

# LEUCOline

H I G H L I G H T S 2 0 1 2



From p-tools to the p-System

## IMPOSSIBLE WAS YESTERDAY

Great variance of applications for the LEUCO p-System

Thanks to the "LEUCO p-System", LEUCO enables applications which have been considered as impossible so far. The particularity of "LEUCO p-System" tools is the large shear angle of more than 55°. In stationary and through-feed processing, the patented LEUCO p-System tools make possible many applications which caused problems or required special proceeding.

Everything started with the best jointing cut currently available on the market -

thanks to jointing with the LEUCO p-System. Especially zero joints require the best cutting quality which can be obtained. What's the use of a perfectly laser-glued edge if the machined edge shows small chippings? [continued on page 2]

Title picture: LEUCO p-System when machining solid wood scantlings

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Title: From p-tools to the p-System

## IMPOSSIBLE WAS YESTERDAY

Great variance of applications for the LEUCO p-System

[continued from page 1]

Thus, an almost invisibly glued edge requires the best tool, the p-System jointing cutter.

In moist rooms too, high cutting quality guarantees long furniture life - as humidity cannot penetrate if there are no edge chippings. Each chipping in the top layer - no matter how small - reduces humidity resistance. In this case too, the use of p-System jointing cutters is almost a necessity.

The problem especially with moist room furniture which are machined on machining centers is, that openings are made with a right-hand rotation tool and a left-hand rotation tool in two work steps. The contact point between both cutters is a potential weak spot. In this case, p-System shank-type cutters offer the solution as they can make the opening in one work step because they can emerge from the material against the edge band. Thus, a weak spot where humidity could penetrate, is prevented from the beginning.

### IS THIS CUTTING QUALITY AVAILABLE IN THE CASE OF OTHER APPLICATIONS, TOO?

From "p"-tools to the "p"-System

Much in demand are rabbeting cuts or chamfers. Thus, LEUCO continued the development of the p-System and added to the initial jointing cutter a whole system of different tools which transfer the outstanding cutting quality to other production areas.

#### Rabbeting

For through-feed machines with tiltable motors and 5-axis machines, a p-System rabbeting cutter with all cutting qualities on the rabbeting and periphery side is possible.

The tools have to be tilted by 5° with the motor side towards the rabbet. This tool is ideally suited for door manufacturing as in this case cutting is done with and against the grain and chippings at the edges are not desired.

The production of furniture parts with folding cuts is equally possible with the p-System rabbeting cutter.

If no tiltable motor or only a 3-axis machining center are available, rabbets are possible at least at the periphery side of the tool with real p-System quality and all p-System characteristics. On the rabbet side a good but conventional cutting quality has to be accepted and not all of the p-System tools can be reached.

#### Chamfering

Even chamfering tools are offered by LEUCO as p-System tools. Please turn to our representatives for application advice. Do you want to cut a pocket or a groove? In this case too, p-System tools can be applied.

#### Machining of parquet elements

The machining of parquet elements is a special challenge. On the one hand very clean cuts have to be produced; on the other hand exotic or finish-lacquered woods have to be machined, too. In combination with the production of a glue pocket and cutting with and against the grain with or without tongue and groove, the result is a highly complex

tool which can be designed according to the individual specifications of each parquet manufacturer and his machine. Just ask us - we are happy to advise you!

**"A GOOD IDEA CAN BE RECOGNIZED BY THE FACT THAT IT IS IMITATED."**

Have you noticed the increase of tools with large shear angle presented on recent trade shows? This confirms impressively that LEUCO added a real highlight with the patented p-System.

Extensive tests show that the original with a shear angle of 55° is unbeatable.

The larger the shear angles the longer the tools' edge lives. This is why the LEUCO p-System is not inexpensive but at a second glance clearly more efficient than a cheap tool.

Which one of your application cases LEUCO may solve with the p-System?

» This afternoon, this morning's utopia will be today's reality. «

Truman Capote (1924 - 84)



LEUCO p-System video clip and brochure: [www.leuco.com](http://www.leuco.com) ▶ News ▶ New products

## LEUCO P-SYSTEM TOOLS

### Program

- cutting material: LEUCO DIA
- symmetric or asymmetric design depending on the cutting width
- rabbeting and chamfering cutter and tools with crowned design on request
- specific dimensions on request
- sharpening service and sharpening know-how exclusively from LEUCO



Jointing, dividing, sizing, rabbeting and chamfering with p-System tools right: would you have imagined this to be a chamfering tool?

## NEW QUALITY DIMENSIONS AND APPLICATION POSSIBILITIES

Peeling – the revolutionary wood processing technology by LEUCO

### Finished!



#### Milling with finish-cut quality without postprocessing

The p-System produces edges in finish-cut quality, time-consuming sanding is no longer necessary.

### Chip-free!



#### Chip-free jointing of veneer boards

The cutting edges of the p-System cut veneer like a sharp knife. Across the veneer they hardly exert cutting force and make a clean cut, regardless whether the veneer overlap is 2 or 10 mm.



### Protection Foil!



#### Long edge lives in the case of high-gloss material with protection foil

As soon as the foil was no longer cleanly cut, the tools were changed. Thanks to the shear angle design the p-System cuts the foil "sharp as a razor" which allows to benefit from the whole edge life of the cutter.

### Save time!



#### Reduction of downtimes

In the case of end-grain cutting, the p-System often allows to pass the edge against the feed without causing edge chipping. This also works with edged workpiece materials depending on edge thickness and board quality; tool changes are no longer necessary, machine downtimes can be reduced.

### Exotics!



#### Fibrous and exotic materials

Thanks to the large shear angle the fibers are cleanly cut, often not even postprocessing is needed.

Peel it,  
see it,  
feel it!

p-system®



#### Jointless optics and humidity resistance

The most important advantages of edging by means of laser or plasma- technology are the jointless optics and humidity resistance of the edge. This becomes possible only when optimal jointing quality is achieved. Thanks to the cutting edges with very large shear angle, LEUCO p-System tools cut the surface "like a pair of scissors" with exceptional edge quality. Thanks to the perfect LEUCO p-System jointing without micro chippings, the advantages of laser edging can in fact be benefited from.



#### Many convinced users cannot be wrong! Enthused customers say:

"The machining of multilayer boards with p-System tools does not longer require polishing!" [Manufacturer of table leaves]

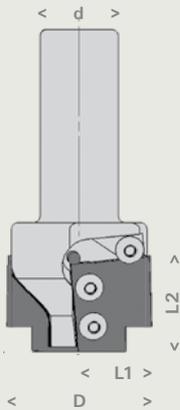
"Up to now, it has been difficult to find a tool for milling cork-coated boards. The cutting quality produced by means of the p-System is the best I have ever achieved in cork! [Specialized joinery]

"Even porous, dark and very difficult cover layers can be machined better than ever with the p-System. And the cutter is running, running, running... [Office furniture manufacturer]



From our production

## ECOPRO PROFILING CUTTER SHORT DELIVERY TIMES



EcoPro shank-type tools are defined shank-type cutters whose bodies and knives can be profiled according to customer specifications. The production process of LEUCO EcoPro tools was optimized. With immediate effect, LEUCO produces your individual profile in only 8 working days counting from a clearly defined order to the tool dispatch.

The knives are produced in two carbide grades - HL Board 06 for hard wood and wood-based materials and HS Solid 60 for soft wood. EcoPro stands for high economic efficiency thanks to a good price-performance ratio.

Profiled shank-type cutters with specifications mentioned below are included in the EcoPro program and are produced within 8 working days as described above:

shank diameter d	25 mm
diameter D	35 to 145 mm
profile widths L1	up to 60 mm
profile depths L2	up to 29 mm



NEW in the catalog

## LEUCO GROOVING CUTTERS FOR WEEKE BHX 050

LEUCO  
g5 system

The successful g5-System of LEUCO saw blades was transferred to the grooving cutter for WEEKE BHX 050.

