

Routing

Leitz Lexicon Edition 7



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	= number 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	= number 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		

Notes to the Lexicon concerning the diagrams and tables

The statements made in the diagrams and tables relate to specific conditions and represent parameters from tests subjected to defined conditions. Variations when using tools in individual case due to special application conditions may be possible. Our support team will provide you with detailed information.



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5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters HW and HW turnblade



Grooving cutter, straight cut

Application:

Router cutter for grooving.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools, portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.), duromers, plastomers, solid surface material (Corian, Varicor etc.), decorative laminates (HPL-compact laminate, Trespa etc.), non-ferrous metals (aluminium, copper etc.), PVC profile extrusions.



Technical information:

Straight cut. End-ground for plunging. Large resharpening area. Good cutting performance in plastic and compound materials.

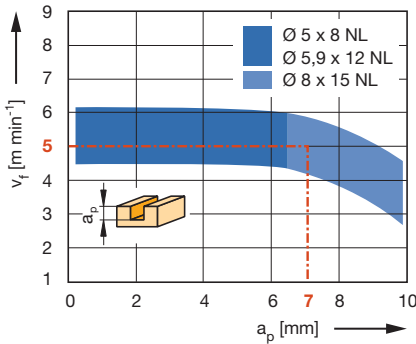
HW solid, Z 1

WO 120 2

D	GL	NL	S	QAL	DRI	ID
mm	mm	mm	mm			
8	70	27	8x30	HW solid	RH	044468 ●

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

Feed speed v_f depending on cutting depth a_p



Workpiece material: Duromers, plastomers, compound materials

Operation: Grooving, sizing

Speed: $n = 16000 - 18000 \text{ min}^{-1}$

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters HW and HW turnblade



Grooving cutter, straight cut

Application:

Router cutter for sizing and grooving.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools, portable routers.

Workpiece material:

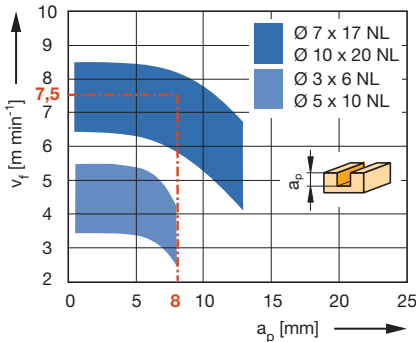
Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.), duromers, plastomers, solid surface material (Corian, Varicor etc.), decorative laminates (HPL-compact laminate, Trespa etc.), non-ferrous metals (aluminium, copper etc.), PVC profile extrusions.



Technical information:

Straight cut. End-ground for plunging. Large resharpening area. Short design for increased stability and reduced vibration. Long design for increased cutting depth (recommended in several steps).

Feed speed v_f depending on cutting depth a_p



Workpiece material: Plastic coated chipboard

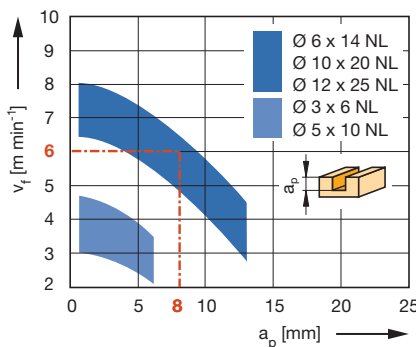
Operation: Grooving

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

Correction factor for v_f :

Solid wood = 0.8; Glulam = 0.8;

Machining across grain = 0.7



HW solid, Z 2, short design

WO 120 1 16

D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
3	50	6	6x30	RH	041979 ●
4	50	7	6x30	RH	041952 ●
4.5	50	8	6x30	RH	041953 ●
5	50	10	6x30	RH	041954 ●
6	50	14	6x30	RH	041956 ●
7	55	17	8x30	RH	041958 ●
8	55	20	8x30	RH	041985 ●
9	70	18	10x40	RH	041961 ●
10	70	20	10x40	RH	041962 ●
12	70	25	12x40	RH	041963 ●

HW solid, Z 2, short design, reinforced shank

WO 120 1 16

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

HW solid, Z 2, long design

WO 120 1 16

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

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

Workpiece material: Duromers, plastomers, Corian

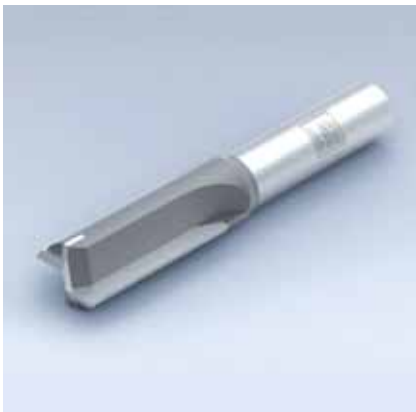
Operation: Grooving

Speed: $n = 16000 - 18000 \text{ min}^{-1}$

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters HW and HW turnblade



Grooving cutter, Z 2

Application:

Router cutter for sizing and grooving.

Machine:

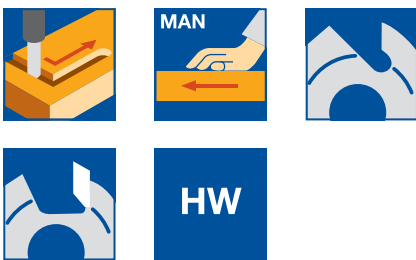
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools, portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Straight cut, tungsten carbide plunging tip.

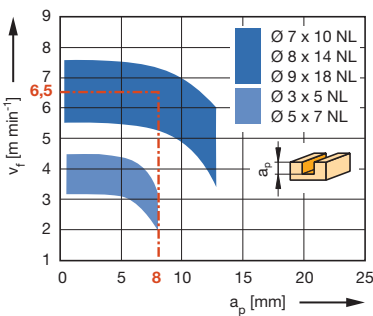


HW, Z 2, shank 9.5 / 12 mm

WO 120 1 01

D mm	GL mm	NL mm	S mm	QAL	DRI	ID
3	34	5	9.5x20	HW solid	RH	038014 ●
5	39	7	9.5x20	HW solid	RH	038018 ●
10	52	20	9.5x20	HW	RH	038028 ●
12	72	25	12x40	HW	RH	038115 ●
13	72	25	12x40	HW	RH	038116 ●
14	76	28	12x40	HW	RH	038117 ●
15	80	30	12x40	HW	RH	038118 ●
16	90	35	12x40	HW	RH	038147 ●
18	90	35	12x40	HW	RH	038148 ●
20	90	35	12x40	HW	RH	038149 ●
25	92	41	12x40	HW	RH	038125 ●

Feed speed v_f depending on cutting depth a_p



Workpiece material: Plastic coated chipboard

Operation: Grooving

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

Correction factor for v_f :

Solid wood = 0.8; Glulam = 0.8;

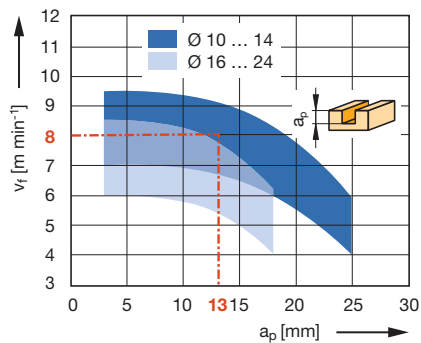
Machining across grain = 0.7

HW, Z 2, shank 10 mm

WO 120 1 01

D mm	GL mm	NL mm	S mm	QAL	DRI	ID
4	49	10	10x35	HW solid	RH	038053 ●
5	49	12	10x35	HW solid	RH	038054 ●
6	53	14	10x35	HW solid	RH	038055 ●
7	55	17	10x35	HW solid	RH	038056 ●
8	60	20	10x35	HW solid	RH	038057 ●
10	70	23	10x35	HW	RH	038058 ●
12	70	23	10x35	HW	RH	038059 ●

RPM: $n = 16000 - 36000 \text{ min}^{-1}$



Workpiece material: Plastic coated chipboard

Operation: Grooving

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

Correction factor for v_f :

Solid wood = 0.8; Glulam = 0.8;

Machining across grain = 0.7

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters HW and HW turnblade



Grooving cutter with shear angle

Application:

Router cutter for sizing, grooving and cutting apertures.

Machine:

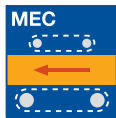
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Finishing type Z 1+1 particularly to machine apertures in furniture and doors. Cutting edges with alternating shear angles for tear-free edges on both sides.



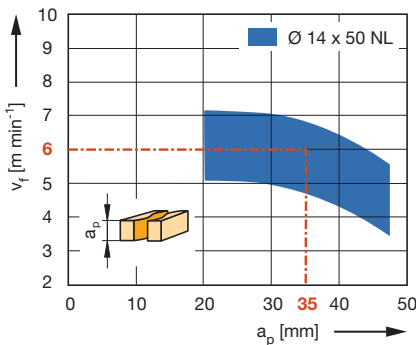
HW, Z 1+1, finishing cut processing

WO 140 2

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

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

Feed speed v_f depending on cutting depth a_p



Workpiece material: Plastic coated or veneered chipboard

Operation: Sizing

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

Correction factor for v_f :

Machining across grain = 0.7

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters HW and HW turnblade



Roughing router cutter in turnblade design

Application:

Router cutter for sizing and grooving to roughing quality.

Machine:

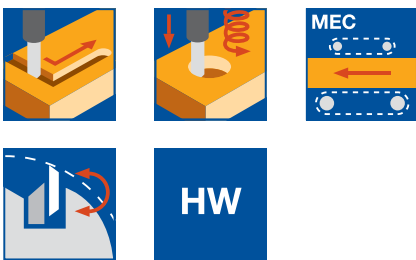
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, laminated veneer lumber (plywood, multiplex 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	125	55	25x60	RH	041922 ●

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

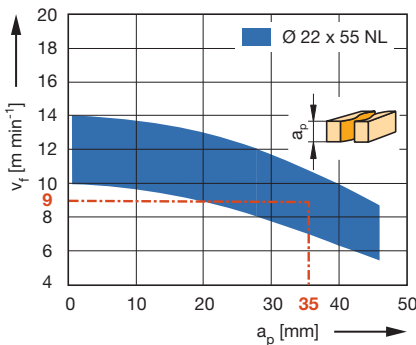
Spare knives:

BEZ	ABM	QAL	VE	ID
	mm		PCS	
Turnblade knife	9x12x1.5	HW-05F	10	005158 ●
Turnblade knife	12x12x1.5	HW-05F	10	005081 ●

Spare parts:

BEZ	ABM	ID
	mm	
Oval head screw Torx® 15	M4x5	007037 ●
Oval head screw Torx® 15	M4x6	006225 ●
Torx® key	Torx® 15	005457 ●

Feed speed v_f depending on cutting depth a_p



Workpiece material: Plastic coated chipboard

Operation: Sizing

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

Correction factor for v_f : MDF = 0.8

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters HW and HW turnblade



Roughing router cutter in turnblade design - HeliCut 11

Application:

Router for sizing and grooving to roughing/finishing quality. Cutting of tenons for frame constructions.

Machine:

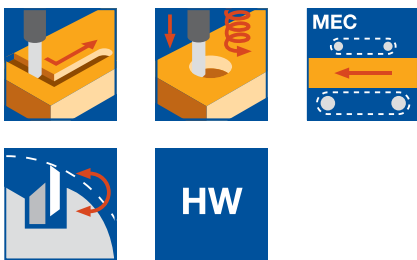
Stationary routers with/without CNC control, machining centres, joinery machines, milling machines machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, glulam and laminated wood.

Technical information:

Spiral shaped edge arrangement of the tungsten carbide turnblades (4 times turnable). Tungsten carbide turnblade plunging knife with chipbreakers for good chip removal (for D = 40 mm). Tangential fixing of the knives in the dust protected area. Deep boreholes are to be cut circularly.



HW, Z 2+2

WL 101 2

D mm	GL mm	NL mm	S mm	DRI	ID
30	125	60	20x50	RH	041928 ●
30	195	120	30x53	RH	041929 ●
40	235	160	30x53	RH	041927 ●

RPM: $n = 6000 - 18000 \text{ min}^{-1}$

Note:

Tool shank S30x53 suitable for many conventional joinery machines.

On machines with automatic tool changer use collet chuck ER 40 together with collet $d = 30 \text{ mm}$, ID **679039**.

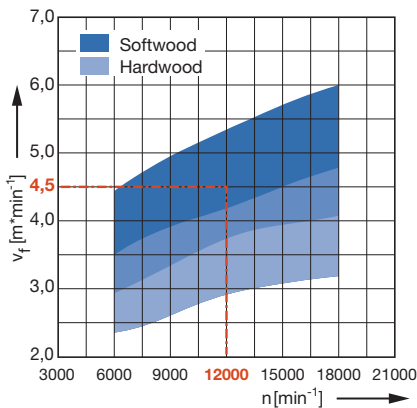
Spare knives:

BEZ	Knife	ABM mm	for D mm	QAL	VE PCS	ID
Turnblade knife	Peripheral tip	11x11x1.5		HW	10	602515 ●
Turnblade knife	Peripheral tip	11x11x1.5		TDC		602904 ●
Exchange knife	Plunging tip	22x12.7x2	30	HW	10	602531 ●
Exchange knife	Plunging tip	22x12.7x2	40	HW	10	602516 ●

Spare parts:

BEZ	ABM mm	ID
Countersink screw, Torx® 15	M4x5	114039 ●
Countersink screw, Torx® 20	M5x6	114040 ●
Torx® key	Torx® 15	005457 ●
Torx® key	Torx® 20	117520 ●

Feed speed v_f depending on RPM n

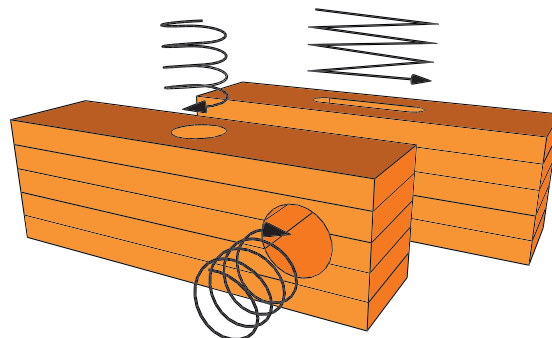


Workpiece material: Softwood, Hardwood

Operation: Sizing and grooving

Axial infeed: $a_p = 20 - 50 \text{ mm}$

Correction factor for v_f : Glulam = 0.8



Application notes:

Circular pockets and boreholes of a depth $> 1xD$ have to be cut circularly.

Use ramp-in cutting to produce mortises.

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters HW and HW turnblade



Grooving router cutter in turnblade design

Application:

Router cutter for sizing and grooving to finish quality.

Machine:

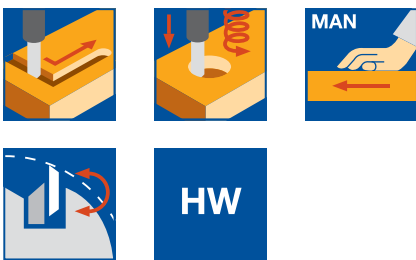
Portable routers, limited suitable: stationary routers with/without CNC control, machining centres.

Workpiece material:

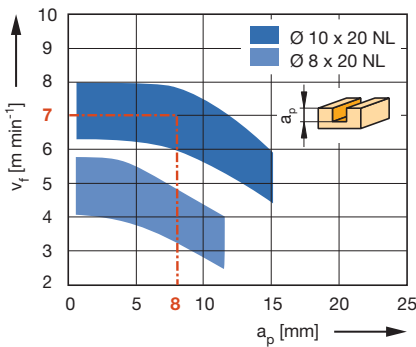
Softwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc.

Technical information:

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



Feed speed v_f depending on cutting depth a_p

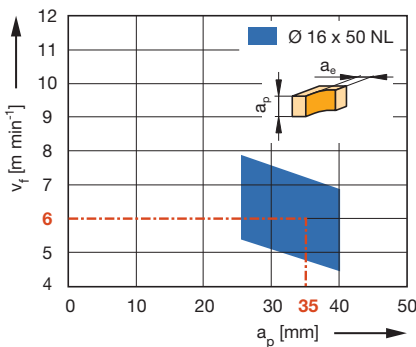


Workpiece material: Plastic coated chipboard

Operation: Grooving, sizing

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

Correction factor for v_f : MDF = 0.8



HW, Z 1, without plunging tip

WL 100 1

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

RPM: D 8 - 12 mm: $n = 18000 - 24000 \text{ min}^{-1}$
D 14 - 20 mm: $n = 16000 - 24000 \text{ min}^{-1}$

Spare knives:

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

Spare parts:

BEZ	ABM	for D	NL	ID
	mm	mm	mm	
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 ●

Workpiece material: Plastic coated chipboard

Operation: Jointing (max. $a_g = 3 \text{ mm}$)

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

Correction factor for v_f : MDF = 0.8

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters HW and HW turnblade



Grooving router cutter in turnblade design

Application:

Router cutter for sizing and grooving to finish quality.

Machine:

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

Workpiece material:

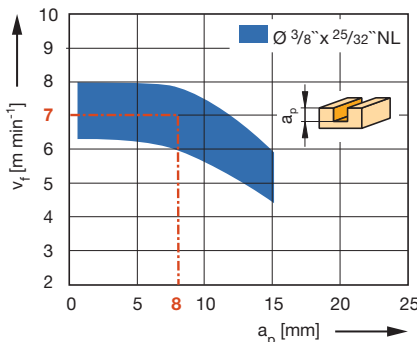
Softwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc.

Technical information:

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



Feed speed v_f depending on cutting depth a_p

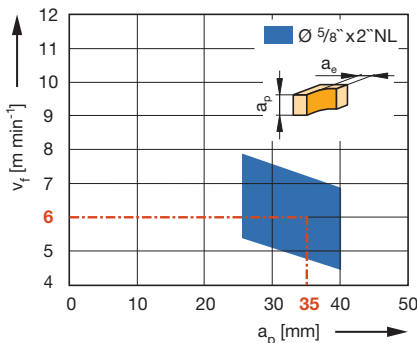


Workpiece material: Plastic coated chipboard

Operation: Grooving, sizing

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

Correction factor for v_f : MDF = 0.8



Workpiece material: Plastic coated chipboard

Operation: Jointing

(maximum chip removal $a_e = 3 \text{ mm}$)

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

Correction factor for v_f : MDF = 0.8

HW, Z 1, with plunging tip

WL 100 1

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

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

Spare knives:

BEZ	ABM	NL	QAL	VE	ID
	mm	mm		PCS	
Turnblade knife	50x5.5x1.1	50	HW-05	10	005191 ●

Spare parts:

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

HW, Z 1, without plunging tip, inch types

WL 100 1

D	NL	GL	S	DRI	ID
in	in	in	in		
1/2"	1 3/16"	2 3/4"	1/2" x 1 3/8"	RH	041060 ●
3/4"	2"	3 7/8"	3/4" x 1"	RH	041067 ●

RPM: D 1/2": $n = 18000 - 24000 \text{ min}^{-1}$

D 3/4": $n = 16000 - 24000 \text{ min}^{-1}$

Spare knives:

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

Spare parts:

BEZ	ABM	for D	NL	ID
	mm	in	in	
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	M3x7.6	1/2"		006233 ●
Countersink screw, Torx® 15	M4x11.5	5/8" - 3/4"		006234 ●

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters HW and HW turnblade



Router cutter in turnblade design

Application:

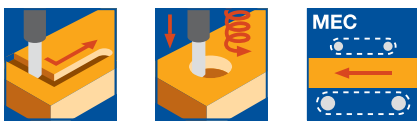
Router cutter for sizing and grooving to finish quality. For grooving with constant tool diameter.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.), duromers, plastomers, solid surface material (Corian, Varicor etc.), decorative laminates (HPL-compact laminate, Trespa etc.).

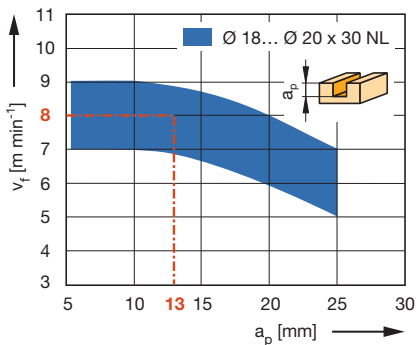


Technical information:

Straight cut. Knife tip designed for seamless 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 cutting depth a_p

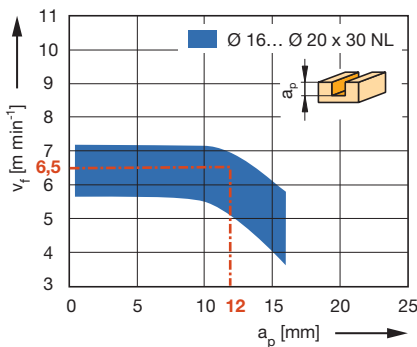


Workpiece material: Plastic coated chipboard

Operation: Grooving, sizing

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

Correction factor for v_f : MDF = 0.8



HW, Z 1, NL 30 mm

WL 101 1

D	GL	NL	S	ID	ID
mm	mm	mm	mm	LH	RH
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: $n = 16000 - 20000 \text{ min}^{-1}$

Spare knives:

BEZ	Knife	ABM	for D	QAL	VE	ID
		mm	mm		PCS	
Turnblade knife	Plunging tip	7.6x12x1.5	16 - 18	HW-05F	10	005080 ●
Turnblade knife	Plunging tip	9x12x1.5	20 - 24	HW-05F	10	005158 ●
Turnblade knife	Peripheral tip	30x12x1.5		HW-05F	10	005161 ●

Spare parts:

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

Workpiece material: Hardwood, along grain

Operation: Grooving, sizing

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

Correction factor for v_f :

Machining across grain = 0.8

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters HW and HW turnblade



Router cutter in turnblade design

Application:

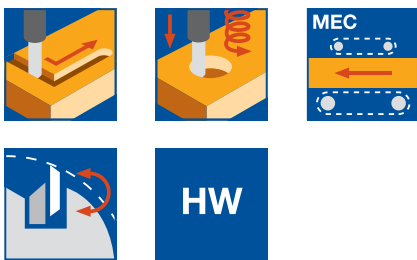
Router cutter for sizing and grooving to finish quality. For grooving with constant tool diameter.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools or portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.), duromers, plastomers, solid surface material (Corian, Varicor etc.), decorative laminates (HPL-compact laminate, Trespa etc.).



Technical information:

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

HW, Z 1, inch types

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"	RH	041084 ●

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

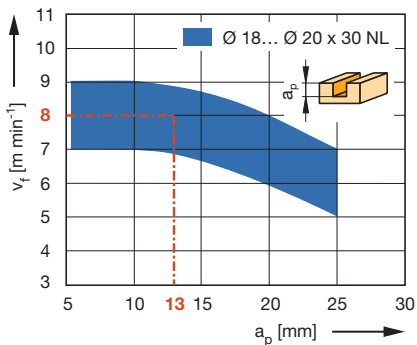
Spare knives:

BEZ	Knife	ABM	QAL	VE	ID
		mm		PCS	
Turnblade knife	Plunging tip	7.6x12x1.5	HW-05F	10	005080 ●
Turnblade knife	Peripheral tip	30x12x1.5	HW-05F	10	005161 ●

Spare parts:

BEZ	Knife	ABM	ID
		mm	
Screw	Plunging tip	M3.5x4 (head D7)	006068 ●
Screw	Peripheral tip	M3.5x4 (head D9)	006226 ●
Torx® key		Torx® 15	005457 ●

Feed speed v_f depending on cutting depth a_p

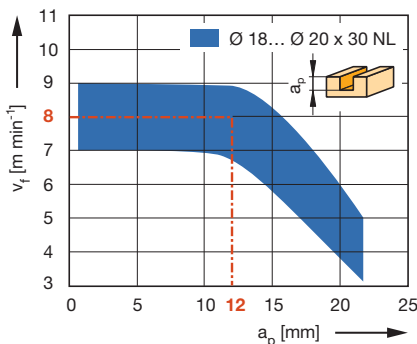


Workpiece material: Plastic coated chipboard

Operation: Grooving, sizing

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

Correction factor for v_f : MDF = 0.8



Workpiece material: Softwood, along grain

Operation: Grooving, sizing

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

Correction factor for v_f :

Machining across grain = 0.8

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters HW and HW turnblade



Router cutter in turnblade design

Application:

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

Machine:

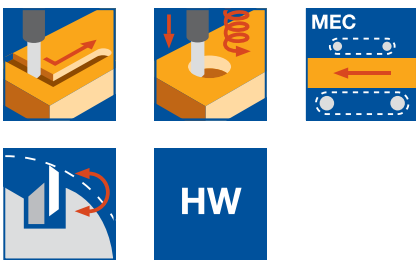
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

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

Technical information:

Straight cut. Teflon coated tool body for reduced resin and glue build up. Limited 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	RH	040925 ●
20	133	58	25x60	RH	040928 ●

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

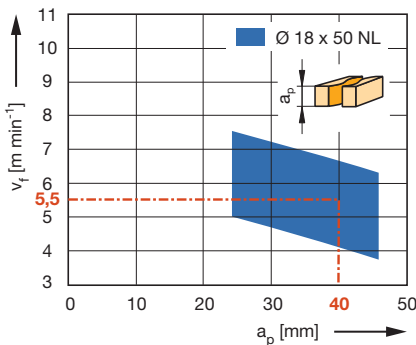
Spare knives:

BEZ	Knife	ABM mm	for D mm	QAL	VE PCS	ID
Turnblade knife	Plunging tip	7.6x12x1.5	16 - 18	HW-05F	10	005080 ●
Turnblade knife	Plunging tip	9x12x1.5	20 - 24	HW-05F	10	005158 ●
Turnblade knife	Peripheral tip	30x12x1.5		HW-05F	10	005161 ●

Spare parts:

BEZ	Knife	ABM mm	for D mm	ID
Oval head screw Torx® 15	Plunging tip	M4x5	18 - 24	007037 ●
Oval head screw Torx® 15	Peripheral tip	M4x5	18 - 24	007038 ●
Torx® key		Torx® 15		005457 ●

Feed speed v_f depending on cutting depth a_p



Workpiece material: Plastic coated chipboard

Operation: Sizing

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

Correction factor for v_f : MDF = 0.8

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters HW and HW turnblade



Router cutter in turnblade design

Application:

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

Machine:

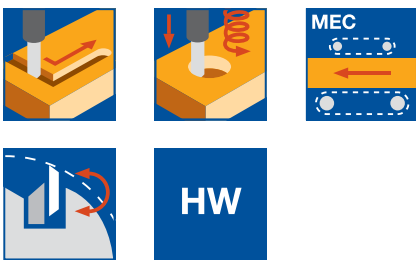
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

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

Technical information:

Straight cut. Teflon coated tool body for reduced resin and glue build up. Limited 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 LH	ID RH
18	115	50	16x50		040847 ●
18	115	50	20x50		040848 ●
18	125	50	25x60	040849 ●	040850 ●

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

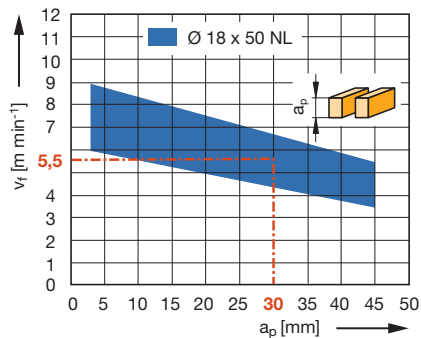
Spare knives:

BEZ	Knife	ABM mm	QAL	VE PCS	ID
Turnblade knife	Plunging tip	7.6x12x1.5	HW-05F	10	005080 ●
Turnblade knife	Peripheral tip	30x12x1.5	HW-05F	10	005161 ●
Turnblade knife	Peripheral tip	50x12x1.7	HW-05F	10	007668 ●

Spare parts:

BEZ	Knife	ABM mm	ID
Oval head screw Torx® 15	Plunging tip	M4x5	007037 ●
Oval head screw Torx® 15	Peripheral tip	M4x5	007038 ●
Torx® key		Torx® 15	005457 ●

Feed speed v_f depending on cutting depth a_p



Workpiece material: Plastic coated chipboard

Operation: Sizing

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

Correction factor for v_f : MDF = 0.8

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters HW and HW turnblade



Router cutter in turnblade design

Application:

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

Machine:

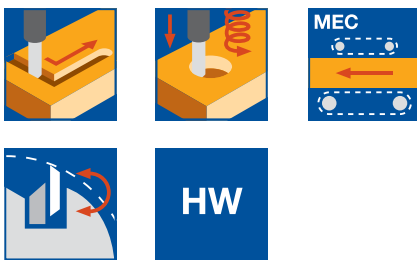
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

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



HW, Z 2

WL 101 2

D	GL	NL	S	ID	ID
mm	mm	mm	mm	LH	RH
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	for D	QAL	VE	ID
		mm	mm		PCS	
Turnblade knife	Plunging tip	7.6x12x1.5	25	HW-05F	10	005080 ●
Turnblade knife	Plunging tip	12x12x1.5	30	HW-05F	10	005081 ●
Turnblade knife	Peripheral tip	30x12x1.5	30	HW-05F	10	005161 ●
Turnblade knife	Peripheral tip	50x12x1.5	25/30	HW-05F	10	006506 ●

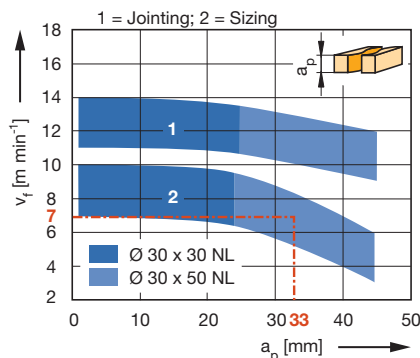
Spare parts:

BEZ	Knife	ABM	for D	ID
		mm	mm	
Oval head screw Torx® 15	Plunging tip	M4x5	25/30	007037 ●
	Peripheral tip		25	
Oval head screw Torx® 15	Peripheral tip	M4x5	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

Operation: Jointing, sizing

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

Correction factor for v_f :

Machining across grain = 0.7; MDF = 0.8

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral roughing/finishing router cutter Marathon

Application:

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

Machine:

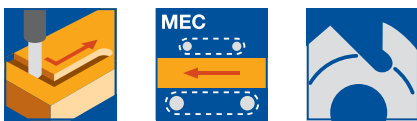
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, laminated veneer lumber (plywood, multiplex plywood etc.), decorative laminates (HPL-compact laminate, Trespa etc.), duromers, plastomers, solid surface material (Corian, Varicor etc.).

