

freud.

**New
Solid Carbide
CNC Bits Range**



Longer lifetime & outstanding performance

Product benefits

• Outstanding longer lifetime:

New micrograin carbide (H05MG), specifically formulated to achieve a high level of hardness and tenacity. The formula guarantees the **greatest resistance to wear and impact**.

• Flawless finishing in high demanding applications:

The range delivers a **perfect finishing**, as a result of the newly developed helix design and geometries.

• Superior cutting performance:

Tight mechanical tolerances, special flute design and best-in-class manufacturing machines ensure the **highest cutting performance**, with reduced eccentricity and no vibrations.

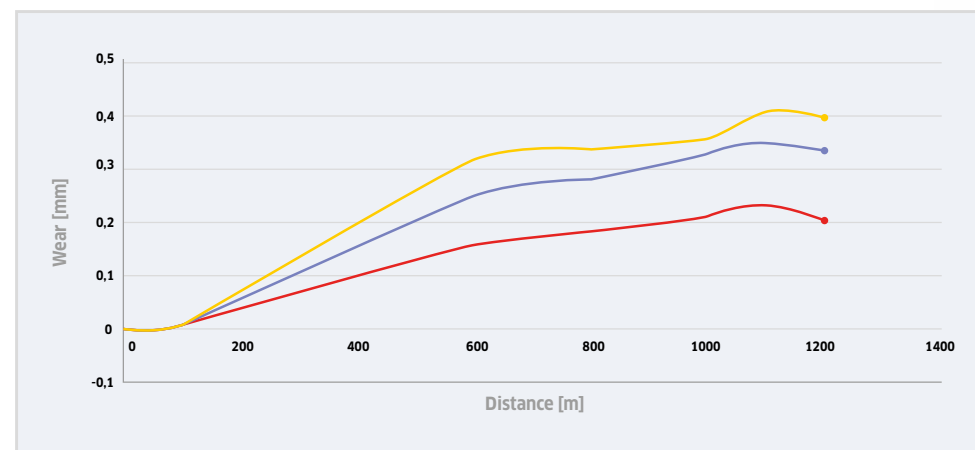
Applications

To be used on all CNC routers for:

- Nesting
- Sizing
- Rabbeting
- Grooving
- Dividing cuts of raw material.

Materials

Wood and derivatives.



Wear results test: freud SCH cutters deliver 50% longer lifetime than competitors.

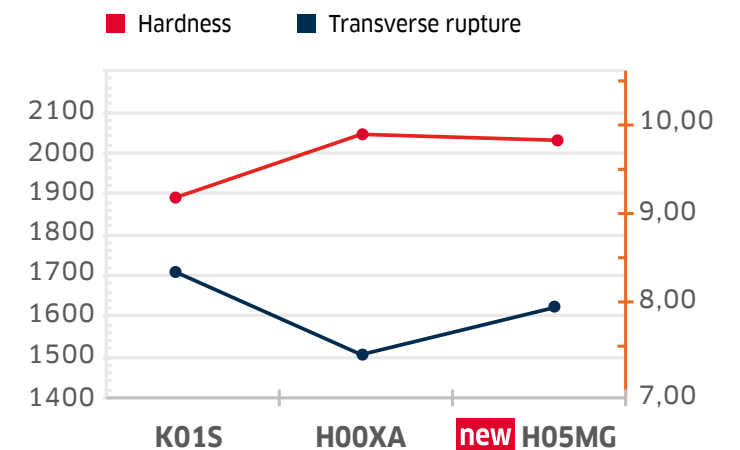


- freud SCH
- Competitor 1
- Competitor 2

Advanced research for innovative solutions

New carbide grade H05MG

- Micrograin hard metal (0.8mm).
- Hardness comparable to H00XA (2000 HV10).
- Tenacity comparable to K01S (but with 150 HV10 in excess).



New packaging - protective and durable TwistPack

- Enhanced product visibility thanks to a transparent propylene tube.
- The telescopic protective packaging protects the bit from shocks, holding it tight also during twist lock actions.
- The hexagon base prevents from rolling.



NEW SAFETY PICTOS



Read sharpening instructions on the website



Use hearing protection



Use hand protection



Use dust protection



Read instruction manual of machine



Use eye protection



Do not use broken bits



Use clean tools

The tools are compliant with the European regulation EN847.

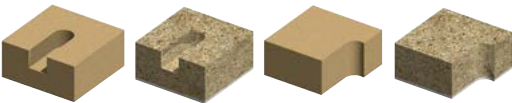
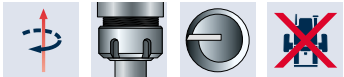
SCH1UF

Router cutter right-hand upcut finishing Z1

Designed for: CNC routing with large gullet space for chips removal.
Suitable for: sizing and plunging with perfect finish.
SCH1U: upcut helix, upward chip removal for a panel best finish on the lower side.

D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Code	SAP
3	13	60	6	1	30.000	SCH1UFN110R	F03FR03639
4	15	50	4	1	30.000	SCH1UFN210R	F03FR03645
4	16	60	6	1	30.000	SCH1UFN120R	F03FR03640
5	17	50	5	1	30.000	SCH1UFN215R	F03FR03646
5	17	60	6	1	30.000	SCH1UFN130R	F03FR03641
5	17	60	8	1	30.000	SCH1UFN160R	F03FR03644
6	19	50	6	1	30.000	SCH1UFN220R	F03FR03647
6	25	60	6	1	30.000	SCH1UFN225R	F03FR03648
8	22	70	8	1	30.000	SCH1UFN235R	F03FR03650
8	32	80	8	1	30.000	SCH1UFN240R	F03FR03651
8	42	90	8	1	30.000	SCH1UFN245R	F03FR03652
10	32	80	10	1	30.000	SCH1UFN255R	F03FR03654
10	42	100	10	1	30.000	SCH1UFN260R	F03FR03655
10	52	100	10	1	30.000	SCH1UFN265R	F03FR03656
12	32	80	12	1	30.000	SCH1UFN270R	F03FR03657
12	52	100	12	1	30.000	SCH1UFN275R	F03FR03658

D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Code	SAP
1/8"	1/2"	2-1/2"	1/4"	1	30.000	SCH1UFN140R	F03FR03642
3/16"	3/4"	2-1/2"	1/4"	1	30.000	SCH1UFN150R	F03FR03643
1/4"	1"	2-1/2"	1/4"	1	30.000	SCH1UFN230R	F03FR03649
3/8"	1-1/8"	3"	3/8"	1	30.000	SCH1UFN250R	F03FR03653
1/2"	1-5/16"	3"	1/2"	1	30.000	SCH1UFN280R	F03FR03659



