



Mechanized plasma solutions

Optimize quality, productivity, and operating cost





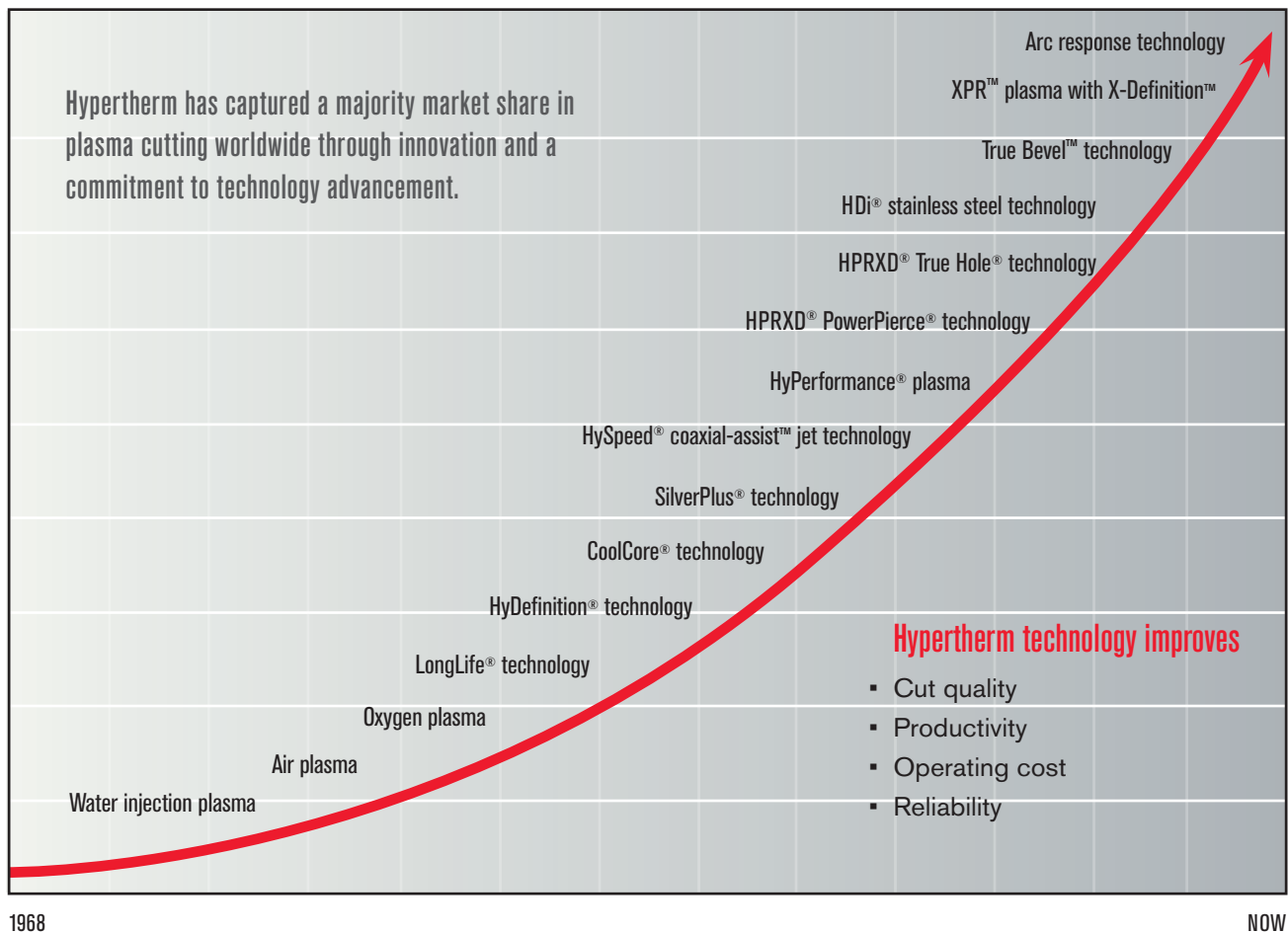
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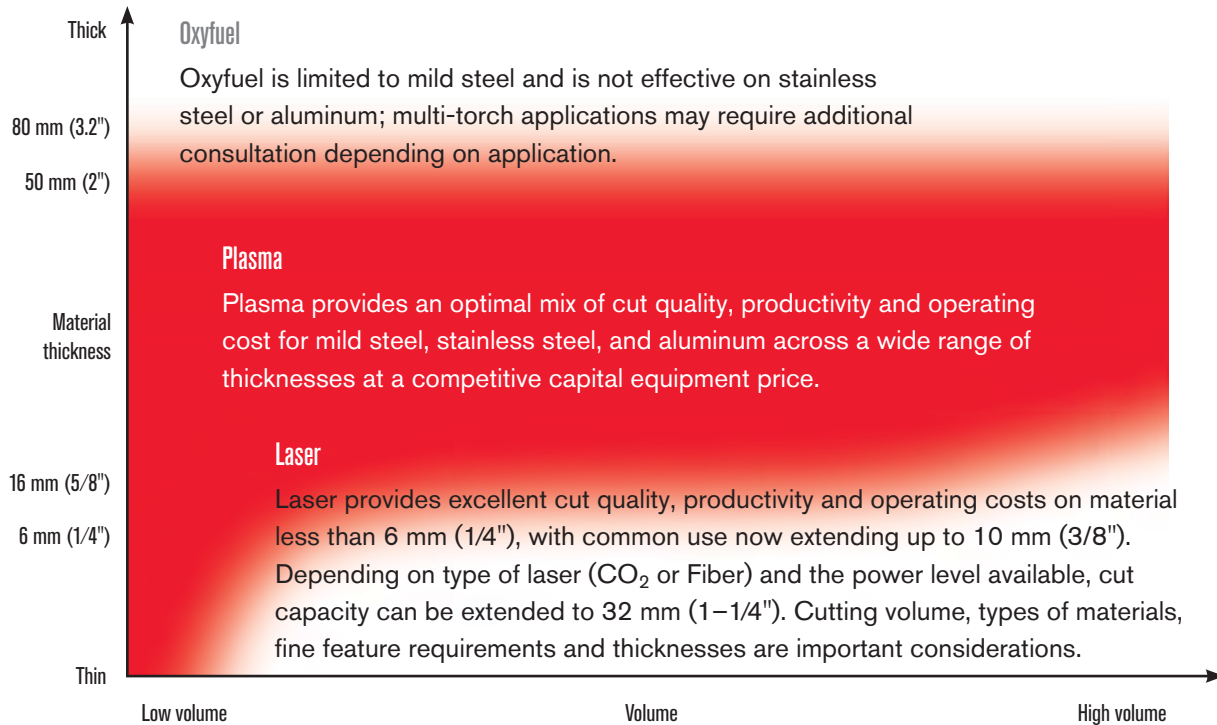
The world leader in plasma cutting technology

