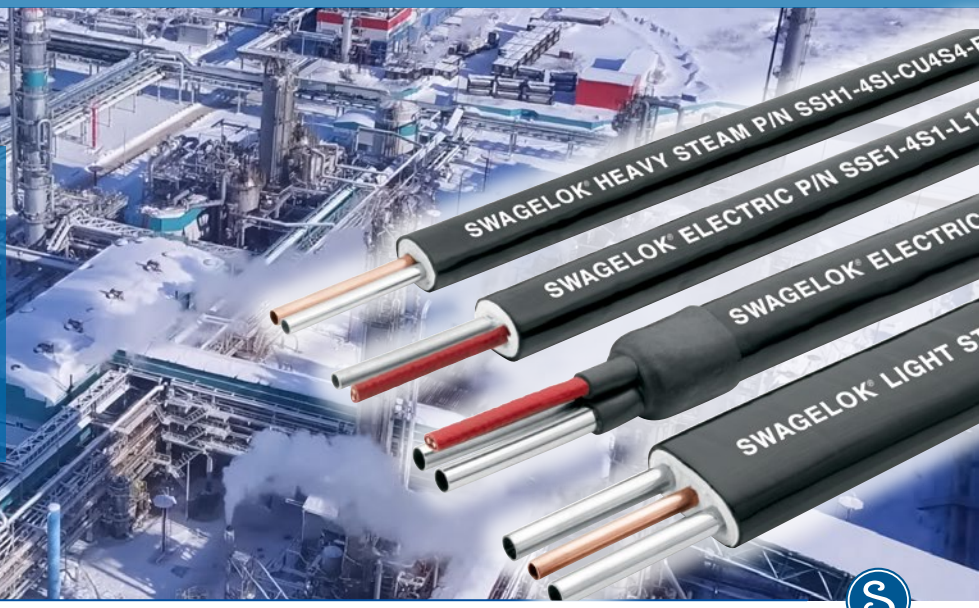
WINTERIZATION OPTIMIZATION



A few proven and trusted Swagelok leak-tight product solutions to help ensure that your external impulse, process, and sampling lines stay fully operational during the most challenging winter extremes:

Electric-Traced Bundle

- Maintains uniform temperatures (up to 250°F) in long, continuous impulse and sample lines
- Self-regulating Raychem® tracer lowers heat output as bundle gets warmer
- Tinned, copper-braided shield

Light Steam-Traced Bundle

- Superior freeze protection of impulse and analyzer transport lines
- Ideal for maintaining temperatures (50°F to 200°F) in small-diameter process lines
- Individually wrapped process and tracer tubes reduce heat transfer

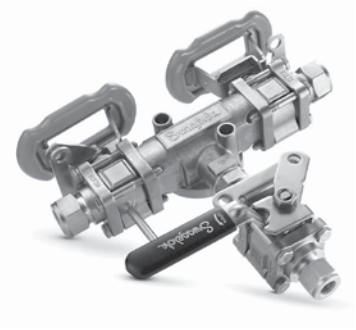
Heavy Steam-Traced Bundle

- Yields optimal high process temperatures (200°F to 400°F) and/or viscosity control
- Maximum high heat transfer due to direct contact of process and tracer tubes
- Effective alternative when electrification is not possible

- **Available in an array of configurations**
- **Insulated with non-wicking, fibrous glass**
- **Covered with a PVC or urethane jacket for exceptional chemical/abrasion resistance**
- **Quickly and easily installed for a more consistent thermal performance versus field-traced and insulated systems**
- **All tubes bend together for pain-free routing and field connections**

Steam Traps

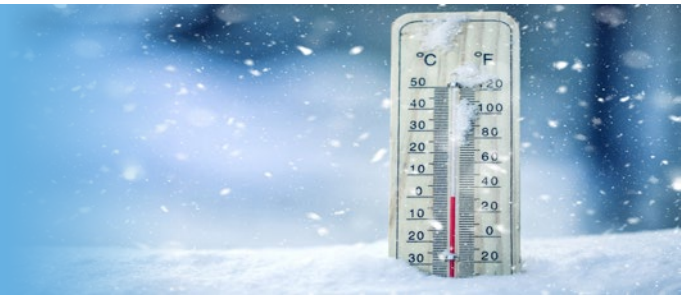
Strongly recommended for every steam-traced line in your system.



Should be located at every 100' or so of heated line – or if you have turns or elevation changes in your main line. Separates condensate from steam. Also removes non-condensable gaseous mixtures. Should be installed before any pressure-relief, control, or closed manual valves to prevent seat erosion and a freeze leading to a rupture.

REMEMBER: If condensate isn't effectively removed from your lines, water hammer could result, causing significant operator risk and/or equipment damage.

A Few More Helpful
Winterization Hints



- **Conduct an Energy-Loss Evaluation** to determine current line leakage and to prevent fugitive emissions that could cause system failure in extreme cold
- **Employ Grab Sampling** - Safely, efficiently, and effectively capture gas and liquid samples for transportation to a lab for analysis; whether you require closed-loop sampling into pressure-rated cylinders OR want to collect liquids and non-volatile process fluid into glass bottles, our options are safe, intuitive, easy to maintain, and available as a single part number
- **Construct heated housing**, even for temporary use, to protect critical outside equipment

Put our team alongside yours

For further details regarding all the leak-tight, productivity-boosting ways Swagelok Pittsburgh | Tri-State Area can help you improve your Bottom Line health, contact:

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