



# FREE FLOAT STEAM TRAP

## MODEL J7X

### FREE FLOAT STEAM TRAP WITH THERMOSTATIC AIR VENTING

#### Features

A reliable and durable free float steam 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 valve 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 area ensures trouble-free operation.



#### Specifications

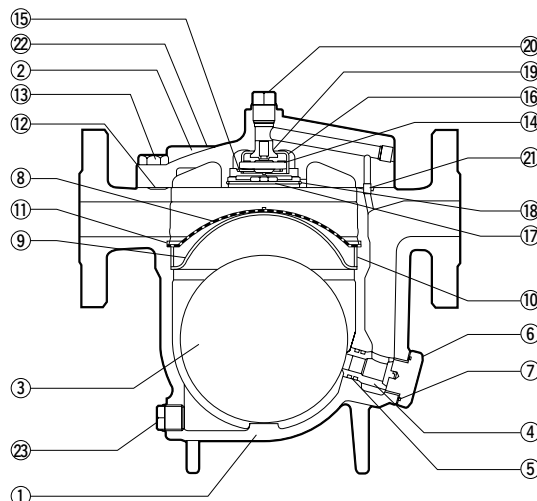
| Model                                    | JS7X                      | J7X                |
|--|---------------------------|--------------------|
| Connection                               | Screwed                   | Flanged            |
| Size (mm)                                | 25, 40                    | 20, 25, 32, 40, 50 |
| Orifice No.                              | 2.5, 5, 10, 14, 16        |                    |
| Maximum Operating Pressure (MPaG) PMO    | 0.25, 0.5, 1.0, 1.4, 1.57 |                    |
| Maximum Differential Pressure (MPa) ΔPMX | 0.25, 0.5, 1.0, 1.4, 1.57 |                    |
| Maximum Operating Pressure (MPaG)        | 0.01                      |                    |
| Maximum Operating Temperature (°C) TMO   | 220                       |                    |
| Subcooling of X-element Fill (°C)        | up to 6                   |                    |
| Type of X-element                        | B                         |                    |

PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS): Maximum Allowable Pressure (MPaG) PMA: 1.57 1MPa = 10.197kg/cm<sup>2</sup>  
 Maximum Allowable Temperature (°C) TMA: 220



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.

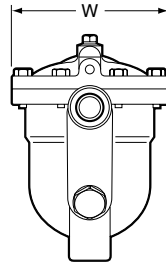
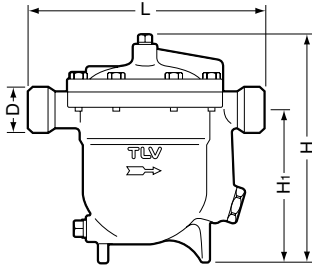
| No.             | Description            | Material         | JIS     | ASTM/AISI*   |
|-----------------|------------------------|------------------|---------|--------------|
| ①               | Body                   | Cast Iron        | FCV410  | A842 Gr. 400 |
| ②               | Cover                  | Cast Iron        | FCV410  | A842 Gr. 400 |
| ③ <sup>F</sup>  | Float                  | Stainless Steel  | SUS316L | AISI316L     |
| ④ <sup>R</sup>  | Orifice                | Stainless Steel  | SUS420F | AISI420F     |
| ⑤ <sup>MR</sup> | Orifice O-Ring         | Synthetic Rubber | EPR     | D2000 CA     |
| ⑥               | Orifice Holder Plug    | Carbon Steel     | S25C    | AISI1025     |
| ⑦ <sup>MR</sup> | Orifice Plug Gasket    | Fluorine Resin   | PTFE    | —            |
| ⑧ <sup>R</sup>  | Screen                 | Stainless Steel  | SUS430  | AISI430      |
| ⑨               | Screen Holder          | Stainless Steel  | SUS304  | AISI304      |
| ⑩               | Screen Holder Retainer | Stainless Steel  | SUS304  | AISI304      |
| ⑪               | Snap Ring              | Stainless Steel  | SUS304  | AISI304      |
| ⑫ <sup>MR</sup> | Cover Gasket           | Fluorine Resin   | PTFE    | —            |
| ⑬               | Cover Bolt             | Carbon Steel     | S45C    | AISI1045     |
| ⑭ <sup>R</sup>  | X-element              | Stainless Steel  | —       | —            |
| ⑮ <sup>R</sup>  | Spring Clip            | Stainless Steel  | SUS304  | AISI304      |
| ⑯ <sup>R</sup>  | X-element Guide        | Stainless Steel  | SUS304  | AISI304      |
| ⑰ <sup>R</sup>  | X-element Cover        | Stainless Steel  | SUS304  | AISI304      |
| ⑱ <sup>R</sup>  | Snap Ring              | Stainless Steel  | SUS304  | AISI304      |
| ⑲ <sup>R</sup>  | Air Vent Valve Seat    | Stainless Steel  | SUS420F | AISI420F     |
| ⑳               | Plug                   | Carbon Steel     | SS400   | A6           |
| ㉑               | Connector              | Stainless Steel  | SUS416  | AISI416      |
| ㉒               | Nameplate              | Stainless Steel  | SUS304  | AISI304      |
| ㉓               | Drain Plug             | Carbon Steel     | SS400   | A6           |



