



# Leitz-Lexicon

**Edition 6**

## Explanation of abbreviations

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





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### 3. Planing and profiling

#### 3.1 Surface planing – thickening

##### Application



Planing and thickening of workpieces on planing and thickening machines. The workpiece is first planed to give a reference surface. Next the exact workpiece thickness is machined by the thickener.

##### Workpiece material

Soft and hardwood (dry and wet), chipboard and fibre materials (chipboard, MDF, etc.), without coating, with plastic coating, with veneer etc.

##### Machines

Surface planing and thickening machines.

##### Mounting of long planerheads

Long planerheads have integrated bearing and drive pulley. The dimensions depend on the machine, and must be specified when ordering the tools.

##### Noise level of long planerheads

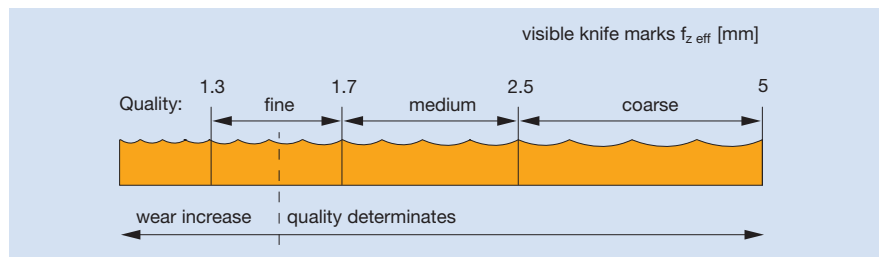
Surface planing machine	Free running		
	With wedge-type head Z2	With spiral head Z2	Noise reduction dB
A acoustic sound level	99.1	84.5	14.6
A acoustic power level L <sub>A</sub> n dB at height of ears	85.2	72.2	13.0
Thickening machine			
A acoustic power level L <sub>WA</sub> in dB	94.2	85.1	9.1
A acoustic power level L <sub>A</sub> in dB at head height infeed at head height outfeed	80.1 75.5	69.3 68.8	10.8 7.1
Surface planing machine	During operation		
	With wedge-type head Z2	With spiral head Z2	Noise reduction dB
A acoustic sound level	100.6	94.1	6.5
A acoustic power level L <sub>A</sub> n dB at height of ears	89.6	83.6	6.0
Thickening machine			
A acoustic power level L <sub>WA</sub> in dB	98.3	92.1	6.2
A acoustic power level L <sub>A</sub> in dB at head height infeed at head height outfeed	81.5 82.7	77.2 77.7	4.3 5.0

##### Recommended cutting materials

	HS	Marathon (MC)	HW
Softwood dry	◆	◆	◆
Softwood wet	◇	◆	
Hardwood dry	◇	◆	◆
Hardwood wet	◇	◆	
Plywood		◇	◆
Chipboard			◆
MDF			◇
WPC (Wood-Plastic-Composite)	◇	◆	◆

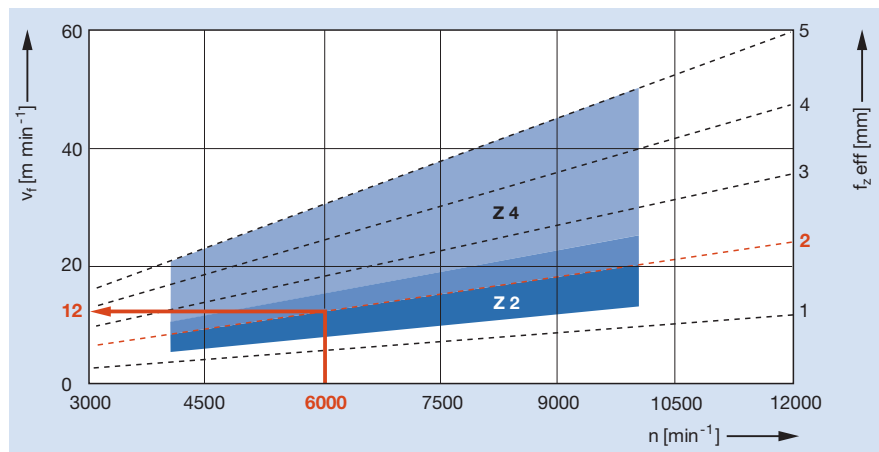
◆ suitable      ◇ partly suitable

#### Feed speed



The feed speed is determined by the required surface quality.  
Relation between the surface quality and length of knife marks  $f_{z\text{ eff}}$ .

#### Diagram to determine the feed speed $v_f$ depending on R.P.M. $n$ and knife marks $f_{z\text{ eff}}$ for different number of teeth $Z^*$



\* Even on tools with several wings, only the marks of one knife show on the workpiece surface (one-knife finish).  
Z 2 and Z 4 tools produce the same surface quality under identical machining conditions. (see technical information and charts in section User manual).

#### Spiral planerhead



Constant knife cutting circle diameter after resharpening with setting fixture – long spiral planerhead

#### Technical information

Steel planerhead with resharpenable HS spiral cutting knives or HS throwaway knives.  
Mounted in a cassette with clamping wedges.  
Constant knife cutting circle diameter after sharpening in setting fixture.

#### Tool design

- Long planerheads with spiral cutting edges (shear-cut) for smooth surfaces
- Noise reduction of up to 13 dB (see chart)
- Option for resharpening the turnblade HS knives in the planerhead

#### Chip removal

Softwood: up to 5.0 mm  
Hardwood: up to 3.0 mm

#### No. of wings/resharpening area

2 – 6 mm

#### Cutting material

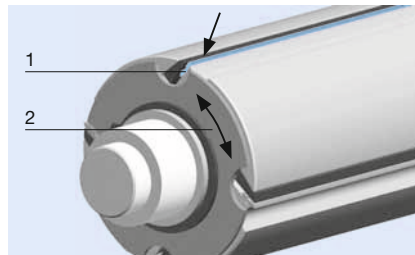
HS

#### Planerhead CentroFix

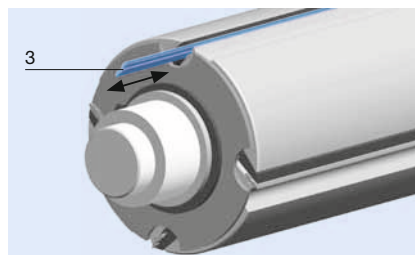


<b>Tool design</b>	Steel or Aluminium planerhead with resharpenable HS or HW reversible resharpenable knives positioned by form fitting knife clamping system
<b>Technical information</b>	<ul style="list-style-type: none"> <li>– Centrifugal force clamping system in the protected area behind the wing.</li> <li>– The turnblade knives with chip breaker ensures clean surfaces even in critical zones.</li> <li>– The clamping system is positioned in the area protected from contamination, behind the knife.</li> </ul>
<b>Chip removal</b>	Softwood: up to 7.0 mm Hardwood: up to 5.0 mm
<b>No. of wings</b>	Z 2 or Z 4, with 2 cutting edges per knife.
<b>Cutting material</b>	HS, HW

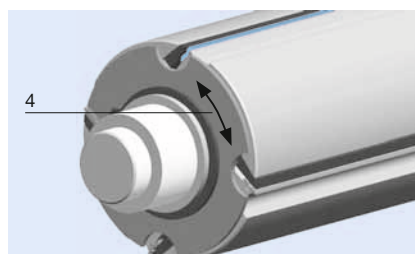
#### Handling/Changing the planing knife



1. Loosen knife clamping by tapping the clamping wedge
2. Release knife seat by rotating the safety flange



3. Axial knife change



4. Close knife seat by rotating the safety flange

#### Note

- CentroFix centrifugal clamping system (without clamping screws) for quick, simple knife change.
- Lower noise level compared to conventional cutterheads from optimised gullet and closed, round tool body.
- Axial knife change.

# Inquiry/order form special tools – surface planing and thicknessing

**Customer details:** Customer number:   Inquiry      Delivery date: (not binding)  CW  
 (if known)

Company: \_\_\_\_\_

Street: \_\_\_\_\_

Date: \_\_\_\_\_

Post code/place: \_\_\_\_\_

Inquiry/order no.: \_\_\_\_\_

Country: \_\_\_\_\_

Tool ID: (if known) \_\_\_\_\_

Phone/fax: \_\_\_\_\_

No. of pieces: \_\_\_\_\_

Contact person: \_\_\_\_\_

Signature: \_\_\_\_\_

## Workpiece material:

Type:

Solid wood: \_\_\_\_\_ Type: \_\_\_\_\_  
 Wood derived material: \_\_\_\_\_ Type: \_\_\_\_\_  
 Others \_\_\_\_\_ Type: \_\_\_\_\_

Moisture content: \_\_\_\_\_ %

Density: \_\_\_\_\_ g/cm<sup>3</sup>

Additional information: \_\_\_\_\_

## Machine:

Manufacturer: \_\_\_\_\_

Type: \_\_\_\_\_

Model: \_\_\_\_\_

Spindle sequence (in feeding direction) e.g. 1 bottom, 2 right hand, 3 left hand, 4 top, 5 multi purpose...

Motor:	Power:	RPM:	Spindle dimensions:	Add. information:
1	_____ kW (HP)	_____ min <sup>-1</sup>	_____ mm	_____
2	_____ kW (HP)	_____ min <sup>-1</sup>	_____ mm	_____
3	_____ kW (HP)	_____ min <sup>-1</sup>	_____ mm	_____
4	_____ kW (HP)	_____ min <sup>-1</sup>	_____ mm	_____
5	_____ kW (HP)	_____ min <sup>-1</sup>	_____ mm	_____

## Tool:

Tool type (see selection): \_\_\_\_\_

Dimension:

Diameter: \_\_\_\_\_ mm

Cutting width: \_\_\_\_\_ mm

Bore: \_\_\_\_\_ mm

No. of teeth: \_\_\_\_\_

Cutting material:

HL (HLS)

HS (HSS)

HW (HM)

ST

Direction of rotation:

left hand

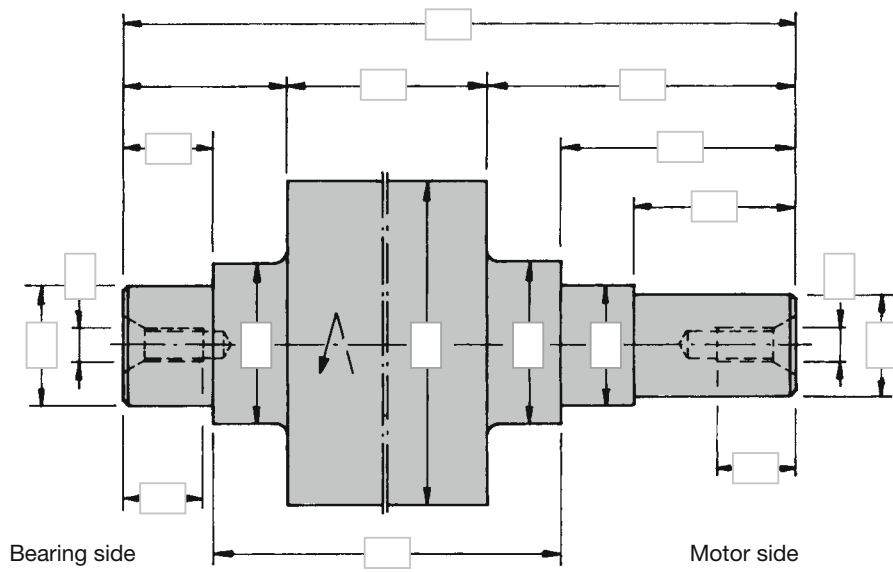
right hand

Please state existing data on tool, machine and workpiece material.



**Dimensions for long planerheads**

(Enter dimensions on drawing or graph)



Sketch for application, special motor spindle etc., side of table to workpiece and fence.

A large rectangular area filled with a fine grid, intended for the user to sketch the application of the planerhead, including the motor spindle, side of table, workpiece, and fence.



#### Planerhead HeliPlan with 4 edge HW turnblade knives

**Application:**

Pre planing, surfacing and jointing all types of wood with large chip removal. Also suitable for finish planing if quality demands are less important or in connection with subsequent sharpening.

**Machine:**

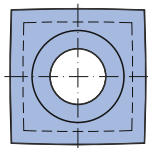
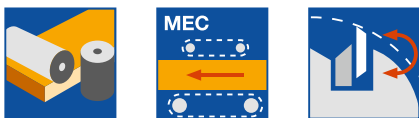
Four side moulders.

**Workpiece material:**

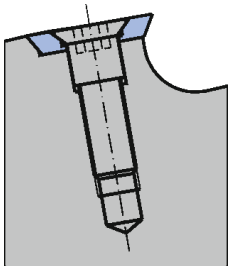
Softwood and hardwood.

**Technical information:**

Pre planing cutterhead with 4 edge HW turnblade knives. Low noise and energy efficient due to spiral, segmented edge arrangement. Smooth finish by radiused cutting edges. Aluminium tool body. Tool and HSK are shrink-fit together. Optional with steel reference cutterhead, for machines with fence.



HW turnblade knife



Knives mounted on periphery

**Aluminium tool body, with bore**

WW 220-2-01

D	SB	BO	Z	AM	n <sub>max.</sub>	ID
mm	mm	mm		PCS	min <sup>-1</sup>	
125	130	40	2/2	26	12000	<b>030423</b> ●
125	170	40	2/2	32	12000	<b>030425</b> ●
125	210	40	2/2	38	12000	<b>030452</b> ●
125	230	40	2/2	40	12000	<b>030447</b> ●
125	240	40	2/2	46	12000	<b>030426</b> ●
140	170	50	2/2	32	9000	<b>030427</b> ●
140	240	50	2/2	46	9000	<b>030428</b> ●

Design with HW cutting edges

Further dimensions and inch dimensions available on request.

Suitable reference cutterheads can be found on page 200.

**Spare knives:**

BEZ	ABM	QAL	VE	ID
	mm		PCS	
Turnblade knife	15x15x2,5	HW	10	<b>009535</b> ●

**Spare parts:**

BEZ	ABM	ID
	mm	
Countersink screw, Torx® 20	M5x14.2-8.8	<b>007394</b> ●
Torx® key	Torx® 20	<b>006091</b> ●



#### Planerhead HeliPlan with 4 edge HW turnblade knives

**Application:**

Pre planing, surfacing and jointing all types of wood with large chip removal. Also suitable for finish planing if quality demands are less important or in connection with subsequent sharpening.

**Machine:**

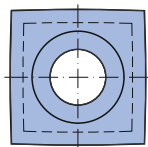
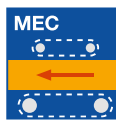
Four side moulders with HSK 85 WS interfaces.

**Workpiece material:**

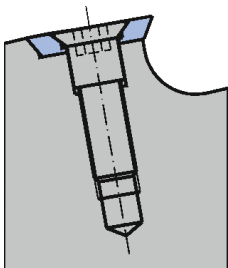
Softwood and hardwood.

**Technical information:**

Pre planing cutterhead with 4 edge HW turnblade knives. Low noise and energy efficient due to spiral, segmented edge arrangement. Smooth finish through radiused cutting edges. Aluminium tool body. Tool and HSK are shrink-fit together. Optional steel reference cutterhead for machines with fence.



HW turnblade knife



Knives mounted on periphery

**Aluminium tool body, with HSK 85 WS**

WL 210-2-02

D mm	SB mm	A mm	Z	AM PCS	$n_{max.}$ $min^{-1}$	DRI	ID
125	130	26	2/2	26	12000	bottom	<b>132000</b> □
125	130	26	2/2	26	12000	top	<b>132001</b> □
125	170	26	2/2	30	12000	bottom	<b>132016</b> □
125	170	26	2/2	30	12000	top	<b>132017</b> □
125	210	26	2/2	36	12000	bottom	<b>132008</b> □
125	210	26	2/2	36	12000	top	<b>132009</b> □
125	240	26	2/2	42	12000	bottom	<b>132010</b> □
125	240	26	2/2	42	12000	top	<b>132011</b> □
125	270	26	2/2	46	8000	bottom	<b>132012</b> □
125	270	26	2/2	46	8000	top	<b>132013</b> □
125	310	26	2/2	54	8000	bottom	<b>132014</b> □
125	310	26	2/2	54	8000	top	<b>132015</b> □

**Aluminium tool body, HSK 85 WS with reference cutterhead**

WL 403-2-02

D mm	SB mm	A mm	Z	V	AM PCS	$n_{max.}$ $min^{-1}$	DRI	ID
125	210	26	2/2	2	36	12000	bottom	<b>132062</b> □
125	240	26	2/2	2	42	12000	bottom	<b>132063</b> □
125	270	26	2/2	2	46	8000	bottom	<b>132064</b> □
125	310	26	2/2	2	54	8000	bottom	<b>132065</b> □

Design with HW cutting edges

Further dimensions and inch dimensions available on request.

Suitable reference cutterheads can be found on page 200.

**Spare knives:**

BEZ	ABM mm	QAL	VE PCS	ID
Turnblade knife	15x15x2,5	HW	10	<b>009535</b> ●

**Spare parts:**

BEZ	ABM mm	ID
Countersink screw, Torx® 20	M5x14.2-8.8	<b>007394</b> ●
Torx® key	Torx® 20	<b>006091</b> ●



#### Reference cutterhead

**Application:**

For cutting a side reference rebate when surface planing on the first bottom spindle in combination with a planer cutterhead.

**Machine:**

Four side moulders with fence.

**Workpiece material:**

Softwood and hardwood.

**Technical information:**

Steel tool body with HW turnblade knives, can be combined with pre planing and finish planing cutterheads on the first bottom spindle.

D145 for planerheads D125.

D160 for planerheads D140.



**For wedge type system, build up system, CentroStar**

WW 410-2

D	SB	BO	Z	V	QAL	n <sub>max.</sub> min <sup>-1</sup>	ID
mm	mm	mm					
145	15	40	2	2	HW	12500	<b>024554</b> ●
160	15	40	2	2	HW	12500	<b>024560</b> ●

**For HeliPlan, VariPlan Plus**

WW 410-2

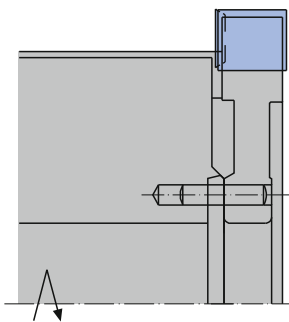
D	SB	BO	Z	V	QAL	n <sub>max.</sub> min <sup>-1</sup>	ID
mm	mm	mm					
145	15	40	2	2	HW	12500	<b>024563</b> ●
160	15	40	2	2	HW	12500	<b>024564</b> ●

**Spare knives:**

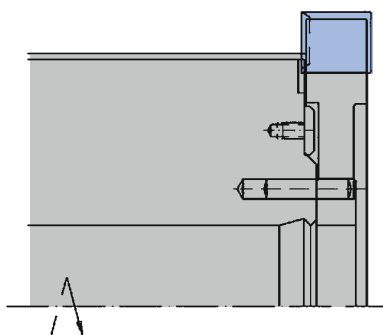
BEZ	ABM mm	QAL	VE PCS	ID
Turnblade spur VS1	14x14x2	HW-F	10	<b>005099</b> ●
Turnblade knife	14,7x8x1,5	HW-30F	10	<b>005070</b> ●

**Spare parts:**

BEZ	ABM mm	BEM	ID
Spacer	70x3x40,DTK58		<b>028617</b> ●
Countersink screw, Torx® 20	M6x0,5x4,9	Torx® 20 for steel-body	<b>006243</b> ●
Pin	6x20		<b>008619</b> ●



Combined reference cutterhead with wedge type system, build up system and CentroStar. Mounted with spacer ID **028617**.



Combination with HeliPlan, VariPlan Plus. Mounted with spacer.



### Cutterhead for groove bed guide

**Application:**

For guide grooves on the first bottom spindle for precise feeding of short parts or curved workpieces.

**Machine:**

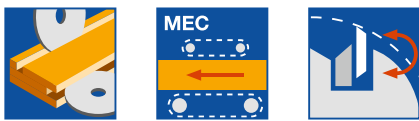
Four side moulders with groove beds.

**Workpiece material:**

Softwood and hardwood, along the grain.

**Technical information:**

Build up turnblade knife tool system, diameter and cutting width constant. The closed, round design of the tool body reduces the noise level.



**HW turnblade design**

WW 101-2, WW 102-2

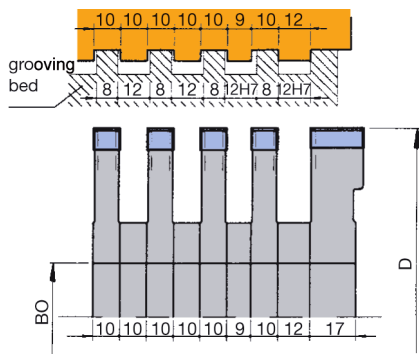
D mm	SB mm	BO mm	BO <sub>max.</sub> mm	Z	V	n <sub>max.</sub> min <sup>-1</sup>	ID
125	20	40	50	2	2	12000	020389 ●
125	10	40	50	2	2	12000	020390 ●
140	20	40	50	2	2	10900	020386 ●
140	10	40	50	2	2	10900	020388 ●

**Spare knives:**

BEZ	ABM mm	QAL	VE PCS	ID
Turnblade knife	19,7x8x1,5	HW-30F	10	005071 ●
Turnblade knife	9,7x8x1,5	HW-30F	10	005197 ●
Turnblade spur VS1	14x14x2	HW-F	10	005099 ●

**Spare parts:**

BEZ	ABM mm	ID
Spacer	60x0,1x40	027941 ●
Spacer	60x0,3x40	027942 ●
Spacer	60x9x40	028449 ●
Spacer	60x10x40	027951 ●
Spacer	60x11,5x40	028431 ●
Set of spacers	60x11,5/0,3/2x 0,1x40	028459 ●
Clamping wedge	18x18,75x8,27	009671 ●
Clamping wedge	9x18,75x8,27	009764 ●
Clamping screw, Torx® 25	M6x18,5	007818 ●
Washer	9/6,2x1,2	006753 ●
Allen screw with shank, Torx® 15	M5x20	007380 ●
Countersink screw, Torx® 20	M6x0,5x4,9	006243 ●
Torx® key	Torx® 15	117507 ●
Torx® key	Torx® 20	117503 ●
Setting gauge	0,3/0,8	005374 ●



**Number of tools for different widths**

SB mm	working width mm				
	80	100	120	140	170
SB 20	1	1	1	1	1
SB 10	3	4	5	6	8



### Planerhead VariPlan Plus for pre and finish planing

#### Application:

Multi purpose planing tool:

For pre planing with RipTec turnblades.

For finish planing with Microfinish turnblades.

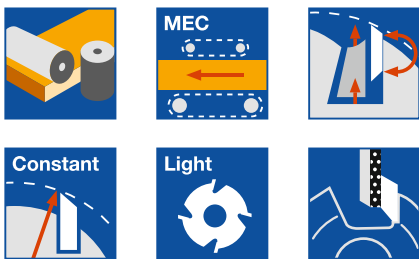
For roughing/finishing planing on a spindle with Integral turnblades.

#### Machine:

Four side moulders and multi spindle planing machines.

#### Workpiece material:

Softwood and hardwood, thermoplastic plastics (partly suitable).



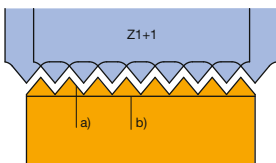
#### Technical information:

Resharpenable and constant diameter planerhead system.

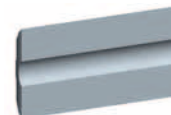
Self positioning and centrifugal force supported knife clamping. Aluminium tool body.

2 cutting angles: 25° for softwood, 18° for dry and hardwood. HW RipTec and

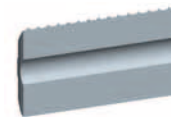
Integral, HS/HW Microfinish turnblades. Resharpener the knives on the cutting face means 1 sharpening operation gives 2 run times.



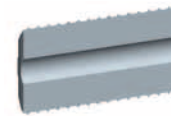
Pre planing with VariPlan Plus Z1+1 RipTec turnblades



a) Microfinish turnblades HS/HW



b) Integral turnblades HW (plane/ripple)



c) RipTec turnblades HW (ripple/ripple)

#### Aluminium tool body, cutting angle 18°

WW 240-2-05

D mm	SB mm	D0 mm	BO mm	n <sub>max.</sub> min <sup>-1</sup>	ID Z 2	ID Z 4
125	130	136	40	11200	<b>131210</b> □	<b>131410</b> □
125	150	156	40	11200	<b>131211</b> □	<b>131411</b> □
125	170	176	40	11200	<b>131212</b> □	<b>131412</b> □
125	180	186	40	11200	<b>131213</b> □	<b>131413</b> □
125	190	196	40	11200	<b>131214</b> □	<b>131414</b> □
125	210	216	40	11200	<b>131215</b> □	<b>131415</b> □
125	230	236	40	11200	<b>131216</b> □	<b>131416</b> □
125	240	246	40	11200	<b>131217</b> □	<b>131417</b> □
140	270	276	40	8000	<b>131218</b>	<b>131418</b>
140	310	316	40	8000	<b>131219</b>	<b>131419</b>

#### Aluminium tool body, cutting angle 25°

WW 240-2-05

D mm	SB mm	D0 mm	BO mm	n <sub>max.</sub> min <sup>-1</sup>	ID Z 2	ID Z 4
125	130	136	40	11200	<b>131200</b> □	<b>131400</b> □
125	150	156	40	11200	<b>131201</b> □	<b>131401</b> □
125	170	176	40	11200	<b>131202</b> □	<b>131402</b> □
125	180	186	40	11200	<b>131203</b> □	<b>131403</b> □
125	190	196	40	11200	<b>131204</b> □	<b>131404</b> □
125	210	216	40	11200	<b>131205</b> □	<b>131405</b> □
125	230	236	40	11200	<b>131206</b> □	<b>131406</b> □
125	240	246	40	11200	<b>131207</b> □	<b>131407</b> □
140	270	276	40	8000	<b>131208</b>	<b>131408</b>
140	310	316	40	8000	<b>131209</b>	<b>131409</b>

Variant	Description	picture knife
110 000	Planerhead without knives	
110 001	Planerhead with HS Microfinish turnblade knives	a)
110 002	Planerhead with HW Microfinish turnblade knives	a)
110 003	Planerhead with HW Integral turnblade knives	b)
110 004	Planerhead with HW RipTec turnblade knives	c)

When ordering **always** state the variant!  
Further dimensions and inch dimensions on request. Suitable reference cutterheads in section 3.2.1 VariPlan Plus spare knives of all versions on page 207.



### Planerhead VariPlan Plus with HSK 85 WS for pre and finish planing

**Application:**

Multi purpose planing tool:  
 For pre planing with RipTec turnblades.  
 For finish planing with Microfinish turnblades.  
 For roughing/finishing planing on a spindle with Integral turnblades.

**Machine:**

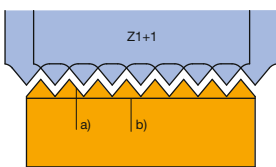
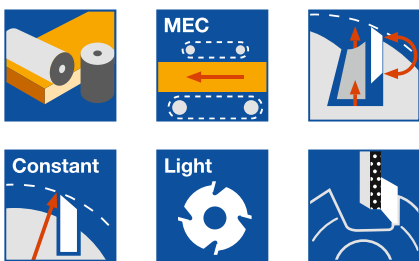
Four side moulders and multi spindle moulders with HSK 85 WS interfaces.

**Workpiece material:**

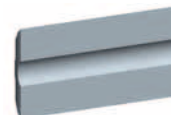
Softwood and hardwood, thermoplastic plastics (partly suitable).

**Technical information:**

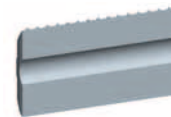
Resharpenable and constant diameter planerhead system.  
 Self positioning and centrifugal force supported knife clamping. Aluminium tool body.  
 2 cutting angles: 25° for softwood, 18° for dry and hardwood. HW RipTec and Integral, HS/HW Microfinish turnblades. Resharpener the knives on the cutting face means 1 sharpening operation gives 2 run times. Tool body and HSK arbor are shrunk fit together.



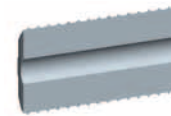
Pre planing with VariPlan Plus Z1+1 RipTec turnblades



a) Microfinish turnblades HS/HW



b) Integral turnblades HW (even/ripple)



c) RipTec turnblades HW (ripple/ripple)

When ordering **always** state the variant!  
 Further dimensions and inch dimensions on request. Suitable reference cutterheads in section 3.2.1 VariPlan Plus spare knives of all versions on page 207.

