

# Powermax® family catalog

Plasma cutting and gouging systems



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# The Hypertherm Associates corporate story

Hypertherm. OMAX. Centricut. ProNest. AccuStream. Robotmaster. These names and more represent the world's leading industrial cutting technologies and solutions, and they can all be found in one company: Hypertherm Associates. With constancy of purpose, a drive to innovate, and a passion for customer success, Hypertherm Associates is leading the industrial cutting and shaping industry.

## Shaping Possibility

Since our founding in 1968, we have always believed in the value of surpassing expectations. It's why we make continued investments in people. It's why we invest aggressively in ongoing product development. And now, it's why we'll be known as Hypertherm Associates: a 100% Associate-owned company composed of the world-class industrial cutting technologies and solutions you know and trust – plasma, waterjet, CAD-CAM, robotic software, and more – to help our customers succeed in ways that have never before been possible.

Hypertherm Associates builds on our legacy of challenging what's achievable with the products we create, the culture we foster, and the experience we deliver to our customers – and then goes further. Whether plasma, waterjet, or the consumables, software, and services that enable connected factories and optimized performance, the solutions that help our customers meet their business objectives can all be found in one place: Hypertherm Associates.

## Committing to Success

Behind the name Hypertherm Associates lies a fundamental commitment to the success of people: our customers, partners, our Associates, and communities. Our dedication to 100% Associate ownership is a direct result of that commitment. By maintaining complete independence from external shareholders or other corporate entities, we can focus on our customers and partners to deliver exactly what they need. And because our Associates work together moving toward a common goal, they are an energized workforce dedicated to delivering a consistently superior customer experience.

## Leading the Industry

From aerospace to agriculture and energy to infrastructure, the people, brands, and technologies of Hypertherm Associates can already be found everywhere advanced manufacturing is happening around the globe. In fact, hundreds of thousands of businesses are relying on Hypertherm Associates technologies and solutions right now for performance and reliability that help increase their productivity and profitability. And that's why companies worldwide turn to Hypertherm Associates to build ships, airplanes, and railcars, to construct steel buildings and bridges, to fabricate heavy equipment and wind turbines, and a whole lot more.

Through our portfolio of technologies and solutions, Hypertherm Associates employs more than 1,900 people and maintains operations and partner representation globally. With Hypertherm Associates, we've created a framework for growth and expansion that will allow us to bring the latest innovations to our customers more quickly, and with a deeper level of integration and customer support.

Hypertherm Associates is the evolution of a vision that continues to put our customers first, to solve their challenges, and to make it even easier to do business with us. Our global team is committed to continuously finding ways to make our company, our customers, and our communities more successful, and we're excited to have you with us as we continue our journey of shaping possibility.

# 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.

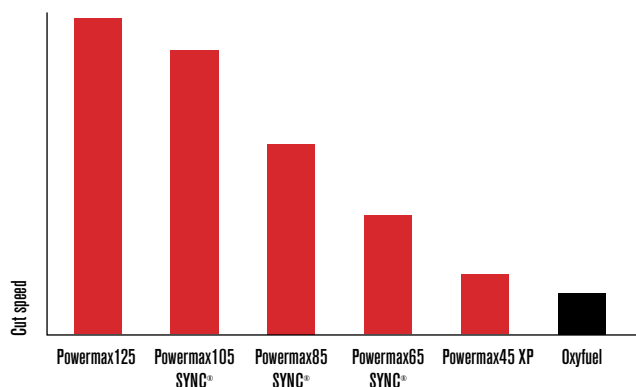
## More productive

Much faster cut speeds up to 1-1/2" 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 1/2" 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 Associates' 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 2-1/4". 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.

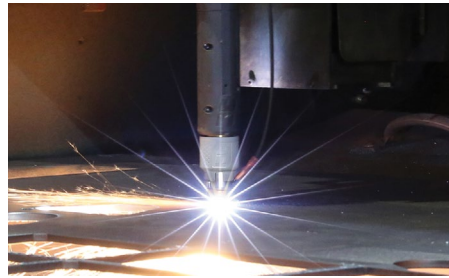
# Genuine Hypertherm consumables

Hypertherm Associates 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



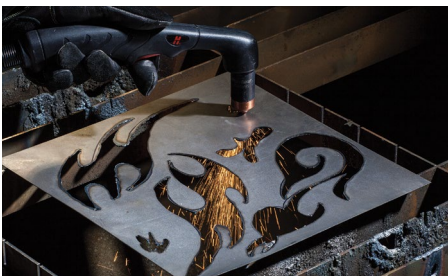
## Gouging

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



## Powermax 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.










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.

# Powermax®

## Product line and application overview



Cut capacity		Powermax30 XP	Powermax30 AIR	Powermax45 XP	Powermax65 SYNC®	Powermax85 SYNC®	Powermax105 SYNC®	Powermax125
	Recommended	3/8"	5/16"	5/8"	3/4"	1"	1-1/4"	1-1/2"
	Severance	5/8"	5/8"	1-1/8"	1-1/4"	1-1/2"	2"	2-1/4"
	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		<b>Mechanized cutting</b>			●	●	●	●	●
		Consumables for portable automation, CNC table and robotic cutting.							
		<b>Drag cutting</b>	●	●	●	●	●	●	●
		Consumables for placing the torch directly on the work piece without a standoff.							
		<b>FineCut®</b>	●		●	●	●	●	●
		FineCut® consumables for narrow kerf width with minimal dross and heat affected zone.							
		<b>Marking</b>			●				
		Consumables for scoring, indicating part identification, hole or weld locations.							
		<b>Precision gouging</b>			●				
		Consumables for spot and tack weld removal at very low output current (<25 A).							
		<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>HyAccess™</b>	●		●	●	●	●	
		HyAccess™, extended reach consumables for improved visibility and accessibility when cutting or gouging in confined spaces.							
		<b>FlushCut™</b>			●	●	●	●	●
		FlushCut™ consumables for cutting closer to base materials as possible without piercing or damaging the workpiece.							

