

# Hypertherm®

## powermax1250® G3 SERIES™

*The performance standard for air plasma cutting*



**7/8"** (22 mm)

*Recommended capacity*

**1 1/8"** (29 mm)

*Maximum capacity*

**1 1/2"** (38 mm)

*Severance capacity*

# powermax1250<sup>®</sup> **G3 SERIES™**

**A new generation of plasma cutting technology**

## **The benefits of Hypertherm technology –**

- **Superior speed and cutting capacity**
- **Longer parts life**
- **Lower operating cost**
- **Higher-quality cuts**
- **Safety**
- **Reliability**
- **Ease of use**

**– in a robust, portable cutting system.**



## **Hypertherm – the world leader in plasma cutting technology**

When you only do one thing, you'd better do it better than anyone else. As the only major manufacturer to focus exclusively on plasma cutting technology, Hypertherm is committed to providing the highest quality systems in the world: improving the performance, reliability and value of our systems, and serving and supporting Hypertherm users. This commitment to technology leadership, quality and support makes Hypertherm the first choice of the true cutting professional.

## **Superior performance by hand or machine**

The Powermax1250 is the first of the Powermax G3 Series. With new technologies in both power supply and torch, it cuts faster and more economically than any system available today. In fact, it cuts 80% faster on 1-inch (25 mm) mild steel than any competitor tested. Its Auto-voltage™ circuit provides automatic adjustment to any input voltage from 200 to 600 volts, 1- or 3-phase. A state-of-the-art, microprocessor-based architecture assures optimum system reliability. Add to this Hypertherm's advanced torch technology and easy-to-read controls, and you have the most advanced plasma cutter money can buy.

- **Recommended capacity:** metals to  $\frac{7}{8}$  inch (22 mm) at cutting speeds over 20 inches (500 mm) per minute.
- **Maximum capacity:** metals to 1  $\frac{1}{8}$  inch (29 mm) at cutting speeds over 10 inches (250 mm) per minute.
- **Severance capacity:** rough cut on metals up to 1  $\frac{1}{2}$  inches (38 mm) at low speed.

The cut capacities above are on mild steel. Some metals, such as aluminum and stainless steel, may require up to 20% reduction in cut speed and capacity.

## **Machine torch operation**

- Up to  $\frac{5}{8}$  inch (16 mm) at 50% duty cycle.
- Up to  $\frac{3}{8}$  inch (10 mm) at 100% duty cycle.

## **The power supply: the heart of the machine**

Advanced, intelligent technology gives the Powermax1250 the power to cut with greater speed, quality and efficiency.

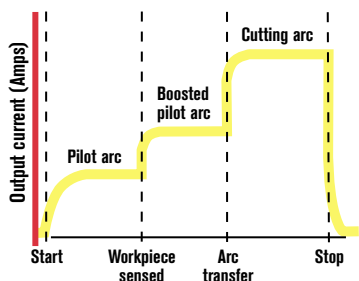
- 80-amp, 12-kilowatt output provides ample power for clean, quick cutting.
- Auto-voltage runs on voltages from 200 to 600 volts, 1- or 3-phase, without the need for manual rewiring.
- New Boost Conditioner™ circuit compensates for input voltage variation.
- Advanced, digitally-controlled inverter design delivers continuously adjustable, constant current output, from 25 to 80 amps, permitting high-quality cuts over a wide range of metal thicknesses.
- An active electronic pilot arc controller for cutting expanded metal or grating.
- New gouging setting allows for improved arc transfer, easier operation and faster metal removal.
- CNC/robotic machine interface is standard on all units, allowing automated control and rapid change over to mechanized operation.



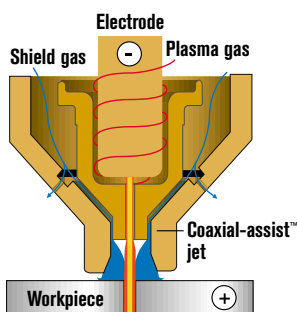
**The torch: intelligent design combines performance, durability, comfort and safety**

The Powermax1250 features Hypertherm's T80 safety trigger torch (patent pending) and T80M mechanized torch. A revolutionary design delivers outstanding cut performance, reliability and operator comfort.

- The longest consumable life in the industry, and we'll prove it. Patented HyLife™ electrodes last longer than ordinary designs (up to 10 times longer in some tests).
- Patented Dual-threshold™ pilot circuit significantly reduces nozzle wear by boosting pilot current precisely when needed.



