



FREE FLOAT DRAIN TRAP

MODEL SS1VG STAINLESS STEEL

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 prevent concentrated wear to ensure long life.
2. Three-point seating provides a tight seal even under no-load conditions (with rubber sealing).
3. Precision ground float guarantees 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.

Pressure Equipment Directive (PED)

Classification according to PED 2014/68/EU, fluid group 2

Size	Category	CE marking
1/2", 3/4", 1"	—*	Art. 4, Sec. 3 (sound engineering practice), CE marking not allowed

* Manufactured in accordance with sound engineering practice



Specifications

Model	SS1VG-R (Rubber Orifice)	SS1VG-M (Metal Orifice)
Connection	Screwed	
Size	1/2", 3/4", 1"	
Orifice No.	10	G5, G10, G16, G21
Maximum Operating Pressure (barg) PMO**	10	5, 10, 16, 21
Maximum Differential Pressure (bar) ΔPMX**	10	5, 10, 16, 21
Maximum Operating Temperature (°C) TMO	150	220
Minimum Condensate Load for Tight Sealing (kg/h)	0	0.5
Applicable fluid	Air, Inert Gas*	

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

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS): Maximum Allowable Pressure (barg) PMA: 21
Maximum Allowable Temperature (°C) TMA: 220
Minimum Allowable Temperature (°C): -40

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

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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 (barg) & Maximum Differential Pressure Δ PMX (bar)												
SS1VG-R	10	10.0	9.9	8.9	7.9	6.9	5.9	4.9	3.9	2.8	1.8	0.8	
SS1VG-M	G5	5.0	4.9	4.4	3.9	3.4	2.9	2.4	1.9	1.4	0.9	0.4	
	G10	10.0	9.9	8.9	7.9	6.9	5.9	4.9	3.9	2.8	1.8	0.8	
	G16	16.0	15.0	13.5	12.0	10.4	8.9	7.4	5.9	4.3	2.8	1.3	
	G21	21.0	20.6	18.5	16.4	14.3	12.2	10.1	8.0	5.9	3.8	1.7	



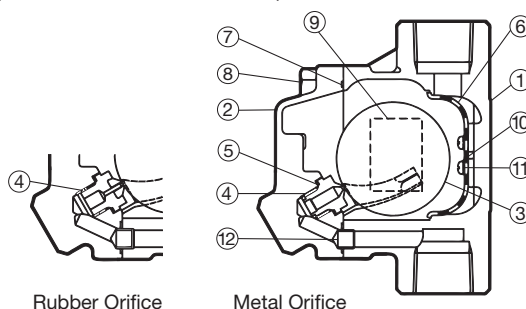
CAUTION

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.

1 bar = 0.1 MPa

No.	Description	Material	DIN*	ASTM/AISI*
①	Body	Cast Stainless Steel A351/A351M Gr.CF8 or CF8M	1.4312 or 1.4410	—
②	Cover	Cast Stainless Steel A351/A351M Gr.CF8 or CF8M	1.4312 or 1.4410	—
③	Float	Stainless Steel SUS316L	1.4404	AISI316L
④	Orifice (Metal)	—	—	—
④	Orifice (Rubber)	Stainl. Stl. SUS303/FPM	1.4305/FPM	AISI303/D2000HK
⑤	Orifice Gasket	Fluorine Resin PTFE	—	—
⑥	Screen	Stainless Steel SUS304	1.4301	AISI304
⑦	Cover Gasket	Fluorine Resin PTFE	—	—
⑧	Cover Bolt	Stainless Steel or A193/A193M Gr.B8M	— or 1.4401	—
⑨	Nameplate	Stainless Steel SUS304/SUS316L	1.4301/1.4404	AISI304/AISI316L
⑩	Screw	Stainless Steel SUS304	1.4301	AISI304
⑪	Spring Washer	Stainless Steel SUS304	1.4301	AISI304
⑫	Connector	Stainless Steel SUS304	1.4301	AISI304

* Equivalent materials



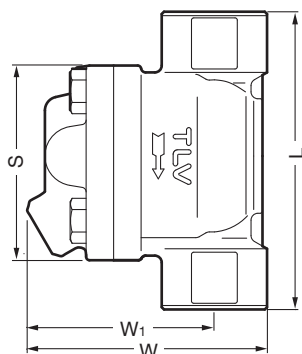
Rubber Orifice

Metal Orifice

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Dimensions

● SS1VG Screwed



SS1VG Screwed*

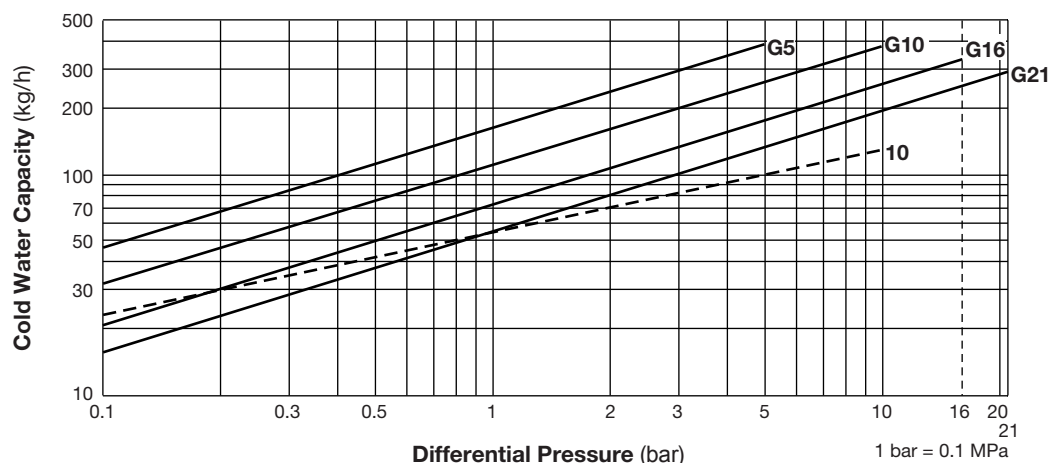
(mm)

Size	L	W	W ₁	S	Weight (kg)
1/2"	110	103	82	85	1.6
3/4"	120				1.7
1"	130				1.8

* BSP DIN 2999, other standards available

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

Discharge Capacity



--- Rubber Orifice — Metal Orifice

- Line numbers within the graph refer to orifice numbers.
- Differential pressure is the difference between the inlet and outlet pressure of the trap.
- The chart is applicable to condensate below 100 °C.
- The discharge capacity is for a liquid with specific gravity of 1.
- Recommended safety factor: at least 1.5.



CAUTION

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

Capacity Conversion Factors

Specific Gravity	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 capacity chart, multiply the required capacity (including safety factor) by the appropriate conversion factor for the specific gravity of the liquid.

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

