

Red-D-Arc™

Plasma Cutting Systems

Hypertherm handheld and mechanized plasma systems for metal cutting and gouging.



System advantages

Productivity

Fast cut speeds, superior cut quality, little or no secondary operations and no pre heating help you to do more in less time.

Ease of use

High portability, simple controls and good arc visibility make Hypertherm systems easy to operate. Any operator can quickly become skilled with one of these systems.

Versatility

From the shop to the field, cutting or gouging stainless, mild steel or aluminum, you can leverage a Hypertherm system for many jobs.

Low operating cost

High productivity and long consumable life minimize operating costs.

Reliability

Smart design, plus intense testing during both product development and manufacturing, delivers industry-leading reliability.

Confidence

Hypertherm's singular focus on plasma, plus the proven performance and reliability of our global installed base, gives you confidence that you are using the best.

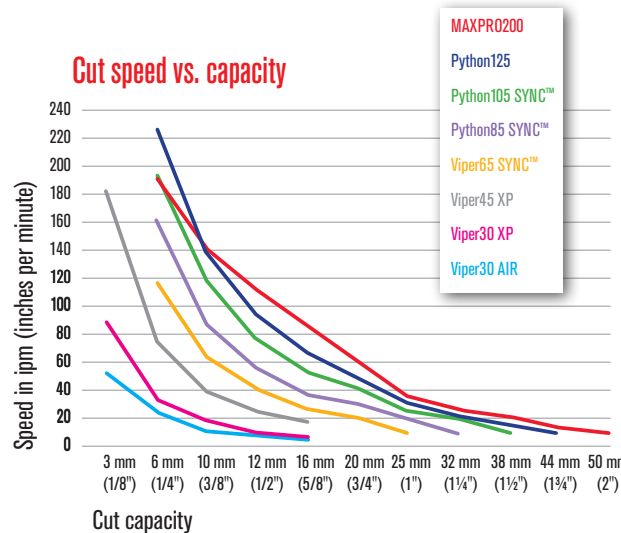
Cut capacity ratings

There are no industry standards for rating cut capacities of plasma systems. Hypertherm's recommended cut and severance cut capacity ratings for Viper and Python branded systems are based on cut edge quality of mild steel and torch travel speeds.

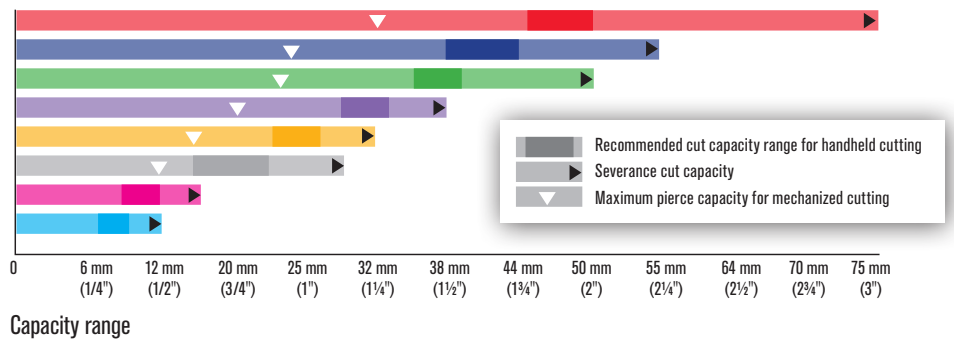
The recommended cut capacity is the thickness at which the system delivers good cut quality with torch travel speeds of about 500 mm (20") per minute. The severance cut capacity is the thickness at which the system can sever the metal but has poor cut quality with torch travel speeds approaching 125 mm (5") per minute.

As a guide for model selection, around eighty percent of the metal being cut should be equal to or less than the recommended thickness and cutting at the severance thickness should be infrequent.

Mechanized pierce capacity is the thickness of mild steel that may be pierced using an automated torch height control with good cut quality and without excessive wear on the consumable parts. The cut capacity for edge starts is the same as the handheld capacity.



