



Leitz-Lexicon

Edition 6

Explanation of abbreviations

A	= dimension A	LL	= left hand rotation
a_e	= cutting thickness (radial)	M	= metric thread
a_p	= cutting depth (axial)	MBM	= minimum order quantity
ABM	= dimension	MC	= multi-purpose steel, coated
APL	= panel raising length	MD	= thickness of knife
APT	= panel raising depth	min^{-1}	= revolutions per minute (RPM)
AL	= working length	MK	= morse taper
AM	= number of knives	m min^{-1}	= metres per minute
AS	= anti sound (low noise design)	m s^{-1}	= metres per second
b	= overhang	n	= RPM
B	= width	n_{max}	= maximum permissible RPM
BDD	= thickness of shoulder	NAL	= position of hub
BEM	= note	ND	= thickness of hub
BEZ	= description	NH	= zero height
BH	= tipping height	NL	= cutting length
BO	= bore diameter	NLA	= pinhole dimensions
CNC	= Computerized Numerical Control	NT	= grooving depth
d	= diameter	P	= profile
D	= cutting circle diameter	POS	= cutter position
D0	= zero diameter	PT	= profile depth
DA	= outside Diameter	PG	= profile group
DB	= diameter of shoulder	QAL	= cutting material quality
DFC	= Dust Flow Control (optimised chip clearance)	R	= radius
DGL	= number of links	RD	= right hand twist
DIK	= thickness	RL	= right hand rotation
DKN	= double keyway	RP	= radius of cutter
DP	= polycrystalline diamond	S	= shank dimension
DRI	= rotation	SB	= cutting width
FAB	= width of rebate	SET	= set
FAT	= depth of rebate	SLB	= slotting width
FAW	= bevel angle	SLL	= slotting length
FLD	= flange diameter	SLT	= slotting depth
f_z	= tooth feed	SP	= tool steel
$f_{z \text{ eff}}$	= effective tooth feed	ST	= Cobalt-basis cast alloys, e. g. Stellite®
GEW	= thread	STO	= shank tolerance
GL	= total length	SW	= cutting angle
GS	= Plunging edge	TD	= diameter of tool body
H	= height	TDI	= thickness of tool
HC	= tungsten carbide, coated	TG	= pitch
HD	= wood thickness (thickness of workpiece)	TK	= reference diameter
HL	= high-alloyed tool steel	UT	= cutting edges with irregular pitch
HS	= high-speed steel (HSS)	V	= no. of spurs
HW	= tungsten carbide (TCT)	v_c	= cutting speed
ID	= ident number	v_f	= feed speed
IV	= insulation glazing	VE	= packing unit
KBZ	= abbreviation	VSB	= adjustment range
KLH	= clamping height	WSS	= workpiece material
KM	= edge breaker	Z	= no. of teeth
KN	= single keyway	ZA	= number of fingers
KNL	= combination pinhole consists of 2/7/42 2/9/46,35 2/10/60	ZF	= tooth shape (cutting edge shape)
L	= length	ZL	= finger length
I	= clamping length		
LD	= left hand twist		
LEN	= Leitz standard profiles		



5. Routing



5.1	Sizing and grooving	416
5.1.1	Shank cutters	416
5.1.2	Circular sawblades for CNC	459



5.2	Jointing, rebating and bevelling	460
5.2.1	Jointing and rebating cutterheads	462
5.2.2	Jointing cutterheads	465
5.2.3	Planing cutters	467
5.2.4	Bevel cutters	468



5.3	Profiling	469
5.3.1	Finger joints	469
5.3.2	Tools for internal doors	474
5.3.3	Tools for furniture and interior construction	477
5.3.4	Tools for multi purpose profiles	487
5.3.5	Tools for special profiles	499

	Action to eliminate problems	503
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	Signs of wear	504
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	Inquiry/order form special tools – routing	506
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5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Grooving cutter, straight cut

Application:

Router cutter for grooving.

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools, portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., laminated wood (plywood etc.), duromers, plastomers, mineral materials (Corian, Varicor etc.), gluelam (HPL, Trespa etc), non-ferrous metals (aluminium, copper etc.).

Technical information:

Straight cut. Ground on edge for plunging. Large resharping area. Good hogging performance in plastic and compound materials.



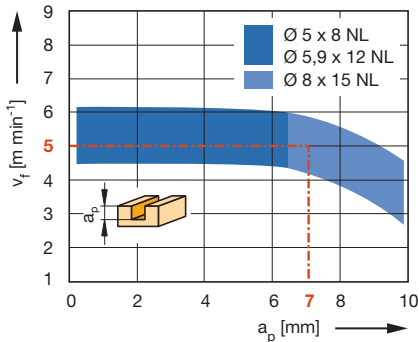
HW solid, Z 1

WO 120-2

D	GL	NL	S	QAL	DRI	ID
mm	mm	mm	mm			
5,9	65	12	6x30	HW solid	RL	044466 ●
8	70	27	8x30	HW solid	RL	044468 ●

RPM: n max. = 24000 min⁻¹

Feed speed v_f depending on cutting depth a_p



Workpiece material: Duromers, plastomers, compound materials

Working step: Grooving, sizing

Speed: n = 16000 - 18000 rpm

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Grooving cutter, straight cut

Application:

Router cutter for sizing and grooving.

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools, portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.), duromers, plastomers, mineral materials (Corian, Varicor etc.), laminated materials (HPL, Trespa etc.), non-ferrous metals (aluminium, copper etc.).



Technical information:

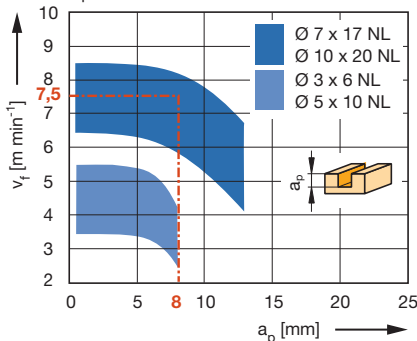
Straight cut. Ground on edge for plunging. Large resharpening area. Short design for increased stability and low vibration cutting. Long design for deep cutting (recommended in several steps).

HW solid, Z 2, short design

WO 120-1-16

D mm	GL mm	NL mm	S mm	DRI	ID
3	50	6	6x30	RL	041979 ●
4	50	7	6x30	RL	041952 ●
4,5	50	8	6x30	RL	041953 ●
5	50	10	6x30	RL	041954 ●
5,5	50	12	6x30	RL	041955 ●
6	50	14	6x30	RL	041956 ●
7	55	17	8x30	RL	041958 ●
8	55	20	8x30	RL	041985 ●
8,5	65	16	8x30	RL	041960 ●
9	70	18	10x40	RL	041961 ●
10	70	20	10x40	RL	041962 ●
12	70	25	12x40	RL	041963 ●

Feed speed v_f depending on cutting depth a_p



Workpiece material: Plastic coated chipboard

Working step: Grooving

Speed: $n = 18000$ rpm

Correction factor for v_f :

Solid wood = 0.8; Gluelam = 0.8;

Machining across grain = 0.7

HW solid, Z 2, short design, reinforced shank

WO 120-1-16

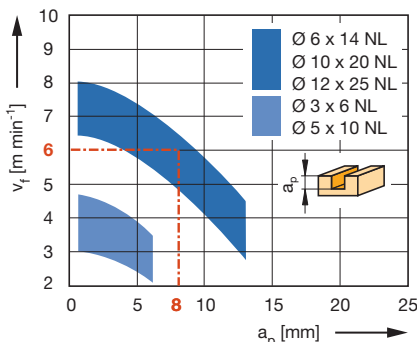
D mm	GL mm	NL mm	S mm	DRI	ID
3	55	6	8x40	RL	041981 ●
4	55	10	8x40	RL	041982 ●
5	55	12	8x40	RL	041983 ●
6	55	14	8x40	RL	041984 ●

HW solid, Z 2, long design

WO 120-1-16

D mm	GL mm	NL mm	S mm	DRI	ID
3	60	12	6x30	RL	041964 ●
4	60	12	6x40	RL	041965 ●
5	80	18	6x40	RL	041966 ●

RPM: n max. = 24000 min⁻¹



Workpiece material: Duromers, plastomers, Corian

Working step: Grooving

Speed: $n = 16000 - 18000$ rpm

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Grooving cutter, Z 2

Application:

Router cutter for sizing and grooving.

Machine:

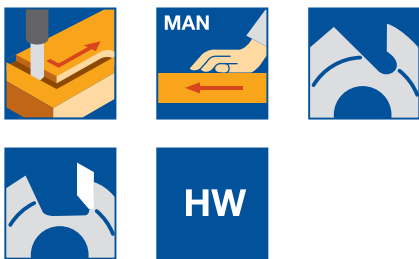
Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools, portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.).

Technical information:

Straight cut, tungsten carbide plunging tip.



HW, Z 2, shank 9.5 / 12 mm

WO 120-1-01

D mm	GL mm	NL mm	S mm	QAL	DRI	ID
3	34	5	9,5x20	HW solid	RL	038014 ●
4	37	6	9,5x20	HW solid	RL	038016 ●
5	39	7	9,5x20	HW solid	RL	038018 ●
8	48	14	9,5x20	HW solid	RL	038024 ●
10	52	20	9,5x20	HW	RL	038028 ●
11	52	25	9,5x20	HW	RL	038030 ●
12	72	25	12x40	HW	RL	038115 ●
13	72	25	12x40	HW	RL	038116 ●
14	76	28	12x40	HW	RL	038117 ●
15	80	30	12x40	HW	RL	038118 ●
16	90	35	12x40	HW	RL	038147 ●
18	90	35	12x40	HW	RL	038148 ●
20	90	35	12x40	HW	RL	038149 ●
25	92	41	12x40	HW	RL	038125 ●
28	94	42	12x40	HW	RL	038127 ●
30	94	42	12x40	HW	RL	038128 ●

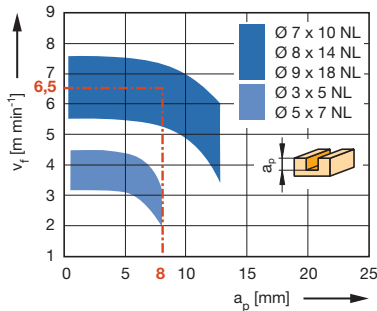
RPM: D = 3 - 25 mm

n = 16000 - 36000 min⁻¹

D = 26 - 30 mm

n = 16000 - 30000 min⁻¹

Feed speed v_f depending on cutting depth a_p



Workpiece material: Plastic coated chipboard

Working step: Grooving

Speed: n = 18000 rpm

Correction factor for v_f : Solid wood = 0.8; Gluelam = 0.8; Across grain = 0.7

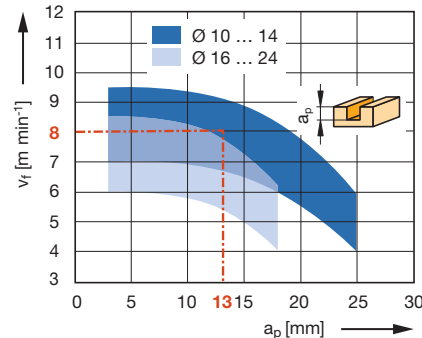
HW, Z 2, shank 10 mm

WO 120-1-01

D mm	GL mm	NL mm	S mm	QAL	DRI	ID
4	60	10	10x35	HW solid	RL	038053 ●
5	60	12	10x35	HW solid	RL	038054 ●
6	60	14	10x35	HW solid	RL	038055 ●
7	60	17	10x35	HW solid	RL	038056 ●
8	60	20	10x35	HW solid	RL	038057 ●
10	70	23	10x35	HW	RL	038058 ●
12	70	23	10x35	HW	RL	038059 ●
14	70	23	10x35	HW	RL	038060 ●
16	70	23	10x35	HW	RL	038062 ●
20	70	23	10x35	HW	RL	038064 ●

RPM: D = 3 - 25 mm

n = 16000 - 36000 min⁻¹



Workpiece material: Plastic coated chipboard

Working step: Grooving

Speed: n = 18000 rpm

Correction factor for v_f : Solid wood = 0.8; Gluelam = 0.8; Machining across grain = 0.7

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Grooving cutter, Z 2

Application:

Router cutter for sizing and grooving.

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools, portable routers.

Workpiece material:

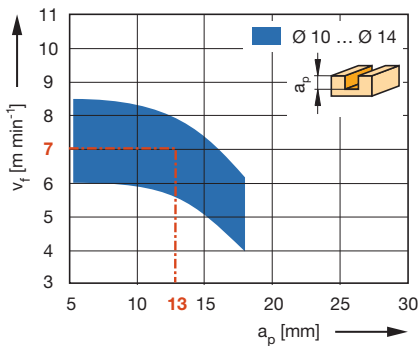
Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.).

Technical information:

Straight cut, plunging tip in tungsten carbide (only WO 120-1-10). Ground on end (only WO 110-2), suitable for plunging. Long design for deep cutting (recommended in several steps).



Feed speed v_f depending on cutting depth a_p



HW, Z 2, shank 12 mm, long design

WO 120-1-01, WO 120-1-10

D mm	GL mm	NL mm	S mm	DRI	ID
10	90	35	12x40	RL	072495 ●
12	90	40	12x40	RL	072496 ●
14	100	50	12x40	RL	072233 ●
16	90	45	12x40	RL	072105 ●
16	100	60	12x40	RL	072234 ●
18	90	45	12x40	RL	072106 ●
20	90	45	12x40	RL	072107 ●
22	90	45	12x40	RL	072108 ●
24	90	45	12x40	RL	072109 ●
30	90	35	12x40	RL	072498 ●

Workpiece material: Plastic coated chipboard

Working step: Grooving

Speed: $n = 18000$ rpm

Correction factor for v_f :

Solid wood = 0.8; Gluelam = 0.8;

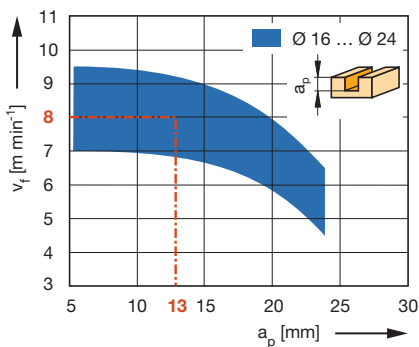
Machining across grain = 0.7

RPM: $D = 3 - 25$ mm

$n = 16000 - 36000$ min⁻¹

$D = 26 - 30$ mm

$n = 16000 - 30000$ min⁻¹



HW, Z 2, inch dimensions, long design

WO 110-2

D in	GL in	NL in	S in	QAL	DRI	ID
1/8"	1 3/4"	3/8"	1/4" x 1 1/4"	HW solid	RL	038069 ●
1/4"	2 1/2"	1 1/4"	1/4" x 1 1/4"	HW solid	RL	038083 ●
1/4"	2 3/8"	3/4"	1/2" x 1 5/8"	HW	RL	038072 ●
5/16"	2 5/8"	1"	1/2" x 1 3/8"	HW	RL	038088 ●
3/8"	2 7/16"	3/4"	1/2" x 1 5/8"	HW	RL	038078 ●
3/8"	2 7/8"	1 1/4"	1/2" x 1 3/8"	HW	RL	038089 ●
1/2"	2 5/8"	1"	1/2" x 1 5/8"	HW	RL	038099 ●
1/2"	2 3/4"	1 1/4"	1/2" x 1 5/8"	HW	RL	038079 ●
1/2"	3 1/8"	1 1/2"	1/2" x 1 3/8"	HW	RL	038091 ●
1/2"	4 1/2"	2"	1/2" x 2 1/2"	HW	RL	038101 ●

Workpiece material:

Plastic coated chipboard

Working step: Grooving

Speed: $n = 18000$ rpm

Correction factor for v_f :

Solid wood = 0.8; Gluelam = 0.8;

Machining across grain = 0.7

RPM: $D = 3 - 25$ mm

$n = 16000 - 36000$ min⁻¹

$D = 26 - 30$ mm

$n = 16000 - 30000$ min⁻¹

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Grooving cutterset, adjustable

Application:

For horizontal grooving in the edge of panels. For cutting panel joint grooves etc.

Machine:

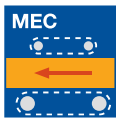
Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.).

Technical information:

Grooving cutterset for mounting on cutter arbor, continuous cutting width adjustment without spacers. Grooving depth up to 12 mm.



Adjustable, mounted on cutter arbor

SO 100-2

Tool Type	D mm	Z	BO mm	ID
Tool set mounted on arbor	100	4/4	20	426061 □

RPM: n max. = 18000 min⁻¹

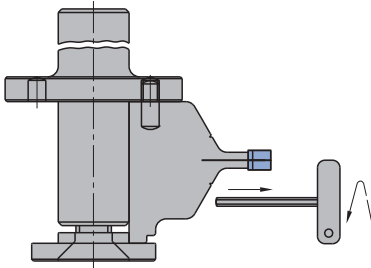
Adjustable, without cutter arbor

SF 502-2-01

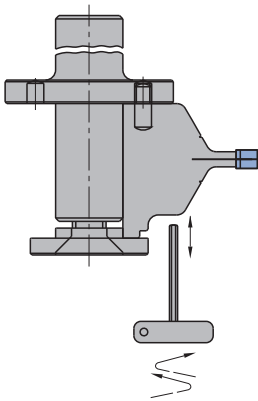
Tool Type	D mm	SB mm	BO mm	ID
Grooving cutterset with flanged sleeve	100	3,5 - 6,2	20	020646 ●

RPM: n max. = 18000 min⁻¹

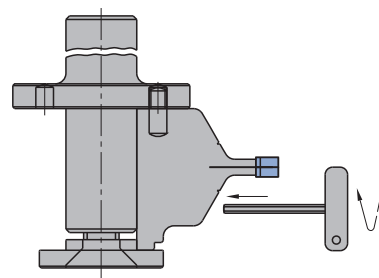
When ordering, select arbors with d=20 mm and clamping length 40 mm. Cutter arbor see section 8 Clamping systems/Adaptors.



Open clamping system



Adjustment SB larger "+", SB smaller "-"



Close clamping system

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Grooving cutter, Z 6

Application:

Routers for cutting additional grooves, for example, wood/alu windows dry glazing systems.

Machine:

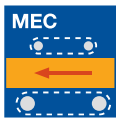
Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Softwood and hardwood, laminated wood in the window construction.

Technical information:

Straight cut. Reinforced body for higher stability.

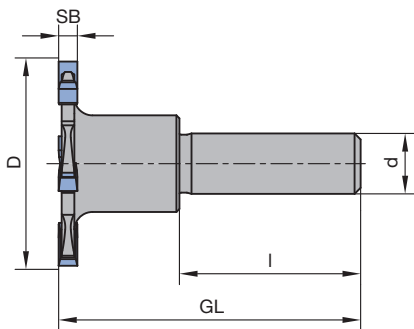


HW, Z 6

WO 110-2

D	GL	SB	S	Z	DRI	ID
mm	mm	mm	mm			
35	50	3,1	10x30	6	RL	038236 ●

RPM: n = 16000 - 24000 min⁻¹



5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Grooving cutter with shear angle

Application:

Router cutter for sizing, grooving and cutting apertures.

Machine:

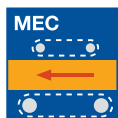
Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.).

Technical information:

Finishing type Z 1+1 particularly for apertures in furniture and doors. Cutting edges with shear angles against feed for tear free edges on both sides.



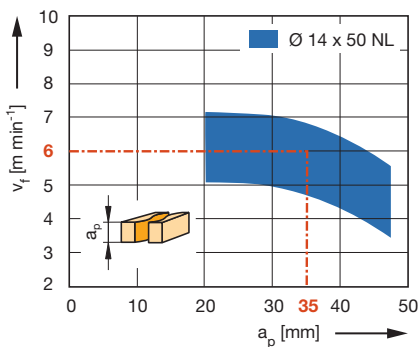
HW, Z 1+1, finishing cut processing

WO 140-2

D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
14	100	50	12x50	RL	038204 ●
14	100	50	14x50	RL	038205 ●
14	120	50	25x60	RL	038206 ●

RPM: n max. = 24000 min⁻¹

Feed speed v_f depending on grooving depth a_p



Workpiece material: Plastic coated and veneered chipboard

Working step: Sizing

Speed: n = 18000 rpm

Correction factor for v_f :

Machining across grain = 0.7

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Spiral routing/finishing router cutter Marathon

Application:

Router cutter for sizing and grooving in roughing/finishing quality.

Machine:

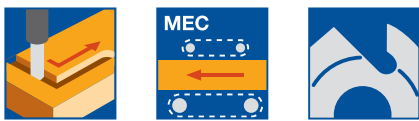
Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF, etc.) uncoated, gluelam (plywood, etc.) gluelam (HPL, Trespa, etc.), duromers, plastomers, mineral working material (Corian, Varicor, etc.).

Technical information:

Solid tungsten carbide, tungsten carbide quality and Marathon coating for increased performance time, particularly in abrasive materials. Recommended for abrasive materials such as HPL/CPL.



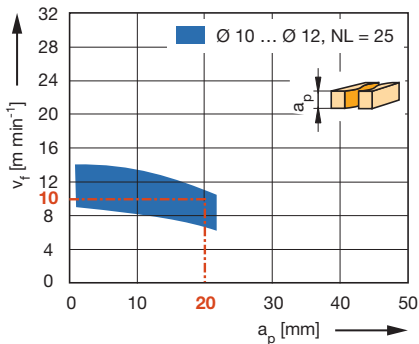
HW, Z 2, short design

WO 160-2-15

D	D	GL	GL	NL	NL	S	S	Z	Twist	DRI	ID
mm	in	mm	in	mm	in	mm	in				
12,7	1/2"	76,2	3"	28,6	1 1/8"	12,7x40	1/2"x1 1/2"	2	RD	RL	240514 ●
12,7	1/2"	88,9	3 1/2"	38,1	1 1/2"	12,7x40	1/2"x1 1/2"	2	LD	RL	240515 ●

RPM: n max. = 24000 min⁻¹

Feed speed v_f depending on grooving depth a_p



Workpiece material: Softwood

Working step: Sizing

Speed: n = 18000 rpm

Correction factor for v_f :

Hardwood = 0.8; Chipboard = 1.3;

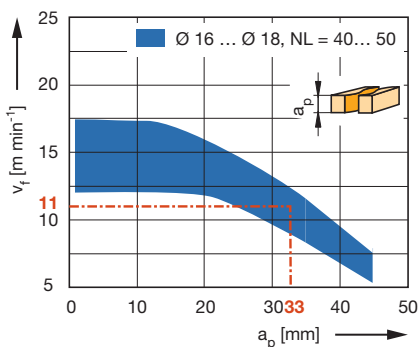
Gluelam = 0.9

HW, Z 2, short design, for abrasive materials

WO 160-2-15

D	GL	NL	S	Z	Twist	DRI	ID
mm	mm	mm	mm				
10	70	25	10x40	2	RD	RL	240200 ●
12	70	25	12x40	2	RD	RL	240201 ●
16	100	40	16x50	2	RD	RL	240202 ●
18	100	50	18x50	2	RD	RL	240203 ●

RPM: n max. = 24000 min⁻¹



Workpiece material: Softwood

Working step: Sizing

Speed: n = 18000 rpm

Correction factor for v_f :

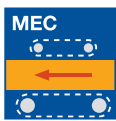
Hardwood = 0.8; Chipboard = 1.2;

gluelam = 0.9

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Spiral roughing/finishing router cutter Marathon

Application:

Router cutter for sizing and grooving in roughing/finishing quality.

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Softwood and hardwood, laminated wood in window construction, chipboard and fibre working materials (MDF, HF, etc.), uncoated, gluelam (plywood, etc.), plasters, mineral working materials (Corian, Varicor, etc.).

Technical information:

Solid tungsten carbide, Marathon coating for increased performance time. Short design for increased stability. Long design for deep cutting (recommended in several steps). Higher feed speeds than conventional roughing cutters, quiet running.

Z 2 / Z 3, short design

WO 160-2-12

D mm	GL mm	NL mm	S mm	Z	Twist	ID LL	ID RL
8	65	20	8x40	2	RD		042277 ●
10	70	25	10x40	2	RD		042278 ●
10	70	25	10x40	2	LD		042279 ●
12	70	25	12x40	3	RD		042280 ●
12	70	25	12x40	3	LD		042281 ●
14	80	30	14x45	3	RD		042282 ●
16	100	40	16x55	3	RD		042273 ●
16	100	40	16x55	3	LD	042283 ●	042284 ●
18	90	35	18x50	3	RD		042285 ●
20	100	45	20x50	3	RD		042286 ●
25	120	60	25x55	3	RD		042287 ●

Z 2 / Z 3, long design

WO 160-2-12

D mm	GL mm	NL mm	S mm	Z	Twist	ID LL	ID RL
8	80	25	8x55	2	RD		042288 ●
12	80	35	12x40	3	RD		042270 ●
12	80	35	12x40	3	LD	042289 ●	042290 ●
12	90	42	12x40	3	RD		042271 ●
14	110	50	14x55	3	RD		042272 ●
14	110	50	14x55	3	LD		042291 ●
16	110	55	16x55	3	RD		042274 ●
16	110	55	16x55	3	LD	042292 ●	042293 ●
18	120	60	18x55	3	RD		042294 ●
20	120	60	20x55	3	RD		042275 ●
20	120	60	20x55	3	LD	042295 ●	042296 ●
20	130	75	20x50	3	RD		042276 ●
20	130	75	20x55	3	LD	042297 ●	

RPM: n max. = 24000 min⁻¹

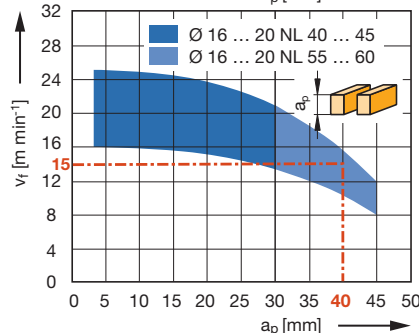
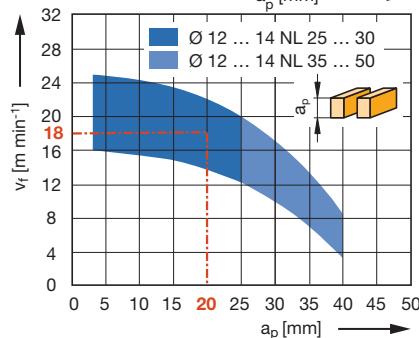
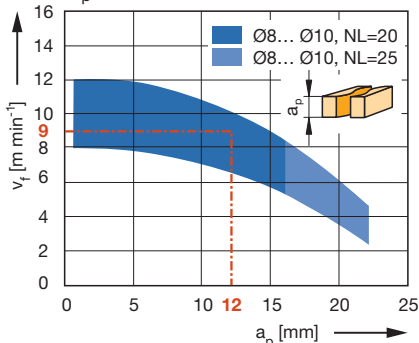
Workpiece material: Softwood

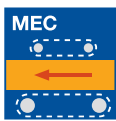
Working step: Sizing

Speed: n = 18000 rpm

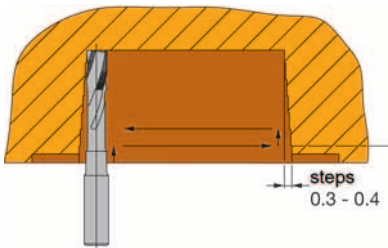
Correction factor for v_f: Hardwood = 0.8;
Chipboard = 1.3; Laminated wood = 0.9

Feed speed v_f depending on grooving depth a_p





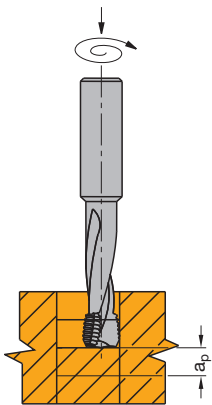
Application example for mortise slot production



Application data:

Infeed at:

a_p 4 - 8 mm per stroke in solid wood;
 v_f 10 - 16 m min⁻¹;
 n = 12000 - 18000 rpm
 a_p 8 - 15 mm per stroke in chipboard;
 v_f 12 - 18 m min⁻¹;
 n = 12000 - 18000 rpm



Production of keyholes and spy holes by circular cutting

Spiral roughing/finishing router cutter Marathon

Application:

Router cutter for sizing, grooving and for slot mortising in roughing/finishing quality.

