# BTM7
# Stainless Steel
# Thermostatic Clean Steam Trap

## Description

The Spirax Sarco BTM7 is a maintainable thermostatic steam trap designed to remove condensate from clean steam systems with minimal backing up. Applications include sterile steam barriers, process vessels and CIP/SIP systems. Manufactured in 316L stainless steel with minimal crevises and a typical internal surface finish of 1.6 - 3.2 Ra, it is self-draining and operates close to steam temperature. Traps are individually packaged with protective end caps and sealed in a polythene bag.

**Options available at extra cost** -
Contact Spirax Sarco for further information

**Fixed bleed** to ensure fail open operation

**Special connections** to suit most piping systems.

**Standards**
The BTM7 has been designed and built in general accordance with ASME BPE. It also complies with the requirements of the European Pressure Equipment Directive 97/23/EC.
All wetted parts of this trap are manufactured from FDA approved materials.
Part 3, 'O' ring - Complies with USP Class VI and FDA CFR title 21, Paragraph 177, Section 2600.

**Certification**
This product is available with certification to EN 10204 3.1.
**Note:** All certification/inspection requirements must be stated at the time of order placement.

## Sizes and pipe connections

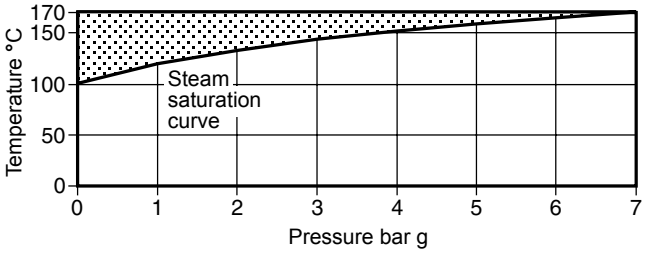
¼", ½", ¾", 1" screwed BSP or NPT.
½", ¾", 1" O/D x 16 swg (0.065") wall thickness tube butt weld.
½", ¾", 1" sanitary clamp compatible hygienic connection.

**DIN 11850 (Series 1) tube butt weld ends**
12 mm O/D x 1.0 mm wall thickness tube butt weld (DN10-D)
18 mm O/D x 1.0 mm wall thickness tube butt weld (DN15-D)

**ISO 1127 (Series 1) tube butt weld ends**
13.5 mm O/D x 1.6 mm wall thickness tube butt weld (DN8-I)
17.2 mm O/D x 1.6 mm wall thickness tube butt weld (DN10-I)
21.3 mm O/D x 1.6 mm wall thickness tube butt weld (DN15-I)

**Note:** On request other connection options are available at extra cost. Please note that seat end spares for specially requested connections will require a minimum order quantity - Please consult Spirax Sarco for further information.

