

IN IT TO WIN IT!

A business meeting during the 2014 Farnborough Airshow led to Grob Machine Tools UK eventually beating off stiff competition to supply its G550 5-axis machining centre to Moyola Precision Engineering. **Mike Richardson** reports.

I know exactly how it feels. As an ex-manufacturing engineer faced with the task of selecting any one of a number of potential machining centres from a list of suitable candidates, I had a variety of opinions to consider - not least those of my financial director.

Assessing the outcome of my engineering team's feedback, colleague preferences ranged from the personal colour choice of supplier A's machining

centre to the most basic 'gut feel' that supplier B was ultimately much nicer people to deal with. Indeed, I often found that, when it came to satisfying our team's criteria, there was very little to choose between any of them - which made it all the more harder to choose a clear favourite!

One machine tool supplier that has played a key role in this kind of customer selection process is Grob Machine Tools UK. Headquartered in Mindelheim, Germany, Grob employs over 4,500 employees worldwide and

has further production plants in Brazil, the US and China. Grob Machine Tools UK was the first subsidiary of the parent company and opened in 1990. From its sales and service office based in Birmingham, the company supports over 250 spindles in the UK.

Six of the best

Grob, along with five other machine tool suppliers was identified by potential customer, Moyola Precision Engineering and asked to complete a proposal; this proposal included producing workpiece clamping layouts and estimated cycle time. From this, three machine tool suppliers were selected for a visit from Moyola's directors in order to perform standard demonstrations and a factory tour.

Founded in 1976, Moyola is a supplier of 5-axis aerospace components, kits and assemblies. Based in Castledawson, Northern Ireland, the company employs over 100 employees. It commenced supply of aerospace components in 1999 after being tasked by its launch customer to provide a solution for 5-axis components of around 3m in size.

Over the subsequent years, Moyola has invested around €20 million in equipment, facilities, CAD/CAM and training to meet its aggressive growth targets. The company has always viewed the utilisation of the very best technology as one of its key unique selling points. This is evidenced by the recent installation of five Starrag Ecospeed F and FHT machines installed at its facility.

Supporting this strategy has been a continual investment in the company's

BELOW: Grob's G550 5-axis machining centre is equipped with 30,000rpm HSK63 spindle, 120-pocket on-board tool magazine, twin-pallet changer and 80bar through-tool coolant capability





workforce including its apprenticeship programme and large programming team of some eight Catia CAD/CAM programmers, enabling Moyola to take on large work packages.

In recent years, the company has strategically moved in the direction of providing a more complete offering to its customer base. Moyola now holds full assembly approvals from both Bombardier and Airbus and has successfully added this capability to its list of core skills.

In addition to the manufacture of large components in a 3.8m x 2.5m envelope size, Moyola has recently been active in offering smaller parts and assemblies solutions to the aerospace industry.

Runners and riders

After the award of a substantial Airbus A350 package, Moyola - in accordance with its technology strategy - embarked on a machining centre purchasing study comprising a shortlist of potential candidates to provide the optimum machining strategy for smaller sub-1m 5-axis components.

Following Moyola's three supplier visits, Grob was selected to complete cutting trials on Moyola's actual part to demonstrate that the cycle time quoted was achievable. The part was subsequently machined and deburred in-process, in the quoted cycle time and to the exacting quality requirements.

The outcome of Moyola's study was to select Grob's G550 5-axis machining centre, equipped with 30,000rpm HSK63 spindle, 120-pocket on-board tool magazine, twin-pallet changer and

80bar through-tool coolant capability.

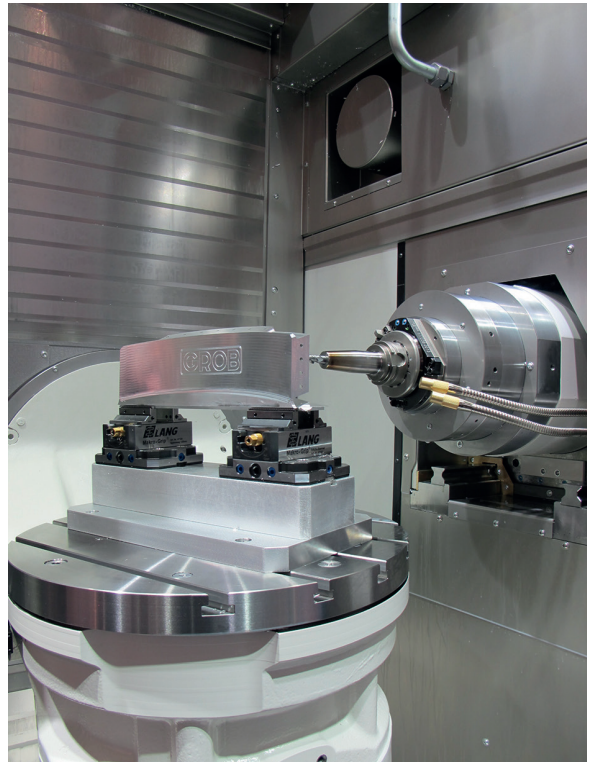
Key machine tool capability requirements demanded that a horizontal spindle configuration was a must for stability and swarf evacuation. In addition, the ability to machine overhead, giving free-fall swarf evacuation directly into the chip conveyor, impressive machine rigidity and high volume metal removal rates were also priorities. The part being machined in two operations was an aerospace grade aluminium aerostructure for the Airbus A350 programme, from solid billet measuring 378mm x 396mm x 180mm.

Grob says its machining centre configuration was a huge factor with the decision process, which enable the aggressive cycle time and quality demands to be met. The company says it will support Moyola, 24 hours, seven days a week, 360 days per year. Remote diagnosis will be on hand, meaning a Grob technician can dial into the machine and support any issues that arise at any time.

As evidenced by the previous history with the Ecospeed machines, it is hoped that this Grob installation will be the first of many machines to be delivered to Moyola and the start of a long relationship between the two companies. Moyola intends to increase the number of its machine tools in the coming months to achieve the increasing volume required by its end customer.

Moyola will be exhibiting at the Paris Airshow in hall 2B, stand G272.

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ABOVE: Moyola's key machine tool capability requirements demanded that a horizontal spindle configuration was a must for stability and swarf evacuation

BELOW: Grob's machining centre configuration played a huge role in Moyola's decision process

