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Reduce noise.

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Optimized performance.  
Innovative applications.

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Highly efficient formatting in throughfeed.  
Optimal quality.

**LEUCO. Magentify Wood Processing.**

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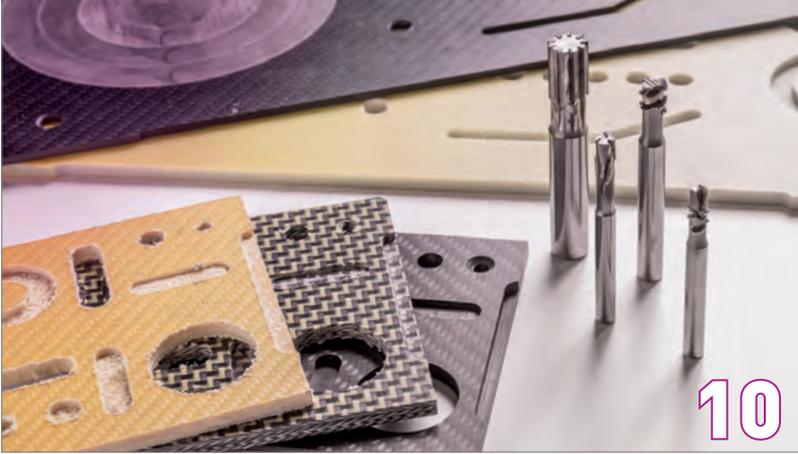
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Sophisticated material processing at F/LIST in Austria

# SPARKLING DIAMONDS for a shiny design

The F/LIST GmbH is a worldwide operating company for exclusive interior fittings of business jets, yachts and residences. The company based in Thomasberg, Austria has more than 800 employees and has been offering since 1950 all services, including manufacturing and installation, from one single source. As one of the main suppliers of tools for the processing of wood and plastic materials, LEUCO is the preferred partner of F/LIST.

F/LIST is able to realize a lot of extraordinary designs. Up to 300 different special surfaces can be produced for only one single project. The surfaces are often provided with highly sensitive varnishing. Therefore, F/LIST must not only buy a large variety of unusual materials, it must also be able to process them. Franz Hausmann, pre-production department manager, who has been working at F/LIST for almost 20 years questions how the problem is supposed to be solved. "We have a lot of experience and try things out but for this, we need first-class tools." For more than 25 years, these tools have been delivered by LEUCO. Among the delivered tools there are circular saw blades for panel sizing and table saws,

jointing cutters for sizing on edge banding machines as well as cutting out and sizing tools on CNC machines. Diamond tips are a matter of course – and rather the rule than an exception with regard to the extremely high demands of List.

The range of products of LEUCO includes a wide range of up-to-date and innovative tools which can meet nearly all requirements. Regardless of whether homogeneous materials, fiber reinforced plastics or special composites have to be processed or whether there are extreme application conditions: LEUCO helps to achieve the desired quality, a high productivity and economic efficiency.



F/LIST uses the LEUCO DIAREX circular saw blade and DP panel sizing saw blade – on various materials including highly abrasive blown glass slabs. from left: Franz Hausmann, Roman Edelhofer



Carbon fiber materials have been in use at F/LIST for many years. F/LIST achieves smooth edges with the LEUCO p-System with a 70° shear angle.



This mix of fire-retardant center layer with a high-quality top layer is almost a day-to-day routine item in the portfolio at F/LIST: In this case, abrasive blown glass was combined with a brittle veneer. The LEUCO DIAREX sizing saw blade cuts the center layer.



Various types of wood and veneer combined with non-wood material and milled with decorative ventilation slots before any lacquer or paint is applied, then cut to shape after surface coating on the table saw. F/LIST uses LEUCO tools.

**Innovation is good, revolution is better**

The use of non-standard materials can be problematic: often they are expensive and difficult to obtain. Therefore, F/LIST cannot afford to produce scrap. But this must not affect the economic efficiency. "It is a balancing act," says Franz Hausmann "The p-System offers us a lot of possibilities. We can go to the limits". He is referring to the unique shear angle of the patented tool from LEUCO which sets new standards. An angle of unprecedented 70 degrees offers an exceptionally wide range of processing solutions adapted to the requirements even if a great variety of materials are to be processed. For this revolutionary tool technologies, LEUCO was honored with the German Innovation Award 2018. What is more important for Franz Hausmann: "The tool alone, however, is not crucial. We need the professional advice of LEUCO so that we are always able to set highlights in our furnishing production even in the future." One thing is certain: Not only the number of special surfaces produced by F/LIST will continue to grow.

**Finding the right solution together**

Architects are more akin to artists than down-to-earth designers when it comes to the exquisite appointment of interiors. One such example is to demand that concrete and film should belong together - entailing the need for them to be processed together as well. Franz Hausmann, always a practical man, has this to add: "We accept this, but we have always had to engage in combat with incredible challenges". One of the greatest of those is fire protection. In buildings, it is always a mandatory stipulation. On yachts, it is not a formal compliance requirement until the vessel exceeds 100 meters - 330 feet - in length. Franz Hausmann still has an accurate recollection of a "Super worst-case scenario": A composite material consisting of a mineral fiber slab, a highly-compressed (HP) laminate, a brittle oak veneer and a high-sheen lacquer finish. There was no latitude whatsoever over the choice of material, and this mineral-based slab was required for fire protection. To work with this, a mit-



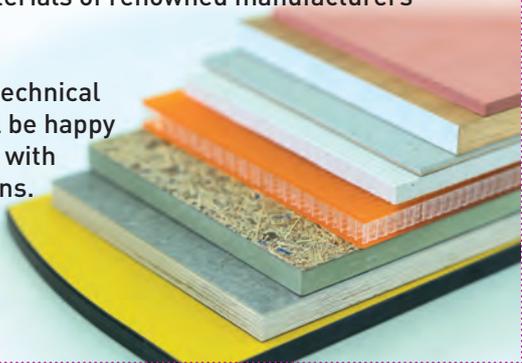
**Magentify your Expertise  
Benefit from LEUCO know-how**

**Which tool for which material?**

**→ online**  
[www.leuco.com/products](http://www.leuco.com/products)

- ▶ Use filter "workpiece material" for further details
- ▶ under "Special manufacturers Materials" in the filter workpiece materials you get tool recommendations for materials of renowned manufacturers

**→ On-site**  
The LEUCO technical advisors will be happy to assist you with your questions.



er edge first had to be produced. A seriously intricate task. Nonetheless, Roman Edelhofer, a technical adviser from LEUCO, was confident of his ground: "LEUCO doesn't believe in 'Can't be done'. We always get a result here". And so it proved to be. On the LEUCO testing ground in Horb, various tools were tested and an appropriate set of application data was devised. This even involved choosing a different machine configuration. A genuine team effort that was crowned with success on this occasion yet again.



Miter cut of HPL top layers, center layer with honeycomb, two-component edge filling after the curing process: F/LIST also uses the LEUCO DIAREX saw blade for this.



Veneered top layer and 2C edge filling, milled cleanly and without tears with the LEUCO p-System in a TRIBOS clamping fixture.



Clean edges without tears in the veneer across and along the grain, milled using LEUCO tools in a nesting process.

### The very best is just good enough

Manufacturers provide processing instructions for new materials. When it comes to the extremely demanding requirements of F/LIST, those instructions are not always helpful and there is no time for experimentation. That is why companies tend to send materials of this kind to the LEUCO Test Center. There, highly specialized experts work with these original sample slabs until they have discovered the best possible processing solution. There is nothing unusual about that process involving changes being made to the tool design. Franz Hausmann knows what that means: "For us, the LEUCO Test Center is a guarantee of quality". Not only for F/LIST because, just like with standard tools, everything is documented very precisely. Interested users can obtain information about LEUCO recommendations for tools and application data on the website at [www.leuco.com](http://www.leuco.com).

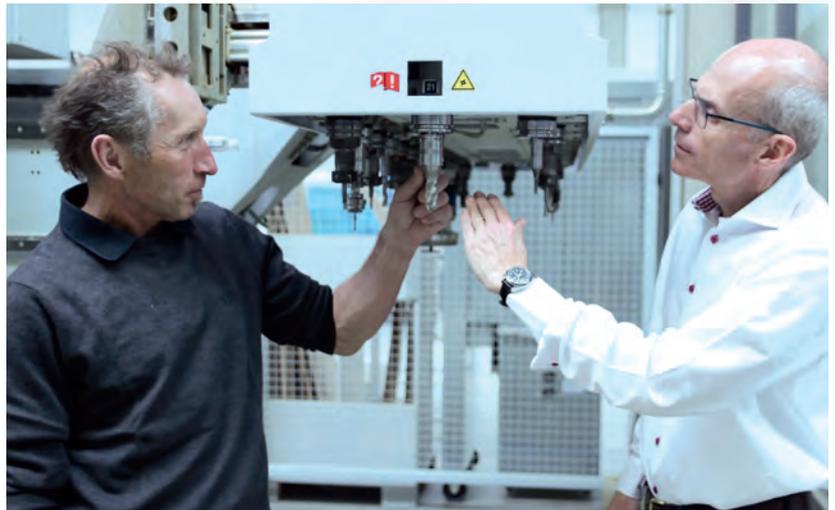
### Partnership that knows no boundaries

Since customers wish to have coordinated turnkey solutions, LEUCO also has very precise clamping equipment in its product range. F/LIST uses the LEUCO TRIBOS family of products right across the board. Just recently, the company location in Canada has also been able to benefit from the remarkably precise concentricity of this clamping equipment. Accordingly, F/LIST is progressing confidently down this same path: Wherever and however it may be needed, demanding customers receive nothing less than the highest level of quality. With this motto, this family-owned Austrian company has built itself an outstanding reputation both at home and around the world.

**F/LIST keeps on presenting LEUCO with new challenges, and LEUCO is committed to supporting F/LIST to improve its competitiveness by providing it with optimum tool solutions. This is just a brief account of a collaborative partnership that both parties would be delighted to extend for a further 25 years.**

## LEUCO TRAINS APPRENTICES AT F/LIST

It's all about quality - right from Day One. At F/LIST, even its apprentices experience this in a very special way indeed. Because they also receive training from LEUCO. They learn that a lot of expertise is involved in tackling the wide variety of materials used in their company. On location, in theory and in practice. In particular, the use of diamond-tipped tools is an acquired skill. These tools are so "sensitive" that you have to develop a special sense for them. Once that skill has been acquired, these tools reward the operator with impeccable performance.



With the TRIBOS clamping tool, LEUCO's new DIAREX cutter with a large shear angle achieves high-precision concentricity on the CNC machine. Franz Hausmann (left), Roman Edelhofer



DIAREX DP saw blades

## SPECIALISTS FOR ALL CASES

Despite the fact that they cost more to purchase than HW tools, it also makes sound financial sense to use DIAREX DP saw blades on table saws and on vertical panel sizing saws. Over the long term, these are the more cost-effective option and score highly by achieving 20 times the service life of their less expensive counterparts. Throughout this time, the operator never needs to be concerned with blunt saw blades, with all the replacement and changeover times that they entail. This makes work simpler, it cuts down on scrap, and it saves time.

A new and improved level of cutting quality is achieved by DIAREX DP saw blades with their special grain size. This unusually fine-grained version enables sharper edges to be cut. Parts can be cut to size in finish-cut quality. With optimized gullets, DIAREX saw blades cut more quietly than previous types. This reduction in the noise level creates a more pleasant working atmosphere.