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

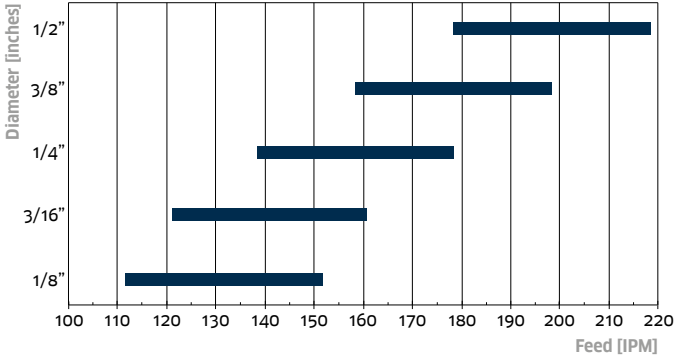
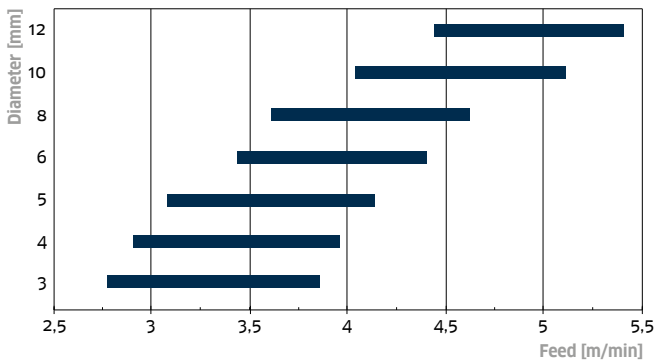
Material:
Hardwood 0,9
MDF/Chipboard 1,1
Depth of cut:
From 1xD to 2xD 0,75
From 2xD to 3xD 0,5
Over 3xD 0,4

Rotation speed:
Suggested speeds are proportional to RPM.

Examples:
For 12.000 RPM factor 12.000/18.000 = 0,66
For 24.000 RPM factor 24.000/18.000 = 1,33

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

Suggested speeds for: softwood - 18.000 RPM. Depth of cut equal to cutting diameter



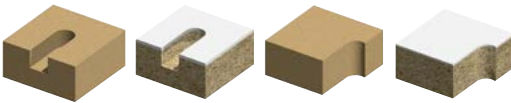
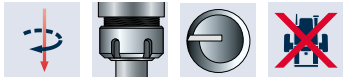
SCH1DF

Router cutter right-hand downcut finishing Z1

Designed for: CNC routing with large gullet space for chips removal.
Suitable for: sizing and plunging with perfect finish.
SCH1D: downcut helix, downward chip removal for a panel best finish on the upper side.

D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Code	SAP
3	13	60	6	1	30.000	SCH1UFN110R	F03FR03639
4	15	50	4	1	30.000	SCH1UFN210R	F03FR03645
4	16	60	6	1	30.000	SCH1UFN120R	F03FR03640
5	17	50	5	1	30.000	SCH1UFN215R	F03FR03646
5	17	60	6	1	30.000	SCH1UFN130R	F03FR03641
5	17	60	8	1	30.000	SCH1UFN160R	F03FR03644
6	19	50	6	1	30.000	SCH1UFN220R	F03FR03647
6	25	60	6	1	30.000	SCH1UFN225R	F03FR03648
8	22	70	8	1	30.000	SCH1UFN235R	F03FR03650
8	32	80	8	1	30.000	SCH1UFN240R	F03FR03651
8	42	90	8	1	30.000	SCH1UFN245R	F03FR03652
10	32	80	10	1	30.000	SCH1UFN255R	F03FR03654

D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Code	SAP
1/8"	1/2"	2-1/2"	1/4"	1	30.000	SCH1UFN140R	F03FR03642
3/16"	3/4"	2-1/2"	1/4"	1	30.000	SCH1UFN150R	F03FR03643
1/4"	1"	2-1/2"	1/4"	1	30.000	SCH1UFN230R	F03FR03649
3/8"	1-1/8"	3"	3/8"	1	30.000	SCH1UFN250R	F03FR03653



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

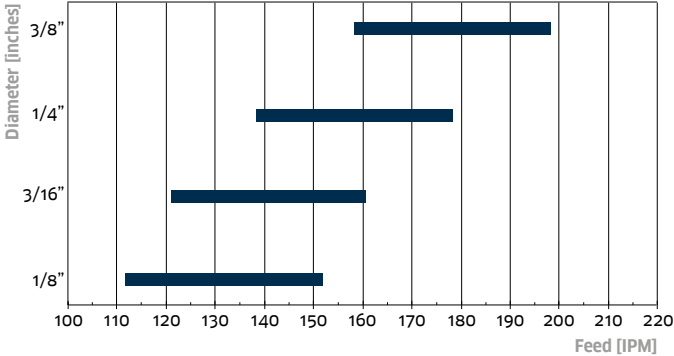
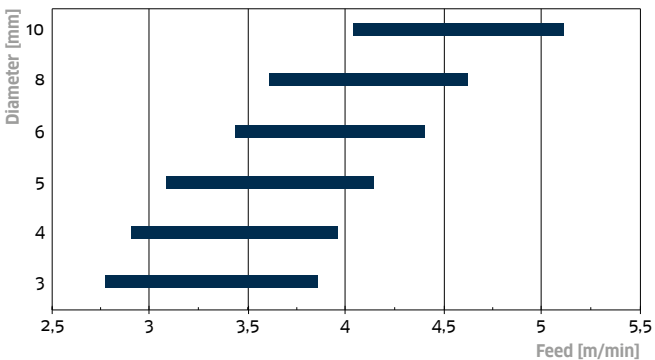
Material:
Hardwood 0,9
MDF/Chipboard 1,1
Depth of cut:
From 1xD to 2xD 0,75
From 2xD to 3xD 0,5
Over 3xD 0,4

Rotation speed:
Suggested speeds are proportional to RPM.

Examples:
For 12.000 RPM factor 12.000/18.000 = 0,66
For 24.000 RPM factor 24.000/18.000 = 1,33

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

Suggested speeds for: softwood - 18.000 RPM. Depth of cut equal to cutting diameter



SCH2UF

Router cutter right-hand upcut finishing Z2

Designed for: CNC routing with general purpose and perfect finish.

Suitable for: sizing and plunging.

SCH2U: upcut helix, upward chip removal for a panel best finish on the lower side.

D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Code	SAP
3	13	50	6	2	30.000	SCH2UFN110R	F03FR03696
3	13	50	8	2	30.000	SCH2UFN135R	F03FR03701
4	15	50	4	2	30.000	SCH2UFN204R	F03FR03709
4	16	50	6	2	30.000	SCH2UFN115R	F03FR03697
4	16	50	8	2	30.000	SCH2UFN140R	F03FR03702
5	17	50	5	2	30.000	SCH2UFN208R	F03FR03710
5	17	60	6	2	30.000	SCH2UFN120R	F03FR03698
5	17	50	8	2	30.000	SCH2UFN145R	F03FR03703
6	17	60	6	2	30.000	SCH2UFN212R	F03FR03711
6	22	60	6	2	30.000	SCH2UFN216R	F03FR03712
6	25	60	8	2	30.000	SCH2UFN150R	F03FR03704
7	32	80	8	2	30.000	SCH2UFN155R	F03FR03705
8	22	70	8	2	30.000	SCH2UFN224R	F03FR03714
8	32	80	8	2	30.000	SCH2UFN228R	F03FR03715
8	42	90	8	2	30.000	SCH2UFN232R	F03FR03716
8	25	70	12	2	30.000	SCH2UFN160R	F03FR03706
10	32	80	10	2	30.000	SCH2UFN240R	F03FR03718
10	42	100	10	2	30.000	SCH2UFN244R	F03FR03719
10	52	100	10	2	30.000	SCH2UFN248R	F03FR03720
10	32	80	12	2	30.000	SCH2UFN170R	F03FR03708
11	37	80	11	2	30.000	SCH2UFN252R	F03FR03721
12	32	80	12	2	30.000	SCH2UFN256R	F03FR03722
12	42	90	12	2	30.000	SCH2UFN260R	F03FR03723
12	52	100	12	2	30.000	SCH2UFN264R	F03FR03724
14	52	100	14	2	25.000	SCH2UFN276R	F03FR03727
16	52	100	16	2	25.000	SCH2UFN280R	F03FR03728
18	52	110	18	2	25.000	SCH2UFN284R	F03FR03729
20	52	120	20	2	25.000	SCH2UFN288R	F03FR03730
20	72	130	20	2	25.000	SCH2UFN292R	F03FR03731

