

# CUBIC and BOXER



## DIAPHRAGM PUMPS

**Cubic** mini diaphragm pumps and **Boxer** diaphragm pumps provide exceptional performance, power and strength, making them ideal for pumping liquids with very high apparent viscosity of up to **50000 cps (at 20°C)**, even if containing suspended solids.

self-priming capacity even with considerable suction head, fine tuning of speed without pressure loss and the possibility of dry operation without suffering damage mean that these pumps offer unrivalled versatility. In addition, the huge choice of construction materials allows selection of optimum chemical compatibility with the fluid and/or environment without neglecting the temperature range. They are specifically designed for **demanding applications with high humidity or in potentially explosive atmospheres (ATEX certification)**.



DEBEM



II 2/2GD c IIB T135°C (zone1)  
II 3/3GD c IIB T135°C (zone2)

[www.debem.it](http://www.debem.it)



# CUBIC and BOXER

Available in PP, PVDF/ECTFE, ALUMINIUM and AISI 316 STAINLESS STEEL;

Use in potentially-explosive atmospheres (ATEX zone 1-2 certification);

Suitable for demanding applications and high-humidity environments;

Dry operation;

Dry self-priming;

Actuated using non-lubricated air;

Adjustable flow rate and head;

Fine tuning of motor speed at constant pressure;

Twin-manifold option (two suction and two delivery);

Bench or ceiling installation;

Three suction and delivery positions;

User-friendly maintenance and parts replacement;

Excellent performance and value for money.

## DESCRIPTION OF THE PUMP

Debem diaphragm pumps consist of a centrally-housed coaxial pneumatic motor. The new generation diaphragms (Long Life profile) are fitted to its shaft. At the two ends, the two pump casings house the ball valves and seats of the product suction and delivery duct.

**A** = ball valves

**B** = pumping chamber

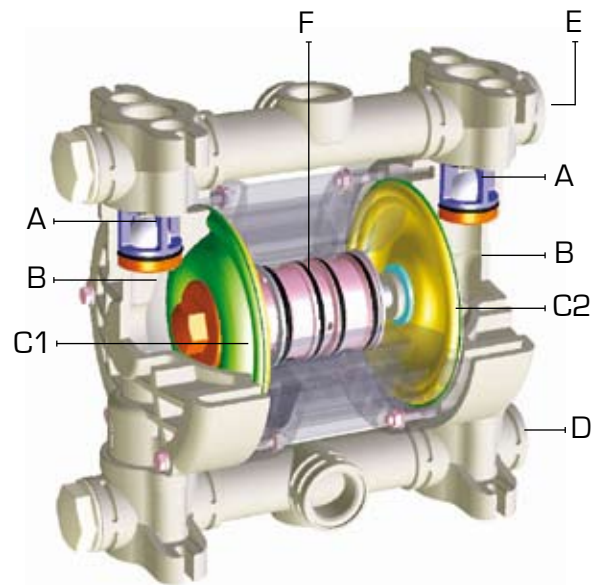
**C1** = product-side diaphragm

**C2** = air-side diaphragm

**D** = suction manifold

**E** = delivery manifold

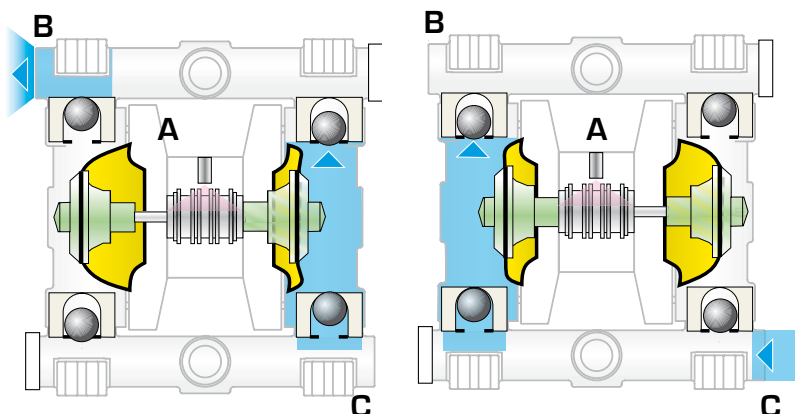
**F** = pneumatic motor

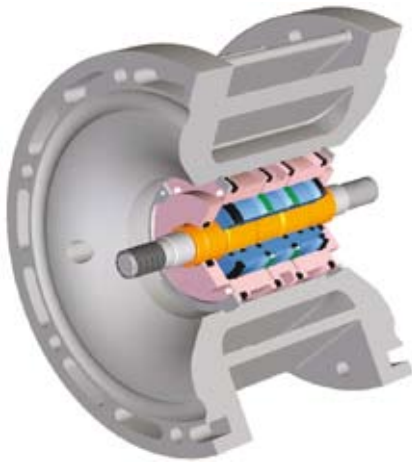


## HOW IT WORKS

The compressed air introduced by the coaxial heat exchanger [A] behind one of the two diaphragms generates compression and pushes the product into the delivery duct [B], at the same time the opposing diaphragm that is integral with the heat-exchanger shaft creates a vacuum and intakes the fluid [C]. Once the stroke has been completed, the pneumatic coaxial heat exchanger diverts the compressed air behind the opposing diaphragm and the cycle is reversed.

For further information regarding operation, please visit our website:  
[www.debem.it/ing/animazione.html](http://www.debem.it/ing/animazione.html)





## COAXIAL PNEUMATIC EXCHANGERS

The heart of an air-operated diaphragm pump consists of the pneumatic heat exchanger that DEBEM has succeeded in developing and innovating in a revolutionary manner, patenting the most durable and reliable system the market currently has to offer. This device introduces compressed air to alter the pressure balance of the diaphragms assisted by a stall-prevention circuit that ensures optimum performance even under the most critical conditions.



## THE COMPONENTS

It has an extremely compact footprint and the small number of components ensures exceptional sturdiness and service life even under the most exacting conditions.

The air passages are carefully designed and optimised to prevent the formation of ice even in low-temperature and high-head applications.

The DEBEM pneumatic heat exchanger is an integrated system with a single central cartridge that does not require additional external components.



## OPERATION

The range of DEBEM diaphragm pumps features a coaxial pneumatic heat exchanger that guarantees faultless operation even with low-pressure compressed air supplies (min 2 bar).

Air-chamber volumes and airways are carefully designed to optimise consumption.

Speed and flow rate can be easily adjusted by regulating air flow, whilst head can be adjusted as a function of compressed air supply pressure.



# CUBIC and BOXER

## DEBEM DIAPHRAGMS

Diaphragms are the components subjected to greatest stress during suction and pumping, when they must also withstand the liquid's chemical attack and temperature. Correct assessment and selection is therefore crucial for diaphragm service life, investment decisions and maintenance costs.

A modern process of design, destructive testing and careful analysis of results has enabled DEBEM to develop LONG LIFE new generation diaphragms. The shape and profile of these products provides a greater working surface and improved load redistribution, thus reducing material stress and yield to a minimum.

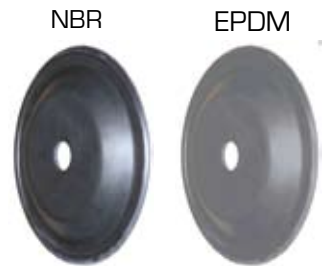


## RUBBER DIAPHRAGMS

They are made from rubber compounds with special additives that improve chemical properties as well as mechanical bending and strength characteristics. These diaphragms have a nylon backing cloth that improves stress distribution:

**NBR:** inexpensive and particularly suited to petroleum- and oil-based liquids;

**EPDM:** good acid, alkaline and abrasion resistance, as well as good flexibility even at low temperatures.



## THERMOPLASTIC DIAPHRAGM

They are made from thermoplastic polymers that provide high mechanical stress resistance and distribution.

**POLYURETHANE:** excellent abrasion resistance and ideal for general use;

**HYTREL:** good abrasion resistance and suitable for food processing.

**SANTOPRENE®:** excellent acid and alkaline resistance, high flexural strength and good abrasion resistance;



**PTFE DIAPHRAGM** This material is noted for its excellent resistance to high temperatures, chemicals and corrosive agents. DEBEM PTFE diaphragms are subjected to a double heat treatment in order to increase elasticity and service life. Each batch undergoes random destructive testing in order to verify its performance.

This diaphragm can be fitted together with one of those previously mentioned in order to increase resistance to the liquid's corrosive chemicals and temperature.



# CUBIC and BOXER



## INSTALLATION

Diaphragm pumps should be bolted horizontally to the feet or holes provided with the heat-exchanger shaft positioned horizontally.