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Softwood and hardwood, laminated wood in window construction, chipboard and fibre working materials (MDF, HF, etc.) uncoated, gluelam (plywood, etc.).

Technical information:

Solid tungsten carbide, Marathon coating for increased performance time. Extra long design for very deep cutting (in several steps). Higher feed speeds than conventional spiral roughing cutters, quiet running.

Z 3, extra long design, for mortise slots

WO 160-2-13

D mm	GL mm	NL mm	AL mm	S mm	Z	Twist	DRI	ID	ID Set HSK-F 63
8	80	25	51	8x25	3	LD	RL	240010	● 240500 □
10	90	30	51	10x35	3	LD	RL	240011	● 240501 □
12	120	35	80	12x35	3	LD	RL	240012	● 240502 □
12	120	35	80	12x35	3	right hand twist	RL	240000	●
14	170	30	95	16x50	3	right hand twist	RL	240001	●
14	190	30	120	16x50	3	right hand twist	RL	240002	●
16	170	50	105	16x50	3	right hand twist	RL	240003	●
16	179	30	120	16x58 *	3	right hand twist	RL	240004	●
16	179	30	120	20x58 *	3	right hand twist	RL	240005	●
16	205	30	135	20x50	3	right hand twist	RL	240006	●
17	170	30	105	20x50	3	right hand twist	RL	240007	●
17	190	30	120	20x50	3	right hand twist	RL	240008	●
18	170	50	115	20x50	3	right hand twist	RL	240009	●

RPM: D 10-12 mm: n = 18000 - 24000 min⁻¹

D 14-18 mm: n = 12000 - 20000 min⁻¹

* with clamping flat for HOMAG/WEEKE latch hole unit

Note:

HSK-F 63 = tool is supplied shrink-fitted in shrink-fit chuck HSK-F 63.

Application:

Router cutter for sizing and cutting spy holes and keyholes in roughing/finishing quality.

Z 3, extra long design for cutting spyholes and keyholes

WO 160-2-14

D mm	GL mm	NL mm	AL mm	S mm	Z	DRI	ID	ID Set HSK-F 63
10	95	45		10x40	3	RL	240100	●
11,3	105	15	55	12x45	2	RL	240101	●
12	120	15	75	12x40	2	RL	240102	●
12	140	20	95	12x40	2	RL	240103	●
14	130	50	75	14x50	3	RL	240104	●
14	170	30	95	16x60	3	RL	240108	● 240601 □
16	130	75		16x50	3	RL	240105	●

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters

D mm	GL mm	NL mm	AL mm	S mm	Z	DRI	ID	ID Set HSK-F 63
16	170	50	105	16x55	3	RL	240107	● 240600 □
16	170	30	95	16x60	3	RL	240106	●
25	200	120		25x65	3	RL	240300	● 240800 □

RPM: D 10-12 mm: $n = 18000 - 24000 \text{ min}^{-1}$
 D 14-18 mm: $n = 12000 - 20000 \text{ min}^{-1}$



Spiral roughing/finishing router cutter Marathon alternate twist

Application:

Routers for sizing and grooving in roughing/finishing quality and tear free cut edges on both sides.

Machine:

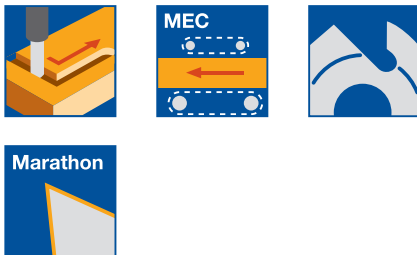
Overhead routers with/without CNC control, machining centres, special router machines with cutting spindles for mounting shank tools.

Workpiece material:

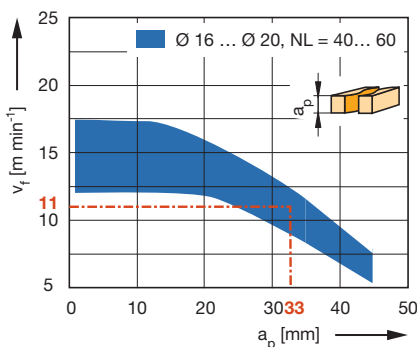
Softwood and hardwood, chipboard and fibre working material (MDF, HF, etc.) uncoated, gluelam (plywood, etc.), plastomers, mineral working materials (Corian, Varicar, etc.).

Technical information:

HW solid, Marathon coating for increased performance time. Alternate twist for tear free cut edges on both sides. Higher feed speeds possible than with conventional roughing cutters. Quiet running.



Feed speed v_f depending on grooving depth a_p



Z 2 + 2

WO 160-2-16

D mm	GL mm	NL mm	S mm	DRI	ID
16	100	40	16x50	RL	240402 ●
20	120	45	20x50	RL	240400 ●
20	130	60	20x50	RL	240401 ●
20	140	75	20x50	RL	240403 ●

RPM: $n \text{ max.} = 24000 \text{ min}^{-1}$

Workpiece material: Softwood

Working step: Sizing

Speed: $n = 18000 \text{ rpm}$

Correction factor for v_f :

Hardwood = 0.8; Chipboard = 1.2;

Gluelam = 0.9

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Roughing router cutter in turnblade design

Application:

Router cutter for sizing and grooving in roughing quality.

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, gluelam (plywood etc.).

Technical information:

Tungsten carbide turnblade knives arranged in irregular pitch for quiet cutting. With turnblade knife plunging tip.



HW, Z 1+1

WL 101-2

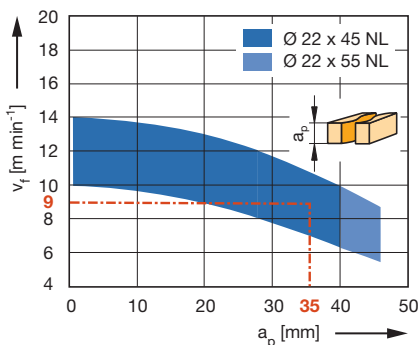
D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
22	105	45	20x50	RL	041923 ●
22	115	45	25x60	RL	041921 ●
22	125	55	25x60	RL	041922 ●

RPM: $n = 16000 - 24000 \text{ min}^{-1}$

Spare parts:

BEZ	ABM	QAL	VE	ID
	mm		PCS	
Turnblade knife	9x12x1,5	HW-05	10	005158 ●
Turnblade knife	12x12x1,5	HW-05	10	005081 ●
Oval head screw Torx® 15	M4x6			006225 ●
Torx®	Torx® 15			005457 ●

Feed speed v_f depending on grooving depth a_p



Workpiece material: Plastic coated chipboard

Working step: Sizing

Speed: $n = 18000 \text{ rpm}$

Correction factor for v_f : MDF = 0.8

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Spiral finishing router cutter

Application:

Router cutter for grooving plastic and aluminium profiles. Ideal for cutting drainage grooves in plastic window profiles.

Machine:

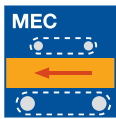
Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Softwood and hardwood, duromers, plastomers, compound materials (PU with aluminium coating etc.), non-ferrous metals (aluminium, copper etc.).

Technical information:

When cutting aluminium, suitable lubrication (spray or minimum volume lubrication) is necessary.

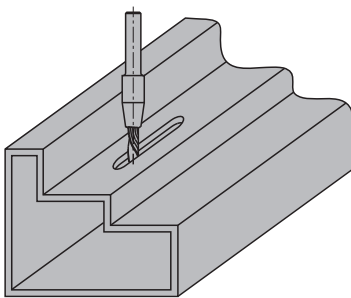


HW solid, Z 1, long design

WO 160-2-07

D mm	GL mm	NL mm	AL mm	S mm	Z	Twist	DRI	ID
5	78	20	30	8x40	1	RD	RL	042539 ●
5	95	20	30	8x40	1	RD	RL	042540 ●
5	110	25	45	8x40	1	RD	RL	042541 ●

RPM: n = 18000 - 24000 min⁻¹



Slotting in hollow sections

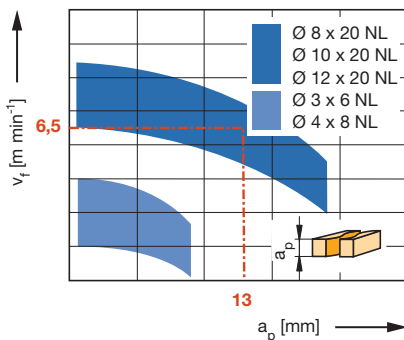
5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Feed speed v_f depending on cutting depth a_p



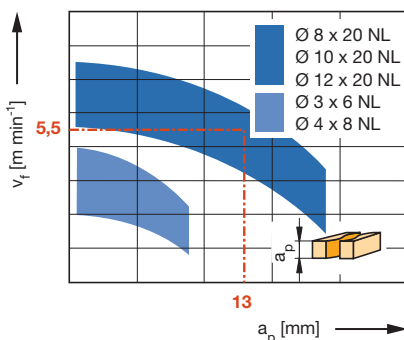
Workpiece material: Softwood

Working step: Sizing

Speed: $n = 18000 - 24000$ rpm

Correction factor for v_f :

Hardwood = 0.9; Machining across grain = 0.8; Chipboard = 1.1



Workpiece material: Duromers, plastomers, gluelam (HPL), compound materials

Working step: Sizing

Speed: $n = 16000 - 18000$ rpm

Spiral finishing router cutter

Application:

Router cutter for sizing, grooving and finish cutting to high cutting quality.

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.), duromers, plastomers, mineral materials (Corian, Varicor etc.), gluelam (HPL, Trespa etc.), non-ferrous metals (aluminium, copper etc.).

Technical information:

Large twist angle for high shear cut. Check twist direction for good top layer quality. Max. cutting depth 1.0 - 1.5 x diameter. Short design for increased stability and low vibration. Long design for deep cutting (recommended in several steps).

HW solid, Z 1, short design

WO 160-2-03

D	D	GL	GL	NL	NL	S	S	Z	Twist	DRI	ID
mm	in	mm	in	mm	in	mm	in				
3		50		6		6x30		1	RD	RL	042723 ●
3		50		6		6x30		1	LD	RL	042724 ●
4		50		8		6x30		1	RD	RL	042725 ●
4		50		8		6x30		1	LD	RL	042726 ●
5		50		10		6x30		1	RD	RL	042727 ●
5		50		10		6x30		1	LD	RL	042728 ●
6		50		14		6x30		1	RD	RL	042729 ●
6		50		14		6x30		1	LD	RL	042730 ●
6,35	1/4"	50,8	2"	15,88	5/8"	6,35x30	1/4"x1 1/8"	1	RD	RL	240512 ●
8		65		20		8x40		1	RD	RL	042731 ●
8		65		20		8x40		1	LD	RL	042732 ●
10		70		20		10x40		1	RD	RL	042733 ●
10		70		20		10x40		1	LD	RL	042734 ●
12		70		20		12x40		1	RD	RL	042735 ●
12		70		20		12x40		1	LD	RL	042736 ●

RPM: $n = 16000 - 24000$ min⁻¹

HW solid, Z 1, long design

WO 160-2-03

D	GL	NL	S	Z	Twist	DRI	ID
mm	mm	mm	mm				
4	60	12	6x40	1	RD	RL	042739 ●
4	60	12	6x40	1	LD	RL	042740 ●
5	80	18	6x40	1	RD	RL	042741 ●
5	80	18	6x40	1	LD	RL	042742 ●
6	80	22	6x40	1	RD	RL	042743 ●
6	80	22	6x40	1	LD	RL	042744 ●
8	80	25	8x40	1	RD	RL	042745 ●
8	80	25	8x40	1	LD	RL	042746 ●
10	90	32	10x40	1	RD	RL	042747 ●
10	90	32	10x40	1	LD	RL	042748 ●
12	90	32	12x40	1	RD	RL	042749 ●
12	90	32	12x40	1	LD	RL	042750 ●

RPM: $n = 16000 - 24000$ min⁻¹

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Spiral finishing router cutter

Application:

Router cutter for sizing, grooving and finish cutting to high cutting quality.

Machine:

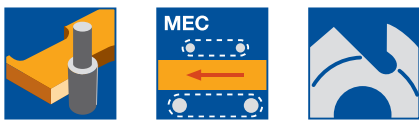
Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

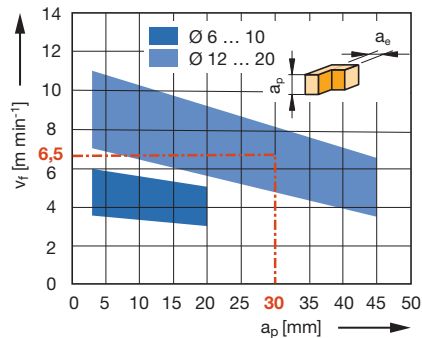
Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.), duromers, plastomers, mineral materials (Corian, Varicor etc.), gluelam (HPL, Trespa etc.).

Technical information:

Ideally used after roughing cutters, finish cut allowance approx. 1-2 mm. Check twist direction for good top layer quality. Short design for increased stability and low vibration. Long design for larger material thickness at reduced feed speeds.



Feed speed v_f depending on grooving depth a_p



Workpiece material: Softwood

Working step: Jointing

Speed: $n = 18000$ rpm

Correction factor for v_f :

Hardwood = 0.9;

Machining across grain = 0.7

HW solid, Z 2, short design

WO 160-2-05

D mm	GL mm	NL mm	S mm	Z	Twist	DRI	ID
6	60	12	6x30	2	LD	RL	042457 ●
8	65	20	8x30	2	RD	RL	042472 ●
10	70	25	10x40	2	RD	RL	042458 ●
10	70	25	10x40	2	LD	RL	042459 ●
12	70	25	12x40	2	RD	RL	042758 ●
12	70	25	12x40	2	LD	RL	042760 ●
16	100	40	16x50	2	RD	RL	042761 ●
16	100	40	16x50	2	LD	RL	042763 ●
20	100	45	20x50	2	RD	RL	042764 ●

RPM: $n = 16000 - 24000$ min⁻¹

HW solid, Z 2, long design

WO 160-2-05

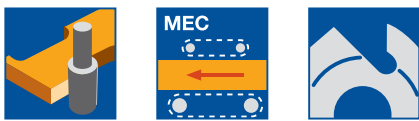
D mm	D in	GL mm	GL in	NL mm	NL in	S mm	S in	Z	Twist	DRI	ID
12		80		35		12x40		2	RD	RL	042765 ●
12,7	1/2"	76,2	3"	31,8	1 1/4"	12,7x40	1/2"x1 1/2"	2	LD	RL	240510 ●
12,7	1/2"	88,9	3 1/2"	31,8	1 1/4"	12,7x40	1/2"x1 1/2"	2	LD	RL	240511 ●
16		110		55		16x55		2	RD	RL	042766 ●

RPM: $n = 16000 - 24000$ min⁻¹

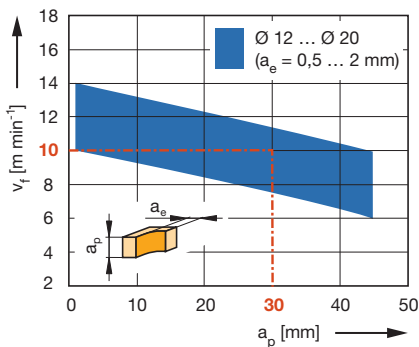
5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Feed speed v_f depending on grooving depth a_p



Workpiece material: Softwood

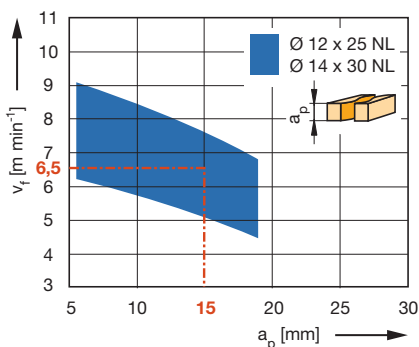
Working step: Jointing

Speed: $n = 18000$ rpm

Correction factor for v_f :

Hardwood = 0.9;

Machining across grain = 0.7



Spiral finishing router cutter

Application:

Router cutter for sizing, grooving and finish cutting to high cutting quality. Z 3 design for high feed speeds.

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.), duromers, plastomers, mineral materials (Corian, Varicor etc.), gluelam (HPL, Trespa etc.).

Technical information:

Ideally used after roughing cutters, finish cut allowance approx. 1-2 mm. Check twist direction for good top layer quality. Short design for increased stability and low vibration. Long design for larger material thickness at reduced feed speeds.

HW solid, Z 3, short design

WO 160-2-05

D mm	GL mm	NL mm	S mm	Z	Twist	ID LL	ID RL
12	70	25	12x40	3	LD		042486 ●
12	70	25	12x40	3	RD	042534 ●	042487 ●
14	80	30	14x40	3	RD		042461 ●
16	100	40	16x50	3	RD		042488 ●
16	100	40	16x50	3	LD		042489 ●
18	90	35	18x50	3	RD		042474 ●

RPM: $n = 16000 - 24000$ min⁻¹

HW solid, Z 3, long design

WO 160-2-05

D mm	D in	GL mm	GL in	NL mm	NL in	S mm	S in	Z	Twist	ID LL	ID RL
8		65		25		8x30		3	LD		042490 ●
12		80		35		12x40		3	RD		042460 ●
12,7	1/2"	88,9	3 1/2"	28,6	1 1/8"	12,7x 40	1/2"x 1 1/2"	3	RD		240509 ●
14		110		50		14x55		3	RD		042462 ●
16		110		55		16x55		3	RD		042464 ●
16		110		55		16x55		3	LD	042473 ●	042465 ●
18		120		60		18x55		3	RD		042475 ●
20		120		60		20x55		3	RD		042466 ●
20		120		60		20x55		3	LD	042468 ●	042467 ●
20		130		75		20x50		3	RD		042549 ●

RPM: $n = 16000 - 24000$ min⁻¹

Workpiece material: Duromers, laminated materials (HPL, CPL)

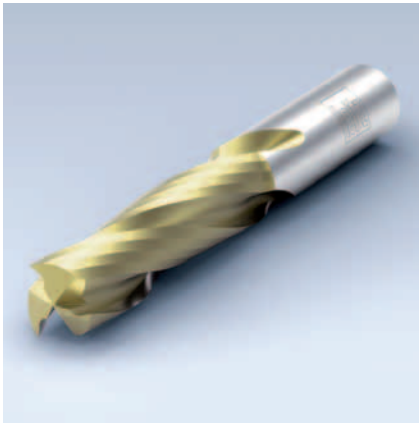
Working step: Sizing

Speed: $n = 14000 - 18000$ rpm

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Spiral finishing router cutter Marathon

Application:

Router cutter for sizing, grooving and finish cutting to high cutting quality. Z 3 design for high feed speeds.

Machine:

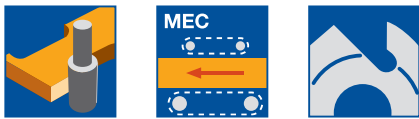
Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

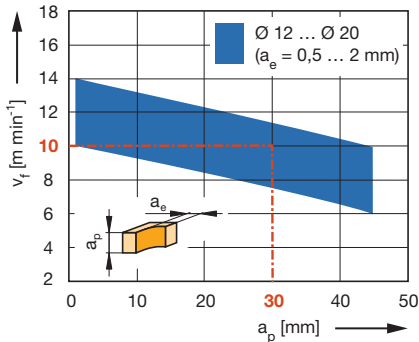
Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.), duromers, plastomers, mineral materials (Corian, Varicor etc.), gluelam (HPL, Trespa etc.).

Technical information:

Marathon coating for increased performance time and reduced resin build up. Ideally used after roughing cutters, finish cut allowance approx. 1-2 mm. Mirror finished cutting area ideal for machining thermoplastics.



Feed speed v_f depending on grooving depth a_p



Workpiece material: Softwood

Working step: Jointing

Speed: $n = 18000$ rpm

Correction factor for v_f :

Hardwood = 0.9;

Machining across grain = 0.7

HW solid, Z 3

WO 160-2-10

D mm	GL mm	NL mm	S mm	Z	Twist	DRI	ID
12	80	35	12x40	3	RD	RL	042790 ●
14	110	50	14x55	3	RD	RL	042791 ●
16	110	55	16x55	3	RD	RL	042792 ●
20	120	60	20x55	3	RD	RL	042793 ●
20	130	75	20x50	3	RD	RL	042794 ●

RPM: $n = 16000 - 24000$ min⁻¹

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Spiral finishing router cutter alternate twist angle

Application:

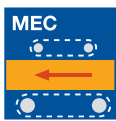
Router cutter for sizing, grooving and finish cutting to high cutting quality. For tear free cut edges on both sides.

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.), duromers, plastomers, mineral materials (Corian, Varicor etc.), gluelam (HPL, Trespa etc.).



Technical information:

Ideally used after roughing cutters, finish cut allowance approx. 1-2 mm. Alternate twist for tear free cut edges on both sides. Z 1+1 design, suited for solid wood up to 50 mm thickness with roughing cut or 30 mm thickness without roughing cut.

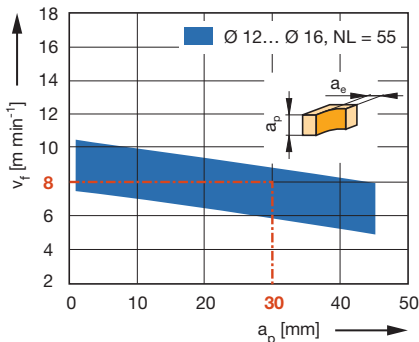
HW solid, Z 1+1

WO 160-2-06

D	D	GL	GL	NL	NL	S	S	ID	ID
mm	in	mm	in	mm	in	mm	in	LL	RL
6,35	1/4"	76,2	3"	25,4	1"	6,35x40	1/4"x1 1/2"		240513 ●
10		70		25		10x40		042512 ●	042511 ●
12		80		35		12x40			042509 ●
16		110		55		16x50			042543 ●

RPM: $n = 16000 - 20000 \text{ min}^{-1}$

Feed speed v_f depending on grooving depth a_p



Workpiece material: Softwood

Working step: Jointing

Speed: $n = 18000 \text{ rpm}$

Correction factor for v_f :

Hardwood = 0.9;

Machining across grain = 0.7

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Spiral finishing router cutter alternate twist angle

Application:

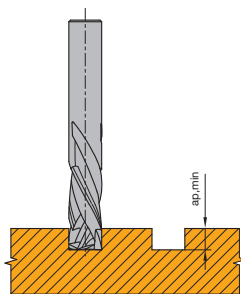
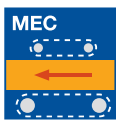
Router cutter for sizing, grooving and finish cutting to high cutting quality. For tear free cut edges on both sides.

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

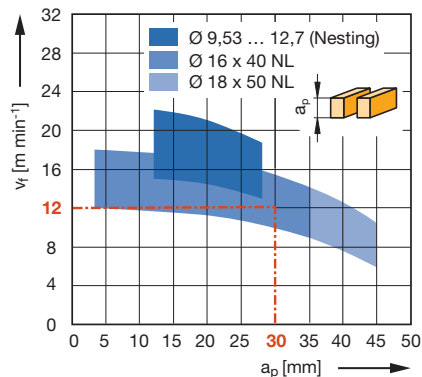
Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.), duromers, plastomers, mineral materials (Corian, Varicor etc.), gluelam (HPL, Trespa etc.).



Minimum grooving depth $a_{p \min}$ for tear free cut.

Feed speed v_f depending on grooving depth a_p



Workpiece material: Plastic coated and veneered chipboard

Working step: Sizing

Speed: $n = 18000$ rpm

Correction factor v_f : MDF = 0.8;

Machining across grain = 0.7

Technical information:

Ideally used after roughing cutters, finish cut allowance approx. 1-2 mm. Alternate twist for tear free cut edges on both sides. Z 2+2 design for coated chipboard material and fibre material, gluelam, abrasive materials and compound materials with aluminium coating.

HW solid, Z 2+2, for abrasive materials

WO 160-2-06

D	D	GL	GL	NL	NL	S	S	DRI	ID
mm	in	mm	in	mm	in	mm	in		
12		70		25		12x40		RL	042536 ●
16		100		40		16x50		RL	042537 ●
18		100		50		18x50		RL	042538 ●
9,53	3/8"	76,2	3"	28,6	1 1/8"	9,53x40	3/8"x1 1/2"	RL	240516 ●
12,7	1/2"	70	2 3/4"	25,4	1"	12,7x40	1/2"x1 1/2"	RL	042795 ●
12,7	1/2"	76,2	3"	31,75	1 1/4"	12,7x40	1/2"x1 1/2"	RL	042796 ●
12,7	1/2"	88,7	3 1/2"	38,1	1 1/2"	12,7x40	1/2"x1 1/2"	RL	240517 ●

RPM: $n = 16000 - 24000$ min⁻¹

HW solid, Z 2+2, Nesting

WO 160-2-06

D	D	GL	GL	NL	NL	S	S	$a_p \min$	DRI	ID
mm	in	mm	in	mm	in	mm	in	mm		
9,53	3/8"	76,2	3"	23	7/8"	9,53x40	3/8"x1 1/2"	5,5	RL	240518 ●
9,53	3/8"	76,2	3"	28,6	1 1/8"	9,53x40	3/8"x1 1/2"	7	RL	240503 ●
12,7	1/2"	76,2	3"	32	1 1/4"	12,7x40	1/2"x1 1/2"	5	RL	240504 ●
12,7	1/2"	76,2	3"	32	1 1/4"	12,7x40	1/2"x1 1/2"	6	RL	240505 ●
12,7	1/2"	88,9	3 1/2"	34,9	1 3/8"	12,7x40	1/2"x1 1/2"	6	RL	240506 ●
12,7	1/2"	101,6	4"	43	1 5/8"	12,7x40	3/8"x1 5/8"	20	RL	240507 ●

RPM: $n = 16000 - 24000$ min⁻¹

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Spiral finishing router cutter alternate twist angle

Application:

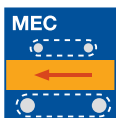
Router cutter for sizing, grooving and finish cutting to high cutting quality. For tear free cut edges on both sides.

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.), duromers, plastomers, mineral materials (Corian, Varicor etc.), gluelam (HPL, Trespa etc.).



Technical information:

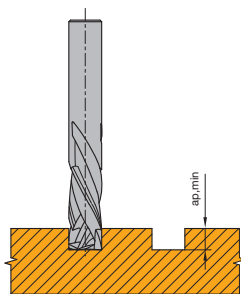
Ideally used after roughing cutters, finish cut allowance approx. 1-2 mm. Alternate twist for tear free cut edges on both sides. Z 2+2 design for coated chipboard material and fibre material, gluelam, abrasive materials and compound materials with aluminium coating.

