



# FREE FLOAT<sup>®</sup> STEAM TRAP

## MODEL SJ3FX 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 capsule (X-element) with "fail open" feature vents air automatically until close-to-steam temperature.
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

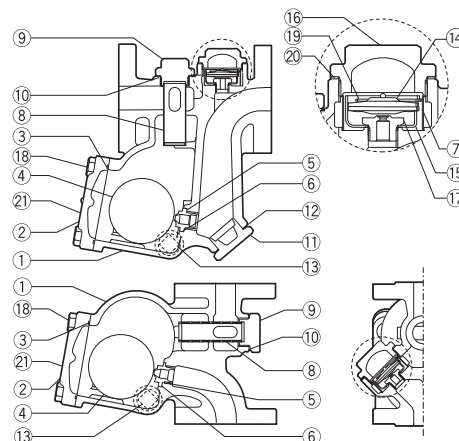
Model	SJ3FNX	SJ3FVX
Installation	Horizontal	Vertical
Connection	Flanged	
Size	DN 15, 20, 25	
Orifice No.	2, 5, 9, 14, 22	
Maximum Operating Pressure (barg) PMO	2, 5, 9, 14, 22	
Maximum Differential Pressure (bar) ΔPMX	2, 5, 9, 14, 22	
Maximum Operating Temperature (°C) TMO	220	
Subcooling of X-element Fill (°C)	up to 6	
Type of X-element	C6	

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



**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.

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 <sup>MR</sup>	Cover Gasket	Fluorine Resin PTFE	PTFE	PTFE
④ <sup>F</sup>	Float	Stainless Steel SUS316L	1.4404	AISI316L
⑤ <sup>R</sup>	Orifice	—	—	—
⑥ <sup>MR</sup>	Orifice Gasket	Fluorine Resin PTFE	PTFE	PTFE
⑦ <sup>R</sup>	Air Vent Screen	Stainless Steel SUS304	1.4301	AISI304
⑧ <sup>R</sup>	Main Screen	Stainless Steel SUS430	1.4016	AISI430
⑨	Screen Holder	Cast Stainless Steel A351 Gr.CF8	1.4312	—
⑩ <sup>MR</sup>	Screen Holder Gasket	Soft Iron SUYP	1.1121	AISI1010
⑪	Orifice Plug	Cast Stainless Steel A351 Gr.CF8	1.4312	—
⑫ <sup>MR</sup>	Orifice Plug Gasket (SJ3FNX)	Soft Iron SUYP	1.1121	AISI1010
⑬	Drain Plug	Carbon Steel SS400	1.0037	A6
⑭ <sup>R</sup>	X-element	Stainless Steel	—	—
⑮ <sup>R</sup>	X-element Guide	Stainless Steel SUS304	1.4301	AISI304
⑯	X-element Cover	Cast Stainless Steel A351 Gr.CF8	1.4312	—
⑰ <sup>R</sup>	Air Vent Valve Seat	Stainless Steel SUS420F	1.4028	AISI420F
⑱	Cover Bolt	Carbon Steel S45C	1.0503	AISI1045
⑲ <sup>R</sup>	Spring Clip	Stainless Steel SUS304	1.4301	AISI304
⑳ <sup>MR</sup>	Element Cover Gasket	Fluorine Resin PTFE	PTFE	PTFE
㉑	Nameplate	Stainless Steel SUS304	1.4301	AISI304

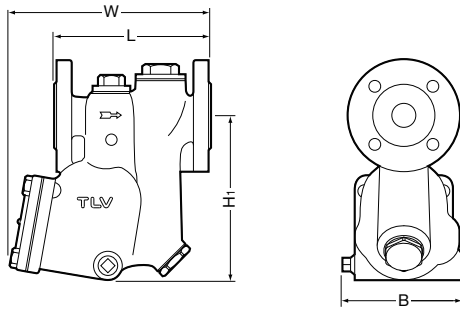


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\* Equivalent materials  
Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float

## Dimensions

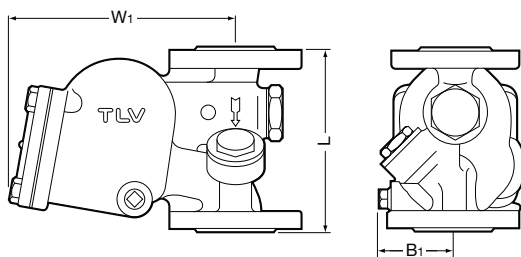
### ● SJ3FNX Flanged



### SJ3FNX Flanged (mm)

DN	L	H <sub>1</sub>	W	B	Weight (kg)
	DIN EN 1092-2				
	PN25/40				
15	150	157	177	100	6.0
20					6.4
25					160

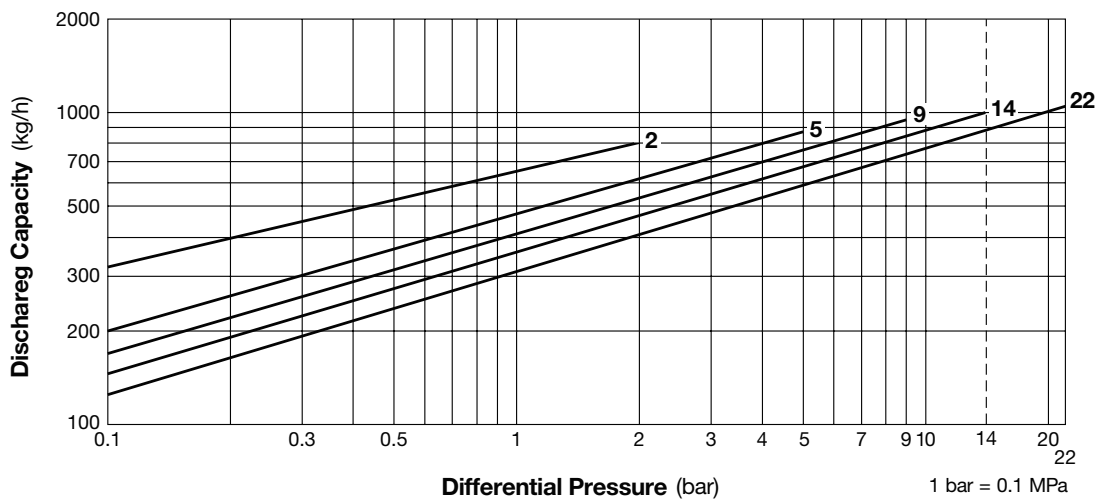
### ● SJ3FVX Flanged



### SJ3FVX Flanged (mm)

DN	L	W <sub>1</sub>	B <sub>1</sub>	Weight (kg)
	DIN EN 1092-2			
	PN25/40			
15	150	155	70	5.1
20	150			5.6
25	160			6.3

## Discharge Capacity



- Line numbers within the graph refer to 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.



**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

