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Powermax85 SYNC plasma cutter

The Powermax85 SYNC™ is a next-generation professional grade air plasma cutter that dramatically simplifies system operation for cutting and gouging up to 25 mm (1″). Features automated system process set-up via advanced RFID-enabled SmartSYNC™ torches and a revolutionary single-piece cartridge consumable that provides trackable utilization data. The Powermax85 SYNC maximizes productivity through reductions in downtime, optimized cut quality performance and streamlined consumable inventory management.

Video gallery

WHERE TO BUY

REQUEST A QUOTE (/CONTACT-US/?
FORM=REQUEST-A-
QUOTE&PRODUCT=POWERMAX85+SYNC)

(/learn/about-our-
products/powermax-
plasma-cutting-and- (/learn/about-our-products/powermax-
gouging- Compare plasma-cutting-and-gouging-
systems/powermax systems/powermax-system-comparison/)
system-
comparison/)

System information

Drag cutting

For dragging the torch directly across the work piece

Fine feature cutting (/learn/applications/fine-feature-cutting/)

For narrow kerf width with minimal dross and heat affected zone

Flush cutting (/learn/applications/flush-cutting/)

For cutting closer to base materials using a 45 degree

Max control gouging (/learn/applications/gouging/)

For precise metal removal, shallower gouge profiles and light metal washing

Max removal gouging (/learn/applications/gouging/)

For aggressive metal removal, deep gouge profiles, and extreme metal washing

Mechanized cutting

For portable automation and table cutting

Unsupported applications

Extended reach cutting (/learn/applications/extended-reach-cutting/)

For improved visibility and accessibility when cutting in confined spaces

Try Powermax45 XP (/hypertherm/powermax/powermax45-xp/)

Extended reach gouging (/learn/applications/gouging/)

For improved visibility and accessibility when gouging in confined spaces

Try Powermax45 XP (/hypertherm/powermax/powermax45-xp/)

Marking (/learn/applications/marki

For scoring, indicating part identification, hole or weld locations

Try Powermax45 XP (/hypertherm/powermax/pc xp/)

Precision gouging (/learn/applications/gouging/)

For spot and tack weld removal at very low output current

SYSTEM INFORMATION

TORCHES AND CONSUMABLES

CONTACT US

(<25 A)
Try Powermax45 XP
(/hypertherm/powermax/powermax45-xp/)

WHERE TO BUY

Benefits

Easy to use

- Cartridges are easy to identify by process with clear laser marking and color coding to eliminate part mix-ups.
- RFID-enabled SmartSYNC™ torches and cartridges automatically set the correct amperage and operating mode, eliminating setup errors.
- End-of-life consumable detection eliminates the uncertainty of knowing when to change the cartridge.
- Less operator fatigue when using hand torches with our new flexible lead. The lead has the same robustness of our previous lead jacket material and will also be used on robotic torches.

Minimize operation costs

- Simplified system operation minimizes the time and costs spent on training and troubleshooting.
- Reductions to downtime during consumable change-outs and elimination of costs associated with premature disposal of consumable parts.
- Cartridge usage data provides valuable insights for improving cutting operations and consumable inventory management.

Maximize performance

- Tackle a wide range of jobs with easily interchangeable torch styles and application specific cartridges for various types of cutting and gouging.
- Optimized cartridge consumable design provides up to twice the life for handheld cutting and improved quality over life in mechanized setups compared to standard consumables.
- Time-saving hand torch controls allow the operator to adjust the amperage on the fly, change cartridges and applications without returning to the power supply.

Industry-leading reliability

- SmartSYNC™ torches (/hypertherm/powermax/smartsync/) are engineered for rugged, industrial environments.
- SpringStart™ technology ensures consistent starting and a more reliable torch.
- Industry-leading reliability reduces production downtime.

Specifications

Cut capacity

Capacity	Thickness	Cut speed
Recommended	25 mm (1")	500 mm/min (20 ipm)
	32 mm (1-1/4")	250 mm/min (10 ipm)
Severance (hand cutting)	38 mm (1-1/2")	125 mm/min (5 ipm)
Pierce*	20 mm (3/4")	

Pierce rating for handheld cutting, or mechanized cutting with programmable torch height control.

