

# Manual feed

Leitz Lexicon Edition 7

Version 2

09/2024



## Explanation of abbreviations

A	= dimension A	LH	= 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	RH	= right hand rotation
DKN	= double keyway	RP	= radius of cutter
DP	= polycrystalline diamond	S	= shank dimension
DRI	= rotation	SB	= cutting width
FAB	= width of rebate	SET	= set
FAT	= depth of rebate	SLB	= slotting width
FAW	= bevel angle	SLL	= slotting length
FLD	= flange diameter	SLT	= slotting depth
$f_z$	= tooth feed	SP	= tool steel
$f_{z \text{ eff}}$	= effective tooth feed	ST	= Cobalt-basis cast alloys, e.g. Stellite™
GEW	= thread	STO	= shank tolerance
GL	= total length	SW	= cutting angle
GS	= Plunging edge	TD	= diameter of tool body
H	= height	TDI	= thickness of tool
HC	= tungsten carbide, coated	TG	= pitch
HD	= wood thickness (thickness of workpiece)	TK	= reference diameter
HL	= high-alloyed tool steel	UT	= cutting edges with irregular pitch
HS	= high-speed steel (HSS)	V	= number of spurs
HW	= tungsten carbide (TCT)	$v_c$	= cutting speed
ID	= ident number	$v_f$	= feed speed
IV	= insulation glazing	VE	= packing unit
KBZ	= abbreviation	VSB	= adjustment range
KLH	= clamping height	WSS	= workpiece material
KM	= edge breaker	Z	= number of teeth
KN	= single keyway	ZA	= number of fingers
KNL	= combination pinhole consists of 2/7/42 2/9/46,35 2/10/60	ZF	= tooth shape (cutting edge shape)
L	= length	ZL	= finger length
l	= clamping length		
LD	= left hand twist		
LEN	= Leitz standard profiles		

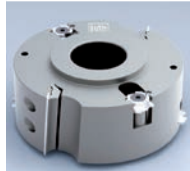
### Notes to the Lexicon concerning the diagrams and tables

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

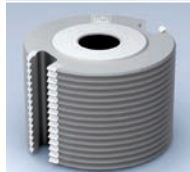
## 4. Manual feed



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## 4. Manual feed

### 4.1 Grooving

<b>Application</b>	To produce different groove widths, manual or mechanical feed, along or across the grain.
<b>Workpiece material</b>	Softwood and hardwood, glulam, chipboard and fibre materials, uncoated, veneered, plastic and paper coated. Plastics and foams.
<b>Machines</b>	Portable machines, spindle moulders, moulders, double-end tenoners, machining centres, edgebanding machines etc.
<b>Type of feed</b>	Manual feed: Application only against feed.  Mechanical feed: Application with or against feed, for minimum tear out, use with feed necessary.

#### Tool design



Tipped tools:  
With HW or DP. DP tips suitable for abrasive materials.

Replaceable tip tools:  
Design with HW turnblade cutters for constant diameter and constant cutting widths.

Two and multiple part tools:  
Designed so the cutting width can be adjusted either by spacers (adjustment steps of 0.10 mm) or by a continuously adjustable sleeve for HW or DP tipped tools.

Single tools:  
Suitable for use as set.

Optimised gullet design DFC:  
The DFC concept directs the chips away from the workpiece, so leaving the tool cutting area unhindered. DFC increases tool performance.

Benefits:

- Better product quality by eliminating chip marks or damage to the workpiece edges.
- Reduced tool cutting edge wear by eliminating multiple cutting.

#### Recommended value for tooth feed rate $f_z$ (in mm)

<b>Solid wood</b>	
Along	0.60 – 0.80 mm
Across	0.30 – 0.40 mm
<b>Glulam</b>	0.40 – 0.50 mm
<b>Chipboard and fibre material</b>	
Without coating	0.50 – 0.70 mm
Coated	0.20 – 0.40 mm
Veneered	0.10 – 0.15 mm
<b>Wood derived materials</b>	
Middle layer	0.30 – 0.60 mm
Top layer	0.08 – 0.12 mm
Plastic	0.20 – 0.50 mm
Polymer compound	0.05 – 0.05 mm
Non-ferrous metals	0.03 – 0.05 mm

$$v_f = f_z \cdot n \cdot Z / 1000$$

## 4. Manual feed

### 4.1 Grooving

#### 4.1.1 Grooving cutters



### Grooving cutters for manual feed

**Application:**

For grooving with (MEC) or against feed (MAN).

**Machine:**

Spindle moulders, moulders and double-end tenoners.

**Workpiece material:**

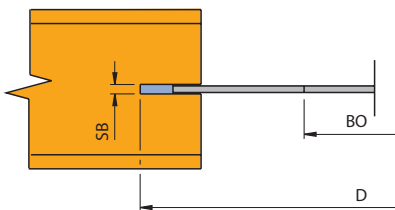
Solid wood; uncoated, coated and veneered wood derived materials.

**Technical information:**

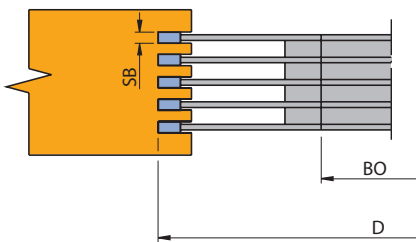
Tool body design with round, closed shape.

**Z 12**

WF 100 1 05



Scheme: Grooving in middle layer



Scheme: Set assembly for lock corner joint

D mm	SB mm	TDI mm	BO mm	BO <sub>max</sub> mm	Z	n min <sup>-1</sup>	ID
125	1,5	0,8	30	50	12	6200 - 13700	020241 ●
125	2,0	1,2	30	50	12	6200 - 13700	020243 ●
125	2,5	1,4	30	50	12	6200 - 13700	020245 ●
125	3,0	2,0	30	50	12	6200 - 13700	020246 ●
125	3,5	2,2	30	50	12	6200 - 13700	020247 ●
125	4,0	2,5	30	50	12	6200 - 13700	020248 ●
125	4,5	3,0	30	50	12	6200 - 13700	020249 ●
150	1,5	0,8	30	60	12	5200 - 11400	020265 ●
150	2,0	1,2	30	60	12	5200 - 11400	020267 ●
150	2,5	1,4	30	60	12	5200 - 11400	020269 ●
150	3,0	2,0	30	60	12	5200 - 11400	020250 ●
150	3,5	2,2	30	60	12	5200 - 11400	020251 ●
150	4,0	2,5	30	60	12	5200 - 11400	020252 ●
150	4,5	3,0	30	60	12	5200 - 11400	020253 ●
150	5,0	3,5	30	60	12	5200 - 11400	020254 ●
150	6,0	4,5	30	60	12	5200 - 11400	020255 ●
150	7,0	5,0	30	60	12	5200 - 11400	020256 ●
150	8,0	6,0	30	60	12	5200 - 11400	020257 ●
150	9,0	7,0	30	60	12	5200 - 11400	160100 ●
150	10,0	8,0	30	60	12	5200 - 11400	160101 ●
180	4,0	2,5	30	70	12	4300 - 9500	020260 ●
180	5,0	3,5	30	70	12	4300 - 9500	020261 ●
180	6,0	4,5	30	70	12	4300 - 9500	020262 ●
180	8,0	6,0	30	70	12	4300 - 9500	020263 ●
180	10,0	8,0	30	70	12	4300 - 9500	160102 ●

Groove cutter for MEC, see section Panel Processing.

For spacers TR 100 0 used as a set, see section Knives and Spare Parts.



### Grooving cutter - lamello joints

#### Application:

For grooving lamello joints and for cutting grooves for corner joints and longitudinal joints (e.g. picture frames, furniture doors).

#### Machine:

Portable power tools - grooving cutters (e.g. Lamello etc.).

#### Workpiece material:

Solid wood; uncoated, coated and veneered wood derived materials.

#### Technical information:

Tool body design with round, closed shape.



#### HW tipped

WF 102 1 01

D	SB	BO	NLA	Z	V	QAL	n	ID
mm	mm	mm	mm				min <sup>-1</sup>	
100	4,0	22	4/4,5/36	2	4	HW	7800 - 13300	<b>020124 ●</b>

#### DP tipped

WF 100 1 DP

D	SB	BO	NLA	Z	QAL	n	ID
mm	mm	mm	mm			min <sup>-1</sup>	
100	4	22	4/4,5/36	4	DP	7800 - 13300	<b>090017 ●</b>

#### Grooving cutterhead

WW 102 1 01

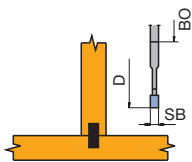
D	SB	BO	NLA	Z	V	QAL	n	ID
mm	mm	mm	mm				min <sup>-1</sup>	
100	4	22	4/4,5/36	2/2	2/2	HW	7800 - 13300	<b>020131 ●</b>

#### Spare knives:

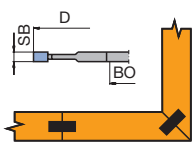
Part-no.	BEZ	QAL	VE	ID
			PCS	
1	Turnblade knife	HW	10	<b>005114 ●</b>
2	Turnblade spur VS4	HW	10	<b>005130 ●</b>

#### Spare parts:

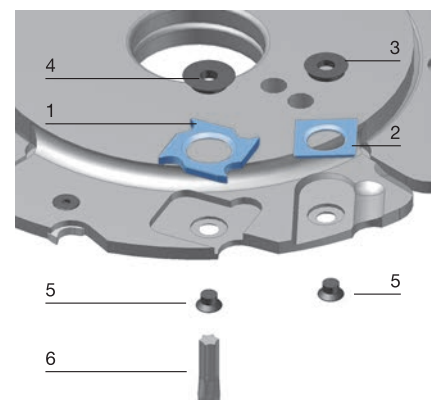
Part-no.	BEZ	ABM	ID
		mm	
3	Special nut for VS	9,9x1,60/M4	<b>005654 ●</b>
4	Special nut for WPL	11,9x2,2/M4	<b>005653 ●</b>
5	Countersink screw, Torx® 9	M4x0,5x3,2	<b>006057 ●</b>
6	Torx® key	Torx® 9	<b>005463 ●</b>



Lamello - T-joint



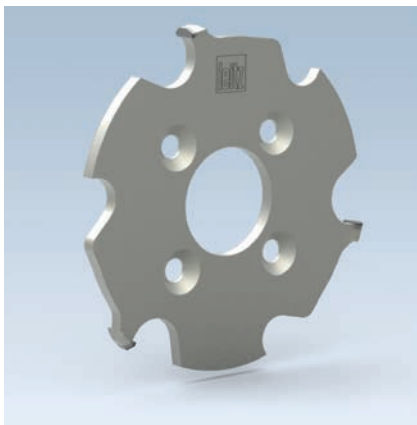
Lamello - Longitudinal/corner joint



## 4. Manual feed

### 4.1 Grooving

#### 4.1.1 Grooving cutters



#### Grooving cutter Lamello® Clamex® P-System®

##### Application:

For grooving lamello joints and for cutting grooves for corner joints and longitudinal joints.

##### Machine:

Portable power tools - grooving cutters (e.g. Lamello etc.) and for use on CNC machining centres.

##### Workpiece material:

Solid wood; uncoated, coated and veneered wood derived materials.

##### Technical information:

Tool body design with round, closed shape.



##### DP tipped for Clamex P - connector

WK 100 3 DP, WK 103 2 DP

D	SB	BO	NLA	Z	QAL	n	ZF	DRI	ID
mm	mm	mm	mm			min <sup>-1</sup>			
100,4	7	22	4/4,3/36	3	DP	7800 - 13300	TR	RH	<b>192378 ●</b>
100,4	7	30	4/6,6/48	3	DP	7800 - 13300	TR	LH	<b>192295 ●</b>
100,4	7	30	4/6,6/48	3	DP	7800 - 13300	TR	RH	<b>192377 ●</b>
100,4	7	30	4/6,6/48	6	DP	7800 - 13300	TR	RH	<b>192298 ●</b>
100,4	7	30	4/6,9/52	6	DP	7800 - 13300	TR	LH, RH	<b>192311 ●</b>
100,4	7	40	4/5,5/52	3	DP	7800 - 13300	TR	RH	<b>192296 ●</b>

Suitable arbors see section Clamping Systems. Drills for access bore see section Drilling.

##### Arbors with shank to mount the grooving cutter

S16x50,d30,l4,L85 ID **041429**

S25x60,d=30,l=4,L=102 ID **041367**

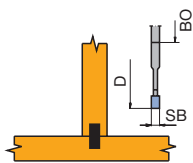
S20x50,d=30,l=4,L=102 ID **041368**

S25x60,d=30,l=4,L=127 ID **042980**

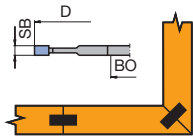
##### Drill for access bore hole

D = 6 mm ID **034116**

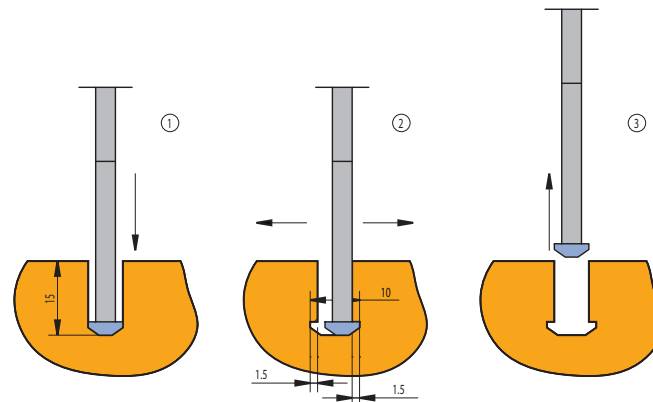
Shank cutter for CNC: ID **039161**



Lamello - T-joint



Lamello - Longitudinal/corner joint



1. 15 mm plunge.
2. 1.5 mm left and right side recesses.
3. Leaving from the middle position.

## 4. Manual feed

### 4.1 Grooving

#### 4.1.1 Grooving cutters



#### Grooving cutterset, adjustable with spacers

##### Application:

For cutting different groove widths.

##### Machine:

Spindle moulders, moulders, edgbanding machines and stationary routers with/without CNC control, double-end tenoners.

##### Workpiece material:

Solid wood along grain and across grain; uncoated, coated and veneered wood derived materials in top layer and middle layer.

##### Technical information:

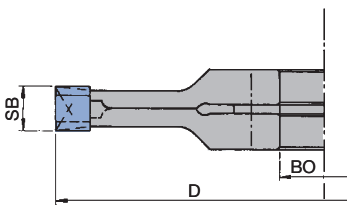
Adjustment of cutting widths with spacers (adjustment 0.10 mm).



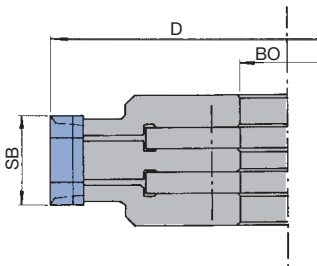
#### 2 part with spurs; SB 1.8 - 23.5 mm

SF 501 1 01

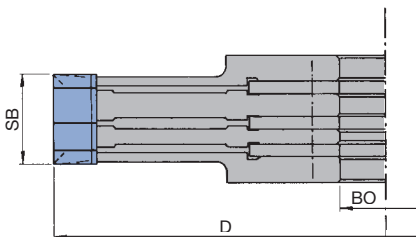
D	SB	BO	BO <sub>max</sub>	Z	V	NT	n	ID
mm	mm	mm	mm			mm	min <sup>-1</sup>	
140	1,8 - 3,4	30	35	4	4	20	5500 - 9500	020545 ●
140	1,8 - 3,4	35	35	4	4	20	5500 - 9500	020546 □
140	1,8 - 3,4	40	45	4	4	20	5500 - 9500	020547 □
140	2,2 - 4,0	30	35	4	4	20	5500 - 9500	020549 ●
140	2,2 - 4,0	35	35	4	4	20	5500 - 9500	020550 □
140	2,2 - 4,0	40	40	4	4	20	5500 - 9500	020551 □
140	2,2 - 4,0	50	50	4	4	20	5500 - 9500	020552 □
150	4,0 - 7,5	30	35	4	4	37,5	5200 - 8900	020573 ●
150	4,0 - 7,5	40	45	4	4	30	5200 - 8900	020575 □
150	4,0 - 7,5	50	50	4	4	27,5	5200 - 8900	020576 □
150	7,5 - 14,5	30	35	4	4	37,5	5200 - 8900	020580 ●
150	7,5 - 14,5	35	45	4	4	30	5200 - 8900	020581 □
150	7,5 - 14,5	40	45	4	4	30	5200 - 8900	020582 □
150	7,5 - 14,5	50	50	4	4	27,5	5200 - 8900	020583 □
180	6,0 - 11,5	30	35	4	4	45	4300 - 7400	020584 ●
180	12,0 - 23,5	30	35	4	4	45	4300 - 7400	020585 ●
180	12,0 - 23,5	40	45	4	4	45	4300 - 7400	020586 □



Grooving cutterset, 2 part design



Grooving cutterset with 1 additional extension part



Grooving cutterset with 2 additional extension parts

#### 2 part; SB 5.2 - 14 mm

SF 501 1 03

D	SB	BO	BO <sub>max</sub>	NLA	Z	V	NT	n	ID
mm	mm	mm	mm	mm			mm	min <sup>-1</sup>	
250	5,2 - 10	30	35	2/10/60	8	8	40	3500 - 6000	020693 ●
250	5,2 - 10	35	60		8	8	40	3100 - 5300	020694 □
250	7,2 - 14	35	60		8	8	40	3100 - 5300	020697

#### 3 / 4 part; SB 4.0 - 30 mm

SF 501 1, SF 501 1 02

D	SB	BO	BO <sub>max</sub>	NLA	Z	V	NT	n	ID
mm	mm	mm	mm	mm			mm	min <sup>-1</sup>	
150	7,5 - 28	50	50		4+4	4	22	5200 - 8900	020661
160	4 - 13	30			4	4	35	5000 - 10700	020667 ●
220	5 - 30	30	35		4+4	4	55	3500 - 6000	020662 ●



## 4. Manual feed

### 4.1 Grooving

#### 4.1.1 Grooving cutters



#### Grooving cutterset, adjustable with spacers

**Application:**

For cutting different groove widths. 2 part design.

**Machine:**

Spindle moulders, moulders, edgbanding machines and double-end tenoners.

**Workpiece material:**

Uncoated, coated and veneered wood derived materials.

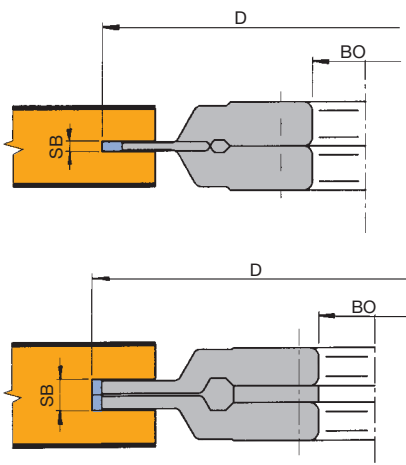
**Technical information:**

Adjustment of cutting width with spacers (adjustment 0.10 mm). Diamaster PRO design. Tip height 3.0 mm.

**2 part; Diamaster PRO; SB 5.0 - 9.5 mm**

SF 501 1 DP

D	SB	BO	BO <sub>max</sub>	NT	Z	n	ID
mm	mm	mm	mm	mm		min <sup>-1</sup>	
180	5,0 - 9,5	30	50	25	4/4	4300 - 7400	<b>090301 ●</b>



Application examples of grooving in the middle layer

## 4. Manual feed

### 4.1 Grooving

#### 4.1.2 Grooving cutterheads



#### Grooving cutterhead set adjustable with spacers

**Application:**

For cutting different groove widths.

**Machine:**

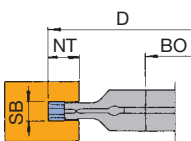
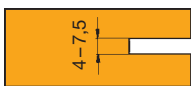
Spindle moulders, moulders, edgbanding machines and stationary routers with/without CNC control, double-end tenoners.

**Workpiece material:**

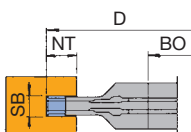
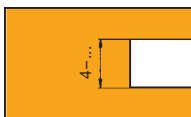
Solid wood along grain and across grain; uncoated, coated and veneered wood derived materials in top layer and middle layer.

**Technical information:**

Adjustment of cutting widths with spacers (adjustment 0.10 mm).



Grooving cutterhead set, 2 part design



Grooving cutterhead set, multi part design

**2 part; SB 4.0 - 7.5 mm**

SW 501 1 01

D	SB	BO	BO <sub>max</sub>	NT	Z	n	ID
mm	mm	mm	mm	mm		min <sup>-1</sup>	
150	4,0 - 7,5	30	50	20	2/2	5200 - 10100	<b>128100 ●</b>
180	4,0 - 7,5	30	50	35	2/2	4300 - 8400	<b>128101 ●</b>

**Extension parts SB 3.8 mm**

WW 200 1 NN

D	SB	BO	BO <sub>max</sub>	Z	n	ID
mm	mm	mm	mm		min <sup>-1</sup>	
150	3,8	30	50	2	5200 - 10100	<b>128130</b>
180	3,8	30	50	2	4300 - 8400	<b>128131</b>

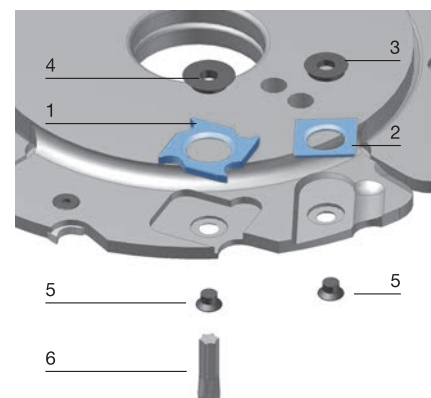
Each extension part increases the cutting widths by 3.6 mm.

**Spare knives:**

Part-no.	BEZ	ABM	QAL	VE	ID
		mm		PCS	
1	Turnblade knife	18x18x1,95	HW	10	<b>005114 ●</b>
2	Turnblade spur VS4	14x14x1,2	HW	10	<b>005130 ●</b>

**Spare parts:**

Part-no.	BEZ	ABM	ID
		mm	
3	Special nut for VS	9,9x1,60/M4	<b>005654 ●</b>
4	Special nut for WPL	11,9x2,2/M4	<b>005653 ●</b>
5	Countersink screw, Torx® 9	M4x0.5x3.2	<b>006057 ●</b>
6	Torx® key	Torx® 9	<b>005463 ●</b>
	Setting gauge for knives	0,3/0,8	<b>005374 ●</b>





### Grooving cutterhead set adjustable with spacers

#### Application:

For cutting different groove widths.

#### Machine:

Spindle moulders, moulders, edgbanding machines and stationary routers with/without CNC control, double-end tenoners.

#### Workpiece material:

Solid wood along grain and across grain; uncoated, coated and veneered wood derived materials.

#### Technical information:

Adjustment of cutting widths with spacers (adjustment range 0.1 mm). Multi part design.



#### Multi part; SB 8.0 - 30.0 mm

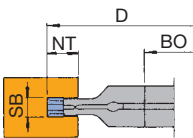
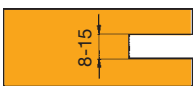
SW 501 1, SW 501 1 01

D mm	SB mm	BO mm	NT mm	Z	n min <sup>-1</sup>	ID
150	8,0 - 15,4	30	20	2/2	5200 - 10100	<b>128104 ●</b>
180	8,0 - 15,4	30	35	2/2	4300 - 8400	<b>128105 ●</b>
200	8,0 - 15,4	30	45	2/2	3900 - 7600	<b>128106 ●</b>
220	8,0 - 30,0	30	58	2/2	3500 - 6000	<b>024663 ●</b>

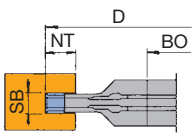
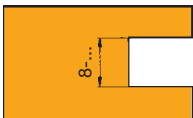
#### Extension part

SW 501 1, WW 200 1 NN

D mm	SB mm	BO mm	BO <sub>max</sub> mm	Z	n min <sup>-1</sup>	ID
150	7,7	30	50	2	5200 - 10100	<b>128134</b>
180	7,7	30	50	2	4300 - 8400	<b>128135 ●</b>
200	7,7	30	50	2	3900 - 7600	<b>128136 ●</b>
220	15	30	45	2	3500 - 6000	<b>024666 ●</b>



Grooving cutterhead set, 2 part design



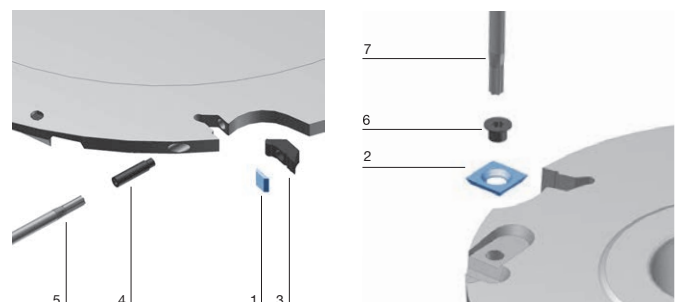
Grooving cutterhead set, multi part design

#### Spare knives:

Part-no.	BEZ	ABM mm	QAL	VE PCS	ID
1	Turnblade knife	7,7x8x1,5	HW-05	10	<b>005053 ●</b>
1	Turnblade knife	14,7x8x1,5	HW-05	10	<b>005056 ●</b>
2	Turnblade spur VS1	14x14x2	HW-F	10	<b>005099 ●</b>
2	Turnblade spur VS2	19x19x2	HW-F	10	<b>005115 ●</b>

#### Spare parts:

Part-no.	BEZ	ABM mm	ID
3	Clamping wedge	7x18,75x8,27	<b>009763 ●</b>
3	Clamping wedge	13x18,75x8,27	<b>630203 ●</b>
4	Allen screw with shank, Torx® 15	M5x20	<b>007380 ●</b>
4	Clamping screw w. disc, Torx® 20	M5x18,5	<b>007446 ●</b>
5	Torx® key	Torx® 15	<b>117507 ●</b>
5	Torx® key	Torx® 20	<b>117503 ●</b>
6	Countersink screw, Torx® 20	M6x0,5x4,9	<b>006243 ●</b>
5	Torx® key	Torx® 20	<b>117503 ●</b>
	Setting gauge for knives	0,3/0,8	<b>005374 ●</b>



## 4. Manual feed

### 4.1 Grooving

#### 4.1.2 Grooving cutterheads



### Grooving cutterhead - steplessly adjustable

#### Application:

For cutting different groove widths.

#### Machine:

Spindle moulders, moulders, edgbanding machines and double-end tenoners.

#### Workpiece material:

Solid wood; uncoated, coated and veneered wood derived materials.

#### Technical information:

Stepless adjustment of cutting width possible when installed on machine. 2 part design.



