

Hypertherm[®]

Mechanized plasma solutions

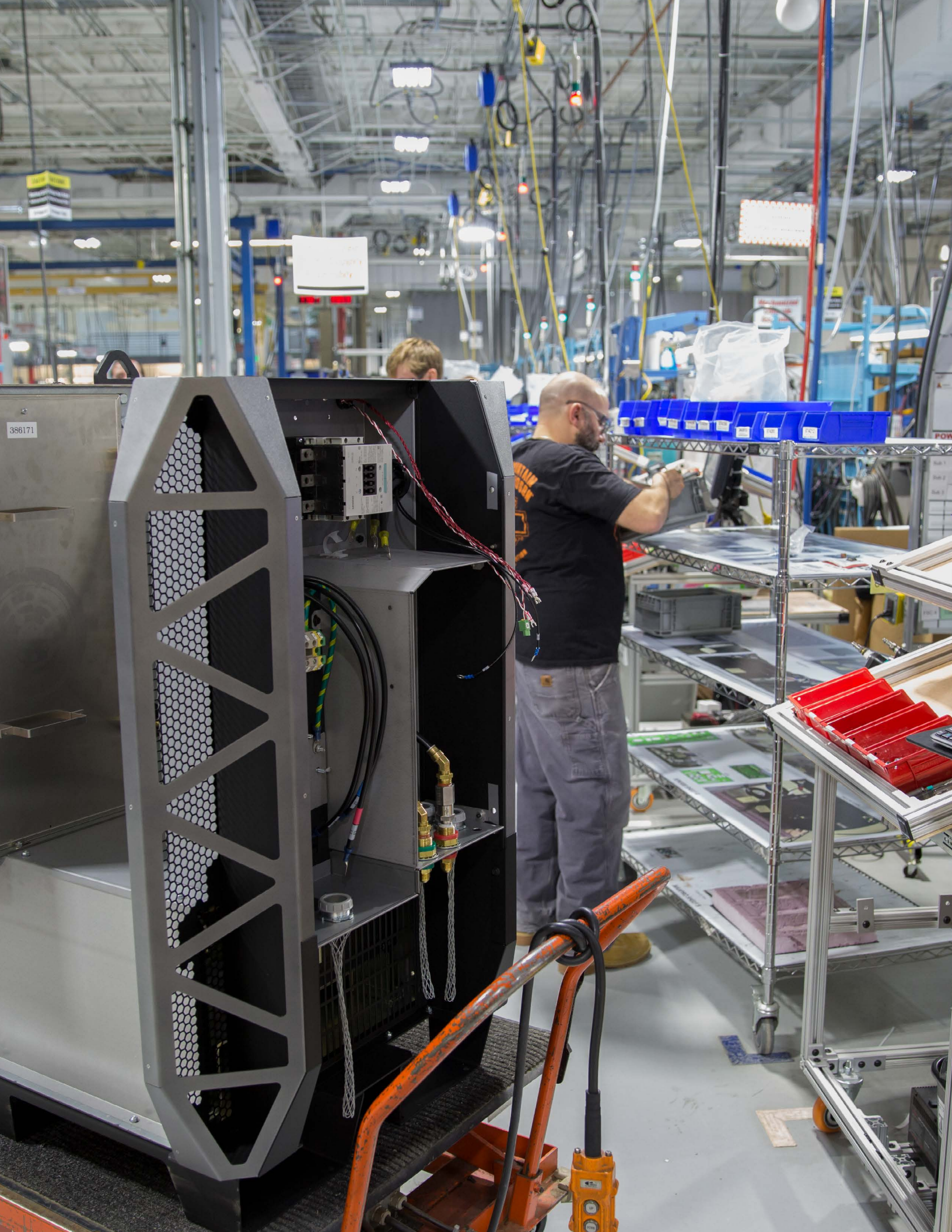
Optimize quality, productivity, and operating cost





