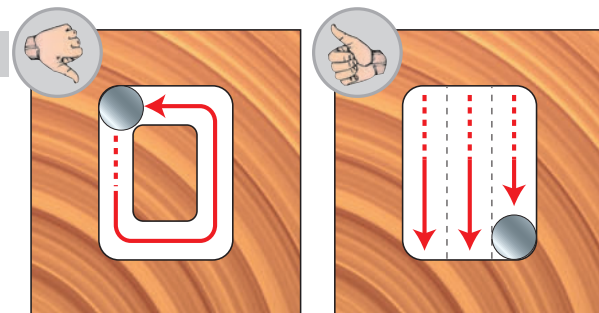
6



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:

Chip load = Feed rate ÷ (RPM x number of flutes)

Feed rate = RPM x number of flutes x chip load

RPM = Feed rate ÷ (number of flutes x chip load)

Note:

Feed rate will be expressed in meters per minute.

Here are some examples:

1. 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.
2. 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.
3. 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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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

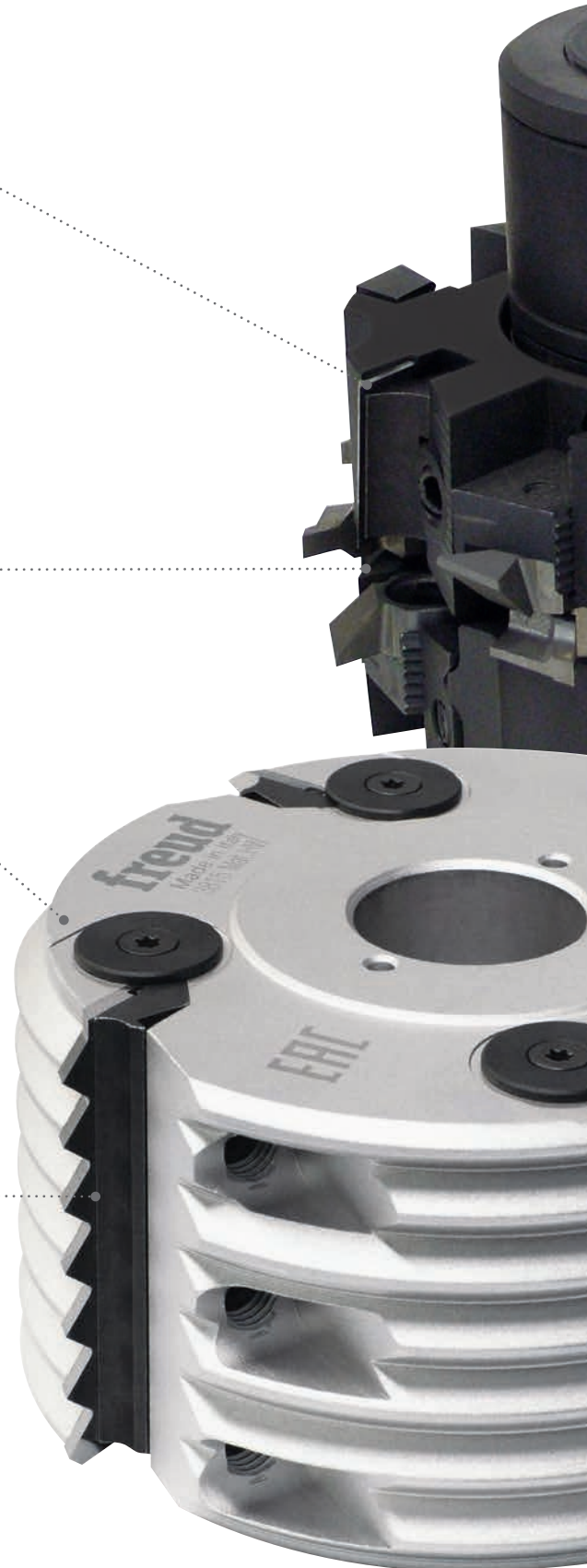
Freud's Performance System Technology knives are designed with extra thickness – 3mm – for up to 6 x reshaping cycles and a prolonged

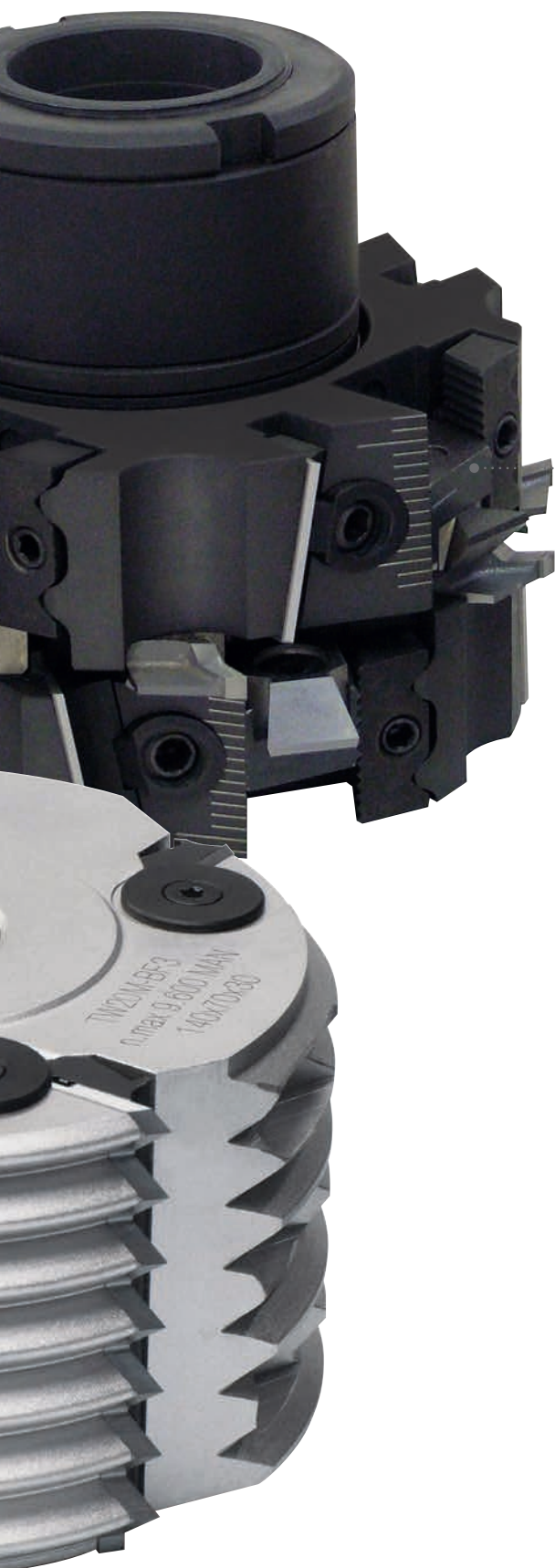
durability.

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.





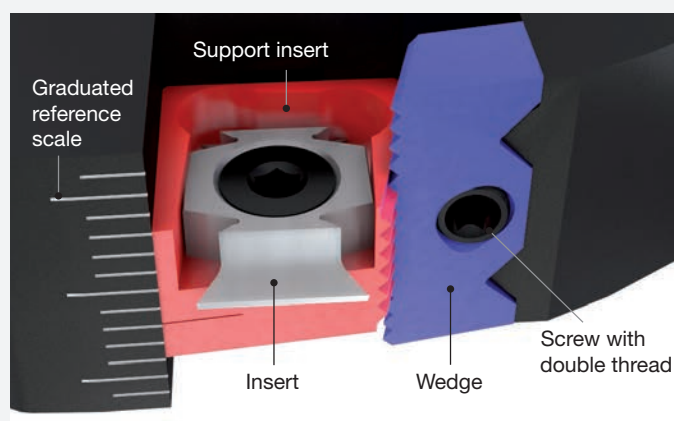
PIONEERING SOLUTIONS

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.

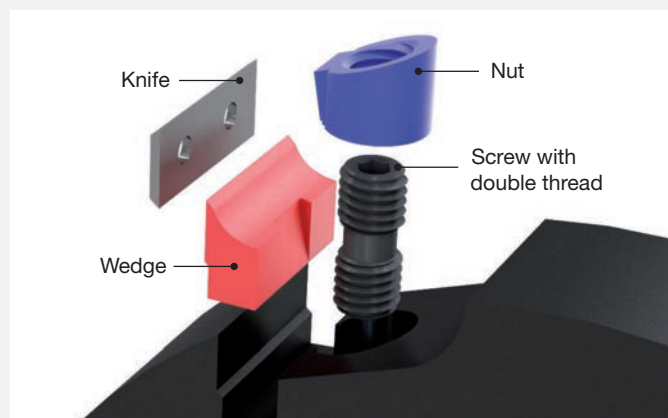
The NSR grants extraordinary precision – with no need for measuring instruments - leveraging Freud's specially grained set, for the perfect adjustment of the insert, with 1 mm steps and precision up to 1/100 of a mm.



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

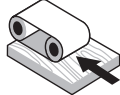




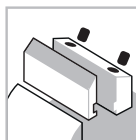
TM06M

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).

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

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

	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



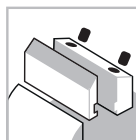
TM07M

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	TM07M AE3	F03FC20416
100	180	35	12	10.300	TM07M AF3	F03FC20417
125	130	40	9	10.300	TM07M GD3	F03FC20418
125	138	40	9	10.300	TM07M GE3	F03FC20419
125	180	40	12	10.300	TM07M GF3	F03FC20420
125	226	40	15	10.300	TM07M GG3	F03FC20421

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Knife	50 x 12 x 1,5	CG18MFC310	F03FH02921
	Wedge	15 x 46 x 8	CN09M AP9	F03FC01290
	Screw	M10 x 22	VT19M MA9	F03FA04496
	Nut	15 x 13,3 x M10	VT20M MA9	F03FC20670
	Allen key	5	CB03M EA9	F03FA00169

Item	In conjunction with item:	Art. No.
TM07M Ø125	T182M AB3	F03FC20584
TM07M	T182M AA3	F03FC20583
TM07M	T182M DB3	F03FC20587

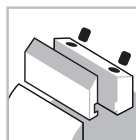


TM20M

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.

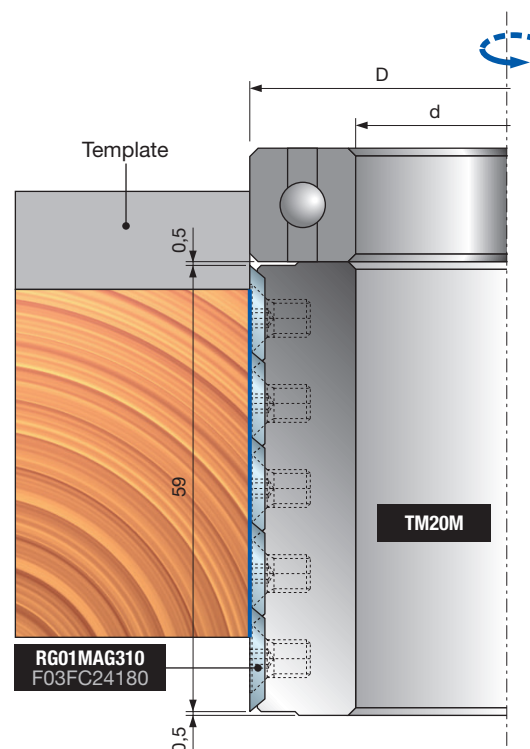
- Use in combination with ballbearing for round timbers.
- Aluminium light alloy body.
- Rebore not available.
- Equipped with 4 sides disposable spurs.

D mm	B mm	d mm	Z	V	Max RPM 1/min.	Freud Code	Art. No.
55	59	30		10	16.000	TM20M ACC	F03FC22098
62	59	35		10	16.000	TM20M BCD	F03FC22099
68	59	40		10	16.000	TM20M CCE	F03FC22100
80	59	50		10	16.000	TM20M DCF	F03FC21977

	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

Bearings for cutterheads TM20M (not included)

For cutterhead	Art. No.	Dimensions mm	Freud Code	Art. No.
TM20M ACC	F03FC22098	55 x 13 x 30	3101M AC9	F03FA10543
TM20M BCD	F03FC22099	62 x 14 x 35	3101M AD9	F03FA10544
TM20M CCE	F03FC22100	68 x 15 x 40	3101M AE9	F03FA10545
TM20M DCF	F03FC21977	80 x 16 x 50	3101M AG9	F03FA10547

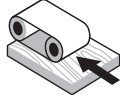




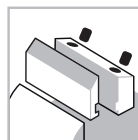
TM21M

Multicut planer cutterheads

MEC



Automatic Feed



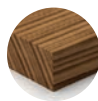
Clamping System



Aluminium Body



Softwood



Hardwood



Planing

Machines:

Moulders, automatic and throughfeed machines.

Materials:

Softwood and hardwood.

Applications:

Planing, moulding and roughing.

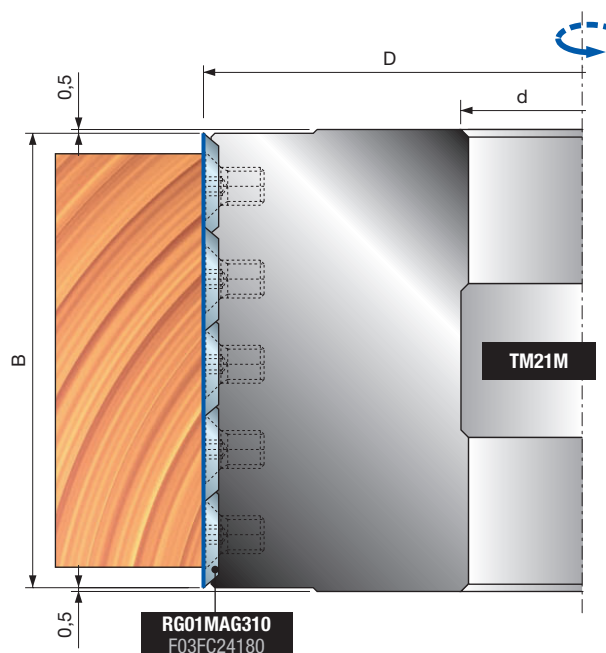
Technical information:

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	V	Max RPM 1/min.	Freud Code	Art. No.
100	60	30		15	10.300	TM21M ECC	F03FC20458
100	100	30		27	10.300	TM21M EEC	F03FC20459
125	130	40		33	10.300	TM21M HGE	F03FC20460
125	150	40		39	10.300	TM21M HHE	F03FC20461
125	180	40		45	10.300	TM21M HIE	F03FC20462

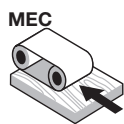
	Spare parts	Dimensions mm	Freud Code	Art. No.
	Spur	14 x 14 x 2	RG01MAG310	F03FC24180
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Torx key	T20	CB03M CC9	F03FA00167



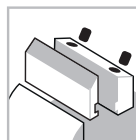


TP05M

Planer cutterheads with HSS knives



Automatic Feed



Clamping System



Aluminium Body



Softwood



Hardwood

Machines:

Moulders, automatic and throughfeed machines.

Materials:

Softwood and hardwood.

Applications:

Planing, moulding and finishing.

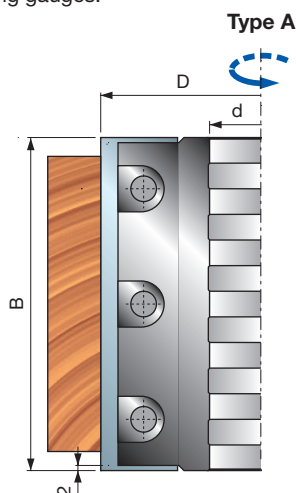
Technical information:

Planer cutterhead particularly indicated for softwood, maximum cutting depth 15 mm.

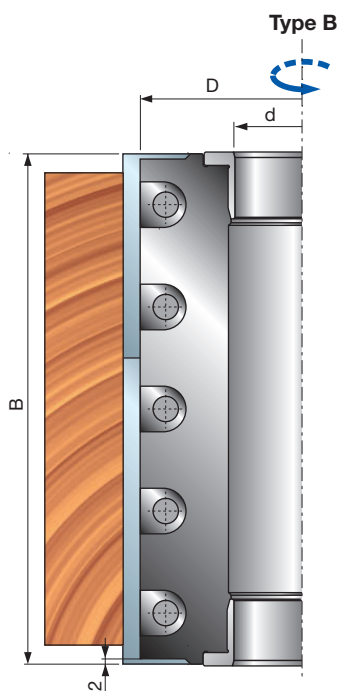
Type A: Cutterheads with traditional bore.

Type B: Bore realised on two side steel flanges fitted on Aluminium body:

- Better bore tolerances.
- Easy dismounting from the spindle.
- Rebore not available.
- Position the knives at the correct diameter with setting gauges.



Type A

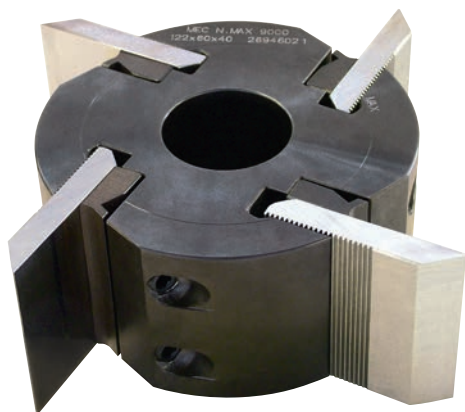


Type B

Planing

	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

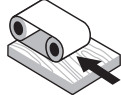
	Spare parts	Dimensions mm	Freud Code	Art. No.
	Screw	M10 x 25	2602M F19	F03FA07353
	Allen key	5	CB03M EA9	F03FA00169
100	Knife	100 x 30 x 3	CT01MDA202	F03FA18167
	Wedge	96 x 19 x 8,5	CN11M 096	F03FC23670
130	Knife	130 x 30 x 3	CT01MHA202	F03FA18169
	Wedge	126 x 19 x 8,5	CN11M 126	F03FC21964
150	Knife	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



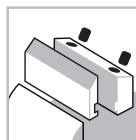
TPCZM

Cutterheads with serrated profilable knives

MEC



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:

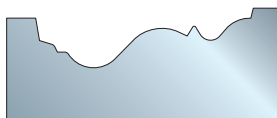
Suitable for profiling all softwoods and hardwoods.

- 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.

Raw knife

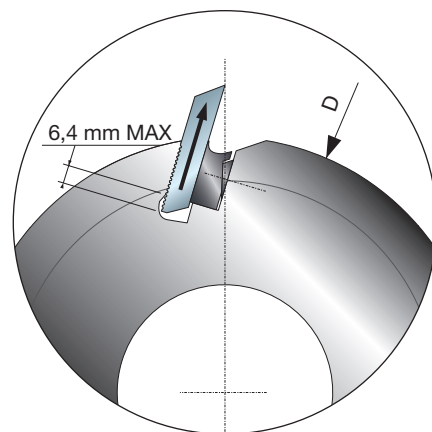
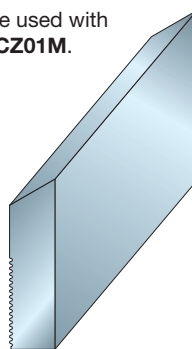


Profiled knife



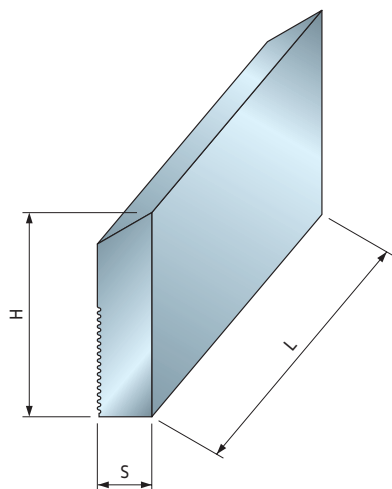
It can be used with knives **CZ01M**.

Knife placement



CZ01M

HSS serrated back knives



Profilable HSS knives with serrated surface.

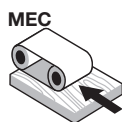
- Suitable for Freud TPCZM planners.
- Suitable for cutting all softwoods and hardwoods.

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

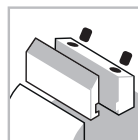


TM28M

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

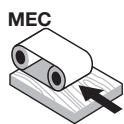
Groove bead cutters

Item	In conjunction with item:	Art. No.
TM28M	T182M EA3	F03FC20588
TM28M	T182M EB3	F03FC20589

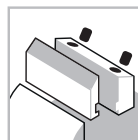
Aluminium light alloy body. For cleaning do not use products containing caustic soda. Can be used in combination with item T182M to cut guiding rebates.

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).

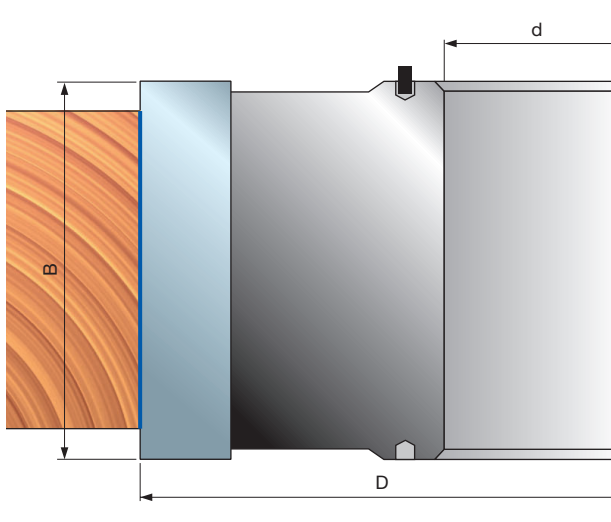
- Aluminium light alloy body.
- Rebore not available.
- Can be used in combination with item T182M to cut guiding rebates.

Groove bead cutters

Item	In conjunction with item:	Art. No.
T102M AC3 - AF3	T182M EA3	F03FC20588
T102M AC3 - AF3	T182M EB3	F03FC20589

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
125	30	32	4	10.300	T102M AL3	F03F668305
125	30	40	4	10.300	T102M AF3	F03FC20577
125	50	32	4	10.300	T102M AI3	F03F668304
125	50	40	4	10.300	T102M AC3	F03FC20575
125	50	50	4	10.300	T102M AD3	F03FC20576

	Spare parts	Dimensions mm	Freud Code	Art. No.	
	Screw	M10 x 22	VT19M MA9	F03FA04496	
	 Nut	15 x 13,3 x M10	VT20M MA9	F03FC20670	
	 Allen key	5	CB03M EA9	F03FA00169	
AC3 - AD3 AI3		Knife	50 x 12 x 1,5	CG08MFA310	F03FH02907
		Wedge	15 x 46 x 8	CN09M AP9	F03FC01290
		Knife	30 x 12 x 1,5	CG08MEA310	F03FH02906
		Wedge	15 x 26 x 8	CN09M AD9	F03FC01283



Application examples

Fig. A

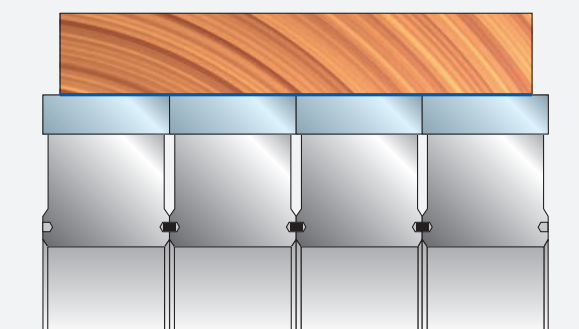
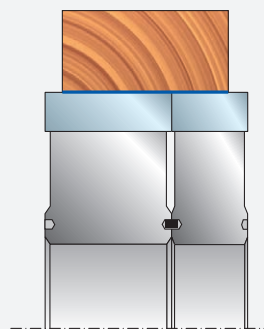


Fig. B

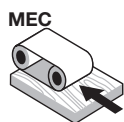


Rebating

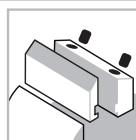


T182M

Groove bead cutterheads with disposable knives



Automatic Feed



Clamping System



Steel Body



Softwood



Hardwood



Rebating

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.

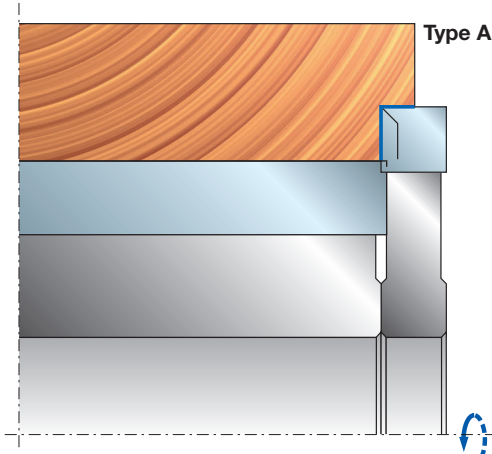
- Item **T182M AB3**: suitable for Casadei and S.C.M. moulders.
- Steel body.
- Rebore not available.

	D mm	B mm	d mm	Z	V	Max RPM 1/min.	Freud Code	Art. No.
Type A	120	12	35	3	3	11.000	T182M BB3	F03FC20585
	120	12	35	2	2	11.000	T182M CB3	F03FC20586
	145	10	40	3	3	9.000	T182M AB3*	F03FC20584
	150	10	40	4	2	9.000	T182M EB3	F03FC20589
Type B	150	10	40	3	3	9.000	T182M DB3	F03FC20587
	145	12	40	4	2	9.000	T182M EA3	F03FC20588
	145	12	40	3	3	9.000	T182M AA3	F03FC20583

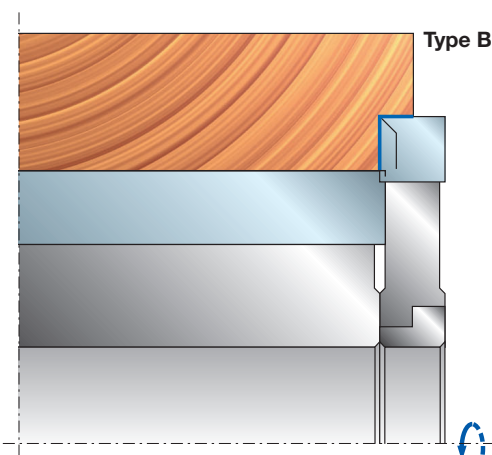
Item	Art. No.	In conjunction with item:
T182M AB3*	F03FC20584	TM06M - TM07M 0125
T182M AA3	F03FC20583	TM06M - TM07M 0125
T182M CB3	F03FC20586	TM06M PC3 - TM06M PH3
T182M DB3	F03FC20587	TM06M - TM07M
T182M EA3	F03FC20588	TM28M - T102M
T182M EB3	F03FC20589	TM28M - T102M

Item **T182M**: use in combination with **TM06M-TM07M** to cut guiding rebates.

* For use on Casadei and S.C.M. moulders.



Type A



Type B

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Torx key	T20	CB03M CC9	F03FA00167
	Spur	14 x 14 x 2	RG01MAA310	F03FH03034
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Allen key	3	CB03M AA9	F03FA00162
AA3	Knife	12 x 12 x 1,5	CG08MBA310	F03FH02903
	Wedge	15 x 10 x 8	CN01M BA9	F03FC01249
	Flange	68 x 10 x 40	FX01M HC9	F03FC15041
	Screw	M6 x 16	VT03M DI9	F03FA04440
AB3	Allen key	3	CB03M AA9	F03FA00162
	Knife	9,6 x 12 x 1,5	CG08MMA310	F03FH02910
	Wedge	15 x 8 x 8	CN09M DB9	F03FC01296
	Screw	M5 x 16	VT03M BB9	F03FA04437
BB3	Allen key	2,5	2619M CA9	F03FA07432
	Knife	11 x 12 x 1,5	CG08MMA310	F03FH03254
	Wedge	15 x 10 x 8	CN01M BA9	F03FC01249
	Screw	M6 x 16	VT03M DI9	F03FA04440
CB3	Allen key	3	CB03M AA9	F03FA00162
	Knife	12 x 12 x 1,5	CG06MAA310	F03FH02889
	Wedge	15 x 10 x 8	CN01M BA9	F03FC01249
	Screw	M6 x 16	VT03M DI9	F03FA04440
DB3	Allen key	3	CB03M AA9	F03FA00162
	Knife	9,6 x 12 x 1,5	CG08MBA310	F03FH02903
	Wedge	15 x 8 x 8	CN09M DB9	F03FC01296
	Screw	M5 x 16	VT03M BB9	F03FA04437
EA3	Allen key	2,5	2619M CA9	F03FA07432
	Knife	12 x 12 x 1,5	CG08MBA310	F03FH02903
	Wedge	15 x 10 x 8	CN09MS AA9	F03FC01323
	Flange	68 x 10 x 40	FX01M HC9	F03FC15041
EB3	Screw	M6 x 22	VT19M AB9	F03FA04491
	Nut	10 x 11,5 x 6	VT20M AA9	F03FA04497
	Allen key	3	CB03M AA9	F03FA00162
	Knife	9,6 x 12 x 1,5	CG08MBA310	F03FH02903
	Wedge	15 x 8 x 8	CN09M AH9	F03FC01285
	Screw	M6 x 22	VT19M AB9	F03FA04491
	Nut	9 x 10,5 x 6	VT20M GA9	F03FC20669
	Allen key	3	CB03M AA9	F03FA00162

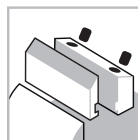


T111M - T112M

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.

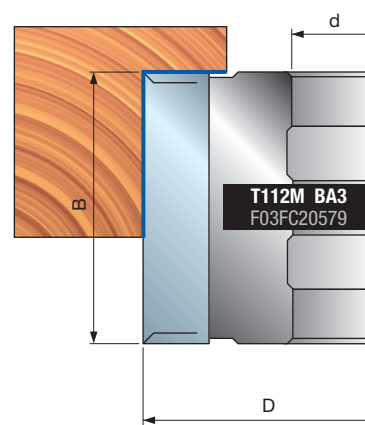
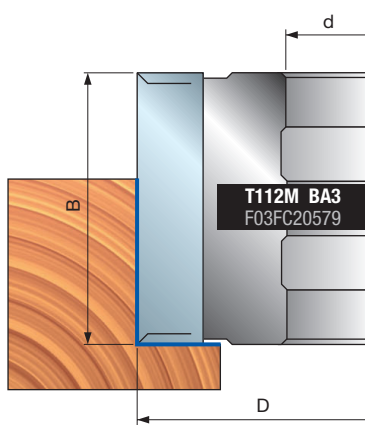
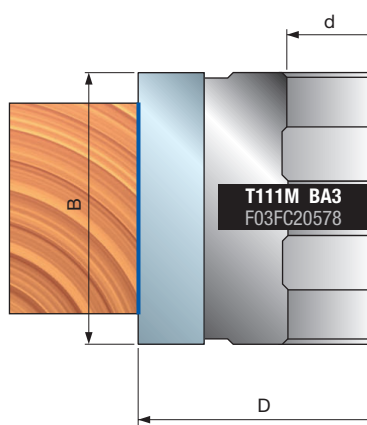
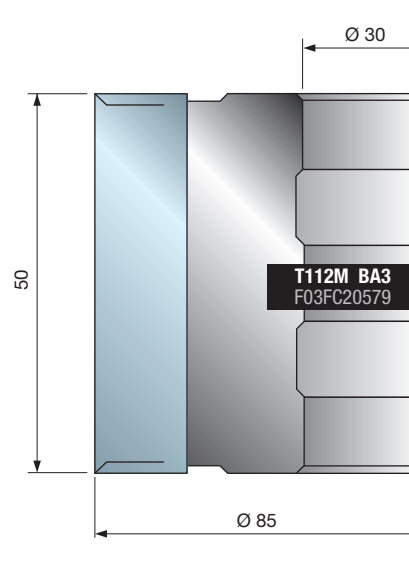
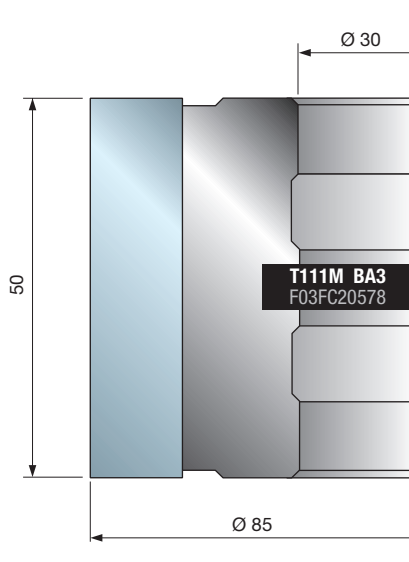
Technical information:

Disposable knives tool for planing and rebating.

- Aluminium light alloy body.
- Rebore not available.

D mm	B mm	d mm	Z	V	Max RPM 1/min.	Freud Code	Art. No.
85	50	30	4		12.000	T111M BA3	F03FC20578
85	50	30	4	4	12.000	T112M BA3	F03FC20579

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Knife	50 x 12 x 1,5	CG08MFA310	F03FH02907
	Screw	M8 x 16	VT03M AA9	F03FA04435
	Wedge	46	CN01M KA9	F03FC01255
	Allen key	4	2619M EA9	F03FA07434
	Torx key	T20	CB03M CC9	F03FA00167
	Spur	14 x 14 x 2	RG01MAA310	F03FH03034
	Screw	M5 x 8	VT05M AA9	F03FA04444



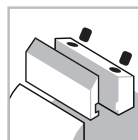


T191M - T192M

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.

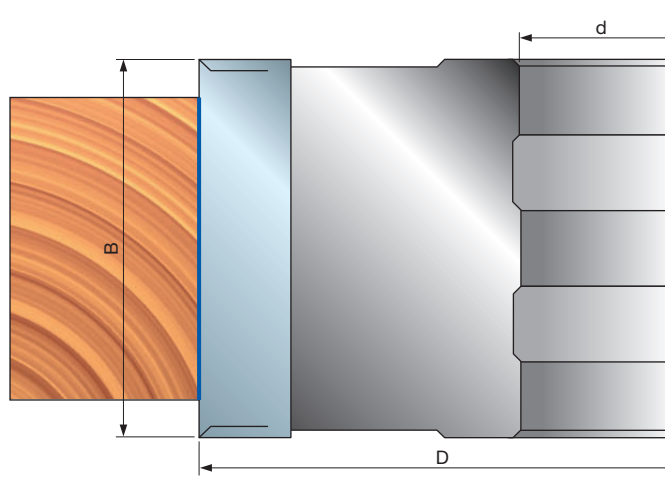
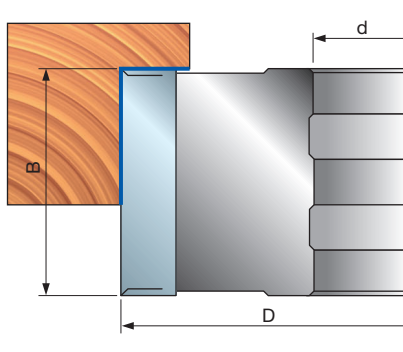
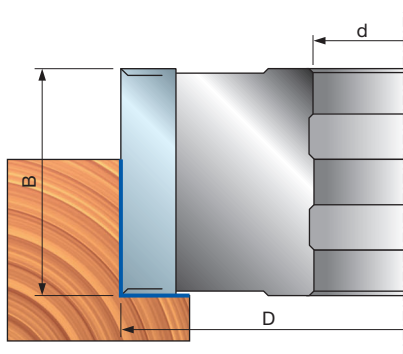
Technical information:

Disposable knives tool for planing and rebating with alternate shear angle.

- Steel body.
- Rebore not available.

D mm	B mm	d mm	Z	V	Max RPM 1/min.	Freud Code	Art. No.
125	50,4	30	4	4	10.300	T191M BA3	F03FC20600
125	50,4	35	4	4	10.300	T191M BB3	F03FC20601
125	50,4	40	4	4	10.300	T191M BC3	F03FC20602
125	50,4	50	4	4	10.300	T191M BD3	F03FC20603
125	50,4	30	2	4	10.300	T192M BA3	F03FC20604
125	50,4	35	2	4	10.300	T192M BB3	F03FC24963
125	50,4	40	2	4	10.300	T192M BC3	F03FC20605
125	50,4	50	2	4	10.600	T192M VC3	F03F703931

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Knife	50 x 12 x 1,5	CG08MFA310	F03FH02907
	Wedge	15 x 46 x 8	CN09M AP9	F03FC01290
	Screw	M10 x 22	VT19M MA9	F03FA04496
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Nut	15 x 13,3 x M10	VT20M MA9	F03FC20670
	Spur	14 x 14 x 2	RG01MAA310	F03FH03034
T112M	Allen key	5	CB03M EA9	F03FA00169
	Torx key	T20	CB03M CC9	F03FA00167



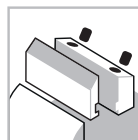


T194M - T195M

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.

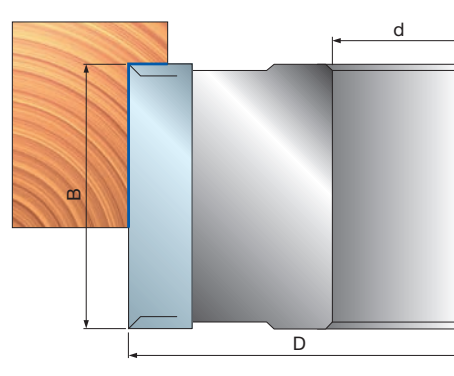
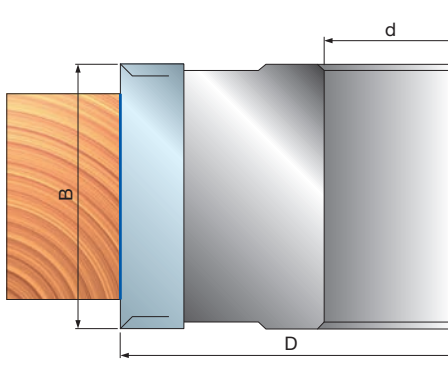
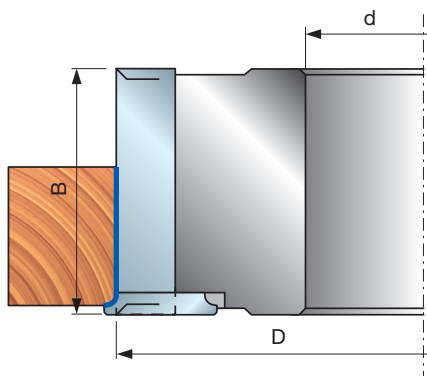
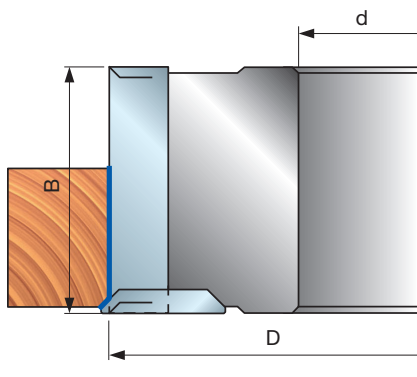
- Seat pockets for chamfering and rounding inserts (not included).
- Aluminium light alloy body.
- Rebore not available.

D mm	B mm	d mm	Z	V	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
AB3 AC3 BB3 BC3	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



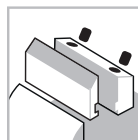


T193M

Disposable knives cutterheads for rebates



Manual Feed



Clamping System



Aluminium Body



Softwood



Hardwood



Planing



Rebating



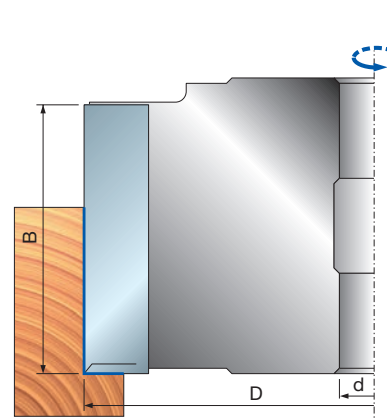
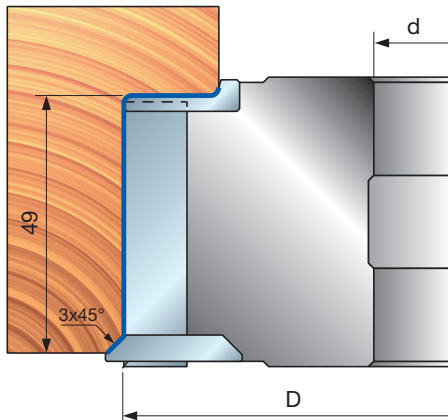
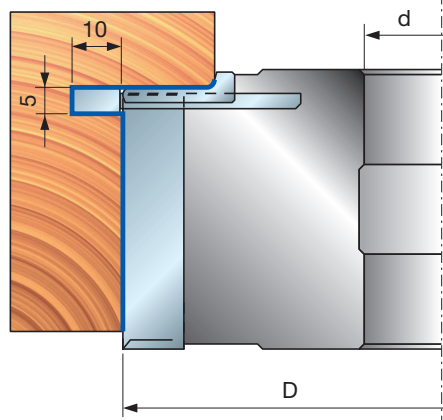
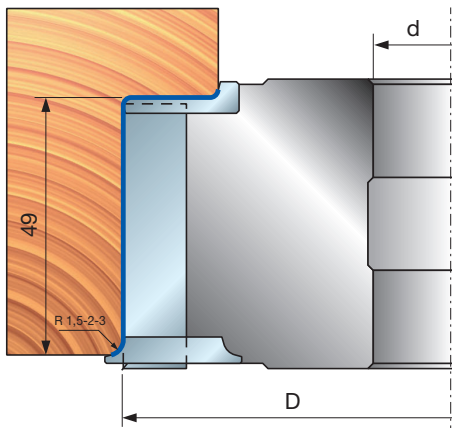
Machines:
Spindle moulders and manual feed machines.

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	V	Max RPM 1/min.	Freud Code	Art. No.
125	50	30	4	2	10.300	T193M BA3	F03FC20606
125	50	32	4	2	10.300	T193M BC3	F03F668306
140	50	50	4	2	9.600	T193M BD3	F03FC25545

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	50 x 12 x 1,5	CG08MFA310	F03FH02907
	Wedge	15 x 46 x 8	CN09M AP9	F03FC01290
	Nut	15 x 13,3 x M10	VT20M MA9	F03FC20670
	Screw	M10 x 22	VT19M MA9	F03FA04496
	Spur	14 x 14 x 2	RG01MAA310	F03FH03034
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Adjustment ring	16 x 11,9 x 2,6	VT18M AG9	F03FC20660
	Screw	M6 x 10	2622M CB9	F03FA07455
	Allen key	5	CB03M EA9	F03FA00169
	Allen key	4	CB03M BA9	F03FA00163
	Torx key	T20	CB03M CC9	F03FA00167

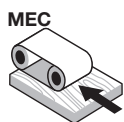
Tool with seat pockets for the following inserts (not included):

Inserts		Dimensions mm	Freud Code	Art. No.
	Multipurpose insert	15	IG25MD15302	F03FC24169
	Multipurpose insert	16	IG25MD16302	F03FC24170
	Multipurpose insert	18	IG25MD18302	F03FC24171
	Screw	M6 x 10	2622M CB9	F03FA07455
	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
	Sector	25 x 45 x 5 Z1	SR11MDBD301	F03FC24206
	Screw	M5 x 8	VT05M AA9	F03FA04444

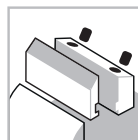


T198M

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.

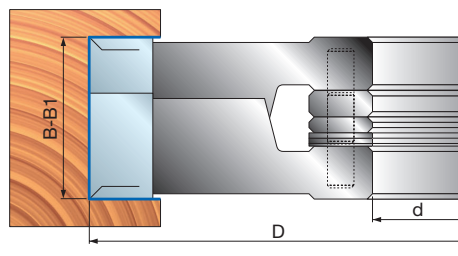
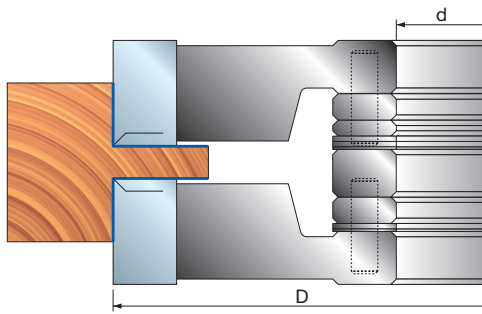
- Rebore not available.
- Seat pockets for chamfering, rounding and grooving inserts (not included).
- Steel body.
- Rebore not available.

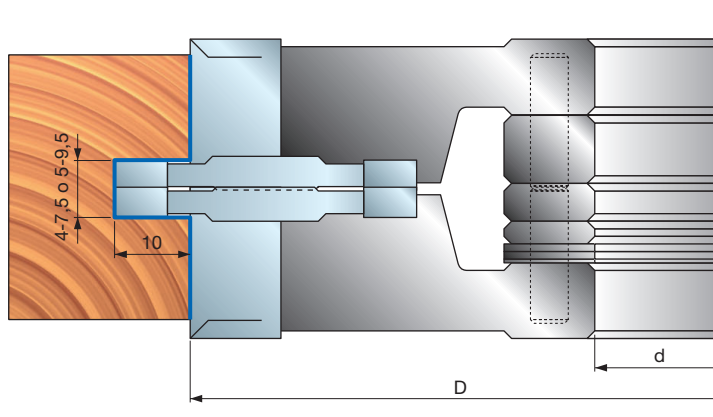
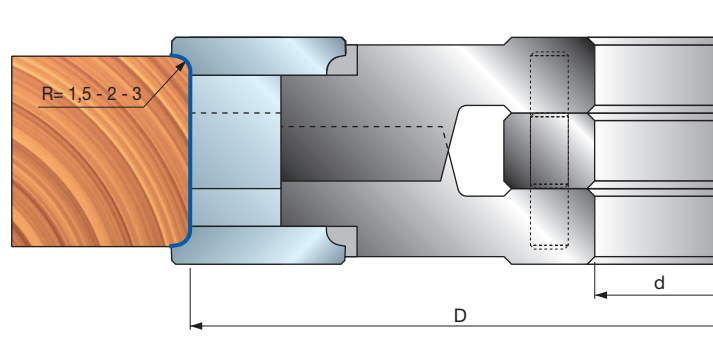
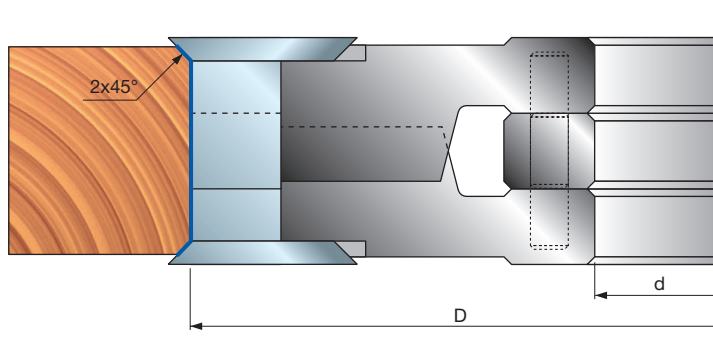
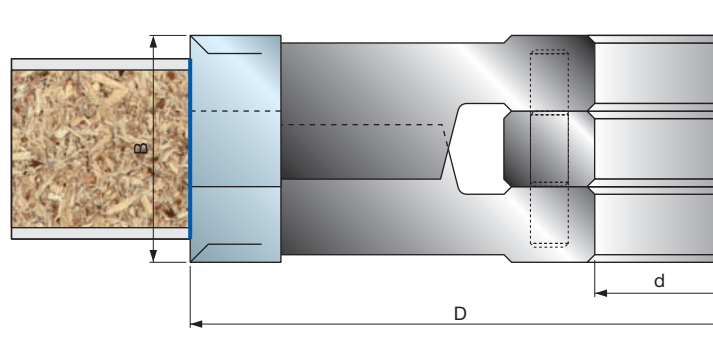
D mm	B-B1 mm	d mm	Z	V	Max RPM 1/min.	Freud Code	Art. No.
140	20,5-39	30	2+2	2+2	9.600	T198M FA3	F03FC22428
140	20,5-39	32	2+2	2+2	9.600	T198M FD3	F03FC24270
140	20,5-39	35	2+2	2+2	9.600	T198M FB3	F03FC20612
140	20,5-39	40	2+2	2+2	9.600	T198M FC3	F03FC20613
140	30,4-59	30	2+2	2+2	9.600	T198M GA3	F03FC22590
140	30,4-59	32	2+2	2+2	9.600	T198M GD3	F03FC24271
140	30,4-59	35	2+2	2+2	9.600	T198M GB3	F03FC20614
140	30,4-59	40	2+2	2+2	9.600	T198M GC3	F03FC20615

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Spur	14 x 14 x 2	RG01MAA310	F03FH03034
	Nut	15 x 13,3 x M10	VT20M NA9	F03FC20671
	Screw	M10 x 22	VT19M MA9	F03FA04496
	Screw	M6 x 14,5	VT16M AA9	F03FA04476
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Allen key	5	CB03M EA9	F03FA00169
	Torx key	T20	CB03M CC9	F03FA00167
FA3	Spacers set	50 x 20 x 30	AN13M BA9	F03FC22427
FB3	Spacers set	55 x 20 x 35	AN13M BB9	F03FC00543
FC3	Spacers set	60 x 20 x 40	AN13M CB9	F03FC00545
FD3	Spacers set	52 x 21,1 x 32	AN13M BE9	F03FC24531
FA3	Knife	20 x 12 x 1,5	CG08MDA310	F03FH02905
FB3	Wedge	15 x 16 x 8	CN09MD A09	F03FC01306
FC3	Wedge	15 x 16 x 8	CN09MS A09	F03FC01331
FD3	Wedge	15 x 16 x 8	CN09MS A09	F03FC01331
GA3	Spacers set	50 x 30 x 30	AN13M BD9	F03FC22591
GB3	Spacers set	55 x 30 x 35	AN13M BC9	F03FC00544
GC3	Spacers set	60 x 30 x 40	AN13M CC9	F03FC00546
GD3	Spacers set	52 x 31,1 x 32	AN13M BF9	F03FC24532
GA3	Knife	30 x 12 x 1,5	CG08MEA310	F03FH02906
GB3	Wedge	15 x 26 x 8	CN09MD AD9	F03FC01300
GC3	Wedge	15 x 26 x 8	CN09MS AD9	F03FC01326
GD3	Wedge	15 x 26 x 8	CN09MS AD9	F03FC01326

Tool with seat pockets for the following inserts (not included):

	Inserts	Dimensions mm	Freud Code	Art. No.
	Grooving insert	40 x 16 x 4	IG04MDAA305	F03FH03409
	Grooving insert	40 x 16 x 4	IG04MSAA305	F03FH02994
	Screw	M6 x 14,5	VT16M AA9	F03FA04476
	Knife	26 x 16 x 5 45°	IG61MDBA305	F03FH03026
	Knife	26 x 16 x 5 45°	IG61MSBA305	F03FH03027
	Knife	26 x 16 x 5 R=1,5	IG62MDAB305	F03FH03028
	Knife	26 x 16 x 5 R=2	IG62MDAC305	F03FH03029
	Knife	26 x 16 x 5 R=3	IG62MDAE305	F03FH03030
	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





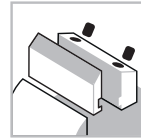


T199M

Adjustable rebate and groove cutterhead sets with disposable knives



Manual Feed



Clamping System



Steel Body



Softwood



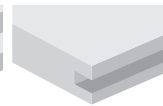
Hardwood



Planing



Rebating



Grooving



Machines:

Moulders, automatic and throughfeed machines.

Materials:

Softwood and hardwood.

Applications:

Planing, rebating and grooving.

Technical information:

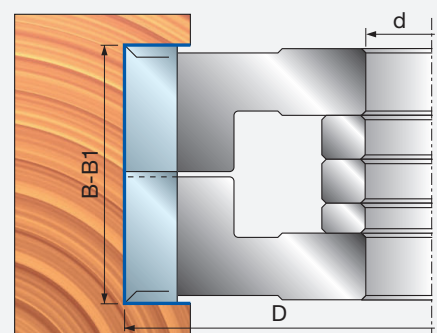
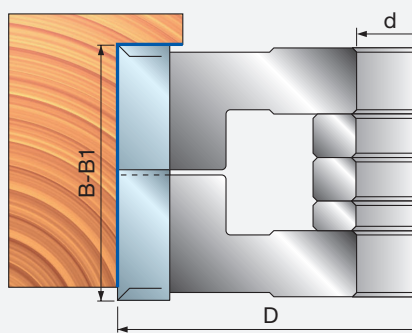
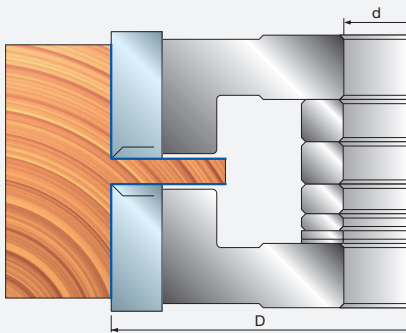
Disposable knives tool set with alternate shear angle.

- Seat pockets for chamfering, rounding and grooving inserts (not included).
- Steel body.
- Rebore not available.

D mm	B-B1 mm	d mm	Z	V	Max RPM 1/min.	Freud Code	Art. No.
140	30,4-59	30	2+2	2+2	9.600	T199M GA3	F03FC20624
140	30,4-59	32	2+2	2+2	9.600	T199M GD3	F03FC24474
140	30,4-59	35	2+2	2+2	9.600	T199M GB3	F03FC20625
140	30,4-59	40	2+2	2+2	9.600	T199M GC3	F03FC20626
140	30,4-59	50	2+2	2+2	9.600	T199M GE3	F03FC25267

Spare parts		Dimensions mm	Freud Code	Art. No.
	Knife	30 x 12 x 1,5	CG08MEA310	F03FH02906
	Wedge	12,3 x 26 x 8	CN01MD GA9	F03FC01263
	Wedge	12,3 x 26 x 8	CN01MS GA9	F03FC01266
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Spur	14 x 14 x 2	RG01MAA310	F03FH03034
	Screw	M8 x 16	VT03M AA9	F03FA04435
	Allen key	4	CB03M BA9	F03FA00163
	Allen key	5	CB03M EA9	F03FA00169
	Torx key	T20	CB03M CC9	F03FA00167
GA3	Spacer set	50 x 30 x 30	AN03M AC9	F03FC00446
GB3	Spacer set	55 x 30 x 35	AN03M BC9	F03FC00456
GC3	Spacer set	60 x 30 x 40	AN03M CC9	F03FC00467
GD3	Spacer set	52 x 30 x 32	AN03M DC9	F03FC00475

A 10 pieces set of spacers: Thickness: 0,1 - 0,2 - 0,3 - 0,5 - 1 - 2 - 3 - 6 - 8 - 10 mm

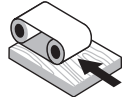




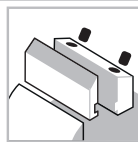
TP48M

ISOprofil cutterheads for door frames

MEC



Automatic Feed



Clamping System



Steel Body



Softwood



Hardwood



Rebating



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.

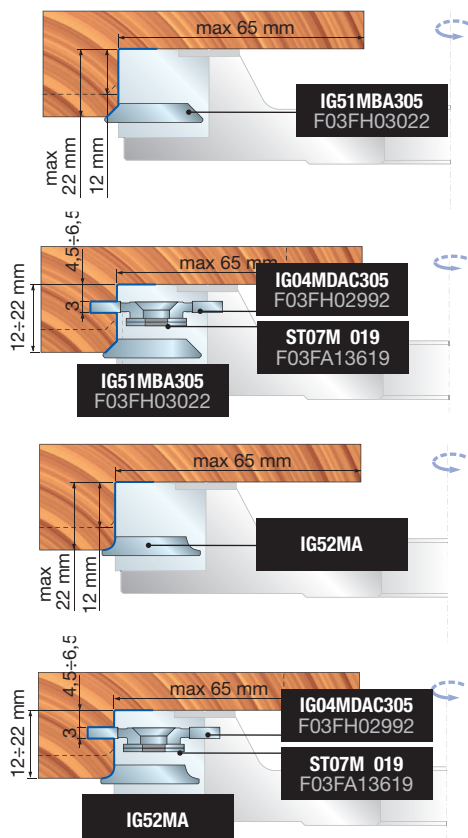
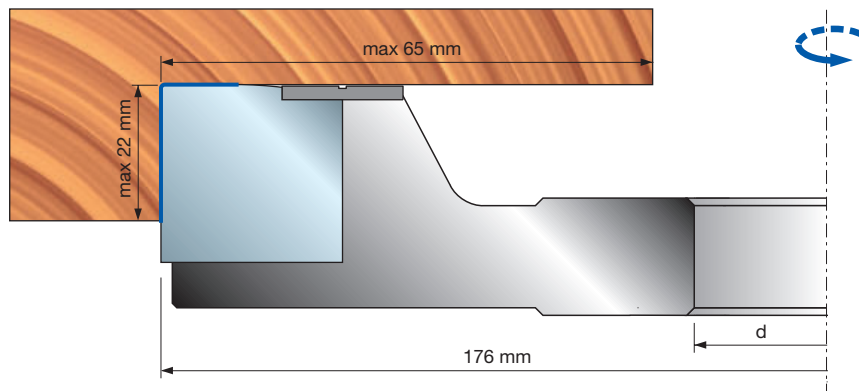
Tool suitable for solid wood jamb board rebate machining.

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

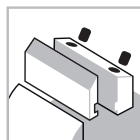




TW23M - TW20M Jointing cutterheads



Manual Feed



Clamping System



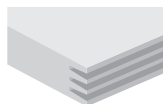
Aluminium Body



Softwood



Hardwood



Jointing



Machines:

Spindle moulders and manual feed machines.

Materials:

Softwood and hardwood.

Applications:

Jointing.

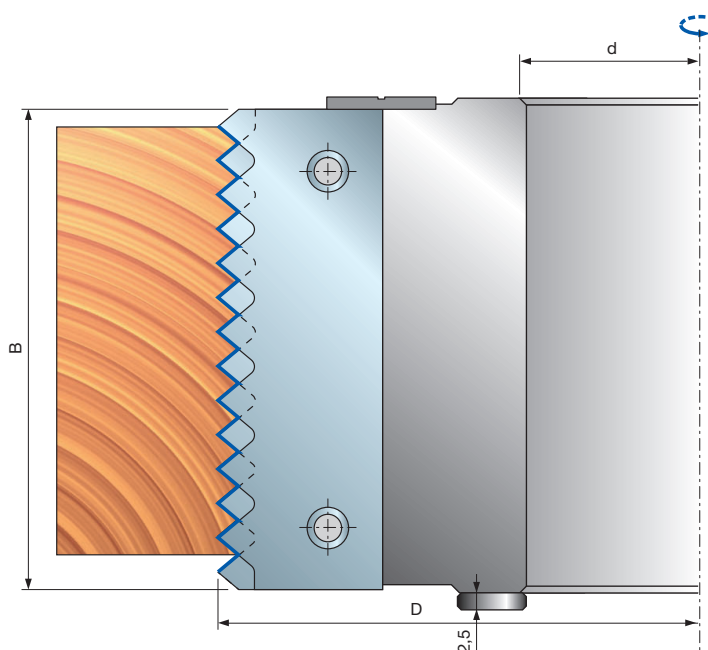
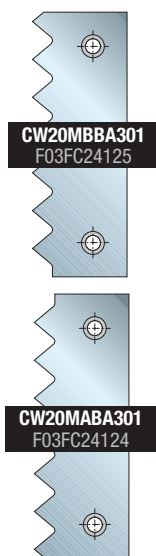
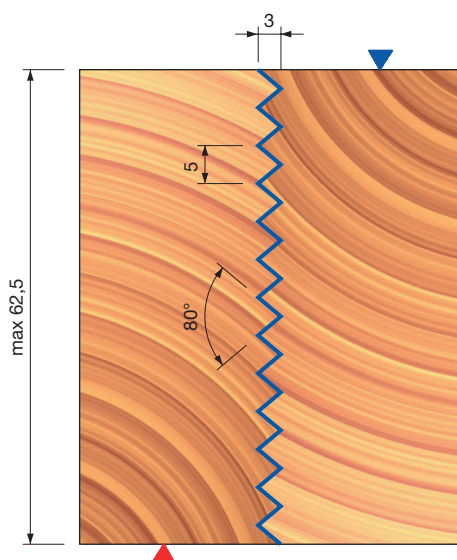
Technical information:

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	TW20M BA3	F03FC22727
140	70	32	4	9.600	TW20M BG3	F03F676528
140	70	35	4	9.600	TW20M BF3	F03FC20564
140	70	50	4	9.600	TW20M BD3	F03FC25548
140	70	30	2	9.600	TW23M BE3	F03FC24404
140	70	32	2	9.600	TW23M BG3	F03F668303
140	70	35	2	9.600	TW23M BF3	F03FC20567
140	70	50	2	9.600	TW23M BD3	F03FC25549

Spare parts	Dimensions mm	Freud Code	Art. No.
Knife	70 x 25 x 3	CW20MABA301	F03FC24124
Knife	70 x 25 x 3	CW20MBBA301	F03FC24125
Wedge	68 x 19 x 8	CN11M C660A	F03FC01354
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
Spacer	50 x 2,5 x 30	AN20M AI9	F03FC00552
Spacer	55 x 2,5 x 35	AN20M BI9	F03FC00553
Spacer	52 x 2,5 x 32	AN20M EI9	F03FC24411



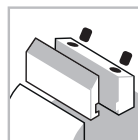


TW22M

Jointing cutterheads



Manual Feed



Clamping System



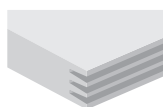
Aluminium Body



Softwood



Hardwood



Jointing



Machines:

Spindle moulders and manual feed machines.

Materials:

Softwood and hardwood.

Applications:

Jointing.

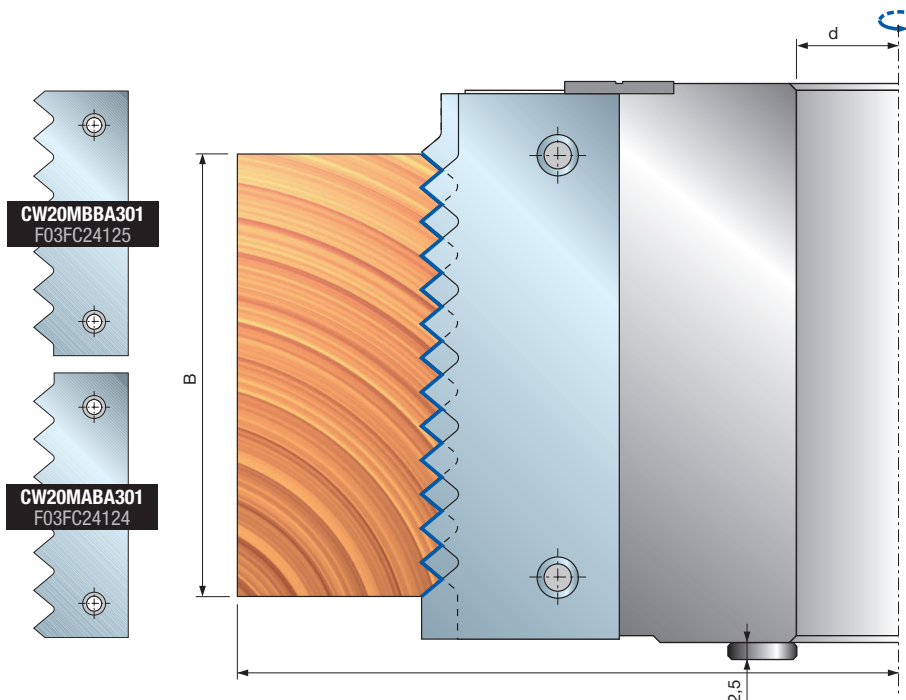
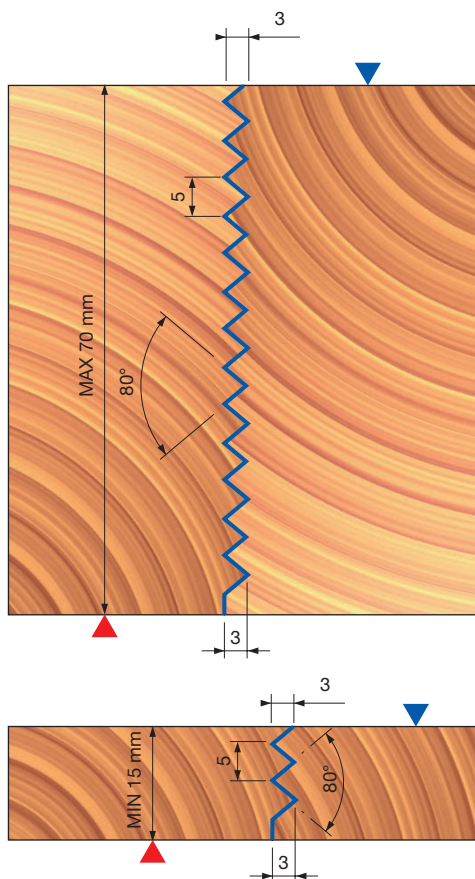
Technical information:

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	V	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

Fig. 1 Profile

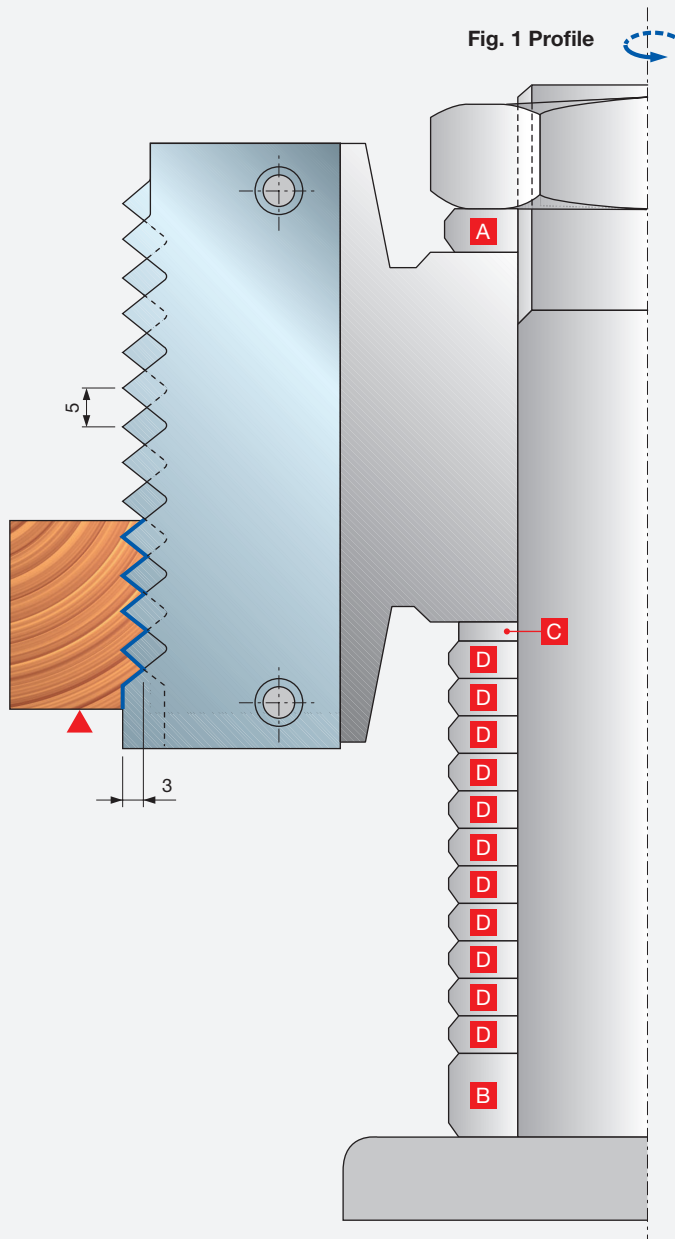
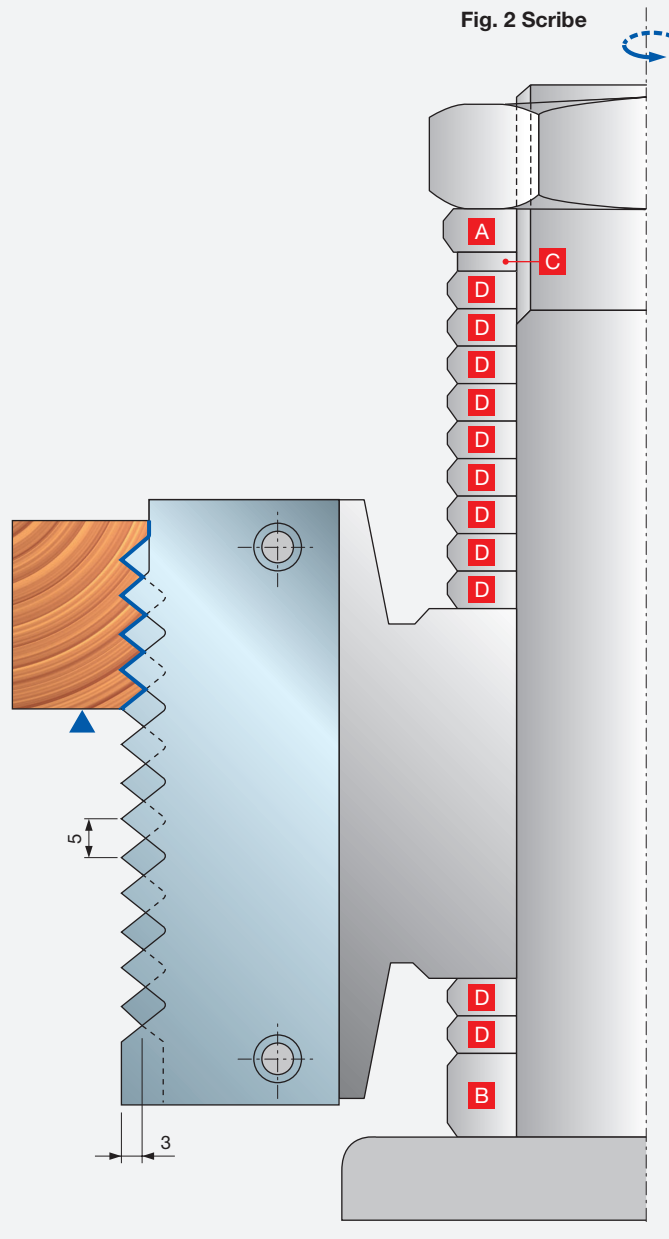


Fig. 2 Scribe



1: To obtain the profile, insert all spacers "C" and "D" below the tool as indicated in figure A.

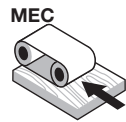
2: To achieve the counterprofile remove spacer "C" and as many spacers "D" as the number of teeth not in use, placing them above the tool as indicated in figure B. In the example above there are 9 teeth not used (Fig. A), so 9 spacers "D" will be removed together with spacer "C" and placed above the 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**.

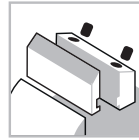


TW01M

Finger joint cutterheads



Automatic Feed



Clamping System



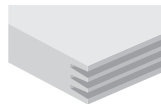
Steel Body



Softwood



Hardwood



Jointing



Machines:

Moulders, automatic and throughfeed machines.

Materials:

Softwood and hardwood.

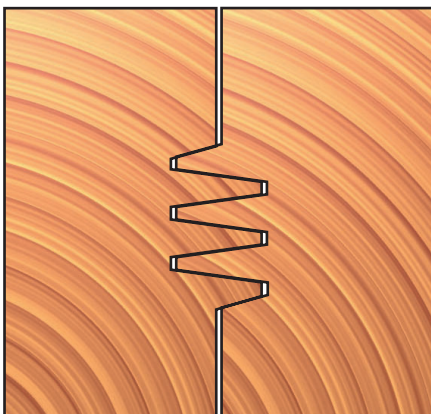
Applications:

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.

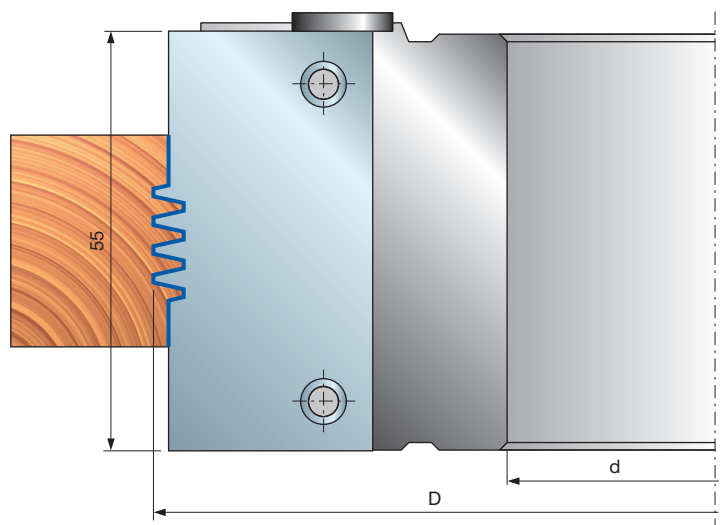


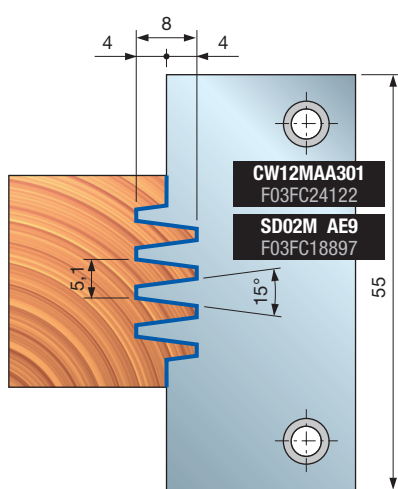
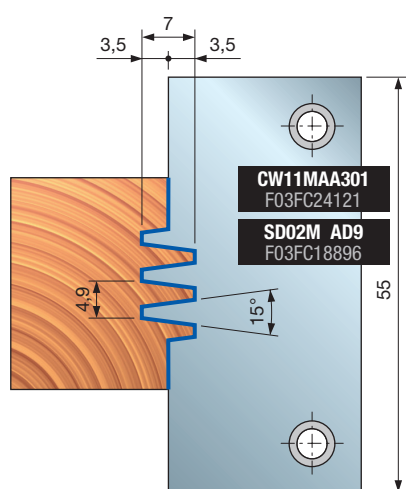
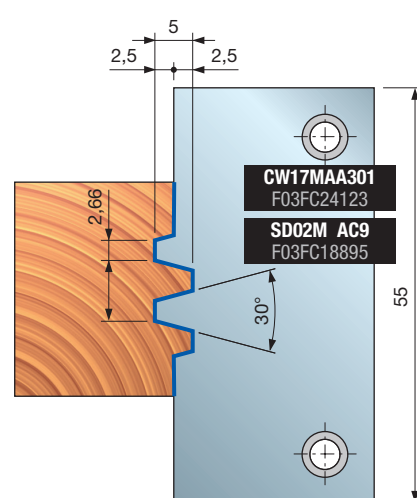
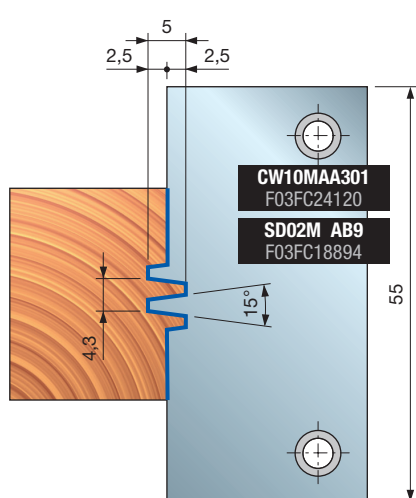
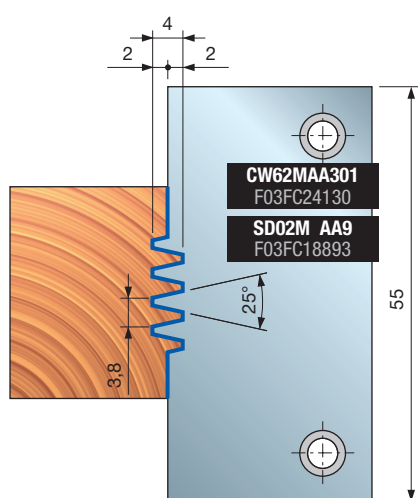
D	B	d	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm		1/min.		
150	55	35	4	9.600	TW01M AB3	F03FC20555

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

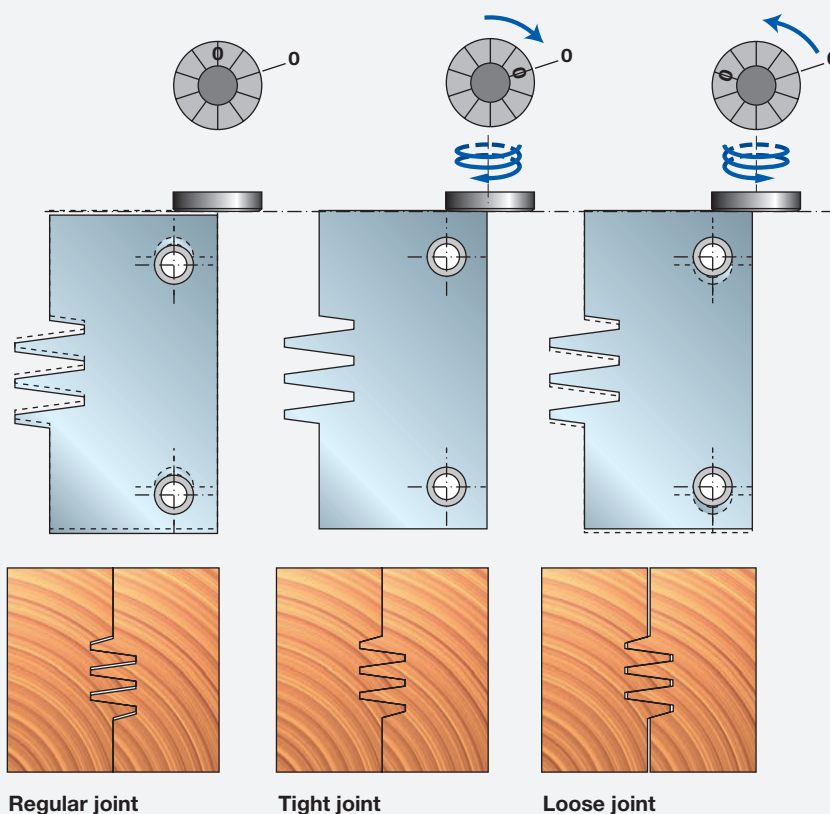




Dimensions	Spare knives	Art. No.
55 x 29 x 3	CW62MAA301	F03FC24130
55 x 29 x 3	CW10MAA301	F03FC24120
55 x 29 x 3	CW17MAA301	F03FC24123
55 x 29 x 3	CW11MAA301	F03FC24121
55 x 29 x 3	CW12MAA301	F03FC24122

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

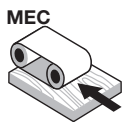
Adjustment examples:



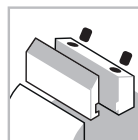


TW24M

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.

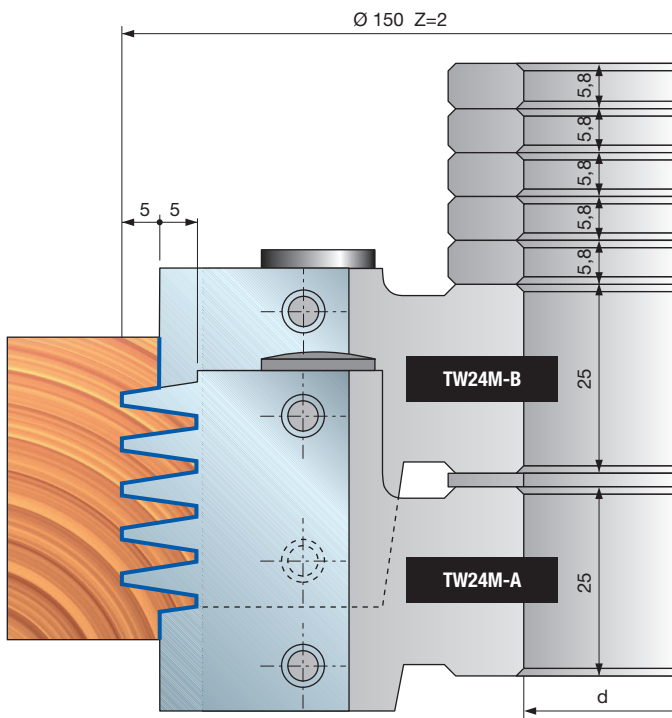
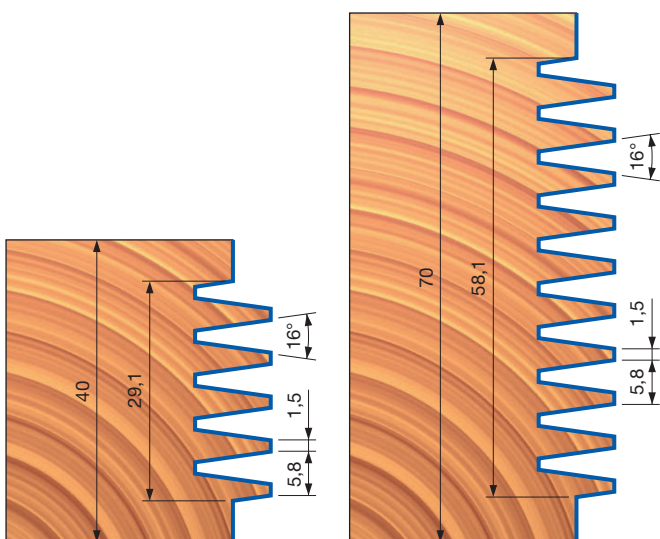
Technical information:

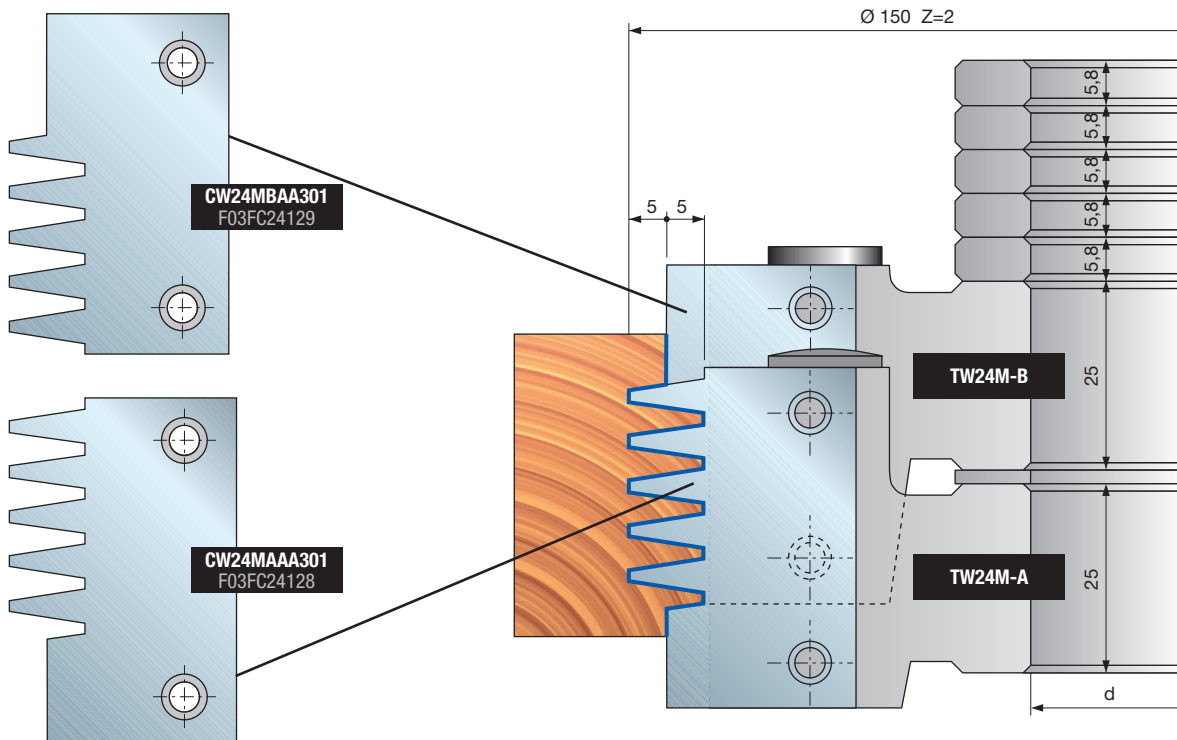
Adjustable tool to work long and cross grain on short workpieces.

