



# FREE FLOAT<sup>®</sup> STEAM TRAP

## MODEL J5X

### 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 to medium-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

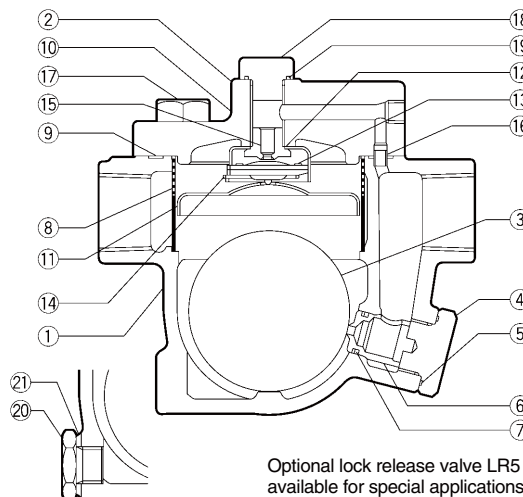
Model	J5X	JF5X
Connection	Screwed	Flanged*
Size (mm)	20, 25, 32, 40	20, 25, 32, 40, 50
Orifice No.	2, 5, 8, 10, 21	2, 5, 8, 10, 16
Maximum Operating Pressure (MPaG) PMO	0.2, 0.5, 0.8, 1.0, 2.1	0.2, 0.5, 0.8, 1.0, 1.6
Maximum Differential Pressure (MPa) Δ PMX	0.2, 0.5, 0.8, 1.0, 2.1	0.2, 0.5, 0.8, 1.0, 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**)

\* JF5X 20 mm and 25 mm have screwed-in flanges \*\* Trap discharge capacity will decrease slightly. Contact TLV for information. 1 MPa = 10.197 kg/cm<sup>2</sup>  
 PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS):  
 Maximum Allowable Pressure (MPaG) PMA: 2.1 (J5X, JF5X 20, 25 mm), 1.6 (JF5X 32 to 50 mm)  
 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	Body J5X, JF5X 20, 25 mm JF5X 32, 40, 50 mm	Ductile Cast Iron Cast Iron	FCD450 FCV410	A536 A842 Gr.400
②	Cover	Ductile Cast Iron	FCD450	A536
③ <sup>F</sup>	Float	Stainless Steel	SUS316L	AISI316L
④	Orifice Holder Plug	Carbon Steel	S25C	AISI1025
⑤ <sup>MR</sup>	Orifice Plug Gasket	Fluorine Resin	PTFE	PTFE
⑥ <sup>R</sup>	Orifice	—	—	—
⑦ <sup>MR</sup>	Orifice O-Ring	Ethylene propylene Rubber	EPR	D2000CA
⑧ <sup>R</sup>	Screen inside/outside	Stainless Steel	SUS430/304	AISI430/304
⑨ <sup>MR</sup>	Cover Gasket	Fluorine Resin	PTFE	PTFE
⑩	Nameplate	Stainless Steel	SUS304	AISI304
⑪ <sup>R</sup>	Float Cover	Stainless Steel	SUS304	AISI304
⑫ <sup>R</sup>	X-element Guide	Stainless Steel	SUS304	AISI304
⑬ <sup>R</sup>	X-element	Stainless Steel	—	—
⑭ <sup>R</sup>	Spring Clip	Stainless Steel	SUS304	AISI304
⑮ <sup>R</sup>	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 <sup>MR</sup>	Plug Gasket	Fluorine Resin	PTFE	PTFE
⑳	Drain Plug**	Carbon Steel	S25C	AISI1025
㉑	Drain Plug Gasket**	Soft Iron	SUYP	AISI1010
㉒	Flange (JF5X 20, 25 mm)***	Carbon Steel	SS400/S25C	A6/AISI1025
㉓	Pipe (JF5X 20, 25 mm)***	Carbon Steel	STPG370	A53 Type S Gr.A



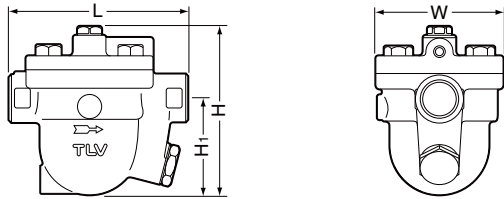
Optional lock release valve LR5 available for special applications.

