

DS200 SERIES THERMOSTATIC STEAM TRAPS

Pressures To 500 PSIG (34.5 barg)
Temperatures to 500°F (260°C)



Applications

- Culinary Steam
- WFI System Sterilization
- Main Drips
- Drainage of Steam Filters and Separators
- Sterilizer Drainage and Air Venting

Options

- SLR - SLR Orifice

Canadian Registration # 0E0591.9

Stainless Steel Body—Body materials are Type 316L Stainless Steel.

Self Centering Valve—Leak tight shut off. Assembly of actuator and valve to impingement plate allows valve to self-align with center of valve seat orifice. Provides long lasting valve and seat.

Temperature Sensitive Actuator—One moving part. Inconel welded actuator for maximum corrosion, thermal and hydraulic shock resistance.

Thermal and Hydraulic Shock Resistant—Impingement plate plus welded construction prevents damage to actuator.

Valve and Seat—Long life, stainless steel valve and seat lapped and matched together for water tight seal.

Maintenance—All models are sealed and maintenance free.

Three Year Guarantee—Trap guaranteed for three years against defects in material or workmanship.

Additional Features—Best air handling capability for fast start up and operation. Fastest response to condensate load or temperature changes. Broad application range. Selection of orifice and pipe sizes meet majority of condensate removal demands in deionized steam systems.

Unique SLR Orifice Option—Provides drainage at saturated temperatures, instant reaction to load changes and guaranteed fail-open operation for extra critical operations.

Models

- DS202—Low capacity
- DS203—Medium capacity
- DS204—High capacity

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-condensibles 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 thermal 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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Typical Specification

Steam trap shall be of balanced pressure design with inconel welded bellows capable of releasing condensate within 10°F of saturated pressure. Where drainage at saturated temperatures is required, trap shall have SLR orifice. All other components shall be of 316 or 316L stainless steel. Trap shall be self draining and normally open.

Materials of Construction

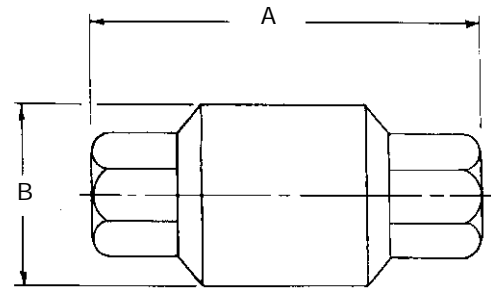
Body: ASTM 743 CF-8M Stainless Steel
Welded Actuator: Inconel Plates, 316L Fittings
Valve & Seat: 316L Stainless Steel

Maximum Operating Conditions

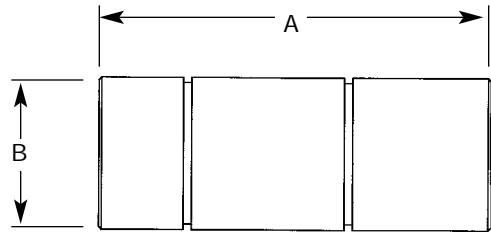
PMO: Max. Operating Pressure 500 psig (34.5 barg)
TMO: Max. Operating Temperature 500°F (260°C)
PMA: Max. Allowable Pressure 650 psig (44.8 barg)
TMA: Max. Allowable Temperature 750°F (399°C)

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 lbs/hr of condensate at 50 psi within 2°F of saturated temperature.



3/8" - 3/4" BODY



1" BODY

Connections:
3/8" - 1" NPT or Socketweld

Dimensions			
NPT or Socket weld	inches (mm)		Weight Lbs. (kg)
	A	B	
3/8", 1/2"	3 3/4 (95)	1 3/4 (44)	1.1 (0.5)
3/4"	3 15/16 (100)	1 3/4 (44)	1.2 (0.54)
1"	4 3/8 (111)	1 3/4 (44)	1.6 (0.73)

Maximum Capacity—lbs/hr 10°F Below Saturation (Kg/hr 5°C Below Saturation)															
Trap	Orifice Inch (mm)	Differential PSIG (bar)													
		5 (0,34)	10 (0,7)	20 (1,4)	50 (3,5)	100 (6,9)	125 (8,6)	150 (10,3)	200 (13,8)	250 (17,2)	300 (20,7)	350 (24,1)	400 (27,6)	450 (31,0)	500 (34,5)
DS202	1/8 (3)	216 (98)	265 (120)	375 (170)	592 (269)	778 (354)	838 (381)	890 (405)	980 (445)	1055 (480)	1121 (510)	1180 (536)	1235 (561)	1284 (584)	1323 (601)
DS203	1/4 (6)	550 (249)	825 (374)	1210 (549)	1975 (896)	2825 (1281)	3140 (1424)	3425 (1554)	3650 (1656)	3960 (1796)	4100 (1860)	4230 (1919)	4420 (2005)	4600 (2086)	4760 (2161)
DS204	5/16 (8)	860 (390)	1220 (554)	1725 (783)	2725 (1237)	3575 (1623)	3850 (1748)	4090 (1857)	4505 (2045)	4850 (2202)	5155 (2340)	5425 (2463)	5675 (2576)	5900 (2679)	6110 (2774)