



Installation and Troubleshooting

Models 11LD, 22LD and 13LD

Free Floating Lever Liquid Drainer Traps - All Stainless Steel Construction

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

Install liquid drainers at the low points on air or gas service systems, or any gas storage or distribution system. See Figures 1, 2, 3 and 4 for typical installations.

INSTALLATION PROCEDURES:

1. Do not exceed the maximum allowable pressure noted on the label on the side of the liquid drainer body. Also, check to see if the liquid drainer has the proper maximum differential pressure for your particular application.
2. Be certain the drainer is installed properly. Note the direction of **flow arrow** on the label and the **red label** indicating **UP** for liquid drainer service.
3. Before installing the drainer, 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. When tightening a pipe into either the inlet or outlet fittings of an 11LD, 22LD or 13LD use only the hex-shaped fittings as wrenching surfaces. **Do not use drainer body for a wrenching surface.**
5. The inlet and outlet piping should be the same size as the liquid drainer's 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 valves and fittings. **If you are installing a liquid drainer without an equalizing connection, try not to use elbows in the inlet line from the equipment to the liquid drainer.**
6. Install gate valves or full ported ball valves (**Do Not Use Globe Valves**) so the drainer can be isolated from the system to permit servicing. If the drainer is installed in a closed piping arrangement, install a union on each side of the drain trap.
7. Use of a pipeline strainer in the line leading to the drainer is recommended for dirty systems.
8. Liquid drainers should be installed so that they can be checked periodically.

Caution: *Do not install liquid drainers with an open discharge where a malfunction could cause damage.*



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TROUBLESHOOTING:

A. Liquid drainer does not discharge.

1. Insufficient liquid coming to drainer to permit discharge. Continue operation.
2. Drainer filled with dirt or sludge. Remove drainer and clean thoroughly. Install strainer on inlet side of drainer.
3. Differential pressure across drainer too high. Check inlet and outlet pressure. If the difference exceeds the maximum pressure stamped on the drainer, the drainer will remain closed. Reduce differential pressure if possible, or install properly sized drainer.
4. Worn valve seat. As the seat becomes worn, the seating area enlarges, lowering the drainer's maximum operating pressure. Replace with new drainer.
5. Inlet or outlet line valves closed. Open valves.
6. Strainer clogged. Clean strainer screen.
7. Collapsed float. Replace with new drainer.

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

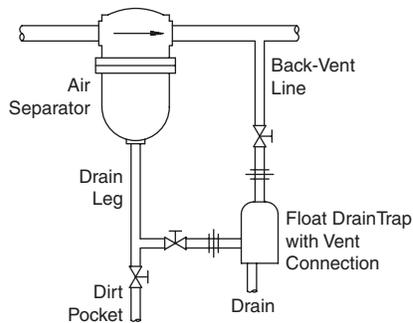


Figure 1. Installation of a liquid drainer with equalizing line downstream of the separator in order to assure a quick and regular flow to the drainer. Note side inlet connection from separator.

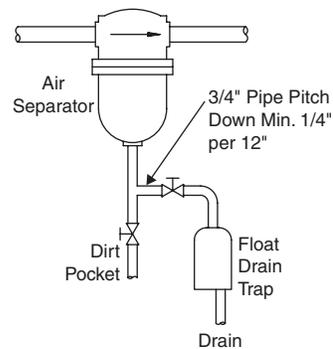


Figure 2. Installation of a liquid drain trap on side of separator.

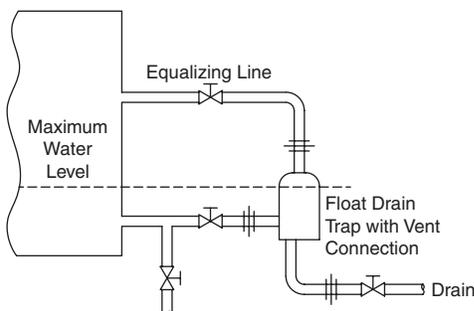


Figure 3. Liquid drainer trap installed at side of a receiver, close to floor. Water will rise to broken line before drain trap opens.

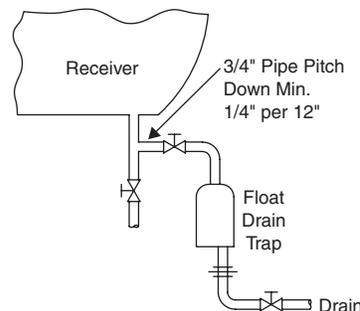


Figure 4. Install the drain trap on side to get better access or compensate for lack of space under the receiver (particularly for drain trap used under compressors).