



TI-P180-11
CMGT Issue 12

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 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.

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

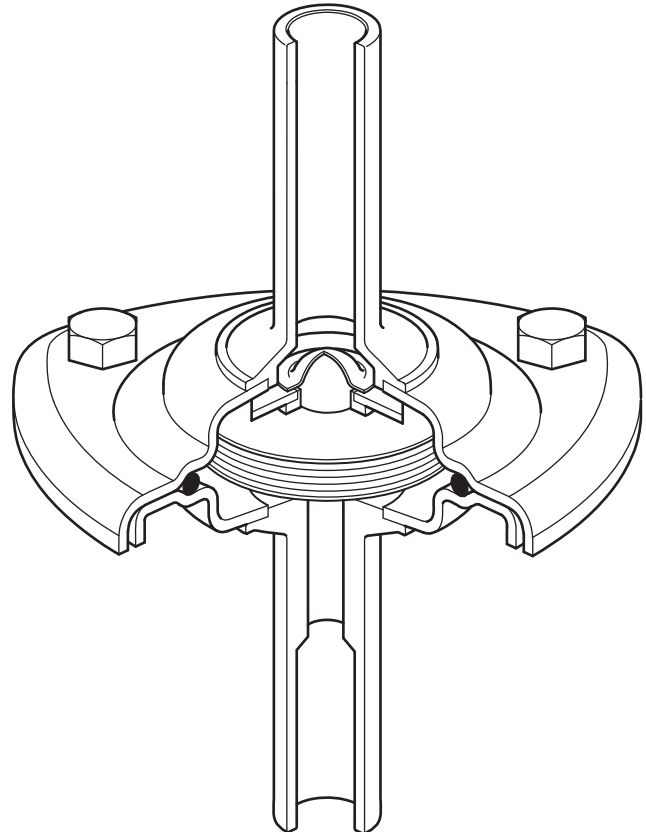
13.5 mm O/D x 1.6 mm wall thickness tube butt weld (DN8-I)

17.2 mm O/D x 1.6 mm wall thickness tube butt weld (DN10-I)

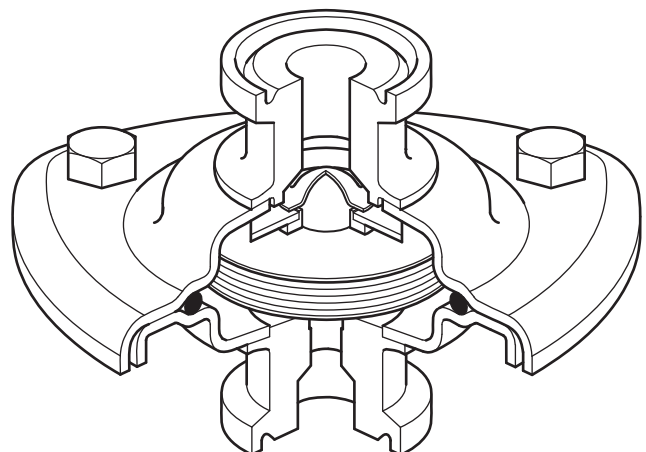
21.3 mm O/D x 1.6 mm wall thickness tube butt weld (DN15-I)

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.

