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SEPTEMBER 2025

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DF Precision Machinery Ltd is not only the official global supplier of Jones & Shipman spares, service and support, holding the OEM records & software and the largest J&S spare parts stock in the world. DF also supply proven solutions from individual machines through to turnkey cells from world renowned suppliers of Cylindrical, Universal, Surface, Profile, Vertical, Rotary, Internal, Creepfeed, Jig, Centre Hole Grinding, Automation Solutions, plus Lapping, Flat Honing and Polishing Technologies.

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SEPTEMBER 2025 • Volume 23 • Issue 4 • ISSN 1740 -1100

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Published by Roger Barber Publishing

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Print:
Holbrooks Printers Ltd,
Portsmouth, Hampshire

Grinding & Surface Finishing is published five times a year and mailed to a controlled circulation of readers with a legitimate interest in the content.

DF Precision Machinery – The home of high precision

DF PRECISION MACHINERY LTD

After spending the previous decade at the heart of the Jones & Shipman/Hardinge management team, Mike Duignan and Alan Fisher established DF Precision Machinery Ltd in 2020. Five years in, they continue to use their wealth of experience, related to precision grinding machine applications and sales, whilst providing the highest standards of customer care.

Key industries served by DF Precision include aerospace, automotive, autosport, mould, tools & die, bearings and medical sectors.

The range of products and technologies sold and supported has increased with automation systems from Wenger, lapping & flat honing from Stahli and centre grinding from Zamag. These complement the extensive grinding product portfolio from globally renowned precision grinding brands, including, Kellenberger, Voumard, Hauser, Tschudin, USACH and Jones & Shipman. As exclusive UK and Ireland representatives for Kellenberger grinding products, DF Precision Machinery boasts an impressive portfolio of solutions.

Complementing Kellenberger grinding products, the company is also the exclusive UK distributor of Okamoto Grinding Products. In addition to Okamoto's extensive range of surface and profile grinders, the renowned manufacturer also offers internal, cylindrical, vertical and rotary grinding products.

In addition to selling this wide range of precision machining solutions and providing related support services to UK customers, DF Precision Machinery is the official global supplier of Jones & Shipman spare parts and support services. The company holds the extensive J&S OEM records, drawings and software and offers unrivalled expertise related to Jones & Shipman products.

Explaining DF Precision Machinery's ethos, Mike Duignan says: "To ensure the delivery of highly efficient precise machines and solutions that provide an attractive ROI for our customers, we use only quality partners. The companies we represent are global leaders in their fields and have built strong reputations through their dedication and commitment to offering first-class products and support.

"Our Customer First philosophy ensures that all of our customers receive high-quality specialist support from initial sales discussions, through to the provision of long-term support services that optimise returns on our customer's investments."

DF also give a little back supporting charities and local sports clubs each year and have now planted 6,000 trees overseas and 18,000 m^2 of UK National Trust woodland.

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From left to right: Ivan Filisetti, Heinz Poklekowski, Michael Horn and Stephan Nell Management Board of the new group UNITED MACHINING SOLUTIONS

UNITED GRINDING Group and GF Machining Solutions becomes UNITED MACHINING SOLUTIONS

With the acquisition of the GF Machining Solutions Division of Georg Fischer AG, the UNITED GRINDING Group has expanded its portfolio to 15 brands. The new group operates under the name UNITED MACHINING SOLUTIONS and, with total sales of over USD 1.5 billion, has become one of the largest machine tool manufacturers in the world.

With the takeover of the GF Machining Solutions Division of George Fischer AG by the UNITED GRINDING Group, one of the largest machine tool manufacturers in the world has emerged with total sales of over USD 1.5 billion and around 5,000 employees at over 50 global locations. The company was renamed UNITED MACHINING SOLUTIONS and retains its headquarters in Bern, Switzerland.

Stephan Nell, CEO of the new group and the UNITED GRINDING Group, reveals: "There has been a long-standing desire to merge the two companies. Lead shareholders Rosmarie and Martin Ebner expressed their full confidence in this strategically important step within the world of global machine tool manufacturing, authorising the necessary capital increase to make this vision into reality. It is rare for two companies to complement each other as well as UNITED GRINDING and GF Machining Solutions. This applies not only to our product portfolios, our international alignment and our understanding of quality, but also to the culture and mindset of our employees. I am convinced that we can make a big difference together, for the benefit of our customers." The group's board of directors closely monitored and supported the process. Fred Gaegauf, chairman of the board of directors at the UNITED GRINDING Group, noted: "The merger of these two companies has created a Swiss powerhouse in machine tool manufacturing."

Optimal addition

With a presence in more than 50 locations, a comprehensive product portfolio and a total of 15 leading brands in their industries, the foundation is laid for future success. "It is the best decision we could make," confirms Ivan Filisetti, CEO of GF Machining Solutions and a member of the new group's Management Board. "Our products do not overlap, they complement each other. This makes integration much easier and, as a Swiss company, we share the same culture with a strong commitment to innovation and digitalisation. We will also keep after our goal of being the preferred partner for our customers, always ready with customised solutions and comprehensive expertise. In other words, able to offer much more than just high-end machines. The group helps us with its strong international alignment, employees on site at our customers' premises and our breadth of technological expertise."

In R&D, collaboration is not only beneficial for the company and its customers in the development of innovative solutions. Synergies can also be leveraged with regard to new standards and regulations, which are becoming increasingly important and require machine manufacturers to respond in order to keep their machines fit for the future.

The two companies are particularly connected by their shared Swiss roots and strong international alignment. "With more than 50 locations worldwide, there are few machine tool manufacturers that are as international as we are and as close to their customers," believes Stephan Nell. "Being able to speak the language of our customers

and offer fast, competent support is an important decision-making criterion for our customers. Our global employees share the same roots and values," adds Ivan Filisetti.

Thanks to many commonalities and an optimal addition to the portfolio, the prerequisites for successfully merging as UNITED MACHINING SOLUTIONS could hardly be better. The group will primarily present itself to the outside world through its individual brands. "In the future, we want to further strengthen the identities of our brands, which have been known and anchored in the market for many years," explains Stephan Nell. "The brands have a long tradition, stand for the highest quality and are often pioneers in their field. Our customers trust the brands they have learned to know and appreciate."

UNITED MACHINING SOLUTIONS with two divisions and established management team

The two divisions UNITED GRINDING and UNITED MACHINING fall under the umbrella name of the group, UNITED MACHINING SOLUTIONS. UNITED GRINDING includes the brands MÄGERLE, BLOHM, JUNG, STUDER, SCHAUDT, MIKROSA, WALTER, EWAG and IRPD. With its expertise in the technologies of surface and profile grinding, cylindrical grinding, tool machining and additive manufacturing, the group continues to offer broad application knowledge, an extensive product portfolio and a distinct range of services for the manufacture of high-precision components.

GF Machining Solutions is one of the world's leading providers of precision engineering and advanced manufacturing technologies for high-precision components and tooling industry. These competencies and technologies will be incorporated into the new group in the UNITED MACHINING division. The group's portfolio will be expanded to include the brands AGIE CHARMILLES, CHARMILLES, MIKRON MILL, LIECHTI, STEP TEC and SYSTEM 3R. This includes machines for high-speed milling, Electrical Discharge Machining (EDM), laser texturing and laser micro-machining. In addition, the division offers state-of-the-art spindles as well as solutions for automation and digitisation, backed by global customer and application support.

The management team at UNITED MACHINING SOLUTIONS consists of four people with a long history in the respective companies: Stephan Nell, Ivan Filisetti, Michael Horn and Heinz Poklekowski. Stephan Nell, CEO of the UNITED GRINDING Group, has spent 22 years within the group. He now takes over as chairman of the management board and strategic leadership for sales and customer care. Ivan Filisetti, president of GF Machining Solutions and affiliated with the company for 23 years, is responsible for establishing the long-term vision of the new group's technology area and remains CEO of UNITED MACHINING. Michael Horn, who is responsible for operations and IT, brings his many years of experience in machine tool engineering and most recently as a member of the Board of DMG MORI AG to the new group. Heinz Poklekowski, who has been a group member for 35 years, his most recent role being CFO for the UNITED GRINDING Group, will assume responsibility for Finance and Group Services.

Premiere at EMO Hannover with eight world firsts

The new group UNITED MACHINING SOLUTIONS will make its debut at EMO Hannover, the leading trade show for production technology. For 50 years, the trade show has provided a unique platform every two years to gain a comprehensive overview of the industry's global offering. UNITED MACHINING SOLUTIONS will be represented by its 15 brands and showcase no fewer than eight world-first innovations.

Hall 11- Stand E45

About UNITED MACHINING SOLUTIONS

With total sales of over USD 1.5 billion, UNITED MACHINING SOLUTIONS is one of the largest machine tool manufacturers in the world. With around 5,000 employees at over 50 global production, service and sales locations, the company is close to its customers and highly efficient.

The group is organised into two divisions: UNITED GRINDING and UNITED MACHINING.

UNITED GRINDING includes the brands MÄGERLE, BLOHM, JUNG, STUDER, SCHAUDT, MIKROSA, WALTER, EWAG and IRPD. Its technologies include surface and profile grinding machines, cylindrical grinding machines, machines for tool machining and machine tools for additive manufacturing.

The UNITED MACHINING division includes the brands AGIE CHARMILLES, CHARMILLES, MIKRON MILL, LIECHTI, STEP TEC and SYSTEM 3R. It includes machines for EDM, high-speed milling and laser technology as well as spindle production and automation solutions.

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50 years of EMO

Continuous development into the world's leading trade fair for production technology

Under the motto "Innovate manufacturing", EMO Hannover 2025 will showcase the entire metalworking value chain from September 22nd to 26th in Hannover Germany. This includes cutting and forming machine tools, manufacturing systems, precision tools, automated material flow, computer technology, industrial electronics and accessories. EMO takes place in a sequence of "Hannover, Hannover, Milan" every two years and is celebrating its 50th anniversary in 2025. As the most important platform for the metalworking industry worldwide, EMO stands for innovation. It sets the pace and is a global leader when it comes to new products, manufacturing solutions and services.

Market leaders from 45 countries worldwide exhibit at EMO. Trade visitors at the exhibition come from all major customer industries, for example mechanical engineering and plant construction, the automotive industry and its suppliers, aerospace technology, precision mechanics and optics, shipbuilding, medical technology, tool and mould making and steel and lightweight construction. All of these visitors come from around 140 countries. No other trade fair presents the full breadth and depth of the international range of manufacturing technology like EMO. Exhibitors and visitors with a high level of expertise discuss the major trends in manufacturing, exchange ideas with representatives of international production research and develop solutions to existing challenges. The future of metalworking: "Innovate manufacturing" remains the constant challenge for the industry. EMO points the way to the limitless possibilities of industrial manufacturing.

On August 1st, 2024, the mailing of registration documents all around the world for EMO Hannover 2025 marked the start of a very special event. The world's leading trade fair for production technology, which takes place is celebrating an important anniversary.

"For half a century, EMO has been bringing the right people together, in the right place and at the right time," emphasises Carl Martin Welcker, EMO general commissioner. "It's the most important event of 2025 for the international metalworking community."

Under the motto Innovate manufacturing, the trade fair covers the entire value chain of this industry. This includes machine tools, manufacturing systems, precision tools, automated material flow, computer technology, industrial electronics and accessories. "As the most important interface between industry and production technology, EMO stands for innovation, internationality, inspiration and the future of metalworking," explains Dr Markus Heering, executive director of EMO organiser VDW (German Machine Tool Builders' Association). EMO is a leader in providing impetus for new products, manufacturing solutions and services.

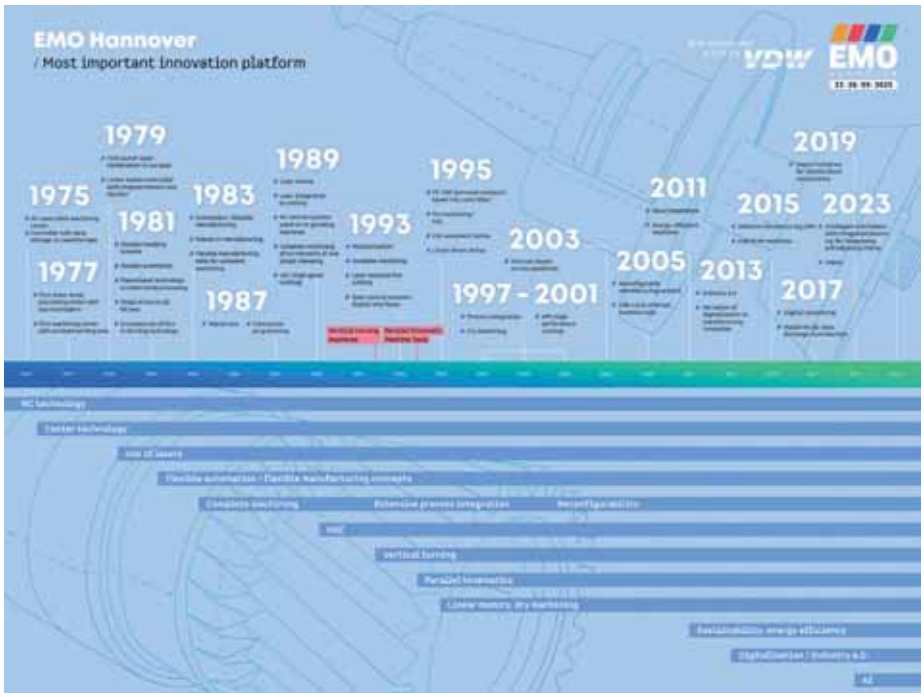
The trade fair also stands for inspiration, as it reflects the international range of manufacturing technology like no other trade fair venue and focuses on its major trends. In this respect, it also points the way to the future of industrial production.

General commissioner General Welcker, who has been campaigning for this huge event since 2012, is convinced: "EMO was, is and will remain THE industry platform for inspiring customers, expanding your own network and, of course, doing business." The trade fair already had this aspiration 50 years ago, when it was launched by the European umbrella organisation for the machine tool industry, Cecimo, in a difficult economic phase with the substantial involvement of the VDW.

The global economy had lost momentum in the 1970s due to structural upheavals. High inflation, high interest rates and rising unemployment figures led to a distinct depression and stagflation, i.e. a lack of growth or low growth combined with steep price rises. Individual sectors of the economy were hoping for a recovery through innovation and the associated increase in the investment ratio. However, the machine tool industry, which then as now was synonymous with sophisticated capital goods and was best able to meet these demands, was, like most areas of mechanical engineering, in a tight situation.

Despite this critical situation, the European and national industry associations stood by their decision taken quite some time ago to launch the first round of EMO exhibitions. In 1975, the year in which the Vietnam War ended and the CSCE agreement was adopted, the first EMO was launched in Paris. In addition to the predominantly Western European exhibitors, 114 manufacturers from Eastern Europe and other parts of the world were represented.

What was special about the new trade fair were the new exhibitors from other continents. This was preceded by an intensive and lengthy discussion about opening up the EEMO, the "Exposition Européenne de Machines-Outils", the Machine Tool European Exposition, to the rest of the world, an event



which had been organised since 1951 with purely European participation. At that time, the VDW vehemently advocated further internationalisation of the trade fair and finally agreed with Cecimo to also admit exhibitors from other parts of the world. This was followed by the renaming and launch of the trade fair as the "Exposition Mondiale de la Machine-Outil" (the World Exhibition for Machine Tools, or EMO for short).

The choice of venue was also discussed beforehand. While the original sequence was "Paris, Hannover, Milan and then Hannover" every two years, EMO has been held with the cycle of "Hannover, Hannover, Milan" since 2005. EMO celebrated its debut in Germany in 1977. While almost 1,400 exhibitors from all over the world were spread across

94,000 sq m of net exhibition space at the first trade fair two years earlier, the second event in Hannover saw a good 1,600 exhibitors exhibiting across a net exhibition space of almost 117,000 sq m.

This was accompanied by increasing internationalisation. Exhibitors from 27 nations, mainly from the USA and Japan as well as emerging markets, presented their innovations alongside Eastern and Western European countries. "What is being shown here in Hannover by the companies of the 13 countries that are now members of the European Committee, as well as by five Eastern European countries, companies from America and this time increasingly by countries in Asia and the Middle East, is virtually the world's machine tool industry," emphasised Markus von Busse, then EMO General Commissioner, at the opening of the first EMO to be held in Germany. He also emphasised: "They don't just supply machine tools, but are increasingly supplying solutions to problems, complete systems."

Continuous growth in subsequent years

This trend continued to consolidate. Four years after the first EMO in Hannover, the trade fair once again attracted a record number of visitors. By 1981, there were already 1,845 exhibitors occupying more than 140,000 sq m with their stands. This included 234 companies from 21 countries outside Western Europe. There was hardly a country that lacked relevant approaches for manufacturing metalworking machinery. Another four years later, EMO 1985 in Hannover grew further to an exhibition space of around 160,000 sq m. About half of the space was taken by companies from Germany.

The positive development of the world's most important trade fair for production technology continues to this day. At the last EMO 2023 in Hannover, around 1,850 exhibitors showcased their products in 15 halls across 235,000 sq m. Around 70 percent

of the companies came from 45 different countries, including China, Italy, Switzerland and Japan. Moreover, about a third of the approximately 92,000 trade visitors came from Asia. After a four year break due to the COVID-19 pandemic, the trade fair offered them the chance to see top-class technical innovations. "We've seen everything here that will make up the future of production; new solutions for automation, for networking in factories and for sustainability in production," summed up EMO commissioner General Welcker at the end of the trade fair. He added that, despite the tense economic situation, the mood was good.

Confidence for the anniversary trade fair in 2025

This is also the goal for EMO 2025, which will have been providing the right answers to all

EMO
HANNOVER
22–26/09/2025

questions relating to production technology for 50 years. The focus will be on automation, sustainability and digitalisation. General Welcker states: "Participation in EMO is a must for all key players in the metalworking industry because this is where the who's who of the industry will be exhibiting."
In this respect, the leading trade fair is the place to be, as no other trade fair in the world brings together so many manufacturing experts on the manufacturer and user sides in one place.

https://emo-hannover.com/

Kellenberger expands technology portfolio to include turning and milling

Kellenberger is consistently pursuing its growth strategy and expanding its technological foundation. Under the slogan "One name, one brand, endless possibilities," the well-established brands Voumard, Hauser and Tschudin will now operate under the brand Kellenberger. In addition, a new machine series will be introduced, expanding the company's core grinding technology to include turning and milling. The first machine developed under this new direction, the KELLENBERGER TM300, will make its debut at EMO.

New CEO Carsten Liske describes the company's global strategy: "In the future, we aim to offer Kellenberger customers not only innovative grinding solutions, but also well-thought-out machine concepts in the fields of turning and milling; the kind of solutions Kellenberger has been known for over decades. With the KELLENBERGER TM300, we've developed a multifunctional machine for complex machining tasks that demand the highest precision and maximum flexibility. The TM300 complements our successful high-precision SP series machines."

Kellenberger's service commitment applies across all series and technologies. From predictive maintenance and outstanding after-sales support to comprehensive spare parts availability via the company's service platform, Kellenberger offers a wide range of services.

The KELLENBERGER TM300 is a state-of-the-art 5-axis turning-milling centre. Equipped with a Siemens "Sinumerik One" control system, the machine is ideally suited for demanding applications in precision engineering, aerospace, medical technology and general mechanical engineering. The main and counter spindles offer high performance with 3,500 rpm and 600 Nm of torque, while the milling spindle delivers 12,000 rpm and 100 Nm of torque. The direct-drive B-axis offers an extended swivel range of 240° and the orthogonal Y-axis with 300 mm travel provides a large machining area. User-friendliness is significantly enhanced by the integration of a digital twin.

The TM300 is optionally available with a lower turret, enabling complete machining of complex workpieces in a single setup. For the machining of long shaft components, a hydraulic steady rest is available.

Kellenberger is also presenting new solutions in its core grinding segment at EMO.

The highly successful KELLENBERGER K100 is now available in a version with an extended machine bed for workpieces up to 1,700 mm in length and a workpiece weight of up to 200 kg, with centre height up to 250 mm. This K100 version can also be configured with up to 10 compact grinding head variants to optimally tailor the machine to the parts being processed. The diagonal grinding head arrangement is complemented by a collision-free universal design with a 500 mm grinding wheel diameter.

Lke all Kellenberger grinding machines, the K100 for workpieces up to 1,700 mm in length is equipped with the latest BLUE Solution software, which features the newly developed gSHAPE tool. This part-oriented graphical programming interface enables visual and intuitive creation of machining programs.

The proven KELLENBERGER K100 platform concept is now available with a grinding length of 1,700 mm.