### Installations:

**drum transfer** (with max. viscosity 10000 cps at 20° C)

**self-priming** (with max. viscosity 10000 cps at 20° C)

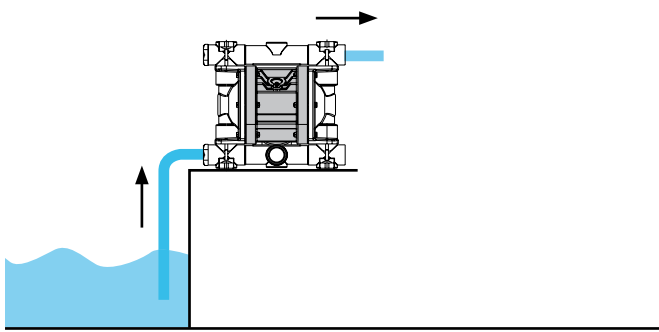
**under head** (with max. viscosity 50000 cps at 20° C)

**immersed** (with max. viscosity 50000 cps at 20° C)

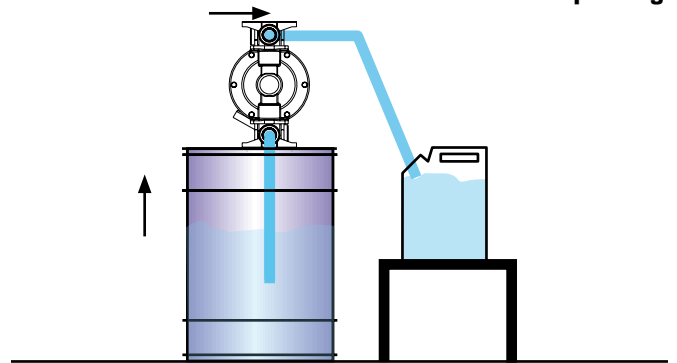
**twin suction and delivery manifold** (with max. viscosity 50000 cps at 20° C)

**twin delivery manifold** (with max. viscosity 50000 cps at 20° C)

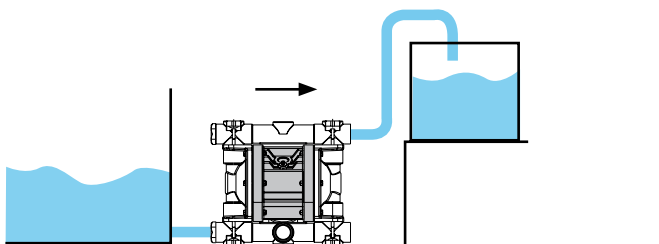
### Drum transfer



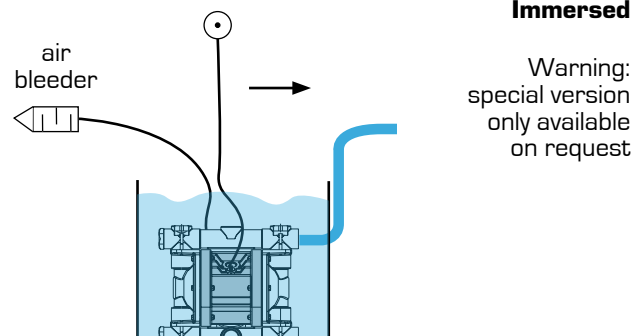
### Self-priming



### Positive suction head



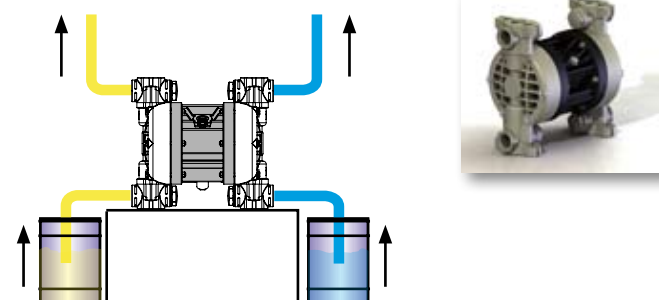
### air connection



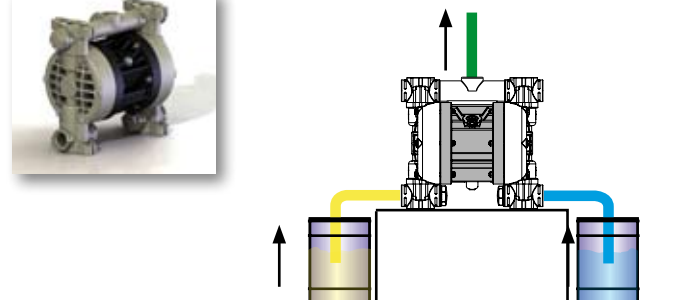
### Immersed

Warning:  
special version  
only available  
on request

### Twin suction and delivery manifold

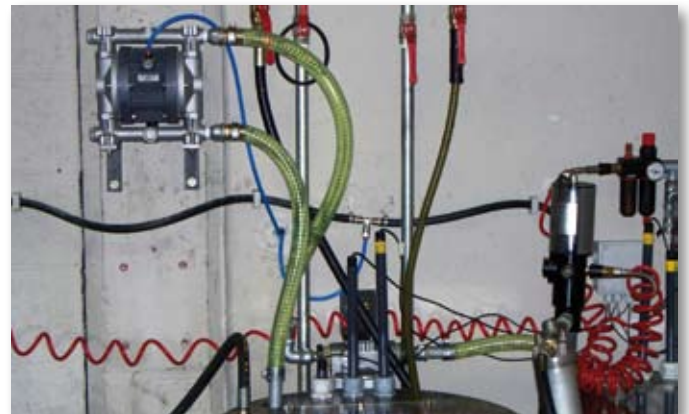
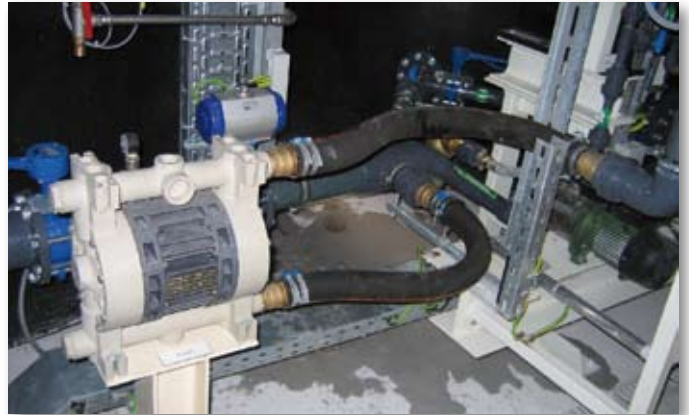
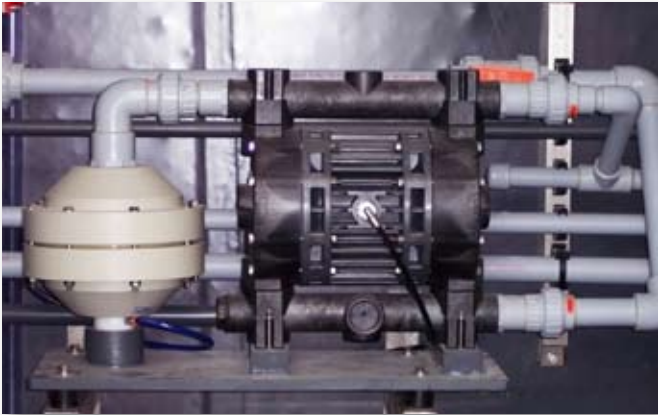


### Twin suction manifold





# CUBIC and BOXER



# CUBIC and BOXER



## CHEMICAL COMPATIBILITY

The type of liquid, temperature and working environment are factors to be considered when deciding on the best choice of construction materials for the pump and its correct chemical compatibility. Some examples are given in the following table:

| SUBSTANCE     | Polypropylene | PVDF<br>ECTFE (Halar®) | Aluminium | Stainless Steel<br>AISI 316 | NBR<br>(Perbunan®) | EPDM<br>(Dutral®) | Polyurethane | PTFE<br>(Teflon®) | PPS-V<br>(Ryton®) | FPM<br>(Viton®) | Santoprene® | PE-UHMW<br>(Poleszene®) |
|---------------|---------------|------------------------|-----------|-----------------------------|--------------------|-------------------|--------------|-------------------|-------------------|-----------------|-------------|-------------------------|
| Acetaldehyde  | A1            | D                      | B         | A                           | D                  | A                 | -            | A                 | A                 | D               | -           | B                       |
| Acetamide     | A1            | C                      | A         | A                           | A                  | A                 | -            | A                 | A                 | B               | -           | -                       |
| Vinyl acetate | B1            | A2                     | A1        | B                           | D                  | B2                | -            | A2                | -                 | A1              | -           | D                       |
| Acetylene     | A1            | A                      | A         | A                           | B                  | A                 | D            | A                 | A                 | A               | -           | -                       |
| Vinegar       | A             | B                      | D         | A                           | B                  | A                 | D            | A                 | A                 | A               | -           | A                       |
| Acetone       | A             | D                      | A         | A                           | D                  | A                 | D            | A                 | A                 | D               | A1          | A2                      |
| Fatty acids   | A             | A                      | A         | A                           | B                  | D                 | D            | A                 | -                 | A               | D           | A                       |

A = very good

B = good

C = poor, not recommended

D = severe etching, not recommended

- = information not available

1 = satisfactory up to 22°C (72°F)


2 = satisfactory up to 48°C (120°F)

For further information, please do not hesitate to contact DEBEM's technical service department.

