BYPASS BLOWDOWN STEAM TRAP

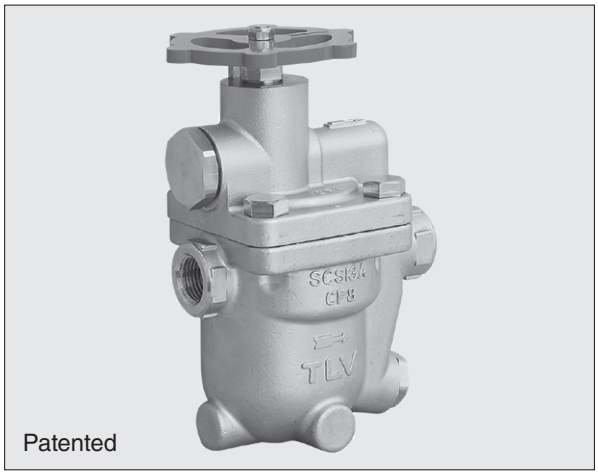
MODEL J3S-X-BV

FREE FLOAT STEAM TRAP WITH BYPASS BLOWDOWN FUNCTION

Features

A reliable and durable stainless steel steam trap that includes a built-in bypass valve to facilitate discharge of the large quantities of condensate produced at start-up by process equipment, heaters, air conditioners, tank heating, etc.

1. A tight-sealing manually operated ball valve incorporated into the cover can be used for bypass blowdown to reduce start-up times.
2. Self-modulating free float provides continuous, smooth, low velocity condensate discharge as process loads vary.
3. Precision-ground float, constant water seal and three-point seating design ensure a steam tight seal, even under no-load conditions.
4. Thermostatic capsule (X-element) with "fail open" feature vents air automatically until close-to-steam temperature.



Patented

Specifications

Model	J3S-X-BV	
Connection	Screwed	Flanged
Size (mm)	15, 20, 25	15, 20, 25
Orifice No.	2, 5, 10	
Maximum Operating Pressure (MPaG) PMO	0.2, 0.5, 1.0	
Maximum Differential Pressure (MPa) ΔPMX	0.2, 0.5, 1.0	
Maximum Operating Temperature (°C) TMO	185	
Subcooling of X-element Fill (°C)	Up to 6	
Type of X-element	C6	

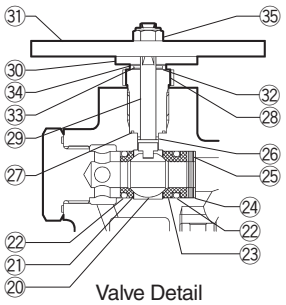
⚠ CAUTION

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.

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS): 1 MPa = 10.197 kg/cm^2
Maximum Allowable Pressure (MPaG) PMA: 1.0
Maximum Allowable Temperature (°C) TMA: 185