In the field of coordinate grinding, Kellenberger is presenting its new WHITE Solution software on the KELLENBERGER H2000 at EMO. WHITE Solution is an innovative CADCAM solution developed in collaboration with renowned software specialist OpenMind and based on HyperMill. This solution enables even more efficient and precise machining while improving workflow integration.

From the internal grinding segment, Kellenberger will showcase the high-end universal cylindrical grinding machine VM1000, as well as the VM30, which is specifically designed for smaller workpieces and equipped with Rex automation.

The 5-axis turning-milling centre KELLENBERGER TM300 will make its debut at EMO.

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ANCA presents innovations for high quality and efficiency at EMO

At EMO 2025, ANCA will present a range of new products and services designed to help cutting tool manufacturers overcome today's key challenges, such as labour shortages, shifting market dynamics and the need for greater resource efficiency. Drawing on the group's deep technological expertise and leveraging the latest advances in digitisation and artificial intelligence, ANCA's engineers and product experts have developed innovative solutions across its entire portfolio of machines, software, automation and services. These offerings are tailored to support customers not only in navigating difficult times, but also in seizing new opportunities in an evolving market.

"Profitability comes from two key pillars: manufacturing the highest quality tools and optimising production costs," says Edmund Boland, GM of ANCA CNC Machines. "At ANCA, we've built our reputation on delivering both, with precision solutions backed by over 50 years of innovation.

"To celebrate EMO's 50th anniversary, we'll showcase a range of new developments designed to help our customers boost efficiency, meet higher specifications and expand their product range."

ULTRA technology powers the next generation of precision

ANCA will showcase its latest advancements built on ULTRA Technology, a breakthrough integration of nanometre-level axis control, intelligent servo algorithms and a precision package combining mechanical design, advanced software and AI enhancements. Developed through ANCA's unique vertical integration, ULTRA Technology forms the foundation for unmatched grinding accuracy, repeatability and production efficiency.
As part of this platform, ANCA will unveil two leading innovations:

MicroX ULTRA

The industry's most precise micro tool grinder, purpose-built for high-volume production of tools as small as Ø0.03 mm. It features nanometre control, in-process laser measurement and proprietary Motor Temperature Control (MTC) to ensure thermal stability. Live demonstrations will include Ø0.3 mm ballnose with fast wheel changes.

MX7 ULTRA

Showcasing flexible, high-volume production of indexable inserts with complex profiles and multiple tips. It combines 5-axis profile grinding with ANCA's patented MTC and offers one-clamp solutions with automatic profile and rake face compensation, enabling fast changeovers without compromising precision. To demonstrate the wider potential of insert grinding, co-exhibitor Mitsubishi will display complementary EDM dress technology at the ANCA stand. This collaboration showcases the advantages of refined process integration, seamless data exchange and end-to-end digitisation along the production chain, improving results and efficiency in insert manufacturing.

Another market premiere at EMO will be ANCA's EPX-SF advanced stream finishing machine which optimises tool performance and improves tool edge IP for a competitive edge. New features include a multidiameter tool gripper, simplified drum swapping mechanism, enhanced coating performance, faster 45 percent loading/unloading cycle time that has been reduced to 25 seconds and smart recipe fine-tuning using output feedback.

CPX Linear

Designed for high-volume blank grinding, the CPX Linear delivers high material removal rates, enhancing productivity, precision and process stability. Achieving surface finishes of <0.2Ra, the machine features automated in-process OD measurement and auto-loading capabilities for diameters ranging from D3–D20 mm all within a large working envelope supported by a powerful roughing spindle. Now equipped with flat grinding capability, the CPX Linear offers even greater versatility, enabling manufacturers to process both cylindrical and flat features in a single setup. Together with GDS clamping technology, who are also co-exhibiting at the stand, the CPX goes as far as grinding 32 mm blanks and even processing sintered blanks.
Software solutions for a competitive edge
ANCA's industry-specific software solutions enable productivity gains, performance improvements, faster cycle time and better user experience maximising efficiencies and maintaining quality while lowering the cost per tool.

Launching at EMO is ANCA's new software package for special inserts InsertsPRO. This dedicated software addresses user-friendliness and introduces new technology features like finished part simulation, rake face compensation, chip breaker calculation and automatic clamping orientation to produce superior inserts fast and flexibly. With advanced simulation for 'first-time right' production and optimised grinding strategies to improve cost-effectiveness, InsertsPRO is designed to meet current and future insert production requirements.

ToolRoom RN35, ANCA's latest grinding software release, features feedrate optimisation and airtime reduction, delivering up to 20 percent shorter cycle times. Along with profile fluting enhancements and VRML import into iGrind, the RN35 release is packed with powerful features to boost productivity, enhance tool quality and deliver exceptional surface finishes.

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- The highest tool quality
- Smarter production with real cost savings
- Proven performance across micro tools, cutting inserts, blank preparation, edge preparation and more

Meet our experts at EMO, explore new automation and software innovations, and experience how from precision to profit – ANCA delivers.

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ADVANCED TECHNOLOGY

AUTOMATION WITH AIMS

PRECISION ENGINEERING

UNMATCHED CONSISTENCY

INTEGRATED INNOVATION

CUSTOMER-CENTRIC FLEXIBILITY

Innovations and technologies of the future from Klingelnberg

At EMO, Klingelnberg will present the P 26 and P 40 Precision measuring centres, the Höfler R 300 Cylindrical Gear Roll Testing Machine, the Höfler Speed Viper Cylindrical Gear Grinding Machine and the Oerlikon G 30 Bevel Gear Grinding Machine. Additionally, ROTEC, a KLINGELNBERG AG subsidiary, will showcase its solutions for the high-precision measurement and evaluation of speeds and angular positions. Smart Factory, the future of the manufacturing industry, will also be a key focus. Through the integration of IoT, AI and real-time data analytics, factories are becoming more intelligent, efficient and adaptive than ever before.

Compact and designed to meet the needs of the automotive industry, the P 26 Precision Measuring Centre is extremely popular with customers. Its success story spans several decades and was built on a foundation of new measurement and evaluation methods, the implementation of innovative measuring systems and uniform quality and reliability. After more than 30 years, Klingelnberg is breaking new ground in machine control technology. The seventh generation of machines is equipped with the latest Beckhoff controller, which is compatible with all current and future add-ons and designed to meet the requirements of the new EU Machinery Directive, now and in the future. It is because of their accuracy and reliability that Klingelnberg Precision Measuring Centres are used as a reference around the world, not just by countless customers, but also by renowned metrology institutes. With the latest advancements, the established combination of tactile (3D NANOSCAN) and optical measurement technology (HISPEED OPTOSCAN) for measuring cylindrical gears is now also available for this model series.

The hybrid measurement technology introduced in 2020 was developed to meet the demand for higher measurement speeds without compromising accuracy. The goal is to inspect as many components as possible using the fewest machines possible.

All Klingelnberg Precision Measuring Centres in the 6th and 7th generation P 26 to P 65 series can be optionally retrofitted with the optical sensor (HISPEED OPTOSCAN). This technology is available as an optional feature for current precision measuring centres, along with the aforementioned measuring and evaluation options.

The measurement technology in the R 300 Höfler Cylindrical Gear Roll Testing Machine can reliably determine the root causes of gear noise resulting from poor gear quality. Due to the short measuring time, the R 300 can be easily integrated into any manufacturing process and enables 100 percent quality control of the gears produced. The R 300 is designed for all roll testing processes that are relevant for evaluating the running behaviour and noise behaviour of gears.

Depending on its equipment, the R 300 enables testing of gears and shafts, a particularly important factor for components in an electric vehicle drivetrain system, eDrive). Due to 100 percent quality control, a considerable amount of data is generated compared to random sampling. For data analysis and reporting, the data from the R 300 can be processed appropriately using the Klingelnberg Gear Noise Analyzer (GNA) software and tolerances developed for production monitoring.

Designed for high-volume generating grinding and polish grinding in large-scale production, the Höfler Speed Viper Cylindrical Gear Grinding Machine is available in three different machine models to suit individual requirements: Speed Viper 300 in a single-spindle configuration, and Speed Viper² 180 and 80 in a dual-spindle configuration. The Speed Viper is designed for maximum workpiece diameters of 80, 180 and 300 mm, depending on the model. The Speed Viper² dual-spindle concept ensures minimal non-productive time.

Smart Factory is revolutionising how products are designed, built and delivered. Through the integration of IoT, AI, and real-time data analytics, factories are becoming more intelligent, efficient and adaptive than ever before. From predictive maintenance that minimises downtime to digital workflows that streamline operations, Smart Factory unlocks higher productivity, reduced costs and improved quality. The future of the industry isn't just automated, it's connected, data-driven and optimised for peak performance.

The performance of a machine stands and falls with the quality of the tools and clamping devices used. This is why Klingelnberg is also setting new standards in this area, with maximum precision, reliability and innovative technology.

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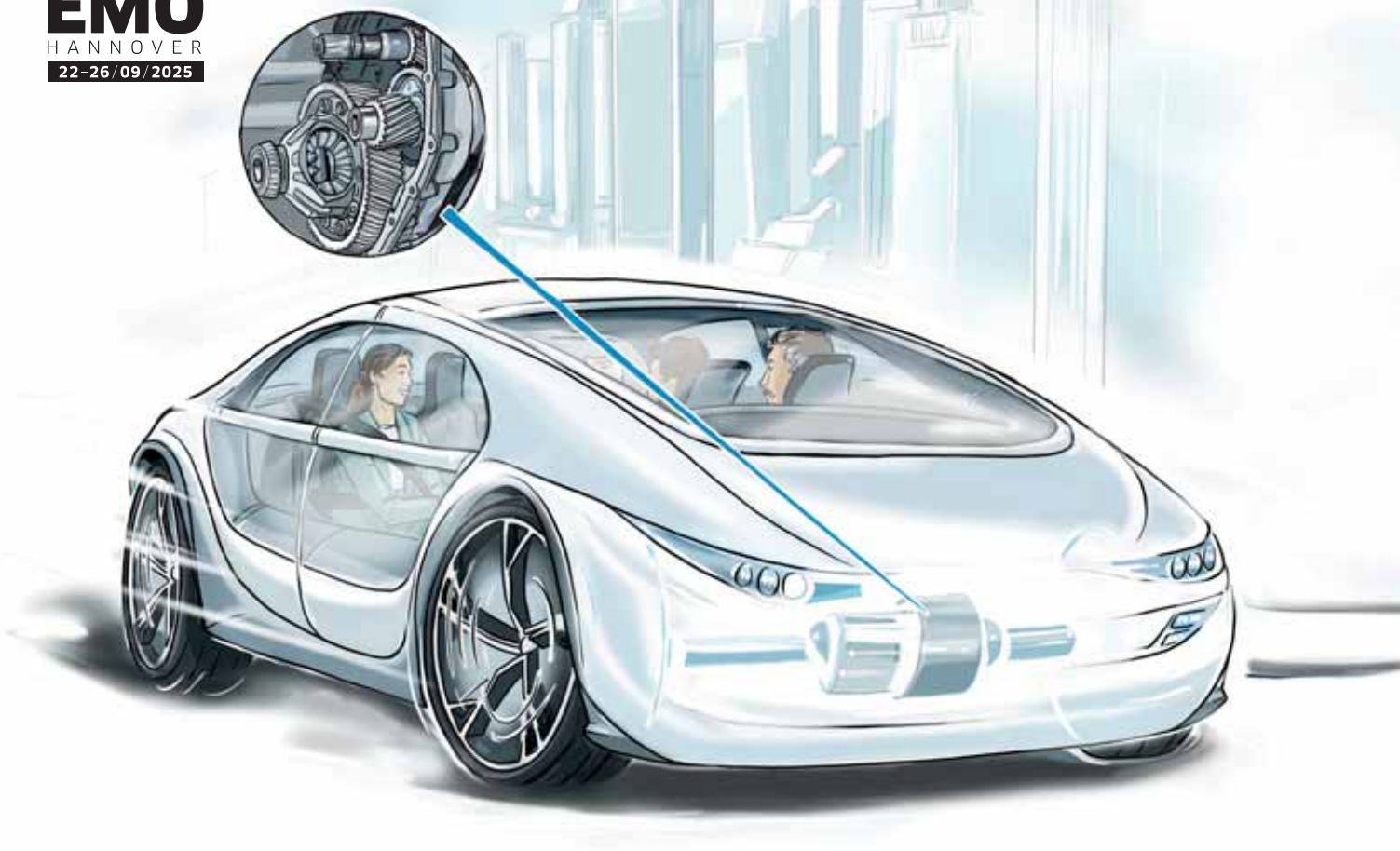
EMO HANNOVER 22–26/09/2025



Developing innovative, efficient and quiet powertrain technologies plays a critical role in shaping tomorrow's mobility. As one of the leading manufacturers of high-precision machine tools and measuring centers for gears, Klingelnberg is ideally equipped for the challenge. With expertise and dedication, Klingelnberg is developing solutions that make tomorrow's visions a reality.

More Information

Visit us at EMO Hannover in Hall 13, Booth D68.

WWW.KLINGELNBERG.COM

Integrated technologies for Advanced Manufacturing

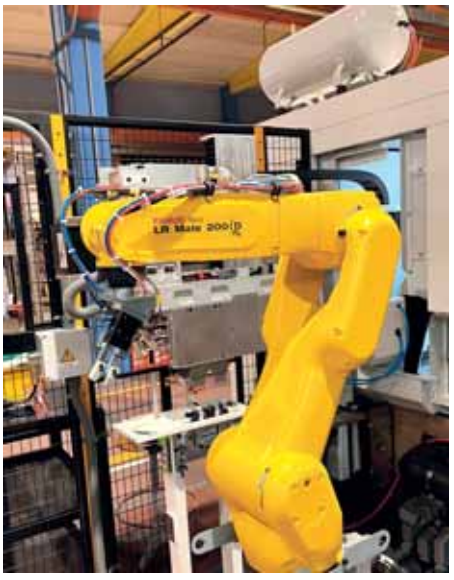
By Claudio Tacchella

Thanks to more than 100 years of uninterrupted Know-How, the Italian company Rettificatrici Ghiringhelli Spa, headquartered in Luino (VA), Italy, is a leader on a global basis in the design and manufacture of highly accurate centreless grinding machines. As a "Problem Solver", Ghiringhelli stands out for its distinctive features and reliability, thus strengthening its worldwide leadership with an export share close to 90 percent and over 3,500 machines delivered to thirty countries. The Ghiringhelli range of solutions involves machines or full systems, integrated with automation and equipment. The company's technical expertise allows it to accomplish 'turnkey' solutions which are able to combine accuracy "to the micron", high productivity and sustainable energy. As a key player in the Italian market, Ghiringhelli invests in sustainability and in the training of future skills, which are strategic levers for innovation and market leadership.

M100 and A80 in the spotlight at EMO

Ghiringhelli will exhibit its highly accurate M100 centreless grinding machine at EMO 2025 in Hannover. Among the features that make it compact, high-performing and "easy to use", the engineered systems, the adjustable CNC housing and a movable ergonomic panel stand out. The setup is simplified and the indoor LED lighting is enhanced. Its technical features allow the grinding of pieces from Ø 0,50 mm to Ø 20 mm for lengths up to 120 mm and the machine can grind both plunge and through feed. It has six CNC axes and a mineral casting frame. The grinding wheel head is equipped with wheels of Ø 450 mm x L 135 mm, 11 kW power for peripheral speed up to 50 m/s, 63 m/s optional. The M100 model aroused interest and was successful among those customers who work in different industrial sectors such as medical, tooling, hydraulics and aerospace industry. Its flexibility and the ease of changeover are particularly appreciated and allow the use of semi-automatic or semi-manual loading systems for small series of workpieces in full compliance with the EEC Machine Directive. The M100 can also be integrated into fully automatic units with robots and advanced control systems. Thanks to these features and the resulting benefits, the customers who work in sectors such as

Compact, high performing and "easy to use". These are the features of the M100 centreless grinding machine.



Ghiringhelli supplies full and complex grinding systems, which are integrated with automation and equipment.

aerospace, tooling and medical have achieved real production efficiencies and a reduction of more than 20 percent of the time required for changeover grinding. The M100 also enables the development of increasingly integrated automation solutions and functions as all other centreless grinder types in the Ghiringhelli's range.

Below the A80 centreless grinding machine

The machine completes the product range in the smallest sizes and finds its application for the grinding of tiny pieces, thus representing a solution that has aroused deep interest especially in niche markets specialised in the grinding of components with diameters up to 5 mm. It is a high-precision, reliable and versatile centreless grinding machine which is designed for a quick setup and can also be used for small production series. The technical features allow fixed centre grinding operations with pieces from Ø 0.5 mm up to Ø 10 mm for lengths up to 80 mm and it can grind both plunge and throughfeed. The A80 has six CNC axes and a natural granite bed. The grinding wheel head is equipped with wheels of Ø 200 mm x L 80 mm, 4 kW power with peripheral speed up to 50 m/s. Despite its small size compared to the other range models, the A80 is designed for a quick setup and allows the handling in semi-automatic or semi-manual cycle in full compliance with the EEC Machine Directive. The machine can be integrated into fully automatic handling units and robotised cells and complete with robots for the handling or the loading of the pieces and advanced testing systems. The A80 can also grind a variety of materials, from traditional steel to ceramics and glass. This flexibility allows the model to be successfully suitable for those sectors producing small parts for the automotive as well as components for the medical, optical, semiconductors, fine mechanics and watchmaking industries, thus going beyond traditional mechanical fields. The first end-users are said to be fully satisfied with the accuracy and the reliability they have experienced since the centreless grinding machine were setup in their production process.

The A80 centreless grinding machine has six CNC-controlled axes and a natural granite bed.

The A80 centreless grinding machine is suitable for the fixed centre grinding of very small parts.

Digital innovation and advanced service

All Ghiringhelli centreless grinding machines are ready for Industry 4.0. They use the CNC Sinumerik-ONE with "Safety Integrated Plus" and the software functions, automation included, are integrated through the HMI Ghiringhelli interface. The implementation of the state-of-the-art Safety system by Siemens ensures full compliance with safety regulations, thus enabling the effective integration of semi-automatic or fully automatic loading systems. The after-sales service uses property technologies for predictive maintenance and remote diagnostics to optimise services and reduce machine downtime. The growing complexity of robotised systems calls for competence and reaction by the Ghiringhelli engineers who are globally connected for accurate analyses and targeted services. Not least, there is a wide choice of accessories and optional devices for machine customisation.

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Hall 11 - Stand E72

Advanced Grinding Solutions at EMO

As always, the Principals of Advanced Grinding Solutions are making a strong presence at this year's EMO show and, for the first time, all eight of them are conveniently located in the same hall: **Hall 11**.

Tschudin is highlighting the use of automation on its range of centreless grinding machines at EMO where it is showing two machines: the compact Tschudin Cube 350 machine and the larger Tschudin Proline 400 machine. Loading and unloading is particularly fast and easy on the Tschudin machines thanks to their patented W-axis whereby the workrest blade is mounted on its own CNC axis and slides out of the working zone where loading and unloading take place.

Nova is a leading manufacturer of high-performance CNC grinding machines, specialising in internal, external and combined grinding applications, with a particular focus on the bearing industry. Its machines are renowned for precision, speed and uptime, featuring easy access for quick changeovers and maintenance. Flexible workholding options, including roller/shoe, magnetic/shoe and chucking systems, accommodate a wide range of part geometries and materials.

Comat, whose Superfiltration systems filter used cutting oil to a better-than-new standard, are also exhibiting in Hall 11. Specialists will be on hand to discuss its wide range of options, from compact stand-alone filter systems to the largest centralised ones.

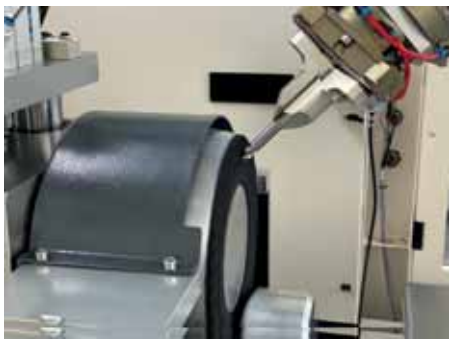
Danobat consists of three renowned brands: Danobat, Overbeck and Hembrug. Danobat is known for its custom-built precision grinding and machining solutions as used in the aerospace, railway, automotive and other industries. Overbeck has been a leader and industry reference in precision ID, face, radius and OD grinding of hard materials for close to 100 years. Hembrug is a leader in building the world's most accurate hard turning and turning/grinding machines. At EMO, Danobat will unveil new grinding models that are all designed for greater flexibility, tighter tolerances, improved reliability, reduced footprint and automation. Staying true to its innovative spirit, Danobat will also present groundbreaking robotic solutions that optimise existing processes and open new production possibilities: the most accurate, stiff and stable CNC robot on the market is going to perform real-time machining. All these innovations will be presented under the slogan "Moments We Build Together".

