Hypertherm®

Powermax Mechanized Applications
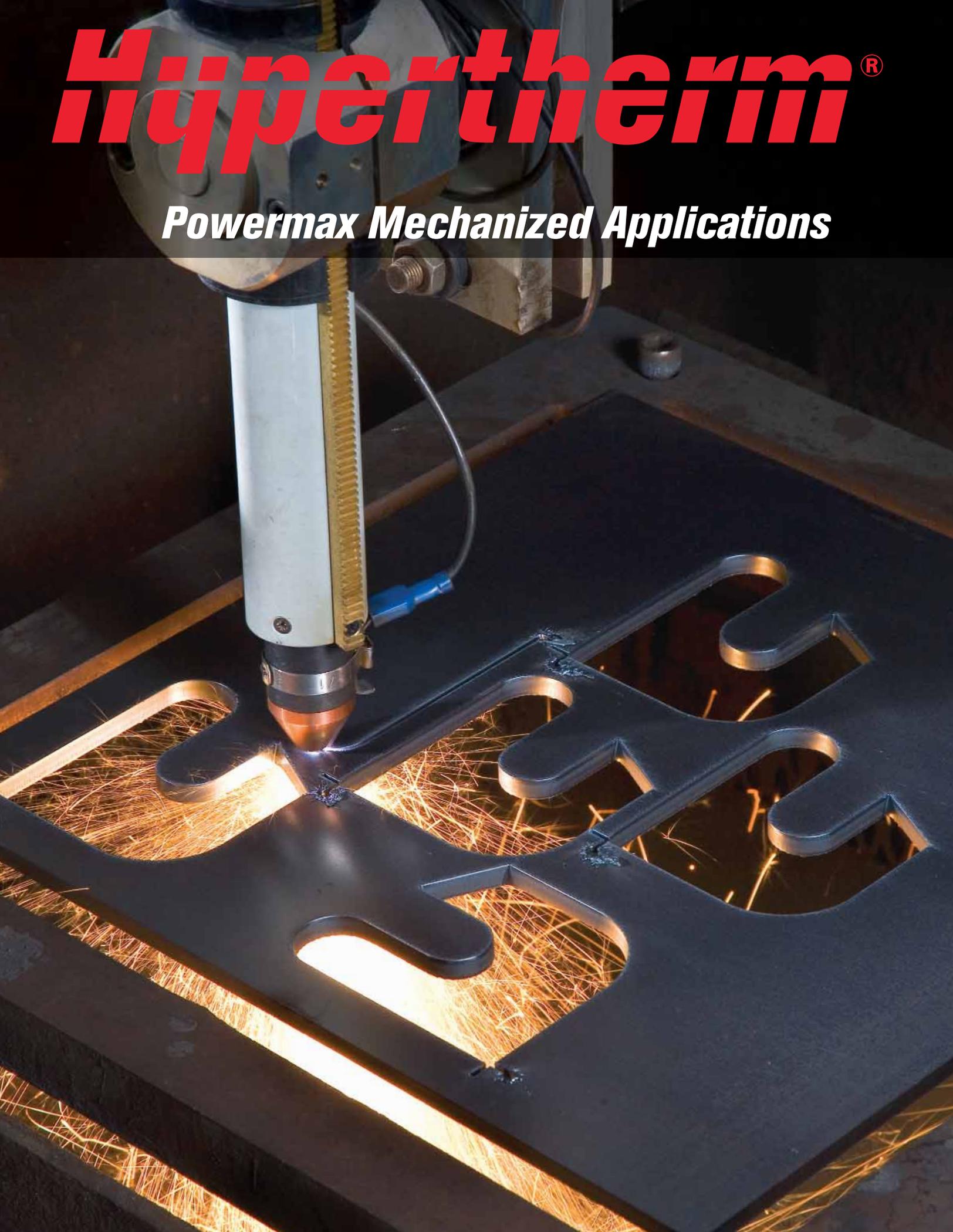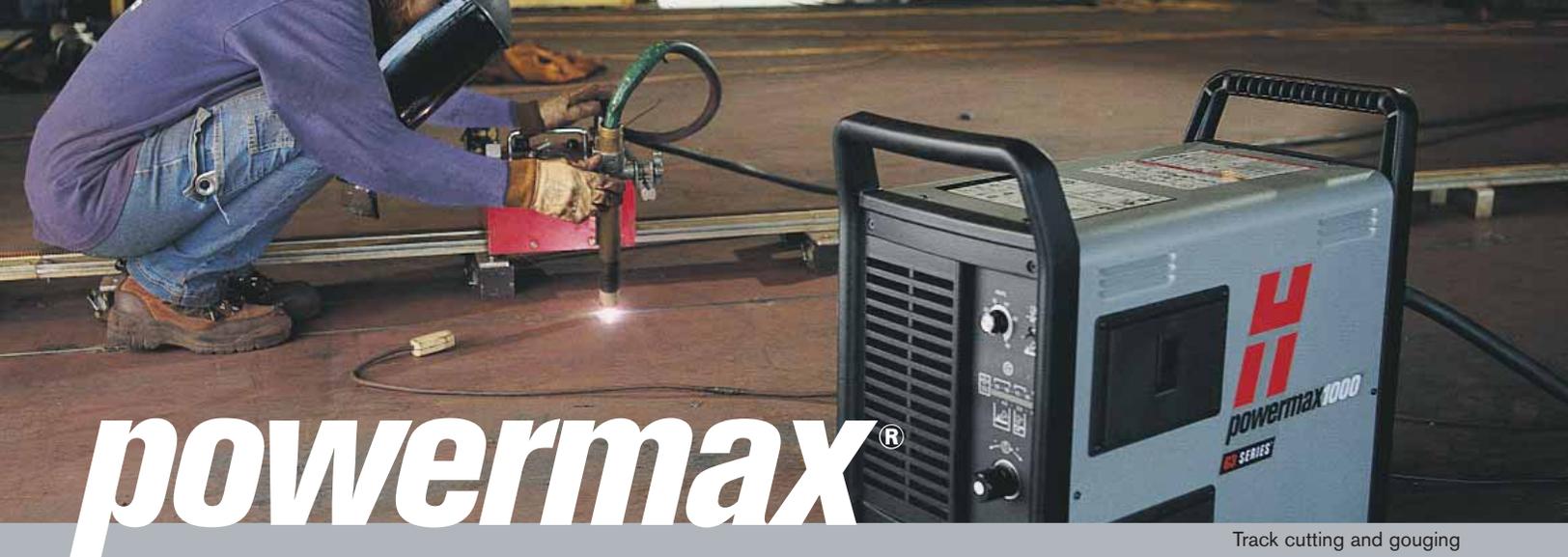
powermax®

