

RETRO SYSTEMS

Mini HORNET™

CNC Plasma & Oxy-fuel Profile Cutting



Precision CNC Profile Cutting Innovation

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MINI HORNET

The **MINI HORNET** is the most full-featured medium-duty unitized CNC profile cutting machine in the industry. The **MINI HORNET** is available with a 60" (1.5m) cutting width and cutting lengths of 120" (3.0m) or 240" (6.0m). The **MINI HORNET** is designed for CNC profile production plasma cutting to 1" (25mm) and oxy-fuel cutting to 2" (50mm). Powerful AC Servo drives, the easy-to-use Hypertherm **MicroEDGE™** CNC control, premium components and rigid steel construction ensure consistent highly accurate profile cut parts.

The **MINI HORNET** is the right choice whether you're a job shop, maintenance shop, ornamental iron shop or even a technical school. If you're looking for your first CNC cutting machine or need to increase your cutting production - the **MINI HORNET** - is right for you.

PLASMA & OXY-FUEL CUTTING

The **MINI HORNET** may be configured with (2) cutting processes - (1) conventional plasma cutting system and (1) oxy-fuel cutting station. 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.

INTEGRATED CUTTING TABLE

The **MINI HORNET** standard cutting table is an integrated single zone down draft air table. Customers may upgrade to the optional multi-zoned air table design to reduce the fan size required and improve exhaust efficiency. Multi zone tables direct exhaust air flow only through the zone where the torch is cutting. The CNC control signals the opening and closing of appropriate damper doors based on machine position along the rails. Removable heavy steel cover plates protect moving parts from slag and heat. An exhaust flange is provided at the rear of the air table for connection to a cartridge style dust collector or fan. Retro Systems offers a wide range of dust collection equipment from Micro Air. The **MINI HORNET** cutting table is also offered in a water table design with adjustable water level.

HEAVY DUTY BEAM AND FRAME DESIGN

Reinforced steel box beam and Dual Hardened Vee Ways ensure ultra smooth motion of the cross axis tool carriage. The machine frame end trucks ride on Triple Machined steel rails attached to support brackets on the sides of the integrated steel cutting table frame.

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 speed. The optional plasma lifter with 6" (150mm) stroke is driven by a powerful AC servo motor to deliver vertical positioning speed of 600 IPM (15m/min).

HYPERTHERM® AUTOMATION CNC CONTROL

Motion control is provided by the **MicroEDGE™** CNC control from Hypertherm® - 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.

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 machine code converter and **NESTER** for basic auto nesting of parts. CNC files may be downloaded 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.

FAST & EASY INSTALLATION

Unitized design means set up is complete in just a few hours. A few components are bolted on, a few cables connected and you're ready to start cutting parts.

HEAVY DUTY DESIGN

- Integrated Cutting Table
- 1/4" Steel Construction

TOOL CARRIAGE

- (1) Plasma torch lifter
- RAD Plasma Torch Collision Mount
- (1) Oxy-fuel torch lifter (not pictured)

HEAVY DUTY DESIGN

- AC Servo Motors
- Planetary Gear Heads
- Enclosed Power Track for Cables
- Large Sheet Metal Rear Deck
- Machined Motor Mounts
- Triple Machined Rail



MicroEDGE™ CNC CONTROL CONSOLE

- Industrial Control Enclosure
- Phoenix Control Software
- 15" (380mm) LCD Touch Screen
- Industrial Keyboard with Integrated Pointing Device
- E-Stop, Plasma ON/OFF, Plasma UP/DOWN
- Oxy-fuel operator controls (optional)
- Dust Collector ON/OFF (optional)



PLASMA SETUP SCREEN

Selection of Material Type, Thickness and Process Amperage from the **CUT CHART SCREEN** sets and controls the **CUTTING SPEED**, **PIERCE HEIGHT**, **PIERCE TIME**, **CUT HEIGHT** and **CUTTING VOLTAGE** during each cut to produce repeatable profile parts.



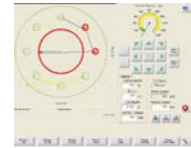
PLASMA CONSUMABLES LIBRARY SCREEN

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



CUSTOMIZABLE SHAPE LIBRARY SCREEN

Create customized parts based on the 68 shapes in the library or download CNC files using a USB Memory stick or over your office network using the standard RJ45 network connection.



DXF IMPORT & NESTING

Custom parts drawn in CAD may be imported directly into the **MicroEDGE™** CNC control with a built-in On-Screen DXF file to NC converter. But that's not all... **MicroEDGE™** even includes **NESTER** for automatic row and column nesting.

