Machining recommendation

EGGER Compact Laminates

Machining of EGGER Compact Laminates



Introduction
EGGER Compact Laminates are decorative compact boards based on curable resins. They have a multi-layer structure and consist of impregnated decorative papers and several impregnated core layers.

The following tool recommendations are based on a wide range of test series with the best processing results in each case.

General machining guidelines
When machining Compact Laminates, the ratio of number of teeth (Z), cutting speed (v_c) and feed rate (v_f) should be taken into account.

Machining method	Cutting speed v_c [m/s]
Sawing	60 - 75
Routing	6 - 20
Drilling	0.7 - 1.6

Machining method	Tooth feed rate f_z [mm]
Sawing	0.02 - 0.1
Routing	Pre-milling 0.2 - 0.3 Finishing 0.04 - 0.06
Drilling	0.15 - 0.3



The following formulas apply to the calculation of cutting speed, tooth feed rate and feed speed:

v_c – Cutting speed [m/s]
$v_c = D \cdot \pi \cdot n / 60 \cdot 1.000$
D – Tool diameter [mm]
n – RPM of tool [min^{-1}]

f_z – Tooth feed rate [mm]
$f_z = v_f \cdot 1.000 / n \cdot z$
v_f – Feed speed [m/min]
n – RPM of tool [min^{-1}]
Z – Number of teeth

v_f – Tooth feed rate [m/min^{-1}]
$v_f = f_z \cdot n \cdot z / 1,000$
f_z – Feed speed [mm]
n – RPM of tool [min^{-1}]
Z – Number of teeth

Cutting the panels with circular sawblades

General note:

- Visible side (decorative side) upwards
- Make sure that the sawblade protrudes correctly (see table)
- Adjust RPM and number of teeth to feed speed
- The use of a scoring sawblade is recommended for precise cuts on the bottom side of the panel

Depending on the sawblade protrusion, the entry and exit angle and thus the quality of the cutting edge change. If the top cutting edge becomes rough, set the circular sawblade higher. If the cut on the bottom side is rough, the circular sawblade must be set lower. In this way the most favourable height setting must be determined.

The following sawblade protrusions (Ü) must be set for sizing and panel sizing saws, depending on the diameter (D):

Circular sawblade diameter D [mm]	Protrusions Ü [mm]
250	ca. 5 - 10
300	
350	
400	
450	



Circular sawblades with a high number of teeth are generally recommended for good machining quality. For circular sawing, the recommended cutting speed (v_c) is 60 - 90 m/s.

Recommended tooth shapes



TR/TR
(trapezoidal/trapezoidal teeth)



FZ/TR
(square/trapezoidal teeth)

To process compact panels that are glued on both sides, a scoring circular sawblade is also required to prevent breakouts on the underside.

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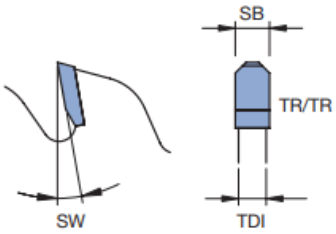






HW

Low Noise



Sizing of single boards in finish cut quality - RazorCut PLUS

Application:
For panel sizing of single boards and stacks of boards with low cutting heights (up to 60 mm) with scoring.

Machine:
Panel sizing saws with scoring unit and pressure beam.

Workpiece material:
Chipboard and fibre materials plastic coated, duroplastics (compact laminate panels, e.g. HPL).

Technical information:
Optimal cutting quality due to special cutting edge geometry and maximal quite running. Suitable for high feed speeds in batch size 1 production. Design with irregular pitch and vibration damping laser ornaments for optimal running behaviour. Maximal tool life through extremely wear-resistant cutting material.

Circular sawblade RazorCut PLUS
WK 878 2 87

Machine	D mm	SB mm	TDI mm	BO mm	NLA mm	Z	ZF	SW °	WSS	ID
	250	3,2	2.2	30	KNL	60	TR/TR	15		**161135** ●
	280	3,2	2.2	30	KNL	60	TR/TR	15		**161136** ●
	300	3,2	2,2	30	KNL	72	TR/TR	15		**161138** ●
Schelling	300	3,2	2,5	30	2/13/94	72	TR/TR	15		**161139** ●
	300	4,4	3,0	30	KNL	60	TR/TR	15		**161137** ●
Homag	300	4,4	3,0	60	2/14/100	72	TR/TR	15		**161140** ●
Selco	300	4,4	3,0	65	2/9/110	60	TR/TR	15		**161141** ●
SCM, Gabbiani	300	4,4	3,0	80	2/14/110 2/7/110 4/9/100 4/19/120 2/9/130	60	TR/TR	15		**161142** ●
Homag	308	3,2	2,4	60	2/14/100	96	TR/TR	15		**161143** ●
Homag	310	4,4	3,2	60	2/14/100	72	TR/TR	15		**161144** ●
Giben	320	4,4	3,2	50	3/15/80	60	TR/TR	15		**161145** ●
Selco	320	4,4	3,2	65	2/9/110	60	TR/TR	15		**161146** ●
SCM, Gabbiani	340	4,4	3,2	80	2/14/110 2/7/110 4/9/100 4/19/120 2/9/130	72	TR/TR	15		**161148** ●
Holz-Her, Mayer, Schelling	350	4,4	3,2	30	KNL 2/13/94	72	TR/TR	15		**161149** ●