## BOXER PUMPS COMPOSITION CODES

ex. **B81PDTAPDXC**

Boxer 81 in PP + diaphragm EPDM + diaphragm PTFE + balls Aisi 316 + ball seats PP + O rings EPDM + twin manifold + conduct

| <b>B81_</b>   | <b>P_</b>   | <b>D</b>   | <b>I</b>             | <b>A</b>   | <b>P</b>   | <b>D</b>  | <b>X</b>                 | <b>C</b>  |
|---|---|--|----------------------|--|--|---|--------------------------|---|
| Pump model  | Pump body   | Air side diaphragm   | Fluid side diaphragm | Balls  | Ball seats   | O Rings   | Twin manifold            | Conduct version   |
| <b>Mid</b> - Midgetbox<br><b>Cu15</b> - Cubic 15<br><b>MICR</b> - Microboxer<br><b>Min</b> - Miniboxer<br><b>B50</b> - Boxer 50<br><b>B80</b> - Boxer 80<br><b>B81</b> - Boxer 81<br><b>B100</b> - Boxer 100<br><b>B150</b> - Boxer 150<br><b>B250</b> - Boxer 250<br><b>B251</b> - Boxer 251<br><b>B502</b> - Boxer 502<br><b>B503</b> - Boxer 503 | <b>P</b> - Polypropylene<br><b>F</b> - PVDF<br><b>E</b> - ECTFE (Halar)<br><b>AL</b> - Aluminium<br><b>A</b> - AISI 316 | <b>N</b> - NBR<br><b>D</b> - EPDM<br><b>U</b> - Polyurethane<br><b>H</b> - Hytrel<br><b>M</b> - Santoprene | <b>T</b> - PTFE      | <b>T</b> - PTFE<br><b>A</b> - AISI 316<br><b>D</b> - EPDM<br><b>*C</b> - Ceramic<br><b>*G</b> - Glass<br><br>* Components on request available up the size B80 | <b>P</b> - Polypropylene<br><b>F</b> - PVDF<br><b>A</b> - AISI 316<br><b>I</b> - PE-UHMW<br><b>R</b> - PPS-V<br><b>E</b> - ECTFE | <b>D</b> - EPDM<br><b>V</b> - Viton<br><b>S</b> - Silicone<br><b>N</b> - NBR<br><b>T</b> - PTFE | <b>X</b><br>if requested | (zone 1)<br><br><br>II 2/2GD c<br>IIB T135°C<br><br><b>C</b><br>if requested |



# BOXER

## FLANGED PUMPS

BOXER pumps are also available with a flange coupling



| Model                     | flange            | stub-end material | size  |
|---------------------------|-------------------|-------------------|-------|
| <b>MINIBOXER PP</b>       | PN 16 in PVC      | PP                | DN 15 |
| <b>BOXER 81 PP</b>        | PN 16 in PVC      | PP                | DN 25 |
| <b>BOXER 100 PP</b>       | PN 16 in PVC      | PP                | DN 25 |
| <b>BOXER 150 PP</b>       | PN 16 in PVC      | PP                | DN 32 |
| <b>BOXER 250 PP</b>       | PN 16 in PVC      | PP                | DN 40 |
| <b>BOXER 502 PP</b>       | PN 16 in PVC      | PP                | DN 50 |
| <b>BOXER 503 PP</b>       | PN 16 in PVC      | PP                | DN 80 |
| <b>MINIBOXER PVDF</b>     | PN 16 in PVC      | PVDF              | DN 15 |
| <b>BOXER 81 PVDF</b>      | PN 16 in PVC      | PVDF              | DN 25 |
| <b>BOXER 100 PVDF</b>     | PN 16 in PVC      | PVDF              | DN 25 |
| <b>BOXER 150 PVDF</b>     | PN 16 in PVC      | PVDF              | DN 32 |
| <b>BOXER 250 PVDF</b>     | PN 16 in PVC      | PVDF              | DN 40 |
| <b>BOXER 502 PVDF</b>     | PN 16 in PVC      | PVDF              | DN 50 |
| <b>BOVER 503 PVDF</b>     | PN 16 in PVC      | PVDF              | DN 80 |
| <b>MINIBOXER AISI 316</b> | PN 10 in AISI 304 | AISI 316          | DN 15 |
| <b>BOXER 80 AISI 316</b>  | PN 10 in AISI 304 | AISI 316          | DN 25 |
| <b>BOXER 100 AISI316</b>  | PN 10 in AISI 304 | AISI 316          | DN 25 |
| <b>BOXER 150 AISI 316</b> | PN 10 in AISI 304 | AISI 316          | DN 32 |
| <b>BOXER 251 AISI 316</b> | PN 10 in AISI 304 | AISI 316          | DN 40 |
| <b>BOXER 502 AISI 316</b> | PN 10 in AISI 304 | AISI 316          | DN 50 |



Intake/delivery connections 1/2" - flow rate 30 l/min

# MICROBOXER



construction materials: PP - PVDF - ALU - Aisi 316



PP

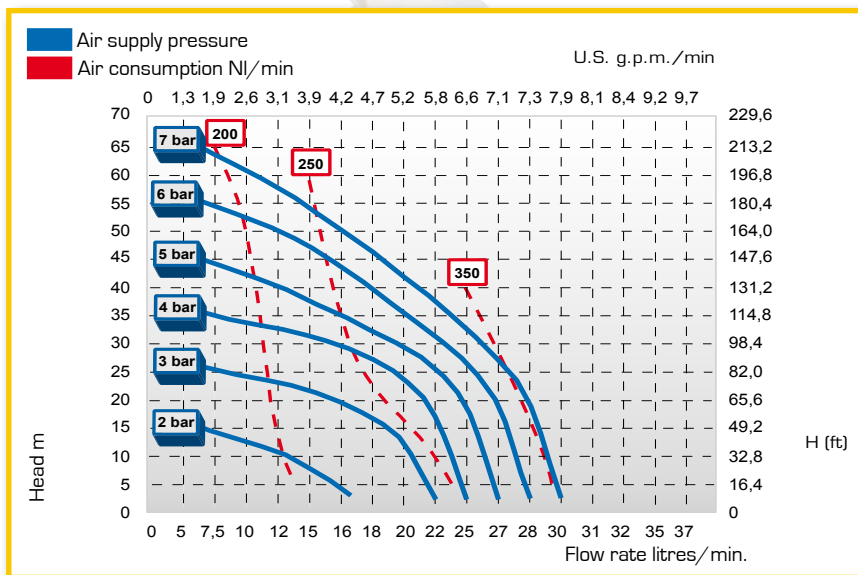
|   |          |  |  |
|---|----------|--|--|
| Intake/delivery connections                           | G 1/2"   |  |  |
| Air connection  | G 1/4"   |  |  |
| Max. self-priming capacity*                           | 6 m      |  |  |
| Max. flow rate*                                       | 30 l/min |  |  |
| Max. head*  | 70 m     |  |  |
| Max. air supply pressure                              | 7 bar    |  |  |
| Max. diameter of passing solids (spherical particles) | 2 mm     |  |  |

|            |          |        |                          |
|------------|----------|--------|--------------------------|
| Net weight | PP       | 1.6 Kg | (zone 2) 60°C Max. temp. |
|            | PVDF     | 1.9 Kg | (zone 2) 95°C Max. temp. |
|            | Alu      | 2 Kg   | (zone 2) 95°C Max. temp. |
|            | Aisi 316 | 3.8 Kg | (zone 2) 95°C Max. temp. |

