

AMX300 Series DirectConnect™ Mixing Valve

INSTALLATION INSTRUCTIONS

APPLICATION

The AMX300 Series DirectConnect™ Mixing Valves fit any application requiring accurate control of water temperature by mixing hot and cold water such as domestic water. The valves are designed for mounting directly onto the water heater in residences, hotels, schools, hospitals, or nursing homes.

Benefits

The AMX300 valves provide increased comfort and safety for the user, as well as reduced installation time for the plumbing contractor.

Operation

Automatic operation is provided by a thermostatic element. The element will control hot and cold water supply based on valve setting. If cold water is shut off, the valve will reduce the mixed water flow rate in seconds.

The internal parts of the valve are coated with Teflon® to reduce scale build-up for better performance in marginal quality water.

NOTE: Even with the Teflon® coating, the internal parts of the valve may still suffer scale build-up and may require cleaning periodically.

SPECIFICATIONS



CAUTION

Injury Hazard.

Exceeding recommended maximum mix temperature can cause burns.

NOTE: If installing AMX300 Series Valve on a system using PEX, consult PEX tubing manufacturer for maximum allowable temperature ratings.

Maximum Hot Water Inlet Temperature: 212° F (100° C).

Operating cold water inlet temperature range: 33° F to 80° F (.5° C to 27° C).

Operating hot water inlet temperature range: 100° F to 212° F (38° C to 100° C).

Mixed Water Supply temperature range: 100° F to 145° F (38° C to 63° C).

Minimum Required Temperature Difference between Hot and Mix: 27° F (15° C).

Flow Rate:

Minimum - 0.25 gpm (0.95 lpm).
Maximum - See Fig. 7.

Cv at 6 GPM:

2.7 at 100° F (38° C) mixed temperature.
2.1 at 120° F (49° C) mixed temperature.
1.5 at 140° F (60° C) mixed temperature.

Maximum Working Pressure: 150 psi.

Lead Free Plumbing Code Compliance: The wettable surfaces of lead free models contain less than .25% of lead by weighted average

Body Material: Nickel-plated brass/bronze construction, Teflon® coated valve body wear surface, Teflon® coated brass shuttle, EPDM O-rings, and proportional design (simultaneous control of hot and cold ports).

Dimensions: See Fig. 1.



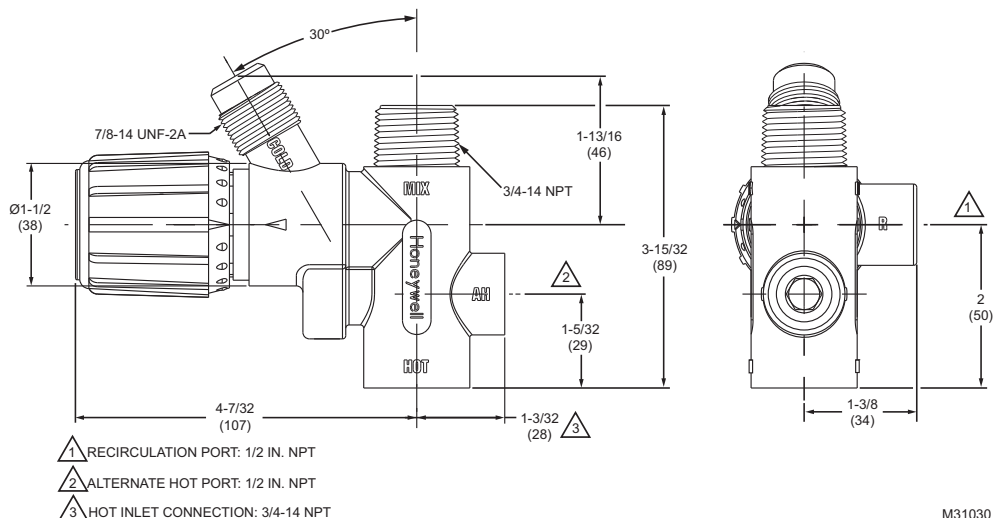


Fig. 1. AMX300 Mixing Valve dimensions in in. (mm).

INSTALLATION

NOTE TO INSTALLER: This product should be installed by a qualified individual, in accordance with local codes and ordinances. It is the responsibility of the installer to properly select, install and adjust these devices as specified in these instructions.

WARNING

Compliance to ASSE 1017 code requires installation of a check valve. An expansion tank must be installed with the check valve to accommodate thermal expansion.

CAUTION

Injury Hazard.

Exceeding recommended maximum mix temperature can cause burns.

Temperature of mixed water from the AMX300 Series DirectConnect Mixing Valve outlet should not exceed 120° F (49° C).

IMPORTANT

1. Do NOT expose the mixing valve to temperatures below 32° F (0° C) or allow it to freeze.
2. Do NOT subject the mixing valve to excess heat during installation.
3. Do NOT use excess thread sealant. If sealant inadvertently enters into the mixing valve chamber, it may cause the internal assembly to malfunction.

1. Before adjusting the outlet mixed water temperature, make sure that the AMX300 Valve is properly installed on the 3/4 in. hot water nipple of the water heater and that the cold water supply to the AMX300 Valve is connected. To be compliant with ASSE 1017 code, a check valve on the cold water side is required.
2. To adjust the outlet mixed water temperature, you must first attach the ThermoStrip (included with the valve) on the outlet pipe connected to the valve. Clean the outlet pipe of the valve first and then firmly apply the Thermo-strip. Flow water and adjust the mixed water outlet temperature to the desired setting range.