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Machine	D mm	SB mm	TDI mm	BO mm	NLA mm	Z	ZF	SW °	WSS	ID
Homag	350	4,4	3,2	60	2/14/100	72	TR/TR	15		**161150** ●
Giben	350	4,4	3,2	75		72	TR/TR	15		**161151** ●
Selco	355	4,4	3,2	65	2/9/100 2/9/110	72	TR/TR	15		**161152** ●
Selco	355	4,4	3,2	80	2/9/130 4/19/120	72	TR/TR	15		**161153** ●
Schelling	360	4,4	3,2	30	2/13/94	72	TR/TR	15		**161154** ●
	370	4,4	3,2	30	KNL	72	TR/TR	15		**161155** ●
Holz-Her	380	4,4	3,2	30	KNL	72	TR/TR	15		**161156** ●
Giben	380	4,4	3,2	50	4/13/80	72	TR/TR	15		**161157** ●
Homag	380	4,4	3,2	60	2/14/100 2/14/125	72	TR/TR	15		**161158** ●
SCM, Gabbiani	380	4,4	3,2	80	2/14/110 2/7/110 4/9/100 4/19/120 2/9/130	72	TR/TR	15		**161160** ●
Homag	380	4,8	3,5	60	2/14/100 2/14/125	72	TR/TR	15		**161159** ●
Mayer, Schelling	400	4,4	3,2	30	KNL 2/13/94	72	TR/TR	15		**161161** ●
Giben, Homag	400	4,4	3,2	75	4/15/105 2/7/110	72	TR/TR	15		**161162** ●
SCM, Gabbiani, Selco	400	4,4	3,2	80	2/14/110 2/7/110 4/9/100 4/19/120 2/9/130	72	TR/TR	15		**161163** ●
Homag	420	4,8	3,5	60	2/14/125 2/19/120	72	TR/TR	15		**161164** ●
Schelling	430	4,4	3,2	30	KNL	72	TR/TR	15		**161165** ●
Giben	430	4,4	3,2	75	4/15/105 2/7/110	72	TR/TR	15		**161166** ●
SCM, Gabbiani, Selco	430	4,4	3,2	80	2/14/110 2/7/110 4/9/100 4/19/120 2/9/130	72	TR/TR	15		**161167** ●
Mayer, Schelling	450	4,4	3,2	30	KNL 2/13/94	72	TR/TR	15		**161168** ●
Homag	450	4,8	3,5	60	2/14/125 2/19/120	72	TR/TR	15		**161169** ●
Schelling	460	4,4	3,2	30	2/13/94	72	TR/TR	15		**161170** ●

Machining recommendation

EGGER Compact Laminates

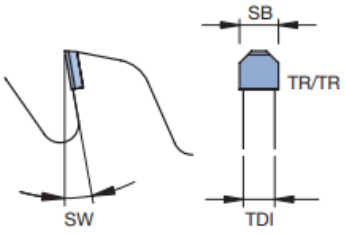








DP



Sizing of single boards and stacks of boards *Excellent*

Application:
For panel sizing of single boards and stacks of boards with scoring.

Machine:
Panel sizing saws with scoring unit and pressure beam.

Workpiece material:
Chipboard and fibre materials plastic coated, duroplastics (compact laminate panels, e.g. HPL), fibre reinforced materials (e.g. GFRP, CFRP).

Technical information:
DP equipment for long tool life. **Excellent** version with irregular tooth pitch and filled laser ornaments for vibration damping and reduction of noise level. Coating of the tool body for higher running performance. Mounting height 6 mm for multiple resharpening.

Panel sizing sawblade TR/TR, Diamaster PLUS
WK 278 2, WK 858 2

Machine	D mm	SB mm	TDI mm	BO mm	NLA mm	Z	ZF	SW °	WSS	ID
	300	4,4	3,2	30	KNL	60	TR/TR	15		**190706** ●
Homag	308	3,2	2,4	60	2/14/100	96	TR/TR	10		**190746** ●
Holz-Her, Mayer, Schelling	350	4,4	3,2	30	KNL 2/13/94	72	TR/TR	15		**190707** ●
Homag	350	4,4	3,2	60	2/14/100 2/14/125	72	TR/TR	15		**190708** ●
Homag	380	4,4	3,2	60	2/14/100 2/14/125	72	TR/TR	15		**190709** ●
Homag	380	4,8	3,5	60	2/14/100 2/14/125	72	TR/TR	15		**190710** ●
Mayer, Schelling	400	4,4	3,2	30	KNL 2/13/94	72	TR/TR	15		**190711** ●
Homag	450	4,8	3,5	60	2/14/125 2/19/120	72	TR/TR	15		**190712** ●

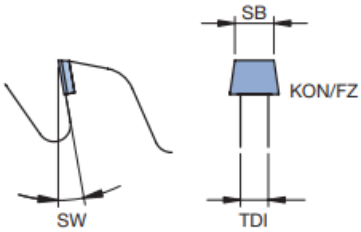
Machining recommendation

EGGER Compact Laminates









Scoring sawblades KON/FZ *Excellent*

Application:
For scoring with feed.

Machine:
Panel sizing saws with scoring unit and pressure beam.

Workpiece material:
Chipboard and fibre materials paper and plastic coated, veneered, laminated veneer lumber (e.g. plywood, multiplex plywood), alu composite panels (e.g. Alucobond®), duroplastics (compact laminate panels, e.g. HPL), fibre reinforced materials (e.g. GFRP, CFRP)

Technical information:
Scoring depth 2.00 - 2.50 mm. Recommended especially for use in plastic and HPL-coated panels. Long tool life due to DP tipping. The suitable circular scoring sawblade must be selected depending on the cutting width of the main saw. Can be used in combination with HW- and DP-tipped main circular sawblades. The cutting width (SB) of the scoring circular sawblades is 0.1 mm less for use in combination with resharpened TC-tipped main circular sawblades.

