



FREE FLOAT STEAM TRAP

MODEL SH7

FREE FLOAT AND THERMOSTATIC STEAM TRAP WITH THREE-POINT SEATING

Features

Inline repairable trap 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 eliminate 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	SH7NL		SH7NH	
Connection	Socket Welded	Flanged	Socket Welded	Flanged
Size (mm)	25, 40			
Orifice No.	2, 5, 10, 14, 22, 32, 46, 65		80, 100	
Maximum Operating Pressure (MPaG)	PMO	0.2, 0.5, 1.0, 1.4, 2.2, 3.2, 4.6, 6.5	8.0, 10.0	
Maximum Differential Pressure (MPa)	PMX	0.2, 0.5, 1.0, 1.4, 2.2, 3.2, 4.6, 6.5	8.0, 10.0	
Minimum Operating Pressure (MPaG)		0.01		
Maximum Operating Temperature (°C)	TMO	425		

PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS):

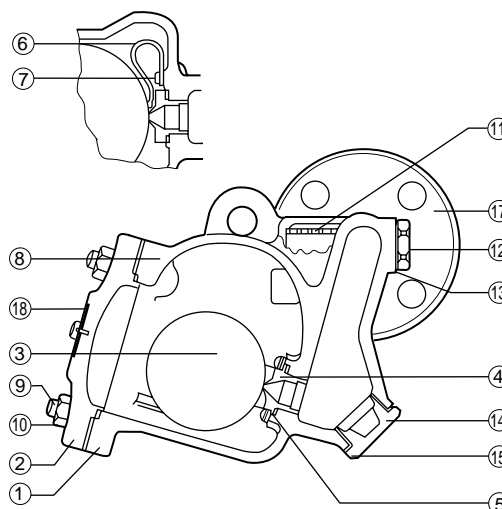
Maximum Allowable Pressure (MPaG) PMA: 6.5 (SH7NL), 10 (SH7NH); Maximum Allowable Temperature (°C) TMA: 425

1 MPaG = 10.197 kg/cm²



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	SCPH2	A216 Gr. WCB
②	Cover (SH7NL)	Carbon Steel	—	A105
	Cover (SH7NH)	Carbon Steel	S25C	AISI1025
③ ^F	Float	Stainless Steel	SUS316L	AISI316L
④ ^R	Orifice	Stainless Steel	SUS420F	AISI420F
⑤ ^{MR}	Orifice Gasket (SH7NL)	Stainless Steel/Graphite	SUS316L	AISI316L
	Orifice Gasket (SH7NH)	Stainless Steel/Graphite	SUS316	AISI316
⑥ ^R	Air Vent Strip	Bimetal	—	—
⑦ ^R	Screw & Spring Washer	Stainless Steel	SUS304	AISI304
⑧ ^{MR}	Cover Gasket (SH7NL)	Stainless Steel/Graphite	SUS316L	AISI316L
	Cover Gasket (SH7NH)	Stainless Steel/Graphite	SUS304	AISI304
⑨	Cover Bolt	Alloy Steel	SNB7	A193B7
⑩	Cover Nut	Carbon Steel	S45C	AISI1045
⑪ ^R	Screen	Stainless Steel	SUS430	AISI430
⑫	Screen Holder	Cast Stainless Steel	SCS2A	A743 CA40
⑬ ^{MR}	Screen Holder Gasket	Soft Iron	SUYP	AISI1010
⑭	Plug	Cast Stainless Steel	SCS13A	A351 Gr.
⑮ ^{MR}	Plug Gasket	Soft Iron	SUYP	AISI1010
⑯	Socket	Carbon Steel	—	A105
⑰	Flange**	Carbon / Cast Steel***	—	A105/216 Gr. WCB
⑱	Nameplate	Stainless Steel	SUS304	AISI304

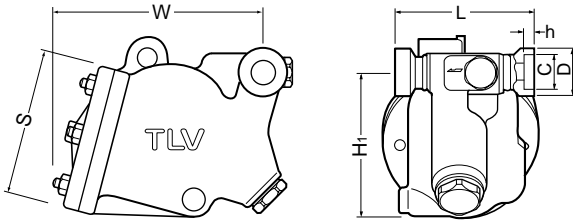


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* Equivalent ** Shown on reverse *** Material depends on flange specifications
Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float

Dimensions

SH7NL/SH7NH Socket Welded

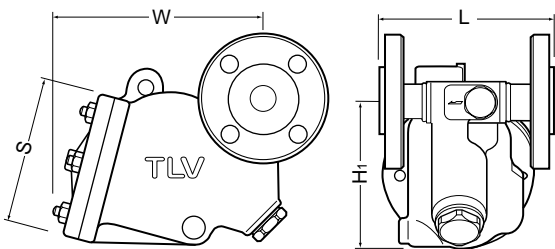


SH7NL/SH7NH Socket Welded (mm)

Size	φD	φC	h	L	H1	W	φS	Weight (kg)
25	50 (55)	34.5	14	178 (198)	197 (220)	283 (340)	205 (230)	26 (46)
40	66 (71)	49.1		28 (48)				

() : SH7NH

SH7NL/SH7NH Flanged

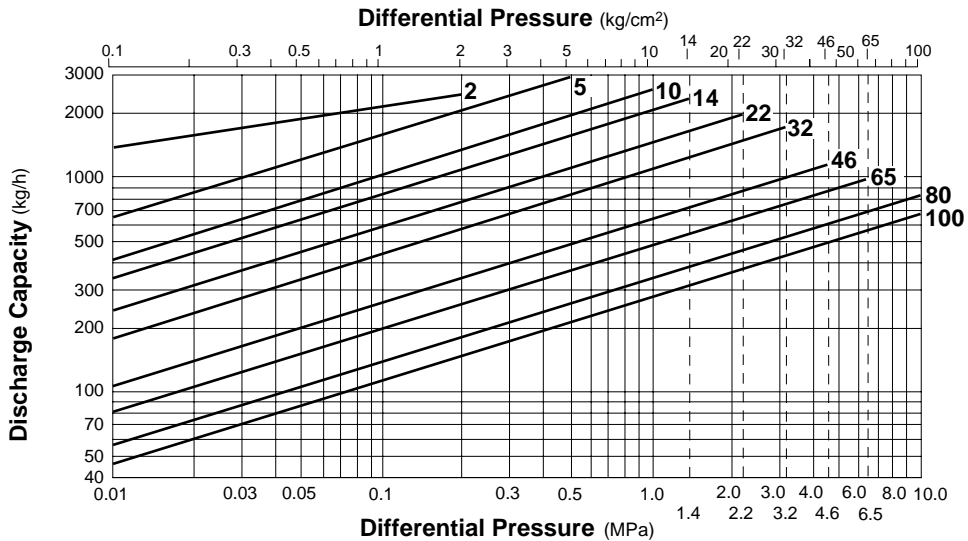


SH7NL/SH7NH Flanged* (mm)

Size	L (ASME Class)		H1	W	φS	Weight (kg)
	150, 300, 600RF	900, 1500RF**				
25	222	233 (352)	197	283	205	31 (51)
40	(242)	270 (290)	(220)	(340)	(230)	42 (55)

* Other standards available, but length and weight may vary
 ** SH7NH only () SH7NH

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 back up will occur!

Manufacturer

TLV CO., LTD.

Kakogawa, Japan

is approved by LRQA Ltd. to ISO 9001/14001

ISO 9001/ISO 14001

