

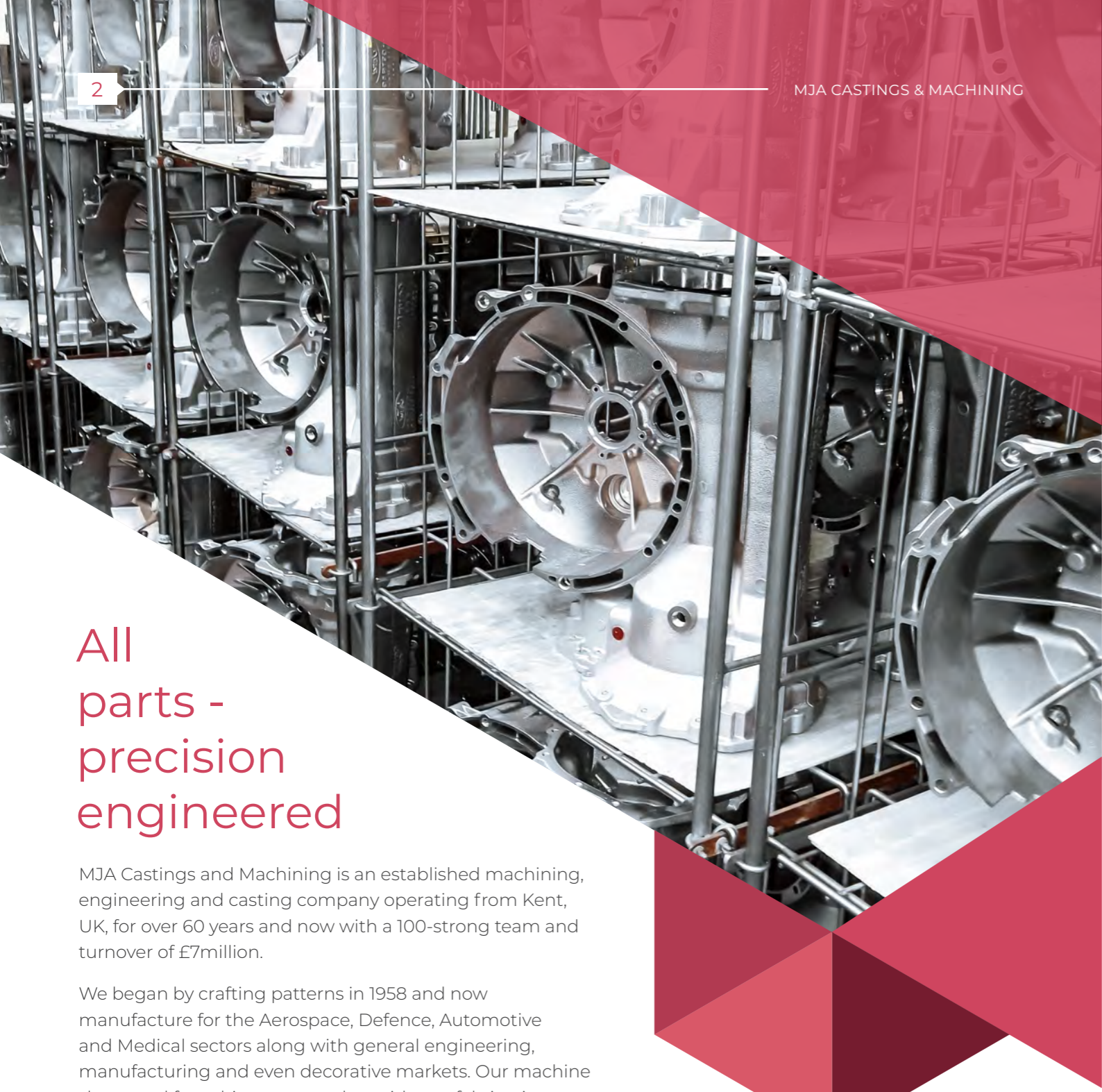
MJALLEN

CASTINGS • MACHINING



INTRODUCING

MJALLEN CASTINGS & MACHINING



All parts - precision engineered

MJA Castings and Machining is an established machining, engineering and casting company operating from Kent, UK, for over 60 years and now with a 100-strong team and turnover of £7million.

