

Webstone's Pro-Connect™ PP-R Pro sockets are manufactured and designed to be compatible with all Aquatherm PP-R piping systems. **IMPORTANT:** These instructions are intended to provide a quick reference for the convenience of the installer. Webstone recommends the installer be fully trained by Aquatherm, and review and follow the full installation instructions provided by the PP-R piping manufacturer and welding iron/fusion machine manufacturer before proceeding with installation. The installer must ensure that any installation complies with all local plumbing and building codes.

Each valve has been cleaned and prepared for installation. Please ensure that the socket end(s) remain clean and free from all contaminants and oils prior to installation.

Socket Fusion Heating and Cooling Times

IMPORTANT: These values may vary by style of pipe used – see aquatherm.com and the fusion equipment manufacturer for complete information.

PIPE DIAMETER		INSERTION DEPTH	HEATING TIME		WELDING TIME	IMMOBILITY TIME	COOLING TIME
ND (inch)	OD (mm)		above 40°F	below 40°F			
1/2"	20 mm	9/16"	5 seconds	8 seconds	4 seconds	30 seconds	1.5 minutes
3/4"	25 mm	5/8"	7 seconds	11 seconds	4 seconds	30 seconds	1.5 minutes
1"	32 mm	11/16"	8 seconds	12 seconds	6 seconds	60 seconds	3 minutes
1 1/4"	40 mm	13/16"	12 seconds	18 seconds	6 seconds	60 seconds	3 minutes
1 1/2"	50 mm	15/16"	18 seconds	27 seconds	6 seconds	60 seconds	3 minutes
2"	63 mm	17/16"	24 seconds	36 seconds	8 seconds	90 seconds	4.5 minutes

Installing Pro-Connect™ PP-R Pro Products using Socket Fusion

Step 1 – Match Pipe and Valve Size, Cut Pipe

Match the pipe size with the appropriate Pro-Connect™ PP-R Pro Product. Verify that both the pipe and Pro-Connect™ PP-R Pro product are undamaged and appropriate for the intended service. Carefully cut the pipe to the proper length necessary for the installation. When cutting the pipe, care must be exercised to ensure that it remains round and does not get flattened into an oval.

IMPORTANT: The pipe must be long enough to fit inside the Pro-Connect™ PP-R Pro product, not just to reach its face.

Insert the pipe to the depth shown in the table above.

Step 2 – Inspect the Cut

Both inside and outside of the pipe must be cleaned of burrs prior to installation. A good cut is smooth, square, and has no cracks or stress marks inside or outside the pipe. Fusing pipe that is cracked will result in joints that leak. Remove standing dirt and oil from both the pipe and valve using an isopropyl alcohol-based cleaner (70% by volume or greater). Dirty pipe will not form proper beads during fusion.

Step 3 – Measure Pipe Insertion Depth

Prior to installing the pipe into the Pro-Connect™ PP-R Pro product, measure the insertion depth from the end of the pipe using the table above or using marking guide provided by PP-R pipe manufacturer, and mark it with a felt-tipped pen.

Step 4 – Prepare Welding Iron

Install the appropriate welding head for the pipe and fitting on welding iron. Plug in iron and allow it to reach appropriate temperature, around 500° F. Iron must be held steady by an assistant, or clamped in place.

Step 5 – Heat Outside of Pipe and Inside of Fitting

Heat pipe and fitting using welding iron heads for time prescribed in table above, following the heating time appropriate for the ambient temperature. If working in extreme heat (over 100° F), reduce heating time slightly, ensuring that heating time is **at least 80%** of the time shown in the table above. Insert pipe and fitting into the welding iron simultaneously in order to keep the iron steady, do not over insert pipe or fitting into welding iron. A bead will form near the welding heads and become shiny as the pipe and fitting become ready to fuse.

Step 6 – Insert Pipe in Fitting

At the conclusion of the heating time, remove from the heating iron and you now have the specified welding time to complete the connection. To do so, squarely insert the pipe into the fitting pushing until the bead formed on the pipe during heating (near insertion mark) meets the fitting. Once the rings meet, you will have maximum of 5 to 15 seconds to make any adjustments to the alignment. **DO NOT TWIST THE PIPE/FITTING WHILE INSERTING OR ALIGNING. DO NOT ALLOW PIPE OR FITTING TO COOL BEFORE INSERTING. DO NOT TOUCH FACE OF PIPE TO EDGE OF FITTING.**

Step 7 – Allow Welded Connection to Cool

Hold piping steady for the full duration of the immobility time. Release piping and allow assembly to cool for times shown above. Do not pressurize or stress welded connection while the connection sets.

Step 8 – Verify Connection

Both PP-R rings formed during heating should be visible and joined around the connection. Once cooled, pressure test all connections.