No.	Description	Material	JIS	ASTM/AISI*
①	Body	Cast Stainless Steel	—	A351/A351M Gr.CF8
②C	Cover	Cast Stainless Steel	—	A351/A351M Gr.CF8
③F	Float	Stainless Steel	SUS316L	AISI316L
④	Orifice Plug	Cast Stainless Steel	—	A351/A351M Gr.CF8
⑤MR	Orifice Plug Gasket	Stainless Steel	SUS316L	AISI316L
⑥R	Orifice	—	—	—
⑦MR	Orifice Gasket	Stainless Steel	SUS316L	AISI316L
⑧R	Screen inside/outside	Stainless Steel	SUS430/304	AISI430/304
⑨MRC	Cover Gasket	Fluorine Resin	PTFE	PTFE
⑩	Nameplate	Stainless Steel	SUS304	AISI304
⑪R	Float Cover	Stainless Steel	SUS304	AISI304
⑫RC	X-element Guide	Stainless Steel	SUS304	AISI304
⑬RC	X-element	Stainless Steel	—	—
⑭RC	Spring Clip	Stainless Steel	SUS304	AISI304
⑮RC	Air Vent Valve Seat	Stainless Steel	SUS420F	AISI420F
⑯	Connector	Stainless Steel	SUS304	AISI304
⑰	Cover Bolt	Stainless Steel	—	—
⑱C	Valve Holder	Stainless Steel	SUS304	AISI304
⑲MRC	Valve Holder Gasket	Fluorine Resin	PTFE	PTFE
⑳C	Ball	Stainless Steel	SUS304	AISI304
㉑C	Inlet Valve Seat	Fluorine Resin w/ Graphite	PTFE	PTFE
㉒C	O-Ring (Inlet/Outlet Valve Seat)	Fluorine Rubber	FPM	D2000HK
㉓C	Outlet Valve Seat	Fluorine Resin w/ Graphite	PTFE	PTFE
㉔C	Washer	Stainless Steel	SUS304	AISI304
㉕C	Disc Spring	Stainless Steel	SUS301	AISI301
㉖C	Gland Packing	Fluorine Resin w/ Carbon	PTFE	PTFE
㉗MRC	Gland Gasket	Fluorine Resin	PTFE	PTFE
㉘C	Gland	Stainless Steel	SUS303	AISI303
㉙C	Spindle	Stainless Steel	SUS303	AISI303
㉚C	Handle Stopper	Stainless Steel	SUS304	AISI304
㉛C	Handle	Stainless Steel	SUS304	AISI304
㉜C	Thrust Washer	Fluorine Resin w/ Carbon	PTFE	PTFE
㉝C	Washer	Stainless Steel	SUS304	AISI304
㉞C	Disc Spring	Stainless Steel	SUS301	AISI301
㉟C	Locknut	Stainless Steel	SUS304	AISI304
㊱	Socket	Stainless Steel	SUS304	AISI304
㊲	Drain Plug Gasket**	Stainless Steel	SUS303	AISI303
㊳	Drain Plug**	Stainless Steel	SUS316L	AISI316L

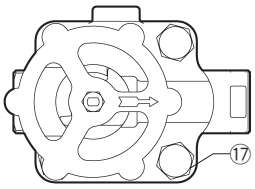
* Equivalent ** Option
Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float, (C) cover unit

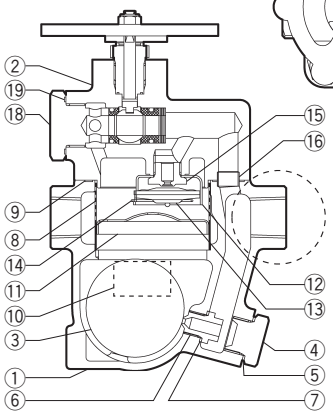


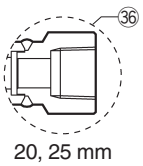
Valve Detail

When the arrow on the handle is pointing in a direction perpendicular to the piping, the built-in bypass valve is in the CLOSED position, so the product functions as a normal steam trap.

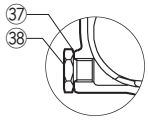
When the arrow on the handle is pointing in a direction parallel to the piping, the built-in bypass valve is in the OPEN position, and the bypass function is enabled.





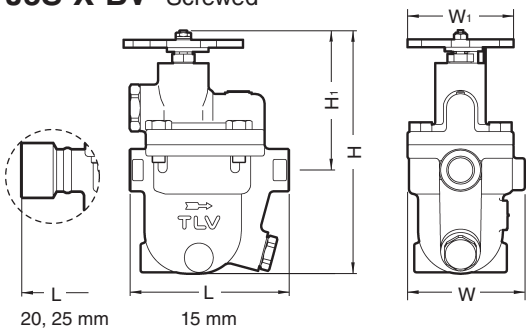


20, 25 mm

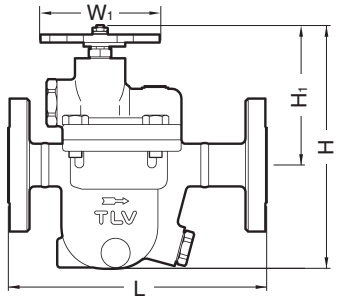


Dimensions

● **J3S-X-BV** Screwed



● **J3S-X-BV** Flanged



CAUTION Removing the handle or locknut causes degradation of the gland section seal. Do not remove the handle or locknut except when performing a disassembly inspection.

