

# spirax sarco

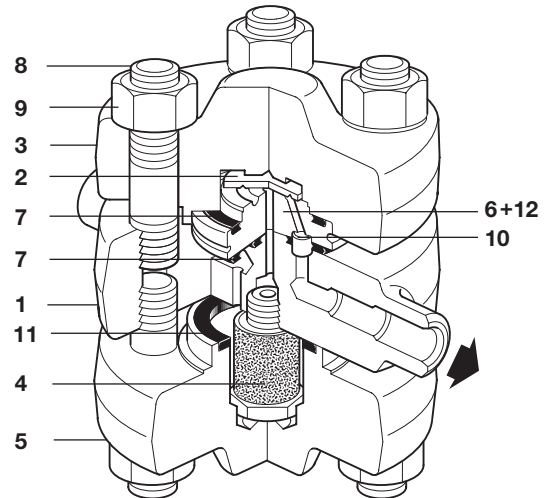
## TD120M High Pressure Thermodynamic Steam Trap with Replaceable Seat

Steam Traps

Thermo-Dynamic®

The Thermodynamic steam trap cycles periodically to discharge condensate very near to steam temperature. It is unaffected by waterhammer or superheat.

<b>Model</b>	<b>TD 120M</b>
<b>PMO</b>	3190 psig
<b>Sizes</b>	1/2", 3/4" & 1"
<b>Connections</b>	SW to ANSI B 16.11 Class 6000
<b>Construction</b>	Forged Alloy Steel
<b>Options</b>	Buttweld and ANSI 1500 RF connections



### Limiting Operating Conditions

**Max. Operating Pressure (PMO)** 3190 psig at saturated steam temperature

**Max. Operating Temperature** 572°F (300°C) at 3,190 psig (220 barg)  
1022°F (550°C) at operating pressures below 1160 psig (80 barg)

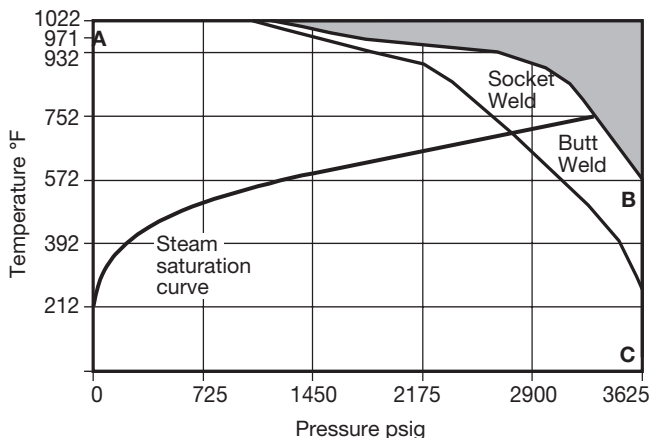
*Minimum pressure for satisfactory operation is 116 psi, 8 bar.  
Maximum back pressure should not exceed 50% of the inlet pressure under any conditions of operation, otherwise the trap may not shut.*

### Pressure Shell Design Conditions

**PMA** 3,190 psig/up to 572°F 220 barg/up to 300°C  
**Max. allowable pressure** 1160 psig/1022°F 80 barg/550°C

**TMA** 1022°F/0-1160 psig 550°C/0-80 barg  
**Max. allowable temperature**  
**Cold Hydraulic Test Pressure** 5437 psig 375 barg

### Pressure/temperature limits (ISO 6552)



### Materials

No.	Part	Material	
1	Body	Alloy steel	ASTM A182 F22
2	Disc	Steel	
3	Top cover	Alloy steel	ASTM A182 F22
4	Strainer screen assembly	Stainless steel	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).

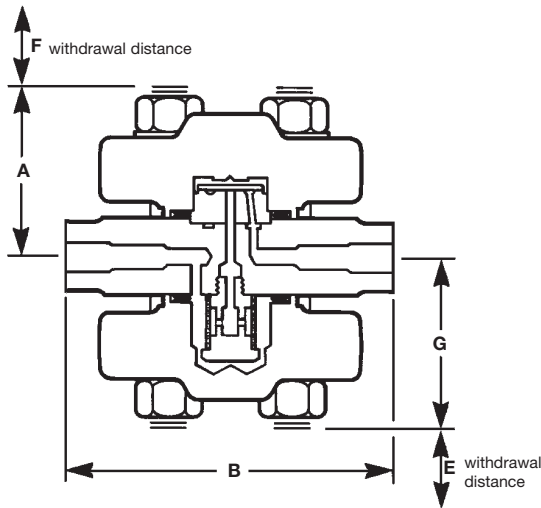
### Capacities

pressure (psig)	cold water (#/hr.)	Hot condensate (#/hr.)	pressure psig	cold water (#/hr.)	Hot condensate (#/hr.)
116	217	156	2000	725	487
250	300	212	2250	762	510
500	403	280	2500	796	532
750	478	329	2750	829	553
1000	540	369	3000	860	572
1250	594	404	3250	890	591
1500	641	434	3500	918	608
1750	685	461	3625	932	617

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.

