

Wood construction

Tool programme for the professional processing of solid wood



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Introduction

New challenges & technologies for the oldest construction material in the world – future-oriented, design-led and high-quality

From today's point of view, wood as a renewable raw material, CO₂ storage and material with excellent insulating properties is probably the most sustainable raw material currently available worldwide. In modern architecture and craftsmanship, wood is experiencing a true renaissance from an aesthetic point of view, for environmental awareness, material properties and workability. The mechanical processing of wood is subject to a multitude of different demands, and this becomes particularly clear in the area of structural wood construction.

Leitz, with vast experience in solid wood applications and extensive knowledge of the challenges in manual and

industrial production, make its innovative tool range the preferred solution for wood construction companies.

For Leitz, the success of its customers and a long-term partnership is the main focus. As a leading supplier of technically high-quality tool solutions, it is our goal to increase efficiency, productivity, quality and sustainability for our customers.

This is made possible by our more than 140 years of experience in tool manufacturing and our particularly deep knowledge of our customers needs and that of the market. All of this and a worldwide Leitz service network with more than 120 of our own service stations as well as our certified quality promise, make Leitz the partner for your success.



Glulam, CLT ...

Core products for wooden house construction

Meeting challenges with innovative solutions

The demand for wood-based construction elements in the building industry continues to grow unabated. Increasing demand and the resulting growth in consumption of materials such as glulam (BSH) or cross-laminated timber (BSP) are forcing the timber construction industry to optimize its manufacturing processes in terms of cost and time. In addition, quality-forming aspects such as appearance, surface finish and gluing ability are increasingly coming into focus.

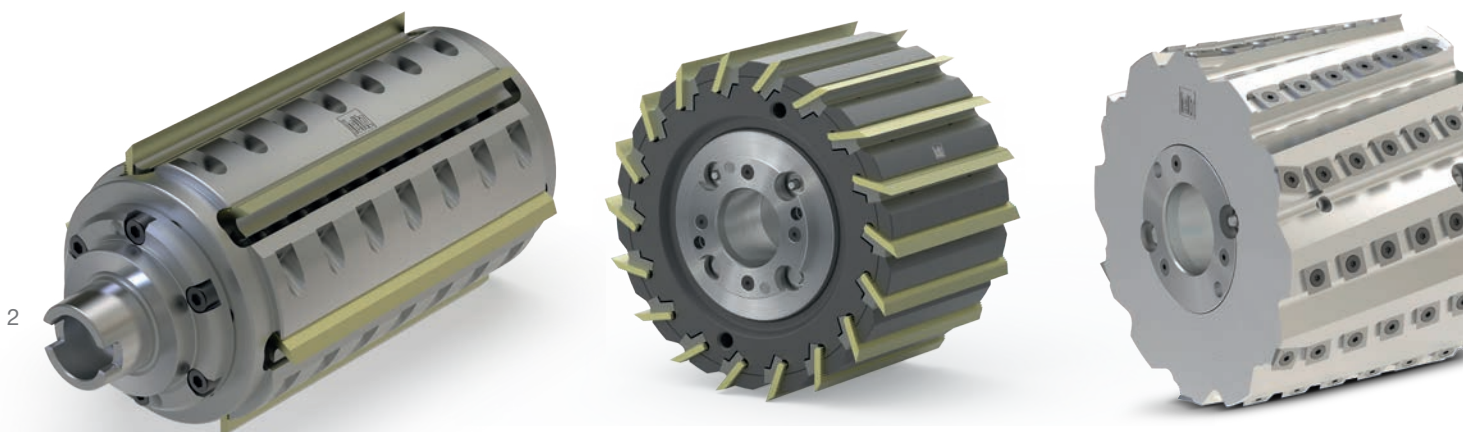
These goals can only be achieved with resilient and robust tool systems that allow high feed rates, are easy to handle, deliver perfect results and are convincing in terms of ease of maintenance.

Planerheads

Dimensional accuracy, shape accuracy and surface quality

The first operation after cutting the raw wood is planing. It is primarily the most important step in woodworking. Here, the shape and material thickness are determined, and surfaces and reference surfaces are created. When planing, the selection of the right tool and the appropriate machining strategy are decisive for the results in all subsequent machining processes.

Further information can be found from page 28 ►





Minifinger jointing tools

High-strength joints with excellent appearance

The dimensionally stable jointing of several short wooden parts to form a large component creates wooden construction elements that would not occur in nature in the required shape, size or load-bearing capacity. Particularly important is the quality and stability of the corresponding type of joint. The production of high-quality flat or upright minifingers requires tools that are optimally matched to the material, adhesive and final use.

Further information can be found from page 45 ►

Optimization cross-cut sawblades

Excellent cross-cuts with short cycle times

Perfect fitting accuracy in the shortest possible time – with precisely placed saw cuts. The prerequisite for perfect results here is the performance and stability of the circular sawblades under high loads.

Further information can be found from page 18 ►



Joinery

Wood cutting on machine controlled equipment

Precise tool solutions for every requirement

The more precise the fit in the joinery, the more time can be saved during final assembly and the better the appearance of visible components. Nowadays, CNC-controlled production machines are mainly used for this work.

The precision and quality of the joinery must also be reflected in the tools used. Leitz offers tooling solutions, especially for joineries, that more than meet these requirements.



Circular sawblades

Leitz circular sawblades offer above all dimensional stability in machining as well as tear-free and absolutely precise results.

◀ Further information can be found from page 14

Boring bits

Boring tools from Leitz are convincing in terms of shape and position accuracy and allow maximum speeds during boring, without intermediate discharge.

Further information can be found from page 74 ▶



Roughing-finishing routers

When it comes to large chip removal combined with low feed forces, Leitz routers with Marathon coating are the perfect choice for sizing, grooving or routing.

◀ Further information can be found from page 64



HeliCut 11 Roughing router

Perfect machining results, large cutting volumes and easy handling – these are the main features of the HeliCut 11 system from Leitz.

[Further information can be found from page 61](#) ▶



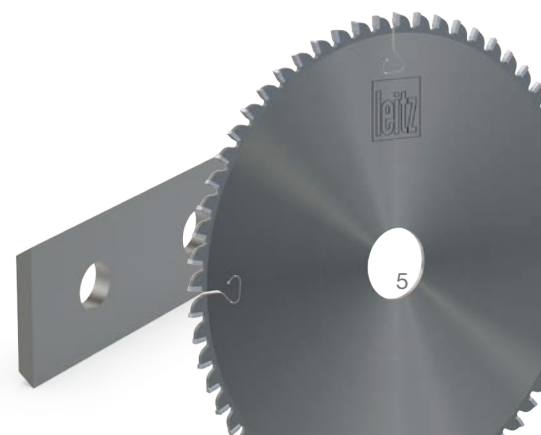
HeliCut 15 Cutterhead

Whether on CNC joinery systems or on other machines for solid wood processing – the HeliCut 15 rebate cutterhead from Leitz offers perfect results with maximum performance.

◀ [Further information can be found from page 56](#)

Tools for manual machines

Leitz offers a comprehensive range of turnblades, circular sawblades or boring bits for manual joineries or for finishing work on the construction site – for precision and perfection in manual operation.



Profiling

Shaping, appearance and surface

Rough sheet piling, tongue & groove, ceiling elements, profile strips, decking boards ...

Profiling is the final processing step that applies to solid wood processing – from raw wood to the final product. This is where the final shape is given to the workpiece. At the same time, this partial process also determines the quality of the final product and thus also the impression that the consumer perceives.

This and the requirements of modern production concepts need, above all, powerful and adaptable tooling systems that are reliable and flexible.



ProfilCut Q

The ProfilCut Q system stands for highest performance and cutting quality and is the customized solution for almost every requirement, every material and every machine.

Continuity of diameter, high runout quality, no adjustment effort on the machine, as well as quick and easy knife change with absolutely flexible profile design convince users day after day.

Further information can be found from page 37 ►

VariPlan / ProFix



HeliCut

The absolute all-round specialist for tear-free machining results with simple and fast cutting edge change as well as long lifetime.

◀ Further information can be found from page 56





Profile cutter

The Leitz tipped profile cutters are particularly robust and stand for the highest machining quality, long lifetime, low-maintenance operation and significant reduction in set-up times.

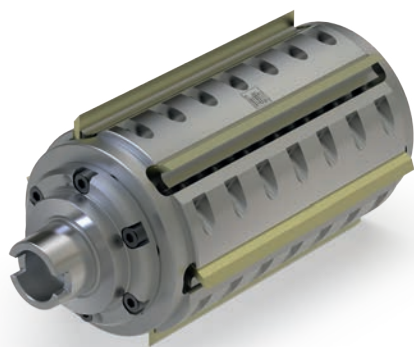
[Further information can be found from page 39](#) ►



Profile cutterheads

Leitz offers a wide range of tools for processing any profile using standard support bodies and individually profiled blanks. By mounting straight knives, the tool can also be used for planing.

◀ [Further information can be found from page 39](#)



Turnblade tools

For more efficiency and flexibility in jointing, rebating, rounding and grooving, Leitz offers an extensive range of standardized turnblade tools for particularly easy on-site service.



Planing

Not all surfaces are the same

What matters!

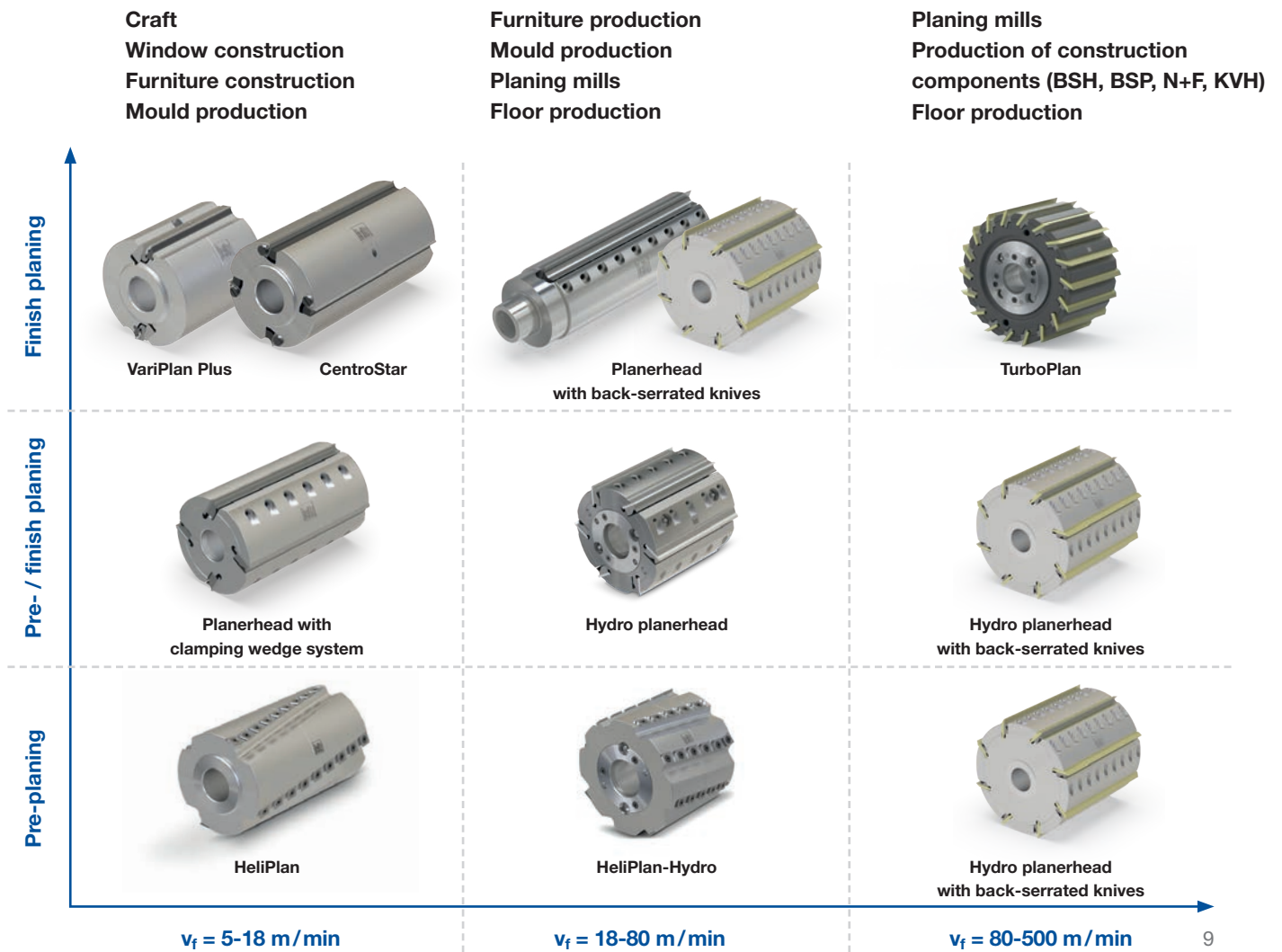
Before choosing a specific tooling system, various parameters must be considered in advance of planning. Only by answering these seven key questions it will be possible to determine the appropriate tooling solution.

Together with application experts on site, Leitz defines the technically suitable solution for each application. We always aim to achieve the optimum added value for the overall process and thus for the customer's economic success.

What type of machine is used?	The machine type determines the dimensions of the tool and how it is mounted within the production unit.
What must be the quality of the surface?	The surface quality to be achieved determines the type of tool. Important: the best technical solution is not always the most economical.
Which application data are required?	Speed or feed rate decisively determine the technical design of the tool and the number of cutting edges.
Which workpiece material is being machined?	The material to be machined and its condition determine the cutting material and the appropriate application data.
What does capacity planning look like?	The throughput of material, whether series production or single application, the goal is an efficient and cost-oriented solution.
How much material is removed?	The difference in thickness between the raw material and the finished product determines the process and thus also the choice of the ideal tooling system.
Who will do the sharpening?	The choice of tool is also determined by whether reprocessing is to take place internally or externally. Always with a view to the production costs.



... Leitz planing systems at a glance.

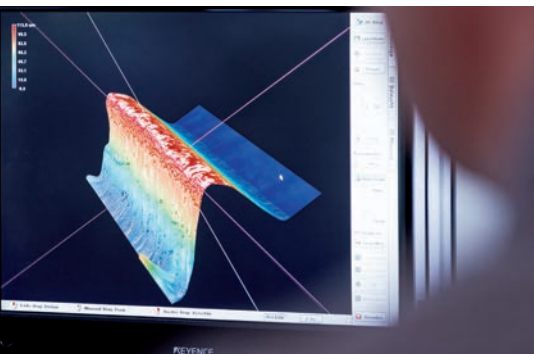


Special materials

... require special tool solutions

Consulting and process optimization for special requirements

Laminated veneer wood, fiber cement, Alucobond, compact laminates, gypsum fiberboard or wood fiberboard – the variety of new types of materials is great and so are the challenges that go hand in hand with them in machining.



Knowledge and experience around cutting materials or coatings

Every material has its own special features, which are reflected in the machining process. To ensure that this can also be designed optimally from an economic point of view, it is important to use the ideal cutting material for the respective application. Leitz has decades of knowledge in the development of cutting materials – whether in the form of various coatings or specially developed carbide mixtures.



Process analysis and process definition for the most economical solution

The basis for the development of feasible strategies and tool solutions is always a thorough examination of the conditions on site. Leitz engineers and technicians deal with the daily challenges that arise in ongoing production. The aim is always to find the most economical and reasonable solution in the interest of the customer and thus to support his business success.



Leitz supports its customers from a wide range of sectors and industries with individual solutions when it comes to machining new materials, increasing tool life, reducing set-up times, minimizing cutting forces, conserving resources or simply making machining more efficient.

Machining strategies around the optimal process

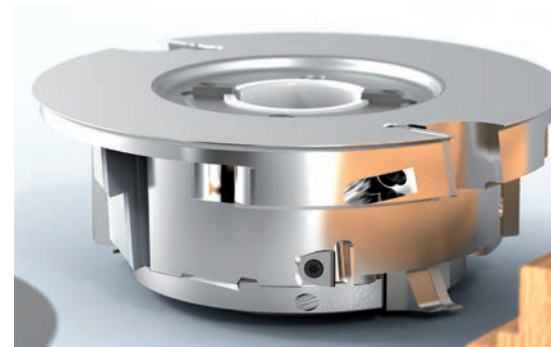
Leitz offers an extensive programme of training courses for its customers.

Practice-oriented training courses and workshops impart valuable user knowledge and are always oriented to the current state of the art. From tool optimization, process sequences, machining methods, milling strategies, and production optimization to the optimum use of extraction systems – the range of topics is optimally customized to individual needs.



Tool combinations or hybrid solutions

Especially when machining combined materials, each tool used must be optimally adapted to the respective machining operation. Leitz offers tool combinations or hybrid solutions that are always aimed at achieving the optimum machining result – and always under the guideline of not losing sight of the efficiency and thus the cost-effectiveness of the overall process.



Special solutions

Special tools – anything but ordinary



Three steps for the optimal process ...

Special requirements for the end product always require special solutions within the manufacturing process. Here it is important to know the numerous influencing components within a production and to understand their interdependencies in order to achieve the optimum result in the end.

Leitz, with its extensive process knowledge and wide range of products, offers the possibility to fall back on universal tooling systems and to adapt them individually to the customer's requirements.

1

Workpiece

Relevant information:

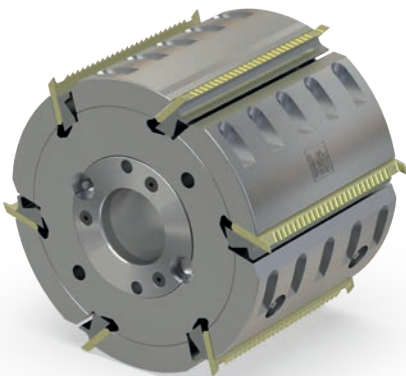
Machining task, cutting direction, profile type, material type, material properties

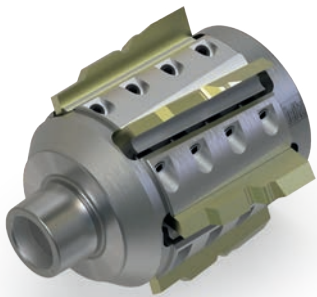
2

Machine

Relevant information:

Machine type, application parameters, spindle sequence, engine power,





3

Tool system

Relevant information:

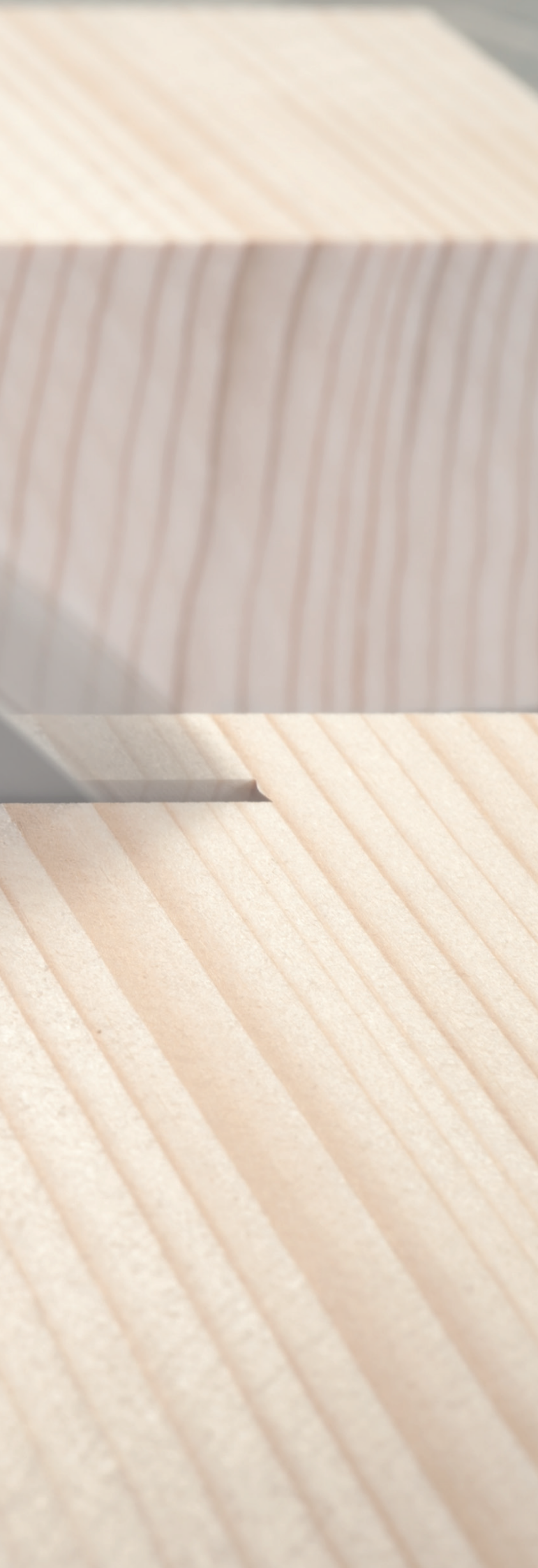
Dimensions, service options, cutting material, type of adaptor

meter, manufacturer, type, year of construction, direction of rotation



Sawing

Leitz tool programme for wood construction



Content chapter Sawing

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1. Sawing

1.1 Solid wood cutting along grain 1.1.3 Circular sawblades without wiper teeth



Lamella cut

Application:

For cutting along grain - shoulder and trimming cuts.

Machine:

Edging, single blade, multi blade saws as well as saws with one or two spindles.

Workpiece material:

Softwood and hardwood wet and dry.

Technical information:

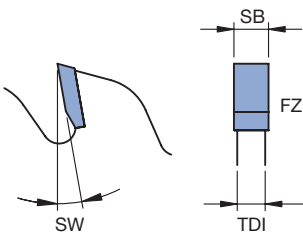
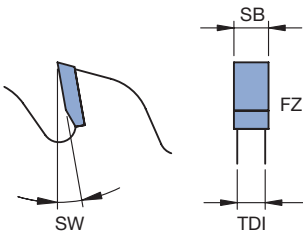
Large gullet area and large lateral tooth protrusion. Solid desing particularly for edge cuts. For universal use in dry and wet soft and hard woods. Design without raker blades. Partially suitable for larger cutting depths and the use in frozen woods.



Shoulder and square cut

WK 100 2

D	SB	TDI	BO	NLA	Z	ZF	SW	WSS	ID
mm	mm	mm	mm	mm			°		
250	4,0	2,6	30	KNL	18	FZ	20	■	165101 ●
300	4,0	2,6	30	KNL	24	FZ	20	■	165102 ●
350	4,4	3,0	30	KNL	24	FZ	20	■	165104 ●
400	5,0	3,2	30	KNL	28	FZ	20	■	165105 ●
450	5,0	3,2	30	KNL	28	FZ	20	■	165106 ●
500	5,0	3,2	30	KNL	32	FZ	20	■	165107 ●



Middle cut

WK 100 2

D	SB	TDI	BO	NLA	Z	ZF	SW	WSS	ID
mm	mm	mm	mm	mm			°		
200	3,2	2,2	30	KNL	18	FZ	25	■	165108 ●
210	3,2	2,2	30	KNL	18	FZ	20	■	165109 ●
250	3,2	2,2	30	KNL	18	FZ	20	■	165110 ●
300	3,2	2,2	30	KNL	24	FZ	20	■	165111 ●
350	3,2	2,2	30	KNL	24	FZ	20	■	165113 ●
400	4,0	2,8	30	KNL	28	FZ	20	■	165114 ●
450	4,0	2,8	30	KNL	28	FZ	20	■	165115 ●
500	4,0	2,8	30	KNL	32	FZ	20	■	165116 ●

1. Sawing

1.1 Solid wood cutting along grain 1.1.3 Circular sawblades without wiper teeth



Sizing solid wood along grain

Application:

For cutting along grain - sizing wood.

Machine:

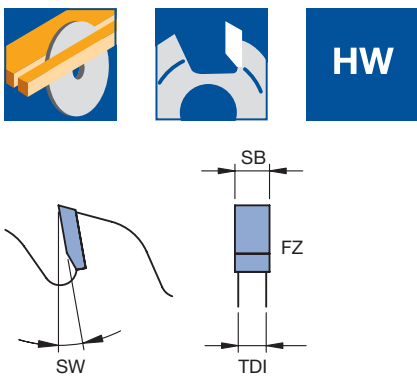
Edging, single blade, multi blade saws as well as saws with one or two spindles.

Workpiece material:

Softwood and hardwood, dry up to 15% wood moisture content.

Technical information:

Design with chip thickness limitation for limited chip removal per tooth and reduced feed speeds.



Circular sawblade FZ with thickness limitation

WK 100 2

D	SB	TDI	BO	NLA	Z	ZF	SW	WSS	ID
mm	mm	mm	mm	mm			°		
250	3.2	2.2	30	KNL	18	FZ	20	■	166050 ●
300	3.5	2.4	30	KNL	14	FZ	20	■	166051 ●
350	3.5	2.4	30	KNL	16	FZ	20	■	166052 ●
400	4,0	2.8	30	KNL	18	FZ	20	■	166053 ●
450	4,0	2.8	30	KNL	20	FZ	20	■	166054 ●
500	4,0	2.8	30	KNL	24	FZ	20	■	166055 ●



Universal sizing

Application:

For multi-purpose application in solid wood.

Machine:

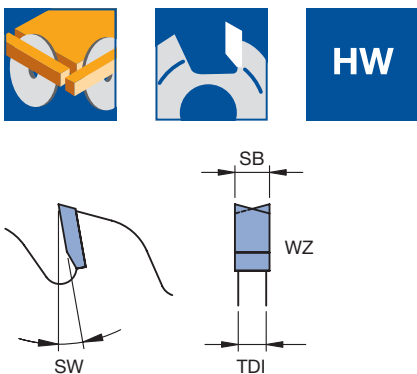
Trimming and cross cutting saws.

Workpiece material:

Softwood and hardwood wet and dry.

Technical information:

Design with chip thickness limitation for limited chip removal per tooth and reduced feed speeds. Tooth shape WZ for cuts in long-fibred woods such as poplar and for cuts in wet woods. Lower power consumption due to tooth shape WZ. Also suitable for cuts across the grain.



Circular sawblade WZ with thickness limitation

WK 150 2

D	SB	TDI	BO	NLA	Z	ZF	SW	WSS	ID
mm	mm	mm	mm	mm			°		
250	3.2	2.2	30	KNL	24	WZ	20	■	166076 ●
300	3.2	2.2	30	KNL	28	WZ	20	■	166077 ●
350	3.2	2.2	30	KNL	32	WZ	20	■	166078 ●
400	4,0	2.8	30	KNL	36	WZ	20	■	166079 ●
450	4,0	2.8	30	KNL	42	WZ	20	■	166080 ●
500	4,0	2.8	30	KNL	48	WZ	20	■	166081 ●
550	4.8	3.5	30	KNL	54	WZ	20	■	166082 ●
600	4.8	3.5	30	KNL	60	WZ	20	■	166083 ●
700	4.8	3.5	30	KNL	60	WZ	20	■	166084 ●



Trimming at high feed rates

Application:

For trimming and cross cutting with cycle times of 0.3 - 1.0 sec.

Machine:

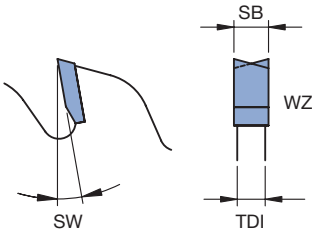
Cross, trimming and optimising saws.

Workpiece material:

Solid wood wet and dry across grain, solid wood profiles across grain.

Technical information:

For fast cross-cutting, sizing and optimizing machines. Large lateral tooth clearance and a high number of teeth. Stable corner angle of 20° for tear-free cutting results and long tool life.



