

Tank Purge Valve – TPV

INSTALLER: PLEASE LEAVE THIS MANUAL FOR THE OWNER'S USE.

NOTE: This product is not intended for use in potable water applications.



WARNING: California Proposition 65 Warning! This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.



SAFETY INSTRUCTION

This safety alert symbol will be used in this manual to draw attention to safety related instructions. When used, the safety alert symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED! FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN A SAFETY HAZARD.**



WARNING: Isolation valve must be in the open position with the handle inline with the valve body when the system is in operation. Failure to follow these instructions may cause system to over pressurize and can result in serious personal injury, death and property damage.



WARNING: Drain valve must be in the closed position with the handle perpendicular to the valve body when the system is in operation. Failure to follow these instructions can cause property damage due to leakage through the drain valve.

OPERATIONAL LIMITS

**WORKING PRESSURE & TEMPERATURE LIMITS
(SOLDER TYPE LIMITS FOR ANSI STD. B.16.18)**

| TYPE OF SOLDER | MAXIMUM LIMITATIONS 1/2" – 1" | | MAXIMUM LIMITATIONS 1 1/4" – 2" | |
|----------------|----------------------------------|-----------------|------------------------------------|-----------------|
| | PRESSURE PSI (kPa) | TEMP °F (°C) | PRESSURE PSI (kPa) | TEMP °F (°C) |
| 95-5 | 300 (2069) | 200 (93) | 300 (2069) | 175 (79) |
| TIN- | 250 (1724) | 225 (107) | 250 (1724) | 200 (93) |
| ANTIMONY | 200 (1379) | 250 (121) | 175 (1207) | 250 (121) |



WARNING: Damage to the Tank Purge Valve or failure of solder sealing joints may occur if these operational limits are exceeded. This can result in water leakage. Failure to follow this instruction can cause serious personal injury and/or property damage.

NPT

Maximum Operating Pressure 400 psig (2758 kPa)
Maximum Operating Temperature 250°F (121°C)

DESCRIPTION

The Bell & Gossett Tank Purge Valve (TPV) is a combination full port ball type isolation valve and drain valve used to connect the system to the expansion tank. This valve allows the tank to be drained for easy servicing or tank replacement without having to drain the system. These valves are furnished standard with a drain valve with standard 5/8" hose connection.

INSTALLATION INSTRUCTIONS

1. Install Tank Purge Valve between the expansion tank and the system so that the drain valve is between the expansion tank and the isolation valve. (The union connection is installed on the tank). The Tank Purge Valve should be installed so that both the drain valve handle and the isolation valve handles are easy accessible. Refer to Figure 1. For typical installation drawings refer to Figure 2 and 3.
2. **For installing Sweat Connections:**
 - a) Clean tube ends and valve connections thoroughly per good piping practices with a fine grade emery cloth or fine grit sandpaper.
 - b) For soldering, use 95-5 (Tin-Antimony) solder and a good grade of flux.
 - c) Use a torch with a sharp pointed flame.
 - d) When sweating the joints, first adjust the valve in the full open position, then wrap the valve with a cool wet rag and then direct the flame with care to avoid subjecting the valve to excessive heat. Allow the valve to cool before touching or operating.
 - e) Check the soldered connection for leaks.

WARNING: Use of improper procedures to sweat valve model with union connection into system can damage valve. Before sweating valve connection, remove the union nut and O-ring from the valve body. Failure to follow this instruction could result in property damage and/or moderate personal injury.

CAUTION: Heat associated with the use of silver solder may damage a Tank Purge Valve and voids the product warranty. Do not use silver solder. Failure to follow these instructions could result in property damage and/or moderate personal injury.

3. For installing NPT connections:

Apply pipe compound conservatively to male connecting fittings only.

CAUTION: The use of PTFE impregnated pipe compound and PTFE tape on pipe threads provides lubricity. Care should be taken to prevent overtightening which may damage the valve body. Failure to follow these instructions can result in moderate personal injury and/or property damage.