**Aluminium tool body, cutting angle 18° on HSK 85 WS**

WP 240-2-05

D mm	SB mm	A mm	n <sub>max.</sub> min <sup>-1</sup>	Z	ID LL/ on bottom	ID RL/ on top
125	130	26	12000	2	131520	131521
125	150	26	12000	2	131522	131523
125	170	26	12000	2	131524	131525
125	180	26	12000	2	131526	131527
125	190	26	12000	2	131528	131529
125	210	26	12000	2	131530	131531
125	230	26	12000	2	131532	131533
125	240	26	12000	2	131534	131535
140	270	26	11300	2	131536	131537
140	310	26	11300	2	131538	131539
125	130	26	12000	4	131620	131621
125	150	26	12000	4	131622	131623
125	170	26	12000	4	131624	131625
125	180	26	12000	4	131626	131627
125	190	26	12000	4	131628	131629
125	210	26	12000	4	131630	131631
125	230	26	12000	4	131632	131633
125	240	26	12000	4	131634	131635
140	270	26	11300	4	131636	131637
140	310	26	11300	4	131638	131639

**Aluminium tool body, cutting angle 18° on HSK 85 WS with reference cutterhead Z2 / V2**

WP 240-2-08

D mm	SB mm	A mm	n <sub>max.</sub> min <sup>-1</sup>	DRI	Z	ID
125	230	26	12000	LL/ on bottom	2	131582
125	240	26	12000	LL/ on bottom	2	131583
125	230	26	12000	LL/ on bottom	4	131682
125	240	26	12000	LL/ on bottom	4	131683



### Planerhead VariPlan Plus with HSK 85 WS for pre and finish planing

#### Application:

Multi purpose planing tool:  
 For pre planing with RipTec turnblades.  
 For finish planing with Microfinish turnblades.  
 For roughing/finishing planing on a spindle with Integral turnblades.

#### Machine:

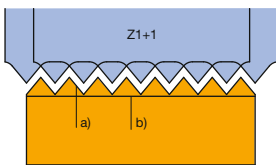
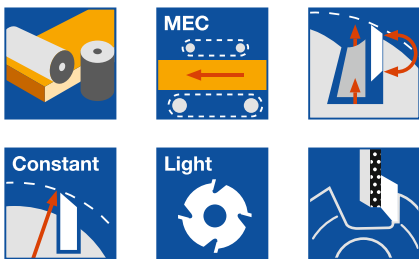
Four side moulders and multi spindle moulders with HSK 85 WS interfaces.

#### Workpiece material:

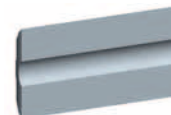
Softwood and hardwood, thermoplastic plastics (partly suitable).

#### Technical information:

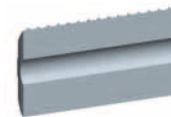
Resharpenable and constant diameter planerhead system.  
 Self positioning and centrifugal force supported knife clamping. Aluminium tool body.  
 2 cutting angles: 25° for softwood, 18° for dry and hardwood. HW RipTec and Integral, HS/HW Microfinish turnblades. Resharpener the knives on the cutting face means 1 sharpening operation gives 2 run times. Tool body and HSK arbor are shrunk fit together.



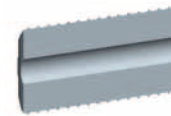
Pre planing with VariPlan Plus Z1+1 RipTec turnblades



a) Microfinish turnblades HS/HW



b) Integral turnblades HW (even/ripple)



c) RipTec turnblades HW (ripple/ripple)

#### Aluminium tool body, cutting angle 25° on HSK 85 WS

WP 240-2-05

D mm	SB mm	A mm	$n_{max.}$ $min^{-1}$	Z	ID LL/ on bottom	ID RL/ on top
125	130	26	12000	2	<b>131500</b> □	<b>131501</b> □
125	150	26	12000	2	<b>131502</b> □	<b>131503</b> □
125	170	26	12000	2	<b>131504</b> □	<b>131505</b> □
125	180	26	12000	2	<b>131506</b> □	<b>131507</b> □
125	190	26	12000	2	<b>131508</b> □	<b>131509</b> □
125	210	26	12000	2	<b>131510</b> □	<b>131511</b> □
125	230	26	12000	2	<b>131512</b> □	<b>131513</b> □
125	240	26	12000	2	<b>131514</b> □	<b>131515</b> □
140	270	26	11300	2	<b>131516</b>	<b>131517</b>
140	310	26	11300	2	<b>131518</b>	<b>131519</b>
125	130	26	12000	4	<b>131600</b> □	<b>131601</b> □
125	150	26	12000	4	<b>131602</b> □	<b>131603</b> □
125	170	26	12000	4	<b>131604</b> □	<b>131605</b> □
125	180	26	12000	4	<b>131606</b> □	<b>131607</b> □
125	190	26	12000	4	<b>131608</b> □	<b>131609</b> □
125	210	26	12000	4	<b>131610</b> □	<b>131611</b> □
125	230	26	12000	4	<b>131612</b> □	<b>131613</b> □
125	240	26	12000	4	<b>131614</b> □	<b>131615</b> □
140	270	26	11300	4	<b>131616</b>	<b>131617</b>
140	310	26	11300	4	<b>131618</b>	<b>131619</b>

#### Aluminium tool body, cutting angle 25° on HSK 85 WS with reference cutterhead Z2 / V2

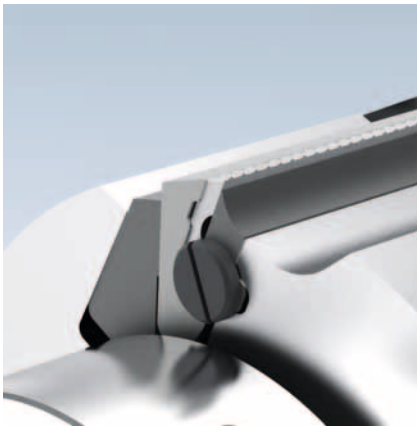
WP 240-2-08

D mm	SB mm	A mm	$n_{max.}$ $min^{-1}$	DRI	Z	ID
125	230	26	12000	LL/ on bottom	2	<b>131580</b> □
125	240	26	12000	LL/ on bottom	2	<b>131581</b> □

When ordering **always** state the variant!  
 Further dimensions and inch dimensions on request. Suitable reference cutterheads in section 3.2.1 VariPlan Plus spare knives of all versions on page 207.



Variant	Description	picture knife
110 000	Planerhead without knives	
110 001	Planerhead with HS Microfinish turnblade knives	a)
110 002	Planerhead with HW Microfinish turnblade knives	a)
110 003	Planerhead with HW Integral turnblade knives	b)
110 004	Planerhead with HW RipTec turnblade knives	c)



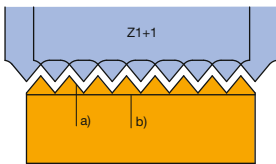
### Planer knives VariPlan Plus for pre and finish planing

#### Application:

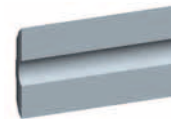
Microfinish HS and HW turnblades: for finish planing softwood and hardwood.  
 RipTec HW turnblades (ripple/ripple): for pre planing/trimming on separate spindle, for softwood and hardwood, particularly for twisted grain wood. Integral HW turnblades (plane/ripple): for roughing/finishing planing on one machining spindle, for softwood and hardwood, particularly for twisted grain wood.

#### Technical information:

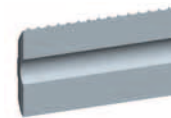
Turnblade variants suitable for the planerhead system VariPlan Plus.  
 HS Microfinish turnblades for softwood, HW turnblades (all knife types) for hardwood and softwood as well as for gluelam with glued joint. Resharpenable turnblade, resharpening area 1.0 mm.



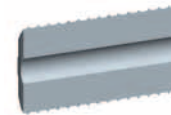
Pre planing with VariPlan Plus Z1+1 RipTec turnblades



a) Microfinish turnblades HS/HW



b) Integral turnblades HW (plane/ripple)



c) RipTec turnblades HW (ripple/ripple)

#### Microfinish turnblades <sup>1)</sup>

AT 103-0-27

SB	H	DIK	ID	ID
mm	mm	mm	HS	HW
130	16	3,7	617006	617106 ●
150	16	3,7	617009	617109 ●
170	16	3,7	617011	617111 ●
180	16	3,7	617012	617112 ●
190	16	3,7	617014	617114 ●
210	16	3,7	617015	617115 ●
230	16	3,7	617016	617116 ●
240	16	3,7	617018	617118 ●
270	16	3,7	617065	617165 ●
310	16	3,7	617022	617122 ●

<sup>1)</sup> Suitable for VariPlan and VariPlan Plus planerheads.

ID = 2 pcs.

#### RipTec and Integral turnblade knives <sup>2)</sup>

AT 103-0-24, AT 103-0-23

SB	H	DIK	QAL	ID	ID
mm	mm	mm		HW	HW
				Integral	RipTec
130	16	3,7	HW	611906	611206 ●
150	16	3,7	HW	611909	611209 ●
170	16	3,7	HW	611911	611211 ●
180	16	3,7	HW	611912	611212 ●
190	16	3,7	HW	611914	611214 ●
210	16	3,7	HW	611915	611215 ●
230	16	3,7	HW	611916	611216 ●
240	16	3,7	HW	611918	611218 ●
270	16	3,7	HW	611965	611265 ●
310	16	3,7	HW	611922	611222 ●

<sup>2)</sup> Only suitable for VariPlan Plus planerheads.

ID = 2 pcs.



#### Planerhead wedge type system

**Application:**

Multi purpose applications for pre planing with large chip removal and finish planing.

**Machine:**

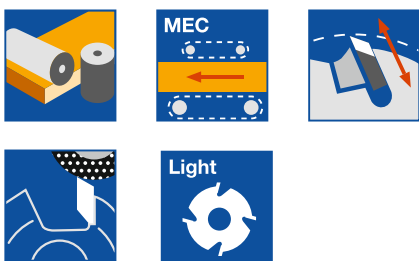
Four side moulders.

**Workpiece material:**

Softwood and hardwood.

**Technical information:**

Cutterhead with resharpenable planer knives SB x 30 x 3.0 mm. Pressure springs position the knives to the defined cutting circle by a setting gauge. Cutting edge qualities HS, Marathon (MC) or HW available. Steel or aluminium tool body design.

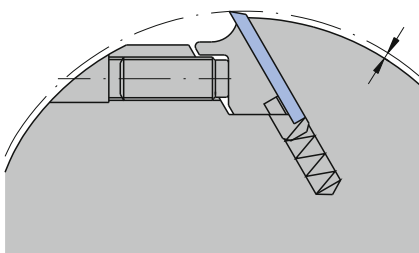


**Steel tool body**

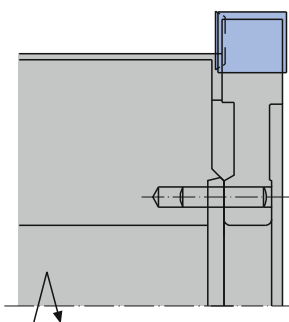
WM 200-2-05

D mm	SB mm	D0 mm	BO mm	n <sub>max.</sub> min <sup>-1</sup>	Z	ID HS	ID HW	
125	100	100	40	10400	4	140002	● 140052	□
125	120	120	40	10400	4	140003	● 140053	□
125	130	130	40	10400	4	140004	● 140054	□
125	150	150	40	10400	4	140005	● 140055	□
125	170	170	40	10400	4	140006	● 140056	□
125	180	180	40	10400	4	140007	● 140057	□
125	210	210	40	10400	4	140009	● 140059	□
125	230	230	40	10400	4	140010	140060	
125	240	240	40	10400	4	140011	140061	

Suitable reference cutterheads can be found on page 200.



Correct knife protrusion: max. 2 mm.



Combined reference cutterhead with wedge type system, build up system and CentroStar. Mounted with spacer ID 028617.

**Aluminium tool body**

WM 200-2-07

D mm	SB mm	ND mm	BO mm	n <sub>max.</sub> min <sup>-1</sup>	Z	ID HS	ID HW	
125	130	130	40	9000	4	140400	● 140450	□
125	180	180	40	9000	4	140401	● 140451	□
125	230	230	40	9000	4	140402	● 140452	□
125	240	240	40	9000	4	140403	● 140453	□
140	130	130	50	9000	4	140404	140454	
140	180	180	50	9000	4	140405	140455	
140	230	230	50	9000	4	140406	140456	
140	240	240	50	9000	4	140407	140457	

Suitable reference cutterheads can be found on page 200.

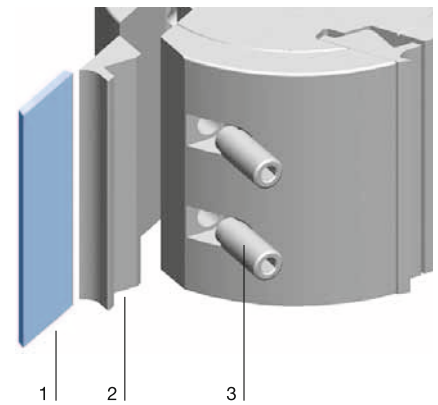
**Spare knives:**

Part-no.	SB mm	H mm	DIK mm	ID HS	ID HW
1	100	30	3	<b>027103</b>	● <b>027279</b> ●
1	120	30	3	<b>027105</b>	● <b>027281</b> ●
1	130	30	3	<b>027106</b>	● <b>027282</b> ●
1	150	30	3	<b>027107</b>	● <b>027283</b> ●
1	170	30	3	<b>027108</b>	● <b>027284</b> ●
1	180	30	3	<b>027109</b>	● <b>027285</b> ●
1	210	30	3	<b>027110</b>	● <b>027286</b> ●
1	230	30	3	<b>027111</b>	● <b>027287</b> ●
1	240	30	3	<b>027134</b>	● <b>027323</b> ●

Spare knives with other dimensions and qualities, see section 9 Knives and spare parts.

**Spare parts:**

Part-no.	BEZ	ABM mm	ID
2	Clamping wedge	98x25,43x11	<b>620752</b> ●
2	Clamping wedge	118x25,43x11	<b>620753</b> ●
2	Clamping wedge	128x25,43x11	<b>620754</b> ●
2	Clamping wedge	148x25,43x11	<b>620755</b> ●
2	Clamping wedge	168x25,43x11	<b>620756</b> ●
2	Clamping wedge	178x25,43x11	<b>620757</b> ●
2	Clamping wedge	208x25,43x11	<b>620759</b> ●
2	Clamping wedge	228x25,43x11	<b>620760</b> ●
2	Clamping wedge	238x25,43x11	<b>620761</b> ●
3	Allen screw	M10x1x25	<b>007395</b> ●
	Allen Key	SW 5	<b>117509</b> ●
	Pressure spring	30x7,5 X 0,8	<b>008051</b> ●
	Setting gauge	D125/140	<b>005361</b> ●





#### Planerhead CentroStar

**Application:**

Especially suitable for finish planing. Can also be used for pre planing with chip removal up to 6 mm.

**Machine:**

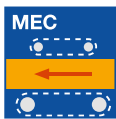
Four side moulders.

**Workpiece material:**

Softwood and hardwood.

**Technical information:**

Form fit knife clamping system supported by centrifugal force. Axial or radial knife removal. HS or HW turnblade planer knife SB x 12 x 2.7 mm. Integrated chip breaker to prevent pre splitting. Aluminium tool body.



**Aluminium tool body**

WW 240-2-20

D	SB	ND	BO	BO <sub>max.</sub>	Z	n <sub>max.</sub> min <sup>-1</sup>	ID HS	ID HW	
mm	mm	mm	mm	mm					
125	100	106	40	50	4	12000	<b>130442</b>	● <b>130443</b>	□
125	130	136	40	50	4	12000	<b>130446</b>	● <b>130447</b>	□
125	170	176	40	50	4	12000	<b>130452</b>	● <b>130453</b>	□
125	180	186	40	50	4	12000	<b>130454</b>	● <b>130455</b>	□
125	210	216	40	50	4	12000	<b>130458</b>	<b>130459</b>	
125	230	236	40	50	4	12000	<b>130460</b>	● <b>130461</b>	□
125	240	246	40	50	4	12000	<b>130462</b>	● <b>130463</b>	□

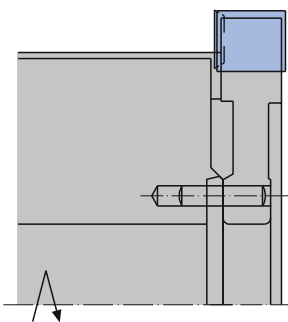
Further dimensions and inch dimensions available on request

Suitable reference cutterheads can be found on page 200.

Spare parts service only by the manufacturer.

**Spare knives:**

SB	H	DIK	QAL	SET	ID	
mm	mm	mm		PCS		
100	12	2,7	HS	4	<b>610203</b>	●
130	12	2,7	HS	4	<b>610205</b>	●
170	12	2,7	HS	4	<b>610210</b>	●
180	12	2,7	HS	4	<b>610211</b>	●
210	12	2,7	HS	4	<b>610213</b>	●
230	12	2,7	HS	4	<b>610214</b>	●
240	12	2,7	HS	4	<b>610215</b>	●
100	12	2,7	HW-F	2	<b>610606</b>	●
130	12	2,7	HW-F	2	<b>610612</b>	●
170	12	2,7	HW-F	2	<b>610620</b>	●
180	12	2,7	HW-F	2	<b>610621</b>	●
210	12	2,7	HW-F	2	<b>610627</b>	●
230	12	2,7	HW-F	2	<b>610629</b>	●
240	12	2,7	HW-F	2	<b>610631</b>	●



Combined with reference cutterhead and spacer ID **028617**.



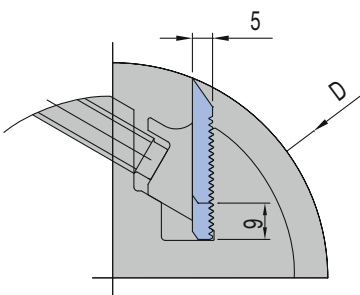
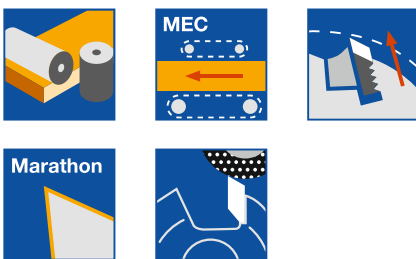
### Planerhead with HSK 85 WS and serrated back HS Marathon planer knives

**Application:**  
Finish planing.

**Machine:**  
Four side moulders with HSK 85 WS interface.

**Workpiece material:**  
Cutting angle 20° for softwood and hardwood in general.  
Cutting angle 12° for materials likely to splinter such as oak, douglas fir, merbau and wood fibre materials, e.g. MDF.

**Technical information:**  
Finish planing cutterhead in mono block design DTK 90 mm with serrated back planer knives SB x 40 x 5 mm ground to cutting circle. Jointable with specific jointing stone.  
For D = 106 mm the allowed RPM for jointing is  $n = 12000 \text{ min}^{-1}$  for SB 240 mm:  $n = 10000 \text{ min}^{-1}$ , >240 - 310 mm:  $n = 8000 \text{ min}^{-1}$ ; steel tool body. High balance quality by assembly with parts of the same weight.



#### Cutting angle 20°

WP 210-2-01

D mm	SB mm	A mm	QAL	Z	$n_{\text{max.}}$ $\text{min}^{-1}$	ID LL / on bottom	ID RL / on top
106	130	26	MC	2	12000	140322	● 140323 ●
106	170	26	MC	2	12000	140324	● 140325 ●
106	240	26	MC	2	12000	140326	● 140327 ●
106	80	26	MC	4	12000	140330	● 140331 ●
106	130	26	MC	4	12000	140332	● 140333 ●
106	170	26	MC	4	12000	140334	● 140335 ●
106	240	26	MC	4	12000	140336	● 140337 ●
106	310	26	MC	4	8000	140338	● 140339 ●
128	80	26	MC	6	10000	140346	□ 140347 □
128	130	26	MC	6	10000	140348	□ 140349 □
128	170	26	MC	6	8000	140350	□ 140351 □

#### Cutting angle 12°

WP 210-2-01

D mm	SB mm	A mm	QAL	Z	$n_{\text{max.}}$ $\text{min}^{-1}$	ID LL / on bottom	ID RL / on top
106	130	26	MC	2	12000	140302	● 140303 ●
106	170	26	MC	2	12000	140304	● 140305 ●
106	240	26	MC	2	12000	140306	● 140307 ●
106	130	26	MC	4	12000	140312	● 140313 ●
106	170	26	MC	4	12000	140314	● 140315 ●
106	240	26	MC	4	12000	140316	● 140317 ●
128	80	26	MC	6	10000	140340	□ 140341 □
128	130	26	MC	6	10000	140342	□ 140343 □
128	170	26	MC	6	8000	140344	□ 140345 □



##### Spare knives:

SB mm	H mm	DIK mm	PT <sub>max.</sub> mm	QAL	SET PCS	ID
80	40	5	0	MC	2	<b>697158</b> ●
130	40	5	0	MC	2	<b>697160</b> ●
170	40	5	0	MC	2	<b>697162</b> ●
240	40	5	0	MC	2	<b>697167</b> ●
310	40	5	0	MC	2	<b>697169</b> ●

Set matched to the same weight.

##### Spare parts:

BEZ	ABM mm	ID
Clamping wedge	80, for knife-thickness 5/6	<b>620732</b> ●
Clamping wedge	130, for knife-thickness 5/5	<b>620734</b> ●
Clamping wedge	170, for knife-thickness 5/6	<b>620736</b> ●
Clamping wedge	240, for knife-thickness 5/6	<b>620739</b> ●
Clamping wedge	310, for knife-thickness 5/6	<b>620741</b> ●
Pin	6x20	<b>008619</b> ●
Torx <sup>®</sup> key	Torx <sup>®</sup> 25	<b>117504</b> ●
Allen Key	SW 5	<b>117509</b> ●
Jointing stone (angular)	20x15x60	<b>008238</b> ●
Jointing stone (round)	12x32	<b>008237</b> ●



### Hydro planerhead

**Application:**

Pre planing and finish planing at high feed speeds of 24 to 120 m/min. See introduction pages for application data.

**Machine:**

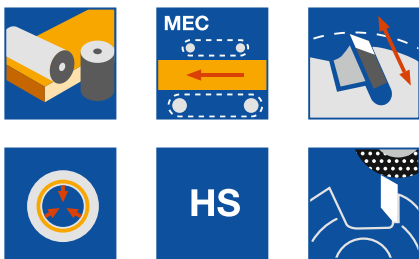
Four side moulders with jointing device.

**Workpiece material:**

Softwood and hardwood.

**Technical information:**

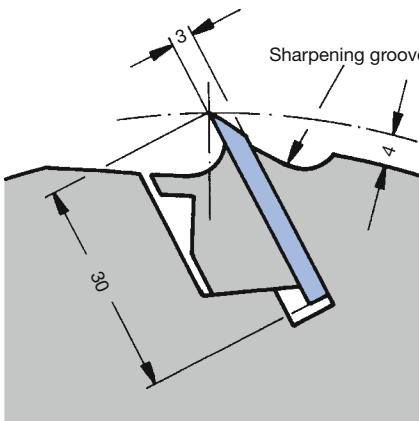
Steel tool body with integrated hydro clamping system. Activated by grease gun. Resharpenable HS planer knives SB x 30 x 3.0 mm. Wedge angle 30°. For jointing, the knives are to be sharpened in the tool body to a concentricity of < 0.005 mm.



**Z 4 - Z 10**

HM 200-2-05

D mm	SB mm	BO mm	Z	QAL	Scheme	n <sub>max</sub> min <sup>-1</sup>	ID
143	160	40	4	HS	2	9000	142003 ●
163	160	50	4	HS	2	9000	142008 ●
163	230	50	4	HS	2	9000	142009 ●
163	260	50	4	HS	2	9000	142010 ●
163	60	50	6	HS	1	9000	142011 ●
163	100	50	6	HS	1	9000	142012 ●
163	130	50	6	HS	1	9000	142013 ●
163	160	50	6	HS	2	9000	142014 ●
163	230	50	6	HS	2	9000	142015 ●
163	260	50	6	HS	2	9000	142016 ●
163	60	50	8	HS	1	9000	142017 ●
163	100	50	8	HS	1	9000	142018 ●
163	160	50	8	HS	2	9000	142019 ●
163	230	50	8	HS	2	9000	142020 ●
203	230	50	8	HS	2	6400	142024 ●
203	150	50	10	HS	2	6400	142026 ●



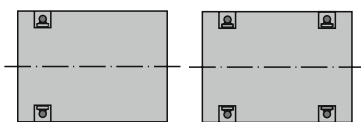
For spare knives of other dimensions and qualities, see section 9 Knives and Spare Parts.

Marathon knives (MC) for high performance, especially in softwood.

**Spare knives:**

Part-no.	SB mm	H mm	DIK mm	QAL	ID
1	60	30	3	HS	009362 ●
1	100	30	3	HS	009350 ●
1	130	30	3	HS	009351 ●
1	150	30	3	HS	009352 ●
1	160	30	3	HS	009363 ●
1	230	30	3	HS	009354 ●
1	260	30	3	HS	009355 ●

Mounted knife



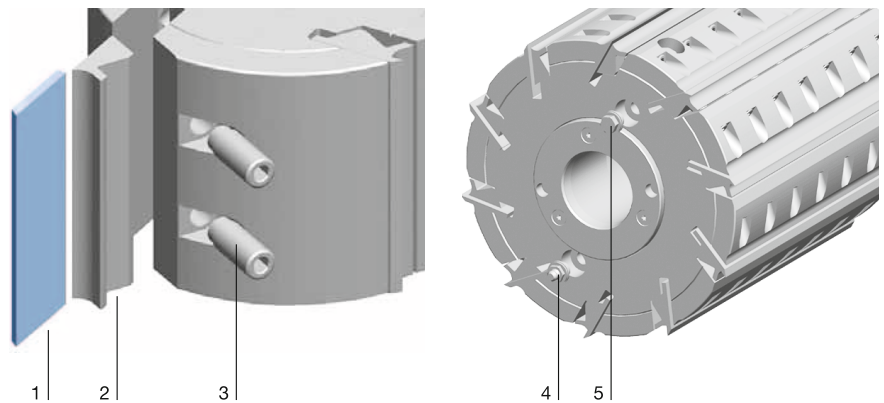
Scheme 1 - left  
Scheme 2 - right

Arrangement of the grease nipples



**Spare parts:**

Part-no.	BEZ	ABM mm	ID
2	Clamping wedge	52x25,3x10,8	<b>620711</b> ●
2	Clamping wedge	92x25,3x10,8	<b>620712</b> ●
2	Clamping wedge	122x25,3x10,8	<b>620713</b> ●
2	Clamping wedge	142x25,3x10,8	<b>620714</b> ●
2	Clamping wedge	152x25,3x10,8	<b>620715</b> ●
2	Clamping wedge	222x25,3x10,8	<b>620716</b> ●
2	Clamping wedge	252x25,3x10,8	<b>620717</b> ●
3	Allen screw	M10x1x25	<b>007395</b> ●
3	Allen screw	M10x1x20	<b>007396</b> ●
3	Allen screw	M10x1x16	<b>007397</b> ●
4	Grease nipple	M10x1	<b>007935</b> ●
5	Relief plug	M10x1	<b>007983</b> ●
	Allen Key	SW 5	<b>117509</b> ●
	Grease gun		<b>008239</b> ●







### RotaPlan hydro planerhead

**Application:**

For pre planing and finish planing at feed speeds of 60 to 200 m min<sup>-1</sup>. See introduction pages for application data.

**Machine:**

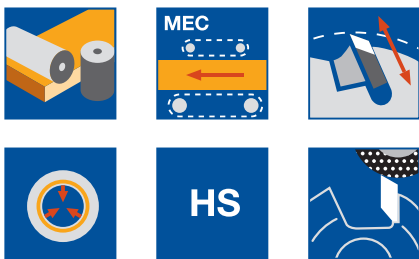
High performance moulders with precision spindles, counter bearing, jointing device and mechanical workpiece handling.

**Workpiece material:**

Softwood and hardwood.

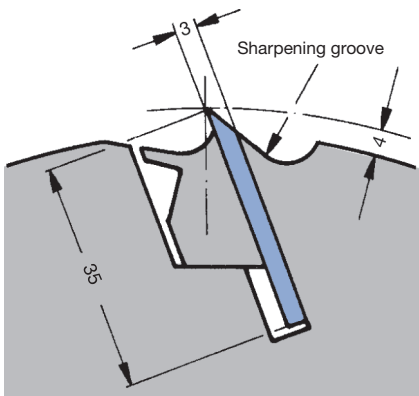
**Technical information:**

Steel tool body with integrated, hydro clamping system. Activated by grease gun. Resharpenable HS planer knives SB x 35 x 3.0 mm. Wedge angle 30°. For jointing, the knives are to be sharpened in the tool body to a concentricity of < 0.005 mm.



