TD120M
High Pressure
Thermodynamic Steam Trap with Replaceable Seat

Description

The TD120M is a maintainable high pressure thermodynamic steam trap with integral strainer and a replaceable seat to ease maintenance, which can be supplied in ½", ¾" and 1" sizes with socket weld, butt weld or flanged connections. It has low capacity specifically designed for superheated mains drainage applications up to 250 bar g.

Standards

This product fully complies with the requirements of the European Pressure Equipment Directive 97/23/EC.

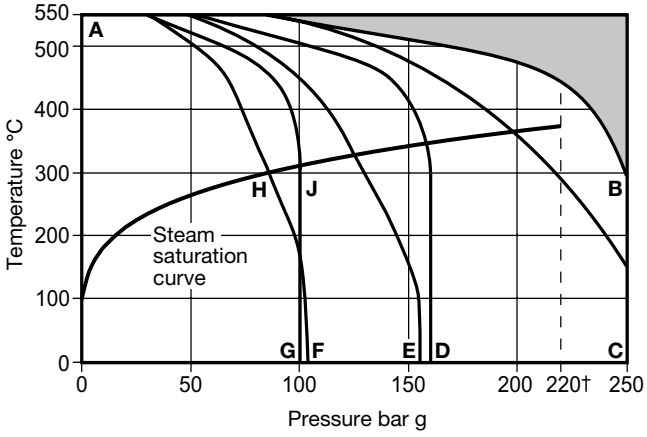
Certification

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

½", ¾" and 1" Butt weld ends to suit Schedule 160 pipe.
½", ¾" and 1" Socket weld ends to ASME (ANSI) B 16.11 Class 6000.
DN15 and DN25 standard integral flange EN 1092 PN160 and PN250.
DN15, DN20 and DN25 standard integral flanges: EN 1092 PN100, ASME (ANSI) Class 600, 900 and 1500.

Pressure/temperature limits (ISO 6552)

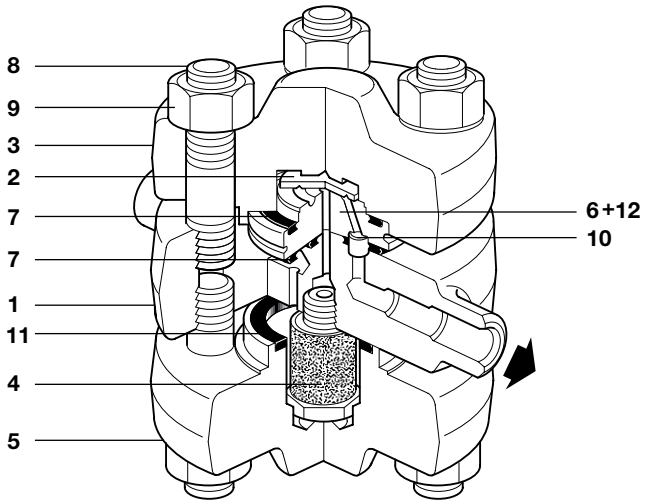


The product **must not** be used in this region.

A-B Flanged to EN 1092 PN250, socket weld and butt weld ends.
A-C Flanged to ASME (ANSI) Class 1500.
A-D Flanged to EN 1092 PN160.
A-E Flanged to ASME (ANSI) Class 900.
A-H-F Flanged to ASME (ANSI) Class 600.
A-J-G Flanged to EN 1092 PN100.

Note: If the product is used at pressures above 170 bar g we would recommend regular inspection of the seat.

Body design conditions		PN250
PMA	Maximum allowable pressure	250 bar g @ 300°C
TMA	Maximum allowable temperature	550°C @ 80 bar g
Minimum allowable temperature		-29°C
† PMO	Maximum operating pressure for saturated steam service	220 bar g @ 374°C
TMO	Maximum operating temperature	550°C @ 80 bar g
Minimum operating temperature		0°C
Note: For lower operating temperatures consult Spirax Sarco		
PMOB	Maximum operating backpressure should not exceed 50% of the upstream pressure	
Minimum operating differential pressure		8 bar g
Designed for a maximum cold hydraulic test pressure of 375 bar g		