Technical information:

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

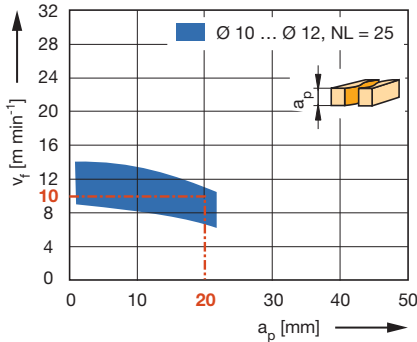


HW, Z 2, short design

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"	88.9	3 1/2"	38.1	1 1/2"	12.7x40	1/2"x1 1/2"	2	RD	RH	240515 ●

Feed speed v_f depending on cutting depth a_p



Workpiece material: Softwood

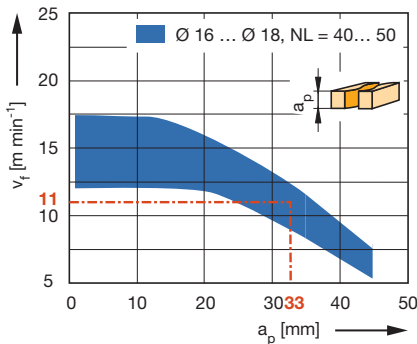
Operation: Sizing

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

Correction factor for v_f :

Hardwood = 0.8; Chipboard = 1.3;

Glulam = 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	RH	240200 ●
12	70	25	12x40	2	RD	RH	240201 ●
16	100	40	16x50	2	RD	RH	240202 ●

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

Workpiece material: Softwood

Operation: Sizing

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

Correction factor for v_f :

Hardwood = 0.8; Chipboard = 1.2;

Glulam = 0.9

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral roughing/finishing router cutter Marathon

Application:

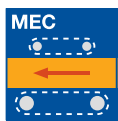
Router cutter for sizing and grooving in roughing/finishing quality.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

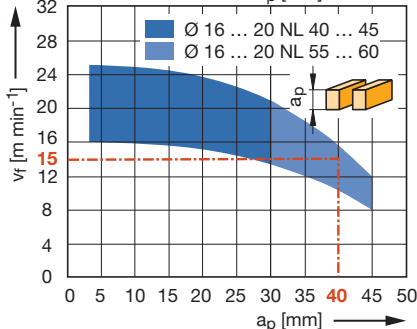
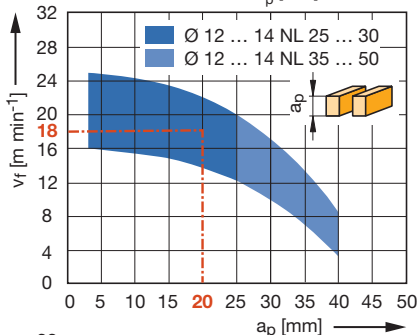
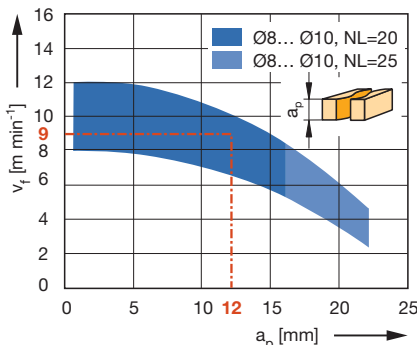
Softwood and hardwood, laminated wood for window construction, chipboard and fibre working materials (MDF, HDF etc.), uncoated, laminated veneer lumber (plywood, multiplex plywood etc.), plastomers, solid surface material (Corian, Varicor etc.), PVC window profiles.



Technical information:

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

Feed speed v_f depending on cutting depth a_p



Z 2 / Z 3, short design

WO 160 2 12

D	GL	NL	S	Z	Twist	ID	ID
mm	mm	mm	mm			LH	RH
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	GL	NL	S	Z	Twist	ID	ID
mm	mm	mm	mm			LH	RH
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: Wood/wood derived material: $n = 16000 - 24000 \text{ min}^{-1}$

Plastics: $n = 12000 - 18000 \text{ min}^{-1}$

Workpiece material: Softwood

Operation: Sizing

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

Correction factor for v_f :

Hardwood = 0.8; Chipboard = 1.3;

Glulam = 0.9

- available ex stock
 - available at short notice
- Instruction manual visit www.leitz.org

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral roughing/finishing router cutter Marathon

Application:

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

Machine:

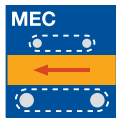
Stationary routers with/without CNC control, machining centres, joinery machines, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, glulam, glue-laminated timber and laminated wood

Technical information:

Solid tungsten carbide. Marathon coating for increased performance times. Long design for large cutting depths. Higher feed rates with conventional roughing cutters possible. Extremely smooth running.



Z 3, long design, shank 30 mm

WO 160 2 12

D	GL	NL	S	Z	Twist	DRI	ID
mm	mm	mm	mm				
30	195	120	30x53	3	RD	RH	240305 ●
40	195	120	30x53	3	RD	RH	240306 ●
40	235	160	30x53	3	RD	RH	240307 ●

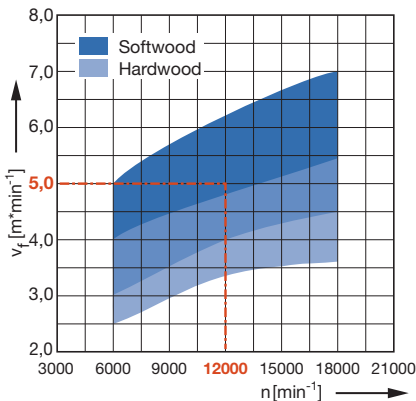
RPM: $n = 6000 - 18000 \text{ min}^{-1}$

Note:

Tool shank S30x53 suitable for many conventional joinery machines.

On machines with automatic tool changer use collet chuck ER 40 together with collet $d = 30 \text{ mm}$, ID **679039**.

Feed speed v_f depending on cutting depth a_p



Workpiece material: Softwood

Operation: Sizing

Axial infeed: $a_p = 20 - 50 \text{ mm}$

Correction factor for v_f :

Hardwood = 0.7; Glulam = 0.8

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral roughing/finishing router cutter Marathon

Application:

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

Machine:

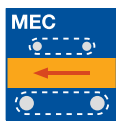
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

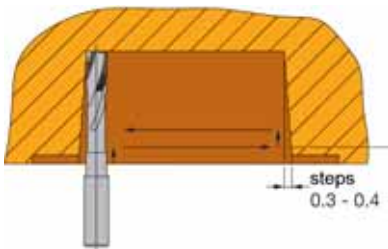
Softwood and hardwood, modified timber for window construction, chipboard and fibre working materials (MDF, HDF etc.) uncoated, laminated veneer lumber (plywood, multiplex plywood etc.), PVC window profiles.

Technical information:

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



Application example for mortise slot production



Z 2 / 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	2	LD	RH	240010 ●	240500 □
10	90	30	51	10x35	2	LD	RH	240011 ●	240501 □
12	120	35	80	12x35	3	LD	RH	240012 ●	240502 □
12	120	35	80	12x35	3	RD	RH	240000 ●	
14	170	30	95	16x50	3	RD	RH	240001 ●	
14	190	30	120	16x50	3	RD	RH	240002 ●	
16	170	50	105	16x50	3	RD	RH	240003 ●	
16	179	30	120	16x58 *	3	RD	RH	240004 ●	
16	179	30	120	16x58	3	RD	RH	240013 ●	
16	179	30	120	20x58 *	3	RD	RH	240005 ●	
16	179	30	120	20x58	3	RD	RH	240014 ●	
16	205	30	135	20x50	3	RD	RH	240006 ●	
17	190	30	120	20x50	3	RD	RH	240008 ●	
18	170	50	115	20x50	3	RD	RH	240009 ●	

RPM: Wood/wood derived material: D 10-12 mm: n = 18000 - 24000 min⁻¹

Wood/wood derived materials: D 14-18 mm: n = 12000 - 20000 min⁻¹

Plastics: n = 12000 - 18000 min⁻¹

* with clamping flat for HOMAG/WEEKE lock case trimming unit

Note:

Set HSK-F 63 = tools marked with the note „Set HSK-F 63“ will be supplied mounted in shrink-fit chuck HSK-F 63.

Application data:

Infeed at:

a_p 4 - 8 mm per stroke in solid wood;

v_f 10 - 16 m min⁻¹;

n = 12000 - 18000 min⁻¹

a_p 8 - 15 mm per stroke in chipboard;

v_f 12 - 18 m min⁻¹;

n = 12000 - 18000 min⁻¹

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral roughing/finishing router cutter Marathon

Application:

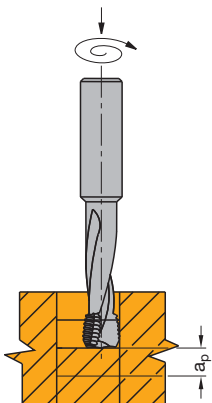
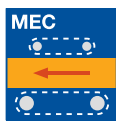
Router cutter for sizing and cutting spyholes and keyholes in roughing/finishing quality.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, modified timber for window construction, chipboard and fibre working materials (MDF, HDF etc.) uncoated, laminated veneer lumber (plywood, multiplex plywood etc.).



Technical information:

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

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	RH	240100 ●	
12	120	15	75	12x40	2	RH	240102 ●	
12	140	20	95	12x40	2	RH	240103 ●	
14	130	50	75	14x50	3	RH	240104 ●	
14	170	30	95	16x60	3	RH	240108 ●	240601 □
16	130	75		16x50	3	RH	240105 ●	
16	170	50	105	16x55	3	RH	240107 ●	240600 □
16	170	30	95	16x60	3	RH	240106 ●	
25	200	120		25x65	3	RH	240300 ●	240800 □

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

D 14-18 mm: n = 12000 - 20000 min⁻¹

Note:

Set HSK-F 63 = tools marked with the note „Set HSK-F 63“ will be supplied mounted in shrink-fit chuck HSK-F 63.

Production of keyholes and spyholes by circular cutting

Application data:

a_p 4 - 8 mm per stroke in solid wood;

v_f 10 - 16 m min⁻¹;

n = 12000 - 18000 min

a_p 8 - 15 mm per stroke in chipboard;

v_f 12 - 18 m min⁻¹;

n = 12000 - 18000 min⁻¹

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral roughing/finishing router cutter Marathon alternate twist

Application:

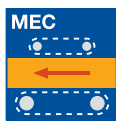
Routers for sizing and grooving in roughing/finishing quality and tear-free cutting edges on both sides.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, laminated veneer lumber (plywood, multiplex plywood etc.), plastomers, solid surface material (Corian, Varicor etc.).



Technical information:

Solid tungsten carbide. 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. Extremely smooth running.

Z 2+2

WO 160 2 16

D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
16	100	40	16x50	RH	240402 ●
16	110	55	16x50	RH	240408 ●
20	120	45	20x50	RH	240400 ●
20	140	75	20x50	RH	240403 ●

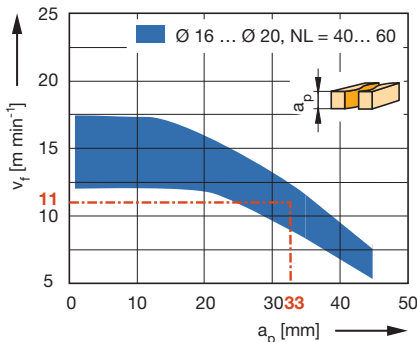
Z 2+2, Nesting types

WO 160 2 16

D	D	GL	GL	NL	NL	S	S	$a_{p \min}$	DRI	ID
mm	in	mm	in	mm	in	mm	in	mm		
12		80		25		12x40		6	RH	240404 ●
12		90		35		12x40		12	RH	240405 ●
12.7	1/2"	76.2	3"	25	1"	12.7x40	1/2"x1 1/2"	6	RH	240406 ●
12.7	1/2"	88.9	3 1/2"	35	1 3/8"	12.7x40	1/2"x1 1/2"	12	RH	240407 ●

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

Feed speed v_f depending on cutting depth a_p



Workpiece material: Softwood

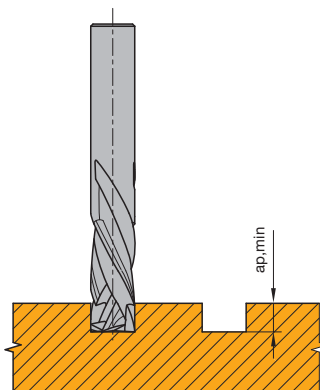
Operation: Sizing

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

Correction factor for v_f :

Hardwood = 0.8; Chipboard = 1.2;

Glulam = 0.9



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

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral finishing router cutter

Application:

Router for grooving plastic and aluminium profile extrusions. Especially to produce drainage grooves in plastic window profiles.

Machine:

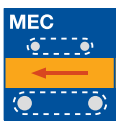
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, duromers, plastomers, sandwich panels (PU foam cores with aluminium covers etc.), NF-metals (aluminium, copper etc.).

Technical information:

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

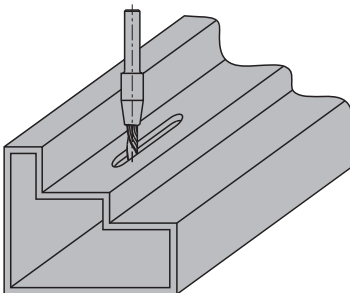


HW solid, Z 1, extended version

WO 160 2 07

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

RPM: n = 18000 - 24000 min⁻¹



Slotting extrusions

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral finishing router cutter

Application:

Router cutter for sizing, grooving and finish cutting. For high demands on finish quality.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.), duromers, plastomers, solid surface material (Corian, Varicor etc.), decorative laminates (HPL-compact laminate, Trespa etc.), NF-metals (aluminium, copper etc.).



Technical information:

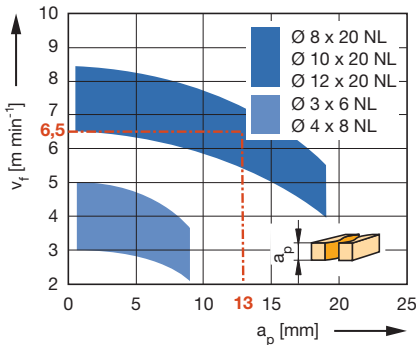
Large twist angle for high shear cut. Check twist direction for good top layer cut quality. Maximum cutting depth 1.0 - 1.5 x D. Short design for increased stability and reduced vibration. Long design for increased cutting depth (recommended in several steps).

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	RH	042723 ●
3		50		6		6x30		1	LD	RH	042724 ●
4		50		8		6x30		1	RD	RH	042725 ●
4		50		8		6x30		1	LD	RH	042726 ●
5		50		10		6x30		1	RD	RH	042727 ●
5		50		10		6x30		1	LD	RH	042728 ●
6		50		14		6x30		1	RD	RH	042729 ●
6		50		14		6x30		1	LD	RH	042730 ●
6.35	1/4"	50.8	2"	15.88	5/8"	6.35x30	1/4"x1 1/8"	1	RD	RH	240512 ●
8		65		20		8x40		1	RD	RH	042731 ●
8		65		20		8x40		1	LD	RH	042732 ●
10		70		20		10x40		1	RD	RH	042733 ●

Feed speed v_f depending on cutting depth a_p



Workpiece material: Softwood

Operation: Sizing

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

Correction factor for v_f :

Hardwood = 0.9;

Machining across grain = 0.8;

Chipboard = 1.1

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	RH	042739 ●
4	60	12	6x40	1	LD	RH	042740 ●
5	80	18	6x40	1	RD	RH	042741 ●
5	80	18	6x40	1	LD	RH	042742 ●
6	80	22	6x40	1	RD	RH	042743 ●
6	80	22	6x40	1	LD	RH	042744 ●
8	80	25	8x40	1	RD	RH	042745 ●
8	80	25	8x40	1	LD	RH	042746 ●
10	90	32	10x40	1	RD	RH	042747 ●
10	90	32	10x40	1	LD	RH	042748 ●
12	90	32	12x40	1	RD	RH	042749 ●

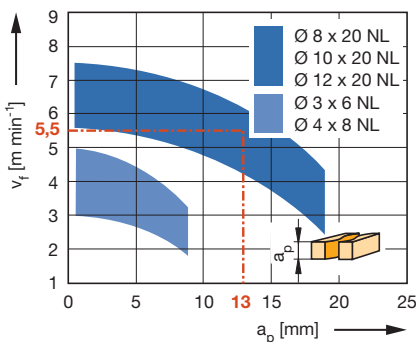
RPM: Wood/wood derived material: $n = 16000 - 24000 \text{ min}^{-1}$

Plastics: $n = 12000 - 18000 \text{ min}^{-1}$

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

Operation: Sizing

Speed: $n = 16000 - 18000 \text{ min}^{-1}$



5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral finishing router cutter

Application:

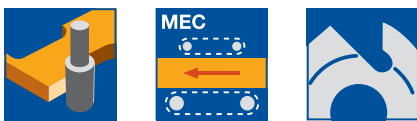
Router cutter for sizing, grooving and finish cutting. For high demands on finish quality.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.), duromers, plastomers, solid surface material (Corian, Varicor etc.), decorative laminates (HPL-compact laminate, Trespa etc.).

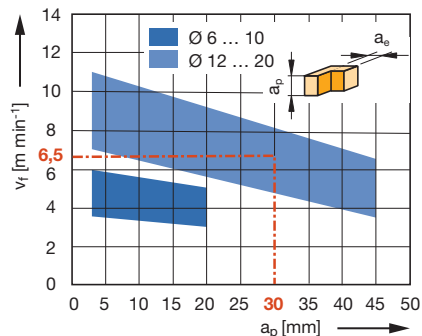


Technical information:

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 cutting depth a_p



Workpiece material: Softwood

Operation: Jointing

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

Correction factor for v_f :

Hardwood = 0.9;

Machining across grain = 0.7

HW solid, Z 2, short design

WO 160 2 05

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

HW solid, Z 2, long design

WO 160 2 05

D	D	GL	GL	NL	NL	S	S	Z	Twist	DRI	ID
mm	in	mm	in	mm	in	mm	in				
12		80		35		12x40		2	RD	RH	042765 ●
12.7	1/2"	76.2	3"	31.8	1 1/4"	12.7x40	1/2"x1 1/2"	2	LD	RH	240510 ●
12.7	1/2"	88.9	3 1/2"	31.8	1 1/4"	12.7x40	1/2"x1 1/2"	2	LD	RH	240511 ●

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

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral finishing router cutter

Application:

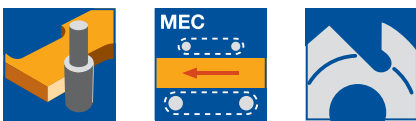
Router cutter for sizing, grooving and finish cutting. For high demands on finish quality. Z 3 design for high feed speeds.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.), duromers, plastomers, solid surface material (Corian, Varicor etc.), decorative laminates (HPL-compact laminate, Trespa etc.).

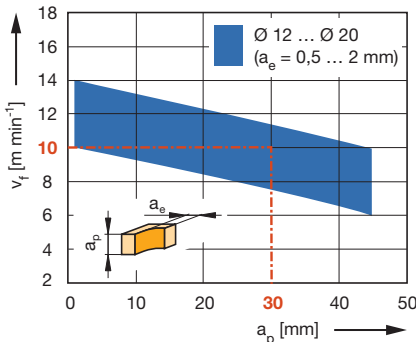


Technical information:

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 cutting depth a_p



Workpiece material: Softwood

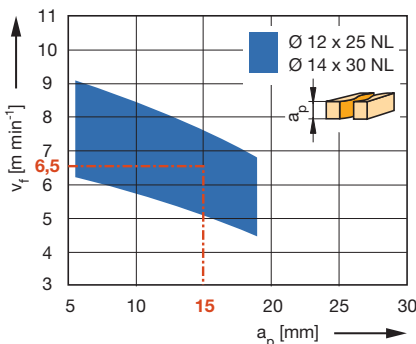
Operation: Jointing

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

Correction factor for v_f :

Hardwood = 0.9;

Machining across grain = 0.7



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

Operation: Sizing

Speed: $n = 14000 - 18000 \text{ min}^{-1}$

HW solid, Z 3, short design

WO 160 2 05

D	GL	NL	S	Z	Twist	ID	ID
mm	mm	mm	mm			LH	RH
12	70	25	12x40	3	LD		042486 ●
12	70	25	12x40	3	RD	042534 ●	042487 ●
16	100	40	16x50	3	RD		042488 ●
16	100	40	16x50	3	LD		042489 ●

HW solid, Z 3, long design

WO 160 2 05

D	GL	NL	S	Z	Twist	ID	ID
mm	mm	mm	mm			LH	RH
8	65	25	8x30	3	LD		042490 ●
12	80	35	12x40	3	RD		042460 ●
14	110	50	14x55	3	RD		042462 ●
16	110	55	16x55	3	RD		042464 ●
16	110	55	16x55	3	LD	042473 ●	042465 ●
20	120	60	20x55	3	RD		042466 ●
20	120	60	20x55	3	LD	042468 ●	042467 ●
20	130	75	20x50	3	RD		042549 ●

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

● available ex stock

□ available at short notice

Instruction manual visit www.leitz.org

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral finishing router cutter Marathon

Application:

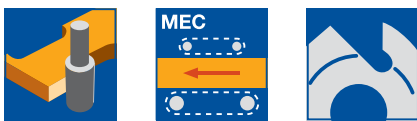
Router cutter for sizing, grooving and finish cutting. For high demands on finish quality. Z 3 design for high feed speeds.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.), duromers, plastomers, solid surface material (Corian, Varicor etc.), decorative laminates (HPL-compact laminate, 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.

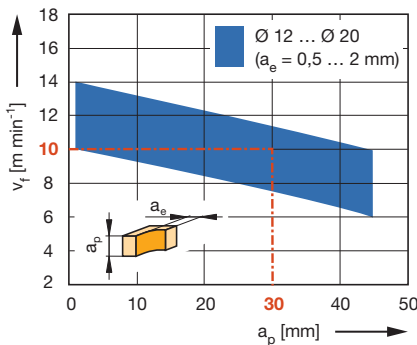
HW solid, Z 3

WO 160 2 10

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

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

Feed speed v_f depending on cutting depth a_p



Workpiece material: Softwood

Operation: Jointing

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

Correction factor for v_f :

Hardwood = 0.9;

Machining across grain = 0.7

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral finishing router cutter alternate twist angle

Application:

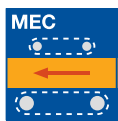
Router cutter for sizing, grooving and finish cutting. For high demands on finish quality and tear-free cut edges on both sides.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.), duromers, plastomers, solid surface material (Corian, Varicor etc.), decorative laminates (HPL-compact laminate, Trespa etc.).



Technical information:

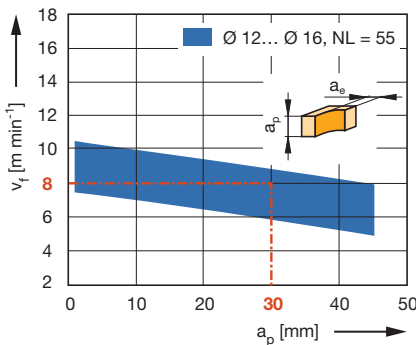
Ideally used after roughing cutters, finish cut allowance approx. 1-2 mm. Alternate twist for tear-free cut edges on both sides. Z 1+1 design, suited for solid wood up to 50 mm thickness with roughing cut or 30 mm thickness without roughing cut.

HW solid, Z 1+1

WO 160 2 06

D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
10	70	25	10x40	RH	042511 ●
12	80	35	12x40	RH	042509 ●
16	110	55	16x50	RH	042543 ●

Feed speed v_f depending on cutting depth a_p



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

Workpiece material: Softwood

Operation: Jointing

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

Correction factor for v_f :

Hardwood = 0.9;

Machining across grain = 0.7

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral finishing router cutter alternate twist angle

Application:

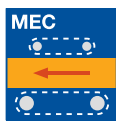
Router cutter for sizing, grooving and finish cutting. For high demands on finish quality and tear-free cut edges on both sides.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.), duromers, plastomers, solid surface material (Corian, Varicor etc.), decorative laminates (HPL-compact laminate, 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. Design for coated chipboard material and fibre material, glulam, abrasive materials and compound materials with aluminium top layer.

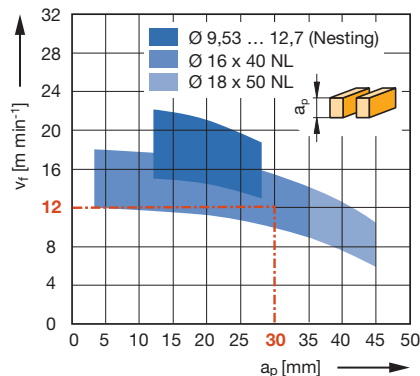


HW solid, Z 2+2, for abrasive materials

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		RH	042536 ●
16		100		40		16x50		RH	042537 ●
18		100		50		18x50		RH	042538 ●
9.53	3/8"	76.2	3"	28.6	1 1/8"	9.53x40	3/8"x1 1/2"	RH	240516 ●
12.7	1/2"	88.7	3 1/2"	38.1	1 1/2"	12.7x40	1/2"x1 1/2"	RH	240517 ●

Feed speed v_f depending on cutting depth a_p



Workpiece material: Plastic coated and veneered chipboard

Operation: Sizing

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

Correction factor v_f : MDF = 0.8;

Machining across grain = 0.7

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

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral finishing router cutter alternate twist angle

Application:

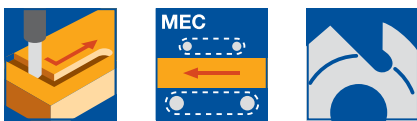
Router cutter for sizing, grooving and finish cutting. For high demands on finish quality and tear-free cut edges on both sides.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.), duromers, plastomers, solid surface material (Corian, Varicor etc.), decorative laminates (HPL-compact laminate, Trespa etc.).



Technical information:

Alternate twist for tear-free cutting edges on both sides. Especially suitable to cut coated chip and fibre boards, glulam, abrasive materials as well as composite materials with aluminium top layer.

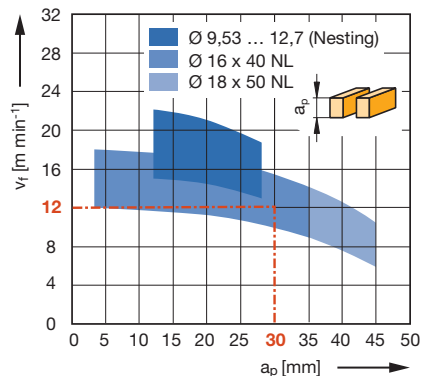


HW solid, Z 2+2, Nesting types

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	RH	240518 ●
9.53	3/8"	76.2	3"	28.6	1 1/8"	9.53x40	3/8"x1 1/2"	7	RH	240503 ●
10		75		28		10x40		8	RH	240530 ●
12.7	1/2"	76.2	3"	32	1 1/4"	12.7x40	1/2"x1 1/2"	5	RH	240504 ●
12.7	1/2"	76.2	3"	32	1 1/4"	12.7x40	1/2"x1 1/2"	6	RH	240505 ●
12.7	1/2"	88.9	3 1/2"	34.9	1 3/8"	12.7x40	1/2"x1 1/2"	6	RH	240506 ●
12.7	1/2"	101.6	4"	43	1 5/8"	12.7x40	3/8"x1 5/8"	20	RH	240507 ●

Feed speed v_f depending on cutting depth a_p



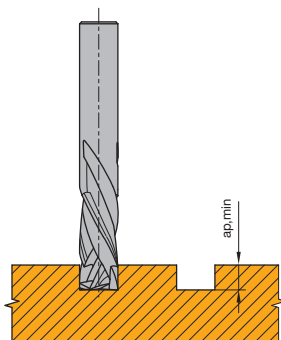
Workpiece material: Plastic coated and veneered chipboard

Operation: Sizing

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

Correction factor v_f : MDF = 0.8;

Machining across grain = 0.7



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

HW solid, Z 3+3, Nesting types

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"	6	RH	240508 ●
10		70		24		10x40		8	RH	042797 ●

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

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Grooving cutter Lamello® Clamex® P-System®

Application:

Router cutter for machining a profile slot for Lamello® Clamex® P-System® connectors.

Machine:

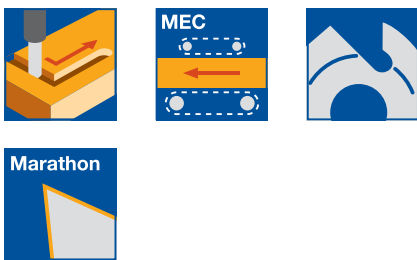
Stationary routers with CNC control, machining centres, especially machines with 5 axes technology or with comparable aggregates to swivel cutting tools.

Workpiece material:

Chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., softwood and hardwood, glued wood and laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Solid tungsten carbide. Marathon-TDC coating for increased performance times. Alternate twist for tear-free cutting edges.



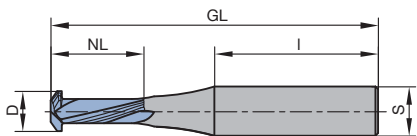
Z 2+2

WO 531 2

D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
9.8	80	23	12x40	RH	039161 ●

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

Boring bit for boring an access hole $D = 6 \text{ mm}$: ID **034116**.
Grooving cutter for CNC: ID **090018**.



Recommendation for application:

RPM:

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

Feed rate:

$v_f = 6 - 8 \text{ m min}^{-1}$ chipboard/MDF

$v_f = 4 - 6 \text{ m min}^{-1}$ solid wood/plywood

5. Routing

5.1 Sizing and grooving

5.1.3 Shank cutters DP



Router cutter Diamaster PRO

Application:

Router for sizing and grooving with continuous cutting edge.

Machine:

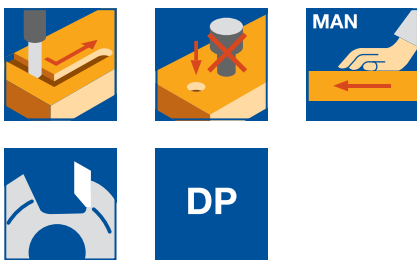
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., duromers, plastomers, laminated materials (HPL-compact laminate, Trespa, multiplex plywood), NF-metals.

