



# FREE FLOAT<sup>®</sup> STEAM TRAP

## MODEL JH7.5R-X/JH7.5R-B JH7.5R-X-E/JH7.5R-B-E

### FREE FLOAT STEAM TRAP WITH THERMOSTATIC AIR VENTING

#### Benefits

**A reliable and durable cast steel steam trap for use on large-size process equipment. JH7.5R-B is also suitable for high-pressure process equipment.**

1. Self-modulating free float provides continuous, smooth, low-velocity condensate discharge as process loads vary.
2. Constant water seal and unique rotational seating design eliminates concentrated valve wear to provide long maintenance-free service life.
3. Up to 1500 or 1600 psig\* hydraulic shock rating ensures excellent resistance of the float to water hammer.
4. **JH7.5R-X:** Thermostatic capsule (X-element) with "fail open" feature vents air automatically at close-to-steam temperature.
5. **JH7.5R-B:** Thermostatic bimetal air vent valve vents air automatically for rapid startup.
6. **JH7.5R-X-E/JH7.5R-B-E:** Three-point seating ensures a steam tight seal even under no-load conditions.
7. Built-in screen with large surface area ensures extended trouble-free operation.

\* Depending on orifice No.



#### Specifications

Model	JH7.5R-X	JH7.5R-B	JH7.5R-X-E	JH7.5R-B-E
Connection	<b>Flanged</b>	<b>Flanged</b>	Socket Weld	<b>Socket Weld</b>
Size (in)	<b>1½, 2</b>	<b>1½, 2</b>	1½, 2	<b>1½, 2</b>
Orifice No.	2, 5, 10, 14, 22, 32	40, 46	10, 14, 22, 32	40, 50
Maximum Operating Pressure (psig) PMO	30, 75, 150, 200, 315, 450	600, 650	150, 200, 315, 450	600, 710
Maximum Differential Pressure (psi) ΔPMX	30, 75, 150, 200, 315, 450	600, 650	150, 200, 315, 450	600, 710
Minimum Operating Pressure (psig)	Vacuum	1.5	Vacuum	1.5
Maximum Operating Temperature (°F) TMO	464	800	464	800
Maximum Allowable Pressure (psig) PMA	650	650	710	710
Maximum Allowable Temperature (°F) TMA	800	800	800	800
Type of Air Vent	X-element (11 °F subcooling)	Bimetal (vents air up to approx. 212 °F)	X-element (11 °F subcooling)	Bimetal (vents air up to approx. 212 °F)

**Connections and sizes in bold are standard**

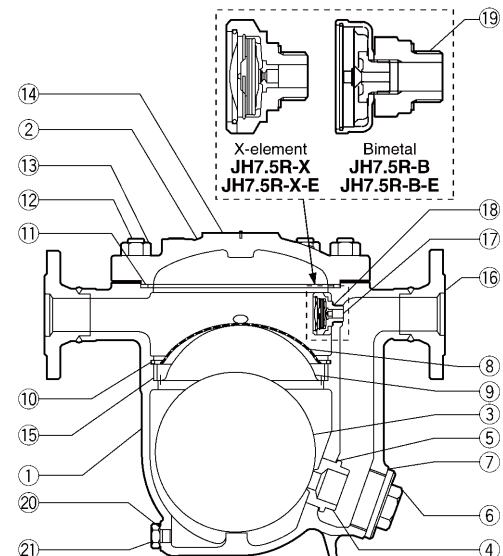


To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

No.	Description	Material	ASTM/AISI*	JIS
①	Body	Cast Steel	A216 Gr.WCB	—
②	Cover	Carbon Steel	A105	—
③ <sup>F</sup>	Float	Stainless Steel	AISI316L	SUS316L
④ <sup>R</sup>	Orifice	—	—	—
⑤ <sup>MR</sup>	Orifice Gasket	Soft Iron	AISI1010	SUYP
⑥	Orifice Plug	Cast Stainless Steel	A351 Gr.CF8	—
⑦ <sup>MR</sup>	Orifice Plug Gasket	Soft Iron	AISI1010	SUYP
⑧ <sup>R</sup>	Screen	Stainless Steel	AISI430	SUS430
⑨	Screen Holder	Stainless Steel	AISI304	SUS304
⑩	Snap Ring	Stainless Steel	AISI304	SUS304
⑪ <sup>MR</sup>	Cover Gasket	Graphite/Stainless Steel	—/AISI304	—/SUS304
⑫	Cover Bolt	Alloy Steel	A193 Gr.B16	SNB16
⑬	Cover Nut	Carbon Steel	AISI1045	S45C
⑭	Nameplate	Stainless Steel	AISI304	SUS304
⑮	Screen Holder Retainer	Stainless Steel	AISI304	SUS304
⑯	Socket**/Flange	Carbon Steel	A105	—
⑰ <sup>X</sup>	X-element Air Vent Unit	JH7.5R-X(-E)	—	—
⑰ <sup>R</sup>	Bimetal Air Vent Unit	JH7.5R-B(-E)	—	—
⑱ <sup>MRX</sup>	Air Vent Unit Gasket	Soft Iron	AISI1010	SUYP
⑲ <sup>R</sup>	Air Vent Guide	JH7.5R-B(-E)	Stainless Steel AISI303	SUS303
⑳ <sup>MR</sup>	Drain Plug Gasket	Soft Iron	AISI1010	SUYP
㉑	Drain Plug	Carbon Steel	A105	—

