

**The CENTROID A560 5-Axis Articulating Head Machining Center:** A new revolution in cylinder head porting and machining. The unique ballscrew drive mechanism (patent pending) provides superior speed, accuracy, and rigidity over traditional articulated head designs, along with virtually maintenance-free operation. The 24,000 RPM spindle allows for faster cycle times with exceptional surface finishes in a large variety of materials. Whether you need to port long V12 or diesel cylinder heads, have a large production volume of heads to port, or have a specialty application requiring extreme angles, the CENTROID A560 is the only choice. Included in the A560 turn-key package is all the tooling, expert training, and outstanding customer service and support you need to be successful. Contact your CENTROID representative today!

**A560 Machine Specifications:**

Table Size:	18" x 56" (457 x 1422mm)
Longitudinal travel (X):	50" (1270mm)
Cross travel (Y):	22" (559mm)
Vertical travel (Z):	24.5" (622mm)
"A" Axis:	360 degree rotation
"B" Axis:	+/- 60 degrees of tilt
Spindle nose to table top:	39" (990 mm)
Spindle center to column:	22" (559mm)
Maximum table load:	2420lbs (1100kg)
Spindle power:	10HP/7.5kW
Spindle taper:	BT30 / ISO 30
Spindle speed:	24,000 RPM
Rapid feed rates (X,Y,Z):	X-400, Y-400, Z-400 IPM
Accuracy:	0.0005" (0.0127mm)
Repeatability:	0.0002" (0.0060mm)
Axis drive motors (X,Y,Z,A,B):	X-1kW, Y-1kW, Z-2kW, A-750w, B-2kW
Coolant pump:	3/4HP 50 Gallon Capacity
Auto lubrication pump:	150W .13 liters/min
Power requirement:	15kVA, 50-60Hz, 208-240v, 3 Phase
Air requirement:	90-100 PSI, 6.2-6.8 Bar

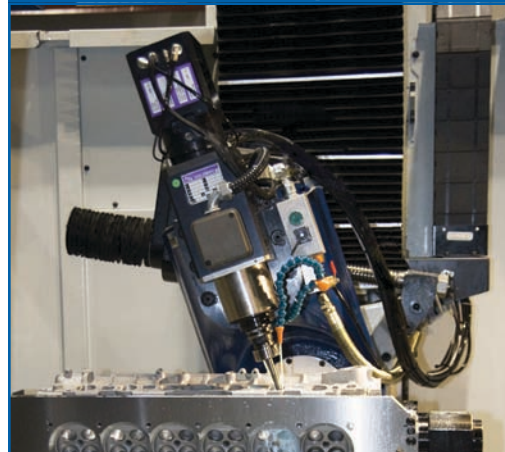
**Included Software:**

In addition to **Mastercam** Multi-Axis with Verify and 1st year Mastercam Maintenance, the CENTROID control includes: Intercon conversational software, digitizing and probing cycles, graphical program preview, automatic tool measurement, cutter radius compensation, unlimited file size, sub programs and macros, part scaling and mirroring, rigid tapping, compression tapping, multiple work coordinate systems, coordinate system rotation, programmable spindle speed, and extensive canned cycles including boring, pocketing, and threadmilling.

**Warranty:**

One year standard warranty for parts, labor, and technical support

**24,000 RPM Spindle**



Equipped with a 10HP 24,000 RPM spindle, the A560 can easily machine a large variety of materials while providing superior surface finishes over traditional lower-RPM spindles.

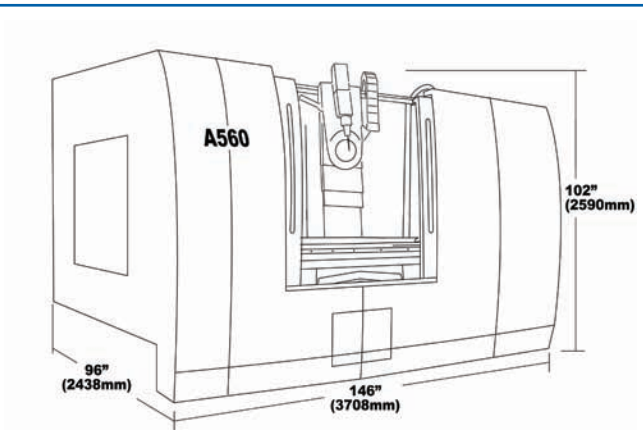
**More than Just a Porting Machine**



Offering +/- 60° of tilt and a generous work envelope, the A560 excels at machining complex and difficult to fixture parts.