HW solid, Z 3+3, Nesting

WO 160-2-06

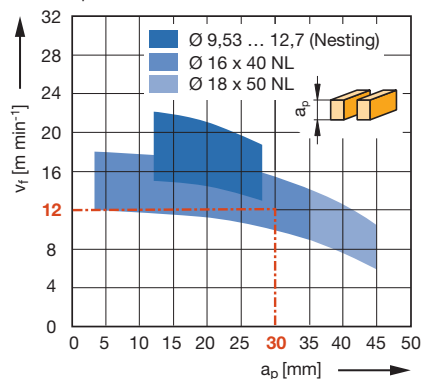
D	D	GL	GL	NL	NL	S	S	ap min	DRI	ID
mm	in	mm	in	mm	in	mm	in	mm		
10		70		24		10x40		8	RL	042797 ●
9,53	3/8"	76,2	3"	23	7/8"	9,53x40	3/8"x1 1/2"	6	RL	240508 ●
9,53	3/8"	70	2 3/4"	23	7/8"	9,53x40	3/8"x1 1/2"	8	RL	042798 ●

RPM: $n = 16000 - 24000 \text{ min}^{-1}$



Minimum grooving depth $a_{p \text{ min}}$ for tear free cut.

Feed speed v_f depending on grooving depth a_p



Workpiece material: Plastic coated and veneered chipboard

Working step: Sizing

Speed: $n = 18000 \text{ rpm}$

Correction factor v_f : MDF = 0.8;

Machining across grain = 0.7

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Router cutter - turnblade design

Application:

Router cutter for sizing and grooving to finish quality.

Machine:

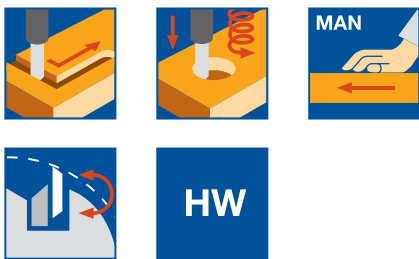
Portable routers, overhead routers with/without CNC control, machining centres.

Workpiece material:

Softwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc.

Technical information:

Tungsten carbide turnblade knife clamped by wedge. Design without plunging tip only suitable for ramp plunging. Design with plunging tip suitable for axial plunging.



HW, Z 1, without plunging tip

WL 100-1

D mm	GL mm	NL mm	S mm	DRI	ID
8	65	20	10x40	RL	041624 ●
9	65	20	10x40	RL	041631 ●
10	65	20	10x40	RL	041638 ●
10	70	25	10x40	RL	041643 ●
11	75	30	10x40	RL	041655 ●
12	76	30	10x40	RL	041667 ●
14	86	40	12x40	RL	041679 ●
16	94	50	12x40	RL	041685 ●
16	109	50	16x50	RL	041714 ●
20	99	50	12x40	RL	041697 ●

RPM: D 8 - 12 mm: $n = 18000 - 24000 \text{ min}^{-1}$

D 14 - 24 mm: $n = 16000 - 24000 \text{ min}^{-1}$

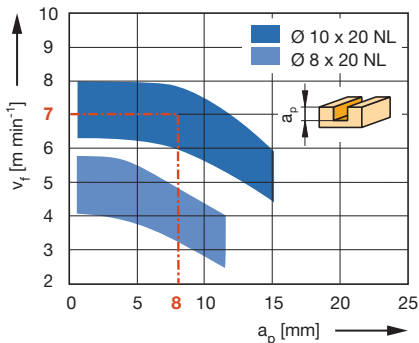
Spare knives:

BEZ	QAL	ABM mm	for D mm	NL mm	VE PCS	ID
Turnblade knife	HW-05	20x4,1x1,1	8 - 9	20	10	005186 ●
Turnblade knife	HW-05	20x5,5x1,1	10 - 12	20	10	005187 ●
Turnblade knife	HW-05	25x5,5x1,1	10	25	10	005188 ●
Turnblade knife	HW-05	30x5,5x1,1	11 - 24	30	10	005189 ●
Turnblade knife	HW-05	40x5,5x1,1	14	40	10	005190 ●
Turnblade knife	HW-05	50x5,5x1,1	14 - 24	50	10	005191 ●

Spare parts:

BEZ	ABM mm	for D mm	NL mm	ID
Clamping wedge	17,5x5,15x2,8	8 - 9	20	009258 ●
Clamping wedge	17,5x6,45x4	10 - 11	20	009259 ●
Clamping wedge	22,5x6,54x4	10	25	009260 ●
Clamping wedge	27,5x6,45x4	11	30	009261 ●
Clamping wedge	27,5x7,35x3,7	12 - 14	30	009263 ●
Clamping wedge	37,5x7,35x3,7	14	40	009264 ●
Clamping wedge	47,5x10,28x4,2	16 - 24	50	009266 ●
Countersink screw, Torx® 8	M2,5x5,7	8 - 11		006231 ●
Countersink screw, Torx® 8	M3x7.6	12 - 14		006233 ●
Countersink screw, Torx® 15	M4x9.5	16		007847 ●
Countersink screw, Torx® 15	M4x11.5	16 - 20		006234 ●

Feed speed v_f depending on grooving depth a_p

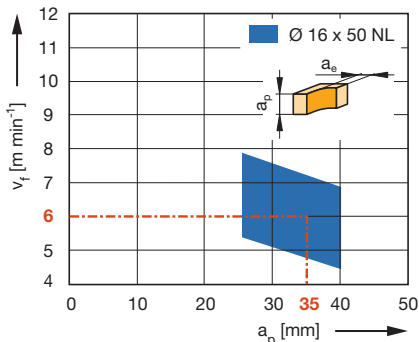


Workpiece material: Plastic coated chipboard

Working step: Grooving, sizing

Speed: $n = 18000 \text{ rpm}$

Correction factor for v_f : MDF = 0.8



Workpiece material: Plastic coated chipboard

Working step: Jointing (max. $a_e = 3 \text{ mm}$)

Speed: $n = 18000 \text{ rpm}$

Correction factor for v_f : MDF = 0.8

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Router cutter - turnblade design

Application:

Router cutter for sizing and grooving to finish quality.

Machine:

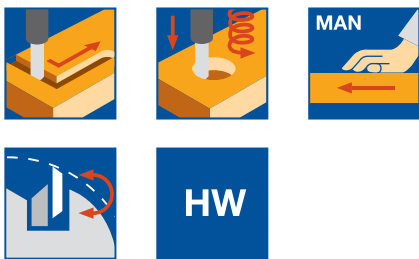
Portable routers, overhead routers with/without CNC control, machining centres.

Workpiece material:

Softwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc.

Technical information:

Tungsten carbide turnblade knife clamped by wedge. Design without plunging tip only suitable for ramp plunging. Design with plunging tip suitable for axial plunging.



HW, Z 1, with plunging tip

WL 100-1

D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
14	107	45	12x40	RL	041722 ●

RPM: n = 16000 - 24000 min⁻¹

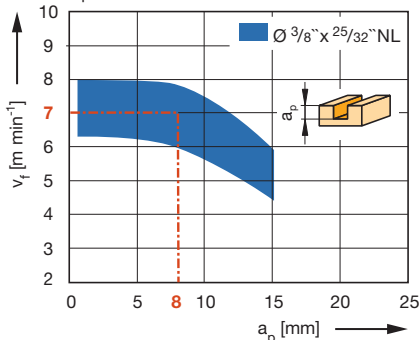
Spare knives:

BEZ	QAL	ABM	for D	NL	VE	ID
		mm	mm	mm	PCS	
Turnblade knife	HW-05	50x5,5x1,1	14 - 24	50	10	005191 ●

Spare parts:

BEZ	ABM	for D	NL	ID
	mm	mm	mm	
Countersink screw, Torx® 8	M3x7.6	12 - 14		006233 ●
Clamping wedge with plunging tip	45x3,7x7,35	14	45	009749 ●

Feed speed v_f depending on grooving depth a_p

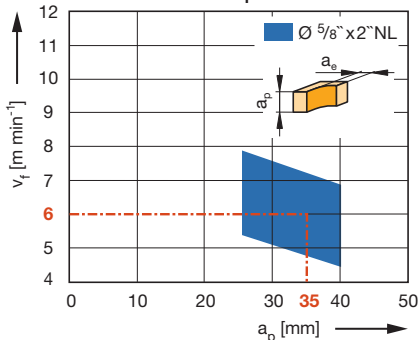


Workpiece material: Plastic coated chipboard

Working step: Grooving, sizing

Speed: n = 18000 rpm

Correction factor for v_f : MDF = 0.8



Workpiece material: Plastic coated chipboard

Working step: Jointing (max. chip removal $a_g = 3$ mm)

Speed: n = 18000 rpm

Correction factor for v_f : MDF = 0.8

HW, Z 1, without plunging tip, inch dimensions

WL 100-1

D	NL	GL	S	DRI	ID
in	in	in	in		
3/8"	25/32"	2 3/8"	1/2" x 1 3/8"	RL	041074 ●
1/2"	1 3/16"	2 3/4"	1/2" x 1 3/8"	RL	041060 ●
5/8"	2"	3 11/16"	1/2" x 1 3/8"	RL	041065 ●
3/4"	2"	3 7/8"	3/4" x 1"	RL	041067 ●

RPM: D 3/8" - 1/2": n = 18000 - 24000 min⁻¹

D 5/8" - 3/4": n = 16000 - 24000 min⁻¹

Spare knives:

BEZ	QAL	ABM	for D	NL	VE	ID
		mm	in	in	PCS	
Turnblade knife	HW-05	20x4,1x1,1	5/16" - 3/8"	25/32"	10	005186 ●
Turnblade knife	HW-05	30x5,5x1,1	1/2"	1 3/16"	10	005189 ●
Turnblade knife	HW-05	50x5,5x1,1	5/8" - 3/4"	2"	10	005191 ●

Spare parts:

BEZ	ABM	for D	NL	ID
	mm	in	in	
Clamping wedge	17,5x5,15x2,8	5/16" - 3/8"	25/32"	009258 ●
Clamping wedge	27,5x7,35x3,7	1/2" - 35/64"	1 3/16"	009263 ●
Clamping wedge	47,5x10,28x4,2	5/8" - 3/4"	2"	009266 ●
Countersink screw, Torx® 8	M2,5x5,7	5/16" - 3/8"		006231 ●
Countersink screw, Torx® 8	M3x7.6	1/2"		006233 ●
Countersink screw, Torx® 15	M4x11.5	5/8" - 3/4"		006234 ●



Turnblade router cutter

Application:

Router cutter for sizing, grooving and finish cutting to finish quality. Z 2 for increased feed rates.

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.).

Technical information:

Straight cut. Knife tip designed for stepless cut. Design with plunging tip for axial plunging. Suitable for machining the narrow edge of painted or foil coated MDF.



HW, Z 2

WL 101-2

D mm	GL mm	NL mm	S mm	ID LL	ID RL
25	125	50	25x60	040857	● 040858 ●
30	105	30	25x60		● 040854 ●
30	125	50	25x60		● 040853 ●

RPM: $n = 14000 - 20000 \text{ min}^{-1}$

Spare knives:

BEZ	Knife	ABM mm	QAL	for D mm	VE PCS	ID
Turnblade knife	Plunging tip	7,5x12x1,5	HW-05	25	10	005080 ●
Turnblade knife	Plunging tip	12x12x1,5	HW-05	30	10	005081 ●
Turnblade knife	Peripheral tip	30x12x1,5	HW-05	30	10	005161 ●
Turnblade knife	Peripheral tip	50x12x1,5	HW-05	25/30	10	006506 ●

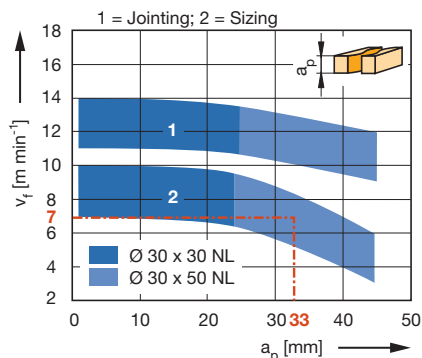
Spare parts:

BEZ	Knife	ABM mm	for D mm	ID
Screw	Plunging tip	M4x5 (head D7)	25/30	007037 ●
Screw	Peripheral tip	M4x5 (head D9)	30	007038 ●
Torx® key		Torx® 15		005457 ●

Feed speed v_f depending on grooving depth a_p

1 = Jointing cut $a_e = 0.5 - 2 \text{ mm}$

2 = Sizing cut



Workpiece material: Plastic coated chipboard

Working step: Jointing, sizing

Speed: $n = 18,000 \text{ rpm}$

Correction factor for v_f : Machining across grain = 0.7; MDF = 0.8

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Turnblade router cutter

Application:

Router cutter for sizing and grooving to finish quality. For grooving with constant tool diameter.

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

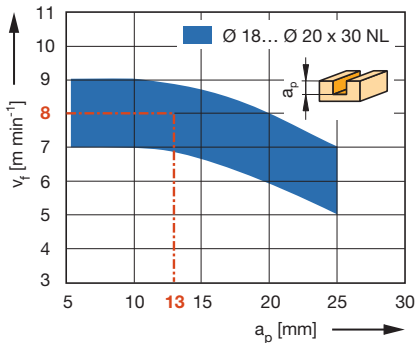
Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.), duromers, plastomers, mineral materials (Corian, Varicor etc.), gluelam (HPL, Trespa etc.).

Technical information:

Straight cut. Knife tip designed for stepless cut. Teflon coated tool body for reduced resin and glue build up. With tungsten carbide plunging tip. Suitable for machining the narrow edge of painted or foil coated MDF.



Feed speed v_f depending on grooving depth a_p

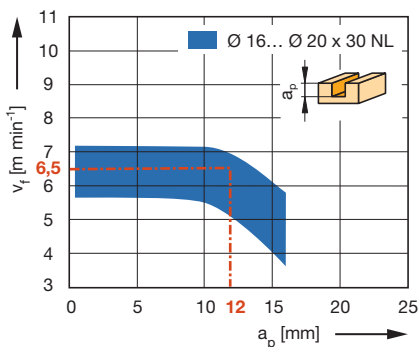


Workpiece material: Plastic coated chipboard

Working step: Grooving, sizing

Speed: $n = 18000$ rpm

Correction factor for v_f : MDF = 0.8



HW, Z 1, NL 30 mm

WL 101-1

D mm	GL mm	NL mm	S mm	ID LL	ID RL
16	80	30	10x35		040861 ●
16	85	30	12x40		040867 ●
16	95	30	16x50	040877 ●	040878 ●
16	95	30	20x50		040879 ●
16	105	30	25x60		040872 ●
18	85	30	12x40		040869 ●
20	85	30	12x40		040871 ●
20	95	30	20x50		040882 ●

RPM: $n = 16000 - 20000$ min⁻¹

Spare knives:

BEZ	Knife	ABM mm	QAL	for D mm	VE PCS	ID
Turnblade knife	Plunging tip	7,5x12x1,5	HW-05	16 - 18	10	005080 ●
Turnblade knife	Plunging tip	9x12x1,5	HW-05	20 - 24	10	005158 ●
Turnblade knife	Peripheral tip	30x12x1,5	HW-05		10	005161 ●

Spare parts:

BEZ	Knife	ABM mm	for D mm	ID
Screw	Plunging tip	M3,5x4 (head D7)	16 - 20	006068 ●
Screw	Plunging tip	M4x5 (head D7)	22 - 24	007037 ●
Screw	Peripheral tip	M3,5x4 (head D9)	16 - 20	006226 ●
Screw	Peripheral tip	M4x5 (head D9)	22 - 24	007038 ●
Torx® key		Torx® 15		005457 ●

Workpiece material: Hardwood, along grain

Working step: Grooving, sizing

Speed: $n = 18000$ rpm

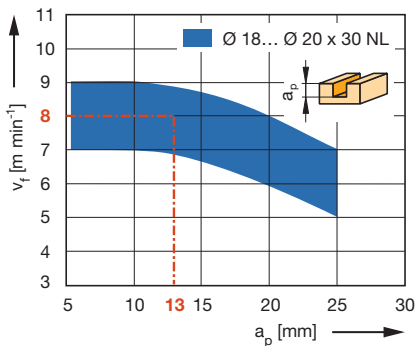
Correction factor for v_f : Machining across grain = 0.8

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters

Feed speed v_f depending on grooving depth a_p

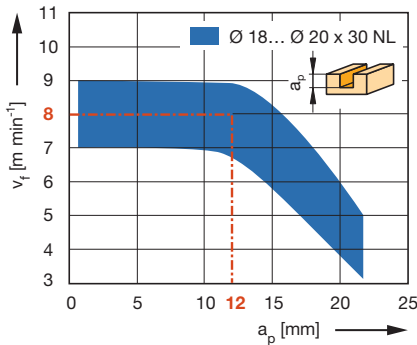


Workpiece material: Plastic coated chipboard

Working step: Grooving, sizing

Speed: $n = 18000$ rpm

Correction factor for v_f : MDF = 0.8



Workpiece material: Softwood, along grain

Working step: Grooving, sizing

Speed: $n = 18000$ rpm

Correction factor for v_f : Machining across grain = 0.8

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools or portable routers.

Technical information:

Straight cut. Knife tip designed for stepless cut. Teflon coated tool body for reduced resin and glue build up. With tungsten carbide turnblade knife plunging edge.

HW, Z 1, inch dimensions

WL 101-1

D	NL	GL	S	DRI	ID
in	in	in	in		
5/8"	1 11/64"	3 5/8"	1/2" x 1 3/8"	RL	041084 ●
3/4"	1 11/64"	3 5/8"	1/2" x 1 3/8"	RL	041085 ●

RPM: $n = 16000 - 20000$ min⁻¹

Spare knives:

BEZ	Knife	ABM	QAL	for D	VE	ID
		mm		mm	PCS	
Turnblade knife	Plunging tip	7,5x12x1,5	HW-05	16 - 18	10	005080 ●
Turnblade knife	Plunging tip	9x12x1,5	HW-05	20 - 24	10	005158 ●
Turnblade knife		30x12x1,5	HW-05		10	005161 ●

Spare parts:

BEZ	Knife	ABM	for D	for D	ID
		mm	mm	in	
Screw	Plunging tip	M3,5x4 (head D7)	16 - 20	5/8" - 3/4"	006068 ●
Screw	Plunging tip	M4x5 (head D7)	22 - 24		007037 ●
Screw	Peripheral tip	M3,5x4 (head D9)	16 - 20	5/8" - 3/4"	006226 ●
Screw	Peripheral tip	M4x5 (head D9)	22 - 24		007038 ●
Torx® key		Torx® 15			005457 ●

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Turnblade router cutter

Application:

Router cutter for sizing and grooving. For grooving with constant tool diameter.

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc.

Technical information:

Straight cut. Teflon coated tool body for reduced resin and glue build up. Limitedly suitable for finish cut. Cutting edge overlap visible on workpiece. With tungsten carbide turnblade knife plunging tip.



HW, Z 1+1, with staggered cutting edges

WL 101-2

D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
18	125	50	25x60	RL	040925 ●
20	133	58	25x60	RL	040928 ●

RPM: $n = 16000 - 20000 \text{ min}^{-1}$

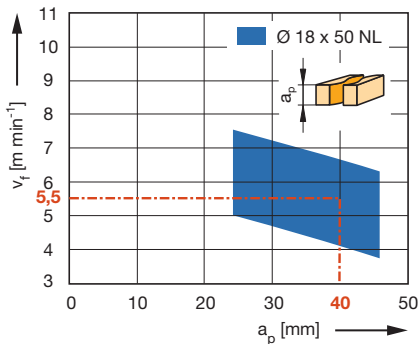
Spare knives:

BEZ	Knife	ABM	QAL	for D	VE	ID
		mm		mm	PCS	
Turnblade knife	Plunging tip	7,5x12x1,5	HW-05	16 - 18	10	005080 ●
Turnblade knife	Plunging tip	9x12x1,5	HW-05	20 - 24	10	005158 ●
Turnblade knife	Peripheral tip	30x12x1,5	HW-05		10	005161 ●

Spare parts:

BEZ	Knife	ABM	for D	ID
		mm	mm	
Screw	Plunging tip	M4x5 (head D7)	18 - 24	007037 ●
Screw	Peripheral tip	M4x5 (head D9)	18 - 24	007038 ●
Torx® key		Torx® 15		005457 ●

Feed speed v_f depending on grooving depth a_p



Workpiece material: Plastic coated chipboard

Working step: Sizing

Speed: $n = 18000 \text{ rpm}$

Correction factor for v_f : MDF = 0.8

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Turnblade router cutter

Application:

Router cutter for sizing and grooving to finish quality. For grooving with constant tool diameter.

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc.

Technical information:

Straight cut. Teflon coated tool body for reduced resin and glue build up. Limitedly suitable for finish cut. Cutting edge overlap visible on workpiece. With tungsten carbide turnblade knife plunging tip.



HW, Z 1+1, with 50 mm/30 mm turnblade knives

WL 101-1

D mm	GL mm	NL mm	S mm	ID LL	ID RL
18	115	50	16x50	040846	040847
18	115	50	20x50	040848	040848
18	125	50	25x60	040849	040850

RPM: $n = 16000 - 20000 \text{ min}^{-1}$

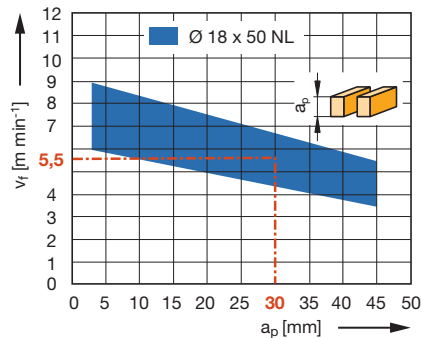
Spare knives:

BEZ	Knife	ABM mm	QAL	VE PCS	ID
Turnblade knife	Plunging tip	7,5x12x1,5	HW-05	10	005080
Turnblade knife	Peripheral tip	30x12x1,5	HW-05	10	005161
Turnblade knife	Peripheral tip	50x12x1,7	HW-05	10	007668

Spare parts:

BEZ	Knife	ABM mm	ID
Screw	Plunging tip	M4x5 (head D7)	007037
Screw	Peripheral tip	M4x5 (head D9)	007038
Torx® key		Torx® 15	005457

Feed speed v_f depending on grooving depth a_p



Workpiece material: Plastic coated chipboard

Working step: Sizing

Speed: $n = 18000 \text{ rpm}$

Correction factor for v_f : MDF = 0.8

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Router cutter Diamaster PRO

Application:

Router cutter for sizing and grooving with increased performance time in particle boards. For tear free cut edges on both sides. Suitable for small and medium batch quantities.

Machine:

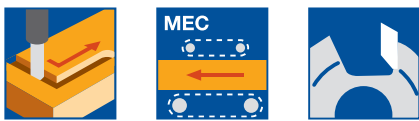
Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

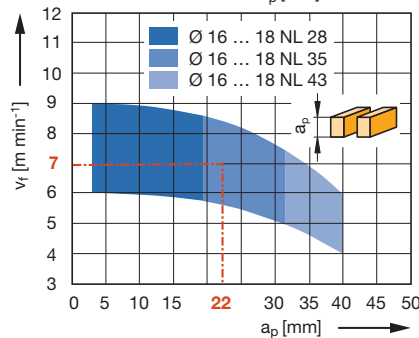
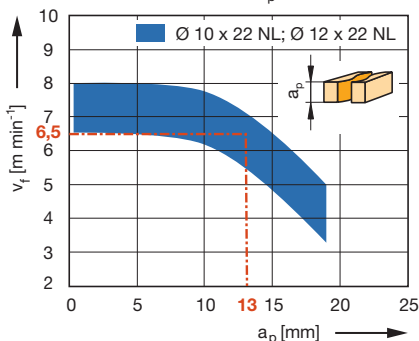
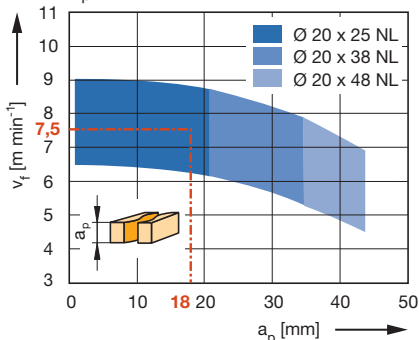
Chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc.

Technical information:

Spiral cutting edge arrangement with alternate shear angles and tungsten carbide plunging tip. Resharpenable 3 to 5 times with normal wear. Cuts to be painted in MDF require finishing with tools with continuous edges.



Feed speed v_f depending on grooving depth a_p



DP, Z 1+1

WO 140-2-50

D mm	GL mm	NL mm	S mm	ID LL	ID RL
10	70	22	12x40		091264 ●
12	70	22	12x40		091265 ●
12	100	28	25x60		091266 ●
14	90	28	16x50		091267 ●
16	80	22	16x50		091268 ●
16	95	22	25x60		091269 ●
16	90	28	16x50	091271 ●	091270 ●
16	100	28	25x60		091272 ●
16	95	35	20x50		091273 ●
16	105	35	25x60		091274 ●
16	115	43	25x60	091276 ●	091275 ●
18	90	28	20x50		091277 ●
18	95	35	20x50		091278 ●
18	105	43	20x50	091281 ●	091280 ●
18	115	43	25x60		091282 ●
20	90	28	16x50		091283 ●
20	100	28	25x60	091285 ●	091284 ●
20	95	35	20x50		091286 ●
20	105	35	25x60		091287 ●
20	105	43	20x50	091289 ●	091288 ●
20	115	43	25x60		091290 ●
20	110	48	20x50	091292 ●	091291 ●
20	120	48	25x60	091294 ●	091293 ●
20	125	53	25x60		091295 ●
20	130	58	25x60		191041 ●

RPM: $n = 18000 - 24000 \text{ min}^{-1}$

DP, Z 1+1, inch dimensions

WO 140-2-50

D mm	D in	GL mm	GL in	NL mm	NL in	S mm	S in	DRI	ID
12,7	1/2"	70	2 3/4"	22,23	7/8"	12,7x38	1/2" x 1 1/2"	RL	091296 ●
19,05	3/4"	110	4 3/8"	48	1 7/8"	19,05x50	3/4" x 2"	RL	091297 ●

RPM: $n = 18000 - 24000 \text{ min}^{-1}$

Workpiece material: Plastic coated chipboard

Working step: Sizing

Speed: $n = 18000 \text{ rpm}$

Correction factor for v_f : MDF = 0.8; Uncoated chipboard = 1.1;

Veneer across grain = 0.7

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Router cutter Diamaster PRO

Application:

Router cutter for sizing and grooving with increased performance time in particle boards. For tear free cut edges on both sides. Suitable for medium batch quantities. Z 2+2 for increased feed speeds.

Machine:

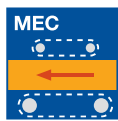
Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

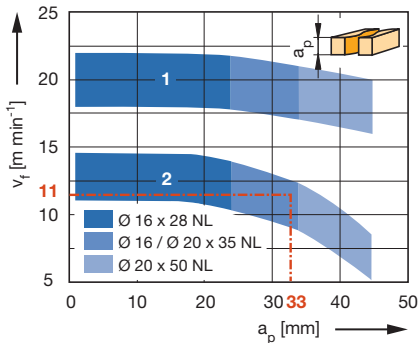
Chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc.

Technical information:

Spiral cutting edge arrangement with alternate shear angles and DP plunging tip. Resharpenable 3 to 5 times with normal wear. Cuts to be painted in MDF require finishing with tools with continuous edges.