D inch	h inch	H inch	A inch	Z	Max RPM 1/min.	Code	SAP
1/8"	1/2"	2"	1/4"	2	30.000	SCH2UFN125R	F03FR03699
3/16"	3/4"	2"	1/4"	2	30.000	SCH2UFN130R	F03FR03700
1/4"	1"	2-1/2"	1/4"	2	30.000	SCH2UFN220R	F03FR03713
3/8"	1-1/8"	3"	3/8"	2	30.000	SCH2UFN236R	F03FR03717
3/8"	1-1/4"	3"	1/2"	2	30.000	SCH2UFN165R	F03FR03707
1/2"	1-1/4"	3"	1/2"	2	30.000	SCH2UFN268R	F03FR03725
1/2"	2"	4"	1/2"	2	30.000	SCH2UFN272R	F03FR03726



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

Material:
Hardwood 0,9
MDF/Chipboard 1,1

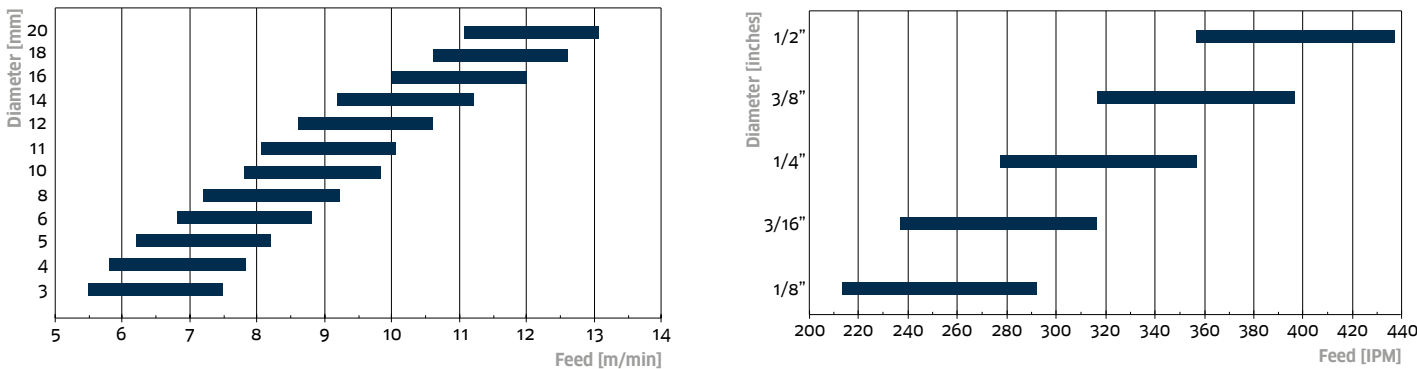
Depth of cut:
From 1xD to 2xD 0,75
From 2xD to 3xD 0,5
Over 3xD 0,4

Rotation speed:
Suggested speeds are proportional to RPM.

Examples:
For 12.000 RPM factor $12.000/18.000 = 0,66$
For 24.000 RPM factor $24.000/18.000 = 1,33$

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

Suggested speeds for: softwood - 18.000 RPM. Depth of cut equal to cutting diameter



SCH2DF

Router cutter right-hand downcut finishing Z2

Designed for: CNC routing with general purpose and perfect finish.

Suitable for: sizing and plunging.

SCH2D: downcut helix, downward chip removal for a panel best finish on the upper side.

D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Code	SAP
3	13	50	6	2	30.000	SCH2DFN110R	F03FR03660
3	13	50	8	2	30.000	SCH2DFN135R	F03FR03665
4	15	50	4	2	30.000	SCH2DFN204R	F03FR03673
4	16	50	6	2	30.000	SCH2DFN115R	F03FR03661
4	16	50	8	2	30.000	SCH2DFN140R	F03FR03666
5	17	50	5	2	30.000	SCH2DFN208R	F03FR03674
5	17	60	6	2	30.000	SCH2DFN120R	F03FR03662
5	17	50	8	2	30.000	SCH2DFN145R	F03FR03667
6	17	60	6	2	30.000	SCH2DFN212R	F03FR03675
6	22	60	6	2	30.000	SCH2DFN216R	F03FR03676
6	25	60	8	2	30.000	SCH2DFN150R	F03FR03668
7	32	80	8	2	30.000	SCH2DFN155R	F03FR03669
8	22	70	8	2	30.000	SCH2DFN224R	F03FR03678
8	32	80	8	2	30.000	SCH2DFN228R	F03FR03679
8	42	90	8	2	30.000	SCH2DFN232R	F03FR03680
8	25	70	12	2	30.000	SCH2DFN160R	F03FR03670
10	32	80	10	2	30.000	SCH2DFN240R	F03FR03682
10	42	90	10	2	30.000	SCH2DFN244R	F03FR03683
10	52	100	10	2	30.000	SCH2DFN248R	F03FR03684
10	32	80	12	2	30.000	SCH2DFN170R	F03FR03672
11	37	80	11	2	30.000	SCH2DFN252R	F03FR03685
12	32	80	12	2	30.000	SCH2DFN256R	F03FR03686
12	42	90	12	2	30.000	SCH2DFN260R	F03FR03687
12	52	100	12	2	30.000	SCH2DFN264R	F03FR03688
14	52	100	14	2	25.000	SCH2DFN276R	F03FR03691
16	52	100	16	2	25.000	SCH2DFN280R	F03FR03692
18	52	110	18	2	25.000	SCH2DFN284R	F03FR03693
20	52	120	20	2	25.000	SCH2DFN288R	F03FR03694
20	72	130	20	2	25.000	SCH2DFN292R	F03FR03695

D inch	h inch	H inch	A inch	Z	Max RPM 1/min.	Code	SAP
1/8"	1/2"	2"	1/4"	2	30.000	SCH2DFN125R	F03FR03663
3/16"	3/4"	2"	1/4"	2	30.000	SCH2DFN130R	F03FR03664
1/4"	1"	2-1/2"	1/4"	2	30.000	SCH2DFN220R	F03FR03677
3/8"	1-1/8"	3"	3/8"	2	30.000	SCH2DFN236R	F03FR03681
3/8"	1-1/4"	3"	1/2"	2	30.000	SCH2DFN165R	F03FR03671
1/2"	1-1/4"	3"	1/2"	2	30.000	SCH2DFN268R	F03FR03689
1/2"	2"	4"	1/2"	2	30.000	SCH2DFN272R	F03FR03690



