

# **INNOVATION THROUGH PASSION**



WATERJET CUTTING SYSTEMS

# PRECISE PRECISE

TECHNI WATERJET™ IS COMMITTED TO MANUFACTURING WATERJET CUTTING MACHINES THAT ARE EASY TO OPERATE, RELIABLE, ACCURATE AND WILL LAST BEYOND OUR CUSTOMERS' EXPECTATIONS.

Our machines incorporate unique features that have been developed and implemented through our commitment to Research & Development. Features such as:

- We were the first company to incorporate a Crash Sensing Break Away Head to a production abrasive waterjet cutting machine.
- We incorporate a unique drive system which utilizes a highly-tensioned, precision stainless steel band, which allows us to achieve very fast cutting and traverse speeds (more than twice as fast as other major brands), while maintaining extremely high tolerances, and being able to withstand the very harsh waterjet environment in the case of water and abrasive coming into contact with the drive system.
- We developed the patented Tech-Sense™ monitoring system that notifies an operator if the cutting head isn't working efficiently. When connected with the latest mobile phone technology, you can remotely communicate with your machine ideal for 'lights out" operation.

- We incorporate a linear scale feedback on our premium product range 'Techjet-X3®". The linear scales give positional feedback to .001mm (0.00004"), making them the most accurate waterjet machines within their price range by far.
- The patented EZY-Load series of material handling has revolutionized the Glass and Stone industries. The EZY-Loader allows for rapid loading/unloading of these brittle materials with ease.
- TECHNI Waterjet™ is the only waterjet manufacturer to offer the patented 'MPG" technology which allows the operator to automatically step through the program forwards and reverse.
- The PAC 60 is the most advanced 5 axis cutting head available in the World of Profile Cutting Machines. The patented design incorporates Direct Servo Technology that enables the highest level of precision to eliminate taper, while enabling beveling of up to +/- 60 degrees.

INNOVATION THROUGH PASSION

TECHNI'S MISSION
IS TO BE A LEAN
MANUFACTURER OF
RELIABLE, INNOVATIVE
WATERJET SYSTEMS.
WE PROVIDE INDUSTRY
QUALITY WATERJET
TECHNOLOGY,
WITH A FOCUS ON
COMPLETE CUSTOMER
SATISFACTION

### **ABOUT WATERIET**

Waterjet cutting is an amazing technology. By utilizing some of Earth's most common resources, water and stone, we are able to cut almost any material in thicknesses up to 8" (200mm). Modern developments in waterjet cutting technology, software, and the machines that drive them has made waterjet cutting the fastest growing machine tool industry on Earth. This is largely due to the fact that waterjet is by far the most versatile cutting process, and with the latest developments has now become very economical. Add to this its simplicity, reliability, and environmental credentials, it's no wonder waterjet is rapidly becoming the cutting process of choice throughout most industries.

High Pressure
Water Outlet

Low Pressure
Water Inlet

For Return Stroke The Opposite End is Pressurized

Cutting Head

"TECHNI Waterjet™ is committed to the continuing development of our waterjet cutting machines to ensure that we remain on the leading edge of this remarkable technology and dynamic industry."

Darren Reukers
MARKETING DIRECTOR

## WATERJET BENEFITS

VERSATILE

Waterjet is capable of cutting 'any" material including; Stainless Steel, Aluminum, Glass, Marble, Plastic, Rubber, Cork and Wood, just to name a few.

POWERFUL

Capable of cutting up to 200mm (8") thick steel.

ACCURATE

With waterjet cutting, part deformation is avoided and high cutting accuracy is achieved without leaving any frayed edges or burrs.

NO HEAT AFFECTED ZONE

Resulting in less warping of components, increased cutter life on secondary operations and no grinding for weld preparation.

FLEXIBLE

Any two-dimensional shape can be cut by a simple program done on the machine CAD system or from any DXF file either networked, downloaded through the inbuilt modem, or from a USB disk or CD.

CLEAN

Waterjet produces no smoke or toxic gases because there is no burning process.

