



# FREE FLOAT<sup>®</sup> STEAM TRAP

## MODEL SJ7FB 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.

1. 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.
3. Thermostatic bimetal air vent valve vents air automatically for rapid startup.
4. Built-in screen with large surface area ensures extended trouble-free operation.
5. 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
DN 40, DN 50	I	With CE marking and Declaration of Conformity



#### Specifications

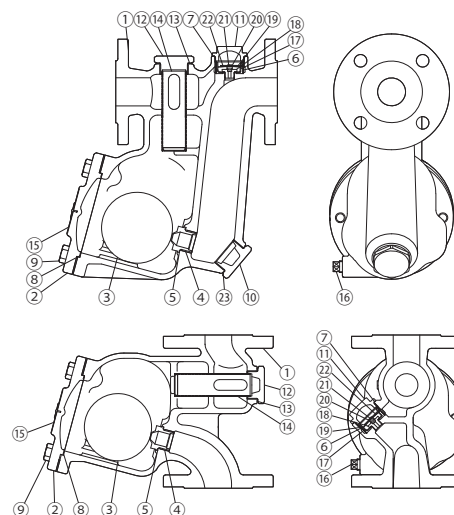
Model	SJ7FNB	SJ7FVB
Installation	Horizontal	Vertical
Connection	Flanged	
Size	DN 40, 50	
Orifice No.	2, 5, 9, 14, 22	
Maximum Operating Pressure (barg) P <sub>MO</sub>	2, 5, 9, 14, 22	
Maximum Differential Pressure (bar) ΔP <sub>MX</sub>	2, 5, 9, 14, 22	
Maximum Operating Temperature (°C) T <sub>MO</sub>	220	

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS): Maximum Allowable Pressure (barg) P<sub>MA</sub>: 22      1 bar = 0.1 MPa  
Maximum Allowable Temperature (°C) T<sub>MA</sub>: 220

No.	Description	Material	DIN*	ASTM/AISI*
①	Body	Ductile Cast Iron GGG40.3	0.7043	A395
②	Cover	Ductile Cast Iron GGG40.3	0.7043	A395
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 (SJ7FNB)	Cast Stainless Steel A351 Gr.CF8	1.4312	—
⑪	Element Cover	Cast Stainless Steel A351 Gr.CF8	1.4312	—
⑫	Screen Holder	Cast Stainless Steel A351 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 (SJ7FNB)	Soft Iron SUYP	1.1121	AISI1010

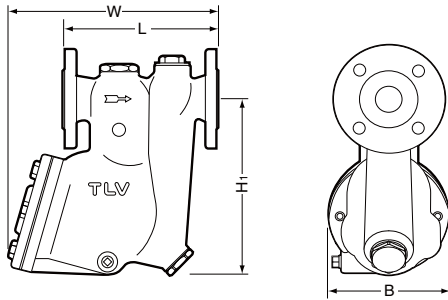
\* Equivalent materials  
Contact TLV for available replacement parts.

**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.



**Dimensions**

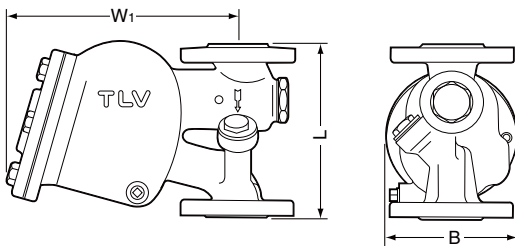
● **SJ7FNB Flanged**



**SJ7FNB Flanged** (mm)

DN	L	H <sub>1</sub>	W	B	Weight (kg)
	DIN 2501 PN25/40				
40	230	315	350	205	26
50					28

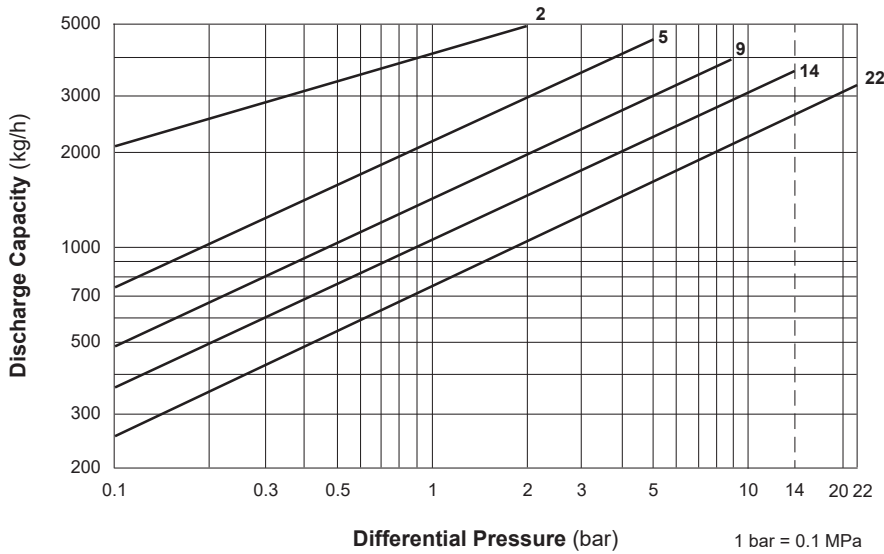
● **SJ7FVB Flanged**



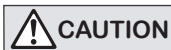
**SJ7FVB Flanged** (mm)

DN	L	W <sub>1</sub>	B <sub>1</sub>	Weight (kg)
	DIN 2501 PN25/40			
40	230	305	205	22
50				23

**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. Capacities are based on continuous discharge of condensate 6 °C below saturated steam temperature.
4. 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  
**TLV** CO., LTD.  
Kakogawa, Japan  
is approved by LRQA Ltd. to ISO 9001/14001