# Powermax30® XP

Professional-grade plasma system for handheld cutting 3/8" 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	3/8"	20 ipm
	1/2"	10 ipm
Severance	5/8"	5 ipm

## Specifications

Input voltages	120-240 V, 1-PH, 50/60 Hz
Input current @ 38 kW	120-240 V, 1-PH, 25.5-18.8 A
Output current	15-30 A
Rated output voltage	125 VDC
Duty cycle @ 104° F	35%, 240 V 20%, 120 V
Open circuit voltage (OCV)	256 VDC
Dimensions with handles	14.0" D; 5.5" W; 11.5" H
Weight w/15' torch	21.4 lbs.
Gas supply	Clean, dry, oil-free air or nitrogen
Recommended gas inlet flow rate/pressure	4 scfm @ 80 psi
Input power cable length	10'
Power supply type	Inverter – IGBT
Engine drive requirement	5.5 kW for full 30 A output
Certifications	CSA-certified for use in the Americas and Asia, except China.
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:

- 1/4" at 19 ipm
- 3/8" at 8 ipm
- 1/2" at 3 ipm

\*compared to Powermax30

Hand systems	
088079	Powermax30 XP system, 120–240 V 1-PH, CSA, plus 75° torch w/ consumables, 15' lead, case, shade 5 glasses, and cutting gloves
088081	Powermax30 XP system, 120–240 V 1-PH, CSA, plus 75° handheld torch w/consumables, 15' lead

Torch assembly	
428174	Duramax® LT Hand Torch Assembly with 15' 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
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, 25' 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® 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	5/16"	20 ipm
	3/8"	10 ipm
Severance	5/8"	5 ipm

## 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 @ 104° F	35%, 240 V 20%, 120 V
Open circuit voltage (OCV)	256 VDC
Dimensions with handles	16.5" D; 7.7" W; 13.1" H
Weight w/15' torch	29.8 lbs.
Input power cable length	10'
Power supply type	Inverter – IGBT
Engine drive requirement	5.5 kW for full 30 A output
Certifications	CSA-certified for use in the Americas and Asia, except China
Warranty	Power supply: 3-year Torch: 1-year

Hand systems	
088096	Powermax30 AIR system, 120–240 V 1-PH, CSA, plus 75° handheld torch w/consumables, 15' lead

Torch assembly	
428393	AIR T30 hand torch assembly with 15' 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

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, 25' 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 5/8" thick metal, gouging, and marking.

## Easy-to-use with versatile design

- Small size and light weight provides exceptional portability for a 5/8" 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 1/4" 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® 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	5/8"	20 ipm
	7/8"	10 ipm
Severance (hand cutting)	1-1/8"	5 ipm
Pierce*	1/2"	

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

Capacity	Metal removal rate	Groove profile*
Gouging		
Typical gouge	7.5 lbs. per hour	.12" D x .26" W

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

## Specifications

Input voltages (± 10%)	200–240 V, 1-PH, 50–60 Hz 480 V, 3-PH, 50–60 Hz
Input current @ 6.5 kW	200–240 V, 1-PH, 39/32 A 480 V, 3-PH, 9.4 A
Output current	10–45 A
Rated output voltage	145 VDC
Duty cycle @ 104° F	50% @ 45 A, 200–240 V, 1-PH 60% @ 41 A, 200–240 V, 1-PH 100% @ 32 A, 200–240 V, 1-PH 50% @ 45 A, 480 V, 3-PH 60% @ 41 A, 480 V, 3-PH 100% @ 32 A, 480 V, 3-PH
Open circuit voltage (OCV)	275 VDC
Dimensions with handles	17.4" D; 6.8" W; 14.1" H
Weight w/20' torch	31 lbs.
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	400 scfh @ 90 psi
Input power cable length	10'
Power supply type	Inverter – IGBT
Engine drive requirement	10 kW for full 45 A output
Electrical efficiency	88%
Recyclability	100%
Certifications	CSA-certified for use in the Americas and Asia, except China
Warranty	Power supply: 3-year Torch: 1-year

Hand systems	
088124	Powermax45® XP system, 230 V 1-PH, CSA, plus CPC port, 75° and 15° handheld torch w/consumables, 20' leads
088113	Powermax45 XP system, 230 V 1-PH, CSA, plus CPC port, 75° handheld torch w/consumables, 20' lead
088115	Powermax45 XP system, 230 V 1-PH, CSA, plus CPC port, 75° handheld torch w/consumables, 50' lead
088112	Powermax45 XP system, 230 V 1-PH, CSA, 75° handheld torch w/consumables, 20' lead
088114	Powermax45 XP system, 230 V 1-PH, CSA, 75° handheld torch w/consumables, 50' lead
088125*	Powermax45 XP system, 230 V 1-PH, CSA, plus CPC port, 75° handheld torch w/consumables, 20' lead, English training kit
088126	Powermax45 XP system, 480 V 3-PH, CSA, 75° handheld torch w/consumables, 20' lead

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

Machine systems	
088123	Powermax45 XP system, 230 V 1-PH, CSA, plus CPC port, 75° and 180° torches w/consumables, 20' and 25' leads, remote
088116	Powermax45 XP system, 230 V 1-PH, CSA, plus CPC port, 180° machine torch w/consumables, 25' lead, remote
088117	Powermax45 XP system, 230 V 1-PH, CSA, plus CPC port, 180° machine torch w/consumables, 35' lead, remote
088118	Powermax45 XP system, 230 V 1-PH, CSA, plus CPC port, 180° machine torch w/consumables, 50' lead, remote
088121	Powermax45 XP system, 230 V 1-PH, CSA, plus CPC port, 180° machine torch w/consumables, 25' lead
088122	Powermax45 XP system, 230 V 1-PH, CSA, plus CPC port, 180° machine torch w/consumables, 50' lead
088119	Powermax45 XP system, 230 V 1-PH, CSA, plus CPC and serial ports, 180° machine torch w/consumables, 25' lead
088120	Powermax45 XP system, 230 V 1-PH, CSA, plus CPC and serial ports, 180° machine torch w/consumables, 50' lead

