MINI HORNET
The MINI HORNET is the most full featured medium duty CNC profile cutting machine available today. The MINI HORNET delivers 60" x 120" (1.52m x 3.04m) precision CNC profile production plasma cutting to 1" (25mm) and oxy-fuel cutting to 2" (50mm). Powerful (3) axis AC Servo drives, the easy-to-use Hypertherm MicroEDGE™ CNC control, Premium components and Rigid steel construction ensures highly accurate profile cut parts.

The MINI HORNET is the right choice whether you’re a job shop, maintenance shop, entrepreneurial 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 torch and (2) oxy-fuel torch. Hypertherm® Powermax™ systems are an excellent choice when medium duty conventional plasma cutting is required. If extended consumable life and oxygen plasma cutting are needed, the Hypertherm® Hypertherm® H255 (3) axis plasma system is recommended. Performance

HEAVY DUTY BEAM AND FRAME DESIGN
Reinforced steel box beams and Dual Hardened Vee ways ensure ultra smooth motion of the cross tool carriage. The machine frame end trucks ride on Triple Machined Tongue & Grooved steel rails attached to support brackets on the sides of the integrated air table frame. A full width steel skirt under the gantry bridge is standard on all Retro Systems machines. Performance

POWERFUL (3) AXIS AC SERVO DRIVE SYSTEM
Machine motion is powered by two 600 Watt (.8 hp) AC servo motors directly coupled to precision 5 arc minute planetary gearboxes to attain 1,000 IPM (25.4m/min) Contouring speeds and 1,400 IPM (35.5m/min) Rapid Traverse speeds. The plasma lifter is driven by a third 250 watt 1.3 hp servo motor to attain vertical positioning speed of 600 IPM. Productivity

INTEGRATED DOWN DRAFT AIR TABLE
The MINI HORNET machine frame includes an integrated air table that is normally connected to a cartridge style dust collector. Select either the standard single zone or the optional four zone design. The four zone design improves air system efficiency by directing exhaust air flow through the center of the torch where the exhaust is targeting. The CNC control signals the appropriate damper door based on machine position along the rails. Removable heavy duty steel plates protect moving parts from slag and heat. Performance

HYPERTHERM® AUTOMATION CNC CONTROLS
Retro Systems exclusively uses Hypertherm® controls in their plasma cutting automation. Wedgewood® XP open architecture design, hardened industrial controls and user-friendly easy-to-learn Phoenix® software make Hypertherm® controls the best in the business. With unparalleled ease of use, the Phoenix screens prompt the operator to select material type, material thickness, cutting amperage and gas selection from the CUT CHART screen. Process Parameter tables within the Phoenix software set and control all plasma cutting process, torch height control and motion control variables to deliver Total System integration.

NESTING, CNC FILE CREATION AND LOADING FILES
The Phoenix CNC control software includes an onboard DXF file import function as well as basic nesting capability. Retro Systems also offers a full scale CAD/CAM GMA software to assist your CAD drawing and prepare CNC machine code. Our GMA software may be used on a computer in your office, at the MINI HORNET or both. CNC files prepared in your office may be downloaded directly to the CNC control across your network or hand carried to the CNC control on a USB memory stick or floppy diskette.

FAST & EASY INSTALLATION
Unboxed 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.

MicroEDGE™ CNC CONTROL CONSOLE
Industrial Control Enclosure • Phoenix Control Software • 15” 1800x1024 LCD Touch Screen • Flash Mounted Industrial Keyboard • E-Stop, Plasma ON/OFF, Plasma UP/DOWN • Oxyfuel operator controls (optional) • Dust Collector ON/OFF (optional)

HEAVY DUTY DESIGN • AC Servo Motors • Planetary Gear Heads • Enclosed Power Track for Cables • Large Sheet Metal Rear Deck • Machined Motor Mounts • Triple Machined Tongue & Grooved Rail

HEAVY DUTY DESIGN • Integrated Down Draft Air Table • 3/16” Steel Construction

TOOL CARRIAGE • (2) Plasma torch lifter station (included) • Pneumatic Plasmas Torch Collision Mount • (1) Oxy-fuel torch lifter station (not pictured, 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.

CONSUMABLES 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.

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 CNC converter. But that’s not all… MicroEDGE™ even includes a Basic nesting program.

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 PLUG network connection.

