MEETING UP IN PARIS

53rd INTERNATIONAL PARIS AIR SHOW LE BOURGET
JUNE 17-23, 2019

CELEBRATING MIDLANDS’ CONTRIBUTION TO CONCORDE
Discover the 30+ Midlands manufacturers that made it fly. See page 12

ATTRACTING NEW TALENT TO AEROSPACE
How are MAA members addressing their skills gaps? See page 5

MAKE DIGITAL COMMUNICATION WORK FOR YOU
Read how three MAA members use social media. See page 4

Meet the MAA members exhibiting this year –
See pages 7 to 10
This year’s headline statistics made Aerospace Forum Birmingham one of the highest profile events in the aerospace calendar.

Held in March at the Birmingham International Convention Centre, the event played host to leading businesses and industry figures, who spent three days deliberating over the market opportunities and pressing issues facing aircraft and engine makers, first-tier suppliers and the global supply chain.

The first part of the forum featured the MAA Conference. This was followed by two days of B2B meetings organised by French B2B experts BCI Aerospace, the MAA’s forum partner.

MAA members recently enjoyed an entire day at Rolls-Royce Control Systems’ site at Birmingham Business Park. A total of 40 visitors from a wide range of aerospace companies received presentations on the company’s products, strategic direction and supply chain. They were then taken on a tour of the management organisation’s electronic and hydromechanical manufacturing and engineering test facilities.

The day, which was sponsored by Robin Hill, MAA Director and Head of Electronics at Rolls-Royce, was the latest ‘Inside… with the MAA’ event.

We are holding our first Midlands Aerospace dinner at the Paris Air Show, on 18 June at Les Noces de Jeannette restaurant in central Paris. To book your place, visit www.midlandsaerospace.org.uk/events/maa-paris-dinner-2019

The 2019 MAA annual black-tie dinner gives guests the chance to gather for an evening of aerospace and defence industry networking. Build on your business relationships and create new ones, whilst enjoying a VIP speaker and after-dinner entertainment. Not to be missed! www.midlandsaerospace.org.uk/events/maa-dinner-2019

BEHIND THE SCENES AT ROLLS-ROYCE CONTROL SYSTEMS

THE VISIT GAVE INSIGHT INTO FUTURE STRATEGY, TECHNOLOGY AND PROCUREMENT

NETWORK OVER DRINKS BEFORE DINNER

BOOK NOW PARIS DINNER 18 JUNE 2019

BOOK NOW ANNUAL DINNER 10 OCTOBER 2019
High Performance Coatings for Turbine and Aero Engine Production and Overhaul

Sacrificial Coatings • Magnesium and Aluminium Sealants and Finishes

Coatings for Air Frame and Ancillaries • Military Coatings

• Chrome Free Coatings

Indestructible Paint Ltd
16-25 Pentos Drive, Birmingham, B11 3TA, UK

T: 00 44 (0) 121 702 2485
E: sales@indestructible.co.uk
www.indestructible.co.uk

We will be available to meet at the Paris Air Show, Le Bourget, 19th and 20th June 2019.
If you would like to arrange a meeting, please e-mail: gary@indestructible.co.uk
Aerospace is a sector that is applauded for its advances in technology, yet as an industry, it has been slow at embracing social media to its own advantage. To harness recruitment potential, boost business and sector awareness, share expertise and build relationships, a greater adoption of digital technology is needed, and quickly.

Three members of the MAA, Bromford Industries, Kepston and Acres Engineering, highlight the benefits and potential that social media and digital technology offer.

**BROMFORD INDUSTRIES MAXIMISES TWITTER REACH**

Bromford Industries uses social media and takes a content marketing approach using blogging and micro-blogging through Twitter to good effect. The company uses the platform to interact with other manufacturing companies, industry press and government organisations, boosting its reach, brand awareness and developing industry relationships and collaboration. Bromford Industries has also embraced digital marketing. It revealed its video brochures at the Farnborough International Air Show in 2018, providing an innovative, multi-sensory way to share its new corporate video.

**KEPSTON’S YOUTUBE SUCCESS**

The company uses Twitter, LinkedIn and YouTube, with YouTube being a particular success – its first video reached over 17,000 views. Supplementing this social media with interactive marketing, Kepston has been able to grow its brand awareness, differentiate itself from its competitors, gather qualified leads, increase its profits and open up new market sectors.

