



# FREE FLOAT DRAIN TRAP®

## MODEL JAH7RA

### DRAIN TRAP WITH TIGHT SHUT-OFF FOR AIR AND INERT GASES

#### Benefits

**High pressure, inline repairable free float trap with tight shut-off. Automatically drains condensate from air and inert gas systems.**

1. Constant water seal and unique rotational seating design eliminate concentrated wear to ensure long life.
2. Three-point seating provides a tight seal even under low-load conditions.
3. Easy, inline access to internal parts simplifies cleaning and lowers maintenance costs.
4. Built-in screen with large surface area ensures extended trouble-free service.



#### Specifications

Model		JAH7RA-R (Rubber Orifice)		
Connection		<b>Screwed</b>	<b>Socket Weld</b>	Flanged
Size (in)		<b>1</b>	<b>1, 1½</b>	1, 1½
Orifice No.		10, 22, 40		
Max. Operating Pressure (psig) PMO**		150, 315, 600		
Max. Differential Pressure (psi) ΔPMX**		150, 315, 600		
Min. Operating Pressure (psig)		Vacuum		
Max. Operating Temperature (°F) TMO		212		
Max. Allowable Pressure (psig) PMA		650		
Max. Allowable Temperature (°F) TMA		800		
Applicable Fluids*		Air, Inert Gas		

\* Do not use for toxic, flammable, or otherwise hazardous gases.

\*\* For specific gravities other than 1.00, use table below

**Connections and sizes in bold are standard**

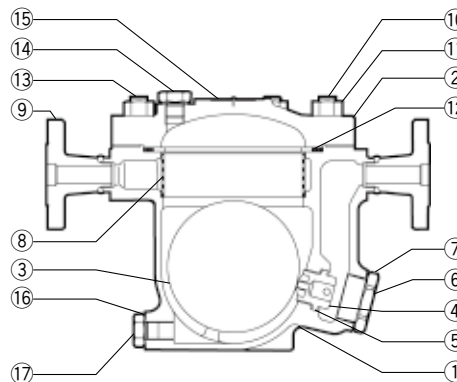
Model	Orifice No.	Specific Gravity										
		1.00	0.99 – 0.95	0.94 – 0.90	0.89 – 0.85	0.84 – 0.80	0.79 – 0.75	0.74 – 0.70	0.69 – 0.65	0.64 – 0.60	0.59 – 0.55	0.54 – 0.50
Maximum Operating Pressure PMO (psig) & Maximum Differential Pressure ΔPMX (psi)												
JAH7RA-R	10	150	150	150	150	150	133	115	96	77	59	40
	22	315	315	315	315	315	288	248	208	167	127	87
	40	600	600	600	600	600	542	466	391	315	239	163



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. DO NOT use with toxic, flammable or otherwise hazardous fluids.

No.	Description	Material	ASTM/AISI*	JIS
①	Body	Cast Steel	A216 Gr.WCB	—
②	Cover	Carbon Steel	AISI1025	S25C
③	Float	Stainless Steel	AISI316L	SUS316L
④	Orifice	Nitrile Rubber/Stainless Steel	D2000BF/AISI316L	NBR/SUS316L
⑤	Orifice Gasket	Soft Iron	AISI1010	SUYP
⑥	Orifice Plug	Cast Stainless Steel	A351 Gr.CF8	—
⑦	Orifice Plug Gasket	Soft Iron	AISI1010	SUYP
⑧	Screen	Stainless Steel	AISI430	SUS430
⑨	Socket**	1"	Cast Steel	A216 Gr.WCB
		1½"	Carbon Steel	A105
	Flange	Carbon Steel	A105	—
⑩	Cover Bolt	Alloy Steel	A193 Gr.B16	SNB16
⑪	Cover Nut	Carbon Steel	AISI1045	S45C
⑫	Cover Gasket	Graphite/Stainless Steel	—/AISI304	—/SUS304
⑬	Plug Gasket	Soft Iron	AISI1010	SUYP
⑭	Balancing Line Plug	Carbon Steel	AISI1025	S25C
⑮	Nameplate	Stainless Steel	AISI304	SUS304
⑯	Drain Plug Gasket	Soft Iron	AISI1010	SUYP
⑰	Drain Plug	Carbon Steel	AISI1025	S25C

\* Equivalent \*\* Shown on reverse



**Options**

1. Body material: stainless steel
2. Balancing port connection: flanged, socket weld, or screwed with other thread standards

