

# spirax sarco

TI-S02-03  
 ST Issue 10

## FT14 Ball Float Steam Trap (Screwed)

### Description

The FT14 is an SG iron bodied ball float steam trap having stainless steel working internals and integral automatic air venting facility. The FT14 can be maintained without disturbing the pipework.

### Available types

|                   |   |
|-------------------|---|
| <b>FT14 (R-L)</b> | Horizontal connections with flow from right to left |
| <b>FT14 (L-R)</b> | Horizontal connections with flow from left to right |
| <b>FT14V</b>      | Vertical connections with flow downwards            |

### Capsule

The BP99/32 capsule which is used in the FT14 is suitable for use on 150°C superheat @ 0 bar g and 50°C superheat @ 32 bar g.

### Optional extras

A **manually adjustable needle valve** (designated 'C' on the nomenclature i.e. **FT14-C**) can be fitted to the trap. This option provides a **steam lock release (SLR)** feature in addition to the standard air vent. For further information please consult Spirax Sarco.

The FT14 has the option of an **integral strainer screen** (designated 'X' on the nomenclature i.e. **FT14-X**).

### Standards

This product fully complies with the requirements of the European Pressure Equipment Directive 97/23/EC.

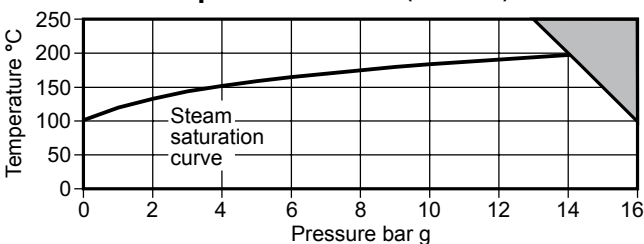
### Certification

This product is available with a manufacturers' Typical Test Report.  
**Note:** All certification/inspection requirements must be stated at the time of order placement.

### Sizes and pipe connections

½", ¾" and 1" screwed BSP or NPT.

### Pressure/temperature limits (ISO 6552)

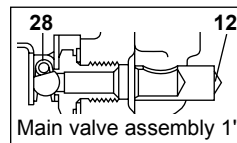
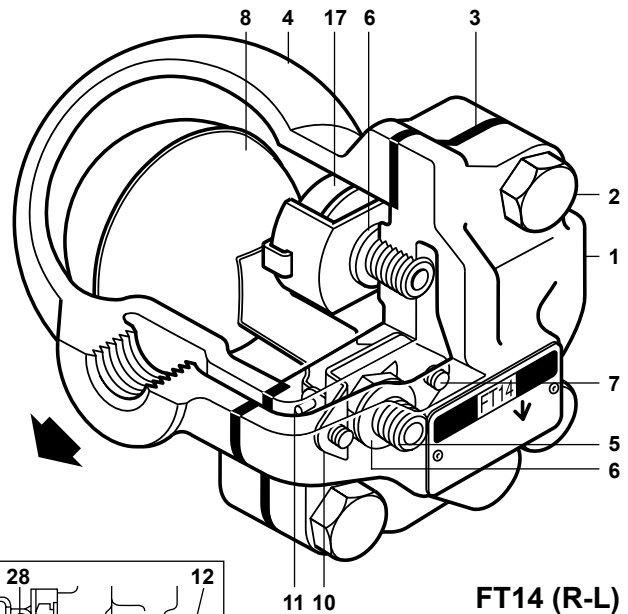
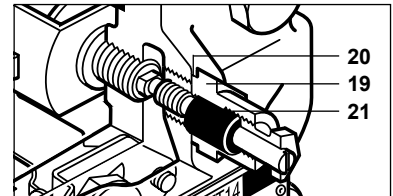


The product **must not** be used in this region.

|                               |  |                  |
|-------------------------------|--|------------------|
| Body design conditions        |  | PN16             |
| PMA                           | Maximum allowable pressure                             | 16 bar g @ 100°C |
| TMA                           | Maximum allowable temperature                          | 250°C @ 13 bar g |
| Minimum allowable temperature |  | -10°C            |
| PMO                           | Maximum operating pressure for saturated steam service | 14 bar g         |
| TMO                           | Maximum operating temperature                          | 250°C @ 13 bar g |
| Minimum operating temperature |  | 0°C              |
|                               | Maximum  | FT14-4.5         |
| ΔPMX                          | differential pressure                                  | FT14-10          |
|                               |  | FT14-14          |

Designed for a maximum cold hydraulic test pressure of 24 bar g

FT14-C (R-L)

