freud

Precisely the best

Solid Carbide Cutters for CNC Nesting Applications

THE MOST COMPLETE RANGE OF SOLID CARBIDE BITS FOR SIZING AND GROOVING

LAMINATED CHIPBOARD & MDF	 	●●●
CHIPBOARD & MDF	 	●●●
PLYWOOD		●●●
SOFTWOOD & HARDWOOD	 	●●●

Key of performance

●●● Ultimate ●● High ● Good

FOR CNC AND PORTABLE ROUTERS

Icon guide

- Up spiral
- Down spiral
- Up and down spiral
- Sizing
- Grooving
- Plunging
- Ramp Plunging
- Spiral Boring
- Axial Boring
- Non Axial Boring
- Slotting
- Better finishing on top
- Better finishing on bottom
- Better finishing on top and bottom

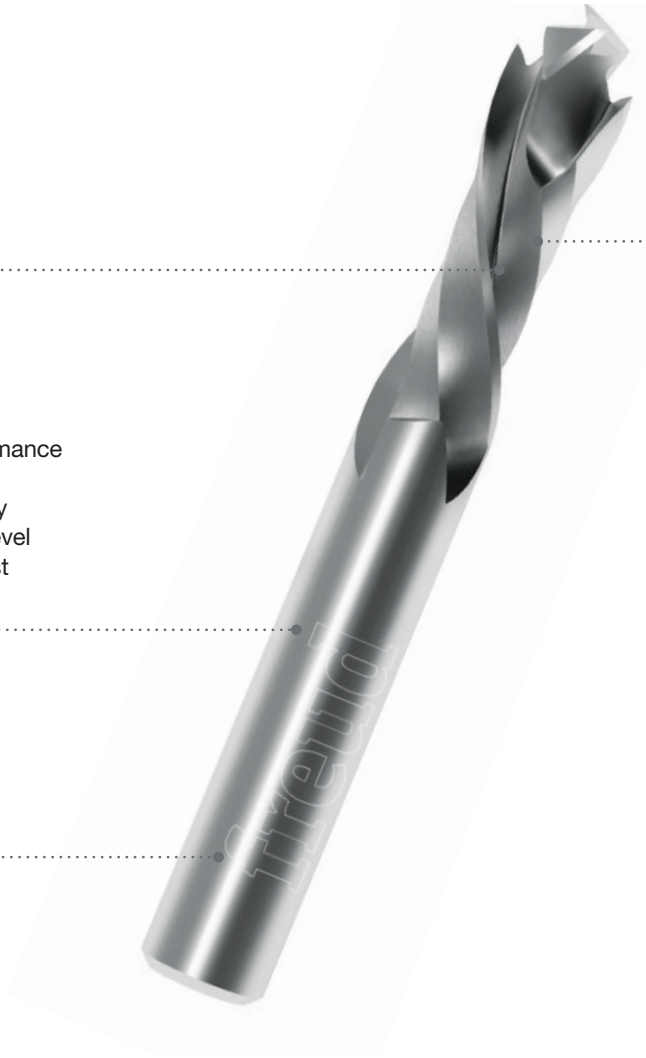
PRODUCT FEATURES

WHY FREUD IS PRECISELY THE BEST!

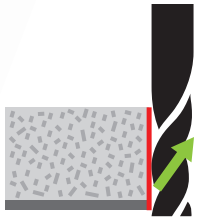
Extended lifetime
Long lasting TiCo Carbide in-house manufactured. Freud's control of the Carbide production cycle ensures that the correct formula is developed to address the specific application needs, delivering maximum performance.

Carbide innovation
Freud constantly invests in new Carbide recipe development to mantain its cutting tools performance at unmatched quality levels.
The new micrograin Carbide H05MG specifically formulated for the SCH range presents a high level of hardness and tenacity, to achieve the greatest resistance to wear and impact.

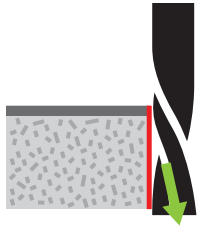
Wide range of shank diameters
From 6 mm to 20 mm.



Design innovation
The new helix designs and geometries, designed for the SCH range, deliver flawless results and impeccable finishing also in demanding applications.



Upcut helix
Universal tool, suitable for all cutting applications and especially for roughing with chipbreaker. Indicated for sizing bottom laminated composite panels.



Downcut helix
Indicated for sizing top laminated composite panels. Not suitable for plunging in case of solid wood.

Up-down cut helix (compression)
Universal tool, suitable for all cutting applications. Indicated for sizing top and bottom laminated composite panels.

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.

FACTORS INFLUENCING TOOL PERFORMANCE

Vibration
It represents the main cause of tool low performance or breakage. Vibrations could be caused by a poor machine maintenance or by an incorrect fixing of the panel, due to damaged suction system or worn out spoil board.

SCH tolerance
In all industrial cutting tools tolerance is a key factor. In the SCH segment this is determined by the shank dimension and the eccentricity. Freud SCH respect the limits fixed by EN 847 European Regulation.

Tool maintenance
It is important to highlight that tool maintenance applies also to accessories and not only to tools. All accessories must be regularly checked or replaced.

Suction system
Wood chips must be removed from the panel via suction systems for security reasons, to avoid further contact with the tools and the surface.

HOW TO CALCULATE THE CORRECT FEED RATE

To find the suggested feed rates refer to the tables with standard parameters and apply the correction factors.

Standard parameters

Material		Cutting thickness		Rotation speed	
	Softwood		h=D		18.000 RPM

Correction factors

Material					
	Hardwood	**x0,9**		MDF/ Chipboard	**x1,1**

Cutting thickness					
	h=Dx1 to Dx2	**x0,75**		h=Dx2 to Dx3	**x0,5**
	h=over Dx3	**x0,4**			

Rotation speed *					
	12.000 RPM	**x0,66**		24.000 RPM	**x1,33**

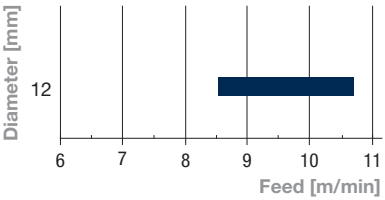
*Suggested speeds are proportional to RPM (e.g. 12.000/18.000=0,66).

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

FEEDING SPEED RATES EXAMPLES FOR SCH2UFN256R

STANDARD PARAMETERS FOR 12 MM DIAMETER BIT

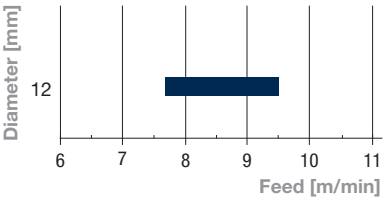
Material	Cutting thickness	Rotation speed
 Softwood	 H=D	 18.000 RPM



Feed rate:
from 8,6 to 10,6 m/min.

CORRECTION FACTORS FOR HARDWOOD (X0,9)

Material	Cutting thickness	Rotation speed
 **Hardwood**	 H=D	 18.000 RPM

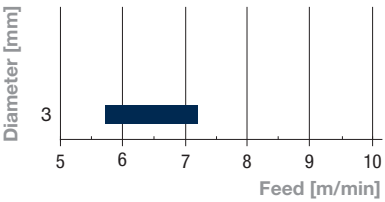


Calculate feed rate:
8,6 x 0,9=**7,74**
10,6 x 0,9=**9,54**

Feed rate:
from 7,74 to 9,54 m/min.

CORRECTION FACTORS FOR HARDWOOD (X0,9) AND FOR 24 MM CUTTING DEPTH (X0,75)

Material	Cutting thickness	Rotation speed
 **Hardwood**	 **H=Dx2 (24 mm)**	 18.000 RPM



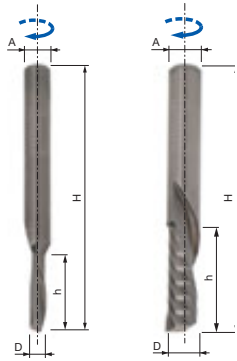
Calculate feed rate:
8,6 x 0,9 x 0,75=**5,80**
10,6 x 0,9 x 0,75=**7,15**

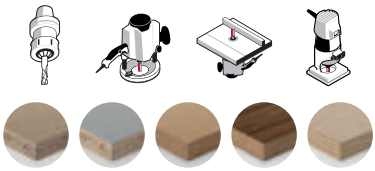
Feed rate:
from 5,8 to 7,15 m/min.

SIZING

SCH1DFN

Finishing router cutter downcut with right-hand Z1





D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm						
3	13	60	6	-20	MG10	1	30000	**SCH1DFN110R**	F03FR03623
4	15	50	4	-20	MG10	1	30000	**SCH1DFN210R**	F03FR03629
4	16	60	6	-20	MG10	1	30000	**SCH1DFN120R**	F03FR03624
5	17	50	5	-20	MG10	1	30000	**SCH1DFN215R**	F03FR03630
5	17	60	6	-20	MG10	1	30000	**SCH1DFN130R**	F03FR03625
5	17	60	8	-20	MG10	1	30000	**SCH1DFN160R**	F03FR03628
6	17	50	6	-20	MG10	1	30000	**SCH1DFN220R**	F03FR03631

D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
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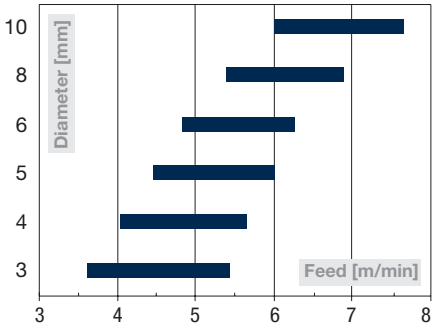
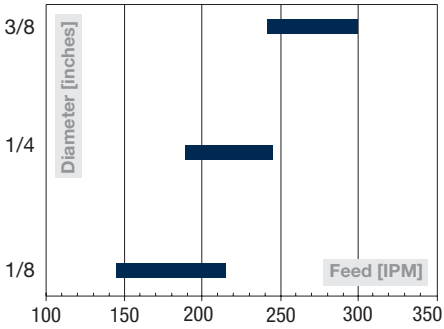
6	22	60	6	-20	MG10	1	30000	**SCH1DFN225R**	F03FR03632
8	22	70	8	-30	MG10	1	30000	**SCH1DFN235R**	F03FR03634
8	32	80	8	-30	MG10	1	30000	**SCH1DFN240R**	F03FR03635
10	32	80	10	-30	H05MG	1	30000	**SCH1DFN255R**	F03FR03637
10	42	100	10	-30	H05MG	1	30000	**SCH1DFN260R**	F03FR03638

