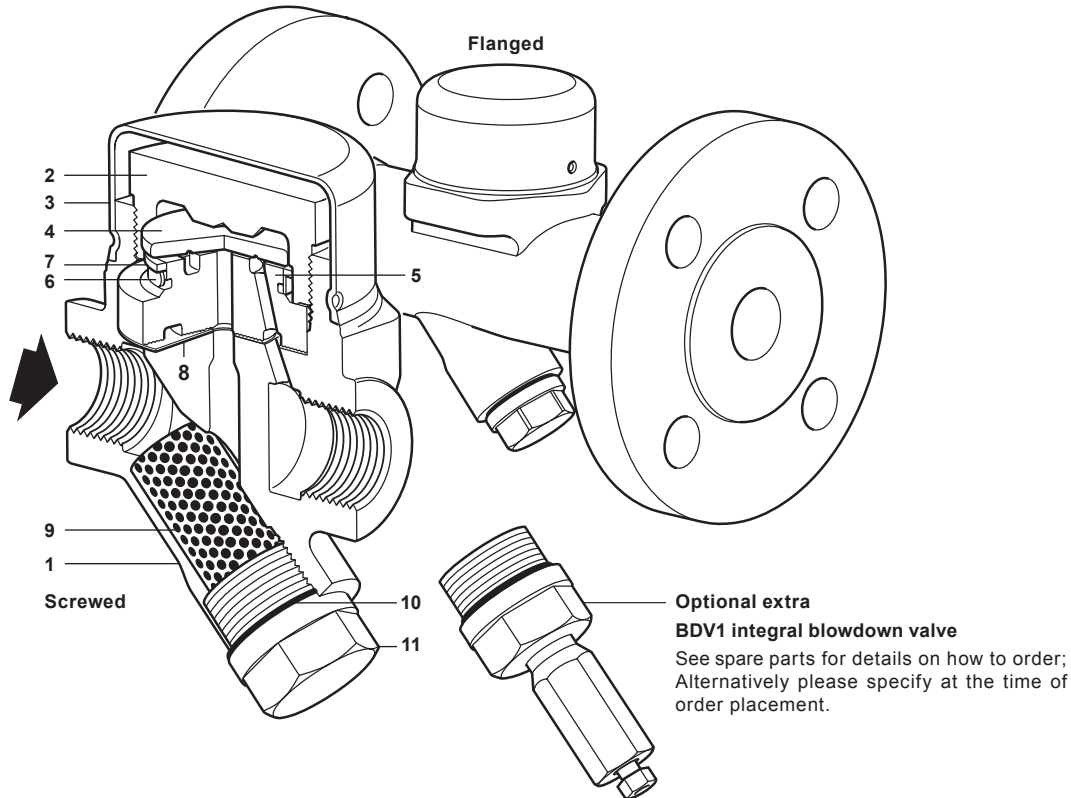


spirax sarco

TDS46M Stainless Steel Thermodynamic Steam Trap with Maintainable Seat



Description

The TDS46M is a stainless steel, thermodynamic steam trap that has been specifically designed for low capacity applications up to 667 psig (46 bar g) (where pipe connections permit). As standard, the unit is available with either screwed, socket weld or flanged connections.

TDS46M benefits:

- Integral strainer.
- Integral air vent.
- Insulation cap.
- Replaceable seat for ease of maintenance.

Optional extras

At extra cost, a **BDV1** integral blowdown valve can be pre-fitted to the strainer cap, please specify at the time of order placement.

Compliance

This product fully complies with the requirements of the European Pressure Equipment Directive 2014/68/EU.

Certification

These products are available with certification to EN 10204 3.1. Note: All certification / inspection requirements must be specified at the time of order placement.

Sizes and pipe connections

½", ¾" and 1" screwed NPT (optional BSP).

½", ¾" and 1" socket weld ends to BS 3799 Class 3000 lb.

½", ¾" and 1" integrally flanged ASME Class 150, ASME Class 300 or ASME Class 600 (optional EN 1092 PN40, PN100).

