ENGINEERING subcontractor
NOV/DEC 2026
No. 50
EST. 1978

THE DIABOLICAL SHOP-FLOOR DUO STRIKE AGAIN:

CAN THE TOOL DENTIST FOIL THEIR COSTLY SCHEMES?

SMASHER & SCRAPPER!



FOR ALL YOUR TOOLING REPAIRS & MAINTENANCE

NTR
TOOLING ENGINEERS

01937 845112 SALES@NTRLTD.CO.UK

MORE THAN JUST A MACHINE

XYZ Machine Tools



13 MODELS



8 MODELS



12 MODELS



8 MODELS



8 AFTERSALES OFFICE SUPPORT



7 APPLICATION ENGINEERS



83 MODELS & 350 MACHINES IN STOCK



17 XYZ QUALIFIED SERVICE ENGINEERS

XYZ Machine Tools

01823 674200 | sales@xyzmachinetools.com | www.xyzmachinetools.com

XYZ Showrooms | Livingston | Huddersfield | Sheffield | Nuneaton | Devon | Poland

ENGINEERING subcontractor NOV/DEC 2026

Volume 23 • Issue 6 • ISSN 1742 -5778

Contents

4 News

8 Aerospace Report

14 EDM

16 Feature: Automation

20 Metal Cutting

24 Cutting Tools

26 Special Report: NTR Ltd

28 Feature: Workholding

34 Feature: CADCAM

38 Feature: Laser Cutting

44 Special Report: LVD UK Ltd

46 Feature: Welding

www.engineeringsubcontractor.com

Jan/Feb 2027 - Features:

- Southern Manufacturing Preview
- Automotive Report
- 5-Axis Machining
- Cutting Tools
- Measurement & Inspection
- Metal Marking
- Waterjet Machining
- Sawing & Cutting Off

Published by Roger Barber Publishing

Publisher/Editor:
John Barber
Email: **john@rbpublishing.co.uk**

Production manager:
Anna Rodrigues - 01472 210712
Email: **studio@rbpublishing.co.uk**

Circulation Enquiries:
Email: **circulation@rbpublishing.co.uk**

Accounts:
Jackie Barber
Tel: 07952 650349
Email: **thebarbers12@btinternet.com**

Design & Production:
Roger Barber Publishing

Print:
Holbrooks Printers Ltd,
Portsmouth, Hampshire

Engineering Subcontractor is published six times a year and mailed to a controlled circulation of readers with a legitimate interest in the content.

Roger Barber Publishing stores all business data securely and does not share with third parties.

No part of this publication may be reproduced without express written permission.

The NTR Tool Hospital: Complete care for your precision tooling

For nearly five decades, Wetherby-based NTR Ltd has provided vital support to the UK manufacturing sector. Known across industry as "The Tool Health Heroes", the company has built an enviable reputation for extending the lifespan of damaged cutting tools, reducing costs and eliminating unnecessary workshop waste.

However, the capabilities within NTR's West Yorkshire facility extend far beyond standard cutter repairs. Today, the business operates as a complete "Tool Hospital", offering a trio of specialist services designed to keep machine shops running at peak efficiency.



Alongside the renowned Tool Dentist service, NTR's Tool Surgeon unit specialises in custom design, re-engineering and rapid prototyping of bespoke metal cutting tools. When off-the-shelf tooling fails to deliver required tolerances or complex components demand custom geometries, the team designs and manufactures tailored solutions from scratch.

Completing the lineup is The Driven Tooling Doctor. Driven toolholders and live units represent a significant investment on any CNC lathe or turning centre. NTR provides comprehensive strip-down, precision bearing replacement, dynamic balancing and scheduled maintenance for driven units across all major machine tool brands.

"Whether a shop floor is dealing with a crashed cutter, an urgent need for specialist tooling or a seized live unit, our team approaches every challenge with the same focus on quality and speed," explains Operations Director Sam Wood. "By bringing these core disciplines together under one roof, we give our customers a single, reliable partner for all their tooling needs."

As an employee-owned business, every member of the NTR team has a direct stake in ensuring precision craftsmanship and rapid turnaround times.

Contact NTR today to discover how the Tool Health Heroes can safeguard your production line.

NTR Ltd
Tel: 01937 845 112
Email: sales@ntrltd.co.uk
www.ntrltd.com

... the exciting adventures of The Tool Dentist continue on page 26

Visitors flock to Mills' Innovation Day event

Mills CNC's 'Innovation Day' technology event attracts over 100 visitors and generates significant multi-tasking machine tool enquiries

Mills CNC has announced that its Innovation Day technology event, held at the company's Technology Campus facility in Leamington on Thursday 8th October, was a huge success.

Over 100 visitors attended the one day event and, when there, were able to check out ten advanced DN Solutions multi-tasking machine tools being put through their paces performing a number of challenging machining demonstrations all designed to show-off their high precision cutting capabilities, fast processing speeds and unrivalled flexibility.

Sharing centre stage with the DN Solutions machines and several of Mills' advanced SYNERGi automation systems, that included the company's recently-introduced low-volume/high-mix T4 series, was a Heller HF 5500 FLEX horizontal simultaneous 5-axis mill-turn machine.

Equipped with the Siemens SINUMERIK ONE control and a 24" multi-touch screen, th HF 5500 FLEX on show was equipped with a powerful HSK-T (mill-turn) spindle, 45 kW/12,000 rpm/400 Nm, a 630 mm x 630 mm rotary, tilting table and a 50-tool position ATC.

The machine's "FLEX" designation refers to the machine's table loading configuration which, unlike some other Heller models, is built without an integrated pallet changer but, instead, features fast and flexible table loading access with direct workpiece set up and the ability to integrate the machine with a myriad of external linear or rotary pallet systems for increased productivity.

The HF 5500 FLEX, already a firm favourite with aerospace, automotive and power generation component manufacturers, was set up to machine a large complex aerospace blisk from solid throughout the event.

The machining demonstration was augmented by Heller UK's general manager, Tom Hughes, giving a key note presentation to attendees that covered the Heller brand and the company's range of high-end technology solutions, as well as a closer, in-depth look at the HF 5500 FLEX.

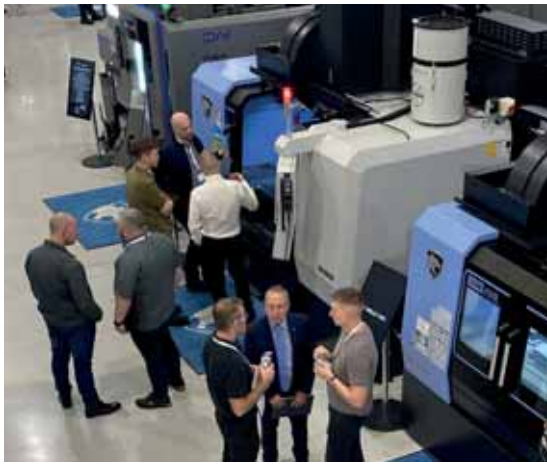
Tony Dale, Mills CNC's Group CEO says: "The Heller machine proved to be a popular draw for visitors and, along with several DN Solutions machines, that included two DVF 4000 simultaneous 5-axis machining centres and a DNX 2100S mill-turn machine, were the technology stars of the show.

"I would like to thank staff at Heller, the team at Mills CNC and, of course, all of the 100+ visitors who attended the event for helping to make our Innovation Day technology event such a success.

"We are now actively following up all the leads and enquiries and I am confident that many of them will, in the next few weeks and months, be transformed into actual sales."









Heller UKs general manager, Tom Hughes.

Mills CNC Ltd
Tel: 01926 736736
Email: sales@millscnc.co.uk
https://www.millscnc.co.uk



Open House 2026

Proudly designed and manufactured in the UK



Explore. Experience. Innovate.

1-3 December

European Technology Centre, Worcester

- UK launch of new automation innovations
- Complete cut-to-bend manufacturing solutions
- 19+ machines running live
- Exclusive ex-demo machine offers
- Behind-the-scenes factory tours

REGISTER TODAY

mazak.com

Mazak



Renishaw celebrates 15 years of development at Miskin

This year, engineering technologies business Renishaw is celebrating the 15th anniversary of the purchase of its Miskin site in South Wales and the completion of the first phase of a further £70 million development of the facility.

Announced in 2022, this is the largest capital investment project in the company's history, which will ultimately double the size of the Miskin site, giving the company space to expand manufacturing capacity to meet rising demand for its leading precision metrology, additive manufacturing and position measurement products.

Renishaw has been committed to the manufacturing of its own products since its formation and uses many of these products within its machining facilities. While much of its production is performed in the UK, at its Miskin, Stonehouse and Woodchester sites, it has carried out the assembly of metrology products in Ireland since 1981 and also has a significant operation in Pune, India.

Renishaw completed the acquisition of the 193-acre site, situated to the west of Cardiff, from Robert Bosch Ltd in September 2011. It started modest operations in May 2012 with a single production shift, having refurbished around 15 percent of the 416,000ft² (38,675 m²) total building space, which primarily consisted of two large production halls.

By the time of the formal opening of the facility in October 2012 by then First Minister of Wales, Carwyn Jones (now Lord Jones), employee numbers were around 25, compared to around 950 today. Following the completion of the first development phase, Hall 3, usable space has grown to 617,000ft² (57,350 m²) and will total 880,000ft² (81,765 m²) once Hall 4 is completed and operational, establishing the Miskin facility as one of the UK's largest advanced manufacturing sites.

The success of the Miskin facility justifies the confidence expressed by Lord Jones at the time of the opening, who said: "Today is a significant event in the history, not just of this site, but for the whole of South Wales."

Renishaw has continued to invest throughout its tenure, with around £150 million spent to date on acquiring the site, refurbishing legacy buildings, developing the new halls and installing advanced manufacturing equipment. The latter currently includes 134 CNC machine tools producing around one million parts per month, three PCB assembly lines, robotic assembly and automated warehousing, with more equipment on order to support customer requirements.

Manufacturing capacity for future growth

This latest phase of development demonstrates Renishaw's long-term confidence in the UK and its commitment to creating highly skilled jobs and supporting economic growth for years to come.

Hall 3 is used to manufacture Renishaw's metal Additive Manufacturing (AM) systems, AGILITY Coordinate Measuring Machines (CMMs) and also houses a multimillion-pound automated storage and retrieval warehousing system. The company is currently experiencing strong demand for its AM systems, notably from the Aerospace and Defence (A&D) sector and is also seeing growing demand for its high-precision multi-sensor CMMs used to inspect complex components, including applications in the energy and A&D sectors.

Hall 4 was constructed as a shell building, with its future utilisation dependent on sales demand and capacity requirements. Due to exceptional demand for Renishaw's position encoders from manufacturers of semiconductor equipment, driven by the growing adoption of Artificial Intelligence (AI), some of that additional capacity is now required and Hall 4 will be partially occupied over the coming months.

To support customers in this important sector, the company is also increasing its capital expenditure on equipment, especially new machine tools, electronics production and automated assembly.

Steve Oakes, director of position measurement, said: "Our encoders are used at all stages of the semiconductor production process, from manufacturing silicon wafers to packaging and testing individual devices. The semiconductor sector is highly cyclical and we are currently seeing a 'super cycle', which is driving very high levels of investment across the entire supply chain."

Energy and sustainability

Beyond increasing manufacturing capacity, the



development of the new halls has been designed to deliver long-term operational and environmental benefits, supporting Renishaw's wider commitment to achieving Net Zero greenhouse gas emissions across Scopes 1 and 2 by 2028. The company's long-term ambition is for all buildings at the Miskin site to operate at Net Zero and both new halls have been designed to achieve Net Zero Carbon in Operation.

The high-performance buildings require significantly less energy than conventional industrial facilities, reducing operating costs and carbon emissions from the outset. Enhanced insulation in the walls, roofs and floors delivers thermal performance well beyond current building regulation requirements, while high-performance glazing minimises heat loss and reduces the energy required to maintain comfortable indoor conditions throughout the year.

Heating and cooling are provided by highly efficient electric heat pump systems, which generate multiple units of heating or cooling energy for every unit of electricity consumed. The system delivers approximately four units of heat and six units of cooling per unit of electricity, making it substantially more energy efficient and lower in carbon emissions than conventional gas-fired systems.

A key feature of the Miskin expansion is its extensive use of on-site renewable energy generation, delivering an estimated 200MWh of clean electricity each year. Where additional electricity is required, renewable energy tariffs are used to further reduce the site's carbon footprint.

People, skills and wellbeing

Alongside the manufacturing expansion, Renishaw has also invested in a new employee wellbeing centre, which includes a spacious restaurant, fitness suite and a range of breakout areas with flexible seating, providing spaces for collaboration, informal meetings and quiet relaxation.

The wider development has also enhanced the site's outdoor environment, with a strong focus on health, wellbeing and biodiversity. Working alongside landscape architects, Renishaw has created a range of landscaped external spaces, including a large central garden featuring outdoor dining areas, lawns and ornamental planting connected directly to the wellbeing centre.

Additional breakout and picnic areas have been incorporated throughout the site, including spaces overlooking a large wetland basin and a 2 km perimeter walking route designed to encourage outdoor activity and wellbeing.

Renishaw is highly respected for its longstanding early careers programmes and its commitment to developing future generations of engineering talent. Its Science, Technology, Engineering and Maths (STEM) education outreach programme in the South West of England and South Wales supports both primary and secondary schools and the Miskin site includes a dedicated education centre that supports the curriculum for STEM subjects.

The Miskin expansion has provided valuable opportunities to develop the skills of Renishaw's apprentices and graduate engineers who have played an active role throughout the project. They have gained first-hand experience of delivering a major industrial development and project engineering apprentices were embedded within the design teams responsible for the new development, contributing to layout planning, coordinating with multiple business functions, attending regular site visits and supporting the design of office and workshop facilities.



Commitment to the future

The expansion of the Miskin site represents a major long-term investment in UK manufacturing, sustainability and skills development. It reinforces Renishaw's commitment to South Wales and the UK while providing a modern, low-carbon manufacturing environment that showcases the best of British engineering. As the site continues to evolve, the new facilities will play a vital role in supporting innovation, reducing carbon emissions and creating high-quality employment opportunities for years to come.

Jim Long, director of group manufacturing, concludes: "The strong growth we are currently seeing has highlighted the importance of in-house manufacturing and the control it gives us in meeting our quality, cost and delivery targets. This commitment to manufacturing is exemplified by the investment that we have made in Miskin over the past 15 years and I would like to thank the many people from across our business who have supported the development of this world-class facility.

"A key aim of our facilities is to create an attractive and enjoyable working environment that inspires employees while creating a world-class environment that impresses visitors and presents a positive image of manufacturing."

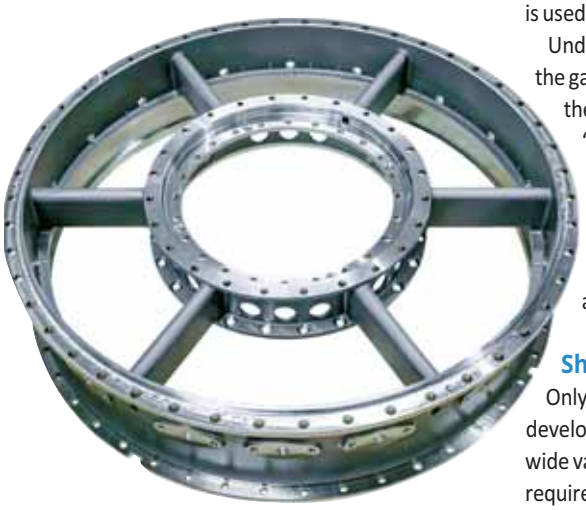
The significant ongoing investment by our Board to increase our production capabilities demonstrates a huge vote of confidence in our manufacturing operations and people, at an exciting time for the business."

Renishaw plc
Tel: 01453 524524
www.renishaw.com

Process expertise in turbine manufacturing

At the Aerospace & Turbine Competence Centre (ATCC) in Rorschacherberg, Switzerland, Starrag develops, tests and optimises complex machining processes. Recently, the facility has begun manufacturing casings for mobile gas turbines under a contract with an American customer. For Starrag, this is essentially an R&D project.

For many decades, Starrag has built process expertise in turbine manufacturing at its headquarters in Rorschacherberg, knowledge that the aviation and energy industries worldwide are putting to good use. After all, Swiss mechanical engineers are primarily suppliers of manufacturing solutions.



Starrag secures this business through contracts for testing and small-batch production, which customers use to manage production peaks. A current order is being manufactured at the ATCC. Starrag is responsible for the complete machining of a small quantity of housings for various gas turbines for the American customer.

The customer also recognises that Starrag is not a traditional supplier. The request was made out of necessity because small-batch production was no longer economically viable for the previous supplier and no other service provider with the necessary expertise and machinery could be found.

Starrag, on the other hand, can use its ATCC facility in Rorschacherberg for most of the work, as it offers ideal conditions for machining casings. Covering approximately 2,000 m^2, the facility is equipped with the latest 4- and 5-axis Starrag machining centres. In addition, experienced application specialists and developers are on-site.

Gas turbines typically consist of several stages. This includes the air inlet, the compressor, usually a multi-stage unit, the combustion chamber, the turbine, which converts the thermal energy of the hot gases into mechanical or electrical energy and the exhaust. This is also the case with the smaller casings, which require six different casing components for their housing. The newer generation includes an additional casing.

Each of the rotationally symmetric casings must meet different requirements and vary in size and geometry. The materials also vary depending on the prevailing temperatures. Titanium is used in the cold section, while inconel is used in the hot section at up to 2,000° Celsius.

Under the contract, Starrag will manufacture the gas turbine housing components and ship them to the United States as shipsets. A 'shipset' refers to a complete set of casings for a turbine.

Ten shipsets were delivered in 2025. Sophisticated production planning is required to consider machine utilisation and the supporting processes.

Short preparation time

Only six months were available for technology development. Not exactly abundant, given the wide variety of casings, each with very different requirements. These range from materials that are difficult to machine to limited access to certain features, such as holes. To position attachments such as blades with precision, tight tolerances must be maintained and a high degree of surface finish achieved.





In addition to machining on Starrag machines, supplementary work is needed. Pressure tests are required for deep-hole drilling. Welding, EDM, heat treatment, hardening and Cerakote coating are outsourced to certified partners, as is the Fluorescent Penetrant Inspection (FPI).

Critical one-time costs

Technological development was also constrained by economics. After all, Starrag didn't just want to gain expertise. One-off costs were a major factor and the clamping device was among them.

For this purpose, a matrix is marked on the pallet to specify the clamping positions for each casing. In this process, the same grooves are always used, but different standard vertical clamping elements are employed. This allows an experienced operator to reconfigure the device quickly.

Further in-house developments were necessary to ensure efficient machining. Stanislav Stankevich, who has extensive expertise in the field of casings, was responsible for overseeing the process and the tools, as well as optimising the equipment.

At the end of the manufacturing process, each part is marked with a serial number in accordance with regulations. Bolts, pins, T-nuts, and supplied components are installed. The shipset is then placed in the reusable packaging in which the blanks were originally delivered. The casing set is then shipped to the United States, where the turbine is fully assembled and tested.

Starrag UK Ltd
Tel: 0121 359 3637
Email: info-uk@starrag.com
www.starrag.com

NYDALOXE PRECISION

PRECISION TOOLING PACKAGES

Tool Holding Without Limit





MAXIMISE THE POTENTIAL OF YOUR MACHINE TOOL INVESTMENT

CHOOSE A GEWEFA UK TOOLING PACKAGE

Whether you are a machine tool supplier looking to add value or an end user aiming for immediate production of top-quality components, NYDALOXE PRECISION provides the definitive toolkit for success.

Our comprehensive packages are engineered for versatility and longevity, ensuring seamless integration with any make of machining centre, lathe or grinding machine.

