Hypertherm®
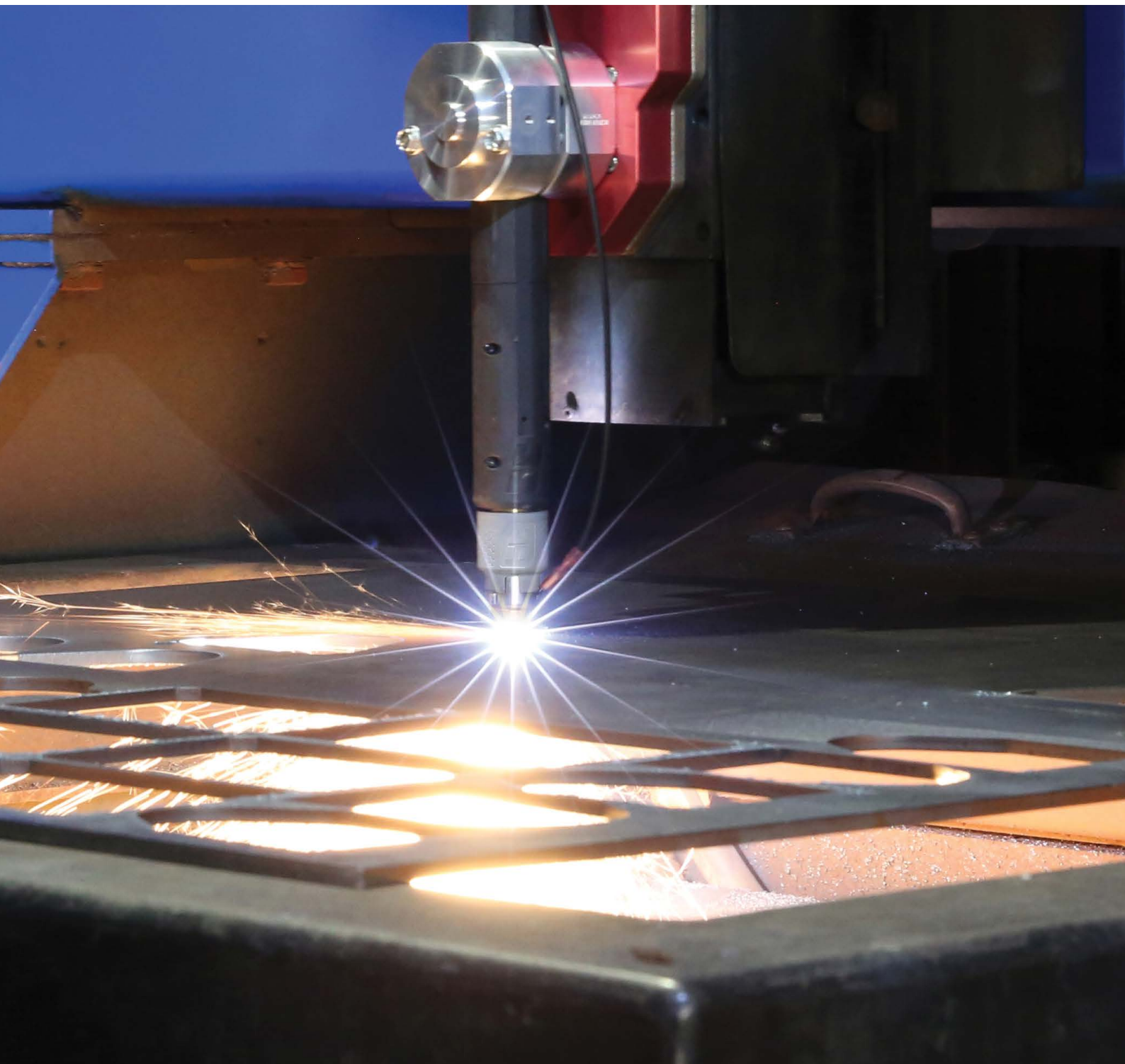
New Powermax SYNC™ series

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 automated cutting or gouging application.

