Hypertherm®

HT4400®

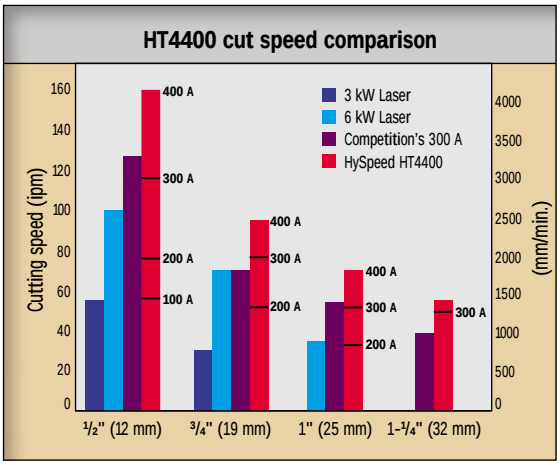
HySpeed™ plasma for straight and bevel cutting

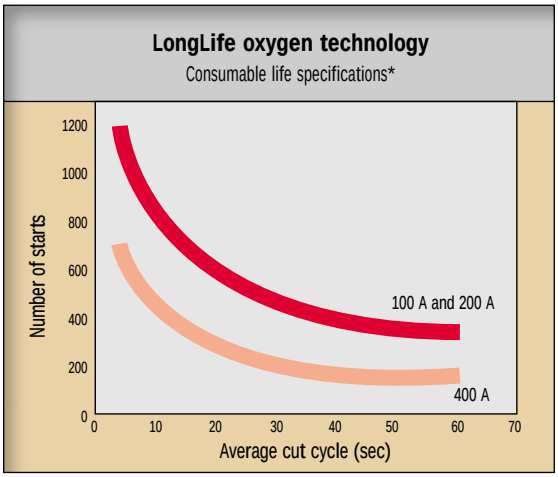
ISO 9001

HT4400

HySpeed 400-amp dry plasma cutting system with LongLife® oxygen technology and CoolCore™ consumables

Begins where laser leaves off, to increase your productivity and profitability





*Based on extensive laboratory testing at Hypertherm. Actual results may vary.

Built for speed

The HySpeed HT4400 is the world's first 400-amp dry oxygen plasma cutting system. Its single power supply delivers unmatched cut speeds – especially on thicker metals that laser systems can't cut. Delivering cut speeds of 95 ipm on ¾-inch mild steel (2298 mm/min. on 20 mm) and 70 ipm on 1-inch (1806 mm/min. on 25 mm), no other metal-cutting process can keep up. At the same time, the HT4400 produces virtually no dross and delivers superior cut-face weldability over the widest range of material types and thicknesses.

This makes the HySpeed HT4400 the perfect complement to laser systems for high-volume metal-cutting operations seeking to increase productivity. In many applications, the HT4400 is a cost-effective alternative to a laser system.

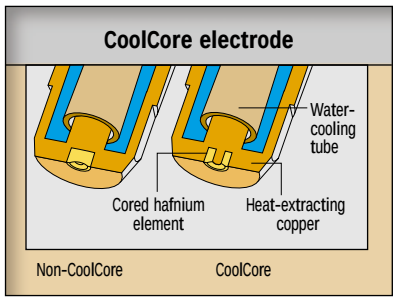
The versatile HT4400 system is capable of cutting the broadest spectrum of material types and thicknesses, meeting all your metal-cutting requirements. It can serve as the primary metal-cutting tool in any environment. Our experienced technical representatives are available to discuss the specifics of your metal-cutting requirements and suggest the best solution.

Engineered to be cost-effective

Two proprietary Hypertherm technologies allow high-speed cutting with maximum consumable life.

The LongLife oxygen process involves precise control of key cutting parameters to gradually ramp up when starting the cut and ramp down when stopping. These are the times when consumable deterioration is most prevalent. As a result, the LongLife process significantly extends consumable life.

CoolCore electrodes are designed with the hafnium insert cored-out rather than utilizing a solid element. This permits heat-extracting copper to be in contact with both the inside and outside surfaces of the hafnium. Transferring heat away from the hafnium results in a 2-fold increase in electrode life.



This view shows a solid element and cored element of hafnium surrounded by the heat-extracting surfaces of water-cooled copper.

Designed for versatile cutting requirements

The HySpeed HT4400 torch makes either straight cuts or bevel cuts. The torch and consumables are designed to support a true 45-degree bevel cut.

When used in underwater cutting to reduce noise, light, and fumes, the HT4400 is provided with a specially designed retaining cap to insure high-reliability starting.*

Such capabilities provide maximum flexibility and versatility for serious metal-cutting operations.

*The noise level with underwater cutting is less than 85 dBa.

Torch and consumables

The HT4400 makes complex cuts quickly.

Why the HySpeed HT4400 has no equal

The power to do more

The only 400-amp dry oxygen plasma cutting system on the market gives you the power to increase productivity, reduce cutting costs and increase profitability.

The HySpeed HT4400 delivers the exceptional cutting speeds required to dramatically increase throughput – especially on thick plate production cutting. No other system available today can match the speed, cut quality, economy, reliability and ease-of-use of the HT4400.

The HySpeed HT4400 gives high-volume metal-cutting operations such as heavy metal fabricators, steel service centers, structural steel operations and shipyards more power than they ever had before.

