PROCESSING INSTRUCTIONS

MANUFACTURER: REHAU
MATERIAL: RAUVISIO noir - laminate

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RAUVISIO noir - laminate

REHAU
Unlimited Polymer Solutions

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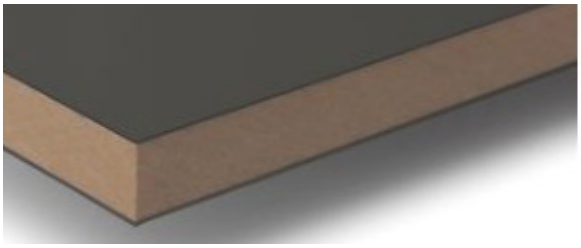
PRODUCT DESCRIPTION REHAU RAUVISIO noir - laminate

RAUVISIO noir combines elegance with craftsmanship at the highest level, capturing the facets of a cosmopolitan attitude toward life. The silky matte finish makes surfaces come alive and creates the perfect balance of design and function. RAUVISIO noir™: The heart of the noble matte family is the new noir series. It contains all the optical and technical strengths.



GRAPHIC: REHAU

Program overview: Pressed components (MDF large-format board, particle board, laminate)

PROCESSING INSTRUCTIONS REHAU RAUVISIO noir - laminate

The following machining information is based on a wide range of test series with the best machining results in each case being produced by LEUCO Ledermann GmbH & Co. KG.

DEFINITION OF TERMS

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

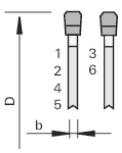
1. GENERAL INFORMATION

With its robust HPL surface, RAUVISIO noir is a versatile material with a noble matte finish and velvety soft surface that is ideally suited for heavy-duty horizontal use, for example, as a countertop in the kitchen or as a counter in a store. (Source REHAU)

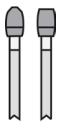
2. TRIMMING / SIZING

2.1 PANEL TRIMMING WITH CIRCULAR SAW BLADES

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



G6



TR-F K

2.2 SIZING SAW

In general, the panels can be processed with all HW panel sizing saw blades available on the market. However, there are major differences in the cutting quality. Circular saw blades with convex flanks are particularly well-suited for an optimum cutting result with almost no chipping: Sizing saw blades HW "TR-F K" Anti-Fingerprint.

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

Saw blade projection:	Ü = 15-25 mm
Speed:	n = 5000-5500 rpm
Feed:	vf = 5-8 m/min
Cutting speed:	vc = 75-85 m/s

These circular saw blades should also be used for trimming cuts on CNC machines.

2.3 PANEL SIZING SAW

On panel sizing saws, the panels can be cut with HW and DP circular saw blades. For almost optimum finish-cut quality, the trimming cut should be made with an HW circular saw blade with convex flanks. For higher volumes, it is recommended to use a DP circular saw blade for the trimming cut. Here, however, it is not possible to achieve finish-cut quality.

HW saws: Panel sizing saw blades HW - Q-Cut "TR-F K"
DP saws: Panel sizing saw blades DP - "G6"

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

Saw blade projection:	Ü = 20-25 mm
Speed:	n = 3600-4200 rpm
Feed:	vf = 20-30 m/min
Cutting speed:	vc = 85-95 m/s

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

The recommended cutting speed is 75-95 m/sec. The upper value should be selected in the case of DP-tipped circular saw blades. Try to aim for a feed per tooth of 0.02-0.10 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** <<<

2.4 THROUGH-FEED MACHINES: HOGGERS

Industrial sizing on through-feed machines is done using diamond-tipped tools. When sizing with hogger tools, outstanding results are achieved in the double hogging process. For this purpose, we recommend hoggers with low cutting pressure, such as the LEUCO PowerTec hogger. The number of hogger teeth should be matched to the respective machining feed.

PowerTec airFace

The following application parameters have been used for testing all hoggers:

Speed: n = 6000 rpm
Feed: vf = 40 m/min

Good results with regard to cutting quality are achieved with PowerTec hoggers. In order to achieve the best possible result, it is always advisable to work with a jointer unit after double hogging. For additional jointing work with suitable joining cutters, a removal of 0.5-1.0 mm is sufficient, provided PowerTec hoggers are used.

3. MILLING / EDGING

In general, tools with DP blades should be used for jointing work in the run-through process. The best results in terms of quality are achieved with a 48° shear angle when sizing with jointing cutters. When using two double jointer units, jointing in two steps is recommended:

use the first jointer unit for the main material removal (roughing) and the second jointer unit for finishing. In addition to the use of precise hydro and HSK clamping units, this procedure creates the optimal conditions for highest quality and high edge lives during jointing work. The feed per tooth (fz) should be at most 0.74 mm.

