

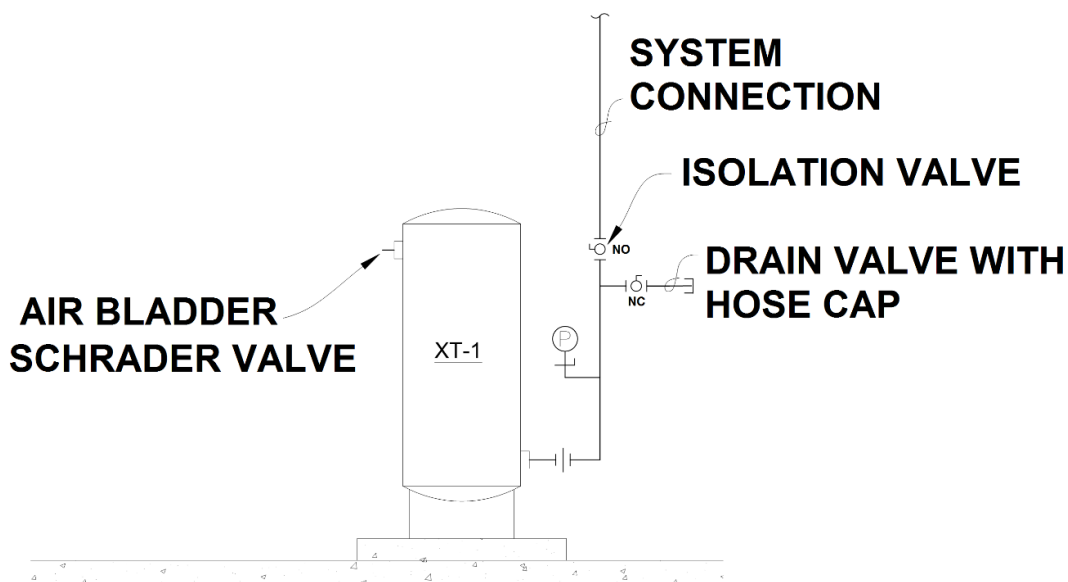
## Pre-Charging the Air Bladder on an Expansion Tank

Expansion tanks come pre-charged with 12 psig, which is an adequate charge for a two-story building. The pressure in an expansion tank needs to be set according to the static fill pressure of the system for each job. Examples:

1. If the elevation from the expansion tank to the highest point in the building is 20 feet (two-story building), the pre-charge is  $0.433 \text{ psi/ft} \times 20 \text{ feet} = 8.66 + 4 \text{ psi} = 12.7 \text{ psi}$  (Note: This is not a precise number).  
For a 2-story building, typically round this number down to 12 psi.
2. If the elevation from the expansion tank to the highest point in the building is 50 feet (5-story building), the precharge is  $0.433 \text{ psi/ft} \times 50 \text{ feet} = 21.6 + 4 \text{ psi} = 25.7 \text{ psi}$  (Note: Again, this is not a precise number. Round the number as needed).

## Tank Pre-Charge Procedure

1. Close the **isolation valve** to the system and isolate the tank from the system.
2. Open the **drain valve** to drain all the water pressure off the water side of the tank. Leave the **drain valve** open during air-side bladder pre-charge.
3. With an air compressor and test gauge, fill the air side bladder of the tank to the desired system water pressure at the **Schrader valve** (air valve on top, similar to a tire fill valve).
4. Shut the **drain valve**.
5. Open the **isolation valve** to the system.



**EXPANSION TANK PIPING DETAIL**