



# FREE FLOAT<sup>®</sup> STEAM TRAP

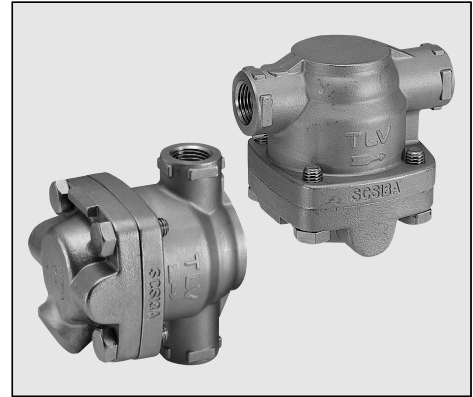
## MODEL SS1 STAINLESS STEEL

### FREE FLOAT STEAM TRAPS WITH THREE-POINT SEATING AND THERMOSTATIC AIR VENTING

#### Features

**Inline repairable stainless steel steam trap for steam mains, tracer lines and small process applications.**

1. Self modulating free float provides continuous, smooth, low velocity condensate discharge as process loads vary.
2. Constant water seal and unique three-point seating ensure perfect steam-tight seal, even under no-load conditions.
3. Trap incorporates thermostatic air vent for fast start-up.
4. Built-in screen with large surface area holds back impurities.
5. Only one moving part, the free float, prevents concentrated wear and provides long service life.
6. Easy, inline access to internal parts simplifies cleaning and reduces maintenance costs.



#### Pressure Equipment Directive (PED)

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

Size	Category	CE marking
DN 15 to 25	—*	Art. 4, Sec. 3 (sound engineering practice), CE marking not allowed

\* Manufactured in accordance with sound engineering practice

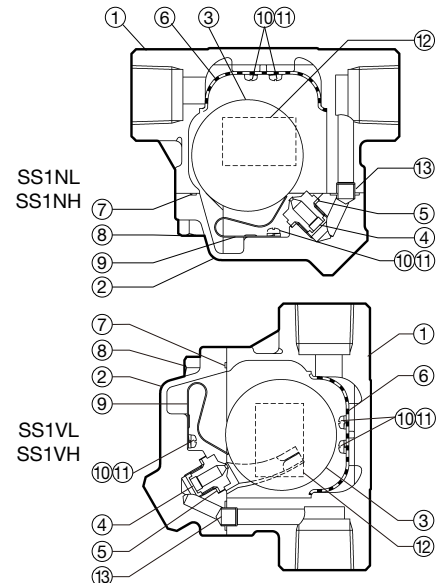
#### Specifications

Model	SS1NL	SS1VL	SS1NH	SS1VH
Installation	Horizontal	Vertical	Horizontal	Vertical
Connection	Screwed, Socket Welded, Flanged			
Size	1/2", 3/4", 1" / DN 15, 20, 25			
Orifice No.	5, 10, 21			
Maximum Operating Pressure (barg) PMO	5, 10, 21			
Maximum Differential Pressure (bar) ΔPMX	5, 10, 21			
Maximum Operating Temperature (°C) TMO	220		400	

**PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS):** 1 bar = 0.1 MPa  
 Maximum Allowable Pressure (barg) PMA: 21 (SS1NL/SS1VL), 25 (SS1NH/SS1VH)  
 Maximum Allowable Temperature (°C) TMA: 220 (SS1NL/SS1VL), 400 (SS1NH/SS1VH)  
 Minimum Allowable Temperature (°C): -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.

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 <sup>F</sup>	Float	Stainless Steel SUS316L	1.4404	AISI316L
④ <sup>R</sup>	Orifice	—	—	—
⑤ <sup>MR</sup>	Orifice Gasket	Stainless Steel SUS316L	1.4404	AISI316L
⑥ <sup>R</sup>	Screen	Stainless Steel SUS304	1.4301	AISI304
⑦ <sup>MR</sup>	Cover Gasket	SS1NL/VL Fluorine Resin PTFE	PTFE	PTFE
		SS1NH/VH Graphite/Stainless Steel SUS316L	-/1.4404	-/AISI316L
⑧	Cover Bolt	Stainless Steel SUS304 or A193/A193M Gr.B8M	1.4301 or 1.4401	AISI304 or —
⑨ <sup>R</sup>	Air Vent Strip	Bimetal	—	—
⑩ <sup>R</sup>	Screw	Stainless Steel SUS304	1.4301	AISI304
⑪ <sup>R</sup>	Spring Washer	Stainless Steel SUS304	1.4301	AISI304
⑫	Nameplate	Stainless Steel SUS304/SUS316L	1.4301/1.4404	AISI304/AISI316L
⑬	Connector	Stainless Steel SUS304	1.4301	AISI304
⑭	Flange**	Cast Stainless Steel A351/A351M Gr.CF8 or CF8M	1.4312 or 1.4410	—

