ENGINEERING subcontractor JAN/FEB 2026

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Your partner for 5 axis machining

SOUTHERN 26 Manufacturing & Electronics
3–5 February 2026 Farnborough International Exhibition Centre

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- Maximum 5 axis capacity within a minimum footprint
- Can also be used as a full-capacity 3 axis machine

Stock Machines Available

Ui Range

- Most economical 5 axis configuration
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VCi/VCXi Range

- Cantilever design allows excellent access
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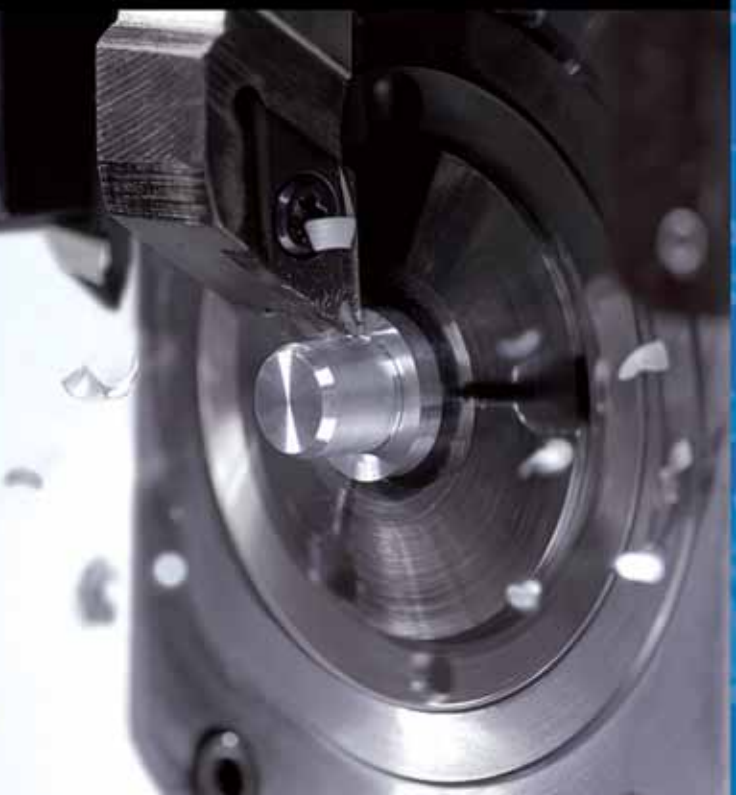
A Commitment to Engineering Tomorrow, Together.



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Cincom Miyano

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Hurco bucks the trend

Against a backdrop of tough trading conditions in the machine tool supply industry, Hurco Europe in its current financial year increased turnover compared to the previous year by more than five percent. Total revenue exceeded £25 million, a figure regularly achieved over the past 10 years. Despite a general reluctance by manufacturing industry to invest during the current financial climate, machine sales to subcontractors serving the aerospace, defence and motorsport sectors held up well in 2025 and continue to do so.

More than one-third of machining centre and CNC lathe sales were secured from first-time buyers of the brand, rather than existing users returning for more machines. It is a proportion that remains remarkably consistent from year to year, enabling the company to maintain its strong position and increase market share in the UK and Ireland.

Speaking of Hurco's sales performance at the company's year-end Open House, held in High Wycombe on 2nd and 3rd December 2025, managing director David Waghorn said: "As is the case for many of our peers, unit volumes were down this year, particularly for the lower-cost, smaller models. However, we were fortunate that several orders were of high value, including for our four types of 5-axis vertical machining centre and our large travelling-column DCX models. At the same time, CNC lathes remained a key part of our business, providing 20 percent of revenue.

"We also saw strong sales of 3- and 5-axis vertical machining centres built in Germany by Roeders, which we have represented in this market exclusively for more than two decades. We shipped six machines, which is a good number for such specialised, high-performance equipment. It is notable that there is increased uptake of integrated jig grinding that gives the user unique benefits in terms of completing high-accuracy parts in a single handling."

He added that another technology gaining traction is automation. Hurco ProCobots have always generated huge interest at shows and sales have been steady since the product was first released. However, it has taken subcontract engineers some time to fully understand how easy a Hurco ProCobot can be to operate and program.

The stage has now been reached where once a company has one ProCobot feeding parts to a machine, they quickly come back for a second, as the return on investment is easy to justify.

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MAZAK Open House draws over 500 visitors and showcases the new INTEGREX j-Series NEO

by Matt Bailey

Over 500 manufacturing professionals visited Yamazaki Mazak's November Open House as the manufacturer recorded strong interest in its newest UK-made machine tools, smart automation solutions and digital service-driven technologies.

The three-day event, in November 2025, held at Mazak's European Manufacturing Plant and Technology Centre, Worcester, focused on how the latest advanced machine technologies can help the UK manufacturing community streamline production processes, boost productivity and future-proof operations.

Visitors were given an exclusive first look in the UK at the newly re-engineered INTEGREX j-Series NEO multitasking machine, a key highlight of the event and the latest machine to enter production at Mazak's Worcester facility. The NEO represents a comprehensive redesign aimed at the changing demands of modern subcontract manufacturing, with 'three key development pillars: higher productivity, improved accuracy and enhanced environmental performance.

The event featured live-cutting demonstrations, including multi-tasking, 5-axis, turning and vertical machining, as well as the latest laser-processing machines and automation systems. Attendees explored how Mazak's integrated solutions can help manufacturers improve productivity, reduce cycle times and embrace digital connectivity through the latest MAZATROL CNC technology.

In addition to its highly popular QUICK TURN lathes and VCN and VTC vertical machining centres, strong attention centered on two of Mazak's newest UK-made ranges: the INTEGREX j-200 NEO and the next generation of its widely adopted CV5 series.

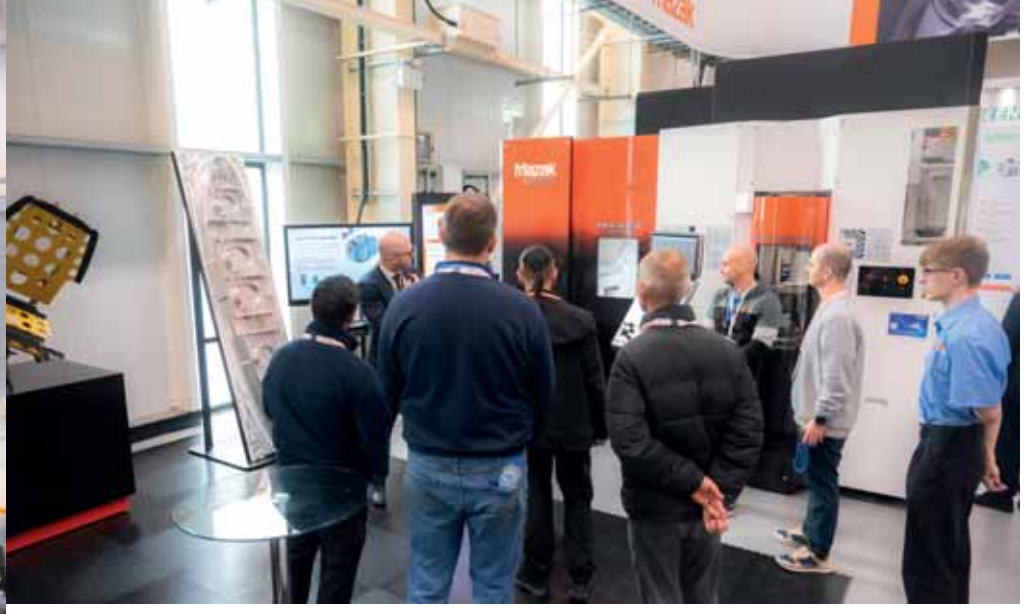
With production of the INTEGREX j-200 NEO now underway, the new line, together with investments in automated laser cutting in the company's sheet metal department, proved a major highlight of the factory tours, delivered by Mazak apprentices throughout the event.

During the Open House, product manager John Woolley outlined the significant engineering developments behind the j-Series NEO: "The j-Series has been a staple of our multitasking line-up for more than 15 years and the NEO variant introduces a range of advances designed for today's subcontract environment."

A core part of the machine's improved accuracy is Mazak's AI Thermal Shield technology, embedded into the SmoothG control. Using advanced learning algorithms, the system measures and compensates for thermal distortion automatically over extended cutting periods. When equipped with a probe, the machine can continuously measure diameters, learn from thermal-growth trends and apply compensation in real time, enabling consistent accuracy even on long-cycle or complex work.

"Energy efficiency has also been a major focus," adds John Woolley. ''With inverter-driven technology across the chiller and hydraulic units reducing energy consumption. A redesigned spindle air curtain and more efficient milling spindle significantly cut compressed-air usage. Faster cutting enabled by the improved spindle performance not only reduces cycle times but also lowers overall energy consumed per component."

One of the most notable performance upgrades comes from substantial increases in spindle power and torque. The main turning spindle has been completely redesigned, with power increased from 15 kW to 18.5 kW and



torque nearly doubled to 326 Nm. The second spindle also sees a jump in peak torque to 233 Nm. The new milling spindle, adopted from Mazak's flagship iH Series, advances from 7.5 kW to 18.5 kW, with more than100 percent torque improvement and a 147 percent increase in power. A larger spindle-shaft diameter, 70 mm to 80 mm, enables bigger bearings, greater clamping rigidity and full exploitation of the added capability.

John Woolley states: "These enhancements respond directly to the shift in the subcontract environment, where reshoring, inconsistent batch sizes and increased complexity require machines that can switch quickly and handle diverse, higher-value work."

The j-Series NEO features a newly enhanced B-axis with four-decimal-place indexing, far more precise than the five-degree or single-degree indexing of earlier models, and expanded tool-capacity options ranging from 36 to 72 tools.

In terms of performance, the j-Series NEO approaches that of the INTEGREX i-200H, offering a broad sweet spot for subcontractors seeking high capability without moving to a flagship machine. Control enhancements include new thermal sensors, advanced AI learning functions and automatic feature recognition for solid-model programming, enabling users to load a model and generate a program in three to five minutes.

First unveiled at JIMTOF in Japan and shown in Europe at EMO, the machine drew strong interest at the Open House, particularly as it is now built at Mazak's European HQ.

Visitors were invited to take part in dedicated 'Technology Tours' showcasing Mazak's latest innovations at the company's European Technology Centre. Key highlights included automated gear manufacturing, entry-level 5-axis machining, multi-tasking solutions and advancements in connectivity through Mazak iCONNECT and the new MAZATROL DX platform.

Other activities included networking with leading suppliers of complementary technologies that enhance machining efficiency.

Attendees could also test their driving skills on multiple F1 racing simulators for a small charitable donation, with the initiative raising more than £800 for Macmillan Cancer Support.

Reflecting on the event, Alan Mucklow, managing director UK & National Distributors at Yamazaki Mazak, comments: "After spending three days talking to customers, my key takeaway is that there is a strong appetite for investment and that organisations are ready to turn to technology to drive productivity. This sentiment has been backed up by a high level of interest after the event, especially in our growing portfolio of UK-made machines.

"This feedback vindicates the strategic decision to further enhance the capability and range of the machines we manufacture here in Worcester to respond to the specific needs of European machine users while shortening lead times for businesses ready to invest. We look forward to building on the success of the event with our customers."

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Leading-edge technolo

The UK's premier annual industrial trade fair, Southern Manufacturing & Electronics, will take place at the world-class Farnborough International Exhibition & Conference Centre from 3rd to 5th February 2026. The international event, now owned and organised by Easyfairs, is poised to surpass the success of 2025, which itself was a record-breaking year, hosting 535 exhibitor companies visited by 10,204 people from the manufacturing and engineering community.

Strong interest in the 2026 event has already led to a near complete sell-out. There has been a high rate of return bookings, highlighting the expo's continued effectiveness. Indeed, many participants have supported the exhibition since it began as a small, regional gathering of engineering firms in 1997. It has expanded continuously ever since into a fully-fledged show of global significance, attracting visitors and exhibitors from around the world. The extensive list of stands covers virtually every aspect of engineering, a distinctive feature being the approximately equal representation of firms operating in mechanical engineering and the electronic/electrical engineering sector.

Easyfairs operates an egalitarian policy whereby larger firms do not overshadow SMEs and smaller vendors. Another aspect of the show is an absence of barriers between the different areas, despite the enormous diversity of technologies and industries on display. Technology Trails grouping firms with expertise in particular areas help to guide people around. As last year, the organiser will maximise the efficiency of visitor interaction with exhibitors via an event app and smart badge technology, designed to enable a seamless exchange of information. An interested party need only touch their badge on an EasyGo reader on each stand they visit to receive the information they require by email the next morning.

Southern stands out as one of the year's most important showcases of production technology. It focuses on presenting practical, workshop-ready technologies, such as cobots and other types of automated component loading and unloading that manufacturers can install quickly and relatively inexpensively. Machine tool suppliers will be strongly represented, alongside providers of cutting tools, workholding equipment and other production hardware.

Subcontract machining specialists promoting mechanical engineering services will be exhibiting examples of components produced from a vast array of materials, while sheet metalworking shops will likewise be showing their expertise in producing fabrications. Additive manufacturing will be prevalent, with numerous companies promoting equipment, consumables and bureau services. Suppliers of tactile and non-contact inspection and metrology equipment will be demonstrating automated methods for integrating measurement into a manufacturing workflow.

The event serves as a hub for firms specialising in business and industrial support. Finishing, cleaning and surface treatment experts will offer equipment or contract services, while visitors will also encounter suppliers of an enormous variety of generic products. They include plastic injection and rubber mouldings, controls, displays, human-machine interfaces, data acquisition systems, sensors, drives, encoders, fasteners, pressings, wire forms, springs and gaskets.

Additionally, the exhibition encompasses providers of training, manufacturing and business software, flooring, guarding and workstations, dust and fume extraction systems, hand tools, packaging and industrial IT. Financial and legal service providers will be on hand to give guidance and advice.

For professionals involved in electronic and electrical engineering, the exhibition provides a wealth of solutions for manufacturing environments. It offers a unique opportunity under one roof to trace the complete process of creating a functional electronic product, from an unpopulated printed circuit board up to the complete device. Leading companies in surface mount technology will show their latest automated placement equipment, featuring adaptable, modular systems tailored for production lines that handle diverse product types and volumes. These modern setups highlight a dual focus: maximising output efficiency while ensuring swift adaptation to change, with key design goals centred on minimising the time required for machine configuration and enabling personnel to supervise multiple pieces of equipment concurrently. Supplementing the machinery displays are electronic manufacturing services firms, which will be promoting their holistic wares encompassing product design, fabrication, quality testing and logistics.

The show's offering includes two free CPD-accredited seminar programmes, one focusing on mechanical engineering and the

gy on show next month

other on electronic/electrical engineering. Substantive sessions will be presented by leading experts throughout the three days, providing valuable learning opportunities for both visitors and exhibitors, with a specific focus on the technical, managerial and environmental issues currently facing manufacturers. Topics of interest will include lean continuous improvement, additive manufacturing, management techniques, CE and UKCA compliance and marking, the role of IP in commerce, commercialisation of ideas and testing. Other themes will include the impact of automation and Industry 4.0, the integration of digital tools and systems to enhance efficiency and productivity, social media for lead generation and other marketing strategies, team motivation, management techniques and business succession planning.

AutoAero, an integral part of Southern Manufacturing & Electronics, is a specialised segment that focuses on suppliers to the UK's aerospace and automotive engineering sectors. The UK aerospace industry is the largest in Europe and internationally is surpassed only by the US. Farnborough, known as the birthplace of aerospace in Britain, has a particular significance as approximately a quarter of the UK's multi-billion-pound aerospace sector is located within a 50-mile radius of the show site. AutoAero provides a rare opportunity for aerospace professionals to source suppliers with the necessary skills and experience across a broad spectrum of engineering disciplines. They include precision engineering, electronics, testing and certification and working with advanced materials such as composites.

The exhibition opens daily at 9:30 am and closes at 4:30 pm, with a 4:00 pm finish on the last day. The site is easily accessible via road and public transport links. There is ample, free

car parking, and a regular, complimentary bus service operates between the showground and the two local railway stations, Farnborough Main and North Camp. Admission to the exhibition is also free; register today for your pass: ***https://register.visitcloud.com/survey/0tih29g7iknv6?actioncode=1032***

Easyfairs UK Ltd
Tel: 020 3196 4300
www.southern-manufacturing-electronics.com

Advanced inventory management at Southern Manufacturing

Leading inventory management specialist Tooling Intelligence will demonstrate four innovative control solutions at Southern Manufacturing & Electronics 2026. The company's stand will feature live demonstrations of cutting-edge technologies designed to eliminate inventory waste, reduce downtime and deliver measurable cost savings for UK manufacturers.

With UK manufacturers facing mounting pressure to improve operational efficiency whilst controlling costs, Tooling Intelligence's offering addresses the growing challenge of inventory control. The company's comprehensive range of solutions, from weight-based vending to electronic access control, provides manufacturers with real-time visibility, automated replenishment and detailed usage tracking that transforms inventory from a cost centre into a competitive advantage.

Visitors to the stand will see the SmartBin weight-based inventory management solution in action. This innovative system delivers absolute control over fasteners, cutting tools, spare parts and critical components through precision weight-sensing technology. Available in four fixed configurations accommodating between 30 and 64 distinct SKUs, SmartBin eliminates manual counting and provides real-time visibility of stock levels. The system's rapid transaction speeds and secure RFID badge access ensure authorised users can quickly access what they need, while automated order generation prevents stockouts and reduces emergency purchasing. For manufacturers struggling with inventory shrinkage or inaccurate stock records, SmartBin's continuous monitoring delivers immediate accountability and substantial cost reductions.

Alongside the SmartBin will be the SmartDrawer vending solution. It offers high-capacity storage from a compact footprint. SmartDrawer offers an entirely custom configuration of drawers and a number of locations to meet your exact requirements. SmartDrawer dispenses everything from cutting tools and abrasives to calibrated instruments and PPE with individual item control. LED-guided product location and touchscreen operation deliver rapid transactions, while the system's modular design allows manufacturers to scale capacity as requirements grow. The rapid refill feature enables fast restocking without repackaging, significantly reducing administrative burden and maximising machine uptime.

For organisations managing critical assets such as laptops, power tools, calibrated instruments and rechargeable equipment, Tooling Intelligence will demonstrate its SupplyVend asset management locker system. These cost-effective, scalable lockers provide user-level access control with check-in/check-out functionality that delivers full audit trails by product and user. With configurations ranging from 11 to 77 compartments and the ability to link multiple auxiliary units, SupplyVend addresses the frequent challenge of missing or misplaced equipment and automated notifications alert management to unreturned items. LED lighting, accessible design and intuitive operation make asset management straightforward, reducing equipment losses and improving utilisation rates.

Complementing the vending solutions, the E-Lock electronic locking system brings control and accountability to products unsuitable for traditional vending methods. This versatile system secures cabinets, stock cages, drawers, and even entire storerooms, providing customised access restrictions by user with allocation codes for precise usage tracking. E-Lock operates standalone or integrates with Tooling Intelligence's broader SupplyPro hardware family, offering manufacturers a cost-effective method to control access to bulky items, overflow stock, office supplies and refurbished parts.

All systems operate through SupplySystem Intelligence Software (SSIS). The cloud platform provides 24/7 access to scheduled reports, instant transaction data retrieval. Remote support from the company's dedicated UK vending experts ensures ongoing optimisation and troubleshooting without site visits, minimising disruption to operations.

Richard Swaffield from Tooling Intelligence comments: “Southern Manufacturing provides an ideal platform to demonstrate how modern inventory management technology delivers tangible returns for UK manufacturers. We're seeing increasing demand from companies seeking to eliminate waste, improve accountability and gain real-time visibility across their inventory.

“Our solutions pay for themselves through reduced stockouts, lower carrying costs and improved productivity.”

Visitors can see live demonstrations of SmartBin, SmartDrawer, SupplyVend and E-Lock on **Stand H320** at Southern Manufacturing & Electronics or contact Tooling Intelligence for further information on any of the company’s inventory management technology.