Technical information:

Solid tungsten carbide tool body for increased stability and smooth running. DP face edge suitable for plunging. Positive shear angle for improved chip removal when ramp plunging. Axial infeed for grooving and sizing maximum 1.0 - 1.5 x D. Resharpenable up to 3 times with normal wear.



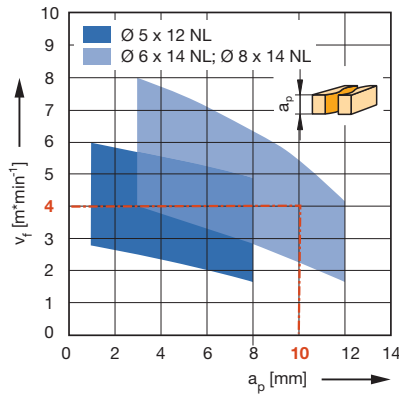
DP, Z 1

WO 120 2 50

D	GL	NL	S	Z	DRI	ID
mm	mm	mm	mm			
5	60	12	8x35	1	RH	191086 ●
6	60	14	8x35	1	RH	191087 ●
8	60	14	8x35	1	RH	191088 ●

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

Feed speed v_f depending on cutting depth a_p

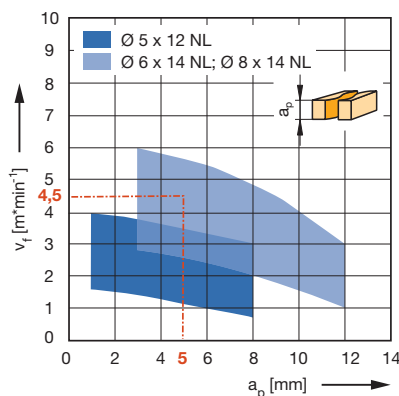


Workpiece material: Plastic coated chipboard

Operation: Sizing

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

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



Workpiece material: Thermoplastics, compound materials

Operation: Sizing

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

- available ex stock
 - available at short notice
- Instruction manual visit www.leitz.org

5. Routing

5.1 Sizing and grooving

5.1.3 Shank cutters DP



Router cutter Diamaster PRO

Application:

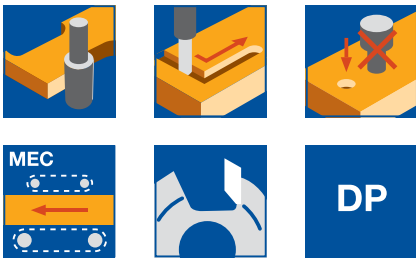
Router cutter for sizing and grooving with continuous cutting edge. Particularly suitable for machining MDF with direct lacquering or foil coating of the machined edges.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., duromers, plastomers, laminated materials (HPL-compact laminate, Trespa, multiplex plywood).



Technical information:

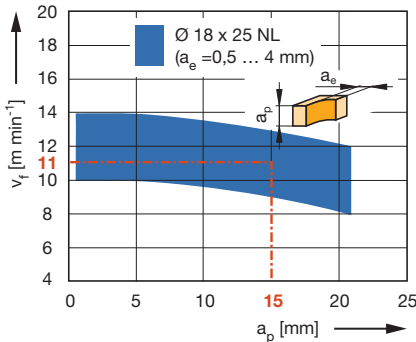
Negative cutting edge shear angles (only for ID **091158**) for tear-free edges during grooving and to support the workpiece clamping of smaller parts. Resharpenable 3 to 5 times with normal wear. Maximum chip removal 4 mm; roughing cut required for higher chip removal.

DP, Z 2

WO 140 2 50

D	GL	NL	S	Z	DRI	ID
mm	mm	mm	mm			
10	70	12	12x40	2	RH	091158 ●
18	90	25	16x50	2	RH	091190 ●

Feed speed v_f depending on cutting depth a_p



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

Workpiece material: Plastic coated chipboard

Operation: Jointing

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

Correction factor for v_f : MDF = 0.9;

Veneer across grain = 0.7

5. Routing

5.1 Sizing and grooving

5.1.3 Shank cutters DP



Router cutter Diamaster PRO

Application:

Router for sizing and grooving with continuous cutting edge.

Machine:

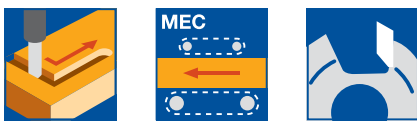
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

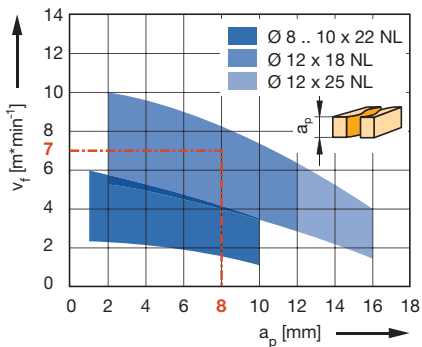
Chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., duromers, elastomers, laminated materials (HPL-compact laminate, Trespa, multiplex plywood), NF-metals.

Technical information:

Solid tungsten carbide tool body for increased stability and smooth running. DP face edge suitable for plunging. Slightly positive shear angle for improved chip removal when ramp plunging. From D = 12 mm on with full size DP plunging edge. Axial in-feed for grooving and sizing maximum 1.0 - 1.5 x D. Resharpenable 2 to 3 times with normal wear.



Feed speed v_f depending on cutting depth a_p



DP, Z 2

WO 120 2 50

D	GL	NL	S	Z	DRI	ID
mm	mm	mm	mm			
8	70	22	12x35	2	RH	191089 ●
10	70	22	12x35	2	RH	191090 ●
12	75	18	16x50	2	RH	191091 ●
12	85	25	16x50	2	RH	191092 ●

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

Workpiece material: Plastic coated chipboard

Operation: Sizing

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

Correction factor for v_f : MDF = 0.8;

Uncoated chipboard = 1.1

5. Routing

5.1 Sizing and grooving

5.1.3 Shank cutters DP



Router cutter Diamaster PLUS

Application:

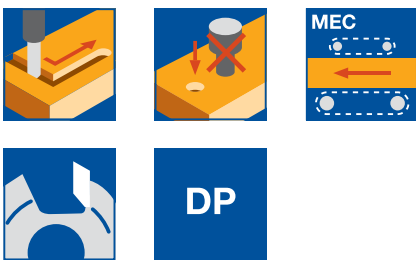
Router cutter for sizing and grooving with seamless cut. Particularly suitable for machining MDF with direct lacquering or foil coating of the machined edges

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., duromers, plastomers, laminated materials (HPL-compact laminate, Trespa, multiplex plywood).



Technical information:

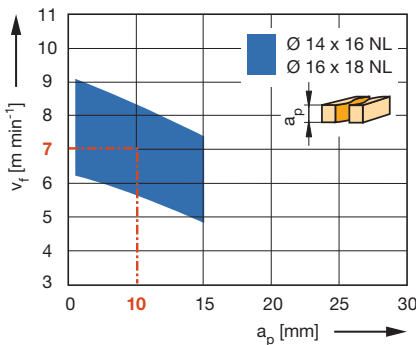
Negative cutting edge shear angles for tear-free edges during grooving and to support the workpiece clamping of smaller parts. Resharpenable 5 to 8 times with normal wear. Short and stable tool design ideal for grooving and sizing of abrasive and hard to machine materials (HPL, Trespa, GFRP, CFRP etc.).

DP, Z 2

WO 120 2 60

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

Feed speed v_f depending on cutting depth a_p



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

Plastics: $n = 12000 - 18000 \text{ min}^{-1}$

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

Operation: Sizing

Speed: $n = 12000 - 18000 \text{ min}^{-1}$

5. Routing

5.1 Sizing and grooving

5.1.3 Shank cutters DP



Router cutter Diamaster PLUS

Application:

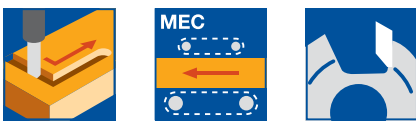
Router for sizing and grooving with continuous cutting edge. Particularly suitable for machining MDF with direct lacquering or foil coating of the machined edges.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., duromers, plastomers, laminated materials (HPL-compact laminate, Trespa, multiplex plywood).



Technical information:

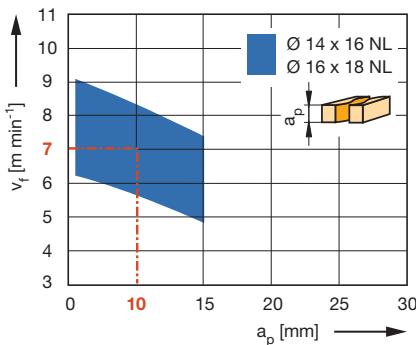
Alternate shear angle of the edges for neutral cutting. DP plunging edge. Resharpenable 5 to 8 times with normal wear. Short and stable tool design ideal for grooving and sizing of abrasive and hard to machine materials (HPL, Trespa, GFRP, CFRP etc.).

DP, Z 2

WO 120 2

D	GL	NL	S	Z	DRI	ID
mm	mm	mm	mm			
14	80	16	20x50	2	RH	191093 ●
16	85	20	20x50	2	RH	191094 ●

Feed speed v_f depending on cutting depth a_p



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

Operation: Sizing

Speed: $n = 12000 - 18000 \text{ min}^{-1}$

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

Plastics: $n = 12000 - 18000 \text{ min}^{-1}$

5. Routing

5.1 Sizing and grooving

5.1.3 Shank cutters DP



Router cutter Diamaster PRO

Application:

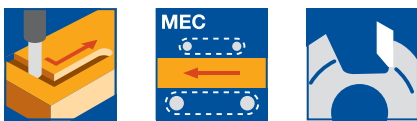
Router cutter for sizing and grooving with increased performance time in engineered wood boards. For tear-free cut edges on both sides. Suitable for small and medium batch quantities.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

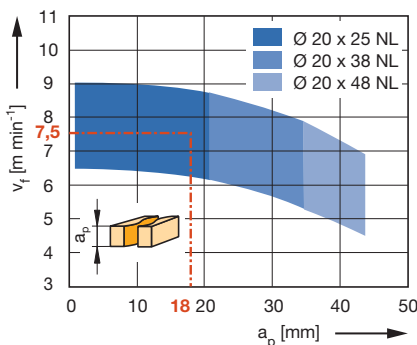
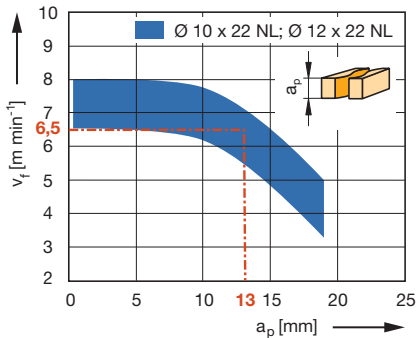
Chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.)



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. Axial infeed for grooving and sizing maximum 1.0 - 1.8 x D.

Feed speed v_f depending on cutting depth a_p



Workpiece material: Plastic coated chipboard

Operation: Sizing

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

Correction factor for v_f : MDF = 0.8;

Uncoated chipboard = 1.1;

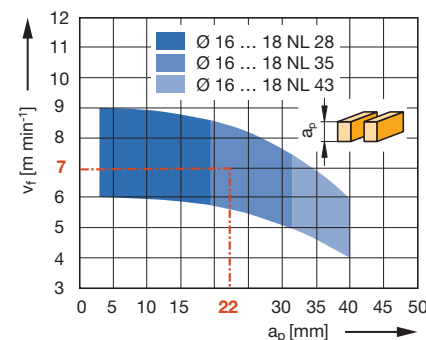
Veneer across grain = 0.7

DP, Z 1+1

WO 140 2 50

D mm	GL mm	NL mm	S mm	ID LH	ID RH
10	70	22	12x40		091264 ●
12	70	22	12x40		091265 ●
12	90	28	20x50		191095 ●
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	105	43	20x50		191096 ●
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: $n = 18000 - 24000 \text{ min}^{-1}$



Workpiece material: Plastic coated chipboard

Operation: Sizing

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

Correction factor for v_f : MDF = 0.8;

Veneer across grain = 0.7

5. Routing

5.1 Sizing and grooving

5.1.3 Shank cutters DP



Router cutter Diamaster PRO

Application:

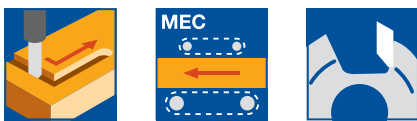
Router cutter for sizing and grooving with increased performance time in engineered wood boards. For tear-free cut edges on both sides. Suitable for small and medium batch quantities.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).



Feed speed v_f depending on cutting depth a_p

Technical information:

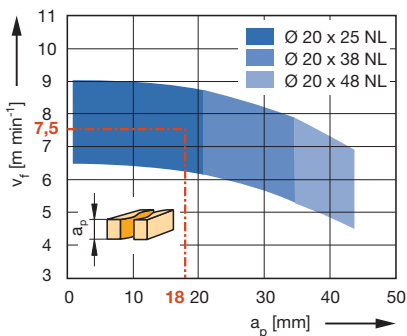
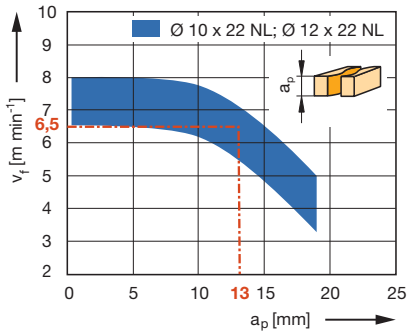
Spiral cutting edge arrangement with alternate shear angles and tungsten carbide plunging tip. Resharpenable 3 to 5 times with normal wear. Cuts to be painted in MDF require finishing with tools with continuous edges. Axial infeed for grooving and sizing maximum 1.0 - 1.8 x D.

DP, Z 1+1, inch types

WO 140 2 50

D	D	GL	GL	NL	NL	S	S	DRI	ID
mm	in	mm	in	mm	in	mm	in		
12.7	1/2"	70	2 3/4"	22.23	7/8"	12.7x38	1/2" x 1 1/2"	RH	091296 ●
12.7	1/2"	80	3 1/8"	35	1 3/8"	12.7x40	1/2" x 1 1/2"	RH	191065 ●
19.05	3/4"	110	4 3/8"	48	1 7/8"	19.05x50	3/4" x 2"	RH	091297 ●

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



Workpiece material: Plastic coated chipboard

Operation: Sizing

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

Correction factor for v_f : MDF = 0.8;

Uncoated chipboard = 1.1;

Veneer across grain = 0.7

5. Routing

5.1 Sizing and grooving

5.1.3 Shank cutters DP



Router cutter Diamaster PRO

Application:

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

Machine:

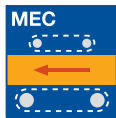
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

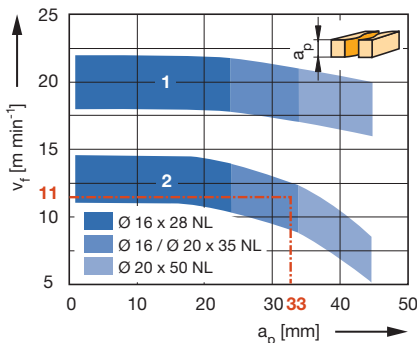
Spiral cutting edge arrangement with alternate shear angles and DP plunging tip. Resharpenable 3 to 5 times with normal wear. Cuts to be painted in MDF require finishing with tools with continuous edges. Axial infeed for grooving and sizing maximum 1.0 - 1.8 x D.



Feed speed v_f depending on grooving depth a_p

1 = Jointing cut $a_e = 0.5 - 2$ mm

2 = Sizing cut



Workpiece material: Plastic coated chipboard

Operation: Jointing, sizing

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

Correction factor for v_f : MDF = 0.6;

Veneer across grain = 0.7

DP, Z 2+2

WO 140 2 50

D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
14	90	35	16x50	RH	191083 ●
16	90	28	20x50	RH	191042 ●
16	95	35	20x50	RH	191043 ●
16	105	45	20x50	RH	191084 ●
18	115	55	20x50	RH	191085 ●
20	95	35	20x50	RH	191044 ●
20	105	35	25x60	RH	191045 ●
20	110	50	20x50	RH	191046 ●
20	120	50	25x60	RH	191047 ●
20	125	58	25x55	RH	191097 ●

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

5. Routing

5.1 Sizing and grooving

5.1.3 Shank cutters DP



Router cutter Diamaster PRO

Application:

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

Machine:

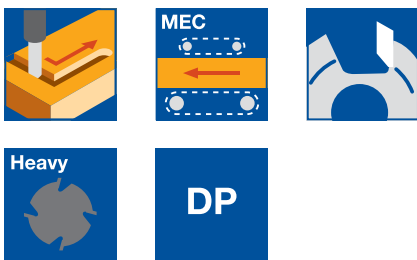
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

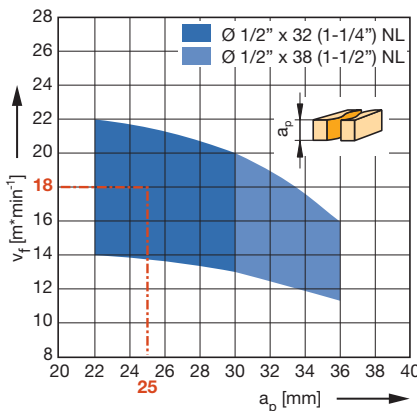
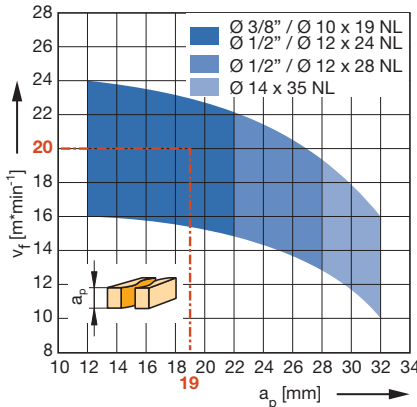
Chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Spiral cutting edge arrangement with alternate shear angles and real - Z 2 over the complete cutting length, with DP plunging tip. Resharpenable up to 3 times with normal wear. Tool body made from high-tensile material. Important to follow the application data parameters.



Feed speed v_f depending on cutting depth a_p



DP, Z 2+2, Nesting

WO 140 2 50

D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
10	65	19	10x40	RH	191059 ●
12	70	24	12x42	RH	191060 ●
12	75	28	12x42	RH	191061 ●
14	90	35	16x50	RH	191101 ●

DP, Z 2+2, Nesting, inch types

WO 140 2 50

D	D	GL	GL	NL	NL	S	S	DRI	ID
mm	in	mm	in	mm	in	mm	in		
9.53	3/8"	65	2 9/16"	19	3/4"	9.53x40	3/8" x 1 9/16"	RH	191062 ●
12.7	1/2"	70	2 3/4"	24	15/16"	12.7x42	1/2" x 1 5/8"	RH	191063 ●
12.7	1/2"	75	2 15/16"	28	1 1/8"	12.7x42	1/2" x 1 5/8"	RH	191064 ●
12.7	1/2"	80	3 1/16"	32	1 1/4"	12.7x40	1/2" x 1 9/16"	RH	191102 ●
12.7	1/2"	85	3 1/3"	38	1 1/2"	12.7x40	1/2" x 1 9/16"	RH	191103 ●

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

Table of recommended workpiece thickness

Id.	NL	workpiece thickness
191059/191062	19	9 – 16 mm
191060/191063	24	13 – 20 (22) mm
191061/191064	28	19 – 25 mm
191102	32	22 – 28 (30) mm
191101	35	22 – 32 mm
191103	38	25 – 35 mm

Workpiece material: Chipboard, plastic coated

Operation: Sizing / Nesting

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

Correction factor for v_f : MDF = 0.8;

Chipboard uncoated = 1.1;

Veneer across the grain = 0.7;

Pre-trimming MDF = 1.2

5. Routing

5.1 Sizing and grooving

5.1.3 Shank cutters DP



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:

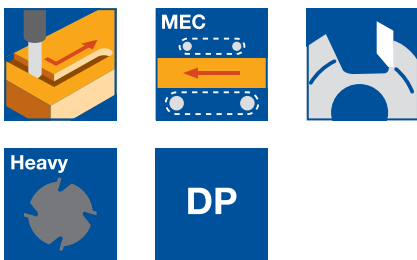
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

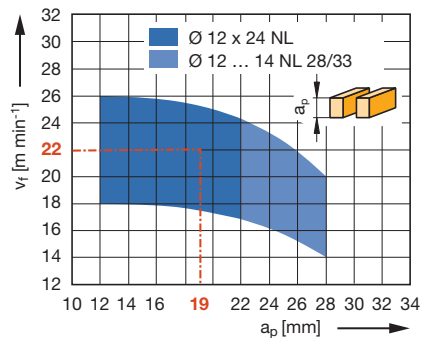
Chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

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 with normal wear. Tool body made from high-tensile material. Important to follow the application data parameters.



Feed speed v_f depending on cutting depth a_p



DP, Z 3+3, Nesting

WO 140 2 50

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

DP, Z 3+3, Nesting, inch types

WO 140 2 50

D	D	GL	GL	NL	NL	S	S	DRI	ID
mm	in	mm	in	mm	in	mm	in		
12.7	1/2"	70	2 3/4"	24	15/16"	12.7x42	1/2" x 1 5/8"	RH	191057 ●
12.7	1/2"	75	2 15/16"	28	1 1/8"	12.7x42	1/2" x 1 5/8"	RH	191058 ●

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

Workpiece material: Plastic coated chipboard

Operation: Sizing / Nesting

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

Correction factor for v_f : MDF = 0.8;

Uncoated chipboard = 1.1;

Veneer across grain = 0.7;

Pre trimming MDF = 1.2

Table of recommended workpiece thickness

Id.	NL	workpiece thickness
191030	19	9 – 16 mm
191031/191057	24	13 – 20 (22) mm
191032/191058	28	19 – 25 mm
191033	33	20 – 30 mm

5. Routing

5.1 Sizing and grooving

5.1.3 Shank cutters DP



Router cutter Diamaster PRO

Application:

Router cutter for sizing and grooving with increased performance time in engineered wood 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:

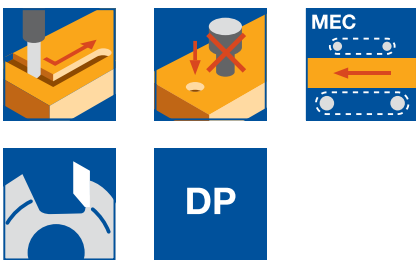
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

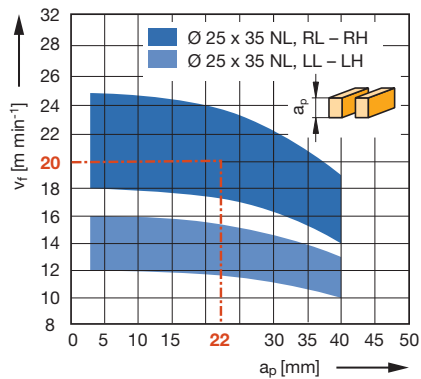
Chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., for tear-free edges on both sides of coated workpieces.

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).



Feed speed v_f depending on cutting depth a_p



Router cutter Diamaster PRO, Z 3+3 / Z 2+2

Workpiece material: Plastic coated chipboard

Operation: Sizing

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

Correction factor for v_f : MDF = 0.8;

Uncoated chipboard = 1.1;

Veneer across grain = 0.7

DP, RH + LH combination tool

WO 140 2 50

D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
25	120	24 + 24	25x50	LH, RH	191034 ●
25	145	35 + 35	25x55	LH, RH	191020 ●

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

5. Routing

5.1 Sizing and grooving

5.1.3 Shank cutters DP



Router cutter Diamaster PLUS

Application:

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

Machine:

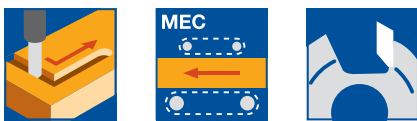
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

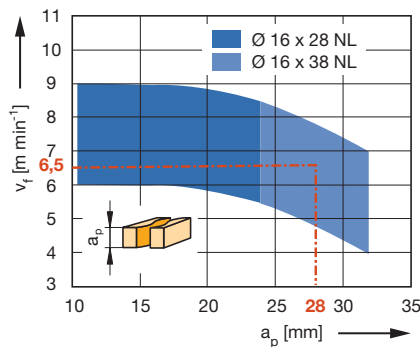
Chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., duromers, plastomers, laminated materials (HPL-compact laminate, Trespa, multiplex plywood).

Technical information:

Cutting edges with alternate shear angle and tungsten carbide plunging tip (ID **090174** with DP plunging edge). Resharpenable 5 to 8 times with normal wear. Cuts for painting in MDF require finishing with tools with continuous edges. Stable and rigid tips suitable for machining abrasive and hard to machine materials (HPL, Trespa, GFRP, CFRP etc.).



Feed speed v_f depending on cutting depth a_p

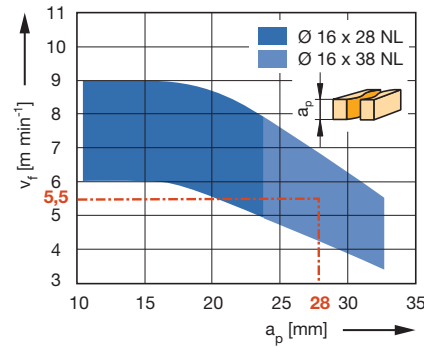
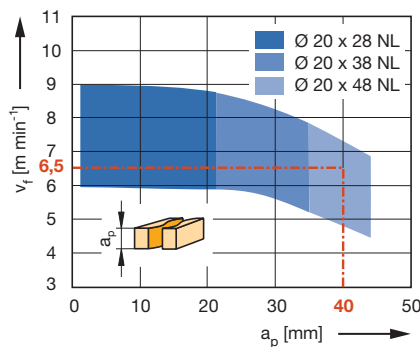


DP, Z 1+1

WO 140 2

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

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



Workpiece material: Plastic coated chipboard

Operation: Sizing

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

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

Workpiece material: Decorative laminates

Operation: Sizing

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

5. Routing

5.1 Sizing and grooving

5.1.3 Shank cutters DP



Router cutter Diamaster QUATTRO

Application:

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

Machine:

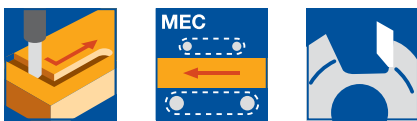
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

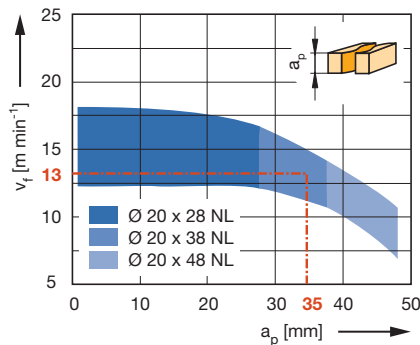
Chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

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.



Feed speed v_f depending on cutting depth a_p



DP, Z 2+2

WO 140 2

D	GL	NL	S	ID	ID
mm	mm	mm	mm	LH	RH
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: $n = 16000 - 24000 \text{ min}^{-1}$

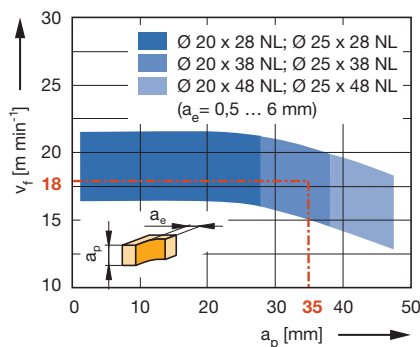
Workpiece material: Plastic coated chipboard

Operation: Sizing

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

Correction factor for v_f : MDF = 0.8;

Paper coated = 0.8



Workpiece material: Plastic coated chipboard

Operation: Jointing

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

Correction factor for v_f : MDF = 0.9;

Paper coated = 0.8;

Veneer across grain = 0.8

5. Routing

5.1 Sizing and grooving

5.1.3 Shank cutters DP



Router cutter Diamaster PLUS, Z 3+3

Application:

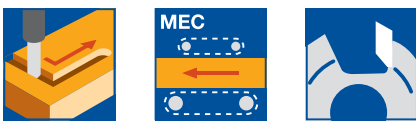
Router cutter for sizing and grooving with increased performance time in engineered wood boards. For tear-free cut edges on both sides. Suitable for large batch quantities. Z 3+3 at high feed speeds.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Chipboard and fibre materials (MDF, HDF 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 support the tool clamping especially for small parts.

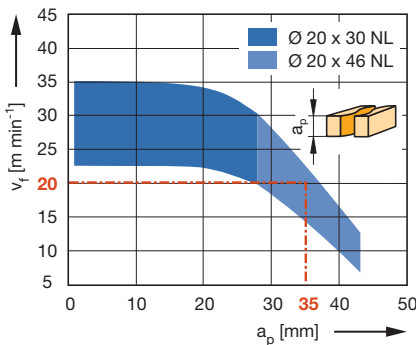
DP, Z 3+3, with negative twist

WO 140 2

D	GL	NL	S	ID	ID
mm	mm	mm	mm	LH	RH
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 cutting depth a_p



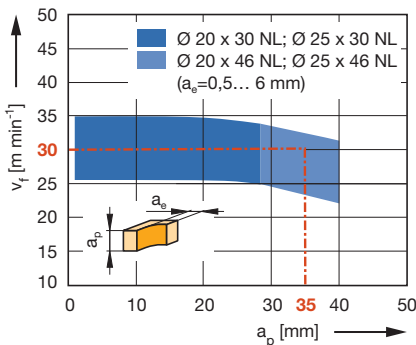
Workpiece material: Plastic coated chipboard

Operation: Sizing

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

Correction factor for v_f : MDF = 0.8;

Paper coated = 0.8



Workpiece material: Plastic coated chipboard

Operation: Jointing

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

Correction factor for v_f : MDF = 0.9;

Paper coated = 0.8;

Veneer across grain = 0.8

5. Routing

5.1 Sizing and grooving

5.1.3 Shank cutters DP



Router cutter Diamaster PLUS, Z 3+3

Application:

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

Machine:

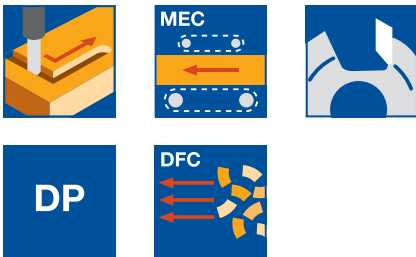
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

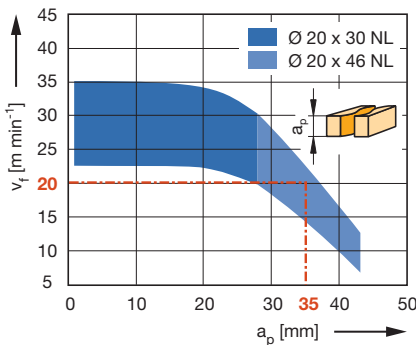
Chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc.

