



## 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.

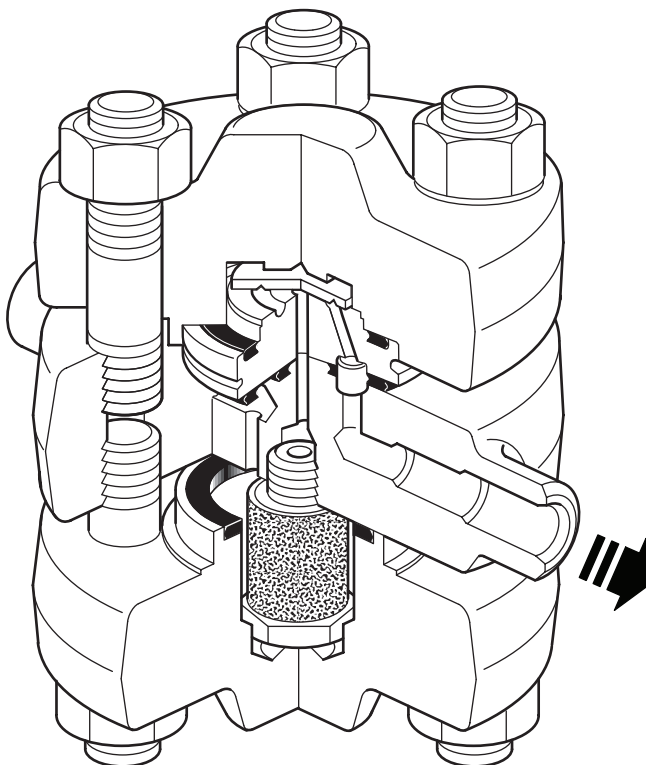
### Standards

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

### 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

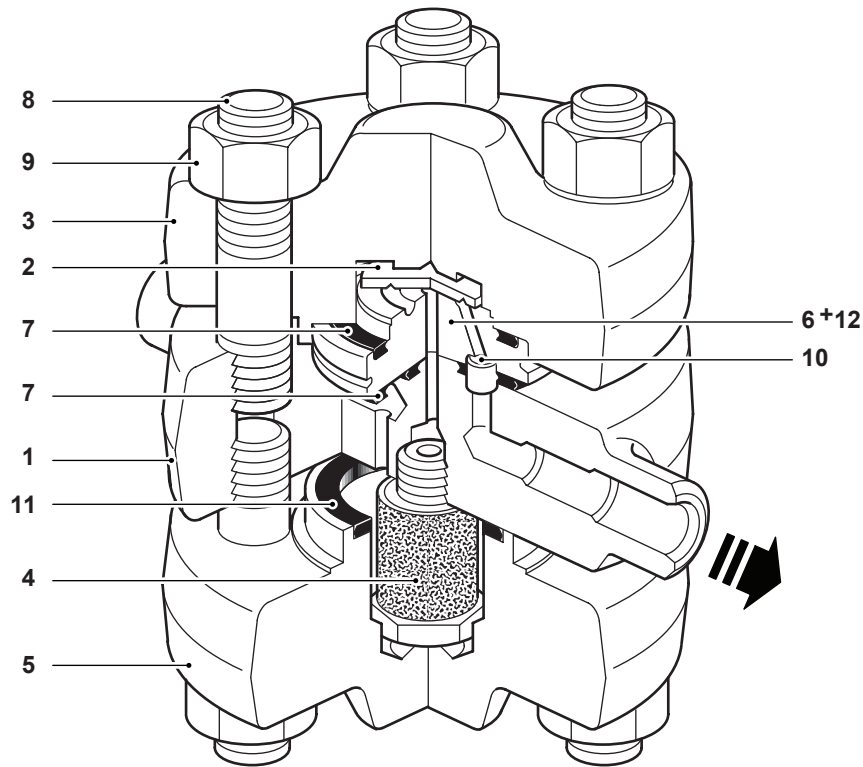
½", ¾" and 1" Butt weld ends to suit Schedule 160 pipe.

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.

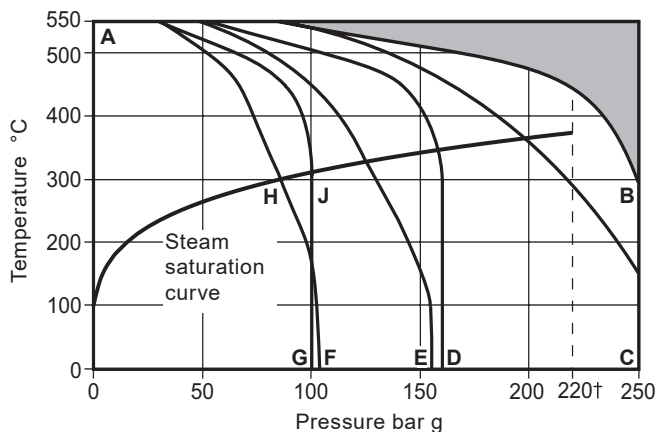
## Materials



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).

