

# Hypertherm®

## Powermax105®

Professional-grade plasma metal cutting and gouging system for handheld cutting 1.25" and mechanized piercing 7/8".



| Capacity                 | Thickness | Cut speed |
|--------------------------|-----------|-----------|
| Cutting                  |           |           |
| Recommended              | 1-1/4"    | 20 ipm    |
|                          | 1-1/2"    | 10 ipm    |
| Severance (hand cutting) | 2"        | 5 ipm     |
| Pierce*                  | 7/8"      |           |

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

| Capacity      | Metal removal rate | Groove profile  |
|---------------|--------------------|-----------------|
| Gouging       |                    |                 |
| Typical gouge | 21.7 lbs per hour  | .25" D x .29" W |

### Maximum productivity

- Finish jobs faster with cut speeds three times greater than oxyfuel on 1/2" mild steel.
- Spend less time on grinding and edge preparation due to superior cut and gouge quality.

### Low operating costs

- Reduce costs with long consumable life and more uptime.
- Electrode end-of-life detection protects the torch and workpiece from damage by automatically stopping power when the electrode is overused.

### Easy-to-use for cutting and gouging

- No need to change the air pressure. Smart Sense™ technology ensures that it is always correctly set.
- Drag cut at full output with a patented shield that reduces dross buildup for smoother cutting.
- Tackle different jobs with multiple, easy-to-use torch styles.

### Built and tested to withstand the harshest conditions

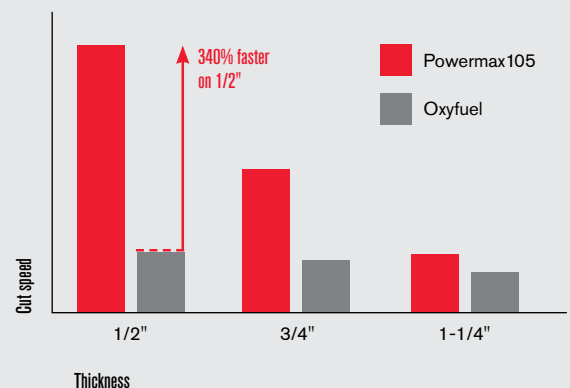
- Duramax™ torches are designed for high-impact and heat resistance.
- SpringStart™ technology ensures consistent starting and a more reliable torch.
- Low maintenance for maximum uptime.

### Duramax standard torch styles

(for more torch options, see [www.hypertherm.com](http://www.hypertherm.com))



### Relative cut performance on mild steel



## Specifications

|  |  |
|--|--|
| Input voltages                           | 200-600 V, 3-PH, 50/60 Hz  |
| Input current @ 16.8 kW                  | 200/208/240/480/600 V, 3-PH 58/56/49/25/22 A   |
| Output current                           | 30-105 A   |
| Rated output voltage                     | 160 VDC  |
| Duty cycle @ 104° F (40° C)              | 70% @ 105 A, 240 V, 3-PH<br>80% @ 105 A, 480-600 V, 3-PH<br>100% @ 94 A, 480-600 V, 3-PH<br>100% @ 88 A, 240 V, 3-PH |
| Open circuit voltage (OCV)               | 300 VDC  |
| Dimensions with handles                  | 23.3" D; 10.8" W; 20.0" H  |
| Weight w/25' torch                       | 100 lbs  |
| Gas supply                               | Clean, dry, oil-free air or nitrogen   |
| Recommended gas inlet flow rate/pressure | Cutting: 460 scfh, 7.7 scfm @ 85 psi<br>Gouging: 480 scfh, 8.0 scfm @ 70 psi   |
| Input power cable length                 | 10'  |
| Power supply type                        | Inverter - IGBT  |
| Engine drive requirement                 | 30 kW for full 105 A output  |
| Certifications                           | CSA-certified for use in the Americas and Asia, except China   |
| Warranty                                 | Power supplies have a 3-year warranty and torches a 1-year warranty  |



## Ordering information

Below are the standard system configurations, which include a power supply, torch and work cable.

|   | 75° hand torch |        | 75° and 15° hand torch |        | 180° full-length machine torch |                        |                              |                     |                        |                              | 180° full-length machine torch and 75° hand torch |
|---|----------------|--------|------------------------|--------|--------------------------------|------------------------|------------------------------|---------------------|------------------------|------------------------------|---|
|   | 25'            | 50'    | 25'                    | 50'    | 25'                            |                        |                              | 50'                 |                        |                              | 25'   |
| Power supplies  |                |        | without remote pendant |        | with remote pendant            | without remote pendant | with I/O cables (no pendant) | with remote pendant | without remote pendant | with I/O cables (no pendant) | with remote pendant                               |
| Standard power supply                                       | 059374         | 059375 |                        |        |                                |                        |                              |                     |                        |                              |   |
| Power supply with CPC port and voltage divider              | 059376         | 059377 | 059382                 | 059383 | 059378                         | 059380                 |                              | 059379              | 059381                 |                              | 059384  |
| Power supply with CPC port, voltage divider and serial port |                |        |                        |        |                                |                        | 059386                       |                     |                        | 059387                       |   |



