



# FREE FLOAT<sup>®</sup> STEAM TRAP

## MODEL SJ5FB 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 small to medium process equipment. Models for horizontal or vertical piping installation.

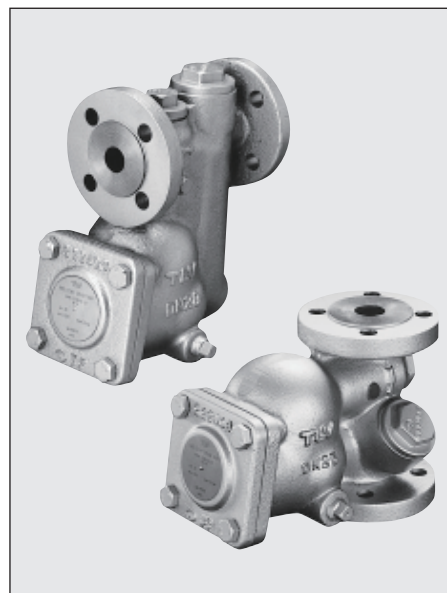
1. Self-modulating free float provides continuous, smooth, low velocity condensate discharge as process loads vary.
2. Precision-ground float, constant water seal and three-point seating design ensure a steam-tight seal, even under no-load conditions.
3. Thermostatic bimetal air vent valve vents air 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 20, DN 25	—*	Art. 4, Sec. 3 (sound engineering practice), CE marking not allowed

\* Manufactured in accordance with sound engineering practice



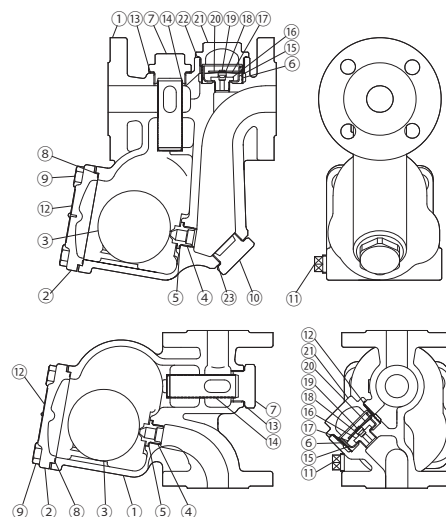
#### Specifications

Model	SJ5FNB	SJ5FVB
Installation	Horizontal	Vertical
Connection	Flanged	
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	

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS): Maximum Allowable Pressure (barg) PMA: 22      1 bar = 0.1 MPa  
Maximum Allowable Temperature (°C) TMA: 220  
Minimum Allowable Temperature (°C): 0

No.	Description	Material	DIN*	ASTM/AISI*
①	Body	Ductile Cast Iron GGG40.3/ EN 5.3103(EN-GJS-400-18-LT)	0.7043	A395 Gr.60-40-18
②	Cover	Ductile Cast Iron GGG40.3/ EN 5.3103(EN-GJS-400-18-LT)	0.7043	A395 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	Screen Holder	Cast Stainless Steel A351 Gr.CF8	1.4312	—
⑧	Cover Gasket	Fluorine Resin PTFE	PTFE	PTFE
⑨	Cover Bolt	Carbon Steel S45C	1.0503	AISI1045
⑩	Orifice Plug (SJ5FNB)	Cast Stainless Steel A351 Gr.CF8	1.4312	—
⑪	Plug	Carbon Steel SS400	1.0037	A6
⑫	Nameplate	Stainless Steel SUS304	1.4301	AISI304
⑬	Screen Holder Gasket	Soft Iron SUYP	1.1121	AISI1010
⑭	Main Screen	Stainless Steel SUS430	1.4016	AISI430
⑮	Guide	Stainless Steel SUS304	1.4301	AISI304
⑯	Air Vent Valve Seat	—	—	—
⑰	Bimetal	—	—	—
⑱	Snap Ring	Stainless Steel SUS304	1.4301	AISI304
⑲	Air Vent Valve	—	—	—
⑳	Snap Ring	Stainless Steel SUS304	1.4301	AISI304
㉑	Element Cover	Cast Stainless Steel A351 Gr.CF8	1.4312	—
㉒	Element Cover Gasket	Fluorine Resin PTFE	PTFE	PTFE
㉓	Orifice Plug Gasket (SJ5FNB)	Soft Iron SUYP	1.1121	AISI1010