- Patented nozzle shield lets you drag the torch on the workpiece at full output, without damaging consumables, and protects the nozzle from molten metal spray and double arcing.
- Postflow cooling to reduce torch stress.
- Hypertherm's patented Coaxial-assist™ jet design boosts cutting speed as much as 20% over conventional designs.



- Hypertherm's revolutionary new ETR™ (Easy Torch Removal) system allows for easy switching between manual and mechanized torches. It also features a radically new integrated approach to strain relief and durability.
- Hypertherm's patented safety trigger protects against accidental starts, with interlocks to deactivate the torch when the consumable parts are removed, using a durable mechanical contact.
- No breakable ceramic parts.



**Options for specialized requirements**

**CIRCLE CUTTING GUIDE**

**LEATHER CABLE COVERS** for torch leads.

**AIR FILTRATION KIT** with a 0.5 micron filter and auto-drain filter bowl.

**WHEEL KIT** for easy mobility.

**HEAT SHIELD** protects hands from excessive reflective heat.



- Patented "blow-back" technology provides a pilot arc without excessive high-frequency interference.
- Consumables for gouging, extended-nozzle cutting, pipe saddle cutting and other applications.

**Engineered for superior reliability**

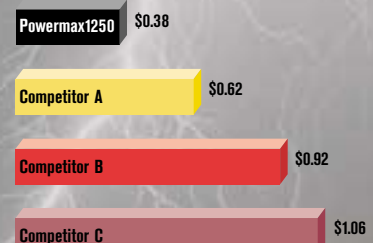
The Powermax1250 is designed for heavy use under the harshest conditions.

- Mechanical and electrical designs are validated through aggressive, accelerated testing.
- Auto-voltage accepts any voltage from 200 to 600 volts, without damage to the system from incorrect wiring or faulty linking. The Boost Conditioner eliminates performance deterioration, shut-down or potential damage due to fluctuating powerline conditions.
- New fan-on-demand feature minimizes dust ingestion.
- Chemically cross-linked torch cable jacket provides improved resistance to molten spray and cut-through.
- CSA/NRTL and CE certifications comply with the highest safety standards.
- IP23CS compliance for resistance to water damage.
- The Powermax1250 is backed by a full, three-year power supply warranty and a one-year torch warranty. No parts excluded. Examine competitive policies closely.



**Superior productivity through technology**

Calculated cost per foot of cut on 3/4" (19 mm) mild steel



Operating cost calculations are based on consumable price, tested consumable life, tested cutting speed, estimated labor and power costs and an assumption of 50% duty cycle operation. Competitive units are in the 70 - 80 amp cutting range.

# powermax1250<sup>®</sup> G3 SERIES™

## High-performance portable plasma cutting system

### Powermax1250 G3 Series standard system components

- Power supply
- T80 or T80M torch
- Spare consumables
- Work cable with clamp  
15 feet (4.5 m)
- Primary power cable

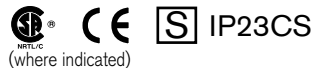
### Options

- Circle cutting guide
- Wheel kit
- Leather cable covers
- Air filtration kit
- Extended work cable
- Hand heat shield, gouging

### Ordering information

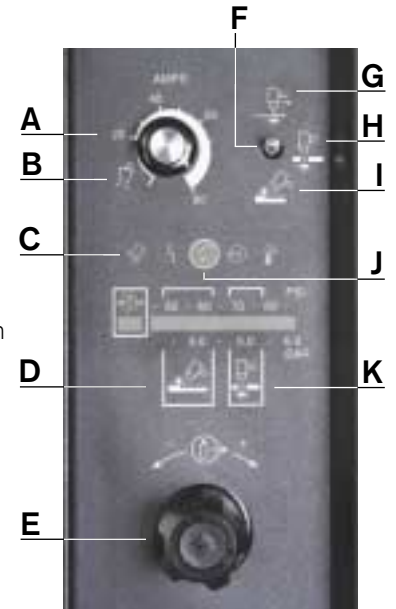
	Systems part numbers	
	With 25' (7.5 m) torch	With 50' (15 m) torch
<b>200 – 600 V, 1/3-PH, CSA</b>		
Manual system	087008	087009
Mechanized system	087012	087013
<b>230 – 400 V, 3-PH, CE</b>		
Manual system	087020	087021
Mechanized system	087022	087023