Tooling Intelligence
Tel: 01926 484511
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Stand H320

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G205-1 and G205-2

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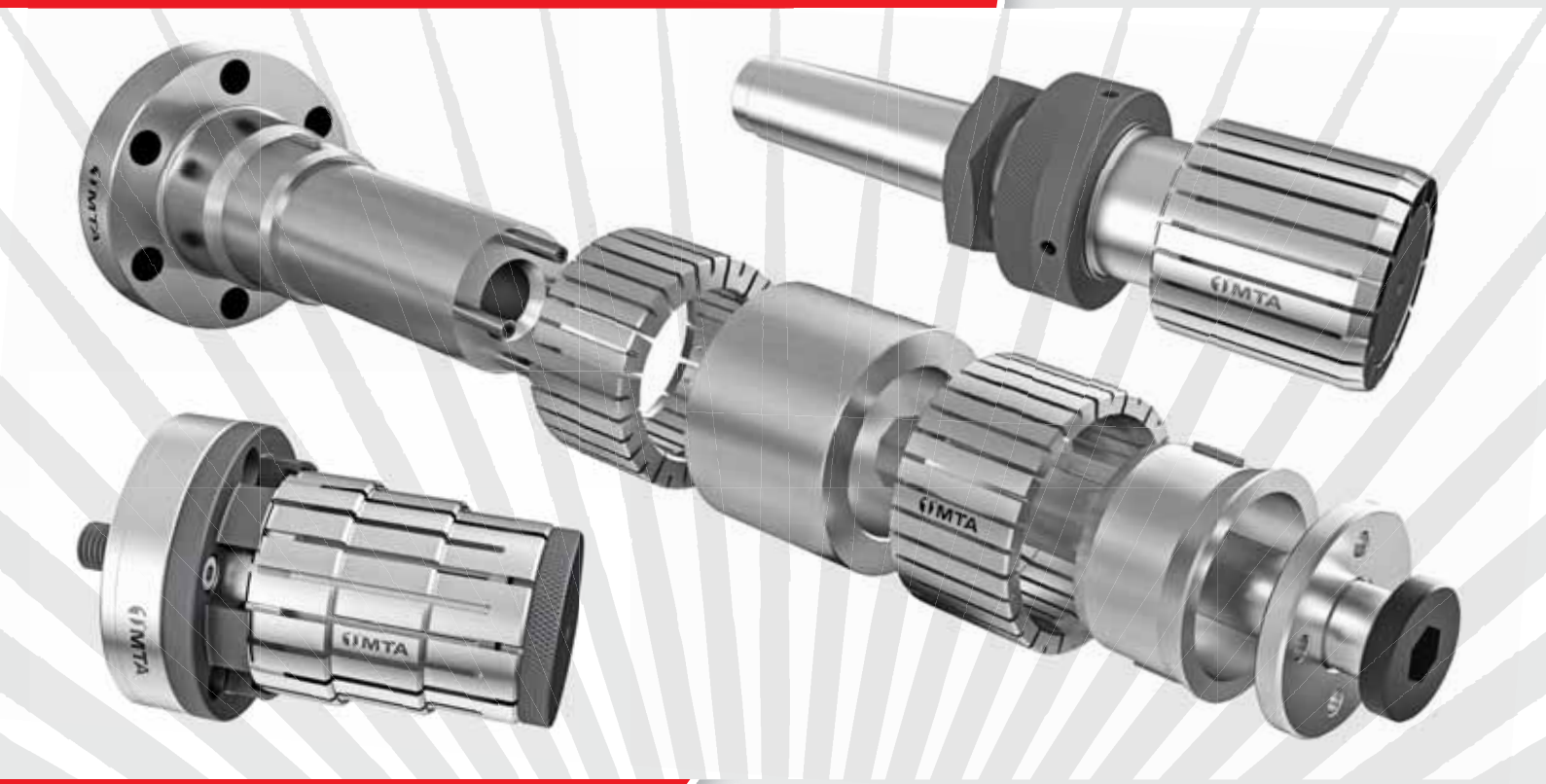

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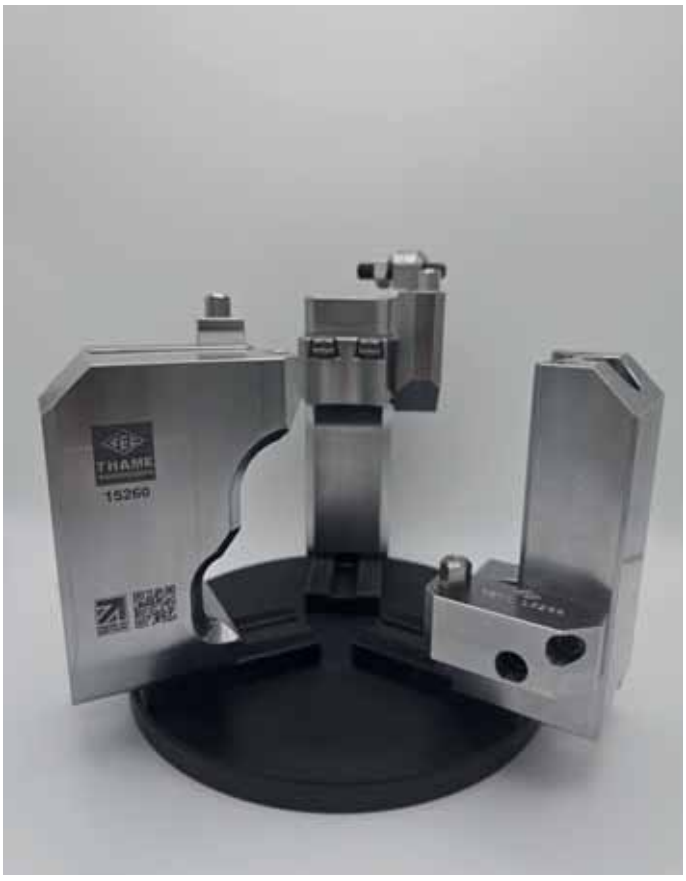
Celebrating 80 years of precision at Southern Manufacturing 2026



The year 2026 is a special one for Thame Workholding as the company is celebrating its 80th anniversary, marking eight decades of supporting UK manufacturers with dependable, precision-engineered workholding. Not many companies can say they've been around long enough to see machines evolve from manual levers to full automation and still keep up, but Thame Workholding can.

Southern Manufacturing gives Thame the ideal platform to celebrate this milestone and showcase the strength and diversity of its offering. On the stand, visitors will find the full line-up from partner brands, including HWR zero-point systems, Flaig magnetic workholding, WITTE vacuum solutions, Air Vise and Versabuilt automation, alongside a generous display of our own British-made TEC chuck jaws. The company is also proud to have the Samchully JB Jaw Boring Chuck featured in this year's Southern Manufacturing Innovation Gallery, recognised as the world's first power chuck with a built-in boring ring. By eliminating the need for traditional boring rings and slugs, the JB range allows machinists to bore soft jaws using nothing more than a standard Allen key. With setup times reduced by up to 90 percent, finer 0.1 mm increments, extended jaw life and full compatibility with standard chucks, it represents a genuine leap forward in efficiency and precision.

The TEC range remains a core focus for Thame this year. With one of the widest off-the-shelf jaw selections in the UK, from soft jaws and reversible jaws to diamond, rocker, pie jaws and more, it is proud to highlight the consistent quality that has kept customers returning for generations. It's engineering built on experience, precision and a commitment to helping manufacturers get the very best from their machines.

There will also be a selection of engineered bespoke fixtures on display, used across aerospace, automotive, medical and general machining. Each reflects the principle that has driven Thame for 80 years, solving real challenges on real shop floors. Whether it's reducing setup times, improving repeatability, or achieving tighter tolerances, every solution has been created with practicality and performance in mind.

Throughout the show, the technical team will be available to discuss applications, challenges and opportunities. They bring a wealth of hands-on expertise and a genuine enthusiasm for helping manufacturers improve throughput and accuracy. Whether you have a specific workholding question or want to explore what's possible, they're ready to help.

As Thame Workholding celebrates its 80th year, the focus remains firmly on the future: expanding its ranges, enhancing its offering and continuing to champion British manufacturing. Whether you already know the company or are meeting for the first time, Thame would be delighted to welcome you to the stand and share what's new.

Thame Workholding is a leading international provider of workholding solutions, with a history dating back to 1946. The company, trading as Thame Workholding, operates under the umbrella of Thame Engineering Company (TEC) and has evolved over the years, relocating to its current facility in Buckinghamshire and investing in modern machinery and technology.

With a comprehensive range of chuck jaws and specialised workholding designs, Thame Workholding offers standard products and bespoke design and manufacturing services to meet customers' unique needs.

In addition to its products, the company also represents a range of partner brands, offering a one-stop shop for customers' workholding needs. In 2022, the company changed leadership, with a new team of directors taking the helm, bringing fresh perspectives and expertise to drive the business forward. Building on its expertise in workholding, Thame Workholding has also expanded its portfolio to include automation and robotics solutions, with a dedicated team focused on developing innovative solutions for customers.

The company is accredited to ISO 9001:2015 quality standard and proudly holds the Made in Britain mark, ensuring that all products meet the highest standards of quality and excellence.

Thame Workholding
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Email: sales@thameworkholding.com
https://thameworkholding.com/

Stand J200

Largest ever stand at Southern Manufacturing for Matsuura

Matsuura Machinery will have its biggest and most ambitious presence ever at Southern Manufacturing 2026, reaffirming its commitment to advancing UK manufacturing with leading CNC and additive manufacturing technologies.

This key event in the calendar will see Matsuura showcase its latest machining, automation and additive manufacturing solutions.

At the heart of the stand will be the company's best-selling multi-pallet 5-axis machining centre, the MX-330 PC10. Configured with 10 pallets and 90 tools, the MX-330 PC10 will run continuous live demonstrations throughout the show, highlighting the exceptional versatility, speed and productivity made possible by Matsuura's proven pallet-changer technology.

Visitors will get to explore Matsuura UK's in-house developed scheduling software, RiMM. Integrated within live automation demonstrations, RiMM will demonstrate how manufacturers can achieve true lights-out production, whether operating a single Matsuura machine or scaling to a fully automated fleet.

Matsuura will also feature the HP MJF 5600 3D printer and Workstation on the stand. This will give visitors the opportunity to see how Multi Jet Fusion is transforming perceptions of end-use AM production and enabling new levels of repeatability and manufacturing efficiency.

With decades of expertise in CNC machining, automation and AM technologies, Matsuura continues to support UK manufacturers in reducing costs, increasing profitability and investing confidently in future-proof production systems.

Manufacturers attending Southern Manufacturing 2026 are invited to visit the stand to see the latest innovations and discover why Matsuura continues to set a new benchmark for performance, reliability and customer support in the industry.

Matsuura provides OEM's, SME's and subcontractors with automated multi-axes CNC machining solutions, metal and plastic 3D printing systems and innovative, fully engineered and optimised manufacturing processes. Backed by class leading customer support and fully trained multi-skilled engineers.

Matsuura Machinery Ltd
Tel: 01530 511400
Email marketing@matsuura.co.uk
https://www.matsuura.co.uk

Stand E260

Your EDM and graphite solutions partner at Southern Manufacturing

Since the company's inception in 1973, Erodex (UK) Limited has set the standard in EDM consumables and graphite solutions. From humble beginnings supplying the finest EDM materials, the company quickly became a leader thanks to its Duragraph and POCO graphite products. Over the decades, Erodex has expanded into metallurgical, semiconductor, mechanical, electrical and vacuum furnace applications, always underpinned by a commitment to quality, innovation and customer service. With acquisitions such as ECP and BWP, Erodex continues to offer class-leading solutions across the EDM industry.

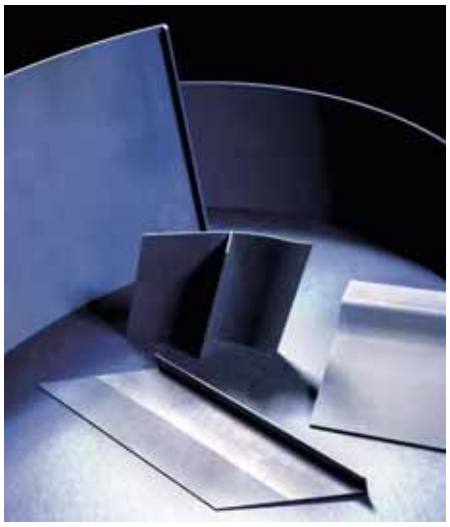
Showcasing EDM consumables

Visitors to Southern Manufacturing will find Erodex's booth a one-stop hub for high-performance EDM consumables. The company stocks a comprehensive range including fast hole drilling copper and brass tubes, WEDM wear parts, deionising resin, anti-rust products and various filters, ensuring that customers can maintain peak machine performance.

Erodex also offers a full spectrum of continuous EDM wire, from the clean, paraffin-free Q-Cut range to Gapstar and Topas Plus wires, designed for speed and precision. Through partnerships with Berkenhoff GmbH (bedra wire), Erodex provides optimal wire solutions tailored for every machine and application. Take advantage of the Erodex sales team on hand to discuss your specific applications and which wire will best suit your requirements, with example spools available to view for comparison. Its WEDM wear parts and accessories include precision wire guides, rollers and belts, helping users reduce downtime and improve throughput, some of which will be on display at Southern Manufacturing.

Graphite electrodes: Supply and machining expertise

A true highlight at Southern Manufacturing will be Erodex's graphite expertise. The company not only supplies an extensive range of graphite electrodes but also offers a world-class machining service from arguably Europe's most advanced graphite-dedicated machine shop. This capability allows Erodex to turn around complex electrode projects that other suppliers might decline, providing solutions to bottlenecks and production challenges. With demonstration pieces on display, as a visitor, you'll be able to see firsthand the type of intricate electrodes that Erodex can manufacture or work alongside you to create the optimum solution for your business needs. One particular highlight on the stand will be that of the Erodex-supplied POCO EDM1 and POCO EDM3; industry-standard grade of graphite for aerospace and fine detail applications, in which Erodex is and, has always been, the sole UK distributor of.



Erodex's approach to electrodes is customer-focused: design starts with the electrode, not the holder, ensuring maximum efficiency and performance. With 52 years of EDM experience, and a highly skilled design team, Erodex consistently delivers electrodes and components that meet the most demanding specifications, from aerospace OEMs, precision tooling, to semiconductor applications.

Why visit Erodex at Southern Manufacturing?

For anyone looking to optimise EDM performance, reduce downtime and access unrivalled graphite solutions, Erodex is the partner to meet. The team will be on hand to discuss material selection, custom electrode design and machine optimisation, offering expert advice for thorough solutions.

Whether you are sourcing consumables or tackling complex graphite machining challenges, a visit to Erodex promises insight, efficiency and innovation.

Erodex (UK) Ltd
Tel: 01384 892011
Email: sales@erodex.com
www.erodex.com

Stand N220

A Southern star

Mills CNC, the exclusive distributor of DN Solutions' and Zayer machine tools in the UK and Ireland, has announced that it will be showcasing a model from its recently introduced and innovative DNX 2100 series of multi-tasking mill-turn machines on its stand at Southern Manufacturing.

The compact 8" chuck, 65 mm bar capacity, DNX 2100S is powerful, fast, accurate and flexible. It has been designed to machine complex, high-precision parts in one hit.

The rigidly-designed and built machine delivers increased productivity and improved process efficiencies and is equipped with two, L and R, opposing 18.5 kW/5,000 rpm spindles, a 12,000 rpm B-axis milling head with 0.0001-degree indexing capabilities, a large-capacity ATC, up to 60 tools, integrated thermal compensation, via eight strategically-located sensors, in-process tool and workpiece measurement and a sophisticated tool break detection facility.

DNX 2100S machines can also be supplied with either the latest FANUC 0iTF Plus or Siemens Sinumerik One control system.

In addition to providing component manufacturers with the ability to complete six-side machining of complex parts in a single setup, the integration of the large-capacity tool changer makes the DNX 2100S the ideal machining solution for fast and efficient small batch processing, significantly reducing, if not entirely eliminating, frequent, time-consuming and costly tool change operations.

To improve the machine's productivity potential still further, the DNX 2100S can be integrated with a bar-feeder and/or a range of robot load/unload systems that include Mills CNC's high-performance SYNERGi Premier, Sprint etc, enabling it to run, interrupted, over long periods of time.

Tony Dale, Mills CNC's CEO says: "DNX 2100S multi-tasking mill-turn machines open up a whole new 'high-productivity' reality for all component manufacturers, irrespective of their size and can transform their machine shops' process and operational efficiencies.

"We introduced a new 10" chuck, larger bore, DNX 2100SB model at our recently-held one-hit machining technology event held at our Campus facility in October 2025 where it proved to be the star of the show.

"We're expecting a similar reaction to the DNX 2100S when it makes its debut at the Southern Manufacturing Show in February. So, why not visit the stand to see, what will undoubtedly be, the Southern Manufacturing's star attraction for yourself."

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Stand C160

Total tube technology and fibre laser cutting solutions at Southern Manufacturing

Unison Ltd, the UK-based inventor of all-electric tube manipulation, will present the capabilities of its full range of tube bending machines, its Pneuform wire bending machines and its advanced Opt2Sim Scan tube measurement system at Southern Manufacturing & Electronics. In addition to tube and wire manipulation technologies, visitors to **Stand G270** will also be able to learn more about the high quality, intelligently priced fibre laser cutting machines available from Unison's sister company, Nukon Lasers UK.

As Britain's leading manufacturer of tube bending machines, Unison offers all-electric benders for tube diameters from 4 mm to 275 mm. Available in single-stack, multi-stack, left/right, pinball and twinhead versions, these advanced machines provide rapid, automatic setup, fast tooling changes and right-first-time repeatability, all supported by exceptional power and rigid mechanical design. Also available, Unison's hybrid-electric, dual-stack machines were developed to make the company's quality and reliability accessible to even more businesses involved in tube manipulation. 50 mm and 80 mm maximum tube diameter hybrid-electric models are available.

High-accuracy CNC-controlled manual tube bending

On show and operational on its stand will be one of Unison's innovative EvBend 1000 manually operated, CNC-controlled tube bending machines. Designed for low volume, high-accuracy prototyping and production,

Unison EvBend models are used across aerospace and MRO, Formula 1 and the oil & gas industry, where they provide 3-axis mandrel, multi-plane bending at a fraction of the cost of fully automated machines.

In addition to the EvBend 1000, which is designed for bending tube of up to 16 mm in diameter, 22 mm in copper, a larger machine, the EvBend 2000, is also available. Built to bend tube of up to 50 mm in diameter, its bending function is servo-assisted. Both EvBend machines feature a 15-inch PC-based touchscreen controlled by a CNC that is capable of processing up to 100 bends per component, storing infinite parts and connecting to CAD and most tube measuring systems.

Laser cutting and wire manipulation

Renowned for its high quality, highly accessible European-built fibre laser cutting machines and press brakes, Nukon Lasers UK has recently launched a new range of high-performance machines, priced to make exceptional fibre laser metal cutting available to even more UK subcontractors and in-house manufacturers. Since acquiring Pneuform, a leading name in the manufacture of wire forming and small-bore tube bending machines, in Autumn 2023, Unison has worked hard to ensure the brand continues to lead the way in the wire bending machinery market. All Pneuform machines are equipped with Yaskawa drives and Unison's user-friendly software for easy programming and operation.

Opt2Sim Scan – for rapid, precise and consistent results

Quite possibly the most advanced handheld tube measurement solution on the market, Unison's Opt2Sim Scan system combines rapid scanning of tube geometry with easy extraction of tube data. Teamed with a Creaform handheld 3D scanner to measure the tube or component they wish to replicate or measure, operators need only enter its bending data into Opt2Sim Scan, then compare measured tube dimensions to master file data and send any corrections directly to the bending machine. Offering considerable scan points without compromising speed, the constant reference geometry provided by Opt2Sim Scan ensures supremely accurate results, with 'compare to master' and feedback to the bending machine being quick and seamless.

Legendary quality, service and support

"Southern Manufacturing & Electronics is incredibly important to us," says Unison Ltd's joint managing director, Alan Pickering. "At the 2026 event we look forward to showing even more UK subcontractors and manufacturers how all their tube and wire manipulation and laser-cutting needs are available from a British-based company that is renowned for providing uncompromising levels of service, support and aftersales care."