Mechanized cutting and gouging

Cut with confidence™

Hypertherm is the world leader in mechanized plasma cutting. Our Powermax line of single-gas (air or nitrogen) mechanized systems delivers high productivity, low operating cost, superior cut quality and Hypertherm's unsurpassed reliability. Powermax products are frequently used on X-Y cutting tables, 3-dimensional robots, track cutting systems, and pipe cutting and beveling machines.

Greater productivity at lower cost

Powermax systems' cut quality, fast speeds, long consumable life and reliability keep productivity high and operating costs low.
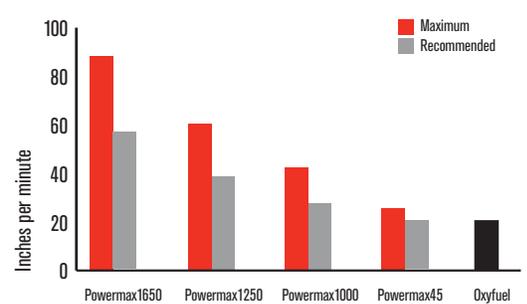
• Good cut quality with less dross for fewer secondary operations.

• Fast cutting speeds with no pre-heating required.

• Consumable technology extends nozzle and electrode life.

• Smart design and intense testing for higher reliability and greater uptime.

Hypertherm technology: the defining difference

Proprietary designs deliver high performance for mechanized applications.

• Contact-start eliminates high-frequency interference.

• Advanced electronics and Powercool™ technology enable high duty cycles.

• CNC interface and available voltage divider make it easy to set up and operate.

• Optional FineCut™ consumables produce less dross, narrower kerf and virtually no heat-affected zone on thinner plate.

• Quick-disconnect torches allow for easy switching to a handheld torch for cutting up scrap or other applications.

