HYPERTHERM®
A Hypertherm Associates Brand

Mechanized plasma solutions

Optimize quality, productivity, and operating cost





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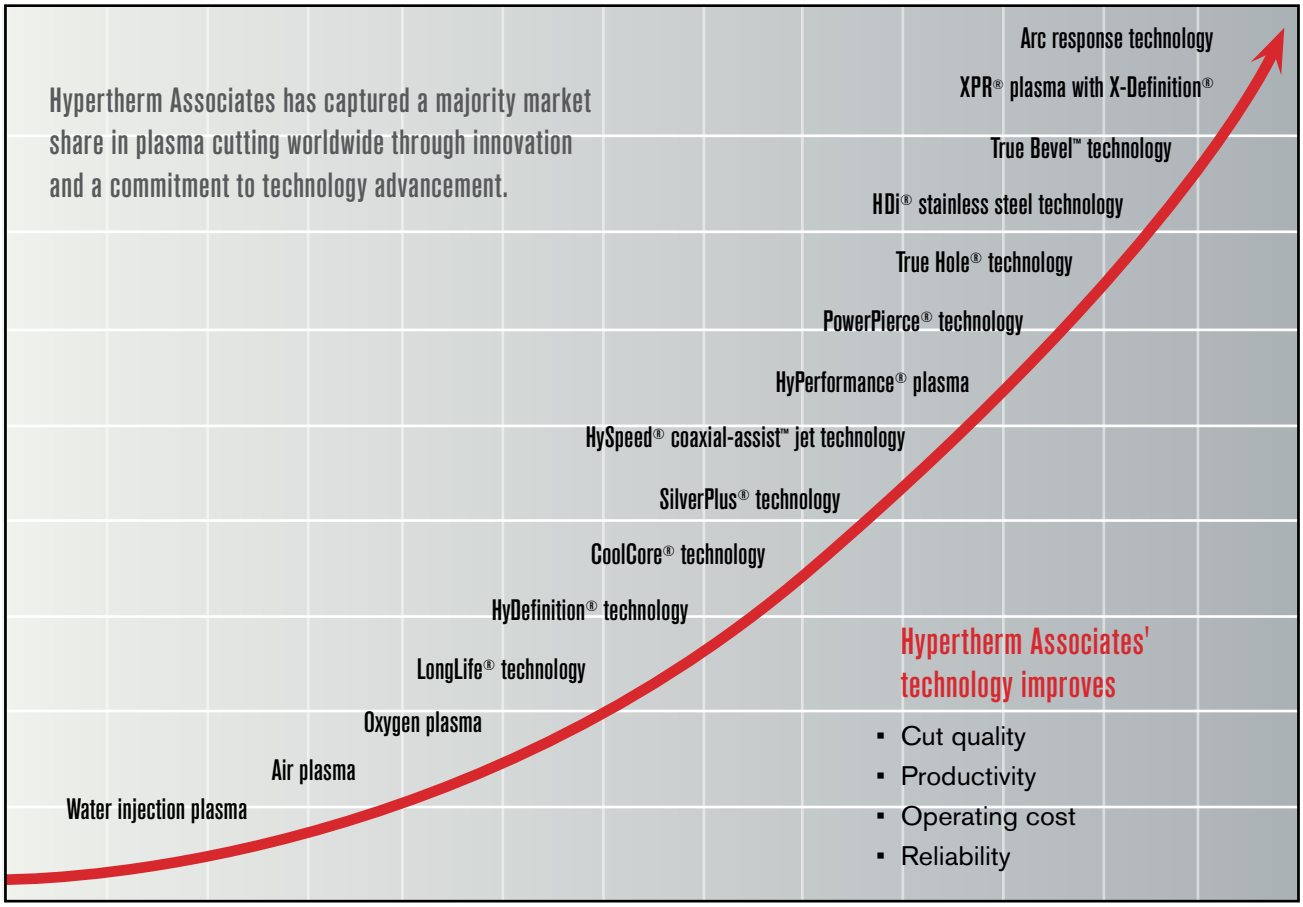
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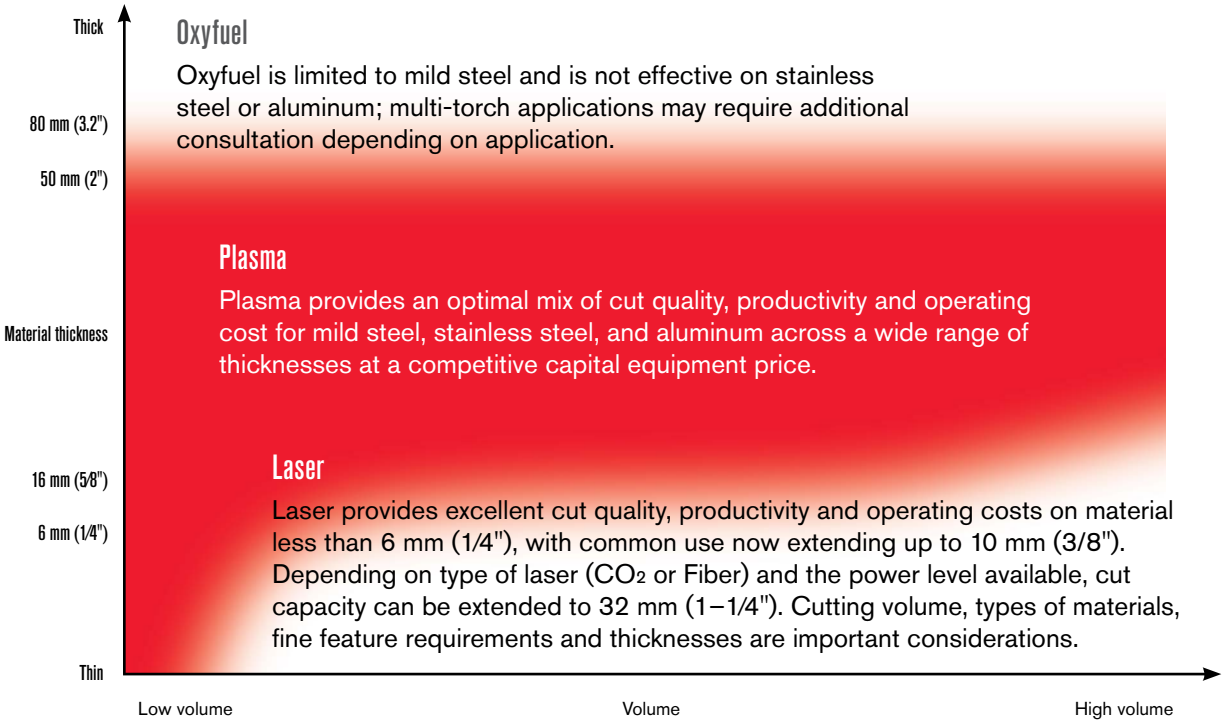
The world leader in plasma cutting technology