- Adjustable for wood thicknesses between 40 and 70 mm.
- Cutterhead supplied with resharpenable HW knives and spacers.
- Steel body.
- Rebore not available.

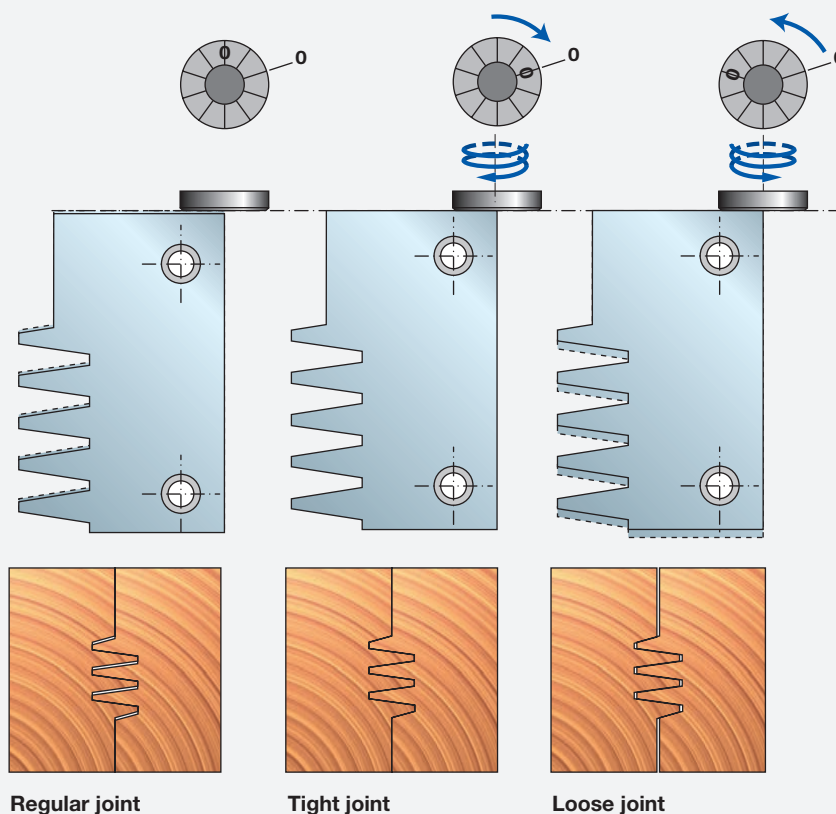
D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
150	-	30	2	9.000	TW24M AA3	F03FC24412
150	-	32	2	9.000	TW24M AE3	F03FC24413
150	-	35	2	9.000	TW24M AB3	F03FC20568
150	-	40	2	9.000	TW24M AC3	F03FC20569

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Knife for tool. "A"	45 x 30 x 3	CW24MAAA301	F03FC24128
	Knife for tool. "B"	45 x 30 x 3	CW24MBAA301	F03FC24129
	Screw	M5 x 7 x 16	VT08M AE9	F03FA04457
	Screw	M6 x 7 x 18	VT08M AG9	F03FC20653
	Wedge	41 x 17 x 8	CN11M B410A	F03FC01352
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Screw	M4 x 6	2602M CE9	F03FA07349
	Allen key	5	CB03M EA9	F03FA00169
	Allen key	2	2619M BA9	F03FA07431
AA3	Set spacers	50 x 5,8 x 30	AN04M AC9	F03FC00500
AB3	Set spacers	55 x 5,8 x 35	AN04M BC9	F03FC00502
AC3	Set spacers	60 x 5,8 x 40	AN04M CC9	F03FC00503
AE3	Set spacers	82 x 5,8 x 32	AN04M EC9	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



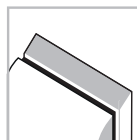


FI22M

Brazed cutters for pockets



Manual Feed



Brazed Cutters



Steel Body



Softwood



Hardwood



Grooving

Machines:
Biscuit jointer.

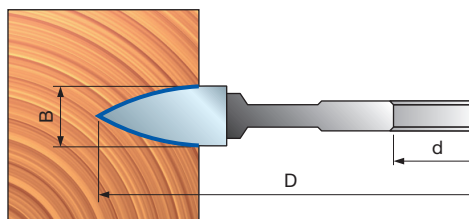
Materials:
Softwood and hardwood.

Applications:
Grooving.

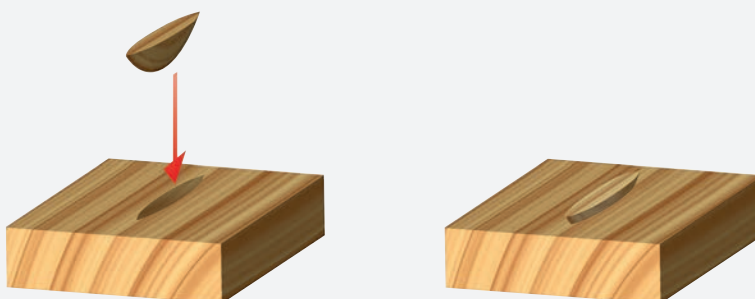
Technical information:
Brazed cutter with non-stick coated body.

- 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

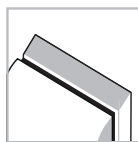




FI02M Brazen cutters for biscuit jointers



Manual Feed



Brazen Cutters



Steel Body



Softwood



Hardwood



Chipboard



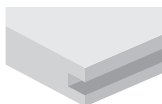
Laminated
Chipboard



MDF

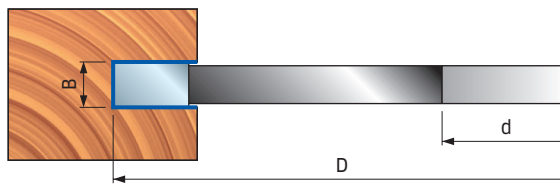


Laminated
MDF



Grooving

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
100	3,95	22	6	23.000	FI02M BX3	F03FS00656



Machines:

Biscuit joiner.

Materials:

Softwood, hardwood and wood based panels.

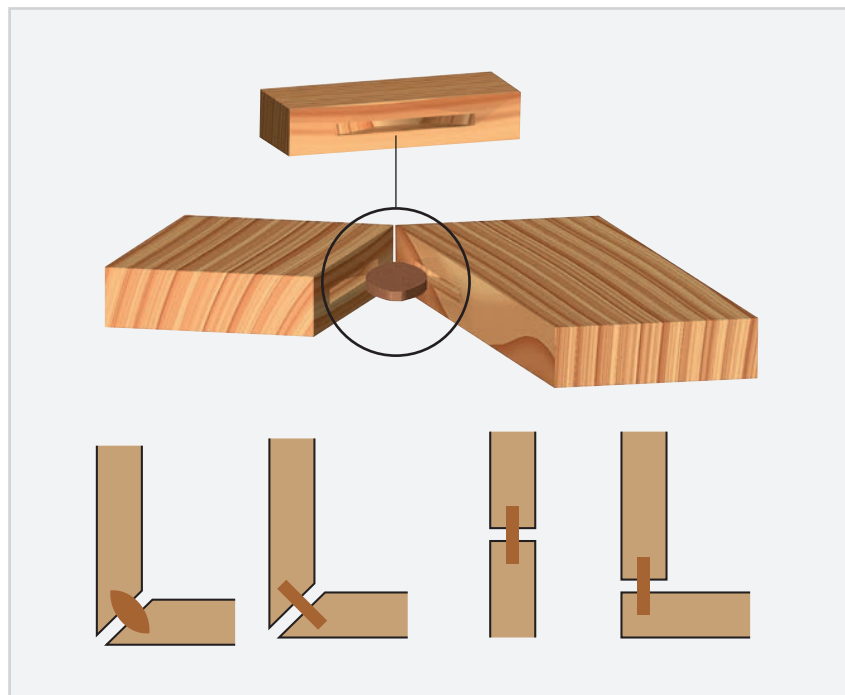
Applications:

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.



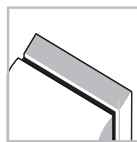


FI02M

Grooving brazed cutters for biscuit jointers with spurs



Manual Feed



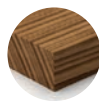
Brazed Cutters



Steel Body



Softwood



Hardwood



Chipboard



Laminated chipboard



MDF



Laminated MDF



Grooving



Machines:

Biscuit joiner.

Materials:

Softwood, hardwood and wood based panels.

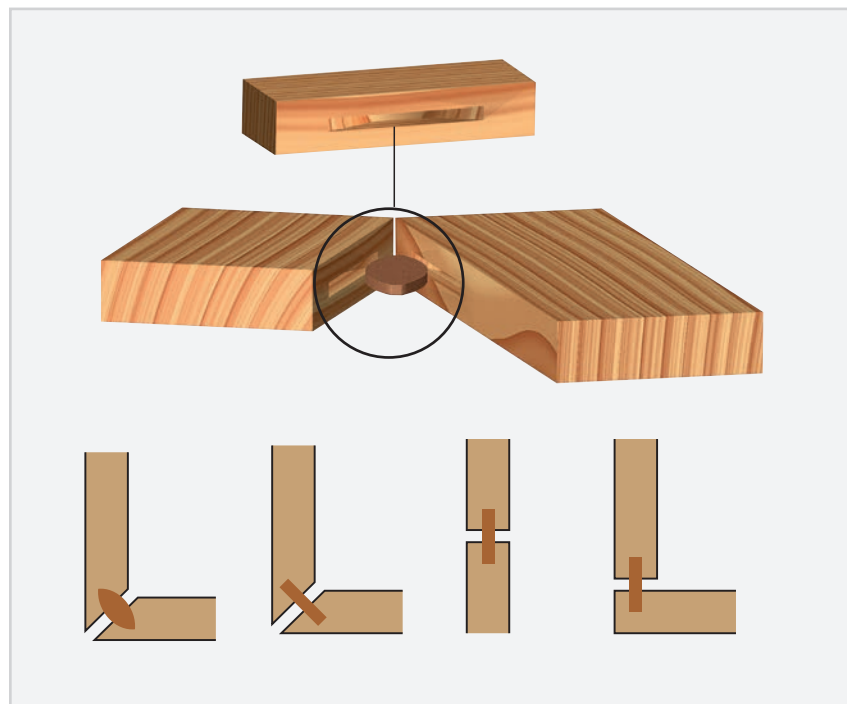
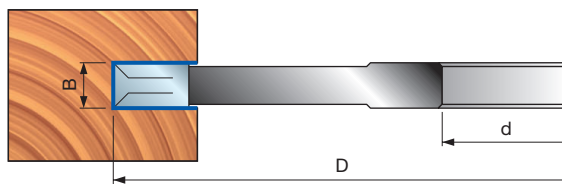
Applications:

Grooving.

Technical information:

Brazed cutters for corner joints.

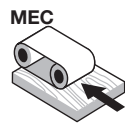
- Good quality grooving on softwood and hardwood, both cross cutting and ripping, on chipboard, compressed laminated woods and MDF.
- Steel body.
- Rebore not available.



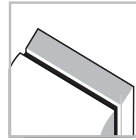


FI02M

Grooving brazen cutters



Automatic Feed



Brazen Cutter



Steel Body



Softwood



Hardwood



Chipboard



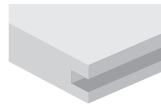
Laminated
chipboard



MDF



Laminated
MDF



Grooving

Machines:

Moulders, automatic and throughfeed machines.

Materials:

Softwood, hardwood and wood based panels.

Applications:

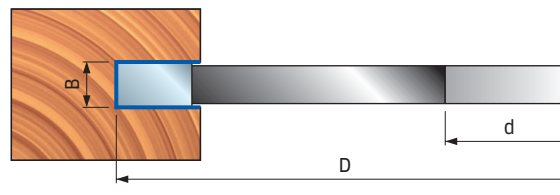
Grooving.

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	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

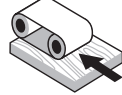




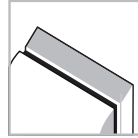
F105M

Grooving brazen cutters

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:

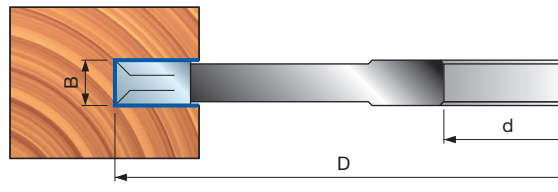
Grooving.

Technical information:

Brazed cutters for good quality grooving on softwood and hardwood, both cross cutting and ripping, on chipboard, compressed laminated woods and MDF.

- Steel body.
- Rebore not available.

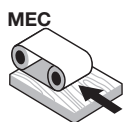
D mm	B mm	d mm	Z	V	Max RPM 1/min.	Freud Code	Art. No.
140	4	35	3	3+3	10.000	F105M EB3	F03FC07525
140	6	35	3	3+3	10.000	F105M EH3	F03FC07533
140	8	35	3	3+3	10.000	F105M EN3	F03FC07539
140	10	35	3	3+3	10.000	F105M ER3	F03FC07545



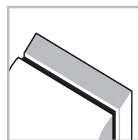


F114M

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:

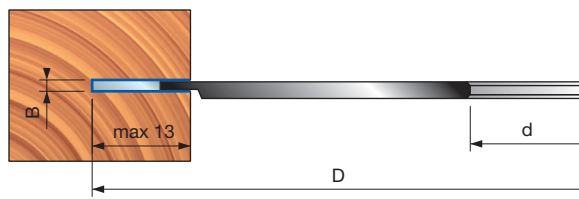
Grooving.

Technical information:

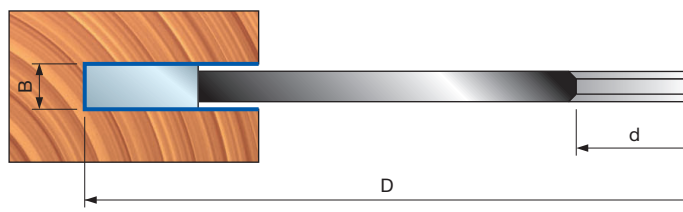
Brazen cutters for good quality grooving on softwood and hardwood, both cross cutting and ripping, on chipboard, compressed laminated woods and MDF.

- Steel body.

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
150	1,5	30 (50)	18	14.500	F114M AA3	F03FS00665
150	2	30 (50)	18	14.500	F114M AE3	F03FS00667
150	2,5	30 (50)	18	14.500	F114M AH3	F03FS00668
150	3	30 (50)	18	14.500	F114M AM3	F03FS00669
150	4	30 (50)	18	14.500	F114M AR3	F03FS00670
150	5	30 (50)	18	14.500	F114M AZ3	F03FS00673
180	3	30 (50)	24	11.500	F114M DA3	F03FS00677
180	4	30 (50)	24	11.500	F114M DC3	F03FS00678



F114M AA3
F03FS00665

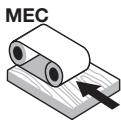




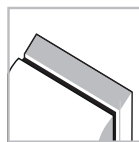
FI07M

Adjustable grooving cutters with spurs

MEC



Automatic Feed



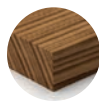
Brazed Cutter



Steel Body



Softwood



Hardwood



Chipboard



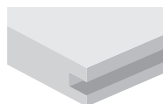
Laminated
chipboard



MDF



Laminated
MDF



Grooving

Machines:

Moulders, automatic and throughfeed machines.

Materials:

Softwood, hardwood and wood based panels.

Applications:

Grooving.

Technical information:

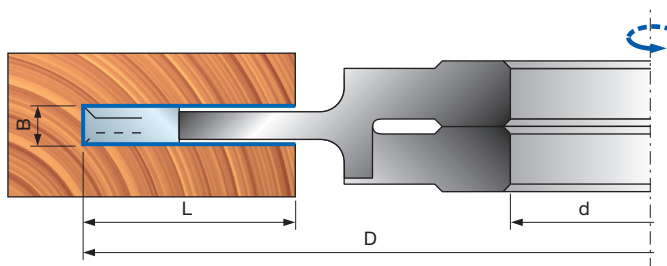
Brazed cutters for good quality adjustable grooving on softwood and hardwood, both cross cutting and ripping, on chipboard, compressed laminated woods and MDF.

- 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	FI07M AB3	F03FC07629
150	4-7,5	35	2+2	2+2	9.000	FI07M AE3	F03FC07634
150	7,5-14,5	35	2+2	2+2	9.000	FI07M AL3	F03FC07643
160	10-19,5	35	2+2	2+2	9.000	FI07M BB3	F03FC07655

Depth of cut

L mm	D mm
27	150
32	160



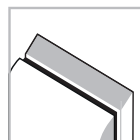


GL207M

Dado set



Manual Feed



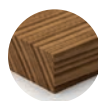
Brazed Cutter



Steel Body



Softwood



Hardwood



Chipboard



Laminated chipboard



MDF



Laminated MDF



Grooving



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).

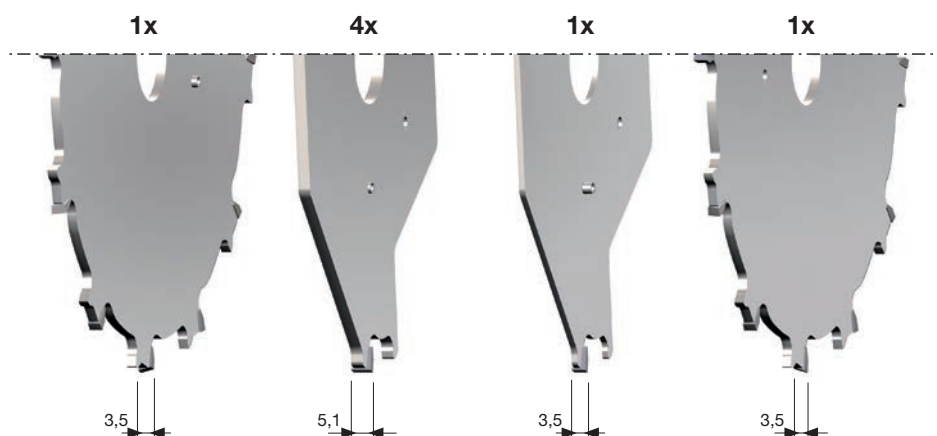
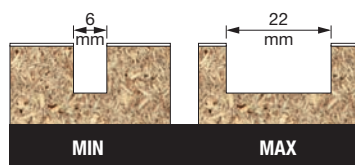


Fig. 1

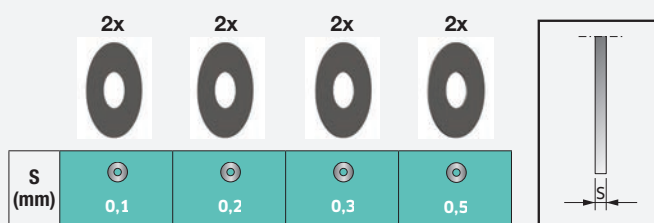
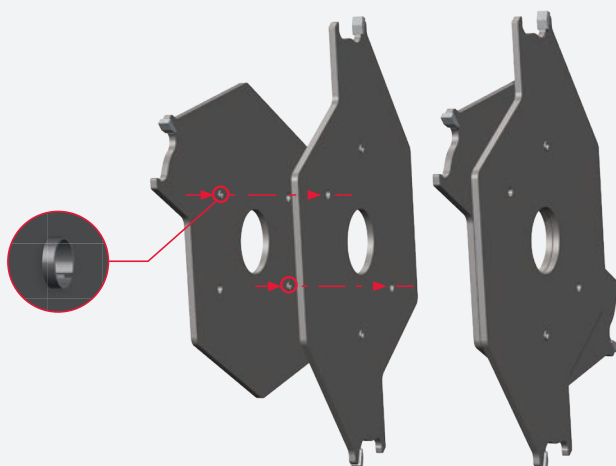


Fig. 2



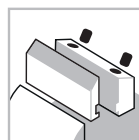


TG13M

Grooving cutterheads for biscuit jointers



Manual Feed



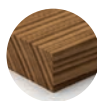
Clamping System



Steel Body



Softwood



Hardwood



Chipboard



Laminated chipboard



MDF



Laminated MDF



Grooving

Machines:

Biscuit jointer.

Materials:

Softwood, hardwood and wood based panels.

Applications:

Grooving.

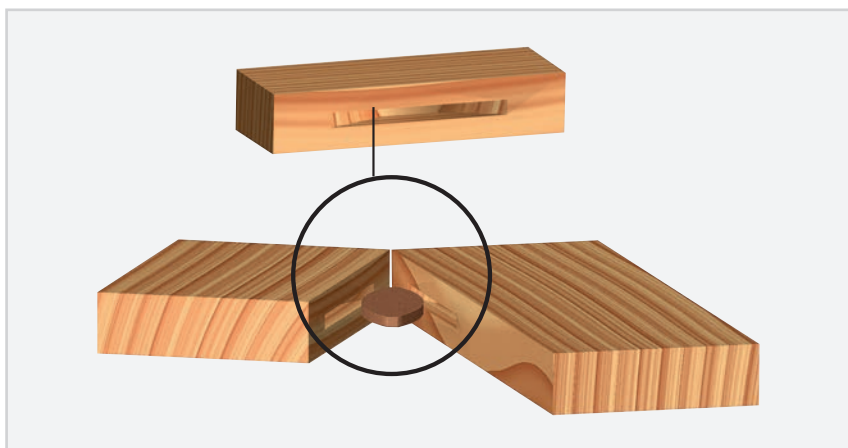
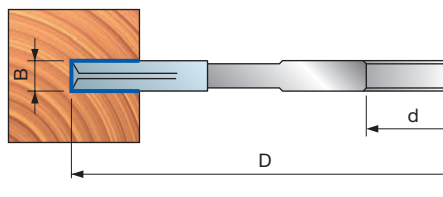
Technical information:

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 mm	B mm	d mm	Z	V	Max RPM 1/min.	Freud Code	Art. No.
100	4	22	4	4	10.500	TG13M AA3	F03FC20271

Spare parts		Dimensions mm	Freud Code	Art. No.
	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

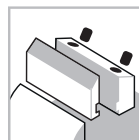


TG11M

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.

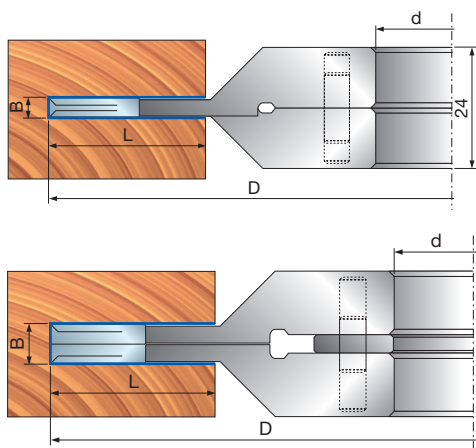
- Steel body.
- Rebore not available.

Depth of cut

L	D
mm	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	B-B1	d	Z	V	Max RPM	Freud Code	Art. No.
mm	mm	mm			1/min.		
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

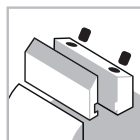


TG18MG

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.

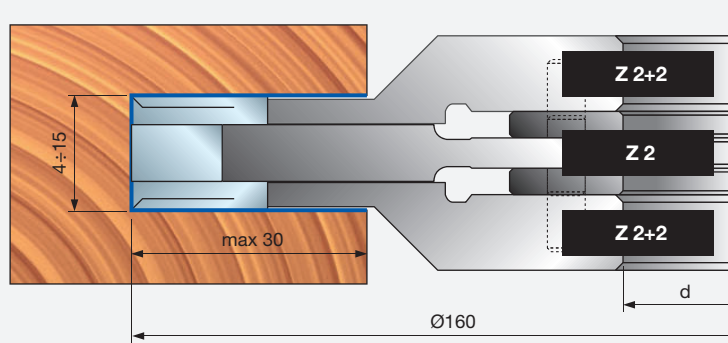
D mm	B-B1 mm	d mm	V	Max RPM 1/min.	Freud Code	Art. No.
160	4-15	30	2+2	8.500	TG18MG AA3	F03FC24546
160	4-15	32	2+2	8.500	TG18MG AE3	F03FC24549
160	4-15	35	2+2	8.500	TG18MG AB3	F03FC24547
160	4-15	40	2+2	8.500	TG18MG AC3	F03FC24548
160	4-15	50	2+2	8.500	TG18MG AD3	F03FC25051
160	8-23	30	2+2	8.500	TG18MG 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.
AA3 - ABS AC3 - AE3		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
		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
		Torx key	T9	CB03M CA9 F03FA00165
DA3 - DB3 DC3 - DE3		Screw	M5 x 8	VT05M AA9 F03FA04444
		Torx key	T20	CB03M CC9 F03FA00167
		Knife	12 x 12 x 1,5	CG08MBA310 F03FH02903
TA3 - TB3 TC3 - TE3		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

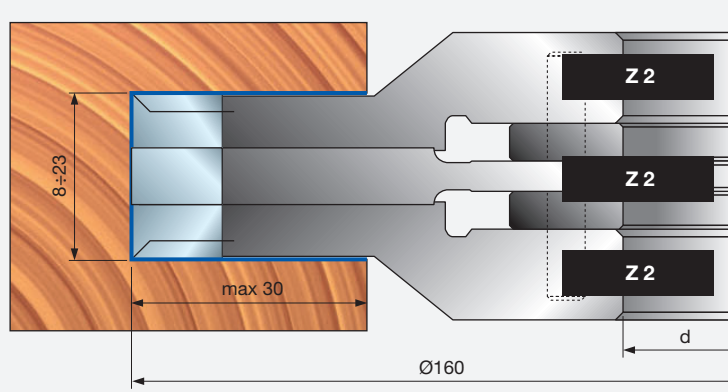
	Spare spacers set	Dimensions mm	Freud Code	Art. No.
⊙	Spacers set	50 x 7,6 x 30	AN03M AN9	F03FC24566
⊙	Spacers set	52 x 7,6 x 32	AN03M GH9	F03FC24569
⊙	Spacers set	55 x 7,6 x 35	AN03M BQ9	F03FC24567
⊙	Spacers set	55 x 7,6 x 40	AN11M CL9	F03FC24568
⊙	Spacers set	50 x 11,6 x 30	AN03M A09	F03FC24570
⊙	Spacers 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

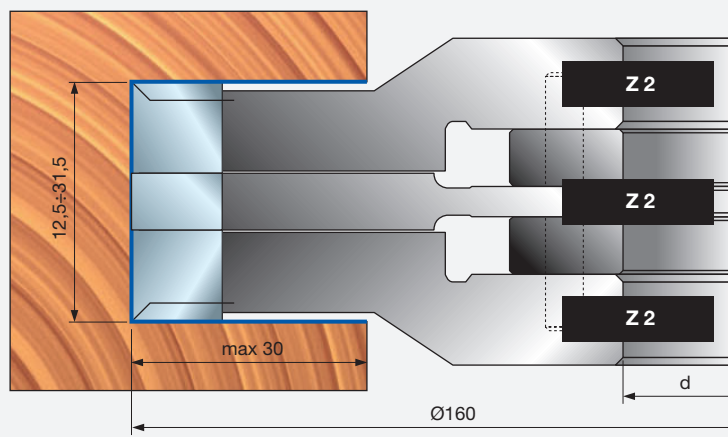
TG18MG
AA3 - AE3 - AB3 - AC3 - AD3



TG18MG
DA3 - DE3 - DB3 - DC3 - DD3



TG18MG
TA3 - TE3 - TB3 - TC3 - TD3



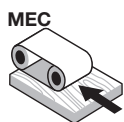
Profiling



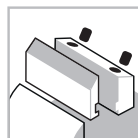


T135M - TG35M

Post forming cutterhead sets with disposable knives



Automatic Feed



Clamping System



Steel Body



Softwood



Hardwood



Chipboard



Laminated
chipboard



MDF



Laminated
MDF



Profiling

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.

T135M for planing

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
125	30	40	3	10.300	T135M AC3	F03FC20580
125	50	40	3	10.300	T135M BC3	F03FC20581

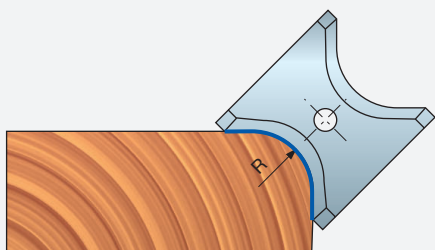
	Spare parts	Dimensions mm	Freud Code	Art. No.
	Screw	M10 x 22	VT19M MA9	F03FA04496
	Nut	15 x 13,3 x M10	VT20M MA9	F03FC20670
	Allen key	5	CB03M EA9	F03FA00169
AC3	Knife	30 x 12 x 1,5	CG08MEA310	F03FH02906
	Wedge	15 x 26 x 8	CN09M AD9	F03FC01283
BC3	Knife	50 x 12 x 1,5	CG08MFA310	F03FH02907
	Wedge	15 x 46 x 8	CN09M AP9	F03FC01290

TG35MD - TG35MS for rounding

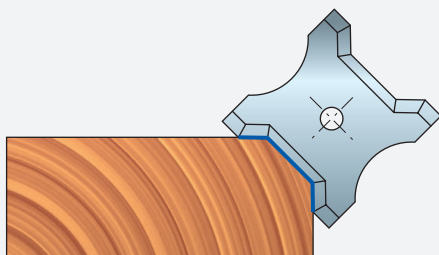
D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
140	13	40	3	10.300	TG35MD EC3	F03FC20280
148,6	20	40	3	10.300	TG35MD CC3	F03FC20278
156,2	26	40	3	10.300	TG35MD DC3	F03FC20279
140	13	40	3	10.300	TG35MS EC3	F03FC20283
148,6	20	40	3	10.300	TG35MS CC3	F03FC20281
156,2	26	40	3	10.300	TG35MS DC3	F03FC20282

	Spare parts	Dimensions mm	Freud Code	Art. No.
EC3	Wedge	12 x 11 x 8	CN21M AC9	F03FC01408
	Screw	M6 x 22	VT19M AB9	F03FA04491
	Nut	10 x 11,5 x 6	VT20M AA9	F03FA04497
	Allen key	3	CB03M AA9	F03FA00162
CC3	Wedge	18 x 18 x 8	CN21M AA9	F03FC01406
	Screw	M10 x 22	VT19M MA9	F03FA04496
	Nut	15 x 13,3 x M10	VT20M MA9	F03FC20670
	Allen key	5	CB03M EA9	F03FA00169
DC3	Screw	M5 x 7 x 16	VT08M AE9	F03FA04457
	Wedge	18 x 24 x 8	CN21M AB9	F03FC01407
	Screw	M10 x 22	VT19M MA9	F03FA04496
	Nut	15 x 13,3 x M10	VT20M MA9	F03FC20670
	Allen key	5	CB03M EA9	F03FA00169
	Screw	M5 x 7 x 16	VT08M AE9	F03FA04457

Knives for rounding



Knives for chamfering



T135M - TG35M

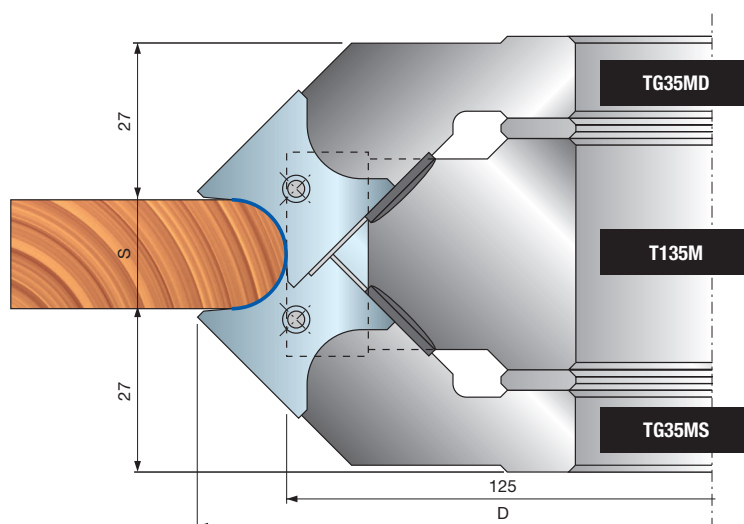
Post forming cutterhead sets with disposable knives

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

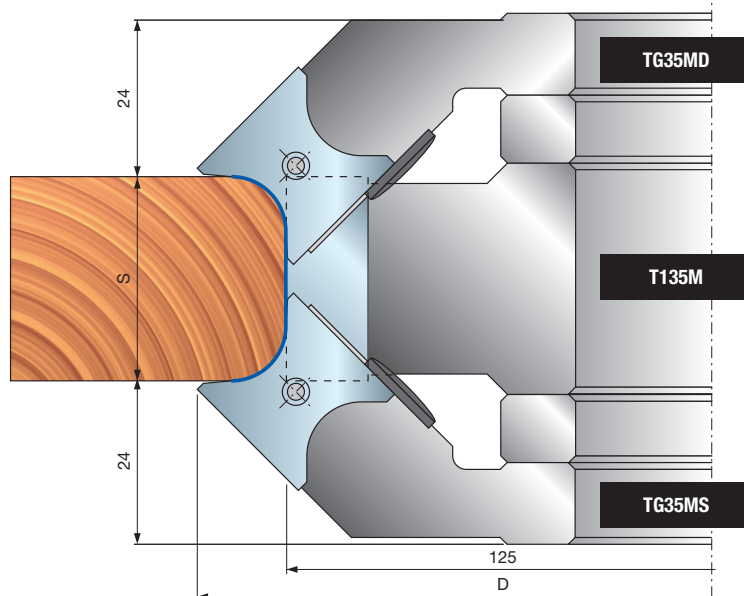


TG35MD CC3
TG35MS CC3

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

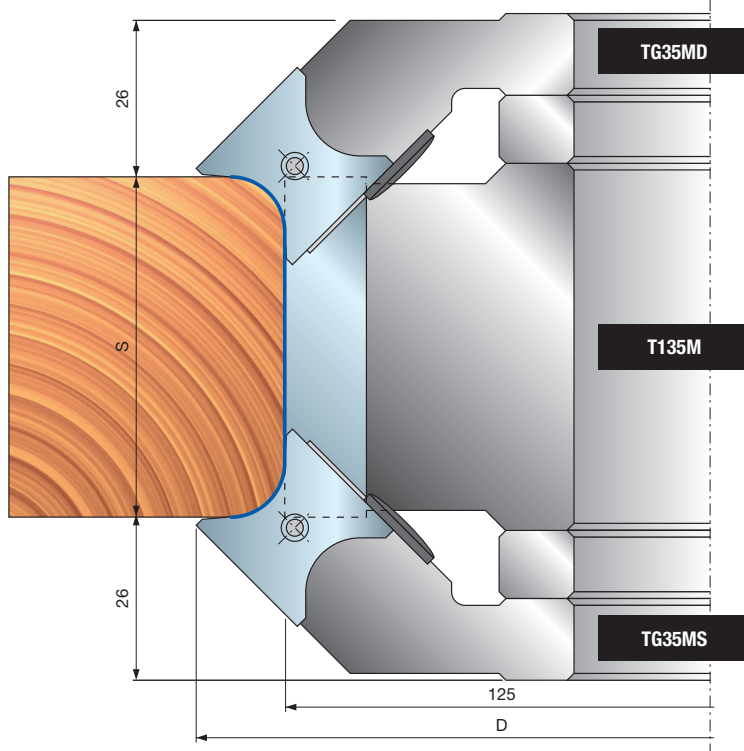


TG35MD DC3
TG35MS DC3

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



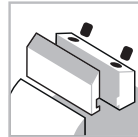


TP22M

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.

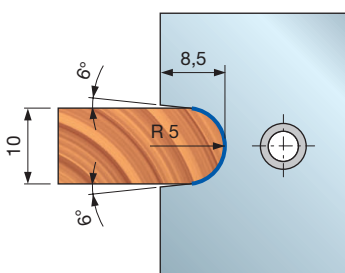
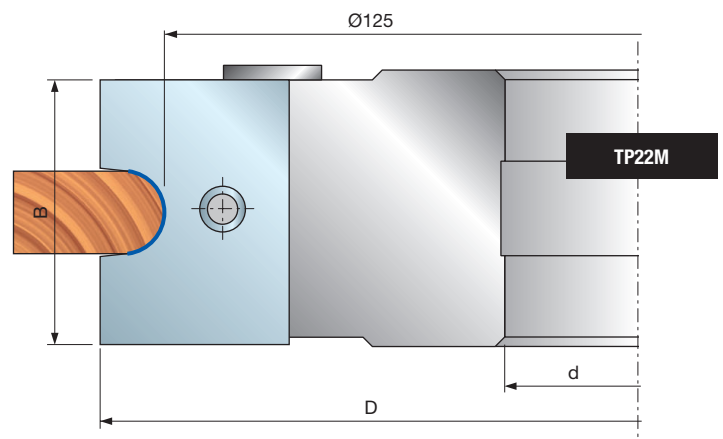
Technical information:

Performance knives tool for multiradius profiles.

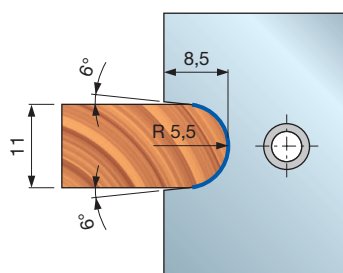
- Knives included.
- Aluminium light alloy body.
- Rebore not available.

D mm	B mm	d mm	Z	Radius mm	Max RPM 1/min.	Freud Code	Art. No.
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

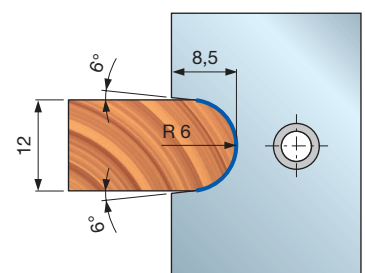
Spare parts	Dimensions mm	Freud Code	Art. No.
Screw	M5 x 8	VT05M AA9	F03FA04444
Positioning plate	22 x 1,7 x 6,5	VT18M GA9	F03FA04488
Screw	M10 x 18	VT03M CC9	F03FA04438
Allen key	5	CB03M EA9	F03FA00169
Wedge	33 x 23 x 8,5	CN13M CI9A	F03FC23042
Knife	35 x 24 x 3 R5	CP22MM05001	F03FC23952
Knife	35 x 24 x 3 R5,5	CP22MM05501	F03FC23953
Knife	35 x 24 x 3 R6	CP22MM06001	F03FC23954



CP22MM05001
F03FC23952



CP22MM05501
F03FC23953



CP22MM06001
F03FC23954

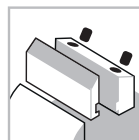


TP22M

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.

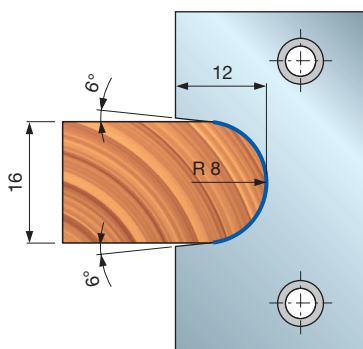
Technical information:

Performance knives tool for multiradius profiles.

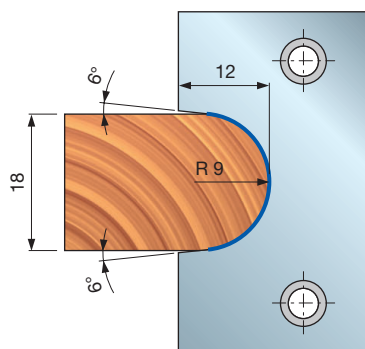
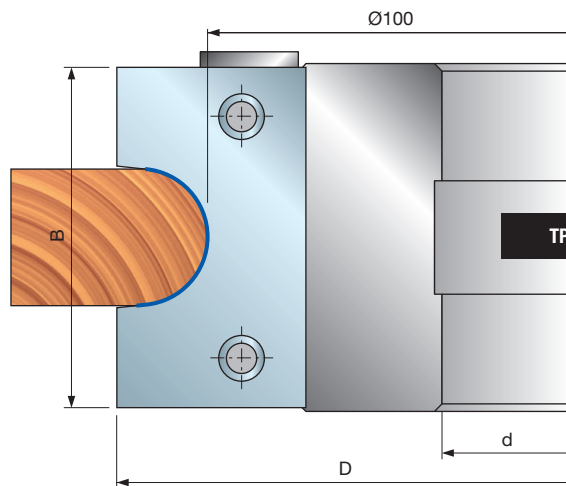
- Knives included.
- Aluminium light alloy body.
- Rebore not available.

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

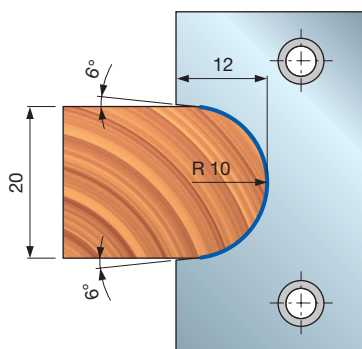
Spare parts	Dimensions mm	Freud Code	Art. No.
Screw	M5 x 8	VT05M AA9	F03FA04444
Positioning plate	22 x 1,7 x 6,5	VT18M GB9	F03FA04489
Screw	M10 x 18	VT03M CC9	F03FA04438
Allen key	5	CB03M EA9	F03FA00169
Wedge	43 x 28 x 8,5	CN13M CH9A	F03FC24449
Knife	45 x 29 x 3 R8	CP22ML08001	F03FC23948
Knife	45 x 29 x 3 R9	CP22ML09001	F03FC23949
Knife	45 x 29 x 3 R10	CP22ML10001	F03FC23950
Knife	45 x 29 x 3 R11	CP22ML11001	F03FC23951



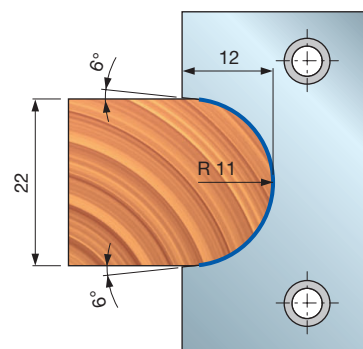
CP22ML08001
F03FC23948



CP22ML09001
F03FC23949



CP22ML10001
F03FC23950



CP22ML11001
F03FC23951

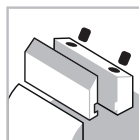


TP23M

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.

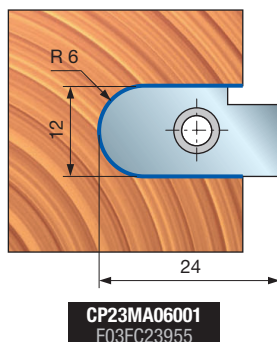
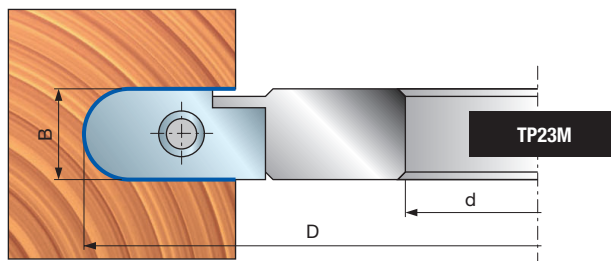
Technical information:

Performance knives tool for multiradius profiles.

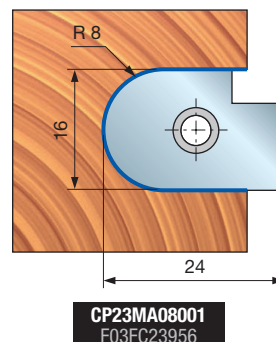
- Knives included.
- Aluminium light alloy body.
- Rebore not available.

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

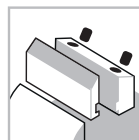


TP31M

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.

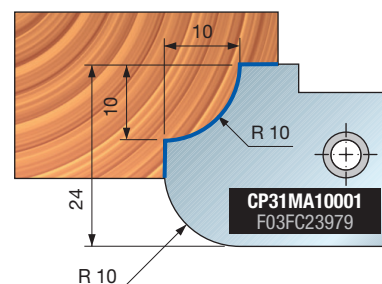
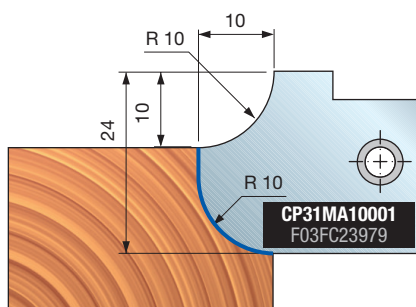
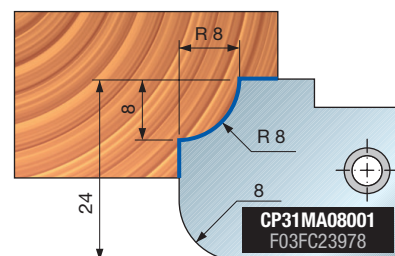
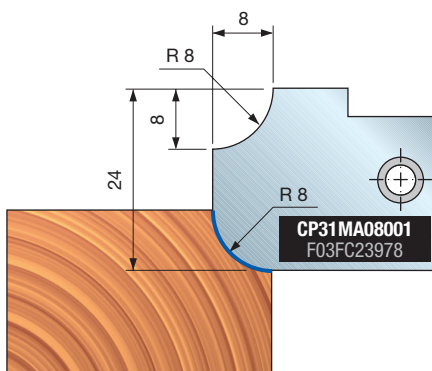
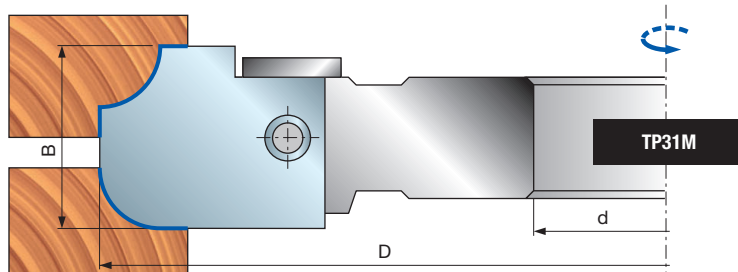
Technical information:

Performance knives tool for multiradius profiles.

- Knives included.
- Aluminium light alloy body.
- Rebore not available.

D mm	B mm	d mm	Z	Radius mm	Max RPM 1/min.	Freud Code	Art. No.
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 mm	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



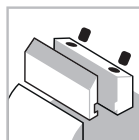


TP31M

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.

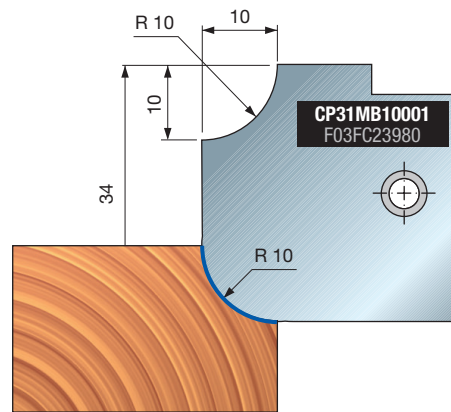
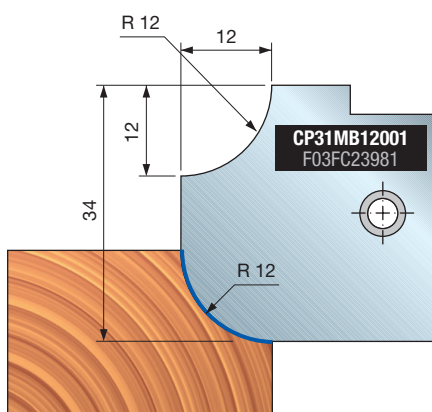
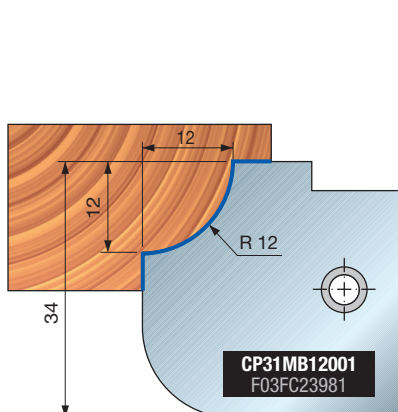
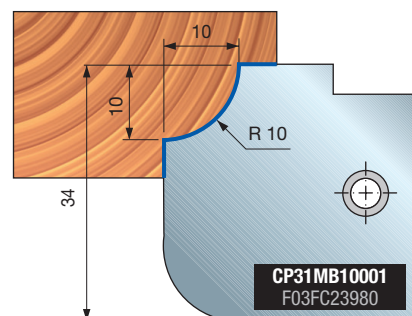
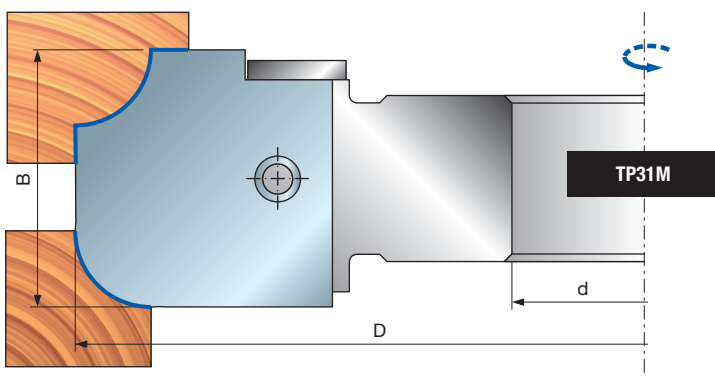
Technical information:

Performance knives tool for multiradius profiles.

- Knives included.
- Aluminium light alloy body.
- Rebore not available.

D mm	B mm	d mm	Z	Radius mm	Max RPM 1/min.	Freud Code	Art. No.
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 mm	Freud Code	Art. No.
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



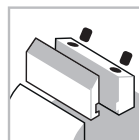


TP31M

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.

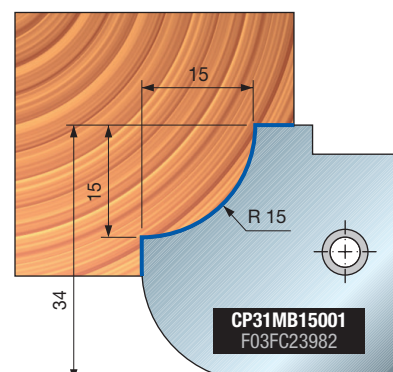
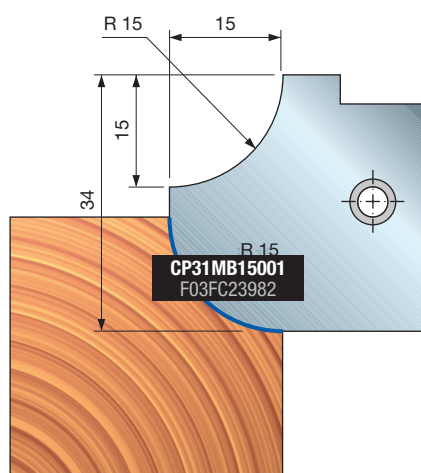
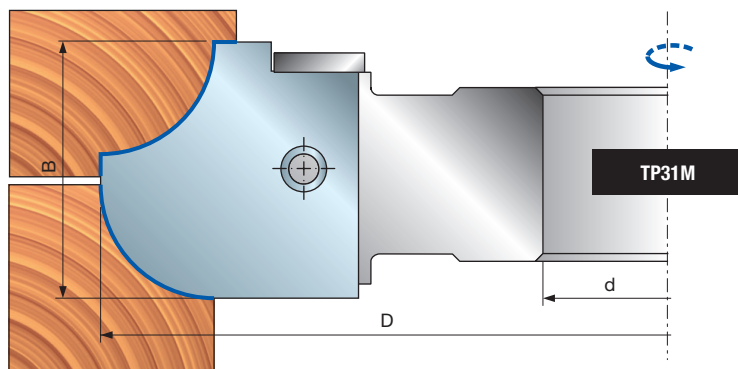
Technical information:

Performance knives tool for multiradius profiles.

- Knives included.
- Aluminium light alloy body.
- Rebore not available.

D mm	B mm	d mm	Z	Radius mm	Max RPM 1/min.	Freud Code	Art. No.
150	34	30	2	15	9.000	TP31M FA3	F03F668941
150	34	32	2	15	9.000	TP31M FC3	F03F668637
150	34	35	2	15	9.000	TP31M FB3	F03FC20485

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Knife	34 x 34 x 3 R15	CP31MB15001	F03FC23982
	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



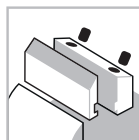


TP31M

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.

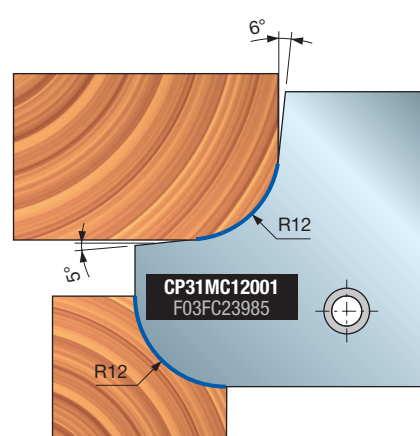
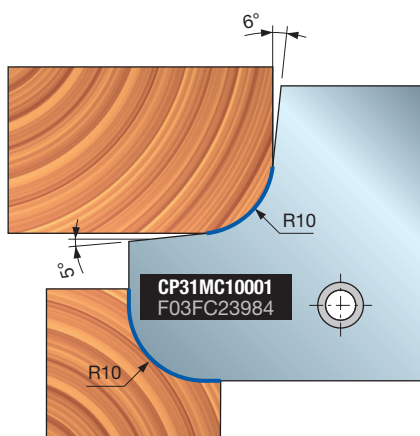
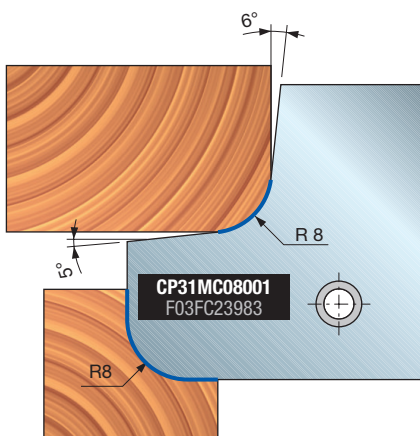
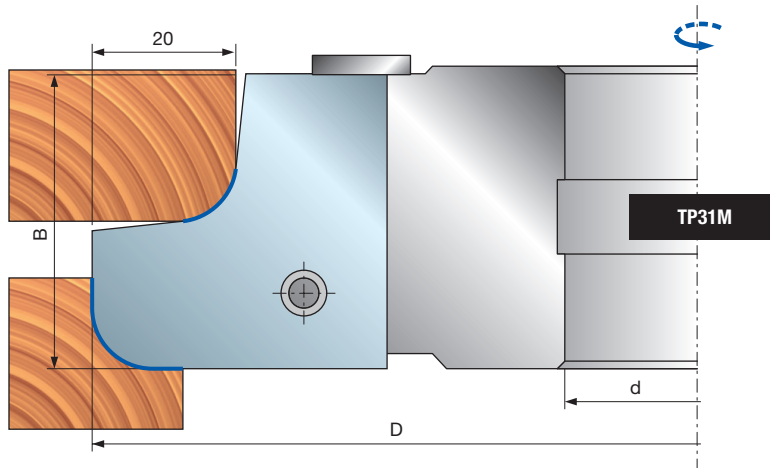
Technical information:

Performance knives tool for multiradius profiles.

- Knives included.
- Aluminium light alloy body.
- Rebore not available.

D 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



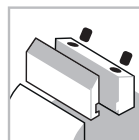


TP31M

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.

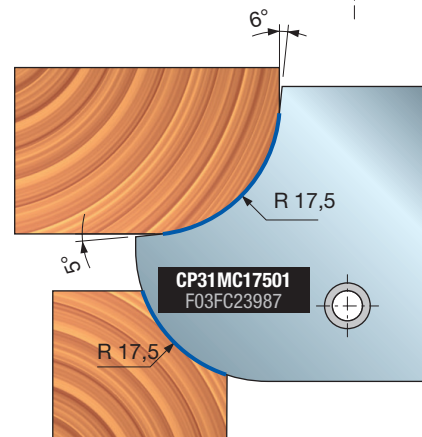
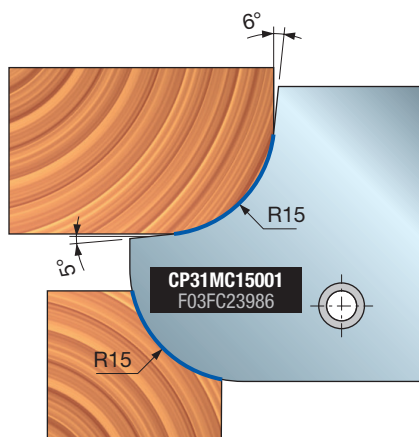
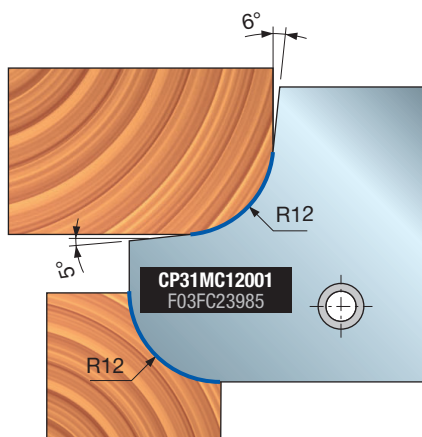
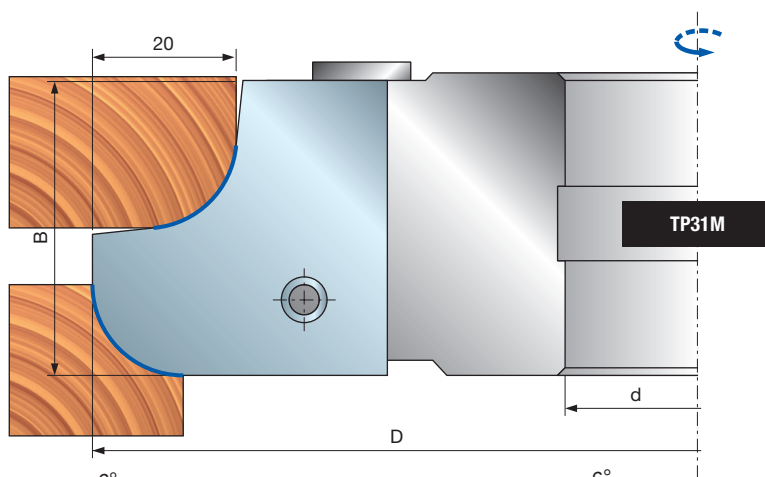
Technical information:

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

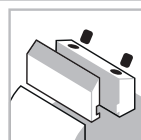


TP31M - TP31MS

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.

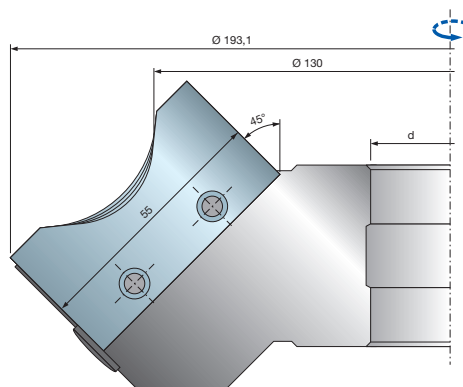
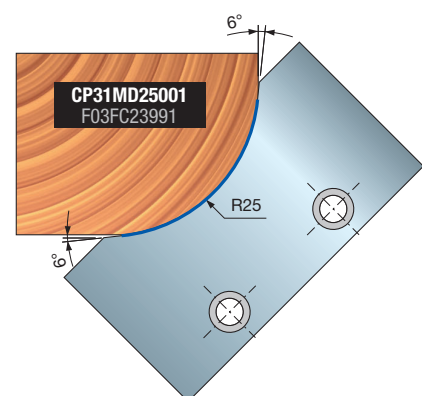
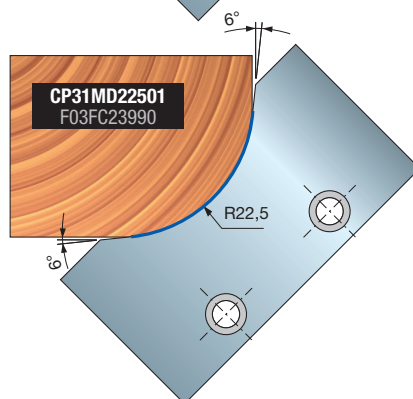
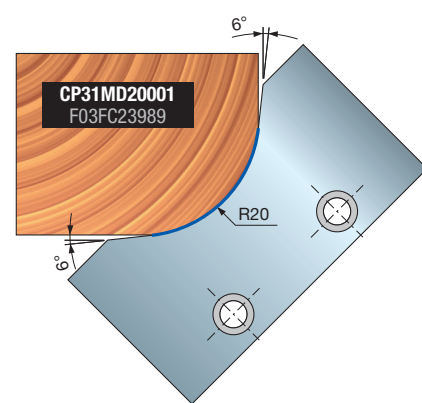
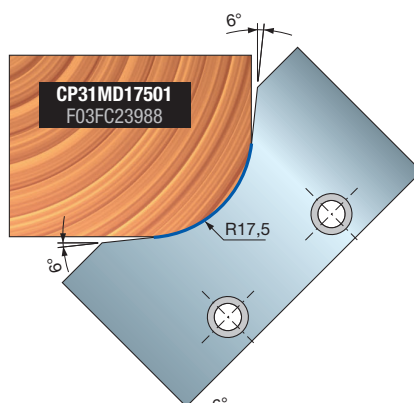
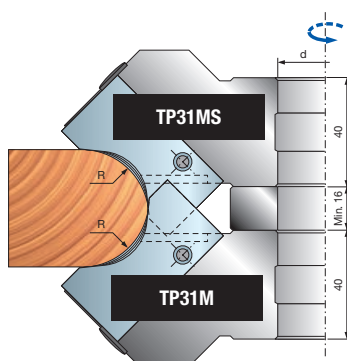
Technical information:

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

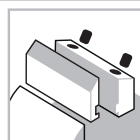


TP40M

Multiprofile cutterheads



Manual Feed



Clamping System



Steel Body



Softwood



Hardwood



Profiling

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



Machines:

Spindle moulders and manual feed machines.

Materials:

Softwood and hardwood.

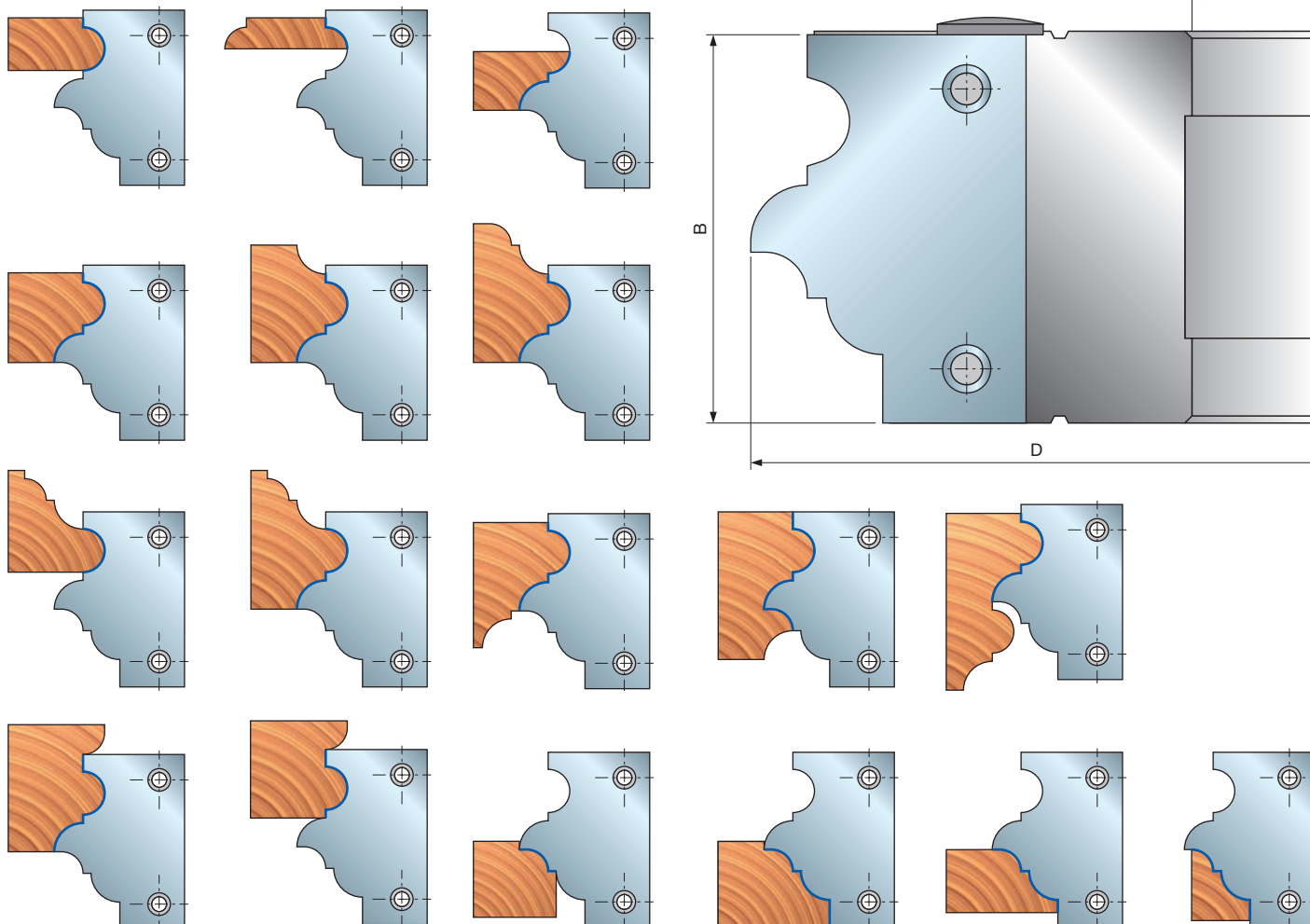
Applications:

Profiling.

Technical information:

Multiprofile cutterhead with Performance knives.

- Steel body.
- Rebore not available.



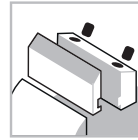


TP44M

Multiprofile cutterheads for flooring and cabinet doors



Manual Feed



Clamping System



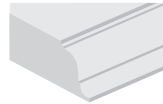
Aluminium Body



Softwood



Hardwood



Profiling



Machines:

Spindle moulders and manual feed machines.

Materials:

Softwood and hardwood.

Applications:

Profiling.

Technical information:

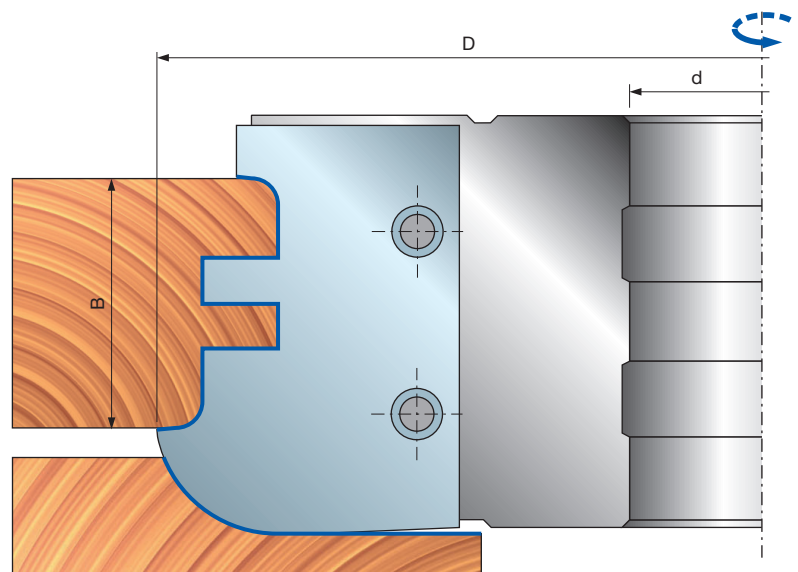
Multiprofile cutterhead with Performance knives for tongue, groove panels, flooring and cabinet doors.

- 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.

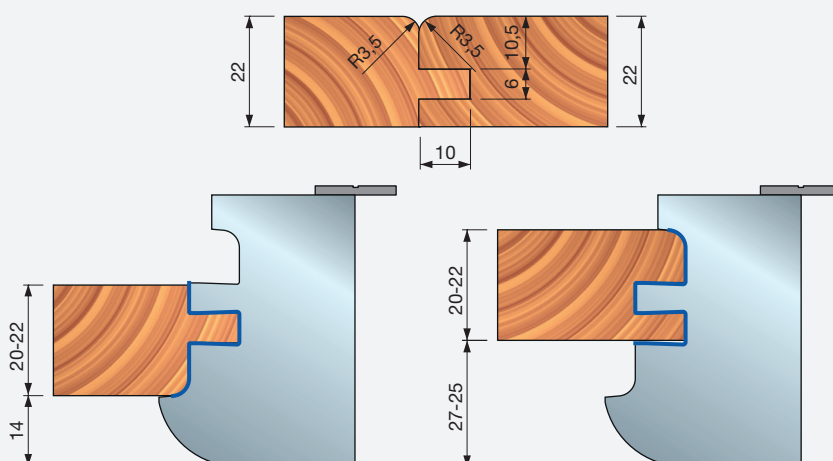
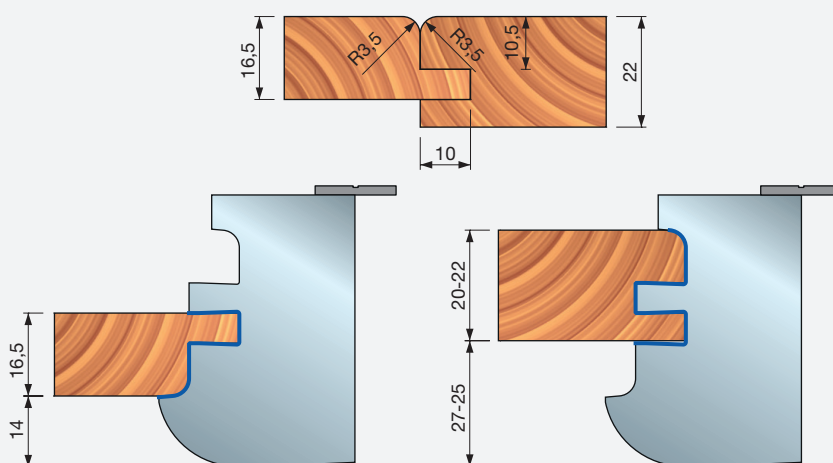
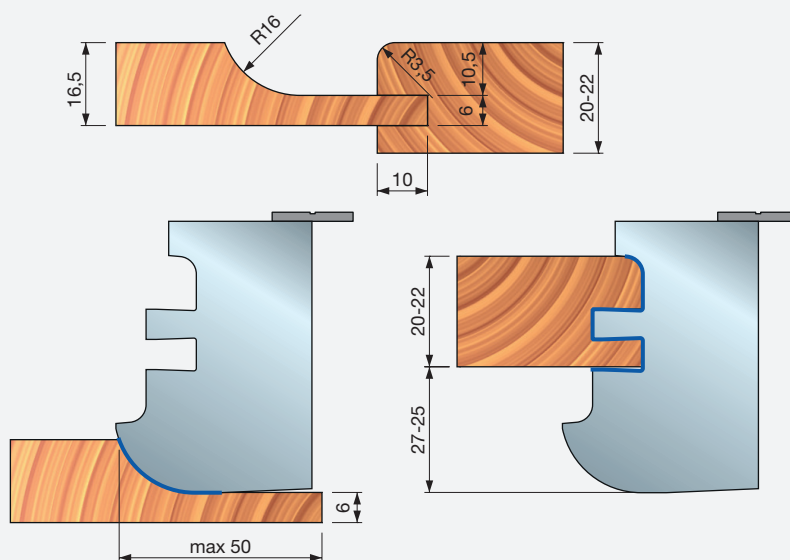
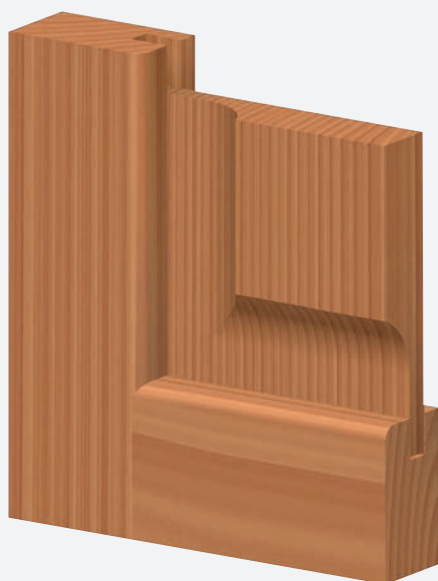
D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
160	55	30	2	8.500	TP44M AA3	F03F668643
160	55	32	2	8.500	TP44M AC3	F03F668644
160	55	35	2	8.500	TP44M AB3	F03FC20502
160	55	50	2	8.500	TP44M AD3	F03FC25268

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

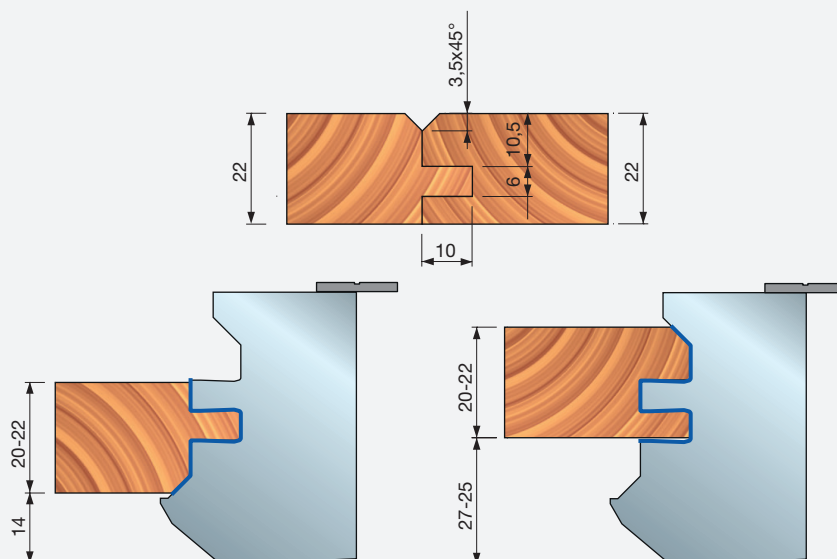
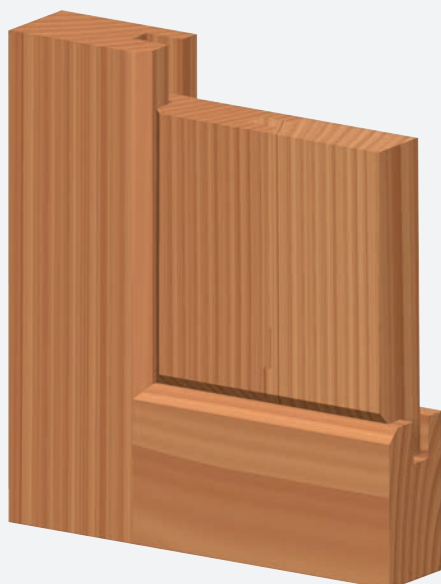
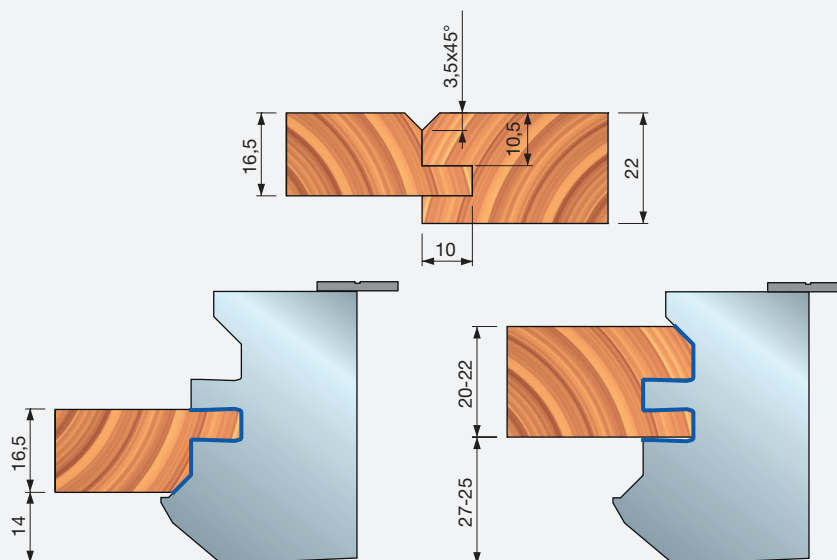
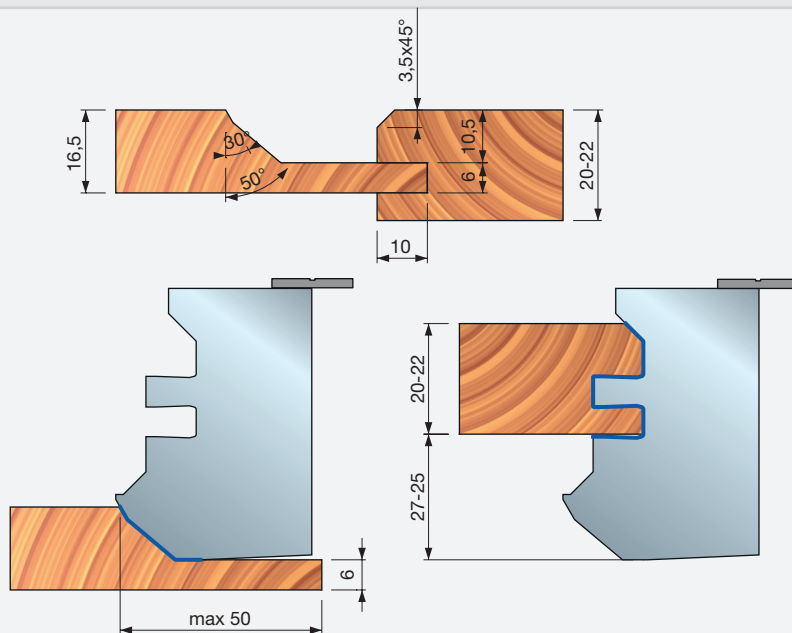
Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife	55 x 40 x 3	CP44MAA301	F03FC24012
2	Knife	55 x 40 x 3	CP44MBA301	F03FC24013



Profile 1



Profile 2

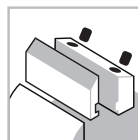




TP32M Cutterhead sets for cabinet doors



Manual Feed



Clamping System



Steel Body



Softwood



Hardwood



Profiling



Machines:

Spindle moulders and manual feed machines.

Materials:

Softwood and hardwood.

Applications:

Profiling.

Technical information:

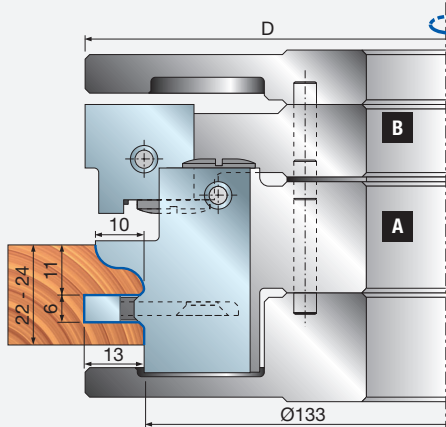
Performance knives tool set for cabinet doors. adjustable timber thickness 22-24 mm.

- 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.