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 cutting depth a_p



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

WO 140 2

D	GL	NL	S	ID	ID
mm	mm	mm	mm	LH	RH
16	100	24	20x50		091254 ●
20	105	30	25x60		191026 ●
20	110	38	25x60		191098 ●
20	120	46	25x60		191099 ●
25	105	30	25x60		191027 ●
25	110	38	25x60		091217 ●
25	120	46	25x60	091218 ●	091219 ●

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

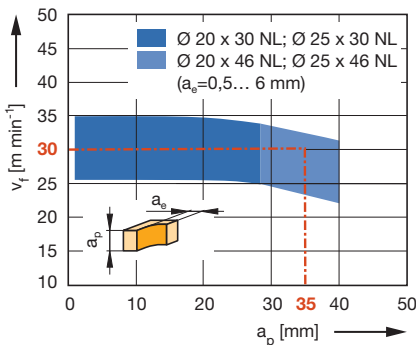
Workpiece material: Plastic coated chipboard

Operation: Sizing

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

Correction factor for v_f : MDF = 0.8;

Paper coated = 0.8



Workpiece material: Plastic coated chipboard

Operation: Jointing

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

Correction factor for v_f : MDF = 0.9;

Paper coated = 0.8;

Veneer across grain = 0.8

5. Routing

5.1 Sizing and grooving

5.1.3 Shank cutters DP



Router cutter Diamaster PLUS³, Z 3+3

Application:

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

Machine:

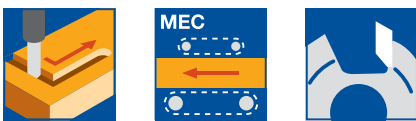
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

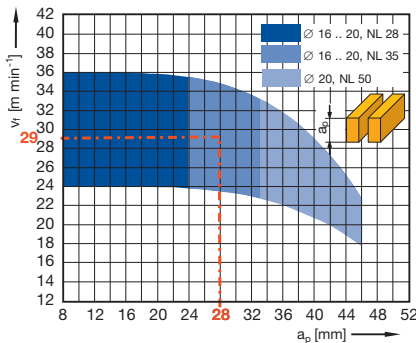
Chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Spiral cutting edge arrangement with alternate shear angles and real - Z 3 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 cutting depth a_p



DP, Z 3+3, with negative shear angle

WO 140 2

D	GL	NL	S	ID	ID
mm	mm	mm	mm	LH	RH
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		191054 ●

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

Workpiece material: Plastic coated chipboard

Operation: Sizing

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

Correction factor for v_f : MDF = 0.8;

Chipboard, uncoated = 1.1;

Veneer across grain = 0.7;

Pre-cutting MDF = 1.2

5. Routing

5.1 Sizing and grooving

5.1.3 Shank cutters DP



Router cutter Diamaster PRO EdgeExpert

Application:

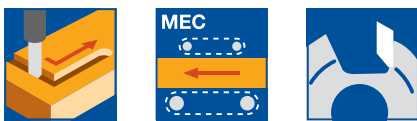
Routers for sizing and grooving with increased performance time in engineered wood boards. For tear-free cutting edges on both sides especially for sensitive and brittle decorative papers, laminating foils and veneers. Suitable for small and medium batch sizes.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).



Technical information:

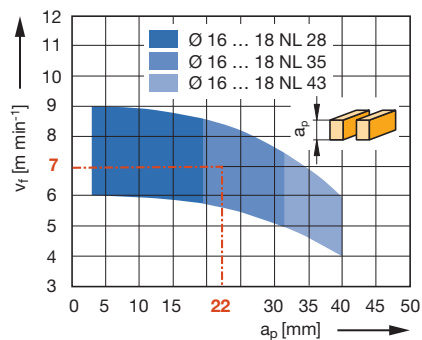
Spiral cutting edge arrangement with alternate shear angles and DP plunging tip. Enlarged shear angle for excellent edge quality for sensitive and brittle decorative papers, laminating foils and veneers. Resharpenable 2 to 4 times with normal wear. Cuts to be painted in MDF require finishing with tools with continuous edges.

DP, Z 1+1

WO 140 2 50

D mm	GL mm	NL mm	S mm	DRI	ID
16	85	25	16x50	RH	191069 ●
16	95	35	20x50	RH	191070 ●

Feed speed v_f depending on cutting depth a_p



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

Workpiece material: Plastic coated chipboard

Operation: Sizing

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

Correction factor for v_f : MDF = 0.8;

Veneer across grain = 0.7;

Extremely sensitive decors = 0.7 - 0.8

5. Routing

5.1 Sizing and grooving

5.1.3 Shank cutters DP



Router cutter Diamaster QUATTRO EdgeExpert

Application:

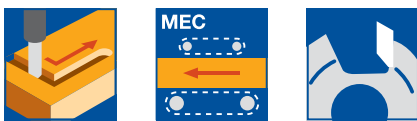
Routers for sizing and grooving with increased performance time in engineered wood boards. For tear-free cutting edges on both sides especially for sensitive and brittle decorative papers, laminating foils and veneers. Suitable for medium and large batch sizes. Z 2+2 for increased feed rates.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).



Technical information:

Spiral cutting edge arrangement with alternate shear angles and DP plunging tip. Enlarged shear angle for excellent edge quality for sensitive and brittle decorative papers, laminating foils and veneers. Resharpenable 4 to 6 times with normal wear. Precutting the workpieces is recommended. Cuts to be painted in MDF require finishing with tools with continuous edges.

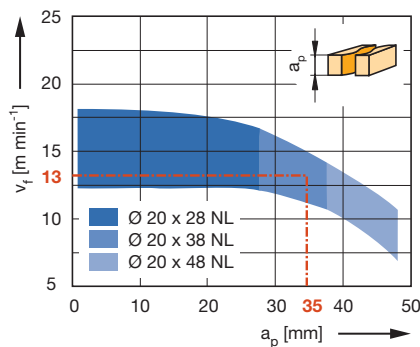
DP, Z 2+2

WO 140 2 50

D mm	GL mm	NL mm	S mm	DRI	ID
20	90	32	20x50	RH	191071 ●
20	120	48	25x60	RH	191072 ●

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

Feed speed v_f depending on cutting depth a_p



Workpiece material: Plastic coated chipboard

Operation: Sizing

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

Correction factor for v_f : MDF = 0.8;

Paper coated = 0.8

5. Routing

5.1 Sizing and grooving

5.1.3 Shank cutters DP



Router cutter Diamaster PLUS³ EdgeExpert, Z 3+3

Application:

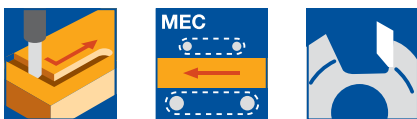
Routers for sizing and grooving with increased performance time in engineered wood boards. For tear-free cutting edges on both sides especially for sensitive and brittle decorative papers, laminating foils and veneers. Suitable for very large batch sizes. Z 3+3 for increased feed rates.

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).



Technical information:

Spiral cutting edge arrangement with alternate shear angles and DP plunging tip. Enlarged shear angle for excellent edge quality for sensitive and brittle decorative papers, laminating foils and veneers. Resharpenable 5 to 8 times with normal wear. Precutting the workpieces is recommended. Especially suitable on CNC machining centres with laser edgebanding technology. Cuts to be painted in MDF require finishing with tools with continuous edges.

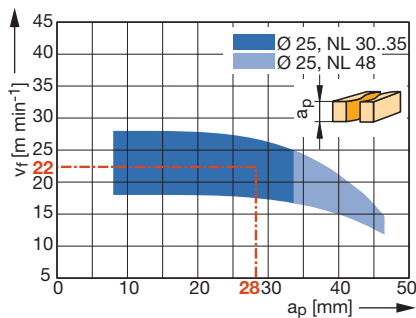
DP, Z 3+3, symmetric edge arrangement

WO 140 2 50

D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
25	105	30	25x60	RH	191073 ●
25	105	35	25x55	RH	191074 ●
25	120	48	25x60	RH	191075 ●

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

Feed speed v_f depending on cutting depth a_p



Workpiece material: Plastic coated chipboard

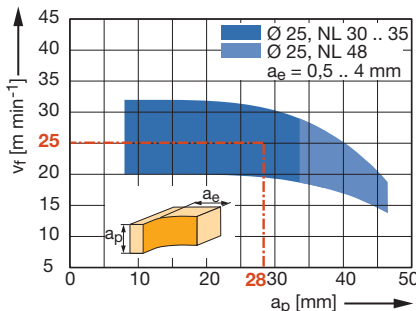
Operation: Sizing

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

Correction factor for v_f : MDF = 0.8;

Veneer across grain = 0.7;

Extremely sensitive decors = 0.7 - 0.8



Workpiece material: Plastic coated chipboard

Operation: Jointing

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

Correction factor for v_f : MDF = 0.8;

Veneer across grain = 0.7;

Extremely sensitive decors = 0.7 - 0.8

5. Routing

5.1 Sizing and grooving

5.1.4 Slotting cutters and mortising bits



Slot mortising bits

Application:

Router cutter for cutting tear-free longitudinal slots with stepwise infeed.

Machine:

Special routers with reciprocating spindles.

Workpiece material:

Softwood and hardwood.

Technical information:

For softwood and hardwood. Suitable for right hand and left hand rotation, tools resharpenable on the face side. Constant diameter after sharpening.

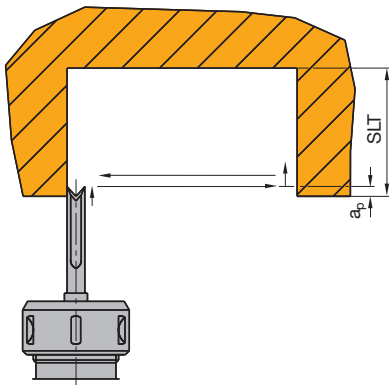


HS, Z 2

WB 510 0

D	GL	S	SLT	QAL	ID
mm	mm	mm	mm		
6	90	13x40	38	HS	037020 ●
8	95	13x40	42	HS	037022 ●
10	105	13x40	50	HS	037024 ●
12	115	13x40	60	HS	037026 ●

RPM: n = 4500 - 9000 min⁻¹



Application example of cutting slots
 $a_p = 0.8$ mm (reciprocating movement)

5. Routing

5.1 Sizing and grooving

5.1.4 Slotting cutters and mortising bits



Slot mortising bits

Application:

Router cutter for cutting tear-free longitudinal slots with stepwise infeed.

Machine:

Slot mortiser.

Workpiece material:

Softwood and hardwood.

Technical information:

Straight cut with chip breakers for reduced cutting forces. High tool rigidity through adapted heat treatment.

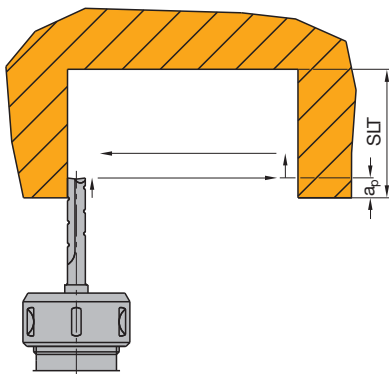


SP, Z 2

WB 401 0, WB 401 1

D	GL	S	SLT	ID	ID
mm	mm	mm	mm	LH	RH
6	120	13x50	60		037163 ●
8	130	13x50	70		037165 ●
10	140	13x50	80		037167 ●
10	140	16x50	80		037183 ●
12	150	13x50	90		037169 ●
12	150	16x50	90		037184 ●
16	170	16x50	110	037150 ●	037173 ●
18	180	16x50	120		037174 ●
20	185	16x50	125		037175 ●

RPM: n = 6000 - 12000 min⁻¹



Application example of cutting slots
 $a_p = 5 - 15$ mm per stroke



Copy shaping cutterhead - HeliCut 15

Application:

For pre-cutting, jointing and copy shaping of large cutting depths, along and across to the fibre direction. For copy shaping of arched workpieces with template, ball bearing and guide ring, as well as for the application on CNC controlled stationary routers e.g. joinery machines, window manufacturing plants.

Machine:

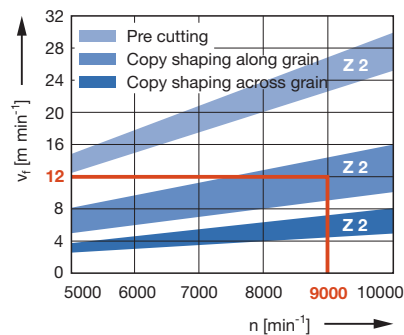
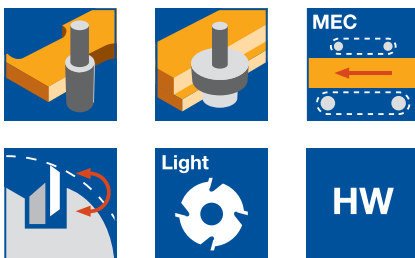
Spindle moulders and profile milling machines, double-end tenoner, stationary routers with/without CNC control.

Workpiece material:

Softwood and hardwood, glulam and laminated wood.

Technical information:

Noise reduced design with staggered knives, applicable for MAN and MEC. Mountable on clamping arbor. Also applicable for rebating. Application of the same knives as peripheral knife and spur. The cutting edges of the HW knives are numbered. No clamping wedges, direct tangential knife clamping thus easy handling of the knife change without further setting gauges. By default mounted with HW turnblade knives ID **009543**.



Feed speed v_f depending on the number of teeth Z and speed n for solid wood (pre trimming and copy shaping)

Example:

$n = 9000 \text{ min}^{-1}$, $Z 2$ /copy shaping along the grain: $v_f = 12 \text{ m min}^{-1}$

Order example:

Tool set ID **132737** mounted on arbor ID **042951**, HSK-F 63 (A = 80 mm). When giving the arbor ID observe the required clamping diameter.



Copy shaping cutterhead - HeliCut 15

SL 499 1, WW 230 2 07

Tool Type	ABM mm	QAL	AM PCS	Z	V	ID
Cutterhead	60x81.5x20	HW	16	2	2	132600 ●
Cutterhead mounted on arbor	1-part	HW	16	2	2	132736 □
Cutterhead	80x81.5x30	HW	16	2	2	132608 ●
Cutterhead mounted on arbor	1-part	HW	16	2	2	132737 □
Cutterhead	125x93.7x30	HW	20	2	2+2	132604 ●
Cutterhead mounted on arbor	1-part	HW	20	2	2+2	132738 □
Cutterhead	125x116.6x30	HW	24	2	2+2	132605 ●
Cutterhead mounted on arbor	1-part	HW	24	2	2+2	132739 □

RPM: D 60 mm: $n_{\max} = 20000 \text{ min}^{-1}$

D 80 mm: $n_{\max} = 18000 \text{ min}^{-1}$

D 125 mm: $n_{\max} = 12000 \text{ min}^{-1}$

More dimensions on request.

Spare knives:

BEZ	ABM mm	QAL	BEM	VE PCS	ID
Turnblade knife	15x15x2.5	HW	HeliCut 15	10	009549 ●
Turnblade knife	15x15x2.5	HW-MF	HeliCut 15	10	009543 ●

Spare parts:

BEZ	ABM mm	ID
Countersink screw, Torx® 20	M5x18	114030 ●
Torx® key	Torx® 20	006091 ●

5. Routing

5.2 Jointing, rebating and bevelling

5.2.1 Jointing and rebating tools



Turnblade jointing / rebating cutterhead

Application:

For jointing and rebating with constant tool diameter.

Machine:

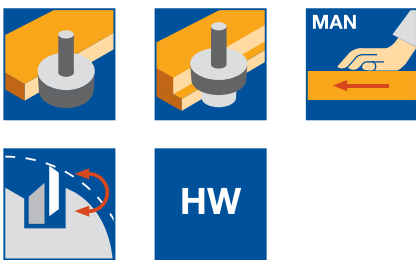
Stationary routers with/without CNC control, machining centres.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

HW turnblades Z 2 with straight cut for offset-free areas on pre-cut workpieces or on workpieces sized with roughing cutters. Mounted spurs especially for the production of tear-free rebates in softwood and hardwood. Smooth running through closed, round shape of the tool body.



HW, Z 2 / V 2

WL 402 1

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

RPM: $n_{max} = 18000 \text{ min}^{-1}$

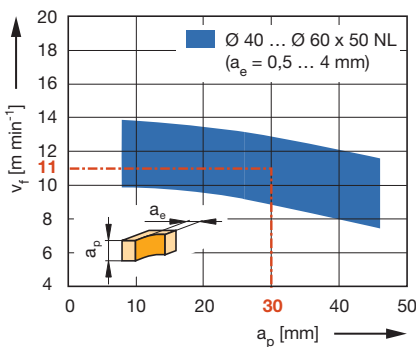
Spare knives:

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

Spare parts:

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

Feed speed v_f depending on cutting depth a_p



Workpiece material: Plastic coated chipboard

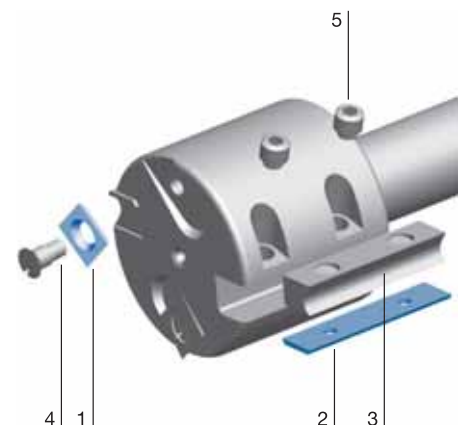
Operation: Jointing

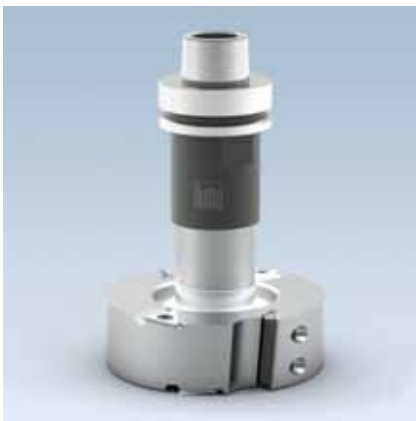
Speed: $n = 16000 \text{ min}^{-1}$

Correction factor for v_f : MDF = 0.9;

Paper coated = 0.8;

Machining across grain = 0.7





Turnblade jointing / rebating cutterhead

Application:

Optimized for rebating, jointing and grooving with and against feed.

Machine:

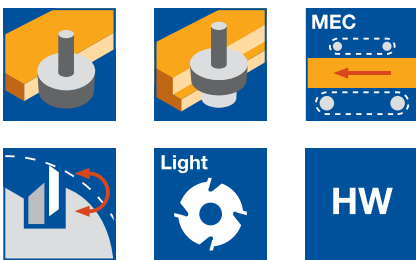
Stationary routers with/without CNC control, CNC machining centres.

Workpiece material:

Softwood and hardwood, compound materials of solid wood and wood derived materials, uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Cutterhead with turnblades and alternate shear angle, righthand rotation. Tool body in lightweight aluminium for a better dynamic situation.



HW, Z 2 / V 2

SL 199 2, SW 500 2

Tool Type	QAL	Z	V	ID
Cutterhead with spacers	HW	2	2	126039 ●
Cutterhead mounted on arbor	HW	2	2	426080 □

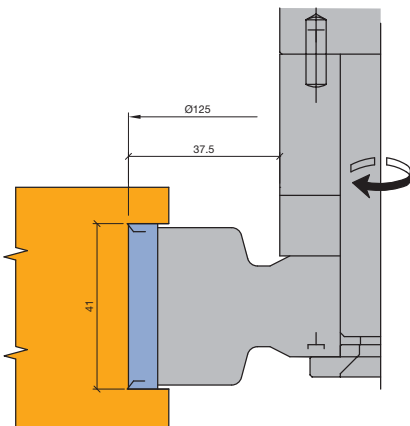
RPM: $n_{max} = 13700 \text{ min}^{-1}$

Spare knives:

BEZ	ABM	ID
	mm	
Turnblade knife	40x8x1.5	005074 ●
Turnblade spur VS2	19x19x2	005115 ●

Spare parts:

BEZ	ABM	ID
	mm	
Clamping wedge	38x18.75x8.27	009675 ●
Countersink screw, Torx® 20	M5x8.5	007808 ●
Clamping screw w. disc, Torx® 25	M6x18.5	007442 ●
Cylindrical screw with ISK	M5x80	007097 ●
Torx® key	Torx® 20	117503 ●
Torx® key	Torx® 25	117504 ●
Allen key	SW 4, L 100	005451 ●



Order example:

Tool set ID **426080** mounted on arbor ID **042847**, HSK-F 63 (A = 80 mm).

When ordering choose arbors with $d = 20 \text{ mm}$ and clamping length 70 mm.



Turnblade jointing / rebating cutterhead

Application:

Optimized for rebating, jointing and grooving with and against feed.

Machine:

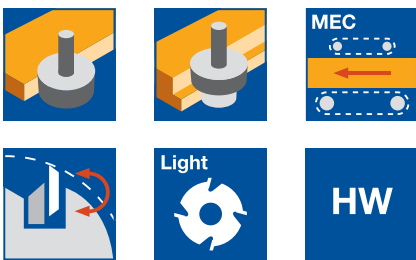
Stationary routers with/without CNC control, CNC machining centres.

Workpiece material:

Softwood and hardwood, compound materials of solid wood and wood derived materials, uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Cutterhead with turnblades and alternate shear angle, righthand rotation. Knife seatings for grooving and edging knives for seal groove and edge roundings. Tool body in lightweight aluminium for a better dynamic situation.

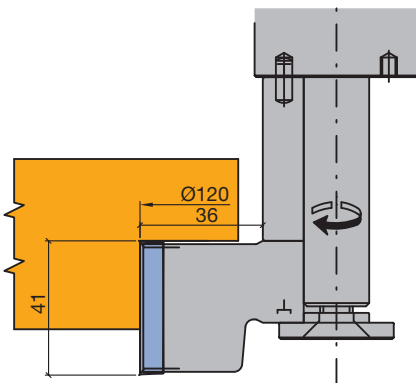


HW, Z 2 / V 2, with seatings for edging knives

SL 499 2, SW 530 2

Tool Type	QAL	Z	V	ID
Cutterhead with spacers	HW	2	2	126040 ●
Cutterhead mounted on arbor	HW	2	2	426081 □

RPM: $n_{max} = 14300 \text{ min}^{-1}$



Spare knives:

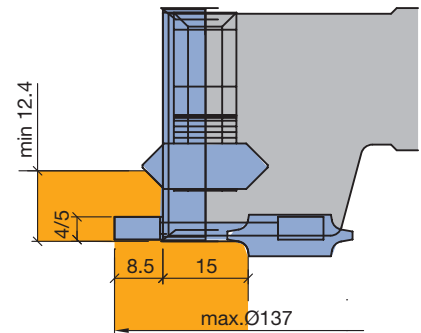
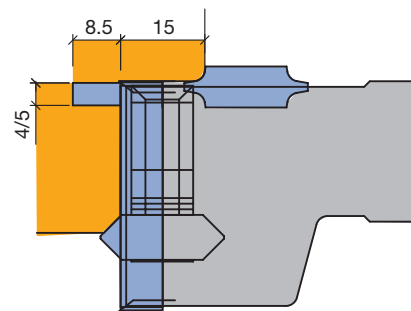
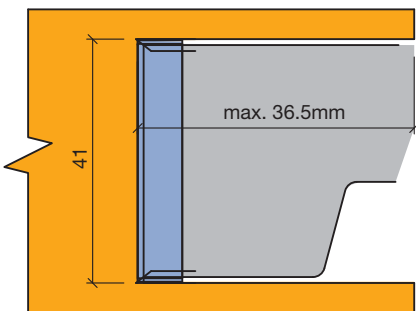
BEZ	ABM	R	FAW	ID
	mm	mm	°	
Turnblade knife	40x8x1.5			005074 ●
Turnblade spur VS2	19x19x2			005115 ●
Edging knife	KM 11/0		45°	008268 ●
Edging knife	KM 12/3	2		008307 ●
Turnblade grooving knife NA5	35.2x15x5			008318 ●
Turnblade grooving knife NA4	35.2x15x4			008317 ●

Spare parts:

BEZ	BEM	ABM	ID
		mm	
Set of spacers	for groove/edge knives	12.9x20x6.1	028565 ●
Spacer	for groove/edge knives	13/6.1x3	028185 ●
Spacer	for groove/edge knives	13/6.1x1	028037 ●
Countersink screw, Torx® 20	for groove/edge knives	M6x40	006090 ●
Countersink screw, Torx® 20	for groove/edge knives	M6x14	006085 ●
Clamping wedge		38x18.75x8.27	009675 ●
Countersink screw, Torx® 20	for spurs	M5x8.5	007808 ●
Clamping screw w. disc, Torx® 25		M6x18.5	007442 ●
Torx® 25			
Cylindrical screw with ISK		M5x80	007097 ●
Torx® key		Torx® 20	117503 ●
Torx® key		Torx® 25	117504 ●
Allen key		SW 4, L 100	005451 ●

Order example:

Tool set ID **426081** mounted on arbor ID **042847**, HSK-F 63 (A = 80 mm).
When ordering choose arbors with d = 20 mm and clamping length 70 mm.





Jointing cutterhead set with edging knives

Application:

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

Machine:

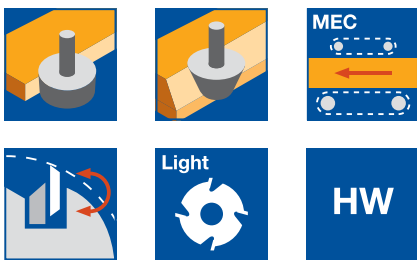
Stationary routers with/without CNC control, machining centres.

Workpiece material:

Softwood and hardwood, compound materials of solid wood and wood derived materials, uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex 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. Smooth running due to closed, round tool body.

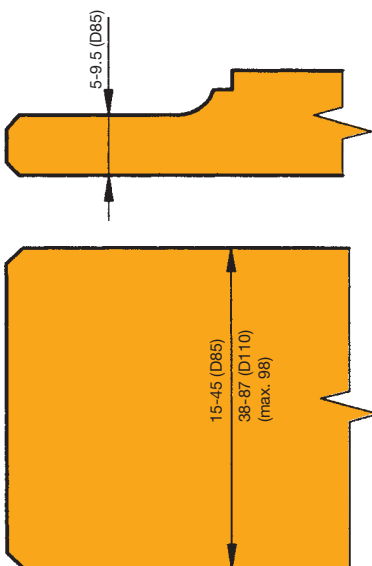
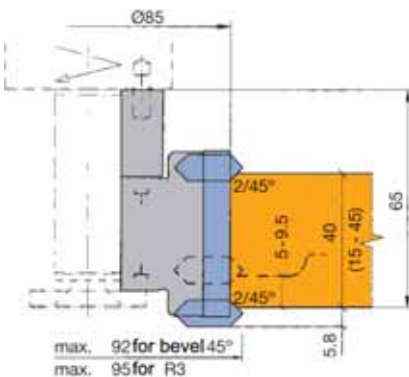


HW, Z 2, with seatings for edging knives

SL 299 2, SW 510 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: $n_{max} = 17900 \text{ min}^{-1}$

D 110 mm: $n_{max} = 15600 \text{ min}^{-1}$

Unless stated otherwise, tools are right hand rotation.

Cutter arbor see section 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 w. disc, Torx® 25	M6x18.5	007442 ●
Countersink screw, Torx® 20	M6x35	007098 ●
Torx® key	Torx® 20	117503 ●
Torx® key	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 $d = 20 \text{ mm}$ and clamping length 55 mm.



WhisperCut jointing and rebating cutterhead

Application:

For tear-free and low noise jointing and rebating of the cutting surface.

Machine:

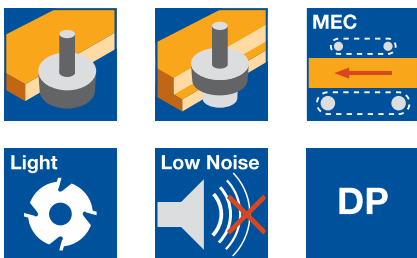
Stationary routers with/without CNC control, machining centres.

Workpiece material:

Chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, paper coated, fibre reinforced plastics (GFRP, CFRP etc.).

Technical information:

Cutterhead with DP knives with alternate shear angle for tear-free jointing edges and cutting surfaces. Noise reduced design with noise reduction of up to 5 dB(A) and highly efficient chip collection (>95%) by DFC. Significant weight reduction through lightweight aluminium tool body. Several times applicable through exchangeable knives. 0.6 mm reshaping area.



Diamaster WhisperCut jointing cutterhead

WM 230 2 01, WP 299 2

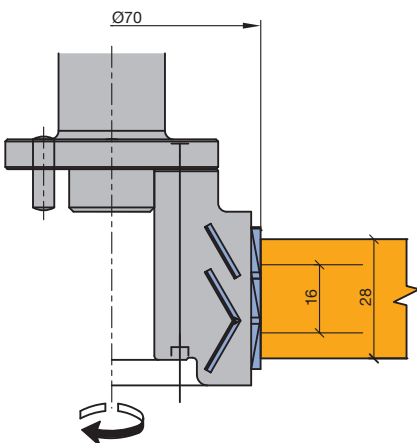
Tool Type	ABM mm	QAL	Z	ID
Cutterhead	70x33x20	DP	2/2/2	192273 ●
Cutterhead mounted on arbor	1-part/HD28	DP	2/2/2	192274 □

Diamaster WhisperCut rebating cutterhead

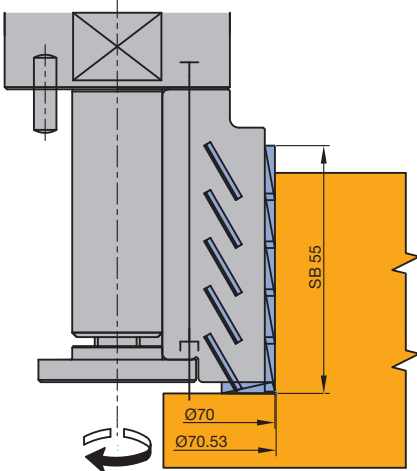
WM 430 2 01, WP 499 2

Tool Type	ABM mm	QAL	Z	ID
Cutterhead	70.53x55x20	DP	3x5	192275 ●
Cutterhead mounted on arbor	D70.53/SB55	DP	3x5	192276 □

Unless stated otherwise, tools are right hand rotation.
Cutter arbor see section Clamping Systems.



