# AODD PUMPS

## 0018 - DUOTEK Series - Pneumatic Diaphragm Pumps




### TECHNICAL DATA

- Connections:
  - Fluid 3/8”
  - Air 6 mm
- Max Flow-rates: 20 l/min
- Max air pressure: 7 Bar
- Max delivery head: 70 mt
- Max suction head:
  - Dry 5 mt
  - Wet 9.8 mt
- Max solid passing: 2,5 mm
- Noise level: 65 dB
- Displacement per stroke: 30 cc
- Pump casing materials:
  - PP
  - PVDF+CF
  - POMc
  - SS
- Max viscosity: 10.000 cps

DUOTEK diaphragm pumps are characterized by exceptional performance, power and strength, making them ideal for pumping liquids with very high apparent viscosity up to 10.000 cps (at 20°C), even if containing suspended solids.

The stall-prevention pneumatic system assures a safe pump running and it does not need lubricated air.

Self-priming dry 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):

- **ATEX**  **Zone 2** in all versions: **EX II 3/3 GD c IIB T135°C**

**model**

**AF** Pneumatic Diaphragm Pumps

**type**

**00** ATEX Zone 2 — **EX II 3/3 GD c IIB T135°C**

| series | flow rate [l/1] | | connection [BSP] fluid | connection [BSP] air | ° suction lift [m] | passing solid [Ø mm] | max viscosity [Cps] | max noise [dB] | displac./cycle [cc] |
|---|---|---|---|---|---|---|---|---|---|
| **0018** | 20 | | 3/8" | 6 mm | 5 | 2,5 | 10.000 | 65 | 30 |

° With **DRY** pump. To **WET** pump: **9,8 m**

**body material**

- **P** Polypropylene + Glass fiber
- **K** PVDF + Carbon fiber
- **S** SS316
- **M** POMc

**AIR diaphragm**

- **H** Hytrel
- **M** Santoprene

**FLUID diaphragm**

- **X** WITHOUT PTFE diaphragm
- **T** PTFE

**balls**

- **T** PTFE
- **S** SS316

**ball seats**

- **P** Polypropylene
- **K** PVDF
- **S** SS316
- **M** POMc

**O-Rings**

- **D** EPDM
- **V** FPM
- **T** PTFE
- **N** NBR

**connections**

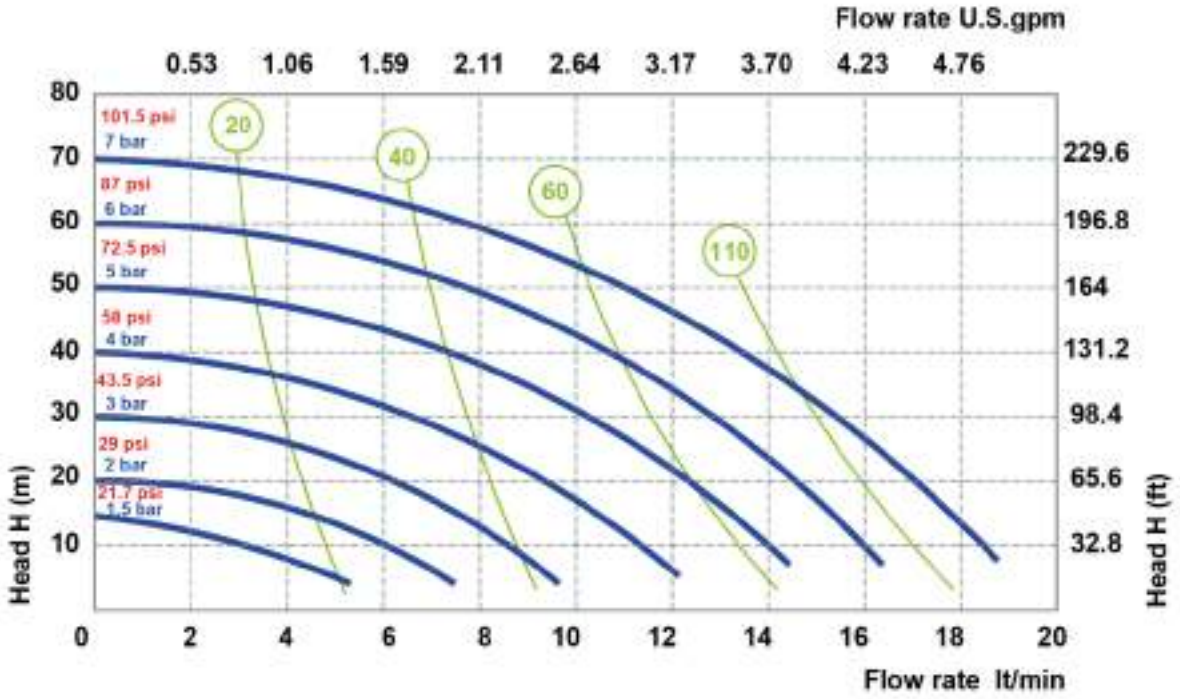
- **1** BSP threaded
- **5** NPT threaded
- **6** BSP threaded + metal ring
- **7** Extra connections

