

TLV®

FREE FLOAT® STEAM TRAP

MODEL J5X DUCTILE CAST IRON CAST IRON

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 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 20 to DN 50	—*	Art. 4, Sec. 3 (sound engineering practice), CE marking not allowed

* Manufactured in accordance with sound engineering practice



Specifications

Model	J5X	JF5X
Connection	Screwed	Flanged*
Size	3/4", 1", 1 1/4", 1 1/2"	DN 20, 25, 32, 40, 50
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

* JF5X DN 20 and DN 25 have screwed-in flanges

1 bar = 0.1 MPa

PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS): Maximum Allowable Pressure (barg) PMA: 13

Maximum Allowable Temperature (°C) TMA: 200

Minimum Allowable Temperature (°C): 0 (FCV400), -10 (GGG40.3/EN 5.3103)

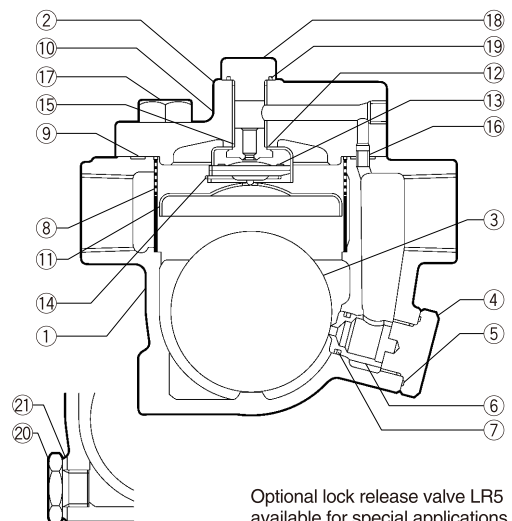


To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

No.	Description	Material	DIN*	ASTM/AISI*
①	Body	J5X, JF5X DN 20, 25 Ductile Cast Iron GGG40.3/ EN 5.3103 (EN-GJS-400-18-LT)	0.7043	A395 Gr.60-40-18
		JF5X DN 32, 40, 50 Cast Iron FCV400	—	A842 Gr.400
②	Cover	Ductile Cast Iron GGG40.3/ EN 5.3103 (EN-GJS-400-18-LT)	0.7043	A395 Gr.60-40-18
③F	Float	Stainless Steel SUS316L	1.4404	AISI316L
④	Orifice Holder Plug	Carbon Steel S25C	1.1158	AISI1025
⑤MR	Orifice Plug Gasket	Fluorine Resin PTFE	PTFE	PTFE
⑥R	Orifice	—	—	—
⑦MR	Orifice O-Ring	Synthetic Rubber EPR	EPR	D2000CA
⑧R	Screen inside/outside	Stainless Steel SUS430/304	1.4016/1.4301	AISI430/304
⑨MR	Cover Gasket	Fluorine Resin PTFE	PTFE	PTFE
⑩	Nameplate	Stainless Steel SUS304	1.4301	AISI304
⑪R	Float Cover	Stainless Steel SUS304	1.4301	AISI304
⑫R	X-element Guide	Stainless Steel SUS304	1.4301	AISI304
⑬R	X-element	Stainless Steel	—	—
⑭R	Spring Clip	Stainless Steel SUS304	1.4301	AISI304
⑮R	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
⑲MR	Plug Gasket	Fluorine Resin PTFE	PTFE	PTFE
⑳	Drain Plug**	Carbon Steel S25C	1.1158	AISI1025
㉑	Drain Plug Gasket**	Soft Iron SUYP	1.1121	AISI1010
㉒	Flange (JF5X DN 20, 25)***	Carbon Steel S25C	1.1158	AISI1025
㉓	Pipe (JF5X DN 20, 25)***	Carbon Steel STPG370	1.0308	A53 Type S Gr.A

* Equivalent materials ** Option *** Shown on reverse

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

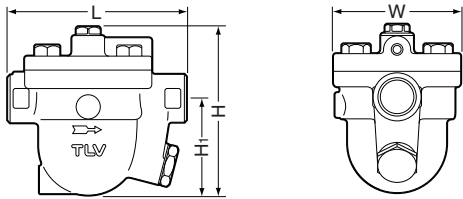


Optional lock release valve LR5 available for special applications.

