

# FREE FLOATS STEAM TRAP

MODEL JH7.2R-X/JH7.2R-B CAST STEEL

#### FREE FLOAT STEAM TRAP WITH THERMOSTATIC AIR VENTING

## **Features**

A reliable and durable cast steel steam trap for use on medium-size process equipment. JH7.2R-B is also suitable for high-pressure process equipment.

- Self-modulating free float provides continuous, smooth, low-velocity condensate discharge as process loads vary
- 2. Constant water seal design ensures a steam-tight seal, even under low-load conditions.
- 3. **JH7.2R-X:** Thermostatic capsule (X-element) with "fail open" feature vents air automatically at close-to-steam temperature.
- 4. **JH7.2R-B:** Thermostatic bimetal air vent valve vents air automatically for rapid startup.
- 5. Built-in screen with large surface area ensures extended trouble-free operation.
- Easy, inline access to internal parts simplifies cleaning and reduces maintenance costs.



## **Specifications**

| Model                                    | JH7.2                | 2R-X           | JH7.2R-B                                       |               |  |
|--|----------------------|----------------|--|---------------|--|
| Connection                               | Socket Welded        | Flanged        | Socket Welded                                  | Flanged       |  |
| Size                                     | DN 4                 | 0, 50          | DN 40, 50                                      |               |  |
| Orifice No.                              | 2, 5, 10, 14, 22, 32 |                | 2, 5, 10, 14, 22, 32, 40, 46                   |               |  |
| Maximum Operating Pressure (barg) PMO    | 2, 5, 10, 1          | 14, 22, 32     | 2, 5, 10, 14, 22, 32, 40, 46                   |               |  |
| Maximum Differential Pressure (bar) ΔPMX | 2, 5, 10, 1          | 14, 22, 32     | 2, 5, 10, 14, 2                                | 2, 32, 40, 46 |  |
| Maximum Operating Temperature (°C) TMO   | 24                   | 10             | 400*/425                                       |               |  |
| Type of Air Vent                         | X-element (6 °       | °C subcooling) | ling) Bimetal (vents air up to approx. 100 °C) |               |  |

PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS):

Maximum Allowable Pressure (barg) PMA: 46

Maximum Allowable Temperature (°C) TMA: 400\*/425

\* With PN flange

**ACAUTION** 

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 A216 Gr.WCB           | 1.0619        | _           |
| 2               | Cover                   | Carbon Steel A105                | 1.0460        | _           |
| 3F              | Float                   | Stainless Steel SUS316L          | 1.4404        | AISI316L    |
| <b>4</b> P      | Orifice                 |                                  | _             | _           |
| 5 <sub>MR</sub> | Orifice Gasket          | Soft Iron SUYP                   | 1.1121        | AISI1010    |
| 6               | Orifice Plug            | Cast Stainless Steel A351 Gr.CF8 | 1.4312        | _           |
| 7 <sub>MR</sub> | Orifice Plug Gasket     | Soft Iron SUYP                   | 1.1121        | AISI1010    |
| 8R              | Screen inside/outside** | Stainless Steel SUS430/304       | 1.4016/1.4301 | AISI430/304 |
| 9               | Screen Holder           | Stainless Steel SUS304           | 1.4301        | AISI304     |
|                 | Cover Gasket            | Graphite/Stainless Steel SUS316L | -/1.4404      | -/AISI316L  |
| 11)             | Cover Bolt              | Alloy Steel SNB16                | 1.7711        | A193 Gr.B16 |
| 12              | Cover Nut               | Carbon Steel S45C                | 1.0503        | AISI1045    |
| 13R             | X-element               | Stainless Steel                  | _             | _           |
| (14)R           | Spring Clip             | Stainless Steel SUS304           | 1.4301        | AISI304     |
| (15)R           | X-element Guide         | Stainless Steel SUS304           | 1.4301        | AISI304     |
| 16 <sup>R</sup> | Air Vent Valve Seat     | Stainless Steel SUS420F          | 1.4028        | AISI420F    |
| 17)R            | Snap Ring               | Stainless Steel SUS304           | 1.4301        | AISI304     |
| 18 <sup>R</sup> | Air Vent Case           | Cast Stainless Steel A351 Gr.CF8 | 1.4312        | _           |
| 19R             | Bimetal Plate           | Bimetal                          | _             | _           |
| 20R             | Air Vent Screen         | Stainless Steel SUS304           | 1.4301        | AISI304     |
| 21)R            | Air Vent Valve Seat     |                                  | _             | _           |
| 22R             | Air Vent Valve Plug     |                                  | _             | _           |
| 23R             | Snap Ring               | Stainless Steel SUS304           | 1.4301        | AISI304     |
| (24)            | Connector               | Stainless Steel SUS416           | 1.4005        | AISI416     |
| 25              | Nameplate               | Stainless Steel SUS304           | 1.4301        | AISI304     |
| 26              | Socket***/Flange        | Carbon Steel A105                | 1.0460        | _           |
| 27MR            | Drain Plug Gasket       | Soft Iron SUYP                   | 1.1121        | AISI1010    |
| 28              | Drain Plug              | Carbon Steel S25C                | 1.1158        | AISI1025    |