Feed speed v_f depending on grooving depth a_p
 1 = Jointing cut a_e 0.5 - 2.0 mm
 2 = Sizing cut



Workpiece material: Plastic coated chipboard

Working step: Jointing, sizing

Speed: $n = 18000$ rpm

Correction factor for v_f : MDF = 0.6;
 Veneer across grain = 0.7

DP, Z 2+2

WO 140-2-50

D mm	GL mm	NL mm	S mm	DRI	ID
16	90	28	20x50	RL	191042 ●
16	95	35	20x50	RL	191043 ●
20	95	35	20x50	RL	191044 ●
20	105	35	25x60	RL	191045 ●
20	110	50	20x50	RL	191046 ●
20	120	50	25x60	RL	191047 ●

RPM: $n = 16000 - 24000$ min⁻¹

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Router cutter Diamaster PRO

Application:

Router cutter for sizing and grooving with increased performance time in particle boards. For tear free cut edges on both sides of the workpiece. Suitable for right hand and left hand cutting (e.g. protective cutting) without tool change.

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., for tear free edges on both sides of coated workpieces.

Technical information:

Spiral cutting edge arrangement with tungsten carbide plunging tip. Right hand rotation: Z 3+3, left hand rotation: Z 2+2. Resharpenable 3 to 5 times with normal wear. Right and left hand rotation in one tool (by adjusting the Z-axis and changing the direction of rotation).

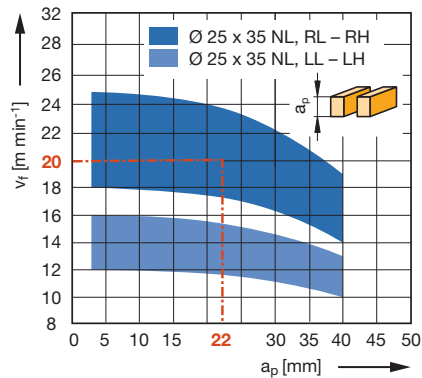


DP, RH + LH combination tool

WO 140-2-50

D mm	GL mm	NL mm	S mm	DRI	ID
25	120	24 + 24	25x50	LL / RL	191034 ●
25	145	35 + 35	25x55	LL / RL	191020 ●

Feed speed v_f depending on grooving depth a_p



Router cutter Diamaster PRO, Z3+3 / Z2+2

Workpiece material: Plastic coated chipboard

Working step: Sizing

Speed: $n = 18000$ rpm

Correction factor for v_f : MDF = 0.8;

Uncoated chipboard = 1.1;

Veneer across grain = 0.7

RPM: $n_{max} = 24000 \text{ min}^{-1}$

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Router cutter Diamaster PRO

Application:

Router cutter for sizing and grooving with continuous cutting edge. Suitable for machining edges of painted or foil coated MDF.

Machine:

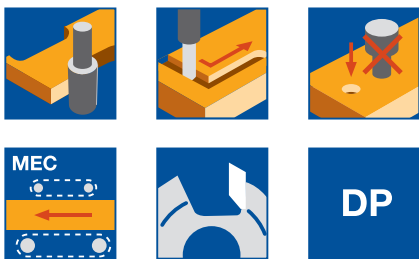
Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

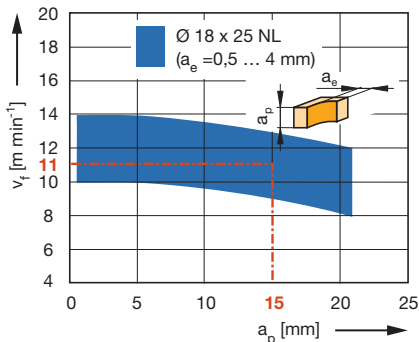
Hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., duromers, plastomers, gluelam (HPL, Trespa etc.)

Technical information:

Negative cutting edge shear angles (only for ID **91158**) for tear free edges during grooving and to support the workpiece clamping of smaller parts. Resharpenable 3 to 5 times with normal wear. Maximum chip removal 4 mm; roughing cut required for higher chip removal.



Feed speed v_f depending on grooving depth a_p



Workpiece material: Plastic coated chipboard

Working step: Sizing

Speed: $n = 18000$ rpm

Correction factor for v_f : MDF = 0.9;

Veneer across grain = 0.7

DP, Z 1 / Z 2

WO 140-2-50

D mm	GL mm	NL mm	S mm	Z	DRI	ID
8	60	12	12x40	1	RL	090154 ●
10	70	12	12x40	2	RL	091158 ●
18	90	25	16x50	2	RL	091190 ●

RPM: $n = 16000 - 24000 \text{ min}^{-1}$

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Router cutter Diamaster PRO³

Application:

Router cutter for sizing and grooving (Nesting) at high feed speeds. For tear free cut edges on both sides of the workpiece.

Machine:

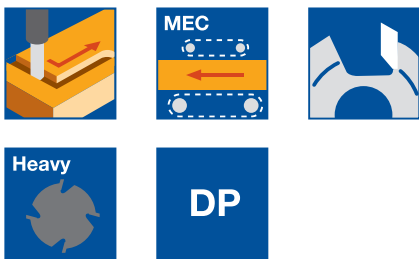
Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc.

Technical information:

Spiral cutting edge arrangement with alternate shear angles and real - Z 3 over the complete cutting length, with DP plunging tip. Resharpenable up to 3 times for normal wear. Tool body designed in stable material. Important to follow the application data parameters.



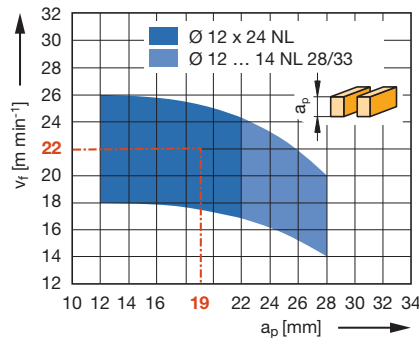
DP, Z 3+3, Nesting

WO 140-2-50

D mm	GL mm	NL mm	S mm	DRI	ID
12	65	19	12x42	RL	191030 ●
12	70	24	12x42	RL	191031 ●
12	75	28	12x40	RL	191032 ●
14	90	33	16x50	RL	191033 ●

RPM: n max. = 24000 min⁻¹

Feed speed v_f depending on grooving depth a_p



Workpiece material: Plastic coated chipboard

Working step: Sizing / Nesting

Speed: n = 24000 rpm

Correction factor for v_f : MDF = 0.8;

Uncoated chipboard = 1.1;

Veneer across grain = 0.7;

Pre-trimming MDF = 1.2

Table of optimal workpiece thickness

Id.	NL	workpiece thickness
191030	19	9 – 16 mm
191031	24	13 – 20 (22) mm
191032	28	19 – 25 mm
191033	33	20 – 28 mm

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Router cutter Diamaster PLUS

Application:

Router cutter for sizing and grooving with increased performance time in particle boards. For tear free cut edges on both sides.

Machine:

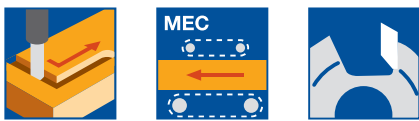
Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

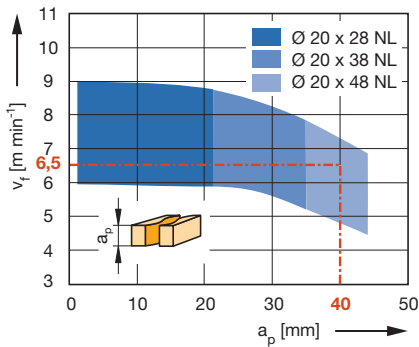
Chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., duromers, plastomers, gluelam (HPL, Trespa etc.).

Technical information:

Cutting edges with alternate shear angle and tungsten carbide plunging tip. Resharpenable 5 to 8 times with normal wear. Cuts for painting in MDF require finishing with tools with continuous edges. Stable tipping suitable for machining abrasive and hard to machine materials (HPL, Trespa, GfK, CfK etc.).



Feed speed v_f depending on grooving depth a_p



Workpiece material: Plastic coated chipboard

Working step: Sizing

Speed: $n = 18000$ rpm

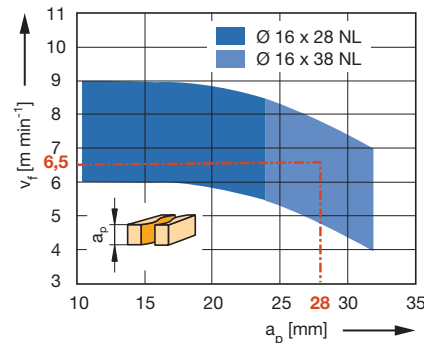
Correction factor for v_f : MDF = 0.8; Veneer across grain = 0.7

DP, Z 1+1

WO 140-2

D mm	GL mm	NL mm	S mm	DRI	ID
12	90	24	16x50	RL	090174 ●
16	90	28	20x60	RL	090188 ●
18	110	48	20x60	RL	091101 ●
20	130	58	25x60	RL	090167 ●

RPM: $n = 16000 - 24000 \text{ min}^{-1}$

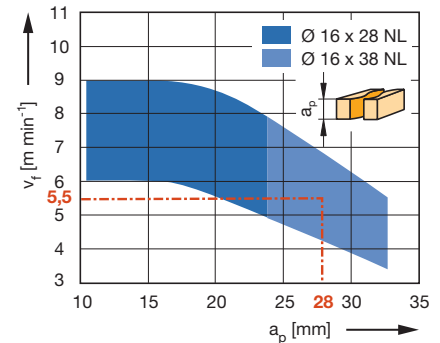


Workpiece material: Plastic coated chipboard

Working step: Sizing

Speed: $n = 18000$ rpm

Correction factor for v_f : MDF = 0.8; Chipboard = 1.3; Veneer across grain = 0.7



Workpiece material: Glulam

Working step: Sizing

Speed: $n = 18000$ rpm

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Router cutter Diamaster PLUS

Application:

Router cutter for sizing and grooving with stepless cut. Suitable for machining the edges of painted or foil coated MDF.

Machine:

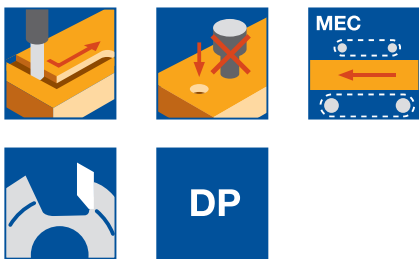
Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., duromers, plastomers, gluelam (HPL, Trespa etc.).

Technical information:

Negative cutting edge shear angles during grooving for tear free edges and to support the clamping of smaller parts. Resharpenable 5 to 8 times with normal wear. The short stable cutting edge ideal for grooving and sizing abrasive and hard to machine materials (HPL, Trespa, GfK, CfK etc.).

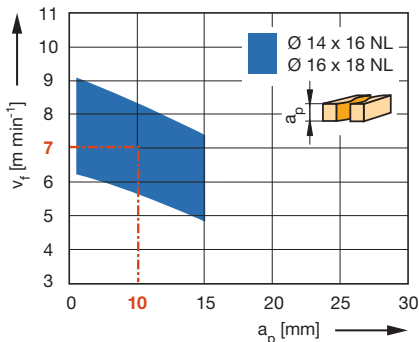


DP, Z 2

WO 120-2-60

D mm	GL mm	NL mm	S mm	Z	DRI	ID
14	80	16	20x50	2	RL	091157 ●
16	80	18	20x50	2	RL	091156 ●

Feed speed v_f depending on grooving depth a_p



Workpiece material: Duromers, gluelam (HPL, CPL), fibre reinforced plastics

Working step: Sizing

Speed: $n = 12000 - 18000$ rpm

RPM: for wood materials: $n = 16000 - 36000$ min⁻¹

for plastics: $n = 12000 - 18000$ min⁻¹



Router cutter Diamaster QUATTRO

Application:

Router cutter for sizing and grooving with increased performance time in particle boards. For tear free cut edges on both sides. Suitable for medium and large batch quantities. Z 2+2 for increased feed speeds.

Machine:

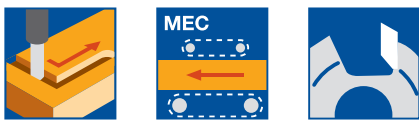
Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc.

Technical information:

Spiral cutting edge arrangement with alternate shear angles and tungsten carbide plunging tip. Resharpenable 5 to 8 times with normal wear. Cuts for painting in MDF require finishing with tools with continuous edges.



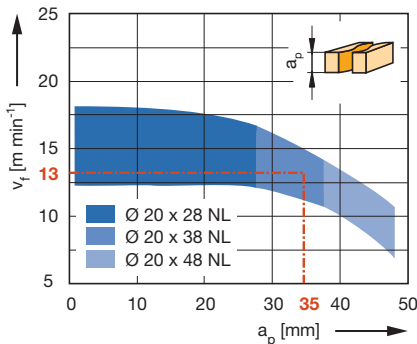
DP, Z 2+2

WO 140-2

D mm	GL mm	NL mm	S mm	ID LL	ID RL
20	90	28	20x50		091235 ●
20	110	48	20x50		091238 ●
20	110	38	25x60		091241 ●
20	120	48	25x60	091246 ●	091247 ●
25	110	38	25x60		091251 ●
25	120	48	25x60	091252 ●	091253 ●

RPM: $n = 16000 - 24000 \text{ min}^{-1}$

Feed speed v_f depending on grooving depth a_p



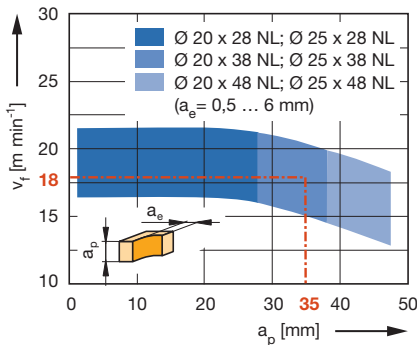
Workpiece material: Plastic coated chipboard

Working step: Sizing

Speed: $n = 18000 \text{ rpm}$

Correction factor for v_f : MDF = 0.6;

Paper coated = 0.8



Workpiece material: Plastic coated chipboard

Working step: Jointing

Speed: $n = 18000 \text{ rpm}$

Correction factor for v_f : MDF = 0.9;

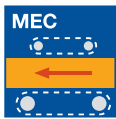
Paper coated = 0.8;

Veneer across grain = 0.8

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Router cutter Diamaster PLUS, Z 3+3

Application:

Router cutter for sizing and grooving with increased performance time in particle boards. For tear free cut edges on both sides. Suitable for large batch quantities. Z 3+3 at high feed speeds.

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

Chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc.

Technical information:

Spiral cutting edge arrangement with alternate shear angles and DP plunging tip. Resharpenable 8 to 12 times with normal wear. Cuts for painting in MDF require finishing with tools with continuous edges. Tools with negative twist to support the workpiece clamping, particularly small parts.

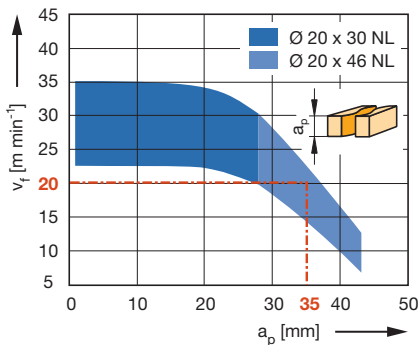
DP, Z 3+3, with negative twist

WO 140-2

D mm	GL mm	NL mm	S mm	ID LL	ID RL
18	100	24	25x60		091204 ●
20	90	24	20x50		091207 ●
20	100	24	25x60		091209 ●
20	105	30	25x60	091170 ●	091171 ●
20	110	38	25x60		091211 ●
20	120	46	25x60		091174 ●
25	100	24	25x60		091213 ●
25	105	30	25x60	091176 ●	091177 ●
25	110	38	25x60		091214 ● 091215 ●
25	120	46	25x60		091179 ● 091180 ●

RPM: $n = 16000 - 24000 \text{ min}^{-1}$

Feed speed v_f depending on grooving depth a_p



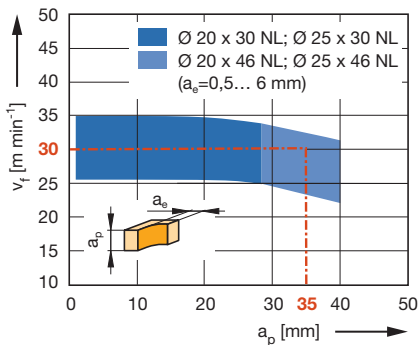
Workpiece material: Plastic coated chipboard

Working step: Sizing

Speed: $n = 24000 \text{ rpm}$

Correction factor for v_f : MDF = 0.8;

Paper coated = 0.8



Workpiece material: Plastic coated chipboard

Working step: Jointing

Speed: $n = 24000 \text{ rpm}$

Correction factor for v_f : MDF = 0.9;

Paper coated = 0.8;

Veneer across grain = 0.8



Router cutter Diamaster PLUS, Z 3+3

Application:

Router cutter for sizing and grooving with increased performance time in particle boards. For tear free cut edges on both sides. Suitable for large batch quantities. Z 3+3 at high feed speeds.

Machine:

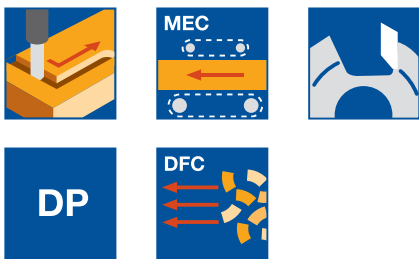
Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

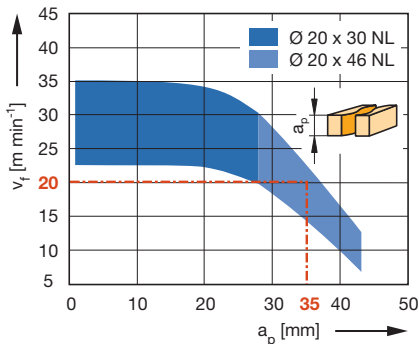
Chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc.

Technical information:

Spiral cutting edge arrangement with alternate shear angles and DP plunging tip. Resharpenable 8 to 12 times with normal wear. Cuts to be painted in MDF require finishing with tools with continuous edges. Tools with positive twist for good chip removal into the extraction system - LEITZ DFC®.



Feed speed v_f depending on grooving depth a_p



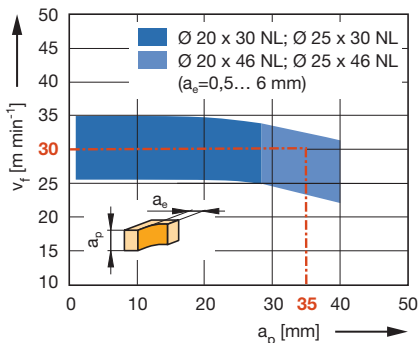
Workpiece material: Plastic coated chipboard

Working step: Sizing

Speed: $n = 24000$ rpm

Correction factor for v_f : MDF = 0.8;

Paper coated = 0.8



DP, Z 3+3, with positive twist, DFC-design

WO 140-2

D mm	GL mm	NL mm	S mm	ID LL	ID RL
16	100	24	20x50		091254 ●
20	105	30	25x60		191026 ●
25	105	30	25x60		191027 ●
25	110	38	25x60		091217 ●
25	120	46	25x60	091218 ●	091219 ●

RPM: $n = 16000 - 24000$ min⁻¹

Workpiece material: Plastic coated chipboard

Working step: Jointing

Speed: $n = 24000$ rpm

Correction factor for v_f : MDF = 0.9;

Paper coated = 0.8;

Veneer across grain = 0.8

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Router cutter Diamaster PLUS³, Z 3+3

Application:

Router cutter for sizing and grooving with increased performance time in particle boards. For tear free cut edges on both sides. Suitable for large batch quantities. Z 3+3 for high feed speeds.

Machine:

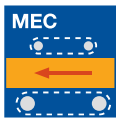
Overhead routers with/without CNC control, machining centres, special router machines with spindles to mount shank tools.

Workpiece material:

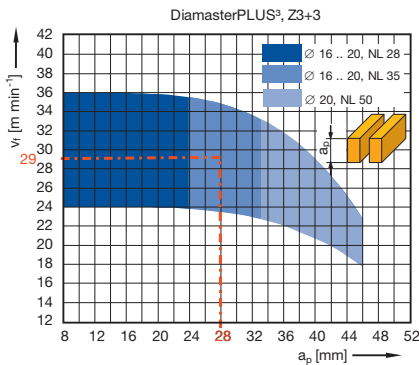
Chipboard and fibre working materials (MDF, HF, etc.), uncoated, plastic coated, veneered, etc.

Technical information:

Spiral cutting edge arrangement with alternate shear angles and real-Z3 over the complete cutting length. DP plunging tip. Resharpenable 8 to 12 times with normal wear. Cuts to be painted in MDF require finishing with tools with continuous edges. Tools with negative twist support the tool clamping especially for small parts.



Feed speed v_f depending on grooving depth a_p



Workpiece material: Plastic coated chipboard

Working step: Sizing

Speed: $n = 24000$ rpm

Correction factor for v_f : MDF = 0.8;

chipboard, uncoated = 1.1;

Veneer across grain = 0.7;

pre cutting MDF = 1.2

DP, Z 3+3, with negative shear angle

WO 140-2

D	GL	NL	S	ID	ID
mm	mm	mm	mm	LL	RL
16	85	28	20x50		191048 ●
16	95	35	20x50	191050 ●	191049 ●
20	85	28	20x50		191051 ●
20	105	35	25x60	191053 ●	191052 ●
20	120	50	25x60	191055 ●	191054 ●

RPM: $n = 18000 - 24000$ min⁻¹

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Reciprocating slotting cutter

Application:

Router cutter for cutting tear free longitudinal slots with step wise infeed.

Machine:

Special routers with reciprocating spindles.

Workpiece material:

Softwood and hardwood, gluelam.

Technical information:

HS design: for softwood and hardwood. Tungsten carbide design: for softwood and hardwood and glued boards. Suitable for right hand and left hand rotation, tools resharpable on the narrow side. Diameter constant after sharpening.



HS, Z 2

WB 510-0

D mm	GL mm	S mm	SLT mm	QAL	ID
6	90	13x40	38	HS	037020 ●
8	95	13x40	42	HS	037022 ●
9	100	13x40	45	HS	037023 ●
10	105	13x40	50	HS	037024 ●
12	115	13x40	60	HS	037026 ●
13	120	13x40	65	HS	037027 ●

RPM: n = 4500 - 9000 min⁻¹

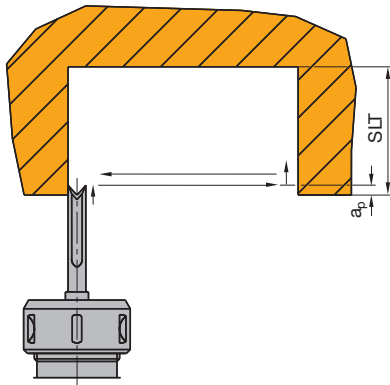


HW tipped, Z 2

WB 510-0

D mm	GL mm	S mm	SLT mm	QAL	ID
8	95	13x40	42	HW	037028 ●
10	105	13x40	50	HW	037029 ●

RPM: n = 6000 - 15000 min⁻¹



Example of slot production
a_p = 0.8 mm (reciprocating movement)

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters



Slot mortise bits

Application:

Router cutter for cutting tear free longitudinal slots with step wise infeed.

Machine:

Slot mortiser.

Workpiece material:

Softwood and hardwood.

Technical information:

Straight cut with chip breaker for reduced cutting forces. High tool rigidity from special heat treatment.

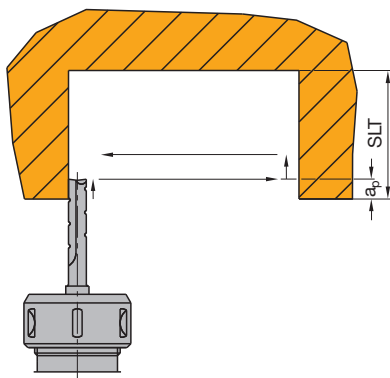


SP, Z 2

WB 401-0, WB 401-1

D mm	GL mm	S mm	SLT mm	ID LL	ID RL
6	120	13x50	60	037140	037163 ●
8	130	13x50	70	037142	037165 ●
8	130	16x50	70		037182 ●
10	140	13x50	80	037144	037167 ●
10	140	16x50	80		037183 ●
12	150	13x50	90	037146	037169 ●
12	150	16x50	90		037184 ●
13	155	13x50	95		037170 ●
14	160	13x50	100	037148	037171 ●
14	160	16x50	100		037185 ●
15	165	13x50	105		037172 ●
16	170	16x50	110	037150	037173 ●
18	180	16x50	120		037174 ●
20	185	16x50	125		037175 ●
22	190	16x50	130		037176 ●
24	195	16x50	135		037177 ●

RPM: n = 6000 - 12000 min⁻¹



Example of slot production
 $a_p = 5 - 15$ mm per stroke



Circular sawblades for processing units

Application:

For sizing, dividing and grooving.

Machine:

Overhead routers with/without CNC control, aggregates on CNC machining centres.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.).

Technical information:

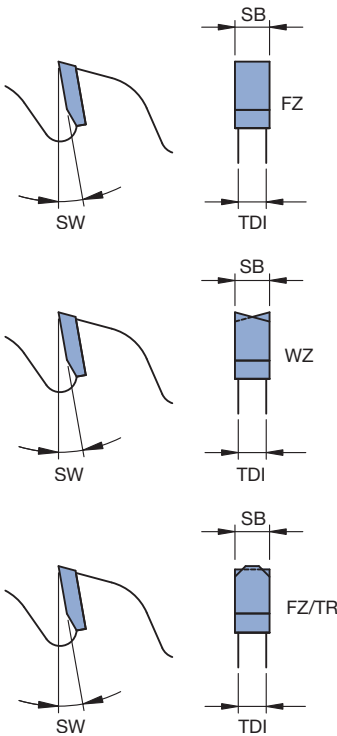
Mounting on sawblade flange or machine aggregate, in some cases additional pinholes must be drilled before mounting. When sizing coated wood derived materials, first score with feed on little infeed (1 -2 mm) and then split against feed.



