



# FREE FLOAT<sup>®</sup> AIR TRAP

## MODEL JA3

### FREE FLOAT AIR TRAP WITH TIGHT SHUT-OFF FOR AIR SERVICE

#### Features

**Light free float air trap for pipe-end installation to automatically drain condensate and oil from compressed air systems.**

1. Self-modulating free float provides continuous, smooth, low velocity condensate discharge as process loads vary.
2. Perfect air-tight seal, even under low-load conditions.
3. Only one moving part, the free float, prevents concentrated wear and provides long maintenance-free service life.
4. Built-in screen with large surface area ensures extended trouble-free operation.
5. Manual blow down device allows cleaning of the valve seat from outside during operation.
6. Major internal parts made of stainless steel.



#### Specifications

Model	JA3	JAF3
Connection	Screwed	Flanged
Size (mm)	15, 20, 25	
Maximum Operating Pressure (MPaG) PMO	1.6	
Maximum Differential Pressure (MPa) ΔPMX	1.6	
Maximum Operating Temperature (°C) TMO	100	
Applicable Fluid*	Air	

\* 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: 2.1 (JA3), 1.6 (JAF3)  
Maximum Allowable Temperature (°C) TMA: 220

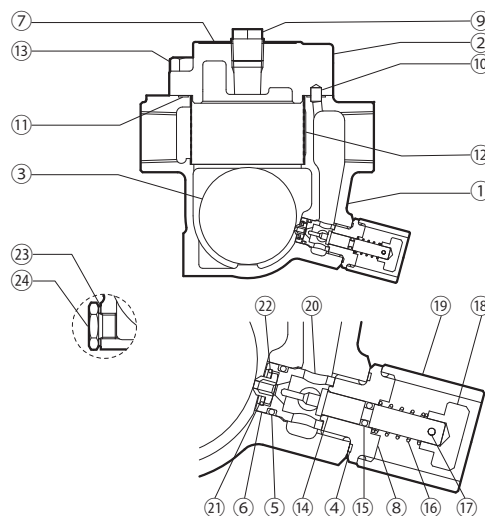


To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

No.	Description	Material	JIS	ASTM/AISI*
①	Body	JA3	Ductile Cast Iron	FCD450 A536
		JAF3	Cast Iron	FCV400 A842 Gr.400
②	Cover	Ductile Cast Iron	FCD450	A536
③ <sup>F</sup>	Float	Stainless Steel	SUS316L	AISI316L
④ <sup>MR</sup>	Holder Nut Gasket	Fluorine Resin	PTFE	PTFE
⑤ <sup>MR</sup>	Valve Seat Holder O-Ring	Nitrile Rubber	NBR	D2000BF
⑥ <sup>R</sup>	Valve Seat	Nitrile Rubber	NBR	D2000BF
⑦	Nameplate	Stainless Steel	SUS304	AISI304
⑧ <sup>R</sup>	Valve Seat Holder Nut	Stainless Steel	SUS420F	AISI420F
⑨	Balancing Line Plug	Carbon Steel	SS400	A6
⑩	Alignment Pin	Bearing Steel	SUU2	A485
⑪ <sup>MR</sup>	Cover Gasket	Fluorine Resin	PTFE	PTFE
⑫ <sup>R</sup>	Screen	Stainless Steel	SUS430	AISI430
⑬	Cover Bolt	Carbon Steel	S45C	AISI1045
⑭ <sup>R</sup>	Needle	Stainless Steel	SUS420F	AISI420F
⑮ <sup>MR</sup>	Needle O-Ring	Nitrile Rubber	NBR	D2000BF
⑯ <sup>R</sup>	Coil Spring	Stainless Steel	SUS304	AISI304
⑰ <sup>R</sup>	Split Pin	Stainless Steel	SUS304	AISI304
⑱ <sup>R</sup>	Plunger	Stainless Steel	SUS420F	AISI420F
⑲ <sup>R</sup>	Guard Bushing	Carbon Steel	SGP	A53 Type F
⑳ <sup>R</sup>	Valve Seat Holder	Stainless Steel	SUS420F	AISI420F
㉑ <sup>R</sup>	Snap Ring	Stainless Steel	SUS304	AISI304
㉒ <sup>R</sup>	Washer	Stainless Steel	SUS304	AISI304
㉓	Drain Plug Gasket**	Soft Iron	SUYP	AISI1010
㉔	Drain Plug**	Carbon Steel	S25C	AISI1025

