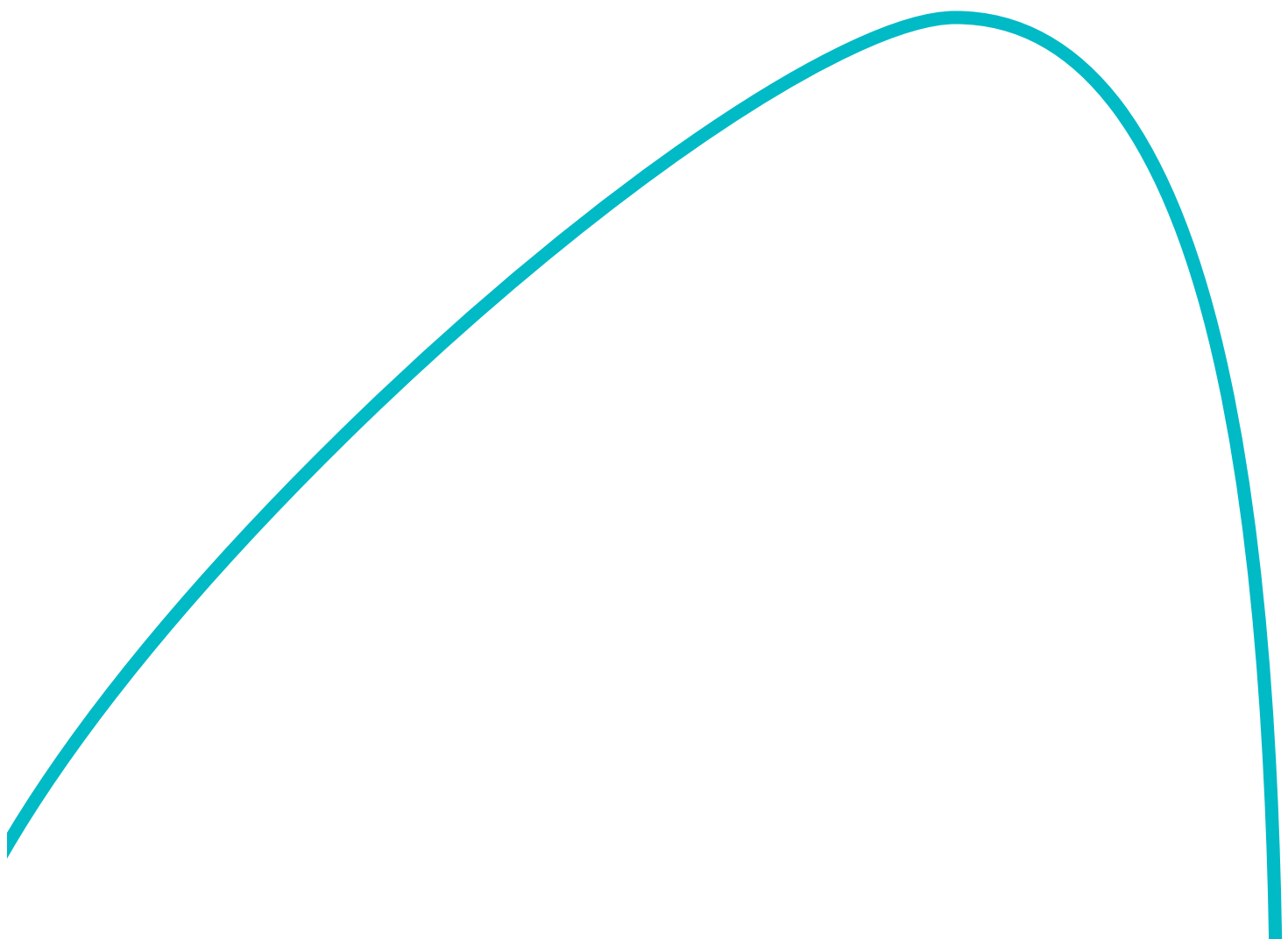


# AODD PUMPS

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





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# ACME – CLEVER PUMPS INNOVATIVE SOLUTIONS FOR FLUID TRANSFER AND DOSING SINCE 1992

Founded in 1992, ACME Pumps quickly established itself as one of the leading manufacturers of industrial peristaltic pumps, air-operated double diaphragm pumps, centrifugal pumps and diaphragm metering pumps. With decades of experience supporting businesses across various sectors, our mission is to deliver highly specialized, tailor-made pumping solutions, solving complex challenges and meeting the unique needs of every customer.

