WIRSBO®
Life, Safety, Comfort Systems

Wirsbo AQUACENTER™ Valved Manifold Installation Guide For AQUAPEX® Professional Plumbing Systems

Bringing *comfort*™ to life

Uponor

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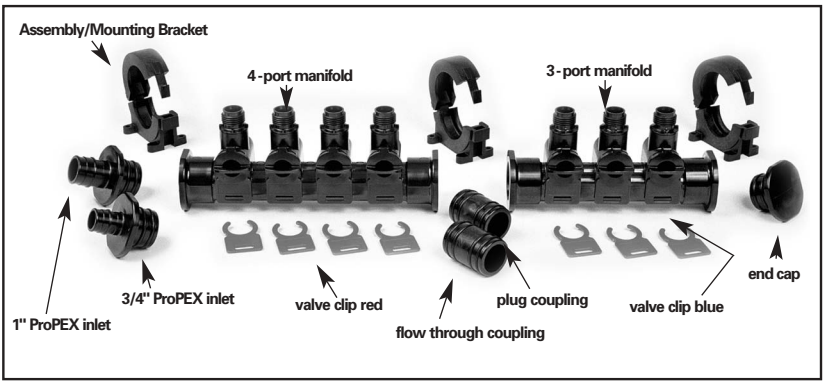
Table of Contents Page

Note: For additional sizing, design and installation guidelines, please refer to the Wirsbo AQUAPEX Installation Handbook.

The AQUACENTER™ Clean Water Management System

Wirsbo's AQUACENTER™ Valved Manifold brings manifold plumbing systems to a new level. Using Wirsbo's state-of-the-art AQUAPEX® tubing, lines are run directly to each fixture from the manifold, reducing the number of required fittings. The AQUACENTER Valved Manifold improves hot water delivery time and ease of installation by using flexible AQUAPEX tubing and fewer fittings.



Wirsbo AQUAPEX tubing is crosslinked polyethylene or PEX. AQUAPEX tubing has been used in plumbing systems around the world for over 30 years, longer than any other plastic plumbing system available. The AQUACENTER Valved Manifold is made of advanced engineered plastic (EP) materials proven in harsh plumbing applications for over 10 years. Together, AQUAPEX tubing and the AQUACENTER Valved Manifold provide a clean water management system.

AQUACENTER Valved Manifold System Standards, Ratings and Certifications

- Wirsbo's AQUACENTER Valved Manifold is tested to ASTM F877 as certified by NSF International.
- The AQUACENTER Valved Manifold is listed to NSF International Standards 14 and 61 that define requirements for performance and toxicity.
- The AQUACENTER Valved Manifold is listed to IAPMO IGC 109-2003, file no. 3946.

Section 2

Important Product Information

FAILURE TO FOLLOW THE INSTRUCTIONS AND INSTALLATION GUIDELINES SET FORTH IN THIS MANUAL CAN RESULT IN THE FAILURE OF THE AQUACENTER CLEAN WATER MANAGEMENT SYSTEM.

- AQUACENTER Valved Manifold threaded outlets seal with a gasket, and do not require pipe dope or Teflon tape.
- Do not over tighten connections by using tools. Tighten swivel nuts by hand until snug, plus a ¼ to ½ turn.
- Do not subject the AQUACENTER Valved Manifold to impact.
- Distribution lines should exit the AQUACENTER Valved Manifold in straight lines perpendicular to the length of the AQUACENTER Valved Manifold.
- Supply lines should enter or exit the AQUACENTER Valved Manifold in a straight line parallel to the length of the AQUACENTER Valved Manifold.
- Do not expose the PEX tubing or the AQUACENTER Valved Manifold to open flame.
- Do not allow solder, flux, solvents or urethane foams to come in contact with the AQUACENTER Valved Manifold as immediate damage may result.
- Do not assemble or disassemble the AQUACENTER Valved Manifold while pressurized. Be sure that the water supply is turned off and that pressure has been relieved from the system.
- Do not conceal the AQUACENTER Valved Manifold behind permanent walls, floors or ceilings.
- Keep valve turning tool in an accessible location near the AQUACENTER.
- Hang or fasten the plastic bag supplied with the manifold kit near the AQUACENTER for future reference.
- Always inform the homeowner where the AQUACENTER is located if fixture stops are omitted.

AQUACENTER Valved Manifold Sizing Guidelines

The general sizing information shown below is appropriate for many AQUACENTER Valved Manifold installations. For additional sizing information, refer to the AQUAPEX Installation Manual. Please consult your local code for the proper sizing information.

