



# FREE FLOAT® DRAIN TRAP

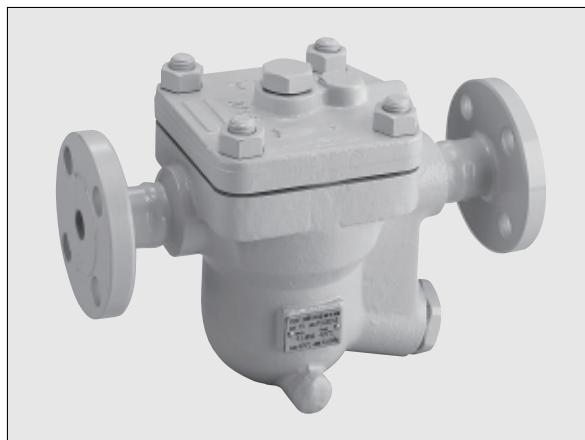
## MODEL JAH5RA

### 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	JAH5RA-R (Rubber Orifice)		
	Screwed	Socket Weld	Flanged
Connection			
Size (in)	<b>3/4, 1</b>	<b>3/4, 1</b>	<b>3/4, 1</b>
Orifice No.		10, 22	
Max. Operating Pressure (psig) PMO**		150, 315	
Max. Differential Pressure (psi) ΔPMX**		150, 315	
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		

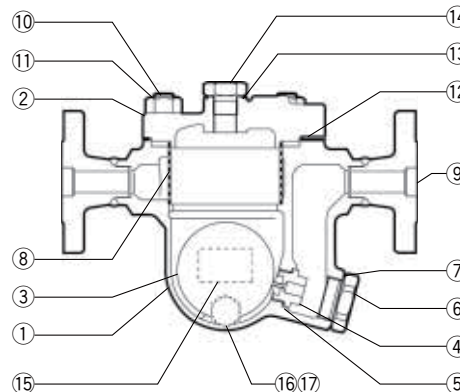
\* Do not use for toxic, flammable, or otherwise hazardous gases.  
 \*\* For specific gravities other than 1.00, use table below

**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)												
JAH5RA-R	10 22	150 315	150 315	150 315	150 315	150 315	130 299	108 248	85 196	62 144	40 92	17 40

**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. 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	A105	—
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	A743 Gr. CA40	—
⑦	Orifice Plug Gasket	Soft Iron	AISI1010	SUYP
⑧	Screen	Stainless Steel	AISI430	SUS430
⑨	Socket**/Flange	Carbon Steel	A105	—
⑪	Cover Bolt	Alloy Steel	A193 Gr. B16	SNB16
⑩	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 \*\*\* Option

**Options**

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

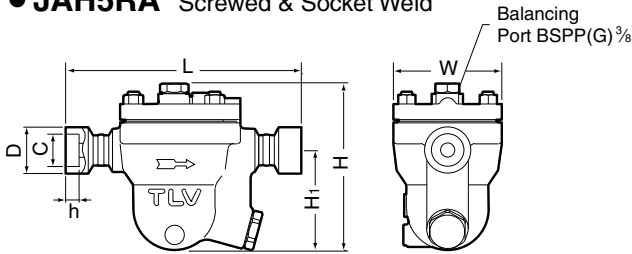
**Leakage Rating**

Maximum Seat Leakage			
Model	Orifice	Minimum Δ P (psi)	
		0.1	1.5
JAH5RA	Rubber	<0.01% of rated valve capacity	<0.15 standard ml/min, <1 bubble/min

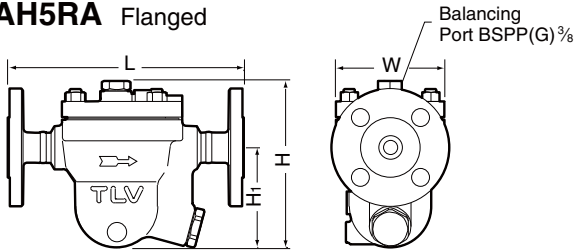
\* Standard milliliters based on 60 °F, 14.73 psi abs

**Dimensions**

● **JAH5RA** Screwed & Socket Weld



● **JAH5RA** Flanged



**JAH5RA** Screwed\* (in)

Size	L	H	H <sub>1</sub>	φ W	Weight (lb)
3/4	9 11/16	6 7/8	4 1/8	4 1/2	15
1	10 1/8				

\* NPT, other standards available

**JAH5RA** Socket Weld\* (in)

Size	L	H	H <sub>1</sub>	φ W	φ D	φ C	h	Weight (lb)
3/4	9 11/16	6 7/8	4 1/8	4 1/2	1 9/16	1.065	9/16	15
1	10 1/8				1 7/8	1.330		

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

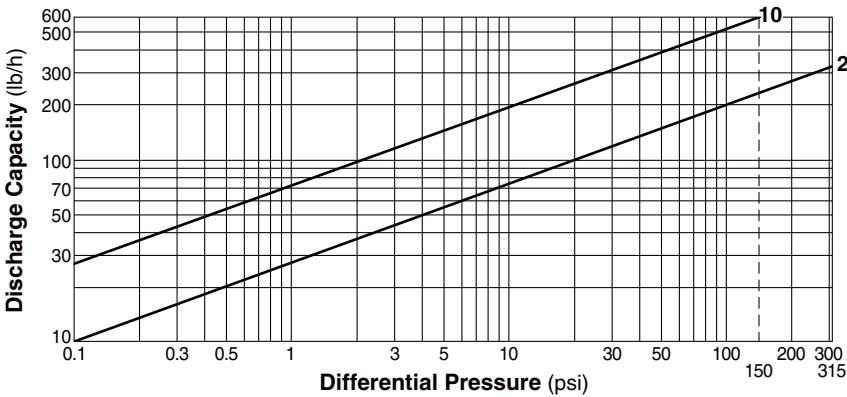
**JAH5RA** Flanged (in)

Size	L		H	H <sub>1</sub>	φ W	Weight (lb)
	Connects to	ASME Class				
3/4		300RF	6 7/8	4 1/8	4 1/2	19
1		12 3/16				22

Other standards available, but length and weight may vary

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 =  $\frac{1}{\sqrt{S.G.}}$



**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.



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

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

