



# FREE FLOAT STEAM TRAPS

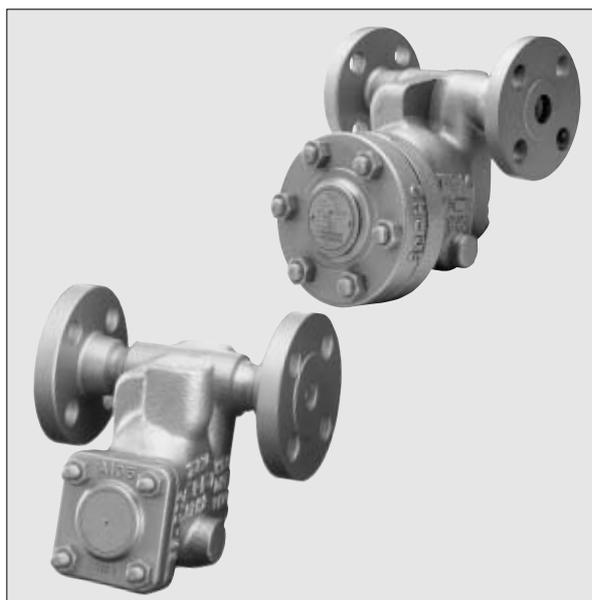
## MODEL SH5

### FREE FLOAT AND THERMOSTATIC STEAM TRAPS WITH THREE-POINT SEATING

#### Features

**Inline repairable traps 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 eliminates 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	
Connection		Socket Welded	Flanged
Size		DN 15, 20, 25	
Orifice No.		2, 5, 10, 14, 22, 32, 46, 65	
Maximum Operating Pressure (barg)	PMO	2, 5, 10, 14, 22, 32, 46, 65	
Maximum Differential Pressure (bar)	ΔPMX	2, 5, 10, 14, 22, 32, 46, 65	
Maximum Operating Temperature (°C)	TMO	425	

PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS) : Maximum Allowable Pressure (barg) PMA : 65  
Maximum Allowable Temperature (°C) TMA : 425

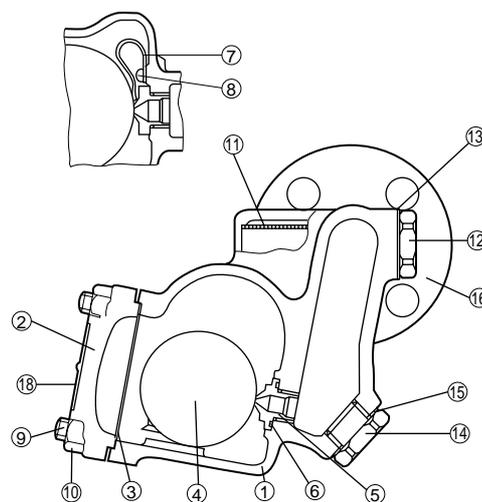
1 bar = 0.1 MPa



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.

