

***Hypertherm***<sup>®</sup>

Powermax<sup>®</sup> family catalog



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# Shaping Possibility®

With the right tools and a relentless focus on innovation, partnership, and community, we believe anything is possible.

More than fifty years ago, in a small two car garage, Hypertherm® began our journey with simple, powerful ideas about business and an invention that shaped the future of industrial cutting. The same ideals that fueled our inception all those years ago are still what drive us today: a passion for challenging what is achievable with the products we create, the culture we foster, and the experience we deliver to our customers. As we look to the horizon and the next 50 years, we are proud that our people, partners, and innovations will shape the future with solutions that make anything possible for industries around the world.

At Hypertherm, we give shape to our customers' vision with the world's leading industrial cutting solutions. Every day we help individuals and companies around the world envision better, smarter and more efficient ways to produce the products that shape our world. So whether you're cutting precision parts in North America, constructing a pipeline in Norway, fabricating agricultural machinery in Brazil, cutting stone in Italy, gouging out welds in the mines of South Africa, or building a skyscraper in China, you can count on Hypertherm to help you not just cut parts but achieve your vision.

## 100% employee ownership matters

At Hypertherm, we are not just employees: we are all owners. Ownership is a powerful motivator that ensures our customers are our top priority. As owners, we make sure every product is built to the highest quality and that our service is second to none. And we build long-term relationships that deliver value for us, our partners and our customers.

## Worldwide presence and strength

Hypertherm is a key partner for your fabrication needs and has built a global organization focused on providing high-performance cutting solutions.

## Key elements of the Hypertherm formula include:

- Dedicated Associates focused on customer-centered product design and support
- Local sales and service
- Broad application experience and proven results
- Sustainable and ethical business practices benefit our customers and communities

# Understanding plasma technology

## Powermax systems cut metal quickly, and cleanly

Plasma, and its intense heat (up to 39,000° F or 22,000° C), is created when gas is ionized by electrical energy. Powermax® systems use plasma to melt metal, and compressed air, nitrogen or F5 gas to blow the molten metal away, leaving a good quality cut edge ready to weld in most cases. Powermax systems are also effective for gouging metal.

## Cut or gouge any electrically conductive metal

Whether in a shop, factory, at home or in the field, Powermax systems cut and gouge all metal types and forms. Most models are available with a handheld or machine torch to fit the application.

## Operating a plasma system requires:

- AC power source (fixed or generator)
- Compressed air – shop air, portable air compressor or bottled air. Nitrogen and F5 gas are often used for stainless steel
- Safety equipment, including shaded glasses or face shield, gloves, protective clothing and proper ventilation

# Why choose Powermax over oxyfuel

## Safer

Cutting with a plasma system needs no flammable gasses.

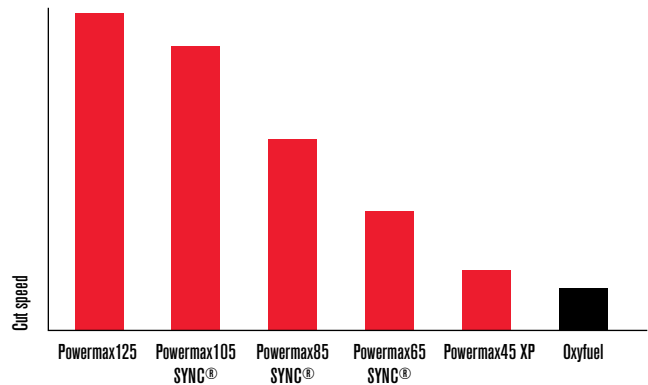
## More productive

Much faster cut speeds up to 38 mm thick; no preheating needed; a cleaner edge with smaller heat-affected zone (HAZ) requires less grinding of the cut edge.

## More versatile

Cuts and gouges all electrically conductive metal including stainless steel and aluminum; easily used with templates, cuts stacked, painted, or rusted metal.

Cut speed comparison on 12 mm mild steel



For more information, refer to product brochures or visit [www.hypertherm.com/powermax](http://www.hypertherm.com/powermax)

# Why choose Powermax over other cutting or gouging systems

## More productive

Our consumable technology delivers faster speeds and better cut quality to help you do more in less time.

## Easier to use

High portability, simple controls and a stable plasma arc make Powermax® systems easy to operate for beginners and experts.

## More versatile

With the widest array of torches and speciality consumables, Powermax systems can be configured to address a wide range of applications from extended reach cutting to precision gouging and more.

## Lower operating cost

Faster speeds and longer consumable life lower your cost of cutting and gouging metal.

## More reliable

Smart design and intense testing during product development and manufacturing keep you up and running.

## Confidence

Hypertherm's focus on plasma by our associate-owners, and the proven performance of our global installed base of systems give you confidence that you are buying the best.



## To choose the Powermax system that will best suit your long-term needs, please consider the following questions

### What thickness of metal will you be cutting?

Powermax plasma can cut from sheet metal to 57 mm. Choose the Powermax system with the recommended capacity for the thickness of metal you expect to cut 80% of the time or more.

### Will the cutting or gouging be done by a handheld torch or with an automated machine?

For automated cutting, select a machine-torch compatible Powermax system with interface options for automation equipment including CNC tables, robots, and track cutters.

### What electrical service do you use?

Knowing the incoming line voltage, phase and breaker size where the system will be used ensures your electrical service can support the Powermax system you choose.

### Will the plasma system be powered by an engine-drive generator?

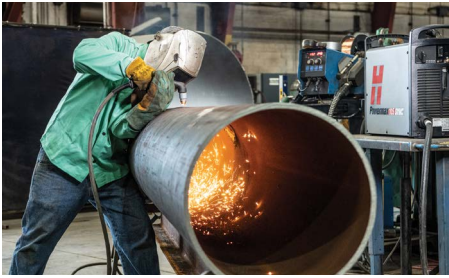
Each Powermax system requires a minimum kilowatt output to deliver full performance. For specific generator requirements refer to the Powermax specification tables within.

### What is your compressed gas source?

Powermax systems require compressed air, nitrogen, or F5 gas for operation. The gas must be dry and free of contaminants. An optional filter is available to ensure clean and dry gas. For specific gas flow rate and pressure requirements refer to the Powermax specification tables within.

# Genuine Hypertherm consumables

Hypertherm designs and manufactures an extensive array of innovative consumable technologies for Powermax® systems. This versatility of application capabilities is what distinguishes Powermax from other plasma systems.



## Drag cutting

For consistent torch motion and improved cut edge quality



## Mechanized cutting

For a variety of automated cutting applications with machine torches



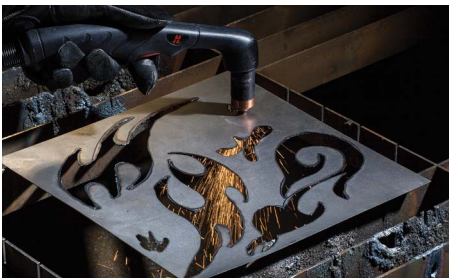
## Gouging

Max removal, max control or precision gouging options to achieve the optimal gouge profile



## FlushCut™

FlushCut consumables feature an angled nozzle bore design for cutting close to base material



## FineCut®

For intricate and fine feature cutting with minimal dross



## Marking

Marking consumables for the Powermax45 XP



## HyAccess™

For cutting or gouging in hard to reach or confined spaces



## Hypertherm cartridge










A dramatically simplified single-piece consumable platform. Optimized for performance and cut quality.

To determine which Powermax systems are compatible with the specific applications being referred to above see the table on page 7.

# Powermax®

## Product line overview



		Powermax30 XP	Powermax30 AIR	Powermax45 XP	Powermax65 SYNC®	Powermax85 SYNC®	Powermax105 SYNC®	Powermax125
Cut capacity	Recommended	10 mm	8 mm	16 mm	20 mm	25 mm	32 mm	38 mm
	Severance	16 mm	16 mm	29 mm	32 mm	38 mm	50 mm	57 mm
	Output range	15-30	15-30	10-45	20-65	25-85	30-105	30-125
	Input phase	Single	Single	Single or three	Single or three	Single or three	Three	Three
Application capabilities	 Mechanized cutting			●	●	●	●	●
	 Drag cutting	●	●	●	●	●	●	●
	 FineCut®	●		●	●	●	●	●
	 Marking			●				
	 Precision gouging			●				
	 Max control gouging			●	●	●	●	●
	 Max removal gouging				●	●	●	●
	 HyAccess™	●		●				
	 FlushCut™			●	●	●	●	●

# Powermax30® XP

Professional-grade plasma system for handheld cutting 10 mm metal.

