

# 3 AXIS WATERJET 4000 x 2000



## DESIGN FEATURES

### SERVO MOTORS

All the movements are provided by Yaskawa drives and servo motors (Japan) and all the linear rails and linear bearings feature German Technology, providing 20m/min max travels for XY, 2.5m/min max travel Z axis and 180°/sec for ABC axis.

### AUTOMATIC LUBRICATING PUMP

The machine comes with stainless steel covers and auto lubricating pump. The machine's cutting tank is not attached to the frame, so the resonance and thermal expansion from the tank doesn't affect the gantry frame.

### RESIN SOFTENER UNIT

The resin softener unit includes an electronic device that promotes an ion-exchange, reducing the hardness and removing the calcium and magnesium from mains water.

### ABRASIVE BUCKET

The machine includes an abrasive bucket for the abrasive inlet, with automatic feed and mixing disk, where the total volume is 100 litres.

**MACHINERY**

# FEATURES

Founded in 2000 by the Farnese family, Farnese Australia are designers and manufacturers of stone cutting and polishing machinery in Australia. With an international reputation and decades of combined professional experience, and expertise, in both the stone industry and the local stone machinery manufacturing industry, Farnese are the first choice for stone fabricators. They continue to dominate this field in Australia and overseas with precision and innovation.

The WATERJET is the most versatile cutting machine that money can buy. It enables the cutting of stone and other types of materials, allowing you to expand your business into other markets. The WATERJET empowers you to cut glass, plastics and many other materials with no setup or tool changing required.





# FEATURES

The waterjet machine can be supplied in two configurations: 3 or 5 interpolated axis according to your application, where the 3 axis setup allows you to do precise cuts providing excellent finish quality traveling the cutting head in X and Y directions on the whole cutting area, plus the Z axis that will be able to calibrate the highest cutting edge and will travel above the material slab.

The 5 axis cutting head can provide cutting in different angles from 90 to 20 degrees (depending of the material and setup applied), these 3 or 5 axis cuttings can be executed due a complex interpolation provided by a high-end Swedish software included with the equipment, empowering you to run with full power.

The standard table size area for the waterjet machine is: 4020x2050mm, the cutting tank volume is 3100 litres and the cutting volume is 4000x2000x230mm. All the movements are provided by Yaskawa drives and servo motors (Japan) and all the linear rails and linear bearings feature German Technology, providing 20m/min max travels for XY, 2.5m/min max travel Z axis and 180°/sec for ABC axis.

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The general tolerance provided by the motors is  $\pm 0.05\text{mm}$  for X and Y axis per 300mm, and for the A, B and C axis it is  $\pm 10\text{arc/sec}$ . The machine can be calibrated within the software interface to provide, on the initial first setup, exactly the dimension required for one main material and after that the cutting precision can change according to the parameters related above. The general cutting precision with all the variables runs about  $\pm 0.5\text{mm}$ .



MACHINERY

# FEATURES



## Pump Unit

One of the most important parts of a waterjet machine is the pump. This waterjet uses a H2O high-pressure pump system containing a big 37kW(50hp) Siemens motor, Bosch Rexroth variable oil pump and an American KMT-H2O intensifier.

This setup generates 60,000psi (415Mpa) and during the cutting process 50,000psi (360MPa) pressure, the oil tank capacity is 91 litres – large tank capacity is an essential feature and permits the air-oil cooling system to become more efficient, especially during the summertime or on warm days. The high and low pressure setup for piercing and cutting can be preset by the software interface, the outlet flow is 3.6 litres per minute using a 0,33mm orifice and the power consumption 28kW.



On the pump unit you will be able to get feedback from gauges such as: Oil pressure, Temperature, Inlet water pressure, high pressure, and the air inlet pressure is provided by a gauge next to the front pendant. The cutting head is Dia-line; the head body and a laser indicator allow the operator to visualise the cutting edge and calibrate the slab on the table before cutting.

The cutting head components consist of mixing chamber, nozzle and jewel can be replaced in case of a crash or natural wear/ tear these components can be purchased from local suppliers and the setup can be explained for a worker/ operator during the installation process.



