



# Thermoflo® Indicator

**INSTALLER: PLEASE LEAVE THIS MANUAL FOR THE OWNER'S USE.**

Note: This product is not intended for use in potable water applications.



**WARNING: California Proposition 65 Warning!** This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.



## SAFETY INSTRUCTION

This safety alert symbol will be used in this manual to draw attention to safety related instructions. When used, the safety alert symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED! FAILURE TO FOLLOW THE INSTRUCTIONS MAY RESULT IN A SAFETY HAZARD.**

## DESCRIPTION

Thermoflo Indicators are designed to quietly and accurately aid in the balancing of hydronic systems. The glass flow indicator tube gives visual readings of flow. Each Thermoflo Indicator is individually tested and calibrated to assure accurate readings.

## INSTALLATION INSTRUCTIONS

1. Thermoflo Indicator sizes 1¼" through 2½" are furnished with solder connections. To connect the Thermoflo Indicator to the system 95-5 tin-antimony or silver solder must be used to maintain the temperature and pressure rating of unit.



**WARNING:** Solder joints can fail resulting in hot fluid leakage or spray. Do not use low temperature lead based solders to solder Thermoflo Indicator into system piping. Failure to follow these instructions could result in serious personal injury or death and property damage.

2. Thermoflo Indicator sizes 3" through 8" are furnished with flanged connections. They are to be installed with suitable gasket and bolting to withstand rated pressure and temperature. Bolts are to be properly torqued and tightened in a criss cross pattern.



**WARNING:** Flange joints leaking high temperature fluids can result from improperly installed gaskets. Use only the size and type bolts recommended by ANSI B16.5 Standard. Gasketing must be suitable for temperature and pressure rating. Bolts must be properly torqued and tightened in a criss cross pattern. Failure to follow these instructions could result in serious personal injury or death and property damage.

3. Thermoflo Indicators may be installed in either a vertical or a horizontal position. Be sure that the direction of flow is as indicated by the flow arrow on the nameplate or the glass tube.



**WARNING:** Accidental breakage of Thermoflo Indicator glass tube will release pressurized system fluid. Do not install Thermoflo Indicator where accidental glass breakage could cause personal injury or property damage. Failure to follow these instructions could result in serious personal injury or death and property damage.



**WARNING:** Low system pH (acidic) or very high system pH can thin tube, resulting in glass tube breakage. System fluid pH must be maintained between 7 and 9. Failure to follow these instructions could result in serious personal injury or death and property damage.

4. Always install a balance valve on the return side of the Thermoflo Indicator to adjust flow to desired rate.

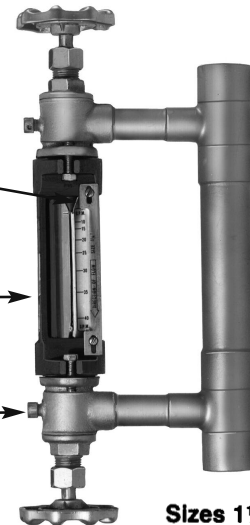
## OPERATIONAL LIMITS

Maximum Operating Pressure 125 psig  
Maximum Operating Temperature 250°F

Reference mark to zero nameplate for accuracy.

**WARNING LABEL PART NO. V56845 IS INSTALLED IN THIS LOCATION. IF MISSING, IT MUST BE REPLACED.**

Vent or Drain

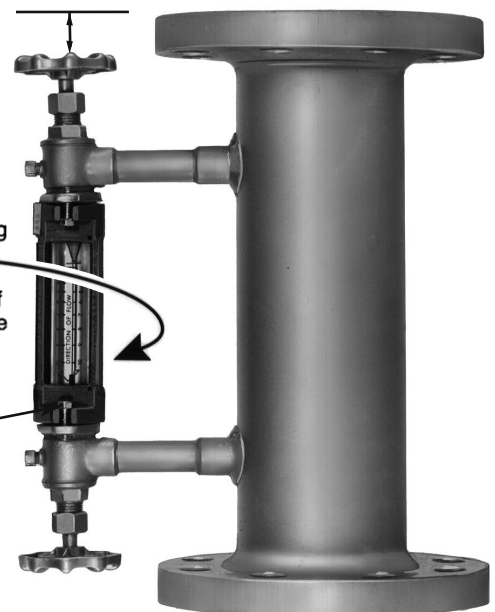


Sizes 1¼"–2½"

Allow 1" clearance on each end of shutoff valve.

If necessary, the gauge can be turned 180° for better viewing by removing the two cap screws in both of the flanged ends. The same flow direction must be maintained.

