

Weldcraft™ W-500

Formerly WP-12

Hand-Held Water-Cooled
TIG Welding Torches



Quick Specs

Model
W-500

Applications

Aluminum ship repair
Heavy fabrication
Metal fabrication
Pipe and tube fabrication

Pressure vessel fabrication
Tool and die
Tube mills
Vocational

Rated Output

DC: 500 A, AC: 350 A

Duty Cycle 100%

Electrode Range

1/16–1/4 in. (1.6–6.4 mm)

W-500 TIG torch

Formerly known as the WP-12, the W-500 is a dependable water-cooled torch designed for high-capacity, demanding applications. The W-500 is engineered to pair heavy-duty welding applications with a water-cooled system.

Comfort and reduced downtime due to the sealed water chamber that minimizes torch overheating.

Heavy-duty components provide reliable welding performance, even after continuous and demanding use.

Copper construction ensures maximum thermal conductivity.

Note: Torch delivered may vary slightly from image shown.



W-500
(WP-12)



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MillerWelds.com
f t y i n



Torch Packages

Models		Rubber	
Old Model	New Name	12.5 ft. (3.8 m)	25 ft. (7.6 m)
WP-12	W-500	WP-12-12	WP-12-25

Torch packages include torch body, handle, power cable, long back cap, gas hose, and water hose.

Connectors

Power cable connectors



195380
50 mm Dinse-style gas thru with gas and water return lines for water-cooled torch.



195377
50 mm Dinse-style with water return line for water-cooled torch.



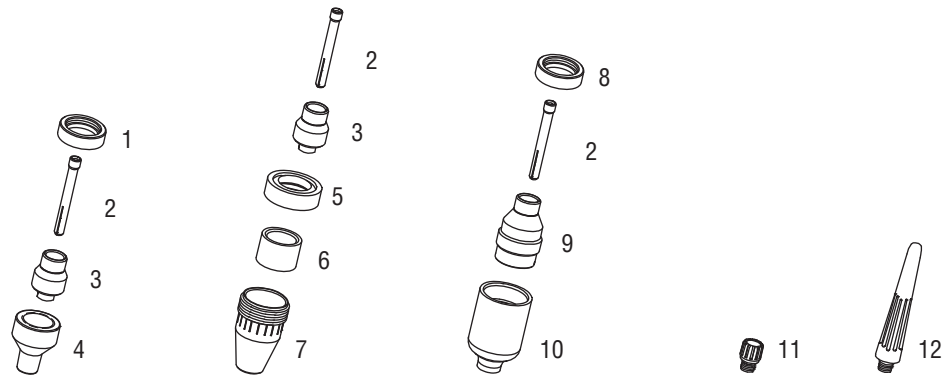
45V11
Power cable adapter for water-cooled torch.



225028
50 mm thread-lock-style for water-cooled torch.

Machines	Connection Type	1-Piece Power Cable Connectors
TIG Machines		
Syncrowave® 200/210	50 mm Dinse-style gas thru	195380
Syncrowave® 250 DX/350 DX (Dinse)	50 mm Dinse-style	195377
Syncrowave® 250 DX/350 DX (stud)	1/2 in. stud	45V11
Dynasty® 200/210/280/350, Maxstar® 200/210/280/350	50 mm Dinse-style	195377
Dynasty® 700, Maxstar® 700	50 mm thread-lock	225028
Multiprocess Machines		
Dimension™ 302/452/NT 450/652	1/2 in. stud	45V11
PipeWorx	1/2 in. stud	45V11
XMT® 304/350	50 mm Dinse-style	195377
XMT® 450	1/2 in. stud	45V11
Engine-Driven Machines		
Most Big Blue®, Trailblazer®, Bobcat™, Blue Star® and Wildcat® models	1/2 in. stud	45V11
Big Blue® 450 Duo CST	50 mm Dinse-style	195377
General Reference		
	50 mm Dinse-style	195377
	50 mm Dinse-style gas thru	195380
	50 mm thread-lock	225028
	1/2 in. stud	45V11
Other Adapter		
	Stud to Dinse-style adapter	232728

Consumables (Refer to Owner's Manual for additional replacement parts.)



