FREE FLOAT DRAIN TRAP

MODEL SH5NLA/SH5NLG

DRAIN TRAP WITH TIGHT SHUT-OFF FOR INERT (SH5NLA) AND HAZARDOUS (SH5NLG) GASES

Benefits

High pressure, inline repairable free float trap with tight shut-off. Automatically drains condensate from air and gas systems.

1. Constant water seal and unique rotational seating design eliminate concentrated wear to ensure long life.
2. Three-point seating provides a tight seal even under no-load conditions.
3. Easy, inline access to internal parts simplifies cleaning and lowers maintenance costs.
4. Built-in screen with large surface area ensures extended trouble-free service.

Specifications

Model		SH5NLA-M*			SH5NLA-R*	SH5NLG-M*			SH5NLG-R*
Connection		Screwed	Socket Weld	Flanged		Screwed	Socket Weld	Flanged	
Size (in)		¾, 1				1	¾, 1		
Orifice No.		5, 10, 22, 32, 46			10, 22	G5, G10, G22, G32, G46			10, 22
Maximum Operating Pressure (psig)	PMO**	75, 150, 315, 450, 650			150, 315	75, 150, 315, 450, 650			150, 315
Maximum Differential Pressure (psi)	ΔPMX**	75, 150, 315, 450, 650			150, 315	75, 150, 315, 450, 650			150, 315
Minimum Operating Pressure (psig)		Vacuum			Vacuum	Vacuum			Vacuum
Maximum Operating Temperature (°F)	TMO	428			300	428			300
Maximum Allowable Pressure (psig)	PMA	925			925	925			925
Maximum Allowable Temperature (°F)	TMA	428			428	428			428

* M: Metal orifice, R: Rubber orifice ** For specific gravities other than 1.00 use table below

SH5NLA/SH5NLG are non-standard products, consult TLV for delivery time required.

Orifice No.		Specific Gravity 1.00-0.90	0.89-0.85	0.84-0.80	0.79-0.75	0.74-0.70	0.69-0.65	0.64-0.60	0.59-0.55	0.54-0.50
		Max. Operating Pressure PMO (psig) & Max. Differential Pressure ΔPMX (psi)								
10	Rubber	150	138	120	102	85	67	49	31	14
22	Rubber	315	315	284	242	200	158	116	74	32
5	Metal	75	66	58	49	41	32	24	15	7
10	Metal	150	138	120	102	85	67	49	31	14
22	Metal	315	315	284	242	200	158	116	74	32
32	Metal	450	450	450	448	370	293	215	137	60
46	Metal	650	650	650	623	455	287	118	—	—

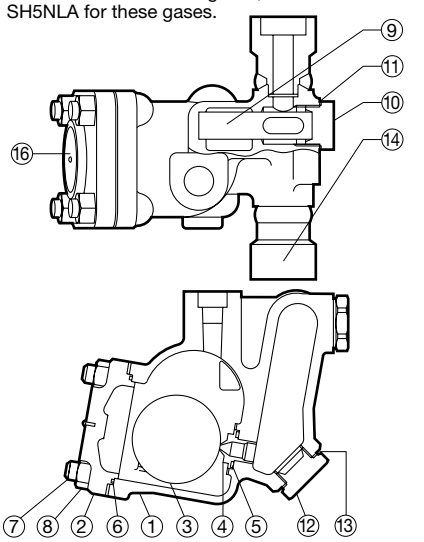
No.	Description		Material	ASTM/AISI*	JIS
①	Body		Cast Steel	A216 Gr. WCB	—
②	Cover		Forged Carbon Steel	A105	—
③	Float		Stainless Steel	AISI316L	SUS316L
④	Orifice	(Metal) SH5NLA-M	Stainless Steel	AISI420F	SUS420F
		(Metal) SH5NLG-M	Stainless Steel + Stellite	AISI316L	SUS316L
		(Rubber)	Stainl. Stl./Fluorine Rubber	AISI303/D2000HK	SUS303/FPM
⑤	Orifice Gasket		Stainless Steel/Graphite	AISI316L	SUS316L
⑥	Cover Gasket		Fluorine Resin	PTFE	PTFE
⑦	Cover Bolt		Alloy Steel	A193 Gr. B7	SNB7
⑧	Cover Nut		Carbon Steel	AISI1045	S45C
⑨	Screen		Stainless Steel	AISI430	SUS430
⑩	Screen Holder		Cast Stainless Steel	A217 Gr. CA15	SCS2A
⑪	Screen Holder Gasket		Soft Iron	AISI1010	SUYP
⑫	Orifice Plug		Cast Stainless Steel	A217 Gr. CA15	SCS2A
⑬	Orifice Plug Gasket		Soft Iron	AISI1010	SUYP
⑭	Socket		Carbon Steel	A1025	S25C
⑮	Flange**		Carbon/Cast Steel***	A105/216 Gr. WCB	—
⑯	Nameplate		Stainless Steel	AISI304	SUS304

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

⚠ 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.

For SH5NLG, consult TLV for toxic, flammable or otherwise hazardous gases; DO NOT USE SH5NLA for these gases.



Options

1. Body material stainless steel
2. Flanged or screwed balancing port connection
3. Orifice material NBR (Nitrile Rubber) or EPDM (Ethylene Propylene Rubber) with a TMO of 212 ℉.

