fluimac
pump solution

AODD PUMPS

www.fluimac.com

ENGLISH

fluimac
pump solution

Made in Italy

MAIN FEATURES

Fluimac is an original, young and dynamic company built in 2012 for a new concept of product. It is specialized in providing pump solutions with an innovative and continuously developing design of range. The huge experience, knowledge and efficiency of its team is the starting point of its own business.
Fluimac stands out for its reliable and prompt technical support and assistance. The internal research and development department ensures the proficiency of its team, which constantly grows in order to satisfy all the customers' needs.The company keeps up with the constant evolution of the national and international market and its quality control guarantees innovative and certificated products, which respect current legal standards.
The organization of the warehouse and the assembly/testing department, allows the company to offer short delivery times, immediate check of availability, speedy shipments and fast service assistance. The policy of Fluimac relies also on excellent customer service and a network of efficient, reliable distributors who ensure willingness, quality and technical support. This makes Fluimac a high quality company, grounded in excellence.

CE Ex ISO 9001 BUREAU VERITAS Certification ACCREDIA FDA COMPLIANT EAC IECEx COMPLIANT UK CA PATENTED

OUR VISION

To be your partner of choice
for pumping solutions, globally.

OUR MISSION

Fluimac, is a passionate,
dedicated Global Family of Professionals.
We listen to each of our Partners and are committed
to deliver the right solution in the Fluid handling and Industrial
Process market.

OUR VALUES

Mutual Respect Doing business is about
being able to generate trust between Customer and Supplier,
and this trust can only be developed if there is a basis of mutual respect.
So, at Fluimac we believe in extending the Mutual Respect
we have as an internal ethic and bringing it to our Business Partnerships.We'll make sure we deliver
against our commitments, on time and in a transparent fashion, so you know
can plan for your own business needs.

PRODUCTS

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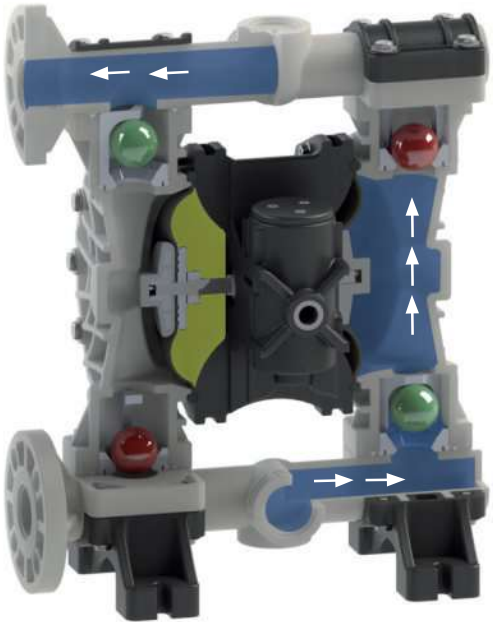
AIR OPERATED DOUBLE DIAPHRAGM PUMPS

MATERIALS OF CONSTRUCTION:
PP, PVDF+CF, ALUMINIUM, SS AISI 316, POMc
Flow-rate from 4 lt/min to 1.050 lt/min

PUMP OPERATION

Fluid

Air



Suction Cycle

1

Compressed air fills right inner chamber, causing the opposing diaphragm to create suction, lifting the lower valve ball, pulling in fluid at inlet. Simultaneously, the right chamber is in “Discharge” cycle.

Discharge Cycle

2

Compressed air fills left inner chamber, causing upper valve ball to open and discharge fluid. Simultaneously, the right chamber is in “Suction” cycle.

INSTALLATION

Pump installed below head (positive suction)
when it is necessary to empty completely the container

Self priming pump installed above head (negative suction)
pump initially works with dry column without problem

Pump installed above drum or tank
with special featuring pump

Pump installed on hopper for high viscosity liquid
hopper’s height helps the pump to treat the fluid. Air pressure has to be high, Suction tube has to be bigger than pump’s size

Submerged pump
it is necessary to check the chemical compatibility

Suspended
special version with fixing feet also in the upper part, for ceiling fixing

Pump installed on a mobile unit
with a trolley or cart when pump must be often moved

