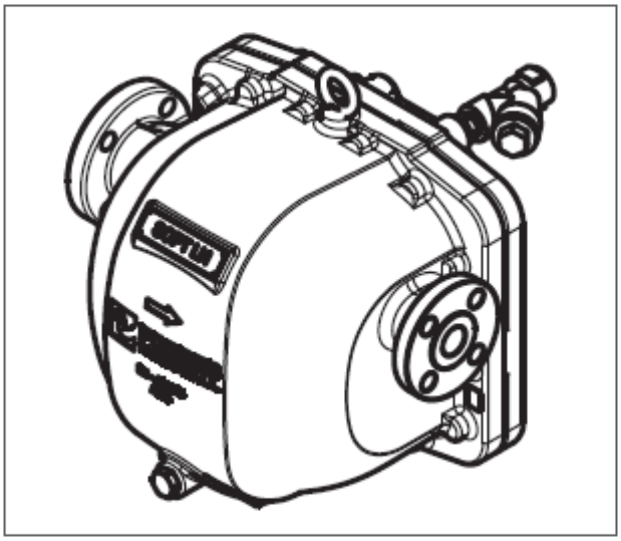
SOPT-LH
Steam Operated Pumping Trap - Low Head

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

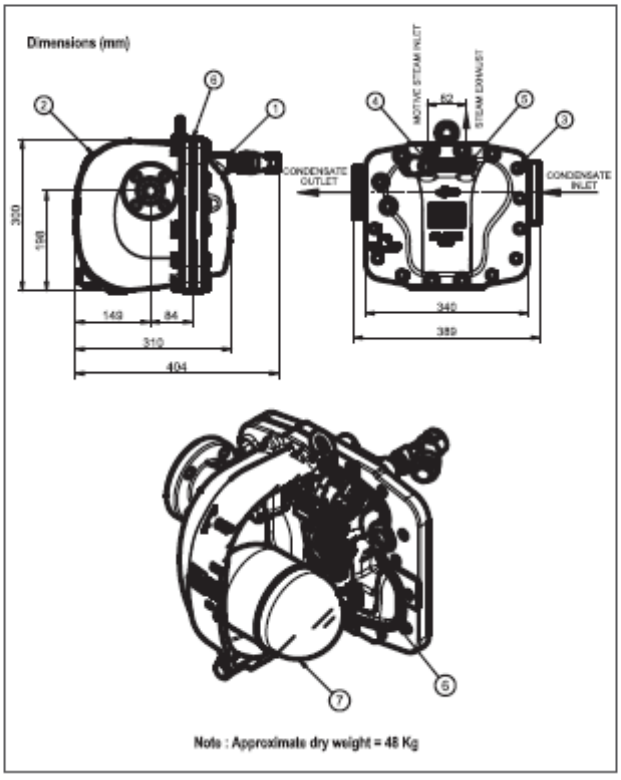
Model	Condensate inlet	Condensate outlet	Motive steam inlet	Steam Exhaust
SOPT-LH	40 NB (Class 150)	25 NB (Class 150)	15 NB Screwed BSPT/NPT/ BSP	15 NB Screwed BSPT/NPT/ BSP

Limiting Conditions

Sizes	40 NB X 25 NB
Body design Conditions	PN16
Max. Operating Pressure	14 bar g @198°C
Max. Operating Temperature	12.8 bar g @300°C
Min. Operating Temperature	-10°C
Discharge per cycle	4.6 Liters
Min. Required installation head from the base of SOPT-LH	200 mm
Max. Cold hydraulic test pressure	24 bar g
Max. Total Back Pressure	5 bar g

Materials

Sr.	Description	Material
1	SOPT-LH BASE	SG Iron ASTM A395 / EN-JS1025
2	SOPT-LH COVER	SG Iron ASTM A395 / EN-JS1025
3	HEX HEAD SCREW M12	ASTM A193 B7
4	15NB MOTIVE STEAM INLET (SCREWED)	SG Iron ASTM A395/ EN-JS1025
5	15NB STEAM EXHAUST (SCREWED)	SG Iron ASTM A395/ EN-JS1025
6	MAIN FLANGE GASKET	GRAPHITE
	INTERNAL MECHANISM	STAINLESS STEEL