Materials

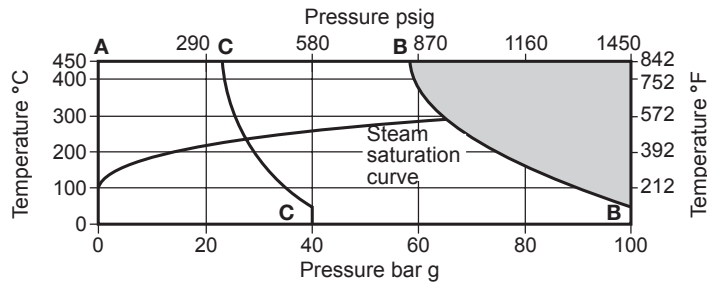
No. Part	Material	
1 Body	Stainless steel	1.4308/ASTM A351 CF8
2 Top cap	Stainless steel	1.4301/ASTM A479 304
3 Insulating cover	Stainless steel	EN 10088-1 1.4301
4 Disc	Hardened steel	1.2379
5 Seat	Hardened steel	1.2379
6 Bimetal ring	Bimetal	
7 Support	Stainless steel	AISI 304
8 Seat gasket	Graphite foil	
9 Strainer screen	Stainless steel	ASTM A478 316L
10 Strainer cap gasket	Stainless steel	AISI 304
11 Strainer cap	Stainless steel	1.4308/ASTM A351 CF8

*Local regulation may restrict the use of this product below the conditions quoted. Limiting conditions refer to standard connections only.
In the interests of development and improvement of the product, we reserve the right to change the specification.*

TDS46M Stainless Steel Thermodynamic Steam Trap with Maintainable Seat

Pressure/temperature limits (ISO 6552) - Screwed, Socket weld and Flanged EN 1092

Screwed
Socket weld
Flanged



□ The product **must not** be used in this region or beyond the parameter of the PMA or TMA of the relative end connection.

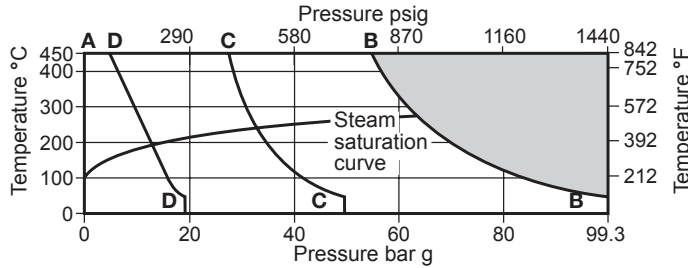
	Body design conditions	PN100
	PMA Maximum allowable pressure	1450 psig @ 122°F (100 bar g @ 50°C)
	TMA Maximum allowable temperature	842°F @ 846 psig (450°C @ 58.3 bar g)
	Minimum allowable temperature	-58°F (-50°C)
A - B - B	Screwed	
	Socket weld	
	PMO Maximum operating pressure	667 psig @ 842°F (46 bar g @ 450°C)
	TMO Maximum operating temperature	842°F @ 667 psig (450°C @ 46 bar g)
	Minimum operating temperature	32°F (0°C)
	Minimum operating pressure	22 psig (1.5 bar g)
	Maximum operating backpressure	80% of upstream pressure
	Designed for a maximum cold hydraulic pressure of:	2175 psig (150 bar g)