Diamaster WhisperCut jointing cutterhead



Diamaster WhisperCut rebating cutterhead

Order example:

Tool set ID **192274** mounted on arbor ID **041126**, shank 25x60 mm.

In case of order select arbors with d = 20 mm and biggest clamping length of the respective type.



Adjustable bevel cutterhead

Application:

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

Machine:

Stationary routers with/without CNC control, machining centres.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

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



Z 2

WP 341 1 01

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

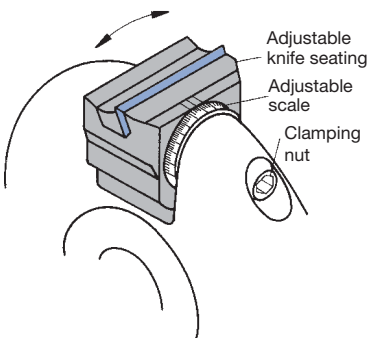
RPM: $n_{max} = 12000 \text{ min}^{-1}$

Spare knives:

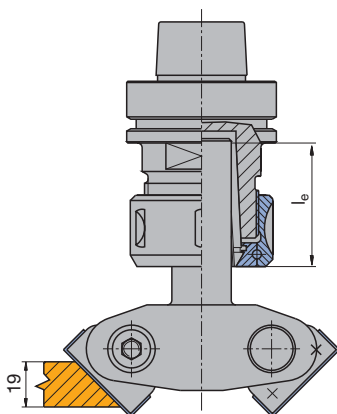
Part-no.	BEZ	ABM	QAL	VE	ID
		mm		PCS	
1	Turnblade knife	40x12x1.5	HW-05F	10	005085 ●

Spare parts:

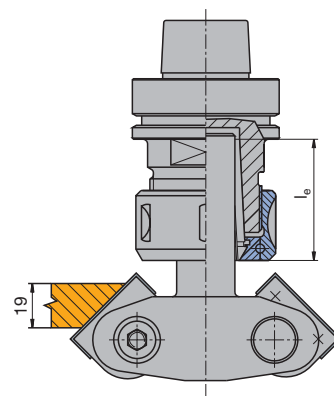
Part-no.	BEZ	ABM	BEM	ID
		mm		
2	Clamping wedge with pin	38x10.88x6		005348 ●
3	Allen screw	M6x12	ISK 3	006035 ●
	Allen key	SW 8, L 100		005437 ●
	Allen key	SW 3		005433 ●



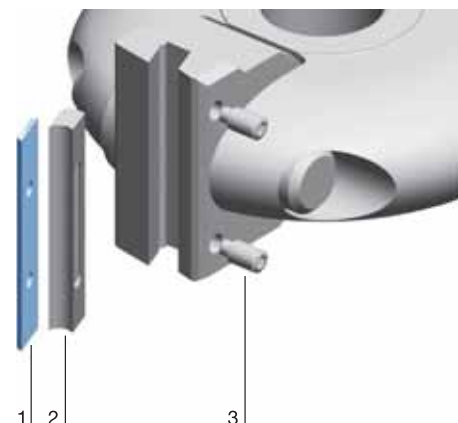
Bevel cutterhead with adjustable knife holder



Bevelling from above



Bevelling from below





Planing cutter - turnblade design

Application:

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

Machine:

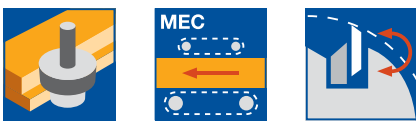
Stationary routers with/without CNC control, machining centres.

Workpiece material:

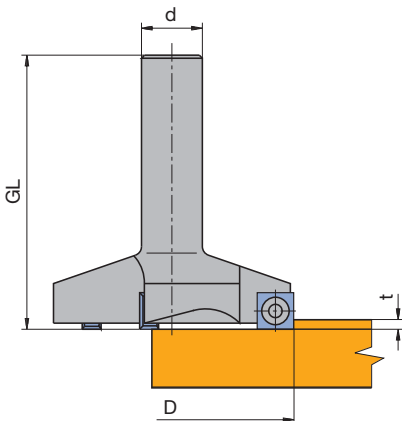
Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.), duromers, plastomers, solid surface material (Corian, Varicor etc.).

Technical information:

Cutting edge with shear angle; reversible and replaceable knives. D 135 and D 180 particularly suitable for planing MDF spoilboards in nesting applications. Knives for smooth and seamless cuts in solid wood or MDF see spare knives.



Example



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

Surface planing of MDF spoilboards in nesting applications:

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

ID **041552** $n = 8400 \text{ min}^{-1}$

$v_f = 25 - 40 \text{ m min}^{-1}$

HW, Z 3, Z 4, Z 5

WL 400 2

D	GL	NL	S	Z	n_{\max}	DRI	ID
mm	mm	mm	mm		min^{-1}		
80	90	12	20x50	3	14000	RH	041550 ●
80	100	12	25x60	3	14000	RH	041551 ●
135	90	12	25x60	4	10000	RH	041553 ●
180	90	12	25x60	5	8400	RH	041552 ●

Spare knives:

BEZ	ABM	QAL	VE	ID
	mm		PCS	
Turnblade knife	12x12x1.5	HW-05F	10	005081 ●
Turnblade profile knife	12x12x1.5	HW-05		602529 ●

Spare parts:

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



Turnblade finishing cutter, Z 1

Application:

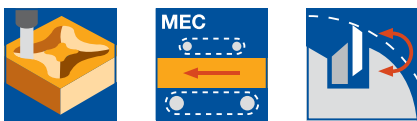
For machining V-groove profiles and for multi-purpose carving operations (decorative groove, 90° corner etc.).

Machine:

Stationary routers with/without CNC-control, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex, plywood etc.).



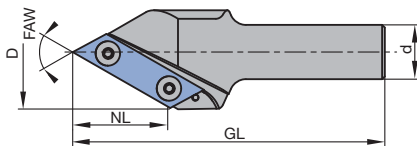
Technical information:

Cutterhead with exchangeable turnblades. 2 or 3 (ID **042932**) performance times through turning the knife. Extra long design (ID **042937**) particularly suitable for carving operations on 5-axes machines.

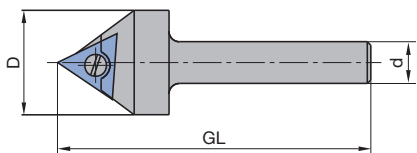
HW, Z 1

WL 300 2

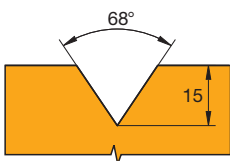
D	GL	NL	S	FAW	Z	P	DRI	ID
mm	mm	mm	mm	°				
29	90	15	12x40	68°	1	1	RH	042932 ●
35	125	42	20x50	45°	1	2	RH	042933 ●
42	115	35	20x50	60°	1	3	RH	042934 ●
42	180	35	20x50	60°	1	3	RH	042937 ●
54	100	27	20x50	90°	1	4	RH	042935 ●
54	100	27	20x50	91°	1	5	RH	042936 ●



V-groove cutter



V-groove cutter 68° (ID **042932**)



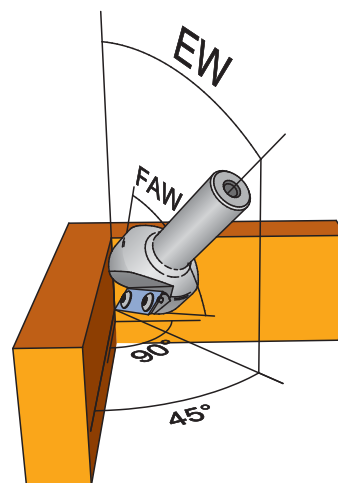
V-groove cutter in turnblade design with point 68° (ID **042932**)

Spare knives:

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



Determination of the adjustment angle EW depending on the bevel angle FAW while finish cutting 90° internal corners.

FAW	EW
45°	= 32.77°
60°	= 45.00°
68°	= 52.26°



DP V-grooving cutter for composite panels

Application:

Routers for cutting V-grooves in composite panels for folding works.

Machine:

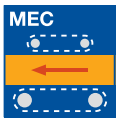
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Composite panels based on thermoplastic cores with aluminium coverage on both sides (e.g. Alucobond®, Dibond® etc.).

Technical information:

DP edge with shear angle. Resharpenable 3 to 5 times with normal wear.



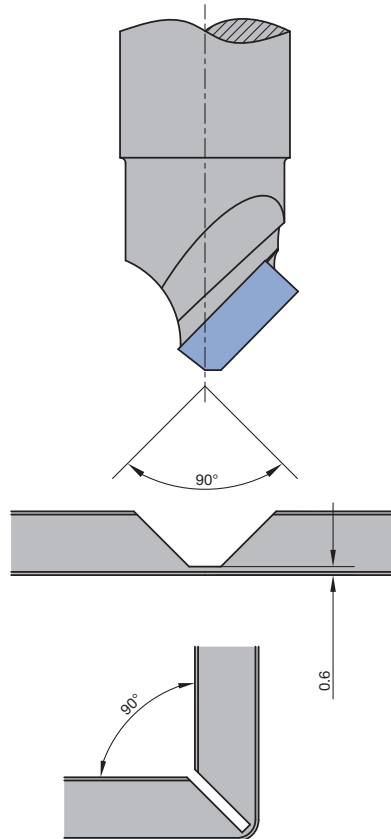
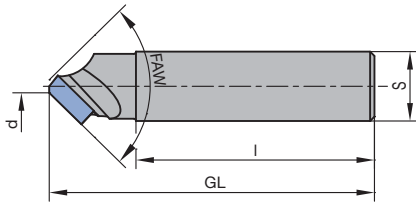
DP, Z 1

WO 311 2

D	d	NL	S	FAW	DRI	ID
mm	mm	mm	mm	°		
18	3	7.5	16x55	90°	RH	191100

RPM: n = 18000 - 24000 min⁻¹

Application example:



Production of folding corners on composite panels.



Profile cutterhead set - multi-purpose 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:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, modified timber for window construction, compound materials of solid wood and wood derived material, uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

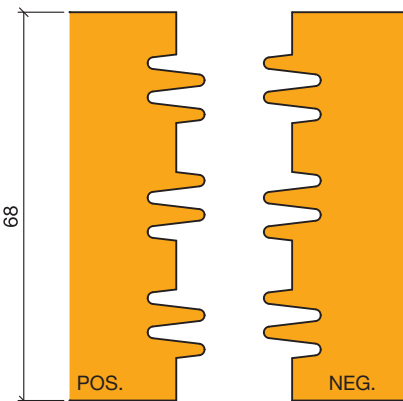
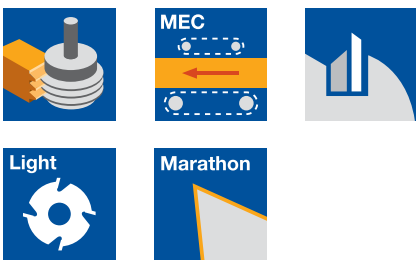
Variable wood thickness (56/56/60/68/78/90/92/106/110 mm) through cutting processes in several passes (profile splitting).

ZL 10 mm, HD 56 - 110 mm

SG 599 2 53

Tool Type	DRI	Z	ID
Glue joint cutter set, positive and negative	RH	2	953576 □

RPM: $n_{\max} = 12700 \text{ min}^{-1}$



Positive and negative glue joint profile, combined in one tool

Single tools

WE 600 2 53

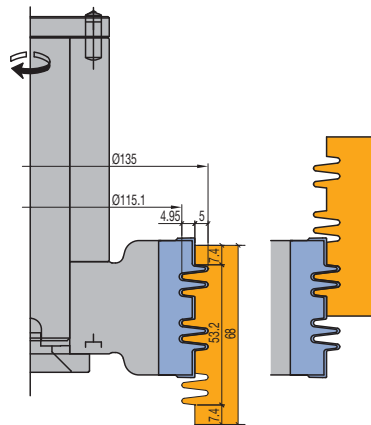
Tool Type	ABM mm	Z	ID
Profile cutterhead	135x53x30	2	414300 ●

Spare knives:

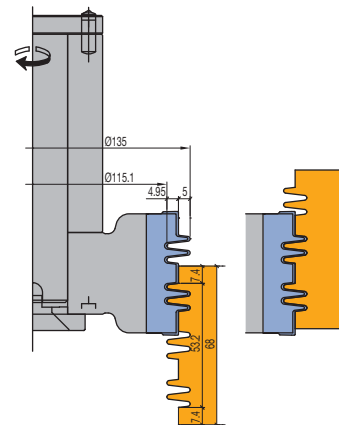
BEZ	ABM mm	QAL	ID
ProfilCut Q knife	53x20.5x2.4	MC	413532

Spare parts:

BEZ	ABM mm	ID
Clamping wedge profiled	48x18x8.27	629291
Clamping screw w. disc, Torx® 25	M6x18.5	007442 ●
Torx® key	Torx® 25	117504 ●



Glue joint profile positive, wood thickness 68 mm

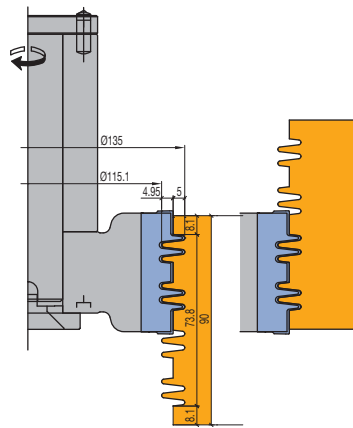


Glue joint profile negative, wood thickness 68 mm

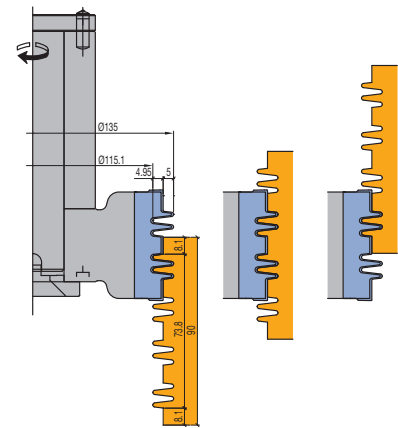
5. Routing

5.4 Profiling

5.4.1 Finger joints



Glue joint profile positive, wood thickness 90 mm



Glue joint profile negative, wood thickness 90 mm



Profile cutterhead set ProfilCut Q - door processing

Application:

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

Machine:

Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

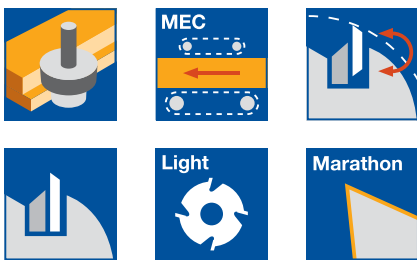
Softwood and hardwood, compound materials of solid wood and wood derived materials, uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

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

SE 540 2 53, SG 599 2 53, WE 500 2 53

Tool Type	ABM mm	Tool no.	Z	ID
Profile cutterhead	104x30x20	3	2	125270
Profile cutterhead	126.2x35x20	5	2	125271
Tooling set with spacers, without arbor	126.2,d20,2-part	3/5	2	126067
Tool set mounted on arbor	D ₀ =96;D=126.2; 2-part	3/5	2	426093

RPM: $n_{max} = 13600 \text{ min}^{-1}$

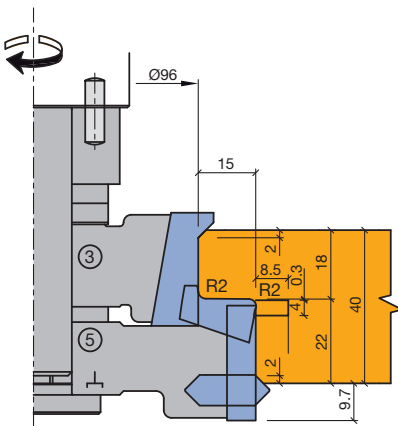
Unless stated otherwise, tools are right hand rotation.

Cutter arbor see section Clamping Systems.

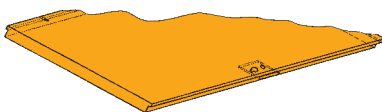
Spare knives:

Part- no.	BEZ	ABM mm	Tool no.	R mm	FAW °	QAL	VE PCS	ID
1	ProfilCut Q knife	30.2x14.1x2	3		45°	MC		619334
1	ProfilCut Q knife	30.2x14.2x2	3	1.5		MC		619335
1	ProfilCut Q knife	30.2x14.21x2	3	2		MC		619336
1	ProfilCut Q knife	30.2x14.22x2	3	3		MC		619337
1	ProfilCut Q knife	30.2x15.3x2	3	4		MC		619338
1	ProfilCut Q knife	30.2x15.31x2	3	5		MC		619339
1	ProfilCut Q knife, flute	30.2x14.1x2	3	3		MC		619340
1	ProfilCut Q knife	20.1x12.61x2	5	2		MC		413046
2	Turnblade knife	30x8x1.5	5			HW-05	10	005059 ●
3	Edging knife	KM 11/0	5		45°	HW-F		008268 ●
4	Turnblade grooving knife	35.2x15x4	5			HW-F		008317 ●

NA4



Example



ID **008270** = R 3 ID **008275** = R 3

ID **008307** = R 2

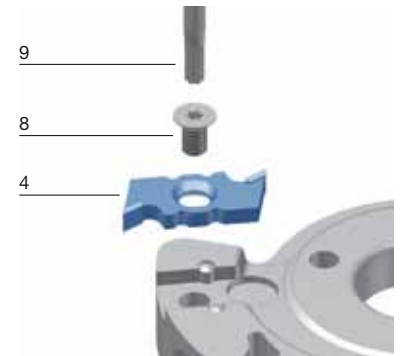
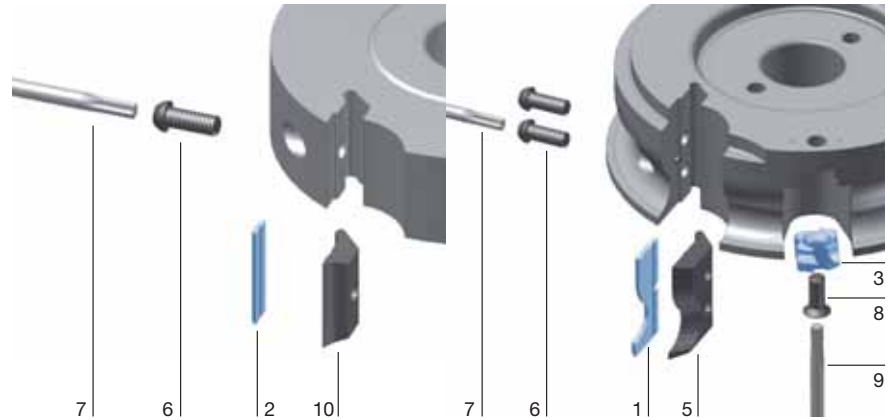
ID **008272** = R 1.5



ID **008271** = R 3

Spare parts:

Part-no.	BEZ	ABM	Tool no.	ID
		mm		
5	Clamping wedge ProfilCut Q	28x20x8.27	3	629208
5	Clamping wedge profiled	18x24.9x8.27	5	629268
6	Clamping screw w. disc, Torx® 25	M6x18.5		007442 ●
7	Torx® key	Torx® 25		117504 ●
8	Countersink screw, Torx® 20	M6x0.5x4.9		006243 ●
9	Torx® key	Torx® 20		117503 ●
10	Clamping wedge	28x18.75x8.27	5	009673 ●
	Magnetic setting gauge	0.3/0.8		005376 ●



5. Routing

5.4 Profiling

5.4.3 Tools for furniture and interior construction



Profile cutterhead set ProfilCut Q - Panel raising

Application:

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

Machine:

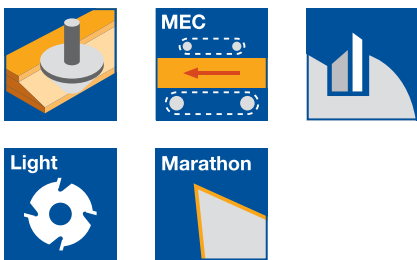
Stationary routers with/without CNC control, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood.

Technical information:

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



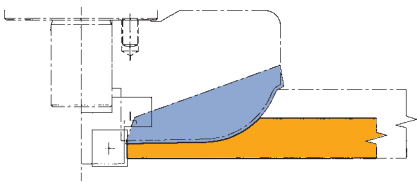
Panel raising depth max. 49 mm

SG 599 2 53, TR 811 0, WE 550 2 53

Tool Type	ABM mm	Z	n_{\max} min^{-1}	ID
Cutterhead	132x43x20	2	11600	125273
Cover plate	46x9.5x20			007925
Cutterhead mounted on arbor	1-part			426095

Unless stated otherwise, tools are right hand rotation.

Cutter arbor see section Clamping Systems.



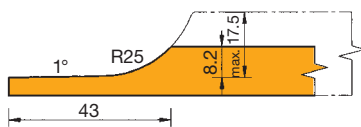
Spare knives:

Part-no.	BEZ	ABM mm	QAL	VE PCS	ID
1	Turnblade knife	12x12x1.5	HW-05F	10	005081 ●
1	ProfilCut Q knife	60x20.47x2	MC		619343

Spare parts:

Part-no.	BEZ	ABM mm	ID
2	Clamping wedge profiled	57x28.97x7.25	629255
3	Clamping screw w. disc, Torx® 25	M6x18.5	007442 ●
4	Torx® key	Torx® 25	117504 ●
	Oval head screw Torx® 15	M4x6	006225 ●
	Torx® key	Torx® 15	117507 ●

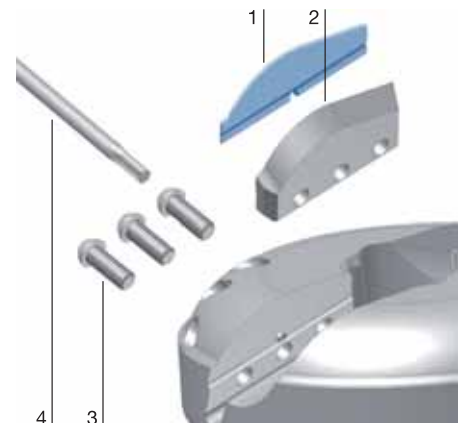
Example



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 Q - Panel raising

Application:

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

Machine:

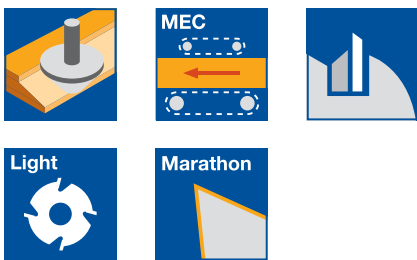
Stationary routers with/without CNC control, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood.

Technical information:

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



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

SG 599 2 53, TR 811 0, WE 550 2 53

Tool Type	P	ABM mm	QAL	Z	n_{max} min ⁻¹	ID
Cutterhead	1	110x40/40x20	MC	2	13800	125274 ●
Cover plate		46x9.5x20				007925
Cutterhead mounted on arbor		1-part	MC			426096 □

Unless stated otherwise, tools are right hand rotation.

Cutter arbor see section Clamping Systems.

Spare knives:

Part-no.	BEZ	P	ABM mm	QAL	VE PCS	ID
	Turnblade knife		12x12x1.5	HW-05F	10	005081 ●
1	ProfilCut Q knife	1	50x14.5x2	MC		619344
1	ProfilCut Q knife	2	50x14.56x2	MC		619345

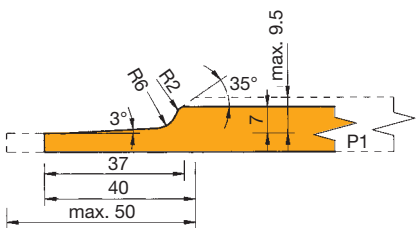
Spare parts:

Part-no.	BEZ	ABM mm	ID
2	Clamping wedge profiled	47x23x7.25	629256
3	Clamping screw w. disc, Torx® 25	M6x18.5	007442 ●
4	Torx® key	Torx® 25	117504 ●
	Oval head screw Torx® 15	M4x6	006225 ●
	Torx® key	Torx® 15	117507 ●

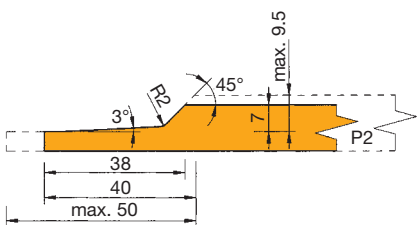
Jointing

WW 200 2 NN

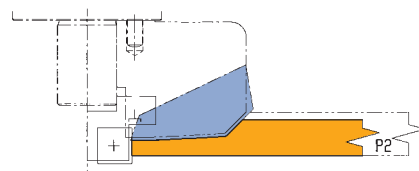
Tool Type	ABM mm	QAL	Z	ID
Jointing cutterhead	30/46x12/22.5x20	HW	2	041221



P1



P2



Example

5. Routing

5.4 Profiling

5.4.3 Tools for furniture and interior construction



Profile cutterhead set ProfilCut Q - Panel raising

Application:

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

Machine:

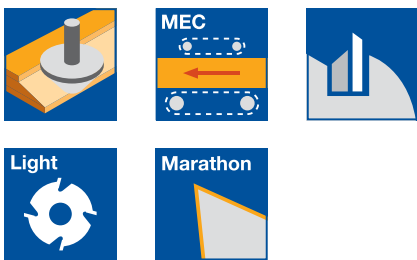
Stationary routers with/without CNC control, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood.

Technical information:

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



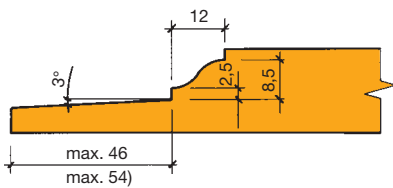
Panel raising depth max. 54 mm

SG 599 2 53, TR 811 0, WE 550 2 53

Tool Type	P	ABM mm	QAL	Z	n_{max} min ⁻¹	ID
Cutterhead	1	124x20/36x20	MC	2/2	12300	125275
Cover plate		46x9.5x20				007925
Cutterhead mounted on arbor	1	1-part	MC	2/2	12300	426097

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

Cutter arbor see section Clamping Systems.



P1



P2



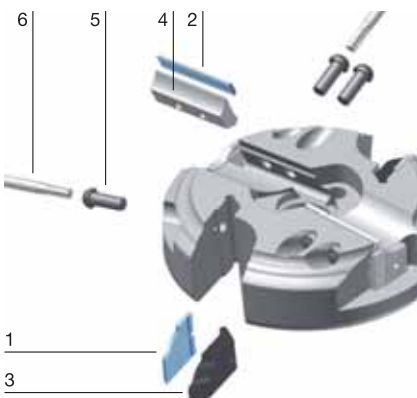
P3



P4



P5



Spare knives:

Part-no.	BEZ	P	ABM mm	QAL	VE PCS	ID
	Turnblade knife		12x12x1.5	HW-05F	10	005081 ●
1	ProfilCut Q knife	1	20x27x2	MC		619346
1	ProfilCut Q knife	2	20x27x2	MC		619347
1	ProfilCut Q knife	3	20x27x2	MC		619348
1	ProfilCut Q knife	4	20x27x2	MC		619349
1	ProfilCut Q knife	5	20x27x2	MC		619350
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	629257
4	Clamping wedge		37x16.8x7.25	009577 ●
5	Clamping screw w. disc, Torx® 25		M6x18.5	007442 ●
6	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 2 NN

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



Profile cutterhead set ProfilCut Q - Panel raising

Application:

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

Machine:

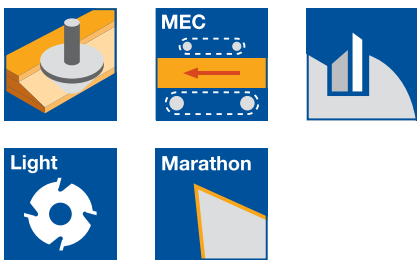
Stationary routers with/without CNC control, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood.

Technical information:

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



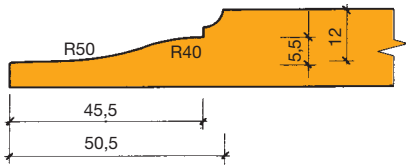
Panel raising depth max. 50 mm

SG 599 2 53, TR 811 0, WE 550 2 53

Tool Type	P	ABM mm	QAL	Z	n _{max} min ⁻¹	ID
Cutterhead	1	131x20/36x20	MC	2/2	11600	125276
Cover plate		46x9.5x20				007925
Cutterhead mounted on arbor	1	1-part	MC	2/2	11600	426098

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

Cutter arbor see section Clamping Systems.



P1



P2

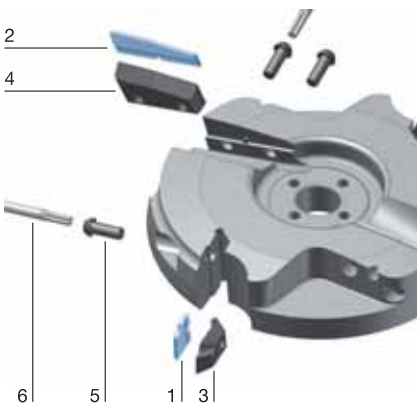
P3



P4

P5

Profile examples



Spare knives:

Part-no.	BEZ	P	ABM mm	QAL	VE PCS	ID
	Turnblade knife		12x12x1.5	HW-05F	10	005081 ●
1	ProfilCut Q knife	1	20x16x2	MC		619351
1	ProfilCut Q knife	2	20x16x2	MC		619352
1	ProfilCut Q knife	3	20x16x2	MC		619353
1	ProfilCut Q knife	4	20x16x2	MC		619354
1	ProfilCut Q knife	5	20x16x2	MC		619355
2	ProfilCut Q knife (pan.rais.)		50x11.68x2	MC		619356

Spare parts:

Part-no.	BEZ	P	ABM mm	ID
3	Clamping wedge profiled	1-5	18x26.46x8.27 (P1-5)	629258
4	Clamping wedge profiled		47x20.18x7.25 (raised panel)	629259
5	Clamping screw w. disc, Torx® 25		M6x18.5	007442 ●
6	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 Q - Door frame

Application:

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

Machine:

Stationary routers with/without CNC control, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood.

