



# FREE FLOAT® DRAIN TRAP

## MODEL JAH5RG

HIGH-PRESSURE FREE FLOAT DRAIN TRAP WITH TIGHT SHUT-OFF FOR AIR AND INERT GAS SERVICE

### Features

Medium-capacity cast steel\* free float trap automatically drains condensate and oil from air and inert gas systems.

1. Self-modulating free float provides continuous, smooth, low-velocity condensate discharge as process loads vary.
2. Precision-ground float and three-point seating provide superior sealing, even under no-load conditions (with rubber orifice).
3. Only one moving part, the free float, eliminates concentrated valve wear and provides long maintenance-free service life.
4. Built-in screen with large surface area ensures extended trouble-free service.

\* Stainless steel body available on request



### Specifications

Model	JAH5RG-R (Rubber Orifice)			JAH5RG-M (Metal Orifice)		
	Screwed	Socket Welded	Flanged	Screwed	Socket Welded	Flanged
Connection						
Size (mm)	15, 20, 25	15, 20, 25, 40			15, 20, 25	15, 20, 25, 40
Orifice No.		10, 22			G5, G10, G22, G40, G46	
Maximum Operating Pressure (MPaG)	PMO**	1.0, 2.2			0.5, 1.0, 2.2, 4.0, 4.6	
Maximum Differential Pressure (MPa)	ΔPMX**	1.0, 2.2			0.5, 1.0, 2.2, 4.0, 4.6	
Minimum Operating Pressure (MPaG)		0.01			0.01	
Maximum Operating Temperature (C)	TMO	150			425	
Minimum Condensate Load for Tight Sealing (kg/h)		0			5	
Applicable Fluids*	Air, Inert Gases					

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

1 MPa = 10.197 kg/cm<sup>2</sup>

PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS): Maximum Allowable Pressure (MPaG) PMA: 4.6  
Maximum Allowable Temperature (C) TMA: 425

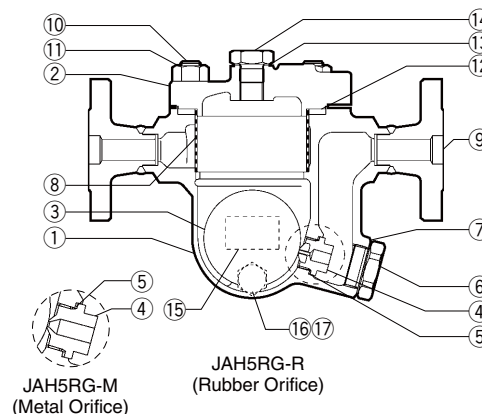
\*\* For fluids with specific gravities other than 1.0, use the table below

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 (MPaG) & Maximum Differential Pressure PMX (MPa)												
JAH5RG-R	10	1.00	1.00	1.00	1.00	1.00	0.85	0.70	0.56	0.41	0.26	0.11
	22	2.20	2.20	2.20	2.20	2.20	1.96	1.62	1.28	0.94	0.60	0.26
JAH5RG-M	G5	0.50	0.50	0.50	0.50	0.48	0.41	0.34	0.27	0.20	0.13	0.05
	G10	1.00	1.00	1.00	1.00	1.00	0.85	0.70	0.56	0.41	0.26	0.11
	G22	2.20	2.20	2.20	2.20	2.20	1.96	1.62	1.28	0.94	0.60	0.26
	G40	4.00	4.00	4.00	4.00	3.87	3.30	2.73	2.16	1.58	1.01	0.44
	G46	4.60	4.60	4.60	4.60	4.27	3.37	2.46	1.55	0.64	—	—



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.

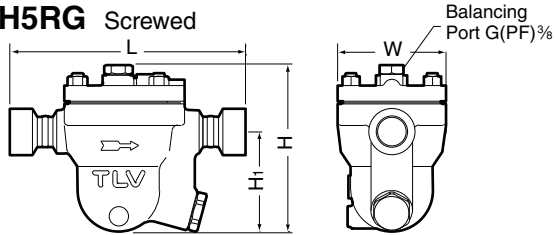
No.	Description	Material	JIS	ASTM/AISI*
①	Body	Cast Steel	—	A216 Gr. WCB
②	Cover	Carbon Steel	—	A105
③	Float	Stainless Steel	SUS316L	AISI316L
④	Orifice	JAH5RG-R Fluorine Rubber/Stain. Steel	FPM/SUS316L	D2000HK/AISI316L
	JAH5RG-M	—	—	—
⑤	Orifice Gasket	Soft Iron	SUYP	AISI1010
⑥	Orifice Plug	Cast Stainless Steel	—	A743 Gr. CA40
⑦	Orifice Plug Gasket	Soft Iron	SUYP	AISI1010
⑧	Screen	Stainless Steel	SUS430	AISI430
⑨	Socket**/Flange	Carbon Steel	—	A105
⑩	Cover Bolt	Alloy Steel	SNB16	A193 Gr. B16
⑪	Cover Nut	Carbon Steel	S45C	AISI1045
⑫	Cover Gasket	Graphite/Stainless Steel	–/SUS304	–/AISI304
⑬	Plug Gasket	Soft Iron	SUYP	AISI1010
⑭	Balancing Line Plug	Carbon Steel	S25C	AISI1025
⑮	Nameplate	Stainless Steel	SUS304	AISI304
⑯	Drain Plug Gasket***	Soft Iron	SUYP	AISI1010
⑰	Drain Plug***	Carbon Steel	S25C	AISI1025