Multi purpose cuts and grooving

WK 250-2, WK 800-2, WK 850-2, WK 850-2-01, WK 850-2-03, WK 850-2-10, WK 850-2-MA

Machine	D mm	SB mm	TDI mm	BO mm	NLA mm	Z	ZF	SW Degree	ID	
Biesse	180	3,2	2,2	30	4/5,5/45	58	WZ	10	058322	□
Biesse	180	3,2	2,2	30	2/6/42	58	WZ	10	058323	□
Biesse	215	4,0	2,8	35	6/5,5/54 2/6/50	50	WZ	10	058321	●
Biesse	250	3,2	2,2	35	2/6/50	60	WZ	10	069546	□
Biesse	250	3,2	2,2	48	4/5,5/61	60	WZ	10	069547	□
Biesse	270	3,2	2,2	35	2/6/50 6/5,5/54	60	WZ	10	058233	●
Holz Her	180	3,5	2,5	30	4/5,5/52	36	WZ	10	058076	□
Holz Her	180	3,2	2,2	30	2/6/42	58	WZ	10	058323	□
Holz Her	220	3,2	2,2	30	2/7/42	64	WZ	10	060662	□
Holz Her	220	3,2	2,2	30	4/5,5/45	64	WZ	10	060663	□
Holz Her	250	3,2	2,2	30	KNL	60	WZ	10	058382	●
Homag	125	2,4	1,6	30	8/6,5/48	36	WZ	10	058234	●
Homag	180	3,5	2,5	30	4/5,5/52	36	WZ	10	058076	□
Homag	220	3,2	2,2	40	8/5,5/52	64	FZ/TR	10	061363	□
Homag	240	3,0	1,8	30	4/5,5/52	48	WZ	10	058077	□
Homag	240	3,0	1,8	40	8/5,5/52	48	WZ	10	070125	□
Homag	240	3,2	2,2	40	8/5,5/52	54	FZ/TR	10	059703	□
Homag	280	3,2	2,2	30	KNL	48	WZ	10	060672	●
Universal	120	4,0	3,0	20	1/6/46	30	WZ	10	058226	●
Universal	150	4,0	3,0	20		30	WZ	10	058227	●
Universal	160	4,0	3,0	20	1/6/46	36	WZ	10	058228	●
Universal	180	4,0	3,0	20	1/6/46	42	WZ	10	058229	●
Universal	200	4,0	3,0	20	1/6/46	42	WZ	10	058230	●
Universal	250	3,2	2,2	30	KNL	48	WZ	10	058202	●
Weeke	125	2,4	1,6	30	8/6,5/48	36	WZ	10	058234	●
Weeke	125	3,2	2,5	30	8/5,5/48	36	FZ	10	060641	●
Weeke	125	4,0	2,8	30	8/5,5/48	36	FZ	10	061300	●
Weeke	220	3,2	2,2	40	8/5,5/52	64	FZ/TR	10	061363	□
Weeke	240	3,0	1,8	30	4/5,5/52	48	WZ	10	058077	□
Weeke	240	3,0	1,8	40	8/5,5/52	48	WZ	10	070125	□
Weeke	240	3,2	2,2	40	8/5,5/52	54	FZ/TR	10	059703	□





Copy shaping cutterhead

Application:

For pre cutting, jointing, copy shaping and rebating. Particularly suitable for deep cutting depths. Roughing cut quality for subsequent profiling and jointing.

Machine:

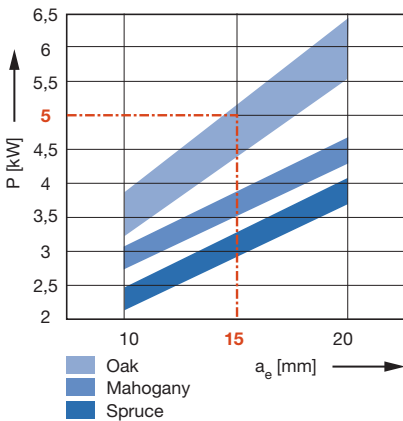
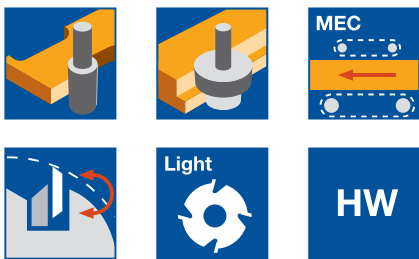
Overhead routers with/without CNC control, machining centres, special routers with spindles for mounting shank tools.

Workpiece material:

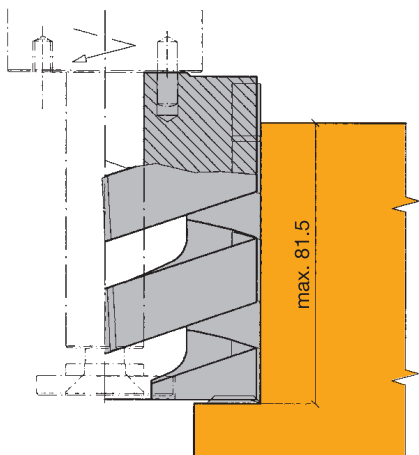
Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.).

Technical information:

Tungsten carbide turnblade knives Z 2 with shear angle in spiral arrangement for high cut performance and optimised chip removal. Staggered cut for reduced cutting forces. With spurs for tear free rebating in softwood and hardwood.



Motor power P depends on workpiece material and cutting depth a_e . For tool diameter $D=80\text{mm}$, Z 2, workpiece thickness $a_p = 60\text{mm}$, $n = 12000\text{rpm}$ and $v_f 4\text{m/min}^{-1}$



Rebating

HW, Z 2+2 / V2 / V4

SL 499-2, WW 220-1, WW 499-2

Tool Type	ABM mm	QAL	AM PCS	Z	V	ID
Cutterhead	80x80,7/83x20	HW	12	2	2	407193 ●
Cutterhead mounted on arbor	1 part	HW	12	2	2	426047 □
Cutterhead	125x80,9x30;	HW	12	2	4	407196 ●
Cutterhead mounted on arbor	1 part	HW	12	2	4	426050 □
Cutterhead	125x94,8x30	HW	14	2	4	410696 ●
Cutterhead mounted on arbor	1 part	HW	14	2	4	426084 □
Cutterhead	125x120,8x30	HW	18	2	4	411197 □
Cutterhead mounted on arbor	1 part	HW	18	2	4	426091 □

RPM: D 80 mm: $n \text{ max.} = 18000\text{ min}^{-1}$
D 125 mm: $n \text{ max.} = 12200\text{ min}^{-1}$

Tool with HW turnblade knives for solid wood.
Cutter arbor see section 8 Clamping systems.

Please note:

When ordering - only use the following cutter arbors:

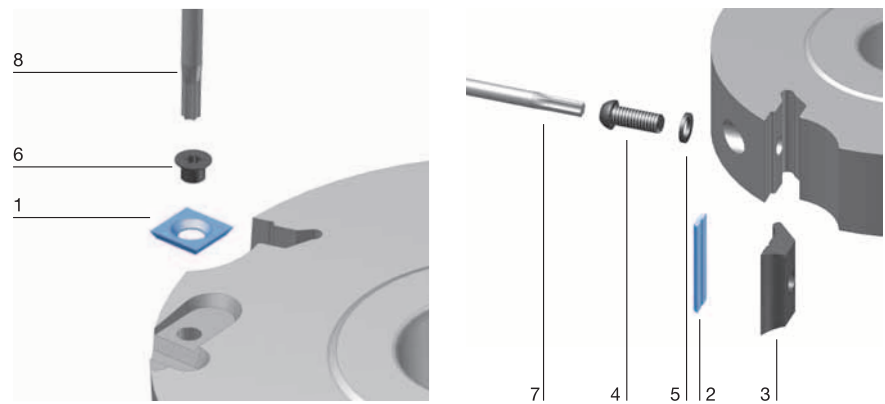
D	clamping length	d
80 mm	70 mm	20 mm
125 mm	80 mm	30 mm

Spare knives:

Part-no.	BEZ	ABM mm	QAL	VE PCS	ID
1	Turnblade spur VS1	14x14x2	HW-F	10	005099 ●
2	Turnblade knife	14,7x8x1,5	HW-30F	10	005070 ●

Spare parts:

Part-no.	BEZ	ABM mm	ID
3	Clamping wedge	13x18,75x8,27	009670 ●
4	Clamping screw, Torx®	M6x18,5	007818 ●
5	Washer	D9x1,2	006747 ●
6	Countersink screw, Torx®	M5x8,5	007808 ●
7	Torx® key	Torx® 25	117504 ●
8	Torx® key	Torx® 20	117503 ●
	Setting gauge	0,3/0,8	005374 ●



5. Routing

5.2 Jointing, rebating and bevelling 5.2.1 Jointing and rebating cutterheads



Jointing rebating cutterhead in turnblade design

Application:

For jointing and rebating with constant tool diameter.

Machine:

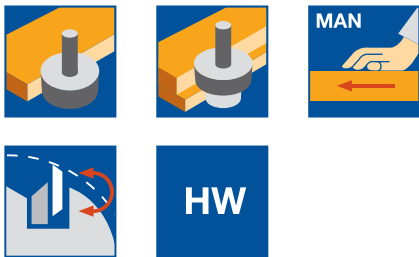
Overhead routers with/without CNC control, machining centres.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.).

Technical information:

Tungsten carbide turnblade knife Z 2 with straight cut for stepless finish on pre cut workpieces or workpieces sized by roughing cutters. With spurs for tear free rebates in softwood and hardwood. Quiet running from closed, round tool body.



HW, Z 2 / V2

WL 402-1

D mm	GL mm	SB mm	S mm	ID
40	120	50	25x60	039235 ●
50	120	50	25x60	039239 ●
60	113	50	25x60	039243 ●

RPM: n max. = 18000 min⁻¹

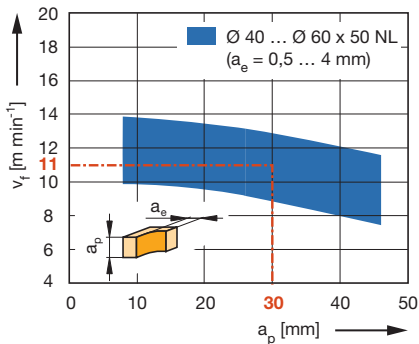
Spare knives:

Part-no.	BEZ	ABM mm	QAL	VE PCS	ID
1	Turnblade spur VS1	14x14x2	HW-F	10	005099 ●
2	Turnblade knife	50x12x1,5	HW-05	10	005086 ●

Spare parts:

Part-no.	BEZ	ABM mm	for D mm	ID
3	Clamping wedge	48x11,6x9		009871 ●
4	Screw with slot	M5x12		005744 ●
5	Allen screw	M8x14	60	006073 ●
5	Allen screw	M8x8	40 / 50	006245 ●
	Allen Key	SW 4		005445 ●

Feed speed v_f depending on grooving depth a_p



Workpiece material: Plastic coated chipboard

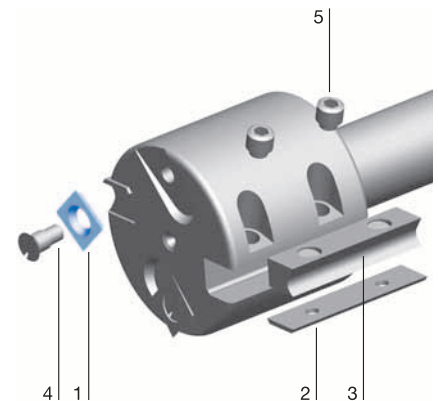
Working step: Jointing

Speed: n = 16000 rpm

Correction factor for v_f : MDF = 0.9;

Paper coated = 0.8;

Machining across grain = 0.7





Jointing cutterhead set with edging knives

Application:

For jointing and rounding or bevelling narrow edges with a constant tool diameter.

Machine:

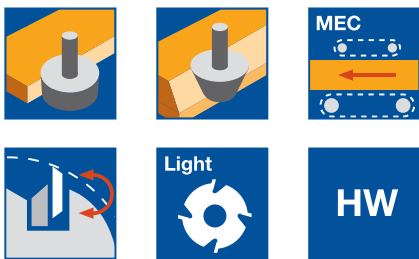
Overhead routers with/without CNC control, machining centres.

Workpiece material:

Softwood and hardwood, compound materials of solid wood and wood derived materials, uncoated, plastic coated, veneered etc., gluelam (plywood etc.).

Technical information:

Tungsten carbide turnblade knives Z 2 with shear angles. Narrow edge profiling with edging knives mounted on both sides of tool. Quiet running due to closed, round tool body.

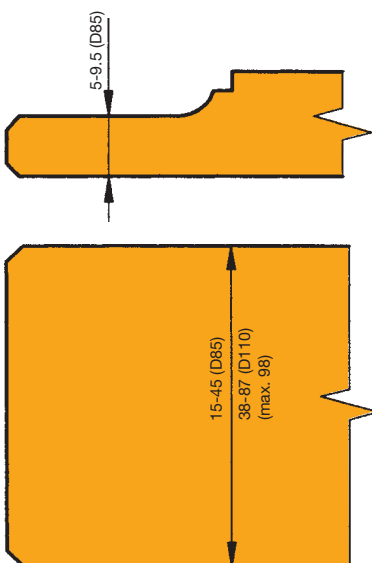
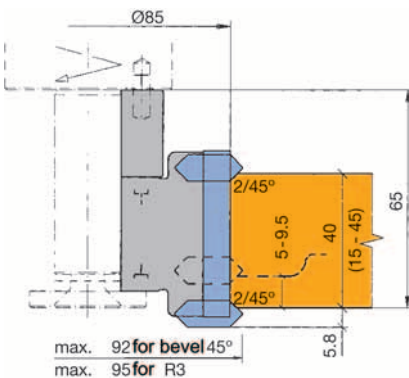


HW, Z 2, with seatings for edging knives

SL 299-2

Tool Type	ABM mm	QAL	Z	ID
Tool set without arbor, with spacer	85x50x20,1 part	HW	2	125038 ●
Tool set mounted on arbor	1 part,HD40	HW	2	426000 □
Tool set without arbor, with spacer	110x100x28x30	HW	2	411179 ●
Tool set mounted on arbor	1 part	HW	2	426085 □

Examples



RPM: D 85 mm: n max. = 17900 min⁻¹

D 110 mm: n max. = 15600 min⁻¹

Unless stated otherwise, tools are right hand rotation.

Cutter arbor see section 8 Clamping systems.

Spare knives:

BEZ	ABM mm	QAL	R mm	FAW	VE PCS	ID
Turnblade knife	50x8x1,5	HW-05			10	005402 ●
Turnblade knife	100x8x1,5	HW-05				005405 ●
Edging knife	KM 12/4	HW-F	1,5			008272 ●
Edging knife	KM 12/3	HW-F	2			008307 ●
Edging knife	KM 12/0	HW-F	3			008270 ●
Edging knife	KM 15/0	HW-F	3			008275 ●
Edging knife	KM 12/1	HW-F	3			008271 ●
Edging knife	KM 11/0	HW-F		45°		008268 ●

Spare parts:

BEZ	ABM mm	ID
Clamping wedge	48x18,75x8,27	009677 ●
Clamping wedge	98x18,75x8,27	009681 ●
Clamping screw, Torx®	M6x18,5	007818 ●
Countersink screw, Torx®	M6x35	007098 ●
Washer	D9x1,2	006747 ●
Torx®	Torx® 20	117503 ●
Torx®	Torx® 25	117504 ●
Magnetic setting gauge	0,3/0,8	005376 ●

Order example:

Tool set ID **426000** mounted on arbor ID **041125**, shank 25x60 mm.

When ordering, choose arbors with d-20 mm and clamping length 55 mm.



Jointing cutterhead Diamaster

Application:

For jointing and copy shaping. For tear free workpiece edges on both sides.

Machine:

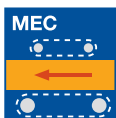
Overhead routers with/without CNC control, machining centres.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., glue-lam (plywood etc.).

Technical information:

Knives with alternate shear angles. Resharpenable and replaceable DP knives Z 2+2. Resharpener area 3.5 mm. Diameter constant after resharpener by adjustable DP knives. Quiet running through closed, round tool body. Adjustable knives for closed glue joints of glued edges.



DP, Z 2+2

WM 230-2

Tool Type	ABM mm	QAL	Z	ID
Cutterhead	70x33/50x20	DP	2/2/2	090926 ●
Cutterhead mounted on arbor	1 part/HD28	DP	2/2/2	426051 □

RPM: n max. = 18000 min⁻¹

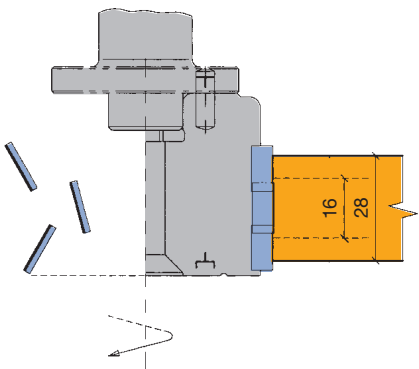
Unless stated otherwise, tools are right hand rotation.

Cutter arbor see section 8 Clamping systems.

Order example:

Tool set ID **426051** mounted on arbor ID **041126**, shank 25x60 mm.

When ordering, choose arbors with d-20 mm and maximum clamping length for the tool.



Example



Planing cutter - turnblade design

Application:

For surface planing of large workpieces and for cutting deep rebates in one working step.

Machine:

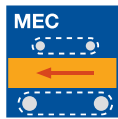
Overhead routers with/without CNC control, machining centres.

Workpiece material:

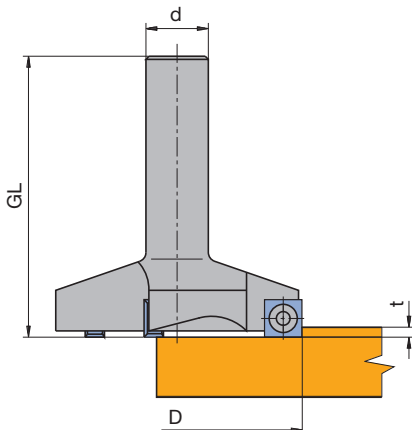
Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.), duromers, plastomers, mineral materials (Corian, Varicor etc.).

Technical information:

Cutting edge with shear angle; reversible and replaceable cutting edges. D 135 and D 180 particularly suitable for planing MDF slave panels during nesting. Knives with radii for mark free cut quality in solid wood or MDF on request.



Example



$t = 0.5 - 10 \text{ mm}$

Surface planing during nesting:

$t = 0.5 - 1.5 \text{ mm}$

ID **041552** $n = 8400 \text{ rpm}$

$v_f = 25 - 40 \text{ m/min}$

HW, Z 3, Z 4, Z 5

WL 400-2

D mm	GL mm	NL mm	S mm	Z	n_{max}	DRI	ID
80	90	12	20x50	3	14000	RL	041550 ●
80	100	12	25x60	3	14000	RL	041551 ●
135	90	12	25x60	4	10000	RL	041553 ●
180	90	12	25x60	5	8400	RL	041552 ●

Spare knives:

BEZ	ABM mm	QAL	VE PCS	ID
Turnblade knife	12x12x1,5	HW-05	10	005081 ●

Spare parts:

BEZ	ABM mm	ID
Oval head screw Torx® 15	M4x6	006225 ●
Torx® key	Torx® 15	005457 ●



Beveling cutterhead, adjustable

Application:

For jointing, bevelling and raised panels with steplessly adjustable bevel angles from 0 to 85°.

Machine:

Overhead routers with/without CNC control, machining centres.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.).

Technical information:

Tungsten carbide turnblade knives Z 2. Accurate and clearly readable angle scale for precise and quick adjustment to the required bevel angle. Bevelling of workpiece both at top and bottom.



Z 2

WP 341-1-01

D mm	GL mm	SB mm	S mm	DRI	ID
100	100	40	20x50	RL	042852 ●
100	110	40	25x60	RL	042850 ●

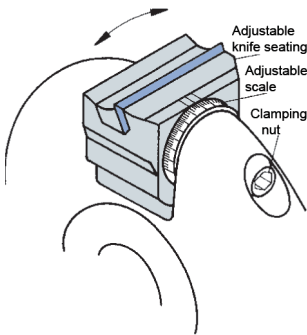
RPM: n max. = 12000 min⁻¹

Spare knives:

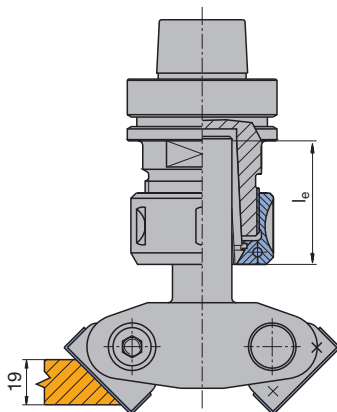
Part-no.	BEZ	ABM mm	QAL	VE PCS	ID
1	Turnblade knife	40x12x1,5	HW-05	10	005085 ●

Spare parts:

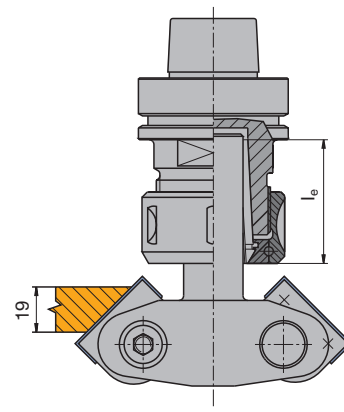
Part-no.	BEZ	ABM mm	BEM	ID
2	Clamping wedge with pin	38x10,88x6		005348 ●
3	Allen screw	M6x12	ISK 3	006035 ●
	Allen Key	SW 8, L 100		005437 ●
	Allen Key	SW 3		005433 ●



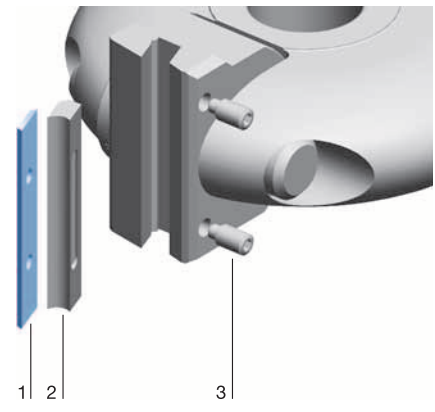
Bevel cutterhead with swivelling knife holder



Bevelling from above



Bevelling from below



5. Routing

5.3 Profiling 5.3.1 Finger joints



Profile cutterhead set - glue joint profile

Application:

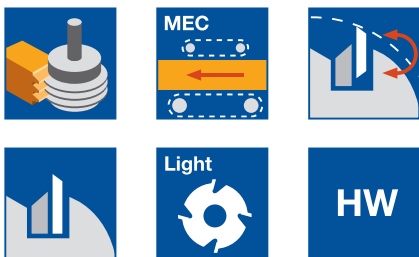
For cutting longitudinal joints for dimensionally stable construction parts, windows and doors e.g. round arched joints, stairs and frame construction parts.

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, modified wood in window construction, compound materials of solid wood and wood derived material, uncoated, plastic coated, veneered, etc. gluelam (plywood, etc.).



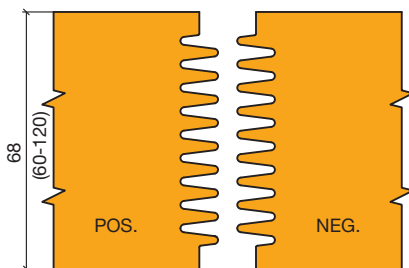
Technical information:

Adjustable finger fit by mounting the shoulder cutters in different knife seatings. Variable wood thickness through different set construction or cutting process in several passes (profile splitting).

ZL 10 mm, TG 6.2 mm, HD 60 - 120 mm

SE 699-2-50

Tool Type	DRI	Tool no.	Z	ID
Tool set glue joint profile (pos.) mounted on arbor	RL	1, 2	2/2	426086 □
Tool set glue joint counter profile (neg.) mounted on arbor	LL	1, 2	2/2	426087 □
Tool set glue joint - profile splitting profile pos. mounted on arbor	RL	1, 2	2/2	426088 □
Tool set glue joint - profile splitting profile neg. mounted on arbor	LL	1, 2	2/2	426089 □
Tool set glue joint - profile splitting profile neg. mounted on arbor	RL	3, 4	2/2	426090 □
Glue joint cutter set, pos. (RL) or neg. (LL)	RL	1, 2	2/2	126046 ●
Glue joint cutter set, neg.	RL	3, 4	2/2	126047 ●



Glue joint profile positive (POS.) and counter profile negative (NEG.)

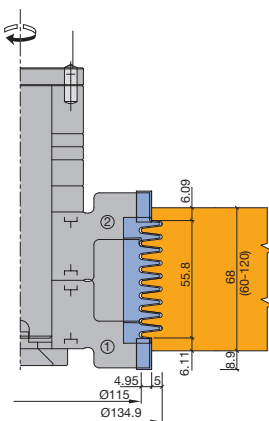
Note:

For special machine applications (e.g. on Weing Conturex), the profile and counter profile must be ordered in RL.

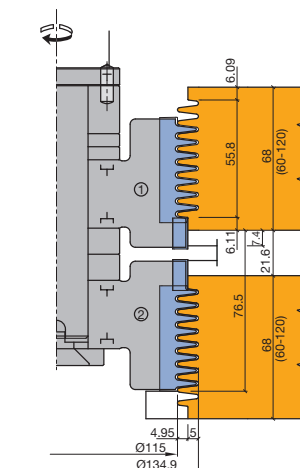
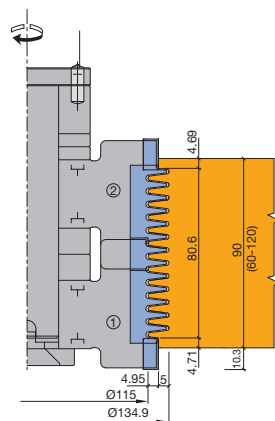
RPM: n max. = 12700 min⁻¹

Note:

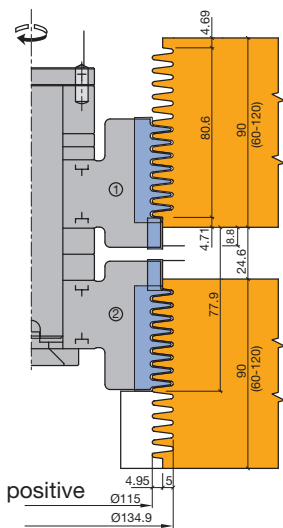
When ordering always state wood thickness (HD). Example: HD 68 mm tool without any special information is mounted positive rh, negative lh. Always 1 tool set profile (pos.) and counter profile (neg.) glue joints required to produce the workpieces without reclamping. Cutter arbor see section 8 Clamping systems.



Glue joint profile set ID. 426086, positive
Conventional production



Glue joint profile set ID. 426088, positive
Profile-splitting-production



Single tools

WE 600-1-50

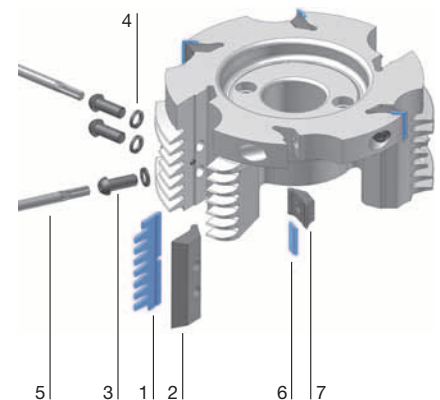
Tool Type	Tool no.	ABM mm	Z	ID
Profile cutterhead	1	134.9x62.6x30	2/2	411180 ●
Profile cutterhead	2	134.9x62.6x30	2/2	411182 ●
Profile cutterhead	3	134.9x62.6x30	2/2	411184 ●
Profile cutterhead	4	134.9x62.6x30	2/2	411185 ●

Spare knives:

Part-no.	BEZ	Tool no.	ABM mm	QAL	VE PCS	ID
1	ProfilCut knife	1	50.1x20.5x2	HW		619230 ●
1	ProfilCut knife	2	50.1x20.5x2	HW		619231 ●
1	ProfilCut knife	3	50.1x20.5x2	HW		619232 ●
1	ProfilCut knife	4	50.1x20.5x2	HW		619233 ●
6	Turnblade knife	1, 2, 3, 4	14,7x8x1,5	HW-30F	10	005070 ●

Spare parts:

Part-no.	BEZ	Tool no.	ABM mm	ID
2	Clamping wedge profiled	1, 2, 3, 4	48x18x8,27	629107 ●
3	Clamping screw, Torx® 25		M6x18,5	007818 ●
4	Washer		D9x1,2	006747 ●
5	Torx® key		Torx® 25	117504 ●
7	Clamping wedge	1, 2, 3, 4	13x18,75x8,27	009670 ●
	Magnetic setting gauge		0,3/0,8	005376 ●





Profile cutterhead set - door processing

Application:

For profiling and rebating internal single rebate doors, rebate depth 15 mm.

