

# Weldcraft™ W-410

## Formerly CS410

Hand-Held Water-Cooled  
TIG Welding Torches 

### Quick Specs

**Model**  
W-410

**Applications**

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

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

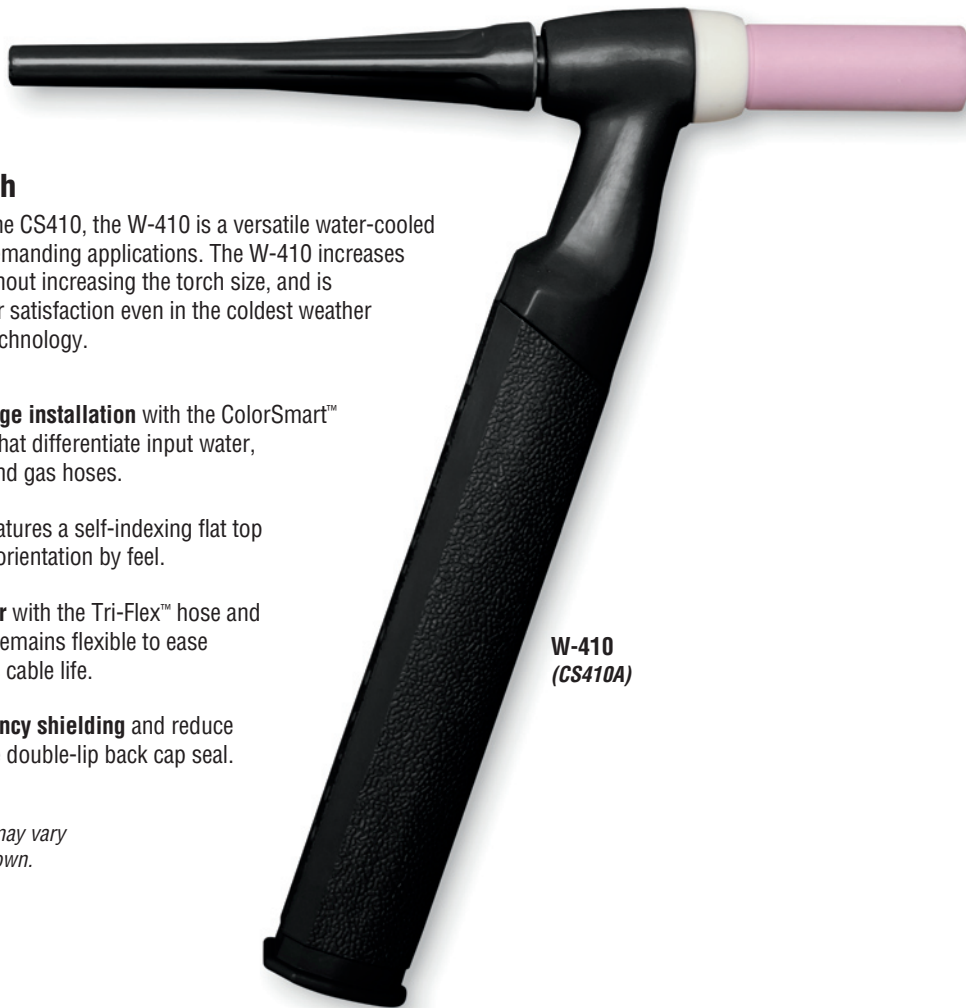
**Rated Output**

DC: 410 A, AC: 310 A

**Duty Cycle** 100%

**Electrode Range**

.040–5/32 in. (1.0–4.0 mm)



W-410  
(CS410A)

### W-410 TIG torch

Formerly known as the CS410, the W-410 is a versatile water-cooled torch designed for demanding applications. The W-410 increases amperage output without increasing the torch size, and is engineered for welder satisfaction even in the coldest weather with top of the line technology.

**Simplify torch package installation** with the 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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## 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)
CS410A	W-410	CS410-12	CS410-25	CS410-50

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

## Connectors

### Power cable connectors



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



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



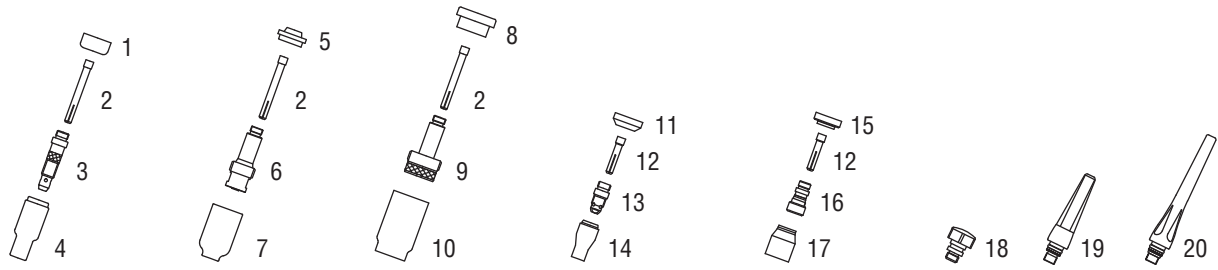
**225028**  
50 mm thread-lock-style for water-cooled torch.



