

# Hypertherm®

## Powermax105®

Professional-grade plasma metal cutting and gouging system for handheld cutting 32 mm and mechanized piercing 22 mm.



Capacity	Thickness	Cut speed
<b>Cutting</b>		
Recommended	32 mm	500 mm/min
	38 mm	250 mm/min
Severance (hand cutting)	50 mm	125 mm/min
Pierce*	22 mm	

\* Pierce rating for handheld use or with automatic torch height control

Capacity	Metal removal rate	Groove profile
<b>Gouging</b>		
Typical gouge	9,8 kg per hour	6,4 mm D x 7,4 mm W

### Maximum productivity

- Finish jobs faster with cut speeds three times greater than oxyfuel on 12 mm mild steel.
- Spend less time on grinding and edge preparation due to superior cut and gouge quality.

### Low operating costs

- Reduce costs with long consumable life and more uptime.
- Electrode end-of-life detection protects the torch and workpiece from damage by automatically stopping power when the electrode is overused.

### Easy-to-use for cutting and gouging

- No need to change the air pressure. Smart Sense™ technology ensures that it is always correctly set.
- Drag cut at full output with a patented shield that reduces dross buildup for smoother cutting.
- Tackle different jobs with multiple, easy-to-use torch styles.

### Built and tested to withstand the harshest conditions

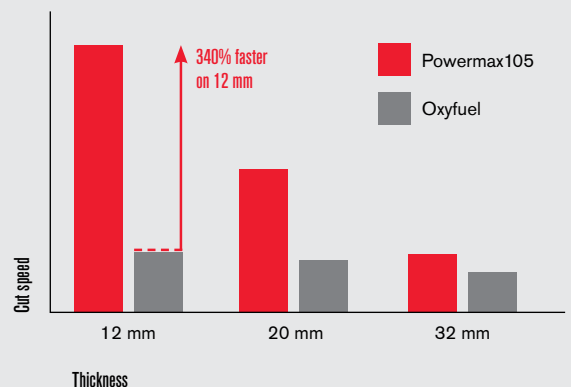
- Duramax™ torches are designed for high-impact and heat resistance.
- SpringStart™ technology ensures consistent starting and a more reliable torch.
- Low maintenance for maximum uptime.

### Duramax standard torch styles

(for more torch options, see [www.hypertherm.com](http://www.hypertherm.com))



### Relative cut performance on mild steel



## Specifications

Input voltages	230-400 V, 3-PH, 50/60 Hz 400 V, 3-PH, 50/60 Hz
Kilowatt output	16,8 kW
Input current @ 16,8 kW	230/400 V, 3-PH, 50/29 A
Output current	30-105 A
Rated output voltage	160 VDC
Duty cycle @ 40° C	230-400 V 70% @ 105 A, 230 V 3-PH 80% @ 105 A, 400 V, 3-PH 100% @ 94 A, 400 V, 3-PH 100% @ 88 A, 230 V, 3-PH 400 V 80% @ 105 A, 400 V, 3-PH 100% @ 94 A, 400 V, 3-PH
Open circuit voltage (OCV)	230-400 V 288 VDC 400 V 292 VDC
Dimensions with handles	592 mm D; 274 mm W; 508 mm H
Weight w/7,6 m torch	45 kg (230-400 V) 41 kg (400 V)
Gas supply	Clean, dry, oil-free air or nitrogen
Recommended gas inlet flow rate/pressure	Cutting: 217 l/m @ 5,9 bar Gouging: 227 l/m @ 4,8 bar
Input power cable length	3 m
Power supply type	Inverter - IGBT
Engine drive requirement	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.
Warranty	Power supplies have a 3-year warranty and torches a 1-year warranty



## Ordering information

Below are the standard system configurations, which include a power supply, torch and work cable. Additional mechanized configurations are listed on our web site.