LEUCO g5-System means a tooth group geometry of ATB right-left-right-left-flat. The user may expect grooving with excellent cutting quality, less cutting pressure, long edge lives and less noise.

With immediate effect, the grooving cutter is available from stock with and without pin holes.

For dimensions and further information see [leuco.com](http://leuco.com) ▶ Products/Info ▶ Cutters with Bore



NEW in the catalog

## ALUMINUM & PLASTICS MACHINING WITH HIGH QUALITY AND GOOD CHIP EVACUATION

LEUCO cutters for the machining of aluminum and plastics can be used for high performance jointing, rabbeting and grooving on CNC machines offering long edge lives. Optimal chip removal and excellent cutting quality thanks to specially polished chip



gullets and positive spiral. The cutters are available from stock.

For dimensions and further information see [leuco.com](http://leuco.com) ▶ Products/Info ▶ Shank-Type Cutters



NEW in the catalog

## LEUCO DIA GROOVING CUTTERS & MOSQUITO DRILL BITS FOR LAMELLO CLAMEX P

For the new and successful system "Clamex P" made by the swiss company Lamello, LEUCO sells diamond-tipped grooving cutters for CNC machining centers to industrial customers. The cutters are suitable for chip-free grooving in solid woods and wood-based panels of the new Clamex P.

Thanks to the tool adapter with 4 thread bores, the grooving cutter can be immediately applied on the machine.

If the Lamello Clamex P system for miters is used, an additional Mosquito through-hole bit is used with a larger total length and a VHW cutting edge.

Grooving cutters, adapter and drill bit are available from stock.

For further information see [leuco.com](http://leuco.com) ▶ News  
▶ New Products

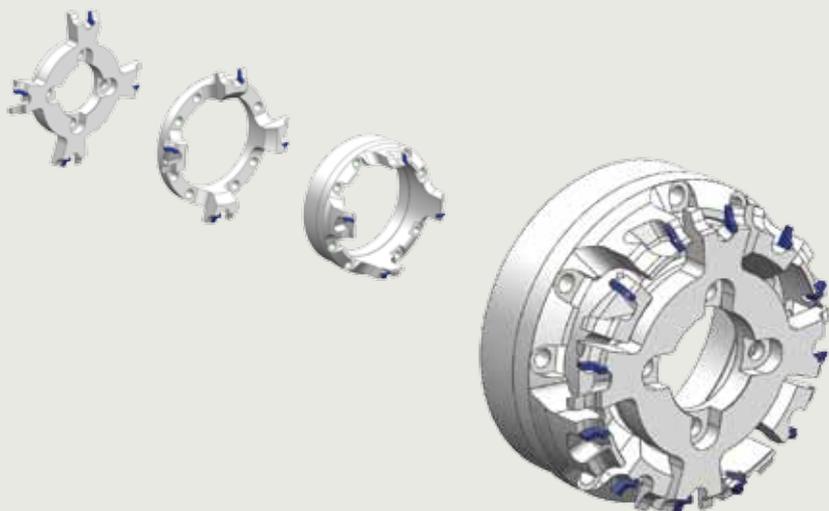


Diamond-tipped grooving cutter, adapter as well as the high performance drill bit in LEUCO Mosquito quality



NEW in the catalog

## COPYING CUTTER SET FOR HOMAG AGGREGATES FK 31 3 DIFFERENT PROFILES IN A TOOL SET ADJUSTABLE IN A GAP OF 400 MM



In the case of the new diamond-tipped copying cutter set for Homag aggregates FK 31 three single profile tools can be adjusted in a gap of 400 mm. To do this, the tools are adjusted axially to each other in a minimal way and brought in working position. A new positioning with regard to the scanning aggregates is not necessary.

LEUCO guarantees the necessary tight tolerances thanks to the most modern production methods and the close development partnership with the machine manufacturer who produces this aggregate.

Replacement tools are available from LEUCO. The function of the aggregate resembles the "FlexTrim" which has been equipped with LEUCO tools for approx. 3 years already.

Three different profiles = one copying cutter set especially for Homag FK 31.  
Very tight production tolerances are imperative for this high-end tool.



## LEUCO TOPS IT

### LEUCO sets standards for panel sizing saw blades

LEUCO recently switched the whole Topline Sizing Saw Blade Program to a LEUCO Low-Noise design with the result that the usual excellent cutting quality can even be surpassed and at the same time noise can be reduced by approx. 4 dB(A) when cutting and idling.

#### LowNoise Panel Sizing Saw Blades set new standards

This success story is continued now with panel sizing saw blades. During the Ligna 2011, LEUCO presented for the first time the new generation of panel sizing saw blades. When configuring the tool body the focus lies on the reduction of vibrations.

A saw blade is noise-reduced if a quick dampening and thus calming of the saw blade in the case of external stimulation is reached. In practical tests you knock against the saw blade and if you hear only a thud, the saw blade is vibration-reduced and running smoothly when cutting and idling.

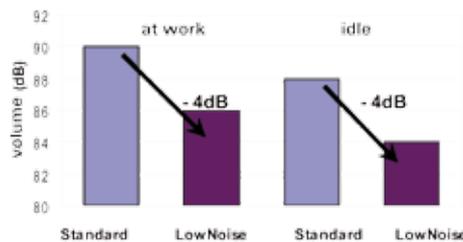
This result is reached by laser ornaments, additional expansion slots and tensioning rings. Geometry, number and position of the expansion slots and laser ornaments are defined by

means of the most modern calculation methods - this is the key to success. This guarantees not only a reduction of vibration but also a noise reduction.

#### In the case of panel sizing saw blades, performance is essential.

This is why LEUCO enhanced panel sizing saw blades also with regard to running meter performance and cutting quality.

Tooth geometry was enhanced to maintain the optimal combination between cutting quality and performance for cuts in single sheets and stacks.



Thanks to the improvements made on the panel sizing saw blade bodies, noise is reduced by approx. 4 dB(A) when cutting and idling.

To improve considerably the running meter performance, LEUCO uses the new cutting material „LEUCO Board O3 plus“ with the following advantages:

- increase of edge lives by approx. 30%
- no tooth breaking in spite of extremely wear resistant tungsten carbide.

Edge life not only depends on the applied new cutting material but also on grinding competence. LEUCO reduces surface roughness when the saw blade teeth are ground and thus increases considerably the edge life.

## PANEL SIZING SAW BLADES

### LEUCO Program

Cutting quality, volumes, material variety ... the LEUCO Panel Sizing Saw Blade program offers the opportunity to meet these demands in an individual way. Even within the range of the mentioned demands, LEUCO offers several versions (diamond- and carbide-tipped), or cutting edge geometries to reach the desired objectives.



Panel sizing saw blade for universal use, for stack cuts and single cuts



Panel sizing saw blade for good cutting quality even with large cutting heights



Panel sizing saw blade for excellent edge quality in laminated panels, for single cuts and stack cuts with small stack height



High-performance panel sizing saw blade for stack cuts with large stack height and high volumes

The new powerful members of the UniCut and SpeedCut family are presented by the improvements described on these pages.

## TECHNICAL IMPROVEMENTS

### The new low-noise, powerful members of the UniCut and SpeedCut family



### SPEEDCUT PLUS / UNICUT PLUS

New tungsten carbidegrade HL Boad O3 plus



Grinding competence



New laser ornaments and expansion slots



Less noise and higher performance compared to SpeedCut and UniCut

### UNICUT G5-SYSTEM

New cutting geometry „g5-System“



New laser ornaments and expansion slots



Less noise and higher performance compared to UniCut, especially in the case of wood-based panels, veneered or paper-laminated panels and honeycomb panels.