On each of the three types of DIAREX saw blade, LEUCO uses different grades of diamond which are matched to suit the field of application and the tooth geometry. The tooth geometries are optimized in terms of number, shape and combination of teeth.



DIAREX HR (right) is the all-rounder, suitable for universal applications. Recommended for wood fiberboard panels, abrasive and hard plastics such as CRP or GRP as well as magnet bond boards. DIAREX DA-F-FA saw blades (center) can achieve finish-cut quality on melamine-laminated or HPL-laminated wood-based panels. DIAREX TR-F-FA (left) was designed for raw particle boards and MDF. This enables LEUCO to provide a suitable variant of DIAREX saw blade for any requirement. An investment that is worth making.

New circular saw blades by LEUCO

## CLEAN SAWING OF PLASTIC MATERIALS



**Excellent cutting quality of plastic material can be achieved with the new sizing saw blade of LEUCO. Plastic materials can be processed without almost no cutting marks and, in many cases, it is no longer necessary to rework the visible edges.**

For the innovation, LEUCO has developed the tooth geometry especially for plastic materials, particularly for many thermoplastics. The saw blades provide a close tooth pitch so that even very thin plastic panels can be processed with almost no cutting marks. LEUCO can provide its newly developed saw blade in topline quality i.e. the highest performance level regarding run-out and concentricity tolerances of the tungsten carbide saw blade. The low-noise version avoids vibration and supports low noise sawing. Thanks to an expansion slot and special laser ornaments, a vibration damping and a smooth running is achieved. By this, the cutting quality is optimized. Another advantage of the saw blade structure is a significant noise reduction. This is of particular benefit for the machine operator. LEUCO offers the HW saw blade for plastic materials with a diameter of 303 mm which can be used on table saws and vertical panel saws. The target groups are the industrial and craft sectors. In the furniture industry, for example, a growing number of plastics are used which can be perfectly processed using our newly developed saw blade.

The new saw blade for plastic material is, above all, a specialist for all kinds of flat plastic panels such as glass laminate or many thermoplastics.



Processing of composite materials

## MATERIALS OF THE FUTURE

**Materials that are extremely light and robust at the same time are the fundamental pillars of aerospace, e-mobility and many other application areas.**

"Composites" is the term used to describe most modern high-performance materials which are mainly used in the lightweight construction. They often consist of carbon, glass or aramid fibers combined with thermoset plastics or thermoplastics. This fiber-reinforced plastics are often processed to become sandwich materials combined with light metal (aluminum, titanium) or honeycomb panels.

The hogging of composites is extremely challenging due to their fibrous, inhomogeneous structure. The carbon fiber, for example, is extremely hard and abrasive, the plastic material is soft and heat sensitive. A good cutting quality without bevel inconsistencies, protruding fibers or delamination is already hard enough to achieve. Another problem is the service life of the tool.

### LEUCO offers two decisive advantages

Wood, the core competence of LEUCO, is a fiber-reinforced material. When you compare wood with the described composites, there are major similarities. The hogging of fiber-reinforced plastic materials is part of LEUCO's everyday business.

Many tools for composite machining have their roots in the machining of metal. Therefore, solid carbide tools or, for optimized edge lives, also diamond-tipped tools can often be found. Polycrystalline diamond (DP) tipped tools are often only available with simple tool geometries. LEUCO have been producing DP-tipped tools for some decades, even with extreme shear angles and very small diameters and is therefore able to combine very complex geometries and long edge lives. Depending on the application, the cutting materials tungsten carbide uncoated, coated or DP are more or less suitable. Taking into account all aspects, DP offers more advantages and that's why LEUCO rely on this cutting material.

### Specially adapted tool solutions for milling, drilling and countersinking of composites

From the standard double-edged cutter with straight cutter axis and the multi-tooth cutter up to the patented p-System cutter, LEUCO offers the right tool for everyone. The DP-tipped p-System cutter of LEUCO is characterized by shear angles of  $\geq 55^\circ$ . This unique feature allows an excellent cutting quality and long edge lives at the same time. Even tough aramid fibers are no problem. Depending on the design, the p-System cutter is suitable for a large range of applications. Designed as compression milling cutter, it can be used, for example, to generate perfect external and internal contours or dividing cuts. Designed as grooving cutter, it is excellently suitable for scarfing or the generation of functional surfaces.

**Drilling** into composite materials leads to significant wear of common carbide drill bits or problems occur when the drill bit enters and exits the material.

LEUCO, therefore, relies on the patented high-performance drill bit. Due to the special tip of the drill bit, the cutting forces during drilling



LEUCO p-System DP compression milling cutter with diameter 6 mm (on the left) and VHW high-performance drill bit, DP (on the right)



LEUCO p-System DP shank-type groove cutters with diameter 8 mm



Multi-tooth DP compression milling cutters with diameter 6 mm

Double-edge DP shank-type cutter with diameter 4 mm

Picture enlarged

are extremely reduced, the fibers of the top layers to be cut are set under pretension and are scored before the main drilling operation. This avoids delaminations, indentations and protruding fibers and the edge life and the constantly high drilling hole quality can be increased significantly.

The **sawing** process is very effective and economical for straight dividing cuts. It can replace trimming or grooving with a milling cutter. LEUCO saw blades achieve good cutting quality at high feed rates. Either the patented LEUCO nn-System and the LEUCO g5-System saw tooth geometry score the materials before cutting and thus achieve a convincing dividing cut quality.

*All environmental influences must be taken into consideration so that a functional and economical solution can be found!*

TOOL  
CLAMPING  
ELEMENTS  
APPLICATION  
DATA



MATERIAL  
COMPOSITION

## EFFECTIVE AND ECONOMICAL ALL-IN- ONE SOLUTION FOR THE CUSTOMER

PROCESSING TASK  
REQUIREMENTS 

MACHINE   
WORKPIECE CLAMPING

Panel sizing saw blade Q-Cut G6

## LONG EDGE LIVES AND OPTIMUM CUTTING QUALITY

**Dividing laminated panels in best quality is the strength of the carbide-tipped Q-Cut G6 from LEUCO. This saw blade now achieves longer edge lives. The Q-Cut G6 is part of the Q-Cut family. What they have in common is the finish-cut quality.**

Q-Cut G6 is a standard tool for horizontal panel sizing saws. The strengths of this saw blade become particularly apparent when laminated composite wood boards have to be divided. Individual panels or stacks up to a cutting height of 80 mm can be processed in perfect cutting quality. Q-Cut G6 now achieves longer edge lives than before. The improvement could be achieved by an optimization of the particularly smooth tooth geometry and the use of a special tungsten carbide for the cutting edges. The implementation of these two measures results in the longest edge life of this saw blade LEUCO could ever reach with tungsten carbide tips for composite wood boards and this in perfect cutting quality.

### High quality and low noise

One factor for the high quality of the panels processed with the Q-Cut

G6 is the stiff tool body. This results in a smooth and low-vibration running and therefore in an increased accuracy during the sawing process. In addition, the saw blade is resistant to breakage and shocks caused by foreign objects. LEUCO has not only redesigned the standard saw blade but also the variant Q-Cut G6 nn-System. The abbreviation "nn" stands for "no noise". The standard version is already silent thanks to its low-vibration tool body ("low noise"). Due to the smaller gullets, the noise level of the Q-Cut G6 nn-System when idling is even lower. The air turbulences generated by the tool are reduced which leads to a lower noise level.

### Good finish-cut quality for any task

The product family Q-Cut consists of four saw blade types which are characterized by their high cutting quality on horizontal panel sizing saws. All these blades are equipped with a low-vibration tool body. The tool configuration differs according to the material to be processed.

The **Q-Cut G6** is the saw blade most used in this family. For many carpenter's shops and furniture manufacturers, it is a standard tool for the sizing of laminated panels. It is available in the diameters 280 to 520 mm. Its tooth group configuration G6 with two leading teeth with an increased cutting performance and four following teeth is designed for long edge lives. The **Q-Cut G6 nn-System** generates only a low noise level with similar processing results.

The **Q-Cut G5** is provided with a tooth group configuration consisting of a leading tooth and four following teeth. This tooth configuration is used for finish-cut quality in plywood, veneered wood-based materials, panels with sensitive top layers as well as lightweight panels. The saw blade **Q-Cut K** is a special tool for anti-fingerprint and plastic panels.

In the Q-Cut family, woodworking companies can find the right tool for every sizing process for finish-cut quality: Q-Cut K, Q-Cut G5, Q-Cut G6 and Q-Cut G6 nn-System (from left)

Specialist business Jochen SCHMÜSER has changed over to coated DP blades from LEUCO

**LEUCO is now offering diamond-tipped panel sizing saw blades with a specialist topcoat surface layer. This guarantees vastly longer edge lives.**

This is of interest to everyone who works with blank, coated or fiber-based wooden panels. Jochen SCHMÜSER in Hollenstedt finds this topcoat surface layer superb, even with HPL material.

"We have been using these saw blades for the last 3 years. They last 50 percent longer than other comparable diamond-tipped saw blades. They also deliver remarkably good cut quality, as Klaus Müller has found, the Production Manager at Jochen SCHMÜSER. The company saws HPL material on three horizontal



Jarek Musial is an expert in cutting HPL material to size and to precise dimensions.



## USERS ENTHUSIASTIC ABOUT DIAMOND-TIPPED SAW BLADE WITH TOPCOAT SURFACE LAYER

panel sizing sawing machines to precise dimensions for the wholesale trade to name just one example. Areas of application for these weather-resistant cut-to-size sections include facade claddings, balcony privacy panels or table tops. Sawing HPL material is a particularly challenging application. The benefits of topcoat also help people who process other materials such as laminated or fiberboard panels. LEUCO has established a family of coated saw blade products that covers all of these areas.

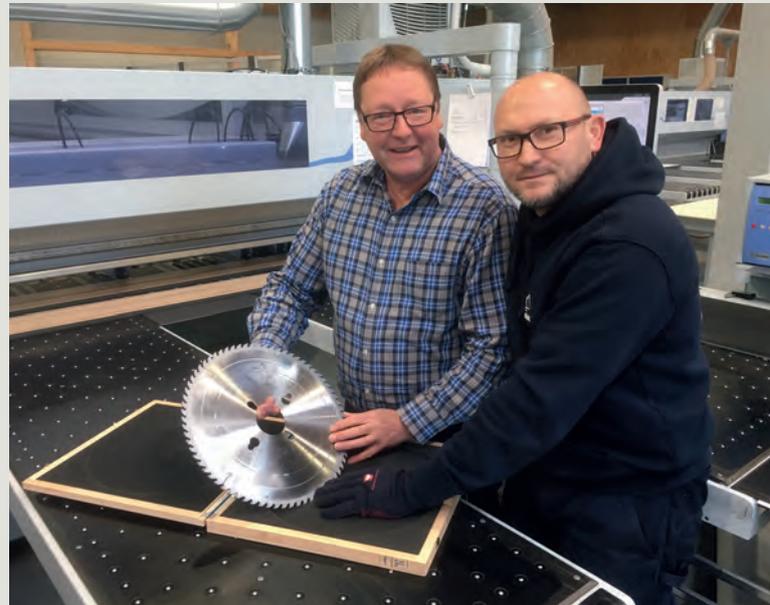
### Many benefits

All users can benefit from the many advantages of diamond-tipped and coated blades. These benefits include extremely long service lives, finished cut quality and quiet operation. A topcoat surface layer on the diamond substantially extends what are already long service lives and improves performance per linear meter by a further 50 percent. Saw cuts with DP topcoat blades are clean and are not corrugated. The blade cuts remarkably smoothly and the user benefits from greater cutting power and cut quality. These benefits are retained throughout the entire life cycle of the saw blade.