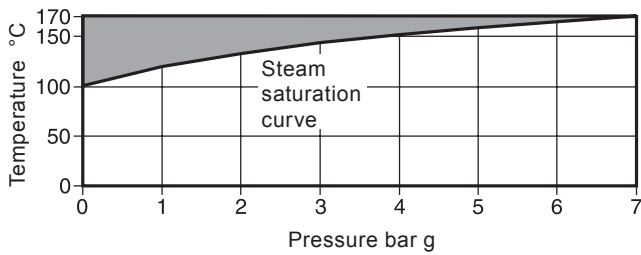
BTM7
with butt weld ends



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

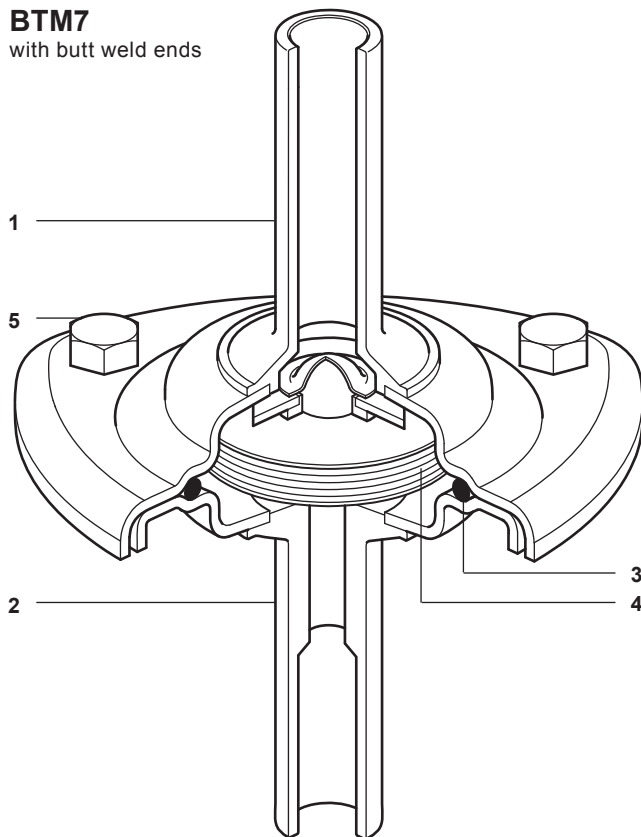
PMA	Maximum allowable pressure	7 bar g @ 170 °C
TMA	Maximum allowable temperature	170 °C @ 7 bar g
Minimum allowable temperature		-10 °C
PMO	Maximum operating pressure for saturated steam service	7 bar g
TMO	Maximum operating temperature	170 °C
Minimum operating temperature		0 °C
Designed for a maximum cold hydraulic test pressure of 10.7 bar g		

