TLV

FREE FLOAT® STEAM TRAP

MODEL SJ3FB   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 15 to DN 25	—*	Art. 4, Sec. 3 (sound engineering practice), CE marking not allowed

* Manufactured in accordance with sound engineering practice
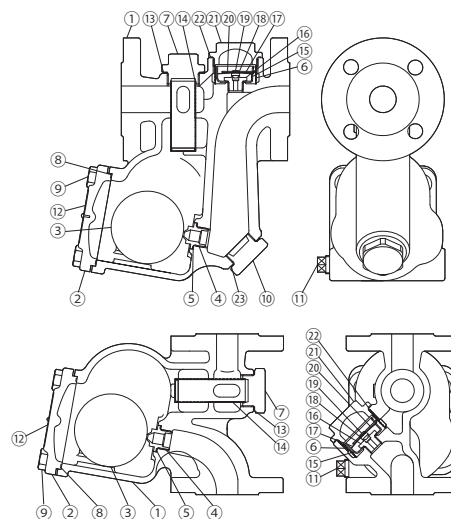
Specifications

Model	SJ3FNB	SJ3FVB
Installation	Horizontal	Vertical
Connection	Flanged	
Size	DN 15, 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	1.4312	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 (SJ3FNB)	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 (SJ3FNB)	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.
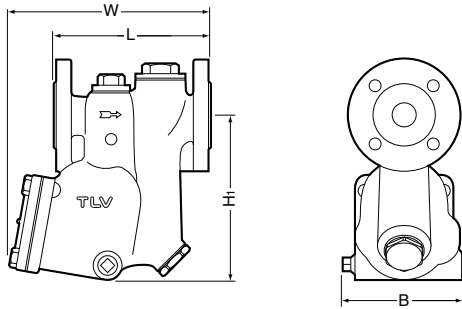

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Dimensions

● **SJ3FNB** Flanged

DN	L DIN 2501 PN25/40	H₁	W	B	Weight (kg)

SJ3FNB Flanged (mm)

DN	L DIN 2501 PN25/40	H_1	W	B	Weight (kg)
15	150	160	180	100	6.0
20	150	160	180	100	6.4
25	160	160	185	100	6.9
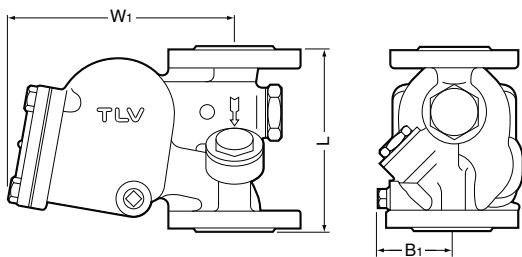
● **SJ3FVB** Flanged

SJ3FVB Flanged (mm)

DN	L DIN 2501 PN25/40	W_1*	B_1*	Weight (kg)
15	150	155	70	5.1
20	150	155	70	5.6
25	160	155	70	6.3

＊ Approx.

Discharge Capacity
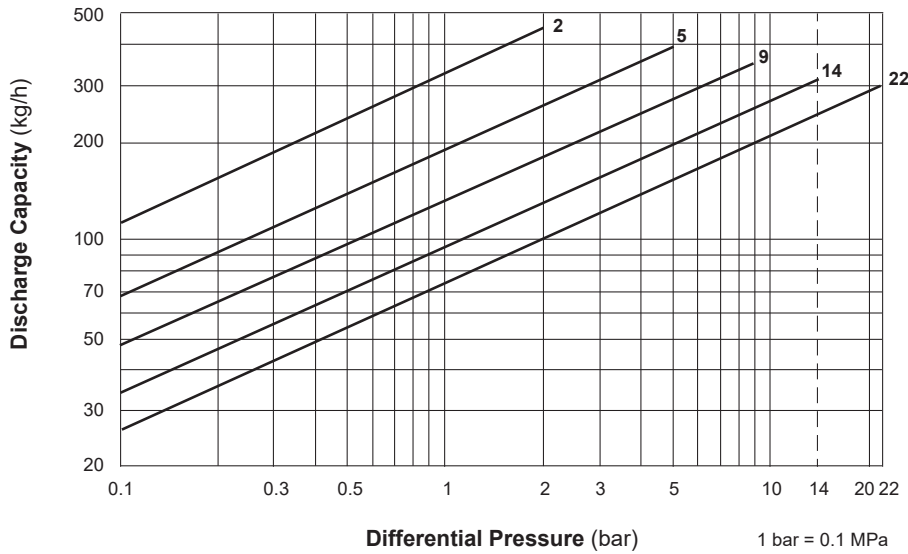
1. Line numbers within the graph are orifice numbers.
2. Differential pressure is the difference between the inlet and outlet pressure of the trap.
3. Capacities are based on continuous discharge of condensate 6 °C below saturated steam temperature.
4. Recommended safety factor: at least 1.5.
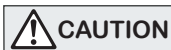
⚠ **CAUTION** DO NOT use this product under conditions that exceed maximum differential pressure, as condensate backup will occur!

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SDS U2000-520 Rev. 3/2024
Products for intended use only.
Specifications subject to change without notice.

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