### No adhesive bonding with HPL

Anyone who saws HPL material has yet another advantage: The topcoat surface layer prevents adhesive bonding from occurring. When sawing with other blades, the resin in the HPL panels can melt, bonding adhesively to the saw blade. This results in frequent tool changes. Also, the saw blade needs to be sent away for cleaning or for resharpener. Specialist business Jochen SCHMÜSER has found a solution to this problem. "Previously, we used carbide and diamond-tipped saw blades. There, we encountered adhesive bonding that caused chipping. However, we



Klaus Müller (left) and Jarek Musial were the first users of this coated saw blade. They are still very satisfied with the long service lives and the relatively low noise level.

need very good quality. We therefore went looking for something better. With these topcoat blades, we have precisely what we need", explains Klaus Müller.

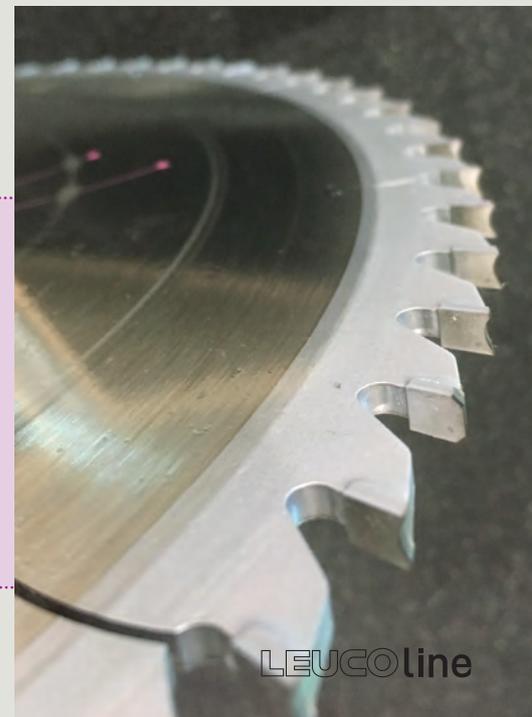
### Pleasingly quiet in operation

All of these saw blades possess another advantage: They are pleasingly quiet. This is achieved by laser ornaments in the blades, arranged in a special vibration-damping sequence. In addition, these ornaments receive a filling that also damps vibrations in the core blade. Jochen SCHMÜSER uses saw blades with a diameter of 350 mm. "That is now significantly quieter than before", states Klaus Müller. The machine operator who tends the machine on a daily basis also benefits from this. SCHMÜSER really appreciates these many advantages and is so convinced that the company now only uses DP topcoat blades for its HPL saw cuts.

### The DP topcoat family of products

Apart from LEUCO, almost no other manufacturer in this sector offers a combination of diamond-tipped and coated saw blades. SCHMÜSER uses topcoat blades with the **HR-TR** tooth shape (hollow back, trapezoid). This variant is suitable for sawing HPL panels or solid core material. Anyone wishing for finish-cut quality in blank or coated wood-based panels should opt for variant **G6**. Individual panels or packages measuring up to 80 mm

can be sawed. Finish cuts in fiber-based wooden panels such as those used for joinery, veneer plywood and lightweight panels are delivered by saw blades bearing the designation **G3**. This trio differs in terms of various tooth geometries, each optimized by LEUCO to suit different fields of application. DP topcoat saw blades are available in various sizes.



LEUCO nn-System DP flex: A family of products with many benefits and with a wide field of application

## THE RIGHT SAW BLADE FOR EVERY MACHINE

With the circular saw blades in LEUCO's nn-System DP flex, users benefit from long tool service lives, a high quality of chip-free cuts and excellent miters. Also, a diverse range of materials can be sawed, and the diamond-tipped saw blade is unusually quiet. Saw blades are available in different diameters and are suitable for many types of machine. These include sizing saws, vertical panel sizing saws or CNC systems.

**Nomen est Omen: On the nn-System DP flex from LEUCO, the 'nn' stands for 'No Noise'. This is a system that runs quietly.** Not all of the saw blades are absolutely noiseless, but they are unusually silent because they do avoid disruptive noise emissions. Small gullets and small tooth sizes deliver the desired result. 'DP' is the abbreviation for diamond - this hard cutting material favors long tool service lives and delivers an outstanding quality of cutting performance. Clean and precise cuts are also achieved by specialist tooth geometry with hollow-back (HR) cutting. The teeth on

these saws have sharp tips. The hollow-back tooth also reduces cutting pressure substantially and makes work almost free of recoil. Blades in the nn-System DP flex system are incredibly thin, with a cutting width of just 2.5 mm. This also means that the blades apply less cutting pressure and require less power.

**'Flex' means that they can be used flexibly with different materials and types of machine.** These saw blades have a universal range of uses and can be resharpened twice. For use on different types of machine, LEUCO offers appropriate diameters of multi-functional saw blades in each case.

### **Sawing quietly and continuously on through-feed machines,**

The chipping saw operates continuously on through-feed machines. Conventional saw blades are loud and make unpleasant whistling noises - and the small chipping saw makes a huge amount of noise. Here, it is a good idea to use nn-System DP flex blades that operate at a pleasant noise level. LEUCO experts have managed to re-

duce noise emissions to a very large extent while idling: A reduction of up to 6 dB(A) compared to conventional diamond-tipped circular saw blades. This is how the nn-System DP flex delivers a noise-reduced working atmosphere that is good for employee well-being. These saw blades all have very small gullets that reduce air turbulence before tooth contact, which in turn reduces the noise level. The outcome: Extremely quiet while idling and while in operation. When idling, the volume drops to about 70 dB(A) - quieter than a vacuum cleaner. This means that the operator does not need to wear hearing protection.

### **Great cutting quality on CNC systems**

Due to the high quality of saw cuts, nn-System DP flex blades are very well suited for use on CNC systems. For example, anyone cutting panels to size or cutting miters will find this an ideal solution. For this category of machine, LEUCO can provide diameters of 180 to 300 mm. As well as hollow back geometry, the thin design of the core blade, with a width of just 2.5 mm, delivers great benefits in terms of cutting quality. For example, on standard panels made of wood-based materials, with or without a high-sheen coating, and on solid wood. Users of CNC systems also appreciate that a wide mix of materials can be sawed in a pleasantly quiet working environment, and that the nn-System DP flex blades have remarkably long edge lives.



Anyone using sizing saws on large volumes of material stands to benefit many times over when they use nn-System DP flex blades. They are a great choice for everyone wishing to cut a comprehensive mix of materials.

#### Broad mix of materials and long edge lives for sizing saws

Anyone using sizing saws on large volumes of material stands to benefit many times over when they use nn-System DP flex blades. They are a great choice for everyone wishing to cut a comprehensive mix of materials. For example, they can be used to cut dry solid wood, coated panel materials, plastics as well as abrasive materials such as mineral-based materials and cement-bonded wood fiber materials. This blade is also ideal for cutting magnetic bond boards, composite materials or blown glass. Clean miter cuts can be achieved to a high standard of quality.

A range of applications this broad can be achieved using the saw

blade design with hollow back geometry, thin cutting width and diamond-tipped cutting materials. The long edge lives are also achieved through the use of this specialist tooth geometry, one which greatly minimizes abrasive wear. This also reduces to a minimum the need to change blades, previously a frequent and time-consuming operation. For format sizing saws, LEUCO offers the nn-System DP flex blades with diameters ranging from 250 to 350 mm.

#### PLEASE NOTE:

For table saws, LEUCO recommends using nn-System DP flex blades with the appropriate splitting wedge and the corresponding scoring saw blade. LEUCO can also provide an appropriate range of accessories. The splitting wedge for these blades must measure between 2.0 and 2.4 mm in thickness. Appropriate scoring circular saw blades for tear-free cuts on both sides are available in diameters of 120 mm and 125 mm. The diamond-tipped scoring circular saw blades have small gullets and conical alternate top bevels.



The nn-System DP flex is an all-rounder for many materials



LEUCO nn-System on a CNC machine: Clean miter cut on blown glass with veneer on both sides

#### LEUCO tip:

The nn-Systems DP flex (left) is ideal for users who wish to damp the loud operating noise of trimming saws. In contrast to the DIAREX HR (right) it is also suitable for use on CNC machines. As well as operating quietly, its strength lies in its ability to achieve clean cuts on a vast number of different materials.

The LEUCO DIAREX HR is an excellent choice for businesses who wish to make no compromises in terms of tool service life. It is more robust, and can be resharpened more often. The DIAREX HR is a good choice for users who process large amounts of the same material, and who can tolerate a moderate level of noise.



## PowerTec airFace hogsers

**"LONG-DISTANCE RUNNERS"  
WITH LONG EDGE LIVES**

Thanks to its high productivity and the very long edge lives, the PowerTec is one of the most successful hogger manufactured by LEUCO. The most recent version in the airFace design has an even longer tool life. The constant cutting width and its usability for panel materials with different coatings are further benefits of the PowerTec.

Due to the suitability for high feed speeds and the long edge lives, the LEUCO PowerTec is one of the most established tool in the furniture and kitchen design industry. Feed rates up to 100 m/min for panels from a thickness of 8 mm can easily be reached using this hogger. The edge life of the new PowerTec airFace could be improved by up to 15 percent thanks to a more advantageous tooth geometry. This means an even longer service life without tool change and thus a higher productivity.

**Smooth running thanks to a streamlined design**

To improve the noise reduction, the PowerTec is provided with the flow-optimized surface airFace. This design to be recognized by the grooves in the body generates a uniform air flow around the tool. By this, the noise emission is reduced.

Another special feature of the PowerTec also optimizes the smooth running. Compared to the usual hogsers, the number of tooth wings is reduced by half. This also means a reduction of the turbulences. This benefit can be achieved through the arrangement of two cutting edges next to each other: a pre-cutting and a finish cutting edge. The noise emissions are not only reduced by the airFace design but also by the reduced number of tooth wings acting on the material.

**Hogging of laminated panels in a fast and material protecting way**

The PowerTec cuts materials with hard coatings and those with sensitive, high-gloss surfaces such as anti-fingerprint designs. Even at high feed rates, a constantly high surface quality can be achieved with this hogger.

In addition to these features, the PowerTec users appreciate the constant cutting width which remain the same over the entire life cycle. The cutting edges of many other hogsers become thinner after each sharpening cycle and do no longer reach the initially possible cutting width. The cutting width of the PowerTec airFace remain the same over the entire tool life.

**Premium hogsers PowerTec airFace S**

The PowerTec airFace S of LEUCO successfully combines the two typical strengths of the hogger: high cutting speed and long edge life. The PowerTec airFace S is equipped with a high number of cutting edges. By this, it achieves a higher material removal rate compared with the already powerful basic model. Thicker DP cutting edges result in a higher stability of the cutting edges, a reduced susceptibility to wear and longer edge lives.

**LEUCO**  
powertec  
airFace S

The new version of the established PowerTec hogger allows feed rates of up to 100 m/min for panels with a thickness of at least 8 mm. The edge lives of the new PowerTec airFace could be improved by up to 15 percent thanks to a more advantageous tooth geometry. The body is equipped with the optically distinctive airFace surface which reduces noise emission.

**LEUCO**  
powertec  
airFace



**LEUCO**  
DIAREX  
airFace

The low noise level jointing cutter LEUCO DIAREX is the optimal choice for alternating materials in case of high quality demands.

