

SOPT-LH

Steam Operated Pumping Trap - Low Head

Description

SOPT-LH is a steam operated pumping trap with flanged connections. This innovative product is capable of working in trapping or pumping mode automatically, depending on the process conditions. The unit is operated by steam and is used to remove condensate from the process plant under all operating conditions including vacuum/stall.

Size and Connection

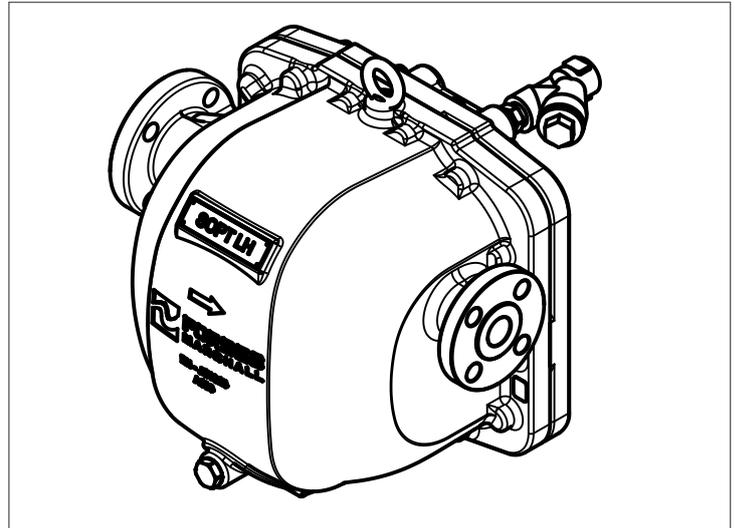
Model	Condensate inlet	Condensate outlet	Motive steam inlet	Steam Exhaust
SOPT-LH	1 1/2" (Class 150)	1" (Class 150)	1/2" Screwed BSPT/NPT/BSP	1/2" Screwed BSPT/NPT/BSP

Limiting Conditions

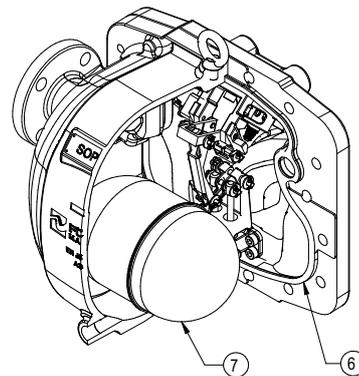
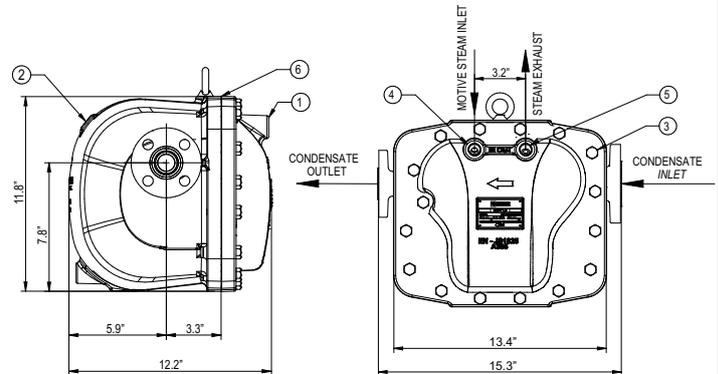
Design Standard	ASME SECTION VIII DIV1
Body design Conditions	ASME CLASS 150
Max. Operating Pressure	200 psi g @ 400°F
Max. Operating Temperature	400°F @ 200 psig
Min. Operating Ambient Temperature	14°F
Discharge per cycle	1.24 US gallons per strokes
Min. Required installation head from the base of SOPT-LH	8"
Max. Cold hydraulic test pressure	400 psi g
Max. Total Back Pressure	72.5 psi g