DIAREX airFace

4. MACHINING ON STATIONARY CNC MACHINES

For dividing cuts, pocket milling and jointing cuts, DP-tipped shank-type cutters with alternating shear angles, ideally in the range of 30°-48°, can be used. The application data and the selection of the tool depend on the requirements regarding the cutting quality and the processing in general.

When high volumes need to be cut, LEUCO CM high-performance shank-type cutters Z=3+3 (approx. 43°-48°) are highly recommended.DP shank-type cutters DIAREX Z=2+2 are suitable for moderate volumes and feed rates. The use of HW or VHW shank-type cutter is not really optimal and makes sense at most when small volumes need to be cut. The optimum feed per tooth fz (mm) is 0.25 mm.

Reference values (basis fz =0.25 m/min at 18,000 rpm)

Number of cutting edges (Z)	Diameter (mm)	Speed (rpm)	Feed rate vf (m/min)
Z=2	16 / 25	18.000	8 - 10
Z=3	16 / 25	18.000	12 - 16
Z=4	48	18.000	16 - 22

Dividing cut: Lower value ranges, depending on the machining situation, the values must be further reduced if necessary.
Jointing cut: Higher value ranges.

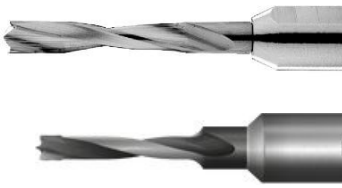
It is generally recommended to use clamping systems with high concentric accuracy for all milling work (hydro-expansion chucks, TRIBOS or heat-shrinking chuck).

5. DRILLING

Through holes:
Very good drilling quality on the entry and exit sides is also achieved with VHW **topline** drill bits. Standard types do not drill cleanly.

Recommended application parameters here (in drilling units):
Speed: 4500 rpm-6000 rpm
Feed: 1.5 m/min-2.5 m/min
Drilling mode: S - S - S (fast - fast - fast)

Dowel holes:
The use of standard dowel bits works. When using VHW topline and Mosquito dowel bits, the results are very good.



Recommended application parameters here (in drilling units):
Speed: 4500 rpm-6000 rpm
Feed: 1.5 m/min-2.5 m/min
Drilling mode: S - S (fast - fast)

Hinge holes:
Standard cylinder boring bits give good results; the best results are achieved with the LEUCO "Light" bit version.

Speed: 4500-5000 rpm
Feed: 1.5-2.0 m/min
Drilling mode: S - S (fast - fast)

6. FORMULAS

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

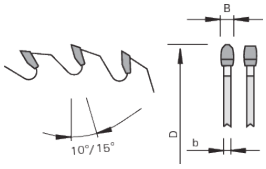
6.2 TOOTH FEED - FZ
- Unit: mm
- Required data: feed rate = vf [m/min]; tool speed = n [rpm]; no. of teeth = z
- Calculation: fz = (vf * 1000)/(n*z)

6.3 FEED SPEED - VF
- Unit: m/min
- Required data: tooth feed = fz [mm]; tool speed = n [1/min]; no. of teeth = z
- Calculation: vf = (fz * n * z)/1000

7. LEUCO TOOLS FOR PROCESSING REHAU RAUVISIO noir - laminate

7.1 CIRCULAR SAW BLADES FOR SIZING SAWS

Dimension	Designation	Z	Tooth config.	Cutting material	Projection	Ident-No.
Ø 300 x 3,2 x Ø 30	Sizing saw blade "Anti-fingerprint"	84	TR-F K	HL Board 04 plus	approx. 25 mm	193195

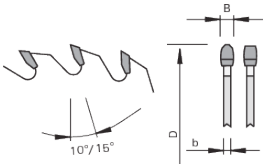


TR-F K

- Additional saws with different diameters, cutting widths, bores and numbers of teeth a**vailable upon request**.

7.2 CIRCULAR SAW BLADES FOR PANEL SIZING SAWS

Dimension	Designation	Z	Tooth config.	Cutting material	Projection	Ident-No.
Ø 350 x 4,0 x Ø 30	Q-Cut	72	TR-F K	HL Board 04 plus	approx. 25 mm	192974
Ø 350 x 4,0 x Ø 60	Q-Cut	72	TR-F K	HL Board 04 plus	approx. 25 mm	192975
Ø 380 x 4,0 x Ø 60	Q-Cut	72	TR-F K	HL Board 04 plus	approx. 25 mm	192976
Ø 450 x 4,0 x Ø 60	Q-Cut	72	TR-F K	HL Board 04 plus	approx. 25 mm	192978

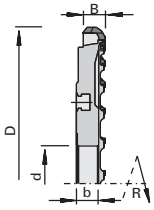


TR-F K

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

7.3 HOGGERS

Dimension	Designation	Z	Cutting material	Ident-No. (L)	Ident-No. (R)
Ø 250 x 9,5 x Ø 60	PowerTec airFace	20+10	DP	186528	186527
Ø 250 x 9,5 x Ø 60	PowerTec airFace S	20+20	DP	186552	186551

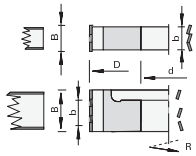


PowerTec airFace

- Additional PowerTec hoggers with other dimension**s available on request**.