## WHICH SAW BLADE FOR WHICH APPLICATION?

Facts and figures



### LEUCO SPEEDCUT PLUS

The powerful saw blade for stack cuts with high running meter performance is available from stock in diameters from 480-730 mm. The maximal cutting height is 215 mm.



### LEUCO UNICUT PLUS

The multi-functional saw blade for pressure beam machines is available from stock in diameters from 350-450 mm. Excellent cutting results can be obtained in single sheets and stacks up to 80 mm.



### LEUCO UNICUT G5

For excellent cutting results in plywood boards, wood core plywood, veneered or paper-laminated panels and - due to the very low cutting pressure - also in honeycomb panels. The slim cutting width of 4.0 mm reduces power consumption of the machine. The UniCut G5 is available from stock with diameters from 350 - 450 mm. Matching the main saw blades, the scoring saw blade program with the tooth form "conical ATB" was enlarged by the cutting width 4.0 - 4.8 mm.

## NEW: LEUCO G5-SYSTEM

„Never saw never again“

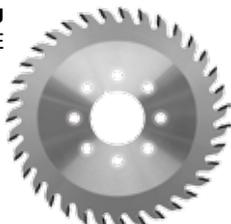
LEUCO  
g5 system



→ The "LEUCO g5-System" includes all saw blades with the unique g5 tooth group cutting geometry.

Many convinced users of the sizing and clipping saw blades with g5 cutting edge geometry on table saws, clipping saws, vertical panel sizing saws and CNC machining centers can be happy:

The convincing g5-System is available now for panel sizing and clipping saw blades with the appreciated characteristics. And available as **grooving cutter** for WEEKE BHX 050/051.



## EXCELLENT CUTTING THANKS TO THE G5-SYSTEM

Advantages of the system

→ „LEUCO g5-System“ stands for

- I excellent cutting quality
- I thin kerf for optimum use of the workpiece material
- I extremely low vibration thanks to special laser ornaments and design
- I cutting material „LEUCO HL Board 03“ or diamond for long edge lives also in extremely abrasive materials.

→ Perfect for use in

### Wood based panels

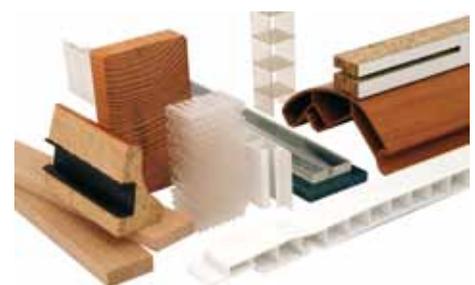
- I miter cuts in veneered or foiled door frames
- I sizing cuts in laminated panel boards
- I honeycomb panels

### Solid wood

- I Chip-free cut across the grain

### Plastics

- I Chop cuts in thin-walled plastic profiles eg. shutter profiles



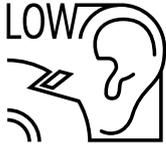
Material mix which can be cut using the g5-System





## TOGETHER WITH LEUCO ON THE LOW-NOISE TRIP

LowNoise jointing cutter family - brazed DIA Jointing Cutter & DIA SmartJointer with exchangeable knives.



LEUCO meets the challenge of extreme noise of edge banding machines with two brand new jointing cutter generations. Thanks to the aerodynamic improvements of knives and gullet, harmful noise

within the operating area of such a machine is considerably reduced.

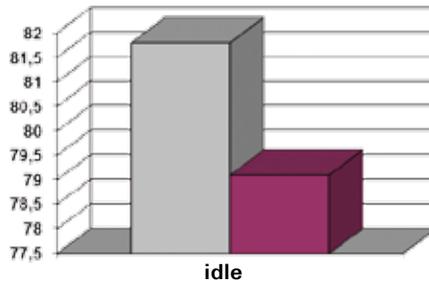
### A TOOL LIKE OUT OF THE WIND TUNNEL

Brazed LowNoise "DIAMAX Jointing Cutter"

This tool is characterized by a cutting edge geometry which is flow-optimized as if developed in the flow channel. Thanks to this jointing cutter family, LEUCO set the standard with regard to noise reduction. The application by renowned machine manufacturers as standard equipment and the number of imitations shows the efficiency of this LowNoise design.

The changes are in the detail and have great effects. The task was to reduce the noise of the standard jointing cutter considerably without renouncing on the advantage of a brazed tool.

Thanks to the change of the gullets and the tooth backs the air flow could be optimized. This avoids turbulences and reduces noise considerably. Thanks to the noise reduction of



sound pressure level when idling:  
left: standard cutter  
right: LowNoise DIAMAX

up to 5 dB(A) when idling and up to 2 dB(A) during operation, working conditions could be improved significantly. The new brazed DIAMAX is one of the most noise-reduced of this category in the whole tool industry. The "facelift" is called "LowNoise Jointing Cutter". The changes made on the jointing cutters are visible at first glance: the cutting edges are

embedded in the tool body aerodynamically, all unnecessary projecting edges were eliminated. This new design of the tools was made possible only thanks to LEUCO's most up-to-date production know-how.

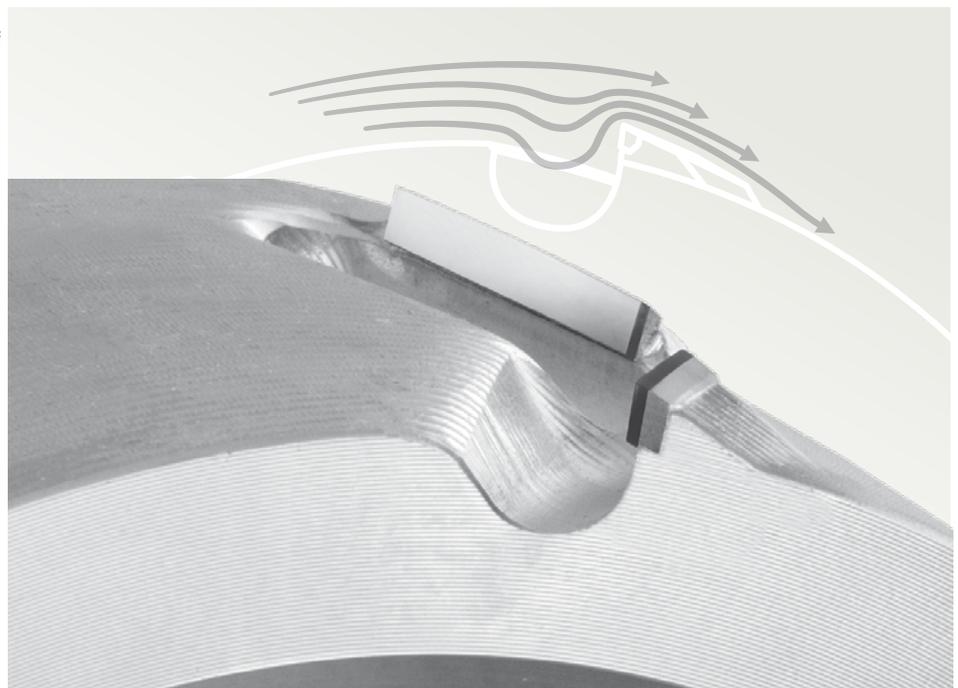


Development of jointing cutters:

..... yesterday...



..... and today



## LOW WEIGHT AND LOW NOISE - TWO SMART CHARACTERISTICS

### LEUCO DIA Jointing Cutter „SmartJointer“

① The low weight of the SmartJointer is due to the high-tensile aluminum body. Dynamic processes such as jump-milling consume only a fraction of the energy needed so far.

