

# Hypertherm®

## powermax45®

### **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 FastConnect™ 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                              | 200 – 240 V, 1-PH, CSA<br>230 V, 1-PH, CE<br>400 V, 3-PH, CE                        |
| Input current @ 5.95 kW                     | 200 – 240 V, 34 – 28 A, 1-PH, CSA<br>230 V, 30 A, 1-PH, CE<br>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<br>60% @ 41 A, 132 V<br>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;<br>13.7" (348 mm) H                            |
| Weight with torch                           | 37 lbs (16.8 kg) CSA<br>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                           | 15' (4.5 m)   |
| Warranty period                             | Full 3-year power supply warranty and a 1-year torch warranty.                      |

## Cut chart

| Material        | Thickness (inches) (mm) |       | Current (amps) | Maximum cut speed* (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   |
| 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.

## Engine-driven generator operation

| Engine drive rating (kW) | System output (amps) | Performance (arc stretch) |
|--------------------------|----------------------|---------------------------|
| 8                        | 45                   | Full                      |
| 6                        | 45                   | Limited                   |
| 6                        | 30                   | Full                      |

## Ordering information

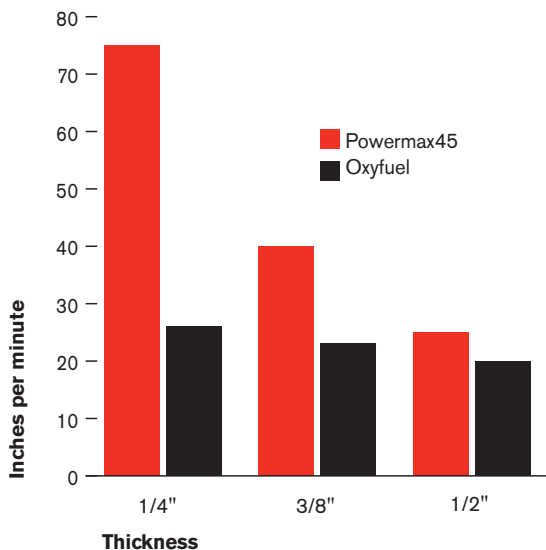
|                                     | System part numbers    |                        |                         |                       |        |
|-------------------------------------|------------------------|------------------------|-------------------------|-----------------------|--------|
|                                     | With 20' (6.1 m) torch | With 25' (7.6 m) torch | With 35' (10.7 m) torch | With 50' (15 m) torch |        |
| <b>230 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.

## Powermax45 versus oxyfuel

Cut speed on mild steel



# Hypertherm®

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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.