## Headquarters and Production Facility

ACME's headquarters and manufacturing facility are located in Santo Stefano Ticino, just 25 km west of Milan and 30 km south of Malpensa Airport (MXP). This strategic location allows us to efficiently serve both national and international clients, offering excellent logistical connections for shipments and customer support. Our facility houses both the production plant and the commercial offices, enabling close coordination between our technical and sales teams to ensure fast, customized service.

## A Dynamic, Customer-Focused Company

ACME is a lean and flexible organization, able to adapt swiftly to market demands. Our customer-centric approach is reflected in our unique ability to respond to specific and customized requests. Thanks to our strong design expertise and long-standing partnerships with trusted suppliers, we can handle demand surges and provide prompt, reliable solutions—even through well-established subcontracting agreements.

## High-Quality Products for Every Industrial Sector

ACME offers a wide range of AODD pumps, ideal for dosing and transferring fluids in a variety of industrial applications. Sizes range from 1/4" to 3", with flow rates between 1 and 1,050 L/min. Flow is adjustable on all models simply by regulating the air inlet pressure and flow. Thanks to FDA and ATEX certifications, our pumps are fully qualified to operate in the food and pharmaceutical industries, as well as in any environments classified as potentially explosive.

ACME pumps are used across a wide range of industries, including:

- Water purification, wastewater treatment, aquariums, marine and naval sectors
- Chemical, pharmaceutical, and cosmetics industries
- Winemaking, food, and dairy sectors
- Paints, inks, paper mills, and tanneries
- Construction, cement and ceramic plants
- Oil & Gas sector, refineries, and fuel storage facilities.

Thanks to their durability and versatility, our pumps are ideal for transferring and dosing challenging fluids such as corrosive, abrasive, viscous liquids, or those with solid suspensions. They are designed to handle intermittent flow, difficult suction conditions, and can run dry for extended periods.

## Our Mission and Commitment to Quality

Our mission is clear: to deliver specific, customized pumping solutions with the customer always at the center. To ensure maximum reliability, we are constantly improving our products and manufacturing processes. Quality is our hallmark, achieved through:

- Long-standing collaborations with trusted suppliers





- Careful selection of materials and components
- Strict control over the entire production process
- Specialized expertise within our team

### A Leading International Brand

Driven by the professionalism and passion of our team, ACME has grown steadily over the years, strengthening its presence both in the local and international markets. Today, we are recognized as one of the key players in the pump sector, and we continue to expand our reach to meet the needs of an increasingly demanding market.

### Our Product Range

Our range of pumps includes:

- **Peristaltic pumps** – ideal for dosing and transferring viscous fluids with solid particles
- **Double diaphragm pneumatic pumps** – suitable for aggressive industrial fluids
- **Diaphragm dosing pumps** – designed for applications requiring precise dosing

- **Mag-drive and mechanically sealed centrifugal pumps** – for pulse-free transfer of low-viscosity fluids
- **Drum and IBC transfer pumps** – designed for direct liquid transfer from drums or IBC tanks

### Core Values

At the heart of our corporate philosophy lies the customer and a strong commitment to compliance and ethical standards. Every member of our internal and external teams is dedicated to providing solutions that are competent, reliable, and timely.

