



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 crevices and a typical internal surface finish of 1.6 - 3.2 $\mu\text{m Ra}$, it is self-draining and operates close to steam temperature. Traps are individually packaged within an "ISO CLASS 7" clean environment with protective end caps and sealed in a protective plastic bag.

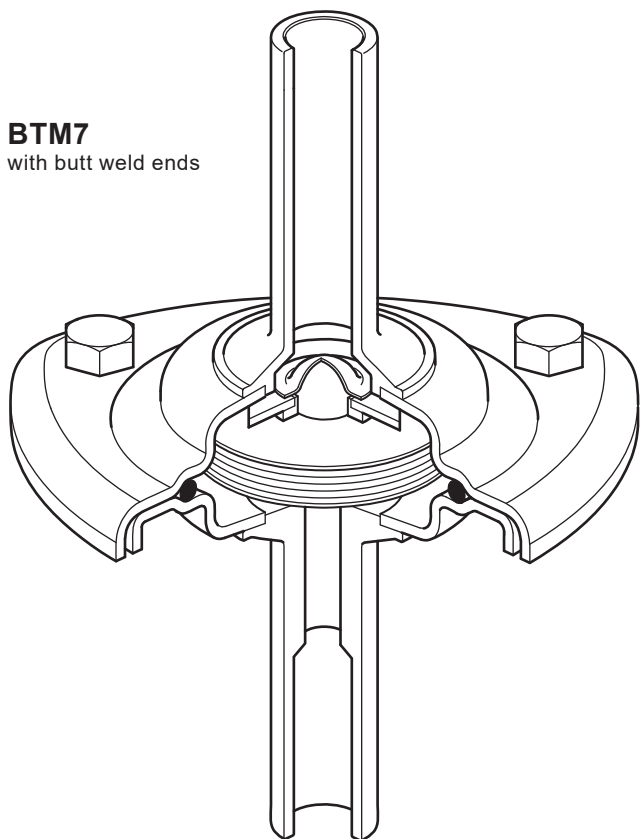
Options available at extra cost

Contact Spirax Sarco for further information

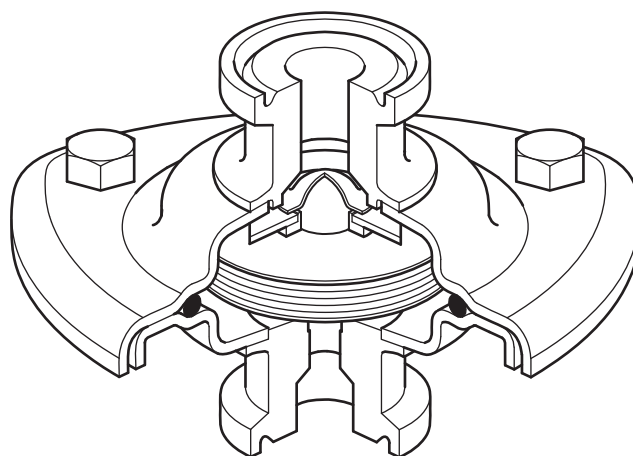
Fixed bleed to ensure fail open operation.

Special connections to suit most piping systems.

BTM7
with butt weld ends



BTM7
with sanitary clamp compatible hygienic connections



Standards

- The BM7 has been designed and built in general accordance with ASME BPE.
- The unit also complies with the requirements of the Pressure Equipment Directive (PED).

The seal part is compliant with:-

- FDA CFR Title 21. Paragraph 177. 2600.
- USP Class VI Biological Reactivity Cytotoxicity Testing In-Vivo <88> extracted at 121°C for 1 hour.
- ADI Free (Animal Derived Ingredients) for materials used, manufacturing processes involved in producing the part.

Certification

This product is available with the following certification:

- EN 10204 3.1 material certificates (pressure containing parts)
- EN 10204 3.1 material certificates (wetted parts, including element fill) subject to additional cost.
- Typical Internal surface finish certificates.
- Specific internal surface finish certificates available at point of order request, and may be subject to additional cost.
- Certificate of compliance for FDA, USP and ADI free.
- TSE/BSE Free Statement.
- Certificate of compliance EC1935:2004 Food Contact Materials.
- Declaration of conformity BS EN ISO 14644-1:2015 Class 7 Clean Room.