Powermax45 XP power supplies (power supplies only, no torches)	
088092	Powermax45 XP power supply, 200–240 V 1-PH, CSA
088104	Powermax45 XP power supply, 200–240 V 1-PH, CSA plus CPC port
088105	Powermax45 XP power supply, 200–240 V 1-PH, CSA, plus CPC and Serial ports
088095	Powermax45 XP power supply, 480 V 3-PH, CSA
088110	Powermax45 XP power supply, 480 V 3-PH, CSA, plus CPC port

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°, 20' lead
088165	Duramax Lock handheld torch, 75°, 50' lead
088162	Duramax Lock handheld torch, 15°, 20' lead
088163	Duramax Lock handheld torch, 15°, 50' lead
088167	Duramax Lock machine torch, 180°, 25' lead
088168	Duramax Lock machine torch, 180°, 35' lead
088169	Duramax Lock machine torch, 180°, 50' lead

Powermax45 XP work leads	
223595	45 A work lead with hand clamp, 25'
223596	45 A work lead with hand clamp, 50'
223127	65 A work lead with hand clamp, 75'

Automated control accessories	
128650	Remote on/off switch for machine torch, 25'
128651	Remote on/off switch for machine torch, 50'
128652	Remote on/off switch for machine torch, 75'
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, 25'
023279	Machine interface cable without voltage divider signal, spade connectors, 50'

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



228350	Machine interface cable with voltage divider signal, spade connectors, 25'
228351	Machine interface cable with voltage divider signal, spade connectors, 50'
223048	Machine interface cable with voltage divider signal, D-sub connector, 25'
123896	Machine interface cable with voltage divider signal, D-sub connector, 50'
223236	Serial interface RS-485 to unterminated, 25'
223237	Serial interface RS-485 to unterminated, 50'
223239	Serial interface RS-485 to 9-pin D-sub connector, 25'

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)
223240	Serial interface RS-485 to 9-pin D-sub connector, 50'

Optional system accessories	
127219	System storage dust cover, Powermax45/45 XP
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, 25' section
127217	Shoulder strap 1.5" x 50"
428347	Gouging heat shield for Duramax® and SmartSYNC™ 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
Drag-cutting	Hand	45	220818	220854	220941	220842	220857
Mechanized	Machine	45	220817 or 2209551	220854 or 2209532	220941	220842	220857
FineCut®	Hand	45	220931	220854 or 2209532	220930	220842	220947
	Machine		220955 or 2209482				
Max control gouging	Hand/Machine	26–45	420480	220854	420419	220842	220857
Precision gouging	Hand/Machine	10–25	420414	220854	420415	220842	220857
Marking	Hand/Machine	10–25	420542	220854 or 2209532	420415	220842	220857
FlushCut™	Hand/Machine	30–45	4205404	420536	4206333	420635	420634
HyAccess™ cutting	Hand	15–45	N/A	420413	420410	420408	220857
HyAccess™ gouging	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-amp 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

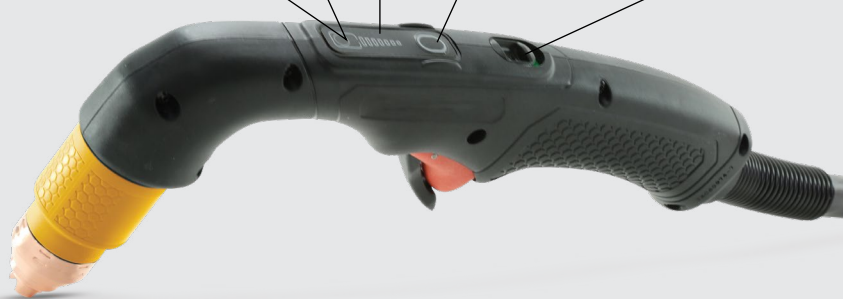
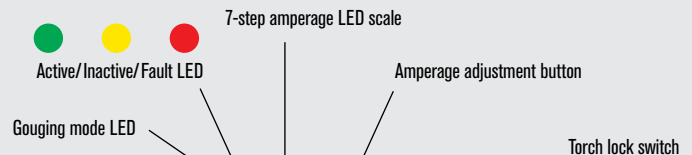
With an emphasis on ease-of-use features, Powermax SYNC can reduce operator training time, provide data driven insights to improve operator performance and make new operators proficient faster.

## 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.



# Torch adapter and the Powermax 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.

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

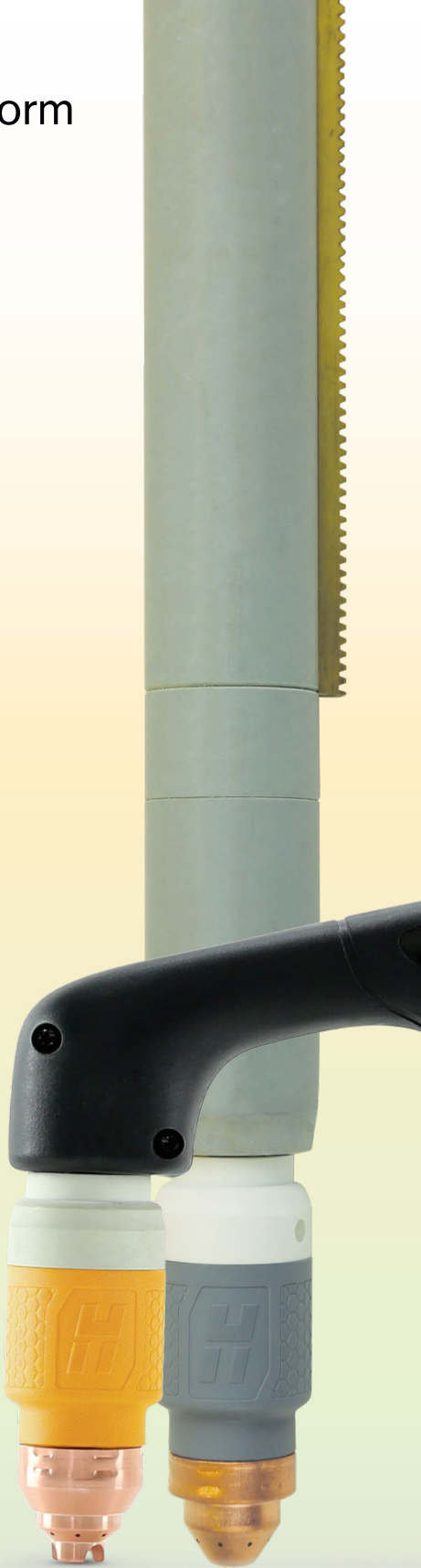
- Not recommended for use on Duramax retrofit torches for Powermax1000/1250/1650
- Not compatible with Duramax Hyamp™ standard or long style torches
- The cartridge consumable platform is standard for the new Powermax SYNC® 65/85/105 systems with SmartSYNC® torches (no adapter required)
- When using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