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

Material:
Hardwood 0,9
MDF/Chipboard 1,1

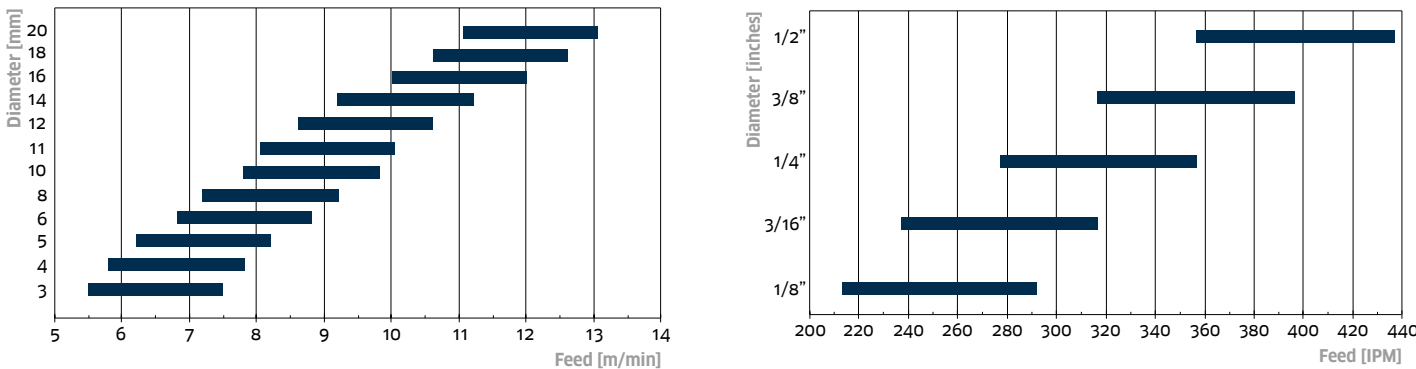
Depth of cut:
From 1xD to 2xD 0,75
From 2xD to 3xD 0,5
Over 3xD 0,4

Rotation speed:
Suggested speeds are proportional to RPM.

Examples:
For 12.000 RPM factor $12.000/18.000 = 0,66$
For 24.000 RPM factor $24.000/18.000 = 1,33$

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

Suggested speeds for: softwood - 18.000 RPM. Depth of cut equal to cutting diameter



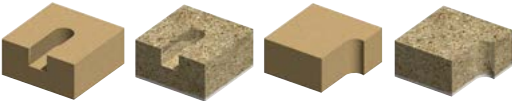
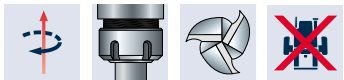
SCH3UF

Router cutter right-hand upcut finishing Z3

Designed for: CNC routing for demanding applications and high speed.
Suitable for: sizing and plunging with perfect finish.
SCH3U: upcut helix, upward chip removal for a panel best finish on the lower side.

D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Code	SAP
8	22	70	8	3	30.000	SCH3UFN208R	F03FR03807
8	32	80	8	3	30.000	SCH3UFN212R	F03FR03808
10	32	80	10	3	30.000	SCH3UFN220R	F03FR03810
10	42	90	10	3	30.000	SCH3UFN224R	F03FR03811
10	52	100	10	3	30.000	SCH3UFN228R	F03FR03812
12	32	80	12	3	30.000	SCH3UFN232R	F03FR03813
12	42	90	12	3	30.000	SCH3UFN236R	F03FR03814
12	52	100	12	3	30.000	SCH3UFN240R	F03FR03815
14	42	90	14	3	25.000	SCH3UFN248R	F03FR03817
14	52	100	14	3	25.000	SCH3UFN252R	F03FR03818
16	42	90	16	3	25.000	SCH3UFN256R	F03FR03819
16	52	100	16	3	25.000	SCH3UFN260R	F03FR03820
16	62	120	16	3	25.000	SCH3UFN264R	F03FR03821
18	52	110	18	3	25.000	SCH3UFN268R	F03FR03822
18	72	130	18	3	25.000	SCH3UFN272R	F03FR03823
20	52	110	20	3	25.000	SCH3UFN276R	F03FR03824
20	72	130	20	3	25.000	SCH3UFN280R	F03FR03825
20	102	150	20	3	25.000	SCH3UFN284R	F03FR03826

D inch	h inch	H inch	A inch	Z	Max RPM 1/min.	Code	SAP
1/4"	3/4"	2-1/2"	1/4"	3	30.000	SCH3UFN204R	F03FR03806
3/8"	1-1/8"	3"	3/8"	3	30.000	SCH3UFN216R	F03FR03809
1/2"	2"	4"	1/2"	3	30.000	SCH3UFN244R	F03FR03816



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

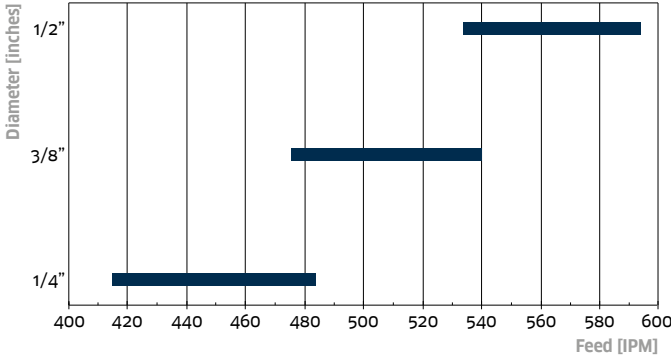
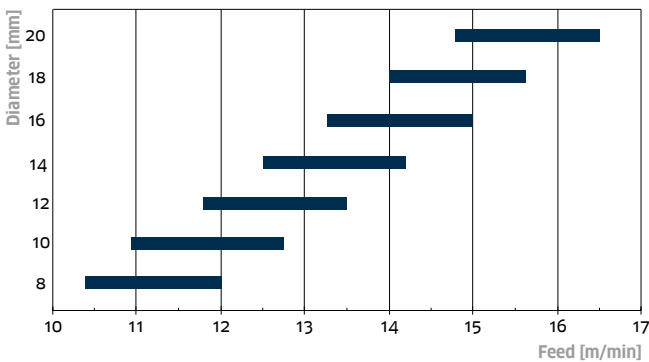
Material:
Hardwood 0,9
MDF/Chipboard 1,1
Depth of cut:
From 1xD to 2xD 0,75
From 2xD to 3xD 0,5
Over 3xD 0,4

Rotation speed:
Suggested speeds are proportional to RPM.

Examples:
For 12.000 RPM factor 12.000/18.000 = 0,66
For 24.000 RPM factor 24.000/18.000 = 1,33

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

Suggested speeds for: softwood - 18.000 RPM. Depth of cut equal to cutting diameter



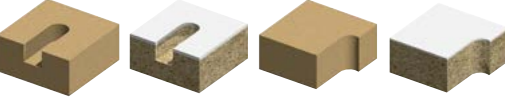
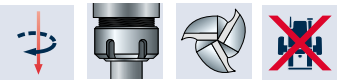
SCH3DF

Router cutter right-hand downcut finishing Z3

Designed for: CNC routing for demanding applications and high speed.
Suitable for: sizing and plunging with perfect finish.
SCH3D: downcut helix, downward chip removal for a panel best finish on the upper side.

