

# Weldcraft™ W-310

## Formerly CS310

Hand-Held Water-Cooled  
TIG Welding Torches



### Quick Specs

**Model**  
W-310

**Applications**

Aerospace  
Aluminum fabrication  
Aluminum ship repair  
Automotive  
Exotic material fabrication  
Light and heavy manufacturing  
Maintenance and repair

Pipe and tube fabrication  
Precision metal fabrication  
Pressure vessel fabrication  
Shipbuilding  
Tool and die  
Tube and pipe  
Vocational

**Rated Output**

DC: 310 A, AC: 235 A

**Duty Cycle** 100%

**Electrode Range**

.020–1/8 in. (0.5–3.2 mm)



W-310  
(CS310A)

### W-310 TIG torch

Formerly known as the CS310, the W-310 is a consistent and versatile water-cooled torch designed for demanding applications. With the W-310, welders are able to increase amperage output without increasing the torch size.

**Simplify torch package installation** with ColorSmart™ hose and cable sets that differentiate input water, water/power cable, and gas hoses.

**D-Handle™ design** features a self-indexing flat top that allows for torch orientation by feel.

**Work in cold weather** with the Tri-Flex™ hose and cable assembly that remains flexible to ease handling and extends cable life.

**Improve high-frequency shielding** and reduce gas leakages with the double-lip back cap seal.

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



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An ITW Welding Company  
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MillerWelds.com  
f t y i n



# Torch Packages

Models		Braided Rubber		
Old Model	New Name	12.5 ft. (3.8 m)	25 ft. (7.6 m)	50 ft. (15.2 m)
CS310A	W-310	CS310-12	CS310-25	CS310-50

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

## 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.



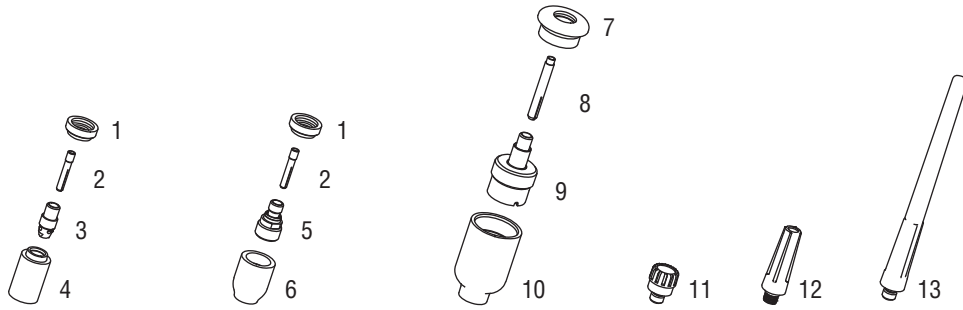
**45V11**  
Power cable adapter for water-cooled torch.



**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)	.020 (0.5)	.040 (1.0)	1/16 (1.6)	3/32 (2.4)	1/8 (3.2)				
1 Insulator (required)	598882	598882	598882	598882	598882				
2 Collet	13N20	13N21	13N22	13N23	13N24				
3 Collet Body	13N25	13N26	13N27	13N28	13N29				
Nozzle Size — size # (inch)	3 (3/16)	4 (1/4)	5 (5/16)	6 (3/8)	7 (7/16)	8 (1/2)	10 (5/8)	12 (3/4)	Short
4 Alumina	—	13N08	13N09	13N10	13N11	13N12	13N13	—	—
* Lava	—	13N14	13N15	13N16	13N17	13N18	13N19	—	—
* Long Lava	796F70	796F71	796F72	796F73	—	—	—	—	—
* X-Long Lava	796F74	796F75	796F76	796F77	—	—	—	—	—

## Gas Lens

Electrode Size — inch (mm)	.020 (0.5)	.040 (1.0)	1/16 (1.6)	3/32 (2.4)	1/8 (3.2)				
1 Insulator (required)	598882	598882	598882	598882	598882				
2 Collet	13N20	13N21	13N22	13N23	13N24				
5 Gas Lens	45V41	45V42	45V43	45V44	45V45				
Nozzle Size — size # (inch)	3 (3/16)	4 (1/4)	5 (5/16)	6 (3/8)	7 (7/16)	8 (1/2)	10 (5/8)	12 (3/4)	Short
6 Alumina Gas Lens	—	53N58	53N59	53N60	53N61	53N61S	—	—	—

## Large Diameter Gas Lens

Electrode Size — inch (mm)	.020 (0.5)	.040 (1.0)	1/16 (1.6)	3/32 (2.4)	1/8 (3.2)				
7 Insulator (required)	54N63-20	54N63-20	54N63-20	54N63-20	54N63-20				
8 Collet	13N20L	13N21L	13N22L	13N23L	13N24L				
9 Large Diameter Gas Lens	45V0204S	45V0204S	45V116S	45V64S	995795S				
Nozzle Size — size # (inch)	3 (3/16)	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 CS110-BSC      12 Medium 41V35      13 Long 41V24

\*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-310	CS310A	
<b>Handle</b>		
D-Handle	CS110-H	
<b>Braided Rubber Power Cables</b>		
12.5 ft. (3.8 m)	25 ft. (7.6 m)	50 ft. (15.2 m)
269764	269765	269759
<b>Braided Rubber Water Hoses</b>		
12.5 ft. (3.8 m)	25 ft. (7.6 m)	50 ft. (15.2 m)
CS310-12W	CS310-25W	CS310-50W
<b>Braided Rubber Gas Hoses</b>		
12.5 ft. (3.8 m)	25 ft. (7.6 m)	50 ft. (15.2 m)
CS310-12G	CS310-25G	CS310-50G

## Genuine Miller® Accessories



**Accessory Kit AK4C**  
Includes one long back cap, one of each size (#5, #6, #7) alumina nozzle, and one of each size (1/16, 3/32, 1/8 inch) of the following: collet, collet body, and 7-inch 2% ceriated tungsten electrode.

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



**Cable Covers**  
WC-3-10 10 ft. (3 m)  
WC-3-22 22 ft. (6.7 m)  
WC-3-48 48 ft. (14.6 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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