



FREE FLOAT STEAM TRAP

MODEL SJ5FX DUCTILE CAST IRON

FREE FLOAT STEAM TRAP WITH THERMOSTATIC AIR VENTING

Features

Inline repairable multi-purpose steam trap with tight shut-off for use with heat exchangers, tank heaters, dryers and process equipment.

1. Thermostatic X-element with fail-open feature vents air automatically at close-to-steam temperature.
2. Only one moving part, the free float, eliminates concentrated valve wear and provides long maintenance-free service life.
3. Easy, inline access to internal parts simplifies cleaning and reduces maintenance costs.
4. Two built-in screens with large surface area ensure extended trouble-free operation.
5. Self-modulating free float provides continuous, smooth, low velocity condensate discharge as process loads vary.



Specifications

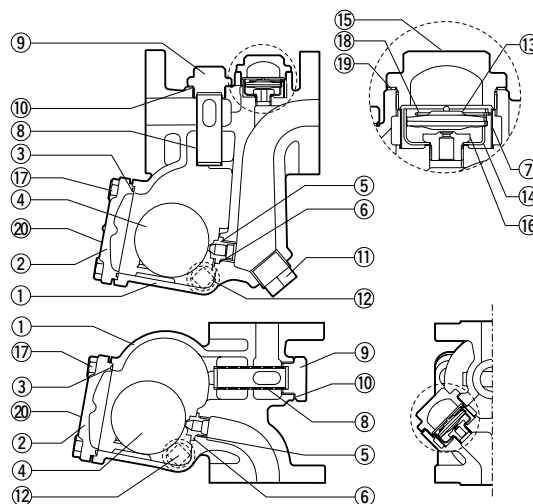
| Model | SJ5FNX | SJ5FVX |
|--|----------------------|--------------------|
| Connection (installation) | Flanged (horizontal) | Flanged (vertical) |
| Size | DN 20, 25 | |
| Orifice No. | 2, 5, 9, 14, 22 | |
| Maximum Operating Pressure (barg) PMO | 2, 5, 9, 14, 22 | |
| Maximum Differential Pressure (bar) ΔPMX | 2, 5, 9, 14, 22 | |
| Maximum Operating Temperature (°C) TMO | 220 | |
| Subcooling of X-element Fill (°C) | up to 6 | |
| Type of X-element | B | |

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS): Maximum Allowable Pressure (barg) PMA: 22
Maximum Allowable Temperature (°C) TMA: 220
1 bar = 0.1 MPa



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 | DIN* | ASTM/AISI* |
|-----------------|------------------------|----------------------------|--------|---------------|
| ① | Body | Ductile Cast Iron GGG-40.3 | 0.7043 | A395 |
| ② | Cover | Ductile Cast Iron GGG-40.3 | 0.7043 | A395 |
| ③ ^{MR} | Cover Gasket | Fluorine Resin PTFE | PTFE | PTFE |
| ④ ^F | Float | Stainless Steel SUS316L | 1.4404 | AISI316L |
| ⑤ ^R | Orifice | Stainless Steel SUS420F | 1.4028 | AISI420F |
| ⑥ ^{MR} | Orifice Gasket | Fluorine Resin PTFE | PTFE | PTFE |
| ⑦ ^R | Air Vent Screen | Stainless Steel SUS304 | 1.4301 | AISI304 |
| ⑧ ^R | Main Screen | Stainless Steel SUS430 | 1.4016 | AISI430 |
| ⑨ | Screen Holder (SJ5FNX) | Ductile Cast Iron GGG-40.3 | 0.7043 | A395 |
| | Screen Holder (SJ5FVX) | Cast Stainless Steel SCS2A | 1.4027 | A743 Gr. CA40 |
| ⑩ ^{MR} | Screen Holder Gasket | Soft Iron SUYP | 1.1121 | AISI1010 |
| ⑪ | Plug (SJ5FNX) | Carbon Steel SS400 | 1.0037 | A6 |
| ⑫ | Drain Plug | Carbon Steel SS400 | 1.0037 | A6 |
| ⑬ ^R | X-element | Stainless Steel | — | — |
| ⑭ ^R | X-element Guide | Stainless Steel SUS304 | 1.4301 | AISI304 |
| ⑮ | X-element Cover | Ductile Cast Iron GGG-40.3 | 0.7043 | A395 |
| ⑯ ^R | Air Vent Valve Seat | Stainless Steel SUS420F | 1.4028 | AISI420F |
| ⑰ | Cover Bolt | Carbon Steel S45C | 1.0503 | AISI1045 |
| ⑱ | Spring Clip | Stainless Steel SUS304 | 1.4301 | AISI304 |
| ⑲ ^{MR} | Element Cover Gasket | Fluorine Resin PTFE | PTFE | PTFE |
| ⑳ | Nameplate | Stainless Steel SUS304 | 1.4301 | AISI304 |



