



# FREE FLOAT<sup>®</sup> STEAM TRAP

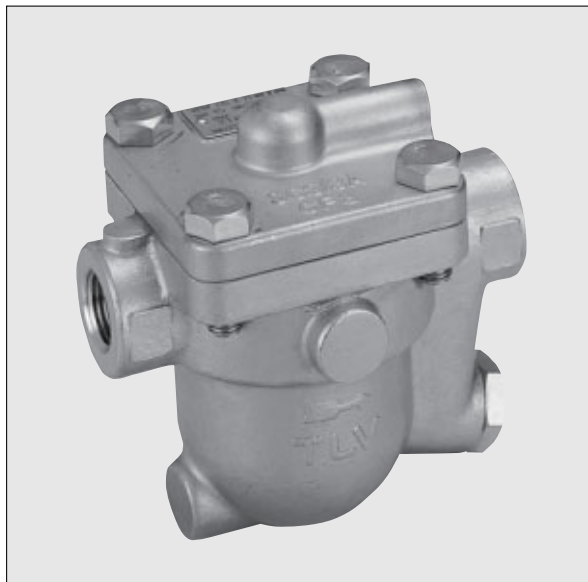
## MODEL J3S-X

FREE FLOAT STEAM TRAP WITH THREE-POINT SEATING AND THERMOSTATIC AIR VENTING

### Features

**A reliable and durable stainless steel steam trap with tight shut-off for use on small-size process equipment.**

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. Only one moving part, the free float, prevents concentrated wear and provides long maintenance-free service life.
4. Thermostatic capsule (X-element) with “fail open” feature vents air automatically until close-to-steam temperature.
5. Built-in screen with large surface area ensures extended trouble-free service.
6. Easy, inline access to internal parts simplifies cleaning and reduces maintenance costs.



### Specifications

Model		J3S-X	
Connection		Screwed	Flanged
Size (mm)		15, 20, 25	
Orifice No.		2, 5, 10, 14, 21	
Maximum Operating Pressure (MPaG)	PMO	0.2, 0.5, 1.0, 1.4, 2.1	
Maximum Differential Pressure (MPa)	ΔPMX	0.2, 0.5, 1.0, 1.4, 2.1	
Minimum Operating Pressure (MPaG)		0.01	
Maximum Operating Temperature (°C)		TMO 220	
Subcooling of X-element Fill (°C)		up to 6 (option: up to 11)	
Type of X-element		C6(option: C11*)	

\* Trap discharge capacity will decrease slightly. Contact TLV for information.

1 MPa = 10.197 kg/cm<sup>2</sup>

PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS): Maximum Allowable Pressure (MPaG) PMA: 2.1  
Maximum Allowable Temperature (°C) TMA: 220

