

# **Hypertherm®**

## ***Powermax overview***



HANDHELD AND MECHANIZED PLASMA SYSTEMS FOR CUTTING AND GOUGING METAL

# Powermax advantages

**Productivity** – Fast cut speeds, superior cut quality, little or no secondary operations and no pre-heating help you to do more in less time.

**Ease of use** – High portability, simple controls and good arc visibility make Powermax systems easy to operate. Any operator can quickly become skilled with a Powermax system.

**Versatility** – From the shop to the field, cutting or gouging stainless, mild steel or aluminum, you can leverage a Powermax system for many jobs.

**Low operating cost** – High productivity and long consumable life minimize operating costs.

**Reliability** – Smart design, plus intense testing during both product development and manufacturing, delivers industry-leading reliability.

**Confidence** – Hypertherm's singular focus on plasma, plus the proven performance and reliability of our global installed base, gives you confidence that you are buying the best.

## Capacity ratings

There is no industry standard for rating plasma systems, so it is important to take care when comparing products from different manufacturers.

### Handheld cut capacity

Recommended – The thickness of mild steel on which the system delivers good cut quality and speeds at or greater than 20 ipm (500 mm) per minute. Eighty percent or more of cutting should be at the recommended thickness.

Severance – The thickness of mild steel that can be reasonably severed at a minimum of 5 ipm (125 mm) but with poor cut quality. Cutting the severance thickness should be infrequent.

### Mechanized pierce capacity

The thickness of mild steel that may be pierced using an automated torch height control with good cut quality and without excessive wear on the consumable parts. If edge starting, the cut capacity is the same as handheld capacity.

Handheld cut capacity	Recommended	Powermax30	Powermax45
		6 mm (1/4")	12 mm (1/2")
Severance	Maximum	10 mm (3/8")	20 mm (3/4")
		12 mm (1/2")	25 mm (1")
Mechanized pierce capacity	Maximum	Not applicable	12 mm (1/2") <sup>1</sup>
Gouge capacity	Metal removed per hour depth x width <sup>2</sup>	Not applicable	2.8 kg (6.2 lbs)
		Not applicable	3.3 mm (.13") x 5.5 mm (.22")
Output current		15 – 30 A	20 – 45 A
Input voltage	CSA	120 – 230 V, 1-PH 50/60 Hz	200 – 240 V, 1-PH, 50-60 Hz
	CE	120 – 230 V, 1-PH 50/60 Hz	230 V, 1-PH, 50-60 Hz 400 V, 3-PH, 50-60 Hz
Rated output voltage		83 VDC	132 VDC
Input current	CSA	120 – 230 V, 1-PH: 26 – 13.5 A	200/230 V, 1-PH, 34/28 A
	CE	120 – 230 V, 1-PH: 26 – 13.5 A	230 V, 1-PH, 30 A 380/400 V, 3-PH, 10.5/10 A
Duty cycle at full output <sup>3</sup>	CSA	50%, 230 V 35%, 120 V	50% @ 45 A, 200 – 240 V, 1-PH 60% @ 41 A, 200 – 240 V, 1-PH 100% @ 32 A, 200 – 240 V, 1-PH
	CE	50%, 230 V 35%, 120 V	50% @ 45 A, 230 V, 1-PH 60% @ 41 A, 230 V, 1-PH 100% @ 32 A, 230 V, 1-PH 50% @ 45 A, 380/400 V, 3-PH 60% @ 41 A, 380/400 V, 3-PH 100% @ 32 A, 380/400 V, 3-PH
Dimensions with handle	depth x width x height	356 x 168 x 305 mm (14.0 x 6.6 x 12.0")	426 x 172 x 348 mm (16.75 x 6.75 x 13.7")
Weight with torch	CSA	9 kg (20 lbs)	17 kg (37 lbs)
	CE	10 kg (21 lbs)	16 kg (35 lbs)
Gas supply		Air or N <sub>2</sub>	Air or N <sub>2</sub>
Recommended gas inlet flow rate/pressure		113 l/min (240 scfh, 4 scfm) @ 5.5 bar (80 psi)	Cutting: 170 l/min (360 scfh, 6 scfm) @ 5.5 bar (80 psi) Gouging: 170 l/min (360 scfh, 6 scfm) @ 4.1 bar (60 psi)
Torch lead lengths	Handheld	4.5 m (15')	6.1 m, 15.2 m, 22.8 m (20', 50', 75')
	Mechanized	Not applicable	4.5 m, 7.6 m, 10.7 m, 15.2 m, 22.8 m (15', 25', 35', 50', 75')