Scoring sawblades KON/FZ, Diamaster PLUS
WK 804 2

Machine	D mm	SB mm	TDI mm	BO mm	NLA mm	Z	ZF	SW °	WSS	ID
	125	3,1	2,5	20		20	KON/FZ	10		**190564** ●
	125	3,1	2,5	22		20	KON/FZ	10		**190614** □
Felder, Mayer	150	4,3	3,2	30		24	KON/FZ	10		**190565** ●
Gabbiani	160	4,3	3,5	55	3/ 7/ 66	30	KON/FZ	10		**190566** ●
Holz-Her	180	4,3	3,5	30	2/10/ 60	30	KON/FZ	10		**190567** ●
Homag	180	4,3	3,5	45		30	KON/FZ	10		**190568** ●
Homag	180	4,7	3,5	45		30	KON/FZ	10		**190569** ●
Schelling	200	4,3	3,5	20	2/11/66	30	KON/FZ	10		**190570** ●
	200	4,3	3,5	30	2/10/ 60	30	KON/FZ	10		**190571** ●
Homag	200	4,3	3,5	45		30	KON/FZ	10		**190572** ●
	200	4,3	3,5	80		30	KON/FZ	10		**190616** □
Selco	200	4,3	3,5	65	2/9/100 2/9/110 2/14/110	30	KON/FZ	10		**190615** ●
Homag	200	4,7	3,5	45		30	KON/FZ	10		**190573** ●
Selco	200	4,7	3,5	65	2/9/110 2/9/100	30	KON/FZ	10		**190574** ●
Homag	220	3,1	2,4	45		48	KON/FZ	10		**190744** ●
Schelling	300	4,3	3,5	30	2/11/73 2/13/94	48	KON/FZ	10		**190743** ●

Machining recommendation

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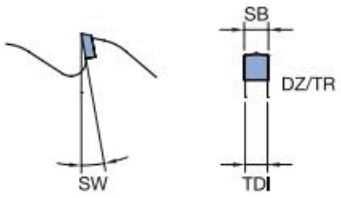






DP





Sizing *Excellent*

Application:
For sizing of single boards.

Machine:
Table, sizing and vertical panel sizing saws.

Workpiece material:
Gypsum and cement fibre panels, duroplastics (compact laminated boards, e.g. HPL), fibre reinforced plastics (e.g. GFRP, CFRP), alu composite panels (e.g. Alucobond®). Chipboard and fibre materials plastic coated.

Technical information:
DP tipping and strong tooth shape for long tool life even in highly abrasive materials. **Excellent** design with filled laser ornaments for vibration damping and noise reduction. Tool body coated for higher running performance.

Circular sawblade DZ/TR, Diamaster PRO
WK 872 2

D mm	SB mm	TDI mm	BO mm	NLA mm	Z	ZF	SW °	WSS	ID
180	3,2	2,2	30		36	DZ/TR	10		**190747** ●
250	3,2	2,2	30	KNL	48	DZ/TR	10		**190748** ●
303	3,2	2,2	30	KNL	60	DZ/TR	10		**190673** ●
303	3,2	2,2	30	KNL	96	DZ/TR	10		**190674** ●
350	3,5	2,5	30	KNL	72	DZ/TR	10		**190749** ●

Machining recommendation

EGGER Compact Laminates

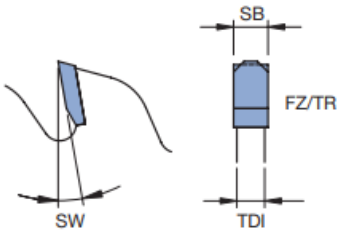








HW



Trimming cut

Application:
For sizing, trimming and cross cutting.

Machine:
Portable and table saws.

Workpiece material:
Non-ferrous metal profiles, duroplastics (compact laminated boards, e.g. HPL), solid surface materials (e.g. Corian).

Technical information:
Solid tooth shape for universal use.

Circular sawblade FZ/TR cutting angle 5°
WK 452 2, WK 852 2

D mm	SB mm	TDI mm	BO mm	NLA mm	Z	ZF	SW °	WSS	ID
160	1,8	1,2	20		48	FZ/TR	5		**166311** ●
160	2,6	1,8	20		48	FZ/TR	5		**166300** ●
165	1,8	1,2	20		48	FZ/TR	5		**166312** ●
180	3,2	2,6	16		42	FZ/TR	5		**166301** ●
190	1,8	1,2	30		54	FZ/TR	5		**166313** ●
190	2,8	1,8	30		54	FZ/TR	5		**166302** ●
200	2,8	2,2	20		84	FZ/TR	5		**166303** ●
200	3,2	2,6	30	KNL	48	FZ/TR	5		**166304** ●
250	3,2	2,6	30	KNL	60	FZ/TR	5		**166305** ●
250	3,2	2,6	30	KNL	80	FZ/TR	5		**166306** ●
250	3,2	2,6	32	2/11/63	60	FZ/TR	5		**166307** □
250	3,2	2,6	32	2/11/63	80	FZ/TR	5		**166308** □
250	3,2	2,6	40	2/8/55 4/12/64	80	FZ/TR	5		**166309** □
275	3,4	2,8	40	2/9/55 4/12/64	72	FZ/TR	5		**166310** ●

Machining recommendation

EGGER Compact Laminates

Machining on stationary CNC machines

Diamond-tipped (DP) routers are particularly suitable for machining Compact Laminates on router machines and machining centres.

Ensure that the workpiece is securely clamped on the machine. We recommend stable and rigid Leitz ThermoGrip® shrink chucks for maximum concentricity, balance and perfect cutting quality. Good machining results can only be achieved if the machine has sufficient rigidity.

In order to find the optimum tool selection in conjunction with the machine, material and machining parameters, it is recommended that you seek advice or recommendations from a Leitz application engineer.