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Stand G270

Expanded HIP, heat treatments and coating capabilities from Wallwork Group

At Southern Manufacturing, Wallwork Group returns with a significantly expanded capability. World-class hard coatings, heat treatments and advanced thermal processing are now more accessible than ever from a single trusted supplier.

The company's **Stand E290** will spotlight an impressive range of technologies including, hot isostatic pressing, PVD and PVECD coatings, heat treatments, plasma nitriding, vacuum carburising and vacuum brazing. With full-service mechanical testing, all backed by UKAS-certified laboratories, this integration of services is a defining strength of Wallwork. It allows customers to streamline production workflows, reduce supply chain complexity and achieve consistent, repeatable quality from prototype to volume manufacture.

A major development since last year's show is the installation of a second Quintus Technologies HIP. This latest investment brings total HIP capital expenditure to £20 million, a clear demonstration of Wallwork's commitment to supporting component manufacturers in aerospace, defence, energy, additive manufacturing, autosports and medical sectors. These additional capabilities give customers access to greater capacity, shorter lead-times and assures confidence in the structural integrity and performance of their mission-critical components.

Quality assurance is central to Wallwork's operations. With EN9100 and Nadcap accreditations, alongside multiple approvals from aerospace primes, manufacturers can rely on Wallwork to meet demanding regulatory and performance standards. The company's commitment to continuous improvement ensures that coatings and processes are developed in close collaboration with OEMs to solve wear, corrosion, fatigue and friction challenges across high-performance applications.

Visitors to the stand will also appreciate the advantages of working with a fully UK-owned and ITAR-compliant partner. This positions Wallwork as a secure and dependable supplier for organisations requiring stringent safeguarding of sensitive technologies. Coupled with its nationwide network of facilities and logistics support, Wallwork delivers an end-to-end service model that customers consistently praise for reliability, communication and technical excellence.

Whether you are seeking to enhance component durability, reduce weight, optimise efficiency or refine manufacturing workflows, Wallwork's experts will be on hand to discuss tailored solutions. Its stand promises not only a showcase of advanced engineering technologies but also an insight into a brand built on decades of innovation, investment and unwavering commitment to quality.

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Stand E290

Programming simplicity will be Hurco's theme for Southern Manufacturing

Hurco will be demonstrating the latest software developments available on the Max5 control at Southern Manufacturing & Electronics. They include a Solid Model Import option, which enables conversational programs to be created directly from an STP file. Similarly, 3D DXF files may be imported and worked on seamlessly.

The 19-inch colour touch-screen control has always been popular due to the ease with which a first-off part can be programmed.

Simple conversational prompts guide the user through the stages of the program, taking the load off the manufacturer's CAM station. Offline-generated NC code can be added into the program using an NC Merge function. Live on-line help is available at the control.

Hurco will exhibit two of its most popular machines. One is the versatile Hurco VM10i machining centre with a working volume of 660 x 406 x 508 mm. Fitting into a compact space, the machine will impress visitors with its ability to offer true machining centre performance. Steel cutting demonstrations will take place throughout the duration of the show.

Sharing equal prominence on the stand will be a Hurco TM6i 2-axis CNC lathe. It is able to turn parts up to 316 mm in diameter, 340 mm long and is well suited to bar work up to 45 mm diameter. The performance of this compact, accurate turning machine is complemented by the Max5 control.

Simple, easy-to-follow graphics guide the user through all operations and tooling selection. The new XP model enhancements mean that concurrent programming, improved graphics and roller guideways are now standard features. The slant-bed lathe is supplied with a 6-inch hydraulic three-jaw chuck, parts catcher and swarf conveyor.

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Stand C200

New Penta Laser products are now ready for the UK metal processing markets

SwingPro & BoltPro: Flatbed laser range upgrades with 3-60 kW laser power, cutting bed sizes 1.5x3.0 m up to 3.5x13 m. An impressive new development of the popular Swing VII and Bolt VII models, including exciting new enhanced features including integrated electrical control cabinet, additional side access door and improved protective guarding.

Laser automation

Showcasing its automation range with a brand new multi million Euro installation in The Netherlands, Penta Laser has a broad range of laser automation products from compact semi-automated load/unloading systems to fully automated storage and retrieval systems for lights out operations.

Bolt Cube:- 3D/5-axis Laser

The company is excited to

announce that the well proven Bolt Cube 3D laser is now ready for sale in the UK and Europe. With many systems installed in the automotive market in China, this capable and sophisticated laser cell has many features that will interest UK laser users. Penta Laser UK offer full UK sales and aftersales support including a huge UK stock of Penta spare parts.

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Stand G95

MACH 2026 is poised to be the catalyst for UK manufacturing to deliver economic growth and sovereign resilience

In April, MACH 2026 will open its doors at the NEC, Birmingham to over 30,000 members of the manufacturing community bringing together buyers, sellers, specifiers and designers. The biennial event offers an unmissable opportunity to experience new technology, live and in action and is perfectly timed for UK manufacturers preparing for growth in capacity and capability.

Registration is now open for the event owned and organised by the Manufacturing Technologies Association (MTA), and sponsored by Lloyds, which is the UK's largest for inspiring, innovating and connecting the manufacturing community and is due to take place across five halls of the NEC from 20th to 24th April 2026.

All aspects of manufacturing technology will be on display at the event and the MTA is delighted to welcome back exhibitors who've been strong supporters of the show over many years in addition to many first-time exhibitors and those returning to the show after a period of absence.

Building on the overwhelming success of their debut at MACH 2024, the Knowledge Hubs will return and are even bigger and better for MACH 2026. These interactive hubs are designed to provide manufacturers with practical guidance on adopting new technologies, helping them tackle challenges, boost performance and improve competitiveness by connecting with the right experts and suppliers.

Strategically located across the show floor, the Knowledge Hubs will focus on key industry topics including subjects including automation and robotics, additive manufacturing, data and AI and consumable tooling. They are designed to provide visitors with impartial advice and signpost them around the show, as well as provide invaluable insights into when and how to invest in technology that drives improvements in productivity, efficiency and operational costs.

The Machining & Tooling Knowledge Hub is a particular focus for MACH 2026 and is supported by a wide range of tooling companies including CERATIZIT, Iscar Tools, Horn, Guhring, ZCC Cutting Tools, Kyocera, Europa Tools, Mapal and Mitsubishi. A key part of the Hub is a seminar theatre where informative presentations will take place covering subjects including how to apply the latest cutting tool technologies plus pointers on selecting the most suitable insert geometries. The programme is designed to empower manufacturers to work faster, better, and more cost-effectively.

MACH is the biennial event that brings together the manufacturing community. It is owned and organised by the MTA, a not-for-profit organisation dedicated to being the voice of the engineering and manufacturing community.

The association is committed to driving innovation, creating value, attracting new talent into the sector and supporting the continued growth of UK manufacturing. MACH is also supported by other key manufacturing organisations including the High Value Manufacturing Catapult and its centres, the MMMA and, for the first time, by Automate UK and Make UK.

The MTA operates as a organisational cluster which includes the trade associations Additive Manufacturing UK (AMUK) and Engineering Supply Chain UK (ESCUK), with both represented at MACH with their own dedicated zones. The AMUK Knowledge Hub will provide impartial advice on how additive manufacturing technology can be adopted into the manufacturing process and applied for best results. As sponsors of the Supply Chain Zone, ESCUK will help promote capacity and capability from within the UK, supporting its members to do more business.

The Education and Development Zone (E&D Zone), sponsored by Iscar Tools, is the educational hub at MACH 2026, designed for students keen to explore what engineering-based manufacturing can offer them as a future career and to help them find their 'pathway to engineering'.

Cutting-edge manufacturing technology on display at MACH 2026 will include machine tools, cutting tools, metrology equipment, additive manufacturing (3D printing), surface engineering, robotics and automation, sheet metal, metal forming and fabrication technology and specialist software which is both enabling and driving the digitalisation of manufacturing.

To find out more about MACH 2026 and to register your attendance, visit: ***https://www.machexhibition.com/***

MTA
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- **Gain** practical guidance at our Knowledge Hubs on adopting new technologies, overcoming operational challenges and reducing costs – then meet and connect with the right experts and suppliers at the show
- **Benefit** from unrivalled opportunities, ranging from high-value conversations and world-class showcases through to meaningful connections that drive innovation and collaboration across UK engineering and manufacturing

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Paths to greater productivity with solutions from MAPAL

MAPAL has developed standard processes for the industrial production of strategic components. On that basis, these tool solutions are modified according to requirements, to help customers boost their productivity. Success stories from various market segments show just how well this works.

Productivity is boosted when the same effect is achieved with less effort, or if a greater yield is achieved with the same effort. If more is achieved with less effort, you've reached the peak of boosted productivity: maximum effect for minimal effort. For instance, this might involve the use of fewer tools, which allow higher quantities to be produced in the same amount of time.

In the fluid power market segment, for instance, MAPAL can draw on a model process for machining the spool bore in hydraulic valve housings. This bore always has a similar design in hydraulic systems for construction machines, agricultural machines and others. In order to be able to control different oil circuits via the spool position, the bore in which it moves must be very precise. MAPAL generally pilots this bore with a solid carbide drill first and then prepares it with a boring tool for finishing.

In this case, MAPAL doesn't just offer one particular solution, but adapts the general tool selection to the respective circumstances. For the hydraulic control of the drive for an excavator, for instance, a pilot drill with three cutting edges was selected. This enabled a high feed rate in the GG25 casting material used for this component. The solid carbide boring tool, which also has three cutting edges, then performs roughing and finishing very efficiently in one machining step, thus reducing process costs. By transitioning from the tools previously used from another manufacturer to the MAPAL process, the customer was able to reduce machining time from 70 to less than 10 seconds. At 3,000 components per month, this meant savings of over 50 hours' machining time – i.e., much higher productivity without using more tools.

Adapting the process to the existing machine setup was the focus of another hydraulics project, which also involved spool bores. In this case, the customer often faced large production volumes, making a highest-possible productivity essential for efficient manufacturing. Investment in new machinery was out of the question, however, due to the volatile economic situation. For MAPAL, the challenge therefore lay in achieving a gain in productivity on the existing machine. The aim was a secure process with a reduced cycle time.

The model process could not be applied directly, because it requires the use of a special solid carbide drill for pre-machining in the machining step that follows countersinking. However, the machine did not have sufficient capacity for this drill. Accordingly, MAPAL replaced the drilling specified in the model process with circular milling, which requires less torque. Two additional tools are then used for circular milling of the control edges in the spool bore. MAPAL's guide pad technology is used for finishing, ensuring the best circularity and surface quality. Instead of the seven tools that the customer was using in their previous process, production is now carried out with just five. This allowed cycle time to be reduced by 40 percent, resulting in savings of 1,250 working hours for an annual manufacturing quantity of 30,000 components. Costs were reduced accordingly: The customer saves €14,000 every year.

Final assembly in aircraft construction calls for productivity and high quality in equal measure. When the segments of a commercial aircraft are drilled with millions of bores for riveted connections, the continuous accuracy of the machining operations, which are mainly carried out using hand-held machines, is a challenge. Depending on the connection, the bores need chamfering, countersinking or simple deburring.

MAPAL's spotfacing tools with microstop cages constitute a depth stop and ensure that the same result is achieved irrespective of the worker involved. The tool manufacturer handles the pre-configuration so that nothing else needs to be adjusted in manufacturing. With different cutting materials, the spotfacing tools with microstop cages are suitable for machining aluminium, CFRP or titanium. Customer-specific colour coding prevents tools from being mixed up and errors in the process. Optionally, dust extraction can be carried out directly on the tool.

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Stand: 20-340

Iscar Tools confirmed as headline sponsor of Education & Development Zone at MACH

Global tooling giant, Iscar Tools has given its support to the Education and Development (E&D) Zone at MACH 2026 by taking on the role of headline sponsor, demonstrating its commitment to helping attract the next generation of engineers into the advanced manufacturing sector.

The E&D Zone is the educational hub at MACH 2026 and is designed for students, keen to explore what engineering-based manufacturing can offer them as a future career and to help them find their 'pathway to engineering'.

David Jones, general manager at Iscar Tools in the UK, comments: "We are delighted to be sponsoring the E&D Zone at MACH 2026, ensuring the event can showcase the engineering-based manufacturing sector to the next generation of engineers. We have all experienced the shortage of engineers in our sector and it remains a key issue for many exhibitors and visiting companies alike. Iscar Tools are keen to inspire interest in the sector from a young age and we believe the MTA's work with schools, encouraging new talent to visit the show, is very worthwhile."

A lynchpin of the E&D Zone is the guided tours of the exhibition. These tours, delivered by apprentices from MTA member companies, allows students to learn more about the latest manufacturing technologies being developed and deployed, discover different career paths and opportunities and meet companies looking for new talent.

James Selka, CEO of the MTA, says: "Attracting new and retaining existing talent in our sector is a significant challenge but one that the MTA is determined to tackle. The dedicated E&D Zone at MACH is designed to inspire a future generation to consider the advanced manufacturing sector as an exciting career."

With nearly 3,000 students in the key age range of 11-18 expected to attend, MACH 2026 promises to provide hands on activities and be a showcase of what a career in advanced manufacturing looks like.

James Selka continues: "We are delighted that Iscar Tools have agreed to take the role of headline sponsor in this area. Their invaluable support ensures the MTA can continue to fund transport for those schools and colleges who

otherwise might not be able to visit the event."

As well as supporting the E&D Zone, Iscar Tools has a showcase stand within the Tooling Zone at MACH 2026 (18-340), displaying its innovative, leading-edge technologies and unique cutting tools. Additionally, its products will feature in live demonstrations on many machine tool company stands throughout the show.

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The key to factory visibility and productivity

A new report from FourJaw Manufacturing Analytics suggests most manufacturers are "stuck between a rock and a hard place" when it comes to understanding their production environments. Research indicates that less than 1 percent of factory data is analysed effectively and that 70 percent of manufacturers still rely on error-prone manual data collection methods.

These data issues make it almost impossible for most manufacturers to make informed investment and continuous improvement decisions based on a complete, objective and up-to-date view of reality.

FourJaw recommends that manufacturers move beyond fragmented data collection and obtain a small amount of "fundamental production data", core metrics such as utilisation, downtime and machine-level energy consumption consistently across the factory floor.

Fundamental production data collection supports Total Factory Visibility (TVF), a unified, real-time view of factory operations to inform investment and continuous improvement initiatives:

Maximising utilisation to boost capacity: By

capturing machine utilisation data, manufacturers can identify bottlenecks and underutilised assets. Manufacturers that gain this production insight typically achieve a 30 percent increase in output capacity within six months, as well as the ability to maintain that new level and even make further improvements on an ongoing basis.

Systematic downtime reduction: TFV identifies the root causes of stoppages, enabling manufacturers to address the most significant and costly causes of downtime. Downtime reduction initiatives informed by TFV typically yield productivity gains of 10 percent in the first year.

Cost control and profitability: Precise tracking of machine usage, downtime and energy consumption can be used to refine cost-per-unit calculations. This is essential for accurate quoting, margin protection and focusing sales and production efforts on profitable work.

Targeted sustainability and energy savings: Machine-level energy consumption data supports efficient ISO 50001 reporting and enables manufacturers to identify unnecessary energy usage and improve energy-intensive processes.

Chris Iveson, CEO of FourJaw Manufacturing Analytics, comments: "Amid rising costs and persistent skills shortages, manufacturers cannot afford to base large capex decisions on clipboards, spreadsheets or complex, incoherent datasets. Total Factory Visibility is a framework that cuts through data complexity, enabling manufacturers to see precisely where their time, money and energy are wasted. This is how you sweat your assets, cut costs and create capacity without capital investment."

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Stand: 17-350

30-taper machining centre produces medical components from tough materials

Adam Thornton, managing director, Kirkstall Precision.

Subcontract machining firm Kirkstall Precision, Leeds, has enhanced its capability to serve the demanding medical sector with the installation of a Brother SPEEDIO M200Xd1-5AX, a Japanese-built, simultaneous 5-axis CNC machining centre supplied by sole UK and Ireland sales and service agent, Whitehouse Machine Tools, Kenilworth.

For the past seven years, the subcontractor has focused almost exclusively on producing components for the medical industry, while also producing surgical instruments and implants for the veterinarian sector. The company is seeing a 15 to 20 percent year-on-year growth rate due to high demand.

The Brother was chosen for its accuracy, repeatability, versatility and compact footprint. Adam Thornton, Kirkstall's managing director says: "Accuracy in the medical sector is a given. Everything has to be completely correct, so we inspect and report all dimensional tolerances. Opting for a top-quality machine tool like the Brother was a fairly obvious decision for us."

Approved to ISO 13485, a globally recognised quality management system standard for medical devices, Kirkstall produces mainly low-volume orthopaedic components from challenging materials, including stainless steel, hardened stainless, titanium and other tough alloys. The 30-taper SPEEDIO is ideal for machining these materials continually. Additionally, it is able to combine on a single platform 5-axis prismatic machining using the 16,000 rpm spindle with turning using the rotary torque table, which was a further key attraction.

Adam Thornton adds: "We've used 40-taper 5-axis technology for some time, but the Brother is faster and takes up less space. It's ideal for the smaller, high-accuracy parts we produce and has delivered typically a 20 percent cycle time reduction compared with our larger production centres."

One such component, a keel punch for total knee replacement surgery, previously required four separate operations on three machines. The Brother now completes 90 percent of the features in a single setup, so only a short second operation is needed, reducing cycle time by 30 percent and improving accuracy. Setup times are faster, the amount of handling has reduced and, most importantly, there has been a big improvement in the accuracy of the product, which is machined to within 15 to 20 microns over the entire form.

Another attribute of the SPEEDIO is its exceptional energy efficiency, a key highlight of its design. Compared to traditional 40-taper machining centres, it draws up to 80 percent less power, which translates into cost savings of several thousands of pounds a year.

Energy saving measures that have been

The Brother SPEEDIO M200Xd1-5AX on the shop floor at Kirkstall's Leeds facility. The high-speed, BBT30, 16,000 rpm spindle machine, normally associated with cutting aluminium and other light materials, here machines mainly stainless steel, titanium and other tough alloys.

Adam Thornton (left) with one of Kirkstall's setter-operators in front of the Brother machining centre, showing the rotary torque table that allows in-cycle turning operations to be completed.

Machining in progress on the Brother.

incorporated include power regeneration during deceleration, high efficiency motors driving the spindle and axis motions, an optimised pump for coolant recirculation, LED lighting, low air consumption and automatic power off when the machine is not being used.

Low power consumption is not just through energy-saving features but is also inherent in the machine's design. Fast cutting speeds and rapids, plus an ability to combine milling and turning operations in one setup, lead to reduced cycle times which in turn lowers power consumption.

Adam Thornton concludes: "Whitehouse Machine Tools has been a collaborative partner, very similar to us in terms of values and ambition.

"We plan to add robotic component handling with optical part recognition to the Brother in 12 to 24 months' time and we feel confident that this supplier will support us with the retrofit.

This stainless steel keel punch used in total knee replacement surgery is 90 percent machined on the Brother much faster than previously and to within 15 to 20 microns over the entire form.

"We're forming a medical group in the contract manufacturing sector and are aiming to be world class. Investing in top quality brands like the Brother really adds to this strategy."

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NCMT and BEL Engineering show how collaboration and social media are building a new talent pipeline

NCMT and BEL Engineering are shining a spotlight on how manufacturers can grow their own next-generation talent by pairing hands-on training with modern 5-axis technology and meeting young people where they already are: on TikTok, Instagram and YouTube.

A 2025 Make UK study found the manufacturing sector faces 55,000 unfilled long-term vacancies, costing £6bn per year in lost output. Since the Apprenticeship Levy was introduced, apprenticeship starts are down 42 percent, intensifying shortages especially for SMEs. NCMT and BEL Engineering are working to reverse this trend with a partnership that equipped BEL's Training Academy with an Okuma GENOS M460V-5AX 5-axis Vertical Machining Centre (VMC), giving apprentices an industry-realistic environment to develop job-ready skills.

