



FREE FLOAT STEAM TRAP

MODEL J3X

FREE FLOAT STEAM TRAP WITH THERMOSTATIC AIR VENTING

Features

A reliable and durable ductile cast iron or cast iron steam trap with tight shut-off for use on small-size 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, prevents concentrated wear and provides long maintenance-free service life.
3. Thermostatic capsule (X-element) with "fail open" feature vents air automatically until close-to-steam temperature.
4. Built-in screen with large surface area ensures extended trouble-free operation.
5. Easy, inline access to internal parts simplifies cleaning and reduces maintenance costs.



Specifications

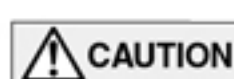
Model	J3X		JF3X
Connection	Screwed		Flanged
Size (mm)	15, 20, 25		
Orifice No.	2, 5, 8, 10, 21		2, 5, 8, 10, 16
Maximum Operating Pressure (MPaG) PMO	0.2, 0.5, 0.8, 1.0, 2.1		0.2, 0.5, 0.8, 1.0, 1.57
Maximum Differential Pressure (MPa) ΔPMX	0.2, 0.5, 0.8, 1.0, 2.1		0.2, 0.5, 0.8, 1.0, 1.57
Minimum Operating 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

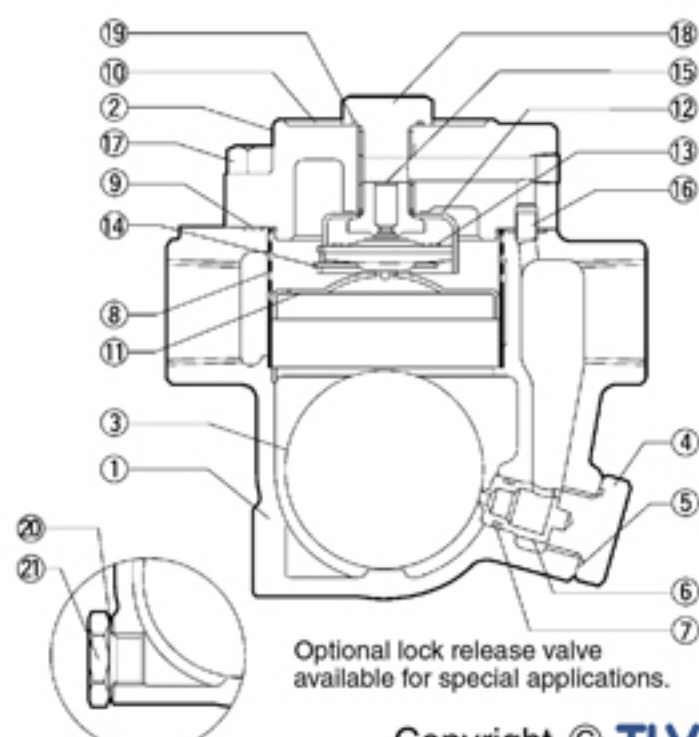


To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

No.	Description	Materials	JIS	ASTM/AISI*
①	Body (J3X)	Ductile Cast Iron	FCD450	A536
	Body (JF3X)	Cast Iron	FCV410	A842 Gr.400
②	Cover	Ductile Cast Iron	FCD450	A536
③F	Float	Stainless Steel	SUS316L	AISI316L
④	Orifice Holder Plug	Carbon Steel	S25C	AISI1025
⑤MR	Orifice Plug Gasket	Fluorine Resin	PTFE	PTFE
⑥R	Orifice	—	—	—
⑦MR	Orifice O-Ring	Ethylene Propylene Rubber	EPR	D2000CA
⑧R	Screen inside/outside	Stainless Steel	SUS430/304	AISI430/304
⑨MR	Cover Gasket	Fluorine Resin	PTFE	PTFE
⑩	Nameplate	Stainless Steel	SUS304	AISI304
⑪R	Float Cover	Stainless Steel	SUS304	AISI304
⑫R	X-element Guide	Stainless Steel	SUS304	SUS304
⑬R	X-element	Stainless Steel	—	—
⑭R	Spring Clip	Stainless Steel	SUS304	AISI304
⑮R	Air Vent Valve Seat	Stainless Steel	SUS420F	AISI420F
⑯	Connector	Stainless Steel	SUS416	AISI416
⑰	Cover Bolt	Carbon Steel	S45C	AISI1045
⑱	Plug	Carbon Steel	S25C	AISI1025
⑲MR	Plug Gasket	Fluorine Resin	PTFE	PTFE
⑳	Drain Plug Gasket**	Soft Iron	SUYF	AISI1010
㉑	Drain Plug**	Carbon Steel	S25C	AISI1025

* Equivalent ** Option

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



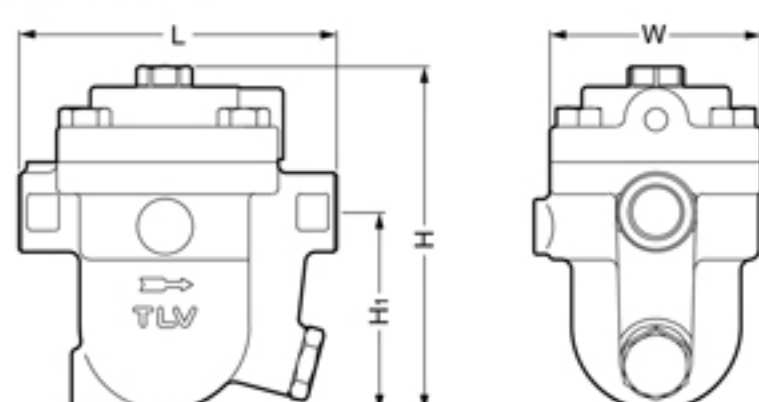
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Consulting & Engineering Service