General Guidelines

Fixture	Minimum Tubing Size Tubing Size (in.)	Flow Rate (gpm)	Flow Pressure (psi)
Bathtubs (60" x 32" and smaller)*	½	4	8
Bathtubs (larger than 60" x 32")	½	4	8
Bidet	⅜	2	4
Combination sink and tray	½	4	8
Dishwasher, domestic*	½	2.75	8
Drinking fountain	⅜	0.75	8
Hose bibs	½	5	8
Kitchen sink*	½	2.5	8
Laundry, 1, 2 or 3 compartments*	½	4	8
Lavatory	⅜	2	8
Shower, single head*	½	3	8
Sinks, flushing rim	½	N/A	N/A
Sinks, service	½	3	8
Urinal, flush tank	½	1.6	15
Urinal, flush valve	¾	15	15
Wall hydrant	½	N/A	N/A
Water closet, flush tank	⅜	1.6	15
Water closet, flushometer valve	1	35	25
Water closet, flushometer tank	⅜	1.6	15
Water closet, one piece*	½	6	20

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 psi = 6.895 kPa.

*Where the developed length of the distribution line is 60 feet or less, and the available pressure at the meter is a minimum of 35 psi, the minimum size of an individual distribution line supplied from a manifold and installed as part of a parallel water distribution system should be one nominal tubing size smaller than the sizes indicated.

Engineered Parallel Water Distribution System Design Information — ⅜" Tubing

The following sizing guidelines for parallel water distribution systems are based on flow rates of typical fixtures that require a minimum of 8 psi residual pressure. Wirsbo recommends using the smallest distribution line size that will meet the required fixture demands.

Residual Pressure at the Fixture (psi)

Inlet Pressure in psi = 35

	⅜" Tubing Length (feet)							
gpm	**20**	**40**	**60**	**80**	**100**	**120**	**150**	**200**
0.5	34.5	34.0	33.5	33.0	32.5	32.0	31.25	30.0
1.0	33.6	32.2	30.8	29.4	28.0	26.6	24.50	21.0
1.5	32.0	29.0	26.0	23.0	20.0	17.0	12.50	N/A
2.0	29.9	24.8	19.7	14.6	9.5	N/A	N/A	N/a
2.5*	27.3	19.6	11.9	N/A	N/A	N/A	N/A	N/A
3.0	24.2	13.4	N/A	N/A	N/A	N/A	N/A	N/A

Inlet Pressure in psi = 45

	⅜" Tubing Length (feet)							
gpm	**20**	**40**	**60**	**80**	**100**	**120**	**150**	**200**
0.5	44.5	44.0	43.5	43.0	42.5	42.0	41.25	40.0
1.0	43.6	43.6	43.6	43.6	43.6	43.6	43.60	43.6
1.5	42.0	39.0	36.0	33.0	30.0	27.0	22.50	15.0
2.0	39.9	34.8	29.7	24.6	19.5	14.4	N/A	N/A
2.5*	37.3	29.6	21.9	14.2	N/A	N/A	N/A	N/A
3.0	34.2	23.4	12.6	N/A	N/A	N/A	N/A	N/A

Inlet Pressure in psi = 60

	⅜" Tubing Length (feet)							
gpm	**20**	**40**	**60**	**80**	**100**	**120**	**150**	**200**
0.5	59.5	59.0	58.5	58.0	57.5	57.0	56.25	55.0
1.0	58.6	57.2	55.8	54.4	53.0	51.6	49.50	46.0
1.5	57.0	54.0	51.0	48.0	45.0	42.0	37.50	30.0
2.0	54.9	49.8	44.7	39.6	34.5	29.4	21.75	9.0
2.5*	52.3	44.6	36.9	29.2	21.5	13.8	N/A	N/A
3.0	49.2	38.4	27.6	16.8	N/A	N/A	N/A	N/A

*8 feet per second (fps) maximum velocity required by some plumbing codes

Notes:

1. Chart based on minimum residual pressure requirement of 8 psi at the fixture
2. Maximum flow rate based on 10 fps velocity

Supply Line Size	¾" up to 2½ bathrooms 1" up to 4½ bathrooms
Fixture Port Rating (at 8 fps flow velocity)	⅜" = 2.5 gpm ½" = 4.0 gpm
Fixture Port Pressure Drop (at rated flow rate)	⅜" = 1.8 psi ½" = 2.6 psi

AQUACENTER Valved Manifold Installation

Before you begin, gather appropriate tools and materials.

