



# FREE FLOAT STEAM TRAP

## MODEL JH3B

### FREE FLOAT STEAM TRAP WITH THERMOSTATIC AIR VENTING

#### Features

**Inline repairable trap for drainage of high pressure heat exchangers and process heaters.**

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 no-load conditions.
3. Only one moving part, the free float, eliminates concentrated wear and provides long maintenance-free service life.
4. Thermostatic bimetal air vent valve vents air automatically for rapid start-up.
5. Easy, inline access to internal parts simplifies cleaning and reduces maintenance costs.
6. Built-in screen with large surface ensures trouble free operation.



#### Specifications

| Model                                    | JH3B                         |               |            |
|--|------------------------------|---------------|------------|
| Connection                               | Screwed                      | Socket Welded | Flanged    |
| Size (mm)                                | 15, 20, 25                   | 15, 20, 25    | 15, 20, 25 |
| Orifice No.                              | 2, 5, 10, 14, 22, 32         |               |            |
| Maximum Operating Pressure (MPaG) PMO    | 0.2, 0.5, 1.0, 1.4, 2.2, 3.2 |               |            |
| Maximum Differential Pressure (MPa) ΔPMX | 0.2, 0.5, 1.0, 1.4, 2.2, 3.2 |               |            |
| Minimum Operating Pressure (MPaG)        | 0.01                         |               |            |
| Maximum Operating Temperature (°C) TMO   | 350                          |               |            |

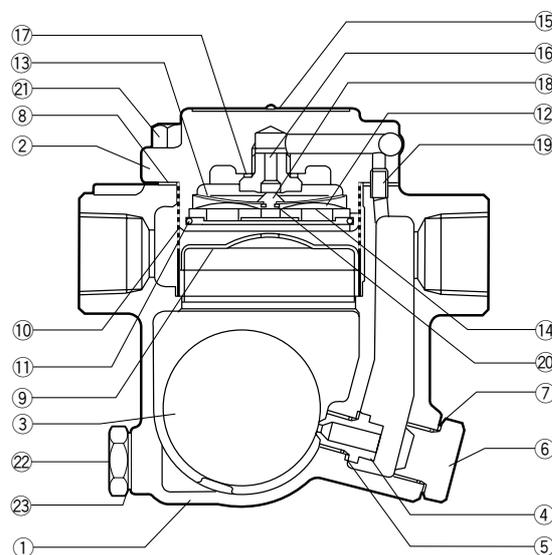
1 MPa = 10.197 kg/cm<sup>2</sup>

PRESSURE SHELL DESIGN CONDITIONS (**NOT OPERATING CONDITIONS**): Maximum Allowable Pressure (MPaG) PMA: 3.2  
Maximum Allowable Temperature (°C) TMA: 350



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 Steel               | –       | A216 Gr. WCB      |
| ②               | Cover               | Cast Stainless Steel     | SCS13A  | A351 Gr. CF-8     |
| ③ <sup>F</sup>  | Float               | Stainless Steel          | SUS316L | AISI316L          |
| ④ <sup>R</sup>  | Orifice             | Stainless Steel          | SUS420F | AISI420F          |
| ⑤ <sup>MR</sup> | Orifice Gasket      | Soft Iron                | SUYP    | AISI1010          |
| ⑥               | Orifice Plug        | Stainless Steel          | SUS303  | AISI303           |
| ⑦ <sup>MR</sup> | Plug Gasket         | Soft Iron                | SUYP    | AISI1010          |
| ⑧ <sup>MR</sup> | Cover Gasket        | Stainless Steel/Graphite | SUS316L | AISI316L          |
| ⑨ <sup>R</sup>  | Float Cover         | Stainless Steel          | SUS304  | AISI304           |
| ⑩ <sup>R</sup>  | Screen              | Stainless Steel          | SUS430  | AISI430           |
| ⑪ <sup>R</sup>  | Snap Ring           | Stainless Steel          | SUS304  | AISI304           |
| ⑫ <sup>R</sup>  | Wave Spring         | Stainless Steel          | SUS304  | AISI304           |
| ⑬ <sup>R</sup>  | Air Vent            | Bimetal                  | –       | –                 |
| ⑭ <sup>R</sup>  | Air Vent Cover      | Stainless Steel          | SUS304  | AISI304           |
| ⑮ <sup>R</sup>  | Air Vent Valve Seat | Stainless Steel          | SUS303  | AISI303           |
| ⑯ <sup>R</sup>  | Valve Seat Gasket   | Soft Iron                | SUYP    | AISI1010          |
| ⑰ <sup>R</sup>  | Air Vent Valve      | Stainless Steel          | SUS416  | AISI416           |
| ⑱               | Connector           | Stainless Steel          | SUS416  | AISI416           |
| ⑲ <sup>R</sup>  | Snap Ring           | Stainless Steel          | SUS304  | AISI304           |
| ⑳               | Cover Bolt          | Carbon Steel             | S45C    | AISI1045          |
| ㉑               | Flange (not shown)  | Carbon/Cast Steel**      | –       | A105/A216 Gr. WCB |
| ㉒               | Drain Plug          | Carbon Steel             | S25C    | AISI1025          |
| ㉓ <sup>MR</sup> | Drain Plug Gasket   | Soft Iron                | SUYP    | AISI1010          |