**LUKE PARKER AT ACRES ENGINEERINGSHARES HIS TIPS:**

- You can use LinkedIn for recruitment, developing a supplier base, connecting to like-minded individuals, gaining insight into new technology, and growing your business, amongst other things.
- Understand your target audience. Keep your posts short, interesting and measurable, in regard to how much engagement you are getting.
- Try posting on different days and at different times; does your audience access LinkedIn in the AM or PM?
- Try to have FUN! People choose to access LinkedIn for their own interests, but always maintain professionalism.
- Go and update your profile, engage and connect with the world!

**FOLLOW US ON TWITTER**

@MAAaero  @Bromford_Ind  @AcresEng  @KepstonLimited

---

**FREE COLLECTION AND DELIVERY OF TOOLS FOR SERVICING AND REPAIR**

*within a 30-mile radius of Daventry, NN11 4PG

www.master-abrasives.co.uk  Tel: 01327-703813  @MasterAbrasive
Talent comes in many forms: from young people entering their first job to experienced engineers who fancy a change of scenery, transferring their skills and knowledge from a different sector into the aerospace industry.

Aerospace is innovative, exciting and full of potential as a career, but how can businesses attract new talent to the sector across the span of age, skills and experience?

See our three tips to get you started. For more detailed information with insights from MAA members have a look at news stories on our website from companies like AE Aerospace, ADI Group, Consilium, JJ Churchill, and Nasmyth Group www.midlandsaerospace.org.uk.

BOEING’S BUILD-A-PLANE CHALLENGE

Created to inspire young people into STEM (Science Technology Engineering and Maths) careers, Boeing’s Build-a-Plane Challenge has seen the company supply kit planes to schools throughout the UK.

To date, the programme has engaged more than 3,500 teenagers since 2012. Its most recent project, sponsored by Nasmyth Group, took place at Ernesford Grange Community Academy in Coventry. The plane was assembled by 33 students, 11 volunteers and school staff before successfully completing its first public flight at Coventry Airport – the fourth plane of the challenge to be certified to fly by the Light Aircraft Association (LAA).

TIPS TO GIVE YOU INSPIRATION:

1. EDUCATE AND INSPIRE

Young minds are full of curiosity and aerospace is an industry that can and does inspire awe. This needs to be instilled at an early age, which is why AE Aerospace and ADI Group both work closely with their local schools.

2. SHOWCASE THE VARIETY

Aerospace offers a wide range of job prospects in a variety of roles to suit all ages and abilities. From apprentice machine operators to experienced engineers, companies need to actively promote the opportunities available within their communities.

3. HIGHLIGHT LONGEVITY

Publicise the rich heritage and future-proof nature of the industry – many jobseekers are seeking a career with long-term security, which many aerospace companies in the Midlands already offer.
The world’s aerospace industry is gearing up for the 53rd Paris Airshow. One of the most prestigious events in the industry’s calendar takes place 17–23 June 2019 at the Le Bourget Parc des Expositions. The MAA will be out in force helping members network, raise their profile and join delegates from around the world in exploring the latest technological innovations.

The MAA will be exhibiting with 14 of its members, showcasing the best of Midlands manufacturing and providing the ideal base to meet with new and existing clients. Their pods on the MAA stand will put our region’s representatives at the heart of the industry’s global supply chain, gathered to discuss the challenges and opportunities ahead.

The first Paris Airshow was held in 1909 and since then it has flourished to become the largest and longest-running aerospace trade show in the world. In 2017, the show attracted 142,000 trade visitors to a venue which accommodated 2,381 exhibitors from 48 countries.

In the face of Brexit, there has never been a better time to demonstrate that the Midlands and the UK are ready to meet the industry’s requirements. The Paris Airshow provides an invaluable platform to promote members' offerings, engage with customers and reach key decision makers.

The MAA’s stand will be located within the UK Pavilion and accommodate 22 exhibition pods, twice as many as in 2017. For the first time, the MAA is also inviting members to attend a specially organised business networking dinner, on Tuesday 18 June at Les Noces de Jeannette restaurant in central Paris.

Leave us your business card for a chance to win our Concorde 50th celebration competition.
EXPANDING ITS UK FACILITY

CW Fletcher is expanding its current facility, adding a new 2,000 square metre building onto its existing UK site, in line with strong order book growth from its diverse customer base.

This growth has been five years in the planning and implementation and is another sign of the company’s continuing success in diversifying its growing customer base.

Coupled with this facility growth is over £2.5m worth of investment in new 5 axis milling and turning machine tools.

“We are really excited about our growth to £27m in 2019 and the building of our new facility is the culmination of this success. Our new and existing customers are placing their trust in our capabilities,” said Richard Phillips, Business Development Manager.