Trimming at high feed rates

WK 150 2

Machine	D mm	SB mm	TDI mm	BO mm	NLA mm	Z	ZF	SW °	WSS	ID
Dimter, System TM	400	3.5	2.8	30	2/10/60 2/15/63 2/10/150 2/10/198	120	WZ	10	■	165450 ●
Dimter, System TM	400	3.5	2.8	30	2/10/60 2/15/63 2/10/150 2/10/198	140	WZ	10	■	165464 ●
Dimter, System TM	450	3.5	2.8	30	2/10/60 2/15/63 2/10/150 2/10/198	158	WZ	10	■	165465 ●
Dimter	450	4.8	3.5	30	2/10/60 2/15/63	138	WZ	10	■	165451 ●
Dimter	450	5,0	3.2	30	2/10/60 2/15/63	108	WZ	10	■	165452 ●
Dimter, System TM	500	4.8	3.5	30	2/10/60 2/15/63 2/10/150 2/10/198	144	WZ	10	■	165454 ●
Dimter	500	4.8	3.5	35	2/10/60 2/15/63	144	WZ	10	■	165455 □
Dimter	500	5.2	3.2	30	2/10/60 2/15/63	120	WZ	10	■	165453 ●
Dimter	520	4.6	3.4	30	2/10/60 2/15/63	144	WZ	10	■	165456 ●
Dimter	550	5,0	3.2	30	2/10/60 2/15/63	96	WZ	10	■	165457 ●
Dimter	550	5.2	3.2	30	2/10/60 2/15/63	120	WZ	10	■	165459 ●
Dimter, System TM	550	5.2	3.2	30	2/10/60 2/15/63 2/10/150 2/10/198	160	WZ	10	■	165458 ●
Dimter	600	5.4	4,0	30	2/10/60 2/15/63	172	WZ	10	■	165461 ●
Dimter	600	5.8	4,0	30	2/10/60 2/15/63	108	WZ	10	■	165460 ●
Dimter	630	5.4	4,0	30	2/10/60 2/15/63	180	WZ	10	■	165462 ●
Dimter	700	5.5	4,0	30	2/15/63	200	WZ	10	■	165463 ●



Trimming, crossing and mitre cuts

Application:

For cross cutting, trimming and angled cuts.

Machine:

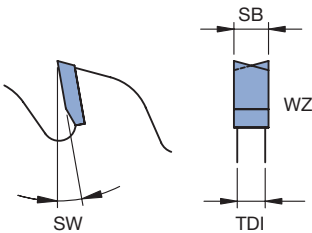
Cross and trimming saws and CNC controlled joinery machines, cross cutting twin saws.

Workpiece material:

Solid wood beams wet and dry, cross-glued beams.

Technical information:

Tooth shape for universal use and with large lateral tooth clearance.



Circular sawblade WZ

WK 150 2

Machine	D mm	SB mm	TDI mm	BO mm	NLA mm	Z	ZF	SW °	WSS	ID
Weinmann	240	3,0	2,0	30	8/6/52	30	WZ	15	■	165337 ●
Weinmann	370	3,5	2,5	30	KNL	108	WZ	10	■	165338 ●
Routech	440	7,0	4,0	75	6/9/100	12+2+2	WZ	20	■	165326 ●
Routech	500	4,4	3,2	75	2/8,5/100	28+2+2+2	WZ	20	■	165328 ●
Routech	500	7,0	4,0	75	6/10,6/100	14+2+2+2	WZ	20	■	165327 ●
Essetre	520	5,4	3,5	60	2/8,5/100	72	WZ	20	■	165332 ●
Weinmann	555	5,2	3,6/6	55	8/6,5/100	54+2+2	WZ	20	■	165325 ●
Essetre	600	5,4	3,5	80	6/7/75	72	WZ	20	■	165333 ●
Routech	600	6,0	4,0	30	8/9,5/120	48	WZ	15	■	057570 ●
Routech	600	7,0	4,0	75	2/14/400	16+2+2+2	WZ	20	■	165329 ●
Uniteam	640	5,4	3,6	30	6/9/125	36+2+2	WZ	20	■	165330 ●
					8/6,5/160					
					8/6,5/130					
					4/10,5/90					
	700	6,0	4,4	30		72	WZ	15	■	165334 ●
	750	6,0	4,4	30		72	WZ	15	■	165335 ●
	800	6,0	4,4	30		72	WZ	15	■	165336 ●
Uniteam	850	8,0	6,0	30	8/6,5/160	60+2+2+2	WZ	20	■	165331 ●
					8/6,5/130					
					4/10,5/90					



Universal sizing - AccuCut

Application:

For cross-cut and sizing.

Machine:

Accu-portable sawblades.

Workpiece material:

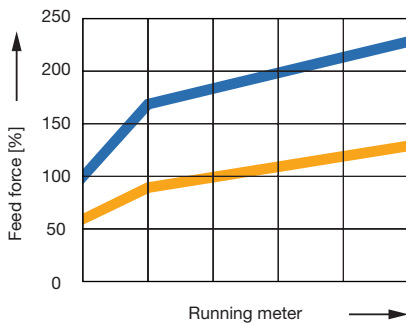
Solid wood lengthwise and crosswise as well as glued, chipboard and fibre materials raw, plastic- and paper-coated, veneered, laminated wood (e.g. plywood, multiplex).

Technical information:

Long battery life due to thin kerf, cutting force-reduced cutting geometry and innovative tooth pitch. Very good cutting quality due to high number of teeth.



Comparison of feed force (MDF 38 mm)



■ Conventional circular sawblade, Z 48, SB 2.2 mm, WZ

■ Leitz AccuCut circular sawblade, Z 42, SB 1.8 mm, WZ/WZ/WZ/FZ

Circular sawblade AccuCut

WK 879 2

D	SB	TDI	BO	Z	ZF	SW	WSS	ID
mm	mm	mm	mm			°		
140	1.8	1.2	20	35	WZ/WZ/WZ/FZ	10	■ ■	166623 ●
160	1.8	1.2	20	42	WZ/WZ/WZ/FZ	10	■ ■	166620 ●
165	1.8	1.2	20	42	WZ/WZ/WZ/FZ	10	■ ■	166621 ●
190	1.8	1.2	30	42	WZ/WZ/WZ/FZ	10	■ ■	166622 ●



Universal sizing

Application:

For cutting along and across grain and sizing.

Machine:

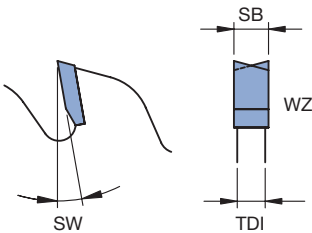
Portable and table saws.

Workpiece material:

Solid wood along and across grain, glued. Chipboard and fibre materials, plastic and paper coated, veneered, laminated veneer lumber (e.g. plywood, multiplex plywood), duroplastics (compact laminated boards, e.g. HPL).

Technical information:

Tooth shape for universal use.



Circular sawblade WZ pos. cutting angle

WK 150 2

D	SB	TDI	BO	NLA	Z	ZF	SW	WSS	ID
mm	mm	mm	mm	mm			°		
100	2.4	1.6	12		30	WZ	10	■ ■ ■ ■ ■	166109 ●
100	2.4	1.6	22		30	WZ	10	■ ■ ■ ■ ■	166110 ●
120	2.4	1.6	20		24	WZ	15	■ ■ ■ ■ ■	166111 ●
125	2.4	1.6	20		24	WZ	15	■ ■ ■ ■ ■	166112 ●
125	2.4	1.6	20		36	WZ	10	■ ■ ■ ■ ■	166113 ●
140	2.4	1.6	20		24	WZ	15	■ ■ ■ ■ ■	166114 ●
150	2.8	1.8	20		48	WZ	10	■ ■ ■ ■ ■	166115 ●
160	1.6	1.1	20		24	WZ	25	■ ■ ■ ■ ■	166100 ●
160	1.8	1.2	20		18	WZ	25	■ ■ ■ ■ ■	166101 ●
160	1.8	1.2	20		32	WZ	5	■ ■ ■ ■ ■	166102 ●
160	2.5	1.6	20		12	WZ	20	■ ■ ■ ■ ■	166116 ●
160	2.5	1.6	20		24	WZ	15	■ ■ ■ ■ ■	166117 ●
160	2.5	1.6	20		48	WZ	15	■ ■ ■ ■ ■	166118 ●
165	2.2	1.6	20		24	WZ	15	■ ■ ■ ■ ■	166119 ●
165	2.2	1.6	20		48	WZ	10	■ ■ ■ ■ ■	166104 ●
165	2.4	1.6	20		12	WZ	15	■ ■ ■ ■ ■	166103 ●
170	2.5	1.6	30		48	WZ	10	■ ■ ■ ■ ■	166120 ●
180	2.5	1.6	20		24	WZ	15	■ ■ ■ ■ ■	166121 ●
180	2.5	1.6	20		48	WZ	10	■ ■ ■ ■ ■	166122 ●
180	2.5	1.6	30		24	WZ	15	■ ■ ■ ■ ■	166123 ●
180	2.5	1.6	30		48	WZ	10	■ ■ ■ ■ ■	166105 ●
184	2.5	1.6	20		24	WZ	15	■ ■ ■ ■ ■	166124 ●
190	2.5	1.8	30		24	WZ	20	■ ■ ■ ■ ■	166128 ●
190	2.8	1.8	16		24	WZ	15	■ ■ ■ ■ ■	166125 ●
190	2.8	1.8	16		48	WZ	10	■ ■ ■ ■ ■	166126 ●
190	2.8	1.8	30		16	WZ	20	■ ■ ■ ■ ■	166127 ●
190	2.8	1.8	30		48	WZ	10	■ ■ ■ ■ ■	166129 ●
200	3,0	2,0	30		34	WZ	10	■ ■ ■ ■ ■	166130 ●
200	3,0	2,0	30		48	WZ	10	■ ■ ■ ■ ■	166131 ●
210	2.4	1.6	30		24	WZ	15	■ ■ ■ ■ ■	166133 ●
210	2.4	1.6	30		42	WZ	20	■ ■ ■ ■ ■	166134 ●
210	2.4	1.6	30		64	WZ	10	■ ■ ■ ■ ■	166135 ●
220	3.2	2.2	30		34	WZ	15	■ ■ ■ ■ ■	166136 ●
220	3.2	2.2	30		60	WZ	10	■ ■ ■ ■ ■	166107 ●
225	2.6	1.8	30		32	WZ	20	■ ■ ■ ■ ■	166137 ●
225	2.6	1.8	30		48	WZ	10	■ ■ ■ ■ ■	166138 ●
230	2.5	1.8	30		24	WZ	20	■ ■ ■ ■ ■	166140 ●
230	2.5	1.8	30		48	WZ	15	■ ■ ■ ■ ■	166108 ●
230	3.2	2.2	30		34	WZ	15	■ ■ ■ ■ ■	166141 ●
235	2.5	1.8	30		12	WZ	15	■ ■ ■ ■ ■	166158 ●
235	2.5	1.8	30		24	WZ	15	■ ■ ■ ■ ■	166156 ●
235	2.5	1.8	30		56	WZ	15	■ ■ ■ ■ ■	166157 ●
235	3.2	2.2	30		24	WZ	15	■ ■ ■ ■ ■	166142 ●
235	3.2	2.2	30		34	WZ	15	■ ■ ■ ■ ■	166143 ●
240	3,0	2,0	30		34	WZ	15	■ ■ ■ ■ ■	166144 ●
240	3,0	1.8	30		48	WZ	10	■ ■ ■ ■ ■	166145 ●
250	2.8	2,0	30	KNL	24	WZ	25	■ ■ ■ ■ ■	166146 ●
250	2.8	2,0	30	KNL	60	WZ	20	■ ■ ■ ■ ■	166147 ●











- Solid wood
- Board, coated
- Board, uncoated
- Non-ferrous metals
- Plastics
- Mineral materials
- Composites
- Steel, thin-walled

1. Sawing

1.7 Portable saws and table-top machines

1.7.1 Circular sawblades WZ

D	SB	TDI	BO	NLA	Z	ZF	SW	WSS	ID
mm	mm	mm	mm	mm			°		
260	3.2	2.2	30	KNL	60	WZ	10		166148 ●
280	3.2	2.2	30	KNL	48	WZ	10		166149 ●
280	3.2	2.2	30	KNL	60	WZ	10		166150 ●
315	3,0	2,0	30	KNL	48	WZ	15		166152 ●
315	3.2	2.2	30	KNL	28	WZ	20		166151 ●
315	3.2	2.2	30	KNL	72	WZ	10		166153 ●
355	3.2	2.2	30	KNL	16	WZ	20		166154 ●
355	3.2	2.2	30	KNL	32	WZ	20		166155 ●



Dry sawing of ferrous metals - DryCut

Application:

For splitting, trimming and sizing.

Machine:

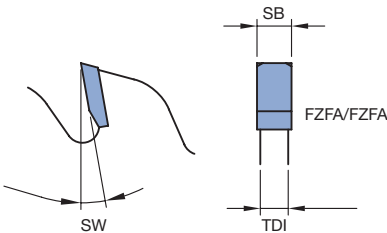
Trimming and mitre saws, portable machines and table saws.

Workpiece material:

Flat and angle steel, pipes, steel plates and profiles, sandwich panels.

Technical information:

Note: Slow feed! Reduce speed! There may be sparks in use. Pay attention to safety instructions of extraction.



Circular sawblade DryCut

WK 977 3

D	SB	TDI	BO	Z	ZF	SW	WSS	ID
mm	mm	mm	mm			°		
160	2,0	1.6	20	48	FZFA/FZFA	0	■	163529 ●
165	2,0	1.6	20	48	FZFA/FZFA	0	■	163530 ●
190	2,0	1.6	30	54	FZFA/FZFA	0	■	163531 ●
210	2,0	1.6	30	60	FZFA/FZFA	0	■	163532 ●
225	2.2	1.8	30	64	FZFA/FZFA	0	■	163533 ●
254	2.2	1.8	30	72	FZFA/FZFA	0	■	163534 ●
300	2.2	1.8	30	80	FZFA/FZFA	0	■	163535 ●
305	2.4	2,0	25.4	80	FZFA/FZFA	0	■	163536 ●
330	2.4	2,0	30	80	FZFA/FZFA	0	■	163537 ●
355	2.4	2,0	25.4	80	FZFA/FZFA	0	■	163538 ●
400	3,0	2.4	30	84	FZFA/FZFA	0	■	163539 ●



Universal sizing

Application:

For universal use on building sites.

Machine:

Universal cutting saws.

Workpiece material:

Panels and timbers with small concrete and metal inclusions, wood wool (e.g. Heraklith), gypsum plasterboard and form work panel of veneer, gas aerated slabs, Styrodur slabs, roundwood and squared timbers.

Technical information:

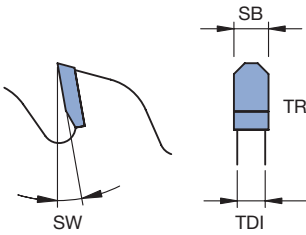
Tool body with round closed form and stable tooth shape. Special tungsten carbide grade for all requirements on construction sites. Noise reducing design.



Circular sawblades TR for saw benches

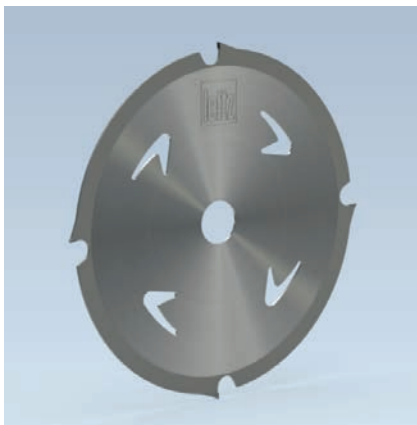
WK 123 2

D	SB	TDI	BO	NLA	Z	ZF	SW	WSS	ID
mm	mm	mm	mm	mm			°		
350	3.5	2.5	30	KNL	24	TR	10		166025 ●
400	3.8	2.8	30	KNL	28	TR	10		166026 ●
450	4,0	3,0	30	KNL	32	TR	10		166027 ●
500	4,0	3,0	30	KNL	36	TR	10		166028 ●



1. Sawing

1.7 Portable saws and table-top machines 1.7.6 Circular sawblades for fibre cement boards



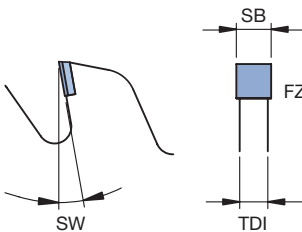
Cutting facade panels *Excellent*

Application:
For trimming and sizing.

Machine:
Accu-portable sawblades.

Workpiece material:
Gypsum and cement boards.

Technical information:
Thin kerf for low power requirement and long battery life. DP tipping for long tool life. Tool body with cooling holes for dust-free cutting surfaces.



Circular sawblade DP design

WK 100 3 DP

D	SB	TDI	BO	Z	ZF	SW	WSS	ID
mm	mm	mm	mm			°		
160	2.2	1.6	20	4	FZ	5	■	190752 ●
165	2.2	1.6	20	4	FZ	5	■	190753 ●
190	2.2	1.6	30	4	FZ	5	■	190754 ●



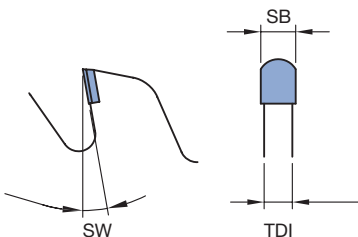
Cutting facade panels *Excellent*

Application:
For trimming and sizing.

Machine:
Table and sizing saws, portable and radial cross saws.

Workpiece material:
Gypsum and cement boards.

Technical information:
Robust tooth shape and DP mounting for long tool life. Special tool body design for high stability.



Circular sawblade DP design

WK 808 2 DP

D	SB	TDI	BO	NLA	Z	ZF	SW	WSS	ID
mm	mm	mm	mm	mm			°		
160	3.2	2.4	20		4	P	5	■	190302 ●
184	3.2	2.4	20		4	P	5	■	190696 ●
190	3.2	2.4	20		4	P	5	■	190303 ●
190	3.2	2.4	30		4	P	5	■	190745 ●
225	3.2	2.4	30		6	P	5	■	190304 ●
300	3.2	2.4	30	KNL	8	P	5	■	190305 ●

Planing and profiling

Leitz tool programme for wood construction



Content chapter

Planing and profiling

Planing	28
Profiling	39
Finger jointing	45
Grooving, jointing, rebating (kerving)	56



Planerhead HeliPlan with 4 edge HW turnblade knives

Application:

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

Machine:

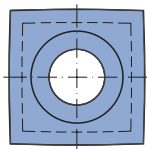
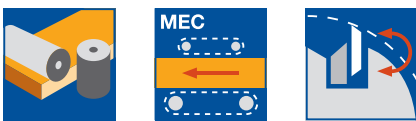
Four-sided moulders.

Workpiece material:

Softwood and hardwood.

Technical information:

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



Aluminium tool body, with bore

WW 220 2 01

D	SB	ND	BO	Z	AM	n _{max}	ID
mm	mm	mm	mm		PCS	min ⁻¹	
125	130	136	40	2/2	22	12,000	030423 ●
125	166	172	40	2/2	28	12,000	030467 ●
125	210	216	40	2/2	36	12,000	030452
125	236	242	40	2/2	40	12,000	030466 ●
125	256	262	40	2/2	44	12,000	030470 ●
140	166	172	50	2/2	28	12,000	030468
140	236	242	50	2/2	40	12,000	030469

Design with HW cutting edges.

Further dimensions and inch dimensions available on request.

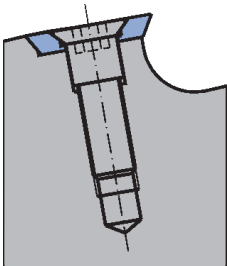
Spare knives:

BEZ	ABM	QAL	VE	ID
	mm		PCS	
Turnblade knife	15x15x2,5	HW	10	009535 ●
Turnblade knife	15x15x2,5	TDC		602901 ●

Spare parts:

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

HW turnblade knife



Knives mounted on periphery



Planerhead HeliPlan with 4 edge HW turnblade knives

Application:

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

Machine:

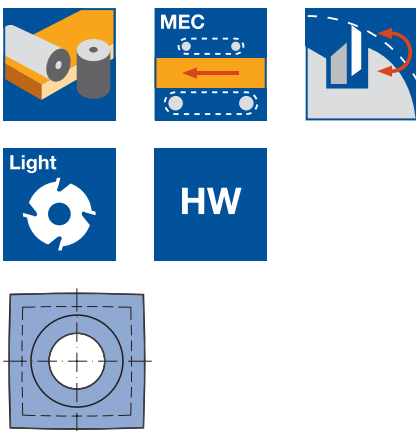
Four-sided moulders with HSK 85 WS interfaces.

Workpiece material:

Softwood and hardwood.

Technical information:

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

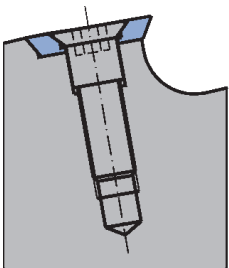


Aluminium tool body, with HSK 85 WS

WL 210 2 02

D	SB	A	Z	AM	n _{max}	ID	ID
mm	mm	mm		PCS	min ⁻¹	bottom	top
125	130	26	2/2	22	12,000	132000 □	132001 □
125	166	26	2/2	28	12,000	132022 □	132023 □
125	210	26	2/2	36	12,000	132008 □	132009 □
125	236	26	2/2	40	12,000	132024 □	132025 □
125	270	26	2/2	46	8,000	132012 □	132013 □
125	310	26	2/2	54	8,000	132014 ●	132015 ●

HW turnblade knife



Knives mounted on periphery

Aluminium tool body, HSK 85 WS with reference cutterhead

WL 403 2 02

D	SB	A	Z	V	AM	n _{max}	DRI	ID
mm	mm	mm			PCS	min ⁻¹		
125	236	26	2/2	2	40	12,000	bottom	132066 □
125	310	26	2/2	2	54	8,000	bottom	132065 □

Design with HW cutting edges.

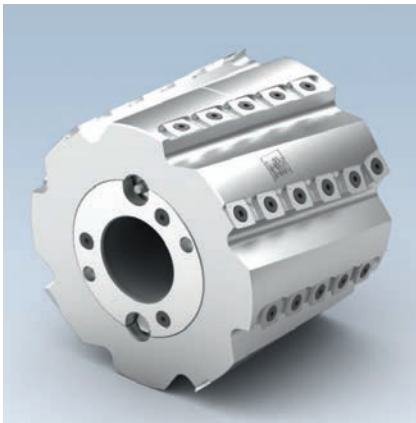
Further dimensions and inch dimensions available on request.

Spare knives:

BEZ	ABM	QAL	VE	ID
	mm		PCS	
Turnblade knife	15x15x2,5	HW	10	009535 ●
Turnblade knife	15x15x2,5	TDC		602901 ●

Spare parts:

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



Hydro Planerhead HeliPlan

Application:

Pre-planing, surface cutting of all types of wood with large chip removal. Finish cutting of glueable surfaces and workpieces with secondary quality demands.

Machine:

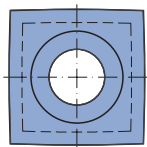
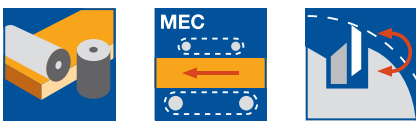
Four-sided moulders and profile machines.

Workpiece material:

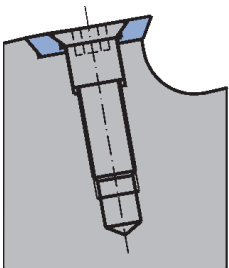
Softwood and hardwood.

Technical information:

Pre-planing cutterhead with 4-time HW turnblades. Low noise and energy efficient through spiral, segmented edge arrangement. Plane surfaces through radiused cutting edges. Tool bodies of lightweight aluminium with integrated hydro clamping system. Activated by a grease gun.



HW turnblade knife



Knives mounted on periphery

Aluminium tool body

HW 230-2

D mm	SB mm	BO mm	Z	n_{max} min ⁻¹	ID
160	150	50	4/4	11,000	132200
160	180	50	4/4	11,000	132201
160	200	50	4/4	11,000	132202
160	230	50	4/4	11,000	132203
160	310	50	4/4	11,000	132204
200	150	50	6/6	8,000	132205
200	180	50	6/6	8,000	132206
200	200	50	6/6	8,000	132207
200	230	50	6/6	8,000	132208
200	310	50	6/6	8,000	132209
250	150	50	8/8	6,900	132210
250	180	50	8/8	6,900	132211
250	200	50	8/8	6,900	132212
250	230	50	8/8	6,900	132213
250	310	50	8/8	6,900	132214

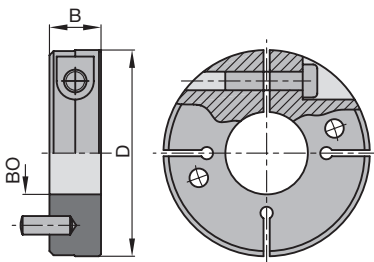
Design in steel/lightweight aluminium on request. This version combines the advantages of a light weight tool and a wear resistant knife seating and gullet area.

Spare knives:

BEZ	ABM mm	QAL	VE PCS	ID
Turnblade knife	15x15x2,5	HW	10	009535 ●
Turnblade knife	15x15x2,5	TDC		602901 ●

Spare parts:

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

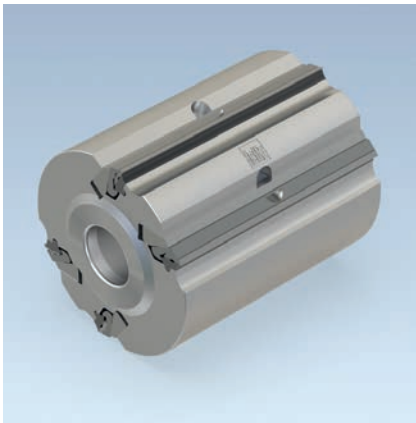


Clamping collar without thread

Clamping collars without thread

TD 870 0

D mm	B mm	BO mm	ID
100	25	40	030700 ●
100	25	50	030702 ●



Planerhead VariPlan Plus Integral

Application:

Versatile application as planing tool:
For roughing and finishing on a processing spindle.

Machine:

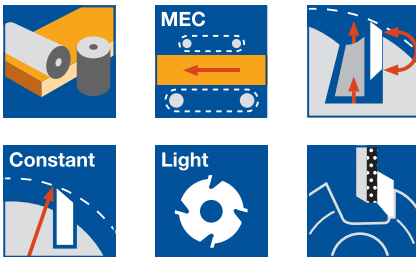
Four-side moulders and multi-spindle planing machines.

Workpiece material:

Softwood and hardwood with knots and fibre structure difficult to machine.

Technical information:

Tool with 2 VariPlan ripple knives and 2 straight VariPlan planer knives (constant diameter and resharpenable). Unequally pitched cutting arrangement for optimum chip formation. Light metal tool body. For chip removal > 1 mm.



Planerhead with bore

WW 240 2 09

D	SB	ND	BO	BO _{max}	QAL	n _{max}	Z	ID
mm	mm	mm	mm	mm		min ⁻¹		
125	130	136	40		HW	12,000	2+2	131712 ●
125	166	172	40		HW	12,000	2+2	131713 ●
125	236	242	40		HW	12,000	2+2	131714 ●
140	130	136	40	50	HW	10,500	2+2	131715 ●
140	166	172	40	50	HW	10,500	2+2	131716 ●
140	236	242	40	50	HW	10,500	2+2	131717 ●

Planerhead with HSK 85 WS

WP 240 2 09

D	SB	QAL	n _{max}	Z	ID	ID
mm	mm		min ⁻¹		LH	RH
125	130	HW	12,000	2+2	131806 □	131807 □
125	166	HW	12,000	2+2	131808 □	131809 □
125	236	HW	12,000	2+2	131810 □	131811 □

Special production tools with deviating cutting widths are not possible!

Spare knives:

BEZ	SB	H	DIK	SET	QAL	ID
	mm	mm	mm	PCS		
Turnblade knife set - VariPlan (ripple)	130	16	3.7	2	HW-MF	617506 ●
Turnblade knife set - VariPlan (ripple)	166	16	3.7	2	HW-MF	617571 ●
Turnblade knife set - VariPlan (ripple)	236	16	3.7	2	HW-MF	617569 ●
Turnblade knife set - VariPlan	130	16	3.7	2	HW-MF	617106 ●
Turnblade knife set - VariPlan	166	16	3.7	2	HW-MF	617171 ●
Turnblade knife set - VariPlan	236	16	3.7	2	HW-MF	617169 ●



Planerhead VariPlan Plus

Application:

Multi-purpose planing tool:
For pre-planing with RipTec turnblades.
For finish planing with microfinish turnblades.

Machine:

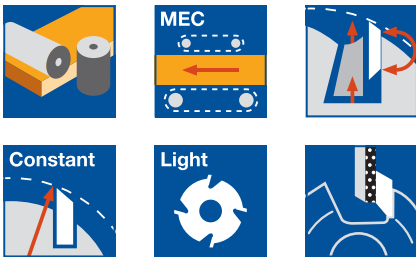
Four-sided moulders and multi spindle planing machines.