J3S-X-BV Screwed* (mm)

Size	L	H	H_1	W	W_1	Weight (kg)
15	120	183	105	89.5	90	3.0
20	190					3.5
25	200					3.7

* Rc(PT), other standards available

J3S-X-BV Flanged (mm)

Size	L		H	H_1	W_1	Weight* (kg)
	ASME Class					
	150RF	300RF				
15	175	175	183	105	90	3.9
20	195	195				5.1
25	215	219				5.8

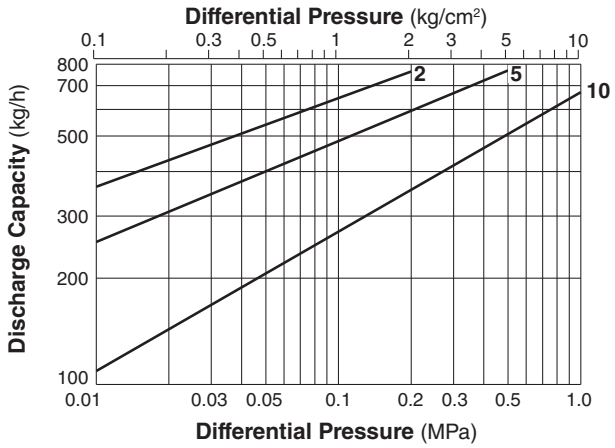
Other standards available, but length and weight may vary
* Weight is for Class 300 RF

Note: The built-in bypass valve can not be used as a stop valve for the inlet and outlet of the product. Accordingly, it is recommended that a separate stop valve be installed at the inlet and outlet for maintenance purposes.

Bypass Valve (Ball Valve) Cv Value

Size (mm)	15	20	25
Ball Valve Bore Size	ϕ 10 mm		
Cv (US)	1.4		
Cv (UK)	1.2		
Kvs (DIN)	1.2		

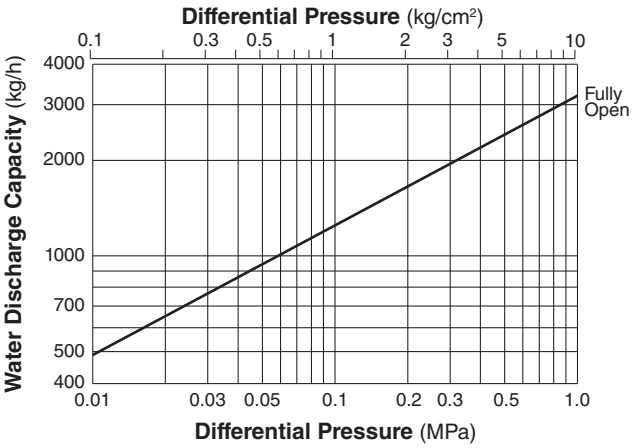
Discharge Capacity (Steam Trap)



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.

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

Bypass Capacity (Ball Valve)



1. Capacities are based on continuous discharge of water at room temperature (Aperture: fully open) and are applicable for temperatures below 100°C.
2. Differential pressure is the difference between the inlet and outlet pressure of the trap.
3. Capacities are the values for the bypass valve (ball valve). X-element values are not included.

CAUTION Operate the bypass valve (ball valve) in only the fully open or fully closed positions. Operation in an intermediate position will damage the valve seat and may lead to leaking of the valve.

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

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