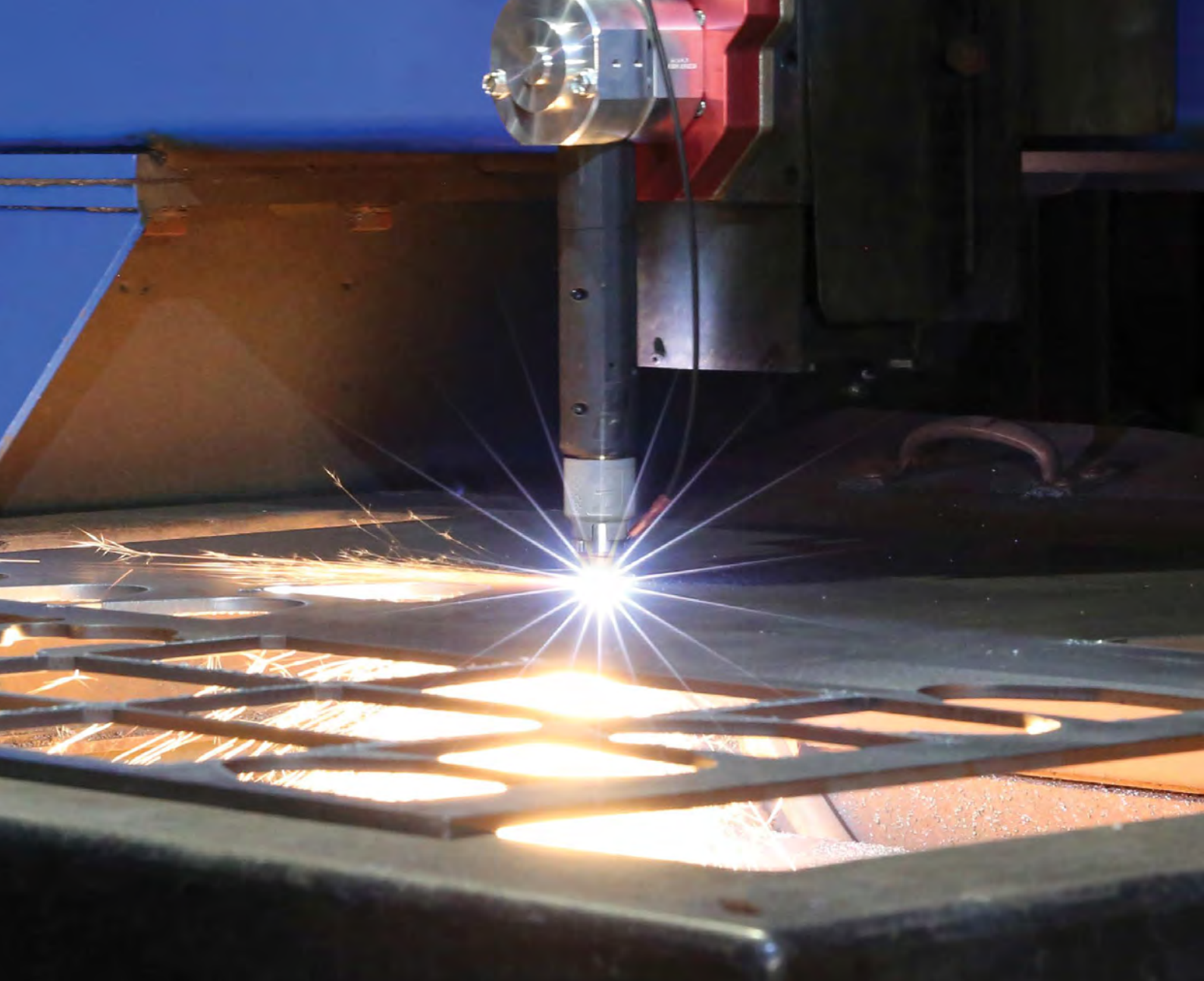


# Powermax SYNC<sup>®</sup> series

Professional air plasma systems from 65–105 amps







A dramatically simplified consumable platform combined with advanced torch communication for automated setup makes Hypertherm's new Powermax65/85/105 SYNC® plasma systems the smarter choice for any cutting or gouging application.