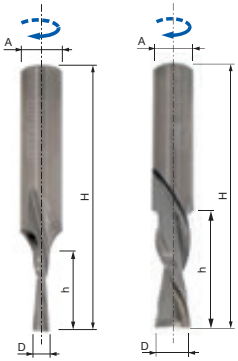
D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
inch	inch	inch	inch						
1/8	1/2	2-1/2	1/4	-20	MG10	1	30000	**SCH1DFN140R**	F03FR03626
3/16	3/4	2-1/2	1/4	-30	MG10	1	30000	**SCH1DFN150R**	F03FR03627
1/4	1	2-1/2	1/4	-20	MG10	1	30000	**SCH1DFN230R**	F03FR03633
3/8	1-1/8	3	3/8	-20	H05MG	1	30000	**SCH1DFN250R**	F03FR03636

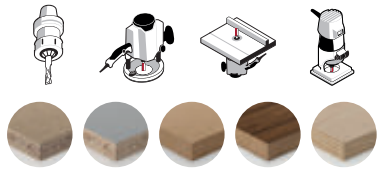
Working parameters for MDF/Chipboard

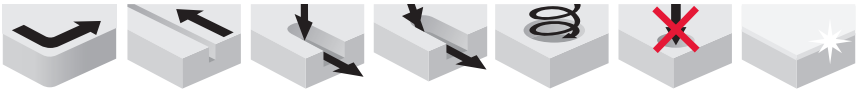




SCH2DFN
Finishing router cutter downcut with right-hand Z2







D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm						
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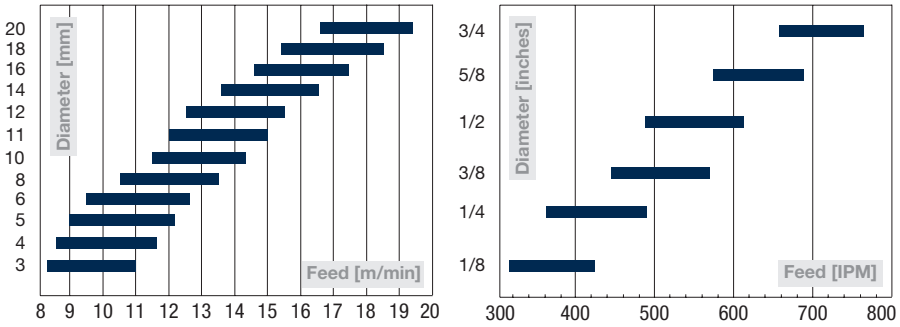
3	13	50	8	-20	MG10	2	30000	**SCH2DFN135R**	F03FR03665
4	16	50	6	-20	MG10	2	30000	**SCH2DFN115R**	F03FR03661
4	16	50	8	-20	MG10	2	30000	**SCH2DFN140R**	F03FR03666
4	15	50	4	-20	MG10	2	30000	**SCH2DFN204R**	F03FR03673
5	17	60	6	-20	MG10	2	30000	**SCH2DFN120R**	F03FR03662
5	17	50	8	-20	MG10	2	30000	**SCH2DFN145R**	F03FR03667
5	17	50	5	-20	MG10	2	30000	**SCH2DFN208R**	F03FR03674
6	25	60	8	-20	MG10	2	30000	**SCH2DFN150R**	F03FR03668
6	17	60	6	-20	MG10	2	30000	**SCH2DFN212R**	F03FR03675
6	22	60	6	-20	MG10	2	30000	**SCH2DFN216R**	F03FR03676
7	32	80	8	-20	MG10	2	30000	**SCH2DFN155R**	F03FR03669
8	25	70	12	-30	H05MG	2	30000	**SCH2DFN160R**	F03FR03670
8	22	70	8	-30	MG10	2	30000	**SCH2DFN224R**	F03FR03678
8	32	80	8	-30	MG10	2	30000	**SCH2DFN228R**	F03FR03679
8	42	90	8	-30	MG10	2	30000	**SCH2DFN232R**	F03FR03680
10	32	80	12	-30	H05MG	2	30000	**SCH2DFN170R**	F03FR03672
10	32	80	10	-30	H05MG	2	30000	**SCH2DFN240R**	F03FR03682
10	42	100	10	-30	H05MG	2	30000	**SCH2DFN244R**	F03FR03683
10	52	100	10	-30	H05MG	2	30000	**SCH2DFN248R**	F03FR03684
11	37	80	11	-30	H05MG	2	30000	**SCH2DFN252R**	F03FR03685
12	32	80	12	-30	H05MG	2	30000	**SCH2DFN256R**	F03FR03686
12	42	90	12	-30	H05MG	2	30000	**SCH2DFN260R**	F03FR03687
12	52	100	12	-30	H05MG	2	30000	**SCH2DFN264R**	F03FR03688
14	52	100	14	-30	H05MG	2	25000	**SCH2DFN276R**	F03FR03691
16	52	100	16	-30	H05MG	2	25000	**SCH2DFN280R**	F03FR03692
18	52	110	18	-30	H05MG	2	25000	**SCH2DFN284R**	F03FR03693
20	52	120	20	-30	H05MG	2	25000	**SCH2DFN288R**	F03FR03694
20	72	140	20	-30	H05MG	2	25000	**SCH2DFN292R**	F03FR03695

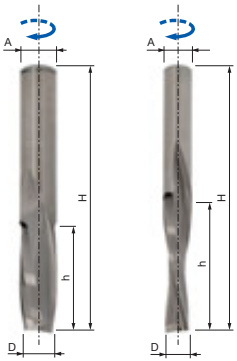
D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
inch	inch	inch	inch						
1/8	1/2	2	1/4	-20	MG10	2	30000	**SCH2DFN125R**	F03FR03663
3/16	3/4	2	1/4	-20	MG10	2	30000	**SCH2DFN130R**	F03FR03664

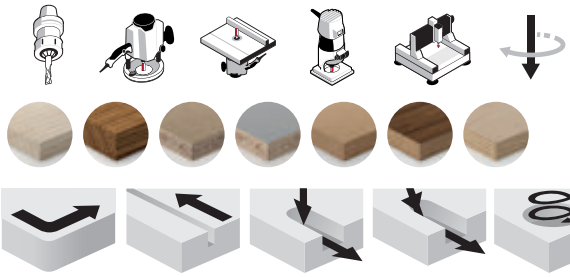
D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
inch	inch	inch	inch						
3/8	1-1/8	3	3/8	-30	H05MG	2	30000	**SCH2DFN236R**	F03FR03681
3/8	1-1/4	3	1/2	-30	H05MG	2	30000	**SCH2DFN165R**	F03FR03671
1/4	1	2-1/2	1/4	-20	MG10	2	30000	**SCH2DFN220R**	F03FR03677
1/2	1-1/4	3	1/2	-30	H05MG	2	30000	**SCH2DFN268R**	F03FR03689
1/2	2	4	1/2	-30	H05MG	2	30000	**SCH2DFN272R**	F03FR03690

Working parameters for MDF/Chipboard



SCH2DFN
Finishing router cutter downcut with right-hand Z2





D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
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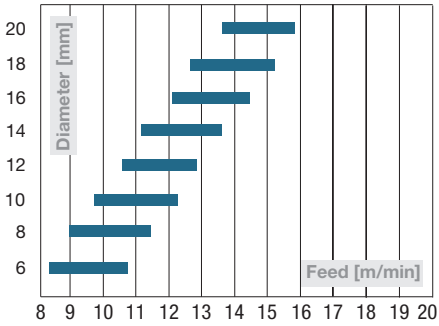
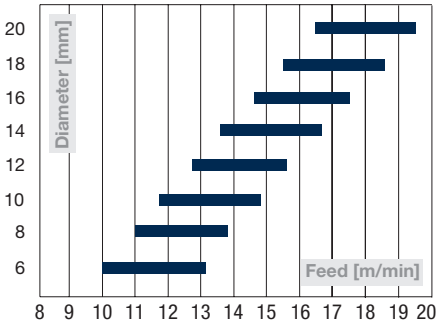
5	17	60	6	-15	MG10	2	30000	**SCH2DFN720R**	F03FR04385
6	22	60	6	-15	MG10	2	30000	**SCH2DFN816R**	F03FR04386
8	22	70	8	-15	MG10	2	30000	**SCH2DFN824R**	F03FR04387
10	32	80	10	-15	MG10	2	30000	**SCH2DFN840R**	F03FR04388
12	52	110	12	-15	MG10	2	30000	**SCH2DFN864R**	F03FR04389
14	52	110	14	-15	MG10	2	25000	**SCH2DFN876R**	F03FR04390
16	52	120	16	-15	MG10	2	25000	**SCH2DFN880R**	F03FR04391
18	52	120	18	-15	MG10	2	25000	**SCH2DFN884R**	F03FR04392
20	52	140	20	-15	MG10	2	25000	**SCH2DFN888R**	F03FR04393
20	72	160	20	-15	MG10	2	25000	**SCH2DFN892R**	F03FR04394

