

MultiCam[®]

1000 Series



Automation Within Reach

MultiCam's 1000 Series machines offer a price/performance breakthrough in CNC router design. Over fourteen years of leading-edge design experience have allowed our engineers to meet the difficult design criteria required to produce these machines.

The challenge was to build a rigid, reliable platform with excellent cutting performance at an entry-level price. The results speak for themselves. For sign manufacturing and other applications requiring value, performance and price in a CNC router, MultiCam's 1000 Series machines are the perfect solution.



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1000 Series Standard Features:

No machine offers more standard features than the MultiCam.

- Custom engineered extrusion design for high strength and rigidity.
- High-frequency 4hp spindle
- User-friendly operator interface
- Automatic Tool Calibration
- High Speed 3 axis Motion Controller.
- Precision dual X-axis drives
- Cast dust collector shroud/pressure foot
- 25 mm linear ball bearing profile rails for maximum stiffness
- 8 Megabytes of Memory with unlimited file size transfer capabilities
- Standard Ethernet or RS232 direct connections

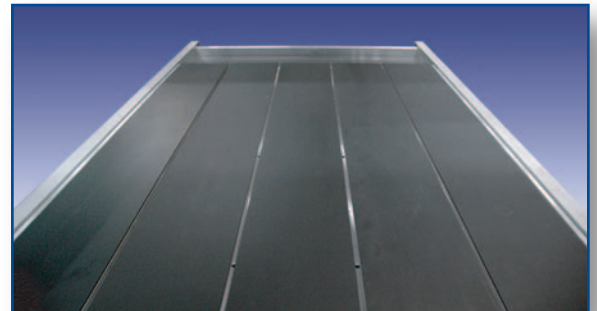


Yes, you do get Ethernet, Automatic Tool Calibration, and one of the easiest to use hand held interfaces for no additional cost!

1000 Series Specifications

Standard Working Surface

The standard work surface is constructed using extruded aluminum tubes to form a T slot table. T slot nuts and strap clamps are included with the machine for clamping substrates down on the table. The T slots are 250mm on center which provides adequate clamping and maximum support under the material. T slot tables with slots too close together tend to let material sag in the grooves. The tubes are designed for high volume air flow and have a center rib for additional strength. They can very easily be converted into a vacuum table by capping the ends, drilling the tops and milling pipe mounts in the bottoms. This service is available as an option direct from the factory.



Optional Working Surface

An optional working surface is a 1 inch thick 80 - 82 Durometer phenolic with a grid pattern to utilize 1/2 x.250 foam gasket tape. The phenolic is mounted to the top of the steel base frame and then is machined in place. This ensures a flat cutting surface normal to the spindle. Phenolic makes an excellent work surface because of its good mechanical strength & dimensional stability. In addition phenolic has a low moisture absorption, resists heat and wear and can be repaired.



1000 Series Specifications (continued)

Base Frame

The base frame is constructed from welded steel tubing. Fork lift tubes are integral to facilitate material handling and installation. Datums are extruded into the main X axis beams to allow accurate rib location and consistent table height.



Gantry

The Gantry tube is engineered for maximum stiffness from aircraft quality aluminum extrusion. 10mm wall thickness and internal I beam structure make it extremely rigid. References for the precision linear bearings are extruded in the design and have excellent parallelism. The rack is tucked up in the front of the extrusion in a position to minimize swarf and chip contamination.



Gantry Supports

Gantry supports are cast aluminum. They are machined on a four axis horizontal machining center to guarantee perpendicularity. The castings give very stiff support of the gantry tube.



Linear Bearings

25 mm Star ball linear bearing profile rails with stainless spring steel strip cover

- High rigidity and top load capacities in all load directions.
- Lowest possible noise level and best running characteristics.
- High torque load capacity
- 4 bearing packs per axis
- 30,400 Nm or 22,421 lbf-ft dynamic capacity per pack.



1000 Series Specifications (continued)

Lead Screw Assembly

The 1000 series utilizes a ½ inch diameter stainless steel lead screw. This is held firmly in place by a precision mounting block with dual angular contact ball bearings for high axial force loads. A brass lead screw nut carries the Z axis load.



