fluimac®
pump solution



# PHOENIX

## AIR-OPERATED DOUBLE DIAPHRAGM PUMPS

Made in Italy

www.fluimac.com

ENGLISH

fluimac
pump solution



## 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.

## FLUIMAC'S CERTIFICATES



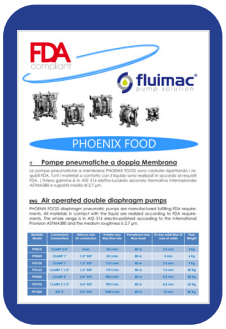

CE CONFORMITY MARKING



ATEX




ISO 9001:2015




FDA COMPLIANT



EAC CONFORMITY MARKING

# PRODUCTS

| PRODUCTS | RANGE | CERTIFICATES |
|---|---|---|

Air operated double diaphragm pumps have long been recognized as the most flexible pumps of the industry for handling difficult liquids at relatively low pressures and flows.
The range of applications is virtually limitless.
Fluimac AODD pumps come in many sizes and choices of materials of construction.
Almost every type of liquid from highly corrosive acids through high viscosity paints and adhesives, to food and drink products can be pumped.



## PHOENIX
Air operated double diaphragm pumps
Realized in:
PP, PVDF, ALUMINIUM, SS AISI 316, POMc
Flow-rate from 7 lt/min to 1.000 lt/min. Connection from ¼" to 3".



## PHOENIX FOOD
Air operated double diaphragms pumps
Realized in:
SS AISI 316 electro-polished.
Flow-rate from 20 lt/min to 1.000 lt/min. Tri-Clamp Connection.



## PHOENIX ATEX
Air operated double diaphragms pumps, ATEX certified for zone1.
Realized in:
PP+CF, PVDF+CF, ALUMINIUM, SS AISI 316, POMc+CF
Flow-rate from 7 lt/min to 1.000 lt/min. Connection from ¼" to 3".



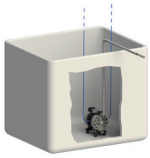
## ACCURATE PHOENIX
Double diaphragm pumps with remote control
Realized in:
PP, PVDF, ALUMINIUM, SS AISI 316, POMc
Flow-rate from 7 lt/min to 250 lt/min. Connection from ¼" to 1"¼.



## DRUM PHOENIX
Air operated double diaphragms pumps with special features to empty drums and tanks
Realized in:
PP, PVDF, ALUMINIUM, SS AISI 316, POMc
Flow-rate from 20 lt/min to 170 lt/min. Connection from 3/8" to 1".



## TWIN PHOENIX
Air operated double diaphragms pumps with special features with double inlet/outlet
Realized in:
PP, PVDF, ALUMINIUM, SS AISI 316, POMc
Flow-rate from 7 lt/min to 700 lt/min. Connection from ¼" to 2".



## SUBMERSIBLE PHOENIX
Air operated double diaphragm pumps with special features, design to be submerged.
Applicable to all size of pumps.



## POWDER PHOENIX
Air operated double diaphragms pump with special design to handle powder
Realized in: ALU, SS.
Size available 1"½ and 2".



## DAMPER
Pneumatic, automatic pulsation dampeners.
Realized in:
PP, PVDF, ALUMINIUM, SS AISI 316, POMc
Applicable to all size of pumps.
Available also in ATEX and FOOD version.

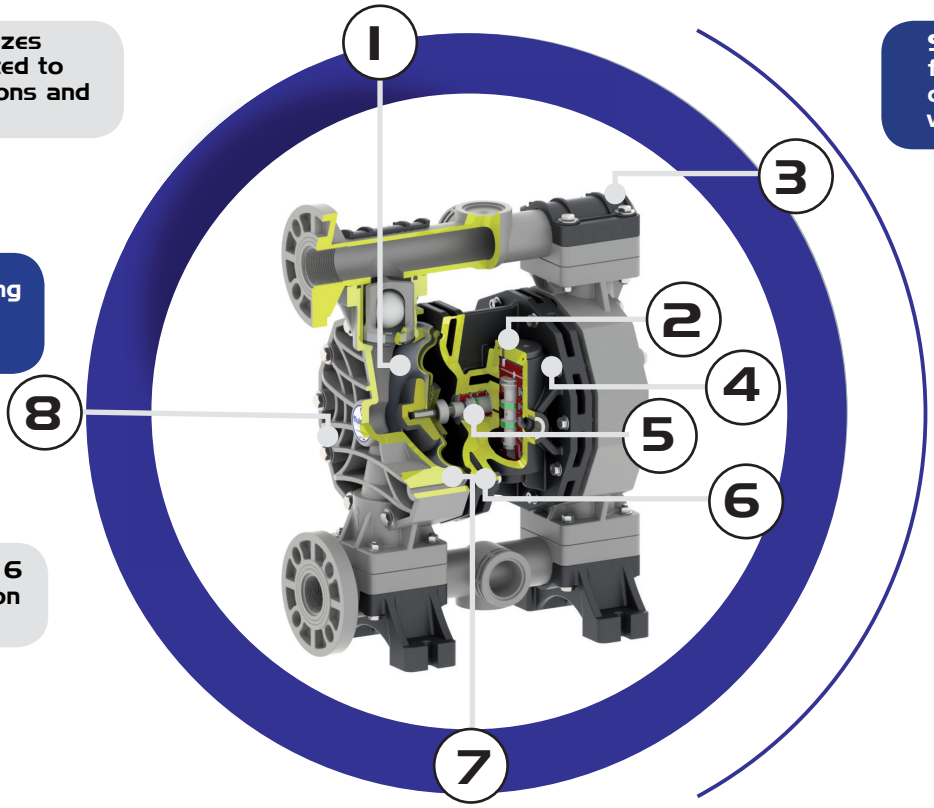
# TECHNICAL FEATURES

**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

# PUMP OPERATION



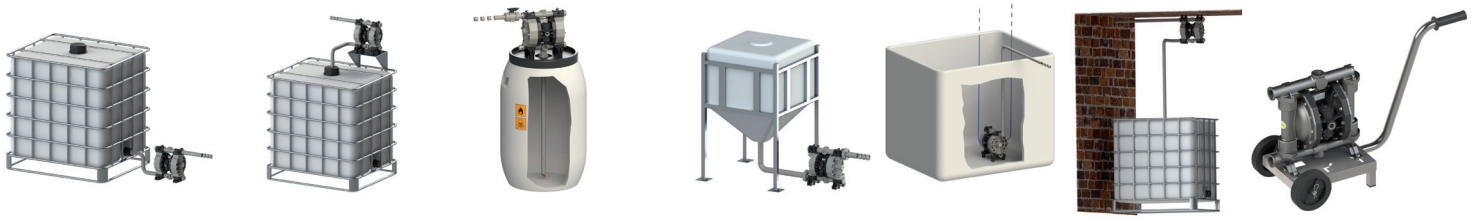

### Suction Cycle

**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

# P | 0120 | P- | HT | T

| MODEL | SIZE | CASING | DIAPHRAGM | BALL |
|---|---|---|---|---|

## MODEL

**P**
**PHOENIX**



**PF**
**PHOENIX FOOD**



**AP**
**ACCURATE PHOENIX**



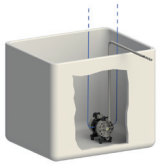
**TP**
**TWIN PHOENIX**



**PP**
**POWDER PHOENIX**



**SP**
**SUBMERSIBLE PHOENIX**



## SIZE

**7**- 7 lt/min

**18** - 20 lt/min

**30** - 35 lt/min

**55** - 55 lt/min

**60** - 65 lt/min

**90** - 100 lt/min

**120** - 120 lt/min

**170** - 170 lt/min

**252** - 250 lt/min

**400** - 380 lt/min

**700** - 700 lt/min

**1000** - 1050 lt/min

## 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.



**OC**
**CONDUCTIVE ACETAL**
Wide range of solvent and hydrocarbons. Good level of abrasion resistance. Groundable.



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



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



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

## DIAPHRAGM



**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.



**H**
**HYTREL**
Good low temperature properties. Good abrasion resistance.



**M**
**SANTOPRENE**
solutions and dilute acids.

## BALL



**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.



**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.



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



**S**
**SS**
High level of corrosion and abrasion resistance.



**Z**
**PE**
With high molecular weight: High level of abrasion resistance



**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

**2**
FLANGED

**3**
TRI-CLAMP
(PHOENIX FOOD)

**5**
NPT THREATED

**6** - DIN 11851/3
(PHOENIX FOOD )

**-**
ATEX ZONE 2

**II 3/3 G Ex h IIB T4 Gc**
**II -/3 D Ex h IIIB T135°C Dc X**

**X**
ATEX ZONE 1

**II 2/2 G Ex h IIB T4 Gb**
**II -/2 D Ex h IIIB T135°C Db X**

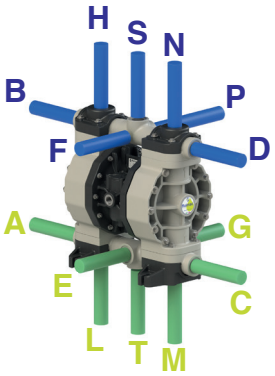



TABLE CODE

# 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.

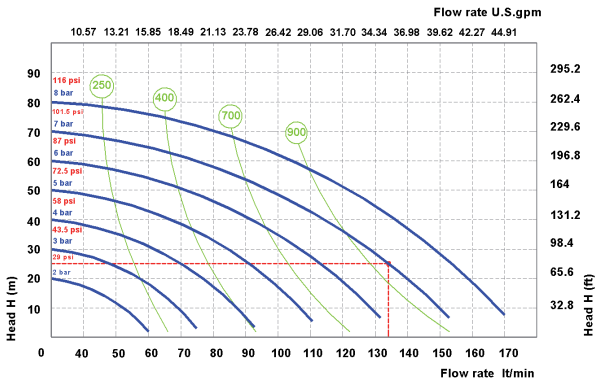
## USING PERFORMANCE CURVES

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

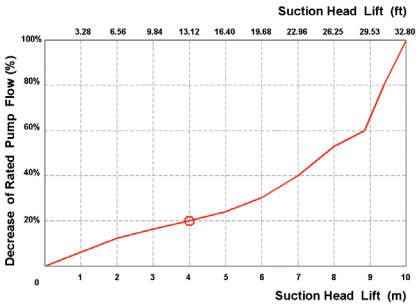
1 Required Flow Rate

2 Total Delivery Head

As an example, consider a P170 pump performance curve, pumping about 135 lt/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.

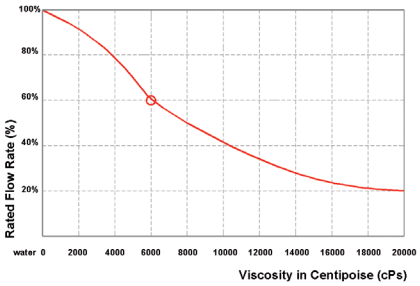



## SPECIFIED SUCTION LIFT




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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pump solution













# PHOENIX

**Realized in:**
**PP, PVDF, ALUMINIUM, SS AISI 316, POMc**
**Flow-rate from 7 lt/min to 1.000 lt/min**
**Connection from 1/4″ to 3″.**
**ATEX certification for zone 2**
**II 3/3 G Ex h IIB T4 Gc**
**II -/3 D Ex h IIIB T135°C Dc X**

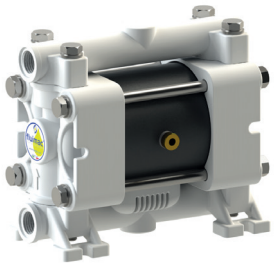
# P 7



PP



PVDF+CF



POMc

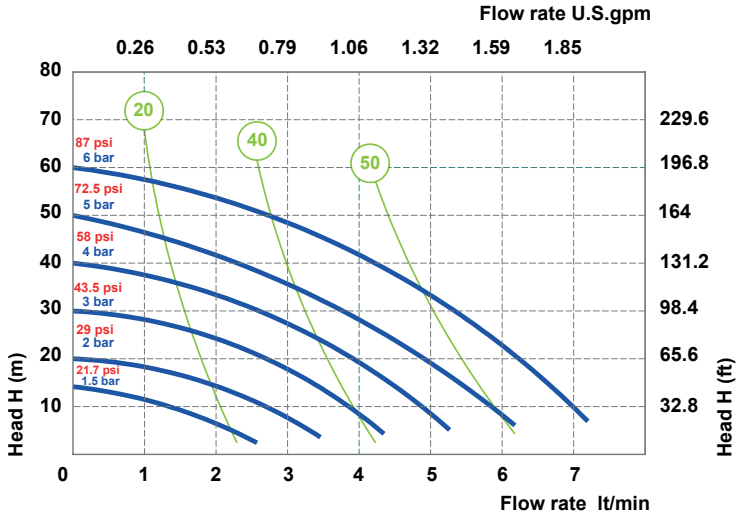
## TECHNICAL DATA

| | |
|---|---|
| Fluid connections | **1/4" BSP** |
| Air connection | **4 mm** |
| Max. Flow rate | **7 lt/min** |
| Max air pressure | **6 bar** |
| Max delivery head | **60 m** |
| Max Suction Lift Dry | **3 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **2 mm** |
| Noise level: | **62 dB** |
| Max Viscosity: | **5.000 cps** |
| Displacement per Stroke: | **18 CC ~** |

Ex II 3/3 G Ex h IIB T4 Gc
Ex II -/3 D Ex h IIIB T135°C Dc X

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.