The main characteristic of this system is the re-usable tool body which saves resources.

② The exchangeable cutting inserts are designed with integrated gullets => these gullets reduce the scouring by abrasive chips. The body can be re-used more often.

③ During the development of the system special attention was given to noise reduction like in the case of the brazed LowNoise Jointing Cutter. No problem for the low-weight DP SmartJointer. The sound pressure level is reduced by 2 dB(A) during operation thanks to the lower weight of the aluminum body (vibration reduction) and thanks to measures described above (e.g. lower edge projection). With 4 dB(A), this reduction is even more significant when idling.

With regard to performance, results are similar to the brazed diamond tools, e.g. long edge lives and high cutting qualities.

The shear angle was even increased compared to standard jointing cutters. Thus, the LEUCO DP SmartJointer is designed for even higher cutting qualities.

**Less weight, less noise, resource saving and technically convincing - simply smart, the SmartJointer by LEUCO.**

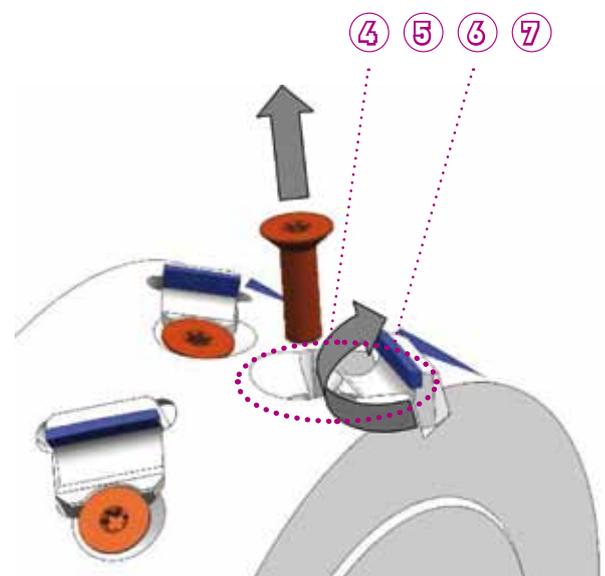


## AT A GLANCE

### SmartJointer Technology

### Your advantage

④ Small construction size thanks to the clamping screw in front of the cutting edge	High cutting widths are suitable for standard dust hoods
⑤ Larger shear angle with 35°	Excellent cutting quality in sensitive materials
⑥ Long-lasting tool body: 1. cutting edges are integrated in the gullets 2. balance compensation is made thanks to the thread inserts	1. low risk of scouring of the tool body even in permanent use in abrasive materials such as particle boards 2. no rebalancing necessary
⑦ High resharpening area of 1.5 mm	Several resharpenings possible like in the case of a brazed tool
Extensive stock program	Suitable for all common machines





## Innovation

## LEUCO DIAREX FINISHJOINTER

When it comes to the point

When jointing wood materials before glueing or laser edging, there are 3 decisive success factors for the jointing cutters used for jump-milling:

1. the achievable cutting quality depending on panel and coating
2. the achievable edge life
3. the noise emission on a milling aggregate which is not encased by a cabin but only by the metal sheet of the dust hood

**LEUCO continued the success path taken with the LowNoise DIAMAX Jointing Cutters and transferred it to the DIA Jointing Cutter with full height diamond tips. This means:**

- **Larger DIAREX resharpening area** compared to DIAMAX or similar tool systems with reduced resharpening area or tipping height. Up to 10 resharpenings are possible - the maximum which can be reached with a given adjustment range of the jointing aggregate.
- Consequent implementation of the **LEUCO LowNoise design with rounded gullets for reduction of wind noise.**
- Adaption of the tooth geometry to **high-quality applications which are increasingly demanded for the production of furniture fronts and for high-quality furniture.** This means shorter teeth and optimized shear angles and especially less variations with the effective hook angle. This improves above all the cutting quality in loose cores and thicker panels as well as in difficult and sensitive coatings.

The LEUCO DIAREX FinishJointer is **resharpenable worldwide on conventional machine technology** and can be obtained with **symmetric or asymmetric tooth configuration** depending on the machine type.

Thanks to the well-defined standard program we can offer an **excellent price-performance ratio** due to large production quantities.

### Quality also depends on the interface

The quality achieved is explicitly **suitable for pre-milling combined with laser edging.** However, a perfect result not only depends on the jointing tool; the interface too, must be optimized accordingly.

The LEUCO standard program covers the new aggregates too, which need a high-precision adapter with hydro bushing increasingly used with machines for laser edging.

For these machine types no spindles with feather key are used but high-precision smooth spindles with a 30 mm diameter and a hexagonal adapter serving as twist-lock. The high-precision concentricity creates a hydraulically activated expansion zone, i.e. the hub expands evenly along the whole diameter inwards and thus prevents an excentric tool clamping on the spindle. Another positive effect is the reduced residual imbalance of the whole system thanks to the centric clamping. The tool is mounted on the hydro bushing and remains there during the whole life cycle to form a unit

with highest run-out accuracy.

The clamping of the tool including the hydro bushing on the spindle is made via axial impressurement which avoids time-consuming dismantling of the dust hood.

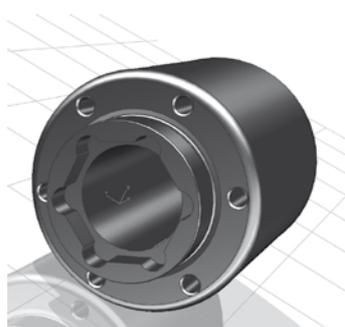
### A solution for everybody

The solution offered by LEUCO covers all edge banding machines with hydro spindle currently available on the market - a solution for all machines with clamping heights of 30-100 mm and tool diameter of 125-150 mm. In this case too, the achieved quantity effects have a positive influence on the price-performance ratio.

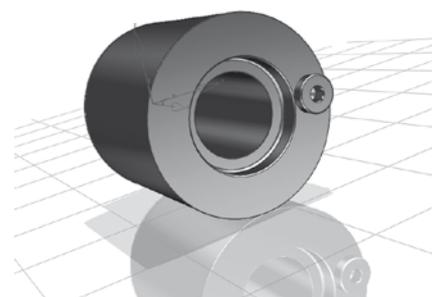
### If high quality is the goal - DIAREX FinishJointer and hydro bushing by LEUCO



Hydro bushing  
on the machine side



Hydro bushing with axial  
impressurement above



## Overview

## THE RIGHT ONE FOR ALL CASES

### LEUCO jointing cutter program for each demand

The DIAREX FinishJointer completes the current LEUCO jointing cutter program.

The advantages of the cost-optimized DIAMAX LowNoise jointing cutter and the LowNoise SmartJointer are combined with an increased resharpening area prolongating tool life and an optimized tooth geometry.

In detail, this means excellent cutting quality in coatings and middle layers, long edge lives and low noise as well as a good price-performance ratio.