Wick AG who manufactures a range of deburring machines for Magnetfinish, will be using EMO to showcase the very latest Magnetfinish deburring machine for cutting tools of all kinds. Wick AG has developed a strong reputation for designing and producing customised robot cells tailored to diverse industrial applications. Processes such as checking and measuring, washing, drying, laser marking, deburring and assembly can all be included within a turn-key automated solution.

Gerber has led the way in the brush honing and polishing of ultra-hard materials for over 70 years. Its machines use specialised brushes, nylon for basic parts or natural fibres with diamond paste for complex shapes to polish surfaces and create consistent edge radii. With planetary polishing tables, they deburr, polish and edge-round components on one or both sides with exceptional precision.

The latest Gerber machines will be displayed in hall 11.

FLP Microfinishing is a leading manufacturer of high-precision fine-grinding, lapping and polishing machines. In addition to the automotive industry, the broad range of applications also includes the fields of optical, aerospace and medical engineering.



DLyte machines from GPA Innova use a patented dry electropolishing process, an innovative, non-abrasive technology that polishes metal parts without using liquid electrolytes. In a single automated step, DLyte can polish and deburr steel, stainless steel, cobalt chrome, titanium, aluminium, nickel and precious metals. Surface finishes below 0.09 µm Ra are achieved with zero impact on part geometry.

Simon Backhouse from AGS will be at EMO to meet with customers on its Principals' stands from the 22nd-24th September. For information on all the machines, visit ***www.advancedgrindingsolutions.co.uk***

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Tschudin - Stand D38
Nova - Stand E82
Comat - Stand F46
Danobat - Stand F60
Wick AG - Stand E89
Gerber - Stand D18
FLP Microfinishing - Stand E77
DLyte - Stand E38

Details make perfection and perfection is not a detail

(Leonardo da Vinci)

It is a principle that we have been applying to all our grinding machines for over 100 years. We design customized centerless grinding solutions that stand out for their innovation and great attention to details. We always guarantee grinding processes to the “micron”, and perfection is not a detail.

GHIRINGHELLI
Centerless Solutions

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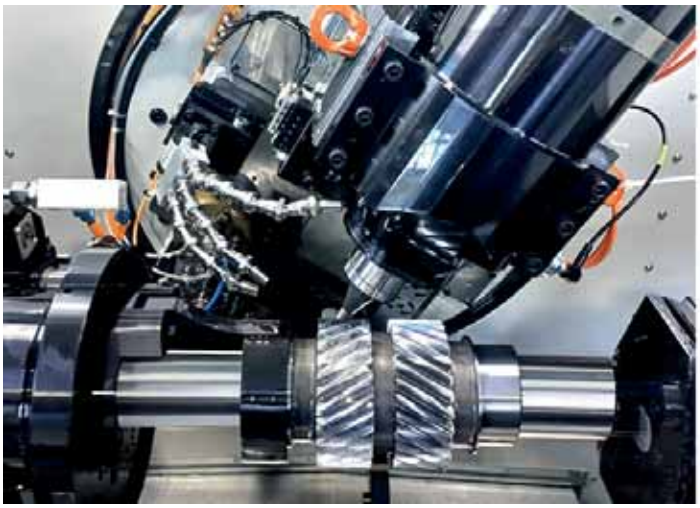
EMO HANNOVER 22-26/09/2025

Hall 11
Booth E72

Grinding solutions from EMAG at EMO



At EMO, EMAG will demonstrate its latest machines, technologies, automation solutions and manufacturing systems. A highlight in the field of automation is the VTC 200 vertical turning centre with counter spindle in combination with the MRC modular robot cell. This system enables the fully automated complete machining of differential housings: both sides of the component are machined with precision, with the component being transferred directly from the first to the second clamping operation, significantly reducing lead times and handling effort.

The MRC cell handles automated machine loading with ease. In addition to workpiece handling and pallet logistics, it integrates secondary processes such as post-process measurement in this case. Its modular design allows the range of functions to be flexibly expanded, for example to include bin picking or loading by an AGV. This makes the MRC an adaptable and versatile solution for automated production.

EMAG will also demonstrate its impressive range of solutions for the grinding market. The VTC 200 vertical turning centre with counter spindle and modular MRC robot cell enables the fully automated machining of differential housings. The VTC 100 GT from EMAG combines hard turning and grinding for complete-machining in a single setup.

Another solution for EMAG will also be on display in the form of the VTC 100 GT which enables the complete-machining in a single setup of rotor shafts by combining hard turning, scroll free turning and grinding. Bearing and sealing ring seats are precision pre-turned and ground to achieve the required IT6 tolerances and surface finishes of Rz 1-3 µm without twisting. The vertical design ensures optimum chip fall and high process reliability. Integrated measuring and automation systems ensure consistent quality with maximum productivity and minimal footprint.

The WPG 7 offers high-precision external cylindrical grinding with a minimum footprint and maximum automation. With an integrated linear gantry and double gripper, the machine loads and unloads the workpieces independently and reliably leading to short chip-to-chip times. It is perfect for short shafts up to 250 mm in length as well as for chucked components and is ideal for flexible batch production with the shortest cycle times.

It will also present the GP 500 H at EMO. This profile grinding machine enables the precision grinding of double helical gears, such as those used in turbofan engines and helicopter gearboxes. Thanks to its 5-axis kinematics, counter bearing system and integrated measuring technology, it meets the highest requirements for precision and process reliability.

The HLC 150 H from EMAG enables the high-precision machining of stepped planetary gears for electric drives through combined power skiving and hobbing in a single setup. These machines complex geometries using an intelligent combination of processes: The smaller tooth profiles are machined by power skiving to avoid collisions with the adjacent shoulder. While the larger helical gearing is efficiently produced using the hobbing process with a higher metal removal rate. The swiveling machining head enables seamless switching between the two processes without the need for reclamping. This technology ensures maximum precision in the orientation of both tooth profiles in relation to each other. This is a decisive factor for the functionality of modern planetary gears in electromobility.

EMAG Machine Tools
Tel: 0049 7162 170
www.emag.com

Hall 17 - Stand B22

ROLLOMATIC®

EMO HANNOVER
Innovate Manufacturing.

Hall 011 - booth F78

ROAD TO AUTOMATION

WITH ROLLOMATIC AUTONOMOUS GRINDING

Rollomatic Smart Factory®

www.rollomatic.ch

Experience cutting-edge technologies in gear technology and automation systems

The LK 280 DC from Liebherr redefines gear skiving. With its solid machine bed and ultra-rigid workpiece spindle setup, it delivers impressive process reliability, even under the toughest conditions. A standout feature is the integrated LHProcessMonitoring software, which detects changes in the machining process at an early stage, ensuring significantly greater stability. Raw part variations, tool wear and other anomalies are all detected in plenty of time to make corrections. Beyond conventional gear skiving, it also supports hard skiving process. This makes it highly versatile and ideal for modern manufacturing requirements.

World premiere at EMO: The new LGP 2000 profile grinding machine

With the LGP 2000, Liebherr presents a new generation of machines for profile grinding. The modular platform allows efficient machining of workpieces up to 2,000 mm in diameter and sets new standards in component precision and flexibility as well as machine productivity. The thermo-symmetric machine bed with integrated coolant circulation ensures outstanding thermal stability. A hydrostatic bearing table with direct drive guarantees wear-free precision over a long service life. A unique feature is that two grinding discs can be used in sequence without changing tools allowing either shorter cycle times or higher surface quality, or an optimized combination of both these advantages. The LGP is ideal for high-speed grinding, creep feed grinding and single- or double-flank topological grinding. For ultra-precise machining of internal gears, an optional grinding arm is available.

New LC 2000 gear hobbing machine

The new LC 2000 gear hobbing machine is based on the same platform as the LGP 2000 profile grinding machine. The new series caters for all relevant gearmaking technologies and is aimed at manufacturers of large gears, particularly for industrial machinery, marine propulsion, construction machinery and wind power. The platform allows machining of workpieces up to 2,000 mm in diameter and sets new standards for precision, flexibility and productivity. The thermo-symmetric machine bed with integrated coolant circulation ensures outstanding thermal stability. A hydrostatic bearing table with direct drive guarantees wear-free precision over a long service life. The machine can be optionally equipped with an integrated FlexChamfer unit for deburring and chamfering. The optimised chip removal is ideal for wet and dry machining.

LGG 300/380/500 generating gear grinding machine

The LGG series combines the three technologies of generating, profile and internal grinding in one machine. Thanks to this technological diversity, Liebherr offers the universal user maximum benefit and a secure investment for the future. The machine can be configured for the individual application. This can be done, for example, by an external automation system using a plastic chain conveyor or robot automation. The LGG is also the most powerful generating gear grinding machine in its class on the market. With the GH 320 CB gear skiving head, workpieces up to module 14 mm can be very economically machined to excellent quality. The extended travel ranges allow the machining of long shafts and at the same time improve the internal grinding of deep workpieces.

Customised digitalisation solutions for your requirements

With a combination of data profiles, protocols and the LHWeb-Platform, Liebherr provides an infrastructure for the acquisition, transmission, storage, processing, provision and display of machine, operating and production data. In the basic app LHMachine-Info, users can see the live status of their machine tools at a glance and observe changes in real time. The LHSignalInfo app visualises the recorded signals, taking into account all measuring points and their exact time stamp. The LHReportInfo app visualises and analyses the performance of the machine and generates reports and evaluations from the machine data, a decisive step toward more productivity.

Gear cutting tools

The success of gear skiving lies in the significantly higher efficiency and productivity of this process compared with shaping and the considerably higher flexibility and lower investment compared with broaching. Liebherr knows the entire process of gear skiving profoundly. It has combined all of its expertise concerning tool design, machines and technology of gear skiving in the Skiving[3] technology package. Very high accuracy in tool production, coupled with optimal tool design, guarantees an excellent gear quality and long tool life.

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Hall 13 - Stand B42
Hall 12 - Stand A12

Innovate Manufacturing

EMO 2025: Latest industrial solutions of gear technology and automation systems!

Gear technology:
Hall 13, Booth B42

Automation systems:
Hall 12, Booth A12

LIEBHERR

Gear Technology and automation systems

From new grinding machines to CNC precision robotics

Market volatility, stringent quality demands and the increasingly complexity of manufacturing processes are driving the need for more efficient and versatile solutions. In response, Danobat has enhanced the capabilities and performance of its grinding and hard turning machines and, at the upcoming EMO exhibition, the company will unveil new grinding models that are all designed for greater flexibility, tighter tolerances, improved reliability, reduced footprint and automation.

Staying true to its innovative spirit, Danobat will also present groundbreaking robotic solutions that optimise existing processes and open new production possibilities. The most accurate, stiff and stable CNC robot on the market is going to perform real-time machining. All these innovations will be presented under the slogan "Moments We Build Together" at the show.

The most precise CNC robot series

Earlier this year, Danobat made a bold leap into CNC precision robotics with dBOT, an innovative robot range built for operations that demand precision and dynamic performance. These groundbreaking robots set new industry standards by combining the flexibility of a robot with the stiffness, stability and accuracy of a machine tool. No other robot on the market offers this performance with three times higher accuracy, 10 times better stiffness and zero backlash making it the ideal choice even for complex machining and high-precision manufacturing. At EMO, dBOT will showcase its capabilities with real-time machining.

The new IRD series

Overbeck's IRD series has long set the standard for high-precision internal and radius grinding, even on tough materials like ceramics and carbide. As manufacturing shifts toward more agile production, the IRD has been completely redesigned to meet new demands.

Precise, flexible and automation-ready, the new IRD performs internal, external, face, radius and non-round grinding in a single setup. It stands alone in the market as the only machine to integrate both radius and non-round processes within a single software platform. Designed for high precision applications in aerospace, toolmaking and mould and die sectors, it easily handles complex geometries and delivers superior surface finishes. At EMO Hannover, Overbeck will showcase the new IRD-300 with an integrated robot, offering a footprint 40 percent smaller than alternative machines.

CGX: Compact and versatile grinding machine

The new CGX delivers versatility in a compact 13 sqm footprint. It handles OD, ID, face and non-round grinding, among other operations, on parts up to 1,800 mm in length, 540 mm in diameter and 500 kg in weight, making it the only grinder in its class with such a big part capacity in a compact design.

At EMO, the CGX will be equipped with an integrated MDM gauge for in- and post-process measurement, allowing real-time control of multiple diameters without interruption. Initially developed for large parts on HG grinding machines, the MDM has proved highly effective in ensuring tight tolerances. The new MDM-100 brings that precision to smaller components, 5–125 mm and includes key improvements over previous versions. It's an ideal solution for manufacturers working with multiple references or parts with varying diameters and continuous or interrupted surfaces, especially valuable when tight tolerances must be measured on small parts.

Estarta: Expert results in centreless from the first part

Historically, achieving top results in centreless grinding relied on the operator's knowledge. Estarta changes that paradigm by delivering expert-level results from the very first part. Designed for fast changeovers, full ergonomics and automatic loading in just 3.5 seconds, Estarta also includes OD and face grinding capabilities thanks to its angular configuration, ensuring burn-free results even in high-throughput environments. Its fully electric design, with no hydraulics, minimises energy use and simplifies maintenance, making it the perfect fit for high volume operations.

Same Mikroturn, more capabilities

Hembrug's Mikroturn ultra-precision hard turning lathe now integrates superfinishing and tool and workpiece measuring systems inside the machine, achieving surface finishes of Ra 0.05 µm and sub-micron profile accuracy. This all-in-one solution eliminates the need for external inspection or additional process steps. Engineered for complex threaded profiles, including gothic, round, planetary and Whitworth, the Mikroturn delivers micron-accurate parts from the very first part.

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Hall 11 - Stand F60

AZ's DB12500: Engineering excellence in large crankshaft grinding

by Claudio Tacchella

The Italian company AZ Spa, based in Thiene (VI), has been specialising for over 70 years in the design and production of grinding machines for large-size components.

At the EMO trade fair, the company will present its AZ-Crankshaft series, specifically developed for grinding crankshafts ranging from 600 mm to 14 metres in length, serving the automotive, marine, railway, earthmoving, oil & gas and energy sectors.

The DB12500 model is the flagship of the AZ-Crankshaft range and stands out for its innovation and energy efficiency. Referred to by industry professionals as a "Jewel of mechanical engineering", this machine builds on more than 70 years of engineering tradition and continuous investment in R&D, positioning itself at the cutting edge for redefining micrometric precision and reliability standards in crankshaft grinding technology.

Grinding large crankshafts is defined as "One of the most challenging machining operations".

Innovative technical features

The DB12500 grinding machine is built on a rigid, double-bed structure made of stabilised cast iron, designed for components up to 12,500 mm in length and 20 tonnes in weight, ensuring high load capacity with superior stability. The wheelhead moves on a hydrostatic carriage (X-axis) powered by a linear motor, through a hydrostatic guideway motion system that guarantees faster, more precise and energy-efficient movements with reduced friction. The orbital movement for pin chasing is equipped with a B axis for taper correction, while CBN wheels operating at 120 m/s allow machining of all materials. The motorised workpiece heads are synchronised in rotation via X and C axes, and the steady rests are automatically positioned to ensure optimal support during the grinding process.

The Marposs in-process diameter measuring and positioning system, which tracks the component, ensures greater precision and reliability. The Siemens CNC includes AZ's proprietary HMI interface for all setup, programming, monitoring, diagnostics and maintenance functions.

On DB12500 the wheelhead moves on a hydrostatic carriage powered by a linear motor on hydrostatic guideway.

The AZ orbital movement for pin chasing is equipped with a B axis for taper correction.

Applications across multiple sectors

The DB12500 is suitable for a wide range of strategic applications, from repair to series production, covering diverse industrial sectors. The crankshaft is a critical component in industrial machinery such as compressors, turbines and hydraulic pumps, where it must withstand high loads while ensuring continuous operation. In heavy vehicles, trucks, buses and agricultural machines crankshafts must transfer high energy levels with extended durability. In the maritime sector, crankshafts are used in merchant vessels, cruise ships, fishing boats and industrial vessels, where they must endure extreme conditions, corrosion and intensive use. Power generators, including gas turbines, diesel generators and electrical production systems, rely on crankshafts to convert energy into electricity. Construction machinery such as excavators and drilling machines require extremely durable and precise components.

All functions of workpiece positioning, setup, programming, monitoring, diagnostics and maintenance are controlled by AZ HMI on Siemens CNC.

Operational challenges and the need for regrinding

In many industrial and marine contexts, crankshafts operate under intense working conditions that require precise regrinding interventions. Excessive vibrations, metallic noises, efficiency loss and abnormal fuel consumption are key signs indicating the need for corrective action. Crankshaft regrinding offers significant benefits: it improves operational reliability by reducing the risk of failure, is a cost-effective alternative to full replacement, extends component life by minimising extraordinary maintenance and contributes to sustainability by regenerating existing parts.

Technical challenges and AZ solutions

Grinding large crankshafts over 12,000 mm in length involves complex technical challenges, particularly regarding precision, thermo-mechanical stability and dimensional management. Large shafts are subject to elastic deflections during machining that can compromise geometric accuracy. AZ's DB12500 counters this through hydrostatic guides, automatic steady rests and beds designed to absorb vibrations. Thermal control is another critical issue, as heat generated during grinding causes differential thermal expansion. The machine integrates advanced cooling systems and real-time monitoring to handle these effects. Maintaining micrometric tolerances on 12-metre parts requires in-process measurement systems and automatic CNC axis corrections. Mono/Multi-tool synchronisation in orbital grinding demands millimetric coordination between wheels and axes to avoid concentricity errors. Workpiece handling requires single-setup clamping systems with advanced centering and support devices to maintain axial and longitudinal alignment within tight tolerances. Even the most efficient CBN wheels experience wear, requiring advanced compensation algorithms to maintain the correct profile throughout machining.

The Marposs diameter measurement system with part tracking ensures greater precision and reliability.

Operational advantages

The solutions implemented in the DB12500 directly address the engineering challenges of large crankshaft grinding. Its robust double-bed counteracts elastic deflections, hydrostatic guides minimise vibrations and friction and the Marposs measurement system ensures micrometric accuracy along the entire grinding length. Regrinding offers substantial operational advantages: it enhances engine reliability by reducing failure risks and downtime, represents a cost-effective alternative to full replacement for large components, increases service life by minimising extraordinary maintenance and contributes to sustainability by regenerating existing parts.

"We are proud to introduce to the market a solution that represents the excellence of Italian engineering," says Sarah Pizzolato, marketing director at AZ Spa. "The DB12500, the result of over 70 years of experience and continuous R&D investment, sets new standards in industrial grinding, enabling precise, efficient and sustainable machining of exceptionally large components."

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EMO 2025: Hall 11 - Stand D30

STUDER to unveil new innovation at EMO

At EMO, STUDER will be unveiling another STUDER innovation at the joint UNITED MACHINING SOLUTIONS booth in addition to numerous innovations from the Group. Fritz Studer AG, one of the market and technology leaders in universal, external, internal cylindrical and out-of-round grinding, will be presenting a new universal cylindrical grinding machine at EMO 2025. Visitors can also look forward to seeing other machines on site including:

S31 with insertLoad

S31 is a cylindrical grinding machine for small to large workpieces in single, small and large series production. It has a distance between centres of 400 mm, 15.7")/650 mm, 25.6"/1,000 mm (40")/1,600 mm (63") and a centre height of 175 mm (6.9"). It can machine work-pieces with a maximum weight of 150 kg, 330 lbs.

Thanks to the upgradeable modular system, the S31 can be adapted to match your precise requirements. The swivelling wheelhead allows you to externally, internally and face grind workpieces in a single clamping with a high-resolution B-axis of 0.00005°. Its foundation is a machine base made of solid Granitan® S103.

S41

The S41 is a CNC universal cylindrical grinding machine for large workpieces. It has distances between centres of 1,000 mm (40")/1,600 mm (63") and centre heights of 225 mm (8.8")/275 mm (10.8"). It can machine workpieces with a maximum weight of 250 kg, 550lbs.

It is a CNC universal cylindrical grinding machine of the latest generation. Boasting many technical features, such as the revolutionary StuderGuide® guideway system, high-precision axis drives with linear motors, it also has an extremely fast direct drive of the B-axis and an even larger selection of wheelhead variants.

favoritCNC

With the favoritCNC, you have the top performer in terms of value for money and it represents many years of precision. The favoritCNC with 650, 25.6", or 1,000 mm, 39.4", distance between centres for universal use is easy and quick to program thanks to StuderPictogramming.