Pumping Capacity Chart (For Installation Head 500mm)		
Motive Pressure (bar g)	Total Back Pressure (bar g)	Capacity (Kg/hr)
2	0,5	703
3	0,5	741
3	1	680
3	2	567
4	0,5	775
4	1	729
4	2	640
4	3	489
5	0,5	838
5	1	712
5	2	579
5	3	476
5	4	476
6	0,5	686
6	1	623
6	2	567
6	3	491
6	4	387
6	5	279
7	0,5	765
7	1	648
7	2	635
7	3	566
7	4	462
7	5	402
8	0,5	666
8	1	604
8	2	515
8	3	451
8	4	468
8	5	417
9	0,5	656
9	1	632
9	2	556
9	3	497
9	4	457
9	5	428
10	0,5	597
10	1	569
10	2	491
10	3	425
10	4	395
10	5	389
11	0,5	480
11	1	528
11	2	454
11	3	385
11	4	303
11	5	285
12	0,5	546
12	1	548
12	2	432
12	3	390
12	4	332
12	5	318
13	0.5	458
13	1	358
13	2	330
13	3	311
13	4	296
13	5	278
14	0,5	438
14	1	423
14	2	372
14	3	320
14	4	332
14	5	284

Trapping Capacity Chart:
(For Installation Head 1100mm)

Differential Pressure (bar g)	Capacity (Kg/hr)
1	1593
2	2289
3	2551
4	2669
5	2795
6	2983
7	3220
8	3464
9	3682
10	3882
11	4152
12	4697

How to specify

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

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

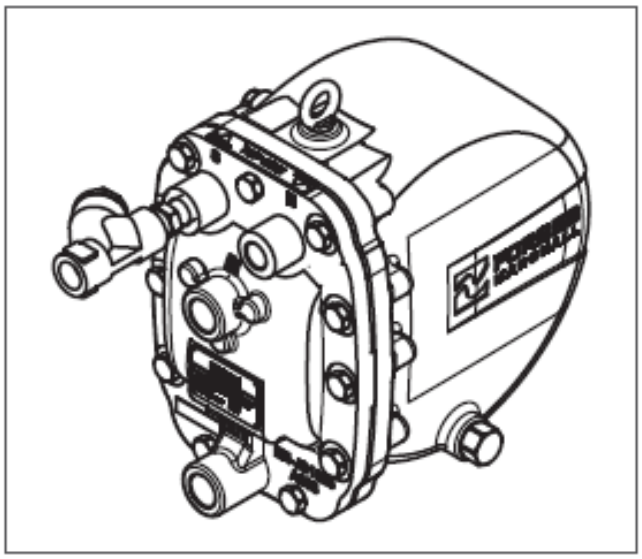
Always order spares by using the description given in column headed " Available Spares" of User Manual for this product.

SOPT-LHM

Steam Operated Pumping Trap - Low Head Miniature

Description

SOPT-LHM is a steam operated pumping trap with screwed 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.

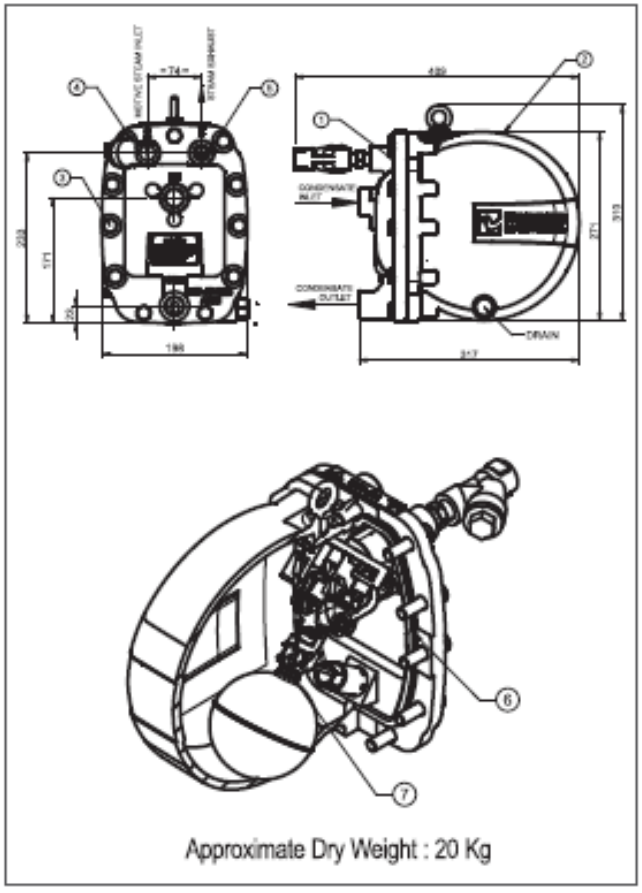


Size and Connection

Model	Condensate inlet	Condensate outlet	Motive steam inlet	Steam Exhaust
SOPT-LHM	20 NB Screwed BSP/ BSPT/ NPT	20 NB Screwed BSP/ BSPT/ NPT	15 NB Screwed BSP/ BSPT/ NPT	15 NB Screwed BSP/ BSPT/ NPT