D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Code	SAP
8	22	70	8	3	30.000	SCH3DFN208R	F03FR03755
8	32	80	8	3	30.000	SCH3DFN212R	F03FR03756
10	32	70	10	3	30.000	SCH3DFN220R	F03FR03758
10	42	90	10	3	30.000	SCH3DFN224R	F03FR03759
10	52	100	10	3	30.000	SCH3DFN228R	F03FR03760
12	32	80	12	3	30.000	SCH3DFN232R	F03FR03761
12	42	90	12	3	30.000	SCH3DFN236R	F03FR03762
12	52	100	12	3	30.000	SCH3DFN240R	F03FR03763
14	42	90	14	3	30.000	SCH3DFN248R	F03FR03765
14	52	100	14	3	30.000	SCH3DFN252R	F03FR03766
16	42	90	16	3	30.000	SCH3DFN256R	F03FR03767
16	52	100	16	3	30.000	SCH3DFN260R	F03FR03768
16	62	120	16	3	30.000	SCH3DFN264R	F03FR03769
18	52	110	18	3	30.000	SCH3DFN268R	F03FR03770
18	72	130	18	3	30.000	SCH3DFN272R	F03FR03771
20	52	110	20	3	30.000	SCH3DFN276R	F03FR03772
20	72	130	20	3	30.000	SCH3DFN280R	F03FR03773
20	102	150	20	3	30.000	SCH3DFN284R	F03FR03774

D inch	h inch	H inch	A inch	Z	Max RPM 1/min.	Code	SAP
1/4"	3/4"	2-1/2"	1/4"	3	30.000	SCH3DFN204R	F03FR03754
3/8"	1-1/8"	3"	3/8"	3	30.000	SCH3DFN216R	F03FR03757
1/2"	2"	4"	1/2"	3	30.000	SCH3DFN244R	F03FR03764



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

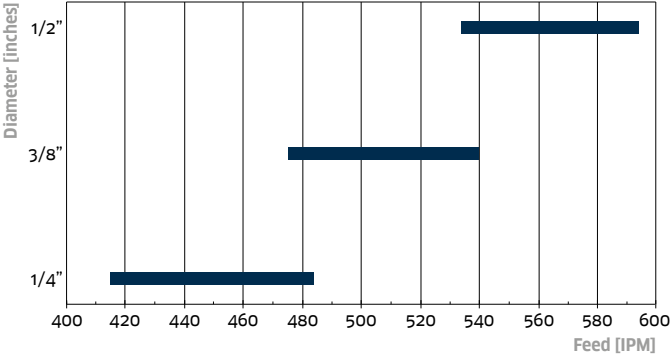
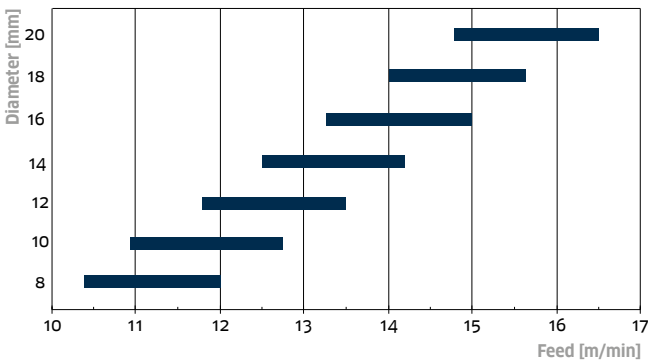
Material:
Hardwood 0,9
MDF/Chipboard 1,1
Depth of cut:
From 1xD to 2xD 0,75
From 2xD to 3xD 0,5
Over 3xD 0,4

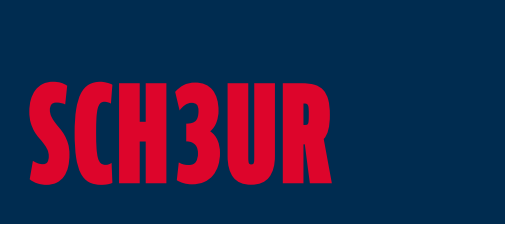
Rotation speed:
Suggested speeds are proportional to RPM.

Examples:
For 12.000 RPM factor 12.000/18.000 = 0,66
For 24.000 RPM factor 24.000/18.000 = 1,33

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

Suggested speeds for: softwood - 18.000 RPM. Depth of cut equal to cutting diameter





Router cutter right-hand upcut roughing Z3

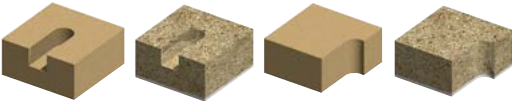
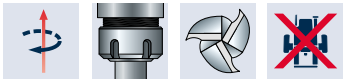
Designed for: CNC routing with chip breakers for extremely fast machining.

Suitable for: sizing and plunging with rough finish.

SCH3U: upcut helix, upward chip removal.

D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Code	SAP
8	22	70	8	3	30.000	SCH3URN504R	F03FR03830
8	32	80	8	3	30.000	SCH3URN506R	F03FR03831
8	42	90	8	3	30.000	SCH3URN508R	F03FR03832
10	32	80	10	3	30.000	SCH3URN512R	F03FR03834
10	42	90	10	3	30.000	SCH3URN514R	F03FR03835
10	52	100	10	3	30.000	SCH3URN516R	F03FR03836
12	32	80	12	3	30.000	SCH3URN518R	F03FR03837
12	42	90	12	3	30.000	SCH3URN520R	F03FR03838
12	52	100	12	3	30.000	SCH3URN522R	F03FR03839
14	42	90	14	3	25.000	SCH3URN528R	F03FR03842
14	52	100	14	3	25.000	SCH3URN530R	F03FR03843
14	60	130	14	3	25.000	SCH3URN531R	F03FR03844
16	42	90	16	3	25.000	SCH3URN534R	F03FR03846
16	52	100	16	3	25.000	SCH3URN536R	F03FR03847
16	72	120	16	3	25.000	SCH3URN538R	F03FR03848
18	52	100	18	3	25.000	SCH3URN540R	F03FR03849
18	72	130	18	3	25.000	SCH3URN542R	F03FR03850
20	52	100	20	3	25.000	SCH3URN546R	F03FR03852
20	72	130	20	3	25.000	SCH3URN548R	F03FR03853
20	85	150	20	3	25.000	SCH3URN550R	F03FR03854
20	102	160	20	3	25.000	SCH3URN552R	F03FR03855

D inch	h inch	H inch	A inch	Z	Max RPM 1/min.	Code	SAP
3/8"	1-1/8"	3-1/2"	3/8"	3	30.000	SCH3URN510R	F03FR03833
1/2"	1-1/8"	3-1/2"	1/2"	3	30.000	SCH3URN524R	F03FR03840
1/2"	1-5/8"	4"	1/2"	3	30.000	SCH3URN526R	F03FR03841
5/8"	2-1/8"	5"	5/8"	3	25.000	SCH3URN532R	F03FR03845
3/4"	2-1/8"	5"	3/4"	3	25.000	SCH3URN544R	F03FR03851



