



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, 1.6
Maximum Differential Pressure (MPa) ΔPMX	0.2, 0.5, 0.8, 1.0, 2.1	0.2, 0.5, 0.8, 1.0, 1.6
Minimum Operating Pressure (MPaG)	0.01	
Maximum Operating Temperature (°C) TMO	220	
Subcooling of X-element fill (°C)	up to 6 (option: up to 11)	
Type of X-element	C6 (option: C11*)	

* Trap discharge capacity will decrease slightly. Contact TLV for information.

1 MPa = 10.197 kg/cm²

PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS):

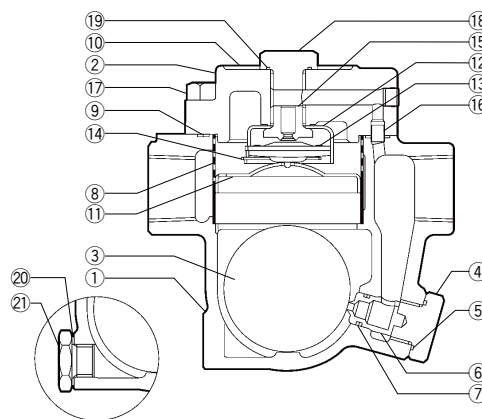
Maximum Allowable Pressure (MPaG) PMA: 2.1 (J3X), 1.6 (JF3X)

Maximum Allowable Temperature (°C) TMA: 220



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	JIS	ASTM/AISI*
①	J3X	Ductile Cast Iron	FCD450	A536
	JF3X	Cast Iron	FCV400	A842 Gr.400
②	Cover	Ductile Cast Iron	FCD450	A536
③ ^F	Float	Stainless Steel	SUS316L	AISI316L
④	Orifice Holder Plug	Carbon Steel	S25C	AISI1025
⑤ ^{MR}	Orifice Plug Gasket	Fluorine Resin	PTFE	PTFE
⑥ ^R	Orifice	—	—	—
⑦ ^{MR}	Orifice O-Ring	Ethylene Propylene Rubber	EPR	D2000CA
⑧ ^R	Screen inside/outside	Stainless Steel	SUS430/304	AISI430/304
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	AISI304
⑬ ^R	X-element	Stainless Steel	—	—
⑭ ^R	Spring Clip	Stainless Steel	SUS304	AISI304
⑮ ^R	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
⑲ ^{MR}	Plug Gasket	Fluorine Resin	PTFE	PTFE
⑳	Drain Plug Gasket**	Soft Iron	SUYP	AISI1010
㉑	Drain Plug**	Carbon Steel	S25C	AISI1025



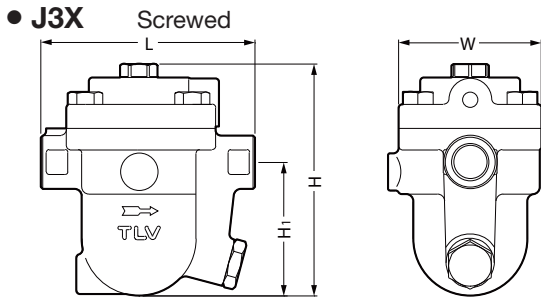
Optional lock release valve LR3 available for special applications.

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* Equivalent ** Option

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

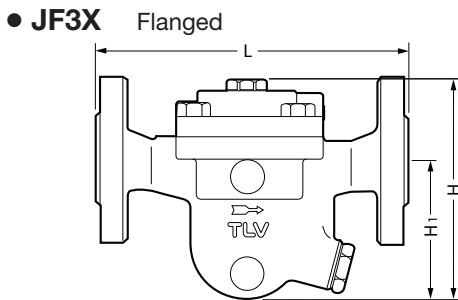
Dimensions



J3X Screwed* (mm)

Size	L	H	H ₁	W	Weight (kg)
15	120	130	75	80	2.7
20			72.5		2.8
25		137	75		3.0

* Rc(PT), other standards available

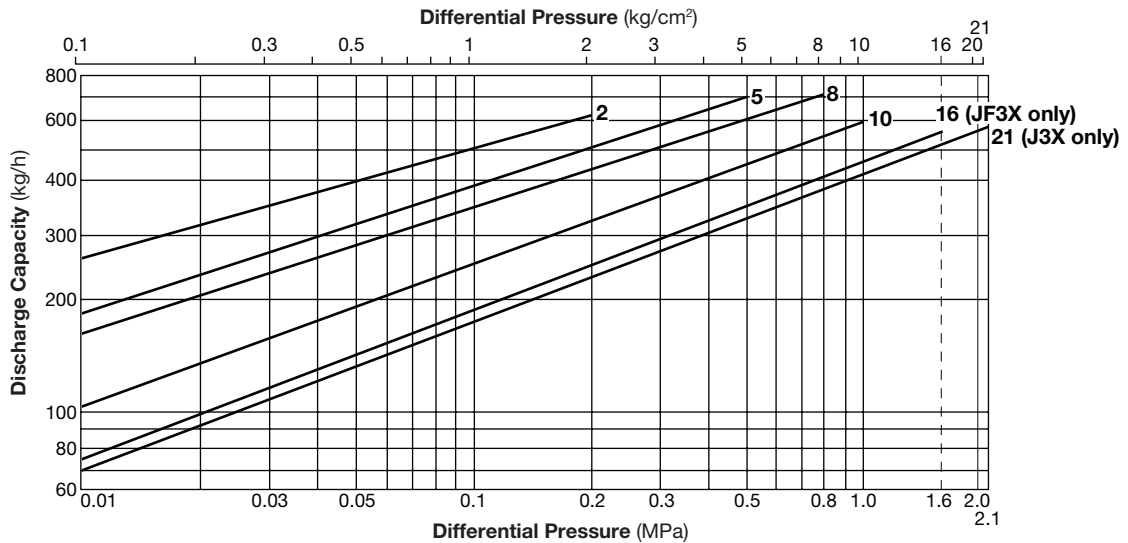


JF3X Flanged (mm)

Size	L				H	H ₁	Weight* (kg)
	ASME Class						
	125FF	(150RF)	250RF	(300RF)			
(15)	—	175	—	175	130	80	3.8
(20)	—	195	—	195	135	90	5.1
25	203	215	215	219	140	95	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.

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

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

