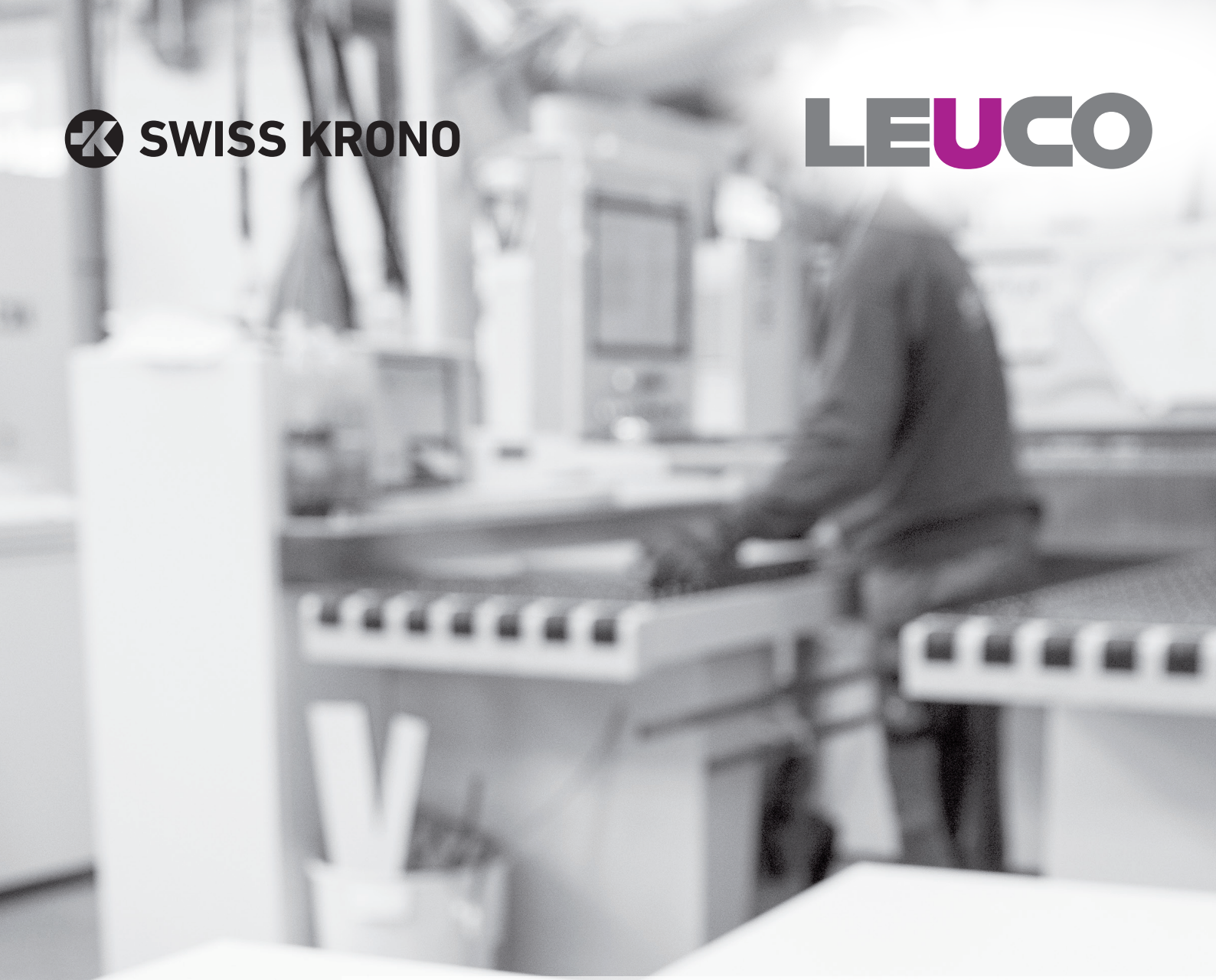

PROCESSING INSTRUCTIONS

MANUFACTURER: SWISS KRONO AG
MATERIAL: SWISS**AFP** (ANTI FINGERPRINT)

Ledermann GmbH & Co. KG
Willi-Ledermann-Straße 1
72160 Horb am Neckar / Deutschland

T +49 (0)7451/930
F +49 (0)7451/93270

info@leuco.com
www.leuco.com

Stand 01/2018

PROCESSING INSTRUCTIONS

SWISS KRONO SWISSAFP

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PRODUCT DESCRIPTION SWISSAFP PANELS

