

# FREE FLOAT® STEAM TRAP

## MODEL SJ6FB DUCTILE CAST IRON

#### FREE FLOAT STEAM TRAP WITH THREE-POINT SEATING AND THERMOSTATIC AIR VENTING

#### **Features**

Reliable and durable steam trap with tight shut-off for use on medium-size process equipment. Models for horizontal or vertical piping installation.

- 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.
- Thermostatic bimetal air vent valve vents air automatically for rapid
- 4. Built-in screen with large surface area ensures extended trouble-free operation.
- Easy, inline access to internal parts simplifies cleaning and reduces maintenance costs.



### **Pressure Equipment Directive (PED)**

| Classification according to PED 2014/68/EU, fluid group 2 |   |   |  |
|---|---|---|--|
| Size Category CE Marking                                  |   | CE Marking                                    |  |
| DN 40, DN 50  | I | With CE marking and Declaration of Conformity |  |

## **Specifications**

| Model                                    | SJ6FNB          | SJ6FVB   |  |
|--|-----------------|----------|--|
| Installation                             | Horizontal      | Vertical |  |
| Connection                               | Flanged         |          |  |
| Size                                     | DN 40, 50       |          |  |
| Orifice No.                              | 2, 5, 9,        | 14, 22   |  |
| Maximum Operating Pressure (barg) PMO    | 2, 5, 9,        | 14, 22   |  |
| Maximum Differential Pressure (bar) ΔPMX | 2, 5, 9, 14, 22 |          |  |
| Maximum Operating Temperature (°C) TMO   | 22              | 20       |  |

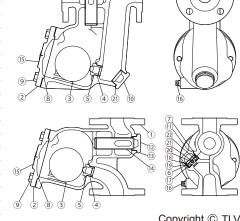
PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS): Maximum Allowable Pressure (barg) PMA: 22 Maximum Allowable Temperature (°C) TMA: 220 Minimum Allowable Temperature (°C): 0

1 bar = 0.1 MPa

To avoid abnormal operation,

| No. | Description                  | Material   | DIN*   | ASTM/AISI*          |
|-----|------------------------------|--|--------|---------------------|
| 1   | Body                         | Ductile Cast Iron GGG40.3/<br>EN 5.3103 (EN-GJS-400-18-LT) | 0.7043 | A395<br>Gr.60-40-18 |
| 2   | Cover                        | Ductile Cast Iron GGG40.3/<br>EN 5.3103 (EN-GJS-400-18-LT) | 0.7043 | A395<br>Gr.60-40-18 |
| 3   | Float                        | Stainless Steel SUS316L                                    | 1.4404 | AISI316L            |
| 4   | Orifice                      | _  | _      |                     |
| (5) | Orifice Gasket               | Fluorine Resin PTFE  | PTFE   | PTFE                |
| 6   | Screen                       | Stainless Steel SUS304                                     | 1.4301 | AISI304             |
| 7   | Element Cover Gasket         | Fluorine Resin PTFE  | PTFE   | PTFE                |
| 8   | Cover Gasket                 | Fluorine Resin PTFE  | PTFE   | PTFE                |
| 9   | Cover Bolt                   | Carbon Steel S45C  | 1.0503 | AISI1045            |
| 10  | Orifice Plug (SJ6FNB)        | Cast Stainless Steel A351/A351M Gr.CF8                     | 1.4312 | _                   |
| 11) | Element Cover                | Cast Stainless Steel A351/A351M Gr.CF8                     | 1.4312 | _                   |
| 12  | Screen Holder                | Cast Stainless Steel A351/A351M Gr.CF8                     | 1.4312 | _                   |
| 13  | Screen Holder Gasket         | Soft Iron SUYP   | 1.1121 | AISI1010            |
| 14) | Main Screen                  | Stainless Steel SUS430                                     | 1.4016 | AISI430             |
| 15) | Nameplate                    | Stainless Steel SUS304                                     | 1.4301 | AISI304             |
| 16  | Plug                         | Carbon Steel SS400   | 1.0037 | A6                  |
| 17  | Element Guide                | Stainless Steel SUS304                                     | 1.4301 | AISI304             |
| 18  | Air Vent Valve Seat          | _  | _      | _                   |
| 19  | Bimetal                      | _  | _      | _                   |
| 20  | Snap Ring                    | Stainless Steel SUS304                                     | 1.4301 | AISI304             |
| 21) | Air Vent Valve               |  | _      |                     |
| 22  | Snap Ring                    | Stainless Steel SUS304                                     | 1.4301 | AISI304             |
| 23  | Orifice Plug Gasket (SJ6FNB) | Soft Iron SUYP   | 1.1121 | AISI1010            |





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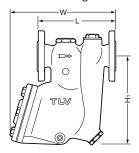
<sup>\*</sup> Equivalent materials Contact TLV for available replacement parts.

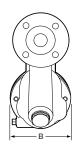


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#### **Dimensions**

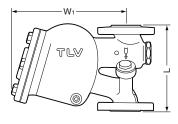
#### SJ6FNB Flanged

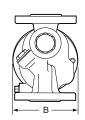




| SJ6 | FNB Flang                | ged |     |     | (mm)           |
|-----|--------------------------|-----|-----|-----|----------------|
| DN  | L<br>DIN 2501<br>PN25/40 | Н,  | W   | В   | Weight<br>(kg) |
| 40  | 230                      | 270 | 315 | 180 | 22             |
| 50  | 230                      | 270 | 315 |     | 24             |

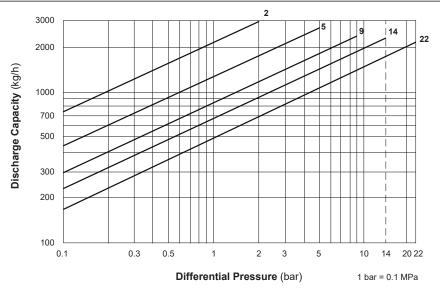
#### SJ6FVB Flanged





| SJ6FVB Flanged (mm |                          |                |                |                |
|--------------------|--------------------------|----------------|----------------|----------------|
| DN                 | L<br>DIN 2501<br>PN25/40 | W <sub>1</sub> | B <sub>1</sub> | Weight<br>(kg) |
| 40                 | <b>─</b>   230           | 265            | 180            | 17             |
| 50                 |                          | 205            |                | 18             |

## **Discharge Capacity**



- Line numbers within the graph are orifice numbers.
  Differential pressure is the difference between the inlet and outlet pressure of the trap.
  Capacities are based on continuous discharge of condensate 6 °C below saturated steam temperature.
  Recommended safety factor: at least 1.5.



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

Manufacturer Kakogawa, Japan approved by LRQA Ltd. to ISO 9001/14001

