Installation Guide

255 Autotrol / Osmonics

Glass Water Systems

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Electrical

- There are no user-serviceable parts in the AC adapter, motor, or controller. In the event of a failure, these should be replaced:
- All electrical connections must be completed according to local codes.
- Use only the power AC adapter that is supplied.
- The power outlet must be grounded.
- To disconnect power, unplug the AC adapter from its power source.

Mechanical

- Do not use petroleum based lubricants such as petroleum jelly, oils, or hydrocarbon based lubricants. Use only 100% silicone lubricants.
- All plastic connections should be hand tightened. Plumber's tape may be used on connections that do not use an O-ring seal. **Do not use pliers or pipe wrenches.**
- All plumbing must be completed according to local codes.
- Soldering near the drain line should be done before connecting the drain line to the valve. Excessive heat will cause interior damage to the valve.
- Do not use lead-based solder for sweat solder connections.

Mechanical (Cont.)

- The drain line must be a minimum of 1/2" diameter. Use 3/4" pipe if the backwash flow rate is greater than 5 GPM
- (18.9 Lpm) or the pipe length is greater than 20 feet (6 m).
- Do not support the weight of the system on the control valve fittings, plumbing, or the bypass.

General

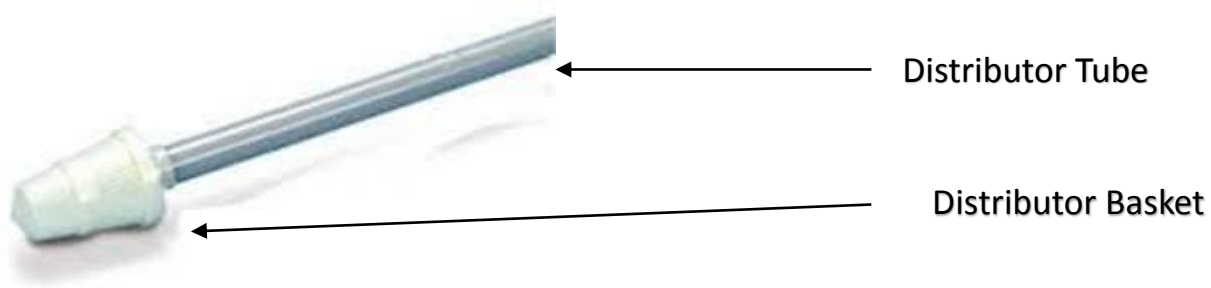
- Keep the media tank in the upright position. Do not turn on side, upside down, or drop. Turning the tank upside down will cause media to enter the valve.
- • Operating ambient temperature is between 34ºF (1ºC) and 120ºF (49ºC).
- • Operating water temperature is between 34ºF (1ºF) and 100ºF (38ºC).
- • Working water pressure range is 20 to 125 psi (1.38 to 8.61 bar). In Canada the acceptable working water pressure range is 20 to 100 psi (1.38 to 6.89 bar).
- • Use only regenerant salts designed for water softening. Do not use ice melting, block, or rock salts.
- • Follow state and local codes for water testing. Do not use water that is micro-biologically unsafe or of unknown quality.
- • When filling media tank, do not open water valve completely. Fill tank slowly to prevent media from exiting the tank.
- • When installing the water connection (bypass or manifold) connect to the plumbing system first. Allow heated parts to cool and cemented parts to set before
- installing any plastic parts. Do not get primer or solvent on O-rings, nuts, or the valve.

Necessary Tools

- PVC Cutter or Hack Saw (With PVC or CPVC Pipe)
- Tube Cutter, Solder, Flux, Flux Brushes, Torch (Copper Pipe), Sand Paper
- PVC Glue (Clear, Yellow (No Primer Needed), Blue)
- PVC Primer
- Teflon Tape or Paste

Filling Resin/Media Tank

- Use Tape to cover the Distributor Tube



- Fill Resin Tank with Gravel to just above the Distributor Basket
- Fill the resin or other media after gravel
- Take Tape off the Distributor Tube

