AODD PUMPS

1000 DUOTEK Series–Pneumatic Diaphragm Pumps



TECHNICAL DATA

- Connections:
  - Fluid 3” - DN80
  - Air 3/4”
- Max Flow-rates: 1.050 l/min
- Max air pressure: 8 Bar
- Max delivery head: 80 mt
- Max suction head:
  - Dry 5 mt
  - Wet 9.8 mt
- Max solid passing: 12 mm
- Noise level: 82 dB
- Displacement per stroke: 9.750 cc
- Pump casing materials:
  - PP
  - PVDF+CF
  - ALUMINIUM
  - SS
- Max viscosity: 55.000 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 55.000 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]
1000	1050	PP	DN80 - 3"	3/4"	5	12	55.000	82	9750
		SS-ALU	3" *						

* **FLANGED**: add the cost of the related KIT

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

body material

- **P** Polypropylene + Glass fiber
- **A** Aluminium
- **S** SS316

AIR diaphragm

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

FLUID diaphragm

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

balls

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

ball seats

- **P** Polypropylene
- **S** SS316
- **A** Aluminium

O-Rings

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

connections

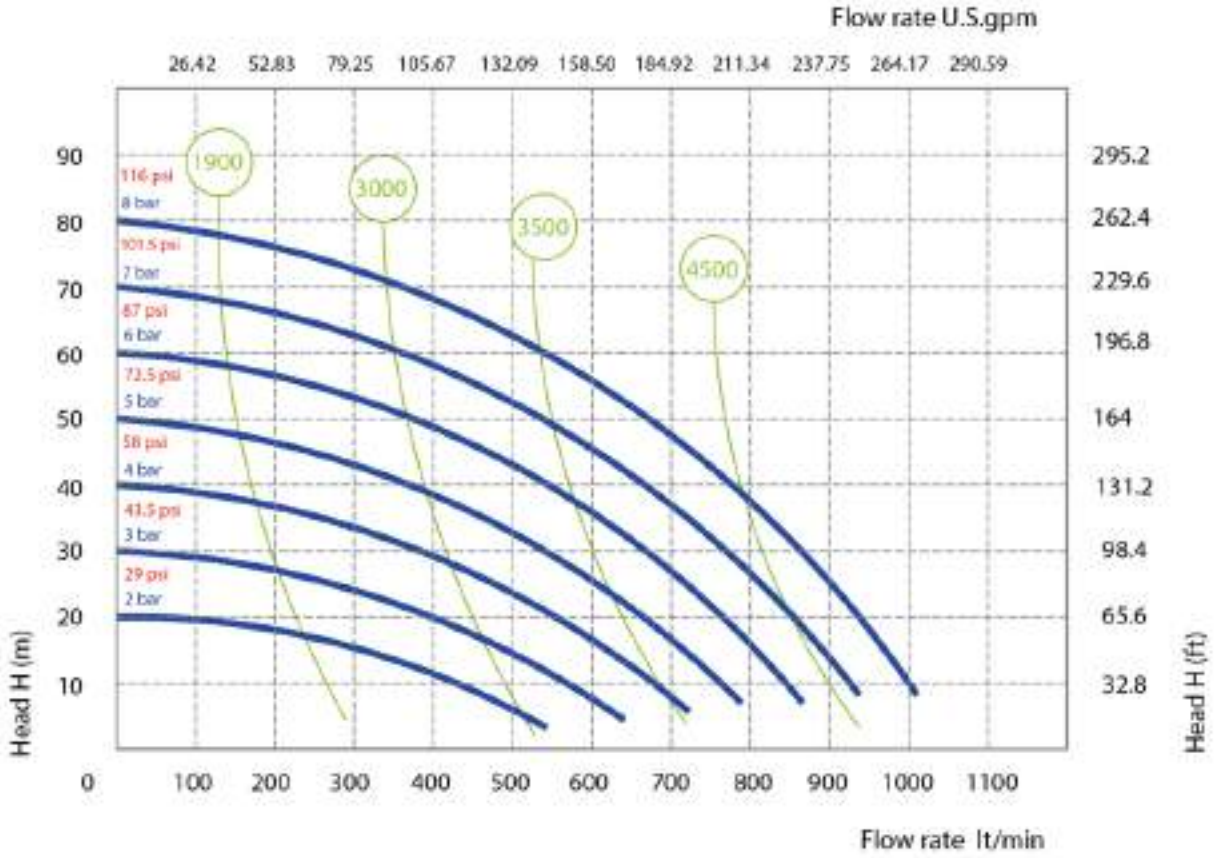
- **1** BSP threaded
- **2** Flanged

optional

- **-** NONE (open A-B)