Workpiece material:

Softwood and hardwood, thermoplastics (partly suitable).

Technical information:

Resharpenable and constant diameter planerhead system. Self-positioning and centrifugal force supported knife clamping. Lightweight aluminium tool body. Resharpener the knives on the cutting face means one sharpening operation gives two additional lives.



Lightweight aluminium tool body

WW 240 2 05

D	SB	ND	BO	n_{max}	Z	ID	ID
mm	mm	mm	mm	min ⁻¹		HS	HW-MF
125	130	136	40	12,000	2	134250 □	134200 ●
125	150	156	40	12,000	2	134251	134201
125	166	172	40	12,000	2	134252 □	134202 ●
125	180	186	40	12,000	2	134253	134203
125	210	216	40	12,000	2	134254	134204
125	236	242	40	12,000	2	134255 □	134205 ●
125	256	262	40	12,000	2	134258	134208
125	270	276	40	10,500	2	134256	134206
125	130	136	40	12,000	4	134450 □	134400 ●
125	150	156	40	12,000	4	134451	134401
125	166	172	40	12,000	4	134452 □	134402 ●
125	180	186	40	12,000	4	134453	134403
125	210	216	40	12,000	4	134454	134404
125	236	242	40	12,000	4	134455 □	134405 ●
125	256	262	40	12,000	4	134458	134408 ●
125	270	276	40	10,500	4	134456	134406

Further dimensions and inch dimensions on request.
Spare knives (HS/HW-MF/HW-RipTec) see section Knives and Spare Parts.

Spare knives:

SB	H	DIK	SET	ID	ID
mm	mm	mm	PCS	HS	HW-MF
130	16	3.7	2	610506 ●	617106 ●
150	16	3.7	2	610509 ●	617109 ●
166	16	3.7	2	610571 □	617171 ●
180	16	3.7	2	610512 ●	617112 ●
210	16	3.7	2	610515 ●	617115 ●
236	16	3.7	2	610569 □	617169 ●
256	16	3.7	2	610572 □	617172 ●
270	16	3.7	2		617165 ●



Planerhead VariPlan Plus

Application:

Multi-purpose planing tool:
For pre-planing with RipTec turnblades.
For finish planing with microfinish turnblades.

Machine:

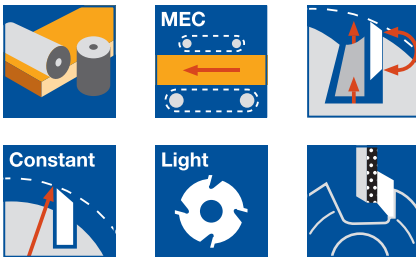
Four-sided moulders and multi spindle moulders with HSK 85 WS interfaces.

Workpiece material:

Softwood and hardwood, thermoplastics (partly suitable).

Technical information:

Resharpenable and constant diameter planerhead system. Self-positioning and centrifugal force supported knife clamping. Lightweight aluminium tool body. Resharpener the knives on the cutting face means one sharpening operation gives two additional lives. Tool body and HSK arbor are shrunk fit together.



Lightweight aluminium tool body on HSK 85 WS

WP 240 2 05

D mm	SB mm	A mm	n_{max} min ⁻¹	Z	QAL	ID LH / bottom	ID RH / top
125	130	26	12,000	2	HW-MF	134500 □	134501 □
125	150	26	12,000	2	HW-MF	134502	134503
125	166	26	12,000	2	HW-MF	134504 □	134505 □
125	180	26	12,000	2	HW-MF	134506	134507
125	210	26	12,000	2	HW-MF	134508	134509
125	236	26	12,000	2	HW-MF	134510 □	134511 □
125	270	26	8,000	2	HW-MF	134512	134513
125	310	26	8,000	2	HW-MF	134514	134515
125	130	26	12,000	4	HW-MF	134600 □	134601 □
125	150	26	12,000	4	HW-MF	134602	134603
125	166	26	12,000	4	HW-MF	134604 □	134605 □
125	180	26	12,000	4	HW-MF	134606	134607
125	210	26	12,000	4	HW-MF	134608	134609
125	236	26	12,000	4	HW-MF	134610 □	134611 □
125	270	26	8,000	4	HW-MF	134612	134613
125	310	26	8,000	4	HW-MF	134614	134615

Further dimensions and inch dimensions on request.

Spare knives (HS/HW-MF/HW-RipTec) see section Knives and Spare Parts.

Spare knives:

SB mm	H mm	DIK mm	SET PCS	ID HS	ID HW-MF
130	16	3.7	2	610506 ●	617106 ●
150	16	3.7	2	610509 ●	617109 ●
166	16	3.7	2	610571 □	617171 ●
180	16	3.7	2	610512 ●	617112 ●
210	16	3.7	2	610515 ●	617115 ●
236	16	3.7	2	610569 □	617169 ●
270	16	3.7	2		617165 ●
310	16	3.7	2	610522 ●	617122 ●



Planerhead VariPlan Plus

Application:

Multi-purpose planing tool:
For pre-planing with RipTec turnblades.
For finish planing with microfinish turnblades.

Machine:

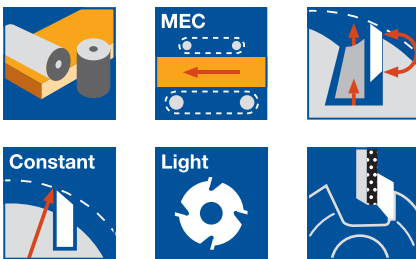
Four-sided moulders and multi spindle moulders with HSK 85 WS interfaces.

Workpiece material:

Softwood and hardwood, thermoplastics (partly suitable).

Technical information:

Resharpenable and constant diameter planerhead system. Self-positioning and centrifugal force supported knife clamping. Lightweight aluminium tool body. Resharpener the knives on the cutting face means one sharpening operation gives two additional lives. Tool body and HSK arbor are shrunk fit together.



Lightweight aluminium tool body on HSK 85 WS with reference cutterhead Z2 / V2

WP 240 2 08

D	SB	A	n _{max}	Z	QAL	DRI	ID
mm	mm	mm	min ⁻¹				
125	236	26	12,000	2	HW-MF	LH / bottom	134581 □
125	236	26	12,000	4	HW-MF	LH / bottom	134681 □

Further dimensions and inch dimensions on request.

Spare knives (HS/HW-MF/HW-RipTec) see section Knives and Spare Parts.

Spare knives:

SB	H	DIK	SET	ID	ID
mm	mm	mm	PCS	HS	HW-MF
130	16	3.7	2	610506 ●	617106 ●
150	16	3.7	2	610509 ●	617109 ●
166	16	3.7	2	610571 □	617171 ●
180	16	3.7	2	610512 ●	617112 ●
210	16	3.7	2	610515 ●	617115 ●
236	16	3.7	2	610569 □	617169 ●
270	16	3.7	2		617165 ●
310	16	3.7	2	610522 ●	617122 ●



Hydro planerhead

Application:

Pre and finish planing with high feed speeds.

Machine:

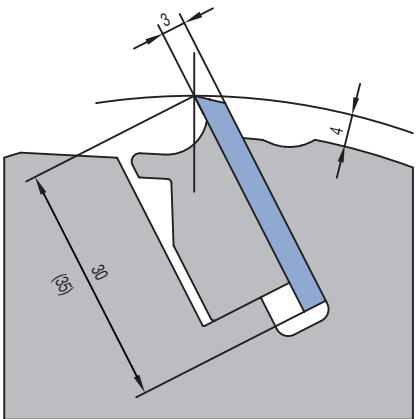
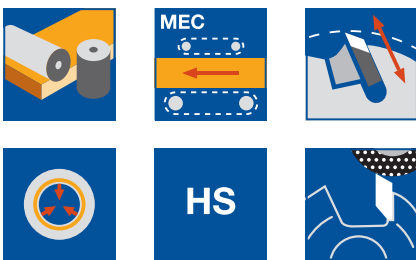
Four-sided moulders and profile machines with jointing equipment.

Workpiece material:

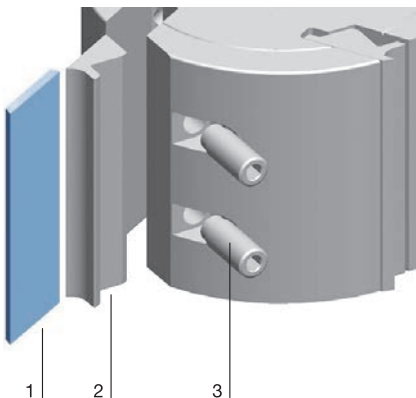
Softwood and hardwood.

Technical information:

Steel tool body with corrosion resistant surface protection. Integrated hydro clamping system with exchangeable clamping sleeves. Activated by a grease gun. Inclusive resharpenable HS planer knives (SB x 30 x 3 mm). From diameter 203 mm, knives with 35 mm height also can be used. Hydro planerheads can only be used in combination with a clamping collar.



Mounted knife



Steel tool body

HM 200 2 07

D mm	SB mm	BO mm	Z	QAL	n_{max} min ⁻¹	ID
163	130	50	4	HS	8,100	142050
163	160	50	4	HS	8,100	142051
163	230	50	4	HS	8,100	142052
163	60	50	6	HS	8,100	142053 ●
163	100	50	6	HS	8,100	142054 ●
163	130	50	6	HS	8,100	142055 ●
163	160	50	6	HS	8,100	142056 ●
163	230	50	6	HS	8,100	142057 ●
163	60	50	8	HS	8,100	142058
163	100	50	8	HS	8,100	142059
163	130	50	8	HS	8,100	142060
163	160	50	8	HS	8,100	142061
163	180	50	8	HS	8,100	142062
163	230	50	8	HS	8,100	142063
203	100	50	12	HS	6,600	142064
203	130	50	12	HS	6,600	142065
203	160	50	12	HS	6,600	142066
203	180	50	12	HS	6,600	142067
203	230	50	12	HS	6,600	142068

Lightweight aluminium version on request.

Spare knives:

Part-no.	SB mm	H mm	DIK mm	ID	ID	ID	ID
				HS Classic	HS Premium	HW	MC33
1	60	30	3	605000	027101 ●	027277 ●	606700 ●
1	100	30	3	605002 ●	027103 ●	027279 ●	606702 ●
1	130	30	3	605005 ●	027106 ●	027282 ●	606705 ●
1	160	30	3	605045 ●	027163 ●		606745 ●
1	180	30	3	605008 ●	027109 ●	027285 ●	606708 ●
1	230	30	3	605011 ●	027111 ●	027287 ●	606711 ●

Spare parts:

Part-no.	BEZ	ABM mm	for SB mm	ID
2	Clamping wedge		60	620950 ●
2	Clamping wedge		100	620951 ●
2	Clamping wedge		130	620952 ●
2	Clamping wedge		160	620953 ●
2	Clamping wedge		180	620954 ●
2	Clamping wedge		230	620955 ●
3	Allen screw	M10x1x25		007395 ●
3	Allen screw	M10x1x20		007396 ●
3	Allen screw	M10x1x16		007397 ●
	Grease nipple	M10x1		007935 ●
	Relief plug	M10x1		007983 ●
	Allen key	SW 5		117509 ●
	Grease gun			008239 ●

● available ex stock

□ available at short notice

Instruction manual visit www.leitz.org



Hydro planerhead TurboPlan PLUS

Application:

Pre and finish planing with high feed speeds.

Machine:

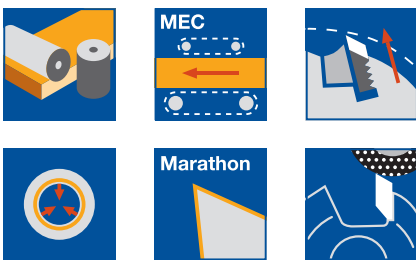
High performance planing machines with precision spindles and counter bearing as well as a jointing unit.

Workpiece material:

Softwood and hardwood.

Technical information:

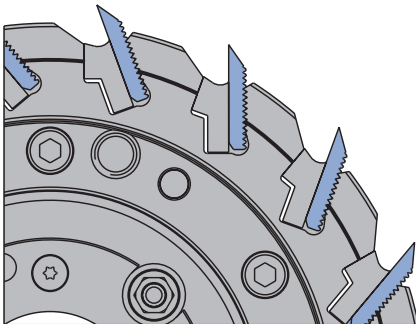
Tool body in weight optimized design with two independent hydro systems for the tool and knife clamping. Activated by a grease gun. Marathon coated planer knives with back serration (SB x 30 x 5 mm). Hydro planerhead can only be used in combination with a clamping collar.



Weight optimised design

HM 200 2 08

D	SB	BO	Z	n_{max}	ID
mm	mm	mm		min ⁻¹	
200	150	50	14	8,000	142230
200	230	50	14	8,000	142231
200	330	50	14	8,000	142232
225	150	50	18	7,200	142233
225	230	50	18	7,200	142234
225	330	50	18	7,200	142235
260	150	50	22	6,200	142236
260	230	50	22	6,200	142237
260	330	50	22	6,200	142238



TurboPlan PLUS knife clamping

Spare knives:

SB	H	DIK	QAL	ID
mm	mm	mm		
150	30	5	MC33	697359 □
230	30	5	MC33	697360 □
330	30	5	MC33	697363 □

Spare parts:

BEZ	ABM	BEM	ID
	mm		
Knife setting device	for TurboPlan		142290
Setting gauge for Hydro planerhead	Knife protrusion 3.8 mm		142291
Grease gun			008239 ●
Grease cartridge	for Hydro sleeve		007934 ●
Jointing stone (round)	12x32	Colour: grey	008237 ●
Jointing stone (angular)	20x15x60	Colour: brown	008238 ●

3. Planing and profiling

3.2 Planing

3.2.4 Combination tools for planing and profiling



Planerhead VariPlan Plus/ProFix F system PF 25

Application:

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

Machine:

Four-sided moulders.

Workpiece material:

Softwood and hardwood.

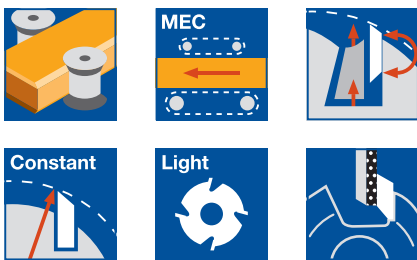
Technical information:

Resharpenable cutterhead system with constant diameter and constant profile.

VariPlan Plus planerhead with knife seatings for ProFix F profile knives (PF 25) and

HW microfinish turnblade knives. Profile knives: PT_{max} 25 mm, SB_{max} 100 mm.

Lightweight aluminium tool body.

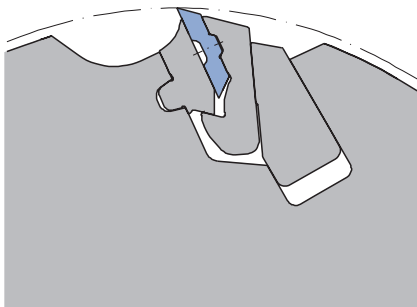


Bore 40 mm

WW 240 2 07

D	SB	ND	BO	QAL	n_{max}	Z	ID
mm	mm	mm	mm		min^{-1}		
125	130	136	40	HW	10,200	2+2	131060 ●
125	166	172	40	HW	10,200	2+2	131058 ●
125	236	242	40	HW	10,200	2+2	131059 ●

Further knife types, dimensions and inch dimensions on request. Servicing with spare parts only by the manufacturer. VariPlan Plus spare knives in section Knives and Spare Parts.



Spare knives:

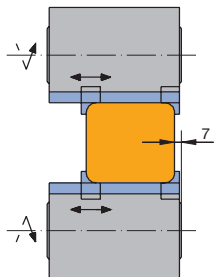
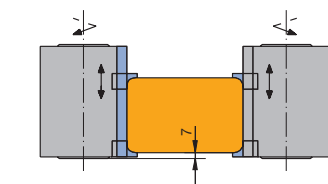
BEZ	SB	ABM	QAL	ID	ID
	mm	mm		LH	RH
ProFix F knife PF 25 R=3	25	R=3	HW	011041 ●	011042 ●
ProFix F knife PF 25 R=5	25	R=5	HW	011043 ●	011044 ●
ProFix F knife PF 25 R=10	25	R=10	HW	011047 ●	011048 ●
ProFix F knife PF 25 Bevel 45°	25	Bevel 45°	HW	011051 ●	011052 ●

Further profile knives on request.

Lightweight aluminium tool body with steel chip breaker

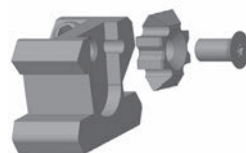
Spare parts:

BEZ	ABM	ID	ID
	mm	LH	RH
Knife holder for edge knives	D=125, SW=20°	011301 ●	011300 ●
Knife holder for grooving knives	D=125, SW=20°, NT=6	011303 ●	011302 ●
Allen key	SW 4		005445 ●
Allen key	SW 5		005452 ●

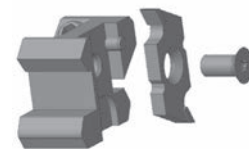


Use on vertical or horizontal spindles

$HD = SB - 40 \text{ mm}$



Knife holder to adapt edge knives.



Knife holder to adapt grooving knives.

3. Planing and profiling

3.2 Planing

3.2.4 Combination tools for planing and profiling



Planerhead VariPlan Plus/ProFix F system PF 25

Application:

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

Machine:

Four-sided moulders with HSK 85 WS interface.

Workpiece material:

Softwood and hardwood.

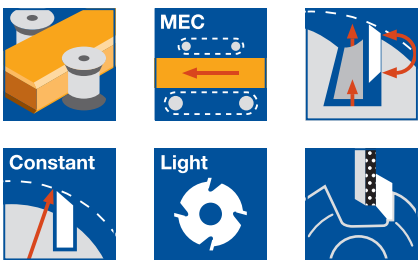
Technical information:

Resharpenable cutterhead system with constant diameter and constant profile.

VariPlan Plus planerhead with knife seatings for ProFix F profile knives (PF 25) and

HW microfinish turnblade knives. Profile knives: PT_{max} 25 mm, SB_{max} 100 mm.

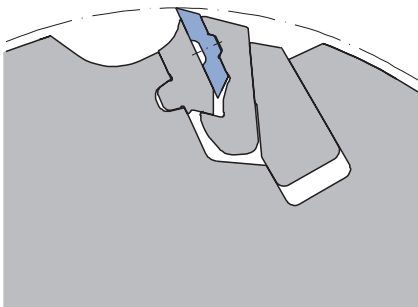
Lightweight aluminium tool body.



HSK 85 WS

WP 240 2 01

D	SB	A	Z	n_{max}	DRI	BEM	ID
mm	mm	mm		min^{-1}			
125	130	26	2+2	10,200	LH	left/ on bottom	131120 □
125	130	26	2+2	10,200	RH	right/ on top	131121 □
125	166	26	2+2	10,200	LH	left/ on bottom	131116 □
125	166	26	2+2	10,200	RH	right/ on top	131117 □
125	236	26	2+2	10,200	LH	on bottom	131118 □
125	236	26	2+2	10,200	RH	on top	131119 □



Further knife types, dimensions and inch dimensions on request. Servicing with spare parts only by the manufacturer. VariPlan Plus spare knives in section Knives and Spare Parts.

Spare knives:

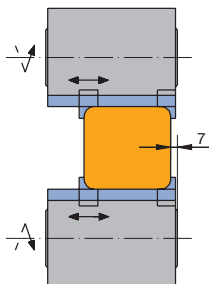
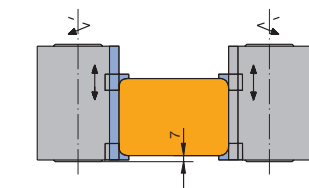
BEZ	SB	ABM	QAL	ID	ID
	mm	mm		LH	RH
ProFix F knife PF 25 R=3	25	R=3	HW	011041 ●	011042 ●
ProFix F knife PF 25 R=5	25	R=5	HW	011043 ●	011044 ●
ProFix F knife PF 25 R=10	25	R=10	HW	011047 ●	011048 ●
ProFix F knife PF 25 Bevel 45°	25	Bevel 45°	HW	011051 ●	011052 ●

Lightweight aluminium tool body with steel chip breaker

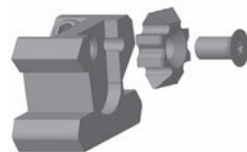
Further profile knives on request.

Spare parts:

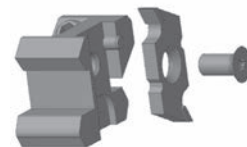
BEZ	ABM	ID	ID
	mm	LH	RH
Knife holder for edge knives	D=125, SW=20°	011301 ●	011300 ●
Knife holder for grooving knives	D=125, SW=20°, NT=6	011303 ●	011302 ●
Allen key	SW 4		005445 ●
Allen key	SW 5		005452 ●



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



Knife holder to adapt edge knives.

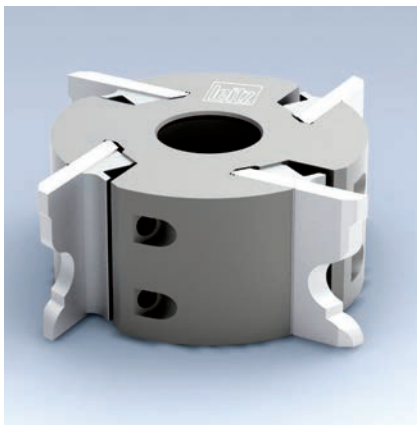


Knife holder to adapt grooving knives.

3. Planing and profiling

3.3 Profiling

3.3.3 Cutterheads for multi-purpose profiling



Profile cutterheads for serrated back blank knives

Application:

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

Machine:

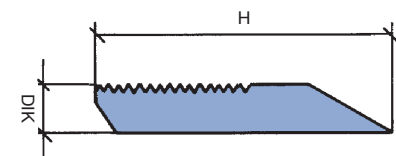
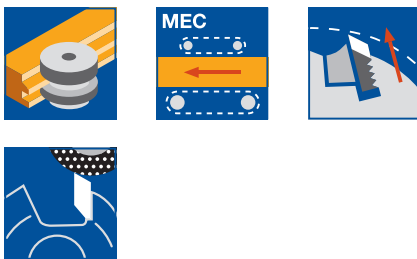
Four-sided moulders.

Workpiece material:

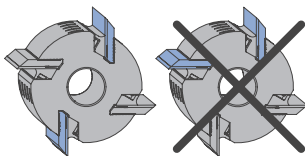
Cutting angle 20° for softwood and hardwood in general.

Technical information:

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



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



Attention:

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

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

Table to determine maximum profile depth.

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

Cutting angle 20°

WM 501 2 05

TD	SB	BO	BO _{max}	n _{max}	Z	ID
mm	mm	mm	mm	min ⁻¹		
122	80	40	40	10,300	2	135805 ●
122	40	40	40	10,300	4	135802 ●
122	60	35	40	10,300	4	135806 ●
122	60	40	40	10,300	4	135808 ●
122	80	40	40	10,300	4	135809 ●
122	100	35	40	10,300	4	135810 ●
122	100	40	40	10,300	4	135812 ●
122	130	40	40	10,300	4	135814 ●
122	150	40	40	10,300	4	135817 ●
122	170	40	40	10,300	4	135816 ●
122	180	40	40	10,300	4	135819 ●
122	230	40	40	10,300	4	135821 ●
122	240	40	40	10,300	4	135822 ●
137	60	40	50	9,400	4	135823 ●
137	60	50	50	9,400	4	135825 ●
137	80	50	50	9,400	4	135826 ●
137	100	40	50	9,400	4	135827 ●
137	100	50	50	9,400	4	135829 ●
137	130	40	50	9,400	4	135830 ●
137	130	50	50	9,400	4	135831 ●
137	150	50	50	9,400	4	135833 ●
137	180	50	50	9,400	4	135836 ●
137	230	50	50	9,400	4	135838 ●

Workpiece material:

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

Cutting angle 12°

WM 501 2 05

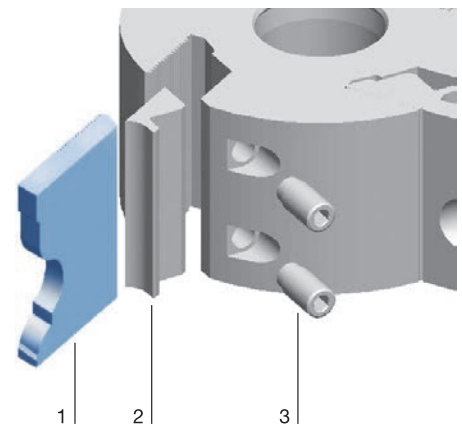
TD	SB	ND	BO	Z	ID
mm	mm	mm	mm		
122	40	40	40	4	135840
122	60	60	40	4	135841
122	80	80	40	4	135842
122	130	130	40	4	135843

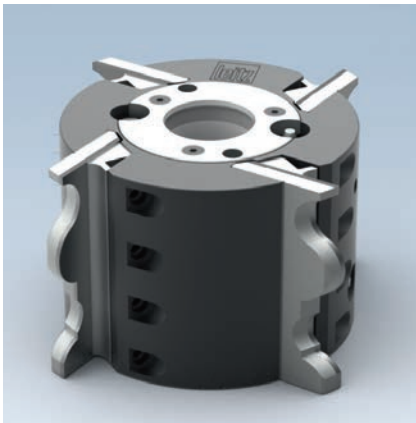
Cutterhead without knives. For blank knives in different dimensions and qualities, see section Knives and Spare Parts.

Lightweight aluminium design on request.

Spare parts:

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





Hydro profile cutterhead for serrated back blank knives

Application:

Cutting of multi-purpose profiles with high feed speeds.

Machine:

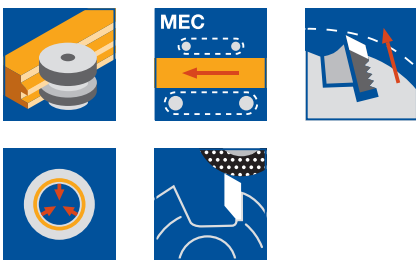
Four-sided moulders and profile machines.

Workpiece material:

Softwood and hardwood.

Technical information:

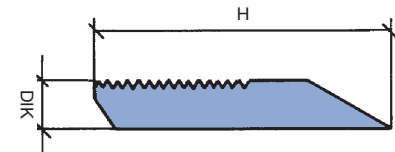
Profile cutterhead with 60°-serration, 1.6 mm pitch. Steel tool body with corrosion resistant surface protection. For blank knives with 8 - 10 mm knife thickness and 5 mm (see table) and 40 - 70 mm knife height, depending on the required profile depth. Integrated hydro clamping system with exchangeable clamping sleeves. Activated by a grease gun. Hydro profile cutterheads can only be used in combination with a clamping collar.



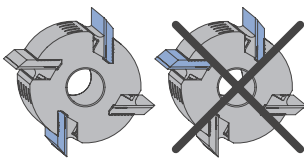
Steel tool body

HM 501 2 05

TD mm	SB mm	BO mm	for knife thickness mm	Z	n _{max} min ⁻¹	ID
135	100	40	8 - 10	4	9,400	137035
135	150	40	8 - 10	4	9,400	137036
145	60	50	8 - 10	6	9,100	137037
145	100	50	8 - 10	6	9,100	137038
150	60	50	8 - 10	4	8,800	137039 ●
150	100	50	8 - 10	4	8,800	137040 ●
150	150	50	8 - 10	4	8,800	137041 ●
150	230	50	8 - 10	4	8,800	137042 ●
150	60	50	8 - 10	6	8,800	137043 ●
150	100	50	8 - 10	6	8,800	137044 ●
150	150	50	8 - 10	6	8,800	137045 ●
150	230	50	8 - 10	6	8,800	137046
165	60	50	8 - 10	8	8,200	137047
165	100	50	8 - 10	8	8,200	137048
170	60	50	8 - 10	8	8,100	137049 ●
170	100	50	8 - 10	8	8,100	137050
170	150	50	8 - 10	8	8,100	137051 ●
190	60	50	5	12	7,400	137052
190	60	50	5	14	7,400	137053



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



Cutterhead without knives. Blanks in various dimensions and qualities see section Knives and Spare Parts.