## PERFORMANCE



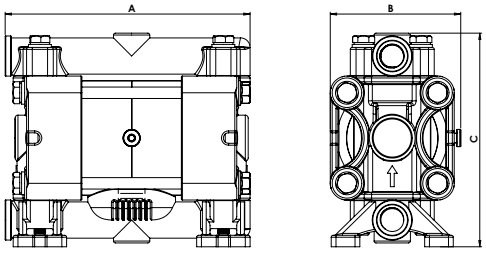

Air supply pressure

Air consumption Nlt/min

The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

## DIMENSIONS

| | A | B | C | Net Weight | Temperature | |
|---|---|---|---|---|---|---|
| **PP** | 129 mm | 68 mm | 112 mm | 0,84 Kg | - 4°C | + 65°C |
| **PVDF** | 129 mm | 68 mm | 112 mm | 0,96 Kg | - 20°C | + 95°C |
| **POMc** | 129 mm | 68 mm | 112 mm | 0,84 Kg | - 5°C | + 80°C |




## COMPOSITION

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **P0007** | **P =** PP<br>**KC =** PVDF+CF<br>**O =** POMc | **NT =** NBR+PTFE | **T =** PTFE<br>**S =** SS | **P =** PP<br>**K =** PVDF<br>**O =** POMc | **D =** EPDM<br>**V =** VITON<br>**N =** NBR<br>**T =** PTFE | **1 =** BSP<br>**5 =** NPT | **- =** zone 2 | **AB =** STANDARD |

# P 18



PP



PVDF+CF



POMc



SS

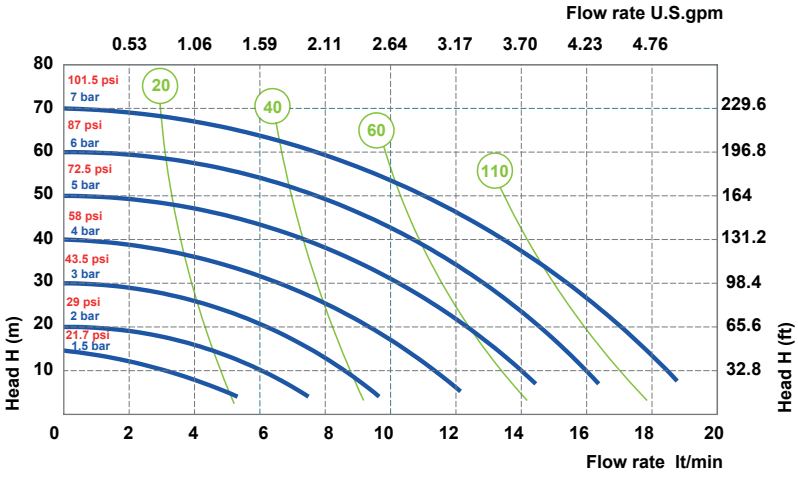
## TECHNICAL DATA

| | |
|---|---|
| Fluid connections | **3/8" BSP** |
| Air connection | **6 mm** |
| Max. Flow rate | **20 lt/min** |
| Max air pressure | **7 bar** |
| Max delivery head | **70 m** |
| Max Suction Lift Dry | **5 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **2,5 mm** |
| Noise level: | **65 dB** |
| Max Viscosity: | **10.000 cps** |
| Displacement per Stroke: | **30 CC ~** |

Ex II 3/3 G Ex h IIB T4 Gc
Ex II -/3 D Ex h IIIB T135°C Dc X

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.

## PERFORMANCE



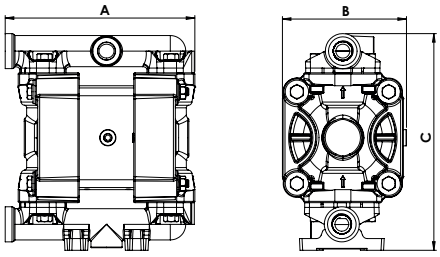

Air supply pressure

Air consumption Nlt/min

The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

## DIMENSIONS

| | A | B | C | Net Weight | Temperature | |
|---|---|---|---|---|---|---|
| **PP** | 146 mm | 96 mm | 167 mm | 1,3 Kg | - 4°C | + 65°C |
| **PVDF** | 146 mm | 96 mm | 167 mm | 1,6 Kg | - 20°C | + 95°C |
| **POMc** | 146 mm | 96 mm | 167 mm | 1,5 Kg | - 5°C | + 80°C |
| **SS** | 148 mm | 92 mm | 152 mm | 2,3 Kg | - 20°C | + 95°C |




## COMPOSITION

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **P0018** | **P =** PP<br>**KC =** PVDF+CF<br>**O =** POMc<br>**SS =** SS | **HT =** HYTREL+PTFE<br>**MT =** SANTOPRENE+PTFE<br>**H =** HYTREL<br>**M =** SANTOPRENE | **T =** PTFE<br>**S =** SS | **P =** PP<br>**K =** PVDF<br>**O =** POMc<br>**S =** SS | **D =** EPDM<br>**V =** VITON<br>**N =** NBR<br>**T =** PTFE | **1 =** BSP<br>**5 =** NPT | **- =** zone 2 | **AB =** STANDARD |

# P 30



PP



PVDF+CF



ALU



SS

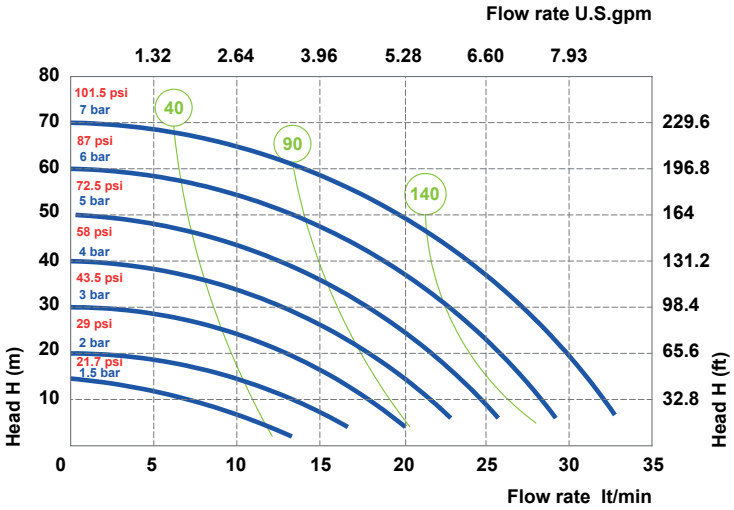
## TECHNICAL DATA

| | |
|---|---|
| Fluid connections | **1/2" BSP** |
| Air connection | **6 mm** |
| Max. Flow rate | **35 lt/min** |
| Max air pressure | **7 bar** |
| Max delivery head | **70 m** |
| Max Suction Lift Dry | **5 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **3 mm** |
| Noise level: | **65 dB** |
| Max Viscosity: | **15.000 cps** |
| Displacement per Stroke: | **65 CC ~** |

Ex II 3/3 G Ex h IIB T4 Gc
Ex II -/3 D Ex h IIIB T135°C Dc X

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.

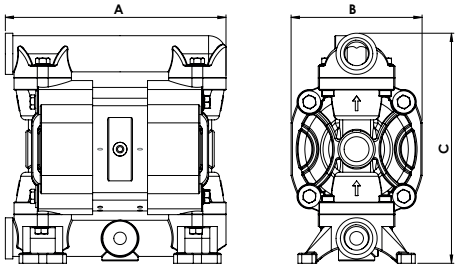
## PERFORMANCE




The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

## DIMENSIONS

| | A | B | C | Net Weight | Temperature | |
|---|---|---|---|---|---|---|
| **PP** | 177 mm | 105 mm | 185 mm | 1,8 Kg | - 4°C | + 65°C |
| **PVDF** | 177 mm | 105 mm | 185 mm | 2,3 Kg | - 20°C | + 95°C |
| **ALU** | 183 mm | 110 mm | 189 mm | 2,8 Kg | - 20°C | + 95°C |
| **SS** | 181 mm | 106 mm | 192 mm | 3,8 Kg | - 20°C | + 95°C |




## COMPOSITION

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **P0030** | **P** = PP<br>**KC** = PVDF+CF<br>**S** = SS<br>**A** = ALU | **HT** = HYTREL+PTFE<br>**MT** = SANTOPRENE+PTFE<br>**H** = HYTREL<br>**M** = SANTOPRENE | **T** = PTFE<br>**S** = SS<br>**D** = EPDM<br>**N** = NBR | **P** = PP<br>**K** = PVDF<br>**S** = SS<br>**Z** = PE-UHMWE | **D** = EPDM<br>**V** = VITON<br>**N** = NBR<br>**T** = PTFE | **1** = BSP<br>**2** = FLANGED<br>**5** = NPT | **-** = zone 2 | **AB** = STANDARD |

# P 55



PP



PVDF+CF



ALU



SS

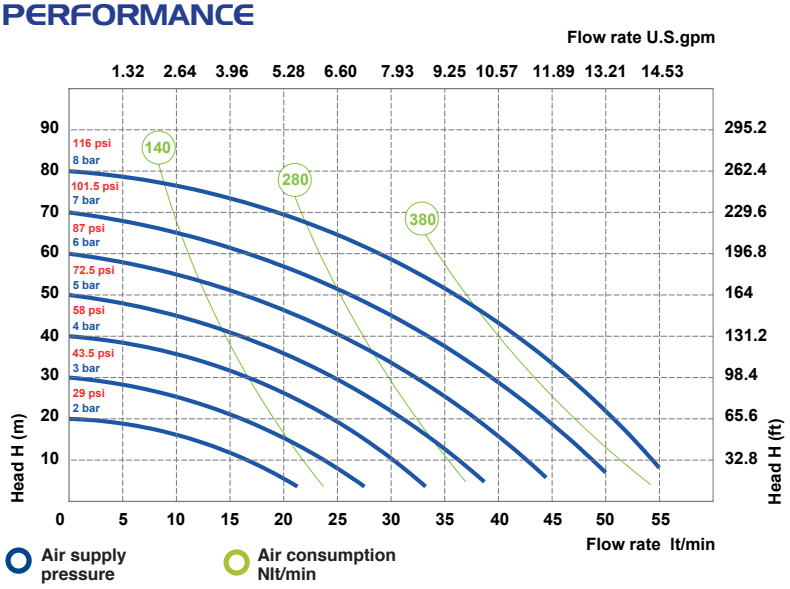
## TECHNICAL DATA

| | |
|---|---|
| Fluid connections | **1/2" BSP** |
| Air connection | **1/4" BSP** |
| Max. Flow rate | **55 lt/min** |
| Max air pressure | **8 bar** |
| Max delivery head | **80 m** |
| Max Suction Lift Dry | **5 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **3,5 mm** |
| Noise level: | **70 dB** |
| Max Viscosity: | **15.000 cps** |
| Displacement per Stroke: | **140 CC ~** |

Ex II 3/3 G Ex h IIB T4 Gc
Ex II -/3 D Ex h IIIB T135°C Dc X

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.

