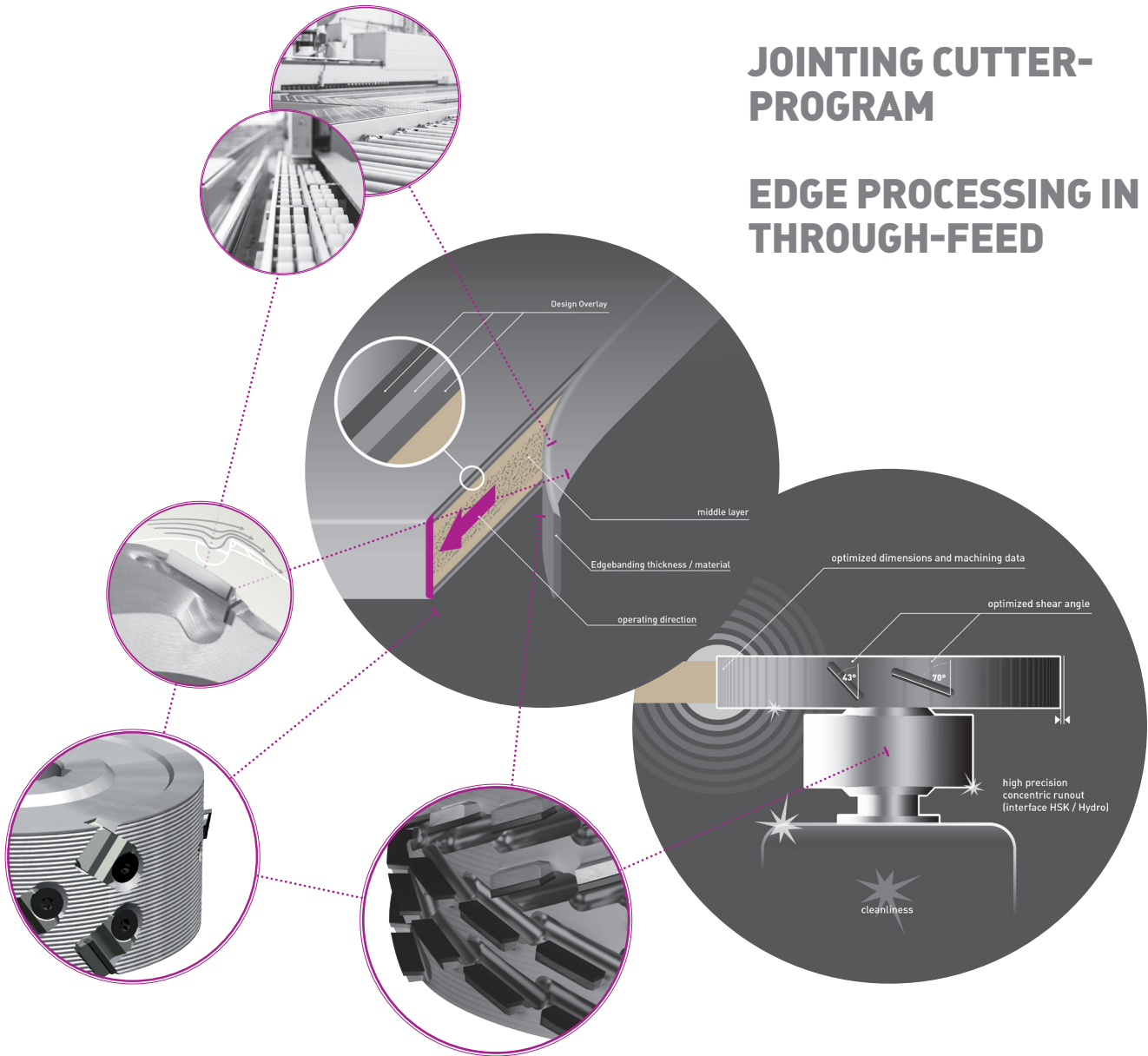


## JOINTING CUTTER-PROGRAM

## EDGE PROCESSING IN THROUGH-FEED

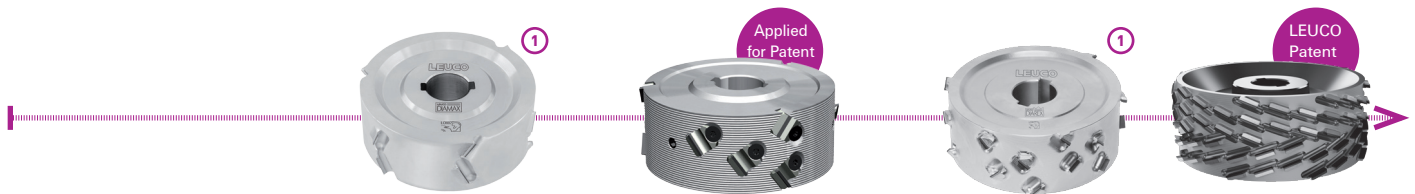


### Diamond-tipped jointing-cutter for each application

- Success factors
- Cutting quality
  - Edge life
  - Noise emission
  - Application spectrum
  - Handling

# → JOINTING CUTTER-OVERVIEW

## LEUCO SIZING OPERATIONS FOR EACH DEMAND



DP-tipped LEUCO jointing cutters	DIAMAX LowNoise	SmartJointer airFace	DIAREX LowNoise	LEUCO p-System
Tool body features	Steel	Aluminum	Steel	Steel
Available diameters in mm	60-150	70-125	70-220	70-200
Shear angle	35°	35°	43°	70°
Flow optimization/ LowNoise Design	++++	++++	+++	+
Number of teeth	2-3	2-3	3-5	2-4
Resharpener area	1,5 mm	1,5 mm	3 mm	4 mm
Running meter performance	++	++	+++	++++
Cutting quality cover layer	++	++	+++	++++
Cutting quality middle layer	++	++	++++	++++
Suitable for zero-joint edging	++	++	+++	++++
Cut change (only for blade heads with cutting inserts)		At customers site		
In detail				

Final grade

“The solid, quiet, high-performance milling cutter”  
 “The versatile, quiet, high-quality, long-lasting milling cutter” (do-it-yourself)  
 “The extraordinary, high-quality, super-long-lasting milling cutter”  
 “The extraordinary, high-quality, super-long-lasting milling cutter”



① from autumn 2017 with LEUCO airFace Design

## \* EDGE LIFE

**What role does the number of teeth play in service life?** The number of teeth depends on the feed rate of the material to be processed. For higher-speed feeds, more teeth are generally recommended. More teeth mean a longer service life.

**Are cutting speed and service life mutually dependent?** Higher RPMs allow faster feeds. However, the higher the RPM, the greater the vibration, friction and spindle load on the motor.

**How does the interface affect the service life of a jointing cutter?** The more exact the interface between the tool, clamping device and machine,

the better the rotation accuracy and therefore the tool's maximum service life.

→ The greater the diversity of materials, the more complex precise measurements become.

→ The individual standard for joining quality determines the end of the service life.



# → JOINTING-QUALITY „HIGH-END“

For several years, machine and edges manufacturers offer new methods, in which a heat source such as laser, plasma, hot air or infrared activates the functional layer of the edge band material and immediately glues it to the workpiece, to achieve a zero-joint look.

at high feed speeds – to better quality. Tools with optimized chip flow design and an optimum suction prevent the so-called „multiple hogging“ which, among other things, may adversely affect the jointing quality and reduce the edgelife of the tools.