TI-P150-11-US 6.17

# TD120M High Pressure Thermodynamic Steam Trap with Replaceable Seat



**Dimensions** (nominal) in inches and millimeters

Size DN	A	B	E	F	G	Weight
1/2" 15	3.1 78	6.2 158	2.2 55	2.2 55	3.1 78	23.1 lb 10.5 kg
3/4" 20	3.2 80	6.2 158	2.2 55	2.2 55	3.2 80	23.1 lb 10.5 kg
1" 25	3.2 80	6.2 158	2.2 55	2.2 55	3.2 80	23.1 lb 10.5 kg

## Sample Specification

High pressure Thermodynamic steam trap with socket weld ends as standard. Trap to be inline maintainable with complete replacement of operating internals. The trap is constructed with alloy steel, suitable for operation from 116 psig to 3,190 psig. Trap comes standard with sinter stainless fine strainer.

## Installation

Install in a horizontal pipeline with the nameplate on top. After 24 hours in service, the cover nuts should be checked for tightness. Full-port isolating valves should be installed upstream and downstream of the trap.

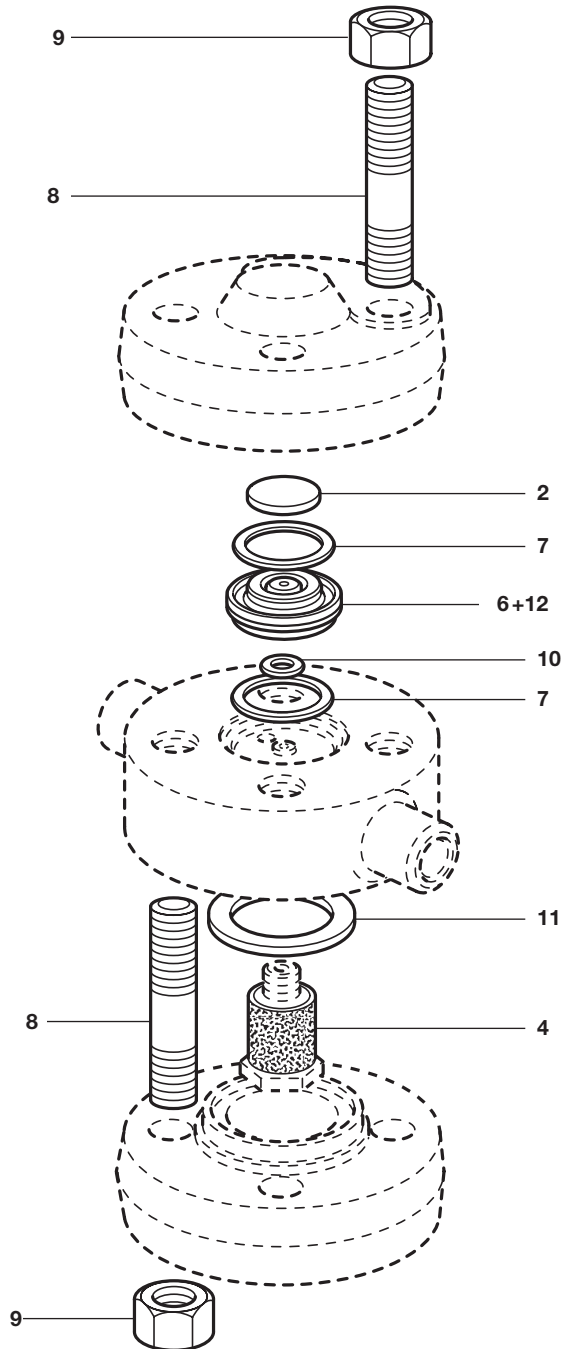
## Maintenance

This product can be maintained without disturbing the piping connections. Complete isolation of the trap from both supply and return line is required before any servicing is performed.

The trap should be disassembled periodically for inspection and cleaning of the disc and seat.

Complete installation and maintenance instructions are given in IM-P150-12.

## Spare Parts



## 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 1/2" TD120M high pressure thermodynamic steam trap.