

# 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 prevents torch overheating.

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

**100-percent-copper construction** ensures maximum thermal conductivity.



W-500  
(WP-12)

*Note: Torch delivered may vary slightly from image shown.*



Torch is warranted for 1 year parts.



**Miller Electric Mfg. Co.**

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# Torch Packages

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

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

# Connectors

## Power Cable Connectors



**195 380**  
50-mm Dinse-style gas thru with gas and water return lines for water-cooled torch.



**195 377**  
50-mm Dinse-style with water return line for water-cooled torch.



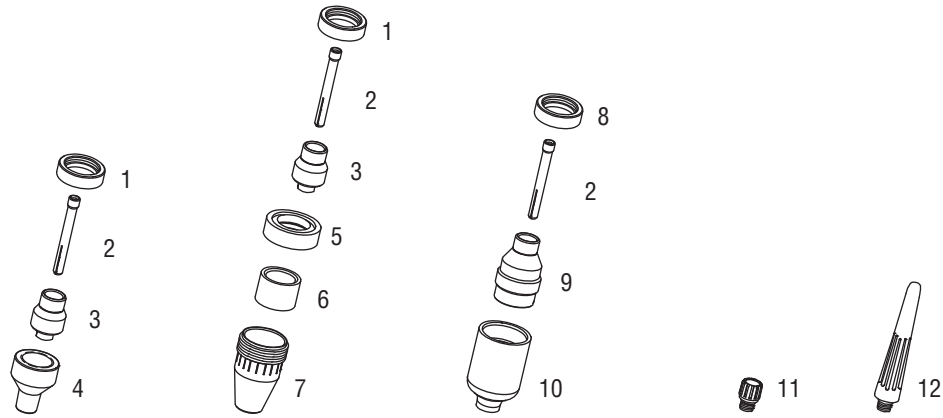
**45V11**  
Power cable adapter for water-cooled torch.



**225 028**  
50-mm thread lock-style for water-cooled torch.

Machines	Connection Type	1-Piece Power Cable Connector
<b>TIG Machines</b>		
Syncrowave® 200/210	50-mm Dinse, Gas Thru	<b>195 380</b>
Syncrowave® 250 DX/350 DX (Dinse)	50-mm Dinse	<b>195 377</b>
Syncrowave® 250 DX/350 DX (Stud)	1/2-in. Stud	<b>45V11</b>
Dynasty® 200/350, Maxstar® 200/350	50-mm Dinse	<b>195 377</b>
Dynasty® 700, Maxstar® 700	50-mm Thread Lock	<b>225 028</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	<b>195 377</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	<b>195 377</b>
<b>General Reference</b>		
	50-mm Dinse	<b>195 377</b>
	50-mm Dinse, Gas Thru	<b>195 380</b>
	50-mm Thread Lock	<b>225 028</b>
	1/2-in. Stud	<b>45V11</b>
<b>Other Adapter</b>		
	Stud to Dinse Adapter	<b>232 728</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)		
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		
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	—	—	86Z01	—	86Z02	86Z03	86Z06	—

## 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

## A Line of Premium Tungsten for the Most Demanding TIG Welding Applications!

Available in four types and industry-standard diameters, Weldcraft's premium line of tungsten electrodes have undergone rigorous testing to ensure the highest quality and durability. Color-coded packages include ten seven-inch (175 mm) tungsten electrodes.

*Note: Refer to manufacturer MSDS 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)	<b>WC040X7</b>	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)	<b>WC116X7</b>		1/16 (1.6)	<b>WP116X7</b>
	3/32 (2.4)	<b>WC332X7</b>		3/32 (2.4)	<b>WP332X7</b>
	1/8 (3.2)	<b>WC018X7</b>		1/8 (3.2)	<b>WP018X7</b>
	5/32 (4.0)	<b>WC532X7</b>		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)	<b>WL2040X7</b>	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)	<b>WL2116X7</b>		1/16 (1.6)	<b>WG116X7</b>
	3/32 (2.4)	<b>WL2332X7</b>		3/32 (2.4)	<b>WG332X7</b>
	1/8 (3.2)	<b>WL2018X7</b>		1/8 (3.2)	<b>WG018X7</b>
	5/32 (4.0)	<b>WL2532X7</b>		5/32 (4.0)	—

## Genuine Miller® Accessories



### Wireless Remote Foot Control #300 429

For remote current and contactor control.

Receiver plugs directly into the 14-pin receptacle of Miller machine. 90-foot (27.4 m) operating range.



### RCCS-14 Remote Contactor and Current Control #043 688

North/south rotary-motion fingertip control fastens to TIG torch using two Velcro® straps. Includes 26.5-foot (8 m) control cord and 14-pin plug.



### Cable Covers

#WC-4-10 10 ft. (3 m)  
#WC-4-22 22 ft. (6.7 m)



### Wireless Remote Hand Control #300 430

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 #151 086

East/west rotary-motion fingertip control fastens to TIG torch using two Velcro® straps. Includes 26.5-foot (8 m) cord and 14-pin plug.

### Extension Kit

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



### Low-Conductivity TIG Coolant #043 810

Sold in multiples of four in one-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).



MillerWelds.com



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