Installing Control Valve

- DO NOT USE TEFLON TAPE OR PASTE ON CONTROL VALVE
- Lubricate the o-rings with NSF-61 certified lubricant/sealant
- Rotate the valve back and forth to make sure it seats right
- Screw on the control valve to just where it is snug – DO NOT OVERTIGHTEN OR USE ANY TYPE OF TOOL TO TIGHTEN

Water Line Connection

- The installation of a bypass valve system is recommended to provide for occasions when the water conditioner must be bypassed for hard water or for servicing.
- The most common bypass systems are the Autotrol® Series 256 bypass valve (Figure 4) and plumbed-in globe valves (Figure 5). Though both are similar in function, the 256

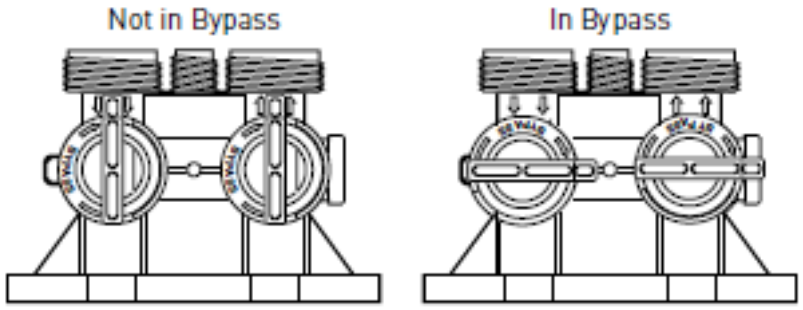


Figure 4 Autotrol Series 256 Bypass Valve

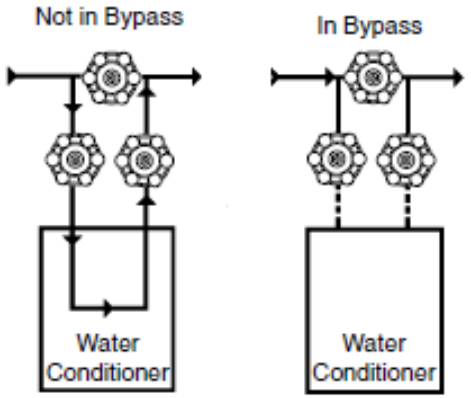


Figure 5 Typical Globe Valve Bypass System

Drain Line Connection

- 1. Ideally located, the unit will be above and not more than 20 feet (6.1 m) from the drain. For such installations, use an appropriate adapter fitting (not supplied), to connect 1/2 inch (1.3 cm) plastic tubing to the drain line connection of the control valve.
- 2. If the unit is located more than 20 feet (6.1 m) from drain, use 3/4 inch (1.9 cm) tubing for runs up to 40 feet (12.2 m). Also, purchase appropriate fitting to connect the 3/4 inch tubing to the 1/2 inch NPT drain connection.
- 3. If the unit is located where the drain line must be elevated, you may elevate the line up to 6 feet (1.8 m) providing the run does not exceed 15 feet (4.6 m) and water pressure at conditioner is not less than 40 psi (2.76 bar). You may elevate an additional 2 feet (61 cm) for each additional 10 psi (0.69 bar).

Drain Line Connection (cont.)

- 4. Where the drain line is elevated but empties into a drain below the level of the control valve, form a 7-inch (18 cm) loop at the far end of the line so that the bottom of the loop is level with the drain line connection. This will provide an adequate siphon trap.
- 5. Where the drain empties into an overhead sewer line, a sink-type trap must be used.
- **IMPORT ANT:** Never insert drain line into a drain, sewer line or trap. Always allow an air gap between the drain line and the wastewater to prevent the possibility of sewage being backsiphoned into conditioner.

Drain Line Connection (cont.)