In September 2025, top UK Manufacturing technology provider NCMT welcomed three new apprentices to its Coventry-based team. BEL Engineering continue to add apprentices to its Training Academy.

Simon McLeod, manufacturing training & development lead at BEL Engineering, states: “Most of our future work is 5-axis, so our investment strategy in machinery matches reality of the equipment they will be using on the shop floor. Common controls, probing and offline programming mean learners build a transferable model of how jobs are really run, so what they practise in the Academy is what they'll do once qualified, working on the best multi-axis machinery.”

“BEL Engineering previously struggled to recruit suitably skilled machinists, so they chose to build talent from the ground up,” says Andrew Skee, sales manager, Northeast and Scotland, NCMT. “By investing in their machining capabilities to help their apprentices and giving learners access to the best 5-axis technology, they're creating engineers who can hit the ground running.”

What's new is how the BEL Engineering Academy and NCMT have been blending real-world training with social media. Apprentices watch short, authentic videos of live machining setups, toolpaths and probing cycles from engineers across the UK and beyond, then apply those insights in the Academy, helping to familiarise them with the technology at their fingertips. It's a powerful loop: inspiration online, application offline.

“They're not only learning in the classroom, they're seeing what their peers and engineers around the world are creating. It gives them inspiration and context for what these machines can achieve, which in turn boosts their confidence to try new approaches in our Academy.” says Simon McLeod. “Social channels give them context for what's possible and the confidence to attempt new approaches safely in our Academy.”

Chief engineer Phil Westgarth states: “If we want 5-axis capability on the shopfloor, we need 5-axis thinking in the classroom. The earlier we get apprentices thinking like engineers, the better.”

Callum Muir NCMT apprentice says: “Social has turned our phones into a shared toolbox. When we have breaks, we show each other short videos, on aerospace, lightweight fixtures for automotive, tough Inconel valves for oil & gas and precision implants for medical, it is really inspiring. Seeing real setups, gives us ideas we can aspire to do when we are fully qualified, from workholding and offsets to CAM tweaks, always with our trainers' guidance. It doesn't replace fundamentals; it accelerates them. Watching clips helps us picture what 'good' looks like across sectors, practise it safely on the machines and build the confidence to take on more complex parts.”

Jonathan Smart, managing director of NCMT, says: “Young people find careers on their phones, so let's use that to inspire them towards engineering. Short-form video is manufacturing's new shop window. Paired with rigorous, on-the-ground training, it helps bridge the skills gap, speaks to future engineers in their language and attracts new recruits to a boundary-pushing industry. We deliver world-class manufacturing technology and work with partners to unlock its full capability; social media adds the spark and ambition apprentices need to excel.”

The collaboration between NCMT and BEL Engineering is more than a technology purchase; it's a long-term investment in people. With cutting-edge 5-axis capability, a tailored training programme and a digital-first learning culture, apprentices are gaining the skills and confidence to thrive in modern engineering.

Together, NCMT and BEL Engineering are helping ensure a bright future for British manufacturing and engineering.

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Compact 5-axis machining centre has many options, including ultrasonics

Occupying just 3.8 sq m of space on the shop floor, a new, 5-axis machining centre with a working volume of 220 x 370 x 290 mm has been introduced by DMG MORI. The new DMU 20 linear is capable of a wide range of applications, from micro-machining of watch components, through EDM electrode and impeller production, to die and mould making.

A rigid, FEM-optimised cast bed and thermo-symmetrical gantry design have been coupled with Magnescale axis position measuring systems to ensure long-term stability and a high level of machining accuracy to within single-figure microns.

The A-axis trunnion swivels from +130 to -93°, allowing flexible machining strategies and enhancing the operator's view of the workpiece. The C-axis table rotates at up to 150 rpm, optionally 1,500 rpm and it can be positioned to an accuracy of two arcseconds. Zero-point clamping is standard, with the customer able to choose Erowa, Schunk or another make. There is also provision for vacuum clamping of delicate or thin-walled workpieces.

The machine is equipped with a powerful Fischer spindle, HSK 32, 42,000 rpm, as standard, although HSK 32 or HSK 40 spindles up to a maximum of 60,000 rpm are available. If elevated levels of precision are required combined with long running times, a shaft-cooled version is available for the HSK 40 variant. The tool magazine offers 26 pockets, or optionally up to 60 tools, suitable for flexible production requirements with frequent tool changes.

The DMU 20 linear enables efficient and productive machining through the integration of tool measurement using a Blum laser system in the working area, integrated into the side of the machine table. In preparation for the measuring cycle, the A-axis is swivelled through 90 degrees.

Numerous other options allow the DMU 20 linear to be customised. Examples are a treatment package to allow oil to be used as a coolant, oil-resistant hoses and electrostatic extraction of fine particulates. There is an interface for a conventional or a CO_2 fire extinguishing system.

DMG MORI developed the DMU 20 linear to be easily automated via a plug-and-play interface, for example with the manufacturer's own PH 10, PH 50 or MATRIS light systems. The intuitive CELOS X user interface on a Siemens SINUMERIK ONE control paves the way for networked production and digitalised processes.

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New 5-axis Heckert X90 machine

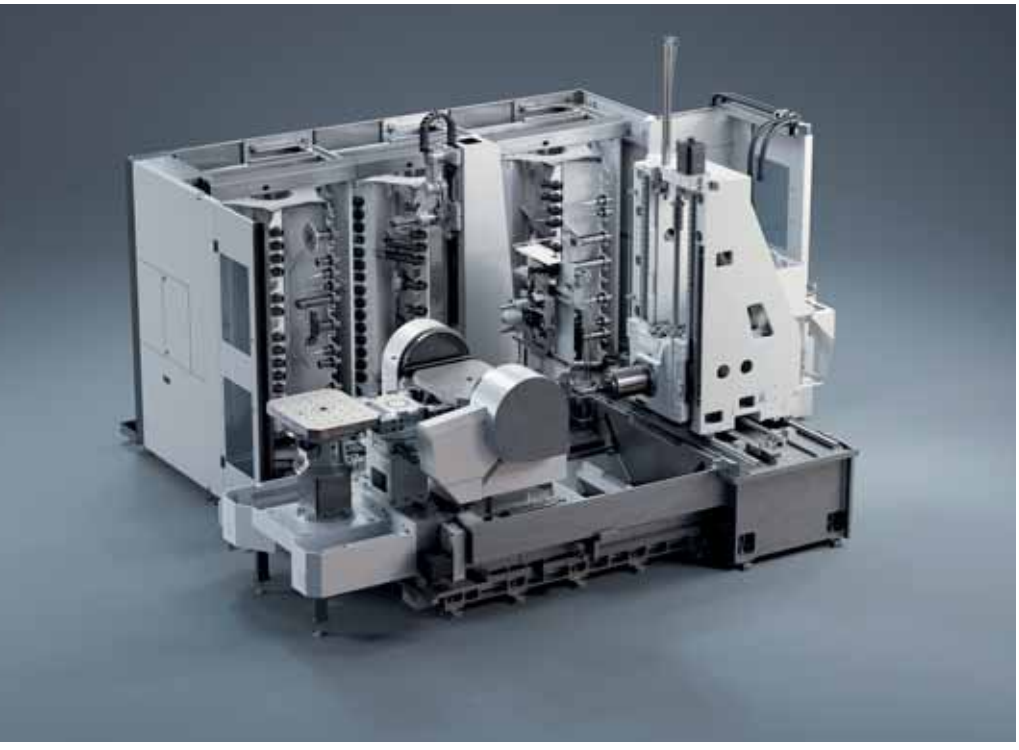
Starrag has launched the Heckert X90, the flagship of its versatile 5-axis machining centre range that delivers exceptional precision and productivity for large-scale manufacturing. Building on the acclaimed Heckert HEC series, the Heckert X90 features a workpiece-side swivel unit, allowing for high-dynamic 5-axis machining from a single clamping position with unparalleled capacity.

The Heckert X90's lightning-fast 65 m/min traverse rate and leading tool changeover times enhance productivity for large components. Pallet changes are completed in just 22 seconds, while the tool changer provides chip-to-chip times of only 8.3 seconds. Standard 800 by 1,000 mm pallets incorporate Starrag's precision-engineered concave surfaces with 6 µm curvature depth, ensuring stable positioning of the largest parts.

The Heckert X90 offers X, Y, and Z axis travel of 1,750 by 1,300 by 1,400 mm while requiring 18 percent less installation space than its HEC Series predecessor. It accommodates workpieces with a core contour diameter of 1,400 m and an extended workpiece contour diameter of 1.6 m, with a maximum height of 1 m, supporting loading masses of up to 2,000 kg. With optional Y-axis stroke extensions of up to 1.4 m and Z-axis up to 1.8 m, the Heckert X90 provides maximum flexibility for oversized components. Within robust dimensions of 8.9 m by 4.6 m, this machine delivers exceptional space utilisation without compromising performance.

The Heckert X90 provides a comprehensive range of spindle options that cater to specific application requirements, from the 12,500 rpm hollow shaft spindles to 15,000 rpm motor spindles, as well as various gear spindles that offer increased torque for heavy machining operations on large workpieces.

Starrag's innovative tool change system offers both lightweight and heavy-duty versions. The lightweight option accommodates tools weighing up to 22 kg, while the heavy-duty version supports tools weighing as much as 50 kg. The maximum tool dimensions are 800 mm in length and 325 mm in diameter, providing versatility for complex large-part machining.

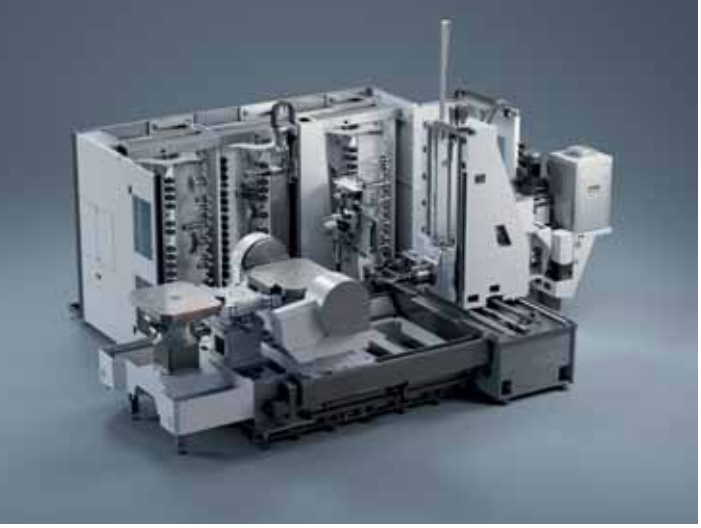


Tool magazine options include timing belt magazines with 45 or 60 positions for HSK-100 tools, chain magazines accommodating up to 120 HSK-100 tools and tower magazines supporting up to 450 HSK-100 tools, ensuring ample tool capacity for extended unmanned production runs.

Turning technology is integral to the machine concept and available as an option. Using specially developed assemblies and software modules, both standard and complex turning operations can be performed with machining centre productivity levels. Unlike turning centres, the machine benefits from versatile setup options, including vertical workpiece clamping and mid-operation clamping via the pallet changer.

For optimal operator experience, the Heckert X90 boasts Starrag's ergonomic 24-inch touchscreen HMI paired with a powerful Siemens SINUMERIK ONE control system. The touch-sensitive display responds to gloves and features a scratch-resistant, easy-to-clean surface. Operators can access PDF construction plans and sequence sketches while maintaining visibility in the workspace through an integrated camera. New hardware and rapid sensor technology enhance automation capabilities via extended 13-channel clamping hydraulics and optimised standard interfaces for pallet storage systems and robot cells.

Efficient chip management employs a



thermo-symmetric design and steep-angled fixed plates, enhanced by an internal coolant supply operating at pressures of up to 80 bar. This setup ensures effective cooling and chip evacuation, with an additional flushing capability of up to 280 litres per minute for applications that generate a high volume of chips from large-scale machining operations.

The Heckert X90 integrates seamlessly with Starrag's comprehensive automation solutions, including round or linear storage systems, and robotic cells, catering to production requirements from small to large batch sizes. The extended work envelope makes it particularly suitable for automated production of large aerospace, energy sector and heavy industrial components.

The new Heckert X90 utilises the proven four-axis Heckert H-series machine envelope. Instead of the NC rotary table from the H-series, X-series models feature a robust rotary/tilt table developed and manufactured in-house at Starrag's Chemnitz plant. The tilting unit incorporates two equally sized bearings and a thermally stable design, enabling five-sided, highly dynamic machining of complex large-scale components.

Ensuring pallet compatibility across the new Heckert X90, smaller X70 and X80 and larger variants was essential for developers. Pallets are interchangeable with Heckert H series machines and older Heckert HEC 630/800 X5 machines, providing investment protection and operational flexibility.

The Heckert X90 is now available as part of Starrag's expanded X-series line of 5-axis machining centres. The Heckert X-series includes the smaller Heckert X50, X70 and X80 variants, with the X90 offering the largest work envelope and capacity for the most demanding large-part manufacturing applications.

StarragTornos Group is one of the world's leading suppliers in the machine tool industry. In its two divisions Starrag and Tornos the Group develops, manufactures and distributes precision machine tools for milling, turning, boring, grinding and complete machining of workpieces made of metal, composite materials and ceramics. StarragTornos' customers include leading companies in the medical and dental technology, luxury goods, aerospace, energy and transportation industries. In addition to its machine tool portfolio, StarragTornos Group offers comprehensive technology and after-sales services. StarragTornos Group employs a total of around 2,000 people. The Group's headquarters are located in Rorschacherberg (Switzerland). StarragTornos Group operates sales and service, production and development sites in Switzerland, Germany, France, Italy, Spain, Poland, the UK, the USA, Mexico, Brazil, China, Thailand, the Taiwan region and India. The Group also has sales and service companies in all major customers' countries.

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Revolutionising motorcycle parts manufacturing with *hyper*MILL

For Evotech Performance, the motorcycle aftermarket specialist spin off from Drury Precision Engineering in Alford, the decision to adopt OPEN MIND Technologies' *hyper*MILL CAM software has transformed its manufacturing capabilities and competitive positioning. After 15 years with their previous CAM system, the company made the strategic leap to *hyper*MILL to support its investment in advanced 5-axis machining and meet the demands of an increasingly sophisticated product portfolio.

Nick Cooper, with the Lincolnshire company since 1999, recalls: "Rob Drury, the original director, accepted me on work experience and, in 2005, Evotech Performance started." Evotech has secured a significant position in the global motorcycle aftermarket, manufacturing precision components like tail tidies, radiator guards, crash protection, mirrors, and indicators. The company evolved from simple fabrication to complex 5-axis machining, reflecting the growing sophistication needed by modern motorcycle manufacturers and enthusiasts.

The driving force behind its CAM software transition to OPEN MIND Technologies' *hyper*MILL was twofold. There was a need to manufacture increasingly complex parts to stay ahead of competitors attempting to copy their designs. "With people trying to copy our parts, the more complex our part and design, the better. We also needed to make more sophisticated parts and make them look better," Nick Cooper notes.

This strategic imperative led to the purchase of a DMG MORI DMP 70 5-axis simultaneous machine, which in turn necessitated advanced CAM software capable of fully exploiting the machine's capabilities. Nick Cooper explains: "That was the reason why we actually bought *hyper*MILL. It can actually drive the parts, make the parts better and make those machining timers quicker."

For Evotech Performance, *hyper*MILL's 5-axis capabilities and integrated CADCAM approach were key. Unlike traditional systems needing a separate CAD suite, *hyper*MILL includes hyperCAD-S, enabling direct geometry modification within the CAM environment, streamlining programming.

Nick Cooper emphasises the unexpected benefits of this integration: "*hyper*MILL has actually brought a new element that we didn't even anticipate. With the simple use CAD suite built into *hyper*MILL, we can actually design our own fixturing. This has moved us on another level from where we thought we would actually be."

The hyperCAD-S capabilities within *hyper*MILL enabled Evotech to develop sophisticated fixturing solutions that maximise their machine utilisation. This capability proved crucial for their large pallet machine operations, where efficient workholding directly impacts productivity and part accuracy.

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XYZ machines proving to be a life saver in more ways than one

For Stafford Engineering Services based in the village of Hixon, on the periphery of Stafford, the manufacturing of specialised bracketry for the mounting of lifesaving defibrillators and life monitoring equipment carried in ambulances has become an increasingly important part of its business. For Shaun Watkin, director, making the right investment in machinery has proven to be not only a gamechanger for his company but in his words "a world changer".

When the business was approached to develop a system of mounting this life saving equipment in a vehicle transporting critically ill patients to hospital by Staffordshire Ambulance Service, Shaun Watkin developed a secure bracket system that, not only supported the device during transit, but also had the ability to easily release the defibrillator so it could be carried by the crew to the patients location. He states: "We were keen to get involved in this project and knew that the system we designed had to be robust. This is because the defibrillators and associated equipment that was to be mounted on it was not that light. We also had to think carefully about how it disconnected from the bracket so that it didn't fall forward to cause issues for the crew when lifting it away. When doing our initial designs, it was not just all drawings there was a fair amount of does this feel right when mounting and unloading the system."

The early versions of the bracket components were manufactured by a 3rd party but then Shaun Watkin was given the opportunity to buy the XYZ Pro 3000 that the subcontractor was using to make the parts, so he jumped at the chance. He continues: "The purchase of this turret mill style machine fitted with a ProtoTRAK CNC control gave the company the ability to make design changes quicker and easier and it helped to save the life of the business. Without that machine, we could not have developed and manufactured the bracket component parts of those early mounting systems."

As the system was accepted, working closely with a defibrillator manufacturer meant that doors were opening all around the country. It was when the Scottish ambulance service had a requirement for a mounting device that Shaun Watkin had to make further investment to keep up with demand. He adds: "With volumes increasing we had to look at adding to the Pro 3000 as a CNC machining capability. We looked long and hard at several suppliers but made the decision to purchase XYZ's LPM machines. These lean production machines were perfect for the work we wanted to do with their tool changing capability and increased performance over a turret mill style machine. The ProtoTRAK control with its conversational software fitted to the machines allowed me to start manufacturing within a day of installation."

With 21 years of manufacturing the brackets under their belt, demand is still increasing which has led to further investment in XYZ products. When Queensland Ambulance Services in Australia came knocking on the door, Shaun Watkin had to think hard how he was going to increase production from 100 systems a month to 400. After talking with XYZ about his conundrum, the decision was taken to invest in a new TMC 1600 vertical machining centre and a CT 65 HD turning centre.

Shaun Watkin states: "The 1600 TMC with its table size of 1,660 mm x 660 mm created the possibility to mount more parts on the table at once, therefore reducing the number of times we had to load/unload parts. The 1,600 mm X travel along with the 650 mm in Y backed up our theory. The increase in spindle power over our current machines was also a key point in our decision making. With 11 KW, 15hp, available and deciding to go with the 12,000-rpm option with through spindle coolant our cutting performance has greatly increased. We are now profiling the aluminium parts at 6 to 7m/min feedrate greatly reducing cycle time. With 20 BT40 tools in the carousel available we can leave more tools set up and reduce the number of times we have to exchange the tools in the machine. Of course, the new ProtoTRAK RMX 15" touchscreen control has allowed us to use the existing programs but, on some parts, it

has been beneficial to re-program them to allow us to use some of the new features available such as clear off to remove material from the outside of the part. With the TMC 1600 installed we have seen production of the base plates go from one every half hour to ten in two hours."

The addition of the CT 65 HD turning centre to the company has speeded up production of the feet used to secure the defibrillators to the mounting bracket. When asked about the turning capacity Shaun Watkin comments: "We have a ProTURN lathe that we have used for these items in the past but again volumes dictated that we needed a more automated system. The CT 65 HD with its 12 station VDI turret and 65 mm bar capacity has slotted into our production capability perfectly. The transition to a Siemens 828D control with the Shopturn software has been easy due to its conversation style of programming and the addition of the LNS barfeed now means we can leave the lathe unattended and use the staff to do other work. Due to the material we use to manufacture the feet from, the 4,000-rpm spindle speed has allowed us to get great finishes and reduce cycle times.

