Hypertherm®

Powermax® family brochure

Portable air plasma cutting and gouging systems


powermax

Contents


Stallion

Understanding plasma technology

Powermax systems cut metal quickly, and cleanly

Plasma, and its intense heat (up to 39,000° F or 22,000° C), is created when gas is ionized by electrical energy. Powermax® systems use plasma to melt metal, and compressed air, nitrogen or F5 gas to blow the molten metal away, leaving a good quality cut edge ready to weld in most cases. Powermax systems are also effective for gouging metal.

Cut or gouge any electrically conductive metal

Whether in a shop, factory, at home or in the field, Powermax systems cut and gouge all metal types and forms. Most models are available with a handheld or machine torch to fit the application.

Operating a plasma system requires:

- AC power source (fixed or generator)
- Compressed air – shop air, portable air compressor or bottled air. Nitrogen and F5 gas are often used for stainless steel
- Safety equipment, including shaded glasses or face shield, gloves, protective clothing and proper ventilation

Why choose Powermax over oxyfuel

Safer

Cutting with a plasma system needs no flammable gasses.

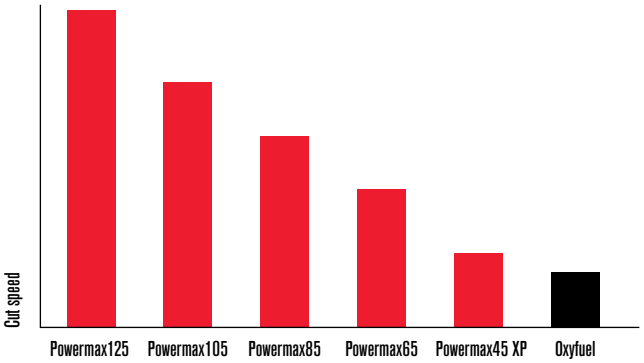
More productive

Much faster cut speeds up to 38 mm (1-1/2") thick; no preheating needed; a cleaner edge with smaller heat-affected zone (HAZ) requires less grinding of the cut edge.

More versatile

Cuts and gouges all electrically conductive metal including stainless steel and aluminum; easily used with templates, cuts stacked, painted, or rusted metal.

Cut speed comparison on 12 mm (1/2") mild steel



For more information, refer to product brochures or visit www.hypertherm.com/powermax/


Powermax

Why choose Powermax over other cutting or gouging systems

More productive

Our consumable technology delivers faster speeds and better cut quality to help you do more in less time.

Easier to use

High portability, simple controls and a stable plasma arc make Powermax® systems easy to operate for beginners and experts.

More versatile

With the widest array of torches and speciality consumables, Powermax systems can be configured to address a wide range of applications from extended reach cutting to precision gouging and more.

Lower operating cost

Faster speeds and longer consumable life lower your cost of cutting and gouging metal.

More reliable

Smart design and intense testing during product development and manufacturing keep you up and running.

Confidence

Hypertherm's focus on plasma by our associate-owners, and the proven performance of our global installed base of systems give you confidence that you are buying the best.

To choose the Powermax system that will best suit your long term needs, please consider the following questions

What thickness of metal will you be cutting?

Powermax plasma can cut from sheet metal to 57 mm (2-1/4"). Choose the Powermax system with the recommended capacity for the thickness of metal you expect to cut 80% of the time or more.

Will the cutting or gouging be done by a handheld torch or with an automated machine?

For automated cutting, select a machine-torch compatible Powermax system with interface options for automation equipment including CNC tables, robots, and track cutters.

What electrical service do you use?

Knowing the incoming line voltage, phase and breaker size where the system will be used ensures your electrical service can support the Powermax system you choose.

Will the plasma system be powered by an engine-drive generator?

Each Powermax system requires a minimum kilowatt output to deliver full performance. Refer to page 16 for more operating information using generators.

What is your compressed gas source?

Powermax systems require compressed air, nitrogen, or F5 gas for operation. The gas must be dry and free of contaminants. An optional filter is available to ensure clean and dry gas. Refer to gas flow rate and pressure requirements in the chart on page 16.

Powermax uses

Handheld, cutting and gouging


Freehand


Straight guide


Circle guide


Weld removal


Templates


HyAccess™


Extended

X-Y-Z cutting and marking


Light table

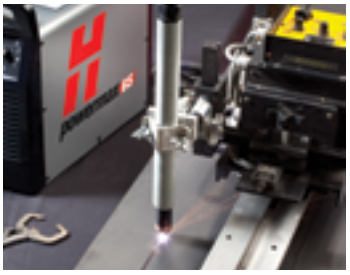

Heavy table


Robotic


Marking

Mechanized straight-line cutting and gouging


Bevel cut


Straight cut


Gouging

Use with a generator


Handheld cutting in the field


Portable mechanized cutting

Pipe cutting


In the field


In the factory

Powermax30 XP

The Powermax30® XP delivers high performance in a small, portable package. With its two-in-one design, the system provides high-power capability for thick metal cutting, plus FineCut® consumables for detailed, thin metal cutting. Combined with a custom carry case, shaded glasses, cutting gloves and adapter plugs for 120 V or 240 V circuits, this system is designed to get you cutting quickly and easily.

