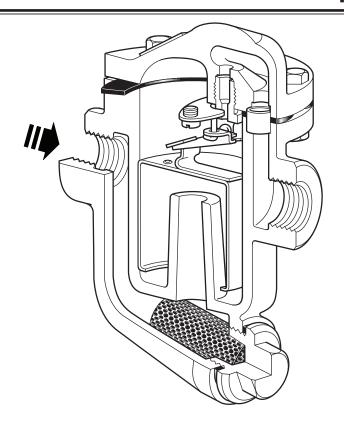
TI-S03-02 CMGT Issue 12

## spirax /sarco

# HM Series Cast Iron Inverted Bucket Steam Traps



#### **Description**

The Spirax Sarco HM Series of cast iron inverted bucket steam traps are designed for installation in horizontal pipework. They are available in screwed connections, with an optional blowdown valve.

#### Sizes and pipe connections

1/2" - HM00, 3/4" - HM10 and 1" - HM12 Screwed BSP T Rp (ISO 7-1) or NPT

#### **Optional extras**

Integral blowdown valve:- The HM Series inverted bucket steam traps can be supplied with integral blowdown valves to remove debris from the inlet strainer. For further details see the relevant Technical Information Sheet.

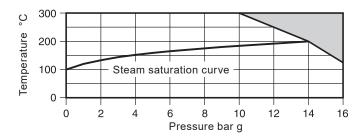
#### **External air vents**

When required, HM Series inverted bucket steam traps can be supplied with separate thermostatic air vents to provide the efficient and quick release of air. Various models, both balanced pressure and bimetallic, are available. Details for the range up to 30 bar g are shown in the relevant sales brochure.

#### **Diffusers**

Where steam traps discharge to atmosphere a diffuser should be fitted to reduce the effect of the blast discharge. The diffuser not only reduces the risk of groundwork erosion and condensate splashback, but also reduces sound pressure levels as well. Available models are detailed in the relevant sales brochure.

### Pressure/temperature limits

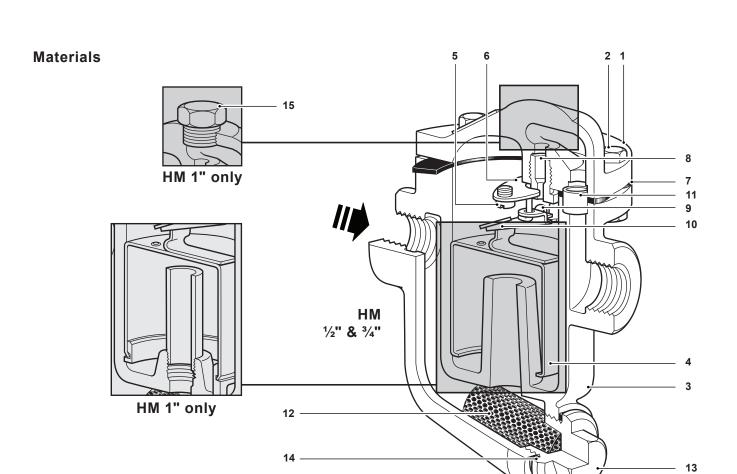


The product **must not** be used in this region.

| Body  | design conditions                                  | PN16     |
|-------|--|----------|
| PMA   | Maximum allowable pressure                         | 16 bar g |
| TMA   | Maximum allowable temperature                      | 300 °C   |
| РМО   | Maximum operating pressure                         | 16 bar g |
| ТМО   | Maximum operating temperature                      | 300 °C   |
| Desig | ned for a maximum cold hydraulic test pressure of: | 24 bar g |

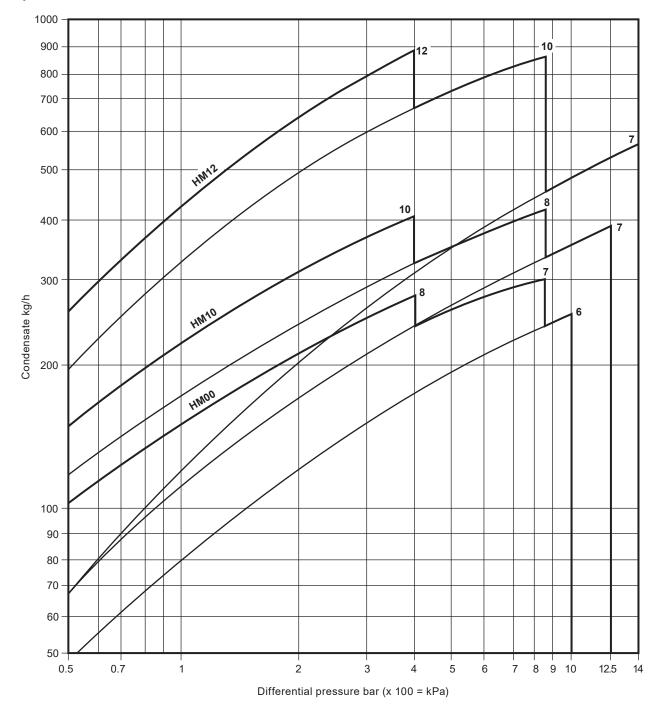
#### $\Delta \text{PMX}$ - Maximum differential pressure

| Size    |      | △PMX - Maximum differential pressure bar |         |        |        |        |  |  |
|---------|------|--|---------|--------|--------|--------|--|--|
|         |      | 4  | 8.5     | 10     | 12.5   | 14     |  |  |
|         | 1/2" | HM00/8                                   | HM00/7  | HM00/6 | -      | -      |  |  |
| Screwed | 3/4" | HM10/10                                  | HM10/8  | -      | HM10/7 | -      |  |  |
|         | 1"   | HM12/12                                  | HM12/10 | -      | -      | HM12/7 |  |  |



