

# 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

## 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.

## 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**

## Our customers' preferred cutting tool for industries including:

- Job shops and general fabrication
- Truck and trailer fabrication
- Tank and vessel fabrication
- Railyard maintenance and railcar fabrication
- Demolition and metal salvage
- Agricultural/equipment maintenance

## 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 – CSA

<b>Input voltages (± 10%)</b>	200–480 V, 1-PH, 50/60 Hz 200–600 V, 3-PH, 50/60 Hz 200/208/240/480, 1-PH 70/68/58/29 A
<b>Input current @ 12.2 kW</b>	200/208/240/480/600 V, 3-PH 42/40/35/18/17 A
<b>Output current</b>	25–85 A
<b>Rated output voltage</b>	143 VDC
<b>Duty cycle @ 40° C (104° F)</b>	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	
<b>Open circuit voltage (OCV)</b>	305 VDC
<b>Weight with 7.6 m (25') torch</b>	32 kg (67 lbs.)

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

## Specifications – CE/CCC

<b>Input voltages (± 10%)</b>	400 V, 3-PH, 50–60 Hz
<b>Input current @ 12.2 kW</b>	380/400 V, 3-PH 20.5/19.5 A
<b>Output current</b>	25–85 A
<b>Rated output voltage</b>	143 VDC
<b>Duty cycle @ 40° C (104° F)</b>	60% @ 85 A, 380–400 V, 3-PH
	100% @ 66 A, 380–400 V, 3-PH
<b>Open circuit voltage (OCV)</b>	270 VDC
<b>Weight with 7.6 m (25') torch</b>	23.5 kg (52 lbs.)

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

<b>Dimensions with handles</b>	483 mm D; 233 mm W; 430 mm H (19" D; 9.2" W; 17" H)
<b>Gas supply</b>	Cutting: air (clean, dry and oil-free), nitrogen
<b>Recommended gas inlet flow rate/pressure</b>	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)
<b>Input power cable length</b>	3 m (10')
<b>Power supply type</b>	Inverter – IGBT
<b>Engine drive requirement</b>	20 kW or 25 kVA for full 85 A output
<b>Electrical efficiency</b>	91.9%
<b>Recyclability</b>	100%
<b>Warranty</b>	Power supply: 6-year, Torch: 1-year

## Ordering information – CSA

Below are the standard system configurations, which include a power supply, torch or torches, work cable, 3–4 cartridges, and product information. Some configurations may include additional items such as a remote pendant and communication cables.

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		
	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				✓			✓	✓
<b>Powermax85 SYNC® power supplies</b>	<b>Handheld</b>			<b>Mechanized</b>				

200–600 V CSA power supply	087183	087184	087187						
200–600 V CSA power supply with CPC port and voltage divider	087185	087186		087207	087189		087208	087190	083351
200–600 V CSA power supply with CPC port, voltage divider, and serial port				087192		087218 *		087219 *	

\* with ring terminated work lead

## Custom configurations – CSA

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

Power supply options	Standard	With CPC port and voltage divider	With CPC port, voltage divider and serial port
<b>Powermax85 SYNC 200–600 V</b>	087213	087214	087215

## Ordering information – CE/CCC

Below are the standard system configurations, which include a power supply, torch or torches, work cable, 3–4 cartridges, and product information. Some configurations may include additional items such as a remote pendant and communication cables.

CE – for use in Europe, Australia & New Zealand – RCM, Serbia, UK – UKCA, Ukraine, and other countries where accepted. CCC – for use in China.	75° hand torch		75° and 15° hand torch	180° full-length machine torch		180° full-length machine torch and 75° hand torch		
	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				✓			✓	✓
<b>Powermax85 SYNC® power supplies</b>	<b>Handheld</b>			<b>Mechanized</b>				

400 V CE/CCC standard power supply	087196	087197	087200					
400 V CE/CCC power supply with CPC port and voltage divider	087198	087199		087201	087202		087203	087204
400 V CE/CCC power supply with CPC port, voltage divider, and serial port					087205	087220	087206	

## Custom configurations – CE/CCC

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

	Standard	With CPC port and voltage divider	With CPC port, voltage divider and serial port
<b>Powermax85 SYNC 380–400 V CE/CCC</b>	087210	087211	087212

	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	428932	428933	428895*
65 A	428931	428930			
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					



### 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

\*Kit includes three 420580 ohmic ring clips.

## Torches and cartridges



Learn more at [www.hypertherm.com/powermax85sync](http://www.hypertherm.com/powermax85sync)

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