

Automatic Variable Orifice Steam Trap

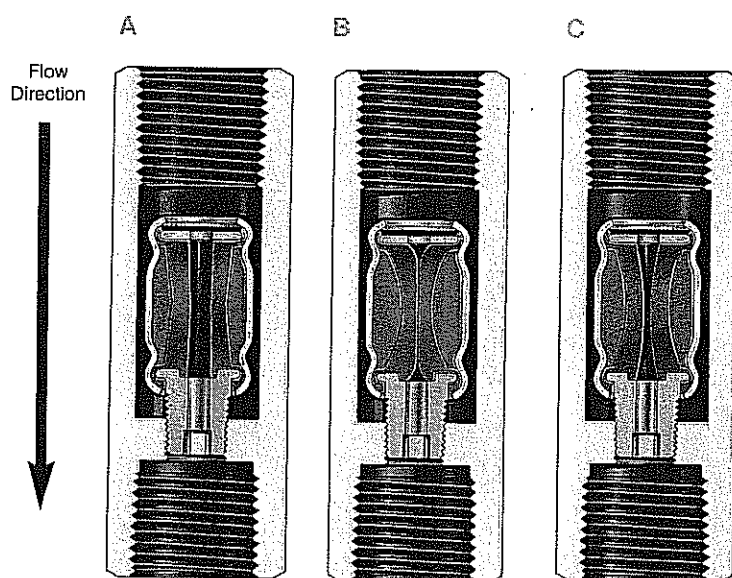
For saturated steam systems

Features

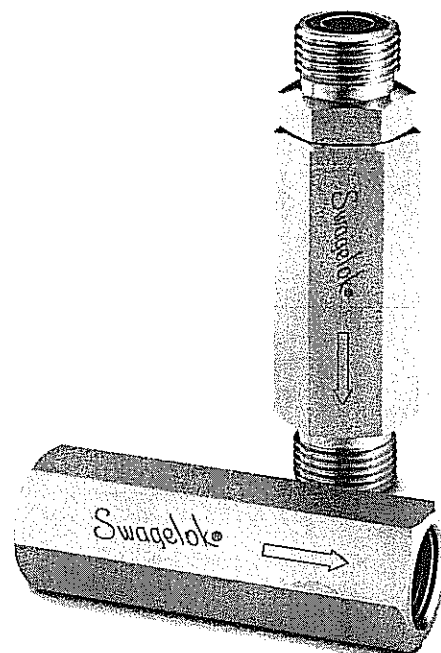
- Compact
- No live steam loss during operation
- Particles pass through the in-line flow path
- No sizing — performs on loads from 0 to 200 lb/h
- Operates with or without backpressure
- No mechanical parts

How it works

A temperature-sensitive hydrocarbon wax responds to the temperature of condensate and steam to open and close the trap.

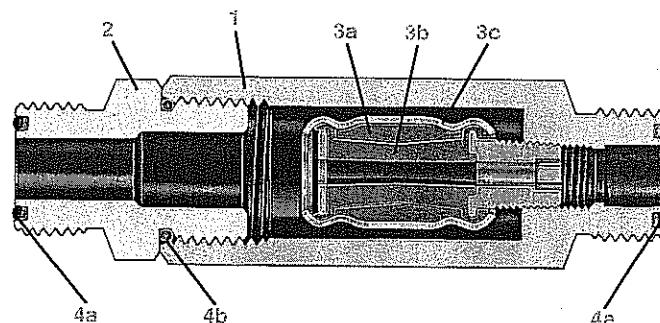


- A** The variable orifice steam trap is wide open and ready to start-up.
- B** After initial start-up, live steam causes the trap to close tightly.
- C** Once equilibrium has been reached, condensate passes through the variable orifice steam trap. The variable orifice allows contaminants to pass through.