Stepper Motor

The NEMA 34 motors Multicam has selected for the 1000 series have undergone extensive testing. The inductance and resistance of the windings is optimized for system smoothness. The integrated step motor drives have also been optimized to run these motors efficiently.



Drive Assembly

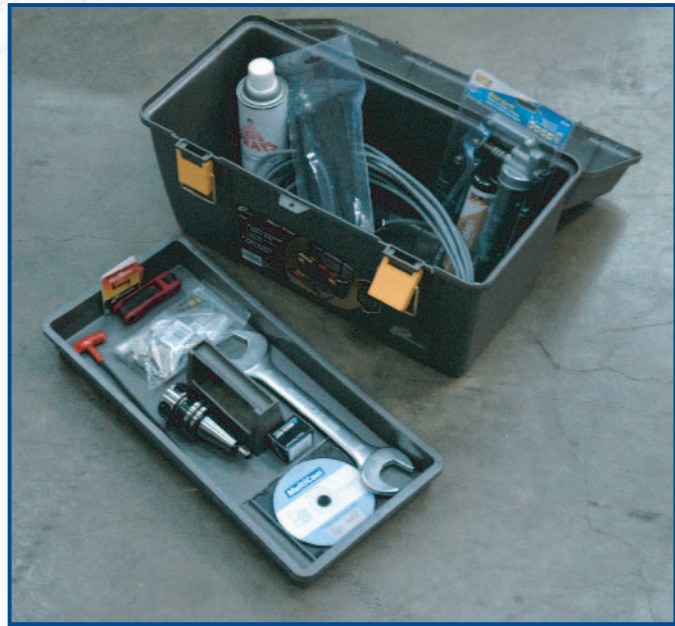
The transmissions on both X and Y axis are the same part. These are based on an aluminum casting and feature steel cable urethane belt drives. The output pinions are supported by a dual bearing arbor with wide bearing separation for optimum stiffness.



