



# FREE FLOAT STEAM TRAP

## MODEL JH7X CAST STEEL

### FREE FLOAT STEAM TRAP WITH THERMOSTATIC AIR VENTING

#### Features

**A reliable and durable cast steel\* free float trap with tight shut-off for use on medium-size process equipment.**

1. Self-modulating free float provides continuous, smooth, low velocity condensate discharge as process loads vary.
2. Constant water-seal design ensures steam-tight seal, even under low-load conditions.
3. Only one moving part, the free float, eliminates concentrated wear and provides long maintenance-free service life.
4. Thermostatic capsule with "fail open" feature vents air automatically until close-to-steam temperature for rapid start-up, increased productivity and even heating.
5. Easy, inline access to internal parts simplifies cleaning and reduces maintenance costs.
6. Built-in screen with large surface ensures trouble free operation.

\* Stainless Steel body available on request



#### Specifications

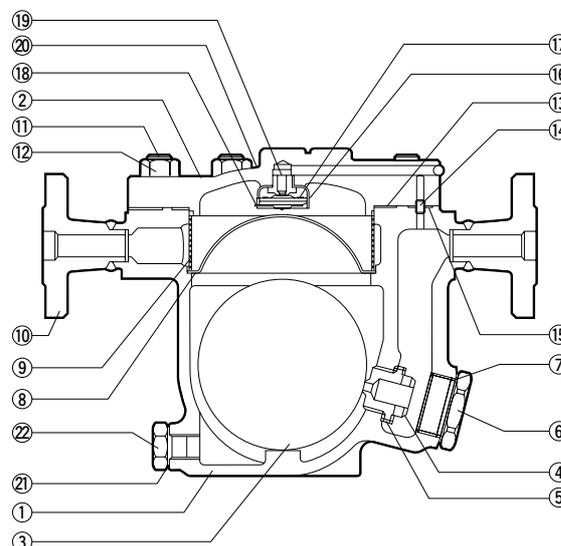
| Model                                    | JHW7X                   | JH7X    |
|--|-------------------------|---------|
| Connection                               | Socket Welded           | Flanged |
| Size                                     | DN 20, 25, 40           |         |
| Orifice No.                              | 1, 2, 5, 10, 14, 22, 32 |         |
| Maximum Operating Pressure (barg) PMO    | 1, 2, 5, 10, 14, 22, 32 |         |
| Maximum Differential Pressure (bar) ΔPMX | 1, 2, 5, 10, 14, 22, 32 |         |
| Maximum Operating Temperature (°C) TMO   | 240                     |         |
| Subcooling of X-element Fill (°C)        | up to 6                 |         |
| Type of X-element                        | B                       |         |

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS): Maximum Allowable Pressure (barg) PMA: 40  
Maximum Allowable Temperature (°C) TMA: 400  
1 bar = 0.1 MPa



To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

| No.             | Description             | Material*   | DIN               | ASTM/AISI           |
|-----------------|-------------------------|---|-------------------|---------------------|
| ①               | Body                    | Cast Steel SCPH2                                  | 1.0619            | A216 Gr. WCB        |
| ②               | Cover                   | Carbon Steel A105                                 | 1.0460            | A105                |
| ③ <sup>F</sup>  | Float                   | Stainless Steel SUS316L                           | 1.4404            | AISI316L            |
| ④ <sup>R</sup>  | Orifice                 | Stainless Steel SUS420F                           | 1.4028            | AISI420F            |
| ⑤ <sup>MR</sup> | Orifice Gasket          | Soft Iron SUYP                                    | 1.1121            | AISI1010            |
| ⑥               | Orifice Plug            | Cast Stainless Steel SCS13A                       | 1.4308            | A351 Gr. CF8        |
| ⑦ <sup>MR</sup> | Orifice Plug Gasket     | Soft Iron SUYP                                    | 1.1121            | AISI1010            |
| ⑧               | Screen Holder           | Stainless Steel SUS304                            | 1.4301            | AISI304             |
| ⑨ <sup>R</sup>  | Screen (outside/inside) | Stainless Steel SUS304/<br>Stainless Steel SUS430 | 1.4301/<br>1.4016 | AISI304/<br>AISI430 |
| ⑩               | Socket (20, 25)         | Carbon Steel S25C                                 | 1.1158            | S25C                |
|                 | Socket (40)/Flange**    | Carbon Steel A105                                 | 1.4016            | A105                |
|                 | Flange**                | Cast Steel SCPH2                                  | 1.0619            | A216 Gr. WCB        |
| ⑪               | Cover Bolt              | Alloy Steel SNB7                                  | 1.7225            | A193 Gr.B7          |
| ⑫               | Cover Nut               | Carbon Steel S45C                                 | 1.0503            | AISI1045            |
| ⑬ <sup>MR</sup> | Cover Gasket            | Stainless Steel/Graphite SUS316L                  | 1.4404            | AISI316L            |
| ⑭               | Connector               | Stainless Steel SUS416                            | 1.4005            | AISI416             |
| ⑮ <sup>MR</sup> | Connector Gasket        | Stainless Steel/Graphite SUS316L                  | 1.4404            | AISI316L            |
| ⑯ <sup>R</sup>  | X-element Guide         | Stainless Steel SUS304                            | 1.4301            | AISI304             |
| ⑰ <sup>R</sup>  | X-element               | Stainless Steel                                   | —                 | —                   |
| ⑱ <sup>R</sup>  | Spring Clip             | Stainless Steel SUS304                            | 1.4301            | AISI304             |
| ⑲ <sup>R</sup>  | Air Vent Valve Seat     | Stainless Steel SUS420F                           | 1.4028            | AISI420F            |
| ⑳               | Nameplate               | Stainless Steel SUS304                            | 1.4301            | AISI304             |
| ㉑ <sup>MR</sup> | Drain Plug Gasket       | Soft Iron SUYP                                    | 1.1121            | AISI1010            |
| ㉒               | Drain Plug              | Carbon Steel S25C                                 | 1.1158            | AISI1025            |

