



FREE FLOAT STEAM TRAP

MODEL SH5

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	SH5NL		SH5NH	
	Socket Welded	Flanged	Socket Welded	Flanged
Connection				
Size (mm)	15, 20, 25			
Orifice No.	2, 5, 10, 14, 22, 32, 46, 65		7 0, 8 0	
Maximum Operating Pressure (MPaG) PMO	0.2, 0.5, 1.0, 1.4, 2.2, 3.2, 4.6, 6.5		7.0, 8.0	
Maximum Differential Pressure (MPa) ΔPMX	0.2, 0.5, 1.0, 1.4, 2.2, 3.2, 4.6, 6.5		7.0, 8.0	
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 (SH5NL), 8 (SH5NH)

Maximum Allowable Temperature (°C) TMA: 425

1 MPaG = 10.197 kg/cm²

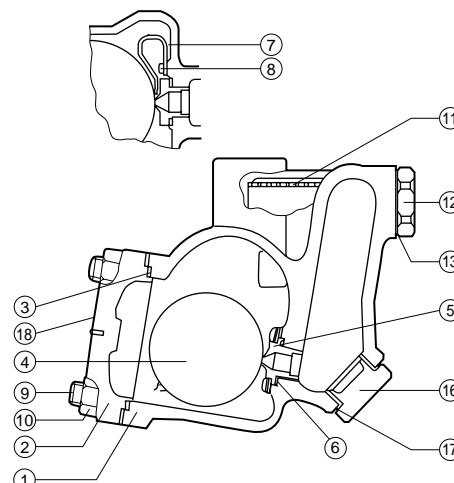


To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

No.	Description	Material	JIS	ASTM/AISI*
①	Body	Cast Steel	—	A216 Gr. WCB
②	Cover (SH5NH)	Cast Steel	—	A182 F11
	Cover (SH5NL)	Carbon Steel	A105	A105
③ ^{MR}	Cover Gasket (SH5NL)	Stainless Steel/Graphite	SUS316L	AISI316L
	Cover Gasket (SH5NH)	Stainless Steel/Graphite	SUS304	AISI304
④ ^F	Float	Stainless Steel	SUS316L	AISI316L
⑤ ^R	Orifice	Stainless Steel	SUS420F	AISI420F
⑥ ^{MR}	Orifice Gasket (SH5NL)	Stainless Steel/Graphite	SUS316L	AISI316L
	Orifice Gasket (SH5NH)	Stainless Steel/Graphite	SUS316	AISI316
⑦ ^R	Air Vent Strip	Bimetal	—	—
⑧ ^R	Screw & Spring Washer	Stainless Steel	SUS304	AISI304
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
⑬ ^{MR}	Screen Holder Gasket	Soft Iron	SUYP	AISI1010
⑭	Flange**	Carbon/Cast Steel***	—	A105/216 Gr. WCB
⑮	Socket**	Carbon Steel	S25C	AISI1025
⑯	Plug	Cast Stainless Steel	SCS2A	A217 Gr. CA15
⑰ ^{MR}	Plug Gasket	Soft Iron	SUYP	AISI1010
⑱	Nam & Plate	Stainless Steel	SUS304	AISI304

* Equivalent ** Shown on reverse *** Material depends on flange specifications

Replacement kits available: (M) maintenance parts, (R) repair parts, (F) float

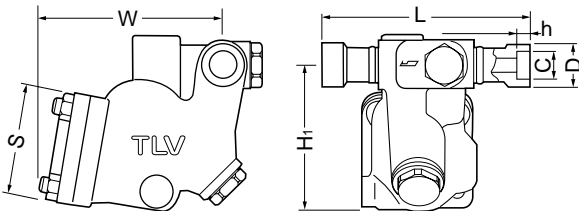


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Dimensions

SH5NL/SH5NH

Socket Welded



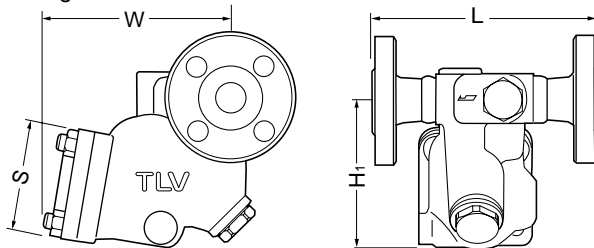
SH5NL/SH5NH Socket Welded (mm)

Size	D	C	h	L	H	W	S	Weight (kg)
15	34	22.2	12	200	138	175	105	10 (13)
20	40	27.7	14		(157)	(186)	(145)	
25	49	34.5						

() SH5NH

SH5NL/SH5NH

Flanged



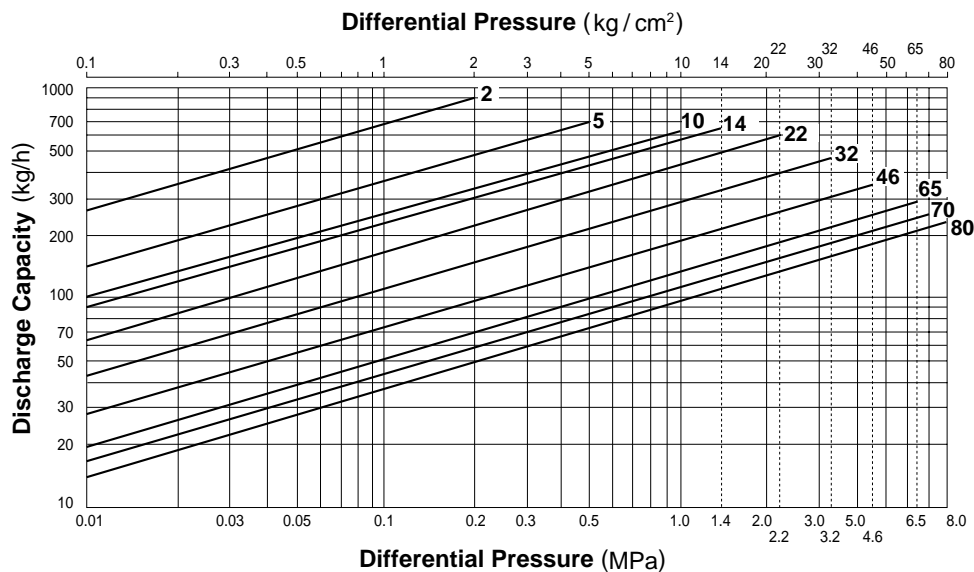
SH5NL/SH5NH Flanged* (mm)

Size	L (ASME Class)		H ₁	W	S	Weight (approx. kg)
	150, 300, 600RF	900, 1500RF**				
15	202	212	138	175	105	11 (16)
20						
25						

* Other standards available, but length and weight may vary
 ** SH5NH only () SH5NH

Note: SH5NL models shown. Configuration of SH5NH cover differs slightly.

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.



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