	<b>Powermax65</b>	<b>Powermax85</b>	<b>Powermax105</b>	<b>MAX200</b>
	20 mm (3/4")	25 mm (1")	32 mm (1-1/4")	38 mm (1-1/2")
	25 mm (1")	32 mm (1-1/4")	38 mm (1-1/2")	50 mm (2")
	32 mm (1-1/4")	38 mm (1-1/2")	50 mm (2")	64 mm (2-1/2")
	16 mm (5/8") <sup>1</sup>	20 mm (3/4") <sup>1</sup>	22 mm (7/8") <sup>1</sup>	22 mm (7/8") <sup>1</sup>
	4.8 kg (10.7 lbs)	8.8 kg (19.5 lbs)	9.8 kg (21.7 lbs)	21 kg (46 lbs) – H35
	3.5 mm (.14") x 6.6 mm (.26")	5.8 mm (.23") x 7.1 mm (.28")	6.4 mm (.25") x 7.4 mm (.29")	–
	20 – 65 A	25 – 85 A	30 – 105 A	40 – 200 A
	CSA 200 – 480 V, 1-PH, 50-60 Hz 200 – 600 V, 3-PH, 50-60 Hz CE 400 V, 3-PH, 50-60 Hz	CSA 200 – 480 V, 1-PH, 50-60 Hz 200 – 600 V, 3-PH, 50-60 Hz CE 400 V, 3-PH, 50-60 Hz	CSA 200 – 600 V, 3-PH, 50/60 Hz CE 230 – 400 V, 3-PH, 50/60 Hz CE 400 V, 3-PH, 50/60 Hz CCC 380 V, 3-PH, 50/60 Hz	CSA 240/480 V, 3-PH, 60 Hz 600 V, 3-PH, 60 Hz 208 V, 3-PH, 60 Hz 220/380/415 V, 3-PH, 50 Hz 200 V, 3-PH, 50 Hz 500 V, 3-PH, 50 Hz 600 V, 3-PH, 60 Hz CE 400 V, 3-PH, 50 H
	139 VDC	143 VDC	160 VDC	150 VDC
	CSA 200/208/240/480 V, 1-PH 52/50/44/22 A 200/208/240/480/600 V, 3-PH 32/31/27/13/13 A CE 380/400 V, 3-PH 15.5/15 A	CSA 200/208/240/480 V, 1-PH 70/68/58/29 A 200/208/240/480/600 V, 3-PH 42/40/35/18/17 A CE 380/400 V, 3-PH 20.5/19.5 A	CSA 200/208/240/480/600 V, 3-PH 58/56/49/25/22 A CE 230/400 V, 3-PH 50/29 A CE 400 V, 3-PH, 28 A CCC 380 V, 3-PH, 30 A	CSA 100/208/240/380/415/480/500/600 V, 3-PH 98/104/90/57/52/45/43/36 A CE 400 V, 3-PH 56 A
	CSA 50% @ 65 A, 230 – 600 V, 1/3-PH 40% @ 65 A 200 – 208 V, 1/3-PH 100% @ 46 A, 230 – 600 V, 1/3-PH CE 50% @ 65 A 380/400 V, 3-PH 100% @ 46 A 380/400 V, 3-PH	CSA 60% @ 85 A, 230 – 600 V, 3-PH 60% @ 85 A, 480 V, 1-PH 50% @ 85 A, 240 V, 1-PH 50% @ 85 A 200 – 208 V, 3-PH 40% @ 85 A 200 – 208 V, 1-PH 100% @ 66 A, 230 – 600 V, 1/3-PH CE 60% @ 85 A 380/400 V, 3-PH 100% @ 66 A 380/400 V, 3-PH	CSA 200 – 600 V, 50% @ 105 A, 200 V, 3-PH 54% @ 105 A, 208 V, 3-PH 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 100% @ 77 A, 208 V, 3-PH 100% @ 74 A, 200 V, 3-PH CE 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 CE 400 V, 80% @ 105 A, 400 V, 3-PH 100% @ 94 A, 400 V, 3-PH CCC 380 V, 80% @ 105A, 380 V, 3-PH 100% @ 94 A, 380 V, 3-PH	100% @ 200 A, 400 – 600 V, 3-PH
	500 x 234 x 455 mm (19.7 x 9.2 x 17.9")	500 x 234 x 455 mm (19.7 x 9.2 x 17.9")	592 x 274 x 508 mm (23.3 x 10.8 x 20.0")	1040 x 710 x 1090 mm (41.3 x 28.3 x 43")
	CSA 29 kg (64 lbs) CE 26 kg (57 lbs)	CSA 32 kg (71 lbs) CE 28 kg (62 lbs)	CSA 45 kg (100 lbs) CE 45 kg (100 lbs) (230-400 V) CE 41 kg (91 lbs) (400 V) CCC 41 kg (91 lbs)	CSA 351 kg (780 lbs) CE 363 kg (800 lbs)
	Air or N <sub>2</sub>	Air or N <sub>2</sub>	Air or N <sub>2</sub>	Plasma: Air, N <sub>2</sub> , O <sub>2</sub> , Ar-H <sub>2</sub> Shield: Air, N <sub>2</sub> , CO <sub>2</sub>
	Cutting: 189 l/min (400 scfh, 6.7 scfm) @ 5.6 bar (85 psi) Gouging: 212 l/min (450 scfh, 7.5 scfm) @ 4.8 bar (70 psi)	Cutting: 189 l/min (400 scfh, 6.7 scfm) @ 5.6 bar (85 psi) Gouging: 212 l/min (450 scfh, 7.5 scfm) @ 4.8 bar (70 psi)	Cutting: 217 l/min (460 scfh, 7.7 scfm) @ 5.9 bar (85 psi) Gouging: 227 l/min (480 scfh, 8.0 scfm) @ 4.8 bar (70 psi)	Plasma: 66 scfh, 31 l/min (1.1 scfm) @ 8.3 bar (120 psi) Shield: 280 scfh, 132 l/min (4.7 scfm) @ 6.2 bar (90 psi)
	3 m, 7.6 m, 15.2 m, 22.8 m (10', 25', 50', 75')	3 m, 7.6 m, 15.2 m, 22.8 m (10', 25', 50', 75')	7.6 m, 15.2 m, 22.8 m (25', 50', 75')	7.6, 15.2, 22.8, 30, 37.5, 45 m (25, 50, 75, 100, 125, 150')
	4.5 m, 7.6 m, 10.7 m, 15.2 m, 22.8 m (15', 25', 35', 50', 75')	4.5 m, 7.6 m, 10.7 m, 15.2 m, 22.8 m (15', 25', 35', 50', 75')	7.6 m, 10.7 m, 15.2 m, 22.8 m (25', 35', 50', 75')	4.5, 7.6, 10.7, 15.2, 22.8, 30, 37.5 m (15, 25, 35, 50, 75, 100, 125')