Materials of Construction

| Component | Material/ASME Specification |
|-----------------------|---|
| 1. Body | 316 stainless steel/ASME SA-479 |
| 2. Adapter | |
| 3. Modulator assembly | a. expansion medium: hydrocarbon wax b. bonded modulator: fluorocarbon FKM; brass 360/ASME B-16 c. outer casing: brass 260/ ASME B-36 |
| 4. O-rings | a. VCO® face seal fitting: 70 durometer fluorocarbon FKM b. body to adapter: 90 durometer fluorocarbon FKM |



Silicone-based lubricant is applied to O-rings. All materials of constructions, except expansion medium, are wetted.
Note: Adapter and O-rings apply only to SS-AVT8-VCO8-M1 AND SS-AVT8-VCO8-M2.

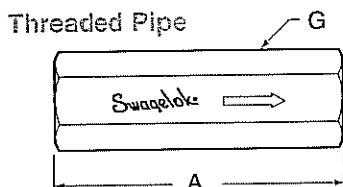
Technical/Ordering Information

Condensate Capacity

- Start-up removal: 1000 lb/h (454 kg/h) maximum.
- Full 200 lb/hr condensate removal rate at body operating temperature of:
 - 220°F (104°C) for -M1 ordering number
 - 180°F (82°C) for -M2 ordering number.
- Condensate removal rate decreases with increase in body temperature.

Installation Considerations

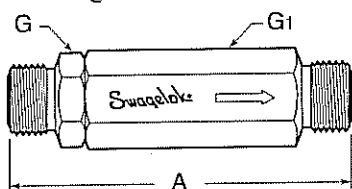
- Do not insulate steam trap.
- Flow arrow on steam trap must point away from the steam source.
- Do not allow the flow arrow to point above horizontal.



| Inlet/Outlet NPT Female Pipe Size, in. | Operating Pressure, psig (bar) | Maximum Allowable Temperature, °F (°C) | Ordering Number | A in. (mm) | G Hex Flat, in. | Modulator's Maximum Orifice, in. (mm) |
|---|--------------------------------------|---|-----------------|---------------|--------------------------|--|
| 1/2 | 50 to 150 (3.5-10) | 365 (185) | SS-AVT8-F8-M1 | 3.39 (86.1) | 1 1/16 | 0.156 (3.9) |
| | 10 to 100 (0.68-6) | 340 (170) | SS-AVT8-F8-M2 | | | |

| Inlet/Outlet ISO Female Pipe Size, in. | Operating Pressure, psig (bar) | Maximum Allowable Temperature, °F (°C) | Ordering Number | A in. (mm) | G Hex Flat, in. | Modulator's Maximum Orifice, in. (mm) |
|---|--------------------------------------|---|-----------------|---------------|--------------------------|--|
| 1/2 | 50 to 150 (3.5-10) | 365 (185) | SS-AVT8-F8RT-M1 | 3.39 (86.1) | 1 1/16 | 0.156 (3.9) |
| | 10 to 100 (0.68-6) | 340 (170) | SS-AVT8-F8RT-M2 | | | |

VCO O-ring Face Seal Fitting



| Inlet/Outlet VCO Size, in. | Operating Pressure, psig (bar) | Maximum Allowable Temperature, °F (°C) | Ordering Number | A in. (mm) | G Hex Flat, in. | G1 Hex Flat, in. | Modulator's Maximum Orifice, in. (mm) |
|----------------------------------|--------------------------------------|---|-----------------|---------------|--------------------------|---------------------------|--|
| 1/2 | 50 to 150 (3.5-10) | 365 (185) | SS-AVT8-VCO8-M1 | 4.06 (103.1) | 1 | 1 1/16 | 0.156 (3.9) |
| | 10 to 100 (0.68-6) | 340 (170) | SS-AVT8-VCO8-M2 | | | | |

Dimensions are for reference only, subject to change

Options

For additional end connector options, contact your Swagelok representative.

Safe Component Selection

When selecting a component, the total system design must be considered to ensure safe, trouble-free performance. Component function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.

Caution: Do not mix or interchange parts with those of other manufacturers.