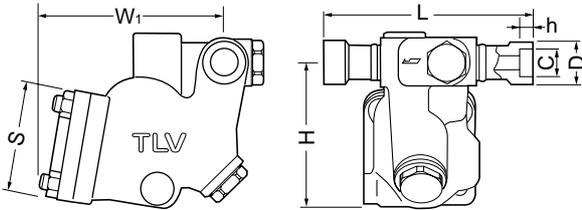
No.	Description	Material*	DIN	ASTM/AISI
①	Body	Cast Steel A216 Gr. WCB	1.0619	A216 Gr. WCB
②	Cover	Carbon Steel A105	1.0460	A105
③ <sup>MR</sup>	Cover Gasket	Stainless Steel/Graphite SUS316L	1.4404	AISI316L
④ <sup>F</sup>	Float	Stainless Steel SUS316L	1.4404	AISI316L
⑤ <sup>R</sup>	Orifice	Stainless Steel SUS420F	1.4028	AISI420F
⑥ <sup>MR</sup>	Orifice Gasket	Stainless Steel/Graphite SUS316L	1.4404	AISI316L
⑦ <sup>R</sup>	Air Vent Strip	Bimetal	—	—
⑧ <sup>R</sup>	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 <sup>R</sup>	Screen	Stainless Steel SUS430	1.4016	AISI430
⑫	Screen Holder	Cast Stainless Steel SCS2A	1.4027	A217 Gr. CA15
⑬ <sup>MR</sup>	Screen Holder Gasket	Soft Iron SUYP	1.0110	AISI1010
⑭	Plug	Cast Stainless Steel SCS2A	1.4027	A217 Gr. CA15
⑮ <sup>MR</sup>	Plug Gasket	Soft Iron SUYP	1.1121	AISI1010
⑯	Flange	Carbon/Cast Steel A105/216 Gr. WCB***	1.0460/1.0619	A105/216 Gr. WCB
⑰	Socket (DN15-DN25)**	Carbon Steel S25C	1.1158	AISI1025
	Socket (DN32-DN50)**	Carbon Steel A105	1.0460	A105
⑱	Nameplate	Stainless Steel SUS304	1.4301	AISI304

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



**Dimensions**

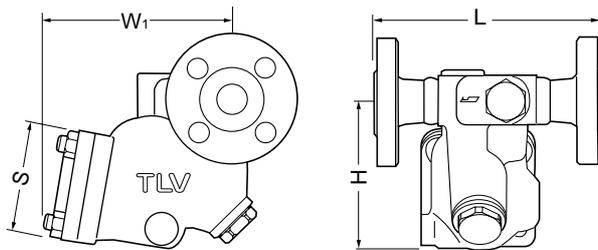
● **SH5NL Socket Welded**



**SH5NL Socket Welded** (mm)

	φD	φC	h	L	H	W	S	Weight (kg)
15	34	21.70	12	200	138	175	105	10
20	40	27.05	14					
25	49	33.80	14					

● **SH5NL Flanged**

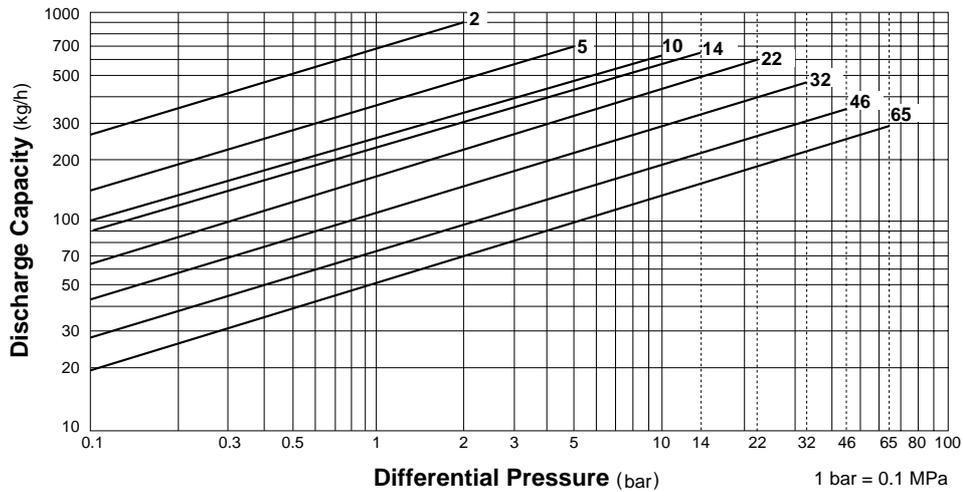


**SH5NL Flanged\*** (mm)

	L1	L2	H	W1	S	Weight (kg)**
15	202	212	138	175	105	11 (13)
20						12 (16)
25						

\* Flange standard: ASME Class 300RF/600RF (L1), Class 900RF (L2);  
 DIN flanges available on request  
 \*\* Class 300RF/600RF (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.



**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