<sup>1</sup> Pierce rating for handheld use or with automatic torch height control.

<sup>2</sup> Dependent on speed, torch angle and standoff.

<sup>3</sup> Hypertherm's duty cycle ratings are established at 40° C (104° F), according to international standards, and are determined at actual cutting arc voltage levels.

Competitive systems are often rated at room temperature 20° C (70° F) and at theoretical output voltages, which allows duty cycle ratings to be significantly overstated.

## Available technologies and features

Model	Power supply									Torch					Work cable			Miscellaneous			
	Drag-cutting capability	Gouging mode	Pilot arc controller	Contact start	Boost Conditioner circuit <sup>4</sup>	Auto-voltage <sup>4</sup>	FastConnect design	Basic machine interface	Advanced automation interface	90° hand torch <sup>5</sup>	75° hand torch	15° hand torch	Full-length machine torch	Mini machine torch	Robotic torches	Hand clamp	C-style clamp	Ring terminal	Remote pendant	Carry strap	Wheel gear
Powermax30	●		●	●	●	●				●					●				●		
Powermax45	●	●	●	●	●	●	●	●		●		●			●				●	●	
Powermax65	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●
Powermax85	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●
Powermax105	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●
MAX200	●								●			●			●				●		●

<sup>4</sup> On CSA models and some CE models. Refer to input voltages in the table above or product brochures for specifics.

<sup>5</sup> 65° hand torch also available for MAX200

# Hypertherm: Company overview

For over 40 years, Hypertherm has been designing and manufacturing the world's finest thermal cutting equipment. Hypertherm systems are trusted for performance and reliability that result in increased productivity and profitability for our customers. With an intense focus on technology innovation, Hypertherm has established our position as the industry leader while delivering the tools our customers need to achieve their best results.



Powermax systems are backed by a full 3-year power supply warranty and a 1-year torch warranty.

## Accessories



### Filter cover

Designed to protect the filter from being damaged from impact. For use on Powermax65/85/105 power supplies.



### Air filtration kit

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



### Gouging heat shield

Provides additional protection in gouging operations. For use on T45v and T100 torches.



### Leather torch sheathing

Available in 25' (7.6 m) sections, this option provides additional protection for torch leads against burn-through and abrasion.



### FineCut™ consumable kits

FineCut consumables are optimized for high-quality cuts on thin metal for a clean edge and a narrow kerf.



### Operator face shield

Multi-purpose face shield that provides face and eye protection for plasma cutting and gouging applications.



### Wheel kit

A complete, pre-assembled kit for added mobility when the machine must be moved. For use on Powermax65/85/105 power supplies.



### Plasma cutting guides

Facilitates consistent and accurate circles and lines. For optional use as a stand-off guide and in bevel cutting applications.



### Powermax All-in-one kits

All-in-one kits provide you with a sampling of all of the consumables available for your Powermax system. Experience the versatility of your system, while purchasing consumables at lower cost.



### System dust covers

Made from a durable denier fabric with a polyurethane coating, a dust cover will protect your Powermax investment for years.



### Leather cutting gloves

Pigskin gloves with grain leather palm for excellent sense of touch. Foam back and reinforced thumb.

# Hypertherm®

## Cut with confidence®

Hypertherm, Powermax, MAX, Hypertherm Certified, Duramax, Spring Start, Smart Sense, Boost Conditioner, Auto-voltage, FastConnect, Powercool, Conical Flow, Dual-threshold and FineCut are trademarks of Hypertherm, Inc. and may be registered in the United States and/or other countries. All other trademarks are the property of their respective owners.

For the authorized Hypertherm dealer nearest you, visit our website at [www.hypertherm.com](http://www.hypertherm.com).

© 4/2012 Hypertherm, Inc.  
Revision 11  
860200



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

**ISO 9001:2008**

**Engineered and  
assembled in the USA**