METAL MATTERS

CONFEDERATION OF BRITISH METALFORMING

2021 - EDITION 61

ISSN 1759-5975 £7.50

CELEBRATING 60 YEARS 1960 - 2020

BROOKS FORGINGS

BRITISH MADE

FORGING, BENDING AND FABRICATION SERVICES

OVER 20 MANUFACTURING PROCESSES


Robot Forging


Upset Forging


Drop Forging


Counterblow Forging


Open Die Forging


Hand Forging


Hot & Cold Bending


Hot & Cold Pressing


Swaging & Pointing


Machining


Fabrication & Assembly


Flash Butt Welding


Forging Simulation

Quality Control


Warehousing

CERTIFIED LR ISO 9001

CERTIFIED LR ISO 14001

CERTIFIED LR ISO 45001

EN 1090 & EN 15048 APPROVED CE

EN 1090 & EN 15048 APPROVED UKCA

NHS3 national highway sector schemes

RISQS RAILWAY INDUSTRY SUPPLIER QUALIFICATION SCHEME VERIFIED

tel. +44 (0)1384 563356 sales@brooksforgings.co.uk www.brooksforgings.co.uk

contents

Front cover image courtesy of European Springs & Pressings.

up and coming events

Crowe and CBM Manufacturing Survey Results:

Wednesday 2nd February at NMC Venue 8am start please email Melinda.jean@thecbm.co.uk

CBM Sheet Metal/Pressworking Breakfast Sector Meeting:

3rd Febuary 8.30-11.30am at NMC Venue

CBM - Health, Safety & Environment Group Meeting

8th Feb, NMC Venue (depending on Covid restrictions)

METALLURGY FOR NON-METALLURGIST:

Two day course 15th & 16th March 2022 via zoom , for further details please email melinda.jean@thecbm.co.uk

MACH 2022:

4th -8th April at the NEC Birmingham

Manufacturing & Engineering week:

6th- 10th June 2022 at the NEC Birmingham

Subcon: 7th-9th June at the NEC Birmingham

UK Metals Expo:

14th - 15th September at the NEC Birmingham

EUROFORGE:

28th - 29th September at Euskalduna Conference Center in Bilbao, Spain

Advanced Engineering 2022:

3-4 November NEC Birmingham.

CBM staff

- **President**
  Steve Morley
  president@thecbm.co.uk
- **Chief Executive**
  Geraldine Bolton
  MCMI, Dip.OCR, MAAT, M.IIM
  geraldine.bolton@thecbm.co.uk
- **Company Secretary & Office Manager**
  Louise Campbell
  louise.campbell@thecbm.co.uk
- **Membership & Events Secretary**
  Melinda Jean
  melinda.jean@thecbm.co.uk
- **Media & Communications Administrator**
  Rachael Bromley
  rachael.bromley@thecbm.co.uk
- **Accounts**
  Marie Williams
  marie.williams@thecbm.co.uk
- **Fastener Sector Specialist**
  Derek Barnes
  derek.barnes@thecbm.co.uk
- **Forging Sector Specialist**
  Derek Bond
  derek.bond@thecbm.co.uk
- **Sheet Metal & Cold Rolled Specialist**
  Adrian Nicklin ISME
  adrian.nicklin@thecbm.co.uk
- **Health, Safety & Environment Consultant**
  Mark Sutton
  AIEMA, MRSPH
  mark.sutton@thecbm.co.uk
- **Energy Specialist**
  Kevin Kirk
  kevin.kirk@thecbm.co.uk
- **Policy Advisor**
  Phil Matten
  phil.matten@thecbm.co.uk
- **NMC Conferencing Supervisor**
  Marie Williams
  marie.williams@nmcvenue.com
- **Reception**
  reception@nmcvenue.com
- **How to contact us**
  Confederation of British Metalforming
  National Metalforming Centre,
  47 Birmingham Road,
  West Bromwich,
  West Midlands B70 6PY.
  Telephone: 0121 601 6350
  Enquiries & Advertising:
  Rachael Bromley
  Media & Communications Administrator
  Email: Rachael.bromley@thecbm.co.uk
  Web: www.thecbm.co.uk
  Find us on LinkedIn
  Follow us on Twitter

CBM CONFEDERATION OF BRITISH METALFORMING

No respite for CBM members as another year draws to an end

CBM predicted that there would be a hangover from the covid pandemic, and the phrase we used was 'kicking the can down the road', in this case the 'can' is the debt carried over from the pandemic. The hope for everyone was that there would be a recovery and analysts were predicting positive sales by quarter four, but the reality could not have been more different.

Steve Morley, CBM President

The automotive sector has stumbled from one problem to the next, mainly centred around the global shortages of semi-conductor chips, which unfortunately it seems to be a common theme in these editorials and my weekly write-ups. The shocking figures I reported in the last edition have continued, with the latest SMMT data showing production at the worst figures for October since 1956. What was more striking was with the difficulties we had last year we have seen a 41.4% reduction from this time last year, with output for domestic and overseas markets declining, down -37.9% and -42.1%.

Mike Hawes, SMMT Chief Executive, said:

'These figures are extremely worrying and show how badly the global semiconductor shortage is hitting UK car manufacturers and their suppliers. Britain's automotive sector is resilient but with Covid resurgent across some of our largest markets and global supply chains stretched and even breaking, the immediate challenges in keeping the industry operational are immense. Government can help the industry with measures to boost competitiveness in line with global rivals, notably in tackling high energy costs, supporting employment and training, and helping businesses whose cashflow is under pressure from these historically poor production numbers.'

Consequently, October has seen some of the worst sales of the year, with no Furlough support to mitigate it. Whilst November has seen an improvement, with some spike in sales, this is still sporadic with downtime at short notice from OEM's causing chaos with managing labour requirements.

To add to this, all the issues mentioned in the last edition are still prevalent, high prices on steel and other commodities, freight costs and supply delays add to the burden.

As I reported in the last edition, there is no end in sight to the semi-conductor issue, with no change in the predictions, which state 2023 before we see any sign of normality in supply. Despite all these factors coming into play the government have still not stepped into offer any additional support to the automotive sector.

It then comes as no surprise that according to research from Make UK, the trade body, and the accountancy firm RSM, 'that more than a third of manufacturers fear their businesses could be in peril from a piling up of pressures including debt, rising costs and multiple hurdles to doing business as usual.'

Cashflow is the life blood of any business and all the factors have combined to bring manufacturing to a crisis, it appears to have little or no control over, which is a perilous position to be facing. Given that we are yet to see the full impact of the impeding increase in inflation the situation could even get worse.

The government has offered the Recovery Loan Scheme as a solution, which as we have covered previously is not fit for purpose. Companies don't want more debt, they need practical help, the government needs to step up to the plate and give companies time to pay by extending Government loan payment terms from 5 years to 10 years and extending time to pay on debts to HMRC.

Steel Safeguarding

Steel Safeguarding continues to be a major concern, we have regularly met with the Department for International Trade (DiT) officials, particularly on Category 12, which as I write for the second quarter running has now exhausted, and once again our members are now facing 25% tariffs.

We did make significant progress by agreeing a joint proposal with UK Steel, which would have alleviated most of the issues for our members. This was presented to the Secretary of State at the end of September but for several reasons this still hasn't been approved. We are still hopeful that we will have something in place before the next quarter starts on January 1st, in the meantime we will keep the pressure on until we get a resolution.

Summary

We are leaving behind another difficult year, one we hoped wouldn't or even couldn't be as bad as last year but in many ways it has been, we are also threatened by a new Covid variant with some restrictions coming back into place and an escalation of the booster vaccinations to try and protect us all.

Adversity is defined as hardships, challenges or misfortune I think there aren't many people reading this who don't recognise some or all of these definitions from a business sense and I'm sure some would have faced some of these at home too.

So once again the Christmas break gives us time to enjoy the festive period with our families and hopefully leave those issues behind, at least for a couple of weeks.

Resilience is a great word, the ability to withstand adversity and bounce back from difficult life events ' the often remarkable resilience of so many British institutions.'

Whilst we might not be able to influence the pace of recovery, I have seen the resilience of our members in abundance over the last two years. I have no doubt that will continue, and we will do everything we can to support you along the way.

Have a great Christmas and Happy and much better New Year and keep safe.

Steve Morley,

President of the

Confederation of British Metalforming

CONFEDERATION OF BRITISH METALFORMING

The UK's only specialist manufacturers' organisation for experts in metalforming

Why Join the CBM

You get valuable influence, business support, technical expertise and market insight as a CBM member.

Lobbying & Promotion

Get your voice heard within Government and the wider manufacturing industry

- Benefit from our active lobbying support, which has played a key role as post-brexit trade negotiations accelerate and the Government makes crucial coronavirus decisions.
- We collaborate with the Department for Business, Energy & Industrial Strategy (BEIS) on a weekly basis, covering issues ranging from Rules of Origin, electricity prices, Steel Safegaurding, to name but a few.
- Our mission is to represent UK metalforming in those industry discussions – and help you access opportunities through collaboration with a broad stakeholder group.

Compliance & Cost Management

Save money through your CBM membership

- As a CBM member, you get access to a range of practical services that save money and make operations easier.
- Our accredited energy tax rebate service is a key benefit – it's saved members £4 million+ annually in Climate Change Levy.
- You can boost your savings with our cost-effective Streamlined Energy & Carbon Reporting compliance service and Energy Saving Opportunity Scheme assessments – as well as discounted meeting room hire, our free business support hotline and more.

Marketing & Business Development Support

- Build relationships and develop opportunities
- CBM members come from across the supply chain – and work across automotive, aerospace, rail, defence, energy and Construction. We help you build relationships with potential customers and partners.
- You can also use our platform to promote your business – in Metal Matters magazine, at industry events and among our growing social media audience. Our popular website directory and Buyers' Guide is a popular way to get noticed by supply chain managers.

Technical Support

Leverage expert knowledge of metalforming techniques

- Whether you have a problem or want advice on a new process, our sector specialists are here to help. With your CBM membership, technical support is quick and cost-effective.
- Over 130 years' experience with our Sector Specialists who cover Forging, Fastening, Press work and Sheet Metal

Innovation & Knowledge Sharing

Keep your business on the front foot

- CBM events give you opportunities to share knowledge and best practice. Thanks to member days, sector group meetings, monthly market reports and more, it's easy to learn about developments that will help your business.
- Through your membership, you also benefit from our established links with universities and innovation hubs like Warwick Manufacturing Group, Advanced Forming Research Centre, Imperial College and Advanced Manufacturing Research Centre.

Training & Skills Development

Fill skills gaps and boost retention

- We offer training opportunities for technical and non-technical roles, so you can fill gaps in your business.
- In response to CBM member feedback, level 6 Apprenticeship (degree level) programme was developed by the CBMs Trailblazer group.
- The level 6 Tool Process Design Engineer Apprenticeship was specifically created for the metal forming sector in recognition of increasing skills shortages. It is the only Apprenticeship that recognises the unique and specialist skills for this senior technical role.

Health & Safety

- Our popular Health & Safety Group meetings provide a vital forum for sharing successes and getting advice on overcoming challenges.
- You have access to our HSE helpline, as well as discounted private healthcare and occupational health services.

PROUD MEMBER OF CBM CONFEDERATION OF BRITISH METALFORMING

CONTACT CBM NOW ON
0121 601 6350 or
email Melinda.jean@thecbm.co.uk

CBM membership pays for itself thanks to the opportunities, access and cost management benefits you receive. Contact us to discuss your business needs and the best membership

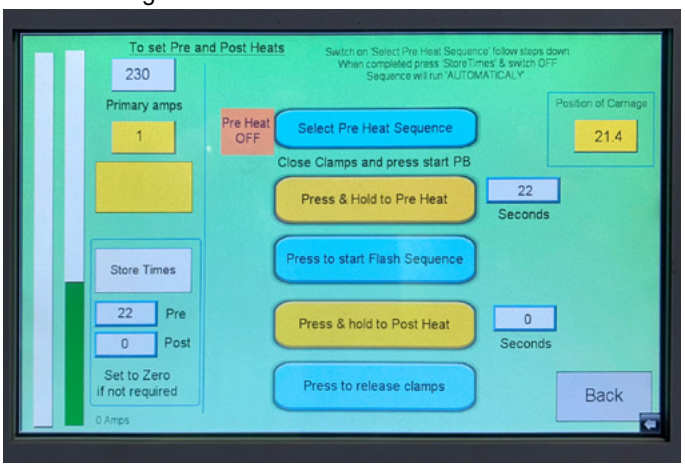
t: 0121 601 6350 · e: info@thecbm.co.uk · www.thecbm.co.uk
Confederation of British Metalforming Centre · 47 Birmingham Road · West Bromwich · West Midlands B70 6PY

Flash butt welding capacity increased with new fully automated machine

Brooks Forgings has upgraded its flash butt welding capacity to include a highly efficient, fully automated, and programmable machine.