Hypertherm 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 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.





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")
Productivity		Bolt quality holes 1:1 (diameter: thickness)	
	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
Operating cost		Quick-disconnect torches maximize productivity	Unmonitored cutting capability enables overnight cutting
	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
Maintenance			Lower operating cost on materials < 10-12 mm (3/8-1/2")
	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.



The Hypertherm advantage

Cut quality and consumable life

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

Productivity

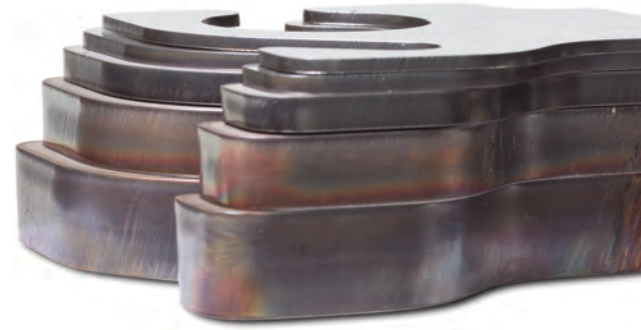
- Hypertherm plasma technology consistently delivers the optimal mix of cut speed and cut quality to minimize secondary operations and maximize productivity.
- Simple user interface, rapid set-up and quick-disconnect torches improve productivity.
- Hypertherm plasma cuts, bevels and marks a variety of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

