HYPERTHERM®
A Hypertherm Associates Brand

Powermax85 SYNC

Recommended cut capacity of 25 mm (1")

Severance capacity of 38 mm (1-1/2")

Professional grade

Part of the Powermax® family, the Powermax85 SYNC features advanced torch communication for automated setup and patented single-piece cartridges for hand cutting, mechanized or robotic cutting, or gouging.

Key business benefits

Simplify operations and boost productivity
Single-piece cartridge simplifies operations and dramatically reduces training time

Minimize operating costs
Up to 5x longer consumable life compared to competitors decreases operating costs

Reduce secondary operations
Improved cut quality over consumable life delivers better part consistency to reduce secondary operations

Powermax85 SYNC cut and gouge capacities

Cut 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 use or with automatic torch height control

Gouge capacity	Metal removal rate	Groove profile
Typical gouge	8.2 kg (18.2 lbs) per hour	3.2 mm (.12") D x 6.8 mm (.26") W

Torch output**	12.2 kW
	85 A x 143 V ÷ 1000 W = 12.2 kW

**Higher output voltage at the torch plus efficiently designed consumables result in a faster, cleaner cut.

Powermax85 SYNC. Easy to use. Versatile. Reliable.

For metal workers who want the most versatile system available to gouge and cut, Powermax85 SYNC delivers the best return on investment. It features a patented single-piece cartridge, greater cutting power than higher-amperage competitors, an automated system process set-up, and SmartSYNC® torches that provide trackable utilization data.

"We're very impressed with the machine's cut quality and love the cartridges. The cartridge life span far exceeds our older machine's consumables, and the cartridge takes seconds to replace."

Salt Creek Fab, United States

THE BEST INVESTMENT IS IN YOUR POWER

Highlighted product features:

Easy to use

- SmartSYNC® torches with the cartridge automatically set the correct amperage and operating mode, eliminating setup errors
- Easy to identify single-piece cartridges are color-coded by process to eliminate parts mix-up and simplify consumable inventory management
- End-of-life detection lets the operator know when it's time to change the cartridge
- Simplified operation minimizes downtime, troubleshooting, waste, and training time

Versatile

- Tackle a wide range of jobs with easily interchangeable torch styles and application-specific cartridges for various types of cutting and gouging
- Time-saving torch controls allow the operator to adjust the amperage on the fly and change cartridges and applications without returning to the power supply
- Access cartridge data for performance tracking and analyzing usage patterns

Industry-leading reliability

- Powermax plasma cutters are known to last decades in the field, minimizing maintenance and downtime
- Power supplies and torches are engineered for rugged industrial environments
- Each Powermax component is tested to perform reliably in demanding conditions

Specifications

CE – for use in Europe, Australia & New Zealand - RCM, Serbia, UK – UKCA, Ukraine, and other countries where accepted.

CCC – for use in China

CSA – for use in the Americas and Asia, except China

CE	CCC	CSA	

Input voltages (± 10%)			
		↳	200–480 V, 1-PH, 50/60 Hz
		↳	200–600 V, 3-PH, 50/60 Hz
↳	↳		400 V, 3-PH, 50–60 Hz

Input current @ 12.2 kW			
		↳	200/208/240/480, 1-PH 70/68/58/29 A
		↳	200/208/240/480/600 V, 3-PH 42/40/35/18/17 A
↳	↳		380/400 V, 3-PH 20.5/19.5 A

Output current	25–85 A
Rated output voltage	143 VDC

Duty cycle @ 40° C (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
↳	↳		60% @ 85 A, 380–400 V, 3-PH
↳	↳		100% @ 66 A, 380–400 V, 3-PH

Open circuit voltage (OCV)			
		↳	305 VDC
↳	↳		270 VDC

Dimensions with handles	483 mm D; 233 mm W; 430 mm H (19" D; 9.2" W; 17" H)

Weight with 7.6 m (25') torch			
		↳	32 kg (67 lbs.)
↳	↳		23.5 kg (52 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 gas inlet flow rate/ pressure	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 or 25 kVa for full 85 A output
Electrical efficiency	91.9%
Recyclability	100%
Warranty	Power supply: 3-year, Torch: 1-year

Ordering information

Below are the standard system configurations, which include a power supply, torch and work cable.