Router cutter Diamaster PRO Z 1 and Z 2
With slightly positive cutting angle for maximum chip removal



AT A GLANCE

- Slightly positive shear angle for best chip removal
- DP basic cutting edge suitable for ramp plunging
- Coordinated tool programme with diameters of 5, 6 and 8 mm in Z 1 and with diameter 8, 10 and 12 in Z 2
- For all conventional machines
- Available from stock
- Diamond-tipped

Description	Application	Cutting material	Cutting value parameters, standard values	Dimensions	Ordering ID	Availability
Router cutter Diamaster PRO Z 1 Slightly positive shear angle[a b]	Jointing, Grooving	DP	v_c = 6-10 m/s Finishing: f_z = 0.06-0.08 mm Pre-cutting: f_z = 0.1-0.3 mm	D5/GL60/NL12/S8x35/Z1/RH	191086	●
				D6/GL60/NL14/S8x35/Z1/RH	191087	●
				D8/GL60/NL14/S8x35/Z1/RH	191088	●
Router cutter Diamaster PRO Z 2 Slightly positive shear angle[a b]	Sizing, Grooving	DP	v_c = 8.5-15 m/s Finishing: f_z = 0.04-0.06 mm Pre-cutting: f_z = 0.2-0.3 mm e. g. Ø 12 mm: n = 24 000 U/min Finishing: v_f = 2-3 m/min Pre-cutting: v_f = 10-15 m/min	D8/GL65/NL15/S12x35/Z2/RH	191108	●
				D8/GL70/NL22/S12x40/Z2/RH	191089	●
				D10/GL70/NL22/S12x35/Z2/RH	191090	●
				D12/GL75/NL18/S16x50/Z2/RH	191091	●
				D12/GL85/NL25/S16x50/Z2/RH	191092	●

Machining recommendation

EGGER Compact Laminates

Router cutter Diamaster PLUS Z 2
For neutral cutting behaviour with alternating cutting angle



AT A GLANCE

- Alternating shear angle for neutral cutting behaviour during grooving and sizing
- Diamond plunging edge
- Excellent stability thus particularly suitable for cutting HPL
- Coordinated tool programme with diameters 14 and 16 mm
- For all conventional machines
- Available from stock
- Diamond-tipped

Description	Application	Cutting material	Cutting value parameters, standard values	Dimensions	Ordering ID	Availability
Router cutter Diamaster PLUS Z 2 Alternating shear angle[a b]	Sizing, Grooving	DP	v_c = 15-20 m/s Finishing: f_z = 0.04-0.06 mm Pre-cutting: f_z = 0.2-0.3 mm	D14/GL80/NL16/S20x50/Z2/RH	191093	●
				D16/GL80/NL20/S20x50/Z2/RH	191094	●

Router cutter Diamaster PLUS Z 2
With negative cutting angle for perfect edges when grooving



AT A GLANCE

- Negative shear angles for tear-free edges when grooving
- Excellent stability thus particularly suitable for cutting HPL
- The cutting pressure supports workpiece clamping for small machined parts in the nesting process
- Coordinated tool programme with diameter 14 and 16 mm
- For all conventional machines
- Available from stock
- Diamond-tipped

Description	Application	Cutting material	Cutting value parameters, standard values	Dimensions	Ordering ID	Availability
Router cutter Diamaster PLUS Z 2 Negative shear angle[a b]	Sizing, Grooving	DP	v_c = 15-20 m/s Finishing: f_z = 0.04-0.06 mm Pre-cutting: f_z = 0.2-0.3 mm	D14/GL80/NL16/S20x50/Z2/RH	091157	●
				D16/GL80/NL18/S20x50/Z2/RH	091156	●

Profile router cutter Diamaster PRO Z 2
For perfect 45° bevels at top and bottom



AT A GLANCE

- Flexible bevelling 45° top and bottom up to a material thickness of 13 mm
- Suitable for rapid plunging
- For all conventional machines
- Available from stock
- Diamond-tipped

Description	Application	Cutting material	Cutting value parameters, standard values	Dimensions	Ordering ID	Availability
Profile router cutter Diamaster PRO Z 2[a]	Bevelling 45° top and bottom up to a material thickness of 13 mm	DP	n = 24 000 U/min v_f = 2-5 m/min	d13/D18/NL24/S20x55/GL85/Z2/RH	245500	●

Profile router cutter Diamaster PRO Z 2
The specialist for convex profiles for edge formation



AT A GLANCE

- Suitable for rapid plunging
- Coordinated tool programme R9 and R16
- For all conventional machines
- Available from stock
- Diamond-tipped

Description	Application	Cutting material	Cutting value parameters, standard values	Dimensions	Ordering ID	Availability
Profile router cutter Diamaster PRO Z 2[a]	Convex profile R9 and R16	DP	n = 24 000 U/min v_f = 2-5 m/min	d13/D21.05/R9/NL20/S20/GL80/Z2/RH	245501	●
				d13/D16.7/R16/NL20/S20/GL80/Z2/RH	245502	●

Machining recommendation

EGGER Compact Laminates

V-Nut router cutter Diamaster PRO Z 1
Especially for engraving and V-grooving



AT A GLANCE

- For engraving and V-grooving
- For all conventional machines
- Available from stock
- Diamond-tipped

Description	Application	Cutting material	Cutting value parameters, standard values	Dimensions	Ordering ID	Avail-ability
V-Nut router cutter Diamaster PRO Z 1[a]	V-grooving, engraving	DP	n = 24 000 U/min v_f = 2-5 m/min	D10/NL9/60°/S12x50/GL70/Z1/RH	245503	●