## Easy-to-use, two-in-one design

- High-power cutting on thick metal plus FineCut® consumables for detailed, thin metal cutting.
- Plug into any 120 or 240 V power with Auto-Voltage™ technology and included plug adapters.

## Finish jobs faster

- 50% increase in cutting power\* for fast cut speeds.
- Less edge preparation – patented consumables designs provide superior cut quality.
- Twice the consumable life\* and 70% more efficient on average for lower cost of cutting.

## Rugged and reliable

- Duramax® LT torch designed to withstand impact and heat.
- Hypertherm Certified™ reliability ensures performance in the most demanding environments.
- Durable carrying case protects the system and gear.



Duramax LT hand torch



Capacity	Thickness	Cut speed
	Cutting	
Recommended	10 mm	500 mm/min
	12 mm	250 mm/min
Severance	16 mm	125 mm/min

## Specifications

Input voltages	120-240 V, 1-PH, 50/60 Hz
Input current @ 3,8 kW	120-240 V, 1-PH, 25,5-18,8 A
Output current	15-30 A
Rated output voltage	125 VDC
Duty cycle @ 40° C	35%, 240 V 20%, 120 V
Open circuit voltage (OCV)	256 VDC
Dimensions with handles	356 mm D; 168 mm W; 305 mm H
Weight with 4,5 m torch	9,5 kg
Gas supply	Clean, dry, oil-free air or nitrogen
Recommended gas inlet flow rate/pressure	113,3 l/min @ 5,5 bar
Input power cable length	3 m
Power supply type	Inverter - IGBT
Engine drive requirement	5,5 kW for full 30 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.
Warranty	Power supply: 3-year Torch: 1-year

## Cutting with 120 V input power

Use FineCut nozzle and deflector for cutting at 120 V input power. When operating at the maximum recommended output of 25 A, the cut capacities are:

- 6 mm at 482 mm/min
- 10 mm at 203 mm/min
- 12 mm at 76 mm/min

\*compared to Powermax30



Hand systems	
088082	Powermax30® XP system, 120-240 V 1-PH, CE, plus 75° handheld torch w/consumables, 4,5 m lead
088083	Powermax30 XP system, 120-240 V 1-PH, CE, plus 75° handheld torch w/consumables, 4,5 m lead w/carry case

Torch assembly	
428174	Duramax® LT Hand Torch Assembly with 4,5 m leads

Consumable kits and packs	
851479	Consumable kit, Powermax30 XP Essential handheld, 30 A, cutting
428244	Dual pack, electrode and nozzle, Duramax LT, 15-30 A, FineCut, qty. 2 each of 420120 and 420117
428243	Dual pack, electrode and nozzle, Duramax LT, 15-30 A, standard cutting, qty. 2 each of 420118 and 420120
428337	Consumable kit, HyAccess, 15-45 A, cutting and gouging
428443	Starter pack, HyAccess, 15-45 A, Cutting, qty. 1 each 420148, 420144 and 420137
428444	Starter pack, HyAccess, 15-45 A, gouging, qty. 1 each 420148, 420147 and 420137

Optional system accessories	
127410	System carry case, Powermax30 XP or Powermax30
017060	Rolling tool bag, 495 x 444 x 317 mm
127144	System storage dust cover, Powermax30 XP or Powermax30
229132	Extension power cord: 120 V/15 A Adapter
229133	Extension power cord: 240 V/20 A Adapter
229134	Extension power cord: 120 V/20 A Adapter
128647	Eliminizer air filtration kit, 1-micron filter and auto-drain moisture separator
011092	Replacement filter element for eliminizer air filter
428719	Oil removal air filtration Kit, 0.01-micron coalescing oil extracting filter
428718	Wall mounting bracket kit for eliminizer air filter or oil removal air filter
428720	Replacement filter element for oil removal air filter kit
024877	Leather torch lead cover with hook and loop closure, black, 7,6 m section
027668	Plasma circle cutting guide, deluxe kit with magnetic base
127102	Plasma circle cutting guide, basic
017041	Plasma angle cutting guide
017042	Magnetic straight edge
017059	Bevel guide
017043	Magnetic block 2-pack
017044	Pocket level and measuring tape holder

## Torch consumable stack-up



Consumable type	Torch type	Amperage	Shield/Deflector	Retaining cap	Nozzle	Electrode	Swirl ring
Standard	Hand	15-30	420116	420114	420118	420120	420211
FineCut®	Hand	15-30	420115	420114	420117	420120	420211
HyAccess™	Hand	15-30		420148	420144 (cutting) 420147 (gouging)	420137	220670

# Powermax30<sup>®</sup> AIR

Professional-grade plasma system with internal air compressor for high portability and easy metal cutting.



## Easy-to-setup and operate

- Operate it anywhere with the internal air compressor.
- Plug into any 120 or 240 V power with Auto-Voltage™ technology and included plug adapters.
- Highly portable. The smallest, lightest weight system in its class.

## Finish jobs faster

- Do more in less time. Fast cutting speeds and superior cut quality result in less secondary operations.
- Quickly cut metal grate or rusted metal without retriggering with the continuous pilot arc feature.
- One tool to cut a variety of metal types and thicknesses.

## Rugged and reliable

- AIR T30 torch is rugged and designed to withstand the toughest environments.
- Robust internal air compressor eliminates the costs associated with an external compressor.
- Hypertherm Certified™ reliability ensures performance in the most demanding environments.



AIR T30 hand torch

Capacity	Thickness	Cut speed
	Cutting	
Recommended	8 mm	500 mm/min
	10 mm	250 mm/min
Severance	16 mm	125 mm/min

## Specifications

Input voltages	120–240 V, 1-PH, 50/60 Hz
Input current @ 2,5 kW	120–240 V, 1-PH, 29–15 A
Output current	15–30 A
Rated output voltage	83 VDC
Duty cycle @ 40° C	35%, 240 V 20%, 120 V
Open circuit voltage (OCV)	256 VDC
Dimensions with handles	420 mm D; 195 mm W; 333 mm H
Weight with 4,5 m torch	13,5 kg
Input power cable length	3 m
Power supply type	Inverter – IGBT
Engine drive requirement	5,5 kW for full 30 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.
Warranty	Power supply: 3-year Torch: 1-year

Hand systems	
088098	Powermax30® AIR system, 120–240 V 1-PH, CE, plus 75° handheld torch w/consumables, 4,5 m lead

Torch assembly	
428393	AIR T30 hand torch assembly with 4,5 m lead

Consumable kits and packs	
428350	Dual pack, electrode and nozzle, T30 AIR, 15–30 A, cutting
851462	Consumable kit, Powermax30 AIR Essential handheld, 30 A, cutting

Optional system accessories	
127469	System storage dust cover, Powermax30 AIR
017060	Rolling tool bag, 495 x 444 x 317 mm
229132	Extension power cord: 120 V/15 A adapter
229133	Extension power cord: 240 V/20 A adapter
229134	Extension power cord: 120 V/20 A adapter
024877	Leather torch lead cover with hook and loop closure, black, 7,6 m section
027668	Plasma circle cutting guide, deluxe kit with magnetic base
127102	Plasma circle cutting guide, basic
017041	Plasma angle cutting guide
017042	Magnetic straight edge
017059	Bevel guide
017043	Magnetic block 2-pack
017044	Pocket level and measuring tape holder

### Torch consumable stack-up



Consumable type	Torch type	Amperage	Shield/Deflector	Retaining cap	Nozzle	Electrode	Swirl ring
Standard	Hand	15–30	420399	420135	420134	420132	420133

# Powermax45<sup>®</sup> XP

Professional-grade plasma system for cutting 16 mm thick metal, gouging, and marking.



## Easy-to-use with versatile design

- Small size and light weight provides exceptional portability for a 16 mm rated cutting system.
- Handheld and mechanized usage with CNC interface and FastConnect™ torch connection.
- Patented drag-cutting technology makes it easy to use – even for first-time operators.
- Tackle different jobs with multiple, easy-to-use torch and consumable styles.
- No need to change the air pressure. Smart Sense™ technology ensures that it is always correctly set.
- Mark, score and make precision gouges with new low amp process.