<sup>(19)</sup> 22 (18)(16 (17)14 2 JH7.2R-B (11) (15) (10) 9 3 28 6 27) (4) 1 JH7.2R-X

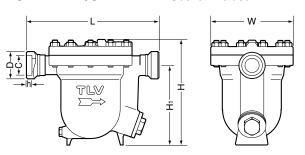
1 bar = 0 1 MPa

<sup>\*</sup> Equivalent materials \*\* JH7.2R-B: inside only \*\*\* Shown on Reverse Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float

# **Consulting & Engineering Service**

## **Dimensions**

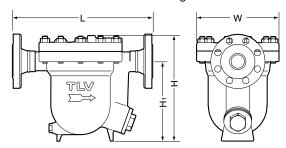
#### ● JH7.2R-X/JH7.2R-B Socket Welded



| JH7.2R-X/JH7.2R-B |     |     |     | Soci | ket W | elded | <b>d*</b> (mm) |             |    |
|-------------------|-----|-----|-----|------|-------|-------|----------------|-------------|----|
| DN                | L   | Н   | H1  | φW   | ΦD    | ФС    | h              | Weight (kg) |    |
| 40                | 401 |     | 320 | 244  | 250   | 64    | 48.8           | 13          | 35 |
| 50                |     | 320 | 244 |      | 77.5  | 61.2  | 16             | 38          |    |

<sup>\*</sup> ASME B16.11-2005, other standards available

#### ● JH7.2R-X/JH7.2R-B Flanged

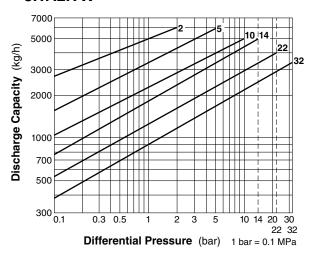


| JH7.2R-X/JH7.2R-B Flanged (mm) |          |         |       |       |       |     |     |     |                 |
|--------------------------------|----------|---------|-------|-------|-------|-----|-----|-----|-----------------|
|                                |          | L       |       |       |       | Н   | H₁  | ΦW  | Weight*<br>(kg) |
| DN                             | DIN 2501 | AS      |       |       |       |     |     |     |                 |
|                                |          | PN25/40 | 150RF | 300RF | 600RF |     |     |     | (1.9)           |
|                                | 40       | 407     | 406   | 413   | 429   | 320 | 244 | 250 | 35              |
|                                | 50       | 411     | 410   | 416   | 435   |     | 244 | 230 | 40              |

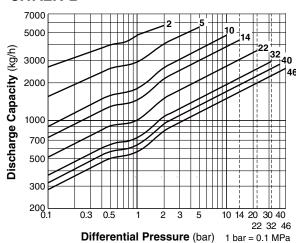
Other standards available, but length and weight may vary

# **Discharge Capacity**

## ● JH7.2R-X



#### JH7.2R-B



- 1. Line numbers within the graph are 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

Kakogawa, Japan is approved by LRQA Ltd. to ISO 9001/14001







<sup>\*</sup> Weight is for DIN PN 25/40