Attention:

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

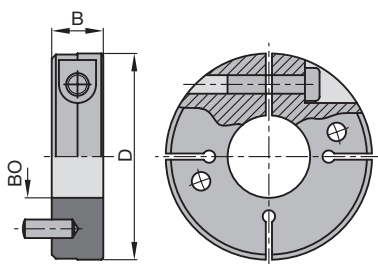
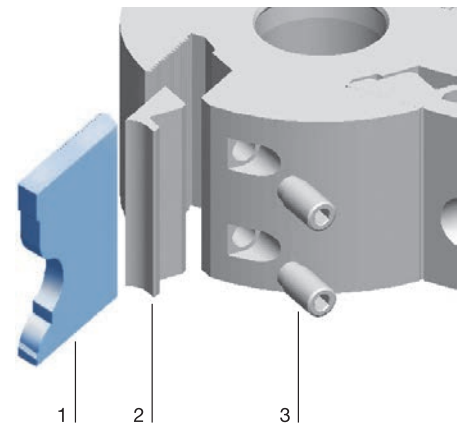
H mm	QAL	PT mm
50	MC	15
60	MC	20
70	MC	30
50	HW	10
60	HW	18

Table to determine maximum profile depth.

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

Spare parts:

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



Clamping collar without thread

Clamping collars without thread

TD 870 0

D	B	BO	ID
mm	mm	mm	
100	25	40	030700 ●
100	25	50	030702 ●



Profile cutterhead with HSK 85 WS for serrated back blank knives

Application:

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

Machine:

Four-sided moulders with HSK 85 WS interface.

Workpiece material:

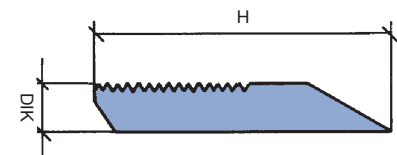
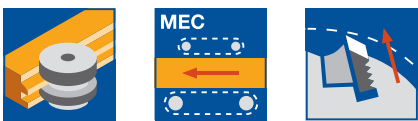
Cutting angle 20° for softwood and hardwood in general.

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

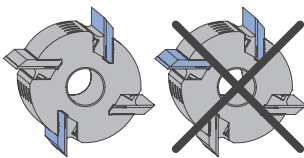
Technical information:

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

Blanks with knife thickness 8 - 10 mm and knife heights of 40 - 70 mm can be used depending on the required profile depth. Cutting materials: Marathon (MC) and HW. Steel tool body. High balance quality by assembly with parts of the same weight.



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



Attention:

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

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

Table to determine maximum profile depth.

The profile depth figures are to be regarded as standard values. The maximum profile depth depends on the tool profile depth and cutting angle.

Cutting angle 20°

WP 510 2 02

TD mm	SB mm	A mm	Z	n_{max} min ⁻¹	ID LH / bottom	ID RH / top
90	40	26	2	12,000	136200	136201
90	60	26	2	12,000	136202 ●	136203 ●
90	80	26	2	12,000	136204 ●	136205 ●
90	100	26	2	12,000	136206 ●	136207 ●
90	130	26	2	12,000	136208 ●	136209 ●
90	150	26	2	12,000	136210	136211
*	90	170	2	12,000	136212 ●	136213 ●
*	90	210	2	12,000	136216	136217
*	90	240	2	12,000	136218 ●	136219 ●
90	270	26	2	8,000	136220	136221
90	40	26	4	12,000	136224 ●	136225 ●
90	60	26	4	12,000	136226 ●	136227 ●
90	80	26	4	12,000	136228 ●	136229 ●
90	100	26	4	12,000	136230 ●	136231 ●
90	130	26	4	12,000	136232 ●	136233 ●
90	150	26	4	12,000	136234	136235
*	90	170	4	12,000	136236 ●	136237 ●
*	90	210	4	12,000	136240	136241
*	90	240	4	12,000	136242 ●	136243 ●
*	90	270	4	8,000	136244	136245
115	80	26	6	10,000	136198 ●	136199 ●
115	130	26	6	10,000	136400 ●	136401 ●
115	170	26	6	10,000	136402 ●	136403 ●
115	240	26	6	8,000	136404 ●	136405 ●

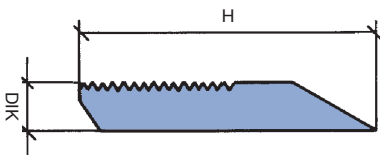
* = Not for PKS blank knives H = 70 mm with n = 12000 min⁻¹

Cutterhead without knives. For blank knives in different dimensions and qualities, see section Knives and Spare Parts.

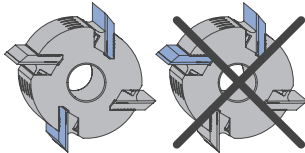
3. Planing and profiling

3.3 Profiling

3.3.3 Cutterheads for multi-purpose profiling



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



Attention:

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

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

Table to determine maximum profile depth.

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

Cutting angle 12°

WP 510 2 02

TD mm	SB mm	A mm	Z	n_{max} min ⁻¹	ID LH / bottom	ID RH / top
90	40	26	2	12,000	136248 ●	136249 ●
90	60	26	2	12,000	136250 ●	136251 ●
90	80	26	2	12,000	136252	136253
90	100	26	2	12,000	136254 ●	136255 ●
90	130	26	2	12,000	136256 ●	136257 ●
90	150	26	2	12,000	136258	136259
*	90	170	2	12,000	136260	136261
*	90	210	2	12,000	136264	136265
*	90	240	2	12,000	136266	136267
90	40	26	4	12,000	136270 ●	136271 ●
90	60	26	4	12,000	136272 ●	136273 ●
90	80	26	4	12,000	136274 ●	136275 ●
90	100	26	4	12,000	136276 ●	136277 ●
90	130	26	4	12,000	136278	136279
90	150	26	4	12,000	136280	136281
*	90	170	4	12,000	136282	136283
115	80	26	6	10,000	136192	136193
115	130	26	6	10,000	136194	136195
115	170	26	6	10,000	136196	136197

* = Not for PKS blank knives H = 70 mm with n = 12000 min⁻¹

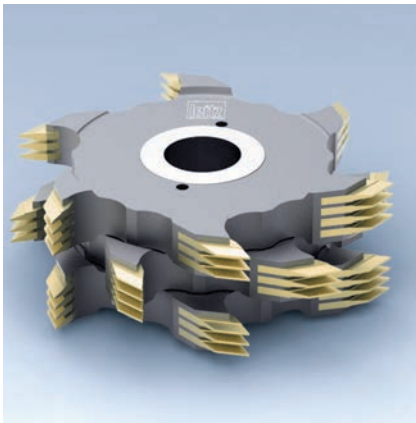
Cutterhead without knives. For blank knives in different dimensions and qualities, see section Knives and Spare Parts.

Spare parts:

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

3. Planing and profiling

3.4 Finger jointing 3.4.1 Minifinger joint cutters



Minifinger joint cutter, Marathon

Application:

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

Machine:

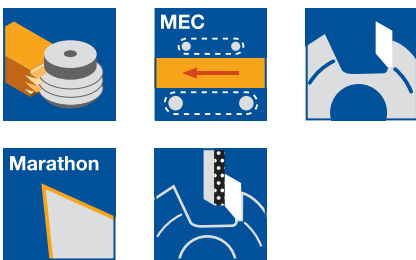
Finger joint machines with/without cut-off saw, continuous machines.

Workpiece material:

Softwood, across grain; also suitable for hardwood.

Technical information:

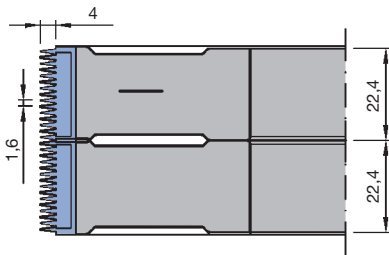
Reduced risk of breakage from individually brazed finger cutting edges. Design with enlarged tip gap suitable for PU adhesives and for finger joint machines without cut-off saws and horizontal working spindle. Marathon coating allows up to 4 times longer tool life compared to HS version. Resharpener area 12 mm (or 6 mm for ID 123005 and 8 mm for ID 123102).



ZL 4/5 mm, TG 1.6 mm

WF 620 2 06

D	SB	ND	BO	Z	ZA	QAL	ZL	ID
mm	mm	mm	mm		PCS		mm	
160	25	22.4	50	2/2	15	MC	4/5	123003
250	25	22.4	50	3/3	15	MC	4/5	123004
250	25	22.4	50	6/6	15	MC	4/5	123005 ●

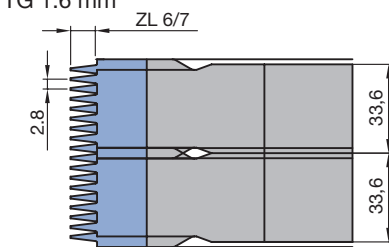


Minifinger joint cutter ZL 4 mm, TG 1.6 mm

ZL 6/7 mm, TG 2.8 mm

WF 620 2 06

D	SB	ND	BO	Z	ZA	QAL	ZL	ID
mm	mm	mm	mm		PCS		mm	
160	34	33.6	50	3/3	12	MC	6/7	123100 ●
250	34	33.6	50	4/4	12	MC	6/7	123101 ●
250	34	33.6	50	6/6	12	MC	6/7	123102 ●

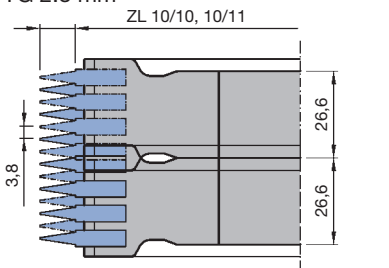


Minifinger joint cutter ZL 6/7 mm, TG 2.8 mm

ZL 10 mm, TG 3.8 mm

WF 620 2 06

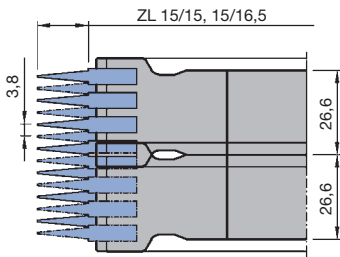
D	SB	ND	BO	Z	ZA	QAL	ID	ID
mm	mm	mm	mm		PCS		ZL	ZL
160	28.6	26.6	50	2/2	7	MC	10/10	120608 ● 120612 ●
160	28.6	26.6	50	3/3	7	MC	10/10	120616 □ 120617 □
250	28.6	26.6	50	3/3	7	MC	10/11	120609 □ 120613 ●
250	28.6	26.6	50	4/4	7	MC	10/11	120620 □ 120622 □



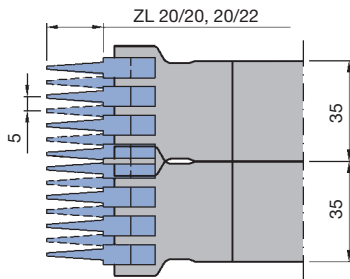
Minifinger joint cutter ZL 10 mm, TG 3.8 mm

3. Planing and profiling

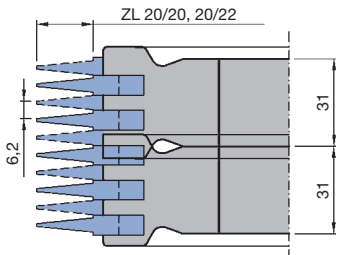
3.4 Finger jointing 3.4.1 Minifinger joint cutters



Minifinger joint cutter ZL 15 mm,
TG 3.8 mm



Minifinger joint cutter ZL 20 mm,
TG 5.0 mm



Minifinger joint cutter ZL 20 mm,
TG 6.2 mm

ZL 15 mm, TG 3.8 mm

WF 620 2 06

D	SB	ND	BO	Z	ZA	QAL	ID	ID
mm	mm	mm	mm		PCS		ZL	ZL
170	28.6	26.6	50	2/2	7	MC	15/15	15/16,5
260	28.6	26.6	50	3/3	7	MC	120709 ●	120713 ●
260	28.6	26.6	80	4/4	7	MC	120710 □	120714 ●
							120721	120723

ZL 15 mm, TG 3.8 mm, for application with PU glue

WF 620 2 06

D	SB	ND	BO	Z	ZA	QAL	ID	ID
mm	mm	mm	mm		PCS		ZL	ZL
170	28.6	26.6	50	2/2	7	MC	15/15	15/16,5
260	28.6	26.6	50	3/3	7	MC	120711 ●	120715 □
260	28.6	26.6	80	4/4	7	MC	120712 □	120716 □
							120722	120724

ZL 20 mm, TG 5.0 mm

WF 620 2 06

D	SB	ND	BO	Z	ZA	QAL	ID	ID
mm	mm	mm	mm		PCS		ZL	ZL
180	37	35	50	2/2	7	MC	20/20	20/22
260	37	35	50	3/3	7	MC	120818 □	120820 □
							120819 □	120821 □

ZL 20 mm, TG 6.2 mm

WF 620 2 06

D	SB	ND	BO	Z	ZA	QAL	ID	ID
mm	mm	mm	mm		PCS		ZL	ZL
180	33	31	50	2/2	5	MC	20/20	20/22
260	33	31	50	3/3	5	MC	120810 ●	120814 □
260	33	31	80	4/4	5	MC	120811 □	120815 □
							120834	120836

ZL 20 mm, TG 6.2 mm, for application with PU glue

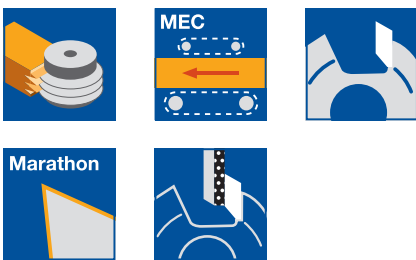
WF 620 2 06

D	SB	ND	BO	Z	ZA	QAL	ID	ID
mm	mm	mm	mm		PCS		ZL	ZL
180	33	31	50	2/2	5	MC	20/20	20/22
260	33	31	50	3/3	5	MC	120812 ●	120816 □
260	33	31	80	4/4	5	MC	120813 □	120817 □
							120835	120837

3. Planing and profiling

3.4 Finger jointing

3.4.2 High performance minifinger cutters



Minifinger joint cutter, Marathon, real Z 4

Application:

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

Machine:

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

Workpiece material:

Softwood, across grain; also suitable for hardwood.

Technical information:

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

ZL 15 mm, TG 3.8 mm

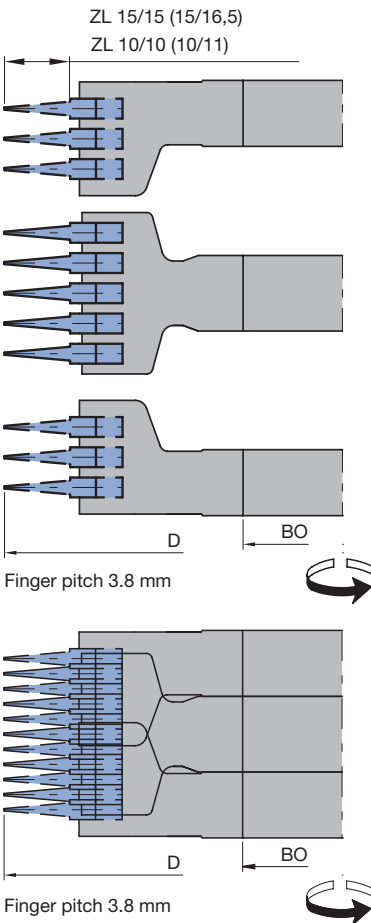
WF 620 2 06, WF 623 2 06

Tool Type	D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	ID ZL 15/15	ID ZL 15/16,5
Top final cutter	170	20.2	16.6	50	4	3	MC	121700 □	121704 □
Basic cutter	170	35.4	19,0	50	4	5	MC	120705 □	120707 □
Bottom final cutter	170	20.2	16.6	50	4	3	MC	121701 □	121705 □

ZL 15 mm, TG 3.8 mm, for application with PU glue

WF 620 2 06, WF 623 2 06

Tool Type	D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	ID ZL 15/15	ID ZL 15/16,5
Top final cutter	170	20.2	16.6	50	4	3	MC	121702 ●	121706 □
Basic cutter	170	35.4	19,0	50	4	5	MC	120706 ●	120708 □
Bottom final cutter	170	20.2	16.6	50	4	3	MC	121703 ●	121707 □
Top final cutter	200	20.2	16.6	70	4	3	MC	121708	121710
Basic cutter	200	35.4	19	70	4	5	MC	120725	120726
Bottom final cutter	200	20.2	16.6	70	4	3	MC	121709	121711



Finger length 10 and 15 mm

TG: 3,8 mm

Real Z4

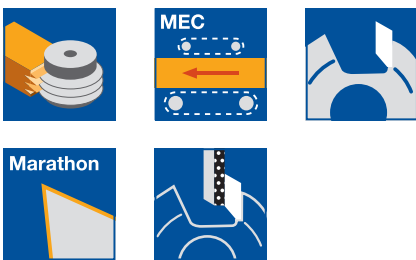
	Basic cutter	Final cutter top	Final cutter bottom
ZA	5	3	3
ND	19	16,6	16,6
HD	KLH	Cutter quantity	Cutter quantity
19	33,2	0	1
38	52,2	1	1
57	71,2	2	1
76	90,2	3	1
95	109,2	4	1
114	128,2	5	1
133	147,2	6	1
152	166,2	7	1
171	185,2	8	1
190	204,2	9	1
209	223,2	10	1
228	242,2	11	1
247	261,2	12	1
266	280,2	13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

HD = wood thickness
KLH = clamping height

3. Planing and profiling

3.4 Finger jointing

3.4.2 High performance minifinger cutters



Minifinger joint cutter, Marathon, real Z 4

Application:

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

Machine:

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

Workpiece material:

Softwood, across grain; also suitable for hardwood.

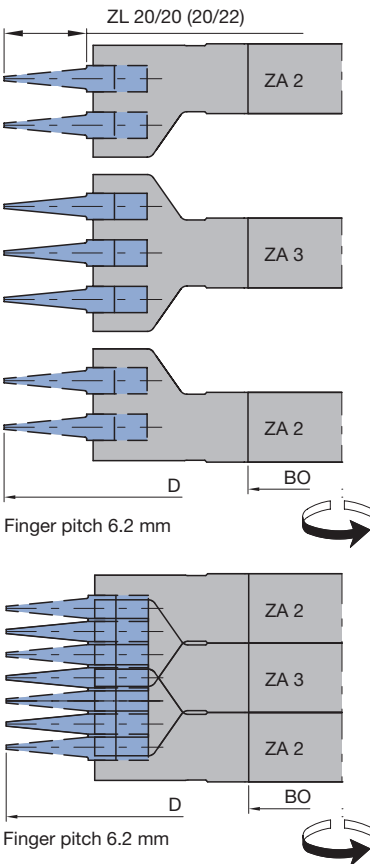
Technical information:

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

ZL 20 mm, TG 6.2 mm

WF 623 2 06

Tool Type	D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	ID ZL 20/20	ID ZL 20/22
Top final cutter	180	18.6	18.6	50	4	2	MC	121808	121810
Basic cutter	180	31	18.6	50	4	3	MC	120838	120840
Bottom final cutter	180	18.6	18.6	50	4	2	MC	121812	121814



ZL 20 mm, TG 6.2 mm, for application with PU glue

WF 623 2 06

Tool Type	D mm	SB mm	ND mm	BO mm	Z	ZA PCS	QAL	ID ZL 20/20	ID ZL 20/22
Top final cutter	180	18.6	18.6	50	4	2	MC	121809	121811
Basic cutter	180	31	18.6	50	4	3	MC	120839	120841
Bottom final cutter	180	18.6	18.6	50	4	2	MC	121813	121815

Finger length 20 mm

TG: 6,2 mm

Real Z3

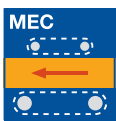
		Basic cutter	Final cutter top	Final cutter bottom
ZA		3	2	2
ND		18,6	18,6	18,6
HD	KLH	Cutter quantity	Cutter quantity	Cutter quantity
19	37,2	0	1	1
37	55,8	1	1	1
56	74,4	2	1	1
74	93	3	1	1
93	111,6	4	1	1
112	130,2	5	1	1
130	148,8	6	1	1
149	167,4	7	1	1
167	186	8	1	1
186	204,6	9	1	1
205	223,2	10	1	1
223	241,8	11	1	1
242	260,4	12	1	1
260	279	13	1	1
279	297,6	14	1	1
298	316,2	15	1	1
316	334,8	16	1	1

HD = wood thickness
KLH = clamping height

3. Planing and profiling

3.4 Finger jointing

3.4.2 High performance minifinger cutters



Minifinger joint cutter, Marathon, real Z 6

Application:

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

Machine:

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

Workpiece material:

Softwood, across grain; also suitable for hardwood.

Technical information:

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

ZL 10 mm, TG 3.8 mm

WF 620 2 06, WF 623 2 06

Tool Type	D	SB	ND	BO	Z	ZA	QAL	ZL	ID
	mm	mm	mm	mm		PCS		mm	
Top final cutter	250	26.6	19	50	6	4	MC	10/11	121012 ●
Basic cutter	250	49.4	26.6	50	6	7	MC	10/11	120601 ●
Bottom final cutter	250	26.6	19	50	6	4	MC	10/11	121013 ●

Finger length 10 mm and 15 mm

TG: 3,8 mm

Real Z6

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

HD = wood thickness

KLH = clamping height



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

Application:

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

Machine:

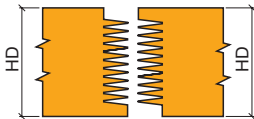
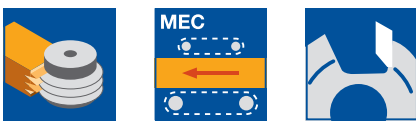
High performance finger joint machines with cut-off saw.

Workpiece material:

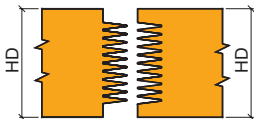
Softwood, across grain; also suitable for hardwood.

Technical information:

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



Profile 2



Profile 3

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

WF 620 2 06, WF 623 2 06

Tool Type	D	SB	ND	BO	Z	ZA	QAL	DRI	ID
	mm	mm	mm	mm		PCS			
Basic cutter	250	20.2	11.2	60	6	3	MC	RH	120624 □
Extension cutter	250	5,0	11.2	60	6	1	MC	LH	121608 □
Extension cutter	250	5,0	11.2	60	6	1	MC	RH	121609 □
Extension cutter	250	12.6	11.2	60	6	2	MC	LH	121610 □
Extension cutter	250	12.6	11.2	60	6	2	MC	RH	121611 □

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

WF 621 2 06

D	SB	BO	Z	QAL	ID	ID
mm	mm	mm			LH	RH
249.7	12	60	6	MC	122400 □	122401 □

29479

TB 270 0

d	BO	NL	GL	ID
mm	mm	mm	mm	
60	50	85	105	029474 ●
60	50	120	140	029475 ●
60	50	150	170	029476 ●
60	50	180	200	029477 ●
60	50	210	230	029478 ●
60	50	240	260	029479 ●

28448

TR 100 0

D	B	BO	ID
mm	mm	mm	
90	3.8	60	028447 ●
90	11.4	60	028448 ●



Hydro minifinger cutterhead TurboHawk with curved knives

Application:

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

Machine:

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

Workpiece material:

Softwood; limited suitability for hardwood.

Technical information:

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



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

HM 620 2 05

P	D mm	BO mm	HD _{max} mm	Z	QAL	n _{max} min ⁻¹	ID LH	ID RH
1	266.67	50	50	5/5	HS	4,000	135524	135525
2	266.67	50	50	5/5	HS	4,000	135532	135533
3	266.67	50	50	5/5	HS	4,000	135540	135541



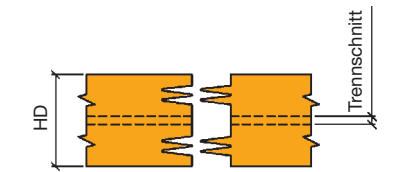
Profile 1 with continuous finger jointing



Profile 2 with staggered shoulder cutters



Profile 3 with shoulder cutters on the same level



Profile 4 with shoulder cutters for splitting

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

HM 620 2 05

P	D mm	BO mm	HD _{max} mm	Z	QAL	n _{max} min ⁻¹	ID LH	ID RH
1	266.67	50	50	5/5	HS	4,000	135548	135549
2	266.67	50	50	5/5	HS	4,000	135556	135557
3	266.67	50	50	5/5	HS	4,000	135564	135565

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

HM 620 2 05

P	D mm	BO mm	HD _{max} mm	Z	QAL	n _{max} min ⁻¹	ID LH	ID RH
1	266.67	50	50	5/5	HS	4,000	135500	135501
2	266.67	50	50	5/5	HS	4,000	135508	135509
3	266.67	50	50	5/5	HS	4,000	135516	135517

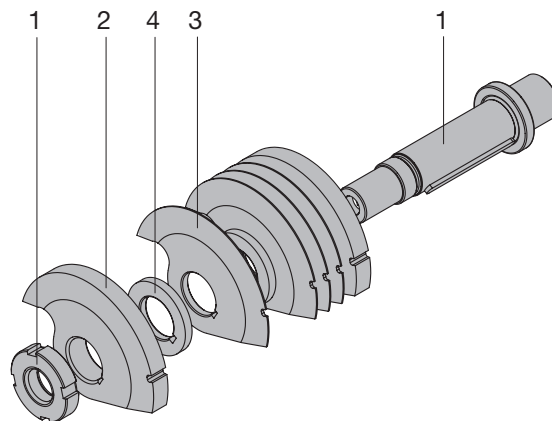
Please note the spindle arrangement. Arrangement for other wood thicknesses on request.

Spare knives:

Part-no.	BEZ	ABM mm	ZL mm	ID HS	ID MC
3	Minifinger knife	38,1x3,53x19,05	6.35	618202 ●	618221 ●
2	Shoulder knife	38,1x8,74x19,05	6.35	618252 ●	618270 ●
3	Minifinger knife	38,1x4,3x19,05	9.52	618208 ●	618222 ●
2	Shoulder knife	38,1x9,51x19,05	9.52	618258 ●	618271 ●
3	Minifinger knife	38,1x3,8x19,05	10/11	618200 ●	618220 ●
2	Shoulder knife	38,1x11,4x19,05	10/11	618250 ●	618269 ●

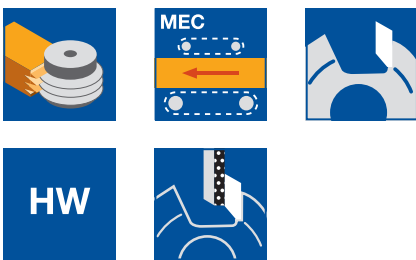
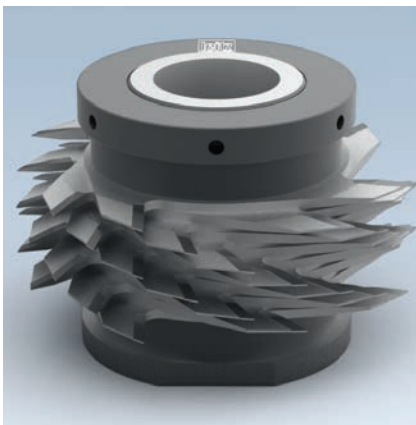
Spare parts:

Part-no.	BEZ	ABM mm	TG mm	ID
	Setting gauge	D266.67x80		005377 ●
1	Clamping arbor	HD 50 mm KL 55 mm		008226 ●
1	Clamping arbor	HD 38 mm KL 43 mm		008227 ●
1	Clamping arbor	HD 32 mm KL 34.5 mm		008228 ●
1	Clamping arbor	HD 25 mm KL 29 mm		008229 ●
	Sickle spanner	34/36 DIN 1810 A		117510 ●
	Screw driver	SW 6, L50		117508 ●
4	Filler piece for rounding knives	33x3.53x19.05,KN1.8x4.2	3.53	008224 ●
4	Filler piece for rounding knives	33x4.3x19.05,KN1.8x4.2	4.3	008225 ●
4	Filler piece for rounding knives	33x3,8x19,05,KN1,8x4,2	3.8	008223 ●



3. Planing and profiling

3.4 Finger jointing 3.4.4 Minifinger disc cutters



Minifinger disc cutter, HW, with and without shoulder cutter

Application:

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

Machine:

Finger joint machines with cut-off saws.

Workpiece material:

Hardwood and abrasive tropical wood.