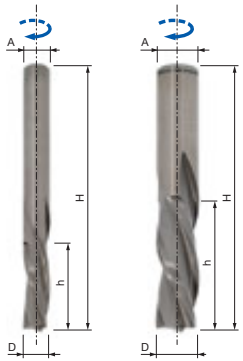
Working parameters for Hardwood

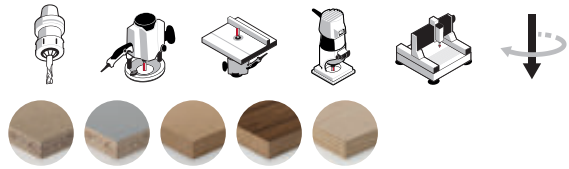


Correction factors for Chipboard/MDF



SCH3DFN
Finishing router cutter downcut with right-hand Z3

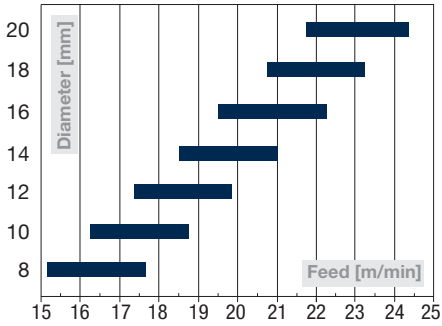


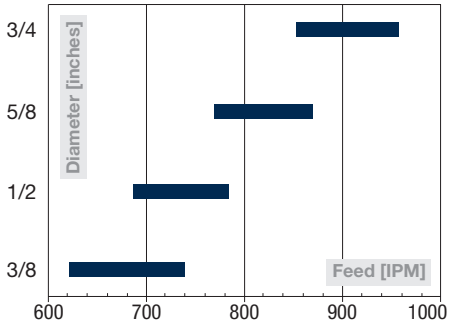


D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm						
8	22	70	8	-30	MG10	3	30000	**SCH3DFN208R**	F03FR03755
8	32	80	8	-30	MG10	3	30000	**SCH3DFN212R**	F03FR03756
10	32	80	10	-30	H05MG	3	30000	**SCH3DFN220R**	F03FR03758
10	42	90	10	-30	H05MG	3	30000	**SCH3DFN224R**	F03FR03759
10	52	100	10	-30	H05MG	3	30000	**SCH3DFN228R**	F03FR03760
12	32	80	12	-30	H05MG	3	30000	**SCH3DFN232R**	F03FR03761
12	42	90	12	-30	H05MG	3	30000	**SCH3DFN236R**	F03FR03762
12	52	100	12	-30	H05MG	3	30000	**SCH3DFN240R**	F03FR03763
14	45	150	14	-30	H05MG	3	25000	**SCH3DFN102R**	F03FR03751
14	42	90	14	-30	H05MG	3	25000	**SCH3DFN248R**	F03FR03765
14	52	100	14	-30	H05MG	3	25000	**SCH3DFN252R**	F03FR03766
16	45	150	16	-30	H05MG	3	25000	**SCH3DFN104R**	F03FR03752
16	42	100	16	-30	H05MG	3	25000	**SCH3DFN256R**	F03FR03767
16	52	100	16	-30	H05MG	3	25000	**SCH3DFN260R**	F03FR03768
16	62	120	16	-30	H05MG	3	25000	**SCH3DFN264R**	F03FR03769
18	45	150	18	-30	H05MG	3	25000	**SCH3DFN106R**	F03FR03753
18	52	110	18	-30	H05MG	3	25000	**SCH3DFN268R**	F03FR03770
18	72	130	18	-30	H05MG	3	25000	**SCH3DFN272R**	F03FR03771
20	52	110	20	-30	H05MG	3	25000	**SCH3DFN276R**	F03FR03772
20	72	140	20	-30	H05MG	3	25000	**SCH3DFN280R**	F03FR03773
20	92	170	20	-30	H05MG	3	25000	**SCH3DFN284R**	F03FR03774

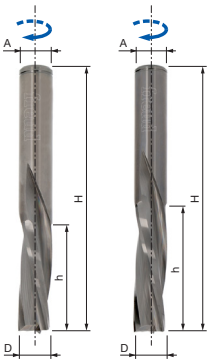
D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
inch	inch	inch	inch						
1/4	3/4	2-1/2	1/4	-20	MG10	3	30000	**SCH3DFN204R**	F03FR03754
3/8	1-1/8	3	3/8	-30	H05MG	3	30000	**SCH3DFN216R**	F03FR03757
1/2	2	4	1/2	-30	H05MG	3	30000	**SCH3DFN244R**	F03FR03764

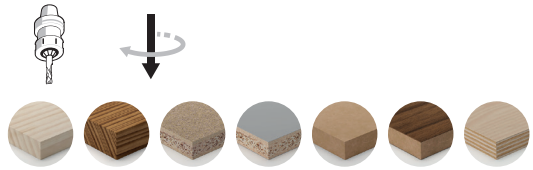
Working parameters for MDF/Chipboard





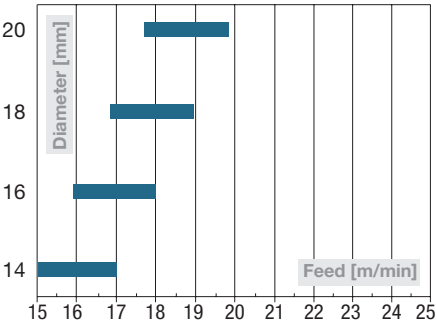
SCH3DFN
Finishing router cutter downcut with right-hand Z3



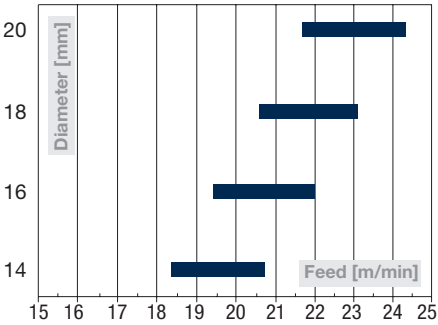


D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm						
14	42	110	14	-15	MG10	3	25000	**SCH3DFN848R**	F03FR04406
16	42	110	16	-15	MG10	3	25000	**SCH3DFN856R**	F03FR04407
16	52	120	16	-15	MG10	3	25000	**SCH3DFN860R**	F03FR04408
18	52	130	18	-15	MG10	3	25000	**SCH3DFN868R**	F03FR04409
20	52	140	20	-15	MG10	3	25000	**SCH3DFN876R**	F03FR04410
20	72	160	20	-15	MG10	3	25000	**SCH3DFN880R**	F03FR04411

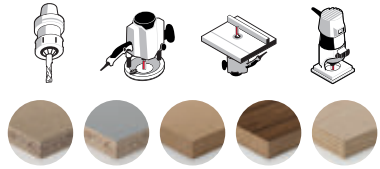
Working parameters for Hardwood

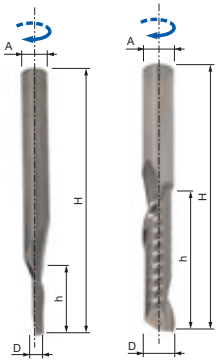


Working parameters for MDF/Chipboard



SCH1UFN
Finishing router cutter upcut with right-hand Z1

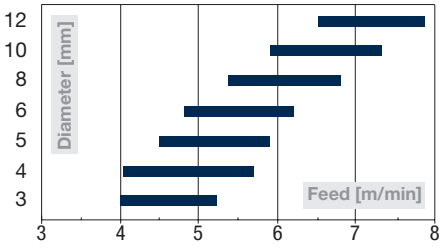


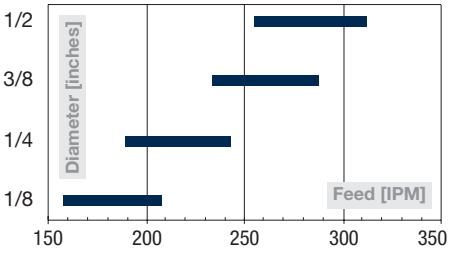


D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm						
3	13	60	6	20	MG10	1	30000	**SCH1UFN110R**	F03FR03639
4	15	50	4	20	MG10	1	30000	**SCH1UFN210R**	F03FR03645
4	16	60	6	20	MG10	1	30000	**SCH1UFN120R**	F03FR03640
5	17	50	5	20	MG10	1	30000	**SCH1UFN215R**	F03FR03646
5	17	60	6	20	MG10	1	30000	**SCH1UFN130R**	F03FR03641
5	17	60	8	20	MG10	1	30000	**SCH1UFN160R**	F03FR03644
6	17	50	6	20	MG10	1	30000	**SCH1UFN220R**	F03FR03647
6	22	60	6	20	MG10	1	30000	**SCH1UFN225R**	F03FR03648
8	22	70	8	30	MG10	1	30000	**SCH1UFN235R**	F03FR03650
8	32	80	8	30	MG10	1	30000	**SCH1UFN240R**	F03FR03651
8	42	90	8	30	MG10	1	30000	**SCH1UFN245R**	F03FR03652
10	32	80	10	30	H05MG	1	30000	**SCH1UFN255R**	F03FR03654
10	42	100	10	30	H05MG	1	30000	**SCH1UFN260R**	F03FR03655
10	52	100	10	30	H05MG	1	30000	**SCH1UFN265R**	F03FR03656
12	32	80	12	30	H05MG	1	30000	**SCH1UFN270R**	F03FR03657
12	52	100	12	30	H05MG	1	30000	**SCH1UFN275R**	F03FR03658

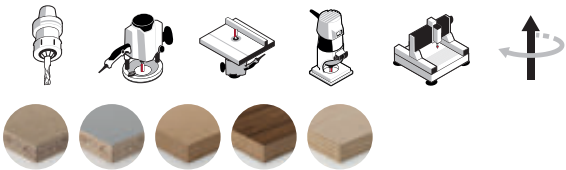
D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
inch	inch	inch	inch						
1/8	1/2	2-1/2	1/4	20	MG10	1	30000	**SCH1UFN140R**	F03FR03642
3/16	3/4	2-1/2	1/4	20	MG10	1	30000	**SCH1UFN150R**	F03FR03643
1/4	1	2-1/2	1/4	20	MG10	1	30000	**SCH1UFN230R**	F03FR03649
3/8	1-1/8	3	3/8	30	H05MG	1	30000	**SCH1UFN250R**	F03FR03653
1/2	1-5/16	3	1/2	30	H05MG	1	30000	**SCH1UFN280R**	F03FR03659

