



FREE FLOAT® STEAM TRAP

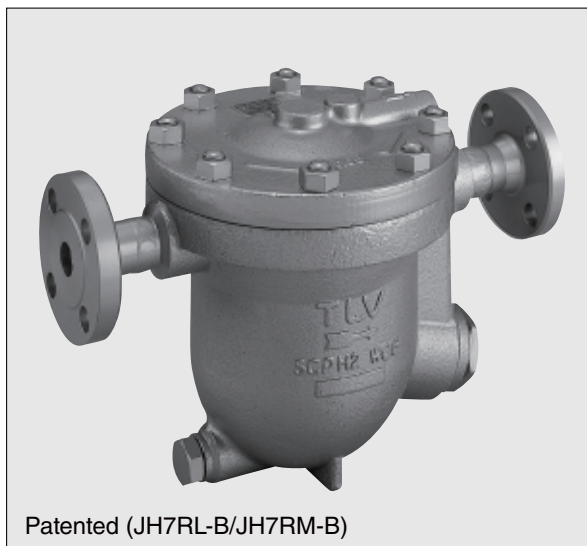
MODEL JH7RL-X JH7RL-B/JH7RM-B

FREE FLOAT STEAM TRAP WITH THERMOSTATIC AIR VENTING

Features

A reliable and durable cast steel steam trap for use on medium-size process equipment. JH7RL-B/JH7RM-B are also suitable for both superheated and high-pressure process equipment.

1. Self-modulating free float provides continuous, smooth, low-velocity condensate discharge as process loads vary.
2. Precision-ground float, constant water seal and three-point seating design ensure a steam-tight seal, even under no-load conditions.
3. **JH7RL-X**: Thermostatic capsule (X-element) with "fail open" feature vents air automatically at close-to-steam temperature.
4. **JH7RL-B/JH7RM-B**: Thermostatic bimetal air vent valve vents air automatically for rapid startup.
5. Built-in screen with large surface area ensures extended trouble-free operation.
6. Easy, inline access to internal parts simplifies cleaning and reduces maintenance costs.



Specifications

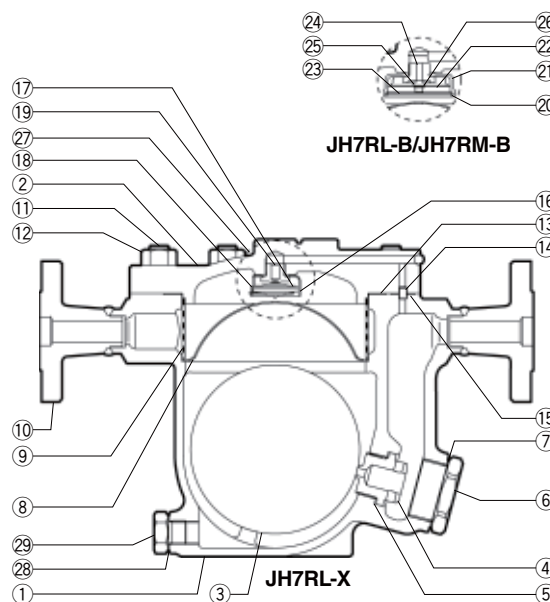
Model	JH7RL-X			JH7RL-B			JH7RM-B	
	Screwed	Socket Welded	Flanged	Screwed	Socket Welded	Flanged	Socket Welded	Flanged
Size (mm)	25, 40	20, 25, 40, 50		25, 40	20, 25, 40, 50		20, 25, 40, 50	
Orifice No.	2, 5, 10, 14, 22, 32			2, 5, 10, 14, 22, 32, 40, 46			65	
Maximum Operating Pressure (MPaG) PMO	0.2, 0.5, 1.0, 1.4, 2.2, 3.2			0.2, 0.5, 1.0, 1.4, 2.2, 3.2, 4.0, 4.6			6.5	
Maximum Differential Pressure (MPa) ΔPMX	0.2, 0.5, 1.0, 1.4, 2.2, 3.2			0.2, 0.5, 1.0, 1.4, 2.2, 3.2, 4.0, 4.6			6.5	
Minimum Operating Pressure (MPaG)	0.01			0.01			0.01	
Maximum Operating Temperature (°C) TMO	240			425			425	
Type of Air Vent	X-element (6 °C subcooling)			Bimetal (vents air up to approx. 100 °C)				

PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS): 1 MPa = 10.197 kg/cm²
Maximum Allowable Pressure (MPaG) PMA: 4.0 (JH7RL-X), 4.6 (JH7RL-B), 6.5 (JH7RM-B) Maximum Allowable Temperature (°C) TMA: 425



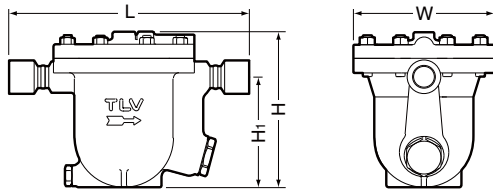
To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

