BDT Bladder Tank Series
Installation & Operation Instructions

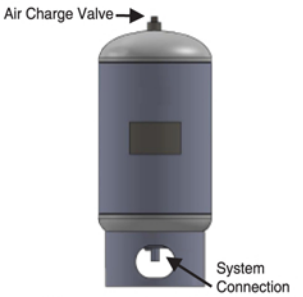
VESSEL DESCRIPTION:
American Wheatley tanks are ASME constructed, pre-charged bladder expansion tanks. They are designed for storage of potable water for pressure boost systems, as well as typical cooling/heating applications. The system's expanded water is contained in a heavy-duty bladder preventing tank corrosion and water logging problems. The factory set pre-charge for these tanks is 12 psig.

CAUTION-If charging above 80 psi, charge to approximately 60 psi, then slowly introduce approximately 1/3 of tank water volume before SLOWLY charging up to desired pressure.

BDT-006 & BDT-009

IMPORTANT: When pressure testing the system piping, the expansion tank must be isolated from the elevated pressure test. Bladder stress and premature failure may result. When filling the system with water, open valve to tank to ensure that any residual air in the tank is displaced by water. It is recommended that the pre-charge be checked annually to ensure proper system protection and long-life for the vessel.

TANK PREPARATION: Visually inspect tank for damage, which may occur during transit. Factory pre-charge pressure may not be correct for the installation. Pre-charge is typically set to equal the system pressure. If unsure, consult a factory representative. The tank MUST be pre-charged to system design pressure BEFORE placing into operation. Remove pipe plug covering the valve enclosure. Check and adjust the charge pressure by adding or releasing air for each application.

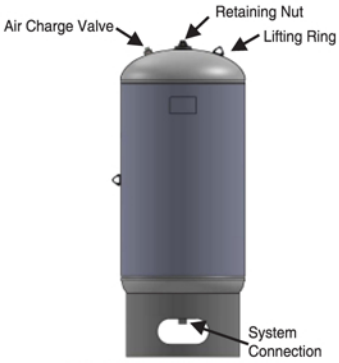


BDT-013, BDT-016 & BDT-026

Set tank in place and pipe system connection to system. Be sure to include isolation valve and drain. Do not loosen nuts on cover plate; this will result in loss of pre-charge. Cover plate should only be removed when replacing bladder, and then only after the tank has been bled to zero gauge pressure.

If system has been filled with water and the tank has been through several cycles, the tank must be isolated from the system and the tank emptied before charging. This ensures all fluid has exited the bladder and proper charging will occur. After emptying bladder, the tank should be charged to 2-3 psi below system initial fill pressure. This air charge pressure may have to be adjusted periodically.

If the pre-charge adjustment is necessary, oil and water free compressed air may be used. Check the pre-charge using an accurate pressure gauge at the charging valve and adjust as required. Check air valve for leakage. If evident, replace the Schrader-type tire valve core. Do not depend on the valve cap to seal the leak. After making sure air charge is correct, replace protective cover over the charging valve for protection.



BDT-040 THRU BDT-211

JOB NAME _____
LOCATION _____
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_____
CONTRACTOR _____
CONTRACTOR P.O. NO. _____

ITEMS	QUANTITY

American WHEATLEY HVAC PRODUCTS®
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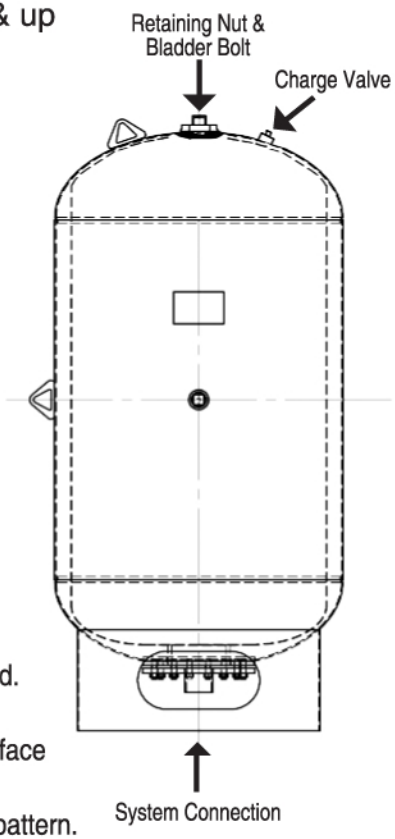
BDT Tank
Instructions for Bladder change

RECOMMENDED TOOLS AND SUPPLIES:

1. Plumbers tool box
2. Compressed air source
3. Replacement Bladder
4. Chain block
5. Pressure Gauge
6. 1/4" (20) all Thread Rod for BDT-040 & up
7. Work light
8. Extension cord



1. Isolate bladder type expansion tank from system. Shut off automatic fill, valve and drain boiler to release all system pressure.
2. Bleed system air charge through air charging valve. Remove air valve core at top of the tank and discharge remaining air.
3. Disconnect tank from the system.
4. Remove bolted bottom flange. Prior to removal, mark mating flanges in order to match up properly when reassembling.
5. Loosen and remove retaining nut on top of tank.
6. Using the chain block and a slight twisting motion, slide the bladder out of the tank. Remove bladder retaining bolt from inside of bladder.
7. Clean up any remaining water, dry out the inside of the tank and clean out any remaining dirt or foreign particles. Check the inside of the tank for any sharp edges that may cut the bladder.
8. Place bladder bot inside new bladder secured with 1/4" All Thread Rod threaded into top of bladder bolt. Roll up bladder as necessary and pull through tank with thread rod.
9. Secure bladder bolt to top of tank with retaining nut. Hand tighten at this point.
10. Postion bottom neck of bladder in bottom of tank opening to act as gasket sealing surface for system connection.
11. Replace the bottom flange, align the marks and tighten the bolts evenly, using a star pattern.
12. Tighten all threaded and bolt connections.
13. Using compressed air source and pressure gauge, apply 10 psi air pressure to the flange connection then relive pressure. These actions should ensure proper positioning of the replacement bladder within the tank.
14. Reassemble the air valve at the top and seal the hanger opening.
15. Precharge tank to fill-pressure or minimum operating pressure.
16. Using soapy water, check the air valve, retaining bolt and nut and bottom flange joint for leakage.
17. Reconnect the system, open the fill-valve and check operation of the tank. Always precharge tank before completing this step.

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