

Model WC5WA3216H specification

The high pressure pump: model WIP5

Pump type: dual plunger reciprocal intensifier. 20:1 intensifier ratio

Max pressure: ultra high pressure 60,000psi (400Mpa) for fast cutting.

Continuously adjustable pressure for optimized cost effective cutting.

Max water flow rate: 0.8Gal/min (3.2L/min).

High pressure water attenuator to dampen cutting pressure fluctuations for smooth edge finish.

Electronic shift ensures high reliability.

Intensifier driven by: hydraulic pump.

Hydraulic pump type: Axial piston hydraulic pump for low noise and power efficiency. Hydraulic accumulator for damping the oil pressure pulsations

50HP high efficiency motor with Wye Delta soft starter.

Cooling method: water cooling with high efficiency plate heat exchanger.

Use of electric chiller is optional with additional cost.

Water filter: 2 stage filtration included inside the pump unit.

Integrated Control panel with heavy gauge metal framework

CE certified Electronic components

All stainless fittings and tubing.

Intake water pressure boost pump is optional with additional cost.

Power source: 3 phase, 220/380/415/480VAC, 50/60Hz 37kw, 50HP.

Approximate form size: 1600 x900 x1400mm, weight 1100kg.



Protective automatic safety shut off under the following circumstances:

- Over pressure limit.
- Over temperature limit.

CNC cutting table: model CAT3216H (5'x10')

The table consists of water tank, X-Y motion system, Z axis motion, cutting head assembly, and abrasive mini-hopper with adjustable abrasive feeding control.

Style: overpass, water tank is made of stainless steel.

Effective cutting area: 5ft x 10 ft (60" x 120")

Largest work piece 63"x 126" (1600x3200mm).

Maximum Z-axis travel: 6" (150mm).

X-Y axis motion system: ball screw, linear motion guide.

X-Y axis motion drive: AC servo motor.

Z axis motion: AC motor with speed reducer.

X-Y axis linear position accuracy: +/- 0.0016"(0.04mm).

X-Y axis repeatability: +/- 0.0004"(0.01mm).

Maximum cutting tolerance: +/- 0.004" (0.1mm).

Maximum X-Y axis travel speed: 32ft/min (10m/min).

This machine can cut all kinds of metal, marble, granite, glass, ceramic tile, rubber, plastic, virtually any materials. This machine can cut metal up to 100mm thick.



Mini hopper for abrasive feeding:

Large size to enable long working time without floor size abrasive hopper.
Clear side view for easy monitoring.
Abrasive valve attachment for easy abrasive on/off control and abrasive flow rate adjustment.

Cutting head:

The assembly consists of pneumatically operated on/off valve and self-aligned cutting head. Maximum Abrasive flow rate: 0.5kg/min (1pound/min). Compressed air source is necessary. An air compressor is optional item from manufacturer. As an option, the cutting head can manually tilt in both x and y directions.

**UHP tubing and plumbing kit for connection:**

1/4" or 7mm OD UHP tubing from intensifier to cutting head mounted on cutting table
Stainless fittings. Rack kit to supporting installation of the tubing.

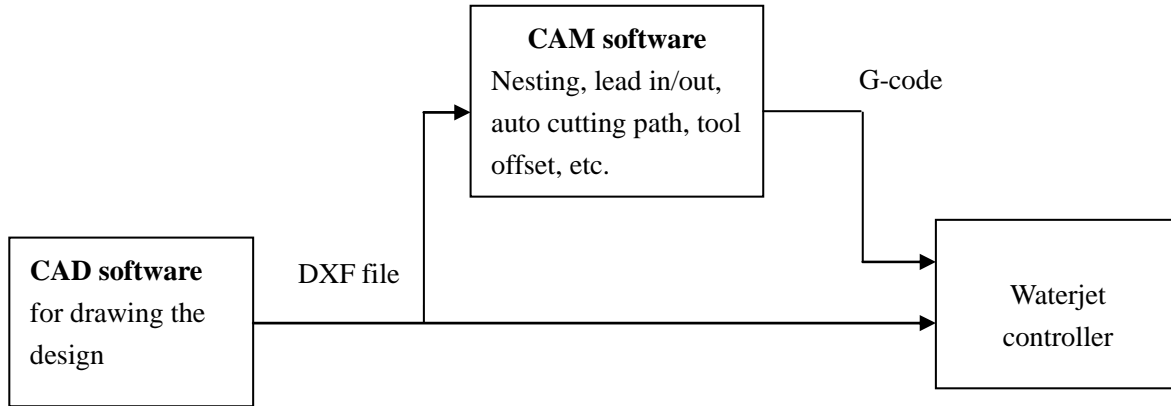
CNC controller:

CNC controller consists of advanced industrial grade computer and specialized software running on the Microsoft windows platform. The controller is capable of simultaneous X-Y axis interpolation movement. Fast accelerate or decelerate motion and high speed travel from point to point. Simulation without motion or dry run with axis motion but no jetting of water/abrasive are features included. Error stop and trace repeat are also very useful features. Out of range warning and hard stop to prevent damage capability are embedded in the system. Emergency shut off switch is provided. Remote control is provided to control the motion of X-Y-Z axis when operator is away from the controller tower. Consumes about 5kw of power.