#### Mounted on sleeve; SB 4.0 - 15.0 mm

SW 502 1 01

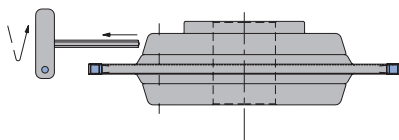
D	SB	BO	BO <sub>max</sub>	NT	Z	n	ID
mm	mm	mm	mm	mm		min <sup>-1</sup>	
180	4,0 - 7,5	30	35	40	2/2	4300 - 8400	<b>128154 ●</b>
180	8,0 - 15,0	30	35	40	2/2	4300 - 8400	<b>128155 ●</b>
180	4,0 - 7,8	40	50	35	2/2	4300 - 8400	<b>128156</b>
180	8,0 - 15,0	40	50	35	2/2	4300 - 8400	<b>128157</b>

#### Spare knives:

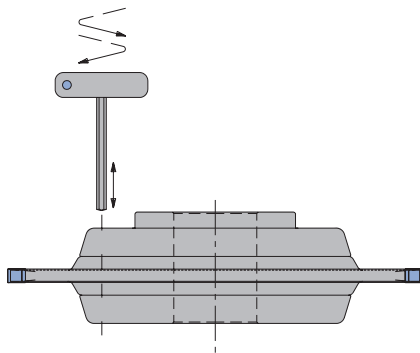
Part-no.	BEZ	ABM	QAL	VE	ID
		mm		PCS	
1	Turnblade knife	18x18x1,95	HW	10	<b>005114 ●</b>
2	Turnblade knife	7,7x8x1,5	HW-30F	10	<b>005068 ●</b>
3	Turnblade spur VS4	14x14x1,2	HW	10	<b>005130 ●</b>
4	Turnblade spur VS2	19x19x2	HW-F	10	<b>005115 ●</b>

#### Spare parts:

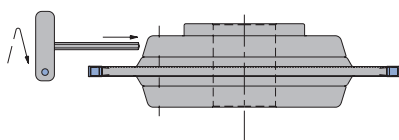
Part-no.	BEZ	ABM	ID
		mm	
5	Special nut for WPL	11,9x2,2/M4	<b>005653 ●</b>
6	Special nut for VS	9,9x1,60/M4	<b>005654 ●</b>
7	Countersink screw, Torx® 9	M4x0.5x3.2	<b>006057 ●</b>
8	Countersink screw, Torx® 20	M6x0.5x4.9	<b>006243 ●</b>
9	Allen screw with shank, Torx® 15	M5x20	<b>007380 ●</b>
10	Clamping wedge	7x18,75x8,27	<b>009763 ●</b>
11	Torx® key	Torx® 20	<b>117503 ●</b>
12	Torx® key	Torx® 9	<b>005463 ●</b>
13	Torx® key	Torx® 15	<b>117507 ●</b>
	Setting gauge for knives	0,3/0,8	<b>005374 ●</b>



Opening the clamping system

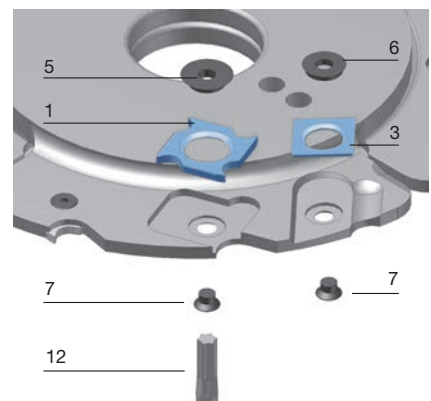
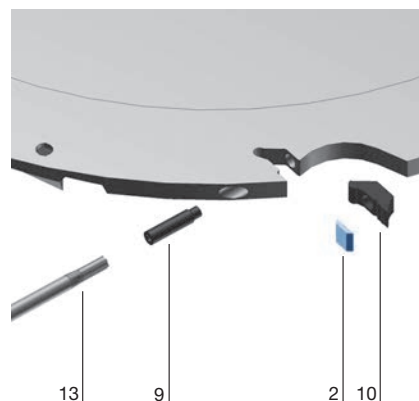


Adjustment: SB larger „+“,  
SB smaller „-“



Closing the clamping system

After the tool is mounted on the spindle it can be adjusted and clamped using a hexagon key



## 4. Manual feed

### 4.1 Grooving 4.1.3 Profile cutter



#### Profile cutter - pitch pockets

**Application:**

Optimized for milling pitch pockets.

**Machine:**

Portable machine Lamello Standard and Lamello Top.

**Workpiece material:**

Softwood and hardwood.

**Technical information:**

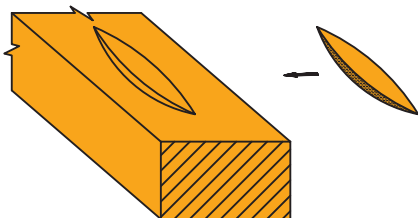
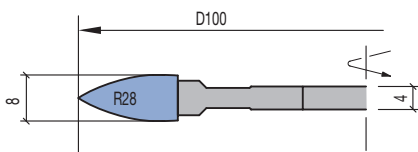
Two reciprocal cutting knives.

**Radii profile**

WF 502 1

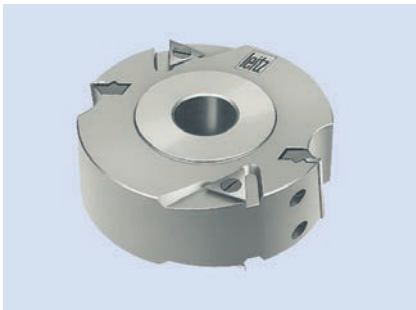
D	SB	BO	BEM	Z	ID
mm	mm	mm			
100	8	22	Size 1-3	1+1	<b>020126 ●</b>

**RPM:** n = 7700 - 13000 min<sup>-1</sup>



<b>Type of operation</b>	Rebate tools cut on the periphery and the side. The rebated edge is produced by spurs.
<b>Workpiece material</b>	Softwood and hardwood, glulam, chipboard and fibre materials, uncoated, veneered, plastic and paper coated. Plastics and foams.
<b>Machines</b>	Spindle moulders. Edgebanding machines; double-end tenoners. Four-sided moulders.
<b>Application</b>	Jointing and rebating against feed: all panel materials with or without coating. Jointing and rebating with feed: machining solid wood with heavily twisted fibres and risk of tear outs. Only for machines with mechanical feed. Note: Difficult chip removal. Jump cutting: jointing with or against feed across grain to avoid tear outs at the front and rear workpiece edges after edgebanding or lipping.

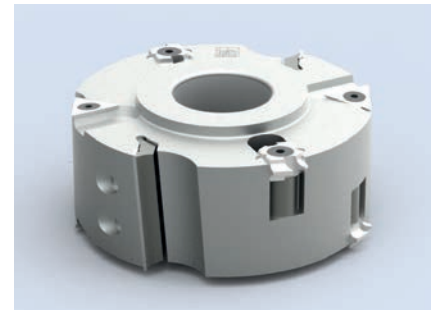
#### Tool design



Turnblade rebating cutterhead with alternate shear angle:  
Reduced feed and cutting forces achieve clean and tear out free rebating edges. Suitable for all coated and uncoated panel materials as well as solid wood.

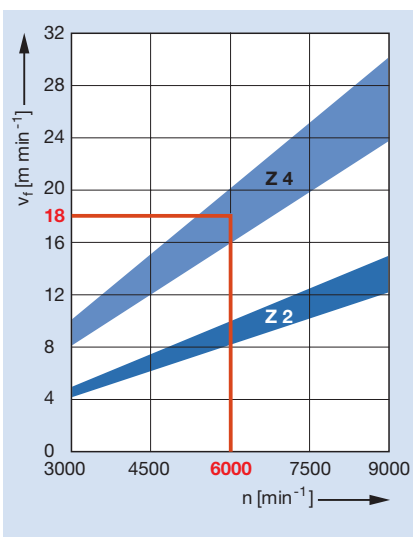


2 part tools with alternate shear angle:  
Can also be used as adjustable grooving tools.

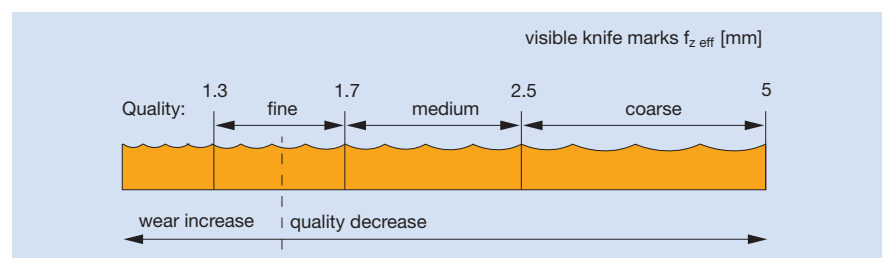


Turnblade rebating cutterhead with additional knives (edge knives):  
Multi-purpose tool for jointing, rebating and rounding/bevelling.

#### Feed speed depending on RPM and no. of teeth



#### Relation between surface quality and length of knife marks $f_{z\text{ eff}}$

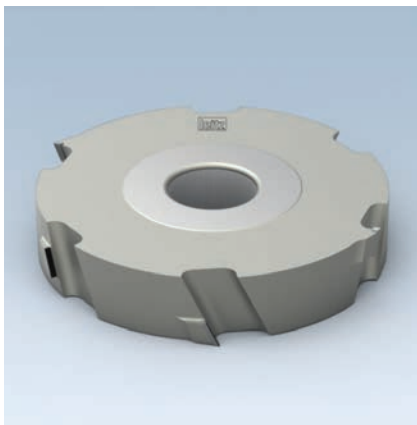


With multi blade tools, only the marks of one knife show on the surface (one knife finish).  
Z 2 and Z 4 tools produce the same surface quality with the same machine setting.  
High numbers of teeth are required for a high hogging performance.

## 4. Manual feed

## 4.2 Jointing, rebating and bevelling

### 4.2.1 Jointing and rebating cutters



### Jointing and rebating cutter Diamaster PRO

**Application:**

Optimized for rebating and jointing with and against feed (e.g. jump cutting). Manual feed only against feed.

**Machine:**

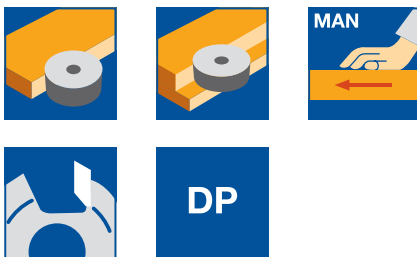
Spindle moulders and edgebanding machines, double-end tenoners.

**Workpiece material:**

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

**Technical information:**

Composite tool with alternate shear angle and main blades with pre-cutting function. Long performance times through polished cutting area. Diamaster PRO design for two resharpening cycles with standard wear. Double sided rebating possible. For larger cutting widths a stacking of various tools is possible. 3.5 mm tipping height. 1.5 mm resharpening area.

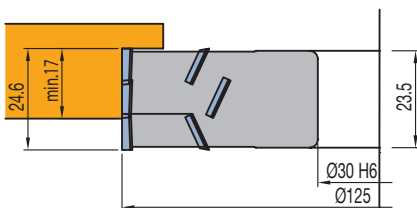


**Diamaster PRO**

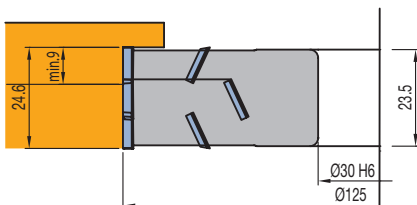
WF 400 1 DP

D	SB	BO	Z	ID
mm	mm	mm		
125	24,6	30	2/2/2	<b>090853 ●</b>
125	24,6	30	2/2/2	<b>090872 ●</b>

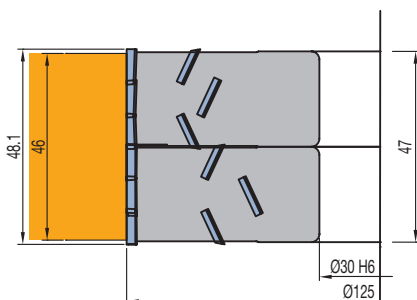
**RPM:** n = 6200 - 13600 min<sup>-1</sup>



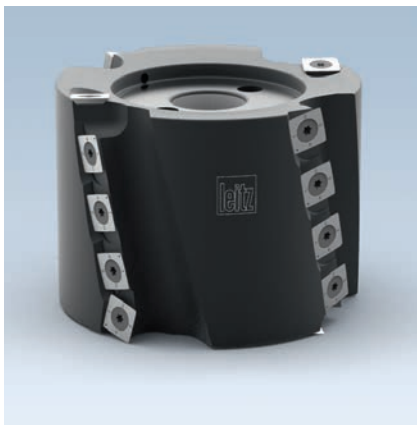
Jointing cutter ID **090853**  
Rebate height min. 17 mm



Jointing cutter ID **090872**  
Rebating height min. 9 mm



Set existing of ID **090853** and ID **090872**



### Copy shaping cutterhead - HeliCut 15

#### Application:

For pre-cutting, jointing and copy shaping of large cutting depths. For copy shaping of curved workpieces with template, ball bearing and guide ring.

#### Machine:

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

#### Workpiece material:

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

#### Technical information:

Noise reduced design with staggered edges and very deep gullets for improved chip removal. Tungsten carbide cutting edges with Microfinish for perfect surface quality. Rebate tools cut on the periphery and the side.



#### Cutterhead for copy shaping, grooving and rebating

WW 230 1 07

D	SB	BO	Z	V	QAL	AM	ID
mm	mm	mm				PCS	
60	81,5	20	2	2	HW-MF	16	132600 ●
80	81,5	30	2	2	HW-MF	16	132608 ●
125	93,7	30	2	2+2	HW-MF	20	132604 ●
125	116,6	30	2	2+2	HW-MF	24	132605 ●

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

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

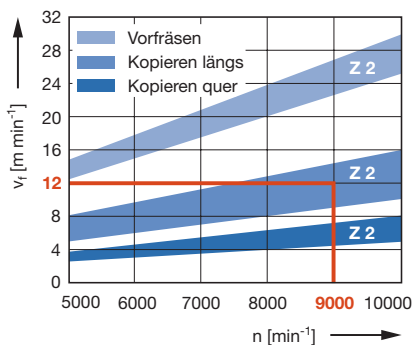
D 125 mm:  $n_{max} = 12000 \text{ min}^{-1}$

#### Spare knives:

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

#### Spare parts:

BEZ	ABM	for D	ID
	mm	mm	
Countersink screw, Torx® 20	M5x12	60	007898 ●
Countersink screw, Torx® 20	M5x14.2-8.8	80	007394 ●
Countersink screw, Torx® 20	M5x18	125	114030 ●
Torx® key	Torx® 20		006091 ●



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

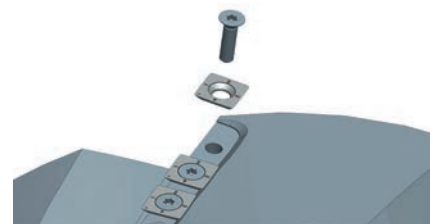
**Example for tool diameter 125 mm:**

$n = 9000 \text{ min}^{-1}$

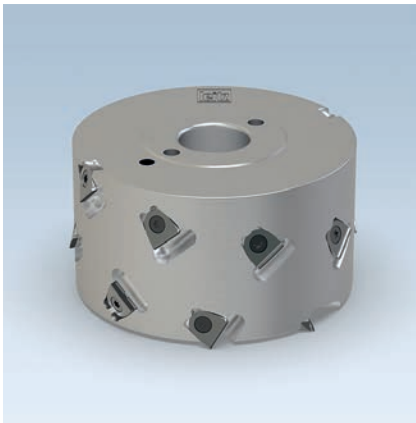
$Z 2$

Application: copy shaping along the grain

$v_f = 12 \text{ m min}^{-1}$







### Jointing and rebating cutterhead WhisperCut EdgeExpert

**Application:**

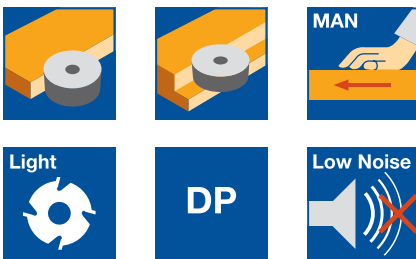
Optimized for noise reduced rebating and jointing particularly for sensitive decorative papers, foil coatings and veneers.

**Machine:**

Spindle moulders and edgebanding machines.

**Workpiece material:**

Chip and fibre boards (MDF etc.) raw, veneered, painted and coated; especially for plastic, paper, HPL and anti-fingerprint coatings. Also suitable for surfaces in mat, high gloss or with relief structures.



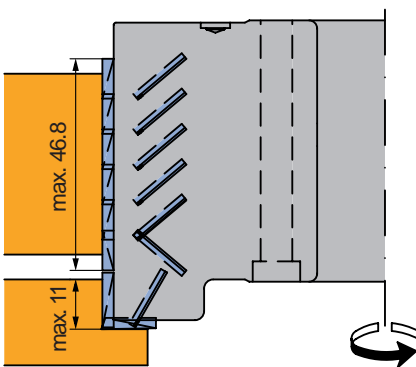
**Technical information:**

DP tipped cutterhead with alternate shear angle for tear-free jointing edges and cutting surface. With rebating knife for tear-free rebating edges (up to 11 mm rebating width). Increased shear angle for excellent edge quality on sensitive decorative papers, foil coatings and veneers. Noise reduced design with up to 5 dB(A) noise reduction. Significant weight reduction by using an aluminium alloy tool body. Carrier body for multiple use with exchangeable knives. 0.6 mm resharpening area.

**Diamaster WhisperCut EdgeExpert - LowNoise, aluminium alloy tool body**

WM 430 2 01

D	SB	BO	$n_{\max}$	Z	DRI	ID
mm	mm	mm	$\text{min}^{-1}$			
125	59,8	30	13700	2/2	RH	<b>192309 ●</b>



Diamaster WhisperCut EdgeExpert jointing and rebating cutterhead



### Rebating cutterhead WhisperCut PRO

**Application:**

Optimized for noise reduced rebating of abrasive materials.

**Machine:**

Spindle moulders.

**Workpiece material:**

Abrasive materials, chip and fibre board (MDF etc.) uncoated, veneered, plastic and paper coated, fibre reinforced plastics (GFRP, CFRP etc.).

**Technical information:**

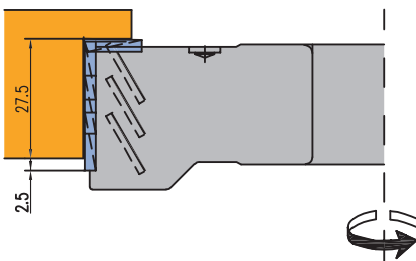
DP tipped rebating cutterhead for tear-free edges on sensitive decorative papers, foil coatings and veneers. Noise reduced design with up to 5 dB(A) noise reduction. Significant weight reduction by using an aluminium alloy tool body. Carrier body for multiple use with exchangeable knives. 0.6 mm sharpening area.



**Diamaster WhisperCut PRO - LowNoise, aluminium alloy tool body**

WM 430 1 01

D mm	SB mm	BO mm	$n_{max}$ $min^{-1}$	Z	V	DRI	ID
125	27,5	30	13700	2	2	RH	<b>192355 ●</b>



## 4. Manual feed

## 4.2 Jointing, rebating and bevelling

### 4.2.3 Rebating cutterheads



#### Rebating cutterhead

##### Application:

For jointing, rebating and grooving.

##### Machine:

Spindle moulders (running against feed), double-end tenoners, edgbanding machines etc. (running with feed or against feed e.g. jump cutting). Stationary routers with/without CNC control.

##### Workpiece material:

Softwood and hardwood, glulam, plastics etc.

##### Technical information:

Cutterhead with alternate shear angle and triangular spurs.



#### Turnblade rebating cutterhead

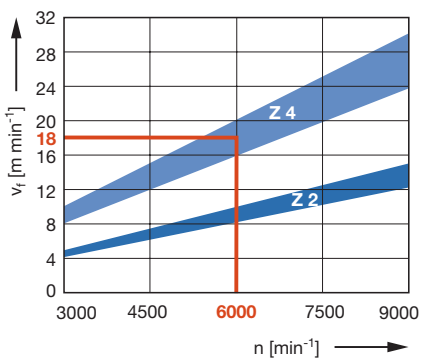
WW 420 1, WW 420 1 02

D	SB	BO	BO <sub>max</sub>	Z	V	n <sub>max</sub>	ID
mm	mm	mm	mm			min <sup>-1</sup>	
85	51	30	40	2	4	20200	125704
100	51	30	40	2	4	17100	125705
125	41	30	40	2	4	13700	125706 ●
125	51	30	50	2	4	13800	125707 ●
125	51	40	50	2	4	13800	125708 □
125	51	50	50	2	4	13800	125709 □
125	81	30	50	2	4	13700	125710 ●
150	51	30	40	2	4	11400	125711 ●
150	61	30	50	4	4	11400	125712 ●

#### Spare knives:

Part-no.	BEZ	ABM	QAL	VE	ID
		mm		PCS	
1	Turnblade knife Marathon	40x8x1,5	HW-30F MC	10	601608 ●
1	Turnblade knife Marathon	50x8x1,5	HW-30F MC	10	601610 ●
1	Turnblade knife Marathon	60x8x1,5	HW-30F MC	10	601611 ●
1	Turnblade knife Marathon	80x8x1,5	HW-30F MC	10	601613 ●
2	Turnblade spur VS2	19x19x2	HW-F	10	005115 ●

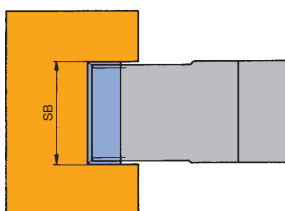
Alternative turnblade knife qualities see section Knives and Spare Parts



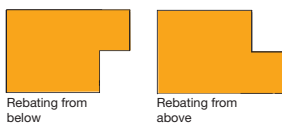
**Feed speed  $v_f$  depending on the number of teeth  $Z$  and speed  $n$  for solid wood along grain**

##### Example:

$n = 6000 \text{ min}^{-1}$ ,  $Z 4$ :  $v_f = 18 \text{ m min}^{-1}$



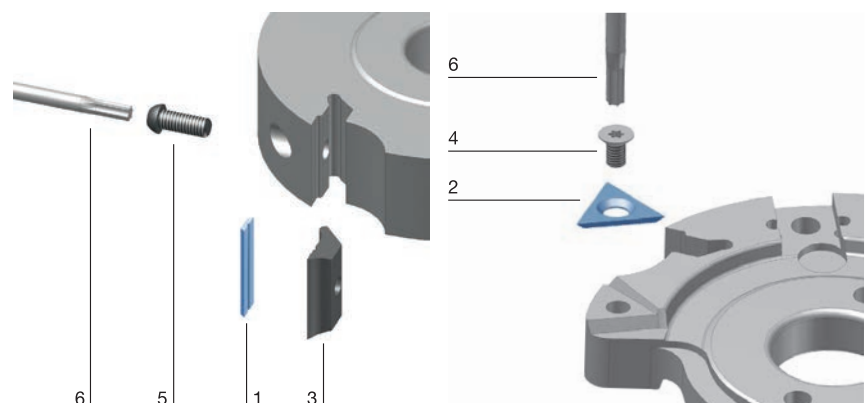
Tool set



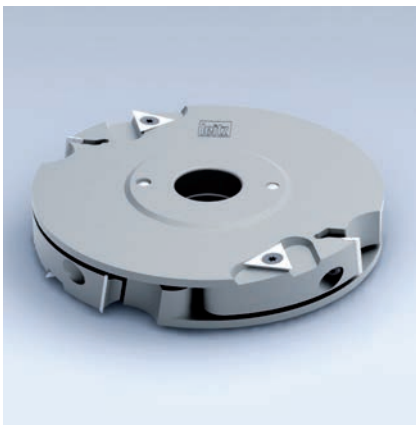
Grooving

#### Spare parts:

Part-no.	BEZ	ABM	ID
		mm	
3	Clamping wedge	38x18,75x8,27	630209 ●
3	Clamping wedge	48x18,75x8,27	630211 ●
3	Clamping wedge	58x18,75x8,27	630212 ●
3	Clamping wedge	78x18,75x8,27	630214 ●
4	Countersink screw, Torx® 20	M5x8.5	007808 ●
5	Clamping screw w. disc, Torx® 20	M5x18.5	007446 ●
6	Torx® key	Torx® 20	117503 ●
	Setting gauge for knives	0,3/0,8	005374 ●



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



### Rebating cutterset, 2 part design

**Application:**

For jointing, rebating and grooving.

**Machine:**

Spindle moulders (running against feed), double-end tenoners and edgebanding machines etc. (running with feed or against feed).

**Workpiece material:**

Softwood and hardwood, glulam, plastics etc.

**Technical information:**

2 part with spacers adjustable tool set with alternate shear angle and triangular spurs.



**SB 26.4 - 98 mm**

SW 531 1 01

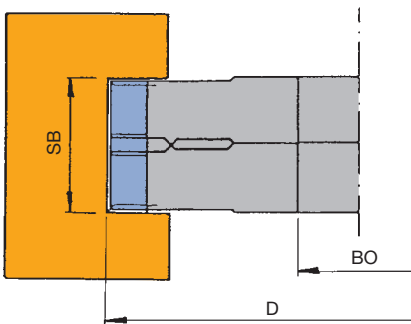
D	SB	VSB	BO	BO <sub>max</sub>	Z	V	n	ID
mm	mm		mm	mm			min <sup>-1</sup>	
160	20	26,4 - 38	30	45	4	4	4900 - 9500	<b>126204</b> ●
160	20	26,4 - 38	50	50	4	4	4900 - 9500	<b>126205</b> □
160	50	56,4 - 98	40	45	4	4	4900 - 9500	<b>126206</b>

**Spare knives:**

Part-no.	BEZ	ABM	QAL	VE	ID
		mm		PCS	
1	Turnblade knife Marathon	19,7x8x1,5	HW-30F MC	10	<b>601604</b> ●
1	Turnblade knife Marathon	50x8x1,5	HW-30F MC	10	<b>601610</b> ●
1	Turnblade knife Marathon	30x8x1,5	HW-30F MC	10	<b>601606</b> ●
2	Turnblade spur VS2	19x19x2	HW-F	10	<b>005115</b> ●

**Spare parts:**

Part-no.	BEZ	ABM	ID
		mm	
3	Clamping wedge	18x18,75x8,27	<b>630204</b> ●
3	Clamping wedge	48x18,75x8,27	<b>630211</b> ●
3	Clamping wedge	28x18,75x8,27	<b>630206</b> ●
4	Countersink screw, Torx® 20	M6x0.5x4.9	<b>006243</b> ●
5	Clamping screw w. disc, Torx® 20	M5x18,5	<b>007446</b> ●
6	Torx® key	Torx® 20	<b>117503</b> ●
	Setting gauge for knives	0,3/0,8	<b>005374</b> ●



Tool set



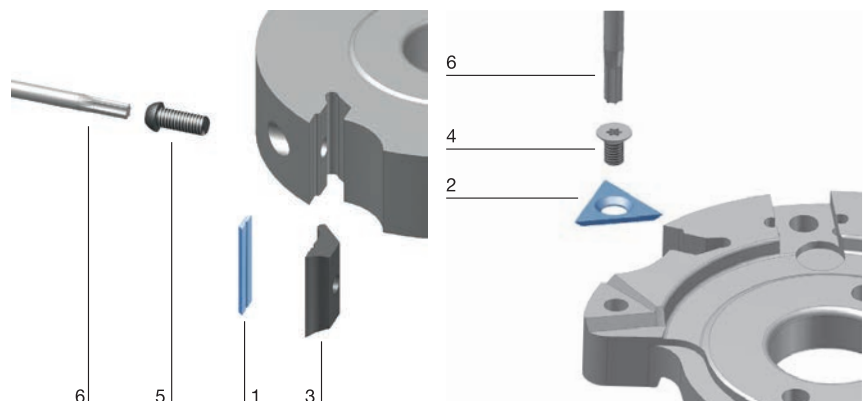
Rebating from below



Rebating from above



Grooving





### Jointing and rebating cutterhead

#### Application:

For rebating and jointing, rounding and profiling at the same time.

#### Machine:

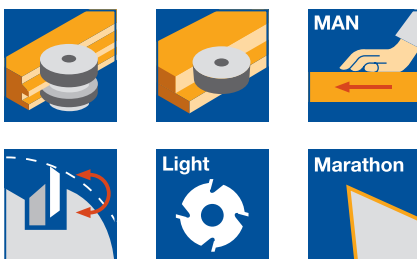
Spindle moulders and moulders, double-end tenoners. Stationary routers with/without CNC control.

#### Workpiece material:

Softwood and hardwood, glulam, plastics etc.

#### Technical information:

Cutterhead with turnblade knives. With alternate shear angle, triangle spurs and seating to adapt edging knives.



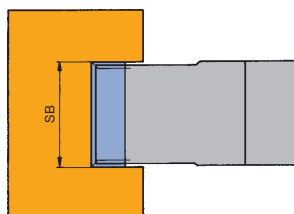
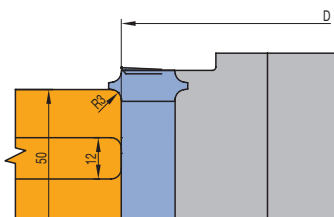
#### Cutterhead with seatings for edging knives

WW 420 1 01

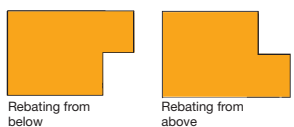
D	SB	BO	Z	KM	n	QAL	ID
mm	mm	mm		PCS	min <sup>-1</sup>		
125	51	30	2	4	6200 - 10600	MC	<b>125683</b> ●
125	101	30	2	4	6200 - 10600	MC	<b>125684</b> ●
170	51	30	2	4	4500 - 7800	MC	<b>125685</b> ●

#### Spare knives:

Part-no.	BEZ	ABM	R	FAW	QAL	VE	ID
		mm	mm	°		PCS	
1	Turnblade knife Marathon	50x8x1,5			HW-30F MC	10	<b>601610</b> ●
2	Turnblade spur VS2	19x19x2			HW-F	10	<b>005115</b> ●
3	Edging knife 45°	KM 21/0		45	HW-F		<b>008292</b> ●
3	Edging knife R1.5	KM 22/4	1,5		HW-F		<b>008295</b> ●
3	Edging knife R2	KM 22/3	2		HW-F		<b>008309</b> ●
3	Edging knife R3	KM 22/0	3		HW-F		<b>008293</b> ●
3	Edging knife R5	KM 24/0	5		HW-F		<b>008305</b> ●
3	Edging knife R5	KM 24/1	5		HW-F		<b>008306</b> ●

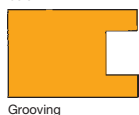


Tool set

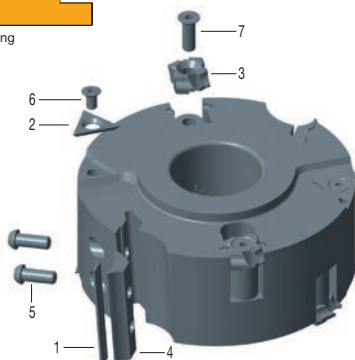


Rebating from below

Rebating from above



Grooving



#### Spare parts:

Part-no.	BEZ	ABM	ID
		mm	
4	Clamping wedge	48x18,75x8,27	<b>630211</b> ●
5	Clamping screw w. disc, Torx® 20	M5x18,5	<b>007446</b> ●
6	Countersink screw, Torx® 20	M5x8,5	<b>007808</b> ●
7	Countersink screw, Torx® 20	M6x30	<b>006089</b> ●
	Torx® key	Torx® 20	<b>117503</b> ●
	Setting gauge for knives	43x12x6	<b>005350</b> ●
	Spacer	13/6,1x0,1	<b>028034</b> ●
	Spacer	13/6,1x0,3	<b>028035</b> ●
	Spacer	13/6,1x0,5	<b>028036</b> ●
	Spacer	13/6,1x1	<b>028037</b> ●
	Spacer	13/6,1x3	<b>028040</b> ●
	Spacer	13/6,1x5	<b>028042</b> ●

#### Edging knife set: 2 edging knives each + countersunk screw + set of spacers

TE 540 0

BEZ	FAW	R	QAL	ID
	°	mm		
Edge cutterset	45°		HW	<b>009091</b> ●
Edge cutterset		1,5	HW	<b>009092</b> ●
Edge cutterset		3	HW	<b>009093</b> ●
Edge cutterset		5	HW	<b>009097</b> ●
Edge cutterset		5	HW	<b>009098</b> ●

● available ex stock

□ available at short notice

Instruction manual visit [www.leitz.org](http://www.leitz.org)



### Rebate cutterset UniCut

**Application:**

For rebating, jointing, grooving, bevelling and rounding.

**Machine:**

Spindle moulders, moulders etc.

**Workpiece material:**

Softwood and hardwood, glulam, plastics etc.

**Technical information:**

2 part with spacers adjustable tool set for multi-purpose application.

**With seatings for edging knives and turnblade grooving knives; SB 30 - 60 mm  
AW 330 1 01**



Tool no.	D mm	SB mm	BO mm	BO <sub>max</sub> mm	Z	V	n min <sup>-1</sup>	ID
1 + 2	160	30 - 60	30	50	2/2	2/2	4900 - 8300	<b>126207 ●</b>
1 + 2	160	30 - 60	40		2/2	2/2	4900 - 8300	<b>126208 □</b>



Tool complete with edge rounding knife R 2.

Additionally:

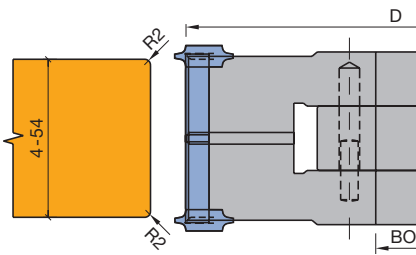
2 grooving knives SB 4 mm with countersunk screws

1 set of spacers D 70 mm for adjusting the tool parts

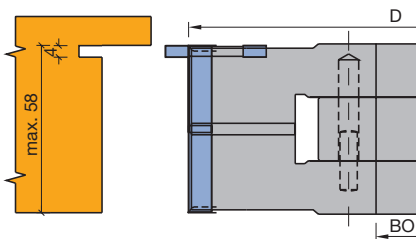
1 set of spacers D 13.70 mm to adjust the edging/grooving knives

1 setting gauge 0.3/0.8 mm

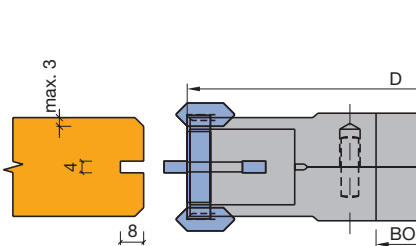
Tool set in wooden box, BO 30.



Jointing, rounding



Rebating and seal groove



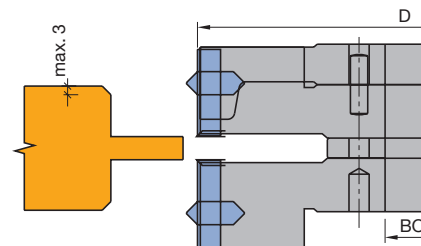
Groove and chamfers

**Spare knives:**

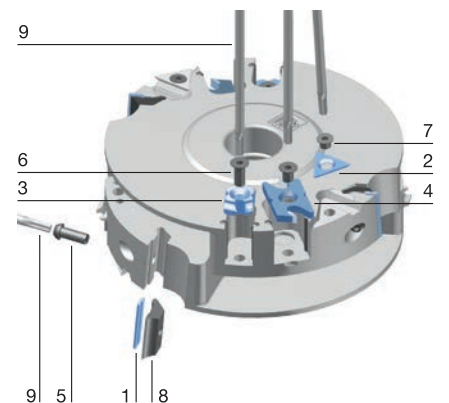
Part-no.	BEZ	ABM mm	QAL	VE PCS	ID
1	Turnblade knife Marathon	30x8x1,5	HW-30F MC	10	<b>601606 ●</b>
2	Turnblade spur VS2	19x19x2	HW-F	10	<b>005115 ●</b>
3	Edging knife 45°	KM 21/0	HW-F		<b>008292 ●</b>
3	Edging knife R2	KM 22/3	HW-F		<b>008309 ●</b>
4	Turnblade grooving knife NB4	36x20x4	HW-F		<b>008323 ●</b>

**Spare parts:**

Part-no.	BEZ	ABM mm	ID
5	Clamping screw w. disc, Torx® 20	M5x18.5	<b>007446 ●</b>
6	Countersink screw, Torx® 20	M6x30	<b>006089 ●</b>
7	Countersink screw, Torx® 20	M6x0.5x4.9	<b>006243 ●</b>
8	Clamping wedge	28x18.75x8.27	<b>630206 ●</b>
9	Torx® key	Torx® 20	<b>117503 ●</b>
	Setting gauge for knives	0,3/0,8	<b>005374 ●</b>



Tongue profile





### Bevel cutterhead turnblade, swivelling

**Application:**

For jointing and bevelling with adjustable bevel angle.

**Machine:**

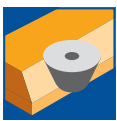
Spindle moulders, moulders, edgbanding machines, double-end tenoners and special machines.

**Workpiece material:**

Softwood and hardwood, laminated veneer lumber, plastomers, limited suitable for MDF and chipboard (uncoated or coated).

**Technical information:**

Knife holder swivelling adjustable from 0 - 90°. Quick and easy angle adjustment of common angles (15°, 30°, 45°, 60°) by additional locking positions in 15° steps. Free of marks cutting result due to 1-part, continuous cutting edge. Economical due to changeable tungsten carbide turnblades with two cutting edges. Optimized gullet design for improved chip removal.



**Turnblade, adjustable bevel angle**

WW 430 1 05

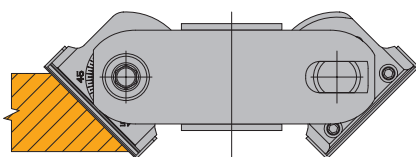
D	SB	BO	BO <sub>max</sub>	Swivel range	n	Z	ID
mm	mm	mm	mm	°	min <sup>-1</sup>		
150	50	30	40	0 - 90	5000 - 9000	2	024169 ●
150	50	31,75	40	0 - 90	5000 - 9000	2	024170 □
150	50	40	40	0 - 90	5000 - 9000	2	024171 □
170	50	50	60	0 - 90	5000 - 9000	2	024172 □

**Spare knives:**

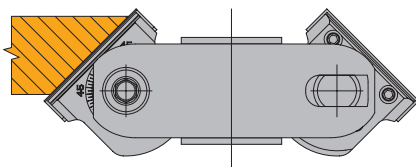
Part-no.	BEZ	ABM	QAL	VE	ID
		mm		PCS	
1	Turnblade knife	50x12x1,5	HW-05F	10	005086 ●

**Spare parts:**

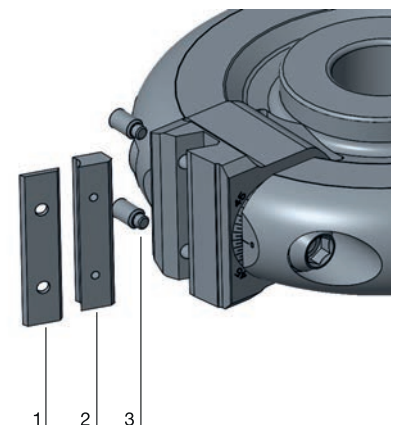
Part-no.	BEZ	ABM	ID
		mm	
2	Clamping wedge with pin	48x10,88x6	009766 ●
3	Allen screw	M6x12	006035
	Allen key	SW 3	005433 ●
	Allen key	SW 8, L 100	005437 ●
	Setting gauge for knives	43x12x6	005350 ●



Bevelling from above



Bevelling from below







**Bevel cutterhead HeliCut, swivelling**

**Application:**

For jointing and bevelling with adjustable bevel angle.

**Machine:**

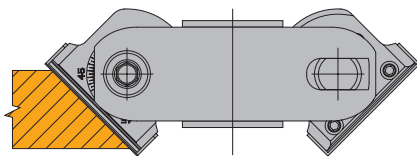
Spindle moulders, moulders, edgebanding machines and double-end tenoners.

**Workpiece material:**

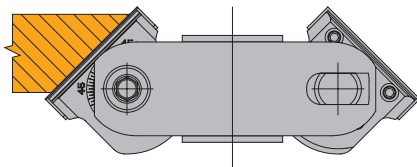
Softwood and hardwood, laminated veneer lumber, plastomers, technical foams (XPS, PU), limited suitable for MDF and chipboard (uncoated or coated).

**Technical information:**

Knife holder can be swivelled steplessly on both sides from 0 - 65°. Quick and easy adjustment of conventional angles (15°, 30°, 45°, 60°) due to additional locking positions in 15° steps. Design with divided cutting edges and optimized gullet areas for low-noise working with low cutting pressure even at high cutting performance. Workpiece edges free of tear-out on both sides even in critical materials due to alternating tool angle. Cutting edges with particularly precise geometry and polishing for long tool life and machining of „soft“ materials. Economical due to partially exchangeable solid carbide blades with 4 cutting chamfers.



Bevelling from above



Bevelling from below

**HeliCut, adjustable bevel angle**

WW 430 1 05

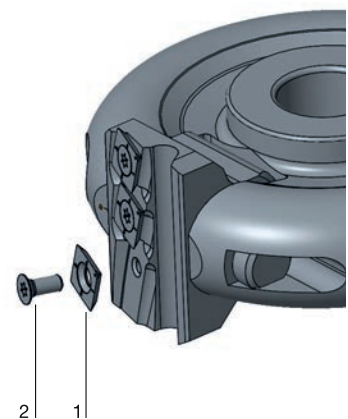
D	SB	BO	BO <sub>max</sub>	Swivel range	n	Z	ID
mm	mm	mm	mm	°	min <sup>-1</sup>		
150	55	30	40	0 - 65	5000 - 9000	1/1	<b>024290</b> ●
150	55	31,75	40	0 - 65	5000 - 9000	1/1	<b>024262</b> □
150	55	40	40	0 - 65	5000 - 9000	1/1	<b>024264</b> □
170	55	50	60	0 - 65	5000 - 9000	1/1	<b>024273</b> □

**Spare knives:**

Part-no.	BEZ	ABM	ID
		mm	
1	Turnblade knife	15x15x2,5	<b>009543</b> ●

**Spare parts:**

Part-no.	BEZ	ABM	ID
		mm	
2	Countersink screw, Torx® 20	M5x12	<b>007898</b> ●
	Torx® key	Torx® 20	<b>006091</b> ●
	Allen key	SW 8, L 100	<b>005437</b> ●







#### Bevel cutterhead WhisperCut, swivelling

**Application:**

For jointing and bevelling with adjustable bevel angle.

**Machine:**

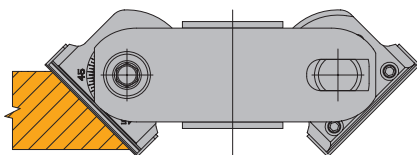
Spindle moulders, moulders, edgbanding machines and double-end tenoners.

**Workpiece material:**

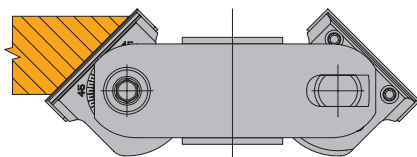
Hardwood, chip and fibre board (chipboard, MDF, HDF etc.), plastic coated, veneered etc., laminated veneer lumber (plywood, multiplex plywood etc.), solid surface material (e.g. Corian®, Varicor® etc.), fibre reinforced plastics (e.g. GRP, CFRP).

**Technical information:**

Knife holder swivelling adjustable from 0 - 65°. Quick and easy angle adjustment of common angles (15°, 30°, 45°, 60°) by additional locking positions in 15° steps. Workpiece edges tear-free on both sides due to alternatinv shear angles. Economical due to partial change of diamond cutting edges. Noise reduced design with optimized gullet design for improved chip removal.



Bevelling from above



Bevelling from below

**WhisperCut, adjustable bevel angle**

WW 430 1 05

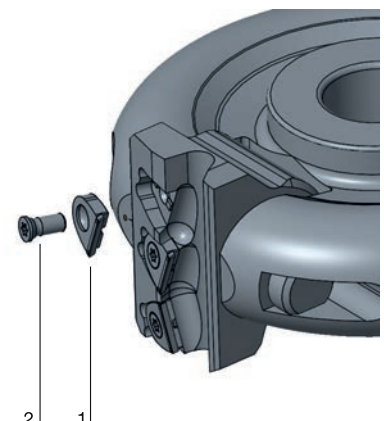
D	SB	BO	BO <sub>max</sub>	Swivel range	n	Z	ID
mm	mm	mm	mm	°	min <sup>-1</sup>		
150	55	30	40	0 - 65	5000 - 9000	1/1	<b>024291</b> ●
150	55	31,75	40	0 - 65	5000 - 9000	1/1	<b>024263</b> □
150	55	40	40	0 - 65	5000 - 9000	1/1	<b>024265</b> □
170	55	50	60	0 - 65	5000 - 9000	1/1	<b>024274</b> □

**Spare knives:**

Part-no.	BEZ	ABM	ID
1	WhisperCut-knife SB14	mm 14x14.2x4.3	<b>091074</b> ●

**Spare parts:**

Part-no.	BEZ	ABM	ID
2	Countersink screw, Torx® 20/59°	mm M5x11.5	<b>007899</b> ●
	Torx® key	Torx® 20	<b>006091</b> ●
	Allen key	SW 8, L 100	<b>005437</b> ●



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**Types of operation** The tools in the following section are suitable for producing glue joints, divided into glue joints (along the grain) and mitre joints.

---

#### Glue joints along grain

Glue joint profiles for length grain glue joints have a low profile depth to minimise the material loss at each glue joint. Glue joint profiles do not increase the stability of the glue joint. The profile is used to position the wood precisely, so it does not slip during pressing. Length grain glue joint profiles are not self-locking. The workpieces must remain pressed together until the glue has hardened completely. Profile tools for glue joints along the grain are not suitable for mitre joints.

---

**Workpiece material** Softwood and hardwood.

---

**Machine** Spindle moulders with or without power feed.  
Four-sided moulders.  
Double-end tenoners.

---

**Application** Against the feed, always along the grain.

---

#### Mitre joint

Solid wood and wood-derived materials cannot be glued on the end faces side without glue joint profiles. Compared to glue joints along the grain, mitre glue joint profiles increase the stability of the joint. These profiles have a greater profile depth, generally 10 mm. Mitre joint profiles must have a straight edge area to create a defined straight joint in the visible area. The profiles are slightly self-locking. This means the workpieces need to be pressed together briefly and can only be machined after the glue has hardened. Mitre joints are typically used to produce segments for arched windows or profiled mouldings.

---

**Workpiece material** Softwood and hardwood.

---

**Machine** Spindle moulders with clamping device and sliding table.  
Double-end tenoners.  
Window machines.  
Stationary routers with or without CNC control.

---

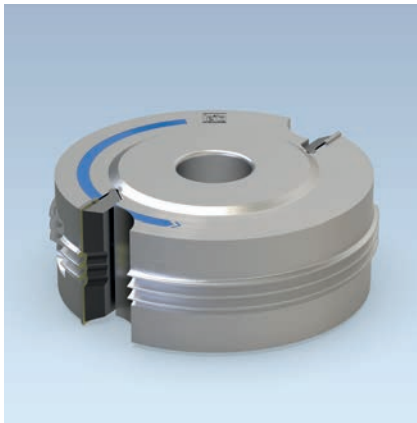
**Application** Against feed, across or along the grain.

---

## 4. Manual feed

### 4.3 Longitudinal, width and mitre joints

#### 4.3.1 Glue joint cutterheads



#### Profile cutterhead ProfilCut Q for glue joint profiles

##### Application:

To cut glue joint profiles with high fit accuracy. Profile P2-4 for processing with the grain for precise positioning of the wood to be glued. Profile 1 is especially suitable for mitre joint profile/longitudinal glue joint profile and for frames.

##### Machine:

Spindle moulders and moulders.

##### Workpiece material:

Softwood and hardwood.

##### Technical information:

Finger profile in rounded design (softline). Effective wood use through small profile depth.



##### MAN feed

WE 600 1 53

P	D	SB	BO	BO <sub>max</sub>	Z	n	ID
	mm	mm	mm	mm		min <sup>-1</sup>	
1	135	30	30	50	2	5700 - 9900	125554 ●
2	135	50	30	50	2	5700 - 9900	125555 ●
3	135	60	30	50	2	5700 - 9900	125556 ●
3	135	60	50		2	5700 - 9900	125557 □
4	135	80	30	50	2	5700 - 9900	125558 ●

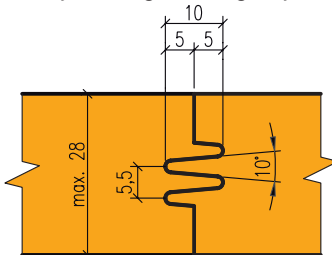
##### Spare knives:

Part-no.	BEZ	ABM	QAL	ID
		mm		
1	ProfilCut Q knife	30x16x2	MC	619237 ●
1	ProfilCut Q knife	50x16x2	MC	619234 ●
1	ProfilCut Q knife	60x16x2	MC	619235 ●
1	ProfilCut Q knife	80x16x2	MC	619236 ●

##### Spare parts:

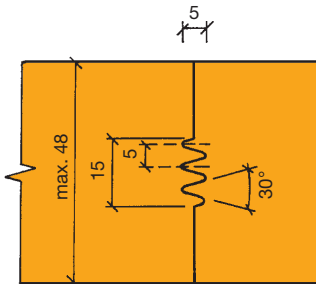
Part-no.	BEZ	ABM	ID
		mm	
2	Clamping wedge profiled	48x23,73x8,27	630147
2	Clamping wedge profiled	58x23,73x8,27	630148
2	Clamping wedge profiled	78x23,73x8,27	630149
2	Clamping wedge profiled	28x23,73x8,27	630150
3	Clamping screw w. disc, Torx® 20	M5x18,5	007446 ●
4	Torx® key	Torx® 20	117503 ●

Mitre joint/longitudinal glue joint profile

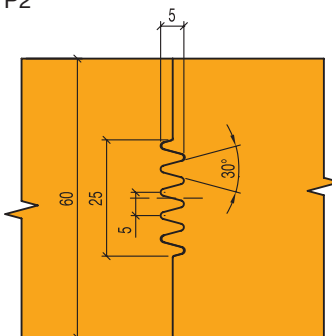


P1

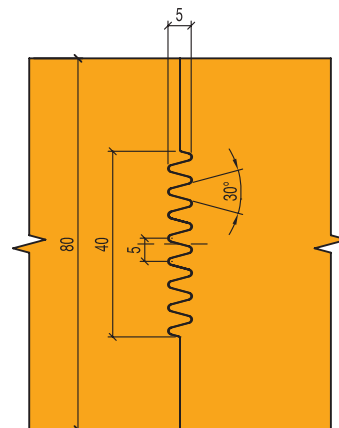
Width glue joint profile



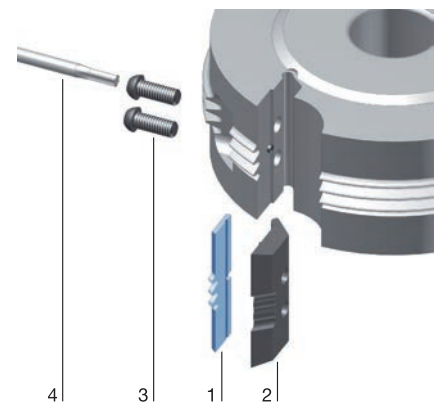
P2



P3



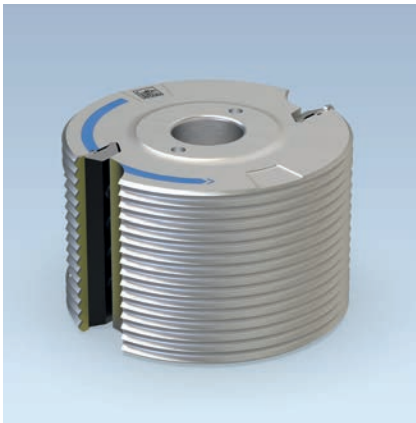
P4



## 4. Manual feed

### 4.3 Longitudinal, width and mitre joints

#### 4.3.1 Glue joint cutterheads



#### Profile cutterhead ProfilCut Q for glue joint profiles

**Application:**

To cut glue joint profiles in fibre direction with high fit accuracy.

**Machine:**

Spindle moulders and moulders.

**Workpiece material:**

Softwood and hardwood.

**Technical information:**

Finger profile in rounded design (softline). Effective wood use through small profile depth.



**Profile cutterhead set**

SE 600 1 53

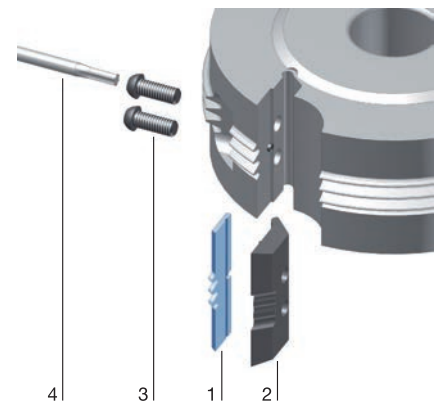
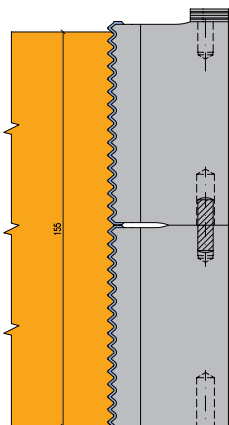
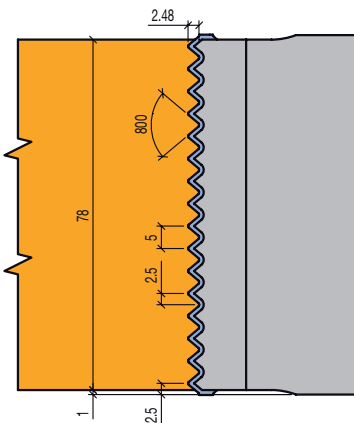
D	SB	BO	Z	ID
mm	mm	mm		
125	78	30	2	126209 ●
125	78	50	2	126210 ●

**Spare knives:**

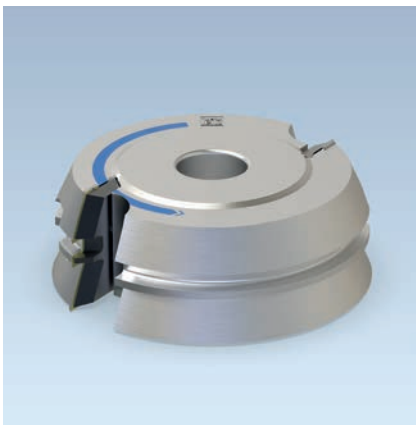
Part-no.	BEZ	ABM	QAL	ID
		mm		
1	ProfilCut Q knife	80.2x14x2.4	MC	619523

**Spare parts:**

Part-no.	BEZ	ABM	ID
		mm	
2	Clamping wedge profiled	77x20x8.27	630027
3	Clamping screw w. disc, Torx® 20	M5x18.5	007446 ●
4	Torx® key	Torx® 20	117503 ●



Tool stackable



### Profile cutterhead ProfilCut Q for glue joints along the grain and mitre joints

**Application:**

For glue joint profiles along grain with precise positioning. Exact positioning of the wood to be glued together and for producing corner joints.

**Machine:**

Spindle moulders and moulders.

**Workpiece material:**

Softwood and hardwood, veneered panel materials.

**Technical information:**

Wood thickness 15 to 48 mm; basic clearance 0.3 mm, side clearance 0.1 mm. Economic wood use due to small profile depth.



