

Hypertherm[®]
HT4001[®]

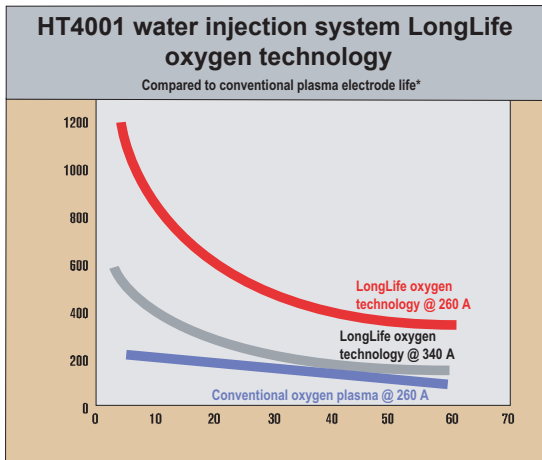
***Water-injection plasma arc
cutting system***

ISO 9001

HT4001

The HT4001 water-injection system provides superior cut quality, high productivity, extended parts life and expansion flexibility

The ideal combination of quality, productivity and flexibility



- **340-amp oxygen capability pierces and cuts mild steel up to 1-1/4 inch (32 mm) at 90°, approximately 3/4-inch at 45° bevel**
- **LongLife™ oxygen technology reduces costs**
- **400-amp base system expandable to 760 amps**

Powerful flexible system

The Hypertherm HT4001 introduces 340-amp oxygen capability to provide clean, fast production cutting of mild steel up to 1-1/4 inch (32 mm) thick with no dross under most conditions. By using oxygen as the plasma gas, nitriding is virtually eliminated - and so is the need for expensive grinding operations.

The system also operates with nitrogen, delivering cuts on stainless steel or aluminum up to 2 inches (50 mm) thick. Patented LongLife oxygen parts technology greatly increases the life of parts through microprocessor control of power and flow parameters, keeping your costs down.

As an option, the HT4001 may be paralleled with a slave power supply for cutting aluminum or stainless steel up to 3 inches (75 mm) thick.

It's a powerful, flexible system designed for high volume production applications where reliability is vital.

Superior cut quality

- 340-amp oxygen capability delivers dross free cuts up to 1-1/4 inch (32 mm) thick at 90°, approximately 3/4-inch at 45° bevel.
- Oxygen plasma is the optimal choice for cutting mild steel. It eliminates dross across a wide cut range. You get faster cut speeds at lower power levels.
- Oxygen plasma improves weldability of the cut face because it virtually eliminates nitriding on mild steel. Cut edge surfaces are exceptionally smooth.

- Using nitrogen, the HT4001 delivers 400 amps of power to slice cleanly through 2 inches (50 mm) of stainless steel or aluminum.

Highest productivity

- The HT4001 is designed for 100% duty cycle at 80 kw output to give you maximum uptime.
- Longer parts life means less downtime for nozzle consumable replacement and more cutting time.
- Superior system reliability ensures that the HT4001 will be running when you need it.
- The HT4001 delivers excellent cut speed. For example, at 340 amps you'll cut 110 inches (2.8 m) of 1/2-inch (12 mm) mild steel per minute - with virtually no clean-up needed.

Lower costs

- Hypertherm's patented LongLife parts technology greatly extends the life of consumables while using oxygen, yielding impressive cost savings.
- Superior cut quality means minimal clean-up. That reduces your labor costs and makes your operation more efficient.

Maximum flexibility

- Available power of 260 or 340 amps for oxygen cutting and up to 760 amps for nitrogen cutting.
- You can add a slave power supply at any time to provide output current up to 760 amps. This extends the cutting range of your HT4001 to 3-inch (75 mm) stainless steel or aluminum.



- Optional beveling consumables allow you to bevel cut at angles of up to 45° with a simple parts change. Maximum thickness depends upon bevel angle.
- The HT4001 may be mounted on a wide variety of X-Y cutting systems, punch presses or robots. It can cut material above, on, or under water. Use it with oxygen or nitrogen to give you the flexibility of maximum cut quality on any metal.
- A Remote High Frequency console lets you locate the power supply up to 200 feet (61 m) from the torch with minimal high frequency interference.
- Optional Torch Height Control and Initial Height Sensing systems provide the ability to automatically position the torch which ensures optimal operation.

