

## PPEC Low Profile Pressure Powered Pump 'The Eliminator'

### Available types

PPEC cast iron body and cover.  
PPEC is supplied with bronze check valves.

### Limiting Conditions

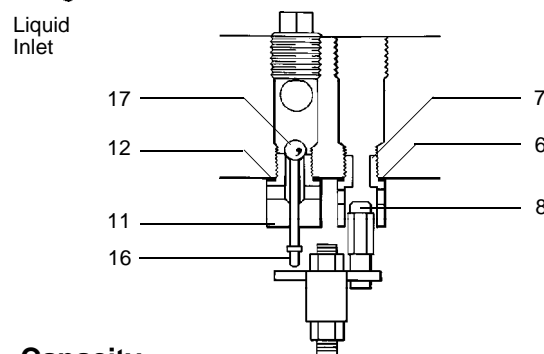
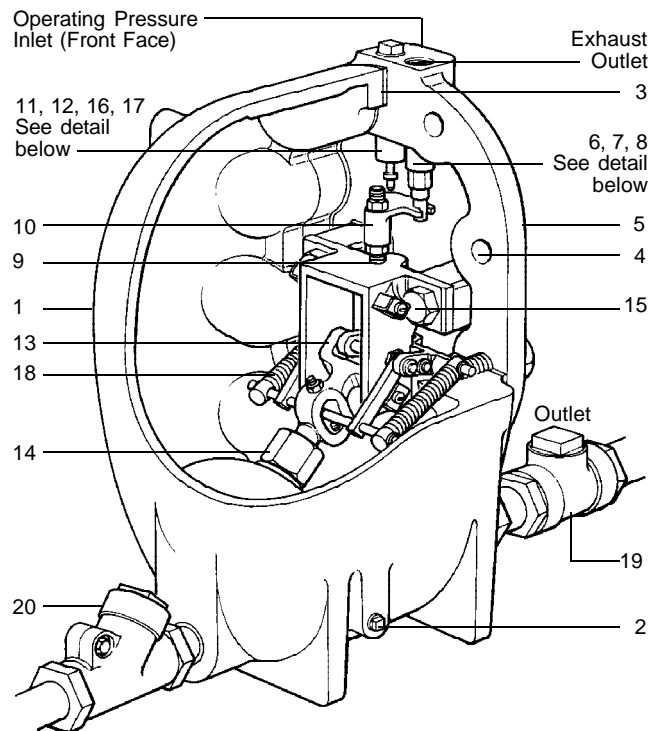
Body design conditions 8.6 bar g (up to 232°C)  
Maximum cold hydraulic test 13 bar g  
Operating inlet pressure  
Steam, air or gas 0.34 to 8.6 bar g.  
Total lift or back pressure which must be below operating pressure to allow capacity to be achieved, = height (H) in metres x 0.0981 plus pressure (bar g) in return line, plus downstream piping friction pressure drop in bar calculated at a flow rate of the lesser of six times the actual condensate rate or 6815 L/h.  
Filling head recommended above the pump is 0.15 m.  
Minimum filling head 0.m (at top of pump) gives a reduced capacity.  
Standard pump operates with liquids of specific gravity 1.0 down to 0.9, specify when ordering for liquid specific gravity from 0.9 to 0.65.  
Pump discharge per cycle:- 15 L. Each cycle at a maximum flow rate of 6815 L/h.  
Steam consumption — 3 kg. of steam per 1000 kg liquid pumped.  
Air consumption — 6230 L<sub>n</sub> per 1000 kg liquid pumped.

### Sizes and pipe connections

1" Screwed BSP (BS21 - parallel)

### Materials

No. Part	Material	
1 Body	Cast Iron	ASTM A126 Class B
2 Plug 1½"	Forged Steel	ASTM A105
3 Cover Gasket	Graphite	Union Carbide GHP
4 Cover Screws ¾" - 10 x 1¾"	Steel	ASTM A449
5 Cover	Cast Iron	ASTM A126 Class B
6 Exhaust Valve Seat Gasket	Stainless Steel	AISI 301
7 Exhaust Valve Seat	Stainless Steel	AISI 303
8 Exhaust Valve Head	Stainless Steel	AISI 303
9 Push Rod	Stainless Steel	AISI 303
10 Valve Head Actuator	Cast Stainless Steel	ASTM A743 Gr. CF-16F
11 Inlet Valve Seat	Stainless Steel	AISI 303
12 Inlet Valve Seat Gasket	Stainless Steel	AISI 302
13 Push Rod Actuator	Stainless Steel	AISI 304
14 Float & Arm	Stainless Steel	AISI 304
15 Mechanism Casting	Cast Stainless Steel	ASTM A 743 Gr. CF-16F
Screws ½" - 13 x 1¼"	Stainless Steel	AISI 304
16 Inlet Valve Stem	Stainless Steel	AISI 303
17 Inlet Valve Head	Stainless Steel	AISI 440
18 Spring	Stainless Steel	AISI 316
19 Check Valve (outlet)	Bronze with bronze disc	
20 Check Valve (inlet)	Bronze with teflon disc	



### Capacity

Capacities in kg/h when installed with recommended 0.15m filling head above top of pump. (Liquids specific gravity 0.9 to 1.0.)

