

## TORNOS DELIVERS LOGICAL SOLUTION TO UNICUT

Running its machine shop 24 hours a day to accommodate existing business and an influx of new contracts, Unicut Precision has now acquired two Tornos Gamma turning centres to service its influx of new business and resolve potential capacity issues.



With over 20 fixed and sliding head turning centres on the shop floor producing tens of thousands of turned parts each week, the Hertfordshire business is without doubt an expert in its field. With the recent increase in orders, instead of turning to its regular machine tool suppliers, the company opted for two new Tornos Gamma 20/6 turning centres.

As the core of the business is built around machining relatively small batches of components up to 32 mm diameter with a fast turnaround time, Unicut has previously opted for Japanese sliding head turning centres based on flexibility and ease of use. However, the

new Tornos Gamma series has completely changed the perception of Tornos turning centres for this Welwyn Garden City business.

As Unicut Managing Director, Mr Jason Nicholson comments: *"This business is modelled on 'logic of brand' and we didn't previously feel that Tornos machines were the best fit solution for our business. However, the new turning centres the company has developed have really opened our eyes to what they have available. When we were looking for new turning centres, Tornos offered the Gamma and it immediately struck me as a high capability machine that was a cost effective package."*

## Presentation

The first 6-axis 20 mm diameter Gamma was delivered in July and it created such an impact that a second machine was installed in October. The high level of capability and flexibility of the Gamma's has the machines producing batches of 500 to 1000 parts from a host of materials that include steel, aluminium and aerospace alloys.

The ISO:9001 business is set up in departments to suit its vast array of component types with one machine shop tailored to turned parts up to 20 mm diameter, another unit for parts up to 32 mm and another department for machining complex parts beyond 32 mm diameter. The acquisition of the Tornos Gamma's has enabled Unicut to move work from its alternate sliding head machines in the 20 mm component department to deliver increased capacity.

As Mr Nicholson continues: *"Our business model is based upon supplying OEMs with impeccable service and quality. To win such prestigious long term agreements with OEMs we have to meet stringent criteria that includes contingency planning. This contingency planning includes covering a series of 'what if' scenarios such as machine breakdowns, staff shortages and so on. To this end, we always aim to buy*

*machines in pairs in the event of such situations. It also gives us flexibility in our workflow scheduling. As the Tornos Gamma was a new step for us, we initially acquired one machine. The machine immediately proved itself, so we ordered a second machine."*

These latest acquisitions take the Unicut investment level to a staggering £1m in seven months. In a two year period the company has now installed a fixed and sliding head turning centre, a Mazak 5-axis machining centre and the two Tornos Gamma machines. The 2012 investment plans are set to include a fixed head twin turret turning centre and a new component cleaning system. This investment level has now seen the company add seven new staff in 2011 to take the workforce up to 35 employees.

When looking for new machine tools, as always Mr Nicholson reviews the available options in the marketplace. On this occasion, it was the Tornos that delivered the ideal package for Unicut. As Mr Nicholson continues: *"The latest Tornos machines show the company has done its homework. The Gamma has all the best elements that are available in competitor machines and has taken it a step further by offering features only available in competitor*



*machines that are way beyond the Gamma's price bracket. The Gamma is installed as a package that includes a Y-axis for rear end working, high pressure coolant (HPC) and a high number of fixed and driven tool positions. One example of the machine being a 'complete package' is the high pressure coolant system. On competitor machines a HPC system would be an additional extra at a cost of £9000, on the Gamma it is integrated into the machine and included in the price."*

For Unicut the benefits of the Gamma are numerous. With regard to the HPC system, the integrated system on the Gamma is not only more cost effective than competitor products but it also sits comfortably within the work envelope as opposed to competitors bulky external units that take up floor space. Additionally, the Gamma incorporates a full Y-axis tool platen that offers up to 8 tool positions for front and rear end working. Of the eight positions, up to four can accommodate driven tooling. Alternate machines can offer the same system but in a price range way beyond the Tornos Gamma.

Additional benefits of the Gamma include the new guide-bushless system that reduces bar remnants and the associated material costs. This innovation not only creates a saving but improves rigidity, which in turn improves tool life and component quality. The guide-bushless system will note more aluminium parts being transferred to the Gamma's at Unicut. This is because sliding head machines inherently encounter quality issues when machining intricate aluminium parts. However, the Gamma with its ability to work as a sliding head or fixed head centre credit to the guide-bushless system, eliminates any issues and offers additional flexibility to Unicut.

*"The Tornos Gamma's have slotted into our business very well and we are delighted with the machines. The Gamma 20/6 machines have a pulse generator for scrolling through complex programs, which aids the machine operator. Additionally, they fit into our structure of running simple or relatively complex parts 24 hours a day, which includes lights out machining.*

*The flexibility and capability versus cost was a major factor in the purchase of the Tornos machines. The machines have ease of access for the setters and the tool positions are close to the workpiece for maximum productivity levels. We have been extremely impressed with the amount of tool positions, the live tooling positions and the overall integration of elements that are optional extras on alternate machines. Tornos will no doubt be seriously considered in our machine tool acquisition plans in the future,"* concludes Mr Nicholson.



Unicut Precision Ltd  
6 Tewin Court  
Tewin Road  
Welwyn Garden City  
Hertfordshire  
AL7 1AU