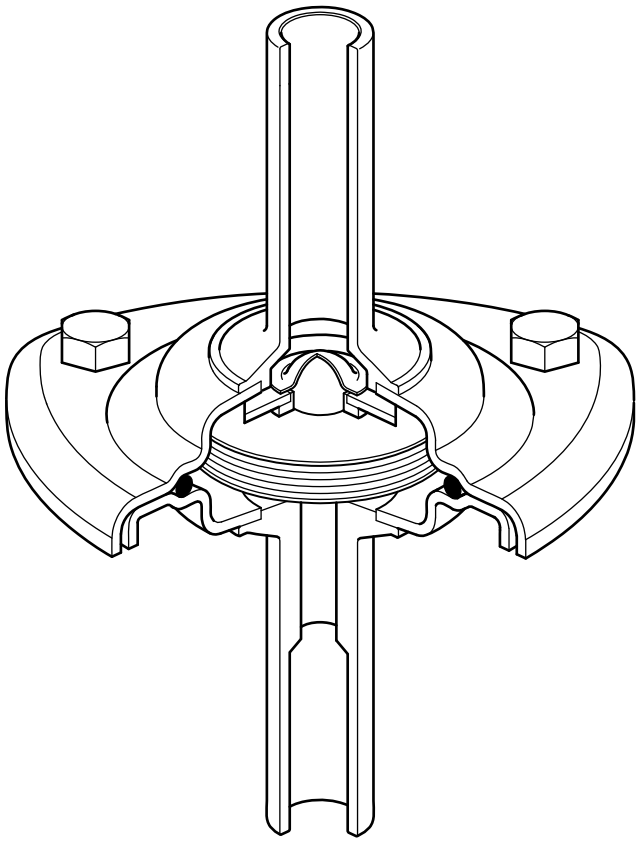
## Pressure/temperature limits



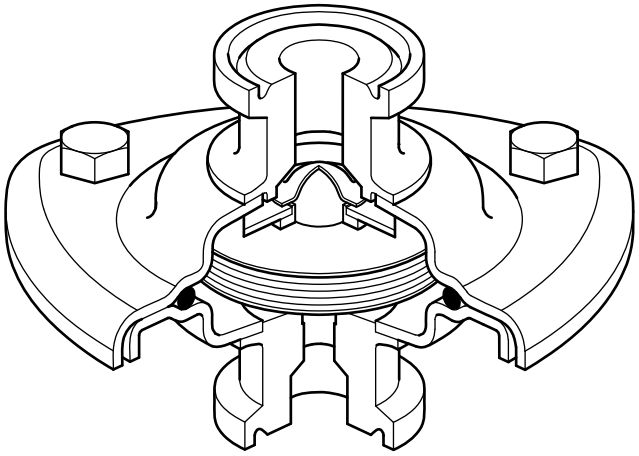

The product should not be used in this region as damage to the internals may occur.

| | | |
|---|---|---|
| Body design conditions | | PN7 |
| PMA | Maximum allowable pressure | 7 bar g @ 170°C |
| TMA | Maximum allowable temperature | 170°C @ 7 bar g |
| Minimum allowable temperature | | -10°C |
| PMO | Maximum operating pressure for saturated steam service | 7 bar g |
| TMO | Maximum operating temperature | 170°C |
| Minimum operating temperature | | 0°C |
| Designed for a maximum cold hydraulic test pressure of 10.5 bar g | | |