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

Bar chart legend: ■ Maximum (red) ■ Recommended (gray). Vertical axis: Inches per minute (0 to 100). Horizontal axis categories: Powermax1650, Powermax1250, Powermax1000, Powermax45, Oxyfuel.

Maximize the value of your existing table or other equipment

- Replace your old plasma or oxyfuel system and get more done, in less time, at lower cost.
- Switching from oxyfuel to plasma allows you to cut stainless steel, aluminum and other metals that oxyfuel cannot.
- Powermax systems are easy to integrate and easy to operate.

"We switched from oxyfuel to plasma cutting, and instantly realized the benefits of the faster cutting speed, cleaner cutting, and increased accuracy with the Hypertherm Powermax1650 system. Not only did our productivity nearly triple but we were able to offer a higher quality product to our customers."

– Mr. Jun Miao, Manufacturing Director, Liangshan Zhongji Dongyue Co., Ltd

Pipe cutting and beveling

X-Y cutting

Robotic 3-dimensional cutting

Additional mechanized solutions

The PowermaxEDGE® combines a CNC-ready Powermax system that includes a 50:1 voltage divider, a Hypertherm Automation torch height control, CNC, cables and motors. PowermaxEDGE offers metal fabricators a complete entry-level or retrofit mechanized plasma cutting system with outstanding performance, value, and ease of integration.

Hypertherm also manufactures the best-selling heavy-duty mechanized cutting systems in the world. HySpeed® and HyPerformance® models deliver Hypertherm's best cut quality, long consumable life and low operating costs for high-production environments.

THREE YEAR WARRANTY

All Powermax systems are backed by a full 3-year power supply warranty and a 1-year torch warranty. No parts excluded.

System components

- Power supply
- Straight torch with gear rack
- 25' (7.6 m), 35' (10.7 m), 50' (15.2 m) or 75' (22.8 m) torch lead
- Extra consumables
- Remote-start pendant
- CNC interface cable (optional on the Powermax45)

System options

- FineCut™ consumables
- Ohmic-contact retaining cap
- Air filtration kit
- 50:1 voltage divider (standard on the Powermax45)
- Sensor™ PHC torch height controller
- Edge® Ti shape-cutting controller

Cut chart (travel speed per minute on mild steel)

System	Metal thickness											
	10 gauge (3 mm)		1/4" (6 mm)		3/8" (10 mm)		1/2" (12 mm)		5/8" (16 mm)		3/4" (19 mm)	
	Recommended	Maximum	Recommended	Maximum	Recommended	Maximum	Recommended	Maximum	Recommended	Maximum	Recommended	Maximum
Powermax45	140" (3550 mm)	175" (4445 mm)	60" (1500 mm)	75" (1905 mm)	32" (810 mm)	40" (1016 mm)	20"* (510 mm)*	25"* (635 mm)*	11"* (280 mm)*	14"* (356 mm)*	8"* (200 mm)*	10"* (254 mm)*
Powermax1000	211" (5359 mm)	264" (6706 mm)	86" (2184 mm)	132" (3353 mm)	41" (1041 mm)	63" (1600 mm)	27" (686 mm)	42" (1067 mm)	20"* (508 mm)*	31"* (787 mm)*	14"* (356 mm)*	22"* (558 mm)*
Powermax1250	345" (8778 mm)	432" (10973 mm)	105" (2667 mm)	161" (4089 mm)	61" (1549 mm)	94" (2388 mm)	39" (991 mm)	60" (1524 mm)	26" (660 mm)	40" (1016 mm)	20"* (508 mm)*	31"* (787 mm)*
Powermax1650	365" (9265 mm)	456" (11582 mm)	135" (3429 mm)	208" (5283 mm)	77" (1955 mm)	119" (3023 mm)	57" (1447 mm)	88" (2235 mm)	40 (1016 mm)	61" (1549 mm)	26" (660 mm)	47" (1194 mm)

