



decomagazine

THINK PARTS THINK TORNOS

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UGITECH –
Stainless Steel
Solutions Provider
for the Medical
Sector.

Not the least
bit crazy.

Accessories...
which are anything
but accessory!

Feeding
a multispindle turn-
ing machine with
blanks is possible!

SIGMA 20 MAKES IT POSSIBLE!

Set up around the Tornos DECO Sigma 20 CNC sliding head turning centre, A-BAX Precision Engineering Ltd of Kettering UK is a successful company formed by a businessman seeing an opportunity arising from a fading CAM Auto machine shop.



Company director Alan Baxendale next to his new machine that makes all possible.

In 2006 the opportunity arose for, A-BAX Managing Director, Alan Baxendale, to take ownership of a machine shop with 6 CAM Auto lathes supplying components to a global company. Mr Baxendale had already purchased a sheet metal business and as sole operative, was looking for a solution to eliminate the labour intensive CAM Autos and allow him to continue with the metal work. Although he had no CNC experience, he realised that the way forward was to replace all the CAM Autos with a CNC turning centre in order to meet demand.

Despite his lack of experience Mr Baxendale knew exactly what he was looking for. He contacted sliding head lathe manufacturers with the brief that "the machine must be capable of machining at least 6 sequential batches within each component group without any requirement from the operator to load changeover programs or tooling between batches." He required variations in engraving details, drill sizes, countersink depth and quantities between each batch for the respective component. An electrical signal was required to interface with an automatic

Presentation

finished parts catcher to allow for bin change to occur between each sequential batch.

Mr Baxendale states: "Whilst some suppliers said their machines could deliver what I wanted, none of them appeared to do it. However, Tornos were the most confident about delivering what I wanted and it was this confidence and the power of the machine that drew me to Tornos." The result was a Tornos Sigma 20 supplied in December 2006 fully tooled with programs.

What Mr Baxendale wanted was a machine that, in conjunction with an automatic finished parts bin changer, would run with minimal operator input and that is effectively what Tornos has delivered.

The company at present primarily produces motorcycle components in batches varying from 150 to 2,500. With 5 types of brass components and up to 80 different sizes, each of the 5 types has between 29 and 72 size variations – something that undoubtedly causes a headache for any manufacturer.

As Mr Baxendale continues: "The (Fanuc) Macro B option on the Tornos means that I can load 6 sizes and associated quantities and the program calculates all the other parameters associated with each variation. The overall tooling in the Sigma 20 remains the same for each group. Technomation Ltd integrated a Doser 600 automatic rotating bin changer, using the signal provided by Tornos, which is controlled by an M code within the parts program. The machine automatically signals the bin to rotate to avoid mixing batches. I can leave the machine overnight and come in the following day to find 6 batches completed and collected in separate bins, allowing me to operate the turnkey package I originally envisaged."

The simplicity now built into the business has been conducted with significant productivity gains. "The previous annual production of approximately 250,000 parts will be achieved in the first six months with the potential to triple production by the end of the first year. The old company was sinking in its workload. With the new Sigma 20 I have not only retrieved the situation but turned it around. I am already looking at new orders and potentially a second machine by the middle of next year," continues Mr Baxendale.

The total number of each part produced per annum is large. However, as Mr Baxendale continues: "Nobody ever wants all their parts in one run. Despite making large quantities overall we must have the capability to run small batches to deliver to customer needs. These needs can be catered for with simplicity, thanks to the Sigma 20."

A-BAX tailored the Tornos parts collection system to meet its changing needs and will develop the system further in conjunction with Tornos and Technomation Ltd to sub-divide large batches and to retrieve the final component made by each batch for inspection in order to achieve ISO:9002.

The automation capability of the Sigma 20 allows A-BAX to run 24/7 without having to employ a night shift and incur additional labour costs and unnecessary set-ups. "I cannot understand why more companies are not working this way. It may be a leap of faith and maybe my naivety and a fresh approach has enabled me to do this. I see companies running a night shift with operators there just to change bins and load programs. Even during the day, machines can sit idle waiting for the operator to set up the next batch for a similar component. This does not seem to be a cost effective way of working," concludes Mr Baxendale.

John McBride
Tornos Technologies UK
Tornos House – Garden Road
Whitwick Business Park
Coalville – Leicestershire
Tel: 01530 513100
E-mail: sales@tornos.co.uk
Site web: www.tornos.ch