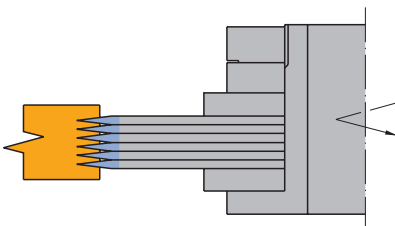
Technical information:

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

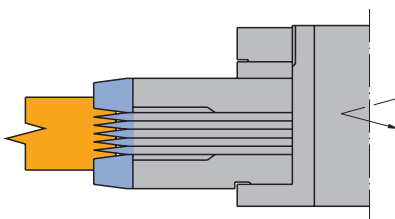
HW, ZL 10/11 mm, TG 3.8 mm

WF 620 2, WF 621 2

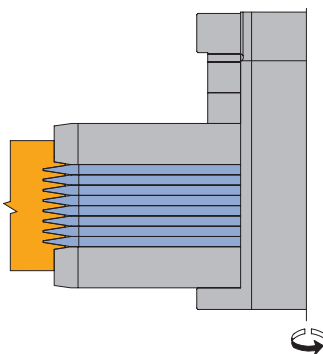
Tool Type	D mm	SB mm	BO mm	Z	n_{max} min ⁻¹	ID
Minifinger joint cutter	160	3.8	70	4	9,000	021511 ●
Minifinger joint cutter	250	3.8	70	6	6,000	021513 ●
Shoulder cutter	159.8	15.2	70	4	9,000	021762 ●
Shoulder cutter P3	249.7	15.2	70	6	6,000	021764 ●
Shoulder cutter P5	239.7	15.2	70	6	6,000	022153 ●



Minifinger joint cutterset without shoulder cutters



Minifinger joint cutterset with shoulder cutters P3



Minifinger joint cutterset with shoulder cutters P5

Clamping element with threaded nut

TB 270 0

d mm	BO mm	NL mm	GL mm	ID
70	50	116	146	029695 ●
70	50	80	110	029473 ●

Spare parts:

BEZ	ABM mm	ID
Sickle spanner adjustable	D90/155; L290; DIN1816; tenon 6	005462 ●

Spacers

TR 100 0

D mm	B mm	BO mm	TG mm	ID
100	3.8	70	3.8	028437 ●
100	11.4	70	3.8	028450 ●
100	15.2	70	3.8	028439 ●
175	11.4	70	3.8	028678 ●



Scorer for shoulder minifinger joints

Application:

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

Machine:

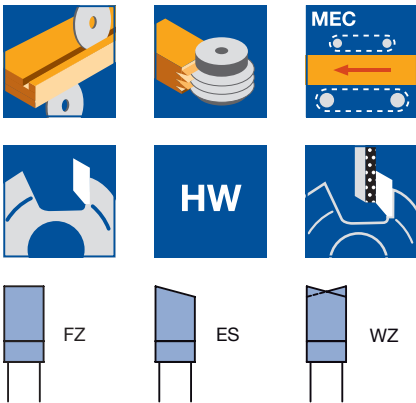
Finger joint machines with trimming and scoring aggregates.

Workpiece material:

Softwood, hardwood and wood derived materials.

Technical information:

Particularly suitable for scoring the shoulders on finger joint machines. Tear-free shoulders guaranteed.



Scoring sawblade for Grecon PowerJoint

WK 100 2

D	SB	BO	Z	ZF	QAL	n_{max}	ID	ID
mm	mm	mm				min^{-1}	LH	RH
100	4.4	20	18	FZ	HW	8,000	061995 ●	061995 ●

Single scoring saw mounted on flanged sleeve

SK 999 2, SK 999 2

D	SB	BO	Z	ZF	QAL	n_{max}	ID	ID
mm	mm	mm				min^{-1}	LH	RH
200	6.5	40 DKN	48	WZ	HW	7,200	061986 □	061987 □
200	4.75	40 DKN	64	ES	HW	7,200	062632 □	062633 □

Double scoring saw mounted on flanged sleeve

SK 999 2

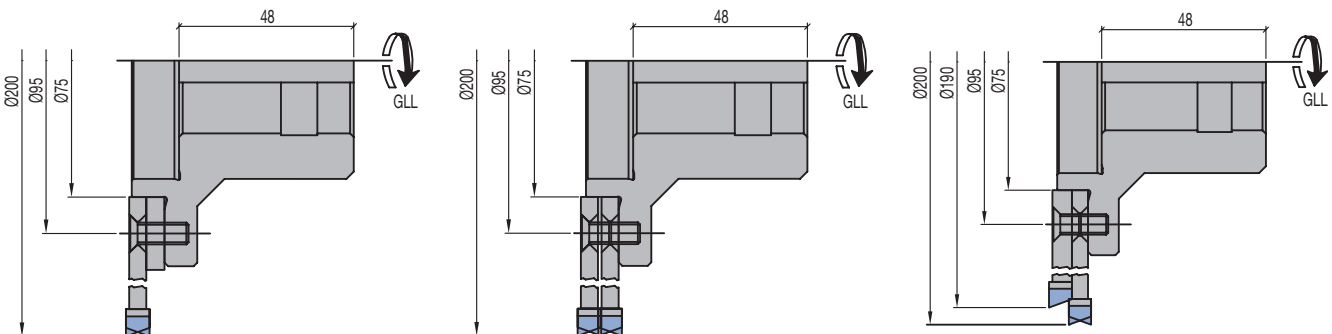
D	SB	BO	Z	ZF	QAL	n_{max}	ID	ID
mm	mm	mm				min^{-1}	LH	RH
200	12.2	40 DKN	48	WZ/WZ	HW	7,200	061988 □	061989 □
200	12.3	40 DKN	48	ES/WZ	HW	7,200	061990 □	061991 □
190								

Spare sawblades:

D	SB	BO	Z	ZF	NLA	QAL	n_{max}	ID	ID
mm	mm	mm			mm		min^{-1}	LH	RH
200	6.5	75	48	WZ	6NL TK95	HW	7,200	061992 ●	061992 ●
190	6.7	75	48	ES	6NL TK95	HW	7,200	061993 ●	061994 ●
200	4.75	75	64	ES	6NL TK95	HW	7,200	062630 ●	062631 ●

Spare parts:

BEZ	ABM	L	BO	ID
	mm	mm	mm	
Flanged sleeve	113/75x61x40 DKN	61	40 DKN	061680 ●
Flanged disc	D115/BO75/TK95		75	028676 ●
Spacer	180x1x75		75	028677 ●
Countersink screw, Torx® 20	M6x16			006086 ●



3. Planing and profiling

3.4 Finger jointing 3.4.5 Scoring sawblades and hoggers



Sawblade hogger for trimming minifingers

Application:

Defined trimming of the workpiece before cutting the fingers for adjusting the finger fitting.

Machine:

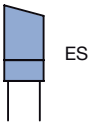
Finger joint machine with trimming aggregate, double-end profiler, tenoner.

Workpiece material:

Softwood, hardwood and wood derived materials.

Technical information:

HW circular sawblade with high number of teeth. Bevelled on one side for perfect cutting quality and reduced tear-outs.



Sawblade hogger mounted on flanged sleeve

SK 999 2

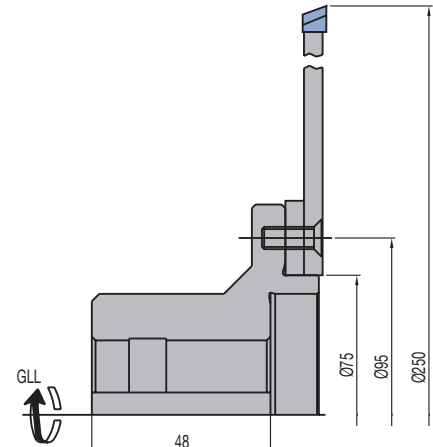
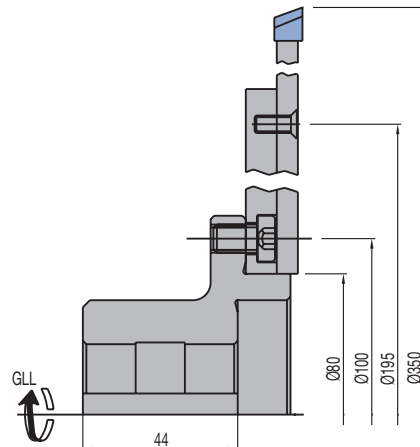
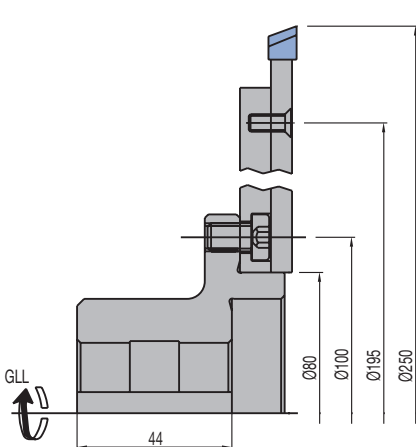
D	SB	BO	Z	ZF	QAL	ID	ID
mm	mm	mm				LH	RH
250	6.35	40 DKN	80	ES	HW	062618 □	062619 □
250	8	40 DKN	60	ES	HW	062620 □	062621 □
350	8	40 DKN	72	ES	HW	062622 □	062623 □

Spare sawblades:

D	SB	BO	Z	ZF	QAL	ID	ID
mm	mm	mm				LH	RH
250	6.35	75	80	ES	HW	062624 ●	062625 ●
250	8	80	60	ES	HW	062626 ●	062627 ●
350	8	80	72	ES	HW	062628 ●	062629 ●

Spare parts:

BEZ	ABM	L	BO	ID
	mm	mm	mm	
Flanged sleeve	113/80x59x40 DKN	12.7	40 DKN	061679 ●
Flanged sleeve	113/75x61x40 DKN	61	40 DKN	061680 ●
Flanged disc	D215/BO80/TK195		80	028675 ●
Flanged disc	D115/BO75/TK95		75	028676 ●
Countersink screw, Torx® 20	M6x16			006086 ●
Countersink screw, Torx® 20	M5x12			006247 ●
Cylindrical screw with ISK	M8x12			005943 ●





Rebating cutterhead for joinery machines - HeliCut

Application:

For cutting grooves, rebate grooves, V-grooves as well as for jointing longitudinal and crosscut wood with large hogging depths in the wood construction.

Machine:

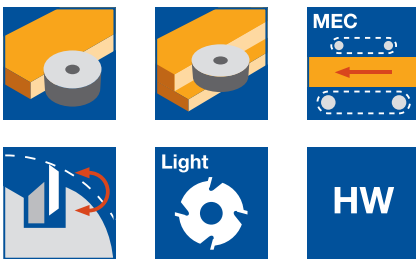
CNC-controlled joinery machines, as well as special machines for general wood construction with machine-specific adaptors.

Workpiece material:

Solid wood, preferably softwood for wood construction, hardwood (oak, ash etc.).

Technical information:

Carrier body constructed from high strength lightweight aluminium alloy. With 4-times turnable, spiral-shaped assembled HW turnblades. Application of the same knives as peripheral knives and spurs. The cutting bevels of the HW knives are numbered. No clamping wedges, direct tangential knife clamping. Easy handling of knife change without further mounting aid.



Aluminium tool body

WW 430-2-05

Machine	D mm	SB mm	BO mm	Z	V	ID
SCM	350	60	HSK-E 63	4x6	2 x 4+4	132571 □
SCM	350	60	HSK-E 63	4x6	2 x 4+4	132572 □
Uniteam	250	50	35 DKN	4x5	2 x 4	132562 □
Uniteam	250	80	35 DKN	4x8	2 x 4	132561 □
Uniteam	290	80	HSK-E 63	4x8	2 x 4+4	132563 □
Uniteam	290	80	HSK-E 63	4x8	2 x 4+4	132564 □
Uniteam	290	80	HSK-A 100	4x8	2 x 4+4	132565 □
Uniteam	290	80	HSK-A 100	4x8	2 x 4+4	132566 □
Uniteam	420	80	HSK-E 63	4x8	2 x 4+4	132567 □
Uniteam	420	80	HSK-E 63	4x8	2 x 4+4	132568 □
Uniteam	420	80	HSK-A 100	4x8	2 x 4+4	132569 □
Uniteam	420	80	HSK-A 100	4x8	2 x 4+4	132570 □
Weinmann	300	20	55	4x2	2 x 4+4	132557 □
Weinmann	300	50	55	4x5	2 x 4+4	132558 □
Weinmann	300	60	55	4x6	2 x 4+4	132560 □
Weinmann	300	61	55	4x6	2 x 4+4	132559 □



More dimensions on request.

Spare knives:

BEZ	ABM mm	QAL	BEM	VE PCS	ID
Turnblade knife	15x15x2,5	HW	HeliCut 15	10	009549 ●
Turnblade knife	15x15x2,5	HW-MF	HeliCut 15	10	009543 ●
Turnblade knife	15x15x2,5	TDC	HeliCut 15		602900 ●

Spare parts:

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

Routing

Leitz tool programme for wood construction





Content chapter Routing

Sizing and grooving	60
Jointing, rebating and bevelling	69
Profiling	70
Face milling and finishing	71

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters HW and HW turnblade



Roughing router cutter in turnblade design

Application:

Router cutter for sizing and grooving to roughing quality.

Machine:

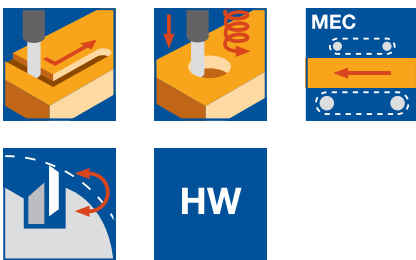
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

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

Technical information:

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



HW, Z 1+1

WL 101 2

D	GL	NL	S	DRI	ID
mm	mm	mm	mm		
22	125	55	25x60	RH	041922 ●

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

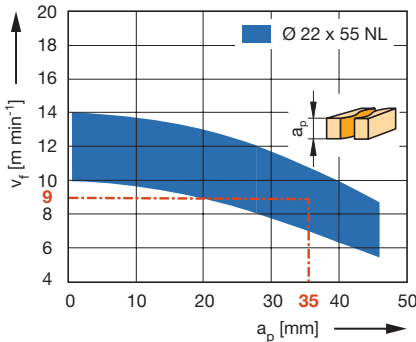
Spare knives:

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

Spare parts:

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

Feed speed v_f depending on cutting depth a_p



Workpiece material: Plastic coated chipboard

Operation: Sizing

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

Correction factor for v_f : MDF = 0.8

5. Routing

5.1 Sizing and grooving

5.1.1 Shank cutters HW and HW turnblade



Roughing router cutter in turnblade design - HeliCut 11

Application:

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

Machine:

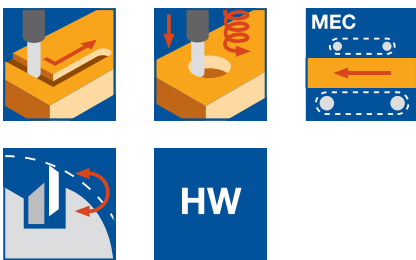
Stationary routers with/without CNC control, machining centres, joinery machines, milling machines with spindles to mount shank tools.

Workpiece material:

Softwood and hardwood, glulam and laminated wood.

Technical information:

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



HW, Z 2+2

WL 101 2

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

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

Note:

Tool shank S30x53 with recess suitable for many conventional joinery machines. Not suitable for use in shrink-fit chucks.

On machines with automatic tool changer use collet chuck ER40 together with collet d = 30 mm, ID **679039**.

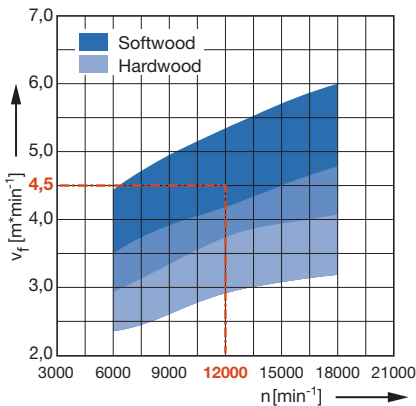
Spare knives:

BEZ	Knife	ABM mm	for D mm	QAL	VE PCS	ID
	Turnblade knife	Peripheral tip	11x11x1,5	HW	10	602515 ●
	Turnblade knife	Peripheral tip	11x11x1,5	TDC		602904 ●
	Exchange knife	Plunging tip	20,6x12,7x2	30 HW	10	602531 ●
	Exchange knife	Plunging tip	22x12,7x2	40 HW	10	602516 ●

Spare parts:

BEZ	ABM mm	ID	
	Countersink screw, Torx® 15	M4x6	114039 ●
	Countersink screw, Torx® 20	M5x6	114040 ●
	Torx® key	Torx® 15	005457 ●
	Torx® key	Torx® 20	117520 ●

Feed speed v_f depending on RPM n

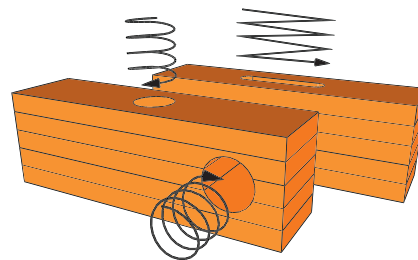


Workpiece material: Softwood, Hardwood

Operation: Sizing and grooving

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

Correction factor for v_f : Glulam = 0.8



Application notes:

Circular pockets and boreholes of a depth $> 1xD$ have to be cut circularly. Use ramp-in cutting to produce mortises.



Spiral roughing router cutter

Application:

Router cutter for sizing and grooving in roughing quality.

Machine:

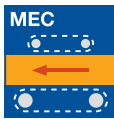
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

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

Technical information:

Solid tungsten carbide with chipbreakers for good chip removal. Long design for large cutting depths (recommended in several steps).



Z 3, long design, shank 32 mm

WO 160 2

D	GL	NL	S	Z	Twist	DRI	ID
mm	mm	mm	mm				
40	283	200	32x65	3	RD	RH	240531 ●

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

Z 3, long design, shank 20 mm

WO 160 2

D	GL	NL	S	Z	Twist	DRI	ID
mm	mm	mm	mm				
20	155	90	20x65	3	RD	RH	240543 ●

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

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral roughing router cutter with extended gullet

Application:

Router cutter for sizing and grooving in roughing quality.

Machine:

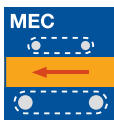
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

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

Technical information:

Solid tungsten carbide with chipbreakers and extended gullet for good chip removal. Extra long design for large cutting depths (recommended in several steps).



Z 3, extra long design, shank 16 mm

WO 160 2

D	GL	NL	S	Z	Twist	DRI	ID
mm	mm	mm	mm				
25	180	25	16x70	3	RD	RH	240544 ●

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

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral roughing/finishing router cutter Marathon

Application:

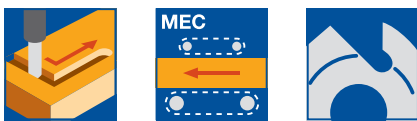
Router cutter for sizing and grooving in roughing/finishing quality.

Machine:

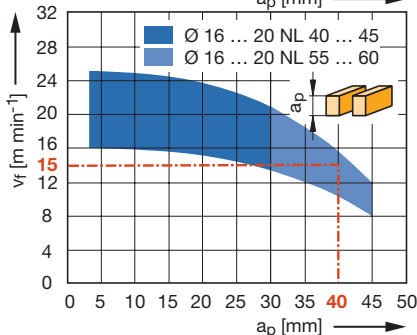
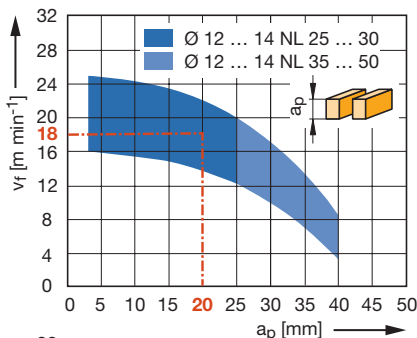
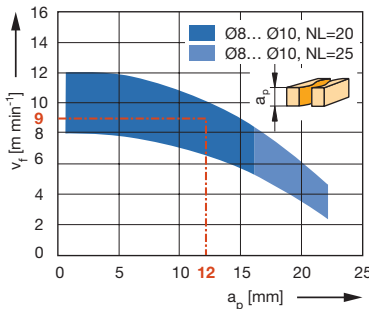
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

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



Feed speed v_f depending on cutting depth a_p



Technical information:

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

Z 2 / Z 3, short design

WO 160 2 12

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

Z 2 / Z 3, long design

WO 160 2 12

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

RPM:

Wood/wood derived material: $n = 16000 - 24000 \text{ min}^{-1}$
 Plastics: $n = 12000 - 18000 \text{ min}^{-1}$

Workpiece material: Softwood

Operation: Sizing

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

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

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral roughing/finishing router cutter Marathon

Application:

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

Machine:

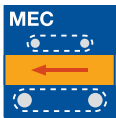
Stationary routers with/without CNC control, machining centres, joinery machines, milling machines with spindles to mount shank tools.

Workpiece material:

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

Technical information:

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



Z 3, long design, shank 30 mm

WO 160 2 12

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

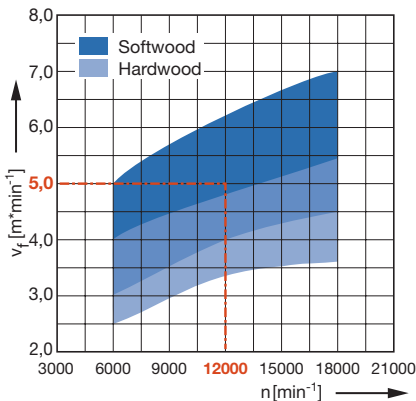
RPM: $n = 6000 - 18000 \text{ min}^{-1}$

Note:

Tool shank S30x53 with recess suitable for many conventional joinery machines. Not suitable for use in shrink-fit chucks.

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

Feed speed v_f depending on cutting depth a_p



Workpiece material: Softwood

Operation: Sizing

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

Correction factor for v_f :

Hardwood = 0.7; Glulam = 0.8

Z 3, long design, shank 32 mm

WO 160 2 12

D	GL	NL	S	Z	Twist	DRI	ID
mm	mm	mm	mm				
30	195	120	32x65	3	RD	RH	240308 ●
40	195	120	32x65	3	RD	RH	240309 ●
40	235	160	32x65	3	RD	RH	240310 ●

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

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral roughing/finishing router cutter Marathon

Application:

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

Machine:

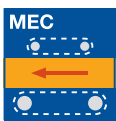
Stationary routers with/without CNC control, machining centres, milling machines with spindles to mount shank tools.

Workpiece material:

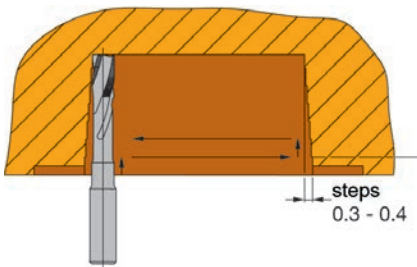
Softwood and hardwood, modified timber for window construction, chipboard and fibre working materials (MDF, HDF etc.) uncoated, laminated veneer lumber (plywood, multiplex plywood etc.), PVC window profiles.

Technical information:

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



Application example for mortise slot production



Application data:

Infeed at:

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

a_p 8 - 15 mm per stroke in chipboard;
 v_f 12 - 18 m min⁻¹;
 n = 12000 - 18000 min⁻¹

Z 2 / Z 3, extra long design, for mortise slots

WO 160 2 13

D mm	GL mm	NL mm	AL mm	S mm	Z	Twist	DRI	ID	ID Set HSK-F 63
8	80	25	51	8x25	2	LD	RH	240010 ●	240500 □
10	90	30	51	10x35	2	LD	RH	240011 ●	240501 □
12	120	35	80	12x35	3	LD	RH	240012 ●	240502 □
12	120	35	80	12x35	3	RD	RH	240000 ●	
14	170	30	95	16x50	3	RD	RH	240001 ●	
14	190	30	120	16x50	3	RD	RH	240002 ●	
16	170	50	105	16x50	3	RD	RH	240003 ●	
16	179	30	120	16x58 *	3	RD	RH	240004 ●	
16	179	30	120	16x58	3	RD	RH	240013 ●	
16	179	30	120	20x58 *	3	RD	RH	240005 ●	
16	179	30	120	20x58	3	RD	RH	240014 ●	
16	205	30	135	20x50	3	RD	RH	240006 ●	
17	190	30	120	20x50	3	RD	RH	240008 ●	
18	170	50	115	20x50	3	RD	RH	240009 ●	

RPM: Wood/wood derived material: D 10-12 mm: n = 18000 - 24000 min⁻¹
 Wood/wood derived materials: D 14-18 mm: n = 12000 - 20000 min⁻¹
 Plastics: n = 12000 - 18000 min⁻¹

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

Note:

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

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral roughing/finishing router cutter Marathon

Application:

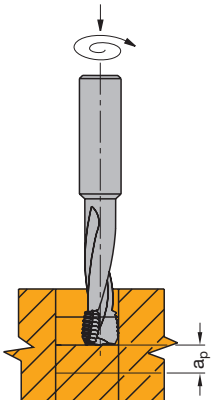
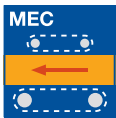
Router cutter for sizing and cutting spyholes and keyholes in roughing/finishing quality.

Machine:

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

Workpiece material:

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



Technical information:

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

Z 3, extra long design for cutting spyholes and keyholes

WO 160 2 14

D mm	GL mm	NL mm	AL mm	S mm	Z	DRI	ID	ID Set HSK-F 63
10	95	45		10x40	3	RH	240100 ●	
12	120	15	75	12x40	2	RH	240102 ●	
12	140	20	95	12x40	2	RH	240103 ●	
14	130	50	75	14x50	3	RH	240104 ●	
14	170	30	95	16x60	3	RH	240108 ●	240601 □
16	130	75		16x50	3	RH	240105 ●	
16	170	50	105	16x55	3	RH	240107 ●	240600 □
16	170	30	95	16x60	3	RH	240106 ●	
25	200	120		25x65	3	RH	240300 ●	240800 □

RPM: D 10-12 mm: n = 18000 - 24000 min⁻¹
D 14-18 mm: n = 12000 - 20000 min⁻¹

Note:

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

Production of keyholes and spyholes by circular cutting

Application data:

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

a_p 8 - 15 mm per stroke in chipboard;
v_f 12 - 18 m min⁻¹;
n = 12000 - 18000 min⁻¹

5. Routing

5.1 Sizing and grooving

5.1.2 Shank cutters HW-solid spiral design



Spiral roughing/finishing router cutter Marathon alternate twist

Application:

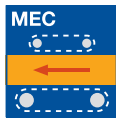
Routers for sizing and grooving in roughing/finishing quality and tear-free cutting edges on both sides.

Machine:

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

Workpiece material:

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



Technical information:

Solid tungsten carbide. Marathon coating for increased performance time. Alternate twist for tear-free cut edges on both sides. Higher feed speeds possible than with conventional roughing cutters. Extremely smooth running.

Z 2+2

WO 160 2 16

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

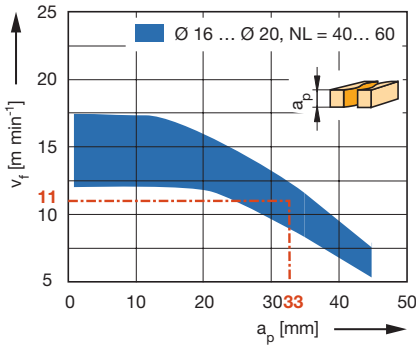
Z 2+2, Nesting types

WO 160 2 16

D	D	GL	GL	NL	NL	S	S	a _{p min}	DRI	ID
mm	in	mm	in	mm	in	mm	in	mm		
12		80		25		12x40		6	RH	240404 ●
12		90		35		12x40		12	RH	240405 ●
12.7	1/2"	76.2	3"	25	1"	12,7x40	1/2"x1 1/2"	6	RH	240406 ●
12.7	1/2"	88.9	3 1/2"	35	1 3/8"	12,7x40	1/2"x1 1/2"	12	RH	240407 ●

RPM: n_{max} = 24000 min⁻¹

Feed speed v_f depending on cutting depth a_p

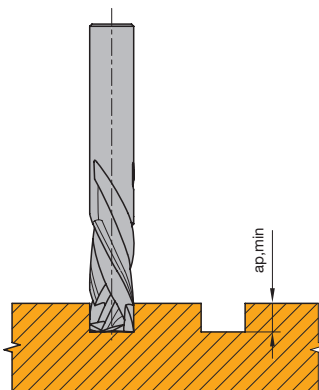


Workpiece material: Softwood

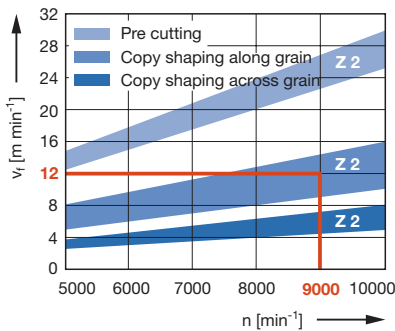
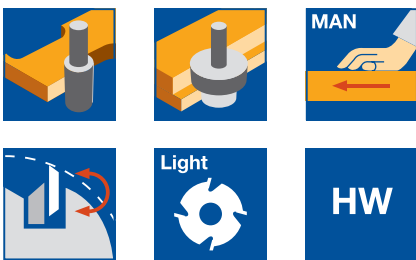
Operation: Sizing

Speed: n = 18000 min⁻¹

Correction factor for v_f: Hardwood = 0.8; Chipboard = 1.2; Glulam = 0.9



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



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

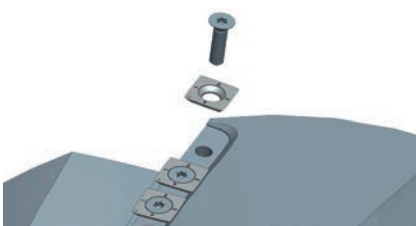
Application: copy shaping along the grain

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

Order example:

Tool set ID **132737** mounted on arbor ID **042951**, HSK-F 63 (A = 80 mm).