Machine:

Overhead routers with/without CNC control, machining centres, special routers with spindles to mount shank tools.

Workpiece material:

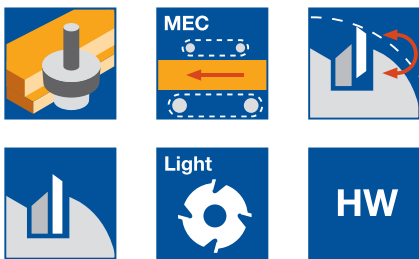
Softwood and hardwood, compound materials of solid wood and wood derived materials, uncoated, plastic coated, veneered, etc., gluelam (plywood, etc.).

Technical information:

Variable profile overlap by exchange profile edging knives.

Adjustable rebate dimensions: rebate width 22 mm, rebate depth 15 mm.

Seal groove profile by mounting grooving knives SB 4 mm. Constant tool diameter.



Single rebate 15 mm

WE 500-2-50, SE 540-2-50, SG 599-2-50

Tool Type	Tool no.	ABM mm	Z	ID
Profile cutterhead	3	94x30x20	2	407741 ●
Profile cutterhead	5	116.2x35x20	2	407742 ●
Tooling set with spacers, without arbor	3 + 5	116.2,d20,2 part	2	126032 ●
Tooling set mounted on arbor	3 + 5	D0=86;D=116,2; 2 part	2	426072 □

RPM: n max. = 13000 min⁻¹

Unless stated otherwise, tools are right hand rotation.

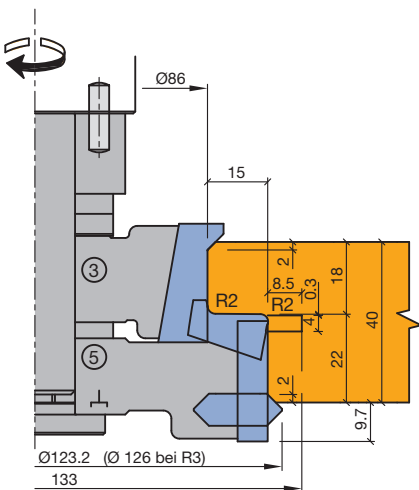
Cutter arbor see section 8 Clamping systems.

Spare knives:

Part-no.	Tool no.	BEZ	ABM mm	QAL	R mm	FAW	VE PCS	ID
1	3	ProfilCut knife	30.2x14.1x2	HW		45°		407759 ●
1	3	ProfilCut knife	30.2x14.2x2	HW	1,5			407760 ●
1	3	ProfilCut knife	30.2x14.21x2	HW	2			407761 ●
1	3	ProfilCut knife	30.2x14.22x2	HW	3			407762 ●
1	3	ProfilCut knife	30.2x15.3x2	HW	4			407763 ●
1	3	ProfilCut knife	30.2x15.31x2	HW	5			407764 ●
1	3	ProfilCut knife, flute	30.2x14.1x2	HW	3			407765 ●
1	5	ProfilCut knife	20.1x12.61x2	HW	2			407793 ●
2	5	Turnblade knife	30x8x1,5	HW-05			10	005059 ●
3	5	Edging knife	KM 11/0	HW-F		45°		008268 ●
4	5	Turnblade grooving knife NA4	35,2x15x4	HW-F				008317 ●

Spare parts:

Part-no.	Tool no.	BEZ	ABM mm	ID
5	3	Clamping wedge profiled	28x22.05x8.27	629074 ●
5	5	Clamping wedge profiled	17x21.22x7.25	629075 ●
6		Clamping screw, Torx® 25	M6x18,5	007818 ●
7		Washer	D9x1,2	006747 ●
8		Torx® key	Torx® 25	117504 ●
9		Countersink screw, Torx®	M6x0,5x4,9	006243 ●



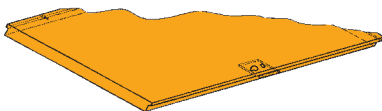
Adjustment scheme:

Max. D = 133 mm for groove

Max. D = 123.2 mm for bevel 45°

Max. D = 126 mm for radius R3

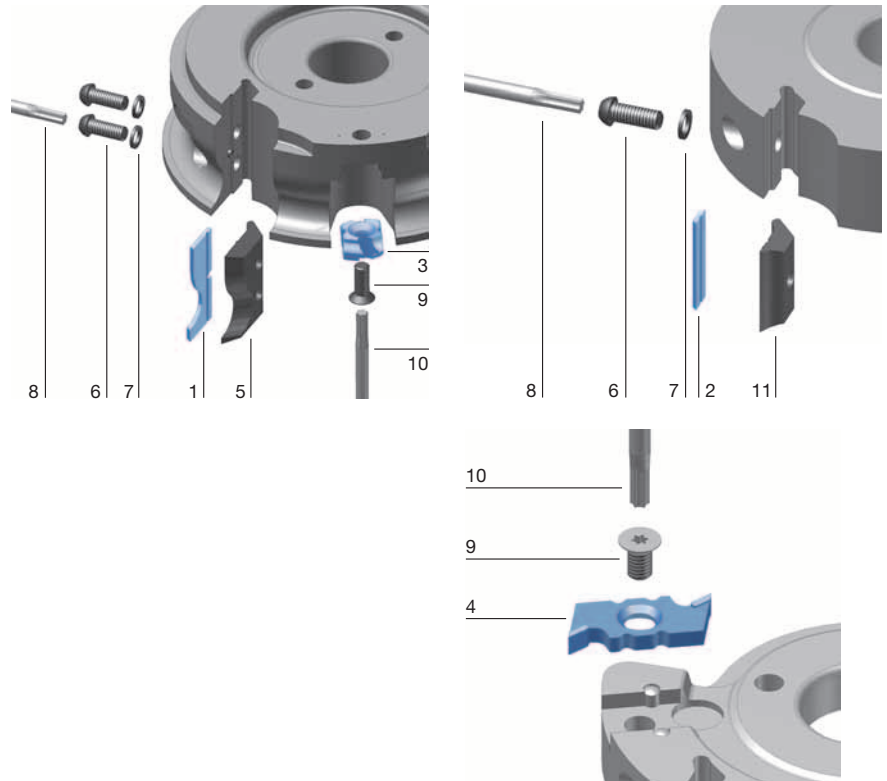
Examples



5. Routing

5.3 Profiling 5.3.2 Tools for internal doors

Part-no.	Tool no.	BEZ	ABM mm	ID
10		Torx® key	Torx® 20	117503 ●
11	5	Clamping wedge	28x18,75x8,27	009673 ●
		Magnetic setting gauge	0,3/0,8	005376 ●





Profile cutterhead set ProfilCut Panel raising and edge rounding

Application:

For panel raising profiles for framed doors, ceilings, wall coverings etc. and for edge profiling solid wood.

Machine:

Overhead routers with/without CNC control, special routers with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood.

Technical information:

Panel raising and edge profile with one tool. Cutterhead with throwaway knives and shear angle.

Panel raising depth max. 34 mm

WE 550 2 50, SG 599 2 50

Tool Type	P	ABM mm	Z	n _{max.}	ID
Cutterhead	1	125x60/48x20	2	12200	023238 ●
Cutterhead mounted on arbor		1 part			426045 □

Unless stated otherwise, tools are right hand rotation.

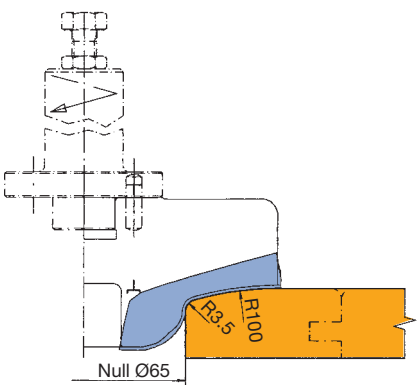
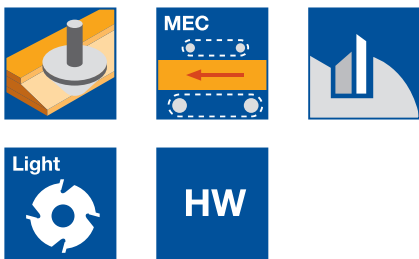
Cutter arbor see section 8 Clamping systems.

Spare knives:

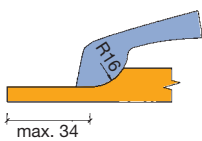
Part-no.	BEZ	P	ABM mm	QAL	ID
1	ProfilCut knife	1	60x19,88x2	HW	619002 ●
1	ProfilCut knife	2	60x20,34x2	HW	619003 ●

Spare parts:

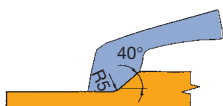
Part-no.	BEZ	ABM mm	ID
2	Clamping wedge profiled	57x28,38x7,25	629000 ●
3	Clamping screw, Torx® 25	M6x18,5	007818 ●
4	Washer	D9x1,2	006747 ●
5	Torx® key	Torx® 25	117504 ●



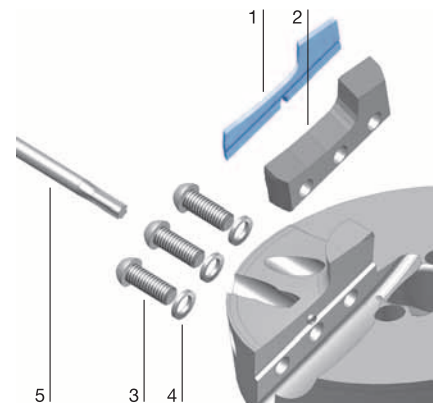
Edge profile



P1



P2





Profile cutterhead set ProfilCut Panel raising

Application:

For panel raising profiles for framed doors, ceilings, wall coverings etc.

Machine:

Overhead routers with/without CNC control, special routers with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood.

Technical information:

Panel edge jointing by mounting an additional jointing cutterhead ID **041221**. Cutterhead with throwaway knives and shear angle.

Panel raising depth max. 49 mm

WE 550-2-50, SG 599-2-50

Tool Type	ABM mm	Z	n _{max.}	ID
Cutterhead	132x43x20	2	11600	125034 ●
Cover plate	46x9.5x20			007925 ●
Cutterhead mounted on arbor	1 part			426022 □

Unless stated otherwise, tools are right hand rotation.

Cutter arbor see section 8 Clamping systems.

Spare knives:

Part-no.	BEZ	ABM mm	QAL	VE PCS	ID
	Turnblade knife	12x12x1,5	HW-05	10	005081 ●
1	ProfilCut knife	60x20,47x2	HW		619100 ●

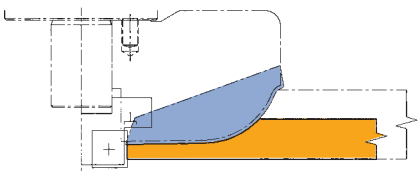
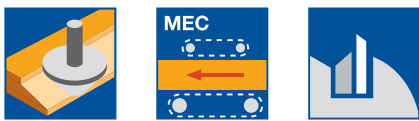
Spare parts:

Part-no.	BEZ	ABM mm	ID
2	Clamping wedge profiled	57x28,97x7,25	629030 ●
3	Clamping screw, Torx®	M6x18,5	007818 ●
4	Washer	D9x1,2	006747 ●
5	Torx® key	Torx® 25	117504 ●
	Oval head screw Torx® 15	M4x6	006225 ●
	Torx® key	Torx® 15	117507 ●

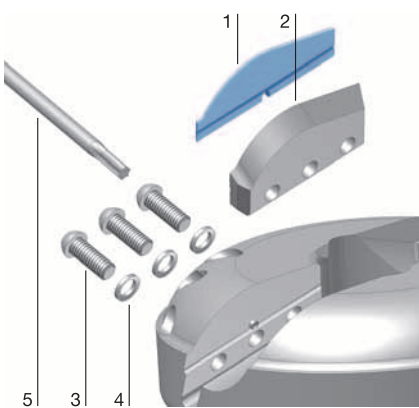
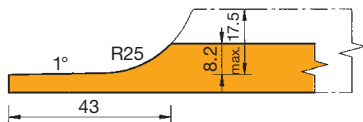
Jointing

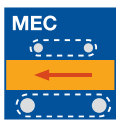
WW 200-2-NN

Tool Type	ABM mm	QAL	Z	ID
Jointing cutterhead	30/46x12/22.5x20	HW	2	041221 ●



Examples





Profile cutterhead set ProfilCut Panel raising

Application:

For panel raising profiles for framed doors, ceilings, wall coverings etc.

Machine:

Overhead routers with/without CNC control, special routers with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood.

Technical information:

Panel edge jointing by mounting an additional jointing cutterhead ID **041221**. Cutterhead with throwaway knives and shear angle. Profile can be changed by replacing the knives.

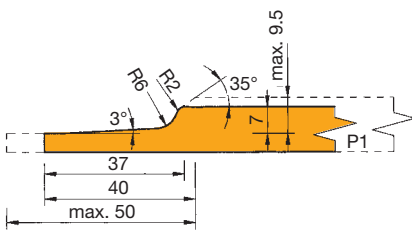
Panel raising depth max. 40 / 50 mm with/without jointing

WE 550-2-50, SG 599-2-50

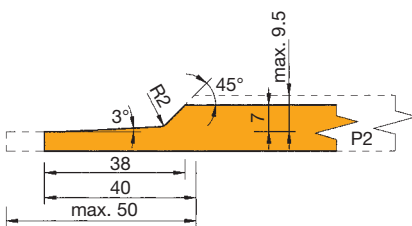
Tool Type	P	ABM mm	QAL	Z	n _{max.}	ID
Cutterhead	1	110x40/40x20	HW	2	13800	023237 ●
Cover plate		46x9.5x20	HW			007925 ●
Cutterhead mounted on arbor		1 part	HW			426043 □

Unless stated otherwise, tools are right hand rotation.

Cutter arbor see section 8 Clamping systems.



P1



P2

Spare knives:

Part-no.	BEZ	P	ABM mm	QAL	VE PCS	ID
	Turnblade knife		12x12x1,5	HW-05	10	005081 ●
1	ProfilCut knife	1	50x14,5x2	HW		009492 ●
1	ProfilCut knife	2	50x14,56x2	HW		009493 ●

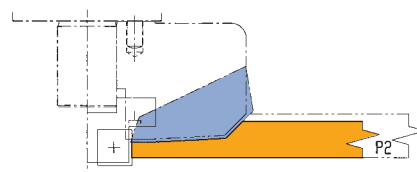
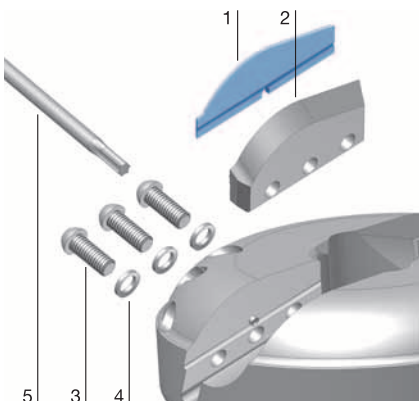
Spare parts:

Part-no.	BEZ	ABM mm	ID
2	Clamping wedge profiled	47x23x7,25	009741 ●
3	Clamping screw, Torx® 25	M6x18,5	007818 ●
4	Washer	D9x1,2	006747 ●
5	Torx® key	Torx® 25	117504 ●
	Oval head screw Torx® 15	M4x6	006225 ●
	Torx® key	Torx® 15	117507 ●

Jointing

WW 200-2-NN

Tool Type	ABM mm	QAL	Z	ID
Jointing cutterhead	30/46x12/22.5x20	HW	2	041221 ●



Example



Profile cutterhead set ProfilCut Panel raising

Application:

For panel raising profiles for framed doors, ceilings, wall coverings etc.

Machine:

Overhead routers with/without CNC control, special routers with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood.

Technical information:

Panel edge jointing by mounting an additional jointing cutterhead ID **041221**. Cutterhead with throwaway knives and shear angle. Profile can be changed by replacing the knives.

Panel raising depth max. 54 mm

WE 550-2-50, SG 599-2-50

Tool Type	P	ABM mm	QAL	Z	n _{max.}	ID
Cutterhead	1	124x20/36x20	HW	2/2	12300	041223 ●
Cover plate		46x9.5x20	HW			007925 ●
Cutterhead mounted on arbor	1	1 part	HW	2/2	12300	426030 □

Unless stated otherwise, tools are right hand rotation with profile P1.

Cutter arbor see section 8 Clamping systems.

Spare knives:

Part-no.	BEZ	P	ABM mm	QAL	VE PCS	ID
	Turnblade knife		12x12x1,5	HW-05	10	005081 ●
1	Profile knife profile 1	1	20x27x2	HW		007560 ●
1	Profile knife profile 2	2	20x27x2	HW		007561 ●
1	Profile knife profile 3	3	20x27x2	HW		007562 ●
1	Profile knife profile 4	4	20x27x2	HW		007563 ●
1	Profile knife profile 5	5	20x27x2	HW		007564 ●
2	Turnblade knife		40x8x1,5	HW-30F	10	005074 ●

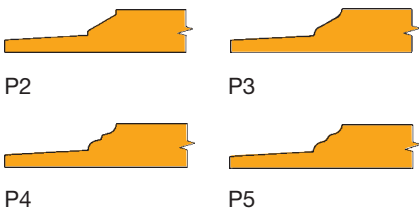
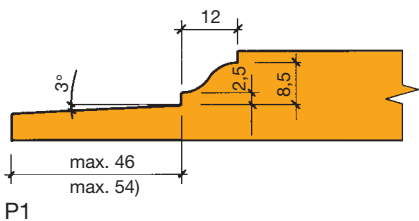
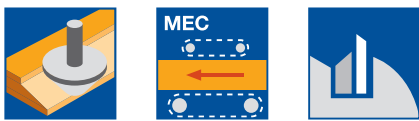
Spare parts:

Part-no.	BEZ	P	ABM mm	ID
3	Clamping wedge profiled	1-5	18x37,46x8,27	009722 ●
4	Clamping wedge	Panel raising	37x16,8x7,25	009577 ●
5	Clamping screw, Torx® 25		M6x18,5	007818 ●
6	Washer		D9x1,2	006747 ●
7	Torx® key		Torx® 25	117504 ●
	Oval head screw Torx® 15		M4x6	006225 ●
	Torx® key		Torx® 15	117507 ●
	Cover plate		46x9.5x20	007925 ●

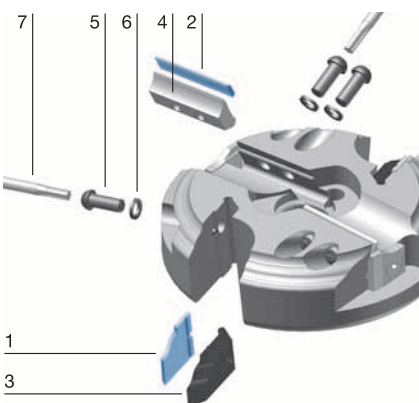
Jointing

WW 200-2WW 200-2-NN

Tool Type	ABM mm	QAL	Z	ID
Jointing cutterhead	30/46x12/22.5x20	HW	2	041221 ●



Profiles





Profile cutterhead set ProfilCut Panel raising

Application:

For panel raising profiles for framed doors, ceilings, wall coverings etc.

Machine:

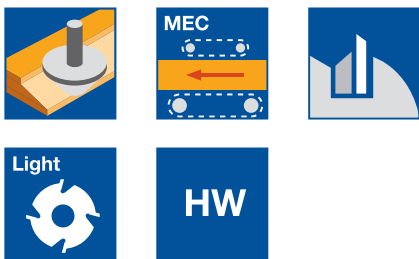
Overhead routers with/without CNC control, special routers with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood.

Technical information:

Panel edge jointing by mounting an additional jointing cutterhead ID **041221**. Cutterhead with throwaway knives and shear angle. Profile can be changed by replacing the knives.

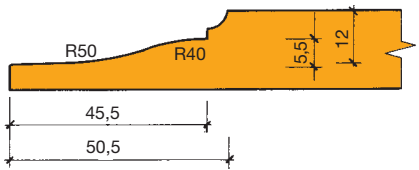


Panel raising depth max. 50 mm

WE 550-2-50, SG 599-2-50

Tool Type	P	ABM mm	QAL	Z	n _{max.}	ID
Cutterhead	1	131x20/36x20	HW	2/2	11600	023220 ●
Cover plate		46x9.5x20	HW			007925 ●
Cutterhead mounted on arbor	1	1 part	HW	2/2	11600	426031 □

Unless stated otherwise, tools are right hand rotation with profile P1.
Cutter arbor see section 8 Clamping systems.



P1



P2



P3

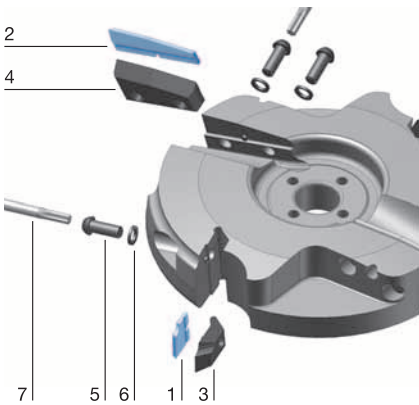


P4



P5

Profiles



Spare knives:

Part-no.	BEZ	P	ABM mm	QAL	VE PCS	ID
	Turnblade knife		12x12x1,5	HW-05	10	005081 ●
1	ProfilCut knife	1	20x16x2	HW		007655 ●
1	ProfilCut knife	2	20x16x2	HW		007656 ●
1	ProfilCut knife	3	20x16x2	HW		007657 ●
1	ProfilCut knife	4	20x16x2	HW		007658 ●
1	ProfilCut knife	5	20x16x2	HW		007659 ●
2	ProfilCut knife (pan.rais.)		50x11,68x2	HW		007600 ●

Spare parts:

Part-no.	BEZ	P	ABM mm	ID
3	Clamping wedge profiled	1-5	18x26,46x8,27 (P1-5)	009725 ●
4	Clamping wedge profiled	panel raising	47x20.18x7.25 (raised panel)	009982 ●
5	Clamping screw, Torx® 25		M6x18,5	007818 ●
6	Washer		D9x1,2	006747 ●
7	Torx® key		Torx® 25	117504 ●
	Oval head screw Torx® 15		M4x6	006225 ●
	Cover plate		46x9.5x20	007925 ●

Jointing

WW 200-2-NN

Tool Type	ABM mm	QAL	Z	ID
Jointing cutterhead	30/46x12/22.5x20	HW	2	041221 ●



Profile cutterhead set ProfilCut Door frame

Application:

For profiles and counter profiles in solid wood frame furniture doors.

Machine:

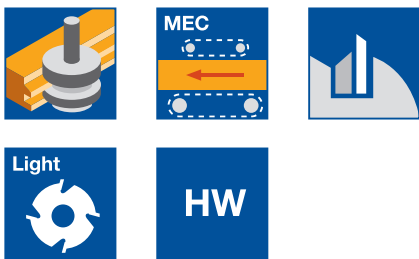
Overhead routers with/without CNC control, special routers with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood.

Technical information:

3 tool sets with 5 profiles for single side profiled frames and inserted or beaded panels. Additional profiles by remounting the single tools.



Frame profile one side, 12 mm tongue

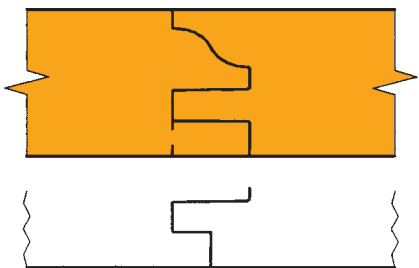
SE 640-2-50, AG 341-2-50

Tool Type	Tool no.	Z	n _{max.}	ID
Profile set	1	2	14500	126006 ●
Counter profile set	2,3	2/2	14500	126007 ●
Tool set profile and counter profile mounted on arbor				043098 □

Frame profile one side, 12 mm rebate

SE 640-2-50, AG 341-2-50

Tool Type	Tool no.	Z	n _{max.}	ID
Profile set	1,3	2/2	14500	126008 ●
Counter profile set	2,4	2/2	14500	126009 ●
Tool set profile and counter profile mounted on arbor				043099 □



P1

Frame profile one side, 6 mm tongue

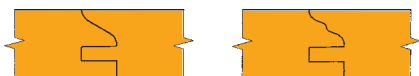
SE 640-2-50, AG 341-2-50

Tool Type	Tool no.	Z	n _{max.}	ID
Profile set	1,5	2/2	14500	126010 ●
Counter profile set	2,5	2/2	14500	126011 ●
Tool set profile and counter profile mounted on arbor				043100 □



P2

P3



P4

P5

Profile examples

Single tools

WE 500-2-50, WW 410-2-NN

Tool Type	Tool no.	ABM mm	Z	ID
Profile cutterhead	1	109,1x30x20	2	023968 ●
Profile cutterhead	2	109,0x20x20	2	023969 ●
Rebating cutterhead	3	109,0x15x20	Z2/V2	023970 ●
Profile cutterhead	4	85x15x20	2	023971 ●
Rebating cutterhead	5	97x15x20	Z2/V2	023972 ●

Cutter arbor see section 8 Clamping systems.

Tools supplied with profile 1 unless ordered otherwise.