CW Fletcher operates in the aerospace, space and nuclear market sectors in size ranges up to two metres in diameter.

Contact: Richard J Phillips  
T: +44 (0)7713 566079  
E: rphillips@cwfletcher.co.uk  
W: www.cwfletcher.co.uk

PROVIDING MARKET-LEADING SOLUTIONS FOR SURFACE TREATMENT LINES

Surface Finishing Engineering Ltd is recognised as a world-class supplier of high quality surface treatment process lines and associated equipment designed for any chemical process that is required for any industry, concentrated mainly within the aerospace sector for new component manufacture, airframe components, wing components, engine hardware and engine MRO.

SFE offers a design service to ensure the process line meets the bespoke requirements of the end user and ensures that the process line design and build satisfy the exacting standards of the aerospace industry.

SFE process lines vary from complete fully automated lines with PLC/SCADA control systems, semi-automated lines and a range of manually operated process lines. It is an approved supplier to some of the largest aerospace OEMs in the world.

Contact: Vic Delveir  
T: +44 (0)1902 409186  
E: v.delveir@sfeuk.com  
W: www.sfeuk.com

SUPPORTING YOUR SUCCESS

The Bibus Metals Group has sales offices and warehouses in the UK, Germany, Poland, Czech Republic, Hungary, Romania, Ukraine, Russia and China in addition to its head office in Zurich, Switzerland. The purpose of the company is to supply nickel alloys, titanium and titanium alloys to all industries, including power generation and aerospace.

Products include all wrought forms such as plate, sheet, bar, tube etc. Complete packages of products can be offered including cut pieces. Extensive stocks are held throughout the Group companies, many of which are AS9120 approved. Bibus Metals can also source products from its mill partners with whom the company has long-standing relationships.

In addition to supplying from stock, Bibus Metals can also source materials from a number of suppliers, which it has strong partnerships with.

Contact: Ian Hedley  
T: +44 (0)7850 704177  
E: ih@bibusmetals.co.uk  
W: www.bibusmetals.com

REVOLUTIONARY IDEAS IN MOTION

Carter Manufacturing has been providing revolutionary ideas in motion since 1999. Being accredited to BS EN ISO 9001:2015 incorporating AS9120 RevB, the company is able to provide customers with on-time service for all standard and specialist aerospace bearing requirements.

Carter Manufacturing is proud to be the European Master Distributor for custom aerospace bearing specialist Napoleon Engineering Services [NES]. NES provides engineered bearings in small order quantities and fast lead times to the aerospace industry and other high technology markets. NES uses a wide variety of bearing materials to suit the customer’s specific application, which can vary from satellite and UAV arm actuation

FOR SURFACE TREATMENT LINES

PROVIDING MARKET-LEADING SOLUTIONS

Surface Finishing Engineering Ltd is recognised as a world-class supplier of high quality surface treatment process lines and associated equipment designed for any chemical process that is required for any industry, concentrated mainly within the aerospace sector for new component manufacture, airframe components, wing components, engine hardware and engine MRO.

SFE offers a design service to ensure the process line meets the bespoke requirements of the end user and ensures that the process line design and build satisfy the exacting standards of the aerospace industry.

SFE process lines vary from complete fully automated lines with PLC/SCADA control systems, semi-automated lines and a range of manually operated process lines. It is an approved supplier to some of the largest aerospace OEMs in the world.

Contact: Vic Delveir  
T: +44 (0)1902 409186  
E: v.delveir@sfeuk.com  
W: www.sfeuk.com

NEW LARGE VOLUME CAPABILITIES

G&O Springs comes to Paris re-invigorated by widespread major developments in its manufacturing plant and processes.

Over the last year, the company has added CNC coiling to its capabilities to reduce costs and increase capacity, with very encouraging results.

Managing Director Steve Boyd says G&O is looking at growth of more than 50% after adding a complete auto-coiling department. The first of three new cells has been set up and is being commissioned.

“We have always been seen by our customers as a small volume, niche supplier,” he said. “This development allows us to achieve the same excellent levels of quality in much higher and more cost-effective production runs. Our weekly output has risen by 46%, but we are targeting an additional 50% increase with the new system.”

Around £375,000 has been invested to date, with additional spending set to take place later this year.

Contact: Steve Boyd  
T: +44 (0)1527 523764  
E: steve.boyd@springs.aero  
W: www.springs.aero
SIGMA DRIVES PRODUCT INNOVATION FOR COST AND WEIGHT

Sigma Components is working in partnership with global OEMs and Tier 1 suppliers to develop new technologies to improve environmental performance and reduce product cost.

