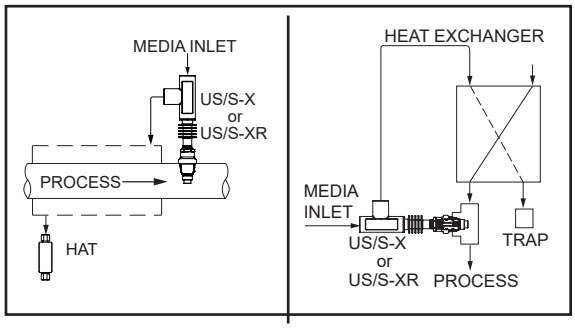
INSTALLATION INSTRUCTIONS
US/S-X, US/S-XR, TV/US-X and TV/US-XR
(Also applies to US/S and US/S-R valves)

The heating or cooling medium piping should be connected to the valves inlet. The outlet from the valve supplies the tracing, heating or cooling coil, or heat exchanger in response to the sensor temperature.

The **US/SX** and **TV/US-X** are used for heating applications while the reverse-acting **US/S-XR** and **TV/US-XR** are used for cooling applications.

The valves can be installed several ways: ***see typical installation drawings shown.***

1. The sensing element directly immersed into the process fluid through a 3/4" female connection.
2. Mounted non-invasively via a 3/4" NPT band-o-let fitting to the pipe or tank to sense the surface temperature.
   Band-o-let fitting is available from the factory.
3. Installed into a tee through which the medium to be sensed is flowing.



Install strainer with #20 mesh screen ahead of valves.

If the installation is susceptible to freezing, the inlet line must be protected in the event that the valve shuts off the steam or fluid flow in response to the sensor temperature.

With steam, the supply line must be trapped immediately at the valve inlet to keep it warm when the valve is closed. (e.g.: ThermOmegaTech®'s HAT)

With water, an automatic freeze protection bleeder valve must be installed immediately at the valve inlet. (e.g.: ThermOmegaTech®'s HAT/FP). **Consult the factory for specific recommendations if necessary.**

In tank temperature control applications, the sensor can be mounted at the tank coil outlet, controlling steam flow into the heating coil in response to the condensate outlet temperature.

If the sensor is mounted to sense surface temperature, the air space around the sensor in the band-o-let fitting should be filled with heat transfer compound (available from the factory). Simply apply about two tablespoons of heat transfer compound into the band-o-let fitting and then screw the sensor into the fitting. Wipe any excess compound from the joint prior to insulation.

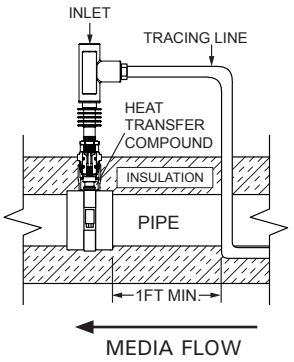
When mounting the sensor to sense surface temperature of a pipe or tank, to avoid thermal short-circuiting the steam tracer or tank heater should not contact the pipe or tank surface within 12 inches of the sensor mounting point.

INSULATION

To minimize effects of ambient temperature on the sensing ability of the valve, insulate the sensor contact area thoroughly.

To enhance heat retention and/or freeze protection, insulate the supply line to the valve and the exposed outlet pipe or tubing. Outlet pipe or tubing from the valve should be pitched to gravity flow toward the insulated process line, tank coil, or heat exchanger to prevent freezing.

The valve body can also be insulated, but **never insulate the finned isolation section of the valve.**



Proper Use: Use ThermOmegaTech® products only as specified to ensure performance, safety, and regulatory compliance.
No Modifications: Do not modify ThermOmegaTech® products, as changes may void warranties and violate regulations (e.g., RoHS, REACH).
Proper Disposal: Dispose of end-of-life products per local hazardous substance regulations; contact ThermOmegaTech® or recycling facilities for guidance.

⚠ WARNING: This product can expose you to chemicals, for example lead, nickel, acrylonitrile, which are known to the State of CA to cause cancer, birth defects, or reproductive harm. For more information, go to www.P65Warnings.ca.gov

Warranty information disclosed at www.thermomegatech.com/terms-conditions/

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