Note: All certification/inspection requirements must be stated at the time of order placement, and may be subject to additional cost.

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).

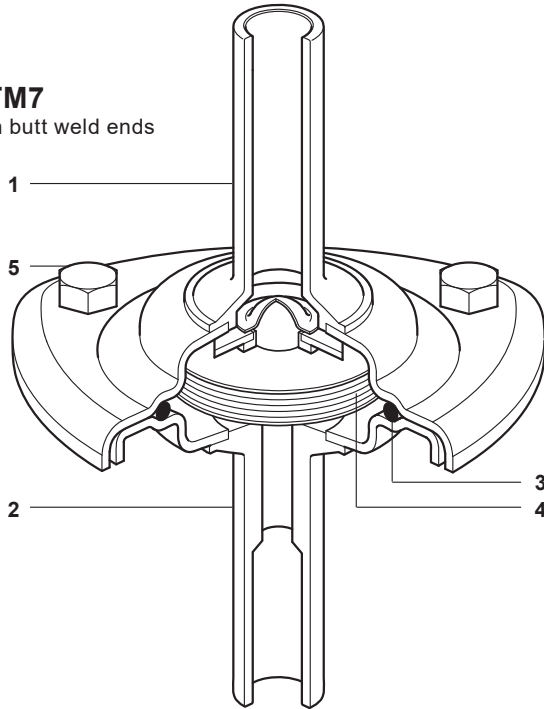
Note: On request other connection options are available at extra cost. Please note that seat end spares for specially requested connections will require a minimum order quantity - Please consult Spirax Sarco for further information.

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	

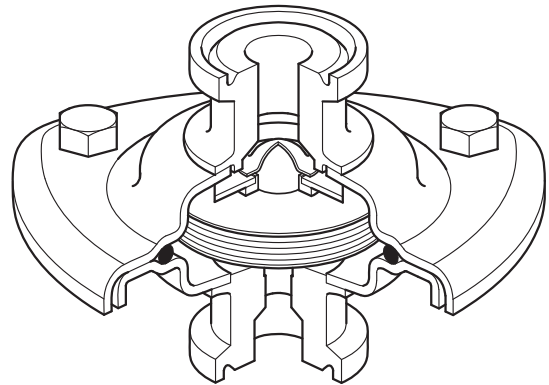
BTM7

with butt weld ends

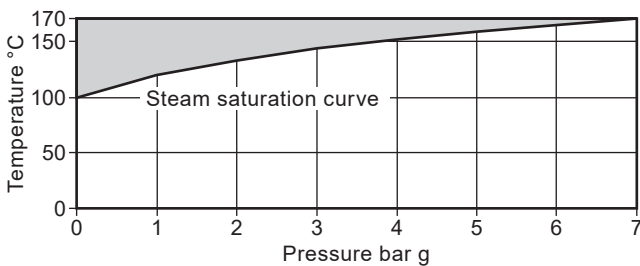


BTM7

with sanitary clamp compatible hygienic connections



Pressure/temperature limits



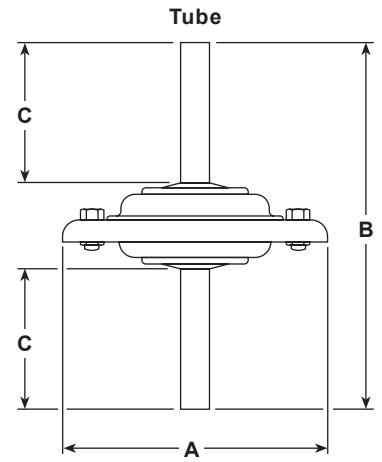
The product should not be used in this region as damage to the internals may occur.