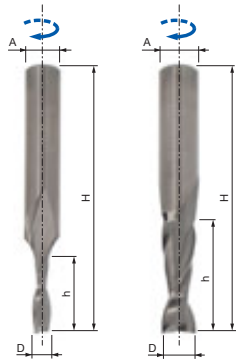
Working parameters for MDF/Chipboard





SCH2UFN
Finishing router cutter upcut with right-hand Z2



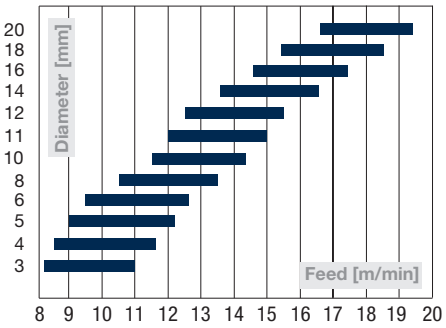


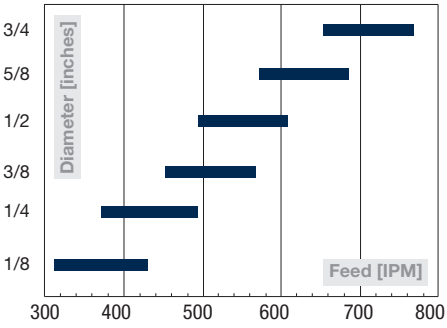
D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm						
3	13	50	6	20	MG10	2	30000	**SCH2UFN110R**	F03FR03696
3	13	50	8	20	MG10	2	30000	**SCH2UFN135R**	F03FR03701
4	16	50	6	20	MG10	2	30000	**SCH2UFN115R**	F03FR03697
4	16	50	8	20	MG10	2	30000	**SCH2UFN140R**	F03FR03702
4	15	50	4	20	MG10	2	30000	**SCH2UFN204R**	F03FR03709
5	17	60	6	20	MG10	2	30000	**SCH2UFN120R**	F03FR03698
5	17	50	8	20	MG10	2	30000	**SCH2UFN145R**	F03FR03703
5	17	50	5	20	MG10	2	30000	**SCH2UFN208R**	F03FR03710
6	25	60	8	20	MG10	2	30000	**SCH2UFN150R**	F03FR03704
6	17	60	6	20	MG10	2	30000	**SCH2UFN212R**	F03FR03711
6	22	60	6	20	MG10	2	30000	**SCH2UFN216R**	F03FR03712
7	32	80	8	20	MG10	2	30000	**SCH2UFN155R**	F03FR03705
8	25	70	12	30	H05MG	2	30000	**SCH2UFN160R**	F03FR03706
8	22	70	8	30	MG10	2	30000	**SCH2UFN224R**	F03FR03714
8	32	80	8	30	MG10	2	30000	**SCH2UFN228R**	F03FR03715
8	42	90	8	30	MG10	2	30000	**SCH2UFN232R**	F03FR03716
10	32	80	12	30	H05MG	2	30000	**SCH2UFN170R**	F03FR03708
10	32	80	10	30	H05MG	2	30000	**SCH2UFN240R**	F03FR03718
10	42	100	10	30	H05MG	2	30000	**SCH2UFN244R**	F03FR03719
10	52	100	10	30	H05MG	2	30000	**SCH2UFN248R**	F03FR03720
11	37	80	11	30	H05MG	2	30000	**SCH2UFN252R**	F03FR03721
12	32	80	12	30	H05MG	2	30000	**SCH2UFN256R**	F03FR03722
12	42	90	12	30	H05MG	2	30000	**SCH2UFN260R**	F03FR03723
12	52	100	12	30	H05MG	2	30000	**SCH2UFN264R**	F03FR03724
14	52	100	14	30	H05MG	2	25000	**SCH2UFN276R**	F03FR03727
16	52	100	16	30	H05MG	2	25000	**SCH2UFN280R**	F03FR03728
18	52	110	18	30	H05MG	2	25000	**SCH2UFN284R**	F03FR03729
20	52	120	20	30	H05MG	2	25000	**SCH2UFN288R**	F03FR03730
20	72	140	20	30	H05MG	2	25000	**SCH2UFN292R**	F03FR03731

D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
inch	inch	inch	inch						
1/8	1/2	2	1/4	20	MG10	2	30000	**SCH2UFN125R**	F03FR03699
3/16	3/4	2	1/4	20	MG10	2	30000	**SCH2UFN130R**	F03FR03700

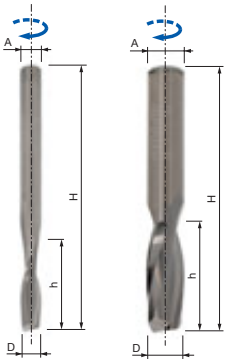
D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
inch	inch	inch	inch						
3/8	1-1/8	3	3/8	30	H05MG	2	30000	**SCH2UFN236R**	F03FR03717
3/8	1-1/4	3	1/2	30	H05MG	2	30000	**SCH2UFN165R**	F03FR03707
1/4	1	2-1/2	1/4	20	MG10	2	30000	**SCH2UFN220R**	F03FR03713
1/2	1-1/4	3	1/2	30	H05MG	2	30000	**SCH2UFN268R**	F03FR03725
1/2	2	4	1/2	30	H05MG	2	30000	**SCH2UFN272R**	F03FR03726

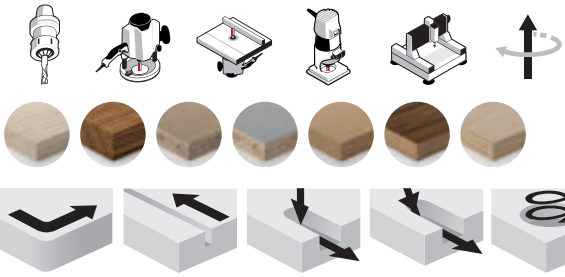
Working parameters for MDF/Chipboard





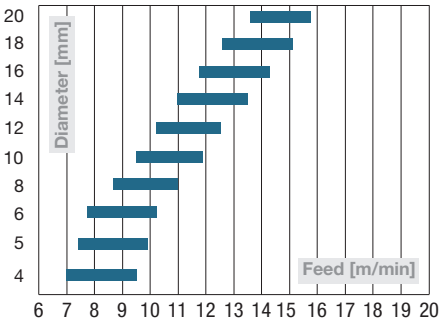
SCH2UFN
Finishing router cutter upcut with right-hand Z2



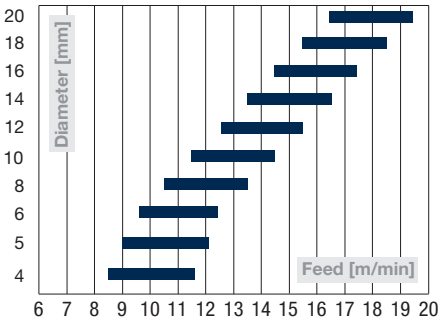


D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm						
4	15	50	4	20	MG10	2	30000	**SCH2UFN804R**	F03FR04395
5	17	50	5	20	MG10	2	30000	**SCH2UFN808R**	F03FR04396
6	22	60	6	20	MG10	2	30000	**SCH2UFN816R**	F03FR04397
8	32	80	8	20	MG10	2	30000	**SCH2UFN828R**	F03FR04398
10	52	100	10	20	MG10	2	30000	**SCH2UFN848R**	F03FR04399
12	52	110	12	20	MG10	2	30000	**SCH2UFN864R**	F03FR04400
14	52	110	14	20	MG10	2	25000	**SCH2UFN876R**	F03FR04401
16	52	120	16	20	MG10	2	25000	**SCH2UFN880R**	F03FR04402
18	52	120	18	20	MG10	2	25000	**SCH2UFN884R**	F03FR04403
20	52	140	20	20	MG10	2	25000	**SCH2UFN888R**	F03FR04404
20	72	160	20	20	MG10	2	25000	**SCH2UFN892R**	F03FR04405