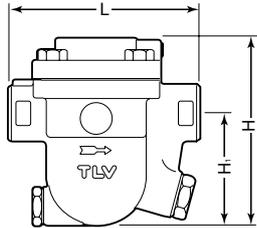
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\* Equivalent \*\* Material depends on flange specifications

Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float

**Dimensions**

● **JH3B**  
Screwed

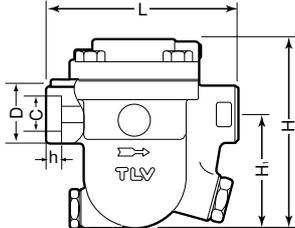


**JH3B** Screwed\* (mm)

| Size | L   | H   | H <sub>1</sub> | Weight (kg) |
|------|-----|-----|----------------|-------------|
| 15   | 130 | 128 | 82             | 3.0         |
| 20   |     |     |                |             |
| 25   | 133 | 142 | 91             | 3.1         |

\* RC(PT), other standards available

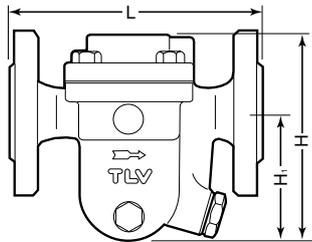
● **JH3B**  
Socket Welded



**JH3B** Socket Welded (mm)

| Size | L   | H   | H <sub>1</sub> | φC   | φD | h  | Weight (kg) |
|------|-----|-----|----------------|------|----|----|-------------|
| 15   | 130 | 128 | 82             | 22.2 | 36 | 12 | 3.0         |
| 20   |     |     |                | 27.7 |    | 14 |             |
| 25   | 133 | 142 | 91             | 34.5 | 44 |    | 3.1         |

● **JH3B**  
Flanged

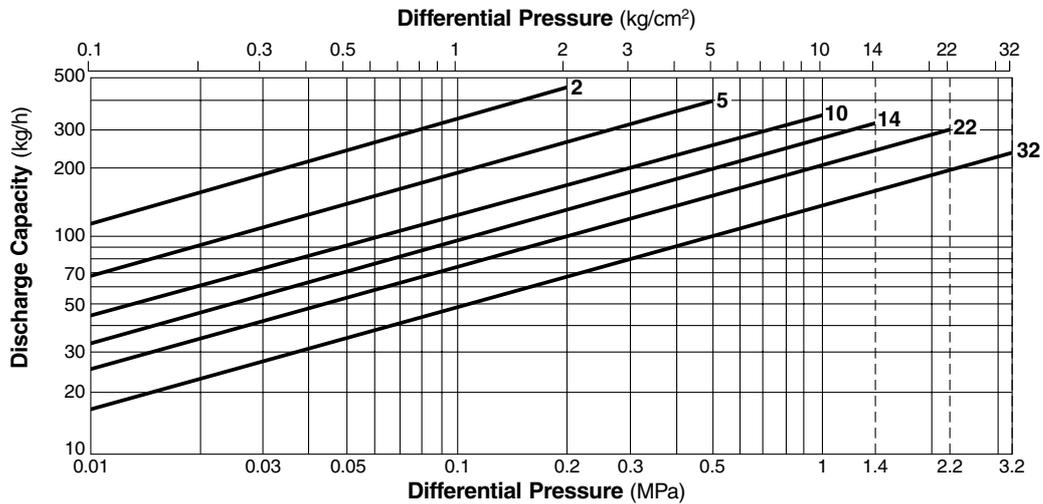


**JH3B** Flanged\* (mm)

| Size | L (ASME Class) |       |       | H   | H <sub>1</sub> | Weight (approx. kg) |
|------|----------------|-------|-------|-----|----------------|---------------------|
|      | 150RF          | 300RF | 600RF |     |                |                     |
| 15   | 210            | 210   | 210   | 142 | 91             | 4.5                 |
| 20   |                |       |       |     |                | 5.4                 |
| 25   |                |       |       |     |                | 6.0                 |

\* Other standards available, but 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.

**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