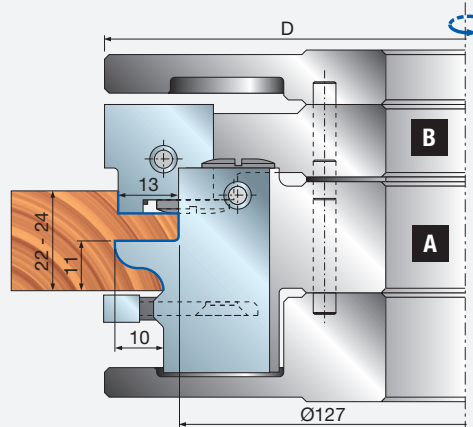
D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
159	-	30	2+2	8.500	TP32M AA3	F03FC24452
159	-	35	2+2	8.500	TP32M AB3	F03FC20489

	Spare parts	Dimensions mm	Freud Code	Art. No.
AD2 - AD3 AA2 - AA3	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

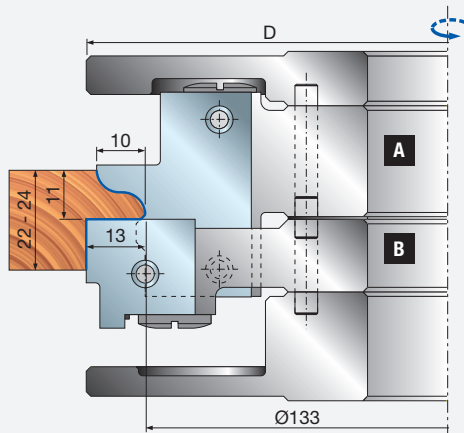


Carrying out a rebate

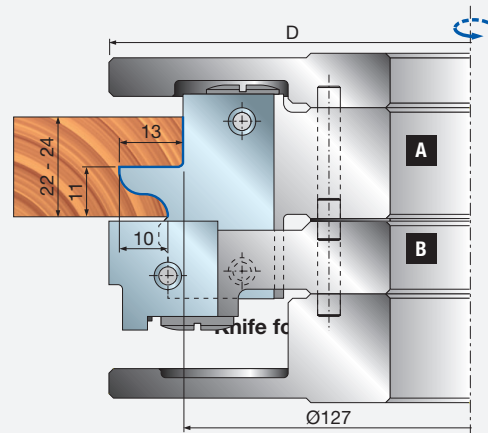


	Spare knives	Dimensions mm	Freud Code	Art. No.
	Knife	45 x 34 x 3	CP32MAA301	F03FC23992
	Knife	45 x 34 x 3	CP32MBA301	F03FC23993
	Knife	45 x 34 x 3	CP32MCA301	F03FC23994
	Knife	45 x 34 x 3	CP32MDA301	F03FC23995
	Knife	45 x 34 x 3	CP32MEA301	F03FC23996
	Knife	45 x 34 x 3	CP32MFA301	F03FC23997
	Knife	45 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

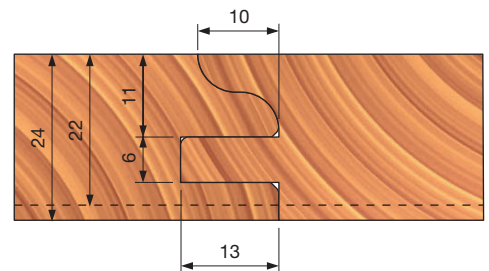


Carrying out a rebate



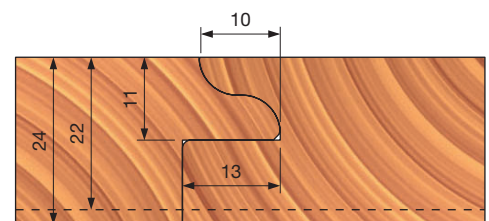
Order example for the profiles shown

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 includedInsert for
TP32M - B

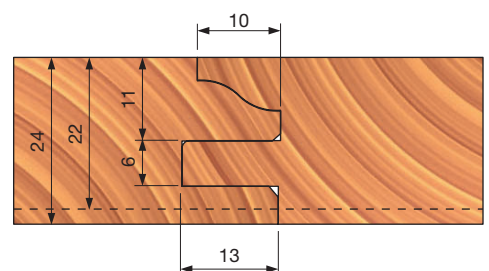
Order example for the profiles shown

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

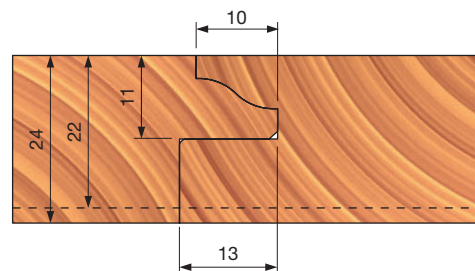
Order example for the profiles shown

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 includedInsert for
TP32M - B

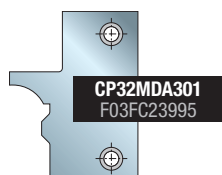
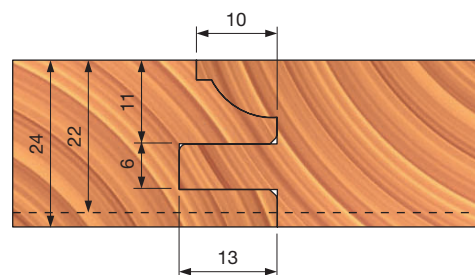
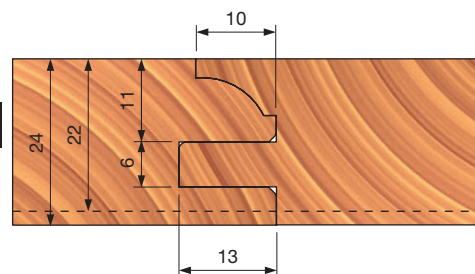
Order example for the profiles shown

Pieces	Dimensions mm	Freud Code	Art. No.
1	159 x 30	TP32M AA3	F03FC24452
2	45 x 34 x 3	CP32MBA301	F03FC23993

Knives for
TP32M - A
Not included

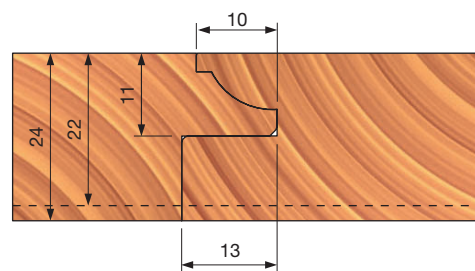
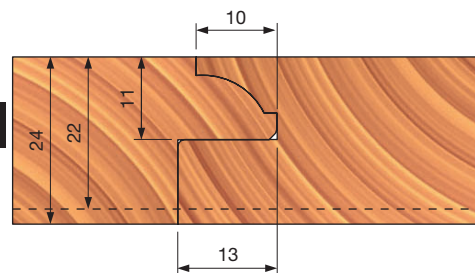
Order example for the profiles shown

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 includedKnives for
TP32M - A
Not includedInsert for
TP32M - B

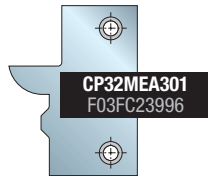
Order example for the profiles shown

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

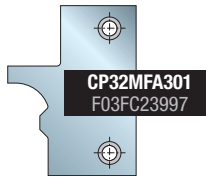
Knives for
TP32M - A
Not includedKnives for
TP32M - A
Not included

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

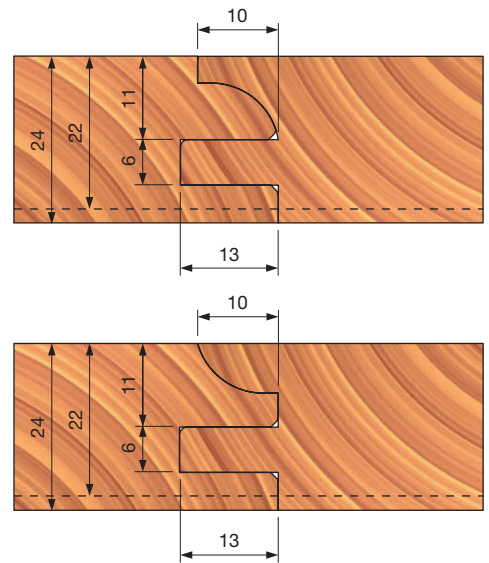


Knives for
TP32M - A
Not included



SR06MAB302
F03FC24191

Insert for
TP32M - B



Order example for the profiles shown

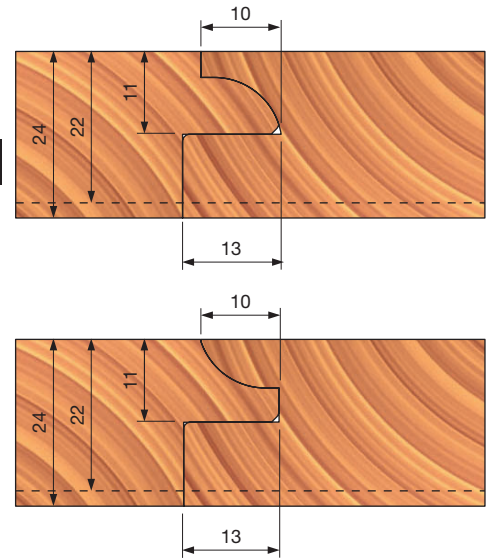
Pieces	Dimensions mm	Freud Code	Art. No.
1	159 x 30	TP32M AA3	F03FC24452
2	45 x 34 x 3	CP32MEA301	F03FC23996
2	45 x 34 x 3	CP32MFA301	F03FC23997



Knives for
TP32M - A
Not included

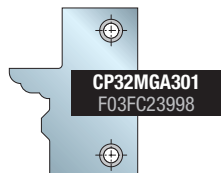


Knives for
TP32M - A
Not included



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

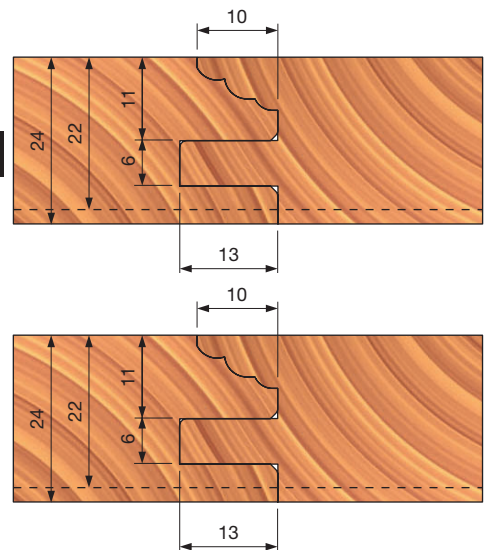


Knives for
TP32M - A
Not included



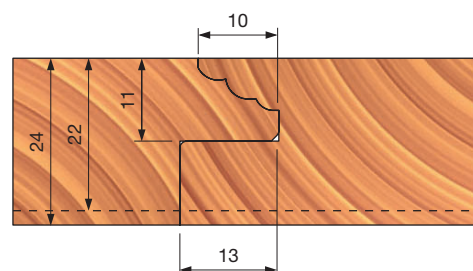
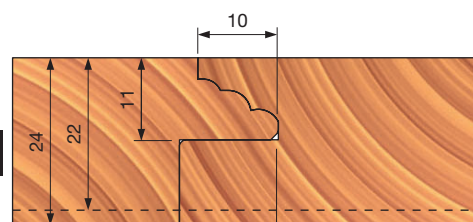
SR06MAB302
F03FC24191

Insert for
TP32M - B



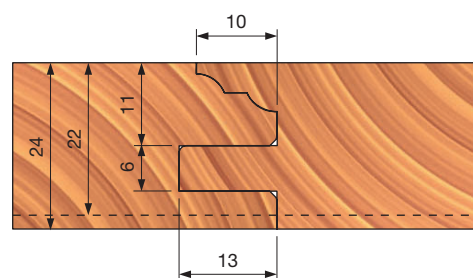
Order example for the profiles shown

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 includedKnives for
TP32M - A
Not included

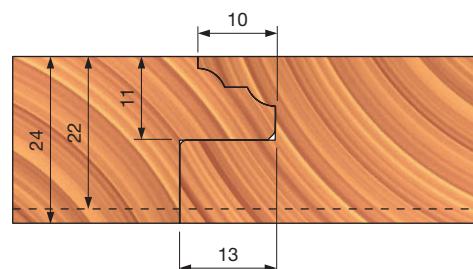
Order example for the profiles shown

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 includedSR06MAB302
F03FC24191Insert 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

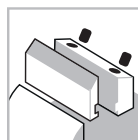
Knives for
TP32M - A
Not included



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.

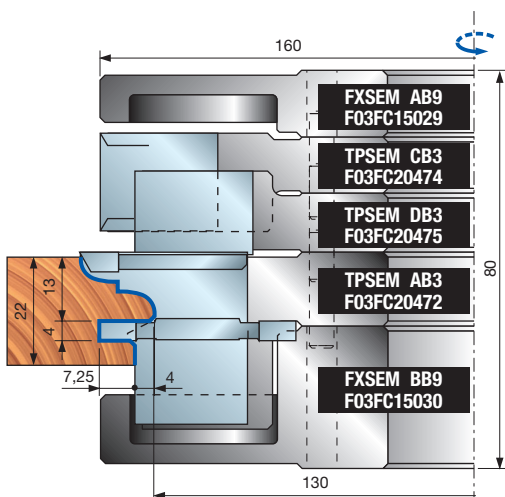
D mm	B mm	d mm	Max RPM 1/min.	Freud Code	Art. No.
160	-	30	8.500	TPSEM22GA3	F03FC23021
160	-	32	8.500	TPSEM22GC3	F03FC24432
160	-	35	8.500	TPSEM22GB3	F03FC20476
160	-	30	8.500	TPSEM30GA3	F03FC23024
160	-	32	8.500	TPSEM30GC3	F03FC24433
160	-	35	8.500	TPSEM30GB3	F03FC20477

Tools for TPSEM sets

	D mm	B mm	d mm	Z	V	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	CPSEMA301	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	CPSEMB301	F03FC23931
	Knife	35 x 34 x 3	CPSEMBD301	F03FC23932
	Knife	35 x 34 x 3	CPSEM301	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

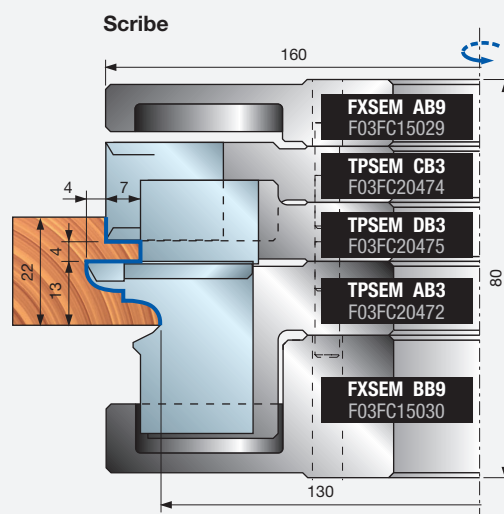
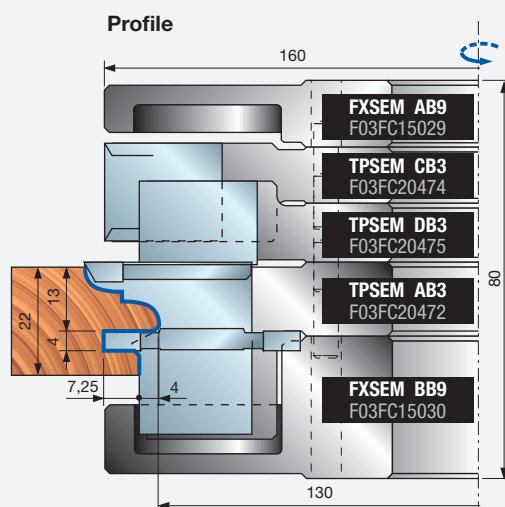
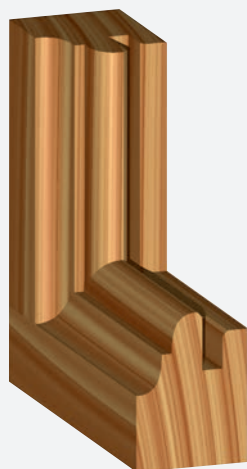
Spare parts for sets TPSEM22 - TPSEM30

	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
BA3-BB3-BC3	 Positioning plate	20 x 11,6 x 2,2	VT18M AS9	F03FC20665
	 Deflector	30,8 x 8 x 24,5	ID04MSAD901	F03FC24140
	 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
CA3-CB3-CC3	 Screw	M6 x 13	VT16M AE9	F03FC20658
	 Positioning plate	20 x 11,6 x 2,2	VT18M AS9	F03FC20665
	 Wedge	16 x 17 x 8	CN11M B160A	F03FC24539
	 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
	 Wedge	16 x 17 x 8	CN11M B130A	F03FC01348
DA3-DB3-DC3	 Knife	17 x 24 x 3	CPSEMDA301	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

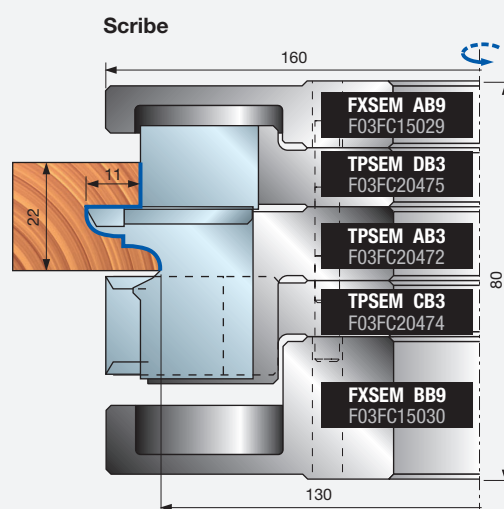
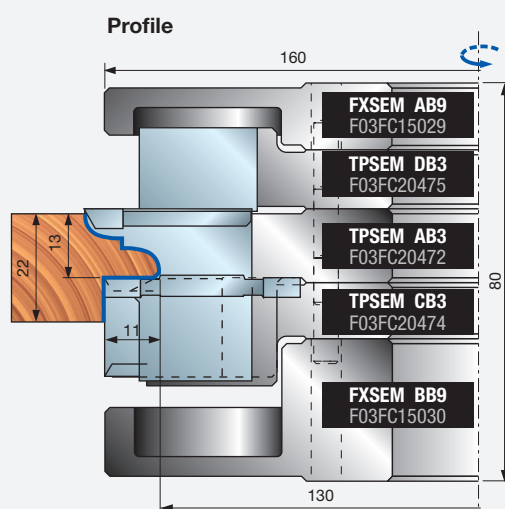
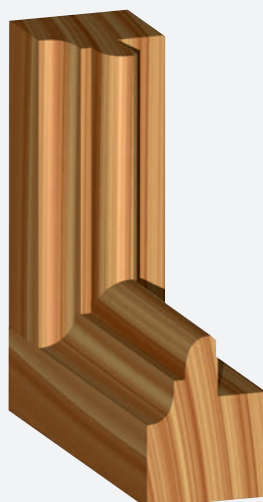
Spare parts for sets TPSEM22 - TPSEM30

	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

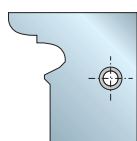


Carrying out a rebate



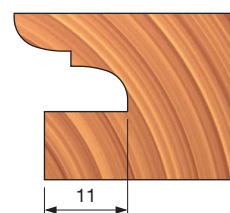
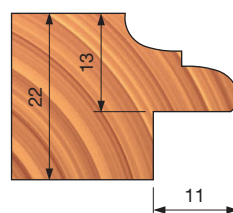
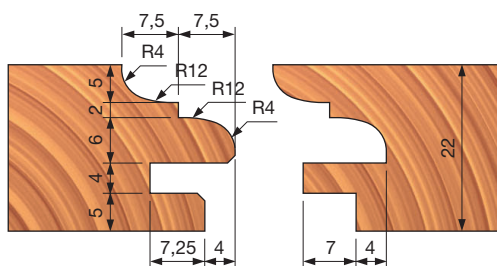
Order example for the profiles shown

Pieces	Dimensions mm	Freud Code	Art. No.
1	160 x 35	TPSEM22GB3	F03FC20476
2	35 x 34 x 3	CPSEMAB301	F03FC23924

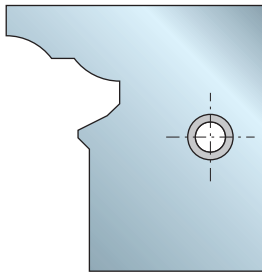


CPSEMAB301
F03FC23924

for TPSEM
AA3 - AB3 - AC3

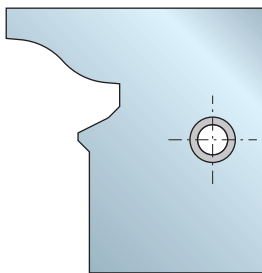
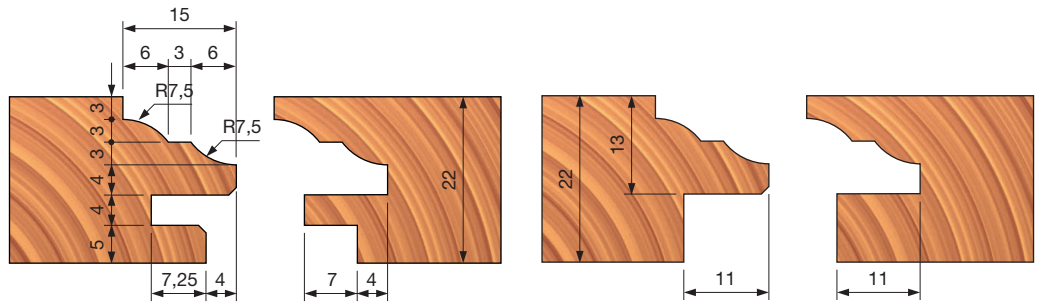


CPSEM Knives for TPSEM AA3 - AB3 - AC3 (Wood thickness: 22 mm)



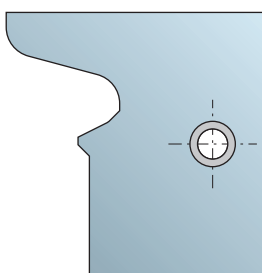
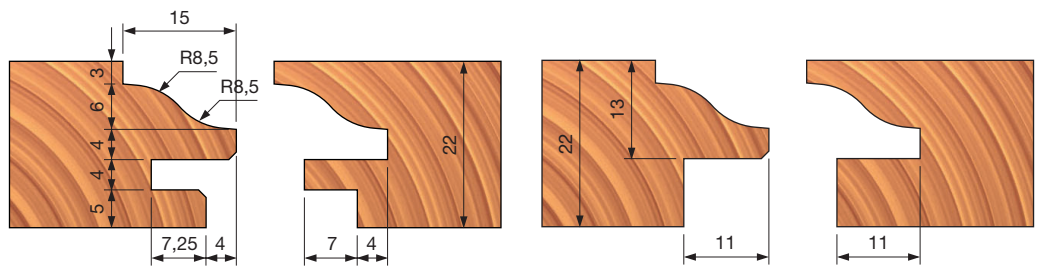
CPSEM301
F03FC23925

for TPSEM
AA3 - AB3 - AC3



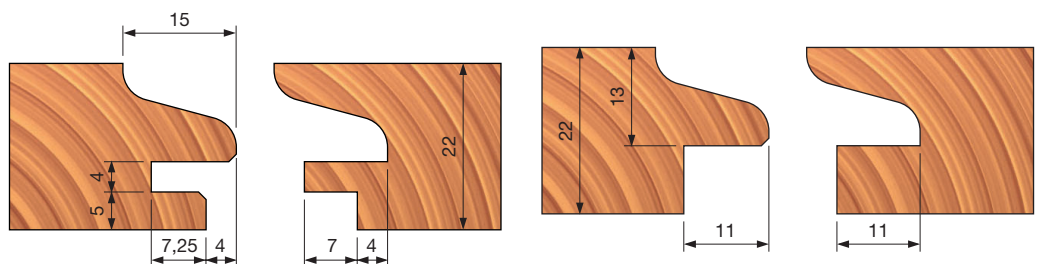
CPSEMAD301
F03FC23926

for TPSEM
AA3 - AB3 - AC3



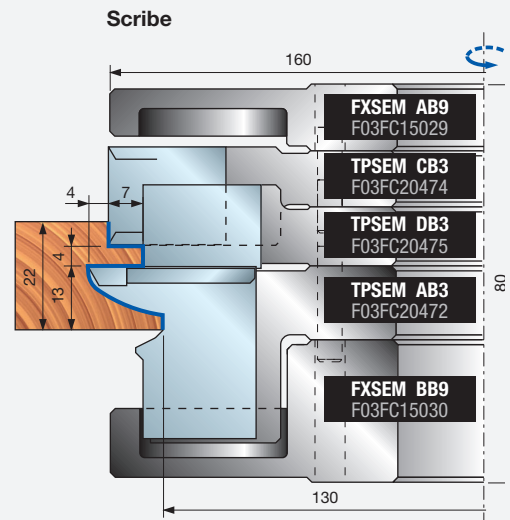
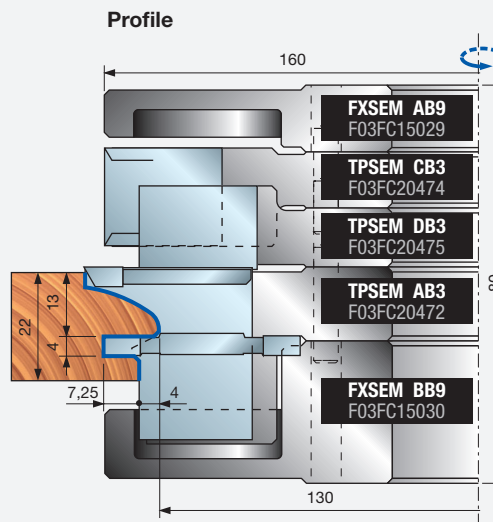
CPSEMA301
F03FC23929

for TPSEM
AA3 - AB3 - AC3

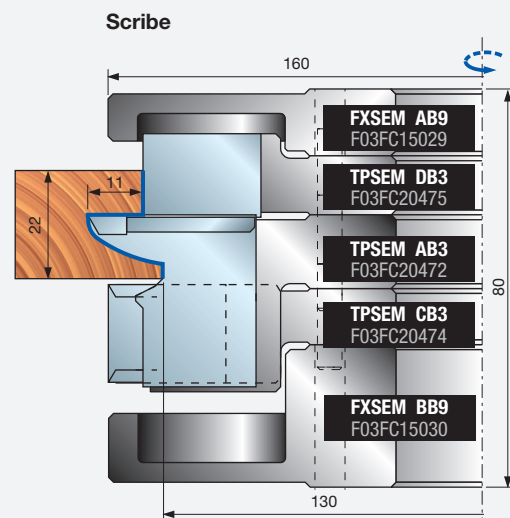
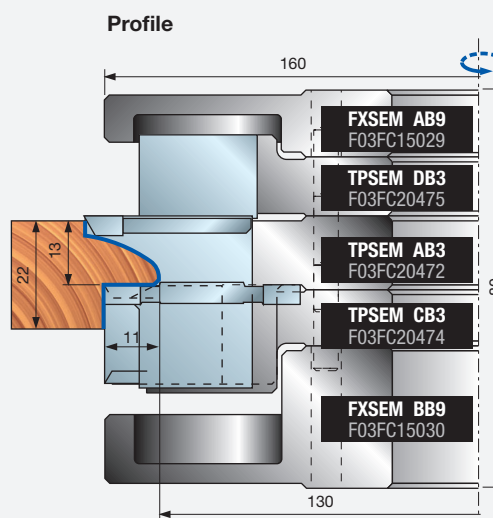


CPSEM Knives for TPSEM AA3 - AB3 - AC3 (Wood thickness: 22 mm)

Carrying out a groove

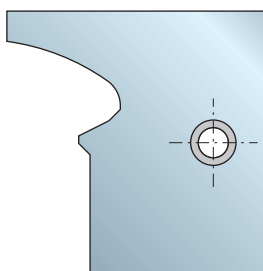


Carrying out a rebate

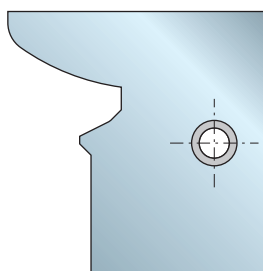


Order example for the profiles shown

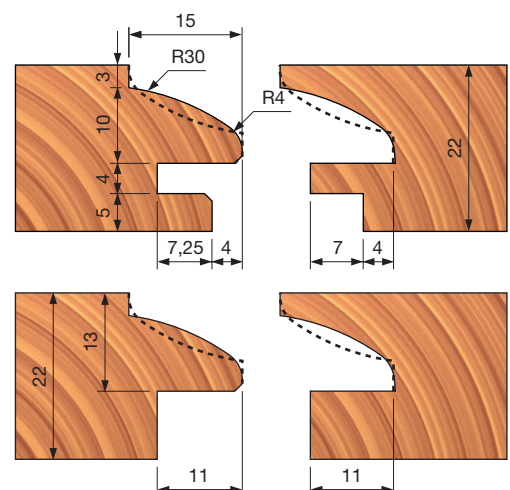
Pieces	Dimensions mm	Freud Code	Art. No.
1	160 x 35	TPSEM22GB3	F03FC20476
2	35 x 34 x 3	CPSEMAE301	F03FC23927
2	35 x 34 x 3	CPSEMAF301	F03FC23928



CPSEMAF301
F03FC23928
for TPSEM
AA3 - AB3 - AC3

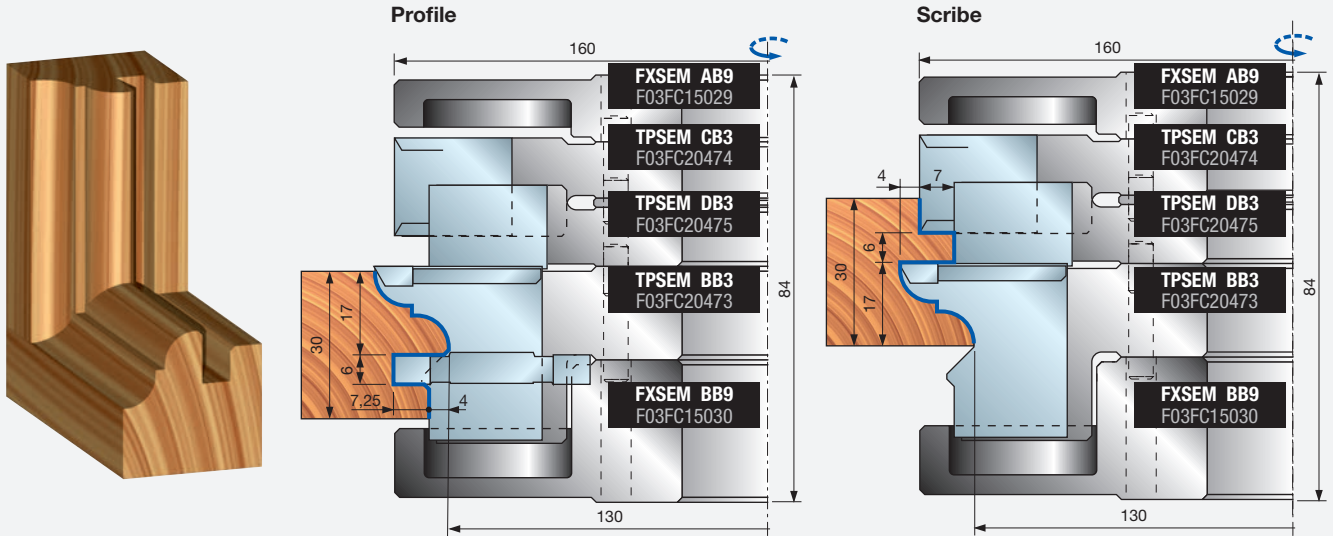


CPSEMAE301
F03FC23927
for TPSEM
AA3 - AB3 - AC3

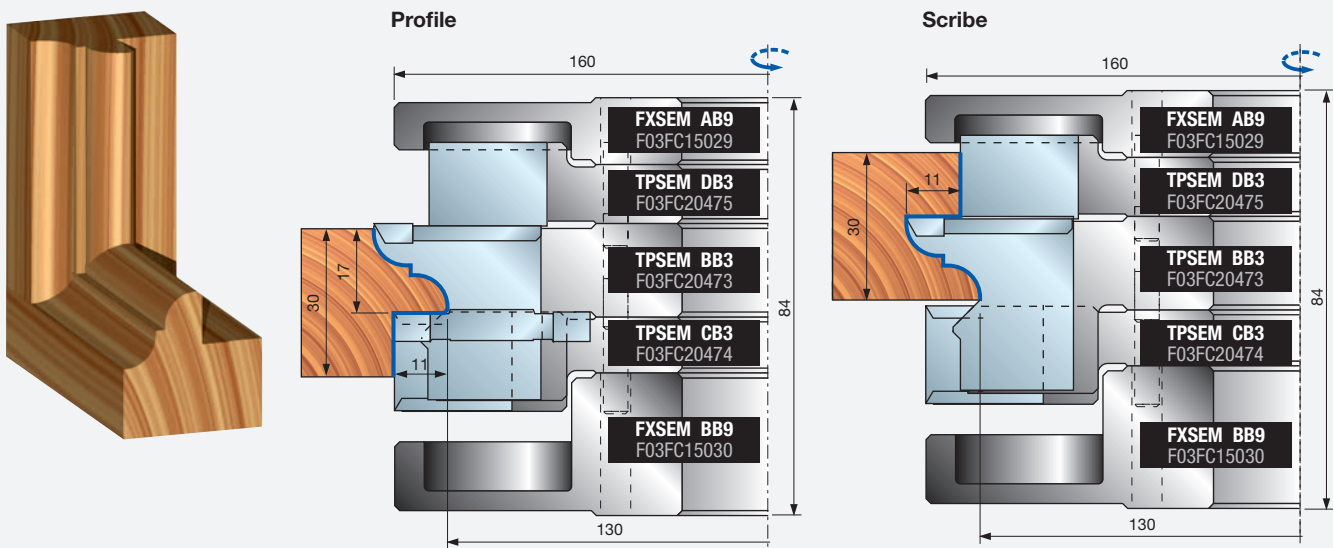


CPSEM Knives for TPSEM BA3 - BB3 - BC3 (Wood thickness: 30 mm)

Carrying out a groove

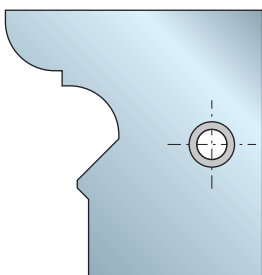


Carrying out a rebate



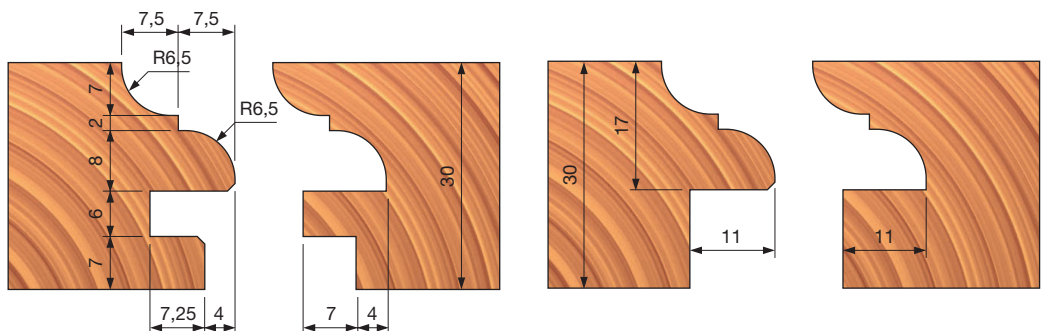
Order example for the profiles shown

Pieces	Dimensions mm	Freud Code	Art. No.
1	160 x 35	TPSEM30GB3	F03FC20477
2	35 x 34 x 3	CPSEMBB301	F03FC23930

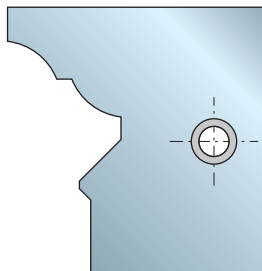


CPSEMBB301
F03FC23930

for TPSEM
BA3 - BB3 - BC3

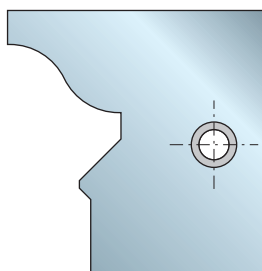
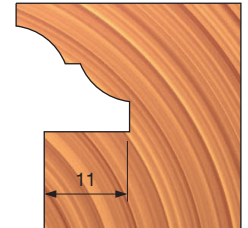
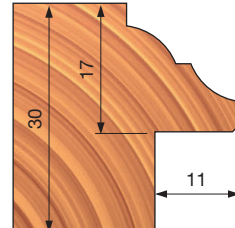
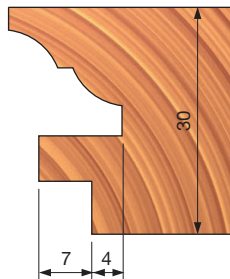
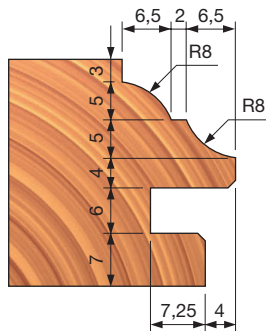


CPSEM Knives for TPSEM AA3 - AB3 - AC3 (Wood thickness: 30 mm)



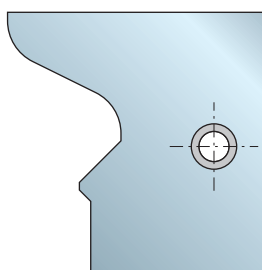
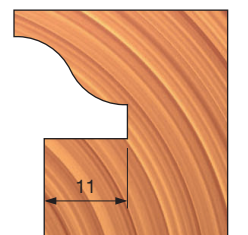
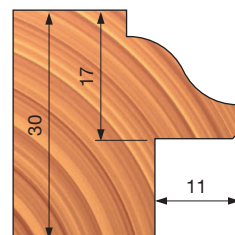
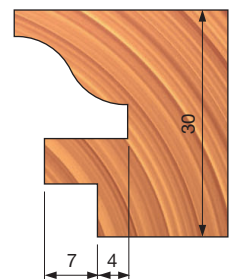
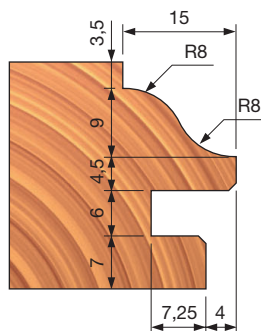
CPSEMBBC301
F03FC23931

for TPSEM
BA3 - BB3 - BC3



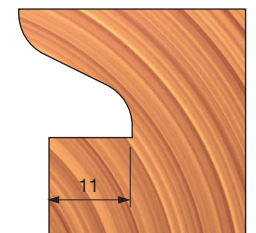
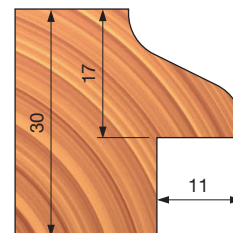
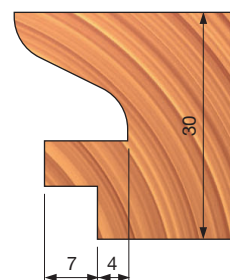
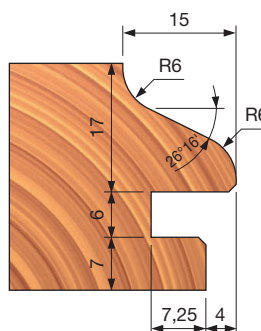
CPSEMBD301
F03FC23932

for TPSEM
BA3 - BB3 - BC3



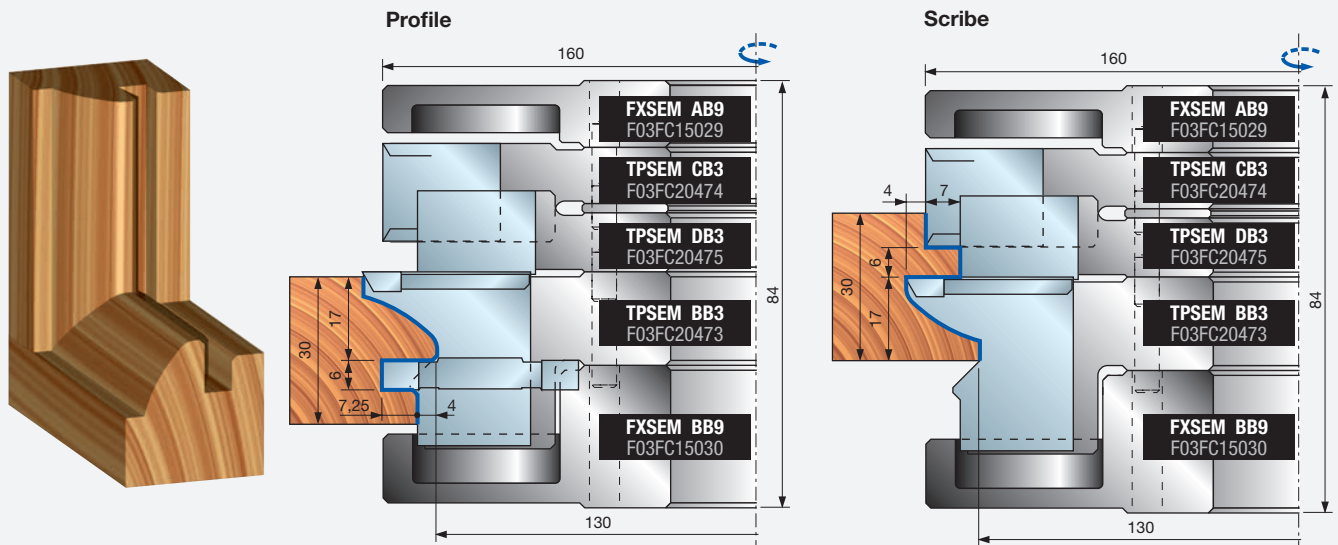
CPSEMBG301
F03FC23935

for TPSEM
BA3 - BB3 - BC3

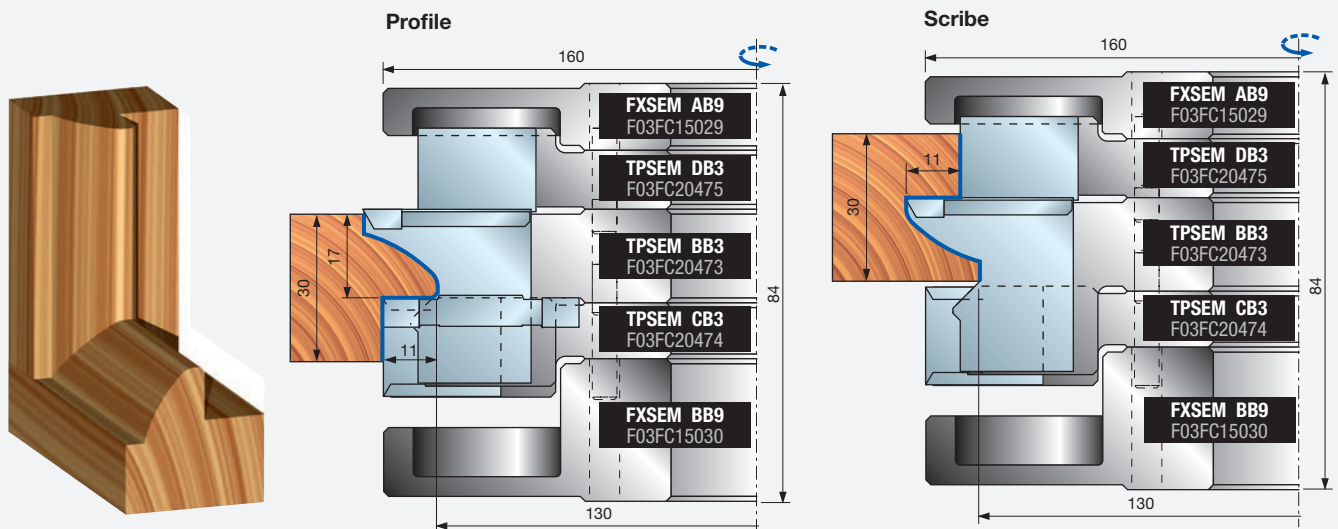


CPSEM Knives for TPSEM BA3 - BB3 - BC3 (Wood thickness: 30 mm)

Carrying out a groove

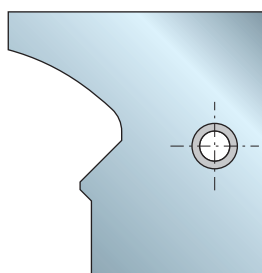


Carrying out a rebate



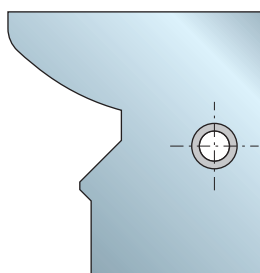
Order example for the profiles shown

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



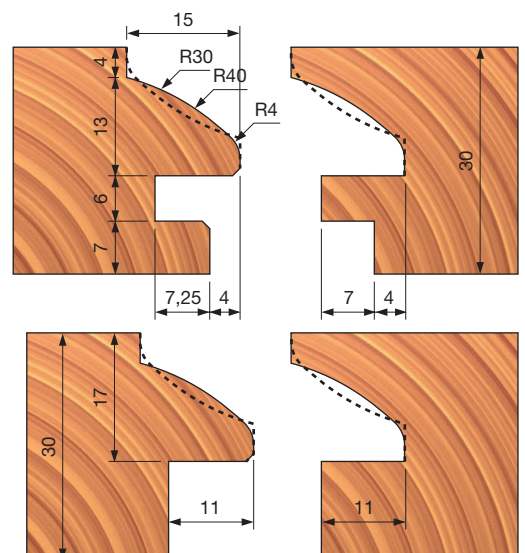
CPSEMBF301
F03FC23934

for TPSEM
BA3 - BB3 - BC3



CPSEMBE301
F03FC23933

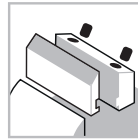
for TPSEM
BA3 - BB3 - BC3



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.

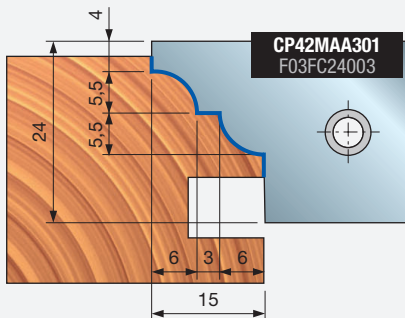
- Mostly suitable for profiling on softwood, hardwood and exotic wood, with a top quality finish.
- The tool versatility allows the production of 44-52 mm thick doors in 2 steps, taking care to adjust the tool programmed height accordingly.
- The variously profiled knives are perfectly interchangeable 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	V	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

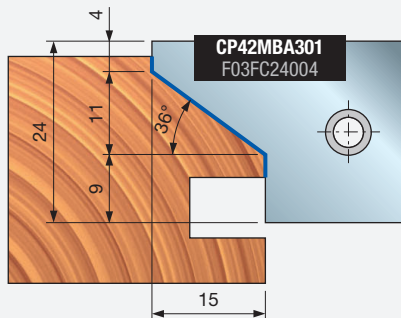
Spare parts		Dimensions mm	Freud Code	Art. No.
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Positioning plate	22 x 1,7 x 6,5	VT18M GA9	F03FA04488
	Wedge	21 x 19 x 8	CN13M AS9A	F03FC24221
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Spur insert	40 x 16 x 4	IG05MDAA305	F03FH02998
	Screw	M6 x 13	VT16M AE9	F03FC20658
	Grooving 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

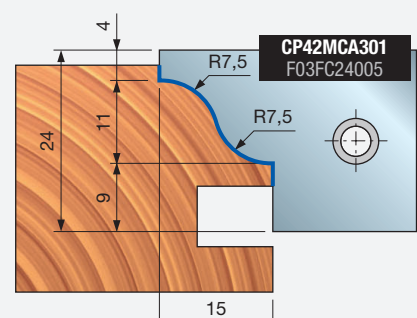
Profile 1



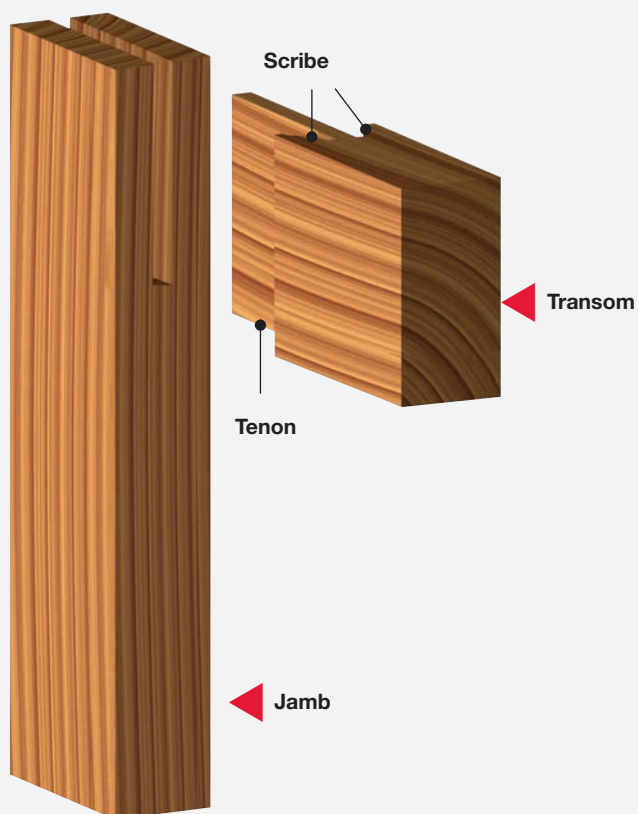
Profile 2



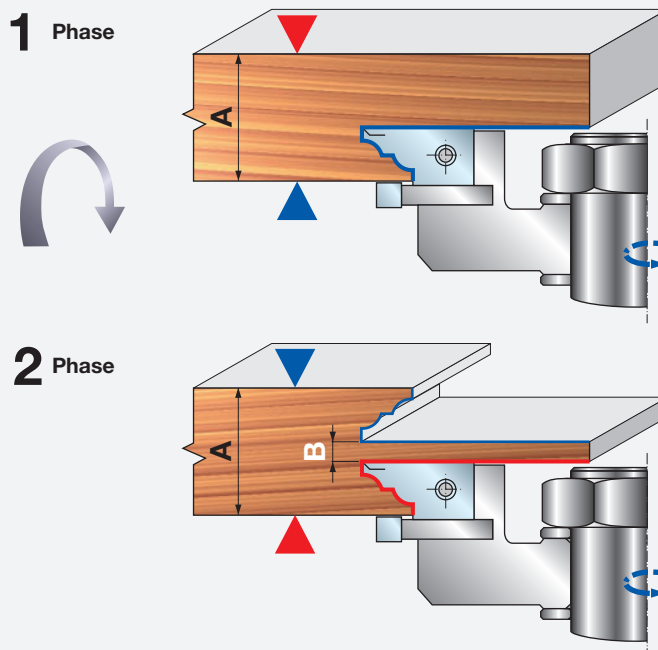
Profile 3



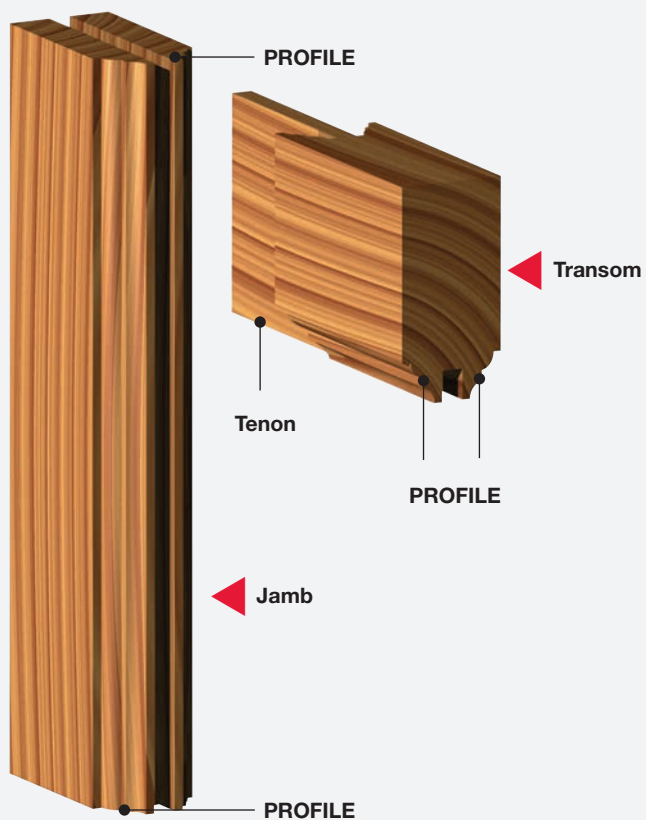
1 Door tenoning



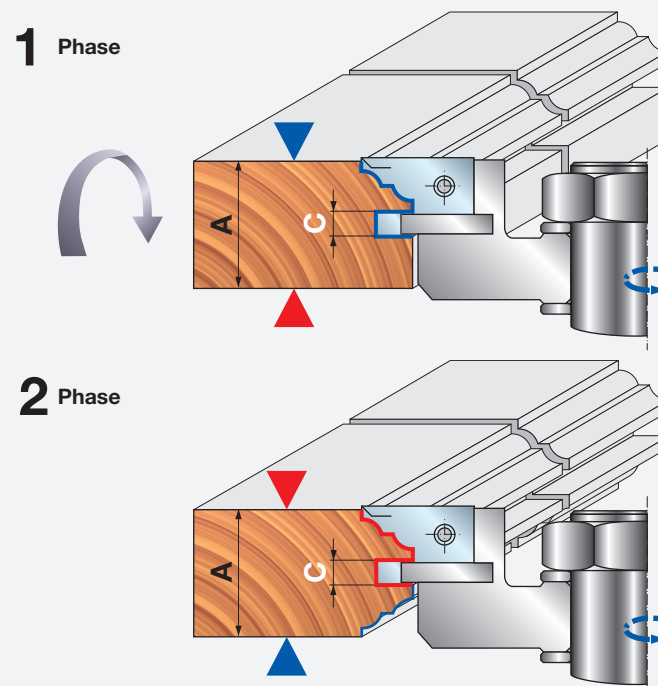
A	Door thickness mm	B	Tenon thickness mm
	44		8
	46		10
	50		14
	52		16



2 Door frame profiling



A	Door thickness mm	C	Groove thickness mm
	44		8
	46		10
	50		14
	52		16



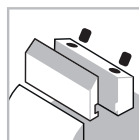


TP46MAN

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

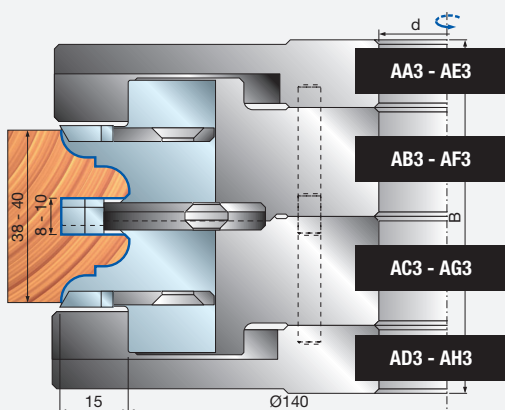
Profile	D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
1	174	78	30	2	7.500	TP46MAN001	F03FC20510
2	174	78	30	2	7.500	TP46MAN002	F03FC20511
3	174	78	30	2	7.500	TP46MAN003	F03FC20512
4	174	78	30	2	7.500	TP46MAN004	F03FC20513
5	174	78	30	2	7.500	TP46MAN005	F03FC20514
6	174	78	30	2	7.500	TP46MAN006	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

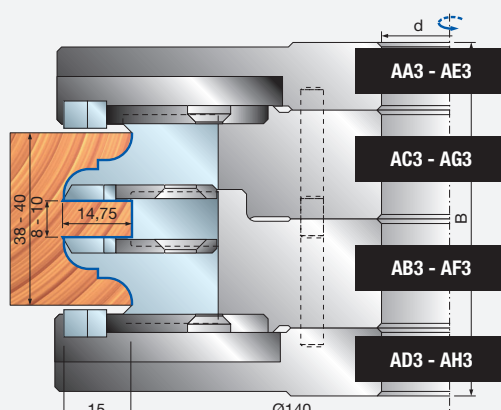
D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
174	31,5	30	2	8.300	TP46M AB3	F03FC20507
174	31,5	30	2	8.300	TP46M AC3	F03FC20508
174	31,5	32	2	8.300	TP46M AF3	F03FC24455
174	31,5	32	2	8.300	TP46M AG3	F03FC24456

See page 408-409 for spare parts.

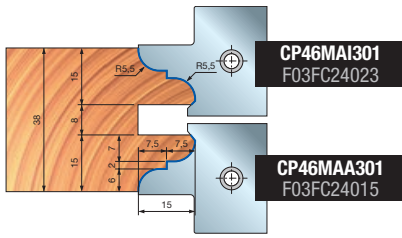
Example of profile



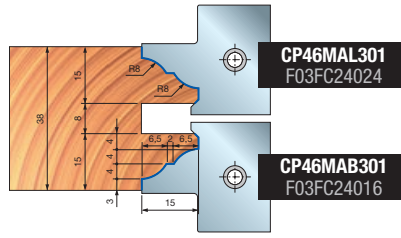
Example of scribe



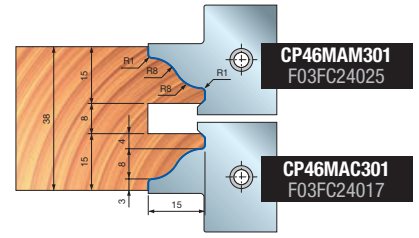
PROFILE 1



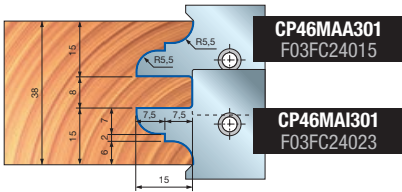
PROFILE 2



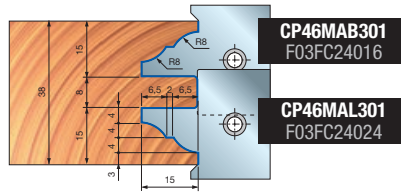
PROFILE 3



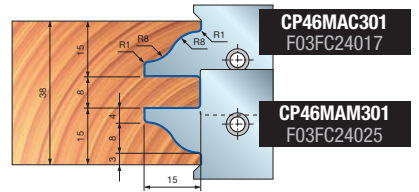
SCRIBE 1



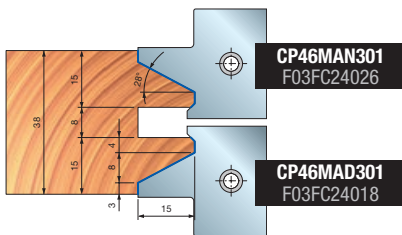
SCRIBE 2



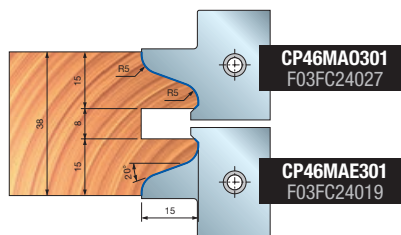
SCRIBE 3



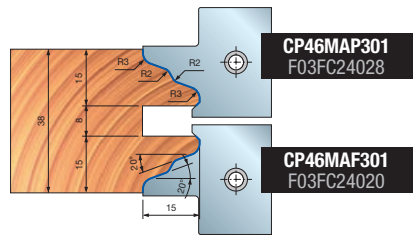
PROFILE 4



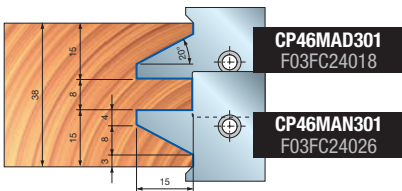
PROFILE 5



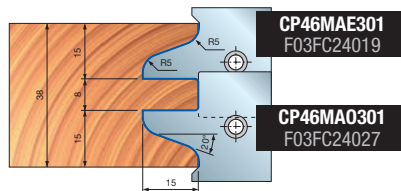
PROFILE 6



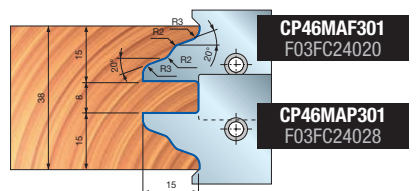
SCRIBE 4



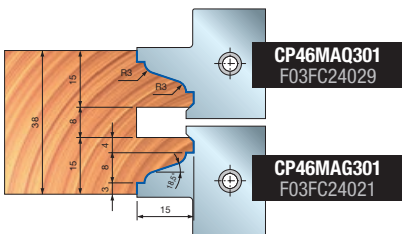
SCRIBE 5



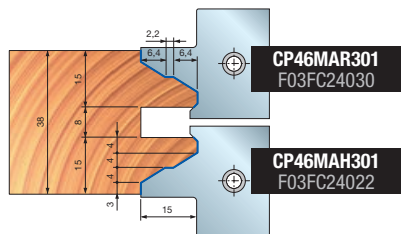
SCRIBE 6



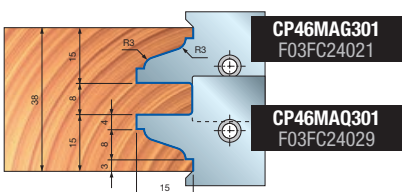
PROFILE 7



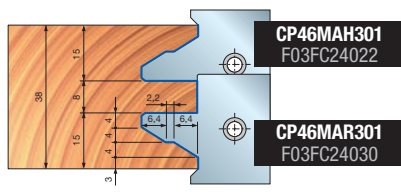
PROFILE 8



SCRIBE 7



SCRIBE 8





Machines:

Moulders, automatic and throughfeed machines.

Materials:

Softwood and hardwood.

Applications:

Profiling.

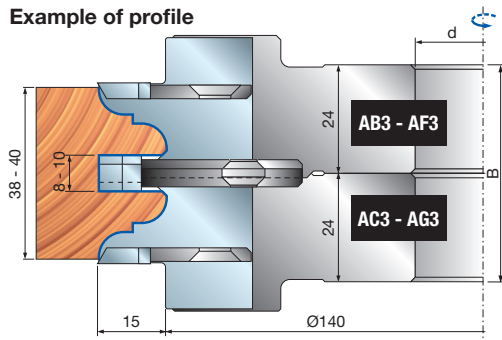
Technical information:

Performance knives tool set for doors.

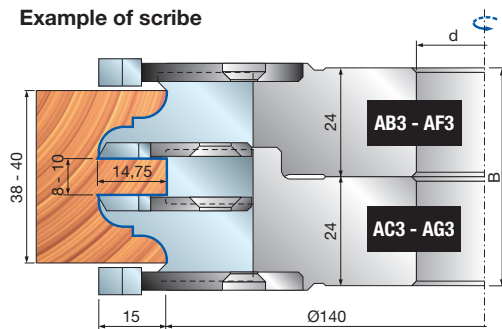
Adjustable timber thickness 38-40 mm.

- 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.

Example of profile



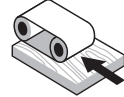
Example of scribe



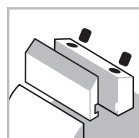
TP46MEC

Multiprofile cutterhead sets for doors (38-40 mm)

MEC



Automatic Feed



Clamping System



Aluminium Body



Softwood



Hardwood



Profiling

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

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



Machines:

Spindle moulders and manual feed machines.

Materials:

Softwood and hardwood.

Applications:

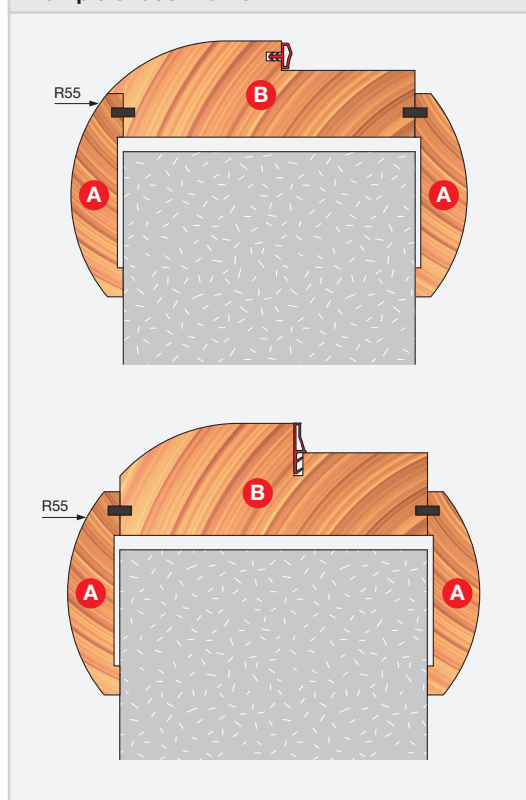
Profiling.

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

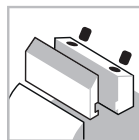


TD60M

Door frames profile cutterheads



Manual Feed



Clamping System



Aluminium Body



Softwood



Hardwood

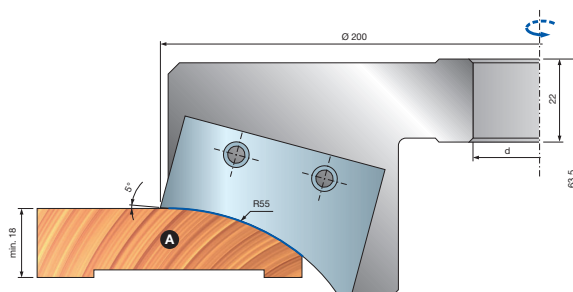


Profiling

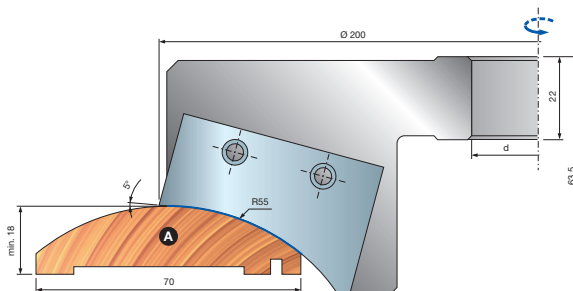
D	B	d	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm		1/min.		
200	55	32	3	7.000	TD60M AC3	F03F668631
200	55	35	3	7.000	TD60M AB3	F03FC20222

	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

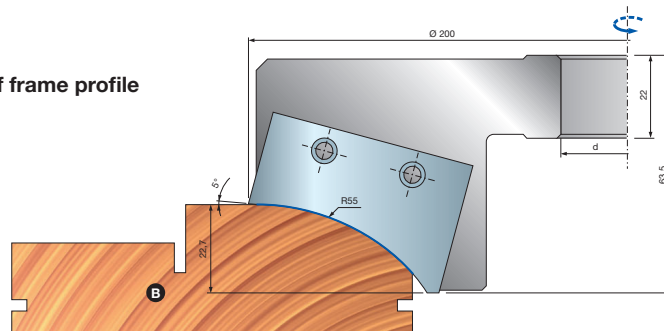
Step 1



Step 2



Example of frame profile



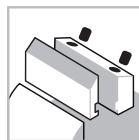


TD61M

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.

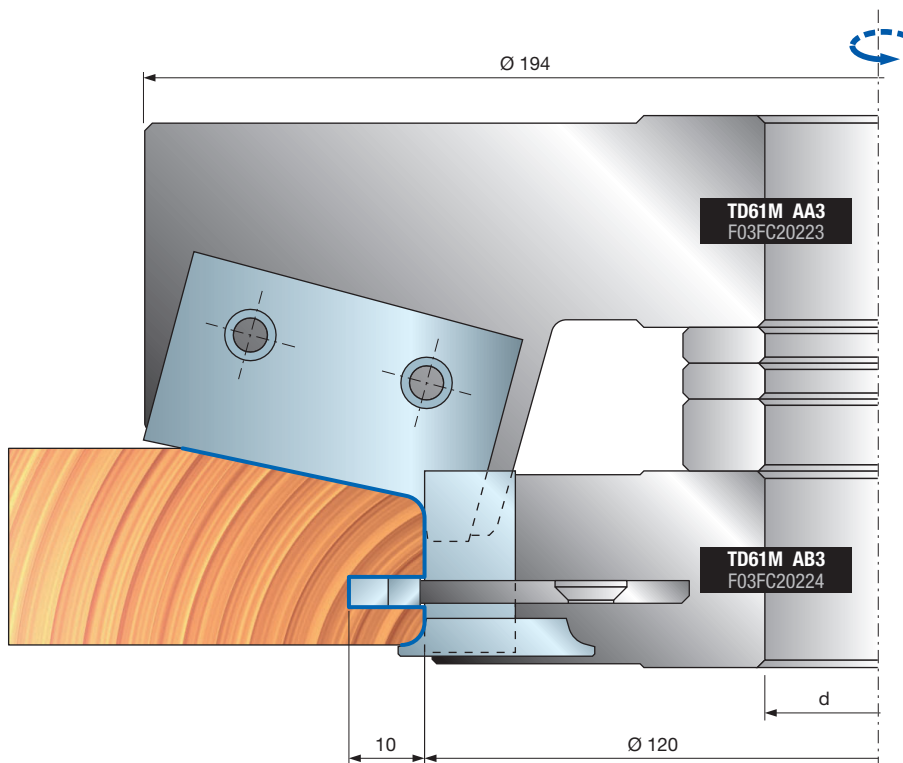
Technical information:

Multiple profile tools set for door frames.

- Aluminium light alloy body.
- Rebore not available.
- Performance knives to be ordered separately.

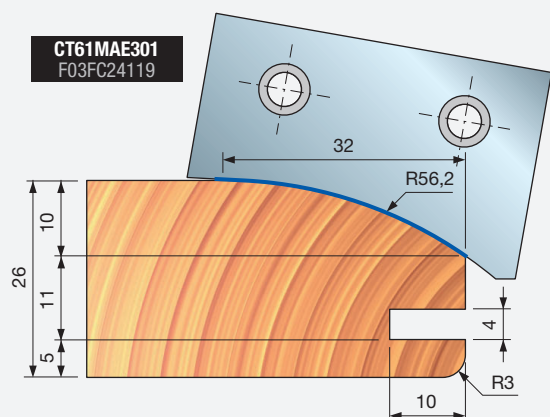
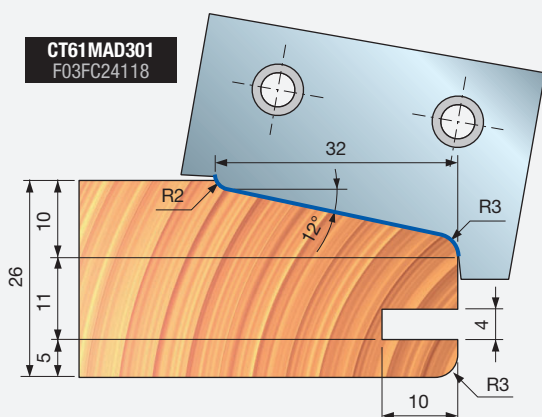
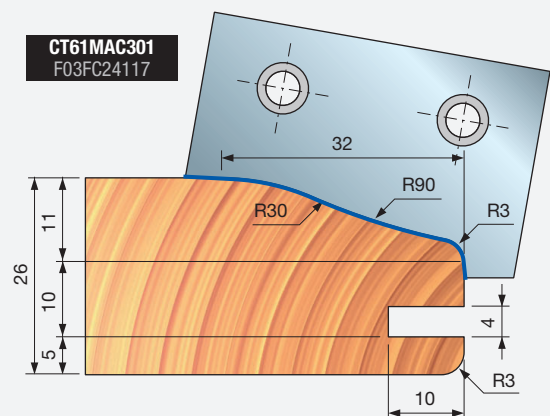
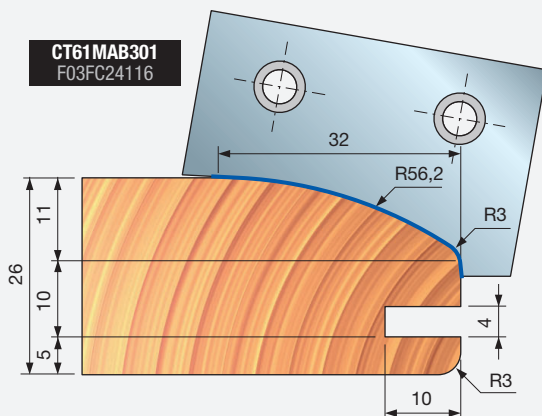
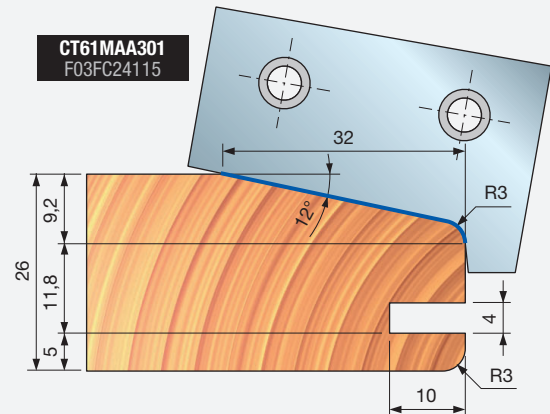
D	B	d	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm		1/min.		
194	59	30	2	7.000	TD61M AA3	F03FC20223
140	25	30	2	8.800	TD61M AB3	F03FC20224

	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	CG08M0A310	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	CT61MAA301	F03FC24115
45 x 30 x 3	CT61MAB301	F03FC24116
45 x 30 x 3	CT61MAC301	F03FC24117
45 x 30 x 3	CT61MAD301	F03FC24118
45 x 30 x 3	CT61MAE301	F03FC24119

Profiles obtainable using both the cutterheads TD61M AA3 and TD61M AB3



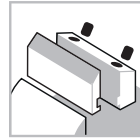


TD21M

Raised panel cutterheads



Manual Feed



Clamping System



Aluminium Body



Softwood



Hardwood



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.



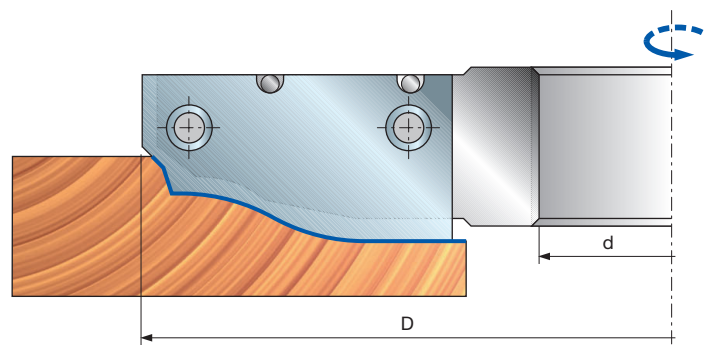
Profiling

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
140	-	30	2	9.600	TD21M HA3	F03FC24421
140	-	32	2	9.600	TD21M HC3	F03FC24422
140	-	35	2	9.600	TD21M HB3	F03FC23145

Spare parts		Dimensions mm	Freud Code	Art. No.
	Screw	M6 x 10	2622M CB9	F03FA07455
	Screw	M6 x 12	2607M 006	F03FA07456
	Washer	14 x 2 x 6	VT18M AL9	F03FC20662
	Positioning plate	33 x 3 x 16	VT18M AI9	F03FC20661
	Allen key	4	CB03M BA9	F03FA00163

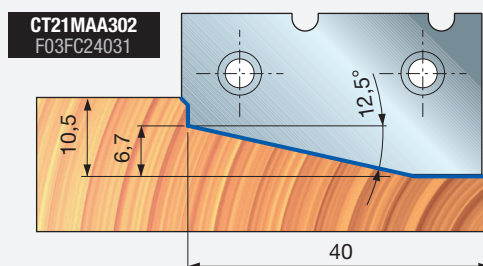
Profiled knives

Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife	41 x 22 x 3,5	CT21MAA302	F03FC24031
2	Knife	41 x 22 x 3,5	CT21MBA302	F03FC24032
3	Knife	41 x 22 x 3,5	CT21MCA302	F03FC24033
4	Knife	41 x 22 x 3,5	CT21MDA302	F03FC24034
5	Knife	41 x 22 x 3,5	CT21MEA302	F03FC24035

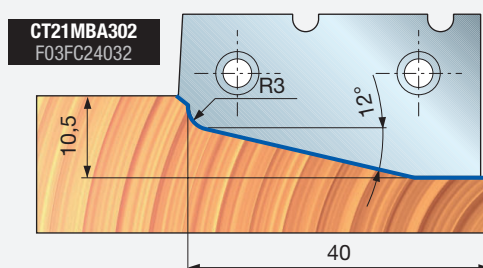


Example of profiles

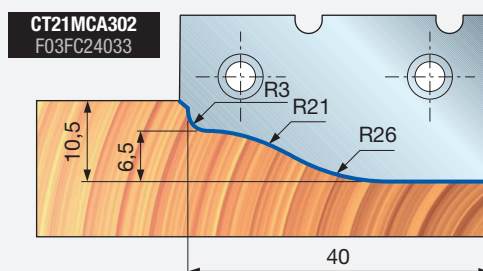
PROFILE 1



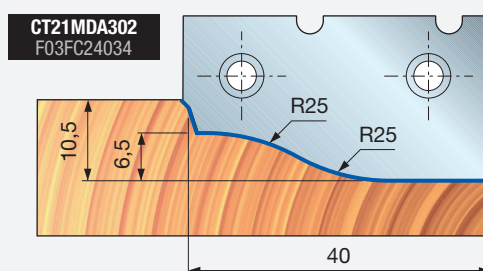
PROFILE 2



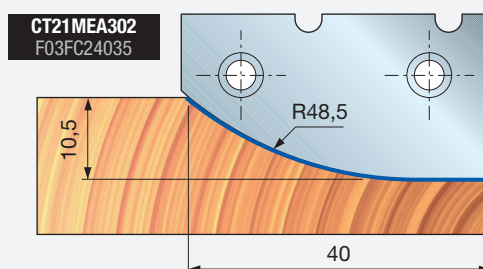
PROFILE 3

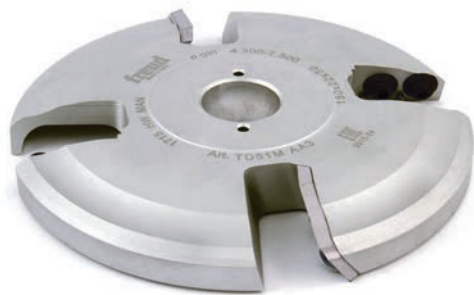


PROFILE 4



PROFILE 5



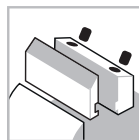


TD51M

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:

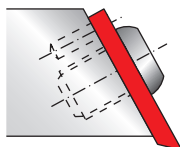
Performance knives raised panel with 5 different profiles available designed to fit knives for softwood and hardwood.

- 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.

1 Knife



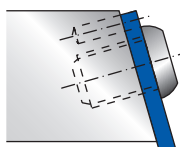
2 Knife



2 Knife

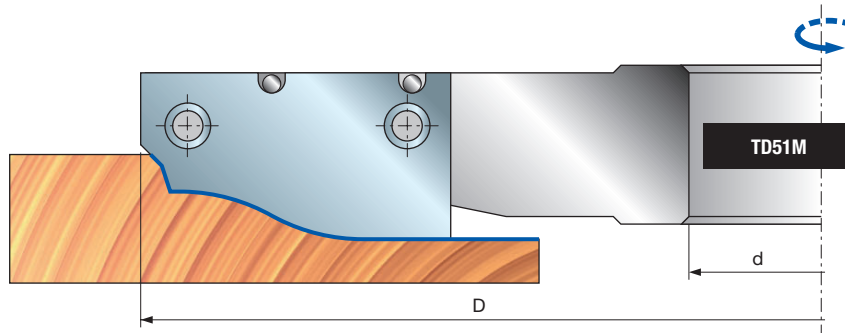


1 Knife



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



2 Knives for Softwood

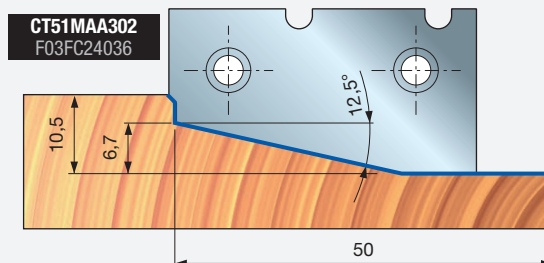
	Profile	Dimensions mm	Freud Code	Art. No.
	1	41 x 28 x 3,5	CT51MAA302	F03FC24036
	2	41 x 28 x 3,5	CT51MBA302	F03FC24037
	3	41 x 28 x 3,5	CT51MCA302	F03FC24038
	4	41 x 28 x 3,5	CT51MDA302	F03FC24039
	5	41 x 28 x 3,5	CT51MEA302	F03FC24040

2 Knives for Hardwood

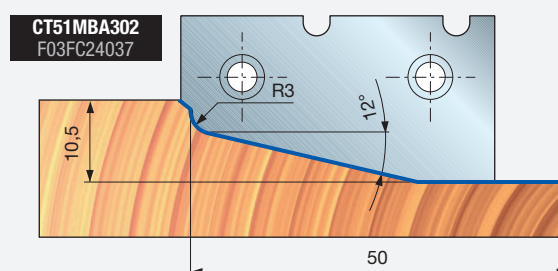
	Profile	Dimensions mm	Freud Code	Art. No.
	1	41 x 22 x 3,5	CT21MAA302	F03FC24031
	2	41 x 22 x 3,5	CT21MBA302	F03FC24032
	3	41 x 22 x 3,5	CT21MCA302	F03FC24033
	4	41 x 22 x 3,5	CT21MDA302	F03FC24034
	5	41 x 22 x 3,5	CT21MEA302	F03FC24035

Example of profiles

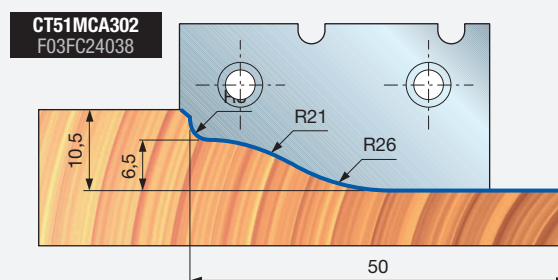
PROFILE 1



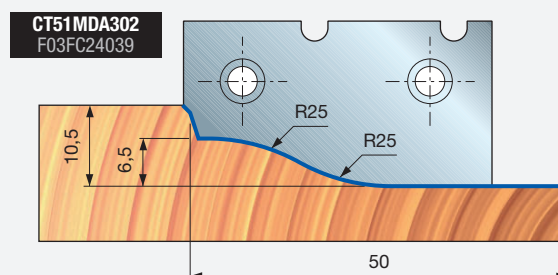
PROFILE 2



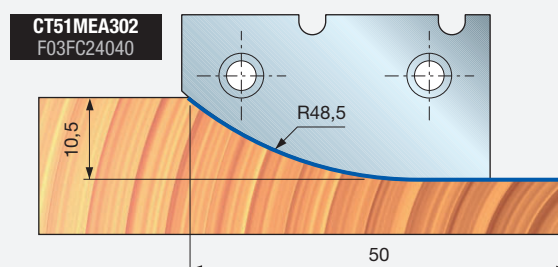
PROFILE 3

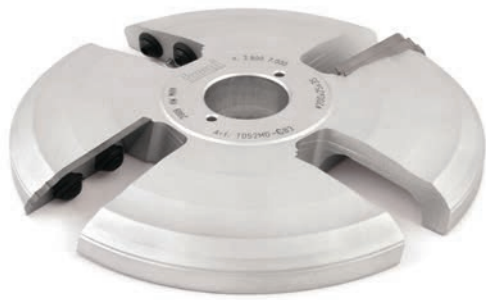


PROFILE 4



PROFILE 5





Machines:

Spindle moulders and manual feed machines.

Materials:

Softwood and hardwood.

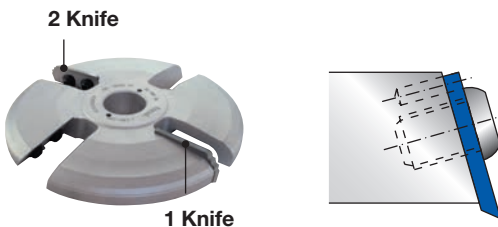
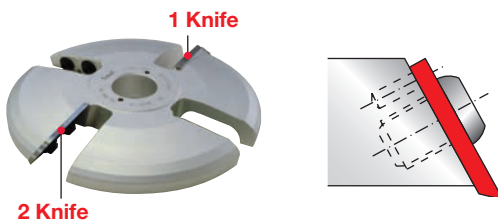
Applications:

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.