Through-feed machining using the DIAREX airFace from LEUCO

## JOINTING CUTTERS OFFERING MAXIMUM VERSATILITY

The wood-processing companies use an increasing variety of materials. The jointing cutter LEUCO DIAREX airFace is ideally suited for this challenge in the through-feed processing since, thanks to its cutting features, it has proven itself for a wide range of materials.

New materials entail new challenges for trade and industry. Nowadays, particle boards for kitchens and furniture, shop fitting and exhibition stand construction are provided with different top layers which include fire protection layers, abrasive coatings and anti-fingerprint materials. Most of these coatings are harder or tougher than wood. The wood itself may have very different strengths. A milling tool for such panels must be able to process the different materials with consistent quality.

The jointing cutter LEUCO DIAREX airFace is an all-round tool to meet this challenge. It is able to process many laminated particle boards with different features achieving consistently good results. This means: uniform, chip-free and smooth processing results for optimal gluing.

### Perfectly suited for a wide range of laminated panels

Especially the shear angle of the cutting edges of 48° used for the LEUCO DIAREX airFace has proven in a large number of runs in the test center of LEUCO to be one of the most versatile designs. This angle guarantees a high cutting quality combined with long edge lives and therefore a good economic efficiency. This makes the LEUCO DIAREX airFace an excellent choice for companies which alternately process different panels and place high demands on quality.

### Noise reduction due to airFace

Another advantage of the LEUCO DIAREX airFace is the reduced noise emission when idling thanks to the unique "airFace" design of the tool. The edges of the gullets are not simply straight but curved and placed at small intervals. Therefore the air flows are directed in a defined way through the gullets which reduces significantly the air flows generating noise. The grooves on the surface also support a turbulence-free air flow around the tool. This design the developers have been adopted from the almost noiselessly flying owls reduces the noise emission of the milling tool by up to 2 dB when idling compared to the predecessor version.



➤ Therefore, the jointing cutter LEUCO DIAREX airFace constitute a valuable enhancement of the tool pool. The workpieces may CHANGE - the DIAREX airFace can REMAIN ON THE MACHINE IN MOST OF THE CASES.

### Balance compensation for milling tools

## PERFECT TOOLS THANKS TO INTELLIGENT BALANCING

**Together with the introduction of the airFace surface for jointing cutters, LEUCO has modified the balancing method. The holes are drilled at several selected points only. This means that the technically structured surface is affected to a very limited extent.**

The special features of the airFace surface include the distinctive grooves on the milling tool body which guarantee a uniform air flow that contributes to the low running noise of the airFace tools. In order to impair this surface to the lowest possible extent, LEUCO places these holes for set screws at special points on the tool. Unbalances can be compensated easily by modifying the setting of the set screws. LEUCO uses this method for the tools Diamax airFace, Diarex airFace and SmartJointer airFace.

### **Balancing with the help of screws instead of holes**

The jointing cutters as well as the other milling tools of LEUCO are balanced prior to delivery. This guarantees a smooth rotation so that motor and spindle are not affected by an uneven running. Normally, the balancing is done by several systematically drilled holes in the surfaces. The material removed in this way allows compensation of unbalances. Such holes, however, would impair the uniform air flow around tools with the new airFace surface. For this reason, LEUCO has changed its balancing method from holes to balancing screws in form of set screws. The holes

for the balancing screws are drilled by LEUCO at points which are well suited from the constructive point of view.

### **When balancing holes are used, the nickel layer remains completely intact**

Moreover, this balancing method prevents the formation of corrosion. In tool manufacturing, balancing is the last production step before delivery. Drilling holes destroys the nickel layer that protects the tool against corrosion. The threaded holes for the set screws, however, are drilled prior to nickel plating. Tools balanced in this way are even more resistant against corrosion.

After having screwed in the unbalancing screws, the screws are marked with yellow or red sealing wax. This marking shows the user that these screws must not be adjusted. After each sharpening process, the tools are balanced again. For this, it is sufficient to set the unbalancing screws. Without new holes, the tools show an excellent balancing quality.



LEUCO has optimized the balancing method for milling tools. Now LEUCO uses balancing screws (right) instead of balancing bores (left) which are placed at points which are favorable from the constructive point of view.

## Jointing cutters SmartJointer airFace

**ALWAYS AVAILABLE**

**Blunt segments on the jointing cutter SmartJointer by LEUCO can be replaced with sharp ones directly by the user. By this, the tool is available again within the shortest time.**

The exchangeable knives of the SmartJointer offer the wood-processing companies the highest degree of flexibility. The segments of the tool can be exchanged quickly and easily. The precise positioning guarantee a constantly high milling accuracy. Due to its highly constant diameter, the SmartJointer can be used immediately after segment replacement without machine adjustment. The replacement of the edges on site also reduces the purchase costs since the user only have to buy one tool or one set of tools per machine.

**Just a few easy steps, no special qualification required**

The replacement is extremely simple. First the milling tool is cleaned with compressed air and a cleaning spray. The screws of the segments can be unscrewed using an allen key. The use of a torque wrench is sufficient to tighten the inserted screws. Thanks to the 3-point support, the position of the segments on the tool body is exactly predefined. A subsequent balancing of the tool is therefore not required.

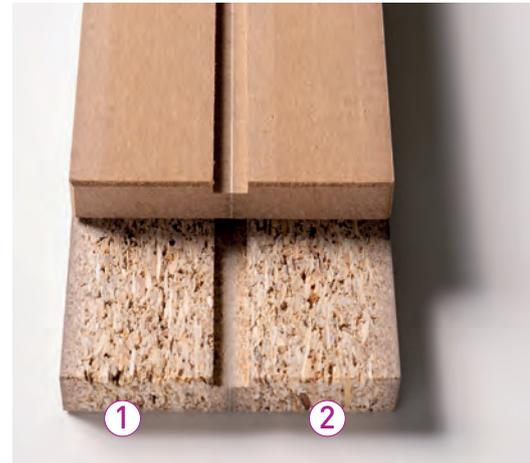
**Cutting edge and gullet are replaced together**

The cutting edges and the gullets are the parts of the milling tool that are most susceptible to wear. Since the edge and the gullet susceptible to wear of the SmartJointer form one constructive unit, they are replaced together. The benefits: Due to the high repeatability of the two elements, the processing quality can be guaranteed in a sustainable manner. Furthermore, the weight-saving tool body made of aluminum is almost wear-free. That means that it has a long service life.

**Benefits at a glance**

- | The replacement can be done quickly and easily on site
- | Cutting edge and gullet form one unit
- | Thanks to the precisely defined fixation, no balancing is required
- | Only one tool or one set of tools per machine required
- | Very high diameter consistency, re-adjustment of the machine after the replacement is not required
- | Lightweight aluminum body with a variety of application possibilities
- | Very quiet

**LEUCO**  
Smart  
Jointer airFace



The repeatability is very high. After the cutting edge replacement (2), the milling quality corresponds to a new tool (1).



The segment change on the SmartJointer can be done easily, quickly and precisely: an allen key has to be used to loosen the screws of the cutting edges. Afterwards the cutting edge is removed, the gullet is cleaned and a new cutting edge is inserted. No special order must be observed.





The shop fitter Ruppel has several through-feed machines. For several years, the production manager Peter Schultz (left) and the LEUCO tool expert Heiko Späth have been using the diamond-tipped SmartJointer on the edge banding machine. In the past, Schultz tried to stack batch sizes with the same panel thickness in front of the machine and to process them according to the different thicknesses. The use of the SmartJointer now allows them to process the materials flexibly and promptly according to their need in production.

Decision in favor of a superior tool concept

## HOW THE DECISION IN FAVOR OF THE SMARTJOINTER airFace PAYS ITS WAY

**The company Ruppel GmbH in Lauda-Königshofen counts on the jointing cutter SmartJointer airFace from LEUCO. In its premises, not the entire tool but only the cutting edge is replaced. With a flick of the wrist, on site. Therefore, the SmartJointer airFace is always available, thus offering extensive and large benefits.**

With about 200 employees, Ruppel manufactures shop equipment and furnishings from single pieces up to series production. The production is equipped, among others, with a CNC machining center and through-feed machines which also include an edge banding machine. From trimming, drilling and milling until edge banding: all required operations are performed in-house. The machines run in 3-shift operation.

**Simply ingenious and ingeniously simple: not the tool but only the cutting edges have to be replaced**

The SmartJointer from LEUCO is the perfect tool for the edge banding machine of Ruppel. "We process panels with edge thicknesses from 16 mm to 60 mm. The panels most used, however, have a thickness of 19 mm. This means that the cutting edges are exposed to different wear conditions. In the past, we had to replace the cutter although only some of the cutting edges had become blunt," remembers Peter Schultz, master carpenter and production manager of the wood processing department at Ruppel. Heiko Späth, master carpenter and the Regional Sales Manager at LEUCO responsible for Ruppel for several years, has the right idea. Why not changing the cutting edges

on site if required? This can be done quickly and easily on the jointing cutter SmartJointer from LEUCO. The tool is provided with diamond-tipped segments which are screwed to the tool body. Each machine operator can loosen the segments in a few minutes and insert them again with just a few steps. Segments with blunt cutting edges can be replaced by those whose edges are still sharp or they are replaced by new ones. Since the gullet and the edges of the SmartJointer form one unit, the gullets susceptible to wear are also replaced automatically. A replacement is even possible if the cutting edges are damaged.

**Since quality is the most important criterion for Ruppel: the jointing cutter LEUCO SmartJointer airFace is the tool of the future**

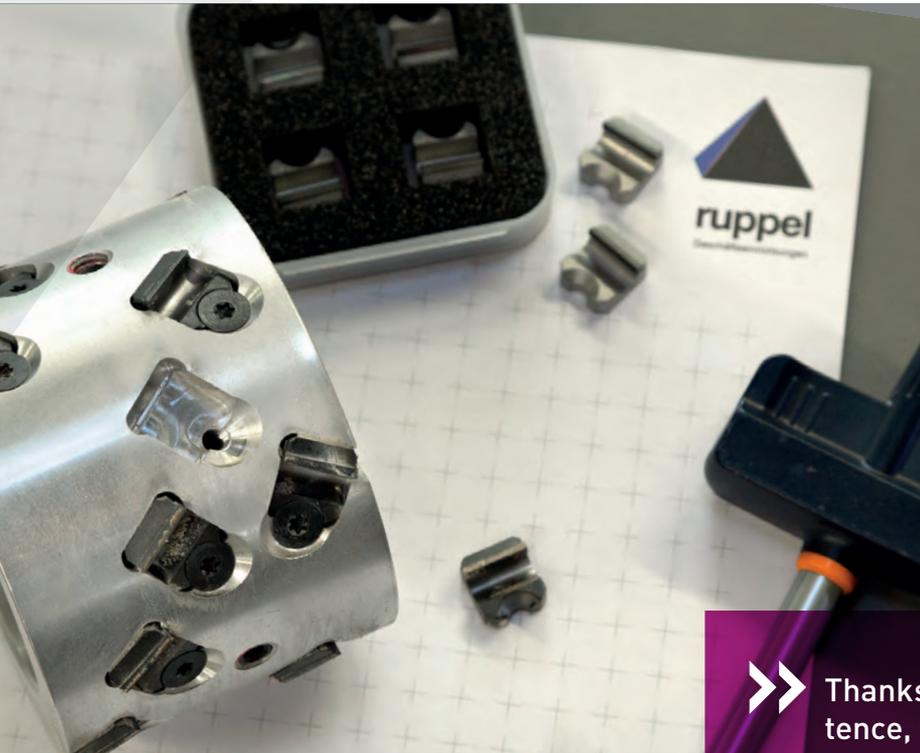
The LEUCO SmartJointer sets new standards. The reduced machine downtimes and long edge lives of the segments which amount, at Ruppel, to a total of 30,000 to 35,000 running meters speak for themselves. Heiko Späth is impressed: "Our development department has done a great job. The best thing is the shear angle of 35° which is a class of its own". The larger shear angle allows a better cutting quality than the usual shear angle of 30°. The difference is clearly visible on the thin edges.

