

Hypertherm®

powermax1000® G3 SERIES™

The performance standard for air plasma cutting



3/4"
(19 mm)

Recommended capacity

1"
(25 mm)

Maximum capacity

1 1/4"
(32 mm)

Severance capacity

ISO 9001

powermax1000[®] **G3 SERIES[™]**

The third generation of plasma cutting has a second great product!

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 do only 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 Powermax1000 is the latest addition to the Powermax G3 Series. With advanced technologies in both power supply and torch,



Hypertherm G3 products cut faster and more economically than any system available today. The Powermax1000's Auto-voltage[™] circuit provides automatic adjustment to any input voltage from 200 to 600 volts, 1- or 3-phase (CE 230 to 400 V 3-phase only). 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 ¾ inch (19 mm) at cutting speeds over 20 inches (500 mm) per minute.
- **Maximum capacity:** metals to 1 inch (25 mm) at cutting speeds over 10 inches (250 mm) per minute.
- **Severance capacity:** rough cut on metals up to 1 ¼ inches (32 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 ½ inch (12 mm) Maximum capacity.
- Up to ¾ inch (10 mm) Recommended capacity.

The power supply: the heart of the machine

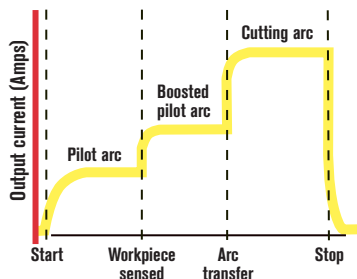
Advanced, intelligent technology gives the Powermax1000 the power to cut with greater speed, quality and efficiency.

- 60-amp, 8.4-kilowatt output provides ample power for clean, quick cutting.
- Auto-voltage runs on voltages from 200 to 600 volts, 1- or 3-phase, (CE 230 to 400 V 3-phase only) 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 20 to 60 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 for easier operation and faster metal removal.
- CNC/robotic machine interface is standard on all units, allowing automated control and rapid changeover to mechanized operation.

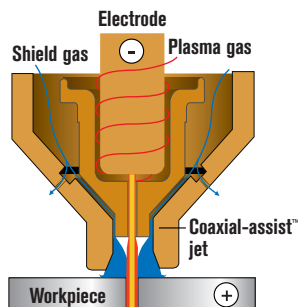
The torch: intelligent design combines performance, durability, comfort and safety

The Powermax1000 features Hypertherm's patented T60 safety trigger torch and T60M mechanized torch, which deliver 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.
- 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 reduces torch stress.
- Hypertherm's patented Coaxial-assist™ jet design boosts cutting speed as much as 20% over conventional designs.



- Hypertherm's ETR™ (Easy Torch Removal) system allows for easy switching between manual and mechanized torches. It also features a strain relief designed for durability.
- Hypertherm's patented safety trigger protects against accidental starts. Interlocks deactivate the torch when the consumable parts are removed, using a durable mechanical contact.



- No breakable ceramic parts.
- 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 Powermax1000 is designed for heavy use under the harshest conditions.

- Mechanical and electrical designs are validated through aggressive, accelerated testing.
- 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 Powermax1000 is backed by a full three-year power supply warranty and a one-year torch warranty. No parts excluded. Examine competitive policies closely.



Options for specialized requirements

FINECUT™ CONSUMABLES for superior cut quality on thin plate, mild and stainless steel.

CIRCLE CUTTING GUIDE

LEATHER CABLE COVERS for torch leads.

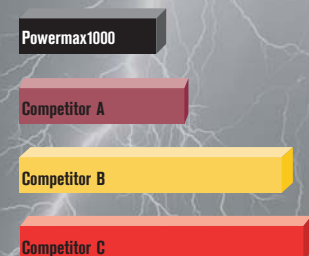
AIR FILTRATION KIT with a .85 micron filter and auto-drain filter bowl.

WHEEL KIT for easy mobility.

HEAT SHIELD protects hands from excessive reflective heat.



Relative cutting cost, Powermax1000 vs. competitors
1/2" (12 mm) mild steel



Operating cost calculations are based on consumable price, tested consumable life, tested cutting speed, estimated labor and power costs. Competitive units are in the 50 - 60 amp cutting range.