## SmartSYNC torch

- Simple, twist-on consumable installation
- Convenient power and amperage adjustment controls



## Cartridge

- Single-piece
- Easy to identify
- RFID communicates amperage and type



### Automatic setup of power supply

- Automatic process and amperage setting
- Data display



## Easy to use

- Easy to identify single-piece cartridge consumables are color coded by process to eliminate parts mix-up and simplify consumable inventory management.
- New SmartSYNC™ torches with the Hypertherm cartridge automatically set the correct amperage and operating mode, eliminating setup errors.
- End of life detection lets the operator know when it's time to change the cartridge.
- Less operator fatigue when using hand torches with our new flexible lead. The lead has the same robustness of our previous lead jacket material.

### Minimizes operating costs

- Simplified operation minimizes downtime, troubleshooting, waste and training time.
- Advanced cartridge consumable design provides up to twice the life for hand cutting and improved quality over life in mechanized setups compared to standard consumables.
- Access cartridge data for performance tracking, analyzing usage patterns.

|               | Powermax65 SYNC                                                  |                     | Powermax85 SYNC    |                     | Powermax105 SYNC   |                     |
|---------------|------------------------------------------------------------------|---------------------|--------------------|---------------------|--------------------|---------------------|
| Capacity      | Thickness                                                        | Cut speed           | Thickness          | Cut speed           | Thickness          | Cut speed           |
|               | Cutting                                                          |                     |                    |                     |                    |                     |
| Recommended   | 20 mm                                                            | 500 mm/min          | 25 mm              | 500 mm/min          | 32 mm              | 500 mm/min          |
|               | 25 mm                                                            | 250 mm/min          | 32 mm              | 250 mm/min          | 38 mm              | 250 mm/min          |
| Severance     | 32 mm                                                            | 125 mm/min          | 38 mm              | 125 mm/min          | 50 mm              | 125 mm/min          |
| Pierce*       | 16 mm                                                            |                     | 20 mm              |                     | 22 mm              |                     |
|               | *Pierce rating for handheld use or with automatic height control |                     |                    |                     |                    |                     |
| Capacity      | Metal removal rate                                               | Groove profile      | Metal removal rate | Gouge profile       | Metal removal rate | Gouge profile       |
|               | Maximum removal gouging                                          |                     |                    |                     |                    |                     |
| Typical gouge | 4 kg per hour                                                    | 2,9 mm D x 6,4 mm W | 8,2 kg per hour    | 3,5 mm D x 6,6 mm W | 8,6 kg per hour    | 6,6 mm D x 6,2 mm W |





Powermax105 SYNC



## Maximize performance

- Tackle a wide range of jobs with easily interchangeable torch styles and application-specific Hypertherm cartridge consumables for various types of cutting and gouging.
- Reduce training time with simplified set up and consistent performance.
- Time-saving torch controls allow the operator to adjust the amperage on the fly and change consumables and applications without returning to the power supply.

## Industry-leading reliability

- SmartSYNC® torches are engineered for rugged, industrial environments.
- SpringStart™ technology ensures consistent starting and a more reliable torch.
- Industry-leading reliability reduces production downtime.

## Torches and cartridges



75° hand torch



15° hand torch



Mechanized torch



New color-coded, quarter-turn cartridges can be changed out in about 10 seconds!



