

TI-P077-01 CMGT Issue 6

## Description

The S and SF series are a range of inverted bucket steam traps. The body and cover are constructed from cast iron and the complete unit is readily maintainable.

| Available | options |
|-----------|---------|
|-----------|---------|

| S series  | In-line connections and integral strainer          |
|-----------|--|
| SF series | Integral flanged connections and integral strainer |

#### Standards

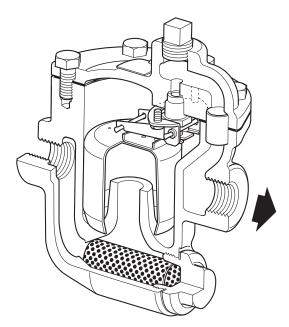
This product fully complies with the requirements of the Pressure Equipment Directive (PED).

#### Certification

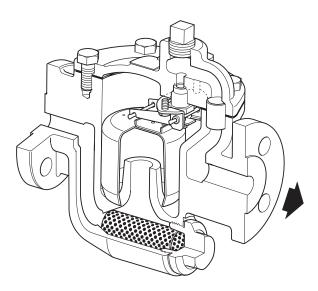
This product is available with certification to EN 10204 3.1. **Note:** All certification/inspection requirements must be stated at the time of order placement.

## Sizes and pipe connections

<sup>1</sup>/<sub>2</sub>" - SA, <sup>3</sup>/<sub>4</sub>" - SB, 1" - SC, 11/<sub>2</sub>" - SD screwed BSP, BS EN 10226 DN15 - SFA, DN20 - SFB, DN25 - SFC, DN40 - SFD Standard flange EN 1092 PN16 (UNI 2237/2229)

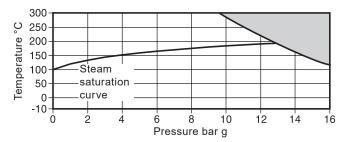


Screwed 1/2"



Flanged DN15

# Pressure/temperature limits (ISO 6552)



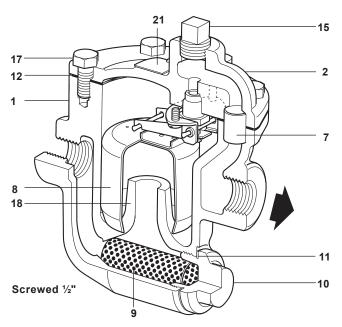
The product **must not** be used in this region.

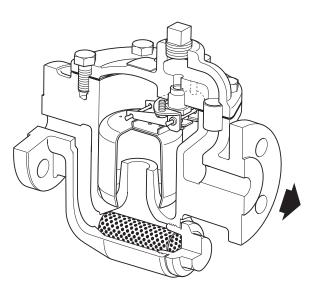
| Body  | design conditions | S                |                  |            |         |       |       | PN16             |
|-------|-------------------|------------------|------------------|------------|---------|-------|-------|------------------|
| PMA   | Maximum allow     | able pressure    |                  |            |         |       | 16    | 6 bar g @ 120 °C |
| ТМА   | Maximum allow     | able temperatu   | re               |            |         |       | 30    | 0 °C @ 9.6 bar g |
| Minim | um allowable ten  | nperature        |                  |            |         |       |       | -10 °C           |
| РМО   | Maximum opera     | ating pressure f | or saturated ste | am service |         |       | 13    | 3 bar g @ 195 °C |
| тмо   | Maximum opera     | ating temperatu  | re               |            |         |       | 30    | 0 °C @ 9.6 bar g |
| Minim | um operating ten  | nperature        |                  |            |         |       |       | 0°C              |
| ΔΡΜΧ  | Maximum differ    | ential pressure  |                  |            |         |       |       |                  |
|       | Screwed           | 4 bar            | 8 bar            | 12 bar     | Flanged | 4 bar | 8 bar | 12 bar           |
|       | 1/2"              | SA4              | SA8              | SA12       | DN15    | SFA4  | SFA8  | SFA12            |
|       | 3/4"              | SB4              | SB8              | SB12       | DN20    | SFB4  | SFB8  | SFB12            |
|       | 1"                | SC4              | SC8              | SC12       | DN25    | SFC4  | SFC8  | SFC12            |
|       | 11⁄2"             | SD4              | SD8              | SD12       | DN40    | SFD4  | SFD8  | SFD12            |

