



# FREE FLOAT® STEAM TRAP

## MODEL SH6NL CAST STEEL

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

#### Features

**Inline repairable trap with tight shut-off for drainage of superheated or high-pressure steam mains 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. Only one moving part, the free float, prevents concentrated wear and provides long maintenance-free service life.
4. Thermostatic air venting with bimetal strip allows fast start-up.
5. High rating against hydraulic shock offers excellent resistance of the float to water hammer.
6. Built-in screen with large surface area ensures extended trouble-free operation.
7. Easy, inline access to internal parts simplifies cleaning and reduces maintenance costs.



#### Specifications

Model		SH6NL	
Connection		Socket Welded	Flanged
Size		DN 25, 40, 50	
Orifice No.		14, 32, 46, 65	
Maximum Operating Pressure (barg)	PMO	14, 32, 46, 65	
Maximum Differential Pressure (bar)	ΔPMX	14, 32, 46, 65	
Maximum Operating Temperature (°C)	TMO	425	400* / 425

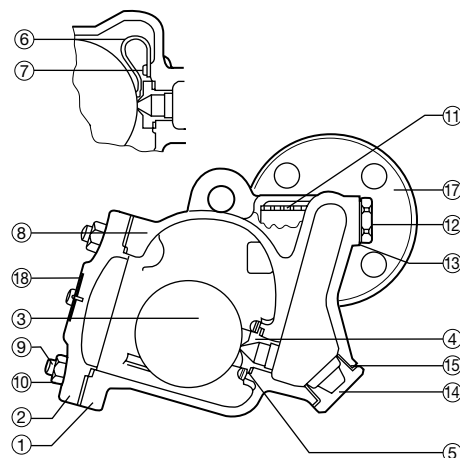
PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS): Maximum Allowable Pressure (barg) PMA: 65 1 bar = 0.1 MPa  
Maximum Allowable Temperature (°C) TMA: 400\* / 425

\* With PN Flange



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.

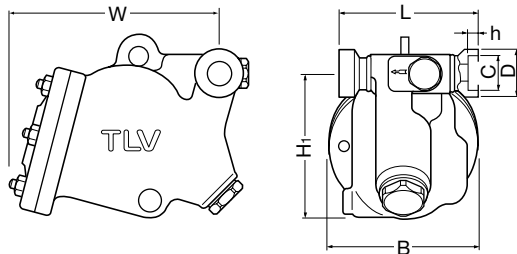
No.	Description	Material	DIN*	ASTM/AISI*
①	Body	Cast Steel A216 Gr.WCB	1.0619	—
②	Cover	Cast Steel A216 Gr.WCB	1.0619	—
③ <sup>F</sup>	Float	Stainless Steel SUS316L	1.4404	AISI316L
④ <sup>R</sup>	Orifice	—	—	—
⑤ <sup>MR</sup>	Orifice Gasket	Graphite/Stainl. Steel SUS316L	—/1.4404	—/AISI316L
⑥ <sup>R</sup>	Air Vent Strip	Bimetal	—	—
⑦ <sup>R</sup>	Screw & Spring Washer	Stainless Steel SUS304	1.4301	AISI304
⑧ <sup>MR</sup>	Cover Gasket	Graphite/Stainl. Steel SUS316L	—/1.4404	—/AISI316L
⑨	Cover Bolt	Alloy Steel SNB7	1.7225	A193 Gr.B7
⑩	Cover Nut	Carbon Steel S45C	1.0503	AISI1045
⑪ <sup>R</sup>	Screen	Stainless Steel SUS430	1.4016	AISI430
⑫	Screen Holder	Cast Stainless Steel A217 Gr.CA40	1.4027	—
⑬ <sup>MR</sup>	Screen Holder Gasket	Soft Iron SUYP	1.1121	AISI1010
⑭	Orifice Plug	Cast Stainless Steel A351 Gr.CF8	1.4312	—
⑮ <sup>MR</sup>	Orifice Plug Gasket	Soft Iron SUYP	1.1121	AISI1010
⑯	Socket**	Carbon Steel A105	1.0460	—
⑰	Flange***	Carbon Steel A105/ Cast Steel A216 Gr.WCB	1.0460/ 1.0619	—
⑱	Nameplate	Stainless Steel SUS304	1.4301	AISI304



\* Equivalent materials \*\* Shown overleaf \*\*\* Material depends on flange specifications  
Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float

**Dimensions**

● **SH6NL Socket Welded**

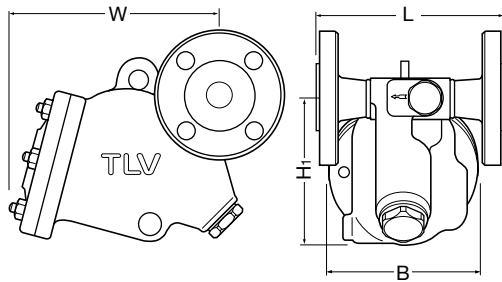


**SH6NL Socket Welded\*** (mm)

Size	L	H <sub>1</sub>	W	φ B	φ D	φ C	h	Weight(kg)
25	178	181	257	180	50	33.9	14	21
40					66	48.8		22
50					79.5	61.2	17	23

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

● **SH6NL Flanged**

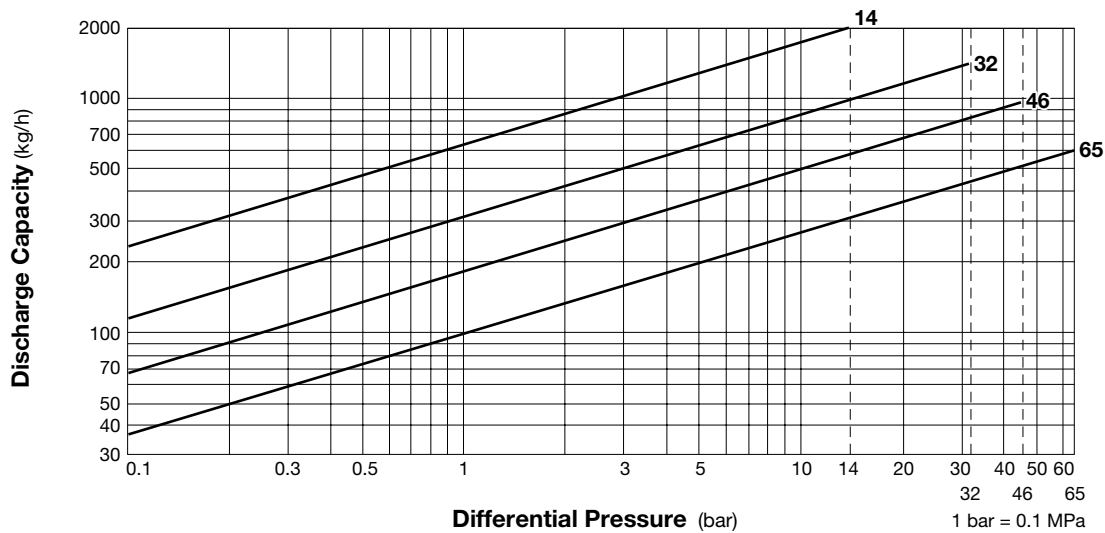


**SH6NL Flanged** (mm)

DN	L				H <sub>1</sub>	W	φ B	Weight* (kg)
	DIN 2501		ASME Class					
	PN25/40	PN63/100	150, 300, 600RF	900RF				
25	160	230	222	232	181	257	180	26
40	230	320		270				29
50			232	310				37

Other standards available, but length and weight may vary  
\* Weight is for ASME Class 900 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 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

