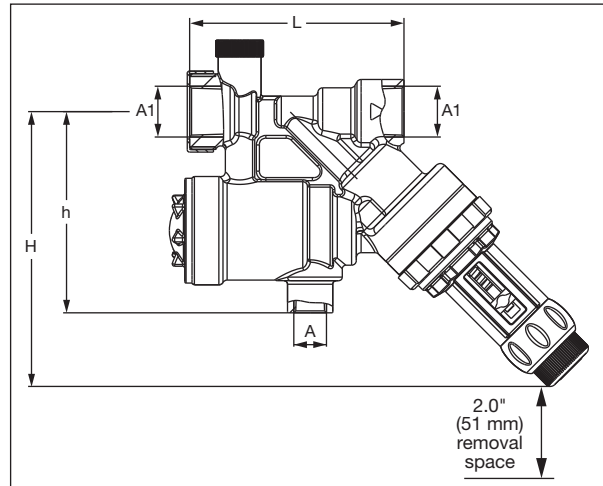


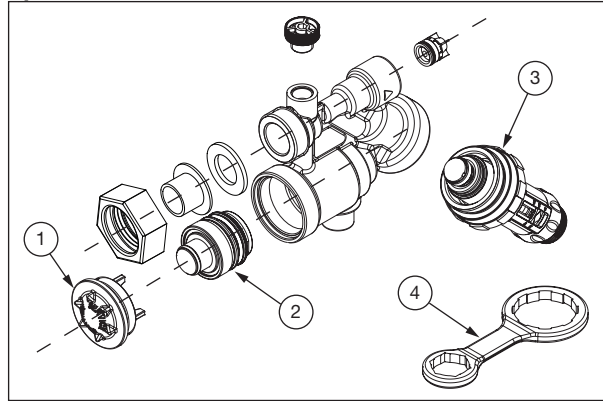
Dimensions:



A - 1/2" NPT
A1 - 1/2" NPT

H - 4.5"
h - 3.3"
L - 3.5"

Spare Parts Breakdown:



- | | | |
|---|---|------------|
| 1 | Backflow Cartridge Service Cap | 3450-002RP |
| 2 | Backflow Preventor Cartridge | 3450-001RP |
| 3 | Pressure Reducing Cartridge | 3350-005RP |
| 4 | Wrench (not included with the valve purchase) | 3450-003RP |

Cartridge Replacement:

Note: When purchasing a replacement backflow or PRV cartridge, Taco recommends also purchasing the wrench in order to simplify removal and replacement of either part.

PRV – Close the isolation valves located on both sides of the 3450 Combination Valve and open the drain at the upstream (inlet side) isolating valve. Loosen the cartridge in the combination valve by placing the wrench (purchased separately) or other user provided tool over the 8 point cam nut and turn counterclockwise. Unscrew the cartridge and remove it from the body. Install the new cartridge hand tight. Fully tighten it using the cartridge

wrench or other tool. **Do not over tighten.** Close the previously opened drain, open the isolating valves and test per local requirements.

Backflow – Close the isolation valves located on both sides of the 3450 Combination Valve and open the drain at the upstream (inlet side) isolating valve. The backflow cartridge is located beneath the black service cap. In order to remove the cap on the combination valve use the cap/cartridge wrench (purchased separately) or other user provided tool. Place the wrench over the 6 point star on the cap and turn counterclockwise to loosen, remove the cap. A spring is located behind the backflow cartridge that may push the cartridge out of the body when the cap is removed. Take care not to lose the spring. If the cartridge remains in place with the cap removed, pull it out. With the spring in place put the new cartridge into the body. Using the 4 fingers on the service cap, push the cartridge into the body and turn the service cap clockwise until hand tight, fully tighten using the wrench or other tool. Close the previously opened drain, open the isolating valves and test per local requirements.

LIMITED WARRANTY STATEMENT

Taco, Inc. will repair or replace without charge (at the company's option) any product or part which is proven defective under normal use within one (1) year from the date of start-up or one (1) year and six (6) months from date of shipment (whichever occurs first).

In order to obtain service under this warranty, it is the responsibility of the purchaser to promptly notify the local Taco stocking distributor or Taco in writing and promptly deliver the subject product or part, delivery prepaid, to the stocking distributor. For assistance on warranty returns, the purchaser may either contact the local Taco stocking distributor or Taco. If the subject product or part contains no defect as covered in this warranty, the purchaser will be billed for parts and labor charges in effect at time of factory examination and repair.

Any Taco product or part not installed or operated in conformity with Taco instructions or which has been subject to misuse, misapplication, the addition of petroleum-based fluids or certain chemical additives to the systems, or other abuse, will not be covered by this warranty.

If in doubt as to whether a particular substance is suitable for use with a Taco product or part, or for any application restrictions, consult the applicable Taco instruction sheets or contact Taco at [401-942-8000].

