



BYPASS BLOWDOWN STEAM TRAP

MODEL J3S-X-BV STAINLESS STEEL

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.



Specifications

Model		J3S-X-BV	
Connection		Screwed	Flanged
Size		½", ¾", 1"	DN 15, 20, 25
Orifice No.		2, 5, 10	
Maximum Operating Pressure (barg)		PMO 2, 5, 10	
Maximum Differential Pressure (bar)		ΔPMX 2, 5, 10	
Maximum Operating Temperature (°C)		TMO 185	
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: 10
Maximum Allowable Temperature (°C) TMA: 185

1 bar = 0,1 MPa

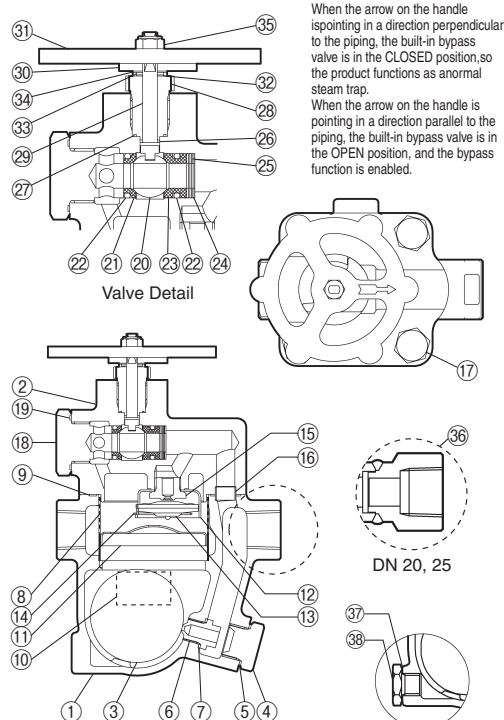
CAUTION

To avoid abnormal operation, accidents or serious injury, DONOT 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 Stainless Steel A351/A351M Gr.CF8	1.4312	—
② ^C	Cover	Cast Stainless Steel A351/A351M Gr.CF8	1.4312	—
③ ^F	Float	Stainless Steel SUS316L	1.4404	AISI316L
④	Orifice Plug	Cast Stainless Steel A351/A351M Gr.CF8	1.4312	—
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	1.4016/1.4301	AISI430/304
⑨ ^{MRC}	Cover Gasket	Fluorine Resin PTFE	PTFE	PTFE
⑩	Nameplate	Stainless Steel SUS304	1.4301	AISI304
⑪ ^R	Float Cover	Stainless Steel SUS304	1.4301	AISI304
⑫ ^{RC}	X-element Guide	Stainless Steel SUS304	1.4301	AISI304
⑬ ^{RC}	X-element	Stainless Steel	—	—
⑭ ^{RC}	Spring Clip	Stainless Steel SUS304	1.4301	AISI304
⑮ ^{RC}	Air Vent Valve Seat	Stainless Steel SUS420F	1.4028	AISI420F
⑯	Connector	Stainless Steel SUS304	1.4301	AISI304
⑰	Cover	Bolt Stainless Steel	—	—
⑱ ^C	Valve Holder	Stainless Steel SUS304	1.4301	AISI304
⑲ ^{MRC}	Valve Holder Gasket	Fluorine Resin PTFE	PTFE	PTFE
⑳ ^C	Ball	Stainless Steel SUS304	1.4301	AISI304
㉑ ^C	Inlet Valve Seat	Fluorine Resin w/ Graphite PTFE	PTFE	PTFE
㉒ ^C	O-Ring (Inlet/Outlet Valve Seat)	Fluorine Rubber FPM	FPM	D2000HK
㉓ ^C	Outlet Valve Seat	Fluorine Resin w/ Graphite PTFE	PTFE	PTFE
㉔ ^C	Washer	Stainless Steel SUS304	1.4301	AISI304
㉕ ^C	Disc Spring	Stainless Steel SUS301	1.4310	AISI301
㉖ ^C	Gland Packing	Fluorine Resin w/ Carbon PTFE	PTFE	PTFE
㉗ ^{MRC}	Gland Gasket	Fluorine Resin PTFE	PTFE	PTFE
㉘ ^C	Gland	Stainless Steel SUS303	1.4305	AISI303
㉙ ^C	Spindle	Stainless Steel SUS303	1.4305	AISI303
㉚ ^C	Handle Stopper	Stainless Steel SUS304	1.4301	AISI304
㉛ ^C	Handle	Stainless Steel SUS304	1.4301	AISI304
㉜ ^C	Thrust Washer	Fluorine Resin w/ Carbon PTFE	PTFE	PTFE
㉝ ^C	Washer	Stainless Steel SUS304	1.4301	AISI304
㉞ ^C	Disc Spring	Stainless Steel SUS301	1.4310	AISI301
㉟ ^C	Locknut	Stainless Steel SUS304	1.4301	AISI304
㊱	Socket	Stainless Steel SUS304	1.4301	AISI304
㊲	Drain Plug Gasket**	Stainless Steel SUS316L	1.4404	AISI316L
㊳	Drain Plug**	Stainless Steel SUS303	1.4305	AISI303
㊴	Flange***	Cast Stainless Steel A351/A351M Gr.CF8	1.4312	—