We can supply the essential, high-performance toolholders required for the most complex,

- **FOR MACHINING CENTRES:** Tailored back-end tooling packages - BT (30, 40, 50), CAT, and HSK or DIN equivalents, including finely-balanced, high-spindle-speed variants. Face-and-taper chucks, hydraulic chucks, shrink-fit tooling, tapping chucks, angle heads, speeders, spindle monitoring. High-strength pull studs.
- **FOR LATHES:** Static and driven toolholding packages for VDI or BMT turrets, quick-change systems, hydraulic adapters, maintenance tools.
- **FOR BOTH:** ER16, ER25, and ER32 collet chucks for maximum grip and minimal run-out, whether for workholding or toolholding. Wrenches, tool storage.

NYDALOXE PRECISION LTD, 28B Southwick Road, North Bradley, Wiltshire, BA14 0SJ
Tel: 01225 811666 Email: sales@nydaloxeprecision.com Web: www.nydaloxeprecision.com

EWS Tool Technologies · FAHRION PRAZISION · GEWEFA · KEMMLER · OTT Spanntechnik JAKOB · BOMULTI · rineck Werkzeugtechnik · WENDELtools TECHNOLOGY YOU CAN TRUST

New machine delivers additional capacity, flexibility and process efficiencies

Mills CNC, the exclusive distributor of DN Solutions' and Zayer machine tools in the UK and Ireland, has recently supplied Rapid Precision Engineering, a leading aerospace component manufacturing and chemical process subcontract specialist based in Huyton, Liverpool with a new DN Solutions' vertical machining centre.

The machine, a small and compact FANUC-controlled DEM 4000, equipped with a 7.5kW/ 8,000 rpm spindle, a 20-tool ATC and supplied with a Nikken (7" chuck) CNC202 4th-axis rotary table, was installed at the company's 15,000 sq. ft. facility in July 2026. Since its arrival, it has been put through its paces machining literally thousands of small, high-precision landing gear fasteners as well as a number of other high-accuracy and high-integrity aerospace components.

Rapid Precision was established in 1993 and in its early days started life as a generic precision subcontractor machining and supplying finished components to a diverse range of customers. In 2003/04, the company made the conscious decision to focus on the aerospace sector and specialise on machining, treating and supplying high-precision components to a number of UK-based landing gear customers.

To achieve its ambitions and grow the business, Rapid Precision has invested in, and maintains, a well-resourced machine shop and has a number of advanced CNC machine tools at its disposal. The company has also invested heavily in developing a number of in-house 'special' processes and treatments that have helped Rapid Precision further differentiate itself in the aerospace market and strengthen its position in customers' supply chains.

The company's transformation, certainly over the last 15-years or so, has been remarkable and today aerospace work accounts for over 95 percent of the company's annual turnover.



As such, the company systematically monitors and reviews the performance of its machine shop to ensure it can achieve and meet the high-quality and fast turnaround demands of its aerospace customers.

Since 2001, Rapid Precision has developed close relationships with Mills CNC and, prior to the arrival of the latest DEM 4000, had invested in five new CNC lathes and three new vertical machining centres from the company.

Paul Brennan, owner and director for Rapid Precision says: "We have a strong partnership with Mills CNC and the machines they have supplied to us in the past, are reliable and deliver excellent cutting performance, high precision and machining flexibility. We acquired our first three (Puma) multi-tasking lathes from Mills in 2001, 2004 and 2007, respectively and all three are still going strong.



"As a consequence, whenever we are in the market for a new CNC lathe or machining centre we invariably make Mills CNC our first port of call."

One of the machines Mills supplied to Rapid Precision in the recent past (2021) was a DNM 4500 vertical machining centre equipped with a Nikken 4th-axis rotary table. This machine, has added another string to the company's bow enabling it to machine complex, high-precision parts in a single setup.

Paul Brennan continues: "The DNM 4500 has





helped us improve our productivity and process efficiencies. The machine's 4th-axis unit enables workpieces to be rotated precisely, ensuring exact positioning and repeatability, and reduces the need for repositioning and re-clamping operations."

Rapid Precision determined that it would not duplicate its previous DNM 4500 investment but, instead, would opt for the smaller DEM 4000 machining centre with a Nikken 4th-axis unit.

"We needed the 4th-axis capability but didn't need a machine with such a big table," explains Paul Brennan.

"Because we had previously invested in a new DEM 4000 from Mills CNC in 2020, we already liked and were well aware of, the machine's capabilities.

"By investing in a second DEM 4000 and equipping it with a 4th-axis unit, we were confident that programs and processes that we had developed for machining small parts on the DNM 4500 could be transferred over and used on the DEM 4000.

"This solution would not only provide us with additional machining capabilities but would also help free-up capacity on the DNM 4500, a real win win situation."

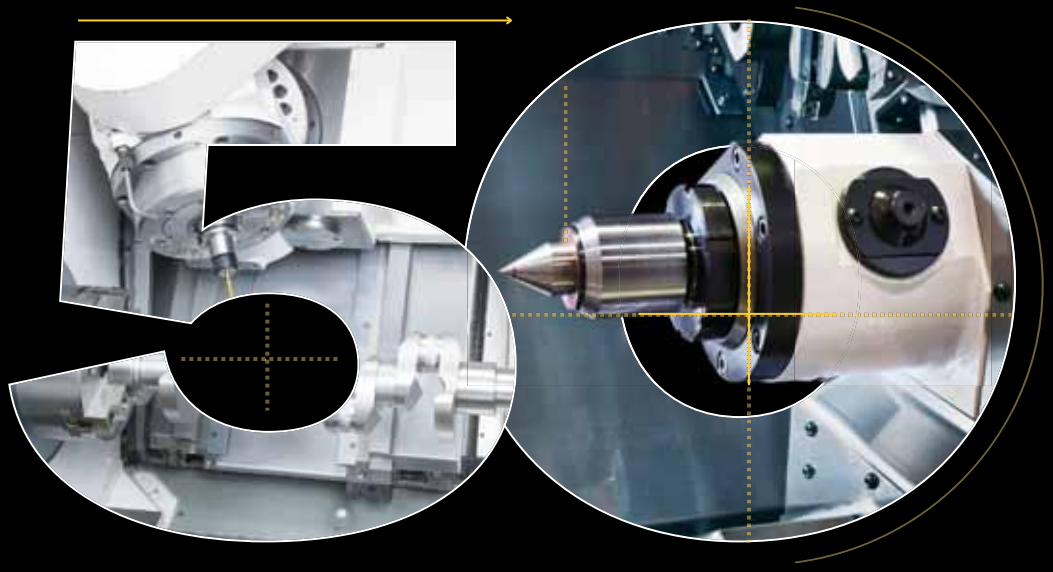
The company approached Mills CNC in May 2026 with its requirements and, following discussions with sales and technical staff, placed the order for a new DEM 4000 equipped with the Nikken table shortly afterwards.

Mills CNC Ltd
Tel: 01926 736736
Email: sales@millscnc.co.uk
https://www.millscnc.co.uk

YOU ARE INVITED

OPEN HOUSE

18TH-19TH NOVEMBER 2026



YEARS TOGETHER

1976 | 2026

OKUMA + NCMT

SECURE YOUR PLACE

Scan the QR code or visit:
www.ncmt.co.uk/events/50-years-okuma/

WWW.NCMT.CO.UK
Siskin Drive
Coventry CV3 4FJ
T +44(0)2476 516 600



How MT Aerospace is using GROB's COSERA MES System to prepare Its production for rising volume

The aerospace industry is experiencing an upswing. New launch vehicles, more satellite launches and increasing demands in the aerospace and defense sectors are forcing companies to realign their production. MT Aerospace is also facing this trend.

Headquartered in Augsburg, Germany, the company develops and manufactures, among other things, tanks and structural components for the European Ariane 6 launch vehicle, as well as components for satellites, the aviation industry and the defense sector. As the industry grows, so do the demands on production. Manufacturing that once involved relatively small production runs is gradually evolving into industrial-scale production with significantly higher output volumes.

For Tobias Hannen, engineer for digitalisation of industrial processes/project manager Space International at MTA, it is clear that this transformation cannot be managed with new machines alone. He states: "In the past, we tended to manufacture small batches. Today, we're talking about several thousand components per year. This completely changes the requirements. Processes must become more transparent and our employees must know at all times what tasks are coming up and how they can prepare for them."

To create this transparency, MT Aerospace opted for GROB's COSERA Manufacturing Execution System even though the company does not have a single machine from the Mindelheim-based manufacturer in operation.

A system that fits the production

When MT Aerospace was looking for a replacement for its existing MES, there were several vendors to choose from. The existing system no longer met the requirements of the growing production. The company was therefore looking for a solution that would integrate seamlessly into the existing system landscape while offering sufficient flexibility for future requirements. "We looked at several providers," recalls Tobias Hannen. "In the end, the deciding factor for us was that GROB understood our processes very quickly. During our discussions, we didn't have to spend a lot of time explaining the challenges we faced. It was immediately clear that they possessed manufacturing expertise."

Another advantage was the tight integration with SAP. Modifications to work plans or additional work steps are applied directly, without the need to maintain information multiple times. "That's exactly what we wanted to achieve. When something changes in SAP, that information should reach the operator immediately. That saves time and prevents misunderstandings," says Tobias Hannen.

The fact that GROB uses the software in its own production and that the MTA project team was able to visit reference customers gave them even more confidence. "It was important for us to see the system in action, not just in a presentation. At the reference customer's site, we were able to speak with the users and see how COSERA is used in everyday operations. These insights were invaluable in helping us make our decision," says Tobias Hannen.

Traceability is not an option, but a requirement

The aerospace industry imposes the highest standards for quality and documentation. Nearly every component manufactured at MT Aerospace has a unique serial number. Every processing step must be fully traceable. "Our customers expect complete traceability," explains Tobias Hannen. "We must be able to say at any time which employee worked on which component and where that component was later used."

GROB was able to deliver exactly this level of transparency. With COSERA, all the information is centrally available to MTA. "Today, we can see at a glance where an order is in the process and whether there are any delays. In the past, we had to search through paper job tickets to find this out," recalls Tobias Hannen.

From gut feelings to real-time data

With MT Aerospace's rising production volumes, it is no longer sufficient to track production status via paper work orders or individual status updates.



Today, a glance at COSERA's production monitoring system is all it takes. "We can see in real time where our products are, what their status is and whether any deviations are occurring. This allows us to react much more quickly," says Alexander Müller, production manager for large tank manufacturing at MTA.

Today, downtime between individual operations can also be analysed with precision. This allows MT Aerospace to identify early on when bottlenecks are developing or when backlogs are beginning to form in specific areas. "We can see very clearly where products are getting held up and at which piece of equipment a bottleneck is developing. This enables us to take corrective action before the delays affect the entire production process," says Alexander Müller.

Information where it's needed

Digitalisation benefits not only production managers but, above all, the employees working at the machines. In the past, they often had to switch between different programs to access drawings, bills of materials, or measurement data. Today, COSERA consolidates all information directly within the job order.

Marco Diener, a machine operator for the FSW welding system at MTA, describes the difference in his day-to-day work as follows: "When I arrive at the system in the morning, I can immediately see what tasks are pending and which components will be processed next. Drawings and work instructions are stored right there. In the past, you had to open several systems to access this information."

Feedback can also be recorded much more quickly thanks to COSERA. "Today, I can log machine times or setup times with just a few clicks. That saves time and makes the work easier," explains Marco Diener.

MT Aerospace had originally planned about two and a half years for the implementation of the new system. Just three weeks after the project began, COSERA was already running on the company's servers. "We were able to show the system to employees very early on. That was important to us because we wanted to involve them in the project from the very beginning," emphasises Tobias Hannen.



Following a pilot project in additive manufacturing, the rollout to other production areas proceeded step by step. Throughout the entire implementation, the project teams from MT Aerospace and GROB worked closely together. "We held regular workshops and were able to discuss our requirements directly. Many topics concerned not only the MES but also SAP and our quality management system. It was precisely this openness in our collaboration that helped us a great deal," recalls Tobias Hannen.

Software that works independently of the machine park

The project demonstrates that GROB's digital manufacturing solutions are not tied to a specific machine manufacturer. MT Aerospace operates a heterogeneous machine landscape comprising a wide variety of manufacturers. COSERA connects these systems and creates a common database. For GROB, this is no longer an isolated case. More and more companies are facing the challenge of scaling up their production from single-unit or small-batch runs to higher volumes. It doesn't matter which machines are already in place. What matters is transparency across all processes.

Optimally positioned for the future

For Tobias Hannen, the project was never just about implementing new software. The goal was to prepare production for future requirements over the long term. He concludes: "Anyone selecting an MES system today shouldn't focus solely on current problems. What's far more important is the question of where the company wants to be in five or ten years. That's exactly what should guide the choice of solution.''

GROB Machine Tools UK Tel: 0121 366 9848
Email: info@uk.grobgroup.com www.grobgroup.com



Precision in practice

How NCMT and Delta XD are redefining metrology capability with Makino EDM



For metrology specialists, accuracy does not stop at the surface. Customers in aerospace and defence require full validation of internal geometries, material integrity and casting quality. This creates a fundamental challenge. Measurement technology can capture external form with exceptional fidelity, but accessing internal features without compromising the part remains a limiting factor.

Delta XD faced exactly this gap. As a business focused on advanced inspection and metrology, the requirement was clear: introduce a capability that could section complex components with minimal material loss, while preserving the integrity of the data.

This requirement led them to NCMT and the implementation of the Makino U6 H.E.A.T. Wire EDM. Lee Griffiths, head of sales & business development at Delta XD, explains: "We had a very specific requirement to support a customer in sectioning some finely detailed turbine components for quality control purposes. The need to split parts very precisely, without losing material, was a key focus for us."

Traditional approaches relied on multiple cuts or outsourced processes, often introducing inefficiencies and limiting control. He continues: "By doing something in one cut versus doing it in three, four or five, from a metrology and inspection point of view, it's much less work. You've got fewer parts to reconstruct digitally and a more accurate representation of the original component."

This was not simply about adding machining capability. It was about integrating precision cutting into a metrology-driven workflow, where every micron matters.

The solution: Makino U6 H.E.A.T. and NCMT expertise

To meet this requirement, Delta XD partnered with NCMT to implement the Makino U6 H.E.A.T. wire EDM. The decision was driven by a combination of technical capability, machine quality and confidence in the supplier.

Jon Marshall, area sales manager at NCMT, outlines the starting point: "They needed to cut components into sectional views for inspection. The key was doing that with the smallest possible kerf, so you don't lose material and you get a true representation of what's inside."

Wire EDM, often described as an electronic bandsaw with micron-level precision, was the ideal process. However, not all EDM platforms are equal. For a metrology-focused application, three factors were critical, precision, cutting efficiency and surface integrity.

The Makino U6 H.E.A.T. addressed each directly. Jon Marshall explains: "The machine will cut to four microns. That level of precision is what makes it suitable for this kind of work."

The machine's ability to run fine wires, down to 0.1 mm diameter, enables extremely narrow kerf widths. This minimises material loss and preserves critical features for inspection. At the same time, the U6 platform offers a larger working envelope than comparable machines, allowing Delta XD to handle both small intricate components and larger castings within a single system.

Beyond geometry, the U6 H.E.A.T. technology is central to performance. Rather than relying on high power alone, Makino uses controlled high-energy pulses to optimise cutting efficiency.

NCMT's Jon Marshall describes the principle: "We utilise high energy rather than just high power. That means we get a higher removal rate, but with lower wire wear and better surface quality. You're cutting faster, with less damage and lower consumable costs."

This approach is particularly important for metrology applications. Reduced recast layers and improved surface finish ensure that sectioned components remain suitable for detailed inspection, including material and structural analysis.



Daniel Lainchbury, chief operating officer at Delta XD.

The machine's dual flushing system further enhances consistency. By maintaining optimal dielectric flow even when cutting complex geometries, it ensures stable cutting conditions and repeatable results.

For Delta XD, these capabilities unlocked a new way of working. "We've developed a process that combines 3D scanning with adaptive machining. We're independently driving the axes to create complex 3D cut paths, which means we can open parts in a way that simply wasn't possible before." Daniel Lainchbury, chief operating officer at Delta XD, explains.

Just as important as the machine itself was the speed and quality of installation.

Jon Marshall highlights the turnaround: as the Makino U6 H.E.A.T. was already in NCMT's Coventry showroom, they were able to act quickly. He states: "From purchase order to install was around ten to fifteen days, including training. It was quick and really simple."

Daniel Lainchbury admits there were initial concerns from Delta XD, but NCMT went the extra mile to ensure the whole process ran smoothly. He says: "I was nervous that we wouldn't have it in on time, or that training wouldn't be sufficient. I'm pleased to say I was proved wrong. The whole process was smooth and we were operational almost immediately."

The results: A new standard for metrology capability

Since installation, the impact on Delta XD's offering has been significant. The ability to perform precise, complex sectioning in-house has transformed both capability and competitiveness. Daniel Lainchbury notes the immediate effect: "Machine utilisation is quite high right now and enquiries have grown. We've definitely seen an increase in demand for this approach."

By reducing multiple cuts to a single operation, Delta XD has streamlined its inspection workflow. Fewer sections mean less reconstruction, improved accuracy and faster turnaround times. Daniel Lainchbury adds: "The overall time to complete inspections is much reduced and the amount of data we can present is greater because we're seeing more of the part in its original state."

This has also strengthened relationships with high-value clients. The ability to validate internal geometries with greater confidence supports design verification and performance analysis in critical applications.

Beyond efficiency, the move to in-house EDM capability has provided strategic control. Lee Griffiths explains: "We're now the masters of our own destiny. We're not relying on subcontractors and we can refine the process ourselves based on what we need from a metrology perspective."

For NCMT, the project demonstrates the broader value of combining high-performance machine tools with application expertise and responsive support. Jon Marshall reflects: "When you look at what we offer as a whole, it's not just the machine. It's the backup, the engineers, the ability to respond quickly. That's what makes the difference."

The partnership has also opened new opportunities. With Delta XD working on high-profile aerospace components, the visibility of Makino technology in this context reinforces NCMT's position in the EDM market.

The collaboration between NCMT and Delta XD highlights a shift in how advanced manufacturing technologies are applied. This is not simply a case of adding machining capability to a metrology business. It is about integrating precision cutting into the measurement process itself.

By selecting the Makino U6 H.E.A.T. and leveraging NCMT's technical support, Delta XD has bridged the gap between measurement and material reality. The result is a more efficient, capable and data-driven approach.

For NCMT, it is a clear demonstration of what defines their offering. Not just supplying high-quality machines but enabling customers to rethink what is possible. "They knew they could come to us and buy a very high-quality product that will still be going 25 years down the line," Jon Marshall notes. "Everything we do at NCMT is top level. We provide the best engineer-to-machine ratio in the country and the backup for automation and customisation that these complex metrology applications require."

NCMT Ltd
Tel: 024 76 516 600
Email: info@ncmt.co.uk
www.ncmt.co.uk



AI and automation

Debunking the five most common myths

AI use continues to expand in the global workplace, but most businesses are still in the experimental or piloting stages with just a small percentage actually deriving value from it. In industrial settings, mindset is proving a barrier to greater adoption. The 2025 Edelman Trust Barometer found that trust in AI is lowest in developed economies like the UK, Germany and the US. This represents a real challenge because trust is fundamental to achieving the support, from boardroom to factory floor, that is needed to integrate AI in a meaningful way.

Mistrust of new technology is something the automation sector is used to dealing with. For years, industrial robots faced resistance from human workers who perceived them as a threat to their livelihoods. However, over time it has been proven that these fears are unfounded. In 2022, the Institute of Labour Economics studied the effect of robots on the labour market in 16 European countries and concluded that robot adoption actually increased employment and reduced unemployment in most markets.

Just as fears about robots have been allayed, the key to building trust in AI is similarly rooted in education, information and transparency. Here, FANUC debunks some of the most common myths surrounding AI and automation.