## Maximum productivity

- Finish jobs faster with cut speeds one and a half times greater than oxyfuel on 6 mm mild steel.
- Spend less time on grinding and edge preparation due to superior cut and gouge quality.
- Fast change out of consumables using the new torch disable switch feature.

## Rugged and reliable

- Duramax<sup>®</sup> Lock torches are designed for high-impact and heat resistance.
- SpringStart™ technology ensures consistent starting and a more reliable torch.
- Hypertherm Certified™ reliability ensures performance in the most demanding environment.

## Torches

- To see details on all torches compatible with this system, please refer to the torch applications chart on page 28.



Capacity	Thickness	Cut speed
	Cutting	
Recommended	16 mm	500 mm/min
	22 mm	250 mm/min
Severance (hand cutting)	29 mm	125 mm/min
Pierce*	12 mm	

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

Capacity	Metal removal rate	Groove profile*
	Gouging	
Typical gouge	3,4 kg per hour	3,2 mm D x 6,8 mm W

\* Actual groove profile varies with torch angle, arc stretch and technique

## Specifications

Input voltages (± 10%)	230 V, 1-PH, 50-60 Hz 400 V, 3-PH, 50-60 Hz
Input current @ 6,5 kW	230 V, 1-PH, 33 A 400 V, 3-PH, 10 A
Output current	10-45 A
Rated output voltage	145 VDC
Duty cycle @ 40° C	50% @ 45 A, 230 V, 1-PH 60% @ 41 A, 230 V, 1-PH 100% @ 32 A, 230 V, 1-PH 50% @ 45 A, 400 V, 3-PH 60% @ 41 A, 400 V, 3-PH 100% @ 32 A, 400 V, 3-PH
Open circuit voltage (OCV)	265 VDC
Dimensions with handles	442 mm D; 173 mm W; 357 mm H
Weight with 6,1 m torch	15 kg
Gas supply	Cutting: air (clean, dry and oil-free), nitrogen, F5 Gouging: air (clean, dry and oil-free), nitrogen, F5 Marking: air (clean, dry and oil-free), argon
Recommended gas inlet flow rate/pressure	188 l/min @ 5,9 bar
Input power cable length	3 m
Power supply type	Inverter - IGBT
Engine drive requirement	12,5 kVA for full 45 A output
Electrical efficiency	88%
Recyclability	100%
Certifications	CE, RCM, GOST-TR, UkrSEPRO, and Serbian AAA for use in Europe, Australia, Belarus, Kazakhstan, Russia, Serbia, Ukraine, and other countries where accepted.
Warranty	Power supply: 3-year Torch: 1-year

Hand systems	
088131	Powermax45® XP system, 230 V 1-PH, CE/CCC, plus CPC port, 75° handheld torch w/consumables, 6,1 m lead
088133	Powermax45 XP system, 230 V 1-PH, CE/CCC, plus CPC port, 75° handheld torch w/consumables, 15,2 m lead
088130	Powermax45 XP system, 230 V 1-PH, CE/CCC, 75° handheld torch w/consumables, 6,1 m lead
088132	Powermax45 XP system, 230 V 1-PH, CE/CCC, 75° handheld torch w/consumables, 15,2 m lead
088145	Powermax45 XP system, 400 V 3-PH, CE/CCC, plus CPC port, 75° handheld torch w/consumables, 6,1 m lead
088147	Powermax45 XP system, 400 V 3-PH, CE/CCC, plus CPC port, 75° handheld torch w/consumables, 15,2 m lead, English training kit
088144	Powermax45 XP system, 400 V 3-PH, CE/CCC, 75° handheld torch w/consumables, 6,1 m lead
088146	Powermax45 XP system, 400 V 3-PH, CE/CCC, 75° handheld torch w/consumables, 15,2 m lead

\*for qualified institutions only – pre-approval required to order

Machine systems	
088134	Powermax45 XP system, 230 V 1-PH, CE/CCC, plus CPC port, 180° machine torch w/consumables, 7,6 m lead, remote
088135	Powermax45 XP system, 230 V 1-PH, CE/CCC, plus CPC port, 180° machine torch w/consumables, 10,7 m lead, remote
088136	Powermax45 XP system, 230 V 1-PH, CE/CCC, plus CPC port, 180° machine torch w/consumables, 15,2 m lead, remote
088141	Powermax45 XP system, 230 V 1-PH, CE/CCC, plus CPC port, 180° machine torch w/consumables, 7,6 m lead
088139	Powermax45 XP system, 230 V 1-PH, CE/CCC, plus CPC and serial ports, 180° torch w/consumables, 7,6 m lead, remote
088140	Powermax45 XP system, 230 V 1-PH, CE/CCC, plus CPC and serial ports, 180° torch w/consumables, 15,2 m lead, remote
088148	Powermax45 XP system, 400 V 3-PH, CE/CCC, plus CPC port, 180° machine torch w/consumables, 7,6 m lead, remote
088149	Powermax45 XP system, 400 V 3-PH, CE/CCC, plus CPC port, 180° machine torch w/consumables, 10,7 m lead, remote
088150	Powermax45 XP system, 400 V 3-PH, CE/CCC, plus CPC port, 180° machine torch w/consumables, 15,2 m lead, remote
088155	Powermax45 XP system, 400 V 3-PH, CE/CCC, plus CPC port, 180° machine torch w/consumables, 7,6 m lead
088156	Powermax45 XP system, 400 V 3-PH, CE/CCC, plus CPC port, 180° machine torch w/consumables, 15,2 m lead
088153	Powermax45 XP system, 400 V 3-PH, CE/CCC, plus CPC and serial ports, 180° machine torch w/consumables, 7,6 m lead
088154	Powermax45 XP system, 400 V 3-PH, CE/CCC, plus CPC and serial ports, 180° machine torch w/consumables, 15,2 m lead

Powermax45 XP power supplies (power supplies only, no torches)	
088093	Powermax45 XP power supply, 230 V 1-PH, CE/CCC
088106	Powermax45 XP power supply, 230 V 1-PH, CE/CCC, plus CPC port
088107	Powermax45 XP power supply, 230 V 1-PH, CE/CCC plus CPC and serial ports
088094	Powermax45 XP power supply, 400 V 3-PH, CE/CCC
088108	Powermax45 XP power supply, 400 V 3-PH, CE/CCC, plus CPC port
088109	Powermax45 XP power supply, 400 V 3-PH, CE/CCC, plus CPC and serial ports

Duramax Lock torch assemblies	
Below are torches that were designed for use with the Powermax45 XP power supplies, however additional torch models are compatible. Refer to page 28 for more information.	
088164	Duramax® Lock handheld torch, 75°, 6,1 m lead
088165	Duramax Lock handheld torch, 75°, 15,2 m lead
088162	Duramax Lock handheld torch, 15°, 6,1 m lead
088163	Duramax Lock handheld torch, 15°, 15,2 m lead
088167	Duramax Lock machine torch, 180°, 7,6 m lead
088168	Duramax Lock machine torch, 180°, 10,7 m lead
088169	Duramax Lock machine torch, 180°, 15,2 m lead

Powermax45 XP work leads	
223595	45 A work lead with hand clamp, 7,6 m
223596	45 A work lead with hand clamp, 15,2 m
223127	65 A work lead with hand clamp, 22,8 m

Upgrade to the revolutionary Hypertherm cartridge consumable platform for Powermax systems with the installation of a torch adapter. See page 17 to learn more.