### Specifications



Input voltages	200 – 600 V, 1- or 3-PH, 50/60 Hz, CSA 230 – 400 V, 3-PH, 50/60 Hz, CE
Input current @ 12.0 kW	200/208/230/240/480 V, 1-PH: 70/70/60/58/31 A 200/208/230/240/400/480/600 V, 3-PH: 41/40/37/34/21/17/17 A
Output voltage	150 VDC
Duty cycle @ 40°C (104°F)	60% @ 80 A, 230 – 600 V, 3-PH 60% @ 80 A, 480 V, 1-PH 50% @ 80 A, 240 V, 1-PH 50% @ 80 A, 200 – 208 V, 3-PH 40% @ 80 A, 200 – 208 V, 1-PH
Maximum OCV	300 VDC
Dimensions	23.1" (586 mm) D; 10.65" (271 mm) W; 19.6" (498 mm) H
Weight with torch	96.6 lbs (44 kg)
Gas supply	Clean, dry, oil-free air or nitrogen
Flow rate	400 scfh; 6.7 cfm (189 l/min) at 90 psi (6.2 bar)
Flow pressure	70 psi (4.8 bar) flowing, 25' leads 75 psi (5.1 bar) flowing, 50' leads

- A: Cutting-current output control, 25 – 80 amps
- B: Gas test position
- C: Back-lit fault indicators
- D: Air pressure range, gouging mode
- E: Air pressure adjustment knob
- F: Cutting mode selector switch
- G: Pilot arc control mode
- H: Normal cutting mode
- I: Gouging mode
- J: Power on indicator
- K: Air pressure range, cutting mode



### Operating data

	Hand torch	Machine torch
<b>Recommended capacity</b>	7/8" (22 mm)	3/8" (10 mm) @ 100% duty cycle
<b>Maximum capacity</b>	1 1/8" (29 mm)	5/8" (16 mm) @ 50% duty cycle
<b>Severance capacity</b>	1 1/2" (38 mm)	–

Material	Thickness		Current (amps)	Maximum travel speed*	
	(inches)	(mm)		(ipm)	(mm/min.)
Mild steel	22 GA.	0.8	25	500	12700
	10 GA.	3.6	40	151	3835
	1/4	6	40	74	1880
	3/8	10	80	94	2388
	1/2	12	80	60	1524
	3/4	19	80	31	787
	1	25	80	16	406
Aluminum	1/32	0.8	25	610	15494
	1/16	1.5	25	268	6807
	1/4	3.2	40	76	1930
	3/8	10	80	121	3073
	1/2	12	80	75	1905
	3/4	19	80	37	940
Stainless steel	22 GA.	0.8	25	496	12598
	10 GA.	3.6	40	107	2718
	1/4	6	40	47	1194
	3/8	10	80	83	2108
	1/2	12	80	50	1270
	3/4	19	80	24	610
1	25	80	14	356	

\*Maximum travel speeds are the results of Hypertherm's laboratory testing. For optimum cut quality, speeds should be reduced between 35 – 50%, depending upon the material. Refer to your operators manual for more detail.

Hypertherm, Powermax, G3 Series, HyLife, Boost Conditioner, Dual-threshold, Auto-voltage, Coaxial-assist and ETR (Easy Torch Removal) are trademarks of Hypertherm, Inc. and may be registered in the United States and/or other countries.

# Hypertherm<sup>®</sup>

The world leader in  
plasma cutting technology™

www.hypertherm.com

Hypertherm, Inc. USA 603-643-3441 Tel 603-643-5352 Fax manual.info@hypertherm.com

Hypertherm Automation USA 603-298-7970 Tel 603-298-7977 Fax info@hyperthermautomation.com

Hypertherm Plasmatechnik GmbH Deutschland 49 6181 58 2100 Tel 49 6181 58 2134 Fax  
HTDeutschland.info@hypertherm.com

Hypertherm (S) Pte Ltd Singapore 65 841 2489 Tel 65 841 2490 Fax HTSingapore.info@hypertherm.com

Hypertherm UK Ltd England 44 1928 579 074 Tel 44 1928 579 604 Fax HTUK.info@hypertherm.com

France 0805 050 111 Tél 0805 050 222 Fax HTFrance.info@hypertherm.com

Hypertherm S.r.l. Italia 39 02 725 46 312 Tel 39 02 725 46 400 Fax HTItalia.info@hypertherm.com

Hypertherm B.V. Nederland 31 315 655866 Tel 31 315 655886 Fax HTNederland.info@hypertherm.com

Japan 81 03 5326 3142 Tel 81 03 5326 3001 Fax HTJapan.info@hypertherm.com