



3A.345-E
 Issue 8 - 2020

DT300F Thermodynamic Steam Trap

Description

The series DT300F thermodynamic steam traps are manufactured with alloy steel body and cover; internal components are made from stainless steel. They are equipped with an internal maintainable strainer and are suitable for use with high pressure and high temperature steam.

DT300F traps can operate on plants with back pressure up to 50% of the inlet pressure.

Standards

These steam traps comply with the requirements of the European Pressure Equipment Directive and carry the CE mark when so required.

Certification

The product is available with material certification to EN 10204 2.2 or EN 10204 3.1.B

Note: Certification and any tests must be specified at the time of order.

Available types

Four different executions with differentiated internal mechanism (type A, B, C, D) and sized in accordance to the discharge capacity requirements.



Pipe connections

- Socket weld ends ANSI B16.11 SW (standard)
- Butt weld ends ANSI B16.25 BW (standard)
- Screwed ANSI B1.20.1 NPT (API) (standard)
- Flanged UNI - DIN PN 100, 160, 250 (on demand)
- Flanged ASME B16.5 Class 600, 900, 1500, 2500 RF (on demand)

Nominal sizes

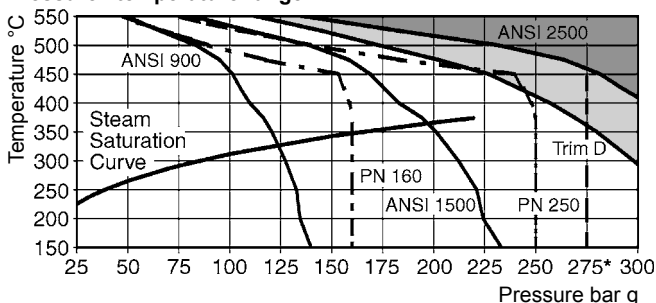
DN ½", ¾", 1", 1½" (BW and flanged execution only)
 DN 15, 20, 25, 40

Design limiting conditions (ISO 6552)

Body design conditions	ANSI 2500
PMA - Maximum allowable pressure	DT300F/ A - B - C @ 20°C 430 bar g
	DT300F/ D @ 20°C 365 bar g
TMA - Maximum allowable temperature	DT300F/ A - B - C @ 113 bar g 560°C
	DT300F/ D @ 100 bar g 560°C
Minimum allowable temperature	-10°C
PMO - Maximum operating suggested pressure	275 bar g*
TMO - Maximum operating temperature	550°C
Maximum operating back pressure as percentage of upstream pressure	50%
Minimum differential pressure for satisfactory performance	15 bar g
Designed for a maximum cold hydraulic test pressure of	645 bar g

These values can be limited by the rating of the flanges installed.

Pressure / temperature range



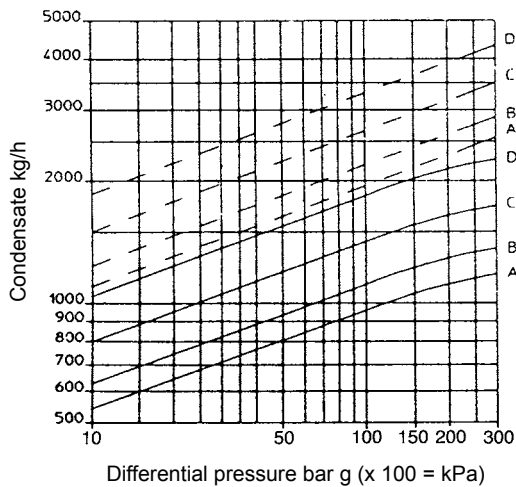
- The product must not be used in this region
- Limit imposed by trim D

Materials

Part	Material	Denomination
Body	Alloy steel	ASTM A182 F22
Cover	Alloy steel	ASTM A182 F22
Body gasket	Stainless steel	AISI 304
Cover studs	Steel	ASTM A193 B16
Cover nuts	Steel	ASTM A194 Gr. 8
Trim set	Stainless steel	AISI S400
Strainer screen	Stainless steel	AISI 316
Strainer flange	Alloy steel	ASTM A182 F22
Strainer gasket	Armco iron	
Strainer flange screws	Steel	ASTM A193 B16