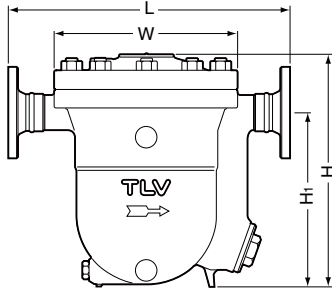
\* Equivalent \*\* Shown on reverse

Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float, (X) X-element unit

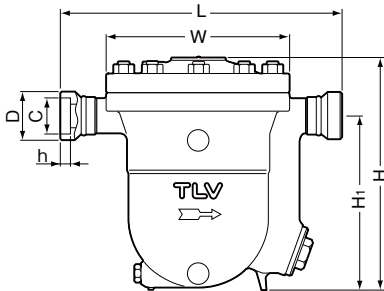


**Dimensions**

● **JH7.5R-X/JH7.5R-B** Flanged



● **JH7.5R-X-E/JH7.5R-B-E** Socket Weld



**JH7.5R-X/JH7.5R-B** Flanged (in)

Size	L			H	H <sub>1</sub>	φW	Weight* (lb)
	Connects to ASME Class						
	150RF	300RF	<b>600RF</b>				
1½	18 <sup>9</sup> / <sub>16</sub>	18 <sup>13</sup> / <sub>16</sub>	19 <sup>7</sup> / <sub>16</sub>	15 <sup>5</sup> / <sub>16</sub>	11 <sup>7</sup> / <sub>16</sub>	12	141
2	18 <sup>11</sup> / <sub>16</sub>	18 <sup>15</sup> / <sub>16</sub>	19 <sup>11</sup> / <sub>16</sub>				145

Other standards available, but length and weight may vary

\* Weight is for Class 600 RF

**Flange classes in bold are standard**

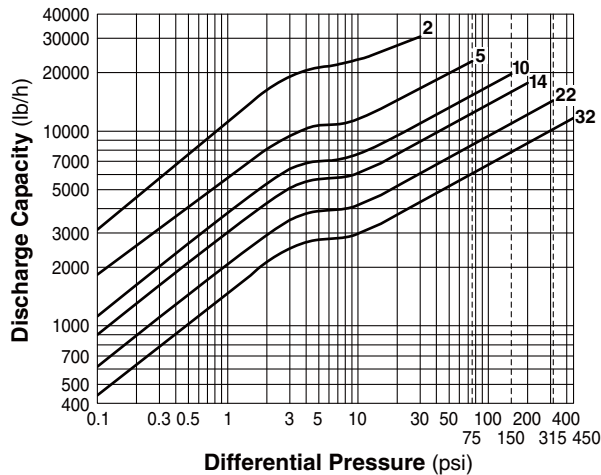
**JH7.5R-X-E/JH7.5R-B-E** Socket Weld\* (in)

Size	L	H	H <sub>1</sub>	φW	φD	φC	h	Weight (lb)
1½	18 <sup>3</sup> / <sub>8</sub>	15 <sup>5</sup> / <sub>16</sub>	11 <sup>7</sup> / <sub>16</sub>	12	2½	1.915	½	112
2					3 <sup>1</sup> / <sub>16</sub>	2.406	½	123

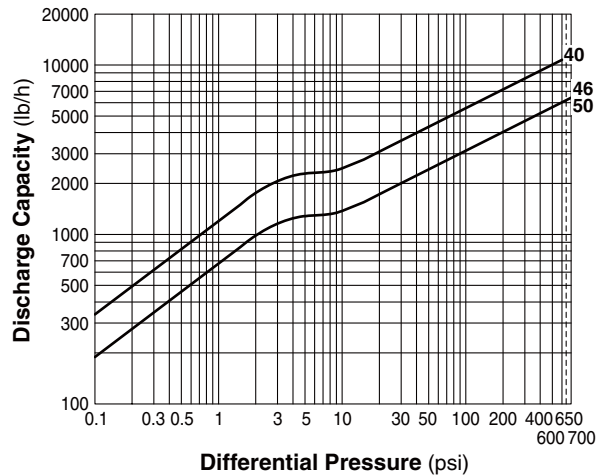
\* ASME B16.11-2005, other standards available

**Discharge Capacity**

● **JH7.5R-X/JH7.5R-X-E**



● **JH7.5R-B/JH7.5R-B-E**



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 11 °F below saturated 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!

**CAUTION** DO NOT DISASSEMBLE OR REMOVE THIS PRODUCT WHILE IT IS UNDER PRESSURE. Allow internal pressure of this product to equal atmospheric pressure and its surface to cool to room temperature before disassembling or removing. Failure to do so could cause burns or other injury. READ INSTRUCTION MANUAL CAREFULLY.

**TLV CORPORATION**

13901 South Lakes Drive, Charlotte, NC 28273-6790  
 Tel: 704-597-9070 Fax: 704-583-1610  
 E-mail: [tlv@tlvengineering.com](mailto:tlv@tlvengineering.com) <https://www.tlv.com>  
 For Technical Service 1-800 "TLV TRAP"



Manufacturer  
**TLV CO., LTD.**  
 Kakogawa, Japan  
 is approved by LRQA Ltd. to ISO 9001/14001

