



Video gallery

XPR300 plasma cutting system

The 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 XPR300 increases cut speed, dramatically improves productivity and slashes operating costs. 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.

WHERE TO BUY

REQUEST A QUOTE (/CONTACT-US/?FORM=REQUEST-A-QUOTE&PRODUCT=XPR300)

System information

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Benefits



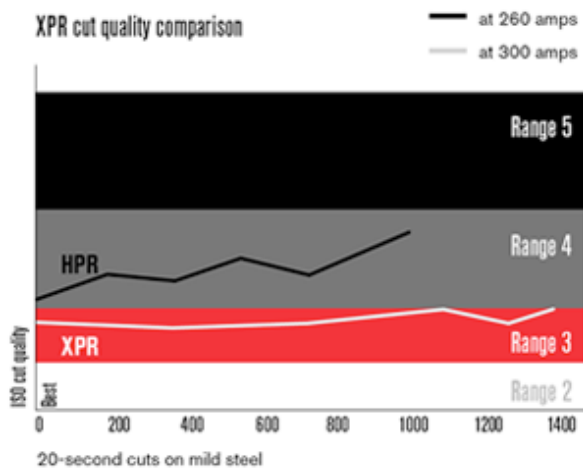
WHERE TO BUY

Industry-leading X-Definition cut quality

The XPR advances HyDefinition® cut quality by blending new technology with refined processes for next generation, X-Definition™ cutting on mild steel, stainless steel and aluminum.

- Consistent ISO range 2 results on thin mild steel
- Extended ISO range 3 cut quality results compared with earlier plasma technology
- Superior stainless steel cut quality across all thickness ranges
- Superior results on aluminum using Vented Water Injection™ (VWI)

Learn more about X-Definition technologies (</learn/articles/newest-plasma-technology/>)



Optimized productivity and reduced operating costs

- Significantly reduced operating costs than previous generation technology
- Increased cut speeds on thicker materials
- Dramatic improvement in consumable life on mild steel applications
- Thicker piercing capability than competitive plasma systems

Engineered system optimization

XPR is engineered to deliver the highest quality cuts and optimal system performance automatically. Advanced power supply technology delivers highly responsive, rapid system feedback, and automatically intervenes to eliminate events that negatively impact system efficiency and consumable life.

XPR's Arc response technology™ (</learn/about-our-products/xpr-plasma-cutting-systems/>) provides automatic torch and ramp-down error protection. Sensors in the power supply deliver refined diagnostic codes and significantly enhanced system monitoring information that reduces troubleshooting time and provides proactive system maintenance data for improved system optimization.

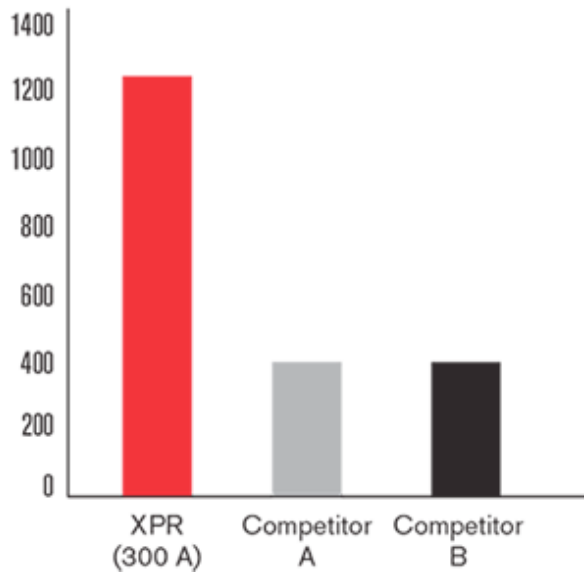
- Increases consumable life 3 times that of competitor's systems by eliminating the impact of ramp down errors
- Reduces the impact of catastrophic electrode blowouts which can damage the torch at high current levels