HT4001 system components

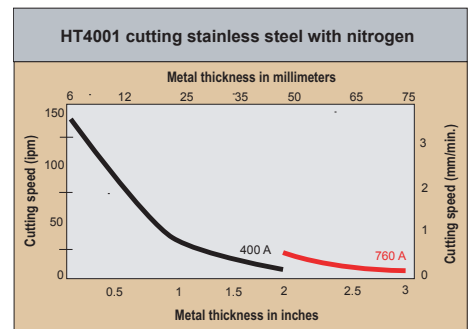
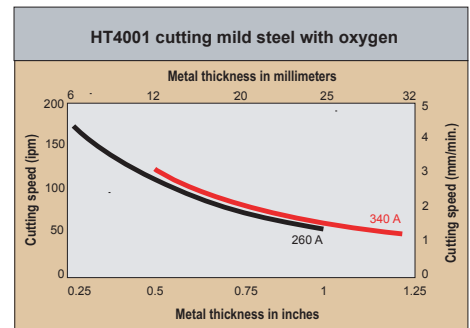
- HT4001 Power Supply
- PAC620 Water-Injection Torch Assembly
- Torch Leads
- Work Cable
- Gas Console
- Motor Valve Console
- Remote High Frequency (RHF) Console
- Leads and Cables
- Optional Initial Height Sensor and Torch Height Control
- Optional Remote Voltage Control
- Optional Water Muffler and Pump
- Optional Water Chiller
- Optional H-401 or H-601 Power Supply Slave

Power output ranges

- 260-Amp: For dross-free oxygen cutting of mild steel up to 1 inch (25 mm) thick with maximum parts life.
- 340-Amp: Highest power oxygen cutting of mild steel up to 1 1/4 inch (32 mm) thick with superior cut speed and quality.
- 400-Amp: Base system power output up to 400 amps for nitrogen cutting of stainless steel and aluminum up to 2 inches (50 mm) thick.
- 760-Amp: Power output with H-401 slave power supply up to 760 amps for nitrogen cutting of stainless steel and aluminum up to 3 inches (75 mm) thick.

Optimize performance

Genuine Hypertherm parts are designed to optimize performance for each torch, power supply and application. Using anything other than genuine Hypertherm parts poses a risk to your cutting system's reliability. Imperfect dimensioning may lead to expensive problems such as torch shorting, overheating and system failure. Using only Hypertherm consumables will safeguard your system, reduce rework costs and save time spent changing parts.



Genuine Hypertherm Consumables

The only way to ensure maximum performance

HT4001

Operating data

Specifications



HT4001 without slave

| | |
|---------------------------------|--|
| Input Voltage | 200/220 V, 3PH, 50-60 Hz @ 275/234 A 380/400/415 V, 3PH, 50-60 Hz @ 135/128/124 A |
| Input Current | 240/480 V, 3PH, 60 Hz @ 214/107 A 575/600 V, 3PH, 60 Hz @ 89/86 A |
| Output Voltage | 80-200 VDC |
| Max Output Current | 400 A |
| Maximum OCV | 325 VDC |
| Duty Cycle | 100% @ 104° F (40° C) @ 80 kw (The HT4001 operates at 100% duty cycle throughout its cutting range.) |
| Dimensions | 34" (863 mm) Width 51" (1295 mm) Height 48 11/16" (1236 mm) Depth |
| Weight | 1800 lb (817 kg) |
| Gas Supply: Plasma gas types | Oxygen (99.5% pure), Nitrogen (99.995% pure) |
| Oxygen inlet pressure | 120 psig (8.3 bar) |
| Nitrogen inlet pressure | 150 psig (10.3 bar) |
| Water Supply: Water to RHF | 2.5 gpm (9.5 l/m) at 150 psig (10.3 bar) @ 70° F (21° C) Max. |
| Water to Chiller | 0.5 gpm (1.9 l/m) at 35 psig (2.4 bar) |

H-401 slave power supply

| | |
|--------------------|---|
| Input Voltage | 200 V, 3PH, 50-60 Hz @ 360 A |
| Input Current | 380/415 V, 3PH, 50-60 Hz @ 180 A 230 V, 3PH, 60 Hz @ 310 A 460 V, 3PH, 60 Hz @ 155 A 575 V, 3PH, 60 Hz @ 125 A |
| Output Voltage | 80-200 VDC |
| Max Output Current | 760 A (in parallel with base HT4001) |
| Maximum OCV | 400 VDC |
| Duty Cycle | 100% @ 104° F (40° C) @ 152 kw (in parallel with base HT4001) |
| Dimensions | 27-1/4" (690 mm) Width 43" (1090 mm) Height 46" (1170 mm) Depth |
| Weight | 1905 lb (866 kg) |