Hypertherm Associates has captured a majority market share in plasma cutting worldwide through innovation and commitment to technology advancement. It is this commitment to technology development that separates Hypertherm plasma from other brands. Hypertherm innovation continually advances cutting technology and outperforms the competition in the key areas of cut quality, productivity, operating cost and reliability.




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Comparison of plasma, oxyfuel, and laser



- Areas of technology overlap indicated by shading, including both thickness and volume.
- Additional consideration is recommended to best determine appropriate technology, as more than one technology may be appropriate in areas of overlap.

Plasma provides the optimal mix of cut quality, productivity, and operating cost

	Oxyfuel	Plasma	Laser
Cut quality*	Good angularity	Excellent angularity	Excellent angularity
	Large heat-affected zone	Small heat-affected zone	Small heat-affected zone
	Dross levels require rework	Virtually dross-free	Virtually dross-free
	Not effective on stainless steel or aluminum	Good fine-feature cutting	Excellent fine feature cutting with narrowest kerf and 1:2–1:4 (diameter:thickness) holes**
		Smooth cut edge	Rougher surface finish on thicker ranges > 10–12 mm (3/8–1/2")
		Bolt quality holes 1:1 (diameter: thickness)	
Productivity	Slow cutting speeds	Very fast cutting speeds up to 50 mm (2")	Very fast cutting speeds on thin material < 12–15 mm (1/2–5/8")
	Pre-heat times increase pierce times	Very fast pierce times	Longer pierce times on thicker material
		Quick-disconnect torches maximize productivity	Unmonitored cutting capability enables overnight cutting
Operating cost	Poor productivity and required rework drive cost per part higher than plasma.	Long consumable life, good productivity and excellent cut quality drive the cost per part lower than other technologies.	Higher capital expense cost
			Lower operating cost on materials < 10–12 mm (3/8–1/2")
Maintenance	Simple maintenance requirements can often be performed by in-house maintenance groups.	Mechanical systems require simple to moderate maintenance, with most components serviceable by in-house maintenance groups.	Maintenance can be moderate to complex and expensive

*Fine features include <1:1 holes, acute angles, sharp internal and external features, tabs and slots.