When giving the arbor ID observe the required clamping diameter.



Copy shaping cutterhead - HeliCut 15

Application:

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

Machine:

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

Workpiece material:

Softwood and hardwood, glulam and laminated wood.

Technical information:

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

Copy shaping cutterhead - HeliCut 15

SL 499 1, WW 230 2 07

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

RPM:

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

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

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

More dimensions on request.

Spare knives:

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

Spare parts:

BEZ	ABM mm	for D mm	ID
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 ●



Dovetail router cutter with exchangeable knives

Application:

For producing dovetail joints especially in the wood and frame construction.

Machine:

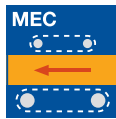
Stationary routers with/without CNC control, machining centres, joinery machines, special cutting machines to process frame parts.

Workpiece material:

Softwood and hardwood, glulam and laminated wood.

Technical information:

HW changing knives Z3 with Marathon coating for extremely high performance times. Chipbreakers in roughing/finishing design for small cutting forces and nearly even areas. One knife each of knife type „A“, „B“ and „C“ has to be mounted in the cutter.

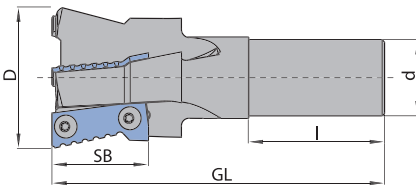


With cylindrical shank, incl. knives SB = 38 mm

WG 502 2

D mm	GL mm	SB mm	S mm	DRI	Z	ID without adaptor
60	131	38/51	30x53,5	LH	3	250000 ●
60	131	38/51	30x53,5	RH	3	250001 ●

RPM: n = 6000 - 18000 min⁻¹



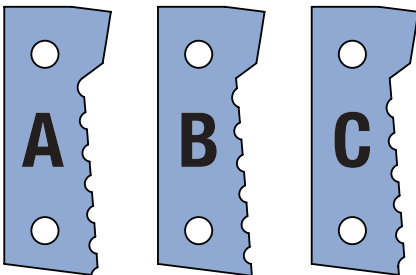
Spare knives:

Part-no.	BEZ	SB mm	Type	ID	
				LH	RH
1	Marathon profile knife	38	A	602517 ●	602509 ●
1	Marathon profile knife	38	B	602518 ●	602510 ●
1	Marathon profile knife	38	C	602519 ●	602511 ●
1	Marathon profile knife	51	A	602520 ●	602512 ●
1	Marathon profile knife	51	B	602521 ●	602513 ●
1	Marathon profile knife	51	C	602522 ●	602514 ●

Spare parts:

Part-no.	BEZ	ABM mm	ID
2	Oval head screw Torx® 15	M4x6	006225 ●
3	Torx® key	Torx® 15	005457 ●

Cylindrical shank design



Spare knives Marathon type A, B, C



Planing cutter - turnblade design HeliPlan

Application:

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

Machine:

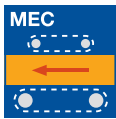
Stationary routers with/without CNC control, machining centres.

Workpiece material:

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

Technical information:

Cutting edge with shear angle; reversible and replaceable knives. D 135 and D 180 particularly suitable for planing MDF spoilboards in nesting applications. Excellent cutting result through optimized cutting geometry.



HW, Z 3, Z 4, Z 5

WL 400 2 01

D	GL	NL	S	Z	n_{\max}	DRI	ID
mm	mm	mm	mm		min^{-1}		
80	90	15	20x50	3	14,000	RH	041554 ●
80	100	15	25x60	3	14,000	RH	041555 ●
135	90	15	25x60	4	10,000	RH	041556 ●
180	90	15	25x60	5	8,400	RH	041557 ●

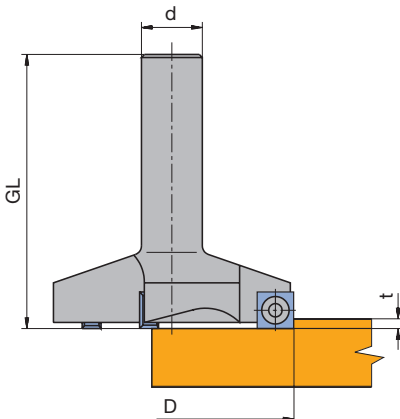
Spare knives:

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

Spare parts:

BEZ	ABM	ID
	mm	
Countersink screw, Torx® 20	M5x9	114049 ●
Torx® key	Torx® 20	006091 ●

Example



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

Surface planing of MDF spoilboards in nesting applications:

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

ID **041557** $n = 8400 \text{ min}^{-1}$

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



Turnblade finishing cutter, Z 1

Application:

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

Machine:

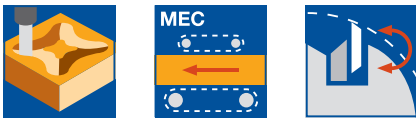
Stationary routers with/without CNC-control, milling machines with spindles to mount shank tools.

Workpiece material:

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

Technical information:

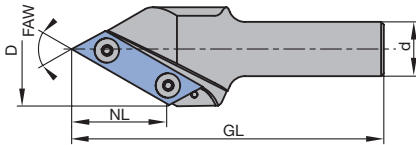
Cutterhead with exchangeable turnblades. 2 or 3 (ID **042932**) performance times through turning the knife. Extra long design (ID **042937**) particularly suitable for carving operations on 5-axes machines.



HW, Z 1

WL 300 2

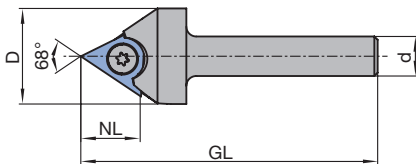
D	GL	NL	S	FAW	Z	P	DRI	ID
mm	mm	mm	mm	°				
29	90	18	12x58	68°	1	1	RH	042932 ●
35	125	42	20x50	45°	1	2	RH	042933 ●
42	115	35	20x50	60°	1	3	RH	042934 ●
42	180	35	20x50	60°	1	3	RH	042937 ●
54	100	27	20x50	90°	1	4	RH	042935 ●
54	100	27	20x50	91°	1	5	RH	042936 ●



Spare knives:

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

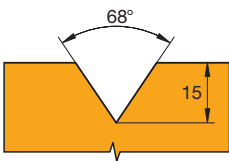
V-groove cutter



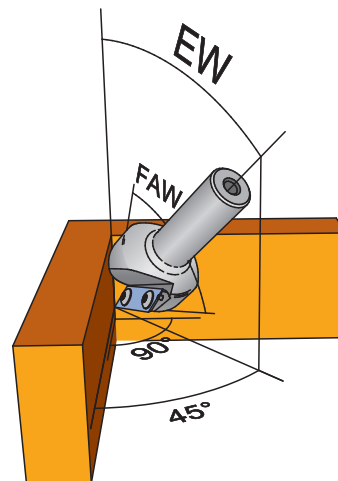
Spare parts:

BEZ	ABM	P	ID
	mm		
Countersink screw, Torx® 20	M5x5	1	007445 ●
Oval head screw Torx® 15	M4x5	2-5	007038 ●
Torx® key	Torx® 20	1	117520 ●
Torx® key	Torx® 15	2-5	005457 ●

V-groove cutter 68° (ID **042932**)



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



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

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

Drilling

Leitz tool programme for wood construction





Content chapter Drilling

Multi-purpose drilling 76



HS solid, Z 2 / V 2

Application:

For drilling very deep through holes without interim clearance strokes.

Machine:

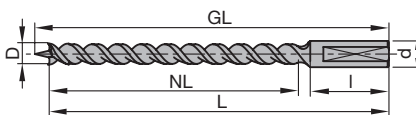
Joinery machines, column drilling machines, drilling machines, multi spindle units, special purpose drilling machines, portable drills.

Workpiece material:

Softwood and hardwood.

Technical information:

Design in HS solid, Z 2 / V 2 with long centre point. Polished gullets for perfect chip removal. Extra-long centre point for use of the drills at an angle.



GL 235 mm

WB 120 0 34

D	GL	NL	S	QAL	DRI	ID
mm	mm	mm	mm			
12	235	165	12x60	HS	RH	230702 ●
14	235	165	14x60	HS	RH	230703 ●
16	235	165	16x60	HS	RH	230704 ●
18	235	165	16x60	HS	RH	230705 ●
20	235	165	16x60	HS	RH	230706 ●
22	235	165	16x60	HS	RH	230707 ●
24	235	165	16x60	HS	RH	230708 ●
26	235	165	16x60	HS	RH	230709 ●
32	235	165	16x60	HS	RH	230710 ●

GL 360 mm

WB 120 0 34

D	GL	NL	S	QAL	DRI	ID
mm	mm	mm	mm			
12	360	290	12x60	HS	RL	230713 ●
14	360	290	14x60	HS	RL	230714 ●
16	360	290	16x60	HS	RL	230715 ●
18	360	290	16x60	HS	RL	230716 ●
20	360	290	16x60	HS	RL	230717 ●
22	360	290	16x60	HS	RL	230718 ●
24	360	290	16x60	HS	RL	230719 ●
26	360	290	16x60	HS	RL	230720 ●
32	360	290	16x60	HS	RL	230721 ●

GL 460 mm

WB 120 0 34

D	GL	NL	S	QAL	DRI	ID
mm	mm	mm	mm			
12	460	390	12x60	HS	RL	230724 ●
14	460	390	14x60	HS	RL	230725 ●
16	460	390	16x60	HS	RL	230726 ●
18	460	390	16x60	HS	RL	230727 ●
20	460	390	16x60	HS	RL	230728 ●
22	460	390	16x60	HS	RL	230729 ●
24	460	390	16x60	HS	RL	230730 ●
26	460	390	16x60	HS	RL	230731 ●
32	460	390	16x60	HS	RL	230732 ●

6. Drilling

6.4 Multi-purpose drilling

6.4.1 Twist drills



HS solid, Z 2 / V 2

Application:

For multi-purpose drilling of tear-free blind holes.

Machine:

Column drilling machines, drilling machines, multi spindle units, special purpose drilling machines, portable drills.

Workpiece material:

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

Technical information:

Design in HS solid with long centre point and round spurs. Shank diameter identical to drill diameter. Design with single heel to reduce friction in the hole.



WB 120 0 02/05, with single heel

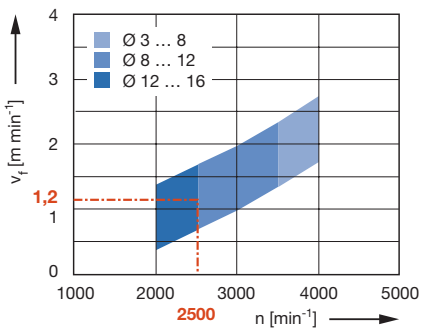
Shank diameter identical to drill diameter

WB 120 0 05

D	GL	NL	S	QAL	DRI	ID
mm	mm	mm	mm			
3	70	35	3x30	HS	RH	035852 ●
4	80	45	4x30	HS	RH	035853 ●
4.5	85	50	4,5x30	HS	RH	035892 ●
5	90	50	5x30	HS	RH	035854 ●
5.5	95	55	5,5x35	HS	RH	035893 ●
6	100	60	6x35	HS	RH	035855 ●
6.5	105	65	6,5x35	HS	RH	035894 ●
7	110	65	7x40	HS	RH	035856 ●
7.5	115	70	7,5x40	HS	RH	035895 ●
8	120	75	8x40	HS	RH	035857 ●
10	140	85	10x50	HS	RH	035859 ●
12	155	95	12x50	HS	RH	035861 ●

RPM: $n = 1500 - 4000 \text{ min}^{-1}$

Feed speed v_f depending on the spindle RPM n



Workpiece material:

Softwood

Operation:

Drilling

Correction factor for v_f :

Hardwood = 0.7

6. Drilling

6.4 Multi-purpose drilling

6.4.1 Twist drills



HW solid, Z 2 / V 2, Marathon

Application:

For drilling very deep holes without interim clearance strokes. Particularly suitable for drilling connection and dowel holes in timber frame and window construction.

Machine:

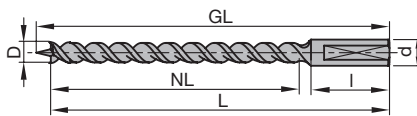
Stationary routers with/without CNC control, machining centres, special cutting machines to machine frame parts, column drilling machines, drilling machines, multi spindle units, portable drills.

Workpiece material:

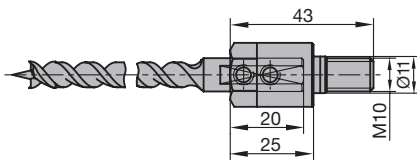
Softwood and hardwood, modified timber for window construction, laminated veneer lumber (plywood, multiplex etc.), glued lumber.

Technical information:

Design in solid tungsten carbide, Z 2/V 2 and centre point. Marathon coating for increased performance time. Extra-long centre point for use of the drills at an angle. Very large gullets for perfect chip removal particularly when drilling in end grain. Shank design with reduced clamping area for good centering in shrink and collet chucks.



WB 120 0 34, solid tungsten carbide drill



WB 120 0 34, solid tungsten carbide drill with adaptor

GL 105 mm

WB 120 0 34

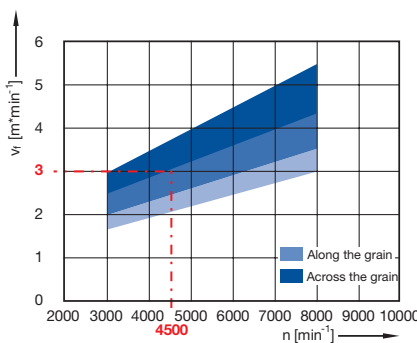
D mm	GL mm	L mm	NL mm	S mm	DRI	ID with adaptor	ID without adaptor
3	105	102	70	10x25	RH	230121	230021
3.5	105	102	70	10x25	RH	230122	230022
4.5	105	101	70	10x25	RH	230123	230023
6	105	100.5	70	10x25	RH	230108	230008
6	105	100.5	70	10x25	LH	230109	230009
8	105	99.5	70	10x25	RH	230110	230010
8	105	99.5	70	10x25	LH	230111	230011
10	105	98.5	70	10x25	RH	230112	230012
10	105	98.5	70	10x25	LH	230113	230013
12	105	97.5	70	10x25	RH	230114	230014
12	105	97.5	70	10x25	LH	230115	230015

GL 130 mm

WB 120 0 34

D mm	GL mm	L mm	NL mm	S mm	DRI	ID with adaptor	ID without adaptor
6	130	125.5	90	10x30	RH	230100	230000
6	130	125.5	90	10x30	LH	230101	230001
6.5	130	125.5	90	10x30	RH	230120	230020
8	130	124.5	90	10x30	RH	230102	230002
8	130	124.5	90	10x30	LH	230103	230003
10	130	123.5	90	10x30	RH	230104	230004
10	130	123.5	90	10x30	LH	230105	230005
12	130	122.5	90	10x30	RH	230106	230006
12	130	122.5	90	10x30	LH	230107	230007

Feed speed v_f depending on the spindle RPM n



Diameter:

$D \leq 6$ mm

Workpiece material:

Softwood

Operation:

Drilling

Correction factor for v_f :

Hardwood = 0.8

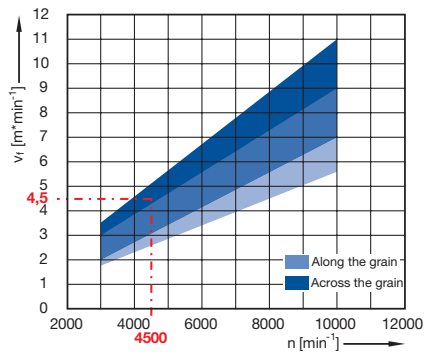
Laminated veneer lumber = 1.2

6. Drilling

6.4 Multi-purpose drilling

6.4.1 Twist drills

Feed speed v_f depending on the spindle RPM n



GL 150 mm

WB 120 0 34

D mm	GL mm	L mm	NL mm	S mm	DRI	ID with adaptor	ID without adaptor
14	150	140.5	100	10x30	RH	230116 □	230016 ●
16	150	140	100	10x30	RH	230118 □	230018 ●

RPM: $n = 3000 - 9000 \text{ min}^{-1}$

Diameter:

$D = 6 - 12 \text{ mm}$

Workpiece material:

Softwood

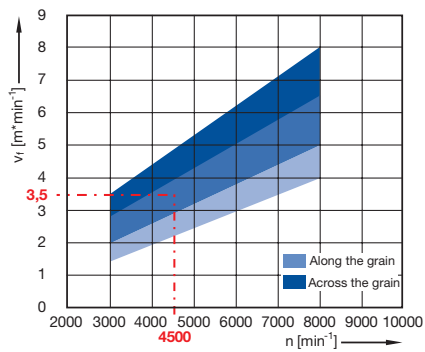
Operation:

Drilling

Correction factor for v_f :

Hardwood = 0.8

Laminated veneer lumber = 1.2



Diameter:

$D > 12 \text{ mm}$

Workpiece material:

Softwood

Operation:

Drilling

Correction factor for v_f :

Hardwood = 0.8

Laminated veneer lumber = 1.2

6. Drilling

6.4 Multi-purpose drilling

6.4.1 Twist drills



HW solid, Z 2, V-point

Application:

For drilling deep holes. Particularly for timber frame and window construction.

Machine:

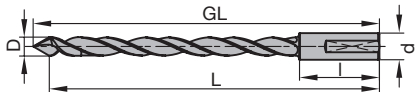
Stationary routers with/without CNC control, machining centres, special cutting machines to machine frame parts, column drilling machines, drilling machines, multi spindle units, portable drills.

Workpiece material:

Softwood and hardwood, modified timber for window construction, laminated veneer lumber (plywood, multiplex etc.), glued lumber.

Technical information:

Solid tungsten carbide design, Z 2 with V-point. Design with double heel for improved guidance while drilling and return stroke from the hole. Shank design with reduced clamping area for good centering in shrink and collet chucks.



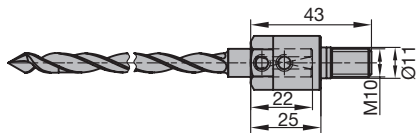
WB 101 0 13, twist drill with V-point

GL 130 / 160 mm

WB 101 0 13

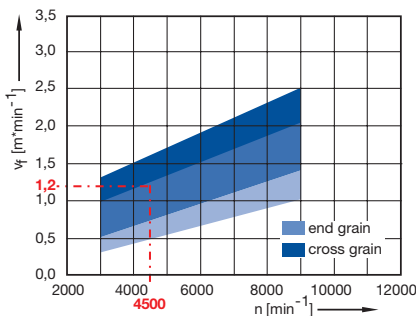
D mm	GL mm	NL mm	S mm	QAL	DRI	ID with adaptor	ID without adaptor
7	130	90	10x30	HW solid	RH	230451 □	230351 ●
8	160	120	10x30	HW solid	RH	230455 □	230355 ●
9	160	120	10x30	HW solid	RH	230452 □	230352 ●
10	160	120	10x30	HW solid	RH	230453 □	230353 ●
12	160	120	10x30	HW solid	RH	230454 □	230354 ●

RPM: $n = 3000 - 9000 \text{ min}^{-1}$



WB 101 0 13, twist drill with V-point, with adaptor

Feed speed v_f depending on the spindle RPM n



Workpiece material:

Softwood

Operation:

Drilling

Correction factor for v_f :

Hardwood = 0.8

Laminated veneer lumber = 1.1

6. Drilling

6.4 Multi-purpose drilling

6.4.1 Twist drills



HW solid, Z 2, V-point, Marathon

Application:

For drilling very deep holes without interim clearance strokes at high feed speed particularly for timber frame and window construction.

Machine:

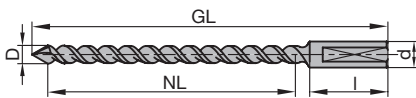
Stationary routers with/without CNC control, machining centres, special cutting machines to machine frame parts, column drilling machines, drilling machines, multi spindle units, portable drills.

Workpiece material:

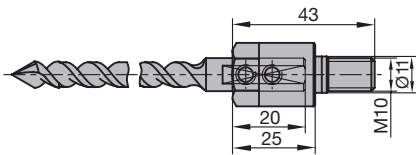
Softwood and hardwood, modified timber for window construction, laminated veneer lumber (plywood, multiplex etc.), glued lumber.

Technical information:

Solid tungsten carbide design, Z 2 with V-point. Marathon coating for increased performance time. Very large gullets for perfect chip removal. Shank design with reduced clamping area for good centering in shrink and collet chucks.



WB 101 0 12,
twist drill with V-point



WB 101 0 12,
twist drill with V-point, with adaptor

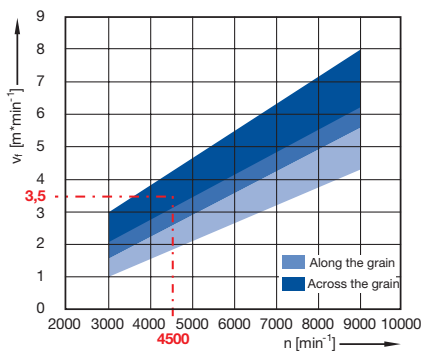
GL 130 / 160 mm

WB 101 0 12

D mm	GL mm	NL mm	S mm	DRI	ID with adaptor	ID without adaptor
6	130	90	10x30	RH	230400	230300 ●
7	130	90	10x30	RH	230401	230301 ●
8	160	120	10x30	RH	230405	230305 ●
9	160	120	10x30	RH	230402	230302 ●
10	160	120	10x30	RH	230403	230303 ●
12	160	120	10x30	RH	230404	230304 ●

RPM: $n = 3000 - 9000 \text{ min}^{-1}$

Feed speed v_f depending on the spindle
RPM n



Diameter:

$D = 6 - 12 \text{ mm}$

Workpiece material:

Softwood

Operation:

Drilling, through hole

Correction factor for v_f :

Hardwood = 0.8

Laminated veneer lumber = 1.2

**SP, Z 1 / V 1, threaded tip****Application:**

For drilling constructions and joint boreholes especially in the wood and frame construction.

Machine:

Stationary routers with/without CNC control, machining centres, joinery machines, special cutting machines to machine frame parts, column drilling machines, drilling machines, boring aggregates, portable drills.

Workpiece material:

Softwood, glued wood. Limitedly suitable for hardwood.

Technical information:

Z 1 / V 1 design with threaded tip. Threaded tip for easy boring especially when using portable machines. Extremely large gullet areas for excellent chipflow. Hexagon shank from D=8 mm on for excellent transmission of the torque.

**GL 235 mm**

WB 110 0

D mm	GL mm	NL mm	S mm	DRI	ID
6	235	160	5.5	RH	230517 ●
7	235	160	6.5	RH	230518 ●
8	235	160	7.5	RH	230519 ●
10	235	160	9.5	RH	230520 ●
11	235	160	10.5	RH	230521 ●
12	235	160	11.5	RH	230522 ●
14	235	160	13	RH	230523 ●
16	235	160	13	RH	230524 ●
18	235	160	13	RH	230525 ●
20	235	160	13	RH	230526 ●
22	235	160	13	RH	230527 ●
24	235	160	13	RH	230528 ●
25	235	160	13	RH	230529 ●
26	235	160	13	RH	230530 ●
28	235	160	13	RH	230531 ●
30	235	160	13	RH	230532 ●
32	235	160	13	RH	230533 ●

GL 460 mm

WB 110 0

D mm	GL mm	NL mm	S mm	DRI	ID
6	460	400	5.5	RH	230511 ●
7	460	400	6.5	RH	230512 ●
8	460	400	7.5	RH	230513 ●
10	460	400	9.5	RH	230514 ●
11	460	400	10.5	RH	230515 ●
12	460	400	11.5	RH	230500 ●
14	460	400	13	RH	230501 ●
16	460	400	13	RH	230502 ●
18	460	400	13	RH	230503 ●
20	460	400	13	RH	230504 ●
22	460	400	13	RH	230505 ●
24	460	400	13	RH	230506 ●
25	460	400	13	RH	230507 ●
26	460	400	13	RH	230508 ●
28	460	400	13	RH	230509 ●
30	460	400	13	RH	230510 ●
32	460	400	13	RH	230516 ●

RPM: n = 500 - 3000 min⁻¹

6. Drilling

6.4 Multi-purpose drilling

6.4.2 Levin type drills



HS solid, Z 1

Application:

For drilling deep holes. Suitable for depths up to approx. 4 x D without interim clearance strokes.

Machine:

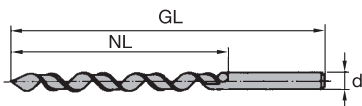
Column drilling machines, drilling machines, multi spindle units, special purpose drilling machines, portable drills.

Workpiece material:

Softwood and hardwood.

Technical information:

Solid HS design, Z 1. V-point for producing tear-free holes on both sides when drilling through holes. Very large gullets for perfect chip removal particularly when drilling in end grain.



V-point for through hole drilling

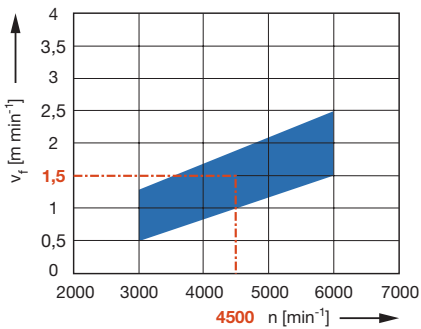
WB 100 0

D	GL	NL	S	QAL	Z	DRI	ID
mm	mm	mm	mm				
5	90	50	5x35	HS	1	RH	036110 ●
6	100	60	6x35	HS	1	RH	036111 ●
8	120	80	8x40	HS	1	RH	036112 ●
10	120	80	10x40	HS	1	RH	036113 ●
12	140	100	12x40	HS	1	RH	036114 ●

RPM: $n = 3000 - 6000 \text{ min}^{-1}$

WB 100 0, with V-point

Feed speed v_f depending on the spindle RPM n



Workpiece material:

Solid wood

Operation:

Drilling

Correction factor for v_f :

Drilling depth $> 4 \times D = 0.8$

6. Drilling

6.4 Multi-purpose drilling

6.4.3 Cylinder head drills



SP, Z 2 / V 2

Application:

For drilling hinge holes, particularly in furniture construction and for fittings in timber construction.

Machine:

Column drilling machines, special purpose drilling machines, portable drills.

Workpiece material:

Softwood.

Technical information:

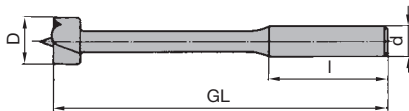
SP solid, Z 2/V 2. Shank 10 mm suitable for stationary boring machines and portable drills.



Shank 10 mm

WB 310 0 03

D	GL	S	DRI	ID
mm	mm	mm		
15	90	10x55	RH	036650 ●
20	90	10x55	RH	036655 ●
25	90	10x70	RH	036658 ●
30	90	10x70	RH	036661 ●
35	90	10x65	RH	036664 ●
40	90	10x65	RH	036667 ●

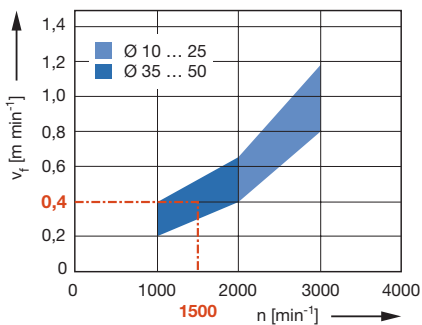


Technical information:

SP solid, Z 2/V 2. Reinforced shank for heavy machining in column drilling machines and powerful portable drills.

