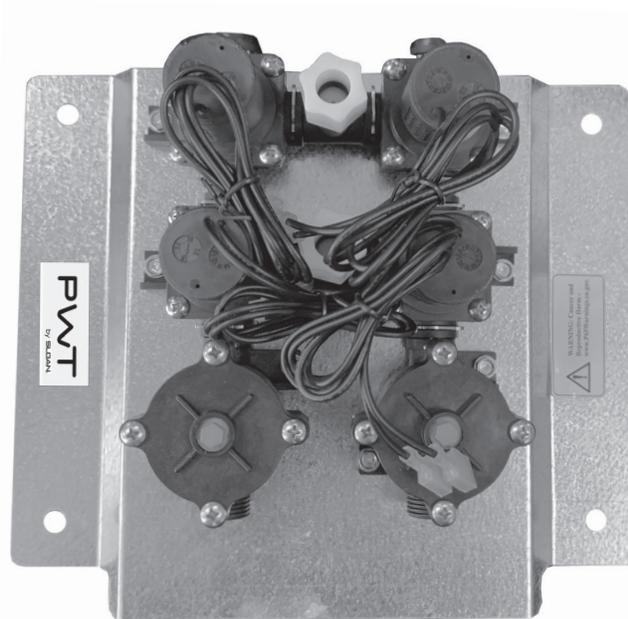


MICROPLUMB® MANIFOLD INSTALLATION INSTRUCTIONS



Installation of the PWT MICROPLUMB® MCR Manifold incorporates the latest advances in microprocessor technology to provide maximum control of your plumbing system. MICROPLUMB® patented sensing and metering products can be programmed to do just about anything you require, when you require it, including the ability to Delay and Lock-Out fixture activation. MICROPLUMB® products control showers, water closets, lavatory and combination fixtures and help maintain operation of ON/OFF/DELAY. The following instructions will serve as a guide when installing the MCR manifold. As always, good safety practices and care are recommended when installing your new manifold. If further assistance is required contact your nearest Sloan PWT Representative office.

SLOAN MANIFOLDS:

- MCR-320A One Line Mixing .5 gpm
- MCR-321A Two Line Mixing .5 gpm
- MCR-322A Four Line Mixing .5 gpm
- MCR-323A 2.5 One Line Mixing 2.5 gpm

LIMITED WARRANTY

Unless otherwise noted, Sloan Valve Company warrants its products, manufactured and sold for commercial or industrial uses, to be free from defects of material and workmanship for a period of three (3) years (one year for SF faucets, special finish and PWT electronics and 30 days on PWT software) from the date of first purchase. During this period, Sloan Valve Company will, at its option, repair, replace, or refund the purchase price of any produce which fails to conform with this warranty under normal use and service. This shall be the sole and exclusive remedy under this warranty. Products must be returned to Sloan Valve Company, at customer's cost. No claims will be allowed for labor, transportation or other costs. This warranty extends only to persons or organizations that purchase Sloan Valve Company's products directly from Sloan Valve Company for purpose of resale.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. IN NO EVENT IS SLOAN VALVE COMPANY RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY MEASURE WHATSOEVER.