### Conclusion

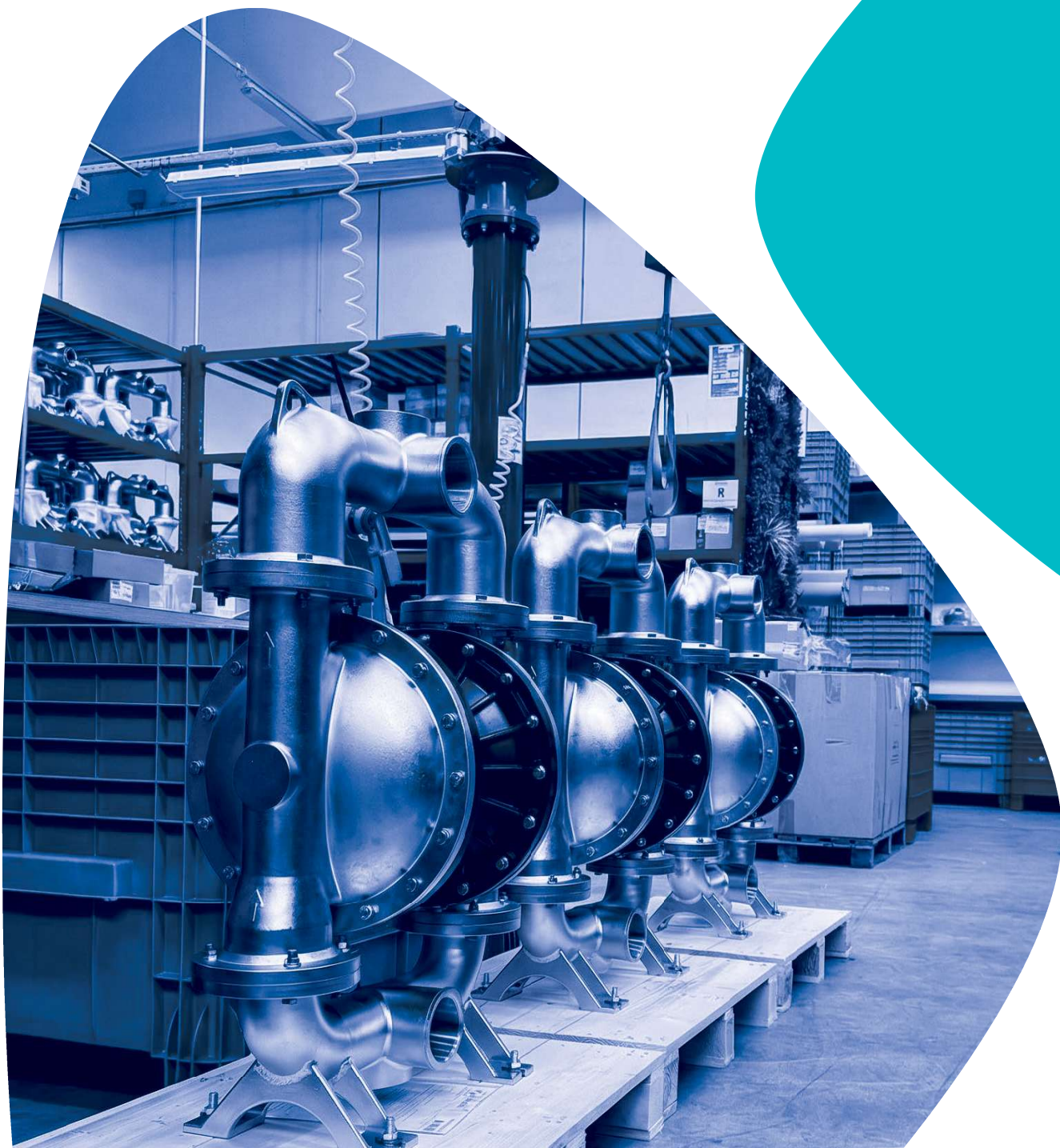
For over 30 years, ACME Clever Pumps has stood for quality, innovation, and reliability in the industrial pump industry. Backed by decades of experience and a drive for continuous innovation, we are ready to support every customer—facing today's challenges and shaping tomorrow's solutions together.















