Model (input voltage, phase, certification)	Handheld system	
	Duramax® LT torch 4,5 m (15')	Duramax® LT torch and carry case 4,5 m (15')
Powermax30 XP (120–240 V, 1-PH, CSA)	088081	088080
Powermax30 XP (120–240 V, 1-PH, CE)	088082	088083

Duramax LT hand torch

Capacity	Thickness	Cut speed
Recommended	10 mm (3/8")	at 500 mm/min (20 ipm)
	12 mm (1/2")	at 250 mm/min (10 ipm)
Severance	16 mm (5/8")	at 125 mm/min (5 ipm)

Watch a Powermax® system demonstration at www.hypertherm.com/powermax/videos/

Powermax30 AIR

The small size and light weight of the new Powermax30® AIR, with an internal compressor, make it a highly portable system enabling metal cutting just about anywhere there is single phase power. Simply plug it in, attach the work clamp and you are ready to cut. The internal compressor eliminates the need for an external air compressor and filter to operate the plasma system. The fast cutting speeds and superior cut quality of Powermax plasma enable you to finish jobs quicker.

Model (input voltage, phase, certification)	Handheld systems
	AIR T30 torch 4,5 m (15')
Powermax30 AIR (120–240 V, 1-PH, CSA)	088097

Air T30 hand torch

Capacity	Thickness	Cut speed
Recommended	8 mm (5/16")	500 mm/min (20 ipm)
	10 mm (3/8")	250 mm/min (10 ipm)
Severance	16 mm (5/8")	125 mm/min (5 ipm)

Powermax45 XP

The best-selling plasma system ever made is now even better. The Powermax45 XP offers improved performance over the Powermax45 with increased cut capacity, faster cut speeds, and automatic gas adjustment for simple setup and operation. New Duramax® Lock torches and consumables support handheld and mechanized cutting of a wider range of metal thicknesses, precision gouging and maximum metal removal gouging, and marking for part identification or scoring for weld preparation.

Below are some of the most common system configurations which include a power supply, torch, work cable and starter consumable kit.

Model (input voltage, phase, certification)	Handheld systems		Mechanized systems		
	75° torch 6,1 m (20')	75° torch 15,2 m (50')	180° full-length torch 7,6 m (25') with remote pendant	180° full-length torch 15,2 m (50') with remote pendant	180° full-length torch 7,6 m (25')
Powermax45 XP* (200–240 V, 1-PH, CSA)	088113	088115	088116	088118	088121
Powermax45 XP* (230 V, 1-PH, CE/CCC)	088131	088133	088134	088136	088141
Powermax45 XP* (400 V, 3-PH, CE/CCC)	088145	088147	088148	088145	088155

*with CPC port

Duramax Lock 75° hand torch

Duramax Lock 15° hand torch

Duramax Lock machine torch

Capacity	Thickness	Cut speed
Recommended	16 mm (5/8")	at 500 mm/min (20 ipm)
	22 mm (7/8")	at 250 mm/min (10 ipm)
Severance	29 mm (1-1/8")	at 125 mm/min (5 ipm)
Pierce	12 mm (1/2")*	

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

Powermax65

Offering the latest technological innovations, like Smart Sense™ technology to automatically adjust the gas pressure, the Powermax65® helps you do more than ever before. A variety of Duramax™ torch styles provide exceptional versatility for hand cutting or gouging, portable automation, X-Y table and robotic cutting or gouging.

Below are some of the most common system configurations, which include a power supply, torch, work cable and starter consumable kit.

Model (input voltage, phase, certification)	Handheld systems			Mechanized systems		
	75° torch 7,6 m (25')	75° torch 15,2 m (50')	75° and 15° torches 7,6 m (25')	180° full-length torch 7,6 m (25') with remote pendant	180° full-length torch 15,2 m (50') with remote pendant	180° full-length torch and 75° hand torch 7,6 m (25')
Powermax65* (200–600 V, 1/3-PH, CSA)	083275	083276	083307	083277	083278	083300
Powermax65* (400 V, 3-PH, CE)	083284	083285	083309	083286	083287	083301

*with CPC port

75° hand torch

15° hand torch

180° mini machine torch

180° full-length machine torch

Capacity	Thickness	Cut speed
Recommended	20 mm (3/4")	at 500 mm/min (20 ipm)
	25 mm (1")	at 250 mm/min (10 ipm)
Severance	32 mm (1-1/4")	at 125 mm/min (5 ipm)
Pierce	16 mm (5/8")*	

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

Powermax85

The premier system for cutting 25 mm (1"), the Powermax85 has the same features and options as the Powermax65, but with more power from a max output current of 85 amps. A variety of Duramax torch styles provide exceptional versatility for hand cutting or gouging, portable automation, X-Y table and robotic cutting or gouging.

Below are some of the most common system configurations, which include a power supply, torch, work cable and starter consumable kit.