**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.

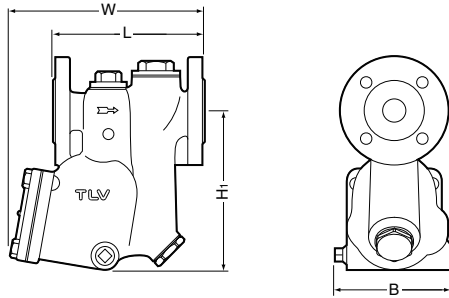


\* Equivalent materials  
Contact TLV for available replacement parts.

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**Dimensions**

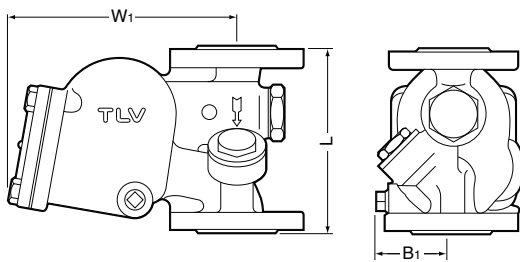
● **SJ5FNB Flanged**



**SJ5FNB Flanged** (mm)

DN	L		H <sub>1</sub>	W	B	Weight (kg)
	DIN 2501	PN25/40				
20	150		170	200	115	8.0
25	160			205		8.4

● **SJ5FVB Flanged**

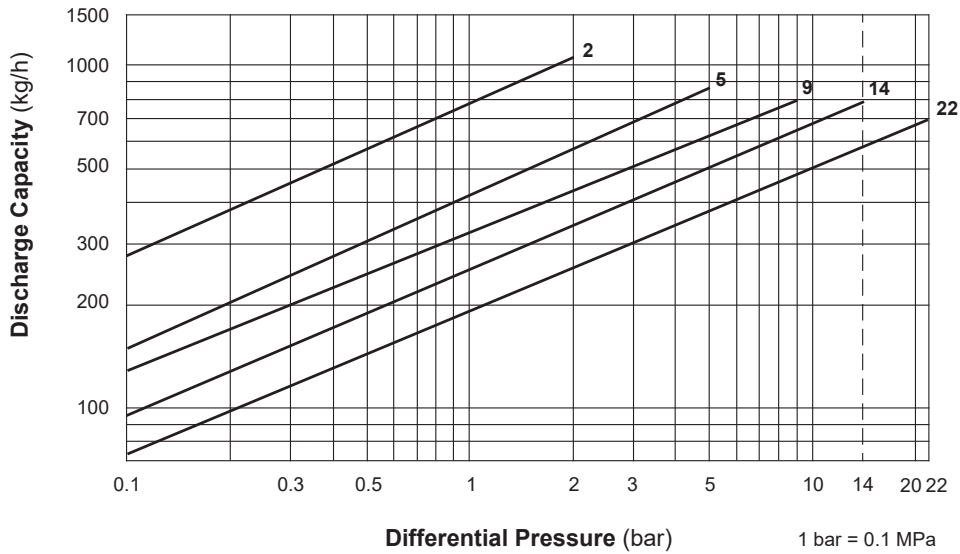


**SJ5FVB Flanged** (mm)

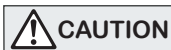
DN	L		W <sub>1</sub> *	B <sub>1</sub> *	Weight (kg)
	DIN 2501	PN25/40			
20	150		175	70	7.3
25	160				7.8

\* Approx.

**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.



**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