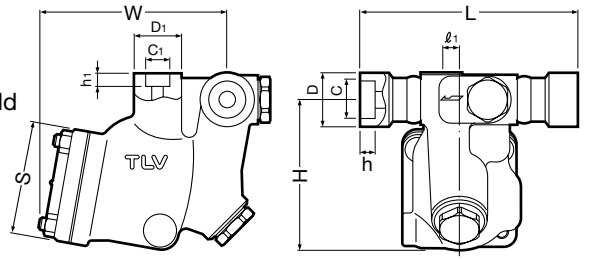
Leakage Rating

ANSI/FCI Leakage Rating Equivalent

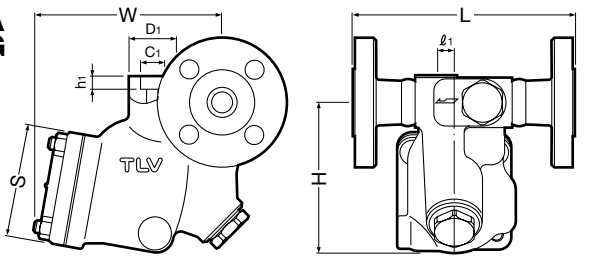
Model	Metal Orifice	Rubber Orifice
SH5NLA	Class 3	Class 6
SH5NLG	Class 3	Class 6

Dimensions

● **SH5NLA**
SH5NLG
Screwed &
Socket Weld



● **SH5NLA**
SH5NLG
Flanged



NOTE:
A pressure-balancing line must be connected to the gas or air system from the balancing port at the top of the trap to a place above any possible condensate accumulation in the system. $\phi D_1=1\frac{3}{4}$, $\phi C_1=\frac{7}{8}$, $h_1=\frac{1}{2}$, $\ell_1=\frac{11}{16}$.

SH5NLA/SH5NLG Screwed* (in)

Size	L	H	W	S	Weight (lb)
$\frac{3}{4}$**	$7\frac{7}{8}$	$5\frac{7}{16}$	$6\frac{7}{8}$	$4\frac{1}{8}$	22
1					

* NPT, other standard available ** SH5NLA only

SH5NLA/SH5NLG Socket Weld (in)

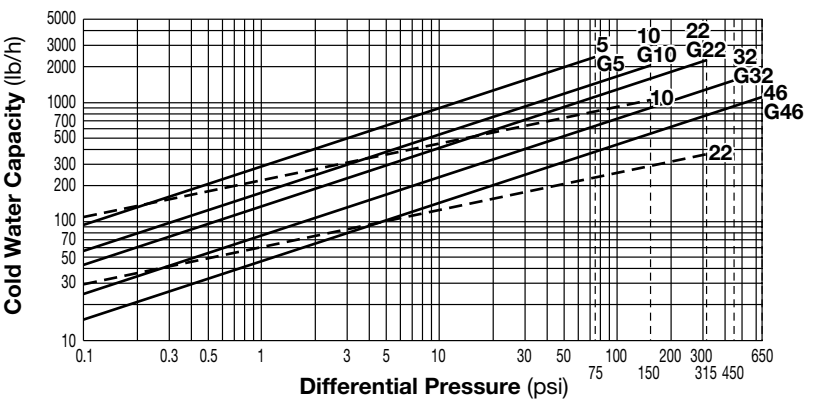
Size	L	H	W	S	ϕD	ϕC	h	Weight (lb)
$\frac{3}{4}$	$7\frac{7}{8}$	$5\frac{7}{16}$	$6\frac{7}{8}$	$4\frac{1}{8}$	$1\frac{9}{16}$	$1\frac{1}{16}$	$\frac{9}{16}$	22
1					$1\frac{15}{16}$	$1\frac{3}{8}$		

SH5NLA/SH5NLG Flanged (in)

Size	L				H	W	S	Weight* (lb)
	ASME Class							
	150RF	300RF	600RF	900RF				
$\frac{3}{4}$	$7\frac{15}{16}$	$7\frac{15}{16}$	$7\frac{15}{16}$	$8\frac{3}{8}$	$5\frac{7}{16}$	$6\frac{7}{8}$	$4\frac{1}{8}$	25
1				$9\frac{1}{16}$				26

Other standards available, but length and weight may vary
*Weight is for Class 600 RF

Discharge Capacity



Capacity Conversion Factors

Specific gravity (S.G.)	0.95	0.9	0.85	0.8	0.75	0.7	0.65	0.6	0.55	0.5
Conversion factor	1.03	1.06	1.08	1.12	1.16	1.19	1.24	1.29	1.35	1.41

Before using the capacity chart multiply the required capacity (including safety factor) by the appropriate conversion factor for the specific gravity of the liquid. Choose from the table above or use the following formula: Conversion factor= $\frac{1}{\sqrt{S.G.}}$

– – – – Rubber Orifice
——— Metal Orifice

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. The chart is applicable to condensate below 212 ℉.
4. The discharge capacity is for a liquid with specific gravity of 1.
5. Recommended safety factor: at least 1.5.

⚠ CAUTION

DO NOT use traps under conditions that exceed maximum differential pressure, as condensate backup will occur!

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Member of FCI FLUID CONTROLS INSTITUTE

Manufacturer
TLV® CO.,LTD.
Kakogawa, Japan
is approved by LRQA Ltd. to ISO 9001/14001

ISO 9001/ISO 14001