Thermal Expansion Relief Valves

Code-Compliant Solution for Thermal Expansion Control

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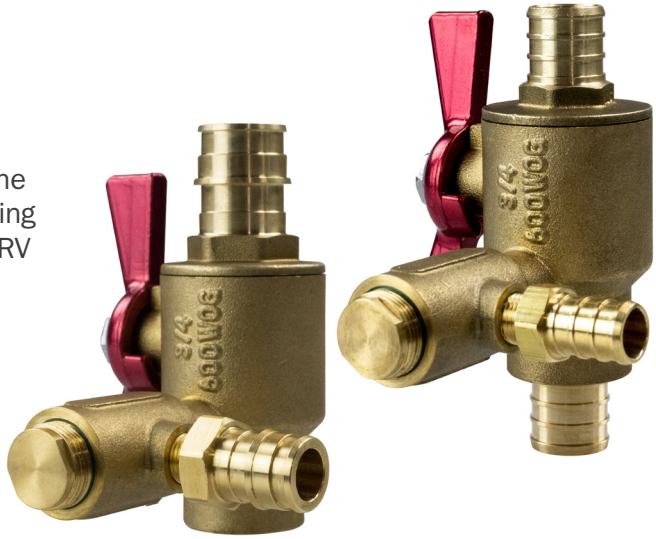
What are Thermal Expansion Relief Valves?

Thermal expansion relief valves (TERVs) have been on the market for over 20 years. Instead of temporarily displacing and storing water like a traditional expansion tank, a TERV discharges the water to prevent explosions or other damage to the water heater or surrounding structure. Discharged water is sent through an integral outlet line and directed to the floor drain or water heater pan.



Sioux Chief Thermal Expansion Relief Valves

Simple Installation: ONE Product vs. 5 to 8 separate items.

Labor Savings: Less labor needed for code compliance. Remove 5 to 8 components and up to 10 installation steps.

Fewer Potential Leaks: Eliminate threaded joints which are the contractor's responsibility if they fail.

Less Mess: Less threading = less tape, less pipe dope, etc.

Less Maintenance: No changing out tanks when diaphragms go bad. Tanks can be difficult to service after installation and may require additional means of access to ensure their continued use.

Code Compliant: Full-port ball valve, tested to IAPMO IGC 128-2019 and CSA B125.3-2018. IAPMO Listed, File: 13009

Quality: Best-in-Class materials. No lead, SCC/DZR resistant. PTFE seats, Stainless springs, EPDM o-rings and relief seat. Superior warranty over expansion tanks.

Space-Saving: Far less space needed than expansion tanks. Much better suited for tight or confined spaces.

Complete: Available as stand-alone valves, or as part of a preformed, grab-and-go water heater connector. Adjustable replacement relief mechanisms also available.

Sioux Chief Thermal Expansion Relief Valves
For in-line F1807 PEX connection (top); or as part of a preformed copper water heater connector (above)

Sioux Chief Thermal Expanion Relief Valves are Compliant with Code Language

2021 Uniform Plumbing Code (UPC)

608.3 - Expansion Tanks, and Combination Temperature and Pressure-Relief Valves

A water system provided with a check valve, backflow preventer, or other normally closed device that prevents dissipation of building pressure back into the water main, independent of the type of water heater used, shall be provided with an approved, listed, and adequately sized expansion tank or other approved device having a similar function to control thermal expansion. ...Such expansion tank or other approved device shall be installed on the building side of the check valve, backflow preventer, or other device and shall be sized and installed in accordance with the manufacturer's installation instructions.

2021 International Plumbing Code

607.3 - Thermal expansion control

Where a storage water heater is supplied with cold water that passes through a check valve, pressure reducing valve or backflow preventer, a thermal expansion control device shall be connected to the water heater cold water supply pipe at a point that is downstream of all check valves, pressure reducing valves and backflow preventers.

2021 International Residential Code

P2903.4 Thermal expansion control

A means for controlling increased pressure caused by thermal expansion shall be installed where required in accordance with Sections P2903.4.1 and P2903.4.2

P2903.4.1 Pressure-reducing valve

For water service system sizes up to and including 2 inches, a device for controlling pressure shall be installed where, because of thermal expansion, the pressure on the down-stream side of a pressure-reducing valve exceeds the pressure-reducing valve setting.

P2903.4.2 Backflow prevention device or check valve

Where a backflow prevention device, check valve or other devic e is installed on a water supply system using storage water heating equipment such that thermal expansion causes an increase in pressure, a device for controlling pressure shall be installed.

P2903.9.2 Water heater valve

A readily accessible full-open valve shall be installed in the cold-water supply pipe to each water heater at or near the water heater.