We began by crafting patterns in 1958 and now manufacture for the Aerospace, Defence, Automotive and Medical sectors along with general engineering, manufacturing and even decorative markets. Our machine shops and foundries operate alongside our fabricating, painting and assembly facilities - all working seamlessly together in one business.

Experienced in concept and development work, we can create exact models or working prototypes and we're experts in aluminium, iron and bronze castings, patterns, fabrications and precise CNC machining to 20 microns.

With hundreds of years of combined knowledge, working for national and international clients, our team can improve every stage of your production - from concepts and CAD to testing and finishing, all within your budget.

Our work can be found across the UK in Ford and CNH vehicles, Royal Navy vessels, cutting-edge MRI scanners and even the clock tower of Big Ben.



Committed to growth

Our training and investment programmes ensure our qualified staff use the latest engineering technology.

Our ongoing apprenticeship schemes see more successful candidates qualify and join us, or our Group companies, every year - ensuring British castings and machining knowledge for the future.



We are proud to be a British manufacturer and to champion the UK skill-set, trade and economy; investing in the communities that we work in.

Part of something bigger



MJAllen Castings and Machining is a member of the MJAllen Group - a family owned business, established in 1958 and based in the South East of England, with a Group turnover exceeding £35million.



Fully accredited

We are fully qualified and accredited with

- BS EN ISO 9001
- BS EN ISO 14001
- BS EN ISO 45001
- CE approval

When required, we can involve our wider Group organisation providing additional staff and expertise with CHAS, Constructionline and CSCS qualifications plus CE approval to BS EN 1090 execution class 2 and ISO 18001 certification in Environmental Management.



We are always happy to provide proof of our accreditations and insurances if required. Please speak to a member of our team.

In good company

Just a few of the local, national and international businesses we are proud to supply.





Aluminium and Bronze castings

We have been providing a comprehensive and industry leading casting service from our own ferrous foundry since the 1960s. Patterns, castings and machining - all within one single workflow.

We produce a wide range of precision aluminium castings up to one tonne and copper-based bronze castings up to 120kg each. We are also experts in gravity die aluminium castings at up to 50kg and of truly exceptional integrity. Plus, we have a full range of heat treatment specifications.

We specialise in the casting and machining of large, high complexity, sand castings that operate in demanding conditions such as high temperatures, immersions and completely pressurised systems.

Our facilities and procedures have developed to offer low-volume, multiple-batch and large-scale production quantities of components - all from one single enquiry and within one single location.

Material specifications

Aluminium alloys and other specifications

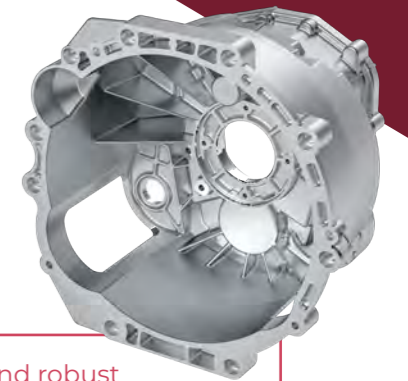
UK BS1490	LM4	LM6	LM25
UK Aero	-	-	BS 2L99
BS EN 1706	AC-45200	AC-44100	AC-42000
ISO	Al-Si-5Cu3	Al-Si12	Al-Si7Mg
USA	319	A413	A356
France	A-S5U3	AS13	A-S7G06
Germany	G-AISi6Cu4	G-AISi12	G-AISi7Mg

Aluminium heat treatment specifications

TS (Stress Relieved)	BSEN 1706 "O"
TB (Solution Treated)	BSEN 1706 "T4"
TB7 (Solution Treated + Stabilized)	BSEN 1706 "T7"
TE (Precipitation Treated)	BSEN 1706 "T5"
TF (Solution + Precipitation)	BSEN 1706 "T6"

Copper based alloys

BS1400	LG2, LG4, G1, HTB1, PB1, AB2
Naval Standards	NES 747, NES 830



We cast complex and robust components for a range of industries and usages, ranging in size from handheld to several metres tall.



