



# FREE FLOAT<sup>®</sup> AIR TRAP

## MODEL JA7

### FREE FLOAT COMPRESSED AIR TRAP

#### Benefits

**Extremely durable, inline-repairable free float trap with a large capacity for automatic drainage of condensate and oil from compressed-air systems.**

1. Self-modulating free float provides continuous, smooth, low velocity condensate discharge as process loads vary, for maximum performance.
2. Durable valve seat maintains air-tight seal, even under low-load conditions.
3. Unique rotational seating design prevents concentrated wear to provide long maintenance-free service life.
4. External manual plunger unit allows rapid cleaning of the valve seat during operation, in the event of oil or dirt accumulation.
5. Rugged float construction with up to 1500 psig hydraulic shock rating ensures excellent performance of the trap.
6. Easy, inline access to internal parts simplifies cleaning and lowers maintenance costs.
7. Built-in screen with large surface area ensures extended trouble-free service.

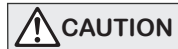


#### Specifications

| Model                                    |  | JA7      |
|--|--|----------|
| Connection                               |  | Flanged  |
| Size (in)                                |  | 1, 1½, 2 |
| Orifice No.                              |  | 16       |
| Maximum Operating Pressure (psig) PMO    |  | 230      |
| Maximum Differential Pressure (psi) ΔPMX |  | 230      |
| Minimum Operating Pressure (psig)        |  | Vacuum   |
| Maximum Operating Temperature (°F) TMO   |  | 212      |
| Maximum Allowable Pressure (psig) PMA    |  | 250      |
| Maximum Allowable Temperature (°F) TMA   |  | 428      |
| Applicable Fluid*                        |  | Air      |

\* Do not use for toxic, flammable or otherwise hazardous fluids.

JA7 is a non-standard product, consult TLV for delivery time required.

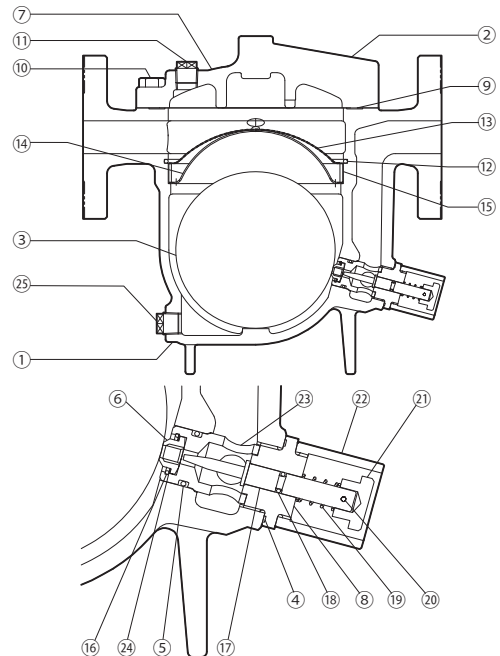


To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

| No.             | Description              | Material        | ASTM/AISI*  | JIS     |
|-----------------|--------------------------|-----------------|-------------|---------|
| ①               | Body                     | Cast Iron       | A842 Gr.400 | FCV400  |
| ②               | Cover                    | Cast Iron       | A842 Gr.400 | FCV400  |
| ③ <sup>F</sup>  | Float                    | Stainless Steel | AISI316L    | SUS316L |
| ④ <sup>MR</sup> | Holder Nut Gasket        | Fluorine Resin  | PTFE        | PTFE    |
| ⑤ <sup>MR</sup> | Valve Seat Holder O-Ring | Nitrile Rubber  | D2000BF     | NBR     |
| ⑥ <sup>R</sup>  | Valve Seat               | Nitrile Rubber  | D2000BF     | NBR     |
| ⑦               | Nameplate                | Stainless Steel | AISI304     | SUS304  |
| ⑧ <sup>R</sup>  | Valve Seat Holder Nut    | Stainless Steel | AISI420F    | SUS420F |
| ⑨ <sup>MR</sup> | Cover Gasket             | Fluorine Resin  | PTFE        | PTFE    |
| ⑩               | Cover Bolt               | Carbon Steel    | AISI1045    | S45C    |
| ⑪               | Balancing Line Plug      | Carbon Steel    | A6          | SS400   |
| ⑫               | Snap Ring                | Stainless Steel | AISI304     | SUS304  |
| ⑬ <sup>R</sup>  | Screen                   | Stainless Steel | AISI430     | SUS430  |
| ⑭               | Screen Holder            | Stainless Steel | AISI304     | SUS304  |
| ⑮               | Screen Holder Retainer   | Stainless Steel | AISI304     | SUS304  |
| ⑯ <sup>R</sup>  | Snap Ring                | Stainless Steel | AISI304     | SUS304  |
| ⑰ <sup>R</sup>  | Needle                   | Stainless Steel | AISI420F    | SUS420F |
| ⑱ <sup>MR</sup> | Needle O-Ring            | Nitrile Rubber  | D2000BF     | NBR     |
| ⑲ <sup>R</sup>  | Coil Spring              | Stainless Steel | AISI304     | SUS304  |
| ⑳ <sup>R</sup>  | Split Pin                | Stainless Steel | AISI403     | SUS304  |
| ㉑ <sup>R</sup>  | Plunger                  | Stainless Steel | AISI420F    | SUS420F |
| ㉒ <sup>R</sup>  | Guard Bushing            | Synthetic Resin | —           | —       |
| ㉓ <sup>R</sup>  | Valve Seat Holder        | Stainless Steel | AISI420F    | SUS420F |
| ㉔ <sup>R</sup>  | Washer                   | Stainless Steel | AISI304     | SUS304  |
| ㉕               | Drain Plug               | Carbon Steel    | A6          | SS400   |