Contents

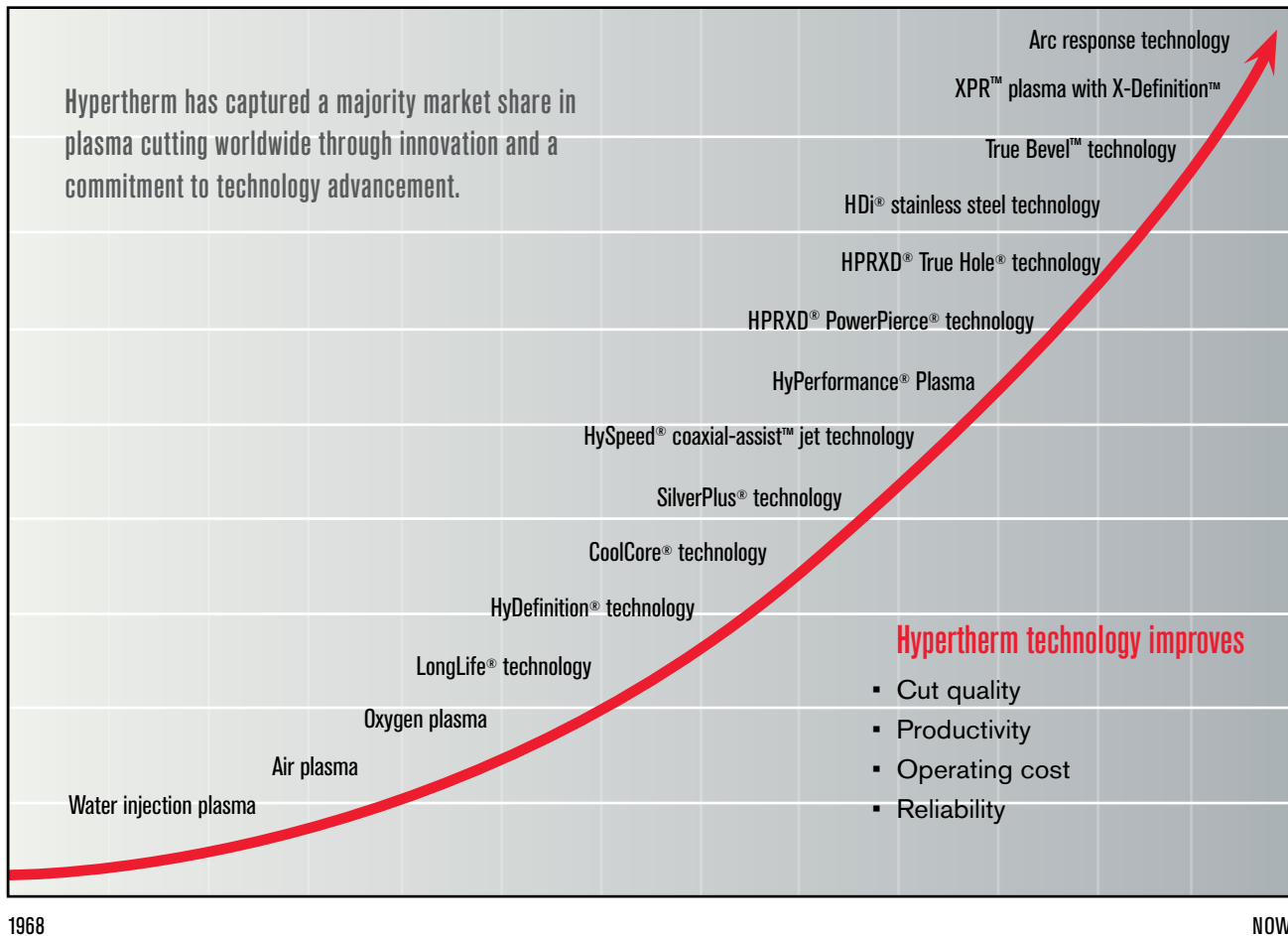
- 3 The world leader in plasma cutting technology
- 5 Comparison of plasma, oxyfuel, and laser
- 5 Plasma provides the optimal mix of cut quality, productivity, and operating cost
- 7 The Hypertherm advantage
- 8 Capabilities and technology benefits
- 10 Air plasma: Powermax®
- 11 LongLife® Air and Oxygen plasma: MAXPRO200®
- 12 HyPerformance® Plasma: HPR130XD®, HPR260XD®, HPR400XD® and HPR800XD®
- 13 XPR300™
- 14 Consumables
- 14 System components
- 15 Environmental benefits of the XPR
- 17 Nearly 50 years of Shaping Possibility



