

## Next Generation Integrated Abrasive Waterjet Cutting System

### BENEFITS

- Machines virtually any material and thickness
- Unique design saves valuable floor space and provides easy access to work zone from 3 sides at an ergonomically correct height
- Proven machine tool design and technology for durability and reliability
- Highest possible productivity through unparalleled work piece accessibility
- No CNC or abrasive waterjet experience necessary: "Trained in a day, proficient in a week"
- Cut parts using virtually any CAD file, or scan drawings directly into FlowMaster® Software

### STANDARD FEATURES

- FlowMaster Windows®-based PC machine control and programming
- Motorized Z-axis with PASER® ECL Plus abrasive waterjet cutting system
- Swiveless plumbing for fast cutting
- Rugged two-piece construction provides accuracy and durability
- Choice of 60,000 psi intensifier or 55,000 psi HyPlex™ pumps
- CleanCut™ material support system with rapid water level control for clean, quiet underwater cutting
- WaterVeyor™ abrasive removal and recovery system (optional)
- Height and collision sensors (optional)
- Dynamic Waterjet® with Active Tolerance Control (optional)



### High Productivity with an Integrated, Compact Design

The Integrated Flying Bridge (IFB) incorporates a design that combines the motion control, pump and high-pressure components of a waterjet cutting tool into one compact machine. It consumes minimal floor space, provides excellent operator access, and is configured for easy material loading and unloading. This abrasive waterjet machine is capable of cutting any metal, stone, tile, and glass material with unmatched accuracy and intricacy.

### The World's Most Popular Waterjet Cutting System

The Integrated Flying Bridge is a design that has been field proven through over a thousand installations worldwide. The robust open gantry is designed and constructed using advanced finite element engineering to ensure it will consistently deliver an extremely high level of accuracy and performance well into the future.

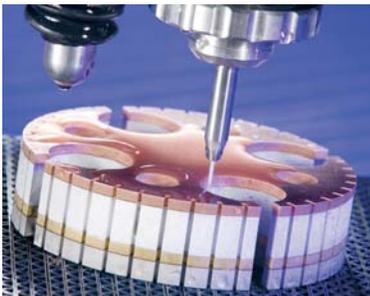
For maximum productivity, it's possible to equip the machine with optional features such as dual cutting heads, Dynamic Waterjet, height and collision sensors, and an automatic abrasive removal system to keep the catcher tank clean and eliminate downtime associated with having to remove used abrasive. Finally, because the machine is equipped with FlowMaster, Flow's intelligent Windows-based PC control and programming system, it is extremely easy to learn and simple to use. No waterjet or programming experience is necessary to begin producing perfect parts.

### All the Unique Benefits of Waterjet Machining

The Integrated Flying Bridge delivers all the benefits that make waterjet systems so unique and capable. Waterjets are able to cut complex shapes and parts in almost any material — from metals of all sorts, to stone, glass, ceramics, rubber, plastics and composites — all up to 8 inches thick. Since they cut parts with no heat affected zone, secondary finishing is typically unnecessary. Because waterjets put no lateral force and exert very little downward force on the parts they are cutting, no elaborate fixturing provisions are required. And finally, with an additional cutting head, it's possible to further increase the machine's productivity and economically produce multiple parts.

### PASER® ECL Plus Abrasive Waterjet Cutting System

PASER ECL Plus continually operates at peak cutting performance — guaranteeing that you cut as fast as possible at the lowest cost per inch. Its compact abrasive metering unit delivers the precise amount of abrasive to the cutting head needed to cut at maximum speed. Not an ounce of abrasive is wasted on inefficient cutting.



## Specifications

### Net Cutting Area and Speed

- X-axis (bridge) and Y-axis (base):  
2 ft x 4 ft (0.6 m x 1.2 m)+  
4 ft x 4 ft (1.2 m x 1.2 m)  
  
4 ft x 8 ft (1.2 m x 2.4 m)  
6.5 ft x 9.8 ft (2 m x 3 m)  
  
6 ft x 12 ft (1.8 m x 3.7 m)  
6 ft x 24 ft (1.8 m x 7.3 m)
- Z-axis:  
8 in (200 mm), motorized Z Axis
- Cutting heads:.\*  
Up to 2
- Rapid transverse maximum:.\*  
500 in/min (12.5 m/min)
- Contouring range:.\*  
0 - 300 in/min (0 - 7.6 m/min)