Automated control accessories	
128650	Remote on/off switch for machine torch, 7,6 m
128651	Remote on/off switch for machine torch, 15,2 m
128652	Remote on/off switch for machine torch, 22,8 m
428755	Remote on/off switch for machine torch, 45,7 m
428653	Upgrade kit: CPC port with selectable voltage ratio
428654	Upgrade kit: Serial interface port (RS-485)
023206	Machine interface cable without voltage divider signal, spade connectors, 7,6 m
023279	Machine interface cable without voltage divider signal, spade connectors, 15,2 m
228350	Machine interface cable with voltage divider signal, spade connectors, 7,6 m
228351	Machine interface cable with voltage divider signal, spade connectors, 15,2 m
223048	Machine interface cable with voltage divider signal, D-sub connector, 7,6 m
123896	Machine interface cable with voltage divider signal, D-sub connector, 15,2 m
223236	Serial interface RS-485 to unterminated, 7,6 m
223237	Serial interface RS-485 to unterminated, 15,2 m
223239	Serial interface RS-485 to 9-pin D-sub connector, 7,6 m
223240	Serial interface RS-485 to 9-pin D-sub connector, 15,2 m

Consumable kits and packs	
851510	Consumable kit, Powermax45® XP Essential handheld, 45 A, cutting
851511	Consumable kit, Powermax45 XP Essential mechanized, 45 A, cutting
851512	Consumable kit, Powermax45 XP Essential mechanized ohmic, 45 A, cutting
428414	Consumable kit, Duramax® and Duramax Lock, 30–65 A, HyAccess™ cutting and gouging
428746	Consumable kit, Duramax and Duramax Lock, 30–45 A, FlushCut™
428445	Starter pack, Duramax, HyAccess, 30–65 A, cutting, qty. 1 each 420413, 420410 and 420408
428446	Starter pack, Duramax, HyAccess, 30–65 A, gouging, qty. 1 each 420413, 420412 and 420408
228767	Bulk pack, electrode, Duramax, 10–105 A, contains 220842, qty. 25
228934	Bulk pack, electrode, CopperPlus, 10–105 A, contains 220777, qty. 25
228761	Bulk pack, nozzle, Duramax FineCut, 30–45 A, contains 220930, qty. 25
228765	Bulk pack, nozzle, Duramax, 45 A, contains 220941, qty. 25
228764	Bulk pack, shield, Duramax drag cutting, 15–85 A, contains 220818, qty. 10
228763	Bulk pack, shield, Duramax mechanized, 15–85 A, contains 220817, qty. 10
428559	Consumable starter kit Powermax45 XP handheld (for à la carte system ordering)
428560	Consumable starter kit Powermax45 XP, mechanized (for à la carte system ordering)
428561	Consumable starter kit Powermax45 XP, mechanized with ohmic retaining cap (for à la carte system ordering)

Optional system accessories	
127219	System storage dust cover, Powermax45/45 XP
017060	Rolling tool bag, 495 x 444 x 317 mm
128647	Eliminizer air filtration kit, 1-micron filter and auto-drain moisture separator
011092	Replacement filter element for eliminizer air filter
428719	Oil removal air filtration kit, 0.01-micron coalescing oil extracting filter
428718	Wall mounting bracket kit for eliminizer air filter or oil removal air filter
428720	Replacement filter element for oil removal air filter kit
024877	Leather torch lead cover with hook and loop closure, black, 7,6 m section
127217	Shoulder strap 38 x 1270 mm

Optional system accessories (continued)	
128658	Gouging heat shield for T45v handheld torches
027668	Plasma circle cutting guide, deluxe kit with magnetic base
127102	Plasma circle cutting guide, basic
017041	Plasma angle cutting guide
017059	Plasma bevel guide
017042	Magnetic straight edge
017059	Bevel guide
017043	Magnetic block 2-pack
017044	Pocket level and measuring tape holder

## Torch consumable stack-up



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

Consumable type	Torch type	Amperage	Shield/ Deflector	Retaining cap	Nozzle	Electrode	Swirl ring
<b>Drag-cutting</b>	Hand	45	220818	220854	220941	220842	220857
<b>Mechanized</b>	Machine	45	220817 or 2209551	220854 or 2209532	220941	220842	220857
<b>FineCut®</b>	Hand	45	220931	220854 or 2209532	220930	220842	220947
	Machine		220955 or 2209482				
<b>Max control gouging</b>	Hand/Machine	26-45	420480	220854	420419	220842	220857
<b>Precision gouging</b>	Hand/Machine	10-25	420414	220854	420415	220842	220857
<b>Marking</b>	Hand/Machine	10-25	420542	220854 or 2209532	420415	220842	220857
<b>FlushCut™</b>	Hand/Machine	30-45	4205404	420536	4206333	420635	420634
<b>HyAccess™ cutting</b>	Hand	15-45	N/A	420413	420410	420408	220857
<b>HyAccess™ gouging</b>	Hand	15-45	N/A	420413	420412	420408	220857

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

<sup>2</sup> Ohmic retaining cap

<sup>3</sup> Nozzle/shield assembly

<sup>4</sup> Retaining ring

# Powermax65/85/105 SYNC®

Building from the strong value proposition that the Powermax® family currently offers, the new Powermax SYNC® series elevates and sets the Powermax brand apart from the competition.

This next generation of Powermax65/85/105 A systems, the Powermax SYNC is the result of several years of design and manufacturing innovation with the main objective of solving common customer pain points associated with plasma system operation.

## Training

With an emphasis on ease-of-use features, Powermax SYNC can reduce operator training time, provide data driven insights to improve operator performance and make new operators proficient faster.

## Consumable inventory management

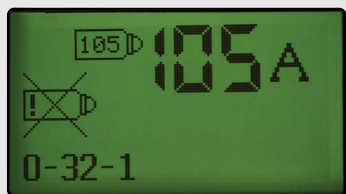
The introduction of a single-piece cartridge consumable reduces the number of parts needed to operate the system, simplifies knowing when and which part to change and optimizes overall performance and cut quality.

## Utilization

Convenient hand torch controls reduces operator reliance to be near the power supply saving valuable time during consumable change-outs and amperage adjustments. Specialty applications such as gouging, FlushCut™ and FineCut® are even easier to access with cartridge and automated set-up, maximizing the versatility of Powermax systems.

Upgrade to the revolutionary Hypertherm cartridge consumable platform with the installation of a torch adapter.

7-step amperage LED scale  
Active/Inactive/Fault LED  
Amperage adjustment button  
Gouging mode LED  
Torch lock switch





# Torch adapter and the Hypertherm cartridge platform

For Powermax45 XP/65/85/105 systems

## Compatibility

The torch adapter allows for conversion to the cartridge consumable platform if you have the following systems and torch types.

## Color codes for ease of use

The easy to identify cartridges are color coded by process to eliminate consumable part mix-ups and are clearly marked for amperage and part number.



System	Torch type	Part number
Powermax45® XP	Duramax® Lock hand, and mechanized	428951
Powermax65®	Duramax hand, mechanized and robotic	
Powermax85®		
Powermax105®		

- Not recommended for use on Duramax retrofit torches for Powermax1000/1250/1650
- Not compatible with Duramax Hyamp™ standard or long style torches
- The cartridge consumable platform is standard for the new Powermax SYNC® 65/85/105 systems with SmartSYNC® torches (no adapter required)
- When using the adapter with the Powermax45 XP in a mechanized application, Hypertherm recommends using the 45 A cut charts for the Powermax45 XP

Process	Amps	Part number	Powermax65 SYNC	Powermax85 SYNC	Powermax105 SYNC
Drag-cutting	45	428927	•	•	•
	65	428931	•	•	•
	85	428935		•	•
	105	428937			•

FineCut drag-cutting	30-45	428928	•	•	•
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Mechanized cutting	45	428925	•	•	•
	65	428930	•	•	•
	85	428934		•	•
	105	428936			•

FineCut mechanized cutting	30-45	428926	•	•	•
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Ohmic ring kit (3) rings per kit		428895	•	•	•
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Max removal gouging	45-85	428932	•	•	
	105	428938			•
Max control gouging	45-85	428933	•	•	
	105	428939			•

FlushCut™	65	428952	•	•	•
	85	428953		•	•
	105	428954			•



# Powermax SYNC® series

Professional air plasma systems from 65–105 amp



## 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 handheld torches with our new flexible lead. The lead has the same robustness of our previous lead jacket material and will also be used on robotic torches.
- 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 to cartridge data for performance tracking, analyzing usage patterns.

## 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 hand 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.

## Hypertherm cartridge reader

The Hypertherm 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. Part number 528083.



## Torches

- To see details on all torches compatible with this system, please refer to the torch applications chart on page 28.