388171

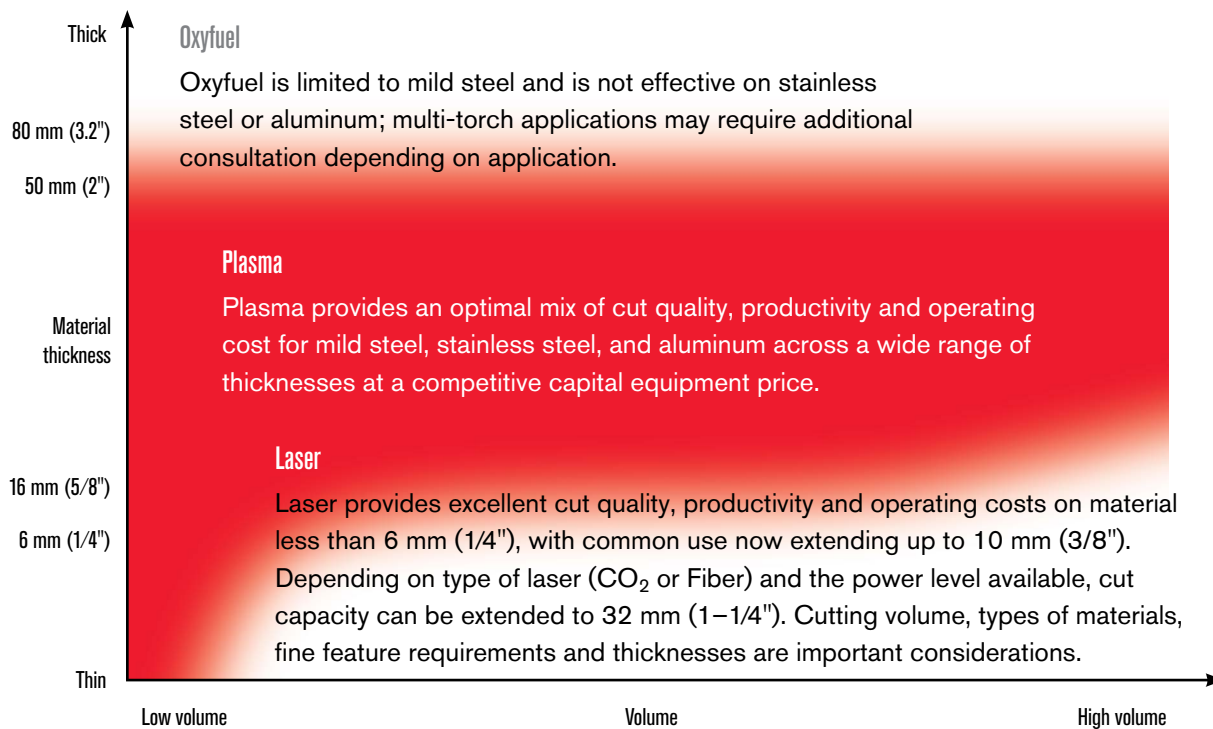
The world leader in plasma cutting technology

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 | 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.



420221
MADE IN USA
SER 60974-7
33016



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.

