



# FREE FLOAT STEAM TRAP

## MODEL SH5VL

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

#### Features

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

1. Constant water seal and unique rotational seating design eliminates concentrated wear.
2. Three-point seating ensures perfect steam tight seal, even under no-load conditions.
3. Easy, inline access to internal parts simplifies cleaning and reduces maintenance costs.
4. High rating against hydraulic shock offers excellent resistance of the float to water hammer.
5. Precision-ground float with a sphericity of 0.004 guarantees superior sealing.
6. Thermostatic air venting with bimetal strip allows fast start-up.
7. Built-in screen with large surface area ensures extended trouble-free operation.
8. Extremely smooth, near-to-steam discharge for safety and environmental considerations.



#### Specifications

Model	SH5VL	
Connection*	Socket Welded	Flanged
Size (mm)	15, 20, 25	
Orifice No.	2, 5, 10, 14, 22, 32, 46, 65	
Maximum Operating Pressure (MPaG) PMO	0.2, 0.5, 1.0, 1.4, 2.2, 3.2, 4.6, 6.5	
Maximum Differential Pressure (MPa) ΔPMX	0.2, 0.5, 1.0, 1.4, 2.2, 3.2, 4.6, 6.5	
Minimum Operating Pressure (MPaG)	0.01	
Maximum Operating Temperature (°C) TMO	425	

\* Screwed connection available

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

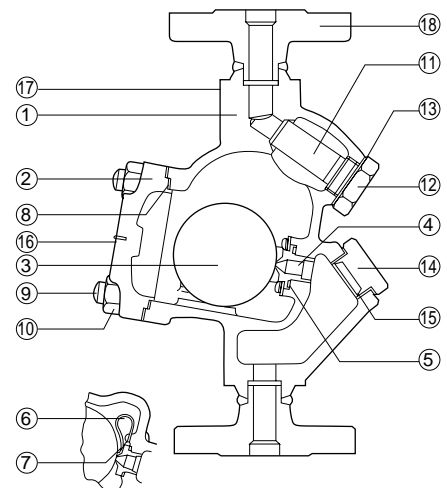
PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS): Maximum Allowable Pressure (MPaG) PMA: 6.5  
Maximum Allowable Temperature (°C) TMA: 425



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	—	A216WCB Gr.WCB
②	Cover	Carbon Steel	—	A105
③	Float	Stainless Steel	SUS316L	AISI316L
④	Orifice	Stainless Steel	SUS420F	AISI420F
⑤	Orifice Gasket	Stainless Steel/Graphite	SUS316L	AISI316L
⑥	Air Vent Strip	Bimetal	—	—
⑦	Screw & Spring Washer	Stainless Steel	SUS304	AISI304
⑧	Cover Gasket	Stainless Steel/Graphite	SUS316L	AISI316L
⑨	Cover Bolt	Alloy Steel	SNB7	A193 B7
⑩	Cover Nut	Carbon Steel	S45C	AISI1045
⑪	Screen	Stainless Steel	SUS430	AISI430
⑫	Screen Holder	Stainless Steel	SUS420F2	AISI420F2
⑬	Screen Holder Gasket	Soft Iron	SUYP	AISI1010
⑭	Orifice Plug	Cast Stainless Steel	SCS2A	A743 CA40
⑮	Orifice Plug Gasket	Soft Iron	SUYP	AISI1010
⑯	Nameplate	Stainless Steel	SUS304	AISI304
⑰	Up-seal	Aluminum	Al	B209
⑱	Flange	Carbon/Cast Steel**	—	A105/216 Gr. WCB

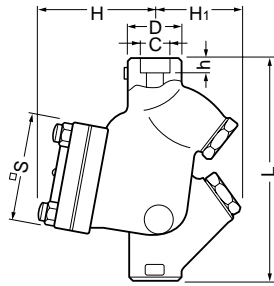
\* Equivalent \*\* Either A105 or A216 WCB, depending on flange specifications



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**Dimensions**

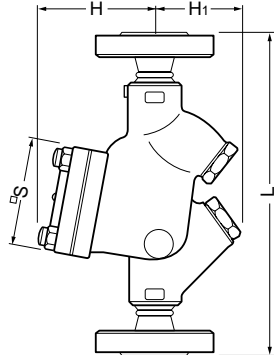
● **SH5VL**  
Socket Welded



**SH5VL** Socket Welded (mm)

Size	D	C	h	L	H	H <sub>1</sub>	S	Weight (kg)
15	52	22.2	12	220	110	85	105	7
20		27.7	14					
25		34.5	14					

● **SH5VL**  
Flanged

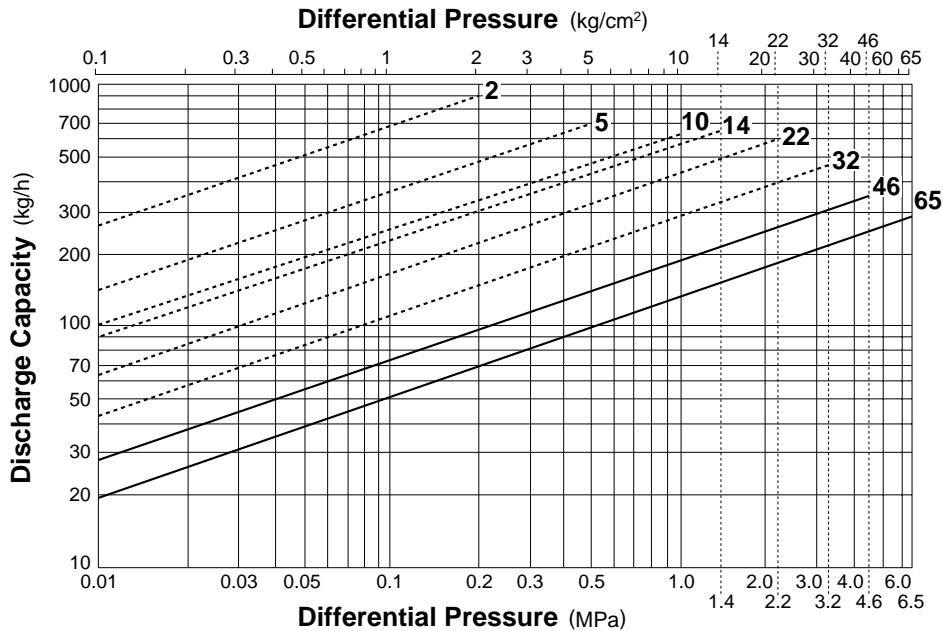


**SH5VL** Flanged (mm)

Size	L	H	H <sub>1</sub>	S	Weight (kg)
15	297	110	85	105	9
20					11
25					12

\* JIS 40K, other standards available

**Discharge Capacity**



—— Standard      - - - - - Available on special request

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!

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

ISO 9001/ISO 14001