Materials

Sr.No	Description	Material
1	SOPT-LH BASE	SG Iron ASTM A395
2	SOPT-LH COVER	SG Iron ASTM A395
3	HEX HEAD SCREW M12	ASTM A193 B7
4	15NB MOTIVE STEAM INLET (SCREWED)	SG Iron ASTM A395
5	15NB STEAM EXHAUST (SCREWED)	SG Iron ASTM A395
6	MAIN FLANGE GASKET	GRAPHITE
7	INTERNAL MECHANISM	STAINLESS STEEL



Dimensions (Inch)



Note : Approximate dry weight = 106 lbs

Pumping Capacity Chart (For Installation Head 19.7")		
Motive Pressure (psi g)	Total Back Pressure (psi g)	Capacity (lbs/hr)
29	7.25	1546.6
43.5	7.25	1630.2
43.5	14.5	1496
43.5	29	1247.4
58	7.25	1705
58	14.5	1603.8
58	29	1408
58	43.5	1075.8
72.5	7.25	1843.6
72.5	14.5	1566.4
72.5	29	1273.8
72.5	43.5	1047.2
72.5	58	1047.2
87	7.25	1509.2
87	14.5	1370.6
87	29	1247.4
87	43.5	1080.2
87	58	851.4
87	72	613.8
101.5	7.25	1683
101.5	14.5	1425.6
101.5	29	1397
101.5	43.5	1245.2
101.5	58	1016.4
101.5	72	884.4
116	7.25	1465.2
116	14.5	1328.8
116	29	1133
116	43.5	992.2
116	58	1029.6
116	72	917.4
130.5	7.25	1443.2
130.5	14.5	1390.4
130.5	29	1223.2
130.5	43.5	1093.4
130.5	58	1005.4
130.5	72	941.6
145	7.25	1313.4
145	14.5	1251.8
145	29	1080.2
145	43.5	935
145	58	869
145	72	855.8
159.5	7.25	1056
159.5	14.5	1161.6
159.5	29	998.8
159.5	43.5	847
159.5	58	666.6
159.5	72	627
174	7.25	1201.2
174	14.5	1205.6
174	29	950.4
174	43.5	858
174	58	730.4
174	72	699.6
188.5	7.25	1007.6
188.5	14.5	787.6
188.5	29	726
188.5	43.5	684.2
188.5	58	651.2
188.5	72	611.6
200	7.25	963.6
200	14.5	930.6
200	29	818.4
200	43.5	704
200	58	730.4
200	72	624.8

Trapping Capacity Chart:
(For Installation Head 43")

Differential Pressure (psi g)	Capacity (lbs/hr)
14.5	3512
29	5046
43.5	5624
58	5884
72.5	6162
87	6576
101.5	7099
116	7637
130.5	8117
145	8558
159.5	9154
174	10355

Note

Pumping capacities shown in above chart are for condensate temperature of 194° F
For higher back pressures & different filling heads contact Forbes Marshall.
Max trapping capacity at 200 psi g differential pressure is 9920 lb/hr.
For filling heads other than 19.7" please contact Forbes Marshall.

How to specify

Example: Steam Operated Pumping Trap Low Head
040SOPT-LH-FPS-QBN

Available Spares

Sr.No	Description	Part Code No.
1	Mechanism assembly kit	SPARE-040SOPT-LH-MKIT
2	Inlet valve seat assembly kit	SPARE-040SOPT-LH-IVKIT
3	Exhaust valve head assembly kit	SPARE-040SOPT-LH-EVKIT
4	Gasket kit	SPARE-040SOPT-LH-GKIT
5	Support bracket assembly kit	SPARE-040SOPT-LH-SBKIT
6	Trap seat assembly kit	SPARE-040SOPT-LH-TSKIT
7	Inlet check valve assembly kit	SPARE-040SOPT-LH-ICVKIT
8	Float assembly kit	SPARE-040SOPT-LH-FKIT

How to order

Always order spares by using the description given in column headed " Available Spares" of User Manual for this product.



Forbes Marshall
Krohne Marshall
Forbes Marshall Arca
Codel International
Forbes Solar
Forbes Vyncke
Forbes Marshall Steam Systems

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