For Ruppel it is also very important that the tool diameter does not change after having replaced the segments. The advantage: Due to its highly constant diameter, the

SmartJointer can be used immediately after segment replacement without machine adjustment. This saves time and means a consistent quality. The LEUCO SmartJointer is ideal for the high demands of Ruppel. Different panel thicknesses and changing batch sizes are only one reason for this. Another reason is the variety of materials to be processed. These are, among others, particle boards, MDF and HPL panels and particularly abrasive fire protection panels. The top layer (decor) is also responsible for the uneven wear of the cutting edges. The LEUCO SmartJointer tackles the most demanding task. "The new edge banding machine which Ruppel wants to buy will be equipped on both sides with this tool," says the practitioner Peter Schultz. This is the best recommendation the



The variety of materials which is processed every day in the premises of the shop fitter Ruppel is impressive.



After having been used every day for five years, the SmartJointer from LEUCO looks as good as new. The diamond-tipped cutting edge and the gullet of the SmartJointer form one unit and are replaced during each segment change. This means that the two parts on the SmartJointer that are subject to wear are replaced while the same body is used for years.

LEUCO SmartJointer can ever receive. But improvements have already been implemented: the new SmartJointers are delivered with the low-noise airFace design. airFace can be recognized by the distinctive longitudinal grooves which guide the air flow along the surface.

The SmartJointer provided Ruppel with the right solution expected by the company. This also shows: customized solutions to fulfil special customer requirements is the great strength of LEUCO. The experts listen to the customer and inform themselves on location. So they can understand what the customer needs.

»» Thanks to its experience and competence, LEUCO is able to determine which solutions are possible and implements them.

The customer has the good feeling: we can rely on LEUCO. «

Innovative. Tried and proven since 2013.

## CUTTERS WITH INTELLIGENT CHIP REMOVAL "AirStream"

### PATENTED PRINCIPLE

With "AirStream-System" tools, an intelligent bore at a precisely defined place on the body prevents the creation of air pressure areas. This leads to a measurable sound and noise reduction of the tool of 3 dB(A) during operation and when idling.

The "AirStream-System" exhibits a great degree of influence on the chip flow. The tool rotation has a direct effect on the air flow and guides the chip flow at precisely the right time towards the dust hood air flow. The chip caption degree increases to as many as 97 - 99 per cent. This results in longer edge lives since the risk multiple hogging is significantly reduced. Moreover, less time has to be spent on cleaning the machine.

The high efficiency is the result of the good cooperation between LEUCO and HOLZ-HER. The machines made by HOLZ-HER are provided with the required form of the dust hood which collects and removes the chips at the optimum time. Tools with AirStream-System are patented and available exclusively for HOLZ-HER through-feed machines.



Tools with AirStream-System distinguish themselves by their characteristic bore in the body.

LEUCO DIAMAX AirStream with HSK 32R clamping

## TEAM WORK FOR AN EVEN MORE PRECISE SIZING

Due to the introduction of the precise tool adapter HSK 32R, LEUCO and HOLZ-HER achieve a higher quality during jointing on edge banding machines. For these machines, the enhanced jointing cutter LEUCO DIAMAX AirStream with HSK 32R clamping is now available. This combination guarantee high-precision sizing with standard machines for trade and industry. The new cutter is used for the first time on HOLZ-HER machines.

The latest result of the cooperation between LEUCO and HOLZ-HER is the introduction of the HSK 32R clamping for edge banding machines. Thanks to a combined traction and locking function, these compact tool adapters ensure a concentric accuracy of two microns. The conventional clamping by means of a double keyway presents a concentricity deviation of up to six microns.

HOLZ-HER is the first machine manufacturer who offers jointing cutters with a high-precision tool adapter for compact machine series. LEUCO succeeded in adapting the big jointing cutter to the slim interface of the size HSK 32R. For this reason, this cost-effective technology is available for the first time for machines usually used in the trade sector.

### Clean milling results thanks to efficient chip caption

The main advantage of the DIAMAX AirStream is the high chip caption rate of 99 percent which can be reached thanks to the patented AirStream design jointly developed by a LEUCO and HOLZ-HER. The chips are guided through bores in the gullets into the extraction hood of the machine. The geometries of tool and extraction hood are exactly adapted to each other. That's why machine and tool work perfectly together.

A multiple hogging is almost completely avoided by the high chip caption rate which results in a higher edge life of the cutter. In addition, the machine remains clean for a much longer time. This means less machine downtimes and cleaning work. Especially for edge banding machines, it is very important that there are no chips on the cutting edges. Before glueing, the edges must be completely even and clean.

Another advantage of the DIAMAX AirStream is the smoother running which reduces the noise level by two to three dB compared to other cutters. For this, LEUCO has optimized the flow behavior of the jointing cutter by changing details such as the cutting edges and the gullets. The bundling of the air flow in front of the extraction hood by the AirStream design has an additional noise-reducing effect. Due to the combination of these two innovative developments, a new standard for precise, clean and silent jointing is set.



**NEW!**

The cutter combines the patented AirStream features, the quality of the LEUCO DIAMAX jointing cutters and the precision of the HSK 32R clamping. The HSK 32R interface with its precise traction and locking function is used for the first time for a jointing cutter.

»» THE COMBINATION "HSK 32R CLAMPING ON JOINTING AGGREGATES" OPENS UP NEW DIMENSIONS REGARDING QUALITY IN THE INDUSTRIAL SEGMENT OF COMPACT MACHINES:

On HOLZ-HER jointing aggregates, a jointing cutter with a precise HSK 32R interface will be used for the first time in this sector.

**Benefits:**

- | concentric accuracy of precise 2 µ, similar to the interfaces "Hydro 30" and "HSK 63F mod" which are usually used in the furniture industry
- | cost-efficient solution for jointing in industrial quality on conventional machines in small workshops

Jointing cutter interface	DKN	HSK 32R	Hydro 30/40	HSK 63F mod
Rotational accuracy	max. 60 µ	max. 20 µ	max. 20 µ	max. 20 µ
Machine size/performance				
Clamping as the basis for zero joint quality				
max. tolerance range jointing work				
Tool cross cut / motor interface				
<ul style="list-style-type: none"> <li>  Hollow cone clamping HSK 32R: precise traction and locking function</li> <li>  DKN interface: locking function</li> </ul>	<p><b>NEW</b> HSK 32R for jointing aggregate</p>			
	<p>LEUCO is the only tool manufacturer who offers the slim clamping chuck in size 32R for a big jointing cutter.</p>			

Since its market launch, the patented LEUCO p-System has altered a few rules of wood processing that were previously immutable. Here are some examples of those rules:

You want more quality? ▶ Normally that is at the expense of edge life.

You want more edge life? ▶ In some cases, that means lowering the bar slightly in terms of quality.

You have difficult materials? ▶ Then you often need to be satisfied with short edge life and poor quality requiring a lot of rework.

▶ **With the revolutionary LEUCO p-System with a larger shear angle, LEUCO can help you to achieve more quality, longer edge life and a range of application options, all at one and the same time.**

▶ **In other words, the patented LEUCO p-System will always give you a little more!**

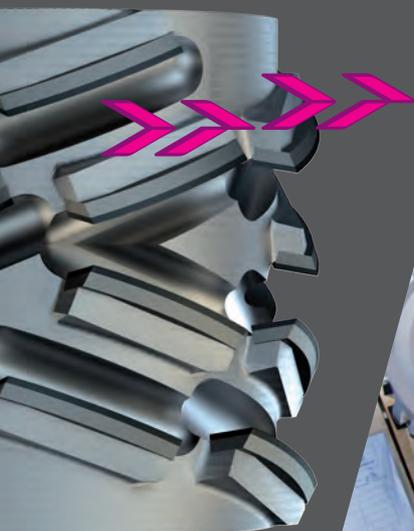


All LEUCO p-System stocked tools have an axis angle of 70°. LEUCO's patent covers axis angles from ≥ 55° to 90°.

LEUCO is the first tool manufacturer to realize tools with shear angles ≥ 55° - 90°

We call these tools »LEUCO p-System«.

The process is called »Peeling«.



Original p-System milling tools

# “CAN IT BE A LITTLE MORE?”

**'MORE EDGE LIFE' with the LEUCO p-System**

Usually, a fast through-feed machine is trimmed to a high level of throughput and parts are also processed where the customer does not see their quality. Has a customer ever examined the carcass behind a kitchen front panel? They tend not to. We are therefore in a segment where quality always matters, but where tool edge life is the defining criterion for the choice of a tool. Every tool change involves downtime and less production output. That loss is a big one because the rate of throughput is high.

**Can edge life be a bit longer? Or even many more?**

If so, then deciding on a p-System is the right thing to do. Tools in the p-System are capable of pushing edge life upwards a long way because they start out with much better quality. Which means that it takes a long time for quality to reach that critical point. These tools do not strike the coatings as hard, so they wear less.

They also apply higher pressure to the coating and shear it, as though cutting with scissors or shears. When you take all of that together, you achieve much longer edge lives and higher levels of production output.

Would you then like to add a cost saving on tools to that? You see, although p-System tools are expensive to purchase, they deliver more value in terms of extended edge life than their premium on price. This longer edge life saves hugely on tool costs in your production operations.



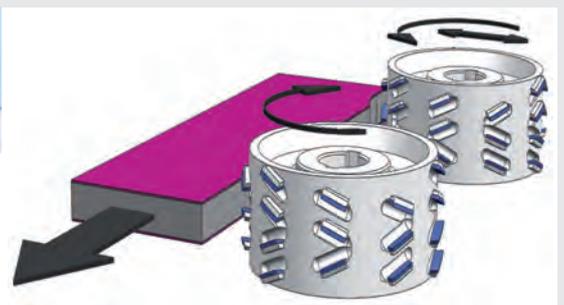
▶▶ A large kitchen manufacturer produces the cabinet components on several production lines and processes pre-coated 16 mm and 19 mm particle boards. Production is made on through-feed machines with feedrates of up to 70 m/min. The customer's demand as to jointing is finish-quality as the edging of the panel is done directly afterwards. For approx. 2 years the kitchen manufacturer has been using LEUCO p-System jointing cutters with a shear angle of 70°. Detailed edge life analyses prove: compared to the previous standard jointing cutters this solution offers 1 million running meters per edge life which means 10 times the edge life of the standard cutters.

The production manager reports: „We were able to reduce waste due to edge chippings in the decor by 80-90%. As well, machine downtime caused by the change of jointing cutters could be reduced by 90%.“

„These two factors by themselves allowed savings in the six-digit range.“

Inspired, he sums up:

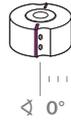
**THE LEUCO p-SYSTEM PAYS OFF!**



Machine concept: On one machine jointing is done without hogs with and against feed. On another machine hogging is done with LEUCO PowerTec hogs in a double hogging process. The next step is jointing with LEUCO p-System cutters.