The new flash butt welding machine is fully automated and programmable offering repeatability and traceability.

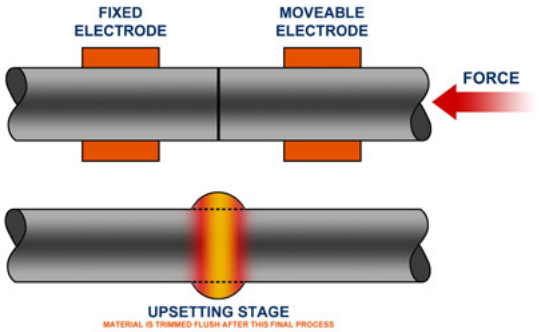
A key benefit of this process is the ability to perform an identical weld on every component. Job-specific data can be stored in the archive and recalled at a later date with full traceability for our Quality Department. As a result, there is also no operator error, which is another major advantage over conventional flash butt welding machines, as a skills gap is looming in British manufacturing.



The touchscreen UI allows the process to be set and then saved for repeatability.

Flash Butt Welding does not introduce foreign weld materials as both bars are welded together by being electronically charged. This procedure allows the component to be heat-treated afterward further increasing its tensile strength.

The machine can weld up to 60mm diameter or square material as well as flat materials and the guarding system has been designed to accommodate materials up to 12 meters in length. The benefits of this are especially apparent for tensioning or lifting components since forged ends can be produced at a lower cost in shorter lengths and then flash butt welded to the exact same bar stock used for the original forging.

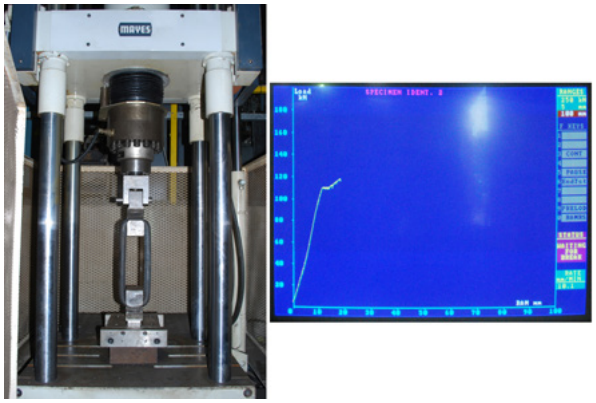


The material is amalgamated together by being electronically charged. No foreign weld material is introduced.

A solid phase, forge weld is made and any molten metal and contaminants formed at the interface during heating are squeezed out of the upset.

Various flash butt welded diameter bars are shown that have been bend tested to evaluate ductility.

Our flash butt welding is supported by various on-site testing procedures, including bending to evaluate ductility, as well as destructive and tensile testing on our 50 Tonne Mayes machine.



Our on-site Mayes 50 tonne vertical destructive/tensile testing machine is shown testing a flash butt welded link.

If you have a project in mind or any questions about the process please do call us on 01384 563356 or send us an email at sales@brooksforgings.co.uk

RLS Toolings - review of ‘strange’ 18 months

“You should never view your challenges as a disadvantage, instead it is important for you to understand that your experience facing and overcoming adversity is actually one of your biggest advantages” (Michelle Obama)

There is no truer saying for what has been a very strange 18 months due to the pandemic across the world. After watching my father build a business from the ground up, which he started only months before a recession took hold of manufacturing in the UK, the learning curve for myself and all at RLS has been solid and so valuable on how we approach such issues or testing times like these whenever we are faced with them.

RLS was quick to respond to the pandemic by promptly making the factory compliant with Government guidelines that enabled us continue manufacturing. Initially with a reduced workforce, but it was sufficient for us to supply our customers with their urgent requirements. During this time, we even managed to acquire some new customers, which came as a pleasant surprise.

RLS has been investing in new machinery steadily over the last 3 or 4 years, and this was set to continue throughout 2020 & 2021. When the world came to an abrupt stop in early 2020 the easiest scenario would have been to put a halt to our investment plans. However, lessons learnt from the past told us to continue with our plans, and because we felt confident with the RLS Tooling brand in the marketplace, it should place us in a positive position to ride through the storm.

I do not believe anyone would have expected it to last so long as it has and continue to cause issues in the supply chain. However, we were still very excited when our new 4 axis grinding machine was delivered in the middle of last year and commissioned once the engineers were able to make the site visit.

Moving forward into 2021, it was identified that due to the demand for our thread rolling dies, more machinery was required on our Milled section, which produces Reminc thread rolling dies, Mathread rolling dies, Wood screws and non-standard products. Therefore, in August 2021 we took delivery of another Bridgeport VMC (as shown in picture).

Earlier in the year, we updated our furnace that is used for stress relieving our tooling during production and after machining. We worked closely with Carbolite Gero Ltd to establish the correct machine which would give maximum productivity and more importantly repeatable results. We consider this is an essential part of the manufacturing process for our thread rolling dies.

RLS
TOOLING LIMITED

Smith Bullough experiences a busy 2021

As the Manchester-based bolt manufacturer Smith Bullough experiences a busy 2021, Director Tim Garton speaks about the importance of keeping the momentum going…

Based in Hindley Green, Greater Manchester, Smith Bullough supplies the fastener distribution trade with the largest range of standard and non□standard special bolts and fastener products in the UK, according to the group.

So far, businesses have experienced a variety of challenges following the coronavirus pandemic and Brexit trade deal. An increase in raw material prices in particular, has left many global companies in a difficult situation.

Tim Garton, Director at Smith Bullough says “The increase has been significant (>30%) from both stockholders and steel mills. As a bolt manufacturer who uses significant quantities of steel in our manufacturing process, we have had to manage a shortage of availability in addition to the price hikes. The UK Steel safeguarding system is another big problem for fastener manufacturers. In the UK to help domestic steel suppliers a 25% tariff on imported steel is levied once imports have reached a specific level. Unfortunately, Liberty Steel (UK) have not supplied the UK market since Q1 of 2021 and 125,000 tonnes of material is lost to UK manufacturers which needs to be filled by imports, if available, regardless of high sales price and possible import tariffs.”

In regard to the Brexit trade deal coming into place this year, Garton says: “Brexit caused a lot of logistics grief. Although better, the situation is far from satisfactory. Costs are increasing.”

Additionally, with an increase in demand post pandemic for special and non□standard parts, 2021 has been a busy year compared to 2020 for the company. Garton adds “We are fortunate that only a very small amount of our sales go into the passenger car market that endured the Covid pandemic and whose production is now being decimated by the global lack of microchips.”

To help combat the rise in demand throughout the fastener and fixing and tools industries, Smith Bullough has recently added to its thread rolling capacity. Garton tells Torque Magazine: “In the past year we have introduced CNC milling and a large CNC machine with live tooling. These machines complement our in□house forging capability.”

With important customers also based outside the UK, Smith Bullough will increase its manufacturing capability to match demand and improve customer satisfaction, in a bid to keep the 2021 momentum going.

Smith
Bullough

Tightening the fastener choice for sheet metal

Author: Sven Brehler – Director of Engineering, TR Fastenings - originally written for Institute of Sheet Metal Engineering (ISME)

There are as many joining methods as there are sheet metal applications. Selecting the best fastener for an application might not be the best fastener for assembly or disassembly. In most cases fasteners are selected based on a range of factors including physical performance, designers experience with a technology, used installation methods within the manufacturing environment, available sizes and lengths as well as piece price and overall cost.

The most recognizable method of joining two parts together would be with **bolt** and **nut** connections. Bolt-nut connections are generally used for detachable mounting of components and sheet metal parts. A nut is retained based on creating sufficient friction within the thread and between the interfaces of the fastener and sheet metal. The preload is created by stretching the bolt during tightening up. A relatively longer bolt can stretch more than a short bolt and is therefore better capable in retaining a nut by friction alone. Because of this, standard nuts and bolts are not always the best solution for joining sheet metal.

There are multiple methods to improving the retention of nuts onto bolts, such as the application of polymeric patches on the screw, which fills the cavities between the two mating threads. Similarly, a nylon ring attached to the nut will provide a light interference between the thread and the polymer. Other options can be mechanical deformation of the nut or thread to increase pressure within the thread.

The retention does not address the function of the joint. Most bolted joints are designed to be friction-grip joints: the preload in the bolt presses the sheet metal components together with such a magnitude that the friction between the components is enough to withstand forces along the sheet metal. If the forces along the metal sheets exceed the friction forces, the joint will slip, and the bolted joint will be subjected to shear forces. Henceforth the joint becoming practically a shear joint.

Accurate tightening and creating of pre-load functions better with longer than with shorter bolts and is therefore more suited in heavy laden dynamic applications with components with greater thickness.

Lockbolts can be a permanent solution if joints are not subject to maintenance. A metal ring is squeezed around a pin with helical or annular grooves, thereby providing a continuous pre-load. The fasteners do however need access from both sides.

Single sided access can improve assembly efficiency or even might be a requirement due to difficulty to reach both sides of the application.

Blind rivets have been specifically designed to allow single sided access. Most designs are based on applying tension to an integrated or reusable mandrel, which increases the body diameter on the blind side by splitting, bulbing or expansion. Compared to nut and bolt joints, blind rivets provide a lower pre-load. Therefore, blind rivets are mainly used as shear joints. Some blind rivets have the additional benefit of being hole filling, increasing joint integrity.

Blind rivet nuts and studs can be used as a hybrid solution, whereby the rivet part either fits in a single-layer component or joins multiple layers together. The addition of a metric thread, either as stud or nut, enables further metal sheets or

components to be joined with respectively a nut or screw.

The concept of blind rivets can be found in the use of solid rivets, where one side of the fastener is deformed using an anvil or die when the fastener has been placed in the hole. Solid rivets do therefore need access from both sides and through-holes in the sheet metal.

Self-piercing rivets are a variant on this subject, where a cup shaped, hardened rivet is pushed into the metal. The hardened rivet deforms the layers of sheet metal and forms an interference joint. Generally, a die is used on the blind side to create a mating profile. In certain materials, such as aluminum, it is possible to set the fasteners without the use of a blind side die. The benefit of this method is the possibility to automate assembly without the need of preparing the joints with holes to fit the fasteners.

Developing products for a 'circular economy' finds its fundamentals in developing products with an extended economic life span and are then suitable for re-use, repurpose or recycling at minimum cost and maximum efficiency and retention of value. This does place again emphasis on the use of reversible threaded fasteners, allowing reuse of parts during repair and maintenance and easy recovery of individual parts when the application is dismantled.

As was earlier established the use of bolts and nuts have the benefit of being removable, but require access from both sides, unless either part has a pre-fitted nut or male threaded part. Cage nuts and **captive screws** are well-known examples. The nuts can be clipped into square holes and are often used to compensate for some misalignment in joints.

One option is to attach the male threaded part to one of the components. This can be done either by welding or clinching. **Weld studs** can be manually or fully automatically placed and have an aesthetic benefit of being (nearly) invisible from the blind side, because no part will protrude. A downside is that parts have to be welded before coating or painting and generally the stud and component material have to be similar to allow welding.

If double sided access is possible before assembly, studs could be fitted to the component by clinching. **Self-clinching studs** do require a pre-punched hole, but the stud to be of a dissimilar material to the component material. All parts can also be pre-painted or coated.

Continued from page 6

Instead of fitting a male fastener part to the component, it is possible to pre-fit a nut. This can also be done using self-clinching products such as the **K-Series® nut**. Alternatively, **self-piercing nuts** or **weld nuts** are an option.

Eventually, it might be possible to remove the nut completely and fit a screw directly into the sheet material. With a preference for isometric threads, it can be possible to cut, punch or laser a hole or deep drawn a collar, which can then be tapped with a thread. Doing this requires additional operations during the manufacturing of the individual components adding to cost.

The use of **thread forming** or cutting screws removes the need of creating a screw thread in the counter parts, reducing number of operations, part numbers and overall cost. Some methods require a pilot hole, where other types of screws can be installed directly into the sheet metal without the need of a hole.

Self-drilling screws are equipped with a drill bit shaped point which creates a hole into which the thread is formed. Even though not requiring a hole for installation is attractive, formation of swarf limits the use in mass production environments.

Flow drilling and flow forming screws are also equipped with a special tip, but instead of drilling, it is designed to melt the material locally to allow the sheet material to flow and a mating thread to be formed by the screw. The joint will be resilient against vibrational loosening due to intimate mating of the threads. Flow drilling screws do require robotic installation and high installation speeds, whereas flow forming, such as the **TR EPW screws** can be installed manually.