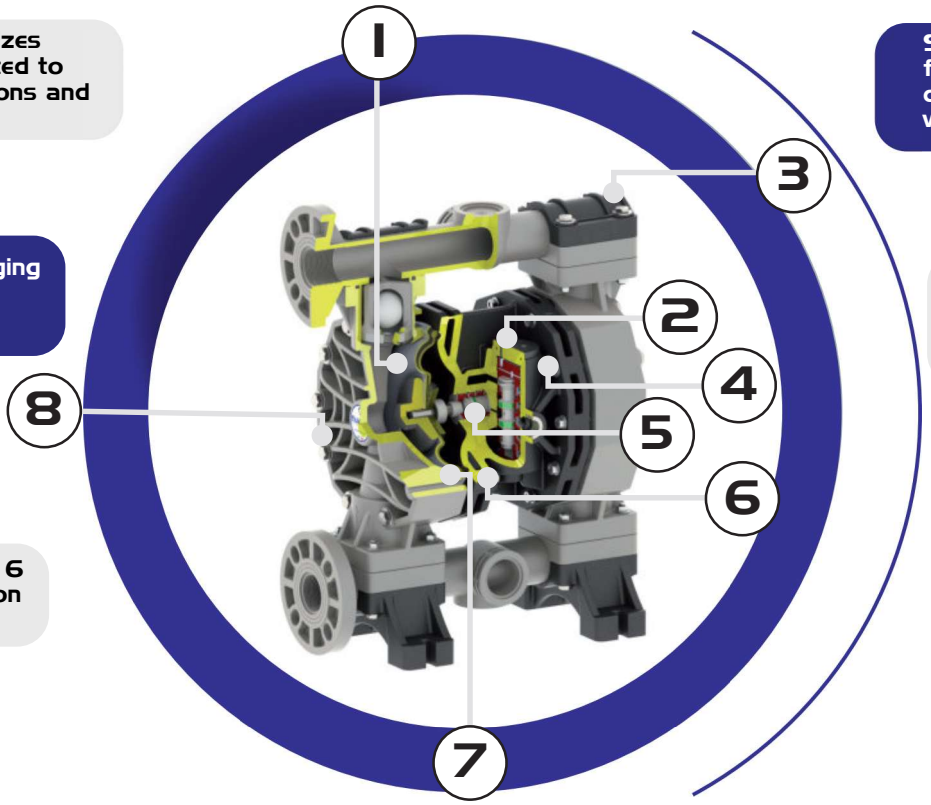
TECHNICAL FEATURES

Wide Range of sizes and materials suited to variety of conditions and chemicals fluids

Safely "dead head" function, against closed discharge, without pump damage

Dry-run without damaging the pump or system: seal-less design

Handled liquids with solids particles: ideal for abrasive and viscous media



Self-priming dry up to 6 meters: works in suction lift applications

Fully submersible: can be submerged completely according to the fluid compatibility

Efficient performance: high flow rates through optimal casings designs

Serviceability: easily and quickly maintained without any special tools

1	2	3	4	5	6	7	8
Long-lasting diaphragm construction ensures a consistent performance and a longer operating life.	Efficient air distribution design: low air consumption. Un-balanced pilot spool, precisely controls positioning of the main power spool to eliminate stalling and increase efficiency.	All bolted design for an effective sealing to extended leak-proof service.	Solid polypropylene air chambers and plastic air valve for maximum chemical resistance in highly corrosive environments.	Acetalic shuttle ensures long valve life,auto-lubricated material.	Pneumatic exchanger is easily externally accessible for a quick inspection. Special Air system: lube-free, non-stall, non-freeze.	Special pinch clamping, design to minimize wear and increase life of the diaphragm, and provides a uniform seal to avoid leak.	Special exhaust chamber with double silencer to expand diffusion passages, reduce the icing and assure low noise level.

QUALITY 100% wet tested after final assembly: deadheading, priming and sealing

SAFE ATEX certifications in all versions: Conductive plastic pumps available

FLEXIBILITY Multiple porting options available along with interface options

P 0120 P- HT T

MODEL	SIZE	CASING	DIAPHRAGM	BALL

MODEL

P
PHOENIX

PF
PHOENIX FOOD

AP
ACCURATE PHOENIX

TP
TWIN PHOENIX

PP
POWDER PHOENIX

PS
SUBMERSIBLE PHOENIX

DP
DRUM PHOENIX

FP
FLAP PHOENIX

SIZE

4
4 lt/min
1/4" BSPP

8
7 lt/min
1/4" BSPP

20
20 lt/min
3/8" BSPP

35
35 lt/min
1/2" BSPP

55
55 lt/min
1/2" BSPP

60
65 lt/min
1/2" BSPP

90
100 lt/min
3/4"BSPP

120
120 lt/min
1"BSPP

170
170 lt/min
1"BSPP/DN25

252
250 lt/min
1"1/4 BSPP

400
380 lt/min
1"1/2BSPP DN40

700
700 lt/min
2"BSPP DN50

1000
1050 lt/min
3"BSPP DN80

CASING

P
POLYPROPYLENE
Wide chemical compatibility. General purpose.Reinforced with glass-fiber.

