FREE FLOAT® STEAM TRAP

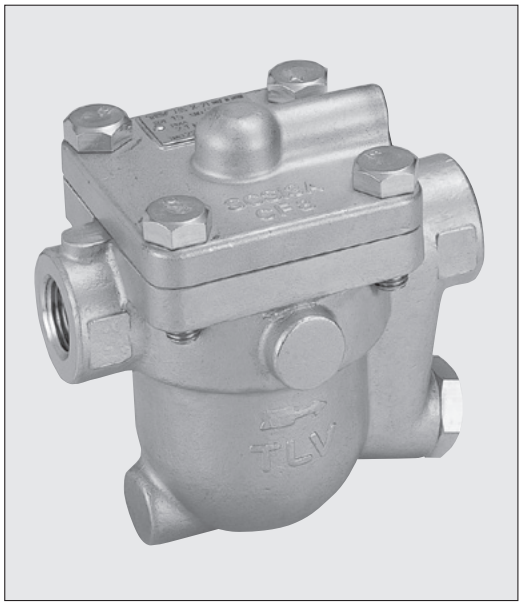
MODEL J3S-X STAINLESS STEEL

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.



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

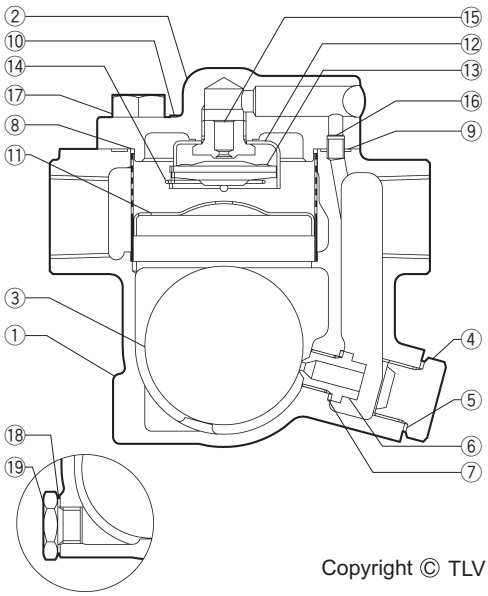
Model		J3S-X	
Connection		Screwed	Flanged
Size		½″, ¾″, 1″	DN 15, 20, 25
Orifice No.		2, 5, 10, 14, 21	
Maximum Operating Pressure (barg)	PMO	2, 5, 10, 14, 21	
Maximum Differential Pressure (bar)	ΔPMX	2, 5, 10, 14, 21	
Maximum Operating Temperature (°C)	TMO	220	
Subcooling of X-element Fill (°C)		up to 6	
Type of X-element		C6	

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS): Maximum Allowable Pressure (barg) PMA: 21 1 bar = 0.1 MPa
Maximum Allowable Temperature (°C) TMA: 220

⚠ 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.

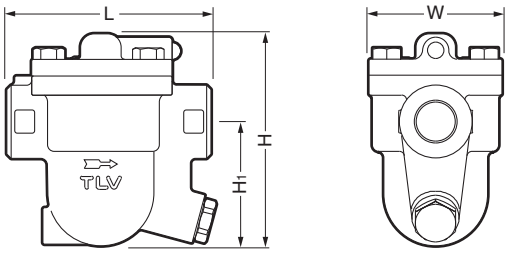
No.	Description	Material	DIN*	ASTM/AISI*
①	Body	Cast Stainl. Steel A351 Gr.CF8	1.4312	—
②	Cover	Cast Stainl. Steel A351 Gr.CF8	1.4312	—
③F	Float	Stainless Steel SUS316L	1.4404	AISI316L
④	Orifice Plug	Cast Stainl. Steel A351 Gr.CF8	1.4312	—
⑤MR	Orifice Plug Gasket	Stainless Steel SUS316L	1.4404	AISI316L
⑥R	Orifice	—	—	—
⑦MR	Orifice Gasket	Stainless Steel SUS316L	1.4404	AISI316L
⑧R	Screen inside/outside	Stainless Steel SUS430/304	1.4016/1.4301	AISI430/304
⑨MR	Cover Gasket	Fluorine Resin PTFE	PTFE	PTFE
⑩	Nameplate	Stainless Steel SUS304	1.4301	AISI304
⑪R	Float Cover	Stainless Steel SUS304	1.4301	AISI304
⑫R	X-element Guide	Stainless Steel SUS304	1.4301	AISI304
⑬R	X-element	Stainless Steel	—	—
⑭R	Spring Clip	Stainless Steel SUS304	1.4301	AISI304
⑮R	Air Vent Valve Seat	Stainless Steel SUS420F	1.4028	AISI420F
⑯	Connector	Stainless Steel SUS416	1.4005	AISI416
⑰	Cover Bolt	Stainless Steel SUS304	1.4301	AISI304
⑱	Drain Plug Gasket**	Stainless Steel SUS316L	1.4404	AISI316L
⑲	Drain Plug**	Stainless Steel SUS303	1.4305	AISI303
⑳	Flange***	Cast Stainl. Steel A351 Gr.CF8	1.4312	—