CE – for use in Europe, Australia & New Zealand - RCM, Serbia, UK – UKCA, Ukraine, and other countries where accepted. CCC – for use in China. CSA – for use in the Americas and Asia, except China	75° hand torch		75° and 15° hand torch	180° full-length machine torch			180° full-length machine torch and 75° hand torch
CE CCC CSA — Torch lead length	7.6 m (25')	15.2 m (50')	7.6 m (25')	7.6 m (25')	10.7 m (35')	15.2 m (50')	10.7 m/7.6 m (35'/25')
✔ = With remote pendant				✔		✔	✔

	Powermax85 SYNC® power supplies	Handheld			Mechanized				
CE CCC ↳ ↳	Standard power supply	087196	087197	087200					
↳ (CSA)	Standard power supply	087183	087184	087187					
CE CCC ↳ ↳	Power supply with CPC port and voltage divider	087198	087199		087201	087202		087203	087204
↳ (CSA)	Power supply with CPC port and voltage divider	087185	087186		087207	087189		087208	087190
CE CCC ↳ ↳	Power supply with CPC port, voltage divider, and serial port					087205	087220	087206	
↳ (CSA)	Power supply with CPC port, voltage divider, and serial port				087192		087218 *	087219 *	

* with ring terminated work lead

Custom configurations

Select power supply, torch, work cable, cartridge, and other components

Power supply options

CE – for use in Europe, Australia & New Zealand - RCM, Serbia, UK – UKCA, Ukraine, and other countries where accepted. CCC –for use in China. CSA - for use in the Americas and Asia, except China	Standard	With CPC port and voltage divider	With CPC port, voltage divider and serial port
CE CCC CSA			
CE CCC ↳ ↳ — Powermax85 SYNC 380–400 V	087210	087211	087212
↳ (CSA) — Powermax85 SYNC 200–600 V	087213	087214	087215

Work leads

	Hand clamp	C-clamp	Ring terminal
7.6 m (25')	223035	223203	223209
15.2 m (50')	223034	223204	223210
22.8 m (75')	223033	223205	223211

Cable options

Cable length	Remote pendant	Control cables				
		CNC, spade connector, divided voltage	CNC, spade connector, no divided voltage	CNC, D-sub connector, divided voltage	RS-485 Serial comm, unterminated	RS-485 Serial comm, D-sub
7.6 m (25')	128650	228350	023206	223048	223236	223239
15.2 m (50')	128651	228351	023279	123896	223237	223240
22.8 m (75')	128652					

Torch options

| | Hand torches | | Long torches | | | | Machine torches | Robotic/Mini | | |
	75°	15°	0.6 m (2'), 45°	0.6 m (2'), 90°	1.2 m (4'), 45°	1.2 m (4'), 90°	180°	180°	90°	45°
4.5 m (15')								059733		
7.6 m (25')	059726	059723			528114		059719	059734	059731	059729
10.7 m (35')							059720			
15.2 m (50')	059727	059724	528116	528117	528118	528119	059721	059735	059732	059730
22.8 m (75')	059728	059725					059722		059767	059766
30 m (100')	059770									

Powermax cartridge options

	Drag cutting	Mechanized/standoff cutting	Max removal gouging	Max control gouging	Ohmic ring kit
45 A	428927	428925			
65 A	428931	428930	428932	428933	428895*
85 A	428935	428934			

| | FlushCut™ | FineCut® | | HyAccess™ | | |
		Handheld	Mechanized	Drag cutting	Gouging	Mechanized
30–45 A		428928	428926			
65 A	428952			428984	428987	528079
85 A	428953					

*Kit includes three 420580 ohmic ring clips.

Cartridge reader
The cartridge reader works with the Powermax SYNC® cartridge reader app to provide a simple process for reviewing data stored in Powermax cartridges. Part number 528083

Torches and cartridges

HAND CUTTING
GOUGING
MECHANIZED
FLUSHCUT
HYACCESS

75° hand torch
15° hand torch
Mechanized torch
Robotic torch
Long torch

Learn more at www.hypertherm.com/powermax85sync

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