Grey and SG (Ductile) Iron castings

MJA Castings and Machining began casting iron in our Kent-based foundry back in 1968 and now delivers to customers across the world.

We produce high-quality grey iron castings at grades 150 - 300 and weights of up to 380kg.

Of special note is our ability to cast 400 / 18 LT SG iron, suitable for 'low temperature' applications of minus 20°C and minus 40°C, for railway applications.

Additionally, we cast in a range of high silicon, low growth, and special irons / alloys on request.

Our particular expertise is in complex core assembly work. All moulds are produced using air-set resin sand, ensuring the highest quality casting in soundness, dimensional accuracy and surface finish. Our iron foundry shares our adjoining non-ferrous foundry's chemical and mechanical analysis, dye penetrant and ultrasonic inspection and pressure testing facilities.

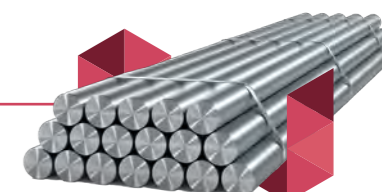
All castings can be supplied machined and finished by our in-house machine shop or in raw form to suit your individual requirements.



Irons and alloys

- Grey iron
- SG / Ductile iron
- Low temperature
- High silicon
- Low growth
- Plus specialists

Our team can also provide, on request, high quality Ni-resist (BS3486), Ni-hard wear-resistant (BS4844) and SiMo heat-resistant iron alloys to exceptional quality and competitive pricing.



Material specifications

Grey iron

BS EN 1561	EN-GJL-150	EN-GJL-200	EN-GJL-250	EN-GJL-300	EM-GJL-350
BS1452 - 1961	12	14	17	20	23
BS1452 - 1990	180	220	250	300	350
ISO	150	200	250	300	350
USA	20 or 25	30	35	40 OR 45	50
France	FGL150	FGL200	FGL250	FGL300	FGL350
Germany	GG15	GG20	GG25	GG30	GG35

Ductile iron (SG, nodular graphite)

BS EN 1563	400-18	400-15	450-10	500-7	600-3	700-2
BS2789:1985	400/18	420-12	450/10	500/7	600/3	700/2
ISO 1083	400-18	400-15	450-10	500-7	600-3	700-2
USA A536	60-40-18	65-45-12	70-50-05	80-55-06	100-70-03	
France NF A32-201	400-18	400-15	150-10	500-7	FGS600-2	FGS700-2
Germany DIN1693	-	GGG40	-	GGG50	GGG60	GGG70

Low temp ductile iron (SG, nodular graphite)

BS EN 1563 400/18LT

Austempered ductile iron (ADI)

