

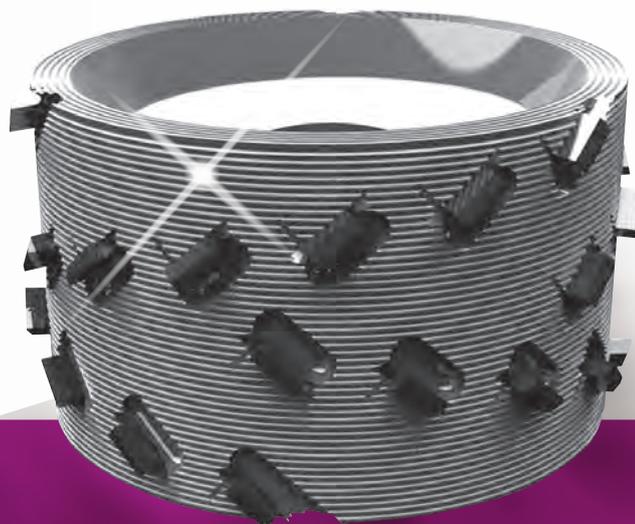
# LEUCOline

H I G H L I G H T S 2 0 1 7



**QUIET  
QUIETER  
AERODYNAMIC**

**Innovative Design of Sizing tools –  
Milestone for the Industry [page 4]**



**REALIZE YOUR IDEAS WITH LEUCO**

## **MAGENTIFY WOOD PROCESSING**

Focus on the essentials to see the right things. Tools for wood and plastic processing with higher **QUALITY**, better **PERFORMANCE**, increased **INNOVATION** and more **SOLUTIONS**.

# CONTENT

## THROUGH-FEED



### 4 INNOVATIVE DESIGN OF SIZING TOOLS

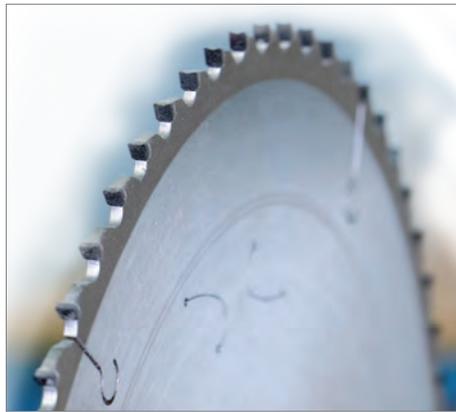
LEUCO DIAMAX and Diarex with new airFace-Design  
 Hogger "PowerTec" becomes "PowerTec airFace"

### 6 JOINTING CUTTER "LEUCO SMARTJOINTER" WITH NEW AIRFACE DESIGN



### 7 SCRAPER KNIVES FOR EACH APPLICATION

## SAWING



### 8 NEW TUNGSTEN CARBIDE TIPPED PANELSIZING SAW BLADES

IQ-Cut and U-Cut

### 9 NEW CUTTING MATERIALS

How important is the cutting material for circular saw blades?

### 10 LEUCO nn-SYSTEM

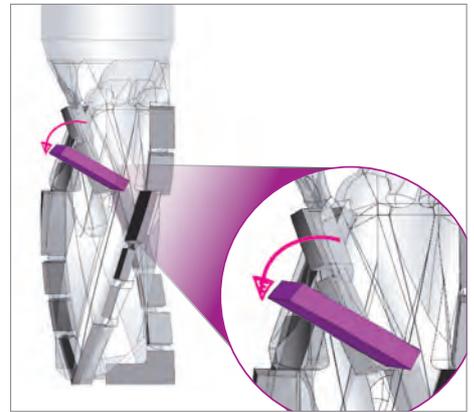
### 11 INNOVATIVE DIAREX SIZING SAW BLADES

Saw Blades for panels with embedded iron foil and iron gauze

### 12 p-SYSTEM-TOOLS

Peeling – the revolutionary wood processing technology  
 New LEUCO p-System grooving shank-type cutter

## CNC PROCESSING



### 13 DP SHANK-TYPE CUTTERS WITH NEW SHEAR ANGLE

More edge live, quality and variety

### 14 PRODUCT NEWS AND RANGE ADJUSTMENTS

New 1mm micro drill bit



Spherical shank-type cutter heads for 5-axes applications  
 High-End Dowel drill bits and through-hole drill bits  
 New cylinder head drill bit „Light“ and others ...

### 16 PRODUCT NEWS AND RANGE ADJUSTMENTS

IDP-grooving cutters for wooden materials  
 New chip turbine Aerotech with simple tool clamping  
 1 cutter solves 5 applications in HPL and mineral-based panels and others ...

**SOLID WOOD**



**18 PALMWOOD-PROCESSING**

| Palm fulfills megatrends of our times

**20 MINIFINGER JOINT CUTTING**

| LEUCO visits customer Abies in Austria

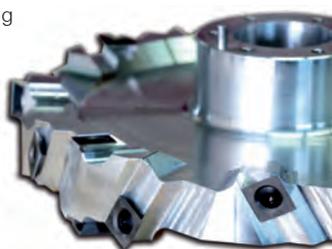
**22 HIGH PERFORMANCE-PROFILE-CUTTER HEAD „ULTRAPROFILER PLUS“**

| Profiling and planing solid woods

**22 PLANING KNIVES WITH „LEUCO TOPCOAT“-COATING**

**23 LEUCO JOINERY-PROGRAM**

| Planing, folding, grooving or cross-cutting and trimming



**SERVICES**



**24 TOOLCLOUD**

| Digital twin of the tool

**25 LEUCO RESHARPENING SERVICE**

| Servicebox  
| Resharpener service on YouTube

**26 MATERIAL VARIETY**

| Technical Symposium  
"challenge material diversity"



**COMPANY**



**28 ABOUT LEUCO**

| New managing director  
LEUCO France  
| German Brand Award for LEUCO  
| 20 years LEUCO China  
| 10 years LEUCO Ukraine

**30 ABOUT LEUCO**

| Tool production with a new  
cleaning procedure  
| Interest group "Palm wood"

**31 LEUCO ONLINE CATALOG**

| Finding tools easily  
| INKA Nomination for the LEUCO  
Online Catalog

## A CLASSIC GETS A NEW FACE

### "PowerTec" hogger becomes "PowerTec airFace"

Increasing the edge life while reducing the noise is, as in the previous years, the aim to be achieved for sizing cuts! Therefore the previous PowerTec III has been redesigned and is now called PowerTec airFace! The principle of a pre-hogging cutting edge and a finish-cut tooth on one wing remains unchanged and allows feeds of up to 100m/min. Even in the future, a uniform cutting width over the entire tool life can be guaranteed!

#### Optimum noise reduction

The noise during the cutting process is generated by air turbulences around the tool and the vibrations which are caused by the contact of the hoppers with the panel. The projecting edges of the PowerTec III have been consequently rounded and, in addition, the tooth pitch has been varied. The new LEUCO airFace design which is also used for jointing cutters canalizes the air on the tool sides during rotation to reduce air turbulences. This ensures a smoother and quieter running of the complete system "tool during processing" both during processing and when idling.

#### For a very long edge life

Hoggers are used in modern and industrial furniture production. The automated through-feed machines record the running meters of a tool whether used for serial production or for the production of individual parts and can therefore make transparent the efficiency of the tools that are used. By using the new cutting edge profile of the new PowerTec airFace, LEUCO customers will achieve an increased edge life of up to 15 % compared to the previous version.

This cutter is recommended by LEUCO when perfect cutting quality and long tool life is required, for instance for use with hard and sensitive high-gloss materials. The cutter can be used starting with a workpiece thickness of 8 mm.

For a long time now, the LEUCO PowerTec III hogger has been one of the most in-demand hoppers on the market in the industrial furniture production! The new airFace version will become a part of this squad and replace the previous version PowerTec III!

**LEUCO**  
powertec  
airface

LEUCOline

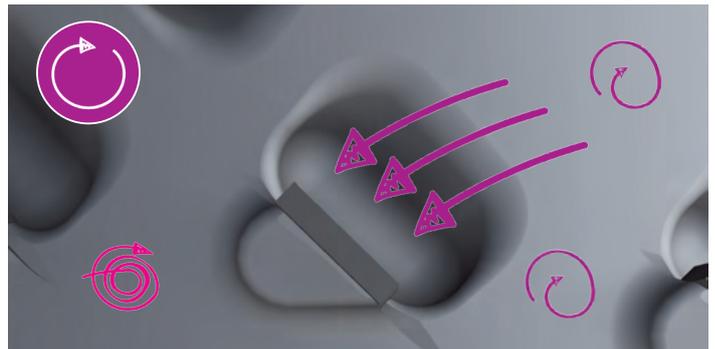
## INNOVATIVE DESIGN OF SIZING TOOLS

### One wing beat ahead!

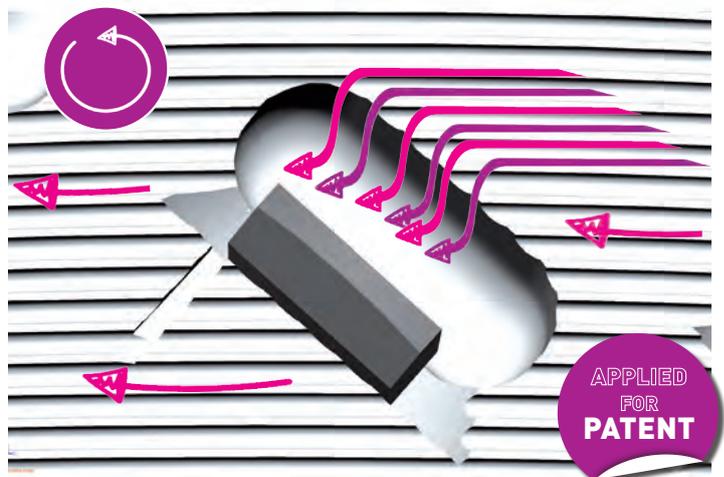
Bionics is the technical term for the use of examples from the nature to develop new technical methods. The owl is an animal that has much to offer in this regard. Their sophisticated feather structures allow them a nearly noiseless flight so that prey animals are not startled. Most of the noise is generated by turbulences at the rear edge of the wing. The "owl wing" concept smooths the air flow by means of the serrated edge and scatters noise which allow nearly noiseless flight characteristics without having a negative effect on the aerodynamics.

#### Learning from nature's example

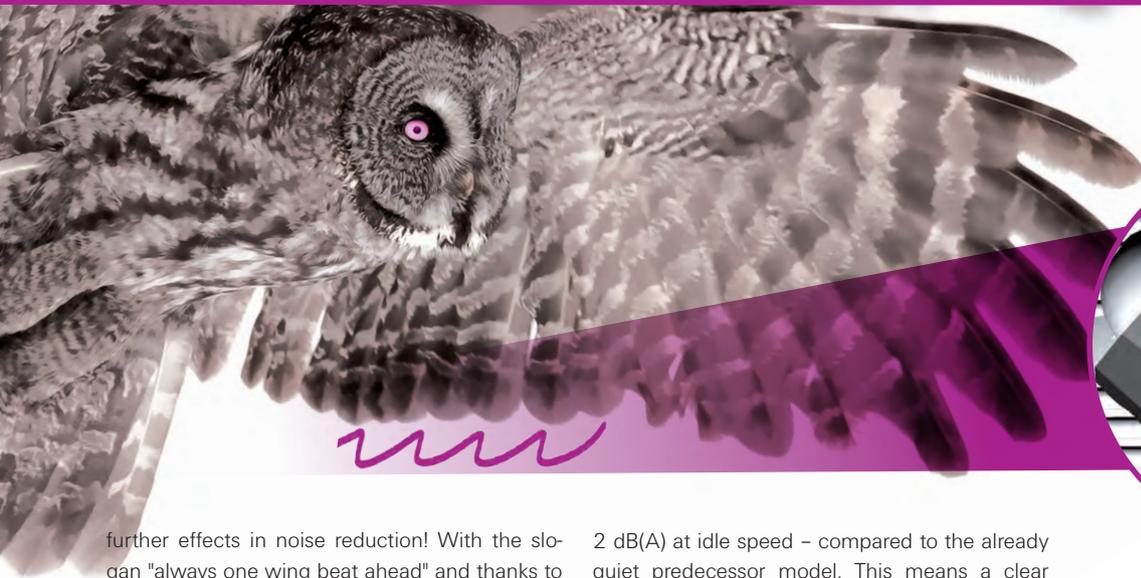
This concept has been used by LEUCO as an example in order to design more aerodynamic sizing tools and to achieve



**SO FAR:** Both at idling speed and during processing, air flows generate noise which has a negative influence on the working environment around the machine



**NEW:** Have a detailed look at the gullet. The new surface structure on the entire body creates an "owl wing shaped edge" and canalizes the air at this point and reduces noise emissions



NEW!



further effects in noise reduction! With the slogan "always one wing beat ahead" and thanks to the completely new design approach, the tools will be designed for the first time without studs behind the edge and with a special surface! This kind of design has never been used in the field of woodworking and therefore represents a milestone in the jointing cutter evolution.

