Hypertherm®

powermax600®

High-Performance Portable Plasma Cutting System

1/2" (12 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 ½ inch (12 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

- **Recommended Capacity:** up to ⅛ inch (3 mm).
- **Maximum Capacity:** up to ¼ inch (6 mm). Cutting above requires an edge start.

The Power Supply: The Heart of the Machine

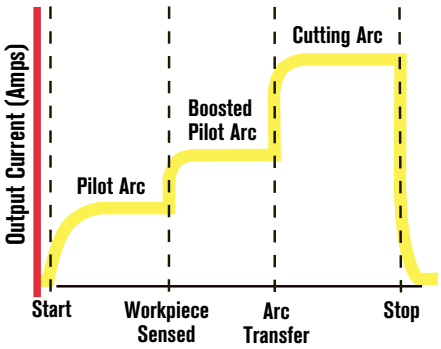
Advanced technology in the power supply enables the Powermax600 to cut with greater quality and efficiency.

- 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.

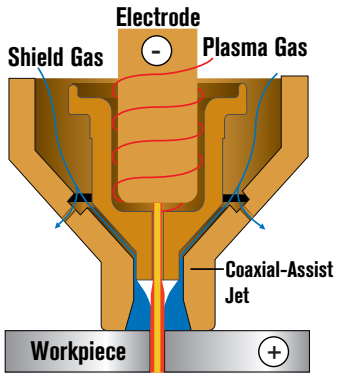
  Dual-threshold pilot™ circuit significantly reduces nozzle wear by boosting pilot current precisely when needed for a strong arc transfer – and not before.



  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.

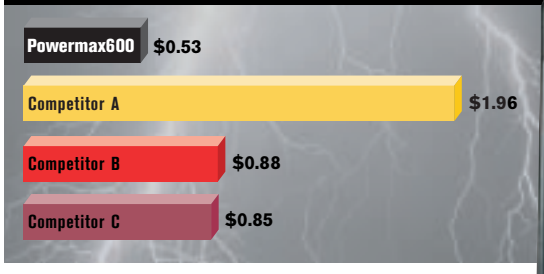
- Mechanical and electrical designs are validated through aggressive, accelerated life, stress, transportation and field testing.
- Voltage input protection guards against damage from mis-wiring in the field.
- Wide voltage operating range of ±15% minimizes performance deterioration, shut-down or potential 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 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 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 - (Part Number)

- Machine Torch 25 feet (7.5m) - 086005
- Remote Start Switch - 028714
- Wheel Kit - 128378
- Extended Work Cable 50 feet (15m) - 128379
- Circle Cutting Guide - 027668
- Leather Cable Covers - 024548
- Air Filtration Kit - 128647

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

CE 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	½" (12 mm)	⅛" (3 mm) @ 100% duty cycle
Maximum Capacity	⅝" (16 mm)	¼" (6 mm) @ 50% duty cycle
Severance Capacity	⅞" (22 mm)	–

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

Material	Thickness (inches)	Thickness (mm)	Current (amps)	Maximum Travel Speed* (ipm)	Maximum Travel Speed* (mm/min.)
Mild Steel	26 GA.	.5	20	340	8,635
	16 GA.	1.5	40	500	12,700
	⅛	3	40	235	5,970
	¼	6	40	72	1,830
	⅜	10	40	34	865
	⅝	16	40	13	330
Aluminum	1/32	1	20	200	5,080
	1/16	1.5	40	535	13,590
	⅛	3	40	210	5,335
	¼	6	40	75	1,905
	⅜	10	40	25	635
	⅝	16	40	10	254
Stainless Steel	26 GA.	0.5	20	290	7,370
	16 GA.	1.5	40	500	12,700
	⅛	3	40	200	5,080
	¼	6	40	60	1,525
	⅜	10	40	25	635
	⅝	16	40	9	230

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

Hypertherm®
The world leader in plasma cutting technology™
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