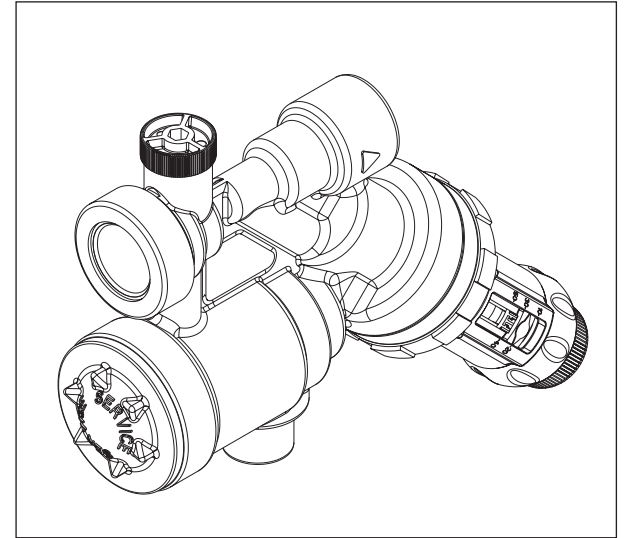
Taco reserves the right to provide replacement products and parts which are substantially similar in design and functionally equivalent to the defective product or part. Taco reserves the right to make changes in details of design, construction, or arrangement of materials of its products without notification.

TACO OFFERS THIS WARRANTY IN LIEU OF ALL OTHER EXPRESS WARRANTIES. ANY WARRANTY IMPLIED BY LAW INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS IS IN EFFECT ONLY FOR THE DURATION OF THE EXPRESS WARRANTY SET FORTH IN THE FIRST PARAGRAPH ABOVE.

THE ABOVE WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR STATUTORY, OR ANY OTHER WARRANTY OBLIGATION ON THE PART OF TACO.

TACO WILL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF ITS PRODUCTS OR ANY INCIDENTAL COSTS OF REMOVING OR REPLACING DEFECTIVE PRODUCTS.

This warranty gives the purchaser specific rights, and the purchaser may have other rights which vary from state to state. Some states do not allow limitations on how long an implied warranty lasts or on the exclusion of incidental or consequential damages, so these limitations or exclusions may not apply to you.



Application:

Taco's combination Backflow Preventer and Boiler Feed Valve (PRV) is designed for use in today's Hydronic heating systems to protect against possible water contamination from the heating system water flowing back into the potable water supply. The combination valve is suitable for systems with fill pressure requirements between 10-50 PSI. The Boiler Feed Valve (PRV) reduces incoming pressure and automatically maintains that system pressure to the valves adjustable pressure set point. The Taco combination valve showcases a fast fill button with automatic reset, this allows the valve to automatically return to maintaining the adjusted pressure setting once the system is full and the set pressure is reached. No more manually holding the valve open or locking it in an open position and over pressurizing to the point of setting off the relief valve. The integral Backflow Preventer prevents the back flow of non potable heating system water into the Potable water supply.

Technical Specifications:

Connections	1/2" x 1/2"
Maximum Inlet Pressure	150 psi
Minimum Delta P Inlet to Outlet	15 psi
Recommended Setting Range	10-50 psi +/-3 psi
Factory Setting	12 psi
Adjustment Capability	8.5 - 65 psi
Maximum Flow Rate(velocity)	25 gpm (8 ft / sec)
Mounting Position	Horizontal Flow with Atmospheric Vent toward the floor
Maximum Temperature	210°F

Installation:

Flush the supply pipe to the valve prior to installation. Install the combination valve so that the atmospheric vent points downward toward the floor. With a properly functioning and correctly installed valve water may be released through the atmospheric vent. In order to prevent water damage during this release process a drain pipe must be installed into the 1/4"NPT vent connection. The drain pipe should end well above a floor drain allowing the flow of water to be easily seen and recognized. The atmospheric vent connection or the drain pipe should never be plugged or allowed to be shut off.

Setting and Maintenance of the Pressure Reducing Valve:

The system pressure of the combination valve is factory set to 12 PSI. Adjust the Pressure Reducing Valve as follows:

Important: In order to achieve accurate setting, heating system adjustments must be done while the system is at its cold fill temperature.

1. Ensure that the inlet pressure is at least 15 PSI above the set pressure.
2. Turn the lock knob counter clockwise to loosen (see figure 1).
3. To reduce the system pressure setting, turn the adjusting knob counter clockwise to the desired set point (see figure 2).
4. To increase the system pressure, turn the adjusting knob clockwise (see figure 3).

