

The model WC5WA6030H abrasive cutting system:

Pump:

High pressure pump type: reciprocal intensifier.
Maximum pressure: 400Mpa (60,000psi).
Maximum water flow rate 3.5L/minute (0.8Gal/min)
Pump cooling method: air. *Electric chiller is optional.*
Water Filter: 2-stage water filtration included.
Approximate size: 60" x 32" x 55" (1600x800x1400mm)
Power source: 3 phase, 220VAC, (or 380/480V) 50/60Hz.
37kw, 50 HP. Motor starting current requirement: 160Amp



CNC Cutting table:

Style: gantry.
Effective cutting area: 10'x20' (3000x6000mm).
Maximum Z-axis travel: 6" (150mm).
X-Y axis motion system: rack-pinion/ball screw, and linear motion guide.
X-Y axis motion drive: AC servo motor.
Water tank made of stainless steel.

Z axis motion: AC motor with speed reducer. (servo motor optional)
Cutting tolerance: 0.2mm/m (0.008").
Repeat accuracy +/-0.1mm/m (0.004").
Maximum X-Y axis travel speed 30ft/min (10m/min).
Maximum work piece weight: 500kg/m².

Cutting head:

Cutting head has pneumatically operated on/off valve. Compressed air source is necessary. An air compressor is optional item from manufacturer. Capable of cutting up to 4" (100mm) thick mild steel. Optional feature: bevel cutting up to 30 degree with straight lines parallel to X or Y.



CNC controller:

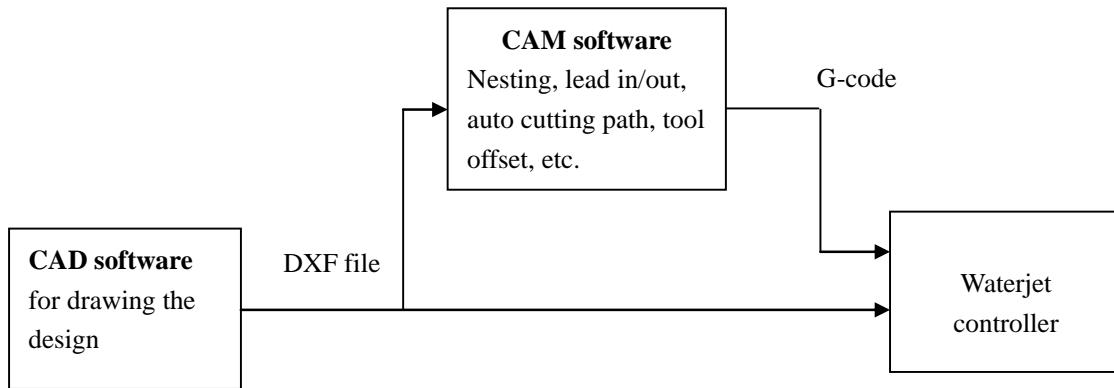
Advanced industrial grade computer. The controller is capable of X-Y axis interpolation movement. Accelerate or decelerate the motion and high speed travel from point to point. Simulation without motion or dry-run with axis movement but no jetting of water/abrasive are features included. Error stop and trace repeat are also very useful features. Other features include out of range warning and hard stop to prevent damage of the cutting head. Emergency shut off switch is provided. CNC system is based on Windows operating system winXp/Vista and is very easy to learn and operate. Controller software interface runs on Microsoft Windows 98/XP/VISTA. Both metric and imperial versions are available.

Height follower:

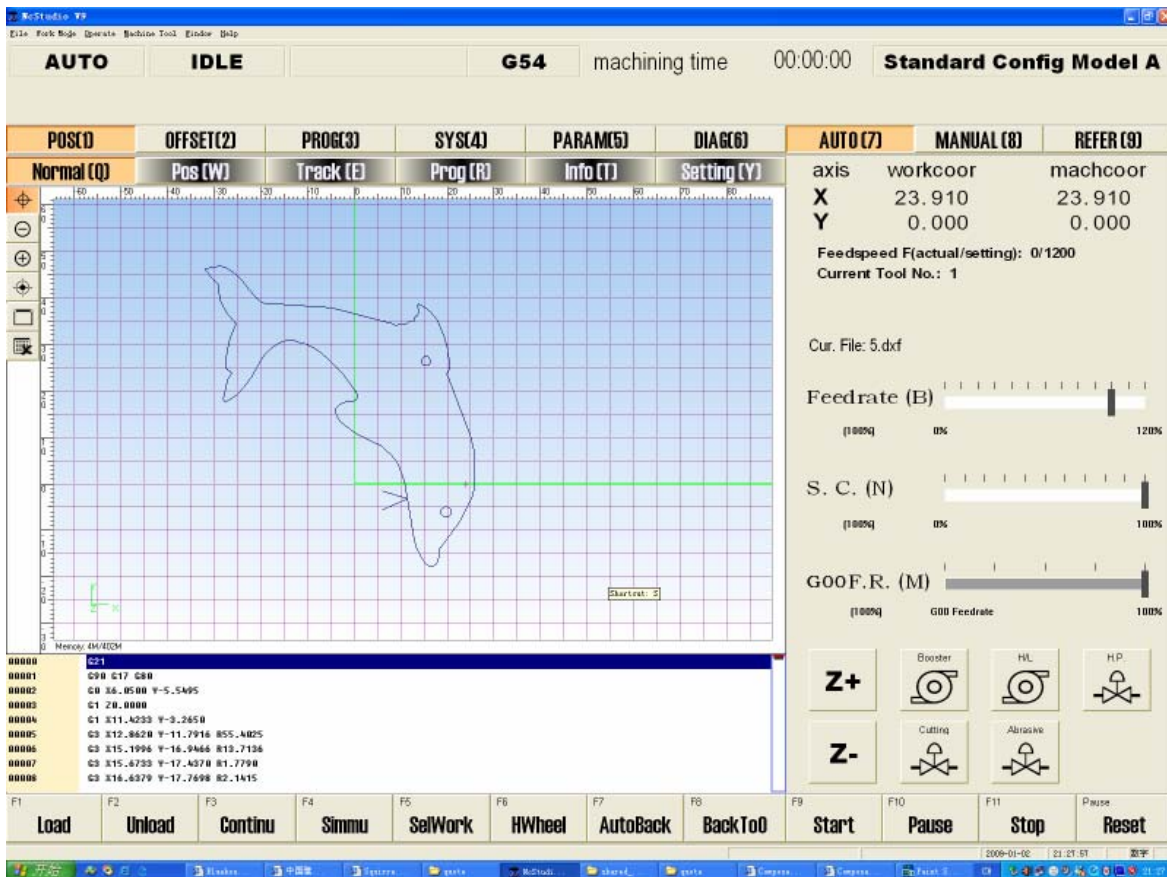
Optional height follower enables the cutting head to keep a relatively constant distance from the surface of the material been cut. This is to avoid the nozzle hitting the material surface and getting damaged. Constant distance also helps to keep the same size of the kerf and the tolerance of the part. Due to the horizontal distance between the sensor and the nozzle, the actual height below the cutting nozzle may be different from the location where the sensor is.

DXF file compatible:

The controller is compatible to dxf file format. Users can save design drawing as .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.



CNC Programming flow chart



User Interface of Controller

Advanced CAD/CAM software (optional):

We offer optional CAD/CAM software for design drawing, automatically generating machine path, lead in/out, nesting, tool offset, and posting G code. This software has two parts, one is similar to AutoCAD (computer aid design), and the other is with rich features of CAM (computer aid machining). This software can also read dxf file generated from other software.

Automatic abrasive feeder:

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

**Accessories included in standard package:**

High pressure tubing, Water hoses, Electrical cable, 1 pcs nozzle, 2 pcs orifice, 1 tube of Blue Goop. 1 set of special tools for pump maintenance.

Spare parts kit (optional).

Including 10 nozzles, 20 orifices, 1 HP seal kit, 1 LP seal kit, 1 HP cylinder, 1 check valve body, 1 check valve repair kit, 1 on/off valve repair kit.

Floor space and ceiling height requirements:

Generally the machine requires minimum floor space of 16' x 25', and ceiling of 15'.

What user should get ready at the site of installation:

One drum (55gal) of ISO #46 anti-wear hydraulic oil, electrical panel, clean water supply at about 50-80psi, 1000 pounds of grit #80 abrasive garnet for waterjet cutting, air compressor of 4HP or higher.