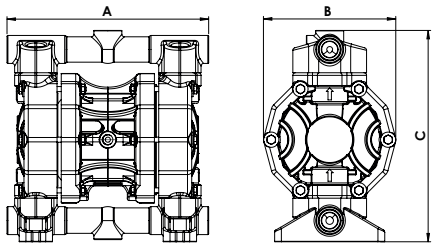
## PERFORMANCE




The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

## DIMENSIONS

| | A | B | C | Net Weight | Temperature | |
|---|---|---|---|---|---|---|
| **PP** | 238 mm | 156 mm | 249 mm | 3,8 Kg | - 4°C | + 65°C |
| **PVDF** | 238 mm | 156 mm | 249 mm | 4,8 Kg | - 20°C | + 95°C |
| **ALU** | 234 mm | 156 mm | 245 mm | 3,8 Kg | - 20°C | + 95°C |
| **SS** | 234 mm | 156 mm | 268 mm | 6,8 Kg | - 20°C | + 95°C |




## COMPOSITION

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **P0055** | **P =** PP<br>**KC =** PVDF+CF<br>**S =** SS<br>**A =** ALU | **HT =** HYTREL+PTFE<br>**MT =** SANTOPRENE+PTFE<br>**H =** HYTREL<br>**M =** SANTOPRENE<br>**D =** EPDM<br>**N =** NBR | **T =** PTFE<br>**S =** SS<br>**D =** EPDM<br>**N =** NBR | **P =** PP<br>**K =** PVDF<br>**S =** SS<br>**Z =** PE-UHMWE<br>**A =** ALU | **D =** EPDM<br>**V =** VITON<br>**N =** NBR<br>**T =** PTFE | **1 =** BSP<br>**2 =** FLANGED<br>**5 =** NPT | **- =** zone 2 | **AB =** STANDARD |

# P 60



PP



PVDF+CF



ALU



SS

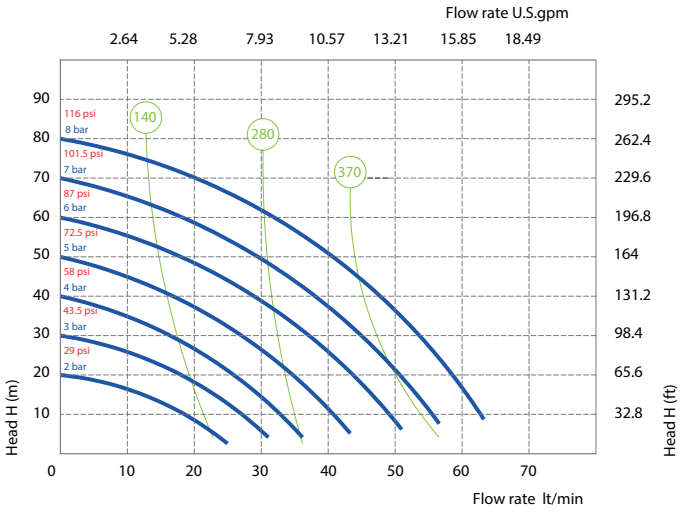
## TECHNICAL DATA

| | |
|---|---|
| Fluid connections | **1/2" BSP** |
| Air connection | **1/4" BSP** |
| Max. Flow rate | **65 lt/min** |
| Max air pressure | **8 bar** |
| Max delivery head | **80 m** |
| Max Suction Lift Dry | **5 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **3,5 mm** |
| Noise level: | **72 dB** |
| Max Viscosity: | **20.000 cps** |
| Displacement per Stroke: | **140 CC ~** |

Ex II 3/3 G Ex h IIB T4 Gc
Ex II -/3 D Ex h IIIB T135°C Dc X

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.

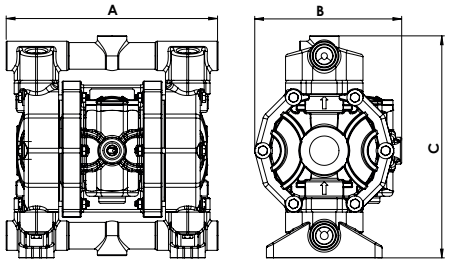
## PERFORMANCE




The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

## DIMENSIONS

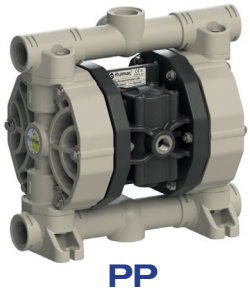
| | A | B | C | Net Weight | Temperature | |
|---|---|---|---|---|---|---|
| **PP** | 238 mm | 165 mm | 249 mm | 4,3 Kg | - 4°C | + 65°C |
| **PVDF** | 238 mm | 165 mm | 249 mm | 5,3 Kg | - 20°C | + 95°C |
| **ALU** | 234 mm | 165 mm | 245 mm | 4,3 Kg | - 20°C | + 95°C |
| **SS** | 234 mm | 165 mm | 268 mm | 7,3 Kg | - 20°C | + 95°C |




## COMPOSITION

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **P0060** | **P =** PP<br>**KC =** PVDF+CF<br>**S =** SS<br>**A =** ALU | **HT =** HYTREL+PTFE<br>**MT =** SANTOPRENE+PTFE<br>**H =** HYTREL<br>**M =** SANTOPRENE<br>**D =** EPDM<br>**N =** NBR | **T =** PTFE<br>**S =** SS<br>**D =** EPDM<br>**N =** NBR | **P =** PP<br>**K =** PVDF<br>**S =** SS<br>**Z =** PE-UHMWE<br>**A =** ALU | **D =** EPDM<br>**V =** VITON<br>**N =** NBR<br>**T =** PTFE | **1 =** BSP<br>**2 =** FLANGED<br>**5 =** NPT | **- =** zone 2 | **AB =** STANDARD |

# P 90



PP



PVDF+CF



ALU (P 100)



SS (P 100)

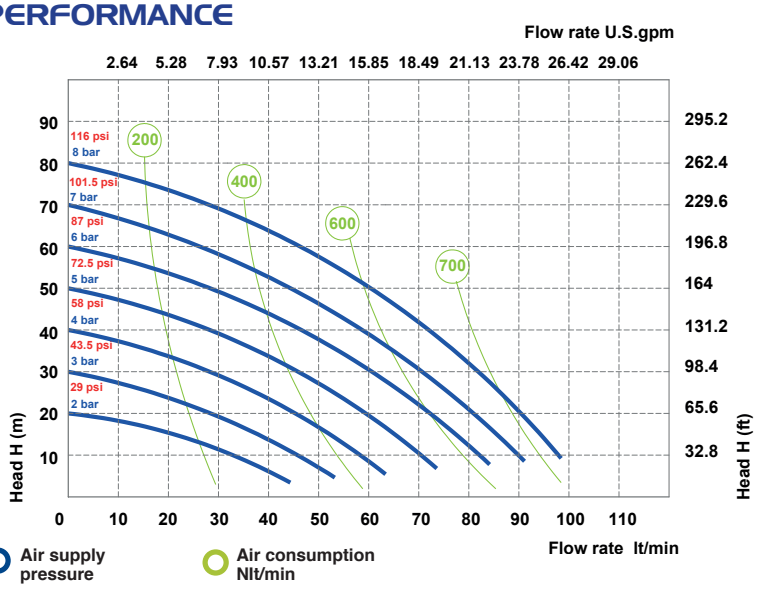
## TECHNICAL DATA

| | |
|---|---|
| Fluid connections | **3/4" BSP** |
| Air connection | **3/8" BSP** |
| Max. Flow rate | **100 lt/mm** |
| Max air pressure | **8 bar** |
| Max delivery head | **80 m** |
| Max Suction Lift Dry | **5 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **4 mm** |
| Noise level: | **72 dB** |
| Max Viscosity: | **25.000 cps** |
| Displacement per Stroke: | **200 CC ~** |

Ex II 3/3 G Ex h IIB T4 Gc
Ex II -/3 D Ex h IIIB T135°C Dc X

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.

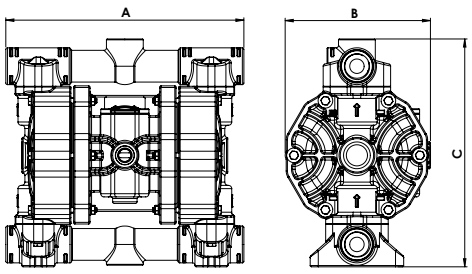
## PERFORMANCE




The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

## DIMENSIONS

| | A | B | C | Net Weight | Temperature | |
|---|---|---|---|---|---|---|
| **PP** | 293 mm | 176 mm | 280 mm | 5,1 Kg | - 4°C | + 65°C |
| **PVDF** | 293 mm | 176 mm | 280 mm | 6,6 Kg | - 20°C | + 95°C |
| **ALU** | 265 mm | 178 mm | 245 mm | 5,6 Kg | - 20°C | + 95°C |
| **SS** | 247 mm | 178 mm | 251 mm | 7,6 Kg | - 20°C | + 95°C |




## COMPOSITION

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **P0090**<br>**P0100** | **P =** PP<br>**KC =** PVDF+CF<br>**S =** SS<br>**A =** ALU | **HT =** HYTREL+PTFE<br>**MT =** SANTOPRENE+PTFE<br>**H =** HYTREL<br>**M =** SANTOPRENE<br>**D =** EPDM<br>**N =** NBR | **T =** PTFE<br>**S =** SS<br>**D =** EPDM<br>**N =** NBR | **P =** PP<br>**K =** PVDF<br>**S =** SS<br>**Z =** PE-UHMWE<br>**A =** ALU | **D =** EPDM<br>**V =** VITON<br>**N =** NBR<br>**T =** PTFE | **1 =** BSP<br>**2 =** FLANGED<br>**5 =** NPT | **- =** zone 2 | **AB =** STANDARD |

# P 120



PP



PVDF+CF



SS

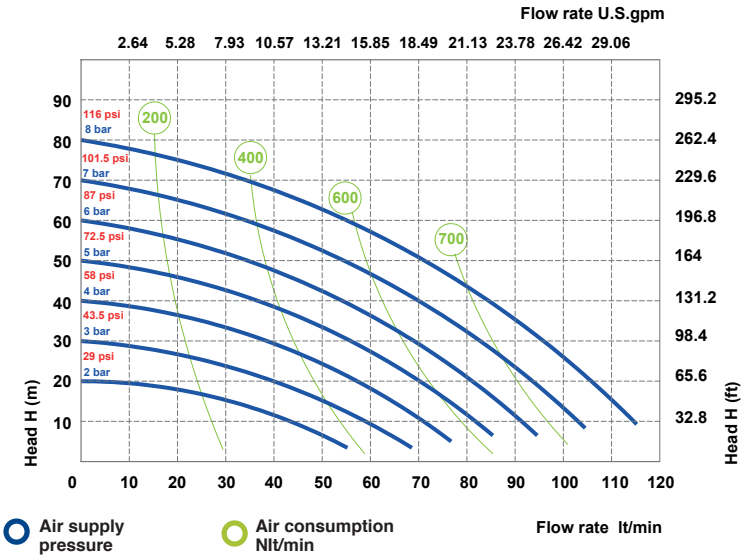
## TECHNICAL DATA

| | |
|---|---|
| Fluid connections | **1” BSP** |
| Air connection | **3/8” BSP** |
| Max. Flow rate | **120 lt/mm** |
| Max air pressure | **8 bar** |
| Max delivery head | **80 m** |
| Max Suction Lift Dry | **5 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **4 mm** |
| Noise level: | **72 dB** |
| Max Viscosity: | **25.000 cps** |
| Displacement per Stroke: | **200 CC ~** |

Ex II 3/3 G Ex h IIB T4 Gc
Ex II -/3 D Ex h IIIB T135°C Dc X

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.