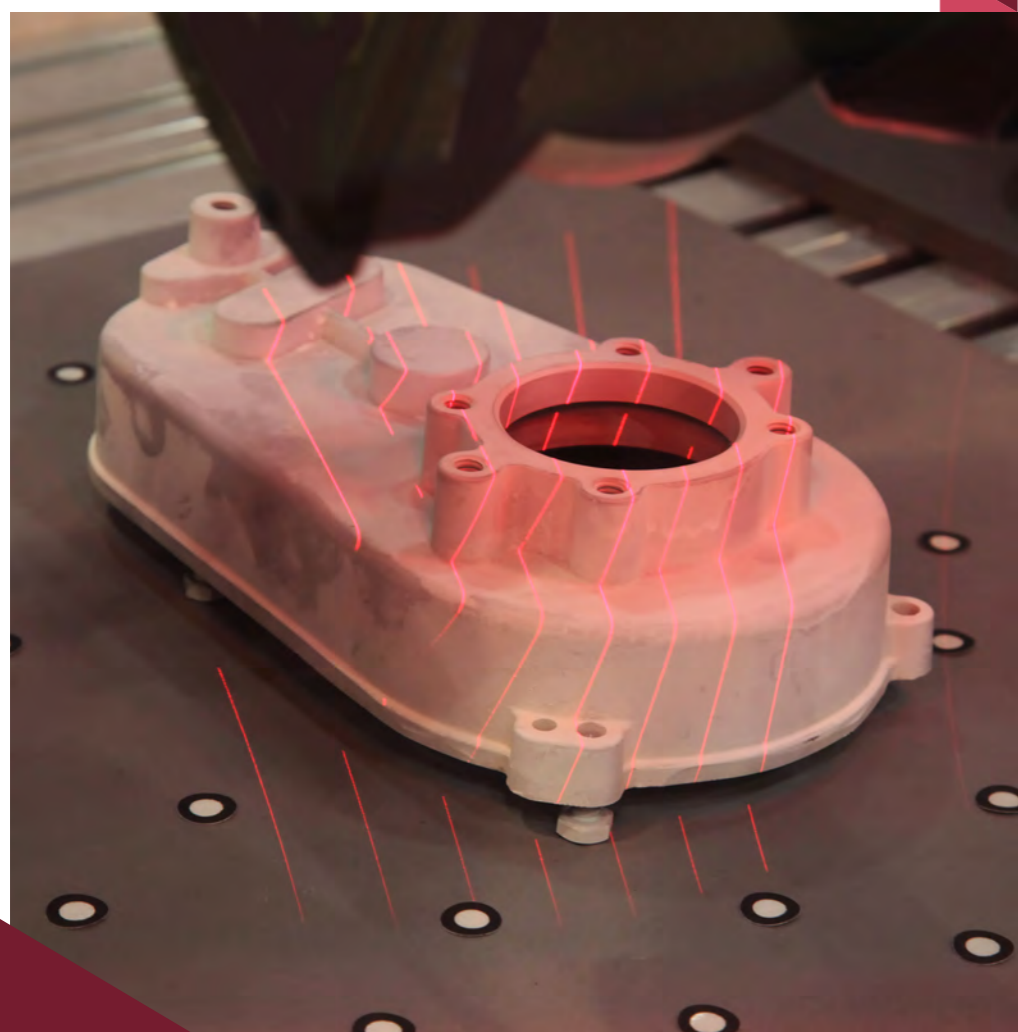
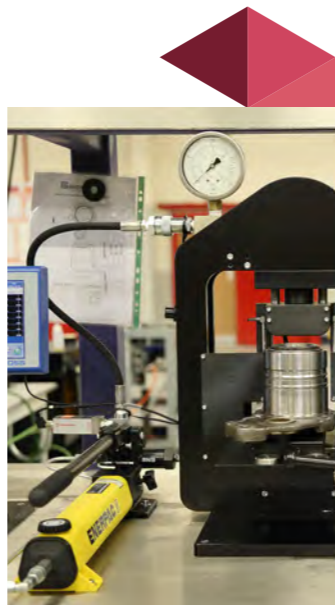
BS EN 1564 800-10 900-8 1050-6 1200-3 1400-1

Comprehensive test facilities

Nothing leaves our premises until we are completely satisfied that it conforms to the exact specifications requested - at each of the casting, machining and finishing stages of production.