* Equivalent materials ** Option *** ASME Flange, not shown
Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float



Dimensions

● **J3S-X** Screwed

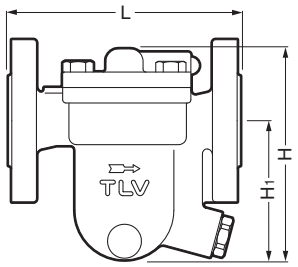


J3S-X Screwed* (mm)

Size	L	H	H_1	W	Weight (kg)
½″	120	119	75	80	2.5
¾″			72.5		2.6
1″		126	75		2.8

* BSP DIN 2999, other standards available

● **J3S-X** Flanged



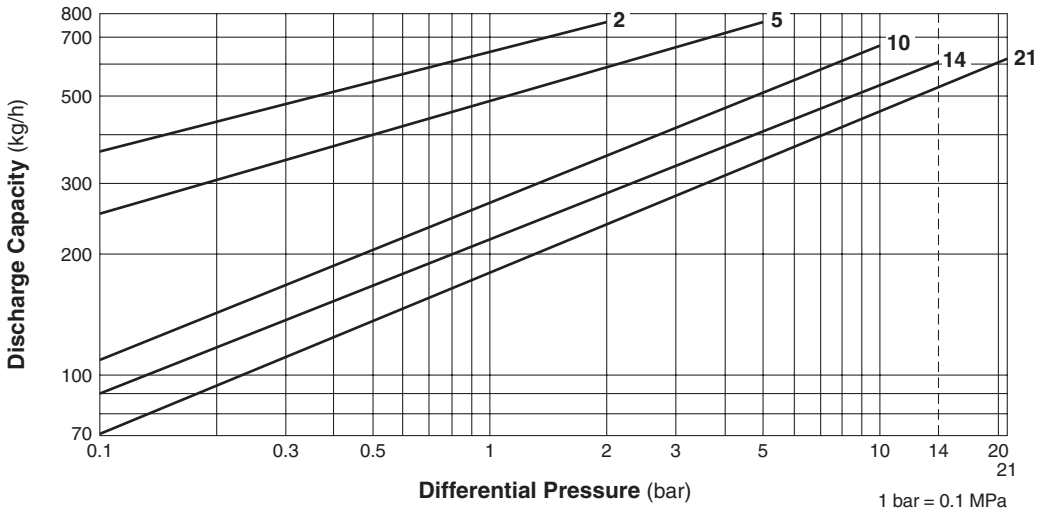
J3S-X Flanged (mm)

DN	L			H		H_1		Weight* (kg)
	DIN 2501	ASME Class						
	PN25/40	150RF	300RF	DIN	ASME	DIN	ASME	
15	150	195	195	132	119	84	75	3.4
20		215	215	140		90		3.6
25	160	235	235	147		92		4.6

* Weight is for PN 25/40

DIN type is shown. ASME type has welded on flanges.

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