

Hypertherm®

powermax1250® G3 SERIES™

Handheld or mechanized plasma system for cutting and gouging metal

Operating data

Cut capacity	Handheld	Mechanized pierce
Recommended	7/8" (22 mm)	
Maximum	1 1/8" (29 mm)	5/8" (16 mm)
Severance	1 1/2" (38 mm)	

Gouge capacity	
Metal removed per hour: 15 lbs (6.8 kg)	
Depth x width: 3/16" (5 mm) x 1/8" (3 mm)	

Key advantages

- Auto-voltage™ automatically adapts to any incoming power from 200 V – 600 V, 1- or 3-phase.
- Coaxial-assist™ jet technology delivers fast cut speeds.
- Boost Conditioner™ compensates for input voltage variations, providing improved performance on low-line voltage, on motor generators and on fluctuating input power.
- Reliability-focused design improves uptime and maximizes return on investment.
- CNC interface and Easy Torch Removal (ETR™) provide increased versatility for handheld and mechanized usage.

Applications

- Hand cutting
- Gouging
- Mechanized cutting
 - X-Y tables
 - Track systems
 - Pipe systems
 - Robotic systems

Standard system components

- Power supply
- T80 hand torch or T80M machine torch
- Extra consumables for cutting
- Work cable with clamp, 15' (4.5 m)



T80 hand torch

T80M machine torch



Specifications

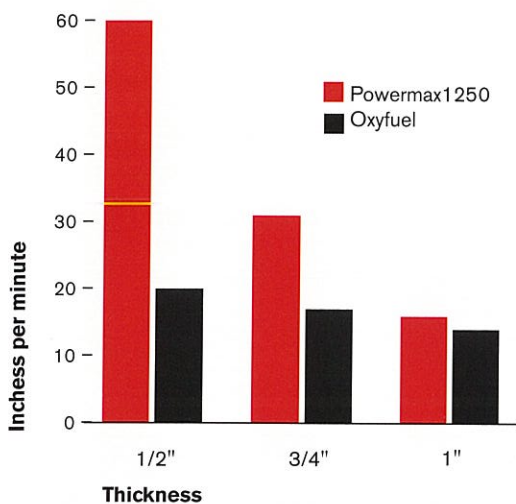
Input voltages	200 – 600 V, 1/3-PH, 50/60 Hz, CSA 230 – 400 V, 3-PH, 50/60 Hz, CE
Input current @ 12.0 kW output	200/208/230/240/480 V, 1-PH: 70/70/60/58/31 A 200/208/230/240/400/480/600 V, 3-PH: 41/40/37/34/21/17/17 A
Rated output voltage	150 VDC
Output current	25 – 80 A
Duty cycle @ 40°C (104° F)	60% @ 80 A, 230 – 600 V, 3-PH 60% @ 80 A, 480 V, 1-PH 50% @ 80 A, 240 V, 1-PH 50% @ 80 A, 200 – 208 V, 3-PH 40% @ 80 A, 200 – 208 V, 1-PH
Output for 100% duty cycle @ 40°C (104° F)	51 A @ 200 – 208 V, 1-PH 56 A @ 200 – 208 V, 3-PH 56 A @ 240 V, 1-PH 62 A @ 230 – 600 V, 3-PH
Maximum OCV	300 VDC
Dimensions with handle	23.1" (586 mm) D; 10.7" (271 mm) W; 19.6" (498 mm) H
Weight with torch	96.6 lbs (44 kg)
Gas supply	Clean, dry, oil-free air or nitrogen
Flow rate	400 scfh; 6.7 cfm (189 l/min) @ 90 psi (6.2 bar)
Flow pressure	70 psi (4.8 bar) flowing, 25' leads 75 psi (5.1 bar) flowing, 50' leads
Input power cable length	8' (2.4 m)
Work cable length	15' (4.5 m)
Warranty period	Full 3-year power supply warranty and a 1-year torch warranty.

Engine-driven generator operation

Engine drive rating (kW)	System output (amps)	Performance (arc stretch)
20	80	Full
15	70	Limited
15	60	Full
12	60	Limited
12	40	Full
8	40	Limited
8	30	Full

Powermax1250 versus oxyfuel

Cut speed on mild steel



Hypertherm®

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Cut chart

Material	Thickness		Current (amps)	Maximum cut speed*	
	(inches)	(mm)		(ipm)	(mm/min.)
Mild steel	22 GA	0.8	25	500	12700
	10 GA	3.6	40	151	3835
	1/4	6.4	40	74	1880
	3/8	9.5	80	94	2388
	1/2	12.7	80	60	1524
	3/4	19.0	80	31	787
	1	25.4	80	16	406
Aluminum	1/32	0.8	25	610	15494
	1/8	3.2	25	268	6807
	1/4	6.4	40	76	1930
	1/2	12.7	80	121	3073
	3/4	19.0	80	75	1905
	1	25.4	80	37	940
	Stainless steel	22 GA	0.8	25	496
10 GA		3.6	40	107	2718
1/4		6.4	40	47	1194
3/8		9.5	80	83	2108
1/2		12.7	80	50	1270
3/4		19.0	80	24	610
1		25.4	80	14	356

*Maximum cut speeds are the results of Hypertherm's laboratory testing. For optimum cut performance, actual cutting speeds may vary based on different cutting applications. Refer to the operator manual for more details.

Ordering information

	System part numbers			
	With 25' (7.6 m) torch	With 50' (15 m) torch	With 75' (23 m) torch	
200 – 600 V, 1/3-PH, CSA ¹	Handheld system	087008	087009	087049
	Mechanized system	087012	087013	087051
230 – 400 V, 3-PH, CE ²	Handheld system	087020	087021	087050
	Mechanized system	087022	087023	087052

¹ For use in the Americas and Asia, except China.

² For use in countries that require CE, CCC or GOST marks.



This system meets the RoHS directive restricting the use of lead, mercury, cadmium and other hazardous compounds.

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 cutting

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

Maximum – The thickness of mild steel on which the system delivers good cut quality but at reduced speeds of 10" (250 mm) per minute. Twenty percent or less of cutting should be at the maximum thickness.

Severance – The thickness of mild steel that can be reasonably severed, but with poor cut quality and at slow speed. Cutting the severance thickness should be infrequent.

Mechanized cutting

Maximum – The thickness of mild steel that may be pierced with good cut quality and without excessive wear on the consumable parts. If edge starting, the cut capacity is the same as handheld capacity.

Note: For additional information on mechanized cutting speeds and thicknesses, refer to product operator manuals.