



BYPASS BLOWDOWN STEAM TRAP

MODEL J3S-X-RV STAINLESS STEEL

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.

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-RV	
Connection	Screwed	Flanged
Size	1/2", 3/4", 1"	DN 15, 20, 25
Orifice No.	2, 5, 10, 21	
Maximum Operating Pressure (barg)	PMO	2, 5, 10, 21
Maximum Differential Pressure (bar)	ΔPMX	2, 5, 10, 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
Maximum Allowable Temperature (°C) TMA: 220
Minimum Allowable Temperature (°C): -40
1 bar = 0.1 MPa



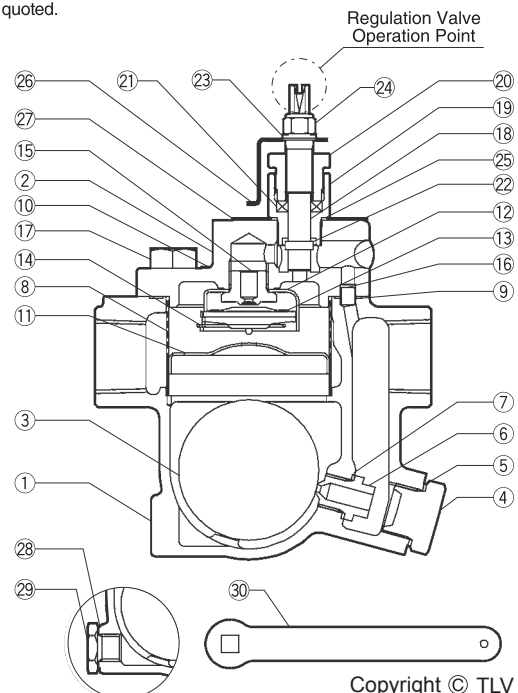
CAUTION

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	Cast Stainl. Steel A351/A351M Gr.CF8 or CF8M	1.4312 or 1.4410	—
②	Cover	Cast Stainl. Steel A351/A351M Gr.CF8	1.4312	—
③ ^F	Float	Stainless Steel SUS316L	1.4404	AISI316L
④	Orifice Plug	Cast Stainl. Steel A351/A351M Gr.CF8 or CF8M	1.4312 or 1.4410	—
⑤ ^{MR}	Orifice Plug Gasket	Stainless Steel SUS316L	1.4404	AISI316L
⑥ ^R	Orifice	—	—	—
⑦ ^{MR}	Orifice Gasket	Stainless Steel SUS316L	1.4404	AISI316L
⑧ ^R	Screen inside/outside	Stainless Steel SUS430/304	1.4016/301	AISI430/304
⑨ ^{MR}	Cover Gasket	Fluorine Resin PTFE	PTFE	PTFE
⑩	Nameplate	Stainless Steel SUS304/SUS316L	1.4301/1.4404	AISI304/AISI316L
⑪ ^R	Float Cover	Stainless Steel SUS304	1.4301	AISI304
⑫ ^R	X-element Guide	Stainless Steel SUS304	1.4301	AISI304
⑬ ^R	X-element	Stainless Steel	—	—
⑭ ^R	Spring Clip	Stainless Steel SUS304	1.4301	AISI304
⑮ ^R	Air Vent Valve Seat	Stainless Steel SUS420F	1.4028	AISI420F
⑯	Connector	Stainless Steel SUS416	1.4005	AISI416
⑰	Cover Bolt	Stainless Steel or A193/A193M Gr.B8M	— or 1.4401	—
⑱ ^V	Regulation Valve	Stainless Steel SUS303	1.4305	AISI303
⑲ ^V	Gland Case	Stainless Steel SUS303	1.4305	AISI303
⑳ ^V	Gland Retainer Nut	Stainless Steel SUS303	1.4305	AISI303
㉑ ^V	Gland Packing	Graphite	—	—
㉒ ^V	Pin	Stainless Steel SUS303	1.4305	AISI303
㉓ ^V	Washer	Stainless Steel SUS304	1.4301	AISI304
㉔ ^V	Locknut	Stainless Steel SUS304	1.4301	AISI304
㉕ ^{MRV}	Gland Case Gasket	Stainless Steel SUS316L	1.4404	AISI316L
㉖ ^V	Aperture Indicator	Stainless Steel SUS304	1.4301	AISI304
㉗ ^V	Aperture Indication Plate	Stainless Steel SUS304	1.4301	AISI304
㉘	Drain Plug Gasket**	Stainless Steel SUS303	1.4305	AISI303
㉙	Drain Plug**	Stainless Steel SUS316L	1.4404	AISI316L
㉚	Handle**	Carbon Steel SS400	1.0037	A6
㉛	Flange**	Cast Stainl. Steel A351/A351M Gr.CF8	1.4312	—