**For additional information, call:
TOLL-FREE IN THE USA & CANADA: 1-800-643-0030**

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HT4001 without slave

| Material | Current (Amps) | Thickness (Inches) | Cutting speed (ipm) | Thickness (mm) | Cutting speed (mm/min.) |
|--|----------------|--------------------|---------------------|----------------|-------------------------|
| Mild steel <i>O₂ plasma</i> | 260 | 1/4 | 170 | 8 | 3850 |
| | | 1/2 | 100 | 12 | 2730 |
| | | 3/4 | 70 | 20 | 1700 |
| | | 1 | 50 | 25 | 1300 |
| | 340 | 1/2 | 110 | 15 | 2570 |
| | | 3/4 | 85 | 20 | 2080 |
| | | 1 | 65 | 25 | 1680 |
| | | 1-1/4 | 45 | 30 | 1280 |
| Stainless steel <i>N₂ plasma</i> | 260 | .035 | 450 | .889 | 11430 |
| | | .075 | 300 | .191 | 7620 |
| | 380 | 1/8 | 200 | 3 | 3950 |
| | | 1/4 | 150 | 6 | 3810 |
| | | 3/8 | 125 | 10 | 3170 |
| | 400 | 1/2 | 100 | 10 | 3070 |
| | | 3/4 | 50 | 15 | 2080 |
| | 1 | 30 | 20 | 1200 | |
| | 1-1/2 | 20 | 25 | 790 | |
| | 2 | 12 | 50 | 310 | |
| Aluminum <i>N₂ plasma</i> | 260 | .035 | 540 | .889 | 13700 |
| | | .075 | 360 | .191 | 9140 |
| | 360 | 1/8 | 240 | 3 | 6100 |
| | | 1/4 | 180 | 6 | 4730 |
| | 380 | 3/8 | 150 | 10 | 3810 |
| | 400 | 1/2 | 120 | 12 | 3050 |
| | | 3/4 | 60 | 10 | 3700 |
| | 1 | 35 | 15 | 2500 | |
| | 1-1/2 | 30 | 20 | 1420 | |
| | 2 | 15 | 25 | 940 | |
| | | | 50 | 400 | |

HT4001 with H-401 slave power supply

| Material | Current (Amps) | Thickness (Inches) | Cutting speed (ipm) | Thickness (mm) | Cutting speed (mm/min.) |
|--|----------------|--------------------|---------------------|----------------|-------------------------|
| Mild steel <i>N₂ plasma</i> | 480 | 1/2 | 110 | 12 | 2800 |
| | | 3/4 | 70 | 20 | 1780 |
| | 560 | 1 | 60 | 25 | 1520 |
| | | 1-1/2 | 30 | 15 | 2400 |
| | 600 | 2 | 20 | 20 | 1750 |
| | | | | 25 | 1540 |
| | | 35 | 950 | 35 | 950 |
| | | | 520 | 50 | 520 |
| | | 700 | 2 | 25 | 50 |
| | 760 | 3 | 12 | 60 | 510 |
| | | | 75 | 320 | |
| Stainless steel <i>N₂ plasma</i> | 480 | 1/2 | 110 | 12 | 2800 |
| | | 3/4 | 70 | 20 | 1780 |
| | 560 | 1 | 60 | 25 | 1520 |
| | | 1-1/2 | 20 | 15 | 2400 |
| | 600 | 2 | 20 | 20 | 1750 |
| | | | | 25 | 1540 |
| | | 35 | 950 | | |
| 50 | 520 | | | | |
| 700 | 2 | 25 | 50 | 630 | |
| 760 | 3 | 12 | 60 | 510 | |
| | | | 75 | 320 | |
| Aluminum <i>N₂ plasma</i> | 500 | 1 | 80 | 25 | 2030 |
| | | 1-1/2 | 45 | 38 | 1150 |
| | 600 | 2 | 30 | 30 | 1710 |
| | | 30 | 1090 | | |
| | 50 | 780 | | | |
| | 700 | 2 | 30 | 50 | 760 |
| 760 | 3 | 15 | 60 | 620 | |
| | | | 75 | 380 | |

Note: Bevel speeds should be reduced by at least 5%.

Hypertherm[®]

The world leader in
plasma cutting technology™

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