

**RETRO** SYSTEMS

**HORNET HS** <sup>TM</sup>  
*Single Side Drive*



*Precision CNC Profile Cutting Innovation*

# Precision CNC Profile Cutting Innovation

## HORNET HS™

The HORNET HS™ single side drive system is a member of the Retro Systems "H" Series family of CNC cutting machines. HORNET "H" series machines include a Hypertherm® PC based CNC control, heavy-wall steel tubing machine frame and gantry beam, precision ground linear ways on both the X & Y axis, powerful AC servo motors and low backlash planetary gear boxes. Both the gantry beam and cross axis carriage ride on precision ground linear ways to deliver premium motion control and accuracy.

### MACHINE SIZES

HORNET HS is available in 5 ft and 6.5 ft effective cutting widths (1.5 & 2.0m). Machines are available with either 12 ft or 20 ft effective cutting lengths (3.6m or 6.0m).

### HEAVY DUTY FRAME DESIGN

"H" Series machines include a left and right rail support assembly and a front and rear frame panel assembly. Each rail support assembly is fabricated from heavy wall steel tubing, stress relieved and then machined to ensure precise alignment of the linear ways and gear rack. Rail support assemblies may be palletized for shipment and bolted together onsite for fast and easy setup.

Gantry beams are fabricated from heavy wall steel tubing, stress relieved and machined for precise alignment of the linear ways and gear rack. The main rail axis servo motor is mounted inside a fabricated steel end truck. The cross axis servo is covered by a sheet metal enclosure.

### INDEPENDENT CUTTING TABLES – AIR OR WATER

The "H" Series design enables an independent air or water table cutting to be set inside the machine frame. An independent cutting table means the machine frame is unaffected by the heat generated by higher amperage plasma systems and plate cutting with oxy-fuel. Retro Systems offers several styles of factory-made cutting tables in either a down-draft air or water table design. Customers may also design and build their own table to fit within the machine's frame. Retro Systems offers a wide range of dust collection equipment from Micro Air.

### PLASMA & OXY-FUEL CUTTING & PLATE MARKING

The HORNET HS tool carriage may be configured with (2) tools - plasma lifter, oxyfuel lifter or an air scribe marker. Air plasma systems are an excellent choice for medium duty conventional plasma cutting. For extended consumable life, improved cut edge weldability and heavier plate capacity, we recommend oxygen plasma systems with liquid cooled torches.

### POWERFUL AC SERVO DRIVE SYSTEM

Machine motion is powered by (2) 600 watt (.8 hp) AC servo motors directly coupled to precision planetary gearboxes to deliver 1,000 IPM (25m/min) Rapid Traverse speeds. The optional plasma lifter with 6" (250mm) stroke is driven by a 600 watt (.8 hp) AC servo motor to deliver vertical positioning speed of 600 IPM (15m/min).

### HYPERTHERM® AUTOMATION CNC CONTROL

Motion control is provided by the Hypertherm® MicroEDGE™ CNC control from - the world leader in plasma cutting automation. Windows® XP Embedded operating system, hardened industrial enclosure and easy-to-learn Phoenix™ software make Hypertherm® controls the best in the business. The control cabinet swivels to maximize ease of use in your shop environment.

Plasma process CUT CHART screens prompt the operator to select material type, material thickness, cutting amperage and gas selection. Parameter tables within the Phoenix software set and control plasma system, torch height control and motion control variables. CutPro™ Wizard guides untrained operators through the basic and essential functions of loading and cutting parts. Simply touch the REMOTE HELP button on the touch screen, and no matter where you are located, our factory service technicians can provide real-time operator training, software updates and troubleshooting within minutes.

### CNC FILE CREATION AND LOADING FILES

The MicroEDGE™ CNC control includes an onboard DXF to CNC converter and NESTER for basic auto nesting of parts. CNC files may be down-loaded from your office computer directly to the MicroEDGE across your network or entered manually to the control via a USB memory stick or floppy diskette. Retro Systems also offers a wide range of full featured advanced CAM software from MTC and others.

### HEAVY DUTY FRAME DESIGN

- Steel Tubing Machine Frame & Beam
- Stress Relieved Frame and Beam
- Machined Assembly Surfaces

### POWERFUL DRIVE SYSTEM

- 600 Watt AC Servo Motors
- Precision 20mm Ground Linear Ways
- Planetary Gear Heads
- Dual In-Line Motor Mount Slides
- 3/4" (19mm) Wide Gear Rack
- 2.5" (63.5mm) Diameter Pinion Gears

### TOOL CARRIAGE OPTIONS

- RSVS-150 Plasma Torch Lifter Station
- Plasma Collision Mount
- OFL-150 Oxyfuel Lifter and Gas Manifold
- Roller Ball Floating Head Plasma Station (not shown)
- Air Scribe Marker (not shown)



### HORNET HS STANDARD FEATURES:

- Heavy Wall Steel Tubing Machine Frame and Beam
- Hypertherm® Automation MicroEDGE™ (3) Axis CNC Control
- 600 Watt (.8 HP) AC Servo Motors and Drive Amplifiers
- Planetary Gear Heads
- 1,000 IPM Rapid Traverse Speed (25m/min)
- Precision Linear Ways on X & Y Drive Axis
- Flexible Cable Carriers on Both X & Y Axis
- Master Carriage to accept up to (2) Tools

### CNC CONTROL & OPERATOR CONTROL CONSOLE FEATURES:

- Microsoft® Windows® XP® - Embedded Version
- Hypertherm® Automation Phoenix® Motion Control Software
- Intel 2.4 Ghz or greater, 512 Megabytes RAM
- 60.0 Gigabyte Hard Drive or greater
- PS2 Keyboard & Mouse Ports
- (1) On-board RJ45 10/100 Base-T Ethernet port
- (5) 2.0 USB & (2) Serial-9 Pin Ports
- Machine side Opto-Isolation
- 68 Shapes Including Text
- 15" (380mm) LCD Touch-Screen Monitor
- Keyboard and Mouse
- Multiple E-STOP buttons

### HORNET HS OPTIONS:

- Cutting Widths: 5 ft & 6.5 ft (1.5m & 2.0m)
- Cutting Lengths: 12 ft & 20 ft (3.6m & 6.0m)
- Plasma Systems up to 200 Amps (1 max)
- Integrated 3rd Axis SENSOR Torch Height Control Interface
- RSVS-150 Plasma Torch Lifter with 600 Watt AC Servo
- Collision Mount for Plasma Torch
- Roller Ball Plate Rider for Plasma Torch
- Oxy-fuel Torch & Lifter Stations (1 max)
- Air Scribe Plate Marker (1 max)
- Multi Zone Down Draft Air Tables
- Water Tables with Adjustable Water Level
- Dust Collection Systems
- Nesting and HVAC Software



Remote Help

### REMOTE HELP

Connect to factory technical support via the internet in less than a minute. Our technicians can:

- Observe CNC Screens while Running the Machine
- Review Settings/Setups
- Review Part Programs
- Perform Software Updates
- Perform HPR Diagnostics
- Provide Technical Training



Cut Wizard

### CUTPRO™ WIZARD

CutPro Wizard™ guides the operator through:

- Loading Part programs
- Selecting a Cutting Process
- Aligning a Plate and Adjusting for Skew
- Selecting Scrap Clearance
- Starting the Cut



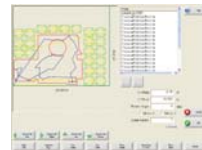
### CUT CHART SCREEN

Operator selects material type, thickness, gases and amperage. The CNC controls the plasma torch height control and motion control variables throughout the cutting job.



### CONSUMABLE SCREEN

Displays images and part numbers for the correct plasma consumables based on the selections made in the CUT CHART SCREEN. It even tracks consumable parts life.



### NESTER

Automatically nest parts on a specified sheet size from the Shape Library or custom CNC files saved on the hard drive. NESTER can even nest parts on a Remnant.