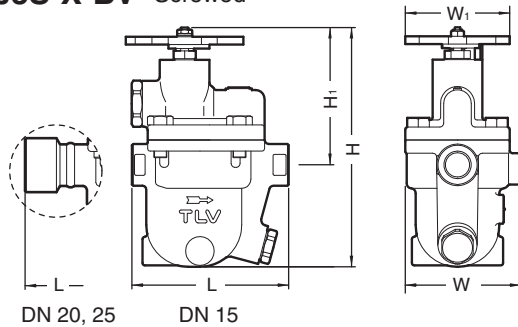
* Equivalent materials ** Option *** Shown on reverse

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

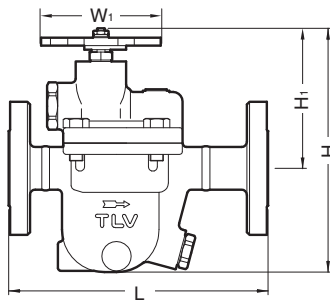


Dimensions

● J3S-X-BV Screwed



J3S-X-BV Flanged



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)
½"	120	183	105	89,5	90	3,0
¾"	190					3,5
1"	200					3,7

* BSP DIN 2999, other standards available

J3S-X-BV Flanged (mm)

DN	L			H	H ₁	W ₁	Weight* (kg)
	DIN 2501	ASME Class					
	PN16	150RF	300RF				
15	170	175	175	183	105	90	4,0
20	170	195	195				4,4
25	180	215	219				5,7

Other standards available, but length and weight may vary

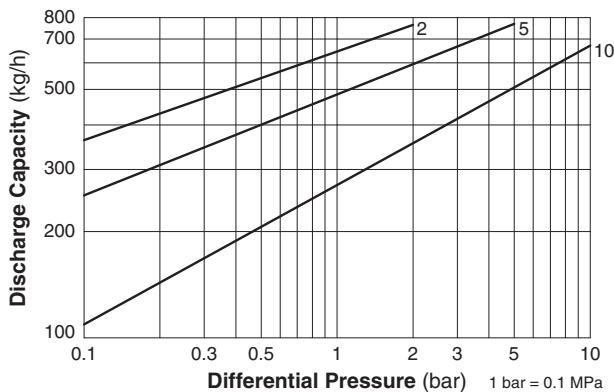
* Weight is for PN 16

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 & Kvs Values

DN	15	20	25
Ball Valve Bore Size	φ 10 mm		
Kvs (DIN)	1,2		
Cv (UK)	1,2		
Cv (US)	1,4		

Discharge Capacity (Steam Trap)

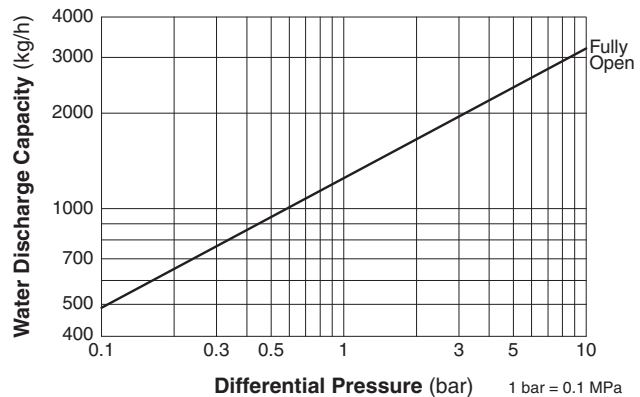


- Line numbers within the graph are orifice numbers.
- Differential pressure is the difference between the inlet and outlet pressure of the trap.
- Capacities are based on continuous discharge of condensate 6°C below saturated steam temperature.
- Recommended safety factor: at least 1.5.



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

Bypass Capacity (Ball Valve)



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



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