## 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.



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



# 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 Powermax 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.

## 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 Powermax 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.

## Powermax cartridge reader

The Powermax cartridge reader works with the Powermax SYNC® cartridge reader app to provide a simple process for reviewing data stored in Powermax 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	3/4"	20 ipm	1"	20 ipm	1-1/4"	20 ipm
	1"	10 ipm	1-1/4"	10 ipm	1-1/2"	10 ipm
Severance	1-1/4"	5 ipm	1-1/2"	5 ipm	2"	5 ipm
Pierce*	5/8"		3/4"		7/8"	
*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	8.8 lbs. per hour	.11" D x .25" W	18.2 lbs. per hour	.14 D x .26 W	19.1 lbs. per hour	.26 D x .24 W

## Specifications

	Powermax65 SYNC®	Powermax85 SYNC®	Powermax105 SYNC®
Input voltages	200–480 V, 1-PH, 50/60 Hz 200–600 V, 3-PH, 50/60 Hz	200–480 V, 1-PH, 50/60 Hz 200–600 V, 3-PH, 50/60 Hz	200–600 V, 3-PH, 50/60 Hz
Kilowatt output	9 kW	12.2 kW	16.8 kW
Input current	200/208/240/480 V, 1-PH 52/50/44/22 A @ 9 kW 200/208/240/480/600 V, 3-PH 32/31/27/13/13 A @ 9 kW	200/208/240/480 V, 1-PH 70/68/58/29 A @ 12.2 kW 200/208/240/480/600 V, 3-PH 42/40/35/18/17 A @ 12.2 kW	200/208/240/480/600 V, 3-PH 58/56/49/25/22 A @ 16.8 kW
Output current	20–65 A	25–85 A	30–105 A
Rated output voltage	139 VDC	143 VDC	160 VDC
Duty cycle @ 104° F	50% @ 65 A, 230–600 V, 1/3-PH 40% @ 65 A, 200–208 V, 1/3-PH 100% @ 46 A, 230–600 V, 1/3-PH	60% @ 85 A, 230–600 V, 3-PH 60% @ 85 A, 480 V, 1-PH 50% @ 85 A, 240 V, 1-PH 50% @ 85 A, 200–208 V, 3-PH 40% @ 85 A, 200–208 V, 1-PH 100% @ 66 A, 230–600 V, 1/3-PH	70% @ 105 A, 240 V, 3-PH 80% @ 105 A, 480–600 V, 3-PH 100% @ 94 A, 480–600 V, 3-PH 100% @ 88 A, 240 V, 3-PH
Open circuit voltage (OCV)	295 VDC	305 VDC	300 VDC
Dimensions with handles	19" D; 9.2" W; 17" H	19" D; 9.2" W; 17" H	23.3" D; 10.8" W; 20.0" H
Weight w/25' torch	61 lbs.	67 lbs.	95 lbs.
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	110–120 psi	110–120 psi	110–120 psi
Minimum inlet gas pressure	75 psi	75 psi	80 psi
Recommended inlet gas flow rate	Cutting: 450 scfh, 7.5 scfm @ 85 psi Gouging: 450 scfh, 7.5 scfm @ 70 psi	Cutting: 450 scfh, 7.5 scfm @ 85 psi Gouging: 450 scfh, 7.5 scfm @ 70 psi	Cutting: 550 scfh, 92 scfm @ 90 psi Gouging: 550 scfh, 92 scfm @ 70 psi
Input power cable length	10'	10'	10'
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	CSA-certified for use in the Americas and Asia, except China	CSA-certified for use in the Americas and Asia, except China	CSA-certified for use in the Americas and Asia, except China
Warranty	Power supplies have a 3-year warranty and torches a 1-year warranty	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



## Powermax cartridge and options

Amps	Drag cutting	Mechanized standoff	Gouging	
			Max control	Max removal
30–45 A				
45	428927	428925	428933	428932
65	428931	428930		
85	428935	428934		
105	428937	428936	428939	428938

## Specialty application cartridge options

FlushCut™	FineCut®		HyAccess			Ohmic ring kit
	Handheld	Mechanized	Drag cutting	Gouging	Mechanized	
	428928	428926				428895*
428952			428984	528079	428987	
428953						
428954						

\*Kit includes three 420580 ohmic ring clips.

Hand systems	
083343	Powermax65 SYNC system, 200-600V 1/3-PH, CSA, 75 degree handheld torch, 25' lead
083344	Powermax65 SYNC system, 200-600V 1/3-PH, CSA, 75 degree handheld torch, 50' lead
083345	Powermax65 SYNC system, 200-600V 1/3-PH, CSA, CPC port, 75 degree handheld torch, 25' lead
083346	Powermax65 SYNC system, 200-600V 1/3-PH, CSA, CPC port, 75 degree handheld torch, 50' lead
083347	Powermax65 SYNC system, 200-600V 1/3-PH, CSA, 75 degree handheld torch, 15 deg hand torch, 25' lead
087183	Powermax85 SYNC system, 200-600V 1/3-PH, CSA, 75 degree handheld torch, 25' lead
087184	Powermax85 SYNC system, 200-600V 1/3-PH, CSA, 75 degree handheld torch, 50' lead
087185	Powermax85 SYNC system, 200-600V 1/3-PH, CSA, CPC port, 75 degree handheld torch, 25' lead
087186	Powermax85 SYNC system, 200-600V 1/3-PH, CSA, CPC port, 75 degree handheld torch, 50' lead
087191	Powermax85 SYNC 200-600V 1/3-PH, CSA, CPC port, 75 deg 25' hand torch, 35' machine torch, 25' remote
087187	Powermax85 SYNC system, SYNC system, 200-600V 1/3-PH, CSA, 75 degree handheld torch, 15 degree hand torch 25' lead
059625	Powermax105 SYNC system, 200-600V 3-PH, CSA, 75 degree handheld torch, 25' lead
059626	Powermax105 SYNC system, 200-600V 3-PH, CSA, 75 degree handheld torch, 50' lead
059627	Powermax105 SYNC system, 200-600V 3-PH, CSA, CPC port, 75 degree handheld torch, 25' lead
059628	Powermax105 SYNC system, 200-600V 3-PH, CSA, CPC port, 75 degree handheld torch, 50' lead
059634	Powermax105 SYNC system, 200-600V 3-PH, CSA, CPC port, 75 degree handheld torch, 15 deg hand torch, 25' lead