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

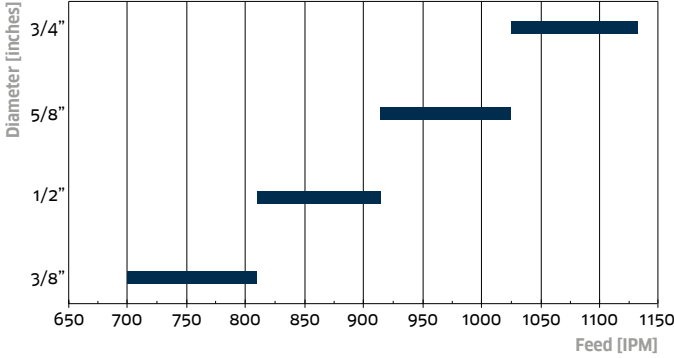
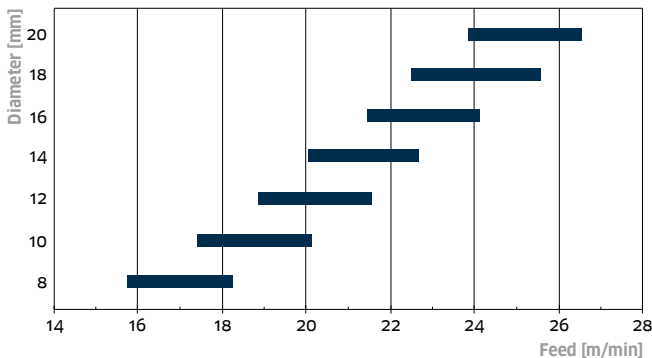
Material:
Hardwood 0,9
MDF/Chipboard 1,1
Depth of cut:
From 1xD to 2xD 0,75
From 2xD to 3xD 0,5
Over 3xD 0,4

Rotation speed:
Suggested speeds are proportional to RPM.

Examples:
For 12.000 RPM factor 12.000/18.000 = 0,66
For 24.000 RPM factor 24.000/18.000 = 1,33

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

Suggested speeds for: softwood - 18.000 RPM. Depth of cut equal to cutting diameter



Router cutter right-hand downcut roughing Z3

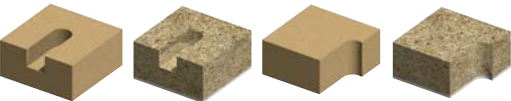
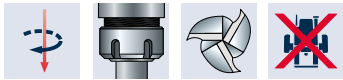
Designed for: CNC routing with chip breakers for extremely fast machining.

Suitable for: sizing and plunging with rough finish.

SCH3D: downcut helix, downward chip removal.

D mm	h mm	H mm	A mm	Z	Max RPM 1/min.	Code	SAP
8	22	70	8	3	30.000	SCH3DRN504R	F03FR03778
8	32	80	8	3	30.000	SCH3DRN506R	F03FR03779
8	42	90	8	3	30.000	SCH3DRN508R	F03FR03780
10	32	70	10	3	30.000	SCH3DRN512R	F03FR03782
10	42	90	10	3	30.000	SCH3DRN514R	F03FR03783
10	42	100	10	3	30.000	SCH3DRN516R	F03FR03784
12	32	80	12	3	30.000	SCH3DRN518R	F03FR03785
12	42	90	12	3	30.000	SCH3DRN520R	F03FR03786
12	52	100	12	3	30.000	SCH3DRN522R	F03FR03787
14	42	90	14	3	25.000	SCH3DRN528R	F03FR03790
14	52	100	14	3	25.000	SCH3DRN530R	F03FR03791
16	42	90	16	3	25.000	SCH3DRN534R	F03FR03793
16	52	100	16	3	25.000	SCH3DRN536R	F03FR03794
16	62	120	16	3	25.000	SCH3DRN538R	F03FR03795
18	52	100	18	3	25.000	SCH3DRN540R	F03FR03796
18	72	130	18	3	25.000	SCH3DRN542R	F03FR03797
20	52	100	20	3	25.000	SCH3DRN546R	F03FR03799
20	72	130	20	3	25.000	SCH3DRN548R	F03FR03800
20	85	150	20	3	25.000	SCH3DRN550R	F03FR03801
20	102	160	20	3	25.000	SCH3DRN552R	F03FR03802

D inch	h inch	H inch	A inch	Z	Max RPM 1/min.	Code	SAP
3/8"	1-1/8"	3-1/2"	3/8"	3	30.000	SCH3DRN510R	F03FR03781
1/2"	1-1/8"	3-1/2"	1/2"	3	30.000	SCH3DRN524R	F03FR03788
1/2"	1-5/8"	4"	1/2"	3	30.000	SCH3DRN526R	F03FR03789
5/8"	2-1/8"	5"	5/8"	3	30.000	SCH3DRN532R	F03FR03792
3/4"	2-1/8"	5"	3/4"	3	30.000	SCH3DRN544R	F03FR03798



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

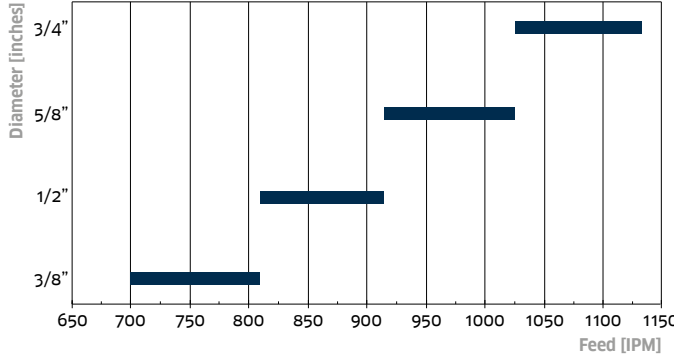
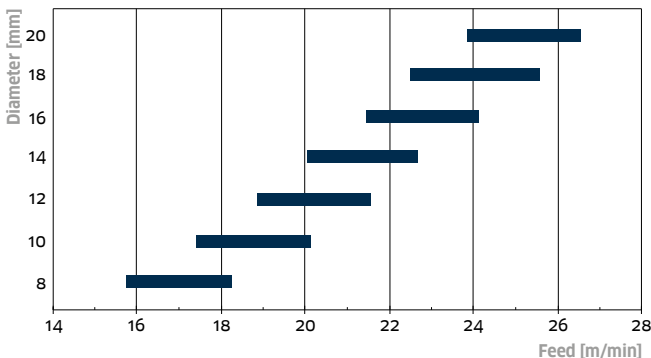
Material:
Hardwood 0,9
MDF/Chipboard 1,1
Depth of cut:
From 1xD to 2xD 0,75
From 2xD to 3xD 0,5
Over 3xD 0,4

Rotation speed:
Suggested speeds are proportional to RPM.