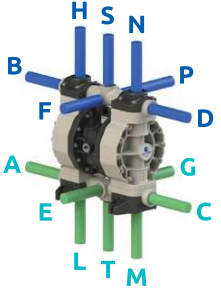
# AIR-OPERATED DOUBLE-DIAPHRAGM PUMPS

Flow-rate from 4 lt/min to 1.050 lt/min.  
Special versions available



# IDENTIFICATION CODES TABLE

AMP	0120	P-	HT	T
MODEL	SIZE	CASING	DIAPHRAGMS	BALLS
<b>AMP</b> AMP 	<b>4</b> 4 lt/min 1/4" BSPP	 <b>P</b> POLYPROPYLENE Wide chemical compatibility. General usage. Reinforced with fiberglass.	 <b>H</b> HYTREL Good resistance to low temperatures and abrasion.	<b>N</b> NBR Suitable for petroleum-based fluids, water, oils, hydrocarbons and mild chemicals.
<b>AMPF</b> AMP FOOD 	<b>8</b> 7 lt/min 1/4" BSPP	 <b>PC</b> CONDUCTIVE POLYPROPYLENE Wide chemical compatibility. General usage. ATEX-compliant.	 <b>W</b> SANTOPRENE HIGH RESISTANCE Solutions and diluted acids.	 <b>D</b> EPDM Suitable for alkaline solutions, diluted acids, ketones and alcohols. Good abrasion resistance.
<b>AMAP</b> ACCURATE AMP 	<b>20</b> 20 lt/min 3/8" BSPP	 <b>KC</b> CONDUCTIVE PVDF Strong chemical resistance to acids and high temperatures. ATEX-compliant.	 <b>NBR</b> NBR Suitable for petroleum-based fluids, water, oils, hydrocarbons and mild chemicals.	 <b>T</b> PTFE Wide chemical compatibility, extreme corrosion resistance, anti-adhesive properties, and high heat resistance.
<b>AMTP</b> TWIN AMP 	<b>35</b> 35 lt/min 1/2" BSPP	 <b>O</b> ACETAL Resistant to a wide range of solvents and hydrocarbons. Good abrasion resistance. (available only in sizes 4, 8 and 10).	 <b>D</b> EPDM Suitable for alkaline solutions, diluted acids, ketones and alcohols. Good abrasion resistance.	 <b>S</b> SS Excellent resistance to corrosion and abrasion. Suitable for viscous fluids.
<b>AMPP</b> POWDER AMP 	<b>60</b> 65 lt/min 1/2" BSPP	 <b>OC</b> CONDUCTIVE ACETAL Resistant to a wide range of solvents and hydrocarbons. Good abrasion resistance. (available only in sizes 4, 8 and 10). ATEX-compliant.	 <b>HT</b> HYTREL + PTFE Wide chemical compatibility, extreme corrosion resistance, anti-adhesive properties, and high heat resistance.	 <b>MT</b> SANTOPRENE + PTFE Suitable for alkaline solutions, diluted acids, ketones and alcohols. Good abrasion resistance.
<b>AMPS</b> SUBMERSIBLE AMP 	<b>90</b> 100 lt/min 3/4" BSPP	 <b>A</b> ALUMINUM Resistant to a wide range of solvents and hydrocarbons. Good abrasion resistance.	 <b>SS</b> SS - AISI 316 ELECTROPOLISHED Excellent resistance to corrosion and abrasion. Food version available.	
<b>AMDP</b> DRUM AMP 	<b>120</b> 120 lt/min 1" BSPP			
<b>AMFP</b> FLAP AMP 	<b>170</b> 170 lt/min 1" BSPP/DN25			
	<b>252</b> 250 lt/min 1" 1/4 BSPP			
	<b>400</b> 380 lt/min 1" 1/2 BSPP DN40			
	<b>700</b> 700 lt/min 2" BSPP DN50			
	<b>1000</b> 1050 lt/min 3" BSPP DN80			

P	V	1	-	AB
BALL SEATS	GASKETS	CONNECTIONS	ATEX ZONE CERTIFICATION	PORTS
<p><b>P</b> POLYPROPYLENE Wide chemical compatibility. General usage.</p>  <p><b>K</b> PVDF Strong chemical resistance to acids and high temperatures.</p>  <p><b>S</b> SS Excellent resistance to corrosion and abrasion.</p>  <p><b>Z</b> PE Suitable for fluids with high molecular weight. High abrasion resistance. (available only with D and N balls).</p>  <p><b>O</b> ACETAL Resistant to a wide range of solvents and hydrocarbons. Good abrasion resistance.</p> 	<p><b>V</b> VITON High heat resistance. Good resistance to aggressive chemicals and hydrocarbons.</p>  <p><b>N</b> NBR Suitable for petroleum-based fluids, water, oils, hydrocarbons and mild chemicals.</p>  <p><b>D</b> EPDM Suitable for alkaline solutions, diluted acids, ketones and alcohols. Good abrasion resistance.</p>  <p><b>T</b> PTFE Wide chemical compatibility, extreme corrosion resistance, anti-adhesive properties, and high heat resistance.</p> 	<p><b>1</b> BSP THREADED</p> <p><b>A</b> BSP THREADED WITH REINFORCED RING</p> <p><b>2</b> FLANGED</p> <p><b>3</b> TRI-CLAMP (AMP FOOD)</p> <p><b>5</b> NPT THREADED</p> <p><b>E</b> NPT THREADED WITH REINFORCED RING</p> <p><b>6</b> DIN 11851/3 (AMP FOOD)</p>	<p></p> <p>- ATEX ZONE 2 From P4 to P120 models   II 3/3 G Ex h IIC T4 Gc   II 3 D Ex h IIIB T135°C Dc X</p> <p>From P170 to P1000 models   II 3/3 G Ex h IIB T4 Gc   II 3 D Ex h IIIB T135°C Dc X</p> <p><b>X</b> ATEX ZONE 1 From P4 to P120 models   III 2/2 G Ex h IIC T4 Gb   II 2 D Ex h IIIB T135°C Db X</p> <p>From P170 to P1000 models   II 2/2 G Ex h IIB T4 Gb   II 2 D Ex h IIIB T135°C Db X</p>	
<p><b>SPECIAL FEATURES</b></p> <p><b>AMSP</b> STAINSTEEL AMP central block made of stainless steel</p> <p><b>AMSCP</b> STROKE COUNTER AMP with external pneumatic signal</p> <p><b>AMPCR</b> AMP with shorter strokes</p> <p><b>AMPCL</b> AMP with longer strokes</p>				