Equipping parts with pilot holes or pre-extruded holes, thread forming screws can be used. These can either be fitted with a thread forming tip or have a trilobular design, which aids thread rolling. These types of fasteners are used extensively in automotive and other high-volume assembly lines. The benefit of this type of screws is the adherence to a metric thread form, allowing the fastener to be replaced by a standard metric screw in case of repair and maintenance.

Program requirements

An important point to consider when selecting a fastener are the features and benefits versus the limitations of the various systems. It is also useful to consider what assembly methods are already used on the assembly and production lines to be able to utilize existing tools and equipment without the need for capital investment.

Key points to consider with any joint:

Materials and thickness to be joined – is it possible to standardize?

Strength of the connection and type of joint – torque tightening or shear joint?

Corrosion resistance – do materials suit together or is there chance of galvanic corrosion?

Accessibility – can the joint be reached from both sides or would single sided access be required or beneficial?

Automation – are the fasteners to be installed automatically to cope with high volumes?

Takt time – not every fastener installs at the same speed.

Poka-yoke – ensure that the correct fastener is used in the correct joint.

At TR we believe within the product design stage, early joining considerations can save substantial costs when detailing the application, or later when the products go into serial production. Our engineers have a wide experience of fastening technologies in a variety of industries and are available to support you with your next product development.

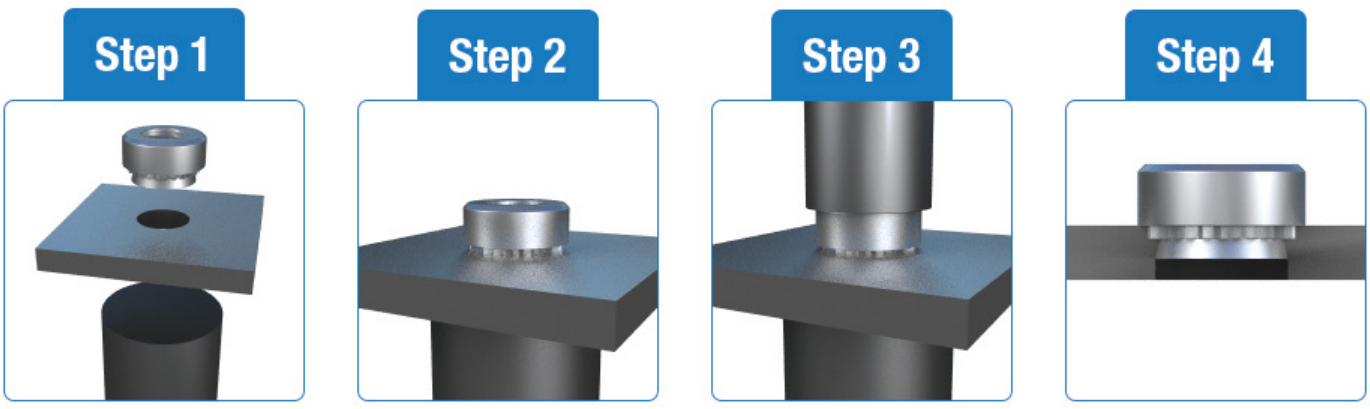
Useful links:

Sheet Metal Fasteners Product Range: https://www.trfastenings.com/products/Catalogue/Fasteners-for-Sheet-Metal

TR Sheet Metal Fasteners – Choosing the right fastener: https://www.trfastenings.com/company/tr-product-media-library

part of the **Trifast plc** Group

TR Clinch Nut Installation



New flexible funding for research projects

A Programme of Research and Innovation for the UK Steels and Metals Sector (PRISM) is delivering funded research projects at the Materials Processing Institute.

The programme, funded by Innovate UK and delivered by the Materials Processing Institute (www.mpiuk.com) aims to improve the competitiveness of the UK Metals Sector by providing funded research and innovation services in the areas of the Circular Economy, Decarbonisation and Digitalisation. It is also supporting the sector's future research and development needs by enhancing the facilities at the Institute.

A world class Advanced Materials Characterisation Centre has been installed and there are projects in progress for an Industrial Decarbonisation Centre and a Circular Economy Technology Centre. The programme is funding collaborative projects, with two or more industrial partners, at a rate of 50% and private projects at a rate of 25%.

Funded by Innovate UK

There are several advantages compared to most other sources of funding. Projects are tailored to the industrial partner's needs, rather than having to meet the specific requirements of an individual funding call or competition, increasing accessibility, increasing the chance of success, and reducing preparation costs. The whole sector's supply chain can benefit from the funding, allowing larger challenges to be addressed and, through involving more partners, reducing the cost to individual companies.

More information on the programme and contact details can be found at https://www.mpiuk.com/prism.htm

European Springs & Pressings - Tackling the manufacturing talent shortage

The skills gap in UK manufacturing has been present for some time, and recent research has highlighted how urgent the issue has become. The Annual Manufacturing Report for 2020 showed that British manufacturers, in particular, are experiencing the most considerable shortage of skilled workers since 1989.

The introduction of smart factories and advancements in automation could be a case for a strong rebound from many businesses. However, it's essential to address how implementing these new smart technologies factors the skills needed to operate efficiently.

This article will discuss the cause of the growing skills gap and how you might combat this with both long and short-term solutions.

CAUSE OF THE SKILLS GAP IN MANUFACTURING

As previously mentioned, the manufacturing sector has been facing the most significant skills shortage in over 30 years. This is partially a result of the rapid advances in smart technologies and automated machinery, along with the impact brought by Covid-19.

While many big hitters in manufacturing are investing in smart technology and efficient equipment, many workers do not currently have the experience to operate these machines. Those looking to start out in the industry are also unaware of the qualifications or skills needed to fill vacant roles.

Listed below are some key solutions to counteract the growing gap while still investing and focusing on the right areas:

MANUFACTURING SKILLS OF THE FUTURE

The manufacturing sector is constantly adapting and evolving, which means it's essential that your workforce can adapt and think critically about programming, tools, technology and digital processes.

By introducing smart technologies such as big data, cloud computing, senators and industrial IoT, you can begin to report more accurately and streamline processes — identifying key areas for boosting capacity and improving products.

SHORT-TERM SOLUTIONS

The shocking reality of the growing skills gap is that employees are retiring faster than the rate of new talent joining the manufacturing industry. Companies with experienced workforces should allocate time to upskilling and re-training employees. To combat a lack of 'modern skills' and/or programming knowledge, you should identify areas where there may be opportunities to upskill current employees. Choosing to automate basic and valuable processes allows for growth in areas like software and machine learning development.

European Springs and Pressings are just one example of a manufacturer at the forefront of pushing the boundaries presented by the growing skills gap — they continue to invest heavily in their workforce and develop their people for the future of manufacturing.

By welcoming apprentices each year, European Springs see the direct benefits of having a development plan in place – many of their qualified apprentices continue to grow their skills as spring technicians. If you would like any more information about the services or products that European Springs offer, please visit their website https://www.europeansprings.com/.

When thinking about short term solutions for the sector's recovery, you should focus on inspiring the next generation of manufacturers with valuable apprenticeship opportunities and put out a strong message surrounding the need for skilled young people to join the industry.

Apprentices are a great addition to your workforce and will gain the necessary experience by working with an established employer. Apprentices not only learn trade skills from more experienced members of the team but start to take accountability, responsibility and bring a fresh perspective of current operations.

LONG-TERM CHANGES

If the skills gap continues to grow, there could be severe consequences for manufacturers — especially in the areas of productivity, operational costs and failing to meet client demands.

To stay competitive in the market, you must invest in upskilling, reskilling and hiring apprentices. As previously mentioned, there are many benefits to apprenticeships, and financially, it's a much smaller and smarter investment than recruiting or hiring a new staff member.

EUROPEAN
SPRINGS & PRESSINGS

Continued on page 12

When you train your staff on new equipment and current operations, you can expect to build a well-rounded, multi-skilled workforce — capable of increasing overall efficiency and product quality. You can introduce this by setting achievable goals with employees and encouraging development through learning opportunities and training courses. Personal development plans (PDPs) are an effective way to record progress and target key areas.

European Springs & Pressings are experienced spring manufacturers. By prioritising the upskilling of their workforce, they can start to build on new and existing team skills. Not only this, but they have seen other benefits like increased productivity and a more streamlined working process. When you spend time identifying current or projected gaps within your team, you can use this data to map a timeline for development, taking into account the equipment or resources you need.

AP&T's servohydraulic press can decrease energy consumption by up to 70%

Transfer applications, press hardening, hot forming of aluminum or forming of composite material... With its servohydraulic press, AP&T has developed a multifaceted, energy efficient alternative to both conventional hydraulic presses and servo mechanical presses.

"Low energy consumption, short cycle times and high precision are desirable attributes, regardless of application. This makes our solution highly interesting for many customers in various industries," says Mikael Karlsson, product manager of Presses at AP&T.

AP&T's servohydraulic press can reduce energy consumption by 40 to 70% compared to conventional hydraulic presses.

AP&T's servohydraulic press stands out from the usual hydraulic press in a number of ways. For example, the hydraulic system's control valves have been replaced by servo motors, which means that speed, position and press force are completely controlled electrically.

"The design has made it possible to limit the number of unique moving parts, cut down on oil volume, reduce pressure in the hydraulic system to a maximum of 250 bar and eliminate the effects of any variations in oil temperature. This lays the foundation for a very robust process with a high degree of availability and repeat accuracy, while substantially reducing the need for maintenance," says Karlsson.

Energy efficient process. The servo motor solution has also streamlined energy consumption by between 40 and 70 percent, depending on the application. Heat loss generated by pressure valves can be avoided, and some servo motors are used as generators at retardation. The press' cushion cylinder is also operated by servo motors which work as generators. Braking energy is distributed to the motors used for acceleration and forming through a kinetic storage system and a central direct current converter. Since the energy is stored internally in the press, it is not necessary to use electricity from the grid during peak loads. Stored energy surpluses can be restored to the grid.

High forming precision. The entire press process is monitored by a closed-loop system, which continuously controls the slide's movements, corrects any deviations and ensures speed and position with a great deal of precision. Not least, the system actively governs the slide's parallelism in relation to the press table — a unique integrated function that contributes to both high forming precision and less wear on tooling.

"The acceleration and retardation speed is an impressive two to three times higher than that of a conventional hydraulic press, thus enabling extremely short cycle times. To maximize production capacity, the press can be synchronized with other servo-driven units for feeding and unloading," says Mikael Karlsson.

"Our servohydraulic press offers a very robust process with a high degree of availability and repeat accuracy, while substantially reducing the need for maintenance," says AP&T's Product Manager for Presses Mikael Karlsson.

Alternative to servo mechanical presses. Low energy consumption, compact design, high production capacity and repeat accuracy in combination with low maintenance costs make AP&T's servohydraulic press a competitive alternative in several areas that have traditionally used servo mechanical presses, such as in transfer solutions and the first presses in tandem lines.

With high stroke frequency, full synchronization and compensation for off-center loads, AP&T's servohydraulic press is well suited to transfer solutions.

AP&T's servohydraulic press — examples of applications

Transfer solutions: High stroke frequency (SPM) compensates off-center loads and offers full synchronization.

Deep drawing and other cold forming: High degree of control accuracy, pre-acceleration of cushion, pulsating forming and major energy savings.

Forming of high-strength steel (AHSS): All forming in one step, reduced spring back, high forming forces on a small tooling area, five to six times greater forming power than a conventional hydraulic press.

Hot forming of aluminum: Minimal energy consumption at long holding times and high force, short cycle time, high forming speed.

Press hardening: Minimal energy consumption at long holding times and high force, short cycle time, high forming speed.

Lead press in tandem lines: Short cycle time for the entire line, full synchronization, flexible power/stroke length through the entire press cycle.

Forming of composites and similar materials: Minimal energy consumption at long holding times and high force, ensured parallelism and flexible force patterns of the tool.

A Year to Remember for Bisley

Since the pandemic struck in early 2020, Bisley has had to change, adapt, and diversify in many ways to manoeuvre its way through some challenging times and conditions.

During lockdown we evaluated our business, our selling channels, how the economy would react, and how business and the working environment might change. We set several initiatives for small groups of people within Bisley, utilising their skills and challenging them to develop new products, find new selling channels and to market these initiatives to new people to protect our business. These initiatives brought people together in ways we have never done before.

In a short time, we designed and launched a new home working range, “Belong”. We focussed on the Bisley Shop and immediately, we saw an increase in sales. With all these exciting launches and product developments, we decided to enter a selection of awards that celebrate manufacturers and the design industry. We’ve been fortunate enough to receive some incredible accolades, including the Manufacturer of the Year award at both the Mix Awards and the Insider Made in Wales Awards, and more recently, won the Commercial Product of the Year for our Be range at the Designer Awards.

