



## PRECISION ABRASIVE WATERJET SYSTEMS

### Equipment Specifications

# 55100



## OMAX® 55100 JetMachining® Center

Precision machining workhorse: From prototypes to production runs in sizes up to 4' x 8'.

The Model 55100 JetMachining Center cuts complex flat parts out of materials including metal, plastic, glass, ceramic and composites directly from a CAD drawing or DXF file. JetMachining is ideal for short-run part production, just-in-time manufacturing, tooling and prototype part development. No tool changes or complex fixturing reduces setup times by at least 50%.

### Standard Features

- OMAX Intelli-MAX® software offers higher average cutting speeds and greater precision with free upgrades for the life of the machine
- Programmable Motorized Z-Axis with precision OMAX MAXJET®5i Nozzle Assembly
- Precision X-Y axis rigidly mounted to the cutting table
- Pre-loaded linear bearings and precision ball screws
- Scissor-style hard plumbing
- Component protection against water, dirt, and grit
- High efficiency direct drive pump systems available in 30, 40, 60, 70 and 80 hp with pressures up to 55,000 psi and 60,000 psi
- Rapid Water Level Control for quiet and clean submerged cutting
- Bulk Abrasive Delivery System transports garnet from the assembly's large hopper into the small hopper located at the Z-axis
- Solids Removal System (SRS) designed for tough industrial use (available as an option)
- Tilt-A-Jet® taper compensating abrasivejet cutting head (available as an option)
- Shipped as a completely pre-assembled and factory-tested system

### Abrasivejet Benefits

- Machines a wide range of materials and thicknesses
- Does not create heat-affected zones or mechanical stresses
- Rapid setup, no tool changes required
- Minimal fixturing required
- Leaves behind a satin-smooth edge, reducing secondary operations
- No noxious gases, liquids or oils used in (or caused by) the machining process
- Completes most work below 80 dBA at 1 meter for submerged cutting
- Environmentally "green" system with quiet and clean operation, low electrical and abrasive consumption

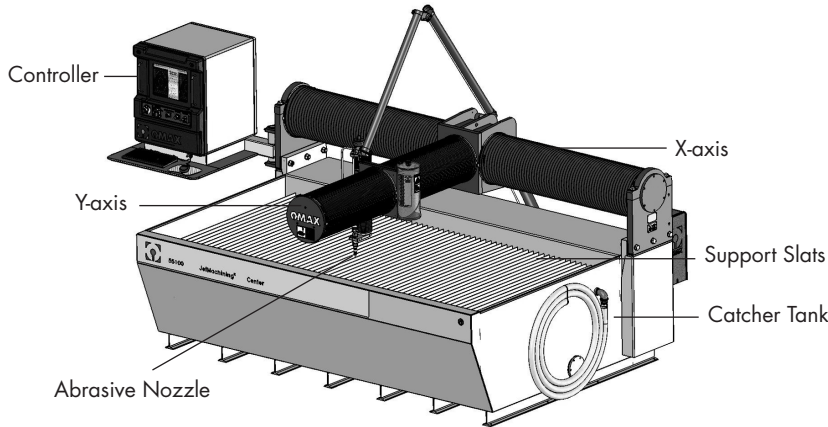
   Connect and follow OMAX for the latest news in waterjet technology.



The OMAX Technology Guarantee entitles you, as the original owner, to free OMAX software upgrades for the life of the machine.

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# OMAX 55100 JetMachining Center



## Optional Accessories

- EnduroMAX™ Direct Drive Pump P3060V, P4060V, or P5060V
- DualPUMP Package (redundant 30 hp, 40 hp, or dual EnduroMAX option)
- Tilt-A-Jet Cutting Head for taper compensation
- Solids Removal System (SRS)
- Z-axis Drill
- Precision Optical Locator (POL)
- Water-only MAXJET 5 for cutting soft materials
- OMAX MAXJET 5 MiniJet Nozzle Assembly
- Manual Tilt Z
- Stone Cutting Kit
- Weir Tank
- Waterjet Brick Kit
- Catcher Tank Armor Plating
- Stainless Steel Tank Cover Kit
- Material Holding Kit
- Collision Sensing Terrain Follower (CSTF)
- Laser Feature Finder

## Machine Dimensions

<b>Footprint</b> (with controller)	155" x 94"	(3,937 mm x 2,388 mm)
<b>Weight</b> (tank empty)	8,000 lb	(3,629 kg)
<b>Height</b> (with scissor plumbing)	118"	(2,998 mm)
<b>Operating Weight</b> (with water in tank)	22,000 lb	(10,000 kg)

## Work Envelope

<b>X-Y Travel</b>	100" x 55"	(2,540 mm x 1,397 mm)
<b>Table Size</b>	126" x 65"	(3,200 mm x 1,650 mm)
<b>Material Supported Slats</b>	4" x 1/8" Galvanized Steel	
<b>Maximum Supported Material Load</b>	400 lbs/sq ft	(1,950 kg/sq meter)

(Optional accessories may reduce travel. Contact OMAX for information.)

## Computer Control System

<b>Hardware</b>	Personal computer
<b>Control Software</b>	Integrated CAD/CAM system directly uses DXF files

## Drive Description

- Closed loop, digital drives
- Brushless servo motors
- Pre-loaded ball screws, recirculating ball bearings
- Linear bearings with hardened, precision ground ways
- Cantilever Y-axis on bridge X-axis

## Accuracy of Motion at 70° F

<b>Ballbar Circularity (Over 12")</b>		
<b>At Max. Traverse Velocity</b>	±0.003"	(±0.08 mm)
<b>Repeatability</b>	±0.002"	(±0.051 mm)
<b>Squareness</b>	0.002" per ft	(0.17 mm/m)
<b>Straightness</b>	0.003" per ft	(0.25 mm/m)
<b>Backlash</b>	0.0007" maximum	(0.018 mm)

## Speed

- 180 inches per minute standard (4,572 mm/min)

## Electrical Requirements

- 3-Phase, 380-480 VAC ±10%, 50-60 Hz
- (Note: Contact OMAX for detailed utility requirements. Pumps are built to meet UL and CE specifications.)

## Pump Options

- 30 horsepower, 55,000 psi (3,850 bar)
- 40 horsepower, 55,000 psi (3,850 bar)
- DualPUMP Package (redundant 30 hp, 40 hp, or dual EnduroMAX option)
- EnduroMAX Direct Drive Pump P3060V, P4060V, or P5060V (delivers 60,000 psi)

## Noise Level

- Below 80 dBA at 1 meter for submerged cutting

## About OMAX

OMAX has the industry leading patented abrasivejet controller with a built-in expert system. Our exclusive "Compute First-Move Later" motion control system automates most programming and tool setup work, virtually eliminating the need for extensive operator training. Plus, with free OMAX Intelli-MAX® Software upgrades for the life of the machine and our ongoing commitment to advance the efficiency of our technology and software, OMAX saves you time and money.

For information on what other OMAX products and accessories can do for you, call us today at 800-838-0343 or visit our website at [www.omax.com](http://www.omax.com).



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