5. Routing

5.3 Profiling

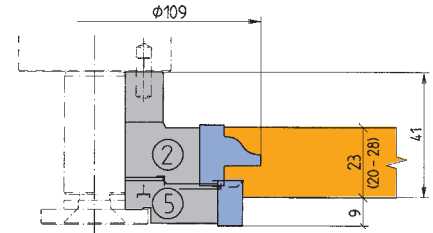
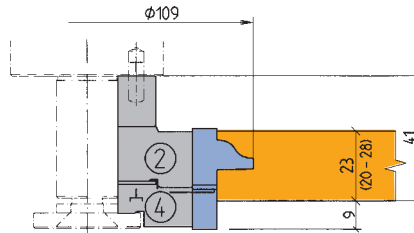
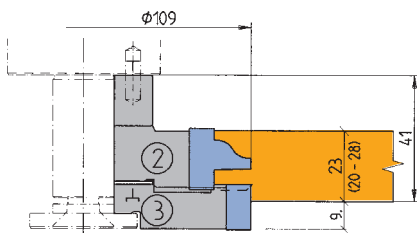
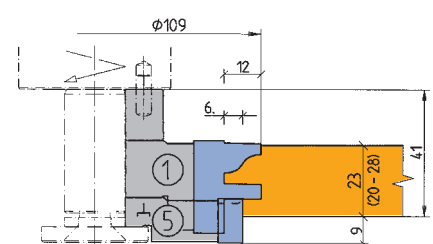
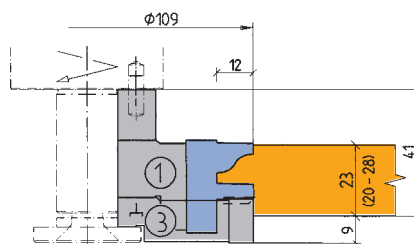
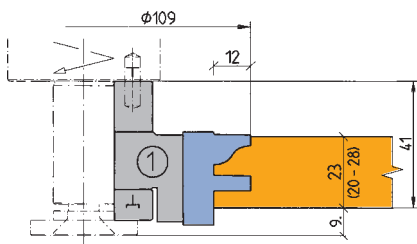
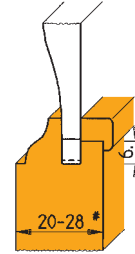
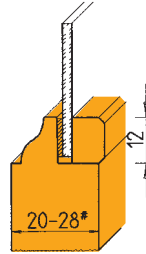
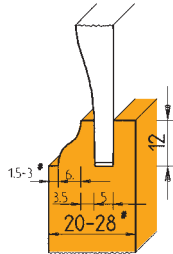
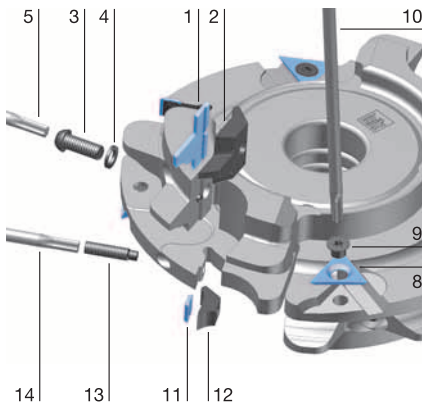
5.3.3 Tools for furniture and interior construction

Spare knives:

Part-no.	BEZ	P	Tool no.	ABM mm	QAL	VE PCS	ID
1	ProfilCut knife	1	1	30x23,2x2	HW		009215 ●
1	ProfilCut knife	2	1	30x23,2x2	HW		009216 ●
1	ProfilCut knife	3	1	30x23,2x2	HW		009217 ●
1	ProfilCut knife	4	1	30x23,2x2	HW		009218 ●
1	ProfilCut knife	5	1	30x23,2x2	HW		009219 ●
1	ProfilCut knife	1	2	20x23x2	HW		009225 ●
1	ProfilCut knife	2	2	20x23x2	HW		009226 ●
1	ProfilCut knife	3	2	20x23x2	HW		009227 ●
1	ProfilCut knife	4	2	20x23x2	HW		009228 ●
1	ProfilCut knife	5	2	20x23x2	HW		009229 ●
8	Turnblade spur VS2	3, 5		19x19x2	HW-F	10	005115 ●
11	Turnblade knife	3, 4, 5		14,7x8x1,5	HW-30F	10	005070 ●

Spare parts:

Part-no.	BEZ	Tool no.	ABM mm	P	ID
2	Clamping wedge profiled	1	28x29x8,27	1-5	009726 ●
2	Clamping wedge profiled	2	18x29x8,27	1-5	009728 ●
3	Clamping screw, Torx® 25		M6x18,5		007818 ●
4	Washer		D9x1,2		006747 ●
5	Torx® key		Torx® 25		117504 ●
9	Countersink screw, Torx® 20		M5x8,5		007808 ●
10	Torx® key		Torx® 20		117503 ●
12	Clamping wedge	3, 4, 5	13x18,75x8,27		009670 ●
	Magnetic setting gauge		0,3/0,8		005376 ●



Tongue 12 mm, inserted panel

Rebate 12 mm, beaded panels

Tongue 6 mm,
inserted and beaded panels



Profile cutterhead set ProfilCut Door frame

Application:

For profiles and counter profiles in solid wood frame furniture doors.

Machine:

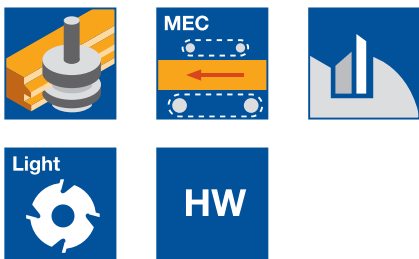
Overhead routers with/without CNC control, special routers with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood.

Technical information:

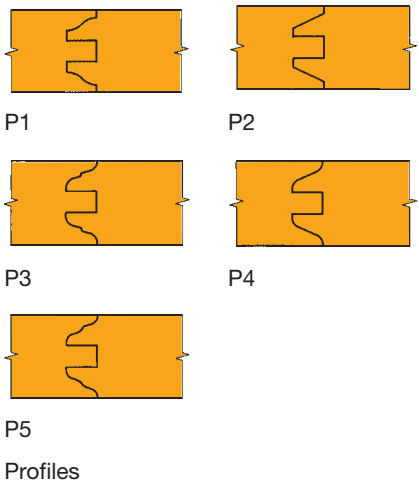
Tool sets with 5 profile choices for frames with profiles on two sides and inserted or beaded panels. Additional tools available for changing from frames with profiles on both sides to frames with profiles on one side.



Frame profile two sides, 15 mm tongue

SE 640-2-50, AG 341-2-50

Tool Type	Tool no.	Z	n _{max.}	ID
Profile set	1,2,3	Z2/V2	13200	126012 ●
Counter profile set	1,3	Z2	13200	126013 ●
Tool set profile and counter profile mounted on arbor				126513 □



Frame profile one side, 15 mm rebate

SE 640-2-50, AG 341-2-50

Tool Type	Tool no.	Z	n _{max.}	ID
Profile set	3,5	Z2/V2	13200	126014 ●
Counter profile set	1,4	Z2	13200	126015 ●
Tool set profile and counter profile mounted on arbor				126514 □

Frame profile two sides, 15 mm tongue, profile and counter profile

SE 640-2-50, SG 699-2-50

Tool Type	Tool no.	Z	n _{max.}	ID
Profile and counter profile set	3,1,2,3	Z2/V2	13200	126016 ●
Tool set profile and counter profile mounted on arbor			13200	126515 □

Additional tool (conversion from tongue 15 mm to rebate 15 mm)

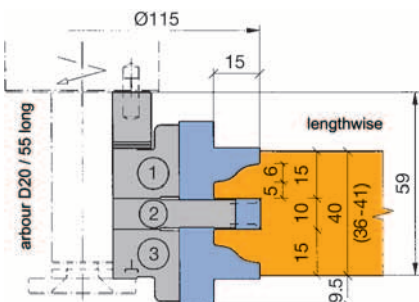
WW 410-2-NN, WW 211-2

Tool Type	Tool no.	Z	n _{max.}	ID
Profile set	5	Z2/V2	13200	125032 ●
Counter profile set	4	2	13200	023085 ●

Cutter arbor see section 8 Clamping systems.

Wood thickness:

frame profile two sides HD 36 - 41 mm
frame profile one side HD 20 - 49 mm



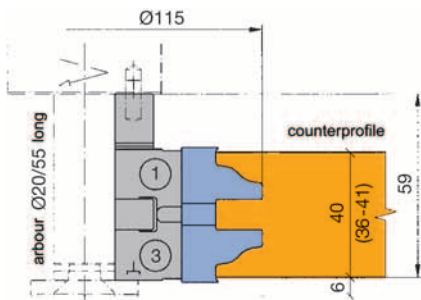
Frame profiled on two sides - profile



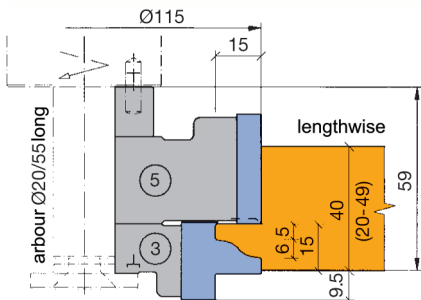
5. Routing

5.3 Profiling

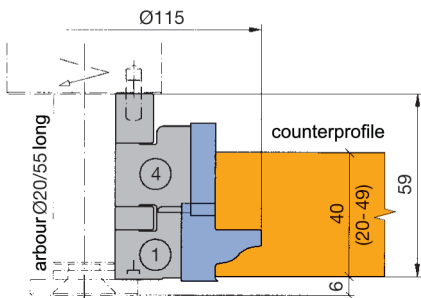
5.3.3 Tools for furniture and interior construction



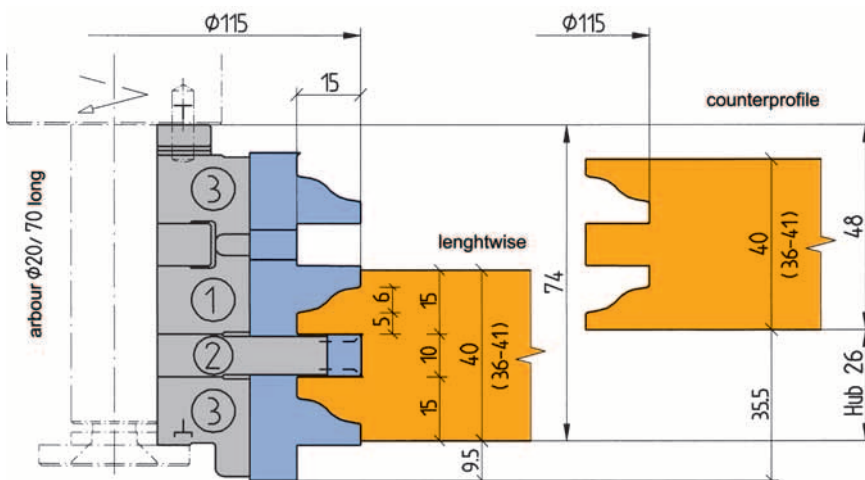
Frame profiled on two sides - counter profile



Frame profiled on one side - profile



Frame profiled on one side - counter profile



Frame profiled on two sides

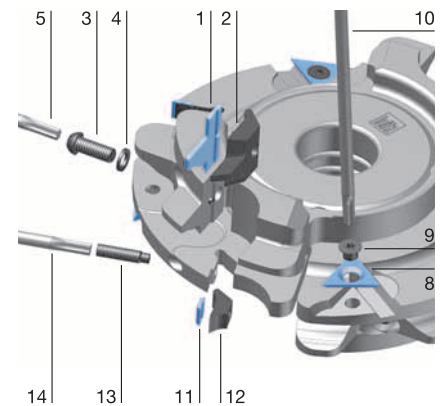
Tool sets for profile and counter profile mounted on arbor

Spare knives:

Part-no.	BEZ	P	Tool no.	ABM mm	QAL	VE PCS	ID
1	ProfilCut knife	1	3	25x27x2	HW		619054 ●
1	ProfilCut knife	2	3	25x27x2	HW		619055 ●
1	ProfilCut knife	3	3	25x27x2	HW		619056 ●
1	ProfilCut knife	4	3	25x27x2	HW		619057 ●
1	ProfilCut knife	5	3	25x27x2	HW		619058 ●
1	ProfilCut knife	1	1	25x27x2	HW		619059 ●
1	ProfilCut knife	2	1	25x27x2	HW		619060 ●
1	ProfilCut knife	3	1	25x27x2	HW		619061 ●
1	ProfilCut knife	4	1	25x27x2	HW		619062 ●
1	ProfilCut knife	5	1	25x27x2	HW		619063 ●
11	Turnblade knife	2		9,7x8x1,5	HW-30F	10	005197 ●
11	Turnblade knife	5		35x8x1,5	HW-30F	10	005073 ●
11	Turnblade knife	4		30x8x1,5	HW-30F	10	005072 ●
15	Turnblade spur VS2	2, 5		19x19x2	HW-F	10	005115 ●

Spare parts:

Part-no.	BEZ	Tool no.	ABM mm	ID
2	Clamping wedge profiled	3	23x34x8,27	629013 ●
2	Clamping wedge profiled	1	23x34x8,27	629012 ●
3	Clamping screw, Torx® 25		M6x18,5	007818 ●
4	Washer		D9x1,2	006747 ●
5	Torx® key		Torx® 25	117504 ●
9	Countersink screw, Torx® 20		M6x0,5x4,9	006243 ●
10	Torx® key		Torx® 20	117503 ●
12	Clamping wedge	2	9x18,75x8,27	009764 ●
12	Clamping wedge	4	28x18,75x8,27	009673 ●
12	Clamping wedge	5	33x18,75x8,27	009674 ●
13	Allen screw with shank, Torx® 15		M5x20	007380 ●
14	Torx® key		Torx® 15	117507 ●
	Magnetic setting gauge		0,3/0,8	005376 ●





Profile cutterhead set ProfilCut

Application:

Multi purpose tool set for bevelling and rounding, optional jointing of the workpiece edge.

Machine:

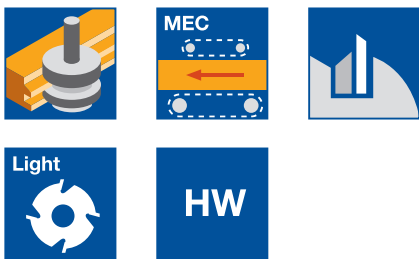
Overhead routers with/without CNC control, special routers with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood.

Technical information:

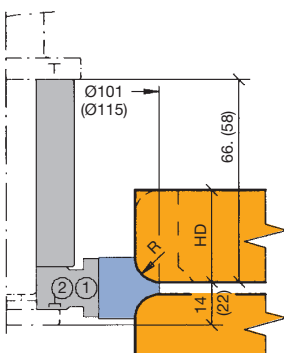
By combining jointing and bevelling or rounding cutterheads several different profiles and wood thicknesses can be covered. Different radii or bevel profile knives can be mounted in one cutterhead.



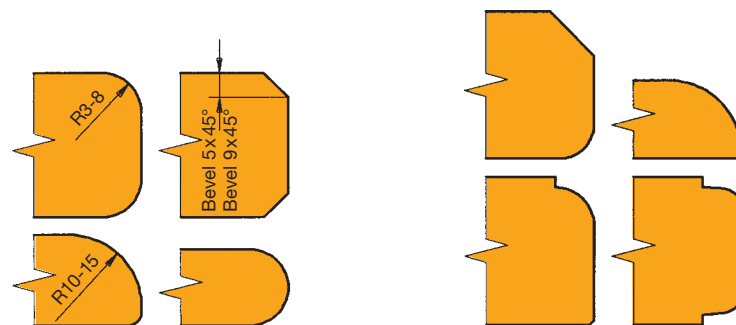
Jointing, rounding or bevelling tool

SG 599-2-50

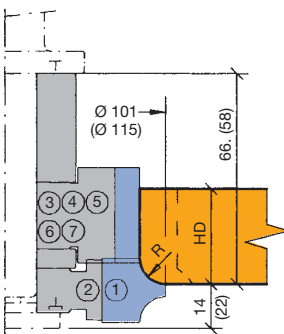
Tool Type	R mm	BEM	n _{max.} min ⁻¹	ID
Rounding		No. of tools 1	12000	022907 <input type="checkbox"/>
Jointing rounding		No. of tools 2	12000	022908 <input type="checkbox"/>
Rounding jointing rounding	3 - 8	No. of tools 3	12000	022909 <input type="checkbox"/>
Rounding jointing rounding	3 - 8 10 - 15	No. of tools 3	12000	022910 <input type="checkbox"/>
Rounding rounding	3 - 8 10 - 15	No. of tools 2	12000	022911 <input type="checkbox"/>



Combination ID **022907**



Profiles



Combination ID **022908**

wood thickness	or	or	or	or	or
tool combination	3 3	4 4	5 5	6 6	7 7
	1 2	1 2	1 2	1 2	1 2
max. HD	19 + R	29 + R	39 + R	14 + R	49 + R
min. HD	-	-	-	-	-

Single tools

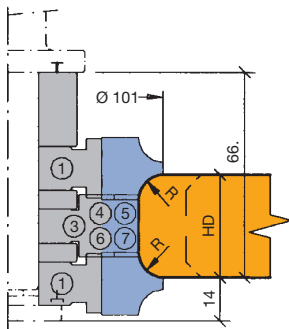
WE 500-2-50, WW 211-2

Tool Type	Tool no.	ABM mm	QAL	Z	R mm	FAW	ID
Profile cutterhead	1	101x20x20	HW	2	3		023069 <input type="checkbox"/>
Profile cutterhead	1	101x20x20	HW	2	4		023070 <input type="checkbox"/>
Profile cutterhead	1	101x20x20	HW	2	5		023071 ●
Profile cutterhead	1	101x20x20	HW	2	6		023072 <input type="checkbox"/>
Profile cutterhead	1	101x20x20	HW	2	7		023073 <input type="checkbox"/>
Profile cutterhead	1	101x20x20	HW	2	8		023074 <input type="checkbox"/>
Profile cutterhead	1	101x20x20	HW	2		5/45°	023075 <input type="checkbox"/>
Profile cutterhead	2	115x35x20	HW	2	10		023978 ●
Profile cutterhead	2	115x35x20	HW	2	11		023979 <input type="checkbox"/>
Profile cutterhead	2	115x35x20	HW	2	12		023980 <input type="checkbox"/>
Profile cutterhead	2	115x35x20	HW	2	13		023981 <input type="checkbox"/>
Profile cutterhead	2	115x35x20	HW	2	14		023982 <input type="checkbox"/>

5. Routing

5.3 Profiling

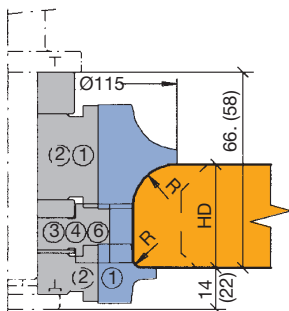
5.3.4 Tools for multi purpose profiles



Combination ID **022909** Combination with tool 2 not possible

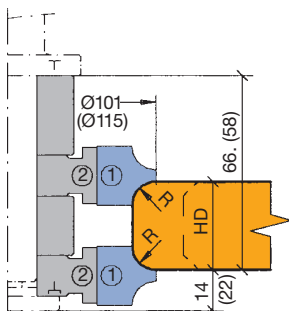
wood thickness	①	①	①	①	①
tool combination	③	④	⑤	⑥	⑦
	①	①	①	①	①
max. HD	17+R+R	27+R+R	37+R+R	13+R+R	47+R+R
min. HD	21	31	41	16	51

no combination possible with tool 2



Combination ID **022910** Combination 1 and 1 see ID **022909** (Combinations of tool 2 and 2, or tool 5 and 7 not possible)

wood thickness	①	②	②
tool combination	①	②	①
	①	②	①
max. HD	57	41	49
min. HD	R+R	R+R	R+R
	but min. 10	but min. 17	but min. 24



Combination ID **022911**

Chart data of bevelling knives:
R = bevel 5 (9)x45°, min. wood thickness is calculated with bevel 5 (9)x54°

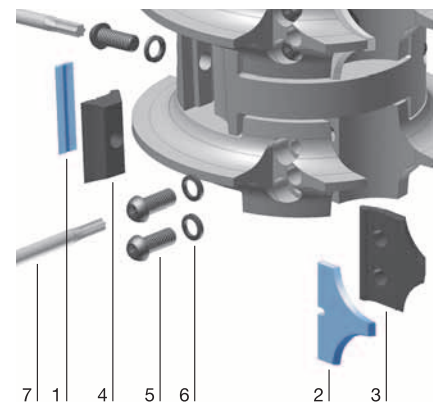
Tool Type	Tool no.	ABM mm	QAL	Z	R mm	FAW	ID
Profile cutterhead	2	115x35x20	HW	2	15		023983 □
Profile cutterhead	2	115x35x20	HW	2		9/45°	023984 □
Jointing cutterhead	3	85x20x20	HW	2			023084 ●
Counter profile set	4	85x30x20	HW	2			023085 ●
Jointing cutterhead	5	85x40x20	HW	2			023086 ●
Jointing cutterhead	6	85x15x20	HW	2			023976 ●
Jointing cutterhead	7	85x50x20	HW	2			023977 ●

Spare knives:

Part-no.	BEZ	Tool no.	ABM mm	QAL	R mm	FAW	VE PCS	ID
1	Turnblade knife	6	14,7x8x1,5	HW-30F			10	005070 ●
1	Turnblade knife	3	19,7x8x1,5	HW-30F			10	005071 ●
1	Turnblade knife	4	30x8x1,5	HW-30F			10	005072 ●
1	Turnblade knife	5	40x8x1,5	HW-30F			10	005074 ●
1	Turnblade knife	7	50x8x1,5	HW-30F			10	005075 ●
2	ProfilCut knife	1	20x18x2	HW	3			008583 ●
2	ProfilCut knife	1	20x18x2	HW	4			008584 ●
2	ProfilCut knife	1	20x18x2	HW	5			008585 ●
2	ProfilCut knife	1	20x18x2	HW	6			008586 ●
2	ProfilCut knife	1	20x18x2	HW	7			008587 ●
2	ProfilCut knife	1	20x18x2	HW	8			008588 ●
2	ProfilCut knife	1	20x18x2	HW	5	45°		008589 ●
2	ProfilCut knife	2	35x25,2x2	HW	10			009120 ●
2	ProfilCut knife	2	35x25,2x2	HW	11			009121 ●
2	ProfilCut knife	2	35x25,2x2	HW	12			009122 ●
2	ProfilCut knife	2	35x25,2x2	HW	13			009123 ●
2	ProfilCut knife	2	35x25,2x2	HW	14			009124 ●
2	ProfilCut knife	2	35x25,2x2	HW	15			009125 ●
2	ProfilCut knife	2	35x25,2x2	HW	9	45°		009126 ●

Spare parts:

Part-no.	BEZ	Tool no.	ABM mm	ID
3	Clamping wedge	1	18x22x8,27	009649 ●
3	Clamping wedge	2	33x29x8,27	009752 ●
4	Clamping wedge	3	18x18,75x8,27	009671 ●
4	Clamping wedge	4	28x18,75x8,27	009673 ●
4	Clamping wedge	5	38x18,75x8,27	009675 ●
4	Clamping wedge	6	13x18,75x8,27	009670 ●
4	Clamping wedge	7	48x18,75x8,27	009677 ●
5	Clamping screw, Torx® 25		M6x18,5	007818 ●
6	Washer		D9x1,2	006747 ●
7	Torx® key		Torx® 25	117504 ●
	Allen Key		SW 4	005445 ●



wood thickness	②	②	②
tool combination	③	④	⑥
	①	①	①
max. HD	17+R+R	27+R+R	13+R+R
min. HD	28	38	23

5. Routing

5.3 Profiling

5.3.4 Tools for multi purpose profiles



Profile router

Application:

Router for changing the profile rebate in windows, for mullion and transom.

Machine:

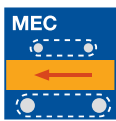
Overhead routers with/without CNC control, machining centres, special routers with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, laminated wood in the window construction.

Technical information:

HW solid. Large spiral angle for optimum chip removal. Pre cutting with spiral routing/finishing cutter Marathon recommended.



Profile router for rebate changing cuts

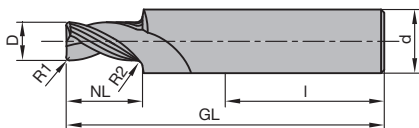
WO 531-2

D mm	GL mm	NL mm	S mm	Z	DRI	Twist	ID	ID Set HSK-F 63
12	100	24	20x50	2	RL	RD	245001	● 245101 □
12	100	30	20x50	2	RL	RD	245000	● 245100 □

RPM: n = 18000 - 24000 min⁻¹

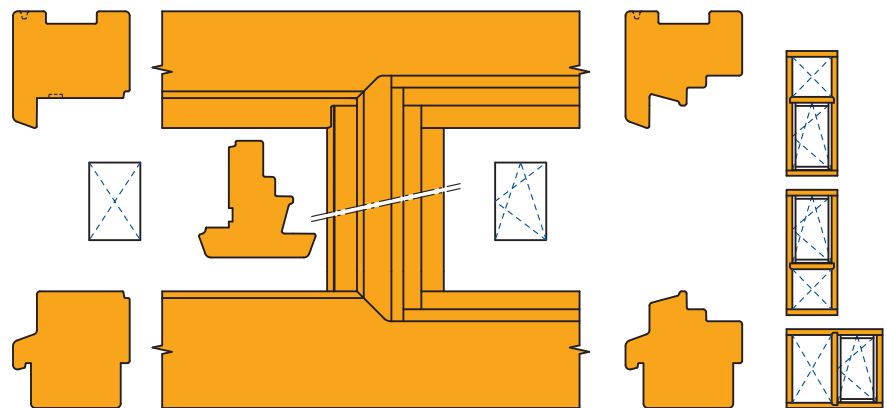
Note:

HSK-F 63 = tool is supplied mounted in shrink-fit chuck HSK-F 63



Example:

Rebate change to window profiles



5. Routing

5.3 Profiling

5.3.4 Tools for multi purpose profiles



Profile router Kolibri

Application:

Routers to pre cut the cross grain profile as protection against break outs on slot/tenon or counter profiles.

Machine:

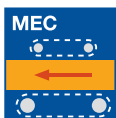
Overhead routers with/without CNC control, machining centres, special routers with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, laminated wood in window construction.

Technical information:

HW solid. Pre cutting working step follows the contour of the subsequent profile.



HW solid, Z 2

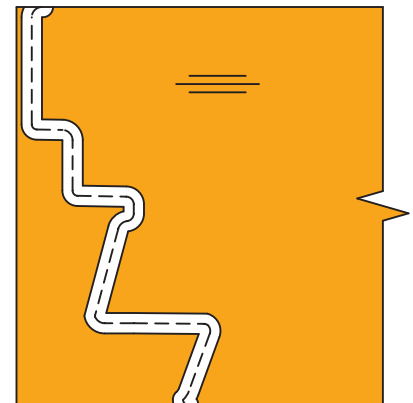
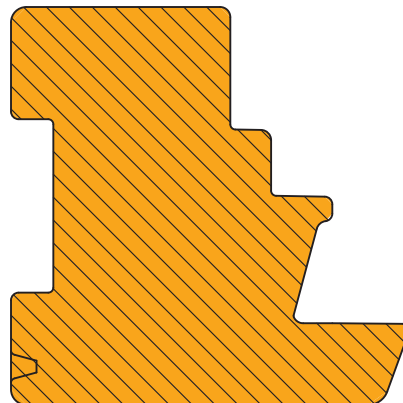
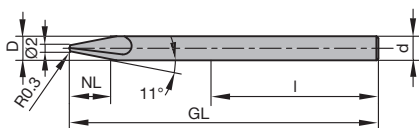
WO 531-2

D	GL	NL	S	Z	DRI	ID
mm	mm	mm	mm			
6	77	5	6x40	2	RL	039160 •

RPM: n = 18000 - 24000 min⁻¹

Example:

Pre cutting on the longitudinal wood with the Kolibri profile cutter before counter profiling.





Profile cutterhead - radii/bevel profile

Application:

For rounding workpieces with different radii or 45° bevelling.

Machine:

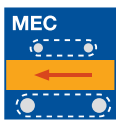
Overhead routers with/without CNC control, special routers with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.), duromers, plastomers, mineral materials (Corian, Varicor etc.).

Technical information:

Multi purpose use on top or bottom of workpiece up to HD approx. 35 mm. Suitable for cutting narrow internal radii on workpieces. One tool body can be used for radii from 2 to 5 mm and 45° bevels.