Gouging mode LED

Active/Inactive/Fault LED

7-step amperage LED scale

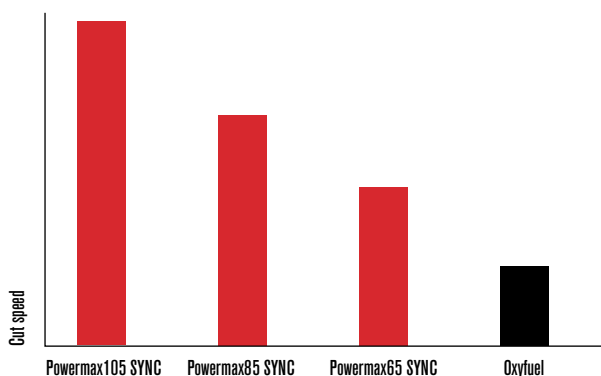
Amperage adjustment button

Torch lock switch

## Specifications

|                                 | Powermax65 SYNC®                                                                                                                                                             | Powermax85 SYNC®                                                                                                                                                             | Powermax105 SYNC®                                                                                                                                                            |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input voltages                  | 400 V, 3-PH 50/60 Hz                                                                                                                                                         | 400 V, 3-PH, 50/60 Hz                                                                                                                                                        | 230-400 V, 3-PH, 50/60 Hz<br>400 V, 3-PH, 50/60 Hz                                                                                                                           |
| Kilowatt output                 | 9 kW                                                                                                                                                                         | 12,2 kW                                                                                                                                                                      | 16,8 kW                                                                                                                                                                      |
| Input current                   | 380/400 V, 3-PH 15,5/15 A @ 9 kW                                                                                                                                             | 380/400 V, 3-PH 20,5/19,5 A @12,2 kW                                                                                                                                         | 230/400 V, 3-PH 50/29 A @ 16,8 kW<br>380/400 V, 3-PH 30/28 A @ 16 kW                                                                                                         |
| Output current                  | 20-65 A                                                                                                                                                                      | 25-85 A                                                                                                                                                                      | 30-105 A                                                                                                                                                                     |
| Rated output voltage            | 139 VDC                                                                                                                                                                      | 143 VDC                                                                                                                                                                      | 160 VDC                                                                                                                                                                      |
| Duty cycle @ 40° C              | 50% @ 65 A, 380-400 V, 3-PH<br>100% @ 46 A, 380-400 V, 3-PH                                                                                                                  | 60% @ 85 A, 380-400 V, 3-PH<br>100% @ 66 A, 380-400 V, 3-PH                                                                                                                  | 70% @ 105 A, 240 V, 3-PH<br>80% @ 105 A, 400 V, 3-PH<br>100% @ 94 A, 400 V, 3-PH<br>100% @ 88 A, 230 V, 3-PH                                                                 |
| Open circuit voltage (OCV)      | 270 VDC                                                                                                                                                                      | 270 VDC                                                                                                                                                                      | 288 VDC                                                                                                                                                                      |
| Dimensions with handles         | 483 mm D; 233 mm W; 430 mm H                                                                                                                                                 | 483 mm D; 233 mm W; 430 mm H                                                                                                                                                 | 592 mm D; 274 mm W; 508 mm H                                                                                                                                                 |
| Weight w/7,6 m torch            | 20,6 kg                                                                                                                                                                      | 23,5 kg                                                                                                                                                                      | 230-400 V: 42,7 kg<br>400 V: 39,4 kg                                                                                                                                         |
| Gas supply                      | Clean, dry, oil-free air or nitrogen                                                                                                                                         | Clean, dry, oil-free air or nitrogen                                                                                                                                         | Clean, dry, oil-free air or nitrogen                                                                                                                                         |
| Optimum inlet gas pressure      | 7,6-8,3 bar                                                                                                                                                                  | 7,6-8,3 bar                                                                                                                                                                  | 7,6-8,3 bar                                                                                                                                                                  |
| Minimum inlet gas pressure      | 5,2 bar                                                                                                                                                                      | 5,2 bar                                                                                                                                                                      | 5,5 bar                                                                                                                                                                      |
| Recommended inlet gas flow rate | Cutting: 210 l/min @ 5,9 bar<br>Gouging: 210 l/min @ 4,8 bar                                                                                                                 | Cutting: 210 l/min @ 5,9 bar<br>Gouging: 210 l/min @ 4,8 bar                                                                                                                 | Cutting: 260 l/min @ 6,2 bar<br>Gouging: 260 l/min @ 4,8 bar                                                                                                                 |
| Input power cable length        | 3 m                                                                                                                                                                          | 3 m                                                                                                                                                                          | 3 m                                                                                                                                                                          |
| Power supply type               | Inverter – IGBT                                                                                                                                                              | Inverter – IGBT                                                                                                                                                              | Inverter – IGBT                                                                                                                                                              |
| Engine drive requirement        | 15 kW for full 65 A output                                                                                                                                                   | 20 kW for full 85 A output                                                                                                                                                   | 30 kW for full 105 A output                                                                                                                                                  |
| Certifications                  | CE, C-Tick, CU/GOST, Ukr, and Serbian – for use in Europe, Australia, Belarus, Kazakhstan, Russia, Serbia, Ukraine, and other countries where accepted. UKCA – Great Britain | CE, C-Tick, CU/GOST, Ukr, and Serbian – for use in Europe, Australia, Belarus, Kazakhstan, Russia, Serbia, Ukraine, and other countries where accepted. UKCA – Great Britain | CE, C-Tick, CU/GOST, Ukr, and Serbian – for use in Europe, Australia, Belarus, Kazakhstan, Russia, Serbia, Ukraine, and other countries where accepted. UKCA – Great Britain |
| Warranty                        | Power supplies have a 3-year warranty and torches a 1-year warranty                                                                                                          | Power supplies have a 3-year warranty and torches a 1-year warranty                                                                                                          | Power supplies have a 3-year warranty and torches a 1-year warranty                                                                                                          |