When using tools, the rotation of the tools generates air turbulences - particularly on projecting edges - that means in front of the cutting edge and in the gullet of the jointing cutter. At this point, there is the strongest and most uncontrolled air flow. Both at idling speed and during processing, these air flows generate noise which has a negative influence on the working environment around the machine.

#### The owl wing is the role model for the new "LEUCO airFace design"

LEUCO recognized the advantages of the owl wing structure and implemented this concept in the design of the new generation of jointing cutters. The aim was to systematically guide the air flow around the diamond-tipped DP cutting edges and to reduce turbulences. Thanks to the intensive research and development of experienced engineers, the so-called "LEUCO airFace" surface on the entire steel body of the jointing cutter could be developed. The principal effect of the gullet with the "owl wing edge" is to canalize the air at this point.

#### New seat for DP cutting edges

In order to achieve a continuous "airFace" surface, there are no studs behind the edges in the design of the new jointing cutters. Instead of a stud, the diamond-tipped edge is provided with a strong supporting tungsten carbide plate. A more dominant DP plate ensures the stability of the DP cutting edge.

#### airFace has been developed for the operators at the machine

With the new LEUCO DIAMAX airFace, a noise reduction of up to 1 dB can be reached at idle speed. Its "bigger brother" the LEUCO DIAREX airFace actually reaches a noise reduction of up to

2 dB(A) at idle speed - compared to the already quiet predecessor model. This means a clear noise reduction for this industry segment. These cutters are the quietest jointing cutters with steel body.

#### Continuous aerodynamic design

The aerodynamic design principle on the body is consequently implemented. To avoid the negative influence of balancing bores on the airFace surface, LEUCO has decided to manufacture the body with defined threads for balancing screws. In the future, these balancing screws will be used in production for the process-related setting of the tools' highly-precise concentricity tolerance.

#### Best performance at a fair price

The new LEUCO DIAREX airFace will be equipped additionally with a larger shear angle. It is therefore excellently suited for the processing of new materials such as e.g. anti-fingerprint panels. Both the DIAMAX and the DIAREX keep their proven resharpening areas: 1.5 mm for the LEUCO DIAMAX airFace and 3.0 mm for the LEUCO DIAREX airFace. Both tools have a very good price-performance ratio and represent the ideal option for the demanding craftsmanship and the industrial application with high performance requirements!

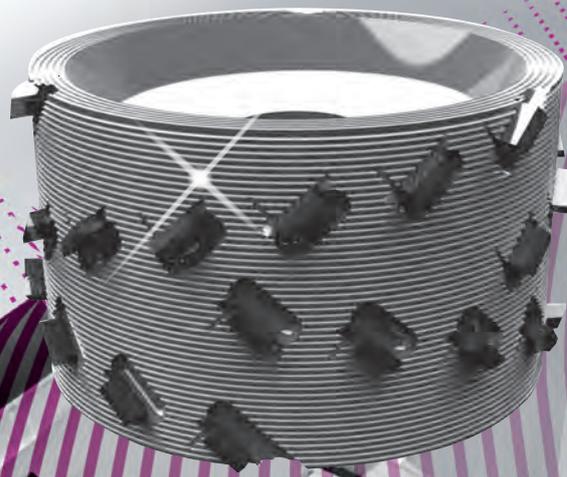
#### Available as of fall 2017

LEUCO will present this new generation of airFace jointing cutters for the first time at LIGNA 2017 and is looking forward to introducing the new tools to other industry professionals! As of fall 2017, there will be less noise in production: then the tools with the new airFace design for the most different machine types will be available from LEUCO!

LEUCO transfers the patent-applied-for airFace design not only to the new DIAMAX and DIAREX jointing cutters but also to other tools.

LEUCO LEUCO  
powertec airface smart joiner airface  
LEUCO  
diarex airface

LEUCO  
diarex  
airface



# LIKE BRAND NEW!

“LEUCO SmartJointer” jointing cutter in the new airFace design

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. As is well known, the knives, followed by the chip gullets, are the areas of a cutter head that are most susceptible to wear. 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. Provided with a set of suitable replacement segments, they will be able to re-equip their tools at any time. Any items needed for



the replacement, such as DP replacement segments, torque wrenches and screws, are available from LEUCO. 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 re-sharpened 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, considering that no extra effort is required for segment replacement and that regular replacement cycles are scheduled anyway for production lines.

**The entire previous SmartJointer product line has now been converted to the airFace version.** Please contact us for help in selecting the tool dimensions best suited for your machine and in making your production “smarter” with the new SmartJointer airFace.

**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.

## SMALL BUT POWERFUL!

Scraper trio for any application – LEUCO leaves the choice to you!

After edging, they allow you to add the finishing touch to your workpiece – scrapers! Having a size of only a few millimeters, these small tools are indispensable for achieving the desired finishing look on the wooden workpiece! Fixed in a machine-specific scraper clamp, the scraper removes a last thin chip from the edge. The blades consist of tungsten carbide as standard. Their different grinding profiles allow machining of most diverse shapes. So-called multi-profile scrapers, in contrast, can handle up to six different profiles with only one scraper, but require an aggregate specially designed for this purpose.

### 1. Standard scraper for ABS, PP and PVC edges

This scraper is well known to LEUCO customers and is available both as a single-profile scraper and as a multi-profile scraper for various machine types. It is well suited for finishing edges in ABS, PP and PVC.

### 2. LEUCO TwinBlade for PMMA edges

LEUCO recommends the TwinBlade scraper for finishing PMMA edges with a transparent high-gloss look. This type of scraper is still the only one in the product range to provide acrylic edges with a smooth and very glossy surface by removing two defined chips. The TwinBlade scraper is available with customized profiles for Homag and IMA machines equipped with the corresponding scraper clamp.



**LEUCO TwinBlade principle:** In a first step, cutter marks and irregularities are removed. The second step consists in removing a very fine chip to achieve a highly glossy finish over the entire radius range.

### 3. As of now, the LEUCO scraper range is complemented by a high-gloss scraper for ABS and PP materials for use in standard fixtures

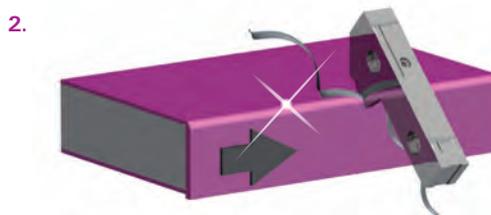
This scraper features a finer grinding pattern and a polished front, in combination with the proven anti stress whitening bevel. These additional technical features reduce friction and improve chip evacuation. The lower friction resistance, in turn, leads to reduced vibrations and helps reduce the wear of the blade. With standard edge materials like ABS and PP, the benefits of this scraper are reflected in a low stress whitening rate and an increased gloss level of the workpiece. The high-gloss scrapers will in future be available for all machine types. Switching to a different scraper type is made easy for users, since no special fixture is required for the new scrapers. Based on a good price-performance ratio, customers can select their scraper types according to their preferences in terms of visual quality.

**This three-stage concept meets the various requirements of the furniture industry, ranging from standard furniture in high gloss quality furniture with special finishes and moisture-resistant.**

LEUCO's scraper trio allows every customer to choose the ideal tool for obtaining the desired workpiece finish and to rely on an efficient and economic production process.



1. Result with "Standard" scraper for edges in ABS, PP and PVC



2. TwinBlade scraper: high gloss for PMMA edges



**NEW:** Very smooth edge, without any chatter marks – high-quality result with a consistently flat surface achieved with the "high-gloss standard scraper" for ABS and PP materials

## NEW FAMILIES OF TUNGSTEN CARBIDE-TIPPED PANEL SIZING SAW BLADES

We have been designed to replace the well known UniCut, SpeedCut and FinishCut product lines.

**What is new and different compared to the previous saw blade families?**

We feature better cutting quality and longer edge life than our predecessors. And the product lines have been streamlined, leaving two instead of three, to make selection easier for you.

### My name is U-Cut or Universal-Cut.

My family is best suited for typical trimming cut operations. We are the perfect choice for trimming coated panel materials if maximum edge life is important to you. Our blades are tipped by LEUCO with the brand-new and innovative tungsten carbide cutting material "HL Board O4 plus", which has been thoroughly tested in long test series. We have always achieved a significantly increased edge life compared to our predecessors. My family consists of four models and we will be available from stock at LEUCO in Horb as of August 2017:

- ! U-Cut TR-F: the proven universal saw blade for use on pressure beam machines
- ! U-Cut max: increased edge life through increased utilization. The saw blade can be reconditioned up to five times more often than usual
- ! U-Cut speed: for high-performance systems with high throughput, for saw blade diameters from 520 mm with the corresponding number of teeth and robust tool bodies
- ! U-Cut WS: for trimming cut in veneered wood-based materials, plywood boards, wood core plywood and raw particle boards



U-Cut max



U-Cut speed



Q-Cut G5

### New: Coated diamond-tipped panel sizing saw blades

## OPERATES FOR LONGER PERIODS THAN ONLY A DIAMOND TIP

Diamond-tipped (DP) panel sizing saw blades from the LEUCO product portfolio are well-known in the industry and are popular because of the long edge lives on the pressure beam machine

During LIGNA 2017, LEUCO will introduce industry professionals to a solution that offers a longer edge life than previous diamond-tipped saw blades. The diamond-tipped cutters have a special LEUCO topcoat coating that considerably extends the already long edge life. When trimming wood materials, the running meter performance has reached a completely new level when it comes to edge life.

The goal of the LEUCO developers was also to de-

sign the tool body so that it is suitable for extremely long periods of operation. The laser ornaments with their special arrangement and shape and filled with a dampening material are the result of intense development work. Users are guaranteed to receive the same high cutting performance and quality throughout the entire life cycle of a saw blade. This new diamond tipped product line with the new laser ornaments filled with a dampening material will be available starting at LIGNA. The marathon cutting tool operators who want to achieve the maximum edge lives choose the blades optionally coated with "LEUCO topcoat"



HELLO!

Our names are "U-Cut" and "Q-Cut", and we are the new families of tungsten carbide-tipped panel sizing saw blades at LEUCO.

**NEW!**

U-Cut (left) and Q-Cut G5 (right)



### My name is Q-Cut or Quality-Cut.

My family is the result of a completely new design and we are perfectly suited for finish cut operations with a horizontal panel sizing saw. Our completely new tool body, for example, distinguishes itself by its excellent vibration behavior, allowing us to run very smoothly. Our high-quality tool body has been combined with the new high-performance cutting material "HL Board O4 plus", and our tooth geometries are the proven G5 and G6 types. All in all, this bundle of features allows us to achieve an edge life that is unprecedented on the market for finish cut operations. Make use of the benefits offered by our three-model family! **We will be available from stock at LEUCO in Horb from August 2017:**

- ! Q-Cut G6: for finish-cut quality with diameters ranging from 280 mm to 520 mm
- ! Q-Cut G6 nn-System: if it is not only the cutting quality that matters, but also minimization of noise
- ! Q-Cut G5: for finish-cut quality in plywood, veneered wood-based materials, panels with sensitive top layers as well as lightweight panels



The diamond-tipped teeth of the new panel sizing saw blades are additionally coated. Customers achieve an edge life that has never been seen on the market.

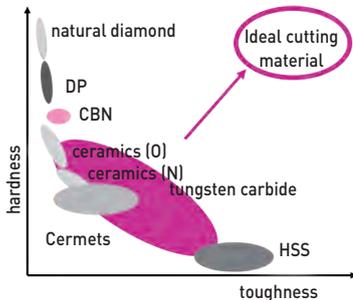
# NEW CUTTING MATERIALS FOR LEUCO TOOLS

## How important is the cutting material for circular saw blades?

At LIGNA 2017, LEUCO will be presenting “HL Board 04 plus” – the new HW cutting material. Dr. Dominique Fendeleur, Head of Research & Development for circular saw blades at LEUCO and Markus Erkenbrecher, Product Manager for circular saw blades, provide information:

### // What cutting materials does LEUCO generally use for saw blades?

Basically, we at LEUCO use three different types of cutting materials for circular saw blades. 98 % of the cutting edges are made of tungsten carbide (HW) or industrially produced diamond (DP). We use ten different HW grades for typical wood and composite materials as well as for nonferrous metal. In terms of DP cutting materials, we can choose between three different grades, depending on the application.



### // Why do you need different cutting materials?

For physical reasons, increasing wear resistance of the cutting material results in decreasing bending strength. With increasing hardness, the cutting materials get more brittle. Vice versa, less hard cutting materials have a higher bending strength. Depending on the application, these two properties have a more or less favorable influence. Polycrystalline diamond, one of the hardest and most wear-resistant cutting materials, is at the same time one of the most brittle cutting materials, causing it to break easily in case of impact.