	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

## 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 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 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 100% @ 46 A, 380–400 V, 3-PH	60% @ 85 A, 380–400 V, 3-PH 100% @ 66 A, 380–400 V, 3-PH	70% @ 105 A, 240 V, 3-PH 80% @ 105 A, 400 V, 3-PH 100% @ 94 A, 400 V, 3-PH 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	45,3 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 Gouging: 210 l/min @ 4,8 bar	Cutting: 210 l/min @ 5,9 bar Gouging: 210 l/min @ 4,8 bar	Cutting: 260 l/min @ 6,2 bar 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

Hand systems	
083356	Powermax65 SYNC system, 380-400 V 3-PH, CE/CCC, 75° handheld torch, 7,6 m lead
083357	Powermax65 SYNC system, 380-400 V 3-PH, CE/CCC, 75° handheld torch, 15,2 m lead
083358	Powermax65 SYNC system, 380-400 V 3-PH, CE/CCC, CPC port, 75° handheld torch, 7,6 m lead
083359	Powermax65 SYNC system, 380-400 V 3-PH, CE/CCC, CPC port, 75° handheld torch, 15,2 m lead
083360	Powermax65 SYNC system, 380-400 V 3-PH, CE/CCC, 75° handheld torch, 15 degree handheld torch, 7,6 m lead
087200	Powermax85 SYNC system, 380-400 V 3-PH, CE/CCC, 75° handheld torch, 15 degree hand torch, 7,6 m lead
087196	Powermax85 SYNC system, 380-400 V 3-PH, CE/CCC, 75° handheld torch, 7,6 m lead
087197	Powermax85 SYNC system, 380-400 V 3-PH, CE/CCC, 75° handheld torch, 15,2 m lead
087198	Powermax85 SYNC system, 380-400 V 3-PH, CE/CCC, CPC port, 75° handheld torch, 7,6 m lead
087199	Powermax85 SYNC system, 380-400 V 3-PH, CE/CCC, CPC port, 75° handheld torch, 15,2 m lead
059679	Powermax105 SYNC system, 230-400 V 3-PH, CE, 75° handheld torch, 7,6 m lead
059680	Powermax105 SYNC system, 230-400 V 3-PH, CE, 75° handheld torch, 15,2 m lead
059690	Powermax105 SYNC system, 380-400 V 3-PH, CE/CCC, 75° handheld torch, 7,6 m lead
059691	Powermax105 SYNC system, 380-400 V 3-PH, CE/CCC, 75° handheld torch, 15,2 m lead
059692	Powermax105 SYNC system, 380-400 V 3-PH, CE/CCC, 75° handheld torch, 15 degree hand torch 7,6 m lead

\*for qualified institutions only – pre-approval required to order

Machine systems	
083327	Powermax65 SYNC system, 380-400 V 3-PH, CE/CCC, CPC port, 180° machine torch, 7,6 m lead
083362	Powermax65 SYNC system, 380-400 V 3-PH, CE/CCC, CPC port, 180° machine torch, 7,6 m lead, remote
083363	Powermax65 SYNC system, 380-400 V 3-PH, CE/CCC, CPC port, 180° machine torch, 15,2 m lead, remote
083364	Powermax65 SYNC system, 380-400 V 3-PH, CE/CCC, CPC port, 180° machine torch, 15,2 m lead
083365	Powermax65 SYNC system, 380-400 V 3-PH, CE/CCC, CPC, 75° hand torch 7,6 m lead, 180° machine torch 10,7 m lead, remote
083366	Powermax65 SYNC system, 380-400 V 3-PH, CE/CCC, CPC and serial ports, 180° machine torch, 7,6 m lead
083367	Powermax65 SYNC system, 380-400 V 3-PH, CE/CCC, CPC and serial ports, 180° machine torch, 15,2 m lead
083377	Powermax65 SYNC system, 380-400 V 3-PH, CE/CCC, CPC and serial ports, 180° machine torch, 10,7 m lead
087202	Powermax85 SYNC system, 380-400 V 3-PH, CE/CCC, CPC port, 180° machine torch, 7,6 m lead
087201	Powermax85 SYNC system, 380-400 V 3-PH, CE/CCC, CPC port, 180° machine torch, 7,6 m lead, remote
087203	Powermax85 SYNC system, 380-400 V 3-PH, CE/CCC, CPC port, 180° machine torch, 15,2 m lead
087204	Powermax85 SYNC system, 380-400 V 3-PH, CE/CCC, CPC port, 75° 7,6 m hand torch, 180° 10,7 m machine torch, remote
087205	Powermax85 SYNC system, 380-400 V 3-PH, CE/CCC, CPC and serial ports, 180° machine torch, 7,6 m lead
087206	Powermax85 SYNC system, 380-400 V 3-PH, CE/CCC, CPC and serial ports, 180° machine torch, 15,2 m lead
087220	Powermax85 SYNC system, 380-400 V 3-PH, CE/CCC, CPC and serial ports, 180° machine torch, 10,7 m lead
059682	Powermax105 SYNC system, 230-400 V 3-PH, CE, CPC port, 180° machine torch, 7,6 m lead
059683	Powermax105 SYNC system, 230-400 V 3-PH, CE, CPC port, 180° machine torch, 15,2 m lead
059712	Powermax105 SYNC system, 230-400 V 3-PH, CE, CPC and serial ports, 180° machine torch, 7,6 m lead
059764	Powermax105 SYNC system, 230-400 V 3-PH, CE, CPC and serial ports, 180° machine torch, 10,7 m lead
059681	Powermax105 SYNC system, 380-400 V 3-PH, CE/CCC, CPC port, 180° machine torch, 15,2 m lead
059693	Powermax105 SYNC system, 380-400 V 3-PH, CE/CCC, CPC port, 180° machine torch, 7,6 m lead
059694	Powermax105 SYNC system, 380-400 V 3-PH, CE/CCC, CPC port, 180° machine torch, 7,6 m lead, remote
059695	Powermax105 SYNC system, 380-400 V 3-PH, CE/CCC, CPC port, 180° machine torch, 15,2 m lead, remote
059698	Powermax105 SYNC system, 380-400 V 3-PH, CE/CCC, CPC and serial ports, 180° machine torch, 15,2 m lead
059697	Powermax105 SYNC system, 380-400 V 3-PH, CE/CCC, CPC and serial ports, 180° machine torch, 7,6 m lead

Power supplies (power supplies only, no torches)	
083368	Powermax65 SYNC power supply, 380-400 V 3-PH, CE/CCC
083369	Powermax65 SYNC power supply, 380-400 V 3-PH, CE/CCC, plus CPC port
083370	Powermax65 SYNC power supply, 380-400 V 3-PH, CE/CCC, plus CPC and serial ports
087210	Powermax85 SYNC power supply, 380-400 V 3-PH, CE/CCC
087211	Powermax85 SYNC power supply, 380-400 V 3-PH, CE/CCC, plus CPC port
087212	Powermax85 SYNC power supply, 380-400 V 3-PH, CE/CCC, plus CPC & Serial ports
059701	Powermax105 SYNC power supply, 230-400 V 3-PH, CE
059702	Powermax105 SYNC power supply, 230-400 V 3-PH, CE, plus CPC port
059703	Powermax105 SYNC power supply, 230-400 V 3-PH, CE, plus CPC and serial ports
059708	Powermax105 SYNC power supply, 380-400 V 3-PH, CE/CCC
059709	Powermax105 SYNC power supply, 380-400 V 3-PH, CE/CCC, plus CPC port
059710	Powermax105 SYNC power supply, 380-400 V 3-PH, CE/CCC, plus CPC and serial ports

SmartSYNC series torch assemblies	
059726	SmartSYNC handheld torch 75° 7,6 m lead
059727	SmartSYNC handheld torch 75° 15,2 m lead
059728	SmartSYNC handheld torch 75° 22,8 m lead
059723	SmartSYNC handheld torch 15° 7,6 m lead
059724	SmartSYNC handheld torch 15° 15,2 m lead
059725	SmartSYNC handheld torch 15° 22,8 m lead
059719	SmartSYNC machine torch 180° 7,6 m lead
059720	SmartSYNC machine torch 180° 10,7 m lead
059721	SmartSYNC machine torch 180° 15,2 m lead
059722	SmartSYNC machine torch 180° 22,8 m lead
059733	SmartSYNC mini/robotic machine torch 180° 4,5 m lead
059734	SmartSYNC mini/robotic machine torch 180° 7,6 m lead
059735	SmartSYNC mini/robotic machine torch 180° 15,2 m lead
059729	SmartSYNC robotic torch 45° 7,6 m lead
059730	SmartSYNC robotic torch 45° 15,2 m lead
059736	SmartSYNC robotic torch 45° 22,8 m lead
059731	SmartSYNC robotic torch 90° 7,6 m lead
059732	SmartSYNC robotic torch 90° 15,2 m lead
059737	SmartSYNC robotic torch 90° 22,8 m lead

