FREE FLOAT® STEAM TRAP

MODEL SH6NL/SH6NH

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

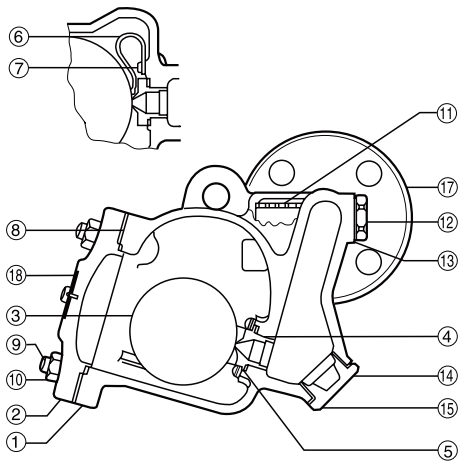
Model		SH6NL		SH6NH	
Connection		Socket Welded	Flanged	Socket Welded	Flanged
Size (mm)		25, 40, 50		20, 25, 40	25, 40
Orifice No.		14, 32, 46, 65		100	
Maximum Operating Pressure (MPaG)	PMO	1.4, 3.2, 4.6, 6.5		10	
Maximum Differential Pressure (MPa)	ΔPMX	1.4, 3.2, 4.6, 6.5		10	
Minimum Operating Pressure (MPaG)		0.01			
Maximum Operating Temperature (°C)	TMO	425			

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS):
Maximum Allowable Pressure (MPaG) PMA: 6.5 (SH6NL), 10 (SH6NH)
Maximum Allowable Temperature (°C) TMA: 425

1 MPa = 10.197 kg/cm²

⚠ 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.

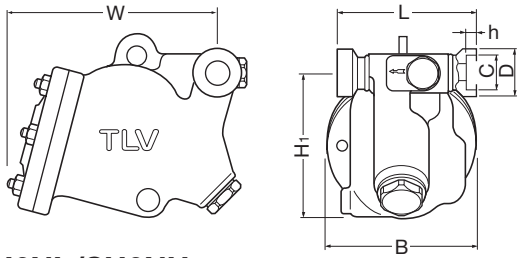
No.	Description		Material	JIS	ASTM/AISI*
①	Body		Cast Steel	—	A216 Gr.WCB
②	Cover		Cast Steel	—	A216 Gr.WCB
③F	Float		Stainless Steel	SUS316L	AISI316L
④R	Orifice		—	—	—
⑤MR	Orifice Gasket	SH6NL	Graphite/Stainless Steel	−/SUS316L	−/AISI316L
		SH6NH	Graphite/Stainless Steel	−/SUS316	−/AISI316
⑥R	Air Vent Strip		Bimetal	—	—
⑦R	Screw & Spring Washer		Stainless Steel	SUS304	AISI304
⑧MR	Cover Gasket	SH6NL	Graphite/Stainless Steel	−/SUS316L	−/AISI316L
		SH6NH	Graphite/Stainless Steel	−/SUS304	−/AISI304
⑨	Cover Bolt		Alloy Steel	SNB7	A193 Gr.B7
⑩	Cover Nut		Carbon Steel	S45C	AISI1045
⑪R	Screen		Stainless Steel	SUS430	AISI430
⑫	Screen Holder		Cast Stainless Steel	—	A351 Gr.CF8
⑬MR	Screen Holder Gasket		Soft Iron	SUYP	AISI1010
⑭	Orifice Plug		Cast Stainless Steel	—	A351 Gr.CF8
⑮MR	Orifice Plug Gasket		Soft Iron	SUYP	AISI1010
⑯	Socket**		Carbon Steel	—	A105
⑰	Flange**		Carbon/Cast Steel***	—	A105/A216 Gr.WCB
⑱	Nameplate		Stainless Steel	SUS304	AISI304



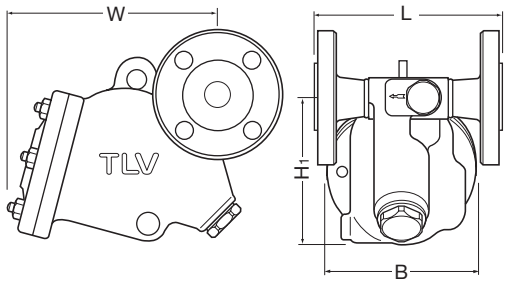
* Equivalent ** Shown on reverse *** Material depends on flange specifications
Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float

Dimensions

● **SH6NL/SH6NH** Socket Welded



● **SH6NL/SH6NH** Flanged



SH6NL/SH6NH Socket Welded (mm)

Model	Size	L	H_1*	W*	ϕB	ϕD	ϕC	h	Weight(kg)
SH6NL	25	178	185	260	180	48	34.5	14	21
	40					64	49.1		22
	50					76.5	61.1	17	23
SH6NH	20	178	190	295	205	44	27.7	14	30
	25					52.5	34.5		31
	40					69	49.1		32

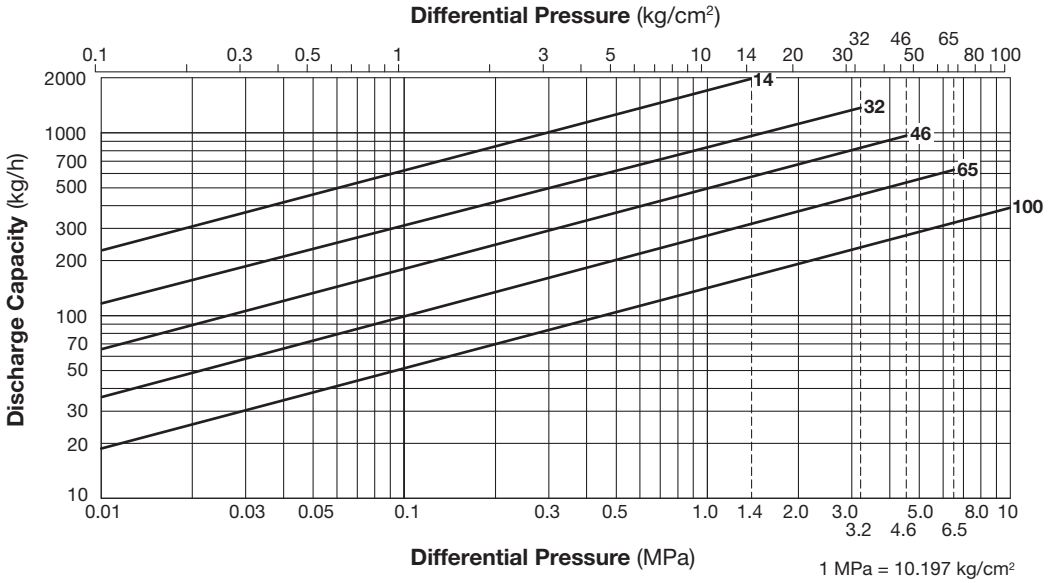
* Approx.

SH6NL/SH6NH Flanged (mm)

Model	Size	L				H_1*	W*	ϕB	Weight** (kg)
		ASME Class							
		150, 300RF	600RF	900RF	1500RF				
SH6NL	25	222	222	232	–	185	260	180	26
	40			270					30
	50	232	232	310					38
SH6NH	25	222	222	232	232	190	295	205	36
	40			270	270				40

Other standards available, but length and weight may vary
* Approx. ** Weight is for Class 900RF

Discharge Capacity



1 MPa = 10.197 kg/cm²

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.

CAUTION DO NOT use traps 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

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