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Machined Components

Die casting specialist diversifies

Investment in high-speed machining centres has helped Suffolk die casting specialist, RD Castings, to diversify from over-reliance on the yellow goods sector and launch a subcontract machining service.

The company used only to machine its own zinc and aluminium high-pressure die castings, but during the second half of 2009 it started a subcontract milling and turning service, producing components in a variety of materials for a much wider spread of industry sectors.

Since the mid '90s, six Brother machining centres have been supplied by Whitehouse Machine Tools to RD Castings' Mildenhall factory. They systematically took over from manual milling, drilling and tapping, which was labour intensive and subject to quality variation due to human involvement. All of the Brothers are fitted with twin APC (automatic pallet change) and some are equipped with a Nikken rotary indexer to provide a fourth CNC axis.

According to RD Castings' sales and marketing director, Anthony Pateman, the production centres are ideally designed for machining



The six Brother high-speed machining centres in operation at RD Castings

castings. He cites fast feeds rates and tapping speeds as well as sub-second tool change time as central to the effectiveness of the machines and says that floor-to-floor times twice as fast when machining centres without APC are used.

Cycle time can be as short as 20 seconds, although at the other end of the scale, a complex gearbox casting recently took 10 minutes to machine on all six faces. It required the use of 26 tools to produce a complex sequence of milled features including

numerous undercuts and circlip grooves. Very tight tolerances were held in respect of squareness, concentricity and roundness.

When machining its aluminium and zinc high-pressure and gravity die castings, minimum run is typically 1,000-off but when providing subcontract services, batch runs on the APC machining centres are often as low as 200-off. General tolerances are ± 0.10 mm, reducing to ± 0.01 mm for some bore diameters.

www.rdcastings.co.uk



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