

# Hypertherm<sup>®</sup>

## powermax45<sup>®</sup>

### **Handheld or mechanized plasma system for cutting and gouging metal**

#### **Operating data**

<i>Cut capacity</i>	<i>Handheld</i>	<i>Mechanized pierce</i>
Recommended	1/2" (12 mm)	
Maximum	3/4" (19 mm)	3/8" (10 mm)
Severance	1" (25 mm)	

#### *Gouge capacity*

Metal removed per hour: 6.2 lbs (2.8 kg)

Depth x width: 1/8" (2.9 mm) x 1/4" (6.5 mm)

#### **Key advantages**

- Small size and light weight provide unmatched portability among 1/2" (12 mm) machines.
- Conical Flow™ increases arc energy density for superior cut quality with little dross.
- Patented drag-cutting technology makes it easy to use – even for first-time operators.
- Boost Conditioner™ compensates for input voltage variations on 200 – 240 V lines, providing improved performance on low-line voltage, on motor generators and on fluctuating input power.
- CNC interface and Fast Connect™ torch connection increase versatility for handheld and mechanized usage.
- Dual-angle design extends nozzle life and lowers operating cost.
- Powercool™ design cools internal components more effectively for greater system reliability and improved uptime.

#### **Applications**

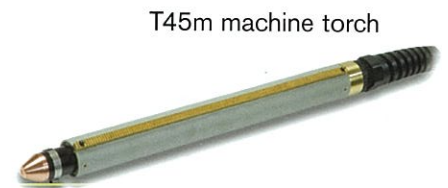
- Hand cutting
- Gouging
- Mechanized cutting
  - X-Y tables
  - Track systems
  - Pipe systems
  - Robotic systems

#### **Standard system components**

- Power supply
- T45v hand torch or T45m machine torch
- Extra consumables for cutting and gouging
- Work cable with clamp, 20' (6 m)
- Carry strap



T45v hand torch



T45m machine torch

## Specifications

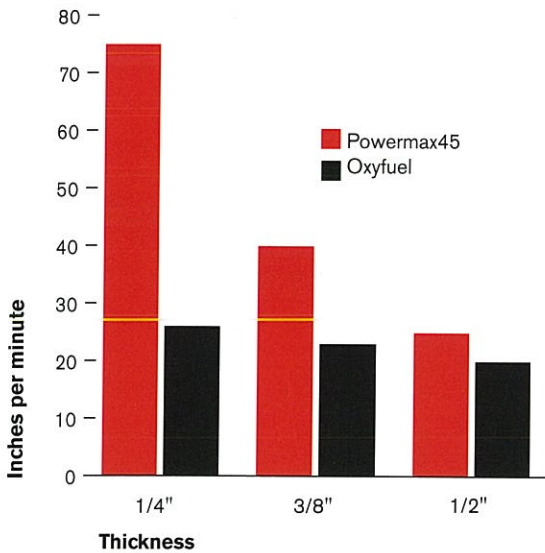
Input voltages (±10%)	200 – 240 V, 1-PH, CSA 230 V, 1-PH, CE 400 V, 3-PH, CE
Input current @ 5.95 kW	200 – 240 V, 34 – 28 A, 1-PH, CSA 230 V, 30 A, 1-PH, CE 400 V, 10 A, 3-PH, CE
Rated output voltage	132 VDC
Output current	20 – 45 A
Duty cycle @ 40° C (104° F)	50% @ 45 A, 132 V 60% @ 41 A, 132 V 100% @ 32 A, 132 V
Output for 100% duty cycle @ 40° C (104° F)	32 A @ 132 V
Maximum OCV	275 VDC
Dimensions with handle	16.75" (426 mm) D; 6.75" (172 mm) W; 13.7" (348 mm) H
Weight with torch	37 lbs (16.8 kg) CSA 35 lbs (15.8 kg) CE
Gas supply	Clean, dry, oil-free air or nitrogen
Flow rate	360 scfh; 6 cfm (170 l/min)
Flow pressure	90 psi (6.2 bar)
Input power cable length	10' (3 m)
Work cable length	20' (6.1 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)
8	45	Full
6	45	Limited
6	30	Full

## Powermax45 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	20 GA	0.9	45	400	10160	
	14 GA	1.9	45	360	9144	
	10 GA	3.4	45	175	4445	
	1/4	6.4	45	75	1905	
	3/8	9.5	45	40	1016	
	1/2	12.7	45	25	635	
	3/4	19.1	45	10	254	
	1	25.4	45	5	127	
	Stainless steel	20 GA	0.9	45	400	10160
		14 GA	1.9	45	360	9144
10 GA		3.4	45	150	3810	
1/4		6.4	45	55	1397	
3/8		9.5	45	32	813	
1/2		12.7	45	18	457	
3/4		19.1	45	9	229	
Aluminum		16 GA	1.5	45	400	10160
		14 GA	1.9	45	400	9144
		10 GA	3.4	45	280	3810
	1/4	6.4	45	100	1397	
	3/8	9.5	45	42	813	
	1/2	12.7	45	25	457	
	3/4	19.1	45	10	229	

\*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 20' (6.1 m) torch	With 25' (7.6 m) torch	With 35' (10.7 m) torch	With 50' (15 m) torch	
<b>200 – 240 V, 1-PH, CSA<sup>1</sup></b>	Handheld system	088016	–	–	088017
	Mechanized system	–	088022	088023	088024
<b>230 V, 1-PH, CE<sup>2</sup></b>	Handheld system	088018	–	–	088019
	Mechanized system	–	088025	088026	088027
<b>400 V, 3-PH, CE<sup>2</sup></b>	Handheld system	088020	–	–	088021
	Mechanized system	–	088028	088029	088030

<sup>1</sup> For use in the Americas and Asia, except China.

<sup>2</sup> 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.