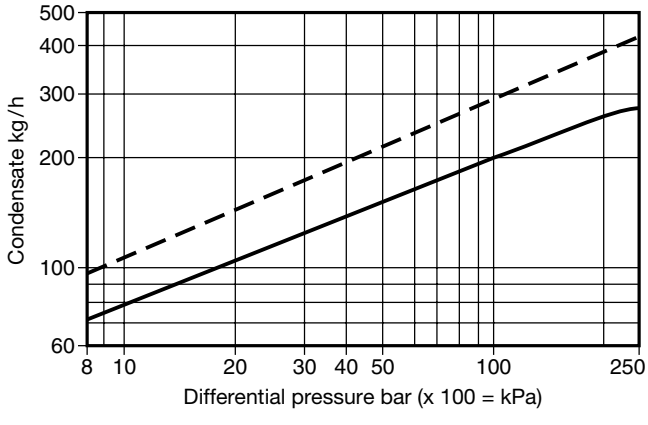


Materials

No.	Part	Material	
1	Body	Alloy steel	ASTM A182 F22
2	Disc	Steel	BS EN ISO 4957
3	Top cover	Alloy steel	ASTM A182 F22
4	Strainer screen assembly	Stainless steel	BS 970 304 S15/ Sintered stainless
5	Bottom cover	Alloy steel	ASTM A182 F22
* 6	Seat	Steel	BS 4659 Gr. BD2
7	Cover gasket	Spirally wound stainless steel with exfoliated graphite filler	
8	Cover studs	Steel	ASTM A193 Gr. B16
9	Cover nuts	Steel	ASTM A194 Gr.4
10	Inner seat gasket	Spirally wound stainless steel with exfoliated graphite filler	
11	Cover gasket	Spirally wound stainless steel with exfoliated graphite filler	
* 12	Ferrule	Stainless steel	

* **Note:** Item **12** (ferrule) is pressed into item **6** (seat).

Capacities (in accordance with ISO 7842)



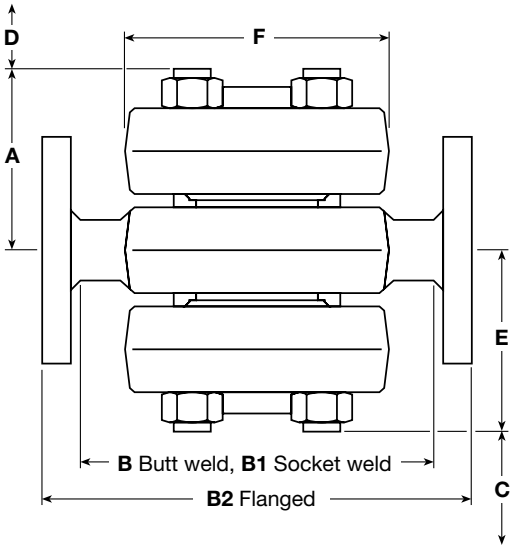
Hot water capacity ———— Cold water capacity — — — —

Local regulations may restrict the use of this product to below the conditions quoted.
In the interests of development and improvement of the product, we reserve the right to change the specification without notice.

Dimensions/weights (approximate) in mm and kg

Butt weld and socket weld

Size	A	B	B1	C	D	E	F	Weight
½"	78	158	156	55	55	78	117	10.5
¾"	80	158	156	55	55	80	117	10.5
1"	80	158	170	55	55	80	117	10.5



Flanged PN100

Size	A	B2	C	D	E	F	Weight
DN15	80	210	55	55	80	117	17.8
DN20	80	240	55	55	80	117	18.7
DN25	80	260	55	55	80	117	21.7

Flanged PN160

Size	A	B2	C	D	E	F	Weight
DN15	80	210	55	55	80	117	17.8
DN25	80	260	55	55	80	117	21.7

Flanged PN250

Size	A	B2	C	D	E	F	Weight
DN15	80	240	55	55	80	117	17.8
DN25	80	260	55	55	80	117	21.7

Flanged ASME (ANSI) Class 600

Size	A	B2	C	D	E	F	Weight
DN15	80	210	55	55	80	117	17.8
DN20	80	240	55	55	80	117	18.7
DN25	80	260	55	55	80	117	21.7

Flanged ASME (ANSI) Class 900 and 1500

Size	A	B2	C	D	E	F	Weight
DN15	80	240	55	55	80	117	17.8
DN20	80	240	55	55	80	117	18.7
DN25	80	260	55	55	80	117	21.7

Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P150-12) supplied with the product.