**Profile depth 6.4 mm**

WE 600 1 53

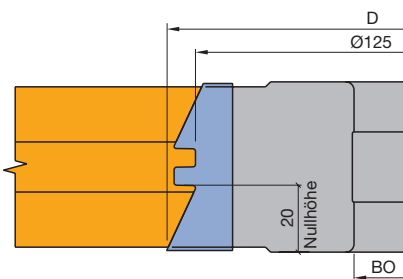
D	SB	BO	BO <sub>max</sub>	Z	n	ID
mm	mm	mm	mm		min <sup>-1</sup>	
142	50	30	50	2	5500 - 9400	<b>125559</b>

**Spare knives:**

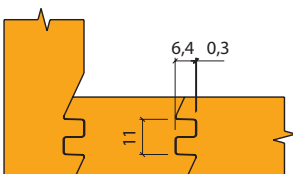
Part-no.	BEZ	ABM	QAL	ID
		mm		
1	ProfilCut Q knife	50x22x2	MC	<b>619238</b>

**Spare parts:**

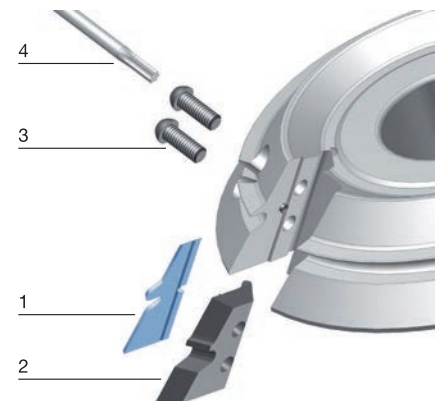
Part-no.	BEZ	ABM	ID
		mm	
2	Clamping wedge profiled	47x30x8,27	<b>630152</b>
3	Clamping screw w. disc, Torx® 20	M5x18.5	<b>007446 ●</b>
4	Torx® key	Torx® 20	<b>117503 ●</b>



Adjustment scheme



Profile example





### Profile cutterhead ProfilCut Q for glue joints along the grain and mitre joints

#### Application:

For 45° glue joint profiles along grain with precise positioning. Exact positioning of the wood to be glued together and for producing corner joints.

#### Machine:

Spindle moulders and moulders.

#### Workpiece material:

Softwood and hardwood, veneered panel materials.

#### Technical information:

Not suitable for melamine or paper coated panel materials.



#### Profile cutterhead ProfilCut Q 45°

WE 610 1 53

D	SB	HD	BO	Z	BO <sub>max</sub>	n	ID
mm	mm	mm	mm		mm	min <sup>-1</sup>	
175	40	28	30	2	50	4400 - 7600	<b>125560</b> ●
175	40	28	50	2	50	4400 - 7600	<b>125561</b> □

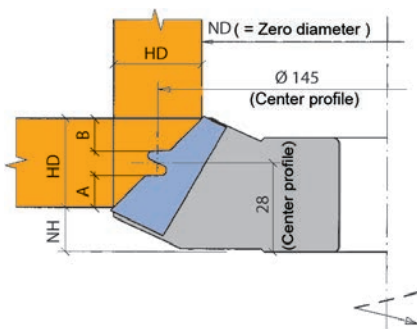
#### Profile adjustment

Height adjustment by profiling the workpiece flat on the table and vertical against the fence:

Profile height: PH 8.00 mm

Correct adjustment, if dimension A is the same as dimension B.

Formula:  $A(B) = (HD - PH) / 2$



$$0\text{-height (NH)} = 28 - \frac{\text{wood thickness (HD)}}{2}$$

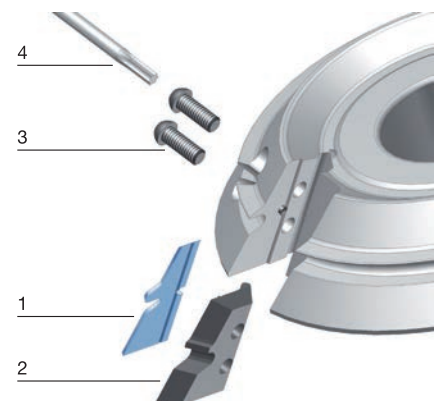
$$0\text{-diameter (ND)} = \text{Ø } 145 - \text{wood thickness (HD)}$$

#### Spare knives:

Part-no.	BEZ	ABM	QAL	ID
		mm		
1	ProfilCut Q knife	40x22x2	MC	<b>619239</b> ●

#### Spare parts:

Part-no.	BEZ	ABM	ID
		mm	
2	Clamping wedge profiled	37x30x8,27	<b>630153</b>
3	Clamping screw w. disc, Torx® 20	M5x18.5	<b>007446</b> ●
4	Torx® key	Torx® 20	<b>117503</b> ●



## 4. Manual feed

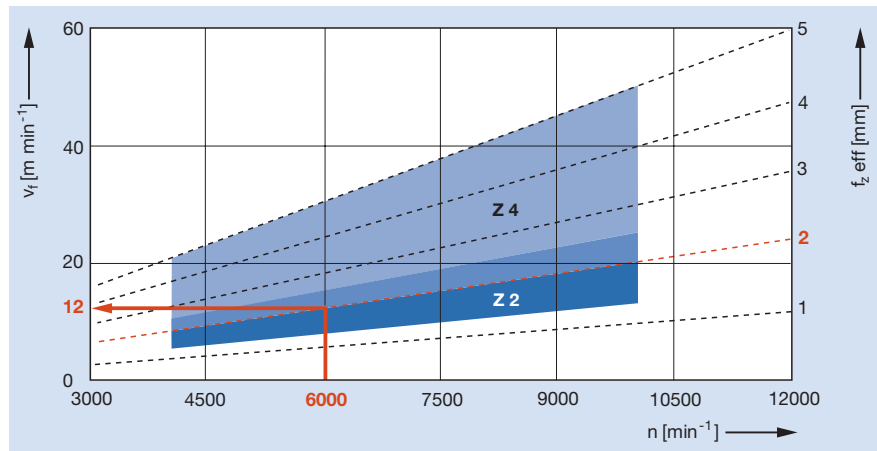
### 4.4 Profiling

#### 4.4.1 – 4.4.6 Different profile cutterheads

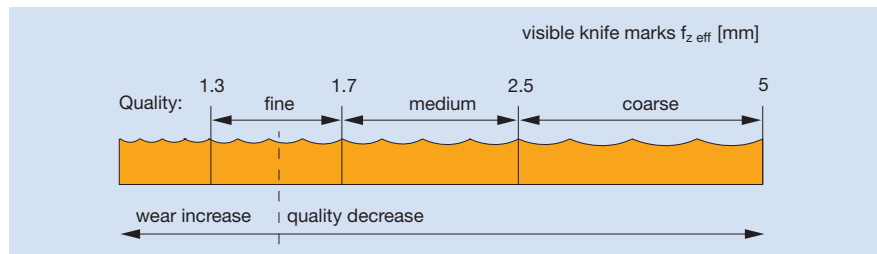
##### Type of operation

Profiling in craft and industry. As there are many different applications, the features of the tool and the wood types to be processed are described in the respective product pages.

##### Feed speeds depending on RPM, length of knife marks and number of teeth



##### Relation between surface quality and length of knife marks $f_{z\text{ eff}}$



With multi blade tools, only the marks of one knife show on the surface (one knife finish).

Z 2 and Z 4 tools produce the same surface quality with the same machine setting. High numbers of teeth are required for a high hogging performance.

##### Workpiece material Machines Application

Please refer to the relevant product pages, depending on the operation and profile.



### Turnblade ProfilCut Q profile cutterhead set for internal door production

#### Application:

For external door profiles with single rebate, rebating depth 13/15/18 mm. Extendable for double rebate 12/15 and 15/15.

#### Machine:

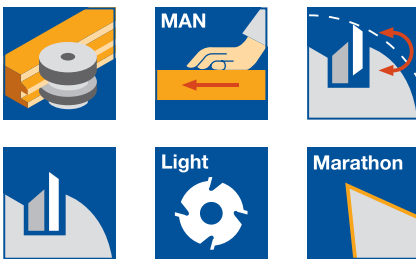
Spindle moulders and moulders.

#### Workpiece material:

Softwood and hardwood.

#### Technical information:

Combinable for front door, single and double rebate. Double rebate profiles by using additional tools. Tool body of aluminium. ProfilCut jointing cutterhead with chamfers to edges, rebate cutterhead with turnblade knives, spurs and seatings for edge knives and seal groove knives.

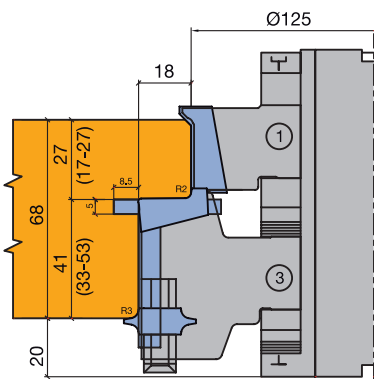
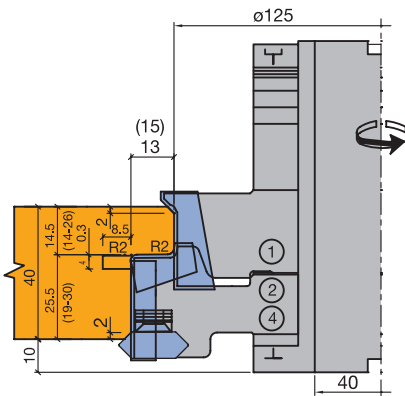


#### Turnblade / profile cutterhead set

SE 540 1 53

BEM	Tool no.	D <sub>0</sub> mm	BO mm	Z	FAT mm	n <sub>max</sub> min <sup>-1</sup>	ID
Single rebate	1/2	125	40	2	13	7200	<b>126211</b>
Single rebate	1/4	125	40	2	15	7200	<b>126212</b>
Single rebate	1/3	125	40	2	18	7200	<b>126213</b>
Double rebate	1/4/5	125	40	2	15/12	7200	<b>126214</b>
Double rebate	1/4/6	125	40	2	15/15	7200	<b>126215</b>

Set completely mounted on VDS-sleeve.



#### Single tools

TB 100 0 01, WE 500 1 53

BEZ	ABM mm	Tool no.	Z	ID
ProfilCut Q tool	133x30x50	1	2	<b>125562</b>
ProfilCut Q tool	151.2x35x50	2	2	<b>125563</b>
ProfilCut Q tool	161.2x54.5/58.5x50	3	2	<b>125564</b>
ProfilCut Q tool	155.2x35x50	4	2	<b>125565</b>
ProfilCut Q tool	179.2x35x50	5	2	<b>125566</b>
ProfilCut Q tool	185.2x35x50	6	2	<b>125567</b>
Reducing sleeve without collar	40x96x30			<b>028302 ●</b>

#### Spare knives:

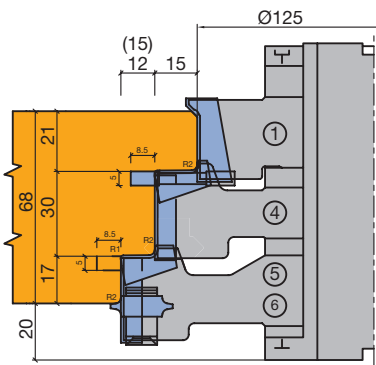
BEZ	ABM mm	Tool no.	QAL	ID
ProfilCut Q knife	30.2x14.1x2	1	MC	<b>619240</b>
ProfilCut Q knife	20.1x12.62x2	2	MC	<b>413043</b>
ProfilCut Q knife	25x12.76x2	3	MC	<b>413017</b>
ProfilCut Q knife	20.1x12.61x2	4	MC	<b>413045</b>
ProfilCut Q knife	20.1x11.89x2	5	MC	<b>413011</b>
ProfilCut Q knife	20.1x12.9x2	6	MC	<b>413015</b>
Turnblade knife Marathon	30x8x1,5	2/4/5/6	HW-05 MC	<b>601634 ●</b>
Edging knife 45°	KM 21/0	2/4	HW-F	<b>008292 ●</b>
Edging knife R2	KM 22/3	5/6	HW-F	<b>008309 ●</b>
Edging knife R3	KM 22/0	3	HW-F	<b>008293 ●</b>
Turnblade grooving knife NB4	36x20x4	2/4	HW-F	<b>008323 ●</b>
Turnblade grooving knife NB5	36x20x5	2 - 6	HW-F	<b>008324 ●</b>



## 4. Manual feed

### 4.4 Profiling

#### 4.4.1 Door rebate - cutterhead sets



#### Spare parts:

BEZ	ABM	Tool no.	ID
	mm		
Clamping wedge ProfilCut Q	27x20x8,27	1	<b>630017</b>
Clamping wedge ProfilCut Q	17x24,7x8,27	2/4/6	<b>630260</b>
Clamping wedge	28x18,75x8,27	2/4/5/6	<b>630206 ●</b>
Clamping wedge ProfilCut Q	22x25,8x8,27	3	<b>630156</b>
Clamping wedge	48x18,75x8,27	3	<b>630211 ●</b>
Clamping wedge ProfilCut Q	17x23,7x8,27	5	<b>630157</b>
Clamping screw w. disc, Torx® 20	M5x18,5	1 - 6	<b>007446 ●</b>
Countersink screw, Torx® 20	M6x20	2/4	<b>006087 ●</b>
Countersink screw, Torx® 20	M6x40	3	<b>006090 ●</b>
Countersink screw, Torx® 20	M6x25	5/6	<b>006088 ●</b>
Countersink screw, Torx® 20	M6x12	2 - 6	<b>006084 ●</b>
Cylindrical screw with ISK	M6x93		<b>007834 ●</b>
Torx® key	Torx® 20	1 - 6	<b>117503 ●</b>
Allen key	SW 5		<b>005452 ●</b>



R 1,5 = ID **619391**  
 R 2,0 = ID **619392**  
 R 3,0 = ID **619393**  
 R 4,0 = ID **619394**  
 R 5,0 = ID **619395**



ID **619396**

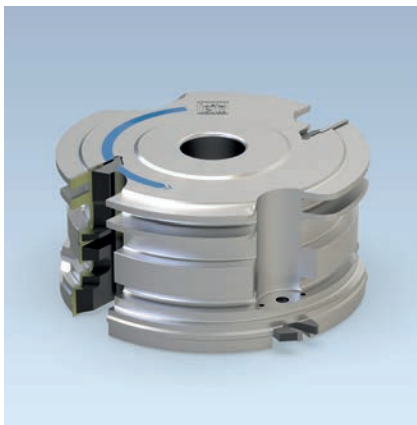


ID **619397**



ID **184008678**

Cut-out for DP edging knives on request



### Profile cutterhead ProfilCut Q

#### Application:

For door casing and door linings with 5 mm rebate.

#### Machine:

Spindle moulders and moulders.

#### Workpiece material:

Softwood and hardwood, uncoated, plastic coated and veneered chipboard and fibre materials.

#### Technical information:

Material thickness: 24 to 27 mm (option up to 32 mm with jointing).

Seal 14 and 12 mm possible by fitting spacers. Adjustable rebate of 5 mm or 4 mm by changeable profile knives.



#### Rebate 5 mm

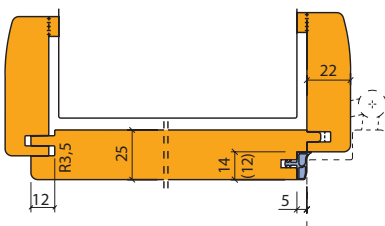
SE 640 1 53

Tool Type	D mm	BO mm	BO <sub>max</sub> mm	Z	FAT mm	n min <sup>-1</sup>	ID
With jointing and rounding	125	30	50	2	5	5100 - 8800	<b>126216 ●</b>
Without jointing and rounding	125	30	50	2	5	5100 - 8800	<b>126217</b>

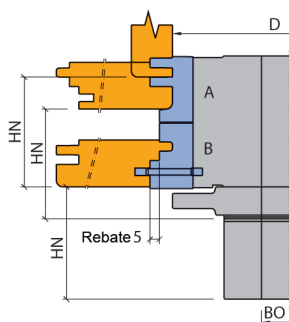
#### Rebate 4 mm

SE 640 1 53

Tool Type	D mm	BO mm	BO <sub>max</sub> mm	Z	FAT mm	n min <sup>-1</sup>	ID
With jointing and rounding	125	30	50	2	4	5100 - 8800	<b>126218</b>
Without jointing and rounding	125	30	50	2	4	5100 - 8800	<b>126219</b>



Door lining profile



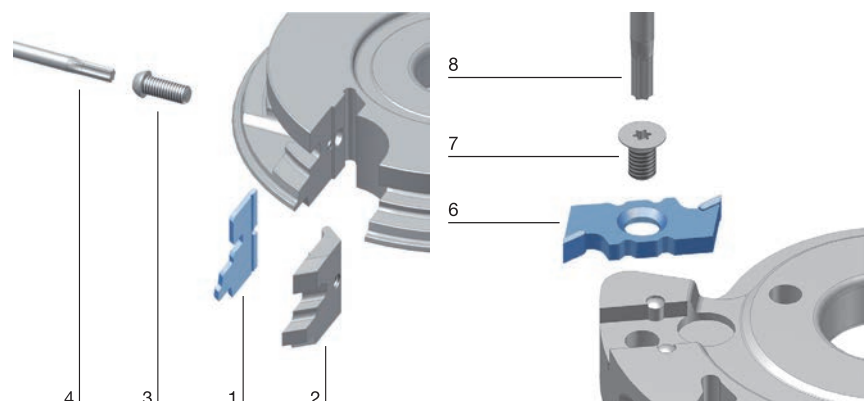
Lining/decorative panel and rebate lining

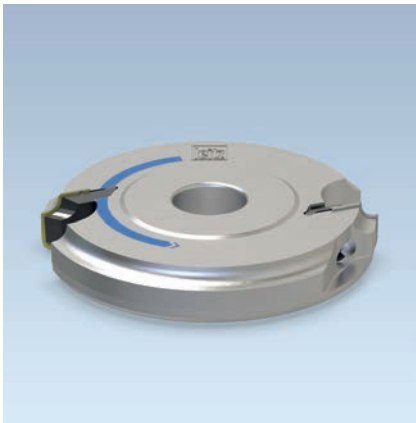
#### Spare knives:

Part-no.	BEZ	ABM mm	QAL	ID
1	ProfilCut Q knife A for jointing	35x22,75x2	MC	<b>619241</b>
1	ProfilCut Q knife B 5 mm rebate	35x23,82x2	MC	<b>619242</b>
1	ProfilCut Q knife A without jointing	35x22,75x2	MC	<b>619243</b>
1	ProfilCut Q knife B 4 mm rebate	35x23,29x2	MC	<b>619244</b>
6	Turnblade grooving knife NB4	36x20x4	HW-F	<b>008323 ●</b>

#### Spare parts:

Part-no.	BEZ	ABM mm	ID
2	Clamping wedge A	32x27,9x8,27	<b>630158</b>
2	Clamping wedge B	32x32,7x8,27	<b>630159</b>
3	Clamping screw w. disc, Torx® 20	M5x18.5	<b>007446 ●</b>
4	Torx® key	Torx® 20	<b>117503 ●</b>
7	Countersink screw, Torx® 20	M6x12	<b>006084 ●</b>





**Profile cutterhead ProfilCut Q**

**Application:**

For different radii profiles with different profile knives. Copy shaping of curved workpieces using template and ball bearing guide ring.

**Machine:**

Spindle moulders and moulders.

**Workpiece material:**

Softwood and hardwood.

**Technical information:**

Production of counter profile possible by combining with the fluting profile. Tool can be used on both sides as panel raising cutter (straight panel raising).



**Radii profile R 2; 3; 5; 7 mm**

WE 500 1 53

R	D	SB	BO	BO <sub>max</sub>	Z	n	ID
mm	mm	mm	mm	mm		min <sup>-1</sup>	
5	139	25	30	50	2	5500 - 9600	<b>125568 ●</b>

**Radii profile R 12; 15; 16; 18; 20 mm**

WE 500 1 53

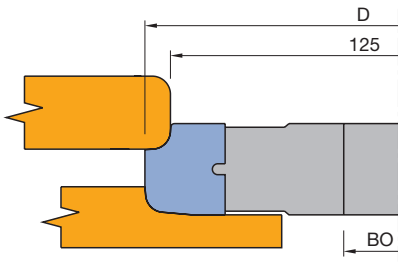
R	D	SB	BO	BO <sub>max</sub>	Z	n	ID
mm	mm	mm	mm	mm		min <sup>-1</sup>	
12	167	40	30	50	2	4600 - 10200	<b>125569 ●</b>

**Spare knives:**

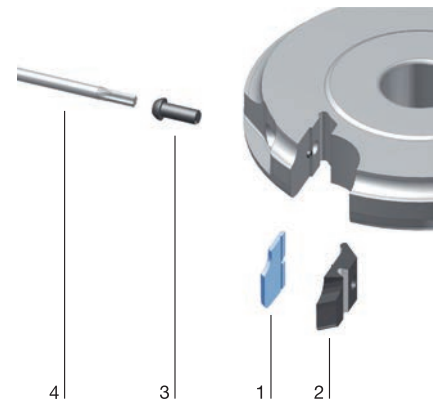
R	Part-no.	BEZ	ABM	QAL	ID
mm			mm		
2	1	ProfilCut Q knife	25x25x2.4	MC	<b>619504</b>
3	1	ProfilCut Q knife	25x25x2.4	MC	<b>619505</b>
5	1	ProfilCut Q knife	25x25x2.4	MC	<b>619501</b>
7	1	ProfilCut Q knife	25x25x2.4	MC	<b>619502</b>
12	1	ProfilCut Q knife	40x32.6x2.4	MC	<b>619516</b>
15	1	ProfilCut Q knife	40x32.6x2.4	MC	<b>619517</b>
16	1	ProfilCut Q knife	40x32.6x2.4	MC	<b>619518</b>
18	1	ProfilCut Q knife	40x32.6x2.4	MC	<b>619519</b>
20	1	ProfilCut Q knife	40x32.6x2.4	MC	<b>619520</b>

**Spare parts:**

Part-no.	BEZ	ABM	ID
		mm	
2	Clamping wedge profiled	22x35x8,27	<b>630160</b>
2	Clamping wedge profiled	37x43x8,27	<b>630161</b>
3	Clamping screw w. disc, Torx® 20	M5x18.5	<b>007446 ●</b>
4	Torx® key	Torx® 20	<b>117503 ●</b>



Radii profile cutterhead





### Profile cutterhead set ProfilCut Q - radii profile

#### Application:

For different radii profiles with different profile knives. Copy shaping of curved workpieces using template and ball bearing guide ring.

#### Machine:

Spindle moulders and moulders.

#### Workpiece material:

Softwood and hardwood.

#### Technical information:

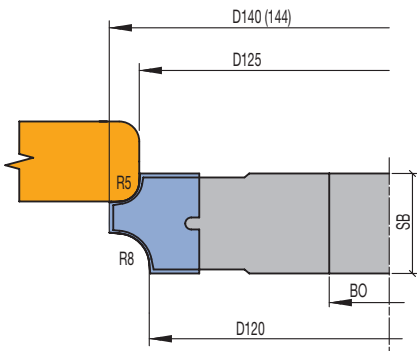
Cutterhead with changing knives R 5/8, R 6/9, R 7/10, R 3/12, bevelling knives 30/45/60° and axially parallel knives. For cutting radii and dowel profiles as well as bevelling and copy-shaping of curved workpieces using templates.



#### Radii profile R 5 - 12 mm or 30/45/60° bevel

AE 540 1 53

D	SB	BO	BO <sub>max</sub>	R	FAW	Z	ID
mm	mm	mm	mm	mm	°		
140	25	30	50	5/8	30/45/60	2	126203 ●
				6/9			
				7/10			
				3/12			



Profile cutterhead D-140(144) mm

Set completely in wooden box including radii/bevel knives.

Standard values for feed speed  $v_f$  at speed  $n = 6000 \text{ min}^{-1}$ :

Machining along grain: 8 to 10  $\text{m min}^{-1}$ .

Machining across grain: 3 to 5  $\text{m min}^{-1}$ .

RPM:  $n = 5400 - 9200 \text{ min}^{-1}$

Zero diameter: 120/125 mm

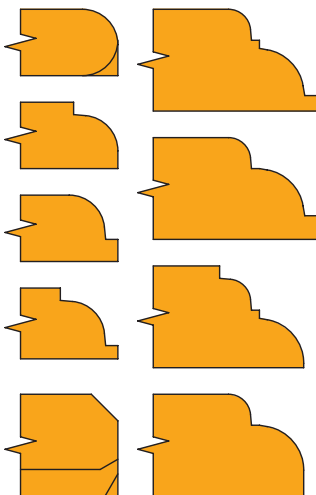
#### Spare knives:

Part-no.	BEZ	ABM	QAL	R	FAW	ID
		mm		mm	°	
1	ProfilCut Q knife	25x22x2	MC	5/8		619445
1	ProfilCut Q knife	25x22x2	MC	6/9		619446
1	ProfilCut Q knife	25x22x2	MC	7/10		619447
1	ProfilCut Q knife	29x24.17x2	MC	3/12		619448
1	ProfilCut Q knife	29x24.17x2	MC		30/45/60	619449

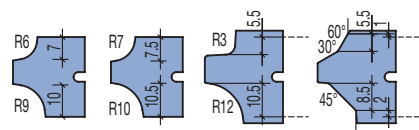
#### Spare parts:

Part-no.	BEZ	ABM	ID
		mm	
2	Clamping wedge	22x30x8,27	630146 ●
3	Clamping screw w. disc, Torx® 20	M5x18.5	007446 ●
4	Torx® key	Torx® 20	117503 ●

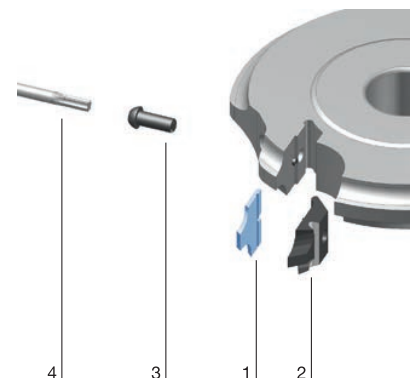
Ball bearing and guide rings - see Lexicon section Knives and Spare Parts.



Left = 1 working step  
Right = 2 working steps

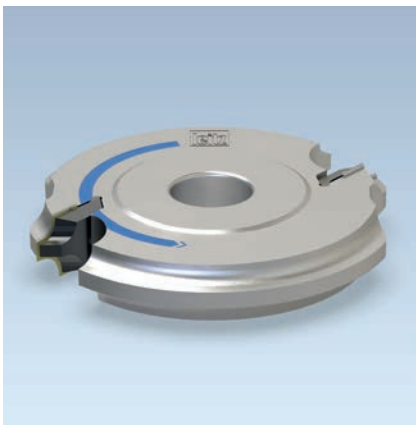


Profile knives radius / bevel



## 4. Manual feed

### 4.4 Profiling 4.4.3 Radius profile cutterheads



#### Profile cutterhead ProfilCut Q

**Application:**

For radii and bevel profiles with different profile knives. Copy shaping of curved workpieces using template and ball bearing guide ring.

**Machine:**

Spindle moulders and moulders.

**Workpiece material:**

Softwood and hardwood.

**Technical information:**

Cutterhead with change knives and straight cut. Multi-purpose application for different profiles.



**Radii profile R 12 - 20 mm or 45° bevel**

WE 500 1 53

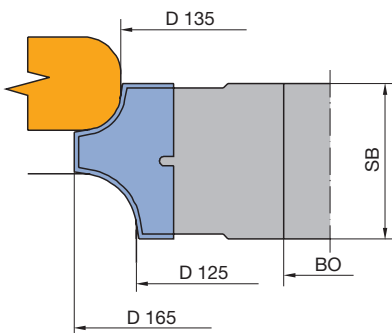
D	SB	BO	BO <sub>max</sub>	Z	R	n	ID
mm	mm	mm	mm		mm	min <sup>-1</sup>	
165	50	30	50	2	12/18	5500 - 5900	<b>125570 ●</b>

**Spare knives:**

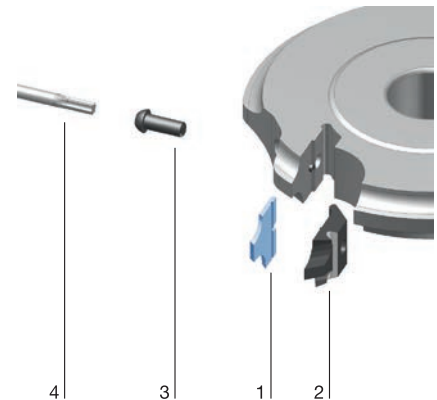
Part-no.	BEZ	ABM	QAL	R	FAW	ID
		mm		mm	°	
1	ProfilCut Q knife	50x33.8x2.4	MC	12/18		<b>619512</b>
1	ProfilCut Q knife	50x33.8x2.4	MC	14/20		<b>619513</b>
1	ProfilCut Q knife	50x33.8x2.4	MC		45	<b>619514</b>

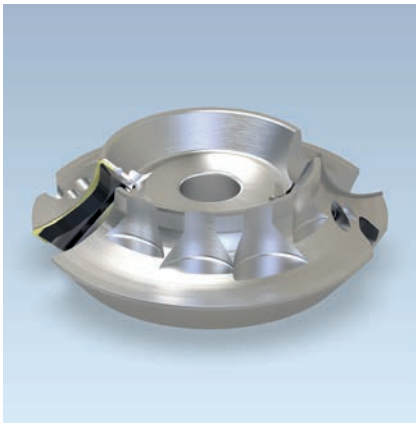
**Spare parts:**

Part-no.	BEZ	ABM	ID
		mm	
2	Clamping wedge profiled	47x29x8,27	<b>630162</b>
3	Clamping screw w. disc, Torx® 20	M5x18.5	<b>007446 ●</b>
4	Torx® key	Torx® 20	<b>117503 ●</b>



Profile cutterhead D-165 mm





### Profile cutterhead ProfilCut Q

#### Application:

For different radii profiles with different profile knives. Copy shaping of curved workpieces using template and ball bearing guide ring.

