

# Weldcraft™ w-225 Pencil

## Formerly WP-20P

Hand-Held Water-Cooled  
TIG Welding Torches 

### Quick Specs

**Model**  
W-225 Pencil

**Applications**  
Aerospace  
Dairy  
Food/beverage industry  
Light and heavy manufacturing  
Maintenance and repair

Petro/chemical  
Precision fabrication  
Shipbuilding  
Tube and pipe  
Vocational

**Rated Output**  
DC: 225 A, AC: 160 A

**Duty Cycle** 100%

**Electrode Range**  
.020–1/8 in. (0.5–3.2 mm)

### W-225 Pencil TIG torch

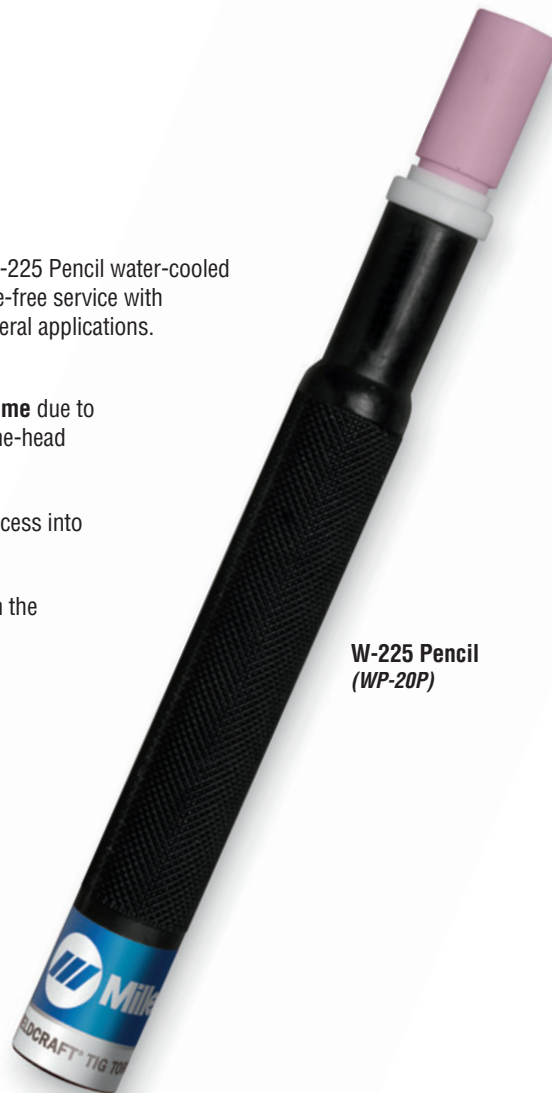
Formerly known as the WP-20P, the W-225 Pencil water-cooled torch is designed for long-term, trouble-free service with consistent welding performance in general applications.

**Extend torch life and minimize downtime** due to overheating with the efficient around-the-head cooling design.

**Pencil-style head** allows for greater access into hard-to-reach joints.

**Comfort and control** are increased with the lightweight, compact body design.

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



W-225 Pencil  
(WP-20P)



**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		Vinyl	
Old Model	New Name	12.5 ft. (3.8 m)	25 ft. (7.6 m)
WP-20P	W-225 Pencil	WP-20P-12	WP-20P-25

P = Pencil

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



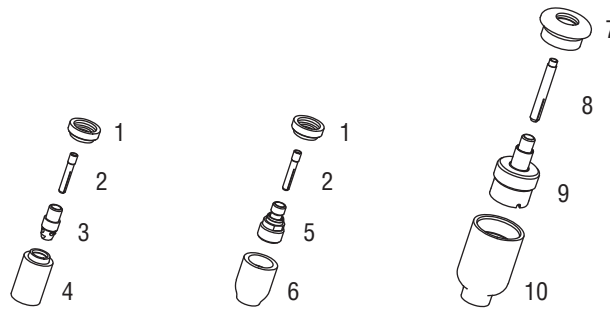
**45V11**  
Power cable adapter for water-cooled torch.



**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)	.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	—

\*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-225		<b>WP-20P</b>
<b>Handles</b>		
Ribbed		<b>53N06R</b>
Knurled		<b>53N06</b>
<b>Vinyl Power Cables and Hoses</b>		
	<b>12.5 ft. (3.8 m)</b>	<b>25 ft. (7.6 m)</b>
Power Cable	<b>45V03HD</b>	<b>45V04HD</b>
Water Hose*	<b>45V07HD</b>	<b>45V08HD</b>
Gas Hose*	<b>45V09</b>	<b>45V10</b>

\*Requires hose clamp 53N04.

## Genuine Miller® Accessories

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



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



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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