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Fig.500AB Series PEX Ball Valve

How to install your 500AB series PP-R and PP-RCT PEX ball valve

Fig. 500AB series PEX Ball Valve F1807

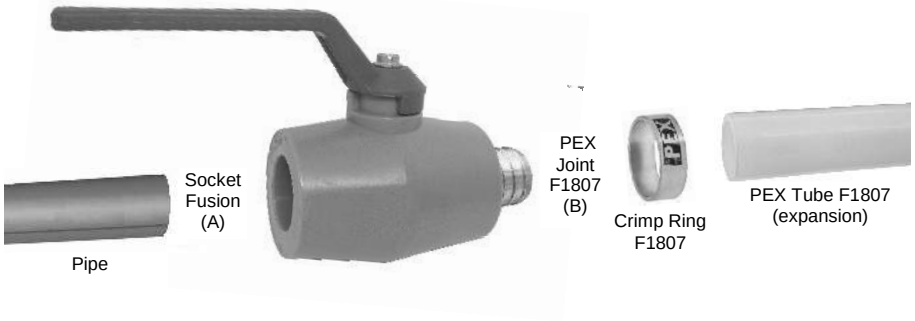
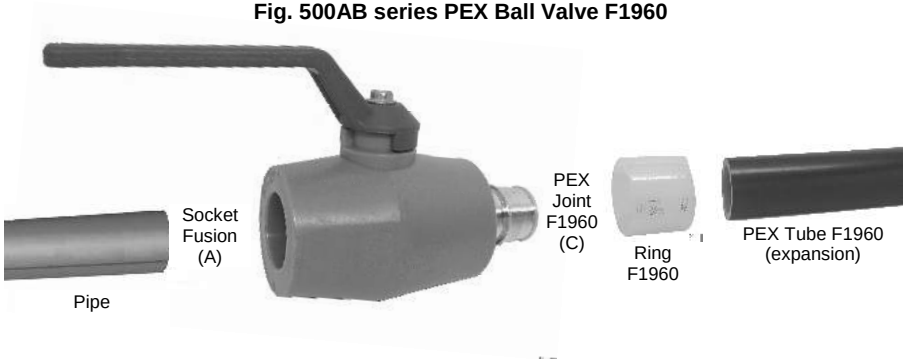


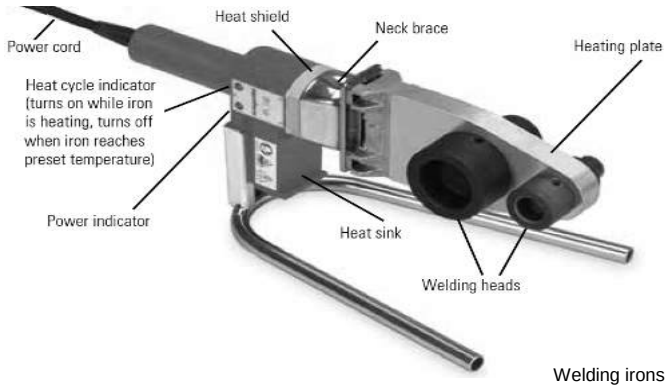
Fig. 500AB series PEX Ball Valve F1960



SOCKET FUSION FOR FIG. 500AB SERIES (A)

For proper heat fusion connection, the two surfaces to be fused together need to be heated to the proper melting temperature, pressed together and allowed to cool under pressure. This process allows the PP-R or PP-RCT chains to reform as a solid structure (without the need for glues, solders, gaskets, or other foreign materials). Only PP-R or PP-RCT type pipe material can be used for this process. A final pressure test should be performed to verify the integrity of the connections. These instructions will cover the basic techniques for heat fusing the pipe.