**Laser will continue to compete when fine features dominate op costs in the decisions making criteria.


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MADE IN USA

The Hypertherm advantage

Cut quality and consumable life

Hypertherm plasma provides more consistent cut quality and longer consumable life than other plasma manufacturers.

Productivity

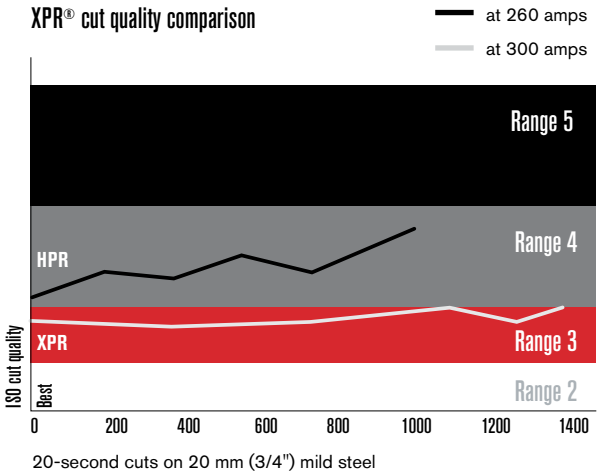
- Hypertherm plasma technology consistently delivers the optimal mix of cut speed and cut quality to minimize secondary operations and maximize productivity.
- Simple user interface, rapid set-up and quick-disconnect torches improve productivity.
- Hypertherm plasma cuts, bevels and marks a variety of metals, thick and thin.

Reliability

- During development, Hypertherm systems endure rigorous reliability testing procedures that are equivalent to years of use in extreme operating environments.
- Our systems are subjected to a wide range of temperatures, humidity levels, vibration, electrical noise, and incoming voltage to ensure that the products we commercialize are extremely robust.

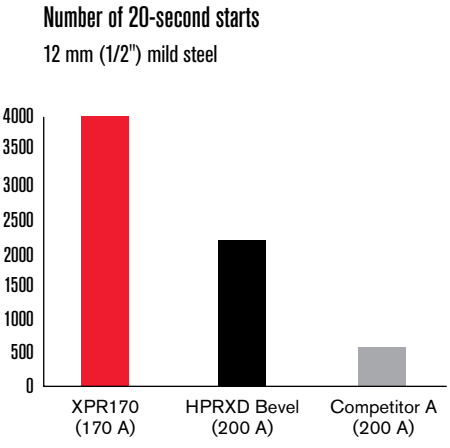
Operating cost

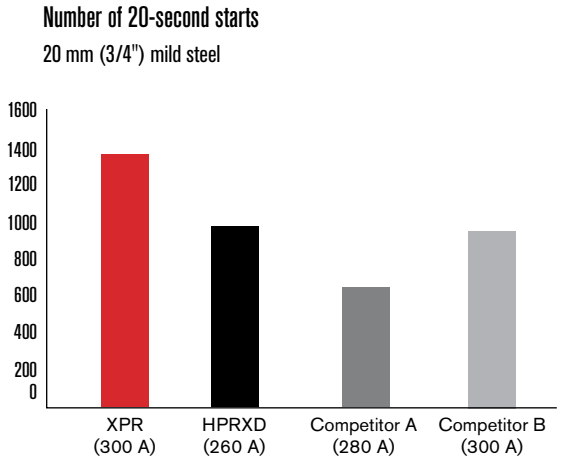
- Hypertherm Plasma's exceptional cut quality, faster cut speeds and significantly longer consumable life deliver operating costs that may be less than half the competition.



20-second cuts on 20 mm (3/4") mild steel







Parts cut by plasma remain consistent from the first cut to the last.

