



IRISH SUBCONTRACTOR BOTTLES SUCCESS WITH TORNOS

When Killala Precision Components Ltd was acquired 12 months ago by a brother and sister partnership with a background in the manufacturing and wine industry, the new owners immediately tasted the potential for success. The recipe for success with the County Mayo company started with the acquisition of a Tornos Sigma 32 from Premier Machine Tools, the Ireland agent for the Swiss machine tool manufacturer.



When the new directors acquired the subcontract business based on the West Coast of Ireland, the growth potential was apparent. Supplying prestigious manufacturers in the oil & gas, refrigeration, hydraulic & pneumatics, brewing, medical and automotive sectors with machined parts in batches from 50 to 500,000 on its array of CNC and CAM auto machine tools, the 34 employee company is maximising its growth potential. Previously, Killala Precision was turning work away because of the capacity limits and capability levels of some of its machine tools. To rectify this issue, the company bought a Tornos Sigma 32/6 from Premier Machine Tools of Kildare.

Commenting upon this acquisition, Killala Precision's Managing Director, Mr Brian Irwin says: *"We had another manufactures 32 mm capacity sliding head that wasn't capable of producing many of our parts. This was pushing more complex parts onto our 10 year old Tornos Deco 20 that is an extremely capable*

and busy machine. We desperately needed a new sliding head, so we reviewed the marketplace and the Tornos Sigma 32 was the hands down winner. It is extremely powerful, versatile and very productive. Whilst we have CNC machine tools from a vast array of vendors, the existing Tornos Deco is a workhorse that is very reliable, productive and well supported, so we were very confident in the brand. We took delivery of the Sigma 32/6 in November and it has delivered beyond our expectations already."

This confidence is boosted by the fact that Tornos is the only sliding head turning specialist with a sales, service, technical support and training base in Ireland. This is all provided by machine tool specialists Premier Machine Tools, a company that delivers levels of service unparalleled by alternate machine tool suppliers. Whilst this support was one of the major deciding factors behind the ISO:9001 registered company's selection of Tornos; from a productivity perspective

Presentation



the 7.5 kw spindle power on main and sub spindle that is beyond many fixed head machines was also a major selling point.

Regarded as the only Swiss type sliding headstock machine capable of producing parts in the realms of a fixed headstock machine, the Sigma 32 has a heavy duty construction for main and counter operations that make it the ideal addition to any machine shop. The rigid and robust nature of the Sigma 32 is noted in the 2.2 kw power output of the driven tool stations that can machine at 10,000rpm. The driven and fixed tool stations see the machine offer 28 tool positions that have improved overlapping processes for Killala Precision. The increased capability for simultaneous operations has improved productivity by over 40% in the short period since the machine's introduction.

As expected with a subcontractor covering such a diverse range of industry sectors, the materials processed on the Sigma 32 include stainless and mild steel, aluminium, bronze and brass through to inconel and hard materials commonly used in the oil & gas sector. Since its introduction, the Sigma 32 has been tasked with producing hydraulic valves, sleeves and pump components in batches from 50 to 5000. One project the Sigma was acquired for, is a family of stainless steel tubes for the brewing industry. Regularly produced in batches from 1000 to 3000, the 80 to 135 mm long tubes have a 9.52 mm external diameter, a 7 mm internal diameter and require external turning down to 8 mm. The previous

sliding head lathe created deformation, elongation, part bending and poor tool life. The 3 m barfeed system with improved component support and guiding on the Sigma has improved machine rigidity, as Killala Precision's Engineering Manager, Mr Ray O'Boyle comments: *"We were scrapping 15% of tube parts, primarily because of poor tool life - a result of the machine parameters. We were getting 25-35 parts with each parting and turning insert edge on the previous sliding head and when we transferred the job to the Sigma 32/6 we instantly noted tool life improvements up to 100 parts per edge with the same Kennametal inserts. With the Sigma, we have more than doubled tool life, significantly reduced our scrap rate and improved our productivity by well over 40%."*

This 40% improvement has arrived from a cycle time reduction from 90 to 65 seconds on one



family of tubes whilst further savings have arrived from reduced insert changeovers. As Mr O'Boyle continues: *"We were using the machine counter to change inserts at set intervals. If an insert was damaged, we would notice damage on previous parts that would deliver a high scrap rate. The Sigma has eradicated this problem. Additionally, by not opening the machine doors to change inserts as often, we are not suffering unnecessary downtime."*

The Sigma 32/6 is running over 30 different jobs with part families within this grouping. As Mr O'Boyle says: *"We are witnessing cycle time and set-up savings on every part we transfer to the Sigma. One set of stainless steel locating pins with a time saving from 40 to 32 seconds is produced in batches of 1000. Moving the pins to the Sigma has cut non-machining times with drilling and tapping conducted on the sub-spindle whilst the main spindle is also machining."*

"From a set-up perspective, the Tornos TB-Deco system is simple to use and works with ISO programming, so set-ups are kept to a minimum. It also



simplifies overlap machining, so we can virtually eliminate non-cutting times. Furthermore, the Sigma has an integrated barfeed system with 4 channel options and 4 pusher sizes as standard. This reduces set-ups, improves synergy between barfeed and machine and also eliminates the additional cost of channel supports, steadies and drives. This is ideal for us as we do job changeovers daily. Like the Deco machine, the new Sigma is running over 16 hours a day, every day, and we are delighted with its performance and also confident in the service and support we have been receiving from Tornos UK and Premier Machine Tools," concludes Mr O'Boyle.

The introduction of the Sigma 32/6 has freed capacity from the company's Deco 20 that is producing smaller parts whilst taking larger work from the company's 51 mm fixed head machine. The company is delighted that the Sigma can produce a combination of small screws at 4.5 mm diameter and large parts over 32 mm at cycle times faster than alternate machines whilst freeing capacity on its other CNC turning centres.



Killala Precision Components Ltd
Woodlands Industrial Estate
Killala, County Mayo
Ireland
Tel. +353 (0)96 32255
Fax +353 (0)96 32306
info@killalaprecision.com