



SINCE 1908  
**wessels**  
company

## INSTALLATION & OPERATION

**TYPE:** ASME PRE-PRESSURIZED BLADDER  
TANKS FOR WATER STORAGE

### REPLACEABLE BLADDER TANKS

I/O Sheet No. HIPRESS06-2

Date: 12-05

### **VESSEL DESCRIPTION**

Wessels tanks are ASME constructed, pre-charged bladder vessels. They are designed to accept water and control pressures in plumbing & heating systems. The system's water is contained in a heavy-duty bladder preventing tank corrosion and potential waterlogging problems that plague traditional systems. The factory set pre-charge for these tanks is pre-set at the factory.

**Caution:** Initial tank pre-charge should not exceed 80 psig.  
**Bladder failure may occur. A premature bladder failure due to this elevated pressurization is not covered under warranty.**

### **Determining Pre-charge Pressure**

The tank air pre-charge should be set to equal the minimum required water pressure in the system at the point the tank is installed. The minimum required system pressure is typically determined as the minimum pressure required at the systems highest fixture PLUS static elevation (measured from the top of the system to the tank location). The maximum pre-charge pressure that can be placed in the tank is 80 psig.



REPLACEABLE  
BLADDER-STYLE TANK

### **System Pressures above 80-psig**

Systems that require greater than 80-psig minimum system pressures should determine if the tank can be physically moved to an elevated location. For example, moving the tank to the top of the system results in reduced pressure stress that may occur during system cycling. If the tank cannot be re-located, the pre-charge pressure should be set with the following procedure to accommodate the high-pressure condition.

### **Pressure Set Procedure**

1. Install tank to the piping system. Insure that an isolation valve is installed between the tank and the system piping.
2. With tank installed and isolation valve in the "off" position, bring system pressure to required minimum pressure.
3. Add oil-free compressed air (or nitrogen) to the tank pre-charge valve until the pre-charge reached 40 psig.
4. Monitoring the tank air pressure, slowly open the tank/system isolation valve. Shut valve "off" when the monitored pressure increases to 42 psi. This will add a buffer of water that will hold back any potential bladder extrusion.
5. Continue to add air until the required minimum pressure is reached.