### Relative cut performance on 12 mm mild steel



## Ordering information

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

| CE                                                                     | 75° hand torch |        | 75° and 15° hand torch | 180° full-length machine torch |                        |                        |                     |                        | 180° full-length machine torch and 75° hand torch |
|------------------------------------------------------------------------|----------------|--------|------------------------|--------------------------------|------------------------|------------------------|---------------------|------------------------|---------------------------------------------------|
| Torch lead length                                                      | 7,6 m          | 15,2 m | 7,6 m                  | 7,6 m                          |                        | 10,7 m                 | 15,2 m              |                        | 10,7 m/7,6 m                                      |
| Powermax65 SYNC® power supplies                                        |                |        | Without remote pendant | With remote pendant            | Without remote pendant | Without remote pendant | With remote pendant | Without remote pendant | With remote pendant                               |
| Standard power supply                                                  | 083356         | 083357 | 083360                 |                                |                        |                        |                     |                        |                                                   |
| Power supply with CPC port and voltage divider                         | 083358         | 083359 |                        | 083362                         | 083327                 |                        | 083363              | 083364                 | 083365                                            |
| Power supply with CPC port, voltage divider, and serial port           |                |        |                        |                                | 083366                 | 083377                 |                     | 083367                 |                                                   |
| Powermax85 SYNC® power supplies                                        |                |        | Without remote pendant | With remote pendant            | Without remote pendant |                        | With remote pendant | Without remote pendant | With remote pendant                               |
| Standard power supply                                                  | 087196         | 087197 | 087200                 |                                |                        |                        |                     |                        |                                                   |
| Power supply with CPC port and voltage divider                         | 087198         | 087199 |                        | 087201                         | 087202                 |                        |                     | 087203                 | 087204                                            |
| Power supply with CPC port, voltage divider, and serial port           |                |        |                        |                                | 087205                 | 087220                 |                     | 087206                 |                                                   |
| Powermax105 SYNC® power supplies                                       |                |        | Without remote pendant | With remote pendant            | Without remote pendant |                        | With remote pendant | Without remote pendant | With remote pendant                               |
| Standard power supply 400 V                                            | 059690         | 059691 | 059692                 |                                |                        |                        |                     |                        |                                                   |
| Standard power supply 230–400 V                                        | 059679         | 059680 |                        |                                |                        |                        |                     |                        |                                                   |
| Power supply with CPC port and voltage divider 400 V                   |                |        |                        | 059694                         | 059693                 |                        | 059695              | 059681                 |                                                   |
| Power supply with CPC port and voltage divider 230–400 V               |                |        |                        |                                | 059682                 |                        |                     | 059683                 |                                                   |
| Power supply with CPC port, voltage divider, and serial port 400 V     |                |        |                        |                                | 059697                 | 059765                 |                     | 059698                 |                                                   |
| Power supply with CPC port, voltage divider, and serial port 230–400 V |                |        |                        |                                |                        | 059764                 |                     | 059712                 |                                                   |

## Custom configurations (select power supply, torch, work cable, cartridge, 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 |
|----------------------------|-----------------------|------------------------------------------------|-------------------------------------------------------------|
| Powermax65 SYNC 400 V      | 083368                | 083369                                         | 083370                                                      |
| Powermax85 SYNC 400 V      | 087210                | 087211                                         | 087212                                                      |
| Powermax105 SYNC 400 V     | 059708                | 059709                                         | 059710                                                      |
| Powermax105 SYNC 230–400 V | 059701                | 059702                                         | 059703                                                      |