\*The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

## TECHNICAL DATA

### PERFORMANCE



PVDF

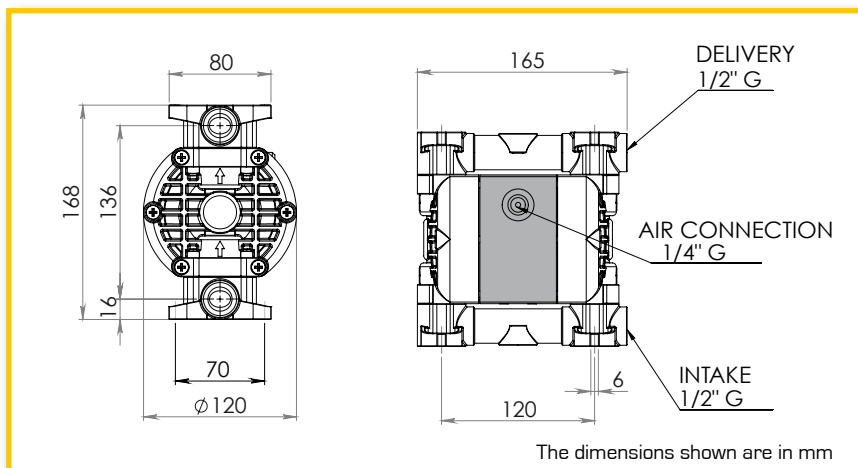


ALU



AISI 316

### DIMENSIONS



All the values shown are approximate and not binding



Intake/delivery connections 1/2" - flow rate 50 l/min

# MINIBOXER

construction materials: PP - PVDF - Aisi 316

|   |          |  |  |
|---|----------|--|--|
| Intake/delivery connections                           | G 1/2"   |  |  |
| Air connection  | G 3/8"   |  |  |
| Max. self-priming capacity*                           | 5 m      |  |  |
| Max. flow rate*                                       | 50 l/min |  |  |
| Max. head*  | 70 m     |  |  |
| Max. air supply pressure                              | 7 bar    |  |  |
| Max. diameter of passing solids (spherical particles) | 3 mm     |  |  |

|            |          |        |                          |
|------------|----------|--------|--------------------------|
| Net weight | PP       | 3.6 Kg | (zone 2) 60°C Max. temp. |
|            | PVDF     | 4.2 Kg | (zone 2) 95°C Max. temp. |
|            | Aisi 316 | 6.5 Kg | (zone 2) 95°C Max. temp. |

\*The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.



Aisi 316

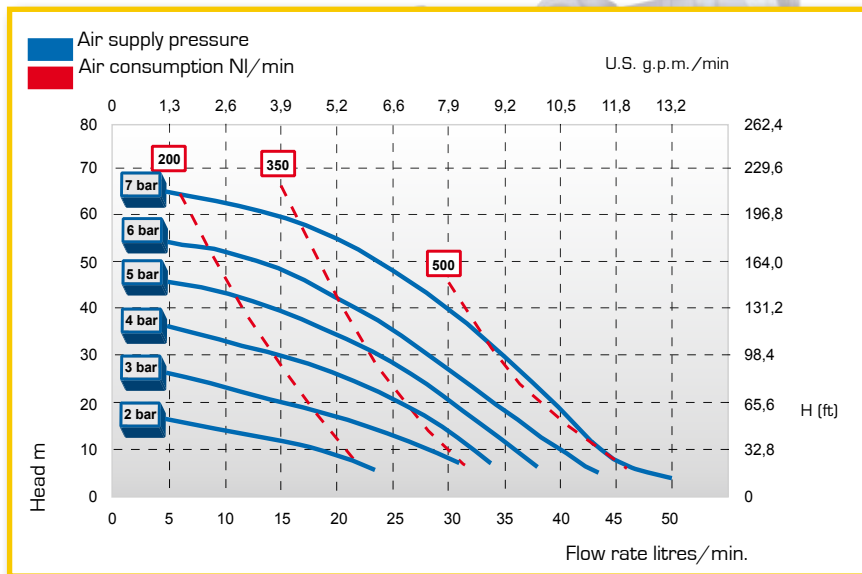
## TECHNICAL DATA



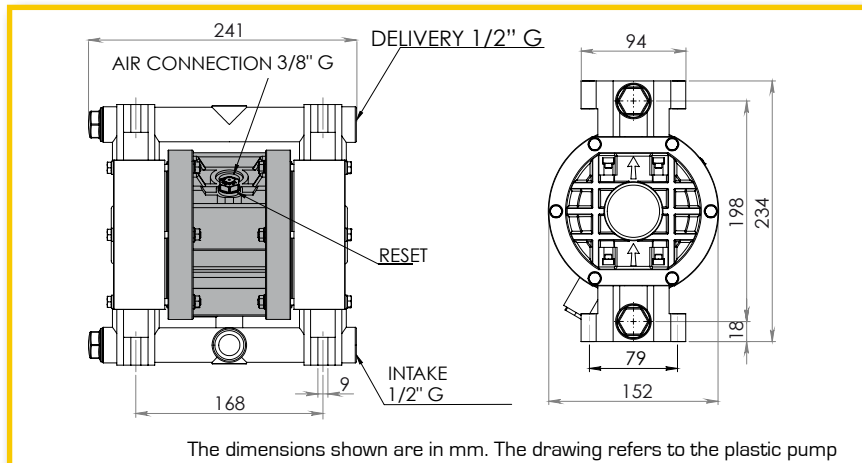
PP



PVDF



PERFORMANCE



DIMENSIONS

All the values shown are approximate and not binding

Intake/delivery connections 1/2" - flow rate 50 l/min

# BOXER 50

construction materials: ALU



ALU

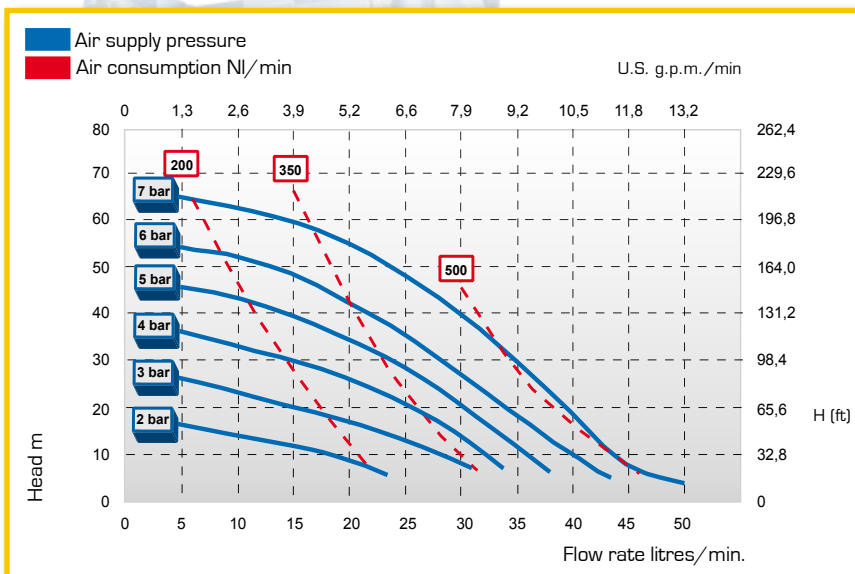
|   |          |
|---|----------|
| Intake/delivery connections                           | G 1/2"   |
| Air connection  | G 3/8"   |
| Max. self-priming capacity*                           | 5 m      |
| Max. flow rate*                                       | 50 l/min |
| Max. head*  | 70 m     |
| Max. air supply pressure                              | 7 bar    |
| Max. diameter of passing solids (spherical particles) | 4 mm     |

Net weight Alu 4 Kg (zone 2) 95°C Max. temp.