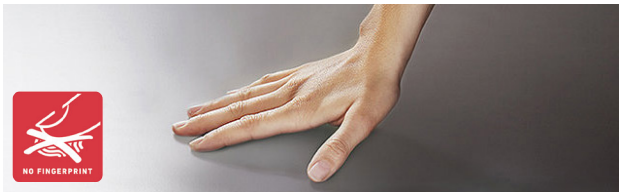
Thanks to their electron-beam cured acrylate coating, SWISS**AFP** «EDELMATT» surfaces are robust, resistant, and easy to clean. Dirt and grease marks can be removed very easily, with no risk of fingerprints occurring. SWISS**AFP** surfaces are particularly well suited for vertical front panels in kitchens and bathrooms, stores, for partition walls and high-quality furniture.

PROCESSING INSTRUCTIONS SWISSAFP PANELS

Before starting processing, remove the transport protection film to inspect the surface. The following processing information is based on the best results achieved in a variety of test series performed by LEUCO in cooperation with SWISS KRONO AG.

DEFINITION OF TERMS

- **DP** = DIA
- **HW** = tungsten carbide
- **HR** = hollow back
- **S-F** = slow, fast
- **S-F-S** = slow, fast, slow
- **vc** = cutting speed
- **fz** = tooth feed
- **vf** = feed rate



SWISS**AFP** «EDELMATT»

Picture: SWISS KRONO AG

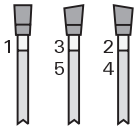
1. GENERAL INFORMATION

When processing SWISS**AFP** panels, tool stress is higher than with the majority of standard wood-based panels. We therefore recommend using diamond-tipped tools (DP) for processing. These provide very good processing quality and long edge life.

2. TRIMMING CUT / SIZING CUTS

2.1. TABLE SAW

Good cutting results depend on various factors:
Good side up, correct saw blade projection, feed rate, tooth configuration, tooth partition, RPM, and cutting speed. Depending on the quantities to be cut, carbide or diamond-tipped circular saw blades are used.



G5


HR

Carbide saw blades with "G5" tooth configuration are particularly suitable for formatting of relatively small quantities. Good cutting results are also possible with the "nn-System DP flex" circular sizing saw blades with hollow-back (HR) tooth shape. Good edges on both sides can only be achieved using a suitable scorer.

2.2. PANEL SIZING SAW

Exceptional cutting results are achieved on panel sizing systems with a new HW-tipped panel sizing saw blade (192976) from the Q-Cut saw family (Q-Cut K).


TR-TR B

Here again, tooth engagement occurs on the good side of the panel. Good edges on both sides can only be achieved using a suitable scorer. Very good cutting results are achieved with a suitable saw blade projection. This parameter varies depending on the diameter:

Circular saw blade diameter	Saw blade projection
D = 250 mm	approx. 15 - 20 mm
D = 300 mm	approx. 20 - 30 mm
D = 350 mm	approx. 22 - 28 mm
D = 400 mm	approx. 25 - 30 mm
D = 450 mm	approx. 25 - 33 mm

The recommended cutting speed is 60 - 90 m/sec. In the case of diamond-tipped saw blades, the upper value must be selected. A feed per tooth of 0.05 - 0.12 mm should be targeted.

3. MILLING / EDGING

Both with high-gloss and matte surfaces, the LEUCO DIAREX airFace jointing-cutters (shear angle = 48°) provide excellent results in edge jointing. Tools with DP blades must be used for milling work.


DIAREX airFace
jointing-cutter

4. PROCESSING ON STATIONARY CNC MACHINES

DP tools, as shown on page 6, are recommended for stationary processing.
However, the following must be observed:

- Always choose the largest possible diameter (lower vibration risk).
- The use of "LEUCO DIAREX" airFace jointing-cutters is recommended on stationary systems, since they provide a good relationship between tool performance and cutting quality.
- Clamping elements: use hydro-expansion chucks or shrink fit chucks in order to ensure the tool runs smoothly. For drilling tools, you can use a direct mount with cutter arbor.
- Recommended material removal for jointing is 2-3 mm each side.

- Tooth feed for jointing:

Material:	16 - 25 mm
Recommended fz (mm) for particle board & MDF	0,45 - 0,55

- Cutting speed for jointing:

Material:	16 - 25 mm
Recommended vc (m/s) for particle board & MDF	approx. 60 m/s

5. DRILLING

Drill bits with low cutting pressure are recommended for drilling of construction holes or holes in a row. This includes the drill bits of the LEUCO "Drill pins" product family D = 3-5 mm, as well as the dowel drill bits of the "Mosquito" type for invisible construction holes.

