

CLOCKING ON TO TORNOS BENEFITS

An English clockmaker has acquired a new Sigma 20 CNC sliding headstock mill-turn centre from Tornos to manufacture a host of tiny components required for its intricate timepiece mechanisms. Claimed by the company to be considerably faster than its existing sliding head machines, the Sigma 20 has cut cycle times by more than 50 % in some instances.



Internal workings of Gluck carriage clock.

Gluck Precision Engineering Co Ltd was established in 1954 by Felix Gluck (who had emigrated from Switzerland in 1930), originally as a supplier of precision components allied to the instrument trade before progressing rapidly into the complete manufacture of industrial clocks. In the mid-1970s the company diversified into the production of exquisite carriage clocks – a venture for which the company holds a Queens Award for Export.

Having successively outgrown three sites in South London, the company relocated to a new facility at Maidstone, Kent in 2006. While clockmaking today still represents around 35% of business at Gluck Precision, the majority of the company's revenue is generated by providing industries such as leisure, pumps, scientific instruments and hand tools with precision turned parts on subcontract basis.

Since the 1990s the company has standardised on a particular make of sliding head auto. However, with an understandable soft spot for Swiss machines, Gluck Precision Engineering granted Tornos permission to provide a few cycle times for existing parts in late 2006, when in the hunt for an additional machine.

"At first, I didn't believe the times I was seeing", states managing director Roger Gluck. "In fact, I asked Tornos to double-check the times as some were 30% quicker than our existing cycles."

Having confirmed the cycle times as correct, a deal was duly struck and a new Sigma 20 sliding head auto took its place at Gluck Precision in February 2006 alongside five existing CNC machines.

"Seeing the Tornos work alongside our existing machines is a real eye-opener," continues Mr Gluck. "Its speed is jaw-dropping; I would estimate it is 10-15% faster on average than our existing machines, while on certain jobs it is even quicker than that. For instance, a stainless steel shaft with milled features for the construction sector is now produced in 66 seconds on the Sigma 20, as opposed to 2 minutes 38 seconds previously using one of our existing machines. The Tornos is very hungry and for the first time we have had to actively seek work to keep it busy. I estimate we will achieve payback on our capital outlay within three years."

Supplied with a Fanuc 31i CNC, swarf management system, parts conveyor and Robobar barfeed, the Tornos Sigma 20 fits perfectly with the Gluck Precision philosophy of process automation.



Tornos Sigma 20 at Gluck.



Parts coming off conveyor. "The pace was so high that I asked Tornos to double check the times as some were 30 quicker..."

"In terms of employees, the company used to be far larger," says Mr Gluck, "but technology and automation has reduced the need for so many hands. However, despite the reduction in headcount, we actually manufacture more parts per week now than ever before. Technology allows us to run 24/7 and complete parts in a single set-up".

BTMA member Gluck Precision Engineering manufactures every component used in its carriage clocks except the facia glass. The company has a host of prestigious clients and has been supplying the

Crown Jewellers for the past 20 years: it has just fulfilled an order for 100 clocks for Buckingham Palace. On the subcontract side, the firm specialises in complex turned parts. Batches vary tremendously (100 – 1 million) but are generally in the region of 5000 to 10,000 off.

"Over the years we have applied our horology skills to complex turned components," concludes Mr Gluck, "and our purchase of the Tornos Sigma 20 supports this process further."



Roger Gluck at front of premises.

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