



# BYPASS BLOWDOWN STEAM TRAP

## MODEL J3S-X-RV

### FREE FLOAT STEAM TRAP WITH BYPASS BLOWDOWN FUNCTION

#### Features

**A reliable and durable stainless steel steam trap that includes a bypass blowdown function to eliminate steam locking on cylinder dryers, presses and other steam-using equipment prone to steam-locking.**

1. Aperture of the regulation valve incorporated into the cover can be adjusted to combat steam locking due to equipment conditions. The valve aperture indicator shows how far open the valve is from 0 to 100%.
2. Regulation valve can be used for bypass blowdown to reduce start-up times.
3. Self-modulating free float provides continuous, smooth, low velocity condensate discharge as process loads vary.
4. Precision-ground float, constant water seal and three-point seating design ensure a steam tight seal, even under no-load conditions.
5. Thermostatic capsule (X-element) with "fail open" feature vents air automatically until close-to-steam temperature.



#### Specifications

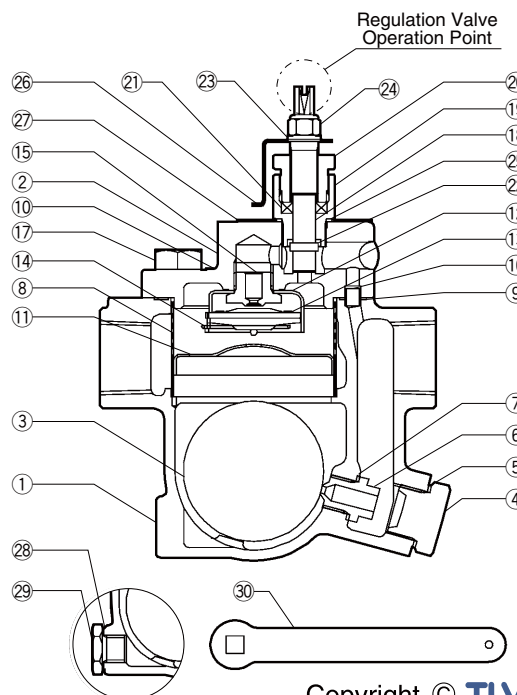
Model	J3S-X-RV	
Connection	Screwed	Flanged
Size (mm)	15, 20, 25	15, 20, 25
Orifice No.	2, 5, 10, 21	
Maximum Operating Pressure (MPaG) PMO	0.2, 0.5, 1.0, 2.1	
Maximum Differential Pressure (MPa) ΔPMX	0.2, 0.5, 1.0, 2.1	
Maximum Operating Temperature (°C) TMO	220	
Subcooling of X-element Fill (°C)	Up to 6	
Type of X-element	B	

PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS): Maximum Allowable Pressure (MPaG) PMA: 2.1 1 MPa = 10.197 kg/cm<sup>2</sup>  
 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 <sup>V</sup>	Regulation Valve	Stainless Steel	SUS303	AISI303
⑲ <sup>V</sup>	Gland Case	Stainless Steel	SUS303	AISI303
⑳ <sup>V</sup>	Gland Retainer Nut	Stainless Steel	SUS303	AISI303
㉑ <sup>V</sup>	Gland Packing	Graphite	—	—
㉒ <sup>V</sup>	Pin	Stainless Steel	SUS303	AISI303
㉓ <sup>V</sup>	Washer	Stainless Steel	SUS304	AISI304
㉔ <sup>V</sup>	Locknut	Stainless Steel	SUS304	AISI304
㉕ <sup>MRV</sup>	Gland Case Gasket	Stainless Steel	SUS316L	AISI316L
㉖ <sup>V</sup>	Aperture Indicator	Stainless Steel	SUS304	AISI304
㉗ <sup>V</sup>	Aperture Indication Plate	Stainless Steel	SUS304	AISI304
㉘	Drain Plug Gasket**	Stainless Steel	SUS303	AISI303
㉙	Drain Plug**	Stainless Steel	SUS316L	AISI316L
㉚	Handle**	Carbon Steel	SS400	A6
㉛	Flange***	Cast Stainless Steel	—	A351 Gr.CF8

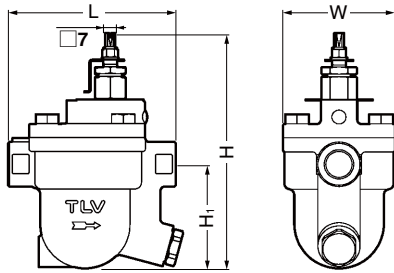


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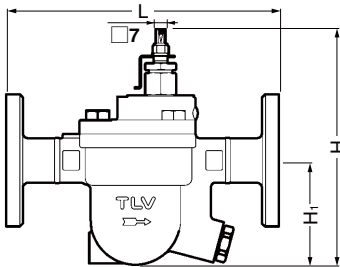
\* Equivalent \*\* Option \*\*\* Shown on reverse  
 Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float, (V) regulation valve unit