Capabilities and technology benefits

Plasma capabilities chart

Systems	Cut quality	Mild steel weldability	O_2/Air mild steel weldability	Productivity	Operating cost	Consumable life	Process flexibility	Application ranges	Price
Air plasma									
Powermax45® XP Powermax65 SYNC® Powermax85 SYNC® Powermax105 SYNC® Powermax125®	● 1	●	NA	●	●	●	●	Light- to medium-duty cutting. Light- to medium-duty mechanized and handheld cutting and gouging.	$
LongLife® air and oxygen plasma									
MAXPRO200®	○ 2	●	●	○	○	○	○	Light- to heavy-duty cutting. Light- to heavy-duty mechanized and handheld cutting and gouging.	$ $
HyPerformance® plasma									
HPR400XD® HPR800XD®	◎ 3	●	●	◎	◎	◎	◎	Precision cutting, light- to heavy-duty cutting. Precision, light- to heavy-duty mechanized cutting. PowerPierce® technology for extreme mechanized piercing capability	$ $ $
XPR®									
XPR170® XPR300®	● 4	●	●	●	●	●	●	Highest definition cutting on mild and non-ferrous materials. Precision heavy duty mechanized cutting. Argon Assist technology for thicker piercing capability*	$ $ $

● Best
◎ Excellent
○ Very good
● Good

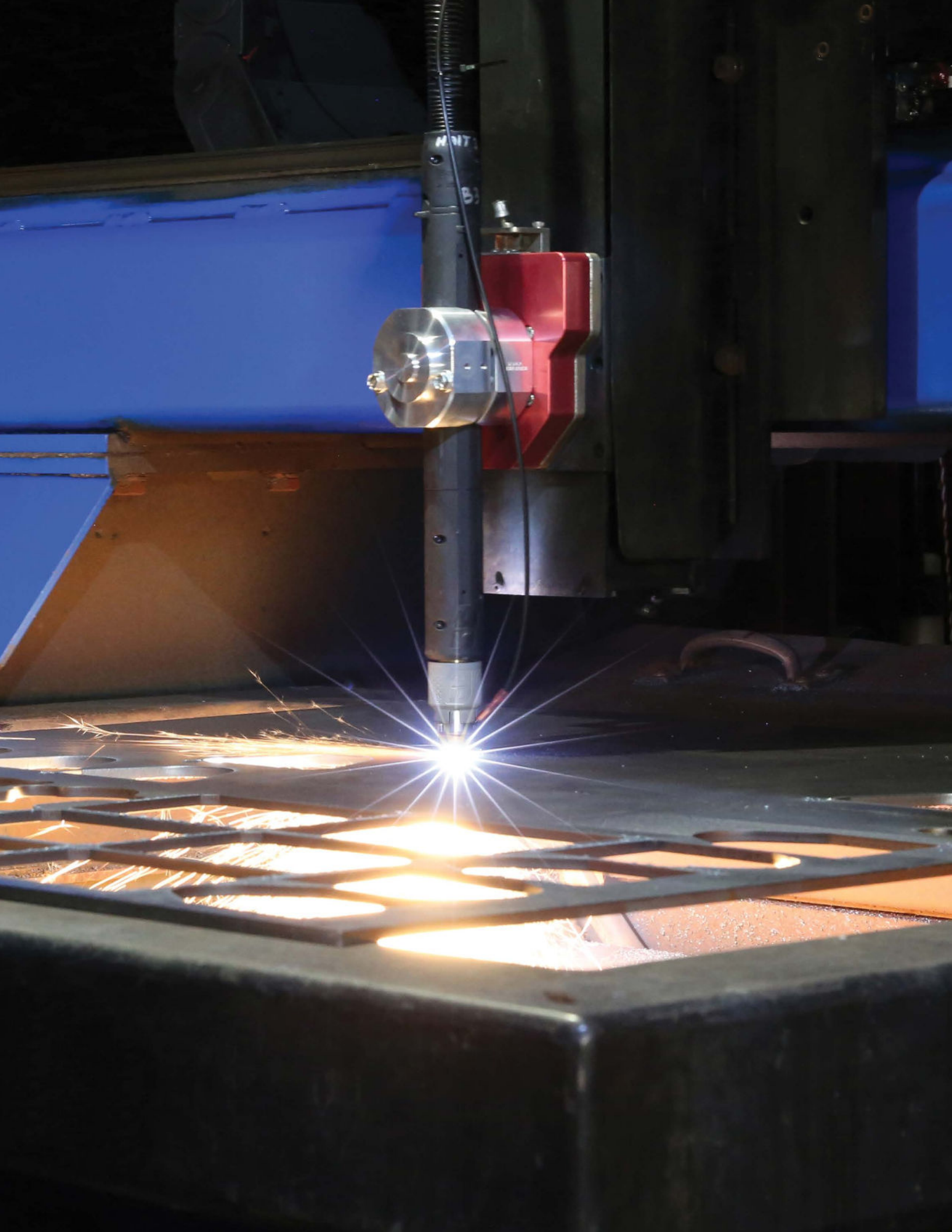
1 Some secondary operations and dross.
2 Some secondary operations with virtually no dross.
3 Minimal to no secondary operations with virtually no dross. True Hole® enabled for best hole quality.
4 Industry leading cut quality with X-Definition™ technology