# PUMP OPERATION



## 1 - SUCTION CYCLE

Compressed air fills the right inner chamber. The movement of the opposing diaphragm lifts the lower valve ball, creating suction and drawing fluid through the inlet. At the same time, the left chamber is in the “Discharge” cycle.

## 2 - DISCHARGE CYCLE

Compressed air fills the left inner chamber. The opposing chamber, by lifting the upper valve, discharges fluid. At the same time, the right chamber is in the “suction” cycle.

# INSTALLATION



### Pump installed below head (positive suction)

Used when the tank must be completely emptied



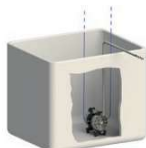
### Self-priming pump installed above head (negative suction)

Easily handles initial dry suction



### Pump installed above drum or tank

Special-feature pump



### Submerged pump

Chemical compatibility must be verified



### Pump installed on hopper for high viscosity fluids

The hopper’s height helps the pump in moving the fluid. Air pressure has to be high, and a suction tube needs to be bigger than the pump’s size



### Suspended

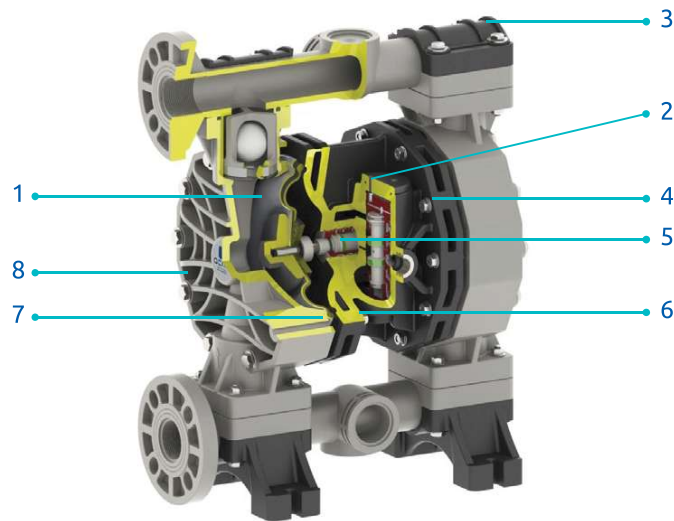
Special version for ceiling fixing that comes with additional feet in the upper part



### Pump installed on a mobile unit

The trolley or cart facilitates easy handling of the pump

# TECHNICAL DATA SHEET



- 1** Long-lasting diaphragms that ensure a consistent performance and longer operating life.
- 2** Efficient design of the pneumatic exchanger ensures low air consumption. An unbalanced pilot spool precisely controls the positioning of the main power spool, eliminating stalling and increasing efficiency.
- 3** All-bolted design ensures effective sealing and maximum safety.
- 4** Solid polypropylene air chambers and plastic air valve ensure maximum chemical resistance in highly corrosive environments.
- 5** Acetal pneumatic exchanger and bushings provide long-lasting resistance thanks to self-lubrication.
- 6** The pneumatic exchanger is easily accessible from the outside for quick inspection. The air system is lube-free, antistall and antifreeze.
- 7** Special diaphragm clamping, designed to minimize wear and increase service life, while providing a secure, hermetic and leak-proof seal.
- 8** Exhaust chamber with double silencer designed to enhance diffusion passages, reduce freezing, and ensure low noise levels.