Dimensions

● J3X Screwed

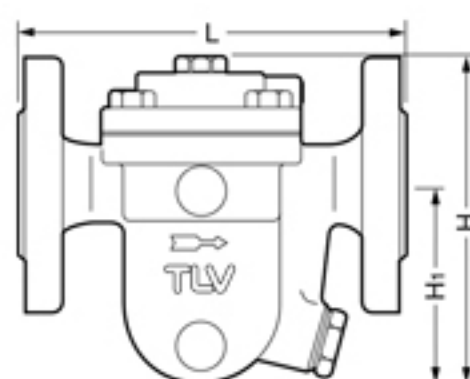


J3X Screwed* (mm)

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

* Rc(PT), other standards available

● JF3X Flanged



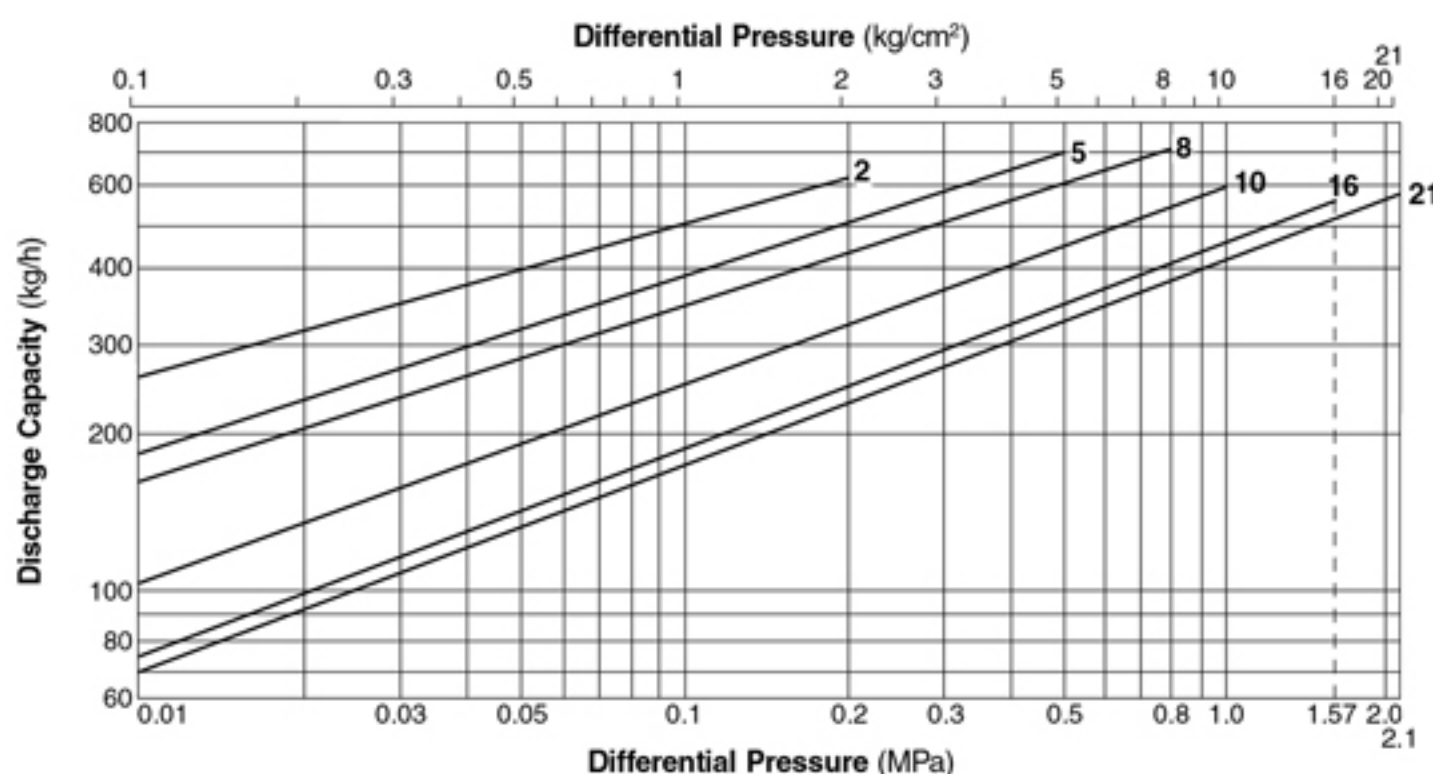
JF3X Flanged (mm)

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	

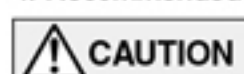
() No ASME standard exists for cast iron; machined to fit steel flanges. Class 125 FF can connect to 150 RF, 250 RF can connect to 300 RF. Other standards available, but length and weight may vary.

* 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

