Hypertherm®

powermax600®

High-Performance Portable Plasma Cutting System

3/8" (10 mm)	5/8" (16 mm)	7/8" (22 mm)
RECOMMENDED CAPACITY	MAXIMUM CAPACITY	SEVERANCE CAPACITY

ISO 9001

powermax600®

The Leader In High-Performance Portable Air Plasma Cutting

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.

Powermax600 Makes These Industries More Productive:

- Manufacturing and fabrication
- Equipment maintenance and repair
- Construction and demolition
- Auto or truck modification and repair
- General welding service and repair
- Metal scrapping and salvage
- And many more

Superior Performance by Hand or Machine

The Powermax600 raises performance and reliability standards for air plasma cutting systems. All you need is input power and low-cost compressed air to cut mild steel, stainless steel, aluminum and most other metals with new power and productivity.

- **Recommended Capacity:** steel up to ⅜ inch (10 mm) thick at cutting speeds over 24 inches (600 mm) per minute.
- **Maximum Capacity:** steel up to ⅝ inch (16 mm) thick at cutting speeds over 10 inches (250 mm) per minute.
- **Severance Capacity:** rough cuts on steel up to ⅞ inch (22 mm) thick.

Non-ferrous metals generally require a 10% – 20% speed and thickness reduction.

Machine Torch Operation

- Up to ⅛ inch (3 mm) thick at 100% duty cycle.
- Up to ¼ inch (6 mm) at 50% duty cycle.

The Power Supply: The Heart of the Machine

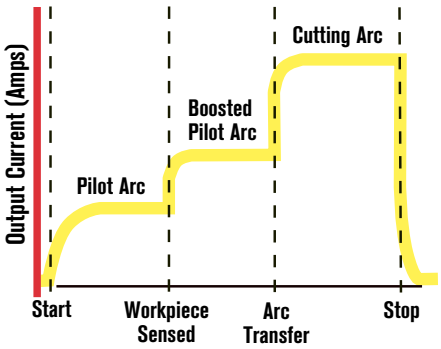
Advanced technology in the power supply enables the Powermax600 to cut with greater quality and efficiency.

- 40-amp, 5.6 kilowatt output cuts through steel up to ⅝ inch (16 mm) thick.
- Advanced digitally-controlled inverter design improves cut quality by delivering constant output regardless of variations in line voltages or torch-to-work distances.
- High duty cycle permits industrial cutting.
- Output current adjustable to 40 amps enables high-quality cutting over a wide range of thicknesses.
- An active electronic pilot-arc controller helps maintain uninterrupted operation when cutting expanded metal or grating.
- An architecture that tolerates power fluctuation and surges permits unrestricted operation on motor generators providing 8 kVA auxiliary power (see instructions).

The Torch: Intelligent Design for Easier Cutting and Lower Operating Cost

- **Longer Consumable Life.** *HyLife® electrodes* last longer than ordinary designs (113% longer, in some tests) by using the same patented hafnium-sizing technologies developed for advanced Hypertherm mechanized systems.

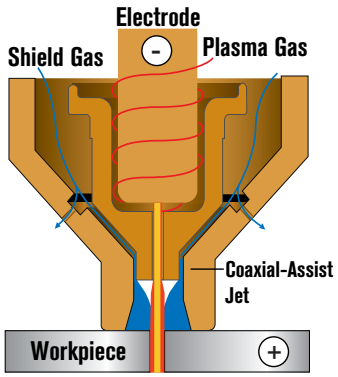
  Dual-threshold pilot™ circuit significantly reduces nozzle wear by boosting pilot current precisely when needed for a strong arc transfer – and not before.



  Patented nozzle shield technology protects the nozzle from molten metal spray and the double-arcing that destroys consumables.

  Post-flow cooling reduces torch stress.

- **Higher Speed.** A patent-pending *coaxial-assist™* jet design boosts cutting speed as much as 20% over conventional designs by stabilizing and shaping the cutting arc.



- **Easier Operation.** *Torch shielding* lets you drag the torch on the workpiece at full output without damaging consumables. Competitive stand-off devices can't match it for convenience and control.
- **No Interference.** Patented "*blow-back*" torch design provides a pilot arc without the excessive high-frequency interference that can damage sensitive electronics.
- **Safe Starting.** Hypertherm's patented PAC123T™ *safety trigger torch* protects against accidental starts.
- **Rugged Operation.** No breakable ceramics threaten the life of the torch. The durable, high-impact clamshell handle provides years of reliable service.
- **Ready Access to Consumables.** Built-in parts compartment keeps consumables close at hand.

- **Easy Torch Change.** A quick-disconnect feature helps keep service downtime to a minimum. (Not available on CE models.)
- **Versatile Applications.** Hypertherm offers consumables for gouging, extended nozzle cutting, pipe saddle cutting and other applications.

Engineered for Superior Reliability

The Powermax600 anticipates heavy use under the harshest conditions.