After installation check all joints for leakage and retighten where necessary.

OPERATION INSTRUCTIONS

1. To drain the tank first close the isolation valve by moving the handle one quarter of a turn until the handle is perpendicular to the valve and piping. Allow the tank to cool to 100°F (38°C).

WARNING: Hot fluids and/or fluids under pressure are safety hazard. Do not drain while it is hot or under pressure. Failure to follow these instructions could result in serious personal injury or death and property damage.

2. Remove the cap from the 5/8" drain on the drain valve and connect a 5/8" garden hose onto the drain valve.
3. Move the handle of drain valve one quarter of a turn until it is inline with the valve body and system piping.

WARNING: It is possible, depending on the age or condition of the drain valve stem seal, for some liquid to escape when closing the valve. Do not have eyes or face directly underneath the valve. Failure to follow these instructions could result in serious personal injury.

To return the Tank Purge Valve to the operating position turn the drain valve handle until it is perpendicular to the valve body and replace the cap onto the drain. Move the handle of the isolation valve one quarter of a turn until it is inline with the valve body and system piping.

SERVICE INSTRUCTIONS

Periodically inspect the Tank Purge Valves for signs of corrosion or leakage. If steam leakage is observed the brass hex packing nut should be tightened slightly until leak stops. If tightening the packing nut does not stop the leak or signs of leakage are noted elsewhere, the Tank Purge Valve must be replaced.

WARNING: Corrosion or leakage are indications that the shutoff valve may be about to cause serious damage. The Union ended valve must be replaced. Failure to follow these instructions could result in serious personal injury or death and property damage.

FIGURE NOTES

1. Tank connection locations may vary depending on the type of tank to be installed.
2. Provide an anti-thermosyphon loop with a minimum drop of 12" to prevent gravity heating of the tank.
3. Figures 2 and 3 show where a tee would be located if multiple expansion tanks are installed.

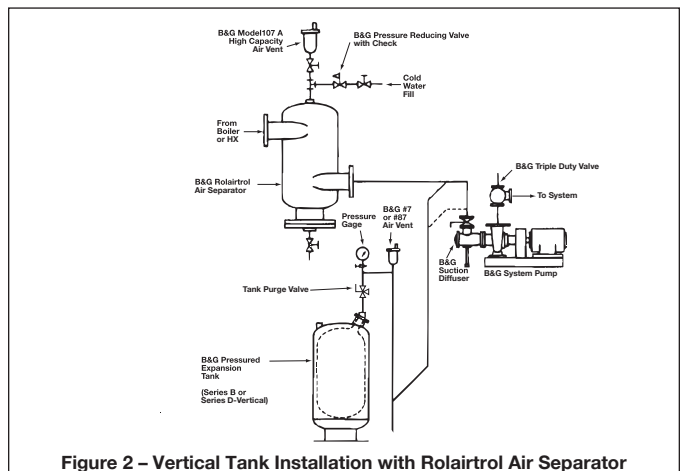


Figure 2 – Vertical Tank Installation with Rolairtrol Air Separator

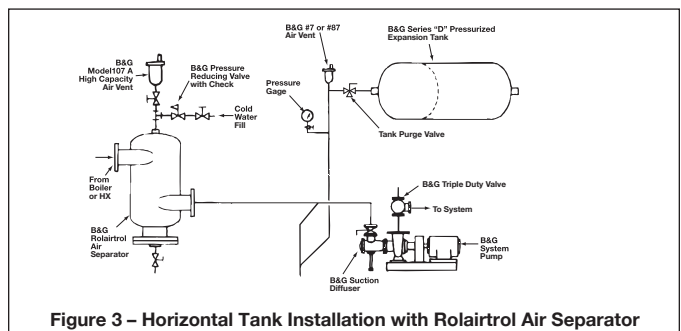


Figure 3 – Horizontal Tank Installation with Rolairtrol Air Separator

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