#### Machine:

Spindle moulders and moulders.

#### Workpiece material:

Softwood and hardwood.

#### Technical information:

Height and diameter adjustment through recess in the tool basic body per radius. Cutterhead extendable for radii R 12.5 - 30 mm. Replacement knives for dowel cuts on request.



#### Radii profile R 12.5 - 30 mm

WE 500 1 53

D	SB	BO	BO <sub>max</sub>	D <sub>0</sub>	Z	R	n	ID
mm	mm	mm	mm	mm		mm	min <sup>-1</sup>	
180	32	30	50	112	2	30	4300 - 7400	125571 ●

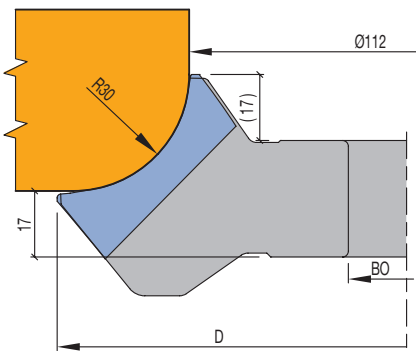
For ball bearings and guide rings see section Knives and Spare Parts.

Standard values for feed speed  $v_f$ :

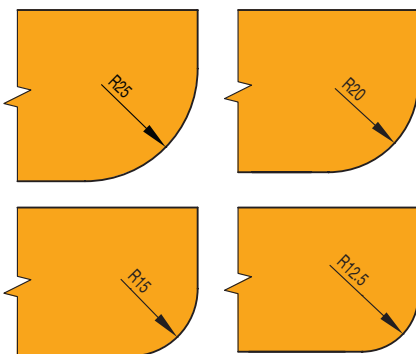
Machining along grain: 8 to 10 m min<sup>-1</sup>

Machining across grain: 3 to 5 m min<sup>-1</sup>

at speed  $n = 6000$  min<sup>-1</sup>.



Profile cutterhead D-180 mm



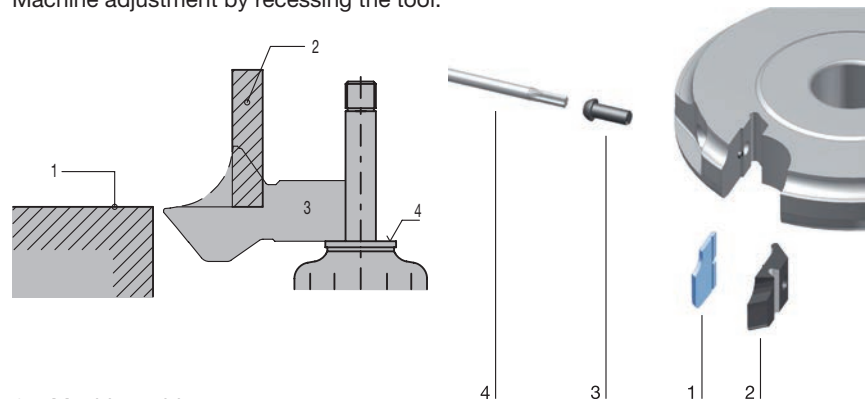
#### Spare knives:

Part-no.	BEZ	ABM	QAL	R	ID
		mm		mm	
1	ProfilCut Q knife	50x22x2	MC	12,5	619431
1	ProfilCut Q knife	50x22x2	MC	15	619432
1	ProfilCut Q knife	50x22x2	MC	20	619433
1	ProfilCut Q knife	50x22x2	MC	25	619434
1	ProfilCut Q knife	50x22x2	MC	30	619430

#### Spare parts:

Part-no.	BEZ	ABM	ID
		mm	
2	Clamping wedge profiled	47x29x8.27	630163 □
3	Clamping screw w. disc, Torx® 20	M5x18.5	007446 ●
4	Torx® key	Torx® 20	117503 ●

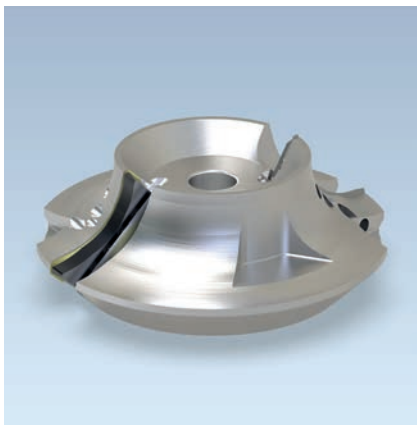
Machine adjustment by recessing the tool.



- 1 = Machine table
- 2 = Fence
- 3 = Tool
- 5 = Spindle

## 4. Manual feed

### 4.4 Profiling 4.4.3 Radius profile cutterheads



#### Profile cutterhead ProfilCut Q

##### Application:

For different radii profiles with 10 different profile knives. Copy shaping of curved workpieces using template and ball bearing guide ring.

##### Machine:

Spindle moulders and moulders.

##### Workpiece material:

Softwood and hardwood.

##### Technical information:

Height and diameter adjustment through recess in the tool basic body. Cutterhead extendable for radii R 30 - 50 mm. Replacement knives for dowel cuts on request.



##### Radii profile R 30 - 50 mm

WE 500 1 53

D	SB	BO	BO <sub>max</sub>	D <sub>0</sub>	Z	R	n	ID
mm	mm	mm	mm	mm		mm	min <sup>-1</sup>	
227	57	30	50	125	2	40	3400 - 7500	<b>125572</b> ●

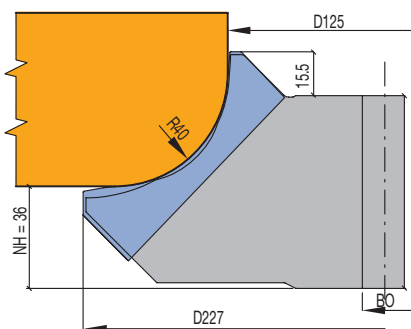
For ball bearings and guide rings see section Knives and Spare Parts.

##### Spare knives:

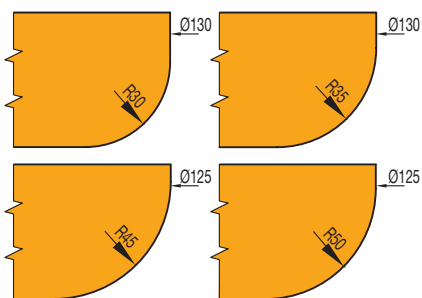
Teile-Nr.	BEZ	ABM mm	QAL	R mm	ID with relief angle	ID without relief angle
1	ProfilCut Q knife	80.1x30.78x2	MC	30	<b>619436</b>	<b>619440</b>
1	ProfilCut Q knife	80.1x30.56x2	MC	35	<b>619437</b>	<b>619441</b>
1	ProfilCut Q knife	80.1x31.08x2	MC	40	<b>619435</b>	<b>619442</b>
1	ProfilCut Q knife	80.1x29.98x2	MC	45	<b>619438</b>	<b>619443</b>
1	ProfilCut Q knife	80.1x29.56x2	MC	50	<b>619439</b>	
1	ProfilCut Q knife	80.1x29.66x2	MC	50		<b>619444</b>

##### Spare parts:

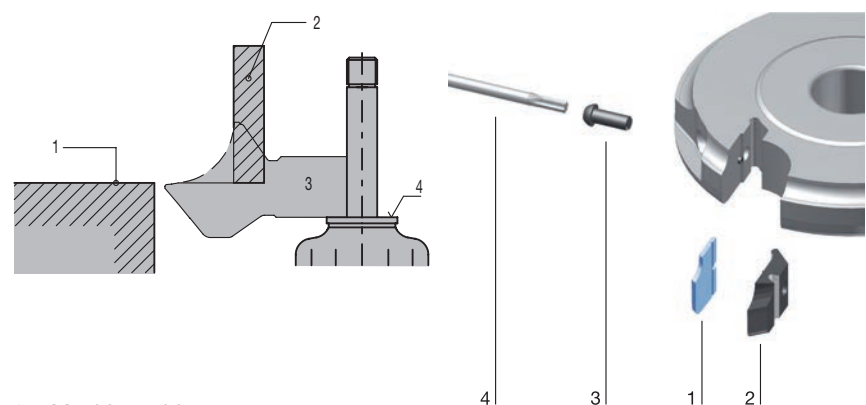
Part-no.	BEZ	ABM mm	ID
2	Clamping wedge ProfilCut	77x39x8.27	<b>630164</b> □
3	Clamping screw w. disc, Torx® 20	M5x18.5	<b>007446</b> ●
4	Torx® key	Torx® 20	<b>117503</b> ●



Profile cutterhead D-227 mm



Machine adjustment by recessing the tool.



- 1 = Machine table
- 2 = Fence
- 3 = Tool
- 5 = Spindle



### Profile cutterhead ProfilCut Q

#### Application:

For radii and counter profiles. Copy shaping of curved workpieces using template and ball bearing guide ring.

#### Machine:

Spindle moulders and moulders etc.

#### Workpiece material:

Softwood and hardwood.

#### Technical information:

Cutterhead with change knives, straight cut. Multi-purpose use for different profiles in one or several working steps.



#### Radii profile R 3 - 10 mm

WE 500 1 53

D	SB	BO	BO <sub>max</sub>	Z	n	ID
mm	mm	mm	mm		min <sup>-1</sup>	
132	40	30	40	2	5900 - 10100	<b>125573 ●</b>

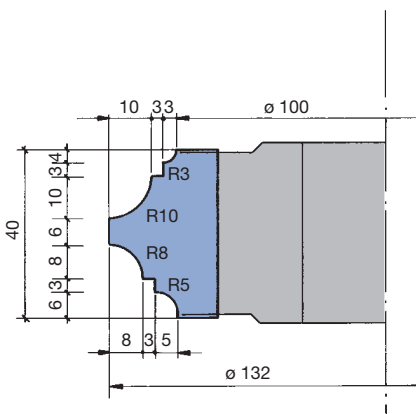
Standard values for feed speed  $v_f$ :

Machining along grain: 8 to 10 m min<sup>-1</sup>

Machining across grain: 3 to 5 m min<sup>-1</sup>

at speed  $n = 6000$  min<sup>-1</sup>

For ball bearings and guide rings see section Knives and Spare Parts.

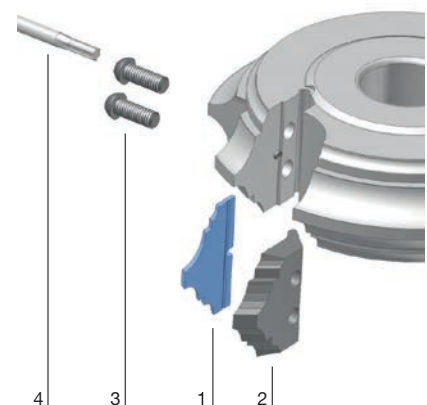


#### Spare knives:

Part-no.	BEZ	ABM	QAL	ID
		mm		
1	ProfilCut Q knife	40.2x28.5x2.4	MC	<b>619515</b>

#### Spare parts:

Part-no.	BEZ	ABM	ID
		mm	
2	Clamping wedge profiled	37x34,5x8,27	<b>630165</b>
3	Clamping screw w. disc, Torx® 20	M5x18,5	<b>007446 ●</b>
4	Torx® key	Torx® 20	<b>117503 ●</b>







### Profile cutterhead set ProfilCut Q - bevelling / rounding

#### Application:

Multi-purpose tool set for bevelling, rounding and jointing the workpiece edges at the same time.

#### Machine:

Spindle moulders, copy shaping and profile moulders.

#### Workpiece material:

Softwood and hardwood.

#### Technical information:

With a combination of jointing and bevelling/rounding cutterheads, different profiles and wood thicknesses can be machined. Profile knives with different radii/bevels can be mounted in one cutterhead.



#### Manual feed

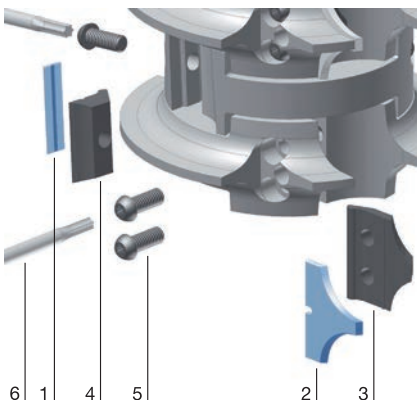
SE 541 1 53

Tool Type	D <sub>0</sub> mm	AW PCS	n min <sup>-1</sup>	Z	ID
Jointing-rounding	125	2	4200 - 7100	2	<b>126220</b>
Rounding-jointing-rounding	125	3	4200 - 7100	2	<b>126221</b>
Rounding-rounding	125	2	4200 - 7100	2	<b>126222</b>

Further radii are available at short notice.

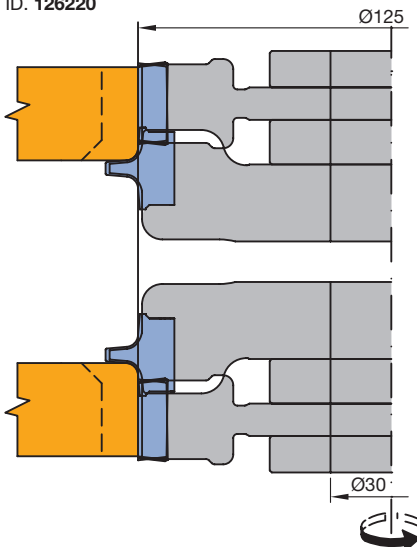
#### Spare parts:

Part-no.	BEZ	ABM mm	Tool no.	ID
3	Clamping wedge	17x23x8,27	1/2/11/12	<b>630140</b>
3	Clamping wedge	32x28x8,27	3/4/13/14	<b>630141</b>
3	Clamping wedge	37x29,7x8,27	5/15	<b>630142</b>
3	Clamping wedge	37x29,7x8,27	6/16	<b>630143</b>
3	Clamping wedge	47x31,8x8,27	7/17	<b>630144</b>
3	Clamping wedge	47x31,8x8,27	8/18	<b>630145</b>
4	Clamping wedge	18x18,75x8,27	20	<b>630204</b> ●
4	Clamping wedge	33x18,75x8,27	35	<b>630208</b> ●
4	Clamping wedge	48x18,75x8,27	50	<b>630211</b> ●
5	Clamping screw w. disc, Torx® 20	M5x18.5		<b>007446</b> ●
6	Torx® key	Torx® 20		<b>117503</b> ●

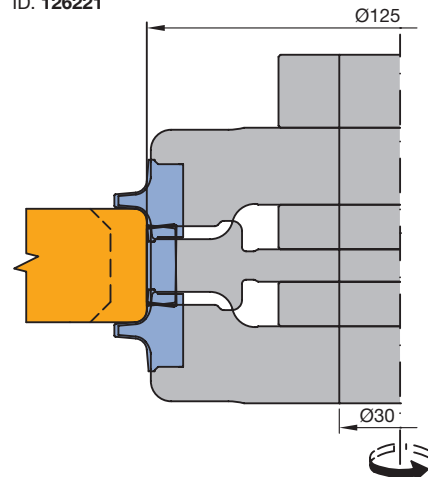


Part nos. 1 and 2 - ProfilCut Q and turnblade knives - see detailed information on the following pages.

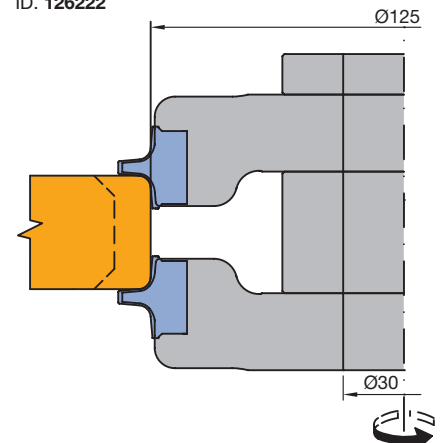
ID. 126220



ID. 126221



ID. 126222

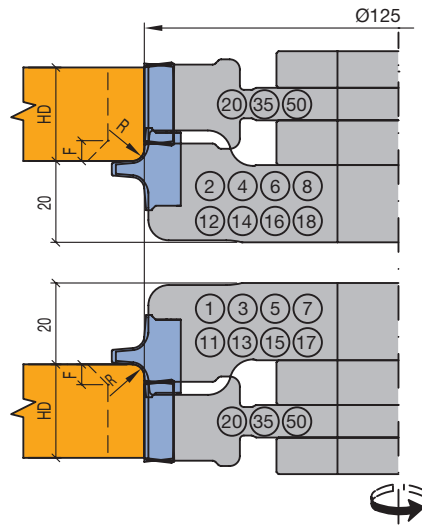


## 4. Manual feed

### 4.4 Profiling 4.4.3 Radius profile cutterheads

#### ID. 126220

Order example:  
 -Combination ID 126220  
 -Profile description top down RL  
 jointingSB35/R5 or R5/jointingSB35  
 -Bore diameter 30



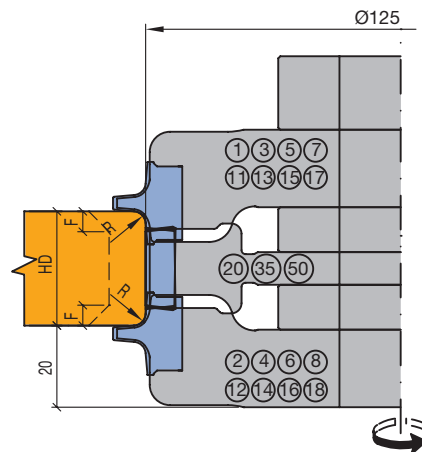
Wood thickness (HD):

Jointing tool	20	35	50
max. HD	18+R (F)	33+R (F)	48+R (F)

F (bevel) max. = 3, 5, 7x45° or 8x40°

#### ID. 126221

Order example:  
 -Combination ID 126221  
 -Profile description top down RL  
 R5/jointingSB35/R5  
 -Bore diameter 30



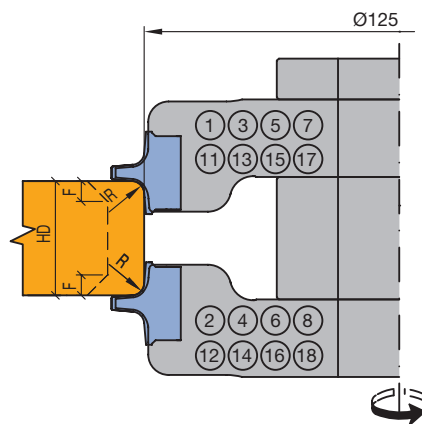
Radii tools	Jointing tool		
	20	35	50
No.1(11)+2(12)	6	12	24
No.1(11)+4(14)	13	19	31
No.1(11)+6(16)	18	24	36
No.1(11)+8(18)	28	34	46
No.3(13)+2(12)	13	19	31
No.3(13)+4(14)	20	26	38
No.3(13)+6(16)	25	31	43
No.3(13)+8(18)	35	41	53
No.5(15)+2(12)	18	24	36
No.5(15)+4(14)	25	31	43
No.5(15)+6(16)	30	36	48
No.5(15)+8(18)	40	46	58
No.7(17)+2(12)	28	34	46
No.7(17)+4(14)	35	41	53
No.7(17)+6(16)	40	46	58
No.7(17)+8(18)	50	56	68
max. HD	18+R+R (F+F)	33+R+R (F+F)	48+R+R (F+F)

Minimum wood thickness

F (bevel) max. = 3, 5, 7x45° or 8x40°  
 Wood thicknesses are calculated with max. bevel

#### ID. 126222

Order example:  
 -Combination ID 126222  
 -Profile description top down RL  
 R5/R5  
 -Bore diameter 30

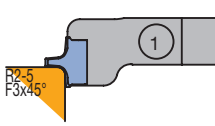
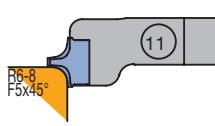
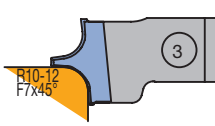
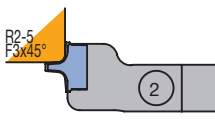
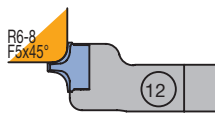
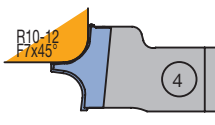
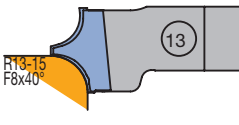
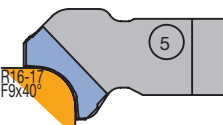
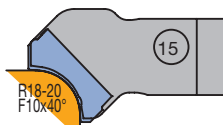
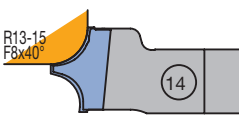
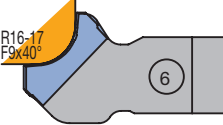
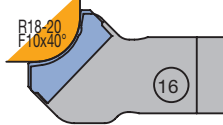
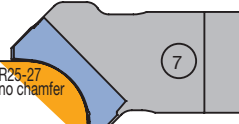
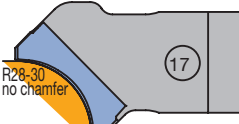
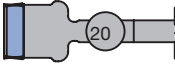
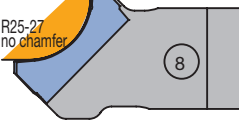
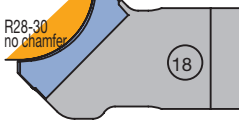
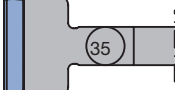
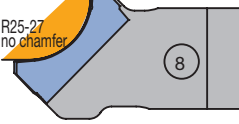
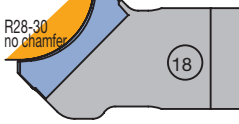
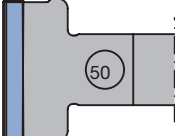


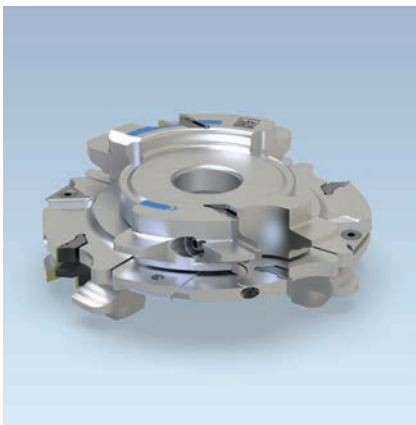
Radii tools	Minimum wood thickness
No.1(11)+2(12)	-2
No.1(11)+4(14)	5
No.1(11)+6(16)	10
No.1(11)+8(18)	20
No.3(13)+2(12)	5
No.3(13)+4(14)	12
No.3(13)+6(16)	17
No.3(13)+8(18)	27
No.5(15)+2(12)	10
No.5(15)+4(14)	17
No.5(15)+6(16)	22
No.5(15)+8(18)	32
No.7(17)+2(12)	20
No.7(17)+4(14)	27
No.7(17)+6(16)	32
No.7(17)+8(18)	42

Minimum wood thickness

## 4. Manual feed

### 4.4 Profiling 4.4.3 Radius profile cutterheads

<p>Spare part: clamping wedge 630140</p>  <p>WZ 125574 R2 ME 619245</p>	<p>WZ 125576 R3 ME 619246</p> <p>WZ 125577 R4 ME 619247</p> <p>WZ 125578 R5 ME 619248</p> <p>WZ 125579 F3x45° ME 619252</p>	<p>Spare part: clamping wedge 630140</p>  <p>WZ 125584 R6 ME 619249</p> <p>WZ 125585 R7 ME 619250</p> <p>WZ 125586 R8 ME 619251</p> <p>WZ 125587 F5x45° ME 619253</p>	<p>Spare part: clamping wedge 630141</p>  <p>WZ 125594 R10 ME 619254</p> <p>WZ 125595 R11 ME 619255</p> <p>WZ 125596 R12 ME 619256</p> <p>WZ 125597 F7x45° ME 619261</p>
<p>Spare part: clamping wedge 630140</p>  <p>WZ 125575 R2 Messer 619245</p>	<p>WZ 125580 R3 ME 619246</p> <p>WZ 125581 R4 ME 619247</p> <p>WZ 125582 R5 ME 619248</p> <p>WZ 125583 F3x45° ME 619252</p>	<p>Spare part: clamping wedge 630140</p>  <p>WZ 125588 R6 ME 619249</p> <p>WZ 125589 R7 ME 619250</p> <p>WZ 125590 R8 ME 619251</p> <p>WZ 125591 F5x45° ME 619253</p>	<p>Spare part: clamping wedge 630141</p>  <p>WZ 125598 R10 ME 619254</p> <p>WZ 125599 R11 ME 619255</p> <p>WZ 125600 R12 ME 619256</p> <p>WZ 125601 F7x45° ME 619261</p>
<p>Spare part: clamping wedge 630141</p>  <p>WZ 125602 R13 ME 619257</p> <p>WZ 125603 R14 ME 619258</p> <p>WZ 125604 R15 ME 619259</p> <p>WZ 125605 F8x40° ME 619262</p>	<p>Spare part: clamping wedge 630142</p>  <p>WZ 125611 R16 ME 619263</p> <p>WZ 125612 R17 ME 619264</p> <p>WZ 125613 F9x40° ME 619269</p>	<p>Spare part: clamping wedge 630142</p>  <p>WZ 125617 R18 ME 619265</p> <p>WZ 125618 R19 ME 619266</p> <p>WZ 125619 R20 ME 619267</p> <p>WZ 125620 F10x40° ME 619270</p>	
<p>Spare part: clamping wedge 630141</p>  <p>WZ 125607 R13 ME 619257</p> <p>WZ 125608 R14 ME 619258</p> <p>WZ 125609 R15 ME 619259</p> <p>WZ 125610 F8x40° ME 619262</p>	<p>Spare part: clamping wedge 630143</p>  <p>WZ 125614 R16 ME 619271</p> <p>WZ 125615 R17 ME 619272</p> <p>WZ 125616 F9x40° ME 619277</p>	<p>Spare part: clamping wedge 630143</p>  <p>WZ 125621 R18 ME 619273</p> <p>WZ 125622 R19 ME 619274</p> <p>WZ 125623 R20 ME 619275</p> <p>WZ 125624 F10x40° ME 619278</p>	
<p>Spare part: clamping wedge 630144</p>  <p>WZ 125625 R25 ME 619279</p> <p>WZ 125626 R26 ME 619280</p> <p>WZ 125627 R27 ME 619281</p>	<p>Spare part: clamping wedge 630144</p>  <p>WZ 125631 R28 ME 619282</p> <p>WZ 125632 R29 ME 619283</p> <p>WZ 125633 R30 ME 619284</p>	<p>SB 20</p>  <p>WZ 125680 ME 601604 (VE 10 pcs.) Wedge 630204</p>	
<p>Spare part: clamping wedge 630145</p>  <p>WZ 125628 R25 ME 619285</p> <p>WZ 125629 R26 ME 619286</p> <p>WZ 125630 R27 ME 619287</p>	<p>Spare part: clamping wedge 630145</p>  <p>WZ 125634 R28 ME 619288</p> <p>WZ 125635 R29 ME 619289</p> <p>WZ 125636 R30 ME 619290</p>	<p>SB 35</p>  <p>WZ 125681 ME 601607 (VE 10 pcs.) Wedge 630208</p>	
<p>Spare part: clamping wedge 630145</p>  <p>WZ 125628 R25 ME 619285</p> <p>WZ 125629 R26 ME 619286</p> <p>WZ 125630 R27 ME 619287</p>	<p>Spare part: clamping wedge 630145</p>  <p>WZ 125634 R28 ME 619288</p> <p>WZ 125635 R29 ME 619289</p> <p>WZ 125636 R30 ME 619290</p>	<p>SB 50</p>  <p>WZ 125682 ME 601610 (VE 10 pcs.) Wedge 630211</p> <p>60x20x30</p> <p>Spacer set (one set per cutterhead necessary)</p>	



#### Profile cutterhead ProfilCut Q for internal doors

##### Application:

For internal door profiles and counter profiles.