Tools Required

- Screw gun or electric drill
- ProPEX® Expander Tool (Q6295075, Q6301000, Q6251500)
- Tubing Cutter (E6081125)
- ¾" and 1¼" wood drill bits

Materials Required

- 1" wood screws (for valved manifold mounting)
- ½" or ¾" plywood – only required when mounting between studs
- AQUAPEX Tubing
- AQUACENTER Valved Manifold Kit (includes valve-turning tool and hot/cold labels)
- ProPEX Swivel Adapters (½ or ⅜" for ½" NPSM threaded outlets only)
- Tubing Uncoiler (recommended)

AQUACENTER Valved Manifold Assembly

The AQUACENTER Valved Manifold can either be assembled prior to mounting or may be assembled as it is being mounted.

1. Determine the total number of outlets required for both the hot and cold manifold assemblies and the appropriate inlet/end cap arrangement.






2. AQUACENTER Valved Manifolds are assembled with Flow Through Couplings (Q2121313) or Coupling Plugs (Q2121251).
3. Insert the coupling into the end of the manifold until it stops. Attach the next manifold to the coupling and install the assembly/mounting bracket (Q2120020).
4. Insert the ¾" ProPEX inlet (Q2120750) or 1" ProPEX inlet (Q2121000) into the appropriate end of the manifold assembly. Install the Assembly/Mounting Bracket.
5. Insert the End Cap (Q2121250) into the other end of the manifold assembly. Install the Assembly/Mounting Bracket.
6. Ensure that all assembly/mounting brackets are fully locked and the release tabs are located on the front (valve) side of the manifold.
7. For hot water distribution, install the Red Valve Clips (Q2120001), included in the kit, prior to the manifold installation. Remove the Blue Valve Clips (Q2120002) by grasping the clip and pulling up and away from the outlet. Rotating the clip away from the tab on the valve while pulling may simplify removal.

Flow Through Coupling **Coupling Plug**

Assembly/Mounting Bracket

¾" ProPEX Inlet **1" ProPEX Inlet**

Note: If insertion of components is difficult, lubricate the o-rings with a soapy water solution.

AQUACENTER VALVED MANIFOLD PLACEMENT

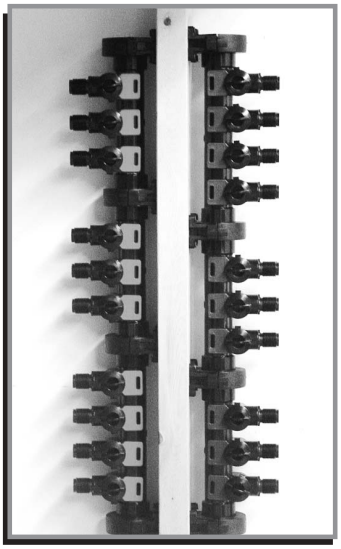
Before installing the AQUACENTER Valved Manifold, review the following guidelines and the local plumbing and building codes.

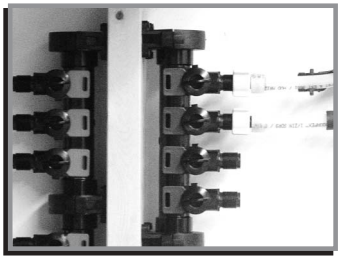
Guidelines

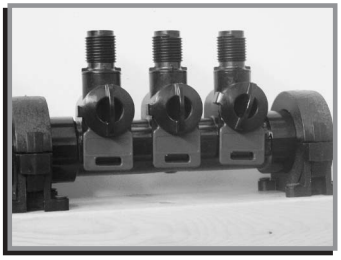
1. Install the AQUACENTER Valved Manifold in a fully accessible location. The opening should be large enough to allow complete servicing of the manifold (mounting screws, distribution lines, etc.).
2. When local code allows, mount the AQUACENTER Valved Manifold unit in a fire-rated wall provided that the access door meets the same rating requirements as the wall and is installed over the access opening.
3. To maximize potential water and energy savings, mount the AQUACENTER Valved Manifold as close as is practical to the hot water source.
4. Do not install the AQUACENTER Valved Manifold within a continuously recirculating hot water plumbing loop. The AQUACENTER Valved Manifold, however, may be supplied from a recirculating hot water loop.
5. If a home requires multiple AQUACENTER Valved Manifolds to service numerous fixtures in the home, consider dividing high-demand fixtures between the units.
6. When the home requires more than one unit due to the number of fixtures or size of the home, consider sub-manifolding and locating a remote AQUACENTER manifold near an outlying group of fixtures.

Tips for Mounting AQUACENTER Valved Manifolds

1. Always mount manifolds in locations that are easily accessible and allow valves to face outward.
2. Always ensure that the release tab on the Assembly/Mounting Brackets is accessible.
3. Provisions must be made to support the tubing runs as they exit the AQUACENTER Valved Manifold. Any bend within 6 inches of a ProPEX connection to ⅜" and ½" AQUAPEX tubing requires the use of a tubing talon, bend support or stud. For ¾" and 1" tubing, support is required for bends within 10 inches of a ProPEX connection.
4. Do not over tighten mounting screws – over tightening may cause the Assembly/Mounting Brackets to fail.



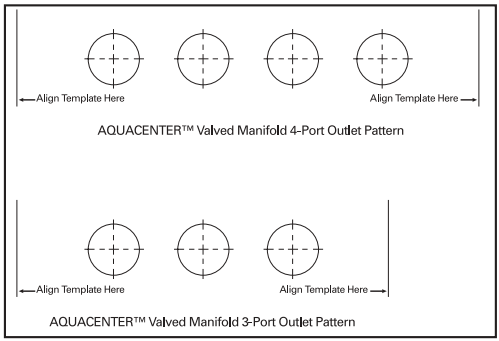




5. When mounting on a stud, center the Assembly/Mounting Brackets on the stud to allow the bracket to open sufficiently.
6. When surface mounting, manifolds must be mounted with fasteners appropriate for the wall surface. If surface mounting to sheetrock, brackets should align with as many studs as practical.
7. Extended driver bits simplify Assembly/Mounting Bracket installation, and allow mounting of the manifold in a fully assembled configuration.
8. To run distribution lines through studs, the drill guide provided may be helpful.

Using the Drill Guide

The drill guide, included with each AQUACENTER Valved Manifold, is used to mark locations of distribution holes that are drilled through the studs. The distribution lines may pass through these holes as they are attached to the AQUACENTER Valved Manifold ports. Use one drill guide to mark all studs.



1. Fasten the drill guide template so that the holes are in the center of the stud.
2. Mark the appropriate number of holes on the stud by lancing a pencil through the crosshairs of the drill guide.
3. Remove the guide and drill holes.

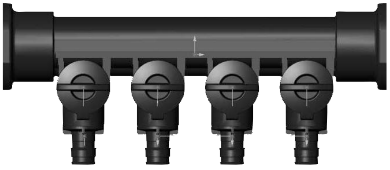
Caution: When the AQUACENTER Valved Manifold is installed prior to wall-finishing operations, protect the unit from paint, texture compounds and drywall dust.

Connecting AQUAPEX to the AQUACENTER Valved Manifold

1. The manifold is available with ¾" or 1" ProPEX supply connections and either ½" threaded outlets (to be connected with a ProPEX swivel adapter) or direct ProPEX connections.
2. Please refer to the appendix for instructions on making a proper ProPEX connection.
3. If using the swivel adapter to thread onto the manifold, start thread and hand tighten until snug, plus a ¼ turn. Do not over tighten the swivel connections or use tools.
4. Open all valves after completing each connection.

Note: Valves are ¼ turn only. Turn valves counter-clockwise to open and clockwise to close. Do not turn past the valve stop.

Valves open



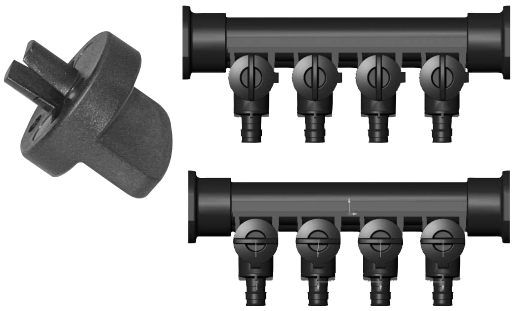
Valves closed

Caution: Turning the valves past the stop will cause the valve body to blow off under pressure.

5. Label each valve handle with the hot and cold fixture labels supplied with the AQUACENTER Valved Manifold.
6. Cap any unused outlet and turn it to the off position.
7. Attach the manifold supply tubing to the appropriate end using proper ProPEX connection procedures.

Caution: Do not use thread sealant (Teflon tape, pipe dope) on the connections. The carriers present in these compounds can crack the plastic port connections, resulting in leaks and water damage.

Use the valve turning tool to open and close valves.



Filling and Testing the AQUACENTER Valved Manifold System

System Test

Air pressure testing of an AQUACENTER Valved Manifold is acceptable and preferred to hydrostatic testing in areas where cold temperatures could freeze the system or where water is not available. Uponor Wirsbo recommends that the installer pressurize the system with compressed air after installing and capping distribution lines. AQUACENTER Valved Manifold valves **must be in the open position prior and during the test**, which should utilize a pressure of not less than working system pressure. Test the system for a minimum of 15 minutes. During the test, system pressure should drop no more than 8 psi in a one-hour period.

Filling the System

Open all connected port valves before filling the system with water and pressurizing.

Care must be exercised when opening a port valve to an empty or unpressurized line. The fixture to which the line is connected should be in the OFF position, and the valve must be opened slowly until water starts to flow into the line.

