AODD PUMPS

0170 DUOTEK Series–Pneumatic Diaphragm Pumps



TECHNICAL DATA

- Connections:
  - Fluid 1” - DN25
  - Air 1/2”
- Max Flow-rates: 170 l/min
- Max air pressure: 8 Bar
- Max delivery head: 80 mt
- Max suction head:
  - Dry 5 mt
  - Wet 9.8 mt
- Max d. passing solids: 7.5 mm
- Noise level: 75 dB
- Displacement for cycle: 700 cc
- Pump casing materials:
  - PP
  - PVDF+CF
  - SS
- Max viscosity: 35.000 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 35.000 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]
0170	170	PP-PVDF	DN25 - 1"	1/2"	5	7,5	35.000	75	200
		SS	1" *						

* **FLANGED**: add the cost of the related KIT — ° With **DRY** pump. To **WET** pump: **9,8 m**

body material

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

AIR diaphragm

- **H** Hytrel
- **M** Santoprene
- **D** EPDM
- **N** NBR

FLUID diaphragm

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

balls

- **T** PTFE
- **S** SS316
- **D** EPDM
- **N** NBR

ball seats

- **P** Polypropylene
- **K** PVDF
- **S** SS316
- **Z** PE-UHMV

O-Rings

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

connections

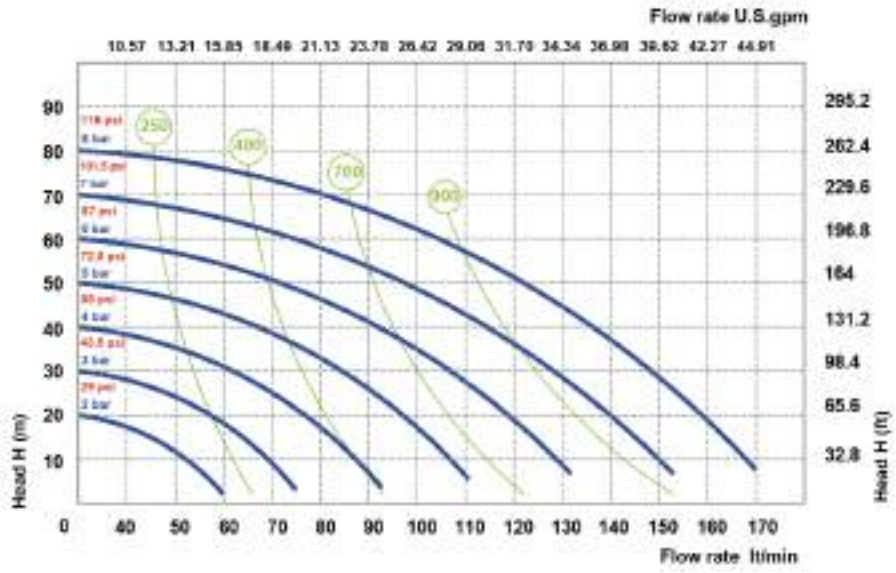
- **1** BSP threaded
- **2** Flanged
- **4** Twin connection
- **5** NPT threaded
- **6** BSP threaded + metal ring
- **7** Extra connections

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	0170	P	M	T	T	P	T	1	-

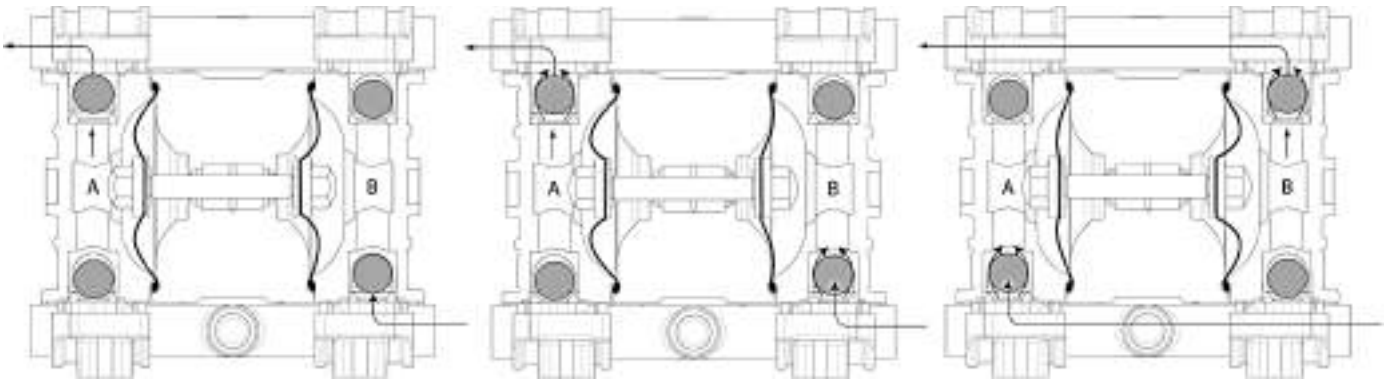
HYDRAULIC CHARACTERISTICS



* 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.

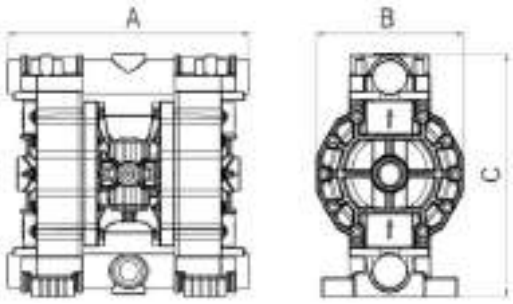
OPERATING PRINCIPLE

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.

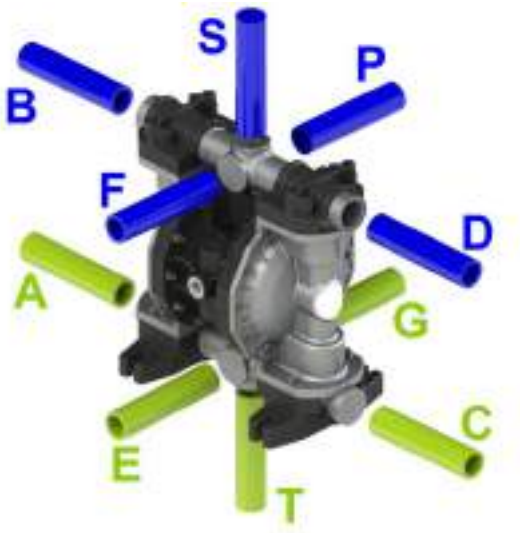


DIMENSIONS (*ALL materials*)

	A	B	C	Weight	Temperature	
PP	430 mm	222 mm	416 mm	15 kg	- 4°C	+ 65°C
PVDF	430 mm	222 mm	416 mm	16 kg	- 20°C	+ 95°C
SS	357 mm	222 mm	371 mm	20 kg	- 20°C	+ 95°C



AVAILABLE CONNECTIONS



Standard = A B

IN = A-E-T-C-G

OUT =B-S-D-F-P