This year has also been an exciting one as we appointed our Creative Director, Jeanine Goddard. This is a hugely important role which will oversee the direction of a New Product Development team, to develop product lines, to enter new global markets, as well as continuing to elevate the Bisley brand.

Richard Costin - Bisley Chief Executive

We have continued to manufacture flexibly, adapting to the ever-changing environment and the reliance of our staff within the factory and our customers’ loyalty to our brand across the globe.

Throughout the year, we have continued to invest in the latest state of the art technology to manufacture products in both Wood and Steel for the office and the home environment. In 2022, we plan to continue widening our various storage ranges and diversify, manufacturing products for the new way of working within the office and home environment.

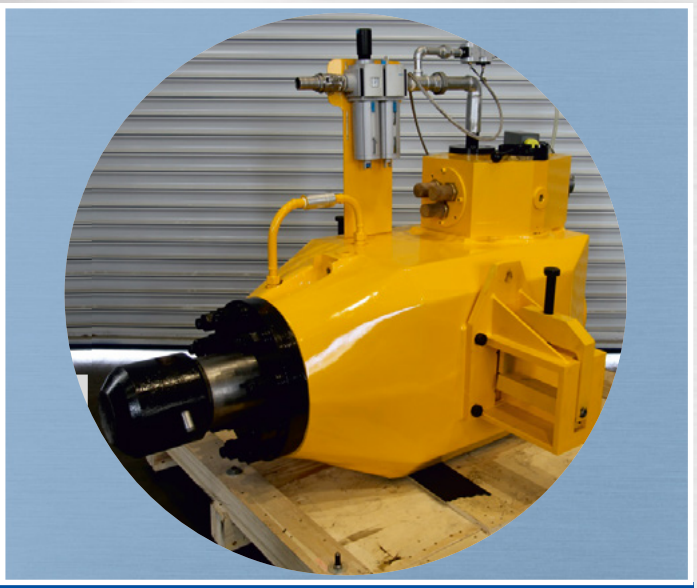
It’s been a year to remember for Bisley and I’d like to extend my thank you to our customers, staff, subsidiaries for all your support, commitment, and loyalty.

BISLEY

BANNING®

Innovation, Efficiency, Competitiveness

BANNING® GmbH
Angensteinerstr. 6
CH-4153 Reinach



KEY DRIVERS

RING ROLLING MACHINES

FORGING HAMMERS

FORGING ROLLS

Fon +41 61 716 20 21 • service@banning-forging.com • www.banning-forging.com

KAIZEN™ INSTITUTE

HOW TO RETAIN THE BEST TALENT?

INCREASE YOUR ORGANISATION'S 2%

In every organisation, there is a small number of people who create exceptional value. Nurturing this group of people is the key to developing, retaining and creating value through your organisation's talent management system.

WHY?

70% of the workforce believes they do not have the necessary skills to be successful in the future.

High performers are **8x** more productive.

1 in **4** high performers believe they will change jobs within 1 year.

1. Develop the critical skills for success

HOW TO INCREASE THE EFFECTIVENESS OF TRAINING

Fast but effective training

- Create internal training standards that help the trainer determine the best way to teach a collaborator.

IMPORTANT STEPS	KEY POINTS	MOTIVES
WHAT TO DO	HOW TO DO IT	WHY?

For each training target process, perform the task breakdown, indicating the important steps, key points (what the trainees really need to know to complete the task successfully) and motives (reasons to perform the step in a certain way).

Select the critical trainings for each collaborator

- Define the training needs according to a skills matrix. This matrix measures the competence/autonomy level in the execution of certain processes.
- In addition to the skills matrix, prioritise training in accordance with the number of employees who know how to carry out a certain task or process, how complex it is, and its impact on productivity and quality.

AUTONOMY LEVELS OF THE SKILLS MATRIX

- The team member does not know how to carry out the task
- The team member has had training: understands the task
- Independent: carries out the task autonomously with the help of the standard
- Specialist: executes the task efficiently achieving results above the target
- Can train others: specialist with training skills

2. Base human resources decisions on data

The growth of digital collaboration, the new methods of data collection and analysis as well as new technologies have been changing the way in which human resources information systems are managed.

The growing trend towards remote working and collaboration platforms (such as Slack or Microsoft Teams) allows for the collection of data and relevant information leading to more informed decision making which truly contributes to talent retention and to the optimisation of the employee experience.

To contribute to increasing retention rates, data analytics is able to:

- Identify factors that contribute to lack of motivation and leaving the organisation.
- Understand patterns in the seasonality of employee departures.

Data Analytics	*Artificial Intelligence*	*Machine Learning*

Re-design the human resources information system to be the centralising hub for HR information.

3. Develop leaders of excellence

Leadership performance is critical in **creating value** through **managing the talent of their teams.**

The **HR team** plays a leading role in **promoting these characteristics across** the organisation.

WHAT ARE THE KEY SKILLS OF A LEADER?

AT KAIZEN INSTITUTE, WE WORK SIDE-BY-SIDE WITH **HUMAN RESOURCES** DEPARTMENTS TO DEVELOP THE **TALENT RETENTION STRATEGIES** THAT BEST FIT EACH BUSINESS. WE WORK AS A **TEAM** TO TRANSFORM PROCESSES TO **CREATE GREATER VALUE** IN THE TALENT MANAGEMENT STRATEGY.

WMG
THE UNIVERSITY OF WARWICK

AFFORDABLE DIGITALISATION FOR SMARTER FACTORIES

Tipping of the digitalisation scale

Gigantic organisations have traditionally been in the forefront of technological development and adoption of advanced manufacturing and digital capabilities gaining huge productivity benefits with some progressing on to become benchmarks for digitalisation titled as 'Lighthouse facility'. Well before the announcement of the fourth Industrial revolution in 2011 called Industry 4.0, ground-breaking technological advancements have been the privilege of mid-cap and larger organisations due to their adoption barriers of high cost for implementation, maintenance, and skills development. However, the sheer size, colossal workforce, multinational presence, routine rigidity and deeply engrained cultures of bigger organisations have sometimes acted as organisational inertia to overcome for successfully embedding digitalisation.

In contrast the more supple Small and Medium Sized Enterprises (SME) which represent more than 99% of UK businesses (5.7 million) although slow in adopting technologies have now got the biggest opportunity to adopt digital tools. The Made Smarter review suggest that within a decade industrial digitalisation could boost UK manufacturing by £455bn and create a net gain of 175,000 jobs. There are several financial and technical support initiatives including Digital Innovation for Manufacturing (DI4M) as well as Made Smarter both managed by WMG to assist SMEs with quick adoption of Digitalisation.

During the recent times of adversity came the biggest opportunity for manufacturers. Easy digital access became the order of the day following the recent workforce and supply chain disruption due to Covid, Brexit and other economic events coupled with the changing face of offices and mobility restrictions. These have led to a surge in the uptake of digital tools and technologies by the C-Suite in at least some part of their business mainly for business continuity. For manufacturers it is critical to move rapidly from traditional manufacturing practices to 'Digital Manufacturing' which encompasses the use of computer-based data driven systems, tools and technologies that span across the entire product or service lifecycle from design to disposal or recycling.

Digital transformation is usually impractical and too big a leap for smaller companies which is why smaller bite sized Digitalisation pilots with fail fast mentality provide the highest traction. The paradoxical situation of lack of suitable data to improve and a desire to improve availability of data has always been a stumbling block for SMEs in taking the plunge. Whilst the high cost of ownership has been one of the biggest considerations for SMEs, the latest scientific developments, online marketplaces and globalisation have made the digital tools more affordable and readily accessible than ever before.

This article further explores the various tools and technologies which have broken the traditional company size barriers acting as easy pilots for digital adoption to move your traditional factory into the new age data driven Smart Factory. They raise the bar for manufacturing productivity but lower the accessibility barrier and could be implemented with a minimal capital outlay.

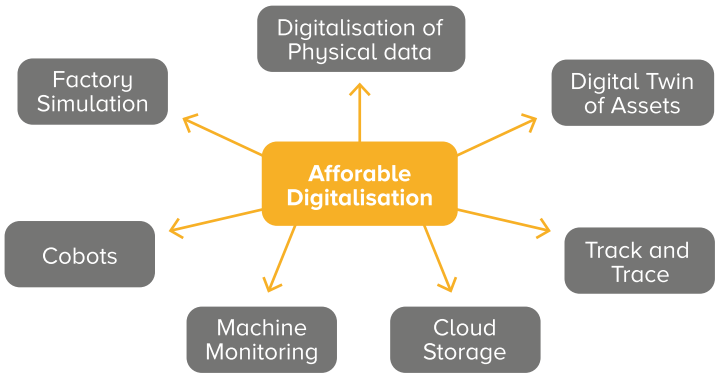


Figure 1 Affordable Digital Tools and Technologies for SMEs

Digitisation of paper-based data

"You can't improve what you don't measure" attributed to the famous quality guru Peter Drucker has the most relevance in the digital age. Most of the factories still work on paper-based information including drawing and quality check sheets stored in hard files. The start of the digitalisation journey happens with converting handwritten paper-based data into a digital format. For manufacturers the typical examples would be digitising aspects of the Purchase order, Quality certificates, Drawings, Process and Quality Inspection cards from manual paper-based format to a digital format. There are several 'Scan to cloud' solutions available for scanning documents directly to metered cloud storage for further processing using their wide array of services. Optical Character Recognition (OCR) tools are readily

available for converting handwritten and ink printed documents into editable digital formats. This would be the starting point towards creating a data-driven culture within your organisation to constantly challenge and improve the status quo, assist critical decision support systems and to predict future events based on historic data.

Digital representation of your critical assets

It is estimated that around 75% of the global industrial data is still in written or 2D formats. This inhibits use of modelling and simulation capabilities for further product development, Computer Aided Process Planning (CAPP), CapEx introduction, layout optimisation, predictive simulation and other improvement activities. The traditional approach would be to build bottom-up 3D models using a modelling software generated by reviewing existing physical spaces and their 2D layouts. However, with the recent development in laser scanners they could be carried out in a reverse manner by scanning the factory space first to directly obtain point cloud data which can then be used to generate very accurate and representative 3D models of your factory. Similar capability can well be applied to remanufacture products as well by scanning the product using Lidar or CT scanning capabilities and then converting them into 3D models using their point cloud data. Most Lidar scanners also provide a Google Street view type 360-degree walkthrough of your factory spaces which could be effectively used in remote working. There are numerous low-cost solutions for capturing the point cloud data using Lidar Scanners ranging from a phone scanner like in the iPhone 12 to dedicated handheld Lidar scanners.

'Track and Trace' of products or services

Information at your fingertips is a key competitive advantage in times of adversity however it shouldn't cost an arm and a leg. With rising digital access, knowing the real-time status of manufactured products or services is key for increasing flexibility and speed eventually impacting profitability. There are numerous open-source platforms available such as runtime JavaScript (Node.js), Python, TensorFlow, etc which builds the backbone of the latest technologies. This coupled with simple local networking HTTP/S application of Internet-of-Things (IoT) would provide a huge impact to SMEs on a shoestring budget. Further low-cost processors such as Raspberry Pi costing approximately £50 can be successfully deployed for applications in a local network or as a middleware to cloud platforms. The typical 'Track and Trace' range of application can be from inspection forms on a handheld device, Near Field Communication (NFC) or Radio Frequency Identification (RFID) based status monitoring, Work In Progress (WIP) tracking, Asset management/ambient condition monitoring etc.

On-demand metered cloud storage

"See you at the top" was one of the accurately delivered sermons evident with the rising popularity of the cloud platform. Their attractive running cost benefits outweigh the traditional capital intensive in-house server setups. A typical application deployed on cloud range around £50/month with no expensive onsite infrastructure to maintain or elaborate IT administration workforce. The advancement in internet-based cloud technology for having serverless application provides an additional advantage of commissioning & using the infrastructure on the fly hence reducing the Operational cost further. The flexibility of scaling the application horizontally and vertically on-demand makes such technology suitable for SMEs.

Real-time machine monitoring

Borderless operations on the go will be a strong distinguishing factor for companies that survive and thrive beyond the pandemic. Ability to monitor and proactively manage your factory using mobile devices from any corner of the world has been one of the key motivators for most SMEs considering Asset Performance Management capabilities. The other stimuli are a more effective workforce and reliable critical assets. What was always a monopoly of bigger technology players is now offered by many smaller organisations. WMG's Manufacturing Information Platform (MIP) offer a budget starter platform to organisations to retrofit affordable instrumentation to critical legacy assets capturing availability and quality data using an economical Raspberry Pi controller to aggregate data onto a dashboard with real time alarms and status details for critical assets to ensure business continuity and higher throughput.