No.	Description	Material	JIS	ASTM/AISI*
①	Body	Cast Steel	—	A216 Gr.WCB
②	Cover	Carbon Steel	—	A105
③ ^F	Float	Stainless Steel	SUS316L	AISI316L
④ ^R	Orifice	—	—	—
⑤ ^{MR}	Orifice Gasket	Soft Iron	SUYP	AISI1010
⑥	Orifice Plug	Cast Stainless Steel	—	A351 Gr.CF8
⑦ ^{MR}	Orifice Plug Gasket	Soft Iron	SUYP	AISI1010
⑧	Screen Holder	Stainless Steel	SUS304	AISI304
⑨ ^R	Screen inside/outside**	Stainless Steel	SUS430/304	AISI430/304
⑩	Flange/Socket***	Carbon Steel	—	A105
⑪	Cover Bolt	Alloy Steel	SNB7	A193 Gr.B7
⑫	Cover Nut	Carbon Steel	S45C	AISI1045
⑬ ^{MR}	Cover Gasket	Graphite/Stainless Steel	-/SUS316L	-/AISI316L
⑭	Connector	Stainless Steel	SUS416	AISI416
⑮ ^{MR}	Connector Gasket	Graphite/Stainless Steel	-/SUS316L	-/AISI316L
⑯ ^R	X-element Guide	Stainless Steel	SUS304	AISI304
⑰ ^R	X-element	Stainless Steel	—	—
⑱ ^R	Spring Clip	Stainless Steel	SUS304	AISI304
⑲ ^R	Air Vent Valve Seat	Stainless Steel	SUS420F	AISI420F
⑳ ^R	Snap Ring	Stainless Steel	SUS304	AISI304
㉑ ^R	Air Vent Case	Cast Stainless Steel	—	A351 Gr.CF8
㉒ ^R	Bimetal Plate	Bimetal	—	—
㉓ ^R	Air Vent Screen	Stainless Steel	SUS304	AISI304
㉔ ^R	Air Vent Valve Seat	—	—	—
㉕ ^R	Air Vent Valve Plug	—	—	—
㉖ ^R	Snap Ring	Stainless Steel	SUS304	AISI304
㉗	Nameplate	Stainless Steel	SUS304	AISI304
㉘ ^{MR}	Drain Plug Gasket	Soft Iron	SUYP	AISI1010
㉙	Drain Plug	Carbon Steel	S25C	AISI1025



Dimensions

● **JH7RL-X/JH7RL-B** Screwed

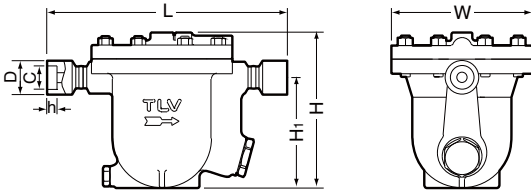


JH7RL-X/JH7RL-B Screwed* (mm)

Size	L	H	H ₁	φW	Weight (kg)
25	334	226	160	206	17
40	336				19

* Rc(PT), other standards available

● **JH7RL-X/JH7RL-B/JH7RM-B** Socket Welded

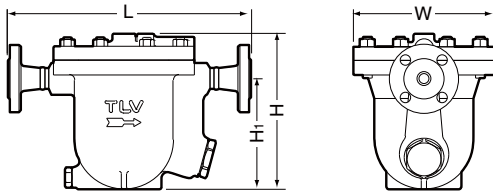


JH7RL-X/JH7RL-B/JH7RM-B S. Welded (mm)

Size	L	H	H ₁	φW	φD	φC	h	Weight (kg)
20	322	226 (231)	160	206 (222)	41.5	27.7	14	17 (19)
25	334				50	34.5		
40	336				66	49.1		17
50		79.5	61.1					

() JH7RM-B

● **JH7RL-X/JH7RL-B/JH7RM-B** Flanged



JH7RL-X/JH7RL-B/JH7RM-B Flanged (mm)

Size	L				H	H ₁	φW	Weight** (kg)
	ASME Class							
	150RF	300RF	600RF	900RF*				
20	340	340	340	370	226 (231)	160	206 (222)	21 (25)
25	385	385	385	395				23 (29)
40	380	380	380	390				26 (34)
50	390	390	390	400				30 (46)

Other standards available, but length and weight may vary

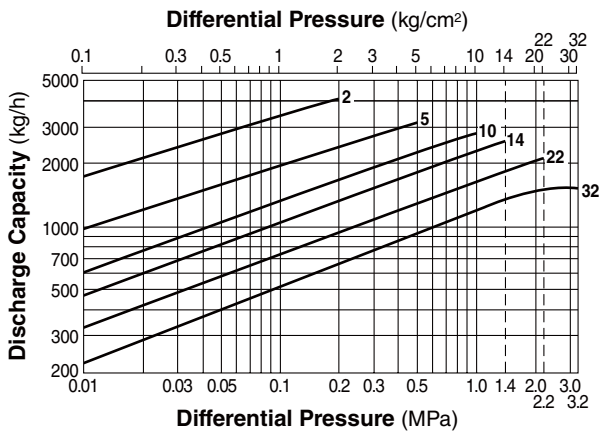
* Not available for JH7RL-X/JH7RL-B

** Weight is for class 600 RF (JH7RL-X/JH7RL-B), 900 RF (JH7RM-B)

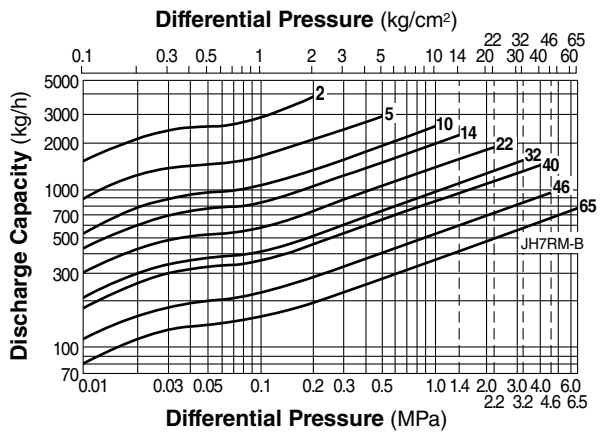
() JH7RM-B

Discharge Capacity

● **JH7RL-X**



● **JH7RL-B/JH7RM-B**



- Line numbers within the graph are 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 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

