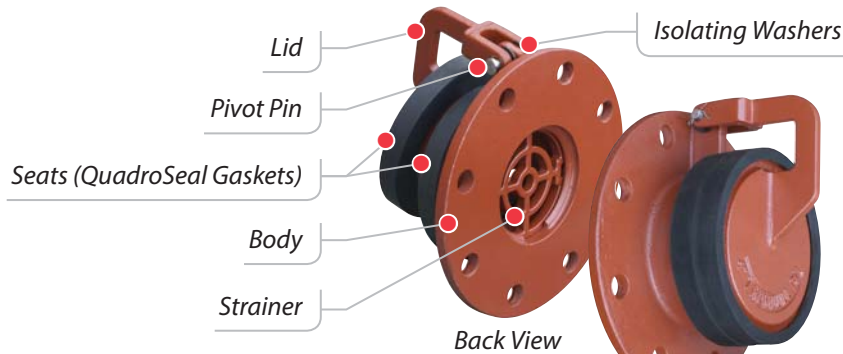


Installation of Tank Pressure Relief Valves

Wall-Type - Ductile Iron

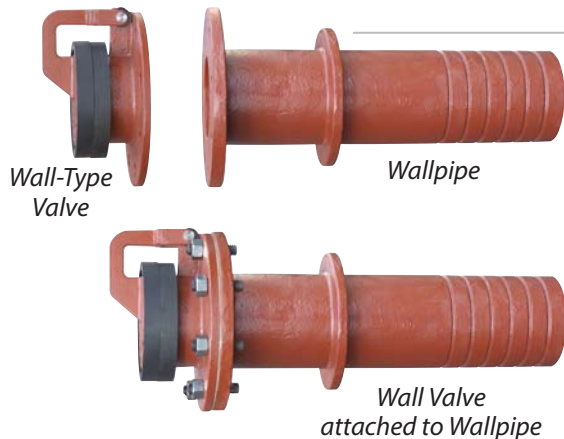
Trumbull Hydrostatic Tank Pressure Relief Valves are offered in two styles, wall-type and floor-type. The wall-type is shown on this page; the floor-type is shown on the following page.

Trumbull Wall-Type Hydrostatic Tank Pressure Relief Valves are available in both 4" and 6"; both sizes use similar components, as shown in the images below.



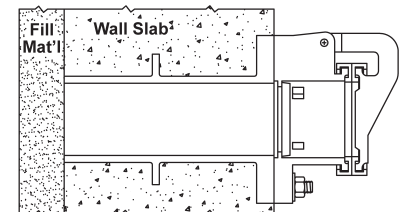
NOTE: 125 lb. ANSI flange gasket and mounting fasteners are NOT provided with valve.

The 4" valve is sized for 5/8" studs.
The 6" valve is sized for 3/4" studs.



Provide a void volume of 2 to 3 cubic feet for crushed stone at the external entry to the Wallpipe.

Fill this volume, and the Wallpipe, up to the strainer, with clean crushed stone; stone should be sized from 3/4" to 2".