Myth 1: AI will take my job

Picture a world without Word or Excel, it's unimaginable. Think of AI in a similar vein, as a tool that helps people to do their jobs more efficiently by automating repetitive and mundane tasks, generating insights and intelligence that can inform decision making, accelerating lengthy testing and design processes and making predictions that can eliminate risks.

Faced with an ageing workforce and chronic labour shortages, the manufacturing sector can also harness AI to supplement and bolster scarce expertise. Difficult-to-fill roles that involve repetitive, manual and routine tasks will be replaced by more skilled jobs that require critical thinking and analysis; AI-augmented technicians, analysts who interpret data to optimise production schedules, and AI-model builders, for example.

It is worth remembering that AI is rarely a standalone solution. In fact, companies only really unlock its value when they enable employees with real-world domain experience to interact with AI at strategic points. The synergy between AI solutions, human judgement and workplace expertise is what creates hybrid intelligence superpowers and real value capture.

In robotics, for example, AI is expanding the opportunities for collaborative applications. By embedding AI, perception and real-time reasoning, components of physical AI, robots can interpret voice commands, respond to dynamic environments and work safely alongside human operators.

Myth 2: AI puts our company's data at risk

As with any data-based technology, there is a requirement to protect AI models, the data they process and the broader systems they integrate with against cyber threats, data interception and operational disruption.

Yes, information inputted into free AI models can become public training data, leading to corporate secrets or personal data being exposed. However, these are not the AI systems that are going to add value in industrial settings.

Keeping it local and using internal GPU (Graphics Processing Units) and servers to run AI





models offers maximum data privacy, ensuring that no sensitive data is used for external training or leaked to third-party cloud providers.

On-device AI is also a high security option, as the data is processed on user devices rather than in the Cloud. Where companies are using established Cloud-based platforms such as Microsoft Azure or Google Cloud Platform for their AI applications, they can be sure their data is safe too, as both offer robust security. However, using a lesser known supplier, without thorough research, could be a risky move.

Security does become a potential issue when data is being shared with a third party such as a machine supplier, for diagnostics, trouble-shooting and servicing. There are best practices that can be adopted for secure sharing, such as processing data through automated checkers to remove sensitive information. Ultimately though, it is a case of working with trusted suppliers and of controlling what data goes into the AI system in the first place.

Going forwards, AI systems are only going to become more secure as legislation catches up with technological advancement. In 2027, the EU Cyber Resilience Act (CRA) comes into force, imposing mandatory cybersecurity requirements on all software and hardware. AI products will have to be secure by design, with no known exploitable vulnerabilities, undergo risk assessments and offer life cycle support, including security updates.

The new FANUC R50iA controller, based on the latest CNC hardware, FS500, is already fully CRA compliant. Over the next two years, all FANUC robots will feature this new controller as standard, while older controllers already provide a very high level of security. FANUC customers can rest assured that they will be ahead of the cyber resilience curve, with their machines futureproofed thanks to smart, safe and compliant equipment.

Myth 3: AI is moving so fast, any system will become obsolete very quickly

The pace of development in AI is rapid, but there are certain measures that companies can take to avoid obsolescence. Open ecosystems and standardised, open-source platforms are a crucial aspect of future-proofing, particularly with the shift from generative to agentic AI.

MCP, an open-source protocol that allows AI assistants to interact with external data sources and software tools, is one standard interface of such systems. OPC Unified Architecture (OPC UA) is another secure, open-source and platform-independent IEC62541 standard for industrial communication.

FANUC is actively collaborating with AI-trailblazer NVIDIA to bring physical AI into mainstream manufacturing. A key step in this journey is its support for the open-source robotics platform ROS 2, which enables programming via Python. By lowering the barrier to entry, this allows developers, researchers and companies to build AI-driven robotics applications on FANUC's proven industrial hardware.

Myth 4: AI is just a gimmick and it won't really improve our factory automation

AI can add value to production lines in more ways than we can currently imagine. Already, predictive maintenance is using sensor data to forecast equipment failures before they happen, vision systems are detecting defects in non-uniform products and diagnostics are dramatically reducing downtime.

AI is transforming industrial automation too, making robots smarter, safer and faster to deploy, through voice-controlled operation, adaptive motion control, safety-aware human-robot collaboration and virtual commissioning via digital twins.

One of the most significant benefits of AI is its ability to accelerate deployment. By assisting with code generation, AI makes it easier and quicker for companies to implement robotic systems. AI-enabled robots also allow existing production lines to be retrofitted without extensive modifications, further speeding up the rollout of automation.

Myth 5: We're not AI-ready, it's going to cost us a fortune

To utilise AI in manufacturing, a company does not need to be fully digitised, but it does need a solid data foundation, as ultimately, AI without data is pointless. AI requires data to be structured, contextualised and available in real-time to drive applications like predictive maintenance, quality control and line optimisation. While not every machine needs to be 'smart', critical equipment requires sensors to monitor performance and feed data to digital twins.

With regard to cost, one of the benefits of AI is that it is quantifiable. Companies should be able to understand what their return on investment is going to be from the start and gauge at a very early stage whether a project is going to work or not.

That said, the more deeply companies commit to AI, the more they will likely get out of it. McKinsey reported that organisations with the most ambitious AI agendas are seeing the greatest benefit . These firms are often aiming to achieve more than just cost reductions; their objectives extend to driving growth and/or innovation through AI, which is where its real potential lies.

To discuss how AI and automation can take your manufacturing business to the next level, visit FANUC at **www.fanuc.eu/uk/en**

FANUC UK Ltd
Tel: 02476 053130
Email: marketing@fanuc.co.uk
www.fanuc.eu/uk/en

Factory warehousing capacity doubled by installing intelligent automation

Managing thousands of tonnes of aluminium profiles each year requires an efficient logistics system. So French company TIR Technologies, which designs and manufactures custom outdoor solar protection systems, including window blinds, awnings, roller shutters and pergolas, has systematically automated its warehousing processes using intelligent storage technology from KASTO. A similar service is available in the UK and Ireland through the German supplier's subsidiary in Leicestershire.

Each year, TIR Technologies handles and processes 3,500 tonnes of aluminium profiles up to 7.5 metres long at its headquarters in Kilstett. The company has been operating for more than 20 years and currently employs a workforce of 330 staff generating an annual turnover of 110 million Euros. The strong revenue per employee is made possible in part by the modern logistics, which includes an industry-specific KASTO fenestra align station. It has resulted in increased warehousing space, more flexible storage and retrieval, greater transparency of material flow and higher productivity.

Two KASTO systems are in operation. The first to be installed, in 2019, was a UNIGRIP automated honeycomb system with 1,200 storage locations, which provides the pergola assembly area with profiles. In 2022, a second, similar storage system was installed, which is 13 m high and has 2,000 storage cassettes for managing the aluminium profiles used in awning production. A singular feature is its ability to handle two different types of cassettes within a compact space using one gantry crane.

The transition to automated honeycomb storage has brought significant benefits to TIR Technologies. The 3D warehousing systems enable twice the volume of aluminium profiles to be held in the same footprint at Kilstett. Every incoming and outgoing transaction is executed and recorded automatically, eliminating the need for time-consuming manual transfers and lists. As a result, the potential for error is greatly reduced, as is the workload on employees.

Additionally, the aluminium profiles are stored in a dry, protected environment, whereas previously some were stored outside, open to the elements. As the stock is now all held in the automated storage system, the need for costly, complex packaging of the raw materials is eliminated. Additionally, the reduction in packaging contributes to sustainability by decreasing waste and lowering the load volumes transported by suppliers.



Patrick Barbier, IT Manager, TIR Technologies.

The KASTOlogic warehouse management software is the brain of the storage operations. It coordinates the handling of incoming and outgoing goods, optimises material flow in the stores and monitors it in real-time, ensuring that production runs smoothly, safely and efficiently.

Configuring the second KASTO honeycomb warehouse to meet the specific requirements of the project involved significant development of both the mechanical elements and the software. The gantry crane was designed so it could handle profiles that are 6 metres long in cassettes on one side and 7.5 metres long on the opposite side. A dual-sensor system on the crane identifies the specific type of cassette and its precise position. This information is essential for accurate braking and safe transfer of loads.

Patrick Barbier, IT manager at TIR Technologies, explains: "Due to this customised solution, we were able to implement a storage system that would not otherwise have been feasible within the available space. Additionally, the automated system allows us to achieve significantly more efficient production, making it easier to plan our operations."

An intelligent system is essential to ensure window profiles arrive precisely where they are needed and to keep everything in sync. KASTOfenestra align fulfils this function. It is an automated storage, order picking and material handling system specifically designed for window, door and facade manufacture. It is able to optimise the handling of long aluminium, plastic and composite profiles, keeping processes moving safely, precisely and without unnecessary delay.



A customer rack of awning material being delivered by forklift to one of a pair of KASTOfenestra align load/unload stations, prior to the material entering the UNIGRIP storage system. Once the forklift sets a rack into the station's centring guide, integrated hydraulic lift units automatically and precisely lower the rack into the cassette.



Pictured bottom right is the KASTOfenestra align transfer station, on which a customer rack in its cassette enters the honeycomb store. The cassette is pulled onto the gantry crane by the latter's built-in mechanical grippers, after which the crane travels down the central aisle to the designated storage location.

The benefits are apparent in Kilstett from the moment materials for a customer order are consolidated into a rack for storage, pending awning assembly. TIR Technologies handles the loading, unloading and movement of these racks of aluminium profiles using the KASTOfenestra align system. Quickly, consistently and with minimal effort, a forklift operator positions a rack above an integrated, horizontal centring guide positioned at a height of two to three metres, without needing to reposition or manoeuvre the truck.

Integrated hydraulic lift units then take over, lowering the customer's rack in a controlled manner until it is precisely positioned in the cassette. To ensure smooth flow of material, KASTOfenestra align is equipped with two cassette locations. While a rack is being stored or retrieved for processing, another customer order is being prepared at the other station, eliminating waiting times.

Patrick Barbier concludes: "KASTO has demonstrated itself to be a reliable partner for us. The relationship will significantly benefit our future logistics development plans as we continually improve our internal processes and expand our business."



Aluminium profiles are now stored at the Kilstett facility in a dry, protected location, ready for use at any time.

KASTO Ltd Tel: 0300 131 9112
Email: sales@uk.kasto.com
www.kasto.com

Mazak launches CP-450

The fast route to productive pallet automation Yamazaki Mazak has launched the CP-450, a fully integrated 12-pallet automation solution designed to help manufacturers maximise the value from their Mazak machine investment through dependable unattended production.

Developed for selected Mazak machining centres, including the CV5-500, CV5-700, VCN-500, VCN-600 and VARIAXIS C-600 machine models, the CP-450 extends machine productivity beyond attended operation while reducing the complexity traditionally associated with automation projects.

Designed for high-mix, low-to-medium volume production environments, the system supports manufacturers looking to increase spindle utilisation, create additional manufacturing capacity and reduce dependence on skilled labour without introducing a standalone automation control system.

Rather than treating automation as a separate engineering project, the CP-450 combines machine and automation into one integrated production platform, with machine control integration, a single operator experience, simplified commissioning and one Mazak support route.



The compact system uses 12 steel pallets measuring 404 x 350 mm and supports a maximum workpiece mass of 150 kg. It can accommodate workpieces up to 450 mm in diameter, with maximum workpiece height depending on the machine tool model.

Operators manage pallet sequencing through an intuitive step-by-step interface integrated into the familiar MAZATROL Smooth control, or via an optional dual monitor. This unified environment is designed to support faster adoption, reduce the need for specialist automation expertise and make unattended production easier to manage with confidence.

Integrated sequencing software gives operators clear visibility of pallet status, while fast, precise zero-point pallet clamping, servo motors on all axes and a blank pallet option for bespoke fixtures support practical, flexible palletised production.

For customers, this means a simpler route to increasing output from a new or existing Mazak machine tool investment, with dependable unattended production, reduced implementation effort and clearer accountability throughout the automation lifecycle.

With a compact 5.8 m² floor space, the CP-450 is suited to manufacturers seeking improved machine utilisation and additional capacity without a proportional increase in labour. The system also retains manual access to the work area through the machine's front door when required, supporting the flexibility needed in high-mix production.

The CP-450 can be supplied with new compatible Mazak machine tools or retrofitted to selected existing installations, helping manufacturers increase productive machining hours and improve return on machine investment without moving to a larger, more complex automation system.

To find out more about the CP-450, visit: **https://www.mazak.com/uk-en/products/automation-machining/**

Yamazaki Mazak UK Ltd
Tel: 01905 755755
Email: info@mazak.co.uk
www.mazak.com/eu-en

DAS Engineering build successful subcontract machining business using XYZ Machine Tools

The installation of an XYZ TC 400 turning centre at DAS Engineering is the 25th machine purchased from XYZ Machine Tools by this successful subcontract machining business started back in 1990 with just a manual turret mill and centre lathe. Dave Stone, owner of DAS, made his first purchase of an XYZ Vulcan turning centre back in 2002 and it was the start of a relationship that has helped the company based in Swillington, Yorkshire to outgrow two industrial units and now employs 22 machinists.

That original purchase of an XYZ turning centre was a story of desire as Dave Stone recounts: "We went to a MACH show in 2002 specifically to see the up-and-coming XYZ Machine Tools and made a beeline for their stand. As soon as I saw the Vulcan turning centre, I fell in love with it and knew I needed to have one. Within a couple of weeks of the show, we had purchased one and 23 years later the machine is still doing 45 hours a week and holds tolerances just as it did on day one."

It was the reliability of this turning centre and the Siemens control fitted with Shopturn conversational software that inspired Dave Stone to start investing in more XYZ products. He continues: "The combination of the mechanics of the machines and the easy-to-use Siemens conversational controls have proven to be the cornerstone of our business. We absolutely love the Siemens control and, in my opinion, has to be the most user-friendly control on the market".

Over the years since that original purchase, DAS have purchased a range of XYZ products including box section and linear rail constructed machining centres, various sizes of CNC lathes and even a surface grinder. The most recent acquisitions have been an XYZ 800 HD machining centre and the TC 400 2 axis turning centre. Dave Stone states: "We needed a machine with greater metal removal capability. The TC 400 fitted the bill perfectly with its 43hp spindle motor and 40 VDI 12 station turret we knew it would be robust enough to increase the material removal rates and hence reduce cycle times. The maximum turned diameter capability of 400 mm, and maximum turned length of 600 mm increased the capacity over the machines we already have and with its 78 mm bar capacity it opened up the opportunity to put bigger stock down the spindle drawtube. Within an hour of the commissioning being completed we were producing parts."

Dave Stone and Dave Rogers discuss the next job for the XYZ TC 400.



The new TC 400 is fitted with the Siemens 828D control utilising a 15" touchscreen control. The team on the shopfloor at DAS have migrated to this latest incarnation of the control system with ease as Dave Stone comments: "There was a slight trepidation when moving to the touchscreen version of the control but within hours the guys adapted to it and say it's a dream to use. That is the thing for us here at DAS all of the machinists can use the control and even if we had 21 of the 22 guys off ill, the last man standing could get the machines running and we continue to make parts for both our long-standing customers and new customers who are coming on board, some of which have been attracted to use DAS due to our ISO 9001 accreditation."

Dave Stone was a beneficiary of a new service being offered by XYZ which is the ability to provide a walk round video of the product.

Mike Corbett, product presenter at the Devon based company observes: "Here at XYZ although we have showrooms located around the country, we know it's not easy to get out and see a machine in the flesh. We have recently started to offer a walk-around video service which Dave took advantage of as we produced him a personalised presentation of the machine and all of its key features."

Dave Stone concludes: "We were 70 percent sure we wanted to purchase the machine but the walk round video covered the final details we needed to know and convinced us it was the right product for us."

Alex Hodgson XYZ area sales manager discusses the TC 400 with Dave Stone.



XYZ Machine Tools
Tel: 01823 674200
Email: sales@xyzmachinetools.com
www.xyzmachinetools.com

Rapid manufacturing and model making company invests in 5-axis machining



Prototyping, rapid manufacturing and industrial model-making specialist Ogle Models and Prototypes, Letchworth, has taken delivery of its first 5-axis machining centre, a Hurco VMX42SRTi with a B-axis spindle head and flush rotary table. It is equipped with a 60-station toolchanger, as premiered at MACH 2026, rather than a standard 40-station version to allow extended periods of unattended production. The extra tool capacity also lends itself to the retrofitting of robotic automation, should it be required in the future.

Ogle invested in the advanced machining centre to gain maximum flexibility within a compact footprint for producing large, complex 3D shapes without the need for multiple setups. This expansion in capacity, both in size and capability, provides critical support for producing the vast variety of components manufactured in the Letchworth facility.

The VMX42SRTi is a high-performance machining centre with a standard specification that reflects this, including a 12,000 rpm, 36.5 kW motor-spindle with integrated chiller, 20-bar through-spindle coolant, direct drives in the B and C rotary axes and linear scales in X, Y and Z. An advantage of the SRTi configuration is that, when 5-axis machining is not required, the machine functions as a 3- or 4-axis machining centre utilising the entire working envelope.

Continuous investment by Ogle in modern production technology complements a long history of engineering excellence that dates back to the company's founding in 1954. With more than 70 years of experience, it serves as a key development partner across the product design, film, architecture, aerospace, defence, medical and automotive sectors. Customer CAD data is translated into precise, exhibition-grade, aesthetic models and high-performance functional parts, backed by comprehensive expertise in 3D printing, vacuum casting, industrial modelmaking, CNC machining and post-process finishing.

This latest 5-axis delivery builds on an ongoing partnership with Hurco that began in 2017 when Ogle acquired its first machine from this supplier, a VM30i 3-axis model. Over subsequent years, the facility integrated two additional Hurco machining centres into its production, including an extended-travel VMX42Ti.

Ogle's production relies on the versatile Hurco WinMax control system, which delivers the operational agility needed to efficiently program and execute one-off custom components and low-volume production batches. While the prototyping specialist invested early in additive techniques, the business maintains a strong commitment to CNC machining as a core capability, ensuring the company remains at the leading edge of the industry.

Hurco Europe Ltd
Tel: 01494 442222
Email: sales@hurco.co.uk
www.hurco.co.uk



Cycle times slashed and tooling costs reduced on rigid Miyano lathes

Family-owned precision manufacturing firm GW Martin, a majority of whose subcontract production involves turn-milling of complex components that frequently require surface treatment and assembly, was an early adopter of CNC technology in the early 1980s. At that time, the company started replacing cam-type and plug-board autos in its Eastleigh factory with computer-controlled lathes.

One of the initial machines to arrive was the first fixed-head Miyano lathe to be installed in the UK, delivered by a former sales agent for the Japanese machine builder. The Miyano brand, along with Cincom sliding-head lathes, now belongs to Citizen Machinery in Japan, whose UK subsidiary supplied in March 2026 two Miyano BNE-65MYY turning centres to GW Martin.

It increased to five the number of these bar-fed, twin-spindle machines currently on the shop floor, while there is also a 20 mm capacity Cincom on-site. Together they account for a quarter of the CNC lathes that the subcontractor operates for bar and billet work, many of the other machines being highly automated with robotic component loading or gantry feed systems.

Numerous Miyano lathes have come and gone over the years due to regular renewal of plant, overseen since 2011 by a young management team headed by managing director Stuart Yalden, grandson of George Martin, who founded the company in 1959. A modernisation programme has seen more than £3 million invested in the past five years in new machines and inspection equipment, replacement flooring and lighting, a new roof and a studio with a CNC lathe, mill and 3D printer to train apprentices, there being six among the present 55 employees.

Stuart Yalden comments: "Our staff are very pleased with the performance of three twin-turret, ABX-type Miyanos in our factory in terms of their power, rigidity and accuracy for producing large-diameter steel parts, so Citizen is one of our two main suppliers of lathes.