→ The overview on the right shows the details:

	DIAMAX LowNoise	Smart Jointer	DIAREX FinishJointer	LEUCO p-System
<b>Features</b>				
tool body features	steel	aluminium body	steel	steel
gullet design	pocket shape with rounded-off edges and studs	pocket shape in interchangeable steel version	pocket shape with rounded-off edges and studs	pocket form
shear angle	30+°	35+°	43+°	70°
tooth length	approx. 12.35 mm	approx. 14.2 mm	approx. 8.5 mm	approx. 14 mm
flow optimization / LowNoise design	++++	++++	+++	+
resharpening area	1.5 mm	1.5 mm	3 mm	4 mm
tooth configuration	asymm. and symmetrical	asymm. and symmetrical	asymm. and symmetrical	symm. recommendable
arrangement of cutting edges	in pairs	mostly in pairs	random	arranged linear obliquely
availability from stock	stock	mostly stock	mostly stock	partly stock
chip caption	++++ / CM	+++	++++ / CM	+++
suitable for laser-edge-technology	++	++	+++	++++
tooth fixation	soldered	exchangeable DP cutting edges	soldered	soldered
running meter performance	++	++	+++	++++
cutting quality cover layer	++	++	+++	++++
cutting quality middle layer	++	++	++++	+++
no. of teeth	2-3	2-3	3-5	2-4
<i>Legend</i>	+ suitable	++ good	+++ very good	++++ maximal

## Hogger Innovation

## LEUCO POWERTEC III TOPLINE

### To be continued

Since its market launch approx. 2 years ago, the DP hogger PowerTec III has developed to the LEUCO best-seller among the DP compact hoggers.

Compared to the PowerTec predecessors, the difference is that - thanks to a new manufacturing process - the finish-cut cutting edge (negative hook angle) and the pre-hogging cutting edge (positive hook angle) can be positioned on one wing. This allows twice as many cutting edges with the same diameter, i.e. the possible feed rate on double-end tenoners is almost without limits. In the meantime, the PowerTec III hogger is applied with a feed rate of more than 100 m/min with excellent edge lives.

### Selective optimization of single features of the „PowerTec III Topline“

- The peripheral cutting edge is subject to the highest mechanical strain which is why it partly shows signs of bad damage at the end of the edge life. LEUCO geometrically optimized these peripheral cutting edges. Less material has to be removed when resharpening which increases the number of possible resharpenings.

- The number of pre-hogging cutting edges is adapted to the number of finish-cut cutting edges as well. Even middle layers of extremely poor quality can be cut with excellent cutting quality and edge lives. This advantage pays particularly when cutting against the grain when the cutting edges emerge against the edge.

- Experience shows that most customers need a hogging width up to 5 mm, as the material is pre-sized on a panel sizing saw with small oversize. This is why the PowerTec III Topline is equipped with a tool body construction which can be expanded on a modular basis. Cutting widths of 8 and 15 mm can be produced with one tool body - this means a batch size optimization to the benefit of the customer.





## Flooring

## DECIDE YOURSELF FOR THE BEST CREW IN YOUR TEAM

Flooring is like the "Formula 1" – Always high performance and precision

No other branch as the flooring industry achieves higher feedrates and edgelives considering such high quality standards for the finished product.

For the flooring manufacturer the tool specialist is next to the machine manufacturer the most important partner. LEUCO knows the requirements and the settings. The development and application engineer crew defines cutting materials, optimized chipflow and tip

geometry. It determines rotation speed, tool weight, runout and concentricity as well as edge and profile quality. It discusses individual demands and coordinates interfaces towards the machine like clamping systems and dust extraction hoods.

LEUCO is one of the few suppliers able to fulfill all requirements, where the thinkerf-sawblade for the dividing of the middle layer and the click-profile cutter are part of the portfolio.

Each step of the process will be analyzed and valued before the development and determination of the tools starts.

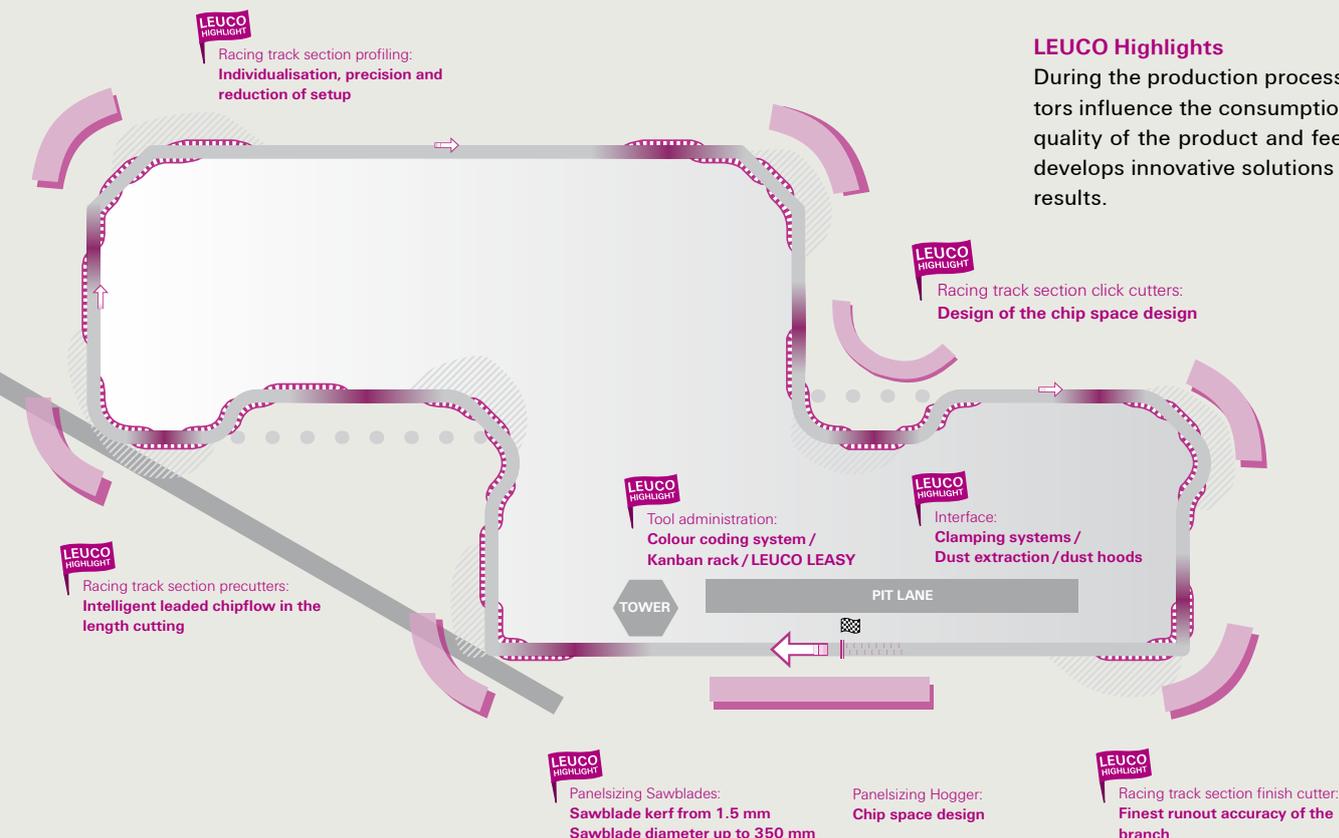
We follow consequently your demands shared with our tooling and process know-how.

**LEUCO is one of the leading tool manufacturers worldwide. We guarantee you tools adapted to the newest technology standards including their service and application engineering, no matter where you are producing.**



### EXAMPLE: LAMINATE FLOORING

Key factors for excellent quality



#### LEUCO Highlights

During the production process some key factors influence the consumption of resources, quality of the product and feed rate. LEUCO develops innovative solutions to get the best results.