Model (input voltage, phase, certification)	Handheld systems			Mechanized systems		
	75° torch 7,6 m (25')	75° torch 15,2 m (50')	75° and 15° torches 7,6 m (25')	180° full-length torch 7,6 m (25') with remote pendant	180° full-length torch 15,2 m (50') with remote pendant	180° full-length torch and 75° hand torch 7,6 m (25')
Powermax85* (200–600 V, 1/3-PH, CSA)	087113	087114	087144	087115	087116	087135
Powermax85* (400 V, 3-PH, CE)	087122	087123	087146	087124	087125	087136

*with CPC port

Capacity	Thickness	Cut speed
Recommended	25 mm (1")	at 500 mm/min (20 ipm)
	32 mm (1-1/4")	at 250 mm/min (10 ipm)
Severance	38 mm (1-1/2")	at 125 mm/min (5 ipm)
Pierce	20 mm (3/4")*	

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

75° hand torch

15° hand torch

180° mini machine torch

180° full-length machine torch

Powermax105

At 105 amps, the Powermax105® offers cut speeds more than three times faster than oxyfuel. Smart Sense technology in the Powermax105 also detects consumable end-of-life, automatically turning off power to the torch to prevent potential damage to other parts or the work piece. A variety of Duramax™ torch styles provide exceptional versatility for hand cutting and gouging, portable automation, X-Y table and robotic cutting or gouging.

Below are some of the most common system configurations, which include a power supply, torch, work cable and starter consumable kit.

Model (input voltage, phase, certification)	Handheld systems			Mechanized systems		
	75° torch 7,6 m (25')	75° torch 15,2 m (50')	75° and 15° torches 7,6 m (25')	180° full-length torch 7,6 m (25') with remote pendant	180° full-length torch 15,2 m (50') with remote pendant	180° full-length torch and 75° hand torch 7,6 m (25')
Powermax105* (200–600 V, 3-PH, CSA)	059376	059377	059382	059378	059379	059384
Powermax105* (230–400 V, 3-PH, CE)	059396	059397	059402	059398	059399	059404
Powermax105* (400 V, 3-PH, CE)	059416	059417	059422	059418	059419	059424

*with CPC port and voltage divider

75° hand torch

15° hand torch

180° mini machine torch

180° full-length machine torch

Capacity	Thickness	Cut speed
Recommended	32 mm (1-1/4")	at 500 mm/min (20 ipm)
	38 mm (1-1/2")	at 250 mm/min (10 ipm)
Severance	50 mm (2")	at 125 mm/min (5 ipm)
Pierce	22 mm (7/8")*	

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

Powermax125

With maximum power and performance for air plasma, the new Powermax125 cuts fast and thick. A 100% duty cycle, a 25 mm (1") pierce capability, and a gouging metal removal rate of 12,5 kg/hour (27.6 lbs/hour), make the Powermax125 the tool for any industrial cutting or gouging job. The new Duramax Hyamp™ torch series is available in a variety of styles to address the widest variety of cutting and gouging applications.

Below are some of the most common system configurations, which include a power supply, torch, work cable and starter consumable kit.

Model (input voltage, phase, certification)	Handheld systems			Mechanized systems		
	85° torch 7,6 m (25')	85° torch 15,2 m (50')	85° and 15° torches 7,6 m (25')	180° full-length torch 7,6 m (25') with remote pendant	180° full-length torch 15,2 m (50') with remote pendant	180° full-length torch 15 m (50') and 85° hand torch 7,6 m (25')
Powermax125* (480 V, 3-PH, CSA)	059536	059537	059538	059539	059540	059541
Powermax125* (600 V, 3-PH, CSA)	059546	059547	059555	059552	059553	059554
Powermax125* (400 V, 3-PH, CE)	059526	059527	059528	059530	059531	059554

*with CPC port and voltage divider

85° hand torch

15° hand torch

180° mini machine torch

180° full-length machine torch

Capacity	Thickness	Cut speed
Recommended	38 mm (1-1/2")	at 457 mm/min (18 ipm)
	44 mm (1-3/4")	at 250 mm/min (10 ipm)
Severance	57 mm (2-1/4")	at 125 mm/min (5 ipm)
Pierce	25 mm (1")**	

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

Duramax and Duramax Hyamp application torches

The Duramax torch series includes torches for every application need, from gouging to robotic to extended reach.

15° Duramax hand torch

45° Duramax robotic torch

90° Duramax robotic torch

180° Duramax robotic torch

45° Duramax Hyamp 0,6 m (2') Long torch

45° Duramax Hyamp 1,2 m (4') Long torch

	Duramax robotic torches			Duramax Hyamp robotic torches			Duramax Hyamp 0,6 m (2') Long torches		Duramax Hyamp 1,2 m (4') Long torches	
	45°	90°	180°	45°	90°	180°	45°	90°	45°	90°
7,6 m (25')	059464	059465	059466	059564	059565	059566	059562	059563	059567	059568
15,2 m (50')							059579	059580	059581	059582

All Duramax Hyamp torches are compatible with the Powermax45 XP, 65, 85, 105, and 125.
All Duramax torches are compatible with the Powermax45 XP, 65, 85, and 105 only.