* Equivalent ** Option *** ASME Flange, not shown

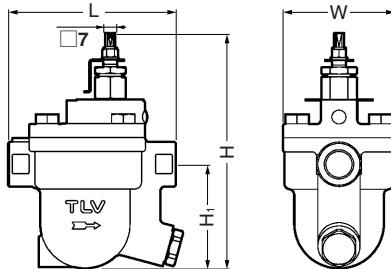
Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float, (V) regulation valve unit



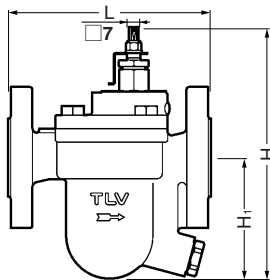
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Dimensions

• J3S-X-RV Screwed



• J3S-X-RV Flanged



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

J3S-X-RV Screwed*

(mm)

Size	L	H**	H ₁	W	Weight (kg)
1/2"	120	170	75	80	2.8
3/4"			72.5		2.9
1"		177	75		3.1

* BSPT, other standards available ** At full open position

J3S-X-RV Flanged

(mm)

DN	L			H*		H ₁		Weight** (kg)
	DIN 2501 PN25/40	ASME Class 150RF 300RF		DIN ASME		DIN ASME		
15	150	175	175	180		84		3.7
20		195	195	188	170	90	75	3.9
25	160	215	219	195		92		4.9

Other standards available, but length and weight may vary

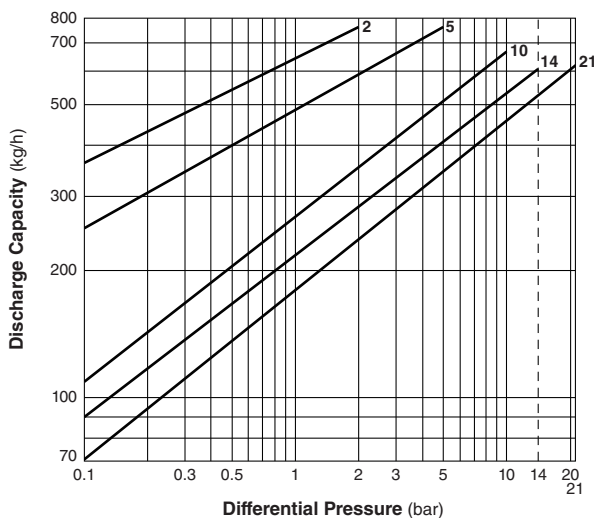
* At full open position ** Weight is for PN 25/40



CAUTION

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)



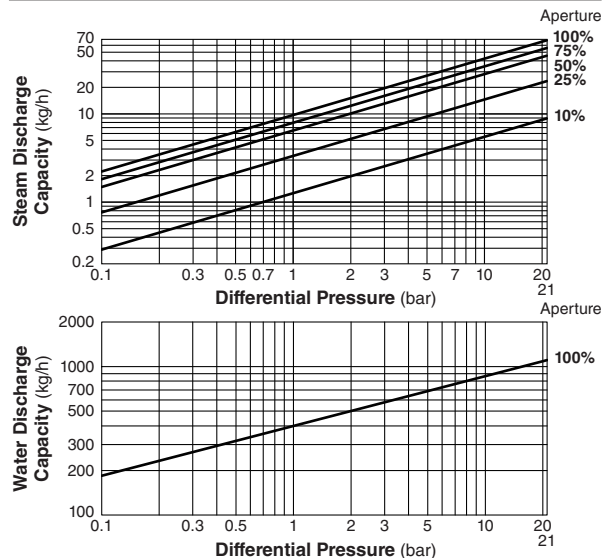
1. Line numbers within the graph are orifice numbers.
2. Differential pressure is the difference between the inlet and outlet pressure of the trap.
3. Capacities are based on continuous discharge of condensate 6°C below saturated steam temperature.
4. Recommended safety factor: at least 1.5.



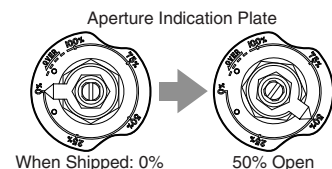
DO NOT use this product under conditions that exceed maximum differential pressure, as condensate backup will occur!

- 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)



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



When Shipped: 0% 50% Open

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

ISO 9001
ISO 14001

