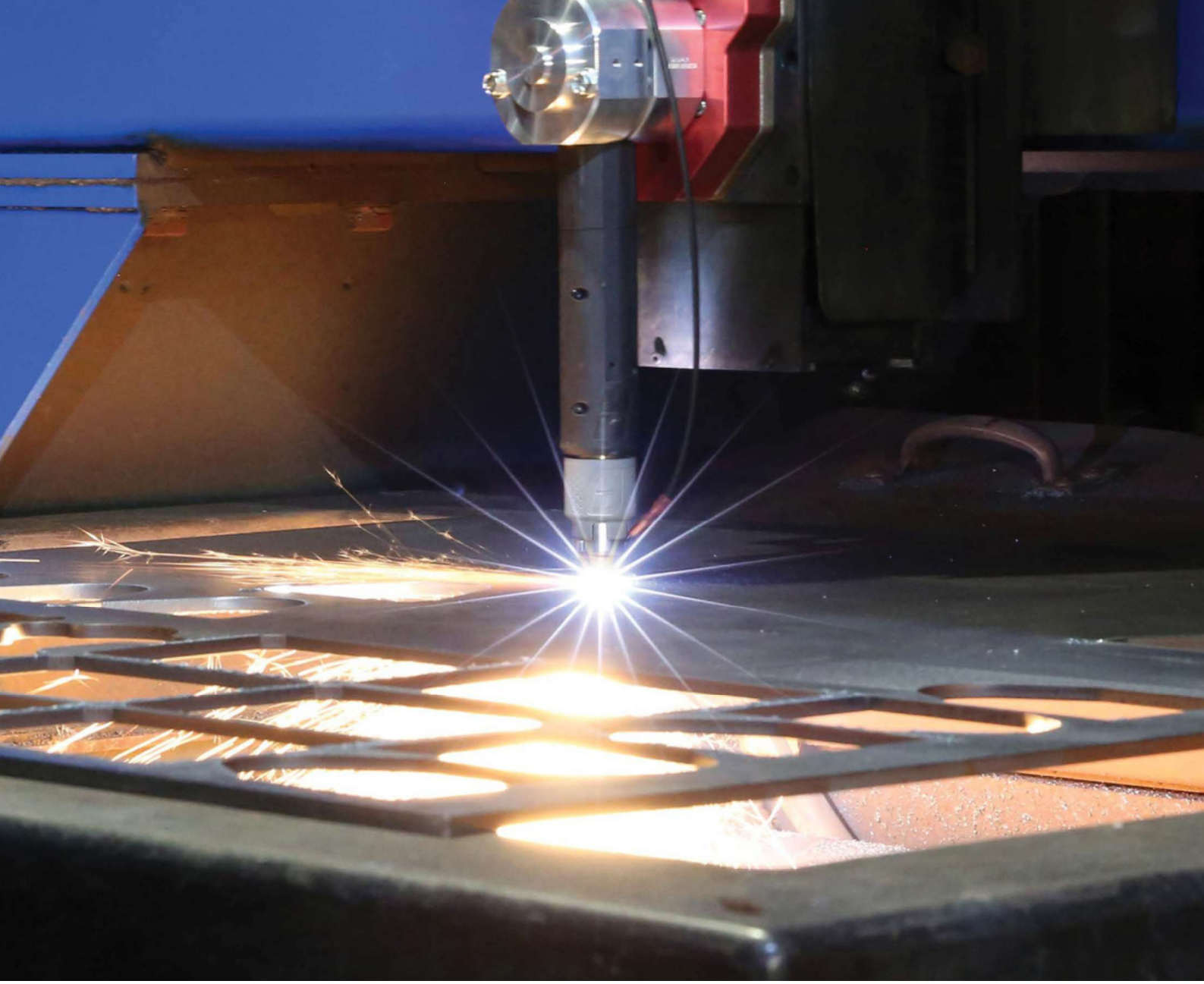
HYPERTHERM®
A Hypertherm Associates Brand

Powermax SYNC® series

Professional air plasma systems from 65–105 amps







A dramatically simplified consumable platform combined with advanced torch communication for automated setup makes Hypertherm's new Powermax65/85/105 SYNC® plasma systems the smarter choice for any cutting or gouging application.



Easy to use

- Easy to identify single-piece cartridge consumables are color coded by process to eliminate parts mix-up and simplify consumable inventory management.
- New SmartSYNC™ torches with the Hypertherm cartridge automatically set the correct amperage and operating mode, eliminating setup errors.
- End of life detection lets the operator know when it's time 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.

Minimizes operating costs

- Simplified operation minimizes downtime, troubleshooting, waste and training time.
- Advanced cartridge consumable design provides up to twice the life for hand cutting and improved quality over life in mechanized setups compared to standard consumables.
- Access cartridge data for performance tracking, analyzing usage patterns.