Our on-site material testing facilities include

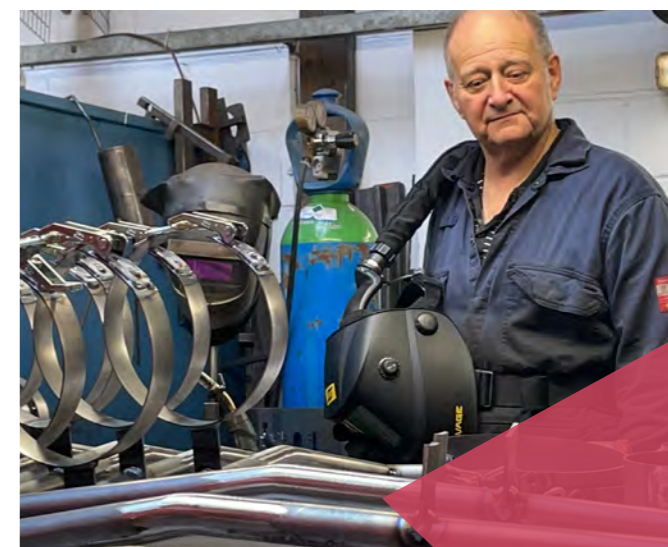
- Non-destructive testing
- Temperature controlled environments
- UV crack detection
- Die penetrant crack detection
- Spectrographic analysis
- Ultrasonic testing
- Endoscopic inspection
- Tensile testing
- Pressure testing
- Coordinate measuring machines
- X-ray inspection



Fabrications

Our experienced team undertake bespoke and production line fabrications, made to order.

- Our fabrication (weldments) team is skilled in profiling, bending, cutting and rolling with the latest MIG, TIG and ARC welding equipment in a range of materials.
- Using our own CNC facilities, we are able to manufacture finished fabrications to extremely tight tolerances before paint or assembly.
- We are CE approved for structural steelwork and accredited to 14001 and 18001 standards.



Our expert team has over a century of MIG, TIG and ARC welding experience.





We have over 20 high-performance CNC machines from leading manufacturers such as Doosan and Heller.



CNC and manual precision machining

Our foundrys are a large part of our business but it's more accurate to think of us as a machine shop that makes its own castings.

Performing all the production stages at one single site allows us to provide an integrated and high quality service for casting, machining, fabricating, painting, assembling and machine building. This offers huge customer savings.

We supply fully machined castings and fabrications to defence, medical, marine, OE and automotive industries in the UK, Europe and North America. We are certified to ISO 9001, 14001 and 18001 with regular audit checks.

The ability to supply our components from drawings to fully machined castings carries many benefits in both cost and time which we pass directly to our customers.

We actively reduce your administration and transportation costs by providing faster problem solving and sourcing activities from one site. Place a single order with a single contact and we'll take care of everything from start to finish.



Our growing customer list matches our ongoing investment in the most up-to-date CNC and manually-operated machinery, backed up by a highly sophisticated inspection facility.

Recent CNC additions include a Doosan twin pallet, horizontal machining centre and Johnford bridge mill, covering machining in X-axis of 3.1m, Y-axis of 1.8m and Z-axis of 1.6m.

Plus, we now operate our own Makino A100 - 30 tonnes of high-performance capability with an 80% larger bed and table load that can take up to 5 tonnes. This machine is one of only three in the UK and we have highly skilled operatives using it to create amazing pieces.

We also have a comprehensive conventional section with horizontal boring, planing, universal milling, turning and drilling capabilities. This means we can efficiently undertake prototype, small batch and fixture works.

