



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

**BIMETALLIC THERMOSTATIC  
STEAM TRAPS  
BCS 30 F 316**

**BIMETALLIC THERMOSTATIC**

The operating principle is based on a balance between the steam force ( pressure related ) trying to open the discharge valve and the bimetal force ( temperature related ) which acts to close it. At saturated steam temperature the bimetal force keeps the valve closed, while with subcooled condensate the pressure opens the valve.



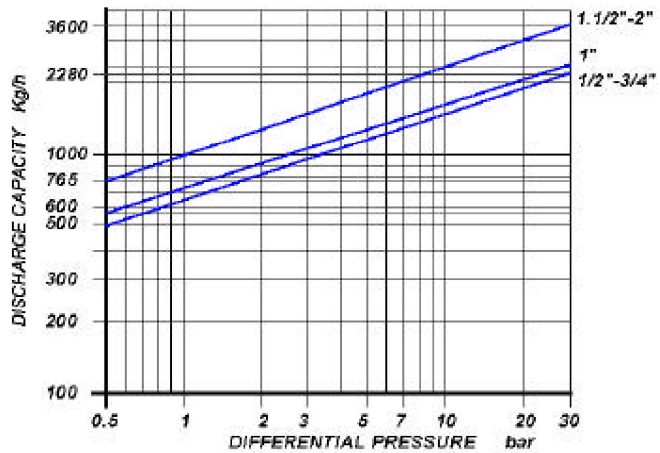
**MAIN FEATURES**

Free air discharge. Suitable on superheated steam. It withstands frost and waterhammer. Modulating discharge only with condensate.

**APPLICATIONS**

- Tracing lines
- Marine applications
- Turbines
- Steam mains
- Tanks

**DISCHARGE CAPACITY**



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

**SIZES**

1/2" - 3/4" - 1" - 1.1/2" - 2"

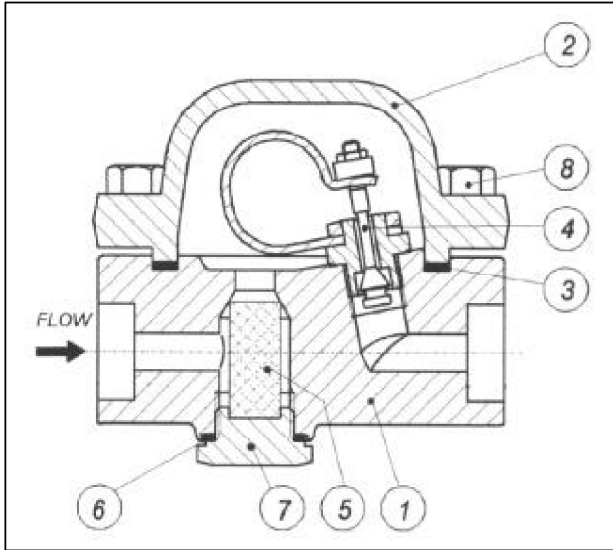
**CONNECTIONS**

|             |                                 |
|-------------|---------------------------------|
| SCREWED     | ANSI B1.20.1 (NPT) / BS21 (BSP) |
| SOCKET WELD | ANSI B16.11                     |
| FLANGED     | ANSI 150#/300#/600#/UNI/DIN     |

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

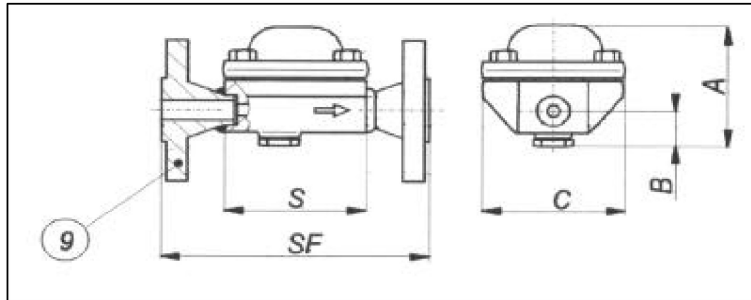
|                                |          |
|--------------------------------|----------|
| Steam Trap rating              | ANSI 800 |
| PMA: Max allowable pressure    | 132 bar  |
| TMA: max allowable temperature | 500°C    |
| PMO: max working pressure      | 30 bar   |
| TMO: max working temperature   | 300°C    |

## BIMETALLIC THERMOSTATIC STEAM TRAPS BCS 30 F316



| POS. | DESCRIPTION    | MATERIALS       | SPARES |
|------|----------------|-----------------|--------|
| 1    | Body           | ASTM A182 F316  |        |
| 2    | Cover          | ASTM A182 F316  |        |
| 3    | Gasket         | 316 / GRAPHITE  | X      |
| 4    | Valve assembly | STAINLESS STEEL | X      |
| 5    | Screen         | AISI 304        | X      |
| 6    | Gasket         | 316 / GRAPHITE  | X      |
| 7    | Strainer cap   | ASTM A182 F316  |        |
| 8    | Bolts          | ASTM A193 B8    |        |
| 9    | Flange         | ASTM A182 F316  |        |

| Size<br>(inches) | S   | A   | B  | C   | Weight<br>(Kg) | Flanged               |      |      |      |      |      |      |    |
|------------------|-----|-----|----|-----|----------------|-----------------------|------|------|------|------|------|------|----|
|                  |     |     |    |     |                | UNI-DIN<br>PN16-25-40 |      | 150# |      | 300# |      | 600# |    |
|                  |     |     |    |     |                | SF                    | Kg   | SF   | Kg   | SF   | Kg   | SF   | Kg |
| ½"               | 100 | 129 | 35 | 135 | 7              | 166                   | 8.5  | 160  | 8.2  | 180  | 8.5  | 190  | 9  |
| ¾"               | 100 | 129 | 35 | 135 | 7              | 170                   | 8.5  | 170  | 8.2  | 190  | 8.5  | 200  | 9  |
| 1"               | 120 | 129 | 35 | 135 | 7              | 190                   | 10   | 200  | 10.2 | 210  | 10.7 | 230  | 12 |
| 1½"              | 160 | 181 | 52 | 180 | 15             | 240                   | 16.1 | 250  | 16   | 260  | 16.5 | 280  | 17 |
| 2"               | 160 | 181 | 52 | 180 | 15             | 246                   | 18   | 250  | 20   | 260  | 21   | 280  | 23 |



### 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. Before welding a SW trap, remove element (4). This operation can be avoided by using arc electro welding. For installation with superheated steam, please contact our Technical Department

### HOW TO SERVICE

By installing a new element assembly you can bring the BC steam trap to the "as new from factory" condition. Unscrew the bolts (8) and remove cover (2) and gasket (3). Unscrew and remove the element (4). Clean the inside of the trap and screw in the element-gasket assembly. Fit a new gasket (3) and reinstall cover (2) tightening the bolts (8). To service the strainer, unscrew cap (7), withdraw screen (5) and clean or replace it. Screwing the cap back in place, always fit a new gasket (6). The discharge temperature may be adjusted without removing the trap from the line. For information about this operation, to be performed only by qualified personnel, please ask our Technical Department.

**How to order:** i.e. BCS 20 F316 1" 150 RF

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