Installation note:
The TD120M is designed for installation with the name-plate on top. For ease and maintenance, consideration should be given to fitting isolation valves upstream and downstream of the steam trap.

Disposal
The product is recyclable. No ecological hazard is anticipated with the disposal of this product, providing due care is taken.

How to order

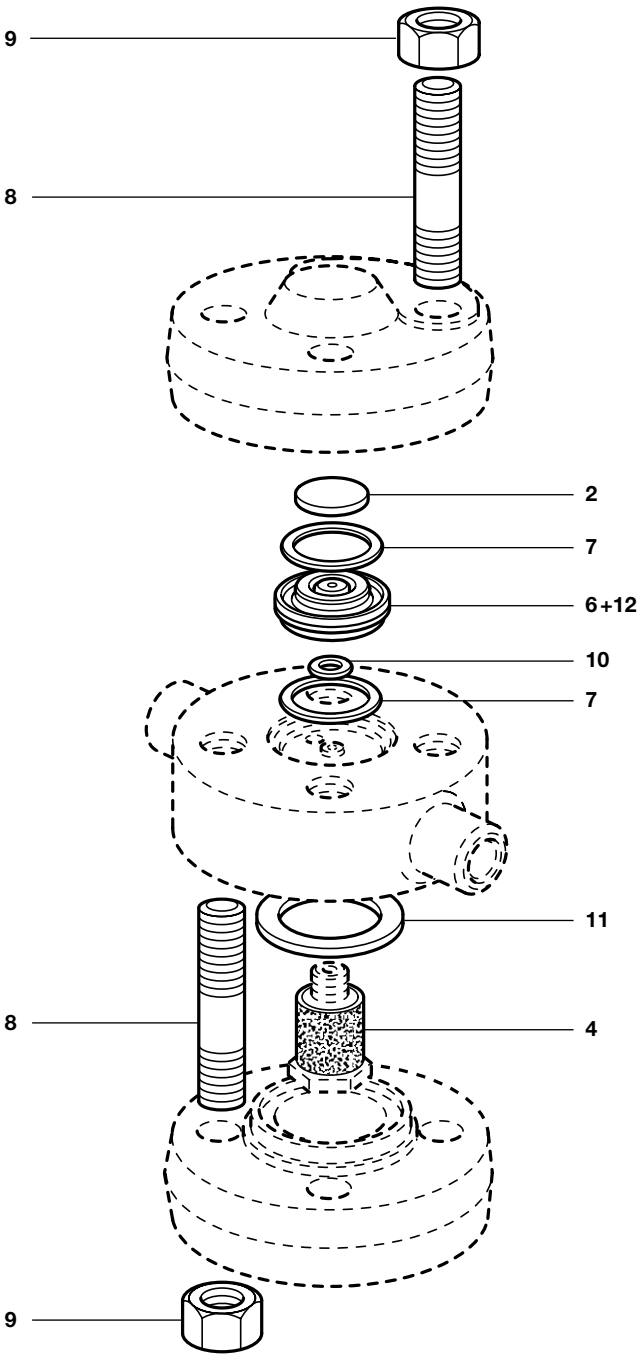
Example: 1 off Spirax Sarco ½" TD120M high pressure thermodynamic steam trap having an alloy steel body with integral strainer and butt weld connections, suitable for superheated steam main drainage. Seat and disc shall be maintainable.

Spare parts

The spare parts available are shown in solid outline. Parts drawn in broken line are not supplied as spares.

Available spares	
Set of cover studs and nuts	**8** (8 off), **9** (8 off)
Strainer screen and gasket	**4**, **11**
Set of gaskets	**7** (2 off), **10**, **11**
Maintenance kit	**2**, **4**, **7** (2 off), **10**, **11**, **6+12**

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 - Seat and disc assembly for a Spirax Sarco ½" TD120M high pressure thermodynamic steam trap.



Recommended tightening torques

Item	Part	or mm		N m
4		22 A/F		25 - 35
8	Stud		M16	85 - 90
9	Nut	23 A/F	M16	160 - 180