# TLV®

# FREE FLOAT® AIR TRAP

## MODEL JA7

**FREE FLOAT AIR TRAP WITH TIGHT SHUT-OFF FOR AIR SERVICE**

## Features

**Free float air trap for large capacities to automatically drain condensate and oil from compressed air systems.**

1. Self-modulating free float provides continuous, smooth, low velocity condensate discharge as process loads vary.

2. Perfect, air-tight seal, even under low-load conditions.

3. Only one moving part, the free float, prevents concentrated wear and provides long maintenance-free service life.

4. Built-in screen with large surface area ensures extended trouble free service.

5. Manual blow down device allows cleaning of the valve seat from outside during operation.

6. Major internal parts made of stainless steel.

## Specifications

| Model | JA7 |
|---|---|
| Connection | Flanged |
| Size (mm) | 15, 20, 25, 40, 50 |
| Maximum Operating Pressure (MPaG)   PMO | 1.6 |
| Maximum Differential Pressure (MPa)   ΔPMX | 1.6 |
| Minimum Operating Pressure (MPaG) | 0.01 |
| Maximum Operating Temperature (°C)   TMO | 100 |
| Applicable Fluid* | Air |

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

1 MPa = 10.197 kg/cm²

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS): Maximum Allowable Pressure (MPaG) PMA: 1.6
Maximum Allowable Temperature (°C) TMA: 220

⚠ **CAUTION**  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 Iron | FCV400 | A842 Gr.400 |
| ② | Cover | Cast Iron | FCV400 | A842 Gr.400 |
| ③F | Float | Stainless Steel | SUS316L | AISI316L |
| ④MR | Holder Nut Gasket | Fluorine Resin | PTFE | PTFE |
| ⑤MR | Valve Seat Holder O-Ring | Nitrile Rubber | NBR | D2000BF |
| ⑥R | Valve Seat | Nitrile Rubber | NBR | D2000BF |
| ⑦ | Nameplate | Stainless Steel | SUS304 | AISI304 |
| ⑧R | Valve Seat Holder Nut | Stainless Steel | SUS420F | AISI420F |
| ⑨MR | Cover Gasket | Fluorine Resin | PTFE | PTFE |
| ⑩ | Cover Bolt | Carbon Steel | S45C | AISI1045 |
| ⑪ | Balancing Line Plug | Carbon Steel | SS400 | A6 |
| ⑫ | Snap Ring | Stainless Steel | SUS304 | AISI304 |
| ⑬R | Screen | Stainless Steel | SUS430 | AISI430 |
| ⑭ | Screen Holder | Stainless Steel | SUS304 | AISI304 |
| ⑮ | Screen Holder Retainer | Stainless Steel | SUS304 | AISI304 |
| ⑯R | Snap Ring | Stainless Steel | SUS304 | AISI304 |
| ⑰R | Needle | Stainless Steel | SUS420F | AISI420F |
| ⑱MR | Needle O-Ring | Nitrile Rubber | NBR | D2000BF |
| ⑲R | Coil Spring | Stainless Steel | SUS304 | AISI304 |
| ⑳R | Split Pin | Stainless Steel | SUS304 | AISI304 |
| ㉑R | Plunger | Stainless Steel | SUS420F | AISI420F |
| ㉒R | Guard Bushing | Synthetic Resin | — | — |
| ㉓R | Valve Seat Holder | Stainless Steel | SUS420F | AISI420F |
| ㉔R | Washer | Stainless Steel | SUS304 | AISI304 |
| ㉕ | Drain Plug | Carbon Steel | SS400 | A6 |
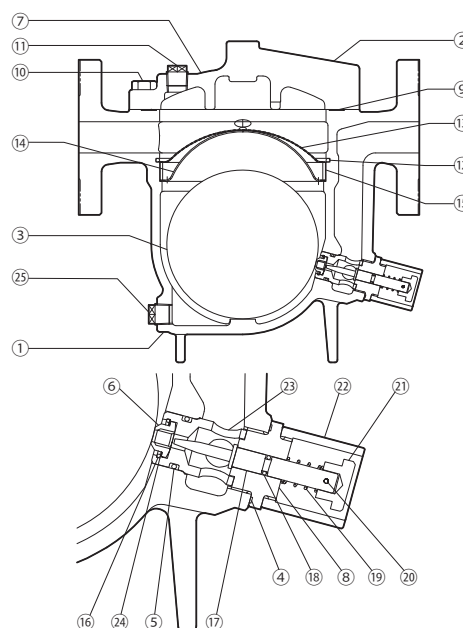
\* Equivalent
Replacement its available: (M) maintenance parts, (R) repair parts, (F) float