Capacity range



System specifications comparison

		Viper30 AIR	Viper30 XP	Viper45 XP	Viper65 SYNC™
Handheld cut capacity	Recommended (at 20 in./min.)	8 mm (5/16")	10 mm (3/8")	16 mm (5/8")	20 mm (3/4")
	Recommended (at 10 in./min.)	10 mm (3/8")	12 mm (1/2")	22 mm (7/8")	25 mm (1")
	Severance	16 mm (5/8")	16 mm (5/8")	29 mm (1-1/8")	32 mm (1-1/4")
Mechanized pierce capacity	with automatic torch height control	Not applicable	Not applicable	12 mm (1/2") ¹	16 mm (5/8") ¹
Maximum	without automatic torch height control			12 mm (1/2")	12 mm (1/2")
Gouge capacity	Metal removed per hour	Not applicable	Not applicable	2.6 kg (5.8 lbs.)	4.0 kg (8.8 lbs.)
	depth x width ²	Not applicable	Not applicable	3.0 x 5.3 mm (.12 x .21")	2.8 x 6.4 mm (.11 x .25")
Output current		15–30 A	15–30 A	10–45 A	20–65 A
Input voltages		120–240 V, 1-PH, 50/60 Hz	120 – 240 V, 1-PH 50/60 Hz	200–240 V, 1-PH, 50–60 Hz 480 V, 3-PH, 50–60 Hz	200–480 V, 1-PH, 50–60 Hz 200–600 V, 3-PH, 50–60 Hz
Rated output voltage		83 VDC	125 VDC	145 VDC	139 VDC
Input current		120–240 V, 1-PH, 28.7–15 A	120 – 240 V, 1-PH: 25.5/18.8 A	200/230 V, 1-PH, 39/32 A 480 V, 3-PH, 9.4 A	200/208/240/480 V, 1-PH, 52/50/44/22 A 200/208/240/480/600 V, 3-PH, 32/31/27/13/13 A
Duty cycle ³		35%, 240 V 20%, 120 V	35%, 240 V 20%, 120 V	50% @ 45 A, 200–240 V, 1-PH 60% @ 41 A, 200–240 V, 1-PH 100% @ 32 A, 200–240 V, 1-PH 50% @ 45 A, 480 V, 3-PH 60% @ 41 A, 480 V, 3-PH 100% @ 32 A, 480 V, 3-PH	50% @ 65 A, 230–600 V, 1/3-PH 40% @ 65 A, 200–208 V, 1/3-PH 100% @ 46 A, 230–600 V, 1/3-PH
Dimensions with handle depth x width x height		420 x 195 x 333 mm (16.5 x 7.7 x 13.1")	356 x 140 x 305 mm (14.0 x 5.5 x 12.0")	442 x 173 x 356 mm (17.4 x 6.8 x 14.0")	483 x 234 x 432 mm (19 x 9.2 x 17")
Weight with torch		13.5 kg (29.8 lbs.)	9.7 kg (21.4 lbs.)	14 kg (31 lbs.)	27.5 kg (61 lbs.)
Gas supply		Not applicable	Air or N ₂	Air or N ₂	Air or N ₂
Recommended flow rate and pressure		Not applicable	113.3 l/min (4 scfm) @ 5.5 bar (80 psi)	Cutting: 189 l/min (400 scfh, 6.6 scfm) @ 5.9 bar (85 psi) Gouging: 165 l/min (350 scfh, 5.8 scfm) @ 4.1 bar (60 psi)	Cutting: 210 l/min (450 scfh, 7.5 scfm) @ 5.9 bar (85 psi) Gouging: 210 l/min (450 scfh, 7.5 scfm) @ 4.8 bar (70 psi)
Handheld torch lead lengths		4.5 m (15')	4.5 m (15')	6.1, 15.2 m, 22.8 m (20', 50', 75')	7.6, 15.2, 22.8 m (25, 50, 75')
Motor generator requirements for full arc stretch at full output		5.5 kW	5.5 kW	10 kW	15 kW

¹ Pierce rating for handheld use or with automatic torch height control.

² Dependent on speed, torch angle and standoff.

³ Hypertherm's duty cycle ratings are established at 40° C, according to international standards, and are determined at actual cutting arc voltage levels.