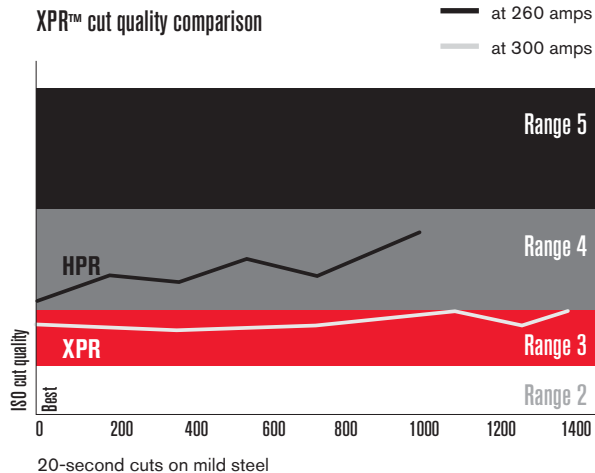
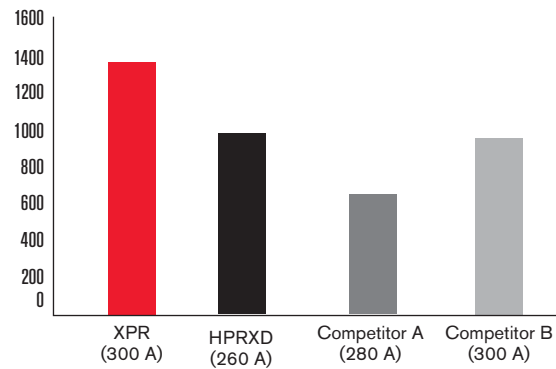
Operating cost

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

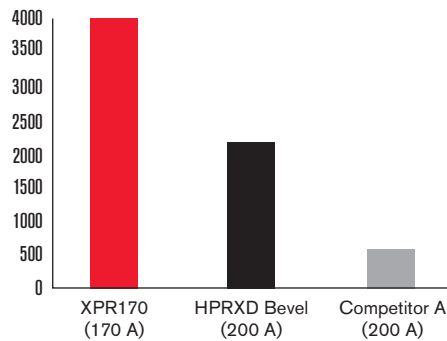


Parts cut by Hypertherm plasma remain consistent from the first cut to the last.

Number of 20-second starts



Number of 20-second starts



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								Light- to medium-duty cutting. Light- to medium-duty mechanized and handheld cutting and gouging.	\$
Powermax65®									
Powermax85®	● ¹	●	NA	●	●	●	●		
Powermax105®									
Powermax125®									
LongLife® air and oxygen plasma									
MAXPRO200®	○ ²	●	●	○	○	○	○	Light- to heavy-duty cutting. Light- to heavy-duty mechanized and handheld cutting and gouging.	\$ \$
HyPerformance® plasma									
HPR130XD®								Precision cutting, light- to heavy-duty cutting.	\$ \$ \$
HPR400XD®	● ³	●	●	●	●	●	●	Precision, light- to heavy-duty mechanized cutting.	
HPR800XD®								PowerPierce® technology for extreme mechanized piercing capability	
XPR™									
XPR170™								Highest definition cutting on mild and non-ferrous materials.	\$ \$ \$
XPR300™	● ⁴	●	●	●	●	●	●	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

Technology benefits of Hypertherm plasma

Systems	XPR plasma									HyPerformance plasma									LongLife air and oxygen plasma			Air plasma												
	X-Definition™ cut quality	Vented Water Injection™	Arc response technologies™	3 Plasma gas mixing for non ferrous	Cool nozzle	50 degree True Bevel™	Argon-assist	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 – Hypertherm's leading cut quality	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		
XPR	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
HPRXD										●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
MAXPRO200																				●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Powermax																				●					●	●	●	●	●	●	●	●	●	●



Air plasma: Powermax®

Light industrial single gas (air, nitrogen, or F5) cutting systems, great for duct cutting, pipe cut-off, beveling and robotic 3-D cutting.