Due to various options, such as a measuring system, balancing system, contact detection and longitudinal positioning, the machine can be easily adapted to other grinding tasks. The favoritCNC has a centre height of 175 mm (6.9") and can machine workpieces with a maximum weight of 80 (176.4 lbs)/ 120 kg (264.6 lbs).

S131 Radius

The S131 is a radius internal cylindrical grinding machine that is especially suitable for grinding complex workpieces from very hard materials The maximum swing diameter is 300 mm (11.7") and the maximum workpiece weight is 100 kg (220lbs).

The machine is ideal for the manufacture of drawing dies, especially in the packaging industry, where tungsten carbide and ceramics are primarily processed. The machine has a host of sophisticated technical features such as the revolutionary StuderGuide® guideway system, high-precision axis drives with linear motors, a fully automatic B-axis with direct drive, etc.

Since 1912, the name STUDER has stood for Swiss hardware, software, system integration, and service at the highest level. With a customised complete solution for every grinding task, the customer also receives the company's knowledge and expertise in all aspects of the grinding process.

The STUDER logo has been a seal of quality for first-class results worldwide for decades. It ensures that "The Art of Grinding" remains closely associated with its name in the future. STUDER has over 113 years of experience in the development and manufacture of precision cylindrical grinding machines.

Fritz Studer AG
Tel: 0041 334 39 1111
Email: info@studer.com
www.studer.com

Hall 11 - Stand E45

Lapmaster Wolters to showcase its versatile 24" Open Face Lapping Machine at EMO

Lapmaster Wolters, a globally recognised leader in precision surfacing technology, is looking to turn heads at EMO 2025 with its highly regarded 24-inch Open Face Lapping Machine. Designed for versatility and engineered for precision, this compact workhorse is making a strong case for why it's become a staple in laboratories, R&D centres and high-specification production lines across the globe.

Visitors to the Lapmaster Wolters booth are getting an up-close look at the machine's hallmark features, including its simple open-face design, which allows for easy part loading and real-time process observation that is ideal for prototyping and low-to-medium volume production. Despite its modest footprint, the 24" model delivers industrial-level accuracy, making it a favourite for applications ranging from optics and aerospace to semiconductors and metalworking.

Precision you can see and feel

At the core of the 24" Open Face Lapping Machine's appeal is its tight flatness control, made possible by its solid construction and time-proven lapping system. With surface flatness capabilities reaching sub-micron tolerances, this machine is ideal for customers who need tight specifications without the complexity or cost of larger, automated systems.

"The Lapmaster 24" is all about balancing performance with accessibility," says Andrew Konnaris, sales manager for Lapmaster Wolters UK. "It's small, yet powerful enough to achieve optical-flat surfaces. That's a rare combination and one that many industries are looking for as they move toward more precise, sustainable manufacturing."

Designed for process development and production alike

While the 24" model is often used in process development, it's no stranger to production environments. The machine can be configured with abrasive slurry or diamond-based processes and accommodates a wide range of work materials including ceramics, glass, ferrous and non-ferrous metals.

Its manual control offers a level of tactile feedback and process control that's ideal for expert operators who need to fine-tune results on the fly. For companies looking to scale, the platform also supports upgrades such as PLC control and custom fixturing.

For more information, visit ***www.lapmaster-wolters.co.uk*** or contact your local Lapmaster Wolters representative.

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Hall 11 - Stand C14

See the latest in design, manufacture and inspection of gears at EMO

Gleason's Total Gear Solutions approach provides more than just the broadest choice of gear manufacturing technologies in the industry, it also connects design, manufacturing and metrology processes to optimise the value chain via digital twins and a Smart Loop Ecosystem for best quality results and maximum efficiency.

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The new Coniflex® Pro Manufacturing System provides advanced design features in a closed loop environment with up to 40 percent less surface stress, up to 30 percent less root bending and excellent NVH results with significant lower transmission errors than forged differential bevel gears.

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Genesis® 280HCD Hobbing and Chamfering Machine integrates chamfer hobbing and fly cutter chamfering in parallel to the gear hobbing process, to adapt to high-production environments or to flexible manufacturing of small and medium batch sizes.

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The universal 100PSiC Power Skiving Machine with integrated radial chamfering features power skiving or hobbing and sequential chamfering, on one single platform with a minimum footprint. Radial chamfering works perfectly for gears, shafts and even workpieces with interfering contours.

Gear inspection at submicron level

Measure submicron surface finish with a skidless probe, analyse waviness in profile and lead and evaluate gear noise with sophisticated software tools, such as Advanced Waviness Analysis and KTEPS. Quantum leap in gear noise evaluation KTEPS Kinematic Transmission Error Prediction Software offers a revolutionary method of showing tooth flank surface deviations in relation to their orders, for simple and fast gear noise evaluation.

From design to manufacture

The KISSsoft® Gear Design Software with the integrated KISSsoft System Module provides many new features for the design and simulation of gearbox elements and complete transmissions, which will be demonstrated at the show.

QFS

The new QFS Workholding System with quick-change adapter makes workholding changes faster than ever. At EMO, you can put the QFS through its paces and challenge its speedy setup which takes less than 30 seconds. Join the challenge and set the record, how fast will you be?

Highest precision combined with easy handling

See the latest hydraulic and mechanical workholding systems for highly productive environments, suitable for many different machining tasks. Available as standard modular system or customised solution, for production and inspection requirements.

To the last micrometre

Grinding and honing applications often have great potential for optimisation, raising quality and/or saving tool life and consequently cost. Find out how Gleason's hard finishing tools will support higher productivity and constant quality results.

Discuss your applications at EMO with Gleason.

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Gleason global services

Gleason provides service solutions for the entire machine lifecycle, from digital maintenance support to customised modernisation programs. At EMO 2025, Gleason service experts will explain how to fully benefit from the capabilities of installed Gleason equipment, ensuring machines operate at optimum level.

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Hall 13 - Stand D18

The Dawn of a new grinding era

Introducing the DAWN DN Vertical Spindle Series

Dawn Machinery Co., Ltd. specialises in special-purpose machines for a wide range of machining processes with over 30 years of R&D experience, particularly in grinding machining technology. Its business philosophy centres on customisation and turnkey solutions, ensuring high efficiency and precision for various workpieces.

The DAWN DN Series of vertical grinding machines embodies the numerous advantages of vertical grinding. These machines are designed for high precision and stability, providing an optimal operating space. Their vertical layout means they are not impacted by gravity when clamping heavy workpieces, which can be easily loaded using an overhead hoist.

It features a double column structure for excellent mechanical rigidity. Fully enclosed covers and oil mist reclaiming devices are standard, preventing leakage of grinding oil and mist. The machines offer flexible configurations, including options for single or dual spindles and with or without an automatic tool changer.

Equipped with user-friendly conversational programming interfaces, the DN series makes control operations and program creation easier. Siemens CNC controllers are available, often with large touch screens. The intelligent dialogue interface incorporates years of grinding experience, allowing operators to select appropriate processing methods without needing to write programs, ensuring processing efficiency and precision.

DAWN Machinery - DN1200 customer.

DAWN-DN-multi-configurations available.

The mechanical specifications vary across the DN series models, ranging from DN 200 to DN 2500, which support workpiece swing diameters from Ø280 mm to Ø2,500 mm and maximum loads from 100 kg to 10,000 kg. These machines can grind inner and outer diameters, as well as the end surface of heavy or non-circular workpieces.

"Having spent time with the Dawn Machinery engineering team and seeing the recent large capacity DAWN DN-2502 two-spindle vertical grinder near completion, I was impressed by the performance and accuracy of the machine build and test" comments, Simon Rood, general manager at RK International Machine Tools.

Precision is a key focus, with minimum setting units for the X and Z axes at 0.0001 mm, supported by optical scales. The hydrostatic pressure turntable boasts a rotational precision of less than 1 µm. The structure incorporates Swiss, German and Japanese linear guideways and ball screws, with linear motors available as an optional feature.

Standard accessories include essential items like oil mist extraction devices, paper and magnetic filters and diamond dressing tools. Optional accessories further enhance capabilities, such as online detection and measuring systems, electromagnetic or hydraulic chucks, powered rotary diamond dressers, collision avoidance detection and spindle monitoring. Touch probe gauges and online measuring systems are available options for part and geometrical inspection.

Turnkey solutions for complex needs

Dawn Machinery offers turnkey solution services, including planning for production lines and assistance with selecting grinding wheels and fixture equipment. This comprehensive approach, from initial quotation to final commissioning, including demonstration, time studies, delivery, installation, training and after-sales services, is handled in-house by RK International, providing clients with the confidence of dealing with a single source supplier.

"Being able to provide local support and boasting a wide range of grinding knowledge was a major bonus when discussing our machines with RK," comments Alan Hsu, CEO and Founder of Dawn Machinery. "With the experience RK International provides, a comprehensive approach to machine tool supply and service is vital for the growth of our product range. Of course, today has never been easier to support an installed machine on the opposite side of the planet, but having local representation and support from a partner who understands the grinding process is paramount to helping and supporting our installed machine network."

Conclusion

For today's engineers and manufacturers facing the challenges of machining small to large, light to heavy, or complex parts with high precision, particularly in critical industries like aerospace and power generation, the DAWN DN Vertical Spindle Series grinding machines offer a compelling solution. Their inherent design advantages over horizontal machines, including superior workpiece rigidity, easier automation, reduced interference issues, a smaller footprint and lower cost of ownership combined with advanced features like ATC and integrated measuring capabilities, deliver significant improvements in productivity, accuracy, and operational efficiency.

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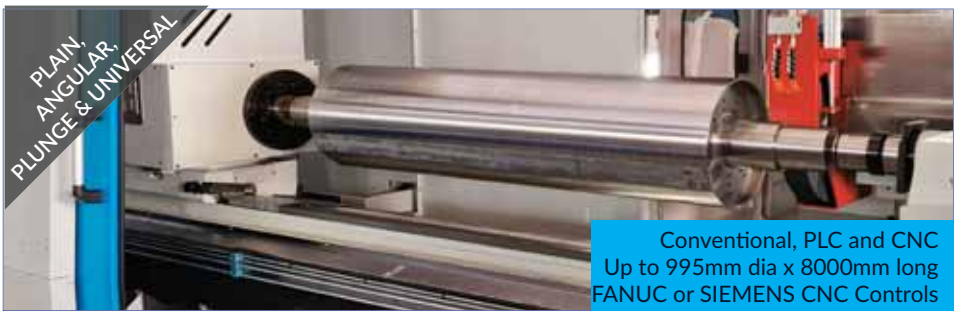

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Retrofit makes aging grinding machines fit for the future

Interview with retrofit expert Andreas Holstein from EMAG Weiss on the modernisation of cylindrical grinding machines

Modern production systems are a key factor for the competitiveness of manufacturing companies. For high-quality cylindrical grinding machines, a comprehensive modernisation of existing systems can be an economically interesting alternative to purchasing new equipment. CNC-Technik Weiss GmbH, part of the EMAG Group since 2019, specialises in retrofitting Karstens cylindrical grinding machines. The Neckartailfingen, Germany–based company has decades of experience in overhauling and modernising these precision machines. In an interview with Andreas Holstein, plant manager at EMAG Weiss, was able to talk about the technical possibilities and economic aspects of retrofitting.

How do you define the term retrofit in the context of machine tools?

By retrofit, we mean the modernisation or retooling of older machines that are no longer in production. This includes both mechanical and control technology components. This is to be distinguished from upgrades, where existing systems are expanded in terms of functionality or safety technology.

What are the main reasons for a retrofit?

One of the main reasons is often outdated control and drive technology for which spare parts are no longer available. Added to this are worn mechanical components such as guides or inadequate machine geometry. An important economic aspect is that the investment for a retrofit is around 15 to 30 percent lower than the cost of a comparable new machine. In addition, the safety of the machine is improved and brought up to leading edge technology. All retrofitted machines are also CE-compliant.

How does the retrofit process actually work?

First, we carry out a detailed inventory of the machine at the customer's premises. Based on this, we discuss the options for reworking the individual assemblies and prepare a scalable, transparent quotation. Depending on the scope, the conversion is carried out at our premises or at the customer's facility. The modernised components of the overhauled machine reach the level of a new machine.

What accuracy do you achieve after a retrofit?

We are guided by DIN 8630 for cylindrical grinding machines. For example, we achieve concentricity of 0.5 micrometres or better for workpiece spindles. After the retrofit, the machine geometry and accuracy correspond to the level of a new machine.

How long does a typical retrofit project take?

Usually between 12 and 16 weeks, depending on the scope. As we have over 60 basic machines of all Karstens series in stock, we can often use an identical machine as a foundation. The customer can then continue production on their old machine until it is replaced. This reduces the downtime to around two days.

How important is energy efficiency in retrofitting?

We use energy-efficient components throughout. The grinding spindle motors comply with efficiency class IE4 and are operated with regenerative frequency

converters. For machine cooling, we use room-controlled air conditioning units that only regulate by a delta to the room temperature. Hydraulic pumps work with an accumulator charging circuit and, therefore, do not run permanently. Machines with hydraulics are retooled to servomotors and are then free of hydraulics.

Are there also more cost-effective retrofit variants?

Yes, a good example is the retrofit of a Karstens K56. Here we had a machine that was still mechanically very good but had control problems. In such cases, we offer a "light retrofit" in which we concentrated on replacing the control system and overhauling the most important mechanical assemblies. This is a very interesting economic option for customers whose machines are still in good mechanical condition.

What about the supply of spare parts for retrofit machines?

The supply of spare parts for retrofit machines is generally guaranteed in the long term, as outdated control and drive components are replaced with modern, current technology as part of the retrofit. In addition, we offer comprehensive service and still have spare parts in stock even for very old machines. In this way, we ensure that your machine can be operated reliably over its entire service life.

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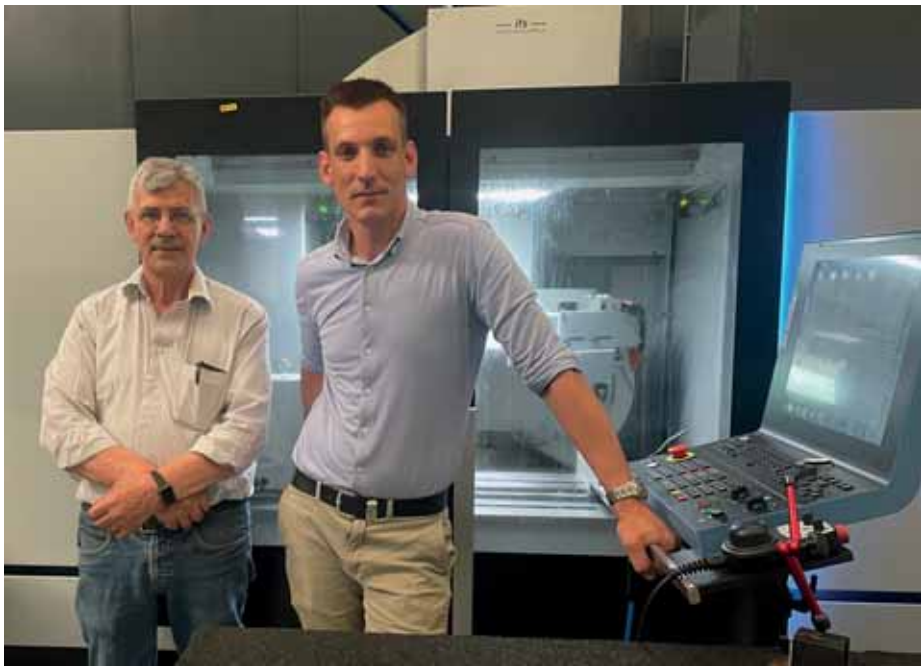
High-precision grinding is an art

Starting a business always requires a certain amount of risk-taking. "It's like a motorcycle race. If you don't want to take any risks, you might miss your chance to win," says Randy Gevers, the CEO of GRT-Tech, based in The Netherlands, with the steely blue eyes and winning smile. It goes without saying that you also need a lot of perseverance, technical acumen and passion.

Passionate grinder Randy Gevers knows what he's talking about: Before founding his company GRT-Tech, he enjoyed years of success in motorcycle racing. But his success story doesn't begin with him, but with his father, Antoon Gevers, who not only instilled in his son a passion for engines and technology, but also for metalworking and, in particular, grinding. Antoon Gevers is something of a grinder whisperer. Like no other, he extracted every last micron from every machine and helped the companies he worked for achieve success in this field over his 50 years of working life. The development of moulds for CD presses in 1980 definitively cemented Antoon Gevers' reputation in the grinding world.

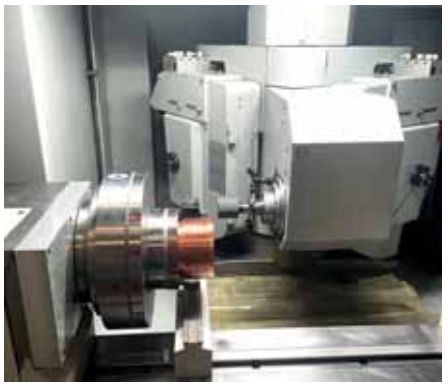
After years of working together as grinders in a company, the Gevers family took the plunge in 2016 with their father's early retirement and went into business for themselves. The first machine Randy Gevers purchased was a conventional grinder, with others following quickly. Fittingly, the first customers came from the KTM world, as the Gevers family had built a large network through racing. Their former employers soon began offering contract manufacturing orders as well.



Today, customers from the aerospace, medical technology, tool and mould making and packaging industries trust the Gevers, as do the navy, luxury yacht builders and many more. Among the discerning customers who value GRT-Tech's work are suppliers to the semiconductor industry. "Theoretically, we could survive on this alone," says Randy Gevers. "But a company shouldn't become dependent on one another and ultimately, it's the diversity of parts that makes the work so appealing." The range of materials used at GRT-Tech extends from steel, various stainless steels, brass and copper to ceramics and plastics. Typically, small batches of up to around 50 pieces are manufactured, but individual parts and prototypes are also produced. Antoon Gevers often manufactures special parts for motorcycles and vintage cars, which customers entrust to him based on his experience.

Randy Gevers quickly realised that machining complex workpieces, such as those used in tool and mould making or medical technology, quickly reached its limits with a conventional grinding machine. So, after moving to the current location in 2018, he purchased a powerful, used Kellenberger KEL-VARIA CNC universal cylindrical grinding machine. "Right from the start, we had a lot of requests for grinding complex workpieces," explains Randy Gevers. "But we could only accept around 10 percent of them. I couldn't and didn't want to continue like that." The decision in favour of a Kellenberger grinding machine wasn't difficult. Antoon and Randy Gevers knew and valued these machines from their time with their former employer.

The KEL-VARIA is a predecessor model of today's premium KELLENBERGER K1000 series and, like the KELLENBERGER K1000, stands for the highest machining and surface quality. Its high static and dynamic rigidity and stability are crucial factors for its high precision and high productivity. Hydrostatic guides in all main axes ensure the highest



dimensional accuracy for grinding tasks with interpolating axes. The B-axis has a direct drive. This allows the turret grinding head to swivel approximately three times faster and position with an accuracy of less than one arc second. This reduces non-productive time and thus increases productivity, especially when machining requires the swivelling in of different grinding wheels.

Due to the positive experience, another Kellenberger grinding machine quickly found its way to Heeswijk-Dinther, a universal internal and external cylindrical grinding machine KELLENBERGERK100. René van der Peet from the sales company BMT Bridgeport Machine Tools, which has represented the Kellenberger, Hardinge and Bridgeport brands, all part of the US Hardinge Group, in the Netherlands for years, acted as a consultant. His experience was of great benefit to Randy Gevers in selecting the machine.

The KELLENBERGER K100 is available with centre distances of 1,000/600 mm and a centre height of 200 mm and is designed for workpiece weights up to 150 kg. The high drive power of the grinding wheel ensures increased productivity, while the newly developed Z-guide ensures high profile accuracy. The C-axis with direct drive provides greater precision in non-circular grinding. The machine's technical highlights include an innovative compact grinding head, 10 grinding head variants, 11.5 kW drive power, 500 mm wheel, up to 63 m/s, HF spindles for internal grinding including diagonal and tandem arrangements, a collision-free universal head with three tool and one measuring positions and a new probe arrangement without a swivel mechanism for increased measuring accuracy.

Randy Gevers chose the longer overall length of 1,000 mm to allow for more flexibility in part size, as well as a grinding head variant with two external grinding spindles, one internal grinding spindle and a tactile measuring head. The high-frequency spindle, with a speed range of 6,000 to 40,000 rpm, has an internal coolant supply. The machine is equipped with a FANUC 31i CNC control and the corresponding software comes from Kellenberger.