With new designs required by the company's existing customer base and with other medical device manufacturers coming on board, there appears to be no let up for the 11 XYZ machines at Stafford Engineering Services. Shaun Watkin concludes: "The support from XYZ for my machines has been excellent. Whether its programming or service support they are quick to respond. We do have our machines regularly serviced by the team at XYZ and this ensures when the demand is at its greatest, like with the recent Queensland order, there are no unexpected surprises for us and we can deliver on time."

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Expanding mandrels are underutilised

1st Machine Tool Accessories explains why the accurate gripping force of expanding mandrels is ideal for high-volume machining to tight tolerances

Workpiece clamping and automation systems specialist 1st Machine Tool Accessories offers to subcontractors and OEMs in Britain and Ireland a comprehensive range of high-precision expanding mandrels, both standard and bespoke, supported by an experienced design and development team in Salisbury. The company is an enthusiastic advocate of this method of clamping components by its ID (Internal Diameter) for machining and is of the opinion that the advantages are not harnessed by machinists nearly as often as they should be.

The standard, modular range comprises manually-, pneumatically- or hydraulically-actuated types capable of automatically gripping a range of internal diameters from 12.5 to 178 mm. Each features a generous expansion to enable a range of diameters to be accommodated and the gripping surface may be ground to suit non-standard bore sizes. Numerous product adaptations and full turnkey solutions are available to meet especially complex requirements and the lead-time for delivery is rapid.

The expanding mandrel is increasingly recognised as a superior workholding solution for high-precision CNC turning, cylindrical OD (Outside Diameter) grinding and multi-axis prismatic milling and drilling. It offers a level of stability, repeatability and concentricity that is difficult for traditional three-jaw chucks and standard collets to match. TIR (Total Indicated Runout) below 0.005 mm is routinely achieved using mandrels, a major advantage for precision machining. It compares favourably with values for a three-jaw chuck, which range from 0.02 to 0.05 mm, or 0.01 to 0.02 mm for a high-quality collet.

Holding in the ID leaves the entire OD of the part exposed and accessible to the cutter. It allows all external features, including shoulders and complex profiles, as well as the component face, to be machined completely in a single setup, which is unattainable when external clamping obstructs the surface. Using a previously-machined bore as the primary datum for subsequent operations, the mandrel ensures accurate concentricity and perpendicularity with external features.

Unlike external clamping, which can introduce distortions in thin-walled or delicate parts due to variations in jaw pressure at discrete points around the circumference, the mandrel provides uniform pressure all around the surface of a bore. Furthermore, for components with a ground, polished or finished exterior, internal clamping prevents damage to the OD, preserving the integrity and quality of the final product by eliminating jaw marks, scuffs and distortion.

In the sub spindle of a bar-fed, twin-spindle lathe, for example, the workholding technique inherently provides better alignment of the workpiece and spindle axis, as it eliminates the eccentricities and jaw pressure variations associated with chucks and the limited gripping surface afforded by collets.

If a lathe is being used for chuck rather than bar work and robot or cobot machine tending is installed, a slight taper can be machined on the end of the sleeve of the mandrel in the sub spindle to allow for any small inaccuracy in end effector position during automated transfer from the main spindle. Exceptionally, if tube rather than billet is being turned, it may be appropriate to use a mandrel in both work spindles.

For applications demanding the highest rigidity and accuracy, the advanced design of 1st MTA mandrels incorporates a double-taper, dual-contact system. The configuration ensures true parallelism between the workpiece bore and the spindle, eliminating deflection and chatter during cutting. By engaging the component's bore at two distinct points near the front and the rear, the system ensures the component is pulled firmly and squarely against a precision-ground back face in the mandrel body.

Accurate axial location increases Z-axis repeatability and stability, which is essential for facing and grooving. The double taper also improves the mandrel's resistance to torsional and bending forces generated during machining, allowing higher feed rates and heavier depths of cut without introducing chatter or runout.

Efficiency may be enhanced using mandrels having inherent safety features. For automated and high-volume environments, some are designed to be pre-sprung and only require hydraulic or pneumatic pressure for release. In these systems, the spring mechanism keeps the mandrel in its expanded, clamped position by default, preventing accidental loosening in the event of a power or pressure failure.

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Transforming production with CERATIZIT UK & Ireland Ltd

When Atkinson Equipment needed to tool up the company's latest machine acquisition, it knew exactly where to turn. The decision to partner with Ceratizit UK & Ireland Ltd wasn't taken lightly, but rather built upon years of trust, technical excellence and a single cutting tool that solved what seemed like an impossible challenge.

Located in Westbury, Wiltshire, Atkinson Equipment has been at the forefront of precision engineering since the late 1960s. What began as a family business developing oil heating, refuelling and liquid transfer equipment has evolved into a sophisticated manufacturing operation serving multiple demanding sectors. Today, the company operates as both an OEM of pump systems and a JOSCAR-registered subcontract machining specialist serving defence, aerospace, automotive, rail, fitness, marine and medical industries.

With 20 years at the company, Ben Hale, engineering production manager at Atkinson Equipment has witnessed much of this evolution firsthand. Ben Hale and his team understand the daily technical challenges that influence strategic decisions about tooling partnerships that can genuinely impact the bottom line.

The machine shop at Atkinson Equipment represents a significant investment in cutting-edge technology. The facility houses a range of Doosan, CMZ and Citizen turning centres. The milling department is equally impressive, featuring a Brother U500 5-axis with automation and Brother 5-axis and twin pallet machining centres. This diversity enables Atkinson to tackle everything from bespoke pump components to high-volume production runs of peripheral equipment.

Several years ago, Atkinson Equipment faced a technical challenge that threatened to derail a critical aluminium project. The company needed special purpose end mills capable of reaching beyond 130 mm. Its existing distribution supplier didn't have a solution.

CERATIZIT UK & Ireland was approached and responded with a solid carbide high-performance end mill featuring dedicated aluminium geometry and, crucially, a necked design that delivered both the reach and the rigidity for stable machining. The tool completed the project swiftly while maintaining the demanding surface finish and dimensional accuracy the customer required.

"That single tool made an enormous difference to us," recalls Ben Hale. "It wasn't just about solving the immediate problem. What really impressed us was how CERATIZIT's technical team understood exactly what we needed and delivered a special tool almost immediately."

Despite this successful collaboration, Atkinson continued to rely primarily on its long-term supplier for the bulk of their cutting tool requirements. However, the memory of CERATIZIT UK & Ireland's service, delivery speed and technical capability lingered.

In February 2025, Atkinson Equipment took delivery of a Citizen L32-VIII LFV sliding head turning centre, a significant investment driven by a contract to manufacture gym equipment. The machine acquisition was primarily for a four-component project, each part was required in quantities of 30,000, totalling 120,000 parts. This demanded a reliable tooling partner.

To streamline the supply chain, Atkinson Equipment wanted a single-source tooling solution for the new Citizen machine. The RFQ went beyond cutting tools. The ISO: 9001:2015 certified company needed collets, bushes, sleeves, tool holders, drills and peripheral equipment to create a seamless transition into production. Once again, the OFTEC-approved company approached Ceratizit.

Iain Tattersall, CERATIZIT UK & Ireland technical sales engineer, who had previously supplied Atkinson Equipment, relished the opportunity. Working closely with Ben and CERATIZIT's applications specialist Vinny the team developed a complete tooling package tailored to the components while maintaining the flexibility to support any future tooling requirements.

The tooling package included everything from workholding components to the latest generation cutting tools from CERATIZIT's performance range. Standard products were specified where appropriate, but the real value lay in the technical support.

"The CERATIZIT team optimised speeds, feeds and cutting strategies and continually refined the process, spending time at the machine with our team to ensure optimum productivity levels."

The Citizen L32-VIII arrival established a foundation for a much deeper relationship with CERATIZIT invited to conduct a comprehensive tooling review across the entire workshop. CERATIZIT systematically evaluated existing inventory, identified opportunities to swap out standard products for equivalent or superior alternatives from its own catalogue. This like-for-like exchange delivered immediate benefits, reducing cutting tool costs significantly while improving tool life by up to 20 percent on most product lines while simultaneously improving productivity by anything from 10 to 50 percent in certain cases. However, the real gains subsequently came from CERATIZIT's technical advice.

Iain Tattersall now visits Atkinson Equipment every two to three weeks, reflecting the active partnership. Rather than just taking orders, he works with machinists to identify tooling challenges. This hands-on

approach characterises the relationship, with CERATIZIT engineers actively involved in process optimisation instead of just supplying products.

Atkinson Equipment's tooling review success prompts discussions with CERATIZIT on installing a TOM 80 tool vending system, aiming to transform storage, tracking and replenishment.

The TOM 80 offers 60 tool positions with the flexibility to add extensions as requirements grow. More importantly, it provides 24-hour access for machinists while automatically managing inventory levels and triggering replenishment orders. Every tool withdrawal is tracked by user, machine and job, creating visibility into consumption patterns and highlighting potential issues before they impact production.

Discussions around which products to include in the vending machine are ongoing. Rather than simply replicating existing inventory, CERATIZIT is taking a strategic approach. It is focusing first on high-usage items where extending tool life delivers immediate cost savings, then expanding to cover the broader range of standard tools used across the workshop. Each product is being evaluated not just on a like-for-like cost basis, but on total cost of ownership, considering tool life, performance and the reduction in downtime from improved reliability.

The consolidation process has already identified opportunities to reduce the overall number of tool types in inventory through strategic product selection. Rather than stocking multiple variations of similar tools, CERATIZIT is recommending versatile products from its performance range that can handle multiple applications effectively. For high-volume production runs, however, the focus remains on application-specific tools that deliver the longest tool life and fastest cycle times.

Beyond the technical attributes of the cutting tools themselves, Atkinson Equipment has been impressed by CERATIZIT's service levels. Lead times, particularly on products delivered from Germany, have exceeded expectations. When urgent requirements arise, CERATIZIT's next-day delivery capability ensures production isn't compromised.

Atkinson Equipment's diverse workload, spanning everything from bespoke pump components in stainless steel to high-volume aluminium parts for the fitness industry, demands adaptability from their tooling supplier. Ceratizit's comprehensive product range, from standard geometries through to high-performance solutions, provides the flexibility to match tools precisely to each application.

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Revolutionising machining efficiency with Iscar's Fast Feed Tools

In the dynamic world of metal cutting and machining, efficiency and precision are paramount. Most of the machining allowance is removed during rough cuts. Therefore, increasing productivity at this stage is crucial for reducing the machining costs of the entire part's manufacturing process. Even today, with improved capabilities in precise forging, die-casting, injection moulding and other workpiece production methods that allow for receiving a workpiece very close to the part's final shape and thus considerably diminishing the machining allowance, a high metal removal rate during rough cutting continues to be an important factor in reducing total costs.

Iscar has consistently pushed the boundaries of innovation to provide solutions that meet the ever-evolving demands of manufacturing. One of Iscar's standout innovations is the Fast Feed line of tools, designed to enhance productivity while maintaining exceptional precision.

Fast Feed tools by Iscar are designed to operate at high feed rates, significantly reducing machining time and increasing productivity. The concept hinges on the principle of shallow depth of cut combined with high feed, allowing for rapid material removal without compromising on surface finish or tool life. This approach is particularly beneficial in roughing operations where the primary goal is to remove as much material as possible in the shortest time. Iscar's Fast Feed tools are engineered with advanced geometries that optimise chip evacuation and reduce cutting forces. This results in less wear and tear on both the tool and the machine, extending the lifespan of both. The Fast Feed tools are suitable for a wide range of materials, including steels, stainless steels, cast irons, High Temperature Superalloys (HTSA) and titanium. This versatility makes the tools an attractive option for industries such as aerospace, automotive and die and mould, where diverse materials are often encountered.

By allowing for higher feed rates, Fast Feed tools dramatically cut down on machining time. This efficiency translates to cost savings and increased throughput, which are critical in high-volume production environments. Despite their primary focus on roughing, Iscar's Fast Feed tools are designed to produce appropriate surface finishes, minimising the need for secondary operations and further enhancing productivity.

The combination of advanced cutting tool materials, wear-resistant coatings, and optimised geometries ensures that Fast Feed tools maintain a long tool life, even under the demanding conditions of high-speed machining.

Fast Feed tools are making significant impacts across various industries. In aerospace, where difficult-to-cut materials like titanium and HTSA are common, these tools help manage the challenges of machining tough materials. In the automotive sector, they enable manufacturers to keep up with the fast-paced production demands while maintaining high quality. The die and mould industry also benefits from the reduced machining times and improved surface finishes, which are crucial for producing complex shapes with high precision.

Iscar offers a comprehensive selection of advanced cutting tools, including fast feed turning and grooving tools. These tools are designed to enhance productivity, efficiency and precision in various machining operations.

Iscar also provides an extensive range of fast feed milling tools that are designed to significantly increase machining efficiency and productivity. These tools are specifically engineered to deliver high material removal rates and reduce cycle times in various milling operations. Fast Feed (FF) milling cutters are a key factor in High Feed Milling (HFM) techniques. The cutter geometry, designed for efficient chip thinning, needs to ensure correct distribution of the cutting force components. There are two principal geometrical approaches. The first design requires the cutting edge of an FF milling cutter to be an arc of a great circle. Another concept is based on using one or two straight edges that are chords of the arc. In both cases, the small cutting-edge angle, usually 9-17°, meets the requirements of chip thinning and decreasing the total bending load on a tool. Ensuring the geometry of solid carbide fast feed endmills and replaceable milling heads demands the specific shape of a cutting edge, while in indexable milling it may be provided by the appropriate location of an insert of even a simple profile.

Iscar's Fast Feed tools exemplify the company's commitment to providing innovative solutions that address the real-world challenges faced by manufacturers.

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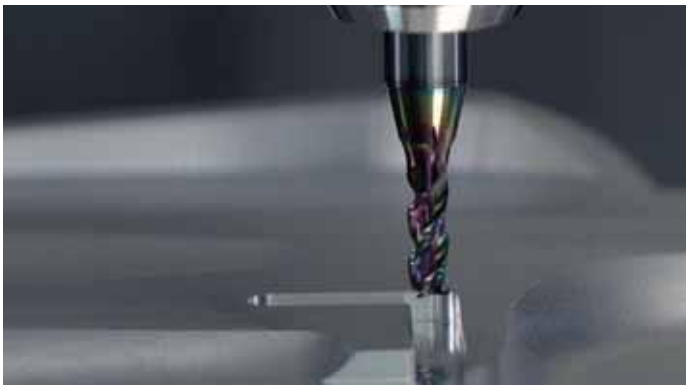
Guhring unveils comprehensive line up at Southern show



Visitors to Guhring's stand at Southern Manufacturing will discover an extensive portfolio of innovative cutting tool solutions spanning drilling, milling, threading, reaming and deburring product lines, with the company's revolutionary RF 100 AL milling line amongst the headline attractions.

The RF 100 AL series of solid carbide end mills is available in diameters from 0.5 to 25 mm. The range has been specifically engineered for aluminium, non-ferrous metal and plastic machining. The smaller RF 100 AL Micro achieves cycle time reductions of up to 76 percent compared to conventional small end mills, while the standard RF 100 AL delivers a 30 percent increase in machining performance with real-world data demonstrating 59 percent faster machining times and 54 percent longer tool life. Both variants feature Guhring's ultra-thin Carbo+ coating, nano-polished round bevel support chamfer and the innovative GühroJet internal cooling system for optimal chip removal.

Available with either corner radius or corner chamfer configurations, the RF 100 AL Micro offers exceptional flexibility for end users by supporting ramping, slotting, trochoidal milling and plunging operations.

Complementing the aluminium specialist at the Farnborough event, the RF 100 Sharp milling cutter represents Guhring's sharpest cutting edge and is now available with corner radius options for enhanced versatility. This premium solid carbide end mill has been engineered to deliver exceptional surface finishes and precision across a wide range of materials.

Also at the Farnborough event will be Guhring's drilling innovations, including the RT100 InoxPro drills and the ExclusiveLine micro-precision drill XL capable of achieving drilling depths up to 30XD and the three-fluted FT 200 U representing a breakthrough in high-feed drilling technology. The modular BT 800 interchangeable head drill system enables rapid head changes whilst extending overall tool life through replaceable cutting heads.

Threading innovations on display include the Energy tap, developed explicitly as the thread specialist for energy sector applications, and the XF fluteless tap that delivers dimensionally accurate threads in steel through material displacement rather than chip formation. The SC-TM-Z SP thread milling cutter impresses with its ability to complete an entire thread in just two passes, dramatically reducing programming complexity and cycle times.

Also at the show on **Stand D200** will be the HR 500 high-performance reamer. It achieves speeds up to 50 times faster than conventional reamers, revolutionising finishing operations. Supporting these cutting tools, the GÜHROSync tapping chuck features innovative clamping technology especially designed for thread tapping and forming operations, while the new 208 grooving system for Sliding Head machines delivers process-reliable in grooving and parting off in the most confined spaces. To find out more, visit Guhring on **Stand D200** at Southern Manufacturing or contact the Guhring team.

Guhring Ltd
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New VQ series small diameter long neck end mills from Mitsubishi Materials

Mitsubishi Materials has introduced an expansion of small diameter end mills to the innovative, high-performance VQ end mill series, designed specifically for stainless steels and other difficult-to-cut materials. Combining cutting-edge geometry with advanced coating technology, the new lineup delivers superior rigidity, wear resistance and chip evacuation for unmatched stability and productivity.

Next-generation performance for challenging applications

The new VQ3XL, VQ4XL, VQ4XLRB and VQ2XLB types feature high-rigidity long necks, each size available with a 3xDC, 5xDC and 8xDC reach and designed to prevent tool interference while maintaining exceptional rigidity during deep cutting operations. These tools enable stable, high-efficiency machining across a wide range of demanding materials such as alloy steel, austenitic stainless steels, titanium alloys, cobalt-chromium steel and heat-resistant alloys. Copper alloys can also be capably machined with the new long neck types. They are ideally suited for side and bottom face milling as well as slotting operations. Additionally, the small diameter and long necks of these end mills, under Ø0.6 mm for 3-flute and under Ø1.0 mm for 4-flute types, opens new possibilities for high-precision micro-machining.

Innovative design features

The optimised long neck geometry, even at the exceptional 8 x DC length, maintains rigidity while minimising workpiece interference, ensuring stable performance in deep or narrow areas. The micro gash land reinforces corner strength, suppresses chipping and extends tool life. A newly developed end cutting edge chip pocket provides improved chip evacuation and reduces clogging, particularly for tools with larger corner radii. The multi-flute configuration, three and four flutes, provides faster and more efficient machining than 2-flute tools, even in small diameters below Ø1.0 mm.

SMART MIRACLE Coating

Mitsubishi's proprietary coating dramatically enhances efficient chip discharge and wear resistance, especially effective on hard-to-cut materials.

Enhanced productivity, extended tool life

By combining high-rigidity tool bodies, advanced edge geometries and state-of-the-art coatings, Mitsubishi Materials continues to push the boundaries of milling performance. The VQ Series empowers manufacturers to achieve exceptional surface finishes, longer tool life and reduced cycle times, all while ensuring reliable performance of very small diameter end mills in the most demanding conditions.

Availability

VQ4XLRB	Ø0.4 mm - Ø1.0 mm
VQ3XL/VQ4XL	Ø0.2 mm - Ø1.0 mm
VQ2XLB	Ø0.2 mm - Ø1.0 mm

All types in with neck lengths 3 x DC, 5 x DC and 8 x DC

MICRO GASH LAND
Suppresses chipping by increasing the strength of the corners.

End Cutting Edge Chip Pocket
Optimised geometry of the end cutting edge for excellent chip evacuation.

XB SERIES - Multi functional turning tools

Introducing the XB Series:
High-performance indexable turning tools for superior machining

Mitsubishi Materials has unveiled the XB Series Indexable Turning Tools, a ground-breaking solution engineered for versatility, precision and productivity across a wide range of machining operations. Designed with a

Secure 3-way clamping system.

highly rigid six-sided secure restraint system, the XB Series ensures optimal clamping and stability. This significantly reduces chatter and vibration even under demanding machining conditions.

Suitable for internal and external machining, grooving, chamfering, threading and side-face grooving operations, the XB Series offers a single-holder solution for multiple applications. The integrated internal coolant design, available in both carbide and steel shanks, ensures efficient chip removal, superior cooling that contributes to extended tool life. This feature not only enhances machining stability but also supports burr-free performance, particularly in internal cutting operations.