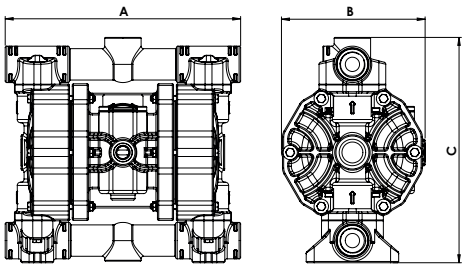
## PERFORMANCE




The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

## DIMENSIONS

| | A | B | C | Net Weight | Temperature | |
|---|---|---|---|---|---|---|
| **PP** | 293 mm | 178 mm | 280 mm | 5,6 Kg | - 4°C | + 65°C |
| **PVDF** | 293 mm | 178 mm | 280 mm | 7,6 Kg | - 20°C | + 95°C |
| **SS** | 258 mm | 177 mm | 295 mm | 9,6 Kg | - 20°C | + 95°C |




## COMPOSITION

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **P0120** | **P =** PP<br>**KC =** PVDF+CF<br>**S =** SS | **HT =** HYTREL+PTFE<br>**MT =** SANTOPRENE+PTFE<br>**H =** HYTREL<br>**M =** SANTOPRENE<br>**D =** EPDM<br>**N =** NBR | **T =** PTFE<br>**S =** SS<br>**D =** EPDM<br>**N =** NBR | **P =** PP<br>**K =** PVDF<br>**S =** SS<br>**Z =** PE-UHMWE | **D =** EPDM<br>**V =** VITON<br>**N =** NBR<br>**T =** PTFE | **1 =** BSP<br>**2 =** FLANGED<br>**5 =** NPT | **- =** zone 2 | **AB =** STANDARD |

# P 170



PP



PVDF+CF



ALU (P 160)



SS

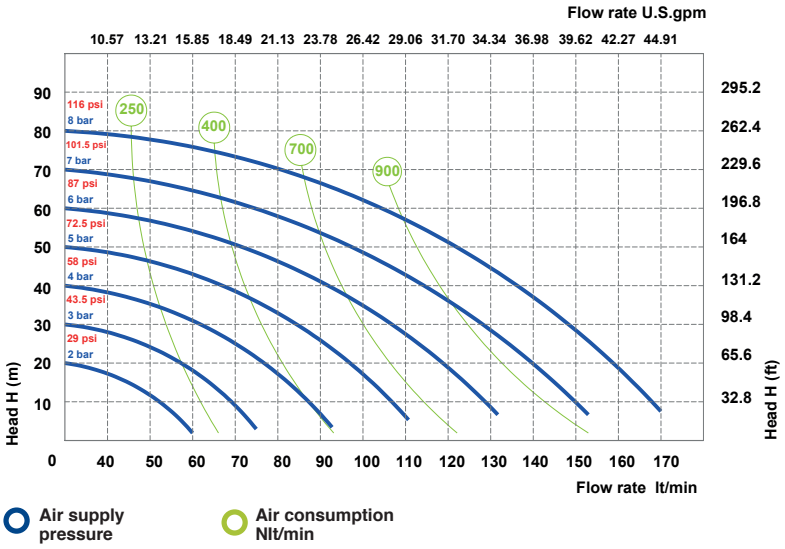
## TECHNICAL DATA

| | |
|---|---|
| Fluid connections | **1” BSP - DN25** |
| Air connection | **1/2” BSP** |
| Max. Flow rate | **170 lt/mm** |
| Max air pressure | **8 bar** |
| Max delivery head | **80 m** |
| Max Suction Lift Dry | **5 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **7,5 mm** |
| Noise level: | **75 dB** |
| Max Viscosity: | **35.000 cps** |
| Displacement per Stroke: | **700 CC ~** |

Ex II 3/3 G Ex h IIB T4 Gc
Ex II -/3 D Ex h IIIB T135°C Dc X

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.

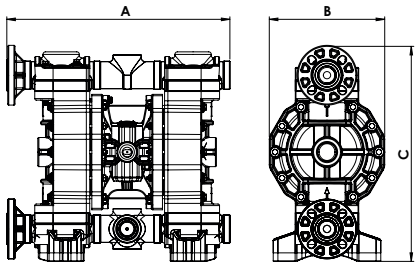
## PERFORMANCE




The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

## DIMENSIONS

| | A | B | C | Net Weight | Temperature | |
|---|---|---|---|---|---|---|
| **PP** | 430 mm | 222 mm | 416 mm | 14,2 Kg | - 4°C | + 65°C |
| **PVDF** | 430 mm | 222 mm | 416 mm | 16,2 Kg | - 20°C | + 95°C |
| **ALU** | 370 mm | 222 mm | 364 mm | 13,2 Kg | - 20°C | + 95°C |
| **SS** | 357 mm | 222 mm | 371 mm | 17,2 Kg | - 20°C | + 95°C |




## COMPOSITION

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **P0170**<br>**P0160** | **P =** PP<br>**KC =** PVDF+CF<br>**S =** SS<br>**A =** ALU | **HT =**HYTREL+PTFE<br>**MT =** SANTOPRENE+PTFE<br>**H =** HYTREL<br>**M =** SANTOPRENE<br>**D =** EPDM<br>**N =** NBR | **T =** PTFE<br>**S =** SS<br>**D =** EPDM<br>**N =** NBR | **P =** PP<br>**K =** PVDF<br>**S =** SS<br>**Z =** PE-UHMWE<br>**A =** ALU | **D =** EPDM<br>**V =** VITON<br>**N =** NBR<br>**T =** PTFE | **1 =** BSP<br>**2 =** FLANGED<br>**5 =** NPT | **- =** zone 2 | **AB =** STANDARD |

# P 252



PP



PVDF+CF



ALU (P 250)



SS

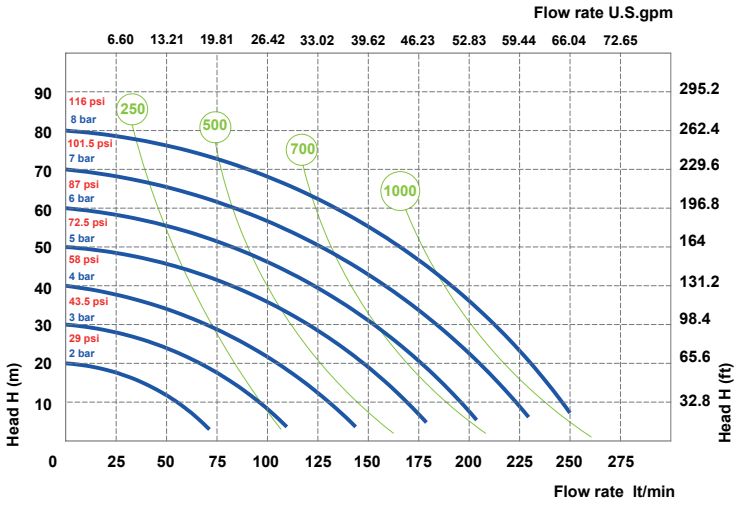
## TECHNICAL DATA

| | |
|---|---|
| Fluid connections | **1”1/4” BSP** |
| Air connection | **1/2” BSP** |
| Max. Flow rate | **250 lt/min** |
| Max air pressure | **8 bar** |
| Max delivery head | **80 m** |
| Max Suction Lift Dry | **5 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **7,5 mm** |
| Noise level: | **75 dB** |
| Max Viscosity: | **35.000 cps** |
| Displacement per Stroke: | **700 CC ~** |

Ex II 3/3 G Ex h IIB T4 Gc
Ex II -/3 D Ex h IIIB T135°C Dc X

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.

## PERFORMANCE



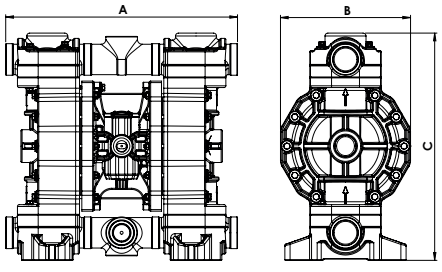

Air supply pressure

Air consumption Nlt/min

The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

## DIMENSIONS

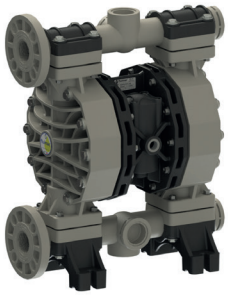
| | A | B | C | Net Weight | Temperature | |
|---|---|---|---|---|---|---|
| **PP** | 396 mm | 222 mm | 388 mm | 14,2 Kg | - 4°C | + 65°C |
| **PVDF** | 396 mm | 222 mm | 388 mm | 16,2 Kg | - 20°C | + 95°C |
| **ALU** | 370 mm | 222 mm | 364 mm | 13,2 Kg | - 20°C | + 95°C |
| **SS** | 357 mm | 222 mm | 374 mm | 17,2 Kg | - 20°C | + 95°C |




## COMPOSITION

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **P0252**<br>**P0250** | **P =** PP<br>**KC =** PVDF+CF<br>**S =** SS<br>**A =** ALU | **HT =** HYTREL+PTFE<br>**MT =** SANTOPRENE+PTFE<br>**H =** HYTREL<br>**M =** SANTOPRENE<br>**D =** EPDM<br>**N =** NBR | **T =** PTFE<br>**S =** SS<br>**D =** EPDM<br>**N =** NBR | **P =** PP<br>**K =** PVDF<br>**S =** SS<br>**Z =** PE-UHMWE<br>**A =** ALU | **D =** EPDM<br>**V =** VITON<br>**N =** NBR<br>**T =** PTFE | **1 =** BSP<br>**2 =** FLANGED<br>**5 =** NPT | **- =** zone 2 | **AB =** STANDARD |

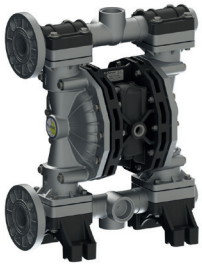
# P 400



PP



PVDF+CF



ALU



SS

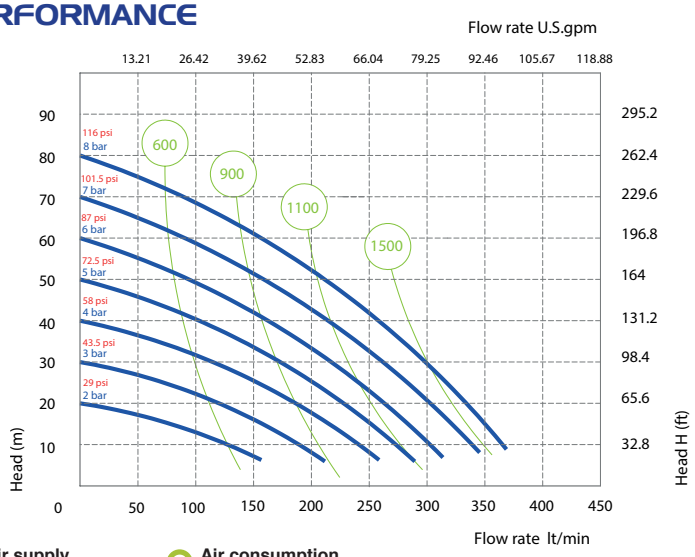
## TECHNICAL DATA

| | |
|---|---|
| Fluid connections | **1”1/2 BSP - DN 40** |
| Air connection | **1/2” BSP** |
| Max. Flow rate | **380 lt/min** |
| Max air pressure | **8 bar** |
| Max delivery head | **80 m** |
| Max Suction Lift Dry | **5 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **8 mm** |
| Noise level: | **78 dB** |
| Max Viscosity: | **40.000 cps** |
| Displacement per Stroke: | **1200 CC ~** |

Ex II 3/3 G Ex h IIB T4 Gc
Ex II -/3 D Ex h IIIB T135°C Dc X

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.