**More quality and more edge life**

Previously, this milling was performed with a turnover knife tool, edge life = 1 day. With the LEUCO p-System, edge life = 1 year



0°



45°



70°

55°

LEUCO PATENT

**'MORE QUALITY'**  
with the LEUCO p-System

When fitting an edge band to fronts and to other furniture items, edge quality has a decisive role to play in the visible area. If the edge is cut to knife-like sharpness then the seam will bond properly. Which means that the item of furniture produced will retain its function - and therefore its quality - for a long time. Or how do you define yourself as a professional supplier? It is often through the enhanced quality that you supply that you can protect your margin. If at the same time, you can save money on tools, so much the better.

**Could you have a little more quality? Or even a lot more?**

If so, then deciding in favor of a p-System is the right thing to do. These tools exert a strong pulling action when cutting. As a consequence, coatings, even ones with protective films, or wood products like Multiplex, are cut extremely cleanly. Right from the first cut, you can see the difference, and the tool lasts a great deal longer too. More quality can also mean that you no longer need to grind down Multiplex edges and the like because quality is already good enough for surface treatment, saving on the time otherwise required for additional operations.

Please note: A few high-gloss coatings cannot cope with too much shear angle on the tools. The hard layers of coating on the surface are then too brittle for the higher pressure applied by p-System tools. We would be pleased to advise you on ways to improve quality with p-System tools, also on your product.



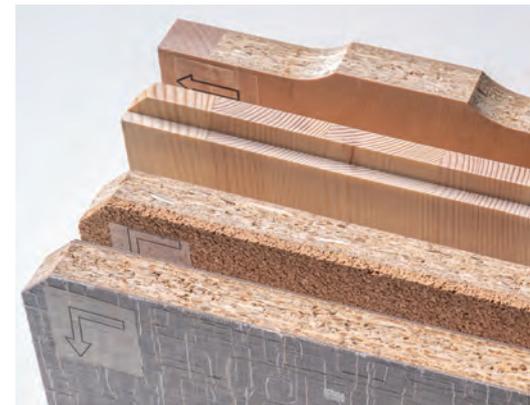
**Clean quality** even when removing 4 cm with one pass. The shear angle of 70° generates only a low cutting pressure and enables a clean cut



Thanks to the shear angle design the p-System cuts the foil „sharp as a razor“ which allows to benefit from the whole edge life of the cutter.

**More quality and longer edge lives:** Fibrous, porous, solid and veneered material with solid edge banding (from left) is milled very cleanly and with long edge lives with the p-System thanks to the low cutting pressure.

**More quality and longer edge lives:** The lightweight core board is veneered with Hemlock. This combination is used by a LEUCO customer with the p-System in the finest quality and with long edge lives.



## 'MORE POSSIBILITIES'

### with the LEUCO p-System

Machining centers are machines capable of a very wide range of applications. Your ability to work with them economically depends very much upon which of their capabilities you are able to use. Everyone can calculate for themselves what potential cost savings can be achieved from the following possibilities:



**Can there be a few more possibilities? Or even many more?** We can also offer some genuinely exciting options, ones not achievable in any other way. If so, then the decision to invest in a p-System tool is the right one. Here is what these tools can do:

- | They can produce cut-outs in a single pass without tool changes or changes in the direction of rotation, even when milling against edges that are not too thin. This eliminates rough edges in cut-outs through the use of two millers operating in opposing directions of rotation, and you also save the cost of a second milling tool.
- | Identical cut quality in solid cuts on the synchronous and opposing side. After all, you are applying a shearing action to both sides simultaneously with a powerful shear cut. Often, one separating cut instead of two is sufficient, regardless of the direction of movement of the components.
- | Running very flat grooves. From a groove depth of 0.5 mm, a p-System grooving cutter always produces a sharp edge. Which is great for flush hardware hinges and inserted pilaster strips or veneers.
- | The cut quality is identical in solid cut (roughing) and finishing. So why engage in finishing? Production quality can also be achieved in solid cut mode.
- | A revolution in finger jointing. Have you ever milled finger joints on a 5-axis machine, simply using a p-System grooving cutter? As simple as milling a groove, with a surface that is ready immediately. Finger jointing becomes a simple operation, but you can also produce high-quality finger jointing connections easily using the new p-System dovetail cutter. Finger jointing has never been this simple!
- | Milling a solid furniture component on all sides in a single operation without have to worry about the direction of the grain, or about having to produce a cut across the grain.



**More possibilities:**  
A traditional finger joint can be milled tear-free with the innovative p-System.

► We cannot fit everything that we can accomplish with the p-System into a single article. The experience of our customers indicates that even if only one of these options is of interest to you, it is still worth investing in p-System tools, to achieve massive improvements and cost-savings in the process within a very short space of time indeed.

**Ask us and put us to the test.** Many of the solutions described here are the outcome of cooperation with our customers. More edge life, more quality, more options for you. And LEUCO is delighted to have 'more challenges'

**Peel it, see it, feel it!**



New LEUCO DP shank-type cutters DIAMAX Z = 1 + 1

NEW!

## NEW STATE OF THE ART TECHNOLOGY ESTABLISHED IN ONE OF THE INDUSTRY'S BEST-KNOWN MILLING CUTTERS

The very first look at the new DIAMAX Z=1+1 shank-type cutters shows the special design of the tools. **The relatively closed-looking round shape of the body and the seemingly puristic chip gullets stand out visually.**

The redesigned body shape gives the tools even greater stability, which ensures a very smooth running and cutting behavior.

A closer look shows that the diamond tips of the new DIAMAX have larger shear angles than the previous tools in this LEUCO product family. The benefits for the end user are even longer edgelife with excellent cutting quality, even in difficult to process materials.

Another optimization feature is the diamond-tipped plunge tip of the new tools. It replaces the previous TCT cutting edges so that much longer edgelives are achieved even with frequent routing of grooves, cutouts and pockets.

Following the optimization of the DIAREX (Z=2+2) series and the DP high-performance

milling cutter (Z =3+3) series started 2 years ago, LEUCO consistently pursues the path of continuous product optimization in the interests of its customers.

Like its predecessor, the new DIAMAX Z=1+1 will be used for jointing, rabbeting, grooving and copying in raw, melamine-, paper-, HPL-laminated, foiled and veneered panels. The new DIAMAX Z=1+1 can be resharpened several times.

The range includes tools in the diameter range 10, 12, 16, 18 and 20 mm and with cutting lengths of 22 - 52 mm. It will be available from stock from June 2019 on successively.

»» THE REDESIGNED BODY SHAPE GIVES THE TOOLS EVEN GREATER STABILITY, WHICH ENSURES A VERY SMOOTH RUNNING AND CUTTING BEHAVIOR.

New: The new shank-type cutters have a larger share angle



Previous version





8.5 mm wide grooves in a single processing step with best cutting quality in a variety of materials, long edge lives and a pleasantly quiet noise level. The low cutting pressure of the carbide-tipped g5-System grooving cutter does not require a high motor output so that the grooving cutter can be used on every CNC machine.

LEUCO grooving cutters with g5-System

## QUICKER SAWING OF LARGE GROOVES

LEUCO offers the first grooving cutter with a cutting width of 8.5 mm for CNC machines. To obtain this width, a grooving cutter 5 mm and two passes have often been necessary. The new grooving cutters of LEUCO can speed up the grooving process and double the edge life of the tool.

The secret of the new grooving cutter is the LEUCO g5-System which is available from LEUCO for different applications and machines. LEUCO now uses this serration for a grooving cutter with a width of 8.5 mm. Thanks to the special tooth geometry and arrangement, the cutting pressure is reduced and, for this reason, also the driving power of the motor. This is why the grooving cutter can be used with motors which are designed to drive grooving cutters of a width of 4 and 5 mm.

Due to the smooth G5 serration of LEUCO, it is possible to produce 8.5 mm wide grooves in a single step also on smaller CNC machines. Using the new g5 saw blade, wide grooves can be produced more quickly. At the same time, the edge life is doubled since the saw blade

does only perform one processing step instead of two.

**High cutting quality for all coatings**

Another benefit of the new grooving cutter from LEUCO is the excellent cutting quality. Solid wood, plastics or varnished surfaces: the grouped profile consisting of 5 teeth each is able to saw wood even with hard or sensitive coatings. This is perfect for grooves in cabinet, showcase or mode parts for the manufacturers of high-quality furniture or furniture parts.

Moreover, the new grooving cutter does only generate a low noise level like all saw blades of the g5-System which will improve the work environment in the processing plant. This makes the new saw blade the favorite for the production of wide grooves on CNC machines.

Negative has a positive effect:

## VHW LOCK CASE MILLING CUTTER FOR HIGH REQUIREMENTS

Door production in the high-performance sector is often accompanied by short cycle times, high feed rates and the desire for long edgelifes. This places the highest demands on drive spindles, clamping devices and tools on the CNC machine.

This also applies for the solid carbide lock case cutters used. Wear-resistant carbide, good chip removal and infeed movements and reverse paths, as gentle as possible guarantee long edgelifes and contribute to minimizing the risk of breakage.

LEUCO now offers a solid carbide lock case roughing cutter version, which has proven its worth in the high-performance door production for quite some time.

The most striking features of this tool are on the one hand the negative spiral winding, on the other hand the special fine toothing of the roughing area.

In use, the lock VHW case milling cutter impresses with its extremely quiet and low-vibration running. The chips also flow well with the negative spiral arrangement.

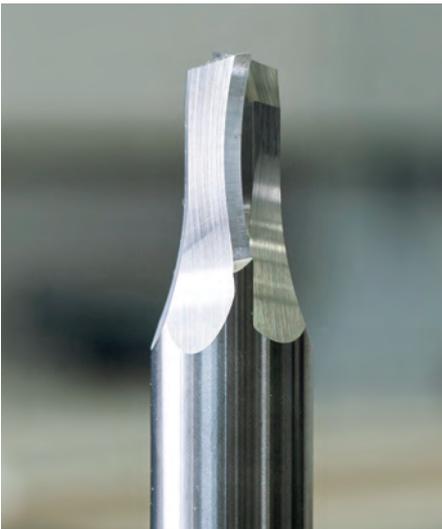
This cutter  $\varnothing 16 \times 25/115/175 \times \varnothing 16$ ,  $Z = 3$ , negative, supplements the LEUCO lock case cutter range and can be ordered with Ident-No. 186763 from stock.



VHW jointing cutter with a striking cutting edge concept

# WHEN A RADIUS MAKES A STRAIGHT LINE

Shank-type cutters with alternating shear angles, so called compression cutters, guarantee best cutting quality at the top and bottom edges, especially for workpieces laminated on both sides.



On the cut surface overcut section of the positive and the negative cutting edges can leave a light line. Especially in the processing of solid wood, MDF and plastics panels, this can require an additional sanding process.

**In the future, LEUCO will be offering an option from solid carbide cutters that will help customers to avoid those overlap lines.**

The main feature of the new solid carbide cutters is continuous, arcuate cutting edges, which produce an absolutely flat cut surface. Due to the arch shape, each cutting edge has opposite shear angles, but without a fixed overcut point.

Outstanding surfaces for jointing and dividing cuts in solid wood, glued veneer, many other laminated materials and plastics are the result. The use is not only possible on machines with console tables. With appropriate selection of the



The new cutter with the curved cutting edge provides excellent surfaces for materials with cover layers on both sides, also with soft mid layers and many panels made of plastics.

matching cutting length routing on machines with spoil boards is possible, too. The program starts with three different tool dimensions and is extended accordingly if necessary.