Technical information:

3 tools 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

AG 341 2 53, SE 640 2 53

Tool Type	Tool no.	Z	n _{max} min ⁻¹	ID
Profile set	1	2	14500	126068
Counter profile set	2/3	2/2	14500	126069
Tool set profile and counter profile mounted on arbor				426099

Frame profile one side, 12 mm rebate

AG 341 2 53, SE 640 2 53

Tool Type	Tool no.	Z	n _{max} min ⁻¹	ID
Profile set	1/3	2/2	14500	126070
Counter profile set	2/4	2/2	14500	126071
Tool set profile and counter profile mounted on arbor				426100

Frame profile one side, 6 mm tongue

AG 341 2 53, SE 640 2 53

Tool Type	Tool no.	Z	n _{max} min ⁻¹	ID
Profile set	1/5	2/2	14500	126072
Counter profile set	2/5	2/2	14500	126073
Tool set profile and counter profile mounted on arbor				426101

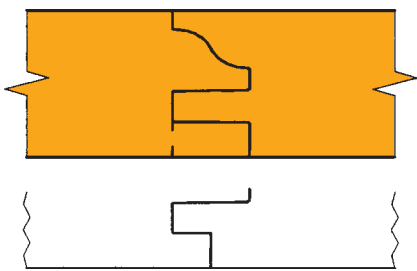
Single tools

WE 500 2 53, WW 210 2, WW 410 2 NN

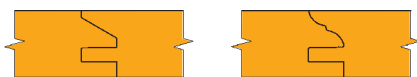
Tool Type	ABM mm	Tool no.	Z	ID
Profile cutterhead	109.1x30x20	1	2	125277
Profile cutterhead	109.0x20x20	2	2	125278
Rebating cutterhead	109.0x15x20	3	Z2/V2	023970 ●
Jointing cutterhead	85x15x20	4	2	023971 ●
Rebating cutterhead	97x15x20	5	Z2/V2	023972 ●

Cutter arbor see section Clamping Systems.

Tools supplied with profile 1 unless ordered otherwise.



P1



P2

P3



P4

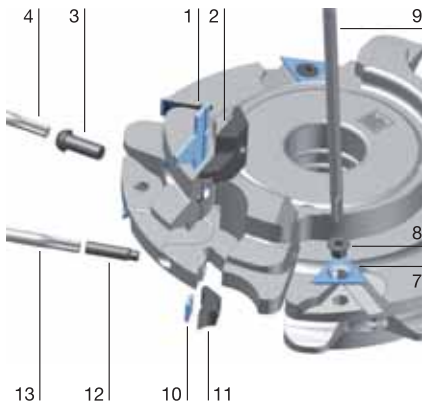
P5

Profile examples

5. Routing

5.4 Profiling

5.4.3 Tools for furniture and interior construction

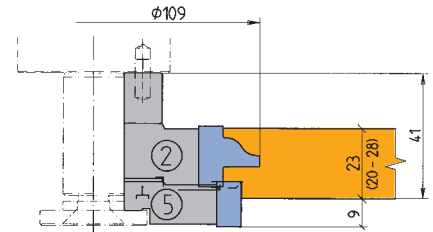
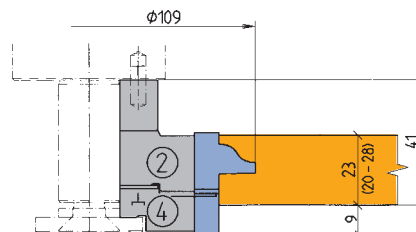
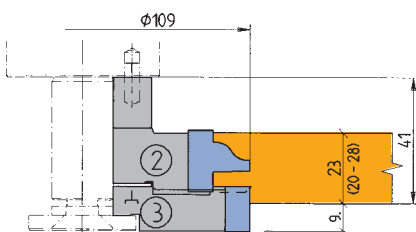
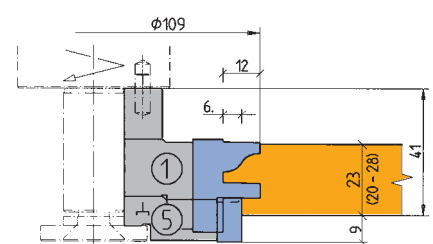
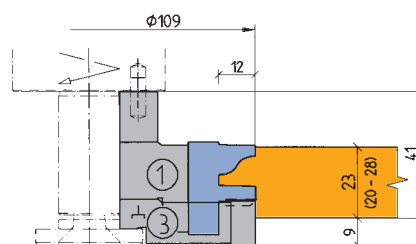
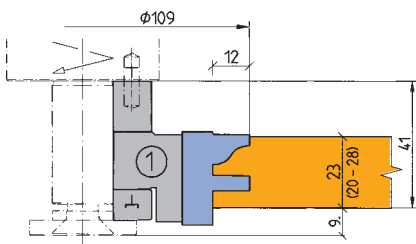
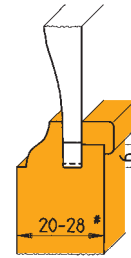
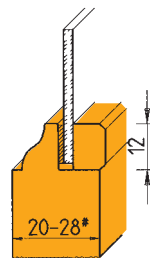
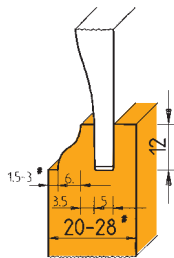


Spare knives:

Part- no.	BEZ	ABM mm	P	Tool no.	QAL	VE PCS	ID
1	ProfilCut Q knife	30x23.2x2	1	1	MC		619357
1	ProfilCut Q knife	30x23.2x2	2	1	MC		619358
1	ProfilCut Q knife	30x23.2x2	3	1	MC		619359
1	ProfilCut Q knife	30x23.2x2	4	1	MC		619360
1	ProfilCut Q knife	30x23.2x2	5	1	MC		619361
1	ProfilCut Q knife	20x23x2	1	2	MC		619362
1	ProfilCut Q knife	20x23x2	2	2	MC		619363
1	ProfilCut Q knife	20x23x2	3	2	MC		619364
1	ProfilCut Q knife	20x23x2	4	2	MC		619365
1	ProfilCut Q knife	20x23x2	5	2	MC		619366
7	Turnblade spur VS2	19x19x2		3/5	HW-F	10	005115 ●
10	Turnblade knife	14.7x8x1.5		3-5	HW-30F	10	005070 ●

Spare parts:

Part- no.	BEZ	ABM mm	P	Tool no.	ID
2	Clamping wedge profiled	28x29x8.27	1-5	1	629260
2	Clamping wedge profiled	18x29x8.27	1-5	2	629261
3	Clamping screw w. disc, Torx®	M6x18.5			007442 ●
4	Torx® key	Torx® 25			117504 ●
8	Countersink screw, Torx® 20	M5x8.5			007808 ●
9	Torx® key	Torx® 20			117503 ●
11	Clamping wedge	13x18.75x8.27		3-5	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

5. Routing

5.4 Profiling

5.4.3 Tools for furniture and interior construction



Profile cutterhead set ProfilCut Q - Door frame

Application:

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

Machine:

Stationary routers with/without CNC control, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood.

Technical information:

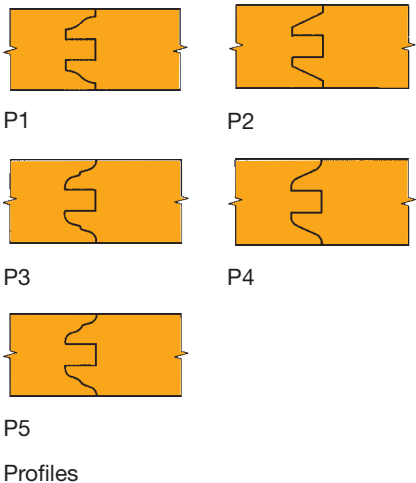
Tools with 5 profiles for double sided profiled frames and inserted or beaded panels. Additional tools available for changing from frames with profiles on both sides to frames with profiles on one side.



Frame profile two sides, 15 mm tongue

AG 341 2 53, SE 640 2 53

Tool Type	Tool no.	Z	n_{max} min ⁻¹	ID
Profile set	1/2/3	Z2/V2	13200	126074
Counter profile set	1/3	Z2	13200	126075
Tool set profile and counter profile mounted on arbor				426102



Frame profile one side, 15 mm rebate

AG 341 2 53, SE 640 2 53

Tool Type	Tool no.	Z	n_{max} min ⁻¹	ID
Profile set	3/5	Z2/V2	13200	126076
Counter profile set	1/4	Z2	13200	126077
Tool set profile and counter profile mounted on arbor				426103

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

SE 640 2 53, SG 699 2 53

Tool Type	Tool no.	Z	n_{max} min ⁻¹	ID
Profile and counter profile set	3/1/2/3	Z2/V2	13200	126078
Tool set profile and counter profile mounted on arbor			13200	426104

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

WW 211 2, WW 410 2 NN

Tool Type	Tool no.	Z	n_{max} min ⁻¹	ID
Profile	5	Z2/V2	13200	125032
Counter profile	4	2	13200	023085 ●

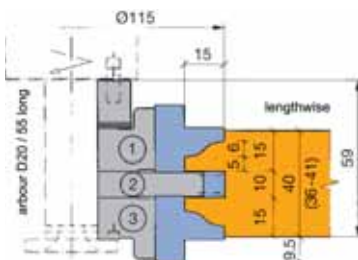
Cutter arbor see section Clamping Systems.

Wood thickness:

Frame profile two sides HD 36 - 41 mm

Frame profile one side HD 20 - 49 mm

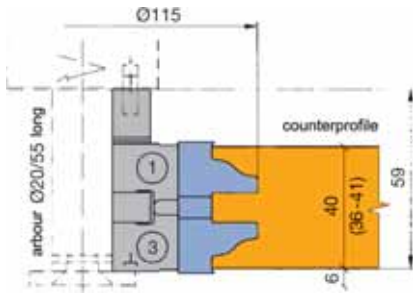
Frame profiled on two sides - longitudinal profile



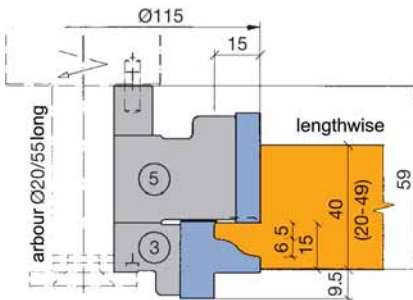
5. Routing

5.4 Profiling

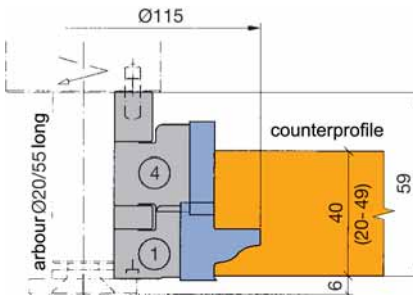
5.4.3 Tools for furniture and interior construction



Frame profiled on two sides - counter profile



Frame profiled on one side - longitudinal profile



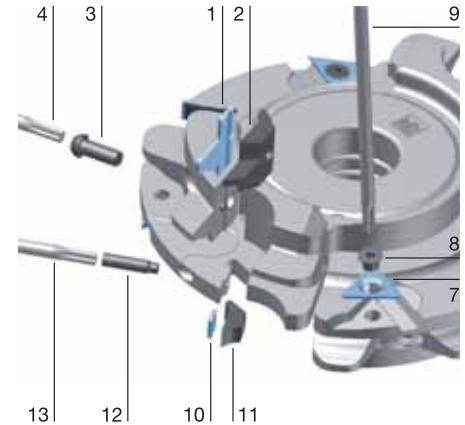
Frame profiled on one side - counter profile

Spare knives:

Part-no.	BEZ	ABM mm	P	Tool no.	QAL	VE PCS	ID
1	ProfilCut Q knife	25x27x2	1	3	MC		619291
1	ProfilCut Q knife	25x27x2	2	3	MC		619292
1	ProfilCut Q knife	25x27x2	3	3	MC		619293
1	ProfilCut Q knife	25x27x2	4	3	MC		619294
1	ProfilCut Q knife	25x27x2	5	3	MC		619295
1	ProfilCut Q knife	25x27x2	1	1	MC		619296
1	ProfilCut Q knife	25x27x2	2	1	MC		619297
1	ProfilCut Q knife	25x27x2	3	1	MC		619298
1	ProfilCut Q knife	25x27x2	4	1	MC		619299
1	ProfilCut Q knife	25x27x2	5	1	MC		619300
7	Turnblade spur VS2	19x19x2		2	HW-F	10	005115 ●
10	Turnblade knife	9.7x8x1.5		5	HW-30F	10	005197 ●
10	Turnblade knife	35x8x1.5		4	HW-30F	10	005073 ●
10	Turnblade knife	30x8x1.5		2/5	HW-30F	10	005072 ●

Spare parts:

Part-no.	BEZ	ABM mm	Tool no.	ID
2	Clamping wedge profiled	23x30x8.27	3	629237
2	Clamping wedge profiled	23x30x8.27	1	629238
3	Clamping screw w. disc, Torx® 25	M6x18.5		007442 ●
4	Torx® key	Torx® 25		117504 ●
8	Countersink screw, Torx® 20	M6x0.5x4.9		006243 ●
9	Torx® key	Torx® 20		117503 ●
11	Clamping wedge	9x18.75x8.27	2	009764 ●
11	Clamping wedge	28x18.75x8.27	4	009673 ●
11	Clamping wedge	33x18.75x8.27	5	009674 ●
12	Allen screw with shank, Torx® 15	M5x20		007380 ●
13	Torx® key	Torx® 15		117507 ●
	Magnetic setting gauge	0.3/0.8		005376 ●





Profile cutterhead set ProfilCut Q

Application:

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

Machine:

Stationary routers with/without CNC control, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood.

Technical information:

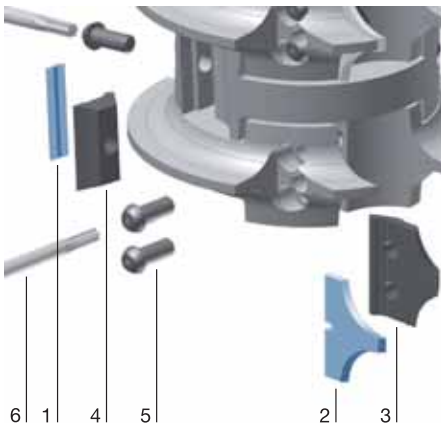
By combining jointing and bevelling or rounding cutterheads several different profiles and wood thicknesses can be covered. Different radii or bevel profile knives can be mounted in one cutterhead.



Jointing, rounding or bevelling tool

SG 599 2 53

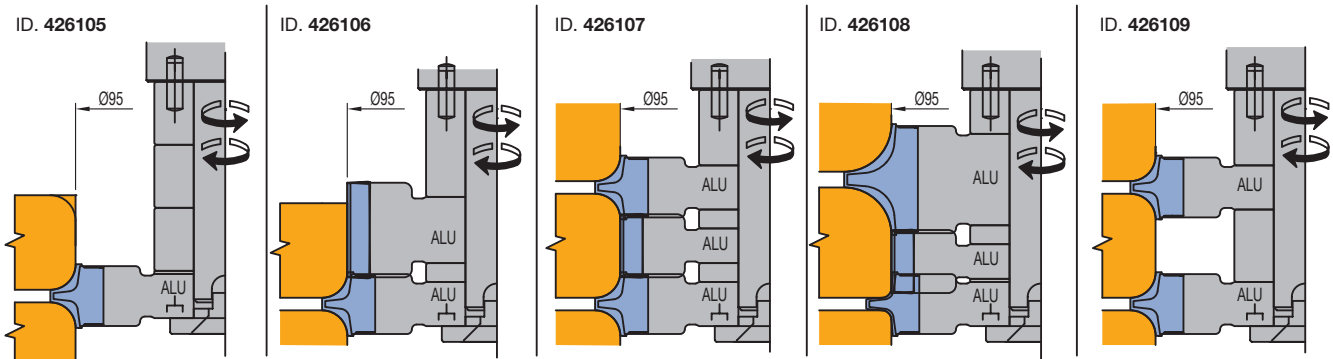
Tool Type	R mm	BEM	n _{max} min ⁻¹	ID
Rounding		No. of tools 1	12000	426105 □
Jointing rounding		No. of tools 2	12000	426106 □
Rounding jointing rounding	3 - 8	No. of tools 3	12000	426107 □
Rounding jointing rounding	3 - 8	No. of tools 3	12000	426108 □
		10 - 15		
Rounding rounding	3 - 8	No. of tools 2	12000	426109 □
		10 - 15		



Spare parts:

Part-no.	BEZ	ABM mm	Tool no.	ID
3	Clamping wedge	18x22x8.27	1	629231
3	Clamping wedge	33x29x8.27	2	629265
4	Clamping wedge	18x18.75x8.27	3	009671 ●
4	Clamping wedge	28x18.75x8.27	4	009673 ●
4	Clamping wedge	38x18.75x8.27	5	009675 ●
4	Clamping wedge	13x18.75x8.27	6	009670 ●
4	Clamping wedge	48x18.75x8.27	7	009677 ●
5	Clamping screw w. disc, M6x18.5			007442 ●
	Torx® 25			
6	Torx® key	Torx® 25		117504 ●
	Allen key	SW 4		005445 ●

Part nos. 1 and 2 - ProfilCut Q and turnblade knives - see detailed information on the following pages.



5. Routing

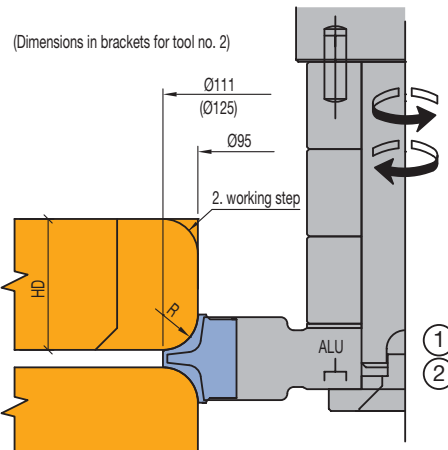
5.4 Profiling

5.4.4 Tools for multi-purpose profiles

ID. 426105

Order example:

- Combination ID 426105
- Profile description top down RL
- RL R5
- Cutter arbor from Lexicon / Larbor length 70mm / Larbor Ø 20mm



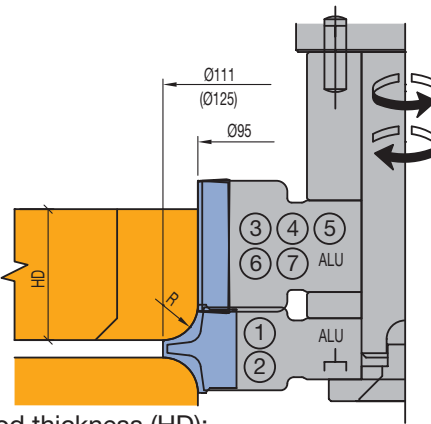
Spacers / tool weight

Tool No.	①	②
Spacer "X"	3x20.0 1x1.0	2x20.0 1x5.0 1x1.0
Weight (without cutter arbor)	0.8 kg	1.0 kg

ID. 426106

Order example:

- Combination ID 426106
- Profile description top down RL
- jointingSB20/R5
- Cutter arbor from Lexicon / Larbor length 70mm / Larbor Ø 20mm



Wood thickness (HD):

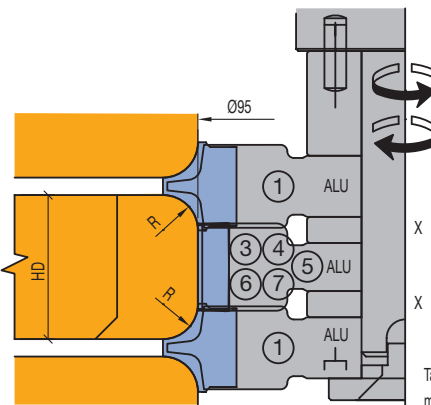
Table value for bevel knives: $R = 5 (9) \times 45^\circ$

Tool-combination	① ③	① ④	① ⑤	① ⑥	① ⑦	② ③	② ④	② ⑤	② ⑥	② ⑦
max. wood thickness	19 + R	29 + R	39 + R	14 + R	49 + R	19 + R	29 + R	39 + R	14 + R	49 + R
min. wood thickness	-	-	-	-	-	-	-	-	-	-
Spacer set "X"	50.0	40.0	30.0	55.0	20.0	35.0	25.0	15.0	40.0	5.0
Weight (without cutter arbor)	0.9 kg	1.0 kg	1.0 kg	1.1 kg	1.1 kg	1.1 kg	1.1 kg	1.2 kg	1.2 kg	1.2 kg

ID. 426107

Order example:

- Combination ID 426107
- Profile description top down RL
- R5/jointingSB20/R5
- Cutter arbor from Lexicon / Larbor length 70mm / Larbor Ø 20mm



At clamping height 75 mm no combination of tool no. ② is possible.

Table value for bevel knives:
min. wood thickness are with bevel $5 (9) \times 45^\circ$ calculated

Tool-combination	① ③ ①	① ④ ①	① ⑤ ①	① ⑥ ①	① ⑦ ①
max. wood thickness	17 + R + R	27 + R + R	37 + R + R	13 + R + R	47 + R + R (but max. 57)
min. wood thickness	21	31	41	16	51
Spacer set "X"	2x18.0	2x13.0	2x8.0	2x20.5	2x3.0
Weight (without cutter arbor)	1.0 kg	1.0 kg	1.1 kg	1.1 kg	1.1 kg

5. Routing

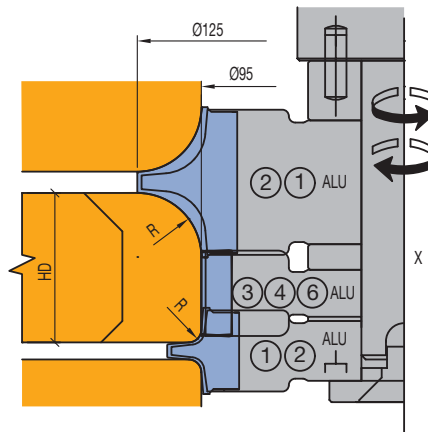
5.4 Profiling

5.4.4 Tools for multi-purpose profiles

ID. 426108

Order example:

- Combination ID 426108
- Profile description top down RL
- R12/jointingSB20/R5
- Cutter arbor from Lexicon / Larbor length 70mm / Larbor Ø 20mm



At clamping height 75 mm no combination of tool no. (2) and (2) or (6) and (7) is possible.
For combination no. (1) and (1) see ID 426107

Tool-combination	(1) (3) (2)	(1) (4) (2)	(1) (6) (2)
max. wood thickness	17+R+R	27+R+R	13+R+R
min. wood thickness	28	38	23
Spacer set "X"	2x10.5	2x5.5	2x13.0
Weight (without cutter arbor)	1.2 kg	1.3 kg	1.3 kg

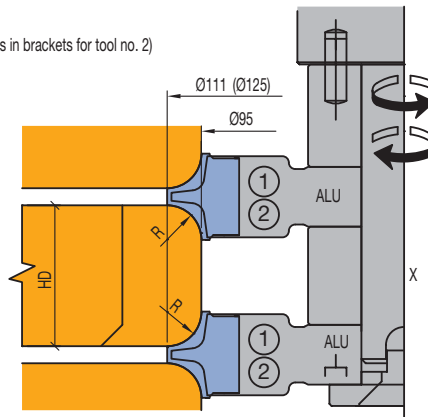
Table value for bevel knives: R = 5 (9) x 45°
min. wood thickness are with bevel 5 (9) x 45° calculated

ID. 426109

Order example:

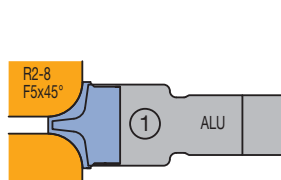
- Combination ID 426109
- Profile description top down RL
- R5/R5
- Cutter arbor from Lexicon / Larbor length 70mm / Larbor Ø 20mm

(Dimensions in brackets for tool no. 2)



Tool-combination	(1) (1)	(2) (2)	(1) (2)
max. wood thickness	57	41	49
min. wood thickness	R + R but min. 10	R + R but min. 24	R + R but min. 17
Spacer set "X"	47	17	32
Weight (without cutter arbor)	0.9 kg	1.3 kg	1.1 kg

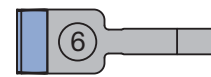
Table value for bevel knives: R = 5 (9) x 45°
min. wood thickness are with bevel 5 (9) x 45° calculated



Spare part:
Clamping wedge 629231

WZ 125377 ME 619245	R2	WZ 125282 ME 619249	R6
WZ 125279 ME 619246	R3	WZ 125283 ME 619250	R7
WZ 125280 ME 619247	R4	WZ 125284 ME 619251	R8
WZ 125281 ME 619248	R5	WZ 125285 ME 619253	F5x45°

SB 15



WZ 125302
ME 5070
(VE 10 pcs.)
Wedge 9670

SB 20



WZ 125299
ME 5071
(VE 10 pcs.)
Wedge 9671

SB 30



WZ 125300
ME 5072
(VE 10 pcs.)
Wedge 9673

SB 40

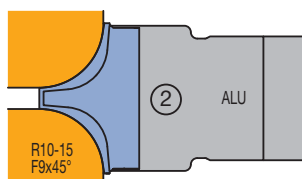


WZ 125301
ME 5074
(VE 10 pcs.)
Wedge 9675

SB 50



WZ 125303
ME 5075
(VE 10 pcs.)
Wedge 9677



Spare part:
Clamping wedge 629265

WZ 125286 ME 619384	R10	WZ 125290 ME 619388	R14
WZ 125287 ME 619385	R11	WZ 125291 ME 619389	R15
WZ 125288 ME 619386	R12	WZ 125292 ME 619390	F9x45°
WZ 125289 ME 619387	R13		

5. Routing

5.4 Profiling

5.4.4 Tools for multi-purpose profiles



Profile cutterhead - radii / bevel profile

Application:

For rounding workpieces with different radii or 45° bevelling.

Machine:

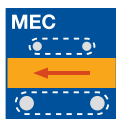
Stationary routers with/without CNC control, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.), duromers, plastomers, solid surface material (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 set of radius profile knives

AG 740 2

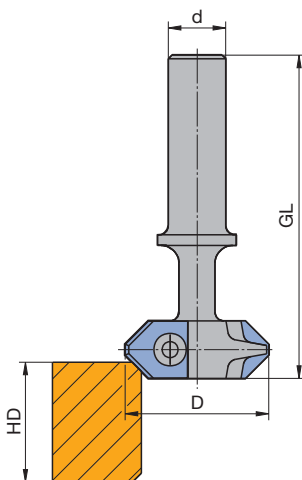
Tool Type	D mm	S mm	Z	DRI	ID
1 tool body + 2 pcs. R2, R3, R4, R5 knives each in wooden box	40	16x60	2	RH	043105 ●

Spare knives:

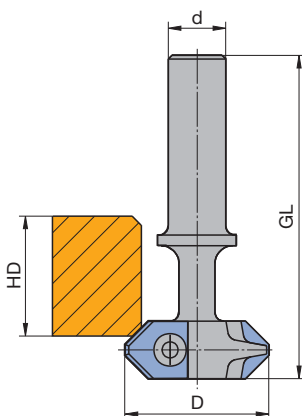
BEZ	ABM mm	QAL	R mm	FAW °	ID
Exchange knife	16x17.5x2	HW	2.0		005132 ●
Exchange knife	16x17.5x2	HW	3.0		005133 ●
Exchange knife	16x17.5x2	HW	4.0		005134 ●
Exchange knife	16x17.5x2	HW	5.0		005135 ●
Exchange knife	16x17.5x2	HW		45°	009525 ●

Spare parts:

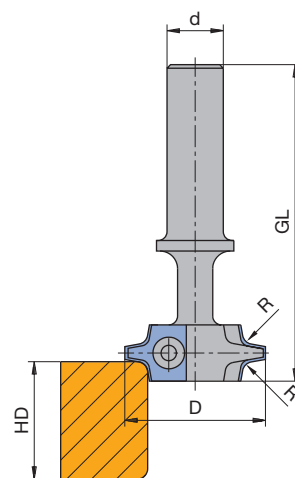
BEZ	ABM mm	ID
Oval head screw Torx® 15	M4x6	006225 ●
Torx® key	Torx® 15	005457 ●



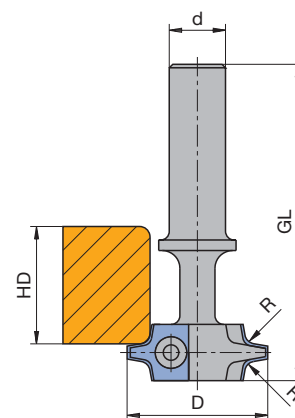
Machining chamfers on the top side of the workpiece



Machining chamfers on the bottom side of the workpiece



Machining radius on the top side of the workpiece



Machining radius on the bottom side of the workpiece



Multi-purpose profile cutterhead, Z 1

Application:

For cutting decorative grooves and internal profiles.

Machine:

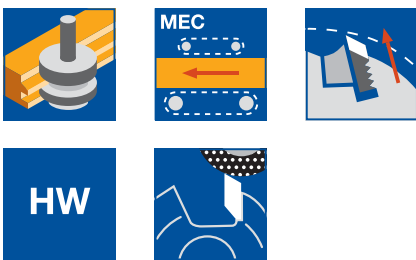
Stationary routers with/without CNC-control, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex 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.