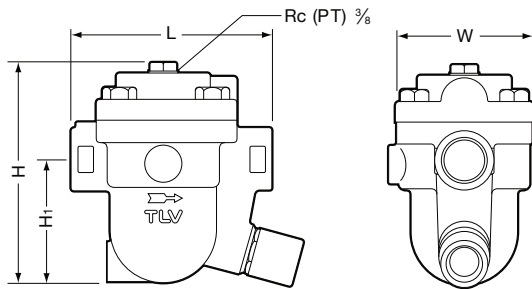
\* Equivalent \*\* Option

Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float



**Dimensions**

● **JA3** Screwed

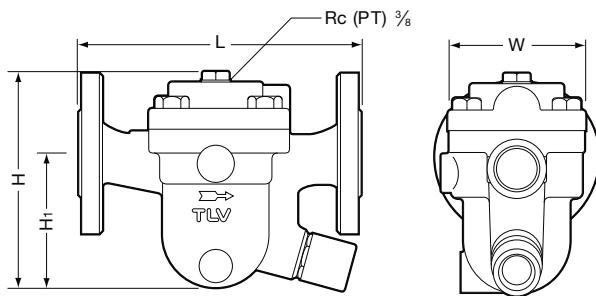


**JA3** Screwed\* (mm)

Size	L	H	H <sub>1</sub>	W	Weight (kg)
15	120	130	75	80	2.7
20			72.5		2.8
25		137	75		3.0

\* Rc(PT), other standards available

● **JAF3** Flanged



**JAF3** Flanged (mm)

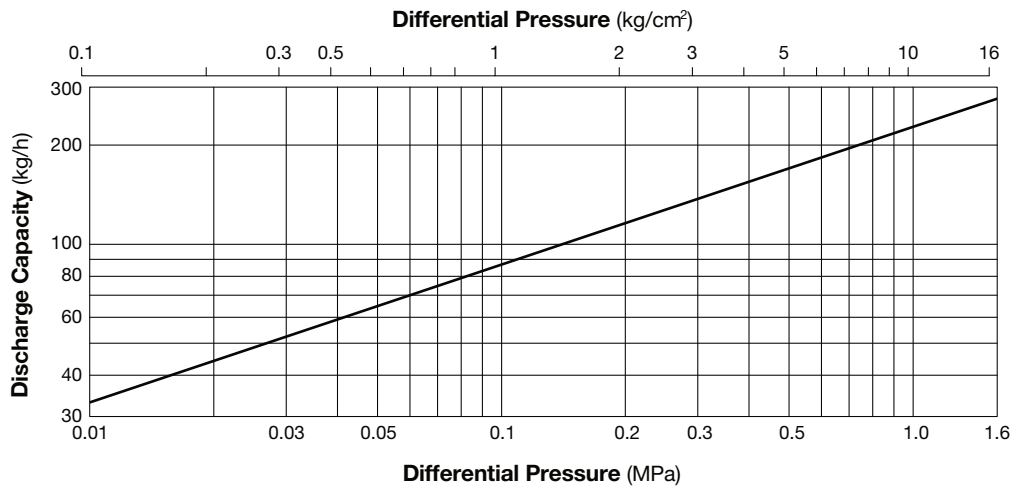
Size	L				H	H <sub>1</sub>	W	Weight* (kg)
	ASME Class							
	125FF	(150RF)	250RF	(300RF)				
(15)	—	175	—	175	130	80	80	3.8
(20)	—	195	—	195	135	90		5.1
25	203	215	215	219	140	95		6.0

( ) No ASME standard exists for cast iron; machined to fit steel flanges  
 Class 125 FF can connect to 150 RF, 250 RF can connect to 300 RF  
 Other standards available, but length and weight may vary  
 \* Weight is for Class 250 RF / 300 RF

**NOTE:**

A pressure-balancing line must be connected to the air 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. Differential pressure is the difference between the inlet and outlet pressure of the trap.
2. The chart is applicable to condensate below 100 °C
3. The discharge capacity is for a liquid with specific gravity of 1.
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  
 ISO 14001