Machine systems	
083348	Powermax65 SYNC system, 200-600V 1/3-PH, CSA, CPC port, 180 degree machine torch, 25' lead, remote
083349	Powermax65 SYNC system, 200-600V 1/3-PH, CSA, CPC port, 180 degree machine torch, 25' lead
083350	Powermax65 SYNC system, 200-600V 1/3-PH, CSA, CPC port, 180 degree machine torch, 50' lead
083351	Powermax65 SYNC system, 200-600V CSA, CPC port, 75 degree 25' hand torch/35' machine torch/25' lead, remote
083352	Powermax65 SYNC system, 200-600V, 1/3-PH, CSA, CPC & Serial Ports, 180 degree torch, 25' lead
083361	Powermax65 SYNC system, 200-600V 1/3-PH, CSA, CPC port, 180 degree machine torch, 50' lead, remote
083375	Powermax65 SYNC system, 200-600V, 1/3-PH, CSA, CPC & Serial Ports, 180 degree torch, 35' lead, ring terminated worklead
083376	Powermax65 SYNC system, 200-600V 1/3-PH, CSA, CPC & Serial ports, 180 degree machine torch, 50' lead, ring terminated worklead
087189	Powermax85 SYNC system, 200-600V 1/3-PH, CSA, CPC port, 180 degree machine torch, 25' lead, ring terminated worklead
087190	Powermax85 SYNC system, 200-600V 1/3-PH, CSA, CPC port, 180 degree machine torch, 50' lead

087192	Powermax85 SYNC system, 200-600V, 1/3-PH, CSA, CPC and Serial Ports, 180 degree torch, 25' lead
087207	Powermax85 SYNC system, 200-600V 1/3-PH, CSA, CPC port, 180 degree machine torch, 25' lead, remote
087208	Powermax85 SYNC system, 200-600V 1/3-PH, CSA, CPC port, 180 degree machine torch, 50' lead, remote
087218	Powermax85 SYNC system, 200-600V, 1/3-PH, CSA, CPC & Serial Ports, 180 degree torch, 35' lead, ring terminated worklead
087219	Powermax85 SYNC system, 200-600V, 1/3-PH, CSA, CPC and Serial Ports, 180 degree torch, 50' lead, ring terminated worklead
059636	Powermax105 SYNC system, 200-600V 3-PH, CSA, CPC port, 180 degree machine torch, 25' lead, remote
059639	Powermax105 SYNC system, 200-600V 3-PH, CSA, CPC port, 180 degree machine torch, 50' lead, remote
059637	Powermax105 SYNC system, 200-600V 3-PH, CSA, CPC port, 180 degree machine torch, 25' lead
059638	Powermax105 SYNC system, 200-600V 3-PH, CSA, CPC port, 180 degree machine torch, 50' lead
059684	Powermax105 SYNC system, 200-600V, 3-PH, CSA, CPC and Serial ports, 180 degree torch, 25' lead
059687	Powermax105 SYNC system, 200-600V 3-PH, CSA, CPC port, 180 degree machine torch 35' lead, hand torch 25'
059762	Powermax105 SYNC system, 200-600V, 3-PH, CSA, CPC and Serial ports, 180 degree torch, 35' lead, ring terminated worklead
059763	Powermax105 SYNC system, 200-600V, 3-PH, CSA, CPC and Serial ports, 180 degree torch, 50' lead, ring terminated worklead

Power supplies (power supplies only, no torches)	
083371	Powermax65 SYNC, 200-600V 1/3 PH, CSA
083372	Powermax65 SYNC, 200-600V 1/3 PH, CSA, plus CPC port
083373	Powermax65 SYNC, 200-600V 1/3 PH, CSA, plus CPC & Serial ports
087213	Powermax85 SYNC, 200-600V 1/3 PH, CSA
087214	Powermax85 SYNC, 200-600V 1/3 PH, CSA, plus CPC port
087215	Powermax85 SYNC, 200-600V 1/3 PH, CSA, plus CPC & Serial ports
059704	Powermax105 SYNC power supply, 200-600V 3-PH, CSA
059705	Powermax105 SYNC power supply, 200-600V 3-PH, CSA, plus CPC port
059706	Powermax105 SYNC power supply, 200-600V 3-PH, CSA, plus CPC and serial ports

SmartSYNC series torch assemblies	
059726	SmartSYNC® handheld torch 75 degree 25' lead
059727	SmartSYNC handheld torch 75 degree 50' lead
059728	SmartSYNC handheld torch 75 degree 75' lead
059770	SmartSYNC handheld torch 75 degree 100' lead
059723	SmartSYNC handheld torch 15 degree 25' lead
059724	SmartSYNC handheld torch 15 degree 50' lead
059725	SmartSYNC handheld torch 15 degree 75' lead
059719	SmartSYNC machine torch 180 degree 25' lead
059720	SmartSYNC machine torch 180 degree 35' lead
059721	SmartSYNC machine torch 180 degree 50' lead
059722	SmartSYNC machine torch 180 degree 75' lead
059733	SmartSYNC mini/robotic machine torch 180 degree 15' lead
059734	SmartSYNC mini/robotic machine torch 180 degree 25' lead
059735	SmartSYNC mini/robotic machine torch 180 degree 50' lead
059729	SmartSYNC robotic torch 45 degree 25' lead
059730	SmartSYNC robotic torch 45 degree 50' lead
059736	SmartSYNC robotic torch 45 degree 75' lead
059731	SmartSYNC robotic torch 90 degree 25' lead
059732	SmartSYNC robotic torch 90 degree 50' lead
059737	SmartSYNC robotic torch 90 degree 75' lead
528114	SmartSYNC 45° long torch with 4' extension and 25' lead
528116	SmartSYNC 45° long torch with 2' extension and 50' lead
528118	SmartSYNC 45° long torch with 4' extension and 50' lead
528117	SmartSYNC 90° long torch with 2' extension and 50' lead
528119	SmartSYNC 90° long torch with 4' extension and 50' lead