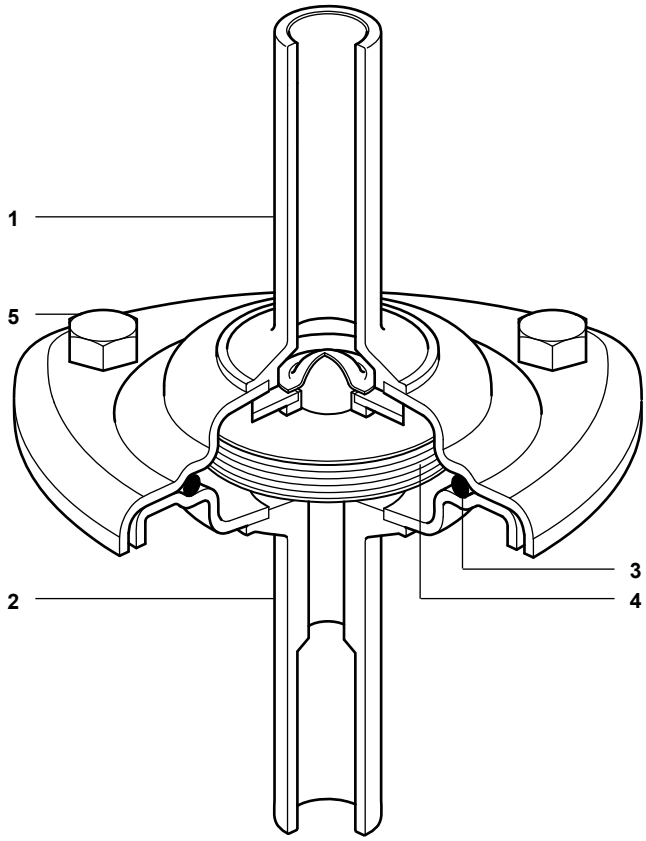
**BTM7**
with butt weld ends



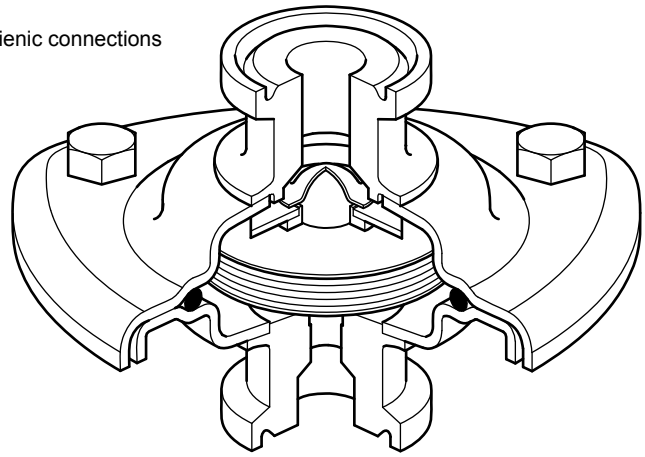
**BTM7**
with sanitary clamp compatible hygienic connections



## BTM7
with butt weld ends




## BTM7
with sanitary clamp compatible hygienic connections



## Materials

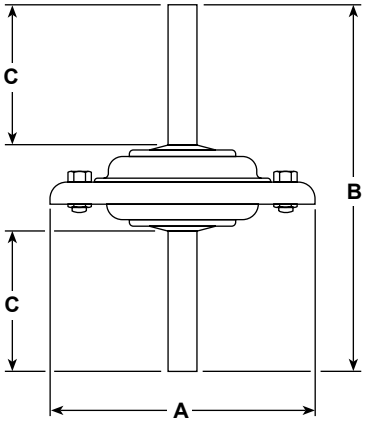
| No. | Part | Material | |
|---|---|---|---|
| 1 | Body (inlet) | Stainless steel | AISI 316L (1.4404) |
| 2 | Body with seal (outlet) | Stainless steel | AISI 316L (1.4404) |
| 3 | 'O' ring | FKM | |
| 4 | Element | Stainless steel | AISI 316L (1.4404) |
| 5 | Nuts and bolts | Stainless steel | BS 6105 Gr. A4 80 |
| | Washers | Austenitic stainless steel | |

## Dimensions / weights (approximate) in mm and kg

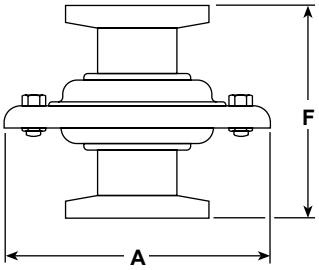
| Size | A | B Tube | C | D Screwed | E Screwed | F Sanitary clamp | Weight Tube | Weight Screwed | Weight Sanitary clamp |
|---|---|---|---|---|---|---|---|---|---|
| ¼" | 70 | - | - | 27 | 58 | - | - | 0.53 | - |
| ½" | 70 | 106 | 40 | 27 | 74 | 49 | 0.62 | 0.66 | 0.62 |
| ¾" | 70 | 106 | 40 | 32 | 81 | 49 | 0.68 | 0.77 | 0.62 |
| 1" | 70 | 106 | 40 | 41 | 95 | 53 | 0.77 | 0.90 | 0.90 |
| DN8* | 70 | 106 | 40 | - | - | - | 0.53 | - | - |
| DN10 | 70 | 106 | 40 | - | - | - | 0.53 | - | - |
| DN15 | 70 | 106 | 40 | - | - | - | 0.62 | - | - |

*DN8 only available for ISO 1127 tube ends.