"Earlier this year we needed extra capacity for manufacturing larger quantities of two nearly-identical, mild steel components for a customer. So, we instigated production trials at Citizen Machinery UK's turning technical centre in Brierley Hill."

During the trials, Citizen's applications department teamed up with GW Martin's engineers and the subcontractor's tooling supplier, Fareham-based Isotools, to investigate whether the BNE turn-milling platform was optimal for producing the pair of mild steel parts. Indeed, it proved to be.







The more complex of the two parts, which was especially tightly toleranced, was produced in approximately the same cycle time as on a different twin-turret lathe in Eastleigh. However, the superior vibration resistance of the Miyano led to lower tooling costs, as significantly fewer cutters were needed to complete a given quantity of components. Furthermore, it was easier to achieve the required accuracy.

When producing the other component, similar benefits were gained and in addition there was a reduction in cycle time from 302 to 200 seconds, resulting in 50 percent higher productivity. The outstanding performance prompted GW Martin to buy not one but two of the BNE lathes, both of which were installed and commissioned at the same time.

The first machine is devoted to producing the mild steel parts. The second lathe provides redundancy should there ever be a problem with the first BNE and also allows more flexibility in work allocation across the shop floor. It has enabled an increase in production output on certain components that have been reassigned to it, shortening delivery lead-times to customers.

Between March and July 2026, three components were produced on the second BNE-65MYY, a 10-axis lathe with two live 12-station turrets having Y-axis movement. The first part came off the machine more than one third faster at 3.5 rather than 5.5 minutes.

The second, a 316 stainless steel spigot housing for a petrochemical industry flow meter, had what appeared to be preposterous drawing tolerances of five microns relative to two diameters and the front face. It too was produced 30 percent faster, but the biggest benefit was a six-fold reduction in scrap rate, down to just 5 percent on the Miyano.

The third part is being produced in half the time, but that is compared with an earlier-generation ABX Miyano dating back to 2007.

Citizen Machinery UK Ltd
Tel: 01923 691500
Email: sales@citizenmachinery.co.uk
www.citizenmachinery.co.uk

Subcontractor installs automated cell for high-mix, low-volume production

An automated production cell based on a 30-taper, 5-axis machining centre with 100 tools has been installed by Whitehouse Machine Tools at the Wisbech, Cambridgeshire factory of Avant Manufacturing, a Tier-1 precision engineering firm specialising in subcontract machining for OEMs in the medical robotics, scientific instrumentation, defence and automation sectors. The equipment supplier is sole sales agent in the UK and Ireland for the Japanese machine manufacturer, Brother.

Founded in April 2021 by graduate engineer Dominic Roach, Avant Manufacturing offers a full engineering service encompassing design-for-manufacture consultancy, rapid prototyping, machining and assembly. The transition to Brother technology began in April 2025, driven by a sharp upturn in business and limited shop floor space.

Seeking extra capacity for 5-axis prismatic machining of complex components, particularly for the biomedical and scientific sectors, the company invested in its first Brother Speedio U500Xd2-5AX compact machining centre. This initial 30-taper platform alleviated the firm's reliance on four conventional, 40-taper, 3-axis vertical machining centres.

Before this initial Brother purchase, Dominic Roach conducted rigorous test cuts at the Whitehouse showroom and technical centre in Kenilworth to ensure the 30-taper machine could deliver the required production output and accuracy. Impressed by the outcome, he notes: “The performance of Brother machines is head and shoulders above what we used previously. The accuracy achieved combined with the high speed has been an absolute game-changer for us.”

In early 2026, Avant Manufacturing further enhanced its capabilities with the installation of a second 5-axis Brother Speedio, a U500Xd2-100T machining centre. This specific model is engineered to address the accelerating industry trend toward high-mix, low-volume production, which at Wisbech typically involves batch sizes ranging from one-off up to 100 components.

The machine features an ingenious arrangement that provides 100-tool capacity, achieved by mounting a 36-tool stocker on either side of the standard 28-tool turret magazine. The machine has been integrated with an Erowa Robot Compact 80 automated storage and retrieval system for 30 machine pallets, enabling the company to achieve prolonged periods of











lights-out, unattended operation. The production cell is operated around the clock, seven days a week and sometimes without any operator intervention over a 24-hour period.

Capable of serving two machines at the same time if Avant decides to integrate another Brother Speedio into the cell, the Erowa automation occupies a compact footprint, enabling both it and the machining centre to function in an area of just 3.3 x 3.8 m on the shop floor. The robot is able to handle payloads of up to 40 kg and workpieces measuring up to 200 x 200 x 250 mm can be accommodated. The entire process is managed by the EROWA JMS 4.0 process control system, which provides a transparent overview of job priorities, CNC programs and tool management, while offering real-time machine status monitoring to ensure maximum process reliability.

Like its Brother Speedio predecessor, the 100-tool model allows multi-face machining of parts in a single clamping, which simplifies workflow and reduces cumulative errors from repeatedly reclamping parts. The machines have a rapid 0.7-second tool-to-tool change time and feature 50 m/min rapids in the X and Y axes, 56 m/min in Z, with 2.2 g acceleration. The latest Brother CNC-D00 control system provides enhanced functionality for fully interpolative 5-axis machining, while support apps offer cycle time optimisation and real-time monitoring of power consumption.

Reflecting on the system's versatility, Dominic Roach says: “Investing in the 100-tool machine has massively increased our flexibility. We are able to have 50 jobs set up at any one time for immediate implementation. Another benefit of the Brother Speedios is their compact footprint, the number of parts produced per square metre of shop floor space is through the roof.”

Furthermore, the move to the 30-taper platform has supported the company’s journey towards sustainability. Brother technology typically delivers an 80 percent reduction in electricity and air consumption compared to 40-taper machines. Dominic Roach notes that after installation of the first Brother Speedio U500Xd2-5AX, Avant Manufacturing saw an increase in business revenue but no increase in its electricity bill.

Whitehouse Machine Tools Ltd
Tel: 01926 852725.
Email: sales@wmtcnc.com
www.wmtcnc.com

PSC toolholders for high-rigidity

Mitsubishi Materials has introduced its new PSC Holder series, a comprehensive range of high-performance toolholders designed to maximise productivity, precision and reliability on multi-tasking machines and CNC lathes.

Built around the internationally recognised Polygon Shank Coupling (PSC) interface, the new series delivers exceptional rigidity and repeatability, enabling manufacturers to achieve consistently high machining accuracy while significantly reducing tool change times. The dual-face contact PSC design combines precision taper and face contact to create a highly rigid connection between the machine spindle and cutting tool.

This robust interface minimises vibration and chatter during demanding turning and grooving operations while ensuring repeat positioning accuracy of ±2 µm or better in all three axes following tool changes. The result is improved surface finishes, greater process stability and enhanced machining consistency. To further enhance machining performance, selected holders incorporate precision coolant nozzles or coolant holes capable of operating at pressures up to 4 MPa, directing coolant precisely to the cutting edge for improved chip evacuation, lower cutting temperatures and extended tool life.

The new range supports a wide variety of machining applications through holders compatible with ISO standard negative and positive inserts, including C, D, T, V and W geometries. In addition, the GY grooving system offers over 100 modular blade configurations for external turning, face grooving and recessing, allowing users to optimise blade width and grooving depth for individual applications while reducing vibration and improving productivity.





Available in PSC30, PSC40, PSC50 and PSC63 mounting sizes, the PSC series provides manufacturers with a versatile, modular tooling solution that combines outstanding rigidity, flexibility and precision, making it an ideal choice for today's high-performance machining environments where productivity, accuracy and repeatability are essential.

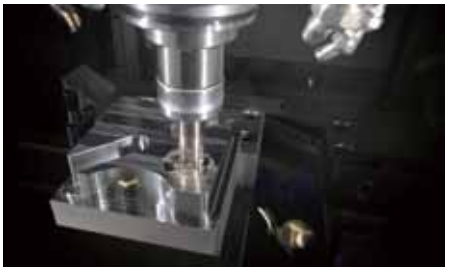
RS0112 series for reliability and high-efficiency

Mitsubishi Materials has also introduced the RS0112, a new multi-function shoulder milling cutter series developed to deliver uninterrupted machining, high efficiency and stable long-duration performance. Designed with the growing demands of automation and labour saving in mind, the RS0112 combines high cutting performance with robust cutter-body construction to improve reliability and productivity. At the heart of the RS0112 is a proprietary V-insert geometry that provides an excellent balance between the sharpness of the cutting edge and strength.

The high-precision, large-radius edge geometry delivers high accuracy on both bottom and wall surfaces, while the positively designed wiper edge reduces cutting resistance. V insert The RS0112 is supported by a wide selection of insert grades to match different workpiece materials and cutting conditions. The MP1200 Series MP1220, MP1230 and MP1240 offers PVD-coated carbide options, while MV1020 and MV1030 feature Al-rich CVD coatings for enhanced wear, heat and oxidation resistance.

MX3030 meanwhile, is a cermet grade designed for fracture resistance and interrupted or general machining applications. In performance testing, the RS0112 achieved a bottom-surface finish of Ra 0.26 µm, while wall-surface step height was reduced to just 18 µm, helping to minimise the need for secondary finishing operations. Three chipbreaker geometries M, R and H are available to further tailor the RS0112 to specific machining conditions. The M chipbreaker is intended for general and stable cutting, the R chipbreaker for interrupted and unstable cutting, and the H chipbreaker for severe interrupted cutting and hardened steel applications.

The cutter body has been engineered for durability and reliable insert clamping. A 50 percent increase in clamping contact area and



a clamping screw with a fine-pitch thread increases tightening torque by 40 percent and prevents the insert loosening. Increased clearance around the insert corner also reduces the risk of cutter-body damage in case of insert breakage or chip abrasion. The RS0112 is available in a comprehensive range of cutters to accommodate all standard milling applications and its 3-D profiling capabilities.

Shank-type multi-function milling cutters are offered in diameters from 12 to 50 mm, with a choice of flute configurations and standard and long-length versions. Screw-in-type cutters are available from 16 to 40 mm in diameter, while arbour-type cutters extend the range to larger diameters, including 32, 40, 50, 63, 80 and 100 mm.

MMC Hardmetal UK Ltd
Tel: 01827 312312
Email: enquiries@mitsubishicarbide.co.uk
https://www.mmc-carbide.com/gb

GUHRING
The Tool Company
QUALITY YOU EXPECT AT A PRICE THAT MAY SURPRISE YOU!
GET TOOLS FAST
£5 million UK stock available for **FREE next-day** delivery or **same-day** collection to keep the spindles turning.
Order online today:
guhring.co.uk

TaeguTec introduces SLIK performer

TaeguTec has expanded its SLIK SOLID solid carbide end-milling line with the introduction of the UHP 5, a new 5-flute premium end mill designed to deliver higher productivity, reduced vibration and a superior surface finish across a wide range of steel and stainless machining applications.





The new TaeguTec Slik Solid Milling Line.

The impressive new UHP 5 is the latest addition to TaeguTec's SLIK SOLID end mill programme and builds directly on the success of the UHP 4 series. The UHP 4 established itself as a high-performance platform for stable milling in demanding production environments, combining optimised cutting-edge geometry with effective chip evacuation to deliver consistent surface quality under high cutting loads. The UHP 5 builds on that foundation, introducing a fifth cutting edge to increase feed capacity and overall throughput in side milling and finishing operations.

Central to the UHP 5's performance is a multi-helix flute angle design, with three distinct helix angles applied across the flutes. This combines with unequal spacing of the cutting edges to disrupt the harmonic frequencies that generate vibration during aggressive milling. The result is smoother, more stable cutting action and a measurably improved surface finish, especially in shoulder milling applications. Working in harmony with an optimised chip gullet geometry that maximises chip evacuation under sustained high cutting loads, the innovative geometry of the UHP 5 reduces the risk of swarf re-cutting and the subsequent heat build-up that can accelerate tool wear.

The UHP 5 is manufactured with TaeguTec's TT5520 PVD-coated grade. This provides high wear resistance and thermal stability across ISO material groups P, M and K. Suitable workpiece materials include carbon steel, alloy steel, mould steel, stainless steel and cast iron, presenting the UHP 5 as the perfect solution for general engineering, automotive and toolmaking environments. The 5-flute UHP 5 is capable of slotting to 1xD, covering both roughing and finishing requirements within a single tooling solution.

Available in both flat end mill and corner radius UHP 5R variants, the programme covers a diameter range of 4 to 25 mm. Corner radius options range from 0.3 to 1.0 mm, depending on the chosen diameter, with cutting diameter tolerance held to 0/–0.020 mm across all diameters. Both variants are available from stock, with pricing available from the TaeguTec UK team.

For full product and cutting data, contact your local TaeguTec representative.

TaeguTec UK Ltd
Tel: 01937 589828
Email: staylor@taegutec.co.uk
www.taegutec.com



DEADLY ROGUES OF THE SHOP FLOOR: SMASHER & SCRAPPER!



Can the heroes of the NTR Tool Hospital foil their evil plot to trash your budget and the planet?

IN THE SHADOW OVER SWARF ALLEY

Across engineering workshops and manufacturing facilities nationwide, a dark, costly and persistent threat haunts the production lines. It is not just one villain ruining factory margins, but a synchronised diabolical duo working in tandem. Meet Smasher and Scrapper, the shop floor's most infamous rogues and the ultimate enemies of profitability, productivity and sustainability.



First comes Smasher. He is the heavy-hitting, wrecking-ball brute of the workshop floor. Whether it is a miscalculated Z-axis offset, a botched rapid traverse, an aggressive feed rate or pure operator fatigue, Smasher is responsible for that stomach-churning sound every machinist dreads: BANG! In a fraction of a second, thousands of pounds worth of precision tooling is mangled. Tips are shattered, pockets are blown out, flutes are sheared and live holder bearings are slammed out of alignment. Then, right on cue, steps in his opportunistic partner in crime: Scrapper.

Scrapper is the sneaky, scavenger goblin of throwaway culture. He hangs around the swarf bins, whispering into the ear of the engineer who just crashed the machine.

"Don't bother fixing that," Scrapper sneers. "It's totally ruined. Just sling it in the bin and order another brand-new replacement on the company card."

Together, Smasher and Scrapper form an unholy alliance that wreaks havoc on engineering businesses. Smasher causes the initial destruction, and Scrapper ensures the evidence is thrown away, draining corporate capital, inflating procurement bills and sending valuable high-grade alloys straight to the landfill.

For years, many machine shops simply accepted this destructive cycle as an unavoidable cost of manufacturing. But from their high-tech fortress in Wetherby, West Yorkshire, the allied workforce of NTR Ltd is standing up to dismantle this villainous partnership once and for all.



ENTER THE TOOL HOSPITAL: An ALLIANCE OF SUPERHEROES

Where Smasher leaves destruction and Scrapper sees worthless rubbish, the NTR Tool Health Heroes see hidden potential, structural integrity and massive savings.

Operating as a 100 percent Employee Owned Trust (EOT), NTR Ltd is powered by a workforce where every single technician, welder, machinist and administrator owns a direct stake in the company. This shared ownership creates a powerhouse of dedication and pride. When a box of smashed, battered or seized tooling arrives in Wetherby, it is not just processed; it is saved.

To defeat the combined threat of Smasher and Scrapper, the co-owners deploy three specialised disciplines under the banner of the NTR Tool Hospital.



THE TOOL DENTIST: UNDOING THE DAMAGE OF SMASHER

When Smasher strikes and brings a multi-axis machining centre to a screeching halt, The Tool Dentist is the first superhero on the scene.

Managing Director Chris Weeds admits that calling the reclamation team "The Tool Dentist" initially raised a few eyebrows among traditional engineers. Yet, the title is perfect. Just as a dentist repairs cracked or broken teeth rather than extracting them, The Tool Dentist performs clinical precision surgery on damaged cutters.

Instead of letting Scrapper convince you to throw away thousands of pounds worth of damaged indexable milling cutters, drills and



end mills, tools are dispatched to Wetherby for a full recovery:

1. **Trauma Triage:** Each incoming tool undergoes a thorough geometric check-in to evaluate pocket integrity and structural feasibility.

2. **TIG Welding Reconstruction:** Smashed pockets and torn body flutes are expertly rebuilt using high-tensile, ultra-tough filler material.

3. **Precision Re-Machining:** Skilled technicians mill pocket seats back to original specifications and regrind flutes to razor-sharp tolerances.

4. **Super-Vision Inspection:** Tools are verified using high-magnification Royal camera technology before being granted an official Certificate of Conformity.

The result is a fully restored tool that performs to original specs, completely foiling Scrapper's plans and saving your business up to 70 percent compared to buying new.

THE TOOL SURGEON: CUSTOM CRAFTSMANSHIP FOR COMPLEX CHALLENGES

Sometimes, Smasher causes destruction because an off-the-shelf tool was completely wrong for the job in the first place. Incorrect geometries, poor chip evacuation and excessive overhang cause tool chatter, leading to premature failure. Furthermore, when legacy suppliers discontinue critical cutters, factories are left stranded.

This is where The Tool Surgeon steps into the operating theatre. Performing advanced re-engineering and custom fabrication, The Surgeon designs and manufactures bespoke, high-performance metal cutting tools from scratch.

By analysing cutting dynamics and material specifications, The Tool Surgeon custom-engineers flute angles, core strength and internal coolant pathways. The result is tailored tooling that eliminates vibration, boosts client productivity by up to 200 percent and makes tools far tougher against future crashes.



THE DRIVEN TOOLING DOCTOR: PROTECTING THE MACHINE HEART

When Smasher plunges a turret into a workpiece, it is not just the cutting insert that suffers. The violent shockwave travels directly into the live tooling unit, shattering internal bearings and throwing alignment off.

Under the guidance of Operations Director Sam Wood, The Driven Tooling Doctor provides expert care for these high-value CNC assets.

Every damaged driven unit undergoes a rigorous 10-step recovery programme. Units are completely dismantled, ultrasonically cleaned, fitted with upgraded precision bearings and heavy-duty seals, dynamically balanced and rig-tested under load.

To stop crashes and wear before they start, The Driven Tooling Doctor also offers a proactive Preventative Health Shield. Scheduled 6-month or 12-month MOT servicing catches bearing fatigue early, guaranteeing zero unscheduled downtime and keeping production moving.

GREEN GUARDIANS OF THE MANUFACTURING SECTOR

Beyond protecting workshop budgets, the NTR Tool Health Heroes are on a vital mission to defend the environment. Smasher and Scrapper represent wasteful, linear manufacturing, but NTR is driving the shift toward a true circular economy.

Every cutter repaired and every live unit restored represents raw materials saved from the furnace. Last year alone, NTR saved an astounding 350,000 kg of metal from being scrapped.

Operating under ISO 14001:2015 environmental management and ISO 9001:2015 quality standards, NTR helps manufacturers hit their Scope 3 sustainability targets while maintaining total precision.

"Recycling and remanufacturing are second nature to our team," says Chris Weeds. "Why let hard-earned corporate profits and valuable planet resources go up in smoke? Every tool we save is a victory over Smasher and Scrapper."

JOIN THE RESISTANCE: MAKE YOUR SHOP FLOOR SCRAPPER-PROOF!

Defeating the shop floor villains is simple, fast and rewarding. With a standard 5-day turnaround and an emergency 48-Hour Rapid Repair protocol available for critical breakdowns, NTR ensures your factory stays operational.

Stop letting crashes and throwaway habits ruin your bottom line. Gather your damaged tooling, skip the swarf bin and dispatch them straight to the NTR Tool Hospital in Wetherby.

Don't let Smasher and Scrapper win! Contact the NTR Tool Health Heroes today and join the resistance!

NTR Ltd
Tel: 01937 845112
Email: sales@ntrltd.co.uk
www.ntrltd.com



Roemheld introduces first-ever floating zero-point workholding system

A new range of heavy-duty workholding pedestals has been introduced by Roemheld that it claims is the first automatically adjusting zero-point clamping system on the market. The units feature integral Z-axis height compensation of ±2.5 mm, as well as positional adjustment of ±1.5 mm in a single lateral axis, or in both X and Y, according to the variant selected. Additionally, the pad on the top of the clamp pedestal pivots by ±5.0 degrees in one direction, or in any direction, so that it fits flush against a curved or distorted surface.