TDS46M Stainless Steel

Thermodynamic Steam Trap with Maintainable Seat

Pressure / temperature limits (ISO 6552) - Flanged ASME

Flanged:
ASME Class 150
ASME Class 300
ASME Class 600



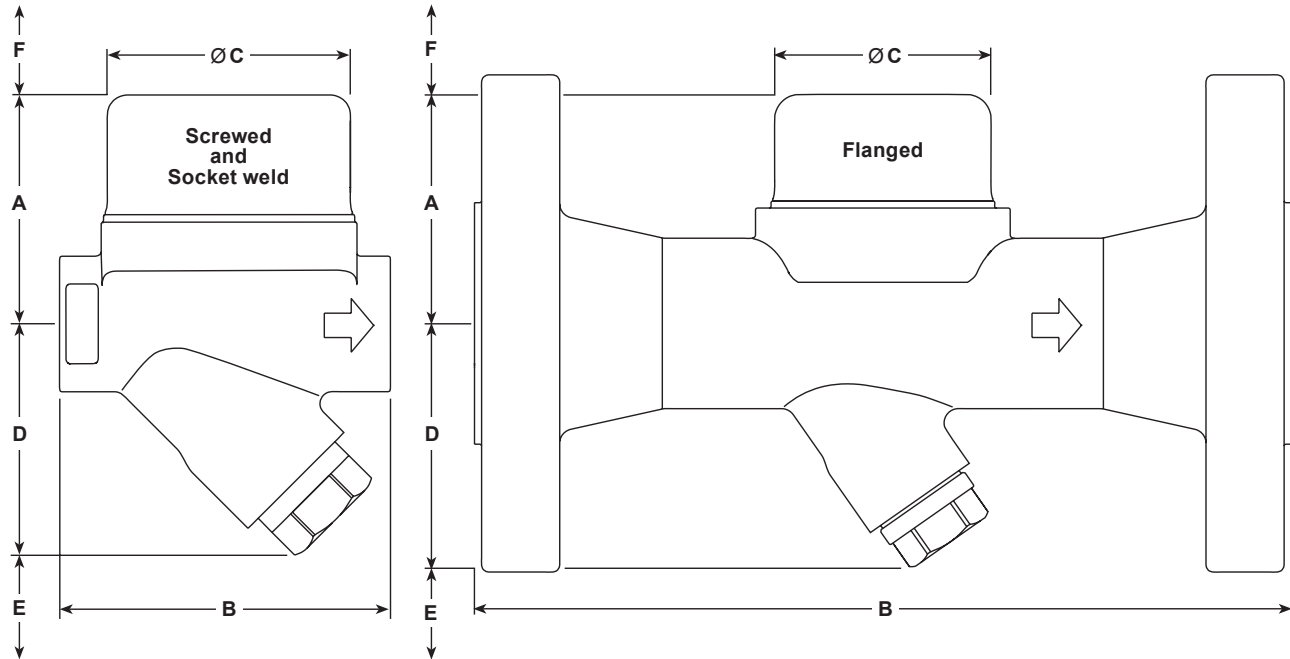
■ The product **must not** be used in this region or beyond the parameter of the PMA or TMA of the relative end connection.

	Body design conditions	ASME Class 600
	PMA Maximum allowable pressure	1440 psig @ 100°F (99.3 bar g @ 38°C)
	TMA Maximum allowable temperature	842°F @ 795 psig (450°C @ 54.8 bar g)
	Minimum allowable temperature	-58° (-50°C)
A - B - B ASME 600	PMO Maximum operating pressure	667 psig (46 bar g)
	TMO Maximum operating temperature	842°F @ 667 psig (450°C @ 46 bar g)
	Minimum operating temperature	32°F (0°C)
	Minimum operating pressure	22 psig (1.5 bar g)
	Maximum operating backpressure	80% of the upstream pressure
	Designed for a maximum cold hydraulic pressure of:	2161 psig (149 bar g)
		Body design conditions
	PMA Maximum allowable pressure	719 psig @ 100°F (49.6 bar g @ 38°C)
	TMA Maximum allowable temperature	842°F @ 397 psig (450°C @ 27.4 bar g)
	Minimum allowable temperature	-58°F (-50°C)
A - C - C ASME 300	PMO Maximum operating pressure for saturated steam service	479 psig (33 bar g)
	TMO Maximum operating temperature	842°F @ 397 psig (450°C @ 27.4 bar g)
	Minimum operating temperature	32°F (0°C)
	Minimum operating pressure	22 psig (1.5 bar g)
	Maximum operating backpressure	80% of the upstream pressure
	Designed for a maximum cold hydraulic pressure of:	1079 psig (74.4 bar g)
		Body design conditions
	PMA Maximum allowable pressure	276 psig @ 100°F (19 bar g @ 38°C)
	TMA Maximum allowable temperature	842°F @ 397 psig (450°C @ 4.6 bar g)
	Minimum allowable temperature	-58°F (-50°C)
A - D - D ASME 150	PMO Maximum operating pressure for saturated steam service	203 psig (14 bar g)
	TMO Maximum operating temperature	842°F @ 66.7 psig (450°C @ 4.6 bar g)
	Minimum operating temperature	32°F (0°C)
	Minimum operating pressure	22 psig (1.5 bar g)
	Maximum operating backpressure	80% of the upstream pressure
	Designed for a maximum cold hydraulic pressure of:	413 psig (28.5 bar g)