AF	00	1000	P	N	T	T	P	V	1	-

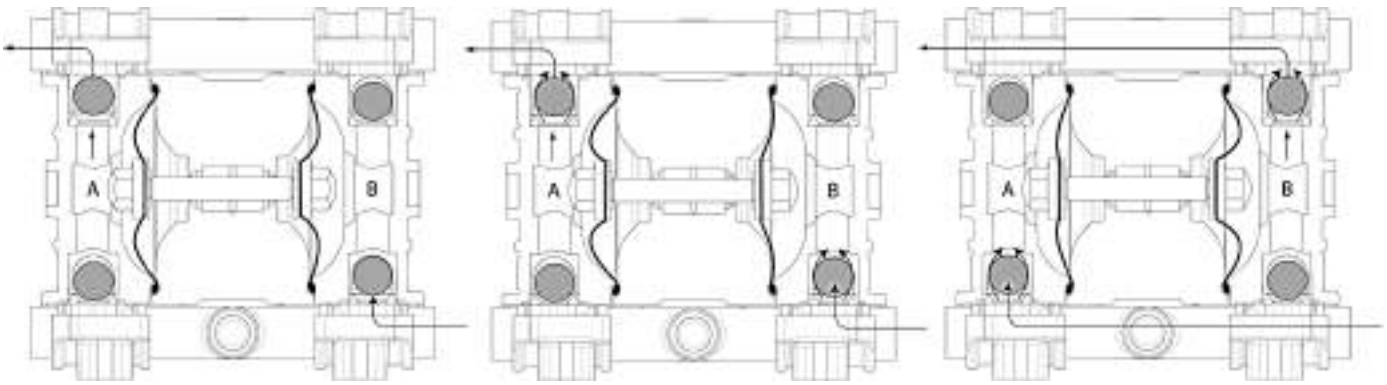
HYDRAULIC CHARACTERISTICS



* 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.

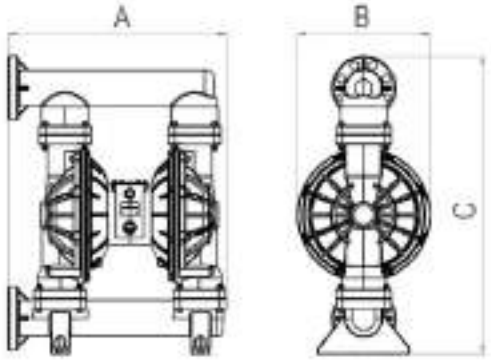
OPERATING PRINCIPLE

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.

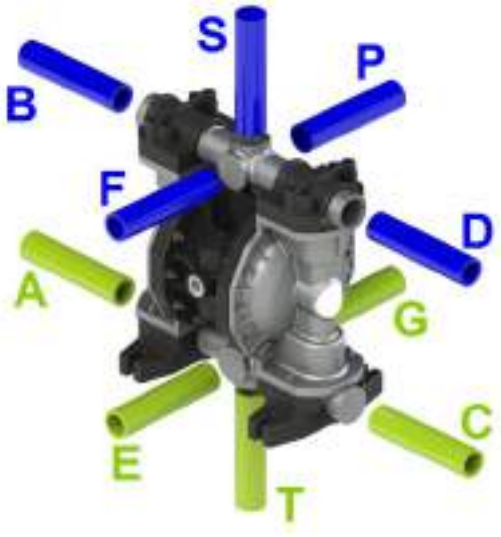


DIMENSIONS (*ALL materials*)

	A	B	C	Weight	Temperature	
PP	685 mm	417 mm	933 mm	50 kg	- 4°C	+ 65°C
PVDF	685 mm	417 mm	933 mm	55 kg	- 20°C	+ 95°C
ALU	570 mm	420 mm	838 mm	55 kg	- 20°C	+ 95°C
SS	570 mm	420 mm	838 mm	120 kg	- 20°C	+ 95°C



AVAILABLE CONNECTIONS



Standard = A B (Dn 80 PP, PVDF)

IN = A-C

OUT =B-D