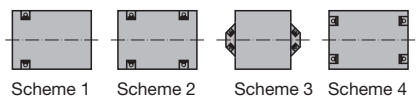
**Z 10 - Z 16**  
HM 200-2-06

D mm	SB mm	ND mm	BO mm	Z	QAL	Scheme	n <sub>max.</sub> min <sup>-1</sup>	ID
203	100	130	50	10	HS	3	6400	142115
203	160	190	50	10	HS	3	6400	142116
203	230	230	50	10	HS	2	6400	142117
203	320	320	50	10	HS	2	6400	142118
203	100	130	50	12	HS	3	6400	142119
203	160	190	50	12	HS	3	6400	142120
203	230	230	50	12	HS	2	6400	142121
203	320	320	50	12	HS	2	6400	142122
225	100	130	45	10	HS	3	5800	142123
225	160	190	45	10	HS	3	5800	142124
225	230	230	45	10	HS	2	5800	142125
225	100	130	45	12	HS	3	5800	142126
225	160	190	45	12	HS	3	5800	142127
225	230	230	45	12	HS	2	5800	142128
225	100	130	45	14	HS	3	5800	142129
225	160	190	45	14	HS	3	5800	142130
225	230	230	45	14	HS	2	5800	142131
225	160	190	45	16	HS	3	5800	142132



Mounted knife

For spare knives of other dimensions and qualities, see section 9 Knives and Spare Parts.



Arrangement of the grease nipples

Marathon knives (MC) for high performance, especially in softwood.

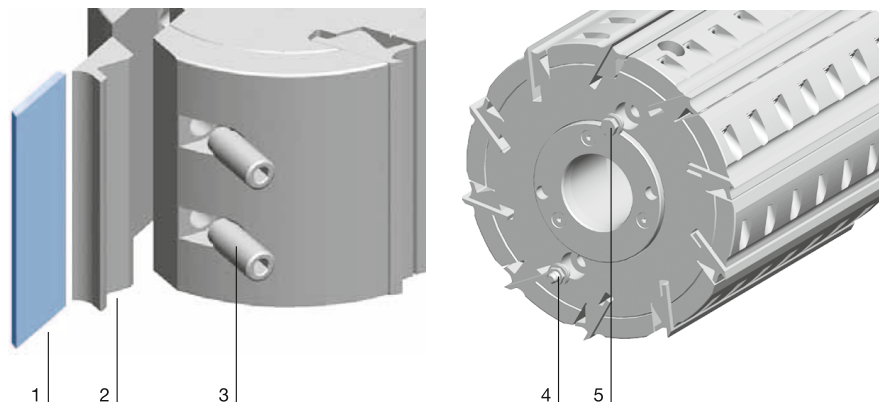
**Spare knives:**

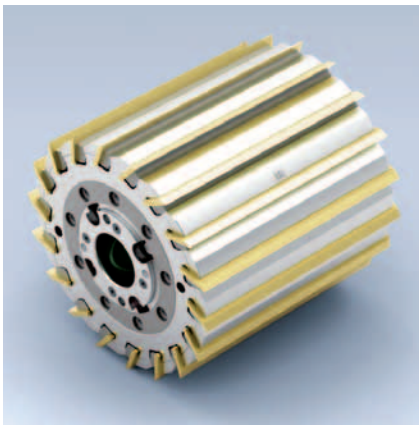
Part-no.	SB mm	H mm	DIK mm	QAL	ID
1	100	35	3	HS	009343 ●
1	160	35	3	HS	009344 ●
1	230	35	3	HS	009345 ●
1	320	35	3	HS	009346 ●



**Spare parts:**

Part-no.	BEZ	ABM mm	ID
2	Clamping wedge	92x25,3x10,8	<b>620712</b>
2	Clamping wedge	152x25,3x10,8	<b>620715</b> ●
2	Clamping wedge	222x25,3x10,8	<b>620716</b> ●
2	Clamping wedge	312x25,43x11	<b>620718</b>
2	Clamping wedge	92x25,3x10,8,40°	<b>620719</b>
3	Allen screw	M10x1x25	<b>007395</b> ●
3	Allen screw	M10x1x20	<b>007396</b> ●
4	Grease nipple	M10x1	<b>007935</b> ●
5	Relief plug	M10x1	<b>007983</b> ●
	Grease gun		<b>008239</b> ●
	Grease cartridge	for Hydro sleeve	<b>007934</b> ●
	Allen Key	SW 5	<b>117509</b> ●





### TurboPlan hydro planerhead

#### Application:

For pre planing and finish planing at feed speeds of 160 to 360 m min<sup>-1</sup>. See introduction pages for application data.

#### Machine:

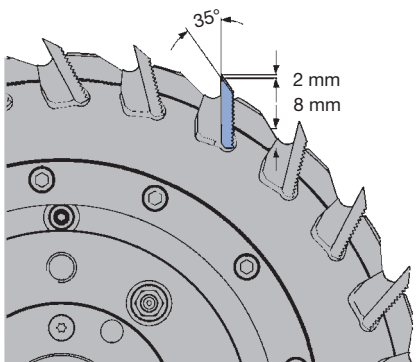
High performance moulders with precision spindles, counter bearing, jointing device and mechanical workpiece handling.

#### Workpiece material:

Softwood and hardwood.

#### Technical information:

Steel tool body with two separate hydro systems for tool and knife clamping. Activated by grease gun. Marathon coated (MC) serrated back planer knives SB x 30 x 5.0 mm. For jointing, the knives are to be sharpened in the tool body to a concentricity of < 0.005 mm.



TurboPlan with integrated balancing segments

#### Z 18 - Z 26

HM 200-2-04

D mm	SB mm	Z	ND mm	BO <sub>max.</sub> mm	n <sub>max.</sub> min <sup>-1</sup>	ID
225	130	18	132	50	7200	<b>142218</b>
225	150	18	152	50	7200	<b>142219</b>
225	230	18	232	50	7200	<b>142220</b>
250	130	20	132	60	6900	<b>142201</b>
250	150	20	152	60	6900	<b>142202</b>
250	230	20	232	60	6900	<b>142203</b>
260	130	22	132	60	6700	<b>142205</b>
260	150	22	152	60	6700	<b>142206</b>
260	230	22	232	60	6700	<b>142207</b>
300	130	26	132	60	6300	<b>142209</b>
300	150	26	152	60	6300	<b>142210</b>
300	230	26	232	60	6300	<b>142211</b>

#### Spare knives:

SB mm	H mm	DIK mm	QAL	ID
130	30	5	MC	<b>605451</b> □
150	30	5	MC	<b>605452</b> □
230	30	5	MC	<b>605453</b> □

#### Spare parts:

BEZ	ABM mm	BEM	ID
Clamping wedge	52x18,6x9,3	for SB = 60	<b>620650</b>
Clamping wedge	122x18,6x9,3	for SB = 130	<b>620651</b>
Clamping wedge	142x18,6x9,3	for SB = 150	<b>620652</b>
Clamping wedge	222x18,6x9,3	for SB = 230	<b>620653</b>
Knife setting device	for TurboPlan		<b>142290</b>
Setting gauge for Hydro planerhead	Knife protection 3,8 mm		<b>142291</b>
Grease nipple	M10x1		<b>007935</b> ●
Relief plug	M10x1		<b>007983</b> ●
Grease gun			<b>008239</b> ●
Grease cartridge	for Hydro sleeve		<b>007934</b> ●
Allen Key	SW 3		<b>005444</b> ●
Jointing stone (round)	12x32	Colour: grey	<b>008237</b> ●
Jointing stone (angular)	20x15x60	Colour: brown	<b>008238</b> ●

### 3. Planing and profiling

### 3.2 Planing

#### 3.2.4 Combination tools for planing and profiling



#### Planerhead VariPlan Plus/ProFix F system PF 25

**Application:**

For planing and profiling (chamfering) e.g. grooving, bevelling, rounding or profiling in common.

**Machine:**

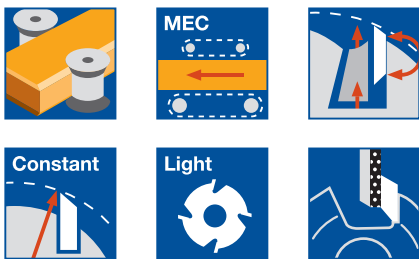
Four side moulders.

**Workpiece material:**

Softwood and hardwood.

**Technical information:**

Resharpenable cutterhead system with constant diameter and constant profile. VariPlan Plus planerhead with knife seatings for ProFix F profile knives (PF 25). Profile knives:  $PT_{max}$  25 mm,  $SB_{max}$  100 mm. Aluminium tool body.



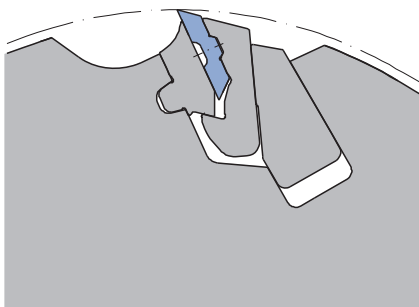
**Bore 40 mm**

WW 240-2-07

D mm	SB mm	ND mm	BO mm	QAL	$n_{max}$ $min^{-1}$	Z	ID
125	130	136	40	HW	9000	2+2	<b>131053</b> ●
125	170	176	40	HW	9000	2+2	<b>131054</b> ●
125	240	246	40	HW	9000	2+2	<b>131055</b> ●

When ordering **always** state the variant!

Further dimensions and inch dimensions on request. Servicing with spare parts only by the manufacturer. VariPlan Plus spare knives in section 9 Knives and spare parts.



**Spare knives:**

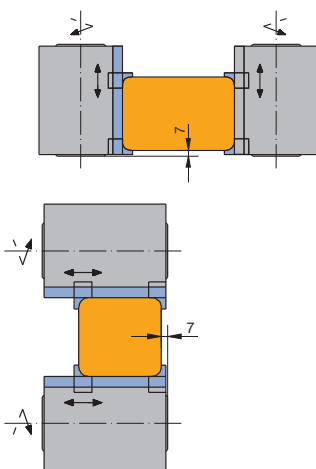
BEZ	SB mm	ABM mm	QAL	ID LL	ID RL
ProFix F knife PF 25 R=3	25	R=3	HW	<b>011041</b> ●	<b>011042</b> ●
ProFix F knife PF 25 R=5	25	R=5	HW	<b>011043</b> ●	<b>011044</b> ●
ProFix F knife PF 25 R=8	25	R=8	HW	<b>011045</b> ●	<b>011046</b> ●
ProFix F knife PF 25 R=10	25	R=10	HW	<b>011047</b> ●	<b>011048</b> ●
ProFix-F knife PF 25 Bevel 45°	25	Bevel 45°	HW	<b>011051</b> ●	<b>011052</b> ●

Aluminium tool body with steel chip breaker

Further profile knives on request.

**Spare parts:**

BEZ	ABM mm	ID
Allen Key	SW 4	<b>005445</b> ●
Allen Key	SW 5	<b>005452</b> ●



Use on vertical or horizontal spindles  
 $HD = SB - 40 \text{ mm}$

Variant	Description
110 000	Planerhead without knives
110 001	Planerhead with HS Microfinish turnblade knives
110 002	Planerhead with HW Microfinish turnblade knives
110 003	Planerhead with HW Integral turnblade knives
110 004	Planerhead with HW RipTec turnblade knives



#### Planerhead VariPlan Plus/ProFix F system PF 25

**Application:**

For planing and profiling (chamfering) e.g. grooving, bevelling, rounding or profiling in common.

**Machine:**

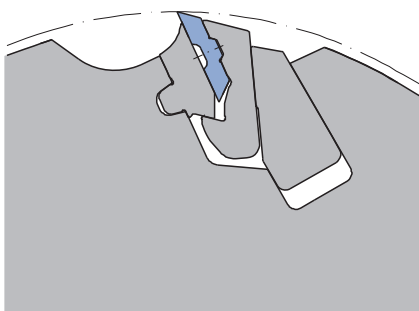
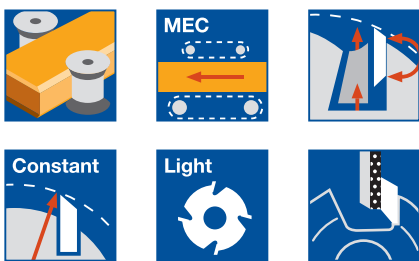
Four side moulders with HSK 85 WS interface.

**Workpiece material:**

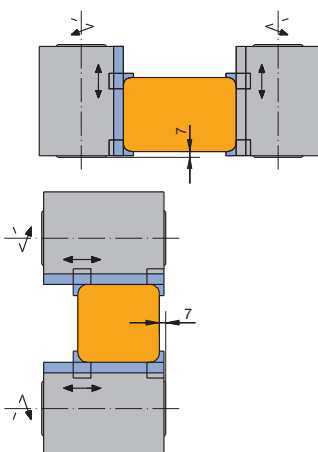
Softwood and hardwood.

**Technical information:**

Resharpenable cutterhead system with constant diameter and constant profile. VariPlan Plus planerhead with knife seatings for ProFix F profile knives (PF 25). Profile knives:  $PT_{max}$  25 mm,  $SB_{max}$  100 mm. Aluminium tool body.



Aluminium tool body with steel chip breaker



Use on vertical or horizontal spindles  
 $HD = SB - 40$  mm

**HSK 85 WS**

WP 240-2-01

D mm	SB mm	A mm	Z	$n_{max}$ $min^{-1}$	DRI	BEM	ID
125	130	26	2+2	10000	LL	left/ on bottom	<b>131108</b> □
125	130	26	2+2	10000	RL	right/ on top	<b>131109</b> □
125	170	26	2+2	10000	LL	left/ on bottom	<b>131110</b> □
125	170	26	2+2	10000	RL	right/ on top	<b>131111</b> □
125	240	26	2+2	10000	LL	on bottom	<b>131112</b> □
125	240	26	2+2	10000	RL	on top	<b>131113</b> □
140	310	26	2+2	8000	LL	on bottom	<b>131114</b> □
140	310	26	2+2	8000	RL	on top	<b>131115</b> □

When ordering **always** state the variant!

Further dimensions and inch dimensions on request. Servicing with spare parts only by the manufacturer. VariPlan Plus spare knives in section 9 Knives and spare parts.

**Spare knives:**

BEZ	SB mm	ABM mm	QAL	ID LL	ID RL
ProFix F knife PF 25 R=3	25	R=3	HW	<b>011041</b>	● <b>011042</b> ●
ProFix F knife PF 25 R=5	25	R=5	HW	<b>011043</b>	● <b>011044</b> ●
ProFix F knife PF 25 R=8	25	R=8	HW	<b>011045</b>	● <b>011046</b> ●
ProFix F knife PF 25 R=10	25	R=10	HW	<b>011047</b>	● <b>011048</b> ●
ProFix-F knife PF 25 Bevel 45°	25	Bevel 45°	HW	<b>011051</b>	● <b>011052</b> ●

Further profile knives on request.

**Spare parts:**

BEZ	ABM mm	ID
Allen Key	SW 4	<b>005445</b> ●
Allen Key	SW 5	<b>005452</b> ●

Variant	Description
110 000	Planerhead without knives
110 001	Planerhead with HS Microfinish turnblade knives
110 002	Planerhead with HW Microfinish turnblade knives
110 003	Planerhead with HW Integral turnblade knives
110 004	Planerhead with HW RipTec turnblade knives



### Tongue and groove cutter, HL solid / HS tipped

**Application:**

For tongue and groove profiles on wall and ceiling panels.

**Machine:**

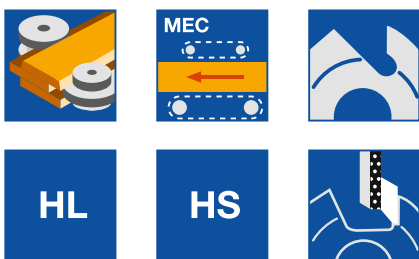
Four side moulders.

**Workpiece material:**

Softwood, along grain.

**Technical information:**

Tongue and groove cutterset with spacers for adjustment to different wood thicknesses and tongue and groove widths. BO 60 for use on hydro sleeve for high feed speeds and machining qualities. HL profile cutter with form ground clearance and large resharping area; HS tipped design with straight clearance.



**Straight with closed joint (P 3)**

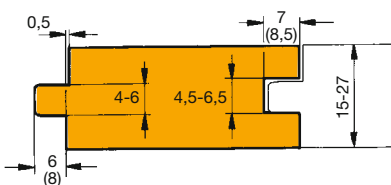
AF 200-2

P	D	BO	HD	Z	NT	FL	n <sub>max</sub>	QAL	ID
	mm	mm	mm		mm	mm	min <sup>-1</sup>		
3	180	60	15 - 27	6	8,5	8	9000	HL	<b>021876</b> ●
3	160	40	15 - 27	6	8,5	8	9000	HS	<b>022016</b> ●

**Bevel profile with closed joint (P 5)**

AF 210-2

P	D	BO	HD	Z	NT	FL	n <sub>max</sub>	QAL	ID
	mm	mm	mm		mm	mm	min <sup>-1</sup>		
5	160	40	12,5 - 16	6	7	6	9000	HS	<b>021913</b> ●

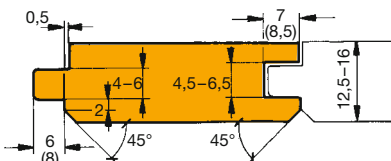


Profile 3: AF 200-2

**Bevel profile (P 1, P 4)**

AF 240-2

P	D	BO	HD	NT	FL	Z	n <sub>max</sub>	QAL	ID
	mm	mm	mm	mm	mm		min <sup>-1</sup>		
1	180	60	12 - 27	7	6	6	9000	HL	<b>021964</b> ●
4	180	60	12 - 27	8	8,5	6	9000	HL	<b>021969</b> ●

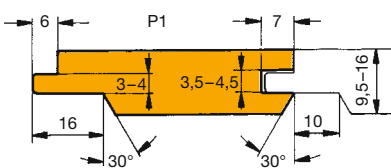


Profile 5: AF 210-2

**Radius profile R5 (P 6)**

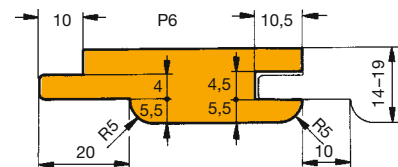
AF 221-2

P	D	BO	HD	NT	FL	Z	n <sub>max</sub>	QAL	ID
	mm	mm	mm	mm	mm		min <sup>-1</sup>		
6	180	60	14 - 19	10	10,5	6	9000	HL	<b>021883</b> ●

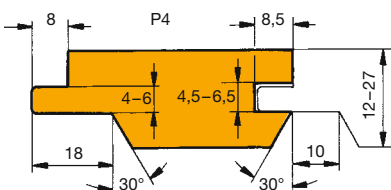


Profile 1: AF 240-2

Hydro-Duo clamping element see page 239.



Profile 6: AF 221-2



Profile 4: AF 240-2

### 3. Planing and profiling

### 3.3 Profiling

#### 3.3.1 Tools for tongue and groove joints



#### Bevel / radius profile cutter for tongue and groove joints, HL solid

**Application:**

Profiling of the visible edge on the groove side of tongue and groove panels on a separate spindle.

**Machine:**

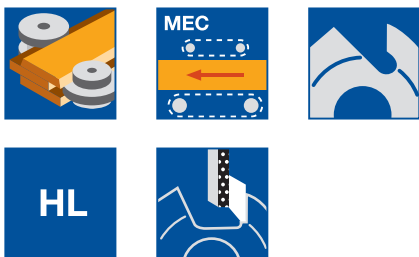
Four side moulders.

**Workpiece material:**

Softwood, along grain.

**Technical information:**

HL profile cutter with form ground clearance and large resharping area suitable to mount on hydro sleeve.



**Bevel groove side, 30°**

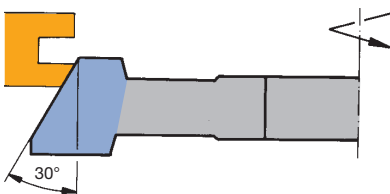
HF 300-2

D mm	SB mm	BO mm	Z	$n_{max.}$ $min^{-1}$	DRI	ID
240	30	60	10	6000	RL	<b>023700</b>
240	30	60	12	6000	RL	<b>023701</b>

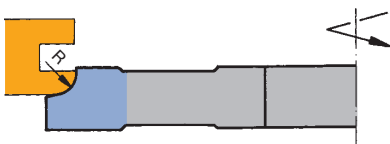
**Round profile groove side**

WF 501-2

D mm	SB mm	BO mm	Z	R mm	$n_{max.}$ $min^{-1}$	DRI	ID
240	20	60	10	5	6000	RL	<b>023628</b>
240	20	60	10	6	6000	RL	<b>023629</b>
240	20	60	10	7	6000	RL	<b>023630</b>
240	20	60	10	8	6000	RL	<b>023631</b>
240	20	60	12	5	6000	RL	<b>023632</b>
240	20	60	12	6	6000	RL	<b>023633</b>
240	20	60	12	7	6000	RL	<b>023634</b>
240	20	60	12	8	6000	RL	<b>023635</b>

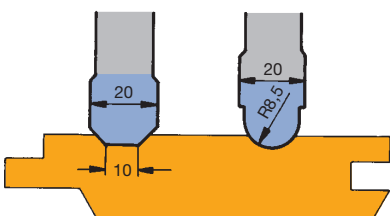


Bevel cutter - groove side



Radius cutter - groove side

Left: Trapezoidal groove /  
Right: Round groove



Relief groove cutter with trapezoidal or round profile

**Application:**

For cutting relief grooves on the back of tongue and groove panels.

**Relief groove cutter with trapezoidal or round profile**

WF 501-2

Tool Type	D mm	SB mm	BO mm	Z	$n_{max.}$ $min^{-1}$	ID
Trapezoidal groove	200	20	60	6	8000	<b>023603</b> ●
Round groove	200	20	60	6	8000	<b>023600</b> ●
Trapezoidal groove	200	20	60	8	8000	<b>023602</b> ●
Round groove	200	20	60	8	8000	<b>023601</b> ●



#### Shadow grooving cutter for tongue and groove panels, HL solid

**Application:**

For cutting shadow groove profiles on tongue and groove panels on the bottom spindle.

**Machine:**

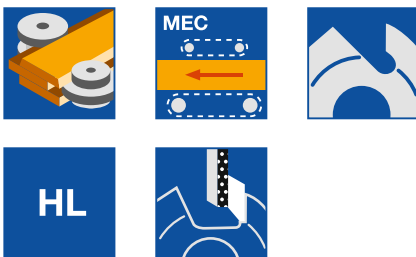
Four side moulders.

**Workpiece material:**

Softwood, along the grain.

**Technical information:**

HL profile cutter with form ground clearance and large resharping area suitable for mounting on hydro sleeve.



**Bevel profile, tongue 30°**

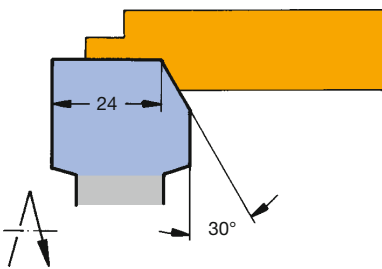
WF 741-2

D mm	SB mm	BO mm	Z	$n_{max}$ min <sup>-1</sup>	ID
200	35	60	10	8000	<b>023400</b>
220	35	60	12	7000	<b>023401</b>

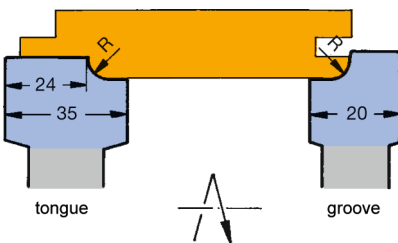
**Round profile**

WF 501-2

Tool Type	D mm	SB mm	BO mm	Z	R mm	$n_{max}$ min <sup>-1</sup>	ID
Groove side	200	20	60	10	5	8000	<b>023604</b>
Tongue side	200	35	60	10	5	8000	<b>023605</b>
Groove side	200	20	60	10	6	8000	<b>023606</b>
Tongue side	200	35	60	10	6	8000	<b>023607</b>
Groove side	200	20	60	10	7	8000	<b>023608</b>
Tongue side	200	35	60	10	7	8000	<b>023609</b>
Groove side	200	20	60	10	8	8000	<b>023610</b>
Tongue side	200	35	60	10	8	8000	<b>023611</b>
Groove side	220	20	60	12	5	7000	<b>023612</b>
Tongue side	220	35	60	12	5	7000	<b>023613</b>
Groove side	220	20	60	12	6	7000	<b>023614</b>
Tongue side	220	35	60	12	6	7000	<b>023615</b>
Groove side	220	20	60	12	7	7000	<b>023616</b>
Tongue side	220	35	60	12	7	7000	<b>023617</b>
Groove side	220	20	60	12	8	7000	<b>023618</b>
Tongue side	220	35	60	12	8	7000	<b>023619</b>



Shadow groove cutter, bevel profile



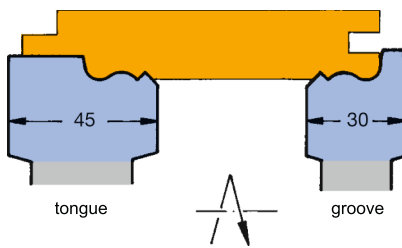
Shadow groove cutter, round profile for tongue and groove panels



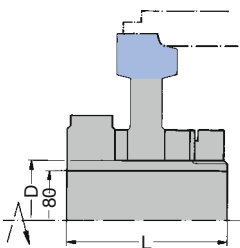
### 3. Planing and profiling

### 3.3 Profiling

#### 3.3.1 Tools for tongue and groove joints



Shadow groove cutter, chalet style profile for tongue and groove panels



Mounting example:  
Shadow groove cutter on Hydro-Duo clamping sleeve.  
Attention: Only use high precision spacers - see section 9 Knives and spare parts.

#### Chalet style profile

WF 502-2

Tool Type	D mm	SB mm	BO mm	Z	n <sub>max.</sub> min <sup>-1</sup>	ID
Groove side	200	30	60	8	8000	<b>023620</b>
Tongue side	200	45	60	8	8000	<b>023621</b>
Groove side	200	30	60	10	8000	<b>023622</b>
Tongue side	200	45	60	10	8000	<b>023623</b>
Groove side	200	30	60	12	8000	<b>023624</b>
Tongue side	200	45	60	12	8000	<b>023625</b>

#### Application:

Hydro-Duo clamping sleeve to mount tongue and groove cutters, bevel/radius profile cutters and shadow groove cutters.

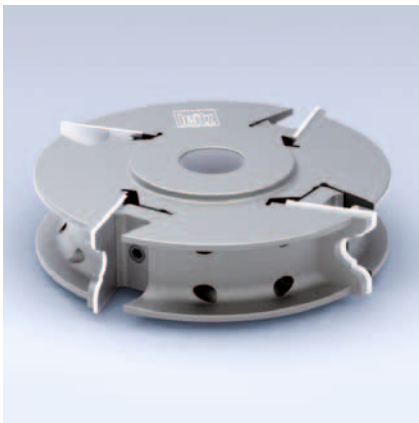
#### Technical information:

Open clamping system activated by a grease gun.

#### Hydro-Duo clamping sleeve

PH 130-0

BEM	D mm	BO mm	L mm	ID
For bevel or radius cutter	60	45	80	<b>030517</b> □
For bevel or radius cutter	60	50	80	<b>030522</b> □
For shadow grooving cutter bevel and radius profile	60	45	80	<b>030523</b> □
For shadow grooving cutter bevel and radius profile	60	50	80	<b>030516</b> □
For shadow grooving cutter chalet style profile	60	45	80	<b>030525</b> □
For shadow grooving cutter chalet style profile	60	50	80	<b>030524</b> □



#### Profile cutterhead VariForm

**Application:**

For cutting profiles. Different profiles with max. 20 mm profile depth can be mounted.

**Machine:**

Moulders, double end tenoners, edge banding machines etc.

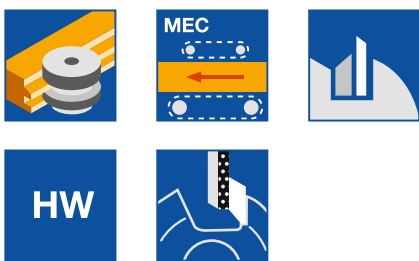
**Workpiece material:**

Softwood and hardwood (HW-30F), panel materials or glued wood (HW-10F).

**Technical information:**

Multi purpose cutterhead for MEC feed with tungsten carbide special profile knives and backing plates.

Resharpenable 3 to 4 times.