- Clamping elements: precise mounting with secure hold.

"Mosquito" HW dowel bits

"Drill pin" HW row-hole drill bits

6. FORMULAS

6.1. CUTTING SPEED – VC

- Unit: m/s
- Data required: diameter = D [mm]; RPM = n [1/min]
- Calculation: $vc = (D * \pi * n)/(60 * 1000)$

6.2. TOOTH FEED – FZ

- Unit: mm
- Required data: feed speed = vf [m/min]; RPM = n [1/min]; number of teeth = z
- Calculation: $fz = (vf * 1000)/(n*z)$

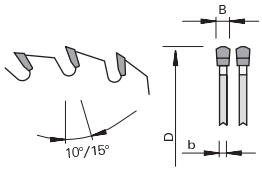
6.3. FEED SPEED – VF

- Unit: m/min
- Required data: tooth feed = fz [mm]; RPM = n [1/min]; number of teeth = z
- Calculation: $vf = (fz * n * z)/1000$

7. LEUCO TOOLS FOR PROCESSING OF SWISSAFP PANELS

7.1. CIRCULAR SAW BLADES FOR PANEL SIZING SAWS

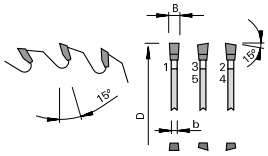
Dimensions	Designation	Z	Tooth shape	Cutting material	Projection	Ident.-No.
Ø 380 x 4,4 /3,2 x Ø 60	Q-Cut K	72	TR-F K	HL Board 04 plus	22-30 mm	192976



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

7.2. CIRCULAR SAW BLADES FOR SIZING SAWS

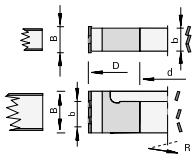
Dimensions	Designation	Z	Tooth shape	Cutting material	Projection	Ident.-No.
Ø 303 x 2,5 (2,0) x Ø 30	nn-System DP flex	60	HR	DP	20 mm	192444
Ø 303 x 3,2 (2,2) x Ø 30	HW sizing saw blades"G5"	100	G5	HL Board 04 plus	20 mm	192795



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

7.3. JOINTING CUTTERS

Dimensions	Designation	Z	Axis<)	Cutting material	Ident.-No.
Ø 125 x 42,8 x Ø 30	DIAREX airFace jointing cutter	3+3	48°	DP	186323
Ø 70 x 48,1 x Ø 30	DIAREX airFace jointing cutter	3+3	48°	DP	186316
Ø 125 x 42,8 x Ø 30	DIAREX airFace jointing cutter	4+4	48°	DP	186326

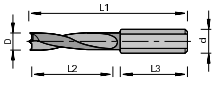


DIAREX airFace jointing cutter

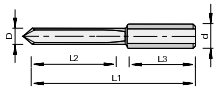
- Additional jointing cutters with different diameters, cutting widths, bores, and numbers of teeth **available upon request.**

7.4. PIN DRILLS AND ROW-HOLE DRILLS

Dimensions	Designation	Cutting material	Ident.-No. (L)	Ident.-No. (R)
Ø 8 x L1=70 x Ø 10	"Mosquito" dowel bits	HW	181174	181173
Ø 3 x L1=45 x Ø 3	Drill pin	VHW	180943	180943



"Mosquito" dowel bits



Drill pin VHW

- Additional drill bits with different diameters, cutting widths, and shaft dimensions **available upon request.**

→ **Couldn't find the tool type or tool dimensions you want?**
Please contact LEUCO Sales.

T +49 (0)7451/93-0
F +49 (0)7451/93-270

info@leuco.com

TIP – LEUCO ONLINE CATALOG

You can find the LEUCO tool recommendations for processing SWISS**AFP** panels in the LEUCO online catalog.

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

EASY & QUICK

1 www.leuco.com/products
2 Click "workpiece material"
3 Workpiece material
4 „SWISS KRONO-AG“
5 „SWISS**AFP**“

→ Select saw blades, cutters, drill bits

Ledermann GmbH & Co. KG
Willi-Ledermann-Straße 1
72160 Horb am Neckar / Deutschland

T +49 (0)74 51/93 0
F +49 (0)74 51/93 270

info@leuco.com
www.leuco.com