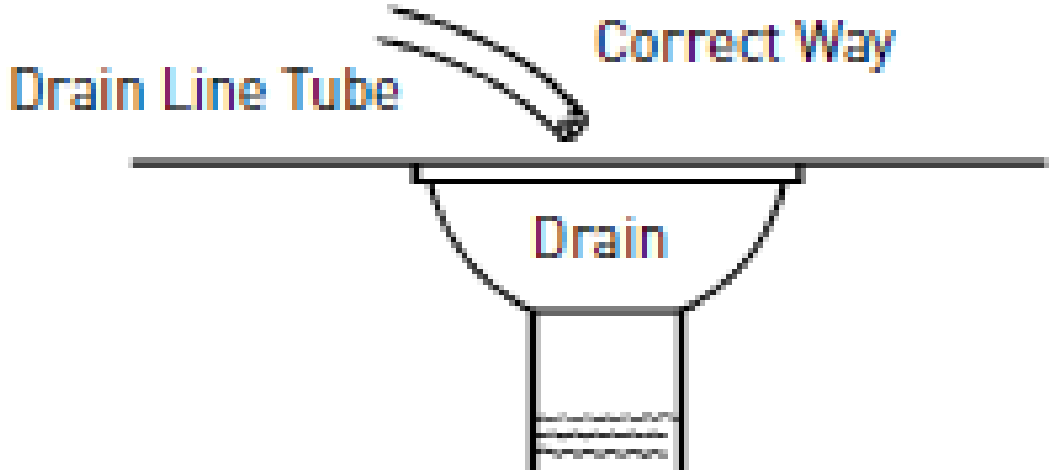


Figure 6

NOTE: Standard commercial practices have been expressed here. Local codes may require changes to these suggestions.

Brine Line Connection

- It will be necessary to install the brine tube and line to a fitting

installed on the air check. Apply plumber tape on all threaded connections.

- Be sure all fittings and connections are tight so that premature checking does not take place. Premature checking is when the ball in the air check falls to the bottom before all brine is drawn out of the brine tank. See Placing Conditioner into Operation section.

Overflow Line Connection

- In the absence of a safety overflow and in the event of a malfunction, the BRINE TANK OVERFLOW will direct “overflow” to the drain instead of spilling on the floor where it could cause considerable damage. This fitting should be on the side of the cabinet or brine tank.
- To connect overflow, locate hole on side of brine tank. Insert overflow fitting (not supplied) into tank and tighten with plastic thumb nut and gasket as shown (Figure 7). Attach length of 1/2 inch (1.3 cm) I.D. tubing (not supplied) to fitting and run to drain. Do not elevate overflow line higher than 3 inches (7.6 cm) below bottom of overflow fitting. Do not tie into drain line of control unit. Overflow line must be a direct, separate line from overflow fitting to drain, sewer or tub. Allow an air gap as per drain line instructions (Figure 6).

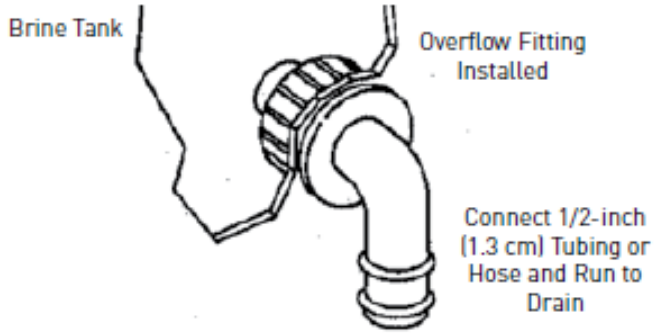


Figure 7

Low Voltage Transformer

- Use only the included transformer for powering the 400 series timers. Connect the plug of the transformer secondary cable to the mating socket on the control (see Figure 8).
- Be certain that the transformer is plugged into a correct voltage source that is not controlled by a wall switch.

System Start-Up

- Fill the Tank Slowly until the unit is completely under pressure
- Turn the system to bypass
- Start the unit regenerating (backwash position)
- You will hear air coming out of the drain line.
- Once the air seems to stop – slowly turn the bypass to service and let the control valve finish the backwash cycle
- Move the valve to skip the brine draw cycle and move to the rapid rinse (forward rinse) cycle
- Let the valve finish the complete regeneration. The unit will fill the brine tank with water.

Programing the control valve

- Program the control valve using the manual associated with your system.
- Any questions call us at 1-877-345-2770