### // What do these different characteristics in terms of wear resistance and stress resistance mean to the user?

The constant objective is to increase a tool's edge life. Edge life can be improved either by increased hardness to reduce the wear or by increased toughness to reduce the risk of cutting edge breakage. The correlation of these characteristics needs to be matched with the materials to be processed.

HL Solid 15, for example, combines softness and toughness for cutting soft wood, and the new HL Board 04 plus, which is harder but more brittle, is perfectly suited for MDF. The same principles apply to diamond: DP is much harder than HW, but by varying other properties (grain sizes, concentration, grain size combinations, ...), we obtain different DP types for different materials. Optionally, all the various cutting materials can even be enhanced by coating them. This type of coating is well known on the market under the label “LEUCO topCoat”. It increases the tool's edge life and prevents chips from sticking to the cutting edges.

### // How is it possible to enhance a cutting material's properties?

New materials and higher machine feed rates lead to increasing requirements to be met by the cutting edges of the circular saw blades. This, of course, requires cutting materials to be enhanced as well. We communicate our requirements to our carbide manufacturers. The development issues always relate to hardness, toughness, machinability and, needless to say, to the price.

### // How do you test new cutting materials?

A first and important step is to test the material's machinability in our internal production processes. We pay attention to:

- I How does the new material behave during soldering? If the carbide is too hard, it may break during soldering.
- I How does the carbide behave during grinding? If it is too soft or too hard, there is a risk of cracks forming. This involves optimizing the grinding disks and adjusting them to the tungsten carbide. Following an internally standardized method, our development engineers perform standardized wear tests at the LEUCO testing ground.



Dr. Dominique Fendeleur (right) and Markus Erkenbrecher (left) in the interview



Under the microscope: hard metal consisting of cobalt and tungsten carbide. The wear resistance-toughness ratio depends on the proportion between the elements. This, in turn, determines the cutting material grade and its field of application.

Any new material must have passed these first challenging internal tests before it will undergo practical testing. In numerous field tests, it will then be tested by users on their machines in everyday operations. For us, as a premium manufacturer, a new cutting material is synonymous with a commitment to quality.

### // What is behind the new “HL Board 04 plus” carbide type from LEUCO?

HL Board 04 plus is a tungsten carbide specially developed for LEUCO. Its optimized performance results from an unusual combination of components. While its hardness is comparable to that of previous types, the HL Board 04 plus provides better performance in terms of break and impact resistance. This significantly reduces the risk of cutting edge breakage during operation.

### // What kind of saw blades can be covered by this new cutting material?

The special properties of the “HL Board 04 plus” carbide make it best suitable for:

- I “U-Cut” and “Q-Cut”, the new families of tungsten carbide-tipped panel sizing saw blades
- I all conical scoring saw blades
- I sizing saw blades for finish cuts, i. e. blades with a large number of teeth such as the circular saw blades of the g5-System family, for example

It can be used for a multitude of materials, ranging from conventional coated particle boards through solid wood to plastics.

### // What are the customers' benefits?

Given the wide range of product families equipped with the new HL Board 04 plus tungsten carbide, almost all our customers will learn about the benefits of this new cutting material. They will benefit from significantly longer edge lives. Field tests have revealed that the new cutting material increases edge life by up to 30 % compared to previously used carbide materials.

# LEUCO nn-SYSTEM DP FLEX

The „no-noise blades“

The new "LEUCO nn-System DP Flex" saw blades all have extremely small chip gullet spaces! And are extremely quiet when idling and during operation! With a noise level of just around 70 dB(A) when idling, the wearing of hearing protection is virtually a thing of the past.

They surprise the industry by their usability in numerous materials and impress their users by their super cutting quality thanks to their special hollow back tooth configuration (HR); Exception: Scoring saw blades: WS tooth configuration.

And to top it off, they are surprisingly thin! The cutting width is a mere 2.5 mm. The blades generate noticeably lower cutting pressure and therefore also require less power during usage.

The edge lives are measurably longer thanks to the diamond tips. Users profit from the "LEUCO nn-System DP FLEX" on many types of machines such as table saws and chop saws, vertical panel sizing saws, CNCs and through-feed installations.

Whisper-quiet •

Excellent cutting quality •

Longer edge life thanks to diamond •

For different materials •

On many types of machines •



**APPLIED FOR PATENT**



## THE INNOVATIVE DIAREX SIZING SAW BLADES

Well-proven and with a new outfit

DIAREX stands for a DP edge version with an optimum price/performance ratio. Since the market launch in 1992, this version has been enjoying a great popularity and is mainly used on the traditional sizing saw machines.

The complete experience of LEUCO regarding cutting material, tooth geometries and gullet design can be found in these blades: **The LEUCO DIAREX sizing saw blade family has been completely revised and will be presented at LIGNA 2017 to the industry professionals for the first time.**

**The advantage of the new DIAREX sizing saw blades:**

- | Longest edge life: LEUCO is focused on new diamond types and uses them depending on the application and the tooth geometry.
- | Significant reduction of the noise level in the surroundings of the machine
- | Optimized number of teeth depending on the tooth configuration and the application

**As of now, the user can choose between three tooth geometries.**

- | The classic TR-F-FA geometry for the use in raw particle boards and MDF

| The specialist in woodworking chooses the geometry DA-F-FA when for a sizing cut in melamine- or HPL-laminated wood-based panels the focus is placed on the quality of the finish cut.

| Last but not least, the DIAREX sizing saw blade is available with the proven hollow-back geometry (HR). Using this HR version, the cutting of fibrous wood-based panels will result in an excellent cutting quality. During the sawing of abrasive and hard plastics such as e.g. CFRP or GFRP, even during the cutting of magnet bond boards, this geometry is considered to be "particularly suited" and therefore the HR version is also called the "problem solver".



All users of a sizing saw or a vertical panel sizing saw are invited to have a look at the state-of-the-art technology which can be found in the "DIAREX sizing saw blades DP" family. As of July 2017, the blades are available ex stock in the diameters 250, 303 and 350mm.

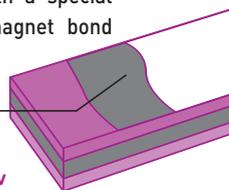
## SAWING MAGNET BOND BOARDS

Saw blades for panels with embedded iron foil or iron mesh



Proven and tested: Saw blades with a special tungsten carbide "Steel 17" for magnet bond boards with iron foil

iron foil



**Well-proven: Carbide-tipped saw blades for panels with iron foil**

In March 2016, the special circular saw blade by LEUCO for the cutting of magnet bond boards has been put on the market. Due to the growing popularity of these panels in the booth building, shopfitting and interior construction sector, the new circular saw blade quickly experienced a strong demand. An iron foil 0.2 mm thick embedded in the laminate provides the high level of adhesive force of these panels. This layer, however, represents the challenge for the cutting tools. After one year, the saw blade with a special tungsten carbide type has given excellent results for this type of material. It is used alone for trimming cuts in laminate and with a support plate for the chip-free sizing of the material and has a long edge life. Thanks to a special type of tungsten carbide, the typical and dangerous sparks which are generated during the cutting of metals are reduced to a minimum. When working with the blade, LEUCO customers do not need to take special precautions. The circular saw blades are still available with a diameter 350 mm for sizing saws as well as a variante for use in horizontal panel sizing saws.

suitable for magnetic panels with iron gauze



For sawing of magnet bond boards with iron mesh, the diamond-tipped saw blade with hollow-back tooth geometry "LEUCO DIAREX HR" is ideally suitable.

**NEW: Diamond-tipped saw blades for panels with iron mesh**

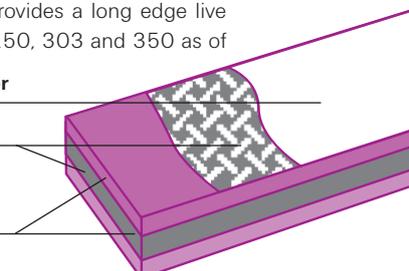
LEUCO carried out various test series regarding the sawing of magnet bond boards with iron mesh together with, amongst others, the renowned Institut für Werkzeugtechnik (IfW) (institute for tool technology) in Stuttgart to find the best solution. The test results provided the confirmation: The diamond-tipped LEUCO sizing saw blade with "hollow-back" tooth geometry is the first choice for a chip-free sawing and a clean cutting of iron mesh fibers. The product family "LEUCO DIAREX DP" provides a long edge live and will be available from stock in the diameters 250, 303 and 350 as of July 2017.

melamin cover layer

iron gauze in

plastic laminate

thin layer



**NEW!**

# PEELING – THE REVOLUTIONARY WOOD PROCESSING TECHNOLOGY



All LEUCO p-System stocked tools have an shear angle of 70°. LEUCO's patent covers shear angles from  $\geq 55^\circ$  to  $90^\circ$ .

• for jointing, rabbeting, dividing, chamfering and grooving on stationary and through-feed machines.

• a brilliant cutting quality presently unmatched on the market

• mostly clearly increased edge lives than common diamond tools

• p-System stands for the greatest possible tool efficiency.

## FINISHED!

Milling with finishcut quality without postprocessing

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



## 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.



Video about LEUCO p-System. Get excited!



## NEW LEUCO p-SYSTEM GROOVE SHANK-TYPE CUTTER

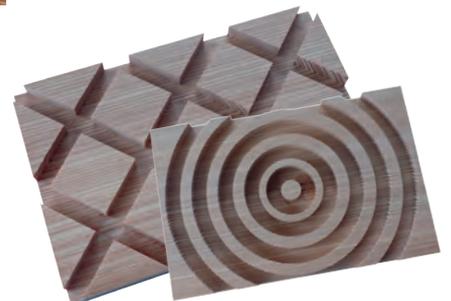
In addition to traditional grooves for rear cabinet paneling, grooves and milling grooves for pilaster strips, (connection) fittings, hinges, assembly plates, etc. rank among the most often used milling processes of a groove shank-type cutter.

At the LIGNA 2017, LEUCO will present the new small dimensions offered by the "LEUCO p-System" shank-type cutter. At the same time, to round out its trade fair exhibits and demos, LEUCO will be showing exciting application samples that were all produced using cutters from the new shank-type cutter product line. At first glance, you wouldn't think that some of the work pieces could be produced by a shank-type cutter. Since grooves are not only cut into the surface, but also on the front and longitudinal edge, this is an interesting area of application for this shank cutter. It is possible to produce flat and deep grooves and milling grooves on almost all surfaces without generating chips.



Chip-free dovetailing using a LEUCO p-System shank-type grooving cutter

LEUCO p-System grooving cutter are available for different grooving widths and depths



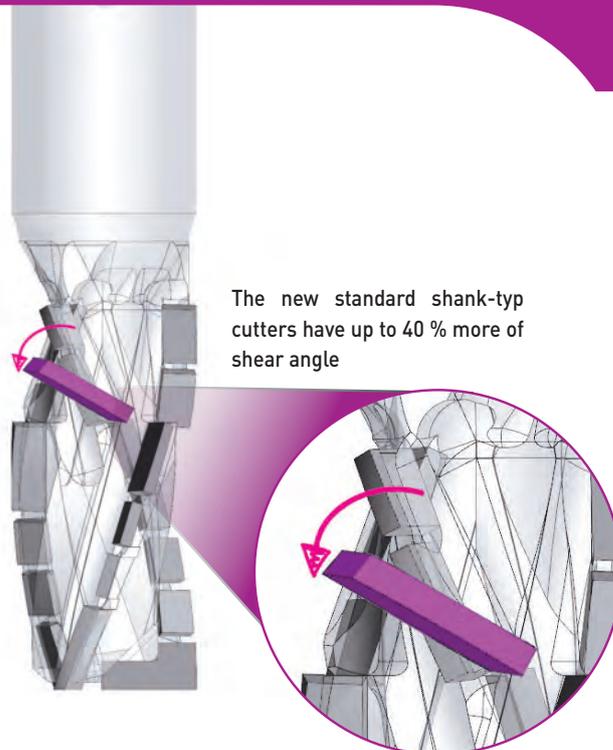
Peeled by a p-System grooving cutter: larch solid wood with diagonal grooves



## NEW STANDARD FOR THE STANDARD PROGRAM

The DP shank-type cutter by LEUCO is provided consistently with new properties

Revolutionary developments are fine for those who make them. And they are very good for those who benefit from them. In the past few decades, LEUCO has set several of such milestones. The last one was the development of the LEUCO p-System. Tools with an extremely large shear angle of 70° and immense advantages regarding quality and edge life particularly, but not only, when used in fiber materials and coatings. The LEUCO patent includes all tools with shear angles of 55° and more. Although sometimes referred to as the world champion of shear angles, LEUCO's first target is not to achieve world records and to set new standards but to integrate the core features of successful developments also in standard tools in order to allow our customers to reach more positive effects and results during their daily work.



