

SOPT

Steam Operated Pumping Trap

Description

SOPT 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 & is used to remove condensate from the process plant under all operating conditions including vacuum/stall.

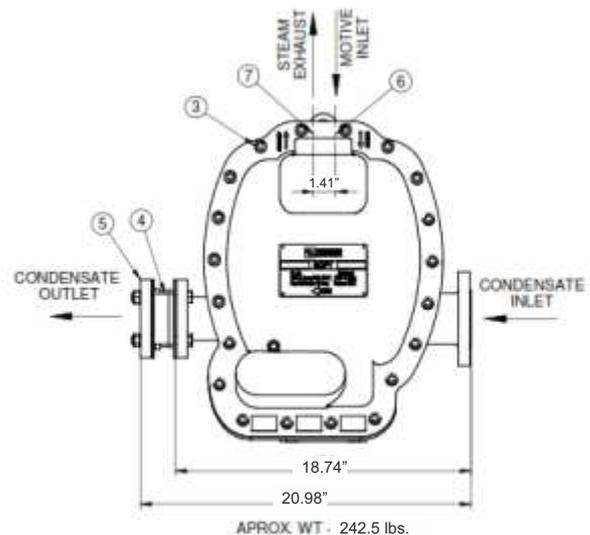
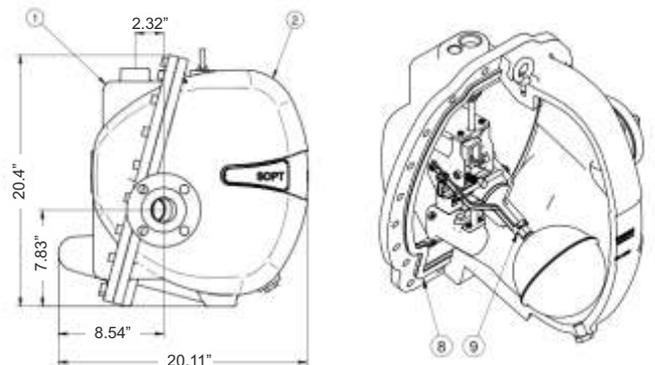
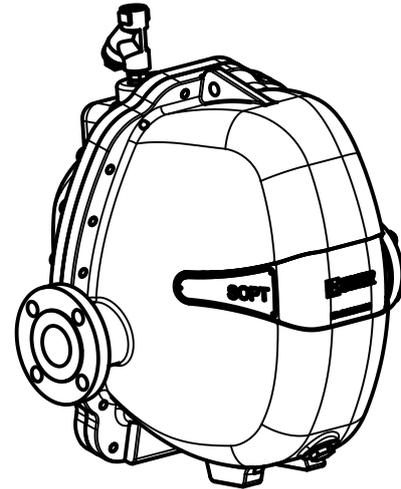
Size and Connection

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

Limiting Conditions

Design Standard	ASME SECTION VIII DIV 1
Body design Conditions	ASME CLASS 150
Max. Operating Pressure	200 psig @ 400°F
Max. Operating Temperature	400°F @ 200 psig
Min. Operating Ambient Temperature	14°F
Discharge per cycle	4.54 US gallons per Stroke
Minimum Required installation head from the base of SOPT	17.7 Inch
Max. Cold hydraulic test pressure	400 psig
Max. Back Pressure	72.5 psig

Sr.No	Description	Material
1	SOPT BASE	SG Iron ASTM A395 / EN-JS1025
2	SOPT COVER	SG Iron ASTM A395 / EN-JS1025
3	HEX HEAD / HEX SOCKET HEAD CAP SCREW	ISO 4762 / ASTM A193 B7
4	1-1/2" FMDCV	Stainless Steel
5	1-1/2"#150 FLANGE	ASTM A105
6	1/2" STEAM INLET (SCREWED NPT)	SG Iron ASTM A395 / EN-JS1025
7	1" STEAM EXHAUST (SCREWED NPT)	SG Iron ASTM A395 / EN-JS1025
8	MAIN FLANGE GASKET	SS Exfoliated graphite
9	INTERNAL MECHANISM	Stainless Steel



Trapping Capacity Chart
(for installation head 44.4 Inch)

Differential Pressure (psig)	Trapping Capacity (lb/hr)
29	10271
43.5	11764
58	12870
72.5	13247
87	14762
101.5	15256
116	16122
130.5	16142
145	16171

How to specify

Example: Steam Operated Pumping
Trap-050SOPT-FPS-QBN

Available Spares

Sr.No	Description	Part Code No.
1	SOPT mechanism assembly kit	SPARE-050SOPT-MKIT
2	Inlet valve seat assembly kit	SPARE-050SOPT-IVKIT
3	Exhaust valve head assembly kit	SPARE-050SOPT-EVKIT
4	Gasket kit	SPARE-050SOPT-GKIT
5	Trap valve head assembly kit	SPARE-050SOPT-TVHKIT
6	Trap seat assembly kit	SPARE-050SOPT-TSKIT
7	Trap valve & trap seat kit	SPARE-050SOPT-TVTSKIT
8	Inlet check valve assembly kit	SPARE-050SOPT-ICVKIT
9	Float assembly kit	SPARE-050SOPT-FKIT

How to order

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

Pumping Capacity Chart (For Installation Head 19.68 Inch)

Motive Pressure (psi g)	Total Back Pressure (psi g)	Capacity (lb / Hr)
43.5	0	3617.8
43.5	7.2	3465.6
43.5	14.5	2632.3
58	0	3218.7
58	7.2	3157
58	14.5	2960.8
58	21.7	2286.2
58	29	2156.1
72.5	0	3057.8
72.5	7.2	3198.9
72.5	14.5	2971.8
72.5	21.7	2370
72.5	29	2103.2
72.5	36.2	1832
72.5	43.5	1666.7
87	0	3280.4
87	14.5	2744.7
87	29	2125.2
101.5	0	3185.7
101.5	14.5	2800
101.5	29	2242.1
116	0	2903.5
116	14.5	2581.6
116	29	2209
130.5	0	2837.3
130.5	14.5	2411.8
130.5	29	2118.6
145	0	2619
145	14.5	2314.8
145	29	2056.9
159.5	0	2486.8
159.5	14.5	2296.6
159.5	29	2004
174	0	2297.2
174	14.5	2098.8
174	29	1845.2
188.5	0	2371
188.5	14.5	2008.4
188.5	29	1776.9
203	0	2189.2
203	14.5	1968.3
203	29	1807.8

Note

Pumping capacities shown in above chart are for condensate temperature of 194° F
For higher back pressures & different filling heads contact factory



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Forbes Solar
Forbes Vyncke
Forbes Marshall Steam Systems

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