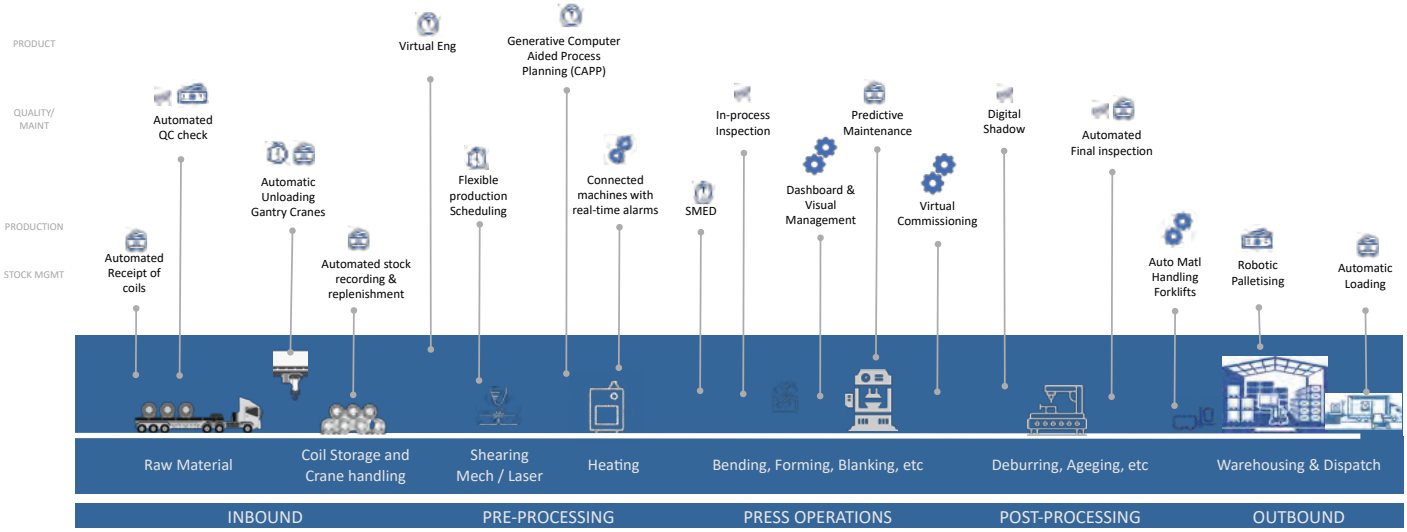
Augmentation of Human workforce with Cobots

'Rise of Machines' has been rampant in the recent years with increase in loss of highly skilled labour, rising complexity of processes, need for 24/7 operations, prevalent occupational hazards and a quest for higher productivity. Traditionally robots have been expensive and time consuming to implement with huge space, safety and skills requirement. However, with the advent of the humble Collaborative Robots (Cobots), humans can effectively work alongside cobots replacing or assisting with task around machine tending, pick and place, inspection, part changeover, processing and assembly. With the entry level cobots starting at just over £8k these are much more accessible for automation pilots within an SME.

Scenario planning through Predictive Simulation

Take the guesswork out of your planning through the powerful ability of Digital Twin Predictive Simulation which can be conducted at a product, process, Line, Factory or Supply chain level. The simulation-based technologies constitute a focal point of digital manufacturing solutions since they allow for the experimentation and validation of the different product, process, and manufacturing system configurations in the virtual world without disrupting actual production. With licences of under £10k these simulations can be used for visualisation of new factories, optioneering for capital equipment validating the business case and returns and for optimisation of existing assets, lines or layouts to improve their performance.

Figure 2 Smart Press Shop



SMART PRESS SHOP

Smart Factory Vision

Manufacturers must aspire towards a Smart factory vision to improve the overall operational performance and organisational resilience. The digital tools can be deployed horizontally along the whole end to end value chain of the factory and could be split down vertically right from design through to production function as shown in figure 2 enabling a highly productive lights out factory.

Co-authored
Nasar Jockey, Principal Engineer – Digital Manufacturing, WMG SME Group
Veer Angadi, Technology Transfer Engineer – Digital Manufacturing, WMG SME Group
This article was first published in 75th Anniversary issue of ISME Oracle magazine

WMG THE UNIVERSITY OF WARWICK

CATAPULT High Value Manufacturing

TRAINING

Training scheme to help Black Country workers at risk of redundancy

People who are at risk of redundancy or have been made redundant in the last three months can access funded training through the Skills Support for Redundancy programme, to help them upskill or retrain. In-Comm Training, one of the training providers chosen to carry out the programme in the Black Country, helps more than 2,500 individuals every year to access apprenticeships and training to equip them with skills they can use to retrain and develop new careers.

This new programme gives individuals the opportunity to complete diplomas in Performing Manufacturing Operations, Engineering Operations and Business Improvement Techniques, all of which are fully funded and an accredited qualification taking 12 months to complete through off and on-the-job-training. There are other certified courses that cover a range of engineering or technical management disciplines.

These include an introduction to metrology, reading engineering drawings, CNC programming and basic hydraulics and pneumatics. These courses can be taken over several days.

Bekki Phillips, In-Comm Training's chief operating officer, said: "We all know how difficult it has been during the pandemic and a lot of people have been made redundant or are at risk of losing their jobs. The Skills Support for Redundancy programme gives individuals access to dedicated training support that will allow them to gain new skills that will be attractive to employers and help make finding new jobs a lot easier. Employees who have received a letter in the last three months saying they are at risk of redundancy can also apply for the scheme, so that they can use the opportunity to upskill, which will add more value to the business if they are able to retain them."

A wide range of funded training is also available for businesses to upskill existing staff through the Skills Support for Workforce programme. Both programmes are delivered by Serco and are co-financed by the Education & Skills Funding Agency and European Social Fund.

Ms Phillips added: "As we emerge from the pandemic, there will be a lot of challenges and plenty of opportunities too. Companies and individuals will need to be as skilled as possible, and this support will help the Black Country adjust to the new way of working in the best way it can."

Telephone us on 01922 457 686

Unique MetalForming Apprenticeship ready to recruit – with Degree and HNC options

The level 6 Tool Process Design Engineer Apprenticeship was specifically created for the metal forming sector in recognition of increasing skills shortages.

The Tool Process Design Engineer apprenticeship and end point assessment have been developed by the CBM and member organisations. It is the only Apprenticeship that recognises the unique and specialist skills for this senior technical role. Organisations of all sizes can access government funds towards the cost of the apprenticeship. The Apprentice may be an existing employee wishing to formalise their qualifications or for a new recruit. The apprenticeship can lead to Incorporated Engineer status with the Institute of Mechanical Engineers.

Employers can choose their preferred training provider including Universities as the apprenticeship has 3 optional routes.

Option 1 Level 6 Tool Process Design Engineer Apprenticeship. The learner undertakes practical and theoretical training on a block release basis. (typically, 88 days over 2 years). Then an assessor visits the workplace every 2 months to continue the training and assessment. Once the training is finished the apprentice must complete an independent end point assessment conducted by the CBM. The funding value assigned to this option usually covers the full cost of both the training delivery and end point assessment

Option 2 Level 6 Tool Process Design Engineer Apprenticeship with HNC units. As option 1 above but provides the additional opportunity for the Apprentice to complete a HNC in Mechanical Engineering. This option incurs an additional cost in order to complete the full Higher National Certificate.

Option 3 There is the possibility of a degree option for suitable candidates. This option requires collaboration between the university and training provider. Again, this option incurs an additional cost to complete the full Degree. The collaborating partners use the Degree,s engineering curriculum to provide some of the under pinning knowledge required in the Apprenticeship standard.

These options allow greater flexibility during these difficult times and ensures this Apprenticeship meets the needs of your business and your workforce.

In response to CBM member feedback this level 6 Apprenticeship (degree level) programme was developed by the CBMs Trailblazer group in collaboration with the Institute of Apprenticeships and technical education. Previously no Tool Process design apprenticeship existed at this level and many employers were dissatisfied with generic qualifications.

In this new apprenticeship skills knowledge and behaviours are specific to our members needs and the employing organisation can choose which university/training provider they work with to achieve the standard. There is the opportunity for the apprentice to work on industry standard training equipment. This equipment was specified by the CBM on behalf of members and procured by the University of Wolverhampton and the Black Country Local Economic Partnership.

The CBM will be the independent end point assessment organisation. This will allow industry specialists, trained in assessment techniques, to become part of the assessment panel. The panel will ensure the apprentice has achieved the required level of knowledge skills and behaviours necessary to meet the needs of modern manufacturing.

We are asking members to become actively involved to ensure this standard adds real value to our sector by encouraging existing and new members of staff to become professionally qualified via this apprenticeship.

The first step is to undertake a demographic and skills analysis of the Tool Process Design capability in your organisation. Using the analysis consider whether to recruit new talent who can undertake this apprenticeship, or whether to up skill your existing workforce as a means of staff retention and to ensure business continuity.

For further information please contact Geraldine Bolton at the CBM via email Geraldine.bolton@thebm.co.uk.

Rising energy prices

Energy prices have soared by an alarming level since June 2021 amid the demand for power in different industries and supplier constraints. As economies around the world recover from the pandemic, energy prices continue to steepen.

Despite this, energy regulator Ofgem says that there will be further "significant rises" next year. Analysts have forecasted that domestic bills in the UK could rise by £400 or more next year if this issue is not solved.

With wholesale energy prices at record highs, energy suppliers that haven't fully hedged requirements to cover their customer portfolio are left exposed to balancing requirements at a significantly higher price than they can sell it, either due to the price cap for domestic customers or existing contractual agreements with their business customers.

Dozens of domestic energy companies in the UK have gone bust. Last month alone, nine domestic energy companies went out of business, leading to over 1 million customers being moved to new suppliers and onto much higher rates.

Business secretary Kwasi Kwarteng has said "the key way we protect consumers is through the price cap". The most the Government can do is provide support for industries and consumers. With many companies and households keen for an answer, Mr Kwarteng has said he is "looking for a solution".

Energy suppliers have criticized the domestic energy price cap, denying that it will 'protect' households from an expected rise in costs. The chief executive of Together Energy, Paul Richards, told BBC Radio 4: "The price cap as a mechanism is not fit for industry, nor is it fit for customers." Richards has stated although some customers were protected by the price cap, there was between £1bn and £3bn in costs due to failed suppliers that would be placed upon businesses and households.

So, no sign of the government intervening or offering much support for business in the current energy crisis.

Rise in wholesale gas prices

Wholesale gas prices have risen 250% since January. Businesses unable to afford soaring energy prices are worried about potentially having to close. Closure of business will leave thousands of people unemployed. The Director General of UK Steel, Gareth Stace, describes the lack of support for businesses as "frustrating".

Companies all over the UK want a business price cap implemented, similar to the one in place for domestic consumers, on the amount that suppliers can charge them. This is crucial for businesses within energy intensive industries like steel-work, chemical plants and paper production.

The British Chambers of Commerce has called on an energy price cap to be introduced for small to medium sized companies struggling with rising gas prices.

A multitude of factors has impacted on wholesale gas prices. The UK has comparably fewer gas storage facilities than other countries and being a net importer of gas, far more exposed to sharp price rises.

Lower than anticipated wind generation in 2021 has forced Britain to rely more on gas to produce power at a time when the UK is already facing supply issues. On top of that, there is a huge pressure on generators to not use fossil fuels and where they do, they have to buy carbon credits which have also gone up a huge amount.

How can we manage our energy prices?

Energy contracts have a larger impact on business costs than ever before and traditional fixed price contract management is becoming less effective at managing costs.

The key is to have a long-term energy management strategy designed to take advantage of forward pricing curves and reduce risk exposure. Buying all your energy at one time for a fixed period can leave you exposed to short term market conditions that affect the overall price of your contract.

Flexible energy contracts provide a long-term solution that gives you the ability to reduce the effect volatile conditions have on your overall costs by looking at the market 3 or 4 years ahead. Businesses can capitalize on market fluctuations and get the best price for energy by purchasing in blocks when the market is favourable. With energy prices showing no sign of easing, find yourself an energy partner and work with them to find a product that gives you the opportunity to manage any increases and make better purchasing decisions.

Beyond net zero: Becoming carbon negative

From 31st October - 12th November 2021, the UK hosted COP26 - the United Nations' 26th annual global climate change conference. During the conference, over 190 world leaders worked together to reach an agreement on how to tackle climate change in order to achieve global net zero by 2050 and limit global warming to 1.5 degrees. But it's not just governments that are setting aspirational sustainability goals – many businesses are now looking beyond their net zero targets and asking: what's next?

For many, the next step will be achieving 'carbon negative' emissions - removing more carbon from the environment than they emit - resulting in 'net negative' emissions. Some also refer to this goal as becoming 'climate positive'.

