# **ALMATEC**°



Where Innovation Flows

AIR-OPERATED DOUBLE-DIAPHRAGM PUMPS
CONSTRUCTED FROM CONDUCTIVE POLYETHYLENE



CXM SERIES

almatec.de



# CXM Series AODD Pumps

- Air-operated double-diaphragm pumps for low- to middleperformance ranges
- Modular design with seven different product connections: Four sizes with NPT connections and three sizes with BSP connections
- High pump safety due to innovative ring-tightening structure, design protected
- Flow optimizations in the product channels
- Made of conductive polyethylene (ATEX and FDA compliant), machined from solid blocks.
- Air control system PERSWING P® without dead spot
- Diaphragms made of EPDM, NBR or PTFE/EPDM compound
- Ball or cylinder check valves
- · Variable center blocks for different port sizes and positions
- · Self-priming, can run dry
- Suction can empty containers of virtually all fluid

#### **Special Features**

Thanks to the modular design the ALMATEC CXM series AODD pumps are available in four sizes with NPT and in three sizes with BSP connections. This wide range of product connections allows a precise adjustment of the pump to the specific application. This is reinforced by the alternative choice between a ball and cylinder valve system, which can also be converted to each other. Ball valves are ideal for liquids containing particles, cylinder valves for superior suction lift. The pumps are widely used as universal pumps in the low to middle performance range, e.g. as drum pumps.

Flow optimizations in the product channels ensure high performance and gentle pumping. CXM pumps are self priming and proof against dry running. They allow containers to be emptied down to the very last drop, even without supervision.

The housings are made of conductive PE, machined from solid blocks, which has a good overall chemical resistance. CXM pumps can be operated within explosion-proof areas and can handle flammable liquids (ATEX compliant). The pumps also meet the FDA requirements.

The diaphragms used consist of one part only and are designed for a long service life. The Almatec air control system PERSWING P® is operating without any lubrication and has no dead center, important for reliable operation in demanding applications (e. g. on-off-mode at low speed).

#### **High Pump Safety**

The housing parts of the CXM series are tightened to each other via housing bolts. However, instead of single bolts pressing punctually against the housing, all housing bolts are tightened together against a diaphragm-sized ring per side. This structure transmits the forces of the housing bolts into the housing parts evenly.

A consistent flow of forces and an increased bolt torque are the effect of this construction –ultimately increasing pump safety.





## Flexible Choice of Product Connections

Four pump sizes with NPT and three pump sizes with BSP connections are available. The NPT pump sizes 10, 20, 50 and 130 are drop-in interchangeable with the CX and CXR series. The position of the suction and discharge ports can be changed by rotating the center block. The product connections of the BSP pumps sizes 25, 55 and 135 are located on the face side of the pump. The sizes and the connection style at a glance:

- CXM 10 = NPT 3/8"
- CXM 20 = NPT 1/2"
- CXM 25 = BSP ½"
- CXM 50 = NPT 3/4"
- CXM 55 = BSP 1"
- CXM 130 = NPT 1<sup>1</sup>/<sub>4</sub>"
- CXM 135 = BSP 1½"



CXM 10, CXM 20, CXM 50, CXM 130



CXM 25, CXM 55, CXM 135

## CXM 50 FTZ Code System

Type and material of valves: E = valve balls, EPDM; N = valve balls, NBR; S = valve balls, stainless steel; T = valve balls, PTFE; Z = cylinder valves, PE

Material of diaphragms and O-rings: E = EPDM, N = NBR, T = PTFE/EPDM compound (FKM O-rings on request)

