



Flow
waterjet

Integrated Flying Bridge –

The Integrated Abrasive Waterjet Cutting System

Standard Features

- FlowMaster® Windows™-based PC machine control and programming
- Motorized Z axis with PASER® ECL Plus abrasive waterjet cutting head
- Cutting performance monitor (peak performance)
- Rugged two-piece construction
- Choice of 4,150 bar intensifier or 3,800 bar HyPlex pumps
- WaterVeyor abrasive removal system (optional)

Benefits

- Machines virtually any material and thickness
- Saves valuable floorspace
- Proven machine tool design and technology for durability and reliability
- Optimal abrasive usage guaranteed
- Highest possible productivity through unparalleled work piece accessibility
- No tool changing required
- Rapid setup time
- Consistent, smooth cutting
- No CNC or abrasive waterjet experience necessary:
"Trained in a day, proficient in a week"
- Cuts parts using virtually any CAD file, or scan a drawing directly into FlowMaster Software

Innovative Waterjet Solutions



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 hundreds of installations worldwide. The robust cantilever 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 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 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

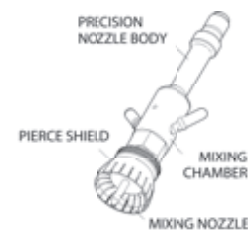
The Integrated Flying Bridge delivers all the benefits that make waterjet systems so unique and capable. Waterjets are able to cut complex shapes and parts in almost any material – from metals of all sorts to stone, glass, ceramics, rubber, plastics and composites – in thickness of up to 175 mm. Since 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 is possible to further increase the machine's productivity and economically produce multiple parts.

PASER ECL Plus – Abrasive Waterjet Cutting Head

The PASER is the only cutting head that constantly operates at peak performance to enhance your profitability. The PASER's peak performance is due to its compact abrasive metering unit which consistently delivers the precise amount of abrasive needed to guarantee you cut as fast as possible with the lowest cost per meter.

PASER ECL Plus is the next evolution of abrasive waterjet cutting heads. It extends the life of your cutting head components. All components are designed and manufactured within exceptionally tight tolerances to ensure precise alignment for the most coherent and concentric waterjet stream achievable. All the cutting power is directed at the work piece AND there is less contact with the mixing nozzle, providing reduced wear and increased component life.

The PASER ECL mixing nozzle and collet precisely center the mixing nozzle radially and axially within the cutting head. Together with the DuraFlow orifice, they increase cutting speed up to 10 % when compared with existing cutting heads, based on similar parameters of pressure, water flow rate and abrasive flow rate.



Abrasive Removal

For an easy abrasive removal from the catcher tank, the IFB 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.

FLOW Pumps

The IFB, 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
50iS	37 kW (50 HP)	3.8 l/min	adjustable up to 4,150 bar	3 AC 400 V, 50 kVA
100iD	75 kW (100 HP)	7.6 l/min	adjustable up to 4,150 bar	3 AC 400 V, 100 kVA
HyPlex 30	22 kW (30 HP)	3.0 l/min	adjustable up to 3,800 bar	3 AC 400 V, 30 kVA
HyPlex 50	37 kW (50 HP)	4.7 l/min	adjustable up to 3,800 bar	3 AC 400 V, 50 kVA

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

FlowMaster: Intelligent PC Control and Programming

FlowMaster, FLOW's Windows based PC software makes programming and controlling the IFB remarkably simple. While exceptionally simple 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, iges, etc.) can be seamlessly imported or created with the built-in CAD functionality. All that is required of the user is to enter some basic cutting parameters such as material type and thickness, 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.

Specifications

Net Cutting Area and Speed

- Working area: 1.2 x 1.2 m, 2.4 x 1.2 m, 3.6 x 2 m and 7.2 x 2 m
- Z-axis: 200 mm, motorized Z axis
- Cutting heads*: up to 2
- Rapid traverse*: maximum 12.5 m/min
- Contouring range*: up to 7.6 m/min

Machine Positional Specifications (per linear axis at 20°C +/- 2°C)

- Linear positional accuracy: ± 0.15 mm
- Repeatability: ± 0.05 mm
- Specified in accordance with ISO 230-2 and applicable NMTBA specifications

Drive System

- Digital AC servo motors with closed loop feedback
- 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

Optional: The IFB can be equipped with Dynamic Waterjet with Active Tolerance Control Technology.

*Dependent upon machine size.

European Headquarters

Flow Europe GmbH

Gewerbestraße 95
D-75015 Bretten
Tel.: +49-(0)72 52-53 80
Fax: +49-(0)72 52-53 85 30
info@flowgmbh.com

Flow France Sarl

38, Place des Pavillons
F-69007 Lyon
Tel.: +33-(0)4-72 80 82 03
Fax: +33-(0)4-72 80 82 04
flowfrance@flowfrance.com

Flow Ibérica, S.L.

Pol. "Európolis"/Calle T. - Nave 5B
E-28230 Las Rozas (Madrid)
Tel.: +34-91-640 73 93
Fax: +34-91-640 73 95
flow.dmv@flowiberica.com

Flow Italia S.r.l.

Strada per Turbigio 64
I-20010 Arluno (MI)
Tel.: +39-02-90 37 93 83
Fax: +39-02-90 37 93 85
flowitalia@flowitalia.com

Flow UK Limited

19 Wheatfield Way
UK-Hinckley LE10 1YG
Tel.: +44-(0)1455-89 53 00
Fax: +44-(0)1455-89 53 05
info@flowuk.com

www.floweurope.com

Regional Sales Representatives, International Distributors and Agents are located worldwide.



Flow
waterjet