Body design conditions

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:	10.7 bar g

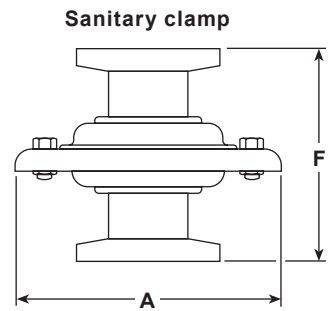
Dimensions (approximate) in mm

Size	Tube			Screwed	Screwed	Sanitary clamp
	A	B	C	D	E	F
1/4"	70	-	-	27	58	-
1/2"	70	106	40	27	74	49
3/4"	70	106	40	32	81	49
1"	70	106	40	41	95	53
DN8*	70	106	40	-	-	-
DN10	70	106	40	-	-	-
DN15	70	106	40	-	-	-



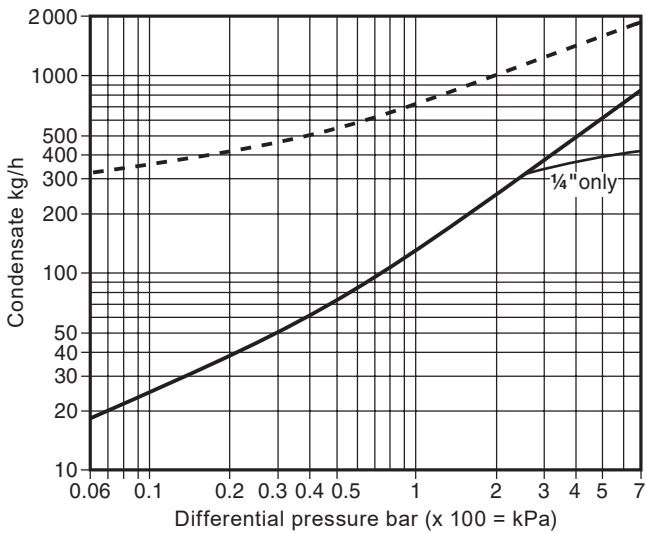
Weights (approximate) in kg

Size	Weight		
	Tube	Screwed	Sanitary clamp
1/4"	-	0.53	-
1/2"	0.62	0.66	0.62
3/4"	0.68	0.77	0.62
1"	0.77	0.90	0.90
DN8*	0.53	-	-
DN10	0.53	-	-
DN15	0.62	-	-

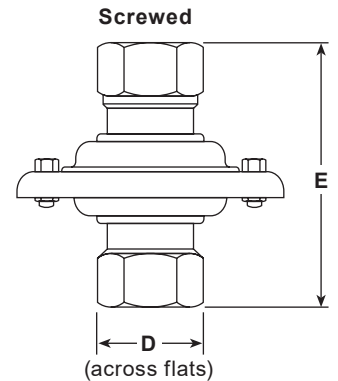


*DN8 only available for ISO 1127 tube ends.

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 a grey line are not available as spares.

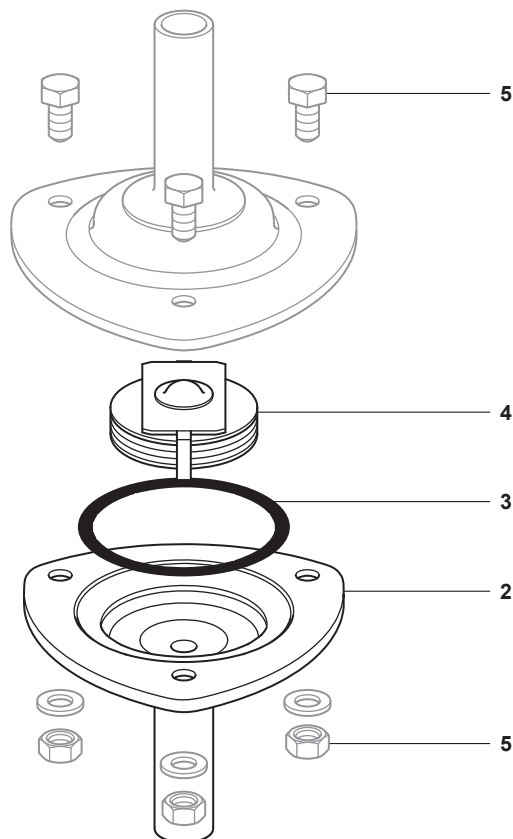
Available spares

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 1/2" BTM7 thermostatic clean steam trap having screwed NPT connections.



Recommended tightening torques

Item	Part	 or mm		N m
5	Nuts and bolts	8 A/F	M5	3-4