**Partly profiled tool body, MEC feed, Z2 - Z4 U profile**

TT 531-2

D	TD	SB	BO	BO <sub>max.</sub>	PT <sub>max.</sub>	Z	n <sub>max.</sub> min <sup>-1</sup>	ID
mm	mm	mm	mm	mm	mm			
165	140	40	30	40	20	2	10000	<b>135212</b> ●
165	140	50	30	40	20	2	10000	<b>135213</b> ●
165	140	60	30	40	20	2	10000	<b>134214</b> ●
180	165	40	35 DKN	35	20	4	9000	<b>135203</b> ●
180	165	50	35 DKN	35	20	4	9000	<b>135204</b> ●
180	165	40	30	50	20	4	9000	<b>135206</b> ●
180	165	60	30	50	20	4	9000	<b>135208</b> ●

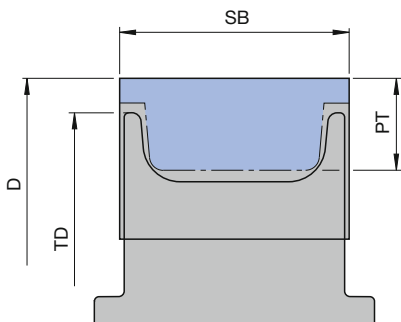
Supplied with clamping wedges, but without backing plates and knives.

**Spare knives:**

Part-no.	H	SB	ID	ID
	mm	mm	HW-10F	HW-30F
1	45	40	<b>636226</b> ●	<b>636239</b> ●
1	45	50	<b>636283</b> ●	<b>636271</b> ●
1	45	60	<b>636287</b> ●	<b>636275</b> ●

**Spare parts:**

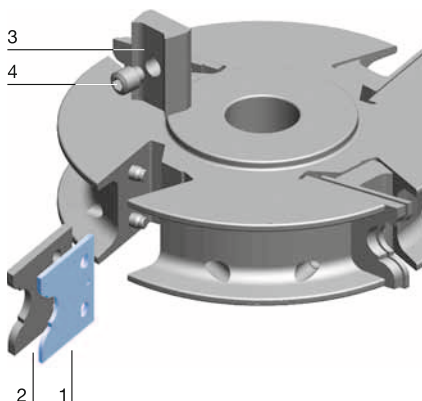
Part-no.	BEZ	ABM	for SB	ID
		mm	mm	
2	Backing plate VariForm	for knives 40x45x2.1		<b>645004</b> ●
2	Backing plate VariForm	for knives 50x45x2.1		<b>645005</b> ●
2	Backing plate VariForm	for knives 60x45x2.1		<b>645006</b> ●
3	Clamping wedge	36x13,21x26	40/45	<b>009756</b> ●
3	Clamping wedge	56x13,21x26	60	<b>009757</b> ●
3	Clamping wedge VariForm	44x13,21x24,25	50/60	<b>009760</b> ●
4	Allen screw with ISK 5	M10x12		<b>006044</b> ●
	Allen Key	SW 5, L100		<b>117506</b> ●



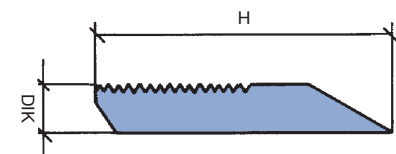
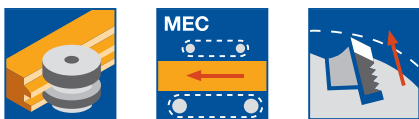
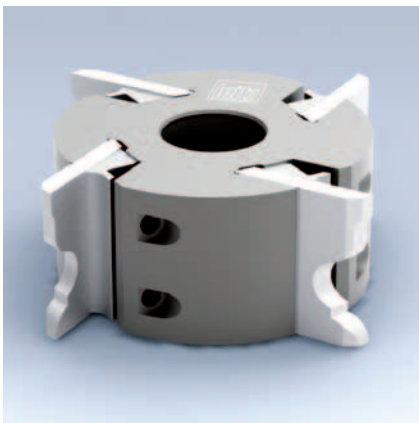
Tool body, U profile

Table of the 0-diameter (D<sub>0</sub>) for adjusting the machine spindles

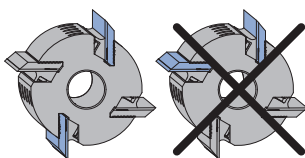
D	TD	Do
mm	mm	mm
150	135	110
165	140	125
180	165	140



Tool system description VariForm see section 11.



Serrated back blank knives with high precision serration, serration angle 60°, pitch 1.6 mm



**Attention:**

For safety reasons, always mount knives + backing plates (VE) of the same weight opposite to each other.

H mm	QAL	PT mm
50	MC	15
60	MC	20
70	MC	30
50	HW	10
60	HW	18
55		15
70		27

Table to determine max. profile depth. The profile depth figures are to be regarded as standard values. The max. profile depth depends on the tool diameter and cutting angle.

#### Profile cutterheads for serrated back blank knives

**Application:**

For multi purpose profiles in hard and/or materials likely to splinter.

**Machine:**

Four side moulders.

**Workpiece material:**

Cutting angle 20° for softwood and hardwood in general.

Cutting angle 12° for materials likely to splinter such as oak, douglas fir, merbau and wood fibre materials, e.g. MDF.

**Technical information:**

Profile cutterhead with 60° serration, 1.6 mm pitch. Steel tool body. Blank knives with knife thickness 8 - 10 mm and knife heights of 40 - 70 mm can be used depending on required profile depth. Cutting materials: Marathon (MC) and HW.

**Cutting angle 20°**

WM 501-2-05

TD mm	SB mm	BO mm	BO in	BO <sub>max.</sub> mm	Z	n <sub>max.</sub> min <sup>-1</sup>	ID
122	80	40		40	2	9000	135805 ●
122	40	40		40	4	9000	135802 ●
122	60	35		40	4	9000	135806 ●
122	60		1 1/2"	40	4	9000	135807 □
122	60	40		40	4	9000	135808 ●
122	80	40		40	4	9000	135809 ●
122	100	35		40	4	9000	135810 ●
122	100		1 1/2"	40	4	9000	135811 □
122	100	40		40	4	9000	135812 ●
122	130	40		40	4	9000	135814 ●
122	150	40		40	4	9000	135817 ●
122	170	40		40	4	9000	135816 ●
122	180	40		40	4	9000	135819 ●
122	230	35		40	4	9000	135820 ●
122	230	40		40	4	9000	135821 ●
122	240	40		40	4	9000	135822 ●
137	60	40		50	4	8500	135823 ●
137	60		1 13/16"	50	4	8500	135824 □
137	60	50		50	4	8500	135825 ●
137	80	50		50	4	8500	135826 ●
137	100	40		50	4	8500	135827 ●
137	100		1 13/16"	50	4	8500	135828 □
137	100	50		50	4	8500	135829 ●
137	130	40		50	4	8500	135830 ●
137	130	50		50	4	8500	135831 ●
137	150	40		50	4	8500	135832 ●
137	150	50		50	4	8500	135833 ●
137	180	50		50	4	8500	135836 ●
137	230	50		50	4	8500	135838 ●

Cutterhead without knives. For blank knives in different dimensions and qualities, see section 9 Knives and spare parts.

### 3. Planing and profiling

### 3.3 Profiling

#### 3.3.2 Cutterheads for multi purpose profiling

H mm	QAL	PT mm
50	MC	15
60	MC	20
70	MC	30

Table to determine max. profile depth. The profile depth figures are to be regarded as standard values. The max. profile depth depends on the tool diameter and cutting angle.

#### Cutting angle 12°

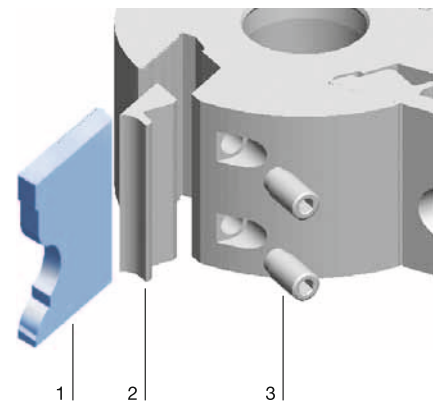
WM 501-2-05

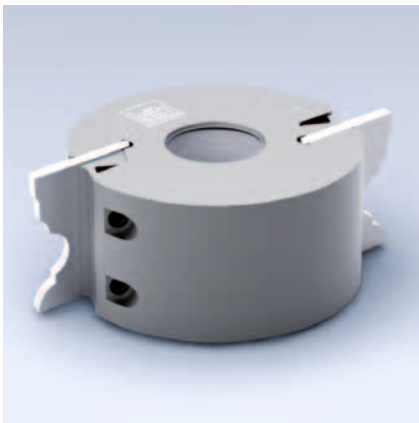
TD mm	SB mm	ND mm	BO mm	Z	ID
122	40	40	40	4	<b>135840</b> ●
122	60	60	40	4	<b>135841</b> ●
122	80	80	40	4	<b>135842</b> ●
122	130	130	40	4	<b>135843</b> ●

Cutterhead without knives. For blank knives in different dimensions and qualities, see section 9 Knives and spare parts.

#### Spare parts:

Part-no.	BEZ	ABM mm	ID
2	Clamping wedge	38x25,3x10,8	<b>620700</b> ●
2	Clamping wedge	58x25,3x10,8	<b>620701</b> ●
2	Clamping wedge	78x25,3x10,8	<b>620702</b> ●
2	Clamping wedge	98x25,3x10,8	<b>620703</b> ●
2	Clamping wedge	128x25,3x10,8	<b>620705</b> ●
2	Clamping wedge	148x25,3x10,8	<b>620706</b> ●
2	Clamping wedge	168x25,3x10,8	<b>620707</b> ●
2	Clamping wedge	178x25,3x10,8	<b>620708</b> ●
2	Clamping wedge	228x25,43x11	<b>620709</b> ●
2	Clamping wedge	238x25,3x10,8	<b>620710</b> ●
3	Allen screw	M10x1x20	<b>007396</b> ●
	Filler piece	40x30x8	<b>005305</b> ●
	Filler piece	60x30x8	<b>005306</b> ●
	Filler piece	80x30x8	<b>005307</b> ●
	Filler piece	100x30x8	<b>005308</b> ●
	Filler piece	130x30x8	<b>005310</b> ●
	Filler piece	150x30x8	<b>005311</b> ●
	Filler piece	170x30x8	<b>620770</b> ●
	Filler piece	180x30x8	<b>005312</b> ●
	Filler piece	230x30x8	<b>005313</b> ●
	Filler piece	240x30x8	<b>620771</b> ●
	Allen Key	SW 5	<b>117509</b> ●





#### Profile cutterheads for serrated back blank knives

**Application:**

Cutting multi purpose profiles.

**Machine:**

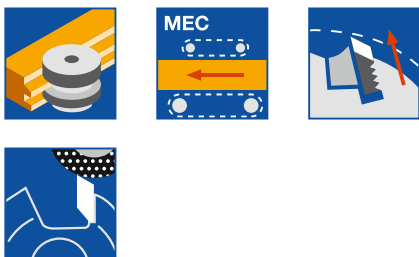
Four side moulders with 30 mm or 1 1/4" working spindle and CNC routers.

**Workpiece material:**

Softwood and hardwood.

**Technical information:**

Profile cutterhead with 60° serration, 1.6 mm pitch. Steel tool body. HS blank knives with 6 mm knife thickness and knife heights of 45 - 55 mm can be used depending on required profile depth.



**Cutting angle 20°, for knife thickness 6 mm**

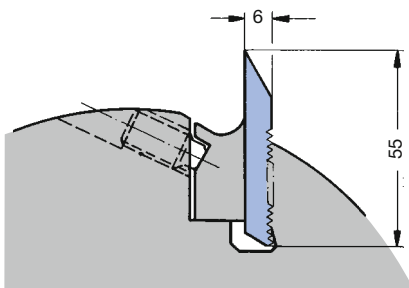
WM 501-2-02

TD mm	Z	DIK mm	SB mm	BO mm	BO <sub>max.</sub> in	n <sub>max.</sub> min <sup>-1</sup>	ID
100	2	6	60	30	1 1/4"	12000	<b>026961</b> ●

Cutterhead without knives. For blank knives in different dimensions and qualities, see section 9 Knives and spare parts.

**Spare parts:**

Part-no.	BEZ	ABM mm	ID
2	Clamping wedge	58x21,4x13	<b>009254</b> ●
3	Allen Key	SW 5, L 80	<b>005435</b> ●
	Allen screw	M10x16	<b>006046</b> ●

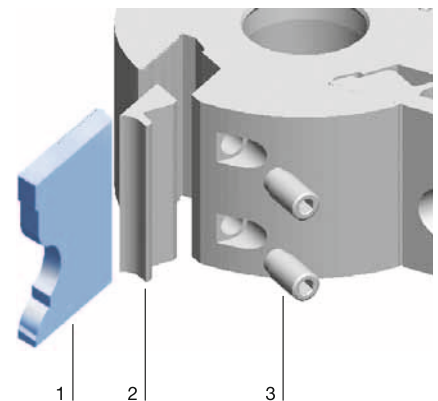


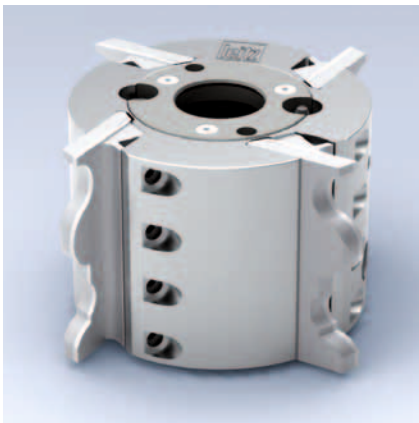
**Knife thickness:** 6.0 mm

**Knife height:** 55.0 mm

**Resharpener area:** 4.8 mm

Knife height mm	45	55
Max. profile depth mm	15	25
Diameter for a tool body diameter of 100 mm	140	160





#### Hydro profile cutterhead for serrated back blank knives

**Application:**

For multi purpose profiles in hard and/or materials likely to splinter at feed speeds of 24 to 100 m/min.

**Machine:**

Four side moulders.

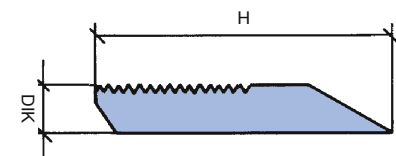
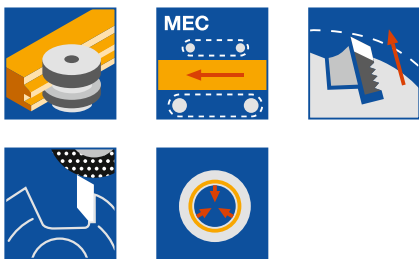
**Workpiece material:**

Cutting angle 20° for softwood and hardwood in general.

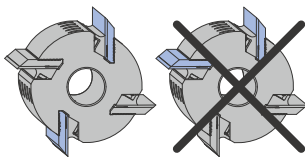
Cutting angle 12° for materials likely to splinter such as oak, douglas fir, merbau and wood fibre materials, e.g. MDF.

**Technical information:**

Profile cutterhead with 60° serration, 1.6 mm pitch. Steel tool body. Blank knives with knife thickness of 8 - 10 mm and knife heights of 40 - 70 mm can be used depending on required profile depth. Integrated hydro clamping, open system, activated by grease gun. Only use hydro profile cutterhead with a locking collar.



Serrated back blank knives with high precision serration, serration angle 60°, pitch 1.6 mm



**Attention:**

For safety reasons, always mount knives + backing plates (VE) of the same weight opposite to each other.

**Cutting angle 20°**

HM 501-2-05

TD mm	SB mm	BO mm	DIK mm	Z	n <sub>max.</sub> min <sup>-1</sup>	ID
135	100	40	8 - 10	4	9000	137001 ●
135	150	40	8 - 10	4	9000	137002
145	60	50	8 - 10	6	8300	137005 ●
145	100	45	8 - 10	6	8300	137004 ●
145	100	50	8 - 10	6	8300	137006 ●
150	60	50	8 - 10	4	8100	137007 ●
150	100	50	8 - 10	4	8100	137008 ●
150	150	50	8 - 10	4	8100	137009 ●
150	230	50	8 - 10	4	8100	137010 ●
150	60	50	8 - 10	6	8100	137011 ●
150	100	50	8 - 10	6	8100	137012 ●
150	150	50	8 - 10	6	8100	137013 ●
150	230	50	8 - 10	6	8100	137014 ●
165	60	45	8 - 10	8	7800	137015
165	60	50	8 - 10	8	7800	137017 ●
165	100	45	8 - 10	8	7800	137016
165	100	50	8 - 10	8	7600	137018 ●
170	60	50	8 - 10	8	7600	137019 ●
170	100	50	8 - 10	8	7600	137020 ●
170	150	50	8 - 10	8	7600	137021 ●
170	230	50	8 - 10	8	7600	137022
190	60	45	8 - 10	10	7200	137023
190	60	50	8 - 10	10	7200	137026
190	60	45	5	12	7200	137024
190	60	50	5	12	7200	137027 ●
190	60	45	5	14	7200	137025
190	60	50	5	14	7200	137028

Cutterhead without knives. For blank knives in different dimensions and qualities, see section 9 Knives and spare parts.

H mm	QAL	PT mm
50	MC	15
60	MC	20
70	MC	30
50	HW	10
60	HW	18
55		15
70		27

Table to determine max. profile depth. The profile depth figures are to be regarded as standard values. The max. profile depth depends on the tool diameter and cutting angle.



#### Hydro profile cutterhead for serrated back blank knives

**Application:**

For multi purpose profiles in hard and/or materials likely to splinter at feed speeds of 24 to 100 m/min.

**Machine:**

Four side moulders.

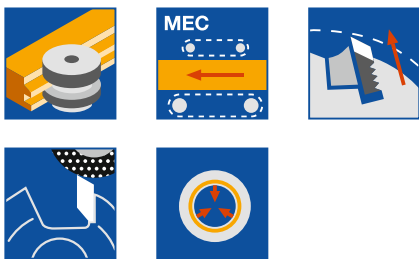
**Workpiece material:**

Cutting angle 20° for softwood and hardwood in general.

Cutting angle 12° for materials likely to splinter such as oak, douglas fir, merbau and wood fibre materials, e.g. MDF.

**Technical information:**

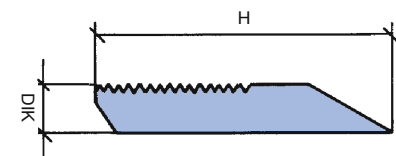
Profile cutterhead with 60° serration, 1.6 mm pitch. Steel tool body. Blank knives with knife thickness of 8 - 10 mm and knife heights of 40 - 70 mm can be used depending on required profile depth. Integrated hydro clamping, open system, activated by grease gun. Only use hydro profile cutterhead with a locking collar.



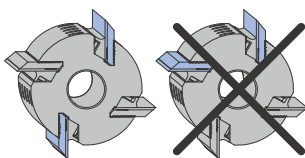
**Cutting angle 12°**

HM 501-2-05

TD mm	SB mm	BO mm	DIK mm	Z	n <sub>max</sub> , min <sup>-1</sup>	ID
135	40	40	8 - 10	4	9000	137029 ●
135	60	40	8 - 10	4	9000	137030 ●
135	80	40	8 - 10	4	9000	137031 ●
135	130	40	8 - 10	4	9000	137032 ●
145	60	50	8 - 10	6	8300	137033 ●
145	80	50	8 - 10	6	8300	137034 ●



Serrated back blank knives with high precision serration, serration angle 60°, pitch 1.6 mm



**Attention:**

For safety reasons, always mount knives + backing plates (VE) of the same weight opposite to each other.

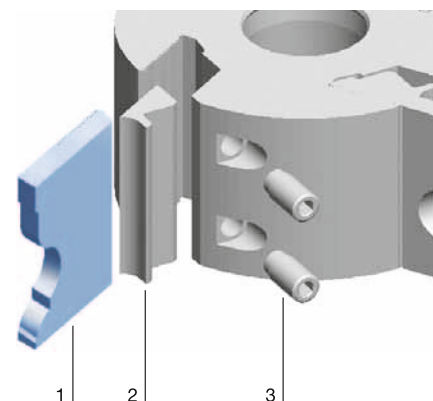
Cutterhead without knives. For blank knives in different dimensions and qualities, see section 9 Knives and spare parts.

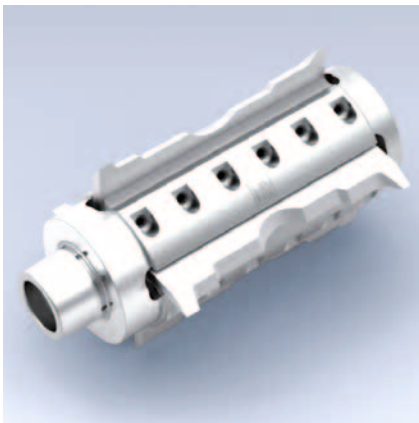
**Spare parts:**

Part-no.	BEZ	ABM mm	for SB mm	ID
2	Clamping wedge	38x25,3x10,8	60	620700 ●
2	Clamping wedge	for knife thickness 5 mm	60	009665 ●
2	Clamping wedge	98x25,3x10,8	100	620703 ●
2	Clamping wedge	148x25,3x10,8	150	620706 ●
2	Clamping wedge	228x25,43x11	230	620709 ●
3	Allen screw	M10x1x20		007396 ●
3	Allen screw	M10x1x25		007395 ●
	Allen Key	SW 5		117509 ●

H mm	QAL	PT mm
50	MC	15
60	MC	20
70	MC	30
50	HW	10
60	HW	18
55		15
70		27

Table to determine max. profile depth. The profile depth figures are to be regarded as standard values. The max. profile depth depends on the tool diameter and cutting angle.





#### Profile cutterhead with HSK 85 WS for serrated back blank knives

**Application:**

For multi purpose profiles in hard and/or materials likely to splinter.

**Machine:**

Four side moulders with HSK 85 WS interface.

**Workpiece material:**

Cutting angle 20° for softwood and hardwood in general.

Cutting angle 12° for materials likely to splinter e.g. oak, Douglas fir, Merbau and wood fibre materials, e.g. MDF.

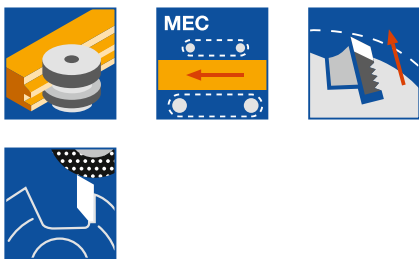
**Technical information:**

Profile cutterhead with back serration, 1.6 mm pitch, with integrated HSK.

Blanks with knife thickness 8 - 10 mm and knife heights of 40 - 70 mm can be used depending on the required profile depth. Cutting materials: Marathon (MC) and HW.

For TD = 90 mm allowed rpm up to SB 240 mm:

$n = 12000 \text{ min}^{-1}$ , for jointing:  $n = 10000 \text{ min}^{-1}$ , >240 - 310 mm:  $n = 8000 \text{ min}^{-1}$ ; steel tool body. High balance quality by assembly with parts of the same weight.

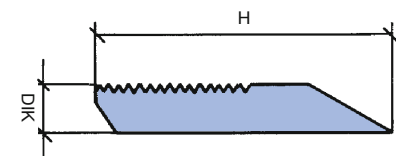


**Cutting angle 20°**

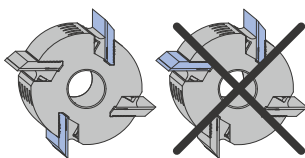
WP 510-2-02

TD mm	SB mm	A mm	Z	$n_{\text{max.}}$ $\text{min}^{-1}$	ID LL / on bottom	ID RL / on top
90	40	26	2	12000	136200	136201
90	60	26	2	12000	136202	136203
90	80	26	2	12000	136204	136205
90	100	26	2	12000	136206	136207
90	130	26	2	12000	136208	136209
90	150	26	2	12000	136210	136211
* 90	170	26	2	12000	136212	136213
* 90	190	26	2	12000	136214	136215
* 90	210	26	2	12000	136216	136217
* 90	240	26	2	12000	136218	136219
90	270	26	2	8000	136220	136221
90	310	26	2	8000	136222	136223
90	40	26	4	12000	136224	136225
90	60	26	4	12000	136226	136227
90	80	26	4	12000	136228	136229
90	100	26	4	12000	136230	136231
90	130	26	4	12000	136232	136233
90	150	26	4	12000	136234	136235
* 90	170	26	4	12000	136236	136237
* 90	190	26	4	12000	136238	136239
* 90	210	26	4	12000	136240	136241
* 90	240	26	4	12000	136242	136243
* 90	270	26	4	8000	136244	136245
* 90	310	26	4	8000	136246	136247
115	80	26	6	10000	136198	136199
115	130	26	6	10000	136400	136401
115	170	26	6	8000	136402	136403

\* = Not for PKS blank knives H = 70 mm with  $n = 12000 \text{ min}^{-1}$



Serrated back blank knives with high precision serration, serration angle 60°, pitch 1.6 mm



**Attention:**

For safety reasons, always mount knives + backing plates (VE) of the same weight opposite to each other.

H mm	QAL	PT mm
50	MC	15
60	MC	20
70	MC	30
50	HW	10
60	HW	18
55		15
70		27

Table to determine max. profile depth. The profile depth figures are to be regarded as standard values. The max. profile depth depends on the tool diameter and cutting angle.

Cutterhead without knives. For blank knives in different dimensions and qualities, see section 9 Knives and spare parts.





#### Profile cutterhead with HSK 85 WS for serrated back blank knives

**Application:**

For multi purpose profiles in hard and/or materials likely to splinter.

**Machine:**

Four side moulders with HSK 85 WS interface.

**Workpiece material:**

Cutting angle 20° for softwood and hardwood in general.

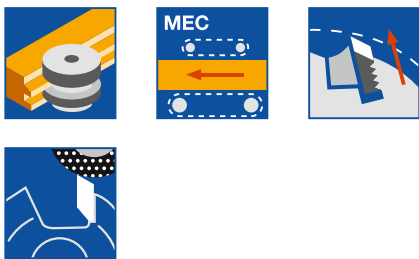
Cutting angle 12° for materials likely to splinter e.g. oak, Douglas fir, Merbau and wood fibre materials, e.g. MDF.

**Technical information:**

Profile cutterhead with back serration, 1.6 mm pitch, with integrated HSK.

Blanks with knife thickness 8 - 10 mm and knife heights of 40 - 70 mm can be used depending on the required profile depth. Cutting materials: Marathon (MC) and HW. For TD = 90 mm allowed rpm up to SB 240 mm:

$n = 12000 \text{ min}^{-1}$ , for jointing:  $n = 10000 \text{ min}^{-1}$ , >240 - 310 mm:  $n = 8000 \text{ min}^{-1}$ ; steel tool body. High balance quality by assembly with parts of the same weight.

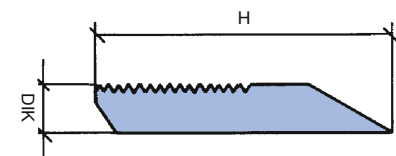


**Cutting angle 12°**

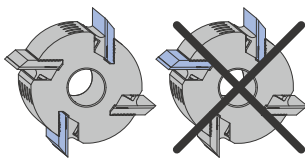
WP 510-2-02

TD mm	SB mm	A mm	Z	$n_{\text{max}}$ $\text{min}^{-1}$	ID LL / on bottom	ID RL / on top
90	40	26	2	12000	136248	136249
90	60	26	2	12000	136250 ●	136251 ●
90	80	26	2	12000	136252 ●	136253 ●
90	100	26	2	12000	136254 ●	136255 ●
90	130	26	2	12000	136256 ●	136257 ●
90	150	26	2	12000	136258 ●	136259 ●
* 90	170	26	2	12000	136260 ●	136261 ●
* 90	190	26	2	12000	136262 ●	136263 ●
* 90	210	26	2	12000	136264 ●	136265 ●
* 90	240	26	2	12000	136266 ●	136267 ●
* 90	270	26	2	8000	136268	136269
* 90	310	26	2	8000	136294 ●	136295 ●
90	40	26	4	12000	136270	136271
90	60	26	4	12000	136272 ●	136273 ●
90	80	26	4	12000	136274 ●	136275 ●
90	100	26	4	12000	136276 ●	136277 ●
90	130	26	4	12000	136278 ●	136279 ●
90	150	26	4	12000	136280 ●	136281 ●
* 90	170	26	4	12000	136282 ●	136283 ●
* 90	190	26	4	12000	136284 ●	136285 ●
* 90	210	26	4	12000	136286 ●	136287 ●
* 90	240	26	4	12000	136288 ●	136289 ●
* 90	270	26	4	8000	136290	136291
* 90	310	26	4	8000	136292 ●	136293 ●
115	80	26	6	10000	136192 □	136193 □
115	130	26	6	10000	136194 □	136195 □
115	170	26	6	8000	136196 □	136197 □

\* = Not for PKS blank knives H = 70 mm with  $n = 12000 \text{ min}^{-1}$



Serrated back blank knives with high precision serration, serration angle 60°, pitch 1.6 mm



**Attention:**

For safety reasons, always mount knives + backing plates (VE) of the same weight opposite to each other.