TDS46M Stainless Steel Thermodynamic Steam Trap with Maintainable Seat

Dimensions (approximate) in inches (mm)

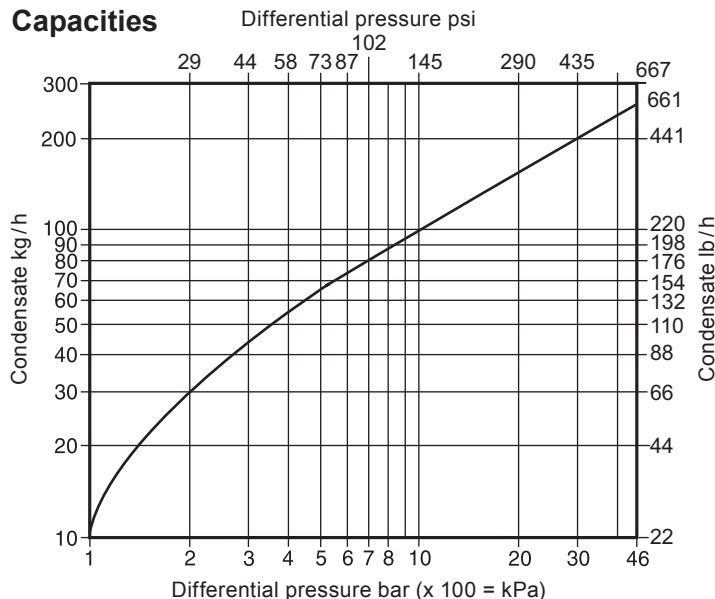
Size	A	Screwed NPT	Socket weld	B	C	D	E	F
				Flanged ASME 150, 300, 600			Withdrawal distance	Withdrawal distance
½"	2.3 (58)	3.1 (78)	3.1 (92)	6.0 (150)	2.4 (61)	2.3 (59)	1.6 (40)	1.2 (30)
¾"	2.4 (61)	3.7 (95)	3.1 (92)	6.0 (150)	2.4 (61)	2.5 (63)	1.6 (40)	1.2 (30)
1"	2.6 (65)	3.7 (95)	3.1 (92)	6.3 (160)	2.4 (61)	2.6 (67)	1.6 (40)	1.2 (30)



Weights (approximate) in pounds (kg)

Size	Screwed	Socket weld	ASME 150	Flanged ASME 300	ASME 600
½"	3.0 (1.38)	3.3 (1.49)	5.4 (2.46)	6.5 (2.96)	6.7 (3.06)
¾"	3.6 (1.64)	3.6 (1.64)	7.0 (3.16)	9.0 (4.06)	9.4 (4.26)
1"	4.2 (1.90)	4.2 (1.90)	9.2 (4.16)	11.4 (5.16)	12.0 (5.46)

Capacities



Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P187-05) supplied with the product.

Installation note:

The TDS46M is designed for installation with the disc in a horizontal plane with the insulating cover at the top.

It is recommended that a check valve is fitted when discharging condensate into return lines where backpressure is experienced.

It is recommended to install isolation valves upstream and downstream of the steam trap.

How to order

Example: 1 off Spirax Sarco ½" TDS46M thermodynamic steam trap having flanged ANSI 300 connections.

TDS46M Stainless Steel Thermodynamic Steam Trap with Maintainable Seat

Spare parts

Please note that the spares shown are the same for the screwed, socket weld and flanged versions. The spare parts available are shown in solid outline. Parts drawn in broken line are not supplied as spares.