	Voltage configuration	75° hand torch		75° and 15° hand torch		180° full-length machine torch					180° full-length machine torch and 75° hand torch	
		7,6 m	15,2 m	7,6 m	15,2 m	7,6 m		15,2 m			7,6 m	
				without remote pendant	with remote pendant	without remote pendant	with I/O cables (no pendant)	with remote pendant	without remote pendant	with I/O cables (no pendant)	with remote pendant	
Standard power supply	230-400 V	059394	059395									
	400 V	059414	059415									
Power supply with CPC port and voltage divider	230-400 V	059396	059397	059402	059403	059398	059400		059399	059401		059404
	400 V	059416	059417	059422	059423	059418	059420		059419	059421		059424
Power supply with CPC port, voltage divider, and serial port	230-400 V							059406			059407	
	400 V							059426			059427	



## Custom configurations (select power supply, torch, consumable kit, work cable, 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
230–400 V CE	059390	059391	059392
400 V CE	059410	059411	059412

### Starter kit consumable options

	Handheld	Mechanized	Mechanized with ohmic retaining cap
Kit	228849	228848	228969

### Torch options

Cable length	Hand torches		Machine torches		Robotic torches		
	75°	15°	180°	Mini 180°	45°	90°	180°
4,5 m			059476	059481			
7,6 m	059473	059470	059477	059482	059464	059465	059466
10,7 m			059478	059483			
15,2 m	059474	059471	059479	059484			
22,8 m	059475	059472	059480				

### Cable options

Cable length	Work cables				Control cables				
	Hand clamp	C-style clamp	Ring terminal	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	223254	223287	223284	128650	228350	023206	223048	223236	223239
15,2 m	223255	223288	223285	128651	228351	023279	123896	223237	223240
22,8 m	223256	223289	223286	128652					

### Torch consumable parts

Nozzles and electrodes are available in various quantities. Contact your distributor for more information.

Consumable type	Torch type	Amperage	Nozzle	Shield/Deflector	Retaining cap	Electrode	Swirl ring
Drag-cutting	Hand	45	220941	220818	220854	220842	220994
		65	220819				
		85	220816	220992			
		105	220990				
Mechanized	Machine	45	220941	220817 or 220955 <sup>1</sup>	220854 or 220953 <sup>2</sup>	220842	220994
		65	220819				
		85	220816	220993 or 220955 <sup>1</sup>			
		105	220990				
FineCut®	Hand	45	220930	220931	220854 or 220953 <sup>2</sup>	220842	220947
	Machine			220948			220994
Gouging	Hand	30–105	220991	220798	220854	220842	220994
	Machine						

<sup>1</sup> Deflector for unshielded cutting

<sup>2</sup> Ohmic retaining cap

## Recommended Hypertherm genuine accessories



### Hyamp™ helmet

Premium auto-dim shade 8–12 with large 5100 square mm viewing area for cutting, welding and gouging. Includes clear safety shields, pouch and sticker sheet. ANSI Z87.1, CSA Z94.3, CE

017031



### Leather torch sheathing

Available in 7,6 m sections, this option provides additional protection for torch leads against burn-through and abrasion.

024548 Brown leather

024877 Black leather with Hypertherm logos



### Wheel/gantry kits

Complete, pre-assembled kits for added mobility or mounting on a cutting table gantry.

229467 Powermax105/125 wheel kit

229570 Powermax105/125 gantry kit



### Air filtration kit

A ready-to-install kit with a 1-micron filter and an auto drain moisture separator protects against contaminated air.

228890 Filter plus cover for Powermax105/125

011092 Replacement filter element for Eliminator

101215 Cover only for Powermax105/125



### System dust covers

Made from a flame-retardant vinyl, a dust cover will protect your Powermax system for years.

127360 Cover, Powermax105



### Hyamp cutting and gouging gloves

Insulated for heavy duty applications. Fire resistant goatskin leather and suede. Padded areas for extra heat and abrasion protection.

017025 Medium

017026 Large

017027 X-Large

017028 2X-Large

ISO 9001:2008

Environmental stewardship is a core value of Hypertherm. Our Powermax products are engineered to meet and exceed global environmental regulations including the RoHS directive.

Hypertherm, Powermax, Smart Sense, Hyamp, Duramax and SpringStart are trademarks of Hypertherm Inc. and may be registered in the United States and/or other countries. All other trademarks are the properties of their respective owners.

© 9/2014 Hypertherm Inc. Revision 3  
86057D

**Hypertherm®**  
**Cut with confidence®**