- ◆ Wide range of flow rates and materials suitable for various conditions and fluids
- ◆ Safe "dead head" operation: with a closed discharge the pump will not be damaged
- ◆ Suitable for handling of liquids containing solids particles
- ◆ Fully submersible: can be entirely immersed, depending on fluid compatibility
- ◆ Serviceability: easily and quickly maintained with no special tools required
- ◆ High performance thanks to an optimal and functional design
- ◆ Self-priming: capable of dry suction up to 6 meters
- ◆ Seal-less design: dry-run without damaging the pumping system

**QUALITY** 100% of the pumps are tested with water after final assembly

**SAFETY** ATEX certification on all versions: conductive plastic pumps available

**FLEXIBILITY** Multiple porting options and connection types available



# PUMP SELECTION

To select the appropriate pump model based on the intended application, the following factors should be considered in order to optimize performance, extend service life, and minimize maintenance costs:

- The nature of the fluid to be pumped, its viscosity, and the solids particles it may contain;
- The pump capacity in relation to the required flow rate;
- Suction and discharge (head) conditions;

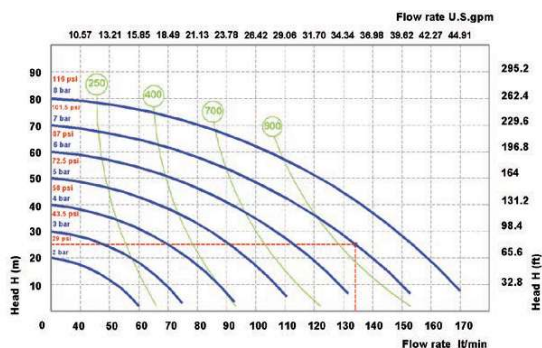
Taking these parameters into account, the correct pump is selected when the intersection of the “head” and “flow rate” axes on the performance curve is near the center section of the graph.

## PERFORMANCE CURVES

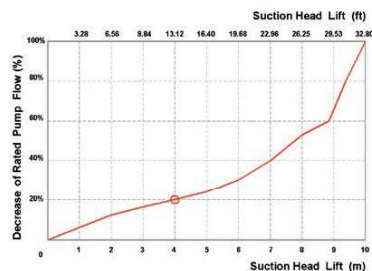
To determine the compressed air requirements and the proper size for a ACME AODD pump, two pieces of information are necessary:

- 1 Required flow rate
- 2 Total delivery head

For example, consider the P170 pump performance curve, which has a pumping capacity of approximately 135 l/min at 25m. Point A on the performance curve is the intersection between the required flow rate and the total delivery head, and it determines the compressed air requirements for this pump. At point A, the pump will require approximately 7 bar of air inlet pressure for proper operation. To verify this, follow the blue curve on the left to read the air pressure in BAR. Then, by following the nearest green curve, it can be seen that the pump will require approximately 900 nl/min (Normal Liter per minute) of air consumption.

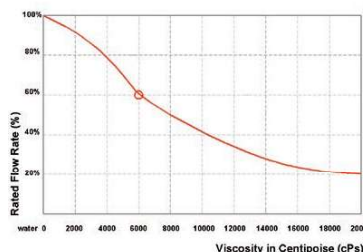


## SPECIFIED SUCTION LIFT



With a suction lift of 4 m, the pump’s flow rate decreases by approximately 20%. This applies to pumps of 3/4” and larger; data varies depending on the pump configuration.

## VISCOUS LIQUIDS PERFORMANCE DATA



When pumping a fluid with a viscosity of 6000 cps, the pump’s flow rate decreases by 60% of its rated value (100% = water). This applies to pumps of 3/4” and larger.

Pump Type	AODD	Centrifugal	Lobe	Gear	Screw	Peristaltic	Piston
Variable Flow & Head Control	◆	◆	◆	◆	◆	◆	◆
Deadhead Safety	◆	◆	◆	◆	◆	◆	◆
Dry-Running	◆	◇	◇	◇	◇	◆	◇
Dry Self-Priming	◆	◇	◇	◆	◇	◆	◆
No Mechanical Alignment	◆	◇	◇	◇	◇	◇	◇
No Electrical Installation	◆	◇	◇	◇	◇	◇	◇
Portability	◆	◆	◆	◆	◆	◆	◆
Submersible	◆	◆	◇	◇	◇	◇	◆
Sealless	◆	◆	◆	◆	◆	◆	◆
Cavitation Tolerance	◆	◇	◆	◆	◆	◆	◆
Low Shear & Degradation	◆	◇	◆	◆	◆	◆	◆

◆ = Suitable   ◆ = With limitations   ◇ = Not recommended

# DAMPER

## PNEUMATIC DAMPERS

Pneumatic, automatic pulsation DAMPERS  
Applicable to all size of pumps  
Available also in ATEX and FOOD version



# DAMPER

The active pulsation dampener is the most efficient way to remove pressure variations on the discharge of the pump. ACME pulsation dampener works actively with compressed air and a diaphragm, setting automatically the correct pressure to minimize the pulsations. Pulsation dampers require minimum maintenance and are, subject to the requirements of the application, available in the same housing and diaphragm materials as the pump.