FAST

Rapid set up times, no tooling and reduced need for secondary operations due to its accuracy and quality of the cut edge.



# **APPLICATIONS**

WATERJET
IS A "COLD
CUTTING"
PROCESS
THAT
PRODUCES
NO HEAT
AFFECTED
AREAS OR
BURNT
EDGES.

Waterjet is Verstile,
Powerful & Accurate.

Due to its very small stream size (approximately 1mm or 0.040") even the most intricate patterns can be cut out.

With its extremely high pressure (up to 90,000 psi) materials up to 8" thick are easily cut.

Stainless Steel

Aluminium

Glass Marble

Plastic

Rubber

Cork

Wood

**Exotic Metals** 

Foam

Granite

Copper

Stone

and more...

### GLASS

Glass cutting is an ideal application for waterjet. Without any tooling or set up changes you can go from cutting the most delicate lead light glass, through to the strongest 100mm (4") thick laminated bullet resistant glass. The very fine cutting stream (approx. 1mm or 0.040") enables cutting of almost any shape, no matter how fine or intricate, with almost no load from the cutting process being applied to the glass. As long as you can handle it, waterjet can cut it.

"Waterjet cutting has revolutionized how we process our flat glass. No longer do we tie up our expensive, and slow CNC machines with work that can be done much faster on the waterjet."

Dennis Loudoun
BEVELLITE GLASS IN SYDNEY

### STONE

Waterjet Cutting of all natural and man-made stones is simple, fast and highly effective. The very small stream size (approximately 0.040" or 1mm) allows for intricate patterns, while the extremely high pressure (up to 90,000 psi) ensures thick materials (up to 8" thick) can be cut. Softec™ Software enables you to go from design to finished part in minutes with very little training and experience.

"Since installing our Waterjet Cutting Machine we have dramatically improved our processing time, while reducing our rejects and making the workshop so much cleaner and quieter. I don't know how we got by without it."

Stewart Macciolli
SCELTA MARBLE IN MELBOURNE

### GASKETS

The versatility of Waterjet Cutting makes it ideal for the manufacture of gaskets. Capable of cutting anything from hardened spring steels, to non-ferrous materials such as brass and copper to delicate graphite composites and softer materials like rubber and paper. It is ideal for low volume, "one-offs" and prototypes.

"Our waterjets have enabled us to significantly reduce our production and delivery time, while also making savings on materials and producing gaskets of the highest quality."

David Nordeen

PIPELINE SEAL AND INSULATORS, TEXAS, USA AND LONDON UK



### **METALS**

Waterjets are extremely powerful, capable of cutting up to 200mm (8") thick stainless steel. Waterjets don't care how hard the material is, and whether it's ferrous or non-ferrous, makes no difference to a waterjet. The very small kerf (approx. 1mm or 0.040") allows it to produce tight corners, with very high tolerances. Waterjet is a "Cold Cutting" process that produces no heat affected areas or burnt edges. These factors mean that there is little or no secondary operation required for most applications.

"At Merrill Tool and Die we process all types of steel and aluminum materials, in a range of thickness with varying degrees of accuracies. The waterjet lets us take on virtually anything. In fact we were so successful with the first one, we purchased a second one."

Lee Opsahl MERRILL TOOL AND DIE IN WISCONSIN

### FOAM & RUBBER

Waterjet Cutting is ideal for many foam, rubber, plastic, insulation and woven materials. With an extremely fine cutting stream (down to 0.004" or 0.1mm) very tight nesting and therefore good material yields can be obtained. The high cutting speeds of waterjet (up to 60m/min or 2500"/min) also means that it is extremely fast, especially when combined with automated loading/unloading equipment.

"In my shop, it's all about speed, versatility and quick response time to our customers, and nothing delivers better than a waterjet."

> Cotton Davis UNIVERSAL RUBBER PRODUCTS IN NORTH CAROLINA



# The Intec-G2® Value Series of Water Jet Cutting Systems represents the greatest "VALUE" for money available in the world of profile abrasive Waterjet cutting.

