

Sanitary Steam Traps

**Model
BTCS**

SANITARY STEAM TRAPS

The BTCS Series is a bellows type, thermostatic steam trap with sanitary connections. Designed specifically for clean steam systems. It features a 20Ra internal finish, and a self-draining design, to minimize the possibility of medium entrapment and bacterial growth.

The improved configuration of the BTCS Series has been specifically designed to provide higher flow rates at low pressures and low subcooling levels. In lab testing, the BTCS has exhibited excellent flow rates at subcooling levels of only 3°F (-16°C).

Two designs are featured in the BTCS Series – the standard BTCS is good for differential pressures up to 65 psi (4,5 bar) and the BTCS1, for differential pressures ranging from 50 - 90 psi (3,4 - 6,2 bar). Both designs are rated to 90 psi (6,2 bar) operating pressure (hydrostatically tested to 450 psi (31 bar) but provide best performance when used within their respective differential pressure operating ratings.

During start-up, the bellows assembly is fully open to discharge all air, non-condensable gases and cool condensate. The heat of the entering steam causes the element to expand, closing the valve. As condensate accumulates in the body, the element cools, causing the ball stem tip to retract from the seat and allow condensate to drain.

- Thermostatic steam trap in 316L stainless steel that is designed for clean steam tracing, drip-leg and process applications



ORDERING SCHEMATIC

| MODEL | | | | 6 | 7 | 8 |
|-------|---|---|---|---|---|---|
| B | T | C | S | 0 | 2 | 1 |

| 6 | PRESSURE RATING |
|---|-----------------------------|
| 0 | 5 - 65 psi (0,34 - 4,5 bar) |
| 1 | 55 - 90 psi (3,8 - 6,2 bar) |

| 7 | SIZE |
|---|------|
| 2 | 1/2" |
| 3 | 3/4" |
| 4 | 1" |

| 8 | END CONNECTION |
|---|-----------------|
| 1 | FNPT |
| T | Tri-Clamp |
| U | Tube End (inch) |



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SANITARY STEAM TRAPS

SPECIFICATIONS

Size: 1/2", 3/4", 1" (DN15, DN20, DN25)

End Connections

- Standard – sanitary clamp ends (Tri-Clover™)
- Optional – tube weld ends, DIN/ISO, threaded

Maximum Operating Conditions:

- Maximum Operating Pressure (PMO): 90 psig (6,2 bar)
- Maximum Allowable Temperature (TMA): 350°F (177°C)

Design Pressure/Temperature Rating:

- Maximum Allowable Pressure (PMA): 145 psig (10,0 bar)
- Maximum Allowable Temperature (TMA): 350°F (177°C)

Maximum Recommended Differential Pressure:

- BTCS0: 10 - 50 psi (0,7 - 3,4 bar)
- BTCS1: 45 - 90 psi (3,1 - 6,2 bar)

MATERIALS

Body Inlet/Outlet: 316L Stainless Steel

Thermal Element: 316L Stainless Steel

O-Ring: Viton, Teflon Encapsulated (FDA approved)

Clamp: 304 SST

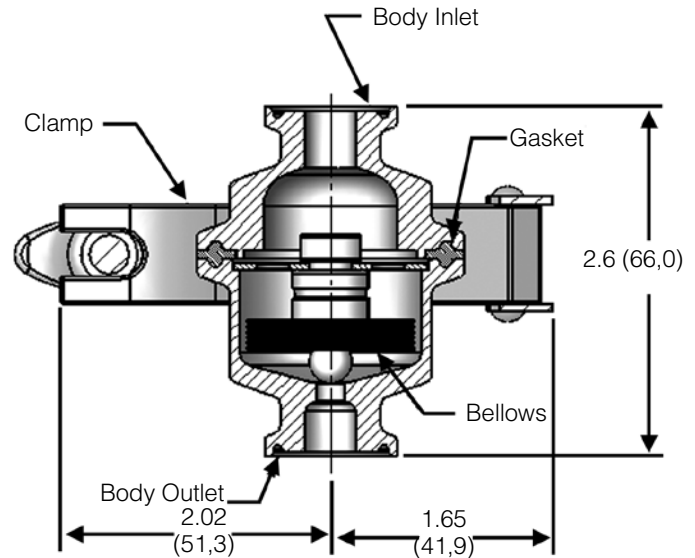
FLOW CAPACITY

| Condensate Temperature Below Saturation (psi/bar) | Capacity at Differential Pressure | | | | | |
|---|-----------------------------------|-------------|-------------|--------------|--------------|--------------|
| | 10 (0,69) | 20 (1,4) | 30 (2,1) | 50 (3,5) | 75 (5,2) | 90 (6,2) |
| 5°F lbs/hr | 195 (43) | 373 (822) | 549 (1210) | 870 (1918) | 1012 (2231) | 1165 (2568) |
| 10°F lbs/hr | 490 (1080) | 813 (1792) | 1142 (2518) | 1715 (3781) | 2207 (4866) | 2437 (5373) |
| 20°F lbs/hr | 1127 (2485) | 1697 (3741) | 2202 (4855) | 3074 (6777) | 3932 (8669) | 4139 (9125) |
| Cold Water pph (kpg) | 2580 (5688) | 3648 (8042) | 4468 (9837) | 5768 (12716) | 6944 (15309) | 7504 (16543) |

APPLICATIONS

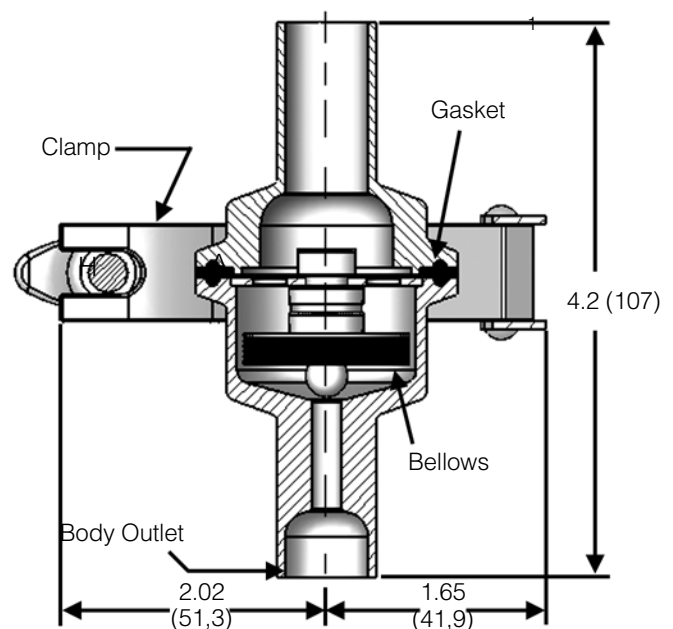
- Typical applications include: fermenters, bioreactors, sterilizers/autoclaves, SIP/CIP systems, process piping equipment and steam barriers
- Condensate drainage from clean steam distribution loops
- Condensate drainage from process systems using clean steam – fermenters, bioreactors, SIP systems and sterilizers

TRI-CLAMP ENDS DIMENSIONS



Weight 1.3 lbs (0,59 kgs)

TUBE WELD ENDS DIMENSIONS



Weight 1.5 lbs (0,68 kgs)