Dimensions

● J3S-X-RV Screwed



● J3S-X-RV Flanged



J3S-X-RV Screwed\* (mm)

Size	L	H**	H <sub>1</sub>	W	Weight (kg)
15	120	170	75	80	2.8
20			72.5		2.9
25		75	3.1		

\* Rc (PT), other standards available \*\* At full open position

J3S-X-RV Flanged (mm)

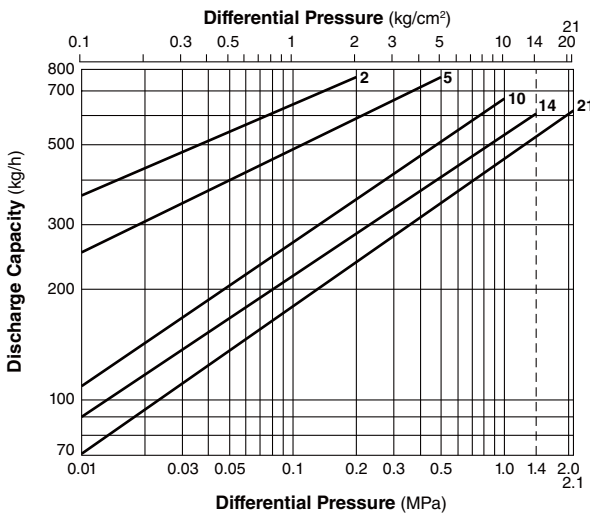
Size	L		H*	H <sub>1</sub>	Weight** (kg)
	ASME Class				
	150RF	300RF			
15	175	175	170	75	3.7
20	195	195			4.6
25	215	219			5.2

Other standards available, but length and weight may vary  
\* At full open position \*\* Weight is for Class 300 RF



To adjust the aperture of the regulation valve, turn only the valve operation point at the very top of the valve using the handle (option), a flat-head screwdriver, or open ended wrench. DO NOT turn the locknut, gland case, or gland retainer nut. Fluid may be discharged under pressure, leading to burns or other injury or damage.

Discharge Capacity (Steam Trap)



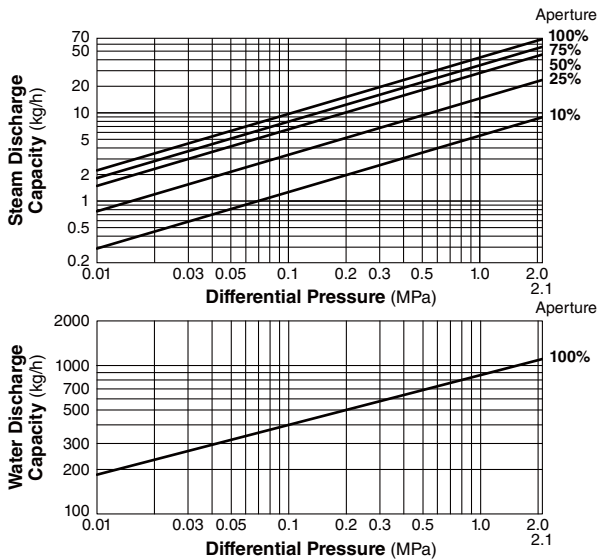
- Line numbers within the graph are orifice numbers.
- Differential pressure is the difference between the inlet and outlet pressure of the trap.
- Capacities are based on continuous discharge of condensate 6°C below saturated steam temperature.
- Recommended safety factor: at least 1.5.



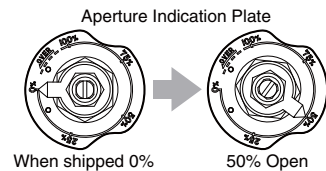
DO NOT use this product under conditions that exceed maximum differential pressure, as condensate backup will occur!

- When using to eliminate steam locking, etc., the steam discharge quantity can be adjusted by using the graph to find out what valve aperture corresponds to your desired steam discharge quantity and differential pressure, then using the valve aperture indication plate to set the valve aperture to the value taken from the graph.
- When using the bypass blowdown function, the valve should normally be set to the full open position during use and then returned to the full close position when bypass blowdown is complete.

Bypass Capacity (Regulation Valve)



- Water discharge capacities are based on continuous discharge of water at room temperature (Aperture: 100%) and are applicable for temperatures below 100°C.
- Differential pressure is the difference between the inlet and outlet pressure of the trap.
- Discharge capacities for steam and water are the values for the regulation valve, not for the x-element. X-element values are not included



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

ISO 9001/ISO 14001