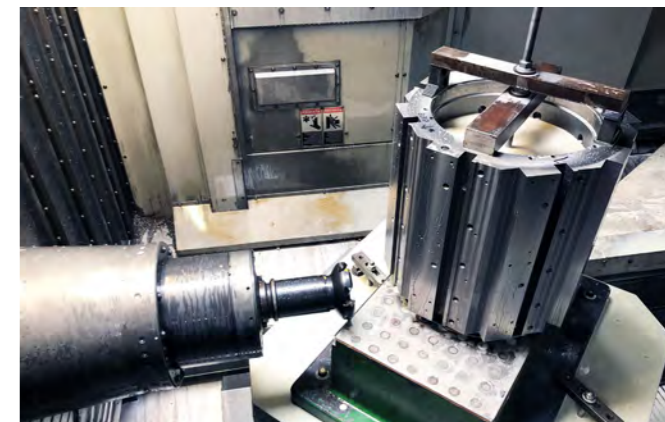
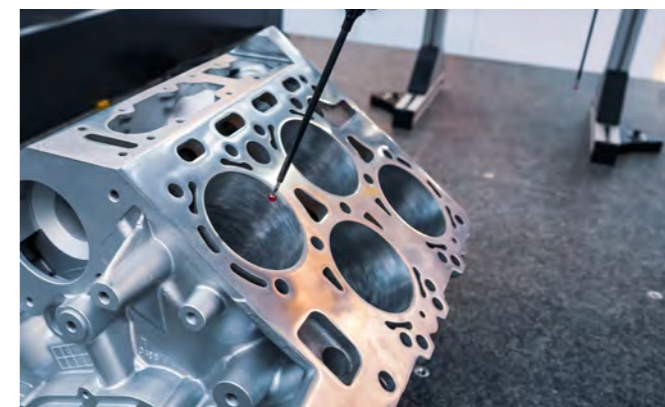
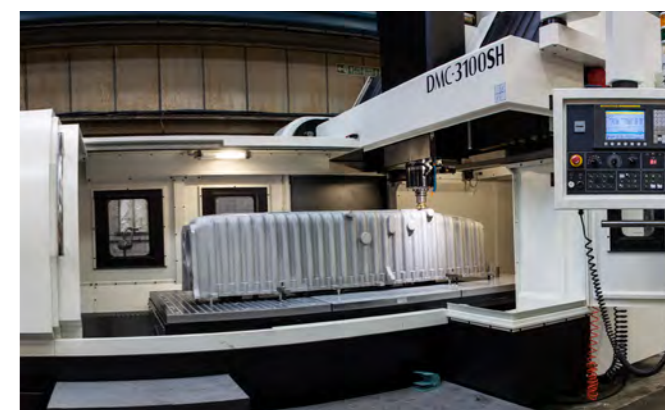
The whole workshop is enhanced by our excellent quality control department.

Dimensional accuracy is assured with our three CMMs enabling a measuring range of up to 2000mm in X axis, 1000mm in Y axis and 800mm in Z axis with high-quality Renishaw precision probes and controls.

We have recently added a 3m FARO arm for mobile CMM capability and we are proud to have electronic height gauges and inspection-grade granite tables within our fully temperature controlled test environment.

The foundries provide extensive in-house facilities for heat-treating castings, chemical and mechanical analysis, x-ray, dye penetrant and ultrasonic penetration. These, along with our full range of conventional inspection equipment, ensure the comprehensive quality control of our casting, fabricating and machining work.

We have on-site pressure testing facilities, a paint shop and sub-assembly area, plus we provide alochroming, anodising and a range of other final processes when required.



Our current plant list



Makino A100 E

- X-axis 3100 | Y-axis 1800 | Z-axis 1600
- RPM 12,000

Dugard Eagle HBM4 Horizontal Borer

- Fanuc 21i control
- X-axis 2200 | Y-axis 1600 | Z-axis 1600
- W-axis 550 quill with 360 degree B-axis
- Fitted with Renishaw spindle probing and Inspection Plus software
- 60 tool carousel

Toshiba BMC100 Horizontal Machining Centre

- 90 tool carousel
- Fanuc 600 control
- Twin pallet 1000 square
- X-axis 2000 | Y-axis 1250 | Z-axis 1000
- Fitted with Renishaw tool & spindle probing

TOS W100A Horizontal Jig Borer

- Heidenhain control
- X-axis 1600 | Y-axis 1120 | Z-axis 1250
- W-axis 810 (quill)
- 360 degree 'B' axis

Dugard HD2210B HD Box Vertical Machining Centre

- Fanuc OiMF control
- X-axis 2200 | Y-axis 1000 | Z-axis 900
- Fitted with Renishaw tool & spindle probing
- 40 tool carousel

Doosan HM1250 Horizontal Machining Centre

- Fanuc controller
- X-axis 2100 | Y-axis 1500 | Z-axis 1500
- Fitted with MP700 Spindle probe including Inspection Plus software