Non-Gas Lens									
Electrode Size — inch (mm)	1/16 (1.6)	3/32 (2.4)	1/8 (3.2)	5/32 (4.0)	3/16 (4.8)	1/4 (6.4)			
1 Insulator (required)	12NG	12NG	12NG	12NG	12NG	12NG			
2 Collet	85Z14	85Z15	85Z16	85Z17	85Z18	85Z19			
3 Collet Body	11WP65	11WP65	11WP65	11WP65	11WP65	11WP65			
Nozzle Size — size # (inch)	4 (1/4)	5 (5/16)	6 (3/8)	7 (7/16)	8 (1/2)	10 (5/8)	12 (3/4)	Short	
4 Alumina	14N57	14N58	14N59	14N60	14N61	14N61-10	14N61-12	—	
* Long Alumina	14GL68	14GL69	14GL70	14GL71	14GL72	—	—	—	
Metal Non-Gas Lens									
Electrode Size — inch (mm)	1/16 (1.6)	3/32 (2.4)	1/8 (3.2)	5/32 (4.0)	3/16 (4.8)	1/4 (6.4)			
2 Collet	85Z14	85Z15	85Z16	85Z17	85Z18	85Z19			
3 Collet Body	11WP65	11WP65	11WP65	11WP65	11WP65	11WP65			
5 Nozzle Gasket (required)	12MNG	12MNG	12MNG	12MNG	12MNG	12MNG			
6 Insulator Sleeve (required)	85Z99	85Z99	85Z99	85Z99	85Z99	85Z99			
Nozzle Size — size # (inch)	4 (1/4)	5 (5/16)	6 (3/8)	7 (7/16)	8 (1/2)	10 (5/8)	12 (3/4)	Short	
7 Metal	—	—	—	—	86Z02	—	—	—	
Gas Lens									
Electrode Size — inch (mm)	1/16 (1.6)	3/32 (2.4)	1/8 (3.2)	5/32 (4.0)	3/16 (4.8)	1/4 (6.4)			
8 Insulator (required)	12GLG	12GLG	12GLG	12GLG	12GLG	12GLG			
2 Collet	85Z14	85Z15	85Z16	85Z17	85Z18	85Z19			
9 Gas Lens	11GL16	11GL32	11GL18	11GL53	11GL36	—			
Nozzle Size — size # (inch)	4 (1/4)	5 (5/16)	6 (3/8)	7 (7/16)	8 (1/2)	10 (5/8)	12 (3/4)	Short	
10 Large Dia. Gas Lens	—	—	57N75	—	57N74	53N88	53N87	53N89	
* Large Dia. Gas Lens-L	—	—	57N75L	—	57N74L	53N88L	53N87L	—	
* Large Dia. Gas Lens-XL	—	—	57N75XL	—	57N74XL	53N88XL	53N87XL	—	
* Large Dia. Gas Lens-XXL	—	—	57N75XXL	—	57N74XXL	53N88XXL	53N87XXL	—	
Back Caps									
11 Short	56Y45		12 Long						56Y44

*Not shown.

Tungsten

Tungsten for the most demanding TIG welding applications!

Available in four types and industry-standard diameters, our line of Weldcraft™ tungsten electrodes has undergone rigorous testing to ensure the highest quality and durability. Color-coded packages include ten 7-inch (175 mm) tungsten electrodes.

Note: Refer to manufacturer SDS sheets for proper preparation and safety. Use proper ventilation/capture during preparation. Refer to manufacturer warning regarding ventilation.



Type	Diameter in. (mm)	Part #	Type	Diameter in. (mm)	Part #
2% Ceriated (EWCe-2)			Pure (EWP)		
Performs well in DC welding and arc starting at low-current settings, and offers excellent performance in AC processes.	0.040 (1.0)	WC040X7	Forms a clean, balled end when heated and provides good arc stability for AC welding with a balanced or unbalanced squarewave or sine wave.	0.040 (1.0)	—
	1/16 (1.6)	WC116X7		1/16 (1.6)	WP116X7
	3/32 (2.4)	WC332X7		3/32 (2.4)	WP332X7
	1/8 (3.2)	WC018X7		1/8 (3.2)	WP018X7
	5/32 (4.0)	WC532X7	5/32 (4.0)	—	
2% Lanthanated (EWLa-2)			Rare Earth (EWG)		
Provides excellent arc starting, arc stability and re-ignition, and less tip erosion in AC or DC welding. Can substitute for 2% Thoriated.	0.040 (1.0)	WL2040X7	Combines the best of all alloying elements, and provides excellent arc stability in AC or DC welding.	0.040 (1.0)	—
	1/16 (1.6)	WL2116X7		1/16 (1.6)	WG116X7
	3/32 (2.4)	WL2332X7		3/32 (2.4)	WG332X7
	1/8 (3.2)	WL2018X7		1/8 (3.2)	WG018X7
	5/32 (4.0)	WL2532X7	5/32 (4.0)	—	

Replacement Parts

Torch Body		
W-500		WP-12
Handle		
Smooth		85WP13
Braided Rubber Power Cables and Hoses		
	12.5 ft. (3.8 m)	25 ft. (7.6 m)
Power Cable	40V84R	40V84RL
Water Hose	40V83R	40V83RL
Gas Hose	40V82R	40V82RL

Genuine Miller® Accessories

Extension Kit
EK-1-25-R 25 ft. (7.6 m), rubber



Cable Covers
WC-4-22 22 ft. (6.7 m)



Wireless Remote Foot Control 300429
For remote current and contactor control. Receiver plugs directly into the 14-pin receptacle of Miller machine. 90-foot (27.4 m) operating range.



Wireless Remote Hand Control 300430
For remote current and contactor control. Receiver plugs directly into the 14-pin receptacle of Miller machine. 300-foot (91.4 m) operating range.



RCC-14 Remote Contactor and Current Control 151086

East/west rotary-motion fingertip control attaches to TIG torch using two hook-and-loop fasteners. Includes 26.5-foot (8 m) cord with 14-pin plug.



RCCS-14 Remote Contactor and Current Control 043688

North/south rotary-motion fingertip control attaches to TIG torch using two hook-and-loop fasteners. Includes 26.5-foot (8 m) cord with 14-pin plug.



Low-Conductivity TIG Coolant 043810

Sold in multiples of four in 1-gallon recyclable plastic bottles. Miller coolants contains a base of ethylene glycol and deionized water to protect against freezing to -37° Fahrenheit (-38°C) or boiling to 227° Fahrenheit (108°C).

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