Valve stems are replaceable. Order Q2120050.

Note: Test the system to a minimum of working system pressure.

WARNING! PRESSURES USED IN TESTING CAN BLOW UNMADE OR INCOMPLETE CONNECTIONS APART WITH TREMENDOUS FORCE!

This force is many times greater when air is used as the test media. To reduce the risk of personal injury, ensure that all connections are completed before testing. Use only the pressure and time required to determine that the system is leak free.

System Disinfection

AQUACENTER manifolds and AQUAPEX tubing should be disinfected in accordance with AWWA C651-86, Standard for Disinfecting Water Mains, or in accordance with local codes.

FAILURE TO FLUSH THE SYSTEM NOTICE!

To prevent reduced service life of system components, disinfection solutions should not stand in the system longer than 24 hours. Flush the system with potable water after disinfection.

DO NOT ALLOW FLUIDS TO FREEZE IN THE AQUACENTER VALVED MANIFOLD SYSTEM.

AQUACENTER VALVE REPLACEMENT

CAUTION: MAKE SURE THERE IS NO PRESSURE ON THE AQUACENTER VALVED MANIFOLD SYSTEM PRIOR TO REPAIR OR REPLACEMENT OF ANY SYSTEM COMPONENTS.

All AQUACENTER Valved Manifolds come complete with assembled valves and their necessary o-rings. O-rings are required for proper valve operation.

1. Remove the red or blue valve clip using a small flat-head screwdriver or by hand.
2. Push the valve down as far as it will go and turn clockwise past the indent on the manifold.
3. Use pliers to grip the handle of the valve if removal is difficult.
4. Place a small amount of soap and water solution on the o-rings on the replacement valve.
5. Locate the tab on the valve so that it clears the indent on the manifold and push the valve all the way.
6. Turn the valve past the indent and pull up until it hits the stop.
7. Slide a red or blue clip with the appropriate label between the manifold and the valve until the clip snaps into place.
8. Pull the valve out of the manifold.

Caution: Failure to install the valve clip could result in the valve being blown off when the system is pressurized.

ProPEX Fittings and Installation Instructions

Wirsbo ProPEX fittings are designed for use with AQUAPEX ASTM F876, F877 and F1960 tubing. Connections are made by sliding a ProPEX ring over the PEX tubing and expanding them simultaneously. ProPEX rings are made of the same Engel-method PEX as the tubing. The expanded tubing and ProPEX Ring then slide over the fitting. The connection is made as the PEX tubing shrinks over the fitting due to the unique shape memory of AQUAPEX. ProPEX fittings come with a 10-year warranty when installed by a Wirsbo-trained installer.

Tools Needed

- ProPEX Expander Tool (hand expander, air expander or battery expander)
- Properly sized expander head hand tightened on the tool
- Tubing cutter designed for plastic tubing

Note: This manual outlines instructions when using the hand or manual expander tool. See the appropriate expander tool manual for specific installation instructions for that tool.

Before You Begin

1. Be sure to have the appropriate AQUAPEX tubing, ProPEX rings and ProPEX fittings handy. ProPEX rings come with red and blue writing to help identify hot and cold water lines.
2. Select the appropriate expander head size.
3. With the tool handles separated, thread the expander heaver over the internal driver onto the tool until the threads bottom out.
4. Work the handles of the tool open and close to check for ease of operation. If there is resistance, apply a small amount of lubricant to the internal driver.

Note: Apply a thin coat of the lubricant that comes in the tool case to the internal driver. The lubricant should be applied daily when the tool is in regular use. Use a lint-free cloth. Keep all other parts of the tool

free from grease. The tool handles will open and close smoothly if the tool is properly greased. Failure to properly lubricate the tool may result in improper connections.

ProPEX Connections for AQUAPEX and hePEX™plus

Wirsbo's exclusive ProPEX fittings make solid, permanent connections without torches, glues and gauges. The unique shape memory of AQUAPEX and hePEX™ plus forms a tight seal around the fitting, creating a strong, reliable connection. For more information on these procedures, please consult the AQUAPEX Installation Handbook or the Wirsbo Installation Handbook on Radiant Floor Heating.