The new standard shank-type cutters have up to 40 % more of shear angle

## THE DP SHANK-TYPE CUTTER BASIC PROGRAM WITH A NEW SHEAR ANGLE FOR LONGER EDGE LIFE, HIGHER QUALITY AND MANIFOLD APPLICATION POSSIBILITIES

**"Facelift" for the diamond-tipped LEUCO shank-type cutters basic program! The previous LEUCO program will discontinue. The shear angle specialists of LEUCO developed the new basic program with significantly higher shear angles.**

**The benefit for our customers:**

- | A performance improvement compared with the previously achieved edge life
- | Improved processing quality both in the trimming cut and finish area
- | A wider range of materials which can be processed with the tool

**The proven DIAMAX series Z=2+2 becomes** the new DIAREX Z 2+2. After repeated customer requests, the program has been enlarged by several shank-type cutters with an edge diameter D16 mm and by shank-type cutters with an edge length of 65 mm. In the future, the cutters will have an up to 40% higher shear angle.

**For the high performance cutters Z=3+3, the increase is in the same range.**

For the flagship Z=5+5 for highest feeds, a new edge diameter of D 25 mm is defined and the edges will be angled further by some degrees.

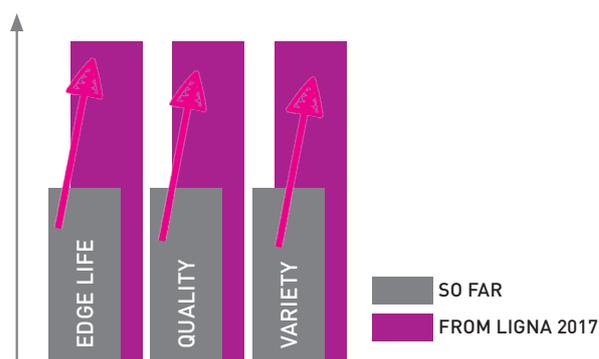
**For the flagship Z=5+5 for highest feeds,** a new edge diameter of D 25 mm is defined and the edges will be angled further by some degrees.

**The high performance trimming router bit program Z=4+2+4** which includes cutters with four different cutting widths ranging from 22 to 48 mm now offers our customers a shear angle of 48°.

The program changeover will be carried out step by step. This will guarantee the smooth transition from the previous product program to the new standard program. You can already now look forward to the new standard!



Longer DP tips: More diamond means longer edge lives



**Acoustic panels – VHW micro drill bits and drill adapters**

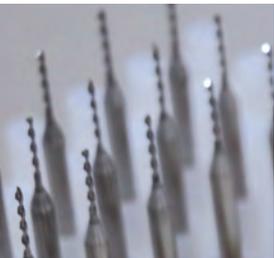


The market for sound-scattering wood-based materials is growing. For the manufacturing of these acoustic panels, 1-mm bores on a 3-mm linear grid have become a standard pattern. Even eagle-eyed observers would find it difficult to spot the fine perforation at a distance of about 1.5 meters.

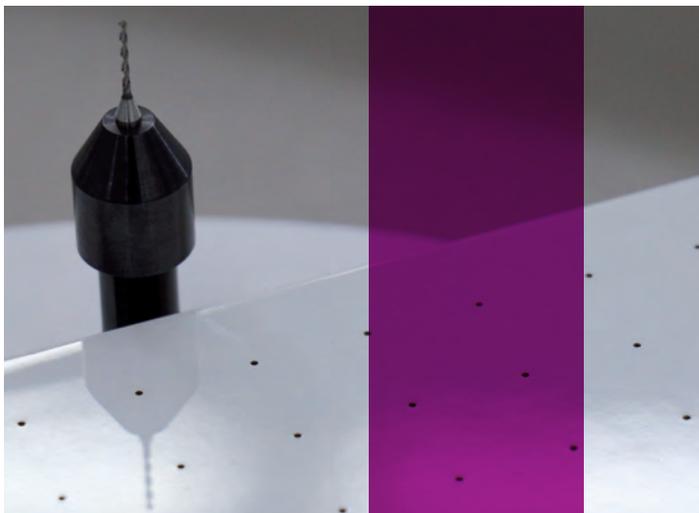
LEUCO has introduced drill adapters specially developed for this purpose. With length adjustment screw and a shank diameter of 10 mm, they are now part of the standard range. The adapter has been designed to guarantee the most common total length of 70 mm (including drill bits) and to allow the delicate micro drill bits to rotate with very high concentric accuracy.

The drill bit range for acoustic panels is complemented by VHW micro drill bits with a diameter of 1 mm, which are available from stock. They are available both for right-hand rotation and left-hand rotation. In contrast to the frequently used conventional multilayer drill bits or similar types, LEUCO drill bits have a different tip angle and a spiral design stabilizing the drill strings and minimizing deviations, thus improving drilling quality and edge life.

The standard dimensions of these drilling experts with their delicate appearance are as follows: diameter 1 mm, length 8.5 mm, total length 38 mm, shank diameter 3.175 mm.



Melamine-coated particle board



MDF high gloss

**Problem solver: Spherical shank-type cutter heads with turnover knives for 5-axes applications**

Developing individual customer solutions is part of our daily business at LEUCO. We present here one interesting example to illustrate this: double-edged, shank-type cutters with turnover knives for cutting of segment-shaped or half-round grooves and relief structures. They also perfectly master operations like in line-by-line milling and finish milling of solid wood, MDF, hardboard and plastomers.

Depending on the application and the workpiece material, the cutter heads can be equipped with profile knives of different tungsten carbide grades to achieve optimal results in terms of edge life and quality of cut. These tools are not part of the standard LEUCO catalog. Please contact your LEUCO representative for further information.



**DP form cutters for fischer® undercut anchor system**

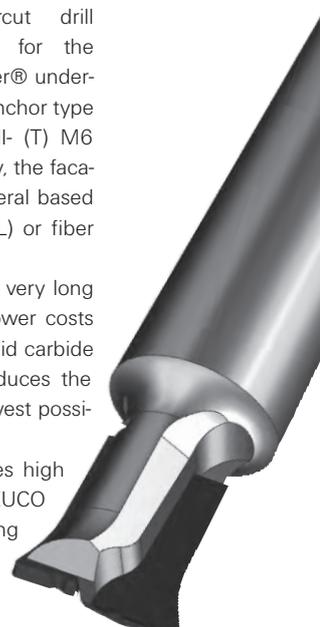


The diamond-tipped cutter is used for the production of undercut drill holes for the fischer® undercut anchor type FZP II- (T) M6

(fischer Zykon panel anchors) Normally, the facade materials to be processed are mineral based materials, high-pressure laminate (HPL) or fiber cement boards.

The cutting material DP stands for a very long edge life and thus for considerably lower costs per hole compared to conventional solid carbide cutters. A special tooth geometry reduces the friction coefficient and ensures the lowest possible heat generation.

A high-strength tool body guarantees high stiffness and excellent stability. The LEUCO topline design offers optimum cutting quality thanks to a special edge preparation.



t +++ NEWS +++ Product range adjustment +++

## New from LEUCO: dowel drill bits and through-hole drill bits - Now with solid tungsten carbide cutting edge

LEUCO is continuing a success story: LEUCO's tungsten carbide (HW) topline dowel and through-hole bits have been unrivaled in the premium segment of the industry for more than a decade due to their unique tooth geometry. The high drilling quality and extremely long edge life of the LEUCO HW topline drill bits are legendary.



The LEUCO Research & Development team has devoted much attention to the enhancement of the existing premium drill bit range. Both the dowel drill bits and the through-hole drill bits were provided with a drill spiral of fine-grained solid tungsten carbide (VHW). The spiral design of the dowel drill bit was optimized.

With the new VHW version, users can benefit from increased edge life compared to the previous HW version. The solid tungsten carbide makes the drill more rigid, which ensures a smooth drilling operation and increases edge life. The improved chip evacuation of the dowel drill bit reduces the risk of double hogging in the borehole. This has another positive effect on the edge life.



## The new LEUCO HW "Light" cylinder head drill Tear-free fitting holes — even at the edges

The new LEUCO Light HW cylinder head drill is a powerful all-purpose device for tear-free drilling of fitting holes and edge holes in solid wood and wood materials. This hard-metal-tipped drill soon will be indispensable in every shop that drills fitting holes on CNC processing centers, automatic drills and fitting drill machines.

The drill contains plenty of intelligent technology, such as a very wear-resistant hard metal for the taper tap, a special taper tap geometry, large chip spaces and a short, effective center point of less than 1 mm. The drill offers a long service life, has outstanding chip ejection, and works with measurably far lower cutting pressure. These features allow the user to use the Light cylinder head drill to bore very close to the bottom cover layer. The center point doesn't poke through. The decoration doesn't arch.

The new LEUCO Light cylinder head drill is available with bore diameters of 15 mm to 35 mm and drill lengths of 57.5 mm to 70 mm, as a right or left version, directly from stock.

**Tip:** The new Light cylinder head drill can bore standard fitting holes faster. The low cutting pressure and good chip ejection make for better performance.

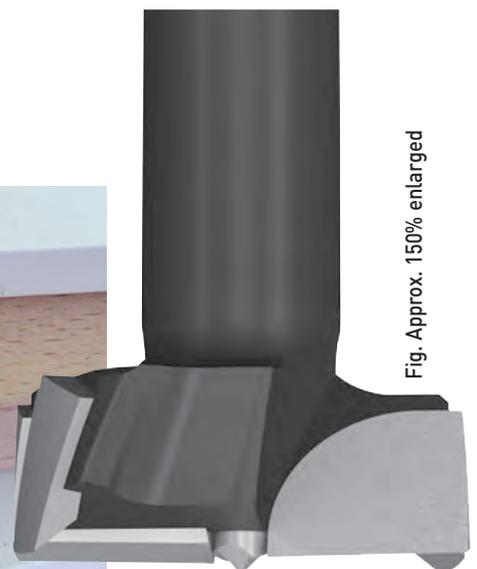
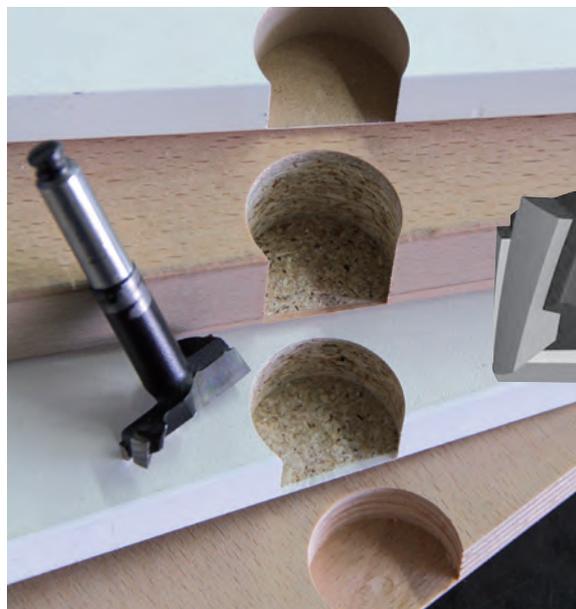


Fig. Approx. 150% enlarged

The new LEUCO Light HW cylinder head drill is a powerful all-purpose device

## Nesting Shank-Type cutter Product Family Welcomes New Applications

### HOW FINE GROOVES ARE GENERATED IN MASSIVE MATERIALS

LEUCO will also be presenting at LIGNA three new diamond-tipped nesting shank-type cutters, especially designed for machining multiplex and MDF support panels. These new cutters reduce the chip volume and, at the same time, enlarge the chip gullet volume in the tool. This guarantees that chip evacuation goes more smoothly, literally. New additions to the DP nesting cutter product family include tools with 12 mm and 16 mm cutting diameters with a special cutting geometry for traditional panel thicknesses.

Diamond-tipped, high performance shank-type tools are commonly used for nesting. These triple-tooth cutting tools ( $Z=3+3$ ) can handle feed speeds of 25 m/min and more for particle board. However, if very dense or very hard materials are machined, such as MDF or multiplex boards, the situation changes noticeably. The volume of the chip material produced by the cut MDFs increases dramatically, which means that the chip gullet in the tool quickly fills up, thus producing more cutting pressure and friction. This, in turn, generates heat, reduces the tool's service life and even the loss of the teeth. The new nesting shank-type cutter product family from LEUCO is a true problem-solver for these applications.



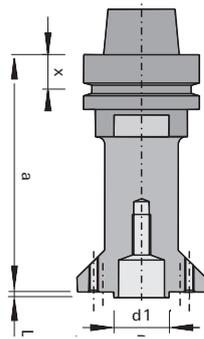
Thanks to a modified cutting geometry, the expanded diamond-tipped nesting shank-type cutter product family meets the special challenges of MDF and multiplex boards as well as similar wood materials.