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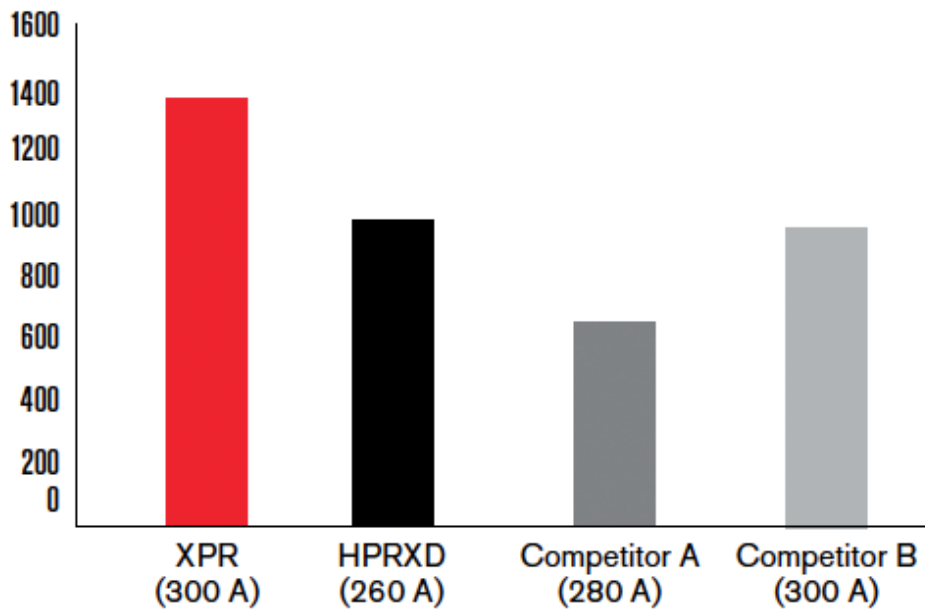
Number of 20-second starts with 5% ramp-down errors



Ease of use

- Intuitive operation and automatic monitoring redefine ease of use
- Full control of all functions and settings via the CNC
- Automatic system monitoring and specific troubleshooting codes for improved maintenance and service prompts
- EasyConnect™ torch lead and one hand torch-to-receptacle connection for fast and easy change-outs
- QuickLock™ electrode for easy consumable replacement
- WiFi in power supply can connect to mobile devices and LAN for multiple system monitoring and service

Number of 20-second starts



Advanced process control and delivery

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WHERE TO BUY

Three console options – Core™, Vented Water Injection™ (VWI) and OptiMix™ – 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.

Gas-connect console gases/fluids

	Core	Vented Water Injection (VWI)	OptiMix
O ₂ /N ₂ /Air	X	X	X
F5/Ar/H ₂ O		X	X
H ₂ -N ₂ -Ar mixing			X



Better for the environment, too!

The XPR300 system reduces consumable use, energy and the carbon footprint.

- 64% less consumable copper material is used per foot of cut
- System is 99.5% recyclable and packaging is 100% recyclable
- The carbon impact of magnetics is 77% lower than its predecessor
- 62% higher power-to-weight ratio and 14% faster cuts

Learn more about improvements that have been made (<https://www.hyperthermassociates.com/corporate-social-responsibility/environment/products/xpr300/>)



Specifications

<p>MENU</p> <p>Maximum open-circuit voltage (U0) ⋮</p>	<p>360 VDC</p> <p>WHERE TO BUY</p>
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Maximum output current	300 A
Maximum output power	66.5 kW
Output voltage	50 VDC–210 VDC
100% duty arc voltage	210 V
Duty cycle rating	100% at 66.5 kW, 40° C (104° F)
Operational ambient temperature range	-10° C–40° C (14° F–104° F)
Power factor	0.98 at 66.5 kW
Cooling	Forced air (Class F)
Insulation	Class H
EMC emissions classification (CE models only)	Class A
Lift points	Top lift eye weight rating 680 kg (1,500 lb.)

Operating data

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

This does not represent a complete list of processes or thicknesses that are available.

Console	Cutting gases	Current (A)	Cut chart thickness (mm)	Approximate cutting speed (mm/min)	Cut chart thickness (in.)	Approximate cutting speed (ipm)
Mild steel						
Core™, VPI, and	O ₂ plasma	30	0.5	5348	0.018"	215

