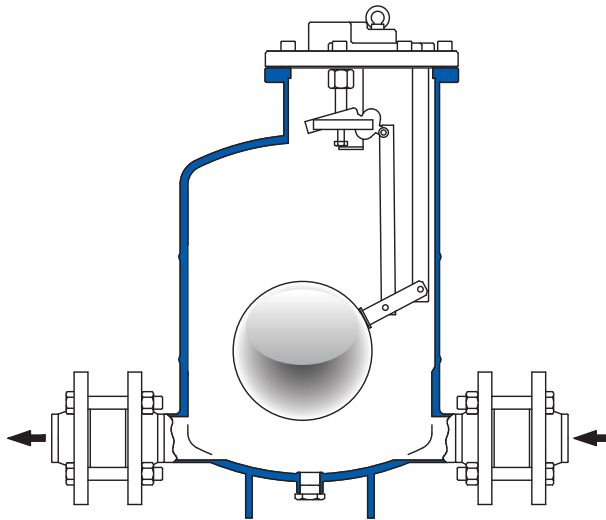




RIFOlift Pressure Operated Pump

11045

PN 16



Housing-Material:

- Carbon steel

Nominal diameters: DN25, DN40, DN50, DN80/50

Connections:

- Flanges acc. DIN EN 1092-1, PN16
- Flange acc. ANSI B 16.5, Class 150
- Female thread Rp acc. ISO 7/1

Nominal pressure stage: PN 16

Housing operation-limits:

max. operating pressure (bar g)	16	14	12
max. operating temperature (°C)	-10/50	100	250

Media: condensate, oil and other non-corrosive fluids

Propellant: steam, compressed air or other gases

Applications: RIFOlift condensate pumps are deployed to lift or displace hot condensate, oil and other liquids in hazardous, far-apart and in higher areas. They are applicable to both open and closed systems where overpressure as well as vacuum might occur.

Function: The condensate flows due to the gravity through the inlet check valve into the condensate pump. The float is lifted which, at the upper limit of its travel, opens the supply valve which allows steam or compressed air to enter the pump body. Simultaneously the vent line is closed. Driven by the medium's pressure, the condensate inside the pump is discharged through the outlet check valve. When the float reaches the lowest level due to the decreasing fluid level, the supply valve closes and the venting valve opens immediately, allowing the condensate to fill the pump again. As the amount of liquid discharged at each stroke is known, the total volume passed during a given period can be calculated by counting the number of strokes during that period. For this purpose a counter (additional equipment) is available which can be screwed into a tapped connection on the top cover of the pump. A sight glass enables a visual function control.

Special characteristics: The condensate pump can be run with steam, gases or air and does not operate electrically. Extraordinary robust design, low maintenance, long-lasting, no cavitations.

Installation: Horizontal

As option at additional charge:

- Level gauge
- Stroke counter

Function limit:

min. density:	0,8 Kg/dm ³
max. viscosity:	5° Engler
max. motive pressure:	10 bar g
min. motive pressure:	0,5 bar g
Pump discharge per cycle DN25 to DN50	16 l
Pump discharge per cycle DN80/DN50	25 l

Capacity multiplying factors for other filling heads: (2)

Filling head (m)	DN25	DN40	DN50	DN80/DN50
0,15	0,7	0,7	0,7	0,9
0,3	1	1	1	1
0,6	1,2	1,2	1,2	1,08
0,9	1,35	1,35	1,35	1,2

The filling head is the dimension between the bottom of receiver and the top of pump. Example is shown on the next page.

CE - Mark:

The pressure equipment described falls acc. to PED 2014/68/EU in the category II and carry the CE-Mark. This product has been designed for use on fluids under group 2 of PED.

Capacity chart:

(1)

Motive Pressure bar g	Total Lift bar g	Flow Rate in Kg/h Installation with 0,3m filling head above the pump cover				
		DN25/DN25	DN40/DN40	DN50/DN50	DN80/DN50	
1	0,35	840	1490	2320	4480	
2		1030	1520	3160	5240	
3		1140	1640	3560	5640	
4		1180	1680	3840	5840	
5		1240	1740	3910	5900	
6		1270	1760	3040	5980	
8		1300	2200	3090	6030	
10		1310	2205	4000	6080	
2		1	805	1560	2550	4080
3			940	1790	2990	4720
4	1080		1930	3160	5080	
5	1110		2010	3200	5280	
6	1140		2090	3250	5400	
8	1180		2190	3280	5490	
10	1190		2250	3320	5560	
3	2		780	1496	2470	3510
4		900	1690	2620	3950	
5		1000	1820	2830	4230	
6		1040	1910	2860	4710	
8		1100	2010	2880	4880	
10		1110	2060	2900	4960	
4	3	740	1400	2360	3480	
5		860	1545	2540	3640	
6		910	1675	2560	3720	
8		970	1805	2590	4050	
10		980	1850	2650	4110	
5	4	720	1335	2280	2690	
6		820	1480	2460	2860	
8		910	1675	2500	3190	
10		930	1760	2540	3380	
6	5	680	1290	2080	2520	
8		740	1530	2180	2740	
10		810	1630	2220	2860	
7	6	660	1230	1880	1940	
8		730	1370	1940	2240	
10		820	1490	2150	2360	

Based on liquid specific gravity: 0,9 - 1,0 kg/cm³

Please state the following when making inquiries / placing orders:

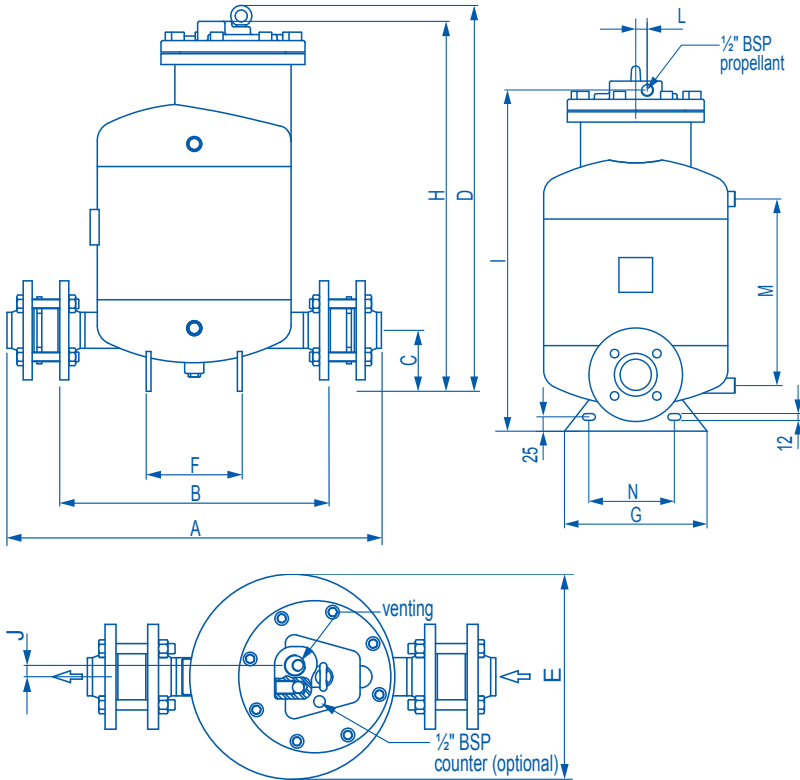
Medium, density, initial pressure, counter pressure and quantity of condensation (kg/h)



Installation Dimensions

11045

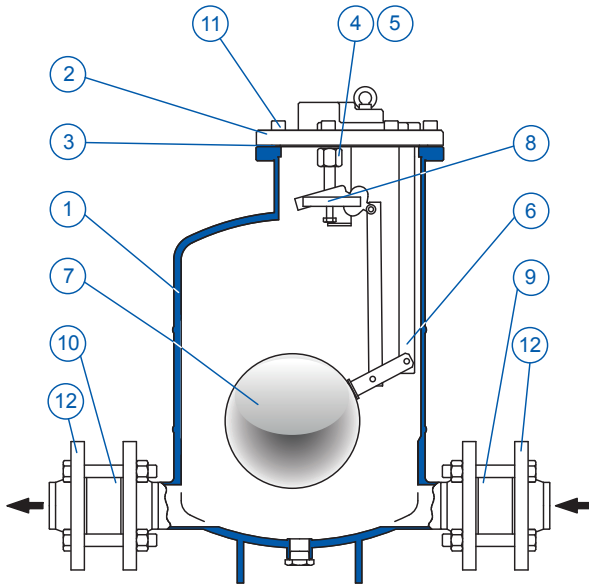
PN 16



Dimensions (in mm), Weight (in Kg), Volume (in l)

	Flange connections acc. EN 1092-1			
DN	25	40	50	80 / 50
A	578	615	644	776
B	444	454	460	580
C	100	100	100	113
D	640	640	640	650
E	323	323	323	406
F	160	160	160	200
G	250	250	250	340
H	617	617	617	627
I	598	598	598	608
J	17	17	17	17
L	18	18	18	18
M	327	327	327	307
N	150	150	150	240
Weight	71	72,8	74,5	78,5
Volume	31,7	31,8	31,9	48,9

Spare Part



- | | |
|----|---|
| 1 | Pump body: P265GH; P235GH; S235JR |
| 2 | Cover**: GJS400-15 |
| 3 | Cover gasket*: non asbestos |
| 4 | Inlet valve**: stainless steel |
| 5 | Exhaust valve**: stainless steel |
| 6 | Rod**: stainless steel |
| 7 | Float**: stainless steel |
| 8 | Spring assembly**: Inconel |
| 9 | Inlet check valve*: CF8M / 1.4408 |
| 10 | Outlet check valve*: CF8M / 1.4408 |
| 11 | Bolts: Steel - 8.8 |
| 12 | Flanges: P250GH / 1.0460 |

* Available as individual parts

** Only available as assembly

To ensure correct parts delivery, specify the position number, the works standard sheet number 11045 and the DN.

Calculation example

Operating data:

Condensate load	1800 kg/h
Filling head	0,15 m
Motive fluid	Steam***
Available pressure	8 bar
Vertical lift after pump	6 m
Return piping pressure	1,5 bar
Piping friction pressure drop	Negligible

Calculation:

Total back pressure	$1,5\text{bar} + (6\text{m} \times 0,0981\text{bar/m}) = 2,09\text{bar}$
Capacity from chart (1)	with 8bar as motive pressure and 3bar as back pressure: capacity of DN50 Pumps is 2590 kg/h
Correction for filling head from chart (2)	with 0,15m filling head: the correction factor is 0,7
Corrected capacity	$2590\text{ kg/h} \times 0,7 = 1813\text{ kg/h}$
Selection	DN50

*** For the calculation for pressurized gas please consult with Rifax.