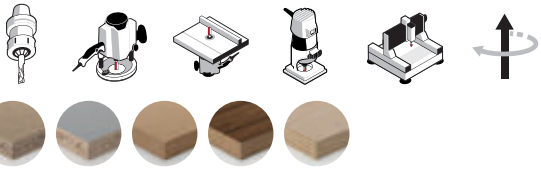
Working parameters for Hardwood

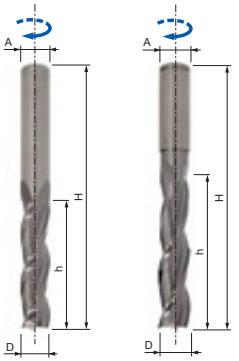


Working parameters for MDF/Chipboard



SCH3UFN
Finishing router cutter upcut with right-hand Z3

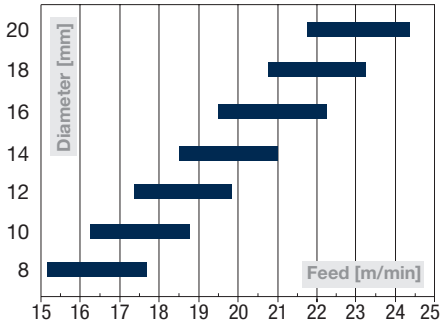


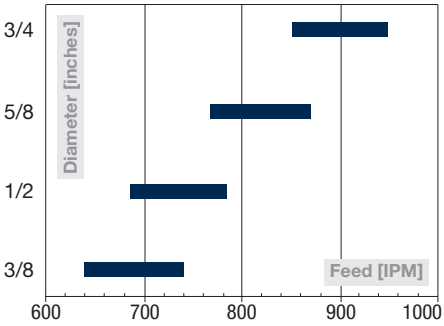


D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm						
8	22	70	8	30	MG10	3	30000	**SCH3UFN208R**	F03FR03807
8	32	80	8	30	MG10	3	30000	**SCH3UFN212R**	F03FR03808
10	32	80	10	30	H05MG	3	30000	**SCH3UFN220R**	F03FR03810
10	42	90	10	30	H05MG	3	30000	**SCH3UFN224R**	F03FR03811
10	52	100	10	30	H05MG	3	30000	**SCH3UFN228R**	F03FR03812
12	32	80	12	30	H05MG	3	30000	**SCH3UFN232R**	F03FR03813
12	42	90	12	30	H05MG	3	30000	**SCH3UFN236R**	F03FR03814
12	52	100	12	30	H05MG	3	30000	**SCH3UFN240R**	F03FR03815
14	45	150	14	30	H05MG	3	25000	**SCH3UFN102R**	F03FR03803
14	42	90	14	30	H05MG	3	25000	**SCH3UFN248R**	F03FR03817
14	52	100	14	30	H05MG	3	25000	**SCH3UFN252R**	F03FR03818
16	45	150	16	30	H05MG	3	25000	**SCH3UFN104R**	F03FR03804
16	42	100	16	30	H05MG	3	25000	**SCH3UFN256R**	F03FR03819
16	52	100	16	30	H05MG	3	25000	**SCH3UFN260R**	F03FR03820
16	62	120	16	30	H05MG	3	25000	**SCH3UFN264R**	F03FR03821
18	45	150	18	30	H05MG	3	25000	**SCH3UFN106R**	F03FR03805
18	52	110	18	30	H05MG	3	25000	**SCH3UFN268R**	F03FR03822
18	72	130	18	30	H05MG	3	25000	**SCH3UFN272R**	F03FR03823
20	52	110	20	30	H05MG	3	25000	**SCH3UFN276R**	F03FR03824
20	72	140	20	30	H05MG	3	25000	**SCH3UFN280R**	F03FR03825
20	92	170	20	30	H05MG	3	25000	**SCH3UFN284R**	F03FR03826

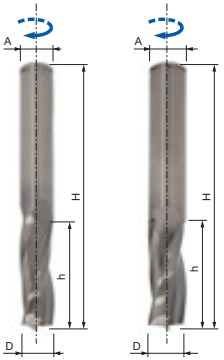
D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
inch	inch	inch	inch						
1/4	3/4	2-1/2	1/4	20	MG10	3	30000	**SCH3UFN204R**	F03FR03806
3/8	1-1/8	3	3/8	30	H05MG	3	30000	**SCH3UFN216R**	F03FR03809
1/2	2	4	1/2	30	H05MG	3	30000	**SCH3UFN244R**	F03FR03816

Working parameters for MDF/Chipboard



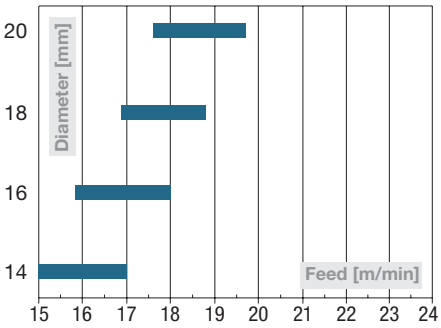


SCH3UFN
Finishing router cutter upcut with right-hand Z3

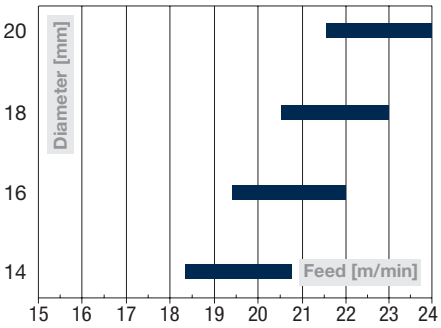


D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm						
14	42	14	110	20	MG10	3	25000	**SCH3UFN848R**	F03FR04412
16	42	16	110	20	MG10	3	25000	**SCH3UFN856R**	F03FR04413
16	52	16	120	20	MG10	3	25000	**SCH3UFN860R**	F03FR04414
18	52	18	130	20	MG10	3	25000	**SCH3UFN868R**	F03FR04415
20	52	20	140	20	MG10	3	25000	**SCH3UFN876R**	F03FR04416
20	72	20	160	20	MG10	3	25000	**SCH3UFN880R**	F03FR04417

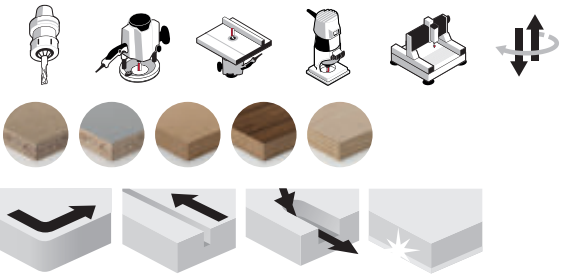
Working parameters for Hardwood

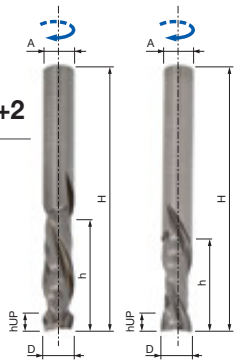


Working parameters for MDF/Chipboard



SCH2XFN
Finishing router cutter compression with right-hand Z2+2

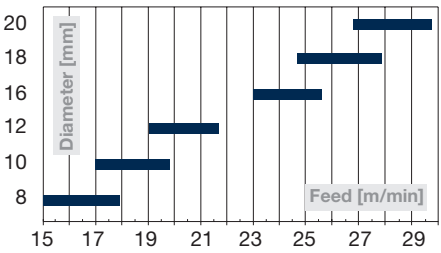


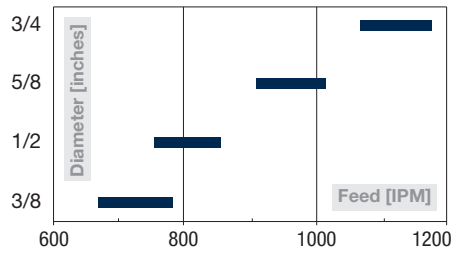


D	h	hUP	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm				1/min.		
8	22	5	70	8	±30	MG10	2+2	30000	**SCH2XFN310R**	F03FR03732
8	32	10	70	8	±30	MG10	2+2	30000	**SCH2XFN410R**	F03FR03741
10	26	5	70	10	±30	H05MG	2+2	30000	**SCH2XFN340R**	F03FR03735
10	32	5	80	10	±30	H05MG	2+2	30000	**SCH2XFN350R**	F03FR03736
10	29	10	80	10	±30	H05MG	2+2	30000	**SCH2XFN420R**	F03FR03743
12	32	5	90	12	±30	H05MG	2+2	30000	**SCH2XFN360R**	F03FR03737
12	42	5	100	12	±30	H05MG	2+2	30000	**SCH2XFN370R**	F03FR03738
12	32	12	80	12	±30	H05MG	2+2	30000	**SCH2XFN425R**	F03FR03744
12	42	12	100	12	±30	H05MG	2+2	30000	**SCH2XFN430R**	F03FR03745
16	35	14	90	16	±30	H05MG	2+2	25000	**SCH2XFN444R**	F03FR04012
18	55	24	110	18	±30	H05MG	2+2	25000	**SCH2XFN450R**	F03FR03749
20	55	30	120	20	±30	H05MG	2+2	25000	**SCH2XFN455R**	F03FR03750

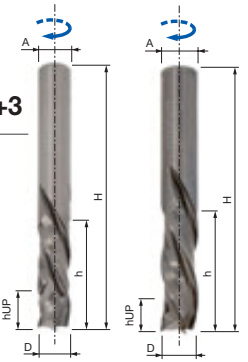
D	h	hUP	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
inch	inch	inch	inch	inch				1/min.		
3/8	1	3/16	3	3/8	±30	H05MG	2+2	30000	**SCH2XFN320R**	F03FR03733
3/8	1-1/8	3/8	3	3/8	±30	H05MG	2+2	30000	**SCH2XFN415R**	F03FR03742
3/8	1-1/4	3/16	3	3/8	±30	H05MG	2+2	30000	**SCH2XFN330R**	F03FR03734
1/2	1	3/16	3	1/2	±30	H05MG	2+2	30000	**SCH2XFN380R**	F03FR03739
1/2	1-1/2	3/16	3-1/2	1/2	±30	H05MG	2+2	30000	**SCH2XFN390R**	F03FR03740
1/2	1	9/16	3	1/2	±30	H05MG	2+2	30000	**SCH2XFN435R**	F03FR03746
1/2	1-1/2	9/16	3-1/2	1/2	±30	H05MG	2+2	30000	**SCH2XFN440R**	F03FR03747

