

Diamond F.C. fills waterjet cutting niche

by Jerry Cook

When Igor Koybash and Konstantyn Lysogor, co-owners of Concord, ON-based Diamond F.C. Inc., realized that there was a growing demand in the market for waterjet cutting, they didn't waste any time filling that niche.

That's why Koybash and Lysogor launched Diamond F.C., which is a job shop that specializes in waterjet cutting and fabricating, earlier this year.

"Waterjet cutting is in demand in the market now. More and more customers are asking for precision waterjet cutting," says Koybash.

Given the firm's rapid growth in business since its inception, the two partners in Diamond F.C. obviously made the right decision. "In our business plan we were very conservative, but our business has grown more quickly (than we anticipated)," says Lysogor.

In fact, Koybash adds that "The amount of work that we had planned for the first six months (in our business plan) we actually got in the first two months that we were in operation."

Diamond F.C. has two employees at its 3,500 sq. ft. facility in Concord. The company specializes in waterjet cutting for customers in a variety of markets including construction, aerospace, signage, automotive, tool and die, and many others.

When Koybash and Konstantyn began the company the first waterjet cutting system they installed was an Omax Model 80160 JetMachining Center. The company has since installed a second waterjet cutting system.

So far, Diamond F.C. has used the Omax JetMachining Center to cut material thicknesses ranging up to 2 1/2 in. However, Koybash says that the Omax waterjet will cut material up to six in. thick.

According to Koybash, the company is waterjet cutting a variety of materials including metals (primarily stainless steel and aluminum), glass, plastics, and more. In general, Diamond F.C.'s production is low volume with part runs typically ranging from one-offs up to five to 10 pieces at a time.

"We can use the machine to cut thousands of parts at a time, but up until now it has been low volumes of parts. However, these parts require very high quality and precision cutting. Every part that we do is a custom job," Koybash. Typically, Diamond F.C. works to very close tolerances of plus or minus 0.001 in.

Waterjet cutting, says Koybash, offers a number of advantages over other competing processes such as lasers, plasma cutting, and electrical discharge machining (EDM).

Koybash cites the example of an aerospace component that the

company recently fabricated using the Omax waterjet cutting system. "Plasma would have (resulted) in too rough a cut while trying to laser cut the part would have changed the actual structure of the material. Wire EDM can cut this part precisely but it also changes the structure of the material," he says.

The Omax Model 80160 JetMachining Center provides large scale precision machining for larger parts or multiple

parts from stock up to 6 ft. x 12 ft.

One feature that Koybash and Lysogor wanted on the Omax waterjet system was the Tilt-A-Jet feature which allows the machine to achieve virtually zero taper with most materials. The Tilt-A-Jet positions the nozzle at an angle calculated by the software to exactly offset the natural taper from the abrasive jet.

Koybash and Lysogor considered

feature INSTALLATION SPOTLIGHT



Diamond F.C. is using the Omax JetMachining Center that the firm recently installed to cut a variety of materials including stainless steel, aluminum, glass, plastics, and more.

a number of waterjet cutting systems before selecting the Omax machine.

The Omax JetMachining Center was supplied by Spark & Co. Inc., Mississauga, ON. Telephone: (905) 670-4333.

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