System specifications comparison

		Powermax30® XP	Powermax30® AIR	Powermax45® XP
Handheld cut capacity	Recommended	10 mm (3/8") 12 mm (1/2")	8 mm (5/16") 10 mm (3/8")	16 mm (5/8") 22 mm (7/8")
	Severance	16 mm (5/8")	16 mm (5/8")	29 mm (1-1/8")
Mechanized pierce capacity	with automatic torch height control	Not applicable	Not applicable	12 mm (1/2")[1]
	without automatic torch height control	Not applicable	Not applicable	12 mm (1/2")
Gouge capacity	Metal removed per hour	Not applicable	Not applicable	3,4 kg (7.5 lbs)
	depth x width[2]	Not applicable	Not applicable	3,2 x 6,8 mm (.12 x .26")
Output current		15–30 A	15–30 A	10–45 A
Input voltages		CSA 120–240 V, 1-PH, 50/60 Hz CE 120–240 V, 1-PH, 50/60 Hz	CSA 120–240 V, 1-PH, 50/60 Hz CE 120–240 V, 1-PH, 50/60 Hz	CSA 200–240 V, 1-PH, 50–60 Hz 480 V, 3-PH, 50–60 Hz CE 230 V, 1-PH, 50–60 Hz 400 V, 3-PH, 50–60 Hz
Rated output voltage		125 VDC	83 VDC	145 VDC
Input current		CSA 120–240 V, 1-PH, 25,5–18,8 A CE 120–240 V, 1-PH, 22,5–18.8 A	CSA 120–240 V, 1-PH, 28.7–15 A CE 120–240 V, 1-PH, 28.7–15 A	CSA 200–240 V, 1-PH, 39/32 A 480 V, 3-PH, 9,4 A CE 230 V, 1-PH, 33 A 400 V, 3-PH, 10 A
Duty cycle[3]		35%, 240 V 20%, 120 V	CSA 35%, 240 V 20%, 120 V CE 35%, 240 V 20%, 120 V	CSA 50% @ 45 A, 200–240 V, 1-PH 60% @ 41 A, 200–240 V, 1-PH 100% @ 32 A, 200–240 V, 1-PH CSA 50% @ 45 A, 480 V, 3-PH 60% @ 41 A, 480 V, 3-PH 100% @ 32 A, 480 V, 3-PH CE 50% @ 45 A, 230 V, 1-PH 60% @ 41 A, 230 V, 1-PH 100% @ 32 A, 230 V, 1-PH CE 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 140 x 305 mm (14.0 x 5.5 x 12.0")	420 x 195 x 333 mm (16.5 x 7.7 x 13.1")	442 x 173 x 357 mm (17.4 x 6.8 x 14.1")
Weight with torch		CSA 9,7 kg (21.4 lbs) CE 9,5 kg (21 lbs)	CSA 13,5 kg (29.8 lbs) CE 13,4 kg (29.5 lbs)	CSA 14 kg (31 lbs) CE 15 kg (33 lbs)
Gas supply	Cutting Gouging Marking	Air or N_2 Air, N_2, F5 Air, N_2, F5	Not applicable	Air, N_2, F5 Air, N_2, F5 Air or Argon
Recommended flow rate and pressure		Cutting: 113,3 l/min @ 5,5 bar (4 scfm @ 80 psi)	Not applicable	Cutting: 188 l/min @ 5,9 bar (400 scfh, 6.6 scfm @ 85 psi) Gouging: 165 l/min @ 4,1 bar (350 scfh, 5.8 scfm @ 60 psi)
Torch lead lengths	Handheld	4,5 m (15')	4,5 m (15')	6,1, 15,2 , 22,8 m (20, 50, 75')
	Mechanized	Not applicable	Not applicable	4,5, 7,6, 10,7, 15,2, 22,8 m (15, 25, 35, 50, 75')
Motor generator requirements for full arc stretch at full output		6,8 kVA or 5,5 kW	6,8 kVA or 5,5 kW	12,5 kVA or 10 kW

[1] Pierce rating for handheld use or with automatic torch height control.
[2] Dependent on speed, torch angle and standoff.
[3] 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.