\* Equivalent \*\* Shown on reverse \*\*\* Option

**Dimensions**

● **JAH5RG Screwed**

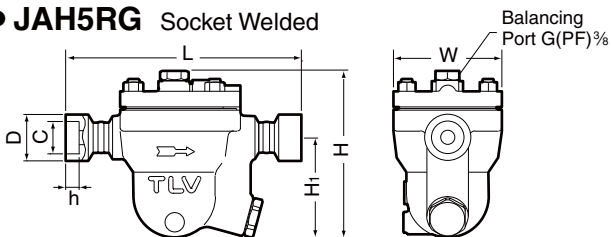


**JAH5RG Screwed** (mm)

Size	L	H	H <sub>1</sub>	W	Weight (kg)
15	234	175	105	115	6.5
20	246				6.6
25	258				6.7

\* Rc(PT), other standards available

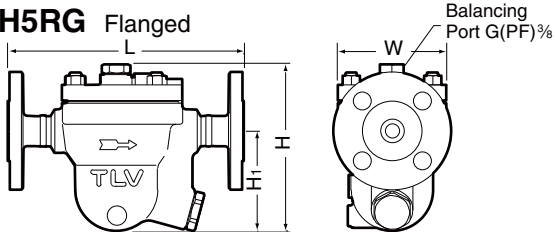
● **JAH5RG Socket Welded**



**JAH5RG Socket Welded** (mm)

Size	L	H	H <sub>1</sub>	W	φD	φC	h	Weight (kg)
15	234	175	105	115	33	22.2	12	6.5
20	246				39.5	27.7	6.6	
25	258				48	34.5	14	6.7
40	246				64	49.1	9.1	

● **JAH5RG Flanged**



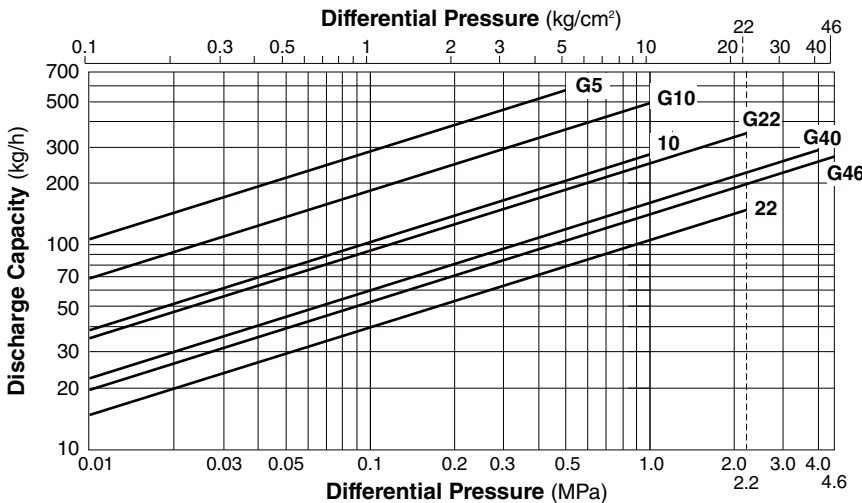
**JAH5RG Flanged** (mm)

Size	L			H	H <sub>1</sub>	W	Weight* (kg)
	ASME Class						
	150RF	300RF	600RF				
15	239	239	239	175	105	115	8.4
20	264	264	264				9.8
25	309	309	309				11
40	290	290	290				15

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/gas system from the balancing port at the top of the trap to a place above any possible condensate accumulation in the system.  
● Balancing port options: 10 or 15 mm, flanged, socket welded or screwed with other thread standards.

**Discharge Capacity**



1. Line numbers within the graph refer to orifice numbers. Orifice numbers beginning with "G" are for JAH5RG-M (metal orifice); other numbers are for JAH5RG-R (rubber orifice).
2. Differential pressure is the difference between the inlet and outlet pressure of the trap.
3. The chart is applicable to condensate below 100 C.
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.



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

● **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 =  $\frac{1}{\sqrt{S.G.}}$

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