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\* Equivalent \*\* Option \*\*\* Shown on reverse  
 Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float

**Dimensions**

● **J5X** Screwed

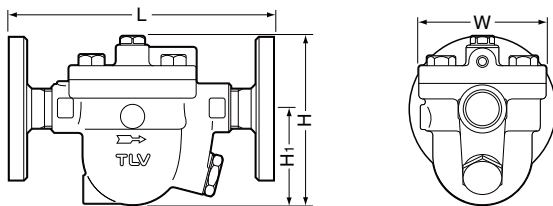


**J5X** Screwed\* (mm)

Size	L	H	H <sub>1</sub>	W	Weight (kg)
20	155	149	84	108	4.4
25					4.3
32					5.8
40	160	182	106		

\* Rc (PT), other standards available

● **JF5X** Flanged 20, 25 mm (Screwed-in flange)

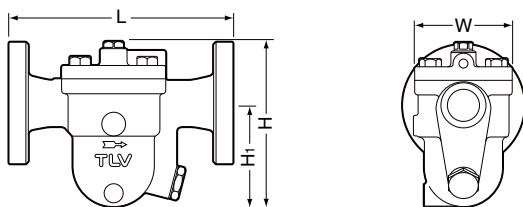


**JF5X** Flanged (mm)

Size	L		H	H <sub>1</sub>	W	Weight* (kg)
	ASME Class					
	150RF	300RF				
20	250	250	149	84	108	6.8
25						7.4

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

● **JF5X** Flanged 32, 40, 50 mm

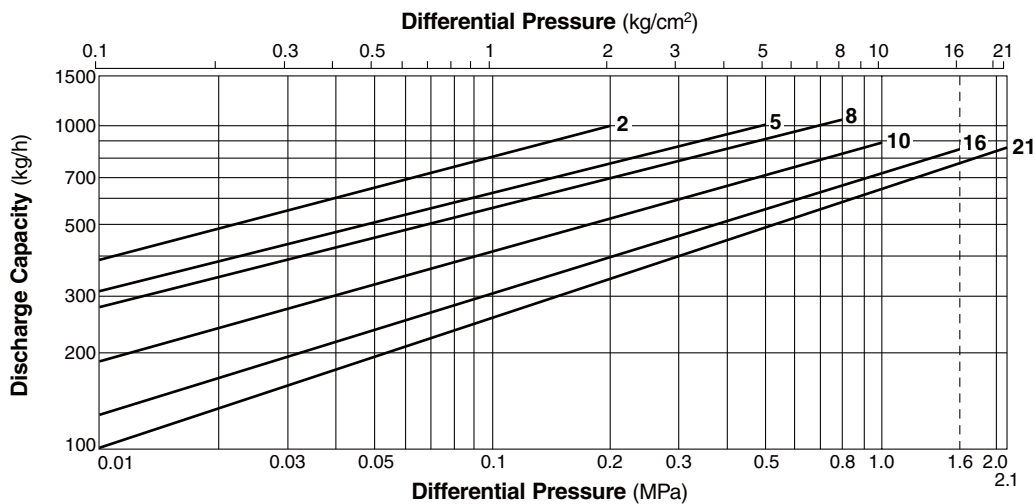


**JF5X** Flanged (mm)

Size	L				H	H <sub>1</sub>	W	Weight* (kg)
	ASME Class							
	125FF	(150RF)	250RF	(300RF)				
32	231	245	244	245	182	113	108	9.4
40	250	260	262	264		116		11
50	257	265	270	271	196	119		12

( ) 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 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