Drilling

Drill HW-solid Z 2
For break-out-free holes in HPL on both sides



AT A GLANCE

- Special cutting edge geometry
- Polished gullet area
- Multiple times resharpenable
- Coordinated tool programme in the diameter range 3-10 mm
- For all conventional machines
- Available from stock

Description	Application	Cutting material	Cutting value parameters, standard values	Dimensions	Ordering ID	Avail-ability
Drill HW-solid Z 2[a]	Blind and through holes	HW	v_c = 0.7-1.6 m/s f_z = 0.15-0.3 mm e.g. Ø 3 mm: n = 3 500 U/min v_f = 0.8 m/min e.g. Ø 5 mm: n = 3 500 U/min v_f = 1.0 m/min e.g. Ø 6 mm: n = 3 500 U/min v_f = 1.5 m/min e.g. Ø 10 mm: n = 3 500 U/min v_f = 1.5 m/min	D3/GL57.5/NL16/S10x36/Z2/RH	230610	●
				D3.6/GL57.5/NL16/S10x36/Z2/RH	230611	●
				D5/GL57.5/NL25/S10x25/Z2/RH	230612	●
				D5.1/GL57.5/NL25/S10x25/Z2/RH	230613	●
				D5.6/GL57.5/NL25/S10x25/Z2/RH	230614	●
				D6/GL57.5/NL25/S10x25/Z2/RH	230615	●
				D7/GL57.5/NL25/S10x25/Z2/RH	230616	●
				D8/GL57.5/NL25/S10x25/Z2/RH	230617	●
				D8.5/GL57.5/NL25/S10x25/Z2/RH	230618	●
				D9.3/GL57.5/NL25/S10x25/Z2/RH	230619	●
				D10/GL57.5/NL25/S10x25/Z2/RH	230620	●

[a] The ThermoGrip® high-precision shrink chuck for shank tools is recommended for tool holding.
[b] **Maximum axial feed during grooving: 1.0 x D. Ensure that the workpiece is sufficiently clamped.**

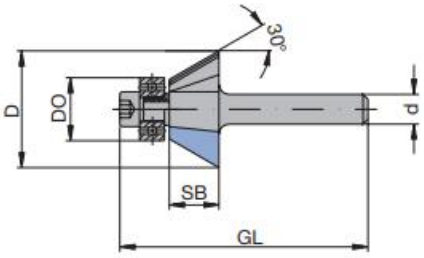




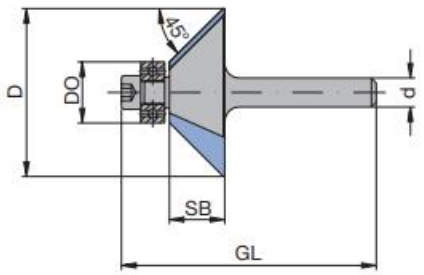




HW



WO 314 1 02 bevel cutter 30°



WO 314 1 03 bevel cutter 45°

Bevel cutter

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

Machine:
Portable routers.

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

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

Bevel cutter, HW, Z 2, shank 8 mm
WO 314 1, WO 315 1

D mm	D_0 mm	GL mm	SB mm	FAW °	S mm	DRI	ID
25,7	12,7	70	25,1	15°	8x30	RH	**072522** ●
25	12,7	50,3	12	30°	8x30	RH	**072774** ●
38,5	12,7	64,5	23	30°	8x30	RH	**072523** ●
26	12,7	47,8	7	45°	8x30	RH	**072775** ●

Spare parts:

BEZ	ABM mm	for D_0 mm	ID
Ball bearing	12.7x4.97x4.76	12,7	**008088** ●
Ball bearing	15.88x5x6.35	15,88	**008081** ●
Cap screw	M4x10		**005846** ●

Bevel cutter, HW, Z 2, shank 12 mm
WO 315 1

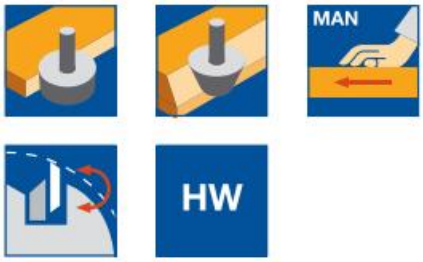
D mm	D_0 mm	GL mm	SB mm	FAW °	S mm	DRI	ID
55	12,7	76	20	45°	12x40	RH	**072517** ●

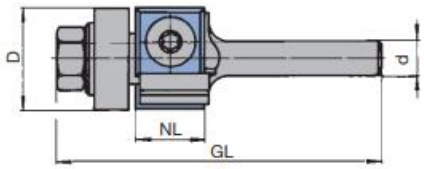
RPM: n = 18000 - 27000 min^{-1}

Spare parts:

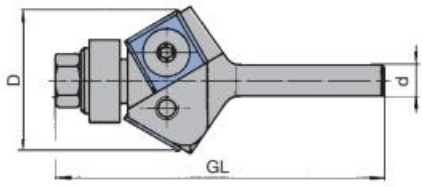
BEZ	ABM mm	for D_0 mm	ID
Ball bearing	12.7x4.97x4.76	12,7	**008088** ●
Cap screw	M4x10		**005846** ●







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



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

Turnblade jointing / bevel cutter

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

Machine:
Portable routers.

