

## TORNOS OPENS UP CAPACITY AT MACHINED COMPONENT SYSTEMS

Steering its way through a relentless recession and coming out the other side with remarkable success has been a difficult journey for Redditch based Machined Component Systems (MCS); a journey that according to Managing Director Mr Warren Gray has tested and proven the true character of the staff, the management and the company's ability to work closely with its customers. The resulting success has seen the company acquire six machine tools in 2011, with the latest acquisitions being two Tornos CNC turning centres.



Throughout the recession, MCS retained all of its customers but suffered a downturn as OEM customers de-stocked their inventory levels as the decreased demand for product filtered down the supply chain. For MCS, this resulted in the loss of staff. However, exiting the recession as a leaner and more robust business, MCS has now won a number of new contracts that includes a six year contract within the Jaguar/Land Rover supply chain to supply a range of components for knuckle assemblies and suspension assemblies and a two year contract with a multinational company supplying products for the assisted living industry plus additional long term contracts.

To service the new contracts MCS has acquired HAAS and Daewoo machining centres as well as a Daewoo chucking lathe, an additional turning centre and a Tornos Delta delivered in June with a Tornos Sigma

ordered at the recent Tornos Open House that has now been delivered. The new orders and machine acquisitions have brought further good news for the West Midlands area with the staff levels rising including two apprentices.

With an order book that includes medical, automotive, petrochemical and environmental work, MCS demands machine tools that are extremely capable, flexible and suitable for its 24 hour a day, five and a half days a week lights-out machining operation. From a machine tool acquisition perspective this has historically involved the purchasing of Tornos Deco sliding head turning centres. However, with diversification into various industry sectors, the company has had to widen its machine tool scope to incorporate larger turning centres and machining centres.

For its new long term automotive contracts, MCS required a turning centre for machining parts up to 20 mm diameter that would meet the new capacity demands of the company. As MCS Managing Director, Mr Warren Gray comments: *"With almost 40 CNC machines, we knew what we were looking for from a turning centre. Despite historically being a Tornos customer, our last Tornos Deco arrived in 2004 and all the relevant suppliers have evolved considerably in the last 6 years, so we had to conduct a full review of the marketplace. Our conclusion was that the Tornos Delta 2015 5-axis turning centre was without a doubt the best machine available for a number of reasons."*

*"In comparison to competitor machines the Tornos Delta has an extremely compact footprint that incorporates high pressure coolant, in-built filtration and a small work envelope with a large capacity for swarf. This small work envelope means that the resting position of the tool stations are very close to the work-piece. This really does make a difference to cycle times as the tools don't travel far before cutting."*

*"The contained design of the Delta 2015 makes it very clean and quiet in comparison to alternate machines. Additionally, its capability level to cost ratio is far more impressive than alternate turning centres whilst the accuracy is everything you would expect from Tornos, holding a 9 micron bore tolerance across a full day of production,"* continues Mr Gray.

The Tornos Delta is currently producing long automotive rods that have been moved from the Tornos Deco machines that are reserved for more complex components. Freeing up capacity from the Deco sliding head lathes, the Delta is currently producing automotive rods from mild steel in batches of 1000 per week with other allocated jobs including batches of 200 to 2000 petrochemical valve components per week, manufactured from 316 grade stainless steel. With all the relatively 'simple' parts that have been moved to the Delta, the machine has undoubtedly improved cycle times with the numerous parts it is producing. Furthermore, the tool turrets accept 16x16 mm tooling whereas competitor machines hold a maximum tool shank of 12 mm. This increases



Warren Gray, CEO MCS

## Presentation



rigidity, surface finishes and creates greater flexibility by allowing MCS to transfer tooling between machines.

With the company increasing its workload in the petrochemical, environmental and healthcare sectors the complexity and diameter range of the parts coming through MCS's door is continually increasing. To meet this demand, the ISO:9001 and ISO:13485 (medical certification) company recently ordered a Tornos Sigma 32 at the Tornos Open House. As Mr Gray continues: "We already have a number of machines capable of producing parts in the size range up to 32 mm diameter. However, besides bringing desperately needed capacity to the business, the 10-axis Sigma brings a flexibility and ease of use beyond that of our other machines for complex parts. For example, the Sigma offers the Tornos' TB-Deco programming platform as well as ISO programming. This enables machine setters familiar with ISO controls or TB-Deco controls from the Deco machines to both operate the new Sigma."

Additionally, the Sigma is regarded as the only machine tool on the market with identical power and rigidity on the main and counter-spindle. With up to 28 tool positions and a large swarf capacity, the Sigma will fit in perfectly with the lights-out philosophy at MCS. From a productivity perspective, with an independent roughing tool, the Sigma has the capability of 3 tools working simultaneously on the workpiece. As Mr Gray continues: "From our time studies we expect the Sigma to be considerably faster than our alternate turning centres. We have five turning centres dedicated to one family of parts for one customer over a 3 years period and we expect the Sigma to make a significant impact on this project."

Looking to the future Mr Gray concludes: "We have made a significant investment in staff and machine tools since the recession and we are already looking at new machines and staff for 2012. In 2011 our business has grown significantly compared to our best ever previous year and we project additional growth for 2012, so we have to be prepared by putting the correct procedures and plant in place. We are confident with the level of service and support we receive from Tornos that they will be a part of our future growth plans."



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