Standard Accessories



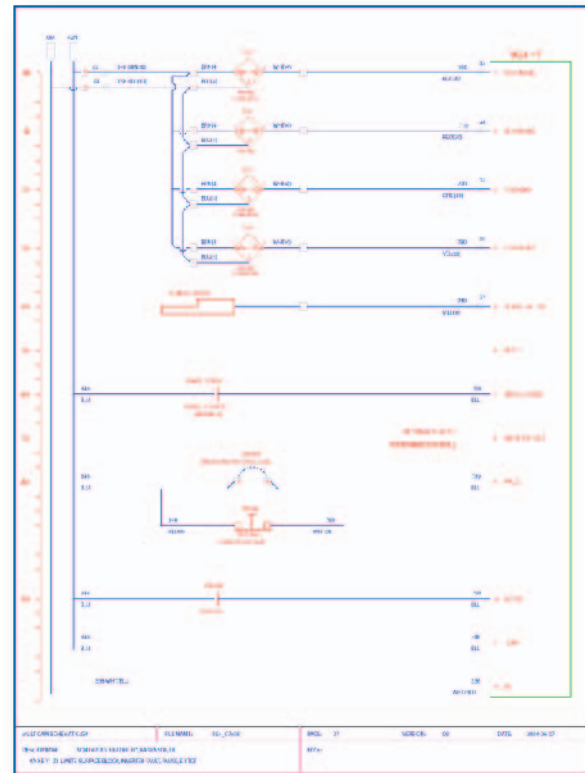
Leveling Feet



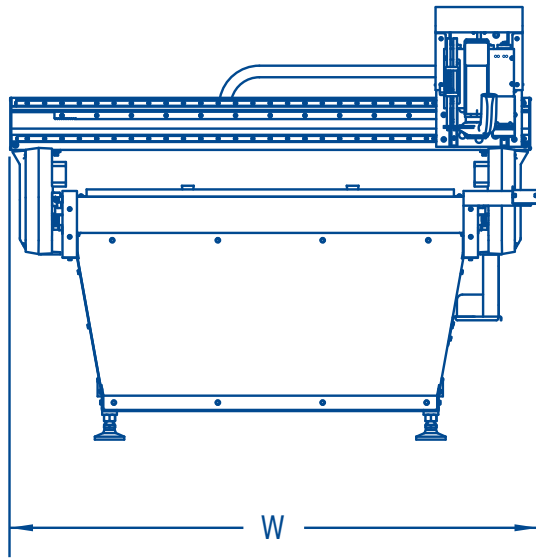
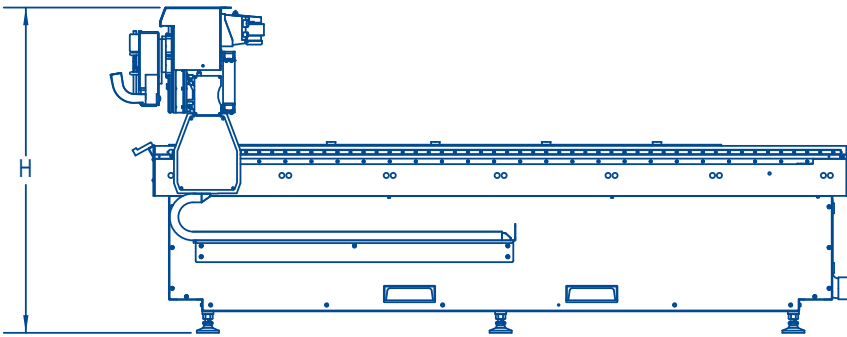
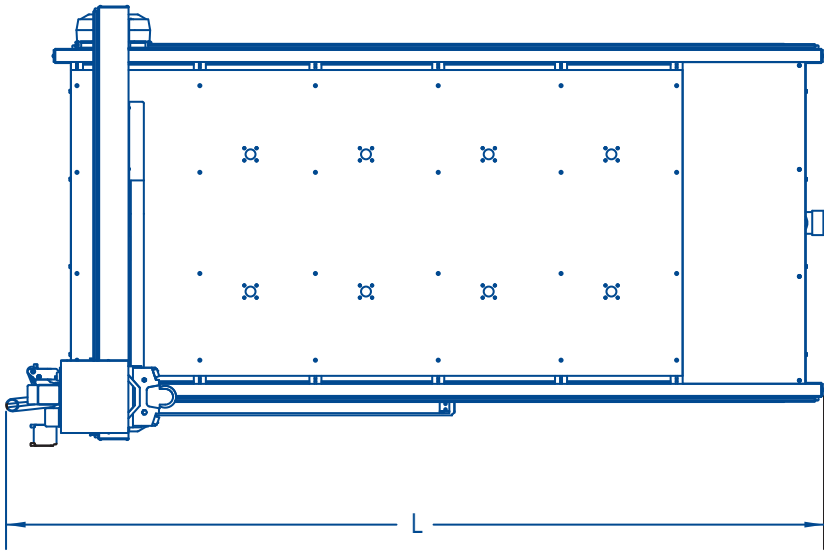
Tool Box



Operation Manual



Electrical Schematics



1000 Series Specs (inches)

- Z-Axis Clearance: 4.5
- Z-Axis Travel: 6"
- Repeatability: +/- .001"
- Cutting Speed: 450 ipm
- Rapid Traverse: 600 ipm
- Drive System X and Y axis: Rack and Pinion
- Drive System Z axis: Lead Screw
- Standard Work Surface: Aluminum T-Plate Extrusion

Size Chart (inches)

MODEL	L	W	H	WORKING AREA	WEIGHT LBS.
101	81	71	58	50 x 50	1001
103	133	71	58	50 x 100	1373
204	156	81	58	60 x 120	1734
304	156	101	58	80 x 120	2040

1000 Series Specs (metric)

- Z-Axis Clearance: 114.3
- Z-Axis Travel: 152.3
- Repeatability: +/- .0254
- Cutting Speed: 450 ipm
- Rapid Traverse: 600 ipm
- Drive System X and Y axis: Rack and Pinion
- Drive System Z axis: Lead Screw
- Standard Work Surface: Aluminum T-Plate Extrusion

Size Chart (metric)

MODEL	L	W	H	WORKING AREA	WEIGHT Kg
101	2057	1803	1473	1270 x 1270	454.05
103	3378	1803	1473	1270 x 2540	622.78
204	3962	2057	1473	1524 x 3048	786.53
304	3962	2565	1473	2032 x 3048	925.33

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