	Powermax65®	Powermax85®	Powermax105®	Powermax125®
	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")	44 mm (1-3/4")
	32 mm (1-1/4")	38 mm (1-1/2")	50 mm (2")	57 mm (2-1/4")
	16 mm (5/8")[1]	20 mm (3/4")[1]	22 mm (7/8")[1]	25 mm (1")[1]
	12 mm (1/2")	16 mm (5/8")	20 mm (3/4")	22 mm (7/8")
	4,8 kg (10.7 lbs)	8,8 kg (19.5 lbs)	9,8 kg (21.7 lbs)	12,5 kg (27.6 lbs)
	3,5 x 6,6 mm (.14 x .26")	5,8 x 7,1 mm (.23 x .28")	8,1 x 6,6 mm (.32 x .26")	4,3–7,9 x 6,0–9,9 mm (0.17-0.31 x 0.24-0.39")
	20–65 A	25–85 A	30–105 A	30–125 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 400 V, 3-PH, 50–60 Hz	CSA 480 V, 3-PH, 50–60 Hz 600 V, 3-PH, 50–60 Hz CE 400 V, 3-PH, 50–60 Hz
	139 VDC	143 VDC	160 VDC	175 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, 50/60 Hz, 58/56/49/25/22 A CE 230/400 V, 3-PH, 50/60 Hz, 50/29 A 400 V, 3-PH, 50/60 Hz, 28 A	CSA 480/600 V, 3-PH, 50/60 Hz, 31/24 A CE 400 V, 3-PH, 50-60 Hz, 36 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	CSA 100% @ 125 A, 480/600 V, 3-PH CE 100% @ 125 A, 400 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")	592 x 274 x 508 mm (23.3 x 10.8 x 20.0")
	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 (230–400 V) 45 kg (100 lbs) (400 V) 41 kg (91 lbs)	CSA (480 V) 48 kg (105.7 lbs) (600 V) 47 kg (104.7 lbs) CE (400 V) 49 kg (108 lbs)
	Air, N_2, F5 Air, N_2, F5	Air, N_2, F5 Air, N_2, F5	Air, N_2, F5 Air, N_2, F5	Air, N_2, F5 Air, N_2, F5
	Cutting: 189 l/min @ 5,9 bar (400 scfh, 6.7 scfm @ 85 psi) Gouging: 212 l/min @ 4,8 bar (450 scfh, 7.5 scfm @ 70 psi)	Cutting: 189 l/min @ 5,9 bar (400 scfh, 6.7 scfm @ 85 psi) Gouging: 212 l/min @ 4,8 bar (450 scfh, 7.5 scfm @ 70 psi)	Cutting: 217 l/min @ 5,9 bar (460 scfh, 7.7 scfm @ 85 psi) Gouging: 227 l/min @ 4,8 bar (480 scfh, 8.0 scfm @ 70 psi)	Cutting: 260 l/min @ 5,9 bar (550 scfh, 9.2 scfm @ 85 psi) Gouging: 212 l/min @ 4,1 bar (450 scfh, 7.5 scfm @ 60 psi)
	7,6, 15,2, 22,8 m (25, 50, 75')	7,6, 15,2, 22,8 m (25, 50, 75')	7,6, 15,2, 22,8 m (25, 50, 75')	7,6, 15,2, 22,8 m (25, 50, 75')
	4,5, 7,6, 10,7, 15,2, 22,8 m (15, 25, 35, 50, 75')	4,5, 7,6, 10,7, 15,2, 22,8 m (15, 25, 35, 50, 75')	4,5, 7,6, 10,7, 15,2, 22,8 m (15, 25, 35, 50, 75')	4,5, 7,6, 10,7, 15,2, 22,8 m (15, 25, 35, 50, 75')
	20,1 kVA or 15 kW	26,8 kVA or 20 kW	40,2 kVA or 30 kW	53,6 kVA or 40 kW

Handheld cut capacity

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

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

Capacity ratings

There is no industry standard for rating plasma systems, so it is important to take care when comparing brands.

Mechanized pierce capacity

The thickness of mild steel that may be pierced using an automated torch height control without excessive wear on the consumable parts. Cut capacity for edge starts is the same as handheld capacity.


Hypertherm
powermax125

Automated cutting and gouging with Powermax

Industrial duty cycles, low operating costs and Hypertherm reliability make Powermax systems ideal for many mechanized applications.

Powermax® systems are used on X-Y cutting tables, robots, track cutting systems, and pipe cutting and beveling machines. FastConnect™ technology enables easy switching between handheld and machine torches.

Using a Powermax plasma system in a mechanized application

The equipment required to run a Powermax system in a mechanized application varies. For example:

- To automate long, straight cuts, a mechanized torch, a remote on/off pendant and track cutter may be all that is needed.
- An entry-level X-Y table application requires a mechanized torch, control cable, and a computer numeric control (CNC) along with the table and lifter.
- For optimum performance on an X-Y table, a programmable torch height control and nesting software would also be used. Proper torch height reduces dross while improving cut angularity and speed.

Mechanized communications

Mechanized Powermax systems include a standard machine interface through a CPC port, which provides access to start, transfer, and divided voltage signals.

For increased control of the power supply through a CNC, the Powermax45 XP, 65, 85, 105, and 125 models are available with an optional RS-485 serial interface port (ModBus ASCII protocol).

One of Hypertherm's long-standing core values is a focus on minimizing our impact on the environment. We work along our entire value stream, from our suppliers to our end users, to reduce negative environmental impacts. Doing so is critical to our, and our customers', success. We are always striving to become better environmental stewards; it is a process we care deeply about.

Our products are engineered to go well beyond environmental regulatory requirements. We meet the EU RoHS directive for restricting the use of hazardous materials, such as lead and cadmium, in our Powermax products. We use Life Cycle Analysis and design for sustainability scorecard to identify opportunities to reduce negative impacts or create beneficial outcomes. Our Powermax systems are manufactured in a LEED Gold designated factory where we purchase 100% renewable energy credits and are well on our way to generating zero landfill waste. Powermax products are shipped in 100% recyclable packaging.