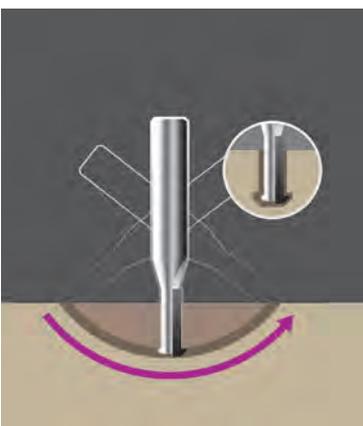
Profile groove solid carbide shank-type cutter - for Lamello Clamex P®

# 5-AXIS CNC: MAKE USE OF YOUR MACHINE POTENTIAL

As a longtime partner of LAMELLO AG, LEUCO produces grooving, drilling and milling tools for the Lamello products CLAMEX P®, DIVARIO and CABINEO.

The CNC tool family for CLAMEX P® now has another addition.

Routing the CLAMEX P® profile groove in the center of the panel on 5-axis machines usually requires the use of a shank-type tool. For this, LEUCO already offers an economically priced TCT Z=1 version, which covers the need for smaller order volumes. For extensive and more frequent milling, however, the diamond-tipped (DP) LEUCO CLAMEX P® Z = 1 profile shank-type cutter offers considerably longer tool life.



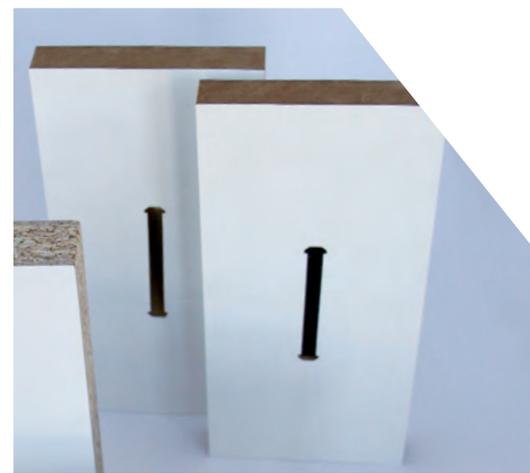
Simple and clever and the same time! The shank-type cutters for jointing of Lamello Clamex P® profile grooves of LEUCO.

As from June 2019 a solid carbide spiral cutter Z=2 version completes the program.

It is made of a wear-resistant carbide grade and thus has a very high rigidity. This is advantageous especially in the processing of hard materials such as hardwood, multiplex, solid core panel, etc.



The additionally applied coating LEUCO TC 104 increases the edgelif. Its high hardness ensures even higher wear resistance. Its low coefficient of friction also leads to a smoothing of the chip surface, less deposits, less heat and thus the best possible durability.



This tipped shank-type cutter is suitable especially for in the middle part of the panel placed grooves.

Whether occasional user or industrial manufacturing, LEUCO offers the optimum solution for the particular application and the individual machining scope for the CLAMEX P® profile groove on the CNC 5-axis machine.



High-performance finger joint cutters

# SHORT FINGER JOINTING WITH 6/7MM AND 4/4.5 MM

When it comes to producing slats for furniture and windows, the perfect material yield is always the basis for innovation. This applies particularly to longitudinal and cross joints in short cuts of woods. Another starting point is the machine's productivity, which can be increased through higher cycle rates, feed speeds and RPMs.

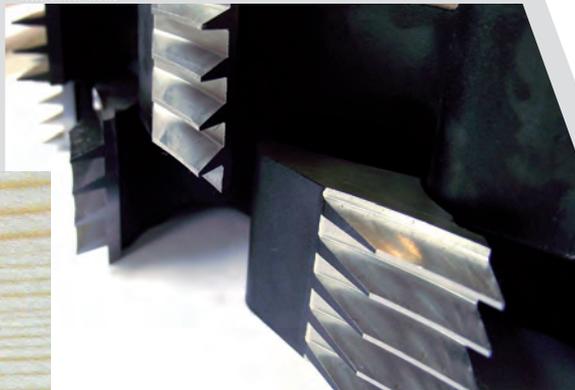
The new finger joint cutters from LEUCO with short finger lengths of 4/4.5 mm or 6/7 mm and a higher number of cutting edges meet both requirements. Due to the low cutting pressure, it cuts broad cross joints, depending on the machine, into short slats starting at approx. 250 mm without risking a lever-effect at feed speeds up to 52 m/min. RPMs and finger jointing quality are the same as with milling cutters with less cutting edges.

**Data at a glance:**

- | Cutting material: high-alloy tool steel [HS Solid 24]
  - | Runout accuracy of 5µm thanks to high-precision manufacturing of the tool body
- Advantages**
- | Double feed speed possible with the same RPM and finger joint quality
  - | Reduced risk due to stringing up short cuts of woods
  - | Less chipping when removing the cutter from the wood, even if the milling cutter is reaching the end of its service life.



Sealed finger joints with 6 mm



The LEUCO High-performance finger joint cutter featuring short fingers and high feed rates

LEUCO saw blade with g5-System

# EXCELLENT QUALITY FOR JOINERY MACHINES

LEUCO now also offers saw blades with tooth group configuration "G5" for joinery machines. They provide the typical advantages of this specific tooth geometry which include excellent cutting quality and significantly higher edge lives compared with the conventional saw blades. A further benefit : the new saw blade is equally suitable for sawing along the grain and transverse to the grain direction.

Tools with the g5-System achieve especially good sawing results due to their special geometry - a combination of a leading tooth and four consecutive teeth for fine machining. This tooth arrangement reduces the cutting pressure. Therefore, these saw blades provide a smooth and low-vibration running, the cutting edges are manufactured precisely. LEUCO has transferred this principle to its saw blades for joinery machines - with a diameter of up to 800 mm and 80 teeth.

## NEW TRIMMING CUTTERHEAD "LEUCO surfCut" WITH FINISH QUALITY

Regardless of whether planing, rabbeting or grooving, the cutterhead LEUCO surfCut can be used by timber construction companies and carpentry shops for various operations. In addition, it can be used on the joinery centers of all machine manufacturers regardless of the machine brand.

Using the surfCut cutterhead, the users normally achieve chip-free surfaces even with branches. The smooth surface visibly exceeds the usual surface qualities. Compared to conventional trimming cutterheads, the "surfCut" plain milling cutter was designed with larger shear angles and the turnover knives are bigger and more stable. During independent customer tests, the LEUCO trimming cutterhead surfCut demonstrated, thanks to the cutting edge arrangement and the solid knives, a service life of up to four times longer than other conventional trimming cutterheads on the market.

The tool geometry is optimized specifically for machining spruce and pine. For this work to go smoothly, the cutting pressure is crucial. The better and faster the chips are removed from the gullet of the tool, the lower is the cutting pressure. The extra large gullets can handle the high volume of chips and branches do not get jammed in the gullet. More than satisfied by the quality and the edge lives, a surfCut user increased the machining speed and works now twice as fast compared to conventional tools. The woodworking shop is enthused and



Application example for the LEUCO surfCut - plain milling of threaded connections



Silent and long edge life: The g5-System joining saw blade convinced test customers with the low noise level and the up to 4 times higher edge life. This saves time because the saw blade has to be changed less frequently.



The distinctive "g5-System" tooth geometry group: flat tooth, alternate top bevel left, alternate top bevel right, alternate top bevel left, alternate top bevel right.

**High quality for each sawing step**

"The results of these saw blades for joinery surpassed our high expectations", says Markus Erkenbrecher, product manager at LEUCO. The constantly high quality of the sawn wood was very convincing. The edges are entirely smooth and even, i.e. high quality without rework. The tool works without chipping even when working across the fiber.

Another advantage of the g5 saw blades for joinery machines is the long service life. During the tests, they usually achieved 30 percent longer edge lives. This can be reached thanks to the low cutting pressure due to the g5 serration. Moreover, the new saw blades can equally be used for ripping and cross cuts. Therefore, the same saw blade can be used for both cutting direction and must not be changed. Thus the carbide-tipped LEUCO g5-System is an all-rounder for joinery machines of all known manufacturers: high-quality cutting results, economically efficient thanks to long edge lives, suitable for sawing along the grain and transverse to the grain direction.

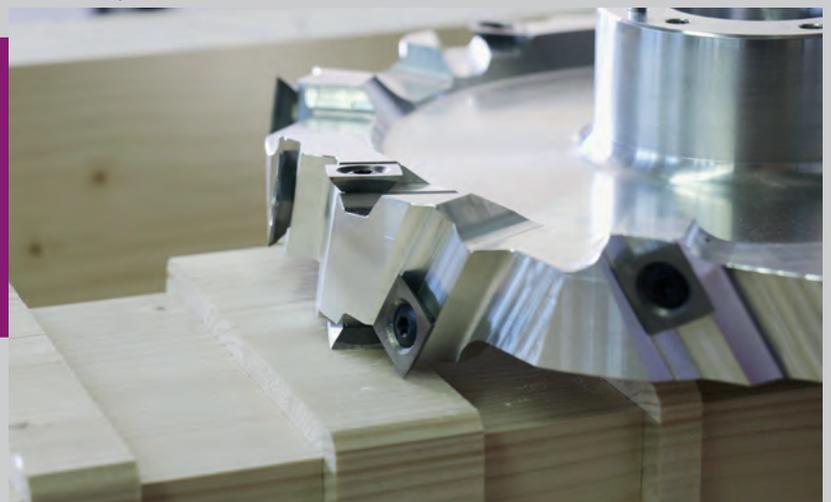


It is not necessary to rework the accurate cuts which can be used as visible edges. The test customers of the saw blade used it for processes which, in the past, have been carried out with a cutter. The processing time on the joinery machine could therefore be reduced.

reaches 75% of the machine's potential feed, compared to 50% with other tools. The new LEUCO trimming cutterhead is an interesting innovation for all carpentry shops and wood building companies for which quality, short machine downtimes and fast processing times are important.



»» The new LEUCO trimming cutterhead is an interesting innovation for all carpentry shops and wood building companies for which quality, short machine downtimes and fast processing times are important.



Regardless of whether planing, rabbeting or grooving, the new trimming cutterhead "LEUCO surfCut" is sure to excite due to its smooth, chip-free surfaces, short machine downtimes and higher processing speeds.

German Innovation Awards for pioneering product performances

## GOLD FOR MAGENTIFY

In summer 2018, LEUCO received two awards in the "Machines & Engineering" area in the "Excellence in Business to Business (B2B)" competition category. The new "LEUCO nn-System" circular saw blade is the result of a number of innovations: on the one hand for its innovative woodworking cutter "LEUCO p-System" and on the other hand for the diamond-tipped circular saw blade "LEUCO nn-System".

Since its founding over 65 years ago, LEUCO has stood for innovative tools for the wood and plastics processing industry. With over 230 industrial property rights, LEUCO has repeatedly set standards in its industry since 1954. "Coming home with not one but two awards given out by a top-class, industry-neutral jury at the German Innovation Awards Ceremony confirms our power of innovation," explains the LEUCO CEO Frank Diez with a broad smile. "With approx. 1,200 employees worldwide, LEUCO is a traditional, medium-sized global company that places great value on successful research and development," adds Diez.

The innovative tools were developed and are being produced at the LEUCO Horb am Neckar and Beinheim (Alsace/France) locations. In modern production facilities, an innovative machine fleet and highly skilled workers ensure high production quality. With both tool innovations, LEUCO has reached enthusiastic customers worldwide in the wood processing and manufacturing industry

### German Innovation Award

With the German Innovation Award, the German Design Council has closed a gap in the award landscape. Wanted are innovative products with economic success. 650 companies submitted applications for the award, among them industry giants along with hidden champions and start-ups. They all have one thing in common: A solution, a detailed innovative product or a service that creates true added value.