## INTERFACES AND TOOL ADMINISTRATION

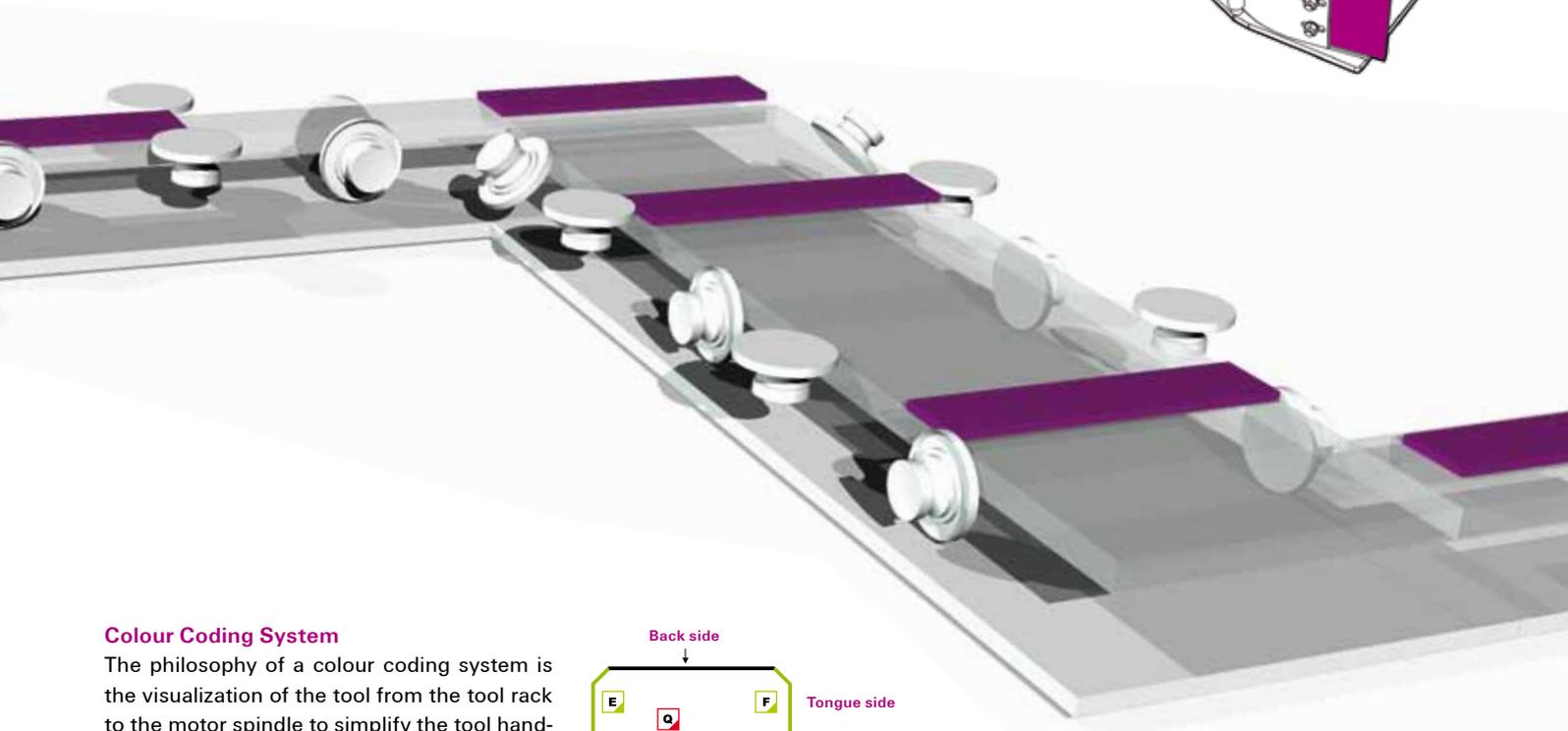
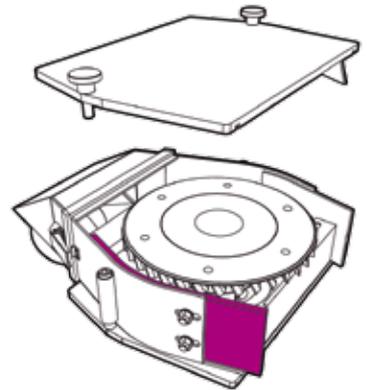
Organization reinforces the success

### More than tooling

The interfaces are the optimal conditions for the laminate and parquet flooring manufacturing: The clamping parts between tool and machine, dust extraction in the machine. The package of all interfaces of single highlights becomes the perfect process.

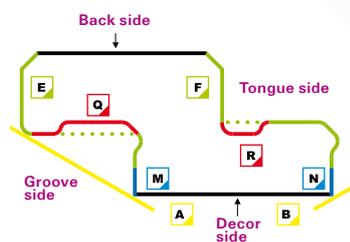
### Dust Extraction / - Hoods

The dusthoods are built up as a kit system. The chipflow in the dusthoods will be customized to the individual profiling process step. This optimizes the chip extraction and leads to clean machines, avoids double chipping and tool wear.



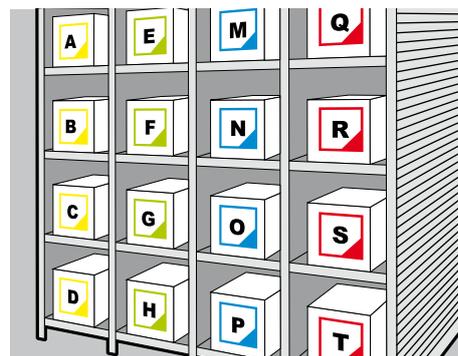
### Colour Coding System

The philosophy of a colour coding system is the visualization of the tool from the tool rack to the motor spindle to simplify the tool handling in the manufacturing process. The colour coding simplifies the internal communication at the flooring manufacturer site and between the flooring manufacturer and LEUCO.



### KANBAN System

Together with the colour coding normally a kanban-rack will be installed. In the rack the tools will be placed the same way as described in the colour coding system. As a result the administration of the tools will become easier, orders for new tools, service of tools and stock of tools.



»We only can be successful when we make our customers successful.

And we want to be successful.«



User report

## QUANTITY THROUGH QUALITY

Performance increases thanks to highly precise High-Performance Finger Joint Cutter

The popular belief that quality and quantity exclude each other, is not shared by Holzwerk Hemau (HWH) in Hemau-Neukirchen/Germany. On the contrary. Since the foundation of the company 25 years ago, great importance has been attached to high quality. And since the beginning of this year, productivity has been increased with constant product quality.

Working in shifts, HWH produces scantlings from pine wood, spruce and larch for window and door production

The annual production in Hemau amounts to 20,000 cbm of scantlings which are delivered to window and door manufacturers all over Europe and Scandinavia.

Scantlings are non-structural elements. They are composed of different wood parts. Parts with cracks, knots, color differences etc. are cut off and only faultless sections are used. This is why scantlings are of especially high quality. The jointing of the single wood sections is made by finger joints. The finger joints are made by means of finger joint cutters. The finger joint bottom is without gaps. Scantling quality means tight joints without chippings.

### Productivity and process safety

Before, the edge life of a finger joint cutter on the finger jointing line of HWH amounted to approx. 10,000 to 12,000 cutting cycles. Thanks to the consequent collaboration with

tool manufacturers the edge life could be increased to 35,000 to 45,000 cutting cycles.

However, this was not enough for HWH. Further increase of the edge life with constant high finger jointing quality was the objective. Since the beginning of this year, a new generation of brazed high-performance finger joint cutters in real Z = 6 design has been applied on the NKD finger jointing line. In addition, the edges of the so-called compound tool have a hard material coating. With the finger joint cutter lamellas of 80-150 mm width and up to 6 m length were cut. The result is overwhelming - the edge life was almost doubled from 40,000 tables to 79,000 tables with the impressive speed of 8 tables per minute.

### Exact finger joints

the tight closing joints do not show chippings at the end of the edge life like they would normally appear when the cutters get blunt.

Even with lamella widths of 150 mm exact finger joints can be produced.

Thanks to the exact finger joint the jointing of single parts can be done without offset.

