



FREE FLOAT[®] STEAM TRAP

MODEL SH5NL 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

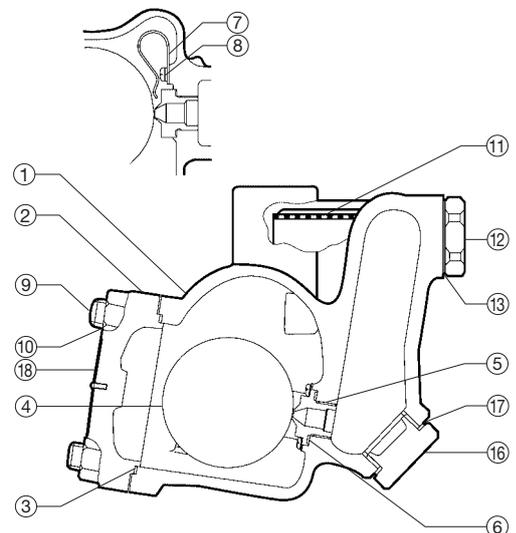
Model	SH5NL	
Connection	Socket Welded	Flanged
Size	DN 15, 20, 25	
Orifice No.	14, 32, 46, 65	
Maximum Operating Pressure (barg) PMO	14, 32, 46, 65	
Maximum Differential Pressure (bar) ΔPMX	14, 32, 46, 65	
Maximum Operating Temperature (°C) TMO	425	

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS): Maximum Allowable Pressure (barg) PMA: 65 1 bar = 0.1 MPa
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	DIN*	ASTM/AISI*
①	Body	Cast Steel A216 Gr.WCB	1.0619	—
②	Cover	Carbon Steel A105	1.0460	—
③ ^{MR}	Cover Gasket	Graphite/Stainless Steel AISI316L	- /1.4404	—
④ ^F	Float	Stainless Steel SUS316L	1.4404	AISI316L
⑤ ^R	Orifice	—	—	—
⑥ ^{MR}	Orifice Gasket	Graphite/Stainless Steel SUS316L	- /1.4404	- /AISI316L
⑦ ^R	Air Vent Strip	Bimetal	—	—
⑧ ^R	Screw & Spring Washer	Stainless Steel SUS304	1.4301	AISI304
⑨	Cover Bolt	Alloy Steel SNB7	1.7225	A193 Gr.B7
⑩	Cover Nut	Carbon Steel S45C	1.0503	AISI1045
⑪ ^R	Screen	Stainless Steel SUS430	1.4016	AISI430
⑫	Screen Holder	Cast Stainless Steel A351 Gr.CF8	1.4312	—
⑬ ^{MR}	Screen Holder Gasket	Soft Iron SUYP	1.1121	AISI1010
⑭	Socket**	Carbon Steel S25C	1.1158	AISI1025
⑮	Flange***	Carbon Steel A105/ Cast Steel A216 Gr.WCB	1.0460/ 1.0619	—
⑯	Orifice Plug	Cast Stainless Steel A351 Gr.CF8	1.4312	—
⑰ ^{MR}	Orifice Plug Gasket	Soft Iron SUYP	1.1121	AISI1010
⑱	Nameplate	Stainless Steel SUS304	1.4301	AISI304

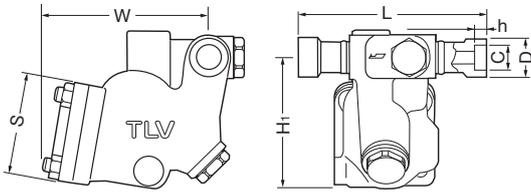


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* Equivalent materials ** Shown on reverse *** Shown on reverse, material depends on flange specifications
Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float

Dimensions

● **SH5NL Socket Welded**

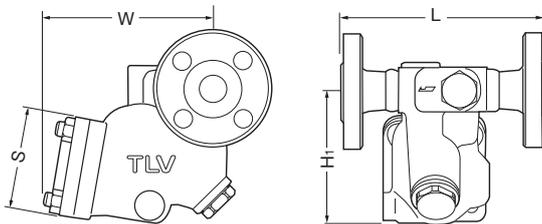


SH5NL Socket Welded* (mm)

Size	L	H ₁ **	W**	S	ØD	ØC	h	Weight (kg)
15	200	140	175	105	32	22.2	12	9.9
20					38	27.7	14	
25					47	34.5		10

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

● **SH5NL Flanged**

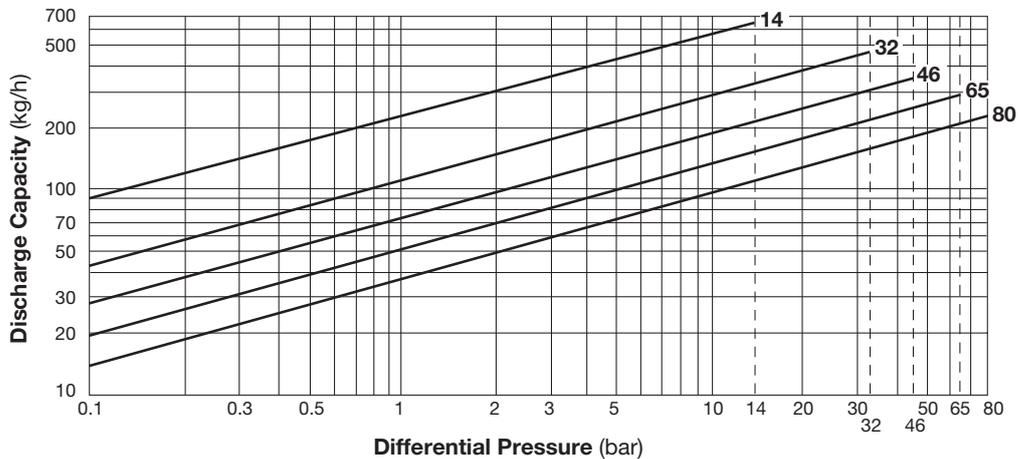


SH5NL Flanged (mm)

Size	L			H ₁ *	W*	S	Weight** (kg)
	300RF	600RF	900RF				
15	202	202	212	140	175	105	13
20			230				14
25							16

DIN and other standards available, but TMO/TMA, length and weight may vary
 * Approx. ** Weight is for Class 900RF

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

ISO 9001
 ISO 14001