Work leads	
223254	Kit: 105A work lead with hand clamp, 7,6 m
223255	Kit: 105A work lead with hand clamp, 15,2 m
223256	Kit: 105A work lead with hand clamp, 22,8 m
223287	Kit: 105A work lead with C-style clamp, 7,6 m
223288	Kit: 105A work lead with C-style clamp, 15,2 m
223289	Kit: 105A work lead with C-style clamp, 22,8 m
223284	Kit: 105A work lead with ring terminal, 7,6 m
223285	Kit: 105A work lead with ring terminal, 15,2 m
223286	Kit: 105A work lead with ring terminal, 22,8 m

Automated control accessories	
128650	Remote On/Off Switch for Machine Torch, 7,6 m
128651	Remote On/Off Switch for Machine Torch, 15,2 m
128652	Remote On/Off Switch for Machine Torch, 22,8 m
428755	Remote On/Off Switch for Machine Torch, 45,7 m
228884	Upgrade kit: Powermax105 CPC Port with Selectable Voltage Ratio
228539	Upgrade kit: Serial Interface Port (RS-485)
023206	Machine Interface Cable without Voltage Divider Signal, Spade Connectors, 7,6 m
023279	Machine Interface Cable without Voltage Divider Signal, Spade Connectors, 15,2 m
228350	Machine Interface Cable with Voltage Divider Signal, Spade Connectors, 7,6 m
228351	Machine Interface Cable with Voltage Divider Signal, Spade Connectors, 15,2 m
223048	Machine Interface Cable with Voltage Divider Signal, D-sub Connector, 7,6 m
123896	Machine Interface Cable with Voltage Divider Signal, D-sub Connector, 15,2 m
223236	Serial Interface RS-485 Cable to Unterminated, 7,6 m
223237	Serial Interface RS-485 Cable to Unterminated, 15,2 m
223239	Serial Interface RS-485 Cable to 9-pin D-sub Connector 7,6 m
223240	Serial Interface RS-485 Cable to 9-pin D-sub Connector 15,2 m
228806	Clamp Assembly for Duramax Robotic Torches
429054	Robotic Torch Teach Tip Assembly for SmartSYNC Robotic Torches

# Powermax125®

Professional-grade plasma metal cutting and gouging system for handheld cutting 38 mm and mechanized piercing 25 mm.



## Maximum productivity

- Finish jobs faster with cut speeds 5 times greater than oxyfuel on 12 mm mild steel.
- Spend less time on grinding and edge preparation due to superior cut and gouge quality.
- Maximize your cutting time with 100% duty cycle.

## Low operating costs

- Reduce costs with consumable life up to four times longer than other systems in this amperage range.
- 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.
- Tackle different jobs with multiple, easy-to-use torch styles.

## Built and tested to withstand the harshest conditions

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

## Torches

- To see details on all torches compatible with this system, please refer to the torch applications chart on page 28.



Capacity	Thickness	Cut speed
	Cutting	
Recommended	38 mm	457 mm/min
	44 mm	250 mm/min
Severance (hand cutting)	57 mm	125 mm/min
Pierce*	25 mm	

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

Capacity	Metal removal rate	Groove profile*
	Gouging	
Typical gouge	12,52 kg per hour	4,3-7,9 mm D x 6,1-9,9 mm W

\* Actual groove profile varies with torch angle, arc stretch, and technique

## Specifications

Input voltages	400 V, 3-PH, 50/60 Hz
Kilowatt output	21,9 kW
Input current @ 21,9 kW	400 V, 36 A
Output current	30-125 A
Rated output voltage	175 VDC
Duty cycle @ 40° C	100% @ 125 A, 380/400 V, 3-PH
Open circuit voltage (OCV)	305 VDC
Dimensions with handles	592 mm D; 274 mm W; 508 mm H
Weight with 7,6 m torch	48,9 kg
Gas supply	Clean, dry, oil-free air or nitrogen
Recommended gas inlet flow rate/pressure	Cutting: 260 l/min @ 5,9 bar Gouging: 212 l/min @ 4,1 bar
Input power cable length	3 m
Power supply type	Inverter – IGBT
Engine drive requirement	40 kW for full 125 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.
Warranty	Power supply: 3-year Torch: 1-year

Hand systems	
059528	Powermax125® system, 400 V 3-PH, CE, plus CPC port, 85° and 15° handheld torches w/consumables, 7,6 m lead
059572	Powermax125 system, 400 V 3-PH, CE, plus CPC port, 85° and 15° handheld torches w/consumables, 15,2 m lead
059526	Powermax125 system, 400 V 3-PH, CE, plus CPC port, 85° handheld torch w/consumables, 7,6 m lead
059527	Powermax125 system, 400 V 3-PH, CE, plus CPC port, 85° handheld torch w/consumables, 15,2 m lead

Machine systems	
059530	Powermax125 system, 400 V 3-PH, CE, plus CPC port, 180° machine torch w/consumables, 7,6 m lead, remote
059531	Powermax125 system, 400 V 3-PH, CE, plus CPC port, 180° machine torch w/consumables, 15,2 m lead, remote
059532	Powermax125 system, 400 V 3-PH, CE, plus CPC and serial ports, 180° machine torch w/consumables, 7,6 m lead
059533	Powermax125 system, 400 V 3-PH, CE, plus CPC and serial ports, 180° machine torch w/consumables, 15,2 m lead
059529	Powermax125 system, 400 V 3-PH, CE, plus CPC port, 85° torch w/7,6 m lead, 180° torch w/15,2 m lead w/consumables, remote
059534	Powermax125 system, 400 V 3-PH, CE, plus CPC and serial ports, 180° torch w/consumables, 7,6 m lead w/ring, cables
059535	Powermax125 system, 400 V 3-PH, CE, plus CPC and serial ports, 180° torch w/consumables, 15,2 m lead w/ring, cables

Powermax125 Power Supplies (power supplies only, no torches)	
059486	Powermax125 power supply, 400 V 3-PH, CE, plus CPC port
059487	Powermax125 power supply, 400 V 3-PH, CE, plus CPC and serial ports

Duramax Hyamp series torch assemblies	
059492	Duramax® Hyamp™ handheld torch, 85°, 7,6 m lead
059493	Duramax Hyamp handheld torch, 85°, 15,2 m lead
059494	Duramax Hyamp handheld torch, 85°, 22,8 m lead
059665	Duramax Hyamp handheld torch, 85°, 45,7 m lead
059495	Duramax Hyamp handheld torch, 15°, 7,6 m lead
059496	Duramax Hyamp handheld torch, 15°, 15,2 m lead
059497	Duramax Hyamp handheld torch, 15°, 22,8 m lead
059664	Duramax Hyamp handheld torch, 15°, 45,7 m lead
059562	Duramax Hyamp Long handheld torch 45°, 0,6 m extension, 7,6 m lead
059579	Duramax Hyamp Long handheld torch 45°, 0,6 m extension, 15,2 m lead
059667	Duramax Hyamp Long handheld torch 45°, 1,2 m extension, 45,7 m lead
059563	Duramax Hyamp Long handheld torch 90°, 0,6 m extension, 7,6 m lead
059580	Duramax Hyamp Long handheld torch 90°, 0,6 m extension, 15,2 m lead
059567	Duramax Hyamp Long handheld torch 45°, 1,2 m extension, 7,6 m lead
059581	Duramax Hyamp Long handheld torch 45°, 1,2 m extension, 15,2 m lead
059568	Duramax Hyamp Long handheld torch 90°, 1,2 m extension, 7,6 m lead
059582	Duramax Hyamp Long handheld torch 90°, 1,2 m extension, 15,2 m lead
059668	Duramax Hyamp Long handheld torch 90°, 1,2 m extension, 45,7 m lead
059758	Duramax Hyamp Long handheld torch 45°, 1,83 m extension, 7,6 m lead
059759	Duramax Hyamp Long handheld torch 45°, 1,83 m extension, 15,2 m lead
059623	Duramax Hyamp Long handheld torch 90°, 1,83 m extension, 7,6 m lead
059624	Duramax Hyamp Long handheld torch 90°, 1,83 m extension, 15,2 m lead
059519	Duramax® Hyamp™ machine torch, 180°, 4,5 m lead
059520	Duramax Hyamp machine torch, 180°, 7,6 m lead
059521	Duramax Hyamp machine torch, 180°, 10,7 m lead
059522	Duramax Hyamp machine torch, 180°, 15,2 m lead
059523	Duramax Hyamp machine torch, 180°, 22,8 m lead
059514	Duramax Hyamp mini machine torch, 180°, 4,5 m lead
059515	Duramax Hyamp mini machine torch, 180°, 7,6 m lead
059516	Duramax Hyamp mini machine torch, 180°, 10,7 m lead
059517	Duramax Hyamp mini machine torch, 180°, 15,2 m lead
059666	Duramax Hyamp mini machine torch, 180°, 45,7 m lead
059564	Duramax Hyamp robotic torch, 45°, 7,6 m lead
059670	Duramax Hyamp robotic torch, 45°, 15,2 m lead
059565	Duramax Hyamp robotic torch, 90°, 7,6 m lead
059671	Duramax Hyamp robotic torch, 90°, 15,2 m lead
059566	Duramax Hyamp robotic torch, 180°, 7,6 m lead
059672	Duramax Hyamp robotic torch, 180°, 15,2 m lead