CUTTING AREA, RAILS AND CABLE CARRIERS:
• 60" x 120" (1.52m x 3.04m) Effective Cutting Area
• All Steel Frame Construction
• Triple Machined “T” Style Main Rail
• Excluded Flexible Cable Carriers for All Cables and Hoses
• Steel Support Trays for Cables and Supply Hoses

INTEGRATED DOWN DRAFT AIR TABLE:
• 3/16” Steel Sheet Construction
• (1) 14ga Slats on 2” Centers • INCLUDED
• Single Zone Table with Center Air Tube • STANDARD
• Center Slotted Exhaust Tube • 10” Diameter Exhaust Connection on Rear of Table
• Four Zone Table with Damper Doors for each Zone • OPTIONAL
• 40” (1016mm) x 60” (1,524mm) Zone with Air Cylinder Actuated Doors
• CNC Opens/Closes Damper Doors Based on Machine Position on Rails
• 8” (200mm) Diameter Exhaust Connection on Rear of Table

THREE AXIS AC SERVO DRIVE PACKAGE:
• 600 Watt (.8 hp) Servo Drives • 400 Watt (.5 hp) AC Servo Drive – (2) Conventional (1) Oxy-fuel Torch Lift
• 250 PM OD Spindle Rapid Traverse Speed / 1,000 PM (25.4m/min) Contouring
• 5 Arc Minute Planetary Gear Heads directly coupled to motors
• 2.5” Phoenix Gear (64mm) Performance

CNC CONTROL & OPERATOR CONTROL CONSOLE:
• 15” (380mm) LCD Touch-Screen Monitor
• Standard Sturdy Industrial keyboard (optical sensing design)
• E-STOP button
• Touch Panel Operator Control Panel • OPTIONAL
• Hypertherm® CNC Control with Phoenix® CNC Profile Cutting Software
• Microsoft® Windows® XP® - Embedded Version
• 20” 1800x1024 LCD Touch Screen Monitor
• Sealed Washable Industrial keyboard (optical sensing design)
• E-STOP, Plasma ON/OFF, Plasma UP/DOWN

OPTIONAL
• Four Zone Table with Damper Doors for each Zone (4)
• Single Zone Table with Center Air Tube (3)
• 3/4” (19mm) Air Tube
• 28” (711mm) x 60” (1,524mm) Zone with Air Cylinder Actuated Doors
• CNC Opens/Closes Damper Doors Based on Machine Position on Rails
• 8” (200mm) Diameter Exhaust Connection on Rear of Table

HYPERTHERM® PHOENIX CNC CONTROL SOFTWARE:
• Conversion of DXF Format CAD Files into Machine Code • INCLUDED
• On-Screen Nesting • INCLUDED
• Shape Library with 68 Customizable Shapes
• Shape Wizard Enables On-Screen Machine Code Editing
• Integrated Sensor Torch Height Control Interface
• Dynamic Kerf Compensation
• “Use Button” Wiring
• Return to Previously Interrupted Cutting Job
• Move to Exact Pierce Point in Nest
• Move forward or backward on path
• 100 Customizable Watch Windows for Speed, Position, Consumable Life, Process Data, and Status Messages

SENSOR PLASMA TORCH HEIGHT CONTROL:
• On-Screen Interface through TOUCH Screens
• Pierce height, Pierce time, Cutting height, Cutting voltage, Retract height after cut
• Pierce Height Sensing using Drivce or Position Error Read Detection
• Maintains Torch to Plate Height during Cut via Voltage Regulation
• 8” (200mm) Letter Stroke Travel for Torch Positioning
• 50-210 VDC Arc Voltage Ranges in 1 volt increments
• 600 PM (152.4mm) Vertical Positioning Speed
• Pneumatic Plasma Torch Collision Mount with input to CNC control which stops plasma cutting and motion

OPTIONS:
• (1) Plasma Systems with 40A to 150 Amp Output
• (1) Motorized Oxy-fuel Torch Station with Gas Manifold
• (1) Zone Air Table with Damper Doors

CNC Plasma & Oxy-fuel Profile Cutting
MACHINE SPECIFICATIONS

Positioning accuracy: +/- .010" (.25mm)
Repeatability: +/- .001" (.025mm)
Effective cutting width: 64.6" (1,641mm) plasma cutting, 61" (1,549mm) oxy-fuel cutting
Effective cutting length: 127" (3,225mm)
Overall machine height: 64" (1,625mm)
Overall machine length: 192" (4,876mm) including CNC control
Overall machine width: 113" (2,870mm) including CNC control
Maximum contouring speed: 1,000 IPM (25.4m/min)
Maximum traverse speed: 1,400 IPM (35.5m/min)
Maximum cutting tools: (1) plasma and (1) oxy-fuel station on tool carriage
Maximum amperage (plasma system): 150 A
Recommended plasma systems: Hypertherm® Powermax series™, HSD130™
Maximum production plasma cutting capacity: 1" (25mm)
Maximum production oxy-fuel cutting capacity: 2" (50mm)
Maximum table capacity (full sheet): 1-1/4" x 60" x 120" (32mm x 1.5m x 3.1m)
Input power for cutting machine: 115 VAC single phase, 20A dedicated circuit

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RETO SYSTEMS

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