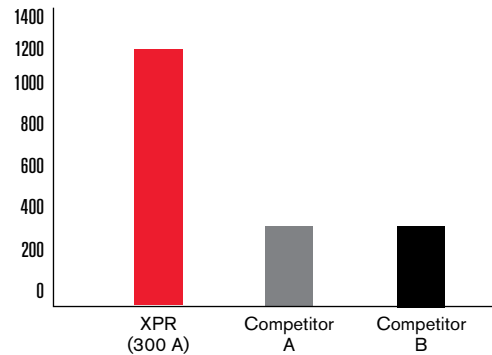
Operating cost

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

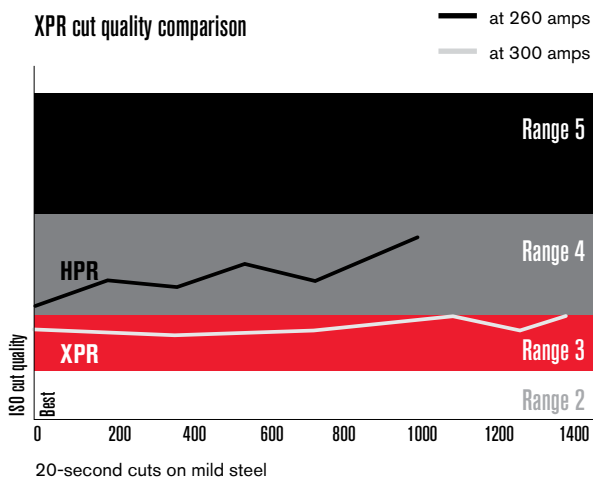


Parts cut by Hypertherm plasma remain consistent from the first cut to the last.

Number of 20-second starts with 5% ramp-down errors



XPR cut quality comparison



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. Precision, light- to heavy-duty mechanized cutting. PowerPierce [®] technology for extreme mechanized piercing capability | \$\$\$ |
| HPR260XD [®] | ● ³ | ● | ● | ● | ● | ● | ● | | |
| HPR400XD [®] | | | | | | | | | |
| HPR800XD [®] | | | | | | | | | |
| XPR[™] | | | | | | | | | |
| 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

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®

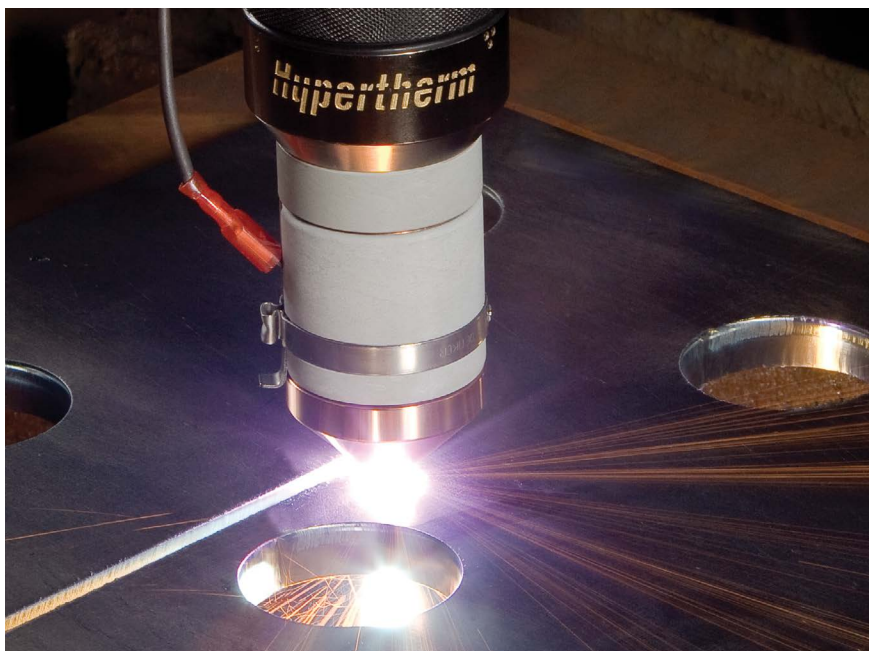
Engineered to deliver heavy-duty, high capacity mechanized and handheld cutting and gouging across a wide range of industrial applications.



| | | | 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.