**optional**

- **-** NONE (open A-B)
- **__** open A-B (std) and any possible opening
- **Y** External pump control WITH solenoid
- **X** External pump control WITHOUT solenoid
- **Z** predisposition for Stroke Counter

| AF | 00 | 0018 | P | M | T | T | P | V | 1 | - |
|---|---|---|---|---|---|---|---|---|---|---|

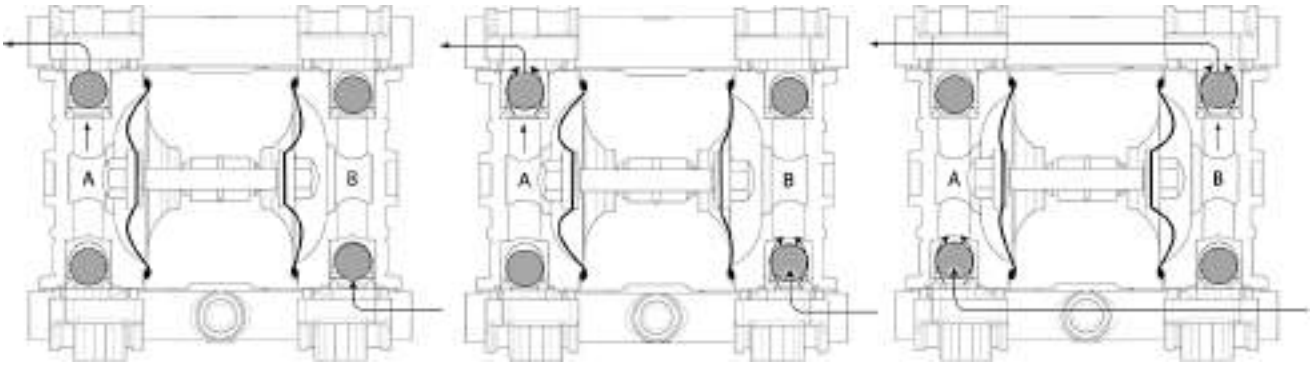
## HYDRAULIC CHARACTERISTICS




* 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.

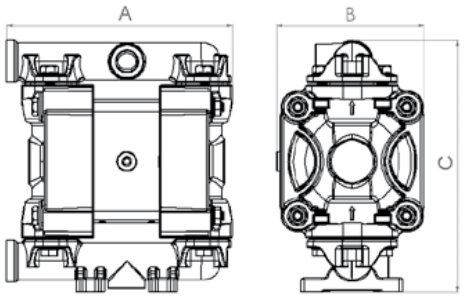
## OPERATING PRINCIPLE

The pneumatic distribution system sends compressed air behind one of the two diaphragms (A), which pushes the fluid towards the delivery circuit. Simultaneously, the opposing diaphragm (B) is located, creating a vacuum in the chamber B, in the suction phase, moved from the shaft that connect the diaphragm to the other (A). In this way the product is sucked from the intake manifold, thanks to de-pressure created in the fluid chamber. When the diaphragm (A), under pressure, reaches the limit of the stroke the distributor switches the two inputs, and the cycle starts again. At the same time, the balls open and close, alternating the chamber A and B, in the closed situation for suction and open delivery in the situation.



### DIMENSIONS (*ALL materials*)

| | A | B | C | Weight | Temperature | |
|---|---|---|---|---|---|---|
| **PP** | 146 mm | 96 mm | 167 mm | 1,5 kg | - 4°C | + 65°C |
| **PVDF** | 146 mm | 96 mm | 167 mm | 1,8 kg | - 20°C | + 95°C |
| **POMc** | 146 mm | 96 mm | 167 mm | 1,7 kg | - 5°C | + 80°C |
| **SS** | 148 mm | 92 mm | 152 mm | 2,5 kg | - 20°C | + 95°C |




### AVAILABLE CONNECTIONS

**Standard** = A B

**IN** = A-E-T-C-G

**OUT** =B-S-D-F-P