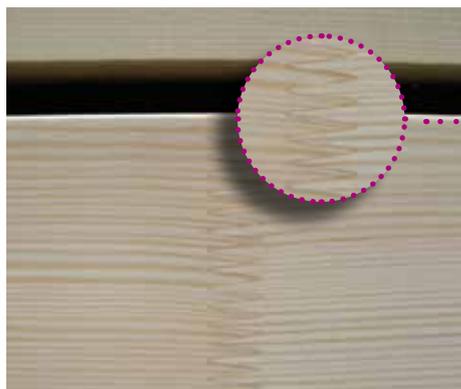
### Tool quality is hidden in the details

The extraordinary performance of the cutter could only be reached thanks to the tool body made from high-tensile steel, precisely ground finger jointing profile and the hard material coating which was adapted to the application. The elasticity of the cutting edge which reduces the risk of tooth breakage is obtained thanks to the cutting material HS. The hard material coating increases the hardness of the cutting edge, wear is slowed down which doubles the edge life. The compact design causes perceivably smooth running. The new narrow spiral design of the brazed finger joint cutter is perfectly suited for short woods without running the risk that single wood pieces are drawn into the machine.

Not only material and construction separate the wheat from the chaff, i.e. the cheap tool from the premium tool.

The production process too, has its share.

The quality of the complete system also depends on process-safe solder connections, hubs ground in the micrometer range, high balancing quality and the sharpening know-how. [to be continued on page 15]



Perfect quality with high throughput: Tight closing finger joints with 10 mm after more than 60,000 cutting cycles.

continued from page 14

## QUANTITY THROUGH QUALITY

### Conclusion

HWH adopted a clear position in the described application case and made a decision in favour of a high-quality finger joint cutter. The benefit is obvious: almost doubling of the edge life with constant high quality: almost doubling of the edge life with constant high quality.

In addition, they benefit from the advantages resulting from the increased edge life: less machine downtimes, less motor output and less waste caused by blunt cutters etc.

Konrad Guggenberger, head of production at HWH knows that there is more illusion than reality in the case of cheap products.

“High volume output on a high quality level can only be obtained with quality products: quantity through quality.”

**Z 6+6 high-performance finger joint cutters with with hard material coating coated edges**



NEW in the catalog

### LEUCO TOPLINE NEW CROSS-CUT SAW BLADE PROGRAM

The design (tooth geometry and tool body design) guarantees universal application in soft and hard, dry up to naturally humid solid woods as well as excellent cutting quality and tool life. For chop cuts (one-sided, double-sided) for precise lengths of boards, lamellas, etc.

The saw blades are applied on joinery machines and double clipping saws and on special machines e.g. by Kalfass, Springer, Krüsli, Hundegger, Weinmann. Thanks to the good chip evacuation, less postprocessing is necessary.

I cutting material: HL Board 10

I WSA cutting geometry: ATB 20° and shear angle of +5°

Available from stock with immediate effect.

For dimensions and further information see [leuco.com](http://leuco.com) ▶ News ▶ Products/Info ▶ Circular Saw Blades



NEW in the catalog

### LEUCO TOPLINE NEW OPTIMIZING CHOP SAW BLADE PROGRAM

The LEUCO Optimizing Chop Saw Blade family was optimized especially for clipping and cross cuts in solid woods, MDF, HDF, ledges on manual or automatic optimizing chop saws. Special attention was given to the tool body stability and the increase of edge lives, thus higher productivity and economic efficiency.

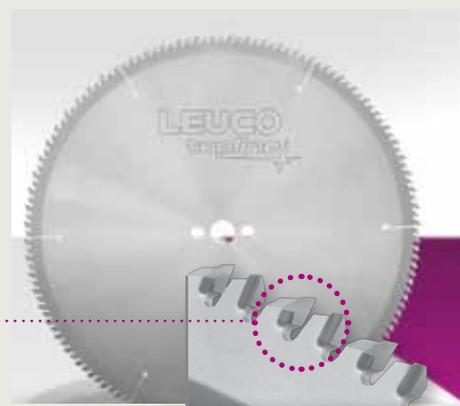
The chop saw blades are applied on under-table cross-cut saws, push-feed saws, through-feed saws, e.g. DIMTER Opticut „C“, „S 90“, „Quantum“ and PAUL machines.

I cutting material: HL Board 06 for long edge lives

I WSA cutting geometry: extreme angle of 40° and shear angle of +5°

Available from stock with immediate effect.

For dimensions and further information see [leuco.com](http://leuco.com) ▶ News ▶ Products/Info ▶ Circular Saw Blades





## Sharpening service

## AS GOOD AS NEW

Excellent reshaping service



As a premium manufacturer we know cutting materials and cutting edge geometries very well and have access to the original data. Among others, LEUCO offers carbide-tipped tools with different carbide grades and thus meets the application like no other. As a manufacturer, LEUCO has the know-how for the best service.

In addition, the excellent LEUCO sharpening service is characterized by:

- sharpening know-how of well-trained LEUCO employees
- the most modern high-tech systems in the company service centers
- availability of your tools based on strict sharpening schedules

### LEUCO diamond and carbide service:

The maintenance of quality tools is necessary for optimal results in woodworking. This is satisfied with a worldwide network of specialists and sharpening services that put your tools back in shape. Our global pickup and delivery service has its own service network covering your area as well.

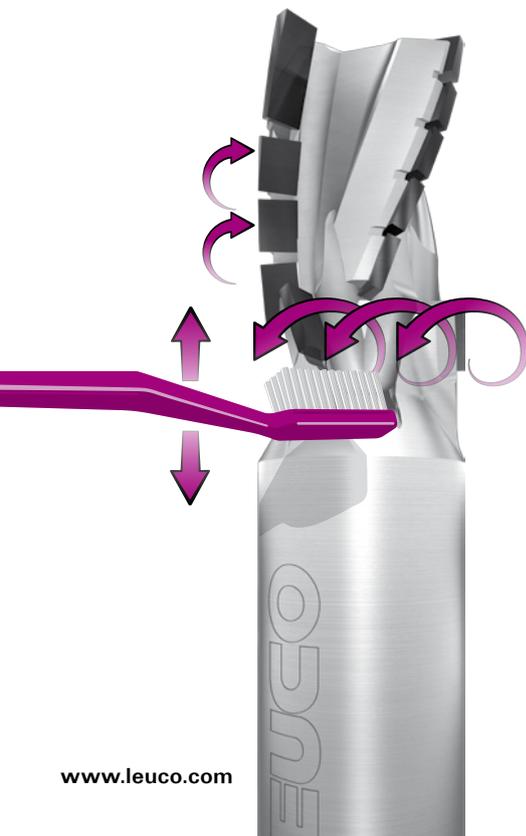
As a quality-aware tool manufacturer we repair all of your tools. Whether sharpening of all

tooth geometries and tooth replacement up to adjustment, alignment, eroding and setting - the precision and quality required, throughout the entire life-span of the tool, along with ensuring the economy of the work at the same time, are the factors in measuring the work of our LEUCO Service Team.

### Contact of LEUCO service centers on all over the world:

See address part in the LEUCO "General Program 02" catalog or

[www.leuco.com](http://www.leuco.com) ▶ Company ▶ Internationality



»» Good service is not just smiling at the customer but making the customer smile. This is what we strive for! To win your smile!!««

## In detail

## CONGRATULATION

New machine equipment for the service center Straubing



All LEUCO service centers are equipped with machines which correspond to the current level of technology.

This advantage can be benefited from only if organization and logistics interact effectively. In close collaboration with the customers, the LEUCO experts safeguard this process to make sure that the right tool arrives at the right place at the right time in the right quality.

### Success story Service Center Straubing

In 1966 LEUCO started in Straubing with a reshaping center to provide the southern part of Germany with the well-known LEUCO service.