**Additional Machining Capabilities**

- Manifold port matching
- Rapid prototyping
- Engraving letters, numbers & logos
- Moldmaking
- Medical/Dental
- Aerospace



Machine Footprint	
Length:	146" (3708 mm)
Width:	96" (2438 mm)
Max Height:	102" (2590 mm)
Shipping Footprint	
Length:	95" (2413 mm)
Width:	96" (2438 mm)
Height:	107" (2718 mm)
Weight	
Machine:	11,000 lbs (5,000 Kg)



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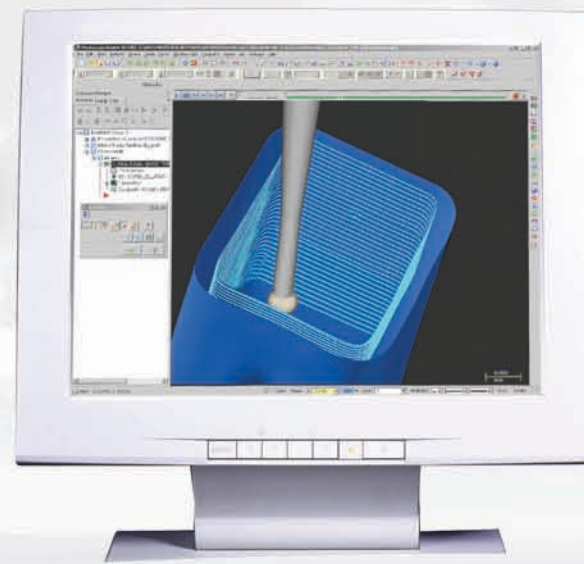
**CENTROID™**

**A560**  
 5-Axis Cylinder Head Porting



### ① Digitize

With up to +/- 60° of tilt, the A560 easily reaches into the most extreme port designs. Heads are digitized in 5-axis right on the machine – no need to purchase additional equipment to digitize your race-winning designs.



### ② Create

The digitized data is exported to Mastercam where surfaces are created and edited. 5-axis tool-paths are then created for the entire head and CNC programs are automatically written.

### ③ CNC Port

The CNC programs are imported into the CENTROID control via USB or Ethernet. A new casting is loaded into the machine and the porting begins. The A560 machines exact copies of your ports for the ultimate in consistency and power gains.

### Turnkey System Includes

- ✓ 5-axis machining center
- ✓ M400 5-axis CNC control
- ✓ Patented articulating head design
- ✓ **Mastercam** CAD/CAM software
- ✓ 10 days of personalized CNC porting training
- ✓ Digitizing probe & software
- ✓ Carbide lollipop porting tool
- ✓ Auto tool length setter
- ✓ Cylinder head fixture plate
- ✓ 24,000 RPM spindle
- ✓ Two BT30 tool holders
- ✓ MPG electronic handwheel
- ✓ Industry's best warranty & support

### Personalized Training



Our skilled technicians will teach you how to reproduce your race winning designs with ease. The personalized training course is tailored to your specific application and includes 5 days of training at CENTROID's facility, followed by 5 days of training at your shop, on your machine.

Specially-designed porting tool

10HP 24,000 RPM spindle

Patent-pending ballscrew-driven articulating head design

Fully enclosed cabinet with flood coolant

Easy access sliding doors with windows

Auto tool length setter

Heavy duty cast iron frame with box ways provides superior accuracy and rigidity

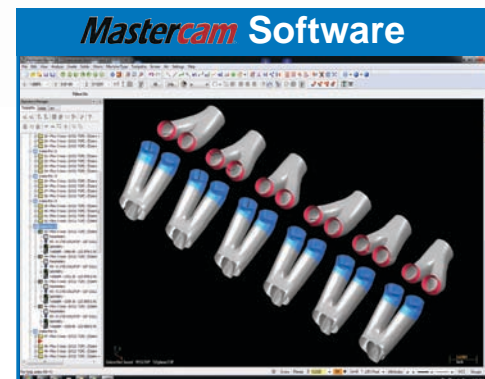


Custom cylinder head fixture plate

Air blast and coolant wash down hose

USB 2.0 and Ethernet ports

MPG electronic handwheel



With special features designed specifically for cylinder head porting, **Mastercam** allows you to quickly create accurate tool paths. Easily view, copy, and modify intake ports, exhaust ports, and combustion chambers. In addition to porting, additional cylinder head machining operations such as custom engraving are easy to program.

### Tooling Package



CENTROID offers the most complete turn-key CNC porting system available. Our comprehensive tooling package includes everything you need to go straight into production including the digitizing probe, a custom cylinder head fixture plate, and a carbide lollipop cutter specially designed by CENTROID to provide optimal chip removal and a superior surface finish.

### User-Friendly 5-Axis CNC



Simple to operate, the CENTROID CNC control is designed with the operator in mind. Graphically assisted part and tool setups along with straightforward menus and an easy to read display ensures every operator will be machining quality cylinder heads in no time. The control software is easily updated giving you access to the latest CNC technology for years to come. Made in the USA.