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How to choose the right surface cleaning product for metal applications

By Michael Zulauf, product design engineer at Weiler Abrasives

Surface cleaning is a routine but vital process in industries like metal fabrication, shipbuilding, and automotive. Effective cleaning impacts product quality, standards compliance and production efficiency. Cleaning a metal part for the next step in production often requires a gentle approach when compared to other types of surface conditioning. It is important to avoid removing too much base material or altering its properties. This makes it crucial to choose the right product for the task and to follow best practices for using it.

Considerations for surface conditioning

The term surface cleaning covers many things, including preparing the metal for painting or removing rust, mill scale, or weld spatter. Users have many options to choose from for these tasks. Consider these four questions when choosing a surface cleaning product:

1. **What are you trying to do?**
   Removing heavy mill scale requires a different product than light weld blending does. Consider what you are trying to accomplish and the end result you want. Will the material be welded after cleaning? Will it be painted? The required steps in the process help determine the right choice.
2. **What is the base material?**
   It is important to match the product type to the base material type. One example is choosing a product designed for use with stainless steel to avoid cross-contamination of the material.
3. **Are there safety or hot work restrictions?**
   Some applications may have restrictions regarding the type of abrasive products that can be used in certain environments. In shipbuilding, for example, work frequently happens in confined spaces or near flammable materials. There may be requirements that limit sparks and heat. Look for surface cleaning products that meet any necessary requirements for safety or the environment.
4. **Is budget a primary concern?**
   Operations have different priorities, including product life, time savings, or cost reduction. Different products will contribute to different priorities. A very aggressive product works quickly but requires more frequent changeover, adding considerable labour downtime. Efficiency and product life must be balanced with purchase cost.

Surface cleaning products

Learning more about the benefits of each type of surface cleaning product helps users choose the right option for their job. Common categories include the following:

- Power wire brushes offer long product life and clean base material without removing metal or altering part dimensions. This makes them a good choice when gentle aggression is needed. Brushes perform well on hot welds and reach into tight spaces and corners better

than other options. Product aggression can be adjusted by choosing different trim lengths, wire diameters, tool speeds and wire styles. Always follow best practices and proper techniques to avoid wire breakage, which can be a safety hazard.

- Non-woven cleaning and stripping discs are a good option for removing paint and coatings when you want to achieve a smooth finish. They conform to the work surface and produce less vibration than other options. However, they will wear faster and require more changeovers.

- Flap discs are designed to be more aggressive and will remove some of the base material. They work well on metal with heavy rust or mill scale, providing a balance between cleaning and aggressiveness. Be careful not to remove too much base material. There are many options for grit size and type, which affect the disc's performance and lifespan.

- Bonded grinding wheels are the most aggressive option. They will remove base material, leaving a rough surface. These wheels are not ideal for basic surface cleaning but are effective for removing heavy mill scale or reshaping coated surfaces. Use them with caution to avoid applying too much pressure, which can gouge the material.

Surface cleaning tips

1. Choose the product for the specific job. There is not one abrasive solution for every surface cleaning task. Using the wrong product increases inefficiency and labour costs and could introduce safety hazards. Selecting the right product type, style and size for the application will help get the job done efficiently and safely while producing the best results.
2. Take care with technique and pressure. Using a short stroke versus a longer stroke can make a big difference. Long, smooth strokes are typically best, but this depends on the hardness of the coating or dirt on the metal. Removing a harder coating may require shorter, quicker oscillations. Do not stay too long in one spot, as this can burn or gouge the base material. Trial and error may be needed with each new application to find the best approach.
3. Stay away from sharp edges with certain discs. If a non-woven material disc is being used, a corner or sharp edge can catch and shred the material. Keep the disc on the flat portion of the surface as much as possible. Non-woven cleaning and stripping discs provide a good balance between conformability and toughness for faster cleaning. Weiler Abrasives offers new Metalynx Ceramic and Metalynx and Toroflex Silicon Carbide non-woven cleaning and stripping discs. The Ceramic disc is more aggressive, while the Silicon Carbide disc is less aggressive and non-sparking, making it ideal for working in confined spaces. In testing, these discs lasted longer and cleaned more surface area than similar competitive products.

Optimising surface cleaning

Achieving optimal results in metal preparation starts with choosing the right abrasive product for surface cleaning. This helps produce the necessary finish and can improve efficiency, labour costs and operator safety.

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How superfinishing cup wheels improve surface quality

In precision manufacturing, the surface quality of components plays a crucial role in their performance, longevity and overall efficiency. Achieving a smooth, polished finish while maintaining tight tolerances is essential in a wide range of industries. One effective tool that helps meet these demanding requirements is the superfinishing cup wheel. These advanced finishing tools have revolutionised how manufacturers approach surface finishing, offering significant benefits in terms of surface quality and overall production efficiency.

This article will delve into the advantages of superfinishing cup wheels, explaining how they enhance surface finishes, reduce roughness and offer numerous other benefits to precision manufacturing processes.

Understanding superfinishing cup wheels

Superfinishing cup wheels are specialised abrasive tools used for high-precision surface finishing. These wheels are designed to improve the surface quality of components after the initial grinding or machining process, typically to remove fine surface irregularities and achieve a mirror-like finish. The wheels are mounted on machines and, through a combination of high-speed rotation and a fine abrasive material, gently polish the surface of the workpiece.

What sets superfinishing cup wheels apart from traditional grinding tools is their ability to deliver exceptionally smooth surfaces. The technology behind them allows for ultra-fine abrasives to polish the surface without compromising the integrity of the underlying material. Unlike standard grinding methods, which may leave microscopic roughness or stress marks on the surface, superfinishing tools are engineered to minimise these imperfections, leading to superior results.

Key benefits of superfinishing cup wheels

Enhanced surface finish

One of the primary benefits of using superfinishing cup wheels is the ability to achieve a smoother and more polished surface than traditional grinding methods. These wheels are designed to work with higher precision and finer abrasives, which gradually refine the surface of the workpiece to a mirror-like finish. This level of smoothness is particularly beneficial in industries where surface contact is critical, such as aerospace and automotive applications.

A superior surface finish is not only about aesthetics but also about performance. Smoother surfaces help to reduce friction between mating components, improving efficiency, reducing wear, and extending the lifespan of the parts.

Reduction in surface roughness

Superfinishing cup wheels excel in reducing surface roughness to levels that would be difficult to achieve with conventional finishing techniques. They effectively smooth out microscopic peaks and valleys, resulting in a significantly reduced surface roughness (Ra). This is particularly important in components like bearings, gears and hydraulic parts, where smooth surfaces ensure optimal performance by reducing friction and wear.

With reduced roughness, parts experience less heat generation and wear during operation, leading to improved operational efficiency and extended component life. This is especially critical in high-performance machinery where every detail matters.

Improved dimensional accuracy

Precision is paramount in many manufacturing processes and superfinishing cup wheels play an essential role in ensuring that components maintain their tight tolerances and precise dimensions. These wheels are capable of providing the fine, consistent touch required to finish components within micron-level tolerances.

The precise nature of superfinishing ensures that the dimensions of the workpiece are maintained throughout the process. This is particularly important for parts that must fit together with minimal gaps, such as in precision assembly lines or high-precision mechanical devices.

Increased efficiency and productivity

Superfinishing cup wheels can significantly improve manufacturing efficiency. Their ability to achieve a high-quality finish in fewer steps compared to traditional grinding methods means that manufacturers can reduce cycle times, speeding up the production process.

Additionally, the reduced need for secondary finishing operations helps lower overall manufacturing costs.

As production processes become faster and more efficient, manufacturers can scale their operations without sacrificing quality, leading to improved productivity and quicker turnaround times.

Extended tool life

Another notable advantage of superfinishing cup wheels is their durability. These wheels are made from high-quality materials designed to withstand prolonged use without wearing down quickly. Their extended lifespan not only leads to cost savings by reducing the frequency of tool replacements but also minimises downtime in the manufacturing process.

With longer-lasting tools, businesses can operate more efficiently, reducing the need for maintenance and tool changes, leading to higher overall productivity and reduced operational costs.

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Email: sales@kaysongreen.co.uk
www.kaysongreen.co.uk

A Practical Guide to Precision Grinding

This book has been written for the people who, figuratively speaking, put their noses to the grindstone every day. The book distills what the author, Walter Graf, learned during over 40 years in the abrasive industry: Travelling the industrialized world, optimising customers' grinding processes and giving grinding seminars.

372 pages, divided into some 20 chapters covering, among others, OD & ID cylindrical grinding, centreless grinding, surface and creep-feed grinding, gear grinding, how to run grinding tests, diamond dressing, giving practical advice on effectively running these processes. Excessive wordiness was consciously avoided and counterbalanced by graphics and simple formulas to make the contents understandable, digestible and actionable.

Anyone wishing a summary of the contents, with the first page of each chapter, please send a request to **info@adgrind.com**

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The filtration of airborne contaminants is critical in keeping manufacturing technology free from debris and operating in optimal condition. Without fume extraction technology, the performance of advanced and costly equipment such as lasers, risks being compromised by particle emissions, potentially leading to equipment breakdown and a degradation of product quality. Effective filtration is particularly important in end-to-end automated manufacturing systems, which rely on multiple, connected elements to contribute to the greater goal of enhanced productivity. Increasingly, this also depends upon the capture, interpretation and actions linked to performance data covering each component. For fume extraction technology, the development and roll-out of Donaldson BOFA's Pro OS operating platform, thought to be the world's first Industry 4.0-enabled system of its type, has the potential to be a game changer.

Pro OS delivers numerous benefits to industries. Here are just five of the most valuable:

Two-way data stream for better control
Pro OS is a fully connected solution that provides a two-way live data stream configured to integrate with established automated production processes. It provides a data feed accessible either via an intuitive customer interface onboard the extraction system or by streaming data automatically with a remote centralised workstation to support a holistic monitoring of an entire production process.

These options provide factories with real-time visibility of fume extraction performance in granular detail. In the case of remote monitoring, data is streamed through Donaldson BOFA's integrated Connect module, which feeds real-time information to either a local area network or a cloud-enabled global monitoring station covering multiple sites.

Pro OS can plug huge volumes of valuable data into a centralised factory dashboard, enabling manufacturers to see multiple extraction performance read-outs, for say filter condition. This has the potential to make a significant contribution to operational efficiency, human resource allocation, energy savings, atmosphere management and productivity. It's also possible to download performance logs covering 12 months for a deep dive into historical trends.

Smart, multi-language, interface for ease of operation
Operatives tasked with the physical monitoring of fume extraction technology benefit from Pro OS's high-resolution 5" colour touchscreen, which provides easy access to extraction system navigation and monitoring. This is made simpler through the onboard availability of multiple local language options, while onscreen icons enable technicians not only to see immediate filter condition status, but at the touch of a button to access granular information about incremental percentage saturation for the pre-filter and HEPA filter stages. A VOC sensor is also incorporated to monitor the use of carbon in the combined filter.

Enhanced filter condition monitoring to safeguard uptime
Whether via the digital display or through centralised data integration, Pro OS outputs help end users optimise filter life by providing data that supports better filter replacement forecasting. This helps operators schedule filter exchanges and maintenance regimes in step with production plans, so avoiding costly unplanned downtime.

Configurable alarms for optimal system performance
Pro OS extraction systems incorporate five configurable relays that can group a number of condition alarms linked to core system components and processes. This allows alerts to be programmed to flag when any thresholds outside normal parameters are exceeded. For example, this could include a warning about a filter nearing saturation, low system airflow, or an elevated system operating temperature. Having these alerts both configurable to local manufacturing requirements and visible via two-way data connectivity, removes the need for 'eyes-on' physical system monitoring, thereby improving overall efficiency.

'No Tool' serviceability for faster reinstatement
Although not directly a benefit of the Pro OS operating platform, Donaldson BOFA has taken the opportunity to redesign certain servicing and maintenance logistics in Pro OS enabled systems.

For example, in the AD Oracle Pro OS Connect extraction system, the PCB and filter compartments have been separated so that technicians gain easier access to the PCB without being exposed to the filter housing. In addition, maintenance is made simpler by the adoption of finger-tight fixings, which in effect create a 'no tool' servicing and maintenance environment.

In short, the development of Pro OS has the potential to deliver significant operational benefits to manufacturers by contributing to enhanced automated production processes in step with the vision for Industry 4.0.

Pro OS is currently available in the AD Oracle Pro OS Connect and AD 1000 Pro OS Connect for laser applications, with further releases across Donaldson BOFA's system line-up due this year.

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All eyes on extraction efficiency and ease of use at EMO 2025

Telford-based oil mist filters manufacturer, Filtermist Ltd, will be launching three brand-new products at EMO 2025 in September.

The first new product, F Save', has been developed to reduce energy consumption on Filtermist units used on machines which aren't always operational.

Filtermist MD, René Joppi elaborates: "Our research and our customers' feedback showed that some machines are only operational for around 30 percent of the working day. If the Filtermist unit is kept running the whole time the machine is switched on, whether it's needed or not, this means energy is being used unnecessarily. Not only does this waste valuable resources and contribute to the customer's carbon footprint, it also costs money.

"We've developed a smart system that involves attaching a sensor to the machine's coolant pump which sends a signal to the F Save 'Hub'. The Hub then switches the Filtermist unit off if the pump isn't running. Our data shows that with this new smart system customers can reduce their energy usage by up to 70 percent. In these cases, payback can be achieved in as little as just over three months.

"F Save does not require any electrical interfacing with the machine tool which makes it extremely simple to set up. It also prevents machine operators from accidentally overriding the mist extraction, meaning people are always protected from exposure to harmful airborne oil mist particles."

Filtermist will also be introducing a brand-new oil mist filter developed in conjunction with Swedish sister company Absolent AB. The new unit has been specifically designed to effectively capture large volumes of submicron particles generated in applications that use neat oil.

"This latest offering from Absolent Air Care Group combines over 80 years of oil mist filtration expertise from Absolent and Filtermist, packaged in a compact, lightweight, energy efficient, plug and play unit which is designed to be machine-mounted," comments Graeme Bell, Filtermist's global commercial director.

"This is a very interesting addition to the Group's product portfolio and we are excited to be showing it on our stand at EMO."

The Filtermist booth will also include a brand-new portable, modular stand designed for a variety of extraction requirements. "The new low-level stand can easily be moved around and makes servicing and maintenance simple. It's also ideal for grinding applications as it can be specified with a cyclone pre-filter to remove swarf before it enters the Filtermist unit," says Graeme Bell.

"The stand has removable panels which offers customers a choice of aesthetics and if a customer has machines which are only used occasionally, it means the extraction unit can be shared across different workstations."

Established in Shropshire in 1969, Filtermist's ethos is to protect people by ensuring cleaner, safer, more productive working environments.

The company, part of the Swedish Absolent Air Care Group, provides an extensive range of products and services designed to ensure the air in production facilities is free from contaminants such as oil mist, oil smoke, dust, fume and VOCs. If left in the atmosphere, airborne particles can be hazardous to health and can pose a fire and slip risk.

Filtermist is best known for manufacturing a range of compact, quiet and efficient oil mist filters which are trusted by world leading manufacturers in more than 60 countries.

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EMO 2025: Hall 11 - Stand C13

Fresh Insights!

Part one of a two-part article from Adelbert Haas

How does the Multigrind® Radical tool grinding machine stand the test? We asked the experts at Kristen + Görmann KG, Silmax S.p.A., Akko Makina, mimatic GmbH and Utilis AG what do they think of their Radical? We met, asked questions and gained fascinating insights into their experience with the Multigrind® Radical. On the following pages, you'll find first-hand reports from five leading companies in the tool grinding industry. A fresh perspective well worth reading.

The Multigrind® Radical user experience: Fresh Insights

Choosing a Multigrind® Radical is always a step into the future of tool grinding. Beyond its many immediate advantages, it often marks a shift from familiar workflows to a new era of automation. It's a step forward on the path to fully automated manufacturing. We're excited to exchange insights with five top-profile tool grinding experts. Join us for the Multigrind® Radical user experience.

Kristen + Görmann KG: "We were looking for a way to expand production capacity to 2–3 shifts per day, ensuring greater flexibility, especially in adapting to order volumes. To address the growing shortage of skilled workers, we rely on automation so the performance of the Nachi robot was a key focus."

mimatic GmbH: "Large batch sizes are the focus of our production. We were impressed by the efficient four-position grinding wheel changer. Workpiece changeover is also a crucial factor at these volumes. The Multigrind® Radical's minimal chip-to-chip time clearly demonstrates its efficiency. Our goal for the future is a three-shift operation 24 hours a day, five days a week, plus any production running into the weekend is a welcome bonus. Mimatic operates on calloff orders, where a competitive unit price is key. The Radical simply needs to run reliably and produce consistently."

Silmax S.p.A.: "We recognised and correctly assessed the potential of Haas Schleifmaschinen. Not only with the Multigrind® Radical but also with the Multigrind® CA. The flexibility of the Multigrind® Horizon software is important for our production. 50 percent of the production is catalogue products and 50 percent is custom tools. This also includes even the smallest modifications in geometry, length, etc. We specifically searched for a fully automated tool grinding machine that could produce more than just a few workpieces and handle more than one process. With the Multigrind® Radical, we can produce 80 percent of our catalogue."

Kristen + Görmann KG: "The Smart Factory is a key aspect for us. With the Multigrind® Radical, we are taking an early step into this manufacturing strategy. This is an essential move to stay prepared for the future."

Akko Makina: "The speed. For Minicut cutting tools, the Multigrind® Radical is 50 percent faster. In terms of our entire portfolio, it's about 20 percent. What stands out are the structurally superior quick changes of the tool and grinding wheel. Very short path to the workpiece, short travel paths, compact and fast. The entire design and automation are very well thought out. It was a perfect fit."

Utilis AG: "There was a need to expand our machinery fleet. We already have two Multigrind® AF, one Multigrind® CA and three Multigrind® CU machines and adding another Multigrind® was the next logical step. The decision to go for a Multigrind® Radical came late, but it's been in operation since December 2024. The basic concept is familiar to us from the other Multigrind® grinding machines, but for a true tool grinder, it's something new. The impressive performance exceeded our expectations. The minimal downtime was a key factor for us. While we haven't fully tapped into the machine's potential yet, we're working on it."

mimatic GmbH: "At Mimatic, multi-tooth thread inserts are ground. Previously, this involved multiple machining steps to produce the circumference, chip surface, and profile. Initially, it was done on three machines and more recently on two machines with an extended workbench. This meant re-clamping thousands of plates, which not only resulted in quality issues but also caused scheduling difficulties and, as a consequence, delivery delays. On top of that, human error became a factor. Now, the entire manufacturing process runs on the Radical."

Kristen + Görmann KG: "A wonderful 'Aha moment' in the first few months. We received a request for a highly complex tool. Without the Radical and the support from Adelbert Haas, we would have had to decline it. This would have been unimaginable with our existing machinery."

Silmax S.p.A.: "The output is remarkable. Why? The fast tool change makes a significant difference with our large quantities. With identical spindle speed and feed rate values, the Multigrind® Radical produces more tools in the same amount of time. Together with the 10 percent time savings, this means, for us, you need nine Radicals instead of 10 other machines."

Kristen + Görmann KG: "The all-in-one machine convinced us. Our customers' orders are becoming increasingly smaller and more detailed. Currently, Kristen + Görmann manufactures turning inserts, milling inserts and special cutting tools. Now, we can offer our customers rotary tools, skiving tools, shaft tools and indexable inserts. This flexibility convinced us."

Akko Makina: "Our reality today is clearly Industry 4.0 manufacturing. Production runs 24 hours a day. One day shift with a machine operator, and the other two shifts are definitely covered without personnel. What we are still missing are a few pallets with diameters of 3 and 4, otherwise, we would have let the Multigrind® Radical run through the weekend as well."

Utilis AG: "The chip-to-chip calculation is something for our controllers. We evaluate the technical performance of our entire production cluster. The Multigrind® Radical lives up to its name. It is radically conceived and different from all others. A tool grinding machine that did not base its development on the competition. That aligns perfectly with Utilis."

Silmax S.p.A.: "Especially the SwissChuck is a big improvement. The reduced setup times are outstanding. You don't have to change the gripper fingers, the maintenance effort is low and we produce with a roundness accuracy of less than 5 µm. That's Radical."

Kristen + Görmann KG: "Everything in one clamping. Previously, grinding was done on two machines. The quality and repeatability are now many times better. As more measuring machines are being used in our customers' incoming goods inspections, this has led to an increase in complaints. The more precise Multigrind® Radical helps to address this issue."

mimatic GmbH: "We now have much better control over the tight tolerances of the produced inserts. Special inserts, in particular, come with high complexity. The ability to manufacture an entire tool on just one machine is a gamechanger for Mimatic. As for setup times, we've saved 60-70 percent compared to the previous process. This is especially noticeable in our production method, where we work with large batch sizes, it has a very positive impact."