##### Machine:

Spindle moulders and moulders.

##### Workpiece material:

Softwood and hardwood.

##### Technical information:

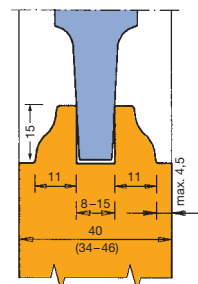
Cutterhead with change knives, straight cut.

##### Tool combination DOUBLE profile with jointing

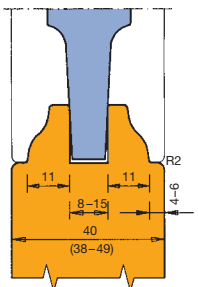
AE 341 1 53, AW 341 1

Tool Type	Tool no.	BO mm	BO <sub>max</sub> mm	ID
Profile 1 (P2-P5 on request)	1/2/3	30	50	<b>126223</b> ●
Profile 1.1 (P2.1-P5.1 on request)	1/2/3/4/5	30	50	<b>126224</b> ●
Profile 6/7	2/4/5/6/7	30	50	<b>126225</b> ●
Profile 6.1/7	2/4.1/5.1/6/7	30	50	<b>126226</b> ●
Profile 8	2/8/9/10	30	50	<b>126227</b> ●
Profile 8.1	2/8.1/9.1/10	30	50	<b>126228</b> ●
Addition for rebates and/or one side	15/16	30	50	<b>126229</b> ●

Combinations complete in wooden boxes.



Profile P 1 closed joint



Profile P 1.1 with open joint

##### Single tools

SW 501 1, WE 500 1 53, WW 200 1, WW 210 1, WW 410 1

Tool Type	Tool no.	D mm	SB mm	BO mm	ID
Profile cutterhead *	1	155	25	30	<b>125637</b> ●
Grooving cutterhead	2	155,2	8 - 15	30	<b>125686</b> ●
Profile cutterhead	3	155	25	30	<b>125638</b> ●
Profile cutterhead	4	161	30	30	<b>125639</b> ●
Profile cutterhead	5	161	30	30	<b>125640</b> ●
Profile cutterhead	6	155,1	25	30	<b>125641</b> ●
Profile cutterhead	7	155,1	25	30	<b>125642</b> ●
Profile cutterhead	8	165	25	30	<b>125643</b> ●
Profile cutterhead bevel	8.1	165	25	30	<b>125644</b> ●
Profile cutterhead	9	165	25	30	<b>125645</b> ●
Profile cutterhead bevel	9.1	165	25	30	<b>125646</b> ●
Jointing cutterhead	10	125	15	30	<b>125687</b> ●
Rebating cutterhead	15	155	35	30	<b>125688</b> ●
Jointing cutterhead	16	125	30	30	<b>125689</b> ●

\* = Profile cutterheads supplied with profile P1.

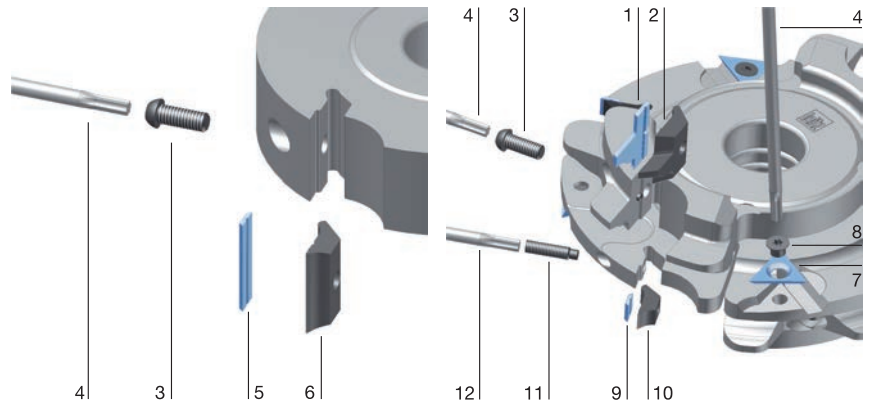
##### Spare knives:

Part- no.	BEZ	ABM mm	P	Tool no.	QAL	VE PCS	ID
1	ProfilCut Q knife	25x27x2	1	1	MC		<b>619291</b>
1	ProfilCut Q knife	25x27x2	2	1	MC		<b>619292</b>
1	ProfilCut Q knife	25x27x2	3	1	MC		<b>619293</b>
1	ProfilCut Q knife	25x27x2	4	1	MC		<b>619294</b>
1	ProfilCut Q knife	25x27x2	5	1	MC		<b>619295</b>
1	ProfilCut Q knife	25x27x2	1	1	MC		<b>619296</b>
1	ProfilCut Q knife	25x27x2	2	3	MC		<b>619297</b>
1	ProfilCut Q knife	25x27x2	3	3	MC		<b>619298</b>
1	ProfilCut Q knife	25x27x2	4	3	MC		<b>619299</b>
1	ProfilCut Q knife	25x27x2	5	3	MC		<b>619300</b>
1	ProfilCut Q knife	30x31x2	6/7	3	MC		<b>619301</b>
1	ProfilCut Q knife	30x31x2	6/7	5	MC		<b>619302</b>
1	ProfilCut Q knife	25x27x2	6/6.1/7	6	MC		<b>619303</b>
1	ProfilCut Q knife	25x27x2	6/6.1/7	7	MC		<b>619304</b>
1	ProfilCut Q knife	25x32x2	8	8	MC		<b>619305</b>
1	ProfilCut Q knife	25x32x2	8.1	8.1	MC		<b>619306</b>

Part- no.	BEZ	ABM mm	P	Tool no.	QAL	VE PCS	ID
1	ProfilCut Q knife	25x32x2	8	9	MC		<b>619307</b>
1	ProfilCut Q knife	25x32x2	8.1	9.1	MC		<b>619308</b>
5	Turnblade knife Marathon	14,7x8x1,5		10	HW-30F MC 10		<b>601603</b> ●
5	Turnblade knife Marathon	30x8x1,5		16	HW-30F MC 10		<b>601606</b> ●
5	Turnblade knife Marathon	35x8x1,5		15	HW-30F MC 10		<b>601607</b> ●
7	Turnblade spur VS2	19x19x2		2/5	HW-F	10	<b>005115</b> ●
9	Turnblade knife Marathon	7,7x8x1,5		2	HW-30F MC 10		<b>601600</b> ●

#### Spare parts:

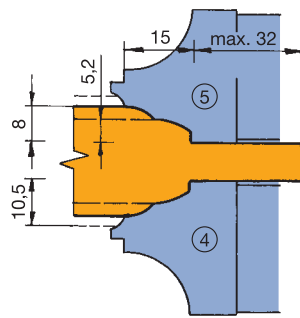
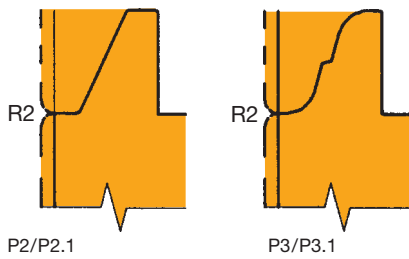
Part- no.	BEZ	ABM mm	P	Tool no.	ID
2	Clamping wedge profiled	22x30x8,27		3	<b>630172</b>
2	Clamping wedge profiled	22x30x8,27		1	<b>630173</b>
2	Clamping wedge profiled	27x38x8,27	6/6.1/7	4/4.1	<b>630174</b>
2	Clamping wedge profiled	27x38x8,27	6/6.1/7	5/5.1	<b>630175</b>
2	Clamping wedge profiled	22x37,3x8,27	6/6.1/7	6	<b>630176</b>
2	Clamping wedge profiled	22x37,3x8,27	6/6.1/7	7	<b>630177</b>
2	Clamping wedge profiled	22x37x8,27	8/8.1	8/8.1	<b>630178</b>
2	Clamping wedge profiled	22x37x8,27	8/8.1	9/9.1	<b>630179</b>
3	Clamping screw w. disc, Torx® 20	M5x18.5			<b>007446</b> ●
4	Torx® key	Torx® 20			<b>117503</b> ●
6	Clamping wedge	13x18,75x8,27		6	<b>630203</b> ●
6	Clamping wedge	28x18,75x8,27	1/2/16	4	<b>630206</b> ●
6	Clamping wedge	33x18,75x8,27	15	5	<b>630208</b> ●
8	Countersink screw, Torx® 20	M6x0,5x4,9			<b>006243</b> ●
10	Clamping wedge	7x18,75x8,27	2	2	<b>009763</b> ●
11	Allen screw with shank, Torx® 15	M5x20			<b>007380</b> ●
12	Torx® key	Torx® 15			<b>117507</b> ●
	Magnetic setting gauge	0.3/0.8			<b>005376</b> ●



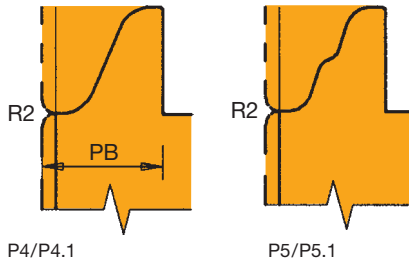
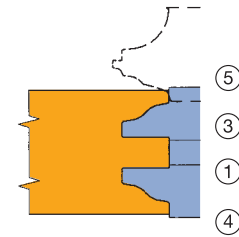
## 4. Manual feed

### 4.4 Profiling

#### 4.4.4 Profile and counter profile cutterheads

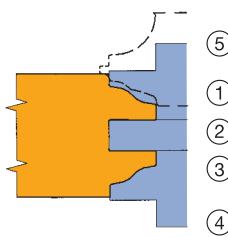


Double profile



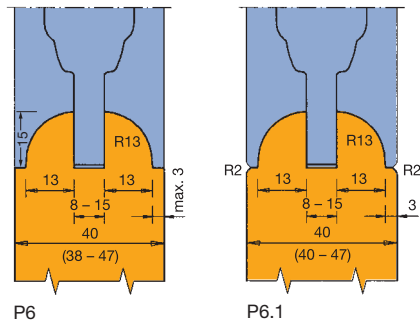
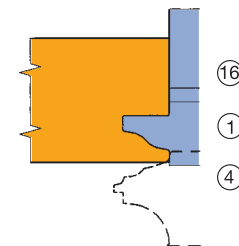
These profile cutterheads can be used for panel raising.

Fig.: Combination options of single tools  
Double profile

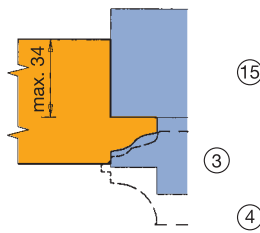


Profiles P1 - P5.1 counter profile

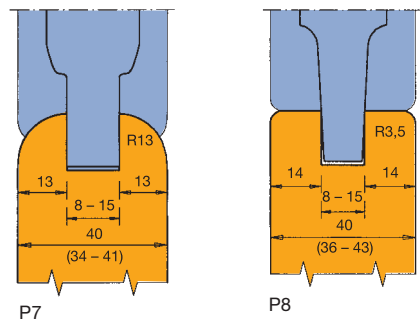
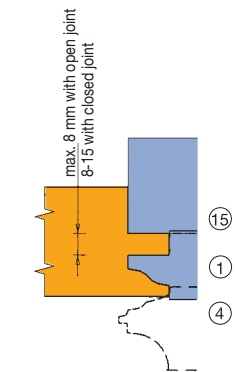
Rebate\*



For profiles P1 - P5.1 along grain

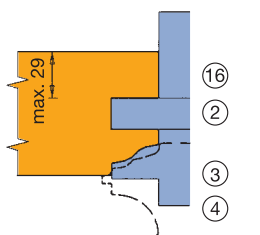


On one side\*

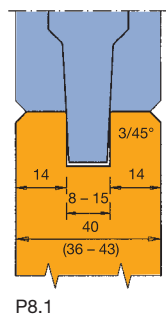
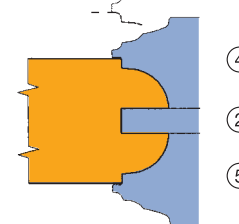


Rebate\*

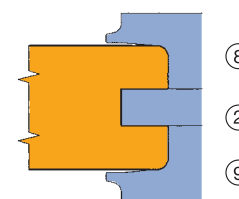
On one side\*



\* Profiles P1 - P8 (rebate possible and on one side)



Profiles P6 - P7 along grain

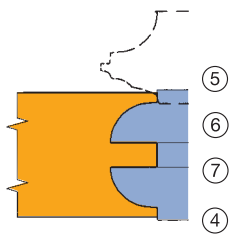


Profile P8 along grain

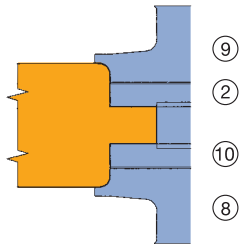
## 4. Manual feed

### 4.4 Profiling

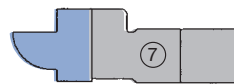
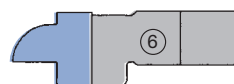
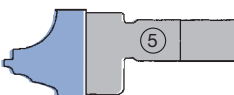
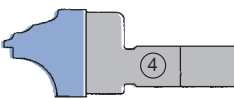
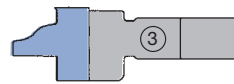
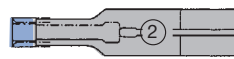
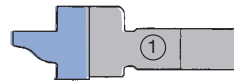
#### 4.4.4 Profile and counter profile cutterheads



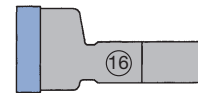
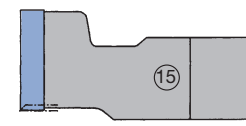
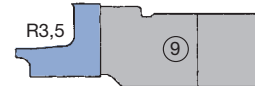
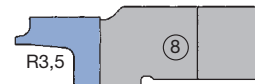
Profiles P6 - P7 counter profile



Profile P8 counter profile



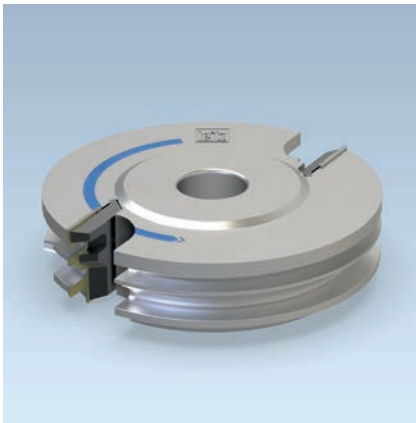
Single tools



## 4. Manual feed

### 4.4 Profiling

#### 4.4.4 Profile and counter profile cutterheads



#### Profile cutterhead ProfilCut Q for furniture doors

**Application:**

For profiles and counter profiles for furniture doors.

**Machine:**

Spindle moulders and moulders.

**Workpiece material:**

Softwood and hardwood.

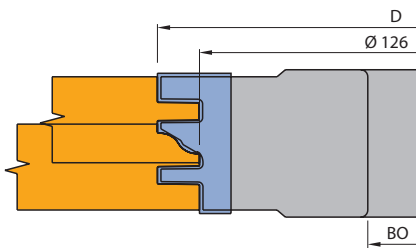
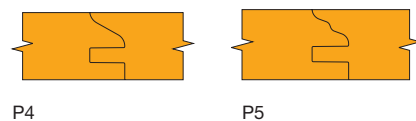
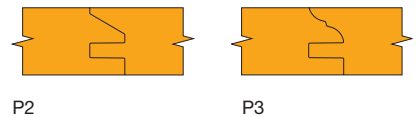
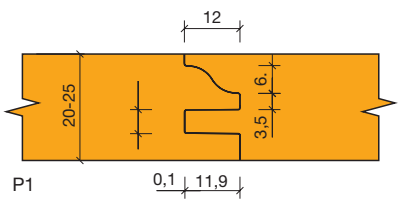
**Technical information:**

Cutterhead with change knives, straight cut.

**SB 20 - 25 mm; with closed joint**

WE 640 1 53

P	D mm	SB mm	BO mm	BO <sub>max</sub> mm	Z	n min <sup>-1</sup>	ID
1	150	40	30	50	2	5200 - 8900	125647 ●
1	150	40	50		2	5200 - 8900	125648 □



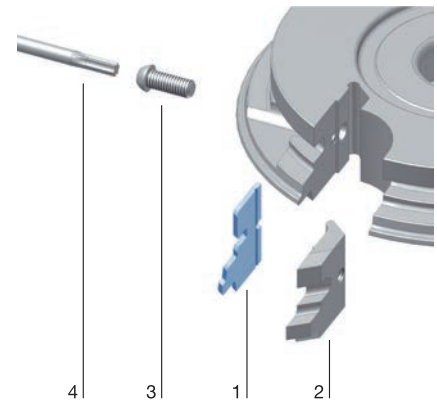
Profile cutterhead

**Spare knives:**

P	Part-no.	BEZ	ABM mm	QAL	ID
1	1	ProfilCut Q knife	40x26x2	MC	619311
2	1	ProfilCut Q knife	40x26x2	MC	619312
3	1	ProfilCut Q knife	40x26x2	MC	619313
4	1	ProfilCut Q knife	40x26x2	MC	619314
5	1	ProfilCut Q knife	40x26x2	MC	619315

**Spare parts:**

Part-no.	BEZ	ABM mm	ID
2	Clamping wedge profiled	37x35x8,27	630180
3	Clamping screw w. disc, Torx® 20	M5x18.5	007446 ●
4	Torx® key	Torx® 20	117503 ●





## 4. Manual feed

### 4.4 Profiling

#### 4.4.5 Panel raising profile cutterheads



#### Profile cutterhead ProfilCut Q - panel raising

**Application:**

For profiling and panel raising 5 different profiles by knife change.

**Machine:**

Spindle moulders and moulders, double-end tenoners.

**Workpiece material:**

Softwood and hardwood (along and across grain).

**Technical information:**

Cutterhead with change knives, shear angle.

**Profiling and panel raising, panel raising profile curved**

AE 342 1 53

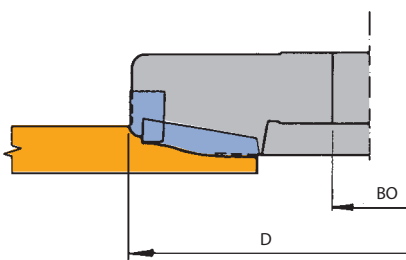
P	D	SB	BO	BO <sub>max</sub>	Z	n	DRI	ID
	mm	mm	mm	mm		min <sup>-1</sup>		
1	190	40	30	50	2/2	4100 - 7000	RH	<b>125649 ●</b>

**Spare knives:**

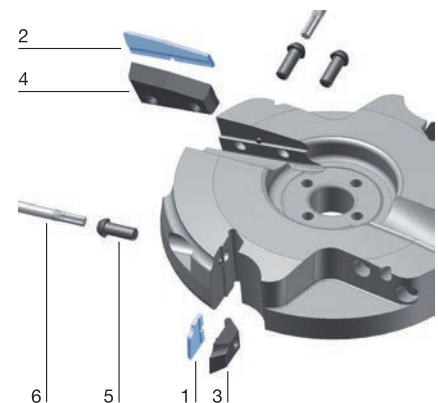
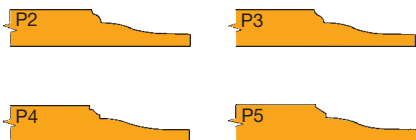
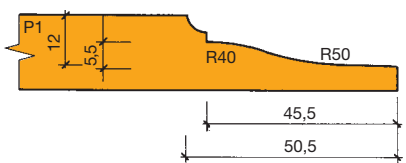
P	Part-no.	BEZ	ABM	ID
			mm	
1	1	ProfilCut Q knife	20x16x2	<b>619321 ●</b>
2	1	ProfilCut Q knife	20x16x2	<b>619322 ●</b>
3	1	ProfilCut Q knife	20x16x2	<b>619323 ●</b>
4	1	ProfilCut Q knife	20x16x2	<b>619324 ●</b>
5	1	ProfilCut Q knife	20x16x2	<b>619325 ●</b>
2	2	ProfilCut Q knife (pan.rais.)	50x11,68x2	<b>619326 ●</b>

**Spare parts:**

Part-no.	BEZ	ABM	ID
		mm	
3	Clamping wedge profiled	17x25x8,27	<b>630181</b>
4	Clamping wedge profiled	47x23,2x8,27	<b>630182</b>
5	Clamping screw w. disc, Torx® 20	M5x18,5	<b>007446 ●</b>
6	Torx® key	Torx® 20	<b>117503 ●</b>



**Single side panel raising**





### Profile cutterhead ProfilCut Q - panel raising

**Application:**

For profiling and panel raising 5 different profiles by knife change.

**Machine:**

Spindle moulders and moulders, double-end tenoners.

**Workpiece material:**

Softwood and hardwood (along and across grain).

**Technical information:**

Cutterhead with change knives, shear angle.

**Profiling and panel raising, panel raising profile straight**

AE 342 1 53

P	D	SB	BO	BO <sub>max</sub>	Z	n	DRI	ID
	mm	mm	mm	mm		min <sup>-1</sup>		
1	204	33	30	50	2/2	3800 - 6500	RH	<b>125650</b>
1	220	33	30	50	2/2	3500 - 6000	RH	<b>125651</b>
1	220	33	50	50	2/2	3500 - 6000	RH	<b>125652</b>

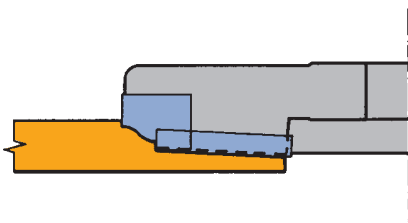
P1 = Profile cutterhead P1.

**Spare knives:**

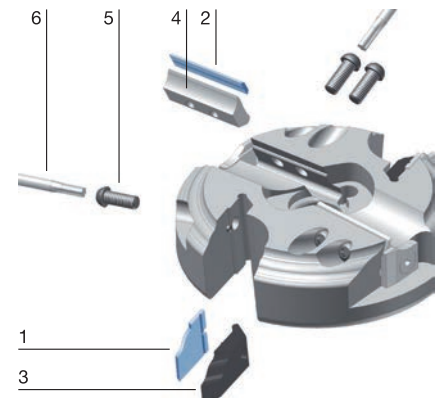
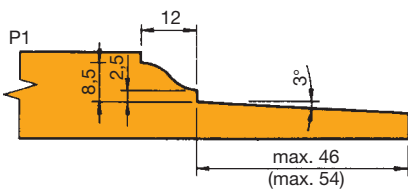
P	Part-no.	BEZ	ABM	VE	ID
			mm	PCS	
1	1	ProfilCut Q knife	20x27x2		<b>619327</b>
2	1	ProfilCut Q knife	20x27x2		<b>619328</b>
3	1	ProfilCut Q knife	20x27x2		<b>619329</b>
4	1	ProfilCut Q knife	20x27x2		<b>619330</b>
5	1	ProfilCut Q knife	20x27x2		<b>619331</b>
	2	Turnblade knife Marathon	50x8x1,5	10	<b>601610 ●</b>
	2	Turnblade knife Marathon	60x8x1,5	10	<b>601611 ●</b>

**Spare parts:**

P	Part-no.	BEZ	ABM	ID
			mm	
1-5	3	Clamping wedge profiled	17x35x8,27	<b>630183</b>
	4	Clamping wedge	48x18,75x8,27	<b>630211 ●</b>
	4	Clamping wedge	58x18,75x8,27	<b>630212 ●</b>
	5	Clamping screw w. disc, Torx®	M5x18.5	<b>007446 ●</b>
	20			
	6	Torx® key	Torx® 20	<b>117503 ●</b>



Single side panel raising



## 4. Manual feed

### 4.4 Profiling

#### 4.4.5 Panel raising profile cutterheads



#### Profile cutterhead ProfilCut Q - panel raising

##### Application:

For profiling and panel raising 4 different profiles by knife change.

##### Machine:

Spindle moulders and moulders, double-end tenoners.

##### Workpiece material:

Softwood and hardwood, three layer laminate.

##### Technical information:

Cutterhead with change knives and shear angle. Tool with 4 profile variants (bevel and quarter round).



#### Profiling and panel raising using one knife, panel raising profile straight

WE 550 1 53

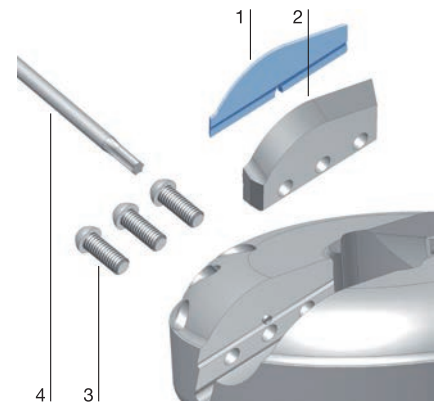
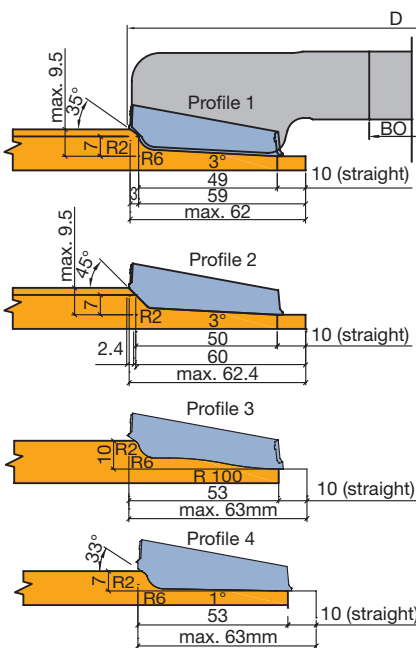
P	D	SB	BO	BO <sub>max</sub>	Z	n	ID
	mm	mm	mm	mm		min <sup>-1</sup>	
1	200	10 - 37	30	50	2	3900 - 6600	<b>125653 ●</b>

#### Spare knives:

P	Part-no.	BEZ	ABM	QAL	ID
			mm		
1	1	ProfilCut Q knife	60x14,5x2	MC	<b>619332 ●</b>
2	1	ProfilCut Q knife	60x14,56x2	MC	<b>619333 ●</b>
3	1	ProfilCut Q knife	60x14,5x2	MC	<b>619489</b>
4	1	ProfilCut Q knife	60x14,5x2	MC	<b>619490</b>

#### Spare parts:

Part-no.	BEZ	ABM	ID
		mm	
2	Clamping wedge profiled	57x26,1x7,25	<b>630184</b>
3	Clamping screw w. disc, Torx® 20	M5x18.5	<b>007446 ●</b>
4	Torx® key	Torx® 20	<b>117503 ●</b>





### Profile cutterhead set ProfilCut Q

#### Application:

For panel raising of cabinet doors, table tops and worktops.