| No. | Part                    |            | Material                              |                       |
|-----|-------------------------|------------|---------------------------------------|-----------------------|
| 1   | Cover                   |            | Cast Iron                             | DIN 1691 GG 20        |
|     | Cover bolts             | 1/2", 3/4" | Steel                                 | BS 3692 Gr.10         |
| •   | Cover nuts              | 1/2", 3/4" | Steel                                 | BS 3692 Gr.10.9       |
| 2   | Cover bolts             | 1"         | Steel                                 | BS 3692 Gr. 8.8       |
|     | Cover nuts              | 1"         | Steel                                 | BS 692 Gr. 8          |
| 3   | Body                    |            | Cast iron                             | DIN 1691 GG 20        |
| 4   | Bucket                  |            | Stainless steel                       | BS 1449 304 S16       |
| 5   | Valve guide plate screw |            | Stainless steel M4.5 x 10             | BS 4183 18/8          |
| 6   | Valve guide plate       |            | Stainless steel                       | BS 1449 304 S11       |
| 7   | Cover gasket            |            | Reinforced exfoliated graphite        |                       |
| 8   | Valve seat              |            | Stainless steel                       | AISI 431              |
| 9   | Valve                   |            | Stainless steel                       | AISI 440B             |
| 10  | Valve lever             |            | Stainless steel                       | BS 1449 321 S31       |
| 11  | Ferrule                 | HM00/10    | Stainless steel                       | BS 970 321 S31        |
| 11  | retruie                 | HM12       | Stainless steel                       | BS 3605 (CFS) 304 S14 |
| 12  | Strainer screen         | HM00       | Stainless steel                       | ASTM A240 316L        |
| 13  | Chrainanaan             | ½" and ¾"  | SG iron                               | DIN 1693 GGG 40       |
| 13  | Strainer cap            | 1"         | Cast iron                             | DIN 1691 GG 25        |
| 14  | Strainer gasket         |            | Reinforced exfoliated graphite        |                       |
| 15  | Plug                    |            | Stainless steel                       | BS 970 416-537        |
|     |                         |            | · · · · · · · · · · · · · · · · · · · |                       |

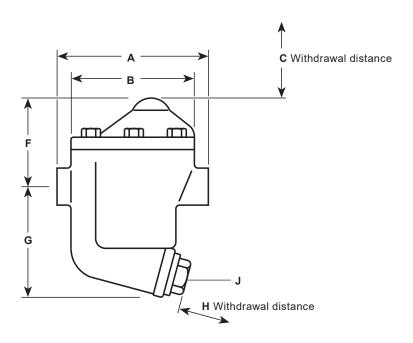
### **Capacities**



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

| Size |      | Α   | В   | С   | F     | G   | н  | J   | Weight |
|------|------|-----|-----|-----|-------|-----|----|-----|--------|
| DN15 | 1/2" | 120 | 100 | 100 | 73.5  | 89  | 65 | M28 | 2.6    |
| DN20 | 3/4" | 120 | 100 | 140 | 94.5  | 107 | 65 | M28 | 3.2    |
| DN25 | 1"   | 180 | 160 | 160 | 145.0 | 120 | 85 | M32 | 8.8    |



**Safety information, installation and maintenance**For full safety information and installation and maintenance instructions see IM-S03-11.

#### **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 3/4" HM10/7 inverted bucket steam trap with screwed BSP T Rp (ISO 7-1) connections.

#### **Spare parts**

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

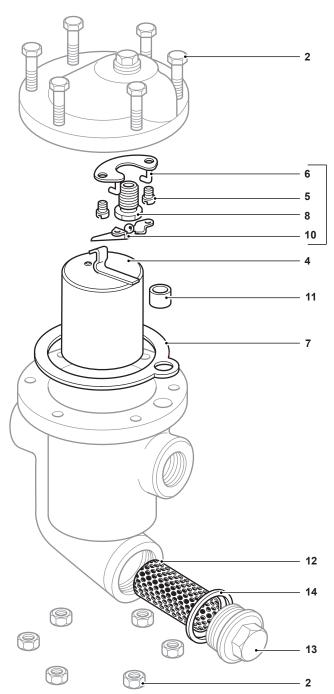
#### Available spares

| Valve and seat assembly                     | 5 (2 off), 6, 8, 10 |
|---|---------------------|
| Bucket                                      | 4                   |
| Cover gasket and ferrule (packet of 3 each) | 7, 11               |
| Strainer screen                             | 12                  |
| Strainer screen gasket (packet of 3 each)   | 14                  |

#### How to order spares

Always order spares by using the description given in the column headed 'Available spares' and state the size and series of the trap.

**Example:** 1 - Valve and seat assembly for a Spirax Sarco ½" HM00/7 inverted bucket steam trap.



#### Valve seat assembly

#### Recommended tightening torques

| Item Part |            | o m | N m      |           |
|-----------|------------|-----|----------|-----------|
| 2         | 1/2", 3/4" |     | M6 x 25  | 15 - 16   |
|           | 1"         |     | M12 x 45 | 85 - 95   |
| 8         | 1/2", 3/4" | 13  |          | 50 - 55   |
|           | 1"         | 17  |          | 80 - 88   |
| 13        | 1/2", 3/4" | 22  | M28      | 50 - 55   |
|           | 1"         | 27  | M32      | 125 - 145 |