Maximum removal gouging

Capacity	Metal removal rate	Gouge profile
Typical gouge	8,2 kg (18.2 lbs.) per hour	3,5 mm D x 6,6 mm W (0.14" D x 0.26" W)

General specifications

Input voltages	200–480 V, 1-PH, 50/60 Hz 200–600 V, 3-PH, 50/60 Hz
Kilowatt output	12.2 kW

Input current	200/208/240/480, 1-PH 70/68/58/29 A @ 12.2 KW 200/208/240/480/600 V, 3-PH 42/40/35/18/17 A @ 12.2 KW
Output current	25–85 A
Rated output voltage	143 VDC
Duty cycle @ 104° F	60% @ 85 A, 230–600 V, 3-PH 60% @ 85 A, 480 V, 1-PH 50% @ 85 A 240 V, 1-PH 50% @ 85 A, 200–208 V, 3-PH 40% @ 85 A, 200–208 V, 1-PH 100% @ 66 A, 230–600 V, 1/3-PH
Open circuit voltage (OCV)	305 VDC
Dimensions with handles	483 mm D; 233 mm W; 430 mm H (19″ D; 9.2″ W; 17″ H)
Weight w/7.6 m (25′) torch	32 kg (67 lbs.)
Gas supply	Clean, dry, oil-free air or nitrogen
Optimum inlet gas pressure	7.6–8.3 bar (110–120 psi)
Minimum inlet gas pressure	5.2 bar (75 psi)
Recommended inlet gas flow rate	Cutting: 210 l/min @ 5.9 bar (450 scfh, 7.5 scfm @ 85 psi) Gouging: 210 l/min @ 4.8 bar (450 scfh, 7.5 scfm @ 70 psi)
Input power cable length	3 m (10′)
Power supply type	Inverter–IGBT
Engine drive requirement	20 kW for full 85 A output
Certifications	CSA-certified for use in the Americas and Asia, except China
Warranty	Power supplies have a 3-year warranty and torches a 1-year warranty

Buying information

Resources

SmartSYNC torches (/hypertherm/powermax/smartsync/) feature RFID capability that when coupled with a Hypertherm cartridge will communicate with a Powermax SYNC system to automatically set the amperage and process on the power supply. Available in handheld, mechanized and robotic torch configurations.

	Hand torches		Machine torches	Robotic/Mini		
	75°	15°	180°	180°	90°	45°
4,5 m (15')				059733		
7,6 m (25')	059726	059723	059719	059734	059731	059729
10,7 m (35')			059720			
15,2 m (50')	059727	059724	059721	059735	059732	059730
22,8 m (75')	059728	059725	059722		059767	059766

Hypertherm cartridges

The Hypertherm cartridge consumable platform (/learn/consumables-and-torches/for-powermax-and-max-systems/hypertherm-cartridges/) is a revolutionary change to standard air plasma consumables. Each single-piece cartridge is optimized by process and amperage to ensure performance while dramatically simplifying the parts needed to cut or gouge with plasma.

Hypertherm cartridges for Powermax systems are manufactured to uphold our high standards for quality and reliability. As part of the manufacturing process, we test-fire each cartridge to ensure proper assembly and function. As a result, there may be burn marks on the tip of the cartridge. This is normal and not a sign of damage.

Drag cutting and FineCut for hand torches

Mechanized and FineCut for machine torches

Max removal and max control gouging

FlushCut options

Related products

Systems	Accessories	Software	Torches

(/hypertherm/powermax/powermax65-sync/)

Powermax65 SYNC plasma cutter (/hypertherm/powermax/powermax65-sync/)

Professional-grade 20 mm (3/4″) plasma cutter provides automated process set-up and a revolutionary cartridge consumable platform for ease of use and optimized performance. Featuring a wide variety of torches and application capabilities for handheld and mechanized cutting and gouging.

(/hypertherm/powermax/powermax105-sync/)

Powermax105 SYNC plasma cutter (/hypertherm/powermax/powermax105-sync/)

Professional-grade 32 mm (1-1/4″) plasma cutter provides automated process set-up and a revolutionary cartridge consumable platform for ease of use and optimized performance.

SYSTEM INFORMATION

TORCHES AND CONSUMABLES

CONTACT US

How can we help you?

Request a quote

(/contact-us/?form=request-a-quote&product=POWERMAX85+SYNC)

Contact sales

(/contact-us/?form=ask-a-product-question&product=POWERMAX85+SYNC)

Product support

(/support/resources-by-product/?productcode=POWERMAX85+SYNC)