Why do we need to achieve 'net negative' emissions?

Carbon removal - the process of extracting carbon dioxide from the atmosphere and storing it - will be essential to ensuring that global temperatures do not exceed 1.5°C-2°C above pre-industrial times.

While every business has a responsibility to reduce its emissions, some sectors, such as agriculture or mining and metal forming, will be unable to stop creating carbon emissions entirely, no matter how many decarbonisation measures they put in place. In order to achieve 'net zero', we will therefore need to remove emissions from the environment in order to 'balance out' any residual emissions that these industries cannot avoid creating.

What can businesses do today to become climate positive?

It's currently estimated that we will need to remove 10 gigatonnes of CO2 from the atmosphere a year by 2050, and double that amount by 2100. Many existing carbon offsetting projects focus on afforestation and deforestation, and by supporting these projects, your business can help to remove carbon from the atmosphere. These types of carbon 'removal' projects actually reduce the amount of carbon dioxide in the atmosphere, whereas many other 'preventative' carbon offset projects merely prevent the release of greenhouse gas emissions.

Every tonne of carbon dioxide that these projects remove or prevent creates one carbon offset or 'carbon credit'. Your company can buy as many of these carbon credits as you need to achieve your goals - so if you're looking to achieve:

- **Carbon neutrality,** then you will need to buy carbon credits (can be carbon removal projects or 'preventative' carbon offset projects) equivalent to your current emissions, which will enable you to 'neutralise' your emissions
- **Net zero,** then you will need to buy carbon credits (only from carbon removal projects) equivalent to your current emissions, but only once you have minimised your emissions as much as possible through carbon reduction measures
- **Carbon negative,** then you will need to purchase more carbon removal offsets than you require to simply cover your current emissions, so you're removing more carbon from the atmosphere than you are creating.

Key considerations before you invest in carbon offsetting

1. Have you already reduced your carbon emissions as much as you can?

Investing in offsetting projects can help you to reach sustainability goals like net zero and climate positive, but unless you have done as much as you can to minimise greenhouse gas emissions from your operations, you could be seen as greenwashing or simply paying others to remove emissions you can't be bothered to tackle within your own business.

2. How many carbon credits will you need to purchase?

Before you choose a carbon offsetting project, you need to have a clear understanding of your current carbon footprint- scopes 1, 2 and 3 - as this will enable you to work out how many carbon credits you will need to buy.

3. How beneficial will this project really be?

It's also important to thoroughly understand the impact a carbon offsetting project will have before you decide to invest. There are varying levels of quality of carbon offsets, ranging from low cost 'bronze' projects to expensive carbon removal projects.

Support for your sustainability goals

When it comes to achieving your sustainability goals, expert support can go a long way. So whether you're looking to achieve carbon neutrality, net zero or become climate positive, find out how their experts can help you to take the next step on your sustainability journey by calling 01772 689 250, emailing hello@inspiredenergy.co.uk, or visit www.inspiredenergy.co.uk/netzero

INSPIRED ENERGY PLC

HGV medicals: new and renewed licences

MOHS Workplace Health highlights the current shortfall of HGV drivers and explains when HGV medicals are required, what they involve and what to look out for when booking a medical.

Whilst the shortage of HGV drivers in the UK will not have come as a surprise to the industry, recent disruption to supply chains has brought the worsening crisis to the forefront of news headlines and public consciousness.

The exact number of HGV drivers needed in the UK is estimated to be between 50,000 and 100,000. In order to fill these much-needed vacancies, the government is continuing to offer guidance and provide support to industry.

Increasing numbers applying to become HGV drivers

As the effects of the driver shortfall are being felt across the country, becoming an HGV driver may be an attractive proposition, particularly for those who may have been on furlough, out of work or are seeking a career change.

HGV medicals: when they are needed

An HGV medical examination is essential for applicants who are:

- applying for their first HGV licence
- renewing their licence at aged 45, after which a medical will be required every five years
- aged 65, when they will need a medical annually.

The purpose of the medical examination is to ensure the driver is medically fit to drive this class of vehicle. It Is the responsibility of the applicant to ensure they obtain the correct paperwork from DVLA.

What does a medical involve?

There are two parts to an HGV medical; firstly, the practitioner will discuss the applicant's medical history and any conditions which may affect their ability to drive safely, and secondly a physical examination will take place which involves testing an applicant's vision, blood pressure and other vital signs. The practitioner will complete their section of the official DVLA form and certify the applicant fit, should they pass all elements of the medical.

Who should conduct an HGV medical?

In many cases, this medical is undertaken by an applicant's GP and on some occasions, their optician. As the coronavirus pandemic continues to impact general practice, there have been a lack of face-to-face appointments available for these medicals which is hindering this part of the application process for many people.

Independent practitioners will be able to complete the medical exam and paperwork, but applicants should be advised to check they are GMC registered and licensed to practice in the United Kingdom or registered within the EU prior to booking. It is essential the practitioner conducting the exam is fully qualified and experienced in order to ensure commercial drivers are healthy enough to safely operate their vehicles and in turn keep our roads safe.

For more information, support or guidance get in touch with MOHS Workplace Health: mohs.co.uk.

mohs workplace health

Play fair with flexi working or pay the penalty, metalforming companies warned

Fabricators need to be agile, fast and flexible - just like footballers - in order to compete. But that's where the comparison should end if the industry isn't to face the same social media storm as Lancashire team AFC Fylde did recently.

A job advert from the club which included an ill-conceived role description for a general manager was shared on Twitter as an example of discrimination in the workplace. The advert stated that the club was looking for hard workers and discouraged applications from those 'looking for a work life balance' or those who 'had to pick up the kids up from school'.

The controversial advert has – not surprisingly – been taken down from the Jobs in Football website as many people rightly complained that it discriminated against working parents and in particular women, who are often the primary caregiver.

So, what lessons should metal forming companies be taking from this incident?

Well, with many parents now back to juggling their day job and childcare after the pandemic, the AFC Fylde story highlights the importance of fairly treating employees who request flexible working hours and ensuring these workers remain valuable members of the team, says Julia Fitzsimmons, head of the employment team at FBC Manby Bowdler.

During COVID, many metal forming businesses embraced flexible working models which allowed some staff to work from home while necessary. This required some input from the employer, for example monitoring health and safety at home and taking steps to ensure staff members' mental health, but overall it was a positive experience and many employees enjoyed their newfound work life balance.

Most physical workspaces are now open for business, but it is expected that a full return to the office for everyone is unlikely and employers will see an uplift in requests for flexible or hybrid working - particularly from back office staff, who don't necessarily need to be onsite all the time.

While there is no legislation which can force a company to allow hybrid working patterns, the law does protect workers against discriminatory working practices and inflexible working requirements. This was proven in a case recently of a former estate agent who was denied flexible working hours to collect her child from nursery.

Own goal for estate agency

Alice Thompson successfully pursued the case against her former employer Manor Estate Agents for indirect sex discrimination as the company refused to consider her request to work a 4-day week and to finish at 5pm. She was awarded £185,000 by the employment tribunal.

Women still undertake the majority of childcare provision and therefore can claim indirect sex discrimination if an employer adopts rigid working practices without good reason or which do not take into consideration childcare requirements.

This doesn't mean that an employer can't reject a request for flexible working. Whilst all qualifying workers have the right to request flexi hours, employers can still refuse a request as long as the reason is listed within the statutory framework. Valid reasons could include the increase in costs of additional employees or if the flexible working would have a detrimental effect on customer service.

Indirect sex discrimination claims however are harder to defend – as Manor Estate Agents found to their detriment – as an employer needs to show that they had considered possible alternatives to their original position and the impact of their working requirements on the particular individual.

Head of Employment at FBC Manby Bowdler, Julia Fitzsimmons

Show discrimination the red card

Metalforming companies must be very careful about the indirect consequences of their words and actions which could be deemed to discriminate. Advertising for staff using phrases such as "dynamic, energetic" and suggesting that your business has a "work hard, play hard" culture can be seen to exclude older workers and imply out of hours work events are a requirement thereby excluding women with childcare arrangements, workers who don't drink for religious reasons, people with disabilities who may not be able to work long days and people at risk from confined social gatherings.

The same goes for flexible working policies and hybrid working arrangements. These should be used to maximise employee engagement rather than excluding groups or individuals who would benefit from a more flexible approach to their hours. Aside from losing valued members of staff, refusing flexi working requests without proper consideration could result in an expensive discrimination judgement.

If you would like to review your flexible or hybrid working policies, get in touch with Julia Fitzsimmons on 01952 208420 or email Julia.fitzsimmons@fbcmb.co.uk for further advice on how to make your workplace more inclusive and compliant.

fbc manby bowdler.
SOLICITORS

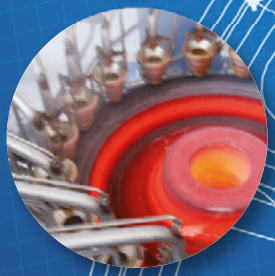
PRESSTRADE®

Second-Hand Machines

New Machines

ALL ABOUT FORGING

Service & Support



Special Installations

Engineering for the Forging Industry

Logistics

www.presstrade.com

Presstrade AG · Angensteinerstrasse 6 · CH-4153 Reinach BL · Switzerland
Phone +41 61 716 20 00 · info@presstrade.com · www.presstrade.com

Manufacturer & Supplier Membership Directory 2021

Fastener

A.M.C. UK Fasteners Ltd
West Midlands NN17 5XZ
t: 01536 271 920
www.amcukfasteners.co.uk

Atlas Copco IAS UK Ltd (Henrob)
Flintshire CH5 2NX
t: 01244 837 220
www.henrob.com

Barton Cold-Form, an Optimas Company
Worcestershire WR9 0LP
t: 01905 772 021
www.global.optimas.com

Brooks Forgings Ltd
West Midlands B64 5QJ

Established in 1960, one of the UK's leading manufacturers of forged and machined components. With our extensive in house manufacturing capabilities we are able to produce standards and specials to suit customer specific requirements.

t: 01384 563 356
f: 01384 563 357
e: enquiries@brooksforgings.co.uk
www.brooksforgings.co.uk

Cirteq Ltd
West Yorkshire BD20 8QP
t: 01535 633 333
www.cirteq.com

Clevedon Fasteners Ltd
West Midlands B75 7DG

West Midlands based UK manufacturers of fasteners and customer specific. Specialists cold forgings. ISO9001 and ISO14001 approved, Covid Secure.

t: 0121 378 0619
f: 0121 378 3186
e: sales@clevedon-fasteners.co.uk
www.clevedon-fasteners.co.uk

Complex Cold Forming Ltd
West Midlands WS10 7SE
t: 0121 556 5700
www.complexcoldforming.com

Cooper & Turner Ltd
Yorkshire S9 1RS
t: 01142 560 057
www.cooperandturner.co.uk

Griff Chains Ltd
West Midlands DY2 0ED
t: 01384 569 415
www.griffchains.co.uk

Howmet Fastening Systems and Rings, Redditch Operations (Linread Ltd)
Worcestershire B98 7TD
t: 01527 525 719
www.howmet.com

Howmet Fastening Systems Telford
Shropshire TF3 3BQ
t: 01952 290 911
www.howmet.com

JCS Hi-Torque Ltd
Suffolk CO10 2YH
t: 01787 376 212
www.jcshi-torque.co.uk

Leggett & Platt Components Europe Ltd
Lancashire BB18 6JA
t: 01282 814 054
www.leggett.com

Leggett & Platt Components Europe Ltd
South Yorkshire S72 7GH
t: 01226 707 500
www.leggett.com

Smith Bullough
Lancashire WN2 4HD
t: 01942 520 250
www.smithbullough.com

SPS Technologies (T.J. Brooks Div.)
Leicestershire LE4 9HX
t: 0116 274 4886
www.spstech.com

Stanley Engineered Fastening (Avdel)
Cheshire WA1 4RF
t: 01925 811 243
www.stanleyengineeredfastening.com

TR Fastenings
East Sussex TN22 1QW
t: 0845 4811 800
www.trfastenings.com

Forging

Abbey Forged Products Ltd
Yorkshire S6 1ND
t: 0114 231 2271
www.abbeyforgedproducts.co.uk

AKS Precision Ball Europe Ltd
County Durham SR8 2PP
t: 0191 587 0000
www.aksball.com

Bedford Steels
Yorkshire S4 7YS
t: 01246 299 100
www.bedfordsteels.co.uk

Bifrangi UK Ltd
Lincolnshire LN2 5DT
t: 01522 585 800
www.bifrangi.co.uk

Blaenavon Forgings Ltd
Gwent NP4 9XG
t: 01495 790 345
www.forgedsolutionsgroup.com

