



FREE FLOAT STEAM TRAP

MODEL JH3S-X/JH3S-B

FREE FLOAT STEAM TRAP WITH THERMOSTATIC AIR VENTING

Features

A reliable and durable stainless steel steam trap for use on small-size process equipment. JH3S-B are also suitable for both superheated and high-pressure process equipment.

1. Self-modulating free float provides continuous, smooth, low-velocity condensate discharge as process loads vary.
2. Precision-ground float, constant water seal and three-point seating design ensure a steam-tight seal, even under no-load conditions.
3. Only one moving part, the free float, eliminates concentrated valve wear and provides long maintenance-free service life.
4. **JH3S-X**: Thermostatic capsule (X-element) with "fail open" feature vents air automatically at close-to-steam temperature.
5. **JH3S-B**: Thermostatic bimetal air vent valve vents air automatically for rapid startup.
6. Built-in screen with large surface area ensures extended trouble-free operation.
7. Easy, inline access to internal parts simplifies cleaning and reduces maintenance costs.



Specifications

| Model | JH3S-X | | | JH3S-B | | |
|--|------------------------------|---------------|---------|--|---------------|---------|
| | Screwed | Socket Welded | Flanged | Screwed | Socket Welded | Flanged |
| Size (mm) | 15, 20, 25 | | | 15, 20, 25 | | |
| Orifice No. | 2, 5, 10, 14, 22, 32 | | | 2, 5, 10, 14, 22, 32 | | |
| Maximum Operating Pressure (MPaG) PMO | 0.2, 0.5, 1.0, 1.4, 2.2, 3.2 | | | 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 | | | 0.2, 0.5, 1.0, 1.4, 2.2, 3.2 | | |
| Minimum Operating Pressure (MPaG) | 0.01 | | | 0.01 | | |
| Maximum Operating Temperature (°C) TMO | 240 | | | 350 | | |
| Type of Air Vent | X-element (6 °C subcooling) | | | Bimetal (vents air up to approx. 100 °C) | | |

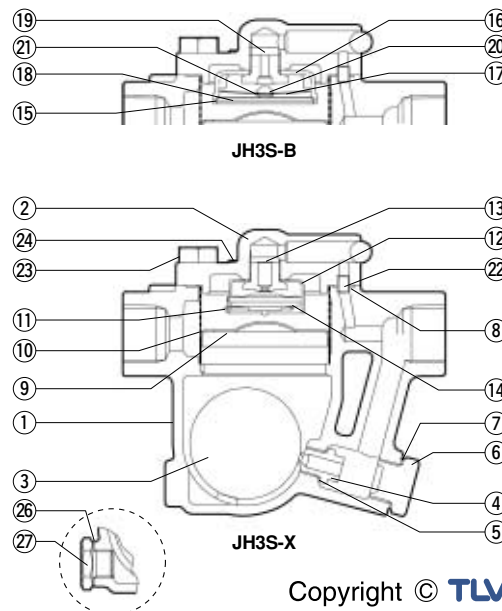
PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS): Maximum Allowable Pressure (MPaG) PMA: 3.2 1 MPa = 10.197 kg/cm²
Maximum Allowable Temperature (°C) TMA: 350



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⁾ |
|-----------------|--|--------------------------|------------|-------------------------|
| ① | Body | Cast Stainless Steel | — | A351 Gr.CF8 |
| ② | Cover | Cast Stainless Steel | — | A351 Gr.CF8 |
| ③ ^F | Float | Stainless Steel | SUS316L | AISI316L |
| ④ ^R | Orifice | — | — | — |
| ⑤ ^{MR} | Orifice Gasket | Stainless Steel | SUS316L | AISI316L |
| ⑥ | Orifice Plug | Stainless Steel | — | A351 Gr.CF8 |
| ⑦ ^{MR} | Orifice Plug Gasket | Stainless Steel | SUS316L | AISI316L |
| ⑧ ^{MR} | Cover Gasket | Graphite/Stainless Steel | —/SUS316L | —/AISI316L |
| ⑨ ^R | Float Cover | Stainless Steel | SUS304 | AISI304 |
| ⑩ ^R | Screen inside/outside ²⁾ | Stainless Steel | SUS430/304 | AISI430/304 |
| ⑪ ^R | Spring Clip | Stainless Steel | SUS304 | AISI304 |
| ⑫ ^R | X-element Guide | Stainless Steel | SUS304 | AISI304 |
| ⑬ ^R | Air Vent Valve Seat | Stainless Steel | SUS420F | AISI420F |
| ⑭ ^R | X-element | Stainless Steel | — | — |
| ⑮ ^R | Snap Ring | Stainless Steel | SUS304 | AISI304 |
| ⑯ ^R | Air Vent Case | Cast Stainless Steel | — | A351 Gr.CF8 |
| ⑰ ^R | Bimetal Plate | Bimetal | — | — |
| ⑱ ^R | Air vent Screen | Stainless Steel | SUS304 | AISI304 |
| ⑲ ^R | Air Vent Valve Seat | Stainless Steel | SUS303 | AISI303 |
| ⑳ ^R | Air Vent Valve Plug | Stainless Steel | SUS416 | AISI416 |
| ㉑ ^R | Snap Ring | Stainless Steel | SUS304 | AISI304 |
| ㉒ | Connector | Stainless Steel | SUS416 | AISI416 |
| ㉓ | Cover Bolt | Stainless Steel | SUS304 | AISI304 |
| ㉔ | Nameplate | Stainless Steel | SUS304 | AISI304 |
| ㉕ | Flange ³⁾ /Socket ³⁾ | Cast Stainless Steel | — | A351 Gr.CF8 |
| ㉖ | Drain Plug Gasket ⁴⁾ | Stainless Steel | SUS316L | AISI316L |
| ㉗ | Drain Plug ⁴⁾ | Stainless Steel | SUS303 | AISI303 |