Limiting Conditions

Sizes	20 NB X 20 NB
Body design Conditions	PN10
Max. Operating Pressure	4.5 bar g
Max. Operating Temperature	155 °C @ 4.5 bar g
Min. Operating Temperature	-10°C
Discharge per cycle	3 Liters
Min. Required installation head from the base of SOPT-LH	200 mm
Max. Cold hydraulic test pressure	15 bar g
Max. Total Back Pressure	4 bar g



Approximate Dry Weight : 20 Kg

Materials

Sr.	Description	Material
1	SOPT-LHM BASE	SG Iron ASTM A395 / EN-JS1025
2	SOPT-LHM COVER	SG Iron ASTM A395 / EN-JS1025
3	HEX HEAD SCREW M12	ASTM A193 B7
4	15NB MOTIVE STEAM INLET (SCREWED BSPT)	SG Iron ASTM A395/ EN-JS1025
5	15NB STEAM EXHAUST (SCREWED BSPT)	SG Iron ASTM A395/ EN-JS1025
6	MAIN FLANGE GASKET	GRAPHITE
	INTERNAL MECHANISM	STAINLESS STEEL

Trapping Capacity Chart

Differential Pressure (barg)	Trapping Capacity (Kg/hr)
0	280
0,5	786
1	850
2	905
3	963
4	1050
4,5	1125

How to specify

Example: Steam Operated Pumping Trap 020SOPT-LHM-AN

Available Spares

Sr.No	Description	Part Code No.
1	Mechanism assembly kit	SPARE-020SOPT-LHM-MKIT
2	Inlet valve seat assembly kit	SPARE-020SOPT-LHM-IVKIT
3	Exhaust valve head assembly kit	SPARE-020SOPT-LHM-EVKIT
4	Gasket kit	SPARE-020SOPT-LHM-GKIT
5	Trap seat assembly kit	SPARE-020SOPT-LHM-TSKIT
7	Inlet check valve assembly kit	SPARE-020SOPT-LHM-ICVKIT
8	Float assembly kit	SPARE-020SOPT-LHM-FKIT
6	Main gasket kit	SPARE-020SOPT-LHM-MGKIT

How to order

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

Note

Pumping capacities shown in above chart are for condensate temperature of 90° C For higher back pressures & installation head other than 500 mm contact factory.

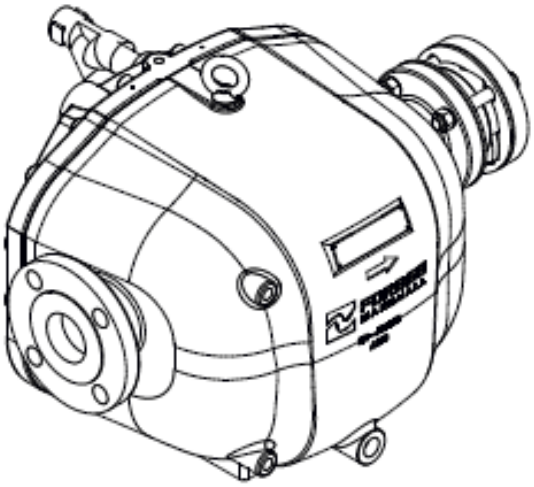
PUMPING CAPACITY FOR 500MM INSTALLATION HEAD		
MOTIVE PRESSURE (bar g)	**BACK PRESSURE (bar g)**	**CAPACITY (kg/hr)**
1	0	185
	0,5	155
2	0	390
	1	260
	1.5	230
3	0	440
	1	360
	2	260
	2,5	220
4	0	430
	1	350
	2	300
	3	250
	3,5	210
4,5	0	410
	1	360
	2	330
	3	275
	4	160

SOPT-LHX

Steam Operated Pumping Trap - Low Head Extra Capacity

Description

SOPT-LHX 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-LHX	50NB (Class 150)	40 NB (Class 150)	15 NB Screwed BSP/ BSPT/ NPT	25 NB Screwed BSP/ BSPT/ NPT