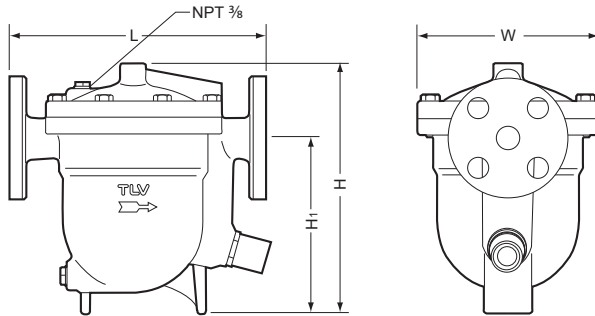
\* Equivalent

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



**Dimensions**

• **JA7** Flanged



**JA7** Flanged (in)

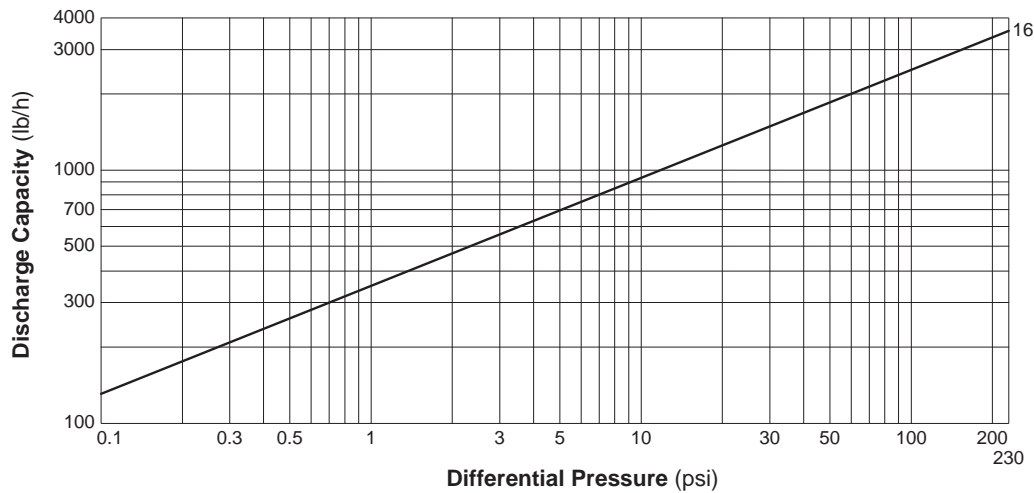
| Size  | L                            |        | H        | H <sub>1</sub> | W      | Weight* (lb) |
|-------|------------------------------|--------|----------|----------------|--------|--------------|
|       | Connects to ASME Class 125FF | 250RF  |          |                |        |              |
| 1     | 10 3/16                      | 10 5/8 | 10 1/4   | 7 5/16         | 7 5/16 | 34           |
| 1 1/2 | 10 5/8                       | 11 1/8 | 10 13/16 | 7 1/2          |        | 39           |
| 2     | 11 1/8                       | 11 5/8 | 11 1/4   | 7 11/16        |        | 41           |

Other standards available, but length and weight may vary  
\* Weight is for Class 250 RF.

**NOTE:**

A pressure-balancing line must be connected to the air 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 refer to 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 a liquid with specific gravity of 1.
5. Recommended safety factor: at least 1.5.



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



**CAUTION** 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](mailto: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