Note: To achieve rated capacity, pump must be installed with check valves as supplied by Spirax Sarco. Use of a substitute check valve may affect the performance of the pump.

### Capacity Multiplying Factors for other Filling Heads

Capacity	Filling Head (m)				
	0	0.15	0.3	0.6	0.9
Multiplying Factors	.7	1.0	1.1	1.3	1.5

### Capacity Multiplying Factors for Motive Gas Supplies (other than steam)

										% Backpressure vs. Motive Pressure (BP/MP)
10%	20%	30%	40%	50%	60%	70%	80%	90%		
1.10	1.13	1.16	1.20	1.25	1.30	1.35	1.40	1.45	Capacity Multiplying Factors	

Operating Inlet Pressure	Total Lift or Back Pressure	Capacity
bar g	bar g	(kg/h)
8.6	1.0	952
8.6	2.8	862
8.6	4.1	771
6.9	1.0	952
6.9	2.8	816
6.9	4.1	726
5.2	1.0	952
5.2	2.8	771
5.2	4.1	590

Operating Inlet Pressure	Total Lift or Back Pressure	Capacity
bar g	bar g	(kg/h)
3.4	0.69	907
3.4	1.7	771
3.4	2.8	635
1.7	0.34	907
1.7	0.69	771
1.7	1.0	635
0.69	0.14	862
0.69	0.34	726
0.34	0.14	680

**Dimensions (approximate) in millimetres**

A	B	C	D	E	F	G	H
279	480	371	333	53	356	229	28

							Weight	
J	K	L	M	N	P	Pump	C.V.	
16	292	16	91	86	305	68 kg	3.2 kg	

**Note:** Cover/Mechanism withdrawal distance - 0.3m.

**Optional extras**

**Flow counter** for measuring liquid pumped.

The upper 1½" API plugged connection in the pump body can be used for connecting the flow counter. If desired, a ½" connection can be provided on the top of the body for connecting the flow counter. Specify when ordering. The flow counter must be mounted vertically and can only be used when pump exhaust is vented. **Gauge glass** with brass cocks.

**Installation**

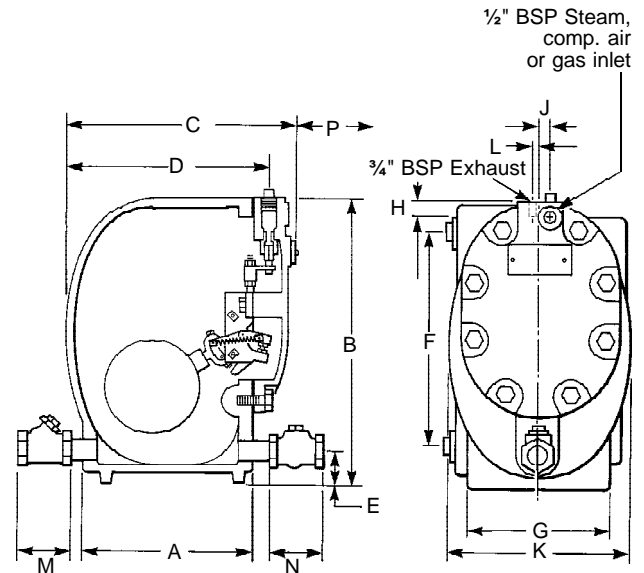
For best operation any flash steam must be vented or condensed ahead of pump inlet. Full details are given in the Installation Instructions supplied with each pump.

**How to specify**

1 - SPIRAX SARCO Low Profile Pressure Powered Pump type PPEC with cast iron body complete with bronze check valves screwed BSP.

**Note:** If you are in any doubt about the size of pump required or if the conditions are unusual we will be glad to advise you if you will give us the answers to the following questions:-

- 1) Nature of liquid to be pumped.
- 2) Temperature of liquid to be pumped.
- 3) Quantity to be pumped (L/h).
- 4) Initial lift, horizontal distance and net effective lift (i.e. initial lift less subsequent fall in discharge line).



- 5) Operating medium (steam, compressed air or gas).
- 6) Operating pressure available.
- 7) The pump is generally used to drain water from a vented receiver but under certain circumstances can drain a unit from under steam pressure or vacuum. State which.

**Spare Parts**

AVAILABLE SPARE	
Cover Gasket	B
Float	F
Brass Inlet Check Valve	M
Brass Outlet Check Valve	M
Cover & Complete Mechanism Assembly	A