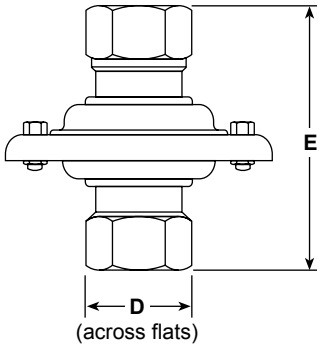
**Tube**



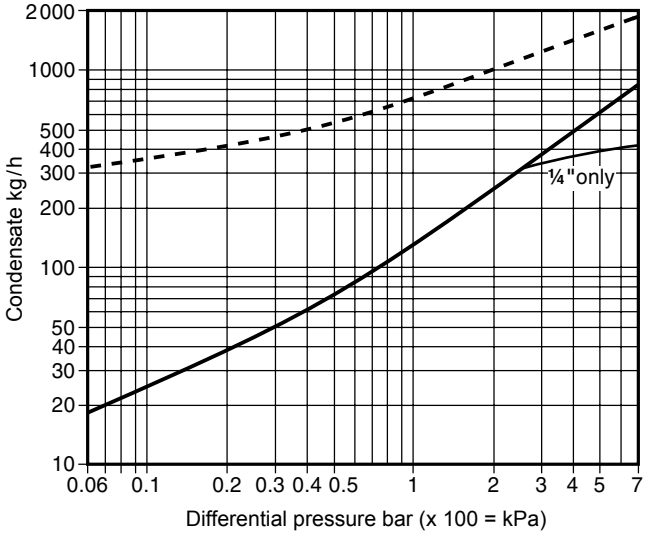

**Sanitary clamp**




**Screwed**




## Capacities




Cold water capacity - - - - - Hot water capacity ——

## Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P180-05) supplied with the product.

**Installation note:**

The trap is designed for installation in vertical lines with the flow downward to ensure self-draining operation. Do not expose element to superheat conditions since over-expansion may result.

Suitable isolation valves must be installed to allow for safe maintenance / replacement.

## How to order

**Example:** 1 off Spirax Sarco DN15 BTM7 maintainable thermostatic clean steam trap with tube ends to ISO 1127, Series 1. (21.3 mm O/D x 1.6 mm wall thickness). Tangent length of tube ends to be 40 mm for ease of orbital welding. Body to be self-draining. Suitable for pressures up to 7 bar g.

## Spare parts

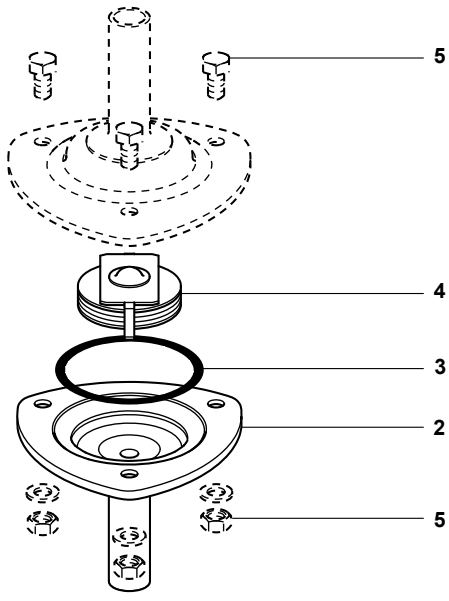
Available parts are shown in solid outline. Parts drawn in broken line are not available as spares.

| Available spares | |
|---|---|
| Element assembly | 4 |
| 'O' ring (packet of 3) | 3 |
| Body with seat (outlet) - state connections | 2 |

**How to order spares**

Always order spares by using the description given in the column headed 'Available spares' and state the size, type and end connection of the trap.

**Example:** 1 off Element assembly for a Spirax Sarco ½" BTM7 thermostatic clean steam trap having screwed NPT connections.




**Recommended tightening torques**

| Item No. | Part | or mm | | N m |
|---|---|---|---|---|
| 5 | Nuts and bolts | 8 A/F | M5 | 3-4 |