### Torch options

|        | Hand torches |        | Machine torches | Robotic/Mini |        |        | Long torches |            |            |            |
|--------|--------------|--------|-----------------|--------------|--------|--------|--------------|------------|------------|------------|
|        | 75°          | 15°    | 180°            | 180°         | 90°    | 45°    | 0,6 m, 45°   | 0,6 m, 90° | 1,2 m, 45° | 1,2 m, 90° |
| 4,5 m  |              |        |                 | 059733       |        |        |              |            |            |            |
| 7,6 m  | 059726       | 059723 | 059719          | 059734       | 059731 | 059729 |              |            | 528114     |            |
| 10,7 m |              |        | 059720          |              |        |        |              |            |            |            |
| 15,2 m | 059727       | 059724 | 059721          | 059735       | 059732 | 059730 | 528116       | 528117     | 528118     | 528119     |
| 22,8 m | 059728       | 059725 | 059722          |              | 059767 | 059766 |              |            |            |            |

## Cable options

| Control cables |                |                                       |                                          |                                       |                                  |                           |
|----------------|----------------|---------------------------------------|------------------------------------------|---------------------------------------|----------------------------------|---------------------------|
| Cable length   | 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 |
| 7,6 m          | 128650         | 228350                                | 023206                                   | 223048                                | 223236                           | 223239                    |
| 15,2 m         | 128651         | 228351                                | 023279                                   | 123896                                | 223237                           | 223240                    |
| 22,8 m         | 128652         |                                       |                                          |                                       |                                  |                           |

| Work leads    | Powermax65 SYNC | Powermax85 SYNC | Powermax105 SYNC |
|---------------|-----------------|-----------------|------------------|
| Ring terminal |                 |                 |                  |
| 7,6 m         | 223200          | 223209          | 223284           |
| 15,2 m        | 223201          | 223210          | 223285           |
| 22,8 m        | 223202          | 223211          | 223286           |
| C-clamp       |                 |                 |                  |
| 7,6 m         | 223194          | 223203          | 223287           |
| 15,2 m        | 223195          | 223204          | 223288           |
| 22,8 m        | 223196          | 223205          | 223289           |
| Hand clamp    |                 |                 |                  |
| 7,6 m         | 223125          | 223035          | 223254           |
| 15,2 m        | 223126          | 223034          | 223255           |
| 22,8 m        |                 | 223033          | 223256           |

## Cartridge reader

The cartridge reader works with the Powermax SYNC® cartridge reader app to provide a simple process for reviewing data stored in Hypertherm cartridges. The cartridge reader fits into the cartridge and works with the near-field communication (NFC) antenna of your mobile device to transfer data stored in the cartridge into the app. Data in the app can then be imported into the cartridge excel data analysis tool, or a customer created tool, to analyze performance for starts, transfers, arc-on time, and other valuable cartridge data. Analysis of this data helps customers better understand cartridge utilization and identify operator training opportunities.



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## Hypertherm cartridge options

|       | Drag cutting | Mechanized/standoff cutting | Max removal gouging | Max control gouging | Ohmic ring kit |
|-------|--------------|-----------------------------|---------------------|---------------------|----------------|
| 45 A  | 428927       | 428925                      | 428932              | 428933              | 428895*        |
| 65 A  | 428931       | 428930                      |                     |                     |                |
| 85 A  | 428935       | 428934                      |                     |                     |                |
| 105 A | 428937       | 428936                      | 428938              | 428939              |                |

\*Kit includes three 420580 ohmic ring clips.

## Specialty application cartridge options

|         | FlushCut™ | FineCut® handheld | FineCut® mechanized |
|---------|-----------|-------------------|---------------------|
| 30-45 A |           | 428928            | 428926              |
| 65 A    | 428952    |                   |                     |
| 85 A    | 428953    |                   |                     |
| 105 A   | 428954    |                   |                     |

For more information visit: [www.hypertherm.com](http://www.hypertherm.com)

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