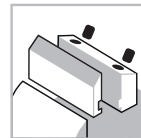


TD52M TD52MD

Raised panel cutterheads for softwood and hardwood



Manual Feed



Clamping System



Aluminium Body



Softwood



Hardwood



Profiling

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

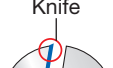
D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
200	25	30	2+2	7.000	TD52M HA3	F03F668623
200	25	30	2+2	7.000	TD52MD HA3	F03F668625
200	25	32	2+2	7.000	TD52M HC3	F03F668624
200	25	32	2+2	7.000	TD52MD HC3	F03F668626
200	25	35	2+2	7.000	TD52M HB3	F03FC20213
200	25	35	2+2	7.000	TD52MD HB3	F03FC20215

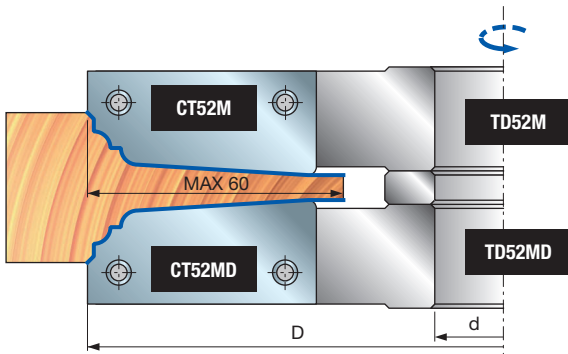
	Spare parts	Dimensions mm	Freud Code	Art. No.
	Washer	14 x 2 x 6	VT18M AL9	F03FC20662
	Screw	M6 x 12	2607M 006	F03FA07456
	Torx key	4	CB03M BB9	F03FA00164

2 Knives for Softwood

	Profile	Dimensions mm	Freud Code	Art. No.	
	2		55 x 30 x 3,5	CT52MTB301 CT52MDB301	F03FC24057 F03FC24052
	3		55 x 30 x 3,5	CT52MTC301 CT52MDTC301	F03FC24058 F03FC24053
	4		55 x 30 x 3,5	CT52MTD301 CT52MDTD301	F03FC24059 F03FC24054
	5		55 x 30 x 3,5	CT52MTE301 CT52MDTE301	F03FC24060 F03FC24055

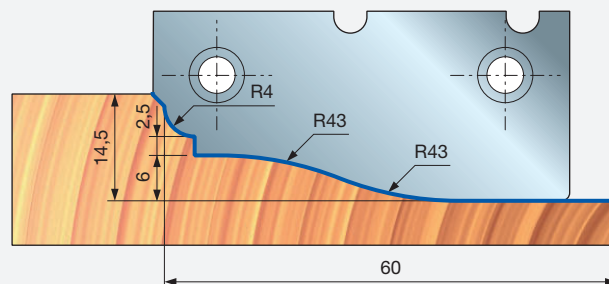
2 Knives for Hardwood

	Profile	Dimensions mm	Freud Code	Art. No.	
	2		55 x 25 x 3,5	CT52MDB301	F03FC24042
				CT52MDBB301	F03FC24045
	3		55 x 25 x 3,5	CT52MDC301	F03FC24043
				CT52MDDC301	F03FC24046
	4		55 x 25 x 3,5	CT52MDD301	F03FC24049
				CT52MDDD301	F03FC24047
	5		55 x 25 x 3,5	CT52MDE301	F03FC24050
				CT52MDDE301	F03FC24048

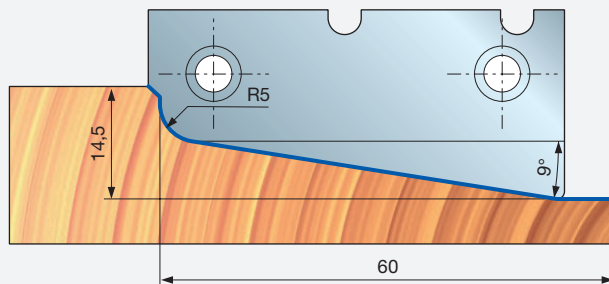


Example of profiles

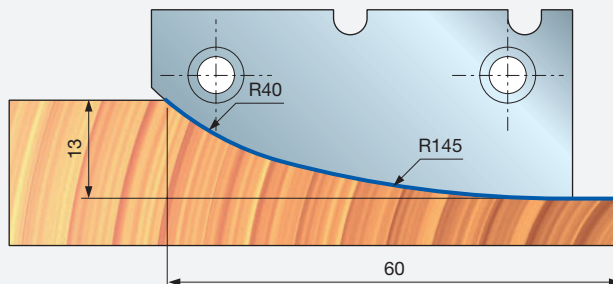
PROFILE 2



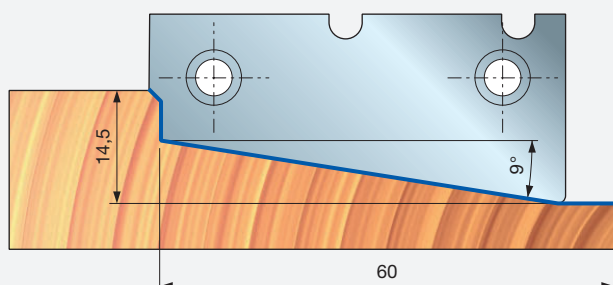
PROFILE 3

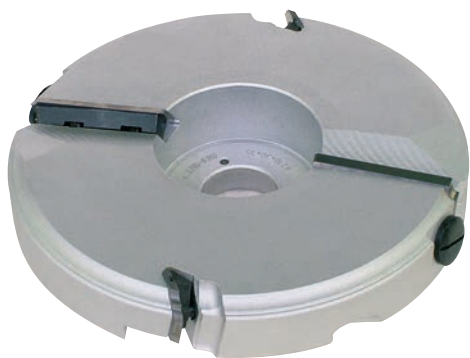


PROFILE 4



PROFILE 5



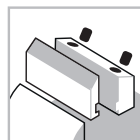


TD55MD TD55MS

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:

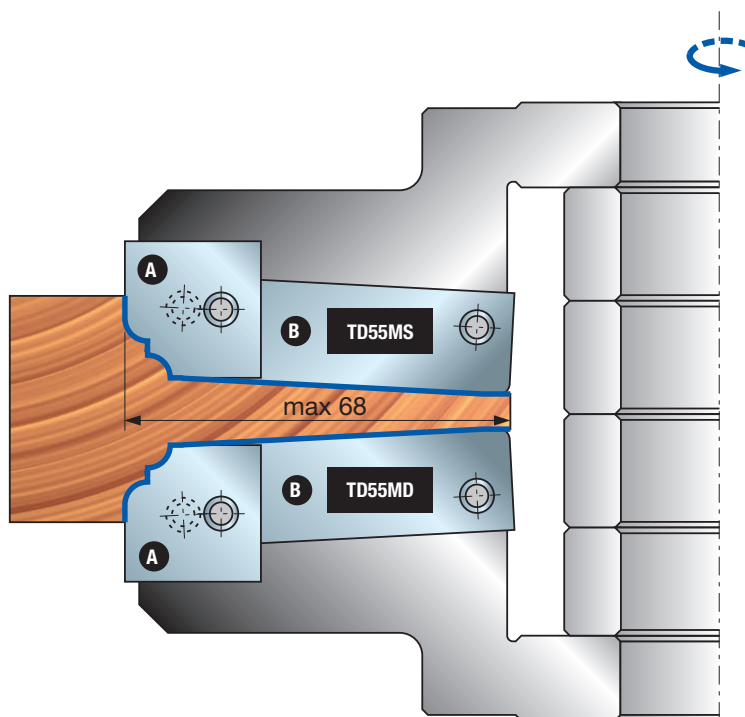
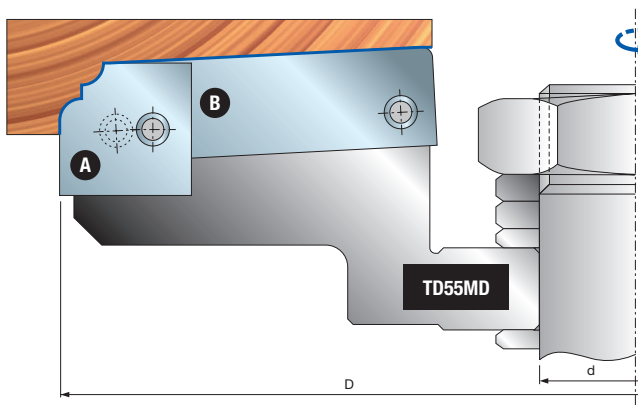
Performance knives raised panel with 4 different profiles available.

- 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 mm	B mm	d* mm	Z	Max RPM 1/min.	Freud Code	Art. No.
210	-	30	2+2	6.500	TD55MD BA3	F03F668627
210	-	32	2+2	6.500	TD55MD BC3	F03F668628
210	-	35	2+2	6.500	TD55MD BB3	F03FC20217
210	-	30	2+2	6.500	TD55MS BA3	F03F668629
210	-	32	2+2	6.500	TD55MS BC3	F03F668630
210	-	35	2+2	6.500	TD55MS BB3	F03FC20219

* Size shown between brackets is the max. rebore possible

Spare parts		Dimensions mm	Freud Code	Art. No.
	Screw	M10 x 25	2602M FI9	F03FA07353
	Screw	M8 x 10 x 22	VT08M AD9	F03FA04456
	Screw	M5 x 7 x 16	VT08M AE9	F03FA04457
	Allen key	5	CB03M EC9	F03FA00171
TD55MS TD55MD	Wedge A	21 x 23 x 8	CN55MD AA9A	F03FC24544
	Wedge B	61 x 18 x 8	CN55MD BA9	F03FC01441
	Wedge A	21 x 23 x 8	CN55MS AA9A	F03FC24545
	Wedge B	61 x 18 x 8	CN55MS BA9	F03FC01443



Knives for TD55MD

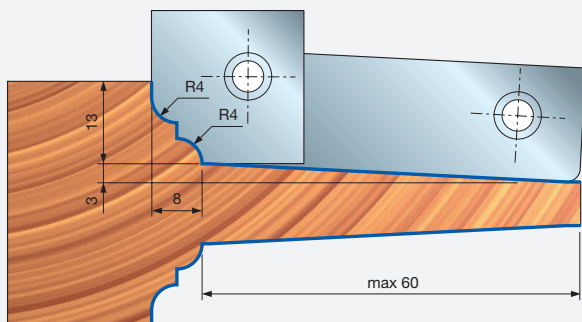
Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife A	23 x 24 x 3	CT55MDAA301	F03FC24078
	Knife B	65 x 20 x 3	CT55MDBA301	F03FC24087
2	Knife A	23 x 24 x 3	CT55MDAB301	F03FC24079
	Knife B	65 x 20 x 3	CT55MDBB301	F03FC24088
3	Knife A	23 x 24 x 3	CT55MDAC301	F03FC24080
	Knife B	65 x 20 x 3	CT55MDBC301	F03FC24089
4	Knife A	23 x 24 x 3	CT55MDAE301	F03FC24082
	Knife B	65 x 20 x 3	CT55MDBE301	F03FC24091

Knives for TD55MS

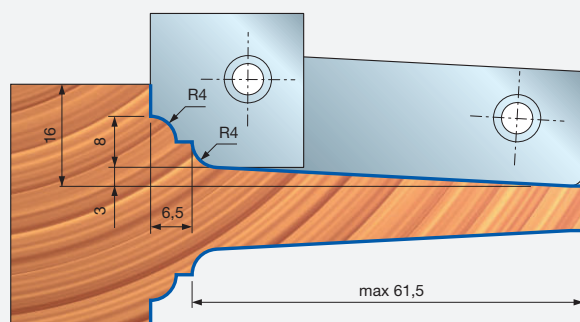
Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife A	23 x 24 x 3	CT55MSAA301	F03FC24096
	Knife B	65 x 20 x 3	CT55MSBA301	F03FC24105
2	Knife A	23 x 24 x 3	CT55MSAB301	F03FC24097
	Knife B	65 x 20 x 3	CT55MSBB301	F03FC24106
3	Knife A	23 x 24 x 3	CT55MSAC301	F03FC24098
	Knife B	65 x 20 x 3	CT55MSBC301	F03FC24107
4	Knife A	23 x 24 x 3	CT55MSAE301	F03FC24100
	Knife B	65 x 20 x 3	CT55MSBE301	F03FC24109

Example of profiles

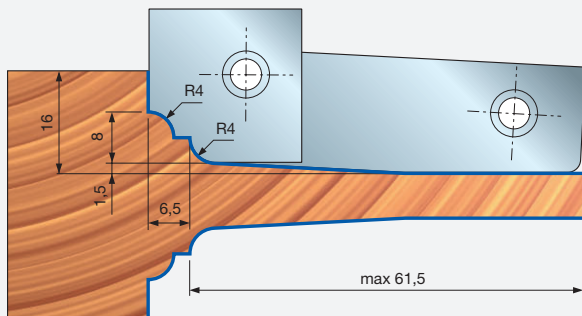
PROFILE 1



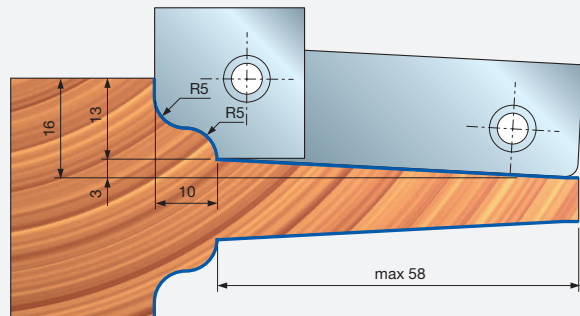
PROFILE 2



PROFILE 3



PROFILE 4



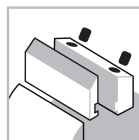


TD55MD TD55MS

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.

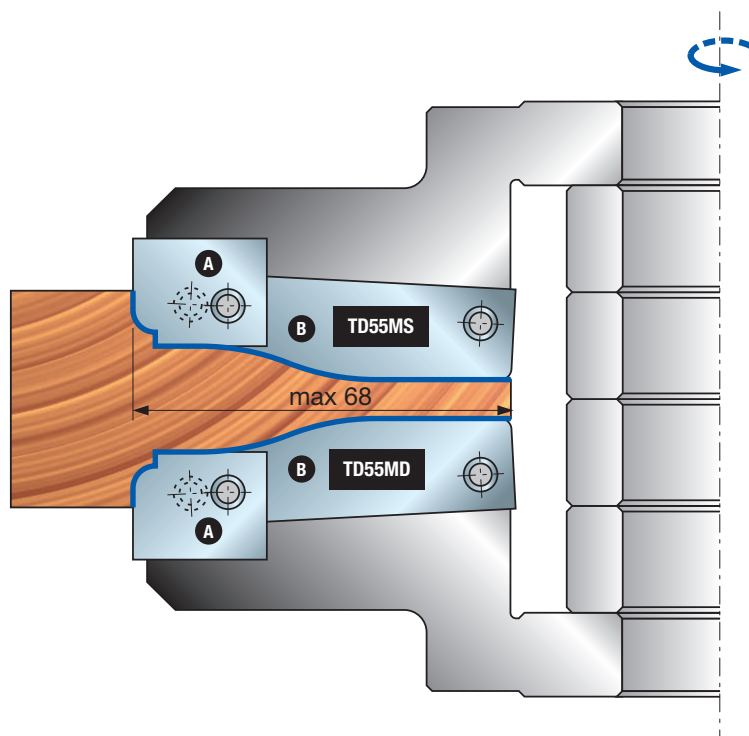
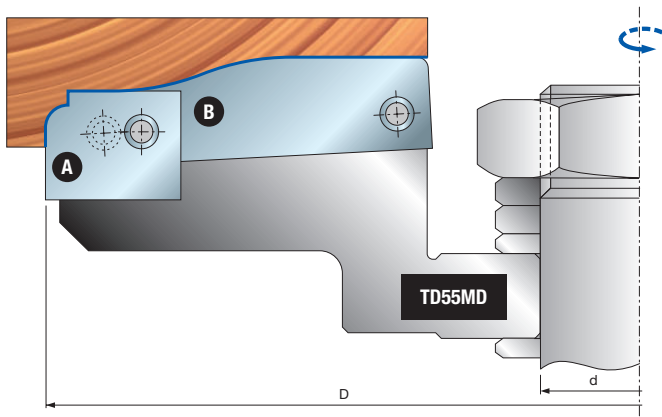
Technical information:

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	TD55MD CA3	F03F668934
210	-	32	2+2	6.500	TD55MD CC3	F03F668935
210	-	35	2+2	6.500	TD55MD CB3	F03FC20218
210	-	30	2+2	6.500	TD55MS CA3	F03F668936
210	-	32	2+2	6.500	TD55MS CC3	F03F668937
210	-	35	2+2	6.500	TD55MS CB3	F03FC20220

	Spare parts	Dimensions mm	Freud Code	Art. No.
	Screw	M10 x 25	2602M FI9	F03FA07353
	Screw	M8 x 10 x 22	VT08M AD9	F03FA04456
	Screw	M5 x 7 x 16	VT08M AE9	F03FA04457
	Allen key	5	CB03M EC9	F03FA00171
TD55MD	Wedge A	21 x 23 x 8	CN55MD AA9A	F03FC24544
	Wedge B	61 x 18 x 8	CN55MD BA9	F03FC01441
	Wedge A	21 x 23 x 8	CN55MS AA9A	F03FC24545
	Wedge B	61 x 18 x 8	CN55MS BA9	F03FC01443



Knives for TD55MD

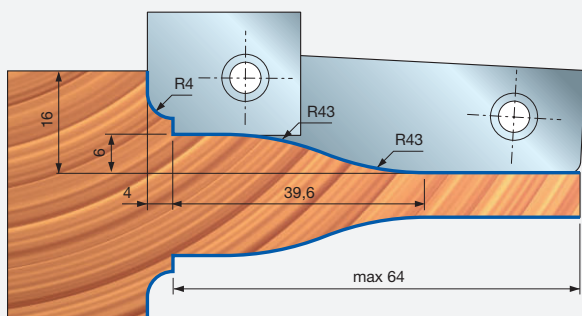
Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife A	20 x 24 x 3	CT55MDAD301	F03FC24081
	Knife B	65 x 20 x 3	CT55MDBD301	F03FC24090
2	Knife A	20 x 24 x 3	CT55MDAG301	F03FC24084
	Knife B	65 x 20 x 3	CT55MDBG301	F03FC24093
3	Knife A	20 x 24 x 3	CT55MDAH301	F03FC24085
	Knife B	65 x 20 x 3	CT55MDBH301	F03FC24094
4	Knife A	20 x 24 x 3	CT55MDAI301	F03FC24086
	Knife B	65 x 20 x 3	CT55MDBI301	F03FC24095

Knives for TD55MS

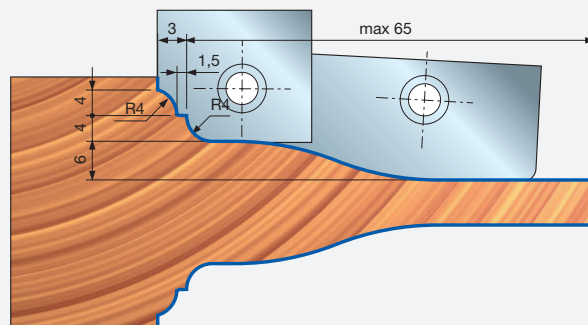
Profile	Spare knives	Dimensions mm	Freud Code	Art. No.
1	Knife A	20 x 24 x 3	CT55MSAD301	F03FC24099
	Knife B	65 x 20 x 3	CT55MSBD301	F03FC24108
2	Knife A	20 x 24 x 3	CT55MSAG301	F03FC24102
	Knife B	65 x 20 x 3	CT55MSBG301	F03FC24111
3	Knife A	20 x 24 x 3	CT55MSAH301	F03FC24103
	Knife B	65 x 20 x 3	CT55MSBH301	F03FC24112
4	Knife A	20 x 24 x 3	CT55MSAI301	F03FC24104
	Knife B	65 x 20 x 3	CT55MSBI301	F03FC24113

Example of profiles

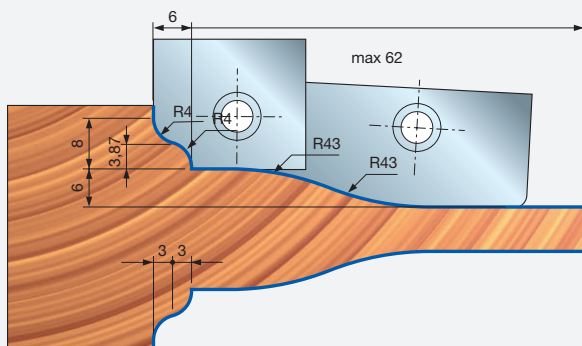
PROFILE 1



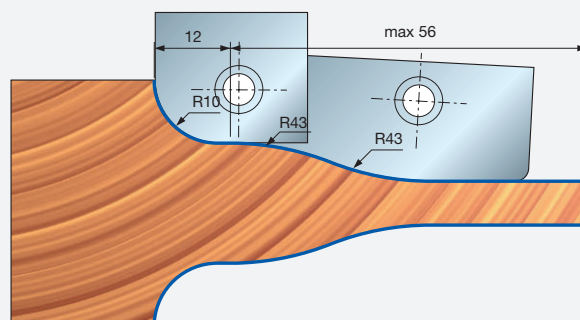
PROFILE 2



PROFILE 3



PROFILE 4



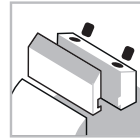


TG79MG

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

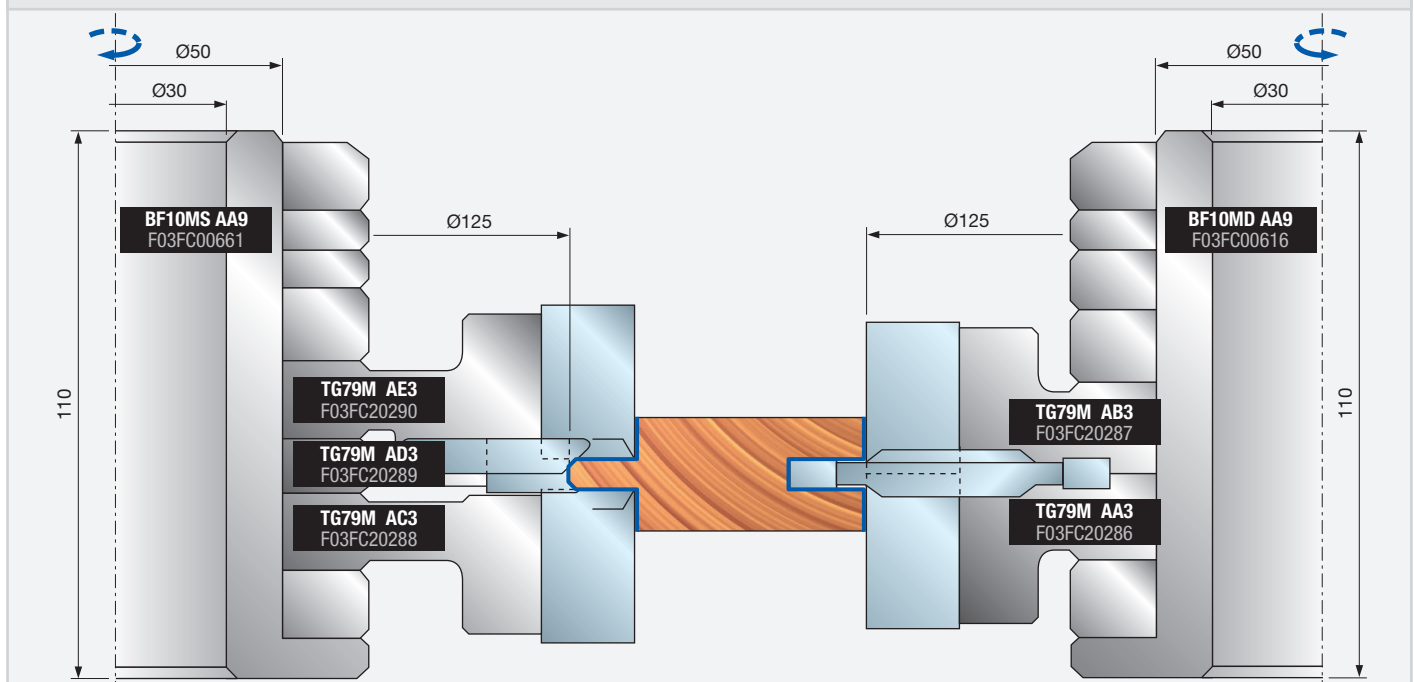


Profiling

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



Tools for TG79MG sets

D mm	B mm	d mm	Z	V	Max RPM 1/min.	Freud Code	Art. No.
125	20	50	2	-	9.000	TG79M AA3	F03FC20286
125	20	50	2	-	9.000	TG79M AB3	F03FC20287
143	20	50	2	2	9.000	TG79M AC3	F03FC20288
128	8	50	2	-	9.000	TG79M AD3	F03FC20289
143	20	50	2	2	9.000	TG79M AE3	F03FC20290
144	20	50	2	2	9.000	TG79M AF3	F03FC20291
125	20	50	-	-	9.000	TG79M AG3	F03FC20292
125	20	50	-	-	9.000	TG79M AI3	F03FC20294
143	20	50	-	-	9.000	TG79M AM3	F03FC20296
143	20	50	-	-	9.000	TG79M A03	F03FC20298

The above codes are intended without sleeve, which should be ordered separately.

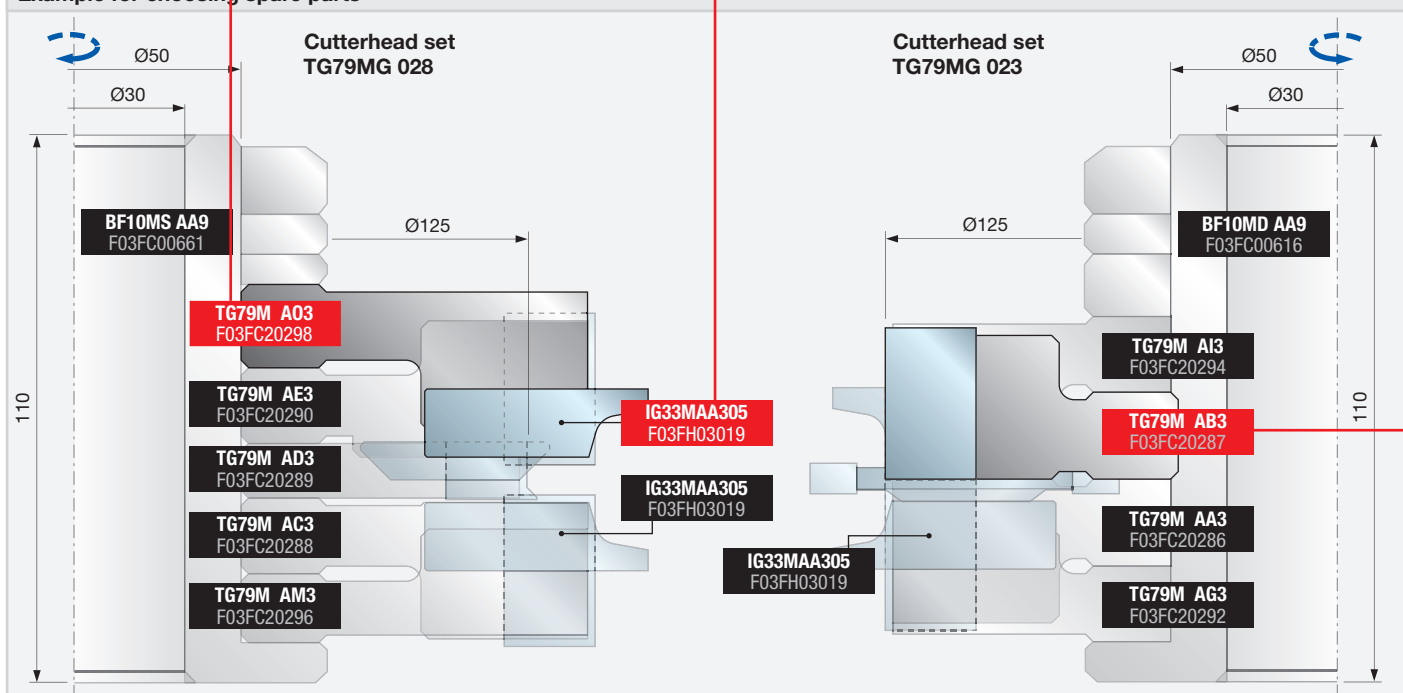
Spare parts for TG79MG tools

	Spare parts	Dimensions mm	Freud Code	Art. No.
AA3	Knife	20 x 12 x 1,5	CG08MDA310	F03FH02905
	Wedge	16	CN01M DA9	F03FC01251
	Screw	M8 x 16	VT03M AA9	F03FA04435
	Grooving insert	40 x 16 x 4	IG04MDAA305	F03FH03409
	Screw	M6 x 14,5	VT16M AA9	F03FA04476
AB3	Knife	20 x 12 x 1,5	CG08MDA310	F03FH02905
	Wedge	16	CN01M DA9	F03FC01251
	Screw	M8 x 16	VT03M AA9	F03FA04435
	Grooving insert	40 x 16 x 4	IG04MSAA305	F03FH02994
	Screw	M6 x 14,5	VT16M AA9	F03FA04476
AC3	Knife	20 x 12 x 1,5	CG08MDA310	F03FH02905
	Wedge	16	CN01M DA9	F03FC01251
	Screw	M8 x 16	VT03M AA9	F03FA04435
	Spur	22,86 x 2,5	RG02MAA305	F03FH03041
	Screw	M5 x 8	VT05M AA9	F03FA04444
AD3	Knife	7,5 x 12 x 1,5	CG01MOB310	F03FC23814
	Wedge	14 x 7,2 x 8	CN09M AT9	F03FC01294
	Screw	M5 x 19	VT11M AA9	F03FA04468
	Knife	20 x 12 x 1,5	CG08MDA310	F03FH02905
	Wedge	16	CN01M DA9	F03FC01251
AE3 - AF3	Screw	M8 x 16	VT03M AA9	F03FA04435
	Spur	22,86 x 2,5	RG02MAA305	F03FH03041
	Screw	M5 x 8	VT05M AA9	F03FA04444
	Beveled insert	22 x 16 x 5 45°	IG51MBA305	F03FH03022
	Screw	M6 x 14,5	VT16M AA9	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°	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
	Screw	M6 x 14,5	VT16M AA9	F03FA04476
	Rounding insert	25,5 x 16 x 9 R3	IG33MAA305	F03FH03019
	Rounding insert	25,5 x 16 x 9 R=5	IG33MAB305	F03FH03020
	Beveling insert	25,5 x 16 x 9 45°	IG33MAD305	F03FH03021
	Screw	M6 x 15,5	VT16M AD9	F03FC20657

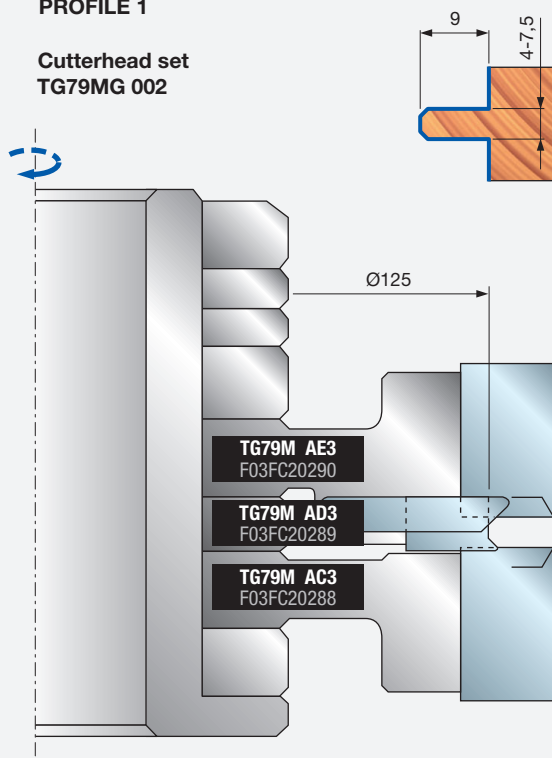
Example for choosing spare parts



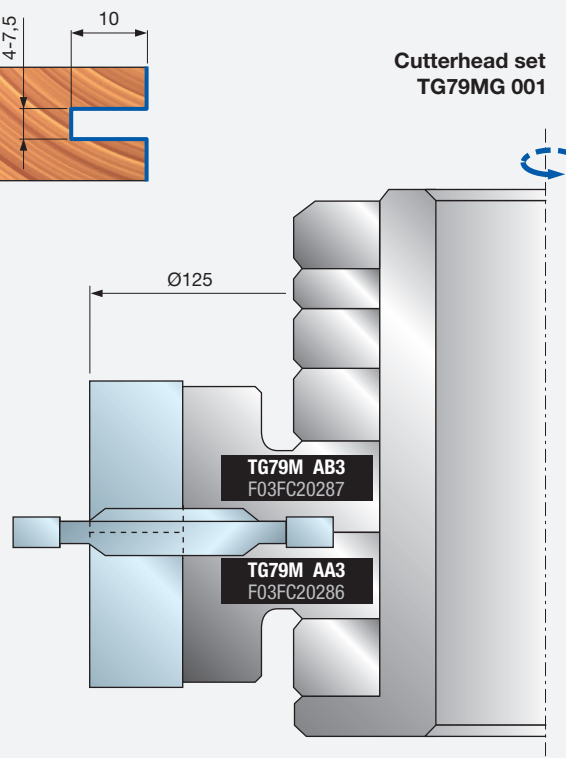
Examples of programming

PROFILE 1

Cutterhead set
TG79MG 002

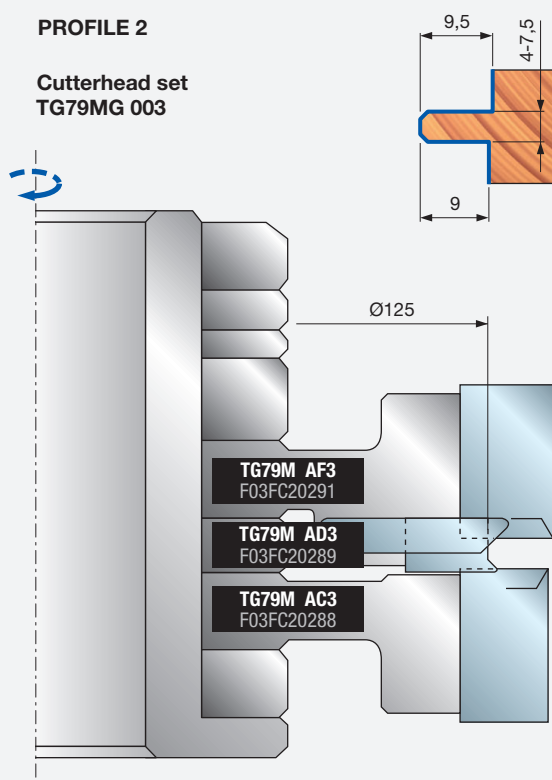


Cutterhead set
TG79MG 001

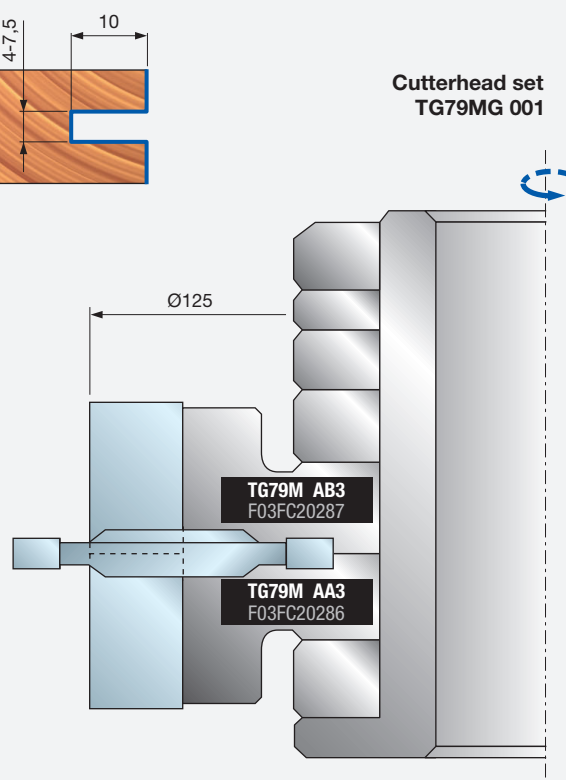


PROFILE 2

Cutterhead set
TG79MG 003



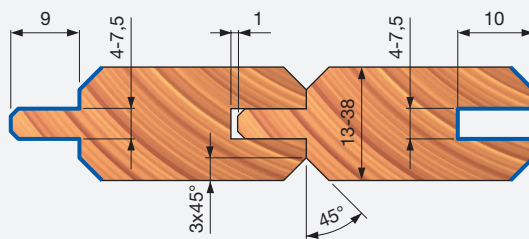
Cutterhead set
TG79MG 001



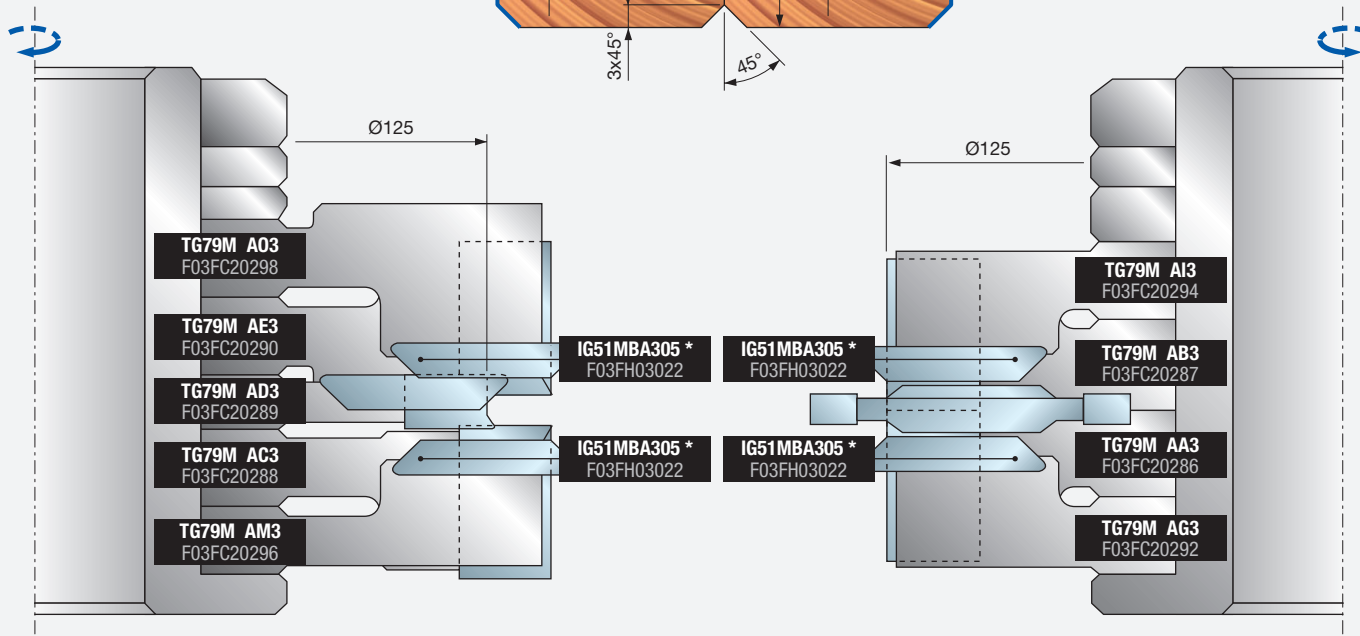
Examples of programming

PROFILE 3

Cutterhead set
TG79MG 006

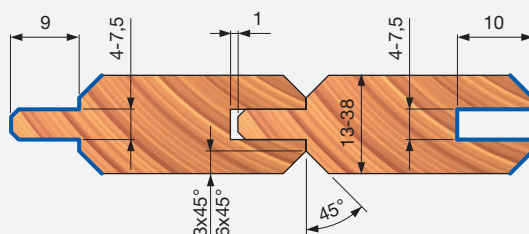


Cutterhead set
TG79MG 004

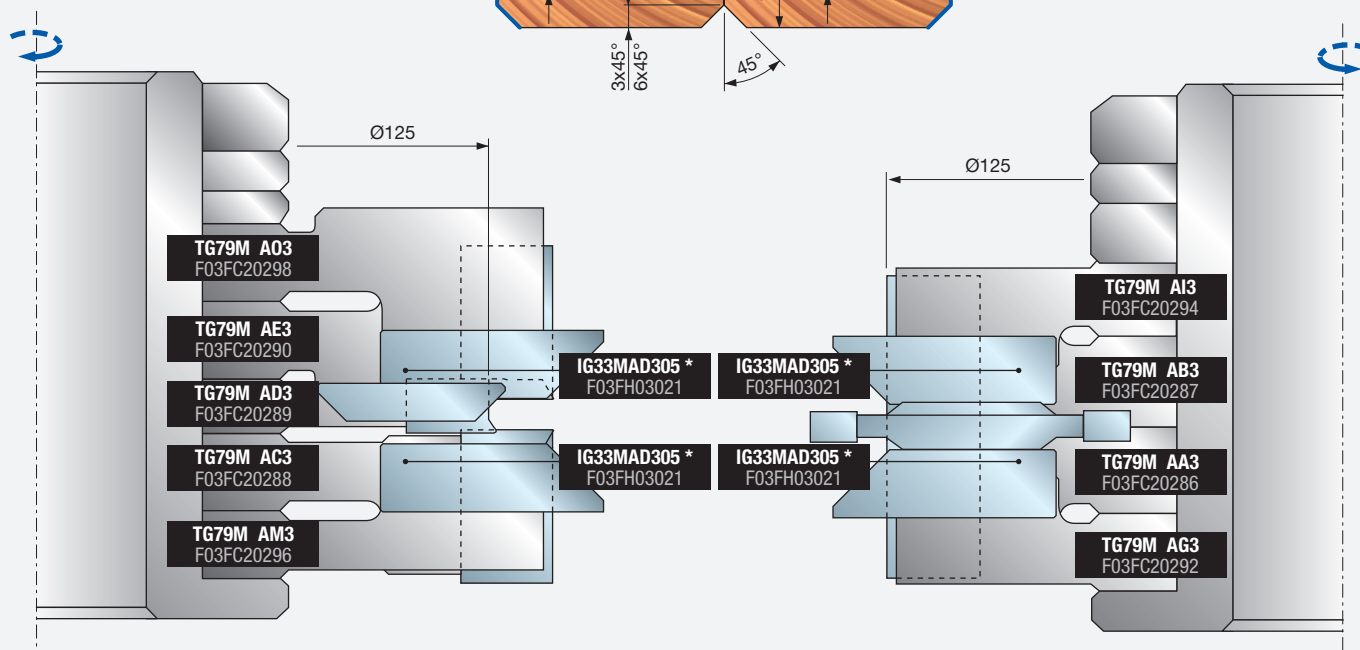


PROFILE 4

Cutterhead set
TG79MG 025



Cutterhead set
TG79MG 020



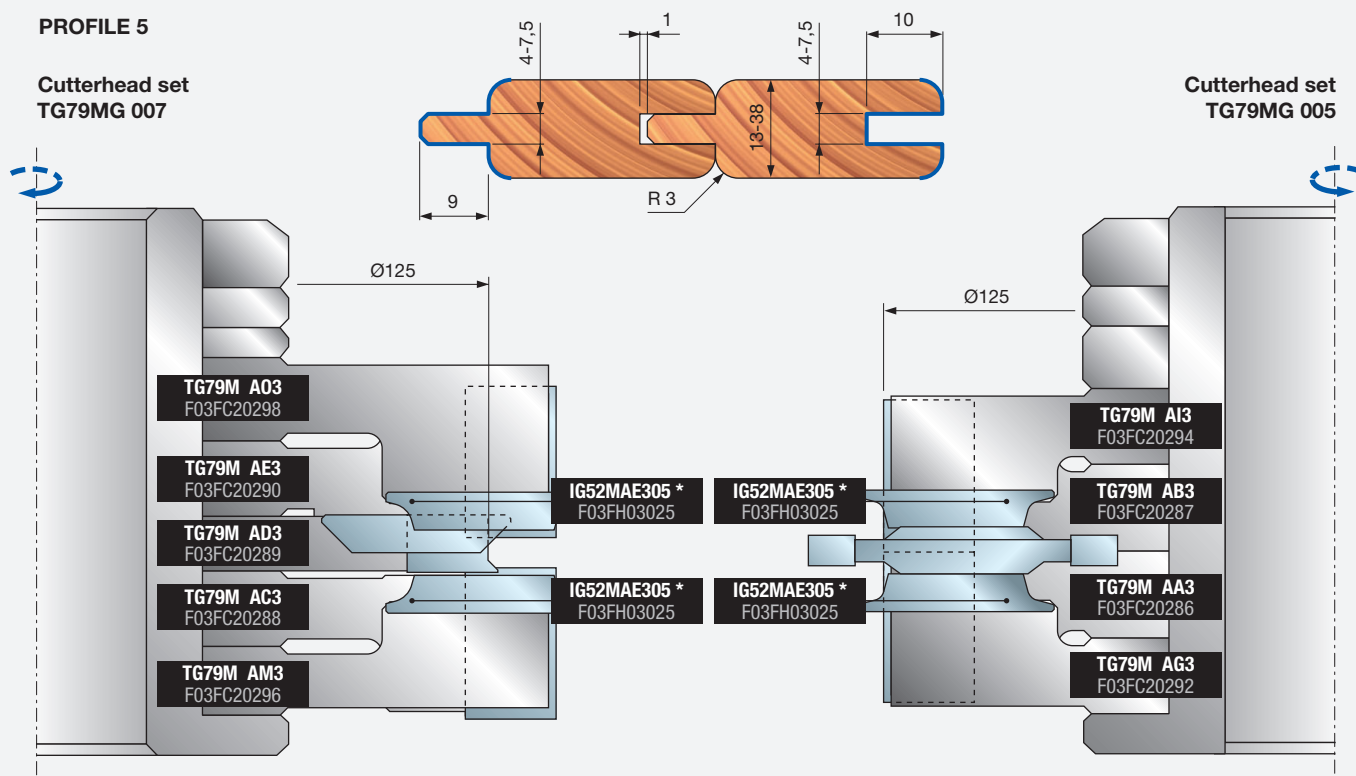
* Inserts are not included

Examples of programming

PROFILE 5

Cutterhead set
TG79MG 007

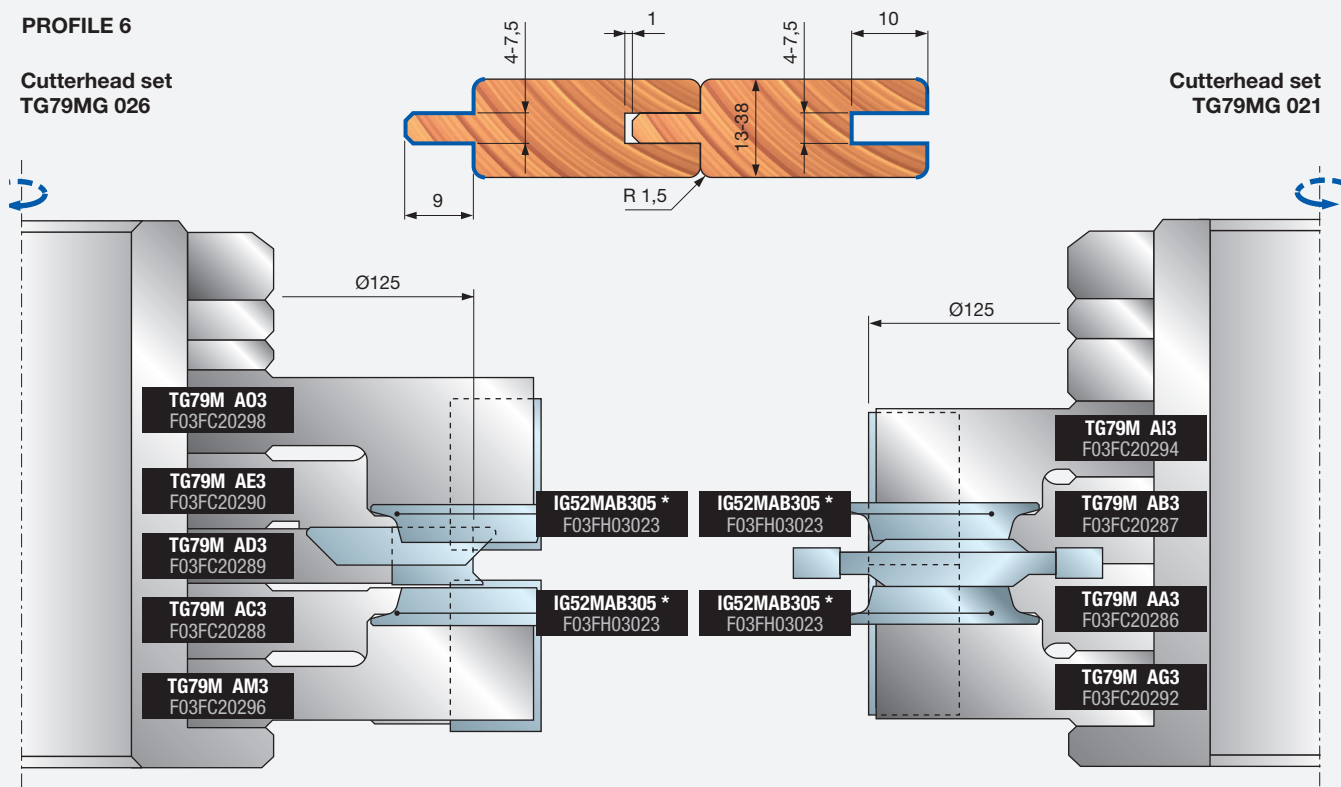
Cutterhead set
TG79MG 005



PROFILE 6

Cutterhead set
TG79MG 026

Cutterhead set
TG79MG 021

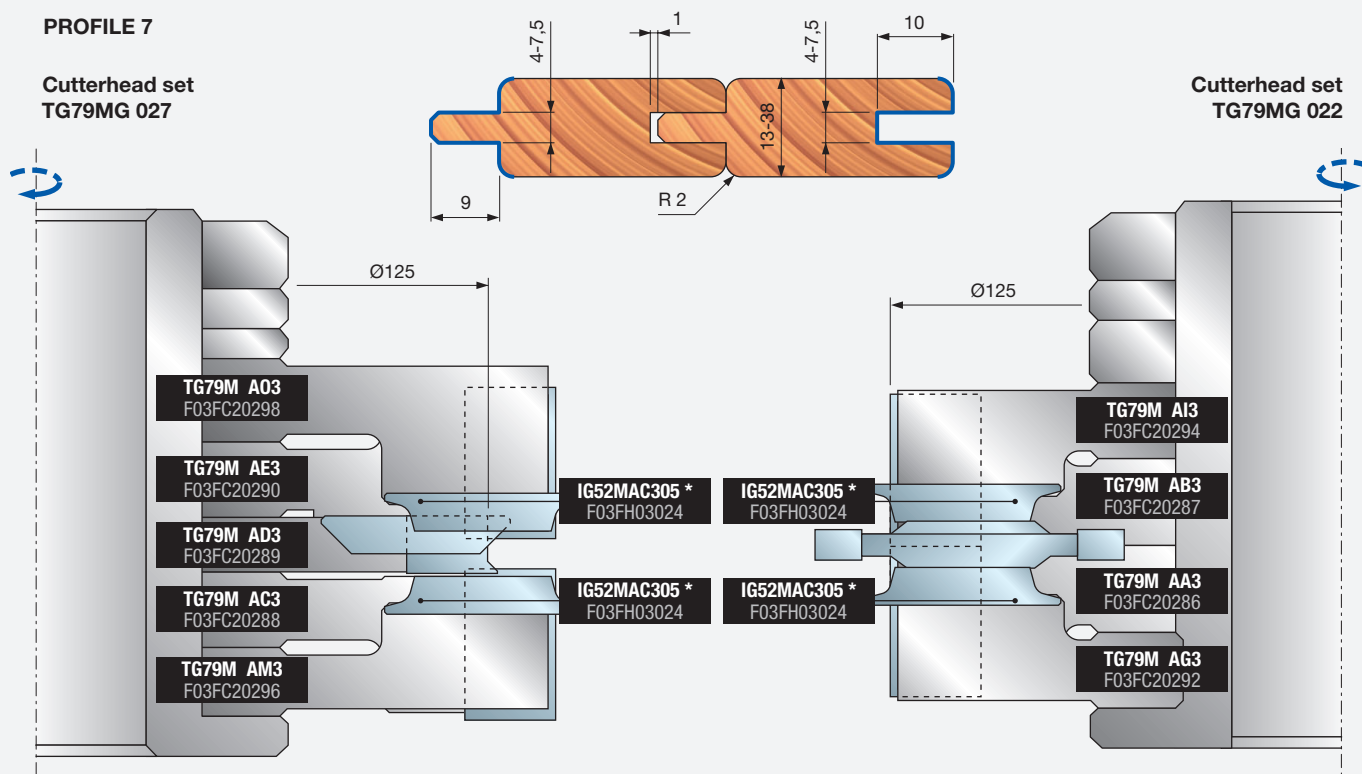


* Inserts are not included

Examples of programming

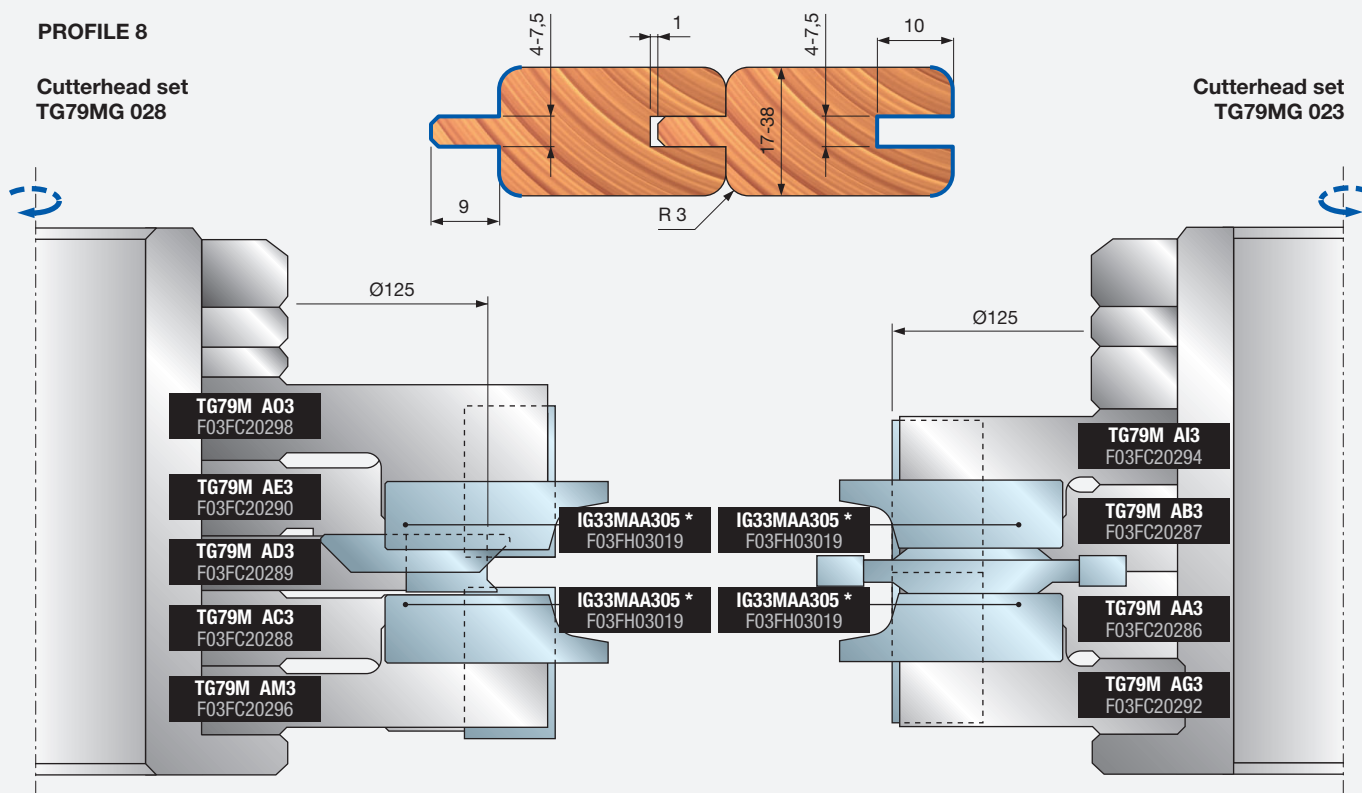
PROFILE 7

Cutterhead set
TG79MG 027



PROFILE 8

Cutterhead set
TG79MG 028

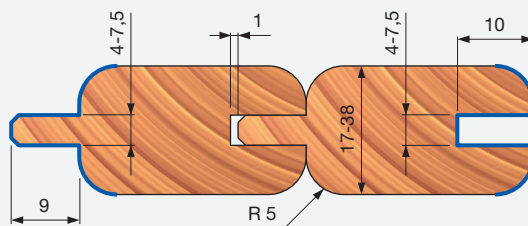


* Inserts are not included

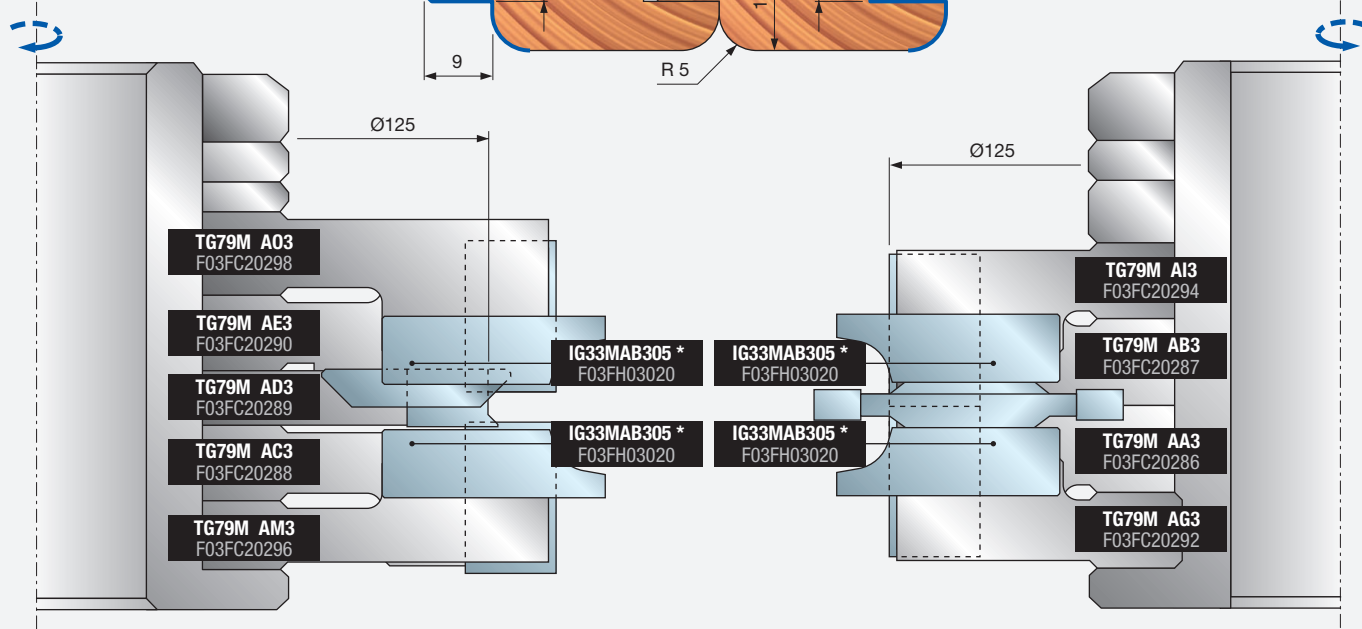
Examples of programming

PROFILE 9

Cutterhead set
TG79MG 029

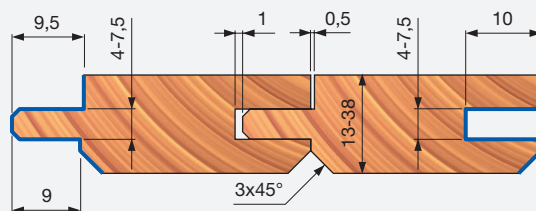


Cutterhead set
TG79MG 024

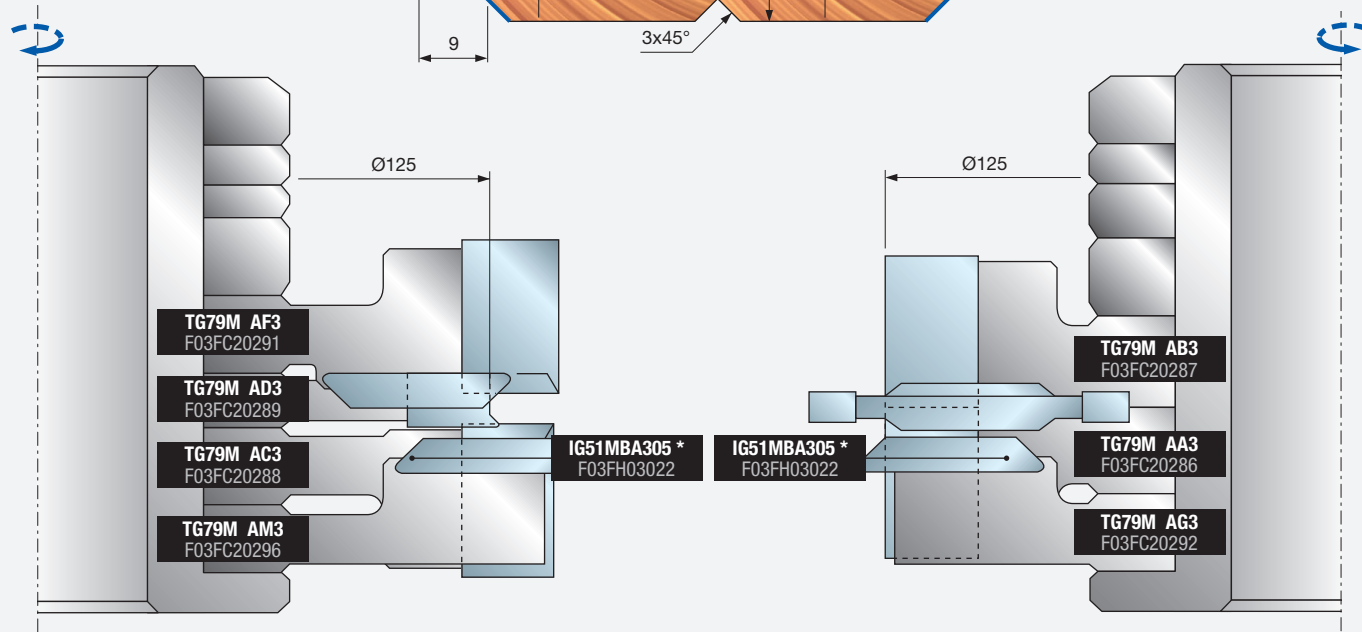


PROFILE 10

Cutterhead set
TG79MG 010



Cutterhead set
TG79MG 008

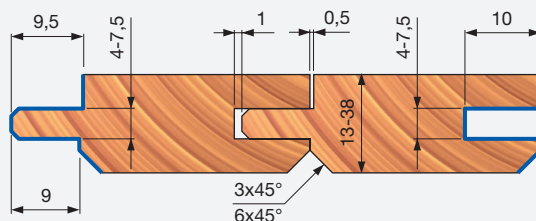


* Inserts are not included

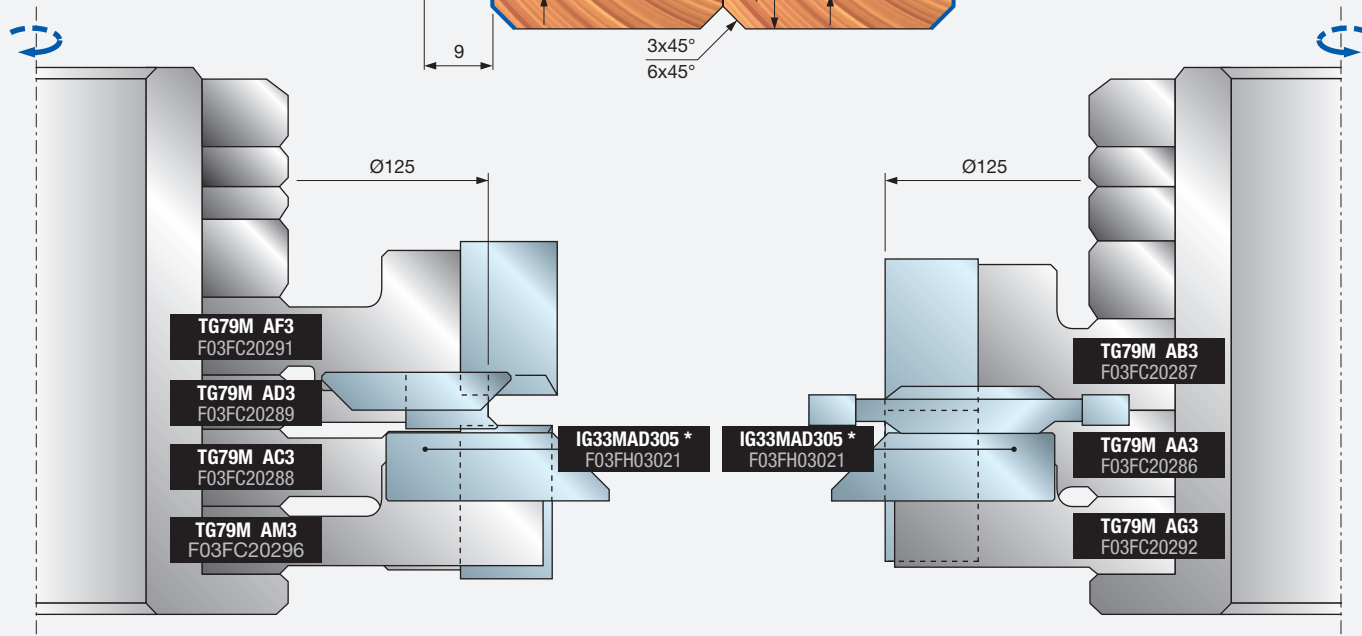
Examples of programming

PROFILE 11

Cutterhead set
TG79MG 035

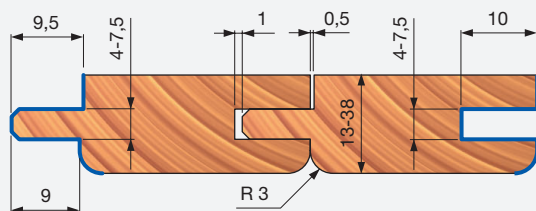


Cutterhead set
TG79MG 030

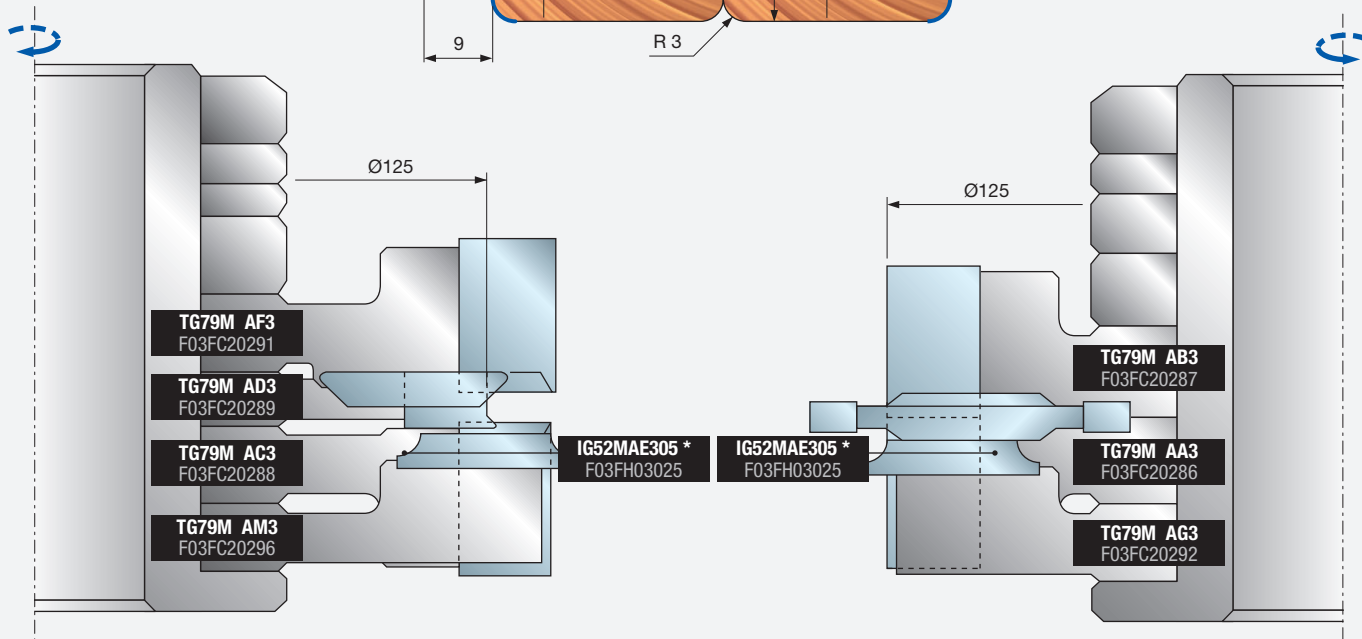


PROFILE 12

Cutterhead set
TG79MG 011



Cutterhead set
TG79MG 009

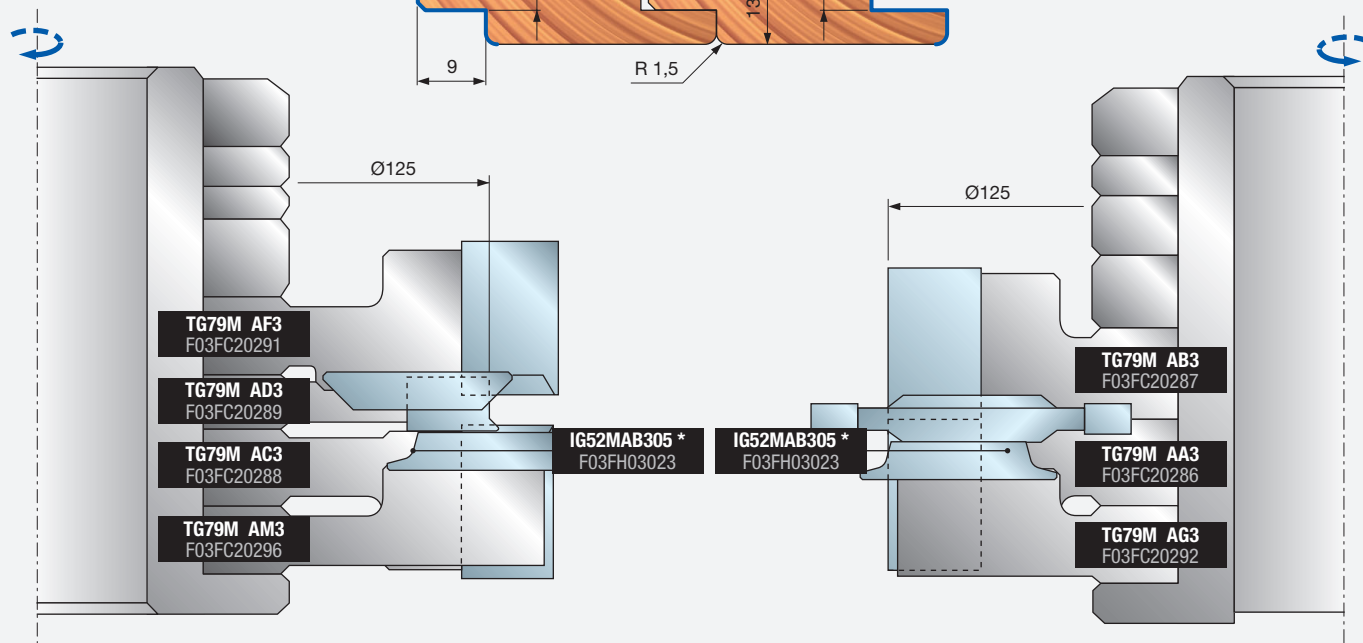


* Inserts are not included

Examples of programming

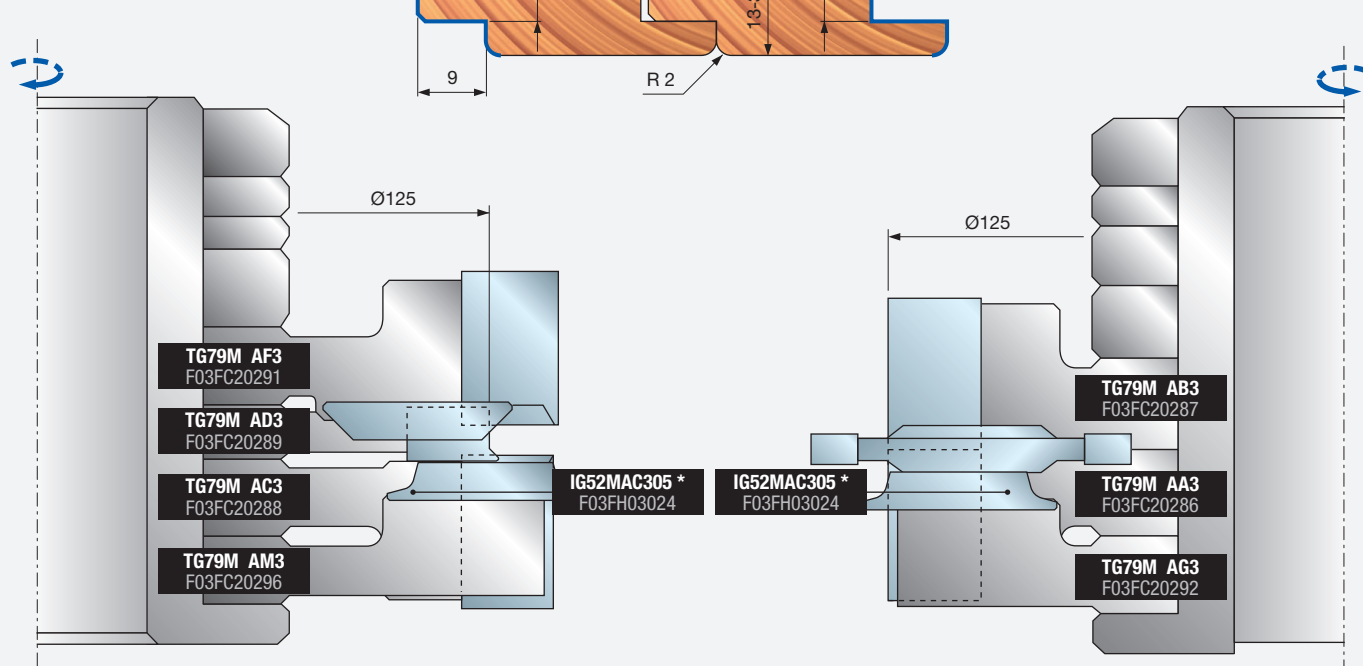
PROFILE 13

Cutterhead set
TG79MG 036



PROFILE 14

Cutterhead set
TG79MG 037

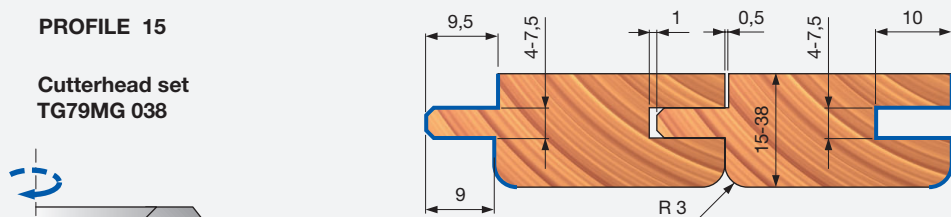


* Inserts are not included

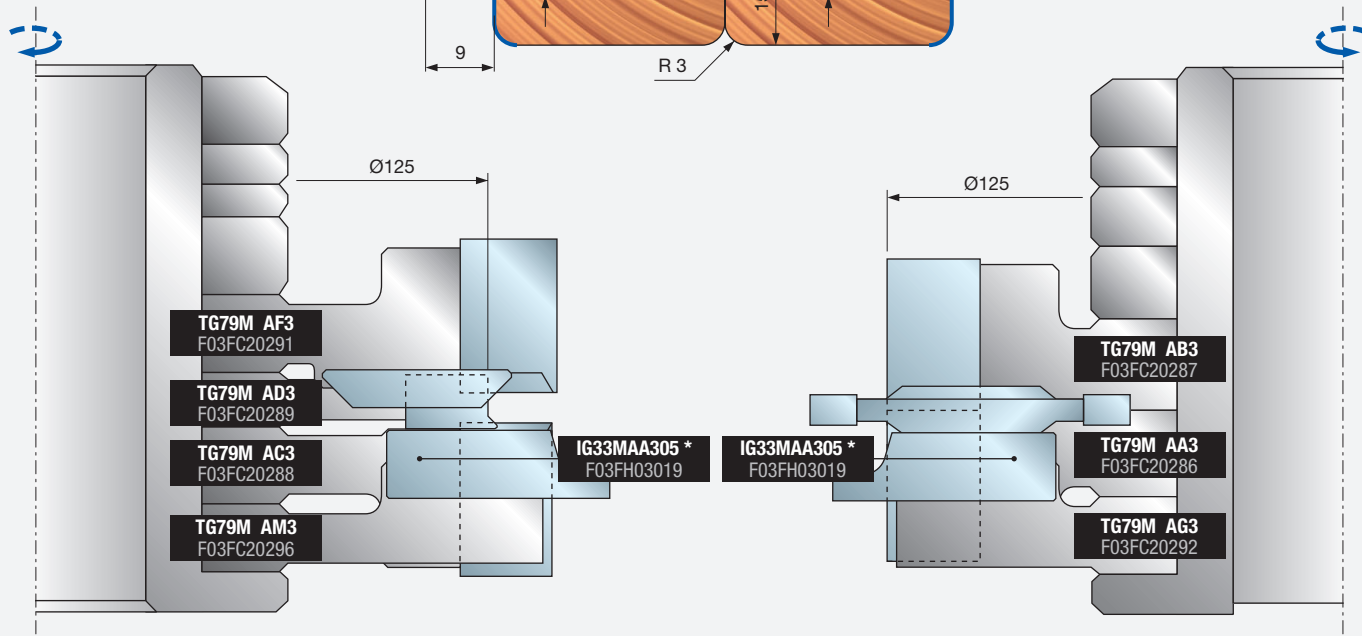
Examples of programming

PROFILE 15

Cutterhead set
TG79MG 038

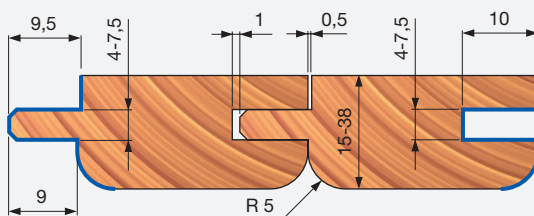


Cutterhead set
TG79MG 033

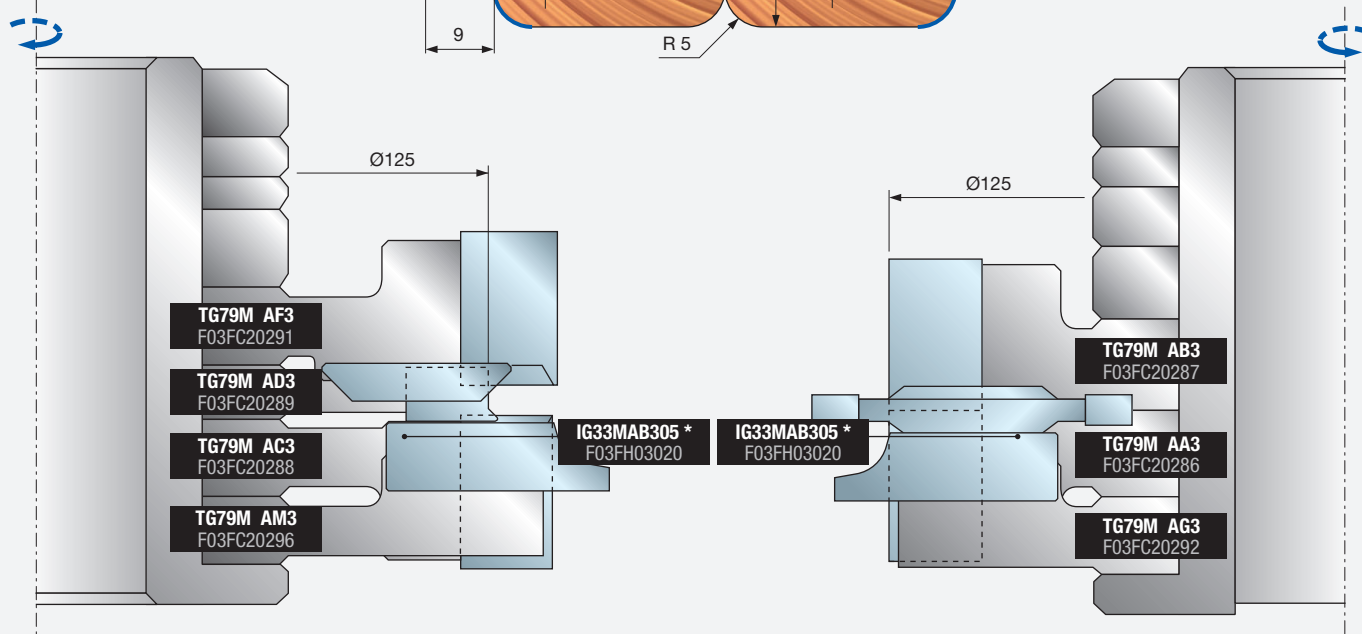


PROFILE 16

Cutterhead set
TG79MG 039



Cutterhead set
TG79MG 034



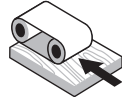
* Inserts are not included



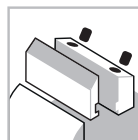
TG99MG

Cutterheads sets for panelling and flooring

MEC



Automatic Feed



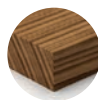
Clamping System



Steel Body



Softwood



Hardwood

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

Profiling

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

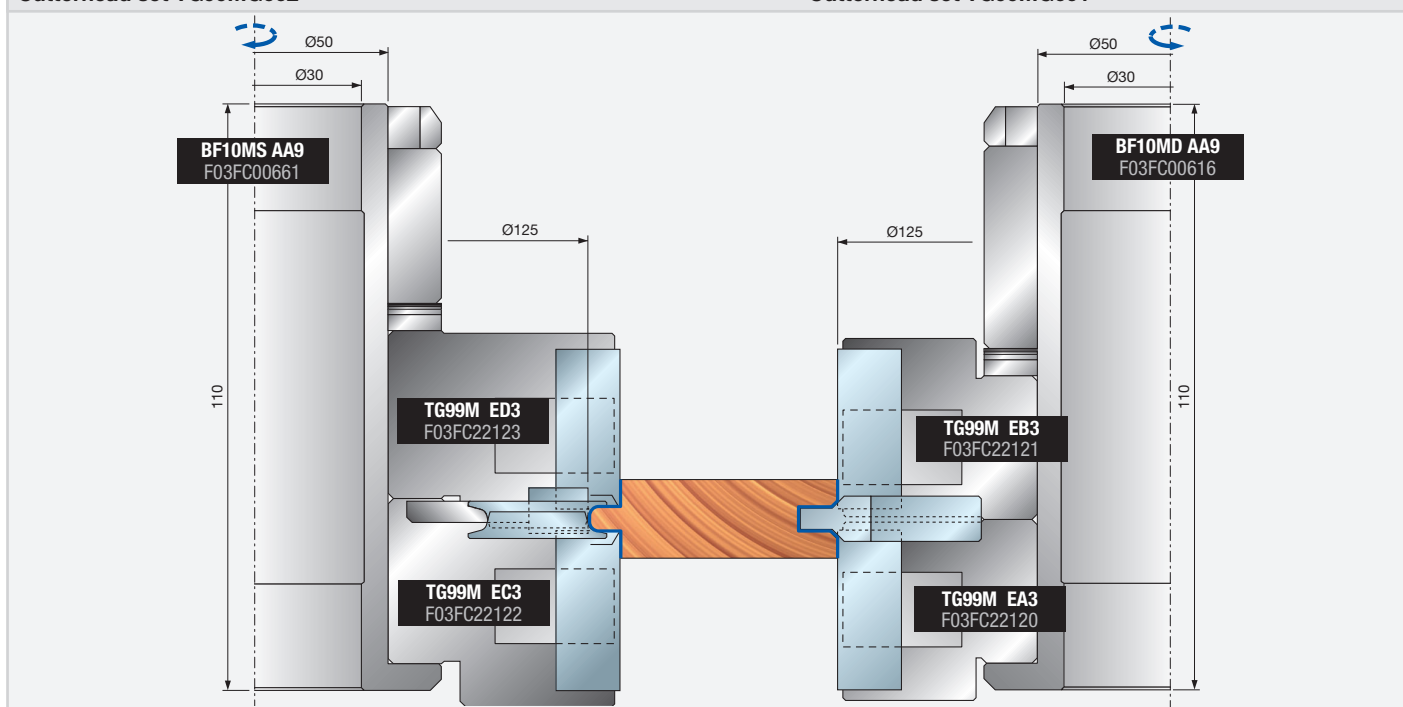
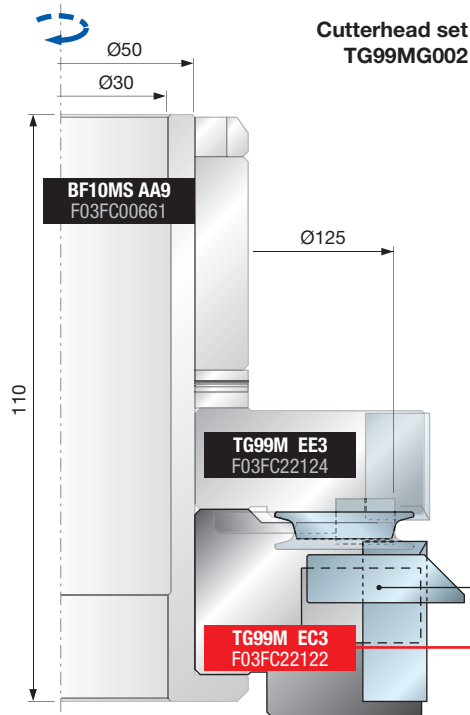
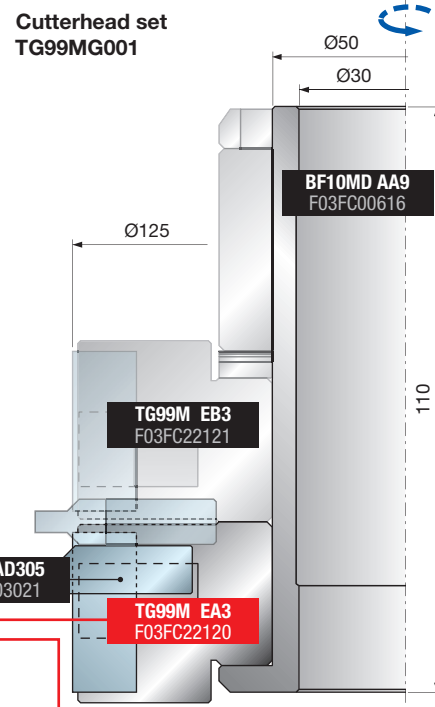


