



# FREE FLOAT<sup>®</sup> STEAM TRAP

## MODEL J3X DUCTILE CAST IRON

### FREE FLOAT STEAM TRAP WITH THERMOSTATIC AIR VENTING

#### Features

**A reliable and durable ductile 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.

#### Pressure Equipment Directive (PED)

Classification according to PED 2014/68/EU, fluid group 2

Size	Category	CE marking
DN 15 to DN 25	—*	Art. 4, Sec. 3 (sound engineering practice), CE marking not allowed

\* Manufactured in accordance with sound engineering practice



#### Specifications

Model	J3X	JF3X
Connection	Screwed	Flanged
Size	1/2", 3/4", 1"	DN 15, 20, 25
Orifice No.	2, 5, 8, 10, 13	
Maximum Operating Pressure (barg) PMO	2, 5, 8, 10, 13	
Maximum Differential Pressure (bar) Δ PMX	2, 5, 8, 10, 13	
Maximum Operating Temperature (°C) TMO	200	
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: 13      1 bar = 0.1 MPa  
Maximum Allowable Temperature (°C) TMA: 200

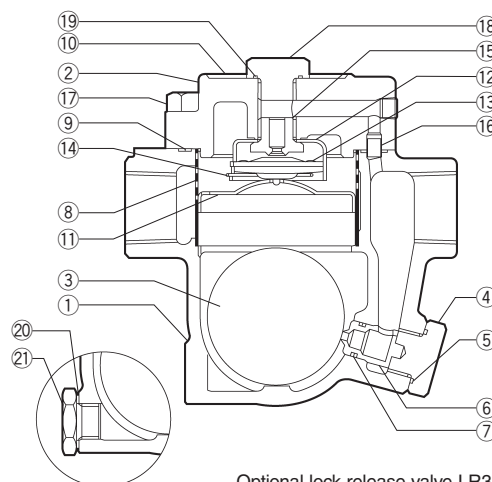


To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

No.	Description	Material	DIN*	ASTM/AISI*
①	Body	Duct. Cast Iron GGG40.3	0.7043	A395
②	Cover	Duct. Cast Iron GGG40.3	0.7043	A395
③ <sup>F</sup>	Float	Stainless Steel SUS316L	1.4404	AISI316L
④	Orifice Holder Plug	Carbon Steel S25C	1.1158	AISI1025
⑤ <sup>MR</sup>	Holder Plug Gasket	Fluorine Resin PTFE	PTFE	PTFE
⑥ <sup>R</sup>	Orifice	—	—	—
⑦ <sup>MR</sup>	Orifice O-Ring	Synthetic Rubber EPR	EPR	D2000CA
⑧ <sup>R</sup>	Screen inside/outside	Stainless Stl. SUS430/304	1.4016/1.4301	AISI430/304
⑨ <sup>MR</sup>	Cover Gasket	Fluorine Resin PTFE	PTFE	PTFE
⑩	Nameplate	Stainless Steel SUS304	1.4301	AISI304
⑪ <sup>R</sup>	Float Cover	Stainless Steel SUS304	1.4301	AISI304
⑫ <sup>R</sup>	X-element Guide	Stainless Steel SUS304	1.4301	AISI304
⑬ <sup>R</sup>	X-element	Stainless Steel	—	—
⑭ <sup>R</sup>	Spring Clip	Stainless Steel SUS304	1.4301	AISI304
⑮ <sup>R</sup>	Air Vent Valve Seat	Stainless Steel SUS420F	1.4028	AISI420F
⑯	Connector	Stainless Steel SUS416	1.4005	AISI416
⑰	Cover Bolt	Carbon Steel S45C	1.0503	AISI1045
⑱	Plug	Carbon Steel S25C	1.1158	AISI1025
⑲ <sup>MR</sup>	Plug Gasket	Fluorine Resin PTFE	PTFE	PTFE
⑳	Drain Plug Gasket**	Soft Iron SUYP	1.1121	AISI1010
㉑	Drain Plug**	Carbon Steel S25C	1.1158	AISI1025

\* Equivalent materials \*\* Option

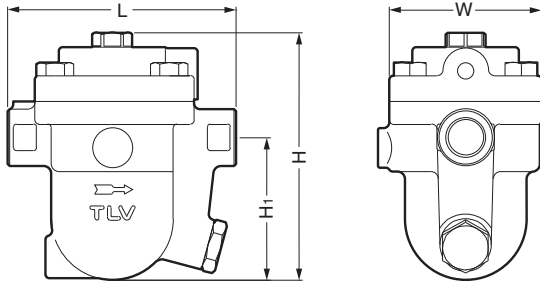
Replacement kits available: (M) Maintenance parts, (R) Repair parts, (F) Float



Optional lock release valve LR3 available for special applications.

**Dimensions**

● **J3X** Screwed

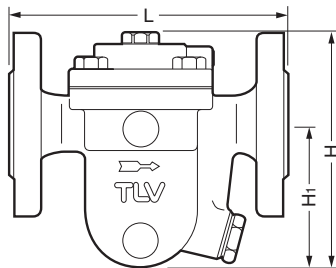


**J3X** Screwed\* (mm)

Size	L	H	H <sub>1</sub>	W	Weight (kg)
1/2"	120	130	75	80	2.7
3/4"			73		2.8
1"		137	75		3.0

\* BSP, DIN 2999, other standards available

● **JF3X** Flanged

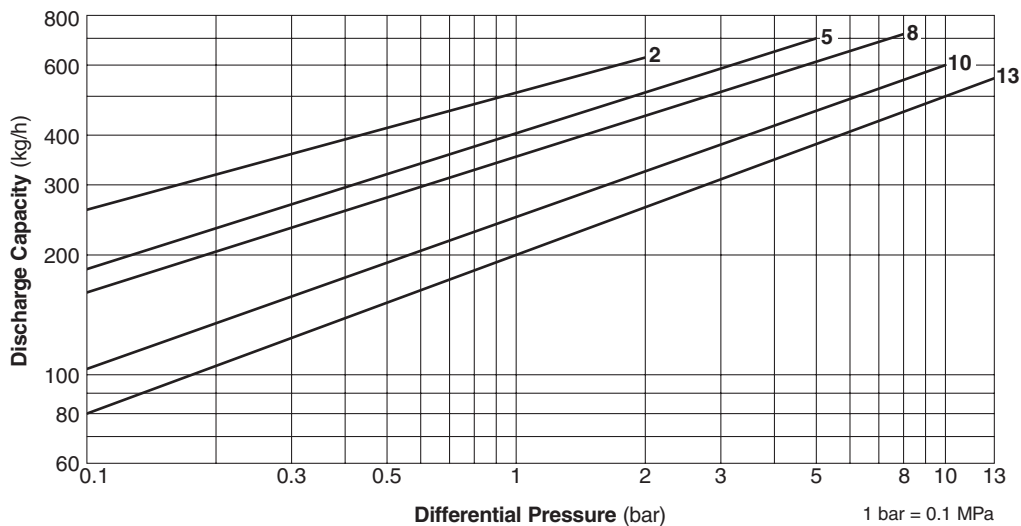


**JF3X** Flanged (mm)

DN	L		H	H <sub>1</sub>	Weight (kg)
	DIN 2501	PN10/16			
	15	150			
20	148		94	5.1	
25	160		155	99	6.0

Other standards available, but length and weight may vary

**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

ISO 9001  
ISO 14001

