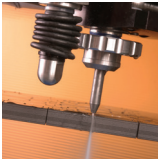




Flow International Corporation

Corporate Fact Sheet



THE COMPANY

Flow International Corporation (a Shape Technologies Group company) is the world leader in the development and manufacture of ultrahigh-pressure (UHP) waterjet pumps and systems for industrial cutting and surface preparation.



Waterjet is one of the fastest growing cutting machines in the machine tool industry. There are virtually no limits to what waterjets can cut, which is why companies of all kinds and sizes are realizing growth, greater efficiency, and improved productivity by adopting UHP waterjets.

- Because there is no heat affected zone (HAZ), waterjets can cut more materials and eliminate grinding off hardened material and slag.
- Waterjets can cut virtually any material, from thin shim stock to over 12 inches.
- Waterjets allow tight nesting and accurate cutting, improving material utilization.
- Waterjets can both replace and complement other machine tool processes such as laser, plasma, EDM, milling, and routers.

Since 1974, Flow has delivered over 12,000 waterjet and abrasive waterjet systems to customers in more than 60 countries. With the largest market share, Flow is the world leader in the development and manufacture of UHP waterjet technology. Flow Corporate Headquarters is in Kent, Washington, and Flow employs approximately 700 employees with offices in North and South America, Asia and Europe. Flow's global preeminence can be attributed to its focus on technology leadership, a full continuum of products that provide complete solutions, application expertise, and a commitment to customer success across the world.

APPLICATIONS

When water is continuously pressurized by Flow pumps rated to 94,000 pounds per square inch (psi) and forced through a tiny opening to become a jet the diameter of a human hair, cutting soft materials such as food, paper and baby diapers, rubber and foam is easy. UHP pure waterjet applications also include industrial surface preparation where failed coatings on large ships, offshore oil platforms, or large storage tanks are removed in preparation of recoating. Add abrasive particles to the jet stream and it becomes a supersonic precision erosion process capable of cutting virtually any hard material including metals, composites, stone, hardened ceramics and glass. Here are just a few examples of how pure and abrasive waterjets improve productivity in a wide variety of operations:



JOB AND MACHINE SHOPS

Our largest customer segment is job shop because of waterjet's versatility. Depending on your vision, an abrasive waterjet can be your primary machine tool, cutting "tough" materials such as titanium, composites or thick aluminum and steel, or it can supplement your current operation. Whether running laser, plasma, EDM or mills, a waterjet easily expands a shop's capabilities, productivity and customer base.

AEROSPACE & ADVANCED SYSTEMS

Flow also provides very large companies, including the world's leading aerospace companies, highly specialized multi-process tools that range from abrasive waterjet cutting and drilling to cleaning and inspection. No other machine tool company offers as complete a solution. For example, most of the composites (as well as aluminum and titanium) used in commercial aircraft are cut with Flow waterjets, whether tail sections, wing struts and fuselage sections, or small high-precision parts made of lightweight or high temperature metals. Flow is the first U.S. recipient of the prestigious Mitsubishi Heavy Industry B787 Excellent Suppliers award.

SHIPYARDS

Removal of failed paint coatings from ships in the marine industry was once performed by grit blasting. Today, the environmental pressures against sand blasting large structures, along with the ever increasing performance of Flow's UHP waterjet equipment, has prompted a significant increase in water for surface preparation in nearly all industrialized countries. Hand-held waterjet lances with rotating nozzles and advanced crawling robots remove paint without the need for containment, which greatly reduces media handling and disposal and also allows for simultaneous work to be performed at the same time as coating removal. On top of all that, coatings reapplied over waterjet-prepared surfaces last longer than over grit-blasted surfaces.

AUTOMOTIVE

Virtually every major automotive manufacturer and tier-one supplier has turned to Flow pure waterjet cutting and cleaning systems to provide solutions for productivity, safety and the environment. Our customers cut a broad range of interior and exterior components such as carpets, headliners, door panels and bumpers.

PAPER & SLITTING

For over thirty years, Flow has met paper manufacturers' needs for a reliable, versatile, redundant, 24/7 cutting operation. Over 700 installations worldwide use Flow's pure waterjets for edge trimming and slitting of tissue, coated paper, and composites as well as cement-based siding and roofing material.

