
Bladder Replacement Installation Procedures

Tanks with bulkhead assembly (21 gallon thru 528 gallon)

ASME BLADDER TANKS - HTS/HTL-DTS/DTL-WTS/WTL SERIES

Bladder Replacement Instructions Models 80 - 2000 Liter

I. Bladder Removal:

CAUTION: Before attempting any repairs or bladder replacements the air-charge in the tank must be reduced to zero. Using an appropriate air tool, bleed off all air from tank until gauge reads Zero.

Do not attempt to remove air pre-charge valve until all air pressure has been removed - as verified by gauge reading. Personal injury could occur if this procedure is not strictly adhered to.

- A. Remove 6 ea bottom cover bolts (Item 1) and 6 ea. Washers (Item 2).
- B. Remove Bottom Flange Cover (Item 3).
- C. Loosen top NUT(Item 5) on tank dome over threaded "bulk-head" nipple (Item 4) to loosen bladder.
- D. Remove bladder (Item 6) through bottom flange opening.

II. Replacement Bladder Installation:

- A. Carefully clean tank flange surface area and clean mating face of removed flange cover.
- B. Carefully roll up bladder longitudinally and insert into tank through bottom flange opening. Use rope to pull bulk head & bladder through top opening and use NUT (Item 5) to secure new bladder in place.
- C. Rotate bladder until bladder flange is perfectly flat against tank mating flange face.
- D. Ensure bladder is fully open inside tank and there is no twisting of bladder.
- E. Re-install flange cover (Item 3) and secure with the 6 ea. bolts and washers.
- F. Position the collar on the bladder on the tank collar. Ensure that the collar sits well on the tank pad. Visually inspect cover plate assembly for any sharp edges or projection. Replace cover plate assembly and tighten up all the bolts to about 50 lbs. torque.

NOTE: When tightening the flange cover against the bladder flange and tank flange, make sure bladder flange is fully compressed to ensure a tight seal. If for some reason the bolts bottom out before proper compression is realized, remove the bolts and install an additional washer under the head of each bolt. Re-tighten and ensure bladder flange is tightly compressed.

- G. Once all the bolts are tighten, precharge tank to minimum system operating pressure. Allow system bottom system connection to be open to atmosphere while tank is charging. This will allow any trapped air in the bladder to escape. Once fill pressure is reached, soap test cover plate and top nut if no leaks are present attach system piping connection.

III. Air leak Testing:

- A. Before reconnecting plumbing to tank bottom flange a leakage test should be performed at this time.
- B. Soap test at top bulkhead assembly around NUT (Item 5).
- C. Connect an appropriate air charging device to the air valve (Item 7).
- D. Charge tank to factory recommended air pressure and/or anticipated initial start-up pressure. We recommend **2-5 psi** below minimum system pressure. Do not over charge.
- E. Using a soap solution check for leakage around the entire periphery of the bottom flange make-up area. Check air pressure again after one hour to ensure there is no loss of air pre-charge.

