



FREE FLOAT DRAIN TRAP®

MODEL JAH7RA

DRAIN TRAP WITH TIGHT SHUT-OFF FOR AIR AND INERT GASES

Benefits

High pressure, inline repairable free float trap with tight shut-off. Automatically drains condensate from air and inert gas systems.

1. Constant water seal and unique rotational seating design eliminate concentrated wear to ensure long life.
2. Three-point seating provides a tight seal even under low-load conditions.
3. Easy, inline access to internal parts simplifies cleaning and lowers maintenance costs.
4. Built-in screen with large surface area ensures extended trouble-free service.



Specifications

| Model | | JAH7RA-R (Rubber Orifice) | | |
|---|--|---------------------------|--------------------|---------|
| Connection | | Screwed | Socket Weld | Flanged |
| Size (in) | | 1 | 1, 1½ | 1, 1½ |
| Orifice No. | | 10, 22, 40 | | |
| Max. Operating Pressure (psig) PMO** | | 150, 315, 600 | | |
| Max. Differential Pressure (psi) ΔPMX** | | 150, 315, 600 | | |
| Min. Operating Pressure (psig) | | Vacuum | | |
| Max. Operating Temperature (°F) TMO | | 212 | | |
| Max. Allowable Pressure (psig) PMA | | 650 | | |
| Max. Allowable Temperature (°F) TMA | | 800 | | |
| Applicable Fluids* | | Air, Inert Gas | | |

* Do not use for toxic, flammable, or otherwise hazardous gases.
 ** For specific gravities other than 1.00, use table below

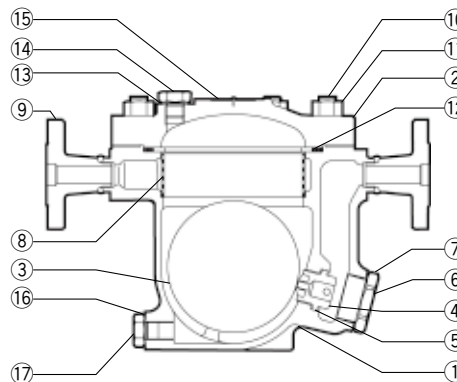
Connections and sizes in bold are standard

| Model | Orifice No. | Specific Gravity | | | | | | | | | | |
|--|-------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 1.00 | 0.99 – 0.95 | 0.94 – 0.90 | 0.89 – 0.85 | 0.84 – 0.80 | 0.79 – 0.75 | 0.74 – 0.70 | 0.69 – 0.65 | 0.64 – 0.60 | 0.59 – 0.55 | 0.54 – 0.50 |
| Maximum Operating Pressure PMO (psig) & Maximum Differential Pressure ΔPMX (psi) | | | | | | | | | | | | |
| JAH7RA-R | 10 | 150 | 150 | 150 | 150 | 150 | 133 | 115 | 96 | 77 | 59 | 40 |
| | 22 | 315 | 315 | 315 | 315 | 315 | 288 | 248 | 208 | 167 | 127 | 87 |
| | 40 | 600 | 600 | 600 | 600 | 600 | 542 | 466 | 391 | 315 | 239 | 163 |



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. DO NOT use with toxic, flammable or otherwise hazardous fluids.

| No. | Description | Material | ASTM/AISI* | JIS |
|-----|---------------------|--------------------------------|------------------|-------------|
| ① | Body | Cast Steel | A216 Gr.WCB | — |
| ② | Cover | Carbon Steel | AISI1025 | S25C |
| ③ | Float | Stainless Steel | AISI316L | SUS316L |
| ④ | Orifice | Nitrile Rubber/Stainless Steel | D2000BF/AISI316L | NBR/SUS316L |
| ⑤ | Orifice Gasket | Soft Iron | AISI1010 | SUYP |
| ⑥ | Orifice Plug | Cast Stainless Steel | A351 Gr.CF8 | — |
| ⑦ | Orifice Plug Gasket | Soft Iron | AISI1010 | SUYP |
| ⑧ | Screen | Stainless Steel | AISI430 | SUS430 |
| ⑨ | Socket** | 1" | Cast Steel | A216 Gr.WCB |
| | | 1½" | Carbon Steel | A105 |
| | Flange | Carbon Steel | A105 | — |
| ⑩ | Cover Bolt | Alloy Steel | A193 Gr.B16 | SNB16 |
| ⑪ | Cover Nut | Carbon Steel | AISI1045 | S45C |
| ⑫ | Cover Gasket | Graphite/Stainless Steel | —/AISI304 | —/SUS304 |
| ⑬ | Plug Gasket | Soft Iron | AISI1010 | SUYP |
| ⑭ | Balancing Line Plug | Carbon Steel | AISI1025 | S25C |
| ⑮ | Nameplate | Stainless Steel | AISI304 | SUS304 |
| ⑯ | Drain Plug Gasket | Soft Iron | AISI1010 | SUYP |
| ⑰ | Drain Plug | Carbon Steel | AISI1025 | S25C |



* Equivalent ** Shown on reverse

Options

1. Body material: stainless steel
2. Balancing port connection: flanged, socket weld, or screwed with other thread standards