Work leads	
223125	65 A Work Lead with Hand Clamp, 25'
223126	65 A Work Lead with Hand Clamp, 50'
223127	65 A Work Lead with Hand Clamp, 75'
223194	65 A Work Lead with C-Clamp, 25'
223195	65 A Work Lead with C-Clamp, 50'
223196	65 A Work Lead with C-Clamp, 75'
223200	65 A Work Lead with Ring Terminal, 25'
223201	65 A Work Lead with Ring Terminal, 50'
223202	65 A Work Lead with Ring Terminal, 75'
223035	85 A Work Lead with Hand Clamp, 25'
223034	85 A Work Lead with Hand Clamp, 50'
223033	85 A Work Lead with Hand Clamp, 75'
223203	85 A Work Lead with C-Clamp, 25'

223204	85 A Work Lead with C-Clamp, 50'
223205	85 A Work Lead with C-Clamp, 75'
223209	85 A Work Lead with Ring Terminal, 25'
223210	85 A Work Lead with Ring Terminal, 50'
223211	85 A Work Lead with Ring Terminal, 75'
223254	Kit: 105 A work lead with hand clamp, 25'
223255	Kit: 105 A work lead with hand clamp, 50'
223256	Kit: 105 A work lead with hand clamp, 75'
223287	Kit: 105 A work lead with C-style clamp, 25'
223288	Kit: 105 A work lead with C-style clamp, 50'
223289	Kit: 105 A work lead with C-style clamp, 75'
223284	Kit: 105 A work lead with ring terminal, 25'
223285	Kit: 105 A work lead with ring terminal, 50'
223286	Kit: 105 A work lead with ring terminal, 75'

Automated control accessories	
128650	Remote On/Off Switch for Machine Torch, 25'
128651	Remote On/Off Switch for Machine Torch, 50'
128652	Remote On/Off Switch for Machine Torch, 75'
428755	Remote On/Off Switch for Machine Torch, 150'
228697	Upgrade kit: CPC Port with Selectable Voltage Ratio
228539	Upgrade kit: Serial Interface Port (RS-485)
023206	Machine Interface Cable without Voltage Divider Signal, Spade Connectors, 25'
023279	Machine Interface Cable without Voltage Divider Signal, Spade Connectors, 50'
228350	Machine Interface Cable with Voltage Divider Signal, Spade Connectors, 25'
228351	Machine Interface Cable with Voltage Divider Signal, Spade Connectors, 50'
223048	Machine Interface Cable with Voltage Divider Signal, D-sub Connector, 25'
123896	Machine Interface Cable with Voltage Divider Signal, D-sub Connector, 50'
223236	Serial Interface RS-485 to Unterminated, 25'
223237	Serial Interface RS-485 to Unterminated, 50'
223239	Serial Interface RS-485 to 9-pin D-sub Connector 25'
223240	Serial Interface RS-485 to 9-pin D-sub Connector 50'
228806	Clamp Assembly for Duramax® and SmartSYNC Robotic Torches
429054	Robotic Torch Teach Tip Assembly for SmartSYNC Robotic Torches

# Powermax125®

Professional-grade plasma metal cutting and gouging system for handheld cutting (1-1/2") and mechanized piercing 1".

## Maximum productivity

- Finish jobs faster with cut speeds 5 times greater than oxyfuel on 1/2" 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	1-1/2"	18 ipm
	1-3/4"	10 ipm
Severance (hand cutting)	2-1/4"	5 ipm
Pierce*	1"	

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

Capacity	Metal removal rate	Groove profile*
Gouging		
Typical gouge	27.6 lbs. per hour	0.17-0.31" D x 0.24-0.39" W

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

## Specifications

Input voltages	480/600 V, 3-PH, 50/60 Hz
Kilowatt output	21.9 kW
Input current @ 21.9 kW	480/600 V, 31/24 A
Output current	30-125 A
Rated output voltage	175 VDC
Duty cycle @ 104° F	100% @ 125 A, 480/600 V, 3-PH
Open circuit voltage (OCV)	320 VDC
Dimensions with handles	23.3" D; 10.8" W; 20.0" H
Weight w/25' torch	480 V 105.7 lbs. 600 V 104.7 lbs.
Gas supply	Clean, dry, oil-free air or nitrogen
Recommended gas inlet flow rate/pressure	Cutting: 550 scfh @ .85 psi Gouging: 450 scfh @ .60 psi
Input power cable length	10'
Power supply type	Inverter – IGBT
Engine drive requirement	40 kW for full 125 A output
Certifications	CSA-certified for use in the Americas and Asia, except China.
Warranty	Power supply: 3-year Torch: 1-year

Hand systems	
059538	Powermax125® system, 480 V 3-PH, CSA, plus CPC port, 85° and 15° handheld torches w/consumables, 25' lead
059569	Powermax125 system, 480 V 3-PH, CSA, plus CPC port, 85° and 15° handheld torches w/consumables, 50' lead
059536	Powermax125 system, 480 V 3-PH, CSA, plus CPC port, 85° handheld torch w/consumables, 25' lead
059537	Powermax125 system, 480 V 3-PH, CSA, plus CPC port, 85° handheld torch w/consumables, 50' lead
059571*	Powermax125 system, 480 V 3-PH, CSA, plus CPC port, 75° handheld torch w/consumables, 25' lead, English training kit
059555	Powermax125 system, 600 V 3-PH, CSA, plus CPC port, 85° and 15° handheld torches w/consumables, 25' lead
059570	Powermax125 system, 600 V 3-PH, CSA, plus CPC port, 85° and 15° handheld torches w/consumables, 50' lead
059546	Powermax125 system, 600 V 3-PH, CSA, plus CPC port, 85° handheld torch w/consumables, 25' lead
059547	Powermax125 system, 600 V 3-PH, CSA, plus CPC port, 85° handheld torch w/consumables, 50' lead