**Leakage Rating**

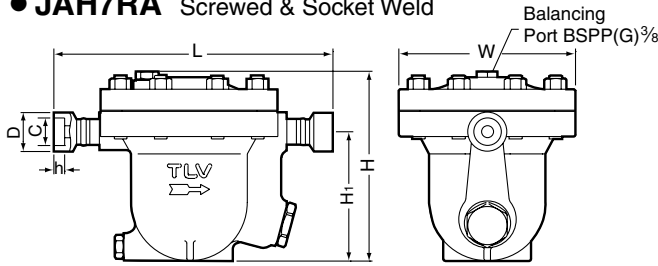
**Maximum Seat Leakage**

Model	Orifice	Minimum Δ P (psi)	
		0.1	1.5
JAH7RA-R	Rubber	<0.01% of rated valve capacity	<0.15 standard ml/min, <1 bubble/min

\* Standard milliliters based on 60 °F, 14.73 psi abs

**Dimensions**

**JAH7RA Screwed & Socket Weld**



**JAH7RA Screwed\***

Size	L	H	H <sub>1</sub>	φ W	Weight(lb)
1	13 1/8	9 5/16	6 5/16	8 3/4	42

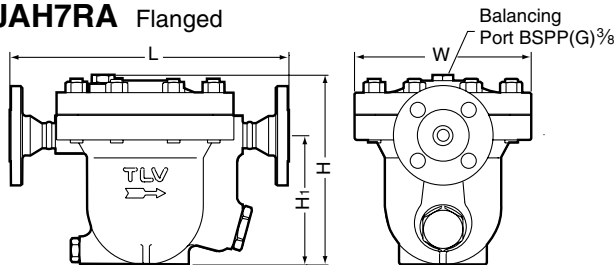
\* NPT, other standards available

**JAH7RA Socket Weld\***

Size	L	H	H <sub>1</sub>	φ W	φ D	φ C	h	Weight (lb)
1	13 1/8	9 5/16	6 5/16	8 3/4	2 1/8	1.330	9/16	42
1 1/2	13 3/4	9 5/16	6 5/16	8 3/4	2 3/4	1.915	9/16	46

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

**JAH7RA Flanged**



**JAH7RA Flanged**

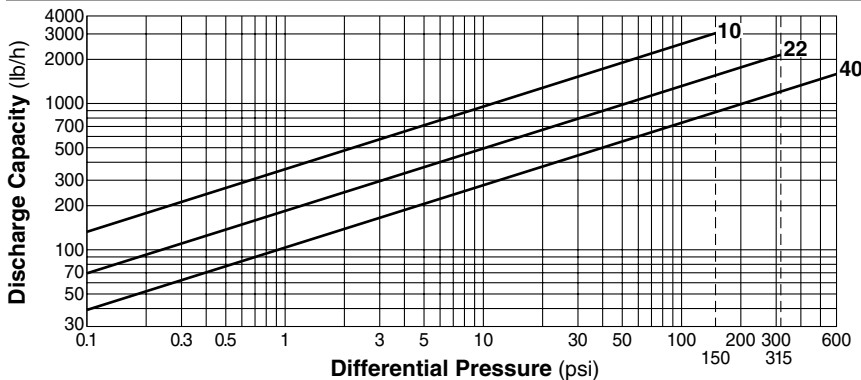
Size	L			H	H <sub>1</sub>	φ W	Weight* (lb)
	Connects to ASME Class						
	150RF	300RF	600RF				
1	15 1/8	15 1/8	15 1/8	9 5/16	6 5/16	8 3/4	55
1 1/2	15	15	15	9 5/16	6 5/16	8 3/4	64

Other standards available, but length and weight may vary

\* Weight is for Class 600 RF

Note: A pressure-balancing line must be connected to the air/inert gas system from the balancing port at the top of the trap to a place above any possible condensate accumulation in the system.

**Discharge Capacity**



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. The chart is applicable to condensate below 212 °F.
4. The discharge capacity is for liquids with a specific gravity of 1. See the Discharge Capacity Conversion Factors table for other specific gravities.
5. Recommended safety factor: at least 1.5.

**Discharge Capacity Conversion Factors**

Specific Gravity (S.G.)	0.95	0.9	0.85	0.8	0.75	0.7	0.65	0.6	0.55	0.5
Conversion Factor	1.03	1.06	1.08	1.12	1.16	1.19	1.24	1.29	1.35	1.41

Before using the discharge capacity chart, multiply the required capacity (including safety factor) by the appropriate conversion factor for the specific gravity of the liquid to be discharged.

Choose from the table above or use the following formula: Conversion Factor =  $\frac{1}{\sqrt{S.G.}}$



**CAUTION**  
DO NOT use traps under conditions that exceed maximum differential pressure, as condensate backup will occur!



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