Copyright © TLV

## Dimensions

● **JA7** Flanged
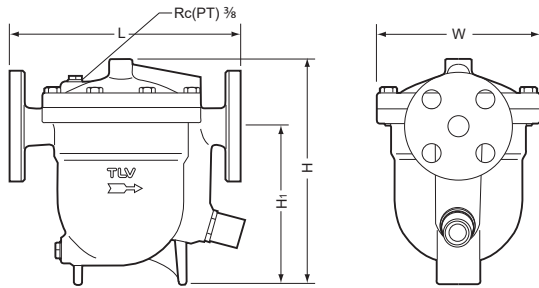


| Size | L | | | | H | H$_1$ | W | Weight* (kg) |
|------|---|---|---|---|---|---|---|---|
| | ASME Class | | | | | | | |
| | 125FF | (150RF) | 250RF | (300RF) | | | | |
| (15) | — | 270 | — | 270 | 255 | 180 | 185 | 12 |
| (20) | — | 270 | — | 270 | 260 | 180 | | 14 |
| 25 | 258 | 270 | 270 | 274 | 260 | 185 | | 15 |
| 40 | 270 | 280 | 282 | 284 | 275 | 190 | | 18 |
| 50 | 282 | 290 | 295 | 296 | 285 | 195 | | |

**JA7** Flanged (mm)

( ) No ASME standard exists for cast iron; machined to fit steel flanges
Class 125 FF can connect to 150 RF, 250 RF can connect to 300 RF
Other standards available, but length and weight may vary
* Weight is for Class 250 RF/300 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
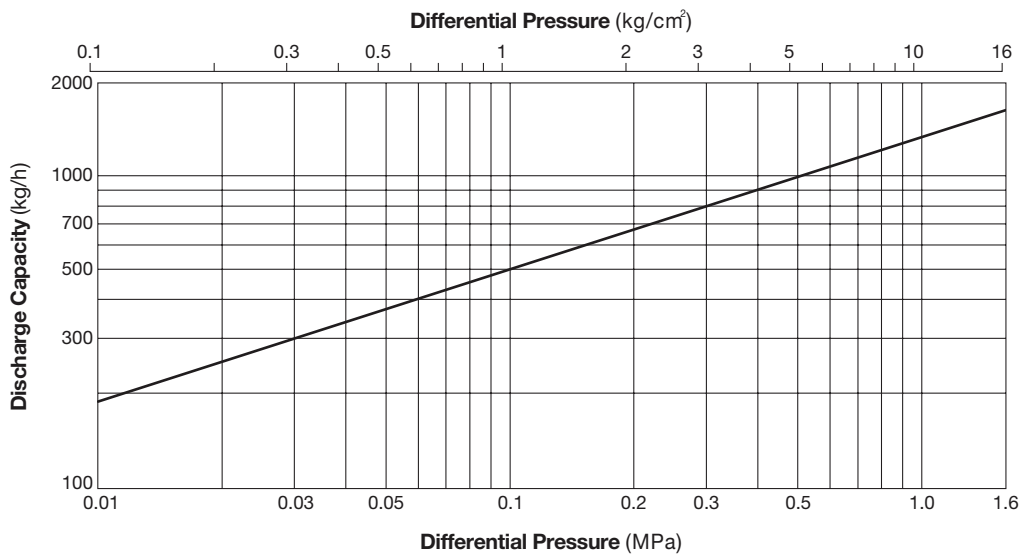


1. Differential pressure is the difference between the inlet and outlet pressure of the trap.
2. The chart is applicable to condensate below 100 °C
3. The discharge capacity is for a liquid with specific gravity of 1.
4. Recommended safety factor: at least 1.5.

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

**Manufacturer**

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

ISO 9001
ISO 14001
CERTIFIED LR
ISO 9001 · ISO 14001

Copyright © TLV

(T)

https://www.tlv.com

SDS M3200-12 Rev. 7/2021
Products for intended use only.
Specifications subject to change without notice.