Mark Johnson, founder and CEO, said: “Thanks to our new technology, multi-site capabilities and our focus on lifecycle management, our innovations offer a real step change for future aircraft performance.”

Sigma’s world-class centre for new product introduction allows the team to look at the full product lifecycle – from initial R&D and NPI to full production – whenever a new product is devised.

Johnson added: “It’s an approach that is proving popular with both aerospace OEMs and Tier 1 customers around the world.”

“The capability means we can take an idea from initial concept – testing that idea with customers and securing development funding – right through to devising the method, tooling and production procedures, before moving into full production. This work is also supported by our Chinese facilities, which are increasingly taking on their own NPI work, not simply delivering new products developed in the UK.”

Sigma’s New Product Introduction and R&D team, comprising dedicated design engineers, fabrications and pipe engineering specialists, CNC programmers, commercial engineers, project managers and even engineering interns, invests in its own R&D, working closely with customers to innovate and add value.

The R&D team is already revolutionising component design with its SigmaLite range of lightweight composite and additive-manufactured components, while the NPI team is delivering exciting new parts for a range of applications. As the aerospace supply chain undergoes a period of substantial change, the company sees a real opportunity to work more closely with OEMs and Tier 1 customers to drive innovation in the sector.

The capabilities and cost structures of Sigma’s UK and Chinese operations mean the team can optimise performance and competitiveness throughout the supply chain.

Sigma will be showcasing its capabilities at Paris Air Show including new products from Sigma’s ongoing R&D programmes. These include composite pipes (COMPipe), lightweight end fittings and composite drive shafts for airframe and aero-engines, offering weight savings of more than 50% versus traditionally manufactured components.

The R&D programmes have been supported by investments from the National Aerospace Technology Exploitation Programme (NATEP), Sharing in Growth, CleanSky programme and the Advanced Manufacturing Supply Chain Initiative (AMSCI). Most recently, Sigma has been awarded a grant by the Aerospace Technology Institute (ATI) to lead a £1.4m collaborative R&D project to develop production methods for its composite pipes and transmission shafts.

For more information on Sigma’s product portfolio and range of value-added services, visit Hall 2B, Stand G183.

Contact: Mark Lambert
T: +44 (0)7833 595213
E: mark.lambert@sigmacomponents.aero
W: www.sigmacomponents.com

SUSTAINABLE, WORLD-LEADING AEROSPACE RESEARCH

The University of Nottingham’s Institute for Aerospace Technology (IAT) is a major hub catalysing, integrating and promoting world-leading aerospace research, technology development and innovative teaching for the aerospace sector of the future.

The IAT supports a 400-strong, multi-disciplinary team of leading researchers. Together with global and regional aerospace companies and aviation sector leaders, it is developing the cutting-edge technologies that will radically improve all aspects of future aerospace.

Its ambition and drive make the IAT a partner of choice in five key areas of research:

- Aerospace Operations
- Aerospace Materials and Structures
- Aerospace Electrification
- Future Flight
- Aerospace Manufacturing

If you share its ambition and passion to discover the next innovation within aerospace, the IAT would like to hear from you.

Contact: Tanja Siggs
T: +44 (0)7773 033185
E: tanja.siggs@nottingham.ac.uk
W: www.nottingham.ac.uk/aerospace
**INVESTMENT FUELS EXPANSION**

*Spincraft and Enginetics* are at Paris to showcase manufacturing processes and hardware components integral to their expanding roles in the aviation market. Spincraft’s current Airbus contract includes single-piece and machined lip skins for A320NEO LEAP and A350 nacelles. This complements earlier A320NEO awards on the geared turbofan engine, and five-piece exhaust plug and nozzle sets.

Enginetics’ extensive metal forming, metal joining and precision machining capabilities support a broad range of next generation engines, including GTF and LEAP.

To support increased volume, a new 7,246 square metre Spincraft facility opened in 2016. The plant, located in the US state of Wisconsin, specialises in aluminium close tolerance air inlet components including clad products for the business jet market. Recent investments include an additional heat treatment facility, capable of supporting single-piece lip skin production for the twin aisle market.

In addition, £1m has been invested in Spincraft’s Newcastle plant. The investment has enabled the plant to expand its capacity and in-house vertical integration capabilities within the aviation and space markets. The newly built cell includes CNC forming, machining, CMM inspection, fluorescent penetrant and robotic surface finishing. ETG now offers customers full turnkey manufacturing solutions that are crucial to meeting their long-term needs.