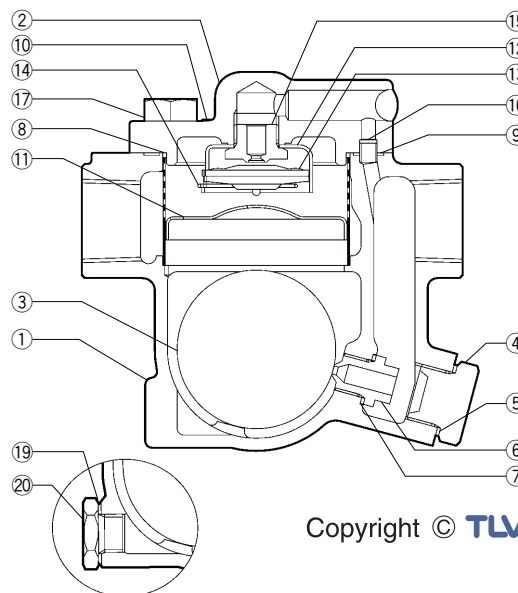


To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

No.	Description	Material	JIS	ASTM/AISI*
①	Body	Cast Stainless Steel	—	A351 Gr.CF8
②	Cover	Cast Stainless Steel	—	A351 Gr.CF8
③ <sup>F</sup>	Float	Stainless Steel	SUS316L	AISI316L
④	Orifice Plug	Cast Stainless Steel	—	A351 Gr.CF8
⑤ <sup>MR</sup>	Orifice Plug Gasket	Stainless Steel	SUS316L	AISI316L
⑥ <sup>R</sup>	Orifice	—	—	—
⑦ <sup>MR</sup>	Orifice Gasket	Stainless Steel	SUS316L	AISI316L
⑧ <sup>R</sup>	Screen inside/outside	Stainless Steel	SUS430/304	AISI430/304
⑨ <sup>MR</sup>	Cover Gasket	Fluorine Resin	PTFE	PTFE
⑩	Nameplate	Stainless Steel	SUS304	AISI304
⑪ <sup>R</sup>	Float Cover	Stainless Steel	SUS304	AISI304
⑫ <sup>R</sup>	X-element Guide	Stainless Steel	SUS304	AISI304
⑬ <sup>R</sup>	X-element	Stainless Steel	—	—
⑭ <sup>R</sup>	Spring Clip	Stainless Steel	SUS304	AISI304
⑮ <sup>R</sup>	Air Vent Valve Seat	Stainless Steel	SUS420F	AISI420F
⑯	Connector	Stainless Steel	SUS416	AISI416
⑰	Cover Bolt	Stainless Steel	SUS304	AISI304
⑱	Flange**	Cast Stainless Steel	—	A351 Gr.CF8
⑲	Drain Plug Gasket***	Stainless Steel	SUS316L	AISI316L
⑳	Drain Plug***	Stainless Steel	SUS303	AISI303

\* Equivalent \*\* Shown on reverse \*\*\* Option

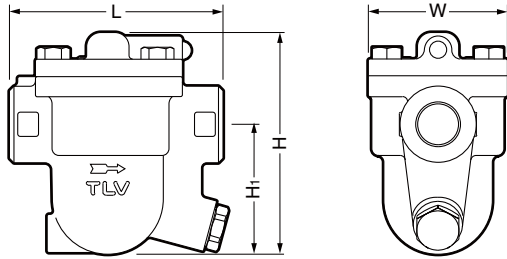
Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float



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**Dimensions**

● **J3S-X Screwed**

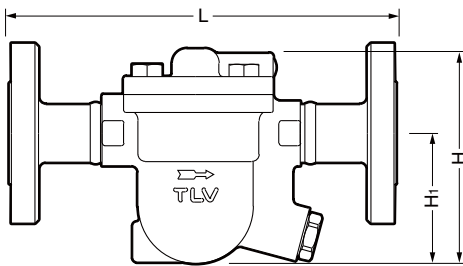


**J3S-X Screwed\*** (mm)

Size	L	H	H <sub>1</sub>	W	Weight (kg)
15	120	119	75	80	2.5
20			72.5		2.6
25		126	75		2.8

\* Rc(PT), other standards available

● **J3S-X Flanged**



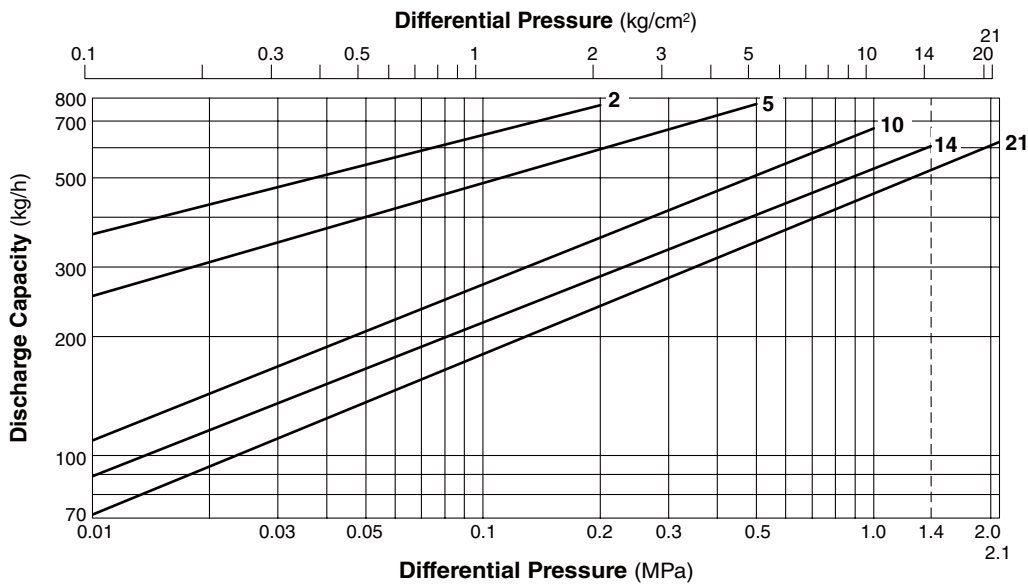
**J3S-X Flanged** (mm)

Size	L		H	H <sub>1</sub>	Weight* (kg)
	ASME Class				
	150RF	300RF			
15	195	195	119	75	3.8
20	215	215			4.8
25	235	235			5.5

Other standards available, but length and weight may vary

\* Weight is for Class 300 RF

**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