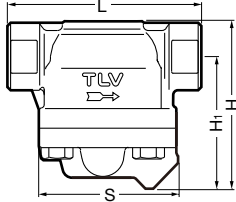


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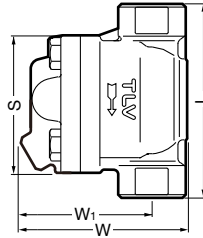
\* Equivalent materials \*\* Shown on reverse  
 Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float

**Dimensions**

● **SS1NL/SS1NH**  
Screwed



● **SS1VL/SS1VH**

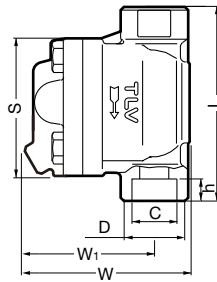
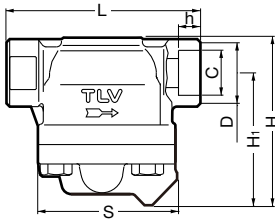


**SS1NL/SS1NH/SS1VL/SS1VH** Screwed\* (mm)

Size	L	H (W)	H <sub>1</sub> (W <sub>1</sub> )	S	Weight (kg)
15	110	102 (103)	81 (82)	85	1.6
20	120				1.7
25	130				1.8

\* BSP DIN 2999, other standards available

Socket Welded

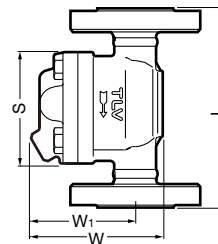
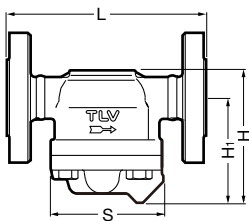


**SS1NL/SS1NH/SS1VL/SS1VH** Socket Welded\* (mm)

Size	L	H (W)	H <sub>1</sub> (W <sub>1</sub> )	S	φD	φC	h	Weight (kg)
15	110	102 (103)	81 (82)	85	30	21.8	13	1.6
20	120				36	27.2		1.7
25	130				44	33.9		1.8

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

Flanged

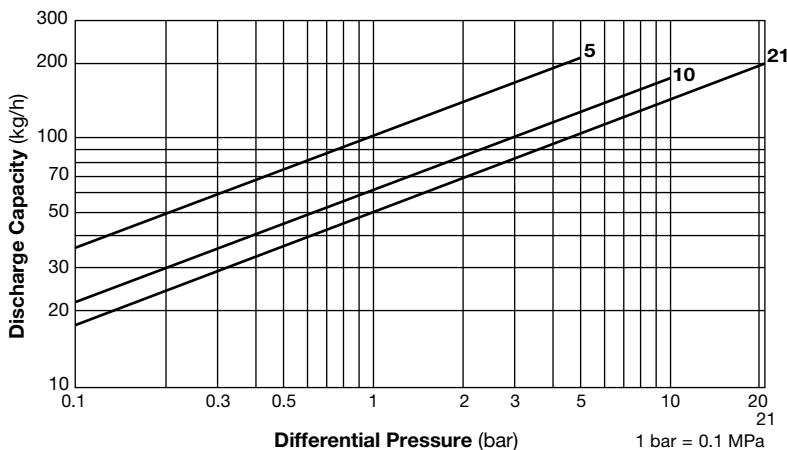


**SS1NL/SS1NH/SS1VL/SS1VH** Flanged (mm)

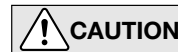
DN	L		H (W)	H <sub>1</sub> (W <sub>1</sub> )	S	Weight* (kg)	
	DIN 2501 PN25/40	ASME Class 150RF 300RF					
15	150	175	175	102 (103)	81 (82)	85	2.8
20		195	195				3.2
25		215	215				4.2

Other standards available, but length and weight may vary  
\* Weight is for DIN PN 25/40

**Discharge Capacity**



1. Line numbers within the graph refer to orifice numbers.
2. Differential pressure is the difference between the inlet and outlet pressure of the trap.
3. Capacities are based on continuous discharge of condensate 6 °C below saturated steam temperature.
4. Recommended safety factor: at least 1.5.



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