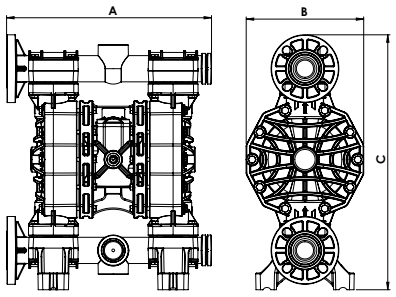
## PERFORMANCE




The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

## DIMENSIONS

| | A | B | C | Net Weight | Temperature | |
|---|---|---|---|---|---|---|
| **PP** | 454 mm | 260 mm | 564 mm | 18,2 Kg | - 4°C | + 65°C |
| **PVDF** | 454 mm | 260 mm | 564 mm | 22,2 Kg | - 20°C | + 95°C |
| **ALU** | 445 mm | 260 mm | 563 mm | 22,2 Kg | - 20°C | + 95°C |
| **SS** | 361 mm | 260 mm | 502 mm | 25,3 Kg | - 20°C | + 95°C |




## COMPOSITION

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **P0400** | **P =** PP<br>**KC =** PVDF+CF<br>**S =** SS<br>**A =** ALU | **HT =** HYTREL+PTFE<br>**MT =** SANTOPRENE+PTFE<br>**H =** HYTREL<br>**M =** SANTOPRENE<br>**D =** EPDM<br>**N =** NBR | **T =** PTFE<br>**S =** SS<br>**D =** EPDM<br>**N =** NBR | **P =** PP<br>**K =** PVDF<br>**S =** SS<br>**Z =** PE-UHMWE<br>**A =** ALU | **D =** EPDM<br>**V =** VITON<br>**N =** NBR<br>**T =** PTFE | **1 =** BSP<br>**2 =** FLANGED<br>**5 =** NPT | **- =** zone 2 | **AB =** STANDARD<br>**EF =** STANDARD SS |

# P 700



PP



PVDF+CF



ALU



SS

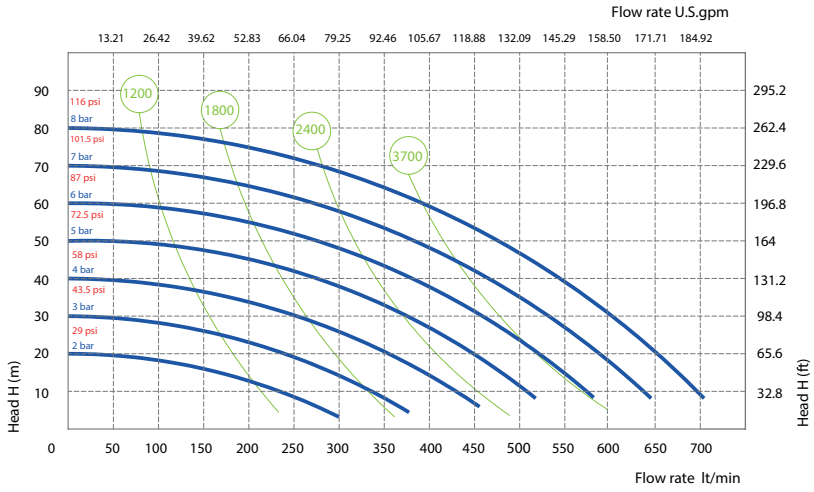
## TECHNICAL DATA

| | |
|---|---|
| Fluid connections | **2” BSP - DN 50** |
| Air connection | **3/4” BSP** |
| Max. Flow rate | **700 lt/min** |
| Max air pressure | **8 bar** |
| Max delivery head | **80 m** |
| Max Suction Lift Dry | **5 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **8,5 mm** |
| Noise level: | **78 dB** |
| Max Viscosity: | **50.000 cps** |
| Displacement per Stroke: | **3050 CC ~** |

Ex II 3/3 G Ex h IIB T4 Gc
Ex II -/3 D Ex h IIIB T135°C Dc X

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.

## PERFORMANCE



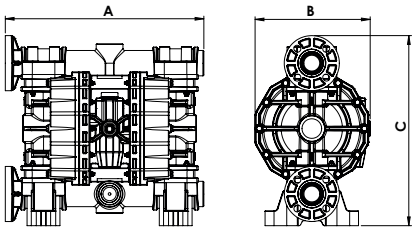

**Air supply pressure**

**Air consumption Nlt/min**

The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

## DIMENSIONS

| | A | B | C | Net Weight | Temperature | |
|---|---|---|---|---|---|---|
| **PP** | 595 mm | 345 mm | 570 mm | 30,6 Kg | - 4°C | + 65°C |
| **PVDF** | 595 mm | 345 mm | 570 mm | 41,6 Kg | - 20°C | + 95°C |
| **ALU** | 595 mm | 345 mm | 567 mm | 37,6 Kg | - 20°C | + 95°C |
| **SS** | 487 mm | 345 mm | 599 mm | 51 Kg | - 20°C | + 95°C |




## COMPOSITION

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **P0700** | **P =** PP<br>**KC =** PVDF+CF<br>**S =** SS<br>**A =** ALU | **HT =** HYTREL+PTFE<br>**MT =** SANTOPRENE+PTFE<br>**H =** HYTREL<br>**M =** SANTOPRENE<br>**D =** EPDM<br>**N =** NBR | **T =** PTFE<br>**S =** SS<br>**D =** EPDM<br>**N =** NBR | **P =** PP<br>**K =** PVDF<br>**S =** SS<br>**Z =** PE-UHMWE<br>**A =** ALU | **D =** EPDM<br>**V =** VITON<br>**N =** NBR<br>**T =** PTFE | **1 =** BSP<br>**2 =** FLANGED<br>**5 =** NPT | **- =** zone 2 | **AB =** STANDARD<br>**EF =** STANDARD SS |

# P 1000



PP



PVDF



ALU



SS

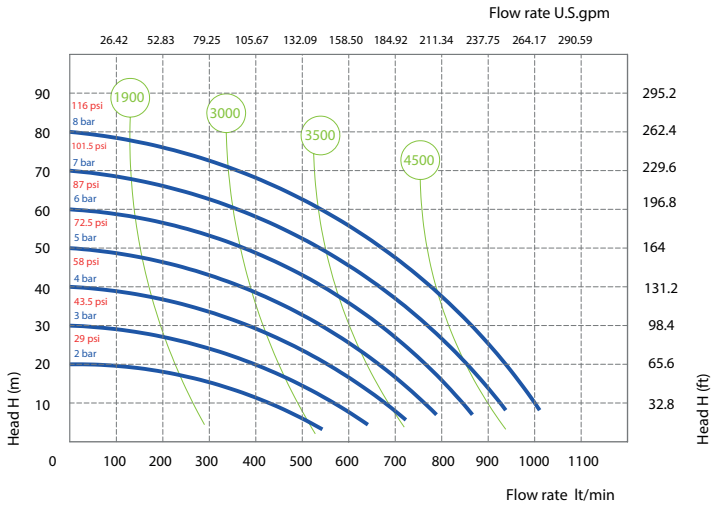
## TECHNICAL DATA

| | |
|---|---|
| Fluid connections | **3” BSP - DN 80** |
| Air connection | **3/4” BSP** |
| Max. Flow rate | **1050 lt/min** |
| Max air pressure | **8 bar** |
| Max delivery head | **80 m** |
| Max Suction Lift Dry | **5 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **12 mm** |
| Noise level: | **82 dB** |
| Max Viscosity: | **55.000 cps** |
| Displacement per Stroke: | **9750 CC ~** |

Ex II 3/3 G Ex h IIB T4 Gc
Ex II -/3 D Ex h IIIB T135°C Dc X

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.

## PERFORMANCE



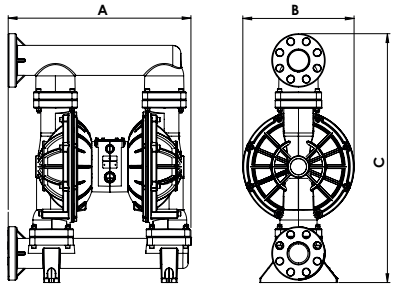

**Air supply pressure**

**Air consumption Nlt/min**

The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

## DIMENSIONS

| | A | B | C | Net Weight | Temperature | |
|---|---|---|---|---|---|---|
| **PP** | 685 mm | 417 mm | 933 mm | 48,5 Kg | - 4°C | + 65°C |
| **PVDF** | 685 mm | 417 mm | 933 mm | 53,5 Kg | - 20°C | + 95°C |
| **ALU** | 570 mm | 420 mm | 838 mm | 53,5 Kg | - 20°C | + 95°C |
| **SS** | 570 mm | 420 mm | 838 mm | 111,5 Kg | - 20°C | + 95°C |




## COMPOSITION

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **P1000** | **P** = PP<br>**K** = PVDF<br>**S** = SS<br>**A** = ALU | **HT** = HYTREL+PTFE<br>**MT** = SANTOPRENE+PTFE<br>**H** = HYTREL<br>**M** = SANTOPRENE | **T** = PTFE<br>**S** = SS<br>**D** = EPDM<br>**N** = NBR | **P** = PP<br>**K** = PVDF<br>**S** = SS<br>**A** = ALU | **D** = EPDM<br>**V** = VITON<br>**N** = NBR<br>**T** = PTFE | **1** = BSP<br>**2** = FLANGED | **-** = zone 2 | **AB** = STANDARD |

fluimac
pump solution





# PHOENIX FOOD

Air operated double diaphragms pumps
Realized in:
SS AISI 316 electro-polished
Flow-rate from 20lt/min to 1.000 lt/min
Tri-Clamp Connection.
ATEX certification

Atex zone 2 Ⓔx II 3/3 G Ex h IIB T4 Gc
Ⓔx II -/3 D Ex h IIIB T135°C Dc X

Atex zone 1 Ⓔx II 2/2 G Ex h IIB T4 Gb
Ⓔx II -/2 D Ex h IIIB T135°C Db X

CE Ⓔx FDA EAC

## PHOENIX FOOD 18 | TECHNICAL DATA | PERFORMANCE

# PF 18

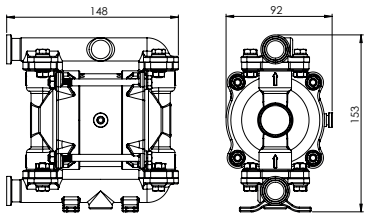


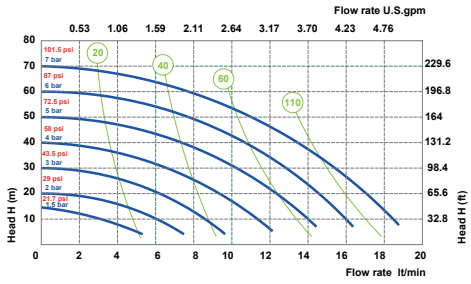
**AISI 316 ELECTRO-POLISHED**

| | |
|---|---|
| Fluid connections | **3/4" TRI-CLAMP** |
| Air connection | **6 mm** |
| Max. Flow rate | **20 lt/min** |
| Max air pressure | **7 bar** |
| Max delivery head | **70 m** |
| Max Suction Lift Dry | **5 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **2,5 mm** |
| Noise level: | **65 dB** |
| Max Viscosity: | **10.000 cps** |
| Displacement per Stroke: | **30 CC ~** |

**ATEX ZONE 2** certification as Standard and, on request, **ATEX ZONE 1**.

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.




The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

| Net Weight | Temperature |
|---|---|
| 2,3 Kg | -20°C +95°C |

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **PF0018** | **S =** SS POLISHED | **HT =** HYTREL+PTFE | **T =** PTFE<br>**S =** SS | **S =** SS | **T =** PTFE | **3 =** TRI-CLAMP<br>**1 =** BSP<br>**6 =** DIN | **- =** zone 2<br>**X =** zone 1 | **AB =** STANDARD |

## PHOENIX FOOD 30 | TECHNICAL DATA | PERFORMANCE

# PF 30

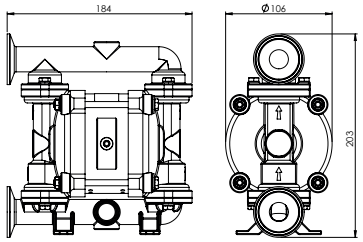


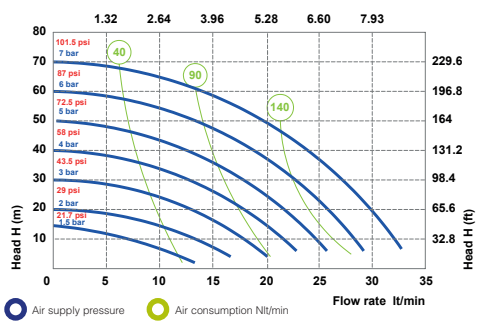
**AISI 316 ELECTRO-POLISHED**

| | |
|---|---|
| Fluid connections | **1" TRI-CLAMP** |
| Air connection | **6 mm** |
| Max. Flow rate | **35 lt/min** |
| Max air pressure | **7 bar** |
| Max delivery head | **70 m** |
| Max Suction Lift Dry | **5 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **3 mm** |
| Noise level: | **65 dB** |
| Max Viscosity: | **15.000 cps** |
| Displacement per Stroke: | **65 CC ~** |

**ATEX ZONE 2** certification as Standard and, on request, **ATEX ZONE 1**.

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.