EP ProPEX Fittings

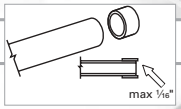
In addition to brass fittings, Wirsbo offers ProPEX fittings in an engineered plastic (EP) material. EP has a proven history in rigorous plumbing environments and offers:

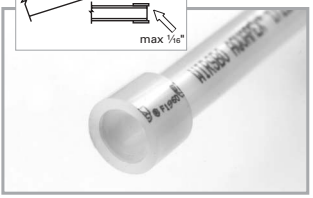
- Greater resistance to harsh conditions
- Resistance to high chlorine levels
- Ability to withstand temperatures from -40 to 320°F
- Strength to withstand pull-out tests of 1,000 pounds
- Completely non-toxic components

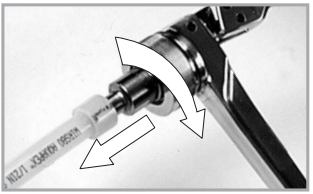
ProPEX Components

- **AQUAPEX/hePEX plus Tubing**
- **Insert Fitting**
- **ProPEX Rings**

EP ProPEX fittings are installed exactly the same way as brass ProPEX fittings.







Making ProPEX Connections

1. Square cut the PEX tubing perpendicular to the length of the tubing. Remove all excess material or burrs that might affect the fitting connection.
2. Slide the PEX ring over the end of the tubing. Extend the end of the ring over the end of the tubing no more than 1/16" (1mm).
3. Brace the free handle of the tool, or place one hand on each handle. Fully separate the handles and slide the expander head into the tubing until it stops. Full expansions are necessary to make a proper connection. Bring the handles together to expand. Separate the handles, remove the head from the tubing and rotate it 1/8 turn. Slide the tool head into the tubing in the newly rotated position and expand again.

Important: The tool should be rotated 1/8 turn after EACH expansion to provide smooth and even expansion of the tubing. If the head is not repositioned after EACH expansion, the segments on the tool head may cause deep grooves in the tubing. These grooves can be potential leak paths.

4. Repeat the expansion process until the tubing and ring are snug against the shoulder on the expander head. See **Chart A** on page 17 for the recommended number of expansions for each tubing size.
5. Immediately remove the ProPEX tool. As you slide the tubing over the fitting, you should feel some resistance. If the tubing reaches the shoulder of the fitting without any resistance, the tubing may be over expanded and may require additional time to fully shrink over the fitting. The tubing and PEX ring must be seated against the shoulder of the fitting for a proper connection.

Chart A

Tubing Size	Ring Marking	Head Marking			# of Expansions		
		Manual	Air Exp	Battery Exp	Manual	Air Exp	Battery Exp
3/8"	3/8"	3/8"	3/8"	—	4-5	4-5	6-7
1/2"	1/2"	1/2"	1/2"	—	3-4	3-4	3-4
3/4"	3/4"	3/4"	3/4"	3/4"H	7-9	7-9	6-7H
1"	1"	1"	1"	1"H	12-14	12-14	6-7H
1 1/4"	1 1/4"	—	—	1 1/4"H	—	—	6-7H
1 1/2"	1 1/2"	—	—	1 1/2"H	—	—	6-7H

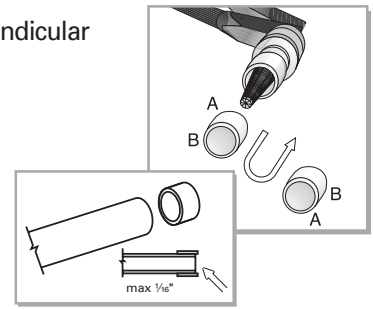
Important Tips For A Proper ProPEX Connection

- Rotate the tool after EACH expansion.
- If the fitting does not slide into the tubing all the way to the stop, immediately remove it from the tubing and expand the tubing one final time. To avoid over expanding the tubing, do not hold the tubing in the expanded position.
- The number of expansions in **Chart A** is the recommended number of expansions. Experience, technique and weather conditions dictate the actual number of expansions. Fewer expansions may be necessary under certain conditions. The correct number of expansions is the number it takes to ensure the tubing and the shoulder of the tool fit snugly against each other.
- Good connections have the PEX ring snug against the stop of the ProPEX fitting shoulder. If there is more than 1/16 of an inch between the ring and the fitting, square cut the tubing 2 inches away from the fitting and make another connection using a new PEX ring.

3/8" AQUAPEX ProPEX Connections

The 3/8" PEX ring is smaller and thicker than the PEX rings used for other tubing sizes. The 3/8" PEX ring must be expanded once on each side to properly fit over the tubing. Expansion of the PEX ring is only necessary for 3/8" AQUAPEX.

1. Square cut the 3/8" AQUAPEX tubing perpendicular to the length of the tube.
2. Expand each side of 3/8" PEX ring with ProPEX tool once.
3. Slide the expanded 3/8" ring over the end of the tubing. Extend the end of the ring over the end of the tubing no more than 1/16 of an inch (1mm).



Once the ⅜" PEX ring has been properly expanded and is on the tubing, refer to steps 3-5 on page 16 for further instruction.