+ NEWS +++ Product range adjustment +++ NEWS +++ Product range adjustment +++++ NEWS

### HSK63F saw blade adapter for MORBIDELLI Author M100 5-axes machines

We have added to our product range an HSK63F saw blade adapter with a clamping diameter of 70 mm and an a-value of 70 mm, being a good alternative to the longer standard version with  $a = 130$  mm. In particular, for the new MORBIDELLI Author M100 machine type, this version with an a-value of 70 mm is a "must have".

In combination with an HW circular saw blade of the "LEUCO g5-System" type or a DP saw blade of the "LEUCO nn-System" type, the machine is perfectly equipped to handle the wide variety of today's materials!



### New chip turbine "AEROTECH UNI-T"

The "AEROTECH system" is both an innovative, highly precise clamping element and an extraction turbine. This system conducts the dust immediately and directly into the dust hood, ensures the maximum efficiency of the extraction, avoids a double hogging and the cutter is cooled.

With the AEROTECH UNI-T, LEUCO presents the successor of the previous AEROTECH UNIVERSAL chip turbine. The collet chuck technology is replaced by a system with internal collet nut that has been successfully used for many years together with the particularly long clamping chucks of the LEUCO program. In contrast to the previous system, the clamping operating is done at the front side of the system and allows a higher tightening torque. This results in an even higher clamping force and a more precise concentricity of the tools used.

Just like the AEROTECH HYDRO systems that are equipped with hydro expansion clamping technology, the new UNI-T series is available in two different versions: as standard version with open interior space and as "faceplate" version which is specially designed for the use in nesting applications and where panel debris cannot enter inside the turbine.



### LAMELLO CLAMEX P® DP grooving cutters for HOMAG Flex 5 / Flex 5+ and BIESSE aggregates

Users of HOMAG Flex 5 or Flex 5+ aggregates and BIESSE groove aggregates will be happy about this: LEUCO adds two further products to its range of diamond-tipped grooving cutters for the LAMELLO CLAMEX P® joining system. As of now, the tools with 40-mm (HOMAG) and 35-mm bore diameters (BIESSE) and the corresponding pin holes and countersinks are also available ex stock.



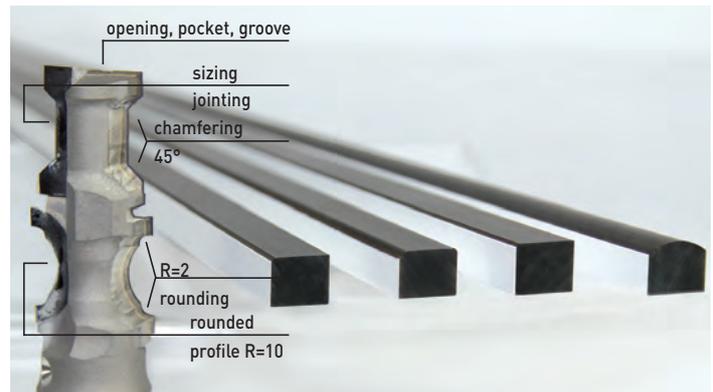
Processing HPL and mineral-based panels:

## NEW AND FLEXIBLE CUTTER CONCEPTS FROM LEUCO

LEUCO offers from stock diamond-tipped cutters for specialized processors of solid core panels and mineral-based panels, who work with clearly defined panel thicknesses, chamfers, or radii. LEUCO recommends these tools for standardized tasks in the milling of large quantities of materials. The new flexible concepts are perfectly suited for... the production of small series, covering a great variety of materials to satisfy the requirements of a wide range of customers. Rounding, chamfering, jointing etc. is performed individually for the customers according to the dimensions specified by the panel processors. The manifold application possibilities spare users from operating multiple individual tools and taking up valuable tool changer places on the CNC machine.

### 1 flexible cutter for 5 applications: jointing, chamfering, rounding, profiling and pocket milling of solid core panels and mineral-based panels

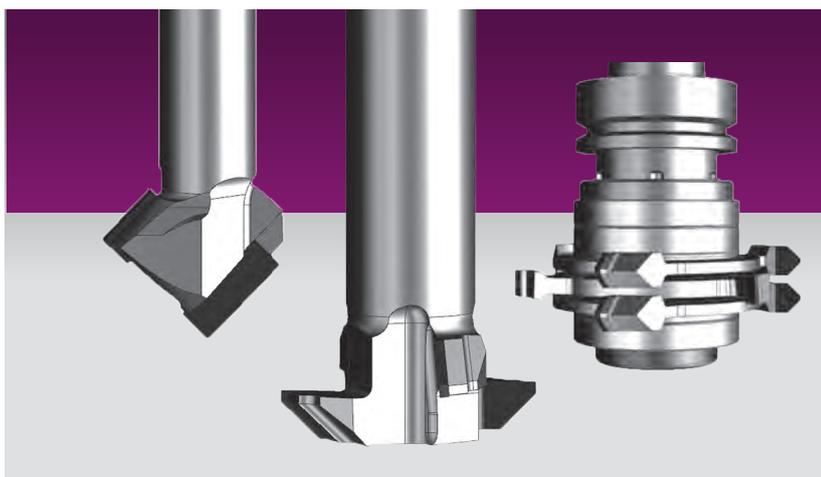
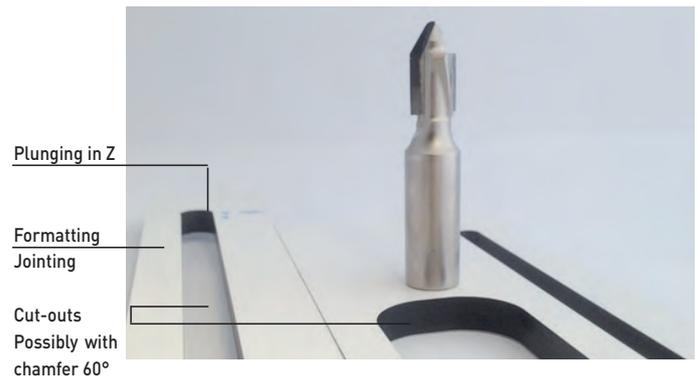
With the diamond-tipped shank-type cutter, users can now joint, chamfer, round, and mill rounded contours on solid core and mineral-based materials. In addition, the cutter's plunge tip allows for plunge-cutting, e.g. for pocket milling, thus making it a 5-in-1 solution. Chucked in a precision clamping device, it is possible to create chip-free, smooth edge surfaces without grooves. The diamond tips guarantee the longest available edge life with these abrasive materials.



### Flexibility in drilling and countersinking, milling and chamfering

Another application example of a multifunctional milling cutter: chip-free through holes with a diameter of 8 mm drilled in the z-axis and, if necessary, countersunk as well. Enlarging hole diameters? Not a problem. Smaller openings with top chamfer at the same time? Not a problem either. What diameter do you prefer?

One for all: drilling, countersinking, milling, chamfering



From left to right: Z=1+1 chamfer cutter, Z=2+2 chamfer cutter jointing/chamfer cutting set and Z=3+3+3 chamfer cutter

### Flexibility in chamfering

In addition to the stock range of diamond-tipped tools for "Sizing" and "Rounding", we can now supply from stock three tool solutions for "Chamfering".

The "small" single-edge cutter is ideally suited for chamfering the upper or lower side of small workpieces or small openings in two cycles.

With a diameter of 50 mm, the "medium-sized" double-edge cutter allows for higher speed rates and neat machining of upper and lower panel sides.

The three-edge milling cutter, in contrast, is the perfect solution for large-sized workpieces. Simultaneous jointing and chamfering (top and bottom) in one operation is made possible by this modular cutter set "Z=3+3+3". It can be set for panel thicknesses of up to 10 mm or even 20 mm and operated at high feed rates.

By the way, the symmetrical chamfer cutters can be used on both sides, which means double edge life for each tool.

**Are you interested?** These cutters are not included in the LEUCO catalog; please contact LEUCO directly for advice on tool selection by specifying the desired dimensions.

## THE PALM FULFILLS THE MEGATRENDS OF OUR TIME

Leightweight, low priced, infinitely available and renewable



**Hidden treasures still exist today. One of them is the palm wood. Woldwide there are about 800,000 ha of palm wood which must be renewed every 25 years. That means 32,000 ha every year. This is estimated to be approx. 110 million cubic meters of palm wood per year. That is double the amount of wood cut in Germany every year. And nobody makes use of it.**

### WHY THERE IS SO MUCH WOOD?

The oil yield of an oil palm decreases significantly after 25 years and the palm must be replaced. It is good to replace it because otherwise even more rain forest in the Asian countries would be destroyed to provide land for new palm plantations. For this reason, it is much better to replace the old palm trees with new and more profitable palm sorts. At present, this is not always done since nobody knows what to do with the old palm trees.

The palm wood, thus, is a raw material which exist in abundance and nobody makes use of it. Now we come to the next megatrend: products for the mass market must be low-priced. High supply and low demand lead to a low price for the palm wood.

And there is a third megatrend which is evident when considering the features of the palm wood. It is very light and fulfills the trends toward leightweight construction materials. Palm wood, although only slightly heavier than balsa, is a wood and not a lightweight construction material with air holes such as, for example, honeycomb panels. It is possible to turn in a screw.

**Meanwhile, the potentials of palm wood have been thouroughly examined.**

**Palm wook is ideally suited as light core layer of a stable panel that can be furnished with a top layer of any material. The top layer stabilizes the panel against**

We at LEUCO manufactured various panels and panel structures and examined them. All furniture applications can be realized. The material can also be used, for example, as a door panel. Despite the lower mass, the same sound insulation as with a tubular chip board can be reached.



sagging, the palm wood ensures a low weight. In the meantime, a large door manufacturer produced sample doors in regular production. The door was 3 kg lighter than a comparable conventional door.

To use the complete potential of palm wood, the challenges of the palm wood processing must be overcome. In this field, LEUCO has performed a lot of development work. Now we can say that the processing of palm wood which is indeed very challenging is possible thanks to the use of LEUCO tools.

Now we ask the users:

Which are the products in which you want to use palm wood as a light, available and low-cost material which also meets the current three megatrends? We are eagerly awaiting your ideas. Talk to us and contact directly our Project Manager Palm Wood and Head of Research, Dr. Martin Dressler: martin.dressler@leuco.com



For many years, our industry segment wondered whether palm wood can be processed at all. The answer is Yes. LEUCO proved the workability. There is nothing more to prevent the use of palm wood. Examples: Panel with palm wood in the core layer and top layers of particle board or MDF or palm wood in all layers glued crosswise with plywood.

## PACMAN-WOOD

"IT LOOKS LIKE PACMAN"



### COMPACT KNOWLEDGE

Palm wood is formally not a wood but a grass. When examined under a microscope, hard and woody fibers can be detected. These fibers are very long and give the wood its strength. In the cross-section, they look like the first Pacman computer games. These fibers are embedded in a very soft cell matrix which can easily be compressed.

For this reason, the processing is very challenging. The fibers must be cut exactly without crushing down or ripping the cells during processing. For this, special tools are required. We will tell you the secret: the cutters need an extremely large shear angle and the saw blades must be provided with a g5 or nn-System tooth geometry. Both can be provided explicitly by LEUCO.



## NEW GEOMETRY BRINGS SUCCESS

Redesigned milling cutters reduce chipping on the trailing edge and achieve longer service lives

For almost two years, machine operators at Abies Austria – a manufacturer of quality laminated timber located in the Upper Austrian town of Oberweis – have been working together with companies LEUCO and Oertli on redesigning finger joint cutters. These machines are manufactured by LEUCO and distributed through Oertli. The goal of this collaboration right from the start was to reduce the chips on the trailing edge while also extending the service life of the cutters. And it was a resounding success reports the Abies Austria Managing Director Günter Hessenberger:

“Due to heavy chipping on the trailing edge of the cutter, the machine was no longer meeting our needs and expectations,” he explained. So the company subsequently began looking for a partner that could provide a solution to this problem.” Working together with Oertli, distributor of LEUCO products in Austria and also a manufacturer of wood processing tools in its own right, engineers looked for ways to improve the machine. While redesigning and developing the new milling cutter, Oertli engineers took into account the local operating conditions, such as cycle time, the glue used and the control parameters. Ultimately, they wanted to achieve a higher processing quality but with the same production capacity.

### New tooth geometry

The project was divided into two phases. During the first phase, engineers worked on the tooth geometry and, during the second, LEUCO developed a new tool coating. “In changing the tooth geometry, engineers focused on making the way the cutting edge engages more efficient,” adds Roman Edelhofer, key account manager at Oertli. In the process, engineers also took into account the fact that the new wedge shape facilitated



The project partners: Roman Edelhofer, key account manager at Oertli LEUCO and Günter Hessenberger, managing director of Abies Austria, with the redesigned finger joint cutters (from left)



Aside from the finger joint cutters, LEUCO supplies Abies Austria with circular saw blades. Hessenberger and Edelhofer with a circular saw blade in a customized design.