Typical Installation
of a wall-type hydrostatic tank pressure relief valve

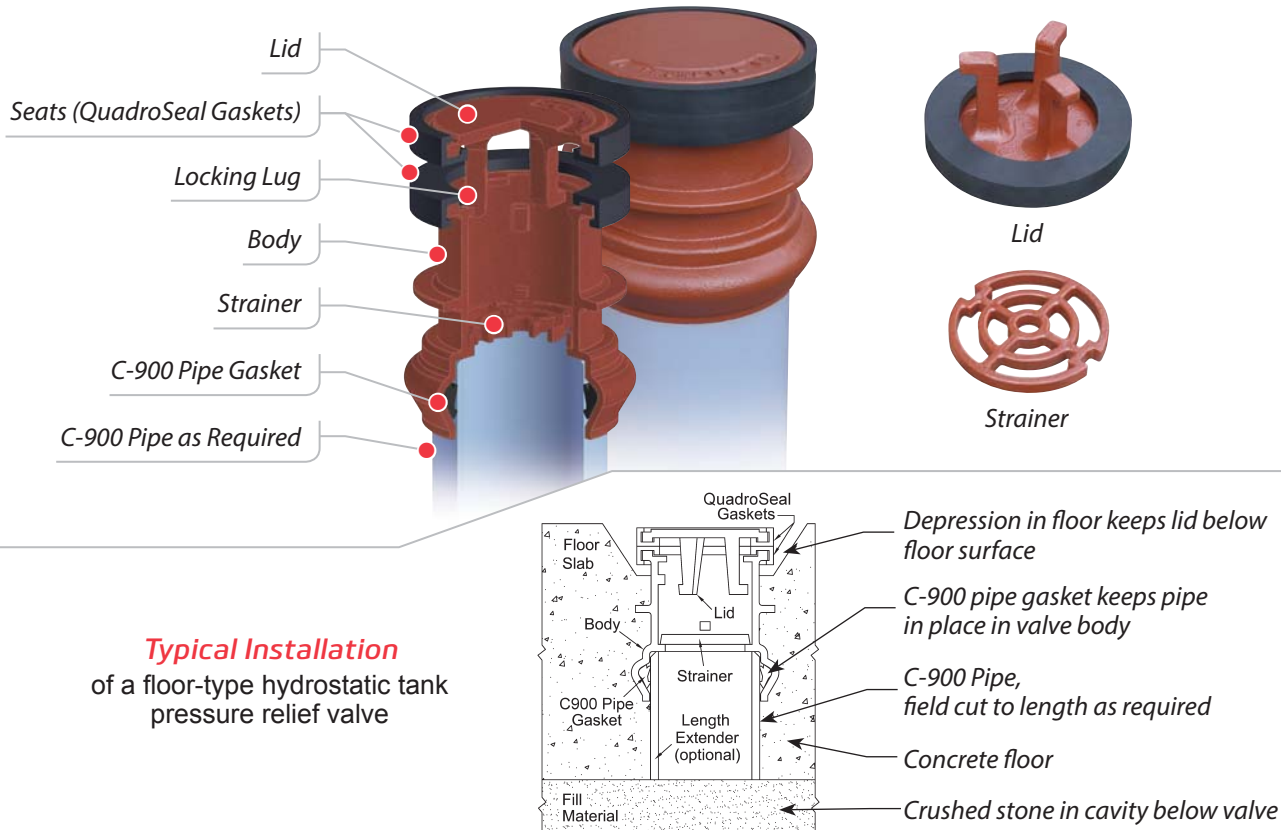
Installation Notes:

- The wall-type valve is typically fastened to a matching Wallpipe that has been embedded in the tank wall.
- The Wallpipe must have the studs aligned such that the valve bolt holes straddle a vertical centerline.
- Any deviation from vertical will result either in leakage, or increased back pressure before valve opens.
- Forms must be properly tied to support the weight of the concrete being poured, to prevent bulging that can cause accumulation of concrete on the wall pipe flange.
- The flanged mounting surface must be clean of mud and concrete, and vertical for proper seating and operation of the valve.
- The valve will begin to open at less than one foot of head differential between the external and the internal fluid levels.
- Use a standard 125 lb. ANSI gasket between the Valve and the Wallpipe; the gasket is not provided with the valve.
- The lid and lid seat assembly must rotate freely on the pivot pin, and be in full contact with the body seat after all fasteners are tightened.
- Check to make sure that no stone or debris has entered the cavity between the strainer and the seats, and that the lid seat and body seat are undamaged and clean before operation.

Installation of Tank Pressure Relief Valves

Floor-Type - Ductile Iron

Trumbull Floor-Type Hydrostatic Tank Pressure Relief Valves are available in both 4" and 6"; both sizes use similar components, as shown in the images below.



Typical Installation
of a floor-type hydrostatic tank
pressure relief valve

Installation Notes:

- The floor-type valve is typically embedded in the concrete floor of the tank.
- It is recommended that the valve assembly be set in a prepared depression in the floor, to such a depth that the top of the lid and lid seat are slightly below the floor surface level when installed. This is intended for clearance of moving equipment or machinery along the floor.
- The overall length of the valve may be extended by using C-900 pipe. The pipe may be field cut to the desired length for each individual valve location. A C-900 Gasket in the valve body holds the pipe securely in place.
- C-900 pipe is not provided with the valve, and must be ordered separately.
- Provide a void volume of 2 to 3 cubic feet for crushed stone at the bottom of the Floor Valve. Fill this volume, and the Floor Valve cavity below the strainer, with clean crushed stone; stone should be sized from 3/4" to 2".
- The valve seating surfaces must be horizontal; do not install valve at an inclined angle.
- Protect the seat surfaces during the preparation and pouring of the floor.
- Check to make sure that no stone or debris has entered the cavity between the strainer and the seats, and that the lid seat and body seat are undamaged and clean before operation.
- To install lid, align the three legs of lid into corresponding openings of valve body. Locking lug will prevent lid from seating, requiring installer to rotate 90 degrees into locked position.