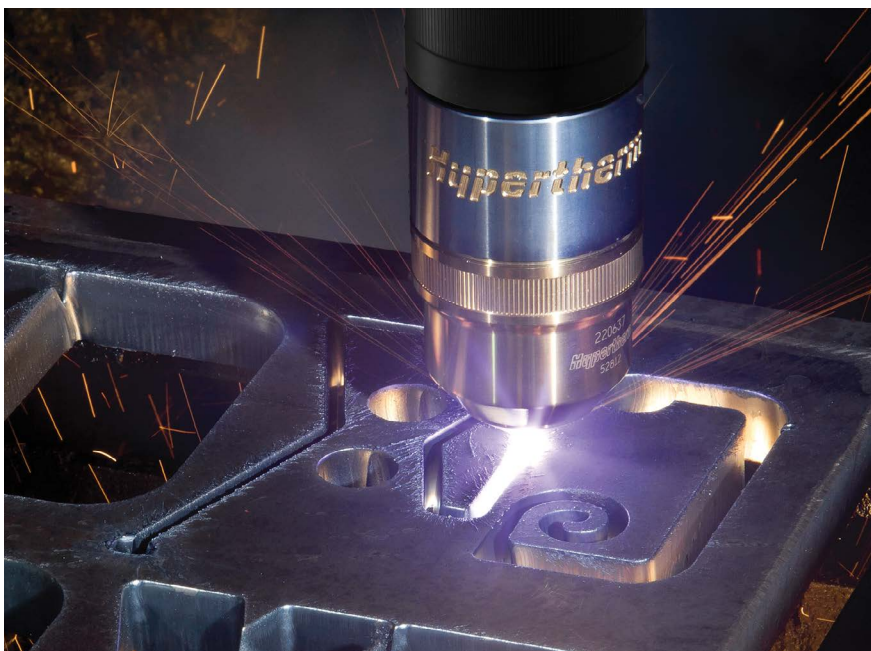


| | | | HPR130XD | HPR260XD | HPR400XD | HPR800XD |
|---|---|--|--|--|--|-----------------|
| Capacity | Mild steel | Dross free* | 16 mm (5/8") | 32 mm (1-1/4") | 38 mm (1-1/2") | 38 mm (1-1/2") |
| | | Production pierce | 32 mm (1-1/4") | 38 mm (1-1/2") | 50 mm (2") | 50 mm (2") |
| | | Maximum cutting capacity | 38 mm (1-1/2") | 64 mm (2-1/2") | 80 mm (3.2") | 80 mm (3.2") |
| | Stainless steel | Production pierce | 20 mm (3/4") | 32 mm (1-1/4") | 45 mm (1-3/4") | 75 mm (3") |
| | | Maximum cutting capacity | 25 mm (1") | 50 mm (2") | 80 mm (3.2") | 160 mm (6-1/4") |
| | | Maximum pierce** | — | — | 75 mm (3") | 100 mm (4") |
| Aluminum | Production pierce | 20 mm (3/4") | 25 mm (1") | 45 mm (1-3/4") | 75 mm (3") | |
| | Maximum cutting capacity | 25 mm (1") | 50 mm (2") | 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") 3850 mm/m (145 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 | 2-4 | 2-5 | |
| Weldability | | Ready to weld | 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 | 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 | 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 | 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 | 30-260 | 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™

The new XPR300 represents the most significant advance in mechanized plasma cutting technology, ever. This next 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, the new XPR300 increases cut speed, dramatically improves productivity and slashes operating costs by over 50%. New ease-of-use features and engineered system optimization make the XPR300 easier to run with minimal operator intervention, while also ensuring optimal performance and unmatched reliability



| | | | |
|-----------------------|---------------------------------------|-------|--------|
| Maximum output power | | 63 kW | |
| 100% duty arc voltage | | 210 V | |
| Cut chart thickness | | mm | inches |
| Pierce capacity | Mild steel (argon-assist) | 50 | 2 |
| | Mild steel (standard O ₂) | 45 | 1-3/4 |
| | Stainless steel | 38 | 1-1/2 |
| | Aluminum | 38 | 1-1/2 |
| Severance capacity | Mild steel | 80 | 3-1/8 |
| | Stainless steel | 75 | 3 |
| | Aluminum | 50 | 2 |
| Cut angle | ISO 9013 range | 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™ (VVI) 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