## HOW IT WORKS

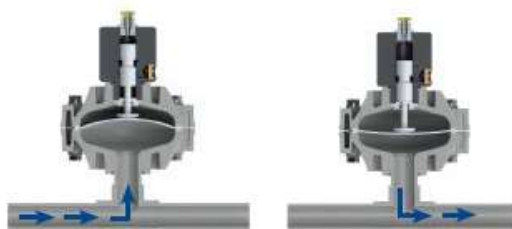
Il fluido pulsante della mandata spinge la membrana verso l'alto dove è ammortizzata dall'aria nella camera pneumatica. La flessione della membrana assorbe la pulsazione creando un flusso costante.



**Significant Pulsation Reduction with an average 70% - 80% pulsation reduction in high back pressure applications.**

## APPLICATIONS

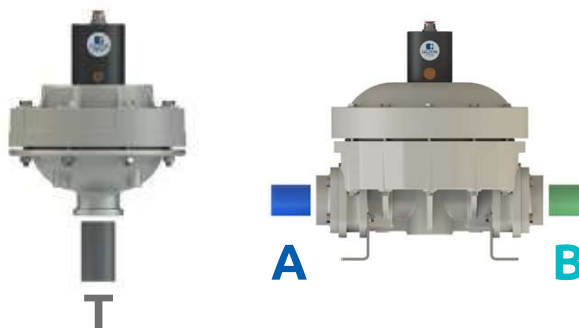
- **METERING/ INJECTION/DOSING:**  
Equalizes discharge pressure spikes, increasing accuracy
- **FILTER PRESS/INLINE FILTERS**  
Increases filter efficiency and life by providing a smooth flow
- **SPRAYING**  
Smooth, consistent spray pattern
- **FILLING**  
Eliminates inconsistent filling and splashing
- **TRANSFER**  
Eliminates harmful water hammer, preventing pipe and valve damage



## INSTALLATION



## PORT POSITION



# DAMPER

## DAMPER 20

### AD20



PP



PVDF+CF



POMc



SS



SS (DF020)

## TECHNICAL DATA

Fluid connections 3/4" BSP

Air connection 6 mm

Max air pressure 8 bar

Capacity Volume 80 CC ~

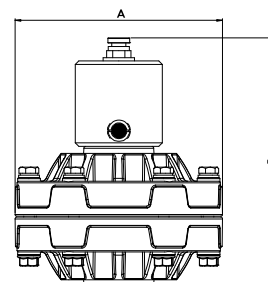
⊗ II 3/3 G Ex h IIC T4 Gc

⊗ II 3 D Ex h IIIB T135°C Dc X

**USABLE WITH:**  
4 - 8 - 20 - 35

## DIMENSIONS

	PP	PVDF	POMc	SS
A (mm)	119	119	119	119
B (mm)	143	143	143	143
Weight Kg	0,65	0,7	0,65	2
Max Temp.	+65°C	+95°C	+80°C	+95°C
Min Temp.	-4°C	-20°C	-5°C	-20°C



MODEL	CASING	DIAPHRAGM	CONNECTIONS	PORTS
AD020	P = PP KC = PVDF+CF O = POMc S = SS	HT = HYTREL+PTFE MT = SANTOPRENE+PTFE H = HYTREL W = SANTOPRENE H.R.	1 = BSP 2 = FLANGED 5 = NPT	T = STANDARD
ADF020	S = SS	HT = HYTREL+PTFE	3 = TRI-CLAMP	T = STANDARD

## DAMPER 25

### AD25



PP



PVDF+CF



POMc



SS



SS (DF025)