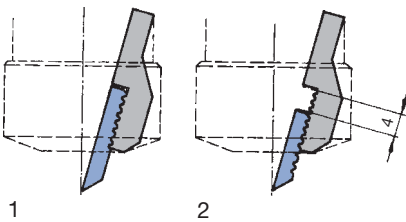


For profiles, Z 1, cutting in end grain

WP 500 1

D	GL	SB	S	Z	DRI	ID
mm	mm	mm	mm			
15	88.5	7	16x50	1	RH	042930 ●

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



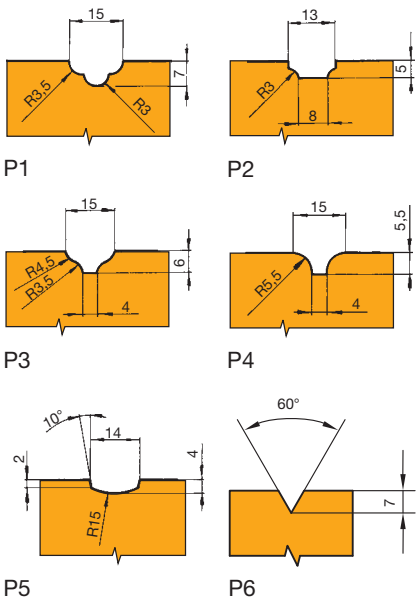
1 = Knife as new
2 = Maximum adjustment of resharpened knife

Spare knives:

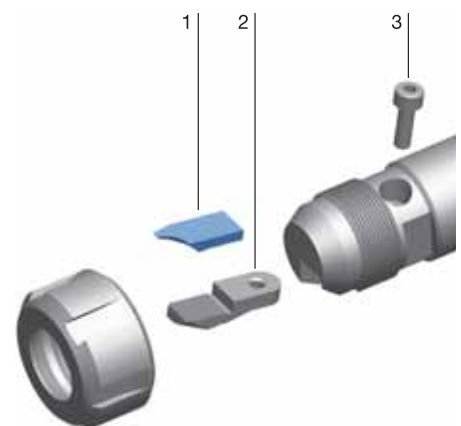
Part-no.	BEZ	P	ABM	QAL	ID
			mm		
1	Profile knife	1	20.7x9x3	HW	006945 ●
1	Profile knife	2	20.7x9x3	HW	006946 ●
1	Profile knife	3	20.7x9x3	HW	006947 ●
1	Profile knife	4	20.7x9x3	HW	006948 ●
1	Profile knife	5	20.7x9x3	HW	006949 ●
1	Profile knife V-groove	6 (60°)	20.7x9x3	HW	006950 ●
1	Back serrated blank		9x21.7x3	HW	007490 ●

Spare parts:

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



Profile examples





Multi-purpose profile cutterhead, Z 2

Application:

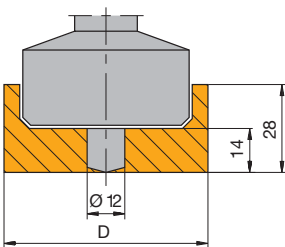
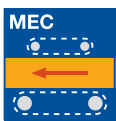
For cutting decorative grooves, internal profiles and combined external and internal profiles.

Machine:

Stationary routers with/without CNC control, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).



Profile area

Technical information:

Cutterhead with profiled changeable 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).

For profiles, Z 2, cutting in end grain

WG 502 2 01

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

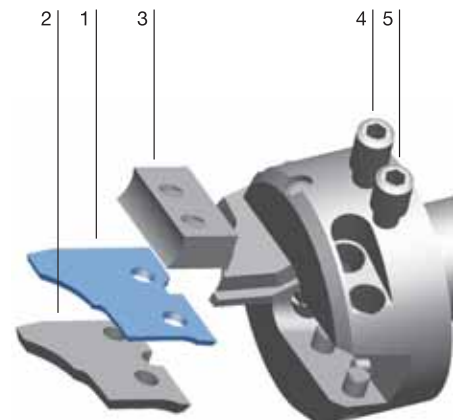
Replaceable profile knife: 6 pcs. each A and B

Backing plates: 1 pc. each A and B

Profile examples see next page.

Spare parts:

Part-no.	BEZ	ABM	QAL	ID
		mm		
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, AT 199 0

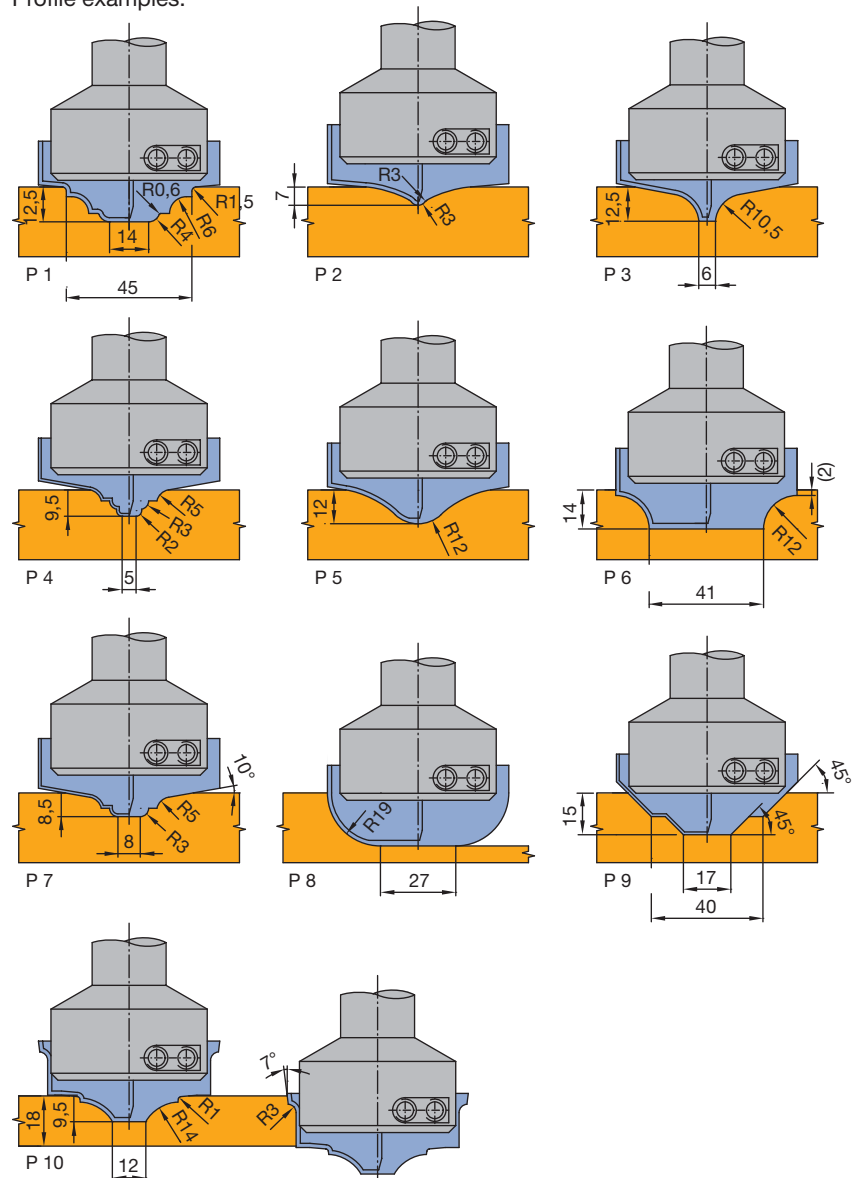
P	ID	ID
	Set of backing plates	Set of profile knives
1	692200 <input type="checkbox"/>	692000 <input type="checkbox"/>
2	692201 <input type="checkbox"/>	692001 <input type="checkbox"/>
3	692202 <input type="checkbox"/>	692002 <input type="checkbox"/>
4	692203 <input type="checkbox"/>	692003 <input type="checkbox"/>
5	692204 <input type="checkbox"/>	692004 <input type="checkbox"/>
6	692205 <input type="checkbox"/>	692005 <input type="checkbox"/>
7	692206 <input type="checkbox"/>	692006 <input type="checkbox"/>
8	692207 <input type="checkbox"/>	692007 <input type="checkbox"/>
9	692208 <input type="checkbox"/>	692008 <input type="checkbox"/>
10	692209 <input type="checkbox"/>	692009 <input type="checkbox"/>

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.

Profile examples:



5. Routing

5.4 Profiling

5.4.4 Tools for multi-purpose profiles



Router cutter - ProfilDiamaster ball nose

Application:

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

Machine:

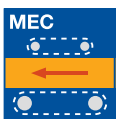
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

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

Technical information:

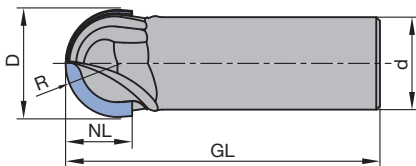
DP profile edges with shear angles. Resharpenable 3 to 5 times with normal wear.



DP, Z 2

WO 531 2 51

D	GL	NL	S	R	DRI	ID
mm	mm	mm	mm	mm		
20	75	12	20x55	10	RH	191035
20	80	12	25x60	10	RH	191036
30	80	18	20x55	15	RH	191037
30	85	18	25x60	15	RH	191038
40	90	24	20x55	20	RH	191039
40	95	24	25x60	20	RH	191040



RPM: n = 18000 - 24000 min⁻¹

Other profiles on request.

Application example:

MDF wall covering or MDF furniture part





Profile cutterhead VariForm with backing plates

Application:

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

Machine:

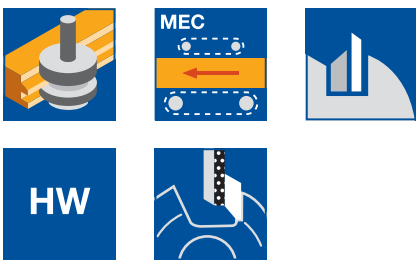
Stationary routers with/without CNC control, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood (HW-30F), chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex 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	RH	135400 ●
110	76	50/60	25x60	15	RH	135401 ●

RPM: $n_{max} = 12000 \text{ min}^{-1}$

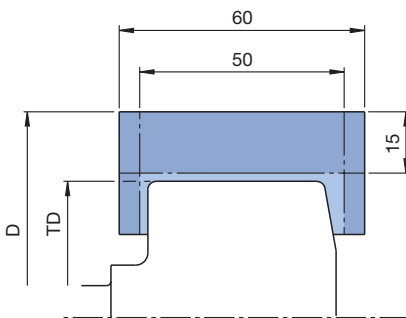
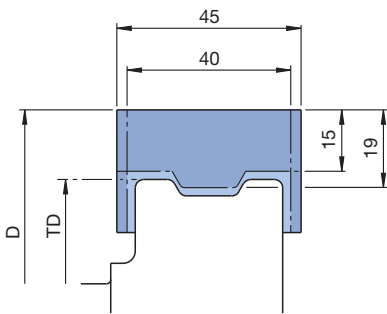
Supplied with clamping wedges, but without backing plates and knives.

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



Grooving cutters, shank 8 mm

Application:

Router cutter for sizing and grooving.

Machine:

Portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Straight cut, ground on end or with tungsten carbide plunging tip.



HW solid, Z 2

WO 120 1 16

D	GL	NL	S	QAL	DRI	ID
mm	mm	mm	mm			
3	45	6	8x30	HW solid	RH	072612 □
4	45	10	8x30	HW solid	RH	072608 □
5	45	12	8x30	HW solid	RH	072613 □
6	55	14	8x40	HW solid	RH	041984 ●
7	55	17	8x30	HW solid	RH	041958 ●
8	55	20	8x30	HW solid	RH	041985 ●
8	60	30	8x30	HW solid	RH	072650 □

HW, Z 2, short version

WO 120 1 09, WO 120 1 10

D	GL	NL	S	QAL	DRI	ID
mm	mm	mm	mm			
9	55	25	8x30	HW	RH	040304 ●
10	60	20	8x40	HW	RH	040440 ●
10	60	25	8x30	HW	RH	072614 □
11	60	20	8x40	HW	RH	040441 ●
12	60	20	8x40	HW	RH	072368 ●
13	60	20	8x40	HW	RH	072369 ●
14	60	20	8x40	HW	RH	072370 ●
15	60	20	8x40	HW	RH	072371 ●
16	70	20	8x50	HW	RH	072372 ●
18	60	20	8x40	HW	RH	072374 □
19	60	20	8x40	HW	RH	072376 □
20	60	20	8x50	HW	RH	072377 ●
22	60	20	8x50	HW	RH	072379 ●
24	60	20	8x40	HW	RH	072380 ●
25	60	20	8x40	HW	RH	072381 ●
30	60	20	8x40	HW	RH	072382 ●

HW, Z 2, long version

WO 120 1 10

D	GL	NL	S	QAL	DRI	ID
mm	mm	mm	mm			
10	60	30	8x30	HW	RH	072651 □
12	60	30	8x30	HW	RH	072652 □
16	65	30	8x35	HW	RH	072373 ●
18	60	30	8x30	HW	RH	072375 ●
20	60	30	8x30	HW	RH	072378 ●

RPM: n = 18000 - 30000 min⁻¹



Grooving cutter, shank 12 mm

Application:

Router cutter for sizing and grooving. Grooving operation for automatic door seals.

Machine:

Portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Straight cut, tungsten carbide plunging tip (only WO 120 1 10). Long version for increased cutting depth (recommended in several steps).



HW, Z 2

WO 120 1 01, WO 120 1 10

D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
10	90	35	12x40	RH	072495 ●
12	90	40	12x40	RH	072496 ●
13.2	85	35	12x40	RH	072741 □
14	85	40	12x40	RH	072104 □
14	100	50	12x40	RH	072233 ●
15	85	35	12x40	RH	072742 □
16	90	45	12x40	RH	072105 ●
16	100	60	12x40	RH	072234 ●
18	90	45	12x40	RH	072106 ●
20	90	45	12x40	RH	072107 ●
22	90	45	12x40	RH	072108 ●
24	90	45	12x40	RH	072109 ●
30	90	35	12x40	RH	072498 ●

RPM: n = 18000 - 30000 min⁻¹

Table for selection of grooving cutter depending on door seal:

Door seal	Width mm	Depth mm	ID
Doppeldicht	12	40	072496
Kältefeind	12	40	072496
Planet HS	13,1	30	072741
Schall-Ex L	14,8	32	072742
Schall-Ex RD	14,8	28	072742
Schall-Ex Ultra	19,7	30	072107

5. Routing

5.5 Portable routers

5.5.1 Tools for sizing and grooving



Grooving cutter with internal threaded shank

Application:

Router cutter for sizing and grooving.

Machine:

Portable routers. M10: Scheer, M12: DeWalt (former ELU).

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Straight cut, ground on end or tungsten carbide plunging tip.

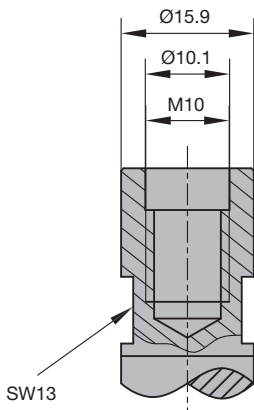


HW, Z 2

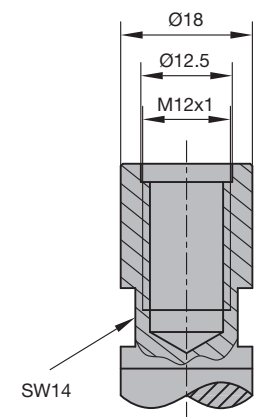
WO 120 1 06, WO 120 1 11, WO 120 1 12

D	GL	NL	S	QAL	DRI	ID
mm	mm	mm	mm			
10	67	35	M10	HW	RH	042050 ●
12	70	40	M12	HW	RH	040082 ●
16	75	45	M12	HW	RH	040084 ●
20	60	25	M12	HW	RH	039942 ●

RPM: n = 16000 - 24000 min⁻¹



Threaded shank M10



Threaded shank M12x1

5. Routing

5.5 Portable routers 5.5.1 Tools for sizing and grooving



Spiral grooving cutter HS

Application:

Router cutter for sizing and grooving.

Machine:

Portable routers.

Workpiece material:

Softwood and hardwood. Thermoplastics.

Technical information:

HS solid, spiral edges, ground plunging edge.

HS, Z 2

WO 160 1



D mm	GL mm	NL mm	S mm	Z	Twist	DRI	ID
6	50	21	8x25	2	RD	RH	072766 □
8	50	19	8x30	2	RD	RH	072391 □
10	60	30	8x30	2	RD	RH	072393 □
12	52	20	8x30	2	RD	RH	072185 □
14	52	20	8x30	2	RD	RH	072186 □
16	52	20	8x30	2	RD	RH	072187 □
18	57	25	8x30	2	RD	RH	072188 □
20	57	25	8x30	2	RD	RH	072189 □

RPM: n = 18000 - 30000 min⁻¹



Spiral grooving cutter HW

Application:

Router cutter for sizing and grooving.

Machine:

Portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.). Thermoplastics. Solid surface material (Corian, Varicor etc.).

Technical information:

Solid tungsten carbide, spiral edges, ground plunging edge.



HW, Z 2

WO 160 1

D mm	GL mm	NL mm	S mm	QAL	Z	Twist	DRI	ID
4	45	10	8x25	HW solid	2	RD	RH	072615 □
6	50	21	8x30	HW solid	2	RD	RH	072759 □
8	55	25	8x30	HW solid	2	RD	RH	072397 □
10	60	30	8x30	HW solid	2	RD	RH	072399 □

RPM: n = 18000 - 30000 min⁻¹



Turnblade router cutter

Application:

Router cutter for sizing and grooving to finish quality.

Machine:

Portable routers. M10: Scheer, M12: DeWalt (former ELU).

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.), duromers, plastomers, solid surface material (Corian, Varicor etc.).

Technical information:

Straight cut with tungsten carbide plunging tip. For grooving with constant tool diameter. Knife tip designed for seamless cut. Teflon coated tool body to reduce resin and glue build up.



HW, Z 1+1, with plunging tip

WL 101 1

D mm	GL mm	NL mm	S mm	DRI	ID
16	70	30	8x30	RH	071050 □
18	70	30	8x30	RH	071051 □
20	54	12	8x25	RH	040824 ●
16	64	30	M10	RH	040911 ●
20	64	30	M10	RH	040915 ●
16	64	30	M12x1	RH	040917 ●
18	64	30	M12x1	RH	040919 ●
20	64	30	M12x1	RH	040921 ●

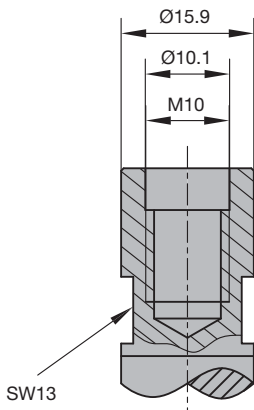
RPM: n = 16000 - 18000 min⁻¹

Spare knives:

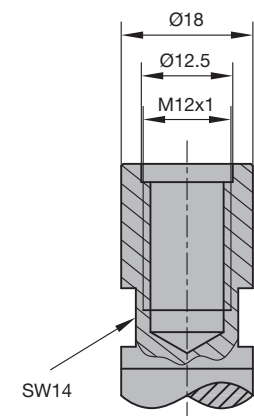
BEZ	Knife	ABM mm	for D mm	QAL	VE PCS	ID
Turnblade knife	Plunging tip	7.6x12x1.5	16 - 18	HW-05F	10	005080 ●
Turnblade knife	Plunging tip	9x12x1.5	20	HW-05F	10	005158 ●
Turnblade knife	Peripheral tip	12x12x1.5		HW-05F	10	005081 ●
Turnblade knife	Peripheral tip	30x12x1.5		HW-05F	10	005161 ●

Spare parts:

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



Threaded shank M10



Threaded shank M12x1



Turnblade router cutter

Application:

Router cutter for sizing and grooving to finish quality.

Machine:

Portable routers.

Workpiece material:

Softwood, chipboard and fibre materials (MDF, HDF 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 limited 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	RH	041722 ●

HW, Z 1, without plunging tip

WL 100 1

D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
8	55	20	8x30	RH	041622 ●
10	60	25	8x30	RH	041641 ●
12	66	30	8x30	RH	041665 ●
14	66	30	8x30	RH	041670 ●

RPM: n = 16000 - 24000 min⁻¹

Spare knives:

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

Spare parts:

BEZ	ABM	for D	NL	ID
	mm	mm	mm	
Clamping wedge	17.5x5.15x2.8	8 - 9	20	009258 ●
Clamping wedge	22.5x6.54x4	10	25	009260 ●
Clamping wedge	27.5x7.35x3.7	12 - 14	30	009263 ●
Clamping wedge with plunging tip	45x3.7x7.35	14	45	009749 ●
Countersink screw, Torx® 8	M2.5x5.7	8 - 11		006231 ●
Countersink screw, Torx® 8	M3x7.6	12 - 14		006233 ●
Countersink screw, Torx® 15	M4x11.5	16 - 20		006234 ●
Torx® key	Torx® 8, L=40			006092 ●

5. Routing

5.5 Portable routers 5.5.1 Tools for sizing and grooving



Panel pilot router cutter

Application:

Router cutter for edge trimming of protruding veneer or laminates and for plunging and cutting apertures into veneered or laminated panels.

Machine:

Portable routers.

Workpiece material:

Chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., glulam (HPL, CPL etc.).

Technical information:

Straight cut with V-point plunging tip.

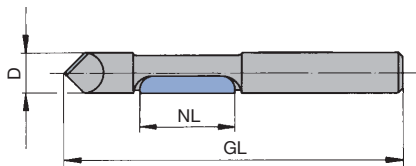


HW, Z 1, with guide pin

WO 250 0 01

D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
6	65	19	6x27	RH	039610 ●
8	65	19	8x30	RH	041586 ●

RPM: n = 18000 - 30000 min⁻¹



Panel pilot router cutter Z 1 with V-point plunging tip

5. Routing

5.5 Portable routers

5.5.1 Tools for sizing and grooving



Grooving cutters

Application:

Router cutter for grooving panel edges.

Machine:

Portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

HW, Z 2, flat tooth, without arbor

WK 200 3 01



D	BO	SB	ID
mm	mm	mm	
40	6	1.5	039644 ●
40	6	1.8	039648 ●
40	6	2	039652 ●
40	6	2.5	039660 ●
40	6	3	039668 ●
40	6	3.5	039672 ●
40	6	4	039676 ●
40	6	5	070653 ●

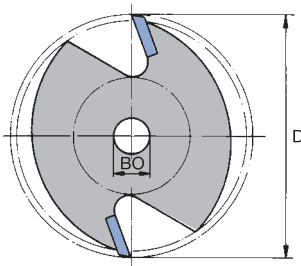
RPM: $n = 12000 - 14000 \text{ min}^{-1}$

Application:

For fixing of grooving cutter WK 200 3 01 without ball bearing guide.

Arbor without ball bearing guide ring

PM 100 0

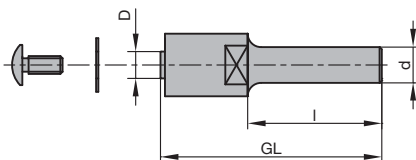


D	GL	S	DRI	ID
mm	mm	mm		
6	49	8x30	RH	072772 □

Spare parts:

BEZ	ABM	ID
	mm	
Washer	6x12x0.5	116009 ●
Clamping screw, Torx® 15	M4x9	007887 ●

WK 200 3 01 grooving cutter Z 2



PM 100 0 Arbor

5. Routing

5.5 Portable routers

5.5.1 Tools for sizing and grooving



Edge trimming cutter

Application:

Router for edge trimming or chamfering of protruding veneer, laminates or edgeband materials. Tool guided on the workpiece by ball bearing guide ring.

Machine:

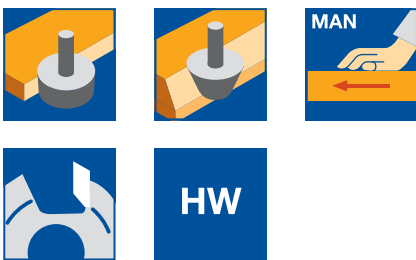
Portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Ball bearing guide ring for use with templates or guided by the workpiece edge.



Edge trimming cutter, HW, Z 2 with guide ring

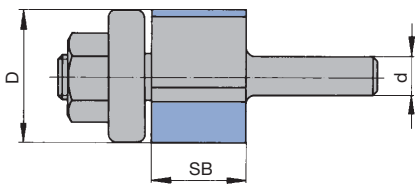
WO 203 1, WO 203 1 01

D	SB	S	BEM	DRI	ID
mm	mm	mm			
21	15	6x30	Guide ring on bottom	RH	039440 ●
12.7	25	8x30	Guide ring on bottom	RH	072509 □
19	25	8x30	Guide ring on shank side	RH	072572 □

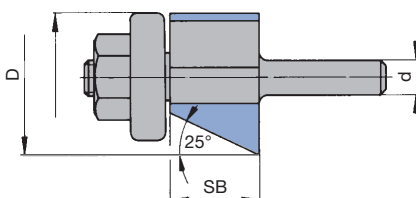
RPM: n = 18000 - 27000 min⁻¹

Spare parts:

BEZ	BEM	ABM	ID
		mm	
Ball bearing	to ID 072509	12.7x4.97x4.76	008088 ●
Ball bearing	to ID 072572	19.05x12.7x4.97	008105 ●
Ball bearing guide	to ID 039440	21x7.2x15.88	072157 ●



Edge trimming cutter with guide ring on bottom



Square bevel trimming cutter with guide ring on bottom

Square bevel trimming cutter, HW, Z 1+1 / bevel 45°

WO 314 1 01

D	D1	SB	S	FAW	DRI	ID
mm	mm	mm	mm	°		
24	18	11	8x30	45°	RH	070477 □

RPM: n = 18000 - 27000 min⁻¹

Spare parts:

BEZ	BEM	ABM	ID
		mm	
Ball bearing guide	to ID 070477	18x8x15.88	070828 ●

5. Routing

5.5 Portable routers

5.5.1 Tools for sizing and grooving



Turnblade jointing / bevel cutter

Application:

Router cutter for edge trimming or bevelling on machines with copy shaping guide ring, side stop or guide rail systems.

Machine:

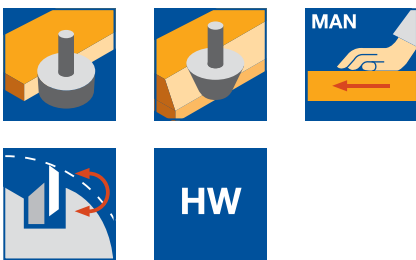
Portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Tools with ball bearing guide ring for use with templates or guided by the workpiece edge. Replaceable tungsten carbide turnblade knives.



HW, Z 2, with ball bearing guide ring

WL 220 1, WL 320 1

Class.	D mm	GL mm	NL mm	S mm	FAW °	DRI	ID
WL 220 1	19	52.7	12	8x30	0°	RH	072776 □
WL 220 1	19	64.5	20	8x30	0°	RH	040765 ●
WL 220 1	19	74.5	30	8x30	0°	RH	040774 ●
WL 320 1	27	60		8x30	45°	RH	072767 □

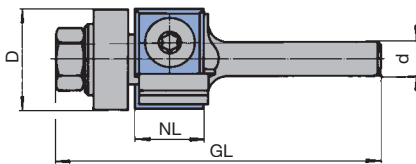
RPM: n = 18000 - 30000 min⁻¹

Spare knives:

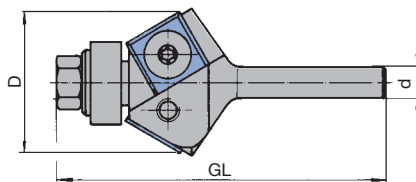
BEZ	Knife	BEM	ABM mm	QAL	VE PCS	ID
Turnblade knife	Peripheral tip	Bevel 45°	12x12x1.5	HW-05F	10	005081 ●
Turnblade knife	Peripheral tip		20x12x1.5	HW-05F	10	005083 ●
Turnblade knife	Peripheral tip		30x12x1.5	HW-05F	10	005084 ●

Spare parts:

BEZ	BEM	ABM mm	ID
Ball bearing	D19	19x6x6	008082 ●
Ball bearing	D27/45°	12.7x4.97x4.76	008088 ●
Nut	NL30	M6	005651 ●
Oval head screw Torx® 15	NL12	M4x5	007038 ●
Clamping screw, Torx® 15	NL12/45°	M4x9	007887 ●
Oval head screw Torx® 15	NL20/30	M4x6	006225 ●
Torx® key		Torx® 15	005457 ●



WL 220 1/0°-jointing cutter with guide ring



WL 320 1/30°-bevel cutter with guide ring



Rebating cutter

Application:
Router for cutting rebates.

Machine:
Portable routers.

Workpiece material:
Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:
Straight cut, ball bearing guide ring. Variable rebating width by changing the guide rings.



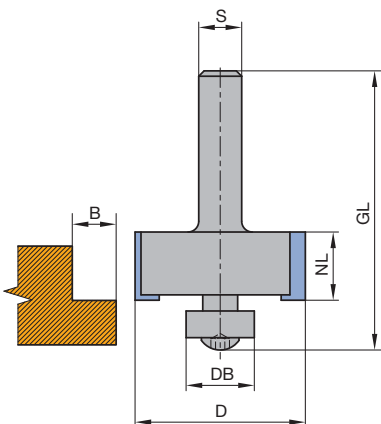
HW, Z 2
WO 434 1

D	DB	GL	NL	S	QAL	DRI	ID
mm	mm	mm	mm	mm			
31.7	12.7	54	12.7	8x30	HW	RH	072479 □

RPM: n = 16000 - 22000 min⁻¹

Spare parts:

BEZ	ABM	B	ID
	mm	mm	
Ball bearing	9.53x3.17x4.76	11	008087 ●
Ball bearing	12.7x4.97x4.76	9.5	008088 ●
Ball bearing guide	16x8x4.76	7.9	072629 ●
Ball bearing guide	19x8x4.76	6.35	072630 ●
Ball bearing guide	22x8x4.76	4.9	072631 ●
Oval head screw Torx® 15	M4x8		007407 ●



Note:
Variable rebating widths by changing the guide rings.

DB	9,53	12,7	16	19	22
B	11	9,5	7,9	6,35	4,9



Turnblade rebating cutter

Application:
Router for cutting rebates.

Machine:
Portable routers.

Workpiece material:
Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:
Straight cut, ball bearing guide ring. Variable rebating width by changing the guide rings.