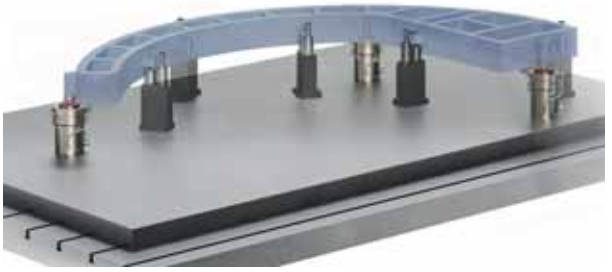
STARK.spheric is manufactured by Stark Spannsysteme, part of the German Roemheld group. The clamping system is targeted at sectors such as aerospace, power generation and heavy equipment manufacturing, where structural components like wing spars, fuselage sections, bulkheads and large frames undergo intensive milling. It likewise simplifies the processing of large fabrications in the shipbuilding and rail sectors, for example, where welding distortion makes clamping on standard zero-point grids nearly impossible.

When machining aerospace parts, where up to 90 percent or even more of the stock material is milled away during roughing, internal residual stresses in the billet, casting or forging are invariably released. Conventional rigid clamping arrangements fight against this physical change, causing a workpiece to warp when unclamped after a subsequent finishing operation.

In contrast, STARK.spheric pedestals adapt dynamically to the workpiece's natural shape in all three dimensions before it is first clamped. As a workpiece is lowered onto a set of pedestals, each adjusts passively and automatically to the workpiece's actual geometry by self-adjusting up to the linear and angular limits quoted above.

After roughing is complete, the clamping force is released by a G-code in the machining cycle to allow the workpiece material to settle into its natural, stress-free state, whereupon it is reclamped for finishing after the pedestals have repositioned themselves laterally and in terms of angular tilt. The Z distance remains constant, however, so the height reference stays valid for the finishing passes.

To facilitate automated machining, even if only one operation is involved and release and reclamping are not required to relieve stress, the 3D floating interface automatically accommodates part-to-part tolerance discrepancies, enabling reliable robotic component loading. An added benefit is that the raised profile of STARK.spheric workholding provides generous tool clearance, allowing cutters deployed by 4-axis and 5-axis machining centres unrestricted access to the sides of a workpiece.



In practical scenarios, STARK.spheric can be set up in multi-unit support configurations, such as a classic three-point fixture layout. In this arrangement, a primary zero-point element establishes the absolute spatial location while accommodating angular variations, while secondary units compensate for directional expansion. Unlike a simple riser block, a STARK.spheric unit is a solid, heavy-wall, steel assembly weighing about 28 kg. It acts as both a vibration-free load-bearing pillar and as a hydraulic actuator for clamping.

Heavy-duty spring packs in the pedestal generate high mechanical retention forces, which are released hydro-pneumatically at the end of a machining cycle. The unit can be fixed directly to a machine table or via a stud that locates into a Stark receiver plate. Workpiece clamping normally uses the manufacturer's zero-point chuck on the top of each pedestal that engages threaded studs previously attached to the underside of the component to be machined, or its fixture.

Alternatively, if the component itself must be secured but cannot be pre-drilled, it may be held by swing clamps on sacrificial lugs that are milled away at a later stage. As the part rests on top of the pedestals, the supporting pads automatically pivot and align to the underside without pushing, lifting or warping it. In that case, the STARK.spheric pedestals act purely as self-aligning, lockable supports, rather than active pull-down zero-point chucks as well.



Roemheld (UK) Ltd
Tel: 01670 281400
Email: sales@roemheld.co.uk
www.roemheld.co.uk

GET A GRIP ON 5-AXIS MACHINING

1st MTA
Machine Tool Accessories

Specialists in workholding

1st Machine Tool Accessories sources the world's finest workholding equipment for raising productivity, especially during 5-axis machining.

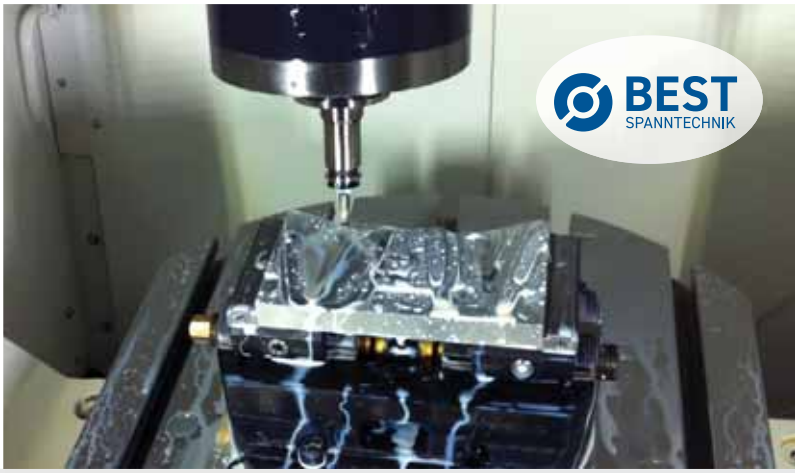
- CHICK: High-precision, modular work-holding solutions known for their versatility.
- SINCO: Zero-point clamping options for mills, EDM machines and CMMs.
- WALMAG: Electro-permanent magnetic workholding for milling, grinding and turning.
- BEST: Mechanical, pneumatic and hydraulic centric vices, special vices and manual chucks.

www.1mta.com









1st Machine Tool Accessories
T: 01725 512517
enquiries@1mta.com
www.1mta.com

Find out which one is right for you. Call today for a demo.

High-density component fixturing maximises output from flexible manufacturing cells

Hydraulic Projects (Hy-Pro), the Dawlish-based manufacturer of hydraulic control valves, pumps and marine steering systems, has expanded its production capacity significantly in the last decade. Employing 40 staff and serving a global customer base, the company produces 85 percent of its components in-house from aluminium billets and iron castings. To raise even further the efficiency of its machine shop to help feed the assembly lines with an increasing number of components during a recent upturn in business, Hy-Pro turned again to workholding specialist 1st Machine Tool Accessories (1st MTA).

The clamping equipment supplier initially delivered a US-made Chick Multi-LOK tooling column in 2016 for use on an Okuma horizontal machining centre, equipped with a 218-tool magazine and a 10-pallet pool. 1st MTA has supported the manufacturer's growth ever since, in particular following the installation in Dawlish in March 2021 of a second, nearly identical Okuma flexible manufacturing cell. As a consequence, there are now six Chick Multi-LOKs in use across the factory.

They enable dozens or even hundreds of parts to be set up in each Okuma cell to enable machining 24 hours a day, six days a week, including lights-out overnight. In both cells, workpiece setup is carried out off-line at a load/unload station in the pallet pool guarding, so the spindle waits only for as long as it takes to deliver a pallet to the machine and rotate it into the working area.

Paul Vicarage, quality engineering manager at Hy-Pro, highlighted the impact of this: "We are getting about six 24-hour days' worth of machining for about four and a half days of single-shift operator input. Moreover, we benefit from high spindle uptime and considerable operational flexibility."

To maintain secure workholding across various component types, Hy-Pro stores on-site about 20 compact, multi-part fixtures for attaching to the four sides of its tooling columns. Each fixture has a set of soft jaws machined in-house, or other workholding equipment, to suit the components being produced. Any fixture can be swapped over in just six minutes. The adaptable arrangement eliminates the need to exchange an entire workholding system when switching components and workpiece materials, offering a more versatile alternative to bespoke, dedicated fixturing.



Paul Vicarage, quality engineering manager at Hy-Pro, demonstrates the ease with which a Chick QwikChange high tensile aluminium faceplate can be removed from a Multi-LOK tooling column. In this setup, 24 aluminium solenoid manifolds are fixtured for one-hit machining. 1st MTA also supplied Mitee-Bite Uniforce clamps, which expand in two directions to hold a pair of components simultaneously against fixed rails.

High-density workholding maximises weekly throughput in each Okuma FMS to match assembly demands. In one instance involving an optimal run of 150 aluminium parts per week, 15 at a time are fixtured on each of four sides of a hollow, high-strength, Tenzaloy cast aluminium alloy tooling column, which was manufactured by Abbott in the US and supplied by 1st MTA.

The lightweight yet strong and vibration-damping column prevents the maximum pallet weight being exceeded, while allowing Op 1 and Op 2 to run in just over 1 hour 10 minutes, allowing 30 parts to come off completely machined each time. The setup incorporates Finnish OK-Vice workholding, as well as US-made Mitee-Bite Pitbull clamps for Op 1. There are two of the tool steel knife edges in a top rail and another in a bottom support rail, all three of which grip securely onto the edges of the workpiece. For Op 2, Mitee-Bite Uniforce clamps secure the components. They expand in two directions to hold a pair of components simultaneously against fixed rails, leaving no witness marks on the finished component.



The underside of the faceplate, showing a pair of location pins and two machined recesses that snap onto any slide assembly on the tooling column in a matter of seconds.

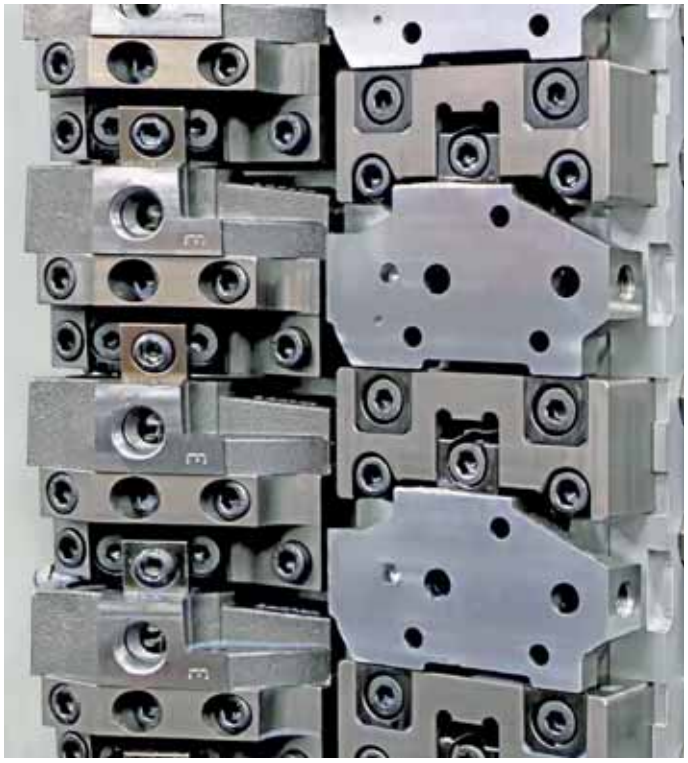


Alternatively, the faces of a column can be fitted with Qwik-LOK twin-station clamps with machined soft jaws for clamping two larger parts simultaneously. Turning the handle on top releases the two components sequentially - a so-called third-hand system that can be managed by one operator.

Paul Vicarage explains that 1st MTA's Abbott system has provided five years of daily service without requiring any replacement parts. He also emphasised the accuracy achieved: "Due to the excellent workholding rigidity, gear pockets are



Cast iron valve end covers being loaded by Paul Vicarage on an Abbott tooling column for machining in three setups.



Close-up of the clamped end covers. The castings are held in place by compact, low-profile Mitee-Bite Pitbull clamps, also supplied through 1st MTA, which exert force through tool steel knife edges for secure gripping and aggressive machining.

machined to within a few microns and this is maintained over the entire face of each side of the tooling column, with no variation."

For heavy cuts on 250-grade cast iron workpieces, a three-operation setup employs an Abbott column equipped with hardened fixtures, as well as low-profile Pitbull knife-edge clamps to avoid tool interference. Despite the heavy cuts being taken including with CBN and ceramic tooling, the rigid clamping comfortably handles aggressive 4 mm depths of cut and 11.5 mm diameter drilling into the solid, without pull-outs or stability issues.

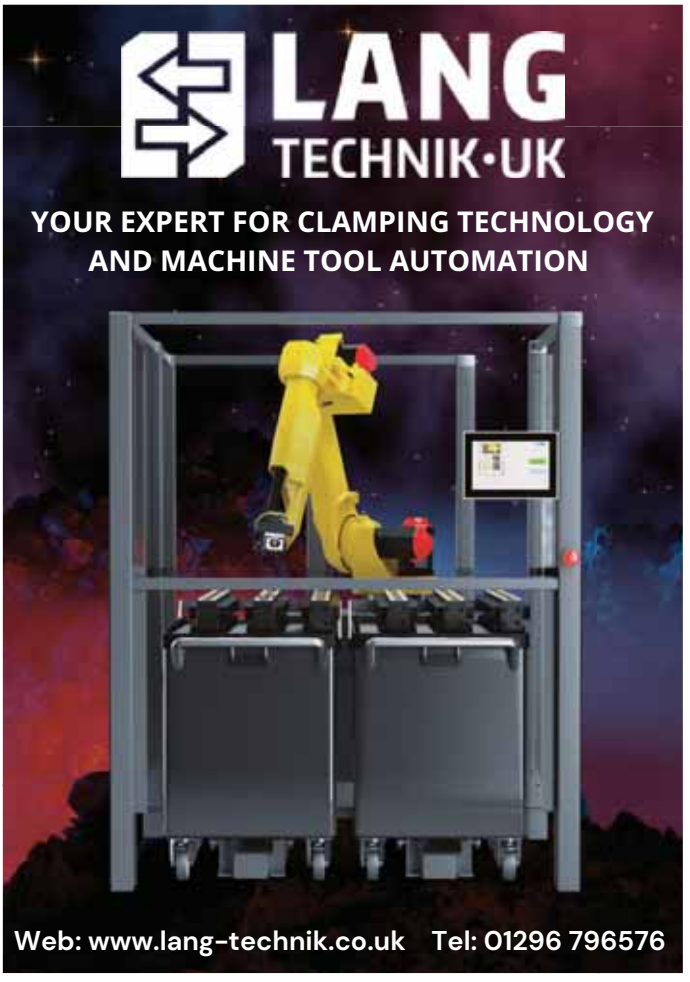


Another multiple-component workholding arrangement on an Abbott tooling column. These are the aluminium pump components that contain gear pockets machined to within a few microns. Mitee-Bite Pitbull knife-edge clamps are seen here for secure workholding on 3 mm of billet material, whereas on the adjacent faces Mitee-Bite Uniforce clamping is employed for Op 2 so the finished component is not marked.

Paul Vicarage concludes: "The comprehensive variety of workholding solutions supplied by 1st MTA means that we have complete control over manufacturing efficiency, flexibility and precision. In addition, the longevity of the clamping equipment means that it is very cost effective.

"As we move increasingly from stand-alone production platforms to pallet-based systems, we will continue to take advantage of the multiplicity of clamping arrangements that are available from 1st MTA with a view to maximising multi-component fixturing and unattended running."

1st Machine Tool Accessories Tel: 01725 512517
Email: enquiries@1mta.com www.1mta.com



Vacuum clamping technology from Leader Chuck offers production advantages for your workshop

Modular, flexible, reliable, affordable and innovative, these are the characteristics that define Tepas Clamping Systems' comprehensive range of advanced vacuum fixing solutions now available in the UK and Eire from Leader Chuck International.

Established in 2016, Tepas Clamping Systems has a renowned global reputation for continually developing and improving its range of vacuum fixturing solutions to meet both customer and industry demands. Leader Chuck International is proud to announce this partnership between the two companies.

Although vacuum clamping can be used for smaller components it offers significant advantages for thin-walled or large-surface-area metal workpieces made of aluminium or other non-ferrous metals. All workpieces can be clamped without warping, without lateral clamping elements restricting tool access or localised clamping forces causing deformation.

Tepas Clamping Systems are designed and manufactured with modularity and reliability at their core. This provides the ability to clamp workpieces from simple to complex and makes precision machining possible.

They are suitable for turning, milling, drilling, tapping, reaming, engraving, galvanising, grinding, polishing, eroding, inspecting, measuring, printing and assembly in steel, stainless steel, titanium, aluminium, non-ferrous metals, plastic, composites and graphite.

Workpiece-specific clamping chucks are recommended when workpieces are exchanged automatically. The vacuum adapter plates are placed loosely on a BaseChuck, held only by vacuum. When exchanging workpieces there is a risk that the adapter plates with the workpieces could become detached from the standard BaseChuck. To avoid this problem, modified standard BaseChuck tables are available where the adapter plates are mounted mechanically.

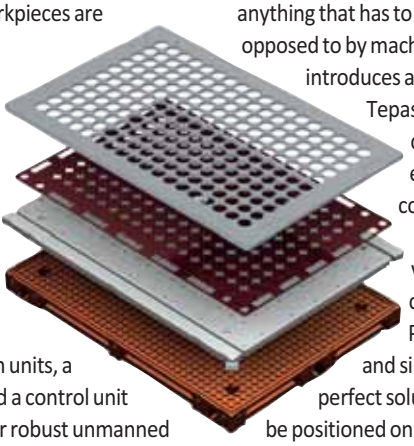
The Tepas vacuum mats provide extra clamping force for the workpieces, guaranteeing even more reliable clamping. The risk is that workpieces,





particularly those with smooth surfaces, remain stuck to the vacuum mats and cannot be removed from the clamping by the changer. To negate this the adapted standard BaseChuck tables can be fitted with an additional compressed air duct.

At just 1 to 2 bar, the workpieces are released reliably from the clamping, resulting in 100 percent process reliability. The dimensions of these adapted standard BaseChuck tables for these applications are always bespoke, guaranteeing the best solution.



For the standard vacuum units, a complete set of sensors and a control unit are available from Tepas for robust unmanned machining using vacuum clamping. Its TVA-55 vacuum sensors register an error message if too little vacuum is available. The user manually sets the depth of the vacuum that triggers an error message. They also register an error message if there is too much moisture (coolant) in the separator tank which could damage the vacuum unit.

For unmanned production with clamping where coolant could be drawn in, Tepas offer vacuum units with an automatic overflow-function. The Tepas TVU-4 vacuum units are fitted with an additional separator tank and control and sensors. A 'plug and play' vacuum unit for unmanned production using vacuum clamping.

Workpieces cannot be fully cut through using traditional vacuum chucks. A common solution is



that slots are not completely milled through and holes are not fully drilled through, but a thin surface (film) remains so that no vacuum leakage occurs. The main drawback is that workpieces then have to be finished manually. Of course, anything that has to be done manually, as opposed to by machine, increases the cost and introduces an opportunity for errors.

Tepas offers solutions for fully cutting through workpieces, enabling these to be produced completely by machine.

With Tepas PerfoPlate vacuum chucks, workpieces can be fully milled through. Particularly for small series and single components, this is the perfect solution. Workpieces can easily be positioned on the PerfoPlate without vacuum sealed zones having to be created or separated with a sealing cord. These vacuum chucks can only be used with the Tepas PerfoMat mats. Micro holes have been made in the clamping surface of these vacuum chucks. The very small micro holes limit the leakage of the vacuum with smaller workpieces or when workpieces are cut through.

From higher volume production runs it is worthwhile producing your own workpiece-specific adapter plate. This is relatively simple and brings a high return.

Leader Chuck Systems Ltd
Tel: 01827 700000
Email: information@leaderchuck.com
https://leaderchuck.com/

Expansion of quick tool change system for lathes

At the recent AMB trade fair in Stuttgart, German toolholder manufacturer EWS Tool Technologies introduced modularity into its standard product line by unveiling EWS.Varia Next. In the UK and Ireland, the company's products are sold by sole agent Nydaloxe Precision.

While the EWS philosophy of retaining permanent base toolholding units in a lathe turret and exchanging modular adapters with clamped cutting tools has been established practice for more than a decade, the exhibition served as the launchpad for a unified ecosystem across the company's entire range of lathe toolholders.