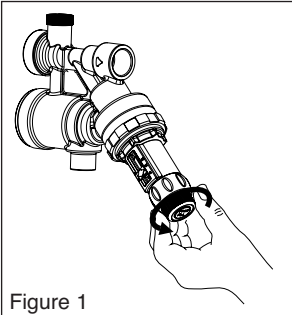


Figure 1

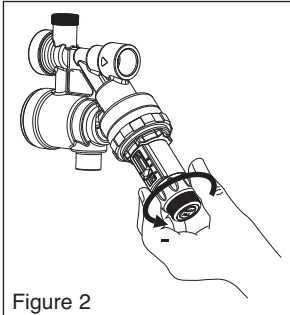


Figure 2

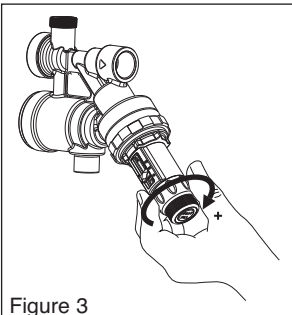


Figure 3

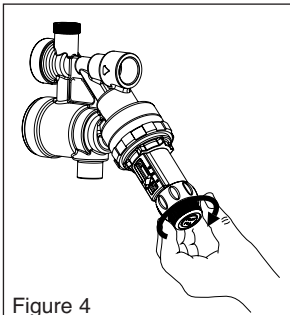


Figure 4

5. Release any pressure above the required setting via a suitable pressure release point in the system.
6. Once the desired pressure setting is reached turn the lock knob clockwise until it is finger tight (see figure 4).

To clean the integrated strainer in the pressure reducing valve, close the isolating valve upstream and downstream of the unit. Remove the PRV cartridge and clean with water.

Automatic Reset Fast Fill Feature:

With the Combination valves' integrated fast fill feature you can override the normal operation when filling and purging the system. To activate the fast fill feature, push in the fast fill bottom on the end of the PRV cartridge (see figure 5). When the fill pressure setting is reached the button will pop out automatically, taking the valve out of fast fill mode and returning to the normal operating mode.

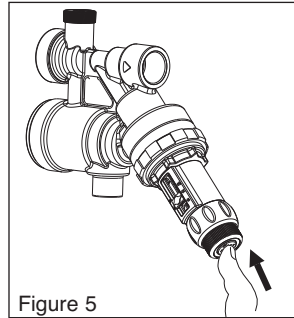


Figure 5

NOTE: If the fast fill button is unintentionally pushed in prior to installation it may be returned to the normal operating mode as follows.

1. Unscrew and remove the lock knob, carefully so as not to lose the spring.
2. If the spring is still inside the lock knob, remove it.
3. Using a suitable tool, such as a small screwdriver or pen, reach inside the lock knob and push the button back out.
4. Put the spring back into the lock knob and screw the knob back onto the cartridge.

Consult local code authorities for installation and testing requirements in your area.

Note: This product should be installed by professionals familiar with the correct function and performance of hydronic heating systems and their associated components.

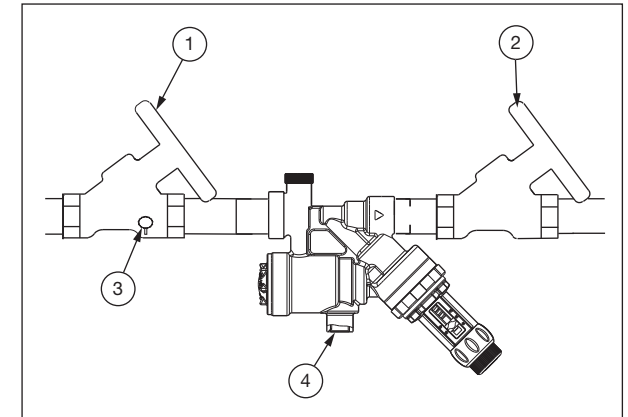
This device shall not be installed in a concealed or inaccessible location, or where venting of water from the device during its normal functioning may be deemed objectionable.

Caution: Protect the valve from freezing and exposure to chemicals or solvents.

Test Procedure:

To test the secondary check valve, reduce the pressure in the upstream pressure zone by proceeding as follows:

1. Fully close the first isolating valve (1).
2. While watching the atmospheric vent (4), open the drain (3), this empties the water between the backflow and the isolating valve.
3. When the check valve works properly, only a very small quantity of water is drained through the atmospheric vent (4)
4. If water continues to drain from the atmospheric vent the backflow cartridge will need to be cleaned or replaced. Follow the instructions for cartridge replacement in order to remove it for inspection. Inspect it for blockage or a build up of impurities. Based on the visual inspection either clean the cartridge with water or replace it with a new one.



- 1 – First Isolating Valve, without Drain
- 2 – Second Isolation Valve
- 3 – Drain
- 4 – Atmospheric Vent

Installation Diagram:

