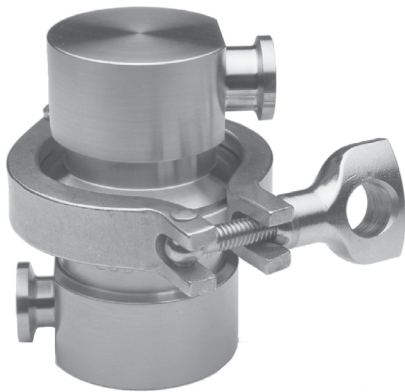




YARWAY SANITARY THERMOSTATIC STEAM TRAPS

ST800 SERIES



MODELS

- ST800-HH** Horizontal inlet and outlet
- ST800-HV** Horizontal inlet, vertical outlet
- ST800-VH** Vertical inlet, horizontal outlet

APPLICATIONS

- CIP/SIP System Condensate Drainage
- Sterilization of Process Vessels
- Culinary Steam
- Humidifiers
- WFI System Sterilization
- Fermenter Sterilization

TECHNICAL DATA

Maximum Operating Pressure (PMO):	100 psig (6.9 barg)
Maximum Operating Temperature (TMO):	338°F (170°C)
Maximum Allowable Pressure (PMA):	150 psig (10.3 barg)
Maximum Allowable Temperature (TMA):	366°F (186°C)
Body Surface Finish (standard):	<20 μ in. Ra internal <32 μ in. Ra external
Electropolish Surface Finish (optional):	13 μ in. Ra internal 20 μ in. Ra external
Gasket Approvals	FDA USDA USP Class VI 3A Sanitary Standard NSF

FEATURES

- Universally Configurable** - Horizontal connections from any direction on standard model; HV and VH models feature one multi-directional horizontal and one vertical connection.
- Steepest Interior Surfaces** - Designed to completely drain without puddling, even in significantly sloped lines.
- Stainless Steel Body** - Body material is 316L Stainless Steel with 20 μ in. Ra internal and 32 μ in. Ra external. Electropolish option available.
- Self-Centering Valve** - Leak-tight shut off. Assembly of actuator and valve to impingement plate allows the valve to self align with center of the orifice.
- Temperature-Sensitive Actuator** - One moving part. Stainless steel, fail open, welded actuator for maximum corrosion, thermal and hydraulic shock resistance.
- One Size Suits Most Services** - Universal ferruled end connection fits both ½" and ¾" piping.
- Maintenance** - Can be easily removed and disassembled for sterilization or repair.
- Industry Standard Food Grade Gasket** - White Viton food grade gasket offers superior performance for higher pressure steam applications.
- Superior Air Handling** - Best air handling capability provides for fast startup.
- Unique SLR Orifice Option** - Provides drainage at saturated temperatures, instant reaction to load changes and guaranteed fail-open operation for extra critical operations.
- Bar Stock** - Connection fittings are not welded onto inlet and outlet pieces.

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SPECIFICATION

Steam trap shall be of balanced pressure design with Inconel® welded bellows capable of releasing condensate within 10°F (5.56°C) of saturated temperature. Trap shall utilize sanitary body clamp allowing disassembly for inspection or cleaning and be entirely self-draining in horizontal or angle piping configuration. Trap end connections shall be standard tri-clamp. Thermostatic actuator shall employ a conical valve lapped to the seat. Traps shall have SLR orifice where drainage at saturated temperatures is required.

SLR Orifice Option

Specify when immediate elimination of condensate and improved sensitivity is desired. A 1/32" orifice at the apex of the valve allows for continuous discharge of condensate. Trap will nominally pass 50 lb/hr (22.7 kg/h) of condensate at 50 psi (3.4 bar) within 2°F (1.11 °C) of saturated temperature

Bellow Options

A - Standard
B - Sensitive - 3°F (1.67°C) subcool for sensitive applications under 45 psi (3.1 bar).

OPERATION

Thermal actuator is filled at its free length with a liquid having a lower boiling point than water. On start-up, valve is normally open to discharge air, non-condensables and condensate. When steam enters trap, thermal actuator fill vaporizes to a pressure higher than line pressure. This forces valve into seat orifice to prevent any further flow. As condensate collects, it takes heat from the actuator, lowering internal pressure. Line pressure will then compress thermal actuator to open valve and discharge condensate. Valve opening automatically adjusts to load conditions from minimum on very light loads to full lift at maximum load.

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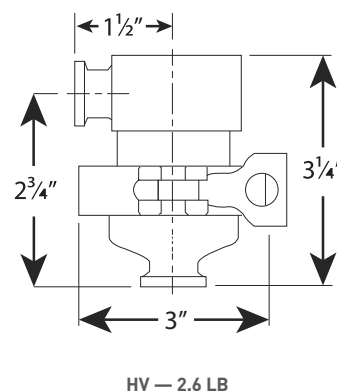
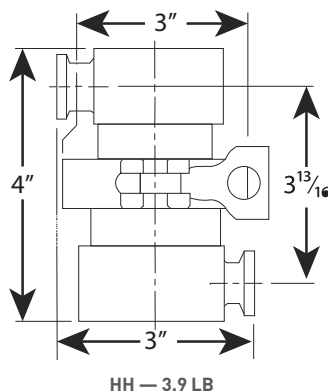
ST800 SERIES

MAXIMUM CAPACITY: LBS/HR AT 10°F BELOW SATURATION (KG/HR AT 5.56°C BELOW SATURATION)

Trap	Orifice Inch	Differential Pressure, psig (barg)										
		5 (0.34)	10 (0.7)	20 (1.4)	30 (2.1)	40 (2.8)	50 (3.4)	60 (4.2)	70 (4.9)	80 (5.6)	90 (6.2)	100 (6.9)
ST800	1/4	550 (249)	825 (374)	1210 (549)	1495 (678)	1750 (794)	1975 (896)	2175 (987)	2350 (1066)	2525 (1145)	2650 (1202)	2825 (1281)
ST801	5/16	861 (391)	1217 (552)	1722 (781)	2150 (975)	2475 (1123)	2722 (1235)	2940 (1334)	3125 (1417)	3290 (1492)	3450 (1565)	3575 (1622)

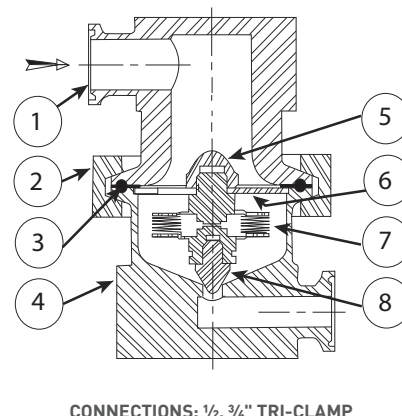
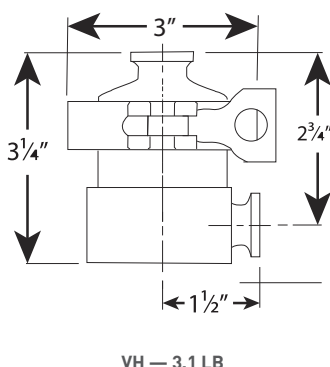
MATERIALS OF CONSTRUCTION

Item	Part Name	Material
1	Body - Inlet	316L Stainless Steel
2	Clamp	304 Stainless Steel
3	Gasket	EPDM, Viton, PTFE, or PTFE-Steel
4	Body - Outlet	316L Stainless Steel
5	Actuator Nut	316L Stainless Steel
6	Centering Plate	316L Stainless Steel
7	Actuator	316L Stainless Steel
8	Valve	316L Stainless Steel



HOW TO ORDER

- Select Orifice Size:
1/4" or 5/16"
- Select Service Size:
1/2" to 3/4" or 1" to 1 1/2"
- Select Bellows Type:
Standard (A)
Sensitive (B)
Standard SLR
Sensitive SLR
- Select Gasket Type:
EPDM
Viton
PTFE
PTFE-Steel
- Select Finish:
Mechanical
Electropolish (EP)



NOTE:

Please specify if Material Test Reports (MTR) or Certificates of Conformance (COC) are required.

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