			Powermax45 XP	Powermax65	Powermax85	Powermax105	Powermax125
Capacity	Mild steel	Production (Pierce)* Severance	12 mm (1/2")	16 mm (5/8") 32 mm (1-1/4")	20 mm (3/4") 38 mm (1-1/2")	22 mm (7/8") 50 mm (2")	25 mm (1") 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") 850 mm/m (30 ipm)	12 mm (1/2") 1280 mm/m (45 ipm)	12 mm (1/2") 1690 mm/m (62 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.



			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 beveling (200)

* 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 Hypertherm's 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.

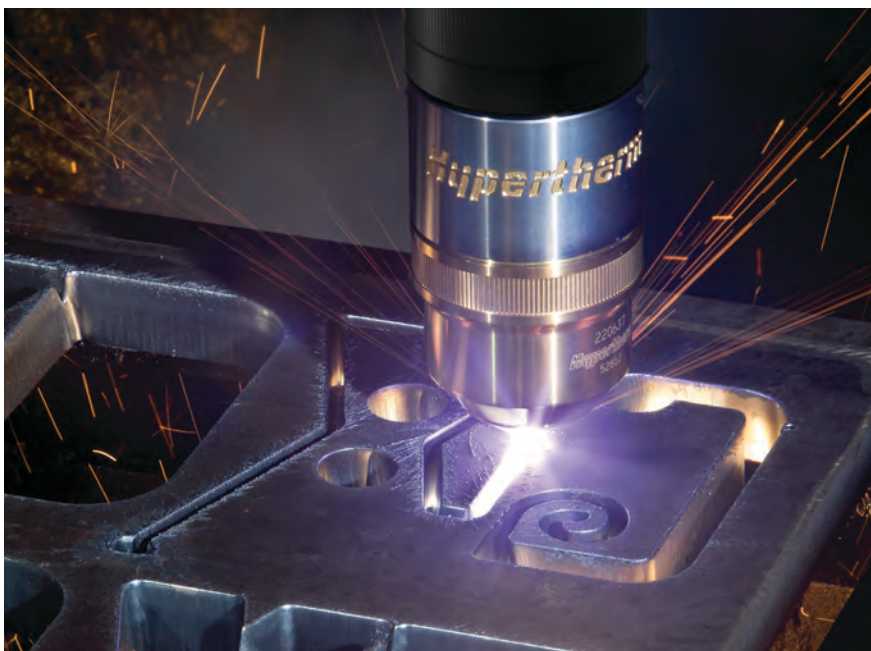


			HPR130XD	HPR400XD	HPR800XD
Capacity	Mild steel	Dross free*	16 mm (5/8")	38 mm (1-1/2")	38 mm (1-1/2")
		Production pierce	32 mm (1-1/4")	50 mm (2")	50 mm (2")
		Maximum cutting capacity	38 mm (1-1/2")	80 mm (3.2")	80 mm (3.2")
	Stainless steel	Production pierce	20 mm (3/4")	45 mm (1-3/4")	75 mm (3")
		Maximum cutting capacity	25 mm (1")	80 mm (3.2")	160 mm (6-1/4")
		Maximum pierce**	—	75 mm (3")	100 mm (4")
	Aluminum	Production pierce	20 mm (3/4")	45 mm (1-3/4")	75 mm (3")
		Maximum cutting capacity	25 mm (1")	80 mm (3.2")	160 mm (6-1/4")
Speed* (Mild steel)	Book specification at highest output current		12 mm (1/2") 2200 mm/m (80 ipm)	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	2-4	2-5
Weldability			Ready to weld	Ready to weld	Ready to weld
Process gases by material (Plasma/shield)	Mild steel		O ₂ /Air, O ₂ /O ₂	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	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	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		30-130	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

The new XPR plasma represents the most significant advance in mechanized plasma cutting technology, ever. This new 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 (standard O ₂)	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	

Process control and delivery

Three 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



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 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's 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's 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's cutting expertise with no additional charge

System components

Nesting software



ProNest®

Computer numerical controllers (CNCs)



EDGE® Connect

Torch height controls (THCs)