Heller MCI16 Horizontal Machining Centre - Two

- Siemens 840D control
- X-axis 800 | Y-axis 630 | Z-axis 630
- 160 tool carousel

Johnford DMC3100SH Vertical Machining Centre

- Fanuc control
- X-axis 3100 | Y-axis 1778 | Z-axis 800
- Fitted with Renishaw TS 27R probe

Heller H4000 Horizontal Machining Centre - Two

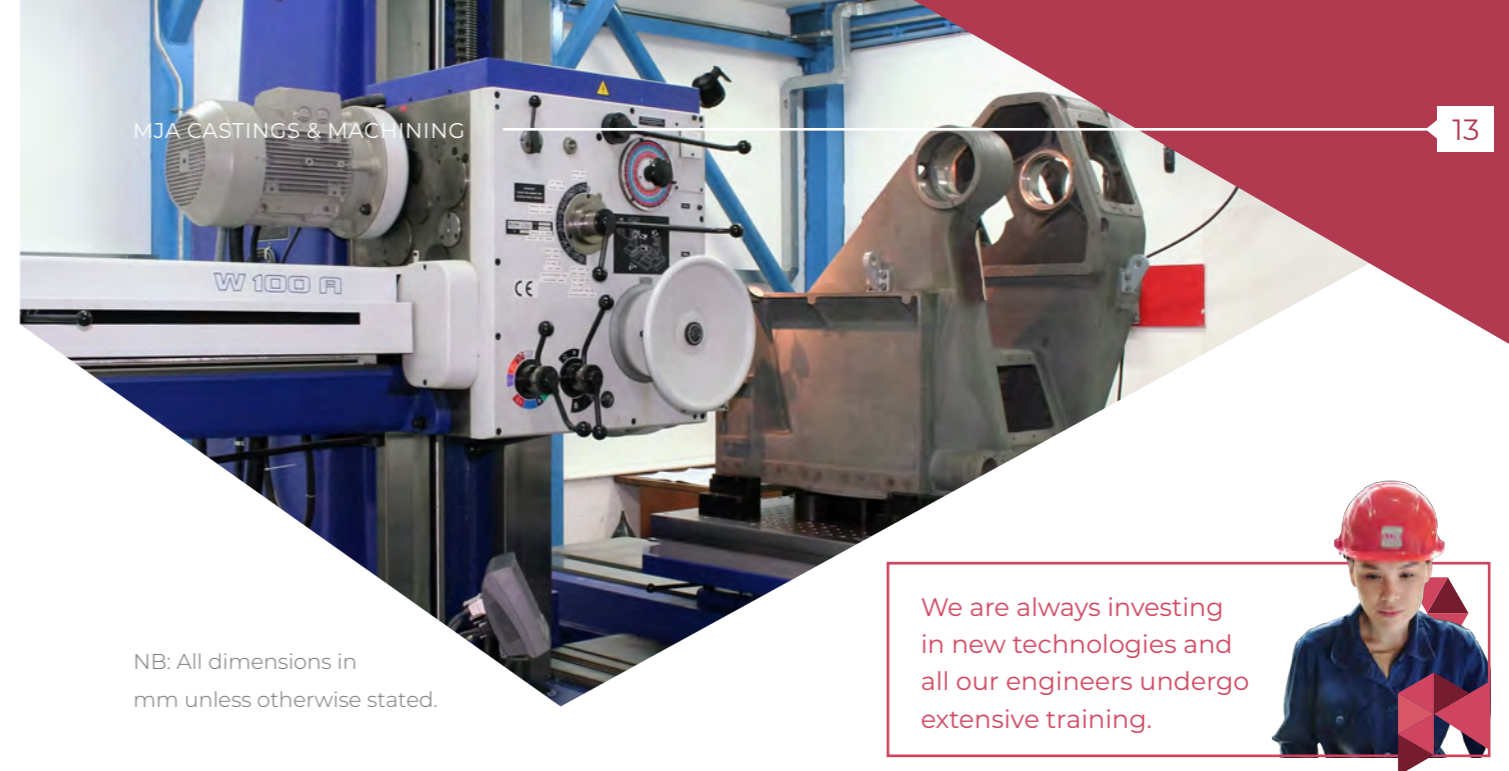
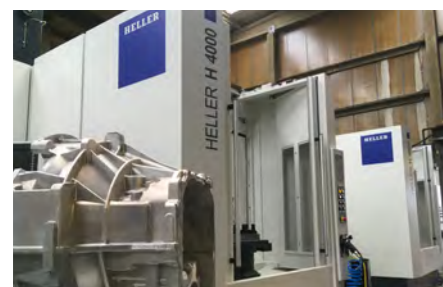
- Siemens 840D control
- X-axis 800 | Y-axis 800 | Z-axis 800
- 1 with 160 tool carousel / 1 with 80 tool carousel