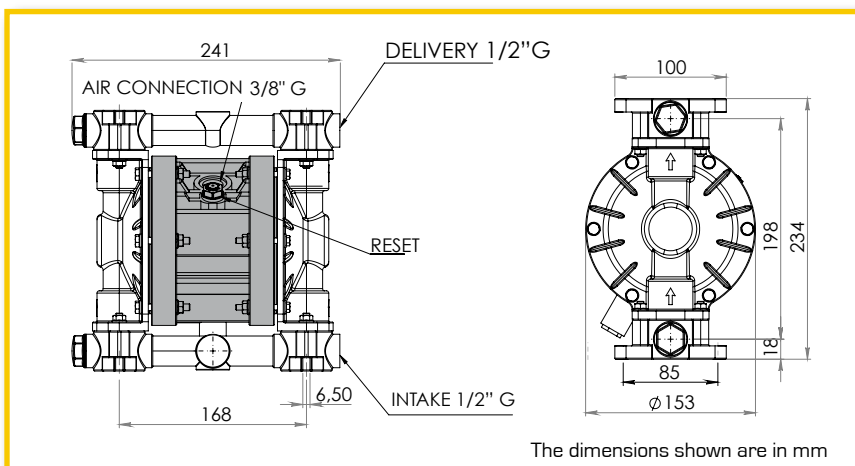
\*The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

## TECHNICAL DATA

### PERFORMANCE



### DIMENSIONS



All the values shown are approximate and not binding



Intake/delivery connections 1" - flow rate 90 l/min

# BOXER 80

construction materials: Aisi 316



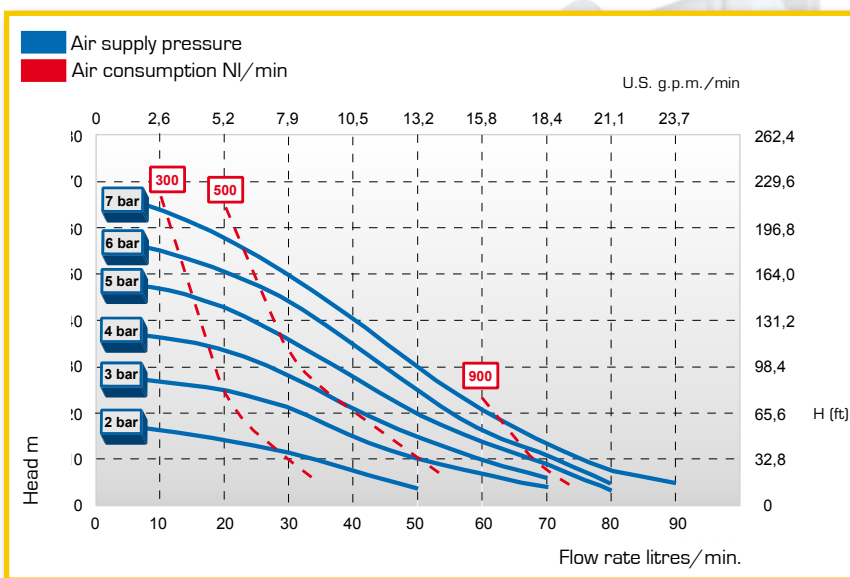
Aisi 316

|   |          |
|---|----------|
| Intake/delivery connections                           | G 1"     |
| Air connection  | G 3/8"   |
| Max. self-priming capacity*                           | 5 m      |
| Max. flow rate*                                       | 90 l/min |
| Max. head*  | 70 m     |
| Max. air supply pressure                              | 7 bar    |
| Max. diameter of passing solids (spherical particles) | 4 mm     |

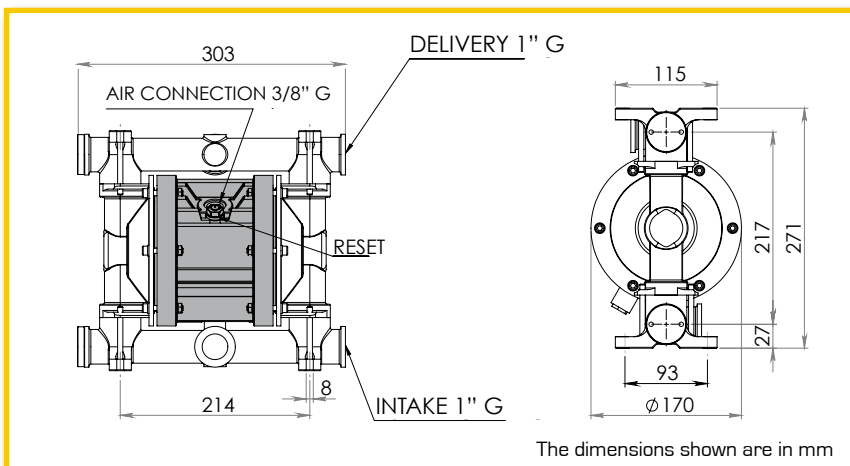
Net weight    Aisi 316    10.5 Kg    (zone 2) 95°C Max. temp.

\*The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

## TECHNICAL DATA



PERFORMANCE



DIMENSIONS

All the values shown are approximate and not binding

Intake/delivery connections 1" - flow rate 100 l/min

# BOXER 81



construction materials: PP - PVDF - ALU



PP

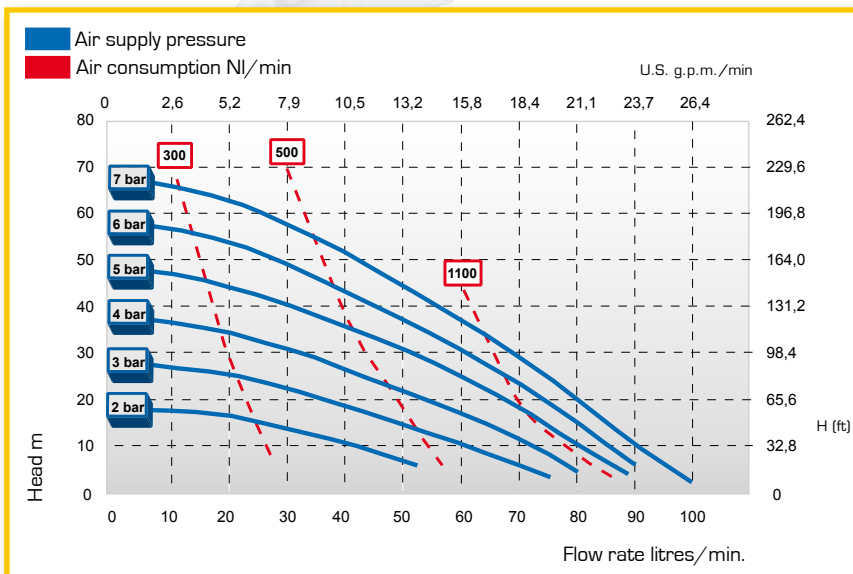
|   |           |  |  |
|---|-----------|--|--|
| Intake/delivery connections                           | G 1"      |  |  |
| Air connection  | G 3/8"    |  |  |
| Max. self-priming capacity*                           | 6 m       |  |  |
| Max. flow rate*                                       | 100 l/min |  |  |
| Max. head*  | 70 m      |  |  |
| Max. air supply pressure                              | 7 bar     |  |  |
| Max. diameter of passing solids (spherical particles) | 4 mm      |  |  |

|            |      |        |                          |
|------------|------|--------|--------------------------|
| Net weight | PP   | 5 Kg   | (zone 2) 60°C Max. temp. |
|            | PVDF | 6.5 Kg | (zone 2) 95°C Max. temp. |
|            | Alu  | 6.5 Kg | (zone 2) 95°C Max. temp. |

\*The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

## TECHNICAL DATA

### PERFORMANCE

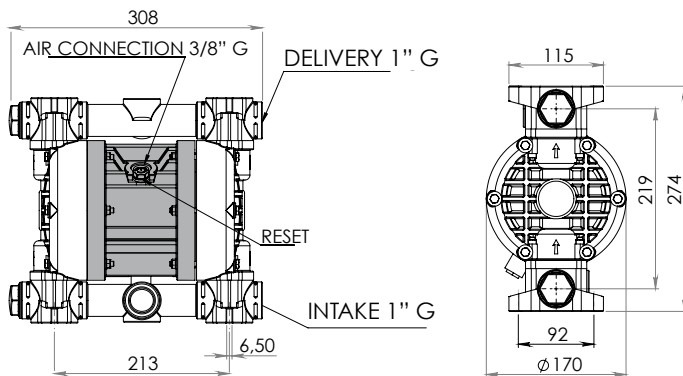


PVDF



ALU

### DIMENSIONS



The dimensions shown are in mm. The drawing refers to the plastic pump

All the values shown are approximate and not binding



Intake/delivery connections 1" - flow rate 150 l/min

# BOXER 100

construction materials: PP - PVDF - ALU - Aisi 316

|   |           |  |  |
|---|-----------|--|--|
| Intake/delivery connections                           | G 1"      |  |  |
| Air connection  | G 1/2"    |  |  |
| Max. self-priming capacity*                           | 5 m       |  |  |
| Max. flow rate*                                       | 150 l/min |  |  |
| Max. head*  | 70 m      |  |  |
| Max. air supply pressure                              | 7 bar     |  |  |
| Max. diameter of passing solids (spherical particles) | 4 mm      |  |  |

|            |          |        |                          |
|------------|----------|--------|--------------------------|
| Net weight | PP       | 7.5 Kg | (zone 2) 60°C Max. temp. |
|            | PVDF     | 8.5 Kg | (zone 2) 95°C Max. temp. |
|            | Alu      | 8.2 Kg | (zone 2) 95°C Max. temp. |
|            | Aisi 316 | 11 Kg  | (zone 2) 95°C Max. temp. |

\*The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.