The XB Series demonstrates a remarkable increase in productivity. When replacing conventional tapping with the XB threading insert, users can expect up to 76 percent more components machined, along with reduced material waste and shorter cycle times.

Compatible with SLV sleeve holders, the tool also supports high-pressure coolant delivery, further boosting operational reliability. The high-pressure coolant also ensures that chip evacuation, especially in small diameter bores is excellent and brings an enhanced level of process security.

Engineered to minimise tool changes and maximise output, the XB Series is the ideal choice for manufacturers seeking efficiency without compromise. With high-quality cutting edges and excellent sharpness, a full range of tools for a variety of applications are available. From aerospace through to the automotive and general metal cutting industries, it sets a new standard for versatility and reliability.

MMC Hardmetal UK Ltd
Tel: 01827 312312
http://www.mmc-carbide.com

New right-angle heads suitable for automation

A new range of toolholding heads designed to mill and drill components at right angles to the orientation of a machining centre spindle has been introduced by Swiss manufacturer Pibomulti, whose products are sold into the British and Irish markets exclusively by Gewefa UK. The next-generation CEP-NG heads can likewise be used in the B-axis spindle of a multi-tasking lathe, or in a live VDI turret station of a turn-mill centre.

Built with high-quality, hardened and ground bevel gears and ABEC 9 angular contact bearings, CEP-NG heads are engineered to deliver reliability, performance, precision and longevity, even when tackling challenging applications in demanding sectors such as automotive, aerospace, medical, defence and energy.

Compared with previous models, the new generation of heads is capable of transmitting higher rotational speeds at a 1:1 ratio, leading to greater productivity due to raised metal removal rate when roughing, or finer surfaces when taking finishing cuts.

ER8 up to ER50/ISO40 tool clamping is available, the latter being capable of deploying a 36 mm diameter tool and transmitting 210 Nm of torque. A further benefit of the head redesign is that vibration is lower, especially when tool overhang is long, further promoting good surface finish as well as extending tool life.

Pibomulti CEP-NG heads are also lighter in weight, reducing stress on the machine tool spindle bearings, as well as on the machine structure when the spindle head is accelerating or decelerating in the linear axes. The lightness similarly lessens the load on the magazine arm during Automatic Tool Change (ATC) and allows quicker exchange.

Lower head weight equally promotes faster cutting feed rates and rapids due to a decrease in inertia, contributing further to elevated levels of production output by shortening overall cycle times. All these advantages are particularly beneficial, including in terms of lower maintenance costs, if the machine is small, less rigidly built or old.

The latest head series integrates several advanced options, including up to 100-bar coolant delivery through the head. A 360° indexing ring with graduations delivers

flexibility for complex, multi-sided machining tasks by allowing the machine tool to automatically rotate and lock the cutting angle. Alternatively, the ring can be indexed manually into position.

Suitable for automated production cycles and unattended running, the feature avoids the expense of having to buy multiple special heads or wasting time manually repositioning a part.

GEWEFA UK Ltd
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New six-edged grooving inserts

With the new 66T grooving system, Horn is expanding its cutting tool portfolio in the area of six-edged indexable inserts, which offer a competitive price per cutting edge. Maximum grooving depth is 9.5 mm, which is about 4 mm more than is possible with the sister system, 64T. Cutting width is either 2.5 mm or 3 mm and the corner radius is 0.2 mm.

Depending on the application, Horn offers 66T grooving inserts with a choice of two chip breaker geometries, 1A or DL, to ensure reliable chip management during machining, plus a further version without geometry for maximum edge strength. The IG65 carbide grade is used for machining stainless steels and difficult-to-cut materials. For general steels, Horn recommends the EG55 carbide grade.

The 1A geometry is suitable for groove turning operations only, while the DL geometry is suitable for longitudinal turning as well as

grooving. For the former operation, the inserts are available with a corner radius of 0.4 mm. The variants with chip breaking geometry ensure excellent surface quality on the groove flanks and the straight main cutting edge produces a cleanly finished base.

Horn Cutting Tools Ltd
Tel: 01425 481880
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www.phorn.co.uk

Ultimate 2-in-1 Dot Peen Marking Station

The Connect Series Combo offers a benchtop and handheld marking system in one, seamlessly switching between bench and handheld modes in seconds and no tools are needed. It allows you to mark both small parts on a bench and large components on the go.

Mark anything from alphanumeric text, incrementing numbers, date codes to logos and datamatrix/QR codes with ease. Templates with fixed and variable data fields can easily be set up and saved for future use. Enjoy wireless freedom with a secure 10 metre Wi-Fi range and a long-lasting 22V lithium-ion battery when using in handheld mode. Effortlessly handle uneven surfaces with the patented IDI feature that adjusts to component surface height differences of up to 8 mm enabling consistent quality marking across the whole mark.

The column has a quick shift function for very fast height adjustment of the column when changing to different sized parts. The Combo has a marking window of 120 x 60 mm and the column can mark parts up to 290 mm tall as standard with an optional 150 mm column extension.

The T base slots allow for easy fixing including the optional heavy duty rotary axis for marking around the diameter of cylindrical parts. Parts up to 10 kg can be marked with a max diameter of 80 mm. Parts can be gripped from either the inside or outside chuck jaws. If you are nameplate marking, an optional nameplate holder is also available for easy positioning and marking of nameplates.

One of the strengths of the Combo is its new data management capabilities. A growing number of customers need a marking system

to communicate with their ERP systems to both import marking data and to export production data after marking for quality purposes.

CSV files can be imported directly to the controller and configured for marking be it a single job or scheduling a day's marking. A barcode reader can be used to read and populate the data from a datamatrix or QR code into the controller and can also be used to open a file offering versatile and powerful data management. Ethernet connectivity comes as standard as well as USB.

The Connect dot peen series from Technomark has redefined the boundaries of permanent marking to give you complete marking freedom and access to data. When used in handheld mode, the ergonomically designed marking head provides a completely wireless system that is lightweight and easy to use and orientate in any position.

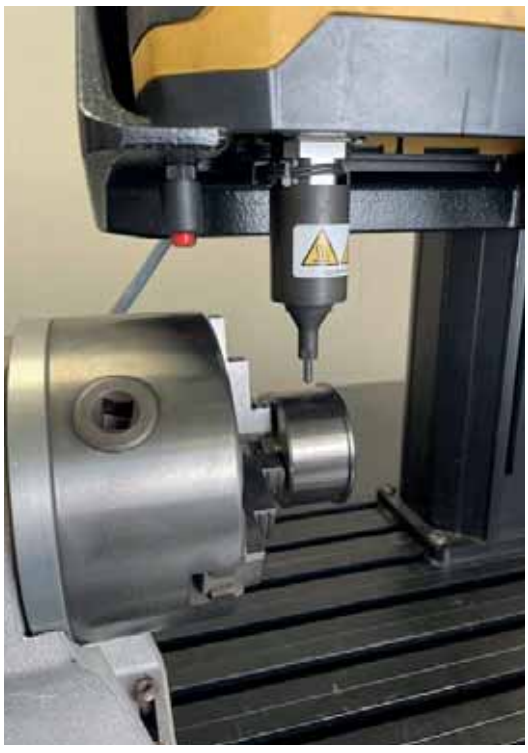
This design focuses on mobility and convenience with a large, intuitive, 10" colour touch screen controller, with easy to use software so anyone can use the marking system in a matter of minutes.

The latest lithium battery technology can give hundreds of marks to manage high volumes of marking before a recharge is required. The built-in battery monitoring system will indicate when battery power is down to 10 percent at which point a power cable can be plugged in to allow hybrid use so there is no interruption to marking.

When in handheld mode the marking foot has four magnets for secure locating of the head when marking. The multifunctional non-slip support foot also features a V shaped foot to allow marking on curved surfaces as well as an optional support guide ideal for marking on the edge of sheet metal or plate. Deep marking is easily achieved ideal for applications which are painted or galvanised after marking.

Universal Marking Systems are Technomark's sole partner in the UK and offer full support to help you find the best solution for your marking application. Minimal maintenance is required for the Combo system but the company are always on hand and offer long-term support.

Discover how this versatile system can elevate your marking process to the next level.



Universal Marking Systems
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Power and adaptability for every application

Boost your industrial marking performance with unmatched versatility and contrast

Gravotech, global specialists in laser and mechanical marking solutions, have announced the launch of its MOPA Laser, a new industrial laser marking machine designed for direct integration into production lines or use in laser stations.

The New MOPA Laser brings together power, versatility and safety, delivering

optimal marking results in low cycle-times. It is engineered for demanding manufacturing environments, offering permanent, high contrast marking on a wide range of metals and plastics. Thanks to its advanced architecture and the ability to adjust the laser pulse duration, the MOPA Laser adapts precisely to the requirements of various materials and applications.

Furthermore, this new laser marking machine caters to industrial identification needs with its available power outputs of 30 and 60 Watts; enabling tamperproof markings on parts that require traceability within the production process, or after the product is assembled.

Versatile

The MOPA Laser delivers high marking speeds and deep marking capabilities. Its versatility matches the application scope of hybrid lasers while maintaining a more attractive cost profile. Designed for seamless integration into automated processes, it is the ideal solution for integrators, OEMs and industrial manufacturers seeking a high-performance marking system with reduced complexity.

In addition to being integrated into automated lines, the MOPA Laser is also available across Gravotech's laser

workstations: Welase, LW2, and LW3, allowing workshops, engravers and small-scale manufacturers to benefit from the same advanced technology in a compact, operator-friendly setup.

Reliable

Building on to its technical features, the MOPA Laser leverages Gravotech's long-standing expertise in laser design and is backed by a robust global service and application network. Whether marking a serial number on aluminum or branding a logo on engineering plastic, the MOPA Laser ensures repeatable and durable results across a broad spectrum of industries.

"The MOPA Laser was developed to respond to a clear market demand: a compact, powerful and versatile laser system. Indeed, customers in the industry are essentially claiming for faster or deeper markings on many different materials according to their respective applications" says the Galvo Laser product manager at Gravotech.

"Besides this, its proven internal architecture, combined with integrated safety features, guarantees both reliability and ease of integration into existing workflows."

Permanent marking and engraving solutions

Gravotech was born in 2008 from the merger of Gravograph, Technifor and Type3 and was unified under one brand in 2020. With its direct presence in over 50 countries, it always has a marking and engraving expert close to you to bring its expertise and know-how in qualifying your application, installing your equipment and training your collaborators.

With Gravograph and Technifor, it has had an established international presence for more than 80 years in the US and Europe and more than 30 years in the Asia Pacific and Latin America.

Designed in France and made near you, its equipment is manufactured and supplied from three production sites in Duluth, Atlanta (USA), La Chapelle Saint Luc, Troyes (France) and Shanghai (China). The company has over 85 percent sales abroad in over 77 countries with 600 plus collaborators worldwide.

It is proud to be present with its equipment with more than 60,000 customers in the world, who trusted Gravograph and Technifor and now Gravotech with high diversity in size and activity. From its smaller retail customers to largest consumer brands, fab labs to professional engravers and largest industrial manufacturers.

Gravotech Ltd
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Why manufacturers benefit from an expert laser marking partner

Part marking is now a core manufacturing requirement

Across modern manufacturing, part marking plays a critical role in identification, traceability and brand protection. Serial numbers, batch codes, data matrix codes and logos are no longer added simply to meet a drawing note; they support quality systems, regulatory compliance, and accountability throughout a product's lifecycle. While the need for marking is well understood, the complexity behind achieving consistent, permanent results is often underestimated.

Laser marking is widely adopted because it delivers durable, non-contact marks across metals and plastics without affecting component integrity. However, achieving the right result depends on far more than selecting a laser. Material grade, surface finish, geometry, contrast requirements and downstream processes all influence mark quality.

Understanding what the mark needs to achieve

One of the biggest challenges manufacturers face is defining what "good" marking actually means. A mark that looks acceptable to the eye may fail automated inspection, become unreadable after coating, or fall short during an audit. An expert laser marking partner helps manufacturers translate identification, traceability, or branding requirements into a clearly defined, production-ready marking process.

This includes advising on mark type, size, depth and location, as well as ensuring compatibility with quality systems and in-service conditions. Addressing these considerations early reduces the risk of rework and late-stage design changes.

Managing the process, not just the laser

Outsourcing laser marking to a specialist partner removes a significant operational burden. Beyond applying the mark itself, a competent provider manages all the practical elements that determine consistency and repeatability. This includes designing and supplying fixtures to protect components and ensure accurate positioning, developing and validating laser parameters and controlling data where serialisation or variable content is required.

Logistics also play a key role. An experienced job shop integrates marking into the wider manufacturing flow, supporting prototype work, small or inconsistent batch runs and overspill capacity without disrupting production schedules.

Why experience on both sides matters

This is where TLM Laser offers a distinct advantage. Operating a dedicated laser marking job shop alongside supplying industrial laser marking systems, TLM Laser understands both outsourced production realities and in-house manufacturing requirements. Knowledge gained from marking real components informs practical decision-making, realistic cycle times and reliable outcomes.

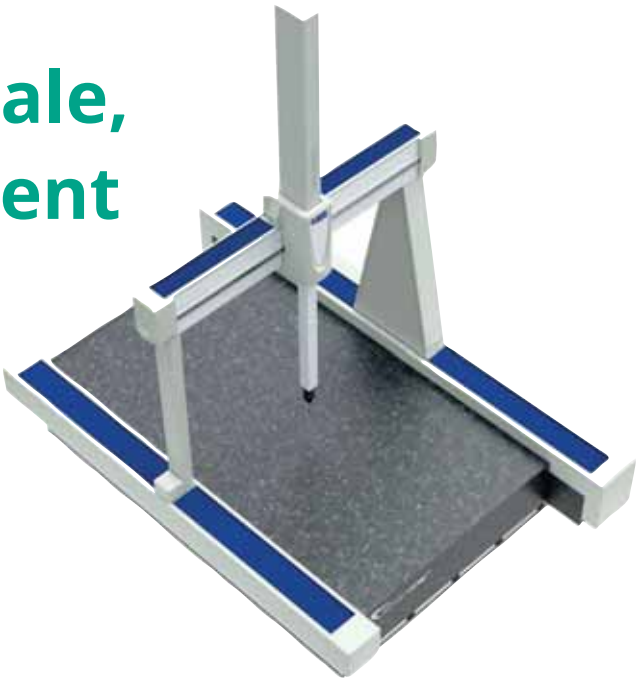
This dual expertise allows TLM Laser to support manufacturers not only with immediate marking needs, but also by helping them understand what is required should volumes, specifications, or long-term strategies change.

Focusing on core manufacturing

For manufacturers, working with an expert laser marking partner means confidence that marking is handled as a controlled, professional process. By outsourcing this complexity, internal teams can remain focused on core manufacturing activities while relying on proven laser expertise to deliver consistent identification, traceability and branding results.

TLM Laser Tel: 01527 959 099
Email: sales@tlm-laser.com www.tlm-laser.com

New CMMs for large-scale, heavy-duty measurement



Two new ranges of bridge-type Coordinate Measuring Machine (CMM), MAXIMA and MAXIMA R, have been launched by LK Metrology to meet a rapidly expanding demand for precise measurement of large, heavy components, often of significant complexity. The innovative machines are ideally suited to quality control applications across industries such as aerospace, energy, automotive, heavy engineering, power generation, transportation and industrial machinery, where consistent measurement results and long-term stability are paramount.

LK's advanced, ceramic materials for the beam and spindle guideways, which provide near-perfect stiffness-to-weight ratio, have been combined with a robust structure to deliver consistent accuracy and repeatable results in the order of 3 µm. Low gap, high-efficiency air bearings and zero-hysteresis drive systems ensure unmatched quality and low maintenance.

The MAXIMA series offers the largest measurement volume on the market, from 12 to 72 cubic metres of any CMM with a granite table. Its high capacity provides outstanding stability, ensuring the machine maintains peak performance even when supporting the heaviest workpieces. Included in the range are 28 models in six table lengths from nominally three up to eight metres and seven variants of bridge cross section up to three metres.

Complementing this offering, the MAXIMA R range features an innovative, twin-rail design engineered for heavyweight workpieces. The structure enables safe and efficient loading of heavy components on the floor and seamless integration with automated transfer systems. A key advantage of these models is that the design eliminates the need for special foundations, while offering exceptional stability, simplified installation and outstanding cost efficiency. The MAXIMA R is available in the same range of sizes as the table-type models.

Both new CMM product lines are equipped with a powerful LK controller and are available in several configurations: either probe-ready for tactile inspection and laser scanning using a PH10MQ Plus multi-sensor indexing probe head with autojoint, or in ScanTek configuration with a multi-sensor REVO2 head to provide 5-axis scanning, or with an SP80 ultra-accurate fixed scanning head with probe builds up to one metre. The PH10MQ-ready models feature a multiwire cable that supports both SLK and L/LC/XC laser scanner technologies, eliminating the need for a separate probe-ready configuration for each type.

The introduction of the MAXIMA and MAXIMA R ranges reinforce LK Metrology's commitment to providing market-leading, multi-sensor solutions for the most challenging metrology applications globally. The machines fulfil a critical need by combining high-precision build at the firm's Castle Donington factory in Derbyshire, UK with very substantial measuring envelopes, providing a reliable and accurate solution for large-scale inspection requirements in manufacturing.

LK Metrology is renowned for innovative metrology solutions and services. The company's products, including CMM, portable measuring arms and metrology software, are used worldwide to control and improve the quality of manufactured components. Its precision technology underpins the process chain from design, development, production and assembly through to quality assurance in global industries such as automotive, aerospace, defence, motorsport, energy, medical and contract inspection.

Established in England in 1963, LK Metrology has an impressive heritage in metrology dating back to the birth of CMM technology. Founded by CMM pioneer Norman Key and his father-in-law Jim Lowther, LK Metrology is credited with many of the CMM industry's firsts including the first bridge-type design, first OEM to integrate computers, first to use a touch trigger probe, first to develop inspection software, first to use all air bearings and granite guideways, first to use carbon fibre composite spindles, first to use microprocessor-controlled drive systems, first to produce a truly thermally stable CMM and first to produce a high-accuracy horizontal-spindle CMM.

In 2018, LK Metrology was relaunched as an independent CMM manufacturer after several years as a division of Nikon Metrology. Headquartered in the UK, LK's CMM development and production are at the company's facility in Castle Donington. Sales and support offices are located in the UK, North America, Belgium, France, Germany, Italy and China, supplemented by a worldwide distributor network.

LK Metrology Ltd
Tel: 01332 811138
www.LKmetrology.com

Mitutoyo

The new SJ-220 portable surface roughness tester is designed like a hand tool for easy on-site use.

Convenient portability and one-touch measurement functionality have been updated for comfortable operability.

Visit us online to find out more or to book your demo.

PRECISION IS IN OUR **DNA**

Mitutoyo's measuring machines and equipment ensuring quality at Purso-Tools

Precision component production for the world's engine manufacturers

In the manufacturing of demanding machined components, precision is of the utmost importance. Maintaining this precision requires advanced quality control, appropriate equipment and smooth collaboration with the equipment supplier. For Purso-Tools, a long-standing partner in measurement devices and services has been Mitutoyo. Purso-Tools Oy, located in Pori on the west coast of Finland, is globally recognised as a manufacturer of heavy-duty camshafts and connecting rods. The company's customers include engine manufacturers and applications for engines in ships and power plants.

Purso-Tools is the world's largest producer of camshafts for heavy industry and, in its sector, one of the few of its kind, especially in Europe.

The company has been steadily building its position since the mid-1990s. Today, the company manufactures camshafts for nearly all major engine manufacturers. Its well-known customers include Wärtsilä, MAN, Bergen Engines (Rolls Royce), Bosch and Caterpillar.

The company's success in global competition, even against in-house production by engine manufacturers, is built on strong specialisation, cost efficiency and the ability to manage large and complex product portfolios.

Uncompromising quality management is an absolute prerequisite for success. "When we talk about quality management, we are at the very core of our operations. In the production of connecting rods and camshafts, we deal with tolerances measured in thousandths of a millimetre. Not a single defective part can be sent to a customer," says Mika Aerikkala.

