



JIT SOLUTIONS

1st Quarter - 2008



Newest Addition to JIT Companies Inc.

JIT Companies Inc. has purchased a new, FLOW waterjet with HyperPressure™ technology from Flow International Corp. The new waterjet offers a 6' x 12' operating envelope. This waterjet will replace a 4' x 8' FLOW waterjet which was purchased by JIT in 1998. The removal of the old waterjet and the installation of the new one will take place during the first week of April. The new waterjet will:

- Cut heavier parts faster or smoother
- Reduce edge taper to less than 0.001" in many cases
- Allow us to quote larger production run jobs

The new software that comes with the waterjet will enhance our ability to provide a true vertical edge to the cut, eliminating taper on most materials. There are some cost savings associated with cutting speed that we will pass on to our customers. These cost savings will be realized on thicker harder materials such as 1/4" and thicker steel, 3/8" and thicker aluminum and many other thicker materials. We will also be able to give our customers a smoother finish for the same price we have charged in the past for a rougher finish. The only limit to thickness of material we can cut is the maximum distance between the cutting head and the table. That distance is approximately 6".

Suitable for Waterjet Series

"Suitable for Waterjet" is a four part series that examines estimating simulations along with cutting options that may benefit a shape cutting project. The value of the option is dictated by the parameters of the project. Part 2 highlights precutting set-ups.

Precutting Set-ups: Special set-ups usually involve one of two concepts: a material (*like foam or corrugated plastic*) that is placed on the slats of the waterjet bed to support the material that is to be cut or the use of a special fixture that can be as simple as a special square or as complex as a heavy steel jig. Special set ups are usually implemented to protect the material finish or the finish of prefabricated parts. They are also used to flatten material and to prevent the material from shifting as stress is relieved during the waterjet cutting process. Lightweight materials, small parts, glass, pre-finished parts or sheet material, and larger parts that need customization will need special attention during the precutting phase of the cutting process. In addition to bed set ups, protective film can also be applied to material as an extra precaution to protect the face of the material. Polished metals, powder coated materials and glass may need this extra precaution.

Tool Settings will be the topic in part 3 of this series, "Suitable for Waterjet". Part three will be included in the next edition of "JIT Solutions"; due out next quarter.

A Solution for "Altimate Medical"

For nearly twenty years Altimate Medical has been making Easystand®; standing technology that improves the quality of life for kids and adults who use wheel chairs world-wide.

The engineering team at Altimate Medical was in need of a rapid, low-cost method to proto type parts and discovered that waterjet lends itself very well to testing extrudable parts prior to tooling up. It is often the case, when developing new assemblies, that an actual physical part is needed; a proto type part that will fit on the machine to test the concept and fine tune the overall assembly. Each time an adjustment is made to the over all assembly another set of proto type parts needs to be made, but to build a mold each time there is an adjustment to a proto type part becomes very expensive.

For this particular project waterjet seemed to be a better option than laser cutting or plasma cutting. The material blank was one inch thick and the part design included tight inside radius and small holes. The variables that needed to be tested included: dimensions of the blank, material type of the blank and the edge quality of the part.

After talking with the folks at JIT Companies we knew we had found a waterjet operator that understood the final application and the concepts that we wanted to test. A team from Altimate Medical went to visit the JIT facility so our design engineers could understand the capabilities of the waterjet and learn how it could be beneficial to our particular project. JIT was a trustworthy partner in deducing what was critical to our machine and how the cutting variables would affect the overall price. We were confident in our design prior to tooling up.

"The waterjet cut parts do a great job of representing the parts as they would be extruded and it has become a valuable tool for us."

*Mike Lokken
Altimate Medical*

More about JIT Companies

JIT Companies fabricates unique projects and custom parts for design professionals, specialty contractors and a broad range of manufacturers. We focus on challenging, short-run projects that require high quality outcomes. Our capabilities include custom waterjet cutting services and made-to-order glass fabrications for both architectural and industrial applications.

We process all types of metal, glass, stone, foam, plastics and laminates. We smoothly integrate into your production cycle to reduce your production costs and overall time-to-market. We have had experience with many different materials, techniques and technological changes. It has always been our mission to maintain Old World quality, even as we introduce New World technology into our fabrications.

For well over twenty years, we have provided innovative solutions to the likes of Goodrich Corporation, Hutchinson Technology, Medallion Cabinetry, and The Science Museum of Minnesota; to name a few. We have succeeded in coming up with solutions when others have said that it could not be done; let our experience be your guide.

Mission Statement

"Blending experience with innovation and technology to create custom solutions."

JIT COMPANIES

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