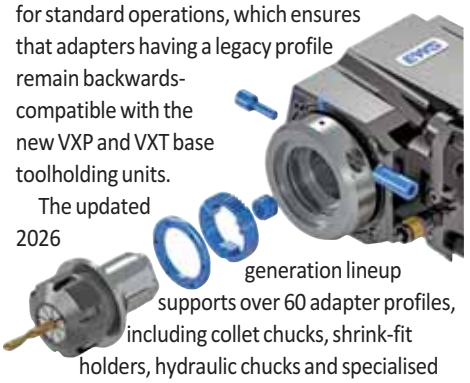
With the Varia system, operators do not have to detach the complete toolholder. Instead, they complete an easy, rapid, one-handed changeover at the interface of a preset tool in its adapter and a base unit, a procedure that takes about twenty seconds, representing a time saving of up to 90 percent.

The show launch restructured the modular range into three generations centred around a single base unit. It utilises a combination of taper-and-face contact offering ± 0.002 mm repeatability together with a mechanical mechanism that pushes an adapter out of a base unit when the clamping screw is loosened. This breaks the tight taper seal, preventing lock-up from the presence of coolant or chips, or due to thermal expansion and facilitating adapter removal.

For high-speed and high-torque machining operations, the new VXP high-performance milling series also made its debut at the exhibition. The design features a patented Double Cone Flex damping interface, whereby an extra cone with built-in compliance is added at the rear of the base unit. It enlarges the distance between the adapter's front and rear supports, improving rigidity and reducing vibration.

The milling toolholders are complemented by the compact VXT series for static turning, which also features Double-Cone Flex in its design. The system employs an external clamping ring to leave the inner bore free for inserting deep boring bars, while maintaining a short overhang near the turret.

Completing the lineup is the original VX series for standard operations, which ensures that adapters having a legacy profile remain backwards-compatible with the new VXP and VXT base toolholding units.



The updated 2026 generation lineup supports over 60 adapter profiles, including collet chucks, shrink-fit holders, hydraulic chucks and specialised interfaces for specific makes of CNC lathe. All are equipped with integrated diaphragm seals capable of handling internal coolant pressures up to 100 bar. The full EWS.Varia Next system is available with turnkey starter kits that include essential mounting blocks, torque wrenches and storage options to enable seamless adoption.

Nydaloxe Precision Ltd
Tel: 01225 811666
Email: sales@nydaloxeprecision.com
www.nydaloxeprecision.com





Lantek unveils v46 at EuroBLECH 2026

Advancing automation and connected manufacturing across the sheet metal workflow



Lantek, a leader in software solutions for the sheet metal, tube and structural steel industries, introduced its latest software Lantek v46 Further at EuroBLECH 2026.

It introduces significant advances across quotation, engineering, programming and manufacturing execution. The new version extends automation to more technologies, connects more of the workshop and improves the flow of manufacturing information across the Lantek portfolio.

Together, these developments help manufacturers to manage increasingly complex production environments with greater efficiency, flexibility and consistency.

A new generation of intelligent quotation

As part of v46, Lantek is introducing a major evolution of its iQuoting solution, bringing significant advances across every stage of the quotation process.

A redesigned part import assistant supports both individual 3D parts and complete assemblies, providing tools to detect and manage geometries, manipulate layers and prepare imported data for quotation. Integrated feasibility rules then evaluate whether the geometries can be manufactured using the available technologies and production capabilities. Combined with deeper and more configurable calculation methods and predefined work plans, these capabilities bring manufacturing knowledge into the quotation process earlier, allowing manufacturers to represent their own production logic, manufacturing routes, resources and costing criteria more accurately when estimating increasingly complex projects.

Many of these capabilities are supported by KAI, Lantek's AI technology, which assists users by analysing manufacturing information, interpreting design data and automating complex decision-making throughout the quotation workflow. Rather than replacing engineering expertise, KAI helps companies to prepare accurate quotations more quickly while reducing manual effort and improving consistency.

Advanced punching programming and NOS optimisation

Lantek Expert v46 takes the programming of punching machines and combined punch-cut technologies to a new level. New options streamline and automate the programming of individual parts and complete nests, while supporting advanced machining strategies and complex combinations of operations.

A key development is the extension of NOS (Nesting Optimisation Service) to punching machines. Previously available only for cutting technologies, Lantek's most advanced nesting engine now brings its material optimisation capabilities to punching environments, extending advanced optimisation across a broader range of sheet metal technologies.

Extending automation across the production workflow

As automated loading, unloading and material storage systems become increasingly important in sheet metal production, Lantek is developing new technology to support the growing number and complexity of these projects.

The newly redesigned Stackmaster delivers a more intuitive and visual palletising programming experience, fully integrated within Lantek Expert. At the same time, Lantek is extending its capabilities for automatic storage systems, with technology designed to connect and coordinate cutting machines and warehouses while managing the related MES workflows, production processes and material inventory as part of a complete automation flow.

New possibilities for tube and structural steel manufacturing

Lantek Flex3D v46 incorporates a new module for designing tube-to-tube connections directly within 3D assemblies.

Users can create and adapt these connections from an extensive library of parametric joint types commonly used in industry. By integrating these capabilities into Lantek Flex3D, recurrent manufacturing-oriented design work can be completed without returning to an external CAD application.

The solution also introduces the unbending of bent tubes during 3D file import, automatically generating the developed geometry required for cutting and manufacturing preparation.

For structural steel and profile fabricators, Lantek v46 adds a new integration with Tekla PowerFab, linking its MES-MRP environment with Lantek's programming solutions. Together with the established StruMIS MRP Connector, this broadens Lantek's integration ecosystem and gives manufacturers greater flexibility to work with their preferred specialised production management platforms.

Expanded machine connectivity across the workshop

Lantek continues to extend its Machine Connectivity capabilities beyond cutting equipment, adding support for press brakes and other types of CNC machines.

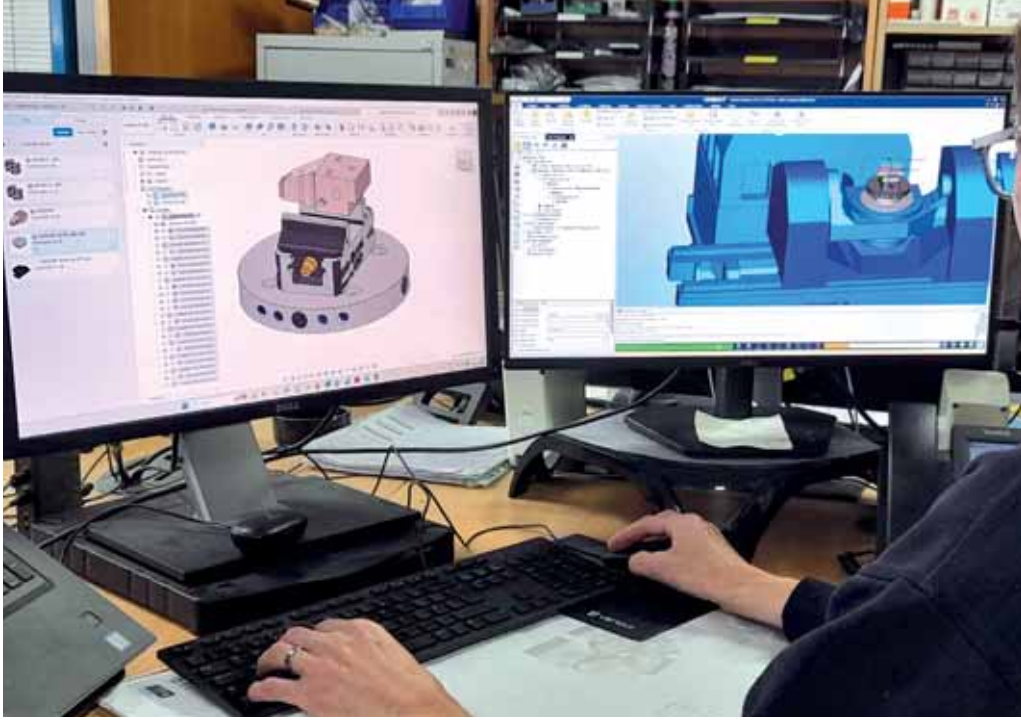
It's Control Panel has also been renewed with a redesigned user interface. The new design improves the organisation, clarity and readability of machine information, complemented by a smoother and more responsive visualisation of real-time machine events.

By enabling a broader range of production assets to feed reliable data into Lantek MES, Control Panel and Lantek Analytics, this expansion reinforces Lantek's multi-vendor approach, improves real-time visibility across the workshop and supports more accurate OEE calculations and other key production indicators.

Lantek Systems Ltd
Tel: 01684 472100
Email: sales.uk@lantek.com
www.lantek.com


www.lantek.com
40 years of excellence
It started in 1986. Today, more than 40,000 manufacturers rely on Lantek's Smart Factory platform to connect their machines, processes and production management.
40 years of technology driving the digital transformation of sheet metal and metal fabrication.
Numbers don't tell the whole story, but they matter.
lantek
40 YEARS
SINCE 1986
CAD/CAM | MES | QUOTING & ERP | ANALYTICS | INTEGRATIONS

Complete confidence in complex machining with Vericut



For precision subcontract machinist WES Engineering Solutions, confidence is fundamental to every machining operation. Manufacturing complex components for demanding industries that include aerospace, defence, nuclear and oil & gas demands absolute faith in every CNC program before the first chip is cut.

By integrating Vericut simulation, verification and analysis software into its programming workflow, the Redruth-based company is verifying all 4- and 5-axis CNC programs before they reach the machine, safeguarding expensive equipment while enabling productive unattended machining.

WES Engineering Solutions employs around 40 people across three specialist divisions. Alongside its subcontract machining business, the company operates a hard metal engineering division specialising in grinding and EDM, together with British Classic Car Performance Braking, which manufactures high-performance brake calipers for classic vehicles. Everything from Austin, Daimler, Ford, Hillman and Jaguar, to Jensen, Land Rover, MG, Morgan, Sunbeam and Triumph.

Across its business divisions, WES machines materials that extend from plastics and copper to stainless steel, titanium and Inconel, machining complex, high-precision components to tolerances as tight as 10 µm, even lower in the case of hard-metal parts undergoing grinding or EDM.

Supporting these demands is an ongoing investment programme in advanced manufacturing technology. Since 2022, WES has boosted its subcontract offer by installing a trio of palletised Matsuura CNC machining centres. An H.Plus-300 4-axis horizontal model with 15 pallets was the first to arrive, followed by two 5-axis vertical models, namely an MX-520 with four pallets in 2024 and an MX-330 with 10 pallets in 2026. The extensive pallet capacity provided by these high-performance machines allows the company to maximise lights-out production while increasing flexibility and throughput.

Alongside investment in machine tools came investment in Vericut simulation, verification and analysis software. WES currently has one Vericut licence, supporting its Matsuura machining centres. Using Autodesk Fusion 360 CAM software, programmers generate the machining strategy before transferring the job directly into Vericut via its integrated Fusion interface.

Using Vericut's Verification, Multi-Axis and Machine Simulation modules, WES simulates every machining process against digital models of its Matsuura machining centres, checking for collisions, over-travel and other potential issues before releasing programs to production. Vericut's Auto-Diff module provides an additional layer of confidence by comparing the machined component with the original CAD model, highlighting any remaining stock or potential gouges.

For WES Engineering Solutions, independent verification is invaluable. The company regularly manufactures high-value components using equally expensive cutters and machines. Even a minor programming error can result in broken tooling, scrapped workpieces or even machine damage.

The software also transforms and expedites the proving-out process on the shop floor. Rather than operators cautiously monitoring every program with a finger poised over the feed-hold button, they can approach new jobs with considerably more confidence.

This confidence becomes even more valuable when programming changes are made late in the working day before machines continue running unattended overnight.

Before selecting Vericut, WES evaluated several alternatives. Alongside the software's proven capability, access to UK-based technical support proved an important consideration. Following a trial period that included deliberately introducing programming errors, the decision quickly became clear.

Value-added investment

Although the financial return is difficult to quantify precisely, WES believes the investment continues to deliver value every day by preventing problems before they occur.

Quality is everything at WES, which is why software like Vericut is so important to its operations. The company is committed to continuous improvement, investment in systems and automation, long-term capability development and supporting customers in regulated and safety-critical industries.

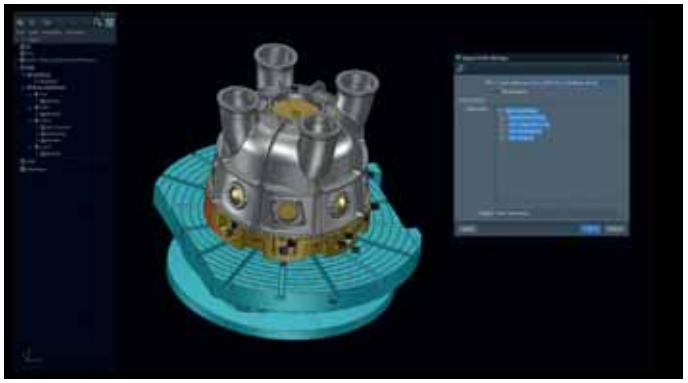
WES Engineering Solutions carries accreditations for ISO 9001 and the AS9100 quality management system standard for the aerospace industry. WES also complies with Cyber Essentials Plus, a government-backed certification that verifies the effectiveness of cybersecurity controls through independent technical testing.

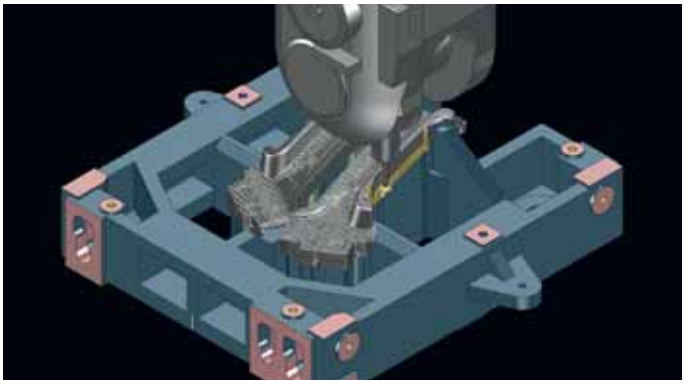
Confidence in tomorrow

As WES Engineering Solutions continues expanding into increasingly complex, higher-value manufacturing sectors, confidence remains central to its future growth. With its investment in advanced machine tools and automated production, Vericut provides the assurance that every program has been thoroughly simulated and verified before manufacturing begins. The result? Safe, efficient and reliable machining for the benefit of both WES and its customers.

Vericut UK
Tel: 01273 773538
Email: info.uk@cgtech.com
https://vericut.com/en-gb

Tebis 4.1 Release 12 expands CADCAM functionality for integration, machining quality and automation





With Release 12 of its Tebis 4.1 CADCAM software, Tebis offers targeted enhancements of key system integration, CAM machining and automated job planning functions. The focus is on improved integration with external CAD systems, expanded machining strategies for greater process safety and new automation functions to reduce the need for manual intervention in NC programming and manufacturing preparation.

The goal is to further improve performance, integrated safety and the use of existing machines in different manufacturing scenarios.

With a new interface for CATIA 3DEXPERIENCE, Tebis now supports direct CAD data import from Dassault Systèmes' platform in 3DXML format. Functionally, the integration is based on the established CATIA V5 interface, enabling seamless further processing within existing Tebis workflows. This gives users a structured way to integrate CAD data from modern system landscapes into their manufacturing processes without media discontinuities.

Tebis 4.1 Release 12 includes enhancements of 3D design and SmartOps Technology as well. Model information is now available dynamically, analysis functions can be configured based on context and geometries can be coloured automatically. Overall, this further bolsters the consistency of the data foundation for downstream CAM programming. Design and manufacturing processes are more tightly integrated, supporting automated workflows throughout the entire process.

For 2.5D and 3D machining, targeted refinements have been introduced to improve machining quality and process safety.

In 2.5D machining, reliefs on cutting edges can be controlled precisely and machined safely with special tools like key (lollipop) cutters. These strategies are designed to remove material efficiently while achieving stable machining results.

The machine head is now checked against defined protected surfaces in feature machining as well. This allows potential collisions to be detected early on, ensuring safe machining from start to finish.

In 3D milling, key machining control functions have been refined. Direct definition of the tilt axis in the NCJob, along with standardised projection logic, results in significantly more consistent machining and even better surface quality.

For thread tapping, the new "Remove chips" strategy significantly increases the stability of deep thread machining. After each machining stroke, the tool is deliberately retracted out of the bore, chips are removed reliably and the tool is relubricated if necessary. This enables a noticeable increase in process safety and tool life.

Another focus of this release is on automating CAM programming and job planning processes. Rules can be used to automatically re-sort NCJobs. Programmers still enjoy flexibility when creating machining operations, but the order in which the operations are executed on the machine is optimised for the process with fewer tool changes and shorter machining times.

In addition, automatic nesting of stanchions and base plates has been expanded. For laser cutting and trimming, parts can be arranged more efficiently, reducing waste and throughput time.

Tebis (UK) Ltd Tel: 024 76 158 178
Email: info@tebis.co.uk https://www.tebis.com/en





80 years, one partner, leading the future

At EuroBLECH in October, AMADA celebrated its 80th global anniversary by highlighting integrated production systems and group synergies, allowing customers to experience the wide-range of solutions available from one partner to help drive success.

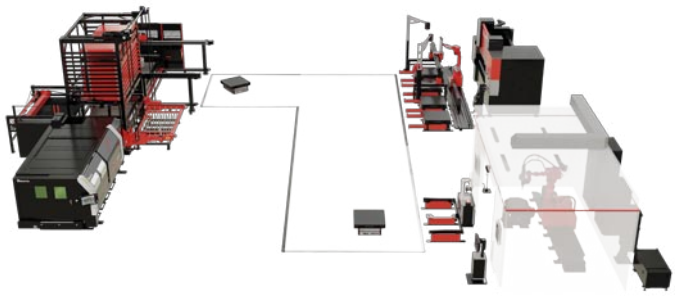
The company showcased everything from autonomous mobile robots and fully automated production cells to the latest technologies in sawing and micro welding applications and class-leading service backup. Experts were on hand to provide advice and discuss the many challenges facing manufacturers today, from technical issues to the difficulties recruiting skilled operators.

The 80th anniversary area allowed visitors to go on the journey from AMADA's beginning, experiencing the many technological advancements pioneered along the way which have evolved through its 'Growing With Our Customers' mantra. A fully integrated production concept featuring AMADA's AMTES logistics solution linking automated fibre laser cutting with robotic bending and welding cells were at the forefront of the booth. Managed by LIVLOTS, which connects machines, software and human expertise into a single cohesive ecosystem, the entire line allows customers to visualise flat sheet to finished parts, all from a single supplier.

Under the AMADA ONE group synergy action, the latest offerings for sawing and micro-welding were also on display, providing visitors with an insight into how their business can be driven into new sectors. Service and tooling solutions will backup the machinery on display, highlighting AMADA's groundbreaking IoT support and advanced punching and bending tool offerings.

Blank-to-bend-to-weld concept

Fully automated part processing from sheet to finished part. Focusing on customer benefits, a fully integrated sheet metal production concept was demonstrated by AMADA at EuroBLECH. Incorporating unique fibre laser technologies to process flat blanks which are automatically removed and palletised, to a robotic bending solution with vision cameras, to a fully automated fibre laser welding cell, everything will be connected with AMADA's 'AMTES' Autonomous Mobile Robot (AMR) system.



Launch of the new EGB-6020ATCE press brake

Uncompromised productivity, extreme flexibility and eco conscious sustainability drive the new 60-tonne model. Featuring exclusive technologies engineered to eliminate setup times and support operators of all skill levels. At EuroBlech 2026, AMADA officially announced the European market launch of the EGB-6020ATCe all-electric press brake.



