

Weldcraft™ A-80 Series

Formerly WP-24 Series

Hand-Held Air-Cooled
TIG Welding Torches



Quick Specs

Models

A-80 Flex
A-80 Flex Valve

Applications

Shipbuilding
Motorsports
Aviation
Restricted areas

Rated Output

DC: 80 A, AC: 50 A

Duty Cycle 60%

Electrode Range

.020–3/32 in. (0.5–2.4 mm)

A-80 Series TIG torches

Formerly known as the WP-24 Series, the A-80 Series consists of innovative torches designed for intricate welding applications, especially in limited-access areas and on thin-gauge materials. The A-80 Series torches deliver comfort and versatility for a variety of welding applications.

Featherweight torch body is well balanced to improve operator comfort and control.

Secure mechanical fittings and connections reduce leakage of gas and water.

Flexible neck can be adjusted in any direction to facilitate welding in difficult joints.

Easy gas-flow adjustment using the fingertip gas valve (A-80 Flex Valve).

Combining the flexible neck and gas valve is ideal for optimal positioning and gas flow control (A-80 Flex Valve).

Note: Torches delivered may vary slightly from images shown.



A-80 Flex
(WP-24F)

A-80 Flex Valve
(WP-24FV)



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Torch Packages

Models		1-Piece Power Cable Standard Rubber	
Old Model	New Name	12.5 ft. (3.8 m)	25 ft. (7.6 m)
WP-24F	A-80 Flex	WP-24F-12-R	WP-24F-25-R
WP-24FV	A-80 Flex Valve	WP-24FV-12-R	WP-24FV-25-R

F = Flex FV = Flex Valve

Torch packages include torch body, handle, and power cable.

Connectors

1-piece power cable connectors



273483
25 mm (small) Dinse-style gas thru for one-piece air-cooled torch.



194722
50 mm Dinse-style gas thru for one-piece air-cooled torch.



195378
50 mm Dinse-style for one-piece air-cooled torch.



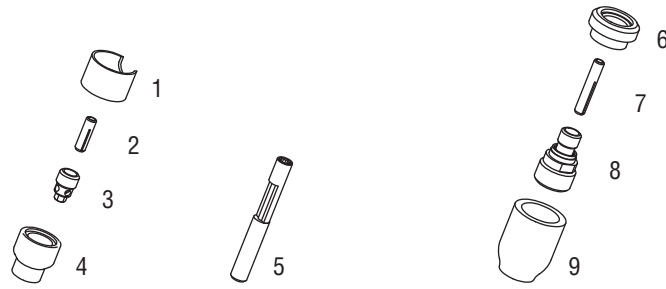
105257
Power cable adapter for one-piece air-cooled torch.



24-5
3/8-24 male adapter.

Machines	Connection Type	1-Piece Power Cable Connectors
TIG Machines		
CST™ 280/282	50 mm Dinse-style	195378
Dynasty® 200/210/280/300/350/400	50 mm Dinse-style	195378
Maxstar® 150 STL/STH, 161 STL/STH	25 mm (small) Dinse-style gas thru	273483
Maxstar® 200/210/280/350/400	50 mm Dinse-style	195378
Syncrowave® 200/210	50 mm Dinse-style gas thru	194722
Syncrowave® 250 DX/300/350 LX/400	50 mm Dinse-style	195378
	1/2 in. stud	105257
Multiprocess Machines		
Dimension® 302/452/NT 450/650/652	1/2 in. stud	105257
Dynasty® 280 DX Multiprocess/300 Multiprocess	50 mm Dinse-style	195378
Multimatic® 200/215/220 AC/DC	25 mm (small) Dinse-style gas thru	273483
Multimatic® 235/255	50 mm Dinse-style	195378
PipeWorx	1/2 in. stud	105257
XMT® 304/350	50 mm Dinse-style	195378
XMT® 450	1/2 in. stud	105257
Engine-Driven Machines		
Most Big Blue®, Trailblazer®, Bobcat™, Blue Star® and Wildcat® models	1/2 in. stud	105257
Big Blue® 450 Duo CST	50 mm Dinse-style	195378
Other Adapters		
	3/8-24 male adapter	24-5
	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 Insulator (required)	53N22	53N22	53N22
2 Collet	53N16	53N14	24C332
3 Collet Body	53N18	53N19	24CB332
Nozzle Size — size # (inch)	4 (1/4)	5 (5/16)	6 (3/8)
4 Alumina	A53N24	A53N25	A53N27
* Lava	—	53N25	—

Collet Body Wrench

5 53N20

Gas Lens

Electrode Size — inch (mm)	.040 (1.0)	1/16 (1.6)	3/32 (2.4)		
6 Insulator (required)	53N66	53N66	53N66		
7 Collet	53N63	53N64	24GLC332		
8 Gas Lens	45V42	45V43	45V44		
Nozzle Size — size # (inch)	4 (1/4)	5 (5/16)	6 (3/8)	7 (7/16)	8 (1/2)
9 Alumina Gas Lens	53N58	53N59	53N60	53N61	53N61S

*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 Bodies		
A-80 Flex		WP-24F
A-80 Flex Valve		WP-24FV
Handles		
Ribbed		105Z55R
Knurled		H-100
Valve		
A-80 Flex Valve		150VTB
Power Cables		
	12.5 ft. (3.8 m)	25 ft. (7.6 m)
Rubber	—	284217

Genuine Miller® Accessories



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.

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