## TECHNICAL DATA

Fluid connections 1" BSP

Air connection 8 mm

Max air pressure 8 bar

Capacity Volume 200 CC ~

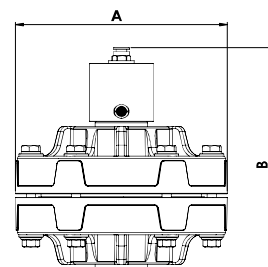
⊗ II 3/3 G Ex h IIC T4 Gc

⊗ II 3 D Ex h IIIB T135°C Dc X

**USABLE WITH:**  
55 - 60 - 90 - 120

## DIMENSIONS

	PP	PVDF	POMc	SS
A (mm)	181	181	181	181
B (mm)	195	195	195	195
Weight Kg	1,75	2	1,9	6,7
Max Temp.	+65°C	+95°C	+80°C	+95°C
Min Temp.	-4°C	-20°C	-5°C	-20°C



MODEL	CASING	DIAPHRAGM	CONNECTIONS	PORTS
AD025	P = PP KC = PVDF+CF O = POMc S = SS	HT = HYTREL+PTFE MT = SANTOPRENE+PTFE H = HYTREL W = SANTOPRENE H.R. D = EPDM N = NBR	1 = BSP 2 = FLANGED 3 = TRI-CLAMP 5 = NPT	T = STANDARD
ADF025	S = SS	HT = HYTREL+PTFE	3 = TRI-CLAMP	T = STANDARD

# DAMPER

## DAMPER 40

### AD40



PP



PVDF+CF



POMc



SS



SS (DF040)

## TECHNICAL DATA

Fluid connections 1" 1/2 BSP

Air connection 10 mm

Max air pressure 8 bar

Capacity Volume 700 CC ~

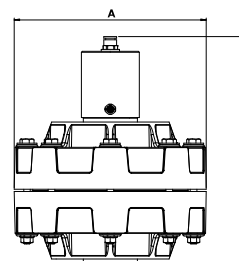
⊕ II 3/3 G Ex h IIB T4 Gc

⊕ II 3 D Ex h IIIIB T135°C Dc X

**USABLE WITH:  
170 - 252 - 400**

## DIMENSIONS

	PP	PVDF	POMc	SS
<b>A (mm)</b>	231	231	231	231
<b>B (mm)</b>	270	270	270	267
<b>Weight Kg</b>	4	4,6	4,2	5,6
<b>Max Temp.</b>	+65°C	+95°C	+80°C	+95°C
<b>Min Temp.</b>	-4°C	-20°C	-5°C	-20°C



MODEL	CASING	DIAPHRAGM	CONNECTIONS	PORTS
AD040	P = PP KC = PVDF+CF O = POMc S = SS	HT = HYTREL+PTFE MT = SANTOPRENE+PTFE H = HYTREL W = SANTOPRENE H.R. D = EPDM N = NBR	1 = BSP 2 = FLANGED 5 = NPT	T = STANDARD
ADF040	S = SS	HT = HYTREL+PTFE	3 = TRI-CLAMP	T = STANDARD

## DAMPER 50

### AD50



PP



PVDF+CF



ALU



SS



SS (DF050)

## TECHNICAL DATA

Fluid connections 2" BSP

Air connection 12 mm

Max air pressure 8 bar

Capacity Volume 2900 CC ~

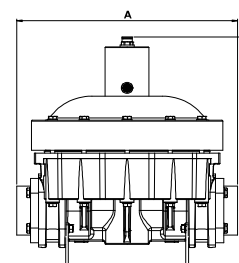
⊕ II 3/3 G Ex h IIB T4 Gc

⊕ II 3 D Ex h IIIIB T135°C Dc X

**USABLE WITH:  
700**

## DIMENSIONS

	PP	PVDF	POMc	SS
<b>A (mm)</b>	404	404	400	402
<b>B (mm)</b>	425	425	425	408
<b>Weight Kg</b>	14	17	14,5	21,6
<b>Max Temp.</b>	+65°C	+95°C	+80°C	+95°C
<b>Min Temp.</b>	-4°C	-20°C	-5°C	-20°C



MODEL	CASING	DIAPHRAGM	CONNECTIONS	PORTS	POSIZIONE
AD050	P = PP KC = PVDF+CF A = ALU S = SS	HT = HYTREL+PTFE MT = SANTOPRENE+PTFE H = HYTREL W = SANTOPRENE H.R. D = EPDM N = NBR	D = EPDM V = VITON N = NBR T = PTFE	1 = BSP 2 = FLANGED 3 = TRI-CLAMP 5 = NPT	T = STANDARD
ADF050	S = SS	HT = HYTREL+PTFE	T = PTFE	3 = TRI-CLAMP	T = STANDARD