- ISO 9001:2008 registration ensures consistent manufacturing excellence
- 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



EDGE® Pro Ti



EDGE® Pro



MicroEDGE® Pro

Torch height controls (THCs)



Sensor™ Ti THC



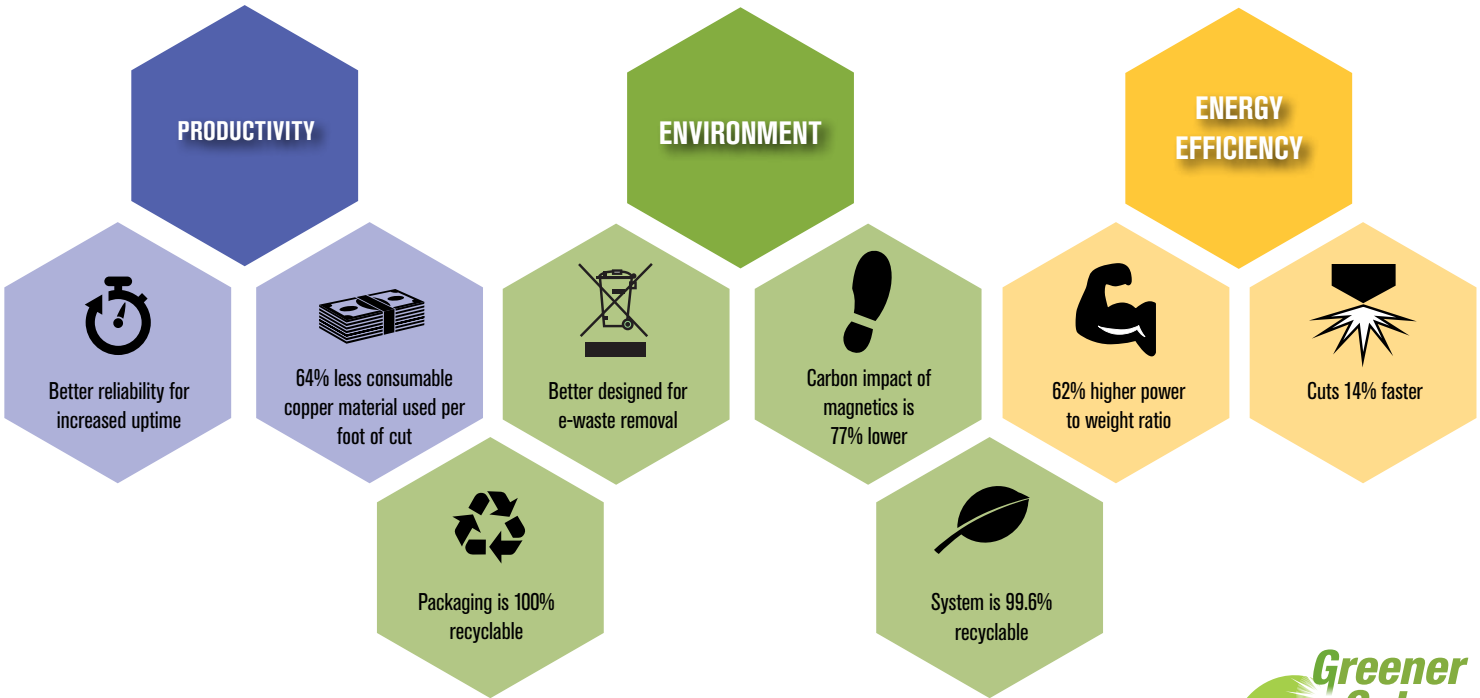
Sensor™ THC



ArcGlide® THC

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.





Nearly 50 years of Shaping Possibility

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

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, 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 aren't just employees: we're 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.

Shaping what's possible the world over

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, True Bevel, HyPerformance, HPR, XPR, PowerPierce, True Hole, HySpeed, SilverPlus, CoolCore, HyDefinition, LongLife, HDi, and Powermax 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.

© 11/2017 Hypertherm Inc. Revision 10

892120



Hypertherm[®]
SHAPING POSSIBILITY™