ALU

## TECHNICAL DATA



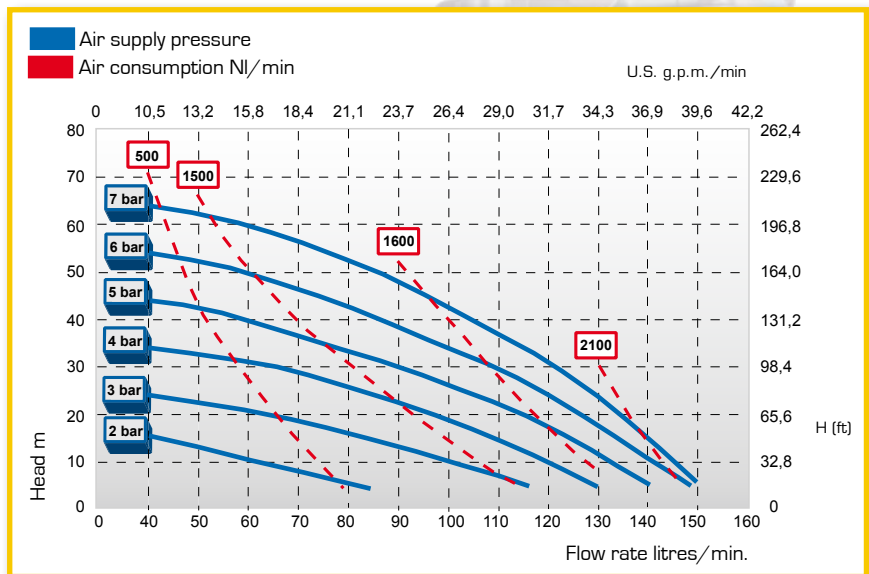
PP



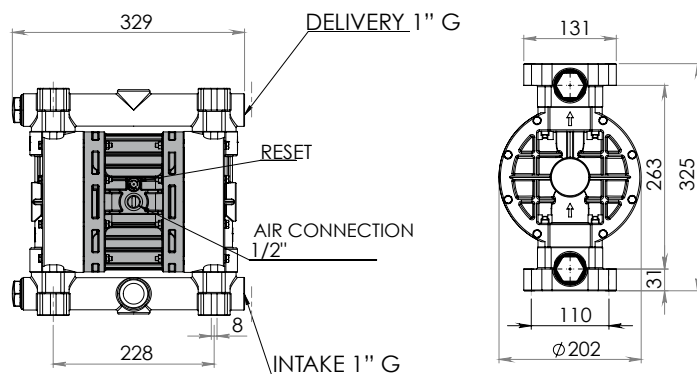
PVDF



Aisi 316



PERFORMANCE



The dimensions shown are in mm. The drawing refers to the plastic pump

DIMENSIONS

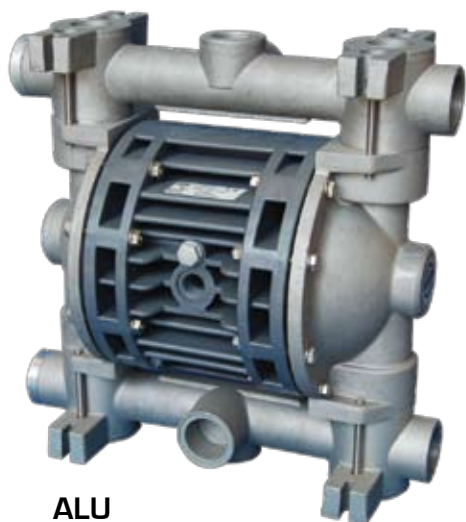
All the values shown are approximate and not binding

Intake/delivery connections 1" 1/4 - flow rate 220 l/min

# BOXER 150



construction materials: PP - PVDF - ALU - Aisi 316



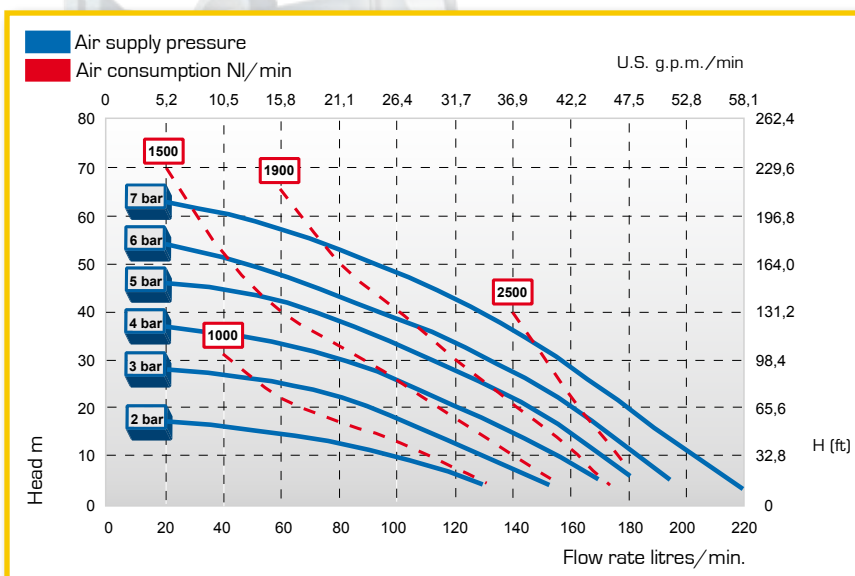
ALU

|   |           |       |                          |
|---|-----------|-------|--------------------------|
| Intake/delivery connections                           | G 1" 1/4  |       |                          |
| Air connection  | G 1/2"    |       |                          |
| Max. self-priming capacity*                           | 5 m       |       |                          |
| Max. flow rate*                                       | 220 l/min |       |                          |
| Max. head*  | 70 m      |       |                          |
| Max. air supply pressure                              | 7 bar     |       |                          |
| Max. diameter of passing solids (spherical particles) | 5 mm      |       |                          |
| Net weight  | PP        | 12 Kg | (zone 2) 60°C Max. temp. |
|   | ECTFE     | 14 Kg | (zone 2) 95°C Max. temp. |
|   | Alu       | 16 Kg | (zone 2) 95°C Max. temp. |
|   | Aisi 316  | 21 Kg | (zone 2) 95°C Max. temp. |

\*The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

## TECHNICAL DATA

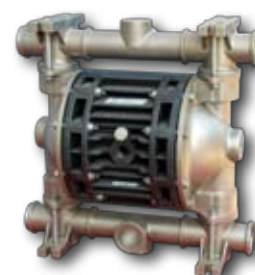
### PERFORMANCE



PP

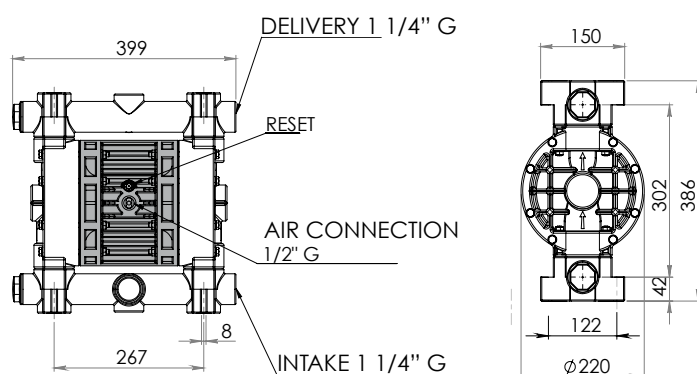


PVDF



AISI 316

### DIMENSIONS



The dimensions shown are in mm. The drawing refers to the plastic pump

All the values shown are approximate and not binding



Intake/delivery connections 1" 1/2 - flow rate 340 l/min

# BOXER 250

construction materials: PP - PVDF

|   |           |  |  |
|---|-----------|--|--|
| Intake/delivery connections                           | G 1" 1/2  |  |  |
| Air connection  | G 1/2"    |  |  |
| Max. self-priming capacity *                          | 5 m       |  |  |
| Max. flow rate *                                      | 340 l/min |  |  |
| Max. head *   | 70 m      |  |  |
| Max. air supply pressure                              | 7 bar     |  |  |
| Max. diameter of passing solids (spherical particles) | 6 mm      |  |  |

|            |      |       |                          |
|------------|------|-------|--------------------------|
| Net weight | PP   | 16 Kg | (zone 2) 60°C Max. temp. |
|            | PVDF | 20 Kg | (zone 2) 95°C Max. temp. |