**DXF file compatibility:**

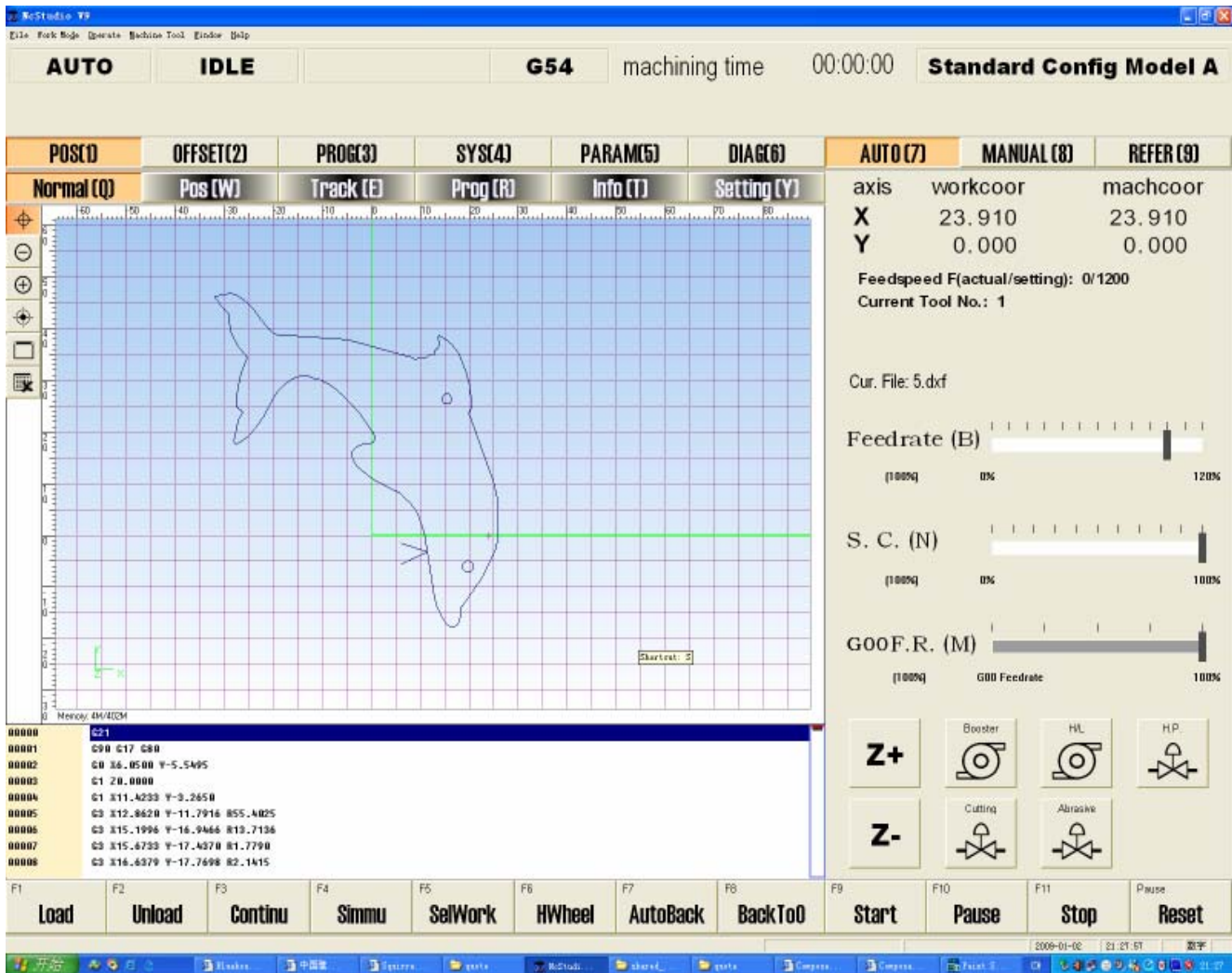
The controller is compatible to dxf file format. Users can save design drawing in .dxf from AutoCAD and read the file into the controller. Controller will post the dxf file to G-code. The controller can also read G-code generated from other CAM software. Controller software interface is based on Microsoft Windows 98/Me/XP/VISTA/Win7.

Advanced CAD/CAM software (optional): for design drawing, automatically generating machine path, lead in/out, nesting, tool offset, and generate G code. Features are similar to AutoCAD, and with rich features of CAM.



CNC Programming flow chart

Controller screen view:



Automatic abrasive feeder (optional):

This equipment is highly recommended for larger tables

- Requires 70psi pneumatic source
- Capacity 40 Gallon, 300kg
- Self detecting empty/full status of reservoir and start/stop feeding.
- Model number ADS-04-170.

**Abrasive Removal System (ARS): (optional)**

Instead of shoveling used abrasive from catch tank by a person, this sub-system is designed to remove used abrasive from the catch tank automatically. The system includes agitation setup to stir up the abrasive for more efficient removal of the abrasive. The used abrasive is collected in a smaller tank (not showing on photo) that can be dumped with a fork lift.

**Electrical Oil Chiller (optional)**

Oil chiller is used to control the temperature of the hydraulic oil in the WIP5 high pressure pump. Without this chiller, cold water has to be used to cool the oil. The warmed up water either goes to a water chiller for re-use, or go to drain, without reuse. With oil chiller, oil in WIP5 pump is circulated to the chiller, cooled and pumped back to the WIP5. It requires about 6kw of power.

**Accessories included in standard package:**

High pressure tubing, Water hose, Electrical cables, 1 pcs nozzle, 2 pcs orifice, 1 tube of blue goop.
1 set of special tools for pump maintenance.

Spare parts kit (optional).