Kristen + Görmann KG: "Unmanned production offers enormous advantages. We can calculate more accurately and have shorter delivery times. A current example, we are now about 50 percent faster in step grinding."

Akko Makina: "We have two Multigrind® AF and two Multigrind® CU in stock and now the first Multigrind® Radical. As for precision, it's still too early to make a statement because we haven't produced more than 500 parts on the Multigrind® Radical yet. On the other hand, I'm not concerned about precision because all Multigrind® machines are very precise."

Utilis AG: "We've been automating in three shifts for 20 years and have full control over our processes, including quality and precision. For us, the Multigrind® Radical is more of a valuable addition. Indeed, a highly complex geometry can be produced better on a Multigrind® Radical. For Utilis, another aspect is crucial: a lot of tool grinding machine in around 4 square metres. Space is expensive in Switzerland and, with the Multigrind® Radical, we optimise our space requirements. Replacing another machine with two Multigrind® Radicals is a compelling argument."

Utilis AG: "Something completely different. The idea and possibility of remote control is particularly interesting for us. Utilis currently manufactures 100 percent in Switzerland. The new machine certainly makes internal support much easier for us. Now, we can log in from any workstation in seconds, check the current status and retrieve all relevant data. This is made possible with the Multigrind® Radical."

...to be continued. Part 2 of this article by Adelbert Haas will be published in the November issue of Grinding & Surface Finishing.

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Precision meets efficiency in lapping and polishing

With the launch of the new Diamond Spray »MF« and Diamond Paste »MF«, LACH DIAMANT presents two innovative products designed to meet the highest standards in precision and surface quality. Whether it's fine grinding, polishing tool contours, or finishing sensitive components, these two MF products impress with their ease of use, efficiency and reliable, controlled results.

Benefits that matter in practice

Diamond Spray »MF« and Diamond Paste »MF« have been specifically developed for professional users working in precision machining of metal, carbide, ceramics and hardened steels.

Key advantages

- **Precise application:** Thanks to the spray action (Spray) and finely tuned viscosity (Paste), the diamond medium can be applied with control and accuracy.
- **Significant time savings:** The ready-to-use Diamond Spray »MF« enables quick and clean application with no complicated preparation.
- **Gentle processing:** Even delicate surfaces and complex geometries can be treated without damage.
- **Variety of grit sizes:** Available in multiple grit sizes to suit removal rate or polishing effect as needed.
- **Residue-free application:** Easy to remove after use, a major plus during final cleaning.

Ideal applications

The MF series is perfectly suited for:

- Tool and mould making, e.g. polishing mould inserts or intricate contours.
- Precision engineering and micro-machining.
- Dental and medical technology.
- Research and development, ideal for lab applications with the highest quality requirements.

Two solutions, one goal: Superior surface finish

Diamond Spray »MF« is ideal for large-area applications. The convenient spray function ensures even coverage, perfect for series production or polishing complex contours.

Diamond Paste »MF« is the go-to solution for detailed and precise work, such as where tight tolerances or hard-to-reach areas are involved.

As a manufacturer with decades of experience, LACH DIAMANT offers personal support in selecting the right product and grit size ensuring maximum efficiency and productivity in your operations.

Easy handling and application for your lapping and polishing work.

Diamond Spray »MF«.

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First-class quality, value and service

Lapping Services Ltd specialise in precision subcontract lapping and polishing, embodying the highest standards of quality, service and British engineering excellence.

Holding AS9100 accreditation, the company are committed to delivering precision machining and surface finishing with exceptional accuracy in thickness, flatness and parallelism. Its dedication to quality and attention to detail not only meet but exceed the expectations of clients across various industries.

It works seamlessly with your production schedules, ensuring swift turnaround times and reliable results. Lapping Services state-of-the-art facilities, coupled with an unrivalled level of expertise, enable it to deliver exceptional value by saving clients both time and costs.

With a comprehensive array of processing options and a customer-first approach, it remains dedicated to offering innovative and flexible solutions at competitive prices. Lapping Services Ltd is where engineering precision meets exceptional service, delivering results you can trust.

Why choose lapping services?

1. AS9100 Quality assurance

Lapping Services is proud to operate under the AS9100 quality management system, recognised globally in aerospace and other high-stakes industries. This certification underscores its commitment to upholding the highest standards, not only in precision and accuracy but also in the consistency of our processes. With AS9100, its clients can be confident they're receiving work of the utmost reliability and traceability. This is a crucial factor when delivering complex components with zero margin for error.

2. Precision for the toughest materials

Handling a variety of materials, particularly non-magnetic and non-ferrous ones, poses unique challenges. Titanium, for instance, with its non-magnetic properties, is notoriously tricky to work with due to issues in workholding and maintaining accuracy, especially with thin materials. However, Lapping Services has perfected the techniques necessary to overcome these obstacles. Its expertise and specialised equipment allows it to tackle these challenges head-on, ensuring it delivers the precision that its clients demand, regardless of material limitations.

3. High precision every time

Precision isn't just a buzzword at Lapping Services, it's a guarantee. Its capability to achieve sub-micron flatness over workpieces up to 500 mm in diameter demonstrates its commitment to meticulous accuracy. Leveraging advanced equipment like its Speedfam 20B, purpose-built for handling 20-inch workpieces, the team delivers surfaces that meet exacting standards in industries where even the slightest deviation can impact performance and safety. Its experience ensures that clients receive components with unparalleled flatness, enhancing the performance of their own products.

4. Consistent delivery and quality targets

Reliability is at the heart of Lapping Services customer relationships. It has consistently met delivery and quality targets over 99.8 percent, achieving "right first time" results that give its clients peace of mind. The clients know they can rely on Lapping Services to deliver components that meet their exact specifications, on time and every time. This exceptional success rate reflects the rigour of its processes and the team's dedication to delivering on every commitment it makes.

5. Cost-effective solutions

In today's market, balancing cost with quality is essential. Lapping Services offers competitively priced solutions, making it a viable choice for companies seeking quality and value. From small batch runs to high-volume projects, it provides flexibility that keeps costs in check while ensuring the highest standards are met.

6. Exceptional customer retention

The company is proud of its long-standing relationships with clients, some of whom have been with Lapping Services for over 20 years. This level of retention speaks volumes about the trust its customers have in the company. By consistently delivering on its promises, it has earned the loyalty of businesses across a range of industries.

7. Your partner in problem-solving

Engineering projects often come with unique challenges that demand innovative solutions. Lapping Services doesn't just provide a service; it collaborates with clients to solve their most difficult problems. Whether its overcoming issues related to materials or achieving precise tolerances, the team has the expertise and the equipment to provide solutions tailored to each client's specific needs. This problem-solving approach has made it a trusted partner in delivering results that others might find unattainable.

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DeburringEXPO integrated into new PARTS FINISHING trade fair

12th to 13th November 2025, Karlsruhe Exhibition Centre, Germany

Never before has the industry experienced such rapid change. This is also impacting the demands placed upon technical trade fairs. As a result, DeburringEXPO will no longer be held as a stand-alone event and instead will be incorporated into the new PARTS FINISHING trade fair. It combines the topics of deburring technologies, component cleaning and surface finishing in a two-day event, which will take place for the first at the Karlsruhe Exhibition Centre in Germany on the 12th and 13th of November.

Megatrends such as the mobility and energy transitions, demographic change and digitalisation are posing new economic and social challenges but are also generating new opportunities. They necessitate new products and customised production strategies from manufacturing companies all the way down to the sub-supplier level. These changes are affecting the trade fair landscape as well. "After many discussions with exhibitors at DeburringEXPO and an in-depth analysis of how various trade fairs are developing, we've decided to stop holding the trade fair for deburring technologies as an independent event," reports Hartmut Herdin, managing director of private trade fair promoters

fairXperts GmbH & Co. KG. "In the future, the subject of deburring technologies will be brought together with the fields of component cleaning and surface finishing at the new, two-day PARTS FINISHING trade fair."
Surface finishing includes the process steps of fine and ultra-fine grinding, polishing, honing, lapping, vibratory grinding, blasting and brushing. The trade fair will be held once every two years at the Karlsruhe Exhibition Centre, for the first time on the 12th and 13th of November, 2025.

By bundling these three important areas, all of which are crucial to quality in parts

production and by holding the trade fair for a duration of two days, the promoters are responding to the requirements and expectations of the market. "More and more companies are scrutinising the cost-benefit ratio of traditional trade fair participation," reports Hartmut Herdin. "For example, considerable booth space is required in order to exhibit machines, which drives the costs up. But nowadays, capabilities and expertise can also be demonstrated digitally very well."

These considerations have been incorporated into the trade fair concept for PARTS FINISHING. On the one hand, it makes it possible for persons responsible for parts production to gather concentrated information concerning solutions and it promotes a dialogue between users and exhibitors in the interdisciplinary development of solutions for special applications. On the other hand, shortening the trade fair to two days reduces travel, accommodation and personnel costs. "This aspect is supported by top-quality, turnkey and individualised booth packages offered at fixed costs that save time, money and resources right from the trade fair preparation stage," adds Hartmut Herdin.

The PARTS FINISHING concept is specifically geared to the actual motivation for trade fair participation: the establishment and maintenance of relations between users and suppliers, as well as the creation and consolidation of networks amongst exhibitors. "The latter makes it possible to enter into strategic partnerships and tackle new projects together as a system supplier," notes Hartmut Herdin.

Knowledge transfer as additional benefit

Exhibitor presentations will be complemented by a transfer of knowledge at the bilingual PARTS FINISHING expert forum, which will be held on both days of the trade fair. Solutions for actual applications, current developments and trends from all three trade fair topics will be at the centre of attention at the simultaneously interpreted presentations (German <> English).

PARTS FINISHING brings together the complementary production steps of deburring, component cleaning and surface finishing under one roof over two days.

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Lissmac SBM-L G1S2 two-sided sheet metal processing machines

Grinding and deburring machines suitable for machining workpieces made of stainless steel, steel, aluminium or non-ferrous metal on both sides are available from Finishing Aids.

These grinding and deburring machines are suitable for machining both sides of stainless steel, steel, aluminium or non-ferrous metal workpieces.

The SBM-L G1S2 grinding and deburring machines were developed for deburring on both sides and edge rounding of workpieces in one operation. The LISSMAC machines are used for deburring sheet metal and processing sheet metal parts, laser parts and stamped parts. The L series is equipped with three units each on the top and bottom. The processing of stainless steel, steel, aluminium or non-ferrous metal workpieces can be done either on the upper side, the lower side or on both sides.

Two-sided sheet metal processing and edge rounding in one operation gives time savings of up to 60 percent. It is also possible to easily connect automation solutions or to integrate them into production lines. The machine concept ensures ergonomic operation and a pleasant working environment without pollution, dust and noise.

Since its launch in 1955, Finishing Aids has specialised in supplying a full programme of surface finishing abrasive products for a wide range of industries from aerospace and automotive engineering through to woodworking, glass processing and jewellery.

Its abrasive production plant, located in its Bury factory, contains state-of-the-art equipment designed for fast, accurate and specialised manufacture of a wide range of high-quality products.

The company's goal is always to offer its customers the best available products at the most competitive prices without sacrificing any of its quality standards. Added to this, its response speed in emergency situations, for example same day manufacture, is of vital importance in a highly competitive industrial world.

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Midland Deburr & Finish supports UK's EV surge with precision finishing expertise

As the UK government reignites support for Electric Vehicle (EV) adoption with new grants and infrastructure funding, Midland Deburr & Finish Ltd is stepping up to play a vital role in ensuring the performance and reliability of critical EV components.

The return of the electric car grant is a welcome development for the automotive industry. Backed by £63 million in additional chargepoint funding, the scheme is designed to accelerate the UK's transition to electric mobility. For companies like Midland Deburr & Finish, based in Lye, this momentum represents not only an industry milestone but a growing opportunity to support EV supply chains with specialist deburring and degreasing services.

As EV adoption increases, so does the need for extreme precision in the production and finishing of the components that power these vehicles. From battery casings and cooling system parts to electric motor housings and high-voltage connectors, the quality and cleanliness of every part directly impacts vehicle performance, safety and durability.

"EV components are often made from lightweight, high-performance materials and complex geometries that demand meticulous finishing," explains Chris Arrowsmith, managing director of Midland Deburr & Finish. "Our deburring and degreasing processes are essential to prepare these parts for optimal performance, whether it's removing burrs that could cause mechanical failures or eliminating residues that interfere with thermal management systems or electronic conductivity."

With over 25 years of experience, Midland Deburr & Finish has become a trusted finishing partner across the UK's advanced manufacturing landscape. As the electric vehicle market expands, the company is seeing increasing demand from component manufacturers looking to meet rigorous industry standards without the overheads of in-house finishing.

"Our customers are under pressure to scale up quickly while meeting exacting OEM specifications," Chris Arrowsmith adds. "By outsourcing their finishing to us, they can accelerate production timelines and avoid costly investment in equipment and training."

According to the Society of Motor Manufacturers and Traders (SMMT), only one in four new vehicles sold in the UK today is electric, but that number is expected to rise to four in five by the end of the decade. With more than 130 electric models now on the market and increasing affordability, demand for components is set to rise exponentially.

To help meet this challenge, Midland Deburr & Finish has refined its finishing techniques to serve EV manufacturers with speed, scalability and repeatable quality. The company's Lye-based facility is equipped with advanced vibratory, centrifugal, solvent and

vapour degreasing technology, capable of handling everything from small, delicate sensor housings to large structural parts.

"We understand the critical nature of EV components and we treat every part with that level of importance," explains Chris Arrowsmith. "It's crucial ensuring the part functions flawlessly for years to come."

The government's recent EV grant, paired with £2.5 billion in support through the DRIVE35 Automotive Transformation Fund, underscores a national commitment to decarbonisation and industrial growth. For Midland Deburr & Finish, it's a validation of the work they've been doing behind the scenes, helping manufacturers overcome challenges related to precision finishing as the industry evolves.

"This is a turning point for the UK's automotive sector," Chris Arrowsmith concludes. "As the country moves toward net zero, we're proud to support the shift to electric by making sure every component meets the highest standards of cleanliness, reliability and performance. The EV future in this country is now around execution and that's where we come in."

As the UK's EV market accelerates, companies like Midland Deburr & Finish will remain essential partners in delivering the quality and consistency needed to keep electric mobility running smoothly, one component at a time.

Established in 1999, for 25 years, Midland Deburr and Finish has emerged as a cost-effective outsourcing solution for companies seeking to delegate their "Dirty processes, including Metal Degreasing." These processes encompassed various tasks such as metal degreasing, component degreasing, deburring, mechanical finishing and general surface improvement within metal finishing.

In 2013, the company expanded its services to include casting impregnation, which proved invaluable in sealing leaking ferrous and non-ferrous castings. This addition further solidified its commitment to providing comprehensive solutions for its clients.

By consistently investing in process capacity and enhancing its quality systems, it has evolved into a reputable company capable of serving a wide range of customers. It caters to diverse market sectors, including automotive, aerospace and Formula One for their metal degreasing, vapour degreasing, solvent degreasing and deburring requirements. Its ability to adapt and meet the unique demands of each industry has contributed to its success and customer satisfaction.

As a privately owned company, Midland Deburr and Finish takes pride in offering a personal and friendly service. Its dedicated team is passionate about both metal degreasing and customer care and prioritises building strong relationships with its clients.

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The digital and efficient way to find the right deburring tool with HEULE Tool Selector

The Online Tool Selector from HEULE Precision Tools makes it possible to find the optimal deburring solution in just a few minutes. By digitally mapping the wide range of products in combination with a sophisticated algorithm, the correct tool can be selected in no time at all. This saves the user a considerable amount of time when selecting tools.

In modern manufacturing, precise and efficient processes directly influence quality and cost-effectiveness. The ideal tool is indispensable, especially in bore machining, but the selection process is often time-consuming and complex.

This is because many different factors need to be considered. What are the technical requirements for the desired result? Is simply removing the burr sufficient, or is countersinking required? What are the dimensions of the bore and the desired result? Which material needs to be machined? Having to fight your way through data sheets wastes valuable time. What is needed is a quick and reliable way to find the ideal application specific solution.

Precise selection of deburring tools using a web-based solution

The web-based HEULE Tool Selector guides users step by step to the perfect solution, intuitively and reliably in a modern and clear design. Developed based on many years of practical experience, the Tool Selector represents the complete standard range of HEULE tool solutions.

By entering specific application data into a clearly structured and visually appealing web interface, users are guided quickly and efficiently to the optimal deburring solution. An intuitive and user-friendly navigation system leads them step by step through the Tool Selector.

1. Select the machining operation

Initially, the user selects one of the following technologies: deburring, chamfering, counterboring or drilling combined. This initial choice filters the range of suitable tools.

2. Select tool family and define parameters

Based on the selected machining type, the Tool Selector presents all suitable HEULE tool solutions. The user then inputs application specific data, such as drilling and deburring diameters, workpiece height, edges to be machined, workpiece specifications and material. This information is used to generate an application-specific recommendation.

3. Selection result

Based on the data entered, the Tool Selector suggests the most appropriate HEULE deburring solution and presents all relevant information in a compact format, from dimensions and cutting values to programming instructions. A special advantage: The suggested solution can be saved as a one-page PDF or printed, making it immediately available to the user.

4. Direct line to HEULE experts

If the proposed solution requires further clarification or ordering, the company recommends direct dialogue with a HEULE expert. Users can submit enquiries to the HEULE team via the Tool Selector and upload their own drawings or 3D models. As a globally recognised deburring specialist, HEULE is pleased to offer personalised support.

Thanks to its clear, step-by-step structure, the Tool Selector enables users to quickly find the right deburring solution that is simple, targeted and individualised.

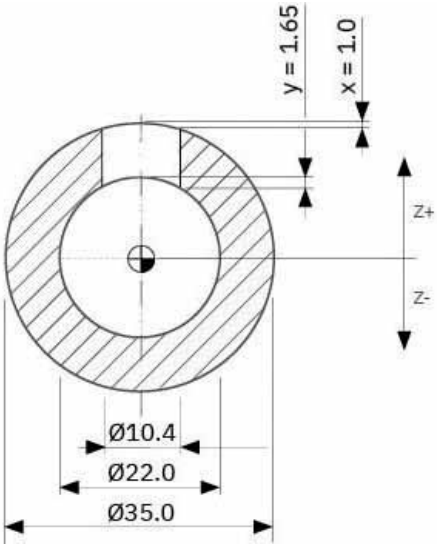
How the user benefits from the Tool Selector

Users benefit from considerable time savings as the most suitable deburring solution from the entire HEULE standard product portfolio is determined in just a few minutes based on the application specific parameters. Another advantage is the user-friendly operation. The intuitive interface and clear, modern layout speak for themselves. No expert knowledge is required to use the application, making the Tool Selector ideal for beginners in this field. Once the selection process is complete, the user receives all the relevant data on the recommended tool solution in a concise PDF. In the long term, users benefit from integrating the perfect deburring solution into their machining process, thanks to the Tool Selector's recommendations. This enhances process reliability by significantly reducing errors and the need for rework. As a result, users can also improve cost efficiency for example, by reducing waste.

The HEULE Tool Selector provides an overview of the standard range of deburring solutions. If a special solution is required, users also have the option to contact HEULE

experts directly to develop a tailored deburring solution together. Customer-specific solutions are created in close collaboration and extend the offering beyond the standard product range.

In today's manufacturing environment, achieving cost-efficiency requires both precision and efficiency and the first step towards this is selecting the right tool quickly and accurately.



Procedure in the Tool Selector

Step 1: Select the machining type «deburring».

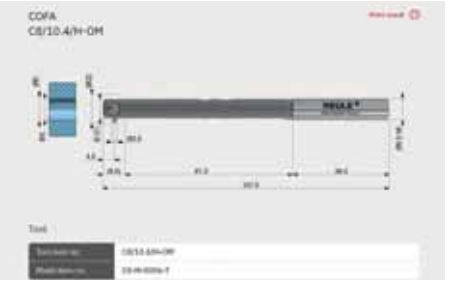
Step 2: Choose the COFA tool family, front and back deburring from Ø 2mm and enter the relevant parameters, including: Bore-Ø: 10,4 mm, deburring-Ø: 11,6 mm, workpiece height, bore depth: 8,15 mm, machining: deburring on both sides, Surface: uneven surface, inner-Ø: 22 mm, centre offset: 0 mm. Based on this input, the Tool Selector automatically calculates a blade clearance angle of 15.9°, which is crucial for deburring on the pipe. Material: Steel with medium to high carbon content.