#### Machine:

Spindle moulders and moulders, double-end tenoners.

#### Workpiece material:

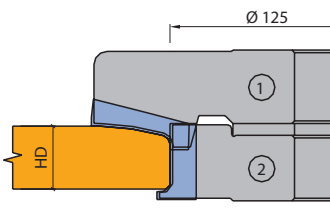
Softwood and hardwood, wood derived materials.

#### Technical information:

Cutterhead with throwaway knives and shear angle. Can be used either as single tool without jointing or as set with jointing cutterhead.



Profile 1.1



P1.1



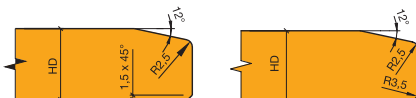
P1.2



P1.3



P2.2



P2.1



P2.3

#### Profile cutterhead set with jointing

SE 500 1 53

P	Tool no.	D mm	SB mm	BO mm	BO <sub>max</sub> mm	Z	n min <sup>-1</sup>	ID
1.1	1 / 2	185	29 - 29,5	30	50	2	4200 - 7200	<b>126230 ●</b>

#### Single tools

WE 500 1 53, WE 550 1 53

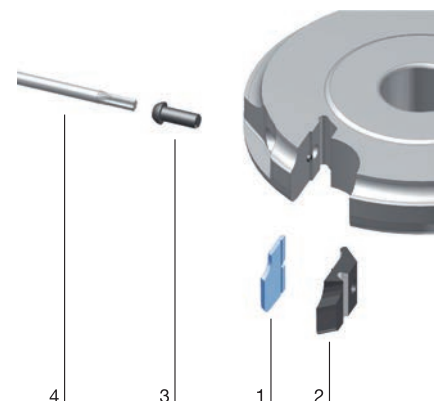
Tool no.	D mm	SB mm	BO mm	BO <sub>max</sub> mm	Z	n min <sup>-1</sup>	ID
1	185	10 - 38	30	50	2	4200 - 7200	<b>125654</b>
2	135	29 - 29,5	30	50	2	5700 - 9800	<b>125655</b>

#### Spare knives:

P	Part-no.	BEZ	ABM mm	Tool no.	QAL	ID
1	1	ProfilCut Q knife	40x13,9x2	1	MC	<b>619316</b>
2	1	ProfilCut Q knife	40x13,88x2	1	MC	<b>619317</b>
1	1	ProfilCut Q knife	30x14,9x2	2	MC	<b>619318</b>
2	1	ProfilCut Q knife	30x15x2	2	MC	<b>619319</b>
3	1	ProfilCut Q knife	30x14,95x2	2	MC	<b>619320</b>

#### Spare parts:

Part-no.	BEZ	ABM mm	Tool no.	ID
2	Clamping wedge profiled	37x24,9x8,27	1	<b>630185 ●</b>
2	Clamping wedge profiled	27x23x8,27	2	<b>630186 ●</b>
3	Clamping screw w. disc, Torx® 20	M5x18.5		<b>007446 ●</b>
4	Torx® key	Torx® 20		<b>117503 ●</b>





**Profile cutterhead ProfilCut Q for handrail profile**

**Application:**

For handrails. Copy shaping of curved workpieces using template and ball bearing guide ring.

**Machine:**

Spindle moulders and moulders, machines with/without CNC control.

**Workpiece material:**

Softwood and hardwood.

**Technical information:**

Cutterhead with change knives and straight cut.



**Handrail profile**

WE 500 1 53

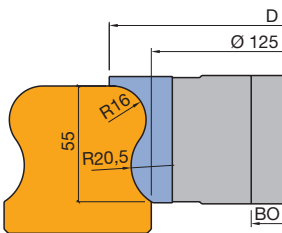
D	SB	BO	BO <sub>max</sub>	Z	n	ID
mm	mm	mm	mm		min <sup>-1</sup>	
165	60 - 61	30	50	2	4700 - 8100	<b>125656 ●</b>

**Spare knives:**

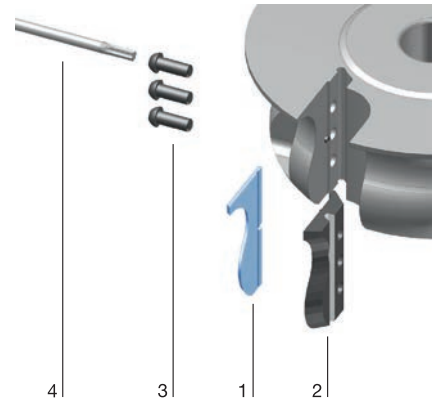
Part-no.	BEZ	ABM	QAL	ID
		mm		
1	ProfilCut Q knife	60x32.7x2.4	MC	<b>619500</b>

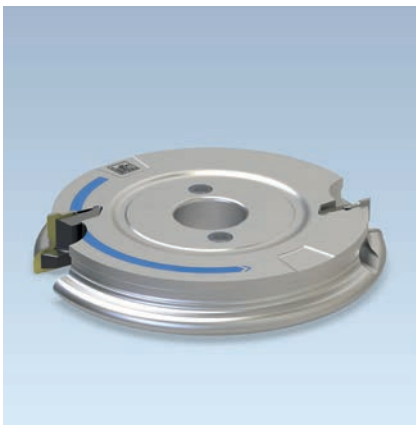
**Spare parts:**

Part-no.	BEZ	ABM	ID
		mm	
2	Clamping wedge profiled	57x35x8,27	<b>630187</b>
3	Clamping screw w. disc, Torx® 20	M5x18.5	<b>007446 ●</b>
4	Torx® key	Torx® 20	<b>117503 ●</b>



Handrail profile





### Profile Cutterhead ProfilCut Q for grip rails

**Application:**  
For cutting recessed grips.

**Machine:**  
Spindle moulders and moulders.

**Workpiece material:**  
Softwood and hardwood, chip and fibre board, raw or plastic coated, glulam etc.

**Technical information:**  
Maximum operating comfort due to lightweight construction of the tool body. Longer lasting consistent finish cutting quality due to Marathon high performance coating.



**MAN feed**  
WE 500 1 53

D	SB	BO	BO <sub>max</sub>	Z	ID
mm	mm	mm	mm		
150	25	30	50	2	<b>125657 •</b>

**RPM:**  $n_{\max} = 12500 \text{ min}^{-1}$

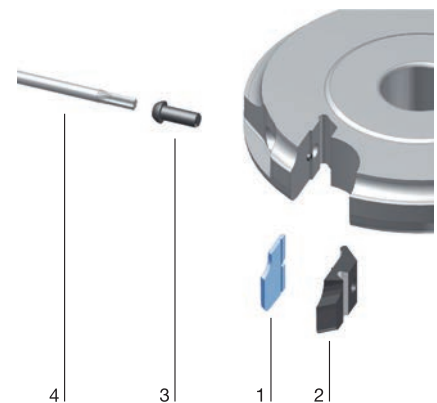
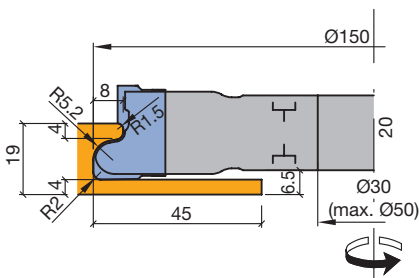
Throwaway knives for other profile variants available on request.

#### Spare knives:

Part-no.	BEZ	ABM	QAL	ID
		mm		
1	ProfilCut Q knife	25.1x21x2.4	MC	<b>619475</b>

#### Spare parts:

Part-no.	BEZ	ABM	ID
		mm	
2	Clamping wedge profiled	21x29,5x8,27	<b>630188</b>
3	Clamping screw w. disc, Torx® 20	M5x18.5	<b>007446 •</b>
4	Torx® key	Torx® 20	<b>117503 •</b>



## 4. Manual feed

### 4.4 Profiling 4.4.6 Common profiles



#### Profile cutterhead ProfilCut Q for gear grooves

**Application:**  
For gear grooves.

**Machine:**  
Spindle moulders and moulders.

**Workpiece material:**  
Softwood and hardwood.

**Technical information:**  
Cutterhead with change knives. User friendliness by lightweight construction of the tool body. Longer performance and cut quality due to Marathon high performance coating.



**Gear groove**  
WE 500 1 53

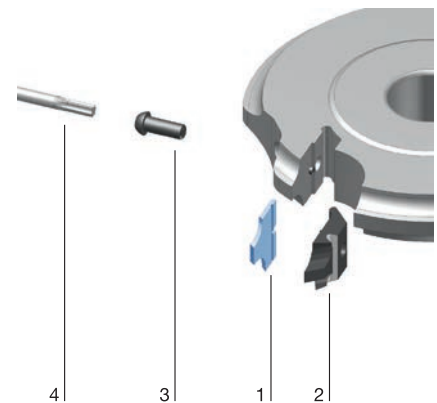
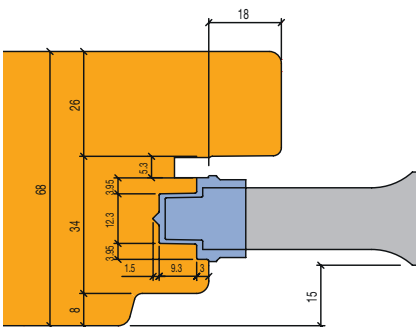
D	SB	BO	BO <sub>max</sub>	Z	n	ID
mm	mm	mm	mm		min <sup>-1</sup>	
188,6	21,3/23,1	30	50	2	4100 - 9100	<b>125658 ●</b>

**Spare knives:**

Part-no.	BEZ	ABM	QAL	ID
		mm		
1	ProfilCut Q knife	21.3x25x2.4	MC	<b>619521</b>

**Spare parts:**

Part-no.	BEZ	ABM	ID
		mm	
2	Clamping wedge	15x33x8,27	<b>630189</b>
3	Clamping screw w. disc, Torx® 20	M5x18.5	<b>007446 ●</b>
4	Torx® key	Torx® 20	<b>117503 ●</b>



## 4. Manual feed

### 4.4 Profiling

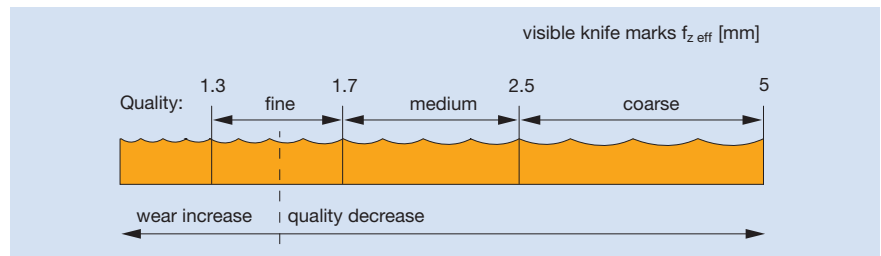
#### 4.4.7 Multi-purpose profile cutterheads

##### Type of operation

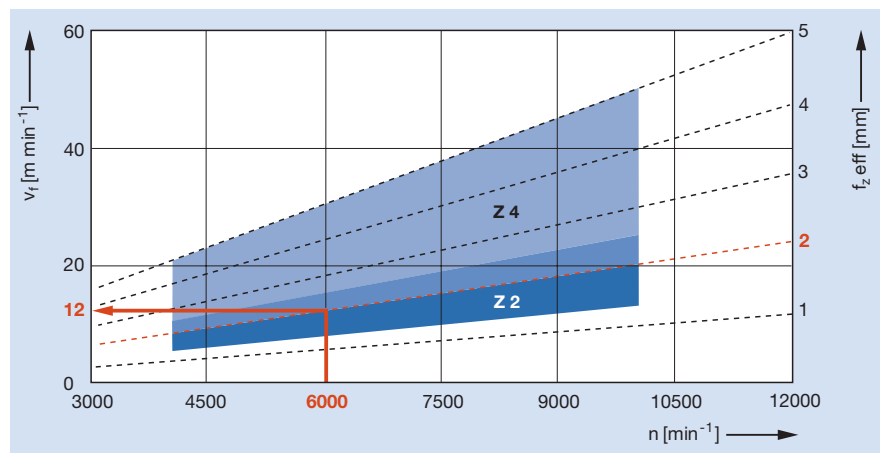
The tools described in the following section are suitable for making many different profiles. This includes profiling in craft or industry, the relevant product descriptions provide a reference when using a specific tool, and the type of woods processed.

The introduction to each section gives general notes and application regulations.

##### Relation between surface quality and length of knife marks $f_{z\text{ eff}}$



##### Feed speeds depending on RPM, length of knife marks and number of teeth



With multi blade tools, only the marks of one knife show on the surface (one knife finish). Z 2 and Z 4 tools produce the same surface quality with same machine setting. High numbers of teeth are required for a high hogging performance.

##### Workpiece materials, machines, application

Please refer to the relevant product pages depending on the operation and profile.

##### Tool system



WM 500 1 04 Profile cutterhead with limiter, tool body in aluminium.

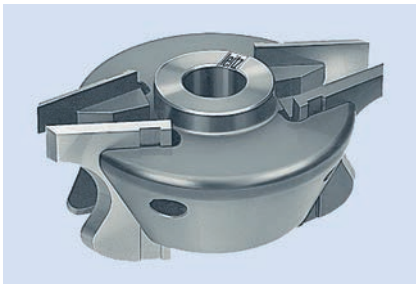
For profile depths up to maximum 15 mm and cutting widths of 50 mm. (WM 510 1 03)  
 For profile depths up to maximum 15 mm and cutting widths of 40 mm. (WM 500 1 04)  
 For small companies or craft. For spindle moulders or combination machines. More than 127 standard profile cutters and limitors available. If required Leitz can supply profile knives and limitors in HS quality to a special shape. Only a drawing or wood sample of the required profile is necessary to produce the special knives.



## 4. Manual feed

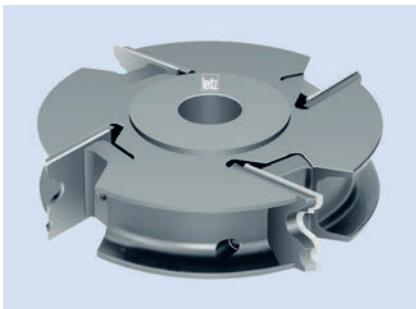
### 4.4 Profiling

#### 4.4.7 Multi-purpose profile cutterheads



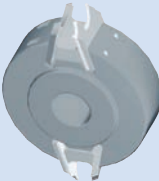
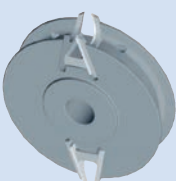

WM 530 1 01 Profile cutterhead.  
 WM 530 1 02 Profile cutterhead.  
 WM 520 1 Profile cutterhead.  
 WM 540 1 Profile cutterhead.

For big profile depths up to maximum 45 mm and cutting widths up to 80 mm. Suitable for small and medium sized companies to produce special profiles. For machines with manual feed. Special profile knives in HS quality can be produced by the Leitz service stations on request. Only a sketch or wood sample of the required profile is necessary to produce special profile knives.



Profile cutterhead VariForm.

**VariForm** cutterheads are available in different designs and dimensions. The tool body is designed for mech. feed without limiter or for manual feed with limiter depending on the application. Please select the correct type of cutterhead for each application from the diagram below.

Design variation	Profile depth up to 15/19 mm	Profile depth up to 20 mm	Profile depth up to 35 mm
<b>MAN-feed</b> For spindle moulders	 Multi-purpose tool body	 Part profiled tool body, U-profile	 Profiled tool body, cranked right/left
Cutting width	40/45 mm a. 50/60 mm	45/45 mm a. 50/60 mm	40 mm to 60 mm

## 4. Manual feed

### 4.4 Profiling

#### 4.4.7 Multi-purpose profile cutterheads



#### Profile cutterhead, aluminium tool body

**Application:**

For profiling, jointing and rebating.

**Machine:**

Spindle moulders and moulders.

**Workpiece material:**

Softwood.

**Technical information:**

Profile cutterhead with aluminium tool body for standard and special profile knives up to 50 mm cutting width and maximum profile depth 15 mm. Constant diameter by using changeable profile knives. Knife thickness 4 mm.



**D 108 mm - 148 mm**

WM 500 1 04, WM 500 1 06

D	SB	BO	BO <sub>max</sub>	Z	n	QAL	ID
mm	mm	mm	mm		min <sup>-1</sup>		
108	40	30	30	2	6000 - 10000	SP	<b>025685 ●</b>
128	40 - 50	30	40	2	6000 - 9000	SP	<b>025815 ●</b>
128	80	30	40	2	6000 - 8000	SP	<b>025816 ●</b>
148	40 - 50	30	50	2	5500 - 7000	SP	<b>025691 ●</b>

See section Knives and Spare Parts.

Table for diameters when using rebating and profile knives:

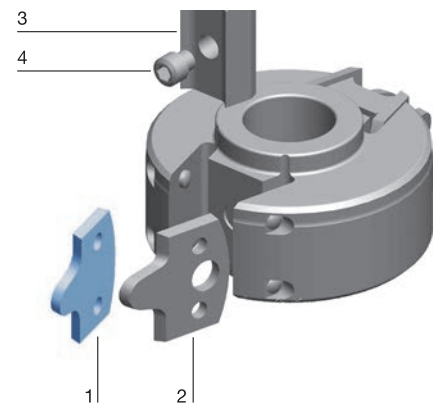
D-mm Tool body	D-mm with rebating knife	D-mm with profile knife
93	108	130
114	128	150

**Spare knives:**

Part-no.	BEZ	ABM	QAL	ID
		mm		
1	Rebate knife	40x32,8x4	SP	<b>007104 ●</b>
2	Limiter	38,4x32,8x4	ST	<b>005586 ●</b>

**Spare parts:**

Part-no.	BEZ	ABM	ID
		mm	
3	Clamping wedge	36x13,21x26	<b>009756 ●</b>
3	Clamping wedge	56x13,21x26	<b>009757 ●</b>
4	Allen screw with ISK 5	M10x12	<b>006044 ●</b>
	Allen key	SW 5	<b>005446 ●</b>



## 4. Manual feed

### 4.4 Profiling

#### 4.4.7 Multi-purpose profile cutterheads



#### Profile cutterhead

##### Application:

For deep one-sided profiles, maximum 45 mm depth.

##### Machine:

Spindle moulders and moulders.

##### Workpiece material:

Softwood and hardwood.

##### Technical information:

Cutting width up to 50 mm. See illustration for usable profile area.  
Knife thickness 4.0 mm.



#### MAN feed, for one sided profiles with SB 50 mm

WM 530 1 01

D	TD	SB	BO	BO <sub>max</sub>	Z	n	ID
mm	mm	mm	mm	mm		min <sup>-1</sup>	
200	148	50	30	40	2	4500 - 7000	<b>029636 ●</b>

Sales unit without knives and limitors.

Note: State direction of rotation when ordering knives.

#### Spare knives:

BEZ	BEM	ABM	QAL	ID
		mm		
Blank Knife	R/T	50.4x45x4	HS	<b>007297 ●</b>
Blank Knife	R/B	50.4x45x4	HS	<b>007298 ●</b>
Limiter blank	R/T	48.8x45x4	SP	<b>005603 ●</b>
Limiter blank	R/B	48.8x45x4	SP	<b>005604 ●</b>

#### Spare parts:

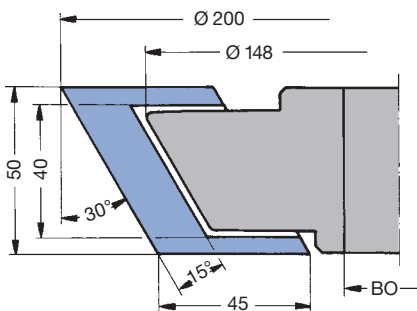
BEZ	ABM	ID
		mm
Allen screw	M10x16	<b>006046</b>
Allen key	SW 5	<b>005446 ●</b>
Double wedge	49,2x13,2x26	<b>009927 ●</b>

#### HS-special profiles and SP-profile limitors

Profile knives set inc. limitor	PG I	SB = 50 mm
Profile knives set inc. limitor	PG II	SB = 50 mm
Set consists of:	2 HS-Profile knives; 2 SP-Limitors	

Profile knives and limitors produced to customer's profile.

**Only use this cutterhead with original Leitz profile knives and limitors!**





### Profile cutterhead

#### Application:

For deep one-sided profiles with large profile depth, maximum 45 mm depth. Easy to use, no setting gauge required.

#### Machine:

Spindle moulders and moulders.

#### Workpiece material:

Softwood and hardwood.

#### Technical information:

Cutting width up to 80 mm. See illustration for usable profile area. Knife thickness 4.0 mm.



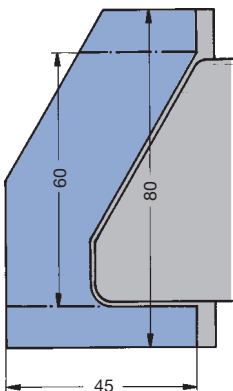
#### MAN feed, for one sided profiles with SB 60 - 80 mm

WM 530 1 02

D	SB	BO	BO <sub>max</sub>	HD	PT <sub>max</sub>	Z	n	ID
mm	mm	mm	mm	mm	mm		min <sup>-1</sup>	
180	60 - 80	30	40	80	45	2	4500 - 6000	<b>026768</b> ●
180	60 - 80	40	40	80	45	2	4500 - 6000	<b>026769</b> □

Sales unit without knives and limitors.

Note: State direction of rotation when ordering knives.



#### Spare knives:

Part-no.	BEZ	ABM	QAL	ID
		mm		
1	Blank Knife R/B	60x60x6	HS	<b>007280</b> ●
1	Blank Knife R/B	80x60x6	HS	<b>007281</b> ●
1	Blank Knife R/T	60x60x6	HS	<b>007282</b> ●
1	Blank Knife R/T	80x60x6	HS	<b>007283</b> ●
2	Limiter blank R/B (60)	58x59.2x6	SP	<b>005596</b> ●
2	Limiter blank R/B (80)	78x59.2x6	SP	<b>005597</b> ●
2	Limiter blank R/T (60)	58x59.2x6	SP	<b>005598</b> ●
2	Limiter blank R/T (80)	78x59.2x6	SP	<b>005599</b> ●

#### Spare parts:

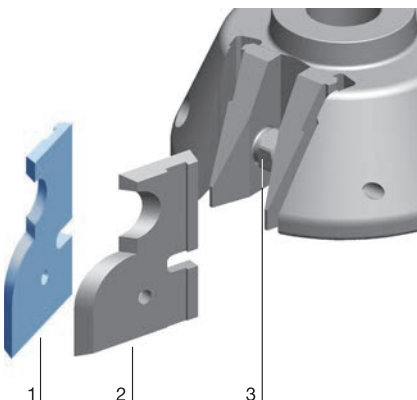
Part-no.	BEZ	ABM	ID
		mm	
3	Clamping screw	M16x1.5x36 LH/RH	<b>005958</b> ●
	Key	SW 17	<b>005456</b> ●

#### HS-special profiles and SP-profile limitors

PG I	Set of profile knives	SB = 60 mm
PG II	Set of profile knives	SB = 60 mm
PG I	Set of profile knives	SB = 80 mm
PG II	Set of profile knives	SB = 80 mm
Set consists of:		2 HS-Profile knives
		2 SP-Limitors

Profile knives and limitors are produced to customer's profile.

**Only use this cutterhead with original Leitz profile knives and limitors!**



## 4. Manual feed

### 4.4 Profiling

#### 4.4.7 Multi-purpose profile cutterheads



#### Profile cutterhead

##### Application:

For deep profiles with large profile depth, maximum 45 mm depth, with resharpenable profile knives and limitors. Easy to use, no setting gauge required.

##### Machine:

Spindle moulders and moulders.

##### Workpiece material:

Softwood and hardwood.

##### Technical information:

Cutting width up to 80.0 mm. Symmetrical tool body for right hand or left hand rotation as required.



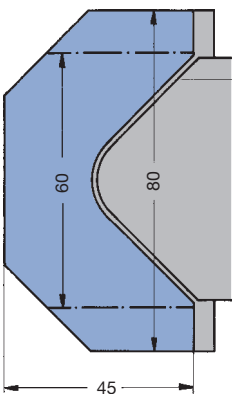
##### MAN feed for symmetric profiles SB 60 - 80 mm

WM 520 1

D	SB	BO	BO <sub>max</sub>	HD	PT <sub>max</sub>	Z	n	ID
mm	mm	mm	mm	mm	mm		min <sup>-1</sup>	
180	60 - 80	30	40	80	45	2	4500 - 6000	026651 ●
180	60 - 80	40	40	80	45	2	4500 - 6000	026652 □

Sales unit without knives and limitors.

Note: State direction of rotation when ordering knives.



##### Spare knives:

Part-no.	BEZ	ABM	QAL	ID
		mm		
1	Blank Knife	60x60x6	HS	007278 ●
1	Blank Knife	80x60x6	HS	007279 ●
2	Limiter blank	58x59.2x6	SP	005594 ●
2	Limiter blank	78x59.2x6	SP	005595 ●

##### Spare parts:

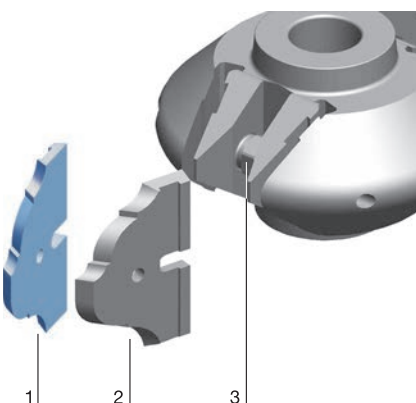
Part-no.	BEZ	ABM	ID
		mm	
3	Clamping screw	M16x1.5x36 LH/RH	005958 ●
	Key	SW 17	005456 ●

##### HS-special profiles and SP-profile limitors

PG I	Set of profile knives	SB = 60 mm
PG II	Set of profile knives	SB = 60 mm
PG I	Set of profile knives	SB = 80 mm
PG II	Set of profile knives	SB = 80 mm
Set consists of:		2 HS-Profile knives
		2 SP-Limitors

Profile knives and limitors are produced to customer's profile.

**Only use this cutterhead with original Leitz profile knives and limitors!**





**Profile cutterhead**

**Application:**

For deep profiles with large profile depth, maximum 45 mm depth, with resharpenable profile knives and limitors. Easy to use, no setting gauge required.

**Machine:**

Spindle moulders and moulders.

**Workpiece material:**

Softwood and hardwood.

**Technical information:**

Cutting width up to 80.0 mm. Symmetrical tool body for right hand or left hand rotation as required.



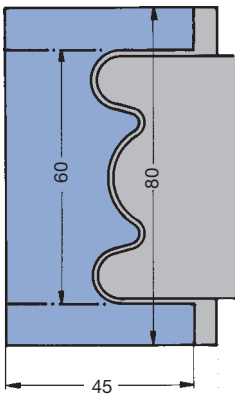
**MAN feed for symmetric closed profiles SB 60 - 80 mm**

WM 540 1

D	SB	BO	BO <sub>max</sub>	HD	PT <sub>max</sub>	Z	n	ID
mm	mm	mm	mm	mm	mm		min <sup>-1</sup>	
180	60 - 80	30	40	80	45	2	4500 - 6000	026865 ●
180	60 - 80	40	40	80	45	2	4500 - 6000	026866 □

Sales unit without knives and limitors.

Note: State direction of rotation when ordering knives.