Designed for a maximum cold hydraulic test pressure of

24 bar g

# **Materials**





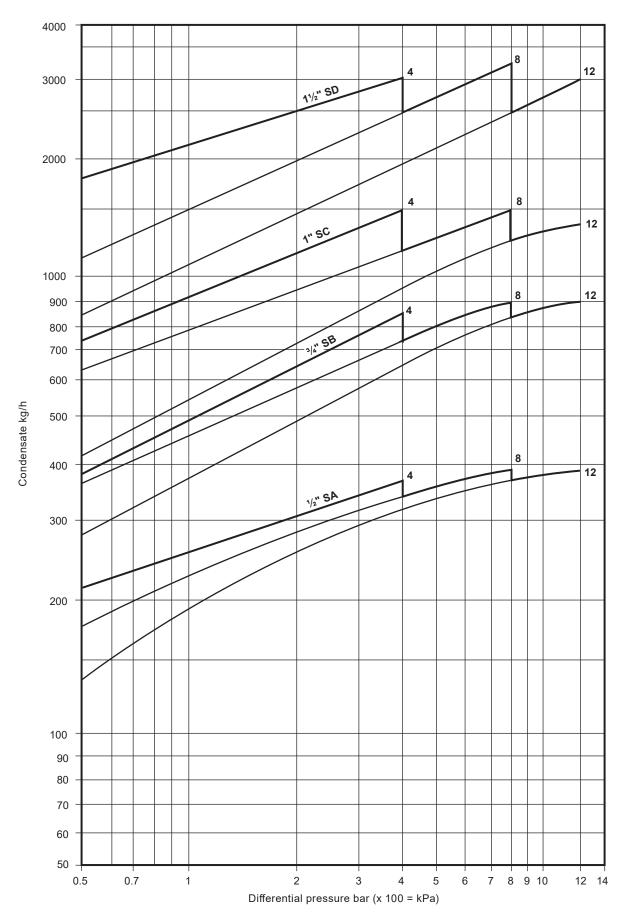
Screwed 1/2"

Flanged DN15

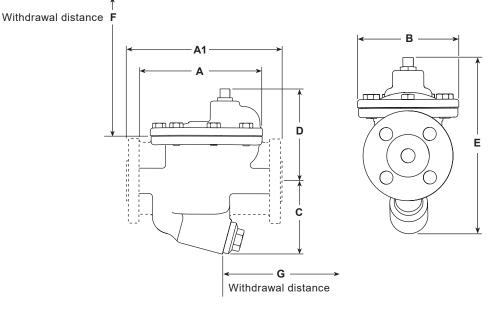
| No.  | Part                   | Material                       |                     |
|------|------------------------|--------------------------------|---------------------|
| 1    | Body                   | Cast iron                      | DIN 1691 GG25       |
| 2    | Cover                  | Cast iron                      | DIN 1691 GG25       |
| 3 *  | Valve seat             | Stainless steel                | X30 Cr 13           |
| 4 *  | Valve head             | Stainless steel                | X30 Cr 13           |
| 5 *  | Valve lever            | Stainless steel                | BS 1449 304         |
| 6 *  | Lever pivot            | Stainless steel                | BS 1449 304         |
| 7    | Ferrule                | Stainless steel                | BS 3605 CF5 304 S14 |
| 8    | Bucket                 | Stainless steel                | BS 1449 304         |
| 9    | Strainer screen        | Stainless steel                | ASTM A240 316L      |
| 10   | Strainer cap           | Cast iron                      | DIN 1691 GG25       |
| 11   | Strainer gasket        | Reinforced exfoliated graphite |                     |
| 12   | Cover gasket           | Reinforced exfoliated graphite |                     |
| 13 * | Valve seat gasket      | Stainless steel                | BS 1449 304         |
| 14 * | Pivot pin              | Stainless steel                | BS 970 304 S15      |
| 15   | Top plug               | Malleable iron                 |                     |
| 16 * | Valve screw            | Stainless steel                | BS 6105 CI A2 70    |
| 17   | Cover bolts            | Steel                          | BS 3692 Gr. 8.8     |
| 18   | Inlet tube ¾", 1", 1½" | Steel                          | BS 1387             |
| 19 * | Starlock washer        | Stainless steel                |                     |
| 20 * | Washer                 | Stainless steel                |                     |
| 21   | Name-plate             | Stainless steel                | BS 1449 304         |

\* Parts 3, 4, 5, 6, 13, 14, 16, 19 and 20 have been shown overleaf.

Capacities Note: Traps should be selected for the most appropriate working pressure differential and not on the basis of load.



