

Hypertherm's HyPerformance Plasma Torch and Consumables

Achieving optimal performance

Use genuine Hypertherm consumables to ensure optimal performance of your HyPerformance Plasma cutting 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 9001:2000 certification 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

Hypertherm®

Benefits

HPR proprietary technologies

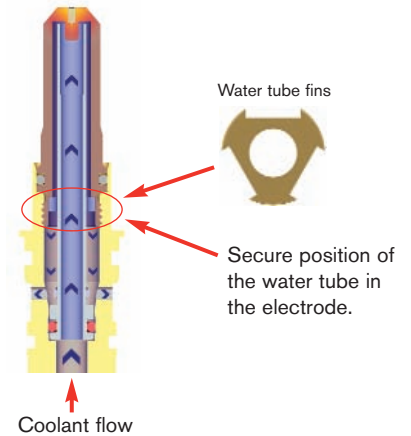
Technology

Benefits

TrueFlow™ (Water Tube – Electrode)

This feature improves the alignment between the water tube and the electrode. Fins align the water tube both axially and coaxially within the electrode as shown.

Delivers repeatable, constant coolant flow over the heat extracting surfaces of the electrode, significantly improving the cooling process, which translates into more consistent electrode life.



HyLife®

HyLife technology correctly calculates the precise diameter of the hafnium emitter in relationship to the current output of the torch to ensure optimal cooling of the hafnium.

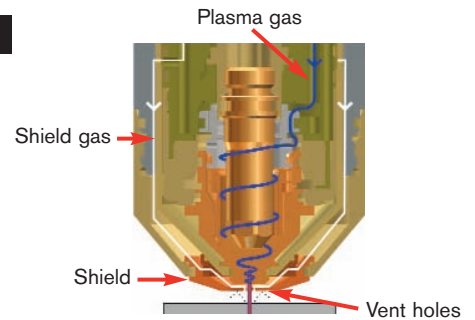
Significantly extends parts life in air and oxygen applications by maximizing hafnium cooling in the electrode.



Torch front-end shielding

The shield is electrically isolated from the nozzle to prevent double arcing. Radial vent holes located around the primary orifice delivers greater arc stability and nozzle cooling.

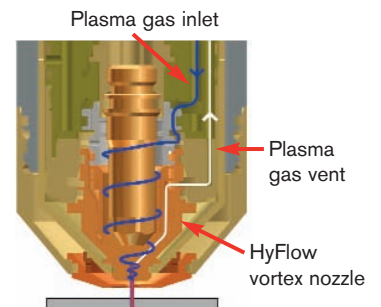
Dramatically increases piercing capability by protecting the nozzle from spatter and double arcing.



HyFlow Vortex

HyFlow vortex nozzle design involves a vented, two-piece nozzle, which constricts and stabilizes the arc precisely in the center of the electrode and creates a cool boundary layer along the inside of the nozzle.

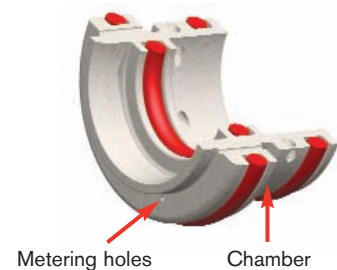
The consistency of the arc density and small diameter of the arc increases consumable life and prolongs HyDefinition cut quality.



Pre-chambered swirl ring


















Designed with an interior chamber that meters gas flow to create a regulated pressure drop at the end of the cut and minimize hafnium erosion.

Extends electrode and nozzle life by providing proper ramp down of the gas flow at the end of the cutting process, critical to Hypertherm's LongLife technology.



