



PROTOTYPING
SAND
GRAVITY
LOW PRESSURE
HIGH PRESSURE
MACHINING
PAINTING
ASSEMBLY
SERVITIZATION

ALUMINIUM

Alucast is unique in the UK for its ability to manufacture aluminium components in all four of the main casting processes, sand, gravity and high and low pressure diecasting. This understanding of the four processes ensures its customers get the optimum solution for every component from a single source.

Whether it is a component that moves from a sand cast prototype through to high volume pressure diecasting production, or a range of components requiring different processes, you work with the same engineers who know the component and who can constantly assess the best and most cost effective manufacturing solutions.

Combine that with Alucast's ability to supply fully machined, painted and assembled components across all four processes and you have a single UK source able to deliver all your casting component requirements.

By understanding the issues of casting aluminium the company can use its experience and Magmasoft® computerised casting simulation to support customers on component design, alloy selection and finishing options to ensure each component is manufactured to optimum quality and cost criteria.

With the introduction of Lean Manufacture techniques Alucast is continuously developing its facilities to improve the cost and flexibility benefits for its customers.

Committed to the goal of supplying precision engineered, high quality aluminium components, Alucast works across a diverse range of markets, from automotive to telecommunications, hydraulics and pneumatics to defence. Alucast's customers include high quality, well known brands such as Bentley, Aston Martin, Lotus, INEOS, Jaguar, Gardner Denver and AP Racing.



Sand Casting and Prototyping

The Alucast sand casting foundry combines the company's excellent reputation for quality with the design flexibility of the process in terms of size, complexity and quantity requirements. Using the airset process Alucast can produce castings up to 250kgs in weight in batches from a single casting through to hundreds.

The sand foundry can make prototype castings using 3D printed moulds in small batches for testing and evaluation before investment in the tooling for gravity or high pressure diecasting. By keeping the prototyping and production in house Alucast can reduce time to market, development and manufacturing costs.

Gravity Diecasting

For low and medium volume batches up to tens of thousands the Alucast gravity foundry fits the bill. With the ability to manufacture complex components the company offers manually poured or semi-automatic die moulding facilities to match capability with customer demand.

To complement the production facility, the highly flexible core shop utilises shell, cold and hotbox processes, and the company also has in-house heat treatment plant, X-Ray and dye penetrant testing.

Low Pressure Casting

Castings are produced by filling the tool cavity with aluminium under low pressure. This system avoids turbulence and is produced with low oxide entrapment and hydrogen pick-up. Castings produced in this method exhibit enhanced structural capabilities.

High Pressure Diecasting

Where high volume, high surface finish components are required, Alucast can deliver through its High Pressure facility. Producing components from a few grammes in weight, Alucast specialises in small batch high pressure castings through the flexibility of its processes and its fast turnaround capabilities.

Machining, Finishing and Assembly

The company has a full machining facility in-house from large CNC Horizontal Twin-Pallet Machining Centres, 5 Axis CNCs and smaller vertical machines and lathes. The company supplies cast components heat treated, machined, painted and assembled where required, therefore matching Alucast's philosophy of supplying a broad range of cast components across the four processes from a single source.



Quality

The company's expanding facilities includes a technical centre, laboratory, spectrographic analysis, X-ray and crack detection enabling Alucast to meet customers increasing quality requirements through reduced PPMs. This has allowed Alucast to achieve IATF 16949:2016 and ISO 9001:2015.

Servitization

Alucast has introduced an innovative business model in liaison with Aston University and offers Magmasoft® casting simulation, heat treatment and advanced crack detection as additional services to customers separately if required.





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