7.4 JOINTING CUTTERS

Dimension	Designation	Machine	Z	Shear<)	Cutting material	Ident-No. (L)	Ident-No. (R)
Ø 125 x 42,8 x Ø 30	DIAREX airFace	Homag	3+3	48°	DP	186323	186323
Ø 100 x 42,8 x Ø 30	DIAREX airFace	SCM	3+3	48°	DP	186362	186363

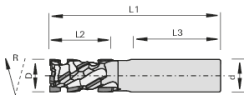


DIAREX airFace

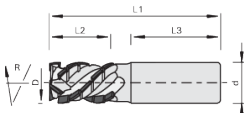
- Additional jointing cutters for other machine brands with different diameters, cutting widths, bores and number of cutting edges **available upon request.**

7.5 CNC SHANK-TYPE CUTTERS

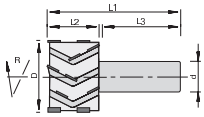
Dimension	Designation	Z	Cutting material	L/R	Ident-No.
Ø 16 x 28 x Ø 16	DIAREX high-performance shank-type cutter	2+2	DP	R	186147
Ø 20 x 28 x Ø 25	DIAREX high-performance shank-type cutter	2+2	DP	R	186151
Ø 18 x 28 x Ø 25	High-performance shank-type cutter, negative	3+3	DP	R	186118
Ø 25 x 28 x Ø 25	High-performance shank-type cutter, negative	3+3	DP	R	186120
Ø 18 x 28 x Ø 25	High-performance trimming cutter	4+2+4	DP	R	186142



DIAREX high performance shank-type cutter



High-performance shank-type cutter, negative



High-performance trimming cutter

I Additional shank-type cutters with different diameters (Ø) and cutting lengths (L2) **available on request.**

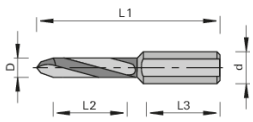
7.6 THROUGH-HOLE, DOWEL AND HINGE HOLE BITS

Dimension	Designation	Cutting material	Ident-No. (L)	Ident-No. (R)
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

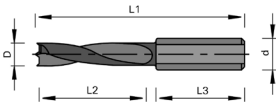
Dimension	Designation	Cutting material	Ident-No. (L)	Ident-No. (R)
Ø 5 x L1=70 x Ø 10	Mosquito dowel bit	VHW	182390	182391
Ø 8 x L1=70 x Ø 10	Mosquito dowel bit	VHW	183151	183150
Ø 5 x L1=70 x Ø 10	topline dowel bit	VHW	185760	185759
Ø 8 x L1=70 x Ø 10	topline dowel bit	VHW	185764	185763

Dimension	Designation	Cutting material	Ident-No. (L)	Ident-No. (R)
Ø 35 x L1=70 x Ø 10	Standard cylinder boring bit	HW	178982	172254
Ø 15 x L1=70 x Ø 10	"Light" cylinder boring bits	HW	184685	184684
Ø 35 x L1=70 x Ø 10	"Light" cylinder boring bits	HW	184689	184688
Ø 35 x L1=70 x Ø 10	Cylinder boring bit Z=2+4	DP	on request	186783

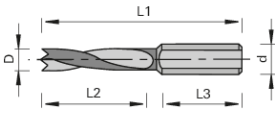
I Additional drill bits with other diameters, cutting lengths and shank dimensions are **available upon request.**



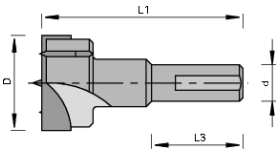
topline through-hole bit



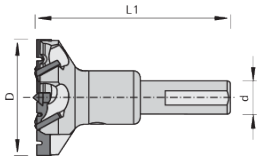
Mosquito dowel bit



topline dowel bit



Cylinder boring bit



Cylinder boring bit Z=2+4

→ **Couldn't find the tool type or tool dimensions you want?**
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TIP – LEUCO ONLINE CATALOG

You can find the LEUCO tool recommendations for processing REHAU RAUVISIO noir - laminate panels in the LEUCO online catalog.

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

QUICK & EASY

1. www.leuco.com/products
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→ Select saw blades, hoggers, cutters, drill bits

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