**Spare knives:**

Part-no.	BEZ	ABM	QAL	ID
		mm		
1	Blank Knife	60x60x6	HS	007276 ●
1	Blank Knife	80x60x6	HS	007277 ●
2	Limiter blank	58x59.2x6	SP	005600 ●
2	Limiter blank	78x59.2x6	SP	005601 ●

**Spare parts:**

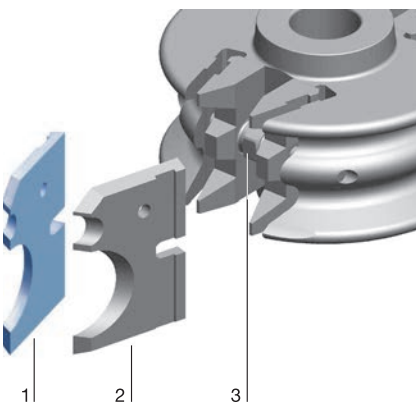
Part-no.	BEZ	ABM	ID
		mm	
3	Clamping screw	M16x1.5x36 LH/RH	005958 ●
	Key	SW 17	005456 ●

**HS-special profiles and SP-profile limitors**

PG I	Set of profile knives	SB = 60 mm
PG II	Set of profile knives	SB = 60 mm
PG I	Set of profile knives	SB = 80 mm
PG II	Set of profile knives	SB = 80 mm
Set consists of:		2 HS-Profile knives
		2 SP-Limitors

Profile knives and limitors are produced to customer's profile.

**Only use this cutterhead with original Leitz profile knives and limitors!**





### Profile cutterhead VariForm

#### Application:

For cutting profiles. Different knives with maximum 15 mm profile depth can be mounted.

#### Machine:

Spindle moulders and moulders, double-end tenoners, edgbanding machines etc.

#### Workpiece material:

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

#### Technical information:

Multi-purpose profile cutterhead for MAN feed with tungsten carbide special profile knives and backing plates and limitors. Resharpenable 3 to 4 times.



#### Tool body, MAN feed, Z 2

TT 531 1

D	TD	SB	BO	BO <sub>max</sub>	PT <sub>max</sub>	Z	n <sub>max</sub>	ID
mm	mm	mm	mm	mm	mm		min <sup>-1</sup>	
150	116	40 - 45	30	50	15	2	8000	135100 ●
150	116	50 - 60	30	50	15	2	8000	135101 ●

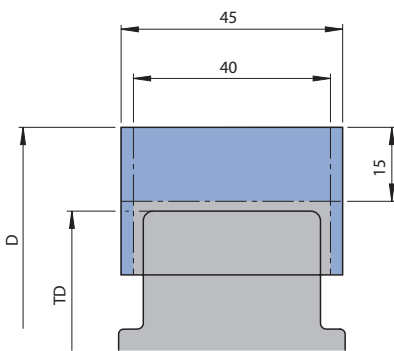
Supplied with clamping wedges, but without backing plates, limitors and knives.

#### Spare knives:

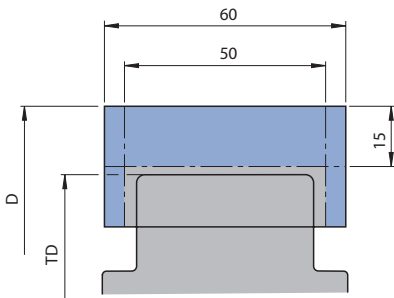
Teile-Nr.	SB	H	PT <sub>max</sub>	ID	ID
	mm	mm	mm	HW-10F	HW-30F
1	40	40	15	636227 ●	636240 ●
1	45	40	15	636231 ●	636244 ●
1	50	40	15	636284 ●	636272 ●
1	60	40	15	636288 ●	636276 ●

#### Spare parts:

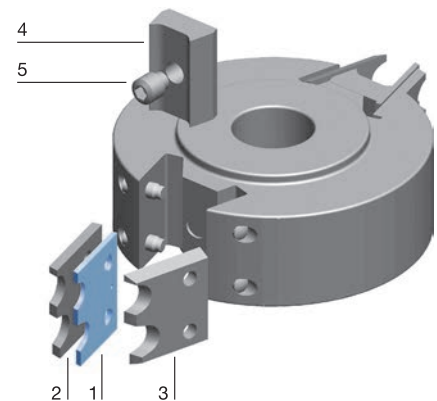
Part-no.	BEZ	ABM	for SB	ID
		mm	mm	
2	Backing plate VariForm	for knives 40x40x2.1	40	645000 ●
2	Backing plate VariForm	for knives 45x40x2.1	45	645001 ●
2	Backing plate VariForm	for knives 50x40x2.1	50	645002 ●
2	Backing plate VariForm	for knives 60x40x2.1	60	645003 ●
3	Limiter VariForm	for knives 40x40x2.1		640000 ●
3	Limiter VariForm	for knives 45x40x2.1		640001 ●
3	Limiter VariForm	for knives 50x40x2.1		640002 ●
3	Limiter VariForm	for knives 60x40x2.1		640003 ●
4	Clamping wedge	36x13,21x26	40/45	009756 ●
4	Clamping wedge VariForm	44x13,21x24,25	50/60	009760 ●
5	Allen screw with ISK 5	M10x12		006044 ●
	Allen key	SW 5, L100		117506 ●



Tool body, SB 40/45 mm



Tool body, SB 50/60 mm







### Profile cutterhead VariForm

#### Application:

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

#### Machine:

Spindle moulders and moulders, double-end tenoners, edgbanding machines etc.

#### Workpiece material:

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

#### Technical information:

Multi-purpose profile cutterhead for MAN feed with tungsten carbide special profile knives and backing plates and limitors. Resharpenable 3 to 4 times.



#### Part profiled tool body, MAN feed, Z 2 (U-profile).

TT 531 1

D	TD	SB	BO	BO <sub>max</sub>	PT <sub>max</sub>	Z	n <sub>max</sub>	ID
mm	mm	mm	mm	mm	mm		min <sup>-1</sup>	
180	165	40	30	50	20	2	7200	135120 ●
180	165	60	30	50	20	2	7200	135122 ●

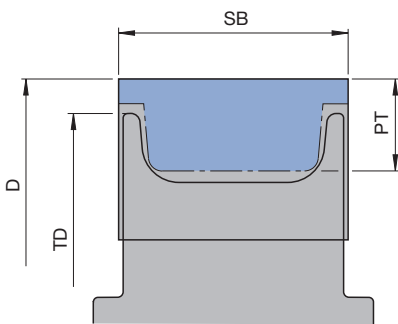
Supplied with clamping wedges, but without backing plates, limitors and knives.

#### Spare knives:

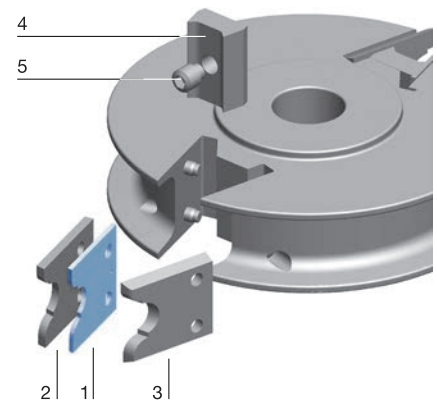
Teile-Nr.	SB	H	PT	ID	ID
	mm	mm	mm	HW-10F	HW-30F
1	40	45	20	636226 ●	636239 ●
1	60	45	20	636287 ●	636275 ●

#### Spare parts:

Part-no.	BEZ	ABM	for SB	ID
		mm	mm	
2	Backing plate VariForm	for knives 40x45x2.1		645004 ●
2	Backing plate VariForm	for knives 60x45x2.1		645006 ●
3	Limitor VariForm	for knives 40x45x2.1		640004 ●
3	Limitor VariForm	for knives 60x45x2.1		640006 ●
4	Clamping wedge	36x13,21x26	40/45	009756 ●
4	Clamping wedge	56x13,21x26	60	009757 ●
5	Allen screw with ISK 5	M10x12		006044 ●
	Allen key	SW 5, L100		117506 ●



Tool body, U profile





Problem	Possible cause	Action
<b>Surface errors</b> <b>Cutting quality</b>	- RPM too low	Increase RPM and cutting speed, increase tool diameter
	- Wrong cutting geometry (shear angle too small for solid wood)	Measure, change tool
	- Spindle and tool tolerances too big	Check motor bearings and tolerances
	- Unbalanced tool	Check and balance
	- Cutting speed too high (tool rubs), number of teeth: feed speed ratio incorrect	Increase feed speed, reduce no. of teeth and RPM
	- Too few teeth, too high feed speed	Adjust number of teeth and feed speed accordingly
<b>Wavy, rough surface</b>	- Irregular workpiece feed	Check feed or conveyor unit
	- Low feed roller pressure, worn feed rollers	Increase feed roller pressure and re-machine grooves in rollers
	- Workpieces too narrow or too short	Pay attention to machine manufacturer's guidelines
	- Chip removal too high	Pre-relieve or machine in several passes
	- Resin built up, or blunt tool	Clean and sharpen tool regularly
<b>Surface errors</b> <b>Burn marks</b>	- Cutting speed too high	Reduce RPM
	- Feed speed: number of teeth ratio wrong	Adjust number of teeth and feed speed accordingly
	- Tool rotates on stationary workpiece	Ensure constant feed through the machine
<b>Surface errors</b> <b>Tear outs</b>	- Wood moisture content too low	Check drying process
	- Knotty wood	Optimise with crosscut saw and longitudinal joints
<b>Surface errors</b> <b>Chip marks</b>	- Incorrect cutting geometry for workpiece material	Check, adjust or use new tool
	- Gap between knife and wedges	Clean and carefully mount knife and wedge
	- Gullet too small	Check and enlarge
	- Extraction hood and chip removal unit insufficient	Contact machine manufacturer
	- Weak dust extraction	Guideline: 30 m s <sup>-1</sup> air speed
<b>Profile error in workpiece – angle error – uneven</b>	- Tool profile sets not identical, e.g. with sets for cutting with/against feed	Check and adjust tool set
	- Spindle not exactly vertical in feed direction or table plane	Check spindle is vertical with dial gauge at two positions with moving spindle (top and bottom of spindle)
	- Worn table and fence	Rework or replace table and fence
	- Angle tolerance between table and fence too large or incorrect adjustment of fence and zero line	Check and adjust angles, adjust fence to tool zero diameter
<b>Power consumption of motor</b> <b>Feeding force</b>	- Resin built up on tool, blunt tool	Clean and sharpen tool regularly
	- Tool gullet too small	Check and correct
	- Shear angle too small	Correct or use new tool
	- Cutting section too large	Relieve profile or machine in several passes

## 4. Manual feed

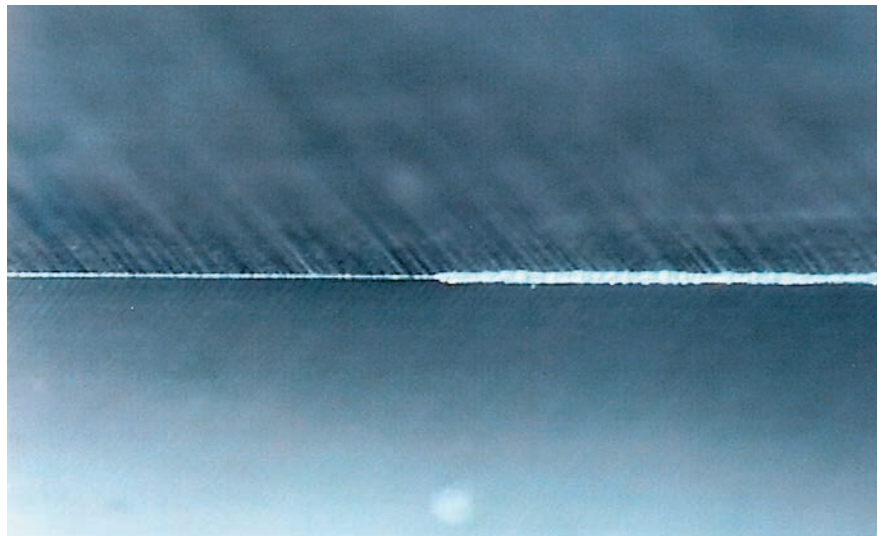
### Signs of wear to HW cutting edges

#### Rounding of cutting edges

Mechanical abrasion causes continuous rounding to the cutting edge when machining uniform materials.

The machined surface quality determines the size of the cutting edge wear. As a standard the width of wear VB of 0.2 to maximum 0.3 mm should not be exceeded.

Tipped tools must be resharpened regularly to ensure the economic efficiency of the tool.

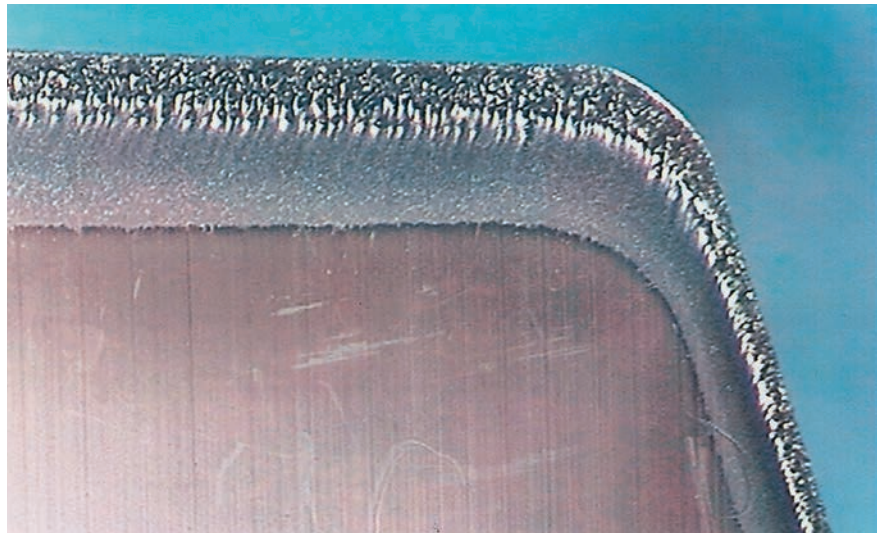


Typical cutting edge wear after machining spruce.

#### Chemical wear to cutting edges

When machining workpiece materials with a high tannic acid content (e.g. oak), the wear to the cutting edges is a combination of mechanical and chemical wear.

The cobalt binder material in the tungsten carbide is etched away by a chemical action prematurely damaging the cutting material.



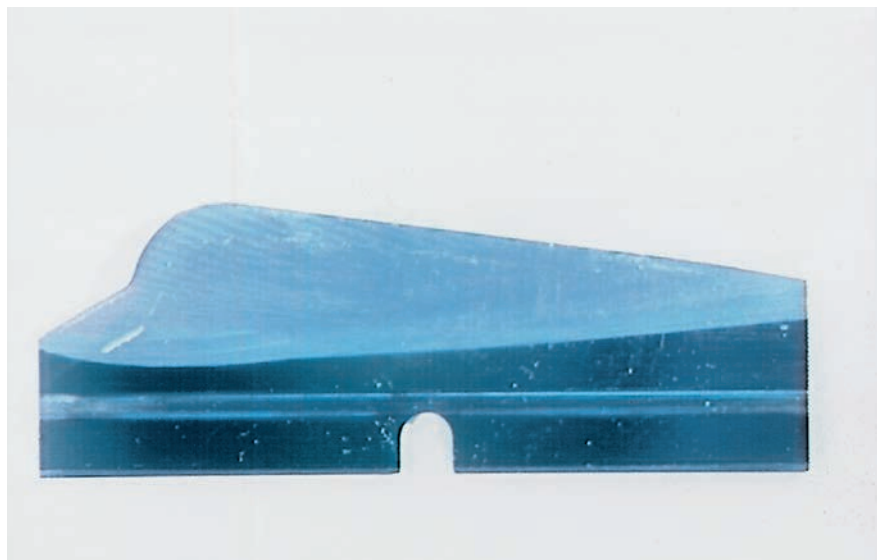
Chemical influence – cutting edge wear – after machining of oak.

#### Cutting edge damage through incorrect repair

With cutterhead/cutter set tools with HW cutting edges, the knives must be turned or replaced at the end of their performance time.

Resharpener on the face is not possible for safety reasons as it leads to a loss of clamping force and gaps between the knife and the clamping wedge, affect the surface quality.

Tools with turnblade/replaceable knives must be thoroughly cleaned and carefully mounted when changing knives.



Damaged cutting edges due to incorrect repair.



## 4. Manual feed

### Signs of wear to DP cutting edges

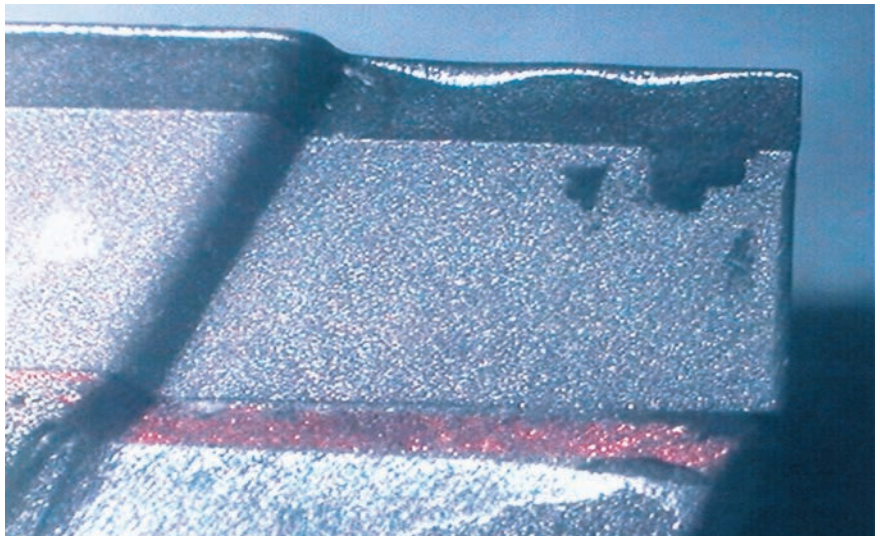
#### Rounding of cutting edges

Mechanical abrasion causes continuous rounding to the cutting edge when machining uniform materials.

Resin build up can develop on the cutting edges because of the long performance time.

The machined surface quality determines the size of the cutting edge wear. As a standard the width of wear VB of 0.2 to maximum 0.3 mm should not be exceeded.

Run time performance can be increased by removing the resin build-up.



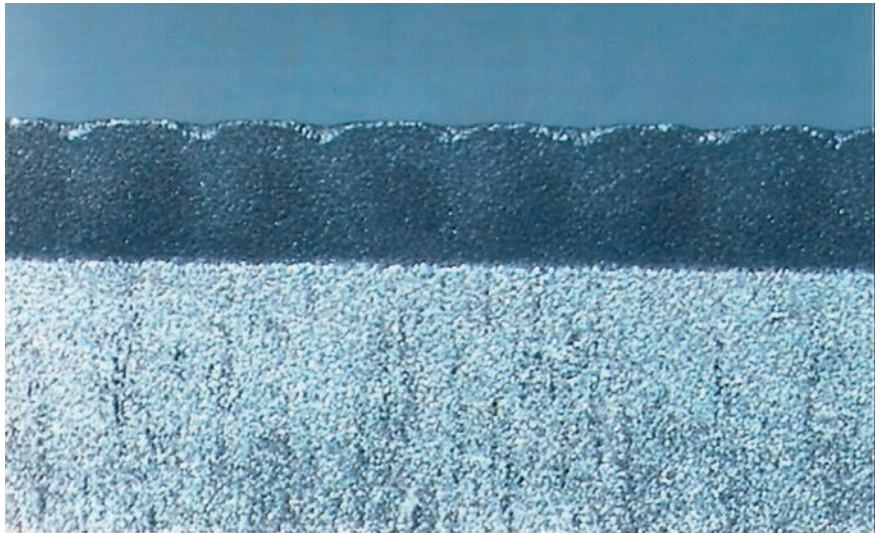
Cutting edge wear after machining GFK.

#### Rounding cutting edges and small chips

The cutting edge is damaged by small chips not caused by the usual wear when machining some wood-derived materials.

This is usually caused by foreign objects such as mineral particles in the work-piece material.

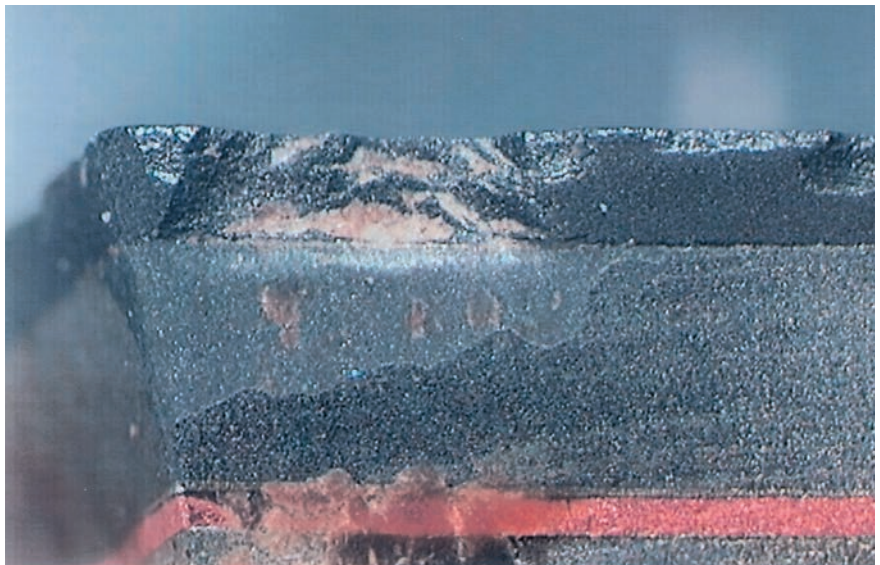
The wear to the cutting edges and the size of the chips to the cutting edge are important factors for economically efficient repair. Increasing cutting forces can totally destroy the cutting edges.



Cutting edge wear and cracks after machining HPL/CPL.

#### Cutting edge destruction

The cutting edge can be destroyed when machining non-uniform materials containing mineral or metallic particles. These particles cannot be detected prior to machining and limit the use of DP (DIA) tools for machining such materials.



Cutting edge destruction by metallic particles.



## Enquiry/order form special tools – manual feed

### Tool:

Tool type (see product information): (e.g. single part/tipped-/tool combination)

Dimension:

Diameter  mm

Cutting width:  mm

Bore:  mm

No. of teeth:

Cutt. mat:

- HL
- HS
- ST
- HW
- DP

Adapter:

- No adaptor required
- Sleeve with anti-twist device
- Sleeve without anti-twist device
- Quick clamping element
- Hydro clamping element

Direction of rotation:

- Right hand rotation
- Left hand rotation

Cutting direction:

- Against feed
- With feed

Type of feed:

- Manual feed (MAN)
- Mechanical feed (MEC)

Feed speed:  min<sup>-1</sup>

Cutting width (SB):  mm

Cutting depth:  mm

Notes:

Zero-diameter:  mm

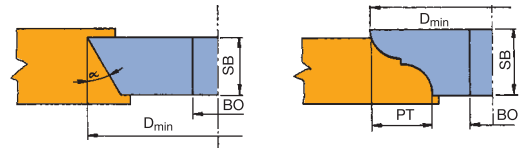
Max. diameter.:  mm

Zero-height:  mm

Clamping length:  mm

Application:

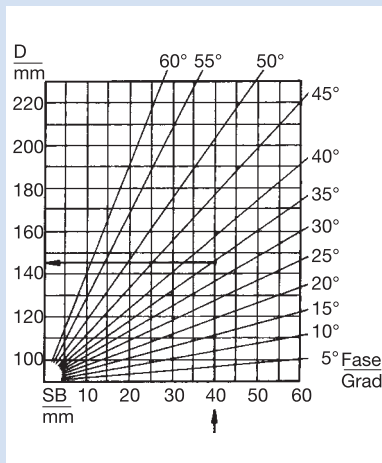
- |              |                                      |                                       |   |
|--------------|--------------------------------------|---------------------------------------|---|
| Solid wood   | <input type="checkbox"/> along grain | <input type="checkbox"/> across grain | <input type="checkbox"/> end grain                  |
| Wood-derived | <input type="checkbox"/> top layer   | <input type="checkbox"/> middle layer | <input type="checkbox"/> top layer and middle layer |



### Technical information:

Tipped tool (bevel-/profile router):  
Design: BG-Test, Z 2, round design  
mech. feed, Z 3, Z 4, round design,  
tooth shape: with/without spurs

Chart to determine min. tool diameter:  
Valid for bevel cutterblock BO – 30 mm:  
For bore 40 mm: D + 10 mm  
For bore 50 mm: D + 20 mm



### Formula to determine tool diameter:

Valid for profile cutterblock BO – 30 mm:

For bore 40 mm: D + 10 mm

For bore 50 mm: D + 10 mm

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

### Note:

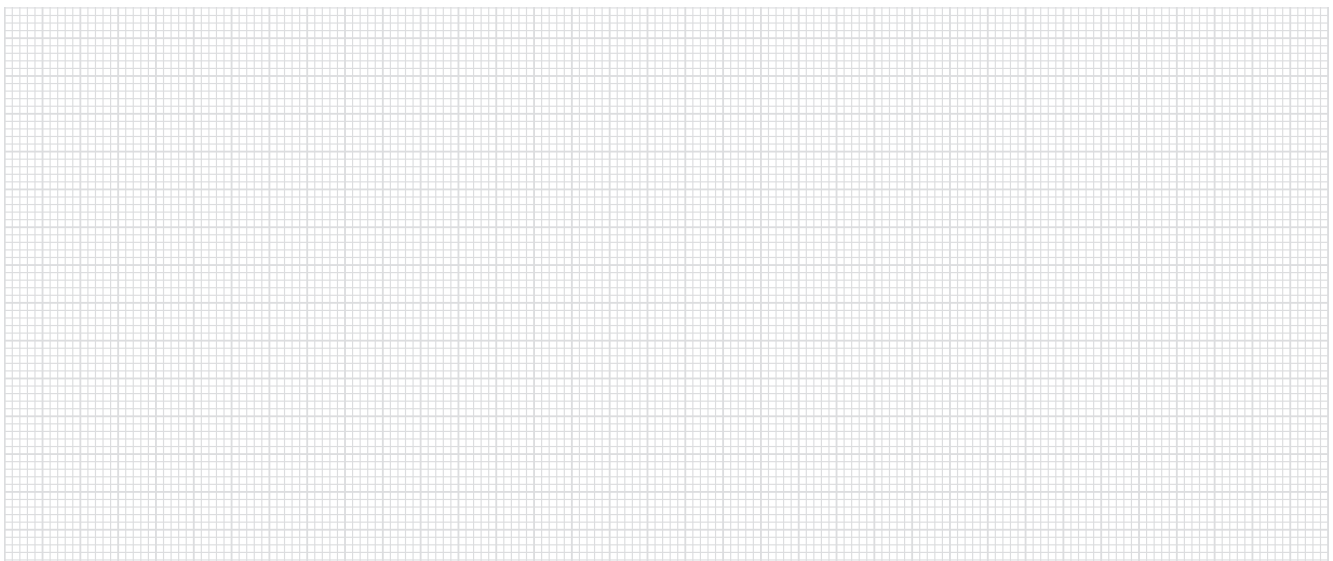
Angles exceeding 45° and large profile depths require large diameters. The maximum possible RPM for the cutterblock diameter must not be exceeded. Profile sketches or profile drawings must show clearly if the workpiece material (wood) or cutterblock is shown. Please state side to table, direction of rotation, dimensions and conditions of application on all workpiece samples or drawings.

Tool combination with turnblade-/exchangeable knives:

**Formula:  $D_{min} = 80 \times 2 \times PT$  (mm)** – Valid 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



Grooving,  
horizontal  
and vertical



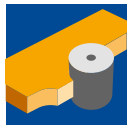
Interchangeable  
knives



Jointing



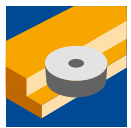
Mechanical  
knife clamping,  
reversible



Copy  
shaping



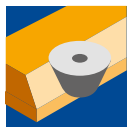
Mechanical  
knife clamping,  
non-adjustable



Rebating



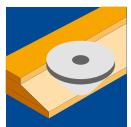
Resharpenable  
cutting face



Bevelling



Resharpenable  
clearance face



Panel  
raising



Alloyed  
tool steel



Profiling



High-speed  
steel



Profiling  
joints



Tungsten  
carbide



Manual  
feed



Polycrystalline  
diamond (PCD)



Tipped tool



Carbide  
metal coating



Light alloy  
body

