



Installation and Troubleshooting

Models 1AV, 2AV, 3AV, 6AV, 32AV, 33AV and 36AV Free Floating Lever Air/Gas Vents

This bulletin should be used by experienced personnel as a guide to the installation of Armstrong Air/Gas Vents. Selection or installation of equipment should always be accompanied by competent technical assistance. You are encouraged to contact Armstrong International, Inc. or its local sales representative for additional information.

Install air vents at all the high points on liquid service systems, hydronic systems, or any liquid storage or distribution system. See figures 1, 2 & 3 for typical installations.

INSTALLATION PROCEDURES:

1. Do not exceed the maximum allowable pressure noted on the cap or nameplate.
2. Be certain the vent is installed properly, with the **cap at the top** for air and gas venting service.
3. Before installing the vent, flush out the line to remove loose dirt. Use pipe dope or teflon tape sparingly and on male threads only. Leave the end thread exposed to avoid introducing sealant into the system.
4. The inlet and outlet piping should be the same size as the air vent connections. Do not reduce the size of the inlet on light loads; however, smaller pipe or tubing may be used on the outlet. Keep the piping as short as possible, with a minimum of fittings and valves. **Do not use elbows in the inlet line from the equipment to the vent.**
5. Install gate valves or full ported ball valves (**do not use globe valves**) so the air vent can be isolated from the system to permit cleaning and repair. If the air vent is installed in a closed piping arrangement, install a union on each side of the air vent.
6. **Do not** use a pipeline strainer in the line leading to the air vent.
7. Air vents should be installed so that they can be checked periodically. A drain line should be piped to a floor drain or to a visible location where it can be regularly checked for leakage.
8. The pipe plug in the cap of the air vent can be replaced with a test cock or test valve for vent testing or even manual venting should the automatic vent fail. A test cock, if installed, makes it possible to check that the vent is not air bound due to the orifice being plugged.

Caution: *Do not install air vents with an open discharge where a malfunction could cause damage e.g. above false ceilings.*

TROUBLESHOOTING:

1. **Check operation.** It is normal on hydronic systems to have no discharge from the vent, but this is not proof that the vent is functioning properly. To check the air vent, crack the test cock, if installed. If the vent is working correctly, a little air should escape, followed by liquid.
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2. **Vent does not open.** If a lot of air escapes out the test cock (if installed) before liquid begins to discharge, it is a sign that the vent body was full of air and that the float did not sink to open the valve, or that the valve seat was plugged. Isolate the vent by closing the inlet gate valve before opening for inspection.
 - A. Remove the air vent's cap.
 - B. Check the complete mechanism and the valve seat in particular for dirt and then clean all parts. If parts appear worn order a new mechanism.
 - C. On new installations, an air vent may fail to open if the orifice selected is too large for the operating pressure being encountered. Replace the mechanism with one sized properly for your operating pressure. Consult your Armstrong Representative.
 - D. An unusual increase in system pressure may cause the air vent to lock shut. Also, check to see if the air/gas vent has the proper maximum differential pressure rating for your particular application.
3. **Air Vent fails to close tightly (leaks liquid).**
 - A. Dirt may be lodged in the valve seat. Clean the valve seat and all other parts, including the cap and body.
 - B. If the valve and seat appear to be worn. Replace the entire mechanism.
 - C. There may be a leak in the float. Disconnect the float and shake it close to your ear. If liquid has leaked into the float you will be able hear it moving (note some floats are weighed with liquid so this may not be a true test). Replace the float.
 - D. An unlikely possibility is that the float has collapsed. If it has, replace the float.

For assistance with an unusual installation or service problems, contact your Armstrong Representative or Armstrong International's Application Engineering Department.

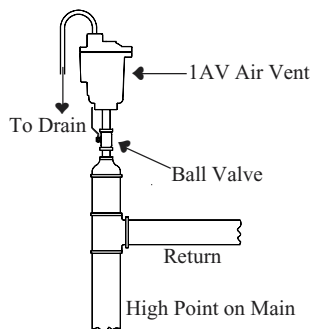


Figure 1. Installation of a Model 1AV automatic air vent on high point of system.

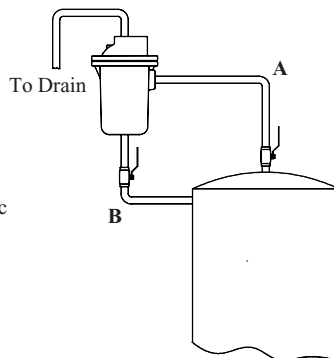


Figure 2. Continuous venting using a Model 3AV with an equalizing line where large amounts of air must be vented. As air enters line **A**, water leaves through line **B**.

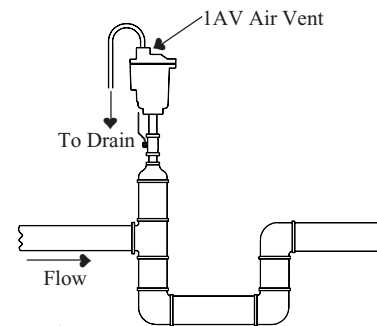


Figure 3. Installation of a Model 1AV automatic air vent on loop in piping.



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