Chart for choosing spare parts

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	●	●	●	●	●	●	●	●	●	●	●	●



Example for choosing spare parts

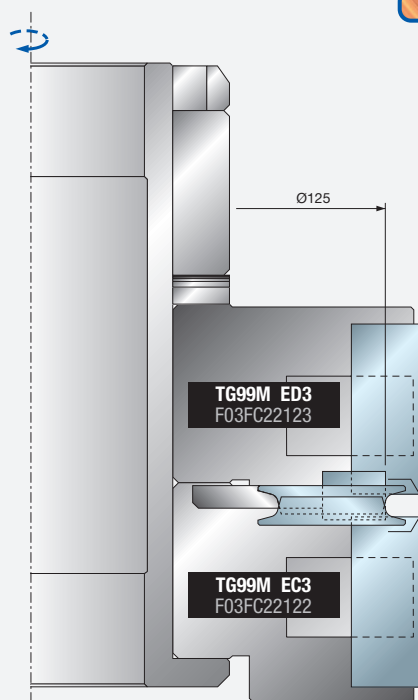
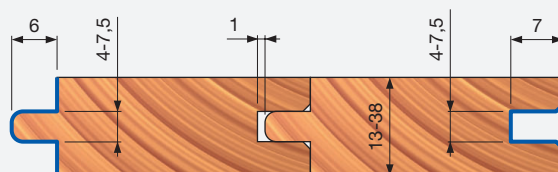


Optional spare parts	Dimensions mm	Freud Code	Art. No.	For cutterheads TG99M			
				EA3	EB3	EC3	ED3
	Beveling insert	25,5 x 16 x 9 45°	IG33MAD305	F03FH03021			
	Rounding insert	25,5 x 16 x 9 R3	IG33MAA305	F03FH03019			
	Rounding insert	25,5 x 16 x 9 R5	IG33MAB305	F03FH03020			
	Screw	M6x15,5	VT16M AD9	F03FC20657			

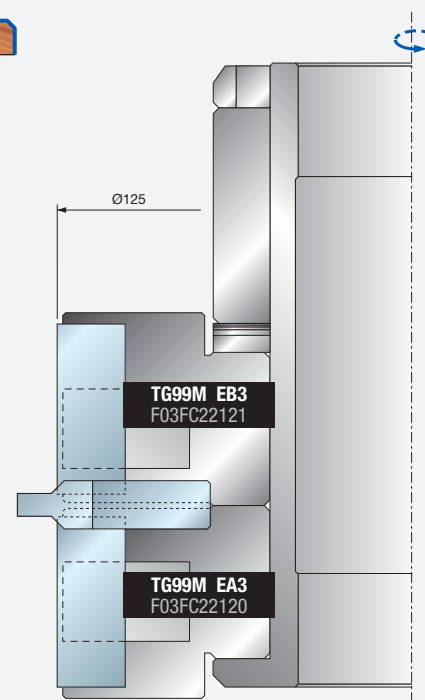
Examples of programming

PROFILE A

Cutterhead set
TG99MG002

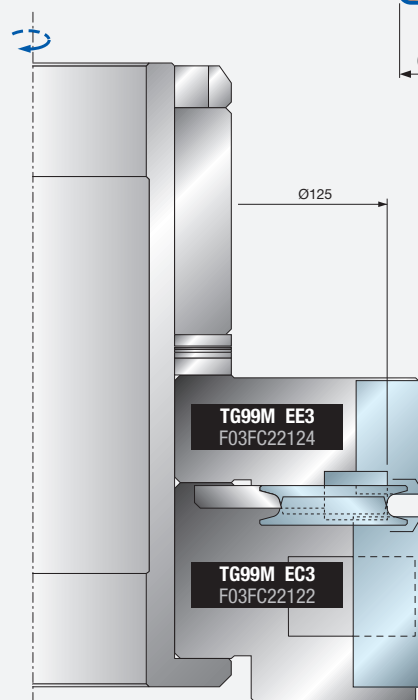
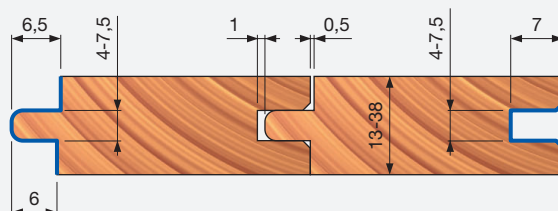


Cutterhead set
TG99MG001

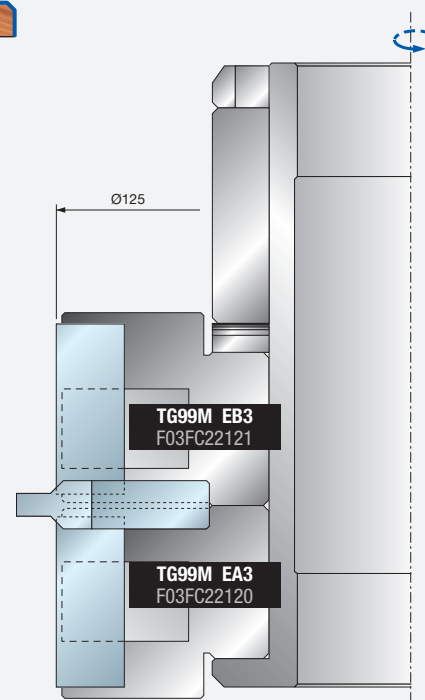


PROFILE B

Cutterhead set
TG99MG003



Cutterhead set
TG99MG001

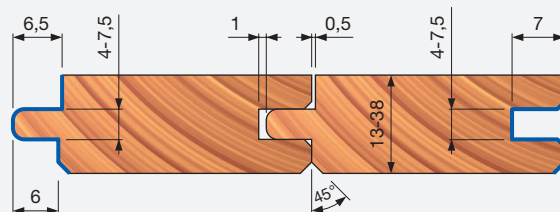
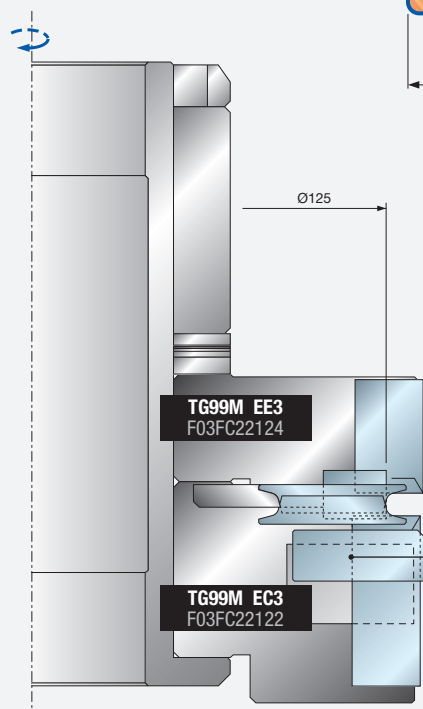


* Inserts are not included

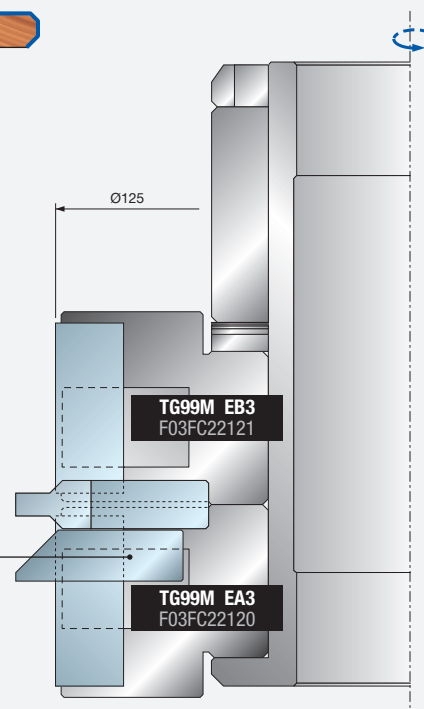
Examples of programming

PROFILE C

Cutterhead set
TG99MG009

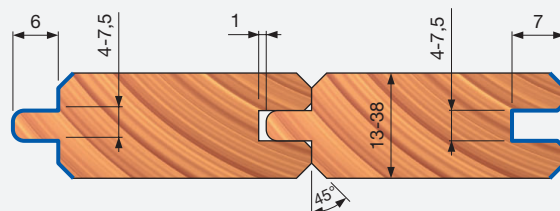
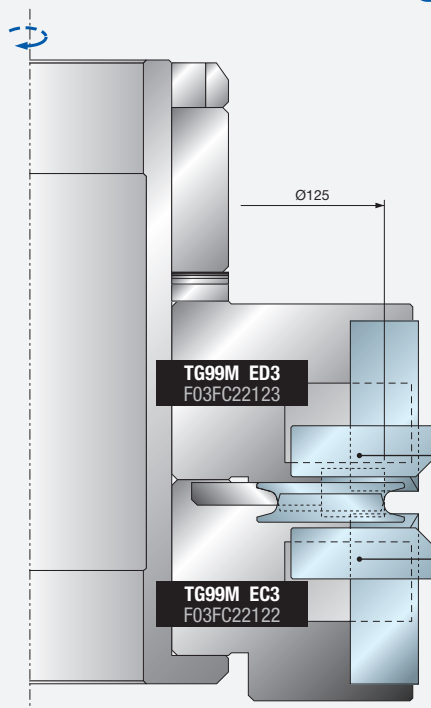


Cutterhead set
TG99MG008

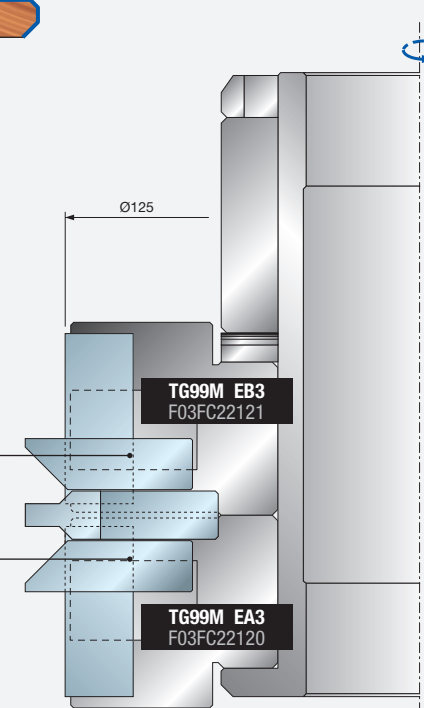


PROFILE D

Cutterhead set
TG99MG011



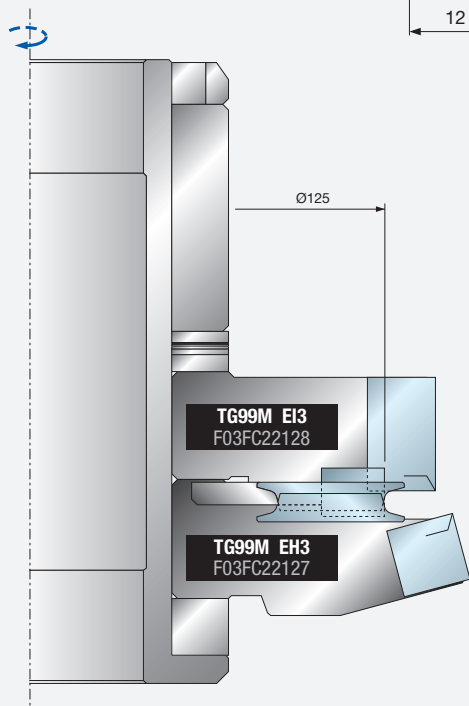
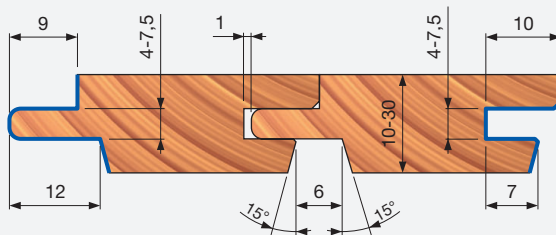
Cutterhead set
TG99MG010



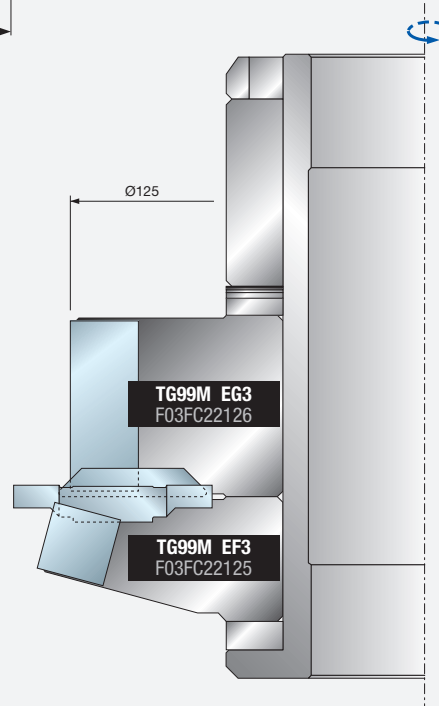
Examples of programming

PROFILE E

Cutterhead set
TG99MG005

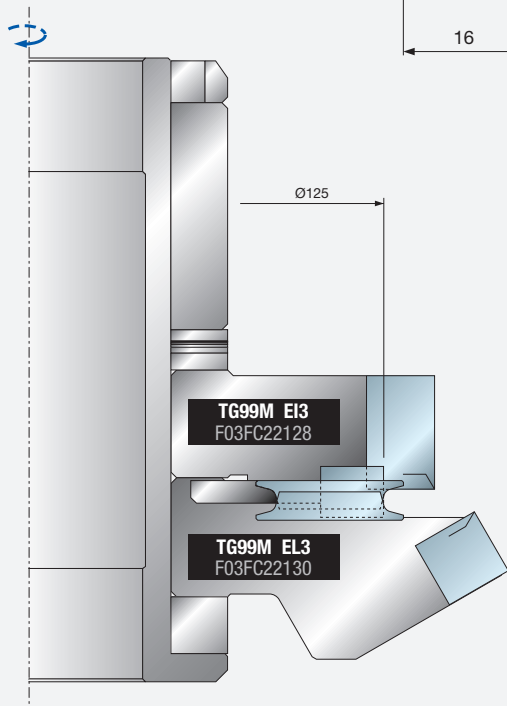
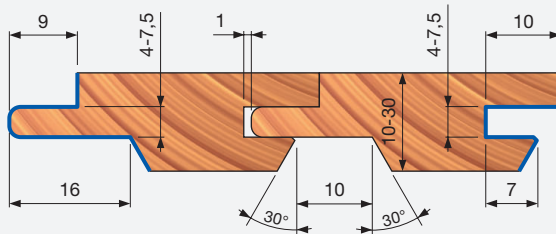


Cutterhead set
TG99MG004

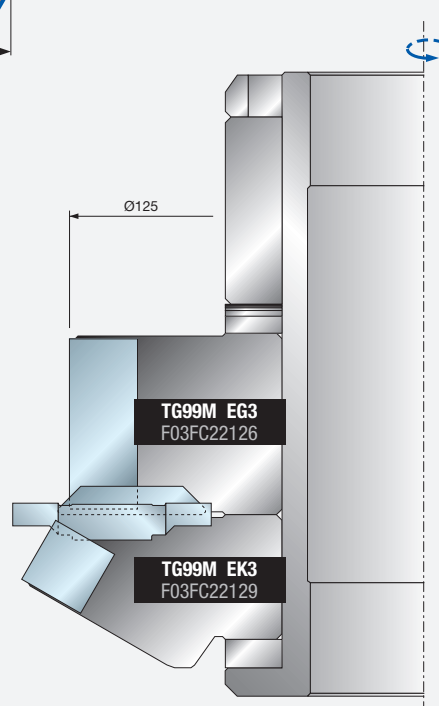


PROFILE F

Cutterhead set
TG99MG007



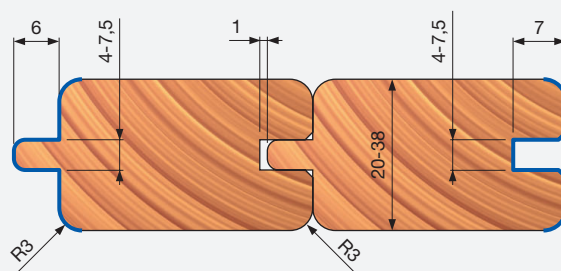
Cutterhead set
TG99MG006



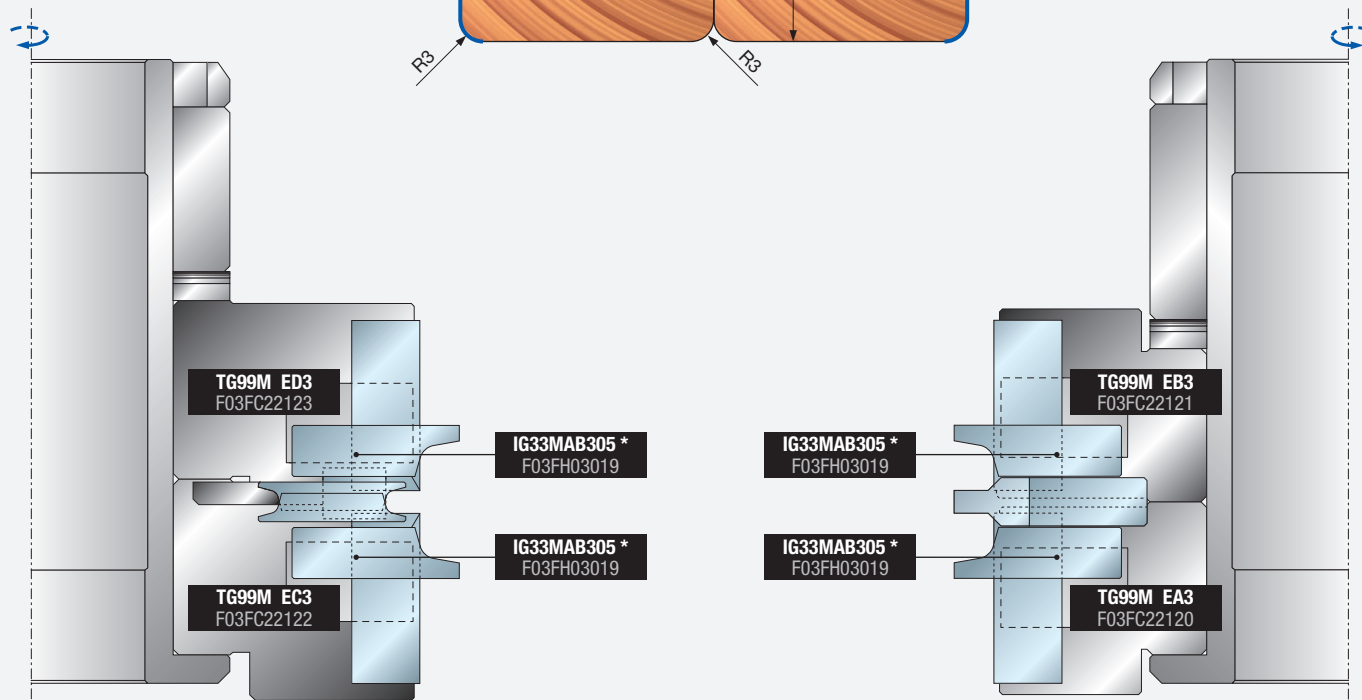
Examples of programming

PROFILE G

Cutterhead set
TG99MG013

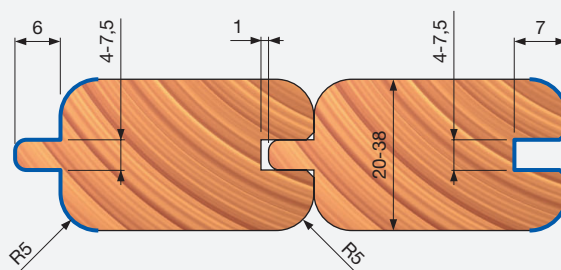


Cutterhead set
TG99MG012

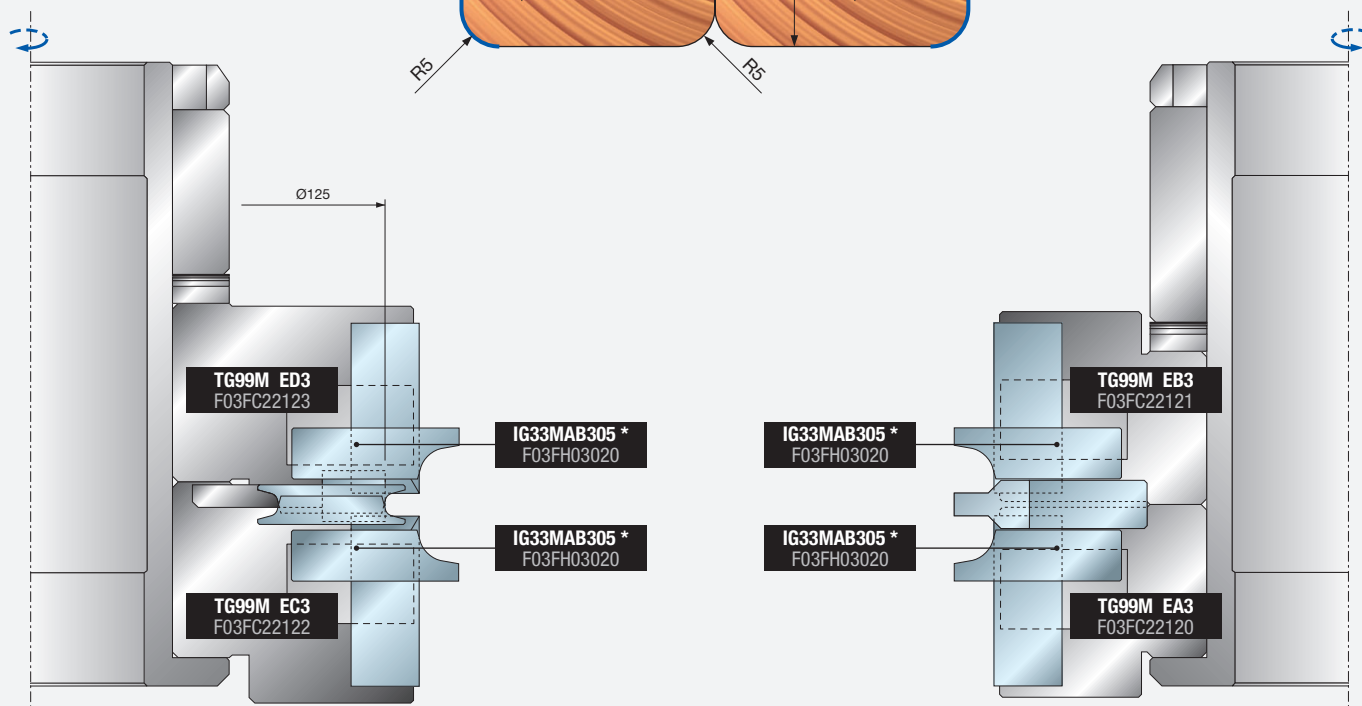


PROFILE H

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.

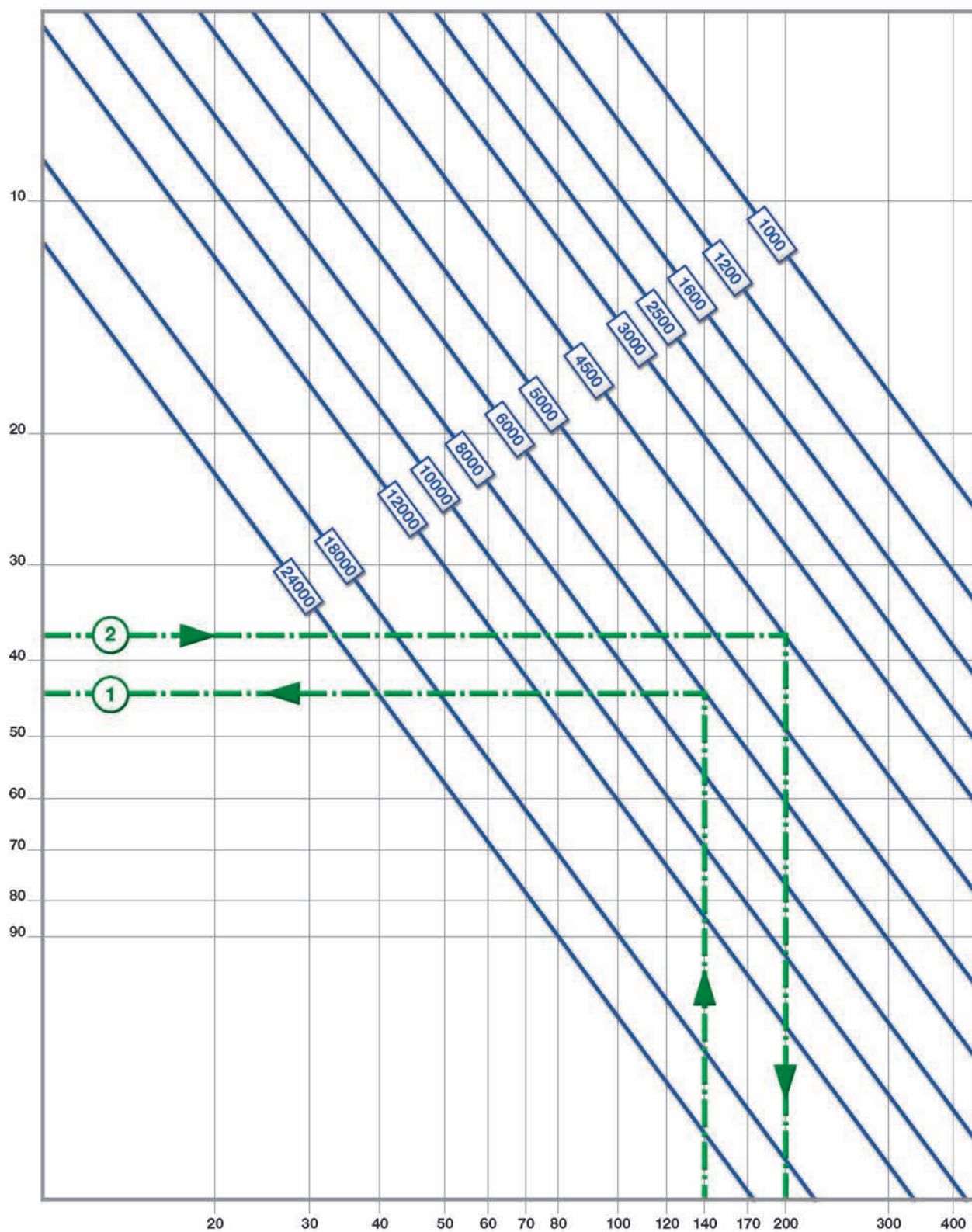
Care should be taken that the data relevant to the safety of the clamped tool are always stored in the data medium.

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.

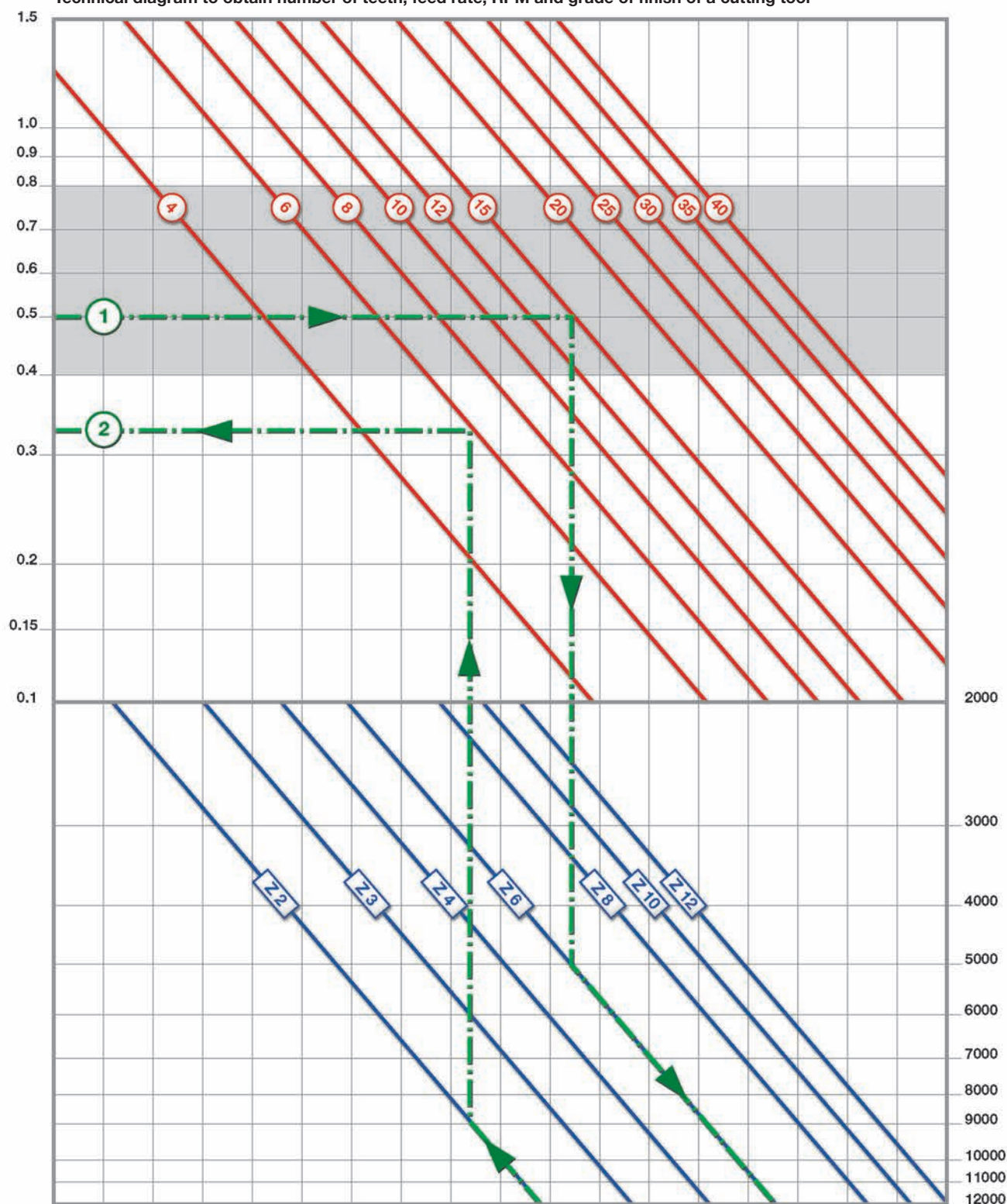
TECHNOLOGICAL FEATURES

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

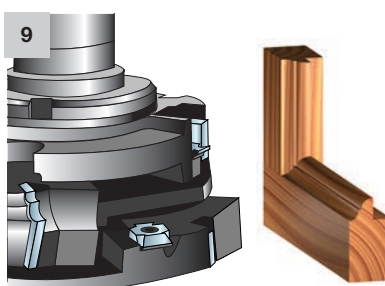
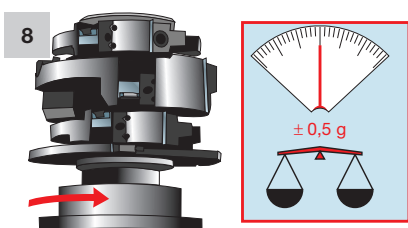
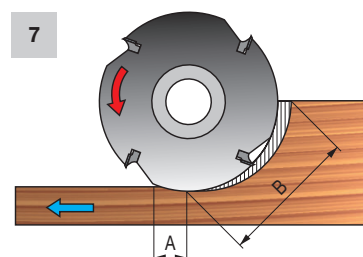
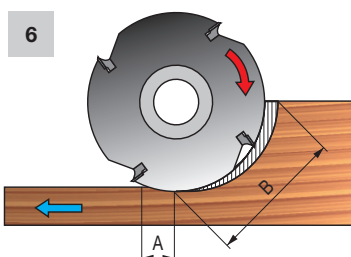
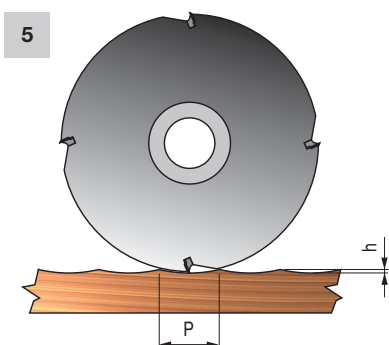
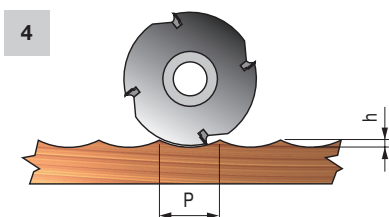
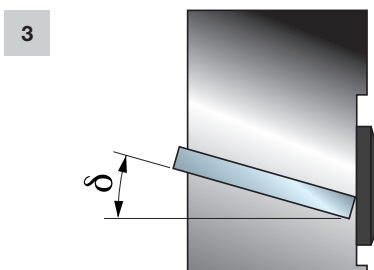
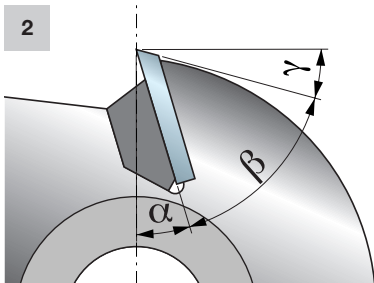




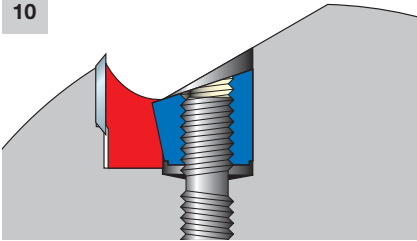
TECHNOLOGICAL FEATURES

TECHNICAL FEATURES OF TRADITIONAL CUTTERHEADS

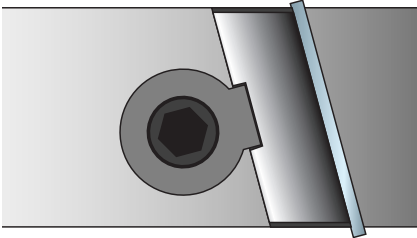
- Freud's exclusive HW used to construct each cutter, is produced according to the kind of work which the tool will undergo, in order to obtain the best duration and quality finish possible. Special instruments guarantee precision and therefore perfect replacement of the knives we produce without the 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 (α)**: depends on the type of material to be cut.
 - **Wedge angle (β)**: this angle is a direct consequence of angles α and γ .
 - **Clearance angle (γ)**: depends on the material to be cut and the thickness of the cutting edge.
 - **Shear angle (δ)**: 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).



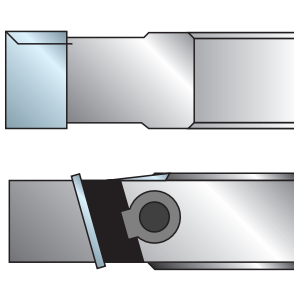
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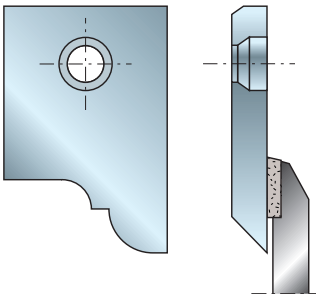
11



12



13



14



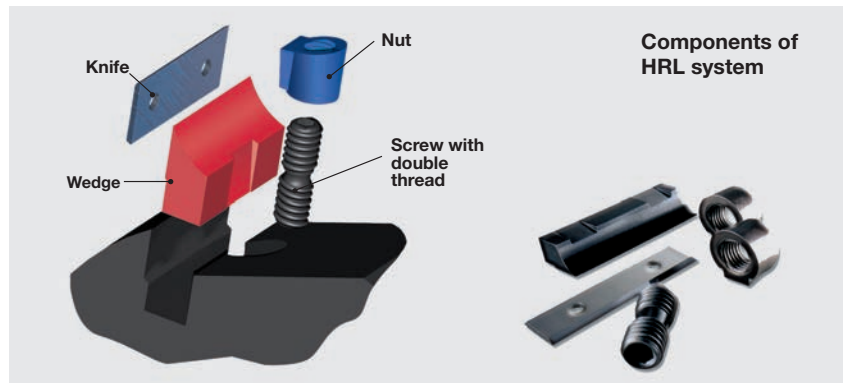
15



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 TA02M (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.

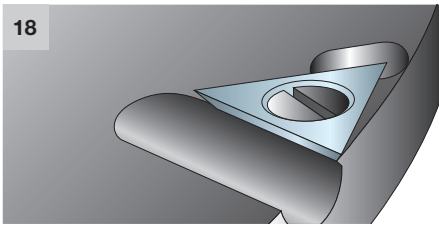
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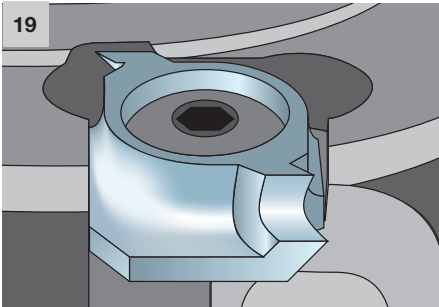
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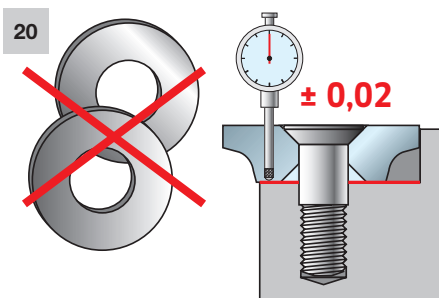
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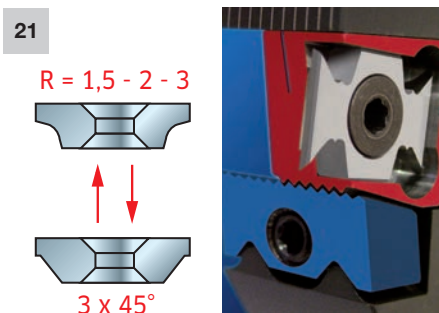
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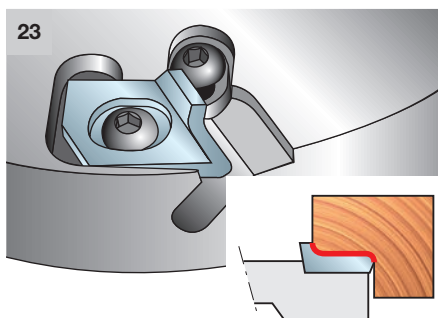
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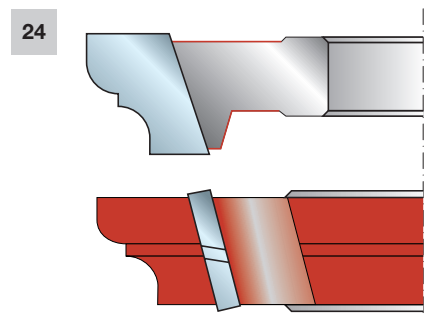
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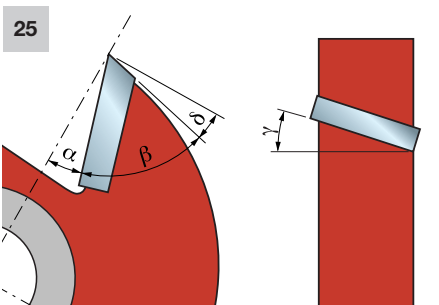
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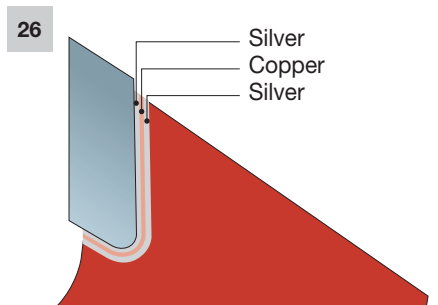
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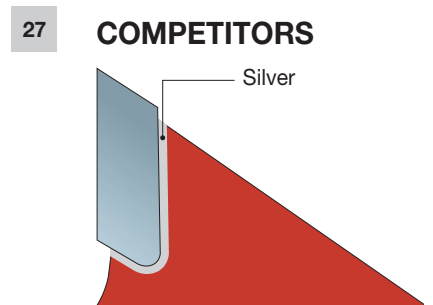
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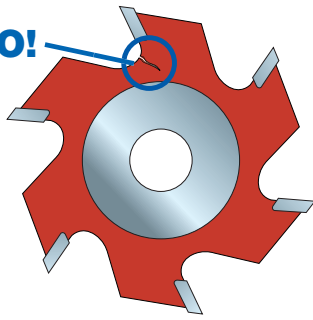
TECHNOLOGICAL FEATURES

INSERTS AND SPURS

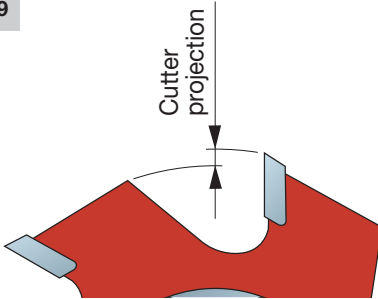
- The triangular spur (Fig. 18) is a component produced in HW to give the cutting edge a long life, used on cutterheads and on Performance tools to give a better finish on rebates. The width of the cutting surface (22 mm) and the position of the spur (positive hook angle) guarantees a perfect finish 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.

28

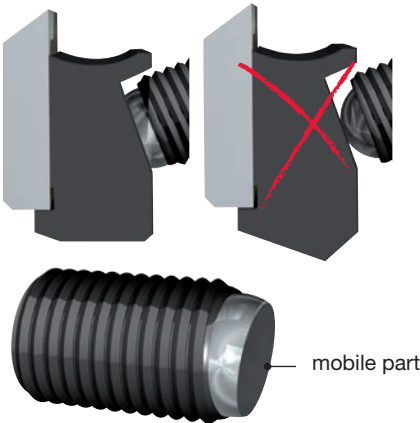
NO!



29

Cutter
projection

1



Screws with spherical insert, for ISOprofil System

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.

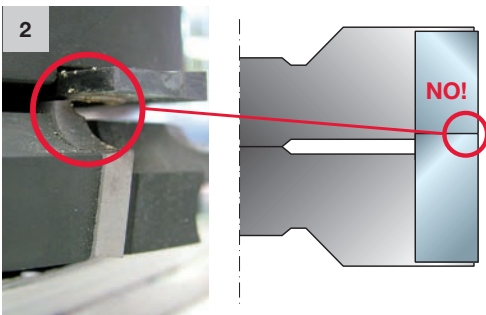
Washing: Tools must be washed with water and an appropriate cleaning product (contact local dealer if more info needed) that doesn't affect the body materials (manganese phosphated steel or aluminium alloy) burnished steel components (screws, washers) and carbide inserts (titanium, cobalt carbide). Use 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.

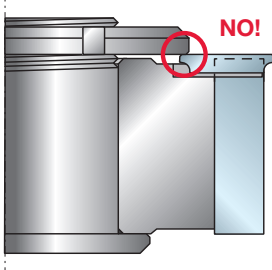
Oiling: If the tools are ready to be immediately used or stored for future use, always oil all the parts with a layer of an anti-rust protective fluid.

Before storing the tools always clean them from dirt and resin by washing, drying and oiling operations. Store the tools in a dry place.

2



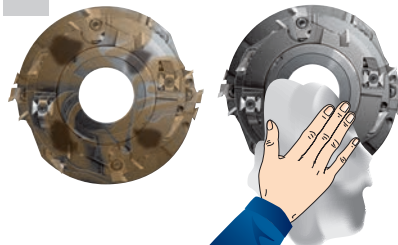
3



4

NO!

OK!



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.



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

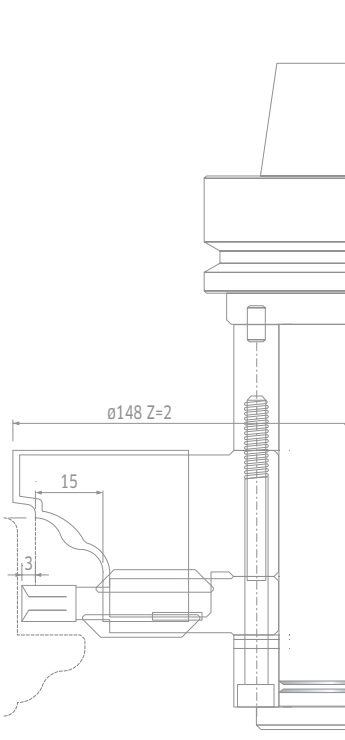
BORING

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

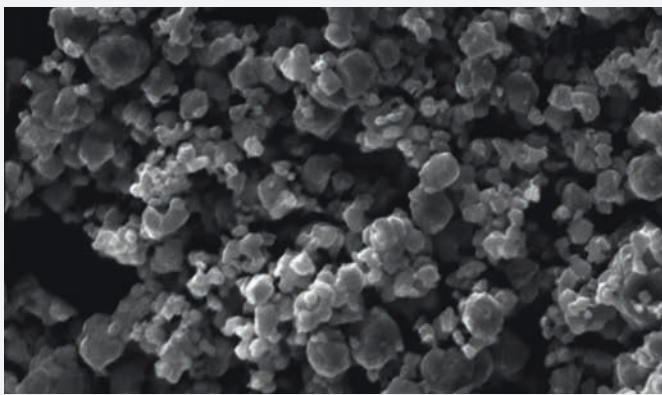
Freud ownership and control of the entire Carbide manufacturing cycle ensures that the correct formula is used for every application, to constantly maximise the knives performance.



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

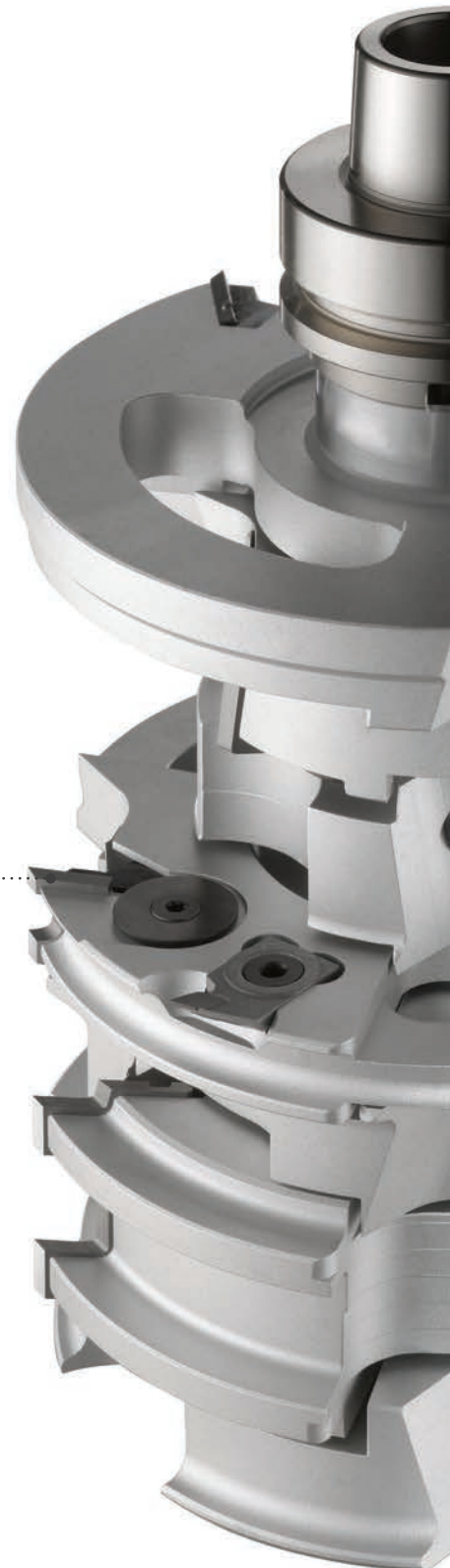
Freud Split Edge knives reduce cutting pressure and prevent edge chip out.

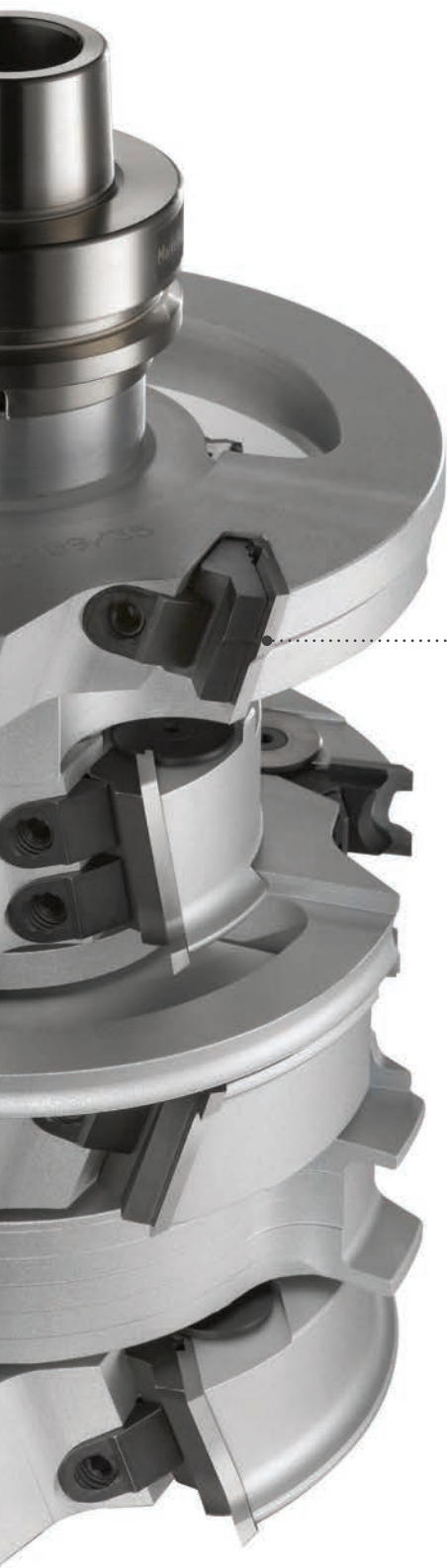
These knives, resharpenable up to 6 times, both enhance the productivity and increase profitability, always delivering a flawless door and window joint profiling.

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

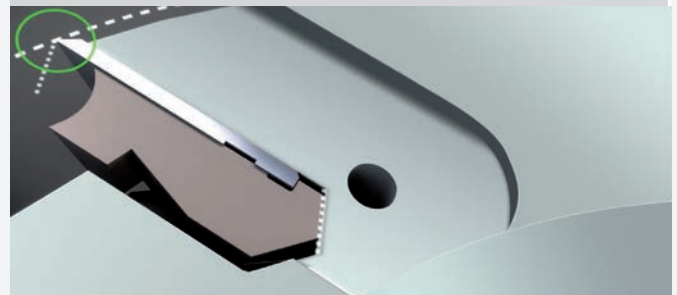
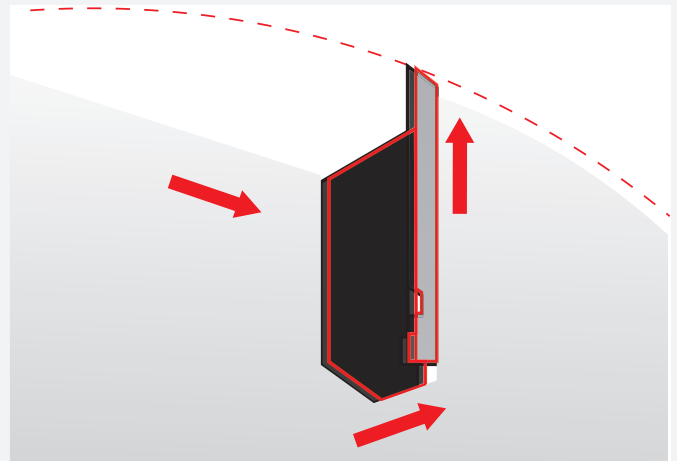
Freud's continuous investment in R&D and its superior knowledge of the industry provide cutting-edge and patented solutions, for maximum production efficiency and increased safety.



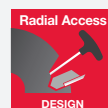
ISOprofil technologies

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 re-positioning 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





Machines:

Automatic feed and window tooling machines.

Materials:

Softwood and hardwood.

Applications:

Profiling.

Technical information:

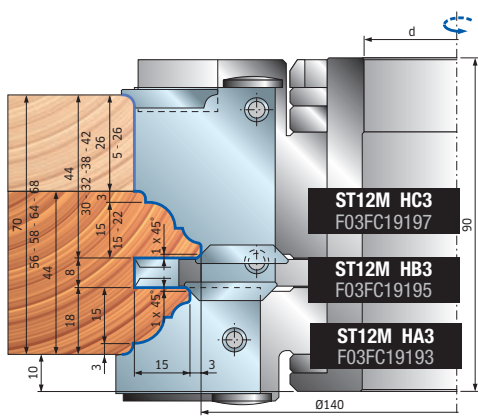
Tool set for internal door profile with a 140 mm zero diameter.

- 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

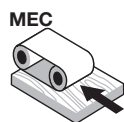


Set ST12MG-800

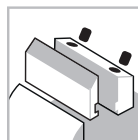
No. 7+7 interchangeable profiles.

ST12MG

Profiling cutterhead sets for internal and external doors



Automatic Feed



Clamping System



Steel Body



Softwood



Hardwood



Profiling

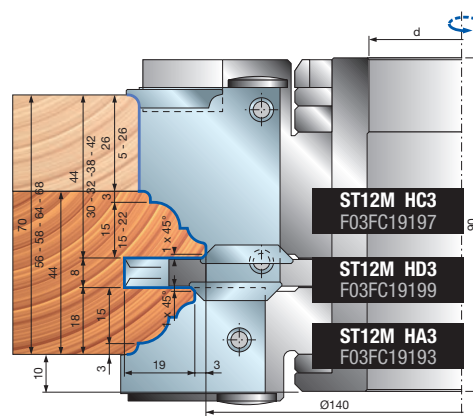
Tool set zero diameter: 140 mm

D mm	B mm	d mm	Z	V	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

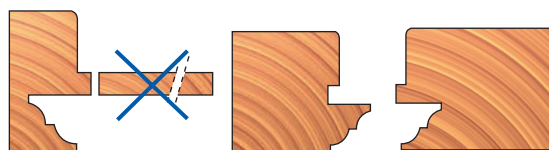
D mm	B mm	d mm	Z	V	Max RPM 1/min.	Freud Code	Art. No.
186	29	70	2	-		ST12M HA3	F03FC19193
176	8	70	2	4		ST12M HB3	F03FC19195
176	58,5	70	2	-		ST12M HC3	F03FC19197
184	8	70	2	4		ST12M HD3	F03FC19199

	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	M5 x 7 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-801

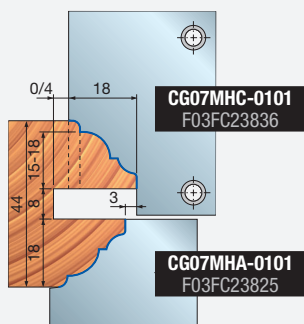
No. 7+7 interchangeable profiles. With anti-torsion pin for assembly of elements with counter profile.



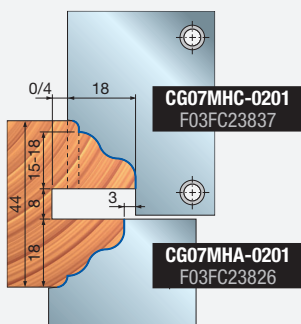
Jamb and transom with ST12MG-801 set: by cutting the tenon as shown, the counter profile with anti-torsion pin is obtained.

Profiles with 3 mm external rounding for cutterheads: ST12M HC3 - ST12M HA3

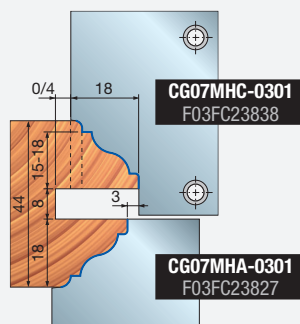
PROFILE 1



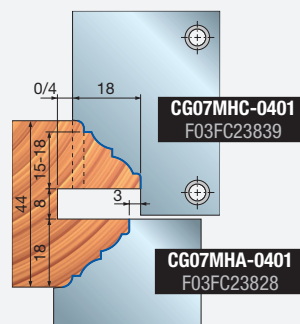
PROFILE 2



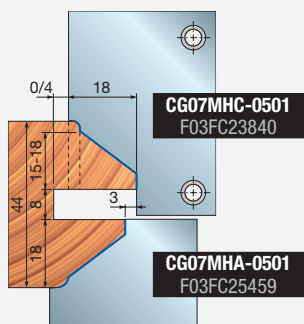
PROFILE 3



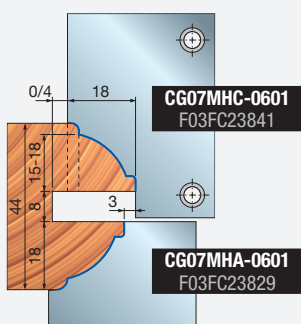
PROFILE 4



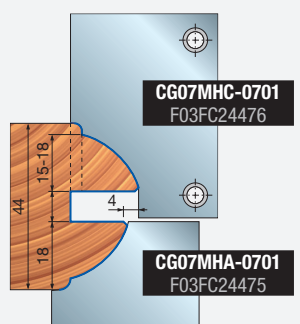
PROFILE 5



PROFILE 6

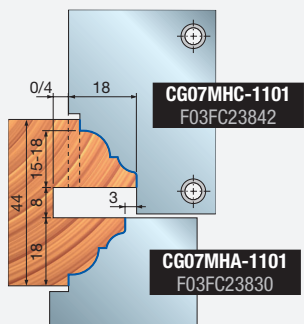


PROFILE 7

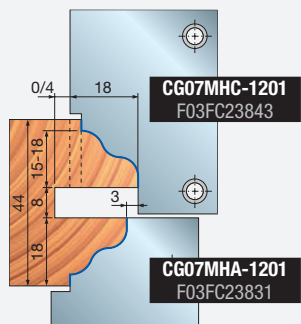


Profiles without external rounding for cutterheads: ST12M HC3 - ST12M HA3

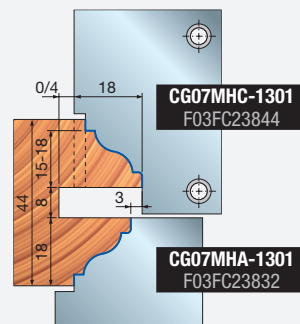
PROFILE 11



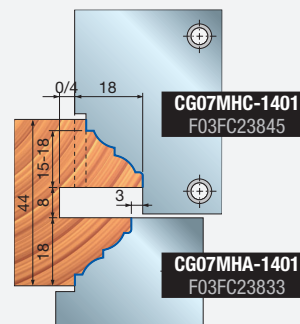
PROFILE 12



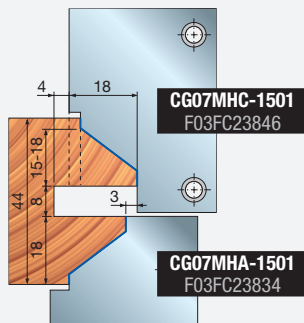
PROFILE 13



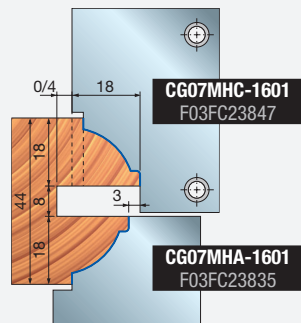
PROFILE 14



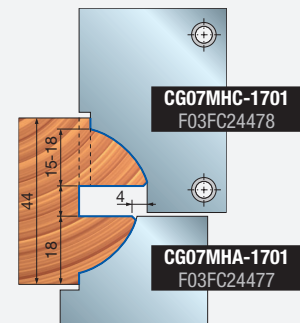
PROFILE 15



PROFILE 16



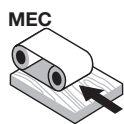
PROFILE 17



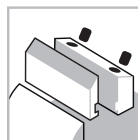


ST12MG

Tenoning cutterhead sets



Automatic Feed



Clamping System



Steel Body



Softwood



Hardwood



Profiling



Machines:

Automatic feed and window tooling machines.

Materials:

Softwood and hardwood.

Applications:

Scribing.

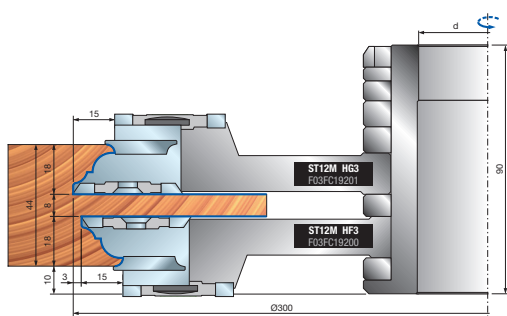
Technical information:

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.



Tool set zero diameter: 300 mm

D mm	B mm	d mm	Z	V	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	V	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

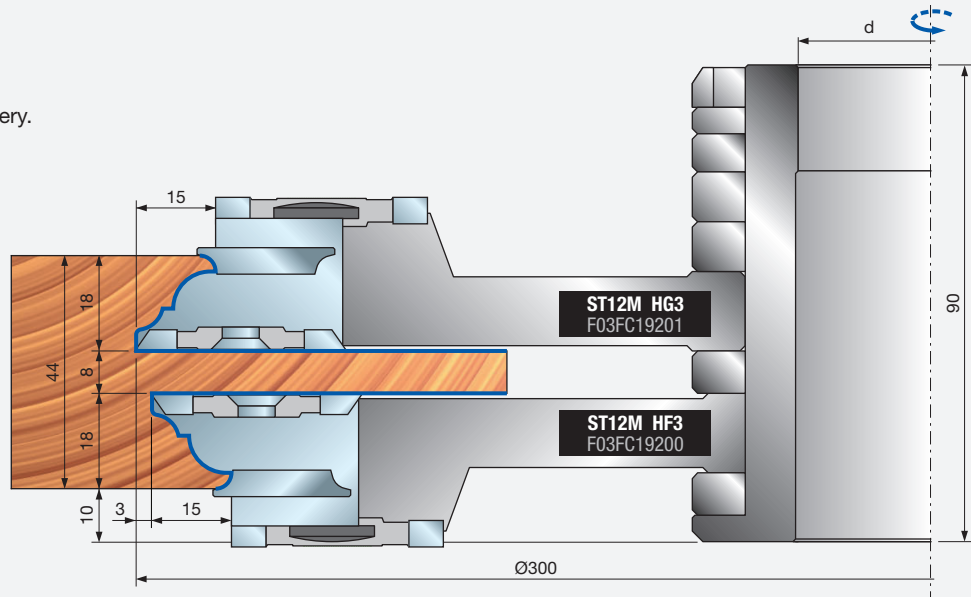
	Spare parts	Dimensions mm	Freud Code	Art. No.
DB3	Knife	7,6 x 12 x 1,5	CG06MHA310	F03FH02897
	Wedge	15 x 7,2 x 8	CN09M DA9	F03FC01295
	Screw	M5 x 19	VT11M AA9	F03FA04468
	Spur	22,86 x 2,5	RG02MAA305	F03FH03041
	Grooving insert	40 x 5 x 8	SR01MSAA301	F03FC24186
	Screw	M6 x 10	VT01M AA9	F03FA04429
	Threaded 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
HG3	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
HH3	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
	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.

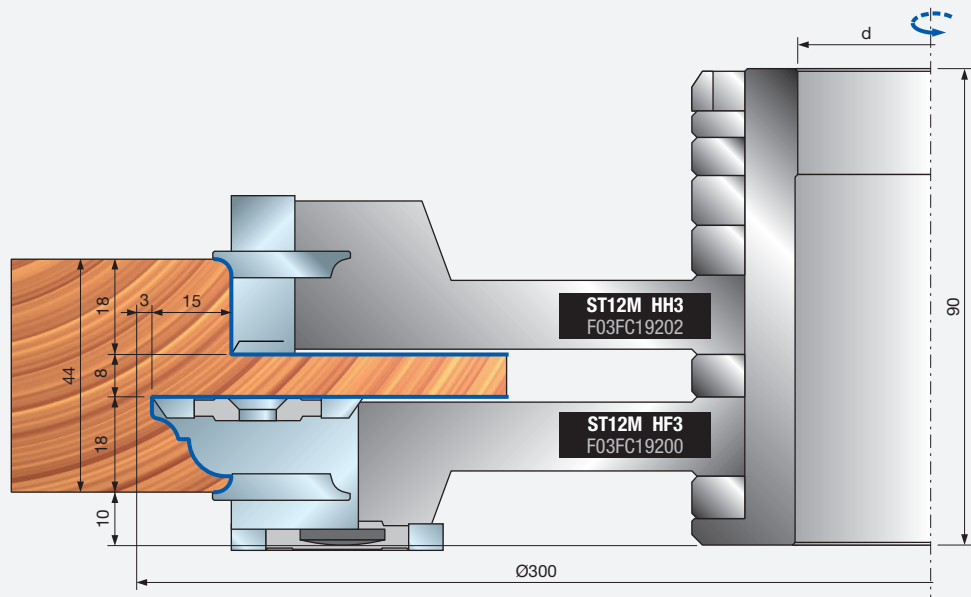
For profile without bead recovery.



Set ST12MG-821

Single tenon.

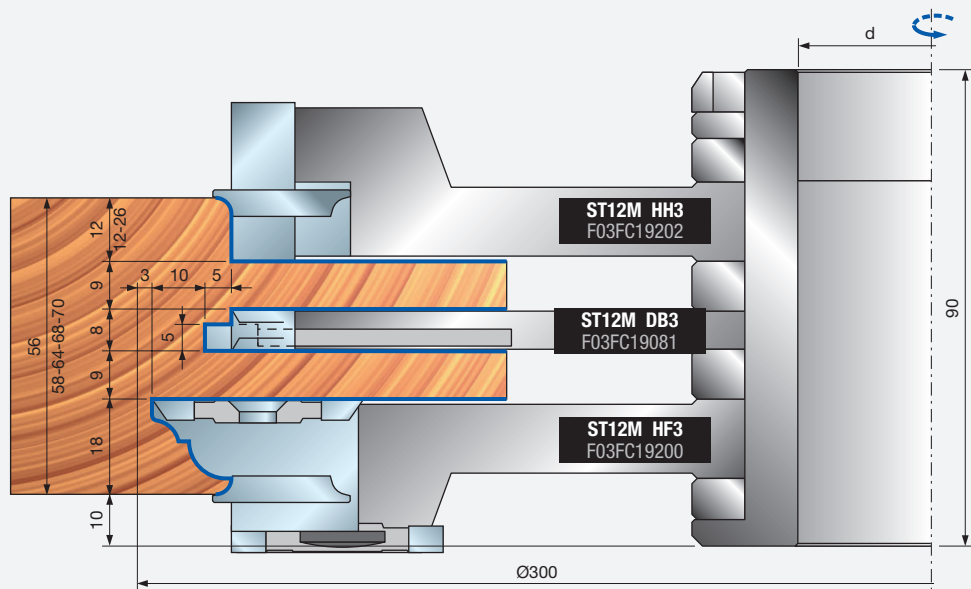
For profile with bead recovery.



Set ST12MG-822

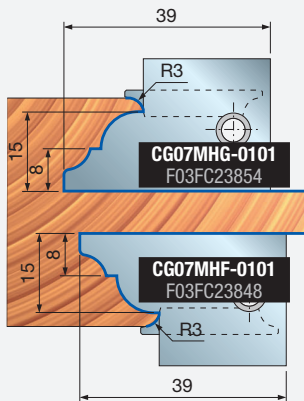
Double tenon.

For profile with bead recovery.

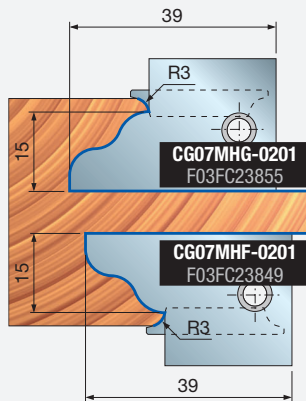


Scribes with 3 mm external rounding for cutterheads: ST12M HG3 - ST12M HF3

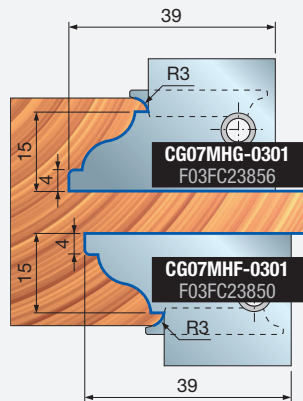
SCRIBE 1



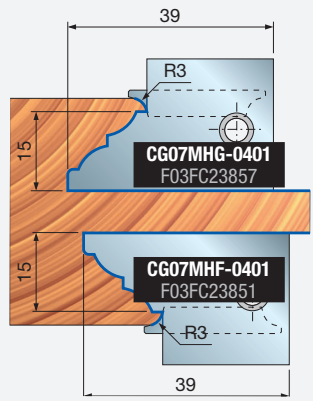
SCRIBE 2



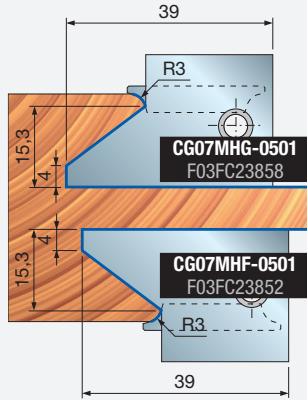
SCRIBE 3



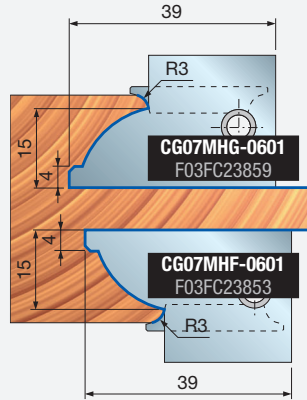
SCRIBE 4



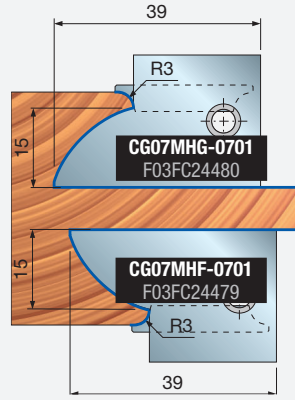
SCRIBE 5



SCRIBE 6

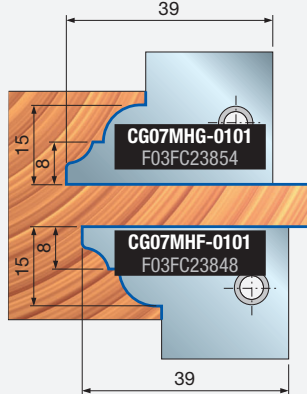


SCRIBE 7

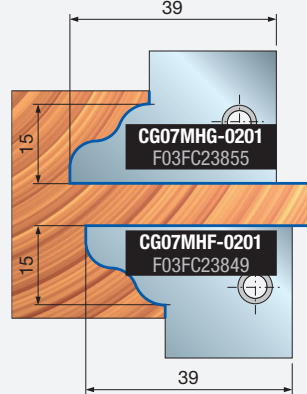


Scribes without external rounding for cutterheads: ST12M HG3 - ST12M HF3

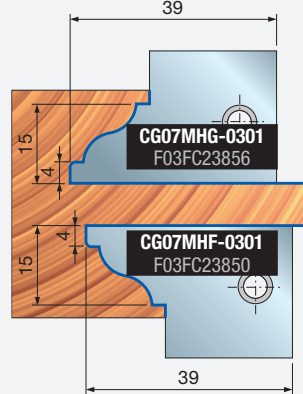
SCRIBE 11



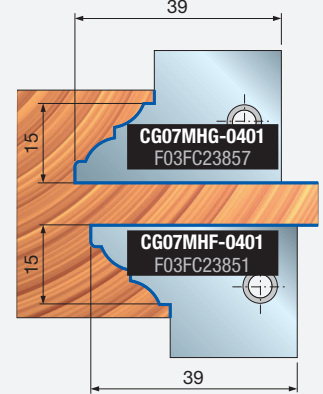
SCRIBE 12



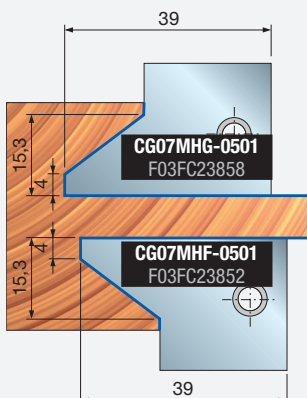
SCRIBE 13



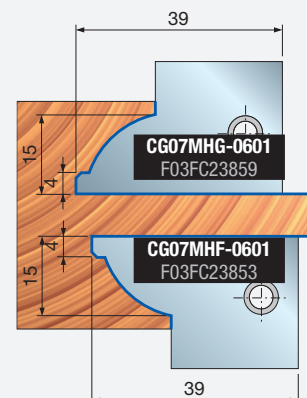
SCRIBE 14



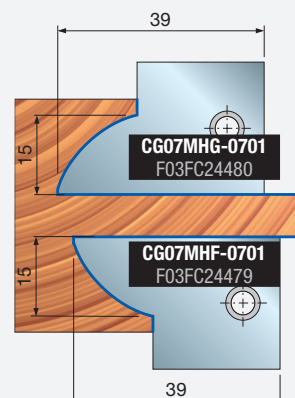
SCRIBE 15



SCRIBE 16



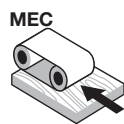
SCRIBE 17



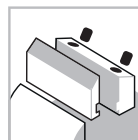


ST12MG

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.

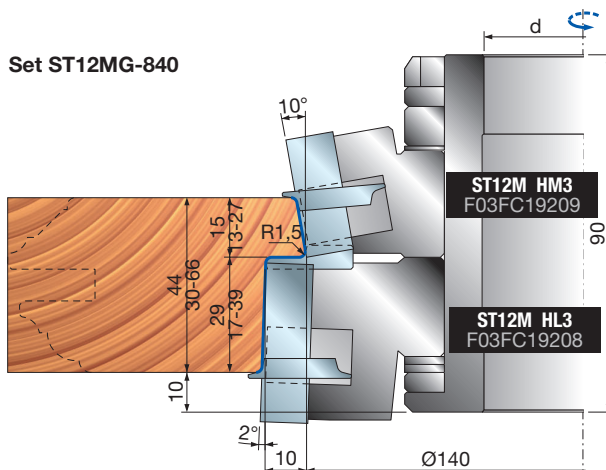
- Tool set can execute 5 different profiles.
- Adjustable timber thickness from 30 to 66 mm.
- Tool set is provided on sleeve to fit every machine spindle dimension.
- Steel body.
- Sleeve and Performance knives to be ordered separately.

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

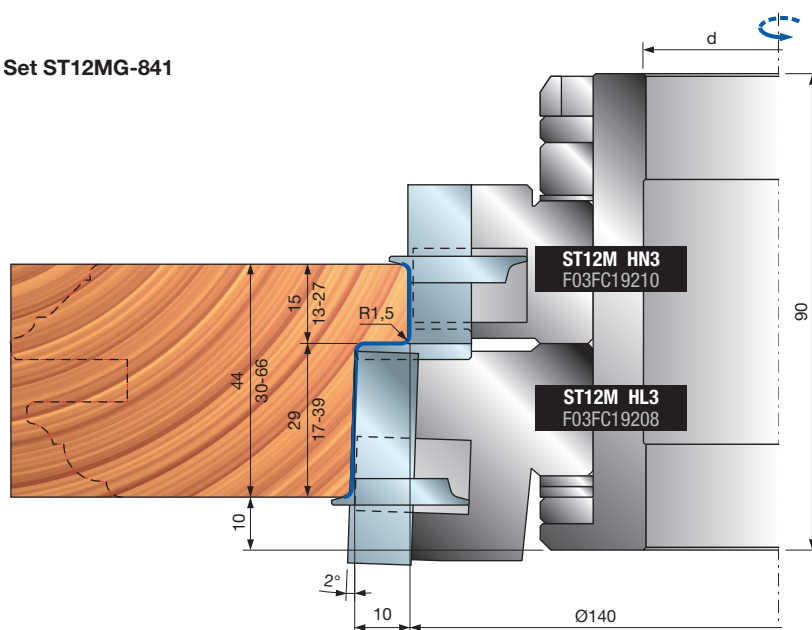
BF10MD sleeves and knives for cutterheads HR3 are not included.

	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
HM3 - HN3	Wedge	28 x 9,5 x 8	CN03M BB9	F03FA00585
	Screw	M8 x 22	VT19M BB9	F03FA04493
	Knife	30 x 12 x 1,5	CG08MEA310	F03FH02906
	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
HR3	Screw	M6 x 13	VT16M AE9	F03FC20658
	Wedge	28 x 9,5 x 8	CN03M BB9	F03FA00585
	Screw	M8 x 22	VT19M BB9	F03FA04493
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Screw	M5 x 7 x 16	VT08M AE9	F03FA04457

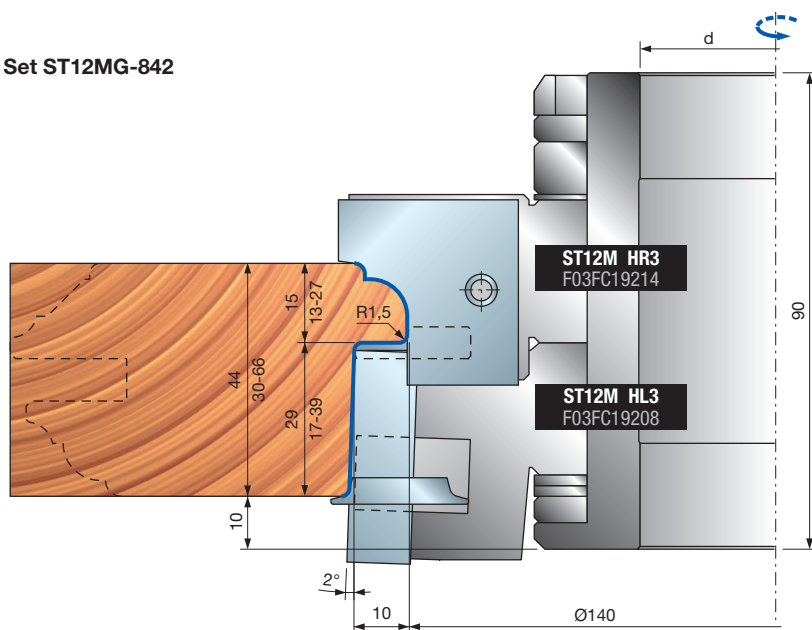
Set ST12MG-840



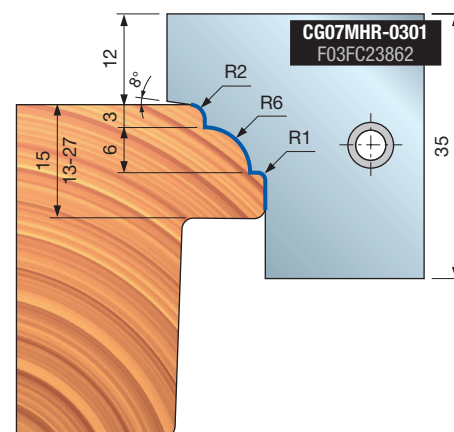
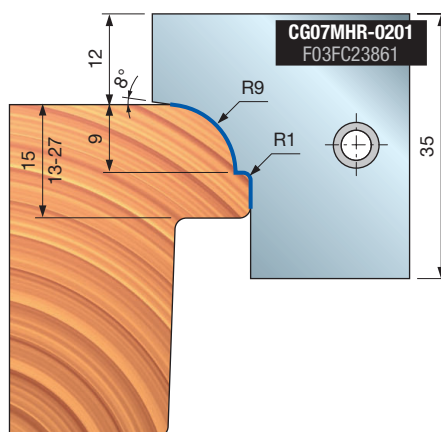
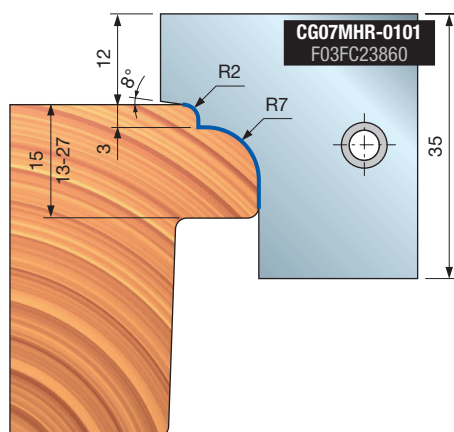
Set ST12MG-841



Set ST12MG-842

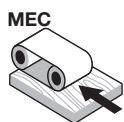


Knives for cutterhead ST12M HR3

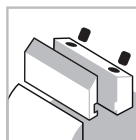




ST12MG Bead recovery cutterhead sets



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

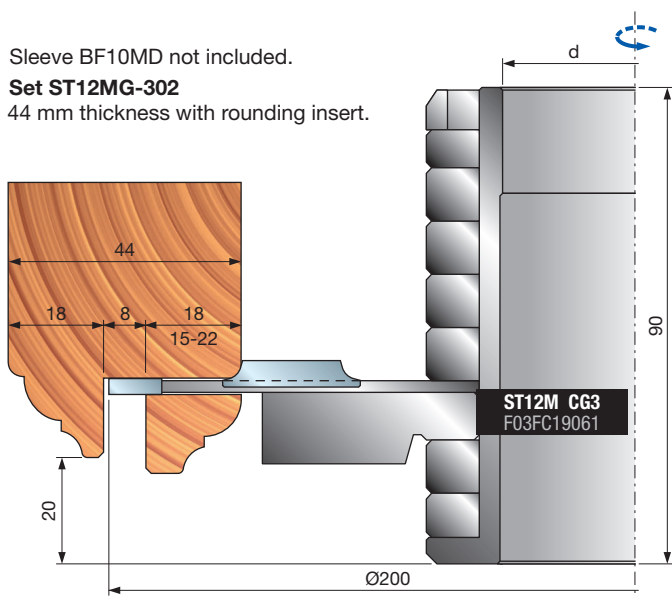
D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
144	13,5	60	2		ST12M CG3	F03FC19061

	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.

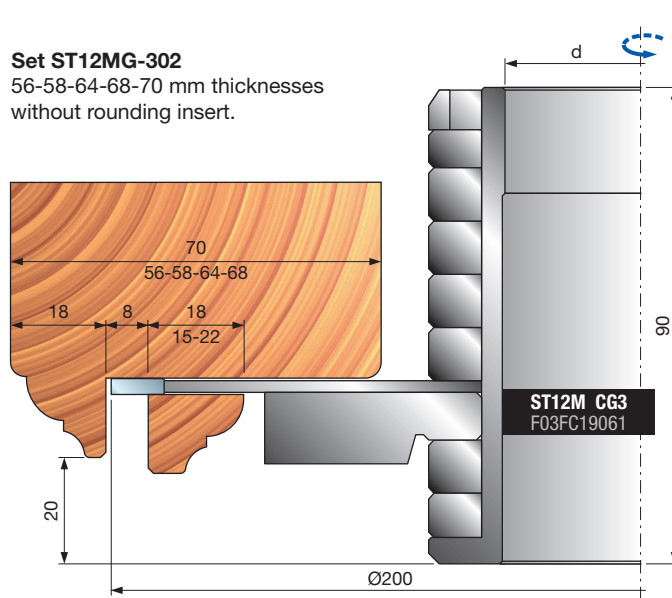
Set ST12MG-302

44 mm thickness with rounding insert.



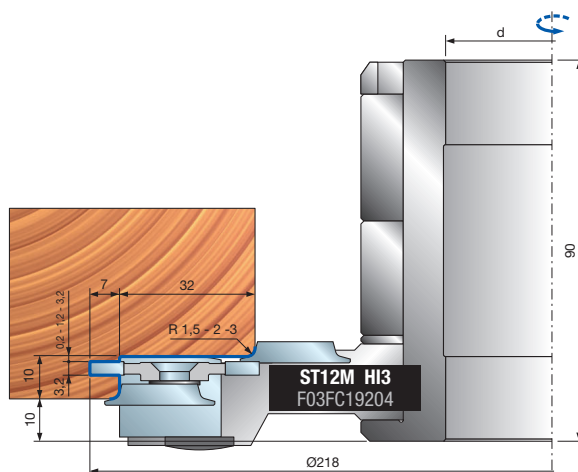
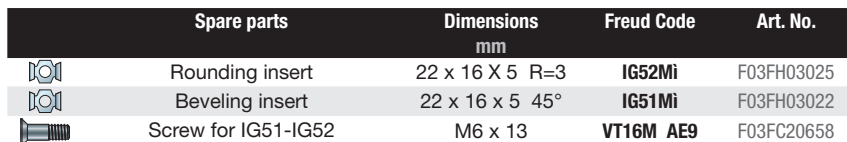
Set ST12MG-302

56-58-64-68-70 mm thicknesses without rounding insert.