Together, Spincraft and Enginetics make up Standex International’s Engineering Technology Group. With six facilities throughout the UK and US, the group provides global manufacturing solutions via collaborative engineering efforts. Precision metal forming technologies are supplemented with vertically integrated manufacturing processes to support aviation, defence and space system markets.

**CONTINUING TO INCREASE AEROSPACE CAPACITY**

Leading manufacturer of premium quality castings *Maycast-Nokes Precision Engineering* is recognised as the UK’s most comprehensive foundry.

The Essex-based aerospace foundry offers fully finished precision sand, investment and gravity die castings in a wide range of aluminium alloys and steel alloys.

Maycast-Nokes offers an “end-to-end” manufacturing service – from a single purchase order it can deliver a fully finished component ready for customer final assembly.

Sales Director Dave Blower said, “These are exciting times for Maycast-Nokes; we are supplying parts for a number of aerospace programmes including A320 NEO, A330 NEO, 777X and Boeing TX and we expect to see significant growth over the next two years. In anticipation of this we have recently added further capacity into our production facilities with the addition of a second HAAS UMC-750, 5 axis machining centre and the commissioning of a brand new gravity die foundry.”

In addition to its extensive foundry and machining services, the company’s Nadcap-approved X-ray/PFD departments are able to develop bespoke process techniques for companies wishing to test the integrity of their cast components.

**Contact:** Dave Blower  
T: +44 (0)1787 477021  
E: dblower@maycast.co.uk  
W: www.maycast.co.uk

Internationaly recognised, *Columbia*'s reputation for supplying high quality precision components to aerospace, nuclear, defence, motorsport, petrochemical and medical industries is unrivalled.

Two sites in the West Midlands, situated near all the major motorway network links, offer lights out manufacturing and provide a full turnkey solution for the manufacture of simple to complex fully processed and tested assembled products.

The company’s in-house prototyping/pre-production and 3D printing enables Columbia to risk share on component development as well as reducing lead time costs and expediting. In addition, Columbia controls a network of sub tier suppliers with skills that complement its own, providing customers with a comprehensive facility.

Columbia consistently works to a tolerance of 5 microns and below, producing key components and assemblies for UK and US military and supporting customers such as Rolls-Royce, Moog, GE, Collins UTC and many more with a one-stop shop.

Ted Yarnall, Operations Director, said: “Continuous investment into innovative technologies and the latest modern plant ensures that we remain cost competitive on the world stage; it gives us the ability to reduce the number of operations, in return reducing cost for customers – providing a cost competitive alternative to low-cost economies.”

*Columbia* holds and conforms to all leading industry accreditations including: AS9100 Rev D, ISO9001, SC21 and Nadcap approvals.

In addition, *Columbia* has customer approvals from Collins UTC, Moog, GE and Rolls-Royce, and has a fully supported Special Process Department.

**Contact:** Ted Yarnall  
T: +44 (0)7790 997811  
E: sireland@standandextg.com  
W: www.standexextg.com

Internationally recognised, *Columbia*'s reputation for supplying high quality precision components to aerospace, nuclear, defence, motorsport, petrochemical and medical industries is unrivalled.

Two sites in the West Midlands, situated near all the major motorway network links, offer lights out manufacturing and provide a full turnkey solution for the manufacture of simple to complex fully processed and tested assembled products.

The company’s in-house prototyping/pre-production and 3D printing enables Columbia to risk share on component development as well as reducing lead time costs and expediting. In addition, Columbia controls a network of sub tier suppliers with skills that complement its own, providing customers with a comprehensive facility.

Columbia consistently works to a tolerance of 5 microns and below, producing key components and assemblies for UK and US military and supporting customers such as Rolls-Royce, Moog, GE, Collins UTC and many more with a one-stop shop.

Ted Yarnall, Operations Director, said: “Continuous investment into innovative technologies and the latest modern plant ensures that we remain cost competitive on the world stage; it gives us the ability to reduce the number of operations, in return reducing cost for customers – providing a cost competitive alternative to low-cost economies.”

*Columbia* holds and conforms to all leading industry accreditations including: AS9100 Rev D, ISO9001, SC21 and Nadcap approvals.

In addition, *Columbia* has customer approvals from Collins UTC, Moog, GE and Rolls-Royce, and has a fully supported Special Process Department.

**Contact:** Ted Yarnall  
T: +44 (0)7790 972077  
E: ted.yarnall@columbia.uk.com  
W: www.columbia.uk.com

*Spincraft* and *Enginetics* are at Paris to showcase manufacturing processes and hardware components integral to their expanding roles in the aviation market. Spincraft’s current Airbus contract includes single-piece and machined lip skins for A320NEO LEAP and A350 nacelles. This complements earlier A320NEO awards on the geared turbofan engine, and five-piece exhaust plug and nozzle sets.