Cap Screw



Sizes 3"–8"

- To retain full calibrated accuracy, avoid elbows or restrictions immediately adjacent to the Thermoflo Indicator. Thermoflo Indicators should be installed with a minimum of 3 pipe diameters of an unrestricted straight length of pipe upstream and downstream.

## OPERATING INSTRUCTIONS

**WARNING:** Hot or cold system fluids can escape unexpectedly. Always wear safety glasses when looking toward or working on the Thermoflo Indicator. Failure to follow these instructions could result in serious personal injury or death.

- Close the shutoff valve on each end of the Thermoflo Indicator.
- The accuracy of the Thermoflo Indicator, or of any flow indicating device, is reduced by dirt or foreign material lodging in the flow indicating mechanism. Always clean a new system thoroughly by adding a cleaning compound to the original fill water. Trisodium phosphate has been found by many to be a satisfactory cleaning compound. Operate the system for a few days, drain and refill with fresh water.
- Open shutoff valves on Thermoflo Indicator.
- Adjust balancing valve to desired flow rate.
- Close Thermoflo Indicator shutoff valves to protect the Thermoflo Indicator and to prevent damage from accidental glass breakage.
- No further adjustments should be required unless a change in flow rate is needed. Should this be necessary, repeat steps 3, 4 and 5.

**WARNING:** Sudden temperature changes or water spray could break Thermoflo Indicator glass tube releasing system fluids. Protect the Thermoflo Indicator from water spray and change temperature in indicator slowly by opening shutoff valves slowly. Failure to follow these instructions could result in serious personal injury or death and property damage.

## SERVICE INSTRUCTIONS

Should the Thermoflo Indicator require cleaning, follow the following instructions:

- Isolate the Thermoflo Indicator from the system with the shutoff valves located on each end of the product.

**WARNING:** Hot system fluids or system fluids under pressure can be very hazardous. Allow the temperature in the Thermoflo Indicator to cool to below 100°F. Keeping face and eyes away from the vent, loosen the vent cap located on the shutoff valve approximately one turn or until pressure is vented from the hole in the side of the cap. Leave the vent open while servicing the Thermoflo Indicator. If fluid continues to flow from vent fitting the Thermoflo Indicator will have to be isolated with shutoff valves located elsewhere in the system before proceeding with service. Failure to follow these instructions could result in serious personal injury or death and property damage.

Thermoflo Indicator shutoff valves, if found to be leaking, can be serviced as follows after they have been isolated from the system:

- Using a wrench, unscrew the valve bonnet from the valve body.
- Remove the retaining screw holding the rubber seat to valve stem.
- Replace the rubber seat with a new one and replace the retaining screw.
- Replace the bonnet gasket and reassemble the bonnet into the valve body.

- Loosen and remove the four cap screws from the end flanges.
- Pull the body assembly from the Thermoflo Indicator with a slight twisting movement.
- Remove the two brass rings and gaskets.
- Remove the inner parts from the glass tube for cleaning. This may be done without removing the glass tube from the housing by pushing the spring-hanger assembly out the inlet (upstream) end.
- After cleaning all parts, replace the spring-hanger assembly in the direction of the arrows. **Note:** The loop on the end of the spring cone should line up with the "Zero" end of the red arrow on the glass tube or the zero mark on the indicator scale.



**WARNING:** Thinning, pitting, scratches, clouding or corrosion on either the inside or outside of glass tube can cause glass tube breakage and the release of system fluids. Thoroughly inspect the tubing for any of these conditions and if found, glass tube must be replaced. Failure to follow these instructions could result in serious personal injury or death and property damage.

**WARNING:** Improper assembly of glass tube into Thermoflo Indicator body can result in glass tube breakage and the resulting release of system fluid. Care must be taken to center the glass tube in the cast iron body to prevent end metal to glass contact which could result in glass tube damage. Failure to follow these instructions could result in serious personal injury or death and property damage.

- Reassemble brass rings and gaskets and insert them between the end flanges. For greater ease of assembly, spread end flanges apart about 1/4". Make sure that arrows point in direction of flow.
- Replace cap screws, alternately tightening each side.

**WARNING:** Leakage, corrosion or indications of damage are signs of an impending serious failure of the Thermoflo Indicator. Periodically inspect all parts for damage. Inspect the inside and outside of the glass tube for thinning, pitting, scratching, clouding or corrosion. Replace all gaskets, glass tube and any damaged parts. Failure to follow these instructions could result in serious injury or death and property damage.

**xylem**  
Let's Solve Water

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