H mm	QAL	PT mm
50	MC	15
60	MC	20
70	MC	30
50	HW	10
60	HW	18
55		15
70		27

Table to determine max. profile depth. The profile depth figures are to be regarded as standard values. The max. profile depth depends on the tool diameter and cutting angle.

Cutterhead without knives. For blank knives in different dimensions and qualities, see section 9 Knives and spare parts.

**Spare parts:**

BEZ	for knife thickness	for SB mm	ID
Clamping wedge	8/10	40	<b>620816</b>
Clamping wedge	8/10	60	<b>620817</b> ●
Clamping wedge	8/10	80	<b>620818</b> ●
Clamping wedge	8/10	100	<b>620819</b>
Clamping wedge	8/10	130	<b>620820</b> ●
Clamping wedge	8/10	150	<b>620821</b> ●
Clamping wedge	8/10	170	<b>620822</b> ●
Clamping wedge	8/10	190	<b>620823</b>
Clamping wedge	8/10	210	<b>620824</b>
Clamping wedge	8/10	240	<b>620825</b> ●
Clamping wedge	8/10	270	<b>620826</b>
Clamping wedge	8/10	310	<b>620827</b>
Allen screw			<b>007396</b> ●
Filler piece		40	<b>005305</b> ●
Filler piece		60	<b>005306</b> ●
Filler piece		80	<b>005307</b> ●
Filler piece		100	<b>005308</b> ●
Filler piece		130	<b>005310</b> ●
Filler piece		150	<b>005311</b> ●
Filler piece		170	<b>620770</b> ●
Filler piece		190	<b>620772</b> ●
Filler piece		210	<b>620773</b> ●
Filler piece		240	<b>620771</b> ●
Filler piece		270	<b>620774</b> ●
Filler piece		310	<b>620775</b> ●
Dust protection cover			<b>008244</b> ●
Allen Key			<b>117509</b> ●



#### Profile cutterhead ProFix F with HSK 85 WS

**Application:**

For various profiles, ideal for panel production.

**Machine:**

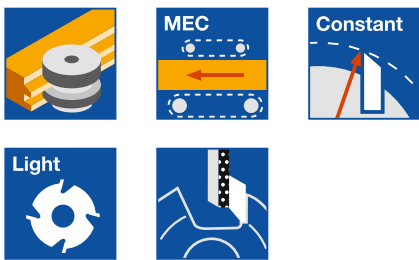
Four side moulders with HSK 85 WS interface.

**Workpiece material:**

Softwood and hardwood, along the grain.

**Technical information:**

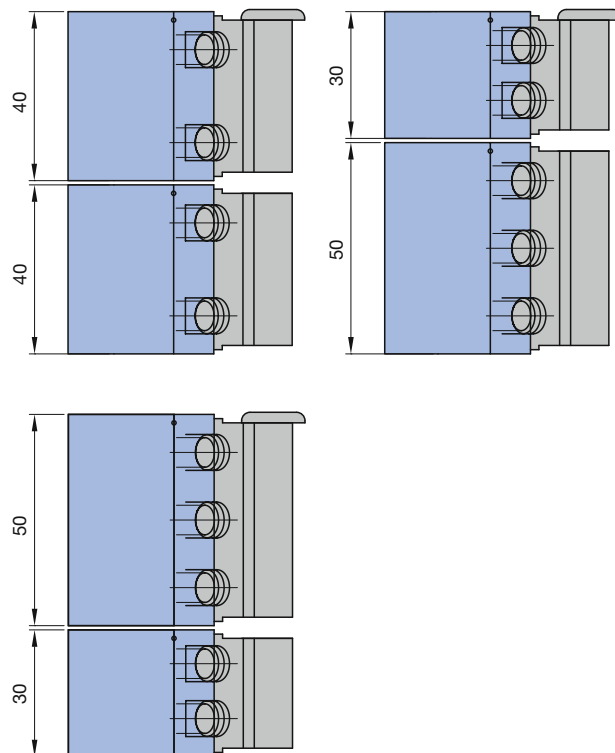
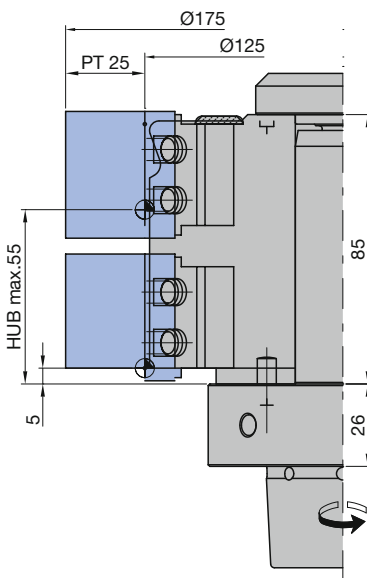
Tool system that is resharpenable, diameter and profile constant. Easy to change profile by changing knife - no need for tool measurement. ProFix F knife with 4.5 mm resharpening area. Maximum profile depth 25 mm. Steel or aluminium tool body shrunk fit to HSK 85 WS arbor. Maximum cutting width 80 mm - possible to split across several knives.



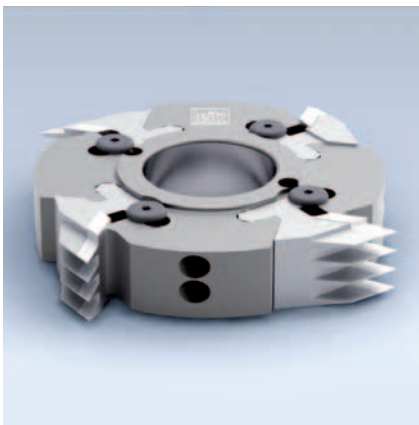
**Aluminium tool body**

HY 500-2-25

D0	PT	SB	n <sub>max.</sub> min <sup>-1</sup>	BEM	ID
125	25	20 - 80	8000	right/ on top	<b>014040</b> ●
125	25	20 - 80	8000	left/ on bottom	<b>014041</b> ●



Example: Possible combinations of knife cutting widths.  
Further profile examples and knife combinations see introduction pages.



#### Minifinger joint cutterhead ProFix PF25

**Application:**

For self locking longitudinal joints.

**Machine:**

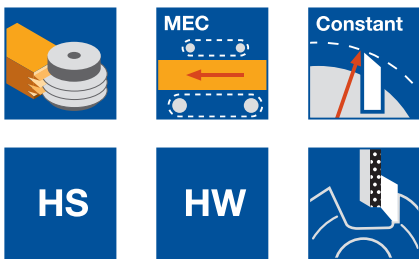
Finger joint machines with / without cut off saw, continuous machines.

**Workpiece material:**

Softwood and hardwood, across grain.

**Technical information:**

Resharpenable, constant diameter and constant profile tool system. Easy to change knife. No machine adjustment required. Steel tool body can be used for minifinger knife with a finger pitch of 3.8 mm and finger length of 10 and 15 mm. Cutting materials HS and HW. Knives: ProFix PF25 knife with 4.5 mm resharpening area.



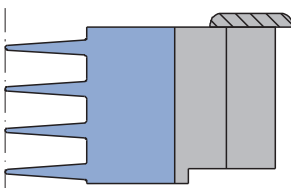
**ZL 10 mm, TG 3.8 mm**

WY 620-2-25

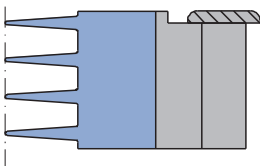
D mm	SB mm	BO mm	Z	ZA PCS	n <sub>max.</sub> min <sup>-1</sup>	QAL	ID ZL 10/10	ID ZL 10/11
160	30,4	50	2/2	8	8000	HS	<b>023466</b> □	<b>023470</b> □
160	30,4	50	2/2	8	8000	HW	<b>023467</b> □	<b>023471</b> □
250	30,4	50	3/3	8	6000	HS	<b>023468</b> □	<b>023472</b> □
250	30,4	50	3/3	8	6000	HW	<b>023469</b> □	<b>023473</b> □

**Spare knives:**

BEZ	SB mm	QAL	ID ZL 10/10	ID ZL 10/11
ProFix Minifinger knife, right	28,6	HW	<b>011005</b> ●	<b>011007</b> ●
ProFix Minifinger knife, left	28,6	HW	<b>011006</b> ●	<b>011008</b> ●
ProFix Minifinger knife, right	28,6	HS	<b>011009</b> ●	<b>011011</b> ●
ProFix Minifinger knife, left	28,6	HS	<b>011010</b> ●	<b>011012</b> ●



ProFix minifinger spare knives with staggered shoulder, knife left



ProFix minifinger spare knives with staggered shoulder, knife right

Table to determine the number of cutters for a given wood thickness.

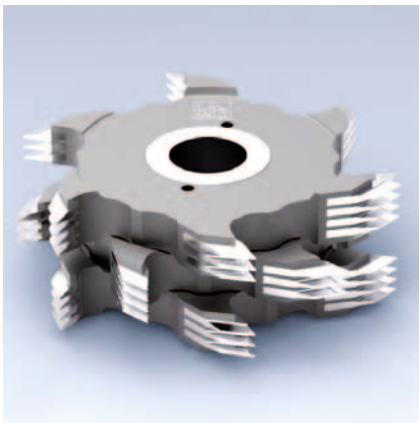
Minifinger cutterhead with a pitch of 3.8 mm.

Finger length 10 and 10/11 mm;  
15 and 15/16.5 mm.

SB	31.4 mm
Boss	30.4 mm
ZA	Tooth row 8
Wood thickness	Quantity of cutterheads
28	1
58	2
89	3
119	4
150	5
180	6
210	7
241	8
271	9
302	10
332	11
362	12

### 3. Planing and profiling

### 3.4 Finger jointing 3.4.2 Minifinger joint cutters



#### Minifinger joint cutter, HS

**Application:**

For self locking longitudinal joints. See section introduction for additional information.

**Machine:**

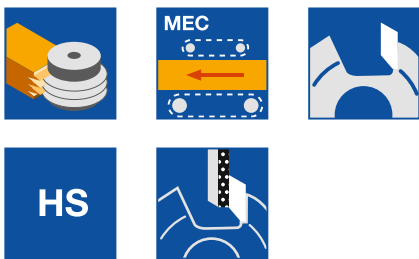
Finger joint machines with / without cut off saw, continuous machines.

**Workpiece material:**

Softwood, across grain; limited suitability for hardwood.

**Technical information:**

Reduced risk of breakage from individually brazed finger cutting edges. Design with enlarged tip gap suitable for PU adhesives and for finger joint machines without cut off saw and horizontal working spindle. Cutting material HS. Resharpener area 12 mm.



**ZL 4 mm, TG 1.6 mm**

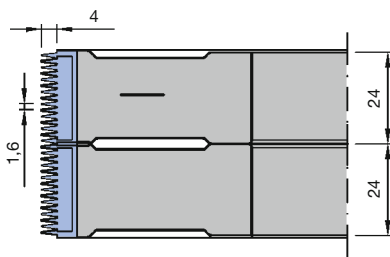
WF 620-2

D	SB	ND	BO	Z	ZA	QAL	ZL	ID
mm	mm	mm	mm		PCS		mm	
160	25	22,4	50	2/2	15	HS	4	<b>021543</b> ●

**ZL 10 mm, TG 3.8 mm**

WF 620-2

D	SB	ND	BO	Z	ZA	QAL	ID	ID
mm	mm	mm	mm		PCS		ZL	ZL
							10/10	10/11
160	17,2	11,4	50	2/2	3	HS	<b>021687</b> □	<b>021691</b> □
160	24,8	22,8	50	2/2	6	HS	<b>021686</b> □	<b>021690</b> □
160	28,6	26,6	50	2/2	7	HS	<b>021685</b> ●	<b>021689</b> ●
160	28,6	26,6	50	3/3	7	HS	<b>120313</b> □	<b>021692</b> ●
250	28,6	26,6	50	3/3	7	HS	<b>021688</b> □	<b>021693</b> ●
250	28,6	26,6	50	4/4	7	HS	<b>120316</b> □	<b>120318</b> □

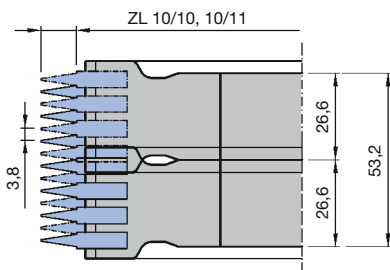


Minifinger joint cutter ZL 4 mm, TG 1.6 mm

**ZL 10 mm, TG 3.8 mm, larger basic clearance**

WF 620-2

D	SB	ND	BO	Z	ZA	QAL	ID	ID
mm	mm	mm	mm		PCS		ZL	ZL
							10/10	10/11
160	28,6	26,6	50	2/2	7	HS	<b>120309</b> □	<b>120311</b> □
160	28,6	26,6	50	3/3	7	HS	<b>120314</b> □	<b>120315</b> □
250	28,6	26,6	50	3/3	7	HS	<b>120310</b> □	<b>120312</b> □
250	28,6	26,6	50	4/4	7	HS	<b>120317</b> □	<b>120319</b> □

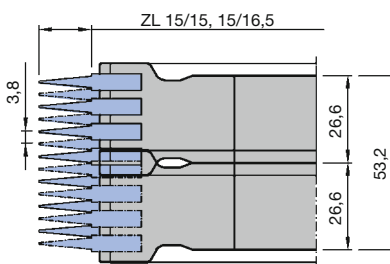


Minifinger joint cutter ZL 10 mm, TG 3.8 mm

**ZL 15 mm, TG 3.8 mm**

WF 620-2

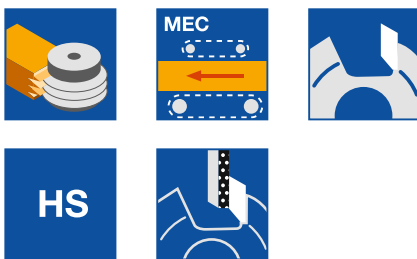
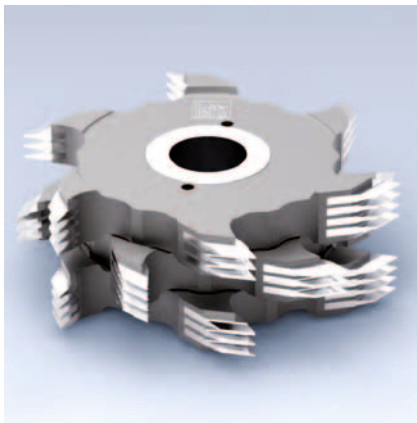
D	SB	ND	BO	Z	ZA	QAL	ID	ID
mm	mm	mm	mm		PCS		ZL	ZL
							15/15	15/16,5
170	28,6	26,6	50	2/2	7	HS	<b>021694</b> ●	<b>021696</b> ●
260	28,6	26,6	50	3/3	7	HS	<b>021695</b> □	<b>021697</b> ●
260	28,6	26,6	50	4/4	7	HS	<b>120416</b> □	<b>120418</b> □



Minifinger joint cutter ZL 15 mm, TG 3.8 mm

### 3. Planing and profiling

### 3.4 Finger jointing 3.4.2 Minifinger joint cutters



#### Minifinger joint cutter, HS

**Application:**

For self locking longitudinal joints. See section introduction for additional information.

**Machine:**

Finger joint machines with / without cut off saw, continuous machines.

**Workpiece material:**

Softwood, across grain; limited suitability for hardwood.

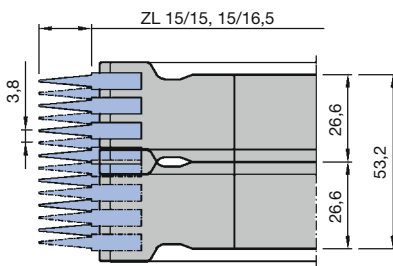
**Technical information:**

Reduced risk of breakage from individually brazed finger cutting edges. Design with enlarged tip gap suitable for PU adhesives and for finger joint machines without cut off saw and horizontal working spindle. Cutting material HS. Resharpener area 12 mm.

**ZL 15 mm, TG 3.8 mm, larger basic clearance**

WF 620-2

D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	ID ZL	ID ZL
170	28,6	26,6	50	2/2	7	HS	15/15	15/16,5
260	28,6	26,6	50	3/3	7	HS	120413	120415
260	28,6	26,6	50	4/4	7	HS	120417	120419



Minifinger joint cutter ZL 15 mm,  
TG 3.8 mm

**ZL 20 mm, TG 6.2 mm**

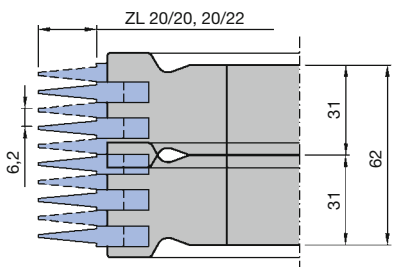
WF 620-2

D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	ID ZL	ID ZL
180	33	31	50	2/2	5	HS	20/20	20/22
260	33	31	50	3/3	5	HS	021668	021669
260	33	31	50	4/4	5	HS	021674	021670
							021675	120513

**ZL 20 mm, TG 6.2 mm, larger basic clearance**

WF 620-2

D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	ID ZL	ID ZL
180	33	31	50	2/2	5	HS	20/20	20/22
260	33	31	50	3/3	5	HS	120515	120516
260	33	31	50	4/4	5	HS	120510	120511
							120512	120514

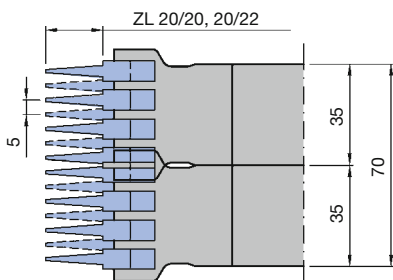


Minifinger joint cutter ZL 20 mm,  
TG 6.2 mm

**ZL 20 mm, TG 5.0 mm**

WF 620-2

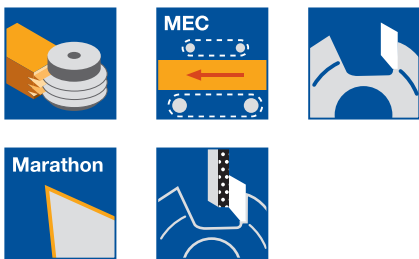
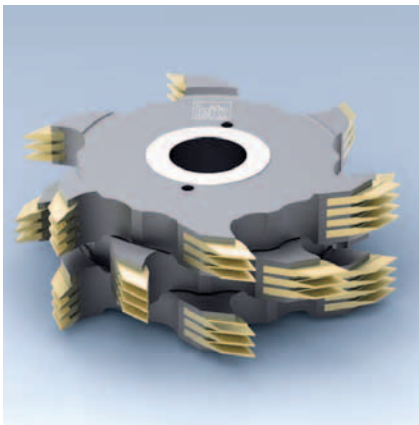
D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	ID ZL	ID ZL
180	37	35	50	2/2	7	HS	20/20	20/22
260	37	35	50	3/3	7	HS	021729	021730
							021735	021731



Minifinger joint cutter ZL 20 mm,  
TG 5.0 mm

### 3. Planing and profiling

### 3.4 Finger jointing 3.4.2 Minifinger joint cutters



#### Minifinger joint cutter, Marathon

**Application:**

For self locking longitudinal joints. See section introduction for additional information.

**Machine:**

Finger joint machines with / without cut off saw, continuous machines.

**Workpiece material:**

Softwood, across grain; also suitable for hardwood.

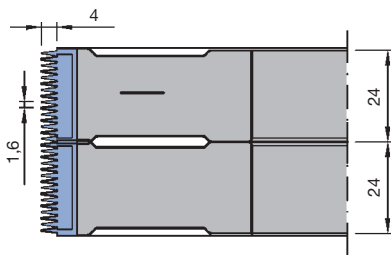
**Technical information:**

Reduced risk of breakage from individually brazed finger cutting edges. Design with enlarged tip gap suitable for PU adhesives and for finger joint machines without cut off saws and horizontal working spindle. Marathon coating allows up to 4 times longer tool life compared to HS version. Resharpener area 12 mm.

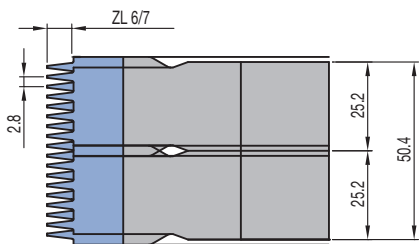
**ZL 4 mm, TG 1.6 mm**

WF 620-2-06

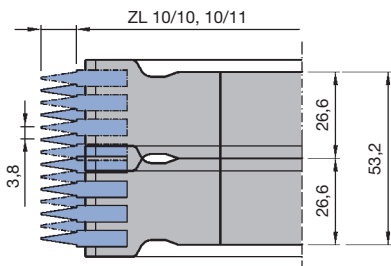
D	SB	ND	BO	Z	ZA	QAL	ZL	ID
mm	mm	mm	mm		PCS		mm	
160	25	22,4	50	2/2	14	MC	4	<b>123000</b> □
250	25	22,4	50	3/3	14	MC	4	<b>123001</b> □
250	25	22,4	50	6/6	14	MC	4	<b>123002</b> □



Minifinger joint cutter ZL 4 mm, TG 1.6 mm



Minifinger joint cutter ZL 6/7 mm, TG 2.8 mm



Minifinger joint cutter ZL 10 mm, TG 3.8 mm

**ZL 6/7 mm, TG 2.8 mm**

WF 620-2-06

D	SB	ND	BO	Z	ZA	QAL	ZL	ID
mm	mm	mm	mm		PCS		mm	
165	28	25,2	50	3/3	9	MC	6/7	<b>123100</b> □
255	28	25,2	50	4/4	9	MC	6/7	<b>123101</b> □
255	28	25,2	50	6/6	9	MC	6/7	<b>123102</b> □

**ZL 10 mm, TG 3.8 mm**

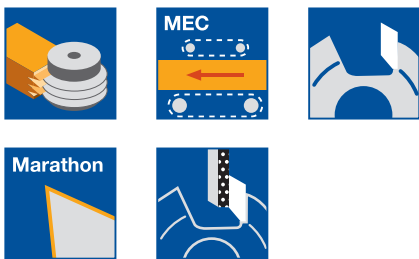
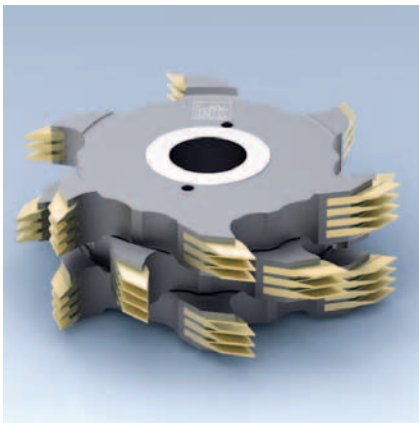
WF 620-2-06

D	SB	ND	BO	Z	ZA	QAL	ID	ID
mm	mm	mm	mm		PCS		ZL	ZL
							10/10	10/11
160	28,6	26,6	50	2/2	7	MC	<b>120608</b>	● <b>120612</b> ●
160	28,6	26,6	50	3/3	7	MC	<b>120616</b>	□ <b>120617</b> □
250	28,6	26,6	50	3/3	7	MC	<b>120609</b>	□ <b>120613</b> ●
250	28,6	26,6	50	4/4	7	MC	<b>120620</b>	□ <b>120622</b> □

**ZL 10 mm, TG 3.8 mm, larger basic clearance**

WF 620-2-06

D	SB	ND	BO	Z	ZA	QAL	ID	ID
mm	mm	mm	mm		PCS		ZL	ZL
							10/10	10/11
160	28,6	26,6	50	2/2	7	MC	<b>120610</b>	□ <b>120614</b> □
160	28,6	26,6	50	3/3	7	MC	<b>120618</b>	□ <b>120619</b> □
250	28,6	26,6	50	3/3	7	MC	<b>120611</b>	□ <b>120615</b> □
250	28,6	26,6	50	4/4	7	MC	<b>120621</b>	□ <b>120623</b> □



### Minifinger joint cutter, Marathon

#### Application:

For self locking longitudinal joints. See section introduction for additional information.

#### Machine:

Finger joint machines with / without cut off saw, continuous machines.

#### Workpiece material:

Softwood, across grain; also suitable for hardwood.

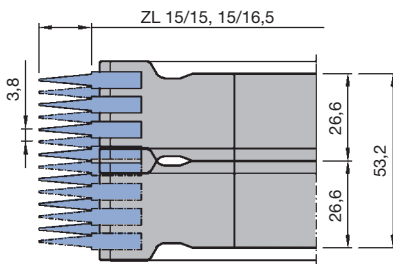
#### Technical information:

Reduced risk of breakage from individually brazed finger cutting edges. Design with enlarged tip gap suitable for PU adhesives and for finger joint machines without cut off saws and horizontal working spindle. Marathon coating allows up to 4 times longer tool life compared to HS version. Resharpener area 12 mm.

#### ZL 15 mm, TG 3.8 mm

WF 620-2-06

D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	ID ZL	ID ZL
170	28,6	26,6	50	2/2	7	MC	15/15	15/16,5
260	28,6	26,6	50	3/3	7	MC	120710	120714
260	28,6	26,6	50	4/4	7	MC	120717	120719

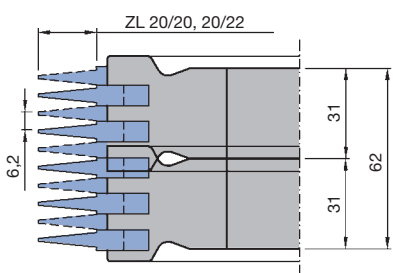


Minifinger joint cutter ZL 15 mm,  
TG 3.8 mm

#### ZL 15 mm, TG 3.8 mm, larger basic clearance

WF 620-2-06

D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	ID ZL	ID ZL
170	28,6	26,6	50	2/2	7	MC	15/15	15/16,5
260	28,6	26,6	50	3/3	7	MC	120711	120715
260	28,6	26,6	50	4/4	7	MC	120712	120716
260	28,6	26,6	50	4/4	7	MC	120718	120720



Minifinger joint cutter ZL 20 mm,  
TG 6.2 mm

#### ZL 20 mm, TG 6.2 mm

WF 620-2-06

D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	ID ZL	ID ZL
180	33	31	50	2/2	5	MC	20/20	20/22
260	33	31	50	3/3	5	MC	120810	120814
260	33	31	50	4/4	5	MC	120811	120815
260	33	31	50	4/4	5	MC	120822	120824

#### ZL 20 mm, TG 6.2 mm, larger basic clearance

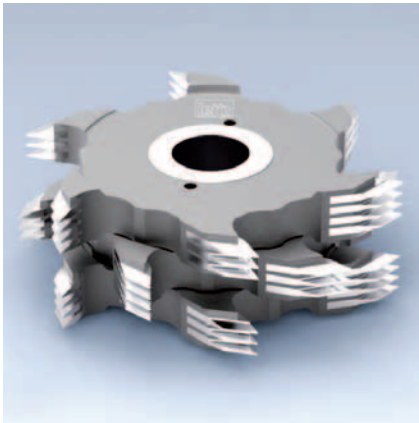
WF 620-2-06

D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	ID ZL	ID ZL
180	33	31	50	2/2	5	MC	20/20	20/22
260	33	31	50	3/3	5	MC	120812	120816
260	33	31	50	4/4	5	MC	120813	120817
260	33	31	50	4/4	5	MC	120823	120825



### 3. Planing and profiling

### 3.4 Finger jointing 3.4.2 Minifinger joint cutters



#### Minifinger joint cutter, HW

**Application:**

For self locking longitudinal joints. See section introduction for additional information.

**Machine:**

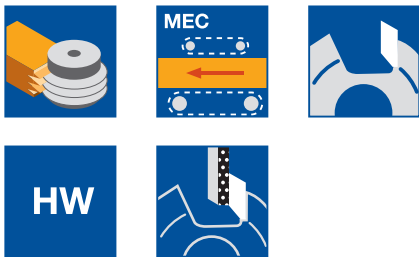
Finger joint machines with / without cut off saws, continuous machines.

**Workpiece material:**

Hardwood, across grain.

**Technical information:**

Reduced risk of breakage from individually brazed finger cutting edges. Cutting material HW. Resharpener area 12 mm.



**ZL 10 mm, TG 3.8 mm**

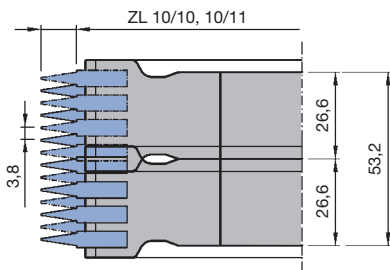
WF 620-2

D mm	SB mm	BO mm	Z	ZA PCS	QAL	$n_{max}$ $min^{-1}$	ID ZL	ID ZL
							10/10	10/11
160	28,6	50	2/2	7	HW	8000	<b>021600</b>	● <b>021601</b> ●
160	28,6	50	3/3	7	HW	8000	<b>021604</b>	□ <b>021603</b> ●
250	28,6	50	3/3	7	HW	6000	<b>021605</b>	□ <b>021602</b> ●

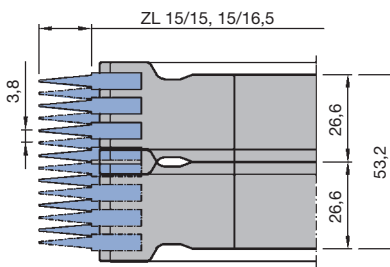
**ZL 15 mm, TG 3.8 mm**

WF 620-2

D mm	SB mm	BO mm	Z	ZA PCS	QAL	$n_{max}$ $min^{-1}$	ID ZL	ID ZL
							15/15	15/16,5
170	28,6	50	2/2	7	HW	8000	<b>021644</b>	● <b>021645</b> ●
260	28,6	50	3/3	7	HW	6000	<b>021652</b>	● <b>021648</b> ●



Minifinger joint cutter ZL 10 mm, TG 3.8 mm



Minifinger joint cutter ZL 15 mm, TG 3.8 mm

Table to determine the number of cutters for a given wood thickness.

Finger length 10 and 15 mm;

D = 160/250 mm and 170/260 mm

Finger pitch = 3.8 mm

SB	28.6 mm
Hub	26.6 mm
ZA	Tooth row ZA 7
Wood thickness	Quantity cutter
24	1
51	2
77	3
104	4
131	5
157	6
184	7
210	8
237	9
264	10
290	11
317	12



### Minifinger cutter for manual feed, HS / HW

**Application:**

For self locking longitudinal joints for non supporting components, e.g. panels and strips.

**Machine:**

Spindle moulders with workpiece clamping and sliding table.

**Workpiece material:**

Softwood and hardwood, across grain.

**Technical information:**

Steel tool body with individually brazed cutting edges. Reduced risk of breakage. Cutting materials HS and HW. Resharpener area 12 mm.



**ZL 10 mm, TG 3.8 mm**  
WF 620-2

D mm	SB mm	ND mm	BO mm	Z	ZA PCS	n <sub>max.</sub> min <sup>-1</sup>	QAL	ID
160	32,4	30,4	40	2/2	8	8000	HS	<b>122904</b> ●
160	24,8	22,8	40	2/2	6	8000	HS	<b>021742</b> ●
160	32,4	30,4	40	2/2	8	8000	HW	<b>021748</b> ●
160	24,8	22,8	40	2/2	6	8000	HW	<b>021750</b> ●



### Shoulder cutter, HS

**Application:**

For self locking longitudinal joints with a straight visible joint, use with minifinger joint cutters D 160 mm, ZL 10/10 or ZL 10/11 mm.

**Machine:**

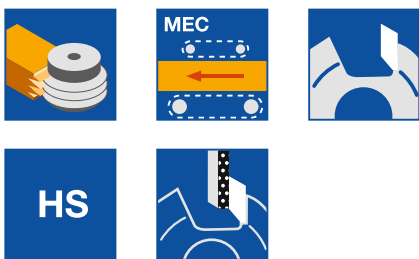
Finger joint machines with/without cut off saws, continuous machines. Can also be used with finger cutters in MAN version on spindle moulders with workpiece clamping and sliding table.

**Workpiece material:**

Softwood, across grain; limited suitability for hardwood.

**Technical information:**

Steel tool body with brazed HS edges. Resharpener area 12 mm.

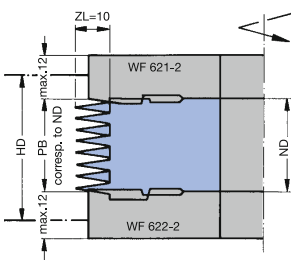


**ZL 10/10 mm, TG 3.8 mm**  
WF 621-2, WF 622-2

Tool Type	D mm	SB mm	BO mm	Z	QAL	ID
Profile cutter	150	15	40	4	HS	<b>021752</b> ●
Profile cutter	150	15	50	4	HS	<b>021753</b> □
Jointing cutter	150	15	40	4	HS	<b>021755</b> ●
Jointing cutter	150	15	50	4	HS	<b>021756</b> □

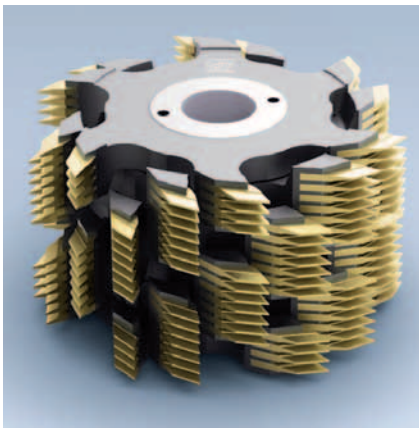
**ZL 10/11 mm, TG 3.8 mm**  
WF 621-2, WF 622-2

Tool Type	D mm	SB mm	BO mm	Z	QAL	ID
Profile cutter	159,6	15	50	4	HS	<b>021761</b> ●



Profile example

● available ex stock  
□ available at short notice  
Instruction manual visit [www.leitz.org](http://www.leitz.org)



#### Minifinger joint cutter, Marathon, real Z 3/4

**Application:**

For self locking longitudinal joints. See section introduction for additional information.

**Machine:**

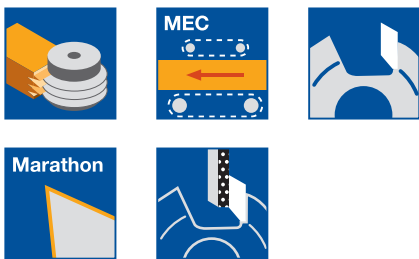
High performance finger joint machines with/without cut off saws.

**Workpiece material:**

Softwood, across grain; also suitable for hardwood.

**Technical information:**

High number of teeth tool design, top and bottom final cutters required. Assembly of tool set: see section introduction. Version with enlarged tip gap suitable for PU adhesives and for finger joint machines without cut off saws for horizontal spindle. Marathon coating allows up to 4 times longer tool life compared to HS version. Resharpener area 12 mm.



**ZL 10 mm, TG 3.8 mm**

WF 620-2-06

Tool Type	D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	ID ZL 10/10	ID ZL 10/11
Top final cutter	160	20,2	16,6	50	4	3	MC	<b>121600</b> □	<b>121604</b> □
Basic cutter	160	35,4	19	50	4	5	MC	<b>120604</b> □	<b>120606</b> □
Bottom final cutter	160	20,2	16,6	50	4	3	MC	<b>121601</b> □	<b>121607</b> □

**ZL 10 mm, TG 3.8 mm, larger basic clearance**

WF 620-2-06

Tool Type	D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	ID ZL 10/10	ID ZL 10/11
Top final cutter	160	20,2	16,6	50	4	3	MC	<b>121602</b> □	<b>121605</b> ●
Basic cutter	160	35,4	19	50	4	5	MC	<b>120605</b> □	<b>120607</b> ●
Bottom final cutter	160	20,2	16,6	50	4	3	MC	<b>121603</b> □	<b>121606</b> ●

**ZL 15 mm, TG 3.8 mm**

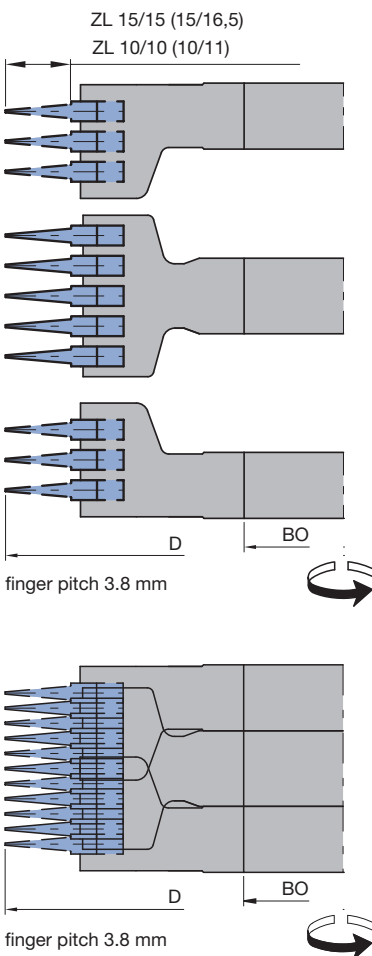
WF 620-2-06

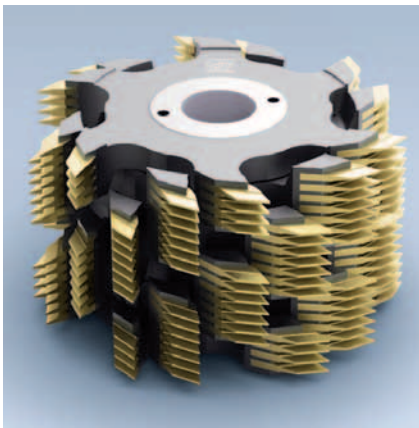
Tool Type	D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	ID ZL 15/15	ID ZL 15/16,5
Top final cutter	170	20,2	16,6	50	4	3	MC	<b>121700</b> □	<b>121704</b> □
Basic cutter	170	35,4	19	50	4	5	MC	<b>120705</b> □	<b>120707</b> □
Bottom final cutter	170	20,2	16,6	50	4	3	MC	<b>121701</b> □	<b>121705</b> □

**ZL 15 mm, TG 3.8 mm, larger basic clearance**

WF 620-2-06

Tool Type	D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	ID ZL 15/15	ID ZL 15/16,5
Top final cutter	170	20,2	16,6	50	4	3	MC	<b>121702</b> ●	<b>121706</b> □
Basic cutter	170	35,4	19	50	4	5	MC	<b>120706</b> ●	<b>120708</b> □
Bottom final cutter	170	20,2	16,6	50	4	3	MC	<b>121703</b> ●	<b>121707</b> □





#### Minifinger joint cutter, Marathon, real Z 3/4

**Application:**

For self locking longitudinal joints. See section introduction for additional information.

**Machine:**

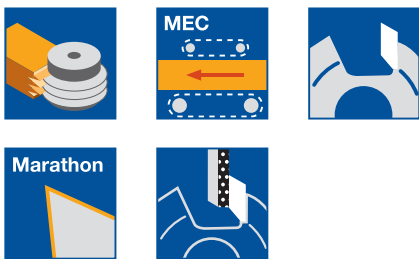
High performance finger joint machines with/without cut off saws.

**Workpiece material:**

Softwood, across grain; also suitable for hardwood.

**Technical information:**

High number of teeth tool design, top and bottom final cutters required. Assembly of tool set: see section introduction. Version with enlarged tip gap suitable for PU adhesives and for finger joint machines without cut off saws for horizontal spindle. Marathon coating allows up to 4 times longer tool life compared to HS version. Resharpener area 12 mm.



**ZL 20 mm, TG 6.2 mm**

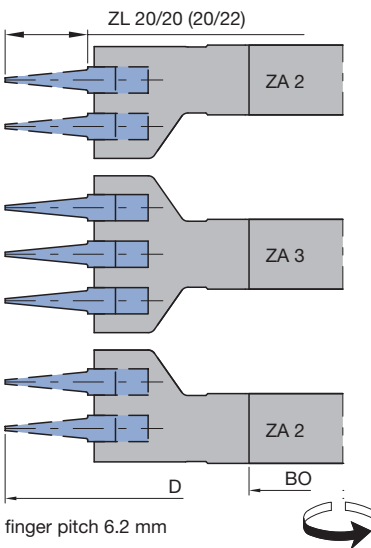
WF 620-2-06

Tool Type	D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	ID ZL 20/20	ID ZL 20/22
Top final cutter	180	18,6	18,6	50	3	2	MC	<b>121800</b> □	<b>121804</b> □
Basic cutter	180	31	18,6	50	3	3	MC	<b>120805</b> □	<b>120807</b> □
Bottom final cutter	180	18,6	18,6	50	3	2	MC	<b>121801</b> □	<b>121805</b> □

**ZL 20 mm, TG 6.2 mm, larger basic clearance**

WF 620-2-06

Tool Type	D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	ID ZL 20/20	ID ZL 20/22
Top final cutter	180	18,6	18,6	50	3	2	MC	<b>121802</b> □	<b>121806</b> □
Basic cutter	180	31	18,6	50	3	3	MC	<b>120806</b> □	<b>120808</b> □
Bottom final cutter	180	18,6	18,6	50	3	2	MC	<b>121803</b> □	<b>121807</b> □



**Finger length 10 and 15 mm**

TG: 3,8 mm

Real Z4

ZA	ND	HD	KLH	Basic cutter quantity	Final cutter top quantity	Final cutter bottom quantity
19	33,2	0	1	1	1	
38	52,2	1	1	1	1	
57	71,2	2	1	1	1	
76	90,2	3	1	1	1	
95	109,2	4	1	1	1	
114	128,2	5	1	1	1	
133	147,2	6	1	1	1	
152	166,2	7	1	1	1	
171	185,2	8	1	1	1	
190	204,2	9	1	1	1	
209	223,2	10	1	1	1	
228	242,2	11	1	1	1	
247	261,2	12	1	1	1	
266	280,2	13	1	1	1	
285	299,2	14	1	1	1	
304	318,2	15	1	1	1	
323	337,2	16	1	1	1	

HD = wood thickness  
KLH = clamping height

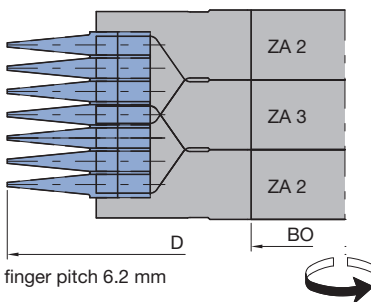
**Finger length 20 mm**

TG: 6,2 mm

Real Z3

ZA	ND	HD	KLH	Basic cutter quantity	Final cutter top quantity	Final cutter bottom quantity
19	37,2	0	1	1	1	
37	55,8	1	1	1	1	
56	74,4	2	1	1	1	
74	93	3	1	1	1	
93	111,6	4	1	1	1	
112	130,2	5	1	1	1	
130	148,8	6	1	1	1	
149	167,4	7	1	1	1	
167	186	8	1	1	1	
186	204,6	9	1	1	1	
205	223,2	10	1	1	1	
223	241,8	11	1	1	1	
242	260,4	12	1	1	1	
260	279	13	1	1	1	
279	297,6	14	1	1	1	
298	316,2	15	1	1	1	
316	334,8	16	1	1	1	

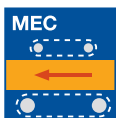
HD = wood thickness  
KLH = clamping height



### 3. Planing and profiling

### 3.4 Finger jointing

#### 3.4.3 High performance minifinger cutters



#### Minifinger joint cutter, Marathon, real Z 6

**Application:**

For self locking longitudinal joints. See section introduction for additional information.

**Machine:**

High performance finger joint machines with/without cut off saws.

**Workpiece material:**

Softwood, across grain; also suitable for hardwood.

**Technical information:**

High number of teeth tool design, top and bottom final cutters required. Assembly of tool set: see section introduction. Version with enlarged tip gap suitable for PU adhesives and for finger joint machines without cut off saws for horizontal spindle. Marathon coating allows up to 4 times longer tool life compared to HS version. Resharping area 12 mm.

**ZL 10 mm, TG 3.8 mm**

WF 620-2-06, WF 623-2-06

Tool Type	D	SB	ND	BO	Z	ZA	QAL	ID	ID
	mm	mm	mm	mm		PCS		ZL 10/10	ZL 10/11
Top final cutter	250	26,6	19	50	6	4	MC	<b>121010</b> <input type="checkbox"/>	<b>121012</b> <input checked="" type="checkbox"/>
Basic cutter	250	49,4	26,6	50	6	7	MC	<b>120600</b> <input type="checkbox"/>	<b>120601</b> <input checked="" type="checkbox"/>
Bottom final cutter	250	26,6	19	50	6	4	MC	<b>121011</b> <input type="checkbox"/>	<b>121013</b> <input checked="" type="checkbox"/>

**Finger length 10 mm and 15 mm**

TG: 3,8 mm

Real Z6

		Basic cutter	Final cutter top	Final cutter bottom
ZA		7	4	4
ND		26,6	19	19
HD	KLH	Cutter quantity	Cutter quantity	Cutter quantity
27	38	0	1	1
53	64,6	1	1	1
80	91,2	2	1	1
106	117,8	3	1	1
133	144,4	4	1	1
160	171	5	1	1
186	197,6	6	1	1
213	224,2	7	1	1
239	250,8	8	1	1
266	277,4	9	1	1
293	304	10	1	1

HD = wood thickness  
KLH = clamping height

**ZL 10 mm, TG 3.8 mm, larger basic clearance**

WF 620-2-06, WF 623-4-06

Tool Type	D	SB	ND	BO	Z	ZA	QAL	ID	ID
	mm	mm	mm	mm		PCS		ZL 10/10	ZL 10/11
Top final cutter	250	26,6	19	50	6	4	MC	<b>121014</b> <input type="checkbox"/>	<b>121016</b> <input type="checkbox"/>
Basic cutter	250	49,4	26,6	50	6	7	MC	<b>120602</b> <input type="checkbox"/>	<b>120603</b> <input type="checkbox"/>
Bottom final cutter	250	26,6	19	50	6	4	MC	<b>121015</b> <input type="checkbox"/>	<b>121017</b> <input type="checkbox"/>

**ZL 15 mm, TG 3.8 mm**

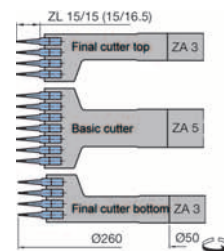
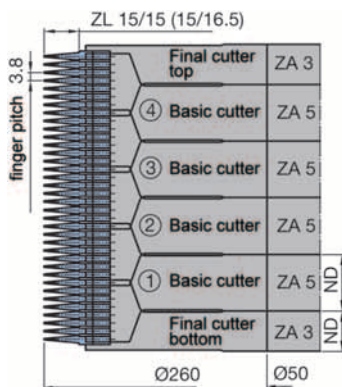
WF 620-2-06, WF 623-3-06

Tool Type	D	SB	ND	BO	Z	ZA	QAL	ID	ID
	mm	mm	mm	mm		PCS		ZL 15/15	ZL 15/16,5
Top final cutter	260	26,6	19	50	6	4	MC	<b>121110</b> <input type="checkbox"/>	<b>121112</b> <input type="checkbox"/>
Basic cutter	260	49,4	26,6	50	6	7	MC	<b>120700</b> <input type="checkbox"/>	<b>120701</b> <input type="checkbox"/>
Bottom final cutter	260	26,6	19	50	6	4	MC	<b>121111</b> <input type="checkbox"/>	<b>121113</b> <input type="checkbox"/>

**ZL 15 mm, TG 3.8 mm, larger basic clearance**

WF 620-2-06, WF 623-5-06

Tool Type	D	SB	ND	BO	Z	ZA	QAL	ID	ID
	mm	mm	mm	mm		PCS		ZL 15/15	ZL 15/16,5
Top final cutter	260	26,6	19	50	6	4	MC	<b>121114</b> <input type="checkbox"/>	<b>121116</b> <input type="checkbox"/>
Basic cutter	260	49,4	26,6	50	6	7	MC	<b>120702</b> <input type="checkbox"/>	<b>120703</b> <input type="checkbox"/>
Bottom final cutter	260	26,6	19	50	6	4	MC	<b>121115</b> <input type="checkbox"/>	<b>121117</b> <input type="checkbox"/>





#### Minifinger joint cutter and shoulder cutter, HS, real Z 6

**Application:**

For self locking longitudinal joints with visible joint for horizontal joints, e.g. solid wood panels or finger jointed profile strips. See section introduction for additional information.

**Machine:**

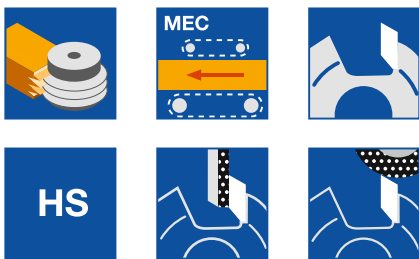
High performance finger joint machines with cut off saw.

**Workpiece material:**

Softwood, across grain; limited suitability for hardwood.

**Technical information:**

High number of teeth tool design. Tool set consists of basic cutter, extension cutter and shoulder cutters for different positions of the visible joint. Cutting width adjusted to wood thickness. Mounted on clamping sleeve. Cutting material HS. Resharpening area 12 mm.



**Basic- / extension cutter ZL 10/11 mm, TG 3.8 mm**

WF 620-2

Tool Type	D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	DRI	ID
Basic cutter	250	20,2	11,2	60	6	3	HS	RL	<b>120320</b> □
Extension cutter	250	5,0	11,2	60	6	1	HS	LL	<b>121317</b> □
Extension cutter	250	5,0	11,2	60	6	1	HS	RL	<b>121318</b> □
Extension cutter	250	12,6	11,2	60	6	2	HS	LL	<b>121319</b> □
Extension cutter	250	12,6	11,2	60	6	2	HS	RL	<b>121320</b> □

**Shoulder cutter profile 2 and 3 for ZL 10/11 mm, TG 3.8 mm**

WF 621-2

D mm	SB mm	BO mm	Z	QAL	ID LL	ID RL
249,7	12	60	6	HS	<b>122200</b> □	<b>122201</b> □

**Shoulder cutter profile 5 for ZL 10/11 mm, TG 3.8 mm**

WF 621-2

D mm	SB mm	BO mm	Z	QAL	ID LL	ID RL
239,7	12	60	6	HS	<b>122202</b>	<b>122203</b>
239	12	60	6	HS	<b>122204</b> □	<b>122205</b> □

**Clamping sleeve with threaded nut**

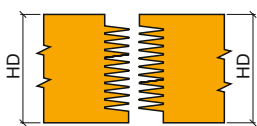
TB 270-0

D mm	BO mm	NL mm	GL mm	ID LL	ID RL
60	50	85	110	<b>029470</b>	<b>029471</b> ●

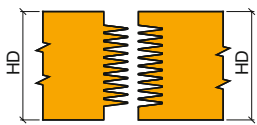
**Spacer**

TR 100-0

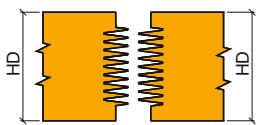
D mm	B mm	BO mm	ID
90	3,8	60	<b>028447</b> ●
90	11,4	60	<b>028448</b> ●



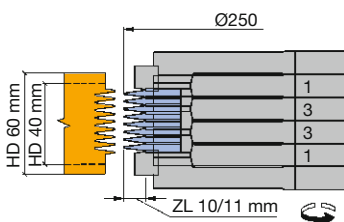
Profile 2



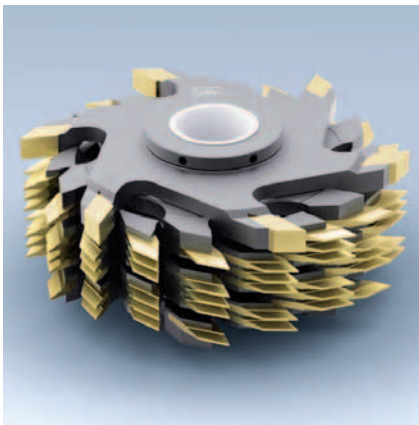
Profile 3



Profile 5 with half shoulder



Minifinger tool set Z = 6 with shoulder cutters



#### Minifinger joint cutter and shoulder cutter, Marathon, real Z 6

**Application:**

For self locking longitudinal joints with straight visible joint for horizontal joints, e.g. solid wood panels or finger jointed profile strips. See section introduction for additional information.

**Machine:**

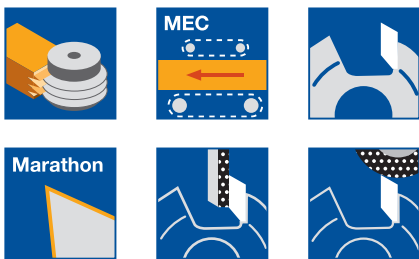
High performance finger joint machines with cut off saw.

**Workpiece material:**

Softwood, across grain; also suitable for hardwood.

**Technical information:**

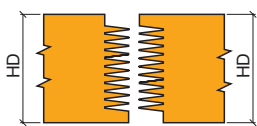
High number of teeth tool design. Tool set consists of basic cutter, extension cutter and shoulder cutters for different positions of the visible joint. Cutting width adjusted to wood thickness. Mounted on clamping sleeve. Marathon coating allows up to 4 times longer tool life compared to HS version. Resharpener area 12 mm.



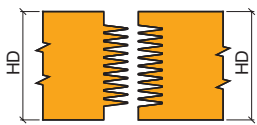
**Basic- / extension cutter ZL 10/11 mm, TG 3.8 mm**

WF 620-2-06

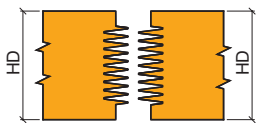
Tool Type	D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	DRI	ID
Basic cutter	250	20,2	11,2	60	6	3	MC	RL	<b>120624</b> □
Extension cutter	250	5,0	11,2	60	6	1	MC	LL	<b>121608</b> □
Extension cutter	250	5,0	11,2	60	6	1	MC	RL	<b>121609</b> □
Extension cutter	250	12,6	11,2	60	6	2	MC	LL	<b>121610</b> □
Extension cutter	250	12,6	11,2	60	6	2	MC	RL	<b>121611</b> □



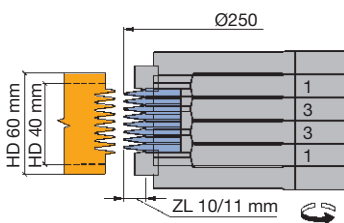
Profile 2



Profile 3



Profile 5 with half shoulder



Minifinger tool set Z = 6 with shoulder cutters

**Shoulder cutter profile 2 and 3 for ZL 10/11 mm, TG 3.8 mm**

WF 621-2-06

D mm	SB mm	BO mm	Z	QAL	ID LL	ID RL
249,7	12	60	6	MC	<b>122400</b> □	<b>122401</b> □

**Shoulder cutter profile 5 for ZL 10/11 mm, TG 3.8 mm**

WF 621-2-06

D mm	SB mm	BO mm	Z	QAL	ID LL	ID RL
239,7	12	60	6	MC	<b>122402</b> □	<b>122403</b> □
239	12	60	6	MC	<b>122404</b> □	<b>122405</b> □

**Clamping sleeve with threaded nut**

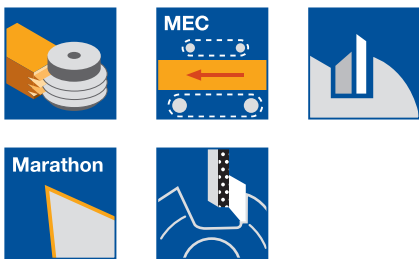
TB 270-0

D mm	BO mm	NL mm	GL mm	ID LL	ID RL
60	50	85	110	<b>029470</b> ●	<b>029471</b> ●

**Spacer**

TR 100-0

D mm	B mm	BO mm	ID
90	3,8	60	<b>028447</b> ●
90	11,4	60	<b>028448</b> ●



### Minifinger joint cutterhead with replaceable Marathon knives

#### Application:

For self locking longitudinal joints. See section introduction for additional information.

#### Machine:

Finger joint machines with and without cut off saw, continuous machines.

#### Workpiece material:

Softwood, across grain; also suitable for hardwood.

#### Technical information:

Steel tool body with block knives. Individually replaceable knives if damaged. Always resharpen sets of tools to the same diameter. Marathon coating allows up to 4x the tool life compared with HS. Resharpener area 10 mm.

#### ZL 10/10 and 10/11 mm

WM 620-2-06

D mm	SB mm	BO mm	ND mm	Z	TG	ZA PCS	$n_{max}$ $min^{-1}$	ID ZL	ID ZL
160	31,4	50	30,4	2/2	3,8	8	8000	10/10	10/11
250	31,4	50	30,4	3/3	3,8	8	4500	<b>135900</b>	<b>135902</b>
								<b>135901</b>	<b>135903</b>

#### ZL 15/15 and 15/16.5 mm

WM 620-2-06

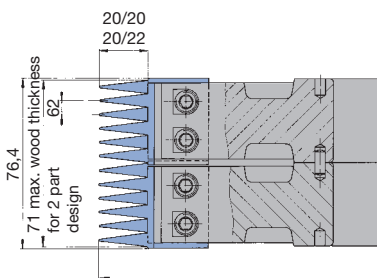
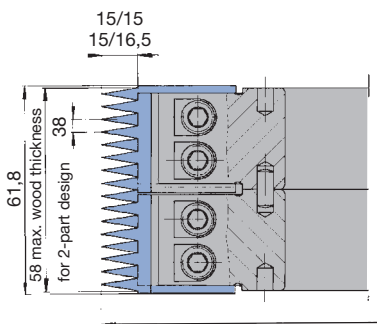
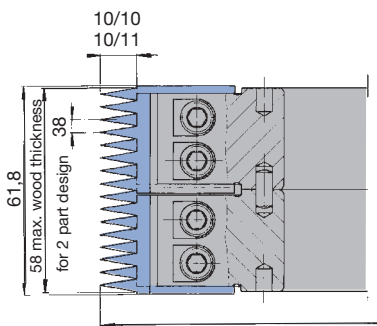
D mm	SB mm	BO mm	ND mm	Z	TG	ZA PCS	$n_{max}$ $min^{-1}$	ID ZL	ID ZL
170	31,4	50	30,4	2/2	3,8	8	8000	15/15	15/16,5
260	31,4	50	30,4	3/3	3,8	8	4500	<b>135904</b>	<b>135906</b>
								<b>135905</b>	<b>135907</b>

#### ZL 20/20 and 20/22 mm

WM 620-2-06

D mm	SB mm	BO mm	ND mm	Z	TG	ZA PCS	$n_{max}$ $min^{-1}$	ID ZL	ID ZL
180	39,2	50	37,2	2/2	6,2	6	8000	20/20	20/22
260	39,2	50	37,2	3/3	6,2	6	4500	<b>135908</b>	<b>135910</b>
								<b>135909</b>	<b>135911</b>

Minifinger knives with larger tip gap for supporting components particularly suitable for finger joint machines with horizontal working spindle and without cut off saws and for PU adhesives.





**Spare knives:**

Cut off saws	Tip gap	Profile knife	ZL mm	TG	ZA PCS	ID 2	ID 3
without	standard	right	10/10	3,8	4	611452	611552
without	standard	left	10/10	3,8	4	611453	611553
without	standard	right	15/15	3,8	4	611454	611554
without	standard	left	15/15	3,8	4	611455	611555
without	standard	right	20/20	6,2	3	611456	611556
without	standard	left	20/20	6,2	3	611457	611557
with	standard	right	10/11	3,8	4	611450	611550
with	standard	left	10/11	3,8	4	611458	611558
with	standard	right	15/16,5	3,8	4	611459	611559
with	standard	left	15/16,5	3,8	4	611460	611560
with	standard	right	20/22	6,2	3	611461	611561
with	standard	left	20/22	6,2	3	611451	611551
without	large	right	10/10	3,8	4	611474	611574
without	large	left	10/10	3,8	4	611475	611575
without	large	right	15/15	3,8	4	611476	611576
without	large	left	15/15	3,8	4	611477	611577
without	large	right	20/20	6,2	3	611478	611578
without	large	left	20/20	6,2	3	611479	611579

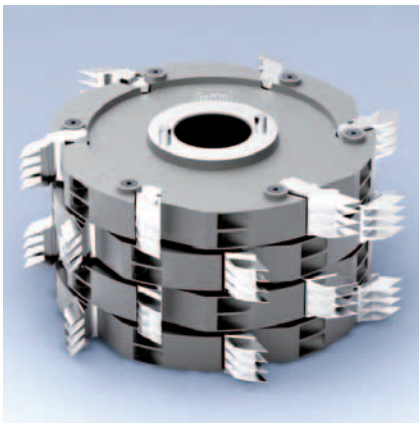
**Cutterhead - block knife  
with pitch 3.8 mm**

Finger length	SB	Hub	ZA	Wood thickness	Quantity of cutterheads
10 and 10/11 mm					
15 and 15/16.5 mm					
SB	31.4 mm				
Hub	30.4 mm				
ZA	Tooth row 8				
Wood thickness					
28				1	
58				2	
89				3	
119				4	
150				5	
180				6	
210				7	
241				8	
271				9	
302				10	
332				11	
362				12	

**Cutterhead - block knife  
with pitch 6.2 m**

Finger length	SB	Hub	ZA	Wood thickness	Quantity of cutterheads
20/20 mm					
22/22 mm					
SB	39.2 mm				
Hub	37.2 mm				
ZA	Tooth row 6				
Wood thickness					
34				1	
71				2	
108				3	
145				4	
183				5	
220				6	
257				7	
294				8	
331				9	
368				10	

Table to determine the quantity of cutterheads for given wood thickness.



#### Minifinger cutterhead with replaceable HW knives

**Application:**

For self locking longitudinal joints. See section introduction for additional information.

**Machine:**

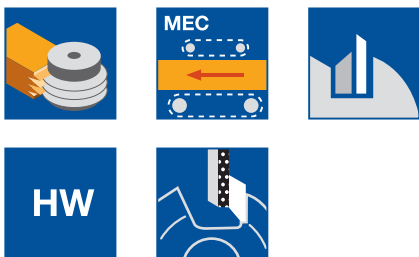
Finger joint machines with and without cut off saw, continuous machines.

**Workpiece material:**

Hardwood, across grain.

**Technical information:**

Steel tool body with block knives. Individually replaceable knives if damaged. Always sharpen sets of tools to the same diameter. Cutting material HW. Resharpener area 10 mm.



**ZL 10/10 and 10/11 mm, TG 3.8 mm.**

WM 620-2

D mm	SB mm	BO mm	ND mm	Z	TG	ZA PCS	n <sub>max.</sub> min <sup>-1</sup>	ID ZL	ID ZL
160	31,4	50	30,4	2/2	3,8	8	8000	022730	022731
250	31,4	50	30,4	3/3	3,8	8	4500	022732	022733

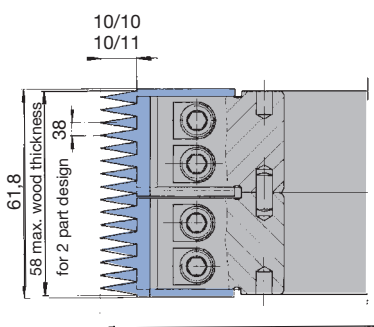
**Spare knives:**

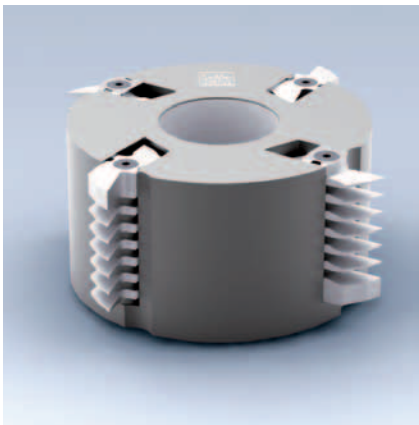
Cut off saws	Tip gap	Profile knife	ZL mm	TG	ZA PCS	ID 2	ID 3
without	standard	right	10/10	3,8	4	611300	611350
without	standard	left	10/10	3,8	4	611302	611352
with	standard	right	10/11	3,8	4	611304	611354
with	standard	left	10/11	3,8	4	611306	611356

Table to determine the number of cutters for a given wood thickness.

**Minifinger cutterhead with a pitch of 3.8 mm.**

Finger length	10 and 10/11 mm; 15 and 15/16.5 mm.
SB	31.4 mm
Boss	30.4 mm
ZA	Tooth row 8
Wood thickness	Quantity of cutterheads
28	1
58	2
89	3
119	4
150	5
180	6
210	7
241	8
271	9
302	10
332	11
362	12





#### Minifinger cutterhead with HW turnblade knives

**Application:**

For self locking longitudinal joints for non supporting components, e.g. panels and strips.

**Machine:**

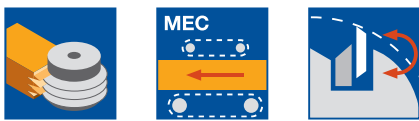
Finger joint machines and continuous machines with cut off saw.

**Workpiece material:**

Softwood and hardwood, across grain.

**Technical information:**

Steel tool body with HW turnblade knives. Particularly suitable for hardwood, e.g. for horizontal joints with and without shoulders. Variable design for defined wood thicknesses from 15 to 60 mm. The rest of the knife seating must be filled with spacers and a safety washer (spare part no. 4). Individual cutting edges can be replaced if a cutting edge breaks. Resharpening area 2 x 6 mm.



**Profile 1, ZL 10/11 mm, TG 3.8 mm**

WM 620-2-01

D mm	SB mm	BO mm	Z	HD mm	n <sub>max.</sub> min <sup>-1</sup>	ID LL	ID RL
160	60	50	2/2	60	8000	<b>135001</b> □	<b>135000</b> □
250	60	50	3/3	60	5000	<b>135005</b> □	<b>135004</b> □



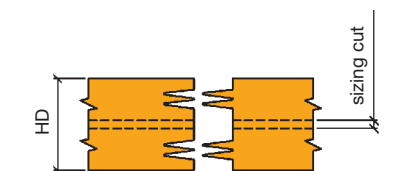
Profile 1 with continuous finger jointing



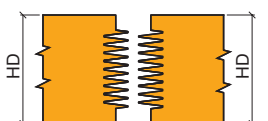
Profile 2 with staggered shoulder cutters



Profile 3 with shoulder cutters on the same level



Profile 4 with shoulder cutters for splitting



Profile 5 with half-shoulder

**Profile 2, ZL 10/11 mm**

WM 620-2-01

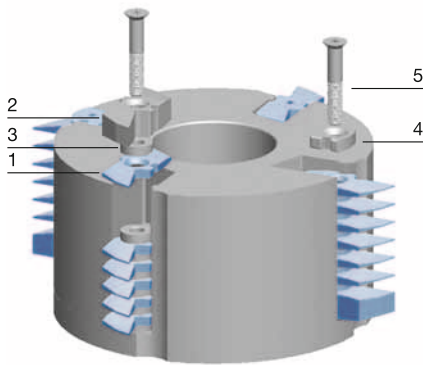
D mm	SB mm	BO mm	Z	HD mm	n <sub>max.</sub> min <sup>-1</sup>	ID LL	ID RL
160	60	50	2/2	20 - 32	8000	<b>135007</b> □	<b>135006</b> □
160	60	50	2/2	30 - 42	8000	<b>135009</b> □	<b>135008</b> □
160	60	50	2/2	40 - 49	8000	<b>135011</b> □	<b>135010</b> □
160	60	50	2/2	50 - 57	8000	<b>135013</b> □	<b>135012</b> □
250	60	50	3/3	20 - 32	5000	<b>135023</b> □	<b>135022</b> □
250	60	50	3/3	30 - 42	5000	<b>135025</b> □	<b>135024</b> □
250	60	50	3/3	40 - 49	5000	<b>135027</b> □	<b>135026</b> □
250	60	50	3/3	50 - 57	5000	<b>135029</b> □	<b>135028</b> □

**Profile 3, ZL 10/11 mm**

WM 620-2-01

D mm	SB mm	BO mm	Z	HD mm	n <sub>max.</sub> min <sup>-1</sup>	ID LL	ID RL
160	60	50	2/2	20 - 32	8000	<b>135031</b> □	<b>135030</b> □
160	60	50	2/2	30 - 42	8000	<b>135033</b> □	<b>135032</b> □
160	60	50	2/2	40 - 49	8000	<b>135035</b> □	<b>135034</b> □
160	60	50	2/2	50 - 57	8000	<b>135037</b> □	<b>135036</b> □
250	60	50	3/3	20 - 32	5000	<b>135047</b> □	<b>135046</b> □
250	60	50	3/3	30 - 42	5000	<b>135049</b> □	<b>135048</b> □
250	60	50	3/3	40 - 49	5000	<b>135051</b> □	<b>135050</b> □
250	60	50	3/3	50 - 57	5000	<b>135053</b> □	<b>135052</b> □

Attention: When assembling, always finish by fitting spacers with the securing device (spare part no. 4).



#### Spare knives:

Part-no.	BEZ	P	ZL mm	SB mm	TG	QAL	ID
1	Minifinger knife		10/11	3,8	3,8	HW	<b>618002</b> ●
2	Shoulder knife	2, 3, 4	10/11	11,4	3,8	HW	<b>618005</b> ●
2	Shoulder knife	5	10/11	11,4	3,8	HW	<b>618006</b> ●

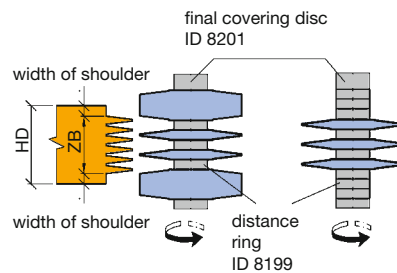
#### Spare parts:

Part-no.	BEZ	ABM mm	ID
3	Spacer for ZL 10/11	13x3,8x6,1	<b>008199</b> ●
3	Spacer	15x17x5	<b>008230</b> ●
4	Spacer with safety device	24,9x21x3,8	<b>008200</b> ●
4	Spacer with safety device	24,9x20x6,2	<b>008201</b> ●
5	Countersink screw, Torx® 20	M6x40	<b>006090</b> ●
5	Countersink screw, Torx® 20	M6x50	<b>007856</b> ●
5	Countersink screw, Torx® 20	M6x65	<b>007882</b> ●
5	Countersink screw, Torx® 20	M6x70	<b>007880</b> ●
	Torx® key	Torx® 20	<b>006091</b> ●

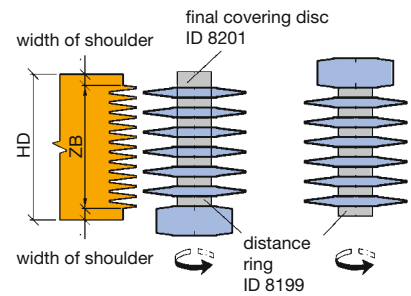
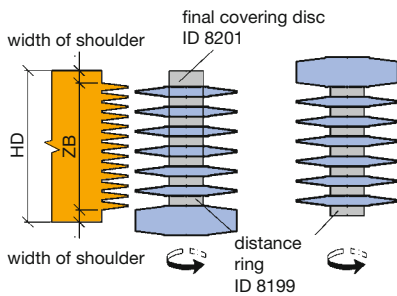
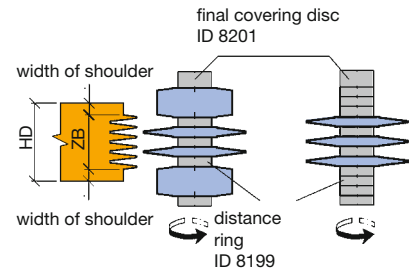
HD from to mm	ZB mm	ZA	Half- shoulder (HS) mm
16 - 22	9,4	3	3,3 - 6,3
19 - 25	13,2	4	2,9 - 5,9
23 - 29	17	5	3,0 - 6,0
27 - 33	20,8	6	3,1 - 6,1
31 - 37	24,6	7	3,2 - 6,2
35 - 41	28,4	8	3,3 - 6,3
38 - 44	32,2	9	2,9 - 5,9
42 - 48	36	10	3,0 - 6,0
46 - 52	39,8	11	3,1 - 6,1
50 - 56	43,6	12	3,2 - 6,2

HD from to mm	ZB mm	ZA	Shoulder (S) mm
17 - 23	10,7	3	
21 - 27	14,5	4	3,2 - 6,2
25 - 31	18,3	5	3,3 - 6,3
29 - 35	22,1	6	3,4 - 6,4
33 - 39	25,9	7	3,5 - 6,5
36 - 42	29,7	8	3,1 - 6,1
40 - 46	33,5	9	3,2 - 6,2
44 - 50	37,3	10	3,3 - 6,3
48 - 54	41,1	11	3,4 - 6,4
52 - 58	44,9	12	3,5 - 6,5

shoulder cutters to one side



shoulder cutters at centre





### Hydro minifinger cutterhead TurboHawk with curved knives

**Application:**

For self locking longitudinal joints for non supporting components, e.g. panels and strips.

**Machine:**

High performance finger joint machines and continuous machines with cut off saw.

**Workpiece material:**

Softwood; limited suitability for hardwood.

**Technical information:**

Resharpenable, constant diameter and constant profile tool system with hydro clamping. No machine adjustment required. Particularly suitable for horizontal joints with and without shoulders. Variable for defined wood thicknesses from 15 to 50 mm. The remaining knife seatings must be filled with spacers and a locking nut. Minifinger curved knives with extremely large resharpening area.



**With curved knives ZL 6.35 mm (1/4"), TG 3.53 mm**

HM 620-2-05

P	D mm	BO mm	HD <sub>max.</sub> mm	Z	QAL	n <sub>max.</sub> min <sup>-1</sup>	ID LL	ID RL
1	266,67	50	50	5/5	HS	4000	<b>135524</b> □	<b>135525</b> □
2	266,67	50	50	5/5	HS	4000	<b>135532</b> □	<b>135533</b> □
3	266,67	50	50	5/5	HS	4000	<b>135540</b> □	<b>135541</b> □

Please note the spindle arrangement. Arrangement for other wood thicknesses on request.



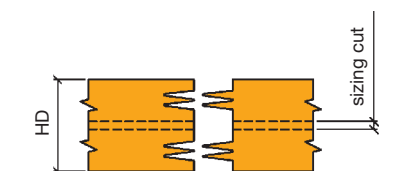
Profile 1 with continuous finger jointing



Profile 2 with staggered shoulder cutters



Profile 3 with shoulder cutters on the same level



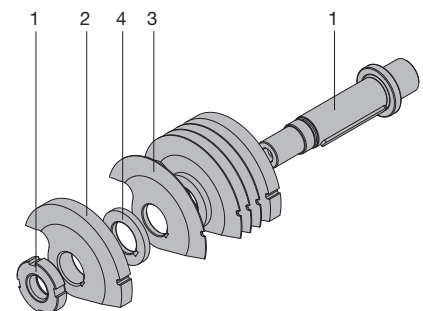
Profile 4 with shoulder cutters for splitting

**Spare knives:**

Part-no.	BEZ	ABM mm	ID HS	ID MC
3	Minifinger knife ZL 6,35	38,1x3,53x19,05, KN	<b>618202</b> ●	<b>618221</b> ●
2	Shoulder knife	38,1x8,74x19,05, KN	<b>618252</b> ●	<b>618270</b> ●

**Spare parts:**

Part-no.	BEZ	ABM mm	ID
	Setting gauge	D266,67x80	<b>005377</b> ●
1	Clamping arbor	HD 50 mm KL 55 mm	<b>008226</b> ●
1	Clamping arbor	HD 38 mm KL 43 mm	<b>008227</b> ●
1	Clamping arbor	HD 32 mm KL 34,5 mm	<b>008228</b> ●
1	Clamping arbor	HD 25 mm KL 29 mm	<b>008229</b> ●
	Sickle spanner	34/36 DIN 1810 A	<b>117510</b> ●
	Screw driver	SW 6, L50	<b>117508</b> ●
4	Filler piece	33x3,53x19,05,KN1,8x4,2	<b>008224</b> ●





### Hydro minifinger cutterhead TurboHawk with curved knives

**Application:**

For self locking longitudinal joints for non supporting components, e.g. panels and strips.

**Machine:**

High performance finger joint machines and continuous machines with cut off saw.

**Workpiece material:**

Softwood; limited suitability for hardwood.

**Technical information:**

Resharpenable, constant diameter and constant profile tool system with hydro clamping. No machine adjustment required. Particularly suitable for horizontal joints with and without shoulders. Variable for defined wood thicknesses from 15 to 50 mm. The remaining knife seatings must be filled with spacers and a locking nut. Minifinger curved knives with extremely large resharpening area.



**With curved knives ZL 9.52 mm (3/8"), TG 4.3 mm**

WM 620-2-05

P	D mm	BO mm	HD <sub>max.</sub> mm	Z	QAL	n <sub>max.</sub> min <sup>-1</sup>	ID LL	ID RL
1	266,67	50	50	5/5	HS	4000	<b>135548</b> □	<b>135549</b> □
2	266,67	50	50	5/5	HS	4000	<b>135556</b> □	<b>135557</b> □
3	266,67	50	50	5/5	HS	4000	<b>135564</b> □	<b>135565</b> □

Please note the spindle arrangement. Arrangement for other wood thicknesses on request.



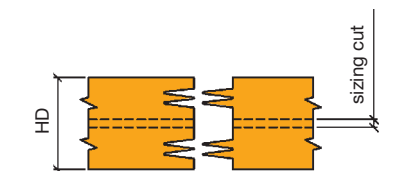
Profile 1 with continuous finger jointing



Profile 2 with staggered shoulder cutters



Profile 3 with shoulder cutters on the same level



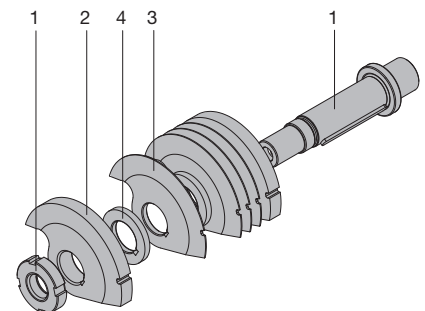
Profile 4 with shoulder cutters for splitting

**Spare knives:**

Part-no.	BEZ	ABM mm	ID HS	ID MC
3	Minifinger knife ZL 9,52	38,1x4,3x19,05, KN	<b>618208</b> ●	<b>618222</b> ●
2	Shoulder knife	38,1x9,51x19,05, KN	<b>618258</b> ●	<b>618271</b> ●

**Spare parts:**

Part-no.	BEZ	ABM mm	ID
	Setting gauge	D266,67x80	<b>005377</b> ●
1	Clamping arbor	HD 50 mm KL 55 mm	<b>008226</b> ●
1	Clamping arbor	HD 38 mm KL 43 mm	<b>008227</b> ●
1	Clamping arbor	HD 32 mm KL 34,5 mm	<b>008228</b> ●
1	Clamping arbor	HD 25 mm KL 29 mm	<b>008229</b> ●
	Sickle spanner	34/36 DIN 1810 A	<b>117510</b> ●
	Screw driver	SW 6, L50	<b>117508</b> ●
4	Filler piece	33x4,3x19,05,KN1,8x4,2	<b>008225</b> ●





### Hydro minifinger cutterhead TurboHawk with curved knives

**Application:**

For self locking longitudinal joints for non supporting components, e.g. panels and strips.

**Machine:**

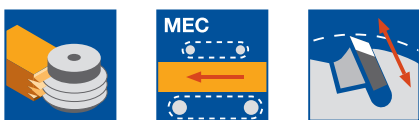
High performance finger joint machines and continuous machines with cut off saw.

**Workpiece material:**

Softwood; limited suitability for hardwood.

**Technical information:**

Resharpenable, constant diameter and constant profile tool system with hydro clamping. No machine adjustment required. Particularly suitable for horizontal joints with and without shoulders. Variable for defined wood thicknesses from 15 to 50 mm. The remaining knife seatings must be filled with spacers and a locking nut. Minifinger curved knives with extremely large resharpening area.



**With curved knives ZL 10/11 mm, TG 3.8 mm**

HM 620-2-05

P	D mm	BO mm	HD <sub>max.</sub> mm	Z	QAL	n <sub>max.</sub> min <sup>-1</sup>	ID LL	ID RL
1	266,67	50	50	5/5	HS	4000	<b>135500</b> □	<b>135501</b> □
2	266,67	50	50	5/5	HS	4000	<b>135508</b> □	<b>135509</b> □
3	266,67	50	50	5/5	HS	4000	<b>135516</b> □	<b>135517</b> □

Please note the spindle arrangement. Arrangement for other wood thicknesses on request.



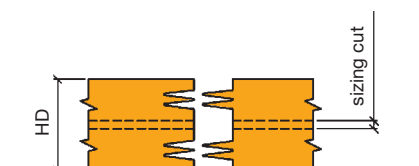
Profile 1 with continuous finger jointing



Profile 2 with staggered shoulder cutters



Profile 3 with shoulder cutters on the same level



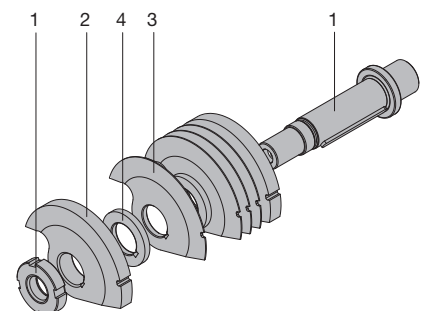
Profile 4 with shoulder cutters for splitting

**Spare knives:**

Part-no.	BEZ	ABM mm	ID HS	ID MC
3	Minifinger knife ZL 10/11	38,1x3,8x19,05, KN	<b>618200</b> ●	<b>618220</b> ●
2	Shoulder knife	38,1x11,4x19,05, KN	<b>618250</b> ●	<b>618269</b> ●

**Spare parts:**

Part-no.	BEZ	ABM mm	ID
	Setting gauge	D266,67x80	<b>005377</b> ●
1	Clamping arbor	HD 50 mm KL 55 mm	<b>008226</b> ●
1	Clamping arbor	HD 38 mm KL 43 mm	<b>008227</b> ●
1	Clamping arbor	HD 32 mm KL 34,5 mm	<b>008228</b> ●
1	Clamping arbor	HD 25 mm KL 29 mm	<b>008229</b> ●
	Sickle spanner	34/36 DIN 1810 A	<b>117510</b> ●
	Screw driver	SW 6, L50	<b>117508</b> ●
4	Filler piece	33x3,8x19,05,KN1,8x4,2	<b>008223</b> ●





### Minifinger disc cutter, HW with and without shoulder cutter

**Application:**

For self locking longitudinal joints for non supporting components, e.g. panels and strips.

**Machine:**

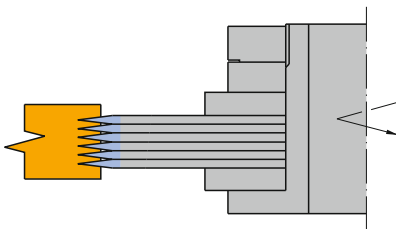
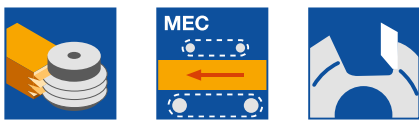
Finger joint machines with cut off saws.

**Workpiece material:**

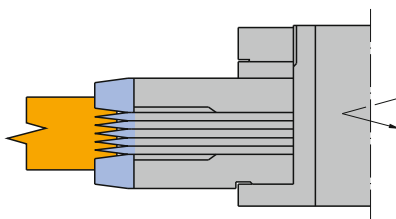
Hardwood and abrasive tropical wood.

**Technical information:**

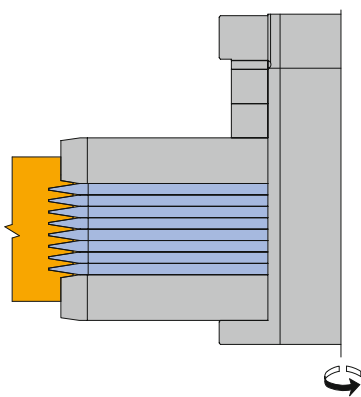
HW tipped cutters. Tool body thickness corresponds to finger pitch. Particularly suitable for horizontal joints with and without shoulders. Variable design for defined wood thicknesses from 15 to 80 mm. Suitable for small wood thicknesses. Resharpening area 3.5 mm.



Minifinger joint cutterset without shoulder cutters



Minifinger joint cutterset with shoulder cutters P3



Minifinger joint cutterset with shoulder cutters P5

**HW, ZL 10/11 mm, TG 3.8 mm**

WF 624-2, WF 621-2

Tool Type	D mm	SB mm	BO mm	Z	n <sub>max.</sub> min <sup>-1</sup>	ID
Minifinger joint cutter	160	3,8	70	2	9000	<b>022200</b> ●
Minifinger joint cutter	160	3,8	70	4	9000	<b>021511</b> ●
Minifinger joint cutter	250	3,8	70	6	6000	<b>021513</b> ●
Shoulder cutter	159,8	15,2	70	4	9000	<b>021762</b> ●
Shoulder cutter P3	249,7	15,2	70	6	6000	<b>021764</b> ●
Shoulder cutter P5	239,7	15,2	70	6	6000	<b>022153</b> ●
Shoulder cutter P5	239	15,2	70	6	6000	<b>022154</b> □

**HW, ZL 10/11.5 mm, TG 4.0 mm**

WF 624-2, WF 621-2

Tool Type	D mm	SB mm	BO mm	Z	n <sub>max.</sub> min <sup>-1</sup>	ID
Minifinger joint cutter	160	4	70	2	9000	<b>021509</b> ●
Minifinger joint cutter	160	4	70	4	9000	<b>021517</b> ●
Shoulder cutter	159,8	16	70	4	9000	<b>021769</b> ●

**HW, ZL 10/11.5 mm, TG 4.0 mm, up to wood thickness 50 mm**

WF 624-2, WF 621-2

Tool Type	D mm	SB mm	BO mm	Z	n <sub>max.</sub> min <sup>-1</sup>	ID
Minifinger joint cutter	160	4	70	2	9000	<b>022203</b> ●
Shoulder cutter	159,9	16	70	2	9000	<b>022204</b> ●

**Clamping element with threaded nut**

TB 270-0

D mm	BO mm	NL mm	GL mm	ID LL	ID RL
70	50	120	146	<b>029694</b> ●	<b>029695</b> ●
70	50	80	110	<b>029472</b> ●	<b>029473</b> ●

**Spare parts:**

BEZ	ABM mm	D mm	ID
Mounting arbor	D100	50	<b>079007</b> ●
Sickle spanner adjustable	D90/155; L290; DIN1816; tenon 6		<b>005462</b> ●





### Minifinger disc cutter, DP with and without shoulder cutter

**Application:**

For self locking longitudinal jointings of non supporting components, e.g. solid wood panels, friezes and strips.

**Machine:**

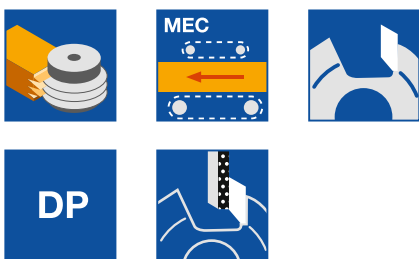
Finger joint machines with cut off saws.

**Workpiece material:**

Hardwood and abrasive tropical wood, wood derived material e.g. chipboard, MDF, HDF etc.

**Technical information:**

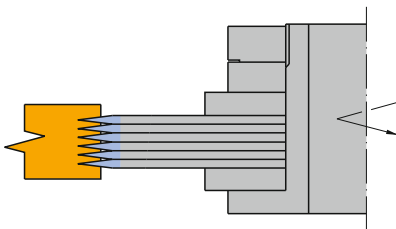
DP tipped cutters. High strength steel tool body. Tool body thickness corresponds to the finger pitch. Suitable for horizontal joints with and without shoulders. Variable design for defined wood thicknesses of 15 to 80 mm. 3 - 5 times resharpenable.



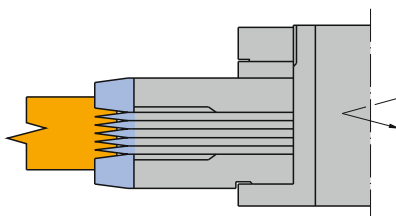
**DP, ZL 10/11 mm, TG 3.8 mm**

WF 625-2-DP

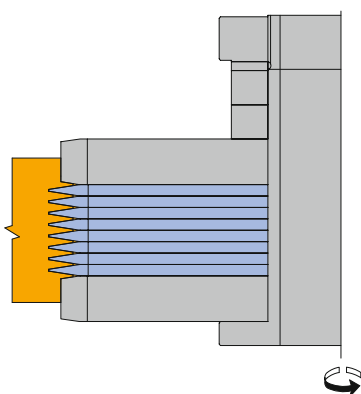
Tool Type	D mm	SB mm	BO mm	Z	n <sub>max.</sub> min <sup>-1</sup>	ID
Minifinger joint cutter	160	3,8	70	2	9000	<b>192542</b> □
Minifinger joint cutter	160	3,8	70	4	9000	<b>192543</b> □
Minifinger joint cutter P3	160	11,4	70	4	9000	<b>192544</b> □
Minifinger joint cutter	250	3,8	70	6	6000	<b>192545</b> □
Minifinger joint cutter P3	250	11,4	70	6	6000	<b>192546</b> □



Minifinger joint cutterset without shoulder cutters



Minifinger joint cutterset with shoulder cutters P3



Minifinger joint cutterset with shoulder cutters P5

**DP, ZL 10/11 mm, TG 4.0 mm**

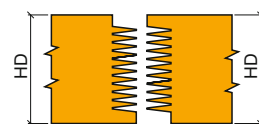
WF 625-2-DP

Tool Type	D mm	SB mm	BO mm	Z	n <sub>max.</sub> min <sup>-1</sup>	ID
Minifinger joint cutter	160	4	70	2	9000	<b>192547</b> □
Minifinger joint cutter	160	4	70	4	9000	<b>192548</b> □
Minifinger joint cutter P3	160	10	70	4	9000	<b>192549</b> □
Minifinger joint cutter	250	4	70	6	6000	<b>192550</b> □
Minifinger joint cutter P3	250	10	70	6	6000	<b>192551</b> □

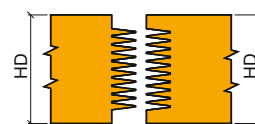
**Spacers**

TR 100-0

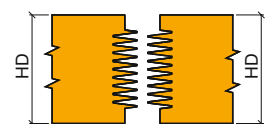
D mm	B mm	BO mm	TG	ID
100	3,8	70	3,8	<b>028437</b> ●
100	11,4	70	3,8	<b>028450</b> ●
100	15,2	70	3,8	<b>028439</b> ●
100	4,0	70	4	<b>028438</b> ●
100	16,0	70	4	<b>028441</b>



Profile 3



Profile 3



Profile 5 with half-shoulder



#### Scorer for shoulder minifinger joints

**Application:**

For scoring before the trimming hogger or for machining the face edge of shoulder joints.

**Machine:**

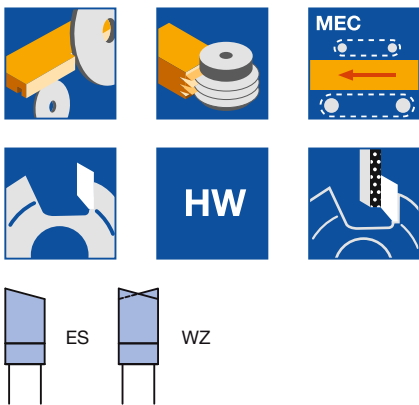
Short length finger joint machines with trimming and scoring.

**Workpiece material:**

Softwood, hardwood and wood derived materials

**Technical information:**

Single sided bevel tooth shape reduces tear outs; with shear angle on request. Particularly suitable for scoring the shoulders on short length finger joint machines with feed. Tear free shoulders guaranteed. Double scorer prevents tear outs on the finger tips.



**Single scoring saw mounted on flanged sleeve**

SK 499-2

D mm	SB mm	BO mm	Z	ZF	QAL	n <sub>max.</sub> min <sup>-1</sup>	ID LL	ID RL
200	*	4,75	40 KN	64	ES	HW	7200	<b>061970</b> ● <b>061974</b> ●
200		4,75	40 KN	64	ES	HW	7200	<b>061982</b> ● <b>061983</b> ●
200		6	40 KN	48	WZ	HW	7200	<b>061975</b> ● <b>061976</b> ●

\* with shear angle

**Double scoring saw mounted on flanged sleeve**

SK 499-2

D mm	SB mm	BO mm	Z	ZF	QAL	n <sub>max.</sub> min <sup>-1</sup>	ID LL	ID RL
200	6 - 12,8	40 KN	48	WZ	HW	7200	<b>061978</b> ● <b>061979</b> ●	
200	5,5 - 11	40 KN	48	ES	HW	7200		<b>061971</b> ●

**Circular sawblade for single scoring saw**

WK 801-2, WK 850-2

D mm	SB mm	BO mm	Z	ZF	NLA mm	QAL	n <sub>max.</sub> min <sup>-1</sup>	ID LL	ID RL
200	*	4,75	75	64	ES	6NL TK95	HW	7200	<b>061968</b> ● <b>061969</b> ●
200		4,75	75	64	ES	6NL TK95	HW	7200	<b>061984</b> ● <b>061985</b> ●
200		6	75	48	WZ	6NL TK95	HW	7200	<b>061977</b> ● <b>061977</b> ●

\* with shear angle

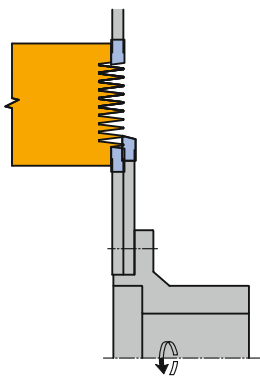
**Circular sawblade for double scoring saw**

WK 101-2, WK 850-2

D mm	SB mm	BO mm	Z	ZF	NLA mm	QAL	n <sub>max.</sub> min <sup>-1</sup>	ID LL	ID RL
193	6	75	48	WZ	6NL TK95	HW	7200	<b>061981</b> ●	<b>061981</b> ●
200	5,5	75	48	ES	6NL TK95	HW	7200		<b>061972</b> ●
190	5,5	75	48	ES	6NL TK95	HW	7200		<b>061973</b> ●

**Flanged sleeve**

D mm	BEM	L mm	BO mm	ID
80	3 mm clamping length	61	40 KN	<b>065605</b>
80	9 mm clamping length	61	40 KN	<b>061680</b>



Single/double scorer for scoring of shoulder and minifinger points.



#### Hogger for trimming minifingers

**Application:**

Defined trimming in front of the finger cut for adjusting the finger fit. Tear free sizing along the grain and across the grain, for working against the feed only with scoring sawblade.

**Machine:**

Finger joint machines with cut off saw, double end tenoner.

**Workpiece material:**

Solid wood and wood derived materials.

**Technical information:**

Steel tool body with HW circular sawblade and hogger elements mounted on flanged sleeve. Can be extended for larger hogger widths. Single sided bevel tooth shape reduces tear outs.


**Steel hogger set, mounted on flanged sleeve**

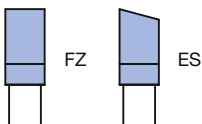
SZ 211-2

D mm	SB mm	BO mm	Z	BEM	QAL	ID LL	ID RL
251	15,6	40	54 (9/9)	KNH	HW	<b>062608</b>	● <b>062609</b>

**Basic hogger - steel tool body without flanged sleeve**

WZ 210-2-01

BEZ	ABM mm	QAL	Z	ID LL	ID RL
Basic hogger	251x12x80	HW	18	<b>062602</b>	● <b>062603</b>
Basic hogger	301x12x80	HW	24	<b>062604</b>	● <b>062605</b>


**Additional hogger - steel tool body**

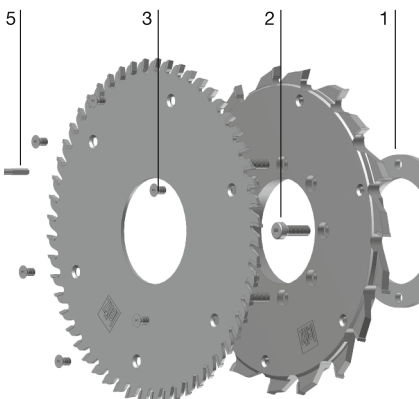
WZ 210-2-02

D mm	SB mm	BO mm	Z	QAL	ID LL	ID RL
251	80	12	18	HW	<b>062652</b>	● <b>062653</b>
251	80	12	24	HW	<b>062654</b>	● <b>062655</b>

**Circular sawblade**

WK 800-2-09, WK 800-2-38, WK 801-2, WK 801-2-05

D mm	SB mm	BO mm	Z	ZF	QAL	ID LL	ID RL
250	4,4	80	54	FZ	HW	<b>061825</b>	● <b>061826</b>
250	4,4	80	54	ES	HW	<b>061837</b>	● <b>061838</b>
250	4,4	80	72	FZ	HW	<b>061945</b>	● <b>061946</b>
260	4,4	80	54	ES	HW	<b>061858</b>	● <b>061859</b>
260	4,4	80	72	ES	HW	<b>061860</b>	● <b>061861</b>
300	4,4	80	48	FZ	HW	<b>061827</b>	● <b>061828</b>
300	4,4	80	72	FZ	HW	<b>061949</b>	● <b>061950</b>
300	4,4	80	48	ES	HW	<b>062028</b>	● <b>062029</b>


**Spare parts:**

Part-no.	BEZ	ABM mm	BEM	ID
1	Spacer	115x5x80		<b>028046</b>
2	Cylindrical screw with ISK	M8x20		<b>005946</b>
3	Countersink screw, Torx® 20	M6x10	Torx® 20	<b>006083</b>
4	Screw with ISK	M8x17	for D = 250/350/305/355	<b>006237</b>
5	Allen Key	SW 6		<b>005494</b>
6	Torx® key	Torx® 20		<b>117503</b>



#### Segment hogger for trimming minifingers

**Application:**

Defined trimming in front of the finger cut for adjusting the finger fit. Tear free sizing along the grain and across the grain, for working against the feed only with scoring sawblade.

**Machine:**

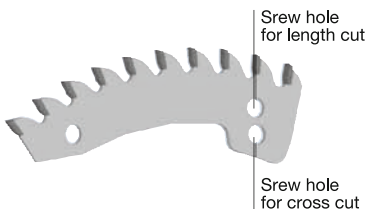
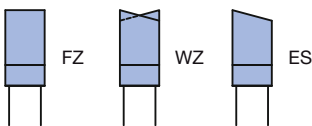
Finger joint machines with cut off saw, double end tenoners.

**Workpiece material:**

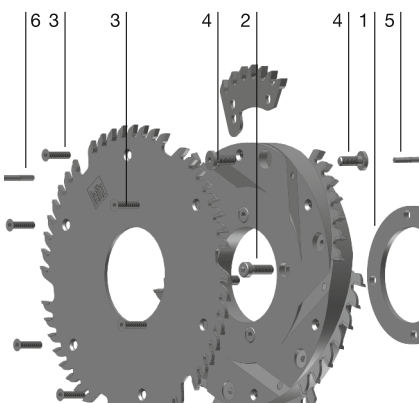
All solid wood, chipboard and fibre materials (MDF ect. uncoated, veneered, plastic and paper coated).

**Technical information:**

Steel tool body with HW circular sawblade and segment hogging elements. Staggered cut through six hogger segments. Mounted on flanged sleeve. Can be extended for larger hogging width. Single sided bevel tooth shape to improve the cutting quality and to reduce tear outs.



Spare segments for segment hogger



**Segment hogging set, mounted on flanged sleeve**

SZ 301-2

D mm	SB mm	BO mm	Z	ZF	QAL	DRI	ID
250	29,6	40 KN	48	ES	HW	LL	<b>064722</b>
250	29,6	40 KN	48	ES	HW	RL	<b>064723</b>

**Steel basic and extension hoggers without flanged sleeve**

WZ 300-2

D mm	SB mm	BO mm	Z	ZF	QAL	ID LL	ID RL
350	36,5	30	6x10	FZ	HW	<b>064414</b>	<b>064415</b> ●
300	31,5	30	6x9	FZ	HW	<b>064412</b>	<b>064413</b> ●
250	26,0	80	6x7	FZ	HW	<b>064410</b>	<b>064411</b> ●

**Spare circular sawblade for segment hogging set**

WK 800-2-46, WK 800-2-45, WK 801-2, WK 850-2-45

D mm	SB mm	BO mm	Z	ZF	QAL	ID LL	ID RL
250	4,4	80	48	ES	HW	<b>061878</b>	<b>061879</b> ●
350	3,2	30	66	WZ	HW	<b>058223</b>	<b>058224</b> ●
300	3,2	30	54	WZ	HW	<b>058221</b>	<b>058222</b> ●
300	4,4	30	66	FZ	HW	<b>061055</b>	<b>061056</b> ●
300	4,4	30	42	FZ	HW	<b>061833</b>	<b>061834</b> ●
260	4,4	80	66	ES	HW	<b>061965</b>	<b>061966</b> ●
260	4,4	80	48	ES	HW	<b>061963</b>	<b>061964</b> ●
250	3,2	80	42	WZ	HW	<b>058219</b>	<b>058220</b> ●
250	4,4	80	66	FZ	HW	<b>061953</b>	<b>061954</b> ●
250	4,4	80	48	FZ	HW	<b>061831</b>	<b>061832</b> ●

**Spare segments for segment hogger**

BEZ	ABM mm	SB mm	QAL	ZF	Z	DRI	ID
Hogging segment	D 250	5,7	HW	FZ	7	LL	<b>064958</b> ●
Hogging segment	D 300	5,7	HW	FZ	9	RL	<b>064961</b> ●
Hogging segment	D 300	5,7	HW	FZ	9	LL	<b>064960</b> ●
Hogging segment	D 250	5,7	HW	FZ	7	RL	<b>064959</b> ●
Hogging segment	D 350	5,7	HW	FZ	10	RL	<b>064963</b> ●
Hogging segment	D 350	5,7	HW	FZ	10	LL	<b>064962</b> ●

**Spare parts:**

Part-no.	BEZ	ABM mm	BEM	ID
1	Spacer	115x5x80		<b>028046</b> ●
2	Cylindrical screw with ISK	M8x20		<b>005946</b> ●
3	Countersink screw, Torx® 20	M6x10	Torx® 20	<b>006083</b> ●
4	Screw with ISK	M8x17	for D = 250/350/305/355	<b>006237</b> ●
5	Allen Key	SW 6		<b>005494</b> ●
6	Torx® key	Torx® 20		<b>117503</b> ●



### Sawblade hogger for trimming minifingers

**Application:**

Defined trimming in front of the finger cut for adjusting the finger fit on exactly right angled cut working pieces.

**Machine:**

Finger joint machine with cut off saw, double end tenoners.

**Workpiece material:**

Solid wood and wood derived materials.

**Technical information:**

HW circular sawblades with high number of teeth. Single sided bevel tooth shape to improve the cut quality and reduce tear outs. For high concentricity mount on flanged sleeve as a unit on the motor spindle.

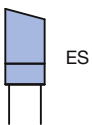


**Sawblade hogger mounted on flanged sleeve**

SK 999-2

D mm	SB mm	BO mm	Z	ZF	QAL	ID LL	ID RL
250 *	6,35	40 KN	80	ES	HW	<b>062610</b>	<b>062611</b>
250	8,0	40 KN	54	ES	HW	<b>062612</b>	<b>062613</b>
350	10,0	40 KN	72	ES	HW		<b>062616</b>
250	29,6	40 KN	48	ES	HW	<b>064722</b>	<b>064723</b>

\*with shear angle

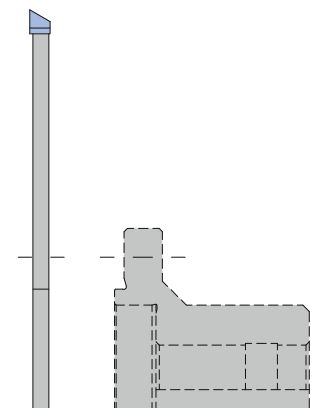


**Circular sawblade for sawblade hogger**

WK 801-2

D mm	SB mm	BO mm	Z	ZF	BEM	QAL	DRI	ID
250 *	6,35	75	80	ES	6NL TK 95	HW	LL	<b>062606</b> ●
250 *	6,35	75	80	ES	6NL TK 95	HW	RL	<b>062607</b> ●
250	8,0	80 KN	54	ES	6NL TK 200	HW	LL	<b>062614</b>
250	8,0	80 KN	54	ES	6NL TK 200	HW	RL	<b>062615</b>
350	10	80 KN	72	ES	6NL TK 195	HW	RL	<b>062617</b>

\*with shear angle



**Flanged sleeve for hoggers**

D mm	L mm	BO mm	ID
80	59	40 KN	<b>061679</b> ●
80	61	40 KN	<b>065605</b>

Sawblade hogger  
HW circular sawblade mounted on  
flanged sleeve, tooth shape single sided  
bevel

# Inquiry/order form special tools – planing and profiling

**Customer details:** Customer number:

Inquiry  
 Order

Delivery date: (not binding)   CW

Company: \_\_\_\_\_

Street: \_\_\_\_\_

Date: \_\_\_\_\_

Post code/place: \_\_\_\_\_

Inquiry/order no.: \_\_\_\_\_

Country: \_\_\_\_\_

Tool ID: (if known) \_\_\_\_\_

Phone/fax: \_\_\_\_\_

No. of pieces: \_\_\_\_\_

Contact person: \_\_\_\_\_

Signature: \_\_\_\_\_

**Workpiece material:**

Solid wood      Type: \_\_\_\_\_  
 Wood material      Type: \_\_\_\_\_  
 Coating      Type: \_\_\_\_\_  
 Other      Type: \_\_\_\_\_  
 Finish hogging

Moisture: \_\_\_\_\_ %  
 Density: \_\_\_\_\_ g/cm<sup>3</sup>  
 Further information: \_\_\_\_\_

**Maschine:**

(e. g. spindle moulders, four side moulders, edging machines, window making machines, etc.)

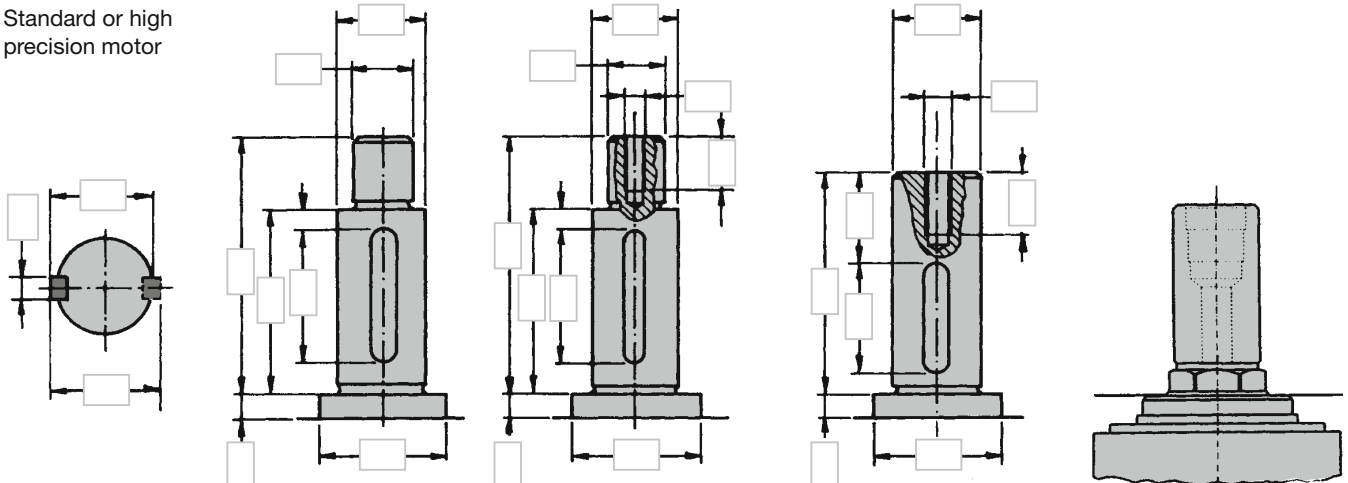
Manufacturer: \_\_\_\_\_  
 Type/construction year: \_\_\_\_\_  
 Model: \_\_\_\_\_

Specification of spindle sequence in feed direction e. g.: 1 bottom, 2 right, 3 left, 4 top, 5 multi purpose...  
 or: 1 scraping, 2 hogging, 3 cutting, 4 finish cutting, 5 post cutting...  
 or: 1 sawing, 2 slot/tenon, 3 cutting with feed, 4 cutting against feed...

Motor no.	Power	RPM	Spindle dimension	Additional information
1	_____ kW	_____ min <sup>-1</sup>	_____ mm	_____
2	_____ kW	_____ min <sup>-1</sup>	_____ mm	_____
3	_____ kW	_____ min <sup>-1</sup>	_____ mm	_____
4	_____ kW	_____ min <sup>-1</sup>	_____ mm	_____
5	_____ kW	_____ min <sup>-1</sup>	_____ mm	_____

Direction of rotation (LHR/RHR) or cutting direction (with feed/against feed) must be specified for each spindle.

Standard or high precision motor



# Inquiry/order form special tools – planing and profiling

## Tool:

Tool type (e. g. one part/tipped tools/assmbl. tool, see product information)

Dimension:  
 Diameter: \_\_\_\_\_ mm  
 Cutting width: \_\_\_\_\_ mm  
 Bore: \_\_\_\_\_ mm  
 Number of teeth: \_\_\_\_\_

Cutting material:  
 HL  
 HS  
 ST  
 HW  
 DP

Cutting point:  
 no cutting point  
 sleeve with interlock  
 sleeve without interlock  
 quick clamping sleeve  
 hydro sleeve

Direction of rotation:  
 right hand rotation  
 left hand rotation

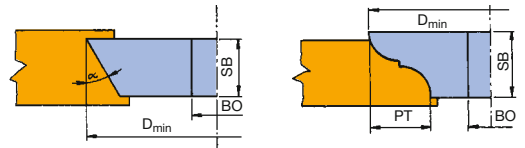
Kind of feed:  
 manual (MAN)  
 mechanical (MEC)

Cutting direction:  
 with feed  
 against feed

Feed speed: \_\_\_\_\_ min<sup>-1</sup>  
 Cutting width (SB): \_\_\_\_\_ mm  
 Cutting depth: \_\_\_\_\_ mm

Remark:  
 zero diameter: \_\_\_\_\_ mm  
 max. diam.: \_\_\_\_\_ mm  
 zero height: \_\_\_\_\_ mm  
 clamping length: \_\_\_\_\_ mm

Application:  
 Solid wood  longitudinal  crosscut  front  
 Wood materials  top layer  Medium layer  Top and medium layer



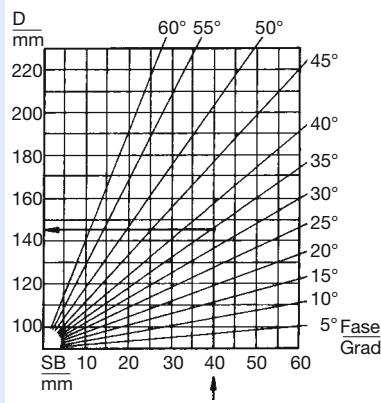
3

## Technical information:

Tipped tools (bevel trimming cutters/profile routers):

Design: bending test, Z2, mech. feed, Z3, Z4, round shape  
 Tooth shape: with/without spur

Table for min. tool diameter.  
 Applicable for bevel trimming cutter BO – 30 mm:  
 For bore 40 mm: D + 10 mm  
 For bore 50 mm: D + 20 mm



### Formula for min. tool diameter:

Applicable for profile routers BO – 30 mm:  
 For bore 40 mm: D + 10 mm  
 For bore 50 mm: D + 20 mm

**Formula:**  $D_{min} = 100 + 2 \times PT$  (mm)

### Note:

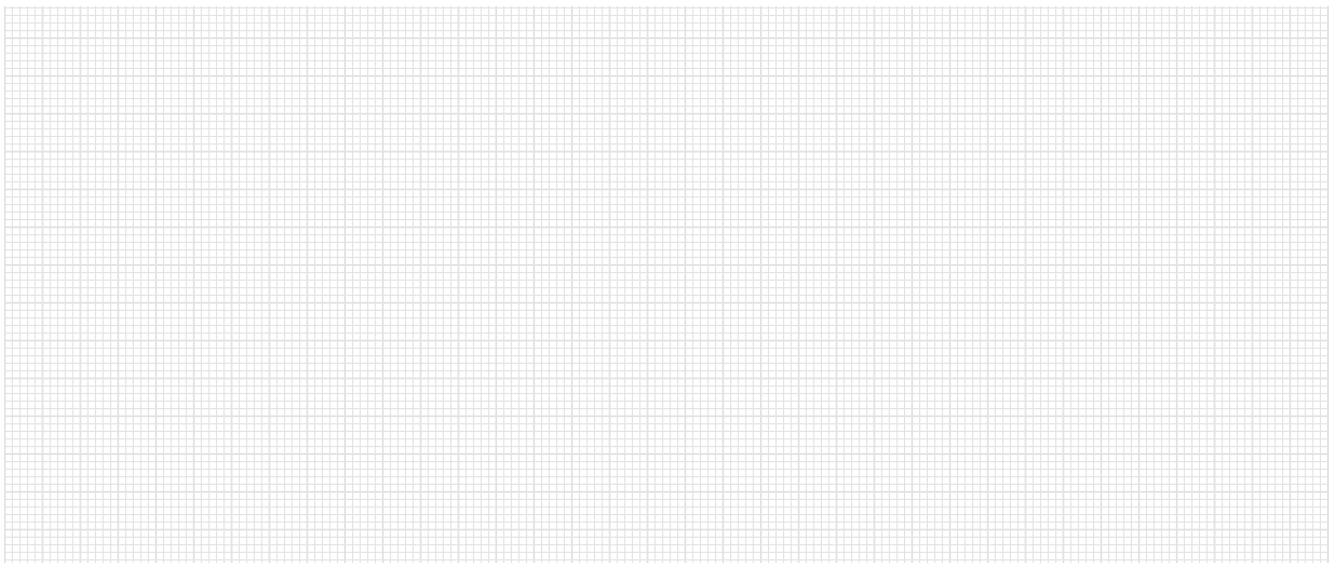
Bevels of more than 45° and large profile depths require large diameters. The maximum permitted RPM must be considered when calculated the cutting diameter and must not be exceeded. Profile sketches must clearly indicate whether the material (wood) or cutter is shown. Please specify motor side, direction of rotation, dimensions and any other conditions on the material sample or the drawings.

Assembled tools with turnblade/throw away knives:
























































































**Formula:**  $D_{min} = 90 + 2 \times PT$  (mm) – Applicable for BO – 30 mm

Sketch for application plan, profile drawing, special motor spindle, etc.

Please specify workpiece support and fence side and/or workpiece face side top/bottom.



# Key to pictograms

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