**Custom configurations** (select power supply, torch, consumable kit, work cable, and other components)

**Power supply options**

|               | Standard power supply | Power supply with CPC port and voltage divider | Power supply with CPC port, voltage divider, and serial port |
|---------------|-----------------------|--|--|
| 200–600 V CSA | 059370                | 059371   | 059372   |

**Starter kit consumable options**

|     | Handheld | Mechanized | Mechanized with ohmic retaining cap |
|-----|----------|------------|-------------------------------------|
| Kit | 228849   | 228848     | 228969                              |

**Torch options**

| Cable length | Hand torches |        | Machine torches |           | Robotic torches |        |        |
|--------------|--------------|--------|-----------------|-----------|-----------------|--------|--------|
|              | 75°          | 15°    | 180°            | Mini 180° | 45°             | 90°    | 180°   |
| 15'          |              |        | 059476          | 059481    |                 |        |        |
| 25'          | 059473       | 059470 | 059477          | 059482    | 059464          | 059465 | 059466 |
| 35'          |              |        | 059478          | 059483    |                 |        |        |
| 50'          | 059474       | 059471 | 059479          | 059484    |                 |        |        |
| 75'          | 059475       | 059472 | 059480          |           |                 |        |        |

**Cable options**

| Cable length | Work cables |               |               | Control cables |                                       |  |                                       |                                  |                           |
|--------------|-------------|---------------|---------------|----------------|---------------------------------------|--|---------------------------------------|----------------------------------|---------------------------|
|              | Hand clamp  | C-style clamp | Ring terminal | Remote pendant | CNC, spade connector, divided voltage | CNC, spade connector, no divided voltage | CNC, D-sub connector, divided voltage | RS-485 Serial comm, unterminated | RS-485 Serial comm, D-sub |
| 25'          | 223254      | 223287        | 223284        | 128650         | 228350                                | 023206                                   | 223048                                | 223236                           | 223239                    |
| 50'          | 223255      | 223288        | 223285        | 128651         | 228351                                | 023279                                   | 123896                                | 223237                           | 223240                    |
| 75'          | 223256      | 223289        | 223286        | 128652         |                                       |  |                                       |                                  |                           |

**Torch consumable parts**

Nozzles and electrodes are available in various quantities. Contact your distributor for more information.

| Consumable type | Torch type | Amperage | Nozzle | Shield/Deflector              | Retaining cap                 | Electrode | Swirl ring |
|-----------------|------------|----------|--------|-------------------------------|-------------------------------|-----------|------------|
| Drag-cutting    | Hand       | 45       | 220941 | 220818                        | 220854                        | 220842    | 220994     |
|                 |            | 65       | 220819 |                               |                               |           |            |
|                 |            | 85       | 220816 |                               |                               |           |            |
|                 |            | 105      | 220990 | 220992                        |                               |           |            |
| Mechanized      | Machine    | 45       | 220941 | 220817 or 220955 <sup>1</sup> | 220854 or 220953 <sup>2</sup> | 220842    | 220994     |
|                 |            | 65       | 220819 |                               |                               |           |            |
|                 |            | 85       | 220816 |                               |                               |           |            |
|                 |            | 105      | 220990 | 220993 or 220955 <sup>1</sup> |                               |           |            |
| FineCut®        | Hand       | 45       | 220930 | 220931                        | 220854 or 220953 <sup>2</sup> | 220842    | 220947     |
|                 | Machine    |          |        | 220948                        |                               |           | 220994     |
| Gouging         | Hand       | 30–105   | 220991 | 220798                        | 220854                        | 220842    | 220994     |
|                 | Machine    |          |        |                               |                               |           |            |

<sup>1</sup> Deflector for unshielded cutting

<sup>2</sup> Ohmic retaining cap

**Recommended Hypertherm genuine accessories**

- Hypertherm plasma cutting gloves, 127169
- Powermax105 wheel kit, 229467
- System storage dust cover, 127360
- Elimimizer filter and cover, 228890
- Replacement filter element for Elimimizer, 011092
- Torch lead cover, black, 024877



Wheel kit



Leather torch sheathing



System dust cover



Air filtration kit



**Engineered and  
assembled in the USA**

**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.



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**Hypertherm®**  
**Cut with confidence®**