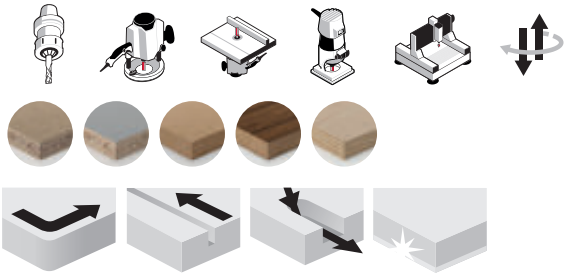
Working parameters for MDF/Chipboard





SCH3XFN
Finishing router cutter compression with right-hand Z3+3

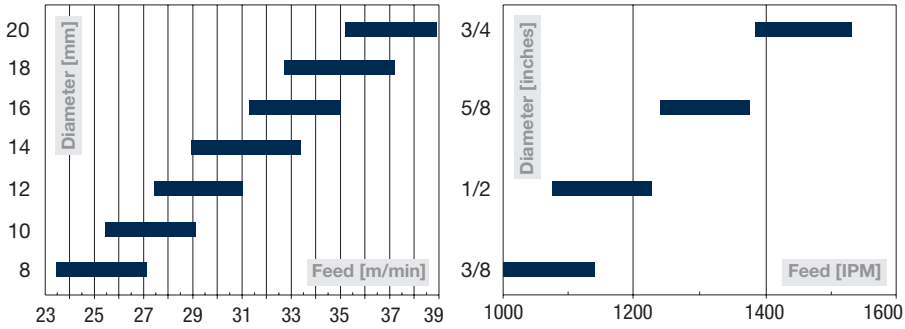




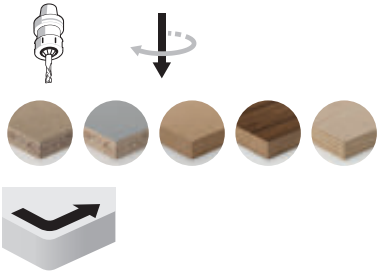
D	h	hUP	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm				1/min.		
8	22	5	70	8	±30	MG10	3+3	30000	**SCH3XFN310R**	F03FR03856
8	32	10	70	8	±30	MG10	3+3	30000	**SCH3XFN410R**	F03FR03866
10	26	5	70	10	±30	H05MG	3+3	30000	**SCH3XFN340R**	F03FR04013
10	32	10	80	10	±30	H05MG	3+3	30000	**SCH3XFN350R**	F03FR03860
10	29	5	80	10	±30	H05MG	3+3	30000	**SCH3XFN420R**	F03FR04014
10	42	13	90	10	±30	H05MG	3+3	30000	**SCH3XFN422R**	F03FR03869
12	22	5	80	12	±30	H05MG	3+3	30000	**SCH3XFN355R**	F03FR03861
12	32	5	90	12	±30	H05MG	3+3	30000	**SCH3XFN360R**	F03FR03862
12	42	5	100	12	±30	H05MG	3+3	30000	**SCH3XFN370R**	F03FR03863
12	32	12	80	12	±30	H05MG	3+3	30000	**SCH3XFN425R**	F03FR03870
12	42	14	100	12	±30	H05MG	3+3	30000	**SCH3XFN430R**	F03FR03871
12	52	16	100	12	±30	H05MG	3+3	30000	**SCH3XFN432R**	F03FR03872

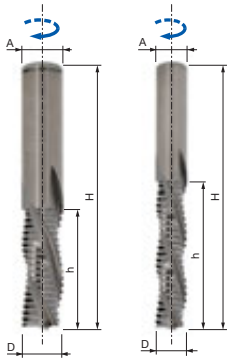
D	h	hUP	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
inch	inch	inch	inch	inch				1/min.		
3/8	1	3/16	3	3/8	±30	H05MG	3+3	30000	**SCH3XFN320R**	F03FR03857
3/8	1-1/4	3/8	3	3/8	±30	H05MG	3+3	30000	**SCH3XFN330R**	F03FR03858
3/8	1-1/8	3/16	3	3/8	±30	H05MG	3+3	30000	**SCH3XFN415R**	F03FR03867
1/2	1	3/16	3	1/2	±30	H05MG	3+3	30000	**SCH3XFN380R**	F03FR03864
1/2	1-1/2	1/2	3-1/2	1/2	±30	H05MG	3+3	30000	**SCH3XFN390R**	F03FR03865
1/2	1-1/8	3/16	3	1/2	±30	H05MG	3+3	30000	**SCH3XFN436R**	F03FR03873
1/2	1-5/8	3/4	3-1/2	1/2	±30	H05MG	3+3	30000	**SCH3XFN438R**	F03FR03874
1/2	2-1/4	3/4	4	1/2	±30	H05MG	3+3	30000	**SCH3XFN442R**	F03FR03875

Working parameters for MDF/Chipboard



SCH3DRN
Roughing router cutter downcut with right-hand Z3

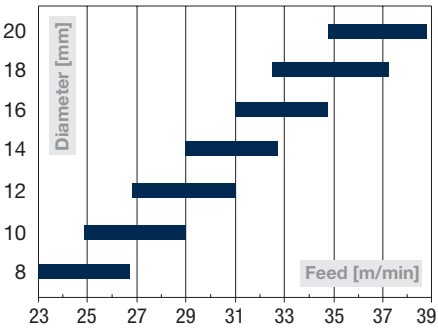


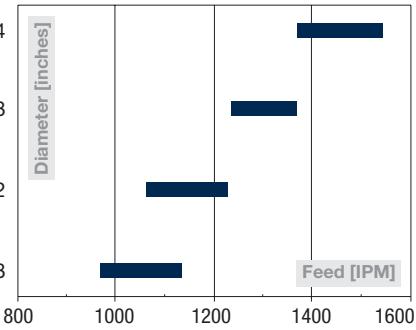


D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm						
8	22	70	8	-30	MG10	3	30000	**SCH3DRN504R**	F03FR03778
8	32	80	8	-30	MG10	3	30000	**SCH3DRN506R**	F03FR03779
8	42	90	8	-30	MG10	3	30000	**SCH3DRN508R**	F03FR03780
10	32	80	10	-30	H05MG	3	30000	**SCH3DRN512R**	F03FR03782
10	42	90	10	-30	H05MG	3	30000	**SCH3DRN514R**	F03FR03783
10	52	100	10	-30	H05MG	3	30000	**SCH3DRN516R**	F03FR03784
12	32	80	12	-30	H05MG	3	30000	**SCH3DRN518R**	F03FR03785
12	42	90	12	-30	H05MG	3	30000	**SCH3DRN520R**	F03FR03786
12	52	100	12	-30	H05MG	3	30000	**SCH3DRN522R**	F03FR03787
14	42	90	14	-30	H05MG	3	25000	**SCH3DRN528R**	F03FR03790
14	52	100	14	-30	H05MG	3	25000	**SCH3DRN530R**	F03FR03791
16	42	100	16	-30	H05MG	3	25000	**SCH3DRN534R**	F03FR03793
16	52	110	16	-30	H05MG	3	25000	**SCH3DRN536R**	F03FR03794
16	62	120	16	-30	H05MG	3	25000	**SCH3DRN538R**	F03FR03795
18	52	110	18	-30	H05MG	3	25000	**SCH3DRN540R**	F03FR03796
18	72	130	18	-30	H05MG	3	25000	**SCH3DRN542R**	F03FR03797
20	52	120	20	-30	H05MG	3	25000	**SCH3DRN546R**	F03FR03799
20	72	140	20	-30	H05MG	3	25000	**SCH3DRN548R**	F03FR03800
20	85	150	20	-30	H05MG	3	25000	**SCH3DRN550R**	F03FR03801
20	102	170	20	-30	H05MG	3	25000	**SCH3DRN552R**	F03FR03802

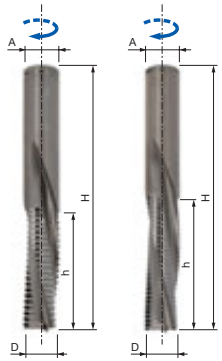
D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
inch	inch	inch	inch						
3/8	1-1/8	3-1/2	3/8	-30	H05MG	3	30000	**SCH3DRN510R**	F03FR03781
1/2	1-1/8	3-1/2	1/2	-30	H05MG	3	30000	**SCH3DRN524R**	F03FR03788
1/2	1-5/8	4	1/2	-30	H05MG	3	30000	**SCH3DRN526R**	F03FR03789
5/8	2-1/8	5	5/8	-30	H05MG	3	25000	**SCH3DRN532R**	F03FR03792
3/4	2-1/8	5	3/4	-30	H05MG	3	25000	**SCH3DRN544R**	F03FR03798

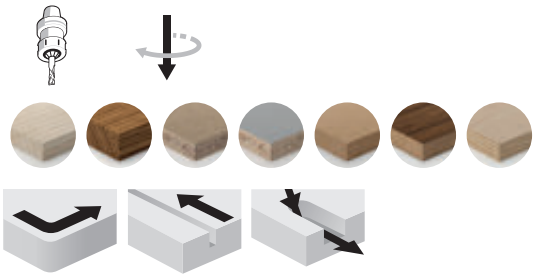
Working parameters for MDF/Chipboard





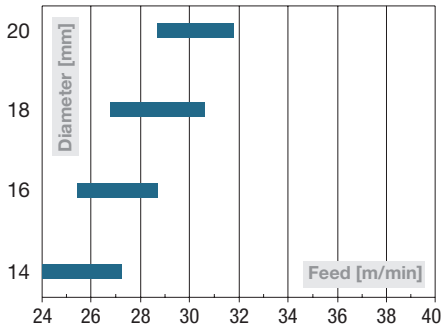
SCH3DRN
Roughing router cutter downcut with right-hand Z3



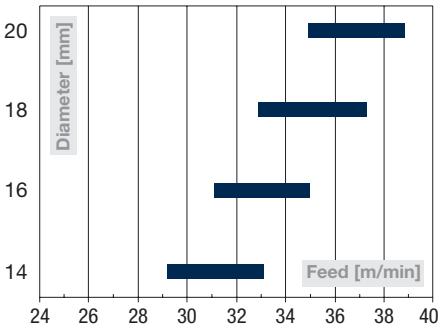


D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm						
14	42	14	100	-15	MG10	3	25000	**SCH3DRN928R**	F03FR04418
16	52	16	120	-15	MG10	3	25000	**SCH3DRN936R**	F03FR04419
16	62	16	130	-15	MG10	3	25000	**SCH3DRN938R**	F03FR04420
18	52	18	130	-15	MG10	3	25000	**SCH3DRN940R**	F03FR04421
20	52	20	140	-15	MG10	3	25000	**SCH3DRN946R**	F03FR04422
20	72	20	150	-15	MG10	3	25000	**SCH3DRN948R**	F03FR04423