Prior to Installation

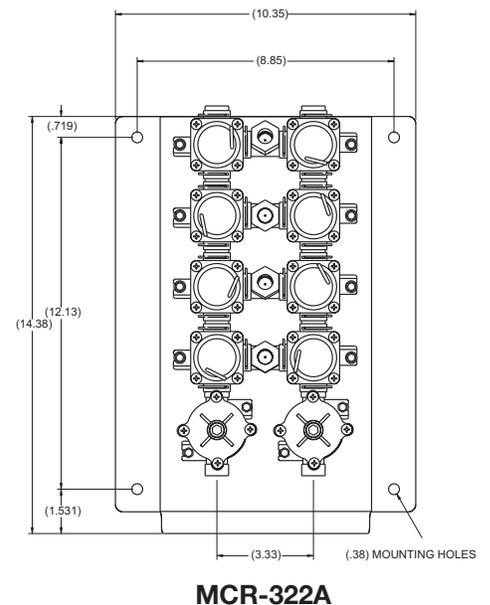
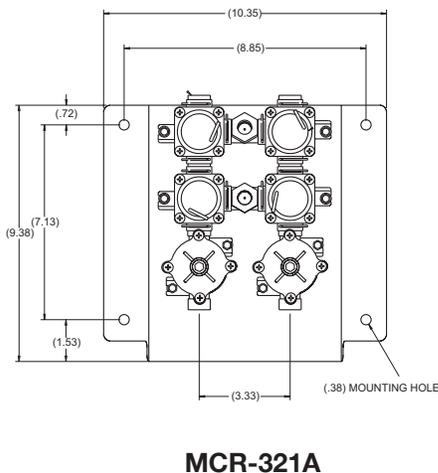
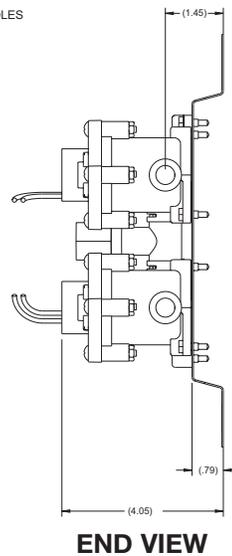
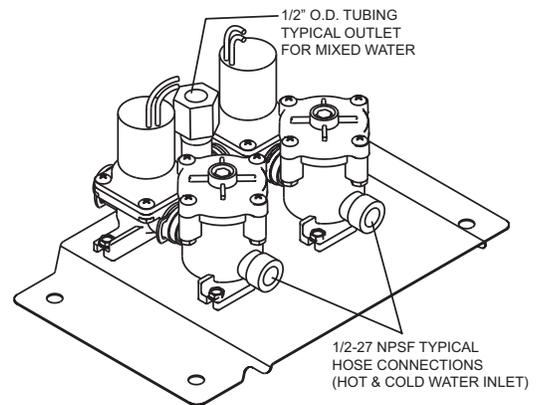
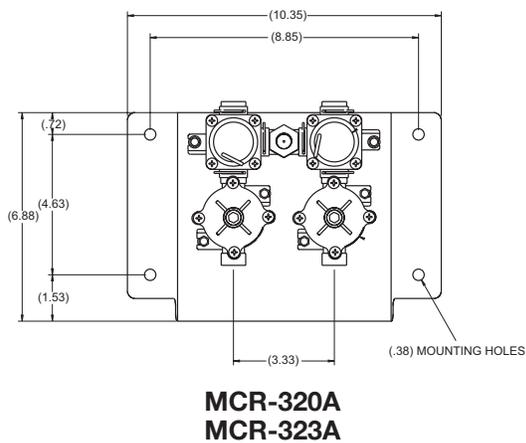
1. All fixtures require water pressure of at least 35 PSI flowing. Recommended maximum pressure 75 PSI.
2. Flow controls of showers are preset to 2.5 gallons per minute or less. Flow controls of lavatories are preset to .5 gallons per minute.
3. Flush all standing water from lines prior to attachment of valve to water supply. Do not leave super chlorinated water in valves or severe damage will occur. Long periods of dormancy can adversely affect valves. The water should be removed from valves during such dormant periods.

For best results from MCR manifolds, reasonable water quality standards must be maintained. High levels and sediments in water supply will have detrimental effects on function of these manifolds.

MCR Manifold Installation Instructions

1. Flush all supply lines thoroughly.
2. Make sure polyethylene tubing is clear of any debris or water. Do not use kinked tubing.
3. Install push buttons and bubbler spout to fixture backplash before securing the fixture to the wall. Install bubbler inlet fitting to the bubbler inlet.
4. Mount the manifold assembly to the wall. Choose a location where future access for service and adjustment of the manifold will be convenient, bearing in mind that the valve must be located within 15 feet of the push button operators and bubbler outlet (by others).
5. **DO NOT** use pipe thread compounds or sealants on any threads connecting to the valves, valve operators and tubing nuts. Thread sealants are not intended for these connections and may contribute to manifold damage or malfunctions and thereby void the warranty.
6. A braided flexible connector to be connected to the supply of the stop/check strainer (supplied by others). Connect free end of flexible connector to supply connection.
7. Connect 1/2" OD polyethylene tubing to the bubbler head and the valve outlet. Compression connections should be only tightened 1/4 to 1/2 turn past hand tight. Over-tightening with a wrench may cause damage. Make sure tubing is fully inserted into socket before tightening .
8. Connect EL-390 cable assembly to the solenoid.
9. Open supply stop(s) and check the manifold connections for leaks.
10. Actuate solenoids several times to initiate water flow. Hold hand in front of bubbler to contain squirting caused by air bubbles. Check water tubing at valve and bubbler for possible leaks again.
11. Adjust timed cycle of valves as needed.

