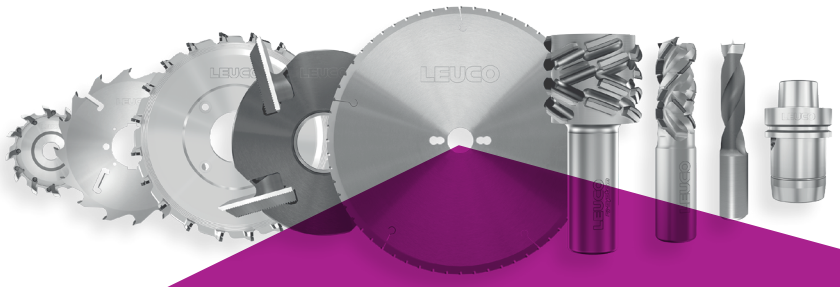
LEUCO
MAGENTIFY WOOD PROCESSING

TOOL RECOMMENDATION

Manufacturer
PFLEIDERER

Material
PRIMEBOARD XTREME SUPERMATT (XTSM)



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Version 04/2025

TOOL RECOMMENDATION

PRIMEBOARD XTREME SUPERMATT (XTSM)

The following tool recommendations are based on a wide variety of test series by LEUCO Ledermann GmbH & Co. KG, with the best machining results in each case.

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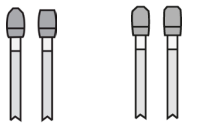
6.6 Through-hole, dowel and cylinder boring bits 8

DEFINITION OF TERMS:

DP = DIA; **HW** = carbide; **HR** = hollow back; **L-S** = slow, fast; **L-S-L** = slow, fast, slow; **vc** = cutting speed; **fz** = tooth feed; **vf** = feed rate; **ü** = saw blade projection

1. TRIMMING / SIZING

Various factors are responsible for good cutting results: Good side facing up, correct saw blade projection, feed rate, tooth configuration, tooth pitch, rpm and cutting speed. Depending on the volume to be cut, tungsten-carbide-tipped (HW) or diamond-tipped (DP) circular saw blades are used. **Recommended tooth configurations:**



TR-F K TR-F-FA

1.2 SIZING SAW

In principle, the panels can be processed with many of the HW and DP saw blades available on the market. However, there are major differences in cutting quality. The sizing saw blade HW „TR-F K" is best suited for very good cutting results. Care must be taken to ensure that the build-up on the tooth sides is removed regularly by cleaning. Good cutting results can also be achieved with the sizing saw blades HW - solid Surface „TR-F-FA".

Optimum application data: (for a circular saw blade Ø 300 mm)

Saw blade projection:	ü = 20 mm
RPM:	n = 4500 1/min
Feed:	vf = 7 m/min
Cutting speed:	vc = 53 m/s

Trimming cuts on CNC machines should also be made with these circular saw blades.

1.3 PANEL SIZING SAW

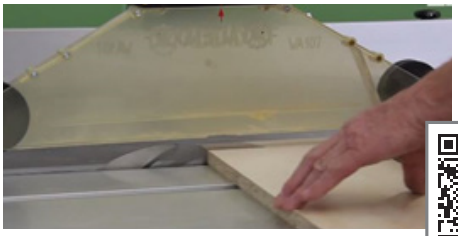
The panels can also be divided on the panel dividing systems using both HW and DP saw blades. For an almost optimum finished cut quality, the trimming cut should be carried out with a HW panel sizing saw blade Q-Cut „TR-F K".

Optimal application data: (for a circular saw blade Ø 450 mm)

Saw blade projection:	ü = 25 mm
RPM:	n = 3600 1/min
Feed:	vf = 20-35 m/min
Cutting speed:	vc = 80 (m/s)

It is also important to ensure the correct saw blade projection, which has an impact on the cutting quality and depends on the diameter.

Circular saw blade diameter	Saw blade projection
D = 300 mm	approx. 18-28 mm
D = 350 mm	approx. 18-28 mm
D = 380 mm	approx. 25-30 mm



Please refer to our YouTube channel for more information about the optimum saw blade projection. >>> Scan QR code and watch video on YouTube! Or go to **www.youtube.com/leucotooling** <<<

1.4 THROUGH-FEED HOGGER SYSTEMS

Industrial format processing on through-feed machines is carried out with diamond-tipped tools. When format processing with hogging tools, good results can be achieved using the double hogging process. Hoggers with low cutting pressure are recommended here, e.g. the LEUCO PowerTec airFace hoggers.

The number of hogging teeth should be designed for the corresponding feed rate of the processing. The PowerTec hoggers have the most advantageous tooth geometry for the panel. Other types of hoggers (UniTec, CompactTec) also deliver good results. If small chipping occurs with these, it can be compensated for by possible rejoining.