Important Tips For A Proper ⅜" ProPEX Connection

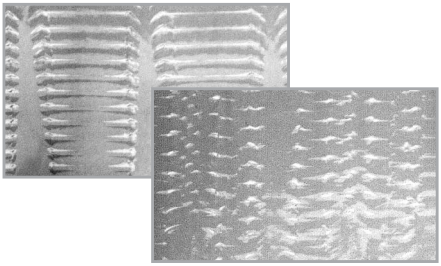
- When the temperature is above 40°F, ProPEX connections to ⅜" AQUAPEX tubing require four to five expansions. When the temperature is below 40°F, only four expansions are necessary
- The thicker PEX ring used for ⅜" ProPEX connections shrinks over the fitting faster than ½", ¾" and 1" PEX rings

Rotating Tool After Each Expansion

The tool should be rotated ⅛ of a turn after EACH expansion to provide smooth and even expansion of the tubing. If the head is not repositioned after EACH expansion, the segments on the tool head may cause deep grooves in the tubing. These grooves can be potential leak paths.

Note: The photos at right show enlarged views of the inside of expanded tubing.

Expansion without proper rotation



Expansion with proper rotation

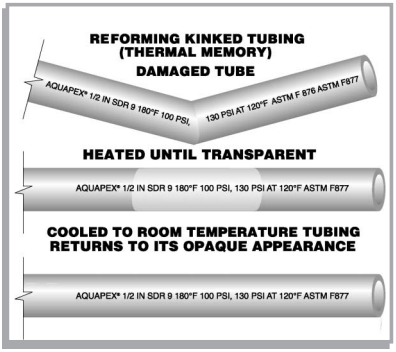
Improper Connections

In the event of an improper connection, square cut the tubing 2 inches from the PEX ring, and begin the steps for making a ProPEX connection.

Reforming Kinked Tubing

If the tubing is kinked and hinders flow, repairs can be made easily.

1. Straighten the kinked portion of the tubing.
2. Heat the kinked area to approximately 265°F with an electric heat gun. Apply the heat evenly until the tubing turns transparent around the entire circumference. Do not use an open flame.
3. Let the repaired AQUAPEX tubing cool undisturbed to room temperature. When the tubing returns to its opaque appearance, the repair is complete.



Plumbing Inspectors Checklist

This checklist is only intended to serve as a guideline to the local authority. It is not intended to include all applicable requirements. Please review the complete Installation Handbook and local code for additional guidelines and/or restrictions. Where any conflict exists between this checklist and local code, the local code shall govern.

Tubing and Fittings

- ❑ AQUAPEX tubing—ASTM F876, ASTM F877, ASTM F1960, CSA B137.5, NSF-pw
- ❑ ProPEX fittings—Manufactured and listed to ASTM F1960 and CSA B137.5

Manifolds

- ❑ NSF Certified to ASTM F1960, NSF-PW
- ❑ Provide access to the AQUACENTER Valved Manifold and its mounting screws, the port valves, distribution line connections and supply-line connections.
- ❑ An AQUACENTER Valved Manifold system, which has valves on all the outlet ports, does not require stop valves at the fixtures. However, the code official may require stop valves at some fixtures.
- ❑ The main service line to the AQUACENTER Valved Manifold should include a main shut-off valve.
- ❑ When the AQUACENTER Valved Manifold is mounted above the water heater, install a minimum of 36 inches of connecting tubing between the water heater and the AQUACENTER Valved Manifold due to chance of heat stacking.
- ❑ When the AQUACENTER Valved Manifold is mounted beside the water heater and is connected with tubing incorporating a horizontal flow, connect with at least 18 inches of tubing.
- ❑ Individual fixture shut-off valves at the manifold should identify the fixture being supplied.

Limitations

- ❑ Do not expose AQUAPEX tubing to direct sunlight for more than 30 days.
- ❑ Do not install AQUAPEX tubing within 6 inches of any gas appliance vents or within 12 inches of recessed light fixtures.

Joints and Connections

- ❑ Square cut all tubing ends and ensure they are free of burrs or debris before a connection is made.
- ❑ Ensure fittings and connections comply with the manufacturer's recommendations.
- ❑ Make transition joints with manufacturer-approved fittings.

ProPEX Fittings

- ❑ Fully seat the AQUAPEX tubing and ProPEX Ring against the shoulder of the fitting.
- ❑ If an improper connection is made, cut 2 inches from the tubing and use a new ProPEX Ring.

Pipe Supports

- ❑ Use plastic pipe supports or metal supports designed for use with plastic tubing.
- ❑ Place horizontal support every 32 inches for ⅜", ½", ¼" and 1" PEX tubing.
- ❑ Provide vertical support every 4 to 5 feet with a mid-story guide placed between floors.
- ❑ Bends within 6 inches of a ProPEX connection to ⅜" to ½" tubing and within 10 inches of a ProPEX connection to ¾" to 1" tubing require support.
- ❑ Allow ⅛ to 3⁄16 inches of slack per foot of run on installed AQUAPEX for expansion and contraction.
- ❑ AQUAPEX should not be rigidly anchored. Anchor the tubing to allow freedom of movement for expansion and contraction.