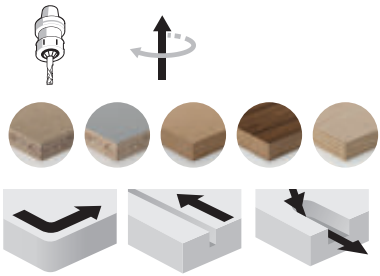
Working parameters for Hardwood

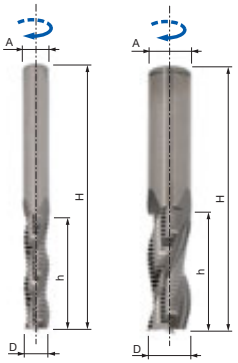


Working parameters for MDF/Chipboard



SCH3URN
Roughing router cutter upcut with right-hand Z3

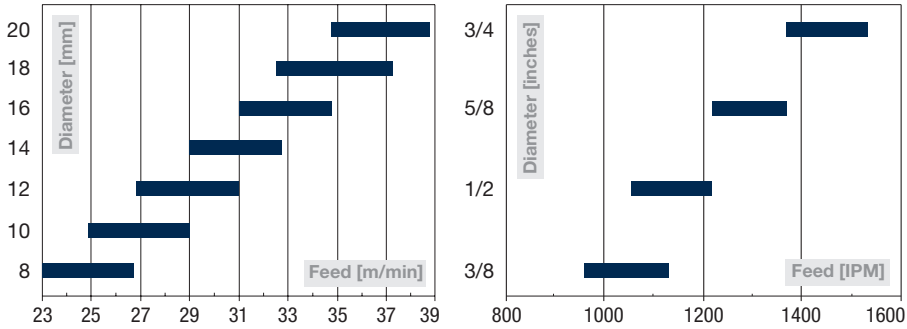




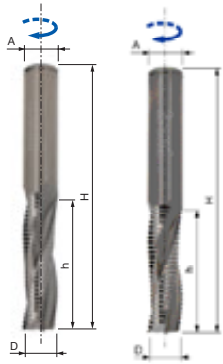
D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm						
8	22	70	8	30	MG10	3	30000	**SCH3URN504R**	F03FR03830
8	32	80	8	30	MG10	3	30000	**SCH3URN506R**	F03FR03831
8	42	90	8	30	MG10	3	30000	**SCH3URN508R**	F03FR03832
10	32	80	10	30	H05MG	3	30000	**SCH3URN512R**	F03FR03834
10	42	90	10	30	H05MG	3	30000	**SCH3URN514R**	F03FR03835
10	52	100	10	30	H05MG	3	30000	**SCH3URN516R**	F03FR03836
12	32	80	12	30	H05MG	3	30000	**SCH3URN518R**	F03FR03837
12	42	90	12	30	H05MG	3	30000	**SCH3URN520R**	F03FR03838
12	52	100	12	30	H05MG	3	30000	**SCH3URN522R**	F03FR03839
14	42	90	14	30	H05MG	3	25000	**SCH3URN528R**	F03FR03842
14	52	100	14	30	H05MG	3	25000	**SCH3URN530R**	F03FR03843
14	60	130	14	30	H05MG	3	25000	**SCH3URN531R**	F03FR03844
16	42	100	16	30	H05MG	3	25000	**SCH3URN534R**	F03FR03846
16	52	110	16	30	H05MG	3	25000	**SCH3URN536R**	F03FR03847
16	62	120	16	30	H05MG	3	25000	**SCH3URN538R**	F03FR03848
18	52	110	18	30	H05MG	3	25000	**SCH3URN540R**	F03FR03849
18	72	130	18	30	H05MG	3	25000	**SCH3URN542R**	F03FR03850
20	52	120	20	30	H05MG	3	25000	**SCH3URN546R**	F03FR03852
20	72	140	20	30	H05MG	3	25000	**SCH3URN548R**	F03FR03853
20	85	150	20	30	H05MG	3	25000	**SCH3URN550R**	F03FR03854
20	102	170	20	30	H05MG	3	25000	**SCH3URN552R**	F03FR03855

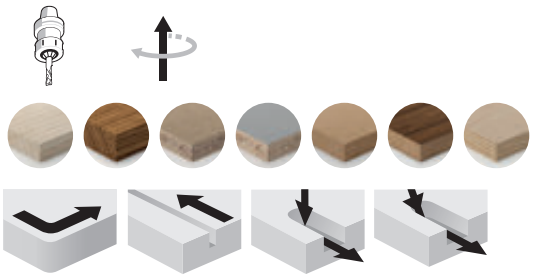
D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
inch	inch	inch	inch						
3/8	1-1/8	3-1/2	3/8	30	H05MG	3	30000	**SCH3URN510R**	F03FR03833
1/2	1-1/8	3-1/2	1/2	30	H05MG	3	30000	**SCH3URN524R**	F03FR03840
1/2	1-5/8	4	1/2	30	H05MG	3	30000	**SCH3URN526R**	F03FR03841
5/8	2-1/8	5	5/8	30	H05MG	3	25000	**SCH3URN532R**	F03FR03845
3/4	2-1/8	5	3/4	30	H05MG	3	25000	**SCH3URN544R**	F03FR03851

Working parameters for MDF/Chipboard



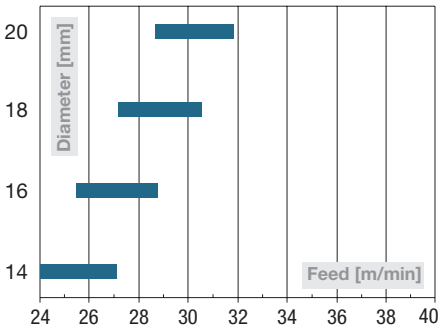
SCH3URN
Roughing router cutter upcut with right-hand Z3



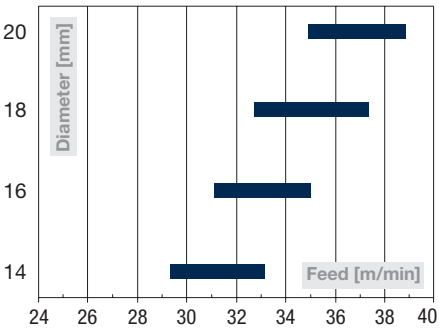


D	h	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm						
14	42	14	100	20	MG10	3	25000	**SCH3URN928R**	F03FR04424
16	52	16	120	20	MG10	3	25000	**SCH3URN936R**	F03FR04425
16	62	16	130	20	MG10	3	25000	**SCH3URN938R**	F03FR04426
18	52	18	130	20	MG10	3	25000	**SCH3URN940R**	F03FR04427
20	52	20	140	20	MG10	3	25000	**SCH3URN946R**	F03FR04428
20	72	20	150	20	MG10	3	25000	**SCH3URN948R**	F03FR04429

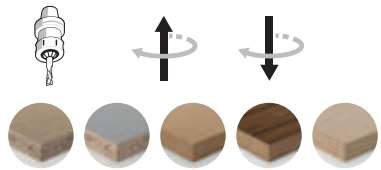
Working parameters for Hardwood

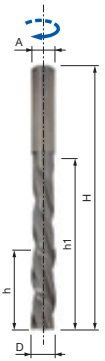


Working parameters for MDF/Chipboard



SCH3
Finishing hardware slot router cutter - right-hand Z3

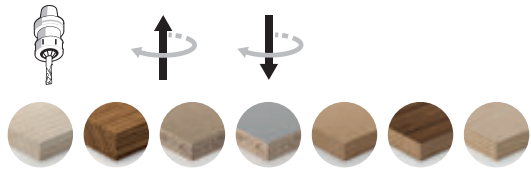


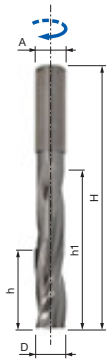


D	h	h1	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm				1/min.		
14	45	95	150	14	-30	H05MG	3	25000	**SCH3DFN102R**	F03FR03751
16	45	95	150	16	-30	H05MG	3	25000	**SCH3DFN104R**	F03FR03752
18	45	95	150	18	-30	H05MG	3	25000	**SCH3DFN106R**	F03FR03753

D	h	h1	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm				1/min.		
14	45	95	150	14	30	H05MG	3	25000	**SCH3UFN102R**	F03FR03803
16	45	95	150	16	30	H05MG	3	25000	**SCH3UFN104R**	F03FR03804
18	45	95	150	18	30	H05MG	3	25000	**SCH3UFN106R**	F03FR03805

SCH3
Finishing hardware slot router cutter - right-hand Z3

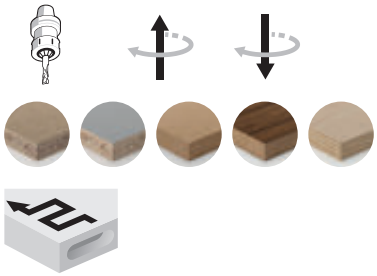


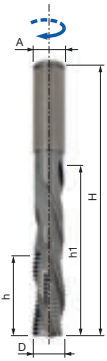


D	h	h1	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm				1/min.		
14	45	95	150	14	-15	MG10	3	25000	**SCH3DFN702R**	F03FR04439
16	45	95	150	16	-15	MG10	3	25000	**SCH3DFN704R**	F03FR04440
18	45	95	150	18	-15	MG10	3	25000	**SCH3DFN706R**	F03FR04441

D	h	h1	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm				1/min.		
14	45	95	150	14	20	MG10	3	25000	**SCH3UFN702R**	F03FR04436
16	45	95	150	16	20	MG10	3	25000	**SCH3UFN704R**	F03FR04437
18	45	95	150	18	20	MG10	3	25000	**SCH3UFN706R**	F03FR04438

SCH3
Roughing hardware slot router cutter - right-hand Z3

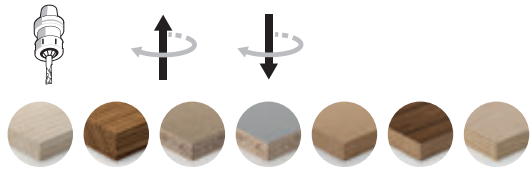


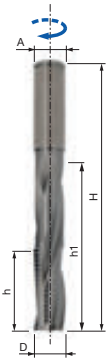


D	h	h1	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm				1/min.		
14	45	95	150	14	-30	H05MG	3	25000	**SCH3DMN102R**	F03FR03775
16	45	95	150	16	-30	H05MG	3	25000	**SCH3DMN104R**	F03FR03776
18	45	95	150	18	-30	H05MG	3	25000	**SCH3DMN106R**	F03FR03777