Available technologies and features

Model	Power supply								Torch						Work cable		Miscellaneous			
	Drag-cutting capability	Gouging mode	Pilot arc controller	Boost Conditioner™ circuit	Auto-voltage™	FastConnect™ design	Basic machine interface	Advanced automation interface	15° hand torch	65° hand torch	75° hand torch	85° hand torch	90° hand torch	Full-length machine torch	Mini machine torch	Hand clamp	C-style clamp	Remote pendant	Carry strap	Wheel gear
Viper30 AIR	●		●	●	●					●					●				●	
Viper30 XP	●		●	●	●					●					●				●	
Viper45 XP	●	●	●	●		●	●	■	■	●				■	■	●		■	■	
Viper65 SYNC	●	●	●	●	●	●	●	■	■	●				■	■	●	■	■		●
Python85 SYNC	●	●	●	●	●	●	●	■	■	●				■	■	●	■	■		●
Python105 SYNC	●	●	●	●	●	●	●	■	■	●				■	■	●	■	■		●
Python125	●	●	●			●	●	■	■		●			■	■	●	■	■		●
MAXPRO200	●	●	●			●	■	■	■				■	■	■	■	■	■		■

● Standard

■ Optional

	Python85 SYNC™	Python105 SYNC™	Python125	MAXPRO200*
	25 mm (1")	32 mm (1-1/4")	38 mm (1-1/2")	38 mm (1-1/2")
	32 mm (1-1/4")	38 mm (1-1/2")	44 mm (1-3/4")	47 mm (1-7/8")
	38 mm (1-1/2")	50 mm (2")	55 mm (2-1/4")	75 mm (3")
	20 mm (3/4") ¹	22 mm (7/8") ¹	25 mm (1") ¹	32 mm (1-1/4")
	16 mm (5/8")	20 mm (3/4")	22 mm (7/8")	Not applicable
	8.3 kg (18.2 lbs.)	8.7 kg (19.1 lbs.)	12.5 kg (27.6 lbs.)	18.7kg (41.2 lbs.)
	3.6 x 6.6 mm (.14 x .26")	6.6 x 6.1 mm (.26 x .24")	4.3-7.9 x 6.1-9.9 mm (0.17-0.31 x 0.24-0.39")	102-69 x 105 cm (40.14"-27.12" x 41.23")
	25-85 A	30-105 A	30-125 A	50-200 A
	200-480 V, 1-PH, 50-60 Hz 200-600 V, 3-PH, 50-60 Hz	200-600 V, 3-PH, 50/60 Hz	480 V, 3-PH, 50-60 Hz 600 V, 3-PH, 50-60 Hz	200/208 VAC, 3-PH, 50 Hz, 108/104 A 220 VAC, 3-PH, 50-60 Hz, 98 A 240 VAC, 3-PH, 60 Hz, 90 A 380 VAC, 3-PH, 50 Hz, 57 A 400 VAC, CE, 3-PH, 50-60 Hz, 54 A 415 VAC, CE, 3-PH, 50 Hz, 52 A 440 VAC, 3-PH, 50-60 Hz, 49 A 480 VAC, 3-PH, 60 Hz, 45 A 600 VAC, 3-PH, 60 Hz, 36 A
	143 VDC	160 VDC	175 VDC	50-165 VDC
	200/208/240/480 V, 1-PH, 70/68/58/29 A 200/208/240/480/600 V, 3-PH, 42/40/35/18/17 A	200/208/240/480/600 V, 3-PH, 50/60 Hz, 58/56/49/25/22 A	480/600 V, 3-PH, 50/60 Hz, 31/24 A	480 VAC, 3-PH, 60 Hz, 45 A
	60% @ 85 A, 230-600 V, 3-PH 60% @ 85 A, 480 V, 1-PH 50% @ 85 A, 240 V, 1-PH 50% @ 85 A, 200-208 V, 3-PH 40% @ 85 A, 200-208 V, 1-PH 100% @ 66 A, 230-600 V, 1/3-PH	200-600 V 50% @ 105 A, 200 V, 3-PH 54% @ 105 A, 208 V, 3-PH 70% @ 105 A, 240 V, 3-PH 80% @ 105 A, 480-600 V, 3-PH 100% @ 94 A, 480-600 V, 3-PH 100% @ 88 A, 240 V, 3-PH 100% @ 77 A, 208 V, 3-PH 100% @ 74 A, 200 V, 3-PH	100% @ 125 A, 480/600 V, 3-PH	100% @ 33 kW
	483 x 234 x 432 mm (19 x 9.2 x 17")	592 x 274 x 508 mm (23.3 x 10.8 x 20.0")	592 x 274 x 508 mm (23.3 x 10.8 x 20.0")	102 x 69 x 105 cm (40.1 x 27.1 x 41.2")
	30 kg (67 lbs.)	42.9 kg (95 lbs.)	48 kg (105.7 lbs.)	335 kg (740 lbs.)
	Air or N ₂	Air or N ₂	Air or N ₂	Plasma gas: Air, O ₂ , N ₂ Shield gas: Air, N ₂
	Cutting: 210 l/min (450 scfh, 7.5 scfm) @ 5.9 bar (85 psi) Gouging: 210 l/min (450 scfh, 7.5 scfm) @ 4.8 bar (70 psi)	Cutting: 260 l/min (550 scfh, 9.2 scfm) @ 5.9 bar (90 psi) Gouging: 260 l/min (550 scfh, 9.2 scfm) @ 4.8 bar (70 psi)	Cutting: 260 l/min (550 scfh, 9.2 scfm) @ 5.9 bar (85 psi) Gouging: 212 l/min (450 scfh, 7.5 scfm) @ 4.1 bar (60 psi)	6.2 +/- 0.7 bar (90 +/- 10 psig)
	7.6, 15.2, 22.8 m (25, 50, 75')	7.6, 15.2, 22.8 m (25, 50, 75')	7.6, 15.2, 22.8 m (25, 50, 75')	7.5, 15, 22, 30 m (25, 50, 75, 100')
	20 kW	30 kW	40 kW	N/A

