

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 BTCS0 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).

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.



ORDERING SCHEMATIC

| MODEL | | | | 6 | 7 | 8 |
|-------|---|---|---|---|---|---|
| B | T | C | S | | | |

| 6 | PRESSURE RATING |
|---|-----------------------------|
| 0 | 10 - 65 psi (0,7 - 4,5 bar) |
| 1 | 50 - 90 psi (3,4 - 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) |



A Division of
Richards Industries
3170 Wasson Road
Cincinnati, OH 45209

toll free. 800.543.7311
local. 513.533.5600
fax. 513.871.0105

steam@richardsind.com
www.bestobellsteamtraps.com

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 - 65 psi (0,7 - 4,5 bar)
- BTCS1: 50 - 90 psi (3,4 - 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

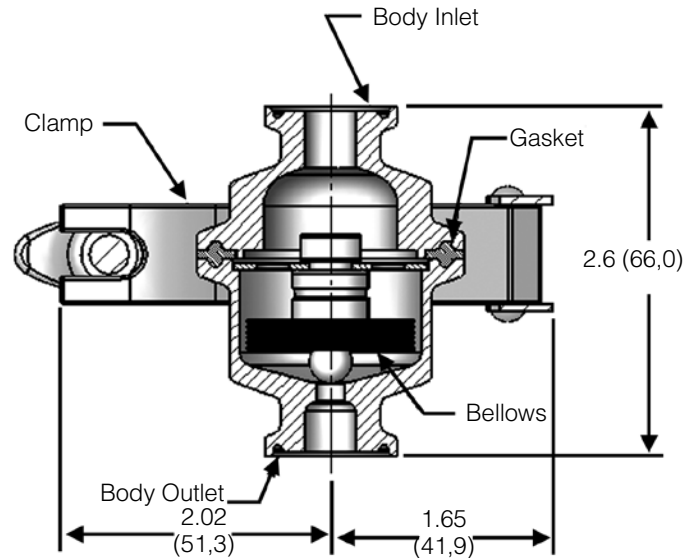
| Condensate Temperature Below Saturation (psi/bar) | Capacity at Differential Pressure | | | | | |
|---|-----------------------------------|-------------|-------------|--------------|--------------|--------------|
| | 10 (0,69) | 20 (1,4) | 30 (2,1) | 50 (3,5) | 75 (5,2) | 90 (6,2) |
| 5°F lbs/hr (43)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

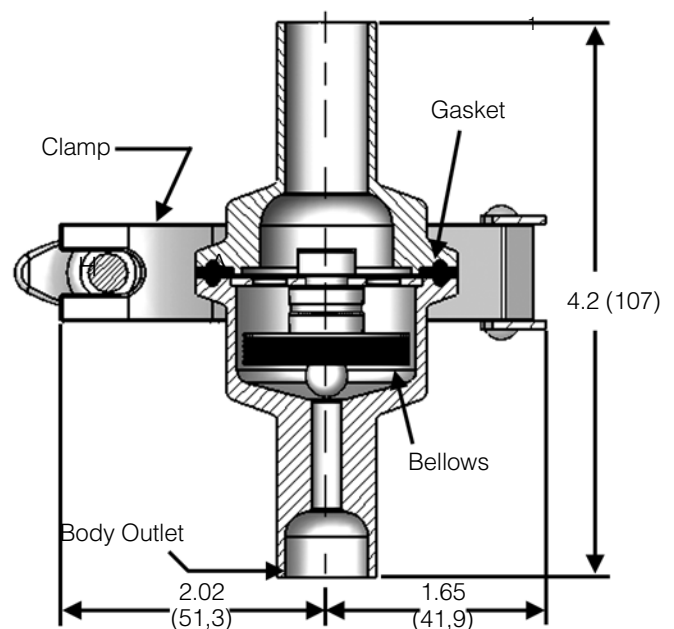
1 year parts & labor warranty available - consult factory for details

TRI-CLAMP ENDS DIMENSIONS



Weight 1.3 lbs (0,59 kgs)

TUBE WELD ENDS DIMENSIONS



Weight 1.5 lbs (0,68 kgs)