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

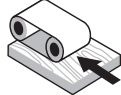




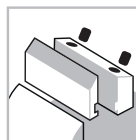
TP43M

Cutterhead sets for vertical slat shutters

MEC



Automatic Feed



Clamping System



Steel Body



Softwood



Hardwood



Profiling

Tool set zero diameter: 125 mm

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
139	-	-	2+2	9.600	TP43M MD3	F03FC20497
147	-	-	2+2	9.000	TP43M FD3	F03FC20496

Tool	Spare parts	Dimensions mm	Freud Code	Art. No.	
		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
1		Knife	34 x 24 x 3	CP43M1MD301	F03FC24009
2		Knife	34 x 24 x 3	CP43M2MD301	F03FC24011
1		Knife	35 x 29 x 3	CP43M1FD301	F03FC24008
2		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

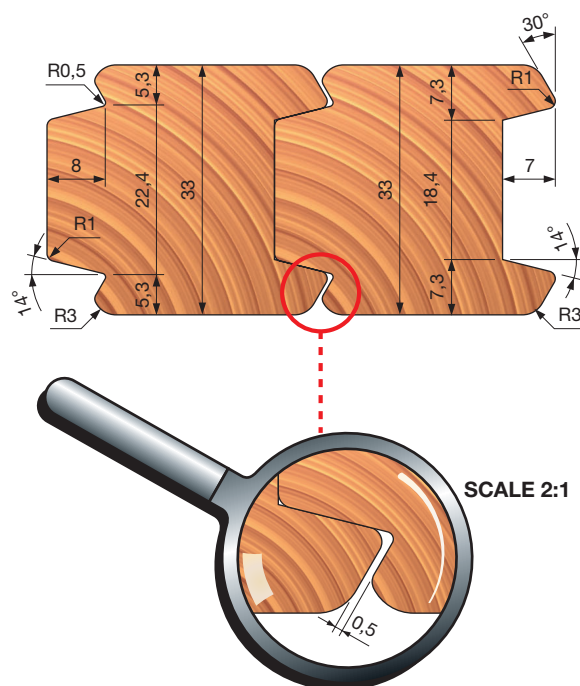
Dimensions mm	Sleeve code	Art. No.
Ø50 x 110 x 30	BF10MD AA9	F03FC00616
Ø50 x 110 x 32	BF10MD AL9	F03FC24533
Ø50 x 110 x 35	BF10MD AB9	F03FC00617
Ø50 x 110 x 40	BF10MD AC9	F03FC00618

Left-hand sleeves

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

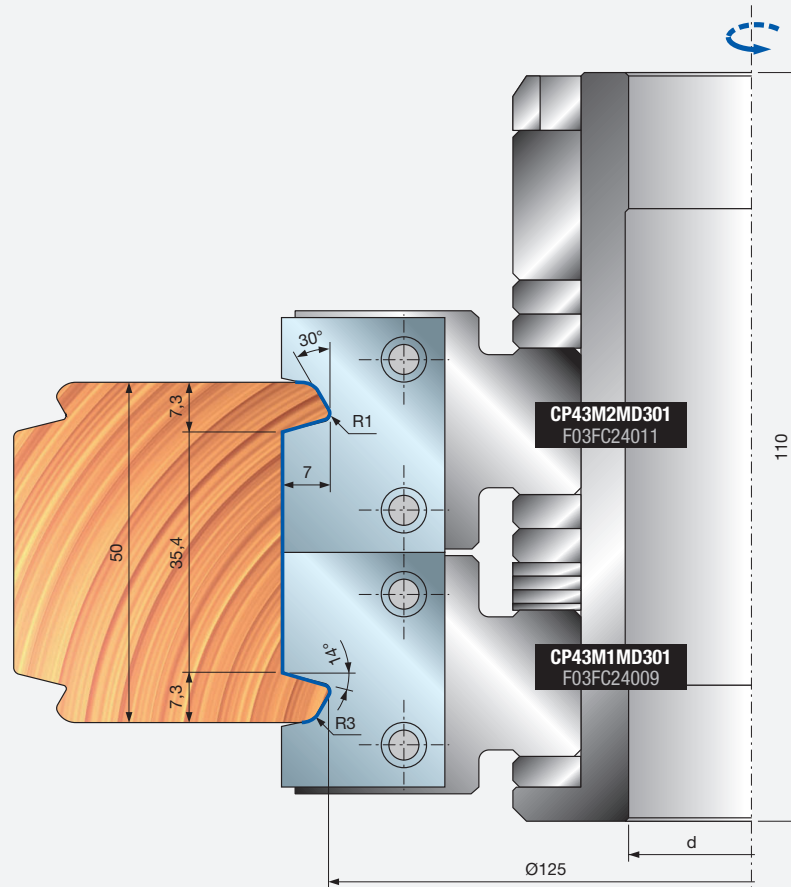
Sleeves must be ordered separately.

Please note: The sets can be ordered with clockwise rotation with BF10MS sleeve.

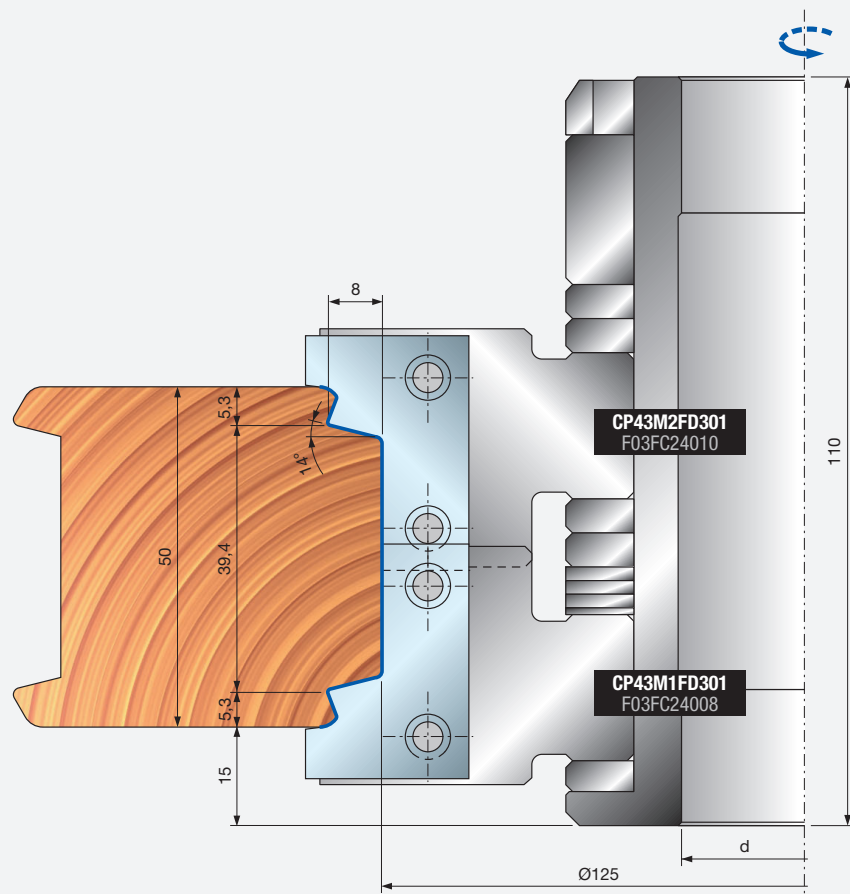


Cutterheads sets for vertical slat shutters

Set TP43M MD3



Set TP43M FD3

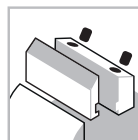


TP45M

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.

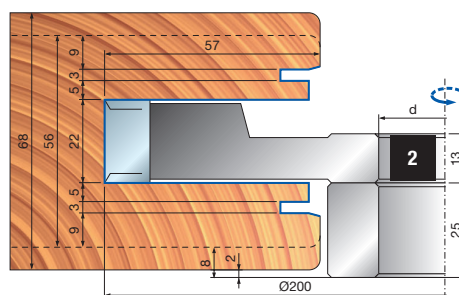
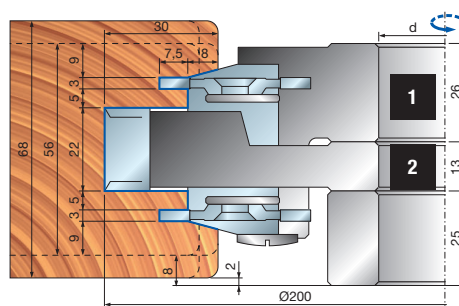
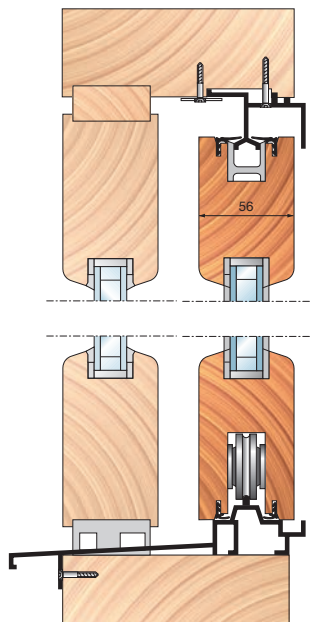
- HS25 from MAICO, AGB or G.U.
- Steel body.
- Knives included.

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		
	Torx key	T20	CB03M CC9	F03FA00167
	Allen key	4	CB03M BA9	F03FA00163
	Allen key	5	CB03M EA9	F03FA00169
1	Knife	45 x 25 x 3	CP45MAA301	F03FC24014
	Screw	M5 x 16 x 7	VT08M AE9	F03FA04457
	Screw	M10 x 18	VT03M CC9	F03FA04438
	Grooving insert	40 x 16 x 3	IG04MDAC305	F03FH02992
	Grooving insert	40 x 16 x 3	IG04MSAC305	F03FH02996
	Screw	M6 x 14,5	VT16M AA9	F03FA04476
	Deflector	30,8 x 6 x 24,5	ID04MDAC901	F03FC24135
	Deflector	30,8 x 6 x 24,5	ID04MSAC901	F03FC24139
	Screw	M4 x 12	VT05M DA9	F03FC20647
	Knife	21,6 x 12 x 1,5	CG06MTA310	F03FC23821
2	Wedge	15 x 20 x 8	CN09M A09	F03FC01289
	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
AB3	Spacer	50 x 25 x 30	AN01MB2509	F03FC00110
AC3	Spacer	52 x 25 x 32	AN01MX2509	F03FC24512
AA3	Spacer	55 x 25 x 35	AN01MA2509	F03FC00059

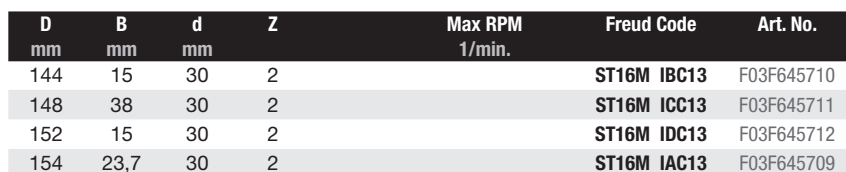
This item is supplied with 25 mm thick ring for base programming.

For doors with maximum weight of 250 Kg using hardware HS25 from MAICO, AGB or G.U.





MEC



		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
IAC13 ICC13		Screw	M10 x 16	2616M EE9	F03FA07426
		Wedge	21 x 42,5 x 8	CN33M IA9	F03FC23308
ICC13		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.

The diagram shows a cross-section of a door profile with a wood-grain finish. The profile has a total height of 44 units. The internal cavity is divided into three sections with heights of 18, 8, and 3 units. The bottom flange has a height of 6 units. The profile is shown in a blue frame with a 15x3 unit section. The frame has a 15x3 unit section. The frame has a 15x3 unit section. The frame has a 15x3 unit section.

ST16M IBC13
F03F645711

ST16M IBC13
F03F645710

ST16M IAC13
F03F645709

ø154 Z=2

Set ST16MGC13701

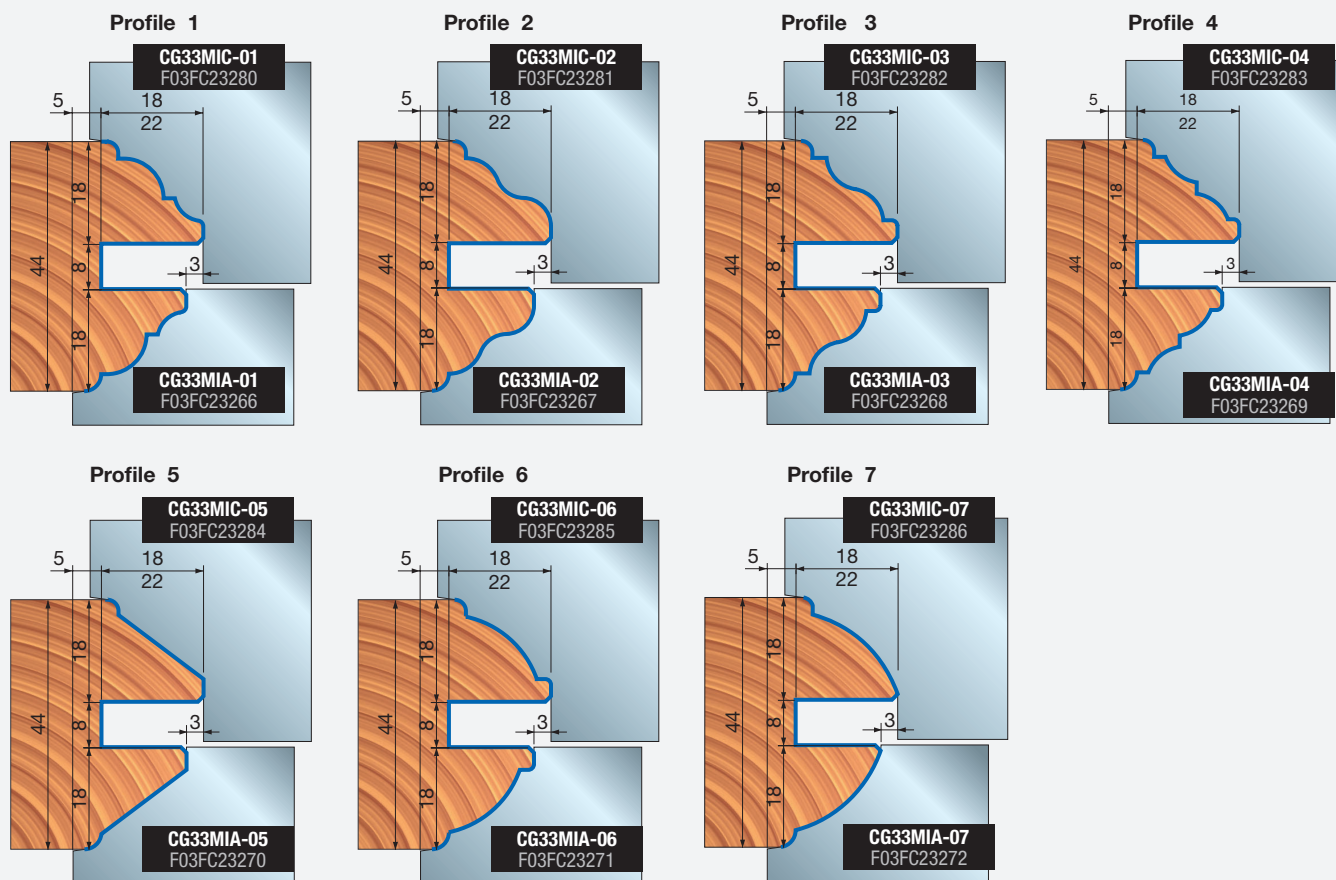
Internal door profiling without bead recovery.
No. 7 interchangeable profiles.

Technical drawing showing the internal door profiling without bead recovery. The drawing illustrates the profile dimensions and the interchangeable profiles available for the set.

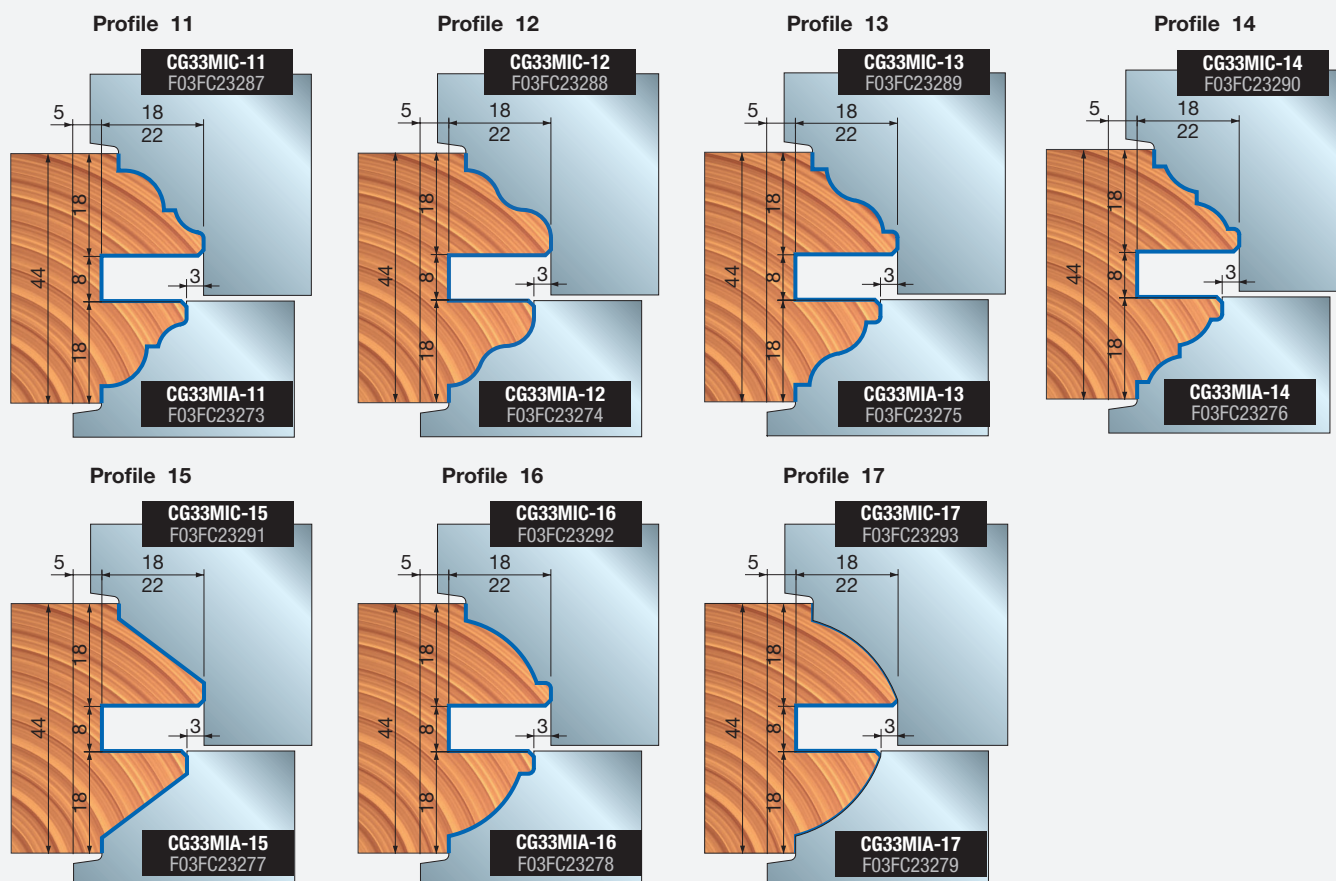
Dimensions and profile specifications:

- Profile width: 15
- Profile height: 19
- Door thickness: 44
- Door section heights: 18, 8, 3
- Profile options:
 - ST16M ICC13 (F03F645711)
 - ST16M IDC13 (F03F645712)
 - ST16M IAC13 (F03F645709)
- Bottom diameter: $\varnothing 154$ Z=2

Profiling with external rounding - Knives for cutterheads ST16MIAC13 - ST16MICC13



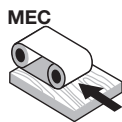
Profiling without external rounding - Knives for cutterheads ST16MIAC13 - ST16MICC13





ST16MG

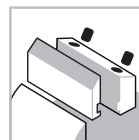
CNC sets for internal doors profiling with bead recovery



Automatic Feed



CNC Machines



Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



Rebating

D mm	B mm	d mm	Z	Max RPM 1/min.	Freud Code	Art. No.
148	123	-	2	9.000	ST16MGC13702	F03FC23499
154	123	-	2	8.500	ST16MGC13703	F03FC23500
154	123	-	2	8.500	ST16MGC13704	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		ST16M IBC13	F03F645710
148	38	30	2		ST16M ICC13	F03F645711
151	22	30	2		ST16M IFC13	F03F645714
151	33	30	2		ST16M IEC13	F03F645713
152	15	30	2		ST16M IDC13	F03F645712
154	23,7	30	2		ST16M IAC13	F03F645709



Machines:

CNC overhead routing machines.

Materials:

Softwood and hardwood.

Applications:

Internal door profiling.

Technical information:

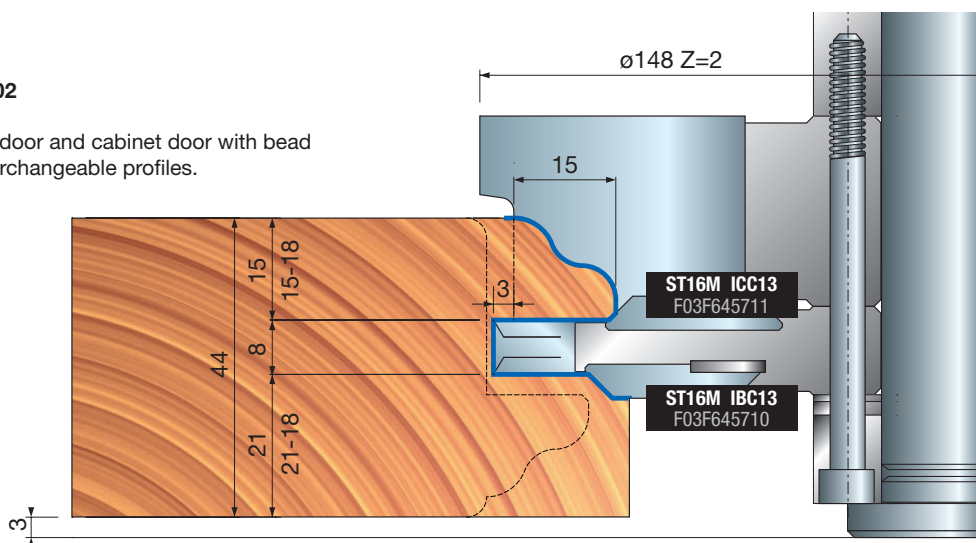
CNC tool set for internal door profile with bead recovery.

- 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.

		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
ICC13		Wedge	34,5 x 42,5 x 8	CN33M IC9	F03FC23309
		Wedge	15 x 7,2 x 8	CN09M DA9	F03FC01295
		Beveling insert	22 x 16 x 5	IG51MBA305	F03FH03022
AA2 - AA3		Spur	22,86 x 2,5	RG02MAA305	F03FH03041
		Knife	7,6 x 12 x 1,5	CG62MHA310	F03FH02956
		Screw	M5 x 6	VT05M AC9	F03FA04446
AA2 - AA3		Screw	M5 x 19	VT11M AA9	F03FA04468
		Screw	M6 x 13	VT16M AE9	F03FC20658
		Knife	30 x 12 x 1,5	CG62MDA310	F03FH02951
AA2 - AA3		Screw	M5 x 8	VT05M AA9	F03FA04444
		Knife	21,6 x 12 x 1,5	CG62MTA310	F03FC25458
		Wedge	15 x 20 x 8	CN09MD AK9	F03FC01304
AA2 - AA3		Rounding insert	22 x 16 x 5 R=3	IG52MAE305	F03FH03025
		Screw	M6 x 14,5	VT16M AA9	F03FA04476
		Screw	M10 x 22	VT19M MA9	F03FA04496
		Nut	15 x 13,3 x M10	VT20M MA9	F03FC20670

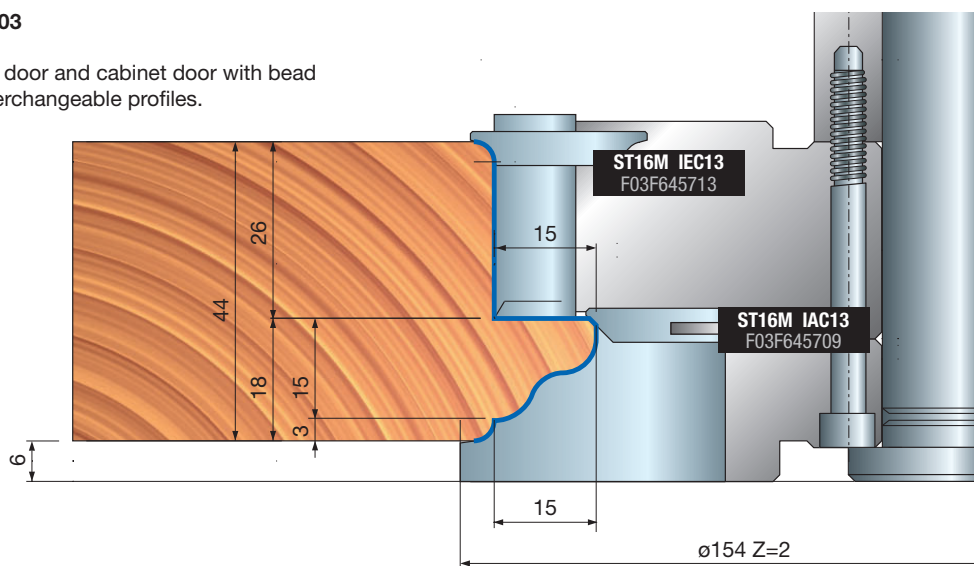
Set ST16MGC13702

Internal profiling of door and cabinet door with bead recovery. No. 7 interchangeable profiles.



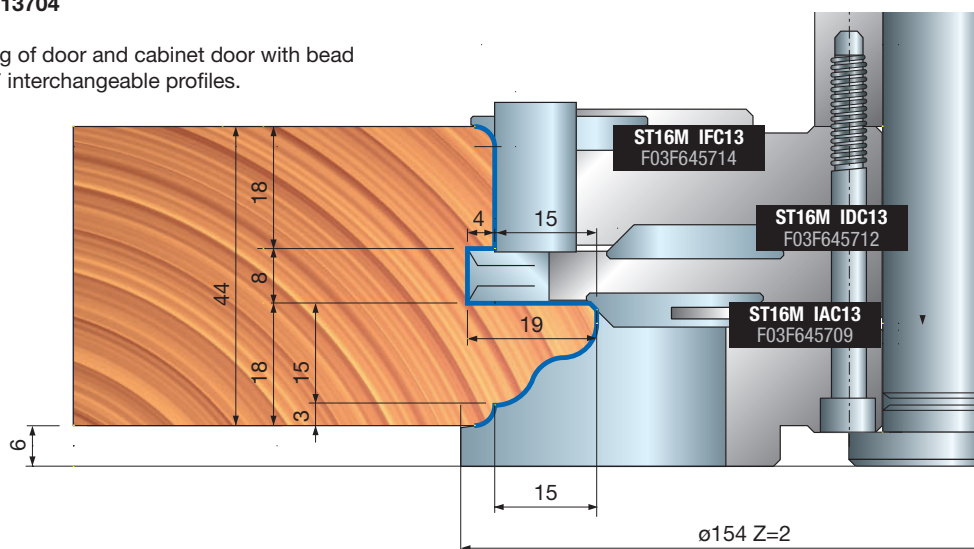
Set ST16MGC13703

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.





Machines:

CNC overhead routing machines.

Materials:

Softwood and hardwood.

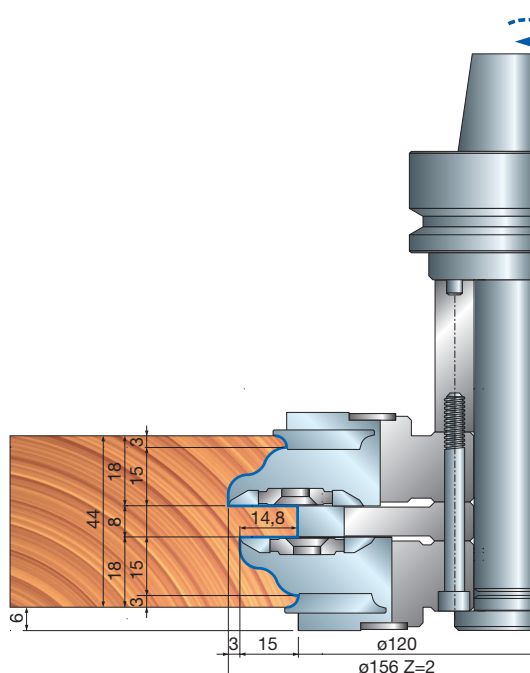
Applications:

Door profile scribing.

Technical information:

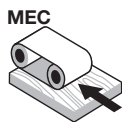
CNC tool set for internal door counterprofile.

- 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.



ST16MG

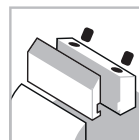
CNC scribing sets for internal doors



Automatic Feed



CNC Machines



Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



Rebating

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

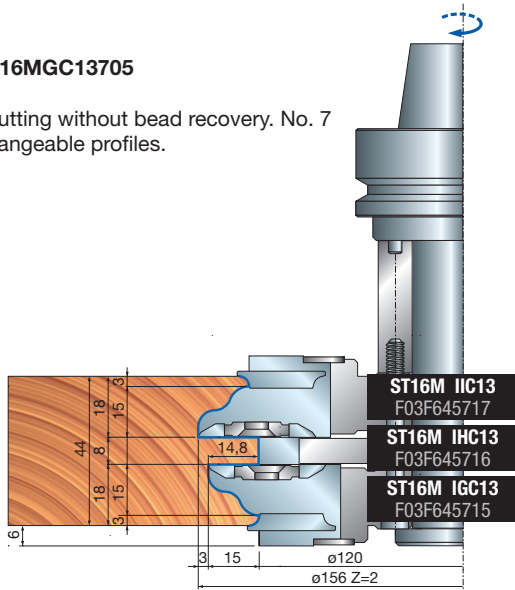
Tools for ST16MGC13705, ST16MGC13706, ST16MGC13707 and ST16MGC13708 sets

D mm	B mm	d mm	Z	V	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
	Screw	M6 x 11,5	VT16M AB9	F03FA04477
IHC13 IJC13	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
	Screw	M10 x 16	2616M EE9	F03FA07426
	Wedge	20,5 x 42,5 x 8	CN33M IIG9	F03FC23311
	Spur insert	40 x 16 x 4	IG05MDAA305	F03FH02998
IIC13	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
	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
IKG13	Rounding insert	22 x 16 x 5 R=3	IG52MAE305	F03FH03025
	Screw	M6 x 14,5	VT16M AA9	F03FA04476
	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
ILC13	Spur	22,86 x 2,5	RG02MAA305	F03FH03041
	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

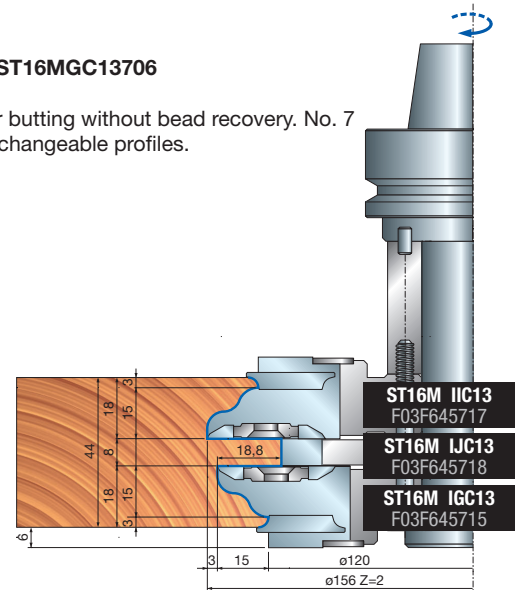
Set ST16MGC13705

Door butting without bead recovery. No. 7 interchangeable profiles.



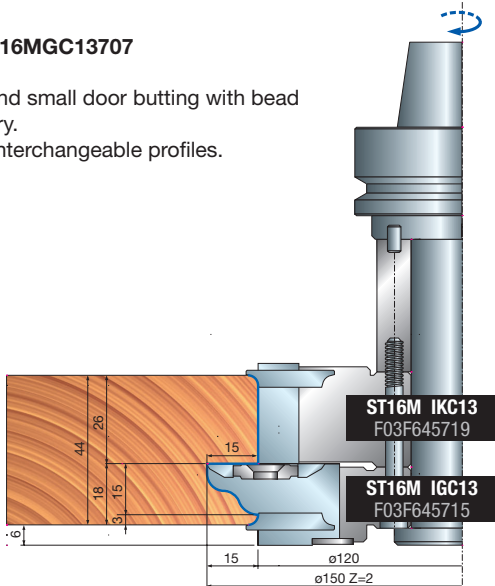
Set ST16MGC13706

Door butting without bead recovery. No. 7 interchangeable profiles.



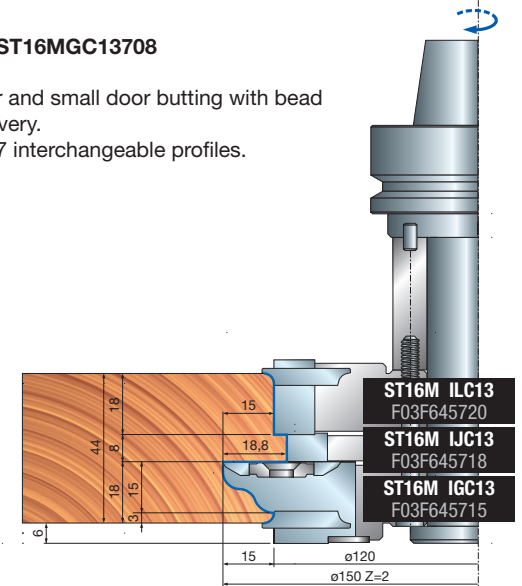
Set ST16MGC13707

Door and small door butting with bead recovery. No. 7 interchangeable profiles.

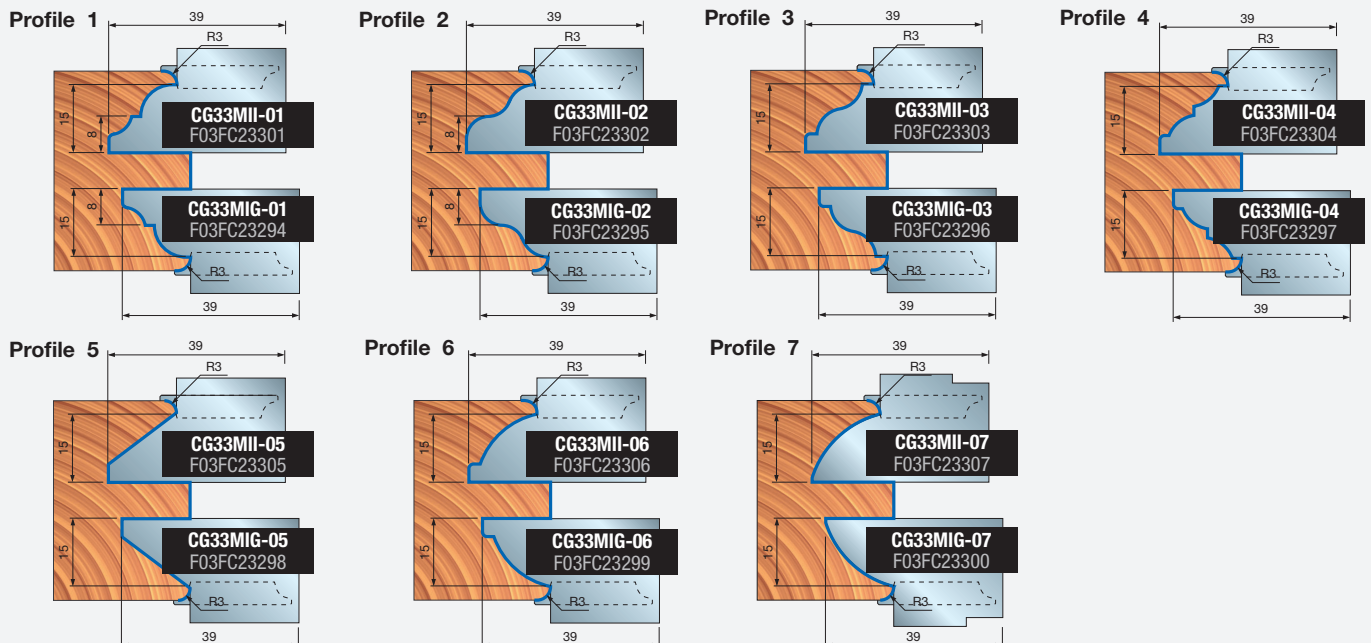


Set ST16MGC13708

Door and small door butting with bead recovery. No. 7 interchangeable profiles.



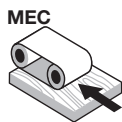
Profiling with 3 mm external rounding - Knives for cutterheads ST16M IGC13 - ST16M IIC13





ST16MG

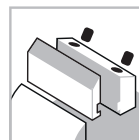
CNC sets for door rebates



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.

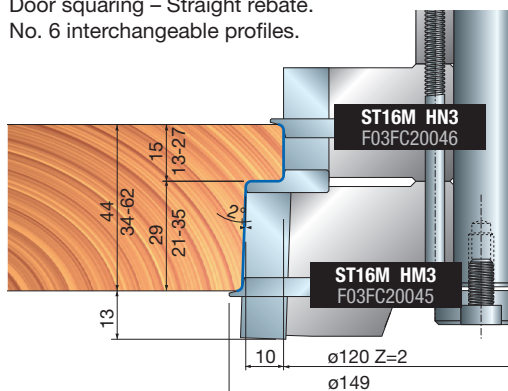
Technical information:

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.

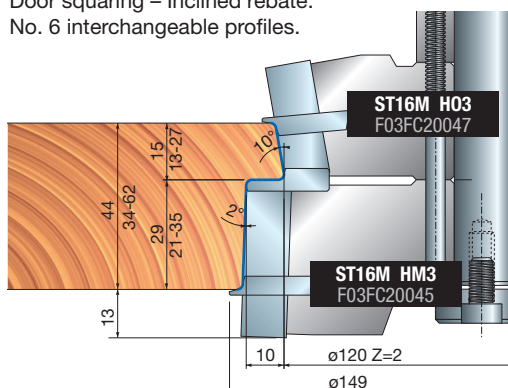
Set ST16MG 820

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	ST16MG 820	F03FC20127
149	127	-	2	9.000	ST16MG 821	F03FC20128

Tools for ST16MG 820 and ST16MG 821 sets

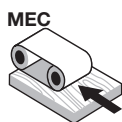
D mm	B mm	d mm	Z	l	Freud Code	Art. No.
120	30	30	2	2	ST16M HN3	F03FC20046
128,4	30	30	2	2	ST16M H03	F03FC20047
141,8	40	30	2	4	ST16M HM3	F03FC20045

Spare parts	Dimensions mm	Freud Code	Art. No.
Knife	40 x 12 x 1,5	CG08MLA310	F03FH02909
Wedge	15 x 36 x 8	CN09MS AR9	F03FC01334
Nut	15 x 13,3 x M10	VT20M MA9	F03FC20670
Screw	M10 x 22	VT19M MA9	F03FA04496
Multipurpose insert	10	IG25MS10302	F03FC24172
Screw	M6 x 10	2622M CB9	F03FA07455
Adjustment ring	16 x 11,9 x 2,6	VT18M AG9	F03FC20660
Wedge	28 x 9,5 x 8	CN03M BB9	F03FA00585
Screw	M8 x 22	VT19M BB9	F03FA04493
Rounding insert	22 x 16 x 5 R=1,5	IG52MAB305	F03FH03023
Screw	M6 x 13	VT16M AE9	F03FC20658
Knife	30 x 12 x 1,5	CG08MEA310	F03FH02906
Wedge	15 x 26 x 8	CN09MD AD9	F03FC01300
Nut	15 x 13,3 x M10	VT20M MA9	F03FC20670
Screw	M10 x 22	VT19M MA9	F03FA04496
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
Screw	M8 x 22	VT19M BB9	F03FA04493
Knife	30 x 12 x 1,5	CG08MEA310	F03FH02906
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
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
Screw	M8 x 22	VT19M BB9	F03FA04493



ST16MG

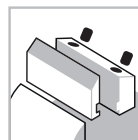
Window tooling set for door frame internal profiling



Automatic Feed



CNC Machines



Clamping System



Aluminium Body



Softwood



Hardwood



Profiling



Rebating



Machines:
CNC overhead routing machines.

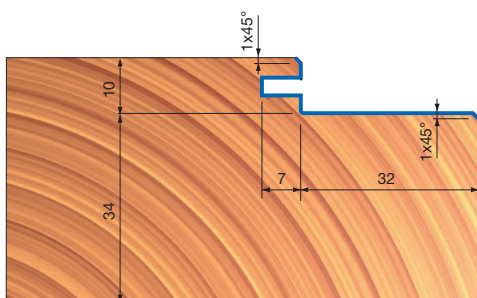
Materials:
Softwood and hardwood.

Applications:
Door frame profiling.

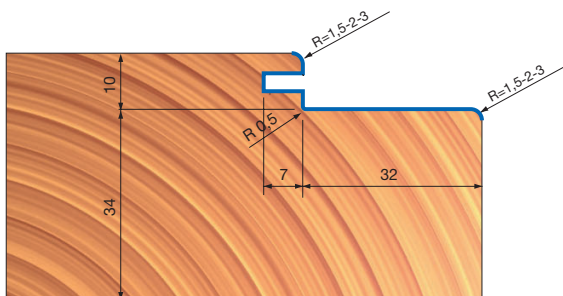
Technical information:
Performance CNC tool set suitable for door frames.

- 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.

With Beveling inserts



With Rounding inserts



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

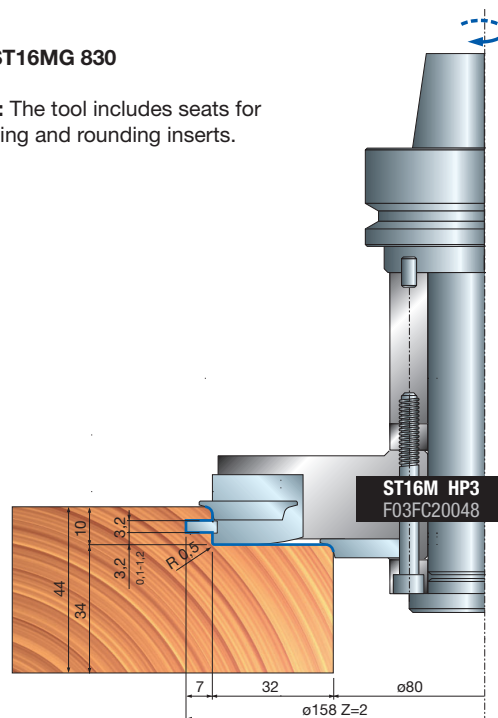
D mm	B mm	d mm	Z	V	Max RPM 1/min.	Freud Code	Art. No.
141	29	30	2	2		ST16M HP3	F03FC20048

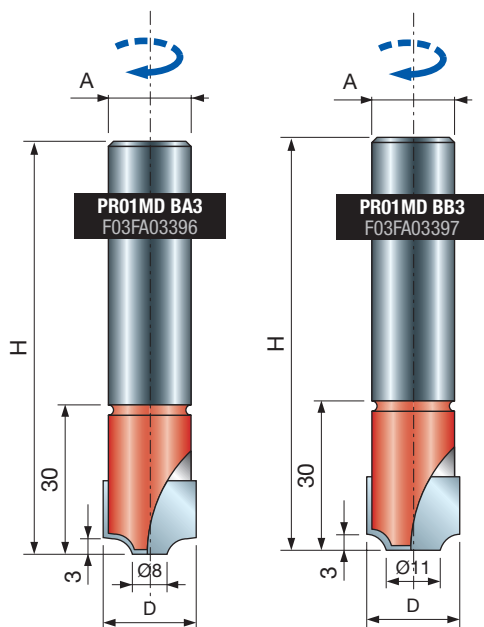
Spare parts	Dimensions mm	Freud Code	Art. No.
Knife	18,5 x 24 x 3	CG30M02401	F03FC23905
Screw	5 x 7 x 18	VT08M AE9	F03FA04457
Screw	M10 x 18	VT03M CC9	F03FA04438
Grooving insert	40 x 16 x 3	IG04MDAC305	F03FH02992
Screw	M6 x 14,5	VT16M AA9	F03FA04476

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

Set ST16MG 830

Note: The tool includes seats for beveling and rounding inserts.





Machines:

CNC machines.

Materials:

Softwood and hardwood.

Applications:

Profiling.

Technical information:

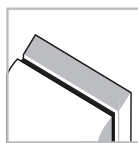
Suitable for window bead recovery operations.
Manufactured in steel with brazed HW tips.

PR01MD

Bead profiling router bits



CNC Router



Brazed Cutters



Softwood

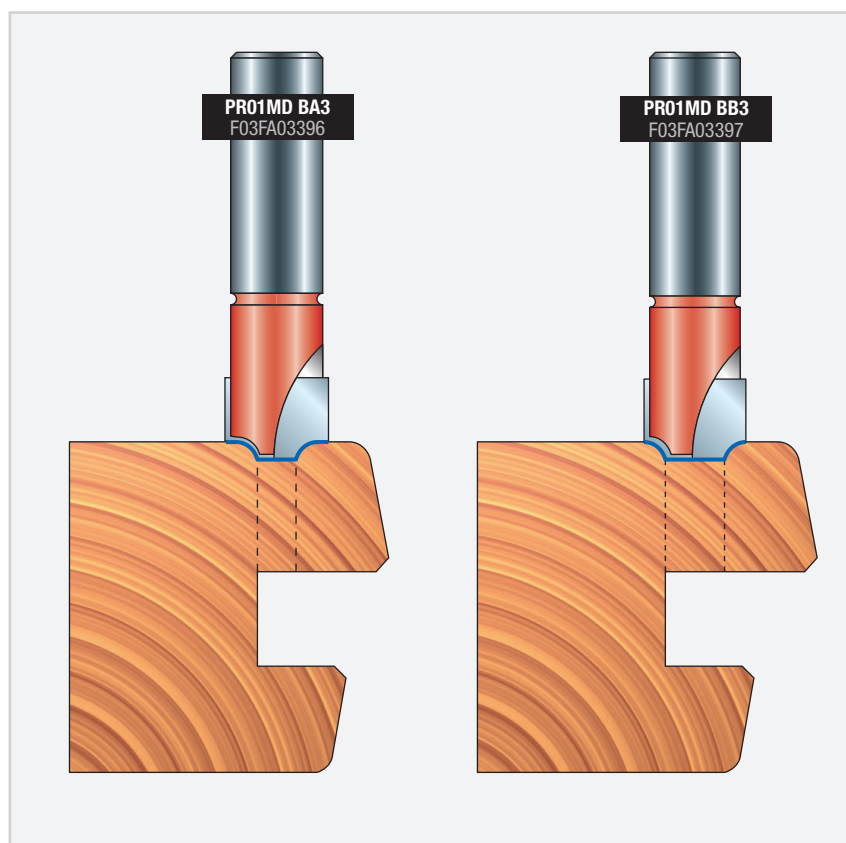


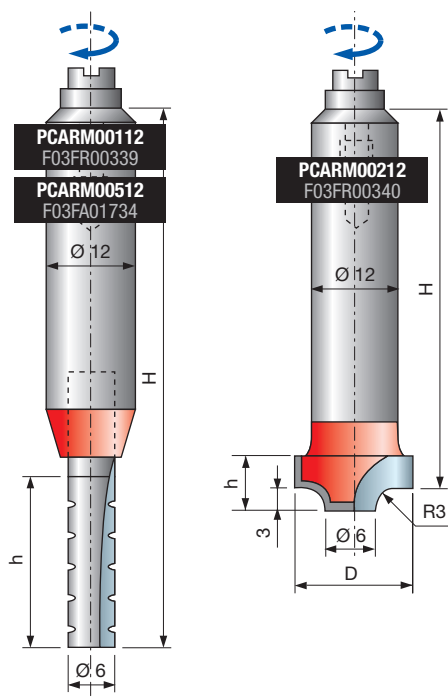
Hardwood



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



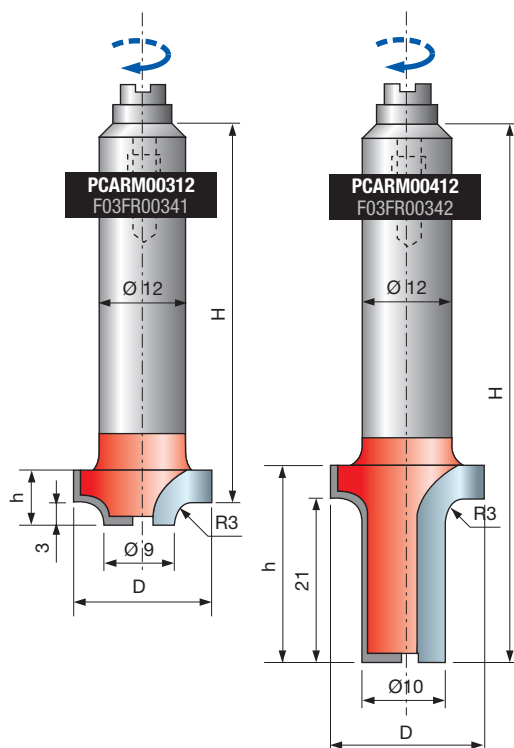


Machines:
CNC machines.

Materials:
Softwood and hardwood.

Applications:
Profiling.

Technical information:
Suitable for arch window bead recovery operations.
• Manufactured in steel with brazed HW tips.

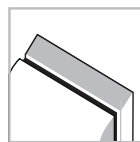


PCARM

Bead recovering router bits



CNC Routers



Brazed Cutters



Softwood

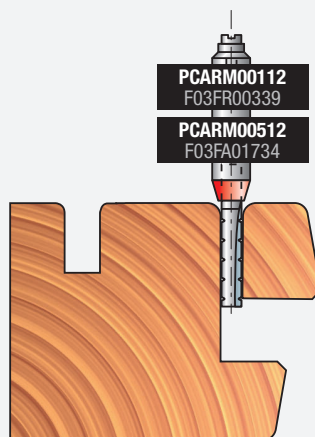


Hardwood

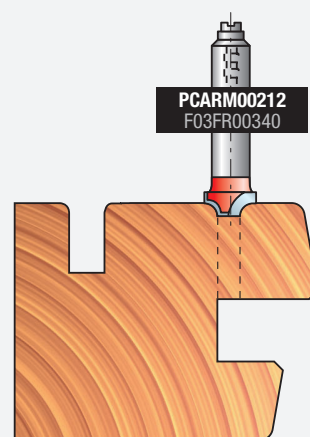


Profiling

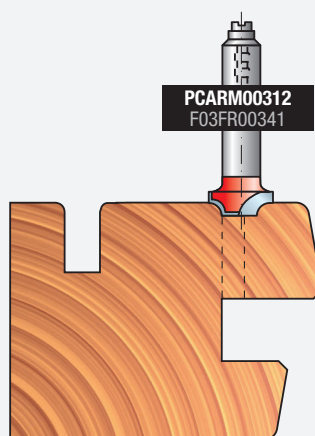
D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Freud Code	Art. No.
6	23,5	71	12	1	24.000	PCARM00112	F03FR00339
6	30	80	12	1	24.000	PCARM00512	F03FA01734
16	8	56	12	2	24.000	PCARM00212	F03FR00340
19	8	56	12	2	24.000	PCARM00312	F03FR00341
20	26	71	12	2	24.000	PCARM00412	F03FR00342



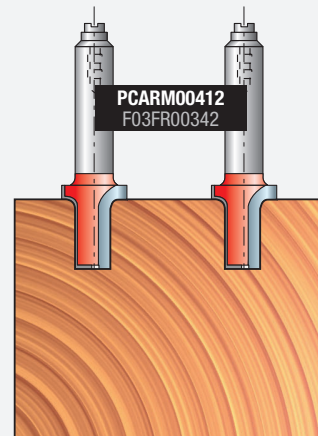
20-28 mm bead recovery bit.



Bead profiling bit.



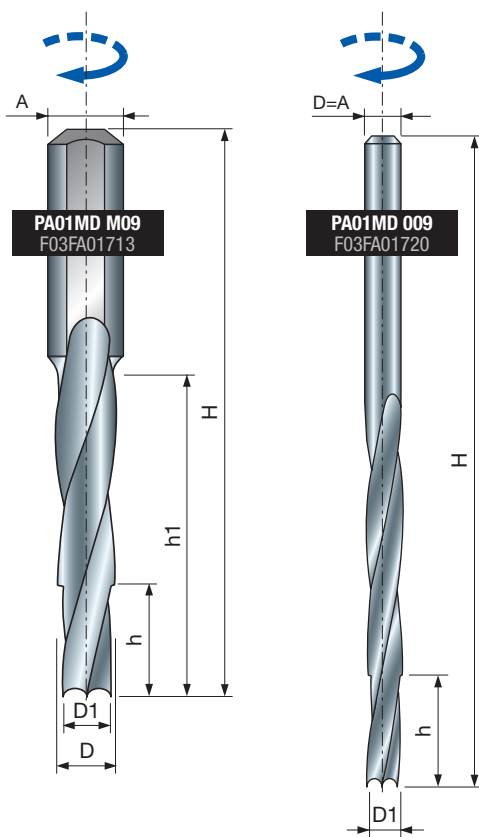
Bead profiling bit.



Arch tracing bit.

Boring





Machines:
Boring and CNC machines.

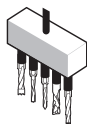
Materials:
Softwood and hardwood.

Applications:
Boring.

Technical information:
Right hand rotation router bit with double diameter for window hinges.

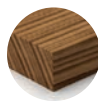
PA01MD

HS stepped drill for hinges



Boring Machines

CNC Routers

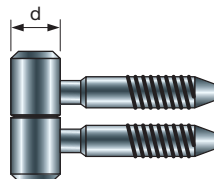


Softwood

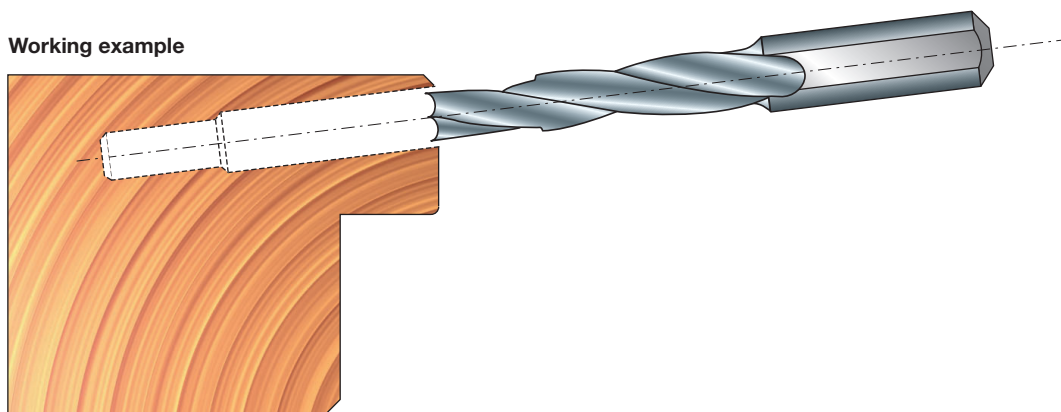
Hardwood

D1 mm	D mm	h mm	h1 mm	H mm	A mm	d mm	Freud Code	Art. No.
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 mm	D mm	h mm	h1 mm	H mm	A mm	d mm	Freud Code	Art. No.
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



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.

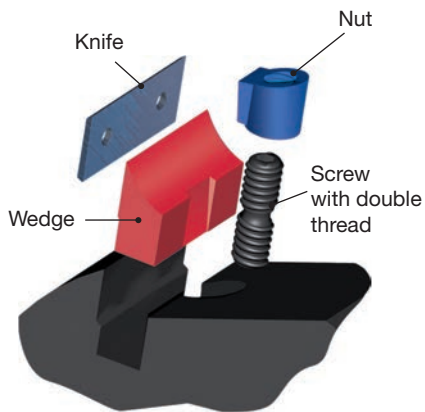
The minimum required clamping length must be kept.

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:

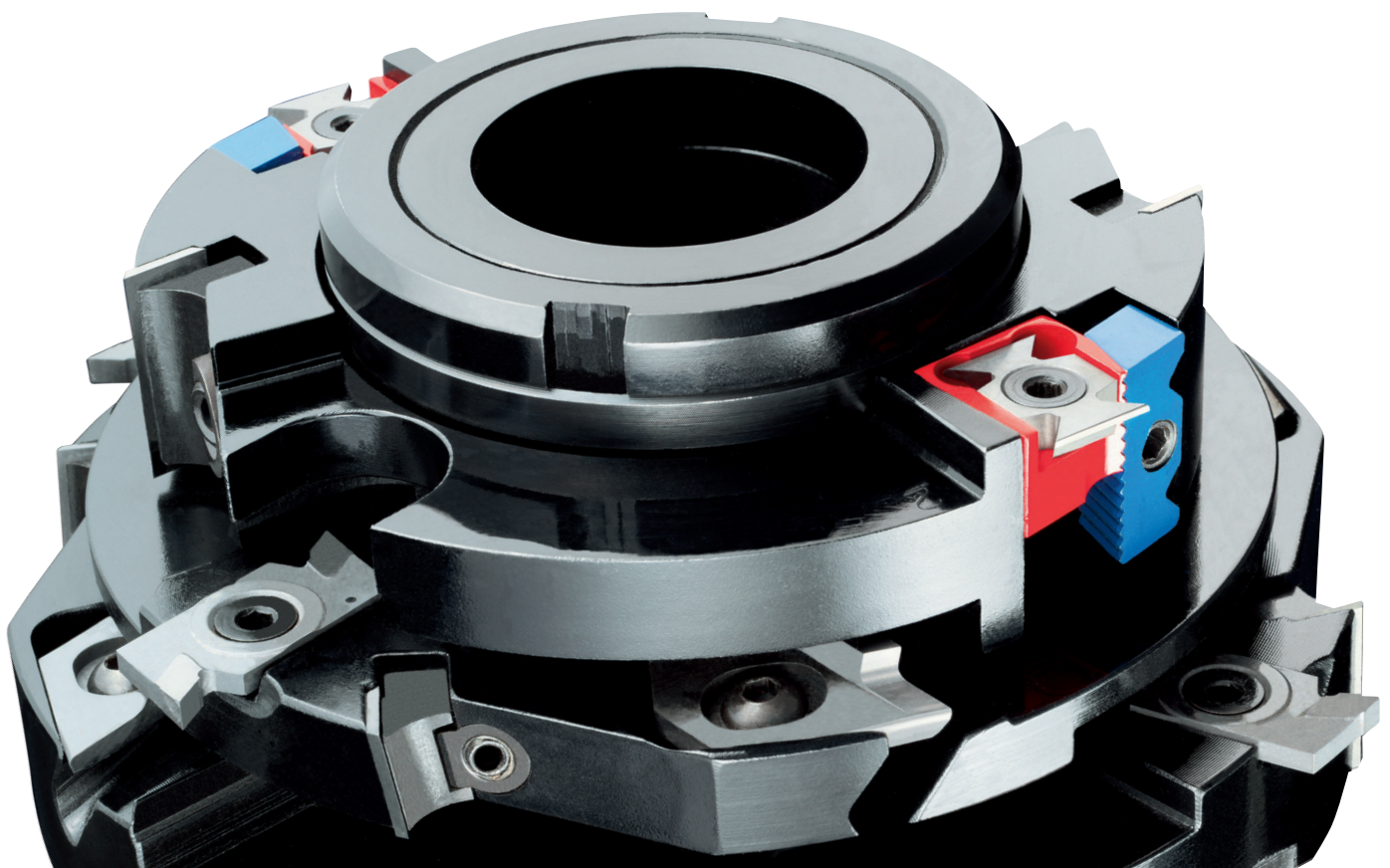
Complexity is not always synonymous of efficiency! There are other more complex locking methods than ours, but none as efficient. Our research centre has been able to carry out its realisation whilst keeping in consideration 2 fundamental points: have as few components as possible so as to be able to 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.

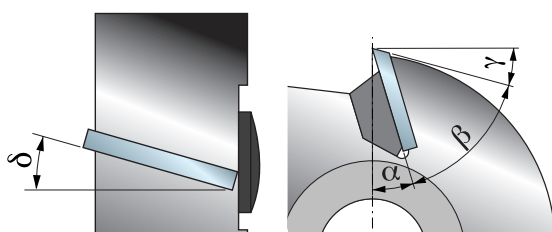
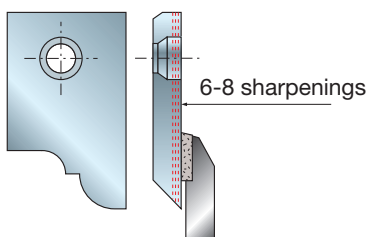
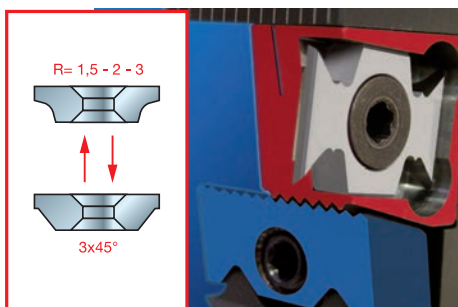
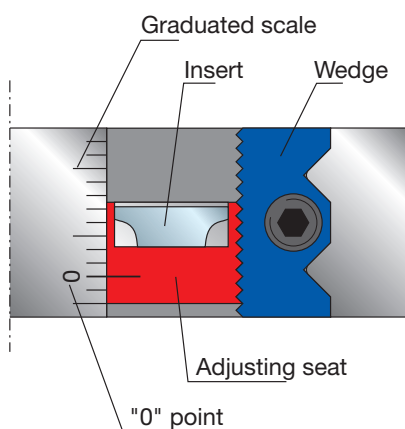
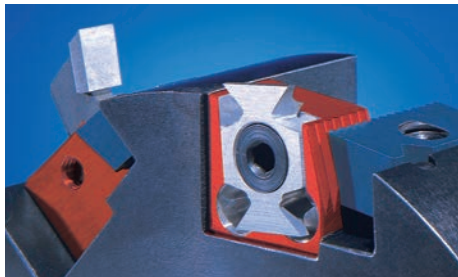
THE EASIEST SYSTEM TO MAINTAIN:

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 gest, 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.

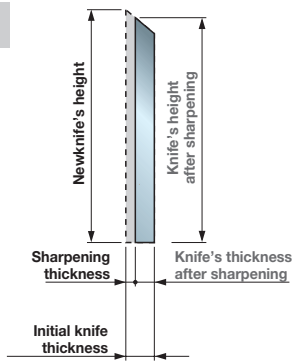
PROFIED AND RESHARPENABLE PERFORMANCE SYSTEM KNIVES

- 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:

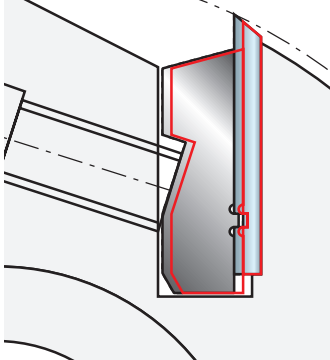
- **Hook angle (α):** depends on the type of material to be cut.
- **Wedge angle (β):** this angle is a direct consequence of angles α and γ .
- **Clearance angle (γ):** depends on the material to be cut and the thickness of the cutting edge.
- **Shear angle (δ):** necessary to obtain a better penetration 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.

1

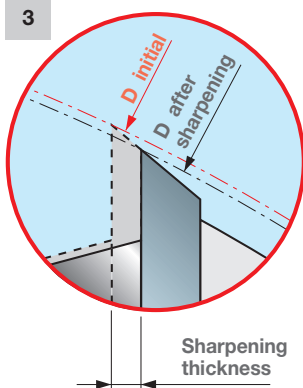


2

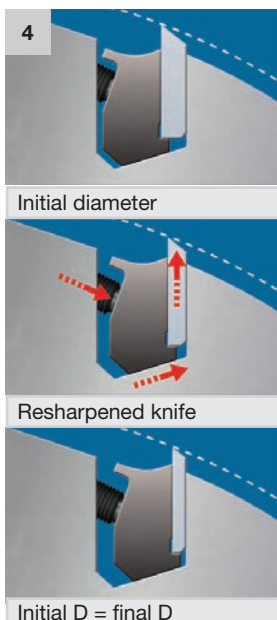
TRADITIONAL system



3

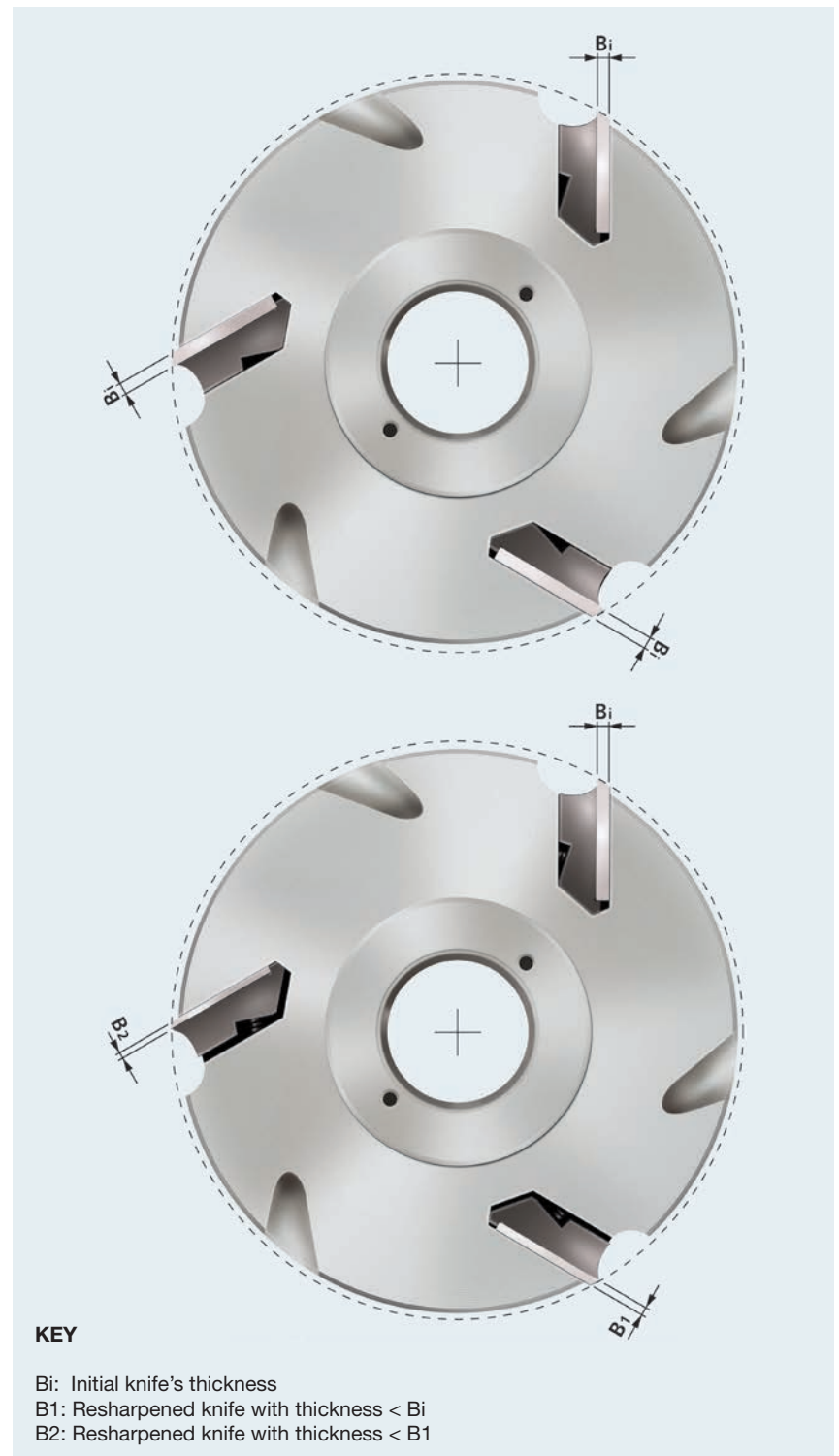


4



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.



A close-up photograph of a metallic flange with a central circular hole. Two bolts are positioned in the foreground, showing their threaded shafts and hexagonal heads. The flange has a smooth, machined surface and a small, colorful logo is visible near the top edge.

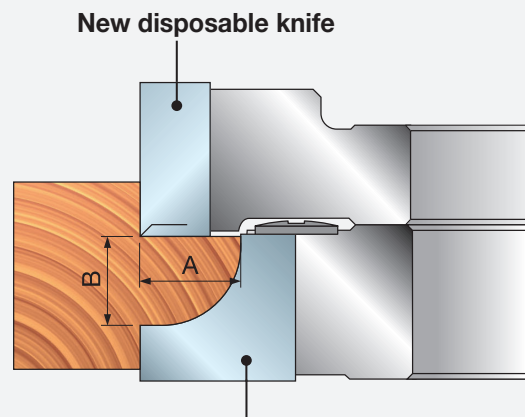
5a

0°

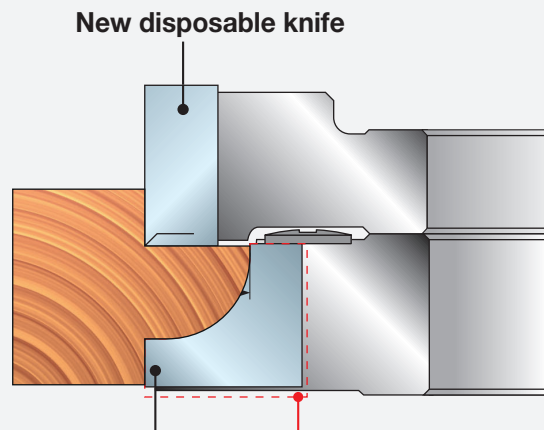
a

b

6



A= A1
B= B1

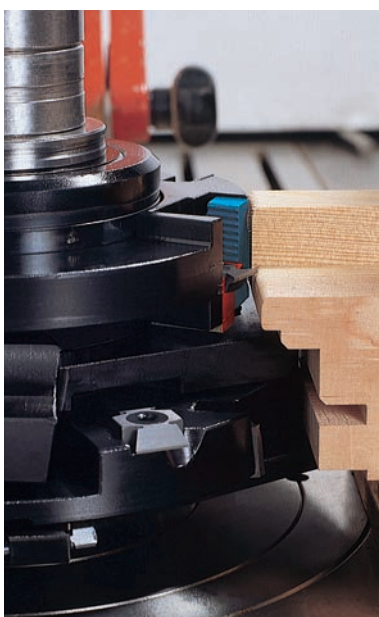
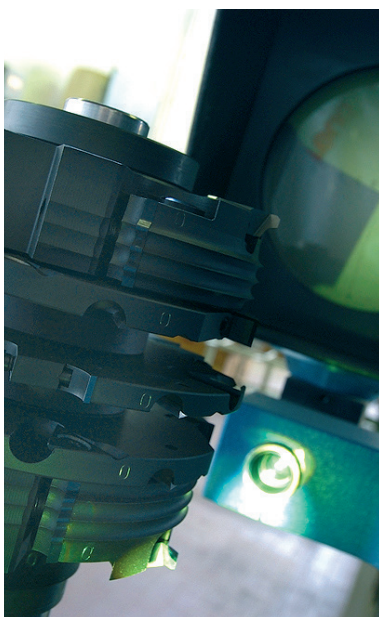


New Performance knife



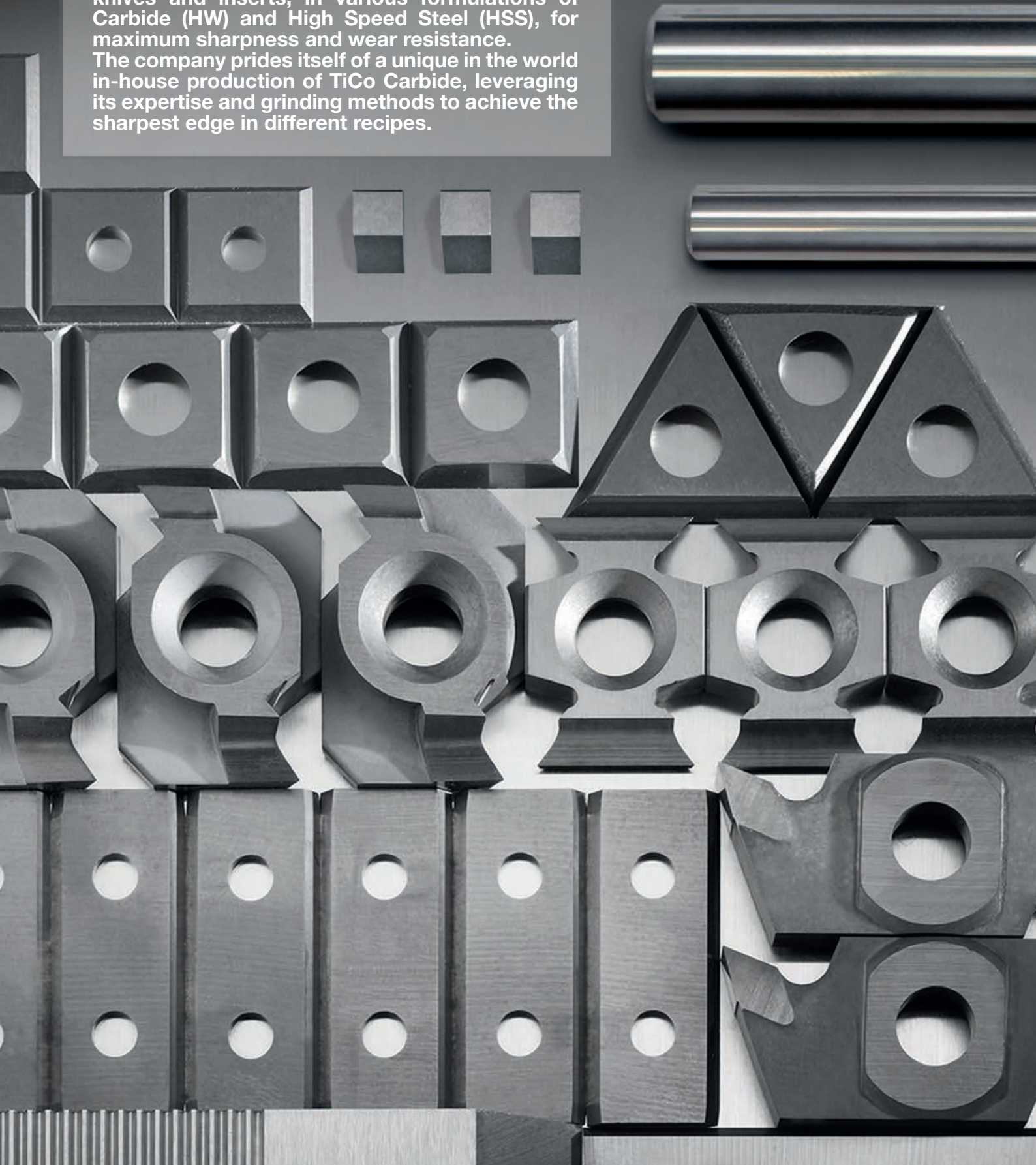
ABSOLUTE QUALITY

- 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.



Leading technology for knives and inserts.....	Page 486
HW - Industrial quality knives - Choose the right tool.....	Page 488

KNIVES

Disposable knives in HW for planing & rebating

CG08M HW - 35° Disposable knives.....	Page 491
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
CG04M HW - 35° Disposable knives.....	Page 493
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
CG19M HW - 35° Disposable knives with end bevels.....	Page 496
CG50M HW - 35° Disposable knives for TG35M	Page 499
CGSEM HW - Split-Edge knives	Page 498

Customised knives in HW

CG400 HW - Customised knives.....	Page 496
CG401 HW - Customised knives.....	Page 497
CG402 HW - Customised profiled knives.....	Page 497
CG403 HW - Customised profiled knives.....	Page 497
CG404 HW - Customised profiled knives.....	Page 499
CG405 HW - Customised profiled knives.....	Page 499
CG501 HW - Customised Split-Edge knives.....	Page 498
CG502 HW - Customised Split-Edge knives.....	Page 498
CK01 HW - Knives 2 mm thickness - special profiling.....	Page 500
CK02 HW - Performance knives 3 mm thickness - special profiling	Page 501

Blanks in HW for profiling

0317M HW - Blanks for profiling - 3 mm thickness	Page 502
0318M HW - Blanks for profiling - 3 mm thickness	Page 503
0339M HW - Blanks for profiling - 2 mm thickness - mirror finished.....	Page 504

HSS Knives for planing

CT01M 18%W HSS knives - Standard dimensions.....	Page 505
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
CP010S 18%W HSS planing knives - Special dimensions.....	Page 506

SPURS

Spurs in HW for roughing and rebating

RG01M HW - Square disposable spurs - Type A	Page 508
RG01M HW - Square disposable spurs - Type B	Page 508
RG01M HW - Square disposable spurs - Type C.....	Page 508
RG02M HW - Triangular disposable spurs	Page 509
RG03M HW - Triangular disposable spurs with radius.....	Page 509

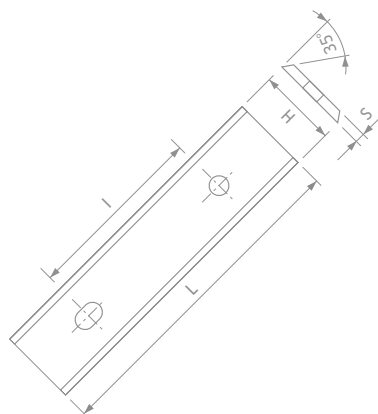
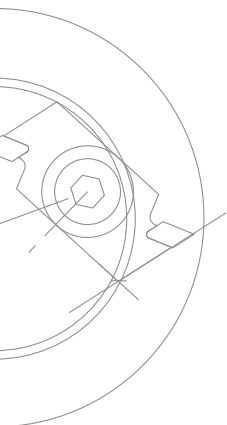
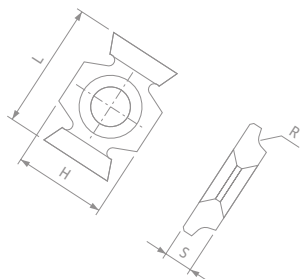
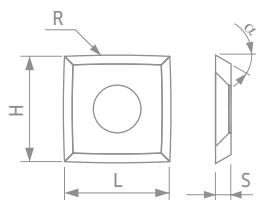
Spurs in HW for planing and finishing

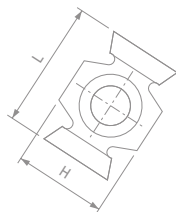
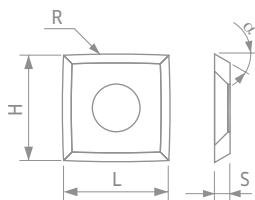
RR01 HW - Razor with rounded corners.....	Page 510
RR10 HW - 30° razor with rounded edges.....	Page 510
RR11 HW - 30° razor with both rounded corners and edges	Page 510

INSERTS

Inserts in HW for beveling & rounding

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IG01M HW - 45° Beveling inserts	Page 512
IG02M HW - Rounding inserts	Page 513
IG21MD - IG21MS HW - 45° Beveling inserts with shear angle	Page 513
IG22MD - IG22MS HW - Rounding inserts with shear angle.....	Page 514
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Inserts in HW for grooving

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ID04MD - ID04MS	Deflectors for inserts IG04MD and IG04MS	Page 518
CG03M	HW - Disposable knives with four cutting edges	Page 518
IG05MD - IG05MS	HW - Spur inserts	Page 518
IG17MD	HW - Insert for beveled grooves	Page 519
SR01MD - SR01MS	HW - Grooving inserts	Page 519
SR06MD	HW - Multipurpose inserts	Page 519
SR06M	HW - Grooving inserts	Page 520
SR06MD - SR06MS	HW - Multipurpose inserts	Page 520
SR11MD - SR11MS	HW - Grooving inserts	Page 520
IG03M	HW - Anti capillary groove inserts	Page 521
IG11M	HW - Anti capillary groove inserts	Page 521
ID11MD - ID11MS	Deflectors for inserts IG11M	Page 521
IG10MD - IG10MS	HW - Inserts for gasket seats	Page 522
ID10MD - ID10MS	Deflectors for inserts IG10MD and IG10MS	Page 522
IG13MD - IG13MS	HW - Inserts for sealing strip seats	Page 523
ID13MD - ID13MS	Deflectors for inserts IG13MD and IG13MS	Page 523
IG14MD - IG14MS	HW - Inserts for frame rebates	Page 524
IG15MD - IG15MS	HW - Inserts for glass sealing	Page 524
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IG16MD - IG16MS	HW - Inserts for glass sealing	Page 525

Safe working practice	Page 526
Technical features	Page 527

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.

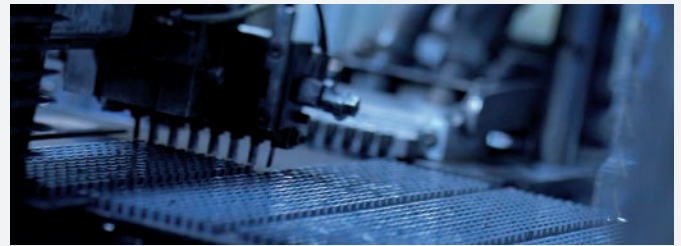




PIONEERING SOLUTIONS

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.



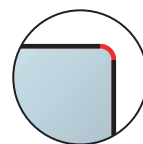
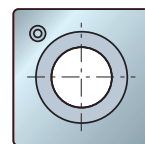
Freud takes pride in producing the sharpest knives in the world, in different Carbide formulas (cutting edge minimum roughness μm 0.12-0.15). This remarkable result is achieved leveraging a solid know-how and the most advanced grinding methods.

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.

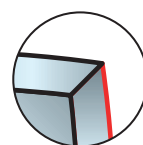
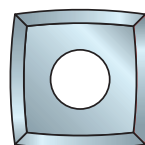
DESIGN INNOVATION

Freud leverages its market knowledge and technical know-how to constantly develop new geometries and shapes for its knives and inserts.

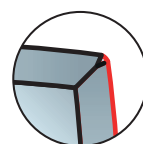
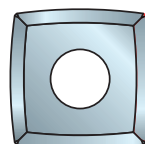
For its new range of Carbide Rounded Razors, for example, Freud has developed designs with rounded corners, rounded edges and with a combination of both, to achieve the highest results in demanding applications that require a perfect quality of cut.



