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LQCOL PLUS SERIES

LIQUID - COLD SYSTEM EXPANSION TANKS

INSTALLATION & OPERATION INSTRUCTIONS



NOTE: Inspect for shipping damage and notify freight carrier or store where purchased immediately if damage is present. To avoid risk of personal injury and property damage, if the Product appears to be malfunctioning or shows signs of corrosion, call a qualified professional immediately. Current copies of the Product Manual can be viewed at www.aquaskyplus.com. Use proper safety equipment when installing.



THIS IS THE SAFETY ALERT SYMBOL. IT IS USED TO ALERT YOU TO POTENTIAL PERSONAL INJURY AND OTHER HAZARDS. OBEY ALL SAFETY MESSAGES THAT FOLLOW THIS SYMBOL TO REDUCE THE RISK OF PERSONAL INJURY AS WELL AS PROPERTY DAMAGE.

WARNING READ CAREFULLY THE PRODUCT INSTALLATION & OPERATION INSTRUCTIONS. FAILURE TO FOLLOW THE INSTRUCTIONS AND WARNINGS IN THE MANUAL MAY RESULT IN SERIOUS OR FATAL INJURY AND/ OR PROPERTY DAMAGE, AND WILL VOID THE PRODUCT WARRANTY. THIS PRODUCT MUST BE INSTALLED BY A LICENSED PROFESSIONAL. FOLLOW ALL APPLICABLE LOCAL AND STATE CODES AND REGULATIONS, IN THE ABSENCE OF SUCH CODES, FOLLOW THE CURRENT EDITIONS OF THE NATIONAL PLUMBING CODE AND NATIONAL ELECTRIC CODE, AS APPLICABLE.

WARNING EXPLOSION OR RUPTURE HAZARD. THE EXPANSION TANK MUST BE OPERATED SO THAT THE PRESSURE DOES NOT EXCEED THE MAXIMUM WORKING PRESSURE.

WARNING EXPLOSION OR RUPTURE HAZARD A relief valve must be installed to prevent pressure in excess of local code requirement or maximum working pressure designated in the Product Manual, whichever is less. Do not expose Product to freezing temperatures or temperatures in excess of 120°C (248°F). Do not adjust the pre-charge or re-pressurize this Product except for any adjustments required at the time of initial installation, especially if Product is corroded, damaged or with diminished integrity.

Adjustment to pre-charge must be done at ambient temperature only. Failure to properly size the Product or follow these instructions may result in excessive strain on the system lead to Product failure, serious or fatal personal injury, leakage and/or property damage.

WARNING Potable Water and Radiant Heating Warning. This Product must not be used in radiant heating, potable water or open systems of any kind. These systems contain oxygenated water which will cause internal corrosion and premature Product failure. Use a PUMPLUS for potable water systems and a HYDRO-PLUS for radiant heating systems. Do not install on dead-end pipe.

WARNING This Product can expose you to chemicals including lead, which is known to cause cancer and birth defects or other reproductive harm.

WARNING EXPLOSION HAZARD. Failure to follow instructions in the accompanying Product Manual can cause rupture or explosion, possibly causing serious or fatal injury, leaking or flooding and/or property damage.

WARNING FAILURE TO PROPERLY SEAL VALVE CAP WILL RESULT IN LOSS OF PRECHARGE CAUSING PRODUCT TO FAIL.

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY
IMPORTANT GENERAL SAFETY INFORMATION
ADDITIONAL SPECIFIC SAFETY ALERTS APPEAR IN THE FOLLOWING INSTRUCTIONS.

Location of LQCOL PLUS Expansion Tanks

⚠ WARNING This Product, like most Products under pressure, may over time corrode, weaken and burst or explode, causing serious or fatal injury, leaking, flooding and/or property damage. To minimize risks, the Product must be installed, periodically inspected, and serviced by a licensed professional. The selected location should be indoors to ensure safe operation and easy access for maintenance. Choose a location where potential leaks will not cause damage to surrounding areas, lower floors, or appliances. Place the system in a waterproof area with adequate drainage to avoid any unexpected water discharge. Ideally, select a location with drainage access within a 3-meter distance to prevent water accumulation. AQUASKY is not responsible for any water damage that may occur in association with the expansion tank installation.

Installation Requirements

The LQCOL PLUS expansion tank should be installed on the incoming water line to the heat source, between the heat source and the backflow preventer or check valve. Proper thread sealant must be used to ensure a leak-free installation.

⚠ WARNING Although the tank is designed for direct installation on the water supply line with the connection, ensure that the system piping is adequately supported. If necessary, add wall-mounted brackets or pipe hangers to prevent strain on the connection.

The LQCOL PLUS expansion tank may be placed in any convenient position within the mechanical room (or building). If multiple tanks are installed, they should all be on the same level.

Point of Connection

Unlike a conventional tank, the LQCOL PLUS sealed air cushion does not require replenishment so DO NOT connect to an air separator or any other air collection device.

For optimal performance, it is recommended to connect the LQCOL PLUS expansion tank before the heat source.

Low-pressure drop components, such as air separators, may be placed at pump suction if desired. However, the system design will determine the feasibility of this configuration.

Natural convection losses and the entry of air into tanks are eliminated by connection to the side or underside of main pipe. The piping should be pitched upward and away from the LQCOL PLUS to eliminate any potential air traps.

Installation

⚠ WARNING THIS PRODUCT MUST BE INSTALLED BY A LICENSED PROFESSIONAL.

