



# FREE FLOAT<sup>®</sup> STEAM TRAP

## MODEL SH5VL

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

#### Features

**Vertical inline repairable trap with tight shut-off for drainage of superheated or high-pressure steam mains, equipment, and turbines.**

1. Self-modulating free float provides continuous, smooth, low velocity condensate discharge as loads vary.
2. Precision-ground float, constant water seal and three-point seating design ensure a steam tight seal, even under no-load conditions.
3. Thermostatic air venting with bimetal strip allows fast start-up.
4. Built-in screen with large surface area ensures extended trouble-free operation.
5. Easy, inline access to internal parts simplifies cleaning and reduces maintenance costs.



#### Specifications

Model		SH5VL	
Connection*		Socket Welded	Flanged
Size (mm)		15, 20, 25	
Orifice No.		14, 32, 46, 65	
Maximum Operating Pressure (MPaG)	PMO	1.4, 3.2, 4.6, 6.5	
Maximum Differential Pressure (MPa)	ΔPMX	1.4, 3.2, 4.6, 6.5	
Minimum Operating Pressure (MPaG)		0.01	
Maximum Operating Temperature (°C)		425	

\* Screwed connection available on request

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

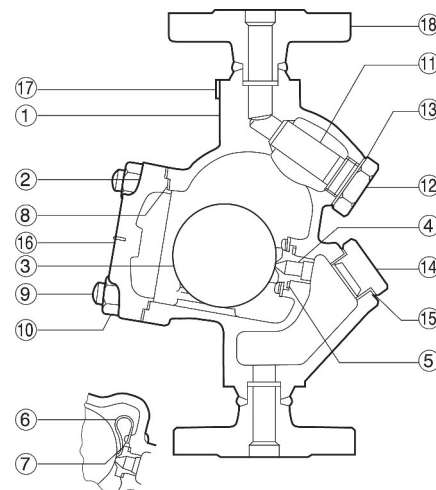
PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS): Maximum Allowable Pressure (MPaG) PMA: 6.5  
Maximum Allowable Temperature (°C) TMA: 425



#### 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	JIS	ASTM/AISI*
①	Body	Cast Steel	—	A216 Gr.WCB
②	Cover	Carbon Steel	—	A105
③ <sup>F</sup>	Float	Stainless Steel	SUS316L	AISI316L
④ <sup>R</sup>	Orifice	—	—	—
⑤ <sup>MR</sup>	Orifice Gasket	Graphite/Stainless Steel	- /SUS 316L	- /AISI316L
⑥ <sup>R</sup>	Air Vent Strip	Bimetal	—	—
⑦ <sup>R</sup>	Screw & Spring Washer	Stainless Steel	SUS304	AISI304
⑧ <sup>MR</sup>	Cover Gasket	Graphite/Stainless Steel	- /SUS316L	- /AISI316L
⑨	Cover Bolt	Alloy Steel	SNB7	A193 Gr.B7
⑩	Cover Nut	Carbon Steel	S45C	AISI1045
⑪ <sup>R</sup>	Screen	Stainless Steel	SUS430	AISI430
⑫	Screen Holder	Stainless Steel	SUS420F2	AISI420F2
⑬ <sup>MR</sup>	Screen Holder Gasket	Soft Iron	SUYF	AISI1010
⑭	Orifice Plug	Cast Stainless Steel	SCS2A	A743 Gr.CA40
⑮ <sup>MR</sup>	Orifice Plug Gasket	Soft Iron	SUYF	AISI1010
⑯	Nameplate	Stainless Steel	SUS304	AISI304
⑰	Up-seal	Aluminium	Al	B209
⑱	Flange	Carbon/Cast Steel**	—	A105/A216 Gr.WCB

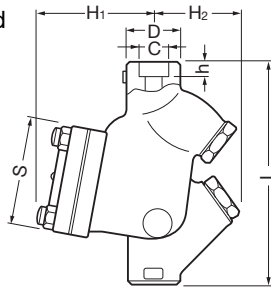


\* Equivalent \*\* Material depends on flange specifications

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

**Dimensions**

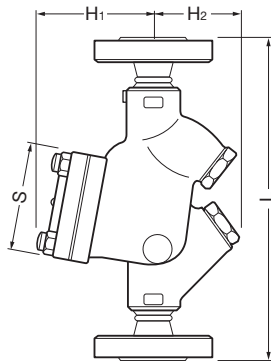
● **SH5VL Socket Welded**



**SH5VL Socket Welded** (mm)

Size	L	H <sub>1</sub>	H <sub>2</sub>	S	φD	φC	h	Weight (kg)
15	220	110	85	105	48	22.2	12	7.0
20						27.7	14	
25						34.5	14	

● **SH5VL Flanged**

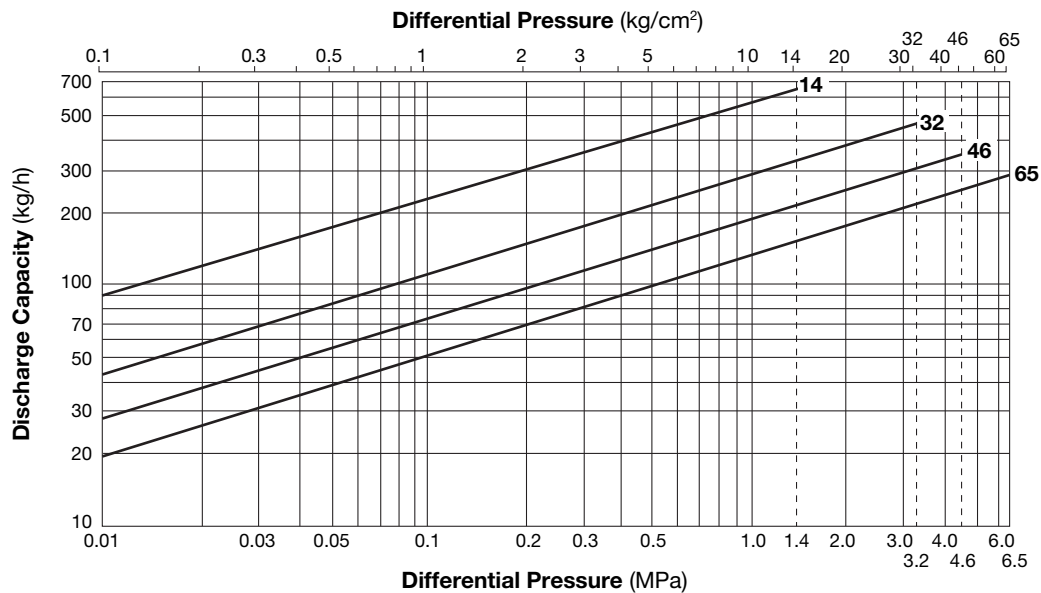


**SH5VL Flanged** (mm)

Size	L			H <sub>1</sub>	H <sub>2</sub>	S	Weight* (kg)
	ASME Class						
	150RF	300RF	600RF				
15	297	297	297	110	85	105	7.5
20							10
25							11

Other standards available, but length and weight may vary  
\* Weight is for Class 600 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 back up will occur!

Manufacturer

ISO 9001/ISO 14001

**TLV**® CO., LTD.  
Kakogawa, Japan  
is approved by LRQA Ltd. to ISO 9001/14001