High-performance portable plasma cutting system

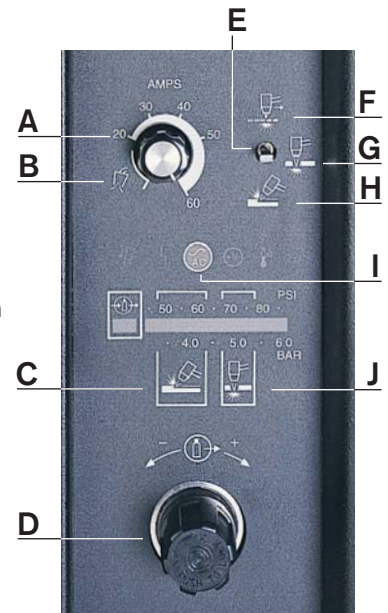
Powermax1000 G3 Series standard system components

- Power supply
- T60 or T60M torch
- Spare consumables
- Work cable with clamp
15 feet (4.5 m)
- Primary power cable

Options - (Part number)

- Circle cutting guide - 027668
- Wheel kit - 128646
- Leather cable covers - 024548
- Air filtration kit - 128647
- Extended work cable - 128717
- Hand heat shield - 128658

- A: Cutting-current output control, 20 – 60 amps
B: Gas test/set position
C: Air pressure range, gouging mode
D: Air pressure adjust control knob
E: Cutting mode selector switch
F: Pilot arc control mode
G: Normal cutting mode
H: Gouging mode
I: Power on indicator
J: Air pressure range, cutting mode



Ordering information

	Systems part numbers		
	With 25' (7.5 m) torch	With 50' (15 m) torch	With 75' (23 m) torch
200 – 600 V, 1/3-PH, CSA			
Hand system	083178	083179	083210
Machine system	083182	083183	083212
230 – 400 V, 3-PH, CE			
Hand system	083192	083193	083211
Machine system	083194	083195	083213

Specifications



Input voltages	200 – 600 V, 1/3-PH, 50 - 60 Hz, CSA 230 – 400 V, 3-PH, 50 - 60 Hz, CE
Input current @ 8.4 kW	200/208/230/240/480 V, 1-PH: 50/48/44/42/22 A 200/208/230/240/400/480/600 V, 3-PH: 30/29/26/24/15/12/11 A
Output voltage	140 VDC
Duty cycle @ 40° C (104° F)	50% @ 60 A, 230 – 600 V, 3-PH 50% @ 60 A, 230 – 480 V, 1-PH 40% @ 60 A, 200 – 208 V, 3-PH 40% @ 60 A, 200 – 208 V, 1-PH
Maximum OCV	300 VDC
Dimensions	23.1" (586 mm) D; 10.7" (271 mm) W; 19.6" (498 mm) H
Weight with torch	83 lbs (37 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

Operating data

	Hand torch	Machine torch
Recommended capacity	3/4" (19 mm)	3/8" (10 mm)
Maximum capacity	1" (25 mm)	1/2" (12 mm)
Severance capacity	1 1/4" (32 mm)	–

Material	Thickness (inches) (mm)	Current (amps)	Maximum travel speed* (ipm) (mm/min.)
Mild steel	26 GA. 0.5	25	638 16205
	10 GA. 3.4	40	151 3835
	1/4 6.4	60	132 3353
	3/8 10	60	63 1600
	1/2 12	60	42 1067
	5/8 16	60	31 787
	3/4 19	60	22 559
Aluminum	1/32 0.8	25	610 15494
	1/8 3.2	40	204 5182
	1/4 6.4	60	145 3683
	3/8 10	60	74 1880
	1/2 12	60	51 1295
	5/8 16	60	33 838
Stainless steel	26 GA. 0.5	25	631 16027
	14 GA. 1.9	40	221 5613
	1/4 6.4	60	110 2794
	3/8 10	60	53 1346
	1/2 12	60	35 889
	5/8 16	60	26 660
	3/4 19	60	18 457

*Maximum travel speeds are the results of Hypertherm's laboratory testing. For optimum cut performance, actual cutting speeds may vary based on different cutting applications. Refer to the operator's manual for more details.

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plasma cutting technology[™]

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