OptiMix™	O ₂ shield		3	1153	0.135"	40
			5	726	3/16"	30
	O ₂ plasma	50	3	3820	0.105"	155
			Air shield	5	2322	3/16"
		8		1369	5/16"	55
	O ₂ plasma	80	3	5582	0.105"	225
			Air shield	6	3048	1/4"
		12		1405	1/2"	55
	O ₂ plasma	130	3	6502	0.135"	240
			Air shield	10	2680	3/8"
		38		256	1-1/2"	10
	O ₂ plasma	170	6	5080	1/4"	200
			Air shield	12	3061	1/2"
	25	1175		1"	45	
	50	267		2"	10	
	O ₂ plasma	300	12	3940	1/2"	155
Air shield			25	1950	1"	75
	50	560	2"	21		
	80	165	3"	7		

Stainless steel

Core, VWI, and OptiMix	N ₂ plasma	40	0.8	6100	0.036"	240
			N ₂ shield	3	2683	0.105"
		6		918	1/4"	32
VWI and OptiMix	F5 plasma	80	3	4248	0.135	140
	N ₂		6	1916	1/4"	70

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	shield		12	864	1/2"	34		
OptiMix	H ₂ -Ar-N ₂ plasma	170	10	1975	3/8"	80		
			12	1735	1/2"	65		
	N ₂ shield	300	38	256	1-1/2"	10		
			12	2038	1/2"	80		
			25	1040	1"	40		
			50	387	2"	17		
N ₂ shield	300	75	162	3"	6			
		VWI and OptiMix	N ₂ plasma	300	12	2159	1/2"	85
					25	1302	1"	50
H ₂ O shield	50		403		2"	15		

Aluminum

Core, VWI, and OptiMix	Air plasma	40	1.5	4799	0.036	240	
			Air shield	3	2596	1/8"	85
				6	911	1/4"	32
VWI and OptiMix	N ₂ plasma	80	3	3820	1/8"	140	
			H ₂ O shield	6	2203	1/4"	80
	N ₂ plasma	130		10	956	1/2"	28
			H ₂ O shield	6	2413	1/4"	95
				10	1702	3/8"	70
	N ₂	300	20	870	3/4"	35	
			12	2286	1/2"	90	
H ₂ O shield			25	1302	1"	50	

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			50	524	2"	20
OptiMix	H ₂ -Ar- N ₂ plasma	300	12	3810	1/2"	150
			25	2056	1"	80
	N ₂ shield		50	391	2"	15

Buying information

Visit our where to buy page ([/where-to-buy/](#)) to find a potential partner, or contact Hypertherm ([/contact-us/](#)) directly if you need further assistance.

Resources

Manuals and documents

XPR300 system brochure - A4

Last updated **07/10/2022**

Products ([/support/documents-library/?category=110](#)) > Brochure/Guide ([/support/documents-library/?category=110&subcategory=830](#))

PDF (476KB) 

[View all \(/support/documents-library/?product=XPR300\)](#)

Training

- Training at Hypertherm ([/learn/training/in-person-training/](#))
- Hypertherm Cutting Institute ([/learn/training/elearning/](#))

Torches and consumables

XPR torch
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WHERE TO BUY



XPR consumables

Nozzles and electrodes are available in various quantities. Please contact an authorized Hypertherm distributor (/where-to-buy/) to place your consumables order. Your consumables may not look exactly like the pictures.

Mild steel

Non-ferrous

XPR300 starter kits

See who is using XPR300

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MEW Structural steel



Increased **WHERE TO BUY** quality & efficiency gains

“Thanks to these automatic machines we are also able to increase the capacity to our desired target of 300 tons of production per month.” – EXCON

[/learn/case-studies/vnr-excon/](#)

Construction and heavy equipment

“...the new machine combines many processes, marking, drilling and bevel cutting.” – Konecrane

Related products

Systems

Software



[\(/hypertherm/edge/edge-connect/\)](#)

EDGE Connect CNC system [\(/hypertherm/edge/edge-connect/\)](#)

Hypertherm Computer Numeric Control (CNC) delivers unmatched reliability, powerful embedded capabilities, and a high level of customizability.



[\(/hypertherm/xpr/xpr170/\)](#)

XPR170 plasma cutting system [\(/hypertherm/xpr/xpr170/\)](#)

The XPR170™ mechanized plasma cutting system delivers next generation X-Definition® processes from very thin up to mid-range thicknesses.

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WHERE TO BUY

How can we help you?



Request a quote (</contact-us/?form=request-a-quote&product=XPR300>)



Contact sales (</contact-us/?form=ask-a-product-question&product=XPR300>)



Product support (</support/resources-by-product/?productcode=XPR300>)

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