The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

| Net Weight | Temperature |
|---|---|
| 3,8 Kg | -20°C +95°C |

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **PF0030** | **S =** SS POLISHED | **HT =** HYTREL+PTFE | **T =** PTFE<br>**S =** SS | **S =** SS | **T =** PTFE | **3 =** TRI-CLAMP<br>**1 =** BSP<br>**6 =** DIN | **- =** zone 2<br>**X=** zone 1 | **AB =** STANDARD |

## PHOENIX FOOD 60 | TECHNICAL DATA | PERFORMANCE

# PF 60

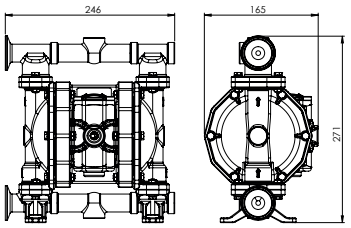


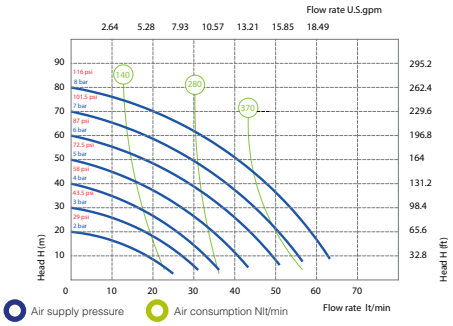
**AISI 316 ELECTRO-POLISHED**

| | |
|---|---|
| Fluid connections | **1" TRI-CLAMP** |
| Air connection | **1/4" BSP** |
| Max. Flow rate | **65 lt/min** |
| Max air pressure | **8 bar** |
| Max delivery head | **80 m** |
| Max Suction Lift Dry | **5 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **3,5 mm** |
| Noise level: | **72 dB** |
| Max Viscosity: | **20.000 cps** |
| Displacement per Stroke: | **140 CC ~** |

**ATEX ZONE 2** certification as Standard and, on request, **ATEX ZONE 1**.

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.



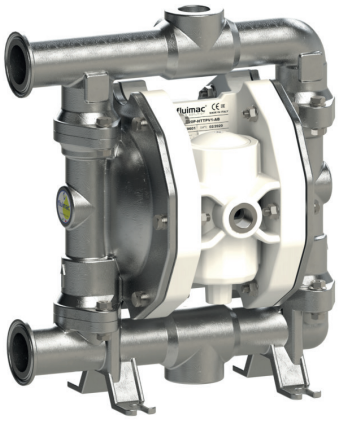

The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

| Net Weight | Temperature |
|---|---|
| 7,3 Kg | -20°C +95°C |

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **PF0060** | **S =** SS POLISHED | **HT =** HYTREL+PTFE | **T =** PTFE<br>**S =** SS | **S =** SS | **T =** PTFE | **3 =** TRI-CLAMP<br>**1 =** BSP<br>**6 =** DIN | **- =** zone 2<br>**X =** zone 1 | **AB =** STANDARD |

## PHOENIX FOOD 120 | TECHNICAL DATA | PERFORMANCE

# PF 120

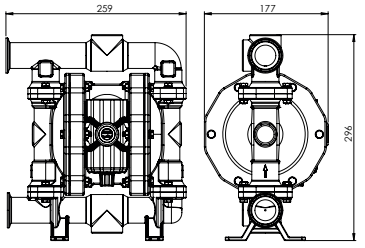


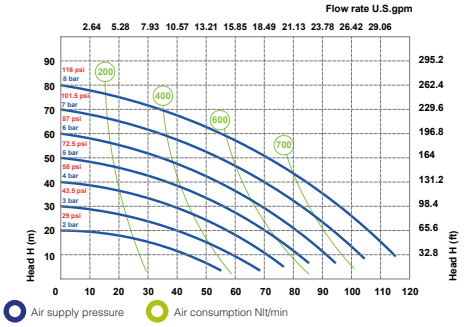
**AISI 316 ELECTRO-POLISHED**

| | |
|---|---|
| Fluid connections | **1"1/2"TRI-CLAMP** |
| Air connection | **3/8" BSP** |
| Max. Flow rate | **120 lt/min** |
| Max air pressure | **8 bar** |
| Max delivery head | **80 m** |
| Max Suction Lift Dry | **5 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **4 mm** |
| Noise level: | **72 dB** |
| Max Viscosity: | **25.000 cps** |
| Displacement per Stroke: | **200 CC ~** |

**ATEX ZONE 2** certification as Standard and, on request, **ATEX ZONE 1**.

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.



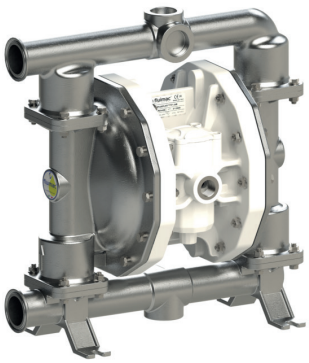




The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

| Net Weight | Temperature |
|---|---|
| 9,6 Kg | -20°C +95°C |

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **PF0120** | **S =** SS POLISHED | **HT =** HYTREL+PTFE | **T =** PTFE<br>**S =** SS | **S =** SS | **T =** PTFE | **3 =** TRI-CLAMP<br>**1 =** BSP<br>**6=** DIN | **- =** zone 2<br>**X =** zone 1 | **AB =** STANDARD |

# PF 170

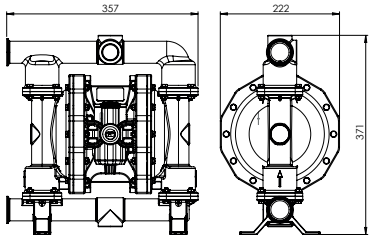


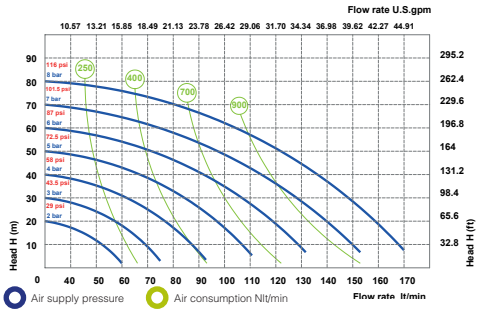
**AISI 316 ELECTRO-POLISHED**

| | |
|---|---|
| Fluid connections | **1”1/2 TRI-CLAMP** |
| Air connection | **1/2” BSP** |
| Max. Flow rate | **170 lt/min** |
| Max air pressure | **8 bar** |
| Max delivery head | **80 m** |
| Max Suction Lift Dry | **5 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **7,5 mm** |
| Noise level: | **75 dB** |
| Max Viscosity: | **35.000 cps** |
| Displacement per Stroke: | **700 CC ~** |

**ATEX ZONE 2** certification as Standard and, on request, **ATEX ZONE 1**.

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.




The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

| Net Weight | Temperature |
|---|---|
| 17,2 Kg | -20°C +95°C |

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **PF0170** | **S =** SS POLISHED | **HT =**HYTREL+PTFE | **T =** PTFE<br>**S =** SS | **S =** SS | **T =** PTFE | **3 =** TRI-CLAMP<br>**1 =** BSP<br>**6 =** DIN | **- =** zone 2<br>**X =** zone 1 | **AB =** STANDARD |



# PF 400

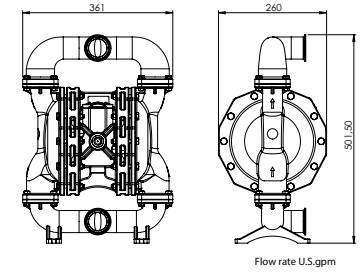


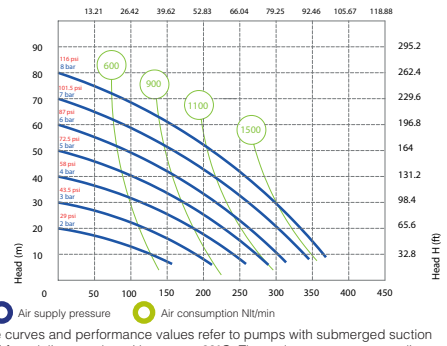
**AISI 316 ELECTRO-POLISHED**

| | |
|---|---|
| Fluid connections | **2” TRI-CLAMP** |
| Air connection | **1/2” BSP** |
| Max. Flow rate | **380 lt/min** |
| Max air pressure | **8 bar** |
| Max delivery head | **80 m** |
| Max Suction Lift Dry | **5 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **8 mm** |
| Noise level: | **78 dB** |
| Max Viscosity: | **40.000 cps** |
| Displacement per Stroke: | **1200 CC ~** |

**ATEX ZONE 2** certification as Standard and, on request, **ATEX ZONE 1**.

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.



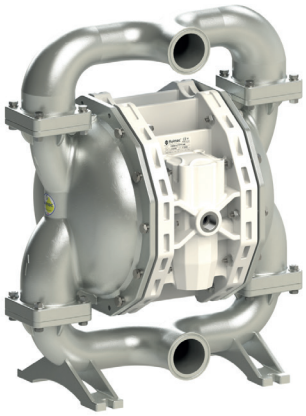




The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

| Net Weight | Temperature |
|---|---|
| 25,3 Kg | -20°C +95°C |

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **PF0400** | **S =** SS POLISHED | **HT =** HYTREL+PTFE | **T =** PTFE<br>**S =** SS | **S =** SS | **T =** PTFE | **3 =** TRI-CLAMP<br>**1 =** BSP<br>**6 =** DIN | **- =** zone 2<br>**X =** zone 1 | **EF =** STANDARD |

# PF 700

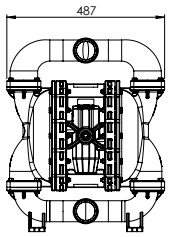


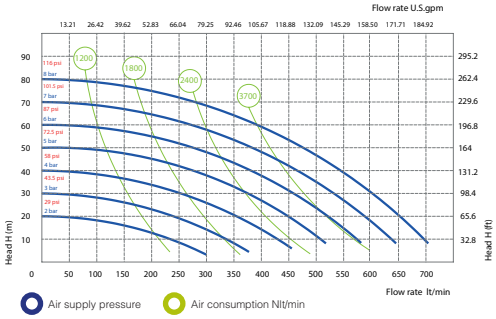
**AISI 316 ELECTRO-POLISHED**

| | |
|---|---|
| Fluid connections | **2”1/2 TRI-CLAMP** |
| Air connection | **3/4” BSP** |
| Max. Flow rate | **700 lt/min** |
| Max air pressure | **8 bar** |
| Max delivery head | **80 m** |
| Max Suction Lift Dry | **5 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **8,5 mm** |
| Noise level: | **78 dB** |
| Max Viscosity: | **50.000 cps** |
| Displacement per Stroke: | **3050 CC ~** |

**ATEX ZONE 2** certification as Standard and, on request, **ATEX ZONE 1**.

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.




The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

| Net Weight | Temperature |
|---|---|
| 51 Kg | -20°C +95°C |

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **PF0700** | **S =** SS POLISHED | **HT =** HYTREL+PTFE | **T =** PTFE<br>**S =** SS | **S =** SS | **T =** PTFE | **3 =** TRI-CLAMP<br>**1 =** BSP<br>**6 =** DIN | **- =** zone 2<br>**X =** zone 1 | **EF =** STANDARD |



# PF 1000

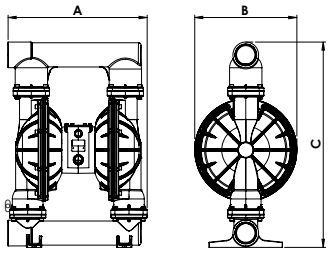


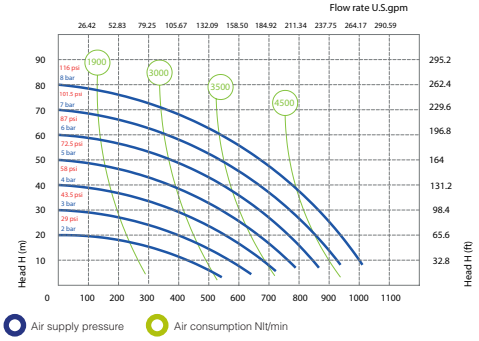
**AISI 316 ELECTRO-POLISHED**

| | |
|---|---|
| Fluid connections | **3” BSP** |
| Air connection | **3/4” BSP** |
| Max. Flow rate | **1050 lt/min** |
| Max air pressure | **8 bar** |
| Max delivery head | **80 m** |
| Max Suction Lift Dry | **5 m** |
| Max Suction Lift Wet | **9,8 m** |
| Max Solid passing | **12 mm** |
| Noise level: | **82 dB** |
| Max Viscosity: | **55.000 cps** |
| Displacement per Stroke: | **9750 CC ~** |

**ATEX ZONE 2** certification as Standard and, on request, **ATEX ZONE 1**.

Displacement per stroke may vary based on suction condition, discharge head, air pressure and fluid type.