Sensor™ THC



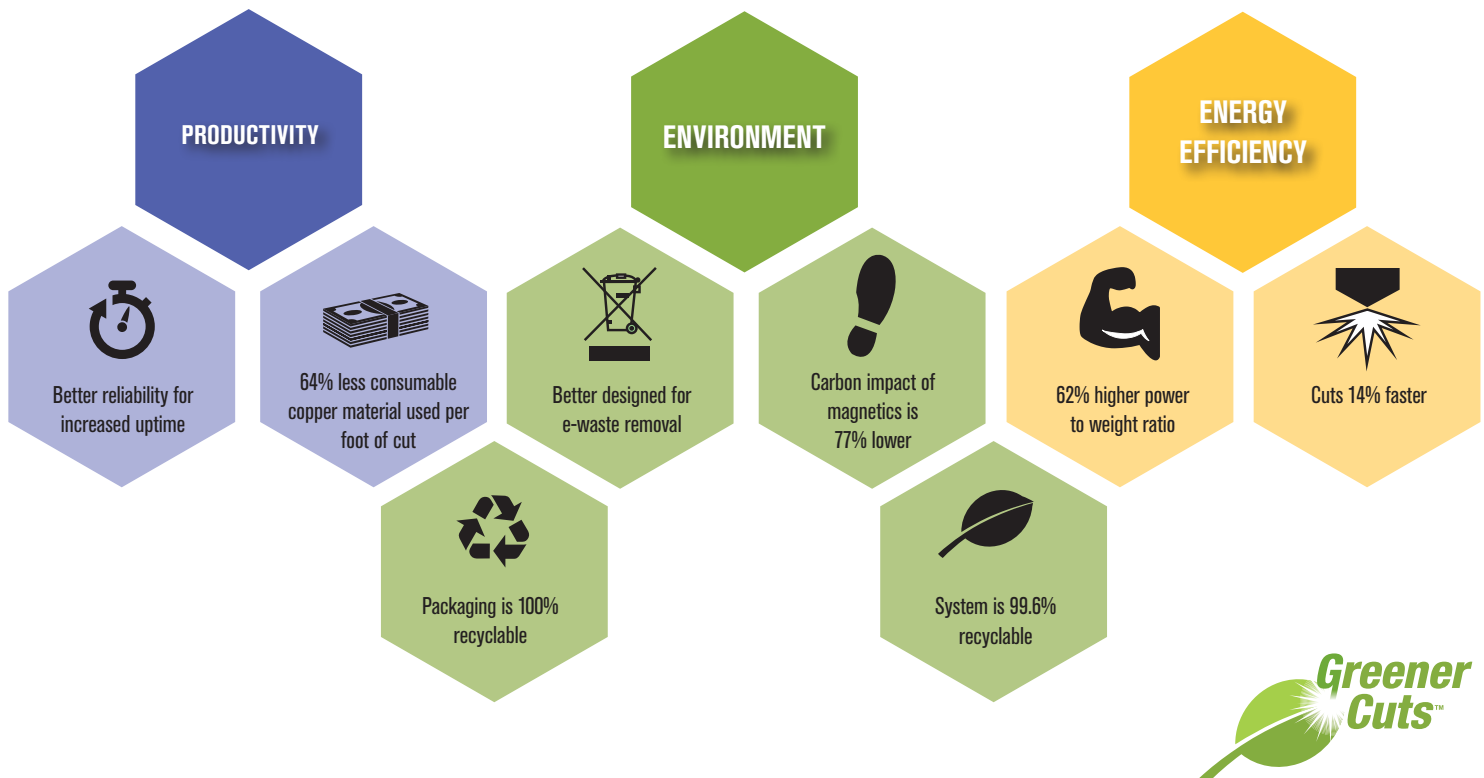
ArcGlide® THC



Sensor™ PHC

XPR Environmental benefits

The engineering mission at Hypertherm 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.





50 years of Shaping Possibility

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

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

HELPING YOU SHAPE THE WORLD.



PLASMA | LASER | WATERJET | AUTOMATION | SOFTWARE | CONSUMABLES

For location nearest you, visit:
www.hypertherm.com

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

Environmental stewardship is one of Hypertherm's core values, and it is critical to our success and our customers' success. We are striving to reduce the environmental impact of everything we do. For more information: www.hypertherm.com/environment.

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Hypertherm®
SHAPING POSSIBILITY™

