FREE FLOAT® STEAM TRAP

FOR RUBBER VULCANIZERS

MODEL J3S-X S Series

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

Benefits

A reliable and durable stainless steel steam trap with tight shut-off designed for use on rubber vulcanizers.

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. Special thermostatic capsule (X-element) with “fail open” feature vents air automatically until close-to-steam temperature.
4. Rugged float construction with up to 1740 psig hydraulic shock rating ensures excellent resistance to water hammer.
5. Cover plug can be removed to allow an LR3 lock release valve to be installed for combatting steam locking.
6. Drain plug allows a manual or automatic valve to be installed for condensate blowdown.
7. S1 model eliminates wire mesh from the internal screen to help avoid clogging with rust and scale.

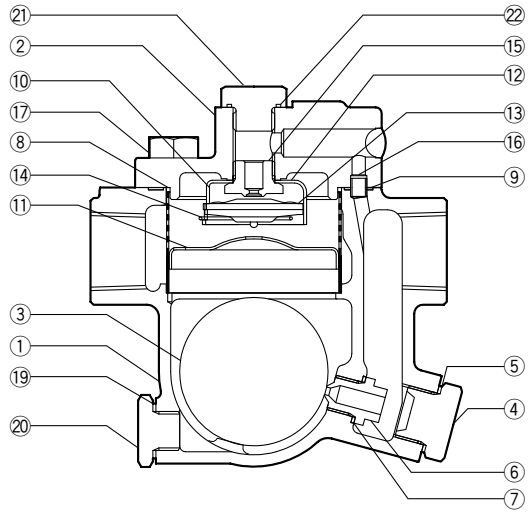
Specifications

Model	J3S-X S1		J3S-X S2	
Connection	Screwed	Flanged	Screwed	Flanged
Size (mm)	½, ¾, 1			
Orifice No.	10, 14			
Maximum Operating Pressure (MPaG) PMO	150, 200			
Maximum Differential Pressure (MPa) ΔPMX	150, 200			
Minimum Operating Pressure (MPaG)	Vacuum			
Maximum Operating Temperature (°C) TMO	428			
Maximum Allowable Pressure (psig) PMA	300			
Maximum Allowable Temperature TMA	428			
Internal Screen	φ3/64″ punched hole with 1/16″ pitch (equivalent to 16 mesh)		φ3/64″ punched hole with 1/16″ pitch + wire mesh (60 mesh)	

These are non-standard products, consult TLV for delivery time required.

⚠ 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.

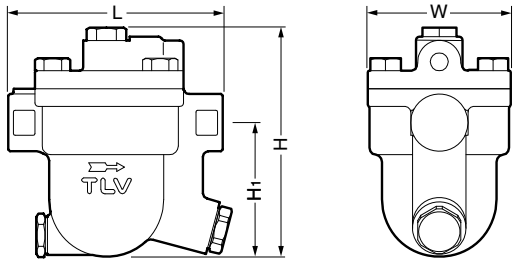
No.	Description	Material	ASTM/AISI*	JIS
①	Body	Cast Stainless Steel	A351 Gr.CF8	—
②	Cover	Cast Stainless Steel	A351 Gr.CF8	—
③	Float	Stainless Steel	AISI316L	SUS316L
④	Orifice Plug	Cast Stainless Steel	A351 Gr.CF8	—
⑤	Orifice Plug Gasket	Stainless Steel	AISI316L	SUS316L
⑥	Orifice	—	—	—
⑦	Orifice Gasket	Stainless Steel	AISI316L	SUS316L
⑧	Screen inside/outside**	Stainless Steel	AISI430/304	SUS430/304
⑨	Cover Gasket	Fluorine Resin	PTFE	PTFE
⑩	Nameplate	Stainless Steel	AISI304	SUS304
⑪	Float Cover	Stainless Steel	AISI304	SUS304
⑫	X-element Guide	Stainless Steel	AISI304	SUS304
⑬	X-element	Stainless Steel	—	—
⑭	Spring Clip	Stainless Steel	AISI304	SUS304
⑮	Air Vent Valve Seat	Stainless Steel	AISI420F	SUS420F
⑯	Connector	Stainless Steel	AISI416	SUS416
⑰	Cover Bolt	Stainless Steel	AISI304	SUS304
⑱	Flange***	Cast Stainless Steel	A351 Gr.CF8	—
⑲	Drain Plug Gasket	Stainless Steel	AISI316L	SUS316L
⑳	Drain Plug	Stainless Steel	AISI303	SUS303
㉑	Cover Plug	Stainless Steel	AISI303	SUS303
㉒	Cover Plug Gasket	Fluorine Resin	PTFE	PTFE