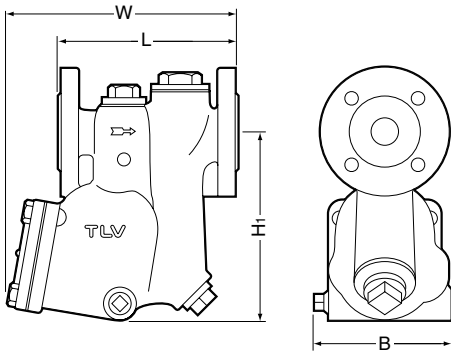
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* Equivalent materials

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

Dimensions

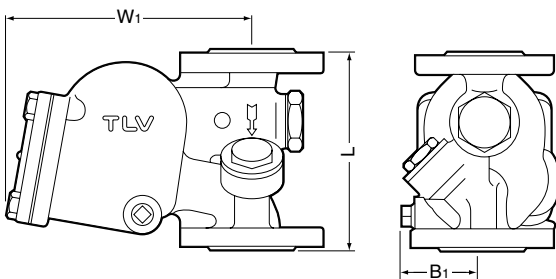
● **SJ5FNX** Flanged



SJ5FNX Flanged (mm)

| DN | L | | W | H ₁ | B | Weight (kg) |
|----|----------|--|-----|----------------|-----|-------------|
| | DIN 2501 | | | | | |
| | PN25/40 | | | | | |
| 20 | 150 | | 196 | 170 | 115 | 8.0 |
| 25 | 160 | | | | | 8.4 |

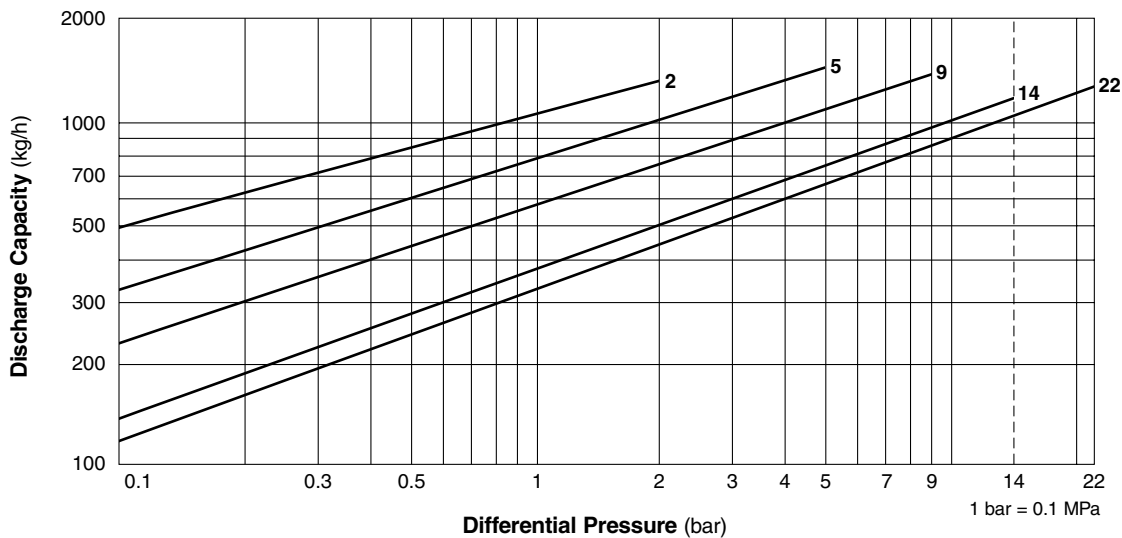
● **SJ5FVX** Flanged



SJ5FVX Flanged (mm)

| DN | L | | W ₁ | B ₁ | Weight (kg) |
|----|----------|--|----------------|----------------|-------------|
| | DIN 2501 | | | | |
| | PN25/40 | | | | |
| 20 | 150 | | 175 | 70 | 7.3 |
| 25 | 160 | | | | 7.8 |

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. 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 which 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

