



**DOUGLAS ITALIA S.P.A.**

**BALANCED PRESSURE  
THERMOSTATIC STEAM TRAPS  
TC 4**

**BALANCED PRESSURE**

The operating principle is based on the expansion and contraction of a temperature sensitive capsule. The elements are filled with a liquid whose saturation temperature is lower than that of water, at the same pressure. With subcooled condensate the elements contract. When steam is formed the pressure inside the element causes expansion to close the valve. .



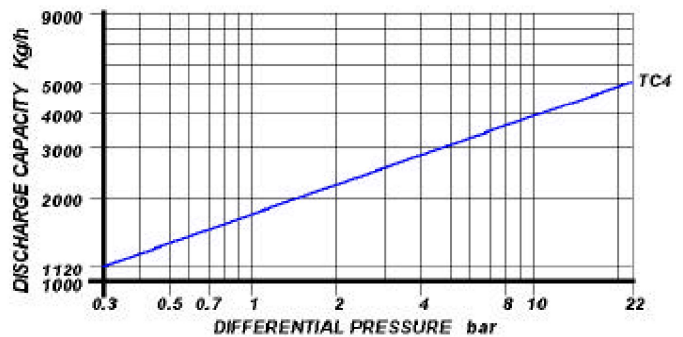
**MAIN FEATURES**

Free air discharge. It withstands frost. Discharge of condensate slightly below steam temperature. It does not withstand waterhammer

**APPLICATIONS**

- Steam mains
- Presses
- Tanks
- Suction heaters
- Ovens

**DISCHARGE CAPACITY**



Cold water capacities are 2 to 4 times greater than the above .  
Safety factor = 1.2 – 1.5

**SIZES**

½" – ¾" – 1"

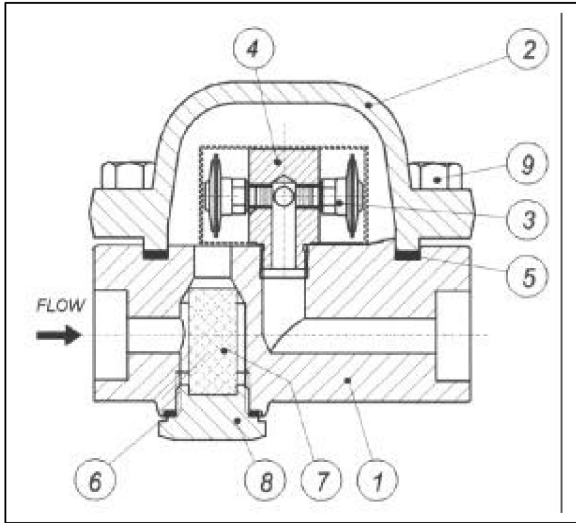
**CONNECTIONS**

Screwed	ANSI B1.20.1 (NPT) / BS21 (BSP)
Socket Welding	ANSI B16.11
Flanged	ANSI B 16.5

**LIMITING CONDITIONS ( according to ISO 6552 )**

Steam Trap rating	ANSI 300
PMA: Max allowable pressure	50 bar
TMA: max allowable temperature	400°C
Max. operating condition	32 bar - 250°C
Max. differential pressure	14.5 bar - 390°C
	22 bar

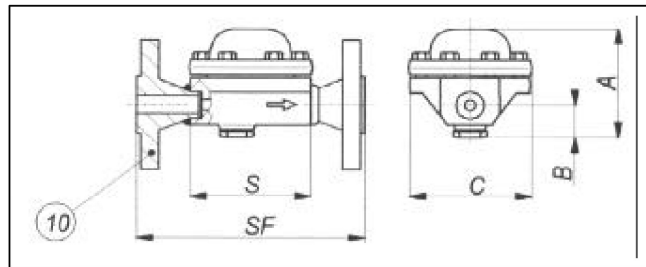
## BALANCED PRESSURE THERMOSTATIC STEAM TRAPS TC 4



POS.	DESCRIPTION	MATERIALS	SPARES
1	Body	ASTM A 105	
2	Cover	ASTM A 105	
3	Valve assembly N.4 *	S.S / HASTELLOY	X
4	Support	AISI 304	X
5	Cover gasket	316 / GRAPHITE	X
6	Gasket	316 / GRAPHITE	X
7	Screen	AISI 304	X
8	Plug	ASTM A 105	X
9	Bolt	ASTM 193 B 7	
10	Flange	ASTM A 105	

\* STANDAR CAPSULE : ( 10°C ) subcooling  
CAPSULE OPTIONS : ( 5°C – 30°C – 40°C ) subcooling

Size (inches)	S	A	B	C	Weight (Kg)	Flanged					
						150#		300#		600#	
						SF	Kg	SF	Kg	SF	Kg
½"	150	130	42	160	15	210	18	230	18	240	18
¾"	150	130	42	160	15	220	20	240	20	250	20
1"	150	130	42	160	15	230	25	240	25	260	25



### INSTALLATION

The steam trap can be installed on horizontal or vertical lines. Do not fit the trap upside down since this position will not allow the cleaning of the strainer. For the same reason the directory of flow on vertical lines must be downwards. For installation with superheated steam, please contact our Technical Department

### HOW TO SERVICE

By installing a new element assembly you can bring the TC 4 steam trap to the "as new from factory" condition. Unscrew the bolts (9) and remove cover (2) and gasket (5). Unscrew and remove the element (3). Clean the inside of the trap and screw in the element-gasket assembly. Fit a new gasket (5) and reinstall cover (2) tightening the bolts (9). To service the strainer, unscrew cap (8), withdraw screen (7) and clean or replace it. Screwing the cap back in place, always fit a new gasket (6). For information about this operation, to be performed only by qualified personnel, please ask our Technical Department.

**How to order:** i.e. TC 4 ½" NPT

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OFFICIAL WEB SITE: [www.douglas-italia.com](http://www.douglas-italia.com)