With the new finger joint cutters, the company has been able to reduce chipping while achieving the same high surface quality. According to Hessenberger, the edge life increased by roughly 20% (left). The redesigned tooth geometry ensures sufficient clamping force between the finger joints (center). The company has now achieved a clean surface with the new system (right).



sufficient clamping for fiber-free glues. These glues are used at Abies Austria because they indicate no swelling behavior and also because they extended the service lives of the planing knives. "It did not take us long to find the right tooth geometry," reports Edelhofer.

### Resilient coating

LEUCO's engineers subsequently developed a new tool coating that further extends the cutter's service life. "This involved finding a middle way between coating thickness and the swelling that develops as a result and the service longevity," explains Edelhofer. During the tool production process, engineers evaporated the coating onto the cutting edge using a vacuum process which rounded the edge to a certain degree. By grinding the face of the cutting tooth, LEUCO ensured the new tool's high precision. This additional work step in producing the cutter has paid off several times over for the customer," says Edelhofer: "The finger joint cutters used always have sharply ground teeth, either as a new tool or after being sharpened." The protective coating is extending the tool's edge life and thus doing what it was designed to do. "Taking all needs into account, we succeeded in finding a good solution. As a result, we are benefiting greatly from our experiences with coatings," indicates Edelhofer.

### Edge life +20 %

"We are satisfied with the result. The modifications we made have increased the service life by roughly one-fifth. At the same time, the surface quality improved. Given these improvements, we also made sure that the costs remained transparent," explains Hessenberger.

### Broad range of products

The broad product portfolio from Abies Austria covers not only quality laminated timber, but includes ready-to-build construction kits for garden sheds and carports. To be able to produce the construction kits ourselves, the company invested in a refurbished Hundegger K1 joinery machine in 2014, which is used to produce any and all necessary joinery connections. In the past years, the managing director observed that a certain breadth in the range of products and services was becoming increasingly important. "Wood processing is getting increasingly complex. For certain projects, it is important to have a broad range of products because you only get the contract if you can handle the entire order," explains Hessenberger.

### From finger joint cutters to joinery tools

Since the joint development project, LEUCO now also supplies the company with circular saw blades, primarily in special dimensions. These are adjusted to the application parameters in the machine fleet. Furthermore, LEUCO also supplies Abies Austria with coated and uncoated planing knives. LEUCO believes that to achieve outstanding customer satisfaction, not only good consulting prior to purchase is decisive, but also good follow-up service. Therefore, a service employee from its distributor Oertli stops by weekly and takes care of the tools by dropping off sharpened blades and picking up those that need to be sharpened. LEUCO is already developing new tools and coating systems. Oertli is also increasingly taking care of Abies Austria's CNC joinery tools. Edelhofer also mentions the LIGNA trade show where both manufacturers intend to present new products.

Article published in Holzkurier issue 15/2017

## FACTS

Location: Oberweis, Austria

Founded: 2005 Employees: 43

Products: quality laminated timber in visible and non-visible quality  
Timber framing, log-house timber and finished construction kits, carports

Abies Austria was founded in 2005 by Andreas Maxwald and Günter Hessenberger. It has been producing quality laminated lumber in the Upper Austrian town of Oberweis since 2006.



At the customer's request, the company order picks the goods



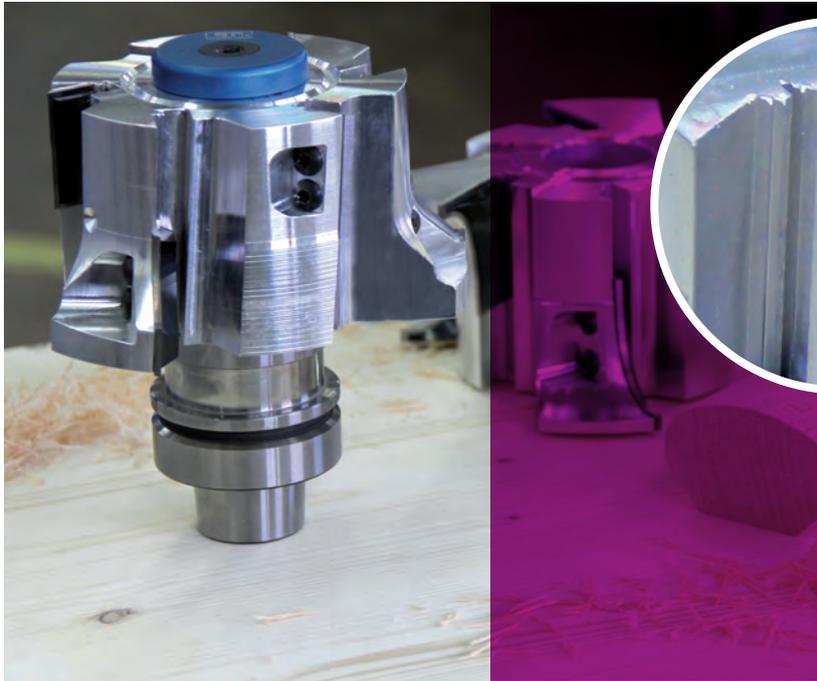
After planing, the quality laminated timber is cut to the desired length



Joinery work is also part of the range of services provided by Abies Austria. For example, the company offers construction kits for garden sheds and carports

## HIGH-PERFORMANCE CUTTER HEAD „ULTRAPROFILER PLUS“

Change cutting knives manually, fast and with highest precision



The new LEUCO cutterhead "UltraProfiler plus" enables a cutting speed of up to 80 m/min. Thanks to the new clamping set-up the user can change the cutters manually with the highest precision.

The knives on the **new high-performance cutterhead "UltraProfiler plus" from LEUCO** are changed manually yet quickly with the highest level of precision. With the innovative cutting insert clamp the knives position themselves on their own without clearance. The user requires max half a minute for the change. The blades have a precise and firm seat; the safety of the head is guaranteed.

This way the new UltraProfiler plus reaches a cutting speed up to 80 m/s. With its aluminum base frame, the cutterhead is used in double end tenoners and molding machines as well as in spindle molders and machining centers to shape solid timber and wood materials. The cutterhead body and mounting plates will be profiled according to customer specifications.

## PLANING KNIVES WITH „LEUCO TOPCOAT“ COATING FOR TRIPLE EDGE LIVES

**NEW!**



From middle 2015 the new LEUCO planing knives will be available optionally coated by „LEUCO Topcoat“ – a quite young but already proven special coating by LEUCO. Probandes were enthused by the triple edge lives compared to uncoated knives. The new „LEUCO TopCoat“ coating effects a anti-adhesion property of the planing knives and avoids unwanted heating.

The coated knives are for use in all common planing cutter heads. Resharpener can easily be done and without any damaging of the coating. After resharpener the knives reach the triple edge lives again and additionally increase the profit.

### Proven Coating

For two years now the „LEUCO TopCoat“ coating wows the branch on fingerjoint cutter by their triple edge lives. The coated jointing cutters are used for jointing softwood, as well as hardwood.

The coating basically prevents wear of the cutting edge. The LEUCO Top-Coat coating will become an integral part of the LEUCO offer for processing solid wood.

**LEUCO  
TOP  
COAT**

## LEUCO JOINERY PROGRAM

Planing, folding, grooving or cross-cutting and trimming



### New trimming cutterhead "LEUCO surfCut" with finish quality

Regardless of whether planing, folding or grooving, the LEUCO cutterhead surfCut can do almost any kind of cutting thanks to its lined arrangement of cutting edges. During an independent customer test, the LEUCO trimming head demonstrated a service life of up to four times longer than other conventional trimming heads on the market.

The issue of sustainability played a major role in its development. Due to the new cutting geometries in the exchangeable inserts, there is less wear and tear and therefore a considerably higher service life. Not only are time-consuming setting-up times reduced, but also the exchangeable inserts are used one-quarter less. Furthermore, the gullet geometry of the aluminum body has been designed for large chip volumes as required by the application.

**LEUCO**  
surfCut

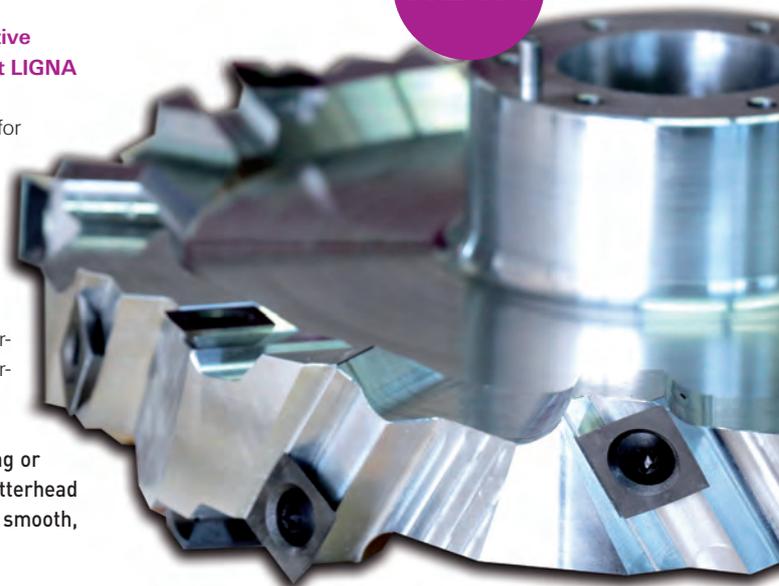
**NEW!**

### LEUCO will introduce its innovative trimming head for the first time at **LIGNA 2017**.

This tool is immediately available for timber construction operations and carpentry shops with a well built-up base tool program. Parallel to this, the new geometry can be applied to other milling systems.

All in all, the new LEUCO surfCut presents itself as a powerful cutterhead with an excellent price/performance ratio.

Regardless of whether planing, folding or grooving, the new LEUCO trimming cutterhead surfCut is sure to excite due to its smooth, chip-free surfaces and long edge life.



### Double clipping saw blades

In addition to the surfCut, LEUCO offers the product family of double clipping saw blades HW with cooling slots "WSA" for clipping and shifter cuts on joinery machines. The combination between the cutting material HL Board 10 which gives the edges an extremely high bending strength and hardness and the "WSA" geometry guarantees the user a very good cutting quality and a long edge life. The blades are designed for the use in soft and hard, dry and naturally humid solid woods. Blades in the diameter range from 350 to 800 mm are available ex stock.

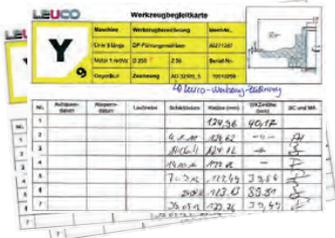


# DIGITAL TWIN OF THE TOOL Toolcloud

The trend towards "Industry 4.0" and the digitalization is unmistakable. Everywhere we look, information technology is increasingly finding its way into our lives and determine our daily routine. Even in our industry segment, systems are growing together, communications and interfaces are established. They are the best condition for the DIGITALIZED TWIN of the tools.

### Management by "slips of paper"

Today, the processes are mainly characterized by manual procedures and data collection. The tool data are stored and maintained in local systems which work independently of one another, such as paper forms, ERP systems or Excel lists. A tool is often accompanied by a so-called accompanying document where the respective technical nominal and measured data, drawings, etc. can be found. As soon as the tool is taken out of the packaging, it is often difficult to transmit the tool data to and into the machine. Every production planner and machine operator knows the sources of error and the amount of work. Up to now, this kind of tool management was, for lack of other possibilities, almost without alternative.



Every production planner and machine operator knows the sources of error and the amount of work entailed by the manual tool management. Up to now, this procedure was, for lack of other possibilities, almost without alternative.

### Management by a "digital twin in the cloud"

In the future, a digital image of this tool will be created in parallel over the complete LifeCycle. That means that a digital twin of the true cutting tool is created for the entire service life. Such a documentation had not previously been possible.

At LIGNA 2017, LEUCO will present this new digital tool management solution including a functional app as a Beta version. From the master data creation to all processes in the customer's plant (stock management, machine data collection, etc.), all data are stored in the "data cloud". It is known that a tool goes through several repair/sharpening cycles and can, therefore, be repeatedly found in the service department and in the customer's production. The new tool management takes these processes also into account.

The app is used to record digitally each process ("event") on and with the tool and to store it in the data cloud. The "location" of the tool, for example, is recorded, too. By this, the current location of the tool is always documented regardless of whether it can be found in the machine, in the service department or in the warehouse. In the way in which the true cutting tool changes during its service life, the data of the digital twin are recorded and updated over the whole life cycle of the tool. Since all data are stored in the cloud, there is the possibility to call and evaluate the data everywhere and anytime in real time and to take appropriate measures.