MINI HORNET STANDARD FEATURES:

- Cutting Width: 60" (1.5m)
- All Steel Construction
- Fabricated 1/4" Steel Table Frame
- Steel Gantry Beam
- Integrated Cutting Table
 - Single Zone Air Table with Slotted Center Exhaust Tube
 - Slat combs with slots cut on 2" centers - Slats included
 - Exhaust Connection on Rear of Table
- Hypertherm® Automation **MicroEDGE™** (3) Axis CNC Control
- 1,000 IPM (25m/min) Rapid Traverse speed
- 600 Watt (.8 HP) AC Servo Motors and Drive Amplifiers
- Precision Planetary Gear Boxes
- Triple Machined "Tee" Rail on both sides of Main Rail Axis
- Dual Hardened Vee Ways on the Cross Axis Beam
- 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
- Industrial Keyboard with integrated Track Ball
- E-STOP button

MINI HORNET OPTIONS:

- Cutting Lengths: 10 ft (3.0m) or 20 ft (6.0m)
- **SPECIAL** Small Footprint 4x4 Machine
- Plasma Systems up to 130 Amps (1 max)
- Integrated 3rd Axis **SENSOR** Torch Height Control Interface
- Plasma Torch Lifter with AC Servo
- Collision Mount for Plasma Torch
- Roller Ball Plate Rôder for Plasma Torch
- Oxy-fuel Torch & Lifter Stations (1 max)
- Air Scribe Plate Marker (1 max)
- Dust Collection Systems
- Nesting and HVAC Software

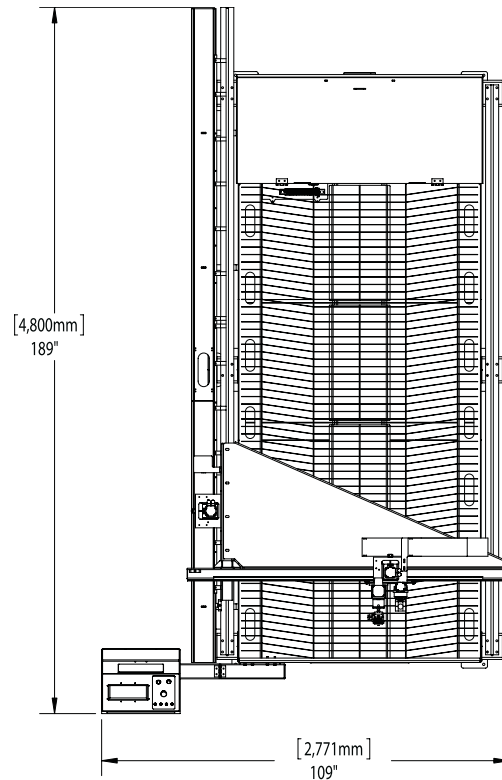
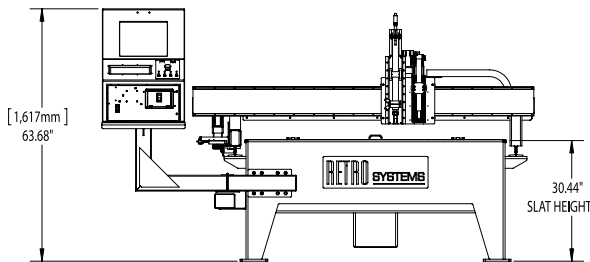
Cutting Table Upgrades (in lieu of standard single zone air table)

- Integrated Water Table with Adjustable Water Level
- Integrated Multi Zone Down Draft Air Table

Precision Productivity Performance



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MACHINE SPECIFICATIONS*

Positioning accuracy	+/- .010" (.25mm)
Repeatability	+/- .001" (.025mm)
Effective cutting width	64.6" (1.6m) plasma cutting, 59" (1.5m) oxy-fuel cutting
Effective cutting length	126" (3.2m) – 10 ft machine 246" (6.3m) – 20 ft machine
Overall machine height	64" (1.6m)
Overall machine length	192" (4.8m) including CNC control – 10 ft machine 312" (8.0m) including CNC control – 20 ft machine
Overall machine width	113" (2.8m) including CNC control
Maximum traverse speed	1,000 IPM (25m/min) Rapid Traverse speed
Maximum cutting tools	(1) plasma and (1) oxy-fuel station on tool carriage
Maximum amperage (plasma system)	130 A
Recommended conventional plasma systems	Hypertherm® Powermax series™, HSD130™
Maximum production plasma cutting capacity	1" (25mm)
Maximum production oxy-fuel cutting capacity	2" (50mm)
Input power for cutting machine	115 VAC single phase, 20A dedicated circuit

*Specifications are subject to change

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