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

Machine systems	
059539	Powermax125 system, 480 V 3-PH, CSA, plus CPC port, 180° machine torch w/consumables, 25' lead, remote
059540	Powermax125 system, 480 V 3-PH, CSA, plus CPC port, 180° machine torch w/consumables, 50' lead, remote
059542	Powermax125 system, 480 V 3-PH, CSA, plus CPC and serial ports, 180° machine torch w/consumables, 25' lead
059543	Powermax125 system, 480 V 3-PH, CSA, plus CPC and serial ports, 180° machine torch w/consumables, 50' lead
059541	Powermax125 system, 480 V 3-PH, CSA, plus CPC port, 85° torch w/25' lead, 180° torch w/50' lead w/consumables, remote
059544	Powermax125 system, 480 V 3-PH, CSA, plus CPC and serial ports, 180° torch w/consumables, 25' lead w/ring, cables
059545	Powermax125 system, 480 V 3-PH, CSA, plus CPC and Serial ports, 180° torch w/consumables, 50' lead w/ring, cables
059552	Powermax125 system, 600 V 3-PH, CSA, plus CPC port, 180° machine torch w/consumables, 25' lead, remote
059553	Powermax125 system, 600 V 3-PH, CSA, plus CPC port, 180° machine torch w/consumables, 50' lead, remote
059550	Powermax125 system, 600 V 3-PH, CSA, plus CPC and serial ports, 180° machine torch w/consumables, 25' lead
059551	Powermax125 system, 600 V 3-PH, CSA, plus CPC and serial ports, 180° machine torch w/consumables, 50' lead
059554	Powermax125 system, 600 V 3-PH, CSA, plus CPC port, 85° torch w/25' lead, 180° torch w/50' lead, consumables, remote
059548	Powermax125 system, 600 V 3-PH, CSA, plus CPC and serial ports, 180° torch w/consumables, 25' lead w/ring, cables
059549	Powermax125 system, 600 V 3-PH, CSA, plus CPC and serial ports, 180° torch w/consumables, 50' lead w/ring, cables

Powermax125 Power Supplies (power supplies only, no torches)	
059488	Powermax125 power supply, 480 V 3-PH, CSA, plus CPC port
059509	Powermax125 power supply, 600 V 3-PH, CSA, plus CPC port
059489	Powermax125 power supply, 480 V 3-PH, CSA, plus CPC and serial ports
059669	Powermax125 power supply, 480 V 3-PH, CSA, plus CPC port, no power cord
059510	Powermax125 power supply, 600 V 3-PH, CSA, plus CPC and serial ports

Duramax Hyamp series torch assemblies	
059492	Duramax® Hyamp™ handheld torch, 85°, 25' lead
059493	Duramax Hyamp handheld torch, 85°, 50' lead
059494	Duramax Hyamp handheld torch, 85°, 75' lead
059665	Duramax Hyamp handheld torch, 85°, 150' lead
059495	Duramax Hyamp handheld torch, 15°, 25' lead
059496	Duramax Hyamp handheld torch, 15°, 50' lead
059497	Duramax Hyamp handheld torch, 15°, 75' lead
059664	Duramax Hyamp handheld torch, 15°, 150' lead
059562	Duramax Hyamp Long handheld torch 45°, 2' extension, 25' lead
059579	Duramax Hyamp Long handheld torch 45°, 2' extension, 50' lead
059667	Duramax Hyamp Long handheld torch 45°, 4' extension, 150' lead
059563	Duramax Hyamp Long handheld torch 90°, 2' extension, 25' lead
059580	Duramax Hyamp Long handheld torch 90°, 2' extension, 50' lead
059567	Duramax Hyamp Long handheld torch 45°, 4' extension, 25' lead
059581	Duramax Hyamp Long handheld torch 45°, 4' extension, 50' lead
059568	Duramax Hyamp Long handheld torch 90°, 4' extension, 25' lead
059582	Duramax Hyamp Long handheld torch 90°, 4' extension, 50' lead
059668	Duramax Hyamp Long handheld torch 90°, 4' extension, 150' lead
059758	Duramax Hyamp Long handheld torch 45°, 6' extension, 25' lead
059759	Duramax Hyamp Long handheld torch 45°, 6' extension, 50' lead
059623	Duramax Hyamp Long handheld torch 90°, 6' extension, 25' lead
059624	Duramax Hyamp Long handheld torch 90°, 6' extension, 50' lead
059519	Duramax® Hyamp™ machine torch, 180°, 15' lead
059520	Duramax Hyamp machine torch, 180°, 25' lead
059521	Duramax Hyamp machine torch, 180°, 35' lead
059522	Duramax Hyamp machine torch, 180°, 50' lead
059523	Duramax Hyamp machine torch, 180°, 75' lead
059514	Duramax Hyamp mini machine torch, 180°, 15' lead

059515	Duramax Hyamp mini machine torch, 180°, 25' lead
059516	Duramax Hyamp mini machine torch, 180°, 35' lead
059517	Duramax Hyamp mini machine torch, 180°, 50' lead
059666	Duramax Hyamp mini machine torch, 180°, 150' lead
059564	Duramax Hyamp robotic torch, 45°, 25' lead
059670	Duramax Hyamp robotic torch, 45°, 50' lead
059565	Duramax Hyamp robotic torch, 90°, 25' lead
059671	Duramax Hyamp robotic torch, 90°, 50' lead
059566	Duramax Hyamp robotic torch, 180°, 25' lead
059672	Duramax Hyamp robotic torch, 180°, 50' lead