	Powermax65 SYNC		Powermax85 SYNC		Powermax105 SYNC	
Capacity	**Thickness**	**Cut speed**	**Thickness**	**Cut speed**	**Thickness**	**Cut speed**
	Cutting					
Recommended	20 mm	500 mm/min	25 mm	500 mm/min	32 mm	500 mm/min
	25 mm	250 mm/min	32 mm	250 mm/min	38 mm	250 mm/min
Severance	32 mm	125 mm/min	38 mm	125 mm/min	50 mm	125 mm/min
Pierce*	16 mm		20 mm		22 mm	
	*Pierce rating for handheld use or with automatic height control					
Capacity	**Metal removal rate**	**Groove profile**	**Metal removal rate**	**Gouge profile**	**Metal removal rate**	**Gouge profile**
	Maximum removal gouging					
Typical gouge	4 kg per hour	2,9 mm D x 6,4 mm W	8,2 kg per hour	3,5 mm D x 6,6 mm W	8,6 kg per hour	6,6 mm D x 6,2 mm W


Powermax105 SYNC

Maximize performance

- Tackle a wide range of jobs with easily interchangeable torch styles and application-specific Hypertherm cartridge consumables for various types of cutting and gouging.
- Reduce training time with simplified set up and consistent performance.
- Time-saving torch controls allow the operator to adjust the amperage on the fly and change consumables and applications without returning to the power supply.

Industry-leading reliability

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

Torches and cartridges



75° hand torch

15° hand torch



Mechanized torch



New color-coded, quarter-turn cartridges can be changed out in about 10 seconds!



Gouging mode LED

Active/Inactive/Fault LED

7-step amperage LED scale

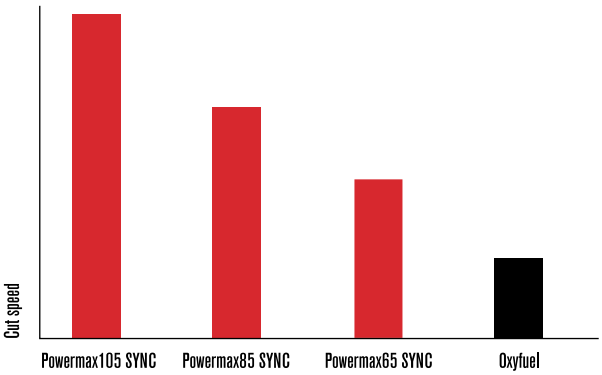
Amperage adjustment button

Torch lock switch

Specifications

	Powermax65 SYNC®	Powermax85 SYNC®	Powermax105 SYNC®
Input voltages	400 V, 3-PH 50/60 Hz	400 V, 3-PH, 50/60 Hz	230–400 V, 3-PH, 50/60 Hz 400 V, 3-PH, 50/60 Hz
Kilowatt output	9 kW	12,2 kW	16,8 kW
Input current	380/400 V, 3-PH 15,5/15 A @ 9 kW	380/400 V, 3-PH 20,5/19,5 A @12,2 KW	230/400 V, 3-PH 50/29 A @ 16,8 kW 380/400 V, 3-PH 30/28 A @ 16 kW
Output current	20–65 A	25–85 A	30–105 A
Rated output voltage	139 VDC	143 VDC	160 VDC
Duty cycle @ 40° C	50% @ 65 A, 380–400 V, 3-PH 100% @ 46 A, 380–400 V, 3-PH	60% @ 85 A, 380–400 V, 3-PH 100% @ 66 A, 380–400 V, 3-PH	70% @ 105 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
Open circuit voltage (OCV)	270 VDC	270 VDC	288 VDC
Dimensions with handles	483 mm D; 233 mm W; 430 mm H	483 mm D; 233 mm W; 430 mm H	592 mm D; 274 mm W; 508 mm H
Weight w/7,6 m torch	20,6 kg	23,5 kg	230–400 V: 42,7 kg 400 V: 39,4 kg
Gas supply	Clean, dry, oil-free air or nitrogen	Clean, dry, oil-free air or nitrogen	Clean, dry, oil-free air or nitrogen
Optimum inlet gas pressure	7,6–8,3 bar	7,6–8,3 bar	7,6–8,3 bar
Minimum inlet gas pressure	5,2 bar	5,2 bar	5,5 bar
Recommended inlet gas flow rate	Cutting: 210 l/min @ 5,9 bar Gouging: 210 l/min @ 4,8 bar	Cutting: 210 l/min @ 5,9 bar Gouging: 210 l/min @ 4,8 bar	Cutting: 260 l/min @ 6,2 bar Gouging: 260 l/min @ 4,8 bar
Input power cable length	3 m	3 m	3 m
Power supply type	Inverter – IGBT	Inverter – IGBT	Inverter – IGBT
Engine drive requirement	15 kW for full 65 A output	20 kW for full 85 A output	30 kW for full 105 A output
Certifications	CE, C-Tick, CU/GOST, Ukr, and Serbian — for use in Europe, Australia, Belarus, Kazakhstan, Russia, Serbia, Ukraine, and other countries where accepted. UKCA – Great Britain	CE, C-Tick, CU/GOST, Ukr, and Serbian — for use in Europe, Australia, Belarus, Kazakhstan, Russia, Serbia, Ukraine, and other countries where accepted. UKCA – Great Britain	CE, C-Tick, CU/GOST, Ukr, and Serbian — for use in Europe, Australia, Belarus, Kazakhstan, Russia, Serbia, Ukraine, and other countries where accepted. UKCA – Great Britain
Warranty	Power supplies have a 3-year warranty and torches a 1-year warranty	Power supplies have a 3-year warranty and torches a 1-year warranty	Power supplies have a 3-year warranty and torches a 1-year warranty