If you want to cut the widest range of metals faster than was ever possible, there is literally only one choice. Put the HySpeed HT4400 to work breaking speed limits for you.

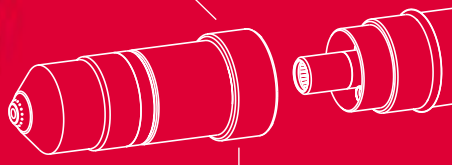
System features

- Single power supply has four 100-amp, 15 kHz choppers delivering the power for unprecedented cutting speeds.
- Microprocessor control ensures accurate process parameters for consistently high-quality cuts and long consumable life.
- LongLife oxygen technology and CoolCore electrodes maximize consumable life and preserve cut quality.
- Liquid-cooled, quick-disconnect torch increases productivity.
- Solid-state ignition console increases system robustness and starting reliability.
- Streamlined cooling system is a low-profile, low-maintenance, water-to-air heat exchanger.
- Manual gas console with LED status indicators promotes ease-of-use with intuitive troubleshooting aids.

HySpeed HT4400 system components

A: Power supply
B: Cooling system
C: Gas console
D: Valve cluster
E: Ignition console
F: Machine torch and leads assembly

- Optional remote current-control console provides flexibility to set cutting current, if not done on a CNC. Not required if a machine interface will provide current control for the plasma system.
- Optional Command THC torch height control allows pierce height and torch-to-work distances within the tightest tolerances in the industry. Minimizes dross and ensures the best possible cut angles.



Quick-disconnect torch reduces downtime, maximizing productivity.

HT4400 HySpeed 400-amp oxygen plasma cutting system

Operating data

Production cutting capability (piercing):	1-¼" 32 mm

Material	Current (Amps)	Thickness (Inches)	Approximate cutting speed (ipm)	Thickness (mm)	Approximate cutting speed (mm/min.)
Mild steel	100	⅛	240	3	6462
		¼	120	6	3226
		½	60	12	1613
	200	¼	160	6	4301
		½	80	12	2151
O_2 plasma		⅝	70	15	1851
O_2-N_2 shield		¾	55	20	1331
		⅞	45	22	1155
	300	⅜*	160	10	3871
		½	120	12	3226
		⅝	100	15	2681
O_2 plasma		¾	80	20	1935
Air shield		⅞	70	22	1796
		1	55	25	1419
	400	½*	160	12	4301
		¾	95	20	2298
		1	70	25	1806
		1-¼	55	32	1386
Stainless steel	200	¼	120	6	3226
N_2 plasma		½	75	12	2016
O_2-N_2 shield		⅝	60	15	1628
		¾	45	20	1089
		⅞	35	22	898
Stainless steel	400	½*	140	12	3763
N_2 plasma		¾	70	20	1694
N_2 shield		1	40	25	1032
		1-¼	30	32	756
Aluminum	200	¼	160	6	4301
N_2 plasma		½	80	12	2151
O_2-N_2 shield		⅝	70	15	1851
		¾	50	20	1210
		⅞	35	22	898
Aluminum	400	½	150	12	4032
N_2 plasma		¾	80	20	1935
N_2 shield		1	50	25	1290
		1-¼	40	30	1085

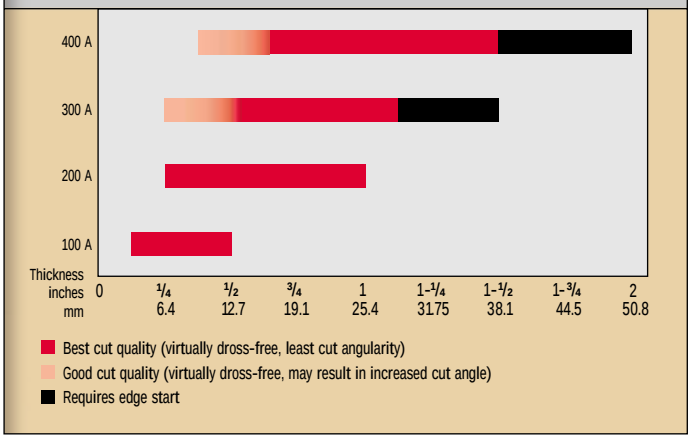
** May result in increased angle variation.*

Specifications

	U_1	I_1	Frequency
Input 3 phase at 89 kVA	200 V	257 A	50/60 Hz
	400 V	128 V	50/60 Hz
	440 V	117 A	50/60 Hz
	480 V	107 A	60 Hz
	600 V	86 A	60 Hz
Output voltage (U_2)	200 VDC		
Output current (I_2)	400 A		
Duty cycle	100% at 89 kVA, 104º F (40º C)		
Maximum OCV (U_0)	361 VDC		
Dimensions	48-11/16" (1236 mm) D; 34" (865 mm) W; 51" (1295 mm) H		
Weight	1800 lbs (817 kg)		
Plasma gas pressure**	O_2, N_2 120 psi ±10 psi (9.6 bar ±0.7 bar)		
Shield gas pressure**	Air, O_2, N_2 120 psi ±10 psi (9.6 bar ±0.7 bar)		

***Actual rate varies according to cutting requirements.*

Performance summary for cutting mild steel with oxygen plasma



Results will vary based on machine motion performance and material characteristics.

Genuine Hypertherm Consumables

The only way to ensure maximum performance

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

Hypertherm®

The world leader in plasma cutting technology™

www.hypertherm.com

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