# Dimensions/weights (approximate) in mm and kg



## Screwed connections

| Size  | Α   | В   | С   | D   | E   | F   | G   | Weight |
|-------|-----|-----|-----|-----|-----|-----|-----|--------|
| 1/2"  | 130 | 105 | 75  | 95  | 170 | 70  | 66  | 3.4    |
| 3/4"  | 175 | 145 | 110 | 105 | 215 | 90  | 80  | 7.3    |
| 1"    | 205 | 155 | 130 | 120 | 250 | 105 | 90  | 10.5   |
| 11⁄2" | 245 | 180 | 195 | 150 | 345 | 165 | 105 | 19.0   |

## Flanged connections

| i laligea e |     |     |     |     |     |     |     |        |
|-------------|-----|-----|-----|-----|-----|-----|-----|--------|
| Size        | A1  | В   | С   | D   | E   | F   | G   | Weight |
| DN15        | 175 | 105 | 85  | 95  | 180 | 70  | 66  | 4.7    |
| DN20        | 225 | 145 | 110 | 105 | 215 | 90  | 80  | 9.3    |
| DN25        | 255 | 155 | 135 | 120 | 255 | 105 | 90  | 12.8   |
| DN40        | 295 | 180 | 195 | 155 | 350 | 165 | 105 | 22.3   |

# Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P077-02) supplied with the product.

#### Installation note

The trap must be installed with the body upright with the strainer cap at the bottom so that the internal bucket is rising and falling vertically.

## Disposal

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

# Spare parts

The spare parts available are shown in heavy outline. Parts shown in a grey line are not supplied as spares.

#### **Available spares**

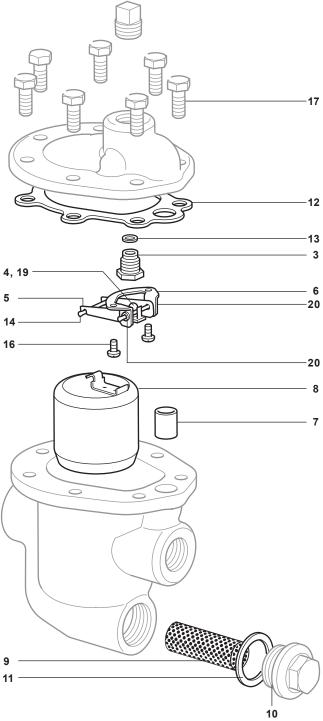
| Valve and seat assembly *(2 off) (supplied pre-assembled) | 3, 4, 5, 6, 7, 12, 13, 14*, 16*, 19, 20* |
|---|--|
| Bucket assembly   | 8  |
| Strainer screen   | 9, 11                                    |
| Packet of all gaskets                                     | 7, 11, 12, 13                            |

#### How to order spares

Always order spare parts by using the description given in the column headed 'Available spares' and state the size, Model No. and pressure rating of the trap.

Example: 1 off Valve and seat assembly for a Spirax Sarco DN20 SFB8 inverted bucket steam trap for differential pressures up to 8 bar.

|          | mended tig              | ghtenii | ng torques<br>≝ | 1        |
|----------|-------------------------|---------|-----------------|----------|
| ltem No. | Trap size               |         | or<br>mm        | N m      |
|          | ½" - DN15               | 15      | -               | 25 - 30  |
| 2        | 3⁄4" - DN20             | 17      | -               | 25 - 40  |
| 3        | 1" - DN25               | 22      | -               | 50 - 60  |
|          | 1½" - DN40              | 30      | -               | 80 - 90  |
|          | 1⁄2" - DN15             | -       | M28 x 30        | 50 - 60  |
| 10       | 3⁄4" - DN20             | -       | M32 x 36        | 50 - 60  |
| 10       | 1" - DN25               | -       | M42 x 46        | 70 - 80  |
|          | 1½" - DN40              | -       | M42 x 50        | 90 - 110 |
|          | 1⁄2" - DN15             | -       | M4 x 8          | 2.5 - 3  |
| 16       | <sup>3</sup> ⁄4" - DN20 | -       | M5 x 10         | 3 - 4    |
| 10       | 1" - DN25               | -       | M5 x 10         | 3 - 4    |
|          | 1½" - DN40              | -       | M6 x 10         | 5 - 6    |
|          | 1⁄2" - DN15             | -       | M8 x 20         | 20 - 25  |
| 17       | 3⁄4" - DN20             | -       | M12 x 25        | 60 - 70  |
| 17       | 1" - DN25               | -       | M10 x 30        | 40 - 45  |
|          | 1½" - DN40              | -       | M12 x 35        | 60 - 70  |



# Re

# How to order

Example: 1 off Spirax Sarco DN20 SFB4 inverted bucket steam trap having flanged EN 1092 PN16 connections.