The Intec-G2® can cut almost any material to 8" thick at maximum cutting speeds with minimum Capital outlay. The Intec-G2® is based on the same design platform as the Techjet-X3®. It is these same design solutions that will provide each Intec-G2® customer with a Waterjet machine that lasts longer and requires less maintenance, while delivering an easy to use, fast and accurate system at a very competitive price. This series of machines are particularly well-suited for industries with slightly lower tolerances such as metal fabricating; marble and granite and glass.

# INTEC® TECH SPECS

# GRADE WATER CUT

technical specifications

Module	i35-G2	i510-G2	i612-G2	i713-G2	i1015-G2	i1020-G2
Machine Size (L x W x H) Does not include pumps or control cabinet	1700 x 2600 x 2050 mm (5'.5" x 8'.6" x 6' 6")	4200 x 2350 x 2050 mm (14' x 7' 8" x 6' 8")	4900 x 2650 x 2050 mm (16' x 8' 6" x 6' 8")	5800 x 3400 x 2100 mm (19' x 11' 2" x 6' 10")	4200 x 6000 x 2000 mm (13' 10" x19' 8" x 6' 6")	4200 x 8000 x 2000 mm (13' 10" x 26' 3" x 6' 6")
Machine Weight (empty)	1600 kg (3530 lbs)	2010 kg (4440 lbs)	2330 kg (5140 lbs)	4100 kg (9040 lb)	<b>w/out tank with tank</b> 2170 kg 5720 kg (4780 lbs) (12610 lb)	w/out tank         with tank           2600 kg         7170 kg           (5730 lbs)         (15810 lb)
Machine Weight (with water)	5200 kg (12500 lbs)	6800 kg (14990 lbs)	8700 kg (19180 lbs)	13600 kg (30000 lb)	19020 kg (41920 lbs)	21920 kg (48330 lbs)
Cutting Table Size	1060 x 1670 mm (3' 6" x 5' 6")	1550 x 3125 mm (5' 1" x 10' 3")	1860 x 3690 mm (6' 1" x 12' 1")	2400 x 4400 mm (7' 10" x 14' 5")	3200 x 4700 mm (10′ 6″ x 15′ 4″)	3200 x 6250 mm (10' 6" x 20' 5")
Cutting Area	915 x 1525 mm (3' x 5')	1525 x 3050 mm (5' x 10')	1830 x 3660 mm (6' x 12')	2100 x 4100 mm (7' x 13')	3050 x 4600 mm (10' x 15')	3050 x 6100 mm (10' x 20')
Accuracy of Motion*	± 0.1mm (0.004")	± 0.12mm (0.005")	± 0.15mm (0.006")	± 0.15mm (0.006")	± 0.15mm (0.006")	± 0.15mm (0.006")
Repeatability*	± 0.025 mm (0.001")	± 0.025 mm (0.001")	± 0.05 mm (0.002")	± 0.05 mm (0.002")	± 0.05 mm (0.002")	± 0.05 mm (0.002")
Max. Air Speed	17.5m/min (700 ipm)	17.5m/min (700 ipm)	17.5m/min (700 ipm)	17.5m/min (700 ipm)	17.5m/min (700 ipm)	17.5m/min (700 ipm)
Max. Cutting Speed	17.5m/min (700 ipm)	17.5m/min (700 ipm)	17.5m/min (700 ipm)	17.5m/min (700 ipm)	17.5m/min (700 ipm)	17.5m/min (700 ipm)
Max. Material Thickness**	200 mm (8")	200 mm (8")	200 mm (8")	200 mm (8")	200 mm (8")	200 mm (8")

IMPORTANT NOTICE: Due to a constant endeavour to improve the machine, the specifications may change without prior notice. All the above accuracy tolerances are correct at the calibration temperature of 20° ± 1° C.

<sup>\*</sup>Linear/Axis/Meter. \*\*115 mm(4.5") with PAC60 cutting head option fitted.