Consumables

HPR consumables

	Shield cap	Shield	Retaining cap	Nozzle	Swirl ring	Electrode	
Mild steel							
30 A	220173	220194	220313	220193	220180	220192	
50 A	220173	220555	220313	220554	220553*	220552	
80 A	220173	220189	220176	220188	220179	220187	
130 A	220173	220183	220176	220182	220179	220181	
200 A	220398	220356	220355	220354	220353	220352	
260 A	220398	220440	220433	220439	220436	220435	
Stainless steel							
45 A	220173	220202	220304	220201	220180	220308	
80 A	220173	220338	220304	220337	220179	220339	
130 A	220173	220198	220304 (H35) 220176 (N ₂)	220197	220179	220307	
200 A	220398	220345	220344	220343	220342	220307	
260 A	220398	220407	220344	220406	220405	220307	
Aluminum							
45 A	220173	220202	220176	220201	220180	220308	
130 A	220173	220198	220304 (H35) 220176 (Air)	220197	220179	220307 (H35) 220181 (Air)	
200 A	220398	220345	220347	220346	220342	220307	
260 A	220398	220407	220344	220406	220405	220307	
Bevel cutting							
Mild steel							
130 A	220398	220645	220603	220646	220179	220649	
260 A	220398	220545	220603	220542	220436	220541	
Stainless steel							
130 A	220398	220609	220608	220656	220179	220606	
260 A	220398	220609	220608	220607	220405	220606	

*50A swirl ring not shown.

Consumables

HPR consumables

MATERIAL	CONSUMABLE DESCRIPTION	Bevel cutting								
		260 A HPR260	200 A HPR260, HPR HD4070	130 A HPR130, HPR260, HPR HD4070	80 A HPR130, HPR260, HPR HD4070	50 A HPR130, HPR260, HPR HD4070	45 A HPR130, HPR260, HPR HD4070	30 A HPR130, HPR260, HPR HD4070	130 A HPR130, HPR260	260 A HPR260
Mild steel	Electrode	220435	220352	220181	220187	220552	-----	220192	220649	220541
	Swirl ring	220436	220353	220179	220179	220553	-----	220180	220179	220436
	Nozzle	220439	220354	220182	220188	220554	-----	220193	220646	220542
	Inner retaining cap	220433	220355	220176	220176	220313	-----	220313	220603	220603
	Shield	220440	220356	220183	220189	220555	-----	220194	220645	220545
	Shield cap	220398	220398	220173	220173	220173	-----	220173	220398	220398
Stainless steel	Electrode	220307	220307	220307	220339	-----	220308	-----	220606	220606
	Swirl ring	220405	220342	220179	220179	-----	220180	-----	220179	220405
	Nozzle	220406	220343	220197	220337	-----	220201	-----	220656	220607
	Inner retaining cap	220344	220344	220304 (H35) 220176 (N ₂)	220304	-----	220304	-----	220608	220608
	Shield	220407	220345	220198	220338	-----	220202	-----	220609	220609
	Shield cap	220398	220398	220173	220173	-----	220173	-----	220398	220398
Aluminum	Electrode	220307	220307	220307 (H35) 220181 (Air)	-----	-----	220308	-----	-----	-----
	Swirl ring	220405	220342	220179	-----	-----	220180	-----	-----	-----
	Nozzle	220432	220346	220197	-----	-----	220201	-----	-----	-----
	Inner retaining cap	220344	220347	220304 (H35) 220176 (Air)	-----	-----	220176	-----	-----	-----
	Shield	220407	220345	220198	-----	-----	220202	-----	-----	-----
	Shield cap	220398	220398	220173	-----	-----	220173	-----	-----	-----

Torch HPR torch assembly

PART NO.	DESCRIPTION
220162	Quick-disconnect torch
220340	Water tube with O-Ring
220163	Quick-disconnect receptacle
024249	Insulating sleeve
220232	Torch mounting sleeve assembly
128879	Torch kit: Bullet plugs, O-Rings, water tube and seal (not shown)
128880	Quick-disconnect kit: O-Ring and connector (not shown)
128784	25' (7.5 m) Leads
128785	50' (15 m) Leads
220700	Bevel water tube (mild steel – 130 A)
220571	Bevel water tube (stainless steel – 130/260 A)

Hypertherm

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