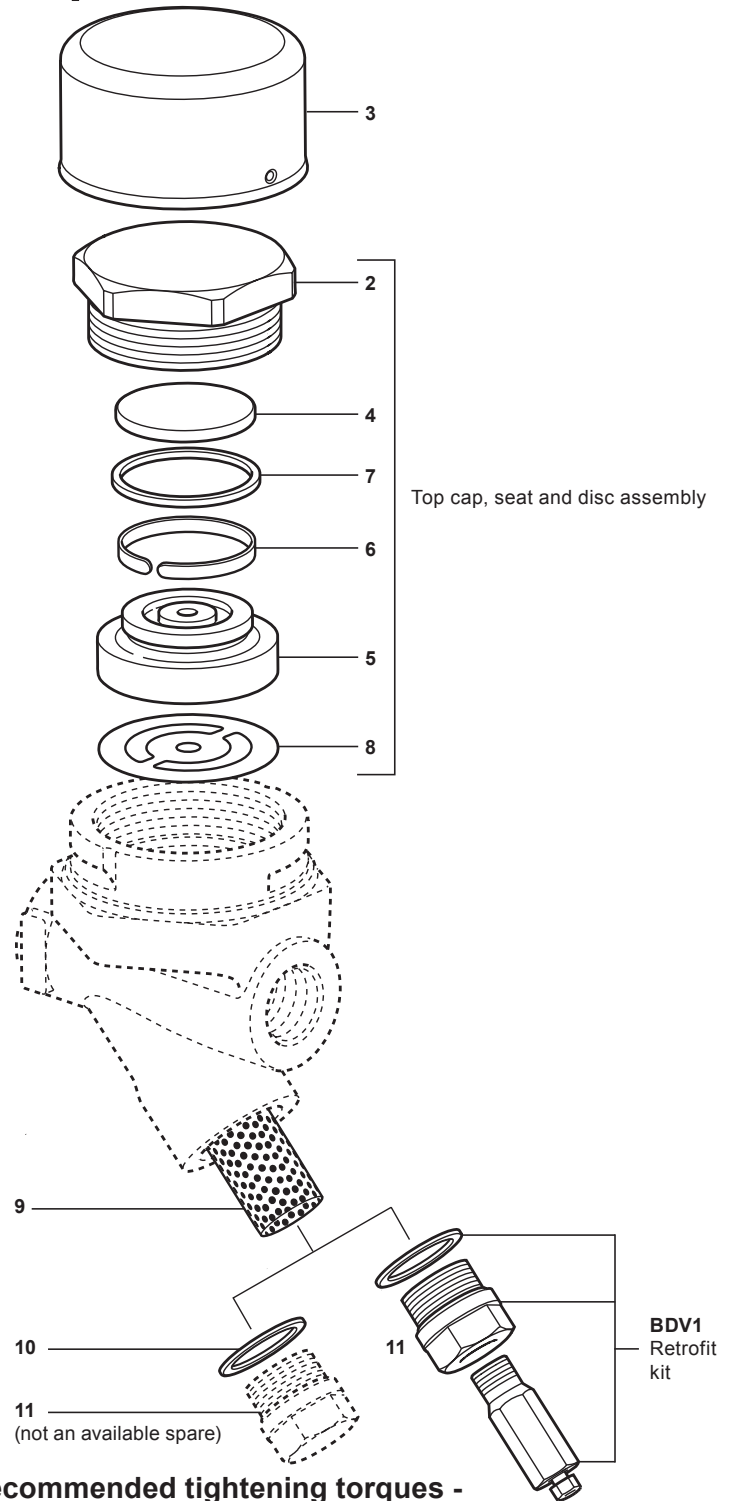
Available spares

Insulating cover	3
Top cap, seat and disc assembly	2, 4, 5, 6, 7, 8
Strainer screen and gasket	9, 10
Set of gaskets (packet of 3 sets)	8, 10
BDV1 blowdown valve retrofit kit	

How to order spares

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

Example: 1 off Top cap, seat and disc assembly for a Spirax Sarco ½" TDS46M thermodynamic steam trap.



Recommended tightening torques - for suitably lubricated threads

Item	Part	in (mm)	ft - lb (N m)
2	Top cap	2.0 (50 A/F)	221 (300)
11	Strainer cap	0.94 (24 A/F)	77 - 81 (105 - 110)