In the line of business that Select Tool specialize in–check fixtures and automation products primarily for the automotive industry–tight tolerances of 0.05 mm are a must.

"Most of the parts we manufacture require five axis CNC machining processes, but we also require machines that can deliver high accuracies too, especially for our check fixtures, and that's where the Grob machines come in, says Dave Tomassi, owner and vice president, and a designer by training, who formed the company in 1997.

Select Tool operates 16 CNC machines in its 12,000 sq ft facility. Three of them are Grob G-series five axis universal machining centres equipped with high speed

spindles that run at 15,000 rpm, but can go as high as 18,000 rpm. The machines typically travel at 2,560, 1,650 and 3,540 ipm in the X, Y and Z axes respectively.

Select Tool purchased its first Grob, a G350 five axis universal machining centre in 2012. A year later it purchased an identical Grob. Last year, it took possession of a G550, a new model in the G-series machines. And this spring, it will take delivery of a fourth G550 machine through Grob's distributor for Ontario, Quebec and New Brunswick, DiPaolo Machine Tools, Mississauga, ON.

"We like the unique configuration of the spindle versus the worktable as the spindle comes in horizontally," says Tomassi. "Most other five axis machines have the spindle vertical. Because of this worktable you can rotate a full 180° and have the workpiece upside down. You can machine unique cutting geometries and hard to reach areas. The configuration is also good for chip control."

The Grob G-series five axis universal machining centres encompass three models: G350, G550 and G750 (there are also two turning versions G550T and G750T). The horizontal five axis concept means that even with the longest tool in the spindle, the maximum component size can be swung and processed collision free. Three linear and two rotary axes allow for five sided and five axis simultaneous machining. The G550 is designed with a large swivel range in the A axis of 225° of rotation. It has an axis speed of 80 m/min and an acceleration of 8 m/s2. The machines can be equipped with controllers from different suppliers; Select Tool has Heidenhain controls on its machines.

Tomassi says all three machines have been performing "extremely well. We have virtually zero downtime."

Tomassi says he's not surprised by the performance of these machines because of Grob's legacy in supplying high quality machines to the automotive industry. "Components used to make these machines, such as control panels, drives and scales are of very high quality."

Tomassi says service was a big plus in his decision to select Grob machines.

"We damaged a spindle on our first Grob and Grob's technicians were able to replace it in less than two days. That's very impressive. You're dealing with factory direct parts [Grob manufactures machine tools at its Bluffton, OH, plant] and technicians that are very knowledgeable and that was a big appeal for us."

Despite the turmoil the automotive industry has faced in the past decade, Tomassi says business has been growing for Select Tool and "the automotive industry has been getting busier since 2009. Because of the growth we needed more machines."

The company also recently expanded its engineering and assembly headquarters into a new and separate facility from the machine shop. The 40,000 sq ft assembly area features a 4,000 sq ft metrology room and 8,000 sq ft of office space for design, program management and administration.

FIELD NOTES

➔**PRODUCT:**
G550 5 axis machining centre

➔**SUPPLIER:**
Grob

➔**END USER:**
Select Tool

www.grobgroup.com
www.selecttool.com