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
	Hardwood		45°	CG22M
			35°	CG26M
			35°	CG01M - CG10M
			35°	CG08M
			35°	CG19M
			40°	CG76M
			40°	CG66M
			40°	CG06M
			40°	CG17M
	Plywood panels		40°	CG18M
			45°	CG62M
			45°	CG22M
			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
			35°	CG20M*
			35°	CG04M*
	MDF		35°	CG05M
			35°	CG26M
			35°	CG01M - CG10M
			35°	CG08M
			35°	CG19M
			40°	CG76M
			40°	CG66M
			35°	CG20M*
			35°	CG04M*
	Plastics		35°	CG20M*
			35°	CG26M
			35°	CG01M - CG10M
			35°	CG08M
			35°	CG19M
			35°	CG20M*

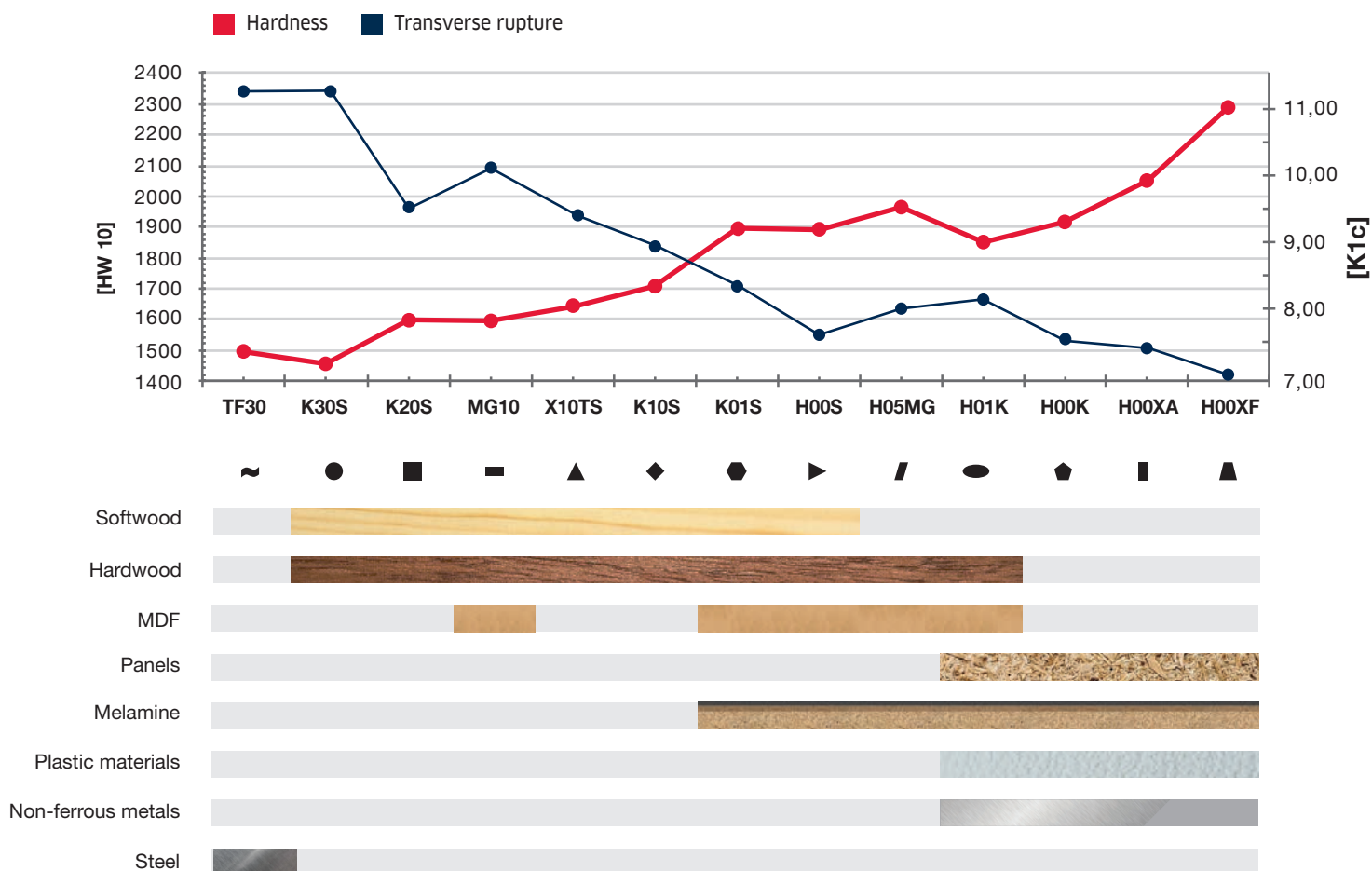
HW - INDUSTRIAL QUALITY KNIVES

CHOOSE THE RIGHT TOOL

RELIEF ANGLE	CODE	APPLICATION								HW	HARDNESS	
		Universal	Softwood	Hardwood	Plywood	Laminated	MDF	HDF	Plastics			HV 10
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

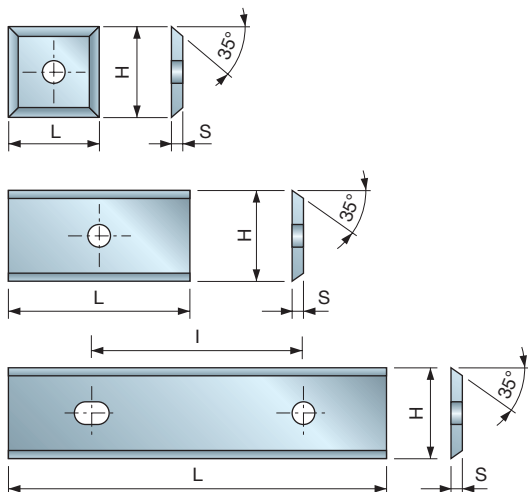
* Not for board containing foreign materials

● 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.

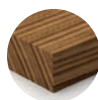
- Ideal for a universal use.

CG08M

HW - 35° Disposable knives



Softwood



Hardwood



Chipboard



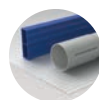
Laminated
Chipboard



MDF



Laminated
MDF



Plastics

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



Softwood



Hardwood



Chipboard



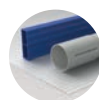
Laminated
Chipboard



MDF



Laminated
MDF



Plastics

Type A

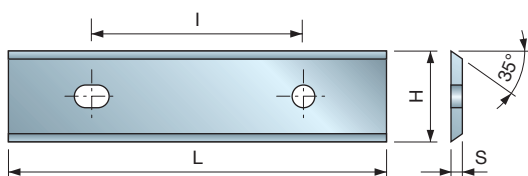
L mm	H mm	S mm	I mm	Freud Code	Art. No.
20	5,5	1,1	-	CG01MDB310	F03FH02735
30	5,5	1,1	-	CG01MEB310	F03FH02850
40	5,5	1,1	-	CG01MFJ310	F03FH02853
50	5,5	1,1	-	CG01MFB310	F03FH02852

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

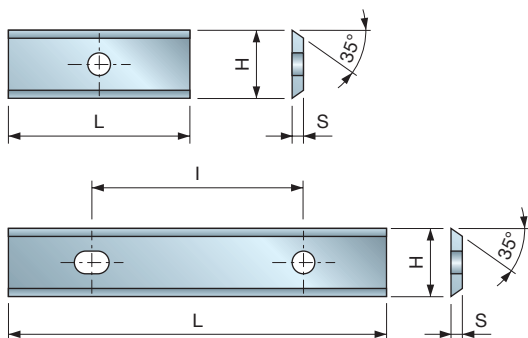
L mm	H mm	S mm	I mm	Freud Code	Art. No.
80	13	2,2	60	CG01MHA301	F03FA18134
100	13	2,2	60	CG01MIA301	F03FA18182
120	13	2,2	60	CG01MKA301	F03FA18183



**HW
H00S**

12 mm Disposable knives made by H00S
Freud's Carbide with 35° relief angle.

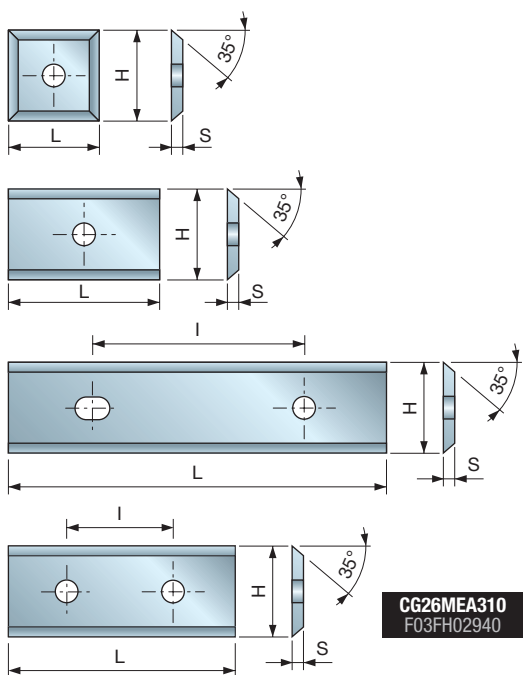
- Ideal for a universal use.



**HW
H00S**

12 mm Disposable knives made by H00S
Freud's Carbide with 35° relief angle.

- Ideal for a universal use.

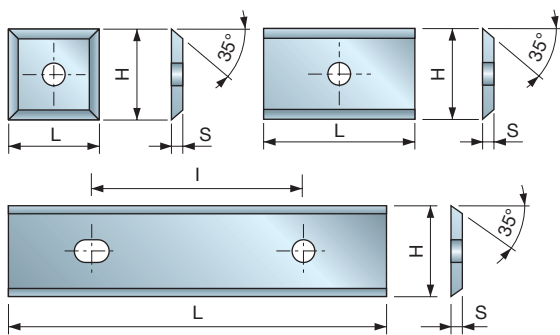


**CG26MEA310
F03FH02940**

**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.

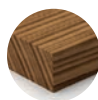
- Ideal for wood composites

CG10M

HW - 35° Disposable knives



Softwood



Hardwood



Chipboard



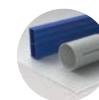
Laminated
Chipboard



MDF



Laminated
MDF



Plastics

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



Softwood



Hardwood



MDF



Laminated
MDF



Plastics

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



Chipboard



Laminated
Chipboard



MDF

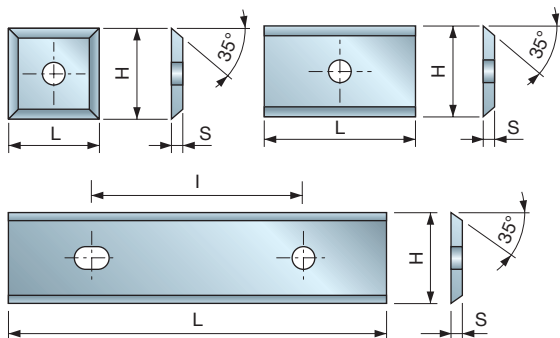


Laminated
MDF



Plywood

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



Chipboard



Laminated
Chipboard



MDF

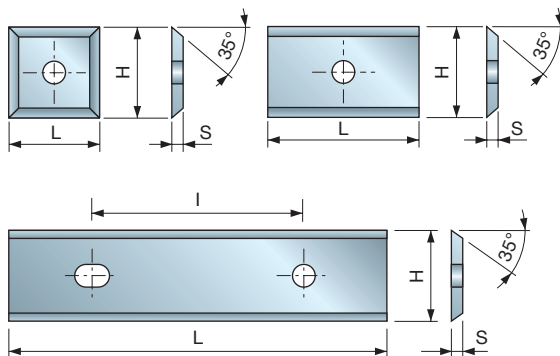


Laminated
MDF



Plywood

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



Chipboard



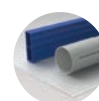
Laminated
Chipboard



MDF

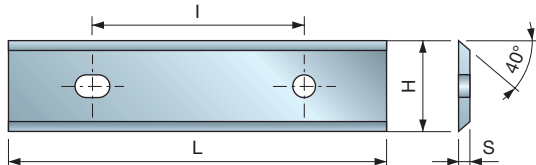
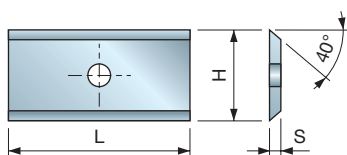
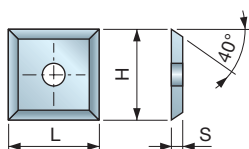


Laminated
MDF



Plastics

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

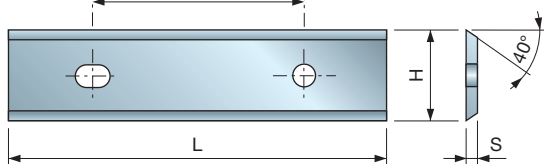
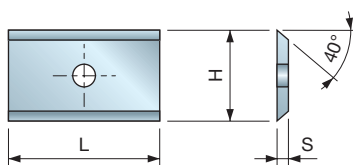
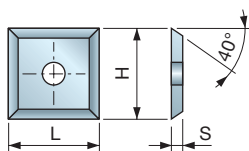


Softwood



Hardwood

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.

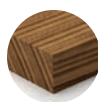
- Suitable for natural softwood, hardwood and plywood.
- Not suitable for chipboard and laminates.

CG66M

HW - 40° Disposable knives



Softwood

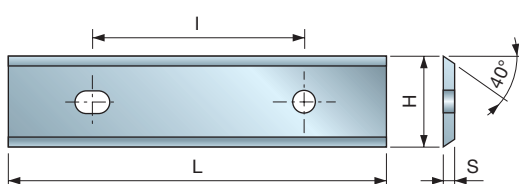
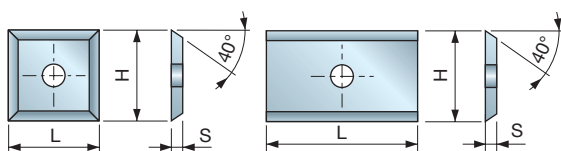


Hardwood



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	-	CG66M0Z310	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.

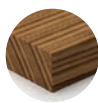
- Particularly indicated for hardwood and abrasive wood.
- Not ideal for chipboard.

CG76M

HW - 40° Disposable knives



Softwood

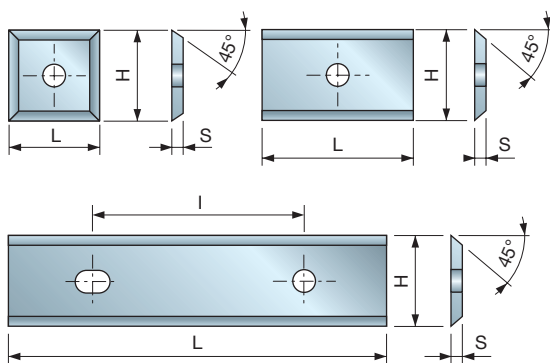


Hardwood



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



HW X10TS

12 mm Disposable knives made by X10TS
Freud's Carbide with 45° relief angle.

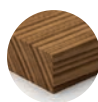
- Suitable for natural softwood, hardwood and plywood.
- Not suitable for chipboard and laminates.

CG62M

HW - 45° Disposable knives



Softwood

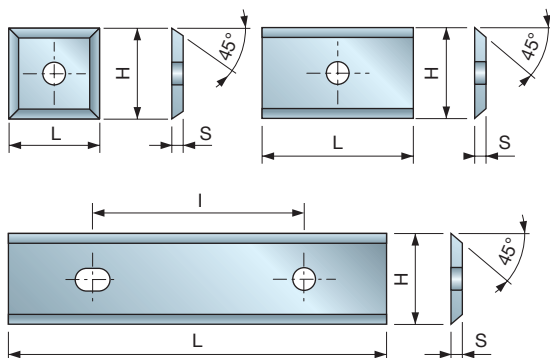


Hardwood



Plywood

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



HW K30S

12 mm Disposable knives made by K30S
Freud's Carbide with 45° relief angle.

- Particularly indicated for natural softwood.

CG22M

HW - 45° Disposable knives

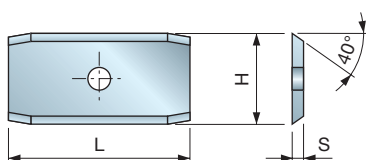


Softwood



Hardwood

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



HW K10S

12 mm Disposable knives made by K10S
Freud's Carbide with 40° relief angle and bevel on both cutting edges.

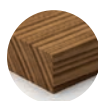
- Suitable for hardwood with particularly sandy and abrasive surfaces (exotic woods).

CG17M

HW - 40° Disposable knives with end bevels

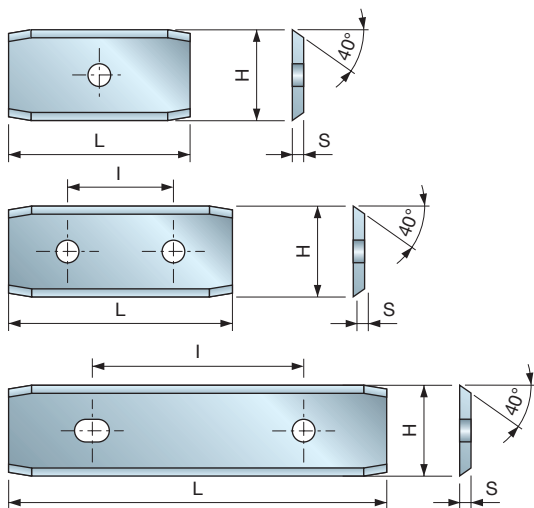


Softwood



Hardwood

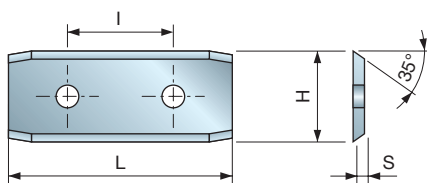
L mm	H mm	S mm	Freud Code	Art. No.
24	12	1,5	CG17MBC310	F03FH02918



HW K30S

12 mm Disposable knives made by K30S Freud's Carbide with 40° relief angle and bevel on both cutting edges.

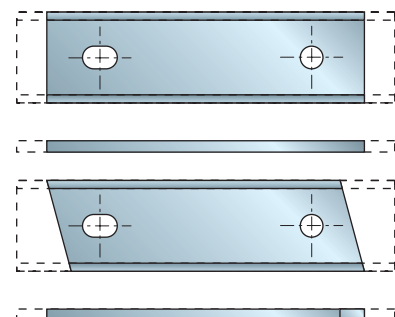
- Particularly indicated for natural softwood and hardwood.



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.

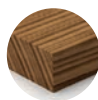
- Minimum order quantity: 1 set of 10 knives of the same type.
- The codes are just a guideline and should be used for ordering purposes only.
- In case of orders specify type of Carbide.

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

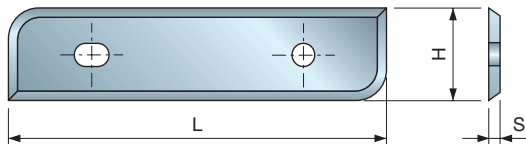
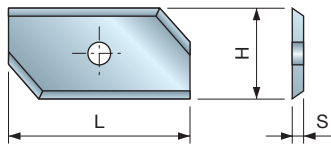
HW - Customised knives

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	



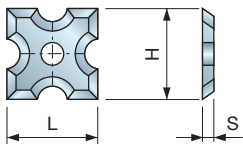
Disposable knives with 2 cutting edges with side clearance.

- 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

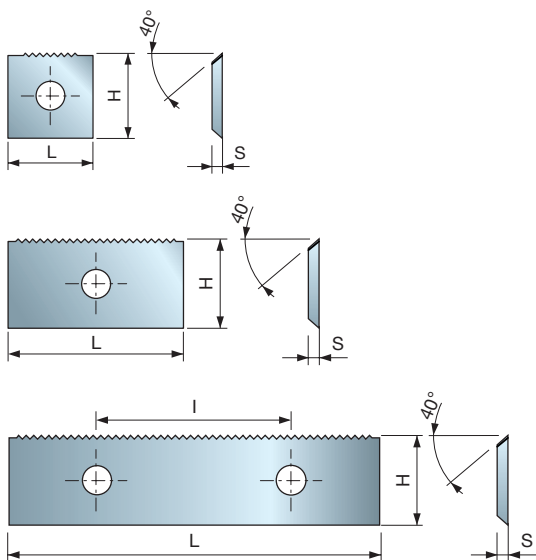
HW - Customised profiled knives

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

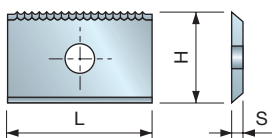
HW - Customised profiled knives

L mm	H mm	S mm	Freud Code	Art. No.
12	12	1,5	CG403 BA3	



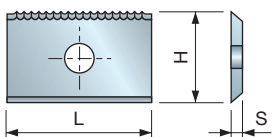
Disposable knives with Split Edge profile

- 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.

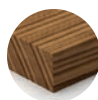
- Suitable for no-Split edge tools.
- Minimum order quantity: 1 set of 10 knives of the same type.
- The codes are just a guideline and should be used for ordering purpose only.

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	CGSEMLB310	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

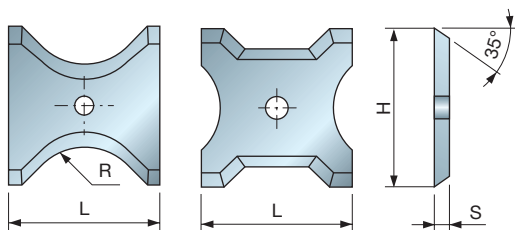
HW - Customised Split-Edge knives

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

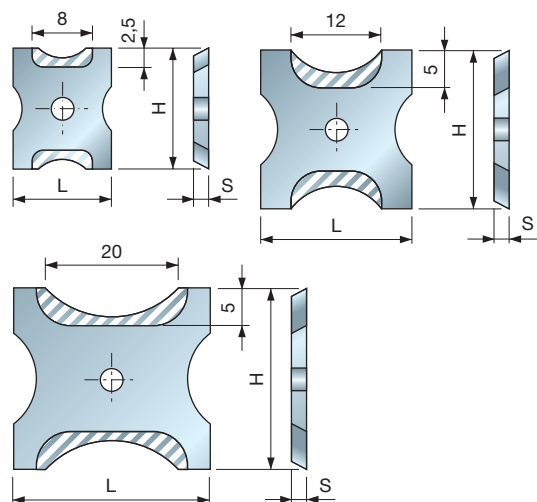
L mm	H mm	S mm	I mm	Freud Code	Art. No.
12	12,33	1,5	-	CG502 BA3	
15	12,33	1,5	-	CG502 CA3	
20	12,33	1,5	-	CG502 DA3	
30	12,33	1,5	14	CG502 EA3	
50	12,33	1,5	26	CG502 FA3	
60	12,33	1,5	26	CG502 GA3	



HW H00S

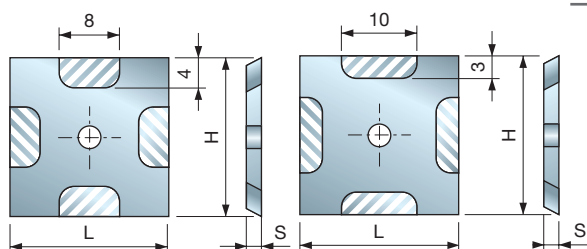
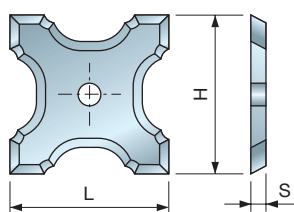
Disposable knives made of H00S Freud's Carbide with 35° relief angle.

- Suitable for TG35M tools set.
- Ideal for universal use.



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.



Shaped knives with 4 cutting edges.

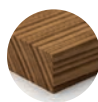
- Minimum order quantity: 1 set of 10 knives of the same type.
- The codes are just a guideline and should be used for ordering purposes only.

CG50M

HW - 35° Disposable knives for TG35M



Softwood



Hardwood



Chipboard



Laminated
Chipboard



MDF



Laminated
MDF



Plywood

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

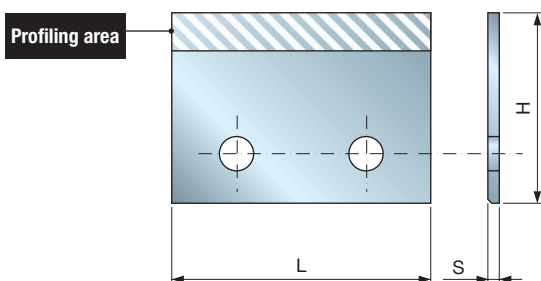
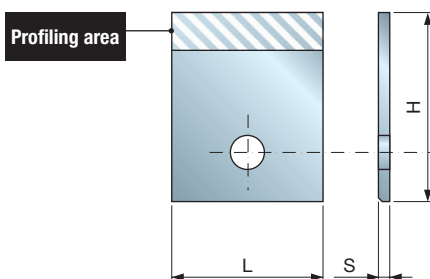
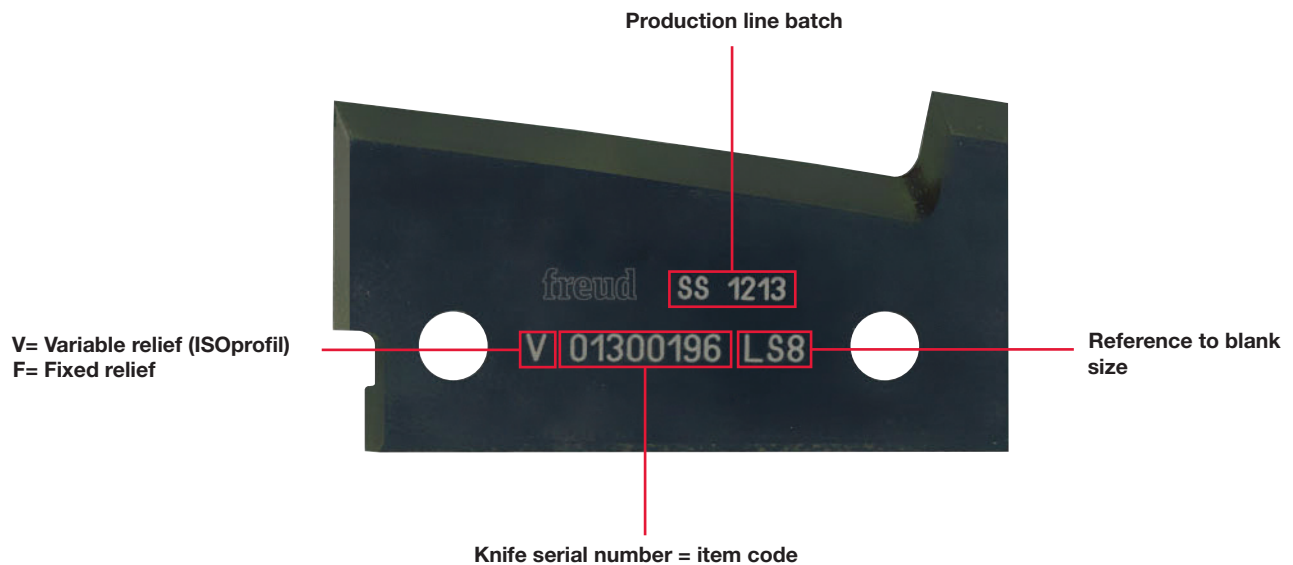
CG404 HW - Customised profiled knives

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	

Meaning of the codes



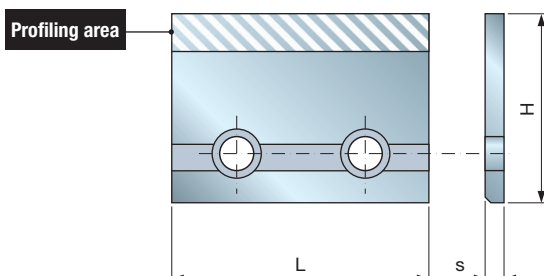
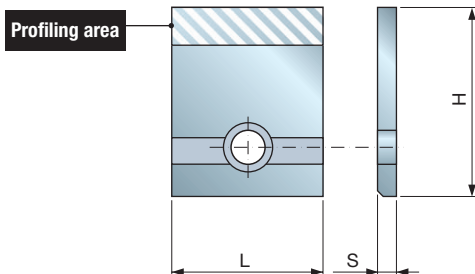
Profiled knives with 2 mm thickness.

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	



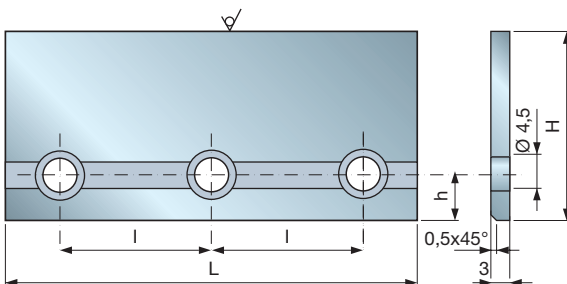
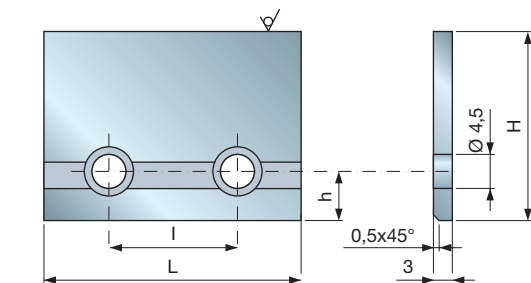
Performance System profiled knives with 3 mm thickness.

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	



HW
H00S

Standard blanks made by H00S Freud's standard Carbide with 3 mm thickness.

- Suitable for hardwood and wood composites.

0317M

**HW - Blanks for profiling
3 mm thickness**



Chipboard



Laminated
Chipboard



MDF

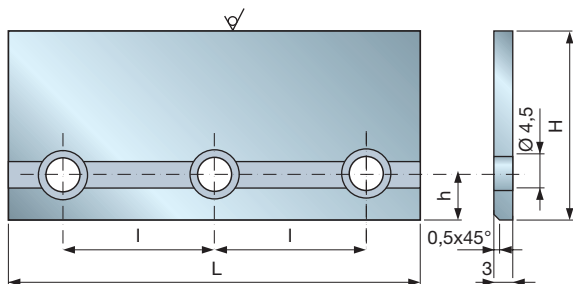
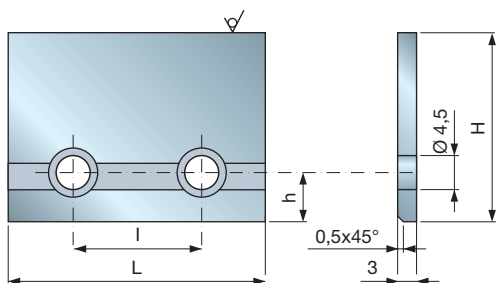


Laminated
MDF



Plywood

L mm	H mm	S mm	NL	I mm	Freud Code	Art. No.
65	20	3	-	-	0317M HU3	F03FH00685
20	25	3	1	-	0317M LH3A	F03FH00686
25	25	3	1	-	0317M LL3A	F03FH00687
30	25	3	1	-	0317M LN3A	F03FH02515
35	25	3	1	-	0317M LP3A	F03FH00688
45	25	3	2	28	0317M LS3A	F03FH00689
55	25	3	3	20,5	0317M LT3A	F03FH00690
70	25	3	2	41	0317M LV3A	F03FH00691
21	30	3	1	-	0317M21030A	F03FH00708
25	30	3	1	-	0317M NL3A	F03FH00692
35	30	3	1	-	0317M NP3A	F03FH00693
45	30	3	2	28	0317M NS3A	F03FH00694
55	30	3	2	41	0317M NT3A	F03FH00695
80	30	3	3	33	0317M NZ3A	F03FH00696
21	35	3	1	-	0317M21035A	F03FH00709
25	35	3	1	-	0317M PL3A	F03FH00697
30	35	3	1	-	0317M PN3A	F03FH00698
35	35	3	1	-	0317M PP3A	F03FH00699
45	35	3	2	28	0317M PS3A	F03FH00700
55	35	3	3	20,5	0317M PT3A	F03FH00701
80	35	3	3	33	0317M PZ3A	F03FH00702
25	40	3	1	-	0317M RL3A	F03FH00703
30	40	3	1	-	0317M RN3A	F03FH00704
40	40	3	-	-	0317M RR3	F03FH00705
40	40	3	1	-	0317M RR3A	F03FH00706
55	40	3	3	20,5	0317M RT3A	F03FH00707



HW
X10TS

Standard blanks made by X10TS Freud's standard Carbide with 3 mm thickness.

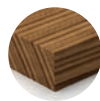
- Suitable for natural softwood and hardwood.

0318M

**HW - Blanks for profiling
3 mm thickness**

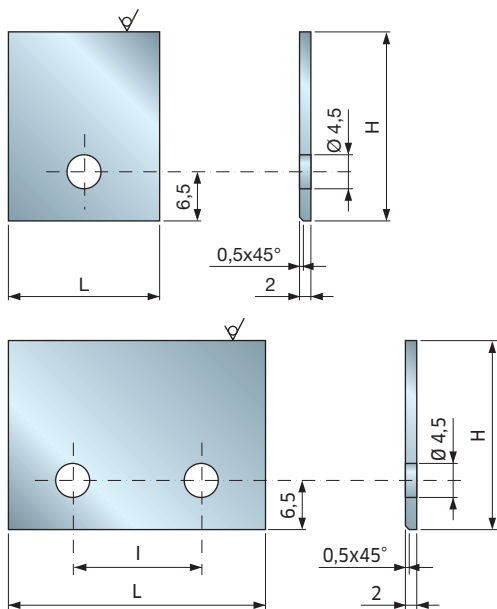


Softwood



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.

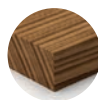
- Suitable for natural softwood and hardwood.

0339M

HW - Blanks for profiling
2 mm thickness - mirror finished

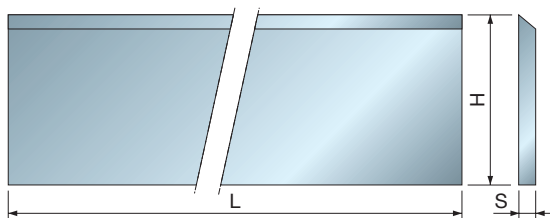


Softwood



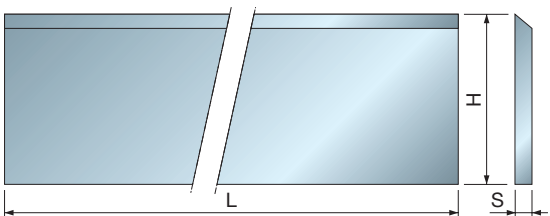
Hardwood

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



Standard plannerhead knives with 18% HSS.

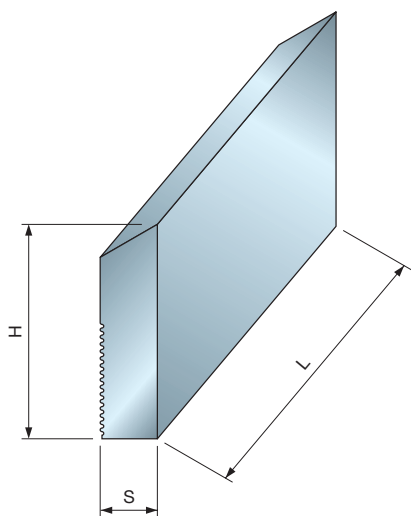
- Box contains 2 pieces with same weight.
- Per balancing reasons fit same box knives in opposite tools seats.



Special plannerhead 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.



Profilable HSS knives with serrated surface.

- Suitable for Freud **TPCZM** planners.
- Suitable for cutting all softwood and hardwood.

CT01M

18%W HSS knives Standard dimensions



Softwood

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

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	

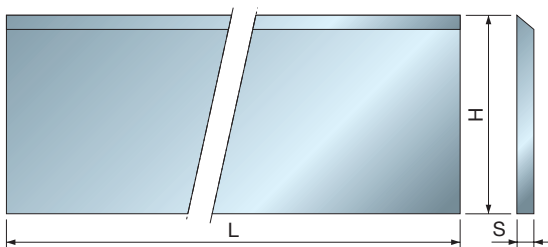
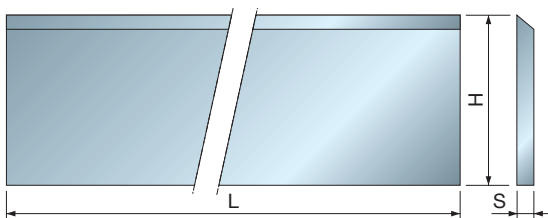
CZ01M

HSS serrated back knives



Softwood

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.

CP01M

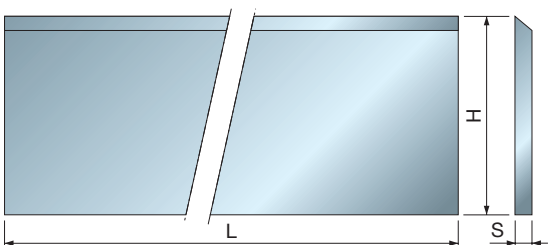
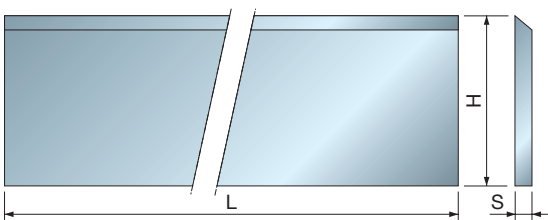
18%W HSS planing knives Standard dimensions



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



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.

CP010S

18%W HSS planing knives Special dimensions

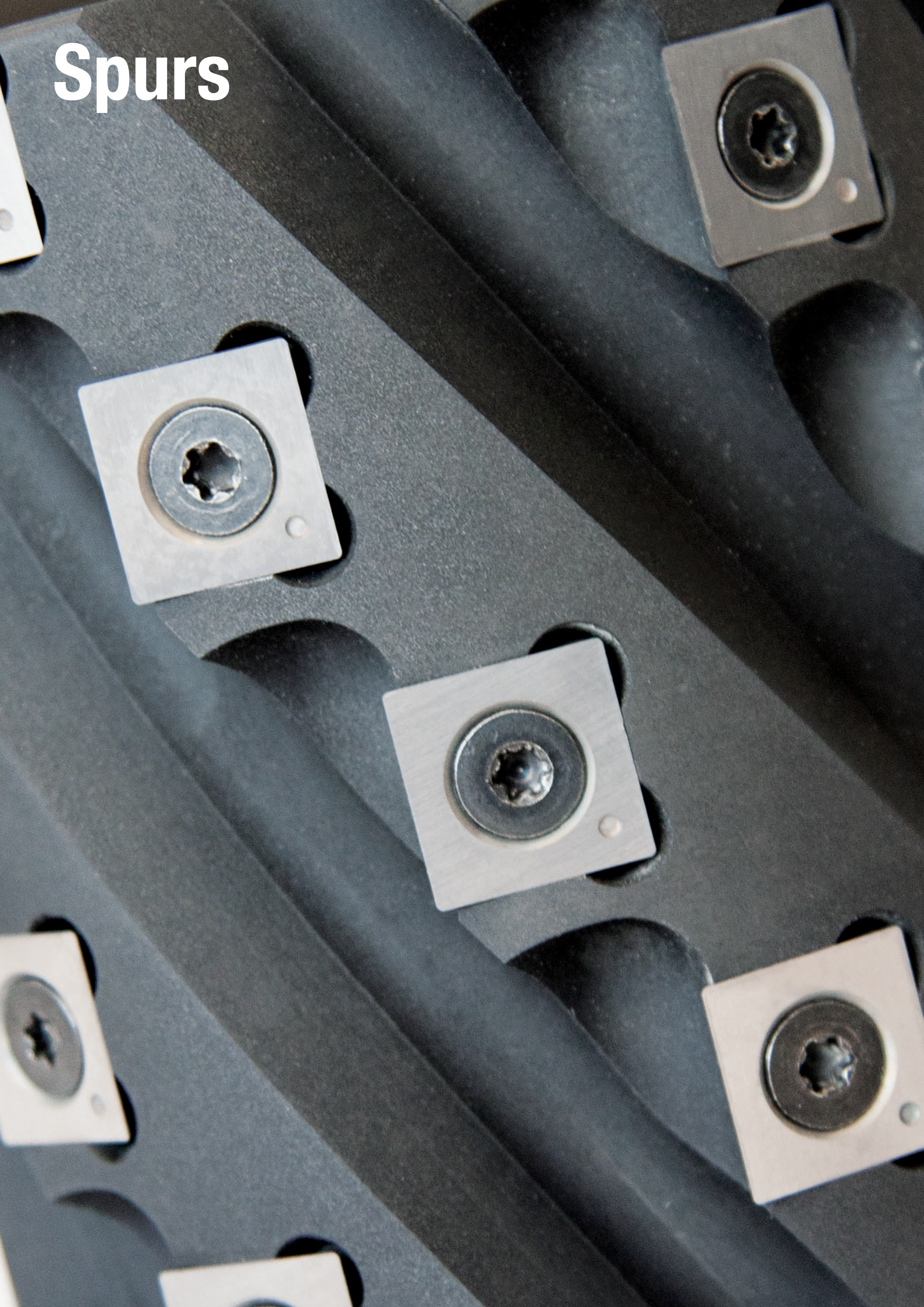


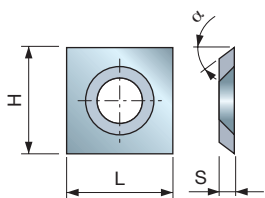
Softwood

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





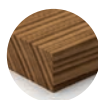
Wide range of squared spurs with 4 cutting sides with variable Carbide types and relief angle to cover all available materials.

RG01M

HW - Square disposable spurs - Type A



Softwood



Hardwood



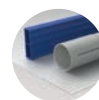
Chipboard



MDF

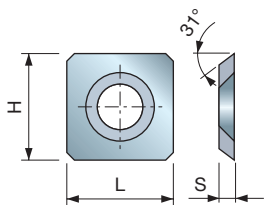


Plywood



Plastics

L mm	H mm	S mm	Quality of HW		Freud Code	Art. No.
13,5	13,5	3	H00S	30°	RG01MDA310	F03FH03582
14	14	1,2	K20S	31°	RG01MAB310	F03FH03035
14	14	2	K20S	30°	RG01MAF310	F03FH03285
14	14	2	MG10	31°	RG01MAE310	F03FH04113
14	14	2	K01S	30°	RG01MAL310	F03FH03777
14	14	2	K20S	31°	RG01MAA310	F03FH03034
14	14	2	H00S	31°	RG01MAI310	F03FH03791
14	14	2	H00XA	31°	RG01MAH310	F03FH03037
14	14	2	MG10	37°	RG01MAD310	F03FH03036
15	15	2,5	K01S	30°	RG01MBE310	F03FH03723



Range of squared spurs with 4 cutting sides and 4 beveled corners.

RG01M

HW - Square disposable spurs - Type B



Softwood

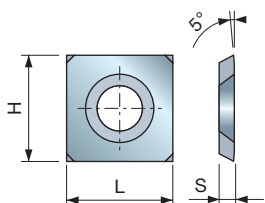


Hardwood



MDF

L mm	H mm	S mm	Quality of HW		Freud Code	Art. No.
15	15	2,5	K20S	31°	RG01MBA310	F03FH03038
14,6	14,6	2,5	MG10	31°	RG01MCA310	F03FH03040
15	15	2,5	MG10	37°	RG01MBD310	F03FH03039



Range of squared spurs with 4 cutting sides and 4 beveled corners.

RG01M

HW - Square disposable spurs - Type C

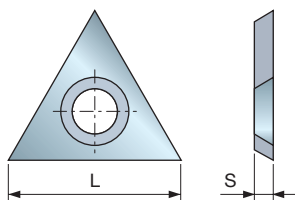


Softwood



Hardwood

L mm	H mm	S mm	Quality of HW		Freud Code	Art. No.
14	14	2	K20S	31°	RG01MAG310	F03FC24180

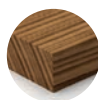


Triangular spurs with sharp edge.

RG02M HW - Triangular disposable spurs



Softwood

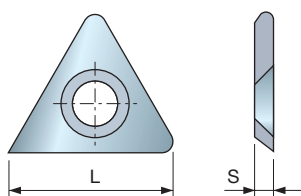


Hardwood



Laminated
Chipboard

L mm	H mm	S mm	Quality of HW	α	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

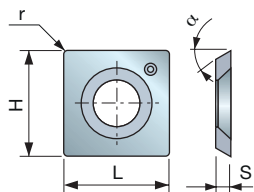


Hardwood



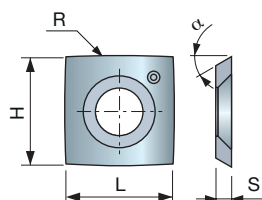
Laminated
Chipboard

L mm	H mm	S mm	Quality of HW	α	Freud Code	Art. No.
21,9	-	2,5	K20S	31°	RG03MAA305	F03FH03042
21,9	-	2,5	K01S	31°	RG03MBE305	F03FH03727



HW K01S

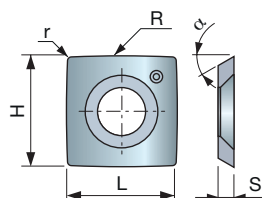
Razors made by K01S Freud's Carbide with rounded corners improve the quality of cut on spiral cutterheads, avoiding the lines left by the sharp edges of conventional square spurs.



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

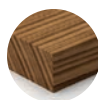
Razors made by K01S Freud's Carbide with rounded edges and corners greatly reduce tear-out on helical cutterheads and planers.

- 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	α	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

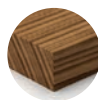
L mm	H mm	S mm	R mm	Quality of HW	α	Freud Code	Art. No.
14	14	2	150	K01S	30°	RR10MAA310	F03FH04012
14,6	14,6	2,5	150	K01S	30°	RR10MBA310	F03FH04043
15	15	2,5	150	K01S	30°	RR10MCA310	F03FH04014
15	15	2,5	50	K01S	30°	RR10MCB310	F03FH04015

RR11

HW - 30° razor with both rounded corners and edges



Softwood



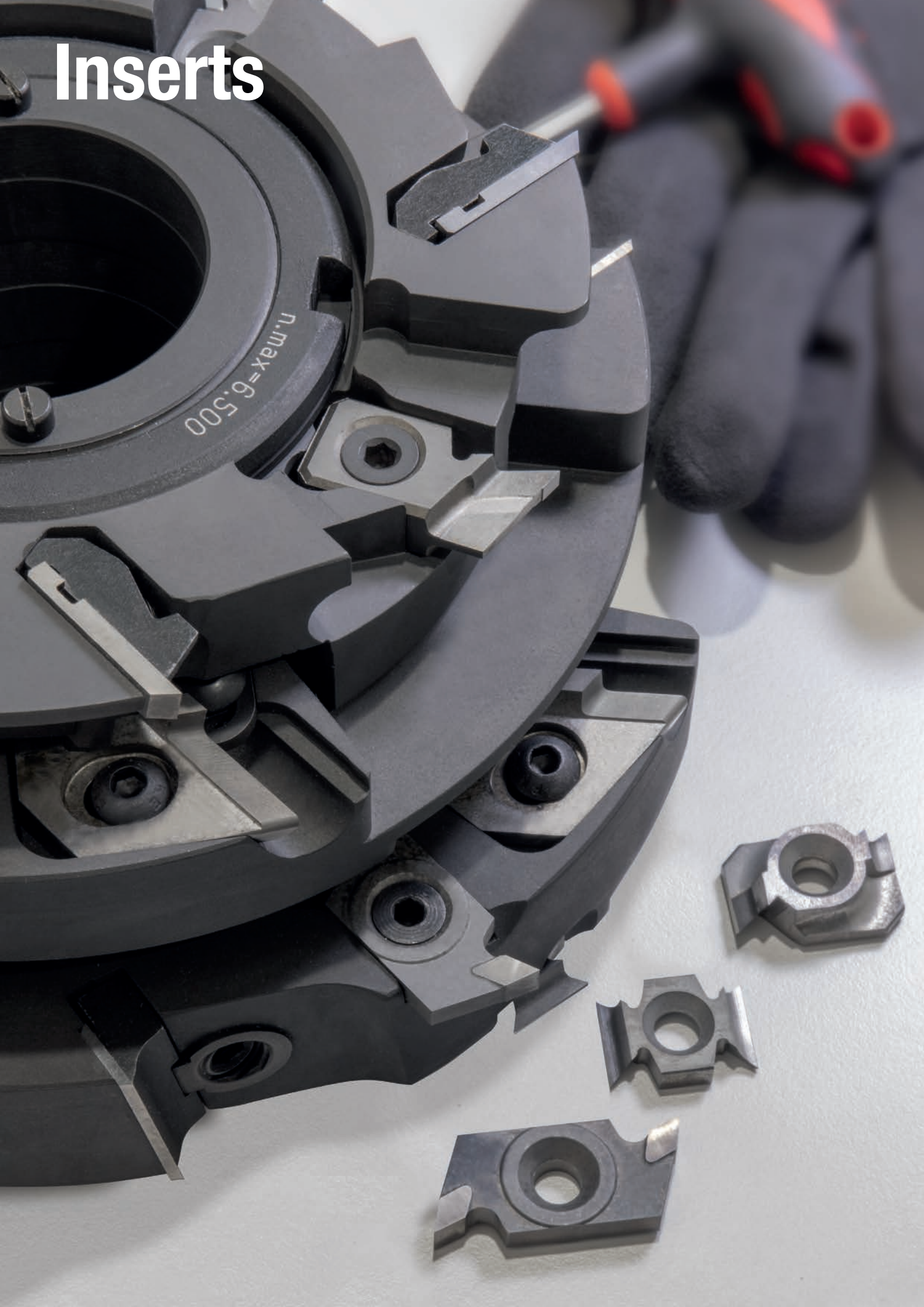
Hardwood

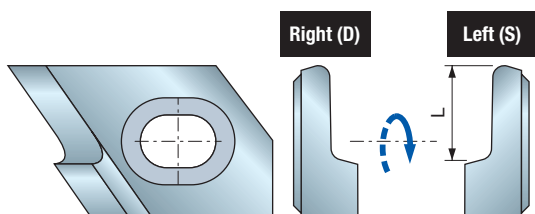


Laminated
Chipboard

L mm	H mm	S mm	R mm	r mm	Quality of HW	α	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

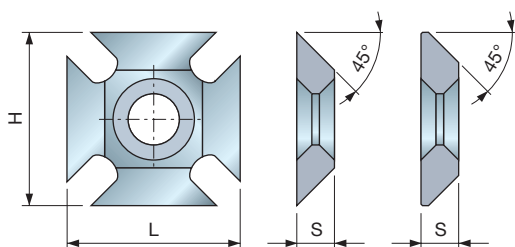
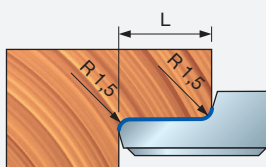
L mm	H mm	S mm	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
10	-	-	IG25MD10302	F03FC24164	IG25MS10302	F03FC24172
11	-	-	IG25MD11302	F03FC24165	IG25MS11302	F03FC24173
12	-	-	IG25MD12302	F03FC24166	IG25MS12302	F03FC24174
13	-	-	IG25MD13302	F03FC24167	IG25MS13302	F03FC24175
14	-	-	IG25MD14302	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

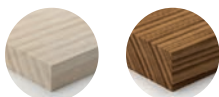


IG01MAA305
F03FH02983

IG01MBA305
F03FH02984

IG01M

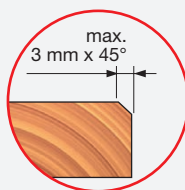
HW - 45° Beveling inserts



Softwood Hardwood

L mm	H mm	S mm	Freud Code	Art. No.
23	23	5	IG01MAA305	F03FH02983
23	23	5	IG01MBA305	F03FH02984

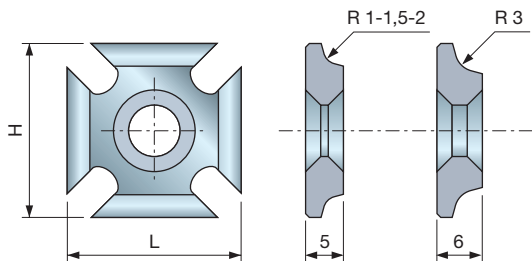
Example of application of inserts IG01M



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

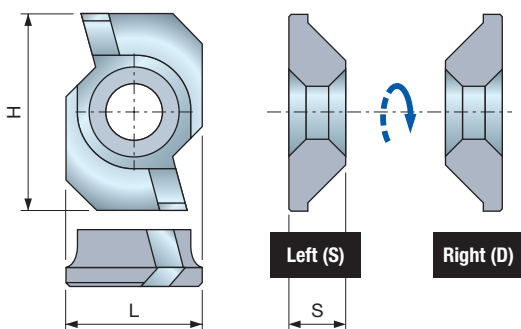
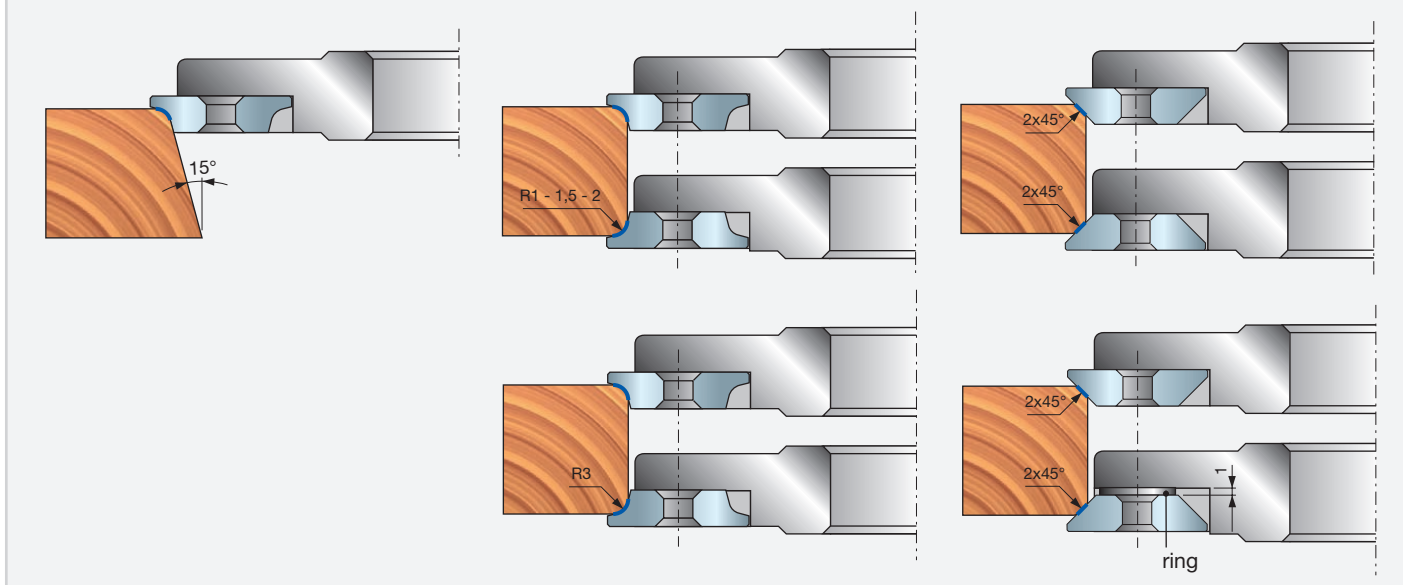
HW
K20S

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



IG21MD IG21MS

HW - 45° Beveling inserts with shear angle



Softwood Hardwood

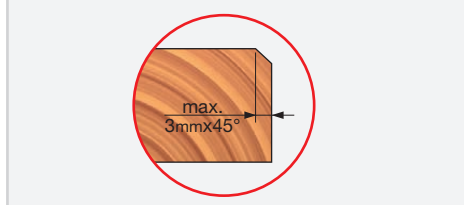
L mm	H mm	S mm	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
18	26	7,5	IG21MDAA305	F03FH03005	IG21MSAA305	F03FH03006

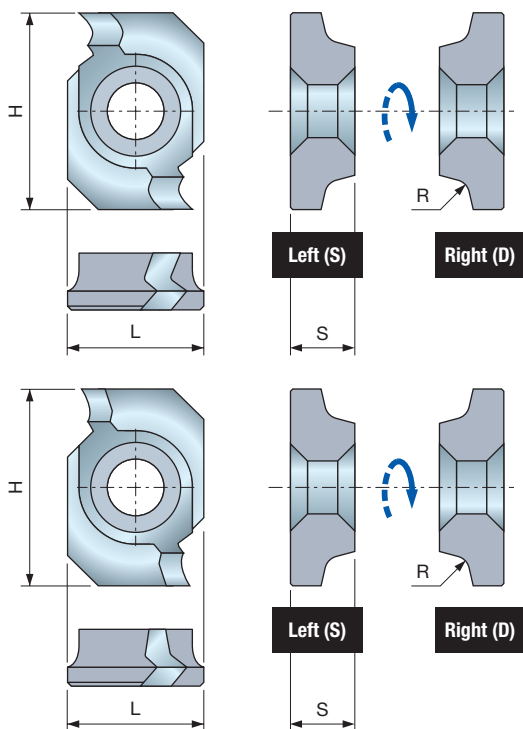
HW
K20S

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.

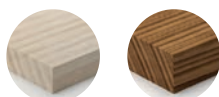
Example of application of inserts IG21MD/S





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

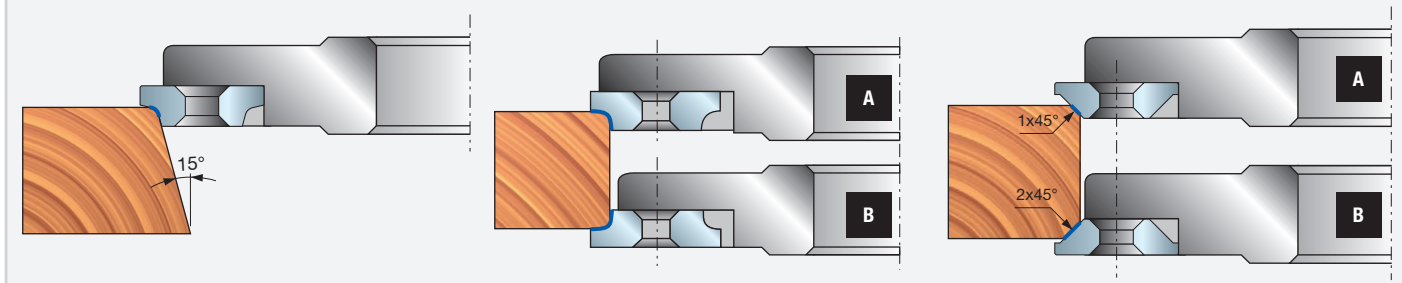
Rounding inserts made by K20S Freud's Carbide and designed with a shear angle.

- 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

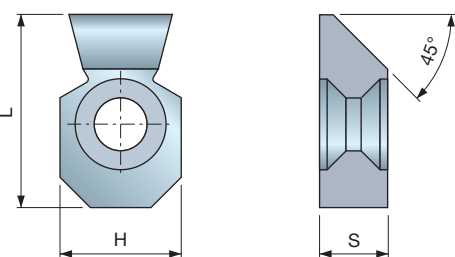
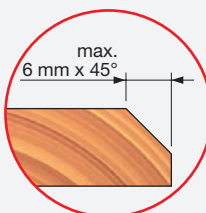
HW - 45° Beveling inserts with shear angle



Softwood Hardwood

L mm	H mm	S mm	Chamfer	Freud Code	Art. No.
25,5	16	9	45°	IG33MAD305	F03FH03021

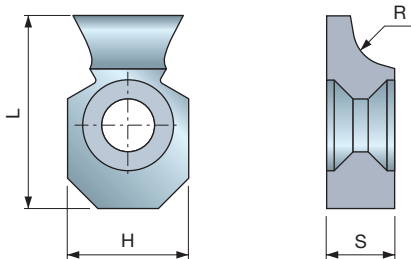
Example of application of inserts IG33M



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.



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**.

IG33M

HW - Rounding inserts with shear angle



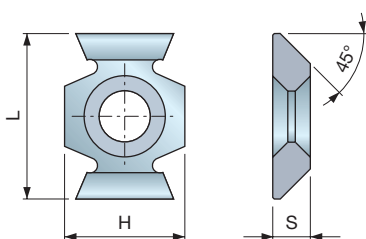
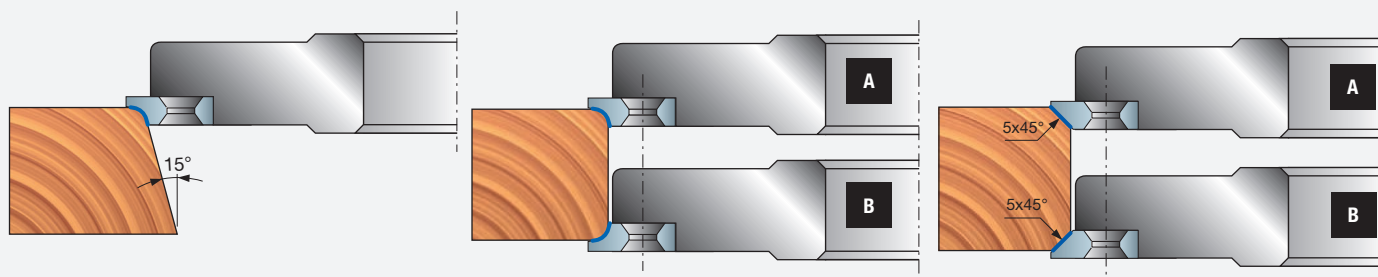
Softwood



Hardwood

L mm	H mm	S mm	R mm	Freud Code	Art. No.
25,5	16	9	3	IG33MAA305	F03FH03019
25,5	16	9	5	IG33MAB305	F03FH03020

Example of application of inserts IG33M



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**.

IG51M

HW - 45° Beveling inserts with shear angle



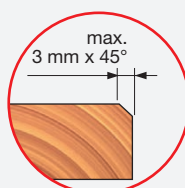
Softwood

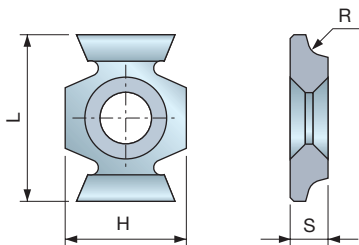


Hardwood

L mm	H mm	S mm	Freud Code	Art. No.
22	16	5	IG51MBA305	F03FH03022

Example of application of inserts IG51M





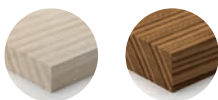
HW
K20S

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

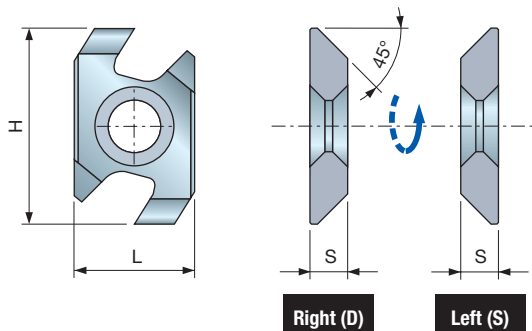
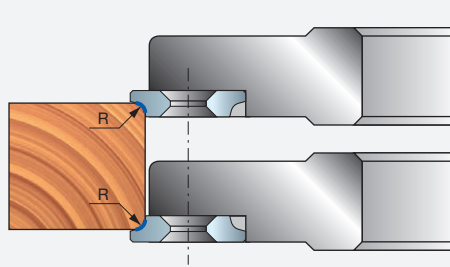
HW - Rounding inserts with shear angle



Softwood Hardwood

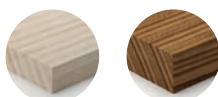
L mm	H mm	S mm	R mm	Freud Code	Art. No.
22	16	5	1,5	IG52MAB305	F03FH03023
22	16	5	2	IG52MAC305	F03FH03024
22	16	5	3	IG52MAE305	F03FH03025

Example of application of inserts IG52M



IG61MD IG61MS

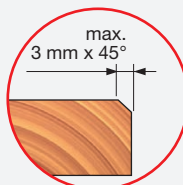
HW - Beveling inserts with anti-kickback technology



Softwood Hardwood

L mm	H mm	S mm	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
26	16	5	IG61MDBA305	F03FH03026	IG61MSBA305	F03FH03027

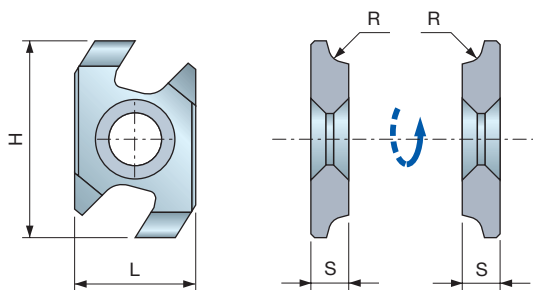
Example of application of inserts IG61MD/S



HW
K20S

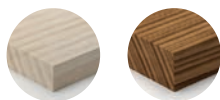
Beveling inserts in K20S Freud's Carbide with anti-kickback technology for MAN feed tools.

- Indicated for natural softwood and hardwood.
- Perfectly interchangeable with rounding inserts **IG62M**.



IG62MD IG62MS

HW - Rounding inserts with anti-kickback technology



Softwood Hardwood

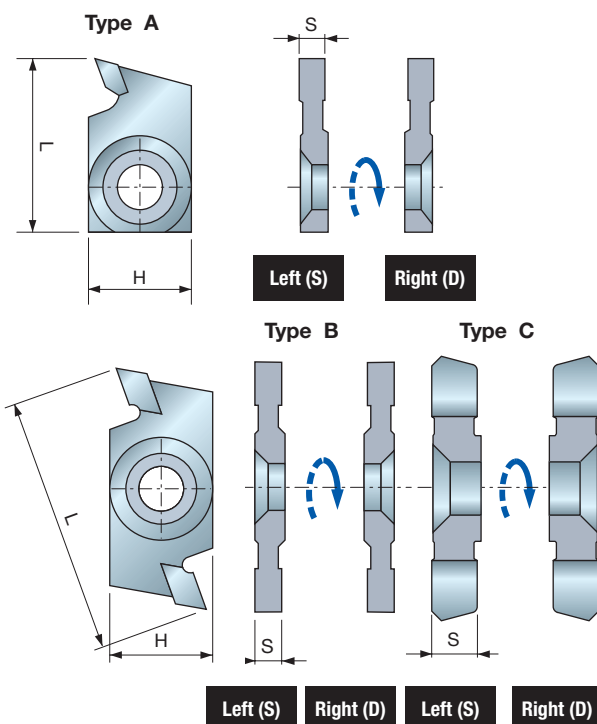
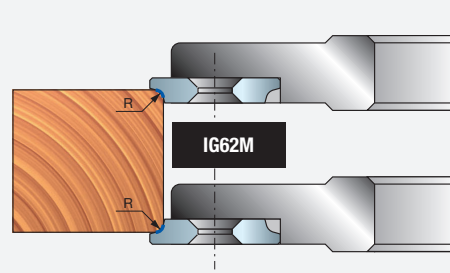
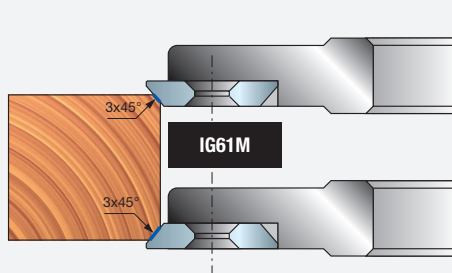
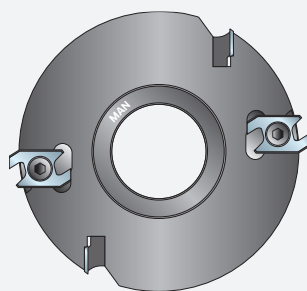
HW
K20S

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**.

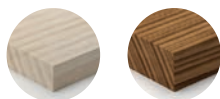
L mm	H mm	S mm	R mm	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
26	16	5	1,5	IG62MDAB305	F03FH03028	IG62MSAB305	F03FH03031
26	16	5	2	IG62MDAC305	F03FH03029	IG62MSAC305	F03FH03032
26	16	5	3	IG62MDAE305	F03FH03030	IG62MSAE305	F03FH03033

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	IG04MDAC3T05	F03FC24153	IG04MSAC3T05	F03FC24153
27	16	4	A	IG04MDAA3T05	F03FC24151	IG04MSAA3T05	F03FC24151
27	16	5	A	IG04MDAB3T05	F03FC24152	IG04MSAB3T05	F03FC24152
27	16	6	A	IG04MDAD3T05	F03FC24154	IG04MSAD3T05	F03FC24154

L mm	H mm	S mm	Type	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
40	16	3	B	IG04MDAC305	F03FH02992	IG04MSAC305	F03FH02996
40	16	4	B	IG04MDAA305	F03FH03409	IG04MSAA305	F03FH02994
40	16	5	B	IG04MDAB305	F03FH02991	IG04MSAB305	F03FH02995
40	16	6	B	IG04MDAD305	F03FH02993	IG04MSAD305	F03FH02997

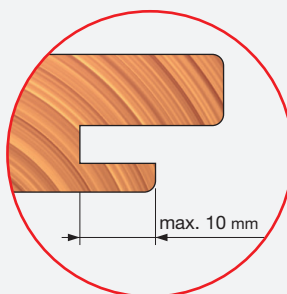
L mm	H mm	S mm	Type	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
12	12	1,5	C	IG04MDAL305	F03FH03358	IG04MSAL305	F03FH03359

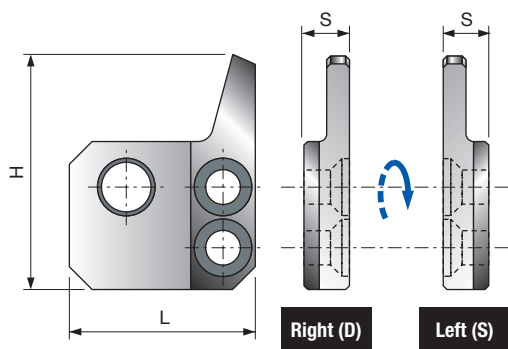
HW
K30S

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





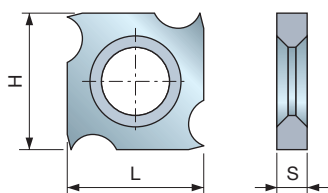
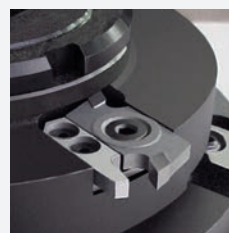
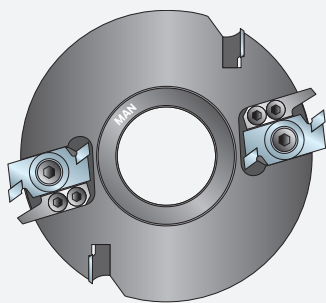
Deflectors suitable for standard **IG04M** grooving inserts as anti-kickback device.
 • Component for MAN feed tools.

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



**HW
K20S**

Disposable knives in K20S Freud's Carbide with 4 cutting edges.
 • Indicated for softwood and hardwood.

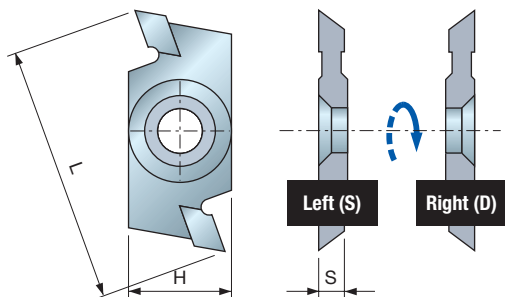
CG03M

HW - Disposable four cutting edges knives



Softwood 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.

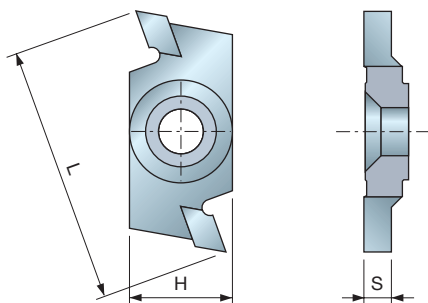
IG05MD IG05MS

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

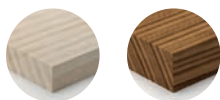


**HW
K30S**

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.

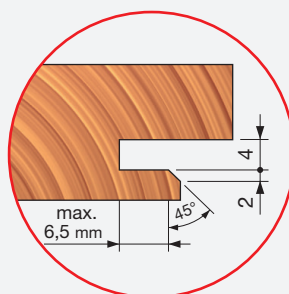
IG17MD HW - Insert for beveled grooves



Softwood Hardwood

L mm	H mm	S mm	Freud Code	Art. No.
40	16	4	IG17MDAA305	F03FC24162

Example of application of inserts IG17MD



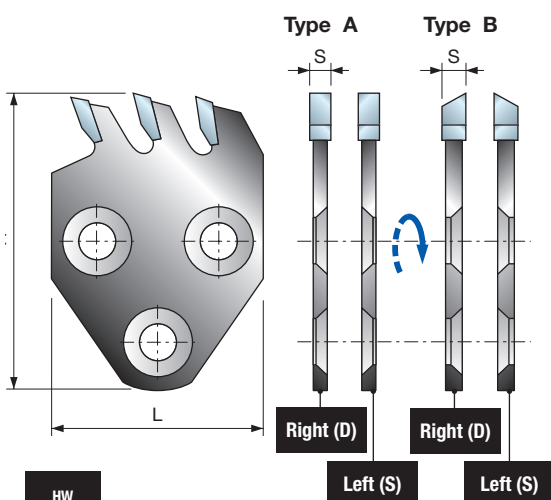
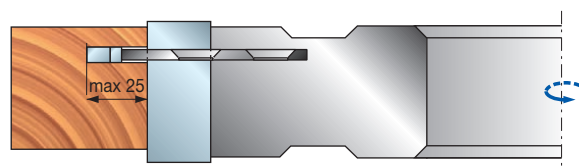
SR01MD SR01MS

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 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.

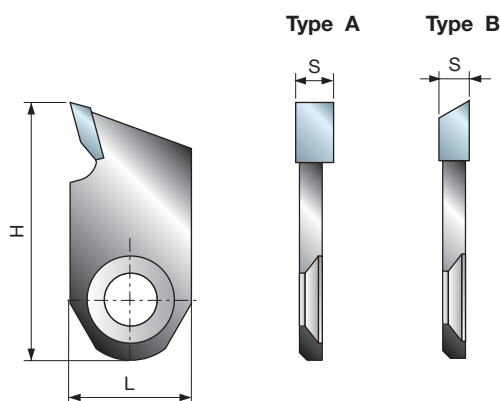
SR06MD

HW - Multipurpose inserts



Softwood Hardwood

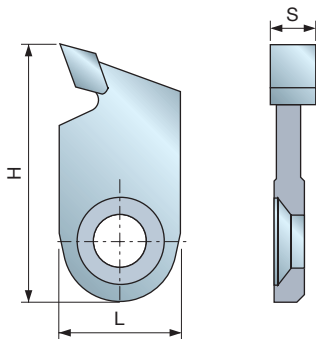
L mm	H mm	S mm	Type	Freud Code	Art. No.
16	34	4	A	SR06MDAG302	F03FC24193
16	34	7	A	SR06MDAH302	F03FC24194
16	34	5	A	SR06MDAI302	F03FC24195
16	34	4	B	SR06MDAL302	F03FC24196



**HW
H00S**

Grooving and spurs inserts made with H00S Freud's Carbide tips.

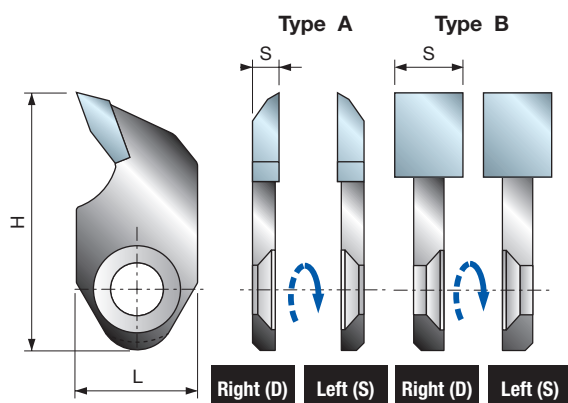
- Max groove depth 17 mm.
- Available in left and right rotation version.
- Indicated for natural softwood and hardwood.



HW
K30S

Grooving inserts made with K30S Freud's Carbide tips.

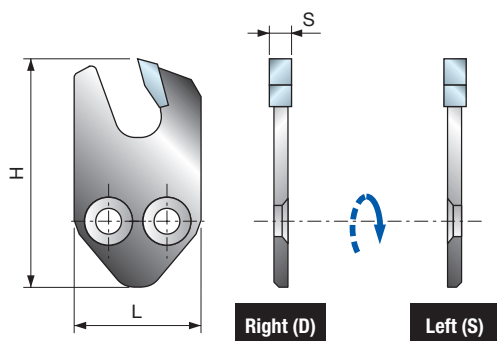
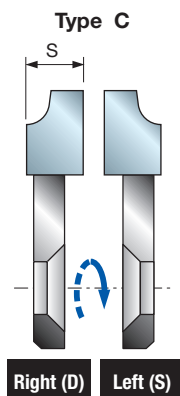
- Max groove depth 17 mm.
- Indicated for natural softwood and hardwood.



HW
H00S

Grooving inserts made with H00S Freud's Carbide tips.

- Max groove depth 17 mm.
- Indicated for natural softwood and hardwood.



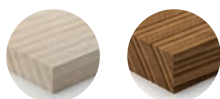
HW
H00S

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.

SR06M

HW - Grooving inserts

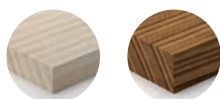


Softwood Hardwood

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

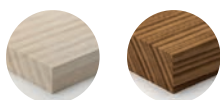


Softwood Hardwood

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

SR11MD SR11MS

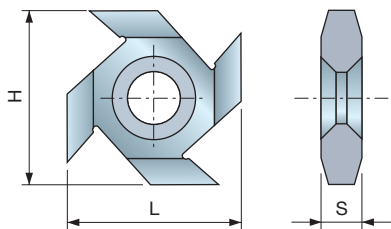
HW - Grooving inserts



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

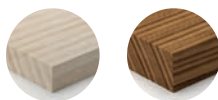




HW
K20S

Anti-capillary inserts made by K20S Freud's Carbide with 4 cutting edges.
• Suitable for natural softwood and hardwood.

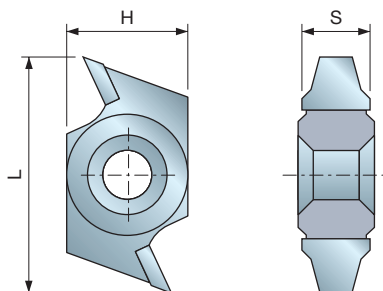
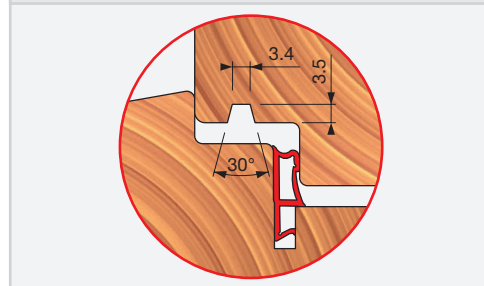
IG03M HW - Anti capillary groove inserts



Softwood Hardwood

L mm	H mm	S mm	Freud Code	Art. No.
23	23	5,4	IG03MAA305	F03FH02989

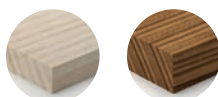
Example of application of inserts IG03M



HW
K20S

Anti-capillary inserts made by K20S Freud's Carbide with 2 cutting edges.
• Suitable for natural softwood and hardwood.

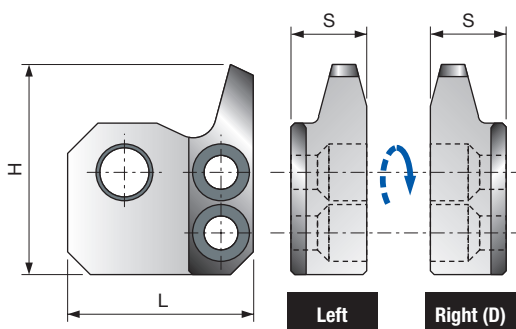
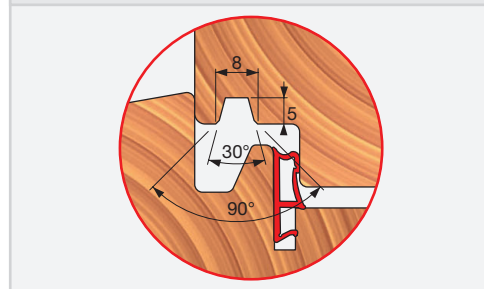
IG11M HW - Anti capillary groove inserts



Softwood Hardwood

L mm	H mm	S mm	Freud Code	Art. No.
33,2	16	10	IG11MAA301	F03FH03002

Example of application of inserts IG11M

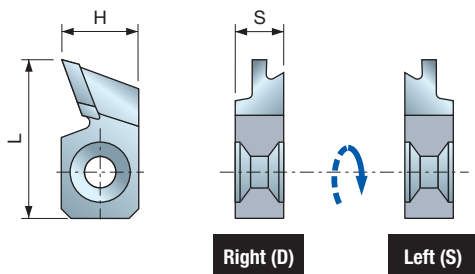


ID11MD
ID11MS

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.



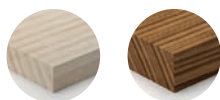
HW
K20S

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

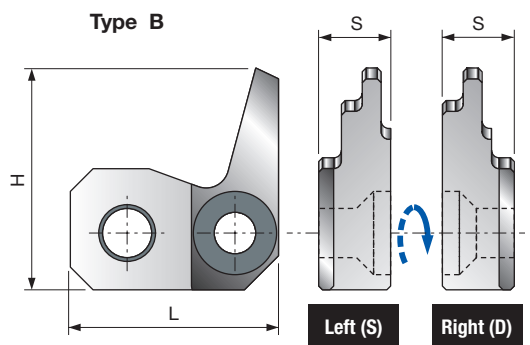
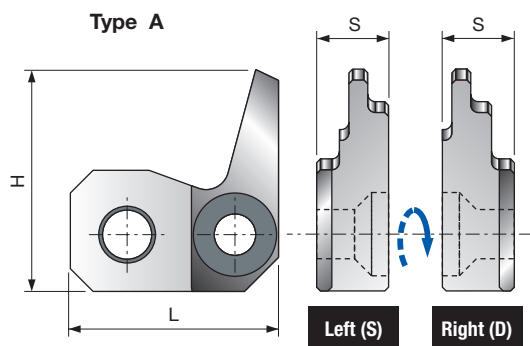
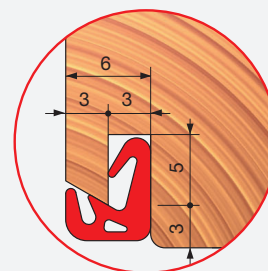
HW - Inserts for gasket seats



Softwood Hardwood

L mm	H mm	S mm	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
32,7	16	10	IG10MDGA301	F03FH03000	IG10MSGGA301	F03FH03001

Example of application of inserts IG10MD/S



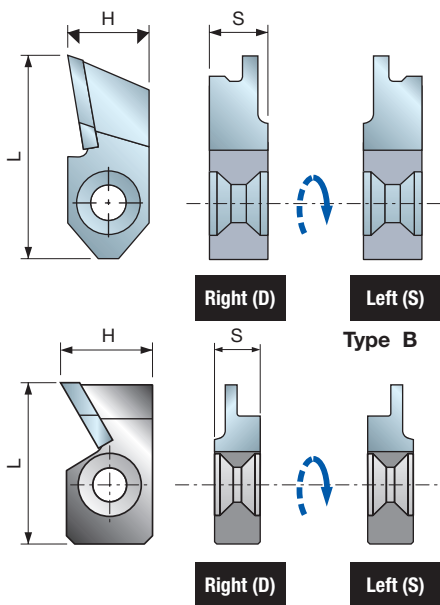
ID10MD ID10MS

Deflectors for inserts IG10MD and IG10MS

L mm	H mm	S mm	Type	Use for	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
27,5	29,3	11	A	IG10MDGA301	ID10MDDGA901	F03FC24141	ID10MDSGA901	F03FC24142
27,5	29,3	11	B	IG10MSGGA301	ID10MSDGA901	F03FC24143	ID10MSSGA901	F03FC24144

Deflectors suitable for standard **IG10M** sealing inserts as anti-kickback device.

- Component for MAN feed tools.



