

# 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)



**Miller Electric Mfg. Co.**  
An ITW Welding Company  
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Appleton, WI 54912-1079 USA

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**MillerWelds.com**



## 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.



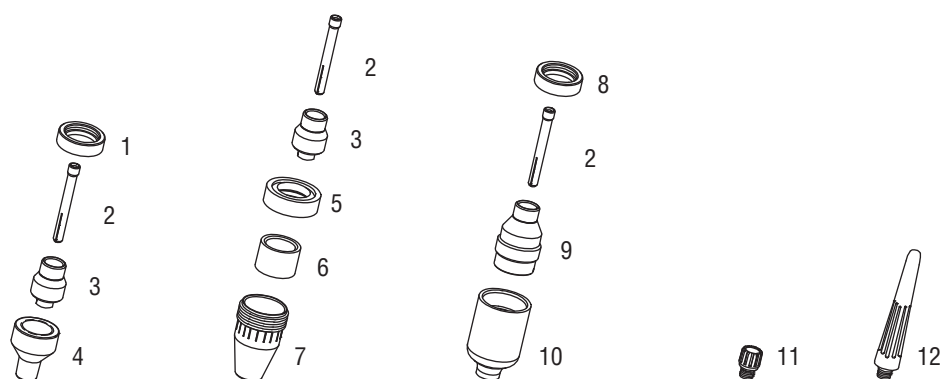
**45V11**  
Power cable adapter for water-cooled torch.



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

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

## 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 #
<b>2% Ceriated (EWCe-2)</b>			<b>Pure (EWP)</b>		
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)	—
<b>2% Lanthanated (EWLa-2)</b>			<b>Rare Earth (EWG)</b>		
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

<b>Torch Body</b>		
W-500		WP-12
<b>Handle</b>		
Smooth		85WP13
<b>Braided Rubber Power Cables and Hoses</b>		
	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).

Distributed by:

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