Powermax125 work leads	
223292	Kit: 125 A work lead with hand clamp, 7,6 m
223293	Kit: 125 A work lead with hand clamp, 15,2 m
223294	Kit: 125 A work lead with hand clamp, 22,8 m
223737	Kit: 125 A work lead with hand clamp, 45,7 m
223295	Kit: 125 A work lead with ring terminal, 7,6 m
223296	Kit: 125 A work lead with ring terminal, 15,2 m
223297	Kit: 125 A work lead with ring terminal, 22,8 m
223298	Kit: 125 A work lead with C-style clamp, 7,6 m
223299	Kit: 125 A work lead with C-style clamp, 15,2 m
223300	Kit: 125 A work lead with C-style clamp, 22,8 m

Automated control accessories	
128650	Remote on/off switch for machine torch, 7,6 m
128651	Remote on/off switch for machine torch, 15,2 m
128652	Remote on/off switch for machine torch, 22,8 m
428755	Remote on/off switch for machine torch, 45,7 m
228884	Upgrade kit: Powermax® 105/125 CPC port with selectable voltage ratio
228539	Upgrade kit: Serial interface port (RS-485)
023206	Machine interface cable without voltage divider signal, spade connectors, 7,6 m
023279	Machine interface cable without voltage divider signal, spade connectors, 15,2 m
228350	Machine interface cable with voltage divider signal, spade connectors, 7,6 m
228351	Machine interface cable with voltage divider signal, spade connectors, 15,2 m
223048	Machine interface cable with voltage divider signal, D-sub connector, 7,6 m
123896	Machine interface cable with voltage divider signal, D-sub connector, 15,2 m
223236	Serial interface RS-485 cable to unterminated, 7,6 m
223237	Serial interface RS-485 cable to unterminated, 15,2 m
223239	Serial interface RS-485 cable to 9-pin D-sub connector 7,6 m
223240	Serial interface RS-485 cable to 9-pin D-sub connector 15,2 m
228806	Clamp assembly for Duramax/Duramax Hyamp robotic torches

Consumable kits	
851474	Consumable kit, Powermax125® Essential handheld, 125 A, cutting
851475	Consumable kit, Powermax125 Essential mechanized, 125 A, cutting
851476	Consumable kit, Powermax125 Essential mechanized ohmic, 125 A, cutting
428713	Consumable kit, Duramax® Hyamp™, 125 A, FlushCut™
428099	Consumable starter kit Powermax125, handheld (for à la carte system ordering)
428100	Consumable starter kit Powermax125, mechanized (for à la carte system ordering)
428101	Consumable starter kit Powermax125, mechanized with ohmic retaining cap (for à la carte system ordering)

Optional system accessories	
229467	Powermax105/125 wheel kit
229570	Powermax105/125 power supply gantry mounting kit for cutting tables
127360	System storage dust cover, Powermax105/125
228890	Eliminizer air filtration kit with steel guard for Powermax105/125
128647	Eliminizer air filtration kit, 1-micron filter and auto-drain moisture separator
011092	Replacement filter element for eliminizer air filter
428719	Oil removal air filtration kit, 0.01-micron coalescing oil extracting filter
428718	Wall mounting bracket kit for eliminizer air filter or oil removal air filter
428720	Replacement filter element for oil removal air filter kit
101215	Steel guard for eliminizer filter for Powermax105/125
229832	Teach tip assembly, Hyamp robotic torch
127363	Torch carry bag, 58 cm, x 28 cm x 28 cm
017049	Long torch carry bag for 0,6 m torch
024877	Leather torch lead cover with hook and loop closure, black, 7,6 m section
017053	Plasma circle cutting guide for Duramax Hyamp torch, deluxe kit with magnetic base
017041	Plasma angle cutting guide
017042	Magnetic straight edge
017058	Bevel guide for Duramax Hyamp
017043	Magnetic block 2-pack
017044	Pocket level and measuring tape holder
428348	Gouging heat shield for Duramax Hyamp 80° hand torches
428809	Skeleton cutting sled for Duramax Hyamp Long torches
428495	Hyamp torch adapter for Powermax125/MAXPRO200® machine torches





## Torch consumable stack-up

Consumable type	Torch type	Amperage	Shield/ Deflector	Retaining cap	Nozzle	Electrode	Swirl ring
Drag-cutting	Hand	45	420172	220977	420158	220971	220997
		65	420172		420169		
		125	420000		220975		
Mechanized	Machine	45	420168	220977 or 4201561	420158	220971	220997
		65	420168		420169		
		125/105	220976		220975		
FineCut®	Hand	45	420152	220977 or 4201561	420151	220971	420159
	Machine						220997
Hyamp FlushCut	Hand/machine	85-125	4204852	420490	420489	420553	420484
Max removal gouging	Hand/machine	30-125	420112	220977	420001	220971	220997
Max control gouging	Hand/machine	30-125	420519	220977	420001	220971	220997

<sup>1</sup>Ohmic retaining cap

<sup>2</sup>Retaining ring

# Personal protective equipment



## Dual face shield for slotted hard hat

ANSI Z87.1, CSA Z94.3, CE  
 017047 Shade 6  
 017048 Shade 8  
 017046 Hard hat



## Dual face shield

127239 Shade 6  
 127103 Shade 8



## Leather cutting gloves

127169



## Hyamp™ cutting and gouging gloves

017025 Medium  
 017026 Large  
 017027 X-Large  
 017028 2X-Large



## Neck guard

017030



## Gouging heat shield

128658 T45v; T60/80/100  
 428347 Duramax® and SmartSYNC®  
 428348 Duramax Hyamp™



## Cutting goggles

ANSI Z87.1, CSA Z94.3, CE  
 017035 Shade 5



## Adjustable eye shades

127416 Shade 5



## Clear safety shields

017034



## Flip-up eye shades

ANSI Z87.1, CSA Z94.3, CE  
 017033 Shade 5

# Torch accessories



## Cartridge torch adapter for Duramax® and Duramax Lock torches

The adapter is designed to support multiple cartridge change-outs. Periodically inspect and remove the adapter from the torch to check for cracking and thread wear to determine when to replace.

428951



## Hyamp™ torch adapter

428495



## Torch teach tools

The torch teach tools enable system operators to program the robot's cutting path, while visually verifying the torch will not touch the workpiece while cutting.