# FEATURES

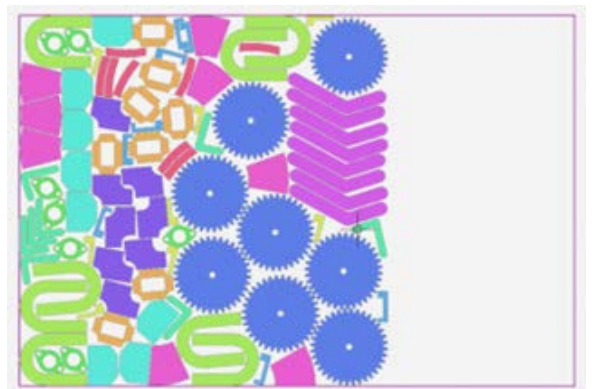
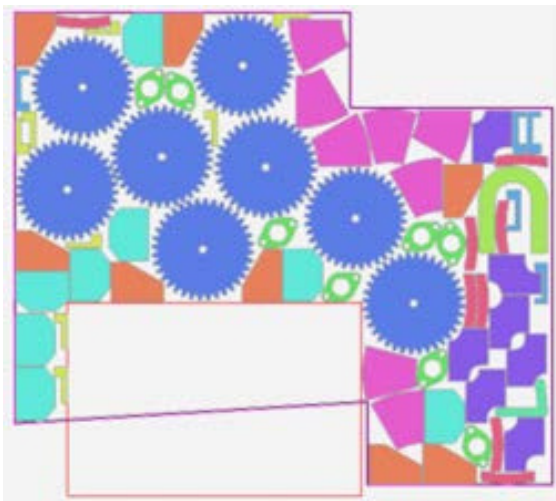
## Easy To Use Interface

The machine's interface includes touchscreen 19 inches monitor, wireless keyboard and mouse.

Our waterjet machines are powered by IGEMS, a Swedish CAD/CAM Software for waterjet cutting machines with thousands of users, from small job shops to big manufacturing plants. IGEMS provides a full 3D interface for the users, being able to do the computer simulations and allowing you to include external components as jigs and different cutting heights in the same cutting area, avoiding tooling crash and providing cutting reports that can be attached to your process sheet and/or can be used to make precise quotes for your customers.

Some extra features as: Auto Nest; Data Exchange, Sign Maker, Tile Maker, Camera Interface, Organizer and floating license can be added depending of your application. IGEMS reads and simulates most part of the available file types for CAM as: \*.acd; \*.dig; \*.gen; \*.dxf; \*.dwg; \*.isf; \*.ncp; \*.skym; \*.ps; \*.eps; \*.geo; \*.trg; \*.hpg; \*.plt; \*.igs; \*.mec; \*.ord; \*.tag; \*.wmf and the standard G-Code.

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# TECHNICAL SPECIFICATIONS

Dimensions of Installed Machine	Metric	Imperial
Width	3000 mm	118.1 in
Depth	1130 mm	44.5 in
Height	1960 mm	77.2 in
Weight	900 kg	1980.0 lb

This equipment can be installed outdoors, consult your local Farnese dealer.

## Features & Feeds:

Mixing Station		YES
Automatic Sludge Control		YES
Touchscreen Interface		YES
Big Bag Trolley		YES
Automatic Sludge Dumping		YES
Dripping Tank		YES
Mixing Tank Capacity	650 Litres	171.7 GAL
Number of Filters		10
Power Required	400V 3ph 50Hz	208V 3ph 60Hz
	10A + Neutral	20A

CONNECTIONS REQUIRED (SUPPLIED BY CUSTOMER)

POWER, WATER, COMPRESSED AIR

TOOLING I CONSULT YOUR LOCAL FARNESE DEALER FOR  
ANY TOOLING REQUIRED

### **We Know That Support Is Important To You.**

Buying a new machine is a big commitment for anyone and continued support throughout the life of that machine is vital.

Being a local company, Farnese carry a vast array of parts locally to ensure that your machine always has the spares it needs. Enjoy peace of mind knowing that you'll be fully supported by Farnese and we'll always have you covered.

Farnese customers don't need to experience unnecessary machinery downtime waiting for remote assistance from other countries, as all the support and remote assistance is provided locally from our own qualified Technicians.

Our mission here at Farnese is to give you the best support in the industry. As we grow, we continue to recruit more and more qualified technicians to further strengthen our position in the Stone Industry.



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