Relative cut performance on 12 mm mild steel



Ordering information

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

CE	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	15,2 m	7,6 m	7,6 m		10,7 m	15,2 m		10,7 m/7,6 m
Powermax65 SYNC® power supplies			Without remote pendant	With remote pendant	Without remote pendant	Without remote pendant	With remote pendant	Without remote pendant	With remote pendant
Standard power supply	083356	083357	083360						
Power supply with CPC port and voltage divider	083358	083359		083362	083327		083363	083364	083365
Power supply with CPC port, voltage divider, and serial port					083366	083377		083367	
Powermax85 SYNC® power supplies			Without remote pendant	With remote pendant	Without remote pendant		With remote pendant	Without remote pendant	With remote pendant
Standard power supply	087196	087197	087200						
Power supply with CPC port and voltage divider	087198	087199		087201	087202			087203	087204
Power supply with CPC port, voltage divider, and serial port					087205	087220		087206	
Powermax105 SYNC® power supplies			Without remote pendant	With remote pendant	Without remote pendant		With remote pendant	Without remote pendant	With remote pendant
Standard power supply 400 V	059690	059691	059692						
Standard power supply 230–400 V	059679	059680							
Power supply with CPC port and voltage divider 400 V				059694	059693		059695	059681	
Power supply with CPC port and voltage divider 230–400 V					059682			059683	
Power supply with CPC port, voltage divider, and serial port 400 V					059697	059765		059698	
Power supply with CPC port, voltage divider, and serial port 230–400 V						059764		059712	

Custom configurations (select power supply, torch, work cable, cartridge, and other components)

Power supply options

	Standard power supply	Power supply with CPC port and voltage divider	Power supply with CPC port, voltage divider and serial port
Powermax65 SYNC 400 V	083368	083369	083370
Powermax85 SYNC 400 V	087210	087211	087212
Powermax105 SYNC 400 V	059708	059709	059710
Powermax105 SYNC 230–400 V	059701	059702	059703

Torch options

	Hand torches		Machine torches	Robotic/Mini			Long torches			
	75°	15°	180°	180°	90°	45°	0,6 m, 45°	0,6 m, 90°	1,2 m, 45°	1,2 m, 90°
4,5 m				059733						
7,6 m	059726	059723	059719	059734	059731	059729			528114	
10,7 m			059720							
15,2 m	059727	059724	059721	059735	059732	059730	528116	528117	528118	528119
22,8 m	059728	059725	059722		059767	059766				

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	128650	228350	023206	223048	223236	223239
15,2 m	128651	228351	023279	123896	223237	223240
22,8 m	128652					

Work leads	Powermax65 SYNC	Powermax85 SYNC	Powermax105 SYNC
Ring terminal			
7,6 m	223200	223209	223284
15,2 m	223201	223210	223285
22,8 m	223202	223211	223286
C-clamp			
7,6 m	223194	223203	223287
15,2 m	223195	223204	223288
22,8 m	223196	223205	223289
Hand clamp			
7,6 m	223125	223035	223254
15,2 m	223126	223034	223255
22,8 m		223033	223256

Cartridge reader



The cartridge reader works with the Powermax SYNC® cartridge reader app to provide a simple process for reviewing data stored in Hypertherm cartridges. The cartridge reader fits into the cartridge and works with the near-field communication (NFC) antenna of your mobile device to transfer data stored in the cartridge into the app. Data in the app can then be imported into the cartridge excel data analysis tool, or a customer created tool, to analyze performance for starts, transfers, arc-on time, and other valuable cartridge data. Analysis of this data helps customers better understand cartridge utilization and identify operator training opportunities.

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Hypertherm 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	

*Kit includes three 420580 ohmic ring clips.

Specialty application cartridge options

	FlushCut™	FineCut® handheld	FineCut® mechanized
30–45 A		428928	428926
65 A	428952		
85 A	428953		
105 A	428954		

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