Examples:
For 12.000 RPM factor 12.000/18.000 = 0,66
For 24.000 RPM factor 24.000/18.000 = 1,33

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

Suggested speeds for: softwood - 18.000 RPM. Depth of cut equal to cutting diameter



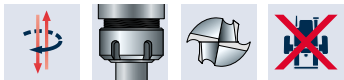
SCH2XF

Router cutter right-hand compression finishing Z2

Designed for: high feed rates and perfect edge finishing on both sides of bilaminated materials.
Suitable for: sizing and nesting on most common panels, double sided melamine or laminated, veneered, natural wood, wood composites and engineered wood.
Short up-cut allows for mortising cut.

D mm	h mm	H mm	A mm	hUP mm	Z	Max RPM 1/min.	Code	SAP
8	22	70	8	5	2+2	30.000	SCH2XFN310R	F03FR03732
8	32	70	8	10	2+2	30.000	SCH2XFN410R	F03FR03741
10	26	70	10	5	2+2	30.000	SCH2XFN340R	F03FR03735
10	32	80	10	5	2+2	30.000	SCH2XFN350R	F03FR03736
10	26	70	10	10	2+2	30.000	SCH2XFN420R	F03FR03743
12	32	90	12	5	2+2	30.000	SCH2XFN360R	F03FR03737
12	42	100	12	5	2+2	30.000	SCH2XFN370R	F03FR03738
12	32	80	12	12	2+2	30.000	SCH2XFN425R	F03FR03744
12	42	100	12	12	2+2	30.000	SCH2XFN430R	F03FR03745
16	35	90	16	14	2+2	25.000	SCH2XFN444R	F03FR04012
18	55	110	20	24	2+2	25.000	SCH2XFN450R	F03FR03749
20	55	110	20	30	2+2	25.000	SCH2XFN455R	F03FR03750

D inch	h inch	H inch	A inch	hUP inch	Z	Max RPM 1/min.	Code	SAP
3/8"	1"	3"	3/8"	3/16"	2+2	30.000	SCH2XFN320R	F03FR03733
3/8"	1-1/8"	3"	3/8"	7/16"	2+2	30.000	SCH2XFN415R	F03FR03742
3/8"	1-1/4"	3"	3/8"	3/16"	2+2	30.000	SCH2XFN330R	F03FR03734
1/2"	1"	3"	1/2"	3/16"	2+2	30.000	SCH2XFN380R	F03FR03739
1/2"	1-1/2"	3-1/2"	1/2"	3/16"	2+2	30.000	SCH2XFN390R	F03FR03740
1/2"	1"	3"	1/2"	9/16"	2+2	30.000	SCH2XFN435R	F03FR03746
1/2"	1-1/2"	3-1/2"	1/2"	9/16"	2+2	30.000	SCH2XFN440R	F03FR03747



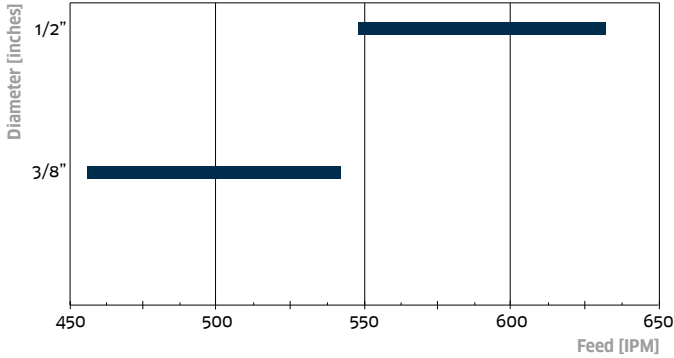
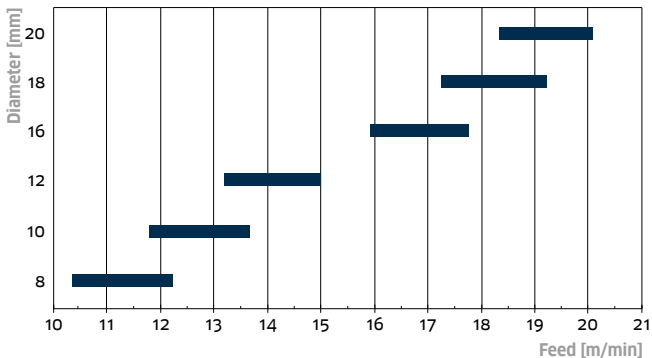
To find suggested feeding speeds see the tables below and apply the following correction factors:

Material:
Softwood 0,9
Hardwood 0,8
Depth of cut:
2x19mm or 2x3/4" 0,75
3x19mm or 2x3/4" 0,50
Rotation speed:
Suggested speeds are proportional to RPM.

Examples:
For 12.000 RPM factor 12.000/18.000 = 0,66
For 24.000 RPM factor 24.000/18.000 = 1,33

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

Suggested speeds for: MDF/chipboard - 18.000 RPM. Depth of cut: 19mm / 3/4"



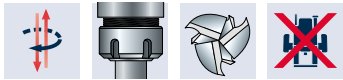
SCH3XF

Router cutter right-hand compression finishing Z3

Designed for: very high feed rates with perfect edge finishing on both sides of bilaminated materials.
Suitable for: sizing and nesting on most common panels, double sided melamine or laminated, veneered, natural wood, wood composites and engineered wood.
Short up-cut allows for mortising cut.

D mm	h mm	H mm	A mm	hUP mm	Z	Max RPM 1/min.	Code	SAP
8	22	70	8	5	3+3	30.000	SCH3XFN310R	F03FR03856
8	32	70	8	10	3+3	30.000	SCH3XFN410R	F03FR03866
10	26	70	10	5	3+3	30.000	SCH3XFN340R	F03FR04013
10	32	80	10	5	3+3	30.000	SCH3XFN350R	F03FR03860
10	29	80	10	10	3+3	30.000	SCH3XFN420R	F03FR04014
10	42	90	10	13	3+3	30.000	SCH3XFN422R	F03FR03869
12	22	80	12	5	3+3	30.000	SCH3XFN355R	F03FR03861
12	32	90	12	5	3+3	30.000	SCH3XFN360R	F03FR03862
12	42	100	12	5	3+3	30.000	SCH3XFN370R	F03FR03863
12	32	80	12	12,5	3+3	30.000	SCH3XFN425R	F03FR03870
12	42	100	12	14,5	3+3	30.000	SCH3XFN430R	F03FR03871
12	52	100	12	16,5	3+3	30.000	SCH3XFN432R	F03FR03872

D inch	h inch	H inch	A inch	hUP inch	Z	Max RPM 1/min.	Code	SAP
3/8"	1"	3"	3/8"	13/64"	3+3	30.000	SCH3XFN320R	F03FR03857
3/8"	1-1/8"	3"	3/8"	13/32"	3+3	30.000	SCH3XFN415R	F03FR03867
3/8"	1-1/4"	3"	3/8"	3/16"	3+3	30.000	SCH3XFN330R	F03FR03858
1/2"	1"	3"	1/2"	13/64"	3+3	30.000	SCH3XFN380R	F03FR03864
1/2"	1-1/8"	3"	1/2"	1/2"	3+3	30.000	SCH3XFN436R	F03FR03873
1/2"	1-1/2"	3-1/2"	1/2"	13/64"	3+3	30.000	SCH3XFN390R	F03FR03865
1/2"	1-5/8"	3-1/2"	1/2"	3/4"	3+3	30.000	SCH3XFN438R	F03FR03874
1/2"	2-1/4"	4"	1/2"	3	3+3	30.000	SCH3XFN442R	F03FR03875