\*The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

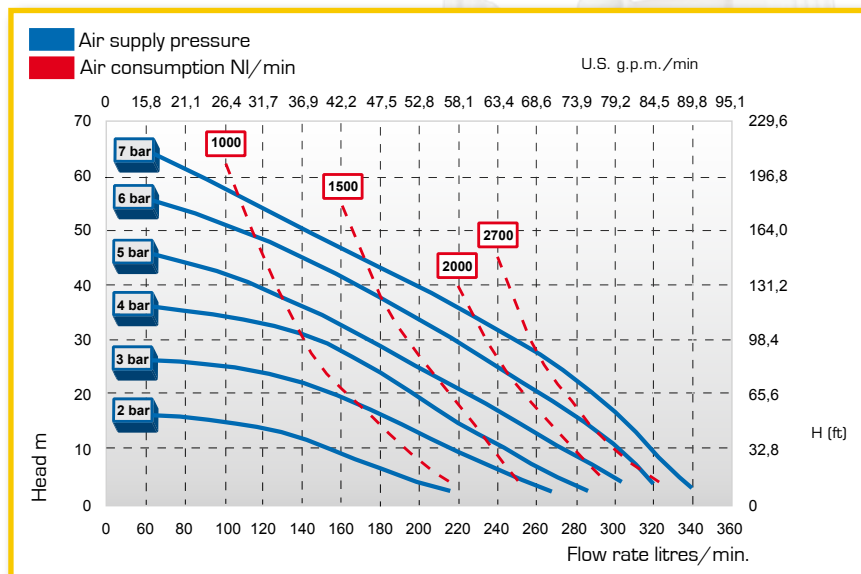


PP

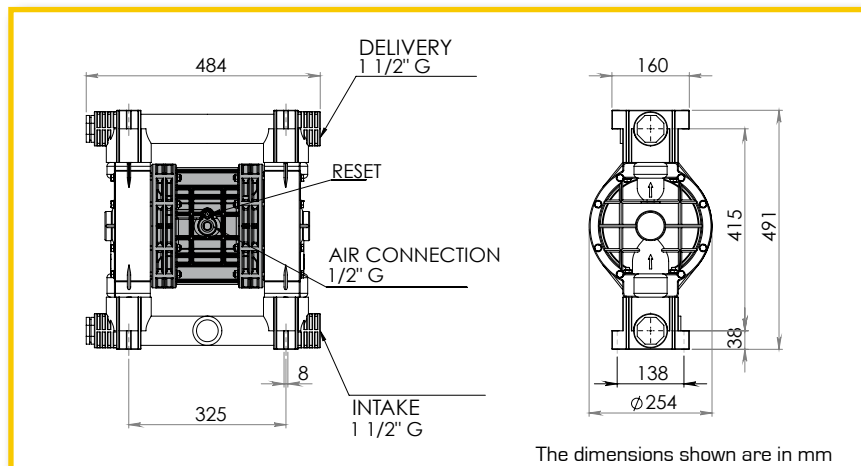
## TECHNICAL DATA



PVDF



PERFORMANCE



DIMENSIONS

All the values shown are approximate and not binding



Intake/delivery connections 1" 1/2 - flow rate 340 l/min

# BOXER 251



construction materials: ALU - Aisi 316



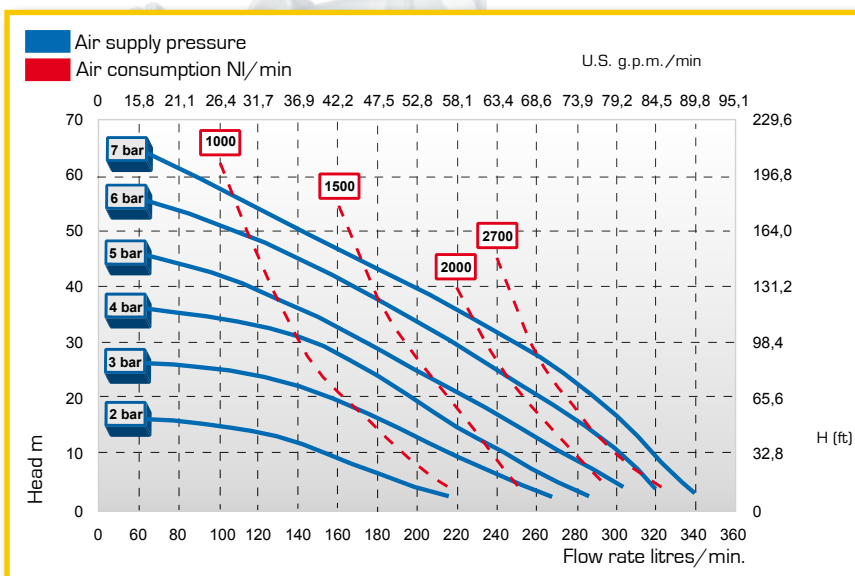
ALU

|   |           |       |                          |
|---|-----------|-------|--------------------------|
| Intake/delivery connections                           | G 1" 1/2  |       |                          |
| Air connection  | G 1/2"    |       |                          |
| Max. self-priming capacity*                           | 6 m       |       |                          |
| Max. flow rate*                                       | 340 l/min |       |                          |
| Max. head*  | 70 m      |       |                          |
| Max. air supply pressure                              | 7 bar     |       |                          |
| Max. diameter of passing solids (spherical particles) | 6 mm      |       |                          |
| Net weight  | Alu       | 21 Kg | (zone 2) 95°C Max. temp. |
|   | Aisi 316  | 32 Kg | (zone 2) 95°C Max. temp. |

\*The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

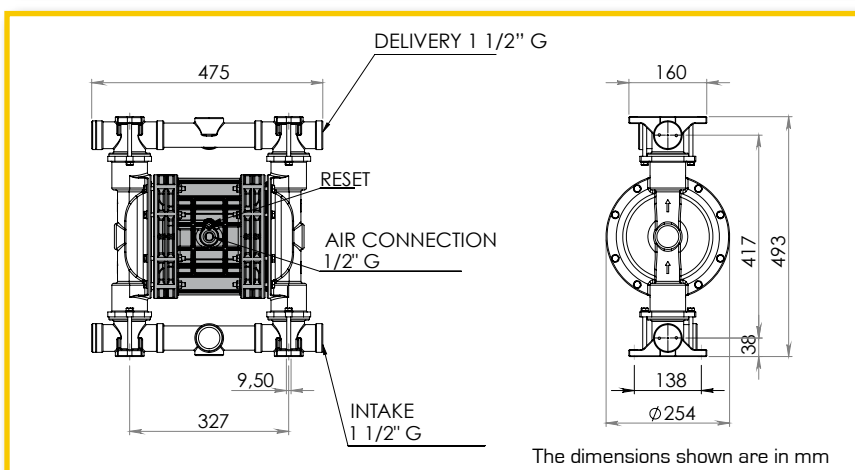
## TECHNICAL DATA

### PERFORMANCE



AISI 316

### DIMENSIONS



All the values shown are approximate and not binding



Intake/delivery connections 2" - flow rate 650 l/min

# BOXER 502

construction materials: PP - PVDF



PP

|   |           |  |  |
|---|-----------|--|--|
| Intake/delivery connections                           | G 2"      |  |  |
| Air connection  | G 1/2"    |  |  |
| Max. self-priming capacity*                           | 4 m       |  |  |
| Max. flow rate*                                       | 650 l/min |  |  |
| Max. head*  | 70 m      |  |  |
| Max. air supply pressure                              | 7 bar     |  |  |
| Max. diameter of passing solids (spherical particles) | 8 mm      |  |  |

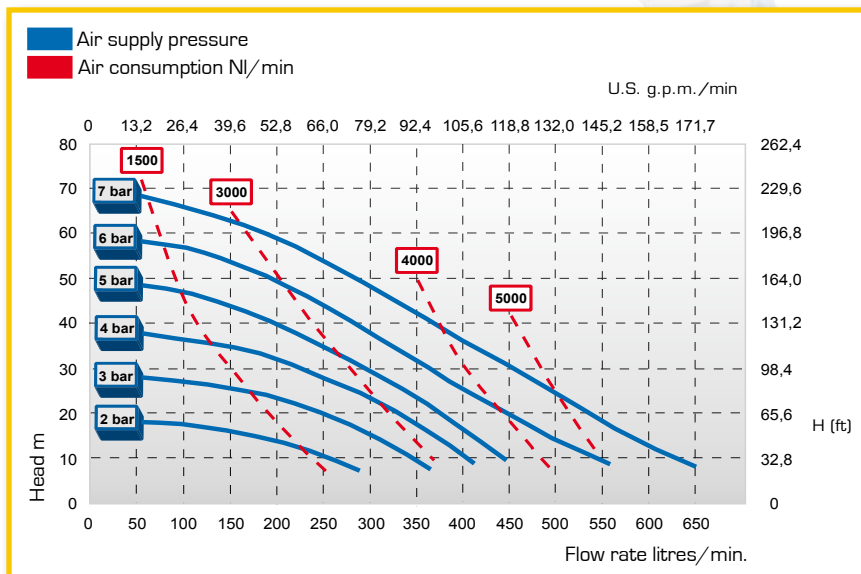
|            |      |       |                          |
|------------|------|-------|--------------------------|
| Net weight | PP   | 54 Kg | (zone 2) 60°C Max. temp. |
|            | PVDF | 65 Kg | (zone 2) 95°C Max. temp. |