Powermax125 work leads	
223292	Kit: 125 A work lead with hand clamp, 25'
223293	Kit: 125 A work lead with hand clamp, 50'
223294	Kit: 125 A work lead with hand clamp, 75'
223737	Kit: 125 A work lead with hand clamp, 150'
223295	Kit: 125 A work lead with ring terminal, 25'
223296	Kit: 125 A work lead with ring terminal, 50'
223297	Kit: 125 A work lead with ring terminal, 75'
223298	Kit: 125 A work lead with C-style clamp, 25'
223299	Kit: 125 A work lead with C-style clamp, 50'
223300	Kit: 125 A work lead with C-style clamp, 75'

Automated control accessories	
128650	Remote on/off switch for machine torch, 25'
128651	Remote on/off switch for machine torch, 50'
128652	Remote on/off switch for machine torch, 75'
428755	Remote on/off switch for machine torch, 150'
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, 25'
023279	Machine interface cable without voltage divider signal, spade connectors, 50'
228350	Machine interface cable with voltage divider signal, spade connectors, 25'

Automated control accessories (continued)	
228351	Machine interface cable with voltage divider signal, spade connectors, 50'
223048	Machine interface cable with voltage divider signal, D-sub connector, 25'
123896	Machine interface cable with voltage divider signal, D-sub connector, 50'
223236	Serial interface RS-485 cable to unterminated, 25'
223237	Serial interface RS-485 cable to unterminated, 50'
223239	Serial interface RS-485 cable to 9-pin D-sub connector 25'
223240	Serial interface RS-485 cable to 9-pin D-sub connector 50'
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, 23" x 11" x 11"

Optional system accessories (continued)	
017049	Long torch carry bag for 2' torch
024877	Leather torch lead cover with hook and loop closure, black, 25' 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 420156 <sup>1</sup>	420158	220971	220997
		65	420168		420169		
		125/105	220976		220975		
FineCut®	Hand	45	420152	220977 or 420156 <sup>1</sup>	420151	220971	420159
	Machine						220997
Hyamp FlushCut	Hand/machine	85-125	420485 <sup>2</sup>	420490	420489	420553	420484
Max removal gouging	Hand/machine	30-125	420112	220977	420001	220971	220997
Max control gouging	Hand/machine	30-125	420509	220977	420001	220971	220997

<sup>1</sup> Ohmic retaining cap

<sup>2</sup> Retaining ring

# Accessories

## Personal protective equipment



Dual face shield  
127239 Shade 6  
127103 Shade 8



Leather cutting gloves  
127169



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 Powermax® 65/85, 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 25'



### Wheel/gantry kits

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



### System dust covers

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



### Remote trigger pendant

- 128650 25'
- 128651 50'
- 128652 75'
- 428755 150'



### Cartridge reader

The cartridge reader works with the Powermax SYNC® cartridge reader app to provide a simple process for reviewing data stored in Powermax cartridges.

- 528083

## 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



### Angle cutting guide

- 017041



### Magnetic straight edge

- 017042



### Bevel cutting guide

- 017059 Standard
- 017058 Duramax Hyamp
- 017066 SmartSYNC



### Magnetic block 2-pack

- 017043



### Torch alignment guide

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

- 528077

# Powermax torches

## Extensive array of torch options

Current systems	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	15' lead					
 Powermax30 AIR	30	AIR T30	15' lead					
 Powermax45 XP	45	Duramax Lock	20' lead 50' lead	20' lead 50' lead	25' lead 35' lead 50' lead			
		Duramax	25' lead 50' lead 75' lead	25' lead 50' lead 75' lead	15' lead 25' lead 35' lead 50' lead 75' lead	15' lead 25' lead 35' lead 50' lead	25' lead 50' lead	2' option 4' option 6' option 25' lead 50' lead
 Powermax65 SYNC®	65	SmartSYNC®						
 Powermax85 SYNC	85		25' lead 50' lead 75' lead 100' lead	25' lead 50' lead 75' lead	25' lead 35' lead 50' lead 75' lead		15' lead 25' lead 50' lead 75' lead	25' lead 50' lead
 Powermax105 SYNC	105							
 Powermax125	125	Duramax Hyamp™	25' lead 50' lead 75' lead 150' lead	25' lead 50' lead 75' lead 150' lead	15' lead 25' lead 35' lead 50' lead 75' lead	15' lead 25' lead 35' lead 50' lead 150' lead	25' lead 50' lead	2' option 4' option 6' option 25' lead 50' lead 150' lead

\*Optional

## Powermax SYNC® torch options

Torch type	System	Torch style
SmartSYNC	Powermax65/85/105 SYNC	Hand
		Long
		Machine
		Robotic



\*Torch adapter and the Powermax cartridge platform for Powermax45 XP/65/85/105 systems

System	Torch type	Part number
Powermax45® XP	Duramax® Lock hand, and mechanized	428951
Powermax65®		
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 Associates recommends using the 45 A cut charts for the Powermax45 XP

## Powermax® torch options

Torch type	System	Torch style
Duramax® LT	Powermax30 XP	Hand
AIR T30	Powermax30 AIR	
Duramax Lock	Powermax45 XP*	Machine
		Hand
Duramax	Powermax45 XP* Powermax65 Powermax85 Powermax105	Machine
		Hand
		Machine
		Robotic
Duramax Hyamp™	Powermax125	Hand
		Long
		Machine
		Robotic

\*The Duramax hand torch is optional for the Powermax45 XP. The standard hand torch is the Duramax Lock

\*Duramax Hyamp torches are optional for the Powermax45 XP/65/85/105

# Consumable kits

- Powermax® Essential consumable kits are 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 are 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



## Duramax® consumable bulk kits

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



## Dual electrode/nozzle packs

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



## 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	428746	15–45 A
Powermax65		
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	15–30 A
	Starter kit – Cutting	428443	
	Starter kit – Gouging	428444	
Powermax45 XP	Combination Cut/Gouging	428414	15–65 A
Powermax65	Starter kit – Cutting	428445	
Powermax85	Starter kit – Gouging	428446	



## Powermax cartridge options

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

\*Kit includes three 420580 ohmic ring clips.



## Specialty application cartridge options

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

# SHAPING POSSIBILITY®

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