FREE FLOAT® STEAM TRAP

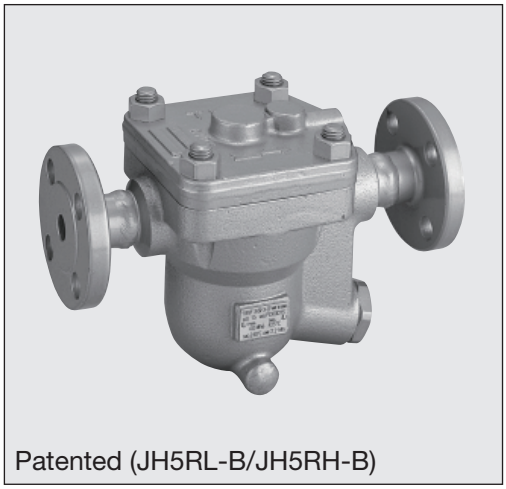
MODEL JH5RL-X JH5RL-B/JH5RH-B

FREE FLOAT STEAM TRAP WITH THREE-POINT SEATING AND THERMOSTATIC AIR VENTING

Features

A reliable and durable cast steel steam trap for use on small to medium-size process equipment. JH5RL-B/JH5RH-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. **JH5RL-X**: Thermostatic capsule (X-element) with "fail open" feature vents air automatically at close-to-steam temperature.
4. **JH5RL-B/JH5RH-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.



Patented (JH5RL-B/JH5RH-B)

Specifications

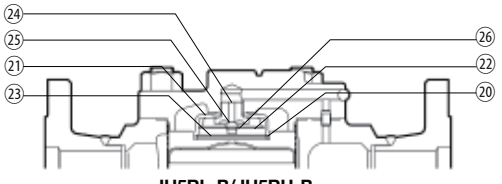
Model	JH5RL-X			JH5RL-B			JH5RH-B	
Connection	Screwed	Socket Welded	Flanged	Screwed	Socket Welded	Flanged	Socket Welded	Flanged
Size (mm)	15, 20, 25	15, 20, 25, 40, 50		15, 20, 25	15, 20, 25, 40, 50		15, 20, 25, 40, 50	
Orifice No.	5, 10, 14, 22, 32			2, 5, 10, 14, 22, 32, 40, 46			80	
Maximum Operating Pressure (MPaG) PMO	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			8.0	
Maximum Differential Pressure (MPa) ΔPMX	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			8.0	
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/cm^2
Maximum Allowable Pressure (MPaG) PMA: 4.0 (JH5RL-X), 4.6 (JH5RL-B), 8.0 (JH5RH-B) Maximum Allowable Temperature (°C) TMA: 425

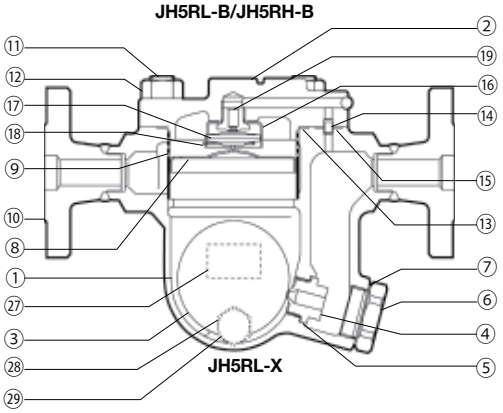
⚠ CAUTION To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

No.	Description		Material	JIS	ASTM/AISI [1]
①	Body		Cast Steel	—	A216 Gr.WCB
②	Cover	JH5RL-X/B	Carbon Steel	—	A105
		JH5RH-B	Cast Steel	—	A216 Gr.WCB
③F	Float		Stainless Steel	SUS316L	AISI316L
④R	Orifice		—	—	—
⑤MR	Orifice Gasket		Soft Iron	SUYP	AISI1010
⑥	Orifice Plug		Cast Stainless Steel	—	A351 Gr.CF8
⑦MR	Orifice Plug Gasket		Soft Iron	SUYP	AISI1010
⑧R	Float Cover		Stainless Steel	SUS304	AISI304
⑨R	Screen inside/outside [2]		Stainless Steel	SUS430/304	AISI430/304
⑩	Flange/Socket [3]		Carbon Steel	—	A105
⑪	Cover Bolt	JH5RL-X/B	Alloy Steel	SNB7	A193 Gr.B7
		JH5RH-B	Alloy Steel	SNB16	A193 Gr.B16
⑫	Cover Nut		Carbon Steel	S45C	AISI1045
⑬MR	Cover Gasket		Graphite/Stainless Steel	– /SUS316L	– /AISI316L
⑭	Connector		Stainless Steel	SUS416	AISI416
⑮MR	Connector Gasket		Graphite/Stainless Steel	– /SUS316L	– /AISI316L
⑯R	X-element Guide		Stainless Steel	SUS304	AISI304
⑰R	X-element		Stainless Steel	—	—
⑱R	Spring Clip		Stainless Steel	SUS304	AISI304
⑲R	Air Vent Valve Seat		Stainless Steel	SUS420F	AISI420F
⑳R	Snap Ring		Stainless Steel	SUS304	AISI304
㉑R	Air Vent Case		Cast Stainless Steel	—	A351 Gr.CF8
㉒R	Bimetal Plate		Bimetal	—	—
㉓R	Air Vent Screen		Stainless Steel	SUS304	AISI304
㉔R	Air Vent Valve Seat		—	—	—
㉕R	Air Vent Valve Plug		—	—	—
㉖R	Snap Ring		Stainless Steel	SUS304	AISI304
㉗	Nameplate		Stainless Steel	SUS304	AISI304
㉘	Drain Plug Gasket [4]		Soft Iron	SUYP	AISI1010
㉙	Drain Plug [4]		Carbon Steel	S25C	AISI1025