Fig. 2. ThermoStrip temperature indicator.

NOTES:

1. The ThermoStrip temperature markers are color-coded for easy reference (See Fig. 2). The actual mixed water temperature is indicated in green with 5° F (3° C) increments. Blue means slightly lower than displayed temperature, and brown means slightly higher than displayed temperature.
2. The thermoStrip is intended for one-time use during initial temperature setting.
3. Open a hot water tap close to the water heater so that mixed water will flow through the AMX300 Valve. The ThermoStrip will show the actual temperature of the mixed water within 10 seconds.
4. To decrease or increase the outlet water temperature, push the mixing valve's handle in towards the valve and turn it clockwise or counterclockwise until the desired temperature is displayed on the ThermoStrip.
5. Ensure that the handwheel is in the locked-out position when finishing the temperature adjustment.

To clean or replace the lower assembly, shut off the water supply and:

1. With a screwdriver, remove the screw and the handwheel.
2. Unscrew the lower nut (turn it counterclockwise) to remove the top assembly. The brass top assembly will pop up.
3. Remove the lower assembly, diffuser, and spring.

⚠ WARNING

Do not use solvents or scratch the metallic or Teflon® coated surfaces.

4. Carefully remove any scaling (calcium deposits) or foreign particles from the valve seat and other internal parts. Use vinegar to remove the calcium deposits. Soak parts until the calcium deposits become soft enough to be scrubbed and washed off.
5. Replace the clean spring, diffuser and lower assembly following the instructions below or use a new replacement kit assembly.
 - a. Insert the spring into the diffuser.

- b. Insert the diffuser with the spring end first into the body.
- c. Fit the valve top assembly into the lower assembly and insert into the valve.
- d. Tighten the lower nut.
- e. Tighten the upper nut.
6. Place the handwheel on the valve.
7. Screw the handwheel onto the valve.
8. Push down and turn the handwheel to set the desired temperature.

NOTE: The AMX300LF (lead free) includes an optional “C” clip that can be installed to prevent further adjustment of the temperature. See Fig. 8 for installation location.

Notice: The optional “C” clip is designed to be very difficult to remove after it has been installed. Install it only after the desired output temperature setting is achieved.

NOTE: Additional thermostrips are available from Honeywell in packs of 10 (TS205-064).

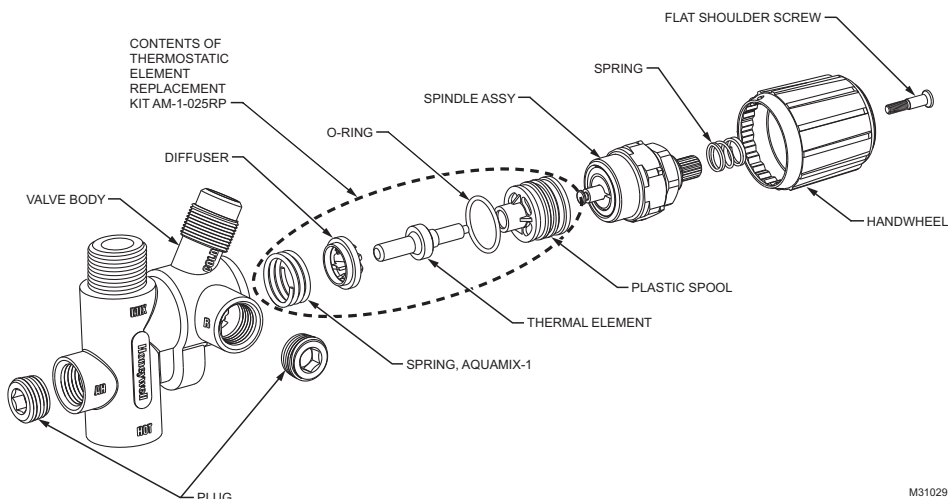


Fig. 6. Expanded view of the AMX300 Series Mixing Valve.

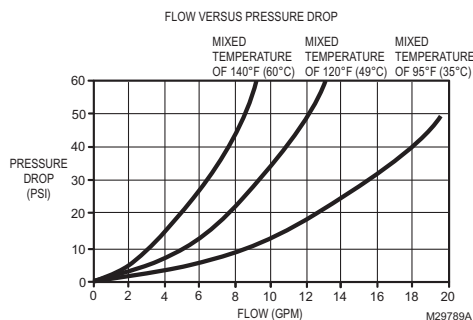


Fig. 7. Pressure Drop Chart.

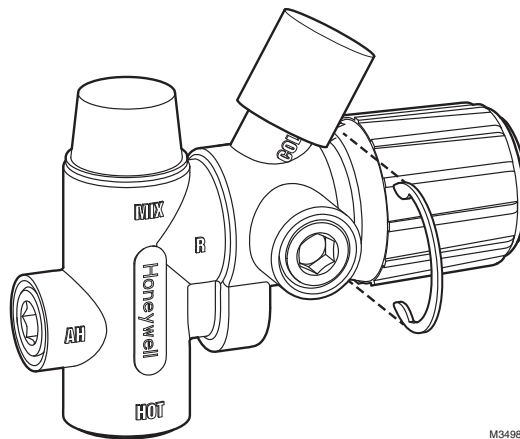


Fig. 8. “C” clip installation location.

Automation and Control Solutions

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