The assessment criteria of the German Innovation Award cover factors such as level of innovation, user benefit and cost-effectiveness. The innovation strategy should take into account factors such as social, ecological, economic sustainability

and the use of energy and resources. Other factors, such as location and employment potential, longevity, market maturity, technical quality and function, materiality and synergy effects all play a decisive role in the assessment process. A top-class jury selected the winners.



During the festive celebration in June 2018 in Berlin's Technology Museum the awards in Berlin were received by (from left to right) Daniel Schrenk (LEUCO managing director for Sales and Marketing), Dr. Martin Dressler (head of Research / Business Field Development and main developer of the LEUCO p-System), Dr. Dominique Fendeleur (head of Research & Development for saw blades and main developer of the LEUCO nn-System) and Frank Diez (CEO of LEUCO and chairman of the Management Board).

## LEUCO REPEATEDLY RECEIVES THE "GERMAN BRAND AWARD"



"We are very proud to receive this prestigious award for the third time in a row," emphasizes LEUCO's Head of Marketing Wolfgang Maier.

The precision tool manufacturer from Horb has received the German Brand Award in the category "Industry Excellence in Branding" for the third year in a row. This year with the addition "Special Mention".

As part of a gala event on June 21, 2018, LEUCO was awarded the "Special Mention" prize in Berlin. The globally operating manufacturer of wood- and plastic-processing tools has been relying for years on a consistent corporate design. "To receive the German Brand Award for the third year in a row confirms our successful strategy," says Wolfgang Maier, Head of Marketing at LEUCO. The German Brand Award is awarded every year by the German Brand Institute and the German Design Council to companies that have sustained brand concepts. The prize is awarded in three competition categories. In the "Industry Excellence in Branding" category where LEUCO is represented, an award is given



en for the best product and company brands within an industry segment.

The German Brand Institute was initiated by the German Design Council. Established more than 60 years ago upon petition of the German Parliament, the German Design Council today represents the design and brand system in the Federal Republic of Germany and supports the economy in all design and brand matters – competently and sustainably.

Tool manufacturer LEUCO invited people to a symposium in the Marta museum of contemporary art in Herford

## DELIGHTING CUSTOMERS WITH THE LEVEL OF SERVICE

At 2-year intervals, LEUCO tackles trailblazing topics. It is not just tool innovations that are important to LEUCO - so is the ability to think outside the box.

The chairman of this event, Dieter Rezbach (CEO of Lignum Consulting) picked up this theme at the point already known to many of the invited guests: Companies in our sector that already provide services as well as service backup are confronted by the reality that this added value they provide tends not to be remunerated.

Which rapidly presents the question as to quite how much service is needed? What role do employees have to play? Who or what is driving this race?

### Challenges online and offline

This was the perfect point to hand over to services expert Prof. Dr. Matthias Gouthier from the University of Koblenz-Landau. "Dissatisfied customers walk away, but satisfied customers are not automatically loyal", stated Dr. Gouthier. In his view, there is potential for revenue growth in the furniture sector through the provision of excellent services, and to improve profitability.

Executive Manager Jochen Mayer from the Digital Excellence Group went one step further and spoke of new services and products, achieved solely through comprehensive digitalization. This is something that those who have already digitalized most of their processes are well placed to consider further. Mayer's core message: **"For the entire corporation, digital challenges are at one and the same time challenges and opportunities - they are not an R&D project or a game plan for remaining budgets"**.

"We cannot always keep on doing the same thing, and then expect different outcomes", stated Christian Mayer, a member of the Board of Management at Ress Möbelwerkstätten. Many furniture makers sell through the retail trade, but that trade is breaking free to an increasing extent from its established role of competent partner. In the wood-processing sector, the importance of sales strategies, marketing, recruitment of skilled staff and digitalization is undervalued.

Paul Götz, Digitalization Project Manager at LEUCO, is certain that digitalization is not going to leave the wood and plastic processing industry unaffected. **Machines are going to become networked and data communication will become a standard feature.** Tool management in its pres-



The speakers, from left to right: Dietmar Nussbaumer (IMA Schelling Digital), Prof. Martin Stosch (OWL University), Prof. Rolf Staiger (Rosenheim University), Wilfried Bantle (Liebich & Partner), Dieter Rezbach (Lignum Consulting), Daniel Schrenk (LEUCO, Sales & Marketing Director), Jochen Mayer (Digital Excellence Group), Christian Mayer (Ress Möbel), Dr. Matthias Gouthier (Koblenz-Landau University)

ent form, with manual interventions or an absence of transparency, is a candidate with the potential for improvement. In future, the 'Digital Twin of the Tool' will represent the complete life cycle of a tool, simplifying the way businesses and operations are managed and run.

Professor and graduate engineer Rolf Staiger from Rosenheim University explained various points, including that 69% of gross added-value in Germany is generated by services. At the present time, only a proportion of those services is delivered in a purely digital manner, i.e. 'independent of production'.

**»We cannot always keep on doing the same thing, and then expect different outcomes«**

CHRISTIAN MAYER,  
RESS MÖBELWERKSTÄTTEN

digitalization is doing to and with people. It means that the number of possible options increases while the number of dependable rules for people is declining at the same time. Nonetheless, that can be used successfully.

The final paper was presented by Wilfried Bantle, an adviser and member of the Supervisory Board at Liebich & Partner, and tackled the question of what



"Without doubt, service is a very worthy word", stated Daniel Schrenk, Sales & Marketing director at LEUCO with a twinkle in his eye as he welcomed his guests. "When you get down into a little more detail", he continued, "you quickly realize that it is services that are going to change the future of our sector".



The CEO of Woodpecker Finch, Ms. Verena Fink, emphasized that, at times like these, it is necessary to build an exciting bridge between a world where familiar business models are visibly starting to disintegrate to one where new ways of doing business beckon.

During the ensuing podium discussion, the participants explained which services and forms of digitalization they are already offering the sector. What is being taught at universities on the subject of service? What efforts are being invested in setting a uniform standard?

Jörg F. Mayer (CEO of Altendorf), Christian Mayer (member of the Board of Management at Ress Möbelwerkstätten), Tobias Schaible (CEO of Homag GmbH, Homag Group), Prof. Martin Stosch (Ostwestfalen-Lippe University) Prof. Rolf Staiger (Rosenheim University) and Daniel Schrenk (Sales & Marketing Director at LEUCO), Dietmar Nussbaumer (CEO of IMA Schelling Digital) (from left)



Celebrate with us

# 40 YEARS LEUCO USA



Dear customers, partners and friends of LEUCO Tool Corporation,

LEUCO Tool Corporation began its impactful adventure in the United States in 1979. Through channels of distribution and machinery importers our desire was to impact our market with the promise of innovation, precision, quality and progressive solutions to manufacturers throughout the country.

In 1983, we opened LEUCO Tool Corporation in Illinois to provide the market with a US based technical support, stocked inventory, and a driving salesforce. Only 5 years later, through much hard work and dedication, we were able to open our 1st carbide service center and continued to develop our sales, delivery and excellent customer service.

By 1995 LEUCO acquired Henderson Tool in Villa Rica, Georgia where our story of fast and remarkable company expansion really began to take flight. Due to the increasing demands on wood tooling solutions, we hired an engineering team to produce innovative tooling locally. Our team also created and launched what we call, "Lifespan"; a diamond tool service history program, alongside our Zero Turnaround Service program.

In 2003 LEUCO Tool Corporation made the strategic decision to move its headquarters from Ingleside, Illinois to Villa Rica. Since then LEUCO has seen tremendous growth as its employee headcount has grown from 55 employees in 3 facilities to today's number of more than 105 employees at 7 facilities.

When we think of expansion and growth, we do not associate that to brick and mortar buildings, revenue or new machinery. Instead, we see growth in the value of our team, our presence in the market and our customers returning year after year for our excellent customer service and quality. It is LEUCO Tool Corporation's goal to bring quality tooling to the woodworking industry and continue to build on the innovation and reliability LEUCO provides.

2019



With best regards,  
We look forward to you!

Your LEUCO team



1979

2009 - 2019

## LEUCOBELRUS IS CELEBRATING ITS 10TH ANNIVERSARY



"LEUCOBelRus" has been founded ten years ago in the Republic of Belarus. The subsidiary of LEUCO is based in Minsk. The main target of the company since the first days after its foundation until today has been the customer-oriented service.

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To reach this target, LEUCOBelRus provides services and materials of the highest quality for the market in Belarus. Furthermore, a wide range of adapted, individual solutions and a friendly environment are offered to each customer. The large number of customers, including well-known companies such as Ikea and Kronospan, confirm the success of these efforts. They are also confirmed by the positive feedback from many customers. LEUCOBelRus has eleven highly skilled employees and high-tech machines to grind and repair tools for wood

and metal processing made of tungsten carbide and polycrystalline diamond on a production floor space of 500 sqm. From the beginning, the company has set a high benchmark regarding the quality of the service work to be performed and has used exclusively machines of leading companies engaged in sharpening technology such



The LEUCOBelRus team is committed with enthusiasm to the customer-oriented service.

as Vollmer. We are not standing still and are continuing to develop. This year the machinery has been completed with a machine from the Swiss manufacturer Schneeberger so that the range of services could be improved. Thanks to our recruiting and bonus system, we have hired and trained first-class employees which share our mission: "Quality tools = quality service!" The direct plans of the company include the automation of the sharpening service processes and the development of logistics services. This will enable us to enhance our service level. We are looking forward to the next ten years with a lot of satisfied customers.



Qualified employees and high-tech machines sharpen and repair all types of tools from circular saw blades and shank-type cutters to hoggers.



Spring 2009: The first machines are delivered to the sharpening service station.

### A success story

## 50 YEARS LEUCO SWITZERLAND

In 1969 LEUCO started in Switzerland with a sharpening service and a production of carbide-tipped circular saw blades. Continuous further and new developments led to success and investments in technological progress and new specialists. Over the years, LEUCO expanded its range of tools with DIA and HW tools and made a name for itself as a machining specialist for wood-based materials. The continuing success and the strong expansion in all areas led to the need for more space. In 1989 the new building in St. Margarethen could be moved into.

For the needs of the market and our claim to be one step ahead, we continue to pursue the philosophy "Innovations are our strengths", which makes LEUCO a market leader even today.



## A LOOK AT LEUCO

LEUCO ranks among the leading international suppliers of complex tools solutions and intelligent services for the wood-working industry.

Our goal is to improve the opportunities for our customers and partners through forward-looking innovations and to open up the potential of wood and related materials as a recyclable raw material to benefit people.

In close contact with our industry, we design and develop tungsten carbide and diamond-tipped circular saw blades, hogs, boring and shank-type tools, drill bits, turnover knives and clamping devices. Our goal is to streamline the processes of our customers in the construction, furniture and panel industry, in lumber mills and interior design companies while also opening up new opportunities in working with the growing variety of materials. Comprehensive consulting services, our sharpening service at manufacturer quality and future tool management solutions have made LEUCO a one-stop tool shop for our customers.

Today, around 1,200 employees work for LEUCO worldwide. With sales subsidiaries in Australia, Belgium, England, Japan, Poland, Singapore, Thailand, Ukraine and Belarus, as well as sales and production locations in China, France, Malaysia, Russia, Switzerland, South Africa and the U.S., our company is represented on all five continents.

**LEUCO**  
**Magentify Wood Processing**



ONLINE-CATALOG 24/7  
[WWW.LEUCO.COM/PRODUCTS](http://WWW.LEUCO.COM/PRODUCTS)

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