At Purso-Tools, quality management methods have evolved as customer requirements have grown, and the number of inspections has increased year by year. Investment in quality and its continuous maintenance is an ongoing process at the company. Purso-Tools' commitment to quality is demonstrated by ISO 9001, ISO 14001 and OHSAS 18001 certifications.

In addition, the company holds customer approvals for supplying components to nuclear power plants.

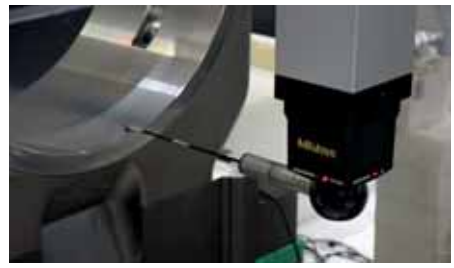
Quality is a necessity, ensured in practice by modern measurement technology. Purso-Tools' long-standing technology and service partner in the field of measurement has been Mitutoyo. The collaboration began in the early 2010s.

At that time, Purso-Tools was looking for a new Coordinate Measuring Machine (CMM) and found the right solution in Mitutoyo, which had recently made significant investments in its Finnish operations. This purchase marked the beginning of a partnership that has taken many forms over the years.

Purso-Tools currently operates three large Mitutoyo CMMs: Crysta Apex 163012, Crysta Apex 122010 and the latest addition, Crysta Apex 574.

In addition to its three Coordinate Measuring Machines (CMMs), Purso-Tools utilises a wide range of other Mitutoyo equipment, including surface roughness testers and handheld measuring instruments. More demanding surface roughness measurements, such as waviness analysis, are carried out in the metrology room using a software-driven Mitutoyo Surftest SJ-500P. Data management, collection and analysis are handled with Mitutoyo's MeasurLink software.

At Purso-Tools, the advanced technology in Mitutoyo machines and instruments is highly valued. For larger machines, key features include dynamic performance and high measuring speed. Yet, in today's world, usability plays a central role and often it's the very factor that differentiates products from various manufacturers.The consistent accuracy of the machines and instruments is ensured through calibration agreements with the equipment supplier.



While the world may be in turmoil, Purso-Tools is experiencing a period of strong growth. Global demand for high-quality engine components is increasing rapidly. As a result, the company's annual turnover has grown from around €12.5 million to €15.5 million over the past couple of years, and this year's revenue is projected to reach €19.5 million.

To meet this growing demand, Purso-Tools is expanding its operations by acquiring new machining technologies and increasing its production space with the addition of a new production hall. There's also a growing need for skilled professionals. Currently, the company employs 65 people and ongoing recruitments are expected to bring that number close to 100.

Mitutoyo, Purso-Tools' partner in measurement technologies, is also committed to continuous development with a customer-first approach.

Having grown significantly in Finland in recent years, Mitutoyo recently relocated its Pirkkala office near Tampere to newly built, spacious and light-filled premises. The size of the new facility nearly doubled and its showroom in Linnakallio now showcases a wide variety of measurement machines and instruments. The facility also offers contract measurement services, including access to the ultra-precise Strato-Apex 9106 CMM in its metrology room.

At the same time, cooperation between Purso-Tools and Mitutoyo continues. Quality management remains a core focus, today and into the future.

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Vision Engineering redefines collaborative inspection with debut of ProteQ VISO at Southern Manufacturing

Vision Engineering, a leading global manufacturer of ergonomic inspection and non-contact metrology systems, will participate at the Southern Manufacturing and Electronics trade show in early February. The company will exhibit its full range of award-winning technology, headlined by the highly anticipated debut of the ProteQ VISO digital stereo inspection system at **Stand G240**.

The new ProteQ VISO system is set to be the key attraction, introducing a breakthrough in digital stereo inspection. It delivers a high-quality, authentic 3D image viewable comfortably on a flat screen. Crucially, the ProteQ VISO includes the innovative capability to securely and instantly share this high-fidelity 3D inspection view with other users, enabling unprecedented levels of remote collaboration and collective decision-making across quality teams.

Visitors to **Stand G240** will have the opportunity to experience Vision Engineering's renowned, patented eyepiece-less technology first-hand. Featured inspection products will include the latest Mantis 3rd Gen, the Queen's Award-winning Lynx EVO, and the ultra-high-definition EVO Cam HALO 4K inspection systems.

Beyond inspection, the stand will host an extensive display of Vision Engineering's precision metrology solutions, including the versatile LVC series, the robust Deltron CMM and the high-speed Swift PRO EDGE zoom non-contact measurement system.

The company encourages all trade show attendees, particularly quality managers, design engineers and production specialists to bring their own samples. The team will provide personalised, hands-on demonstrations using their advanced technology range for both inspection and measurement tasks.

Vision Engineering Ltd is a global leading-edge designer and manufacturer of patented ergonomic stereo optical and digital instruments, used for inspection, manipulation, measurement and analysis of manufactured parts, by many of the world's leading manufacturers and their extended supply chains.

Its contract manufacturing division offers comprehensive contract manufacturing, design and commercialisation packages, giving customers access to the latest technology, as well as a team of experienced designers and engineers.

Vision Engineering
Tel: 01483 248300
https://www.visioneng.com

Aberlink helps Sonardyne discover new depths in CMM technology

When engineer John Partridge founded an underwater acoustics consultancy in a small town in southern England in 1971, he had a vision. He wanted to make operations beneath the waves safer and more efficient. Driven by technical curiosity and a desire to solve real-world challenges, his company, Sonardyne has gone on to provide highly effective and trusted answers to successive offshore, scientific and marine industry challenges.

Over five decades, its innovations have set and then reset the benchmarks of what's possible, first in underwater positioning with products like Compatt, which is still a global byword for acoustic transponders six generations later, and, since the start of the century, equally significant developments in inertial and optic technologies.

From helping to accurately position the very first truly deepwater offshore structures to surveying globally significant historic wrecks, and from detecting tsunamis to broadcasting live video from a submersible, its history and future is one of industry firsts.

Sonardyne's product range is operational from shallow water coastal work to the greatest depths of the oceans. In recent years, it has seen growth in autonomous and uncrewed vehicles. Autonomous Underwater Vehicles (AUVs), Remotely Operated Vehicles (ROVs) and even Uncrewed Surface Vehicles (USVs) are increasingly being used offshore to carry inspection and survey work.

Martin Gregory first got in contact with Aberlink in 2008. The need to improve in-house the quality control of high-precision parts made for underwater navigation systems and Aberlink's reputation for being the easiest to use CMM in the market, lead Martin Gregory to get in contact as he explains: "Our equipment relies on precision to ensure the best positioning and navigation possible. It is designed to operate in the harshest environments, at depths exceeding 8,000 metres below the sea's surface. Every measurement in the manufacturing of our products matters. It is a testament to Aberlink's excellence that we are now investing in our fourth Axiom CMM, which meets our exacting standards for quality."

Since the first purchase of an Axiom too 1200 CNC CMM in 2008, Sonardyne has gone on to purchase another three Aberlink CMMs to keep up with the demands of the business. The latest purchase is the 3rd generation Axiom CNC CMM.

The new Axiom CMM is a testament to Aberlink's commitment to in-house design and manufacturing, a philosophy that has driven the company's success from its base in the picturesque Cotswold hills of Gloucestershire.

This latest iteration features:

- **Enhanced stiffness:** A brand-new right-hand-side bridge assembly with increased Yaxis air-bearing separation delivers greater accuracy.
- **Faster measurements:** Improved drive assemblies enable the new Axiom to measure parts up to 25 percent faster than its predecessor.
- **Shop-floor durability:** The latest linear encoders significantly improve dirt immunity, ensuring reliable performance in demanding environments.
- **Modern aesthetic:** The new Axiom now matches the sleek, contemporary look of Aberlink's Halo and Horizon CNC CMMs, bringing it in line with the rest of the range.

Aberlink's products and services provide customers with remarkable value for money. This has been achieved by producing a fully self-contained business model from day one. Because the company machines all the components for the CMMs themselves, it understands the manufacturing process fully and clever design-for-manufacture ensures reliable products are produced with no redundant costs. All CMMs are assembled on-site in Gloucestershire, where the software is also written in-house. Aberlink is a fully integrated company with minimal external costs and that is why it can offer the amazing value for money.

Martin Gregory concludes: ''The reliability of the Aberlink CMMs has been faultless, we get Aberlink in every year to do our service and recalibration; they update our software to the latest version free-of-cost during the service visit. We're able to load multiple parts on the bed of the CMM and it'll measure the lot in one go. New Aberlink hardware has enabled us to fit a Camera system with CNC collimated light on our latest Axiom CNC CMM. Aberlink's Programming from CAD software enables us to create inspection programs before we've made new parts, minimising any bottleneck when they arrive for CMM inspection. Visiting customers are always very impressed with the CMM setup in our quality department.

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Why the Baty Shadowgraph is still a workshop favourite

With automation and AI-driven inspection systems being the buzz words of the moment, it's easy to forget there is still a light to be cast on more traditional measurement solutions. Walk into almost any engineering workshop and you'll still find one tool quietly holding its own, the profile projector. Shine light through a part and project its shadow onto a screen, it's a simple theory. Yet, that simplicity hides an incredible level of accuracy.

From a tiny turned shaft to a complex turbine blade, the profile projectors, also known as Shadowgraphs to some, magnify every edge, radius and curve, allowing you to check if it's made to spec, within just a few microns.

There's no software learning curve, no calibration anxiety, just a clear, magnified image that tells you everything you need to know in seconds.

For decades, the Baty Shadowgraph has been a trusted name in optical measurement. But today's Baty Shadowgraphs are a world away from the ones first built decades ago. Models such as the SM300 and R600 still use precision optics and rock-solid mechanics, but

now come with digital readouts, CNC stages and optional Fusion software that lets you capture data, compare profiles and even import CAD overlays.

From compact bench-top models such as the SM300 and SM350 to large floor-standing systems such as the R400 and R600, every Shadowgraph is built for precision, stability and ease of use. With screen sizes up to 600 mm, workstage travels up to 450 × 200 mm and 0.5 µm digital resolution, it delivers dependable accuracy where microns matter.

Modern Baty systems blend old-school optics with new technology. Interchangeable lenses, 10× to 100× magnification, dual lighting for profile and surface inspection and advanced Fusion software with edge detection and CAD overlay, make these optical projectors as capable today as ever.

Despite all the advances in metrology, the Shadowgraph remains a go-to for many inspection teams. Why? It's non-contact, so there's no risk of damaging delicate parts, it gives instant visual feedback and it's versatile enough to handle parts that digital probes struggle with.

The Baty Shadowgraph isn't just a machine, it's part of the DNA of precision engineering. It's been there for decades, helping thousands of companies guarantee quality and build reputations for accuracy. It's a reminder that great engineering doesn't always need reinventing. Sometimes, it just needs refining.

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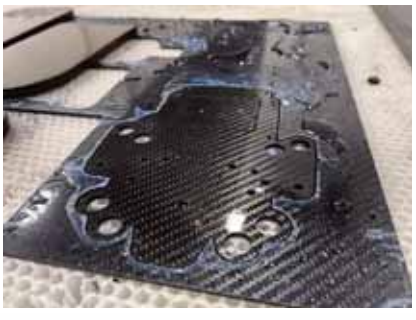
Flow Waterjet Technology used for motorsport, Electronics and general engineering

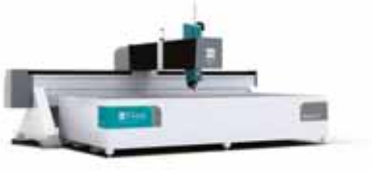
AEC Engineering are a small family run business based on the west side of the historic city of Worcester since 1929, with a rich automotive engineering back-ground, they have diversified in recent years to future-proof their engineering legacy into the fourth generation.

Now catering for motorsport, electronics, general engineering and pharmaceutical customers, AEC Engineering offer modern and cost-effective manufacturing solutions including 5-axis waterjet, CNC milling, turning and fabrication.

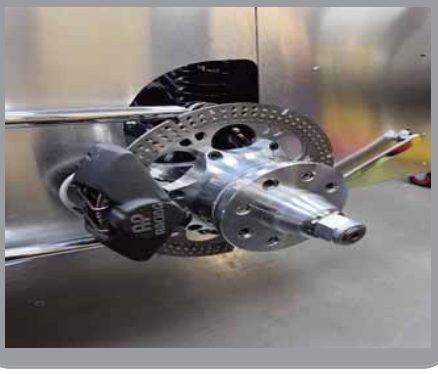
Complete Flexibility
The Flow waterjet offers state-of-the-art technology, making use of high-pressure water and abrasive to cut and shape a wide range of materials, including aluminium, titanium, composites and glass.

AEC Engineering - Hill Climb Championship
To showcase its Engineering capabilities, AEC Engineering has extensively modified and hand built in-house, its own hill climb car which will be driven in the British Hill Climb Championship by George Gwilliam, company machining director.





Full race car redesign with innovative light weight components sourced through their in-house 5-axis waterjet and CNC machining.



Flow Waterjet is very proud to be associated with AEC Engineering and the utilisation of the Mach200 System for their specialised and bespoke work. The Mach200-4020 System, 5-axis Pivot+™ wrist with automatic taper compensation and energy efficient HyPlex® Pump was selected as the ideal solution for AEC Engineering.

Flow International Corporation is the world's leading developer and manufacturer of ultra high-pressure waterjet cutting systems with Flow UK providing locally based technical and customer service to a wide range of Industries.

For further information, please contact:
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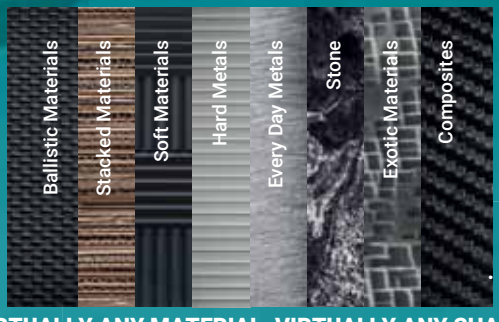

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Start-up company gets 'optimal' results with Kerf Waterjet

Located in County Durham, Waterjet-Tec Ltd is a promising start-up, especially given its recent investment in an Optima O-Series 420 waterjet cutting machine from Kerf Developments. Founded by Co-Directors Terry Stewart and Peter Robinson, the new business is situated near its sister company, Laser Profiling (North East) Ltd.

The serial entrepreneurs recognised an opportunity when a local waterjet firm went into administration. As Peter Robinson comments: "We previously sold a business and I had retired, but a gap in the market for a subcontract waterjet business appeared and it was too good to pass up. We found a facility, looked for a machine and employed experienced staff."

With decades of expertise in the sheetmetal industry, the business partners employed two engineers with extensive knowledge in waterjet cutting. Commenting upon the machine selection process, Waterjet-Tec fellow director Terry Stewart comments: "We identified a market opportunity around two core points. Firstly, there was an opportunity for cutting a wide range of non-metallic materials beyond the traditional laser and plasma remit. Secondly, certain parts across industries such as aerospace, offshore and the military require cutting with no heat generation, as it has a propensity to alter the physical properties and integrity of components."

The key requirements

As a new business buying its first machine, the turnover, order fulfilment and subsequently the reputation of the business would be built upon the first machine. With exceptional flexibility and speed limitations falling on either side of the pros and cons argument for waterjet cutting, Waterjet-Tec looked for a twin cutting head machine with an unsurpassed reputation for reliability and service. A solution that would deliver speed and flexibility.

Peter Robinson adds: "We have decades of waterjet, laser and plasma cutting experience, and what has been a major let down is spares, consumables and service support. However, Kerf has been the stand-out supplier. Its Rochdale headquarters stocks an abundance of spare parts and consumables, so same or next-day service is always assured. In contrast, other vendors have to ship parts from Europe. This often takes at least three days to arrive, and then you have to wait for an engineer to install parts. The situation isn't much better with consumables."

The solution

Doing its due diligence from a position of vast expertise, the fledgling business opted for the Optima O-Series 420 with a 4 by 2 m bed with two cutting heads. Peter Robinson continues: "Despite looking at rival machines, we knew the Kerf machine would be at least 30 percent faster than anything else, giving us a competitive edge as soon as we opened the doors for business. Our team also had first-hand service experience from numerous waterjet suppliers and they immediately recommended Kerf."

The Optima 420 was supplied in April with two cutting heads, each driven by the BFT ECOTRON® high-pressure pump that generates pressure up to 4,000 bar for cutting all material types in thicknesses up to 200 mm. Supplied with the industry-leading BFT hydraulic intensifier pump with a built-in booster and fan cooler as standard, the Optima 420 delivers powerful, precise, repeatable and reliable cutting for production environments.

The benefits

Commenting on the productivity of two high-pressure cutting heads, Terry Stewart confirms: "There are some high-profile MoD and offshore projects that can only be cut with waterjet due to the strict limitations on heat-transfer during processing. With the

twin-head capability, we can cut double the number of parts that our competitors can achieve. This instantly makes us more cost competitive with the bonus of significantly reduced lead times. Our turnaround times can be days, not weeks like competitors, especially on large parts."

Referring to one large sub-sea pipe cutting project, Peter Robinson continues: "We are currently profiling large nylon pipes, and these heavy-duty parts need a stable cutting environment. The machine has a robust steel frame that withstands excessive weight and vibration and accommodates all of our large parts."

In addition to the sturdy base and frame design, the Optima 420 has a robust bridge design with twin-sided drives and digital AC servos on each axis. This offers a rigid CNC platform for the 20 m/min rapid axes acceleration of the machine while dampening vibration and enhancing precision and surface edge quality. The Optima also has a precision 40 mm diameter ballscrew drive that further underpins the precision and stability credentials of the machine.

Commenting upon the market benefits of the Optima 420, Peter Robinson says: "We are extremely competitive on both price and turnaround times due to the twin-head capability. We are even scheduling work to load the machine at the end of a shift to run lights-out. Depending on the job, the machine will run for 10 to 20 hours unmanned and the next step is to look into fitting cameras on the machine. This will help us to monitor, reload and run the Optima for even longer unmanned periods over evenings and weekends."

Software streamlines throughput

The user-friendliness of the CNC control system and the IGEMS CADCAM nesting software on the Optima 420 has also made a significant impact on Waterjet-Tec. Alluding to this, Terry Stewart continues: "The IGEMS system is straightforward to use. It makes programming parts extremely fast and efficient, so we can create programmes while the machine is running. For customers who supply drawings as .STEP and .IGES files, we can add toolpaths, calculate machining times and turnaround quotes for customers in minutes. This gives us a massive advantage over competitors and sets us apart.

"Additionally, the nesting technology minimises material waste and costs whilst the speed and contours of cutting paths are also optimised to streamline production and minimise non-cutting times."

"Like the availability of spares, consumables and any other support we need, Kerf are always available to help us with the software. However, the IGEMS suite is very intuitive and if we do have any challenges, they have a complete library of online video tutorials where we can upskill ourselves."

Concluding on the acquisition, Peter Robinson says: "We are delighted with everything that Kerf has supplied. From the initial discussions to commissioning and ongoing support and consumables, Kerf has proven to be a partner on this journey, supporting us at every step.

As for the machine, we fully expect the Optima 420 to have a very short payback period and our annual turnover will be approaching £1m in the near future, which is a fantastic foundation for a new business to grow."

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How aerospace and defence share the same waterjet advantage

Precision at the intersection of aerospace and defence

Across NATO and allied industries, one principle defines modern manufacturing: precision sustains readiness. Whether supporting flight-critical structures or armour-grade components, engineers demand manufacturing methods that deliver absolute consistency across diverse materials without compromising performance.

WARDJet waterjets meet that mandate. Designed and assembled in the United States, WARDJet systems employ ultra-high-pressure water and abrasive material to achieve cold-cut precision on metals, composites and hybrid assemblies. The result is an integrated cutting solution that supports both aerospace innovation and defence durability with no Heat-Affected Zones (HAZ) or loss of material integrity.

Common challenges, one proven technology

Aerospace and defence programs operate in different sectors but face parallel production challenges: stringent tolerances, material diversity and high-accountability traceability. WARDJet's cold process provides a single, unified capability across these constraints, reducing rework, improving throughput and enabling dependable production under demanding schedules.