Webster & Bennett Titan Vertical Boring Mill

- Fanuc OT CNC control
- 47" chuck
- 1500 max swing diameter

Doosan DNM 500 II Vertical Machining Centre

- Fanuc CNC control
- X-axis 1020 | Y-axis 540 | Z-axis 510
- Spindle nose to table top 150 to 660



NB: All dimensions in mm unless otherwise stated.

We are always investing in new technologies and all our engineers undergo extensive training.



Dugard HD1886B HD Box Vertical Machining Centre

- Fanuc OiMF control
- X-axis 1800 | Y-axis 860 | Z-axis 700
- Fitted with Renishaw tool & spindle probing
- 40 tool carousel

Mori-Seiki Junior Vertical Machining Centre

- X-axis 560 | Y-axis 410 | Z-axis 460
- Spindle nose to table top 150 to 610
- Spindle centre to column Front 680

Mori-Seiki AL-2 CNC Lathe

- Fanuc control
- Maximum diameter 250
- Length 533
- 8 station turret

Yang ML60A CNC Lathe

- Fanuc series O-T control
- Maximum diameter 550
- Length 1100
- Diameter through bore 100
- 8 station turret

Webster & Bennett Vertical Turning / Boring Mill

- 48" M series
- 64" actual maximum diameter
- 3.08 – 190 RPM

Doosan HP5100 II Horizontal Machining Centre

- Fanuc CNC control
- X-axis 850 | Y-axis 700 | Z-axis 750
- Pallet indexing 0.001 degree B-axis

Manual machines

In addition to our CNC machines we have a range of manual tools for precise and skilled finishing by our experienced team. Our fixed and mobile overhead cranes allow for safe maneuvering of pieces of all sizes.

Two of Centre Lathes

- 254 x 2000, with 610mm swing

Three of Vertical Milling Machines

- 1220 x 305

Jones & Shipman 540 Surface Grinder

- 600 x 200

Assorted Pillar Drills

Startrite HB280A Automatic Metal Cutting

- 280 diameter

Hydesco Planer

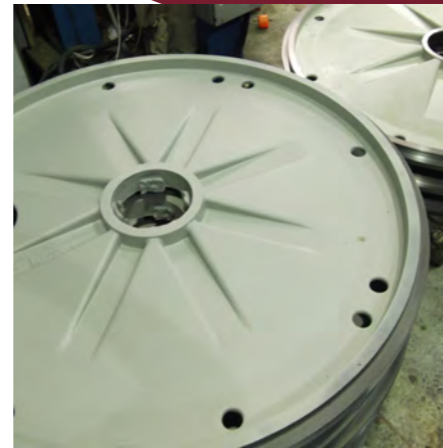
- 1825 x 910

Assorted Pedestal Grinders

Assorted Overhead Cranes

- 3.2 tonnes lifting capacity

Gallery





All enquiries: **01233 631 554**
Visit us online: **mjallen.co.uk**

MJAllen Castings & Machining is a limited company registered in England and Wales with company registration number 02378447.

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