Cutterhead with cutterset/radii profiles

AG 740-2

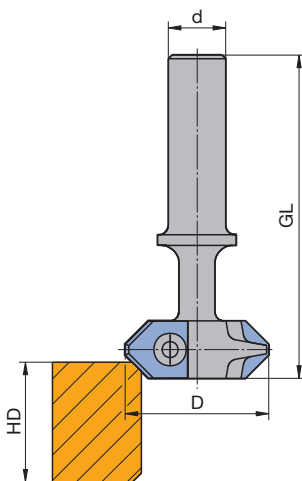
Tool Type	D mm	S mm	Z	ID
1 tool body + 2 pcs. R2, R3, R4, R5 knives each in wooden box	40	16x60	2	043105 ●

Spare knives:

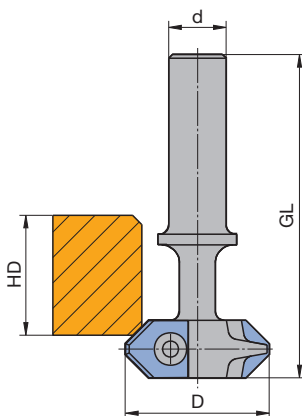
BEZ	ABM mm	QAL	R mm	FAW	ID
Profile knife	16x17,5x2	HW	2,0		005132 ●
Profile knife	16x17,5x2	HW	3,0		005133 ●
Profile knife	16x17,5x2	HW	4,0		005134 ●
Profile knife	16x17,5x2	HW	5,0		005135 ●
Profile knife	16x17,5x2	HW		45°	009525 ●

Spare parts:

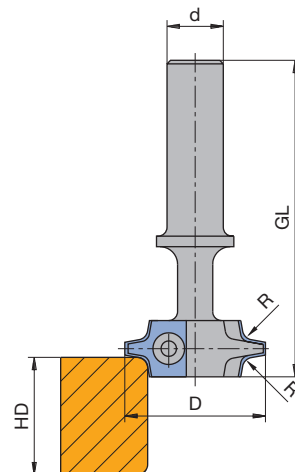
BEZ	ABM mm	ID
Oval head screw Torx® 15	M4x6	006225 ●
Torx® key	Torx® 15	005457 ●



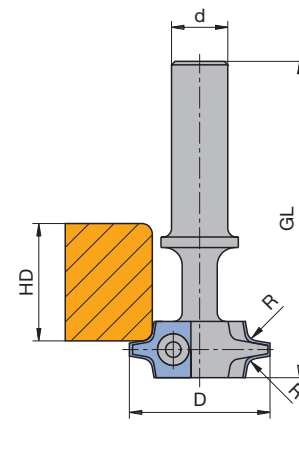
Bevel on the top side of the workpiece



Bevel on the bottom side of the workpiece



Radius on the top side of the workpiece



Radius on the bottom side of the workpiece



Multi purpose profile cutterhead, Z 1

Application:

For cutting decorative grooves and internal profiles.

Machine:

Overhead routers with/without CNC control, special routers with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.).

Technical information:

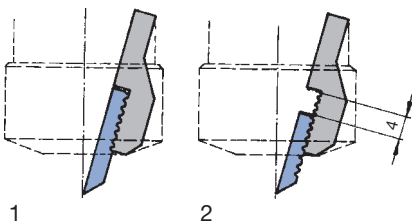
Cutterhead with resharpenable profile knife. Form fit, play free knife mounting by precise serration. Different profiles in one tool body. Special profiles can be ground into the blank knife on request and available with DP tipping for long performance time in wood derived materials.



For profiles, Z 1, cutting in end grain

WP 500-1

D mm	GL mm	S mm	Z	ID
15	88,5	16x50	1	042930 ●
15	98,5	25x60	1	042931 ●



1 = Knife as new
2 = Maximum adjustment of resharpened knife

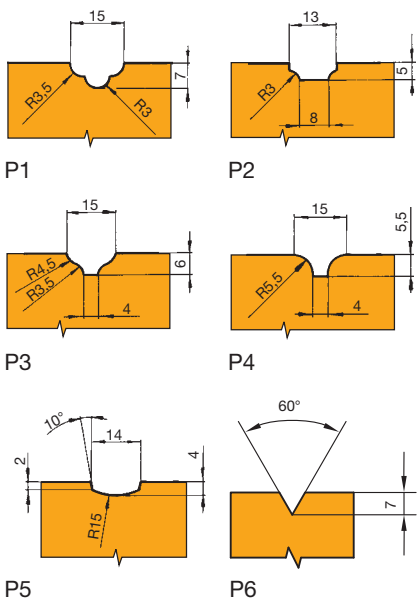
Sales unit consisting of cutterhead with clamping wedge and nut but without HW knife blank.

Spare knives:

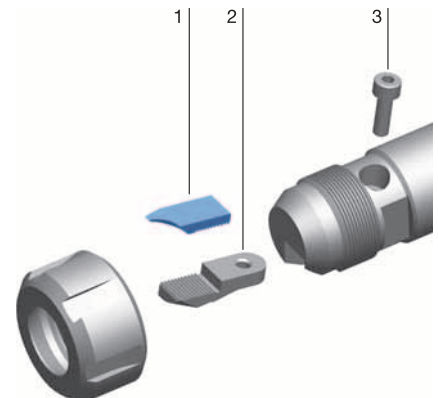
Part-no.	BEZ	P	ABM mm	QAL	ID
1	Profile knife	1	20,7x9x3	HW	006945 ●
1	Profile knife	2	20,7x9x3	HW	006946 ●
1	Profile knife	3	20,7x9x3	HW	006947 ●
1	Profile knife	4	20,7x9x3	HW	006948 ●
1	Profile knife	5	20,7x9x3	HW	006949 ●
1	Profile knife	6 (V-Nut 60°)	20,7x9x3	HW	006950 ●
1	Serrated blank		9x21,7x3	HW	007490 ●

Spare parts:

Part-no.	BEZ	ABM mm	ID
2	Clamping wedge with serration	9x27,4x7	009584 ●
3	Cylindrical screw with ISK	M4x16	005847 ●
	Sickle spanner	34/36	005498 ●
	Allen Key	SW 3	005433 ●



Profiles





Multi purpose profile cutterhead, Z 1

Application:

Suitable for V grooving profiles and for multi purpose finish cutting (decorative groove, 90° corner etc.).

Machine:

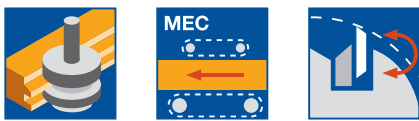
Overhead routers with/without CNC control, special routers with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.).

Technical information:

Cutterhead with exchangeable turnblades. 2 or 3 (ID **042932**) performance times through turning the knife.



Cutting in end grain, Z 1

WL 300-2

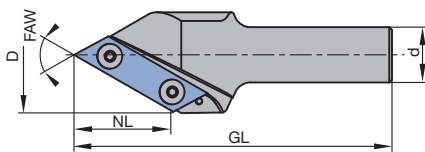
D mm	GL mm	NL mm	S mm	FAW	Z	P	DRI	ID
30	90	15	12x40	68°	1	1	RL	042932 ●
35	125	42	20x50	45°	1	2	RL	042933 ●
42	115	35	20x50	60°	1	3	RL	042934 ●
54	100	27	20x50	90°	1	4	RL	042935 ●
54	100	27	20x50	91°	1	5	RL	042936 ●

Spare knives:

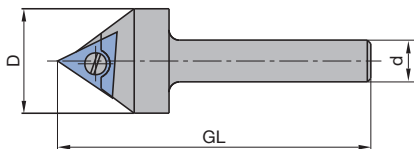
BEZ	ABM mm	P	QAL	ID
Turnblade knife triangular	19x19x2	1	HW	009528 ●
Turnblade knife	59x12x1,5	2	HW	602503 ●
Turnblade knife	49x12x1,5	3	HW	602502 ●
Turnblade knife	39x12x1,5	4, 5	HW	602501 ●

Spare parts:

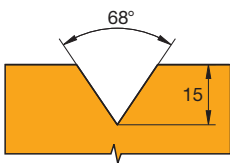
BEZ	ABM mm	P	ID
Countersink screw	M5x5	1	007381 ●
Screw	M4x5	2 - 5	007038 ●
Torx® key	Torx® 15	2 - 5	005457 ●



V groove cutter



V groove cutter 68° (ID **042932**)



V groove cutter in turnblade design with point 68° (ID **042932**)



Multi purpose profile cutterhead, Z 2

Application:

For cutting decorative grooves, internal profiles and combined external and internal profiles.

Machine:

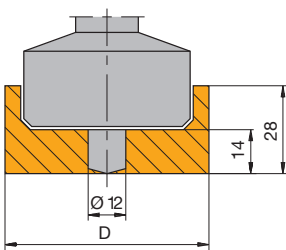
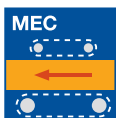
Overhead routers with/without CNC control, special routers with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.).

Technical information:

Cutterhead with profiled throwaway knives. One knife with centre cutting design. Knives with shear angle. Different profiles possible in one tool body. Special profiles ground into blank knives and backing plates on request. Use cutterhead WP 500-1 for smaller decorative groove profiles (d < 15 mm).



Profile area

For profiles, Z 2, cutting in end grain

WG 502-2-01

D mm	GL mm	SB mm	S mm	Z	DRI	ID
65	95	14 - 28	16x50	2	RL	042872 ●
65	95	14 - 28	20x50	2	RL	042873 ●
65	105	14 - 28	25x60	2	RL	042870 ●

Sales unit consisting of cutterhead with clamping wedge but without profiled HW knives and backing plates. Tip with 1 replaceable profile knife and backing plate each, version A and 1 replaceable profile knife and backing plate each, version B.

Minimum order quantity:

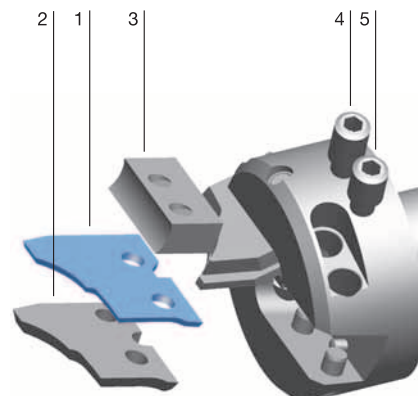
Replaceable profile knife: 6 pcs. each A and B

Backing plates: 1 pc. each A and B

Profile examples see below.

Spare parts:

Part-no.	BEZ	ABM mm	QAL	ID
1	Blank knife	35,5x30,5x2	HW	007488 ●
1	Blank knife	35,5x30,5x2	HW	007489 ●
2	Backing plate A	34x28x4		007923 ●
2	Backing plate B	34x28x4		007924 ●
3	Clamping wedge	25x15x8		009969 ●
4	Allen screw	M8x16		006042 ●
5	Allen screw	M8x14		006073 ●
	Allen Key	SW 4		005445 ●



Sets of profile knives and backing plates

AT 103-0

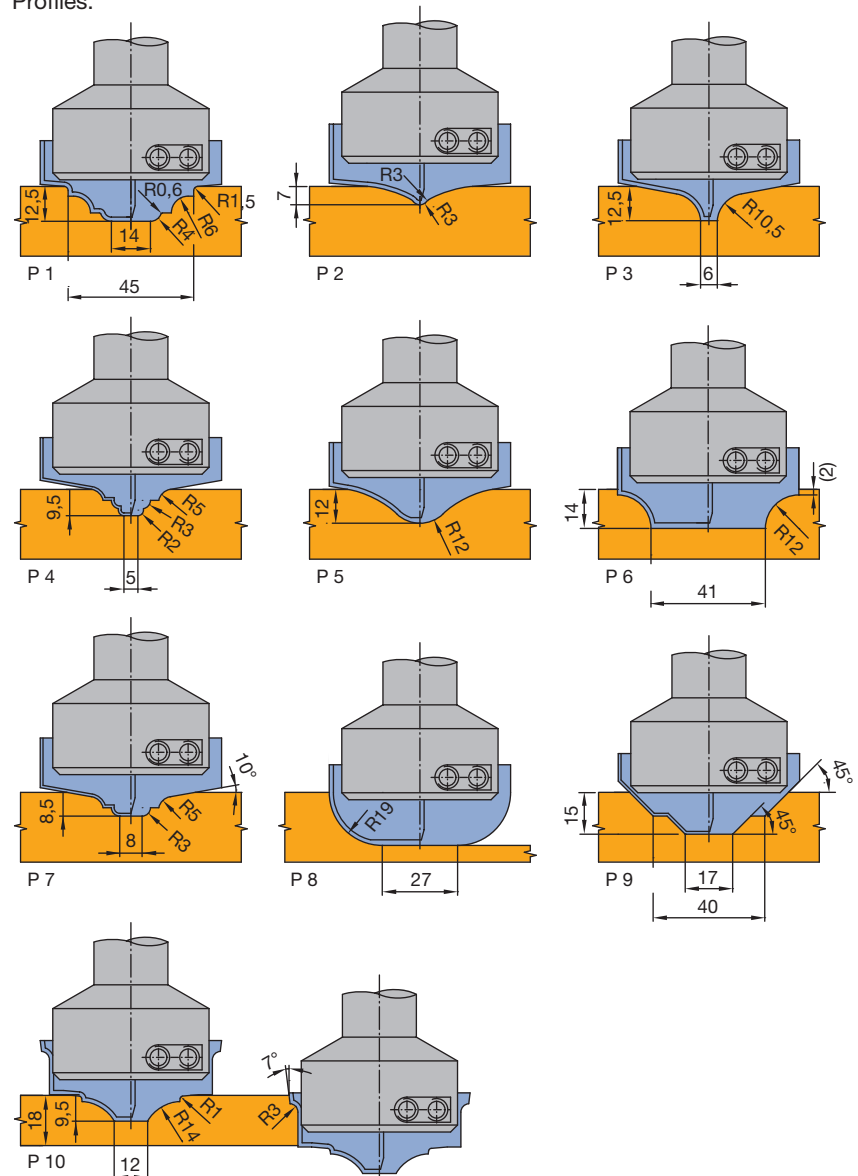
P	ID Profile cutter-set	ID Set of backing plates
1	692000	692200
2	692001	692201
3	692002	692202
4	692003	692203
5	692004	692204
6	692005	692205
7	692006	692206
8	692007	692207
9	692008	692208
10	692009	692209

Set of profile knives consisting of 1 profile knife design A and B each.

Set of backing plates consisting of 1 backing plate design A and B each.

Minimum order quantity: set of profile knives: 6 pcs., set of backing plates: 1 pc.

Profiles:



5. Routing

5.3 Profiling

5.3.4 Tools for multi purpose profiles



Carving bit

Application:

Router cutter for carving copy shaping with large chip removal.

Machine:

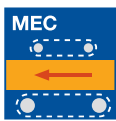
Carving machines, portable routers.

Workpiece material:

Softwood and hardwood.

Technical information:

Cutting on end and on periphery, large resharpening area. Low feed forces from spiral cutting edges.



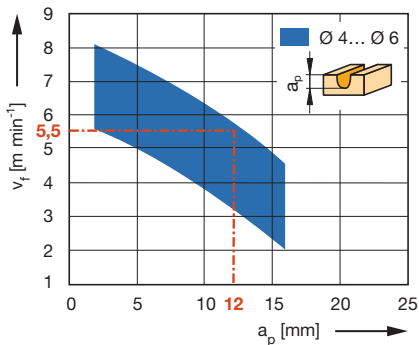
HS solid, Z 1, Z 2

WO 590-2-01, WO 590-2-02

D mm	GL mm	S mm	Z	ID LL	ID RL
2	82	9x50	1	039130	039131
3	82	9x50	1	039132	039133
4	82	9x50	2	039040	039041
5	86	9x50	2	039042	039043
6	86	9x50	2	039044	039045
8	90	9x50	2	039046	039047
10	90	9x50	2	039048	039049
12	90	9x50	2	039050	039051
15	95	9x50	2	039052	039053
18	95	9x50	2	039054	039055
22	95	9x50	2	039056	039057
24	95	9x50	2	039058	039059

RPM: $n = 12000 - 24000 \text{ min}^{-1}$

Feed speed v_f depending on grooving depth a_p

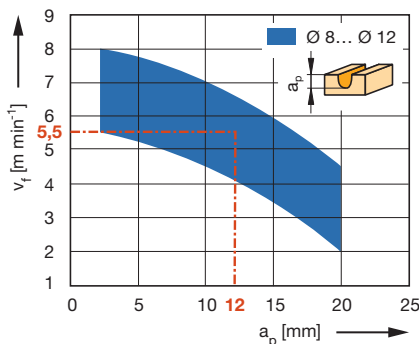


Workpiece material: Softwood

Working step: Copy shaping

Speed: $n = 18000 \text{ rpm}$

Correction factor for v_f : Hardwood 0.8



Workpiece material: Softwood

Working step: Copy shaping

Speed: $n = 18000 \text{ rpm}$

Correction factor for v_f : Hardwood 0.8

5. Routing

5.3 Profiling

5.3.4 Tools for multi purpose profiles



Router cutter - Profile Diamaster PDM

Application:

Routers to cut radius profiles in panels for furniture and interior construction.

Machine:

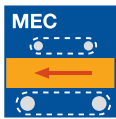
Overhead routers with/without CNC control, machining centres, special routers with spindles to mount shank tools.

Workpiece material:

Chipboard and fibre materials (MDF, HF, etc.), uncoated, plastic coated, veneered, etc.

Technical information:

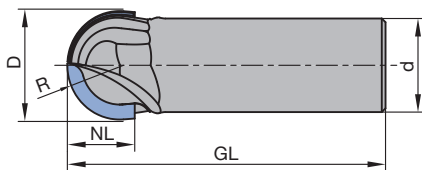
DP profile edges with shear angles. 3 to 5 times resharpenable for normal wear.



DP, Z 2

WO 531-2-51

D mm	GL mm	NL mm	S mm	R mm	DRI	ID
20	75	12	20x55	10	RL	191035
20	80	12	25x60	10	RL	191036
30	80	18	20x55	15	RL	191037
30	85	18	25x60	15	RL	191038
40	95	24	20x55	20	RL	191039
40	95	24	25x60	20	RL	191040



RPM: n = 18000 - 24000 min⁻¹

More profiles on request.

Example:

MDF wall covering





Profile cutterhead VariForm with backing plates

Application:

For cutting different profiles. Profile can be changed by replacing profile knives and backing plates.

Machine:

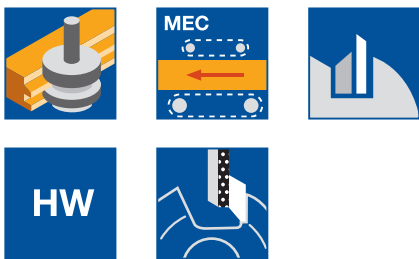
Overhead routers with/without CNC control, special routers with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood (HW-30F), chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.) (HW-10F).

Technical information:

Three point knife clamping for high precision and safety. Economic, resharpenable 3 to 4 times. Modular system: use the same profile knives in different tool bodies on different machines.



Tool body, mech. feed, Z 2

TU 531-2

D	TD	SB	S	PT _{max.}	DRI	ID
mm	mm	mm	mm	mm		
110	76	40/45	25x60	15	RL	135400 ●
110	76	50/60	25x60	15	RL	135401 ●

RPM: n max. = 12000 min⁻¹

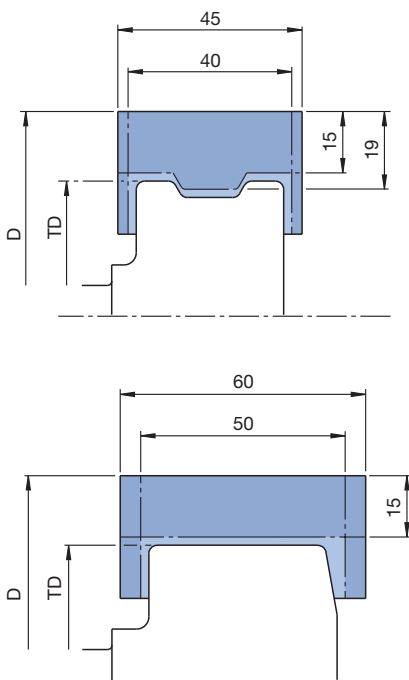
With clamping wedges, but without backing plates and knives.

Spare knives:

BEZ	H	SB	PT _{max.}	ID	ID
	mm	mm	mm	HW-10F	HW-30F
Blank knife VariForm	40	40	15	636227 ●	636240 ●
Blank knife VariForm	40	45	15	636231 ●	636244 ●
Blank knife VariForm	40	50	15	636284 ●	636272 ●
Blank knife VariForm	40	60	15	636288 ●	636276 ●

Spare parts:

Tool Type	ABM	H	for SB	PT _{max.}	ID
	mm	mm	mm	mm	
Backing plate	for knives 40x40x2.1	40	40	15	645000 ●
Backing plate	for knives 45x40x2.1	40	45	15	645001 ●
Backing plate	for knives 50x40x2.1	40	50	15	645002 ●
Backing plate	for knives 60x40x2.1	40	60	15	645003 ●
Clamping wedge	36x13,5x26		40/45		009761 ●
Clamping wedge	44x13,5x26		50/60		009762 ●
Allen screw	M10x12				006044 ●
Key	SW 5, L100				117506 ●



Profile area



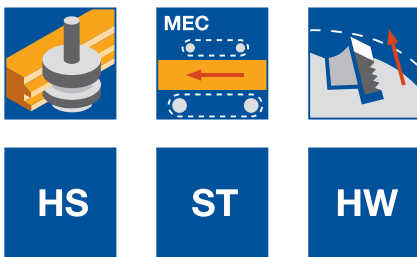
Profile cutterhead for serrated back blank knives

Application:
For cutting different profiles.

Machine:
Overhead routers with/without CNC control, special routers with spindles to mount shank tools.

Workpiece material:
Softwood and hardwood, chipboard and fibre materials (MDF, HF etc.), uncoated, plastic coated, veneered etc., gluelam (plywood etc.).

Technical information:
High precision knife clamping through serrated back knives. Wide range of different cutting materials to suit the workpiece material.



Z 2
WP 510-2-01

D	TD	SB	GL	S	Z	DRI	n _{max.} min ⁻¹	ID
mm	mm	mm	mm	mm				
100	63	40	100	25x60	2	RL	12000	042890 ●

Sales unit consisting of cutterhead and clamping system, but without knives.

Recommendation of cutting material:

	HS	ST	HW	HW M-Syst.
Softwood	◆	◆		
Hardwood		◇	◆	◆
Gluelam			◇	◆
Chipboard				◆
MDF				◇
Mineral materials				◇
HPL				◇

◆ suitable
◇ conditionally suitable

Blank knives with thickness 6 mm

TC 110-0

SB	H	DIK	ID	ID	ID
mm	mm	mm	HS	HW	ST
40	41,5	6	007327	● 007486	● 007763

Spare parts:

BEZ	BEM	ABM	ID
		mm	
Clamping wedge	for standard blanks	39x18,5x7,2	009970 ●
Allen screw		M8x14	006073 ●
Allen Key		SW 4, L 71	005468 ●

Blank knives with micro serration

TC 110-0-15

BEZ	SB	DIK	QAL	ID
		mm		
Backing plate	40	6		008181 ●
Blank knife	40	2,5	HW	009423 ●

Micro serrated knives and backing plates can only be used in WP 510-2-01 cutterheads if the MS clamping wedge is used.

Spare parts:

BEZ	BEM	ABM	ID
		mm	
Clamping wedge MS	for micro serrated knives	39x18x6	009771 ●
Allen screw		M8x14	006073 ●
Allen Key		SW 4, L 71	005468 ●

Inquiry/order form special tools – routing

Customer details: Customer number:
(if known)

Inquiry
 Order

Delivery date: (not binding) CW

Company: _____

Street: _____

Date: _____

Post code/place: _____

Inquiry/order no.: _____

Country: _____

Tool ID: (if known) _____

Phone/fax: _____

Quantity: _____

Contact person: _____

Signature: _____

Workpiece material:

Solid wood Type: _____

Wood-derived material Type: _____

Other Type: _____

Direction of machining for solid wood or veneered workpieces:

along grain

across grain

Type of coating: _____

Additional information: _____

Machine:

Manufacturer: _____

Range of RPM: _____ min⁻¹

Adaptor
(e. g. SK 30, HSK-F 63 etc.): _____

Tool:

Tool type (see selection pages): _____

Dimensions:

Diameter: _____ mm

Cutting width: _____ mm

Shank diameter: _____ mm

No. of teeth: _____

Cutting material:

HS

HW

ST

DP Type of feed:

Mech. feed

Manual feed

Direction of rotation:

left hand

right hand

State profile with sketch or drawing:

Cutting on periphery only

Cutting in end grain (ramp plunging possible)

for plunging in z-axis

Arrangement of cutting edges:

with shear angle on one side

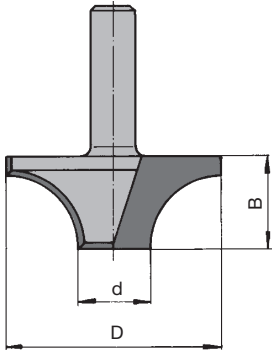
with alternate shear angle

Please tick the appropriate box

Inquiry/order form special tools – routing

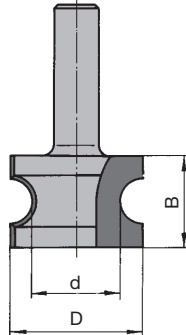
Examples for profile groups 1 and 2:

WO 521-1
open profile



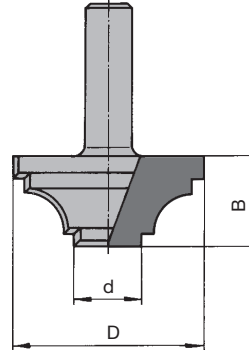
Profile group 1:
cutting on periphery
with bottom knife for
cutting in end grain

WO 522-1
closed profile



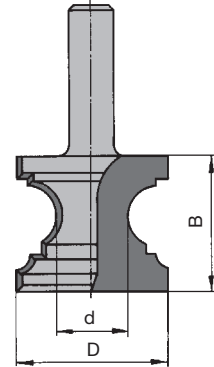
Profile group 1:
cutting on periphery

WO 521-2
open profile



Profile group 2:
cutting on periphery
with bottom knife for
cutting in end grain
























































































WO 522-2
closed profile



Profile group 2:
cutting on periphery
with bottom knife for
cutting in end grain

Sketch for application plan, profile drawing, special motor spindle etc.
Enter on sketch which side of workpiece to table i. e. face side on top/bottom

Key to pictograms

	Sawing, multiple cut		Scoring, hogging		Profiling		Carving		Manual feed		Spindle with anti-twist keyway		SP	Alloyed tool steel
	Sawing, thin kerf		Hogging		Profiling joints		Grooving, sizing		Solid metal tool		Spindle with anti-twist hexagon		HL	High-alloyed tool steel
	Sawing, horizontal		Double hogging		Profiling tongue and groove		Finish sizing		Tipped tool		Hydro clamping system - open		HS	High-speed steel
	Sawing along grain		Hogging, folding		Planing		Grooving, horizontal and vertical		Special body alloy		Hydro clamping system - closed		ST	Stellite
	Sawing across grain		End trimming		Planing, profiling		Jointing		Light alloy body		Hydro-Duo (bi-directional) clamping		HW	Tungsten carbide
	Sawing, universal		Edge trimming		Drilling blind holes		Copy shaping		Inter-changeable knives		Hydro clamping arbors		DP	Polycrystalline diamond (PKD)
	Scoring, sawing		Grooving, horizontal and vertical		Drilling, through holes		Rebating		Mechanical knife clamping, reversible		Hydro clamping		DM	Monocrystalline diamond (MKD)
	Scoring and sawing stacks		Grooving honeycomb panels		Step drilling		Bevelling		Centrifugal knife clamping, reversible		Shrink-fit clamping		Marathon	Carbide metal coating
	Sawing hollow sections		Jointing		Counter-sinking		Panel raising		Mechanical knife clamping, non-adjustable		Quick clamping system		Diamond	Diamond coating
	Sawing, honeycomb panels		Copy shaping		Slotting		Profiling		Mechanical knife clamping, adjustable - serrated		Resharpenable cutting face			
	Sawing hollow transparent plastic		Rebating		Spiral boring		Profiling joints		Mechanical knife clamping adjustable - plane		Resharpenable clearance face			
	Sawing solid transparent plastic		Bevelling		Non-axial boring		Mortising		Mechanical knife clamping, re-sharpenable and constant diameter		Low noise			
	Scoring, top and bottom		Panel raising		Plug cutting		Mechanical feed		Spindle without twist protection		Optimised chip flow			