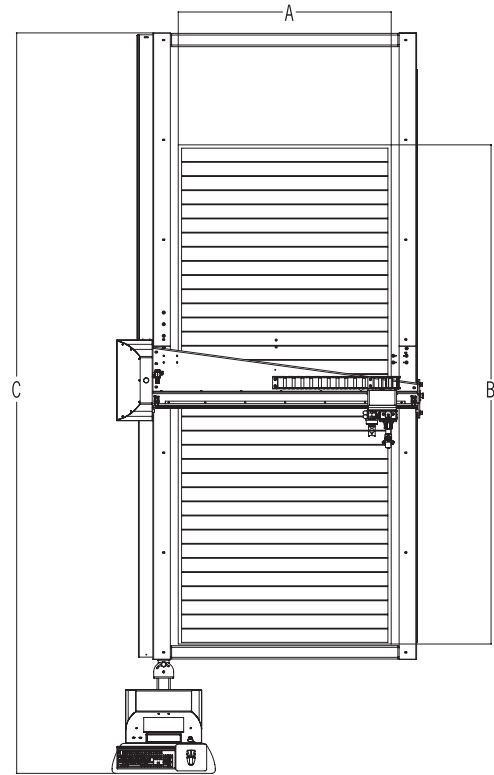
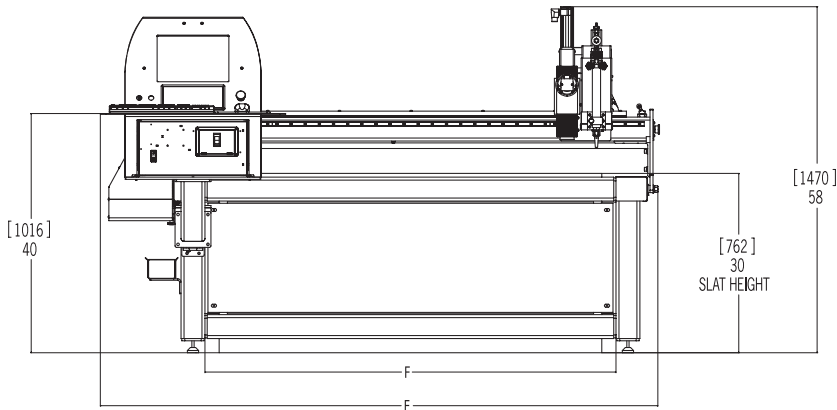


# Precision Productivity Performance

## HORNET HS<sup>TM</sup>

Single Side Drive

Precision CNC Profile Cutting Innovation



### MACHINE SPECIFICATIONS

Positioning accuracy

+/- .010" (.254mm) \*

Repeatability

+/- .001" (.025mm) \*

\* Measured in a 60" x 60" area (1.5m x 1.5m)

Overall machine height

**5 ft (1.5m)**  
58" (1.47m)

**6.5 ft (2.0m)**  
58" (1.47m)

Effective cutting width (A)

62" (1.6m)

82" (2.1m)

Effective cutting length (B)

12 ft (3.7m)

12 ft (3.7m)

20 ft (6.1m)

20 ft (6.1m)

Overall machine length (C)

223" (5.6m) including CNC control

319" (8.1m) including CNC control

Overall machine width (E)

94" (2.4m)

114" (2.9m)

Width between rails (F)

69" (1.7m)

89" (2.2m)

Maximum traverse speed

1,000 IPM (25m/min)

Maximum tools

(2) – (1) Plasma, (1) Oxy-fuel, (1) Air scribe

Maximum amperage (plasma system)

200A

Recommended air plasma systems

Hypertherm® Powermax series™, Thermal Dynamics® CUTMASTER series™

Recommended oxygen plasma systems

Hypertherm® HSD130™, HT2000 HySpeed™

Maximum production plasma cutting capacity

1" (25mm)

Maximum production oxy-fuel cutting capacity

2" (50mm)

Input power for cutting machine

230VAC single phase, 20A dedicated circuit

## RETRO SYSTEMS

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