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	

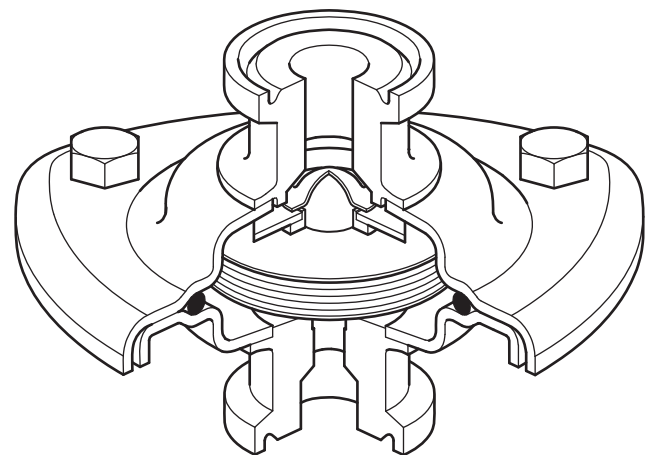
BTM7

with butt weld ends



BTM7

with sanitary clamp compatible hygienic connections

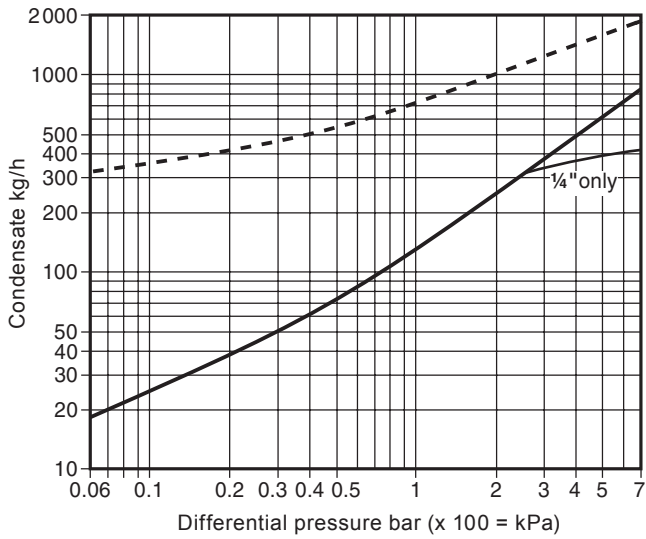


Dimensions/weights (approximate) in mm and kg

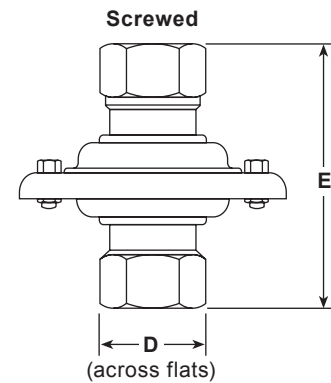
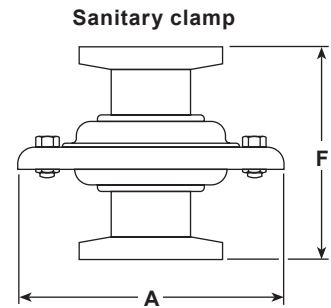
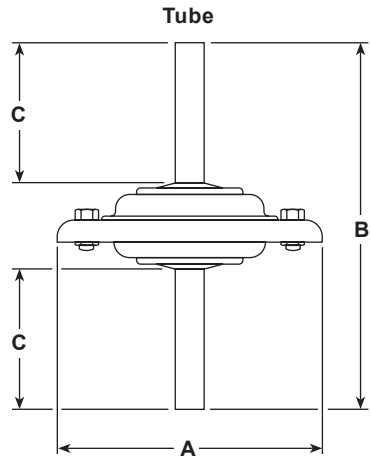
Size	A	B Tube	C	D		F Sanitary clamp	Weight		
				Screwed	Screwed		Tube	Screwed	Sanitary clamp
¼"	70	-	-	27	58	-	-	0.53	-
½"	70	106	40	27	74	49	0.62	0.66	0.62
¾"	70	106	40	32	81	49	0.68	0.77	0.62
1"	70	106	40	41	95	53	0.77	0.90	0.90
DN8*	70	106	40	-	-	-	0.53	-	-
DN10	70	106	40	-	-	-	0.53	-	-
DN15	70	106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

*DN8 only available for ISO 1127 tube ends.

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.

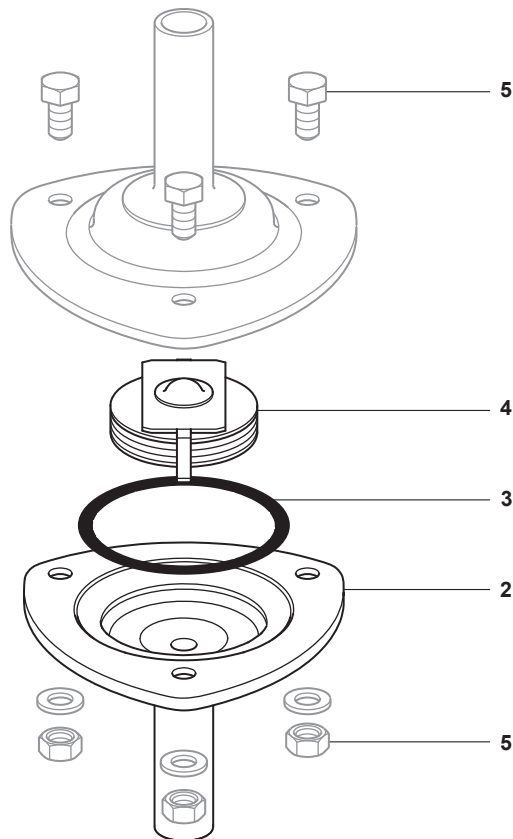
Available spares

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 ½" 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