

# BETCOR SAYS INNOVATION IS THE KEY IN JOB SHOP MACHINING

**B**etcor Manufacturing in Ontario, Canada is a small custom job shop with a difference. At first glance, they look like most other job shops, with a shop floor filled with machines for CNC milling, turning, surface grinding, cylindrical grinding, and even some welding and fabricating work.

At one end of the shop floor, though, is a piece of equipment that is anything but traditional state-of-the-art abrasive waterjet machining center. The OMAX 55100 JetMachining<sup>®</sup> Center has enabled Betcor to handle more operations in-house instead of sending parts out to other shops. "We were sending out parts to be cut on a plasma, laser or waterjet, instead of using conventional milling operations," says partner Barry Corbet. "Many of these were parts with large radii and had large amounts of metal removed. When we decided to expand our business we took a very close look at all of these processes and concluded that abrasive waterjet, and in particular the OMAX was most suitable for our target market."

Like most job shops Betcor Manufacturing in Alliston, Ontario, serves a wide variety of markets, including automotive, aerospace, and advertising. This means that while innovation is key to Betcor, versatility is also important, and the waterjet provides that versatility by machining a wide variety of materials.

"Where the abrasive waterjet really excels is machining accurately in thicker materials, in hardened steels, in stainless and for cutting heat sensitive materials like plastics and gaskets," said partner Jeff McCloskey. "Although laser and plasma have a speed advantage for cutting thin sheet material, our abrasive waterjet can achieve similar cost results by simply stacking the sheets and then cutting them together."

The abrasive waterjet had some unexpected benefits as well, according to McCloskey. "It cuts virtually dust free by cutting submerged, so we don't have to worry about dust contaminating our other machine tools."

Despite its versatility, McCloskey says the abrasive waterjet

proved to be easy to learn. "In fact, the learning curve to operate this machine is far shorter than that of other CNC machine tools." This means that Betcor could quickly begin using the OMAX for jobs.

Betcor has also found that the abrasive waterjet works well with other machines. "Many parts that we produce can come finished right off the OMAX, but we do a lot of parts that combine processes on both the waterjet and VMC's," said McCloskey.

Because the abrasivejet uses a standard PC and common file formats, it smoothly integrates into Betcor's existing computer equipment. This is especially useful for quoting jobs, says McCloskey, "Most customers e-mail their part files to us for quoting and we use the machine software for calculating our waterjet quotes. You simply open an IGES or DXF file, and enter the variables, including material and material thickness, and the software calculates the cycle time and costs for machining the part."

Betcor appreciates that OMAX also understands the importance of innovation. "OMAX just introduced new software that dramatically improves the performance of the machine itself. For cutting a right angle outside corner, for example, the machine cuts slightly past the intersecting point then rapidly backtracks to the intersection point and continues. In some cases this can mean as much as a 30 percent decrease in cycle time."

Even the installation of Betcor's abrasivejet is innovative—the pump and abrasive hopper are installed on a mezzanine and the machine is on the shop floor below, where the manufacturing actually takes place. This allows for maximum use of floor space.

"We tend to take an innovative approach to everything we manufacture," says Corbet. "This is what drives Betcor Manufacturing's success."

For more information email [sales@betcor.com](mailto:sales@betcor.com) or visit [www.omax.com](http://www.omax.com) ■

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*Standing in front of their new OMAX machine is Ted Rimmer of Hascotech, Barry Corbet & Jeff McCloskey.*



*Betcor's machine shop.*



*Samples of Betcor's waterjet parts.*