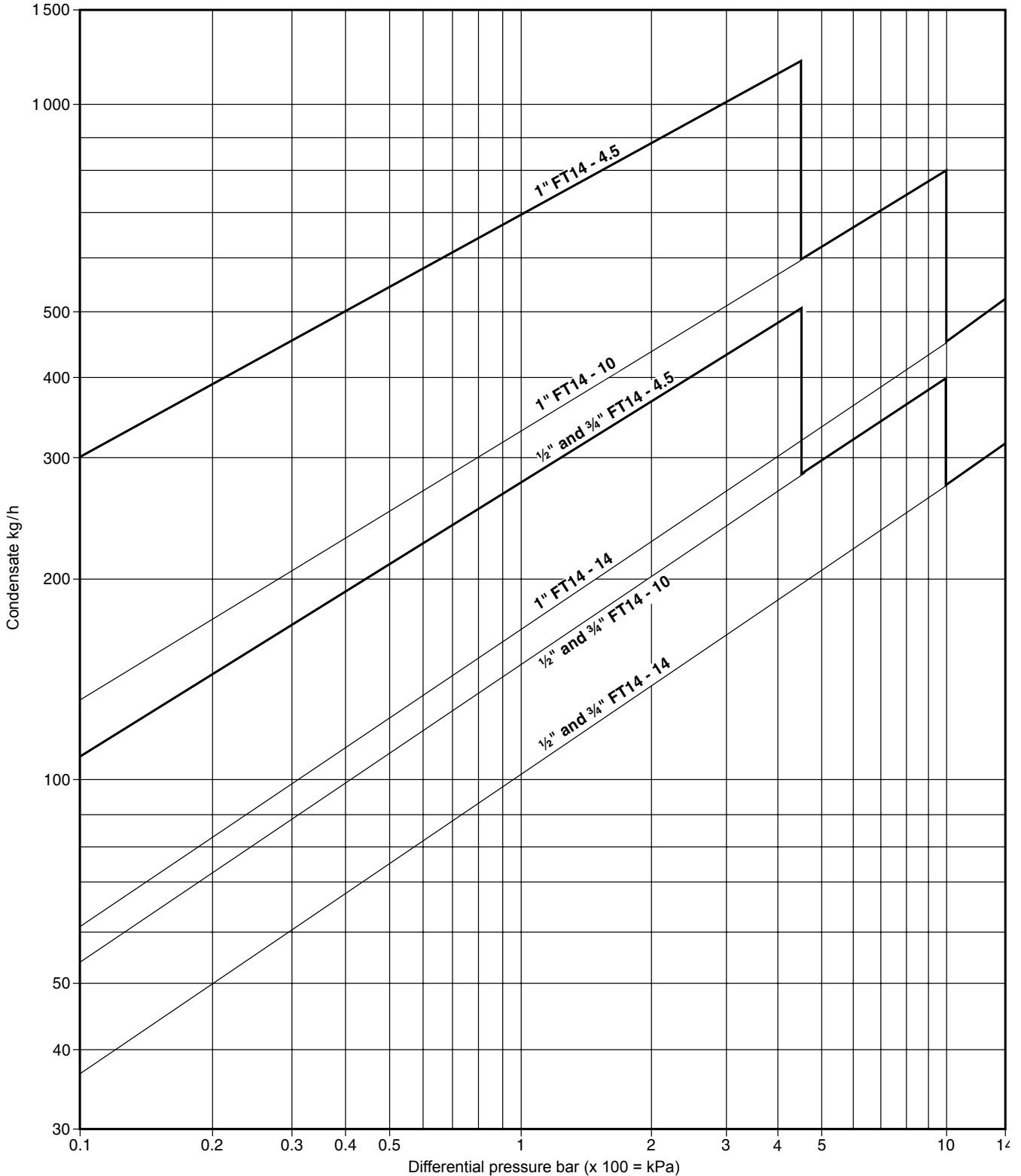


### Materials

| No. Part                         | Material                         |
|----------------------------------|----------------------------------|
| * 1 Body                         | SG iron DIN 1693 GGG 40          |
| 2 Cover bolts                    | Steel BS 3692 Gr.8.8             |
| 3 Cover gasket                   | Reinforced exfoliated graphite   |
| 4 Cover                          | SG iron DIN 1693 GGG 40          |
| 5 Valve seat                     | Stainless steel BS 970 431 S29   |
| 6 Valve seat gasket              | Stainless steel BS 1449 409 S19  |
| 7 Pivot frame assembly screws    | Stainless steel BS 6105 CI A2-70 |
| 8 Ball float and lever           | Stainless steel BS 1449 304 S16  |
| 10 Pivot frame                   | Stainless steel BS 1449 304 S16  |
| 11 Pivot pin                     | Stainless steel                  |
| * 12 Erosion deflector (1" only) | Stainless steel BS 970 431 S29   |
| 17 Air vent assembly             | Stainless steel                  |
| 18 Air vent gasket               | Stainless steel BS 1449 409 S19  |
| 19 SLR assembly                  | Stainless steel BS 970 303 S21   |
| 20 SLR gasket                    | Stainless steel BS 1449 304 S16  |
| 21 SLR seal                      | Graphite                         |
| 28 Valve spring (1" only)        | Stainless steel BS 2056 302 S26  |

\* **Note:** Item 12 is pressed into item 1 (1" only).