Over the years, this important location has developed according to the growing demands of the customers and - quickly reaching its limits - had to move several times.

The newest acquisition, a high-end „Vollmer QXD 200“ eroding machine for the diamond tool service is running at full capacity.

Of course, the LEUCO experts do not only care for tools from Lower Bavaria, but provide all incoming tools with the aspired economic efficiency which is increased with each reshaping.

We also accept tools from "non-locals", says the head of the service center Manfred Feiertag with a grin as he proudly presents his new QXD 200.



The head of the service center in Straubing, Manfred Feiertag, shows the new Vollmer QXD 200.

LEUCO brochures

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Order or download from our website [www.leuco.com](http://www.leuco.com)



LEUCO Catalog "General Program 02"  
Ident-No. 839203



LEUCO Catalog - pdf on CD:  
"General Program 02" in german, english,  
french, spanish, turkish, chinese, russian.  
Ident-No. 839204



### CIRCULAR SAW BLADES

#### For Wood-Based Panels



Circular saw blade "g5-System"  
Ident-No. 839191

Circular saw blade „g5-System for Rehau  
Geneo", Ident-No. 839265

Saw blades UniCut positive-negative geometry  
Ident-No. 839297

DP panel sizing saw blades short delivery  
times program, Ident-No. 839214

#### For Solid Wood

Optimizing cross-cut saw blades  
Ident-No. 839384

Double clipping saw blades  
Ident-No. 839382

Multi rip saw blades HardRip,  
Ident-No. 839238

Thin-kerf saw blades, Ident-No. 839241

Sizing saw blades for solid wood, MAN-Feed  
Ident-No. 839299



### HOGGER

Hogger PowerTec III  
Ident-No. 839303



### CUTTERS WITH BORE

#### Grooving



Grooving Cutter against the feed  
Ident-No. 839301

#### Jointing

FinishJointer SmartJointer  
Ident-No. 839307

FinishJointer DIAMAX  
Ident-No. 839352

LEUCO p-System, Ident-No. 839305

#### Profiling

Cutterhead UltraProfilier  
Ident-No. 839189

#### Planing

Quicklock Hydro planing cutterhead  
Ident-No. 839226

Powerlock Planing Cutterhead HW with  
Centrolock knives, Ident-No. 839298

#### Finger Jointing

Finger jointing cutter HS Solid 34  
Ident-No. 839235

High-performance finger jointing cutter  
Ident-No. 839232



### SHANK-TYPE CUTTERS

#### Solid carbide body tools



LEUCO EcoLine shank type cutter VHW,  
Ident-No. 839319

High-performance shank type cutter for  
machining of aluminium, Ident-No. 839332

High-performance shank type cutter for  
machining of plastics, Ident-No. 839330

LEUCO VHW EcoLine shank type cutter  
Ident-No. 839319

#### DP tipped tools

DIAMAX shank type cutter program  
Ident-No. 839259

DP high performance shank type cutter  
Ident-No. 839250

LEUCO p-System, Ident-No. 839305

#### Accessories

Adjusting Unit, Ident-No. 839300

LEUCO CNC StarterKit, Ident-No. 839354

### MODULA

Cutter head system Modula  
Ident-No. 839334



### DRILL BITS

High-performance dowel bits with solid carbide  
body, Ident-No. 839195



LEUCO EcoLine boring bit  
Ident-No. 839253



### CLAMPING SYSTEMS



LEUCO Tribos pressure shrinking chuck  
Ident-No. 839116

LEUCO Heat shrink-fit chuck,  
Ident-No. 839309

LEUCO Hydro clamping chuck ps-System with  
HSK 63 F shank, Ident-No. 839328



### TURNOVER KNIVES, PROFILE KNIVES



LEUCO SetProfiler / SetProfiler topcoat  
Ident-No. 839256

LEUCO EcoKnife, Ident-No. 839839229

### FLOORING TOOLS

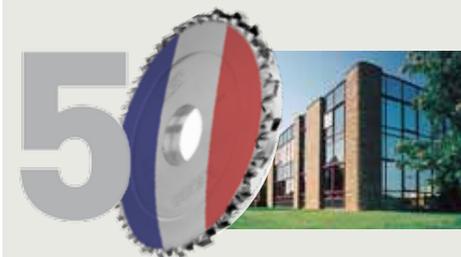
LEUCO Laminate flooring tools  
Ident-No. 839223

LEUCO Parquet flooring tools  
Ident-No. 839224

LEUCO FRANCE

## CONGRATULATION

50th Anniversary



In 2011 LEUCO S.A.R.L. (LEUCO France) celebrated with all their employees an important milestone in the company's history: the 50th anniversary.

#### A look backwards

In 1954, LEUCO was founded by Mr. Ledermann and Mr. Störzer in Horb am Neckar. As their project grew rapidly they decided to expand on a worldwide basis. They decided to start with the foundation of a French daughter company in the Alsace, the neighbor region in France. This allowed them to hire bilingual staff which made the relations to the mother company easy. The first LEUCO daughter company abroad, LEUCO France, was founded on November 29, 1961.

Since its foundation LEUCO S.à.r.l. has known heights and depths. At the moment 60 persons are employed. During the past years the service stations have been completely restructured. The remaining 5 service stations are equipped with the most modern technology. This summer in Ballan Miré a 5-axis milling machine was installed and part of the building in Ostwald was renovated which has been the location of the service station for the Rhine valley since August 2011.



During a jubilee celebration Thierry Nicolet, managing director of LEUCO S.a.r.l. emphasizes:

„This development and our success does not come out of the blue! Thanks to our customers' trust our company was able to overcome some obstacles as the good reputation of the LEUCO brand proves.“



**1954**

Foundation of the LEDERMANN & Co. production site in Horb a.N.

Carbide-tipped tools for metal working, automotive engineering and machine construction

**1956**

Brazed tools for milling and drilling in wood and plastic

Introduction of the LEUCO hollow-ground circular saw blade

**1962**

First cutterhead with carbide turnover knives for wood and plastic

**1966**

Jointing / Chamfering Cutterhead with 12 mm turnover knife and with or without spurs

**1975**

LEUCO is the first tool manufacturer to present diamond tools on the LIGNA



**1983**

SuperProfiler with bore



## About LEUCO

**DAS IST LEUCO**

Innovative, trend-setting and reliable - right from the beginning!

The company Ledermann & Co. was founded in 1954 by Willi Ledermann and Josef Störzer in Horb am Neckar / Germany. The LEUCO brand was born.

Today, 58 years later, LEUCO is one of the world's largest suppliers of carbide and diamond-tipped machine tools for wood and plastic processing. Wealth of ideas and technical know-how have been the heart of LEUCO since the beginning. The product

range includes circular saw blades, hogsers, bore-type and shank-type cutters, drills, clamping systems and inserts.

Sharpening service, application consulting and service packages bundled under the term „Tool management“ complete the spectrum. LEUCO sells via direct sales. Our customers are sawmills, building-, furniture- and paneling-industry as well as interior finishing.

Internationally, around 1,100 employees work for LEUCO. Sales affiliates are in Australia, Belgium, England, Japan, Malaysia, Poland, Russia, Singapore, Thailand, Ukraine, USA and Belarus. Sales and production subsidiaries are in China, France, Switzerland and South Africa.



**1987**  
Diamond Saw Blade

**1991**  
LEUCO DIAMAX  
Topline Circular Saw Blade

**1999**  
PowerTec Hogger  
i-System tools

powerTec

i@system

**2006**  
Power DIA Profiler

**2007**  
G5 Sizing Saw Blades  
(for excellent cutting)

**2010**  
p-System tools  
PowerTec III Hoggers

p@system

**2011**  
Aerodynamic LowNoise  
Jointing Cutters



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