D	h	h1	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm				1/min.		
14	45	95	150	14	30	H05MG	3	25000	**SCH3UMN102R**	F03FR03827
16	45	95	150	16	30	H05MG	3	25000	**SCH3UMN104R**	F03FR03828
18	45	95	150	18	30	H05MG	3	25000	**SCH3UMN106R**	F03FR03829

SCH3
Roughing hardware slot router cutter - right-hand Z3





D	h	h1	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm				1/min.		
14	45	95	150	14	-15	MG10	3	25000	**SCH3DMN702R**	F03FR04430
16	45	95	150	16	-15	MG10	3	25000	**SCH3DMN704R**	F03FR04431
18	45	95	150	18	-15	MG10	3	25000	**SCH3DMN706R**	F03FR04432

D	h	h1	H	A	Helix Angle	Quality of HW	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm	mm				1/min.		
14	45	95	150	14	20	MG10	3	25000	**SCH3UMN702R**	F03FR04433
16	45	95	150	16	20	MG10	3	25000	**SCH3UMN704R**	F03FR04434
18	45	95	150	18	20	MG10	3	25000	**SCH3UMN706R**	F03FR04435

FREUD RANGE FOR CNC MACHINES

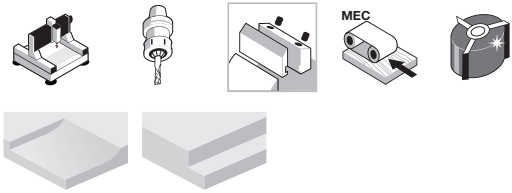
To complete the offer for CNC routers and sizing machines of different sizes and main brands, Freud provides a range of accessories.
This includes spoilboard surfacing cutters, Nickel coated chucks and high precision collets.

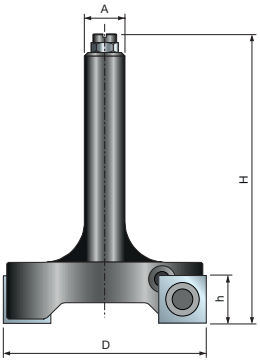
Spoilboard surfacing cutters
Freud NC12 Spoilboard Surfacing Cutters delivers impeccable results and superior finishing, leveraging the shear angle positioning of the knives.
Thanks to the tight body mechanical tolerances, tool dynamic balancing and extremely precise knives, the NC12 range ensures the highest cutting performance and vibration free cuts.

High precision chucks
Freud new comprehensive range of chucks guarantees an extremely accurate balancing at maximum speed (G2.5 ISO 1940-1). This ensures durable clamping of the tools in the most demanding CNC routing applications.

High precision collets
Freud's offer includes high precision collets that contribute to the greatest performance of the CNC cutting tools. It is therefore important to regularly check and maintain them to guarantee maximum efficiency.

NC12M
Spoilboard surfacing cutters





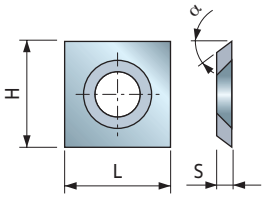
D	h	H	A	Z	Max RPM	Freud Code	Art. No.
mm	mm	mm	mm		1/min.		
60	13	80	12	2	-	**NC12M60**	F03FR03949
80	13	80	20	3	-	**NC12M80**	F03FR03884
100	13	80	20	3	-	**NC12M100**	F03FR03886
60	13	80	12	2	-	**NC12M60N**	F03FR03950
80	13	80	20	3	-	**NC12M80N**	F03FR03885
100	13	80	20	3	-	**NC12M100N**	F03FR03887

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

mm	Spare parts	Dimensions	Freud Code	Art. No.
		mm		
	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

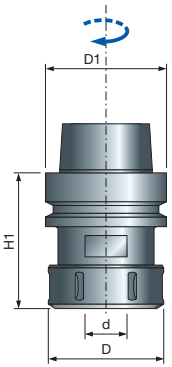
Optional square disposable spur

D	B	b	Type	Quality of HW	α	Freud Code	Art. No.
mm	mm	mm					
14	14	2	1	H00XA	31°	**NC12M101N**	F03FR03889



MP08M
High precision chucks - HSK 63 E

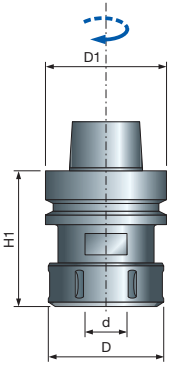
Chucks for CNC overhead CNC machines with **HSK 63E** shank.
- G2,5 balancing for high speed applications.
- **ER32 RH** locking ring for item **MP08MDC AA9**.
- **ER40 RH** for **MP08MDC BA9**.
- Collet not included.



H1	D	d	D1	Freud Code	Art. No.
mm	mm	mm	mm		
73	50	4-20	63	**MP08MDC AA9**	F03FA19217
78	63	6-25	63	**MP08MDC BA9**	F03FA19218

MP10M
High precision chucks - HSK 63 F

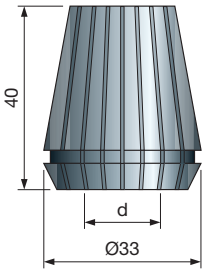
Chucks for CNC overhead CNC machines with **HSK 63F** shank.
- G2,5 balancing for high speed applications.
- **ER32 RH** locking ring for item **MP10MDC AA9**.
- **ER40 RH** for **MP10MDC BA9**.
- Collet not included.



H1	D	d	D1	Freud Code	Art. No.
mm	mm	mm	mm		
73	50	4-20	63	**MP10MDC AA9**	F03FA19227
78	63	6-25	63	**MP10MDC BA9**	F03FA19228

MP06M
High precision collet for ER32 locking rings

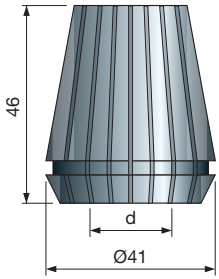
Collet for router bits with cylindrical shank.
Suitable for **MP06MD**, **MP08MDC AA9** and **MP10MDC AA9** chucks.



d	H	Clamping range	Freud Code	Art. No.
mm	mm			
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

MP16M
High precision collet for ER40 locking rings

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



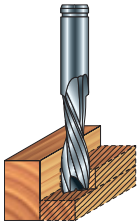
d	H	Clamping range	Freud Code	Art. No.
mm	mm			
4	40	4÷3	**MP06M 049**	F03FA01550
6	40	6÷5	**MP06M 069**	F03FA01551
8	40	8÷7	**MP06M 089**	F03FA01553
10	40	10÷9	**MP06M 109**	F03FA01554
12	40	12÷11	**MP06M 129**	F03FA01555
14	40	14÷13	**MP06M 149**	F03FA01557
16	40	16÷15	**MP06M 169**	F03FA01558
18	40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

CORRECT USE AND SAFETY RULES

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).
- 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. 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 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.

1



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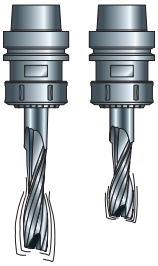

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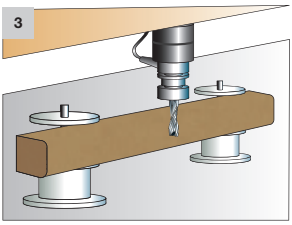

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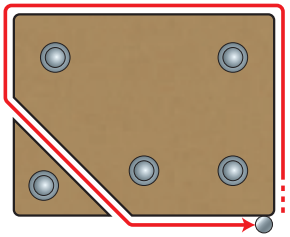
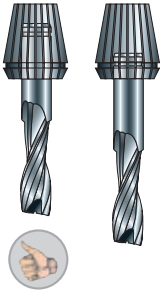
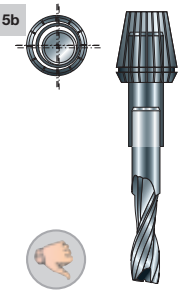


5a



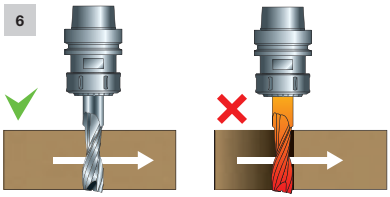
5b



CORRECT USE AND SAFETY RULES

- 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 (Fig. 6).
- 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).
- Always choose router bits with the appropriate dimensions for the kind of work to carry out.
- 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).
- Never start the router with the bit in contact with wood (Fig. 9).
- Always feed your work or router in the proper direction against the bit rotation (Fig. 10).

6



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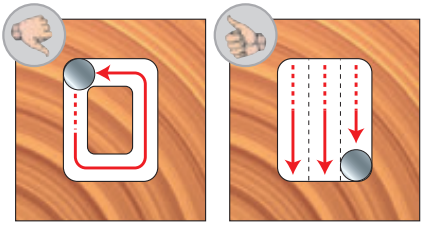
8



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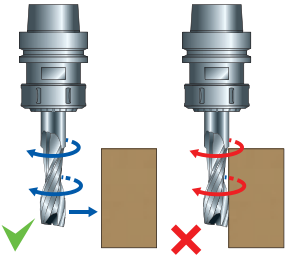

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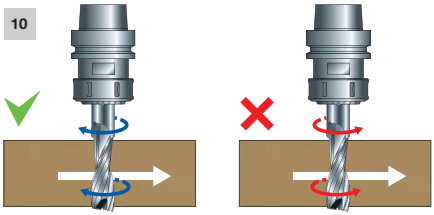

Precisely the best

Freud - Leading the industrial market since 1962

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

Freud technologies and solutions Perfection crafted for your needs

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

Technological supremacy In-house Carbide production

Leader in Carbide manufacturing since 1980: Freud prides itself of a unique in the world in-house production and sintering of Carbide components, for superior quality cutting tools. Freud TiCo, a specially formulated, highly compact combination of Titanium and Cobalt Carbide, ensures maximum precision and long lasting sharpness of the cutting edge. The ability to formulate dedicated recipes, for standard and customised applications, delivers the highest tool performance.

Global distribution Worldwide services wherever you are

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

October 2025

freud

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