Step 3: The Tool Selector recommends the appropriate solution: COFA C8/10.4/H and a blade with 20° clearance angle. It also displays cutting data and programming guidance.

Step 4: Download the PDF and/or request expert advice, done.

HEULE at EMO

HEULE's passion for deburring solutions and back bore machining will be on display at EMO



in Hannover. At EMO, HEULE will demonstrate why it is a leading partner for the machining of bore edges. With advanced technologies for deburring, chamfering, counterboring and combined drilling, HEULE provides smart deburring solutions for a wide range of applications even when it comes to challenging materials or complex geometries. At the heart of every solution lies its passion for burrs. A special product highlight awaits visitors at the show, the details will be revealed on site.

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EMO 2025: Hall 5 - Stand A08

VOLLMER to showcase razor-sharp brilliance at EMO

At the EMO 2025 trade fair in Hannover, the sharpening specialist VOLLMER will be showcasing its full-line supplier range of automated grinding, eroding and laser machinery, along with its services and digital products for the metalworking industry, on Stand F26 in Hall 11.

As a full-line supplier, VOLLMER will have a wide range of products for state-of-the-art metalworking on display at EMO 2025 in Hanover. For the first time, VOLLMER will be presenting its new 'VGrind infinity linear' tool grinding machine and giving insights into the digital world of the VOLLMER Smart Hub platform, which can be used to centrally record, process and manage machine data.

The VLaser 370 laser machine and the VHybrid 260 combined grinding and erosion machines will also be on its stand. VOLLMER's appearance at EMO will be rounded off with machines from two of its subsidiaries, Loroch and ultraTEC innovation. The focus here will be the innovative automation of the new ultraTEC A20C.

VOLLMER to showcase its VGrind infinity linear for the first time

The new VOLLMER VGrind infinity linear grinding machine will celebrate its world premiere at EMO 2025. The machine will showcase how customers can flexibly grind their rotary tools with this all-rounder. No matter whether its cutting materials such as carbide, High-Speed Steel (HSS), Polycrystalline Cubic Boron Nitride (PcBN) or ceramic, the VGrind infinity linear can create cutting tools with diameters from 0.2 to 200 mm with precision, speed and efficiency. Automation and digital solutions enable unmanned operation of the machine around the clock, from small batch sizes and special solutions to series production.

Maximum precision with laser, grinding or erosion

The VOLLMER VLaser 370 laser machine can also be seen live at EMO. On the foundation of its sophisticated kinematics, efficient extraction technology and astounding process stability, the VLaser 370 can be continuously operated for months without corrections or cleaning. It is suitable for machining tools made from ultra-hard cutting materials such as Polycrystalline Diamond (PCD) CVD diamond or PcBN and is ready for use with automatic settings, without manual intervention and around the clock.

The VHybrid 260, with which tool manufacturers can fully grind or erode both carbide and PCD tools, will also be at EMO. The machine is based on multi-layer machining, which is implemented through two vertically configured spindles. The lower spindle can be used both for grinding and for eroding. Thanks to the Vpulse EDM generator, the smallest microtools with diameters of 0.45 mm and below can be produced with maximum precision, performance and surface finish using the VHybrid 260.

Digital services open the gates to the world of IoT

This year's trade fair digital products and services highlight is the VOLLMER Smart Hub platform, which can be used to centrally record, process and manage data from VOLLMER machines. The VOLLMER Smart Hub brings transparency and efficiency to modern production and, in combination with an AI-based chatbot, can provide information on machine utilisation, the number of tools produced or even missing parts. VOLLMER will also present its digital V@dison solutions and its services relating to maintenance, servicing, training and financing.

VOLLMER subsidiaries also represented

In addition to its own machines, VOLLMER will also showcase products and services from its subsidiaries, Loroch and ultraTEC innovation. Loroch will have its KSC 560-B sharpening machine for metal cutting saw blades at Hanover. This machine is suitable for complete saw blade processing without manual intervention, including automatically grinding chip breakers. Loroch will also be showcasing its TC 720 saw blade measuring device, which can be used to precisely check the tooth geometry of circular saw blades and circular knives.

ultraTEC innovation will present its A20 C ultrasonic deburring system, with attached innovative automation systems. This allows manufacturers to deburr components in large quantities such as high-speed steel taps or dental implant drills in an economical manner, keeping edges sharp but burr-free. The special feature here is that several components can be deburred simultaneously with this unique machine configuration.

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EMO 2025: Hall 11 - Stand F26

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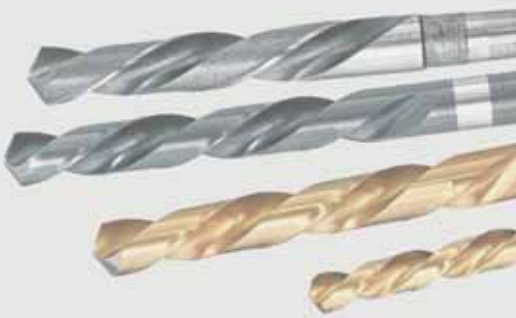

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Unlocking high-speed precision with the Spindle Speed Increaser

Spindle Speed Increaser from ANCA delivers 50,000 rpm to transform your FX, MX, or TX into a precision powerhouse for small-tool applications

ANCA has developed a high-performance Spindle Speed Increaser kit designed to elevate the capabilities of its FX, MX and TX grinding machine platforms. This innovative solution allows users to achieve wheel speeds of up to 50,000 rpm, making it ideally suited for small diameter grinding wheels and specialised applications, such as PCD pocket grinding and Internal Diameter (ID) grinding.

Enhancing versatility with high-speed precision

The Spindle Speed Increaser kit is a simple yet powerful addition that significantly expands the potential of your existing ANCA machine. Designed to operate seamlessly within the machine's grinding spindle, it enables users to access ultra-high spindle speeds without any special machine modifications.

Importantly, the Spindle Speed Increaser is fully compatible with ANCA's automatic wheel pack changer, allowing it to sit alongside conventional grinding wheel packs for convenient, automated tool changes.

Ideally suited for grinding wheels under 10 mm in diameter, the kit opens new opportunities in high-precision grinding applications. Originally developed for the TX platform, the Spindle Speed Increaser is now also offered for FX and MX machines, providing broader access to its capabilities across ANCA's customer base.

"The regular ANCA grinding spindle runs up to 10,000 rpm, perfect for most standard tool grinding operations using wheels above 75 mm in diameter," explains Duncan Thompson, ANCA product manager. "However, customers have been asking for a solution to efficiently use smaller wheels. These wheels require significantly higher rpms to achieve the surface speeds necessary for optimal grinding and the Spindle Speed Increaser provides an elegant solution to this challenge."

Technology behind the upgrade

At the heart of the Spindle Speed Increaser is a compact geared mechanism driven by the main spindle. This gearing increases output rpm by a factor of approximately seven, achieving speeds up to 50,000 rpm at the grinding wheel.

The kit is supplied with a comprehensive set of seven collets, supporting wheel shank sizes from 1 mm to 7 mm, providing users with flexibility to suit a range of tool geometries and grinding operations.

Precision in PCD pocket and ID grinding

One of the key use cases for the Spindle Speed Increaser is the grinding of PCD Polycrystalline Diamond (PCD) pockets, a common operation in the production of tools used across the automotive, aerospace and woodworking industries.

A typical manufacturing process begins with standard grinding operations such as fluting and relief, using conventional wheel packs. Then, using the Spindle Speed Increaser, small pencil grinding wheels can be deployed to accurately create PCD pockets at high RPM. This ensures optimal surface finish and accuracy in a single-machine setup.

"Using the Spindle Speed Increaser for pocket grinding eliminates the need for secondary setups," explains Duncan Thompson. "It saves time, reduces the risk of alignment errors and increases overall manufacturing efficiency."

Complementing the hardware, ANCA also offers dedicated PCD pocket grinding software. This easy-to-use package enables users to define complex pocket geometries quickly and precisely, further streamlining the tool production process.

A smart investment for greater return

Available as an optional accessory for both new and existing FX, MX, and TX machines, the Spindle Speed Increaser is an ideal upgrade for tool manufacturers looking to broaden their production capabilities and maximise the value of their machine investment.

"The Spindle Speed Increaser, combined with ANCA's PCD pocket software, opens the door to new tooling opportunities without requiring additional capital equipment," Duncan Thompson adds. "It's another smart way to unlock more performance from your existing ANCA machine."

To see the Spindle Speed Increaser at work, watch the YouTube video showcasing its functionality and application in real-world scenarios:
https://www.youtube.com/watch?v=EdbQv63WU28&t=2s

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EMO 2025: Hall 11 - Stand F34

State-of-the-art laser processing from WALTER

VISION LASER offers state-of-the-art laser processing for brazed diamond tools developed for maximum precision and efficiency in tool production. Based on the proven HELITRONIC VISION, the machine combines decades of experience with pioneering laser technology.

Thanks to the innovative C.O.R.E. operating system, users benefit from intuitive operation, seamlessly integrated system applications and a fully digital workflow that is standardised on all machines from the UNITED GRINDING Group.

Mineral casting portal design

The VISION LASER features the WALTER mineral casting portal design for optimum tool surfaces. The machine therefore offers you optimum vibration damping, temperature insensitivity, drive dynamics and, ultimately, grinding precision.

All five CNC axes of the VISION LASER are equipped with linear drives and are controlled by integrated high-resolution measuring systems. These generate precise movements with high dynamics. The VISION LASER also has a C-axis with torque drive for maximum accuracy and durability.

Precision made easy. Automatic calibration of the axes, the laser focus position and the centre of rotation minimises operator effort and enables highly precise and efficient manufacturing processes.

It provides continuous monitoring of machine consumption data such as air consumption, energy consumption, laser and scan head and temperature monitoring. There is no need for cooling lubricants, filters, or wires, which reduces resource consumption and operating costs.

Software integration and user-friendly operation

The GTR ProfDia Laser software is used as a classic application similar to the GTR ProfDia Erosion, which has been widely used in wire erosion for decades and thus offers GTR-experienced users an easy introduction to operating the new laser machine.

Automation with robot loader 25 (optional)

Folded-arm robot with six controlled axes for

automatic loading of tools. User-friendly "Process Manager" software for convenient programming of loading operations and intelligent management of tool magazines. Automatic teaching enables short setup times. Depending on the type of workpiece or workpiece diameter, up to 70 workpieces can be loaded via the robot loader. Maximum workpiece weight: 20 kg; maximum workpiece diameter: 250 mm.

Walter Ewag UK Ltd
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www.walter-machines.com

EMO 2025: Hall 11 - Stand E45

Hotman China accelerates innovation with NUM's advanced CNC solutions

Guangdong Hotman Machine Tool Co., Ltd., a leading manufacturer of high-precision grinding machines based in Dongguan, China, has successfully launched its new vertical Non-Circular Grinding (NCG) machine series with the support of NUM's advanced CNC technology and NUMgrind software. This collaboration marks a significant milestone in Hotman's innovation journey, enabling faster market entry, improved efficiency and enhanced flexibility in grinding complex workpieces.

A strategic partnership for cutting-edge grinding solutions

Hotman, founded in 2003, has established itself as a key player in China's grinding machine industry. With a strong focus on research and development, the company has built a comprehensive product portfolio comprising nearly 100 models across 12 grinding categories.

In 2018, Hotman and NUM initiated their collaboration, which deepened during the trade fair DMP Shenzhen 2021, when Hotman was searching for an advanced CNC solution for non-circular vertical grinding applications. Their key requirement was not just a powerful CNC control system, but a complete solution that seamlessly integrated both CNC hardware and specialised grinding software.

NUM's Flexium+ CNC system and NUMgrind software emerged as the perfect fit for Hotman's needs, offering a highly efficient, reliable and flexible platform to develop its new Z850 vertical NCG grinding machine.

Introducing the Z850 vertical NCG grinding machine

The Z850 vertical grinding machine represents a breakthrough in precision grinding technology, allowing manufacturers to achieve high levels of accuracy, consistency and productivity. This machine is specifically designed for non-circular grinding applications, making it ideal for complex workpieces that require precise shaping.

Key features of the Z850 grinding machine

- Vertical grinding configuration ensures optimal stability and precision.
- 6-station grinding wheel magazine enables multiple grinding operations in one setup.
- Capability to grind OD and ID cylindrical, including cones, as well as non-circular parts.
- Direct drive motor for precise rotary table control enhances accuracy and surface finish.
- In-process measurement system ensures real-time quality control, including automated calibration.
- NUM's CNC Technology for precision, efficiency and customisation.

The Z850 is powered by NUM's Flexium+ CNC system, which provides: High-performance motion control for ultra-precise grinding operations; NUMgrind software, which simplifies the programming of complex grinding tasks; Customisable grinding cycles to meet specific customer requirement and seamless integration with automation solutions, increasing overall productivity.

NUM Technology implemented in the Z850

- Flexium 68+ CNC control system.
- High-performance servo drives and motors.
- Custom-developed online measurement and calibration features.

By leveraging these advanced CNC solutions, Hotman was able to reduce its software development costs, accelerate the time-to-market and enhance the overall performance of its machines.

Fast and efficient implementation: A game-changer for Hotman

One of the most impressive aspects of this collaboration was the rapid implementation timeline. The entire system was developed, tested and commissioned within just two months, an exceptional achievement that allowed Hotman to launch its new vertical NCG grinding machine series faster than ever before.

Key benefits achieved:

- Accelerated time-to-market, fast commissioning enabled a competitive market launch.
- Improved efficiency, optimised software and automation reduce production time.
- **Exceptional stability and accuracy:** NUM's technology ensures consistent high-precision grinding.
- **Seamless machine operation:** NUMgrind software makes programming complex shapes easy.
- **Customised features:** Adapted solutions for specific customer needs.
- **Customer feedback:** NUMgrind software transforms Hotman's production process.

Providing the ability to quickly and efficiently program different workpieces has expanded Hotman's market potential and strengthened its position as an industry leader.

Strengthening the NUM-Hotman collaboration

The success of this project has paved the way for a stronger partnership between Hotman and NUM. With NUM's cutting-edge technology and Hotman's expertise in precision grinding, both companies are well-positioned to drive further innovation and market growth.

As Hotman continues to expand its product portfolio and global reach, NUM remains a trusted technology partner, providing the advanced solutions needed to stay ahead in the competitive grinding machine industry.

NUM (UK) Ltd
Tel: 024 76 301 259
www.num.com

A new look, a new name, but the same passion as always

PFERD has become PFERD TOOLS

PFERD has been a pioneer in innovative tool solutions for work on surfaces and for cutting and machining materials for over 225 years. Now, the company has a brand-new identity. This also includes a new name: PFERD TOOLS. Going forward, the international brand name and a modern, dynamic design will more clearly reflect the brand's identity as an innovative, expert and reliable partner in trade and industry.

The core of the PFERD TOOLS brand

The company is kicking off the future with a clear message: Innovative by tradition. The phrase captures what sets PFERD TOOLS apart, over 225 years' experience powered by unceasing innovation. This new motto brings together the company's rich heritage and its focus on future-forward solutions. It is actively transforming tradition into progress. Uniquely clear and pioneering positioning: PFERD TOOLS is innovative by tradition.

The name PFERD remains at the heart of the brand. With the addition of "TOOLS," it's immediately apparent what the company offers: smart solutions for tools and drives.

Modern, digital and international

PFERD TOOLS is taking advantage of the digital transformation for the benefit of its customers. With distinct messaging and a contemporary, fresh image, PFERD TOOLS is building on a strong foundation for the future, locally and globally, online and in the field.

"We're proud to have come up with a vivid,

eye-catching and unmistakable brand identity. It enables us to sharpen people's perception of PFERD TOOLS as an innovative premium brand and send a strong signal that we're ready for the future and writing the next chapters of our success story," highlights Jörn Bielenberg, CEO of August Rüggeberg GmbH & Co. KG. The new corporate design has been rolled out via digital and physical touchpoints over the last few months.

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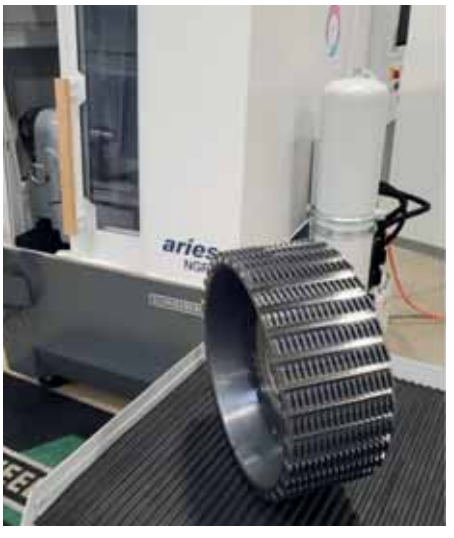
The big comeback of in-house tool sharpening with SCHNEEBERGER CNC-grinding machines

Amesbury Truth, part of the Quanex Group at the Owatonna, MN, USA facility replaced its Barber Coleman gear hob sharpener with a newer, faster and more capable solution. The hobs are sized from 50 - 200 mm (2" - 8") in diameter. For this task and potentially grinding any other cutting tool used in the shop, Amesbury chose a SCHNEEBERGER Aries NGP+ 5-axis CNC machine.

The quality of the re-sharpened hobs exceeds expectations not only in hobs tool life but also longevity between sharpening. The newly sharpened hobs are delivering cost savings to Amesbury of more than $140,000 in new cutters and $32,000 in outside sharpening in the first year of the Aries operation. A clear success story, thanks to less new hobs purchased, as well as less or no outside sharpening to support production. Additional benefits of in-house tool sharpening are the full control over tool life cycle, flexibility in the timing of the sharpening process, as well as overall environmental friendliness.



Modernising toolroom equipment can save a company a tremendous amount of money. Although toolroom investments are not always seen as first priority, the hidden benefits will come to light after a SCHNEEBERGER Aries or Norma machine have been put into the operation.

Are you interested in improving your economic efficiency? Contact the sales team at SCHNEEBERGER.

J. SCHNEEBERGER Maschinen AG develop and produce the most modern CNC grinding machines for the manufacturing and re-grinding of cutting tools and the production of a variety of precision parts.

SCHNEEBERGER is represented in all important markets with its own sales and service branch offices or qualified partners. The customers include companies from tool manufacturing, the automotive industry and its suppliers, from general machine builders, the aerospace industry, energy technology and job shop.

J. SCHNEEBERGER Maschinen AG
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https://www.schneeberger.swiss/en

EMO 2025: Hall 11 - Stand E78

Guyson's dual division showcase at CHEMUK 2025

In May, Guyson International's two divisions, Blast & Wash and Hose & Couplings, exhibited at CHEMUK 2025, hosted at the NEC Birmingham.

CHEMUK is the largest expo supporting chemicals, process engineering and formulated product industries. During the two-day event, CHEMUK hosted over 500 specialist exhibitors and more than 100 expert speaker sessions, discussing the big challenges and opportunities presented across the UK's chemical and chemical product industries.

Reflecting on the event, Mark Viner, managing director of Guyson blast & wash division states: "The chemical process and laboratory sectors have always been important markets for Guyson's range of surface finishing and precision cleaning equipment. The CHEMUK expo was an ideal opportunity to showcase our latest detergent and solvent cleaning ranges which received very positive feedback. We had some great conversations with existing and potential customers, with plenty of exciting opportunities to follow up on."

In the Chemical Laboratory Show Zone, Guyson's Blast & Wash division exhibited alongside partners Inventec Performance Chemicals, global providers of soldering, cleaning, cooling and coating materials for electronic, semiconductor and industrial applications. Drawing upon their partnership at the event, offered a fantastic opportunity to showcase Guyson's comprehensive range of Inventec solvents, including their 3M solvent replacements, PFAS-free cleaning chemicals and hydrocarbon solutions for co-solvent cleaning, all of which are compatible with Guyson's Microsolve mono and co-solvent cleaning systems. Inventec's range of solvents can all be supplied directly by Guyson.

Taking centre stage on the Blast & Wash stand were Guyson's brand-new detergent cleaning range, made in partnership with Airedale Group and exclusively launched to the attendees of CHEMUK 2025. The range included Guyson's Formula GP, Formula PB and Formula HD aqueous based detergents, formulated for use across a variety of applications and industries.

Designed for hard surfaces, Guyson's Formula GP is suitable for a wide range of applications and is highly efficient at removing contaminants from plastics, glass, metals and other materials, as well as removing brake dust. This general purpose, low-alkaline ultrasonic cleaner is suitable for use on aluminium and safer to use than caustic materials.

The Formula PB, Guyson's polisher brightener ultrasonic cleaner is highly advantageous for brightening non-ferrous metals, descaling limescale, removing oxides, rusts, shop soils and welding splatter from aluminium, steel and stainless steel. This liquid acid product also serves as a preconditioning agent for aluminium, steel and stainless steel, as well as an anti-rust treatment solution.