Four of our newest Powermax systems are 5%–40% more efficient than their predecessors. They often cut thicker and faster yet use less energy. An example of this increased efficiency is the Powermax65 compared to an earlier predecessor, the MAX100®. Both have the same cut capacities, yet the Powermax65 is much smaller, lighter and uses less power.

	MAX100	Powermax65	Difference
Cut capacity	32 mm (1-1/4")	32 mm (1-1/4")	SAME
Output	100 A	65 A	35% less
Size	0,59 m³ (21'³)	0,059 m³ (1,9'³)	90% smaller
Weight	190 kg (420 lbs)	29 kg (64 lbs)	85% lighter

For more information about automated cutting refer to the Powermax Mechanized Applications brochure.

Genuine Hypertherm consumables

You can cut with confidence knowing that Hypertherm is dedicated to supporting your operation with high-quality parts. When purchasing consumables for your Powermax® system, look for an easy to understand color code system on the packaging organized by torch series, to identify the right consumables for your Powermax handheld or mechanized torches.

Torch series	Color code
T30v, T45v, T45m	Blue
AIR T30	Green
Duramax LT	Yellow
Duramax Lock and Duramax RT	Red
Duramax Hyamp™	Purple
Legacy	White

Consumable kits

- Consumable kits offer a convenient means of experiencing the versatility of Powermax plasma systems.
- HyAccess™ kits – extended consumables that provide the extra reach needed when cutting or gouging in hard to access spaces.
- Powermax Essential consumable kits – designed to provide the optimal mix of consumables for cutting at the amperage of your Powermax system.
- Bulk kits – economical for high volume use of select consumables.

Powermax Essential consumable kits

Powermax system	Torch series	Torch type	English kit number*
Powermax30 AIR	T30 AIR	Handheld	851462
Powermax30 XP	Duramax LT	Handheld	851479
Powermax45 XP	Duramax Lock	Handheld	851510
Powermax65	Duramax	Handheld	851465
		Mechanized	851466
		Mechanized Ohmic	851467
Powermax85	Duramax	Handheld	851468
		Mechanized	851469
		Mechanized Ohmic	851470
Powermax105	Duramax	Handheld	851471
		Mechanized	851472
		Mechanized Ohmic	851473
Powermax125	Duramax Hyamp	Handheld	851474
		Mechanized	851475
		Mechanized Ohmic	851476

HyAccess kits

Powermax system	Kit type	Kit part number	Amperage
Powermax30 XP	Combination – Cut/Gouge kit	428337	15–45 A
Powermax45 XP	Combination – Cut/Gouge kit	428414	
Powermax65	Combination – Cut/Gouge kit	428414	15–65 A
Powermax85	Starter pack – Cutting only	428445	
Powermax105	Starter pack – Gouging only	428446	

Duramax retrofit torches

If you own a Powermax600, 800, 900, 1000, 1250, 1650 or MAX42/43® system and are not ready to purchase a new Powermax system, you can enhance the performance of your system with a Duramax retrofit torch.

Duramax technology advantages

- Proprietary, fiber-reinforced torch handle is 5 times more impact resistant and 20% more heat resistant to withstand your toughest metal-cutting applications.*
- Duramax™ RT torches use the same consumables as new Powermax systems to provide longer consumable life and up to a 30% reduction in consumable costs.*
- CopperPlus® electrodes, designed exclusively for use with Duramax torches, provide at least 2 times longer consumable life over standard consumables when cutting metal 12 mm (1/2") and under to reduce your operating costs.**

Ease of use

- Duramax retrofit torches use the torch connection designed for your system which makes retrofitting easy.
- Retrofit torches for Powermax600, 800, 900 and MAX42/43 are available with or without quick disconnect. Easy Torch Removal (ETR) connections come standard on retrofit torches for Powermax1000, 1250 and 1650 systems.

* When compared with standard T60/T80/T100 torches and/or consumables for Powermax1000/1250/1650.

** Standard consumables refer to the original Hypertherm consumables designed for the system.

Handheld torch lead with quick disconnect

Mechanized torch lead with quick disconnect

Handheld or mechanized torch lead without quick disconnect for Powermax600 CE systems

Easy Torch Removal (ETR) connection

Part number	Torch assemblies for Powermax600/800/900 and MAX42/43
228916	Duramax HRT hand torch assembly with 7,6 m (25') leads
228917	Duramax HRT hand torch assembly with 15,2 m (50') leads
228918	Duramax HRT hand torch assembly with 7,6 m (25') leads**
228919	Duramax HRT hand torch assembly with 15,2 m (50') leads**
228920	Duramax HRT machine torch assembly with 7,6 m (25') leads
228921	Duramax HRT machine torch assembly with 15,2 m (50') leads
228922	Duramax HRT machine torch assembly with 7,6 m (25') leads**

**Without quick disconnect for Powermax600 CE models.

Part number	Torch assemblies for Powermax1000/1250/1650
228788	Duramax HRT hand torch assembly with 7,6 m (25') leads
228789	Duramax HRT hand torch assembly with 15,2 m (50') leads
228807	Duramax HRTs hand torch assembly with 7,6 m (25') leads
228790	Duramax MRT machine torch assembly with 7,6 m (25') leads
228791	Duramax MRT machine torch assembly with 15,2 m (50') leads

Cutting guides

Circle cutting guide

Quick and easy setup for accurate circles up to 70 cm (28") diameter and as a stand-off guide for straight and bevel cuts. For use with Powermax system torches.