The curves and performance values refer to pumps with submerged suction and free delivery outlet, with water at 20°C. These data may vary according to the construction materials and hydraulic conditions.

| Net Weight | Temperature |
|---|---|
| 111,5 Kg | -20°C +95°C |

| MODEL | CASING | DIAPHRAGM | BALLS | SEATS | GASKET | CONNECTIONS | ATEX | PORTS |
|---|---|---|---|---|---|---|---|---|
| **PF1000** | **S =** SS POLISHED | **HT =** HYTREL+PTFE | **T =** PTFE<br>**S =** SS | **S =** SS | **T =** PTFE | **3 =** TRI-CLAMP<br>**1 =** BSP<br>**6 =** DIN | **- =** zone 2<br>**X =** zone 1 | **AB =** STANDARD |

fluimac
pump solution

















# SPECIAL PUMPS

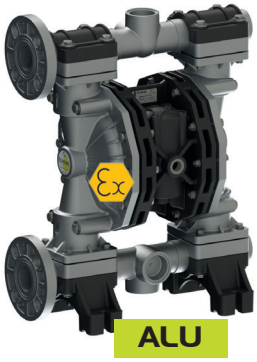
Air operated double diaphragms pumps
with special features:
**PHOENIX ATEX** certification zone I ATEX
**ACCURATE PHOENIX** remote control
**DRUM PHOENIX** to empty drums and tanks
**TWIN PHOENIX** with double inlet/outlet
**POWDER PHOENIX** to handle powder trasferring
**SUBMERSIBLE PHOENIX** ready to be submerged directly into the fluid

# PHOENIX ATEX

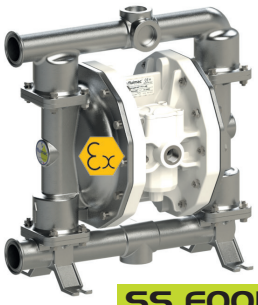

POMc+CF


PP+CF


PVDF+CF


ALU


SS


SS FOOD



## European ATEX directive 2014/34/UE

### Ex II 2/2 G Ex h IIB T4 Gb
### Ex II -/2 D Ex h IIB T135°C Db X

Ex Safety symbol in agreement with DIN 40012 appendix A

**II 2/2 G** surface equipment for use in zones with the occasional presence of combustible gases, fumes or fogs, as well as dust, in the air during the normal

**II -/2 D** operation (EN 1127-1 par. 6.3), in the external and internal zone.

**Ex h** equipment in protection mode “c”, or “b”, or “k”, in agreement with standard EN 80079-37

**IIB** except for the following gases: hydrogen, acetylene, carbon sulphide

**IIIB** except for the following dust: conductive dust

**T4/T135°C** temperature class admitted.

| PUMPS | MAIN APPLICATIONS |
|---|---|
| ALL RANGE | • Petrol-Chemical Industry • Painting industry<br>• Flexographic industry • Automotive industry<br>• Food industry |

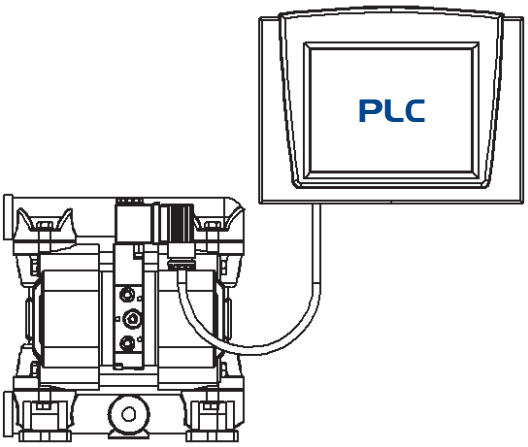
## TECHNICAL DATA

Fluimac has filed with the BUREAU VERITAS certification body the documentation certifying ATEX compliance pursuant to Directive 2014/34/UE for its ranges of AODD pumps and pulsation dampeners, with special construction materials to have zone 1 certification.

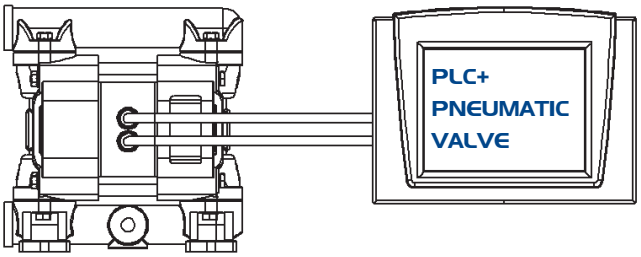
# ACCURATE PHOENIX



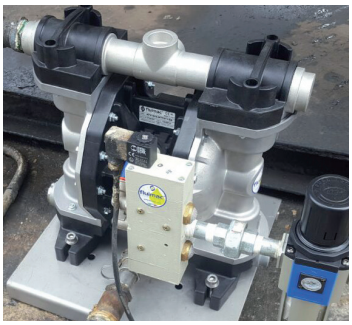


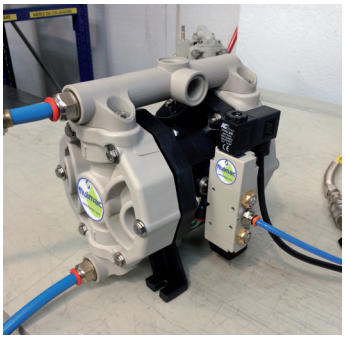








## PUMPS

AP7
AP18
AP30
AP60
AP90
AP120
AP170
AP252

## MAIN APPLICATIONS

- CHEMICAL INDUSTRY
- WASTE DISPOSAL TECHNOLOGY
- FLEXOGRAPHIC INDUSTRY
- PAINTING INDUSTRY
- PRINTING INDUSTRY
- WATER TREATMENT

## TECHNICAL DATA

ACCURATE PHOENIX are Pumps that give you the external pump control necessary for exacting applications such as batching. Featuring a direct electrical interface that utilizes electrical impulses to stroke the pump instead of differential pressure, the ACCURATE PHOENIX provides a variable stroke rate that you can easily control as needed.

Note: PLC and computer system not included.

# DRUM PHOENIX

## PUMPS

DP18 - DP30 - DP60 - DP120 - DP170

## MAIN APPLICATIONS

- CHEMICAL INDUSTRY
- WASTE DISPOSAL TECHNOLOGY
- AUTOMOTIVE INDUSTRY
- FOOD INDUSTRY



## TECHNICAL DATA

DRUM PHOENIX are designed for emptying drums and containers, and provide an economical and wear resistant alternative to other pumping systems. In order to handle a wide range of fluids, DP pumps are available in all materials. The pump can be quickly and easily mounted on the drum with its feet. The drum will be completely emptied with a suction pipe.

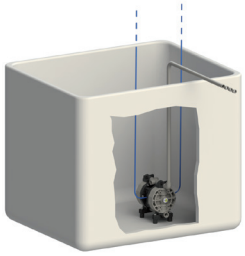
# SUBMERSIBLE PHOENIX

## PUMPS

ALL RANGE

## MAIN APPLICATIONS

- CHEMICAL INDUSTRY
- WASTE DISPOSAL TECHNOLOGY
- FOOD INDUSTRY
- PETROL-CHEMICAL INDUSTRY



## TECHNICAL DATA

SUBMERSIBLE pumps may be submerged into the liquid. It is important to make sure that all components which are in contact with the liquid are chemically compatible. The air exhaust must be led to the atmosphere by means of a hose.

# TWIN PHOENIX

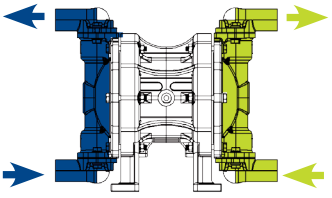
## PUMPS

ALL RANGE

## MAIN APPLICATIONS

- PAINTING INDUSTRY
- WASTEWATER TECHNOLOGY
- PRINTING INDUSTRY
- PAPER PROCESSING
- FLEXOGRAPHIC INDUSTRY





## TECHNICAL DATA

TWIN PHOENIX are mainly used in the textile and paper processing industry. These dual action pumps are able to transfer two different media independently and simultaneously.
This is accomplished by using separate connections on the suction and discharge ports, keeping two pumped media isolated from each other, preventing unwanted mixing.

# POWDER PHOENIX

## PUMPS

PP400 - PP700 IN ALU AND SS

## MAIN APPLICATIONS

- PAINTING INDUSTRY
- WASTEWATER TECHNOLOGY
- PRINTING INDUSTRY
- FOOD INDUSTRY
- CHEMICAL INDUSTRY



## TECHNICAL DATA

POWDER pumps are designed to move bulk powders more effectively throughout your process vs. other unsafe and labor intensive means.
These heavy duty pumps will consistently transfer fine-grained, low-bulk density dry powders in a dust-free operation.

fluimac
pump solution









# DAMPER

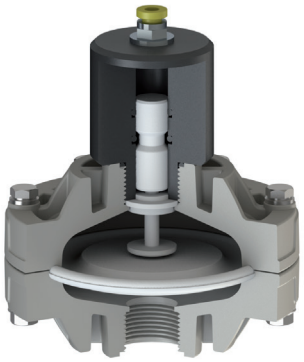
Pneumatic, automatic pulsation dampeners Realized in:
PP, PVDF, ALUMINIUM, SS AISI 316, POMc
Applicable to all size of pumps.
ATEX ZONE 2 AND ZONE 1 CERTIFICATION
Available also in FOOD version.

# DAMPER

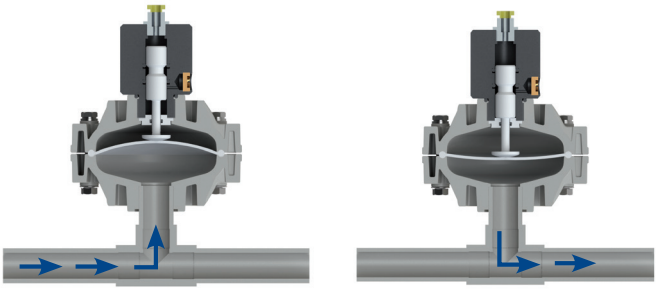
The active pulsation dampener is the most efficient way to remove pressure variations on the discharge of the pump. Fluimac pulsation dampener works actively with compressed air, setting automatically the correct pressure to minimize the pulsations. Pulsation dampeners require minimum maintenance and are, subject to the requirements of the application, available in the same housing and diaphragm materials as the pump.

## HOW IT WORKS

The pulsating flow of the discharge forces the diaphragm upwards where it is cushioned by the air in the chamber.The flexing of the diaphragm absorbs the pulsation giving a smooth flow.