Brockhouse Group Ltd
West Midlands B70 0SN
t: 0121 556 1241
www.brockhouse.co.uk

Brookes & Adams Ltd
West Midlands B44 9DX
t: 0121 360 1588
www.banda.co.uk

Brooks Forgings Ltd
West Midlands B64 5QJ

Established in 1960, one of the UK's leading manufacturers of forged and machined components. With our extensive in house manufacturing capabilities we are able to produce standards and specials to suit customer specific requirements.

t: 01384 563 356
f: 01384 563 357
e: enquiries@brooksforgings.co.uk
www.brooksforgings.co.uk

Cascade (UK) Ltd
Greater Manchester M11 2DD
t: 0161 438 4010
www.cascorp.com

Cerro EMS Ltd
West Midlands B9 4DS
t: 0121 772 6515
www.cerro-ems.com

Chapmans Agricultural Ltd
South Yorkshire S6 2FH
t: 0114 285 6000
www.chapmans-uk.com

Cramlington Precision Forge Ltd
Northumberland NE23 1WA
t: 01670 716 811
www.cpfl-tvs.com

Footprint Sheffield Ltd
South Yorkshire S6 2AH
t: 0114 232 7080
www.footprint-tools.co.uk

Henry Williams Ltd
County Durham DL1 2NJ
t: 01325 462 722
www.hwilliams.co.uk

Independent Forgings & Alloys Ltd
South Yorkshire S6 2BL
t: 0114 234 3000
www.independentforgings.com

Kimber
West Midlands B64 5QY
t: 01384 414 500
www.kimbermills.co.uk

Koyo Bearings (Europe) Ltd
South Yorkshire S75 3TA
t: 01226 733 200
www.koyo.eu

Mettis Group Ltd
Worcestershire B97 6EF
t: 01527 406 400
www.mettis-aerospace.com

Mills Forgings Ltd
Warwickshire CV1 2BJ
t: 024 7622 4985
www.millsforgings.co.uk

MSI-Forging Division
South Yorkshire DN4 8DH
t: 01302 366 961
www.msi-forge.com

Padley & Venables Ltd
Yorkshire S18 2XT
t: 01246 299 100
www.padley-venables.com

Pandrol UK Ltd
Nottinghamshire S81 7AX
t: 01909 476 101
www.pandrol.com

Smith Bullough
Lancashire WN2 4HD
t: 01942 520 250
www.smithbullough.com

Solid Swivel Ltd
West Midlands B64 7BL
t: 01384 636 421
www.solidswivel.co.uk

Somers Forge Ltd
West Midlands B62 8DZ
t: 0121 585 5959
www.somersforge.com

Special Quality Alloys Ltd
Yorkshire S9 3XN
t: 0114 243 4366
www.specialqualityalloys.com

Spromak Ltd
Merseyside L36 6AN
t: 0151 480 0592
www.spromak.co.uk

Tecomet
Yorkshire S6 2AN
t: 0114 285 5881
www.symmetrymedical.com

The Crosby Group UK Limited
West Midlands B64 6AJ

The Crosby Group is a global leader in innovating, developing, manufacturing and supplying products used in lifting, rigging, load monitoring, material handling and other related applications.

t: 01384 353 120
www.premierstampings.co.uk

Tinsley Bridge Group
Yorkshire S9 1TG
t: 0114 2211 111
www.tinsleybridge.co.uk

W.H. Tildesley Ltd
West Midlands WV13 2AN
t: 01902 366 440
www.whtildesley.com

Wyman Gordon Lincoln Ltd
Lincolnshire LN2 5XY
t: 01522 525 492
www.wyman-gordon.com

Wyman Gordon Ltd
West Lothian EH54 5BZ
t: 01506 446 200
www.wyman-gordon.com

Sheet Metal / Pressing

3M Healthcare
Lancashire BB7 1NX
t: 01200 421 140
www.3M.com/uk

AGA Rangemaster Ltd
Warwickshire CV31 2AD
t: 01926 457 400
www.rangemaster.co.uk

Aisin Europe Manufacturing (UK) Ltd
West Midlands B32 3BZ
t: 0121 421 5688
www.aisin.com

APS Metal Pressings Ltd
West Midlands B19 3AR

- APS are a world leading manufacturer, with unrivalled metal forming and presswork capabilities.
- Our 57,000 square foot facility contains the latest start-of-the-art manufacturing plant enabling us to provide, complex high specification components.
- Founded in 1970, this family run business, is based within the hub of British industry – Birmingham, the home of the Enviro-Cup.

t: 0121 523 0011
f: 0121 554 7244
e: info@apsmith.co.uk
www.apsmith.co.uk

Bisley (FC Brown)
Gwent NP19 4PW
t: 01633 637 383
www.bisley.com

Broadways Stampings Ltd
Buckinghamshire MK1 1DT
t: 01908 279 200
www.broadwaysstampings.co.uk

C.Brandauer & Company Ltd
West Midlands B19 2YU
t: 0121 359 2822
www.brandauer.co.uk

Carlton Laser Services Ltd
Leicestershire LE4 9LN
t: 0116 233 9990
www.carltonlaser.co.uk

Cirteq Ltd
West Yorkshire BD20 8QP
t: 01535 633 333
www.cirteq.com

Denso Marston Ltd
Yorkshire BD17 7JR
t: 01274 702 404
www.denso-europe.com

Eaton Electrical Systems Ltd
South Yorkshire DN2 4NB
t: 01302 321 541
www.cooper-ls.com

Eaton Group
Kent ME12 1LP
t: 01795 889 146
www.enclosures-crouse-hinds.uk.com

Eden - A trading division of The Marmon Group Limited
Northamptonshire NN8 6GR
t: 01933 401 555
www.eden-uk.com

Eu-Matic Div. of Multimatic Ltd
Warwickshire CV5 6UB
t: 024 7667 3333
www.multimatic.com

European Springs & Pressings (Beckenham)
Kent BR3 4DW
t: 0208 663 1800
www.europeansprings.com

NEW Ex-pressed Steel Panels LTD
North Yorkshire BD22 0DB
t: 01535 632 721
www.steelpanels.com

Futaba-Tenneco UK Ltd
Lancashire BB12 6HJ
t: 01282 433 171
www.futaba-tenneco.co.uk

G John Power Limited
West Midlands B63 3PF
t: 0121 550 3112
www.gjohnpower.co.uk

G-TEKT Europe Manufacturing (Gloucester)
Gloucestershire GL3 4AJ
t: 01452 610 022
www.takao.co.uk

G-TEKT Europe Manufacturing Ltd (Gwent)
Gwent NP23 5SD
t: 01495 307 190
www.takao.co.uk

GDC Group Ltd (Newry)
County Down BT34 2QU
t: 02830 264 621
www.gdcgroup.co.uk

GDC Group Ltd (Portadown)
County Armagh BT63 5HU
t: 0283 8333 131
www.gdcgroup.co.uk

Gestamp Tallent Ltd (Aycliffe)
County Durham DL5 6EP
t: 01325 313 232
www.gestamp.com

Gestamp Tallent Ltd (Cannock)
Staffordshire WS11 1LY
t: 01543 466 664
www.gestamp.com

Gestamp Tallent Ltd (Llanelli)
Carmarthenshire SA14 8EU
t: 01554 772 233
www.gestamp.com

Glen Dimplex Home Appliances
Merseyside L35 2XW
t: 0844 248 4466
www.gdha.com

Guala Closures UK Ltd
Lanarkshire G66 1ST
t: 0141 777 2000
www.gualaclosures.com

H V Wooding Ltd
Kent CT21 6HG
t: 01303 264 471
www.hvwooding.co.uk

Hadley Industries Plc
West Midlands B66 2PA
t: 0121 555 1300
www.hadleygroup.com

Imperial Machine Company
Wrexham LL13 9RF
t: 01978 661 155
www.imco.co.uk

JCS Hi-Torque Ltd
Suffolk CO10 2YH
t: 01787 376 212
www.jcshi-torque.co.uk

Kiyokuni Europe Ltd
Shropshire TF2 9TY
t: 01952 292 920
www.kiyokuni.co.uk

KMF (Precision Sheet Metal) Ltd
Staffordshire ST5 7UF
t: 01782 569 060
www.kmf.co.uk

Leonardt Limited — t: 01746 861 203
Shropshire WV16 6NN — www.leonardt.com

Liberty Pressing Solutions (Coventry) Ltd — t: 02476 691 000
West Midlands CV5 6RT — www.libertyhousegroup.com

Lincat — t: 01522 875 500
Lincoln LN6 3QZ — www.lincat.co.uk

Metal Assemblies Ltd — t: 0121 500 5616
West Midlands B70 9DD — www.metalassemblies.co.uk

Milton Keynes Pressings Ltd
Buckinghamshire MK2 3EF

The MKP Group consists of Milton Keynes Pressings, Ryeland Toolmakers and Maine office, all established Engineering Companies. As a tier one supplier of Metal pressings and sub assemblies in to the automotive and other industries we pride ourselves on our quality and delivery performance to our customers of which we have received various awards.

Our Accreditations include:

bsi. ISO 9001 Quality Management | ISO 14001 Environmental Management | OHSAS 18001 Occupational Health & Safety Management | TS 16949 Automotive Quality Management | VDA 6.3

t: +44 (0) 1908 271 940
www.mkp.co.uk

Northern Automotive Systems Ltd — t: 01873 832 263
Monmouthshire NP7 0EB — www.nasuk.com

Presspart Manufacturing Ltd — t: 01254 584 126
Lancashire BB1 5RF — www.presspart.com

Radius Aerospace Inc — t: 01743 454 300
Sheffield S20 3GB — radiusaerospace.com

Rical Limited — t: 0121 558 2694
West Midlands B66 1NY — www.ricalgroup.com

Rittal-CSM Ltd — t: 01752 207 600
Devon PL6 7EZ — www.rittal-csm.co.uk

SAS International (Scotland) — t: 01655 882 555
Ayr KA19 7AZ — www.sasint.co.uk

SAS International (Wales) — t: 01656 664 600
Glamorgan CF31 3XU — www.sasint.co.uk

SDE Technology
Shropshire SY1 3LB

- SDE Technology is a long standing metal presswork and assemblies provider based in Shrewsbury.
- With mechanical, progression, hydraulic and transfer options up to 1000T, and incorporating 2 state of the art Powder coating lines on site.
- We are here for all your pressing and coating needs.

t: 01743 450 501
www.sde.technology.co.uk

Sertec Aluminium Structures — t: 0121 706 0330
West Midlands B11 2BF — www.sertec.co.uk

Sertec Auto Structures Heavy Stamping — t: 01675 463 361
West Midlands B46 1JX — www.sertec.co.uk

Sertec Light Stampings — t: 0121 327 1428/ 01675 436 000
West Midlands B6 7QT — www.sertec.co.uk

SPS Aerostructures Ltd — t: 0115 988 0000
Nottinghamshire NE15 0DP — www.spstech.com

Stadco Castle Bromwich — t: 0121 382 3120
West Midlands B24 9GZ — www.stadco.co.uk

Stadco Powys — t: 01691 648 561
Powys SY22 5DH — www.stadco.co.uk

Stadco Telford — t: 01952 222 111
Shropshire TF1 7LL — www.stadco.co.uk

Steel & Alloy Processing Ltd — t: 0121 553 5292
West Midlands B70 6BZ — www.steelalloy.co.uk

Stockfield Metal Spinners Ltd — t: 0121 440 1333
West Midlands B12 9DJ — www.stockfield.com

Swann-Morton Ltd — t: 0114 234 4231
Yorkshire S6 2BJ — www.swann-morton.com

The Regent Engineering Co (Walsall) Ltd — t: 0121 526 6060
West Midlands WS10 8XB — www.regenteng.com

Titan Steel Wheels — t: 01562 850 561
West Midlands DY10 3SD — www.titansteelwheels.com

Voestalpine Metsec plc — t: 0121 601 6000
West Midlands B69 4HF — www.metsec.com

Voestalpine Rotec Ltd — t: 01455 620 300
Leicestershire LE10 3BS — www.voestalpine.com/rotec

Walsall Pressings Co Ltd — t: 01922 721 152
West Midlands WS1 4JW — www.walpres.co.uk

Whittan Storage — t: 0800 169 5151
Shropshire TF7 4LN — www.link51.co.uk

William King Ltd — t: 0121 500 4100
West Midlands B70 9DR — www.williamking.co.uk

Cold Rolled

Aisin Europe Manufacturing (UK) Ltd — t: 0121 421 5688
West Midlands B32 3BZ — www.aisin.com

Grove Metal Sections Ltd — t: 01902 601 697
West Midlands WV13 3RN — www.grovems.com