Ordering information

Below are nine standard plasma system models which all include a power supply, torch and work cable. The Viper65 SYNC, Python85 SYNC, Python105 SYNC and Python125 systems also include a wheel kit. All models are CSA certified.

Models	System part numbers
Viper30 AIR (4.5 m [15 ft.] torch, 110-220 V)	088100
Viper30 XP (4.5 m [15 ft.] torch, 110-220 V)	088102
Viper45 XP (6.1 m [20 ft.] torch, 200-240 V, 1-PH)	088159
Viper45 XP (6.1 m [20 ft.] torch, 480 V, 3-PH)	088161
Viper65 SYNC (7.6 m [25 ft.] torch, 200-600 V, 1/3-PH)	083355
Python85 SYNC (7.6 m [25 ft.] torch, 200-600 V, 1/3-PH)	087195
Python105 SYNC (7.6 m [25 ft.] torch, 200-600 V, 3-PH)	059686
Python125 (7.6 m [25 ft.] torch, 480 V, 3-PH)	059608
Python125 (7.6 m [25 ft.] torch, 600 V, 3-PH)	059609

Note: not approved for use on phase converters.

The models listed in the table below can be custom configured by selecting the desired power supply, torch, work cables and consumable kits, as well as any accessories. When ordering torches for the Viper45 XP, Python125, or the MAXPRO200 a starter consumable kit must be ordered.

Models	Power supply part numbers
Viper45 XP (200-240 V, 1-PH)	88158
Viper45 XP (480 V, 3-PH)	88160
Viper65 SYNC (200-600 V, 1/3-PH)	083374
Python85 SYNC (200-600 V, 1/3-PH)	087216
Python105 SYNC (200-600 V, 3-PH)	059707*
Python125 (480 V, 3-PH)	059607**
Python125 (600 V, 3-PH)	059606**
MAXPRO200 (480 V, 3-PH)	078609***
MAXPRO200 (600 V, 3-PH)	078617***

* Must order wheel kit (part #229370) when ordering this item.