* Equivalent ** Outside screen (wire mesh) on S2 model only *** Shown on reverse

Dimensions

● **J3S-X S Series** Screwed

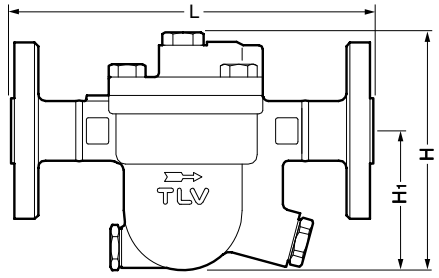


J3S-X S Series Screwed* (in)

Size	L	H	H_1	W	Weight (lb)
½	4¾	5⅛	3	3⅛	5.5
¾			2⅞		5.7
1		5⅜	3		6.2

* NPT; other standards available

● **J3S-X S Series** Flanged

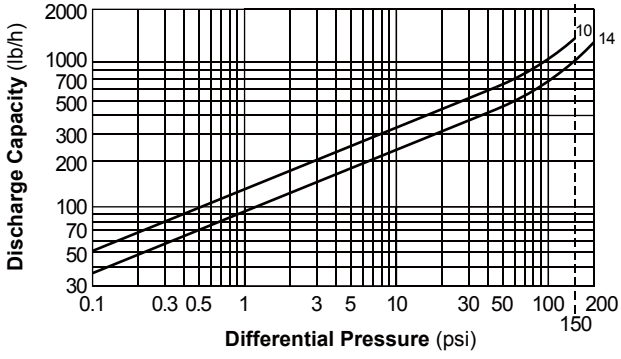


J3S-X S Series Flanged (in)

Size	L		H	H_1	Weight* (lb)
	Connects to ASME Class				
	150RF	300RF			
½	7 11/16	7 11/16	5⅛	2 15/16	8.4
¾	8 7/16	8 7/16			11
1	9¼	9¼			12

Other standards available, but length and weight may vary
* Weight is for Class 300 RF

Discharge Capacity

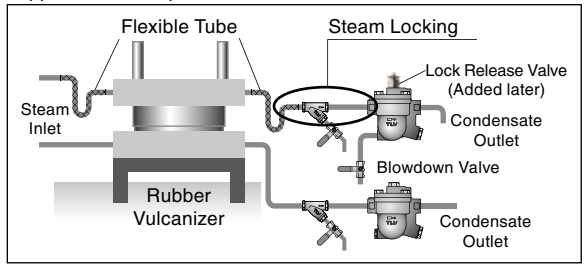


1. Line numbers within the graph are orifice numbers.
2. Differential pressure is the difference between the inlet and outlet pressure of the trap.
3. Capacities are based on continuous discharge of condensate 11 °F below saturated steam temperature.
4. Recommended safety factor: at least 1.5.

⚠ CAUTION DO NOT use this product under conditions that exceed maximum differential pressure, as condensate backup will occur!

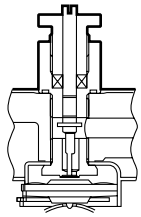
Usage

Application Example



For explanation purposes only, not intended as installation designs..

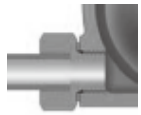
- In steam using rubber vulcanizers the heat plate moves up and down making it easy for steam locking to occur. This can result in condensate backup, which causes temperature drops. The S series has a plug in the cover that can be removed to allow an LR3 lock release valve to be installed for combating this problem. By opening the valve a tiny amount to release "locked" steam, the proper temperature can be ensured.



LR3
Lock Release
Valve Installed

- A drain plug at the bottom of the body is equipped as standard. By removing the plug and installing a manual or automatic valve, condensate blowdown can be carried out when there is a temperature drop.

Note: Since the thread standard is G(PF)1/4, a thread conversion fitting is needed for piping.



Blowdown Piping
Installed

⚠ CAUTION DO NOT DISASSEMBLE OR REMOVE THIS PRODUCT WHILE IT IS UNDER PRESSURE.
Allow internal pressure of this product to equal atmospheric pressure and its surface to cool to room temperature before disassembling or removing. Failure to do so could cause burns or other injury. READ INSTRUCTION MANUAL CAREFULLY.

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Manufacturer
TLV CO., LTD.
Kakogawa, Japan
is approved by LRQA Ltd. to ISO 9001/14001

ISO 9001
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