Completing the range, Formula HD is a powerful caustic solution, specifically formulated for cleaning ferrous metals and effectively removing heavy oils, grease and carbon. Furthermore, this heavy duty ultrasonic cleaner is ideal for cleaning steel

mould tools and extrusion dies, as well as removing carbonised deposits from steel components.

Guyson's specially formulated detergents combine excellent performance with low dilution and temperature, to create an efficient and cost-effective solution for ultrasonic cleaning operations. What's more, each Formula detergent cavitates and de-gases efficiently and are fully water rinseable to ensure a perfect stain-free finish.

In the Process and Chemical Engineering Show Zone, Guyson's Hose & Coupling division exhibited their expansive range of flexible hose assemblies in specialist rubber, PTFE and convoluted stainless steel. As well as their Hansen MLDB series and Mann Tek dry-break quick-release hose couplings, designed for high-flow applications, where minimum spillage is vital such as for expensive, flammable, toxic or other dangerous fluids.

Guyson's attendance at CHEMUK 2025 provided an excellent platform for both Guyson divisions to strengthen relationships with industry peers, whilst showcasing how its cutting-edge products are transforming operations across the UK's chemical and chemical product industries.

To celebrate the launch of the new Formula detergents range, Guyson are offering customers the opportunity to receive a free 1-litre Formula bottle of their choice, with the purchase of any Guyson ultrasonic cleaning bath or tank. To find out more, speak to a Guyson representative today.

Guyson International Ltd
Tel: 01756 799911
https://guyson.co.uk/

MecWash Systems appointed agent for Sugino Machines in the UK

MecWash Systems Ltd has been appointed as the sole UK agent of Sugino Corporation's advanced high-pressure cleaning and deburring machines, including the highly regarded Jet Clean Centre (JCC) range. This strategic partnership strengthens MecWash's position as premier UK supplier of advanced aqueous parts cleaning systems for high-precision industries.

The Sugino JCC (Jet Clean Centre) provides deburring and washing of all parts with high pressure water up to 245MPa.

Sugino, a leader in high pressure cleaning and deburring technology, has developed the JCC series to deliver precision results, short cycle times and operational flexibility.

The Sugino systems are designed like machine tools with an XYZ column and rotating plinth, to give great strength, accuracy and control of the powerful waterjets. The systems are also programmed like CNC machine tools, so they can be used easily by machine tool trained staff.

Delivering very high-pressures at up to 2,450 bar, these machines provide exceptional performance for particularly tenacious contamination and burrs. This power can be

particularly valuable in cleaning up die castings, removing casting media or oxidation scale from hardening, leaving an excellent surface finish.

Pierre Le Noach, sales manager at Sugino Machine France, comments: "This is a great opportunity for Sugino and MecWash to combine forces to tackle the toughest cleaning challenges in industry. This partnership gives Sugino access to the UK market, where high-pressure deburring and washing systems are in great demand. MecWash has an exceptional reputation and will help to drive Sugino's presence within UK manufacturing."

"This partnership is a perfect synergy of precision engineering and technical expertise," says John Pattison, managing director of MecWash Systems. "The Sugino JCC machines complement and extend our existing range by providing capability for applications where accurate "brute force" is critical for cleaning or deburring."

As the exclusive UK agent, MecWash will provide sales support, with Sugino providing technical service and spare parts supply for the Sugino JCC range.

MecWash Systems specialises in the design and manufacture of advanced aqueous cleaning and degreasing systems for metal and plastic components. The company provides innovative, environmentally responsible cleaning technologies from its headquarters in Tewkesbury, Gloucestershire.

Mecwash Systems Ltd
Tel: 01684 271600
Email: enquire@mecwash.co.uk
https://www.mecwash.com

The right cleaning solution for every task and industry

As a full-service provider of future-oriented, flexible and resource-efficient solutions for industrial component cleaning, Ecoclean and UCM will be presenting a perfectly tailored range of products and services at this year's parts2clean from October 7th to 9th in Stuttgart, Germany.

It includes modularly designed cleaning systems and customised special systems as well as application-specific process technologies, for example for spray, high-pressure, immersion, ultrasonic and plasma cleaning, steam degreasing, injection flood washing, Pulsed Pressure Cleaning (PPC) and ultrasonic plus. This means that all tasks, from coarse to high-purity cleaning, can be performed not only stably, but also efficiently and in a resource-saving manner. Four cleaning systems from the wide range will be on show live. These include the new EcoCvario aqueous chamber system. It is equipped with PPC as standard, among other things and can therefore handle even very demanding cleaning tasks reliably and economically.

The cost-efficient and highly flexible EcoCcompact for solvent cleaning will be on show in the L version. The product family is available in three working chamber sizes and batch weights of up to 150 kg and can be easily converted from hydrocarbon to modified alcohol. Adapted to the cleanliness requirements, the compact plug and play systems can be equipped with all process technologies available for solvent cleaning and for use in high purity cleaning.

With the UCMIndexLine, the system manufacturer is presenting a very compact rotary indexing system. Equipped with six cleaning and rinsing stations, with and without ultrasound or PPC, almost all processes for aqueous-based precision cleaning can be mapped. The system was designed for cleaning small and compact components. Ecoclean will also be exhibiting the UCMCombiLine, a modular ultrasonic cleaning system for low throughputs and high cleanliness requirements. The machine, which is available in several sizes for manual workstations, will also be used to demonstrate how the APM technology for validatable and contact-free measurement of ultrasonic frequency and power works.

This year's trade fair appearance will also focus on the significantly expanded range of contract cleaning services. This is carried out in the three Test and Service Centres equipped with the latest plant and process technology as well as connected laboratories for cleanliness tests. The range of services extends from classic parts cleaning through fine and precision cleaning to ultra-fine and high purity cleaning.

Ecoclean GmbH
Tel: 0049 711 7006223,
www.ecoclean-group.net

Blasting solutions from Vapormatt

From pioneering innovations to collaborative developments, Vapormatt's knowledge of wet blasting is among the highest in the world. It offers a range of solutions for a number of industries including: aerospace, aluminium extrusion, composites, cutting tools inserts, round shank tools, medical and wire and cable.

With both automatic and manual systems to purchase or rent, the company can provide you with a variety of solutions. All of its solutions benefit from the extensive knowledge of experienced design teams, process consultants and service engineers. This ensures that any solution Vapormatt provides you with will meet you expectations of surface processing.

Serving customers all over the world, it is headquartered at the Innovation Centre in the South West of England. Vapormatt was founded in 1978 by the 2nd generation of the Ashworth family and is still family owned today.

Why the Vapormatt Puma XL has taken the market by storm

Since its launch late last year, the Vapormatt Puma XL has quickly established itself as an industry favourite for manually wet blasting larger components and for good reason. Designed with industrial versatility and operator efficiency at its core, the Puma XL combines rugged stainless-steel construction with precision engineering to deliver exceptional surface preparation across sectors like aerospace, composites, automotive and additive manufacturing.

What sets the Puma XL apart?

✅ **Large-format blasting envelope:** Accommodates heavy and oversized components with ease thanks to a swing-out turntable that can cope with 250 kg UDL and wide-opening side-loading door.

✅ **Advanced Vapormatt blasting technology:** Adjustable blast pressure and media concentration ensures surface prep is tailored for anything from delicate components to aggressive cleaning tasks.

✅ **Smart ergonomic design:** From operator-positioned controls to a flat-backed cabinet for wall placement, everything is built for comfort, space efficiency and minimal maintenance downtime.

✅ **Sustainable and cost-efficient operation**: Features like the S-Tank filtration system and recirculated rinse cycle help cut costs while maintaining peak process quality.

Whether you're cleaning, peening, deburring, stripping paint, or prepping for coatings, the Puma XL is engineered to deliver repeatable, high-quality finishes with a process you can trust and a machine that's built to last.

Wet blasting for superior PVD and CVD coating preparation

When it comes to preparing components for high-performance coatings like Physical Vapor Deposition (PVD) and Chemical Vapor Deposition (CVD), surface preparation is key and wet blasting is one of the most effective and reliable methods.

Here is why:

✅ **Surface cleanliness:** Wet blasting removes oxides, residues and contaminants without embedding particles or generating heat, providing a pristine surface for coating adhesion.

✅ **Controlled roughness:** It delivers a uniform, finely tuned surface texture (Ra) ideal for coating nucleation and mechanical interlocking. This is something many other methods struggle to do consistently.

✅ **Non-destructive process:** Unlike dry blasting or mechanical polishing, wet blasting avoids micro-cracks and preserves dimensional tolerances, especially important for precision and heat-treated parts.

✅ **One-step cleaning and surface conditioning:** It combines cleaning and surface preparation in a single operation, reducing process steps and improving consistency.

✅ **Ideal for complex geometries:** The process effectively cleans internal cavities and intricate shapes that are difficult to access with other finishing methods.

Suitable components for wet blasting pre-PVD/CVD coating include:

✅ **Cutting tools:** Carbide inserts, end mills, drill bits, taps, reamers

✅ **Aerospace components:** Turbine and compressor blades, vanes

✅ **Medical implants:** Spinal implants, orthopaedic devices, bone screws

Whether you're targeting tool life, biocompatibility, or corrosion resistance, starting with the right surface prep makes all the difference.

Vapormatt 4.0: Maximising wet blast up-time with industry 4.0 intelligence

As manufacturers face increasing demands for consistency, traceability and efficiency, Vapormatt has responded with Vapormatt 4.0. This bespoke Industry 4.0 solution is fitted to

its automatic machines and is built specifically for wet blasting applications.

What does this mean for customers?

✅ **Unmatched process control:** Real-time monitoring of pressures, flow rates, and media condition ensures repeatable, high-quality surface finishes every time.

✅ **Predictive maintenance:** Vapormatt 4.0 detects performance drift before it becomes downtime, helping customers move from reactive to proactive maintenance.

✅ **Full traceability:** Every process parameter is logged, making compliance and quality assurance easier than ever. This is vital for industries like aerospace, medical and precision tooling.

✅ **Remote diagnostics and support:** Vapormatt engineers can remotely monitor and configure systems, delivering faster support and maximum uptime.

✅ **Resource optimisation:** Smarter use of air, water and blasting media leads to lower operational costs and a more sustainable process.

✅ **Smart Factory Integration:** Seamless communication with MES and ERP systems means customers are ready for full digital integration in modern manufacturing environments.

✅ **Data-Driven Insights:** Custom dashboards and analytics put production data to work, informing decisions and improving yield.

Vapormatt 4.0 isn't just about automation, it's about giving customers greater control, confidence and a competitive edge with every blast.

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Investing in a plastic de-flashing shot blast machine cuts personnel requirements by nearly 50 percent

Achieving a competitive edge in the market by cost-efficient production of innovative products. A global leader in the production of electromechanical components for safe and efficient switching operations and the protection of direct current applications followed this guideline by automating the de-flashing of plastic housings at its German location. The company chose a Rösler wire mesh belt blast machine, model RSAB 370-T1+1, compliant with ATEX regulations. This investment helped to practically cut the personnel costs in half!

The Schaltbau GmbH is a globally leading supplier of Direct Current (DC) solutions. This multi-division company, located in Munich, specialises in electrification products and solutions for many industries. For decades railway customers have been utilising the comprehensive portfolio of contactors, plug connections, switches and safety components. The trademark Eddicy stands for ultra-modern solutions for safe and reliable switching operations and the protection of direct current applications in the sectors energy and E-vehicles. These innovative products are produced at several locations in Germany, Europe, the United States and Asia including a plant in Aldersbach, located in Bavaria, Germany.

Reducing manufacturing costs through automation

Armin Voggenreiter, director of operations at the Aldersbach location of the Schaltbau GmbH, comments: "To remain competitive at our Aldersbach plant we work hard to identify cost reduction possibilities for practically every single manufacturing step." As part of a lean manufacturing project the production of housing components was extensively analysed. These are moulded in a pressing operation utilising melamine/polyester materials. Due to some material overflow in the press unwanted flashes are created, which must be removed to ensure the safe assembly and functionality of the components. To date the flash removal was done manually requiring a lot of time and personnel. For example, one person was stationed at each press. Therefore, automating the de-flashing operation offered a substantial cost-saving opportunity.

The project managers at Schaltbau presented this task to two equipment manufacturers, whose machines are already utilised in other manufacturing areas of the company. Armin Voggenreiter explains: "Rösler was one of the two suppliers we talked to. We know this company well, because it has been a reliable partner of ours in the field of mass finishing." A major requirement for the selection of the right blast machine was that the de-flashing process had to be extremely gentle. For example, the components must not tumble over each other during the entire process, and they must be completely free of any residual blast media when coming out of the machine. "For this challenging task, Rösler presented the by far most convincing equipment concept," states Armin Voggenreiter. Rösler offered the highly flexible wire mesh belt blast machine, model RSAB 370-T1+1, as the most suitable solution for the continuous, gentle de-flashing of the housing components. The de-flashing trials at Rösler were conducted in a comparable machine.

"The excellent results of the processing trials convinced us that the Rösler equipment concept was by far the best for our purposes," adds Armin Voggenreiter.

Effective de-flashing with less personnel

After they have been pressed, the duroplast components, with dimensions of up to 350 x 215 x 45 mm and weighing up to 575 Gramm, are manually placed on the 370 mm wide, wear-resistant wire mesh belt. The transport speed through the blast machine, precisely adapted to the respective workpieces and the severity of the flashes, is stored in a processing program, which can be selected by the operator at the control panel. The blast chamber is equipped with two W32 turbines, which were specially developed for the treatment of plastic components. One turbine is placed above and the other below the wire mesh belt. The mesh is wide enough that the blast media, in the form of polyamide pellets, reaches the workpieces on all sides so that they can be de-flashed in one single pass through machine. Any dust created during the process is continuously removed. Moreover, the standard blow-off system and the additional compressed air blow-off device ensure that any residual blast media is removed from the de-flashed components.

At the machine outlet a chute transfers the finished housing components to a separate conveyor belt system in "L" shape design for returning the components to the loading section, where they are removed by hand. "The shot blast machine allowed us to reduce our personnel costs by around 40 percent," reports Armin Voggenreiter. To minimise the operating noise, the entire shot blast machine is placed in a noise absorbing cabin. To offset the resulting shortening of the loading area, Rösler increased the length of the wire mesh belt.

Safe processing and operation in compliance with ATEX regulations

The standard, highly effective blast media cleaning system with vibratory screen and air-wash separator, augmented by the automatic media replenishment system, ensures that the blast media mix in circulation always contains the optimal pellet size distribution. The RSAB 370-T1+1 at Schaltbau also contains an anti-static system with automatic compound dosing. This practically eliminates the risk of dust and blast media adhering to the de-flashed components..

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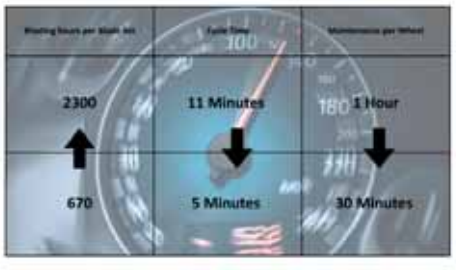
50 percent reduction in cycle time with blast wheel upgrade

Spanish foundry switches 40-year-old machine to Wheelabrator's TITAN 15 Smart wheels

Fudike, an iron foundry based in Ibarra, Northern Spain, has transformed the performance of its hanger-type shot blast machine by upgrading to Wheelabrator's TITAN 15 Smart blast wheels. A full blast cycle now takes five minutes instead of 11 and the team are getting 2,300 blasting hours out of a single set of wheel blades which is more than triple the blade life of the previous wheels.

Fudike specialises in brake discs for railway applications, which are desanded and cleaned in a 1985 hanger-type machine with three indirect-drive 11 kW blast wheels. Unhappy with its 670 blasting hours of wear parts life and 11-minute blast cycle, the Fudike team was looking for an upgrade that would significantly improve both, unlocking extra production capacity and savings on running costs.



Francisco Lusinchi, Wheelabrator expert for Equipment Modernisation Programs (EMPs) in Spain, explains what happened next: "The Fudike team quickly zeroed in on our TITAN 15 Smart wheel, a direct-drive blast wheel with cast wear parts for lighter-duty foundry applications that is for motor powers under 22 kW. Most of our customers want us to carry out the upgrades, but the team at Fudike really know their stuff. They wanted to do the conversion, but they also wanted to test it first. So, they bought one TITAN 15 Smart from us and installed it themselves, no mean feat, considering they were converting from indirect to direct drive."

The Fudike team quickly saw the impact of the upgrade. Even with just one blast wheel converted to TITAN 15 Smart, the cycle time dropped from 11 to 8 minutes.

Backed by this immediate result, Fudike bought and installed the remaining two blast wheels and has been running with the upgraded setup since February 2024. Not only can the machine now run more than three times longer without exchanging the blades, when they do need changing, it only takes 30 minutes per wheel instead of an hour.

The short payback time on this blast wheel upgrade shows the enormous impact blast wheels have on the running costs of wheel blast processes. That's why Wheelabrator has invested significantly in its blast wheel portfolio to offer customers cost-optimised solutions.

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Dry blasting machines for metal fabrication

Speed, safety & surface perfection

ActOn Finishing specialise in surface finishing technology that drives manufacturing performance. With over 60 years of experience, its expertise helps clients across the UK achieve optimal finishes on metal parts. In this guide, it focusses on dry blasting machines, their benefits and how they support precision metal fabrication.

What is dry blasting?

Dry blasting, also known as abrasive blasting, is a mechanical process that propels media at high velocity onto a surface. It removes contaminants, smooths rough edges and prepares parts for coatings. The method is widely used in fabrication, aerospace, automotive and general engineering industries.

Unlike wet blasting, dry blasting uses compressed air without any liquid. This makes it ideal for applications where water could damage components or interfere with downstream processes.

Why dry blasting matters in metal fabrication

Metal fabrication shops face tight deadlines and strict specifications. Surface finishing is not just cosmetic. It affects part quality, coating adhesion and safety.

Dry blasting offers multiple benefits including: Removes rust, paint and mill scale efficiently; Provides a uniform profile for coatings and bonding; Works with many media types, including aluminium oxide and glass bead; Enhances edge radius without altering part geometry.

This makes it particularly valuable for surface prep for powder coating, where cleanliness and consistency are critical.

The speed advantage

Dry blasting machines work quickly. When integrated into production lines or work cells, they reduce bottlenecks and save valuable time. Compared to manual grinding or chemical stripping, dry blasting shortens prep time dramatically.

With the right blasting cabinet, operators can process multiple parts with consistent results. The ability to control media flow, pressure and exposure means less rework and faster output.

Safety built in

ActOn dry blasting machines come with safety in mind. Enclosed blasting cabinets keep operators protected from dust and high-speed particles. All of its systems include built-in dust extraction units and safety interlocks.

For operators, the risk of repetitive strain is reduced thanks to ergonomically designed workstations. This ensures compliance with H&S standards and supports workforce well-being.

Surface perfection for coating success

Whether you are preparing mild steel for paint or aluminium for powder coating, dry blasting delivers precision. The process can be tailored to achieve specific Ra values or surface profiles.

This level of control is essential for parts requiring high coating adhesion or meeting aerospace-grade standards.

When to use dry blasting

Dry blasting isn't always the answer, but in the following scenarios, it excels:

Powder coating prep: Creates ideal anchor patterns for electrostatic coatings.

Weld cleaning: Removes slag and discolouration post-weld.

Surface texturing: Enhances part aesthetics or performance.

Rust removal: Cleans old or stored parts before rework.

If you're unsure which solution suits your application, the ActOn team can help you trial your parts with different methods.

Choosing the right dry blasting machine

When you're looking for dry blasting machines for sale UK, it's vital to consider:

Size of components: Standard cabinet, automated shot blasting system or shot blasting room?

Throughput required: Batch or inline processing?

Media type compatibility: Aluminium oxide, glass bead, plastic, etc.

Dust control: Is a cyclone or cartridge extractor needed?

ActOn offers a range of dry blasting systems tailored to different industries and parts. Its consultation process ensures you get the right solution with no over-spec.

Sustainability considerations

Dry blasting is cleaner than many solvent-based or chemical methods.

ActOn machines come with:
- Efficient media recycling systems.
- Minimal water or chemical waste.
- Lower energy consumption vs. thermal stripping.

This supports environmental compliance and helps manufacturers lower their carbon footprint.

Dry blasting is a proven solution for metal finishing, but success depends on the machine, media and method. As a UK-based manufacturer, ActOn Finishing brings experience in creating reliable, safe and efficient blasting solutions.

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