### What do these zero-joint processes mean for the tool?

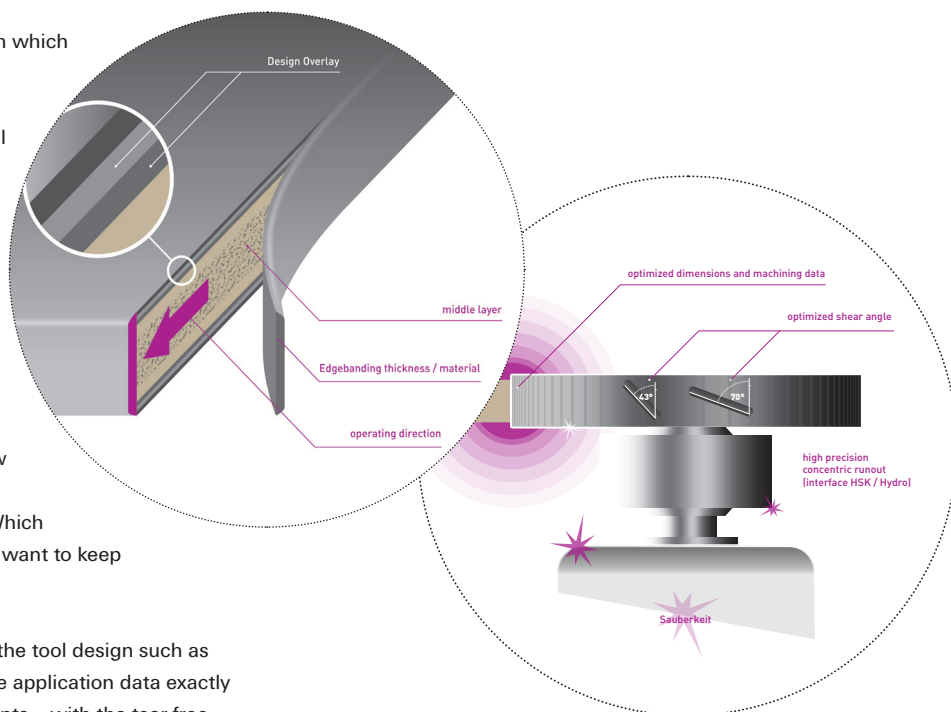
Regardless of the very process, for the invisible joint optics tear-free and razor-sharp joined edges are a must. It is exactly this claim which the appropriate LEUCO tool solutions meet. Together with the furniture manufacturer LEUCO discusses individually every little detail and tailors the tools to the very situation.

### The base: Analysis of material and machine

Which wood-based materials are used, what is the overlay of this material, what does the core of the panel look like, which material thicknesses are being processed? Which kind of edge is used? What is the configuration of the machine? Which and how many motor units are available for the joining process? What is the expected throughput? Which flexibility does the the furniture manufacturer want to keep open?

LEUCO defines the machining sequence and the tool design such as cutting widths, cutting edge tip height and the application data exactly according to material and machine requirements – with the tear-free, razor-sharp joined edge- with maximum economic efficiency – in the focus, always. Therefore LEUCO recommends jointing cutter with a shear angle of 43° resp. 70°.




**The interface between the motor and tool affects the joining quality of the milling cutters.** Hydro or HSK toolholders ensure the most stableconcentricity. A clean working environment contributes - particularly in the high-end range with microfine surfaces and tight tolerances



## ?! EDGE „HIGH-END“

Whenever the furniture manufacturer has the highest quality standards for the completed edge, LEUCO speaks of the "high-end edge". High-precision tool solutions are used for tear-free, razor sharp joint quality. Regardless of whether the joining is followed by modern zero-joint processes or traditional edge gluing.

### Comparison of interfaces rotation accuracy

Rotation tolerance	Double keyway 	Hydro-clamping bushing 	HSK clamping 
Tools on delivery	max 0,02 mm	max 0,02 mm	max 0,02 mm
Combi tool-machine	max 0,06 mm	Zero tolerance	Zero tolerance

# → LEUCO SMARTJOINTER AIRFACE

Now even more stylish: the LEUCO DP jointing cutter head of the "SmartJointer plus" series with exchangeable knives! As of now, the new version named "SmartJointer airFace" is available for a large number of machine types.

## Smart: low weight and low noise

Previous SmartJointer versions have also been characterized by very low noise, which is partly due to its significantly reduced weight compared to conventional tools. The low weight of the SmartJointer is made possible by its high-tensile aluminum body. With this cutter, dynamic processes such as jump milling consume only a fraction of the previously required energy. Furthermore, the spindle bearings are relieved thanks to a reduced unbalance. In addition, the light aluminum body vibrates less and creates less noise when at idle and during use. Together with the optimally designed knives with little protrusion, this leads to an audibly lower noise level on the jointer aggregate of the edge banding machine. An additional noise reduction is now achieved with the new airFace surface, which allows the air to be channeled while the tool is rotating. Therefore, both at idle and while moving, the SmartJointer airFace has the lowest noise level in comparison with other jointing cutters. At the same time, the new airFace look makes it easy to distinguish it from the conventional SmartJointer version, which only partly allows segments to be changed.