PowerTec airFace

2. MILLING / EDGE PROCESSING

In general, tools with diamond cutting edges should be used for through-feed joining. When sizing with jointing cutters, the best quality results were achieved with joining tools that have large shear angles. This is the case with LEUCO p-System jointing cutters (70°) and alternatively DIAREX airFace (48°). The feed/tooth (fz) should ideally be between 0.7 and 0.8 mm.



p-System jointing cutter



DIAREX airFace

3. PROCESSING ON CNC STATIONARY MACHINES

The best cutting edges were achieved with high-performance shank-type cutters DP - Z=3+3 p-System high-performance shank-type cutters CM DP. Grooving, pocket milling with p-System grooving cutters is well possible. When Nesting, the fz should not be higher than 0.20 mm. We generally recommend using clamping systems with high concentric accuracy for all milling work (hydraulic expansion clamping chuck, TRIBOS or heat-shrinking chuck).

4. DRILLING

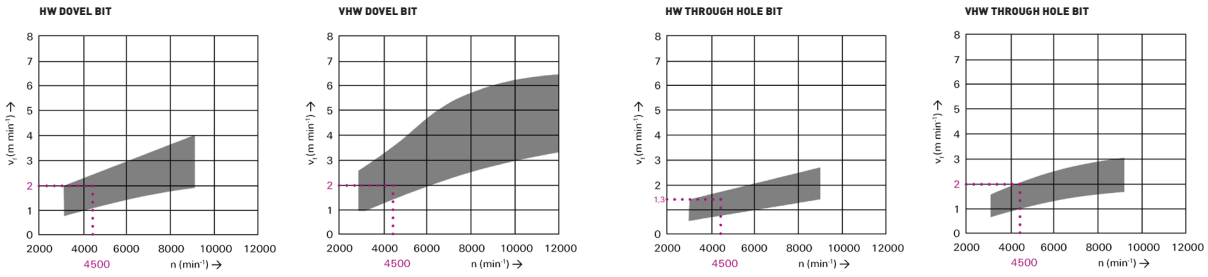
Note: This surface is mainly a surface for furniture fronts and is not normally used in carcass construction.

Dowel holes:
Conventional HW and VHW dowel drills can be used.
High-performance dowel drills and topline dowel drills also achieve good results.
Application data: Rotations per minute: 4,500 rpm Feed: 1.5-2m/min
Drilling mode: S-S (fast-fast)

Through-hole bits:
Through-hole bits VHW - topline and Mosquito dowel drills VHW can be used.
Application data: Rotations per minute: 4,500 rpm Feed: 1.5-2m/min
Drilling mode: S-S (fast-fast)

Hinge hole drilling:
The LEUCO cylinder boring bits Light are recommended.
Application data: Rotations per minute: 4,000 rpm Feed: 1.5-2m/min
Rotations per minute above n=4,500 rpm are not recommended

Drilling: determination of the feed rate as a function of revolutions per minute



5. FORMULAS

5.1 CUTTING SPEED - VC

- Unit: m/s
- Data required: diameter = D [mm]; tool speed = n [rpm]
- Calculation: vc = (D * π * n)/(60 * 1000)

5.2 TOOTH FEED - FZ

- Unit: mm
- Data required: feed rate = vf [m/min]; tool speed = n [rpm]; number of teeth = z
- Calculation: fz = (vf * 1000)/(n*z)

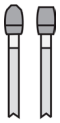
5.3 FEED RATE - VF

- Unit: m/min
- Data required: tooth feed = fz [mm]; tool speed = n [rpm]; number of teeth = z
- Calculation: vf = (fz * n * z)/1000

6. LEUCO TOOLS FOR PROCESSING OF PFLEIDERER PRIMEBOARD XTREME SUPERMATT (XTSM)

6.1 CIRCULAR SAW BLADES FOR SIZING SAWS

Dimension	Designation	Z	Tooth config.	Cutting material	Projection	Ident-No.
Ø 300 x 3,2 x Ø 30	Circular saw blade HW „TR-F K" - Anti-fingerprint	84	TR-F K	HL Board 04 plus	approx. 20 mm	193195
Ø 303 x 3,2 x Ø 30	Circular saw blade HW - solid Surface	84	TR-F K	HL Board 04 plus	approx. 20 mm	193133

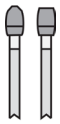


TR-F K

- Additional saws with different diameters, cutting widths, bores and numbers of teeth **available on request**.

6.2 CIRCULAR SAW BLADES FOR PANEL SIZING SAWS

Dimension	Designation	Z	Tooth config.	Cutting material	Projection	Ident-No.
Ø 300 x 4,0 x Ø 60	Q-Cut „TR-F K"	72	„TR-F K"	HL Board 04 plus	18-28 mm	192974
Ø 350 x 4,0 x Ø 60	Q-Cut „TR-F K"	72	„TR-F K"	HL Board 04 plus	18-28 mm	192975
Ø 380 x 4,0 x Ø 60	Q-Cut „TR-F K"	72	„TR-F K"	HL Board 04 plus	25-30 mm	192976



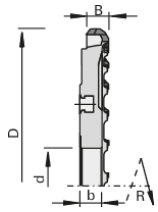
TR-F K

- Additional saws with different diameters cutting widths, bores and numbers of teeth **available on request**.
- Number of teeth and feed rate depend on cutting height and application for single panels or stack cuts.

