



# Abrasive water jet cutting machine

## Watersonic

### Watersonic: modern waterjet cutting systems for flexible single-part and series production

This separation process is an extremely efficient alternative to milling and EDM processing. The method enables material and time-saving nesting of several operations with better cutting performance.

Very complex shapes can be manufactured with high precision and clean cut edges without material or surfaces being deformed. Whether single or series production, this cold cutting process guarantees a low cost

production with maximum precision and minimum tolerances. Cold cutting is especially important for the increasing need for production of miniaturized components. Using precision, micro water jet technology intricate workpieces can be cut in many materials with a positioning accuracy of 0.0025 mm (0.0001") and within the tolerance range of +/- 0.01 mm (0.0004").

Over 220 reference customers in more than 30 countries. Call for the nearest in your area.



Made in Germany



#### Standard configuration

- ✓ XY Num Axium CNC control to 20 m/min (780"/min) (optional 40m/min (1575"/min))
- ✓ CNC-controlled Z-axis
- ✓ Pneumatic quick-up, height control and collision avoidance
- ✓ Control cabinet (Rittal)
- ✓ PC-control
- ✓ Cutting software EasyCut4
- ✓ HP pump Ecotron® 40.37 (Max Flow 3.8 l (1gal) at 37 kW (50Hp))
- ✓ Overpressure valve BDV
- ✓ ELM control cabinet
- ✓ Double filter unit FLP
- ✓ Infinitely variable pressure on proportional valve
- ✓ Cutting head (water valve)
- ✓ Abrasive head
- ✓ CNC-controlled abrasive dosing head with abrasive intermediate tank
- ✓ Abrasive hopper 250 kg (550lbs)
- ✓ Abrasive pressure tank
- ✓ Water Pre compression pump
- ✓ Double barrier
- ✓ HD piping between the pump and cutting head
- ✓ Tool kit and spare parts kit
- ✓ Mounting tool
- ✓ Operation manual
- ✓ HP pump series Ecotron® is modular to customize your needs
- ✓ The standard version includes Sonic Water Ecotron® 40.37
- ✓ The standard version includes Water Sonic ECO Ecotron® 40.19

### Watersonic: The waterjet cutting system

- Welded, corrosion-resistant aluminum frame with gantry
- Guideways and drive systems are reliably protected against water and abrasive dust
- Brushless servo motors
- Stainless steel tank with adjustable water level
- Segmented cutting supports
- Full High-Pressure piping up to 12 meters (474") between the high pressure pump and cutting table
- Protection of the work area by light barriers according to the EU-Directive

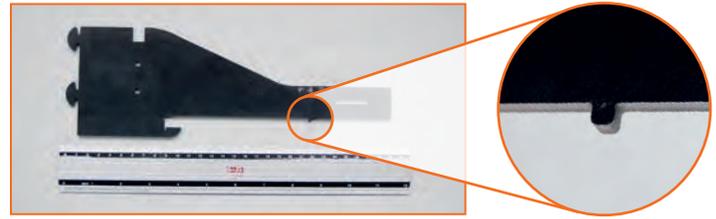
Specifications		1020	3020	4020	6020
		3 x 6'	9 x 6'	13 x 6'	19 x 6'
<b>TRAVEL AREA</b>					
X-axis	mm	1002 (39")	3002 (117")	4002 (156")	6002 (234")
Y-axis	mm	2002 (78")			
Z-axis	mm	200 (7.8")			
Max. table load	kg/m <sup>2</sup>	600 (132 lbs/ft <sup>2</sup> )			
Positioning accuracy	mm	± 0.1 (0.04")			
Repeatability	mm	± 0.1 (0.04")			
Rapid feed	m/min	20 (780"/min)			
Electric connection	V	3x400, 16 A (460V, 3ph, 60Hz)			
Weight (without water)	kg	700 (1,540 lbs)	1000 (2,200 lbs)	1200 (2,640 lbs)	1400 (3,080 lbs)
Item No.		<b>2000000</b>	<b>2000001</b>	<b>2000002</b>	<b>2000003</b>

- ✓ HD pump Ecotron series is a modular pump design can adopt to individual needs
- ✓ Watersonic use Ecotron 40.37 as standard
- ✓ Watersonic ECO the Ecotron 35.11 as standard

\*The above specifications are subject to change without prior notice. No liability for printing mistakes. Machine may be shown with optional equipment.

## A wide range of materials can be processed

- Steel/stainless steel, alloyed and non-alloyed, heat resistant alloys, titanium, aluminum, copper, bronze
- All kinds of stone: granite, marble, ceramic, concrete
- Glass, acrylic, bulletproof glass, security glass and plexiglass
- Art and foams
- Carbon, carbon fiber and glass fiber
- Gaskets, rubber, fabric, leather
- Wood, cardboard, etc.



3D (5-axis) cutting head (optional)

2 cutting head operation (optional)

### Optional configuration

- Waste water treatment
- Chip conveyor
- PC cabinet air conditioner
- Electronic handwheel
- Data exchange
- Cutting software
- 3D cutting robot
- Multiple cutting heads
- 3D cutting head I head + software
- Tool kit and spare parts kit
- Laser pointer
- Pneumatic drilling
- Rotation axis for pipe/profile processing
- Manual rotation up to 46° of the cutting head
- HP pumps, BHDY or KMT, various sizes on request

## Advantages of the abrasive water jet Cutting Technology:

- Environmentally friendly technology, no toxic cutting gases
- “Cold Cut” - no work hardening and microstructural changes
- No mechanical loading / torsion on the workpiece

- Cutting complex contours possible
- High-precision machining for excellent cutting results
- Quick setup of the workpiece
- Low noise levels
- Optimal use of the material
- Flexible and economical production of individual parts and series

Specification		BHDY Ecotron® 40.19	BHDY Ecotron® 40.37	BHDY Hytron® 40.37	KMT SL-V 50 Classic
Max. operating pressure	bar	4000 (58,000 psi)	4000 (58,000 psi)	4000 (58,000 psi)	4000 (58,000 psi)
Max. permanent cutting pressure	bar	3800 (55,100 psi)	3800 (55,100 psi)	3800 (55,100 psi)	3800 (55,100 psi)
Max. flow rate	l/min	1.9 (0.5 gal)	3.8 (1 gal)	3.8 (1 gal)	3.8 (1 gal)
Gear ratio		1:21,78	1:21,78	1:21,78	-
Oil tank capacity	l	130 (34 gal)	130 (34 gal)	130 (34 gal)	144 (38 gal)
Air supply	bar	5.5-7 (80-100 psi)	5.5-7 (80-100 psi)	5.5-7 (80-100 psi)	5.9 (85 psi)
Main drive motor	kW	18.5 (25 Hp)	37 (50 Hp)	37 (50 Hp)	37 (50 Hp)
Electric connection		460 V/60 Hz	460 V/60 Hz	460 V/60 Hz	460 V/60 Hz
Amperage	A	35.2	68.7	68.7	66
Length	mm	1400 (55")	1800 (70")	1900 (75")	1727 (67")
Width	mm	800 (55")	850 (33")	970 (38")	914 (35")
Height	mm	900 (55")	955 (37")	1410 (55")	1203 (47")
Weight	kg	700 (1,540 lbs)	950 (2,090 lbs)	1400 (3,080 lbs)	1180 (2,600 lbs)

\*The above specifications are subject to change without prior notice. No liability for printing mistakes. Machine may be shown with optional equipment.