\*The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

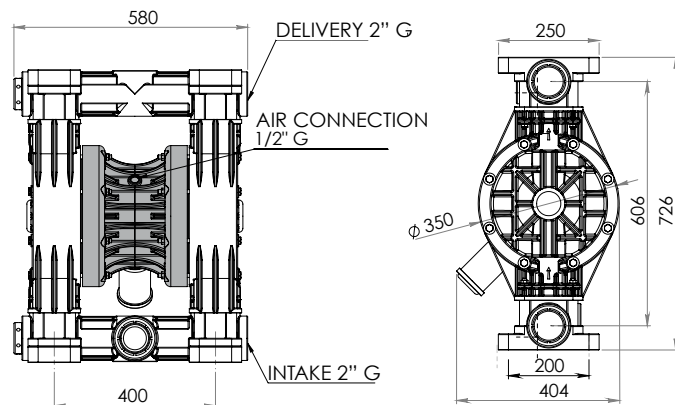
## TECHNICAL DATA



PVDF



PERFORMANCE



The dimensions shown are in mm

DIMENSIONS

All the values shown are approximate and not binding

Intake/delivery connections 2" - flow rate 650 l/min

# BOXER 502



construction materials: Aisi 316



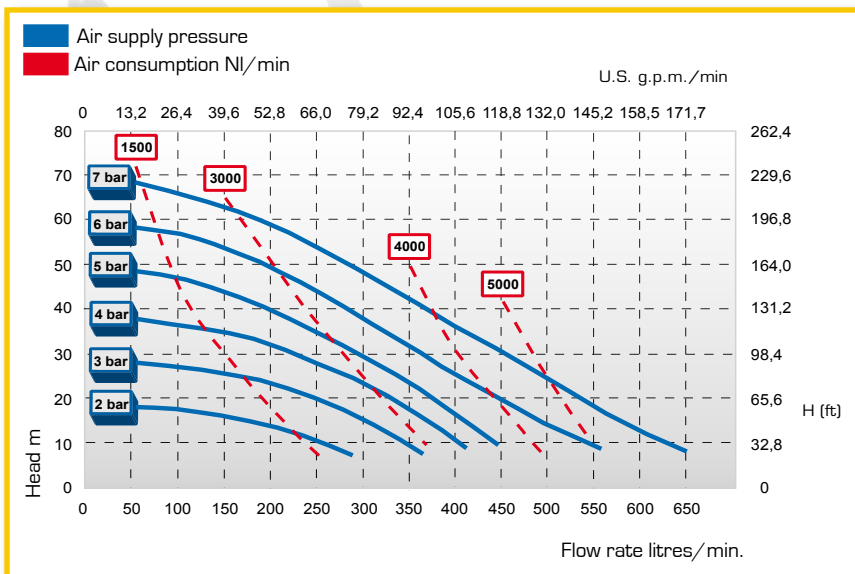
Aisi 316

|   |   |
|---|---|
| Intake/delivery connections                           | G 2"                                    |
| Air connection  | G 1/2"                                  |
| Max. self-priming capacity*                           | 4 m                                     |
| Max. flow rate*                                       | 650 l/min                               |
| Max. head*  | 70 m                                    |
| Max. air supply pressure                              | 7 bar                                   |
| Max. diameter of passing solids (spherical particles) | 8 mm                                    |
| Net weight  | Aisi 316 49 Kg (zone 2) 95°C Max. temp. |

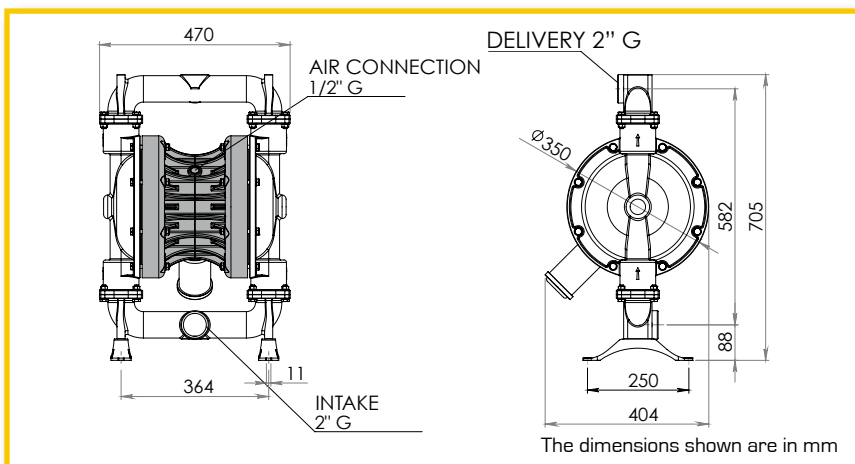
\*The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

## TECHNICAL DATA

### PERFORMANCE



### DIMENSIONS



All the values shown are approximate and not binding



Intake/delivery connections 3" - flow rate 900 l/min

# BOXER 503

construction materials: PP - PVDF

|   |           |  |  |
|---|-----------|--|--|
| Intake/delivery connections                           | G 3"      |  |  |
| Air connection  | G 3/4"    |  |  |
| Max. self-priming capacity*                           | 5 m       |  |  |
| Max. flow rate*                                       | 900 l/min |  |  |
| Max. head*  | 70 m      |  |  |
| Max. air supply pressure                              | 7 bar     |  |  |
| Max. diameter of passing solids (spherical particles) | 10 mm     |  |  |

|            |      |       |                          |
|------------|------|-------|--------------------------|
| Net weight | PP   | 56 Kg | (zone 2) 60°C Max. temp. |
|            | PVDF | 67 Kg | (zone 2) 95°C Max. temp. |

\*The curves and performance values refer to pumps with submerged suction and a free delivery outlet with water at 20°C, and vary according to the construction material.

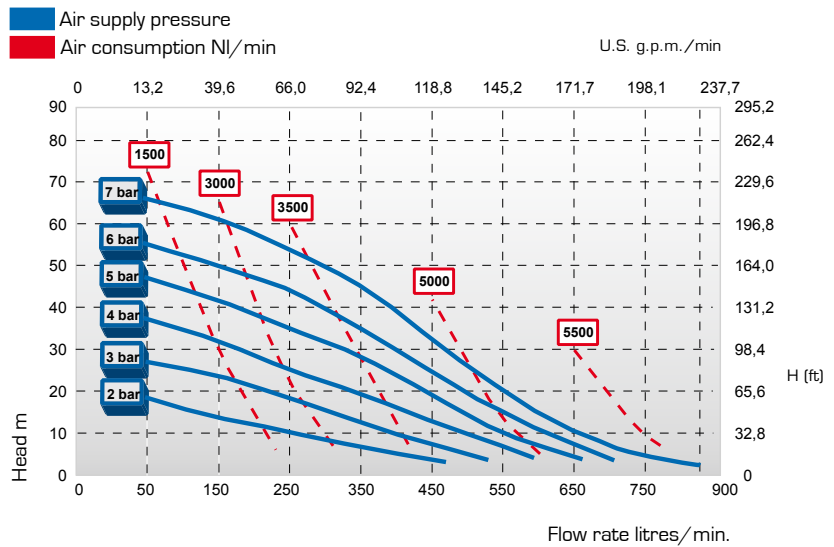


PVDF

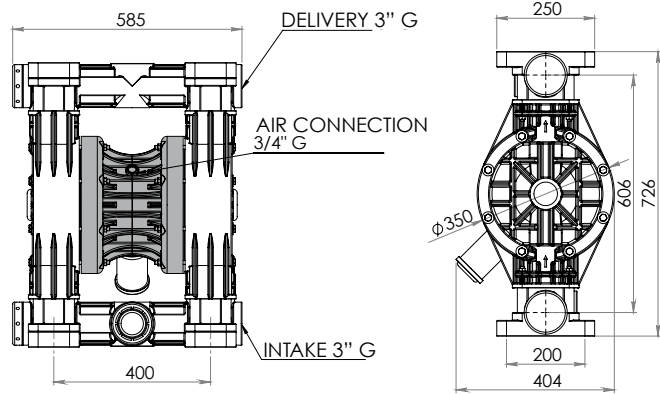
## TECHNICAL DATA



PP



PERFORMANCE



The dimensions shown are in mm

DIMENSIONS

All the values shown are approximate and not binding