PC
CONDUCTIVE POLYPROPYLENE
Wide chemical compatibility. General purpose.Groundable.

KC
CONDUCTIVE PVDF
Strong chemical resistance to acids. High temperature resistance. Groundable.

O
ACETAL
Wide range of solvent and hydrocarbons resistance. Good level of abrasion resistance. (Just 4, 8 and 10 size).

OC
CONDUCTIVE ACETAL
Wide range of solvent and hydrocarbons. Good level of abrasion resistance. Groundable. (Just 4, 8 and 10 size).

A
ALUMINUM
Wide range of solvent and hydrocarbons. Good level of abrasion resistance.

S
SS – AISI 316 Electropolished
High level of corrosion and abrasion resistance.

DIAPHRAGM

H
HYTREL
Good low temperature properties. Good abrasion resistance.

W
SANTOPRENE HIGH RESISTANCE
Solutions and dilute acids.

NBR
NBR
Good for petroleum-based fluids, water, oils, hydrocarbons and MILD chemicals.

D
EPDM
OK with caustic solutions, dilute acids, ketones and alcohols. Good abrasion resistance.

HT
HYTREL + PTFE
Widest chemical compatibility, extreme corrosion resistance, non-adhesive, high heat resistance

MT
SANTOPRENE + PTFE
Widest chemical compatibility, extreme corrosion resistance, non-adhesive, high heat resistance

BALL

N
NBR
Good for petroleum-based fluids, water, oils, hydrocarbons and MILD chemicals.

D
EPDM
OK with caustic solutions, dilute acids, ketones and alcohols. Good abrasion resistance.

T
PTFE
Widest chemical compatibility, extreme corrosion resistance, non-adhesive, high heat resistance.

S
SS
High level of corrosion and abrasion resistance.
Good for viscous fluids.

P | V | 1 | - | AB

BALL SEAT	GASKET	CONNECTIONS	ATEX ZONE CERTIFICATION	PORTS

P
POLYPROPYLENE
Wide chemical compatibility.
General purpose.

K
PVDF
Strong chemical resistance to acids.
High temperature resistance.

S
SS
High level of corrosion and abrasion resistance.

Z
PE
With high molecular weight: High level of abrasion resistance.
(Just D and N balls).

O
ACETAL
Wide range of solvent and hydrocarbons resistance. Good level of abrasion resistance.

V
VITON
High heat resistance.
Good resistance to aggressive chemicals and hydrocarbons.

N
NBR
Good for petroleum-based fluids, water, oils, hydrocarbons and MILD chemicals.

D
EPDM
Good with caustic solutions, dilute acids, ketones and alcohols.
Good abrasion resistance.

T
PTFE
Widest chemical compatibility, extreme corrosion resistance, non-adhesive, high heat resistance.

1
BSP THREATED

A
BSP THREADED WITH REINFORCED RING

2
FLANGED

3
TRI-CLAMP
(PHOENIX FOOD)

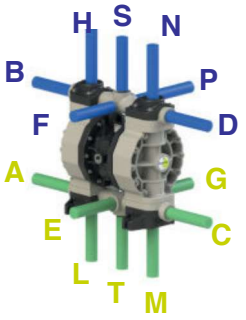
5
NPT THREADED

E
NPT THREADED WITH REINFORCED RING

6
DIN 11851/3
(PHOENIX FOOD)

-
ATEX ZONE 2
From P4 to P120 models
II 3/3 G Ex h IIC T4 Gc
II 3 D Ex h IIIB T135°C Dc X
From P170 to P1000 models
II 3/3 G Ex h IIB T4 Gc
II 3 D Ex h IIIB T135°C Dc X

X
ATEX ZONE 1
From P4 to P120 models
II 2/2 G Ex h IIC T4 Gb
II 2 D Ex h IIIB T135°C Db X
From P170 to P1000 models
II 2/2 G Ex h IIB T4 Gb
II 2 D Ex h IIIB T135°C Db X