1. Shut off the water supply and power (electricity or gas) during the installation of valves and the expansion tank.
2. Note location of system connection and air charge valve on the expansion tank.
3. Remove the plug or pipe cap from the system connection point.
4. Before making any connections, check the tank and the air charge (use an accurate pressure gauge). The air pressure must be equal to the minimum system pressure at the tank's location.
5. The tank may now be piped to the system (use the suggested LQCOL PLUS piping diagrams provided on the next page).
6. Selected appropriate pipe size for the connection. Connection to each LQCOL PLUS must have a lock shield gate valve and union to allow isolation and removal if required. Make up and fill valves, whether manual or automatic, should be tied into the connecting line. This will ensure that pump operation will not affect valve operation.

Failure to follow these steps could result in damage to rubber diaphragm and void all warranties.

Operational Limits

Maximum Operating Pressure: As stamped on label

Maximum Operating Temperature: 120°C (248 °F)

Minimum Operating Temperature: 2°C (35.6°F) (non-glycol application)

If unit is being installed in a glycol system where minimum temperatures fall below 2°C (35.6°F), contact the Aquasky technical service department at (888)-4-2562-6368.

Operating Instructions

1. Check the expansion tank pre-charge before the system is filled with water. The charge is 30 psi unless noted otherwise on the tank label (The pre-charge could be customized). Check to make sure this is the correct pre-charge pressure specified for the system.
2. If the tank pre-charge pressure needs to be changed on a dry system follow the following procedure:
 - a. Check the expansion tank air pressures at the pre-charge connection with an accurate tire type pressure gauge. The pre-charge connection is the same kind of connection found on automobile tires.
 - b. If the pressure is low, charge the tank with nitrogen gas or without free compressed air. Check the pressure frequently during this process as you would when filling a tire with air.



DANGER: Excessive pressure can cause tank to explode. Exercise care when filling a tank with air so the pressure does not exceed that required or does not exceed the working pressure of the tank as stamped on the nameplate. Failure to follow these instructions will result in serious personal injury or death and property damage.

3. If, after the system has been filled with water and operating, it is found that the expansion tank pre-charge needs adjustment, use the following procedure:
 - a. Turn off the heat source and allow the system water to cool to ambient temperature.



IMPORTANT: Expansion tank cannot be properly air charged other than at ambient temperature.

- b. Close lock-shield valve in tank-to-system piping.
- c. Open the drain valve to empty water from the expansion tank.
- d. Remove the protective cap from the air valve located at the bottom of the tank.
- e. Check the tank's air pressure at the pre-charge connection using an accurate tire-type air gauge.
- f. Refer to 2b above.
- g. After ensuring the air charge is correct, replace the protective cap on the air valve.
- h. Close the drain valve, open the lock-shield valve and turn on the heat source.

Maintenance

The LQCOL PLUS expansion tank and the system recommended a safety inspection every month by a licensed professional. Visually examine the tank and the system connection for signs of leaks or corrosion on the tank exterior and connection.

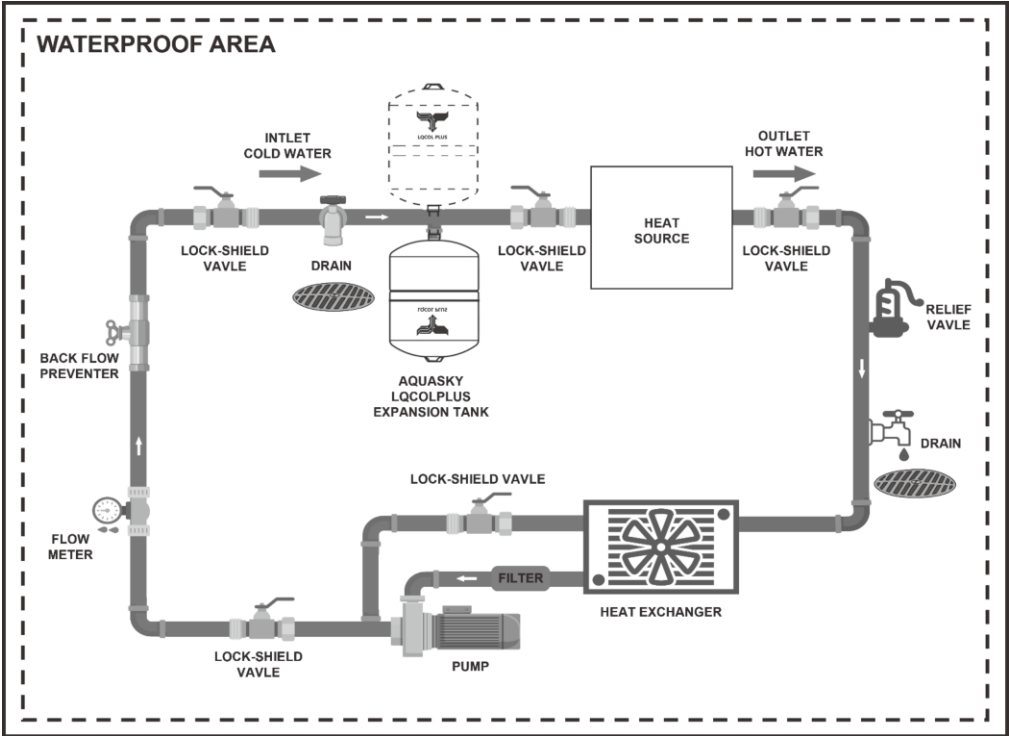
Warranty

LQCOL PLUS Series Models: Three (3)-Year Limited Warranty

LQCOL PLUS expansion tank must be replaced every three (3) years.

Visit www.aquaskyplus.com for complete warranty details

Suggested Piping Diagrams



⚠ WARNING This entire system must be placed in a waterproof area to prevent damage caused by leakage.



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