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

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

HW, Z 2, with ball bearing guide ring
WL 220 1, WL 320 1

Class.	D mm	GL mm	NL mm	S mm	FAW °	DRI	ID
WL 220 1	19	52,7	12	8x30	0°	RH	**072776** ●
WL 220 1	19	64,5	20	8x30	0°	RH	**040765** ●
WL 220 1	19	74,5	30	8x30	0°	RH	**040774** ●
WL 320 1	27	60		8x30	45°	RH	**072767** ●

RPM: n = 18000 - 30000 min^{-1}

Spare knives:

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

Spare parts:

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

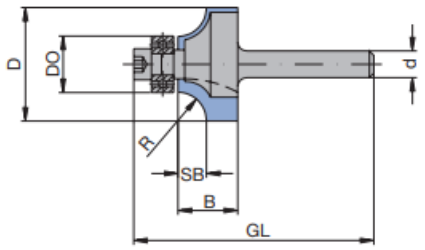








HW



Radius cutter

Radius cutter

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

Machine:
Portable routers.

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

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

Radius cutter, HW, Z 2, shank 6 / 8 mm
WO 551 1

D mm	D_0 mm	GL mm	SB mm	B mm	S mm	R mm	DRI	ID
16,7	12,7	49	2	12	6x30	2	RH	**072456** ●
18,7	12,7	50	3	7	6x30	3	RH	**072458** ●
25,5	12,7	54	6	12	6x30	6,35	RH	**072462** ●
17,1	12,7	49	2	12	8x30	2,2	RH	**072636** ●
19,1	12,7	50	3	7	8x30	3	RH	**072635** ●
22,7	12,7	52	5	9	8x30	5	RH	**072634** ●
28,7	12,7	55	8	12	8x30	8	RH	**072632** ●
31,7	12,7	56	9,5	16,5	8x30	9,5	RH	**072637** ●
42,7	12,7	62	15	22	8x30	15	RH	**072639** ●

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

Radius cutter, HW, Z 2, shank 12 mm
WO 551 1

D mm	D_0 mm	GL mm	SB mm	B mm	S mm	R mm	DRI	ID
63	12,7	80	26	32	12x40	25	RH	**072501** ●

RPM: n = 16000 - 22000 min^{-1}

Spare parts:

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

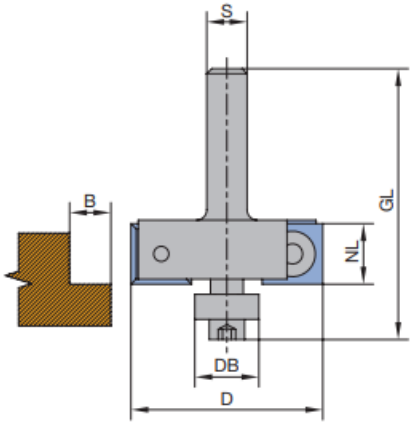








HW



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

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

Turnblade rebating cutter

Application:
Router for cutting rebates.

Machine:
Portable routers.

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

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

HW, Z 2, with set of ball bearing guide rings
AL 630 1

D	DB	GL	NL	S	QAL	DRI	ID
mm	mm	mm	mm	mm			
38	12,7	54	12,7	8x30	HW	RH	**072521** ●

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

Spare knives:

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

Spare parts:

BEZ	ABM mm	B mm	ID
Ball bearing	9.53x3.17x4.76	11	**008087** ●
Ball bearing	12.7x4.97x4.76	9,5	**008088** ●
Ball bearing guide	16x8x4,76	7,9	**072629** ●
Ball bearing guide	19x8x4,76	6,35	**072630** ●
Ball bearing guide	22x8x4,76	4,9	**072631** ●
Oval head screw Torx® 15	M4x8		**007407** ●
Oval head screw Torx® 15	M4x6		**006225** ●
Torx® key	Torx® 15		**005457** ●

Machining recommendation

EGGER Compact Laminates

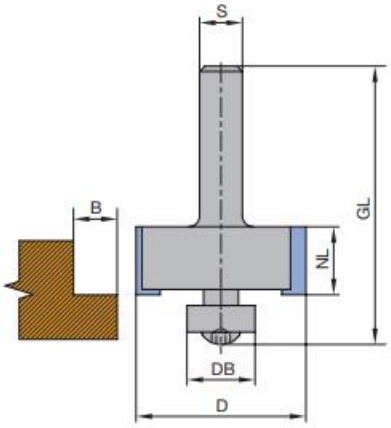








HW



Note:
Variable rebating widths by changing the guide rings.

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

Rebating cutter

Application:
Router for cutting rebates.

Machine:
Portable routers.

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

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

HW, Z 2
WO 434 1

D mm	DB mm	GL mm	NL mm	S mm	QAL	DRI	ID
31,7	12,7	54	12,7	8x30	HW	RH	**072479** ●

RPM: n = 16000 - 22000 min^{-1}

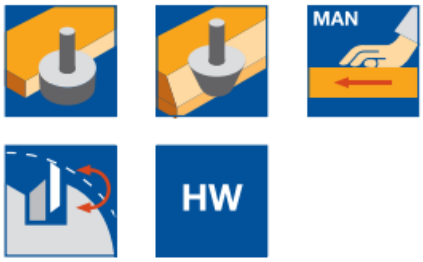
Spare parts:

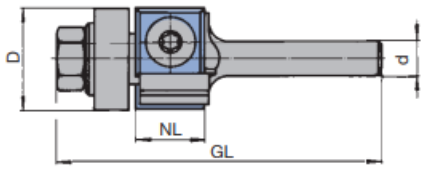
BEZ	ABM mm	B mm	ID
Ball bearing	9.53x3.17x4.76	11	**008087** ●
Ball bearing	12.7x4.97x4.76	9,5	**008088** ●
Ball bearing guide	16x8x4,76	7,9	**072629** ●
Ball bearing guide	19x8x4,76	6,35	**072630** ●
Ball bearing guide	22x8x4,76	4,9	**072631** ●
Oval head screw Torx® 15	M4x8		**007407** ●
Torx® key	Torx® 15		**005457** ●

Machining recommendation

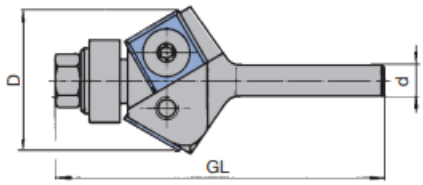
EGGER Compact Laminates







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



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

Turnblade jointing / bevel cutter

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

Machine:
Portable routers.