The function "Read an Object" allows the user to scan a respective object and to call information such as measured data, drawings, current status information, etc. belonging to a tool. The functions "Aggregate" and "Disaggregate" carry out "marriages" and "divorces". Tool adapters get "married" to tools, tools to machines or motors or "divorced" from them. At the same time, each recording process is accompanied by data which are important for the aggregation: in case of a "marriage" of an adapter to a tool, these are new measurement and application data. In case of a "divorce" of a tool from a machine, the number of manufactured pieces or the running meters are documented. Using the function "Location", a storage location can be assigned and the receipt and the issue of the tool can be recorded; the app can be used on a mobile phone or a tablet.



### Digital tool management in practice

In order to make consistent records via the app, LEUCO makes the master data of the tool available in the cloud. The user registers his machines and storage locations. The individual objects, such as tool, tool adapters, motors, or machines are clearly identified by means of a datamatrix code or a RFID chip. The data matrix code or RFID chip contains a serialization number which is unique in the world. The data are not stored on the objects but only the unique identification via data matrix or RFID. The data of the objects can be found in the data cloud. Since only the unique number of the object is transmitted, the user has a certain degree of independence.

Due to these events / record procedures, the individual process steps can be reported consistently. The digital twin represents a transparency without precedent and offers new possibilities in the tool world – and paves the way to DIGITALIZATION.

### Advantages of the LEUCO solution

- | Trend-setting tool management in this industry segment
- | Data model applicable for all tools independent of LEUCO
- | Consistent reporting of the individual process steps in real time



### Information

- | Data storage in a safe, neutral and platform-independent cloud
- | Data model in compliance with the VDMA standard sheet 8849: this directive clearly defines all dimension-relevant attributes such as diameters, lengths, cutting widths, and others. These attributes have been standardized by all machine and tool manufacturers and ensure the manufacturer-independent communication between machine and tool.
- | The basic and clear identification of the numbers which are unique in the world are guaranteed by the SGTIN (Serialised Global Trade Item Number) of the standardization service GS 1 Germany GmbH.
- | The solution regarding the digital tool management has been developed together with other project partners in the supported Tool Cloud project

# LEUCO SERVICEBOX

New Sharpening Service Box enjoys high demand



The "LEUCO Sharpening Service Box" helps our customers get their tools sharpened when the time comes. The service box and pick-up service reflect LEUCO's usual high performance and reliability and gives the customer greater flexibility.

Customers place the dull tools in the service box to indicate they are in need of sharpening, then uses the LEUCO hotline to initiate a pick-up order for the tools. Within 48 hours, the service box is picked up by the package courier at the customer's office and is delivered to the LEUCO ServiceCenter for sharpening. There, the tools are sharpened and restored to original equipment manufacturer (OEM) quality. The customer gets the service box back with the freshly sharpened tools within 9 days.

LEUCO's specially-designed service boxes are made of plastic and come in two different sizes. Up to 13 saw blades can be transported from the customer's production facility to the LEUCO ServiceCenter in these light but stable service boxes. The box can hold saw blades with a maximum possible diameter of 450 mm.

# MAGENTIFY YOUR SHARPENING SERVICE!

OEM-quality sharpening service from LEUCO



Take a look at the new LEUCO sharpening service video to see how a dull tool moves through the most various process step in

the ServiceCenter to become a freshly sharpened precision tool in OEM quality. To watch, go to the LEUCO YouTube channel under

>>> [www.youtube.de/leucotooling](http://www.youtube.de/leucotooling) <<<

Long-term expertise in German ServiceCenters:

## 60 YEARS OF LEUCO SERVICE IN HERFORD IN EAST WESTPHALIA



In 1957, LEUCO selected Herford as its location in the German top furniture-making region of east Westphalia. After several location changes in Herford, LEUCO has had its headquarters in Hertzstraße in Heidsiek since 2001. Seven days a week, three shifts a day is what it takes to restore the customers' tools to OEM quality. Experienced technicians and the best possible equipment guarantee the high-quality sharpening service.

## 50 YEARS OF LEUCO SERVICE IN THE LOWER BAVARIAN CITY OF STRAUBING



LEUCO opened its doors for business in Straubing in 1967. Throughout the years, the important Bavarian location developed together with the growing challenges of the customers. The ServiceCenter kept reaching its limits and moved several times into larger spaces. Nowadays, the state-of-the-art sharpening center provides sharpening services for tungsten carbides and diamond-cutting in Breslauer Straße in Straubing. Its plant operates in three shifts so that the expert technicians there can restore customer tools to OEM quality.



# TECHNICAL SYMPOSIUM "MATERIAL DIVERSITY AS A CHALLENGE"

Woodworking experts convened at LEUCO

The guests invited to the technical symposium were managers from LEUCO's customers, including kitchen and furniture manufacturers, shop fitters, machine manufacturers, colleges and specialist publications.

The modern furniture manufacturer no longer lives from wood alone. Diversity of materials opens opportunities for design but also brings with it complexity. Around 80 experts from the German wood and plastic machining sector accepted the invitation from LEUCO to convene at the second expert symposium in Horb am Neckar in late October 2016.

In his opening remarks, Daniel Schrenk, LEUCO's Director of Sales and Marketing, introduced the theme of the symposium "Challenges of material diversity" in the industry. While furniture manufacturers are able to differentiate themselves through material, look and feel, at the same time there is also a desire to effectively manage the growing amount of variety in terms of choice

and production. LEUCO will continue to do everything it can to support the excellent ideas generated by its customers by developing good tool and system solutions. In his opinion, the trend towards diversity is a mirror of our complex society, and material diversity is the logical consequence of this.

Renowned speakers representing material and machine manufacturers, research and academia, experienced furniture manufacturers and representatives from LEUCO subsequently outlined the latest concepts and developments from their perspectives.

The attendees exhibited a great deal of stamina and stayed focused right up to the end of the final presentation. The moderator, Dieter Rezbach (Managing Partner of Lignum Consulting), emphasized the outstanding international leadership of Germany's wood and furniture industry and of its suppliers of machinery, tools and hardware hinges. Constantly providing groundbreaking innovations, also in terms of new materials, will aid them in maintaining a leading role in this difficult field into the future.

Many thanks to the colleagues at LEUCO, who contributed to the success of this impressive event.



**Andreas Schmutzler, Managing Director, D. Lechner GmbH kitchen worktops:** The furniture manufacturers must take it upon themselves to decide the extent to which they accept and even desire material and variant diversity.



**Daniel Schrenk, Director of Sales and Marketing at LEUCO** While furniture manufacturers are able to differentiate themselves through material, look and feel, at the same time there is also a desire to effectively manage the growing amount of variety in terms of choice and production. LEUCO will continue to do everything it can to support the excellent ideas generated by its customers by developing good tool and system solutions.



**Dr. Martin Dressler, Head of Research / Business Segment Development at LEUCO:** CFRP processing belongs in the hands of woodworkers - they are the ones who have always worked with fibrous workpiece materials.

## Statements about material diversity in the industry made by the attendees:

This won't be boring. We'll tackle it!

Variant management concerns everyone, for batch sizes of 1 and very difficult for all materials

A very broad array of material diversity, everyone has to decide on the amount/variety.

Very interesting. However, one also gets the impression that even end customers are overwhelmed by the terror of too many possibilities.

The symposium has changed our way of thinking. It's very important to exchange ideas with suppliers and partners in order to find solutions.

LEUCO received expressly positive feedback for the symposium from the experts. The LEUCO expert symposia series will be continued in order to share the latest ideas, developments and findings from the industry with industry professionals.





Andreas Rinke, CEO of Technik IMA Klessmann GmbH: Manufacturing furniture parts in a batch size of 1 is becoming increasingly standard demand for our clients. This always brings with it a diverse array of challenges for the production processes and in terms of respecting the diversity of the materials slated for processing including all of their specific characteristics.



Ewald Westfal, General Manager Technology at LEUCO: From one piece of steel or aluminum all the way up to a solution provider for our clients, that's our conviction for producing tools.

Wolfgang Kettner, CEO of Kettner GmbH & Co. KG, a manufacturer of furniture: The beauty in a piece of furniture is not only determined by its shape, its color or its materials, but also by the amount of enjoyment it provides people in their everyday lives.



In his summary, moderator Dieter Rezbach, Managing Partner at Lignum Consulting, emphasized the outstanding international leadership of Germany's wood and furniture industry and of its suppliers of machinery, tools and hardware hinges. Constantly providing groundbreaking innovations, also in terms of new materials, will aid them in maintaining a leading role in this difficult field into the future.



Manfred Riepertinger, Head of Product Management raw materials and environment, EGGER Group: As a producer of materials, we implement market trends into our wood-based panels. The total package, comprised of feel, accessories and logistics, must suit our customers.



THE SYMPOSIUM HAS CHANGED OUR WAY OF THINKING. IT'S VERY IMPORTANT TO EXCHANGE IDEAS WITH SUPPLIERS AND PARTNERS IN ORDER TO FIND SOLUTIONS.

STATEMENT OF A GUEST



Elko Beeg, CEO of Sachsenkuchen Hans-Joachim Ebert GmbH: Furniture manufacturers are faced with the challenge of developing the right solutions that allow them to efficiently master continually growing product diversity spurred by ever an increasing desire for individualization on the part of customers.

Frieder Schuler, Director Technical Sales Systems, HOMAG Group: Along with the material mix, manufacturing companies today are also particularly confronted with challenges posed by exacting demands for full flexibility in terms of dimensions and processing sizes. Modern, automated and self-sufficient production methods can also economically be carried out in places with high salaries such as Germany and even ease the shortage of skilled workers.



Dr. Dominique Fendeleur, Head of Research / Development saw blades and finger jointing tools at LEUCO: With circular saw blades, the technical details and refinements often aren't apparent at first glance. We constantly carry out improvements and developments for this product family - as we do with all other tool families - in order to satisfy the demands set by new clients, materials and trends.

New Managing Director at LEUCO France

## JEAN-MICHEL PETER



Since the 1st March 2017, Jean-Michel Peter has been the new Managing Director of LEUCO Sarl (Ostwald near Strasbourg) At the same time, he has become Sales Manager for the French market. Jean-Michel Peter, 52 years, began his career in 1989 at the production site of LEUCO in Beinheim, Alsace. At LEUCO Production, he had several functions in the design and programming department and was leader of the technical office. In 2004, he entered the sales organization LEUCO Sarl and gathered a lot of experiences in the sales sector. Lastly, he was the leader of the Application Engineering. Thanks to his 30 years of experience, he is a specialist in the tool spectrum and understands the requirements of our customers. "My aim is to make the development of the company and the customer support fit for the future" explains Jean-Michel Peter.

LEUCO Sarl was founded in 1960, has 60 employees and is successful on the French market. The ServiceCenters are located in Meyzieu, Ballan Miré, Ostwald, and Vitrolles.

## LEUCO RECEIVES GERMAN BRAND AWARD FOR EXCELLENCE IN BRAND MANAGEMENT



Wolfgang Maier, Head of Marketing (LEUCO), receives the German Brand Award 2016 for successful brand management in Berlin

At the first "German Brand Award" offered by the German Brand Institute in cooperation with the German Design Council, LEUCO was recognized as the 2016 winner for the category of "Industry Excellence in Branding". With this, LEUCO is among the best product and company brands for the category of "Machines & Engineering" in the entire industry. "The LEUCO brand," according to the jury of the German Design Council, "stands for innovative strength and the highest quality that is made in Germany." This award is a distinction for successful brand management and sustainable brand communication. Only companies nominated by the German Brand Institute, its brand scouts and expert committees were permitted to take part in the competition. The award ceremony took place in mid-June at the Volkswagen Forum in Berlin.

"Special Mention" for LEUCO jointing cutters

## DESIGN AWARD FOR THE FUNCTIONALITY OF THE LEUCO SMARTJOINTERS



Benjamin Sitzler, developer of the SmartJointer, and Oliver Galli, director of the R&D department, are pleased about receiving the "Special Mention" at the German Design Award.

It is a fact. The term "design" makes technicians think of a guy in a turtleneck who enthuses about a beautiful thing. The opposite is the case. Technology and design complement one another perfectly. It is a product designer's task to provide a beautiful product for free. And this is exactly what design means in the tool technology. The functions are put together in such an intelligent way that a successful solution for the customer is generated. In February 2017, the German Design Council awarded LEUCO in Frankfurt with a "Special Mention" of the German Design Award for the jointing cutter "SmartJointer". Its "smart" features such as low weight, low noise and multiple use were the reasons for the nomination for the contest. The "Special Mention" rewards especially the multiple use of the aluminum body.



# A JOURNEY OF A THOUSAND MILES STARTS WITH THE FIRST STEP

Chinese Way is fast and fearless

The past 20 years of achievements laid a good foundation for our future development. In the next 20 years, LEUCO China will have to face other demanding tasks and situations and will take advantage of the opportunities and challenges to find new ways and to move consistently ahead.

LEUCO had started its China activities in 1997 by establishing a Joint Venture company in Shanghai Pudong area. LEUCO China has been relocated to Taicang (about 50 km in the northwest of Shanghai) in the Jiangsu Province in 2005. Since 2014 the Chinese LEUCO headquarters is in the new building in Banqiao, a business area of Taicang.