MANIFOLD MOUNTING DIMENSIONS



Troubleshooting Valves

SYMPTOM: BUBBLER STREAM OVERSHOOTS THE LAVATORY BASIN (STEADY STREAM).

1. Check the flow control fitting to be sure the flow restrictor is in place. The flow restrictor is normally located inside the tee fitting where the outlet supply tubing is connected to the valve. Penal spouts are designed for a rate of .5 gpm flow rate provided by this flow restrictor. Flow rate can not be adjusted adequately using the inlet stops on the valve.
2. Check the hole in the spout or bubbler for debris or blockage. The outlet hole of the bubbler must be clear of any obstruction or partial obstruction to form proper height arc. Clear any debris inside the bubbler head by disconnecting the supply tube from the fitting and blowing air back through the bubbler. Do not use tools or probes through the hole on the bubbler as they may damage the finish or distort the hole, causing an erratic stream.

SYMPTOM: VALVE WILL NOT SHUT OFF.

1. Turn off water to valve. remove the solenoid valve top by removing the (4) screws securing it. Remove valve operator exposing the water chamber of the valve. Check the rubber diaphragm assembly for possible debris. Check the diaphragm to be sure the rubber is properly seated into the plastic post. The plastic post has a groove that the rubber diaphragm fits into and there should not be any bulges in the rubber when it is properly seated. Check the hole through the plastic post to be sure it's free of debris. Turn the diaphragm assembly over and find the small circle near the edge of the rubber. There is a small hole in the middle of the circle that should be free of debris. Rinse the assembly with clean water to remove any debris. If any part of the diaphragm is damaged, replace the entire diaphragm assembly using part # 3375080 (Diaphragm kit). Re-assemble the valve and adjust the timing to desired cycle length.

SYMPTOM: VALVE WILL NOT OPEN.

1. Make sure the water supply is turned on.
2. Check the flow control orifice located in the valve outlet fitting to be sure it is not blocked by debris. if blocked, clear debris by blowing air through it from the tubing end of the fitting. Do not force any tools through the orifice as this may damage or distort it and cause improper operation.
3. Check the solenoid valve to be sure it is activated.

SYMPTOM: BUBBLER STREAM DOES NOT FORM A HIGH ENOUGH ARC.

1. Check the flow control fitting for blockage. clear any debris with air pressure or flushing with clean water. Do not use probes to clear blockage as this may cause damage to the flow restrictor.
2. Check plastic supply tubing for possible kinks that would restrict water flow.
3. Make sure inlet stops are open.
4. Turn off inlet stops and inspect strainer screens for blockage or mineral build-up. Use clean water to rinse away debris. If mineral build-up is severe on the screen, use a commercial mineral solvent, (like calcsolve or limerase) to clean it. thoroughly rinse the screen before re-installing it.

Important Valve Re-Assembly Note:

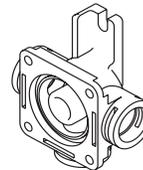
DO NOT tighten the four (4) screws that hold the valve top to the valve base any tighter than 18 inch pounds torque.

RECOMMENDED SPARE PARTS FOR PWT MANIFOLDS

1.	3375077	Manifold C-Clip Repair Kit of 5
2.	0375401	Foot Valve Base
3.	0375399	Manifold .5 gpm Flow Control Tee
4.	0375400	Manifold 2.5 gpm Flow Control Tee
5.	3375076	24VAC Solenoid With Spring
6.	3375078	Stop Check Repair Kit
7.	3375079	Stop Check Strainer Assembly
8.	3375080	Manifold Diaphragm Replacement Kit



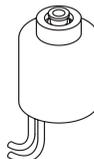
1. PWT MANIFOLD C-CLIP REPAIR KIT OF 5



2. FOOT VALVE BASE



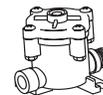
3. MANIFOLD .5 GPM FLOW CONTROL TEE
4. MANIFOLD 2.5 GPM FLOW CONTROL TEE



5. 24 VAC SOLENOID WITH SPRING



6. STOP CHECK REPAIR KIT



7. STOP CHECK STRAINER ASSEMBLY



8. MANIFOLD DIAPHRAGM REPLACEMENT KIT

SLOAN • 10500 SEYMOUR AVENUE • FRANKLIN PARK, IL 60131

Phone: 1-800-982-5839 or 1-847-671-4300 • Fax: 1-800-447-8329 or 1-847-671-4380 • www.sloan.com