HW, Z 2, with set of ball bearing guide rings

AL 630 1

D	DB	GL	NL	S	QAL	DRI	ID
mm	mm	mm	mm	mm			
38	12.7	54	12.7	8x30	HW	RH	072521 □

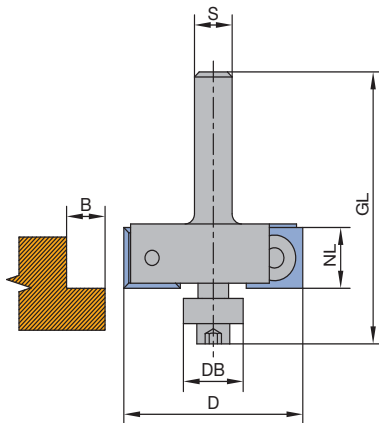
RPM: n = 18000 - 27000 min⁻¹

Spare knives:

BEZ	ABM	QAL	ID
	mm		
Turnblade knife	12x12x1.5	HW-05F	005081 ●

Spare parts:

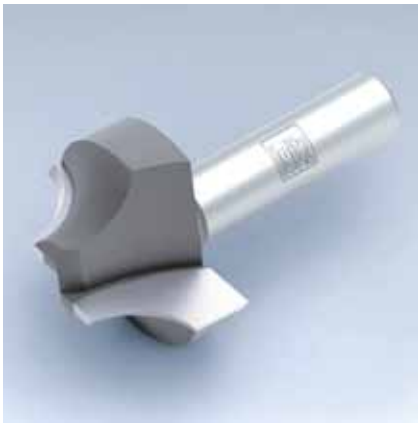
BEZ	ABM	B	ID
	mm	mm	
Ball bearing	9.53x3.17x4.76	11	008087 ●
Ball bearing	12.7x4.97x4.76	9.5	008088 ●
Ball bearing guide	16x8x4.76	7.9	072629 ●
Ball bearing guide	19x8x4.76	6.35	072630 ●
Ball bearing guide	22x8x4.76	4.9	072631 ●
Oval head screw Torx® 15	M4x8		007407 ●
Oval head screw Torx® 15	M4x6		006225 ●
Torx® key	Torx® 15		005457 ●



DB	9,53	12,7	16	19	22
B	14,2	12,6	11	9,5	8

Note:

Set of ball bearing guide rings consists of DB = 9.53 / 12.7 / 16 / 19 and 22 mm



Quarter round cutter

Application:

Router cutter for rounding with template, guide ring, side stop or guide rail system.

Machine:

Portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Edges with shear angle, without plunging tip.

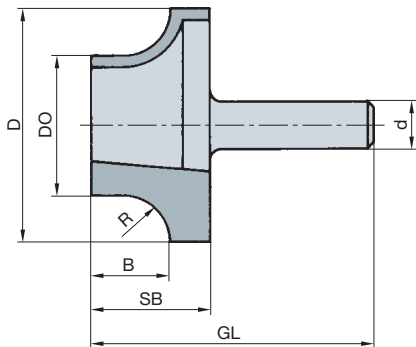


Quarter round cutter, HW, Z 2

WO 531 1 01

D	D ₀	SB	GL	S	R	DRI	ID
mm	mm	mm	mm	mm	mm		
17	11	10	41	8x30	3	RH	072429 ●
19	11	11	42	8x30	4	RH	072431 ●
21	11	12	43	8x30	5	RH	072433 ●
23	11	13	44	8x30	6	RH	072435 ●
27	11	15	45	8x30	8	RH	072437 ●

RPM: n = 18000 - 27000 min⁻¹



Quarter round cutter Z 2



Radius cutter

Application:

Router cutter for rounding over workpiece edges. Tool guided along workpiece by ball bearing guide.

Machine:

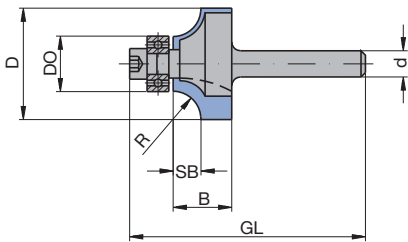
Portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Ball bearing guide ring on bottom for use with templates or guided by the workpiece edge.



Radius cutter

Radius cutter, HW, Z 2, shank 6 / 8 mm

WO 551 1

D	D ₀	GL	SB	B	S	R	DRI	ID
mm	mm	mm	mm	mm	mm	mm		
16.7	12.7	49	2	12	6x30	2	RH	072456 ●
18.7	12.7	50	3	7	6x30	3	RH	072458 ●
25.5	12.7	54	6	12	6x30	6.35	RH	072462 ●
17.1	12.7	49	2	12	8x30	2	RH	072636 ●
19.1	12.7	50	3	7	8x30	3	RH	072635 ●
22.7	12.7	52	5	9	8x30	5	RH	072634 ●
28.7	12.7	55	8	12	8x30	8	RH	072632 ●
31.7	12.7	56	9.5	16.5	8x30	9.5	RH	072637 □
42.7	12.7	62	15	22	8x30	15	RH	072639 □

RPM: n = 18000 - 27000 min⁻¹

Radius cutter, HW, Z 2, shank 12 mm

WO 551 1

D	D ₀	GL	SB	B	S	R	DRI	ID
mm	mm	mm	mm	mm	mm	mm		
63	12.7	80	26	32	12x40	25	RH	072501 ●

RPM: n = 16000 - 22000 min⁻¹

Spare parts:

BEZ	ABM	ID
	mm	
Ball bearing	12.7x4.97x4.76	008088 ●
Cap screw	M4x10	005846 ●

5. Routing

5.5 Portable routers 5.5.2 Tools for profiling



Bevel cutter

Application:

Router cutter for bevelling workpiece edges. Tool guided along workpiece by ball bearing guide.

Machine:

Portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Ball bearing guide ring on bottom for use with templates or guided by the workpiece edge.



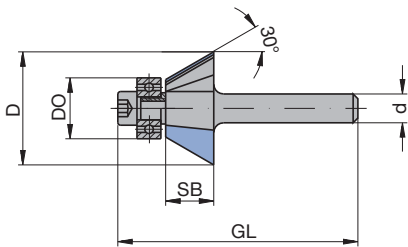
Bevel cutter, HW, Z 2, shank 8 mm

WO 314 1, WO 315 1

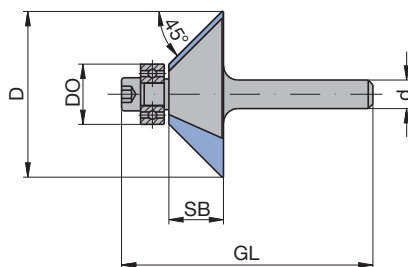
D	D ₀	GL	SB	FAW	S	DRI	ID
mm	mm	mm	mm	°	mm		
25.7	12.7	70	25.1	15°	8x30	RH	072522 □
25	12.7	50.3	12	30°	8x30	RH	072774 □
38.5	12.7	64.5	23	30°	8x30	RH	072523 □
26	12.7	47.8	7	45°	8x30	RH	072775 ●

Spare parts:

BEZ	ABM	for D ₀	ID
	mm	mm	
Ball bearing	12.7x4.97x4.76	12.7	008088 ●
Ball bearing	15.88x5x6.35	15.88	008081 ●
Cap screw	M4x10		005846 ●



WO 314 1 02 bevel cutter 30°



WO 314 1 03 bevel cutter 45°

Bevel cutter, HW, Z 2, shank 12 mm

WO 315 1

D	D ₀	GL	SB	FAW	S	DRI	ID
mm	mm	mm	mm	°	mm		
55	12.7	74	26	45°	12x40	RH	072517 ●

RPM: n = 18000 - 27000 min⁻¹

Spare parts:

BEZ	ABM	for D ₀	ID
	mm	mm	
Ball bearing	12.7x4.97x4.76	12.7	008088 ●
Cap screw	M4x10		005846 ●

5. Routing

5.5 Portable routers 5.5.2 Tools for profiling



Guttering mould cutter

Application:

Router cutter for cutting draining grooves and for copy shaping.

Machine:

Portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

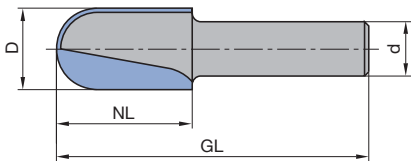
For use with separate guide rings and templates, side stop or guide rail system.



Guttering mould cutter, HW, Z 2, shank 8 mm

WO 531 1, WO 531 1 06

D	GL	NL	S	R	DRI	ID
mm	mm	mm	mm	mm		
8	38	8	8x30	4	RH	041153 <input type="checkbox"/>
16	65	25	8x30	5	RH	072616 <input type="checkbox"/>
12.7	40	10	8x30	6.35	RH	072403 <input type="checkbox"/>
16	41	11	8x30	8	RH	072405 <input type="checkbox"/>
19.4	41	11	8x30	9.7	RH	072057 <input type="checkbox"/>
25.4	44	14	8x30	12.7	RH	072058 <input type="checkbox"/>



Guttering mould cutter without guide ring

Guttering mould cutter, HW, Z 2, shank 12 mm

WO 531 1

D	GL	NL	S	R	DRI	ID
mm	mm	mm	mm	mm		
30	60	20	12x40	15	RH	072222 <input type="checkbox"/>
40	65	25	12x40	20	RH	072239 <input type="checkbox"/>

RPM: n = 18000 - 27000 min⁻¹



Guttering mould cutter with guide ring

Application:

Router cutter for cutting draining grooves and for copy shaping.

Machine:

Portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Ball bearing guide ring on top, for use with templates or guide rail system.



Guttering mould cutter, HW, Z 2, with guide ring

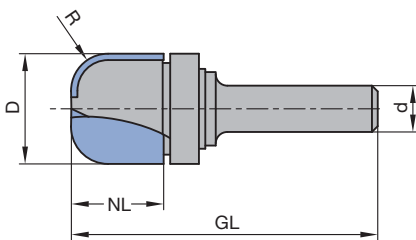
WO 551 1

D	GL	NL	S	R	DRI	ID
mm	mm	mm	mm	mm		
19	53	16	8x30	6.4	RH	072617 □

RPM: n = 18000 - 27000 min⁻¹

Spare parts:

BEZ	ABM	ID
	mm	
Ball bearing	19.05x12.7x4.97	008105 ●
Safety washer	12x1 DIN 471	008419 ●



Guttering mould cutter with guide ring



Guttering mould cutter with guide ring

Application:

Router for cutting cove moulds.

Machine:

Portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Cutting edges with shear angle, ball bearing guide ring on bottom for use with templates or guide rail system.



HW, Z 2

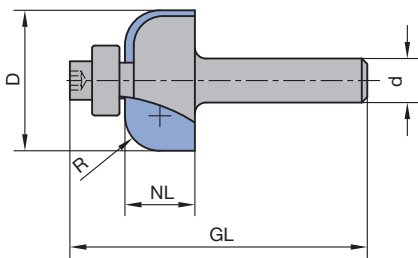
WO 551 1, WO 551 1 02

D	GL	NL	S	R	DRI	ID
mm	mm	mm	mm	mm		
25.5	54	12.7	8x30	6.35	RH	072471 □
28.8	56	14	8x30	8	RH	072473 □
31.7	56	14.3	8x30	9.5	RH	072475 □
38.1	57	16	8x30	12.7	RH	072477 □

RPM: n = 18000 - 27000 min⁻¹

Spare parts:

BEZ	ABM	ID
	mm	
Ball bearing	12.7x4.97x4.76	008088 ●
Cap screw	M4x10	005846 ●



Guttering mould cutter with guide ring



Dovetail cutter

Application:
Routers for dovetail joints.

Machine:
Portable routers.

Workpiece material:
Softwood and hardwood, laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:
Cutting edges with shear angle. Design with spurs for increased cutting quality.

HS/HW, Z 2, shank 8 mm, without spurs

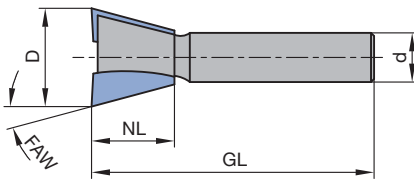
WO 610 1, WO 612 1



D mm	GL mm	NL mm	S mm	FAW °	QAL	DRI	ID
13.8	46	13.5	8x30	15°	HS	RH	072757 □
20	49	17	8x30	15°	HS	RH	072411 □
13.8	46	13.5	8x30	15°	HW	RH	072758 □
16	46	13.5	8x30	15°	HW	RH	072045 □
20	49	17	8x30	15°	HW	RH	072417 □
14.3	50	16	8x30	10°	HW	RH	072585 □
20	58	26	8x30	10°	HW	RH	072583 □

HS/HW, Z 2, shank 8 mm, with spurs

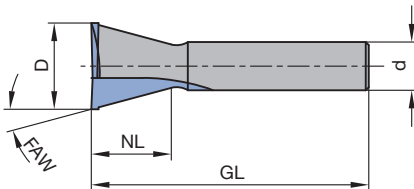
WO 612 1



D mm	GL mm	NL mm	S mm	FAW °	QAL	DRI	ID
14.3	46	13.5	8x30	15°	HW	RH	070361 □

RPM: n = 18000 - 27000 min⁻¹

Dovetail cutter without spurs



Dovetail cutter with spurs

5. Routing

5.5 Portable routers 5.5.2 Tools for profiling



V-groove / engraving cutter

Application:

Routers for cutting V-grooves and engraving.

Machine:

Portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Cutting edges with shear angle. Z 1 suitable for fine engraving operations.



HS/HW, Z 1

WO 531 1

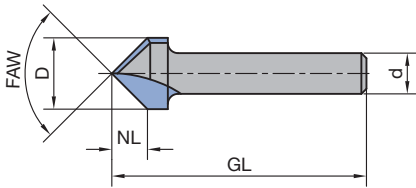
D	GL	NL	S	FAW	QAL	DRI	ID
mm	mm	mm	mm	°			
11	50	9.5	8x30	60°	HW	RH	070562 <input type="checkbox"/>
11	55	9.5	8x30	60°	HS	RH	070262 <input type="checkbox"/>

HS/HW, Z 2

WO 531 1

D	GL	NL	S	FAW	QAL	DRI	ID
mm	mm	mm	mm	°			
11	50	9.5	8x30	60°	HS	RH	072421 <input type="checkbox"/>
14	50	7	8x30	90°	HS	RH	072423 <input type="checkbox"/>
14	50	7	8x30	90°	HW	RH	072425 <input type="checkbox"/>

RPM: n = 18000 - 27000 min⁻¹



V-groove / engraving cutter



V-groove cutter for plasterboard

Application:

Router for cutting V-grooves in plasterboard for folding.

Machine:

Portable routers.

Workpiece material:

Plasterboard and gypsum fibre, softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Cutting edges with shear angle, flat point designed for folding.

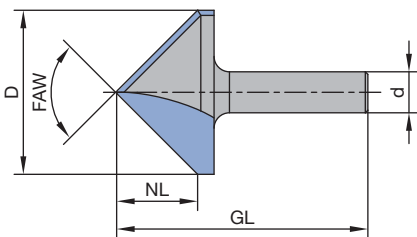


HW, Z 1 / Z 2

WO 531 1

D	GL	NL	S	FAW	QAL	Z	DRI	ID
mm	mm	mm	mm	°				
12.5	55	14	8x30	45°	HW	1	RH	072618 <input type="checkbox"/>
32	49	16	8x30	90°	HW	2	RH	070673 <input type="checkbox"/>

RPM: n = 18000 - 27000 min⁻¹



V-groove cutter for plasterboard

5. Routing

5.5 Portable routers 5.5.2 Tools for profiling



Profile cutter

Application:
Router cutter for profiling.

Machine:
Portable routers.

Workpiece material:
Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:
Cutting edges with shear angle. With guide ring for guiding along the workpiece edges. Finger pull cutter for cutting a covered grip rail on furniture fronts.



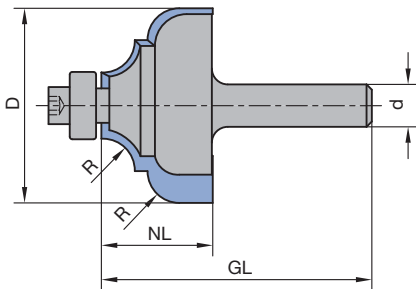
HW, Z 2, profile cutter, with guide ring

WO 551 1

D	GL	NL	S	R	DRI	ID
mm	mm	mm	mm	mm		
36.7	61	21	8x30	6	RH	072511 □

Spare parts:

BEZ	ABM	ID
	mm	
Ball bearing	12.7x4.97x4.76	008088 ●
Cap screw	M4x10	005846 ●



Profile cutter with guide ring WO 551 1

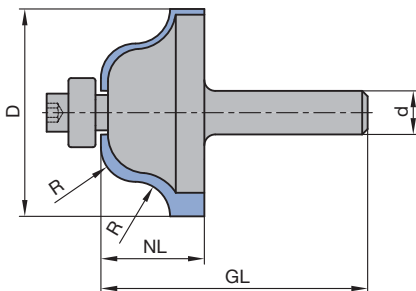
HW, Z 2, double radius cutter, with guide ring

WO 551 1

D	GL	NL	S	R	DRI	ID
mm	mm	mm	mm	mm		
31.7	53	13	8x30	4	RH	072481 □
38.1	59	19	8x30	6.35	RH	072483 □

Spare parts:

BEZ	ABM	ID
	mm	
Ball bearing	12.7x4.97x4.76	008088 ●
Cap screw	M4x10	005846 ●



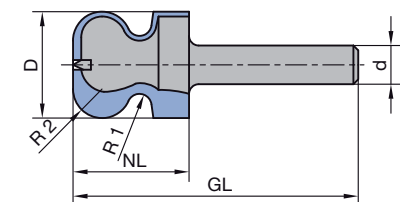
Double radius cutter with guide ring
WO 531 1

HW, Z 2, finger pull cutter

WO 532 1

D	GL	NL	S	R1	R2	DRI	ID
mm	mm	mm	mm	mm	mm		
22	59	16	8x30	2.5	6	RH	072624 □

RPM: $n = 18000 - 27000 \text{ min}^{-1}$



Finger pull cutter WO 532 1

5. Routing

5.5 Portable routers 5.5.2 Tools for profiling



T-groove cutter

Application:

Router for cutting T-grooves and keyholes.

Machine:

Portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Straight cut.

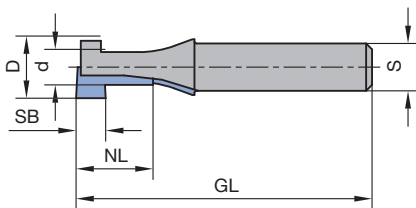


HW, Z 1

WO 120 1

D	d	SB	GL	NL	S	QAL	DRI	ID
mm	mm	mm	mm	mm	mm			
10.5	6.5	5	50	13	8x30	HW	RH	072526 □

RPM: n = 18000 - 27000 min⁻¹



T-groove cutter

5. Routing

5.5 Portable routers 5.5.2 Tools for profiling



Glue joint cutter

Application:

Routers for cutting glue joint profiles.

Machine:

Portable routers.

Workpiece material:

Softwood and hardwood, laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Straight cut. Guide by side stop or guide rail system.

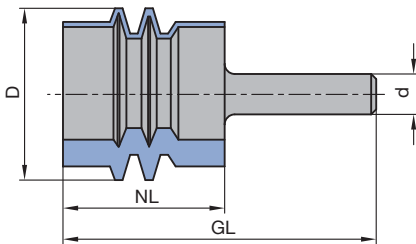
HW, Z 2

WO 631 1



D	GL	NL	HD	S	QAL	DRI	ID
mm	mm	mm	mm	mm			
34	62	32	30	8x30	HW	RH	072197 □

RPM: n = 18000 - 27000 min⁻¹



Glue joint cutter



Spiral grooving cutter

Application:

Router for sizing and grooving.

Machine:

Portable routers.

Workpiece material:

Solid surface material (Corian, Varicor etc.).

Technical information:

Solid tungsten carbide design, spiral-shaped edges, ground plunging edge.

HW, Z 2, spiral roughing/finishing cutter

WO 160 2 04

D	GL	NL	S	Twist	DRI	ID
mm	mm	mm	mm			
12	87	42	12x40	LD	RH	072707 □



HW, Z 2, spiral finishing cutter

WO 160 2 05

D	GL	NL	S	Twist	DRI	ID
mm	mm	mm	mm			
10	70	25	10x40	RD	RH	042458 ●
12	70	25	12x40	RD	RH	042758 ●
12	87	42	12x40	RD	RH	072705 □

RPM: n = 18000 - 27000 min⁻¹



Turnblade grooving cutter

Application:

Router cutter for sizing and grooving.

Machine:

Portable routers.

Workpiece material:

Solid surface material (Corian, Varicor etc.).

Technical information:

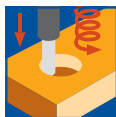
Straight cut. Design with plunging tip limited suitable for axial plunging.

HW, Z 1, with plunging tip

WL 100 1

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

RPM: n = 16000 - 24000 min⁻¹



Spare knives:

BEZ	ABM	NL	QAL	VE	ID
	mm	mm		PCS	
Turnblade knife	50x5.5x1.1	50	HW-05	10	005191 ●

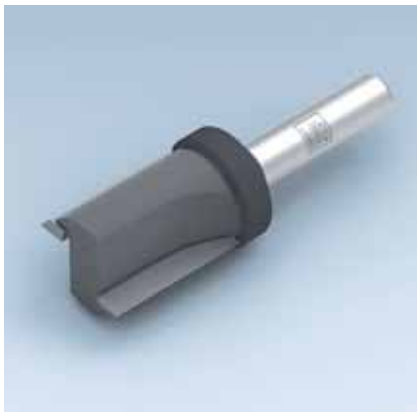
Spare parts:

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

5. Routing

5.5 Portable routers

5.5.3 Tools for solid surface materials



Edge trimming cutter with guide ring

Application:

Router for trimming protrusions of glued solid surface material construction parts.

Machine:

Portable routers.

Workpiece material:

Solid surface material (Corian, Varicor etc.).

Technical information:

Straight cut. Plastic covered ball bearing guide ring for protection against marks on the workpiece.



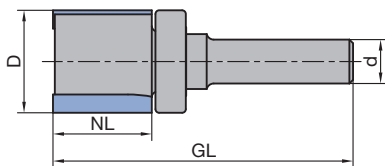
HW, Z 2, with guide ring on top

WO 203 1

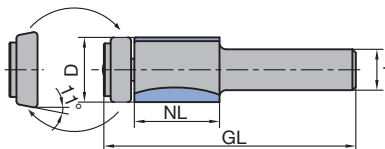
D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
28	80	25	12x40	RH	072697 □

Spare parts:

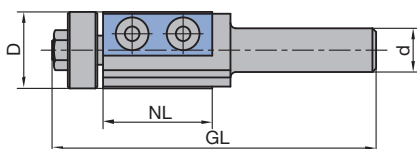
BEZ	ABM	ID
	mm	
Ball bearing guide	28x8.3x15	072712 ●



Edge trimming cutter with guide ring on top



Edge trimming cutter with guide ring on bottom



Turnblade edge trimming cutter with guide ring on bottom

HW, Z 2, with guide on bottom

AO 640 1

D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
19	74	25	12x40	RH	072709 □

Spare parts:

BEZ	ABM	ID
	mm	
Ball bearing guide	19x8x4.76	072630 ●
Ball bearing guide	22x8x4.76/11°	072711 ●
Oval head screw Torx® 15	M4x8	007407 ●

HW turnblade, Z 2, with guide ring on bottom

WL 220 1

D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
21	89	30	12x40	RH	072220 □

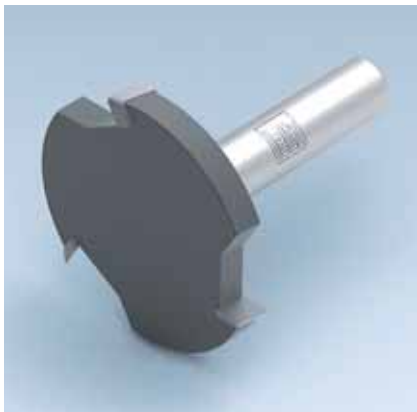
RPM: n = 18000 - 27000 min⁻¹

Spare knives:

BEZ	ABM	VE	ID
	mm	PCS	
Turnblade knife	30x12x1.5	10	005161 ●

Spare parts:

BEZ	ABM	ID
	mm	
Ball bearing guide	15.88x21x8.1	072255 ●
Nut	M6	005651 ●
Oval head screw Torx® 15	M4x6	006225 ●
Torx® key	Torx® 15	005457 ●



Planing cutter

Application:

Router for cutting panel raising profiles.

Machine:

Portable routers.

Workpiece material:

Solid surface material (Corian, Varicor etc.).

Technical information:

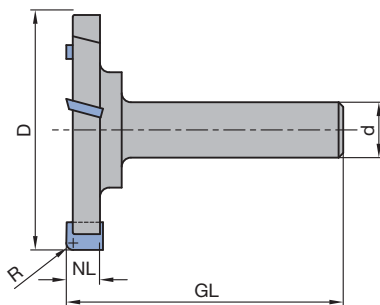
Optimised cutting geometry for clean planed surface. Also suitable for edge trimming of installed sinks of solid surface material.



HW, Z 3

WO 110 1

D	GL	NL	S	n_{\max}	DRI	ID
mm	mm	mm	mm	min^{-1}		
52	60	7.3	12x40	27000	RH	072693 □



Planing cutter Z 3



V-groove cutter for composite panels

Application:

Routers for cutting V-grooves in composite panels for folding operations.

Machine:

Portable routers.

Workpiece material:

Composite panels based on thermoplastic cores with aluminium coverage on both sides (e.g. Alucobond®, Dibond® etc.).

Technical information:

Stable edges, flat point for folding operations.



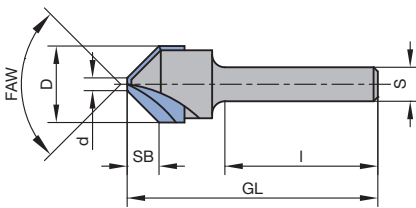
HW, Z 2

WO 531 2

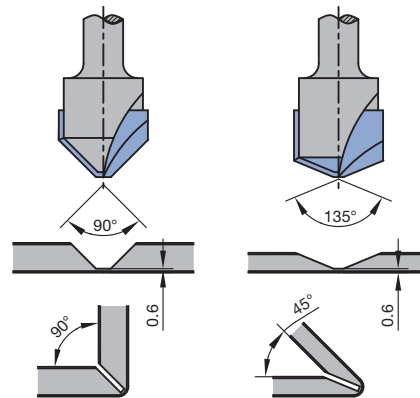
D	d	GL	NL	S	FAW	QAL	Z	DRI	ID
mm	mm	mm	mm	mm	°				
18	3	59	8	8x39	90°	HW	2	RH	070564 □
18	2	59	3.3	8x39	135°	HW	2	RH	070565 □

RPM: n = 18000 - 27000 min⁻¹

Application example:



V-groove cutter for composite panels



Production of folding corners on composite panels



Dowel drill, HW, Z 2 / V 2

Application:

For drilling blind holes, particularly dowel holes in furniture construction.

Machine:

Portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Spurs geometry with shear cut. Tool body with reduced diameter for minimum friction and feed force. Cylindrical shank without clamping flat.

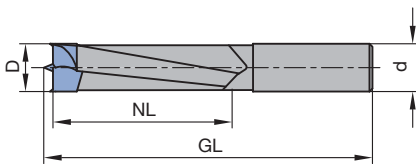


Dowel drill, HW, Z 2 / V 2

WB 101 0, WB 120 0

D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
3	55	16	8x30	RH	072597 <input type="checkbox"/>
5	60.5	30	8x27	RH	072752 <input type="checkbox"/>
6	60.5	30	8x27	RH	072753 <input type="checkbox"/>
8	60.5	30	8x27	RH	072754 <input type="checkbox"/>
10	60.5	30	8x27	RH	072755 <input type="checkbox"/>

RPM: n = 3000 - 9000 min⁻¹



Dowel drill Z 2 / V 2



Through-hole drill, HW, Z 2

Application:

For drilling through holes in furniture construction.

Machine:

Portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Conical tip design for tear-free through-holes. Tool body with reduced diameter for minimum friction and feed force. Cylindrical shank without clamping flat.

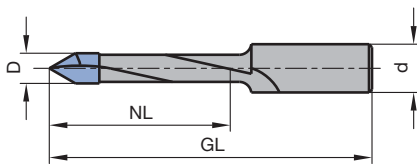


Through-hole drill, HW, Z 2

WB 101 0

D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
5	60.5	30	8x27	RH	072756 □

RPM: n = 3000 - 9000 min⁻¹



Through hole drill Z 2



Hinge boring bit

Application:

For drilling hinge holes in furniture construction.

Machine:

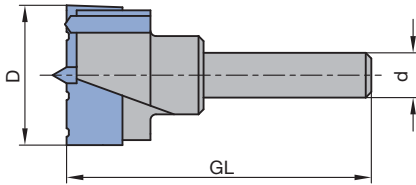
Portable routers.

Workpiece material:

Softwood and hardwood, chipboard and fibre materials (MDF, HDF etc.), uncoated, plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.).

Technical information:

Good centering in solid wood by centre point. Minimised friction by relief ground spurs and raker edge with chip breakers. Cylindrical shank without clamping flat.



HW, Z 2 / V 2

WB 310 0

D	GL	S	DRI	ID
mm	mm	mm		
15	54.5	8x30	RH	034660 <input type="checkbox"/>
18	54.5	8x30	RH	072596 <input type="checkbox"/>
20	54.5	8x30	RH	072012 <input type="checkbox"/>
22	54.5	8x30	RH	072740 <input type="checkbox"/>
25	54.5	8x30	RH	034656 <input type="checkbox"/>
26	54.5	8x30	RH	034658 <input type="checkbox"/>
30	54.5	8x30	RH	034657 <input type="checkbox"/>
34	54.5	8x30	RH	072196 <input type="checkbox"/>
35	54.5	8x30	RH	034659 <input type="checkbox"/>

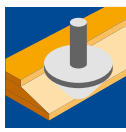
RPM: n = 3000 - 9000 min⁻¹

Hinge boring bit Z 2 / V 2

Key to pictograms



Drilling blind holes



Panel raising



Mechanical knife clamping, adjustable - serrated



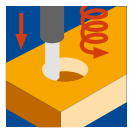
Slotting



Profiling



Resharpenable cutting face



Spiral boring



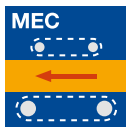
Profiling joints



Resharpenable clearance face



Non-axial boring



Mechanical feed



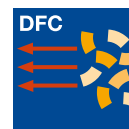
Low Noise Low noise



Carving



Manual feed



Optimised chip flow



Grooving, sizing



Solid metal tool



Alloyed tool steel



Finish sizing



Tipped tool



High-speed steel



Grooving, horizontal and vertical



Special body alloy



Tungsten carbide



Jointing



Light alloy body



Polycrystalline diamond (PCD)



Rebating



Interchangeable knives



Carbide metal coating



Bevelling



Mechanical knife clamping, reversible