[1] Equivalent [2] JH5RL-B, JH5RH-B: inside only [3] Shown on reverse [4] Option
Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float



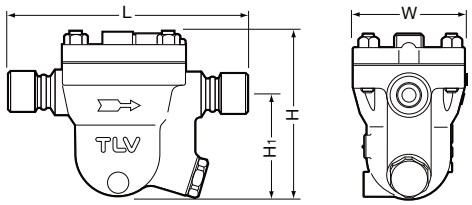
JH5RL-B/JH5RH-B



JH5RL-X

Dimensions

• JH5RL-X/JH5RL-B Screwed

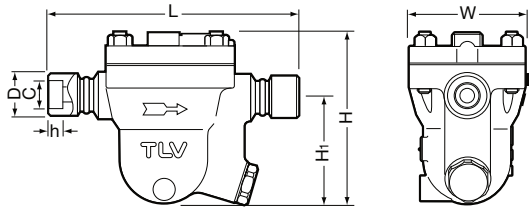


JH5RL-X/JH5RL-B Screwed* (mm)

Size	L	H**	H_1**	W	Weight (kg)
15	234	165	105	115	6.5
20	246				6.6
25	258				6.7

* Rc(PT), other standards avalilable ** Approx.

• JH5RL-X/JH5RL-B/JH5RH-B Socket Welded

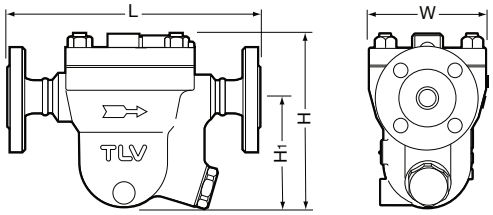


JH5RL-X/JH5RL-B/JH5RH-B Socket Welded (mm)

Size	L	H*	H_1*	W	ϕD	ϕC	h	Weight (kg)
15	234	165 [175]	105 [110]	115 [125]	33	22.2	12	6.5 [10]
20	246				39.5	27.7	14	6.6 [10]
25	258				48	34.5		6.7 [10]
40	246				64	49.1		7.8 [13]
50					77.5	61.1	17	8.2 [14]

[ ] JH5RH-B * Approx.

• JH5RL-X/JH5RL-B/JH5RH-B Flanged



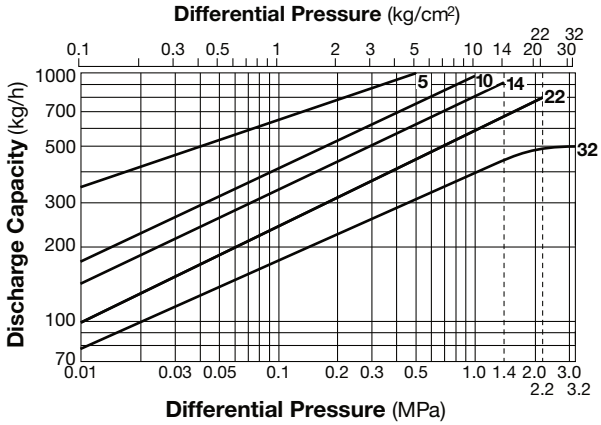
JH5RL-X/JH5RL-B/JH5RH-B Flanged (mm)

Size	L			H*	H_1*	W	Weight** (kg)
	ASME Class						
	150RF	300RF	600RF				
15	239	239	239	165 [175]	105 [110]	115 [125]	8.4 [12]
20	264	264	264				9.8 [14]
25	309	309	309				11 [16]
40	290	290	290				15 [19]
50	300	300	300				19 [23]

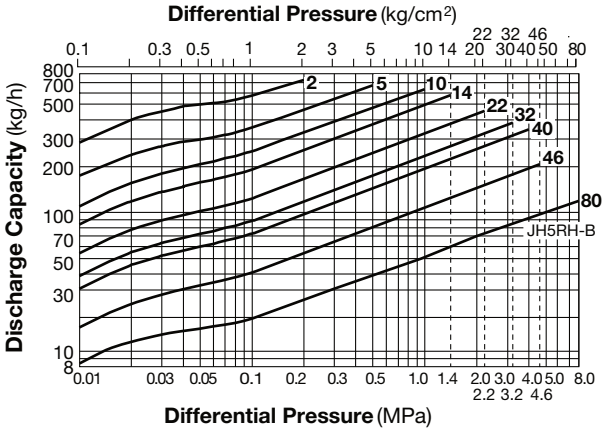
Other standards available, but length and weight may vary
* Approx. ** Weight is for Class 600 RF
[ ] JH5RH-B

Discharge Capacity

• JH5RL-X



• JH5RL-B/JH5RH-B



1. Line numbers within the graph are 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

ISO 9001
ISO14001

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Products for intended use only.
Specifications subject to change without notice.