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

Machines	Connection Type	1-Piece Power Cable Connectors
<b>TIG Machines</b>		
CST™ 280 (Dinse)	50 mm Dinse-style	195377
Dynasty® 200/210/280/350/400	50 mm Dinse-style	195377
Dynasty® 700/800	50 mm thread-lock	225028
Maxstar® 200/210/280/350/400	50 mm Dinse-style	195377
Maxstar® 700/800	50 mm thread-lock	225028
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
<b>Multiprocess Machines</b>		
Dimension™ 302/452/NT 450/650/652	1/2 in. stud	45V11
Dynasty® 280 DX Multiprocess	50 mm Dinse-style	195377
Multimatic® 255	50 mm Dinse-style	195377
PipeWorx	1/2 in. stud	45V11
XMT® 304/350	50 mm Dinse-style	195377
XMT® 450	1/2 in. stud	45V11
<b>Engine-Driven Machines</b>		
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
<b>General Reference</b>		
	50 mm Dinse-style	195377
	50 mm Dinse-style gas thru	195380
	50 mm thread-lock	225028
	1/2 in. stud	45V11
<b>Other Adapter</b>		
	Stud to Dinse-style adapter	232728

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



Non-Gas Lens									
Electrode Size — inch (mm)	.040 (1.0)		1/16 (1.6)		3/32 (2.4)		1/8 (3.2)		5/32 (4.0)
1 Insulator (required)	18CG		18CG		18CG		18CG		18CG
2 Collet	10N22		10N23		10N24		10N25		54N20
3 Collet Body	10N30		10N31		10N32		10N28		406488
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	10N50	10N49	10N48	10N47	10N46	10N45	10N44	—	
* Long Alumina	—	10N49L	10N48L	10N47L	—	—	—	—	
* Lava	105Z43	105Z42	105Z44	105Z45	08N78	08N79	08N80	—	
* Long Lava	12N03	105Z60	12N02	105Z61	—	—	—	—	
Gas Lens									
Electrode Size — inch (mm)	.040 (1.0)		1/16 (1.6)		3/32 (2.4)		1/8 (3.2)		5/32 (4.0)
5 Insulator (required)	54N01		54N01		54N01		54N01		54N01
2 Collet	10N22		10N23		10N24		10N25		54N20
6 Gas Lens	45V24		45V25		45V26		45V27		45V28
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 Alumina Gas Lens	54N18	54N17	54N16	54N15	54N14	—	—	54N19	
* Long Gas Lens	—	54N17L	54N16L	54N15L	—	—	—	—	
Large Diameter Gas Lens									
Electrode Size — inch (mm)	.040 (1.0)		1/16 (1.6)		3/32 (2.4)		1/8 (3.2)		5/32 (4.0)
8 Insulator (required)	54N63		54N63		54N63		54N63		54N63
2 Collet	10N22		10N23		10N24		10N25		54N20
9 Large Diameter Gas Lens	45V0204		45V116		45V64		995795		45V63
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	—	
Stubby Non-Gas Lens									
Electrode Size — inch (mm)	.040 (1.0)		1/16 (1.6)		3/32 (2.4)		1/8 (3.2)		
11 Insulator (required)	18CG20		18CG20		18CG20		18CG20		
12 Stubby Collet	10N22S		10N23S		10N24S		10N25S		
13 Stubby Collet Body	17CB20		17CB20		17CB20		17CB20		
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	
14 Stubby Alumina	13N08	13N09	13N10	13N11	13N12	13N13	—	—	
Stubby Gas Lens									
Electrode Size — inch (mm)	.040 (1.0)		1/16 (1.6)		3/32 (2.4)		1/8 (3.2)		
15 Insulator (required)	17GLG20		17GLG20		17GLG20		17GLG20		
12 Stubby Collet	10N22S		10N23S		10N24S		10N25S		
16 Stubby Gas Lens	17GL040		17GL116		17GL332		17GL18		
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	
17 Alumina Gas Lens	53N58	53N59	53N60	53N61	53N61S	—	—	—	
Back Caps									
18 Short	57Y04		19 Medium 300M		20 Long 57Y02				

\*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)	<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)	—

## Replacement Parts

<b>Torch Body</b>		
W-410	<b>CS410A</b>	
<b>Handle</b>		
D-Handle	<b>CS210-H</b>	
<b>Braided Rubber Power Cables</b>		
<b>12.5 ft. (3.8 m)</b>	<b>25 ft. (7.6 m)</b>	<b>50 ft. (15.2 m)</b>
<b>CS410-12PC</b>	<b>CS410-25PC</b>	<b>CS410-50PC</b>
<b>Braided Rubber Water Hoses</b>		
<b>12.5 ft. (3.8 m)</b>	<b>25 ft. (7.6 m)</b>	<b>50 ft. (15.2 m)</b>
<b>GS310-12W</b>	<b>GS310-25W</b>	<b>CS410-50W</b>
<b>Braided Rubber Gas Hoses</b>		
<b>12.5 ft. (3.8 m)</b>	<b>25 ft. (7.6 m)</b>	<b>50 ft. (15.2 m)</b>
<b>CS410-12G</b>	<b>CS410-25G</b>	<b>CS410-50G</b>

## 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)



**Wireless Remote Foot Control 301580**  
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 301582**  
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**  
Must be ordered in quantities of four. One-gallon recyclable plastic bottle. 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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