** Must order wheel kit (part #229467) when ordering this item.

*** Must order wheel kit (part# 428035) when ordering this item

Torch selection for custom configurations

Cable length	Viper45 XP		Viper65 SYNC™, Python85/105 SYNC™						Python125				MAXPRO200®			
	Handheld	Machine	Handheld		Machine				Handheld		Machine		Handheld		Machine	
	75°	180° full-length	75°	15°	180° full-length	180° mini	90° mini	45° mini	85°	15°	180° full-length	180° mini	65°	90°	Standard	Quick disconnect
4.5 m (15')						059733					059519	059514				
6.1 m (20')	088164															
7.6 m (25')		088167	059726	059723	059719	059734	059731	059729	059492	059495	059520	059515	228976	228980		
10.7 m (35')					059720						059521	059516				
15.2 m (50')	088165	088169	059727	059724	059721	059735	059732	059730	059493	059496	059522	059517	228977	228981		
22.8 m (75')	059475	059480	059728	059725	059722		059737	059736	059494	059497	059523		228978	228982		
30.4 m (100')													228979	228983		
Diameter sleeve																
45 mm (1 3/4")															228937	428027
50 mm (2")															428024	428028

Starter consumable kits

	Viper45 XP	Python125	MAXPRO200
Handheld torch	428559	428099	428014
Machine torch	428560	428100	428013
Machine torch with ohmic retaining cap	428561	428101	

MAXPRO interface cables

Choose one	PS To CNC/THC	
	1.5 m (5')	223327
	3 m (10')	223328
	7.6 m (25')	223329
	15.2 m (50')	223330
	22.8 m (75')	223331
	30 m (100')	223332

MAXPRO machine torch lead packages (shielded)

Choose one	Shielded leads	
	7.6 m (25')	229477
	15.2 m (50')	229478
	22.8 m (7')	229479
	30 m (100')	229480

Hypertherm cartridge options

	Drag cutting	Mechanized/standoff cutting	Max removal gouging	Max control gouging	Ohmic ring kit
45 A	428927	428925	428932	428933	428895*
65 A	428931	428930			
85 A	428935	428934			
105 A	428937	428936	428938	428939	

*Kit includes three 420580 ohmic ring clips.

Work cables for custom configurations

Cable length	Viper45 XP		Viper65 SYNC		Python85 SYNC			Python105 SYNC			Python125		MAXPRO200	
	Hand clamp	Hand clamp	C-style clamp	Ring terminal	Hand clamp	C-style clamp	Ring terminal	Hand clamp	C-style clamp	Ring terminal	Hand clamp	C-style clamp	Work cable assembly with lugs	Work cable ground clamp
25' (7.6 m)	223595	223125	223194	223254	223035	223203	223287	223254	223287	223284	223292	223298	223335	008539
50' (15 m)	223596	223126	223195	223255	223034	223204	223288	223255	223288	223285	223293	223299	223336	
75' (23 m)	223127	223127	223196	223256	223033	223205	223289	223256	223289	223266	223294	223300	223337	
100' (30m)													223338	

Accessories

Part number	Description
027668	Cutting guide – deluxe
127102	Cutting guide – basic
128647	Eliminizer air filtration kit
011092	Replacement filter element for eliminizer air filter
024877	Leather torch lead cover with velcro closure, 7.5 m (25 ft) section
127410	System dust cover for Viper30 XP
127469	System dust cover for Viper30 AIR
127219	System dust cover for Viper45 XP
428951	SYNC adapter
528083	Cartridge reader kit
428951	Cartridge adapter: Duramax® handheld or machine torches

Part number	Description
127301	System dust cover for Viper65 SYNC or Python85 SYNC
127360	System dust cover for Python105 SYNC or Python125
229370	Wheel cart for Viper65 SYNC or Python85 SYNC
229467	Wheel cart for Python105 SYNC or Python125
228697	Upgrade kit: CPC port with selectable voltage ratio for Viper65 SYNC, Python85 SYNC, Python105 SYNC, or Python125
228539	Upgrade kit: Serial interface port (RS-485) for Viper65 SYNC, Python85 SYNC, Python105 SYNC, or Python125
024866	MAXPRO200 Lead sheath: 4.4 cm x 3.0 m (1-3/4" x 10 ft.) leather with snaps
127389	MAXPRO200 Gouging heat shield
428035	MAXPRO200 Wheel kit



Red-D-Arc rents and leases Hypertherm plasma cutting systems. Hypertherm, in business since 1968, is the world leader in plasma technology and continues to bring innovative products to market that help solve metal cutting and gouging challenges. All products are designed and assembled in the USA.

Red-D-Arc™

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