*For edge starts

Specifications

	Powermax45	Powermax1000	Powermax1250	Powermax1650
Amperage	20 – 45 A	20 – 60 A	25 – 80 A	30 – 100 A
Mechanized pierce capacity	3/8" (10 mm)	1/2" (12 mm)	5/8" (16 mm)	3/4" (19 mm)
Input voltages	200 – 240 V, 1-PH, 50/60 Hz, CSA 230 V, 1-PH, 50/60 Hz, CE 400 V, 3-PH, 50/60 Hz, CE	200 – 600 V, 1/3-PH, 50/60 Hz, CSA 230 – 400 V, 3-PH, 50/60 Hz, CE	200 – 600 V, 1/3-PH, 50/60 Hz, CSA 230 – 400 V, 3-PH, 50/60 Hz, CE	200 – 600 V, 3-PH, 50/60 Hz, CSA 230 – 400 V, 3-PH, 50/60 Hz, CE
Input current	200 – 240 V, 1-PH: 34 – 28 A 230 V, 1-PH: 30 A 400 V, 3-PH: 10 A	200/208/230/240/480 V, 1-PH: 50/48/44/42/22 A 3-PH: 30/29/26/24/15/12/11 A	200/208/230/240/480 V, 1-PH: 70/70/60/58/31 A 3-PH: 41/40/37/34/21/17/17 A	200/208/230/240/400/480/600 V, 3-PH: 53/51/46/44/27/22/21 A
Output voltage	132 VDC	140 VDC	150 VDC	160 VDC
Duty cycle at full output*	50%	50%, 230 – 600 V, 3-PH 50%, 230 – 480 V, 1-PH 40%, 200 – 208 V, 3-PH 40%, 200 – 208 V, 1-PH	60%, 230 – 600 V, 3-PH 60%, 480 V, 1-PH 50%, 240 V, 1-PH 50%, 200 – 208 V, 3-PH 40%, 200 – 208 V, 1-PH	80%, 400 – 600 V, 3-PH 70%, 230 – 240 V, 3-PH 60%, 200 – 208 V, 3-PH
Amperage @ 100% duty cycle	32 A	52 A	68 A	92 A
Maximum OCV	275 VDC	300 VDC	300 VDC	300 VDC
Dimensions	16.8" (426 mm) D 6.8" (172 mm) W 13.7" (348 mm) H	23.1" (586 mm) D 10.7" (271 mm) W 19.6" (498 mm) H	23.1" (586 mm) D 10.7" (271 mm) W 19.6" (498 mm) H	26.4" (671 mm) D 16.8" (427 mm) W 25.8" (655 mm) H
Weight with 25' (7.6 m) machine torch	39 lbs (18 kg)	84 lbs (38 kg)	98 lbs (45 kg)	132 lbs (60 kg)
Gas supply	Air or N$_2$	Air or N$_2$	Air or N$_2$	Air or N$_2$
Flow rate and pressure	360 scfh (170 l/min) @ 90 psi (6.2 bar)	400 scfh (189 l/min) @70 psi (4.8 bar)	400 scfh (189 l/min) @ 70 psi (4.8 bar)	550 scfh (260 l/min) @ 75 psi (5.1 bar)

* Hypertherm's duty cycle ratings are established at 104° F (40° C), according to international standards, and are determined at actual cutting arc voltage levels. Competitive systems are often rated at room temperature 70° F (20° C) and at theoretical output voltages, which allows duty cycle ratings to be significantly overstated.

Genuine Hypertherm Consumables
Made in the USA
Quality ★ Consistency ★ Performance

Ordering information

Powermax mechanized system part numbers	with 25' (7.6 m) torch	with 35' (10.7 m) torch	with 50' (15 m) torch	with 75' (23 m) torch
Powermax45				
208 – 240 V, 1-PH, CSA	088022	088023	088024	–
230 V, 1-PH, CE	088025	088026	088027	–
400 V, 3-PH, CE	088028	088029	088030	–
Powermax1000				
200 – 600 V, 1/3-PH, CSA	083182	083188*	083183	083212
230 – 400 V, 3-PH, CE	083194	083198*	083195	083213
Powermax1250				
200 – 600 V, 1/3-PH, CSA	087012	087018*	087013	087051
230 – 400 V, 3-PH, CE	087022	087026*	087023	087052
Powermax1650				
200 – 600 V, 3-PH, CSA	059279	059284*	059280	059303
230 – 400 V, 3-PH, CE	059290	059293*	059291	059304

* Without remote pendant.

Hypertherm®

RoHS

These Powermax systems meet the RoHS directive restricting the use of lead, mercury, cadmium and other hazardous compounds.

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For the authorized Hypertherm dealer nearest you, visit our website at **www.hypertherm.com**.

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