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

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

HW, Z 2, with ball bearing guide ring
WL 220 1, WL 320 1

Class.	D mm	GL mm	NL mm	S mm	FAW °	DRI	ID
WL 220 1	19	52,7	12	8x30	0°	RH	**072776** ●
WL 220 1	19	64,5	20	8x30	0°	RH	**040765** ●
WL 220 1	19	74,5	30	8x30	0°	RH	**040774** ●
WL 320 1	27	60		8x30	45°	RH	**072767** ●

RPM: n = 18000 - 30000 min^{-1}

Spare knives:

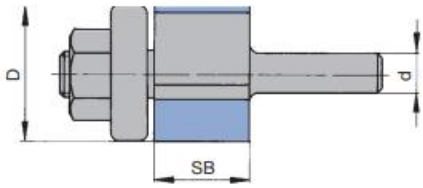
BEZ	Knife	for mm	ABM mm	QAL	VE PCS	ID
Turnblade knife	Peripheral tip	45°	12x12x1.5	HW-05F	10	**005081** ●
Turnblade knife	Peripheral tip		20x12x1,5	HW-05F	10	**005083** ●
Turnblade knife	Peripheral tip		30x12x1,5	HW-05F	10	**005084** ●

Spare parts:

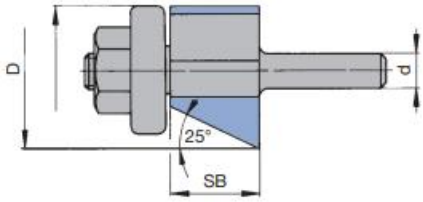
BEZ	for mm	ABM mm	ID
Ball bearing	D19	19x6x6	**008082** ●
Ball bearing	D27/45°	12.7x4.97x4.76	**008088** ●
Nut	NL30	M6	**005651** ●
Oval head screw Torx® 15	NL12	M4x5	**007038** ●
Clamping screw, Torx® 15	NL12/45°	M4x9	**007887** ●
Oval head screw Torx® 15	NL20/30	M4x6	**006225** ●
Torx® key		Torx® 15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







Edge trimming cutter with guide ring on bottom



Square bevel trimming cutter with guide ring on bottom

Edge trimming cutter

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

Machine:
Portable routers.

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

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

Edge trimming cutter, HW, Z 2 with guide ring
WO 203 1, WO 203 1 01

D	SB	S	BEM	DRI	ID
mm	mm	mm			
21	15	6x30	Guide ring on bottom	RH	**039440** ●
12,7	25	8x30	Guide ring on bottom	RH	**072509** ●
19	25	8x30	Guide ring on shank side	RH	**072572** ●

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

Spare parts:

BEZ	BEM	ABM	ID
		mm	
Ball bearing	to ID 072509	12.7x4.97x4.76	**008088** ●
Ball bearing	to ID 072572	19,05x12,7x4,97	**008105** ●
Ball bearing guide	to ID 039440	21x7,2x15,88	**072157** ●