*Available with CorePlus, VWI and OptiMix gas consoles

Technology benefits of Hypertherm plasma

Systems	XPR plasma									HyPerformance plasma										LongLife air and oxygen plasma					Air plasma									
	X-Definition® cut quality– Hypertherm's leading cut quality	Vented Water Injection™***	Arc response technologies™	3 Plasma gas mixing for non ferrous***	Cool nozzle	50 degree True Bevel™	Argon-assist technology for thicker piercing capability*	WiFi	Lowest operating cost	Patented True Hole® technology	True Bevel™ technology	Patented PowerPierce® technology for extreme piercing capability	HDi® thin stainless technology	Remote (CNC) gas switching capability	More process options for optimizing cut quality	Highest cut speeds	Mark, cut, and bevel with same consumables	HyDefinition® technology	Can be used on the largest machine frames	100% duty cycle	Quick-disconnect torch assembly	Thicker cutting capability	Oxygen and multi-gas capability for improved cut quality, faster cut speeds, and improved weldability	Lower operating cost with LongLife® process	Serial communications enable full control from the CNC	Bevel capability up to 45°	Automatic gas technology minimizes operator intervention	Built and tested to withstand the harshest conditions	Good weldability	Fast cut speeds per recommended thickness	Good cut quality	Low operating cost	Automatic setup and optimization based from cartridge technology****
XPR	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
HPRXD										●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
MAXPRO200																				●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Powermax																				●	●				●	●	●	●	●	●	●	●	●	●

*Available with CorePlus, VWI and OptiMix gas consoles
**Available with VWI and OptiMix gas consoles
***Available with OptiMix gas consoles
****Available with Powermax SYNC®



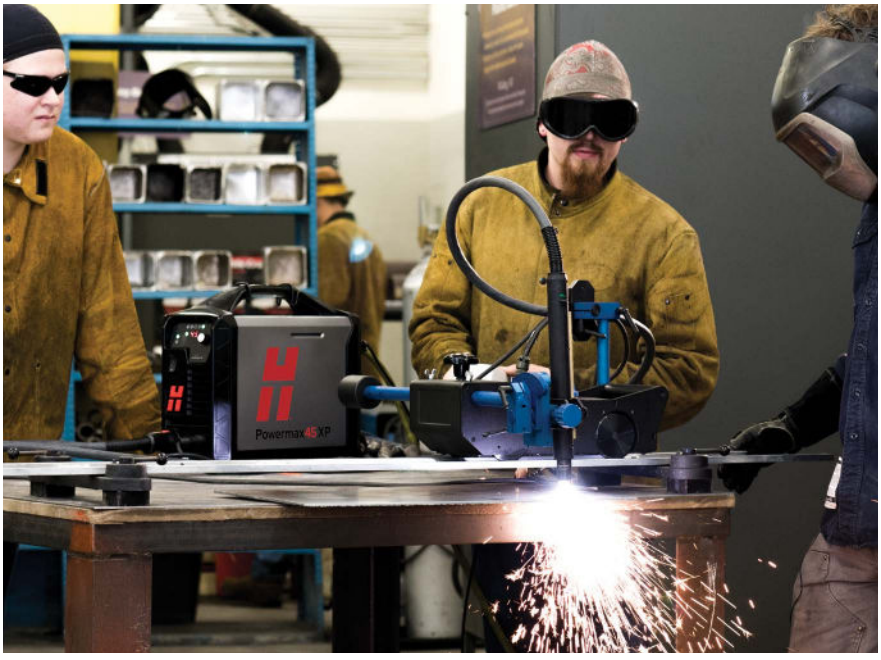
Air plasma: Powermax®

Light industrial single gas (air, nitrogen, or F5) cutting systems, great for duct cutting, pipe cut-off, beveling, and robotic cutting.



			Powermax45 XP	Powermax65 SYNC®	Powermax85 SYNC®	Powermax105 SYNC®	Powermax125
Capacity	Mild steel	Production (Pierce)*	12 mm (1/2")	16 mm (5/8")	20 mm (3/4")	22 mm (7/8")	25 mm (1")
		Severance	29 mm (1-1/8")	32 mm (1-1/4")	38 mm (1-1/2")	50 mm (2")	57 mm (2-1/4")
	Stainless steel	Production (Pierce)*	12 mm (1/2")	12 mm (1/2")	16 mm (5/8")	20 mm (3/4")	25 mm (1")
	Aluminum	Production (Pierce)*	10 mm (3/8")	12 mm (1/2")	16 mm (5/8")	20 mm (3/4")	25 mm (1")
Speed			12 mm (1/2") 540 mm/m (18 ipm)	12 mm (1/2") 840 mm/m (30 ipm)	12 mm (1/2") 1240 mm/m (46 ipm)	12 mm (1/2") 1700 mm/m (61 ipm)	12 mm (1/2") 2050 mm/m (75 ipm)
Cut angle		ISO 9013 range**	5	5	5	5	5
Weldability			Preparation required	Preparation required	Preparation required	Preparation required	Preparation required
Process gases by material (plasma/shield)		Mild steel	Air	Air	Air	Air	Air
		Stainless steel	Air, N_2, F5	Air, N_2, F5	Air, N_2, F5	Air, N_2, F5	Air, N_2, F5
		Aluminum	Air, N_2	Air, N_2	Air, N_2	Air, N_2	Air, N_2
Process amps (cutting)			10–45	20–65	25–85	30–105	30–125

* Capacity for mechanized systems with automatic torch height control.
** ISO 9013 is a standard that defines cut quality of thermally cut parts. The lower the range (range 1 is the lowest), the smaller the angle on the cut face. Cut angle in range 4 is better than in range 5.



LongLife® air and oxygen plasma: MAXPRO200®

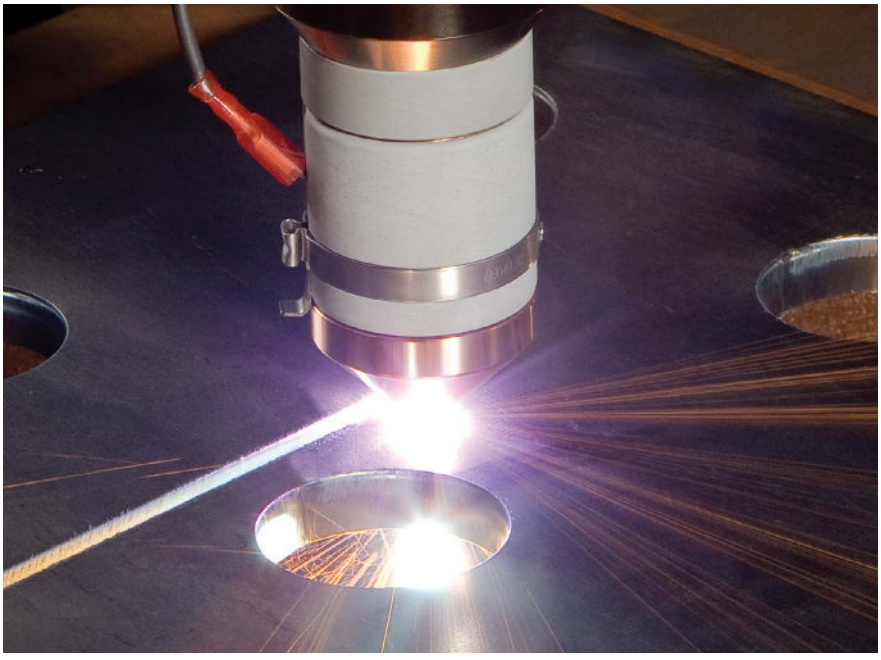


Engineered to deliver heavy-duty, high capacity mechanized and handheld cutting and gouging across a wide range of industrial applications.

Extreme bevel consumables provide unmatched mild steel cut bevel capability, 66.5° maximum torch tilt angle.

			MAXPRO200
Capacity	Mild steel	Dross free* (O_2/Air)	20 mm (3/4")
		Production pierce	32 mm (1-1/4")
		Severance	75 mm (3")
	Stainless steel	Production pierce	25 mm (1")
		Severance	64 mm (2-1/2")
	Aluminum	Production pierce	32 mm (1-1/4")
		Severance	75 mm (3")
Speed* (mild steel)		Book specification at highest output current	12 mm(1/2") 3415 mm/m (130 ipm)
Cut angle		ISO 9013 range**	4–5
Weldability			Ready to weld
Process gases by material (plasma/shield)		Mild steel	Air/Air, O_2/Air
		Stainless steel	Air/Air, N_2/N_2
		Aluminum	Air/Air, N_2/N_2
Process amps (cutting)		Not all processes available for all materials	50–200 130 and 200 (extreme bevel)

* Feature and material type can influence dross free performance.
** ISO 9013 is a standard that defines cut quality of thermally cut parts. The lower the range (range 1 is the lowest), the smaller the angle on the cut face. Cut angle in range 4 is better than in range 5.



HyPerformance plasma

HyPerformance® plasma systems deliver HyDefinition® cut quality at a fraction of the operating costs. By incorporating our proven HyDefinition, LongLife®, PowerPierce®, HDi® and True Hole® technologies, HyPerformance plasma boosts overall performance, productivity and profitability. The systems offer unmatched process flexibility to cut, bevel and mark metals, including 3D shapes, up to 160 mm (6-1/4") thick.



			HPR400XD	HPR800XD
Capacity	Mild steel	Dross free*	38 mm (1-1/2")	38 mm (1-1/2")
		Production pierce	50 mm (2")	50 mm (2")
		Maximum cutting capacity	80 mm (3.2")	80 mm (3.2")
	Stainless steel	Production pierce	45 mm (1-3/4")	75 mm (3")
		Maximum cutting capacity	80 mm (3.2")	160 mm (6-1/4")
		Maximum pierce**	75 mm (3")	100 mm (4")
	Aluminum	Production pierce	45 mm (1-3/4")	75 mm (3")
		Maximum cutting capacity	80 mm (3.2")	160 mm (6-1/4")
Speed* (Mild steel)		Book specification at highest output current	12 mm (1/2") 4430 mm/m (170 ipm)	12 mm (1/2") 4430 mm/m (170 ipm)
Cut angle		ISO 9013 range***	2–4	2–5
Weldability			Ready to weld	Ready to weld
Process gases by material (Plasma/shield)		Mild steel	O_2/Air, O_2/O_2, Ar/Air	O_2/Air, O_2/O_2, Ar/Air
		Stainless steel	H35/N_2, N_2/N_2, H35-N_2/N_2, F5/N_2, Ar/Air, Ar/N_2	H35/N_2, N_2/N_2, H35-N_2/N_2, F5/N_2, Ar/Air, Ar/N_2
		Aluminum	H35/N_2, Air/Air, H35-N_2/N_2, Ar/Air, Ar/N_2	H35/N_2, Air/Air, H35-N_2/N_2, Ar/Air, Ar/N_2
Process amps (Cutting)		Not all processes available for all materials	30–400	30–800

* Feature and material type can influence dross free performance.

** Maximum pierce requires use of an autogas console and controlled motion process. See technical documentation for details.

*** ISO 9013 is a standard that defines cut quality of thermally cut parts. The lower the range (range 1 is the lowest), the smaller the angle on the cut face. Cut angle in range 4 is better than in range 5.



XPR plasma

XPR® plasma represents the most significant advance in mechanized plasma cutting technology, ever. This latest generation system redefines what plasma can do by expanding its capabilities and opportunities in ways never before possible. With unmatched X-Definition® cut quality on mild steel, stainless steel and aluminum, XPR increases cut speed, dramatically improves productivity and significantly reduces operating costs. New ease-of-use features and engineered system optimization make XPR easier to run with minimal operator intervention, while also ensuring optimal performance and unmatched reliability.