## Smart: stainless segments, re-usable body

The segments now come with a stainless steel body and are thus fully protected against oxidation. The objective is still to use the aluminum body as often as possible. During a segment change on the SmartJointer airFace, the chip gullets are replaced at the same time. This prevents wear of the aluminum body and enables long-term multiple use.

## SmartJointer – allowing customers to be independent

The new airFace version is ideally suited for customers who attach importance to a low noise level and/or who want to be independent of sharpening stations. It is important to replace only complete sets of segments in order to avoid differences in cutting edge protrusion.

## Diameter consistency saves time

Consistent tool diameters provide a clear advantage when inserting knives in mint condition. This avoids time-consuming adjustment procedures on the aggregate and allows users to promptly resume production!

It is still also possible to have the SmartJointer airFace resharpened in the conventional way at the LEUCO ServiceCenter. For such cases, the tool is provided with a resharpening area of 1.5 mm, allowing several resharpening processes on the jointing head. This method is particularly suitable for industrially oriented companies.

LEUCO  
smart  
jointer  
airface

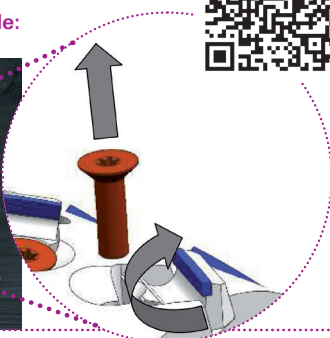
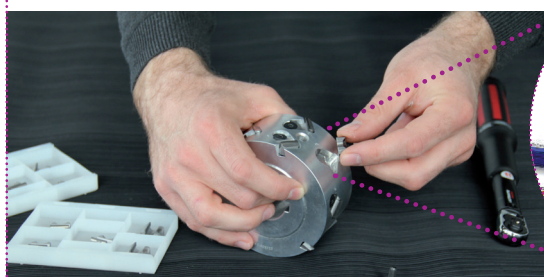


The entire previous SmartJointer product line has now been converted to the airFace version.

## SMART//handling

The segments can be replaced by the customers themselves with only few accessories!

Video guidance on YouTube - Simply scan QR code:



**Tip:** Given that the tooth rows are subjected to different wear situations, it is possible to replace tooth rows already worn from cutting the top layer with rows from the core layer. Depending on the jointing quality requirements, this method can be useful to prolong the edge life. Of course, you will find all the information needed for proper segment replacement in the operating instructions supplied with the tool.

# → JOINTING-CUTTER-CHECKLIST



Which jointing cutter provides the best price/performance ratio depends on several factors of the machine, the material and the quality standard. This checklist can serve as a clear basis for deciding:

## Machine

- ✓ Manufacturer?
- ✓ Double end profiler / edge gluing machine?
- ✓ Number of joining assemblies?
- ✓ Type of interface tool / machine?
- ✓ Performance
- ✓ Power consumption?
- ✓ Extraction performance?

## Work environment

- ✓ Low-noise joining?

## Process - before joining

- ✓ Chipper unit available?

## Process - joining

- ✓ Removal in mm?
- ✓ Material widths?
- ✓ Variety of materials?
- ✓ Quality standard for joined edges?
- ✓ Change milling / protection milling?
- ✓ Throughput volumes?
- ✓ Feed/work speed?

## Process - after joining

- ✓ What type of gluing?
- ✓ Which machine set for reworking edges?

# → JOINTING-CUTTER-PROGRAM

Finding the right jointing cutter is easy!  
Use the practical filter in the LEUCO online catalog

For example, choose

- I Your machine / your set
- I Which material is to be processed?
- I What should the tool's dimensions be?
- I And many more

The filter results will quickly show you the catalog line of specific machine types and which milling cutter is recommended for which material.



www.leuco.com/products

## INTERESTED?

→ Latest stock program in the LEUCO Online-Catalog at [www.leuco.com/products](http://www.leuco.com/products)

Didn't find the right milling cutter for you in the catalog?  
Contact us at [info@leuco.com](mailto:info@leuco.com)





→ Due to the variety of machines and tasks we recommend to discuss your special application cases with a LEUCO tool representative.



[www.leuco.com](http://www.leuco.com) → Contact

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

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

**[info@leuco.com](mailto:info@leuco.com)**  
**[www.leuco.com](http://www.leuco.com)**