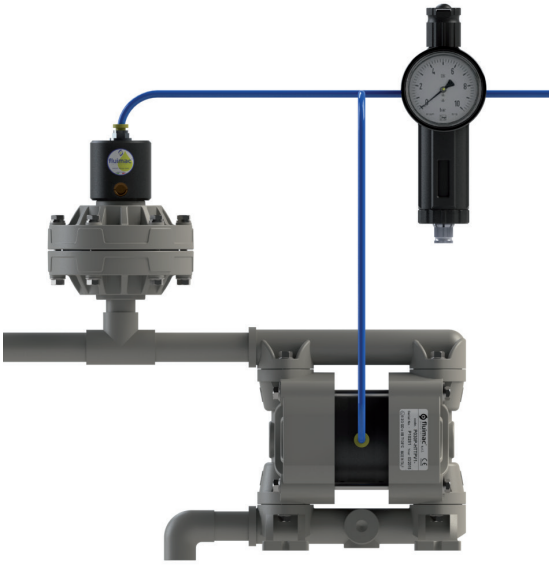
**Significant Pulsation Reduction with an average 70% - 80% pulsation reduction in high back pressure applications.**



## APPLICATION

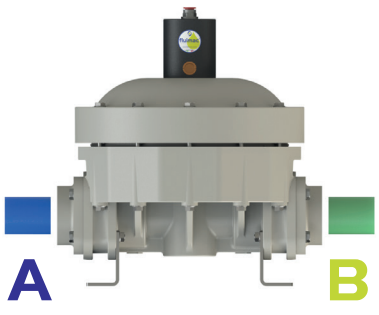
- METERING/INJECTION/DOSING:
  Equalizes discharge pressure spikes, increasing accuracy;
- FILTER PRESS/INLINE FILTERS:
  Increases filter efficiency and life by providing a smooth flow;
- SPRAYING:
  Smooth, consistent spray pattern;
- FILLING:
  Eliminates inconsistent filling and splashing;
- TRANSFER:
  Eliminates harmful water hammer, preventing pipe and valve damage.

## INSTALLATION



## PORT POSITION



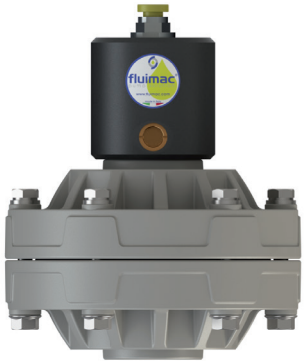



## DAMPER 20

## TECHNICAL DATA

## DIMENSIONS

# D20



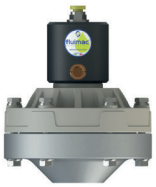
PP



PVDF+CF



POMc



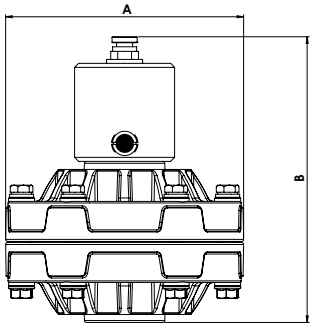
AISI

| Fluid connections | 3/4" BSP |
|---|---|
| Air connection | 6 mm |
| Max air pressure | 8 bar |
| Capacity Volume | 80 CC ~ |

**ATEX ZONE 2** certification as Standard and, on request, **ATEX ZONE 1**.

**APPLY TO:**
7 - 18 - 30

| | PP | PVDF | POMc | AISI |
|---|---|---|---|---|
| **A (mm)** | 119 | 119 | 119 | 119 |
| **B (mm)** | 143 | 143 | 143 | 143 |
| **Net Weight Kg** | 0,65 | 0,7 | 0,65 | 2 |
| **Max Temperature** | +65°C | +95°C | +80°C | +95°C |
| **Min Temperature** | -4°C | -20°C | -5°C | -20°C |




| MODEL | CASING | DIAPHRAGM | CONNECTIONS | PORTS |
|---|---|---|---|---|
| **D020** | **P =** PP<br>**KC =** PVDF+CF<br>**O =** POMc<br>**S =** SS | **HT =** HYTREL+PTFE<br>**MT =** SANTOPRENE+PTFE<br>**H =** HYTREL<br>**M =** SANTOPRENE | **1 =** BSP<br>**2 =** FLANGE<br>**5 =** NPT | **T =** STANDARD |

## DAMPER 25

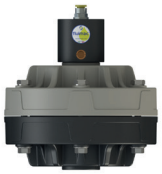
## TECHNICAL DATA

## DIMENSIONS

# D25



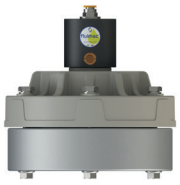
PP



PVDF+CF



POMc



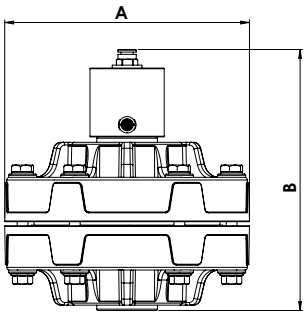
AISI

| Fluid connections | 1" BSP |
|---|---|
| Air connection | 8 mm |
| Max air pressure | 8 bar |
| Capacity Volume | 200 CC ~ |

**ATEX ZONE 2** certification as Standard and, on request, **ATEX ZONE 1**.

**APPLY TO:**
55 - 60 - 90 - 120

| | PP | PVDF | POMc | AISI |
|---|---|---|---|---|
| **A (mm)** | 181 | 181 | 181 | 181 |
| **B (mm)** | 195 | 195 | 195 | 182 |
| **Net Weight Kg** | 1,75 | 2 | 1,9 | 6,7 |
| **Max Temperature** | +65°C | +95°C | +80°C | +95°C |
| **Min Temperature** | -4°C | -20°C | -5°C | -20°C |




| MODEL | CASING | DIAPHRAGM | CONNECTIONS | PORTS |
|---|---|---|---|---|
| **D025** | **P =** PP<br>**KC =** PVDF+CF<br>**O =** POMc<br>**S =** SS | **HT =** HYTREL+PTFE<br>**MT =** SANTOPRENE+PTFE<br>**H =** HYTREL<br>**M =** SANTOPRENE<br>**D =** EPDM<br>**N =** NBR | **1 =** BSP<br>**2 =** FLANGE<br>**5 =** NPT | **T =** STANDARD<br>**AB =** SS |

## DAMPER 40

## TECHNICAL DATA

## DIMENSIONS

# D40



PP

| | |
|---|---|
| Fluid connections | **1”1/2 BSP** |
| Air connection | **10 mm** |
| Max air pressure | **8 bar** |
| Capacity Volume | **700 CC ~** |

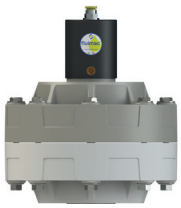
**ATEX ZONE 2** certification as Standard and, on request, **ATEX ZONE 1**.

**APPLY TO:**
170 - 252 - 400

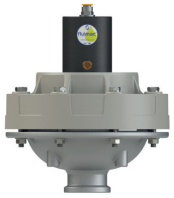
| | PP | PVDF | POMc | AISI |
|---|---|---|---|---|
| **A (mm)** | 231 | 231 | 231 | 231 |
| **B (mm)** | 270 | 270 | 270 | 267 |
| **Net Weight Kg** | 4 | 4,6 | 4,2 | 5,6 |
| **Max Temperature** | +65°C | +95°C | +80°C | +95°C |
| **Min Temperature** | -4°C | -20°C | -5°C | -20°C |



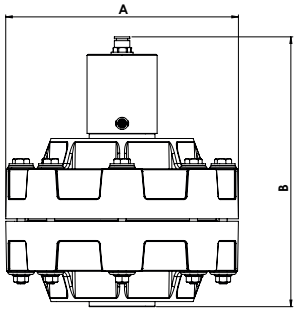
PVDF+CF



POMc



AISI



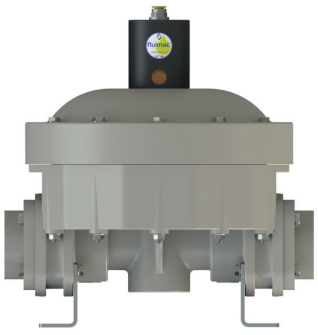

| MODEL | CASING | DIAPHRAGM | CONNECTIONS | PORTS |
|---|---|---|---|---|
| **D040** | **P =** PP<br>**KC =** PVDF+CF<br>**O =** POMc<br>**S =** SS | **HT =** HYTREL+PTFE<br>**MT =** SANTOPRENE+PTFE<br>**H =** HYTREL<br>**M =** SANTOPRENE<br>**D =** EPDM<br>**N =** NBR | **1 =** BSP<br>**2 =** FLANGE<br>**5 =** NPT | **T =** STANDARD |

## DAMPER 50

## TECHNICAL DATA

## DIMENSIONS

# D50



PP

| | |
|---|---|
| Fluid connections | **2” BSP** |
| Air connection | **12 mm** |
| Max air pressure | **8 bar** |
| Capacity Volume | **2900 CC ~** |

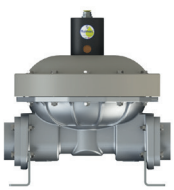
**ATEX ZONE 2** certification as Standard and, on request, **ATEX ZONE 1**.

**APPLY TO:**
700 - 1000

| | PP | PVDF | ALU | AISI |
|---|---|---|---|---|
| **A (mm)** | 404 | 404 | 400 | 402 |
| **B (mm)** | 425 | 425 | 425 | 408 |
| **Net Weight Kg** | 14 | 17 | 14,5 | 21,6 |
| **Max Temperature** | +65°C | +95°C | +80°C | +95°C |
| **Min Temperature** | -4°C | -20°C | -5°C | -20°C |



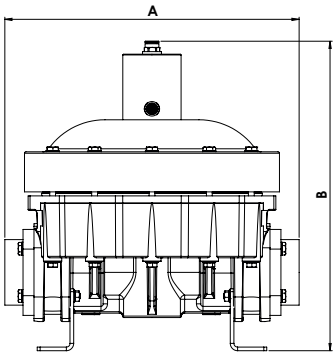
PVDF+CF



ALU



AISI




| MODEL | CASING | DIAPHRAGM | O-RING | CONNECTIONS | PORTS |
|---|---|---|---|---|---|
| **D050** | **P =** PP<br>**KC =** PVDF+CF<br>**A =** ALU<br>**S =** SS | **HT =** HYTREL+PTFE<br>**MT =** SANTOPRENE+PTFE<br>**H =** HYTREL<br>**M =** SANTOPRENE<br>**D =** EPDM<br>**N =** NBR | **D =** EPDM<br>**V =** VITON<br>**N =** NBR<br>**T =** PTFE | **1 =** BSP<br>**2 =** FLANGE<br>**5 =** NPT | **AB =** STANDARD |

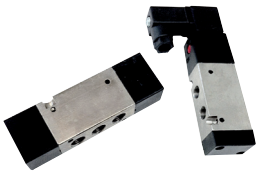
# ACCESSORIES



## AIR REGULATION KIT
Adjust and set air pressure and airflow-rate with a filter regulator, pressure gauge and air valve unit.



## INOX TROLLEY
It makes pumps transportable.



## SWITCH VALVES
Remotely start and stop with a solenoid or pneumatic valve for the pump's air line.



## ANTI VIBRATION FEET KIT
Reduces physical vibration from AODD pump operation.



## STROKE COUNTER
Count the number of strokes, connected to a control. It allows various type of monitoring.



## PP, PVDF, ALU SS NOOZLE
Dispenser to delivery control and batching.



## DIAPHRAGM FAILURE DETECTION FLUID-GUARD
The Leak Detector provide a signal and the pump can be shut down when diaphragms fail.



## REINFORCED PVC HOSE
With metal reinforcement for suction/discharge, also food-grade.



## PNEUMATIC BATCH CONTROL
Pneumatic batcher can control any FLUIMAC AODD pump allowing you to set the cycles amount and count the strokes.



## FOOT BALL VALVE
Realized in PP and PVDF.
Size available 1" - 1"1/4 - 1"1/2 - 2"
Used to prevent the suction hose from emptying.



## ELECTRONIC BATCH CONTROL
Electronic batcher can control any FLUIMAC AODD pump allowing you to set the cycles amount and count the strokes.



## SOFT STARTER
It is always recommended to start up an AODD pump slowly.
This to protect the diaphragms.



## BASKET STRAINER FILTERS IN PP
Installed on the suction of the pumps, protects them from suspended solids and impurity.



## VALVES FITTINGS AND CONNECTIONS IN PP, PVC, INOX



## GEMINI CONTROL
Electronic Control System for accurate pumps. This system allows you to use AODD pump as dosing system.



## FLANGE CONNECTION KIT
It modifies a pump with BSP connection into a flanged pump.



## PRESSURE BOOSTER
Where the line pressure is not enough, this system doubles the in let pressure to supply correctly the air to the pump.



## WALL FIXING BRACKET
Wall fixing bracket for diaphragm pumps, for all sizes.