Hadley Industries Plc — t: 0121 555 1300
West Midlands B66 2PA — www.hadleygroup.com

Voestalpine Metsec plc — t: 0121 601 6000
West Midlands B69 4HF — www.metsec.com

Fastener

Ajax Tocco International Ltd — t: 0121 322 8000
West Midlands B8 1BG — www.ajaxtocco.co.uk

Broder Metals Group Ltd — t: 0114 232 9240
Yorkshire S35 9TG — www.broder-metals-group.com

Carlo Salvi UK Ltd - Hatebur — t: 01952 587 730
Shropshire TF7 4PF — www.carlosalvi.com

Doerken MKS Systeme Gmbh and Co — t: 00 49 233 0630
Germany — www.doerken.com

Heat Treatment 2000 Ltd — t: 0121 526 2000
West Midlands B70 9PQ — www.heattreat2000.co.uk

National Machinery UK Ltd — t: 0121 222 5352
West Midlands B31 2TS — www.nationalmachinery.eu

Phillips Screw Company — t: 0754 081 1962
Leicestershire LE3 2YB — www.phillips-screw.com

RLS Tooling — t: 01543 271 808
Staffordshire WS11 9PU — www.rlstooling.co.uk

Forging

Ajax Tocco International Ltd — t: 0121 322 8000
West Midlands B8 1BG — www.ajaxtocco.co.uk

Bharat Forge — t: 01562 720 396
Middlesex TW8 9JJ — www.bharatforge.com

Carlo Salvi UK Ltd - Hatebur — t: 01952 587 730
Shropshire TF7 4PF — www.carlosalvi.com

Condat Ltd — t: 01302 770 088
Doncaster, DN 10 6EZ — www.condat-lubricants.com

Dreher Automation — t: 0049 7454 881 640
Germany D- 72172 — www.dreher.de

Forge Tech Services (UK) Ltd
West Midlands B71 3QW

- Spares, Service and Process engineering for all makes of metalforming equipment
- Forge Tech offer a full Turnkey service for all your metalforming equipment projects from small spares to complete press installations.

t: 07789 502 850
www.forgetechservices.com

Henkel Ltd — t: 01442 278 000
Hertfordshire HP2 4RQ — www.henkel.com

Interpower Induction Ltd — t: 01675 477 700
West Midlands WS8 6LH — www.interpowereurope.com

James Durrans and Sons
Yorkshire S36 9QU

- Suppliers of all types of forging lubricants
- UK based manufacturing facilities and technical support
- 10 day delivery time on most lubricants

Contact:
Steven Sherry, Sales Manager — t: 01226 370 000
www.durrans.co.uk

LASCO Umformtechnik GmbH — t: 00 49 9561 6420
Germany — www.lasco.com

Micas Simulations Ltd — t: 01865 775 412
Oxfordshire OX4 2ER — www.micassimulations.co.uk

Sheet Metal / Pressing

Aalberts Surface Technologies Ltd — t: 0121 327 2020
West Midlands B6 7EE — www.hauckht.co.uk

AP&T UK — t: 00 45 762 53201
Denmark — www.aptgroup.com

Dayton Progress Ltd — t: 01926 484 192
Warwickshire CV8 1NP — www.daytonprogress.co.uk

Dreher Automation — t: 00 49 7454 881 640
Germany D-72172 — www.dreher.de

EcoCooling Limited — t: 07973 287 385
Suffolk IP28 6RE — www.ecocooling.org

Institute of Sheet Metal Engineering — t: 0789 149 9146
West Midlands WV6 7UQ — www.isme.btck.co.uk

Ryeland Toolmakers — t: 01908 647 746
Buckinghamshire MK2 3JJ — www.ryelandtoolmakers.co.uk

The Bifurcated & Tubular Rivet Company — t: 01296 314 300
Buckinghamshire HP20 1DQ — www.bifandtub.co.uk

Commercial

Advanced Forming Research Centre — t: 0141 534 5200
Renfrew PA4 9LJ — www.strath.ac.uk/afrc

Altair Engineering — t: 01926 468 600
Warwickshire CV32 4JG — www.altairengineering.co.uk

Control Energy Costs Ltd — t: 07501 221 728
Surrey CR5 1BN — www.cec.uk.com

Crowe U.K. LLP — t: 0121 543 1900
West Midlands B69 2DG — www.crowe.co.uk

Cyber-weld — t: 01926 811 225
Southam CV47 1NE — www.cyberweld.co.uk

ECi Software Solutions — t: 0333 123 0333
Cambridgeshire PE27 4AA — www.ecim1.eu

FBC Manby Bowdler Solicitors LLP — t: 01902 578 000
West Midlands WV2 4DN — www.fbcmb.co.uk

Fortress Interlocks — t: 01902 349 000
West Midlands, WV4 8FB — www.fortressinterlocks.com

Fuchs Lubricants (UK) Ltd — t: 01782 203 700
Staffordshire ST1 5HU — www.fuchs.com/uk

Gravity Risk Services — t: 07510 695 335
Leicestershire LE7 1GP — www.gravityriskservices.co.uk

Highley Steel Ltd — t: 01384 396 660
West Midlands DY8 1JN — www.highleysteel.com

NEW Imperial College London — t: 020 7589 5111
London SW7 2A8 — www.imperial.ac.uk

In-comm Training and Business Services Ltd	**t: 01922 457 686**
West Midlands WS9 8UG	**www.in-comm.co.uk**
Inspired Energy Plc	**t: 01772 689 250**
Lancashire PR4 2TZ	**www.inspiredenergy.co.uk**
Kumi Solutions	**t: 02746 350 360**
Warwickshire CV8 9FF	**www.kumi-solutions.com**
Lake Engineering Solutions	**t: 07948 352 008**
Worcestershire B98 8QJ	**www.lakecm.co.uk**
MOHS Workplace Health Ltd	**t: 0121 601 4041**
West Midlands B70 6PX	**www.mohs.co.uk**
Petrofer UK PLC	**t: 01952 580 100**
Shropshire TF7 4PW	**www.petrofer.co.uk**
Pilz Automation Technology	**t: 01536 460 766**
Northamptonshire NN18 8TJ	**www.pilz.co.uk**
Powerstar	**t: 0333 230 1327**
South Yorkshire S35 1QP	**www.powerstar.com**
Process Parameters Ltd	**t: 01628 778688**
Berkshire SL6 3UA	**www.processparameters.co.uk**
R & D Tax Claims Ltd	**t: 0845 003 0140**
Shrewsbury SY4 4FA	**www.rdtaxclaims.co.uk**
NEW Regenerco Limited	**t: 07973 298 832**
Burton Upon Trent DE13 9PD	**www.regenercoenergy.com**
ReTell	**t: 01932 730 890**
Middlesex TW16 5QH	**www.retell.co.uk**
Sammet Consulting	**t: 07885 489 176**
Birmingham	**www.linkedin.com/stuart-mellor-sammet**
Total UK Ltd	**t: 01977 636 303**
West Yorkshire WF11 8JY	**www.total.co.uk**

CONFEDERATION OF BRITISH METALFORMING

ONLINE VIA ZOOM

METALLURGY FOR NON-METALLURGISTS

TUESDAY 15TH & WEDNESDAY 16TH MARCH 2021

THE METALLURGY FOR NON-METALLURGISTS PROGRAMME IS A TWO DAY COURSE DESIGNED FOR ANYONE WHO NEEDS TO KNOW MORE ABOUT METALS AND PROCESSES USED IN THEIR COMPANY.

The above course dates are provisional.

If you would like to express an interest to attend, please email Melinda Jean, melinda.jean@thecbm.co.uk

OUTLINE OF COURSE CONTENTS

- Metal properties
- Metals structure
- Ore smelting
- Metals making & casting
- Rolling and metal forming
- Mechanical Testing and NDT
- Hot & cold working/shaping/forming
- Heat treatment
- Metal alloy classification
- Corrosion

BUSINESS BENEFITS

The Metallurgy for Non-Metallurgists programme will enable participants to:

- communicate more effectively with technical colleagues
- be better informed and more efficient when dealing with customer enquiries
- avoid mistakes caused by lack of understanding
- understand the production, processing and testing of relevant metals and alloys
- appreciate the properties and applications of relevant industrial alloys

PROGRAMME CONTENT

Courses commence with delivery of core knowledge components and progress onto a series of extended knowledge modules.

PROGRAMME DELIVERY

Courses take the form of participative workshops, led by an expert metallurgist with extensive metals industry experience.

The content, length and structure of the course can vary according to individual company needs.

A folder of course materials is supplied and all attendees will receive a certificate after completing the two day course.

COST

CBM members £325 + vat per person,
Non Members £445 + vat per person

Places are limited, so to avoid disappointment reserve your place(s) now contact: Melinda Jean at the CBM on 0121 601 6350 or email: melinda.jean@thecbm.co.uk

NATIONAL METALFORMING CENTRE,
WEST BROMWICH, WEST MIDLANDS B70 6PY

INSURANCE SERVICES FOR CBM MEMBERS

gravity RISK SERVICES

Geraldine Bolton
Chief Executive of the CBM

OUR APPROACH

Gravity Risk Services have partnered with The Confederation of British Metalforming to provide cost effective insurance solutions to their members.

Choosing the right broker to review your insurance programme can be difficult. The insurance market is intensely competitive and insurance brokers come in many shapes and sizes. Some exist by competing solely on price, and the quality of their advice and level of understanding can often be limited. It is vital to consider a broker who has the specialist knowledge and understanding of your industry and the issues you face. If an insurance broker cannot understand your business, the processes you undertake, the exposures of your business both internally and externally, how can this information be presented to insurers to obtain competitive pricing and bespoke policy covers? It is very important that insurers know all about your business so they can provide the best cover and the best price.

Gravity Risk Services have had connections with the Confederation of British Metalforming (CBM) for nearly 20 years. We understand their industry with a passion and know how to design the correct Insurance programme for their business.

> *"We have had extensive discussions with Gravity Risk Services regarding this new member service and are confident this is a service that will benefit members when reviewing and renewing their insurance programme. Not only has it the potential to save money, but it can enhance policy covers too. We recommend all members speak to Gravity Risk Services before renewing their present insurance arrangements."*
>
> **Geraldine Bolton, Chief Executive of the CBM**

CBM CONFEDERATION OF BRITISH METALFORMING

EXCLUSIVE MEMBER BENEFITS

As a member of the CBM you have access to a range of insurance services that include:

- 10% minimum savings on current insurance policies next renewal premium guaranteed*
- Free independent assessment and 'due diligence' of your current business insurance arrangements (usually charged at £1,000 + VAT)
- Discounted 'Gravity Business Assist' support package including Health and Safety software legal support service and Directors & Officers Liability insurance
- An Agreed Service Level Agreement
- Free Risk Management support from Aviva including access to consultancy support from an expert and heavily discounted products and services
- Discounted HR and H&S services including gap analysis audits, consultancy support and an online self service tool, HR Partner
- Access to all partnership support services (Full details on request)

** subject to agency agreement in place with the current insurer and no change in risk exposures*

CONTACT

The Old Vicarage • 26 High Street
Syston • Leics • LE7 1GP
Switchboard: 0116 478 2999
Email: CBM@gravityriskservices.co.uk

www.gravityriskservices.co.uk

manufacturing + engineering week

NEC BIRMINGHAM | 6-10 JUNE 2022

Celebrating the best in UK manufacturing and engineering excellence and innovation.

What's on

6-7 June - Virtual Event Programme

8-9 June - Live Event Programme

10 June - Round up and Key Takeaways

- **Hear inspiring keynotes, exclusive interviews and debates**
- **Attend CPD accredited workshops**
- **Source products and services from Britain's best suppliers**

Premier Partners

WÜRTH igus Farnell AN AVNET COMPANY

Innovation Zone Sponsor

ARROW

Keynote Theatre Sponsor

ABB

manufacturing + engineering week NEC BIRMINGHAM | 6-10 JUNE 2022

Incorporating design engineering expo / engineering expo / manufacturing expo / maintec

Find out more at www.mandeweek.co.uk

@MandEWeek

EXHIBIT AT MACH 2022

THE UK'S NATIONAL EVENT FOR INSPIRING, INNOVATING AND CONNECTING MANUFACTURING

Taking place from **4-8 April 2022,** MACH will be the event to connect the world of manufacturing technologies and be the destination of choice for manufacturing engineers, decision makers, buyers and specifiers looking to discover new technology, adopt and invest in the digital revolution.

TO BOOK YOUR SPACE AT MACH 2022 VISIT
machexhibition.com

Organised by

MTA
THE MANUFACTURING TECHNOLOGIES ASSOCIATION

Sponsored by

LLOYDS BANK

MACH
4-8 April 2022
NEC Birmingham UK
machexhibition.com