Maintenance of Tank Pressure Relief Valves *Wall-Type - Ductile Iron*

Trumbull Wall-Type Hydrostatic Tank Pressure Relief Valves provide reliable protection over a long service life. Although they require little or no maintenance, the following notes and recommendations should be considered.

The major causes of valve leakage are generally found to be damaged seat surfaces, or debris lodged on, or between the seats. A thorough physical inspection of the valve should be performed whenever the tank is drained for cleaning or maintenance. During this inspection, the following precautionary steps are recommended:

- a.** Physically rotate the lid on the pivot pin – fully open to fully closed, to assure that there is no binding; the lid should move freely on the pivot pin. The lid should rotate to a closed position when released. Observe the contact surfaces between the resilient seats when closed and note any gap which may be due to restricted motion.
- b.** Closely inspect the seats for any mechanical damage to the sealing surfaces. Damaged seats must be replaced, or leakage will result. To replace the resilient seats, follow the steps below.
 - i. Adhesive is used to completely seal any gaps between the seat and the casting. All old adhesive must be removed from the castings before attaching replacement seats, using 3M #2 solvent.
 - ii. Coat all internal surfaces of the replacement resilient seat and the mating casting surface with 3M #1300 adhesive, and attach seat to casting. Remove any excess adhesive from the seat sealing surfaces with 3M #2 solvent.
 - iii. Apply pressure to the lid against the body, to assure the seats are in the correct position. The adhesive will set within a few hours and be ready for use in 24 hours.
 - iv. Do not re-use seats once they have been pried off of the valve; replace them with new seats.

After the seats are replaced, or if the resilient seats are undamaged, continue as below:

- c.** Remove any debris that may be adhering to the seat surfaces.
- d.** Check the internal strainer to assure that the grates are clear. Remove the strainer to clear any debris that may be clogging the strainer and/or the valve body. After cleaning, replace the strainer in the valve body and rotate into locked position.
- e.** Examine for physical damage to the valve. Bent pivot pins can be replaced, but cracked or broken castings cannot be repaired; the valves must be replaced.

Replacement Parts

for Trumbull Wall-Type Hydrostatic Tank Pressure Relief Valves:

Please note that the seats are the same for both the body and lid, for each corresponding valve size.



Recommended spare parts:
Neoprene "QuadroSeal" Gaskets

Approved adhesive for resilient seats:
3M #1300 Adhesive

Approved solvent to remove existing adhesive:
3M #2 Solvent

Maintenance of Tank Pressure Relief Valves

Floor-Type - Ductile Iron

Trumbull Floor-Type Hydrostatic Tank Pressure Relief Valves provide reliable protection over a long service life. Although they require little or no maintenance, the following notes and recommendations should be considered.

The major causes of valve leakage are generally found to be damaged seat surfaces, or debris lodged on, or between the seats. A thorough physical inspection of the valve should be performed whenever the tank is drained for cleaning or maintenance. During this inspection, the following precautionary steps are recommended:

- a. Rotate the lid slightly on the body, to assure that there is no binding; the lid should be free. Align the lid lugs with the openings in the body casting and lift the lid to remove it.
- b. Closely inspect the seats for any mechanical damage to the sealing surfaces. Damaged seats must be replaced, or leakage will result. To replace the resilient seats, follow the steps below.
 - i. Adhesive is used to completely seal any gap between the seat and the casting. All old adhesive must be removed from the castings before attaching replacement seats, using 3M #2 solvent.
 - ii. Coat all internal surfaces of the replacement resilient seat and the mating casting surface with 3M #1300 adhesive, and attach seat to casting. Remove any excess adhesive from the seat sealing surfaces with 3M #2 solvent.
 - iii. Apply pressure to the lid against the body, to assure the seats are in the correct position. The adhesive will set within a few hours and be ready for use in 24 hours.
 - iv. Do not re-use seats once they have been pried off of the valve; replace them with new seats.

After the seats are replaced, or if the resilient seats are undamaged, continue as below:

- c. Remove any debris that may be adhering to the seat surfaces.
- d. Check the internal strainer to assure that the grates are clear. Remove the strainer to clear any debris that may be clogging the strainer and/or the valve body. After cleaning, replace the strainer in the valve body and rotate into locked position.
- e. Physical damage to the valve lid, such as cracked or broken lugs cannot be repaired; the lid must be replaced.

Replacement Parts

for Trumbull Floor-Type Hydrostatic Tank Pressure Relief Valves:

Please note that the seats are the same for both the body and lid, for each corresponding valve size.



Recommended spare parts:
Neoprene "QuadroSeal" Gaskets

Approved adhesive for resilient seats:
3M #1300 Adhesive

Approved solvent to remove existing adhesive:
3M #2 Solvent