



FREE FLOAT® STEAM TRAP

MODEL SH3NL

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

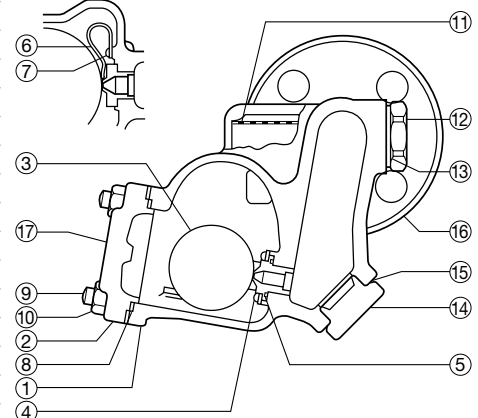
Model		SH3NL	
Connection		Socket Welded	Flanged
Size (mm)		15, 20, 25	
Orifice No.		14, 32, 45	
Maximum Operating Pressure (MPaG)	PMO	1.4, 3.2, 4.5	
Maximum Differential Pressure (MPa)	ΔPMX	1.4, 3.2, 4.5	
Minimum Operating Pressure (MPaG)		0.01	
Maximum Operating Temperature (°C)	TMO	425	

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS): Maximum Allowable Pressure (MPaG) PMA: 4.5 1 MPa = 10.197 kg/cm²
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.

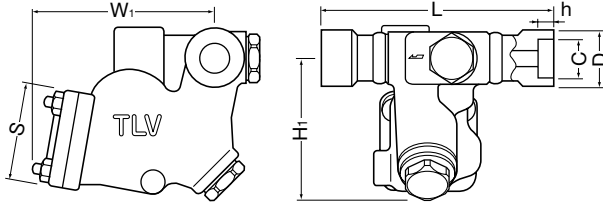
No.	Description	Material	JIS	ASTM/AISI*
①	Body	Cast Steel	—	A216 Gr.WCB
②	Cover	Carbon Steel	—	A105
③ ^F	Float	Stainless Steel	SUS316L	AISI316L
④ ^R	Orifice	—	—	—
⑤ ^{MR}	Orifice Gasket	Graphite/Stainless Steel	- /SUS 316L	- /AISI316L
⑥ ^R	Air Vent Strip	Bimetal	—	—
⑦ ^R	Screw & Spring Washer	Stainless Steel	SUS304	AISI304
⑧ ^{MR}	Cover Gasket	Graphite/Stainless Steel	- /SUS316L	- /AISI316L
⑨	Cover Bolt	Alloy Steel	SNB7	A193 Gr.B7
⑩	Cover Nut	Carbon Steel	S45C	AISI1045
⑪ ^R	Screen	Stainless Steel	SUS430	AISI430
⑫	Screen Holder	Cast Stainless Steel	SCS2A	A743 Gr.CA40
⑬ ^{MR}	Screen Holder Gasket	Soft Iron	SUYP	AISI1010
⑭	Orifice Plug	Cast Stainless Steel	SCS2A	A743 Gr.CA40
⑮ ^{MR}	Orifice Plug Gasket	Soft Iron	SUYP	AISI1010
⑯	Socket**	Carbon Steel	S25C	AISI1025
	Flange	Carbon/Cast Steel***	—	A105/A216 Gr.WCB
⑰	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

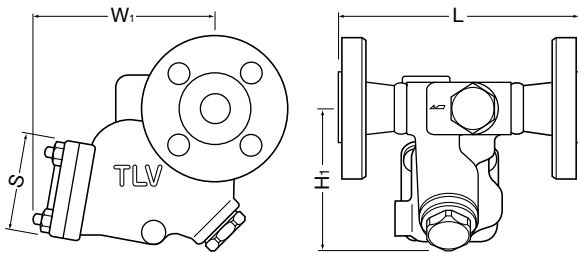
•SH3NL Socket Welded



SH3NL Socket Welded (mm)

Size	L	H ₁	W ₁	S	φD	φC	h	Weight (kg)
15	200	121	157	83	34	22.0	12	8.5
20					40	27.7	14	
25					49	34.5	14	

•SH3NL Flanged

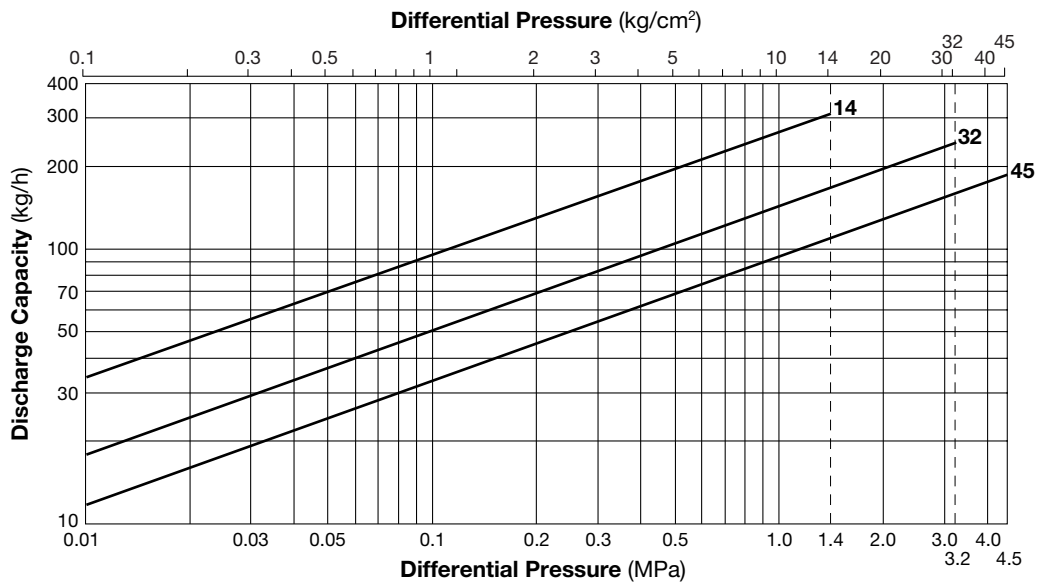


SH3NL Flanged (mm)

Size	L			H ₁	W ₁	S	Weight* (kg)
	ASME Class						
	150RF	300RF	600RF				
15	202	202	202	121	157	83	9.0
20							9.6
25							10

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