SmartSYNC torch
▪ Simple, twist-on consumable installation
▪ Available in full-length, mini and robotic styles

Auto-set power supply
▪ Automatic process and amperage setting
▪ Data display

Cartridge
▪ Single-piece
▪ Easy to identify
▪ RFID communicates amperage and type

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.

Minimizes operating costs

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

Capacity	Powermax65 SYNC		Powermax85 SYNC		Powermax105 SYNC	
	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

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

Machine torch

45° SYNC robotic torch
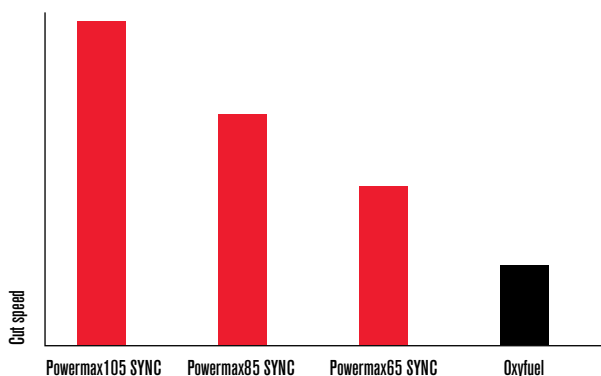
90° SYNC robotic torch

180° SYNC robotic torch

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

Specifications

	Powermax65 SYNC™	Powermax85 SYNC™	Powermax105 SYNC™
Input voltages	380 V, 3-PH 50/60 Hz	380 V, 3-PH, 50/60 Hz	380 V, 3-PH, 50/60 Hz
Kilowatt output	9 kW	12,2 kW	16,8 kW
Input current	380 V, 3-PH 15,5 A @ 9 kW	380 V, 3-PH 20,5 A @12,2 KW	380 V, 3-PH 30 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 V, 3-PH 100% @ 46 A, 380 V, 3-PH	60% @ 85 A, 380 V, 3-PH 100% @ 66 A, 380 V, 3-PH	80% @ 105 A, 380 V, 3-PH 100% @ 94 A, 380 V, 3-PH
Open circuit voltage (OCV)	270 VDC	270 VDC	300 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 @ 5,9 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	CCC – for use in China.	CCC – for use in China.	CCC – for use in China.
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.

CCC	180° full-length machine torch				180° full-length machine torch and 75° hand torch
Torch lead length	7,6 m		15,2 m		10,7 m/7,6 m
Powermax65 SYNC™ power supplies	With remote pendant	Without remote pendant	With remote pendant	Without remote pendant	With remote pendant
Power supply with CPC port and voltage divider	083362	083327	083363	083364	083365
Power supply with CPC port, voltage divider and serial port		083366		083367	
Powermax85 SYNC™ power supplies	With remote pendant	Without remote pendant	With remote pendant	Without remote pendant	With remote pendant
Power supply with CPC port and voltage divider	087201	087202		087203	087204
Power supply with CPC port, voltage divider and serial port		087205		087206	
Powermax105 SYNC™ power supplies	With remote pendant	Without remote pendant	With remote pendant	Without remote pendant	With remote pendant
Power supply with CPC port and voltage divider	059694	059693	059695	059681	
Power supply with CPC port, voltage divider and serial port		059697		059698	

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 380 V	083368	083369	083370
Powermax85 SYNC 380 V	087210	087211	087212
Powermax105 SYNC 380 V	059705	059709	059710

Torch options

	Machine torches	Robotic/Mini		
	180°	180°	90°	45°
4,5 m		059733		
7,6 m	059719	059734	059731	059729
10,7 m	059720			
15,2 m	059721	059735	059732	059730
22,8 m	059722			

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					

Cable options

	Work cables		
Cable length	Hand clamp	C-style clamp	Ring terminal
7,6 m	223254	223287	223284
15,2 m	223255	223288	223285
22,8 m	223256	223289	223286

Hypertherm cartridge options

	Mechanized/ standoff cutting	Max removal gouging	Max control gouging	Ohmic ring kit
45 A	428925			
65 A	428930	428932	428933	428895*
85 A	428934			
105 A	428936	428938	428939	

*Kit includes three 420580 ohmic ring clips.

Specialty application cartridge options

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

For more information, visit:
www.hypertherm.com

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