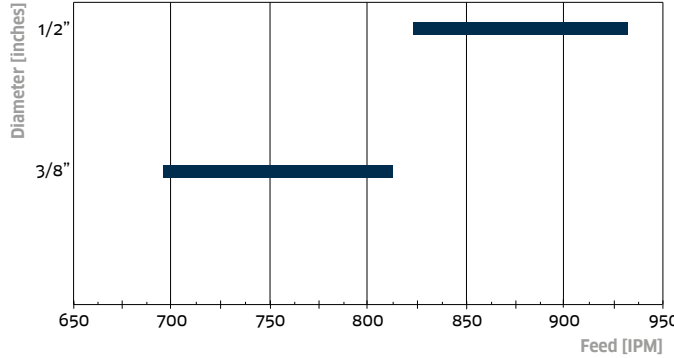
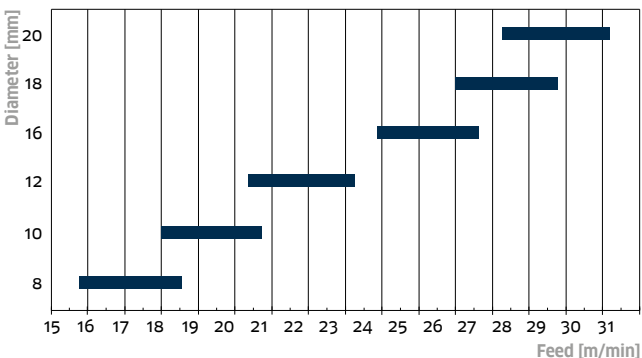
To find suggested feeding speeds see the tables below and apply the following correction factors:

Material:
Softwood 0,9
Hardwood 0,8
Depth of cut:
2x19mm or 2x3/4" 0,75
3x19mm or 2x3/4" 0,50
Rotation speed:
Suggested speeds are proportional to RPM.

Examples:
For 12.000 RPM factor 12.000/18.000 = 0,66
For 24.000 RPM factor 24.000/18.000 = 1,33

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

Suggested speeds for: MDF/chipboard - 18.000 RPM. Depth of cut: 19mm / 3/4"



SCH3

Router cutter right-hand upcut hardware slots finishing Z3

Designed for: CNC machining centres.
Suitable for: for windows, shutters and all hardware slots laminates or solid wood.

Upcut

D mm	h mm	H mm	A mm	hUP mm	Z	Max RPM 1/min.	Code	SAP
14	95	150	14	45	3	25.000	SCH3UFN102R	F03FR03803
16	95	150	16	45	3	25.000	SCH3UFN104R	F03FR03804
18	95	150	18	45	3	25.000	SCH3UFN106R	F03FR03805

Downcut

D mm	h mm	H mm	A mm	hUP mm	Z	Max RPM 1/min.	Code	SAP
14	95	150	14	45	3	25.000	SCH3DFN102R	F03FR03751
16	95	150	16	45	3	25.000	SCH3DFN104R	F03FR03752
18	95	150	18	45	3	25.000	SCH3DFN106R	F03FR03753

Upcut with chipbreakers

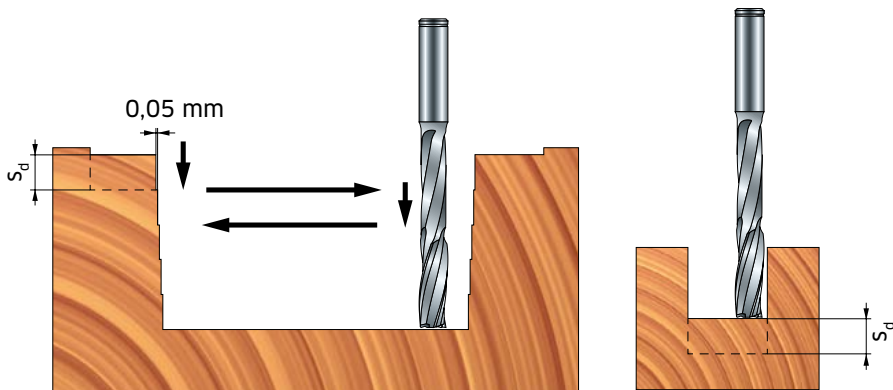
D mm	h mm	H mm	A mm	hUP mm	Z	Max RPM 1/min.	Code	SAP
14	95	150	14	45	3	25.000	SCH3UMN102R	F03FR03827
16	95	150	16	45	3	25.000	SCH3UMN104R	F03FR03828
18	95	150	18	45	3	25.000	SCH3UMN106R	F03FR03829

Downcut with chipbreakers

D mm	h mm	H mm	A mm	hUP mm	Z	Max RPM 1/min.	Code	SAP
14	95	150	14	45	3	25.000	SCH3DMN102R	F03FR03775
16	95	150	16	45	3	25.000	SCH3DMN104R	F03FR03776
18	95	150	18	45	3	25.000	SCH3DMN106R	F03FR03777

Solid wood feed & speeds:
Maximum depth per stroke s_0 8 mm
Suggested infeed at 18.000 RPM 15 m/min

Chipboard feed & speeds:
Maximum depth per stroke s_0 15 mm
Suggested infeed at 18.000 RPM 12 m/min



Solid wood - Best Upcut



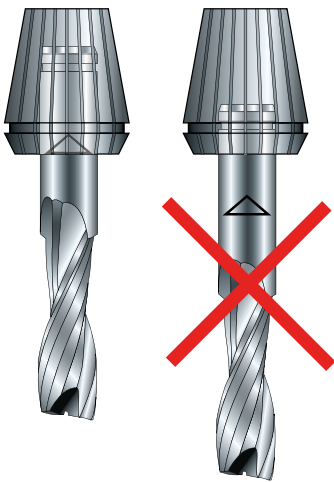
Laminates - Best Downcut

Explanation of symbols and abbreviations

HOW TO READ A CODE							
SC	H	1	U	F	N	100	R
	S	2	D	R	C		L
		3	X				

SC = solid cutter
H = helical
S = straight
3 = number of teeth
U = positive (up)
D = negative (down)
X = compression
F = finishing
R = roughing
N = not coated
C = coated
100 = progressive number
R = rotation (right)
L = rotation (left)

Minimum fixing lenght
Insert the shank into the collet at least until the mark.



SYMBOLS TO READ THE PRODUCT TABLES

D	Diameter	A	Shank	Max RPM	Max RPM
h	Cutting height	Z	Number of teeth	Code	Item code
H	Overall height	hUP	UP cut lenght	SAP	Item code - for SAP users only

OTHER SYMBOLS

	TiCo Hi-Density carbide		1 flute		Router cutters for overhead router machines		Sizing - Laminate
	Up spiral		2 flutes		Sizing - MDF		Grooving - Laminate
	Down spiral		3 flutes		Grooving - MDF		Sizing - Bilaminate
	Up spiral and down spiral		Z 2+2		Sizing - Chipboard		Grooving - Bilaminate
	Table mounted router only		Z 3+3		Grooving - Chipboard		Nesting - Bilaminate

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