### Machine Positional Specifications (per linear axis at 68°F ± 3°F / 20°C ± 2°C)

- **Linear positional accuracy:.\***  
± 0.003 in (0.08 mm)
- **Repeatability:.\***  
± 0.002 in (0.05 mm)
- Specified in accordance with ISO 230-2 and applicable NMTBA specifications

### Drive System

- Digital AC servo motors with closed loop feed
- X- and Y-axis utilize a ball screw with driven nut
- X- and Y-axis utilize recirculating ball, linear bearings and hardened precision ways
- Full protection package (covers and internal bellows) for drive system and ease of machine maintenance

\*Dependent upon machine size.

\*Currently not available with Dynamic Waterjet.

## FlowMaster: Intelligent PC Control and Programming

FlowMaster, Flow's Windows-based waterjet control system, makes programming and controlling the IFB remarkably simple. While exceptionally easy to operate, FlowMaster is also extremely powerful with an integrated database of cutting parameters for virtually any material and thickness. Any standard drawing format (dxf, dwg, etc.) can be seamlessly imported or created with the built-in CAD functionality. All that is required of the user is to enter basic cutting parameters, such as material type, thickness, and desired edge quality, and FlowMaster does the rest. To easily monitor the progress of a job as the machine cuts the part, its cut path is continuously displayed on the computer monitor. All machine and pump functions are controlled and displayed by FlowMaster.

## Dynamic Waterjet with Active Tolerance Control

Dynamic Waterjet with Active Tolerance Control produces more accurate parts, at significantly higher cutting speeds, than parts cut with conventional abrasive waterjets. FlowMaster makes operating the Dynamic Waterjet extremely simple as it dynamically controls the position of the cutting head so that parts are cut to high precision without taper. Dynamic Waterjet optimizes waterjet cutting by operating at the highest speeds possible, with the best part precision to achieve the lowest cost per part.

## Flow Pumps

The Integrated Flying Bridge, like all Flow waterjets, can be equipped with either intensifier or HyPlex™ pumps. Both types of pumps run at the highest continuous operating pressures in the industry. Continuous operating pressure is an important distinction to make. It's what allows all Flow pumps to cut any material or shape faster and less expensively than machines operating at lower pressure. Flow's HyPlex pump technology provides high operating pressures with increased efficiencies. Flow is the only company in the industry to provide customers with a choice of pump technology.

Pump	Power	Flow Rate	Continuous Operating Pressure	Voltage
50 iS	50 HP	1.00 gpm	Adjustable up to 60,000 psi	400/480 VAC, 150 KVA
100 iD	100 HP	2.00 gpm	Adjustable up to 60,000 psi	400/480 VAC, 225 KVA
HyPlex 30	30 HP	0.82 gpm	Up to 55,00 psi	400/480 VAC, 100 KVA
HyPlex 50	50 HP	1.25 gpm	Up to 55,00 psi	400/480 VAC, 150 KVA

All pumps are physically and electronically integrated into the machine frame. Pumps can be easily accessed for maintenance at the rear of the waterjet system.

## Abrasive Removal

For an easy abrasive removal from the catcher tank, the Integrated Flying Bridge can be equipped with an optional self-cleaning WaterVeyor abrasive removal system. The patented WaterVeyor uses a "Venturi effect" to remove garnet from the catcher tank. The design minimizes moving parts and wear items which require maintenance and can increase operating costs.

## INNOVATION | EXPERTISE | COMMITMENT

### Get It All with Flow

For over three decades, Flow has set the standard for excellence in waterjet technology. We are the only waterjet company in the world that offers total solutions and support from a single source, both before and after your waterjet system is installed. We learn your business requirements. We help you select and implement the right solution. We train your staff and we are there for you for the entire lifecycle of our products.

### When you partner with Flow, you get more than a product:

Our **INNOVATION** ensures that you will always have the latest and highest quality technology.

Our **EXPERTISE** ensures that you will always have the right technology for your individual business needs.

Our **COMMITMENT** to customer service ensures that you will always receive the support you need to stay productive.

For your complimentary needs analysis or a product demonstration, please call one of our waterjet experts at **1-800-446-3569**.

We look forward to partnering with you in your success.

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