With every move we were able to provide a better working environment for our workers and employees and could also achieve a higher performance for our customers. In Banqiao we are now in the favorable position to offer modern work places in a perfect surrounding, which will enable us to further improve our performance and capacity for the benefit of our customers. The focus areas of innovation and precision along with investments in development and production have borne fruit. As a technology leader and innovative partner, LEUCO stands for opportunities and future. China is developing faster and faster,

so is LEUCO China. LEUCO China's planning for the future is set. We will continue to make huge investment on products and processing method to guarantee a certain quality level for our tools and services and provide extensive one-to-one customer support services across the five continents.

**At the moment, we offer sales and resharpening service at 4 main locations in Beijing, Dongguan, Danyang, and Taicang. In Taicang we produce DP tipped tools for the local market.**



**Our challenge is to convince the customers that we can do it. LEUCO China has developed quickly and constantly from modest beginning to technical competence, diligence and wealth of ideas. It is true that the Chinese environment will remain dynamic. We believe all LEUCO China members are ready - and looking forward to the challenges from our customers.**

# LEUCO UKRAINE IS CELEBRATING ITS 10TH ANNIVERSARY

10 years ago, the LEUCO subsidiary in the Ukraine was founded and is therefore one of the youngest LEUCO subsidiaries worldwide. Six dynamic employees started under the most basic conditions. Today, LEUCO Ukraine is a capable subsidiary with 25 employees and a universally and well-equipped ServiceCenter. The company has its center in Kiev from where a sharpening service and sales advice are offered for the whole Ukraine. Thanks to a sharpening center for carbide-tipped saw blades with automatic loader and machines for diamond service, the customers are provided with a constant resharpening quality. Thanks to the wide-ranging knowledge, challenging

sharpening requirements can be performed in a short time and even complex tools for parquet and laminate floors can be repaired. The good tool know-how allows the LEUCO Ukraine team to support the customers with advice and assistance regarding the optimization of their production facilities. One of the first employee and idea provider full of energy is the managing director Maksim Latko. He is very proud of the support his team can provide and which is now beginning to bear fruit: due to a sophisticated profile change on a finger joint cutter from 10 to 3.5 mm, the customer is also able to finger joint knotty woods and residual woods. So he can reduce waste and saves 2.5 truckloads of raw material per month.



Thanks to modern machines and a lot of special knowledge, the team in the ServiceCenter in Kiev is able to perform even the most complex sharpening requirements in a short time.

## MORE GLOSS – LESS EMISSIONS

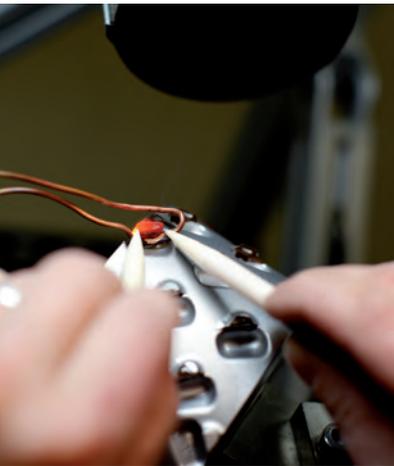
### Tool production with a new cleaning procedure

Diamond-tipped tools need to be cleaned before and after soldering the small diamond plates to the tool body. **At the LEUCO tool production plant in Horb am Neckar (Baden-Württemberg/DE) the previous sandblast cleaning is now being replaced by a new innovative cleaning bath.**

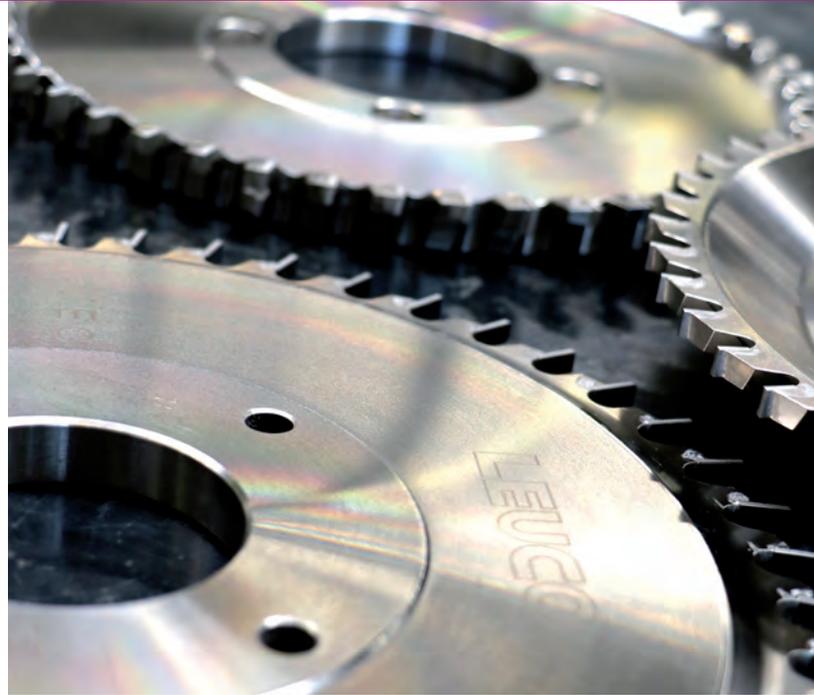
#### One new procedure, three benefits

For decades, sandblasting has been the best available technology, creating the typical matte finish of the tools. The first positive effect of the new cleaning bath is clearly visible in the truest sense of the word: it adds a glossy surface with high visual quality to the steel bodies. The technical properties remain unchanged.

Another aspect is the dusty environment in which the production staff used to work during manual sandblasting. In addition, the cleaning granulate had to be disposed of in a special way, which was not beneficial in terms of ecology.



**Before and after soldering a small diamond plate to the tool, the steel body needs to be cleaned. To remove residues from the tool body, LEUCO replaces the traditional sandblasting method by an innovative industrial cleaning bath and reduces dust emissions.**



High visual quality: diamond-tipped tools with glossy body

We at LEUCO are pleased that the new cleaning bath allows us to reduce dust exposure for our employees, to further enhance process safety in production and to offer our customers at the same time a high-quality finish of their diamond-tipped tools.

#### More than just innovative tools

LEUCO has been continuously investing in new production technologies and process optimizations. This is documented, for example, by our quality management according to ISO 9001, implemented since 1995. The latest certification for ISO 50001:2011 Energy Management, awarded in February 2016, emphasizes our commitment to sustainable use of energy resources.

## LEUCO IS THE DRIVING FORCE IN THE INTEREST GROUP "PALM WOOD"

Together with the companies EWD, Kleiberit and Weinig, LEUCO is committed to an interest group which is concerned with the use of palm wood resources. Together we conduct research on the entire process chain from the sawn wood to the complete processing and glueing. For many years, it was not clear in this industry segment whether palm wood which, from the botanical point of view, is formally not a wood but a grass can be processed. Meanwhile, the workability could be proved by the interest group.

Which are the products in which you want to use palm wood as a light, available and low-cost material?

The interest group now looks for users from the construction and furniture industry who want to use this material in their production. Contact person: Head of Research at LEUCO, Dr. Martin Dressler, [martin.dressler@leuco.com](mailto:martin.dressler@leuco.com)



From left to right: Uwe Schroeder (Kleiberit), Horst Hermas (EWD), Peter W. Mansky (Kleiberit), Thomas Kühnelt (Weinig Concept), Dr. Otto Leible (Weinig Concept), Dr. Martin Dressler (LEUCO)

## TOOLS ARE EASY TO FIND IN THE ONLINE CATALOG

CHOOSE TOOLS BASED ON MATERIAL, MACHINE, FEATURES OR APPLICATION

Innovations in tools and tool solutions are always exciting for customers who want to work even better and more economically. And it's great when tool info is also easy to find. **The LEUCO online catalog at the LEUCO website [www.leuco.com](http://www.leuco.com) makes things easy for the wood and furniture industries.**

### FILTER TOOLS BASED ON NEED

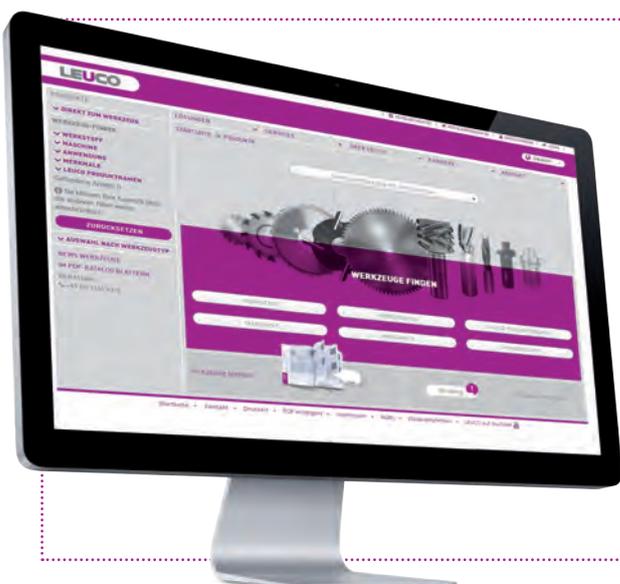
From the entire LEUCO tool line, with about 8,500 items, customers can target the right tools to choose. The filters "Material", "Machine", "Feature" and "Product name" nar-

row down the choice of possible tools further and further. Example: The user has a certain material and wants a tool for processing it, so he clicks on the Material filter for that material. He is shown a number of LEUCO tools and tool types that are suitable for processing the material. If the user gets too many hits, he can easily narrow down the selection, such as by specifying the tool type more precisely by selecting "circular saw" and the diameter he wants. The online catalog is extremely flexible. Another of many search options can be chosen, such as first the machine that the tool is needed

for, then closer specification of the tool's features, and finally the material to be processed, for example.

### Comparison option and price queries

The "Compare" function shows the features or relevant tools side by side. Promising tools are placed in the "Get price" basket. After the address is provided, there is always the option to ask for tool prices.



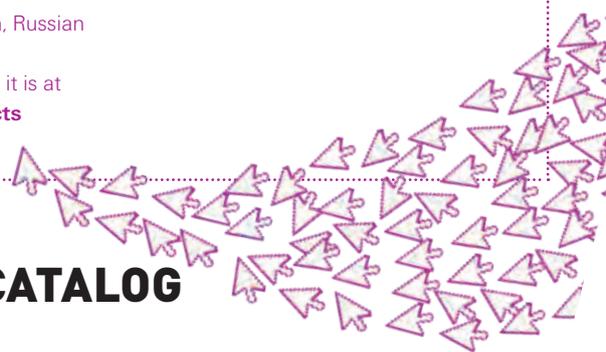
## LEUCO ONLINE CATALOG

FIND TOOLS EASILY!

- | **Where:** [www.leuco.com/products](http://www.leuco.com/products)
- | **What:** Filter tools from the comprehensive, up-to-date LEUCO line precisely, quickly and easily
- | **When:** 365 days a year, round the clock for everyone
- | **How:** Intuitive to use, without a password, login, etc.

Languages: German, English, Russian

→ See for yourself how easy it is at [www.leuco.com/products](http://www.leuco.com/products)



## NOMINATION FOR THE LEUCO ONLINE CATALOG BY PROFESSIONAL PANEL



The „INKA“ contest (INdustrieKAtaloge – industrial catalogs) honors B2B communication media for technical products every two years. Managers and employees from marketing, advertising and product communication from B2B companies

met in April 2017 at the Bregenz Conference Center (Austria) at Lake Constance in order to discuss the challenges and opportunities which result from the digitalization of product communication.

The 2016 INKA awards were presented as part of a prize-giving ceremony at the INKA forum. The eight-person Jury gave prizes in the categories „Print Catalog“ and „Online Catalog / Shop“.

LEUCO was nominated as one of the top 5 in the „Online Catalog / Shop“ category for its new online catalog. We received a „special

mention“ at the prize-giving ceremony for the exceptional structure and versatile, filter-based search options. Julius Blum GmbH, Austrian specialist for furniture coatings, was the most successful participant in the competition, reigning supreme in many categories. For LEUCO, this gave further incentive to perfect the online catalog.





## THAT IS LEUCO

**INNOVATIVE, TREND-SETTING AND  
RELIABLE - RIGHT FROM THE  
BEGINNING!**

In 1954 the businessman Willi Ledermann and the engineer Josef Störzer founded the company Ledermann & Co. The LEUCO brand was born.

Wealth of ideas and technical know-how have been the heart of LEUCO since the beginning. The product range includes circular saw blades, hoggers, 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, Poland, Singapore, Thailand, Ukraine and Belarus. Sales and production subsidiaries are in China, France, Malaysia, Russia, Switzerland, South Africa and USA.



**ONLINE-CATALOG 24/7**  
**WWW.LEUCO.COM/PRODUCTS**

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