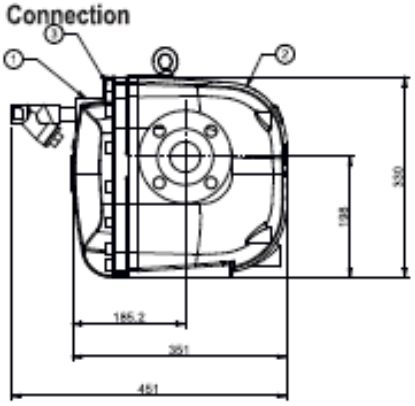
Limiting Conditions

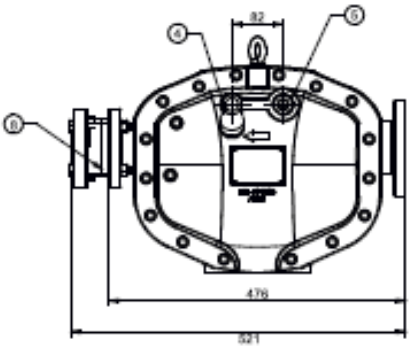
Sizes	50 NB X 40 NB
Body design Conditions	PN16/ASA Class 150
Max. Operating Pressure	13.8 bar g @ 198 °C
Max. Operating Temperature	198 °C @ 14 bar g
Min. Operating Temperature	-10°C
Discharge per cycle	6.7 Liters
Min. Required installation head from the base of SOPT-LH	200 mm
Max. Cold hydraulic test pressure	24 bar g
Max. Total Back Pressure	5 bar g

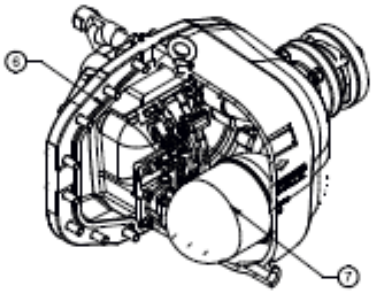
Materials

Sr.	Description	Material
1	SOPT-LHX Base	SG Iron ASTM A395 / EN-JS1025
2	SOPT-LHX Cover	SG Iron ASTM A395 / EN-JS1025
3	Hex Socket Head Screw M12	ASTM A193 B7
4	15NB Motive Steam Inlet (Screwed BSPT)	SG Iron ASTM A395/ EN-JS1025
5	25NB Steam Exhaust (Screwed BSPT)	SG Iron ASTM A395/ EN-JS1025
6	Main Flange Gasket	Graphite
7	Internal Mechanism	Stainless Steel
8	40NB FMDCV	Stainless Steel

Size and Connection







Note : Approximate dry weight = 70 Kg

Pumping Capacity Chart (For Installation Head 1000mm)

Motive Pressure (bar g)	Total Back Pressure (bar g)	Capacity (kg/hr)
2	0.5	2000
3	0.5	1988
3	1	1389
3	2	869
4	0.5	2258
4	1	1759
4	2	1181
4	3	637
5	0.5	2300
5	1	1839
5	2	1217
5	3	905
5	4	609
6	0.5	2460
6	1	1997
6	2	1456
6	3	1099
6	4	912
6	5	613
7	0.5	2525
7	1	2035
7	2	1466
7	3	1099
7	4	851
7	5	743
8	0.5	2455
8	1	2173
8	2	1651
8	3	1191
8	4	901
8	5	761
9	0.5	2452
9	1	2210
9	2	1654
9	3	1150
9	4	901
9	5	740
10	0.5	2518
10	1	2130
10	2	1634
10	3	1315
10	4	927
10	5	716
11	0.5	2499
11	1	2187
11	2	1726
11	3	1385
11	4	925
11	5	735
12	0.5	2546
12	1	2229
12	2	1809
12	3	1486
12	4	1045
12	5	777
13	0.5	2538
13	1	2277
13	2	1816
13	3	1522
13	4	1010
13	5	751
13.8	0.5	2500
13.8	1	2231
13.8	2	1832
13.8	3	1511
13.8	4	1173
13.8	5	823

Note

Pumping capacities shown in above chart are for condensate temperature of 90° C. For higher back pressures and filling heads other than 1000mm contact Forbes Marshall

Trapping Capacity Chart

Differential Pressure (bar g)	Capacity (Kg / hr)
1	7000
2	8500
3	9010
5	11800
7	11800