Square bevel trimming cutter, HW, Z 1+1 / bevel 45°
WO 314 1 01

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

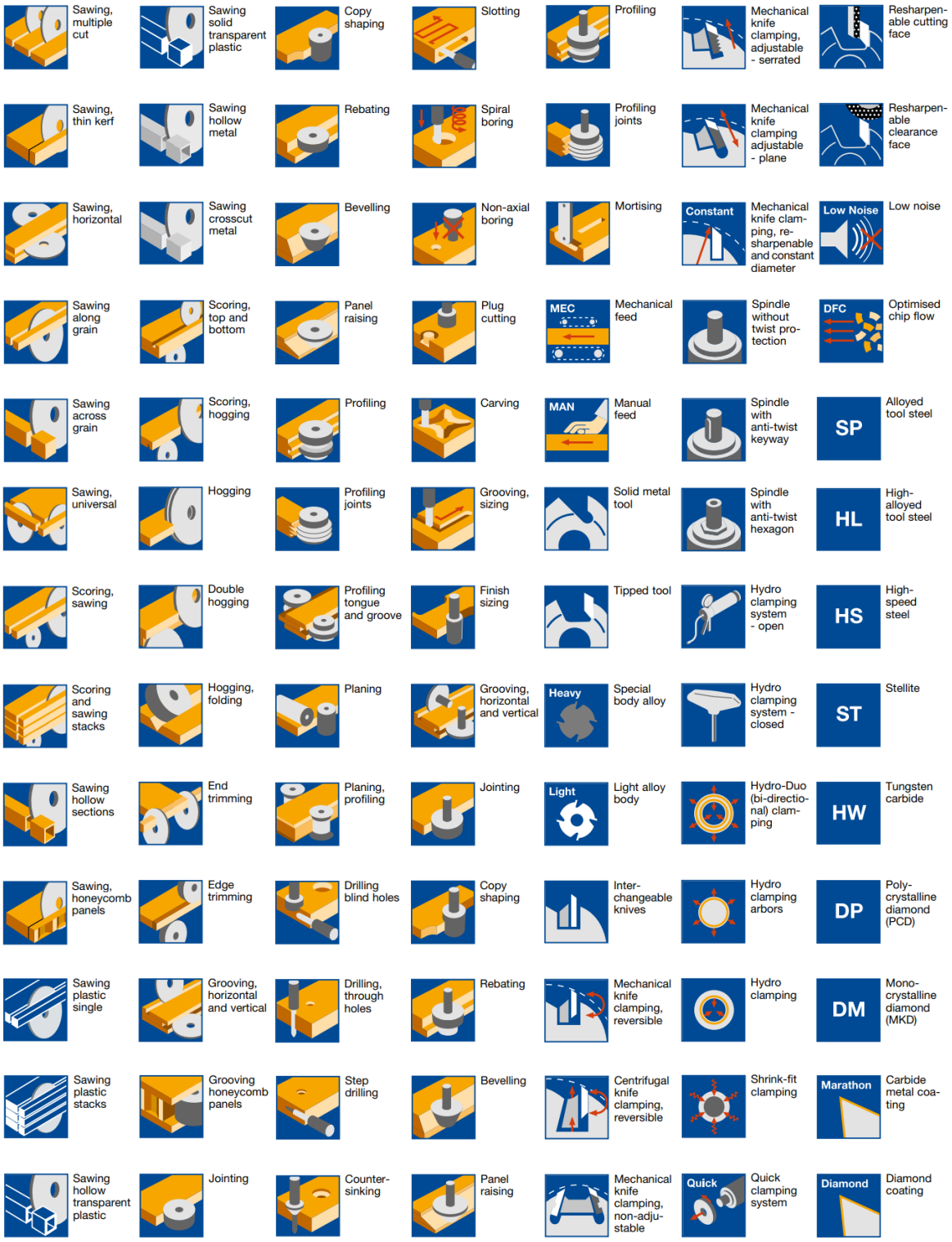
RPM: n = 18000 - 27000 min^{-1}

Spare parts:

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

Machining recommendation

EGGER Compact Laminates



Machining recommendation

EGGER Compact Laminates

Explanation of abbreviations

A	=	dimension A
a_e	=	cutting thickness (radial)
a_p	=	cutting depth (axial)
ABM	=	dimension
APL	=	panel raising length
APT	=	panel raising depth
AL	=	working length
AM	=	number of knives
AS	=	anti sound (low noise design)
b	=	overhang
B	=	width
BDD	=	thickness of shoulder
BEM	=	note
BEZ	=	description
BH	=	tipping height
BO	=	bore diameter
CNC	=	Computerized Numerical Control
d	=	diameter
D	=	cutting circle diameter
D0	=	zero diameter
DA	=	outside Diameter
DB	=	diameter of shoulder
DFC	=	Dust Flow Control (optimised chip clearance)
DGL	=	number of links
DIK	=	thickness
DKN	=	double keyway
DP	=	polycrystalline diamond
DRI	=	rotation
FAB	=	width of rebate
FAT	=	depth of rebate
FAW	=	bevel angle
FLD	=	flange diameter
f_z	=	tooth feed
$f_{z\,eff}$	=	effective tooth feed
GEW	=	thread
GL	=	total length
GS	=	Plunging edge
H	=	height
HC	=	tungsten carbide, coated
HD	=	wood thickness (thickness of workpiece)
HL	=	high-alloyed tool steel
HS	=	high-speed steel (HSS)
HW	=	tungsten carbide (TCT)
ID	=	ident number
IV	=	insulation glazing
KBZ	=	abbreviation
KLH	=	clamping height
KM	=	edge breaker
KN	=	single keyway
KNL	=	combination pinhole consists of 2/7/42 2/9/46,35 2/10/60
L	=	length
l	=	clamping length
LD	=	left hand twist
LEN	=	Leitz standard profiles
LH	=	left hand rotation
M	=	metric thread
MBM	=	minimum order quantity
MC	=	multi-purpose steel, coated
MD	=	thickness of knife
min^{-1}	=	revolutions per minute (RPM)
MK	=	morse taper
$m\ min^{-1}$	=	metres per minute
$m\ s^{-1}$	=	metres per second
n	=	RPM
$n_{max.}$	=	maximum permissible RPM
NAL	=	position of hub
ND	=	thickness of hub
NH	=	zero height
NL	=	cutting length
NLA	=	pinhole dimensions
NT	=	grooving depth
P	=	profile
POS	=	cutter position
PT	=	profile depth
PG	=	profile group
QAL	=	cutting material quality
R	=	radius
RD	=	right hand twist
RH	=	right hand rotation
RP	=	radius of cutter
S	=	shank dimension
SB	=	cutting width
SET	=	set
SLB	=	slotting width
SLL	=	slotting length
SLT	=	slotting depth
SP	=	tool steel
ST	=	Cobalt-basis cast alloys, e.g. Stellit®
STO	=	shank tolerance
SW	=	cutting angle
TD	=	diameter of tool body
TDI	=	thickness of tool
TG	=	pitch
TK	=	reference diameter
UT	=	cutting edges with irregular pitch
V	=	number of spurs
v_c	=	cutting speed
v_f	=	feed speed
VE	=	packing unit
VSB	=	adjustment range
WSS	=	workpiece material
Z	=	number of teeth
ZA	=	number of fingers
ZF	=	tooth shape (cutting edge shape)
ZL	=	finger length

In this machining recommendation, corresponding parameters for optimum machining of the designated materials are presented. The information on tools and machining parameters are guideline values without any claim to completeness or general validity. Machine or process-related marginal conditions can lead to deviating application parameters. Individual adjustments may be necessary in individual cases. In particular, the respective manufacturer's information on the intended use of the machine, tool and material must be observed. No rights can be derived from this machining recommendation. For solutions to complex tasks, please contact our technical advisor.

The information is based on the current state of the art and has been prepared with particular care and to the best of our knowledge. Due to continuous technical development as well as new standards and laws, technical changes may occur.