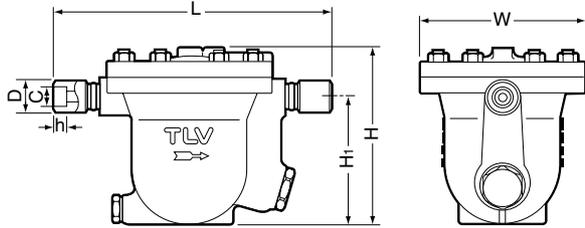


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\* Equivalent materials \*\* Material depends on flange specifications  
Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float

**Dimensions**

● **JHW7X** Socket Welded

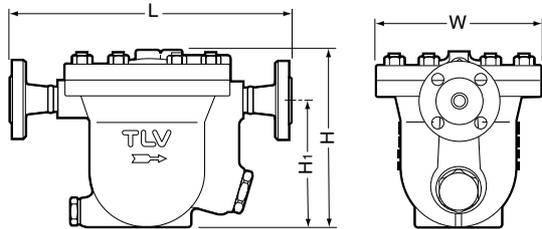


**JHW7X** Socket Welded\* (mm)

| Size | L   | H   | H <sub>1</sub> | φW  | φD | φC    | h  | Weight(kg) |
|------|-----|-----|----------------|-----|----|-------|----|------------|
| 20   | 350 | 227 | 161            | 206 | 40 | 27.05 | 14 | 21         |
| 25   |     |     |                |     | 49 | 33.80 |    |            |
| 40   | 336 |     |                |     | 66 | 48.65 |    | 23         |

\* ASME B12.11, other standards available

● **JH7X** Flanged

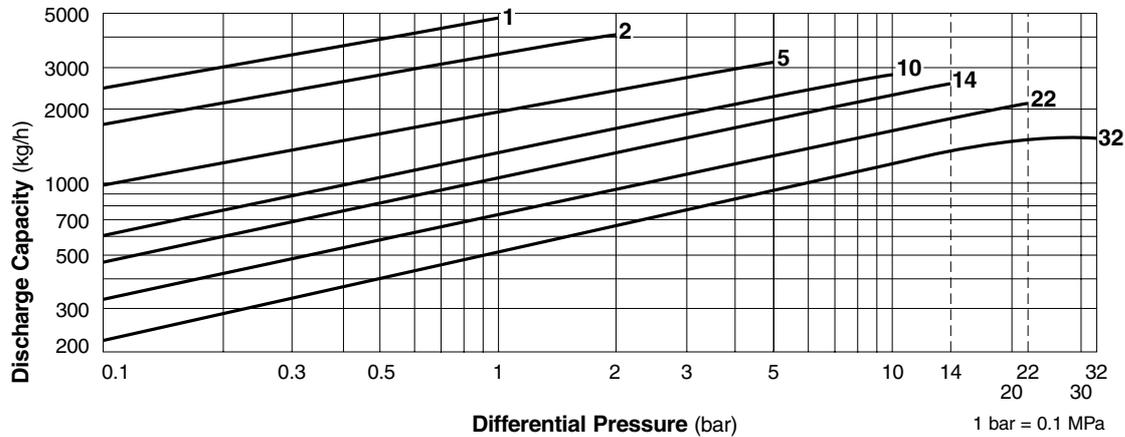


**JH7X** Flanged\* (mm)

| Size | L                   |            |       |       | H   | H <sub>1</sub> | φW  | Weight* (kg) |
|------|---------------------|------------|-------|-------|-----|----------------|-----|--------------|
|      | DIN 2501<br>PN25/40 | ASME Class |       |       |     |                |     |              |
|      |                     | 150RF      | 300RF | 600RF |     |                |     |              |
| 20   | 350                 | 350        | 350   | 350   | 227 | 161            | 206 | 23           |
| 25   |                     |            |       |       |     |                |     | 24           |
| 40   | 380                 | 380        | 380   | 380   |     |                |     | 27           |

Other standards available, but length and weight may vary  
\* Weight is for DIN PN 25/40

**Discharge Capacity**



1. Line numbers within the graph refer to orifice numbers.
2. Differential pressure is the difference between the inlet and outlet pressure of the trap.
3. Capacities are based on continuous discharge of condensate 6 °C below saturated steam temperature.
4. Recommended safety factor: at least 1.5.

**CAUTION** DO NOT use traps under conditions that exceed maximum differential pressure, as condensate backup will occur!

Manufacturer

ISO 9001/ISO 14001

**TLV**® CO., LTD.  
Kakogawa, Japan

is approved by LRQA Ltd. to ISO 9001/14001

