

# Powermax105 SYNC

Recommended cut capacity of 32 mm (1-1/4")

Severance capacity of 50 mm (2")

Professional grade



Part of the Powermax® family, the Powermax105 SYNC features advanced torch communication for automated setup and patented single-piece cartridges for hand cutting, mechanized or robotic cutting, and 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

## Powermax105 SYNC cut and gouge capacities

Cut capacity	Thickness	Cut speed
Recommended	32 mm (1-1/4")	500 mm/min (20 ipm)
	38 mm (1-1/2")	250 mm/min (10 ipm)
Severance (hand cutting)	50 mm (2")	125 mm/min (5 ipm)
Pierce*	22 mm (7/8")	
*Pierce rating for handheld use or with automatic torch height control		
Gouge capacity	Metal removal rate	Groove profile
Typical gouge	8.6 kg (19.1 lbs.) per hour	6.6 mm D x 6.2 mm W (.26 D x .24 W)

Torch output**	16.8 kW
	105 A x 160 V ÷ 1000 W = 16.8 kW

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

## Powermax105 SYNC. Easy to use. Versatile. Reliable.

For metal workers who want the most versatile system available to gouge and cut, Powermax105 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.

**“Our operators just love the Powermax SYNC. It’s a much simpler process changing the consumables, and we’re seeing better life.”**

Best Fender Products  
United States

**THE BEST  
INVESTMENT  
IS IN YOUR  
POWER**

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

- Shipbuilding/ship repair
- Truck and trailer fabrication
- Tank and vessel manufacturing
- 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, 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	
<b>Input voltages (± 10%)</b>			
↳		↳	200–600 V, 3-PH, 50/60 Hz
↳	↳		380–400 V, 3-PH, 50–60 Hz
<b>Input current @ 16.8 kW</b>			
		↳	200/208/240/480/600 V, 3-PH 58/56/49/25/22 A
↳			230/400 V, 3-PH 50/29 A
	↳		380/400 V, 3-PH 30/28 A
<b>Output current</b>			30–105 A
<b>Rated output voltage</b>			160 VDC
<b>Duty cycle @ 40° C (104° F)</b>			
↳	↳	↳	70% @ 105 A, 240 V, 3-PH
		↳	80% @ 105 A, 480–600 V, 3-PH
		↳	100% @ 94 A, 480–600 V, 3-PH
		↳	100% @ 88 A, 240 V, 3-PH
↳	↳		80% @ 105 A, 400 V, 3-PH
↳	↳		100% @ 94 A, 400 V, 3-PH
↳	↳		100% @ 88 A, 230 V, 3-PH
<b>Open circuit voltage (OCV)</b>			
		↳	300 VDC
↳	↳		288 VDC
<b>Dimensions with handles</b>			592 mm D; 274 mm W; 508 mm H (23.3" D; 10.8" W; 20.0" H)
<b>Weight with 7.6 m (25') torch</b>			
↳		↳	230–400 V: 42.7 kg (94 lbs.)
↳	↳		400 V: 39.4 kg (87 lbs.)
<b>Gas supply</b>			Clean, dry, oil-free air or nitrogen
<b>Optimum inlet gas pressure</b>			7.6–8.3 bar (110–120 psi)
<b>Minimum inlet gas pressure</b>			5.5 bar (80 psi)
<b>Recommended gas inlet flow rate/pressure</b>			Cutting:
			260 l/min @ 6.2 bar (550 scfh, 9.1 scfm @ 90 psi)
			Gouging:
			260 l/min @ 4.8 bar (550 scfh, 9.1 scfm @ 70 psi)
<b>Input power cable length</b>			3 m (10')
<b>Power supply type</b>			Inverter – IGBT
<b>Engine drive requirement</b>			30 kW or 37.5 kVA for full 105 A output
<b>Electrical efficiency</b>			91%
<b>Recyclability</b>			100%
<b>Warranty</b>			Power supply: 3-year, Torch: 1-year

## Ordering information

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

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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				✓		✓	✓

Powermax105 SYNC® power supplies				Handheld			Mechanized					
↩	↩		Standard power supply 380–400 V	059690	059691	059692						
↩			Standard power supply 230–400 V	059679	059680							
		↩	Standard power supply 200–600 V	059625	059626	059634						
↩	↩		Power supply with CPC port and voltage divider 380–400 V	059679	059680		059694	059693		059695	059681	
↩			Power supply with CPC port and voltage divider 230–400 V					059682			059683	
		↩	Power supply with CPC port and voltage divider	059627	059628		059636	059637		059639	059638	059687
↩	↩		Power supply with CPC port, voltage divider, and serial port					059697	059765		059698	
↩	↩		Power supply with CPC port, voltage divider, and serial port 380–400 V					059712	059764			
		↩	Power supply with CPC port, voltage divider, and serial port 230–400 V					059684	059762*		059763	

\* 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				
↩	↩		Powermax105 SYNC 380–400 V	059708	059709	059710
↩			Powermax105 SYNC 230–400 V	059701	059702	059703
		↩	Powermax105 SYNC 200–600 V	059704	059705	059706

### Work leads

	Hand clamp	C-clamp	Ring terminal
7.6 m (25')	223254	223287	223284
15.2 m (50')	223255	223288	223285
22.8 m (75')	223256	223289	223286

### Cable options

Control cables						
Cable length	Remote pendant	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			
105 A	428937	428936	428938	428939	

	FlushCut™	FineCut®		HyAccess™		
		Handheld	Mechanized	Drag cutting	Gouging	Mechanized
30-45 A		428928	428926			
65 A	428952			428984	428987	528079
85 A	428953					
105 A	428954					



### 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/powermax105sync](http://www.hypertherm.com/powermax105sync)

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