6.3 HOGGERS

Dimension	Designation	Z	Tooth config.	Ident-No.(L)	Ident-No.(R)
Ø 250 x 10 x Ø 60	PowerTec 5 airFace	16+8	DP	80477092	80477091

I Additional hoggers with other dimensions **available on request.**

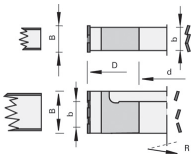


PowerTec airFace

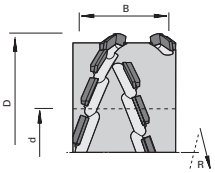
6.4 JOINTING CUTTERS

Dimension	Designation	Z	Cutting material	Machine	Shear <)	Ident-No. (L)	Ident-No. (R)
Ø 125 x 42,8 x Ø 30	DIAREX airFace	3+3	DP	Homag	48°	186323	186323
Ø 100 x 42,8 x Ø 30	DIAREX airFace	3+3	DP	SCM	48°	186362	186363
Ø 125 x 47,8 x Ø 30	p-System	3+3	DP	Homag	70°	184071	184071
Ø 125 x 62,5 x Ø 30	p-System	3+3	DP	IMA 08.379	70°	184989	184990

I Additional jointing cutters with different diameters, cutting widths, bores and numbers of teeth **available on request.**



DIAREX airFace

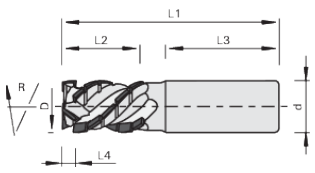


p-System
jointing cutters

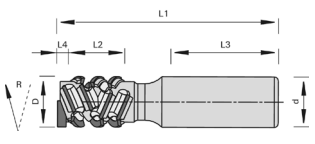
6.5 CNC SHANK-TYPE CUTTERS

Dimension	Designation	Z	Cutting material	Ident-No.
Ø 25 x 28 x Ø 25	High perfomance shank-type cutter DP	3+3	DP	186120
Ø 25 x 25,5 x Ø 25	p-System shank-type cutter	2+2+1	DP	184382
Ø 60 x 38 x Ø 25	p-System shank-type jointing cutter	4+4	DP	184084

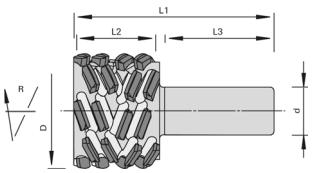
I Additional shank-type cutters with other dimensions are **available on request.**



High performance shank-type
cutter DP



p-System shank-type cutter



p-System shank-type jointing cutter

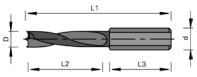
6.6 THROUGH-HOLE, DOWEL AND CYLINDER BORING BITS

Dimensions	Designation	Cutting material	Ident-No. (L)	Ident-No. (R)
Ø 5 x L1=70 x Ø 10	Mosquito dowel bit	VHW	182390	182391
Ø 8 x L1=70 x Ø 10	Mosquito dowel bit	VHW	183151	183150
Ø 5 x L1=70 x Ø 10	topline dowel bit	VHW	185760	185759
Ø 8 x L1=70 x Ø 10	topline dowel bit	VHW	185764	185763

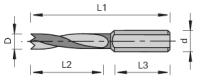
Dimensions	Designation	Cutting material	Ident-No. (L)	Ident-No. (R)
Ø 5 x L1=70 x Ø 10	Through-hole bit HW	HW	176505	176504
Ø 8 x L1=70 x Ø 10	Through-hole bit HW	HW	176507	176506
Ø 5 x L1=70 x Ø 10	topline through-hole bit	VHW	185742	185741
Ø 8 x L1=70 x Ø 10	topline through-hole bit	VHW	185744	185743

Dimensions	Designation	Cutting material	Ident-No. (L)	Ident-No. (R)
Ø 15 x L1=70 x Ø 10	„Light" cylinder boring bit	HW	184685	184684
Ø 35 x L1=70 x Ø 10	„Light" cylinder boring bit	HW	184689	184688

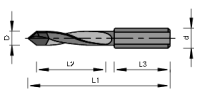
Additional drill bits with other diameters, cutting lengths and shank dimensions **are available on request.**



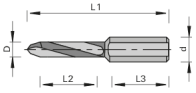
Mosquito dowel bit



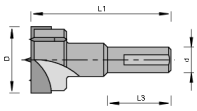
topline dowel bit



Through-hole bit HW



topline through-hole bit



„Light" cylinder boring bit

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You can find LEUCO tool recommendations for processing Pfleiderer PrimeBoard XTreme SuperMatt (XTSM) in the LEUCO online catalog.

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Scan the QR-Code and learn about the LEUCO warehouse program.

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