127102 Basic kit – 38 cm (15") arm, wheels and pivot pin
027668 Deluxe kit – 28 cm (11") arm, wheels, pivot pin, anchor base and plastic case
017053 Hyamp deluxe kit – 28 cm (11") arm, wheels, pivot pin, anchor base and plastic case*

*For use with Hyamp torches only

Angle cutting guide

Protractor with magnetic base holds straight or square edges to make cutting precise angles easy.

017041

Bevel cutting guide

Cut a precise beveled edge for perfect weld preparation. Compatible with circle cutting guides, magnetic straight edge, angle guide.

017059 Standard
017058 Hyamp

Personal protective equipment

Hyamp™ helmet

Premium auto-dim shade 8–12 with large 5100 square mm (7.92 square inches) viewing area for cutting, welding and gouging. Includes clear safety shields, pouch and sticker sheet. ANSI Z87.1, CSA Z94.3, CE.

017031

Face shield

Clear face shield with flip-up shade for cutting and grinding. Safety shield included ANSI Z87.1, CSA Z94.3, CE.

127239 Face shield shade 6
127103 Face shield shade 8
017047* Face shield for hard hat shade 6
017048* Face shield for hard hat shade 8
017030 Leather neck guard (optional)
017029 Replacement shade 5 (for <40 A)
127243 Replacement shade 6 (for <60 A)
127105 Replacement shade 8 (for <80 A)
127104 Clear shield replacement
017046 Hard hat only (white)

*Hard hat not included

Cutting goggles

Shade 5 (for <40 A) soft body goggle fits over prescription glasses. ANSI Z87.1, CSA Z94.3, CE.

017035

Basic eyewear

127416 Shade 5 adjustable eyeshade
017034 Clear safety eye shields

Flip-up eyeshades

Shade 5 (for <40 A) flip-up shade, anti-scratch lens and adjustable frame. ANSI Z87.1, CSA Z94.3, CE.

017033

Magnetic straight edge

Two magnet blocks with 61 cm (24") straight edge.

017042

Pocket level and tape holder

Magnetic base and tape holder with built-in level.

017044

Magnetic block 3-pack

Attaches to any standard square or straight edge up to 0,31 cm (1/8") thick. Slotted on three sides.

017043

Hyamp cutting and gouging gloves

Insulated for heavy duty applications. Gun-cut palm design with seamless trigger finger and extended cuff provide flexibility and protection.

- Fire resistant goatskin leather and suede
- Padded areas for extra heat and abrasion protection

017025 Medium
017026 Large
017027 X-Large
017028 2X-Large

Leather cutting gloves

Pigskin grain leather.

127169

Cutting blanket

1,5 m x 1,8 m (5' x 6') 0,5 kg (18 oz.) fiberglass blanket protects nearby surfaces from cutting and gouging sparks. Rated for 540° C (1000° F).

017032

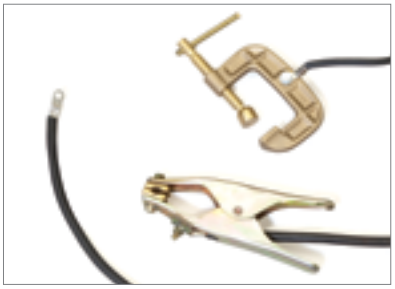
Arc-rated metalworking jersey

Top quality washable welder wear made from modacrylic fabric for flame and arc flash resistance. Durable with no chemical treatment.

- Tested for protection and durability: ASTM 1506-10a; OSHA 1910.269; NFPA 70E
- Arc rating = 28 cal/cm^2

017016 Medium, black
017017 Large, black
017018 X-Large, black
017019 2X-Large, black
017020 3X-Large, black

System accessories



Work cables

Three grounding connection styles. 15,2 m (50') and 22,8 m (75') lengths available.

Powermax65

223125 Hand clamp 7,6 m (25')
223194 C-style clamp 7,6 m (25')
223200 Ring terminal 7,6 m (25')

Powermax85

223035 Hand clamp 7,6 m (25')
223203 C-style clamp 7,6 m (25')
223209 Ring terminal 7,6 m (25')

Powermax105

223254 Hand clamp 7,6 m (25')
223287 C-style clamp 7,6 m (25')
223284 Ring terminal 7,6 m (25')

Powermax125

223292 Hand clamp 7,6 m (25')
223298 C-style clamp 7,6 m (25')
223295 Ring terminal 7,6 m (25')

Remote pendants

Remote on/off control for a machine torch attaches to the CPC port on Powermax45 XP, 65, 85, 105 and 125 models.