## 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.

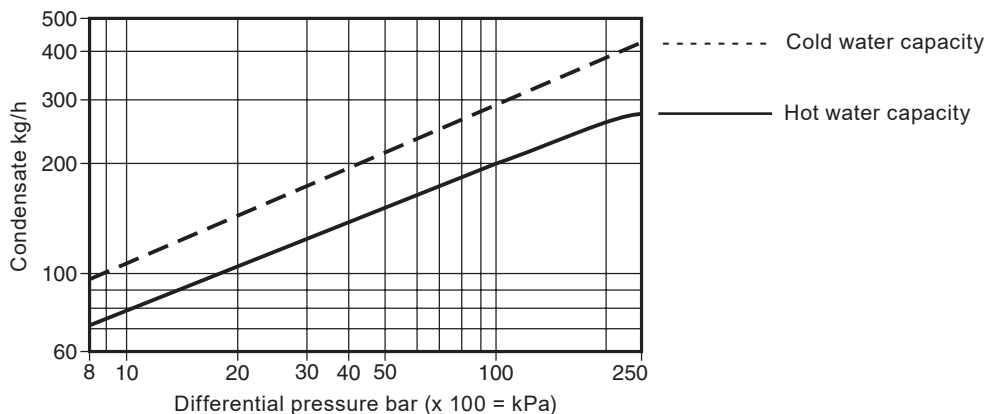
**A-H-F** Flanged to ASME (ANSI) Class 600.

**A-J-G** Flanged to EN 1092 PN100.

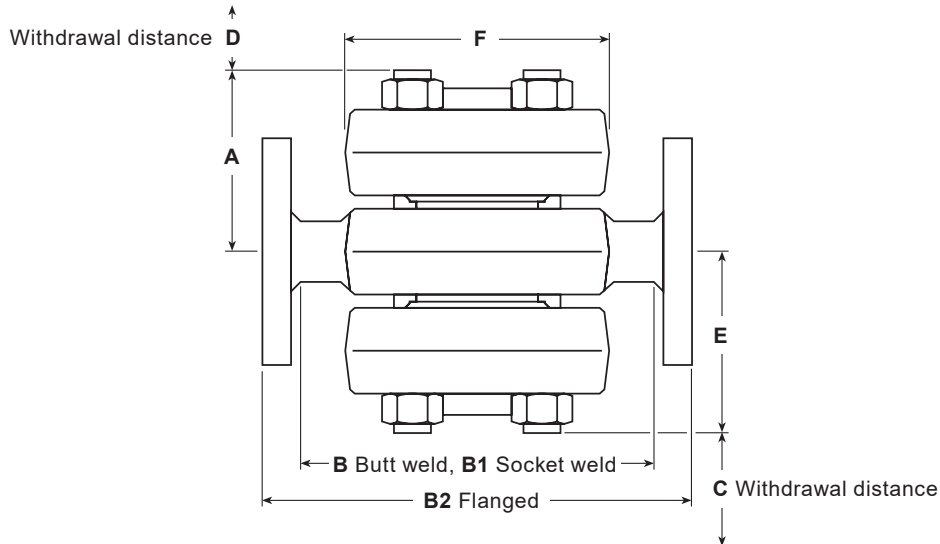
**Note:** If the product is used at pressures above 170 bar g we would recommend regular inspection of the seat.

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
<b>Note:</b> 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

## Capacities (in accordance with ISO 7842)



**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 a grey line are not supplied as spares.

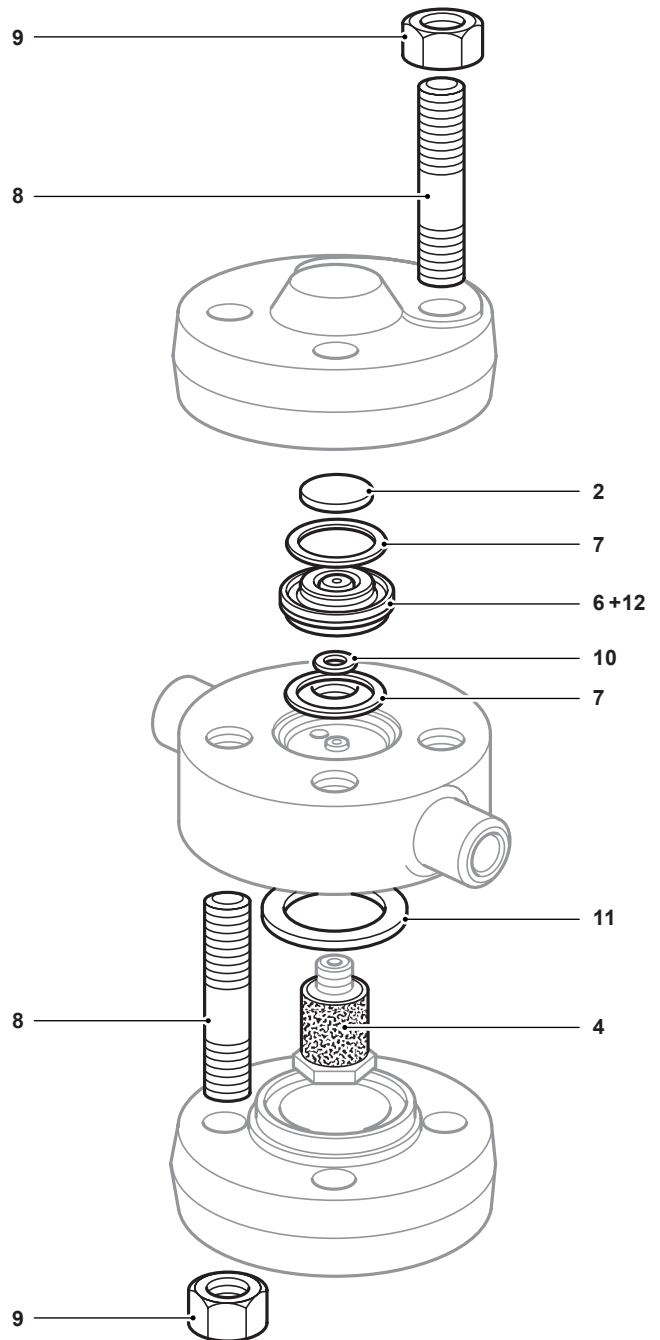
#### Available spares

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