



# FREE FLOAT<sup>®</sup> STEAM TRAP

## MODEL SS1

### FREE FLOAT STEAM TRAP WITH 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 startup.
4. Built-in screen with large surface area holds back impurities.
5. Only one moving part, the free float, reduces concentrated wear and provides a long service life.
6. Easy, inline access to internal parts simplifies cleaning and reduces maintenance costs.



#### Specifications

Model	SS1NL	SS1VL	SS1NH	SS1VH
Installation	Horizontal	Vertical	Horizontal	Vertical
Connection	Screwed, Socket Welded, Flanged			
Size (mm)	15, 20, 25			
Orifice No.	5, 10, 21			
Maximum Operating Pressure (MPaG) PMO			0.5, 1.0, 2.1	
Maximum Differential Pressure (MPa) ΔPMX			0.5, 1.0, 2.1	
Minimum Operating Pressure (MPaG)			0.01	
Maximum Operating Temperature (°C) TMO	220		350	

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

Maximum Allowable Pressure (MPaG) PMA: 2.1

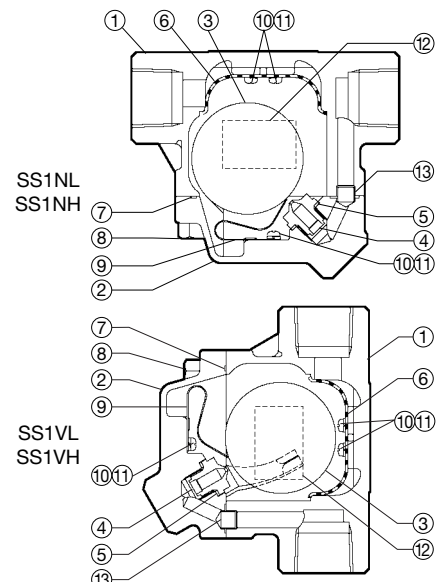
Maximum Allowable Temperature (°C) TMA: 220 (SS1NL/SS1VL), 350 (SS1NH/SS1VH)

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



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 Gr.CF8
②	Cover	Cast Stainless Steel	—	A351 Gr.CF8
③ <sup>F</sup>	Float	Stainless Steel	SUS316L	AISI316L
④ <sup>R</sup>	Valve Seat	—	—	—
⑤ <sup>MR</sup>	Valve Seat Gasket	Stainless Steel	SUS316L	AISI316L
⑥ <sup>R</sup>	Screen	Stainless Steel	SUS304	AISI304
⑦ <sup>MR</sup>	Cover Gasket	SS1NL/VL	Fluorine Resin	PTFE
		SS1NH/VH	Graphite/Stainless Steel	— /SUS316L — /AISI316L
⑧	Cover Bolt	Stainless Steel	SUS304	AISI304
⑨ <sup>R</sup>	Air Vent Strip	Bimetal	—	—
⑩ <sup>R</sup>	Screw	Stainless Steel	SUS304	AISI304
⑪ <sup>R</sup>	Spring Washer	Stainless Steel	SUS304	AISI304
⑫	Nameplate	Stainless Steel	SUS304	AISI304
⑬	Connector	Stainless Steel	SUS304	AISI304
⑭	Flange**	Cast Stainless Steel	—	A351 Gr.CF8



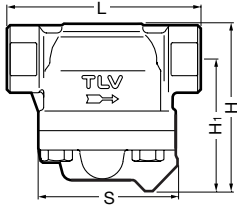
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\* Equivalent \*\* Shown on reverse

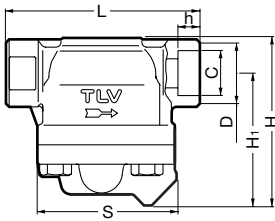
Replacement Kits available: (M) maintenance parts, (R) repair parts, (F) float

**Dimensions**

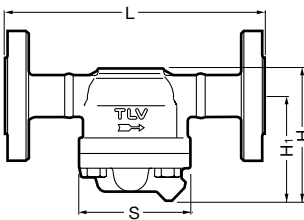
● **SS1NL • SS1NH**  
Screwed



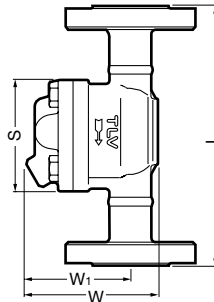
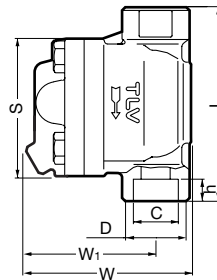
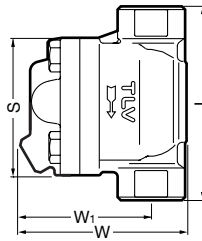
Socket Welded



Flanged



● **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

\* Rc(PT), other standards available

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

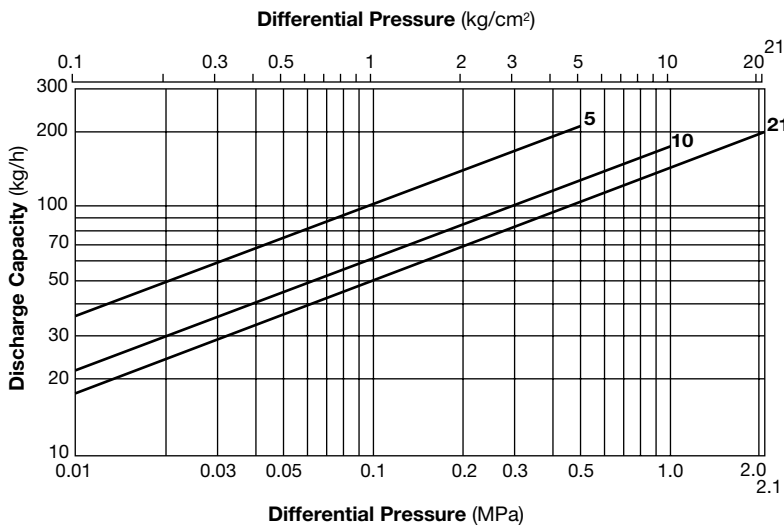
Size	L	H/W	H <sub>1</sub> /W <sub>1</sub>	S	φD	φC	h	Weight (kg)
15	110	102/103	81/82	85	30	22.2	13	1.6
20	120				36	27.7		1.7
25	130				44	34.5		1.8

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

Size	L		H/W	H <sub>1</sub> /W <sub>1</sub>	S	Weight* (kg)
	ASME Class 150RF	300RF				
15	175	175	102/103	81/82	85	2.9
20	195	195				3.9
25	215	215				4.6

Other standards available, but length and weight may vary  
\* Weight is for Class 300 RF

**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 traps under conditions that exceed maximum differential pressure, as condensate backup will occur!

Manufacturer

ISO 9001/ISO 14001

**TLV**® CO., LTD.  
Kakogawa, Japan

is approved by LRQA Ltd. to ISO 9001/14001

