



FREE FLOAT[®] DRAIN TRAP

MODEL SS1VG-M2

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

Features

Stainless steel trap to be installed in pipe ends. Automatically drains condensate from air and inert gas systems.

1. Constant water seal and unique rotational seating design eliminate concentrated wear to ensure a longer service life.
2. Three-point seating provides a tight seal even under no-load conditions (with rubber orifice).
3. Precision ground float ensures superior sealing.
4. Built-in screen with large surface area ensures extended trouble-free operation.
5. Self-modulating free float provides continuous, smooth, low velocity condensate discharge as process loads vary.



Specifications

Model	SS1VG-R-M2 (Rubber Orifice)	SS1VG-M-M2 (Metal Orifice)
Connection	Screwed, Socket Welded, Flanged	
Size (mm)	15, 20, 25	
Orifice No.	10	G5, G10, G16, G21
Maximum Operating Pressure (MPaG) PMO	1.0	0.5, 1.0, 1.6, 2.1
Maximum Differential Pressure (MPa) ΔPMX	1.0	0.5, 1.0, 1.6, 2.1
Minimum Operating Pressure (MPaG)	0.01	0.01
Maximum Operating Temperature (°C) TMO	150	220
Minimum Condensate Load for Tight Sealing (kg/h)	0	0.5
Applicable Fluids*	Air, Inert Gases*	

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

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS):

Maximum Allowable Pressure (MPaG) PMA: 2.1

Maximum Allowable Temperature (°C) TMA: 220

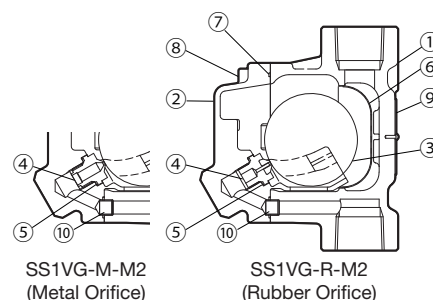
Model	Orifice No.	Specific Gravity										
		1.00	0.99 – 0.95	0.94 – 0.90	0.89 – 0.85	0.84 – 0.80	0.79 – 0.75	0.74 – 0.70	0.69 – 0.65	0.64 – 0.60	0.59 – 0.55	0.54 – 0.50
Maximum Operating Pressure PMO (MPaG) & Maximum Differential Pressure ΔPMX (MPa)												
SS1VG-R-M2	10	1.00	0.99	0.89	0.79	0.69	0.59	0.49	0.39	0.28	0.18	0.08
SS1VG-M-M2	G5	0.50	0.49	0.44	0.39	0.34	0.29	0.24	0.19	0.14	0.09	0.04
	G10	1.00	0.99	0.89	0.79	0.69	0.59	0.49	0.39	0.28	0.18	0.08
	G16	1.60	1.50	1.35	1.20	1.04	0.89	0.74	0.59	0.43	0.28	0.13
	G21	2.10	2.06	1.85	1.64	1.43	1.22	1.01	0.80	0.59	0.38	0.17



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 Stainless Steel	—	A351/A351M Gr.CF8
②	Cover	Cast Stainless Steel	—	A351/A351M Gr.CF8
③	Float	Stainless Steel	SUS316L	AISI316L
④	Orifice	Rubber	Fluorine Rubber/Stainl. Steel	FPM/SUS303
		Metal	—	—
⑤	Orifice Gasket	Fluorine Resin	PTFE	—
⑥	Screen	Stainless Steel	SUS304	AISI304
⑦	Cover Gasket	Fluorine Resin	PTFE	—
⑧	Cover Bolt	Stainless Steel	—	—
⑨	Nameplate	Stainless Steel	SUS304	AISI304
⑩	Connector	Stainless Steel	SUS304	AISI304
⑪	Flange**	Cast Stainless Steel	—	A351/A351M Gr.CF8

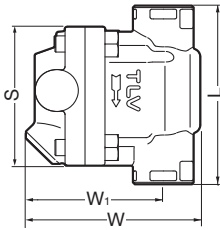
* Equivalent materials ** Shown on reverse



Dimensions

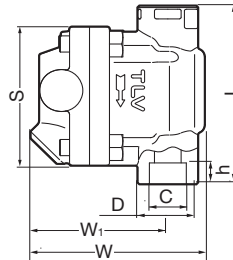
● **SS1VG-M2**

Screwed



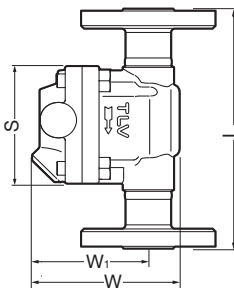
● **SS1VG-M2**

Socket Welded



● **SS1VG-M2**

Flanged



SS1VG-M2 Screwed*

(mm)

Size	L	W**	W ₁ **	S	Weight (kg)
15	110	110	82	85	1.5
20	120				
25	130				1.7

* Rc(PT), other standards available

** Approx.

SS1VG-M2 Socket Welded

(mm)

Size	L	W*	W ₁ *	S	φ D	φ C	h	Weight (kg)
15	110	110	85	85	34	22.2	13	1.5
20	120				39	27.7		
25	130				48	34.5		1.7

* Approx.

SS1VG-M2 Flanged

(mm)

Size	L		W*	W ₁ *	S	Weight** (kg)
	ASME Class					
	150RF	300RF				
15	175	175	110	85	85	2.9
20	195	195				3.9
25	215	215				4.6

Other standards available, but length and weight may vary

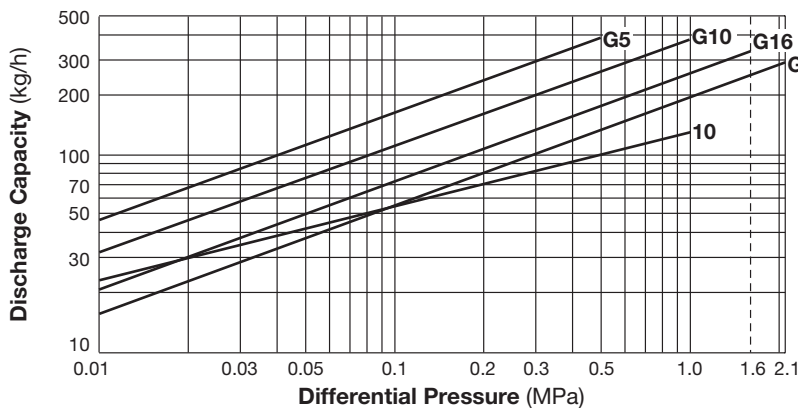
* Approx.

** Weight is for Class 300 RF

NOTE:

Install the shortest possible vertical condensate pipe to the trap to ensure unobstructed condensate flow.

Discharge Capacity



1. Line numbers within the graph refer to orifice numbers. Orifice numbers beginning with "G" are for SS1VG-M-M2 (metal orifice); other numbers are for SS1VG-R-M2 (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 this product 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

ISO 9001
ISO 14001