Enginetics’ extensive metal forming, metal joining and precision machining capabilities support a broad range of next generation engines, including GTF and LEAP.

To support increased volume, a new 7,246 square metre Spincraft facility opened in 2016. The plant, located in the US state of Wisconsin, specialises in aluminium close tolerance air inlet components including clad products for the business jet market. Recent investments include an additional heat treatment facility, capable of supporting single-piece lip skin production for the twin aisle market.

In addition, £1m has been invested in Spincraft’s Newcastle plant. The investment has enabled the plant to expand its capacity and in-house vertical integration capabilities within the aviation and space markets. The newly built cell includes CNC forming, machining, CMM inspection, fluorescent penetrant and robotic surface finishing. ETG now offers customers full turnkey manufacturing solutions that are crucial to meeting their long-term needs.
Dynamic Metals prides itself on competitive pricing, short lead times, personal service and its customers buy delivery on time. No minimum order charge. Its customers buy among its customers. Dynamic Metals has the capability to cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.

Dynamic Metals prides itself on competitive pricing, short lead times, personal service and no minimum order charge. Its customers buy delivery on time. Dynamic Metals has the capability to saw cut material to customer requirements in house and can also manufacture material and semi-finished products to unique customer requirements through the UK-based Conversion Centre with in-house metallurgists.
TIME CRITICAL SOLUTIONS

UK & EUROPEAN
LOGISTICS & STORAGE SPECIALIST

EXPRESS ADR/HAZARDOUS STORAGE AND DISTRIBUTION TEMPERATURE CONTROL TRUCK MOUNTED FORKLIFTS

MIDLANDS HEATHROW PARIS IRELAND

WWW.JJXLOGISTICS.CO.UK 01384 221 642

Follow us on social media
Technology from the Midlands played a pivotal role in the development of the world’s first supersonic passenger plane. From engine fuel pumps to flight control actuators, from wheels and brakes to heat exchangers, Midlands firms supplied Concorde with a plethora of the high-tech parts needed to fly passengers at 60,000ft and twice the speed of sound.

Half a century on, more than three quarters of those suppliers are still in business. At many, the current generation of highly skilled engineers is working in new factories and supplying the newest versions of their core technologies to the latest Airbus and Boeing commercial aircraft – demonstrating the enduring appeal of the best of British engineering...

And, of course, international collaboration is now a stronger theme than ever.

BELOW ARE SOME OF THE MANY MIDLANDS COMPANIES THAT SUPPLIED CONCORDE

<table>
<thead>
<tr>
<th>Company</th>
<th>Description</th>
<th>Industry/Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbey Panels (now closed)</td>
<td>Fuel tanks</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>Accles and Pollock (now Liberty Tubular Solutions)</td>
<td>Tubes for heat exchangers</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>IMI Birmingham (now Timet, PCC)</td>
<td>Titanium engine parts</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>James Booth Aluminium (now Arconic)</td>
<td>Unknown</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>Light Metal Forgings Ltd. (unknown)</td>
<td>Unknown</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>Ransome and Marles (now NSK)</td>
<td>Engine bearings</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>Sterling Metals (now closed)</td>
<td>Aluminium castings for engine</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>INI Birmingham</td>
<td>Primary and auxiliary hydraulic pumps</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>John Thompson (unknown)</td>
<td>Three 12,000 gallon refuelling tankers</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>Linread (now Arconic)</td>
<td>Fasteners</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>RISTS (now Leoni Wiring Systems)</td>
<td>Wiring/electrical circuits</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>Systron Donner (now closed)</td>
<td>Pulse generator for test rigs</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>Brooks (now SPS Technologies, PCC)</td>
<td>Fasteners</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>Dunlop Precision Rubber (now Meggitt)</td>
<td>Airframe and engine seals</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>Unbrako (now closed)</td>
<td>made specialist fasteners</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>High Duty Alloys (now Mettis)</td>
<td>forged brake torque tubes</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>James Booth Aluminium (now Arconic)</td>
<td>Hot air pipes</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>JS Chinn (now Nasmyth)</td>
<td>Fuel pumps for engines</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>Lucas Aerospace (now Rolls-Royce)</td>
<td>Bearings</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>Rose Bearings (now NMB Minebea)</td>
<td>Bearings</td>
<td>Aerospace supply chains</td>
</tr>
<tr>
<td>Triplex (now GKN)</td>
<td>Cockpit windscreens</td>
<td>Aerospace supply chains</td>
</tr>
</tbody>
</table>
FIERCELY PROUD TO WORK ON CONCORDE

Advertisements from the late 1960s and early 1970s offer us a glimpse of the aerospace industry of the time. Our companies promoted their prowess based on their contributions to Concorde. Many of the same core capabilities are still being deployed today to develop the aircraft of the future.