SPECIAL FEATURES

SP **STAINSTEEL PHOENIX** CENTRAL BLOCK IN SS
SCP **STROKE COUNTER PHOENIX** WITH EXTERNAL PNEUMATIC SIGNAL
PCR **PHOENIX WITH SHORTER STROKES**
PCL **PHOENIX WITH LONGER STROKES**

TABLE CODE

PUMP SELECTION

To select the right FLUIMAC pump for your application, the following factors should be considered to achieve economy of operation, long pump life, and minimal maintenance costs:

- The nature of the medium to be pumped, its viscosity, and the solids content
- Pumping capacity in relation to the desired output
- Suction and pressure conditions

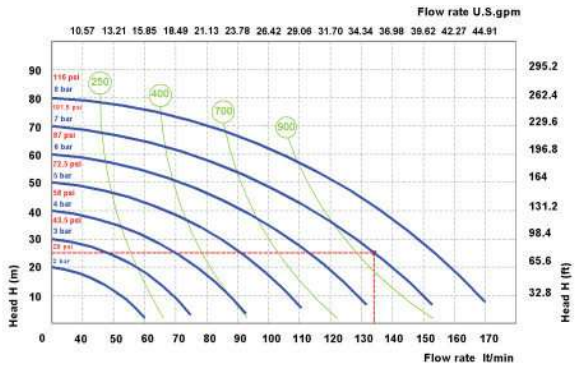
Considering these parameters, an optimal pump size is selected when the intersection of the intended installation “pressure vs. flow rate” is near the middle section of the curves.

USING PERFORMANCE CURVES

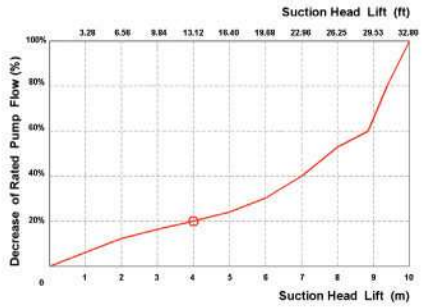
To determine compressed air requirements and proper size for a FLUIMAC AODD pump, two elements of information are required:

1 Required Flow Rate
2 Total Delivery Head

As an example, consider a P170 pump performance curve, pumping about 135 l/min at 25m.Point A on the performance curve is where the desired Flow Rate and Total Delivery Head points intersect. This point determines compressed air requirements for the particular pump. At performance point A, the pump will require approximately 7 bar air inlet pressure. To arrive at this figure, follow the solid blue curve to the left to read the air pressure rating in BAR. By looking at the nearest green curve, it is determined the pump will require approximately 900 nl/min (Normal Liter per minute) of air consumption

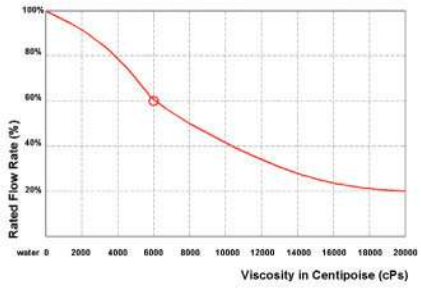


SPECIFIED SUCTION LIFT



With a suction lift of 4 m, pump rate decreases by approximately 20%. Valid for pumps 3/4” and larger; data varies with pump configuration.

VISCOUS LIQUIDS PERFORMANCE DATA



During the conveyance of a fluid with a viscosity of 6000cPs, the pump rate decreases to 60% of its rated value (100% = water). Valid for 3/4” pumps & larger.

PUMP TYPE	AODD	CENTRIFUGAL	LOBE	GEAR	SCREW	PERISTALIC	PISTON
							
Variable Flow & Head Control	☑	☑	☑	☑	!	☑	☑
Deadhead Safely	☑	☑	!	!	!	!	!
Dry-Running	☑	x	x	x	x	☑	x
Dry Self-Priming	☑	x	x	☑	x	☑	!
No Mechanical Alignment	☑	x	x	x	x	x	x
No Electrical Installation	☑	x	x	x	x	x	x
Portability	☑	☑	!	!	!	☑	!
Submersible	☑	!	x	x	x	x	!
Sealless	☑	!	!	!	!	☑	!
Cavitation Tolerance	☑	x	!	!	☑	☑	!
Low Shear & Degradation	☑	x	☑	☑	!	☑	!

☑ = Suitable ! = Limitations x = Not Recommended

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PHOENIX

MATERIALS OF CONSTRUCTION:
PP, PVDF+CF, ALUMINIUM, SS AISI 316, POMc
Flow-rate from 4 lt/min to 1.050 lt/min