

New 600-tonne aluminium die casting machine services EV and hybrid market

The electric vehicle (EV) and hybrid market is growing fast and suppliers to automotive original equipment manufacturers (OEMs) are having to adapt their product ranges to keep up. One of the new demands is aluminium components, which offer reduced weight. For this very reason, Mark Aluminium Die Casting (MADC) has recently invested in a new 600-tonne casting machine to produce high pressure aluminium die-cast bodies for oil pumps and water pumps - specifically designed for the next generation of green vehicles.

EV and hybrid vehicles utilise batteries as part of the floorplan (in EVs, this replaces the internal combustion engine entirely), which means that green vehicle packaging is completely different. Batteries and associated motors are heavy, so to offset the weight, in most cases OEMs are utilising an increased quantity of aluminium compared to traditional steel components to achieve this. Reduced weight equals improved vehicle range and performance, all desirable attributes in an electrified vehicle. Thus, demand for aluminium components is rising as OEMs move to utilise more of it in their new green vehicle designs.

MADC has therefore added to its capacity in India with a new casting machine. The new unit complements an existing 1,100 tonne die casting machine, offering the required capacity to mass produce components to support high-volume vehicle manufacturing.

The business already offers a proven track record in designing and supplying cast aluminium parts, with its castings utilised in the PROFLOW range of automotive water pumps, which deliver OEM levels of performance. PROFLOW water pumps are preferred by Aston Martin, General Motors, Jaguar Land Rover and Volvo.

David Lewis, Plant Manager at MADDC, adds: *"Sales of EV's and hybrids are growing exponentially, and will continue to do so as petrol and diesel cars are slowly phased out. As a supplier to OEMs and the automotive aftermarket, we must be able to provide high quality aluminium castings to support this market shift while delivering quantities required to support just-in-time (JIT) production operations. This new investment will allow us to keep pace with this growth in aluminium demand.*

In addition, we will be taking delivery of two more even larger high-pressure die-casting machines as well as two new similar capacity YIZUMI machines to offer even greater future capacity. One of each will be operational by the end of this financial year, with the next set coming online the following year."

Photograph Captions

Photo 1:

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Photo 2:

The business already offers a proven track record in designing and supplying cast aluminium parts

About Mark Aluminium Die Casting

Mark Aluminium Die Casting offers a flexible small-to-large volume Aluminium die casting service. We provide design advice, tooling and specialist technical support. We differentiate ourselves by our service levels and responsiveness, we also maintain high quality standards and of course, finding ways to be extremely cost competitive. We can also test, pack and stock your items ready for immediate call-off delivery.

Cast aluminium parts have been manufactured at our site in Colwyn Bay, Wales for over 30 years. The company currently operates a modern furnace and a series of large high pressure aluminium die casting machines producing parts for automotive, electrical and electronics applications. In-house design, high-pressure aluminium die casting, engineering, manufacturing, assembly and testing, plus a large stock facility are all located on one site.

We employ a mixture of UK, EU and Chinese manufactured dies and moulds in order to meet a wide range of price, precision and volume demands.

For longer runs and super precision applications, the best quality tooling is always required, which we source locally. However in order to remain cost competitive and support companies that wish to re-shore their manufacturing base – in order to become more flexible in terms of volumes and reduce lead times and supply chain vulnerability – we also offer a manufacturing service based on a highly cost competitive production model.

Mark Aluminium Die Casting offers a full design, manufacture and test service for the OEM and replacement markets where volumes range from 1,000s to hundreds of 1,000s of parts. We also have a large engineering, assembly and packaging facility, logistics and a huge on-site stock capacity.

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