<table>
<thead>
<tr>
<th>Company</th>
<th>Products/Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dowty Boulton Paul (now Moog Aircraft Group)</td>
<td>Powered actuation systems (eight) for elevon and rudder controls</td>
</tr>
<tr>
<td>Dunlop Aviation (now Dunlop Aircraft Tyres)</td>
<td>Tyres</td>
</tr>
<tr>
<td>Dunlop Aviation (now Meggitt)</td>
<td>Wheels, brakes</td>
</tr>
<tr>
<td>High Duty Alloys (now Mettis)</td>
<td>RR58 alloy forgings</td>
</tr>
<tr>
<td>Henry Wiggin &amp; Co (now Special Metals Wiggins, PCC)</td>
<td>Nickel alloys for combustion chambers</td>
</tr>
<tr>
<td>Hymatic (now Honeywell)</td>
<td>Fuel tank pressure control design/equipment</td>
</tr>
<tr>
<td>Hobsons (now Collins Aerospace)</td>
<td>A/C generator/ hydraulic drive</td>
</tr>
<tr>
<td>Midcast Numerical Control (unknown)</td>
<td>Unknown</td>
</tr>
<tr>
<td>Smith Clayton Forge (now Wyman Gordon, PCC)</td>
<td>Forging of engine compressor wheels and turbine disks</td>
</tr>
<tr>
<td>Saunders Valve (now closed)</td>
<td>Fuel control valves</td>
</tr>
<tr>
<td>Serck (now Meggitt)</td>
<td>Heat exchangers</td>
</tr>
<tr>
<td>Unbrako (now closed)</td>
<td>Fasteners for braking systems</td>
</tr>
<tr>
<td>Union Carbide UK (now Arconic)</td>
<td>Alloy engine housing parts</td>
</tr>
</tbody>
</table>

Dunlop Aviation (now Meggitt) made the wheels and the innovative carbon brakes.
Midlands aerospace is growing in both size and capability and we need to establish a more mature supply chain if we are going to sustain the growth.

Lisa Swan, Operations Director and site lead at Collins Aerospace, who has recently moved from the automotive to the aerospace industry, says aerospace is accelerating at the same speed as the automotive world right now.

Q. HOW LONG HAVE YOU WORKED IN THE AEROSPACE INDUSTRY?
A. I have been working in the sector for a year in my current role as an Operations Director. Prior to this I was a Plant Manager for a company that made safety electronics for the automotive industry.

I decided to make the move from automotive to aerospace so that I could get experience of another industry. I also wanted to use the opportunity to transfer some of the good processes from automotive to the world of aerospace.

Q. WAS THE SECTOR WHAT YOU THOUGHT IT WOULD BE WHEN YOU FIRST JOINED?
A. Coming from an automotive environment, I was told that the aerospace industry is very slow-paced in comparison. I can say that this is absolutely not the case!

Q. TELL US ABOUT YOUR CURRENT ROLE
A. My role as Operations Director for Collins Aerospace in Wolverhampton gives me a lot of responsibility for growth in terms of sales, and at the same time, as a business, we also need to recognise the need to transform our facility in order to drive improvements in financial performance for our shareholders.

Q. WHAT ARE YOU WORKING ON RIGHT NOW?
A. Achieving operations and productivity improvements are our number one priority right now and for the rest of this year. We are currently working on managing significant volume increases, implementing automation and increasing employee training, which will help improve flexibility.

Q. WHAT IS THE MOST CHALLENGING ASPECT OF YOUR WORK?
A. Having enough time to get everything done! I am responsible for all of Collins’ operations support functions, as well as the manufacturing processes, and we are trying to drive improvements throughout every part of the organisation.

Q. WHAT DO YOU FIND MOST REWARDING ABOUT IT?
A. Within the field of operations, you tend to see results quickly, which is very motivating. Developing and promoting talent from within the organisation and seeing people succeed is also very rewarding.

Q. IF THERE IS ONE THING YOU COULD CHANGE ABOUT THE AEROSPACE INDUSTRY, WHAT WOULD IT BE AND WHY?
A. We are held back by the design of some of our products and recognise that we would be able to transform quicker if we could make some design modifications.