The technology behind precision

Every WARDJet waterjet begins with precision built into its core. Each system is constructed on a rigid, stress-relieved steel frame and guided by linear motion assemblies with high-resolution encoders for micron-level accuracy. This foundation ensures consistent performance across metals, composites and hybrid materials while meeting the strict tolerances demanded in aerospace and defence production.

To extend capability, WARDJet offers modular configurations such as 5-axis cutting heads for complex bevels or dual-head setups for high-volume runs. These options increase throughput and versatility without compromising accuracy or system rigidity. The result is a machine platform that grows with evolving mission requirements while maintaining its repeatable precision. Every system is powered by MOVE CNC software, providing full command of tool paths, feed rates and pressure control.

Safety, sustainability and shop discipline

In high-compliance environments, safety and cleanliness are mission priorities. Unlike thermal methods, waterjet cutting produces no fumes, slag, or airborne dust. It requires no post-cut deburring and eliminates the risk of heat-induced deformation.

WARDJet systems support closed-loop water filtration and abrasive recycling, reducing environmental footprint and total operating cost. This aligns with NATO-aligned sustainability frameworks and EHS directives, ensuring that facilities meet both technical and environmental standards.

Built for adaptability and growth

WARDJet's modular architecture scales from compact R&D cells to full-format production systems. Each platform can be configured with automated handling, dual-head operation, or SmartRemove part extraction, all designed to enhance throughput without compromising precision or control. Every WARDJet system is designed for long-term serviceability, allowing operators to upgrade components as mission requirements evolve.

Unified capability in action

Manufacturers across aerospace and defence sectors are implementing WARDJet waterjets to consolidate multiple cutting processes into one precise, cold-cut solution. By integrating waterjet technology into existing production lines, organisations achieve consistent part accuracy, reduced post-processing and reliable material performance across a wide range of substrates.

The strategic advantage: Precision as policy

For aerospace and defence manufacturers, procurement decisions must consider more than throughput. They must ensure interoperability, traceability, lifecycle efficiency and cost certainty. WARDJet's engineering approach supports these operational imperatives through five enduring advantages.

1. Lifecycle economics
Waterjet systems avoid the consumable wear and downtime of thermal tools. With no cutting bits or saws to replace, operating costs remain predictable and systems maintain reliable performance across long production cycles while meeting aerospace and defence quality standards.

2. Digital integration & traceability
Each WARDJet system connects directly with enterprise resource and manufacturing execution systems (ERP/MES). Cut data, operator credentials and time logs can be exported to support part certification, quality documentation, or NATO AQAP standards.

3. Modularity and scalability
WARDJet's modular construction allows incremental expansion, such as longer beds, higher-pressure pumps, or additional heads, without full system replacement. This ensures long-term fleet compatibility and simplifies sustainment across multi-site operations.

4. Partnership & support network
With engineering, assembly, and service based in Tallmadge, Ohio and regional hubs in the U.K. and Poland, WARDJet provides rapid technical response across allied territories. Training, remote diagnostics and field service are delivered by factory-certified technicians, ensuring continuity of expertise and minimising operational downtime.

5. Strategic program alignment
By consolidating aerospace and defence machining on a single platform, organisations streamline procurement, reduce training complexity and maintain a unified qualification trail. This interoperability mirrors NATO's emphasis on standardisation and ensures every cut, component and record meets the same level of precision and accountability.

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PanelOne with Edgecut 3

A modern interface for more efficient cutting

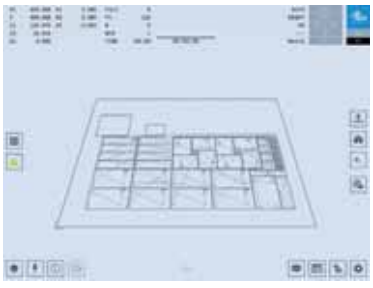
Water Jet Sweden has officially launched the next generation of PanelOne®, now equipped with the new Edgecut 3 interface. The system made its first public appearance at Blechexpo 2025 in October, where it drew strong interest from visitors looking for smarter, more efficient control solutions for advanced waterjet cutting.

Familiar system, now more powerful

PanelOne has long been recognised for its ease of use, thanks to its intuitive touchscreen and joystick design. From the beginning, the focus was on providing a control system that operators could learn quickly while still managing highly complex cutting jobs.

With Edgecut 3, that familiar user experience has been retained, while introducing a wide range of improvements that enhance speed, clarity and operator flexibility.

Built on Microsoft .NET for future development



The new interface is developed on Microsoft .NET, making PanelOne more robust and easier to expand with new functions over time. In total, Edgecut 3 brings over 30 new features and enhancements and several plug-ins that were previously optional now come as standard.

Key new features in Edgecut 3

- DNC mode for handling large programs and enabling faster start-up.
- Extended preview functions, including rapid movements, cutting times, tool displays and part dimensions.
- 3D graphics showing tool paths for all individual X/Z cutting heads, including visualisation of 3D programs.
- Visual block search, allowing operators to click directly on the display to navigate within the program.
- A completely redesigned maintenance page covering updates, diagnostics, parameters, macros, notes and history.
- Customisable colour themes for improved visibility under different lighting conditions.
- Automatic email notifications for error alerts, replacing the previous SMS service.

These updates not only streamline operation but also support improved performance when working with IGEMS' new postprocessor, REV_2.

All new Water Jet Sweden cutting machines are now delivered with Edgecut 3 installed as standard.

For existing machines

- If your system already uses PanelOne and operates on Windows 10 or newer, a software upgrade is sufficient.
- Older machines may require a combined software and hardware update to support the new interface.

If you are interested in upgrading to Edgecut 3 or learning more about the new features, do not hesitate to get in touch with Water Jet Sweden.

Water Jet Sweden develops, manufactures and markets advanced solutions for waterjet cutting and provides a quality aftermarket offer with service and parts. Since 1993, it strives to be the obvious first choice for customers worldwide who seek solutions in waterjet cutting of high quality and high technical content.

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Premium Pedrazzoli saws from Saws UK

Metal cutting demands accuracy, speed and machines that can go the distance. For more than 75 years, Pedrazzoli has built heavy duty saws that deliver on all three. Made in Italy and designed for workshops, its machines provide precise, reliable cuts every time. Saws UK is proud to be the sole UK representative of Pedrazzoli, bringing these premium, heavy-duty saws into workshops across the country. The result is cutting that's faster, quieter and more consistent than ever before. Whether you're working with box sections, tubes, solid bars or custom applications, Pedrazzoli saws offer the reliability and performance your workshop demands.

The story of Pedrazzoli begins back in 1948 in the small Italian town of Bassano del Grappa. Two brothers, Walter and Baldassarre Pedrazzoli, set up a tiny workshop with a simple goal: to build machines that just work. From those early days, the brothers' inventions made life easier for metalworkers. They started with tube benders and cutting machines, solving problems that craftsmen faced every day. Word spread quickly and soon Pedrazzoli machines were found in workshops across Italy.

As the decades passed Pedrazzoli grew alongside Italy's post war boom. The company earned a reputation for durability and precision in cutting machinery and by the 1970s had become one of the bestselling cold saw brands in the UK. Even now, Pedrazzoli remains a family inspired company at heart, building heavy duty, premium machines that combine traditional craftsmanship with modern technology.

Saws UK stock a wide range of Pedrazzoli machines and offer free technical advice to help you choose the right solution.

Circular saws are a key part of the Pedrazzoli range, known for premium build quality and long-term reliability. They are available in manual and semi-automatic models, with some options including feeders for greater efficiency. Each saw is engineered to deliver dependable cutting performance across a wide variety of workshop setups.

Pedrazzoli's manual circular saws are built to last. Their cast iron construction keeps the machine stable, even under heavy use, while the balanced cutting head makes each cut feel smooth and controlled. Depending on the model, you can choose between single speed, two speed or variable speed setups. Mitre versions come with a rotating table that supports shorter lengths with ease, helping maintain accuracy and extend blade life.

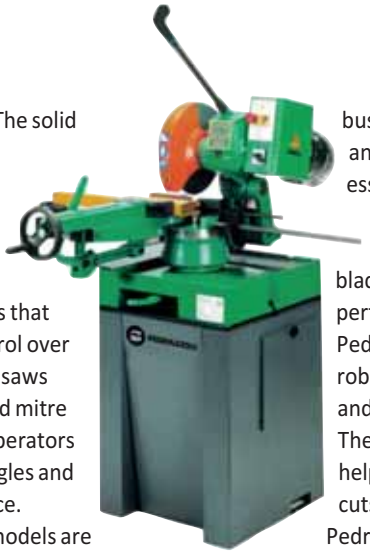
The semi-automatic machines are designed for quick, quiet and repeatable cutting. A refined transmission system keeps everything running smoothly, while variable speed control helps match the blade to the material. The head moves on self-lubricating bushings for steady operation and the anti-burr vice can be positioned on either side. A pneumatic head movement system with a hydraulic brake gives operators control over descent speed, helping improve cut quality and reduce wear. Optional add ons, like blade cleaning systems, reverse rotation and loading tables, allow the machine to be tailored to your workflow.

For workshops that need continuous, hands-off cutting, Pedrazzoli also offers circular saws fitted with bar feeders. These machines automatically continue cutting until the material runs out, making them ideal for longer production runs. They can carry out mitre cuts left and right in semi-automatic mode, with aluminium focused models also able to tilt vertically for angled cuts up to 45 degrees. The cutting table rotates smoothly and locks into common angles, while the feeder grips material securely without distortion. With a 600 mm stroke that can be set to single or multiple steps, operators can

choose between semi-automatic feeding or a fully automatic cycle depending on the job. Pedrazzoli Super Brown 2000 MRM Pedrazzoli circular saws are known for solid cast iron construction, which keeps the machine stable and reduces vibration during cutting. The cutting heads are carefully balanced so operators get a smooth, controlled cut even on longer shifts. Many models offer variable speed settings that let you match the blade speed to the material, helping improve accuracy and blade life. The range also includes machines that can carry out mitre cuts, using a tilting head design that stays reliable even after years of use. Clamping options vary from manual to pneumatic depending on the model and most machines include effective coolant or lubrication systems that help protect the blade and keep cuts clean.

Pedrazzoli Saws can handle a wide range of materials, from stainless steel and aluminium to more complex profiles, while delivering consistent, reliable performance. With manual, semi-automatic and fully automatic models available, there is a bandsaw to suit every workflow, whether it's occasional cuts or full-scale production.

Pedrazzoli's manual bandsaws are built for strength and precision. The solid construction keeps the machine stable during cutting, while the smooth-running blade ensures accurate, clean cuts. Ideal for workshops that need flexibility and control over individual cuts, the bandsaws have adjustable vices and mitre capabilities that allow operators to handle a variety of angles and materials with confidence.



The semi-automatic models are designed for speed and consistency. The saw moves automatically for repetitive cuts, while operators retain control over setup and blade descent. These machines are quiet, reliable, and suitable for medium to high volume work, offering excellent performance across different materials. Features such as adjustable blade speed, tilting heads, and reversible vices make them versatile for a wide range of cutting tasks.

Fully automatic bandsaws are built for continuous, high-volume production. Once the material is loaded, the saw feeds, cuts and returns automatically, reducing operator involvement. These machines are ideal for busy workshops where efficiency and repeatable precision are essential. Optional extras like programmable stops, multiple stroke settings, and automatic blade cleaning further enhance performance and reliability. Pedrazzoli bandsaws are built with robust construction to stay stable and precise even under heavy use. The blades run smoothly and quietly, helping to deliver clean, accurate cuts every time.

Pedrazzoli machines are built to last and deliver consistent reliable performance. With heavy duty construction, precise cutting capabilities and a range of manual, semi-automatic and fully automatic models there is a saw to suit every workshop and every workflow. With long lasting durability and a reputation for quality Pedrazzoli saws are an investment in efficiency, accuracy and peace of mind for any metalworking operation.

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Compact storage and sawing from a single source

Brütsch/Rüegger Metals AG has upgraded its operational efficiency with the installation of Unitower 3.0 (left) and Unitop 3.0 (right) automatic storage and retrieval systems from Kasto.

To meet growing demand, stockholder, processor and distributor Brütsch/Rüegger Metals AG, located in Regensdorf, near Zurich, has upgraded its operations by replacing a semi-automatic honeycomb storage system for housing long stock with fully-automatic Unitop and Unitower storage systems from Kasto, Germany. The Swiss metals distributor has also integrated two additional bandsaws from the KASTOwin series. Similar storage and sawing products and services are available in the UK and Ireland through the group's subsidiary in Kibworth Harcourt, Leicester.

Brütsch/Rüegger stocks 5,500 tonnes of metals of 8,000 different types and sizes. Since its establishment in 1877, the distributor has experienced steady growth and today, with a team of 30 employees, it is one of the leading suppliers of metal tubes, bars and sections in Switzerland.

With the higher level of business came challenges. The honeycomb storage system from the 1980s was reaching the limit of its capability. Inefficient use of space, protracted material retrieval times and safety issues associated with manual operations were hindering operational efficiency.

Problems came to a head with the takeover in 2023 of Walter Looser AG, the leading provider of semi-finished and finished bronze products in Switzerland. Patrick Epp, managing director of Brütsch/Rüegger explains: "Our warehouse stock continued to increase and we eventually reached our maximum storage capacity.

"Expanding the existing warehouse was not feasible due to infrastructure constraints, leaving only one option, consolidation. This led to the initiation of a new project to increase storage capacity, modernise the warehouse and enhance process efficiency."

The new storage systems have improved workplace safety, since material is now transferred automatically to the saws.

The metals specialist had complex requirements for the new installation, which needed to have twice the storage capacity and fit within the 26-metre-wide hall. Additionally, the system had to be reliable, easy to operate and able to employ seven different storage and retrieval stations, allowing simultaneous processing of materials with multiple saws. The capacity requirements presented a particular challenge, as the design had to consider not only the limited floor space but also height restrictions due to an array of solar panels installed on the roof of the hall.

Patrick Epp adds: "We have been using a KASTOwin A 3.3 bandsaw from Kasto since 2018 and we are very satisfied with its performance. It is designed for series cutting and is fast and reliable in operation.

"The saw includes automatic functions, minimises non-productive times and features comprehensive monitoring systems, all of which contribute to efficiency and safety while reducing blade wear, whether for single cuts or large series.

"This level of ongoing efficiency was one of the primary reasons we chose to meet with Kasto at a LogiMAT trade fair in Stuttgart to talk about our requirements."

During discussions there, it became evident that Kasto, headquartered in Achern, Germany, could offer exactly what Brütsch/Rüegger was looking for. The supplier recommended its Unitop 3.0 overhead, horizontally-moving gantry crane system with 521 storage positions for storing material up to 6.5 metres long, and its Unitower 3.0 cassette storage system, with vertically-moving stacker crane, able to accommodate 12 m long material.

Patrick Epp emphasises: "A significant advantage of Kasto over its competitors is that we would receive both storage systems from a single source. All other suppliers could only deliver one or the other."

The new installation in Regensdorf comprises a Unitop with three double-output stations that automatically supply four sawing centres with material, plus a 12-metre long Unitower. Both systems are computer controlled by the KASTOlogic warehouse management system.

To achieve the required capacity, given the limited height of the hall, the systems were sunk four metres into the floor in recesses measuring 35 x 9 metres and 14 x 4 metres respectively. Additionally, the installation includes two new bandsawing centres from the KASTOwin series, models F 3.3 and A 3.6. The new warehousing arrangement, which was completed at the end of 2024 with the commissioning of the final saw, allows the company to store and process its long goods in a single hall, optimising the use of space.

Special products, such as 12 m tubes for the hydraulics industry, are stored in the Unitower. This tower storage system enhances material flow, saves significant space due to its compact design and can handle loads of up to five tonnes per cassette.

The revised storage system has increased workplace safety, since goods are now transferred automatically via a retrieval station to the saws. It represents a significant improvement over the previous solution. Moreover, the reduction in error rates has enhanced customer satisfaction. Faster access to materials leads to shorter delivery times, giving Brütsch/Rüegger a decisive advantage over its competitors in today's just-in-time production landscape.

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Fire suppression for the next generation of manufacturing

With UK subcontract manufacturers continuing to move up the value chain, the materials machined and the risks managed continue to evolve. Increased demand from aerospace, defence, medical and motorsport sectors is driving a sharp rise in the machining of high-performance, high-risk materials such as titanium, magnesium, and zirconium. Alongside this shift comes a growing requirement for specialist, machine-integrated fire protection.

Kraft & Bauer UK is seeing a significant increase in fire suppression system installations across CNC machining environments and a notable rise on machines using high-risk metals and oil coolant. UK manufacturers are having to innovate and become more efficient to remain competitive in today's market. This has accelerated the adoption of approaches such as unattended operation and the machining of more exotic materials, both of which require a far more proactive and engineered approach to fire safety.

Historically, machine fire protection has been most commonly associated with grinding. However, CNC turning and milling machines are increasingly recognised as presenting a comparable, and in some cases higher, fire risk; especially those running for extended periods, frequently unattended, or using oil-based coolants and lubricants.

Manufacturers simply cannot afford the risk of losing a machine. Kraft & Bauer automated fire suppression systems are widely regarded as the gold standard in mitigating this threat, with proven installations preventing numerous machine fires each year. Advanced sensor technology and microprocessor-controlled detection means that fires are identified and suppressed within seconds, protecting machinery, production and personnel from potentially devastating consequences. In the event of a fire, Kraft & Bauer systems can have the cylinders swapped and production up and running in as little as 20 minutes.

Any CNC machine that uses oil-based coolant or lubrication presents an inherent fire risk. Oil mist, vapour and residue inside an enclosed machining area can ignite quickly and create flash fires if exposed to sparks, hot swarf, or abnormal temperatures.

For this reason, the law strongly advocates that any machine operating with oil, regardless of material, must be protected by an automated fire detection and suppression system. Manual firefighting is not a realistic, compliant, or safe control measure for enclosed CNC machines where flash fires can ignite, particularly during unmanned operation. Automated systems are designed to detect and suppress a fire at source before it can escalate beyond the machine enclosure.

Titanium and magnesium are no longer specialist materials reserved for a handful of OEMs. Their strength-to-weight ratio, thermal properties and performance advantages have made them increasingly common across multiple sectors including aerospace and defence, medical manufacturing and motorsport.

Titanium and its alloys are highly reactive when machined, particularly when dry cutting, insufficient coolant is used, or fine chips accumulate in tool enclosures. Fires involving titanium burn at extremely high temperatures and can spread rapidly within seconds.

Such fires cannot be safely or effectively controlled by hand extinguishers or water and therefore require automatic detection and suppression systems specifically designed for combustible metals by law. For subcontractors, this has led to growing scrutiny from insurers, customers, and auditors, many of whom now demand machine-level fire suppression as part of a responsible risk management strategy.

While UK legislation does not mandate a specific fire suppression system for every CNC machine, employers have clear legal duties to manage fire risk effectively.

In practice, where machines use oil, high-risk materials, or run unattended, insurers and enforcing authorities view automated fire suppression as an essential control measure. Following a fire incident, the absence of machine-level protection is often difficult to justify.

Kraft & Bauer UK supports both new machine installations and retrofit projects across CNC turning, milling, grinding, EDM, and laser cutting machines. Systems are engineered specifically for the machine, process, and materials involved, ensuring reliable detection and rapid suppression without unnecessary downtime.

For subcontractors expanding into new sectors or materials, retrofit fire suppression offers a practical way to manage risk without replacing existing equipment. Kraft & Bauer UK are also authorised and trained to service a wide range of fire systems, ensuring that systems remain compliant and in working order all year round.

Fire suppression is no longer simply a compliance consideration, it is a strategic investment in machine availability, customer confidence, and business continuity. When machine uptime is so essential, the risk of fire must be mitigated as much as possible.

The demand for titanium and magnesium components continuing to grow across aerospace, defence, medical, and motorsport sectors and machine-integrated fire protection is fast becoming an industry expectation. Kraft & Bauer UK remains at the forefront of this transition, delivering the most advanced fire suppression systems designed specifically for high-performance manufacturing environments.

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