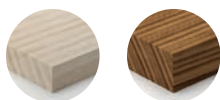
**HW
K30S**

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

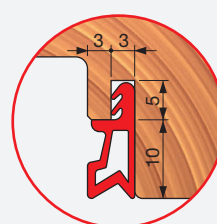
HW - Inserts for sealing strip seats



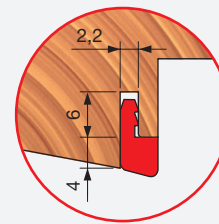
Softwood Hardwood

L mm	H mm	S mm	Type	Freud Code		Art. No.	
				Right (D)		Left (S)	
41,5	16	11,5	A	IG13MDAA301	F03FH03003	IG13MSAA301	F03FH03004
30	16	8,5	B	IG13MDBA301	F03FC24159	IG13MSBA301	F03FC24160

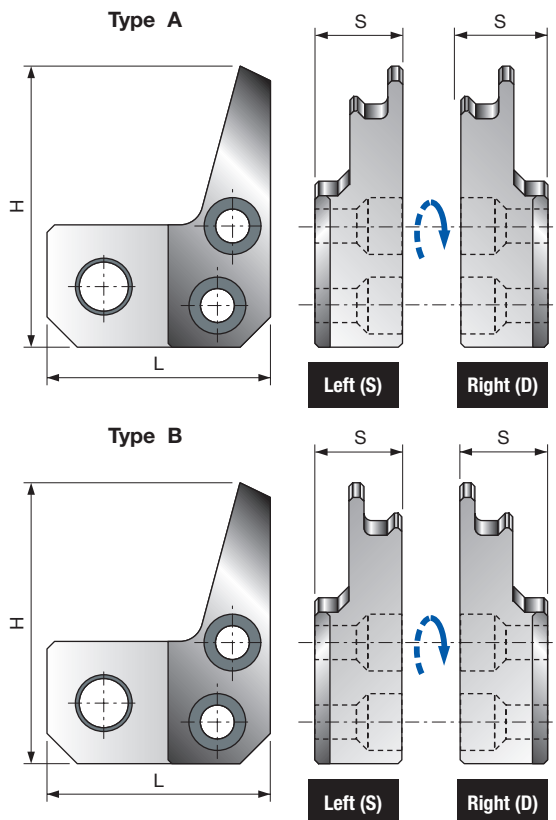
Examples of application of inserts IG13MD/S



AA3



BA3



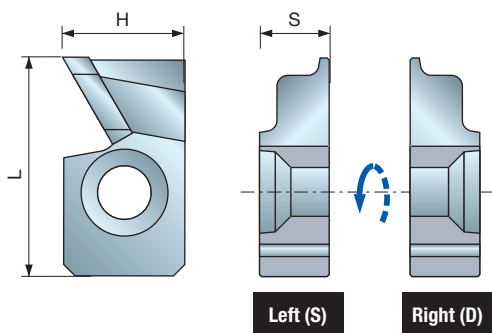
ID13MD ID13MS

Deflectors for inserts IG13MD and IG13MS

L mm	H mm	S mm	Type	Use for	Freud Code		Art. No.	
					Right (D)		Left (S)	
29,9	37,1	12,5	A	IG13MDAA301	ID13MDDAA901	F03FC24147	ID13MDSAA901	F03FC24148
29,9	37,1	12,5	B	IG13MSAA301	ID13MSDAA901	F03FC24149	ID13MSSAA901	F03FC24150

Deflectors suitable for standard **IG13M** sealing inserts as anti-kickback device.

- Component for MAN feed tools.



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**

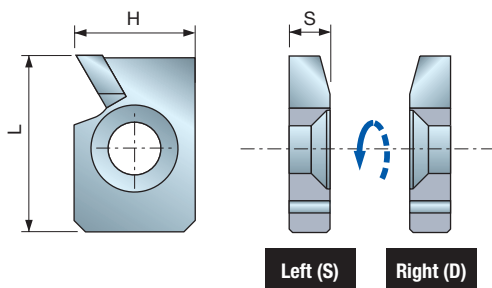
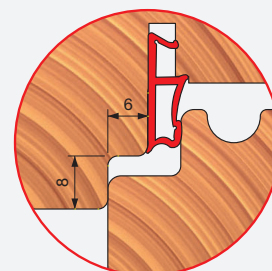
HW - Inserts for frame rebates



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



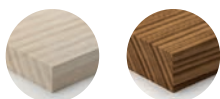
HW
K20S

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**

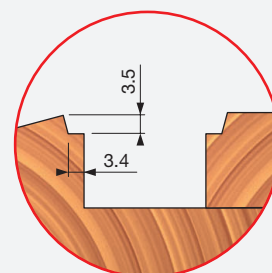
HW - Inserts for glass sealing

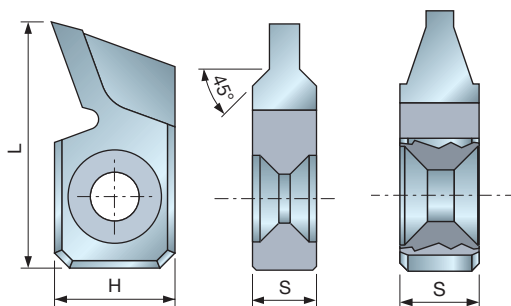


Softwood Hardwood

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

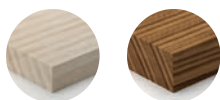
HW
K20S

Shaped inserts made by K20S Freud's Carbide for glass sealing.

- Suitable for natural softwood and hardwood.

IG16M

HW - Inserts for glass sealing

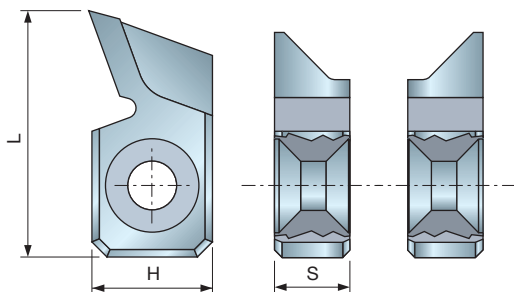
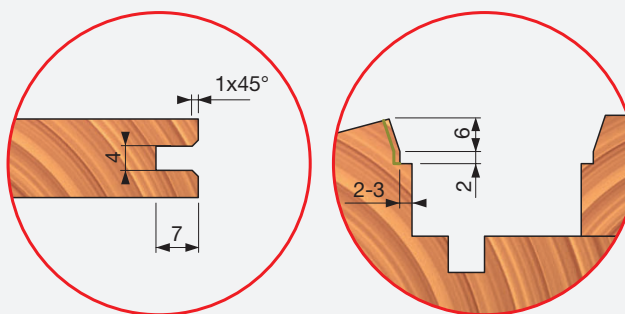


Softwood

Hardwood

L mm	H mm	S mm	Freud Code	Art. No.
32,7	16	8,5	IG16MAA301	F03FC24161
32,7	16	10	IG16MAB301	F03FC24381

Examples of application of inserts IG16M



Right (D)

Left (S)

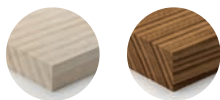
HW
K20S

Shaped inserts made by K20S Freud's Carbide for glass sealing.

- Suitable for natural softwood and hardwood.

IG16MD IG16MS

HW - Inserts for glass sealing

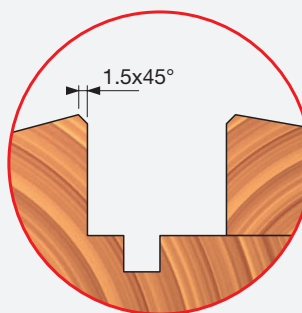


Softwood

Hardwood

L mm	H mm	S mm	Freud Code Right (D)	Art. No.	Freud Code Left (S)	Art. No.
32,7	16	6	IG16MDAC301	F03FC24382	IG16MSAC301	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



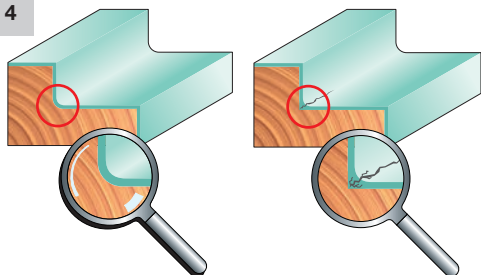
2



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.

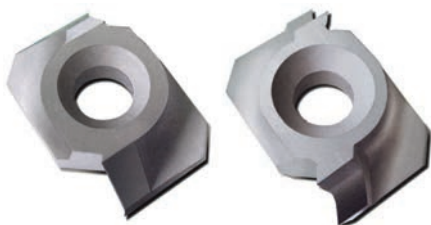
6



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).

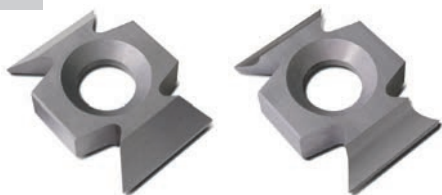
MULTIPURPOSE INSERT (IG25M - Fig. 11): produced in hard metal, carries out both the function of a rounding insert and rounding spur, obtaining both operational as well as economical advantages. With this spur and with a single pass, you obtain the finished rebate with the desired depth and the rounding 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



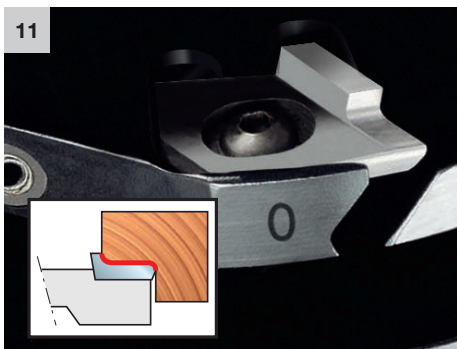
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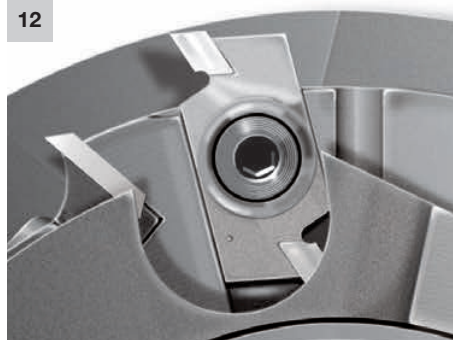
IG51MD

IG52MD

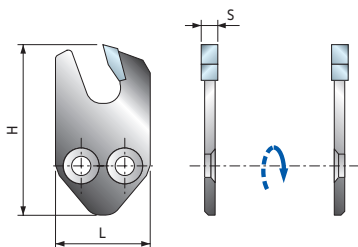
11



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.

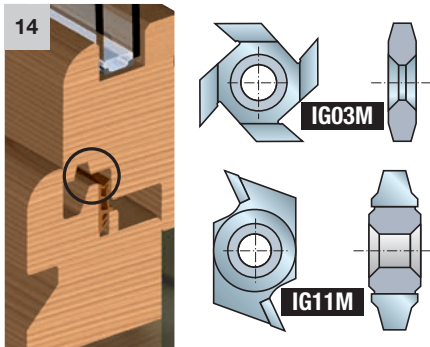
ANTI CAPILLARY GROOVE INSERTS (IG03M, IG11M - Fig. 14): produced integrally in hard metal for carrying out grooves for various applications. They possess technical characteristics and different dimensions to satisfy specific necessities for various sectors.

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).

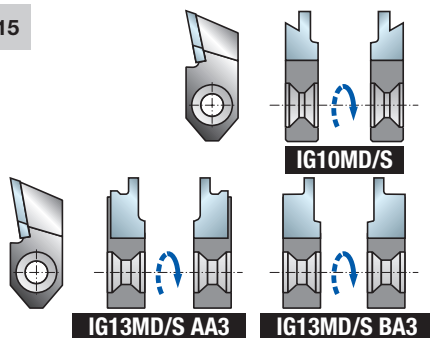
INSERTS ACCORDING TO THE NORM UNI EN 847-1 (IG61MD/S, IG62MD/S - Fig. 17 AN 18): the new European Norm UNI EN 847-1 states, that tools destined to be used with manual feed must adopt specific designs, to reduce to the minimum, dangers that may occur to the user. In particular, tools with a non circular 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.**

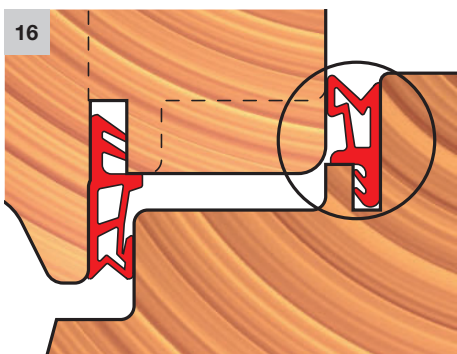
14



15



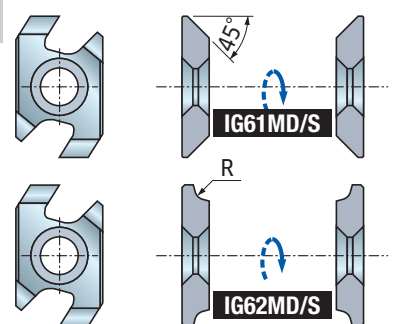
16



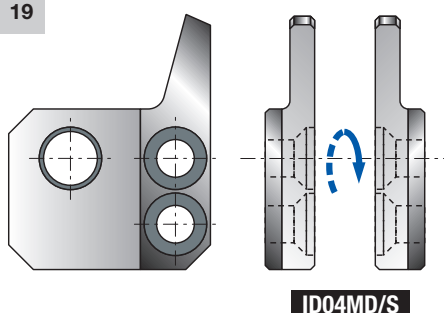
17



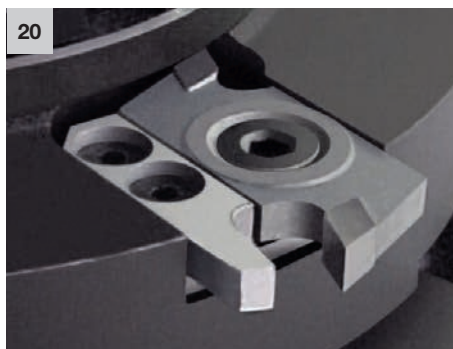
18



19



20

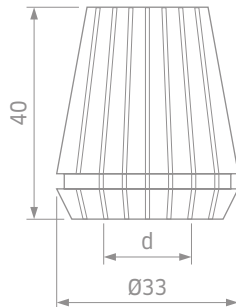
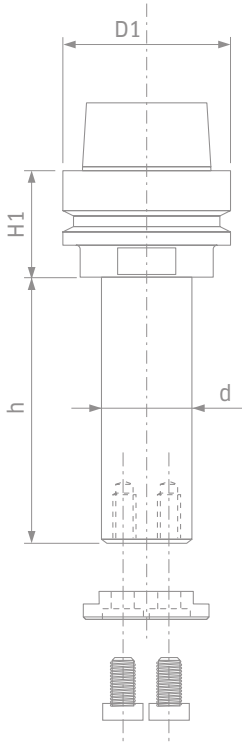


Accessories and Spare Parts

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
MP09M	High precision Nickel coated spindles - HSK 63 F	Page 539
MP10MD	High precision Nickel coated chucks - HSK 63 F	Page 539
CD01M	Pull studs for chucks ISO30	Page 540
MP06M	High precision collet for ER32 locking rings	Page 540
GH32M	High precision locking ring	Page 540
MP16M	High precision collet for ER40 locking rings	Page 541
GH40M	High precision locking ring	Page 541
MC01M	Encoding microchip for smart tool	Page 541

Bushes and accessories

BF10MD-BF10MS	Sleeves with locking nut	Page 542
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
FX03M	Stiffening collars for saw blades	Page 544
AN01M	Spacers	Page 545
AN01	Special spacers	Page 548
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CC01	Ball bearing guide for moulding	Page 549
3102M	Ball bearing	Page 549
RB62M	Ball bearing rub collars	Page 549
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KEYS AND DEVICES

	Spare screws, nuts, washers and keys	Page 551
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.

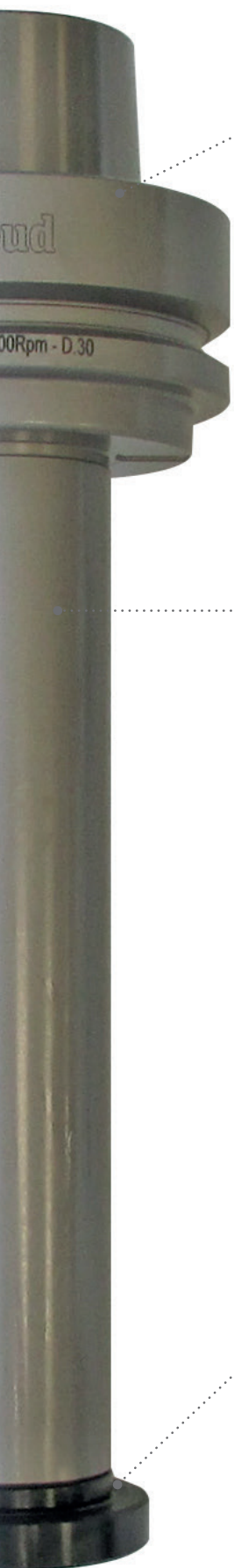


MAINTENANCE KEYS & ACCESSORIES

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 μm).

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.

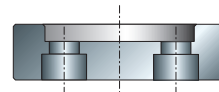
All Freud's tool holders are designed to be equipped with a microchip, ready to be programmed for tool management systems.

FLANGES

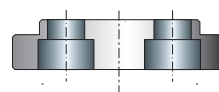
Freud provides different flange types.

Flange **Type B** is the standard.

Flange **Type A** is the optional with no. 3 M6 fixing screws. Available on request.



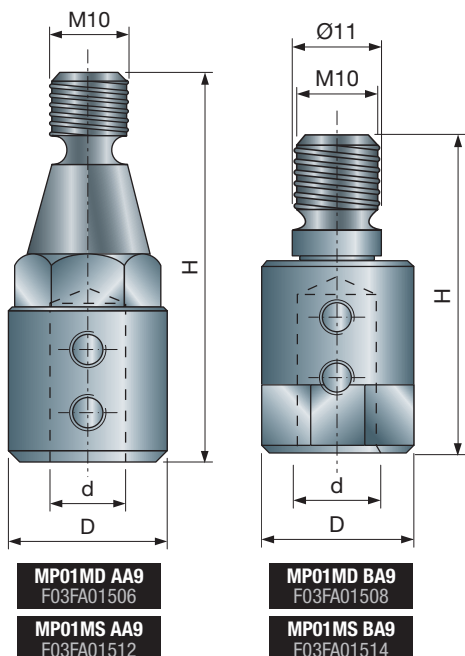
Flange Type A



Flange Type B

Components





MP01MD MP01MS

Chucks for bits for multiboring machines

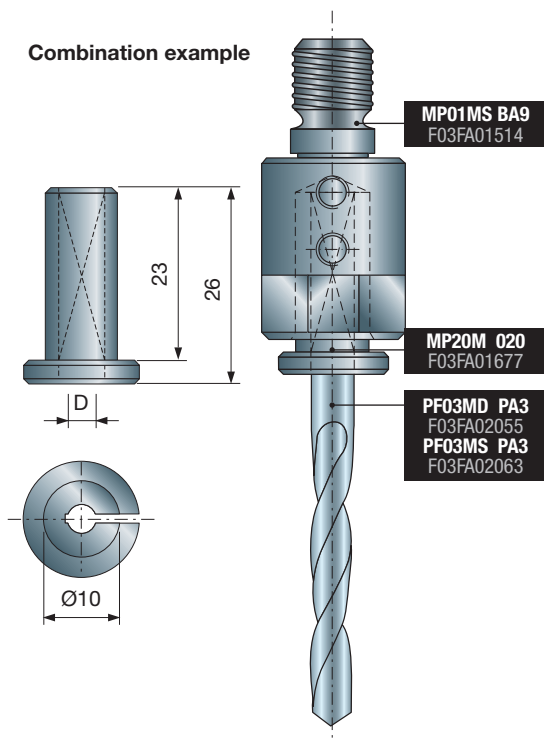
D	H	d	Rotation	Freud Code	Art. No.	Freud Code	Art. No.
mm	mm	mm		Right (D)		Left (S)	
* 19	47	10	RH	MP01MD AA9	F03FA01506	MP01MS AA9	F03FA01512
D	H	d	Rotation	Freud Code	Art. No.	Freud Code	Art. No.
mm	mm	mm		Right (D)		Left (S)	
** 19	41	10	LH	MP01MD BA9	F03FA01508	MP01MS BA9	F03FA01514
Spare parts				Dimensions	Freud Code	Art. No.	
Screw				mm			
				M6 x 6	2615M DD9	F03FA07423	

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

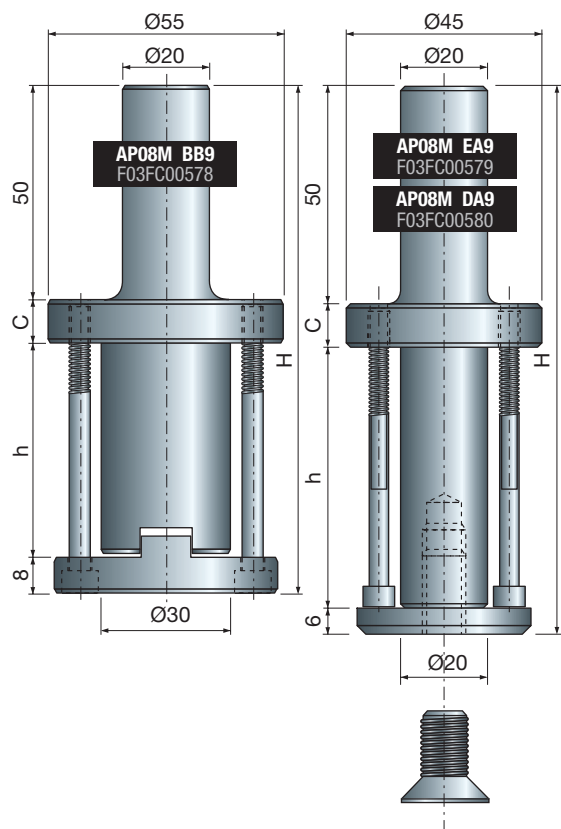


MP20M

Spring adaptors for twist drills

D	Freud Code	Art. No.
mm		
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

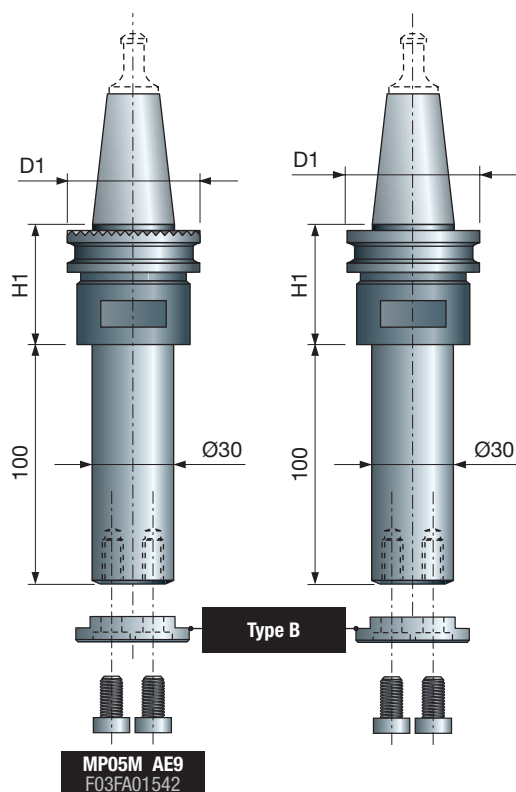
Spindle for overhead routers

D mm	h mm	H mm	C mm	Freud Code	Art. No.
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.



Spindles for overhead CNC machines with **ISO30** shank for Ø30 mm tools bore.

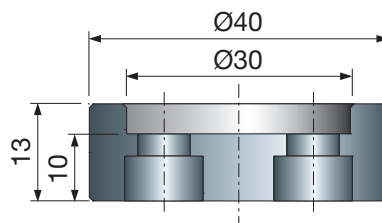
- Standard chucks are provided with **Type B**. Flange **Type A** is supplied on demand.
- Terminal pin **CD01M** is not included.

MP05M High precision spindles - ISO30

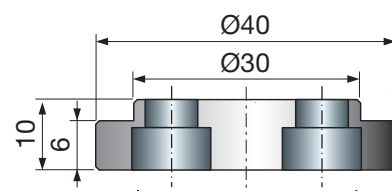
D1 mm	H1 mm	Router	Freud Code	Art. No.
50	35	Universal	MP05M AA9	F03FA01538
50	35	Biesse	MP05M AB9	F03FA01539
46	35	CMS	MP05M AC9	F03FA01540
49	41	SCM - Morbidelli	MP05M AE9	F03FA01542

Flange Type A

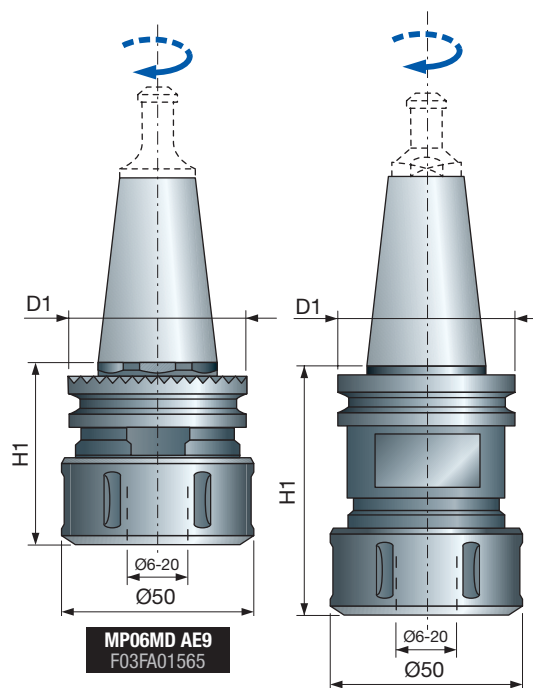
FX09M AA9
F03FA13481



Flange Type B



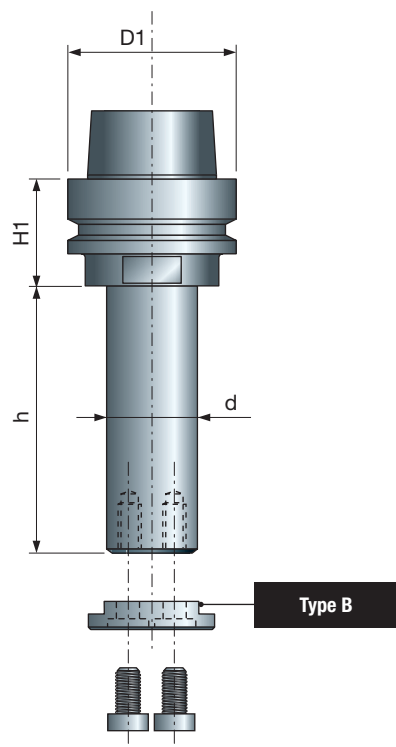
MP06MD High precision chucks - ISO30



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.

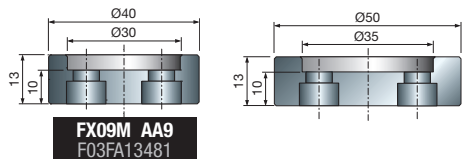
D mm	H mm	Router	Freud Code	Art. No.
50	67	Universal	MP06MD AA9	F03FA01561
50	50	Biesse	MP06MD AB9	F03FA01562
46	60	CMS	MP06MD AC9	F03FA01563
58	50	Esseteam	MP06MD AD9	F03FA01564
49	55	SCM - Morbidelli	MP06MD AE9	F03FA01565



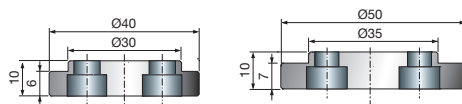
Spindles for CNC overhead CNC machines with **HSK 63 E** shank.

- 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

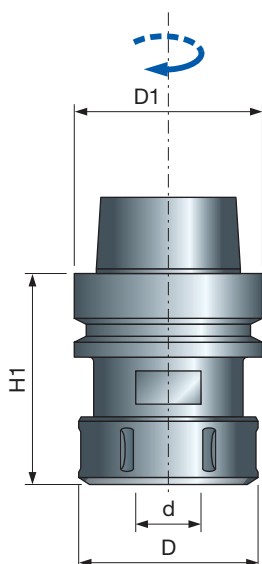
MP08M

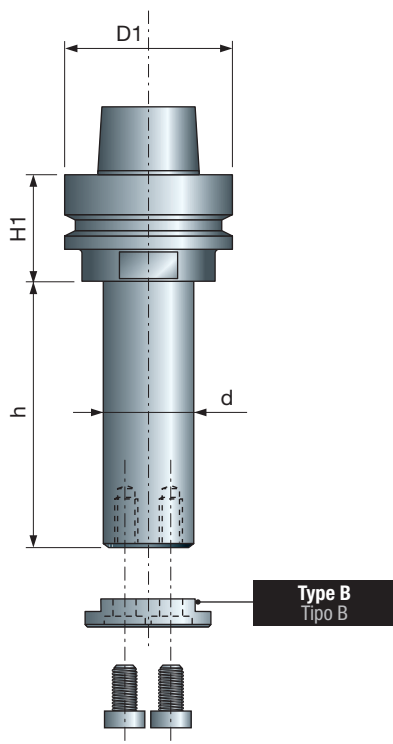
High precision Nickel coated chucks - HSK 63 E

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.

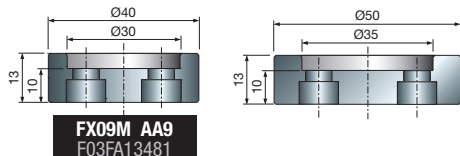




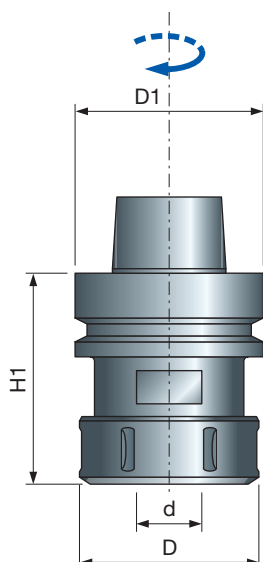
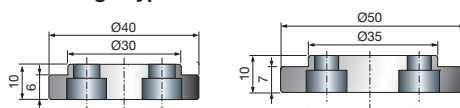
Spindles for CNC overhead CNC machines with **HSK 63 F** shank.

- 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



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 F

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 F** shank.

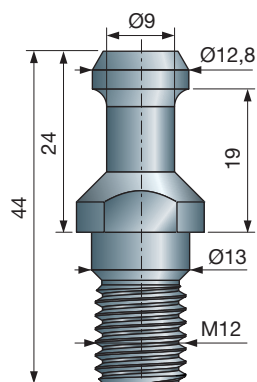
- Nickel coating treatment to prevent rust.
- G2,5 balancing for high speed applications.
- **ER32 RH** locking ring for item **MP10MDC AA9**.
- **ER40 RH** for **MP10MDC BA9**.
- Collet not included.

CD01M

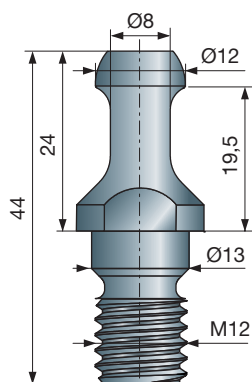
Pull studs for chucks ISO30

Terminal pins for ISO30 chucks and spindles.

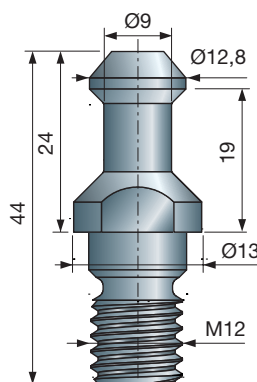
For routers:	Freud Code	Art. No.
CMS	CD01M AA9	F03FA00537
Biesse, Masterwood	CD01M BA9	F03FA00538
Alberti, Masterwood	CD01M CA9	F03FA00539
SCM, Morbidelli	CD01M DA9	F03FA00540
Busellato, IMA, Weeke, Maka	CD01M EA9	F03FA00541



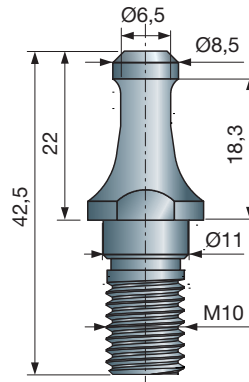
CD01M AA9
F03FA00537



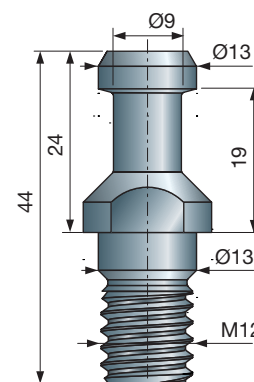
CD01M BA9
F03FA00538



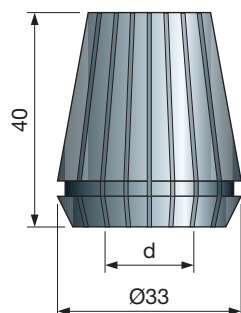
CD01M CA9
F03FA00539



CD01M DA9
F03FA00540



CD01M EA9
F03FA00541

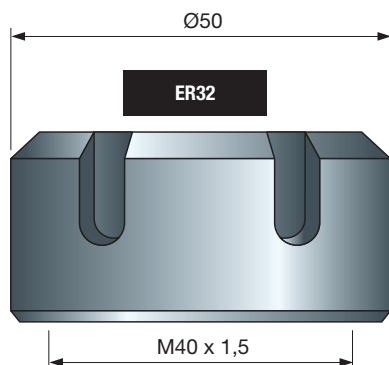


Collet for router bits with cylindrical shank.
Suitable for **MP06MD**, **MP08MDC AA9** and
MP10MDC AA9 chucks.

MP06M

High precision collet for ER32 locking rings

d mm	H mm	Clamping range	Freud Code	Art. No.
4	40	4÷3	MP06M 049	F03FA01550
6	40	6÷5	MP06M 069	F03FA01551
8	40	8÷7	MP06M 089	F03FA01553
10	40	10÷9	MP06M 109	F03FA01554
12	40	12÷11	MP06M 129	F03FA01555
14	40	14÷13	MP06M 149	F03FA01557
16	40	16÷15	MP06M 169	F03FA01558
18	40	18÷17	MP06M 189	F03FA01559
20	40	20÷19	MP06M 209	F03FA01560

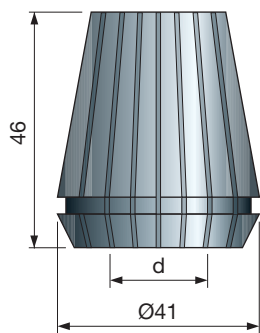


Locking rings suitable for universal high precision chucks with **MP06M** collet.

GH32M

High precision locking ring

D mm	Locking ring	Freud Code	Art. No.
50	ER32	GH32M AA9	F03FA01400

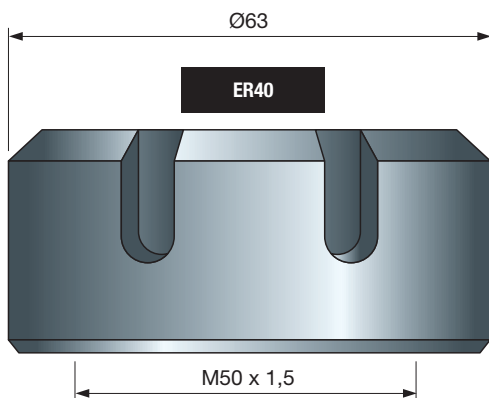


Collets for router bits with cylindrical shank.
Suitable for **MP08MDC BA9** and **MP10MDC BA9** chucks.

MP16M

High precision collet for ER40 locking rings

d mm	H mm	Clamping range	Freud Code	Art. No.
6	46	6÷5	MP16M 069	F03FA01666
8	46	8÷7	MP16M 089	F03FA01667
10	46	10÷9	MP16M 109	F03FA01668
12	46	12÷11	MP16M 129	F03FA01669
14	46	14÷13	MP16M 149	F03FA01670
16	46	16÷15	MP16M 169	F03FA01671
18	46	18÷17	MP16M 189	F03FA01672
20	46	20÷19	MP16M 209	F03FA01673
25	46	25÷24	MP16M 259	F03FA01675

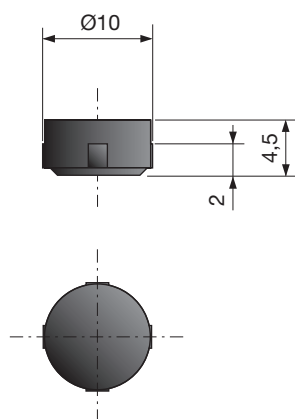


Locking rings suitable for universal high precision chucks with **MP16M** collet.

GH40M

High precision locking ring

D mm	Locking ring	Freud Code	Art. No.
63	ER40	GH40M AA9	F03FA01401



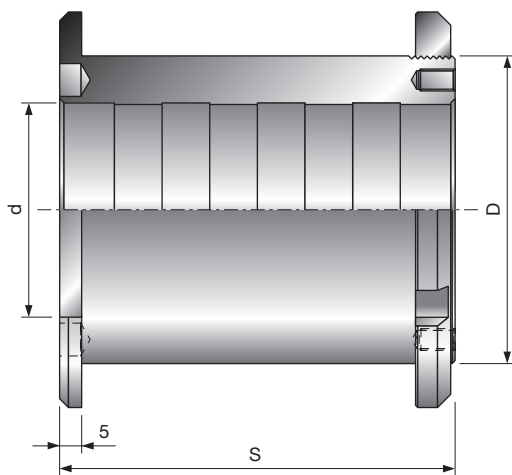
MC01M

Encoding microchip for smart tools

D mm	H mm	h mm	Freud Code	Art. No.
10	4,5	2	MC01M 010	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°.



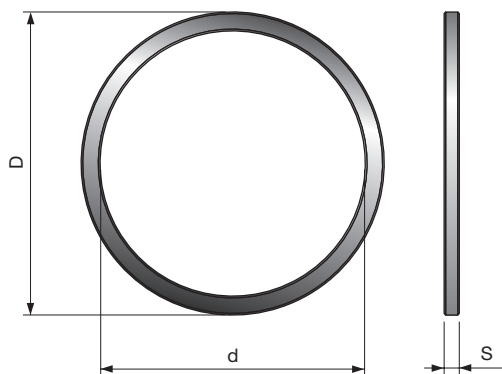
Standard Freud's sleeves for complex tools with threaded locking nut.

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	BF10MD AA9	F03FC00616	BF10MS AA9	F03FC00661
50	130	30	BF10MD AD9	F03FC00619	BF10MS AD9	F03FC00664
50	60	35	BF10MD AG9	F03FC00622	-	-
50	110	35	BF10MD AB9	F03FC00617	BF10MS AB9	F03FC00662
50	130	35	BF10MD AE9	F03FC00620	-	-
50	110	40	BF10MD AC9	F03FC00618	BF10MS AC9	F03FC00663
50	130	40	BF10MD AF9	F03FC00621	BF10MS AF9	F03FC00665
55	110	35	BF10MD BA9	F03FC00625	BF10MS BA9	F03FS07470
55	130	35	BF10MD BC9	F03FS07469	BF10MS BC9	F03FS07471
55	110	40	BF10MD BB9	F03FS07468	-	-
55	130	40	BF10MD BD9	F03FC00626	BF10MS BD9	F03FC00668
60	90	32	BF10MD DL9	F03FC24537	-	-
60	85	35	BF10MD KB9	F03FC00643	-	-
60	90	35	BF10MD DB9	F03FC00630	-	-
60	110	35	BF10MD CB9	F03FC00627	-	-
60	85	40	BF10MD KC9	F03FC00644	-	-
60	90	40	BF10MD DC9	F03FC00631	BF10MS DC9	F03FC00669
60	110	40	BF10MD CC9	F03FC00628	-	-
60	85	50	BF10MD KD9	F03FC00645	-	-
60	90	50	BF10MD DD9	F03FC00632	-	-
60	110	50	BF10MD CD9	F03FC00629	-	-
70	75	30	BF10MD LA9	F03FC00646	-	-
70	85	30	-	-	BF10MS HA9	F03FC00676
70	90	30	BF10MD EA9	F03FC24536	-	-
70	90	32	BF10MD EL9	F03FC24537	BF10MS EL9	-
70	85	35	BF10MD HB9	F03FC00638	-	-
70	90	35	BF10MD EB9	F03FC00633	BF10MS EB9	F03FC00671
70	75	40	BF10MD LC9	F03FC00647	-	-
70	85	40	BF10MD HC9	F03FC00639	-	-
70	90	40	BF10MD EC9	F03FC00634	BF10MS EC9	F03FC00672
* 70	40	50	BF10MD QD9	F03FC00653	BF10MS QD9	F03FC00685
* 70	45	50	BF10MD PD9	F03FC00652	BF10MS PD9	F03FC00684
* 70	50	50	BF10MD OD9	F03FC00651	BF10MS OD9	F03FC00683
* 70	55	50	BF10MD ND9	F03FC00650	BF10MS ND9	F03FC00682
* 70	60	50	BF10MD MD9	F03FC00649	BF10MS MD9	F03FC00681
* 70	65	50	BF10MD ID9	F03FC00641	BF10MS ID9	F03FC00679
* 70	70	50	BF10MD GD9	F03FC00637	BF10MS GD9	F03FC00675
* 70	75	50	BF10MD LD9	F03FC00648	BF10MS LD9	F03FC00680
* 70	80	50	BF10MD FD9	F03FC00636	BF10MS FD9	F03FC00674
* 70	85	50	BF10MD HD9	F03FC00640	BF10MS HD9	F03FC00678
* 70	90	50	BF10MD ED9	F03FC00635	BF10MS ED9	F03FC00673

* Item already fitted with pin holes.

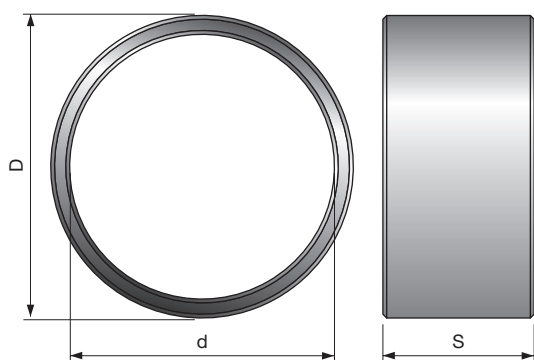


Standard reduction rings suitable for circular saw blades.

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

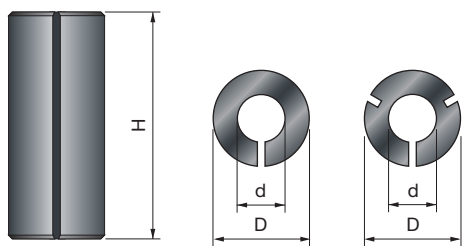


Standard reduction rings suitable for cutterheads.

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

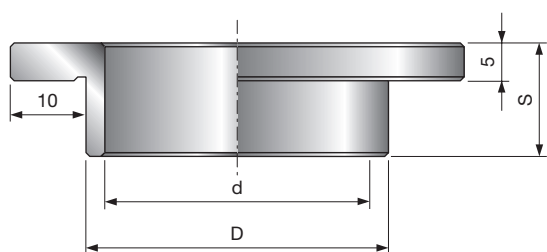


Reducing bushes for router bits.

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

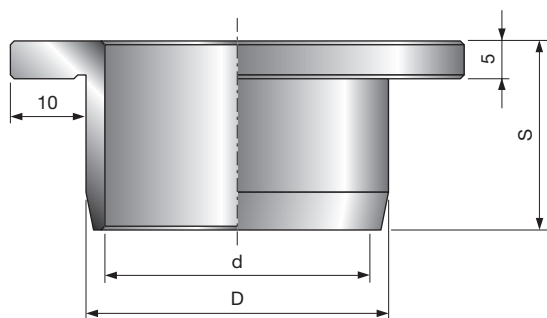


Reducing bushes for cutterheads with shoulder.

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

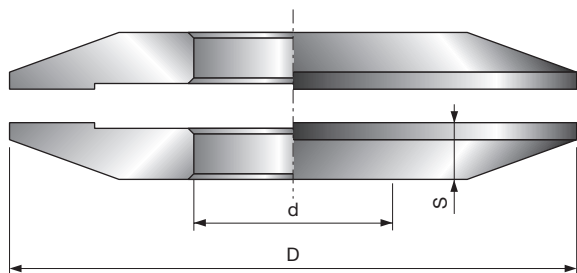


Reducing bushes for cutterheads with shoulder.
• Suitable for planer heads **TM06M** and **TM07M**.

FX02M

Reducing bushes

D mm	S mm	d mm	Freud Code	Art. No.
40	25	35	FX02M CB9	F03FC15043

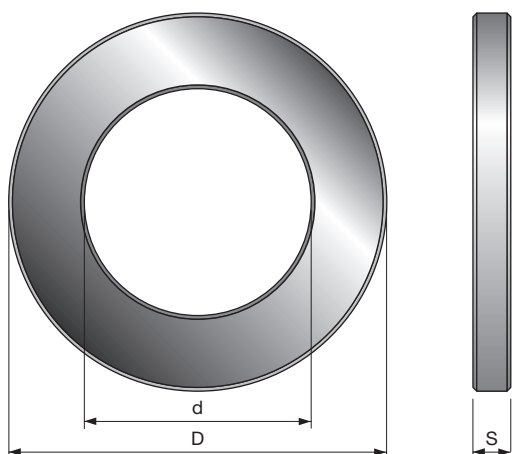


Stiffening collars suitable for circular saw blades.

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



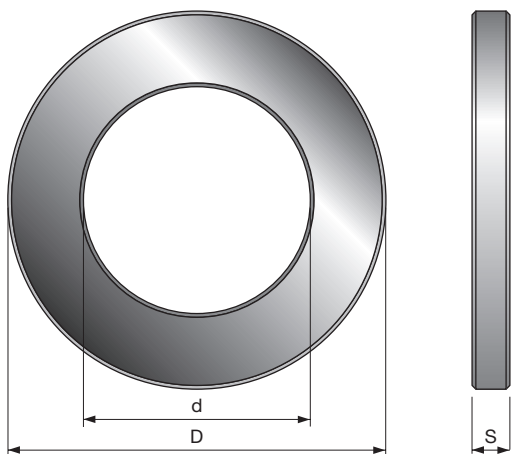
Standard spacers suitable for cutterheads.

AN01M

Spacers

D mm	S mm	d mm	Freud Code	Art. No.
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

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

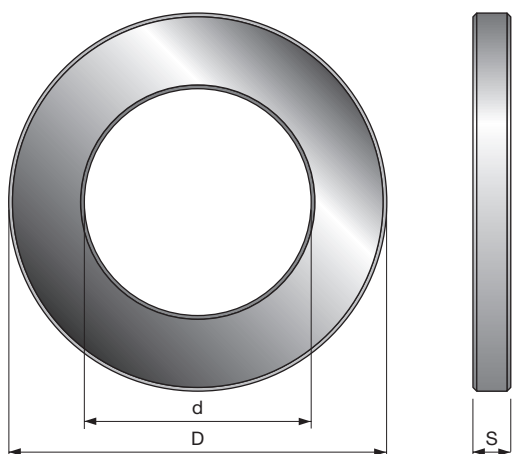


AN01M

Spacers

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

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
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70	19	50	AN01MD1909	F03FC00191
70	20	50	AN01MD2009	F03FC00192
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70	23	50	AN01MD2309	F03FC00195

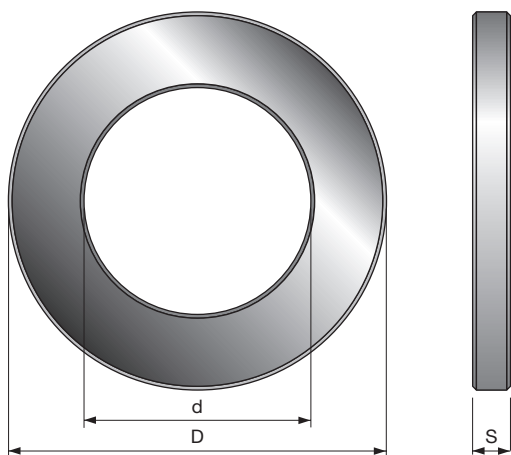


AN01M

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
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90	26	70	AN01MH2609	F03FC00297
90	27	70	AN01MH2709	F03FC00298
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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



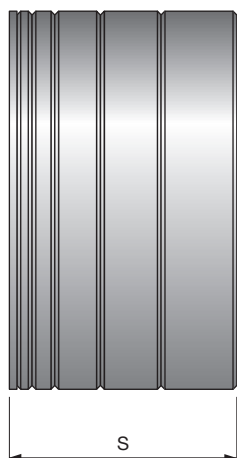
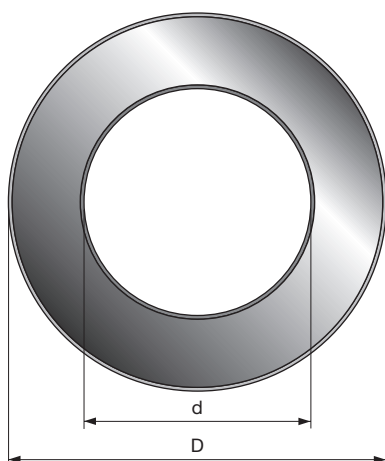
Special spacers suitable for cutterheads;
minimum thickness 1mm.

- 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	

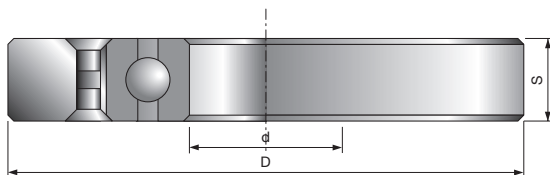


AN03M

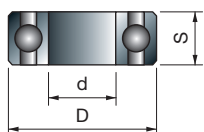
Standard spacer set

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

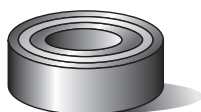
Standard spacers sets suitable for cutterheads.



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

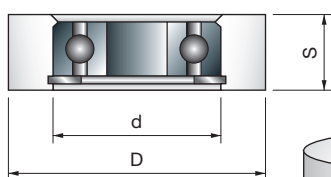
Ball bearing guide for moulding

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	4	6,05	3102M BB9	F03FA10568
12,7	4,98	4,76	3102M AB9	F03F010007
13	5	4	3102M CD9	F03FA14096
13	5	6	3102M AP9	F03FA10558
14	4	8,05	3102M BC9	F03FA10569
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



Cylindrical rub collars for ball bearing.



RB62M

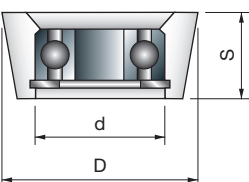
Ball bearing rub collars

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

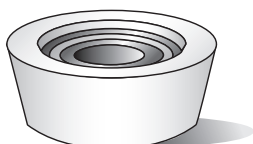
3103MC

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



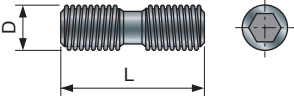
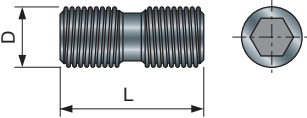
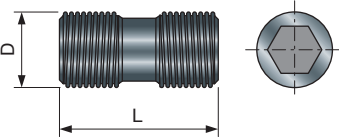
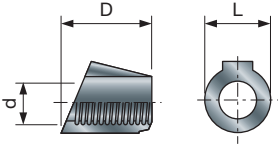
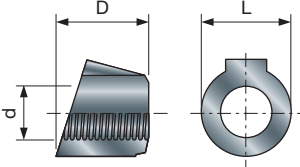
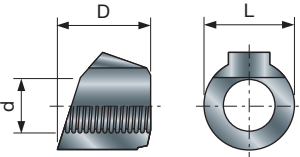
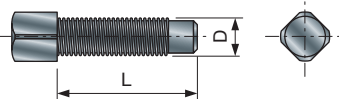
Conical rub collars for ball bearing.



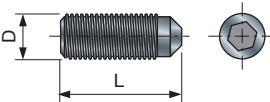
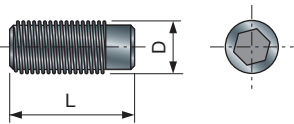
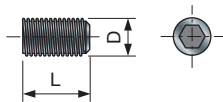
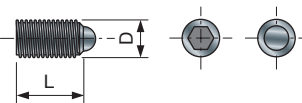
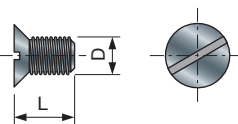
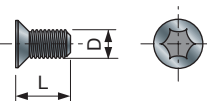
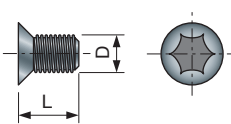
Keys and devices



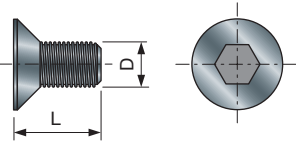
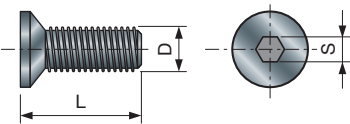
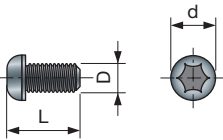
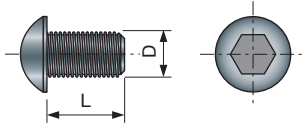
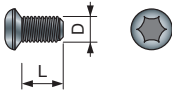
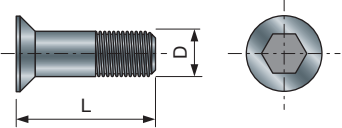
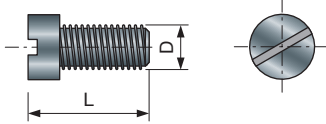
Spare screws, nuts, washers and keys

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	VT19M AB9	F03FA04491
	RH-LH Hex print screws for H.S.I. knives	M8 x 22	VT19M BB9	F03FA04493
	RH-LH Hex print screws for disposable knives	M10 x 22	VT19M MA9	F03FA04496
	Nuts for VT19M AB9 screws	10 x 11,5 x M6	VT20M AA9	F03FA04497
		9 x 10,5 x M6	VT20M GA9	F03FC20669
	Nuts for VT19M MA9-MB9 screws	15 x 13,3 x M10	VT20M MA9	F03FC20670
	Nuts for VT19M MA9-MB9 screws	15 x 13,3 x M10	VT20M NA9	F03FC20671
	Squared head screws for disposable knives	M5 x 19	VT11M AA9	F03FA04468

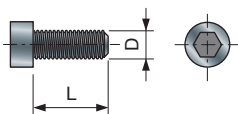
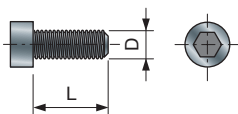
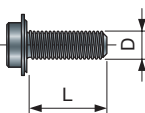
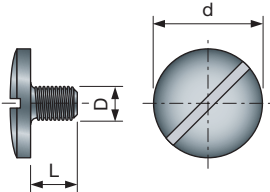
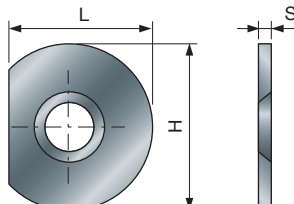
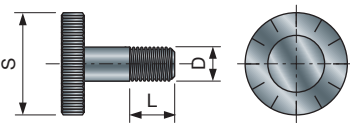
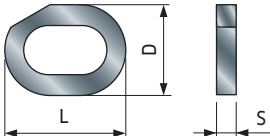
Spare screws, nuts, washers and keys

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	VT03M DE9	F03FA04439
		M6 x 12	VT03M DL9	F03FA04441
		M6 x 16	VT03M DI9	F03FA04440
		M8 x 16	VT03M AA9	F03FA04435
	Hex print screws for disposable knives	M4 x 10	2602M CB9	F03FA07346
		M5 x 12	VT03M BA9	F03FA04436
		M5 x 16	VT03M BB9	F03FA04437
		M8 x 16	2602M BB9	F03FA07344
		M8 x 25	2602M EI9	F03FA07352
		M10 x 18	VT03M CC9	F03FA04438
		M10 x 25	2602M FI9	F03FA07353
	Hex print screws	M3 x 3	2615M AA9	F03FA07418
		M4 x 6	2602M CE9	F03FA07349
		M5 x 5	2615M CC9	F03FA07420
		M5 x 10	2602M DC9	F03FA07350
		M6 x 6	2615M DD9	F03FA07423
		M8 x 8	2615M EE9	F03FA07424
		M8 x 10	2602M CC9	F03FA07347
	Hex print screws with semi-sphere for ISOprofil Technology	M8 x 16	2616M DE9	F03FA07425
		M10 x 16	2616M EE9	F03FA07426
	Countersink screws for TA01-02 grinding devices	M4 x 6	VT05M AB9	F03FA04445
	Countersink Torx screws for IG03 inserts	M4 x 3,2	VT05M BB9	F03FA04447
		M4 x 4,2	VT05M BC9	F03FA04448
		M4 x 6,5	VT05M BD9	F03FA04449
	Countersink Torx screws for RG and RR spurs	M4 x 12	VT71M AC9	F03FA14740
		M5 x 6	VT05M AC9	F03FA04446
		M5 x 8	VT05M AA9	F03FA04444

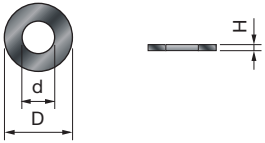
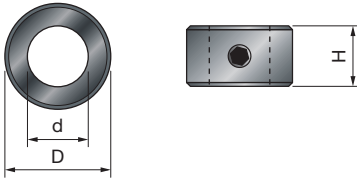
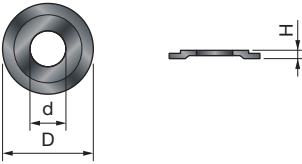
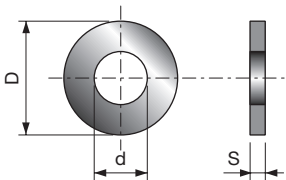
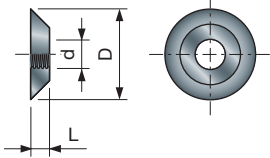
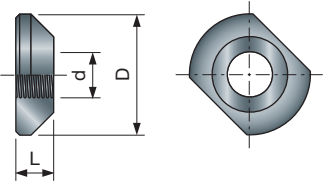
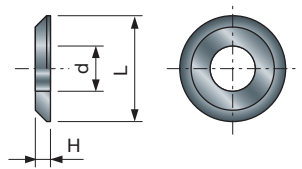
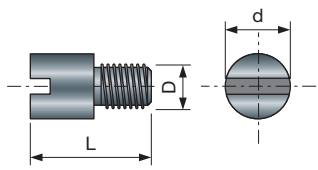
Spare screws, nuts, washers and keys

Spare parts	Description	Dimensions D/L x L/H x d/S (mm)	Freud Code	Art. No.
	Countersink Hex print screws	M5 x 8	VT05M CA9	F03FA04451
		M6 x 8	VT01M AB9	F03FA04430
		M6 x 10	VT01M AA9	F03FA04429
	Countersink Hex print screws for ID deflectors	M4 x 12	VT05M DA9	F03FC20647
		M4 x 14	VT05M DB9	F03FC20648
		M4 x 16	2609M BD9	F03FA07379
		M6 x 16	VT05M DC9	F03FC20649
		M6 x 16	2609M DD9	F03FA07381
		M8 x 40	2609M EK9	F03FB04618
		M10 x 20	2609M FF9	F03FA07382
		M10 x 35	2609M FI9	F03FA07383
	Round head Torx screw for disposable knives router cutters	M3 x 6 x 5	VT72M AA9	F03FA04506
		M4 x 8 x 6	VT70M AA9	F03FA04504
		M4 x 10 x 9	VT71M AA9	F03FA04505
	Round head Hex print screw	M4 x 10	2622M AB9	F03FA07453
		M6 x 8	2622M CA9	F03FA07454
		M6 x 10	2622M CB9	F03FA07455
		M6 x 12	2622M CC9	F03FA07456
		M8 x 18	2622M DF9	F03FA07457
		M8 x 30	2622M DI9	F03FA07458
		M10 x 25	2622M EH9	F03FA07459
	Round head Torx screw for scorers	M4 x 6	VT71M AB9	F03FA14739
	Countersink Hex print screws for IG inserts	M6 x 11,5	VT16M AB9	F03FA04477
		M6 x 13	VT16M AE9	F03FC20658
		M6 x 14,5	VT16M AA9	F03FA04476
		M6 x 15,5	VT16M AD9	F03FC20657
		M6 x 18,5	VT16M AC9	F03FC20656
		M6 x 20	VT16M AF9	F03FC20659
	Slotted screws	M4 x 10	2611M DB9	F03FA07386
		M5 x 10	2606M DE9	F03FA07361

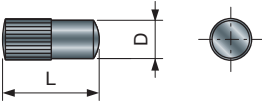
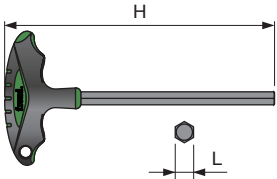
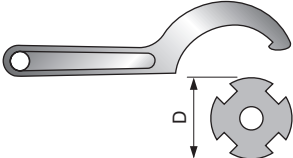
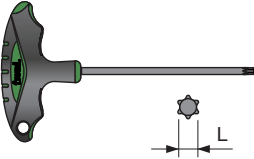
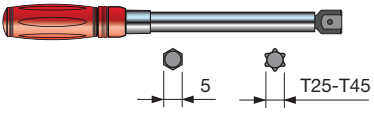
Spare screws, nuts, washers and keys

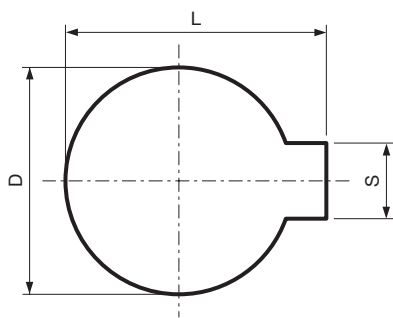
Spare parts	Description	Dimensions D/L x L/H x d/S (mm)	Freud Code	Art. No.
	Hex print allen screws	M3 x 6	2607M AA9	F03FA07362
		M3 x 8	2607M AB9	F03F010001
		M3 x 10	2607M AC9	F03FA07363
		M4 x 8	2607M BB9	F03FA07365
		M5 x 16	2607M CF9	F03FA07367
		M5 x 20	2607M CH9	F03FA17148
		M5 x 40	2607M CL9	F03FA07368
		M5 x 60	2607M CP9	F03FA07369
		M5 x 90	2607M CS9	F03FA18898
	Hex print allen screws	M6 x 16	2607M AF9	F03FB04614
		M8 x 16	VT02M AA9	F03FA04432
		M8 x 35	2607M EK9	F03FB04615
		M10 x 20	2607M FH9	F03FB04616
		M10 x 30	2607M FJ9	F03FB04617
	Flanged screws for router bits	M3 x 7,6	2607M 001	F03F010000
	Reference screws for cutterheads	M5 x 7 x 18	VT08M AE9	F03FA04457
		M5 x 8,8 x 18	VT08M AM9	F03FA04462
		M8 x 10 x 22	VT08M AD9	F03FA04456
	Reference plates for cutterheads	22 x 1,7 x 6,5	VT18M GB9	F03FA04489
	Adjustment screws for jointing cutterheads	M5 x 8 x 25	VT08M AC9	F03FC20652
		M6 x 7 x 18	VT08M AG9	F03FC20653
		M6 x 8 x 25	VT08M AB9	F03FC20651
	Adjustment shaped rings for IG25 inserts	16 x 11,9 x 2,6	VT18M AG9	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	2617M BG9	F03FR01668
		16 x 1,6 x 8,4	2617M AG9	F03F010005
		6 x 2 x 4	VT18M AB9	F03FA04480
	Stop collars for drill bits	12 x 4 x 6,05	3102M BB9	F03FA10568
		14 x 4 x 8,05	3102M BC9	F03FA10569
	Step washers	9 x 2 x 4,76	FX07M AA9	F03F010158
		12 x 1,1 x 4,76	FX07M AB9	F03F010159
	Spacers for inserts	13,6 x 0,1 x 7	ST07M 019	F03FA13619
		13,6 x 0,2 x 7	ST07M 029	F03FA13620
		13,6 x 0,5 x 7	ST07M 059	F03FA13621
		15 x 1 x 7	ST07M 109	F03FA03865
		15 x 2 x 7	ST07M 209	F03FA03867
	Threaded rings for locking screws	10,2 x 1 x M4	VT18M AA9	F03FA04479
		11,6 x 1,5 x M4	VT18M BA9	F03FA04483
		11,6 x 2,5 x M4	VT18M BB9	F03FA04484
		9,4 x 1,7 x M4	VT18M DA9	F03FA04487
		8 x 5 x M4	VT18M CB9	F03FA04486
	Threaded nuts for RH and LH VT19M AB9-IA9 screws	16 x 4 x M6	VT18M CC9	F03FC20666
		16 x 5 x M6	VT18M CA9	F03FA04485
	Washers for knives	14 x 2 x 6	VT18M AL9	F03FC20662
		9 x 1,5 x 4	VT18M AH9	F03FA04481
	Threaded pins for sleeves	M5 x 9,5 x 7	VT08M AH9	F03FC20654
		M6 x 15,5 x 8	VT08M AI9	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	2601M AB9	F03FA07326
	L-shape Hex allen key	2	2619M BA9	F03FA07431
		2,5	2619M CA9	F03FA07432
		3	2619M DA9	F03FA07433
		4	2619M EA9	F03FA07434
		5	2619M FA9	F03FA07435
		6	2619M GA9	F03FA07436
		8	2619M HA9	F03FA07437
	T-shape Hex allen key with handle	3 x 110	CB03M AA9	F03FA00162
		4 x 110	CB03M BA9	F03FA00163
		5 x 110	CB03M EA9	F03FA00169
	C-spanners for shanks and sleeves locking rings	45 - 50 (ER32)	CB07M 4550	F03FB00145
		58 - 62 (ER40)	CB07M 5862	F03FB00146
		68 - 75	CB02M BA9	F03FA00160
		80 - 90	CB02M CA9	F03FA00161
	Socket wrench for sleeves locking rings - Ø40/50	70 x 95 x 50	CB02M 6070	F03FC00720
	Socket wrench for sleeves locking rings Ø60/70	88,9 x 95 x 68,9	CB02M 8090	F03FC00721
	T-shape Torx allen key with handle	T9 x 100	CB03M CA9	F03FA00165
		T15 x 100	CB03M DA9	F03FA00168
		T20 x 100	CB03M CC9	F03FA00167
		T25 x 100	CB03M BB9	F03FA00164
	Fork wrench	5	CB04M 059	F03FA00172
	Torque wrench	10-60 Nm	CB06M106001	F03FC25296
• 1/4 L-Lock-ratchet insert • Exagon insert 5mm • Torx insert T25 (long and short version) • Torx insert T45 (long and short version)	Inserts set fo torque wrench		CB0BITSIMB01	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

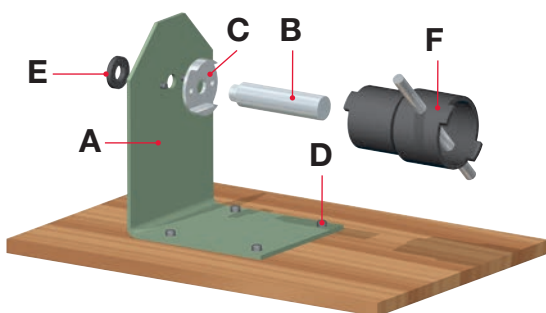
D mm	S mm	L mm	Freud Code	Art. No.
12	5	13,8	OPT04 AA9	F03FC16203
14	5	16,3	OPT04 BA9	F03FC16204
16	5	18,3	OPT04 CA9	F03FC16205
18	6	20,8	OPT04 DA9	F03FC16206
20	6	22,8	OPT04 EA9	F03FC16207
25	8	28,3	OPT04 FA9	F03FC16208
30	8	33,3	OPT04 GA9	F03FC16209
35	10	38,3	OPT04 HA9	F03FC16210
40	10	43,3	OPT04 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.



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.
A	Support plate		150 x 230 x 250	SAG1M BA9	F03FA03851
E	Self-locking nut		50 x 8 x 30	SAG1M DA9	F03FA03852
C	Coupling disk		65 x 20 x 30 $\varnothing 50$	SAG1M F65	F03FC18872
C	Coupling disk		75 x 20 x 30 $\varnothing 60$	SAG1M F75	F03FC18873
C	Coupling disk		85 x 20 x 30 $\varnothing 70$	SAG1M F85	F03FC18874
B	Arbor		$\varnothing 35$ x 122	SAG1M 035	F03FC18875
B	Arbor		$\varnothing 40$ x 122	SAG1M 040	F03FC18876
B	Arbor		$\varnothing 50$ x 122	SAG1M 050	F03FC18877
F	Key $\varnothing 40/50$		70 x 95 x 50	CB02M 6070	F03FC00720
F	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.
A	Support plate		150 x 230 x 250	SAG1M BA9	F03FA03851
E	Self-locking nut		50 x 8 x 30	SAG1M DA9	F03FA03852
C	Coupling disk		65 x 20 x 30 $\varnothing 50$	SAG1M F65	F03FC18872
C	Coupling disk		75 x 20 x 30 $\varnothing 60$	SAG1M F75	F03FC18873
C	Coupling disk		85 x 20 x 30 $\varnothing 70$	SAG1M F85	F03FC18874

Optional items

	Spare parts		Dimensions mm	Freud Code	Art. No.
B	Arbor		$\varnothing 35$ x 122	SAG1M 035	F03FC18875
B	Arbor		$\varnothing 40$ x 122	SAG1M 040	F03FC18876
B	Arbor		$\varnothing 50$ x 122	SAG1M 050	F03FC18877
F	Key $\varnothing 40/50$		70 x 95 x 50	CB02M 6070	F03FC00720
F	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



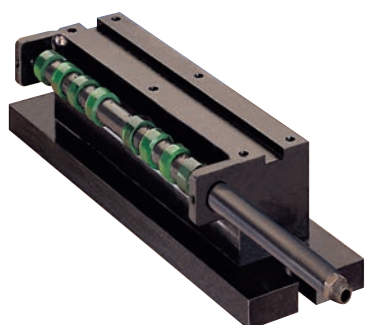
TA02M

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

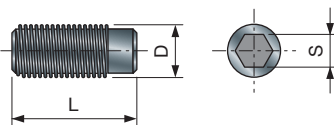
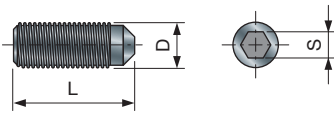
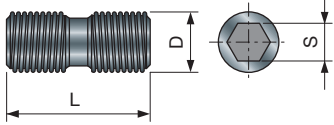
Support for grinding Performance knives

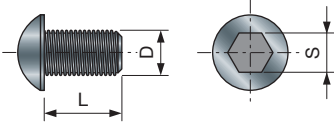
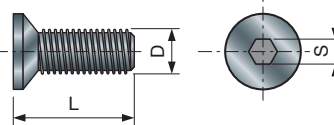
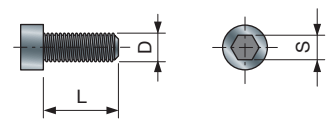
L mm	H mm	S mm	Freud Code	Art. No.
340	98	90	TA03M AA9	F03FC20202

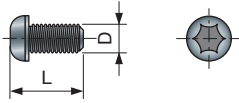
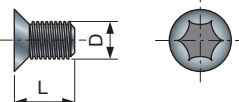
Support for **TA01M** device

Torque values for screws and grub screws used for tightening Freud knives and inserts

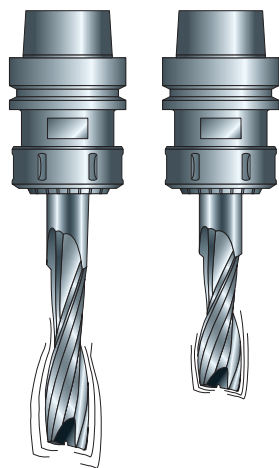
To avoid insufficient clamping forces or screw rupture due to overload, all the screws must be tightened with the required torque. If not differently stated on the instruction manual or marked on the tools, use the following torque values.

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
				
				

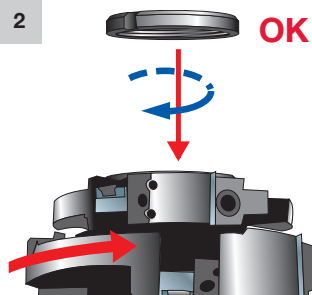
Spare parts	Description	Screw thread mm	Key (S) mm	Tightening torques 8,8 (Nm)
	Hex print screws	M3	2,5	1
		M4	3	2
		M5	4	5
		M6	5	8
		M8	6	12
		M10	8	30
				
				

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
				

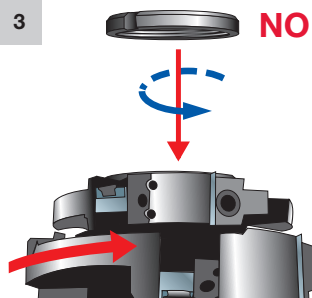
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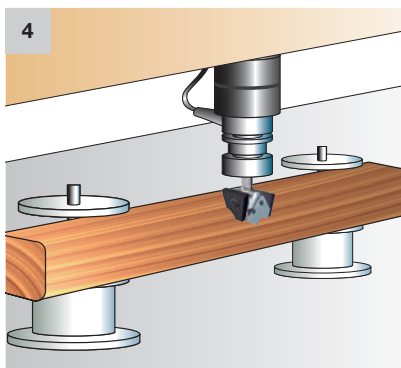
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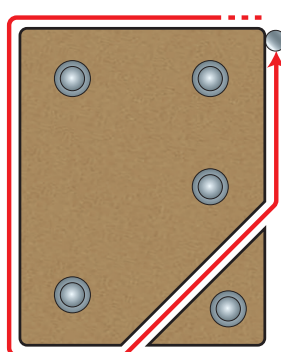
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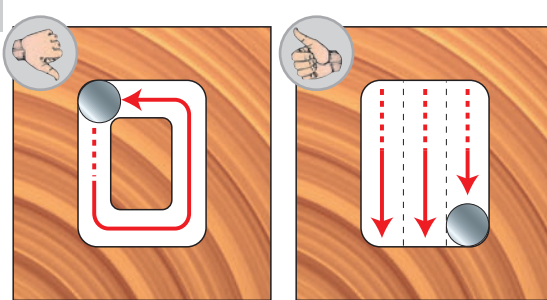
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8



9



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.

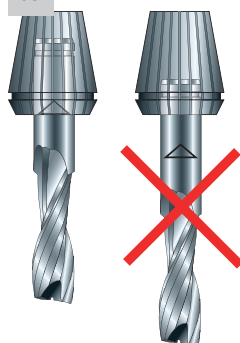
To avoid damaging router bits, we suggest controlling if the fixing surface of the chuck and the router bit are clean and that there are no imperfections (Fig. 7).

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).

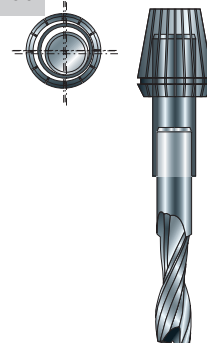
Wearing gloves increases grip and reduces the risk of injury.

To avoid injury, tools must be handled with care using special appliances so as to transport them without incurring injury to the user.

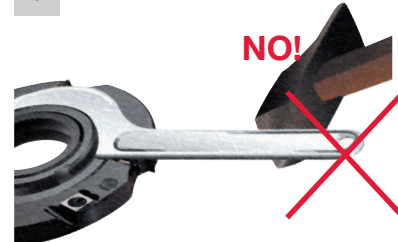
5a



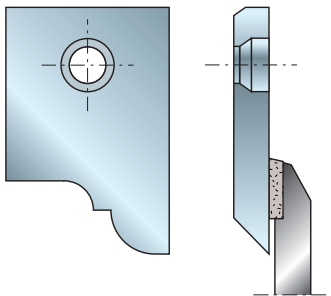
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6



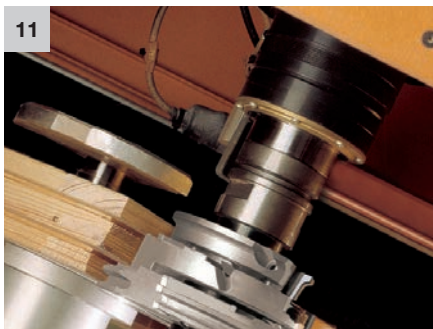
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TECHNOLOGICAL FEATURES

- 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 TA02M (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.

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12



13



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EXPLANATION OF SYMBOLS AND ABBREVIATIONS

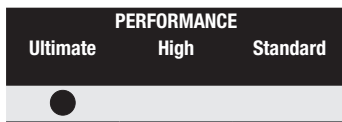


CHART ABOUT THE SAW BLADE'S PERFORMANCE

SYMBOLS TO READ THE PRODUCT TABLES

h1	Actual height	B-B1	Adjustable cutting thickness	γ	ATB angle	β	Back relief angle
C	Bearing diameter	d	Bore	h	Cutting height	B	Cutting thickness
D	Diameter	α	Hook angle	I	Interaxial distance (Inserts in RB section)	KN	Keyways
L	Length	Max RPM	Max RPM	Z	Number of teeth	H	Overall height
NL	Pin holes	R	Radius (Spurs in RB section)	R1	Radius	b	Saw blade body thickness
A	Shank	V	Spurs	S	Thickness	hUP	UP cut lenght
L.U.	Working length						

FEATURE ICONS

	Anti-kickback Technology		Anti-vibration Technology		Cascading System		EXrim Coating
	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

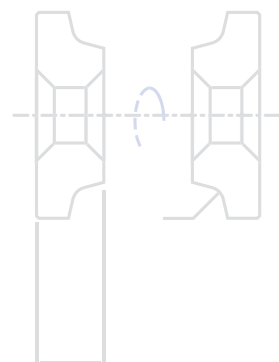
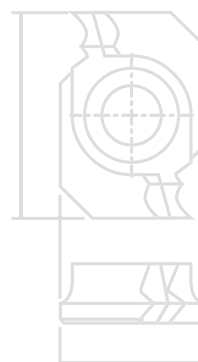
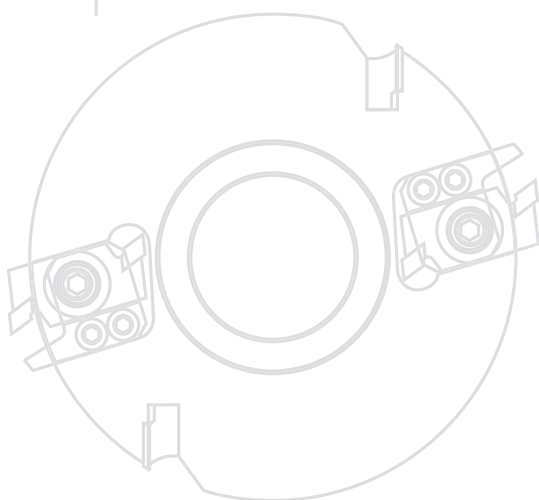
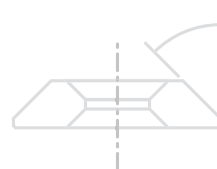
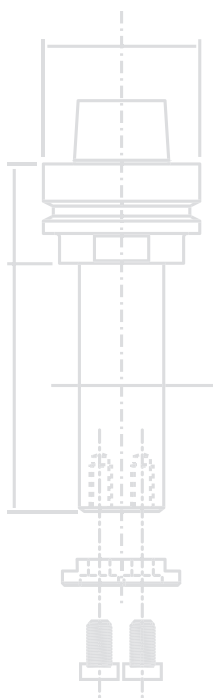
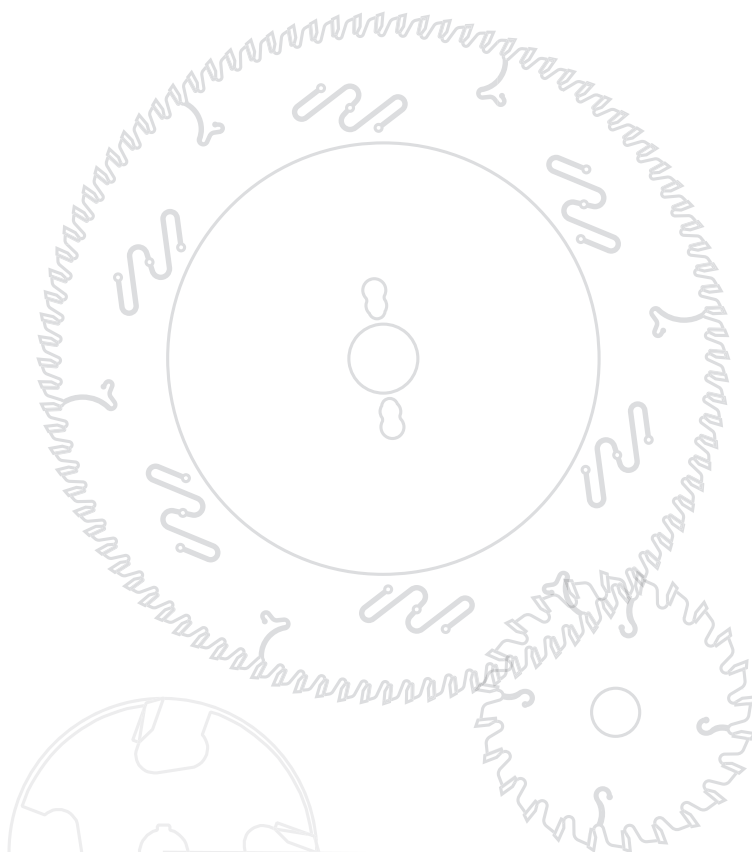
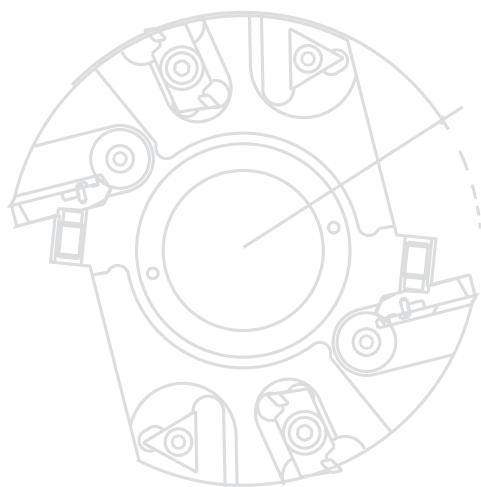
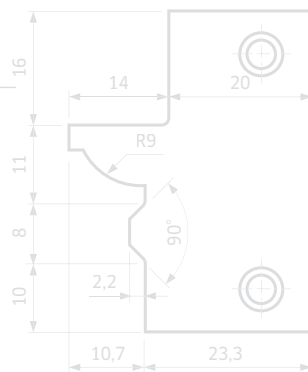
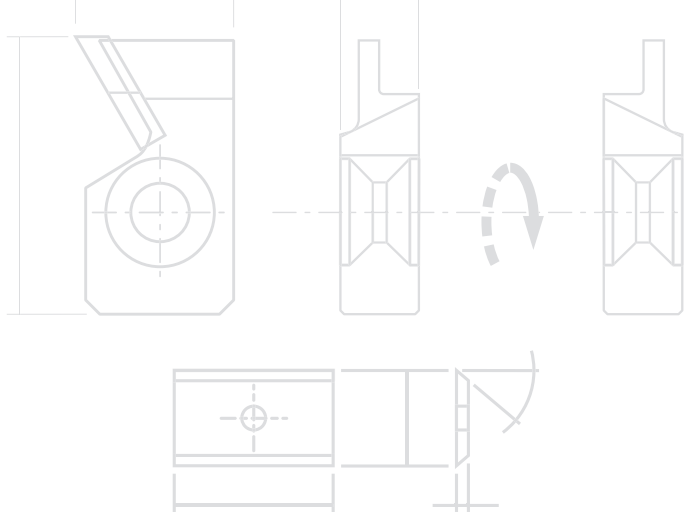
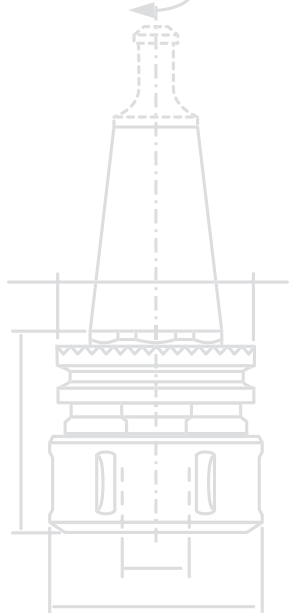
	Boring Machines		Cleaving Machines		CNC Cutting Units		CNC Machines
	CNC Machines		CNC Router		Corded		Cordless/Cordless
	Cordless		Double End Tenoners		Double Head Cutting Machines		Dry-Cut Mitre Saw
	Edge Banders		For Table Mounted Only		Hand-Held Circular Saws		Hand-Held Routers
	Horizontal Panel 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



**CIRCULAR SAW BLADES FOR
STATIONARY MACHINES**

**CIRCULAR SAW BLADES FOR
PORTABLE MACHINES**

**ROUTING TOOLS FOR
CNC MACHINES**

**ROUTING TOOLS FOR
PORTABLE MACHINES**

CUTTERHEADS AND BRAZED CUTTERS

WINDOW TOOLING

KNIVES AND INSERTS IN HW AND HSS

ACCESSORIES AND SPARE PARTS



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