Q. WHICH PERSON/ACHIEVEMENT INSPIRES YOU THE MOST WITHIN THE SECTOR?
A. There are too many to name within an industry with such an impressive history, but if I had to pick one, it would most probably be Amelia Earhart.

Q. HOW DO YOU THINK MIDLANDS AEROSPACE IS EVOLVING?
A. The Midlands aerospace sector is growing in both size and capability and we need to establish a more mature supply chain if we are going to sustain the growth.

Q. IF YOU WERE NOT WORKING IN AEROSPACE, WHICH SECTOR WOULD YOU BE WORKING IN?
A. I would probably still be in automotive.

https://www.collinsaerospace.com/
NEW MEMBERS

The MAA welcomes the following new members

ACCUA ENGINEERING
Willenhall
Supplier of specialist machining.

ADVANCED ENGINEERING UK LTD
Birmingham
Leading provider of multi-axis precision engineering solutions.

CGTECH LIMITED
Hove
Programming and simulation software provider.

CITYSPRINT
London
Providing flexible and reliable courier service.

DRUCK LTD
Leicester
Druck is a world class supplier of pressure sensing solutions.

GORDANO SUPPORT GROUP
Bristol
Provides logistics support services and packaging products.

HARDMET ASSOCIATES LIMITED
Suckley
Manufacturer of tungsten carbide and technical (industrial) ceramic components.

PEL I PRODUCTS (UK) LTD
Glossop
Supplier of protector cases for the protection of instrumentation and tooling.

PRODRIVE
Banbury
Premium engineering services provider.

QUEST 4 ALLOYS LTD
Willenhall
Suppliers of rare and exotic nickel alloys and stainless steels in most product forms.

QUICK RELEASE AUTOMOTIVE LTD
Gallows Hill
Product data management specialist.

STATUS METROLOGY SOLUTIONS LTD
Nottingham
CMM inspection service.

THE SEMPRE GROUP LTD
Gloucester
Provider of high quality measuring, testing and software-based systems.

TT ELECTRONICS ROXPUR MEASUREMENT & CONTROL
Sheffield
Manufacturer of temperature, pressure, flow, and level measurement products.

TURBO CAST (INDIA) PVT. LTD
Rajkot, India
India’s first indigenous investment casting foundry for ferrous and non-ferrous materials.

MAA NETWORKING DINNER – PARIS AIR SHOW
18 June 2019
Les Noces de Jeannette Restaurant Central Paris
Join members of the aerospace and defence industry for dinner.

NATEP - NEW TECHNOLOGIES IN THE SUPPLY CHAIN
10 July 2019
Rolls-Royce, Derby
A showcase of new technologies being developed in the aerospace supply chain supported by NATEP.

MAA ANNUAL DINNER
10 October 2019
Council House, Birmingham
Our hugely popular business networking evening will be returning to Birmingham’s fabulous Council House. Make sure you secure your seat.

PARIS AIR SHOW
17-23 June 2019
Le Bourget Parc des Expositions
Attend the 53rd Paris Air Show and take part in the largest aerospace trade show in the world, which is home to global industry leaders and the very latest technological innovations.

MAKE THE MOST OF BEING AN MAA MEMBER
24 September 2019
MAA Offices, Coventry
Come and meet the MAA team over breakfast and learn how we can help your business.

For further information and to book your place at an MAA event, please visit www.midlandsaerospace.org.uk/events

ABOUT THE MAA...

The Midlands Aerospace Alliance (MAA) is the voice of companies in the British Midlands supplying global aerospace. Its 300 member organisations range from global aerospace players to SMEs. The MAA board comprises senior managers from Collins Aerospace, Meggitt, Moog Aircraft Group and Rolls-Royce, elected supply chain representatives and key regional partner bodies.

For additional copies of Midlands Aerospace, or to add your colleagues to the distribution database, please contact the MAA by any of the means below.

Produced for the MAA by Bridge PR and Media Ltd

T: +44 (0) 2476 430250
F: +44 (0) 2476 430251
E: info@midlandsaerospace.org.uk

www.midlandsaerospace.org.uk/maa/join-the-MAA
WANT BETTER CASHFLOW?
LET’S MAKE IT HAPPEN.

Our Business Payments are flexible and innovative so your business can free up cash to fund growth. We could pay your suppliers in 5 days and you could get up to 58 days to pay us. It’s one of those ‘win-win’ situations.

For more information, please contact Sam Wells on 07519 520769 or sam.g.wells@aexp.com

Terms apply.