WB 310 0 02, reinforced shank
13/16 mm

Feed speed v_f depending on the spindle
RPM n



Shank 13 / 16 mm, reinforced design

WB 310 0 02

D	GL	S	DRI	ID
mm	mm	mm		
10	120	13x50	RH	036421 ●
12	120	13x50	RH	036422 ●
15	140	13x50	RH	036424 ●
20	140	13x50	RH	036427 ●
25	140	13x50	RH	036430 ●
30	140	13x50	RH	036433 ●
35	140	16x50	RH	036436 ●

RPM: $n = 1000 - 3000 \text{ min}^{-1}$

Workpiece material:

Softwood

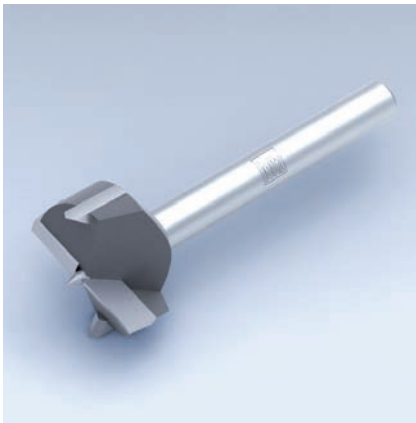
Operation:

Drilling

6. Drilling

6.4 Multi-purpose drilling

6.4.3 Cylinder head drills



HW, Z 2 / V 2

Application:

For drilling hinge holes, particularly in furniture construction.

Machine:

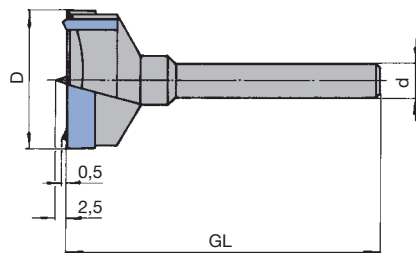
Column drilling machines, drilling machines, special purpose drilling machines, portable drills.

Workpiece material:

Softwood and hardwood.

Technical information:

Tungsten carbide design, Z 2/V 2. Shank 10 mm suitable for stationary drilling machines and portable drills.



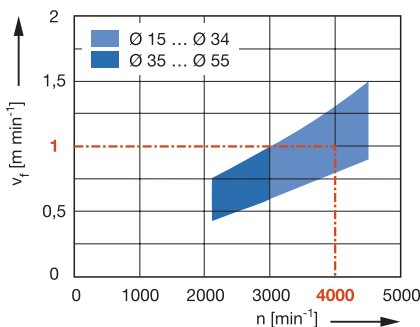
Shank 10 mm
WB 310 0 03

D	GL	S	DRI	ID
mm	mm	mm		
15	90	10x55	RH	036668 ●
16	90	10x55	RH	036669 ●
17	90	10x55	RH	036670 ●
18	90	10x55	RH	036671 ●
19	90	10x55	RH	036672 ●
20	90	10x55	RH	036673 ●
22	90	10x55	RH	036674 ●
24	90	10x70	RH	036676 ●
25	90	10x70	RH	036677 ●
26	90	10x70	RH	036678 ●
28	90	10x70	RH	036679 ●
30	90	10x70	RH	036680 ●
34	90	10x65	RH	036682 ●
35	90	10x65	RH	036683 ●
40	90	10x65	RH	036686 ●

RPM: n = 1200 - 4500 min⁻¹

WB 310 0 03, shank 10 mm,
GL = 90 mm

Feed speed v_f depending on the spindle
RPM n



Workpiece material:

Hardwood

Operation:

Drilling

Correction factor for v_f :

Chipboard = 1.2

Laminated veneer lumber = 1.1

6. Drilling

6.4 Multi-purpose drilling

6.4.3 Cylinder head drills



HW, Z 2 / V 2

Application:

For drilling hinge holes, particularly in furniture construction.

Machine:

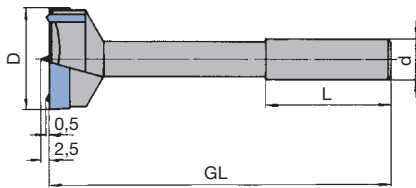
Column drilling machines, drilling machines, special purpose drilling machines, portable drills.

Workpiece material:

Softwood and hardwood.

Technical information:

Tungsten carbide design, Z 2/V 2. Reinforced shank for heavy machining in column drilling machines and powerful portable drills.



Shank 13 / 16 mm, reinforced design

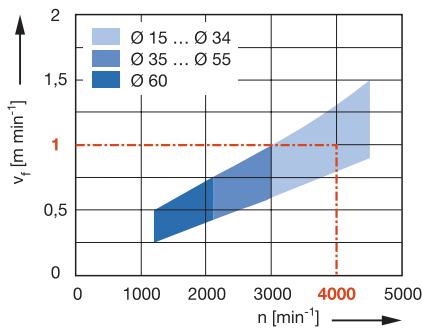
WB 310 0 02

D	GL	S	DRI	ID
mm	mm	mm		
20	140	13x50	RH	036462 ●
22	140	13x50	RH	036463 ●
25	140	13x50	RH	036465 ●
30	140	13x50	RH	036468 ●
35	140	16x50	RH	036471 ●
40	140	16x50	RH	036474 ●
50	150	16x50	RH	036480 ●
55	150	16x50	RH	036483 ●
60	150	16x50	RH	036486 ●

RPM: n = 1200 - 4500 min⁻¹

Tungsten carbide tipping with large resharpening area

Feed speed v_f depending on the spindle RPM n



Workpiece material:

Hardwood

Operation:

Drilling

Correction factor for v_f :

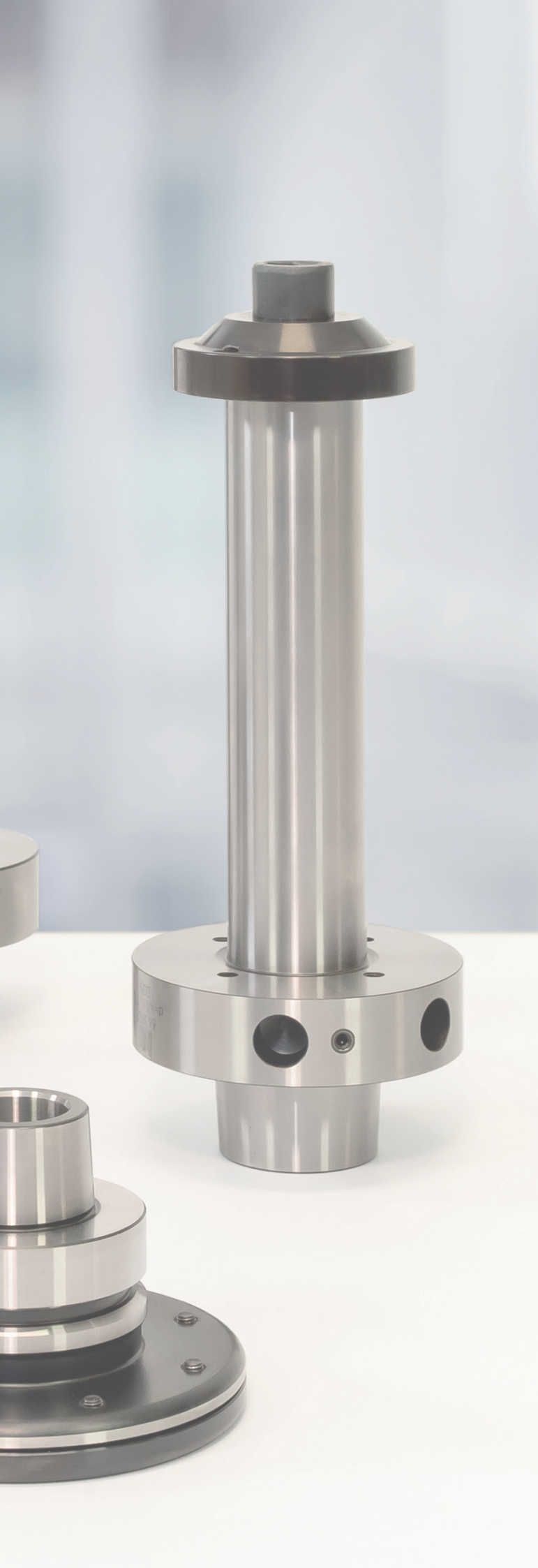
Chipboard = 1.2

Laminated veneer lumber = 1.1

Clamping systems

Leitz tool programme for wood construction





Content chapter Clamping systems

Overview	90
Clamping elements	91
Clamping chucks	93

High requirements on joinery machines

Due to the machining tasks on the workpiece, tools with above-average diameters are used on joinery systems. Due to the high weight of the tools, large chip removal and cutting forces as well as swiveling movements at full speed, the interface between machine and tool has to cope with enormous forces. Leitz offers the right clamping system for the individual machining situation, which meets the high requirements and optimally transfers the performance of the machine to the tool.

Cutting arbors

- Adjusted to machine, tool, machining task on the workpiece and application data
- Designed for maximum speed taking into account tool weight, overhang length and load during machining



Collet chuck

- Very versatile and flexible use by changing to different clamping diameters with different collets
- Low requirements for shank tolerances of the tool
- High economic efficiency



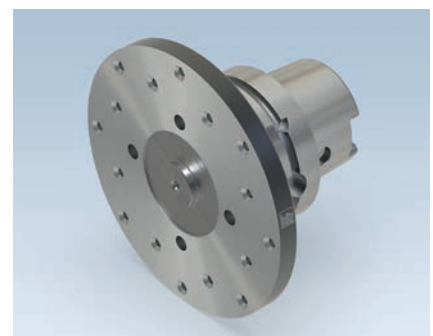
Shrink fit chuck

- Highest accuracy, almost like monolithic tools
- High cost-effectiveness, as the adaptor can be used multiple times
- For maximum tool life and highest cutting speed
- High stability and rigidity
- Perfect for high speed



Saw flanges

- Adjusted to the respective sawblade and the operating conditions
- Large forces must be absorbed due to pivoting movements of large and heavy sawblades in speed
- Ideal contact surface for perfect axial runout
- Secure fastening of the main blade
- Guarantee of maximum possible cutting depths



7. Clamping systems

7.1 Clamping elements

7.1.1 Hydro clamping - open system



For spindle without safety device against twisting

Application:

Clamping sleeve for centric, play-free clamping of tools and cutterheads.

Machine:

Machines with high precision spindles e.g. moulders etc.

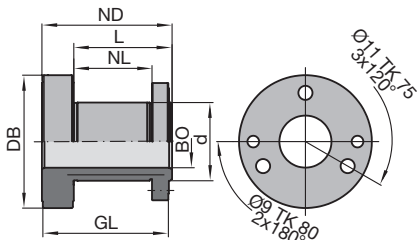
Technical information:

Hydro-Duo open clamping system, activation of hydro clamping by a grease gun. Suitable for right and left hand rotation.

With clamping nut

PH 130 0 01

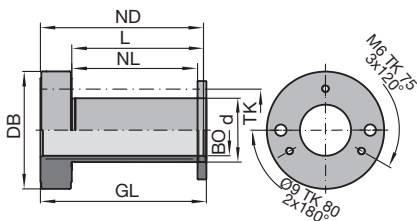
d	BO	NL	L	GL	ND	DB	ID
mm	mm	mm	mm	mm	mm	mm	
60	40	60	75	100	100	102	030503 ●
60	45	60	75	100	100	102	030505 ●
60	50	60	75	100	100	102	030507 ●
60	50	40	55	80	80	102	030515 ●



Spare parts:

BEZ	ABM	ID
	mm	
Sickle spanner adjustable	D90/155; L290; DIN1816; tenon 6	005462 ●
Grease gun		008239 ●
Grease cartridge	for Hydro sleeve	007934 ●
Grease nipple	M10x1	007935 ●

Hydro-Duo clamping element
PH 130 0 01 with clamping nut



With end ring and clamping screws

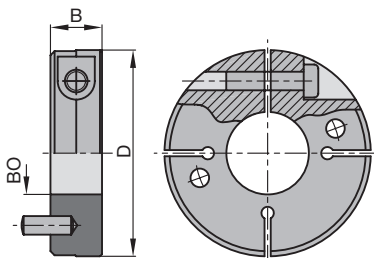
PH 130 0 02

d	BO	NL	L	GL	ND	DB	TK	ID
mm	mm	mm	mm	mm	mm	mm	mm	
50	40	98	105	130	100	92	65	030600 ●
60	45	28	35	59.5	59.5	102	75	030605 ●
60	50	98	105	130	130	102	75	030602 ●

Spare parts:

BEZ	ABM	ID
	mm	
Allen key	SW 5	005452 ●
Grease gun		008239 ●
Grease cartridge	for Hydro sleeve	007934 ●
Grease nipple	M10x1	007935 ●
Cylindrical screw with ISK	M6x70	005936 ●
Cylindrical screw with ISK	M6x120	005942 ●

Hydro-Duo clamping element
PH 130 0 02 with end ring and
clamping screws



Clamping collar without thread

Clamping collars without thread

TD 870 0

D	B	BO	ID
mm	mm	mm	
100	25	40	030700 ●
100	25	45	030701 ●
100	25	50	030702 ●

7. Clamping systems

7.1 Clamping elements

7.1.2 Hydro clamping - closed system



For spindle without safety device against twisting

Application:

Clamping sleeve for centric clamping of tools, tool sets and cutterheads.

Machine:

Machines with high precision spindles, e.g. moulders, double-end tenoners, edgbanding machines, window production machines etc.

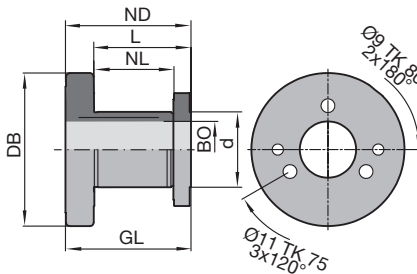
Technical information:

Hydro-Duo closed hydro clamping system, activation of hydro clamping by internal clamping system without grease gun. Suitable for right and left hand rotation.

With clamping nut

PH 130 0 05

d	BO	NL	L	GL	ND	DB	ID
mm	mm	mm	mm	mm	mm	mm	
60	45	63	77	100	100	122	031603
60	50	63	77	100	100	122	031601 ●
70	60	43	57	80	80	130	031605



Hydro-Duo clamping element
PH 130 0 05 with clamping nut

Spare parts:

BEZ	ABM	ID
	mm	
Sickle spanner adjustable	D90/155; L290; DIN1816; tenon 6	005462 ●

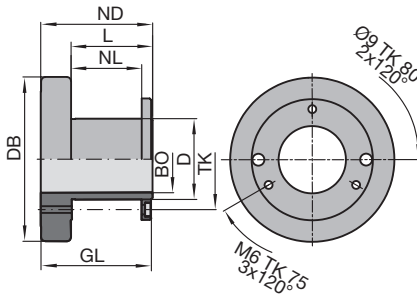
With end ring and clamping screws

PH 130 0 06

d	BO	NL	L	GL	ND	DB	TK	ID
mm	mm	mm	mm	mm	mm	mm	mm	
60	50	52	60	83	83	122	75	031650 ●

Spare parts:

BEZ	ABM	ID
	mm	
Allen key	SW 5	005452 ●
Cylindrical screw with ISK	M6x70	005936 ●

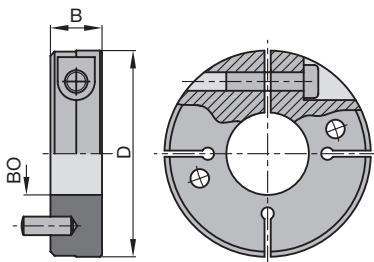


Hydro-Duo clamping element
PH 130 0 06 with end ring and
clamping screws

Clamping collars without thread

TD 870 0

D	B	BO	ID
mm	mm	mm	
100	25	45	030701 ●
100	25	50	030702 ●



Clamping collar without thread



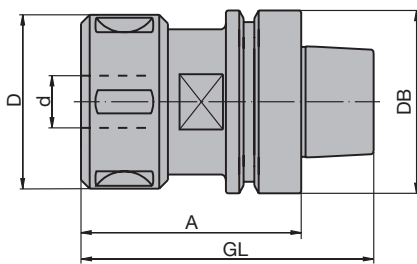
Collet chuck with hollow taper shank HSK-F 80

Application:

Precision tool chuck with collet for clamping shank tools with cylindrical shank and shank diameters up to $d_{max} = 30$ mm (1").

Technical information:

Hollow taper shank as per DIN 69893. Exact concentric running through hardened, ground and double slotted collets. Easy handling as loosening the ball bearing collet nut automatically opens the collet. Suitable for right hand and left hand rotation because of ball bearing collet nut. Ball bearing collet nut for increased clamping forces and improved concentricity compared to monobloc design. Tool chuck and collet nut fine balanced. Suitable mounting device VN 799 0 see section Knives and Spare Parts.

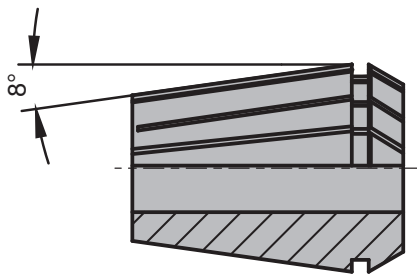


HSK-F 80, DIN 69893, A = 78 mm, diameter range 6-30 mm, short design, 8° taper angle of the collet

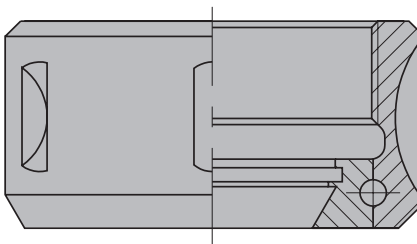
PM 350 0 15

d	D	DB	A	GL	Weight	ID
mm	mm	mm	mm	mm	kg	
6 - 30	63	80	78	110	1.6	679044 ●

Sales unit consisting of clamping chuck with ball bearing collet nut, without collet or spanner.



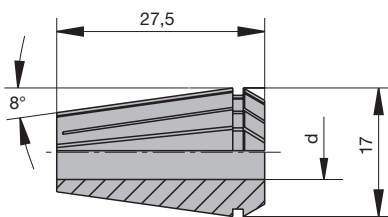
Collet angle 8°: DIN ISO 15488



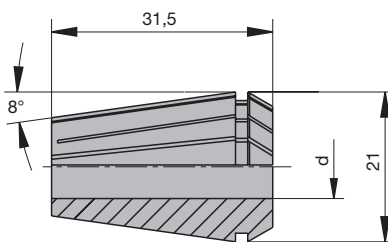
Ball bearing collet nut

Spare parts:

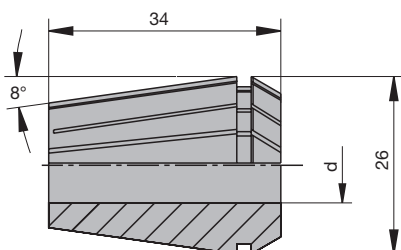
BEZ	ABM	for S	ID
	mm	mm	
Collet (8°)		6	037926 ●
Collet (8°)		8	037927 ●
Collet (8°)		10	037928 ●
Collet (8°)		12	037929 ●
Collet (8°)		14	037930 ●
Collet (8°)		16	037931 ●
Collet (8°)		20	037932 ●
Collet (8°)		25	037933 ●
Collet (8°)		30	679039 ●
Collet (8°)		6,35 (1/4")	037934 ●
Collet (8°)		9,53 (3/8")	037935 ●
Collet (8°)		12,7 (1/2")	037936 ●
Collet (8°)		15,88 (5/8")	037937 ●
Collet (8°)		19,05 (3/4")	037938 ●
Collet (8°)		25,4 (1")	037939 ●
Sickle spanner	58/62		005458 ●
Collet chuck nut with ball bearing	M50x1.5		006639 ●
Chip-Balluff	511 Bytes		081309 ●
Chip-Balluff	2047 Bytes		081330 □



ER 16 collet diameter range 6-10 mm



ER 20 collet diameter range 6-13 mm



ER 25 collet diameter range 6-16 mm

Collets, type ER, DIN ISO 15488

Application:

For collet chucks and multi spindle units and trimming units with 8° taper angle (type ER, DIN ISO 15488).

Technical information:

Double slotted design for maximum clamping forces and concentricity.

Diameter range 6-10 mm, ER 16, Type 426E, DIN ISO 15488

PM 150 0

BEZ	for S mm	d mm	D mm	GL mm	ID
Collet (8°)	6	5,5 - 6	17	27,5	037972 ●
Collet (8°)	8	7,5 - 8	17	27,5	037973 ●
Collet (8°)	10	9,5 - 10	17	27,5	037974 ●
Collet (8°)	6,35 (1/4")	5,85 - 6,35	17	27,5	679022 ●
Collet (8°)	9,53 (3/8")	9,03 - 9,53	17	27,5	679023 ●

Spare parts:

BEZ	ABM mm	D mm	Diameter range mm	DRI	ID
Sickle spanner	30/32		6 - 10		005516 ●
Collet chuck nut with ball bearing	M22x1.5	32	6 - 10	RH	006645 ●

Diameter range 6-13 mm, ER 20, Type 428E, DIN ISO 15488

PM 150 0

BEZ	for S mm	d mm	D mm	GL mm	ID
Collet (8°)	6	5,5 - 6	21	31,5	037975 ●
Collet (8°)	8	7,5 - 8	21	31,5	037976 ●
Collet (8°)	10	9,5 - 10	21	31,5	037977 ●
Collet (8°)	12	11,5 - 12	21	31,5	037978 ●
Collet (8°)	6,35 (1/4")	5,85 - 6,35	21	31,5	679024 ●
Collet (8°)	9,53 (3/8")	9,03 - 9,53	21	31,5	679025 ●
Collet (8°)	12,7 (1/2")	12,2 - 12,7	21	31,5	679026 ●

Spare parts:

BEZ	ABM mm	D mm	Diameter range mm	DRI	ID
Sickle spanner	34/36		6 - 12,7		005498 ●
Collet chuck nut with ball bearing	M25x1.5	35	6 - 13	RH	006647 ●

Diameter range 6-16 mm, ER 25, Type 430E, DIN ISO 15488

PM 150 0

BEZ	for S mm	d mm	D mm	GL mm	ID
Collet (8°)	6	5,5 - 6	26	34	037979 ●
Collet (8°)	8	7,5 - 8	26	34	037980 ●
Collet (8°)	10	9,5 - 10	26	34	037981 ●
Collet (8°)	12	11,5 - 12	26	34	037982 ●
Collet (8°)	14	13,5 - 14	26	34	037983 ●
Collet (8°)	16	15,5 - 16	26	34	037984 ●
Collet (8°)	6,35 (1/4")	5,85 - 6,35	26	34	679027 ●
Collet (8°)	9,53 (3/8")	9,03 - 9,53	26	34	679028 ●
Collet (8°)	12,7 (1/2")	12,2 - 12,7	26	34	679029 ●
Collet (8°)	15,88 (5/8")	15,38 - 15,88	26	34	679030 ●

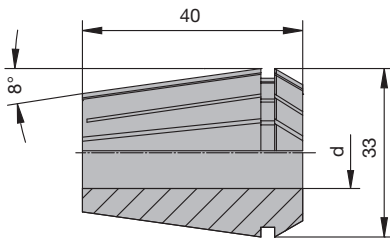
Spare parts:

BEZ	ABM mm	D mm	Diameter range mm	DRI	ID
Sickle spanner	40/42		6 - 16		005518 ●
Collet chuck nut with ball bearing	M32x1.5	42	6 - 16	RH	006649 ●

7. Clamping systems

7.3 Clamping chucks

7.3.3 Collet chucks



ER 32 collet diameter range 6-20 mm

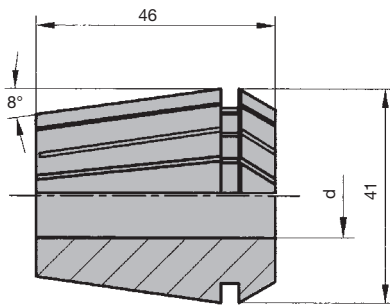
Diameter range 6-20 mm, ER 32, Type 470E, DIN ISO 15488

PM 150 0

BEZ	for S mm	d mm	D mm	GL mm	ID
Collet (8°)	6	5,5 - 6	33	40	037439 ●
Collet (8°)	8	7,5 - 8	33	40	037440 ●
Collet (8°)	10	9,5 - 10	33	40	037441 ●
Collet (8°)	12	11,5 - 12	33	40	037442 ●
Collet (8°)	13	12,5 - 13	33	40	037443 ●
Collet (8°)	14	13,5 - 14	33	40	037444 ●
Collet (8°)	16	15,5 - 16	33	40	037445 ●
Collet (8°)	18	17,5 - 18	33	40	037446 ●
Collet (8°)	20	19,5 - 20	33	40	037447 ●
Collet (8°)	6,35 (1/4")	5,85 - 6,35	33	40	037509 ●
Collet (8°)	9,53 (3/8")	9,03 - 9,53	33	40	037510 ●
Collet (8°)	12,7 (1/2")	12,2 - 12,7	33	40	037511 ●
Collet (8°)	15,88 (5/8")	15,38 - 15,88	33	40	037507 ●
Collet (8°)	19,05 (3/4")	18,55 - 19,05	33	40	037506 ●

Spare parts:

BEZ	ABM mm	D mm	Diameter range mm	DRI	ID
Sickle spanner	45/50				005491 ●
Collet chuck nut with ball bearing	M40x1.5	50	6 - 20	RH	005718 ●



ER 40 collet diameter range 6-26 mm

Diameter range 6-26 mm, ER 40, Type 472E, DIN ISO 15488

PM 150 0

BEZ	for S mm	d mm	D mm	GL mm	ID
Collet (8°)	6	5,5 - 6	41	46	037926 ●
Collet (8°)	8	7,5 - 8	41	46	037927 ●
Collet (8°)	10	9,5 - 10	41	46	037928 ●
Collet (8°)	12	11,5 - 12	41	46	037929 ●
Collet (8°)	14	13,5 - 14	41	46	037930 ●
Collet (8°)	16	15,5 - 16	41	46	037931 ●
Collet (8°)	20	19,5 - 20	41	46	037932 ●
Collet (8°)	25	24,5 - 25	41	46	037933 ●
Collet (8°)	30	29,5 - 30	41	46	679039 ●
Collet (8°)	6,35 (1/4")	5,85 - 6,35	41	46	037934 ●
Collet (8°)	9,53 (3/8")	9,03 - 9,53	41	46	037935 ●
Collet (8°)	12,7 (1/2")	12,2 - 12,7	41	46	037936 ●
Collet (8°)	15,88 (5/8")	15,38 - 15,88	41	46	037937 ●
Collet (8°)	19,05 (3/4")	18,55 - 19,05	41	46	037938 ●
Collet (8°)	25,4 (1")	24,9 - 25,4	41	46	037939 ●

Spare parts:

BEZ	ABM mm	D mm	Diameter range mm	DRI	ID
Sickle spanner	58/62		6 - 25,4		005458 ●
Collet chuck nut with ball bearing	M50x1.5	63	6 - 25,4	RH	006639 ●



Collets, DIN ISO 10897, taper ratio 1:10

Application:

For collet chucks as well as for multi spindle units and trimming units with 2°52' taper angle (taper ratio 1:10).

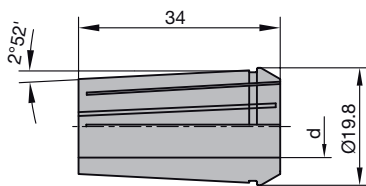
Technical information:

Double slotted design for maximum clamping forces and concentricity.

