

# Hypertherm®

## Powermax105®

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



Capacity	Thickness	Cut speed
Cutting		
Recommended	32 mm	500 mm/min
	38 mm	250 mm/min
Severance	50 mm	125 mm/min
Pierce*	22 mm	

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

Capacity	Metal removal rate	Groove profile
Gouging		
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

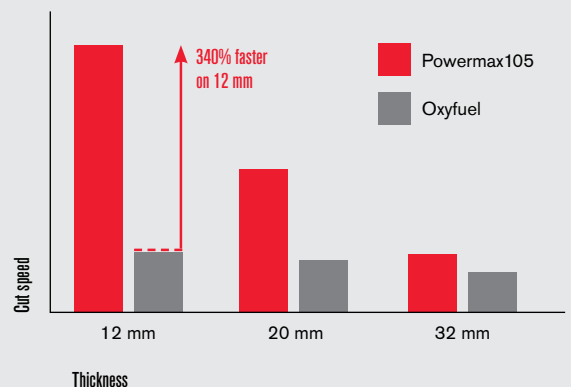
- Duramax™ torches are designed for high-impact and heat resistance.
- SpringStart™ technology ensures consistent starting and a more reliable torch.
- Low maintenance for maximum uptime.

### 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	CCC	380 V, 3-PH, 50/60 Hz
	CE	230-400 V, 3-PH, 50/60 Hz 400 V, 3-PH, 50/60 Hz
Input current @ 16,8 kW		380 V, 3-PH, 30 A 230/400 V, 3-PH, 50/29 A 400 V, 3-PH, 28 A
Output current		30-105 A
Rated output voltage		160 VDC
Duty cycle @ 40° C		380 V CCC/400 V CE 80% @ 105 A, 400 V, 3-PH 100% @ 94 A, 400 V, 3-PH 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
Open circuit voltage (OCV)		380 V CCC 288 VDC 230-400 V CE 288 VDC 400 V CE 292 VDC
Dimensions with handles		592 mm D; 274 mm W; 508 mm H
Weight w/7,6 m torch		41 kg (380 V CCC, 400 V CE) 45 kg (230-400 V CE)
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. CCC for use in China.
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
Power supplies				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	380 V CCC	059434	059435								
	230-400 V	059394	059395								
	400 V	059414	059415								
Power supply with CPC port and voltage divider	380 V CCC	059436	059437	059442	059443	059438	059440 or 059450 <sup>1</sup>	059439	059441 or 059451 <sup>1</sup>		
	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	380 V CCC						059446 or 059448 <sup>1</sup>			059447 or 059449 <sup>1</sup>	
	230-400 V						059406			059407	
	400 V						059426			059427	

<sup>1</sup> Does not include a power cord.

## 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
380 V CCC	059430	059431	059432 or 059433 <sup>1</sup>
230–400 V CE	059390	059391	059392
400 V CE	059410	059411	059412

<sup>1</sup> Does not include a power cord.

### 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				
		105	220990	220992			
Mechanized	Machine	45	220941	220817 or 220955 <sup>2</sup>	220854 or 220953 <sup>3</sup>	220842	220994
		65	220819				
		85	220816				
		105	220990	220993 or 220955 <sup>2</sup>			
FineCut®	Hand	45	220930	220931	220854 or 220953 <sup>3</sup>	220842	220947
	Machine			220948			220994
Gouging	Hand	30–105	220991	220798	220854	220842	220994
	Machine						

<sup>2</sup> Deflector for unshielded cutting

<sup>3</sup> Ohmic retaining cap

**Recommended Hypertherm genuine accessories**

- Hypertherm plasma cutting gloves, 127169
- Powermax105 wheel kit, 229467
- System storage dust cover, 127360
- Eliminer filter and cover, 228890
- Replacement filter element for Eliminer, 011092
- Torch lead cover, black, 024877



Wheel kit



Leather torch sheathing



System dust cover



Air filtration kit

**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.



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