\* Equivalent  
 Replacement Kits available: (M) maintenance parts, (R) repair parts, (F) float

**Dimensions**

● **JS7X**  
Screwed

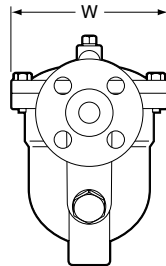
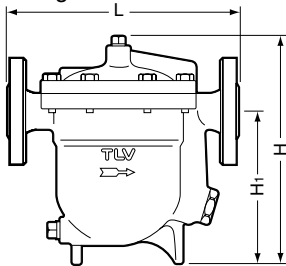


**JS7X** Screwed\* (mm)

| Size | L   | H   | H <sub>1</sub> | φW  | D  | Weight (kg) |
|------|-----|-----|----------------|-----|----|-------------|
| 25   | 280 | 276 | 182            | 185 | 50 | 13          |
| 40   |     | 291 | 190            |     | 70 | 14          |

\* Rc(PT), other standards available

● **J7X**  
Flanged

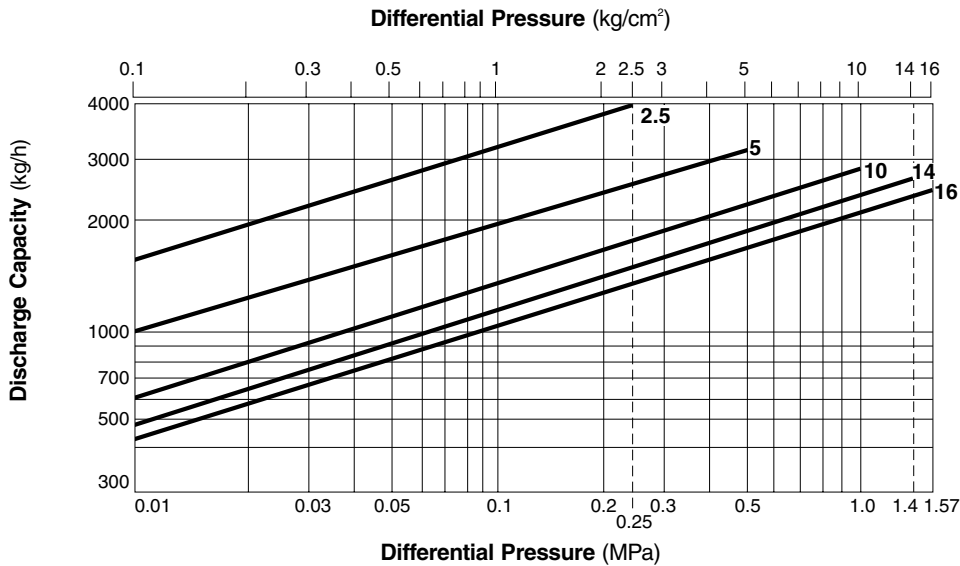


**J7X** Flanged\* (mm)

| Size | L (ASME Class) |       | H   | H <sub>1</sub> | φW  | Weight (approx. kg) |
|------|----------------|-------|-----|----------------|-----|---------------------|
|      | 150RF          | 300RF |     |                |     |                     |
| 20   | 270            | 270   | 272 | 180            | 185 | 14                  |
| 25   |                | 274   | 276 | 182            |     | 15                  |
| 32   |                | 270   | 286 | 187            |     | 16                  |
| 40   | 280            | 284   | 291 | 190            | 18  | 18                  |
| 50   | 290            | 296   | 301 | 195            |     |                     |

\* Fits to ASME Class 150RF or 300RF  
Other standards available, length and weight may vary

**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.



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