STONE, TILE AND GLASS

Floors or countertops, inlays or medallions, decorative or architectural glass, an abrasive waterjet's unique ability to cut intricate designs at high speed without breakage frees the imagination.

IN-HOUSE PRODUCTION

Whether cutting prototypes, short runs of complex shapes or production parts, a Flow waterjet's versatility, close part tolerances and high accuracy maximizes material usage. The cold-cutting process and high quality edge shorten or even eliminate the need for secondary processing.

FOOD CUTTING

Meats, poultry, fish, produce, pastries, frozen foods and even candy bars are cut with Flow pure waterjets because the stream cuts fast and ultrathin, maximizing uptime, and there is no bacterial transfer. Companies fabricating food cutting equipment choose Flow waterjets because of their cutting versatility and cleaning capabilities

It is hard to find an application that a Flow waterjet can't meet.



FLOW OFFERS A FULL CONTINUUM OF PRODUCTS

No matter the application, Flow waterjet systems provide industry-leading technology at every price point. A wide variety of systems and technologies from which to choose allows us to consult with our customers to determine what best fits their needs. Whether featured on TV fabricating custom bikes or extreme all terrain vehicles with tight timelines, an aerospace supplier producing extremely accurate components, or a shop supplying one-off repair parts, Flow has the right system.

The **Mach 2** Series of tables is the classic waterjet combining traditional waterjet capabilities, reliability, and exceptional value. Using the powerful but easy-to-use FlowMaster® software, it provides the best cutting capabilities in its class. It is Flow performance made affordable.

The **Mach 3** Series is the world's most popular waterjet available with all pump platforms as well as Dynamic Waterjet® to ensure accurate and fast flat stock cutting. It provides unmatched technology at a competitive price.

The **Mach 4** Series is the forefront of waterjet technology. Available with all pumps as well as Dynamic Waterjet XD, it brings the benefits of Dynamic Waterjet to multi-axis 3D and beveling. It is the waterjet that is years ahead.

Advanced Systems are designed to meet specific requirements with 5 to 11-axis systems such as robotic cells, slitters, composite machining systems and multi-process applications such as inspection, measurement, touch probe/verification, precision routing, and drilling. Tomorrow's capabilities available today.

Flow also offers **surface preparation** systems to meet a broad range of requirements in the marine, industrial, automotive and construction environments. Whether stripping off paint and rust or removing tough "non-skid" from aircraft carrier decks, Flow's waterjet cleaning systems offer a variety of choices to meet specific customer needs.

FLOW IS THE WORLD LEADER IN WATERJET TECHNOLOGY

All major waterjet advancements have come from Flow. Every decade, Flow has led the industry with productivity improvements. These are just a few:

- 1975** – Flow commercializes intensifier pumps for 24/7 operation
- 1979** – Abrasive waterjet invented by Dr. Mohamed Hashish; cuts virtually any material
- 1981** – Vacuum Assist safely cuts composites, glass and stone without delamination, cracking, chipping, or breaking
- 1986** – Direct drive triplex pump released; Flow is the only manufacturer offering both intensifier and direct drive technology
- 1995** – What is to become the world's most popular waterjet software FlowMaster® released; provides an easy-to-use yet powerful control
- 2001** – Dynamic Waterjet® released; virtually eliminates stream lag and V-shaped taper errors
- 2006** – After a decade of testing and perfecting the technology, the HyperJet® pump rated at 94,000 psi released to provide continuous commercial HyperPressure cutting. Pressure = Productivity
- 2009** – Dynamic Waterjet XD brings the unique accuracy of Dynamic Waterjet from the flat stock world to beveling and 3D applications. FlowXpert™ Software suite greatly simplifies the programming of a bevel or 3D part for Dynamic Waterjet XD cutting
- 2012** – Laser height setter provides high speed standoff height setting and contour mapping to provide the proper distance between the cutting head and the target material.
- 2015** – What's next? Whatever it is, Flow will lead the way



Flow International Corporation

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