## Capacities

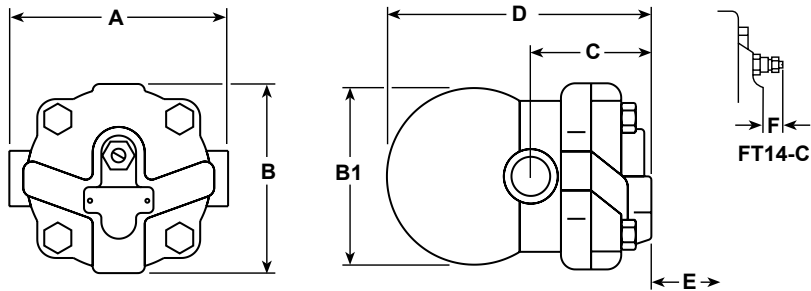


Capacities shown above are based on condensate at saturation temperature. When discharging sub-cooled condensate the air vent provides extra capacity. Under start-up conditions when the condensate is cold the internal thermostatic air vent will be open and provides additional capacity to the main valve. On 4.5 bar units this will provide a minimum of 50% increased capacity above the hot condensate figures shown. On 10 and 14 bar units this will be a minimum increase of 100% on the published capacity. The following table gives the minimum additional cold water capacities from the air vent.

| $\Delta P$ (bar)                                     | 0.5 | 1   | 2   | 3   | 4.5 | 7   | 10   | 14   |
|--|-----|-----|-----|-----|-----|-----|------|------|
| <b>Minimum additional cold water capacity (kg/h)</b> |     |     |     |     |     |     |      |      |
| 1/2" and 3/4"  | 70  | 140 | 250 | 380 | 560 | 870 | 1130 | 1500 |
| 1"   | 120 | 240 | 360 | 500 | 640 | 920 | 1220 | 1500 |

**Dimensions/weights (approximate) in mm and kg**

| Size | A   | B   | B1  | C  | D   | E<br>Withdrawal distance | F  | Weight |
|------|-----|-----|-----|----|-----|--------------------------|----|--------|
| 1/2" | 121 | 107 | 96  | 67 | 147 | 105                      | 30 | 2.9    |
| 3/4" | 121 | 107 | 96  | 67 | 147 | 105                      | 30 | 2.9    |
| 1"   | 145 | 107 | 117 | 75 | 166 | 110                      | 23 | 4.0    |



**Safety information, installation and maintenance**

For full details see the Installation and Maintenance Instructions (IM-S02-13) supplied with the product.

**Installation note:**

The FT14 must be installed with the direction of flow as indicated on the body, and with the float arm in a horizontal plain so that it rises and falls vertically. If required the flow orientation can be changed on site.

**Disposal**

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

**How to order**

**Example:** 1 off Spirax Sarco 1/2" FT14-4.5 (R-L) ball float steam trap with screwed BSP connections and integral air vent.

**Spare parts**

The spare parts available are shown in solid outline. Parts drawn in broken line are not supplied as spares.

**Available spares**

|  |   |
|--|---|
| Main valve assembly with float           | 3, 5, 6, 7 (2 off), 8, 10, 11, 28 (1" only)         |
| Air vent assembly                        | 3, 17, 18   |
| Steam lock release and air vent assembly | 3, 17, 18, 19, 20, 21                               |
| Cover gasket (packet of 3)               | 3   |
| Maintenance kit                          | 3, 5, 6, 7 (2 off), 8, 10, 11, 17, 18, 28 (1" only) |

**How to order spares**

Always order spares by using the description given in the column headed 'Available spares' and state the size, type of trap and pressure range.

**Example:** 1 - Main valve assembly for a Spirax Sarco 1/2" FT14-10 ball float steam trap.

**Steam lock release assembly**

**Air vent assembly**

**Main valve assembly**

**Note:** Item 28 is required for 1" size only

**Recommended tightening torques**

| Item      | or<br>mm            | N m       |
|-----------|---------------------|-----------|
| 2         | 17 A/F<br>M10 x 30  | 47 - 50   |
| 5         | 17 A/F              | 50 - 55   |
| 7         | Pozidrive<br>M4 x 6 | 2.5 - 3.0 |
| 17        | 17 A/F              | 50 - 55   |
| 19 and 21 | 19 A/F              | 50 - 55   |