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Dimensions

● **J5X** Screwed

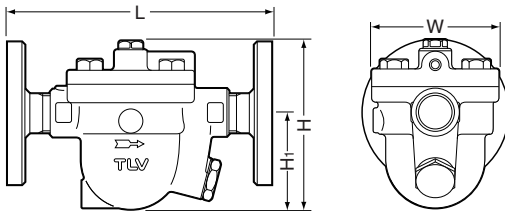


J5X Screwed* (mm)

Size	L	H	H ₁	W	Weight (kg)
3/4"	155	149	84	108	4.4
1"					4.3
1 1/4"	160	182	106		5.8
1 1/2"					

* BSP DIN 2999, other standards available

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

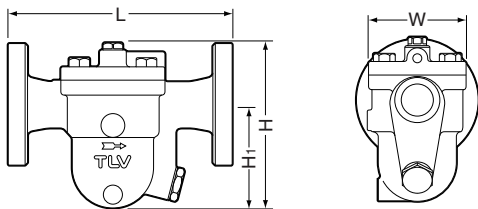


JF5X Flanged (mm)

DN	L	H	H ₁	W	Weight (kg)
	DIN 2501 PN10/16				
20	250	149	84	108	6.3
25					6.9

Other standards available, but length and weight may vary

● **JF5X** Flanged DN 32, 40, 50

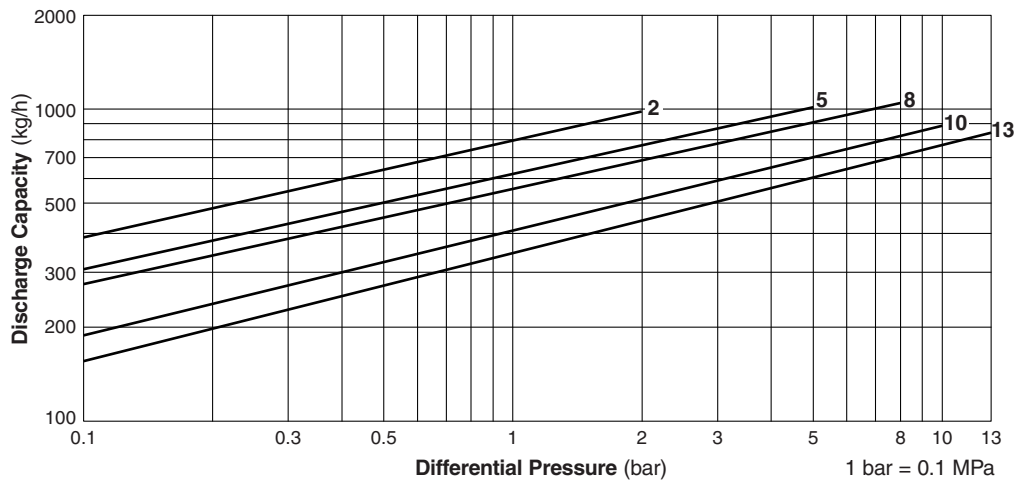


JF5X Flanged (mm)

DN	L	H	H ₁	W	Weight (kg)
	DIN 2501 PN10/16				
32	241	185	115	108	9.5
40	256		120		10
50	265	200			11

Other standards available, but length and weight may vary

Discharge Capacity



- Line numbers within the graph refer to orifice numbers.
- Differential pressure is the difference between the inlet and outlet pressure of the trap.
- Capacities are based on continuous discharge of condensate 6 °C below saturated steam temperature.
- 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