		XPR170		XPR300	
Maximum output power		35.7 kW		66.5 kW	
100% duty arc voltage		210 V		222 V	
Cut chart thickness		**mm**	**inches**	**mm**	**inches**
Pierce capacity	Mild steel (argon-assist)*	40	1-9/16	50	2
	Mild steel (production)	35	1-3/8	45	1-3/4
	Stainless steel	22	7/8	38	1-1/2
	Aluminum	25	1	38	1-1/2
Severance capacity	Mild steel	60	2-3/8	80	3-1/8
	Stainless steel	38	1-1/2	75	3
	Aluminum	38	1-1/2	50	2
Cut angle	ISO 9013 range	2–4		2–4	

*Argon-assist technology for thicker piercing is available with CorePlus, VWI and OptiMix consoles.



Process control and delivery

Four gas connect console options offer unmatched mild steel cut quality with each console delivering successively enhanced cutting capabilities on stainless steel and aluminum. All consoles can be fully controlled through the CNC for high productivity and ease of use.



Core™ console



CorePlus™ console



Vented Water Injection™ (VWI) console



OptiMix™ console

Consumables

Hypertherm consumables are designed in conjunction with the cutting system to provide optimal performance throughout the life of your plasma system. It is the only way to guarantee that you are using the latest performance-enhancing consumable technologies, machined to the highest quality standards and backed by the combined service resources of Hypertherm Associates and its worldwide network of channel partners.

Technology

- Superior cut quality and reduced or eliminated secondary operations
- Faster cutting speeds and greater thickness capabilities
- Dramatically longer consumable life
- Lower operating cost and higher productivity



Quality

- Hypertherm Associates' quality management system is registered to the International Standard ISO9001: 2015
- Six-sigma manufacturing processes guarantee repeatable machining of critical-to-function dimensions for consistent consumable performance
- Manufactured with state-of-the-art, precision equipment that consistently maintains the high tolerances required by Hypertherm high-performance consumable parts

Service

- Worldwide product support provided in conjunction with our network of channel partners
- Customized process/system application solutions
- Preventive maintenance, world-class service and operator training
- Included open access to Hypertherm Associates' cutting expertise like True Hole® and True Bevel™ with no additional charge
- Consult our SureCut™ family brochure (893630) for further details

System components

Nesting software

ProNest®

ProNest® LT

Computer numerical controllers (CNCs)



EDGE® Connect



XPR® Environmental benefits

The engineering mission at Hypertherm Associates is to develop innovative technologies, products, and solutions that provide superior value to our customers, our owners, and our planet. We consider it critical to our success to reduce the environmental impact of everything we do. All our plasma systems have been designed to be more efficient and less wasteful by reducing consumable use, energy and the carbon footprint.

PRODUCTIVITY

- Better reliability for increased uptime
- 64% less consumable copper material used per foot of cut

ENVIRONMENT

- Better designed for e-waste removal
- Carbon impact of magnetics is 77% lower
- Packaging is 100% recyclable
- System is 99.6% recyclable

ENERGY EFFICIENCY

- 62% higher power to weight ratio
- Cuts 14% faster

Greener Cuts™


Constancy of purpose
Drive to innovate
Passion for customer success

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 the founding of Hypertherm 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.

SHAPING POSSIBILITY®

PLASMA | LASER | WATERJET | AUTOMATION | SOFTWARE | CONSUMABLES

For more information visit: www.hypertherm.com

Hypertherm, LongLife, HyDefinition, CoolCore, SilverPlus, HySpeed, Coaxial-assist, HyPerformance, HPRXD, PowerPierce, True Hole, HDi, True Bevel, XPR, X-Definition, Powermax, Powermax SYNC, MAX, Core, CorePlus, Vented Water Injection, OptiMix, ProNest, EDGE, ArcGlide, and Shaping Possibility are trademarks of Hypertherm, Inc. and may be registered in the United States and/or other countries.

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HYPERTHERM ASSOCIATES™

As 100% Associate owners, we are all focused on delivering a superior customer experience. www.hyperthermassociates.com/ownership

Environmental stewardship is one of Hypertherm Associates' core values. www.hyperthermassociates.com/environment

100% Associate-owned

Greener Cuts™