128650 77,6 m (25')
128651 15,2 m (50')
128652 22,8 m (75')

Air filtration kits

Ready-to-install kits with a 1-micron filter and an auto-drain moisture separator protects against contaminated air.

128647 Filter only
228570 Filter plus cover for Powermax65/85
228624 Cover only for Powermax65/85
228890 Filter plus cover for Powermax105/125
101215 Cover only for Powermax105/125
011092 Replacement air filter element

Wheel/gantry kits

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

229370 Powermax65/85 wheel kit
229569 Powermax65/85 gantry kit
229467 Powermax105/125 wheel kit
229570 Powermax105/125 gantry kit

Leather torch sheathing

Available in 7,6 m (25') sections, this option provides additional protection for torch leads against burn-through and abrasion.

024548 Brown leather
024877 Black leather with Hypertherm logos

Torch carry bags

Durable bag for carrying spare torches, work cables and accessories.

127363 Standard torch bag (shown) 58 x 28 x 28 cm (23" x 11" x 11")
107049 Duramax Hyamp 0,6 m (2') torch bag
107050 Duramax Hyamp 1,2 m (4') torch bag

Machine interface cables

Cables for connecting the serial interface port to CNC controllers on Powermax65, 85, 105 and 125 models.

223236 RS-485 to unterminated 7,6 m (25')
223237 RS-485 to unterminated 15,2 m (50')
223239 RS-485 to 9-pin D-sub connector 7,6 m (25')
223240 RS-485 to 9-pin D-sub connector 15,2 m (50')

Cables for connecting the CPC port to CNC controllers on Powermax45, 65, 85, 105 and 125 models.

023206 14-pin CPC to spade connector 7,6 m (25')
023279 14-pin CPC to spade connector 15,2 m (50')
228350 14-pin CPC to spade connector 7,6 m (25'), for divided arc voltage
228351 14-pin CPC to spade connector 15,2 m (50'), for divided arc voltage
123896 14-pin CPC to D-sub connector 15,2 m (50'), for divided arc voltage

Rolling tool bag

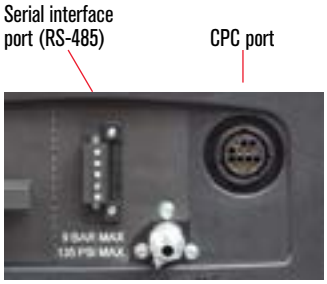
This rugged bag transports the Powermax30, 30 AIR, 45 or 45 XP with extra room for torches, consumables, accessories, and other gear. 50 cm x 44 cm x 32 cm (19.5" x 17.5" x 12.5")

017060

System dust covers

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

127144 Powermax30/30 XP
127469 Powermax30 AIR
127219 Powermax45 XP
127301 Powermax65/85
127360 Powermax105/125



Mechanized communication kits

Upgrade kits for the Powermax45 XP, 65, 85, 105 and 125 systems for mechanized applications.

428653 CPC port with selectable voltage divider board, Powermax45 XP
228697 CPC port with selectable voltage divider board, Powermax65 and 85
228884 CPC port with selectable voltage divider board, Powermax105 and 125
428654 Serial interface port (RS-485), Powermax45 XP
228539 Serial interface port (RS-485), Powermax65, 85, 105 and 125

System carry case

Rugged case for protecting and storing the Powermax30 or 30 XP and accessories.

127410

Gouging heat shield

Additional protection when gouging.

428347 Duramax torches
428348 Hyamp torches
128658 T45v and T60/80/100 torches

Nearly 50 years of Shaping Possibility

With the right tools and a relentless focus on innovation, partnership and community, we believe anything is possible.

At Hypertherm®, we give shape to our customers' vision with the world's leading industrial cutting solutions. Every day we help individuals and companies around the world envision better, smarter and more efficient ways to produce the products that shape our world. So whether you're cutting precision parts in North America, constructing a pipeline in Norway, fabricating agricultural machinery in Brazil, gouging out welds in the mines of South Africa, or building a skyscraper in China, you can count on Hypertherm to help you not just cut parts but achieve your vision.

100% employee ownership matters

At Hypertherm, we aren't just employees: we're all owners. Ownership is a powerful motivator that ensures our customers are our top priority. As owners, we make sure every product is built to the highest quality and that our service is second to none. And we build long-term relationships that deliver value for us, our partners and our customers.

Shaping what's possible the world over

Hypertherm is a key partner for your fabrication needs and has built a global organization focused on providing high-performance cutting solutions.

Key elements of the Hypertherm formula include:

- Dedicated Associates focused on customer-centered product design and support
- Local sales and service
- Broad application experience and proven results
- Sustainable and ethical business practices benefit our customers and communities

Hypertherm wall of patents

HELPING YOU SHAPE THE WORLD.

PLASMA | LASER | WATERJET | AUTOMATION | SOFTWARE | CONSUMABLES

For location nearest you, visit:
www.hypertherm.com

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.

896010

Greener Cuts™

Hypertherm®
SHAPING POSSIBILITY™