This new size completes the company's premium line-up of top-of-the-range servo-electric bending solutions, following the European debut of the EGBe series, ranging from sizes 4010 to 1303 and the EGB-1303ATCe model at the 2024 edition.

Joining technologies with integrated data-driven weld quality monitoring

AMADA showcased a range of different technologies at EuroBLECH with solutions for laser welding, process monitoring, resistance welding and laser part marking designed to improve quality, traceability and productivity.



AMADA introduces the VCSAW-160

The new VCSAW-160 represents AMADA's latest innovation in industrial sawing. Developed around a completely new machine architecture. Delivering cutting performance of up to 708 cm^2/min, the VCSAW160 is equipped with the dedicated specialised band saw blade, enabling a cutting range from Ø30 to Ø160 mm without changing the blade. Its reduced cutting allowance maximises material utilisation by allowing more parts to be produced from each bar, while also reducing chip generation and raw material consumption.

The introduction of Minimum Quantity Lubrication (MQL) technology and a comprehensive range of automation options further enhance productivity by supporting cleaner operation, simplified automation and highly efficient production environments.



AMADA service & IOT



Discover the evolution of smart manufacturing with AMADA. It is bringing you closer to the team than ever before by introducing a new portal designed to enhance connectivity and partnership. Acting as your single window into your entire AMADA machine ecosystem, this versatile hub is powered by the secure VCBOX. It delivers real time performance tracking, visual troubleshooting, and predictive maintenance.

Backed by over 500 European service experts, see how the proactive partnership seamlessly turns operational data into maximised uptime and drastically minimises unplanned disruptions.

Advanced LIVLOTS ecosystem

AMADA presented the continuous evolution of its flagship digital solution, LIVLOTS, at EuroBLECH. Designed as the digital backbone for modern manufacturing, LIVLOTS connects machines, software and human expertise into a single cohesive ecosystem. At the exhibition, AMADA will demonstrate how it combines core operational capabilities with cutting-edge autonomous features and tailored consulting services to drive digital transformation.

About the AMADA Group

The AMADA Group, founded in 1946 by Isamu AMADA, is headquartered in Japan and consists of 90 subsidiaries and affiliated companies. Its main businesses are the manufacture, sale, lease, repair, maintenance and inspection of metalworking machines and equipment. The AMADA Group provides a full range of solutions, not only five major businesses which are sheet metal machinery, cutting machinery, grinding machinery, stamping presses and micro welding, as well as software, peripheral equipment, tooling, maintenance and service.

As a comprehensive global manufacturer of metalworking machinery, AMADA contributes to the development of manufacturing considering what is most important from the customer's point of view.



About AMADA in Europe

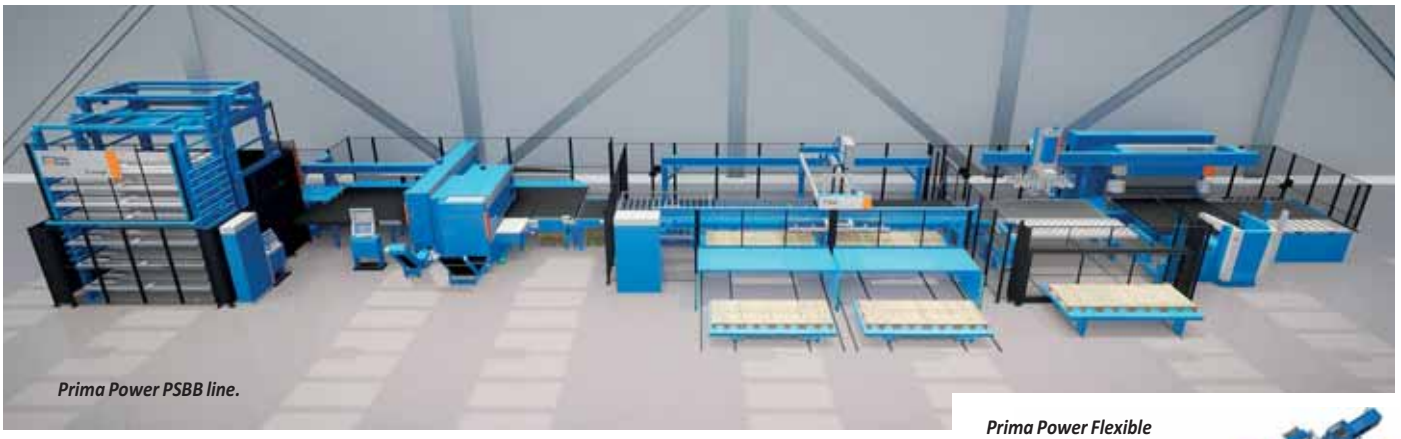
Established in Europe since 1972 first with the sheet metal fabrication machine business, AMADA in Europe combines tradition, Japanese expertise and the best in European know-how. This manufacturing presence gives other advantages; European market suitable solutions, a nearby after-sales service and the shortening of the delivery times.

13 sales & services subsidiaries together with agents cover the needs in all the European continent as well as CIS countries and Africa. A synergies strategy between countries and units allows AMADA to offer more powerful and innovative solutions. The establishment of 8 manufacturing sites which are dedicated to machines, tooling and automation systems allows a strong and competitive industrial Europe activity, while preserving its specific features.

AMADA is carrying out long-term investment in facilities to fuel productivity gains, developing business activity and and creating jobs.

AMADA (UK) Ltd
Tel: 01562 749500
Email: info@amada.co.uk
www.amada.eu

Full integration with no compromise



Prima Power PSBB line.

At EuroBLECH, Prima Power presented two new flexible manufacturing systems showcasing its latest developments in integrated sheet metal production, including world premieres in automation, bending and software, reinforcing its strategy of Evolve by integration.

The two flexible manufacturing systems combine multiple technologies, automation and digital solutions for dynamic sheet metal production environments, where productivity, adaptability and operational continuity are key. The lines feature several key innovations and first-time showcases, highlighting scalable solutions that evolve with market needs. Different automation architectures, from material flow to unloading and transfer, will demonstrate how systems can be configured for a wide range of strategies, from small batches to unattended high-volume production.

The first manufacturing line focusses on laser processing integrated with a new bending solution, as well as advanced automation and material flow systems and featured three world premieres. Among them, Prima Power previewed a new concept in bending technology designed to make panel bending more accessible while preserving the performance, reliability and integration capabilities that define its approach to manufacturing. The launch builds on more than 40 years of panel bending expertise developed at Prima Power's Product Unit Bending in Cologna Veneta, Italy. The manufacturing line also introduces new approaches to automation and material - 1 -handling, together with advanced solutions for autonomous material transfer and logistics.

The second manufacturing line demonstrated a highly automated production flow integrating punching, shearing, buffering and bending into a single, connected process.

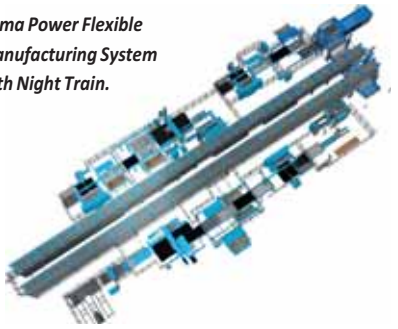
Designed to streamline operations from raw material to finished components, the system highlights how integrated solutions can minimise manual handling, improve efficiency and ensure consistent output quality. New features and enhancements further support extended autonomous operation, improving process stability and enabling longer periods of unattended production. Advanced material handling, intelligent buffering and optimised process coordination contribute to a more controlled and reliable production flow, helping manufacturers maximise machine utilisation while maintaining flexibility across different production scenarios, from high-mix production to continuous, high-volume output.

Software played a central role in the exhibition. Prima Power presented its All-in-One software platform, a unified environment designed to manage and control the entire production process through the integrated modules for all-day work steps Plan, Program, Run, Control and Trust. Particular attention will be given to the Trust module, with the introduction of a new AI-driven predictive maintenance service that analyses machine data to anticipate issues, enhancing service responsiveness with proactive alerts to technicians and reducing unplanned downtime through preventive intervention.



Prima Power NC Express.

Prima Power's industrial DNA is rooted in the integration of two pioneering companies, Prima Industrie (Italy, 1977) and Finn-Power (Finland, 1969). Since their integration in 2008, the Group has built on a shared legacy of customer focus, a fully integrated technological approach and a strong drive to progress automation in sheet metal manufacturing.



Prima Power Flexible Manufacturing System with Night Train.

With its EuroBLECH 2026 showcase, Prima Power demonstrates how this legacy continues to evolve, raising the technological bar while staying true to what matters most to customers: higher productivity, greater manufacturing agility, integrated workflows, full production visibility and control and a future-ready investment.

Prima Power operates with nearly 60 years of expertise, stemming from the strategic integration of Prima Industrie (1977) and Finn-Power (1969), two pioneering companies both renowned for their excellence in integrating innovative solutions into customers' processes, a unique combination that has enabled Prima Power to deliver one of the most integrated technology offers in the sector.

Its portfolio includes flexible manufacturing systems, automation & robotics, software, punching, shearing & combi, bending and laser processing. The group employs about 1,700 people worldwide, with 15,000 installations, six production plants and annual revenues of around 500 million Euros.

Prima Power UK Ltd
Tel: 0844 4996241
Email: sales.uk@primapower.com
www.primapower.com

Mazak unveils complete sheet metal solution at EuroBLECH

Yamazaki Mazak demonstrated its continued investment in new technologies at EuroBLECH, showcasing the complete process from laser cutting to bending alongside three new machines.

Making its European debut at EuroBLECH, the OPTIPLEX Ez-L pairs a 6 kW laser with stable, repeatable performance on thin to medium-thickness materials, built for daily production. As an addition to the wider OPTIPLEX Ez range, it stands out with a newly engineered body, SmoothCUT resonator and redesigned cutting head, lifting performance while keeping the price competitive.

Ease of use and shopfloor efficiency were key factors in the machine's development: wide-opening front and side doors speed up loading and unloading, while the 21.5" MAZATROL SmoothLX CNC offers clear nested-layout views and straightforward operation.



OPTIPLEX Ez-L also inherits a new-generation nozzle system from Mazak's higher-end platforms. Combined with Grand Cut and SmoothCUT, it improves cutting stability and gas utilisation, helping to enhance process stability while reducing operating costs. Compatibility with Mazak's automation for loading and unloading allows users to expand productivity as production requirements increase.

The model on display at EuroBLECH was equipped with a CSS 3015e automation system that, in combination with the laser machine, delivers enhanced productivity by increasing beam-on time and enables lights-out operation. Together, this can improve machine utilisation from 50-60 percent to 80-85 percent.

A second new machine showcased at EuroBLECH was the OPTIPLEX 3015 HP. Designed for fast, stable processing of thick materials, the new-generation OPTIPLEX HP series combines high-power fibre-laser performance with consistent edge quality. Its 20 kW Mazak SmoothCUT resonator extends cutting capability across a broad range of materials without compromising process stability.



This machine also incorporates Mazak Grand Cut technology with Enhanced Beam Control, which automatically optimises beam characteristics to suit different materials and thicknesses. For the laser user, this enables superior edge quality with reduced bevel angles and improved cut stability by up to four times compared with conventional cutting methods.

The OPTIPLEX HP also features a 21.5" touchscreen display for programming, wide-opening doors for easy loading and unloading and an integrated nozzle camera that allows the operator to check the nozzle position while viewing the operation screen.

Yamazaki Mazak UK Ltd
Tel: 01905 755755
Email: info@mazak.co.uk
www.mazak.com/eu-en



Summit aims for peak performance, with three Nukon machines

For Preston-based Summit Engineering Fabrications Ltd, investing in a Nukon ECO 315 12 kW flatbed fibre laser cutting machine from Nukon Lasers UK in summer 2025, was the start of a 12-month journey that led to the purchase of a Nukon press brake then a second Nukon fibre laser.



One of Lancashire's most trusted providers of steel fabrications, precision metal cutting and engineering services, in early 2025 Summit took the decision to upgrade its existing plasma cutting capabilities. "With a growing order book for precision-cut metal parts, we decided it was time to further accelerate our metal-cutting offering by switching to a fibre laser machine," comments Summit's operations manager, Chris Foweraker. "In addition to greater cutting performance, we recognised that moving to fibre laser cutting would also remove the need for time-consuming secondary processes, such as deburring and polishing, that were often required following plasma cutting.

"It was actually a social media post that led us to begin a conversation with Steve Haddrell of Nukon Lasers UK," he continues. "After meeting up with us and taking the time and trouble to fully understand our laser-cutting requirements, Steve arranged for our managing director, Alan Green, to visit Nukon's European manufacturing facility and see a Nukon ECO 12 kW fibre laser machine in action. He was impressed by the accuracy, speed, easy programming and build quality of the Nukon ECO, 3 m x 1.5 m maximum sheet capability, model, as well as its accessible pricing. Cutting a range of trial parts also demonstrated that the Nukon's powerful 12 kW Raycus resonator was more than capable of making light work of the mild steel of up to 35 mm in thickness, stainless steel and aluminium of up to 30 mm in thickness, as well as the pre-galvanised steel and chequer plate that we typically cut each week."

"To be honest, purchasing was a quick decision," adds Alan Green. "The quality of the machine and the advice given was sufficient to convince us that there was no reason to look elsewhere. The fibre laser was ordered during the factory visit and installed a few months later in June 2025. Commissioning was straightforward and included full training on using our new fibre laser machine as well as its Lantek nesting software."

The Summit Engineering name is well-known across the Northwest of England and further afield, particularly in the construction, general engineering, aerospace and agricultural machinery sectors. As such, it wasn't long before news of the company's investment in the Nukon fibre laser spread, resulting in even more orders for precision metal cutting.

"From the get-go with our new fibre laser machine, the speed at which we could precision cut increased massively," says Chris Foweraker. "In fact, we are now cutting finished parts in around 25 percent of the time it previously took using the plasma machine with secondary operations. Additionally, thanks to the efficiency of the Lantek nesting system, we are also able to maximise the number of components obtained from each metal sheet and, in doing so, further improve efficiency."

Seeing the improvements in speed, quality and efficiency that the Nukon fibre laser was delivering, the attention of Summit's management team then turned to upgrading the firm's press brake. "Although our old 62-tonne press brake did what was required of it, the Nukon fibre laser with its Lantek system opened our eyes to the benefits that upgrading to a new machine would bring," continues Chris Foweraker.

Turning again to Nukon Lasers UK, Summit chose a high-performance, highly compact 60-tonne press brake with a 1,500 mm length bed from Nukon's AMH range. Installed in January of this year, the machine features high-precision Rolleri tooling and a high-performance ESA S875W CNC. With Lantek software native to Nukon machines, Summit benefits from a totally seamless laser-cutting and bending process that begins with initial quoting and concludes with the production of final parts. Lantek Expert CADCAM manufacturing management software digitally unfolds 3D parts for cost-effective nesting and precise 2D laser cutting. Bend tool selection and real-time control of the Nukon press brake are then provided through Lantek Bend software.

Just a few months in, the Nukon press brake is already helping Summit reduce setup time, improve bending accuracy and ensure repeatability across repeat orders and batch production runs. Sitting alongside the Nukon ECO fibre laser, it has helped turn precision bending and cutting into one seamless operation, with fully automated bend sequences and automatically selected and calculated bend angles.

With orders increasing, thanks to the improved accuracy, performance, productivity and capability provided by its Nukon ECO fibre laser machine and Nukon AMH press brake, in May 2026 Summit took delivery of a second Nukon fibre laser machine. A previously owned Nukon Rex 6 kW flatbed model, traded in by a customer upgrading to a more powerful machine, this latest investment will help Summit further diversify its business and make the company more efficient, particularly when laser-cutting production runs of different metal types and thicknesses.

"Our Nukon machines have been transformational for our business," concludes Alan Green. "In fact, we have adapted the way we work to maximise their capabilities, including the seamless data transfer between our lasers and press brake. Thanks to the additional workflow, we've increased our staffing levels and, looking to the long-term, are considering expansion. Throughout our entire journey with Nukon, Steve Haddrell and the wider team at Nukon Lasers UK have provided excellent support. We've received expert advice at every stage and whenever we've had a question, needed help, assistance or guidance, they've been onto it, without delay."



"Summit Engineering Fabrications Ltd is a fantastic business that is committed to producing the highest-quality components for its customers," says Steve Haddrell, sales director of Nukon Lasers UK. "They know precisely what they want to achieve and are always open to advice. Contacting us originally to replace a plasma cutting machine that was proving problematic in terms of part quality and accuracy, Summit has become an incredible ambassador for the quality, reliability and price accessibility offered by the Nukon brand."

Nukon Lasers UK
Tel: 01723 582868
Email: sales@nukonlasers.co.uk
www.unisonltd.com

Proven. Powerful. Precise.



- *Powerful, precise, 2D, 3D and tube fibre laser machines - up to 30 kW*
- *Full-featured press brakes with flexible tooling options*
- *Proven performance, reliability and repeatability*
- *Accessibly priced and made in Europe*
- *From the exclusive Nukon distributors for the UK and Ireland*

Contact us now to discuss your needs:
+44 (0) 1723 582 868 | sales@nukonlasers.co.uk

NUKON® UK

nukonlasers.co.uk

LVD powers bespoke vehicles

A new LVD Puma laser and two new Easy-Form press brakes are boosting capacity and capability at an Irish manufacturer of specialist vehicles

Based in Athenry, in County Galway, Quinn Vehicles is a family business specialising in high-specification bespoke vehicles, in particular, emergency response vehicles, specialist refrigerated trucks and mobile cold storage units.



For example, it manufactures ambulances for services across the UK, the USA, Australia and the Middle East including customers such as the London Ambulance Service.

Founded over 200 years ago by a blacksmith, John Quinn, the company is today run by the fifth generation of his descendants, brothers Micheàl and Seamus Quinn.

The company today is at the forefront of technology, employing advanced manufacturing equipment and is a specialist in the use of composite materials with everything designed, developed and manufactured in-house.

As Micheàl Quinn explains: "Everything is based around composites. That is our USP and it allows us to offer a superior product. A composite-based ambulance offers significant advantages over traditional metal-based vehicles. Not only is it a more modern, lighter vehicle, but it also offers significant improvements in temperature control and patient comfort.

"A lot of our ambulances are destined for customers in hot climates, such as parts of the USA, Australia and the Middle East. A traditional ambulance is very difficult and expensive to keep cool in these conditions, whereas ours is effectively an insulated box so it is much more comfortable for the patient."

There is still a lot of metal in a composite ambulance though.

"It's a combination of composites and sheet metal," says Micheàl Quinn, "and sheet metal is a huge part of our business. A lot of components, access doors, frames, brackets and so on are sheet metal and that's why we have upgraded our sheet metal manufacturing capacity with the new laser and press brakes from LVD."



He says that the nature of the business means that the emphasis is on high precision, low to medium volume, custom fabrication rather than assembly-line products.

"It's low volume, high repeatability. Our run rate is seven ambulances a week, two trucks a week and three cold stores a week. We aren't like a big trailer manufacturer that might be producing 500 reefers (refrigerated trucks) a day.

We are a much nimbler business and the LVD machines and software allow us to turn products around quickly for our customers.

"We can turn round a development project for a customer in 10 to 12 weeks rather than them having to wait six months and that is thanks to the LVD CADMAN® and SDI software."

Micheàl Quinn continues: "What we make is a combination of newly designed elements and repeating elements. Ambulances may all look roughly similar, but in reality, no two regions' ambulances are the same. So, we take a basic standard design and adjust that to suit the customer's needs."

All the sheet metal parts are designed and built up in SOLIDWORKS. They are then imported to the CADMAN software, flattened and sent to the machines.