Capacities

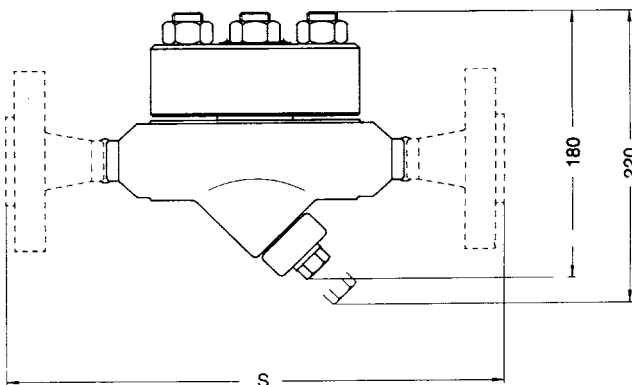
The condensate discharge capacities can be deduced by the diagram below shown.



Hot water capacity _____
Cold water capacity - - - - -

Dimensions / weights (approximate) in mm and Kg

DN Connections	1/2"		3/4"		1"		1 1/2"	
	S	Weight	S	Weight	S	Weight	S	Weight
Scrd / BW / SW	200	15.0	200	15.0	200	15.0	200	15.0
Fig. PN 100 / 160	295	17.0	310	18.0	320	20.2	330	23.0
Fig. PN 250	325	20.0	330	21.0	335	22.0	365	28.0
Fig. ANSI 600	320	16.8	330	17.6	340	18.6	355	23.0
Fig. ANSI 900 / 1500	337	18.4	355	20.4	363	22.2	382	26.8
Fig. ANSI 2500	363	22.2	375	23.0	395	27.0	440	40.0



How to specify

DN 1" Spirax Sarco DT300F/B thermodynamic steam trap socket weld connection according to ANSI B 16.11 SW. Alloy steel body construction suitable for high temperature; stainless steel internal components. Inbuilt maintainable protecting strainers.

Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions 3.333.5275.247 supplied with the product.

Installation note

The trap must be installed below the drain point and in the horizontal plane with the cover upright, fitted according to the flow direction as indicated on the body. Suitable stop valves must be installed upstream and downstream the steam trap to permit safe operation during routine maintenance of the trap and the strainer cleaning. Due to the blast operation of the steam trap, any downstream accessory must be installed at a distance of at least 1 - 2 m.

After 24 hours from the start up it is advisable to check the cover nuts tightening acting with a torque of 100 N m.

Maintenance note

To replace the internal trim set, remove the body cover unscrewing the cover nuts with a 30 mm wrench. Unscrew the internal trim set using the following spanners:

Trim set A	32 mm spanner
Trim set B	36 mm spanner
Trim set C	41 mm spanner
Trim set D	50 mm spanner

After cleaning all joint faces, fit the new unit and tighten with a torque of about 140 N m.

When reassembling, fit a new cover gasket and make sure that all joint faces are perfectly clean.

To clean or replace the strainer screen, undo the strainer flange screws using a 19 mm spanner, withdraw the screen and clean it or, if damaged, replace with a new one. Insert the screen, refit the strainer flange and tighten the assembly screws with a recommended torque of 50 N m.

Disposal

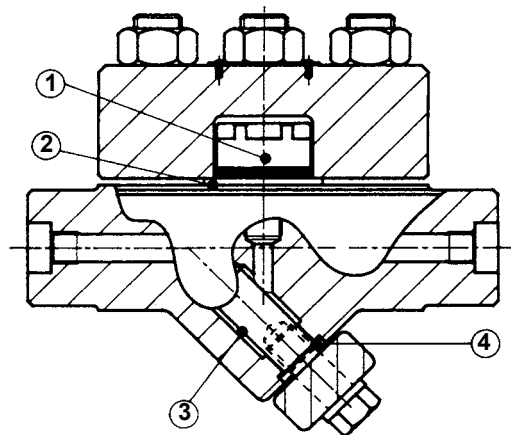
This product is recyclable. No ecological hazard is anticipated with the disposal of this product, providing due care is taken.

Spare parts

The available spare parts are indicated in the table with reference number given in the drawing. No other parts are available as spares.

Available spares

Internal trim set		1 - 2
Body gaskets set	(3 off)	2
Strainer assembly	(1 off)	3 - 4
Strainer gasket set	(3 off)	4



How to order spares

Always order spare parts by using the description given in the table and state the type of trap, the internal trim set type and size of the connections.

Example: 1 Internal trim set for a DT300F/B Spirax Sarco steam trap, DN 1".