Diameter range 6-12.7 mm, Type 407E, DIN ISO 10897

PM 150 0

BEZ	for S mm	d mm	D mm	GL mm	ID
Collet (2°52')	6	6	19.8	34	679013 ●
Collet (2°52')	7	7	19.8	34	679015 ●
Collet (2°52')	8	8	19.8	34	679016 ●
Collet (2°52')	9	9	19.8	34	679017 ●
Collet (2°52')	10	10	19.8	34	679019 ●
Collet (2°52')	12	12	19.8	34	679020 ●
Collet (2°52')	6,35 (1/4")	6.35	19.8	34	679014 ●
Collet (2°52')	9,53 (3/8")	9.53	19.8	34	679018 ●
Collet (2°52')	12,7 (1/2")	12.7	19.8	34	679021 ●



Collet type 407E diameter range
6-12.7 mm

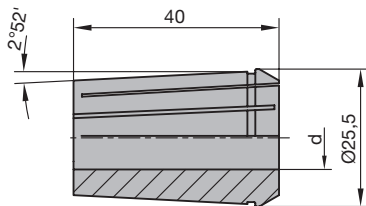
Spare parts:

BEZ	ABM mm	D mm	Diameter range mm	DRI	ID
Sickle spanner	34/36		6 - 12,7		005498 ●
Collet chuck nut	M27x1.5	35		RH	006653 ●

Diameter range 6-16 mm, Type 415E, DIN ISO 10897

PM 150 0

BEZ	for S mm	d mm	D mm	GL mm	ID
Collet (2°52')	6	6	25.5	40	679005 ●
Collet (2°52')	8	8	25.5	40	679032 ●
Collet (2°52')	9	9	25.5	40	679033 ●
Collet (2°52')	9.5	9.5	25.5	40	679034 ●
Collet (2°52')	10	10	25.5	40	679006 ●
Collet (2°52')	11	11	25.5	40	679035 ●
Collet (2°52')	12	12	25.5	40	679036 ●
Collet (2°52')	13	13	25.5	40	679007 ●
Collet (2°52')	14	14	25.5	40	679037 ●
Collet (2°52')	16	16	25.5	40	679008 ●
Collet (2°52')	6,35 (1/4")	6.35	25.5	40	679009 ●
Collet (2°52')	9,53 (3/8")	9.53	25.5	40	679010 ●
Collet (2°52')	12,7 (1/2")	12.7	25.5	40	679011 ●
Collet (2°52')	15,88 (5/8")	15.88	25.5	40	679012 ●



Collet type 415E diameter range
6-16 mm

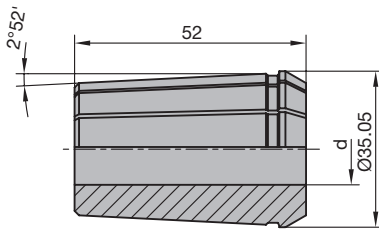
Spare parts:

BEZ	ABM mm	D mm	Diameter range mm	DRI	ID
Sickle spanner	40/42		6 - 16		005469 ●
Collet chuck nut with ball bearing	M33x1.5	43		RH	005685 ●

7. Clamping systems

7.3 Clamping chucks

7.3.3 Collet chucks



Collet type 462E diameter range
6-25.4 mm

Diameter range 6-25.4 mm, Type 462E, DIN ISO 10897

PM 150 0

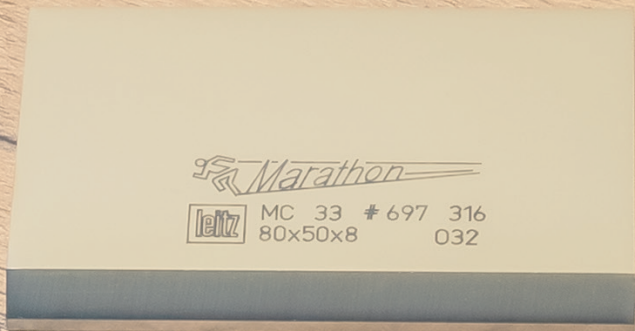
BEZ	for S mm	d mm	D mm	GL mm	ID
Collet (2°52')	6	6	35.05	52	037429 ●
Collet (2°52')	8	8	35.05	52	037430 ●
Collet (2°52')	10	10	35.05	52	037431 ●
Collet (2°52')	12	12	35.05	52	037432 ●
Collet (2°52')	13	13	35.05	52	037433 ●
Collet (2°52')	14	14	35.05	52	037434 ●
Collet (2°52')	16	16	35.05	52	037435 ●
Collet (2°52')	18	18	35.05	52	037436 ●
Collet (2°52')	20	20	35.05	52	037437 ●
Collet (2°52')	25	25	35.05	52	037438 ●
Collet (2°52')	6,35 (1/4")	6.35	35.05	52	037495 ●
Collet (2°52')	9,53 (3/8")	9.53	35.05	52	037505 ●
Collet (2°52')	12,7 (1/2")	12.7	35.05	52	037496 ●
Collet (2°52')	15,88 (5/8")	15.88	35.05	52	037502 ●
Collet (2°52')	19,05 (3/4")	19.05	35.05	52	037497 ●
Collet (2°52')	25,4 (1")	25.4	35.05	52	037508 ●

Spare parts:

BEZ	ABM mm	D mm	Diameter range mm	DRI	ID
Sickle spanner	58/62		6 - 25,4		005458 ●
Collet chuck nut with ball bearing	M48x2	60		RH	005714 ●

Knives and spare parts

Leitz tool programme for wood construction





Content chapter Knives and spare parts

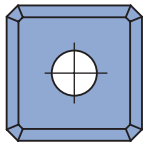
Knives and blank knives	100
Keys	107

8. Knives and spare parts

8.1 Knives and blank knives

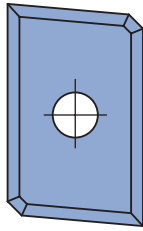
8.1.1 Turnblade knives

Knife type:
Type 1



Turnblade knife

Type 2



Knife height 12 mm with bevel

HW

TM 405 0

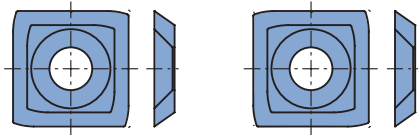
Knife	SB mm	H mm	DIK mm	FAW °	QAL	ID
1	12	12	1.5	1x45°	HW	602009 ●
2	19.7	12	1.5	5°	HW	602010 ●

Workpiece material:

Softwood and hardwood

Cutting material:

HW



Turnblade knife with radius for calibration moulder System Rotoles

HW

TM 435 0

SB mm	H mm	DIK mm	QAL	VE PCS	ID left	ID right
14.3	14.3	2.5	HW	10	602525 ●	602526 ●
14	14	2	HW-10F	10	602527 ●	602528 ●

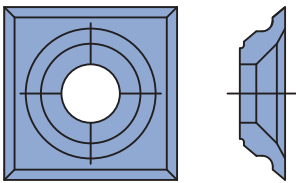
Workpiece material:

Softwood and hardwood

Cutting material:

HW / HW fine grain quality

ID = 1 piece.



Turnblade knife with 4 cutting edges

Knife height 21 mm with 4 cutting edges

HW

TM 410 0

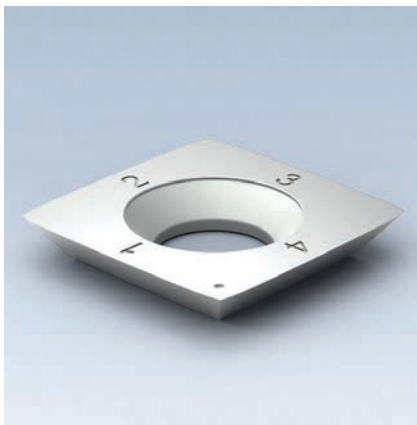
SB mm	H mm	DIK mm	QAL	ID
21	21	5.5	HW	009527 ●

Workpiece material:

Softwood and hardwood

Cutting material:

HW



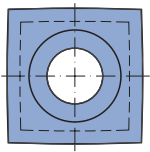
Turnblade knives for cutterhead system HeliCut

HW / TDC

TM 135 0, TM 405 0, TM 435 0

BEM	SB	H	DIK	QAL	VE	ID
	mm	mm	mm		PCS	
HeliCut 15	15	15	2.5	HW	10	009549 ●
HeliCut 15	15	15	2.5	HW-MF	10	009543 ●
HeliCut 15	15	15	2.5	TDC		602900 ●
HeliCut 11 (peripheral tip)	11	11	1.5	HW	10	602515 ●
HeliCut 11 (peripheral tip)	11	11	1.5	TDC		602904 ●
HeliCut 11 (plunging tip D30)	20.6	12.7	2	HW	10	602531 ●
HeliCut 11 (plunging tip D40)	22	12.7	2	HW	10	602516 ●

ID = 1 piece.



HW turnblade knife

Workpiece material:

Softwood and hardwood

Cutting material:

HW / TDC



Knife height 30 mm

For planerhead wedge-type system WM 200 2 05

TM 100 0, TM 100 0 03, TM 100 0 05

Cutting material recommendation	HS Classic / Premium	MC33	HW
Solid wood dry	◆	◆	◇
Solid wood wet	◇	◆	
Hardwood dry	◇	◆	◆
Hardwood wet	◇	◆	
Glulam		◇	◇
Thermoplastics (PE, PP, PVC, etc.)	◆	◆	◇
WPC (Wood-Plastic-Composite)	◇	◆	◇

◆ suitable ◇ partly suitable



Cross section of planer knife (HS Classic / HS Premium / MC33)



Cross section of planer knife (HW)

Cutting material:

HS Classic / HS Premium / MC33 / HW

Wedge angle:

40° (HS Classic / HS Premium / MC33)

45° (HW)

SB	H	DIK	VE	ID	ID	ID	ID
mm	mm	mm	PCS	HS Classic	HS Premium	HW	MC33
60	30	3	2	605000	027101 ●	027277 ●	606700 ●
80	30	3	2	605001	027102 ●	027278 ●	606701 ●
100	30	3	2	605002 ●	027103 ●	027279 ●	606702 ●
110	30	3	2	605003	027104 ●	027280 ●	606703 ●
120	30	3	2	605004	027105 ●	027281 ●	606704 ●
130	30	3	2	605005 ●	027106 ●	027282 ●	606705 ●
150	30	3	2	605006 ●	027107 ●	027283 ●	606706 ●
160	30	3	2	605045 ●	027163 ●		606745 ●
170	30	3	2	605007 ●	027108 ●	027284 ●	606707 ●
180	30	3	2	605008 ●	027109 ●	027285 ●	606708 ●
190	30	3	2	605009	027144 ●	027322 ●	606709 ●
210	30	3	2	605010	027110 ●	027286 ●	606710 ●
230	30	3	2	605011 ●	027111 ●	027287 ●	606711 ●
240	30	3	2	605012 ●	027134 ●	027323 ●	606712 ●
250	30	3	2	605013	027161 ●		606713 ●
260	30	3	2	605014 ●	027112 ●	027288 ●	606714 ●
270	30	3	2	605015	027162 ●		606715 ●
310	30	3	2	605016 ●	027113 ●	027289 ●	606716 ●
320	30	3	2	605046	027164 ●		606746 ●
360	30	3	2	605029	027114 ●	027292 ●	606729 ●
400	30	3	2	605030	027115 ●		606730 ●
410	30	3	2	605031 ●	027116 ●	027293 ●	606731 ●
460	30	3	2	605032	027130 ●	027295 ●	606732 □
500	30	3	2	605033	027117 ●		606733 □
510	30	3	2	605034 ●	027118 ●	027296 ●	606734 □
600	30	3	2	605035	027119 ●		606735 □
610	30	3	2	605036 ●	027120 ●	027297 ●	606736 □
630	30	3	2	605037	027125 ●	027298 ●	606737 □
640	30	3	2	605038 ●	027121 ●	027299 ●	606738 □
710	30	3	2	605039	027122 ●	027300 ●	606739 □
810	30	3	2	605040 ●	027123 ●	027302 ●	606740 □

ID = 1 piece.

Knife height 35 mm

For long planerheads wedge-type system

TM 100 0, TM 100 0 03, TM 100 0 05

SB	H	DIK	VE	ID	ID	ID	ID
mm	mm	mm	PCS	HS Classic	HS Premium	HW	MC33
60	35	3	2	605119	027387 ●		606819 ●
100	35	3	2	605120	027388 ●		606820 ●
160	35	3	2	605121	027389 ●		606821 ●
230	35	3	2	605122	027390 ●		606822 ●
310	35	3	2	605100	027351 ●	027303 ●	606800 ●
320	35	3	2	605101	027352 ●	027304 □	606801 ●
330	35	3	2	605102	027353 ●	027305 □	606802 ●
360	35	3	2	605103	027354 ●	027306 □	606803 ●
400	35	3	2	605104	027355 ●	027307 □	606804 ●
410	35	3	2	605105 ●	027356 ●	027308 ●	606805 ●
450	35	3	2	605106	027357 ●	027309 □	606806 □
460	35	3	2	605107	027358 ●	027310 □	606807 □
500	35	3	2	605108 ●	027359 ●	027311 □	606808 □
510	35	3	2	605109 ●	027360 ●	027312 ●	606809 □
600	35	3	2	605110	027361 ●	027313 □	606810 □
610	35	3	2	605111 ●	027362 ●	027314 □	606811 □
630	35	3	2	605112	027363 ●	027315 ●	606812 □
635	35	3	2	605113	027364 ●	027316 ●	606813 □
640	35	3	2	605114 ●	027365 ●	027317 ●	606814 □
660	35	3	2		027371 ●		
700	35	3	2	605115	027366 ●	027318 □	606815 □
710	35	3	2	605116	027367 ●	027319 □	606816 □
740	35	3	2	605117	027368 ●	027320 □	606817 □
810	35	3	2	605118 ●	027369 ●	027321 ●	606818 □

ID = 1 piece.

8. Knives and spare parts

8.1 Knives and blank knives

8.1.5 Planer knives



Planer knives with 60° back serration

For planerhead with 60° back serrated knife fixture

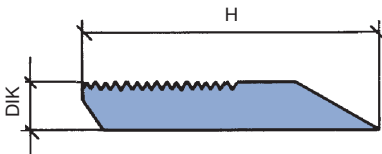
AT 103 0 29

SB	H	DIK	SET	QAL	ID
mm	mm	mm	PCS		
150	30	5	2	MC33	697359 □
230	30	5	2	MC33	697360 □
310	30	5	2	MC33	697361 □
320	30	5	2	MC33	697362 □
330	30	5	2	MC33	697363 □
40	40	5	2	MC33	697300 ●
60	40	5	2	MC33	697301 ●
80	40	5	2	MC33	697302 ●
100	40	5	2	MC33	697303 ●
130	40	5	2	MC33	697304 ●
150	40	5	2	MC33	697305 ●
170	40	5	2	MC33	697306 ●
180	40	5	2	MC33	697307 ●
190	40	5	2	MC33	697308 ●
210	40	5	2	MC33	697309 ●
230	40	5	2	MC33	697310 ●
240	40	5	2	MC33	697311 ●
270	40	5	2	MC33	697312 ●
310	40	5	2	MC33	697313 ●

Cutting material recommendation	MC 33
Solid wood dry	◆
Solid wood wet	◆
Hardwood dry	◆
Hardwood wet	◆
Glulam	◇
Chipboard	
MDF	
Thermoplastics (PE, PP, PVC, etc.)	◆
WPC (Wood-Plastic-Composite)	◆

Set of the same weight.

◆ suitable ◇ partly suitable

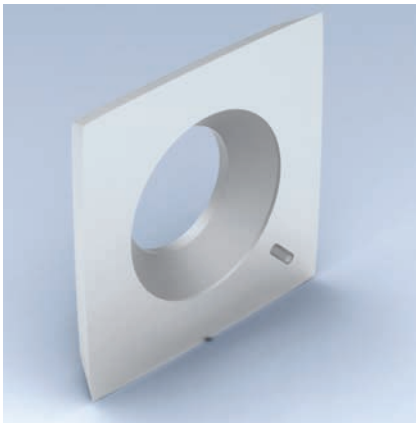


Cutting material:
MC33

8. Knives and spare parts

8.1 Knives and blank knives

8.1.5 Planer knives



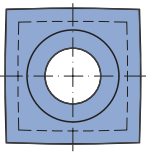
Turnblade planing knives HeliPlan

For cutterhead system HeliPlan

TM 405 0

BEZ	ABM mm	QAL	VE PCS	ID
Turnblade knife	15x15x2,5	HW	10	009535 ●
Turnblade knife	15x15x2,5	TDC		602901 ●

ID = 1 piece.



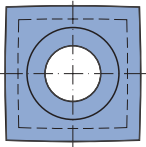
HW turnblade knife

Workpiece material:

Softwood and hardwood

Cutting material:

HW / TDC



HW turnblade knife

Workpiece material:

Softwood and hardwood

Cutting material:

HW

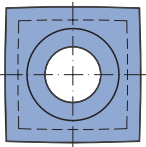
Turnblade planing knives CASTOR

For cutterhead system CASTOR-Finish

TM 405 0

BEZ	ABM mm	QAL	VE PCS	ID
Turnblade knife	15x15x2,5	HW	10	009540 ●

ID = 1 piece.



HW turnblade knife

Workpiece material:

Softwood and hardwood

Cutting material:

HW

Turnblade planing knives Silent Power

For cutterhead system Silent Power

TM 405 0

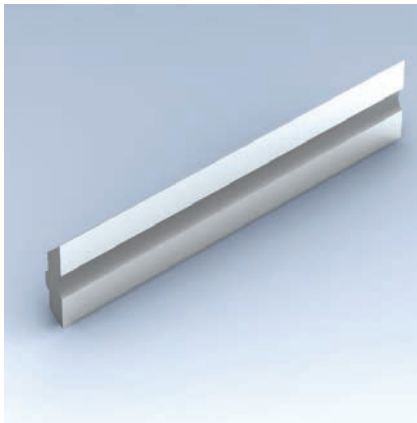
BEZ	ABM mm	QAL	VE PCS	ID
Turnblade knife	13,8x13,8x2,5	HW	10	602534 ●

ID = 1 piece

8. Knives and spare parts

8.1 Knives and blank knives

8.1.5 Planer knives



Turnblade planing knives VariPlan / VariPlan Plus

For cutterhead system VariPlan / VariPlan Plus

AT 103 0 03, AT 103 0 27

SB mm	H mm	DIK mm	SET PCS	ID HS	ID HW Microfinish
50	16	3.7	2	610500	617100
60	16	3.7	2	610501	617101
80	16	3.7	2	610502	617102
100	16	3.7	2	610504	617104
120	16	3.7	2	610505	617105
130	16	3.7	2	610506	617106
150	16	3.7	2	610509	617109
166	16	3.7	2	610571	617171
170	16	3.7	2	610511	617111
180	16	3.7	2	610512	617112
190	16	3.7	2	610514	617114
210	16	3.7	2	610515	617115
230	16	3.7	2	610516	617116
236	16	3.7	2	610569	617169
240	16	3.7	2	610518	617118
256	16	3.7	2	610572	617172
270	16	3.7	2		617165
310	16	3.7	2	610522	617122
330	16	3.7	2		617124
360	16	3.7	2		617125
400	16	3.7	2	610526	617126
410	16	3.7	2	610527	617127
410	16	3.7	3	610528	
420	16	3.7	2	610529	617129
430	16	3.7	2	610530	617130
500	16	3.7	2	610533	617133
510	16	3.7	4	610562	617162
520	16	3.7	4	610563	617163
530	16	3.7	2	610536	617136
540	16	3.7	2	610537	617137
600	16	3.7	2	610538	617138
610	16	3.7	2	610539	617139
630	16	3.7	2	610541	617141
640	16	3.7	4	610564	617164

Cutting material recommendation	HS	HW
Solid wood dry	◆	
Solid wood wet	◇	
Hardwood dry		◆
Hardwood wet		◆
Glulam		◆
Clipboard		◇
MDF		◇

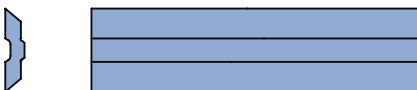
◆ suitable ◇ partly suitable

Cutting material:

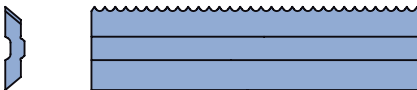
HS / HW

Cutting material:

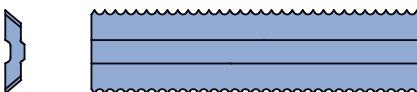
HW



Turnblade knife VariPlan HS / HW
resharpenable, for finish cutting of
softwood and hardwood



Turnblade knife VariPlan HW Integral
resharpenable, for pre and finish cutting
softwood and hardwood



Turnblade knife VariPlan HW RipTec
resharpenable, for pre-cutting softwood
and hardwood

For cutterhead system VariPlan Plus

AT 103 0 23, AT 103 0 24

SB mm	H mm	DIK mm	SET PCS	ID HW Integral	ID HW RipTec
100	16	3.7	2	611904	611204
120	16	3.7	2	611905	611205
130	16	3.7	2	611906	611206
150	16	3.7	2	611909	611209
166	16	3.7	2		611271
170	16	3.7	2	611911	611211
180	16	3.7	2	611912	611212
190	16	3.7	2	611914	611214
210	16	3.7	2	611915	611215
230	16	3.7	2	611916	611216
236	16	3.7	2		611269
240	16	3.7	2	611918	611218
270	16	3.7	2	611965	611265
310	16	3.7	2	611922	611222

● available ex stock

□ available at short notice

Instruction manual visit www.leitz.org



Blank knives with 60° back serration

HS and MC33 blank knives, for profile and hydro profile cutterheads

AT 103 0 28, AT 103 0 29

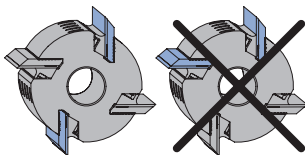
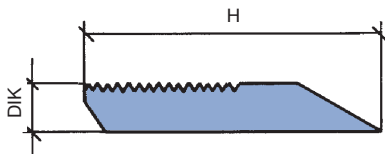
Cutting material recommendation	HS	MC 33
Solid wood dry	◆	◆
Solid wood wet	◇	◆
Hardwood dry	◇	◆
Hardwood wet	◇	◆
Glulam		◇
Thermoplastics (PE, PP, PVC, etc.)	◆	◆
WPC (Wood-Plastic-Composite)	◇	◆

◆ suitable ◇ partly suitable

H	PT
mm	mm
50	15
60	20
70	30

Table to determine maximum profile depth.

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



Attention:

For safety reasons, always mount knives of the same weight in opposite seatings

Cutting material:

HS / MC33

SB	H	DIK	PT _{max}	SET	ID	ID
mm	mm	mm	mm	PCS	HS	MC33
40	50	8	15	2	697500	697314 ●
60	50	8	15	2	697501	697315 ●
80	50	8	15	2	697502	697316 ●
100	50	8	15	2	697503	697317 ●
130	50	8	15	2	697504	697318 ●
150	50	8	15	2	697505	697319 ●
170	50	8	15	2	697506	697320 ●
180	50	8	15	2	697507	697321 □
190	50	8	15	2	697508	697322 □
210	50	8	15	2	697509	697323 □
230	50	8	15	2	697510	697324 ●
240	50	8	15	2	697511	697325 ●
260	50	8	15	2	697512	697326 □
270	50	8	15	2	697513	697327 □
310	50	8	15	2	697514	697328 ●
40	60	8	20	2	697515	697329 ●
60	60	8	20	2	697516	697330 ●
80	60	8	20	2	697517	697331 ●
100	60	8	20	2	697518	697332 ●
130	60	8	20	2	697519	697333 ●
150	60	8	20	2	697520	697334 ●
170	60	8	20	2	697521	697335 ●
180	60	8	20	2	697522	697336 □
190	60	8	20	2	697523	697337 □
210	60	8	20	2	697524	697338 □
230	60	8	20	2	697525	697339 ●
240	60	8	20	2	697526	697340 ●
260	60	8	20	2	697527	697341 □
270	60	8	20	2	697528	697342 □
310	60	8	20	2	697529	697343 ●
40	70	8	30	2	697530	697344 ●
60	70	8	30	2	697531	697345 ●
80	70	8	30	2	697532	697346 ●
100	70	8	30	2	697533	697347 ●
130	70	8	30	2	697534	697348 ●
150	70	8	30	2	697535	697349 ●
170	70	8	30	2	697536	697350 ●
180	70	8	30	2	697537	697351 ●
190	70	8	30	2	697538	697352 □
210	70	8	30	2	697539	697353 □
230	70	8	30	2	697540	697354 □
240	70	8	30	2	697541	697355 ●
260	70	8	30	2	697542	697356 □
270	70	8	30	2	697543	697357 □
310	70	8	30	2	697544	697358 □

MC33 blank knife set of the same weight.



Torque tool set

TorqueVario®-STplus T-handle torque tool set, 11 parts

AT 199 0

BEZ	BEM	ID
TorqueVario-STplus 5-14 Nm	Bitholder 1/4 inch for bits with drive E 6.3 and C 6.3; Bits of series 7045 Torx and 7043 Hexagon in lengths 70 mm; Torx T 15 - T 20 - T 25; Hexagon SW 4 - SW 5 - SW 6 - SW 8	009103 ●

Application:

Controlled tightening with predefined torque for changing knife tool systems

Design:

Model 5-14 Nm. Numeric torque indicator in the window scale. Steplessly controlled torque by control tool Torque Setter (included in delivery). Comfortable T-handle with soft zones for optimal torque transmission.

Precision:

±6%, based on national standards

Extra:

Delivery in stable metal box, incl. test protocol

Leitz Service

Tool service in manufacturer quality

Arguments for your success

Tools as good as new – this is based on the philosophy of maximum tool life and perfect machining quality throughout the entire life cycle of Leitz products. The Leitz tool service plays a decisive role in this. Taking the highest quality standards into account, Leitz is able to regrind tools of all types and from all manufacturers and deliver them back to the customer in manufacturer quality for use again – and that means around the globe in over 150 countries.

Your benefits due to ...



QUALITY

... in good hands

- Uniform service and quality standards worldwide
- Absolute precision through-out the whole service process
- Handling by qualified Leitz personnel
- Complete service process documentation



RELIABILITY

... with us as your partner

- Local personal contact partner
- Reliable tool collection and delivery
- Transparent pricing



KNOWLEDGE

... through our know-how

- Our own service education center for international employee and customer training
- Continuous updating of qualifications for our employees with special focus on technology and production
- Consultation service in almost all areas of the wood and wood-based materials processing industries



PRODUCTIVITY

... is our incentive

- Quick accessibility, fast reactivity
- Understanding of your production processes
- Short set-up times due to programming aids and application data (Plug-and-Play)
- Optimal use from your tools over their entire life cycle



100

Service locations worldwide



1000

Service employees worldwide



15 Mio

Tools per year



FLEXIBILITY

... through our solutions

- Most modern machines and technologies
- Individual customer care through various service models (e.g. Complete Care)
- Re-grinding tooling from all manufacturers
- Flexible pricing models (square meters, running meters, number of products, ...)



EFFICIENCY

... through our processes

- Simple and short administration processing
- State-of-the-art electronic data collection systems via smartphone or tablet
- Comprehensive and transparent working steps



SUSTAINABILITY

... for the environment

- Raw material and optimized wear – as little as possible, as much as necessary
- Paperless administration and production
- Careful handling of valuable resources

Leitz worldwide

Partner in your market



38

National companies



100

Service locations worldwide



150000

Satisfied customers



3000

Employees



NORTH- & CENTRAL AMERICA

- 3 national companies
- 7 service locations



SOUTH AMERICA

- 1 national company
- 1 production plant
- 3 service locations



EUROPE

- 24 national companies
- 5 production plants
- 65 service locations



ASIA

- 8 national companies
- 1 production plant
- 19 service locations



AUSTRALIA / OCEANIA

- 2 national companies
- 5 service locations

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	min^{-1}	= revolutions per minute (RPM)
AL	= working length	MK	= morse taper
AM	= number of knives	m min^{-1}	= metres per minute
AS	= anti sound (low noise design)	m s^{-1}	= metres per second
b	= overhang	n	= RPM
B	= width	n_{max}	= maximum permissible RPM
BDD	= thickness of shoulder	NAL	= position of hub
BEM	= note	ND	= thickness of hub
BEZ	= description	NH	= zero height
BH	= tipping height	NL	= cutting length
BO	= bore diameter	NLA	= pinhole dimensions
CNC	= Computerized Numerical Control	NT	= grooving depth
d	= diameter	P	= profile
D	= cutting circle diameter	POS	= cutter position
D0	= zero diameter	PT	= profile depth
DA	= outside Diameter	PG	= profile group
DB	= diameter of shoulder	QAL	= cutting material quality
DFC	= Dust Flow Control (optimised chip clearance)	R	= radius
DGL	= number of links	RD	= right hand twist
DIK	= thickness	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.

Key to pictograms





Your local contact:
Scan QR Code or visit
www.leitz.org.

www.leitz.org