"I think the phrase I've seen used by LVD is 'Art to Part'. Well, it really is. From the design

concept to flat pattern to the folded part. We have to design, maybe nine or ten parts a day and I can guarantee that nine would be spot on and the tenth might need a little tweak. It is very good. It's not just a sales pitch, it actually works and because programming is so much faster, we can get through the work much faster."

The new machine investments were on one hand about increasing capacity, but in the case of the press brakes it was also about increased accuracy and an element of deskilling.

The LVD Puma 3015 6 kW fibre laser, with a 3 m by 1.5 m sheet capacity, replaced an older LVD Lynx machine. "We changed the laser primarily because of capacity," states Micheàl Quinn. "As our volume of work grew the Lynx just couldn't provide the capacity we needed. We work a four-day, 10-hour a day compressed week from Monday to Thursday. On top of that we were having to run the laser on late shifts and all day Friday.

Sometimes we had to run it on Saturday too just to meet demand and even if you are only running one machine you still need a supervisor, the lights on and the compressor running. It is just inefficient.

"We ran the numbers and worked out it was more cost-effective for us to buy a faster machine with more capacity. The new Puma is now running for about six or seven hours a day. It's not running flat out four days a week, so we have capacity to ramp up as the business grows. The new laser has given us an extra 30 percent capacity."

The two new LVD Easy-Form press brakes also replaced older machines. "There were two reasons why we purchased the new press brakes," notes Micheàl Quinn. "The first was that the CADMAN software really removes an element of skill from the job and we have really struggled to find skilled press brake operators.

"As we got busier and busier we also needed to modernise the equipment to keep pace with demand. The new machines are much faster than the old ones, particularly with the LaserSafe optical guarding system and they are so accurate that the amount of rework required is much lower."

He adds that the machine controls are very intuitive, allowing the operators to be able to be up and running with the machines after only a couple of hours of training.

The company's relationship with LVD has been close and enduring. Micheàl Quinn says that the company bought its first LVD machine in 2006 and that he has been a firm supporter of their equipment ever since: "When we had an idea that we were going to change the laser and



the two press brakes, we looked at the equipment and it all made sense for us. There was no hard sell, the LVD equipment sells itself."

The fact that, like Quinn Vehicles, LVD is also a family-business also strikes a chord. Micheàl Quinn concludes: "The approach is relaxed and the company still feels very family-oriented, which appeals to me. As a fifth-generation family business those values matter to us. That shared family ethos is one reason our relationship with LVD works so well."

LVD UK Ltd
Tel: 01295 676800
Email: sales.uk@lvdgroup.com
www.lvdgroup.com

Shaping **flows.**

LaserTWO

Designed with a modular, no-nonsense approach, LaserTWO strikes the perfect balance between price and functionality. The fiber laser is available in two configurations to fit your price-performance needs.



Local covers • single bed configuration

Check out our latest LaserTWO laser cutting machine

LVD

Accelerating part production with TRUMPF's AI-powered laser welding cell



Photo: Courtesy of TRUMPF.

Thanks to Artificial Intelligence (AI), programming the new TruLaser Weld 3000 is significantly faster and easier. Compact welding optics reach even hard-to-access areas within the component. This is ideal for companies with a wide variety of part variants and limited space.

A shortage of skilled workers, frequently changing components and limited production space pose challenges for many manufacturing companies. At EuroBLECH 2026, TRUMPF introduced the new TruLaser Weld 3000, a compact robotic laser welding cell that can be programmed significantly faster thanks to AI while requiring very little space. "The TruLaser Weld 3000 provides competitive advantages, particularly for companies that manufacture high-quality sheet metal assemblies and housings in small batches with a wide variety of variants. It enables stable processes, short cycle times, and thus a high degree of flexibility in production," says Moritz Berger, product manager at TRUMPF.

From CAD model to finished program in half the time

The new TruLaser Weld 3000 can be programmed either directly at the machine in the conventional way or offline using the TruTops Weld software, for example from the office. This is particularly advantageous when working with frequently changing components: Employees can create new programs on the computer while the machine continues production. In addition, welding programs based on CAD data are created significantly faster than with conventional programming. The "TeachLine Touch" function can then be used to correct minor deviations. Weld points can be repositioned simply by tapping on the machine screen. This reduces programming and setup time by up to 50 percent. Corrections are even easier with the "TeachLine AI" feature extension. An AI-based process detects deviations in the weld points and corrects the robot path according to the actual component configuration. This allows the system to be set up more quickly for new components. Another advantage: Even less experienced employees can operate the laser welding cell.

Smaller welding optics expand the range of parts that can be processed

Newly developed welding optics, approximately 40 percent smaller, expand the range of applications for the TruLaser Weld 3000. Thanks to its compact design, the welding robot can reach even hard-to-access areas within a component, such as the interiors of deep housings, crates, or boxes. This enables users to automate the production of a wider range of parts and reduce manual rework.

TRUMPF relies on proven laser welding technologies to ensure process stability and weld quality. These include BrightLine Scan, which is a combination of a high-frequency scanner and motorised focus adjustment. It enables greater gap bridging of up to 0.4 mms and wider welds for better tolerance compensation. The BrightLine Weld function distributes the laser power between an inner and outer core in the laser light cable. This reduces spatter, particularly during deep welding and ensures high-quality results. For larger gaps of up to approximately 1.5 mm or materials that require filler metal, FusionLine combines the laser with filler wire for targeted material deposition.

Small footprint, great flexibility

The TruLaser Weld 3000's protective enclosure has a footprint of 3.65 x 3.65 m, making it about 24 percent smaller than the smallest version of the TruLaser Weld 5000. This means that the laser welding cell ideal for confined production environments. Despite its compact design, the machine can process pallet-sized components thanks to a KUKA Iontec robot with a 2,100 mm reach. To align the components, the user can choose between a conventional welding table, a tilt-rotate positioner, or a compact rotary changer for loading and unloading parallel to production.

With a laser power of three or four kilowatts, the TruLaser Weld 3000 welds stainless steel and structural steel up to 8 mm of material thickness, as well as aluminum up to 6 mm. Typical applications include equipment and plant engineering, sheet metal components for data centres, medical technology and the kitchen and food industries.

TRUMPF Ltd Tel: 01582 725 335
Email: sales@uk.trumpf.com www.trumpf.com



Photo: Courtesy of TRUMPF.

Fronius

Fronius Additive Cell

Plug-and-play ecosystem

Additive manufacturing using wire- and arc-based layer-by-layer deposition enables the creation of custom geometries of medium to high complexity. This makes the production and modification of components more flexible, more cost-effective, and more resource-efficient.

The Fronius Additive Cell is our turnkey system for immediate use. From the robot mechanics and software to a thermally optimised clamping system, we offer you a validated, all-in-one system from a single source—designed to seamlessly integrate into your manufacturing process.



For further information visit:
www.fronius.com/fronius-additive

Fronius combines additive manufacturing, software and automation in a single package

Whether for a spare part, prototype, or complex one-of-a-kind piece, Wire Arc Additive Manufacturing (WAAM) is becoming increasingly important as an industrial process. The new WAAM-based Additive Cell from Fronius combines state-of-the-art CMT welding technology, intelligent process control and user-friendly software to produce high-quality metal components more easily, quickly and efficiently. With this latest innovation, Fronius is once again underscoring its position as a comprehensive solutions provider for additive manufacturing.

The expectations being placed on modern manufacturing processes are constantly increasing. Shorter development cycles, maximum material efficiency and cost-effective production of complex geometries are in greater demand than ever before. From aerospace and automotive to pressure vessels, rolling stock and oil and gas, many industries require customised, tailored solutions and spare parts that are available quickly: in other words, the exact areas where additive manufacturing can truly shine. With metal 3D printing, components are created virtually out of thin air. Compared to conventional manufacturing processes such as casting, cutting, or milling, additive components keep material consumption and costs low. "WAAM enables decentralised, location-independent manufacturing without the need for complex production lines. Even irregular geometries can be built to the highest quality standards without wasting valuable material," summarises Manuel Stinglmayr, business development at Fronius International GmbH.

A stable welding process that enables uniform layer build-up is crucial for achieving the desired quality with the Directed Energy Deposition-Arc (DED-Arc) method. The CMT Additive PRO, which is based on the Cold Metal Transfer (CMT) process developed by Fronius, is particularly well-suited to additive manufacturing as a relatively cool dip transfer arc process that combines a higher deposition rate than other additive manufacturing methods with low heat input. The "CMT Additive PRO" welding characteristics are specifically tailored to the requirements of additive manufacturing, providing features such as a deposition rate stabiliser, Pulsed HotStart, CTWD measurement and power correction to ensure the necessary process stability. "The CMT Additive PRO guarantees uniform and, above all, predictable layer build-up across the entire component. This drastically reduces scrap rates as well as the workload required for any rework," emphasises Manuel Stinglmayr.

Flexibility for custom welding solutions

For many companies, additive manufacturing presents numerous challenges. Compared to traditional manufacturing techniques, however, material waste is significantly lower and neither complex moulds and tools nor long lead times are required. Thanks in particular to the new Fronius Additive Cell, production of the first components can begin quickly. The Fronius Additive Cell is a perfectly coordinated complete system developed by Fronius to meet the needs of industry. Inside the welding cell, the CMT Additive PRO and Fronius iWave ensure a precise welding process while the Polaris system remains in overall control. "The Additive Cell combines proven welding technology, intelligent control and Fronius's many years of welding expertise. Every component has been designed to complement the other, resulting in a stable manufacturing process," says Anna Dieplinger, key product manager for additive manufacturing, automation & digital solutions at Fronius International GmbH.

The Fronius Additive Cell includes not only the hardware but also the proprietary software bundle Vectris, which brings together the Machine Tool Service Kit (MTSK) and the post-processor on a single central platform. Developed by a highly experienced team of Fronius specialists, the software is designed specifically for additive manufacturing with the Fronius Additive Cell. In addition to an integrated kinematic model, an adapted user interface and validated welding operations for additive processes, it also supports geometry-based detection of different component regions. This allows for flexible process parameters, such as



The Fronius Additive Cell is a perfectly coordinated end-to-end system for additive manufacturing.



At the Fronius Prototyping and Manufacturing Centre, experts offer a comprehensive, top-tier service package for additive manufacturing.

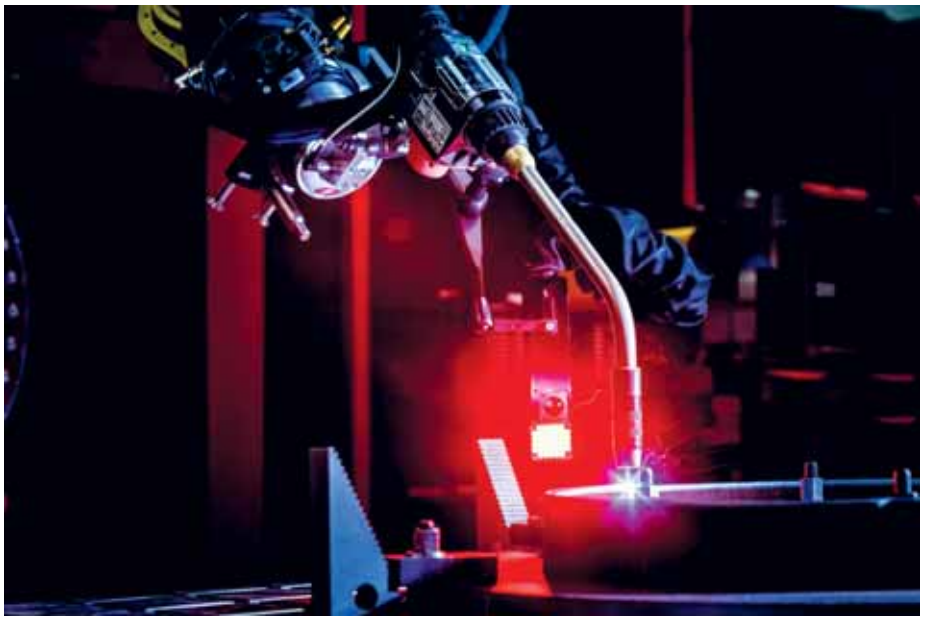
different settings for outer walls, panels, infills, or component joints. Thanks to the "FroArc" welding command integrated into the post-processor, these so-called "build styles" are translated directly into code for the welding robot and the system switches to the correct welding parameters at the exact desired location without delay. Fronius's integrated system, consisting of a welding machine and software, ensures a simple, stable and reliable welding process.

360° service for additive manufacturing

The applications for the Fronius Additive Cell and WAAM in general are diverse, ranging from reverse engineering and optimisation of existing components to completely new designs. While reverse engineering is particularly useful for repairs when original parts are no longer available or the CAD data has been lost, designing new components permits optimised geometries. Both contribute to greater manufacturing efficiency and cost-effectiveness over the long term. To help customers with these requirements and more, Fronius offers a comprehensive package of consultation, feasibility studies, process development and production services at its Prototyping and Manufacturing Centre. It can also develop, test, and certify the optimal welding and pressure parameters for the respective welding materials. These ready-made and validated "recipes" can be licensed directly to you, allowing you to start production without delay. As part of its comprehensive 360° service offering, Fronius also handles the full process engineering for additive manufacturing projects upon request. Customers benefit from expert knowledge, state-of-the-art development capabilities and thoroughly tested solutions, all without having to take on any risk themselves.

Technological expertise as a key to success

With decades of experience in welding technology, Fronius enjoys a unique foundation for additive manufacturing in the industrial sector. The ongoing development of CMT, combined with comprehensive application and process expertise, makes Fronius a strong partner for a wide range of additive manufacturing applications.

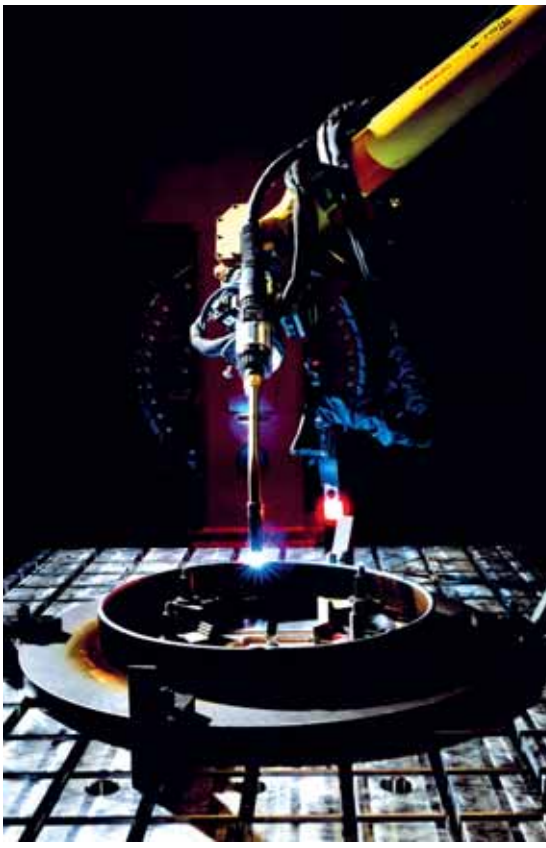


You can find out more about Fronius Additive here **www.fronius.com/fronius-additive**

Connecting what matters

Together with its team of around 6,500 employees, Fronius forges connections that drive progress. Founded in 1945 as a small, regional one-man operation, the Austrian family-run company is now an international player within the electrical and electronics industry. It has an export share of 89 percent, operates globally with 36 subsidiaries and collaborates with a network of sales partners in more than 60 countries. Its areas of expertise include controlling and using electrical energy in the fields of welding technology, battery charging and solar power, which is impressively underscored by 1,834 active patents. Fronius welding never stops revolutionising welding technology and finding ways of joining metals to create structures that last. Fronius Solar & Energy focuses on managing and storing energy on an intelligent basis, as well as linking solar power with other sectors.

Fronius UK Ltd
Tel: 01908 512300
www.fronius.com



Left and above: Additive manufacturing enables optimised component geometries and reduces resource consumption.

ESAB introduces Dueler EHL 1500

A new integrated system expands ESAB's portfolio into handheld laser welding, pairing an intuitive user experience with the speed and precision fabricators need.



ESAB is entering the handheld laser welding market with the introduction of the Dueler EHL 1500, the company's first laser welding system. Built for fabricators who need real performance without the setup complexity of traditional laser systems, Dueler integrates a 1,500-watt laser power source, ESAB's PreciDrive™ wire-feeding technology and a touchscreen interface into a single, air-cooled unit. No external water chiller. No separate components to manage.

"The Dueler EHL 1500 represents an important expansion of the ESAB portfolio," says Peter Burchfield, vice president of global products at ESAB. "As we continue to invest in technologies that help our customers work more efficiently and confidently, handheld laser welding gives us an opportunity to bring new capabilities to the market. Building on the arc welding expertise and customer relationships that have defined ESAB for generations, we drew on that experience to create a product that is easy to work with, featuring a compact, integrated design with a built-in feeder, gas bottle holder, gun holder, cable management and storage box. It also has an intuitive HMI that resonates with welders' experience and know-how and it was designed specifically around customers' applications and working environments."

On applications where weld appearance, heat management and throughput matter, laser welding has a clear edge. Dueler welds up to four times faster than TIG and up to twice as fast as MIG and its focused laser beam puts heat exactly where it needs to go, reducing distortion, minimising burn-through and cutting down on post-weld grinding and cleanup.

Dueler EHL 1500 at a glance

- Integrated, air-cooled design. The laser power source, wire feeder and controls are housed in one compact system and no external water chiller is required.
- Adjustable output from 150 to 1,500 watts. It handles everything from thin-gauge sheet metal to material up to 6.5 mm thick.
- ESAB PreciDrive™ wire feeding provides consistent filler-metal delivery for reliable, repeatable weld quality.
- Intuitive touchscreen with manual and synergic modes. Experienced welders can dial in their own parameters; newer operators can get productive quickly using factory-programmed settings for common metals.
- Lightweight torch design, the product is built for comfort during extended use on the shop floor.

Another option for fabrication teams

The Dueler EHL 1500 is designed to complement MIG and TIG welding, not replace them. It gives fabrication teams another option for applications where lower heat input, weld appearance and faster cycle times matter most. The system is suited for a range of environments, including general fabrication, automotive, railcar, HVAC, food and beverage, hard surfacing and cladding, operations where weld quality and throughput have a direct effect on productivity.





Safety is part of the complete system. The Dueler EHL 1500 meets applicable laser safety requirements and ships with a certified ESAB laser welding helmet and a full set of accessories to support safe setup and operation from day one.

With the Dueler EHL 1500, ESAB is extending its welding, filler metal and wire-feeding expertise into handheld laser welding. It's a continued investment for ESAB's evolution as premiere industrial compounder and another way to help fabricators improve productivity, control quality and respond to the demands of modern production.

The Dueler EHL 1500 is available through authorised ESAB distributors and online sales channels.

ESAB is a leader in welding and cutting equipment and consumables. Its innovative, world-renowned equipment and fabrication technology solutions are developed with input from its customers and built with the expertise and heritage of a global manufacturing leader. Its collective vision is to transform the industry and meet customers' needs through its diverse portfolio of products.

ESAB UK
Tel: 01992 800875
Email: info@esab.co.uk
https://esab.com/



The UK's national event for **inspiring, innovating** and **connecting** manufacturing

Organised by

MTA
THE MANUFACTURING TECHNOLOGIES ASSOCIATION

MACH
machexhibition.com
PART OF THE MTA CLUSTER

Book your stand today!

SCAN HERE



kraft & bauer uk

YOUR SAFETY *Our Mission*



Protecting precision without compromise. Advanced fire suppression systems from Kraft & Bauer UK. Offering servicing, new installations, and retrofits across CNC grinding, milling, turning, EDM, and laser cutting machines.

Our Services

- Machine-integrated systems
- Rapid detection and activation
- Annual servicing and certification
- Design, installation, and compliance

For More Information
www.kraftandbauer.co.uk sales@kraftandbauer.co.uk

Contact Us
+44 0 2476 229477