General Recommendations

- ❑ Protect AQUAPEX tubing passing through hollow masonry walls or metal studs with sleeves or grommets.
- ❑ Protect AQUAPEX tubing from damage (nail, screw, etc.) with suitable steel-plate protectors.
- ❑ The minimum bend radius of PEX is six times the outside diameter.

Testing

- ❑ Pressure test the system to at least working pressure.

Limited Warranty:

Uponor Wirsbo warrants to the real property owners and succeeding owners that AQUAPEX® tubing, AQUACENTER™ Manifolds and the ProPEX® fitting system shall be free from defects in material and workmanship, under normal conditions of use, when used for potable water distribution. For AQUAPEX tubing, AQUACENTER manifolds and ProPEX fittings installed by licensed plumbing contractors recognized by Uponor Wirsbo as having successfully completed the Wirsbo AQUAPEX training course, this limited warranty shall expire in: twenty-five (25) years for AQUAPEX tubing, ten (10) years for AQUACENTER manifolds, ten (10) years for ProPEX fittings, and two (2) years for the ProPEX manual and auto expander tools. For AQUAPEX tubing, AQUACENTER manifolds and ProPEX fittings installed by licensed plumbing contractors not recognized by Uponor Wirsbo as having successfully completed the AQUAPEX training course, this limited warranty shall expire in one (1) year for all AQUAPEX tubing, AQUACENTER manifolds, ProPEX fittings and ProPEX tools. AQUAPEX basin and tank risers, and all straight and angle stop valves sold by Uponor Wirsbo are warranted for one (1) year. All warranty periods are measured from date of installation.

Written notification of a believed failure must be received by Uponor Wirsbo within the applicable warranty period, and within thirty (30) days of the believed breach. All product believed to be defective must be made available to Uponor Wirsbo for testing and determination of cause. Upon receipt of a warranty claim, Uponor Wirsbo shall have ninety (90) business days in which to determine whether it acknowledges responsibility for any believed defects in material or workmanship and the appropriate course of action to be taken.

It is expressly agreed that the exclusive remedies under this limited warranty shall be at the option of Uponor Wirsbo to: issue a refund, repair or replace any article which is proven to be defective. Allowances made to customers for transportation, labor, repairs, or any other work are at the sole discretion of Uponor Wirsbo, and must be authorized in writing, in advance by Uponor Wirsbo.

This limited warranty applies only if the articles sold hereunder are: (a) selected, designed, and installed by a licensed plumbing contractor according to the then current (time of installation) installation instructions provided by Uponor Wirsbo, (b) are not exposed to temperatures and/or pressures that exceed the limitations printed on the tubing, (c) remain in their originally installed location, (d) are connected to potable water supplies, (e) show no evidence of tampering, mishandling, neglect, or accidental damage, (f) are installed in accordance with applicable building and plumbing code requirements. The above limited warranty is the full extent of the express warranties provided by Uponor Wirsbo.

By the mutual agreement of the parties, it is expressly agreed that this limited warranty and any claims arising from breach of contract, breach of warranty, or any other claim arising hereunder, shall be governed and construed under the laws of the State of Minnesota. It is expressly understood that authorized Uponor Wirsbo Sales Representatives, Distributors and Factory Trained Plumbing Professionals have no express or implied authority to bind Uponor Wirsbo to any agreement or warranty of any kind without the express written consent of Uponor Wirsbo.

Uponor Wirsbo DISCLAIMS ANY WARRANTY NOT PROVIDED HEREIN INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. Uponor Wirsbo FURTHER DISCLAIMS ANY STATUTORY OR IMPLIED WARRANTY OF HABITABILITY. Uponor Wirsbo FURTHER DISCLAIMS ANY RESPONSIBILITY FOR LOSSES, EXPENSES, INCONVENIENCES, SPECIAL, INDIRECT, SECONDARY, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM OWNERSHIP OR USE OF THE ARTICLES SOLD HEREUNDER. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

Valid for AQUAPEX® Tubing, AQUACENTER™ Manifolds and
ProPEX® Potable Water Plumbing Components
To Real Property Owners and Succeeding Owners During Warranty Period
This Warranty is Effective for Installations
Made after August 1, 2002

WIRSBO®
Life, Safety, Comfort Systems

Wirsbo AQUACENTER™ Valved Manifold Installation Guide For AQUAPEX® Professional Plumbing Systems

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