



FREE FLOAT STEAM TRAP

MODEL J3X

FREE FLOAT STEAM TRAP WITH THERMOSTATIC AIR VENTING

Features

A reliable and durable cast iron, ductile cast iron or stainless steel free float steam trap with tight shut-off for use on small process equipment.

1. Self-modulating free float provides continuous, smooth, low velocity condensate discharge as process loads vary.
2. Only one moving part, the free float, eliminates concentrated valve wear and provides long maintenance-free service life.
3. Thermostatic capsule with "fail open" feature vents air automatically until close-to-steam temperature, for rapid start-up, increased productivity and even heating.
4. Easy, inline access to internal parts simplifies cleaning and reduces maintenance costs.
5. Built-in screen with large surface area ensures trouble-free operation.



Specifications

Model		J3X		JF3X
Body material		Ductile Cast Iron	Stainless Steel	Cast Iron
Connection		Screwed		Flanged
Size (mm)		15, 20, 25		
Orifice No.		2, 5, 8, 10, 21		2, 5, 8, 10, 16
Maximum Operating Pressure (MPaG)	PMO	0.2, 0.5, 0.8, 1.0, 2.1		0.2, 0.5, 0.8, 1.0, 1.57
Maximum Differential Pressure (MPa)	ΔPMX	0.2, 0.5, 0.8, 1.0, 2.1		0.2, 0.5, 0.8, 1.0, 1.57
Minimum Operating Pressure (MPaG)		0.01		
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 (J3X), 1.57 (JF3X); Maximum Allowable Temperature (°C) TMA: 220

1 MPa = 10.197 kg/cm²



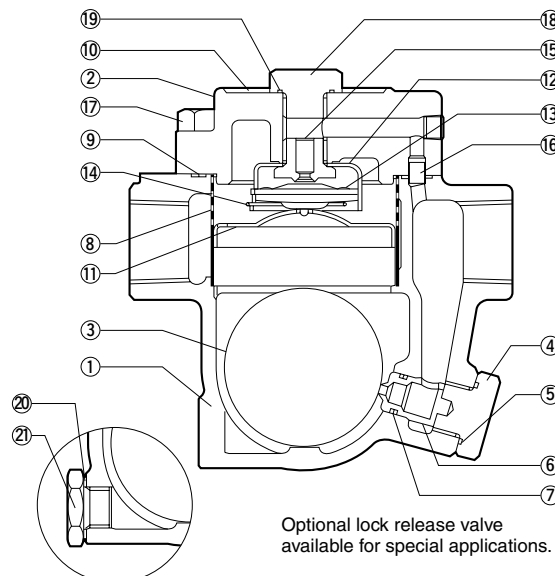
CAUTION

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	Materials	JIS	ASTM/AISI*
①	Body (J3X)	Ductile Cast Iron	FCD450	A536 Gr. 35-45-12
	Body (JF3X)	Cast Stainless Steel	A351 Gr. CF8	—
②	Cover	Ductile Cast Iron	FCD450	A536 Gr. 35-45-12
		Cast Stainless Steel	A351 Gr. CF8	—
③ ^F	Float	Stainless Steel	SUS316L	AISI316L
④	Orifice Holder Plug	Carbon Steel	S25C	AISI1025
		Stainless Steel	SUS303	AISI303
⑤ ^{MR}	Orifice Plug Gasket	Fluorine Resin	PTFE	PTFE
⑥ ^R	Orifice	Stainless Steel	SUS420F	AISI420F
⑦ ^{MR}	Orifice O-Ring	Synthetic Rubber	EPR	D2000CA
⑧ ^R	Screen outside/inside	Stainless Steel	SUS304/430	AISI304/430
⑨ ^{MR}	Cover Gasket	Fluorine Resin	PTFE	PTFE
⑩	Nameplate	Stainless Steel	SUS304	AISI304
⑪ ^R	Float Cover	Stainless Steel	SUS304	AISI304
⑫ ^R	X-element Guide	Stainless Steel	SUS304	SUS304
⑬ ^R	X-element	Stainless Steel	—	—
⑭ ^R	Spring Clip	Stainless Steel	SUS304	AISI304
⑮ ^R	Air Vent Valve Seat	Stainless Steel	SUS420F	AISI420F
		Stainless Steel	SUS416	SUS416
⑯	Connector	Carbon Steel	S45C	AISI1045
		Stainless Steel	SUS304	AISI304
⑰ ^{MR}	Plug	Carbon Steel	S25C	AISI1025
		Stainless Steel	SUS303	AISI303
⑱	Plug Gasket	Fluorine Resin	PTFE	PTFE
⑳ ^{MR}	Drain Plug Gasket**	Soft Iron	SUYP	AISI1010
		Stainless Steel	SUS303	AISI303
㉑	Drain Plug**	Carbon Steel	S25C	AISI1025
		Stainless Steel	SUS316L	AISI316L