429054 for SmartSYNC robotic torches

229456 for Duramax® robotic torches

229832 for Duramax Hyamp™ robotic torches

## System accessories



### Air filtration kits

- 128647 Filter kit only
- 228570 Powermax65/85®, kit and cover
- 228890 Powermax105/125, kit and cover
- 011092 Replacement filter element
- 428719 Oil removal air filter kit



### Leather torch sheathing

- 024877 Black leather 7,6 m



### Wheel/gantry kits

- 229370 Powermax65/85, wheel kit
- 229569 Powermax65/85, gantry kit
- 229467 Powermax105/125, wheel kit
- 229570 Powermax105/125, gantry kit



### Rolling tool bag

- 017060 50 cm x 44 cm x 32 cm



### Remote trigger pendant

- 128650 7,6 m
- 128651 15,2 m
- 128652 22,8 m
- 428755 45,7 m



### Torch carry bag

- 127363 58 cm x 28 cm x 28 cm
- 017049 Duramax® Hyamp™ 0,6 m



### 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.

- 528083



### System dust covers

- 127144 Powermax30/30 XP
- 127469 Powermax30 AIR
- 127219 Powermax45/45 XP
- 127301 Powermax65/85
- 127360 Powermax105/125

## Cutting guides



### Circle cutting guide

- 127102 Basic Duramax®, Duramax LT, AIR, T30
- 027668 Deluxe Duramax, Duramax LT, AIR, T30
- 017053 Duramax Hyamp™
- 027669 Deluxe SmartSYNC®
- 017065 Basic SmartSYNC



### Bevel cutting guide

- 017059 Standard
- 017058 Duramax® Hyamp
- 017066 SmartSYNC



### Magnetic block 2-pack

- 017043



### Angle cutting guide

- 017041



### Torch alignment guide

Designed for setting up a machine torch to produce high quality bevel cuts at accurate angles using a tractor.

- 528077



### Pocket level and tape magnet

- 017044










### Magnetic straight edge

- 017042

# Torch applications for Powermax®

## Powermax torch product line overview

Hypertherm® offers an extensive array of torch options for the Powermax line of plasma systems.

Current systems	System	Amps	Torch series	Torch style(s)						
				Current	Hand torch	Straight hand torches	Straight machine torches	Short machine torches	Robotic torches	Long torches
	Powermax30 XP	30	Duramax® LT	4,5 m lead						
	Powermax30 AIR	30	AIR T30	4,5 m lead						
	Powermax45 XP	45	Duramax® Lock	6,1 m lead 15,2 m lead	6,1 m lead 15,2 m lead	7,6 m lead 10,7 m lead 15,2 m lead				
			Duramax® Hyamp™	7,6 m lead 15,2 m lead 22,8 m lead	7,6 m lead 15,2 m lead 22,8 m lead	4,5 m lead 7,6 m lead 10,7 m lead 15,2 m lead 22,8 m lead	4,5 m lead 7,6 m lead 10,7 m lead 15,2 m lead	7,6 m lead 15,2 m lead	0,6 m option 1,2 m option 1,83 m option 7,6 m lead 15,2 m lead	
	Powermax65 SYNC®	65	SmartSYNC®	7,6 m lead 15,2 m lead 22,8 m lead	7,6 m lead 15,2 m lead 22,8 m lead	7,6 m lead 10,7 m lead 15,2 m lead 22,8 m lead			4,5 m lead 7,6 m lead 15,2 m lead 22,8 m lead	4,5 m lead 15,2 m lead
	Powermax85 SYNC	85								
	Powermax105 SYNC	105								
	Powermax125	125	Duramax® Hyamp™	7,6 m lead 15,2 m lead 22,8 m lead 45,7 m lead	7,6 m lead 15,2 m lead 22,8 m lead 45,7 m lead	4,5 m lead 7,6 m lead 10,7 m lead 15,2 m lead 22,8 m lead	4,5 m lead 7,6 m lead 10,7 m lead 15,2 m lead 45,7 m lead	7,6 m lead	0,6 m option 1,2 m option 1,83 m option 7,6 m lead 15,2 m lead 45,7 m lead	

\*Optional

Protect your investment. Choose genuine Hypertherm torches, consumables, and cartridges to keep your Powermax system running at peak performance. Incorporating the latest technologies and manufactured to the highest standards, Hypertherm consumables and cartridges enhance cut quality, extend consumable life, and boost productivity.

<b>Drag cutting</b>	Consumables for placing the torch directly on the work piece without a standoff.
<b>Mechanized cutting</b>	Consumables for portable automation, CNC table and robotic cutting.
<b>Max control gouging</b>	Consumables for precise metal removal, shallower gouge profiles and light metal washing.
<b>Max removal gouging</b>	Consumables for aggressive metal removal, deep gouge profiles and extreme metal washing.
<b>Precision gouging</b>	Consumables for spot and tack weld removal at very low output current (<25 A).
<b>Marking</b>	Consumables for scoring, indicating part identification, hole or weld locations.
<b>Extended reach cutting</b>	HyAccess™, extended reach consumables for improved visibility and accessibility when cutting or gouging in confined spaces.
<b>Fine feature cutting</b>	FineCut® consumables for narrow kerf width with minimal dross and heat affected zone.
<b>Flush cutting</b>	FlushCut™ consumables for cutting closer to base materials as possible without piercing or damaging the workpiece.



85° hand torch



180° mini machine torch



180° Duramax® robotic torch



15° hand torch



180° full-length machine torch



90° Duramax® robotic torch



45° Duramax® robotic torch



45° Duramax® Hyamp™ 2' Long torch



45° Duramax® Hyamp™ 4' Long torch



75° SmartSYNC® hand torch



Machine SmartSYNC® torch



180° SmartSYNC® robotic torch



15° SmartSYNC® hand torch



90° SmartSYNC® robotic torch



45° SmartSYNC® robotic torch

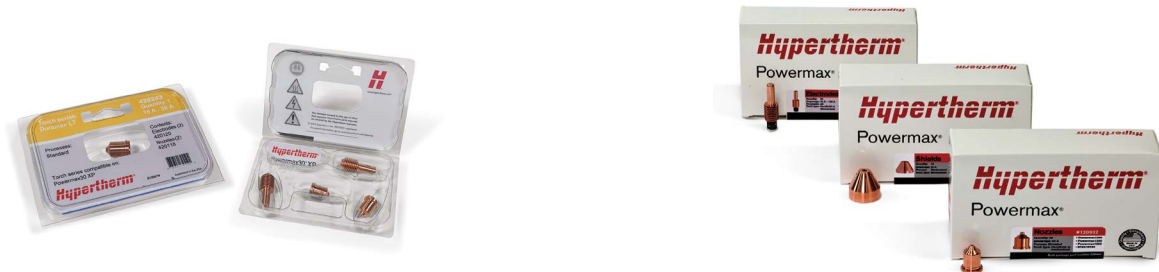
# Consumable kits

- Powermax® Essential consumable kits – designed to provide the optimal mix of cutting consumables for your Powermax system
- HyAccess™ and FlushCut™ kits
- Dual pack electrode/nozzle kits for Powermax30 AIR and Powermax30 XP
- Bulk kits – economical for high volume use of select consumables



## Powermax Essential consumable kits

Powermax system	Handheld	Mechanized	Mechanized Ohmic
Powermax30 AIR	851462		
Powermax30 XP	851479		
Powermax45 XP	851510	851511	851512
Powermax65	851465	851466	851467
Powermax85	851468	851469	851470
Powermax105	851471	851472	851473
Powermax125	851474	851475	851476



## Dual electrode/nozzle packs

Powermax system	Part number	Process
Powermax30 AIR	428350	Standard cutting
Powermax30 XP	428243	Standard cutting
	428244	FineCut®

## Duramax® consumable bulk kits

Contents	Order quantity	Part number
Electrode (220777)	25	228934
Electrode (220842)	25	228767
Nozzle (220816)	25	228760
Nozzle (220819)	25	228759
Nozzle (220930)	25	228761
Nozzle (220797)	25	228762
Nozzle (220941)	25	228765
Nozzle (220990)	25	228797
Nozzle (220991)	25	228796
Shield (220992)	10	228798
Shield (220993)	10	228799
Shield (220817)	10	228763
Shield (220818)	10	228764



## FlushCut kits

FlushCut consumables for cutting closer to base materials as possible without piercing or damaging the workpiece.

Powermax system	Kit part number	Operating amperage
Powermax45 XP		
Powermax65	428746	15-45 A
Powermax85		
Powermax105	428647	85-105 A
Powermax125	428713	85-125 A



## HyAccess kits

Extended reach consumables for improved visibility and accessibility when cutting or gouging in confined spaces.

Powermax system	Kit type	Kit part number	Operating amperage
Powermax30 XP	Combination Cut/ Gouging	428337	
	Starter kit - Cutting	428443	15-30 A
	Starter kit - Gouging	428444	
Powermax45 XP	Combination Cut/ Gouging	428414	15-65 A
Powermax65			
Powermax85	Starter kit - Cutting	428445	
Powermax105	Starter kit - Gouging	428446	

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ISO 9001:2015

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