Housing material: Conductive Polyethylene, machined from solid blocks

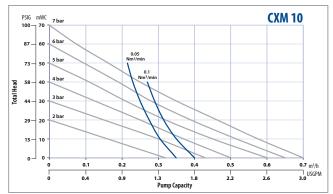
Pump size, capacity in I/min

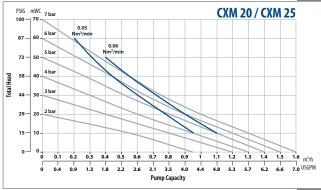
**CXM Series** 

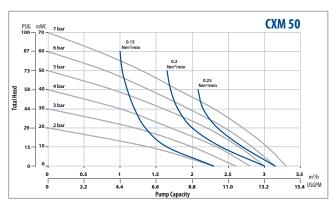
#### **Technical Data**

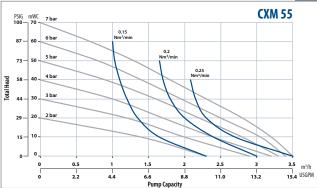
Pump size		CXM 10	CXM 20	CXM 25	CXM 50	CXM 55	CXM 130	CXM 135
Dimensions: Length	mm (in.)	86 (3.4)	124 (4.9)	124 (4.9)	175 (6.9)	180 (7.1)	240 (9.4)	245 (9.7)
Width		135 (5.3)	151 (5.9)	151 (5.9)	201 (7.9)	201 (7.9)	265 (10.4)	265 (10.4)
Height		90 (3.5)	123 (4.8)	123 (4.8)	167 (6.6)	167 (6.6)	217 (8.5)	217 (8.5)
Nominal port size		3/8" NPT	1/2" NPT	1/2" BSP	3/4" NPT	1" BSP	1 1/4" NPT	1 1/2" BSP
Air connection		1/4" BSP	1/4" BSP	1/4" BSP	1/4" BSP	1/4" BSP	1/4" BSP	1/4" BSP
Weight	kg (lb)	1 (2.2)	1.8 (3.8)	1.8 (3.8)	4.7 (10.4)	4.7 (10.4)	11 (24)	11 (24)
Max. driving air pressure	bar (psig)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)	7 (100)
Max particle size of solids for pumps with ball valves	mm (in.)	1.5 (0.06)	2 (0.08)	2 (0.08)	3 (0.12)	3 (0.12)	4 (0.16)	4 (0.16)
Suction head, dry								
Cylinder valves	mWC (ft)	0.7 (2.3)	2 (6.6)	2 (6.6)	4.5 (14.8)	4.5 (14.8)	4.5 (14.8)	4.5 (14.8)
EPDM ball valves		0.5 (1.6)	1 (3.3)	1 (3.3)	3 (9.9)	3 (9.9)	3 (9.9)	3 (9.9)
PTFE ball valves		0.5 (1.6)	1 (3.3)	1 (3.3)	2 (6.6)	2 (6.6)	3 (9.9)	3 (9.9)
Stainless steel ball valves		0.5 (1.6)	1 (3.3)	1 (3.3)	2 (6.6)	2 (6.6)	3 (9.9)	3 (9.9)
Suction head, wet	mWC (ft)	8 (26.3)	8 (26.3)	8 (26.3)	9 (29.5)	9 (29.5)	9 (29.5)	9 (29.5)
Max. operating temperature	°C (°F)	70 (158)	70 (158)	70 (158)	70 (158)	70 (158)	70 (158)	70 (158)

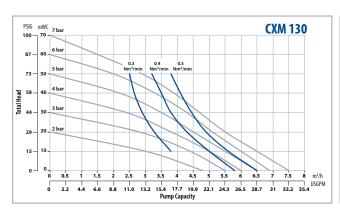
### Performance Range

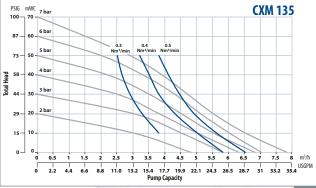












The data refers to water (20°C, 68°F), under using of different pump variations, a compressor Atlas Copco VSG30 and calibrated measuring equipment. The specified performance data are warranted by ALMATEC in accordance with DIN EN ISO 9906. The blue lines state the air consumption.



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Almatec Maschinenbau GmbH Carl-Friedrich-Gauß-Straße 5 47475 Kamp-Lintfort, Germany T: +49 (0) 2842/961-0 F: +49 (0) 2842/961-40 info@almatec.de almatec.de

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