* Equivalent ** Option

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



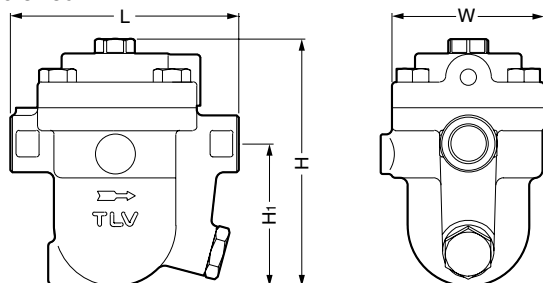
Optional lock release valve available for special applications.

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Dimensions

● J3X

Screwed



J3X Screwed*

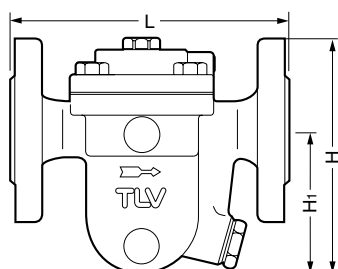
(mm)

Size	L	H	H ₁	W	Weight (kg)
15	120	130 (128)	75 (73)	80	2.7 (2.5)
20			73		2.8 (2.6)
25		137 (135)	75		3.0 (2.8)

* Rc(PT), other standards available
() Stainless steel body

● JF3X

Flanged



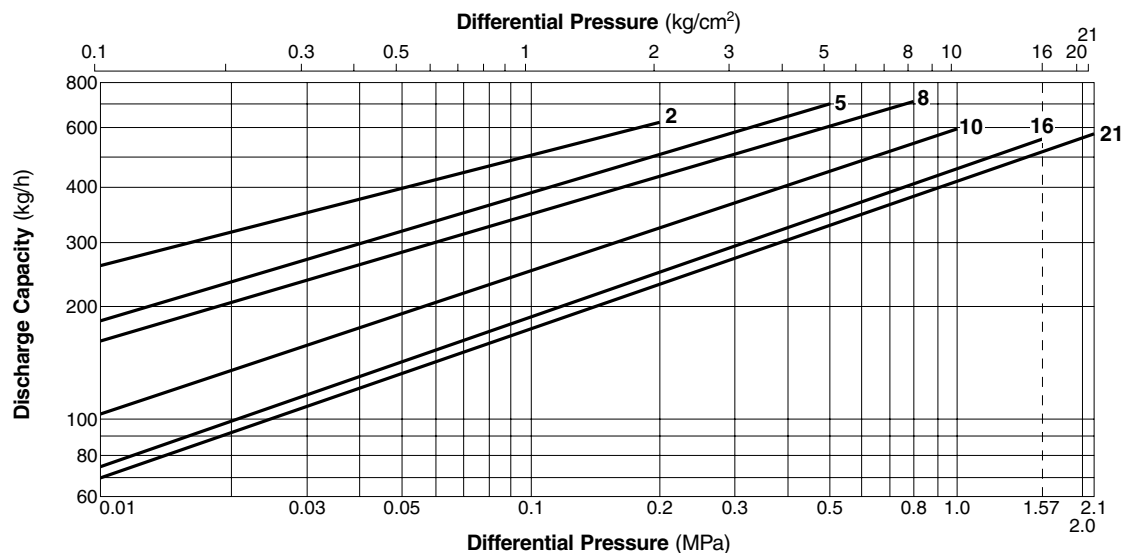
JF3X Flanged

(mm)

Size	L				H	H ₁	W	Weight (kg)
	ASME Class							
	125FF	(150RF)	250RF	(300RF)				
(15)	—	175	—	175	127	79	80	3.8
(20)	—	195	—	195	133	89		5.1
25	203	215	215	219	140	91		6.0

() No ASME standard exists for cast iron; machined to fit steel flanges
Class 125 FF can connect to 150 RF, 250 RF can connect to 300RF
Other standards available, but length and weight may vary
* Weight is for Class 250 RF/300 RF

Discharge Capacity



1. Line numbers within the graph refer to 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 traps under conditions that exceed maximum differential pressure, as condensate backup will occur!

Manufacturer

ISO 9001/ISO 14001

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