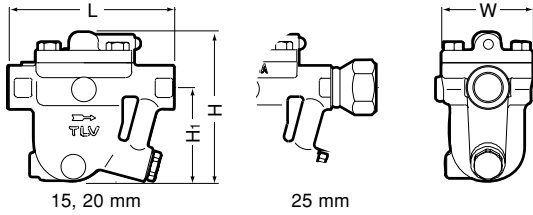
¹⁾ Equivalent ²⁾ JH3S-B: inside only ³⁾ Shown on reverse ⁴⁾ Option
Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float



Copyright © TLV

Dimensions

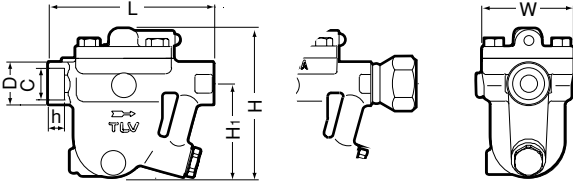
● **JH3S-X/JH3S-B** Screwed



15, 20 mm

25 mm

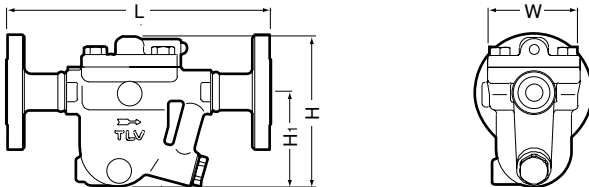
● **JH3S-X/JH3S-B** Socket Welded



15, 20 mm

25 mm

● **JH3S-X/JH3S-B** Flanged



JH3S-X/JH3S-B Screwed* (mm)

| Size | L | H | H ₁ | W | Weight (kg) |
|------|-----|-----|----------------|----|-------------|
| 15 | 145 | 129 | 82 | 80 | 2.7 |
| 20 | | | | | 2.8 |
| 25 | 203 | | | | |

* Rc(PT), other standards available

JH3S-X/JH3S-B Socket Welded (mm)

| Size | L | H | H ₁ | W | φD | φC | h | Weight (kg) |
|------|-----|-----|----------------|----|----|------|----|-------------|
| 15 | 145 | 129 | 82 | 80 | 36 | 22.2 | 12 | 2.7 |
| 20 | | | | | | | 14 | |
| 25 | 203 | | | | 44 | 34.5 | | 2.8 |

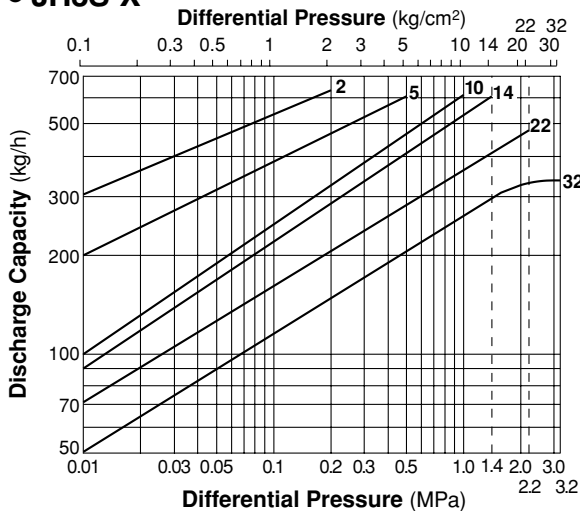
JH3S-X/JH3S-B Flanged (mm)

| Size | L | | | H | H ₁ | W | Weight* (kg) |
|------|------------|-------|-------|-----|----------------|----|--------------|
| | ASME Class | | | | | | |
| | 150RF | 300RF | 600RF | | | | |
| 15 | 210 | 210 | 220 | 129 | 82 | 80 | 4.3 |
| 20 | 230 | 230 | 230 | | | | 5.1 |
| 25 | 250 | 250 | 250 | | | | 5.8 |

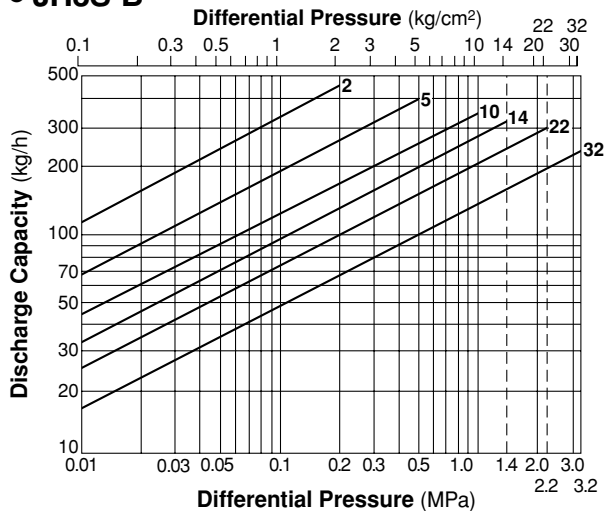
Other standards available, but length and weight may vary
* Weight is for class 600 RF

Discharge Capacity

● **JH3S-X**



● **JH3S-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.

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