1) **Cutting the pipe:** Cuts should be as square as possible (never more than 5° off) and without jagged edges. Check for longitudinal cracks on the pipe wall after each cut.
2) **Prepare Welding heads:** Socket fusion is made by using welding irons. The welding irons have interchangeable welding heads that are specifically sized to match the pipe and valves for a perfect fit. Different welding heads are required for each pipe size. Only use welding heads from an approved tool manufacturer.
   (a) Install the welding heads on to the welding iron
   (b) Plug in the welding iron to pre-heat. (this will take approx. 5-10 minutes)
   (c) Using a digital thermometer, check the temperature of the welding heads. The temperature should be taken at the inside of the welding heads and at close range. The proper temperature for the socket fusion should be 260 °C +/- 10 °C (500 °F +/- 18 °F). If the iron does not reach 260 °C (500 °F) or drastically exceeds it, the thermometer may be faulty. Use a second thermometer, (contact style) to verify.
3) **Marking the pipe:** Correct welding depth must be achieved to ensure a proper heat fusion connection. Use the chart below (**Socket Fusion Heating and Cooling Times**) to determine the proper welding depth for your pipe size. Make a mark on the tube at the ***Welding depth*** measurement shown on the table.
4) **Socket fusion:** You must use the correct size welding head for a proper fusion. The ***Heating time*** begins when the pipe and the valve are fully inserted into the welding head.
   (a) Welding iron should be clamped down for ease of use.
   (b) Clean the pipe (if needed).
   (c) Push the pipe and valve on to the welding heads **at the same time**.
      - Stop the pipe when you reach the ***Welding depth*** *mark you made on the pipe*. Over-insertion will cause a restriction in the pipe and lower its performance.
      - Stop the valve when you reach the stopline. Tapered heads will offer little resistance until just before the stop.
   (d) Observe the ***Heating time***. A bead will form and become shiny as the fusion nears readiness.
   (e) Remove the valve and pipe from the welding heads.
   (f) Immediately insert the pipe into the valve and quickly push until it comes to a full stop within the ***Welding time***.
      - You will have 5 to 15 seconds to make any adjustments to the alignment, depending on the pipe size.
      - Align the pipe and observe the ***Cooling time***. You will need to provide full support for at least 1/4 of the cooling time.



Welding irons

Socket Fusion Heating and Cooling Times PP-R or PP-RCT							
Dimension		*Welding depth*		*Heating time [sec]*		*Welding time*	*Cooling time*
OD [mm]	*ND [inch]*	*[mm]*	*[inch]*	*Above 5°C (41°F)*	*below 5°C (41°F)*	*[sec]*	*[min]*
Ø20	1/2”	14.5	0.57”	5	8	4	2
Ø25	3/4”	16.0	0.63”	7	11	4	2
Ø32	1”	18.1	0.71”	8	12	6	4

SIDE PEX JOINT (ASTM 1807) FOR FIG. 500AB SERIES (B)

Ensure that the tubing is cut square and is free from burrs and/or debris. The tubing should be seated completely on the valve and firmly engage all of the end barbs. An appropriate sized crimp ring should be installed using a properly sized/adjusted tool.

1) **Cutting the pipe:** you may use any method which will not damage the pipe. Cuts should be as square as possible (never more than 5° off) and without jagged edges. Check for longitudinal cracks on the pipe wall after each cut.

2) **Installation:**
   (a) Slide crimp ring over end of tubing.
   (b) Insert valve to end of tubing until it stops.
   (c) Position the crimp ring 1/8” to 1/4” from the end of the tubing and over the ribs of the valve
   (d) Place the crimping end of the tool around the crimp ring and press the handle together
   (e) Check for proper crimp with a gauge.

SIDE PEX JOINT (ASTM 1960) FOR FIG. 500AB SERIES (C)

Ensure that the tubing is cut square and is free from burrs and/or debris. The tubing should be seated completely on the valve and firmly engage all of the end barbs. An appropriate sized ring should be installed using a properly sized/adjusted tool.

1) **Cutting the pipe:** Cuts should be as square as possible (never more than 5° off) and without jagged edges. Check for longitudinal cracks on the pipe wall after each cut.

2) **Installation:**
   (a) Insert ring onto PEX tube
   (b) Insert expander tool into PEX tubing and activate the tool.
   (c) Carefully expand the PEX tubing and ring.
   (d) Insert expanded ring/tubing onto PEX valve.