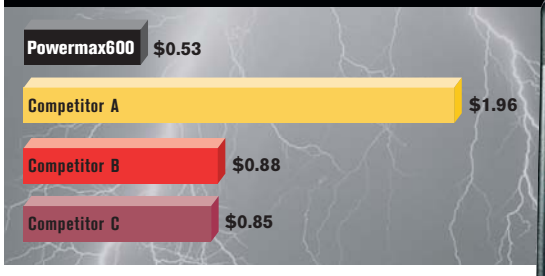
- Mechanical and electrical designs are validated through aggressive, accelerated life, stress, transportation and field testing.
- Voltage input protection guards against damage from mis-wiring in the field.
- Wide voltage operating range of ±15% minimizes performance deterioration, shut-down or potential damage due to fluctuating power line conditions.
- IP23 compliance means resistance to rain damage. The internally mounted air regulator is protected from impact damage.
- CE certifications comply with the highest safety standards.
- The Powermax600 is backed by Hypertherm's full three-year power supply warranty and one-year torch warranty. Unlike some competitive warranties, the Hypertherm warranty backs the entire system, torch and labor.

THREE YEAR WARRANTY

Options for Specialized Requirements

- **FineCut™ Consumables** for superior cut quality on thin plate, mild and stainless steel.
- **Machine Torch** for high-quality cutting on mechanized tables or other fixtures.
- **Wheel Kit** for maximum mobility without an unwieldy cart.
- **Extra-Long Torch Leads and Work Cables** (50'/15 m) for additional reach.
- **Circle Cutting Guide** for cutting measured circles.
- **Leather Cable Covers** for torch leads to provide additional protection against damage.

SUPERIOR PRODUCTIVITY THROUGH TECHNOLOGY
Calculated cost-per-foot of cut on ½" (12 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 35 – 50 amp cutting range.

powermax600
High-Performance Portable Plasma Cutting System

Powermax600 System Components

Standard

- Power Supply
- PAC123T Torch
- Quick-disconnect Torch (not on CE models)
- Spare Consumables
- Work Cable with Clamp 15 feet (4.5 m)
- Primary Power Cable

Options

- Machine Torch and Remote Start Switch
- Wheel Kit
- Extended Work Cable 50 feet (15 m)
- Circle Cutting Guide
- Leather Torch Cable Covers

A: Power On Indicator
B: Pressure Gauge
C: Low Air Pressure Warning
D: Over-Temperature Warning
E: Ready Indicator – Operating Conditions Met
F: Cutting Current Output Control – 20 to 40 amps
G: Low Line Voltage Warning
H: Gas Test/Set Position
I: Torch Cap Sensor Warning
J: Pilot Arc Controller Switch (not on CE models)

Ordering Information

	System Part Numbers		
	15' (4.5 m) torch	25' (7.5 m) torch	50' (15 m) torch
208/240 V, 1 PH, 50/60 Hz, CSA			
Hand System	086030	086031	086032
Machine System	086033	086034	086036
480 V, 3 PH, 50/60 Hz, CSA			
Hand System	086037	086038	086039
Machine System	086040	086041	086043
400 V, 3 PH, 50/60 Hz, CE			
Hand System	086008	086009	086010
Machine System	086011	086012	086013
230 V, 3 PH, 50/60 Hz, CE			
Hand System	086014	086015	086016
Machine System	086017	086018	086019

Specifications

IP23 (where indicated)

Input Voltages	208/240 V, 1 PH, 50/60 Hz, CSA 480 V, 3 PH, 50/60 Hz, CSA 400 V, 3 PH, 50/60 Hz, CE Certified 230 V, 3 PH, 50/60 Hz, CE Certified
Input Current @ 5.6 kW	208/240 V, 1 PH: 46/40 Amps 230/400/480 V, 3 PH: 17/9.7/12 Amps
Output Voltage	140 VDC
Output Current	Adjustable, 20 – 40 Amps
Duty Cycle	50% @ 5.6 kW, 40°C (104°F)
Maximum OCV	300 VDC
Dimensions	20" (510 mm) D; 9.5" (240 mm) W; 17" (430 mm) H
Weight with Torch	47 lbs (21 kg)
Gas Supply	Clean, dry, oil-free air or nitrogen
Flow Rate	360 scfh; 6 cfm (170 l/min)
Flow Pressure	72 psi (5.0 bar)

Operating Data

Mild Steel†	Hand Torch	Machine Torch
Recommended Capacity	3/8" (10 mm)	1/8" (3 mm) @ 100% duty cycle
Maximum Capacity	5/8" (16 mm)	1/4" (6 mm) @ 50% duty cycle
Severance Capacity	7/8" (22 mm)	–

† Non-ferrous metals typically require a 10% – 20% rating reduction.

Material	Thickness (inches)	Thickness (mm)	Current (amps)	Approximate Travel Speed* (ipm)	Approximate Travel Speed* (mm/min.)
Mild Steel	26 GA.	.5	20	270	6,850
	16 GA.	1.5	40	400	10,150
	1/8	3	40	190	4,950
	1/4	6	40	65	1,680
	3/8	10	40	25	640
	5/8	16	40	9	250
Aluminum	0.020	1	20	160	4,150
	16 GA.	1.5	40	430	10,900
	1/8	3	40	170	4,450
	1/4	6	40	60	1,620
	3/8	10	40	20	510
	5/8	16	40	8	200
Stainless Steel	26 GA.	0.5	20	230	5,970
	16 GA.	1.5	40	400	10,150
	1/8	3	40	160	4,060
	1/4	6	40	50	1,320
	3/8	10	40	20	510
	5/8	16	40	7	180

**Recommended travel speeds are approximately 80% of maximum.*

Hypertherm®
The world leader in plasma cutting technology™
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