Leakage Rating

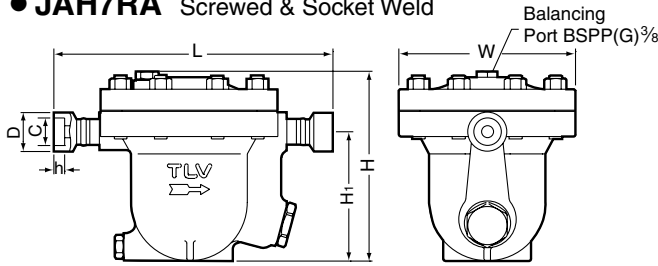
Maximum Seat Leakage

| Model | Orifice | Minimum Δ P (psi) | |
|----------|---------|--------------------------------|--------------------------------------|
| | | 0.1 | 1.5 |
| JAH7RA-R | Rubber | <0.01% of rated valve capacity | <0.15 standard ml/min, <1 bubble/min |

* Standard milliliters based on 60 °F, 14.73 psi abs

Dimensions

JAH7RA Screwed & Socket Weld



JAH7RA Screwed*

| Size | L | H | H ₁ | φ W | Weight(lb) |
|------|--------|--------|----------------|-------|------------|
| 1 | 13 1/8 | 9 5/16 | 6 5/16 | 8 3/4 | 42 |

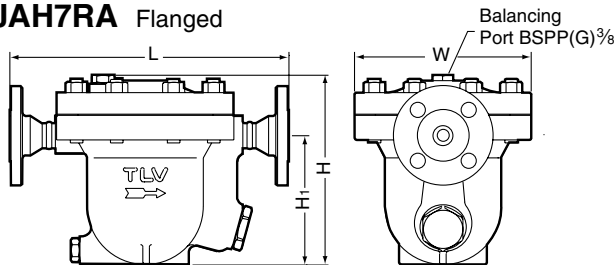
* NPT, other standards available

JAH7RA Socket Weld*

| Size | L | H | H ₁ | φ W | φ D | φ C | h | Weight (lb) |
|-------|--------|--------|----------------|-------|-------|-------|------|-------------|
| 1 | 13 1/8 | 9 5/16 | 6 5/16 | 8 3/4 | 2 1/8 | 1.330 | 9/16 | 42 |
| 1 1/2 | 13 3/4 | 9 5/16 | 6 5/16 | 8 3/4 | 2 3/4 | 1.915 | 9/16 | 46 |

* ASME B16.11-2005, other standards available

JAH7RA Flanged



JAH7RA Flanged

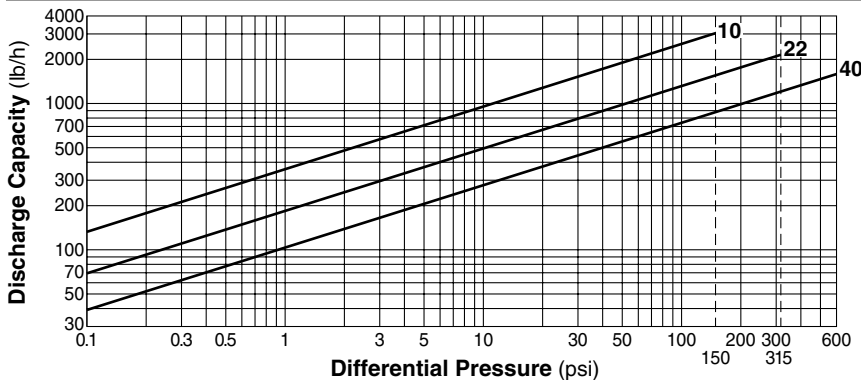
| Size | L | | | H | H ₁ | φ W | Weight* (lb) |
|-------|------------------------|--------|--------|--------|----------------|-------|--------------|
| | Connects to ASME Class | | | | | | |
| | 150RF | 300RF | 600RF | | | | |
| 1 | 15 1/8 | 15 1/8 | 15 1/8 | 9 5/16 | 6 5/16 | 8 3/4 | 55 |
| 1 1/2 | 15 | 15 | 15 | 9 5/16 | 6 5/16 | 8 3/4 | 64 |

Other standards available, but length and weight may vary

* Weight is for Class 600 RF

Note: A pressure-balancing line must be connected to the air/inert gas system from the balancing port at the top of the trap to a place above any possible condensate accumulation in the system.

Discharge Capacity



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. The chart is applicable to condensate below 212 °F.
4. The discharge capacity is for liquids with a specific gravity of 1. See the Discharge Capacity Conversion Factors table for other specific gravities.
5. Recommended safety factor: at least 1.5.

Discharge Capacity Conversion Factors

| | | | | | | | | | | |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Specific Gravity (S.G.) | 0.95 | 0.9 | 0.85 | 0.8 | 0.75 | 0.7 | 0.65 | 0.6 | 0.55 | 0.5 |
| Conversion Factor | 1.03 | 1.06 | 1.08 | 1.12 | 1.16 | 1.19 | 1.24 | 1.29 | 1.35 | 1.41 |

Before using the discharge capacity chart, multiply the required capacity (including safety factor) by the appropriate conversion factor for the specific gravity of the liquid to be discharged.

Choose from the table above or use the following formula: Conversion Factor = $\frac{1}{\sqrt{S.G.}}$



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



DO NOT DISASSEMBLE OR REMOVE THIS PRODUCT WHILE IT IS UNDER PRESSURE. Allow internal pressure of this product to equal atmospheric pressure and its surface to cool to room temperature before disassembling or removing. Failure to do so could cause burns or other injury. READ INSTRUCTION MANUAL CAREFULLY.

TLV CORPORATION

13901 South Lakes Drive, Charlotte, NC 28273-6790
 Tel: 704-597-9070 Fax: 704-583-1610
 E-mail: tlv@tlvengineering.com <https://www.tlv.com>
 For Technical Service 1-800 "TLV TRAP"



Manufacturer
TLV CO., LTD.
 Kakogawa, Japan
 is approved by LRQA Ltd. to ISO 9001/14001

