



# AIR OPERATED DOUBLE DIAPHRAGM PUMPS





# Leading through innovation



## SAMOA Corporation North America

- Weaverville, NC
- 80,000 Sq.ft. Facility
- Customer Service, Factory & Distribution Center

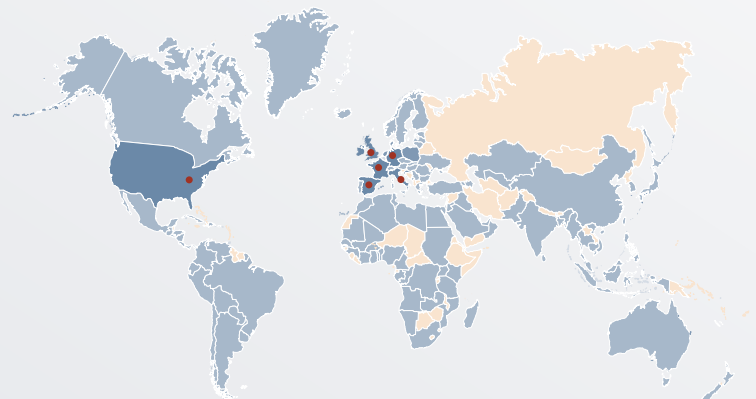


SAMOA Headquarters and Technical Centre in Gijón (Spain)

SAMOA is a leading European manufacturer of high-quality fluid handling equipment. For over 60 years, we have been committed to designing and manufacturing first-class, reliable products that exceed industry standards. We take pride in our manufacturing facilities, which have earned ISO 9001, ISO 14001, and ISO 45001 certifications. This recognition is a testament to our unwavering commitment to environmental sustainability, quality, and safety practices.

Our mission is to provide premier customer service while helping businesses achieve maximum efficiency in their production processes with best-in-class products. Our global network of distributors and subsidiaries provides strong sales support as well as reliable after-sales service - all backed up by a team of skilled SAMOA engineers and technicians. We are the global go-to provider when it comes to fluid handling equipment – one driven by innovation and powered by customer satisfaction.

## Global Presence with Local Support



● Subsidiary

Authorized Distributors

# AIR OPERATED DOUBLE DIAPHRAGM PUMPS

AODD pumps are positive displacement reciprocating pumps. They are the most versatile pumps for low to medium viscosity fluid transfer. SAMOA manufactures an extensive range of AODD pumps for a wide variety of applications.

## ADVANTAGES OF AODD PUMPS



**Portable & Easy to Install.**

**Intrinsically Safe: No electrical Requirements or Hazards.**

**Works with Abrasive, Corrosive or Shear Sensitive Fluids.**

**No Dynamic Mechanical Seals or Packings to Fail.**

**Dead Head Capability (On-Demand Operation).**

**Easy to Operate: Adjustable Flow / Pressure with only an Air Pressure Regulator.**

**Works with Clean Fluids & Fluids with Solids in Suspension.**

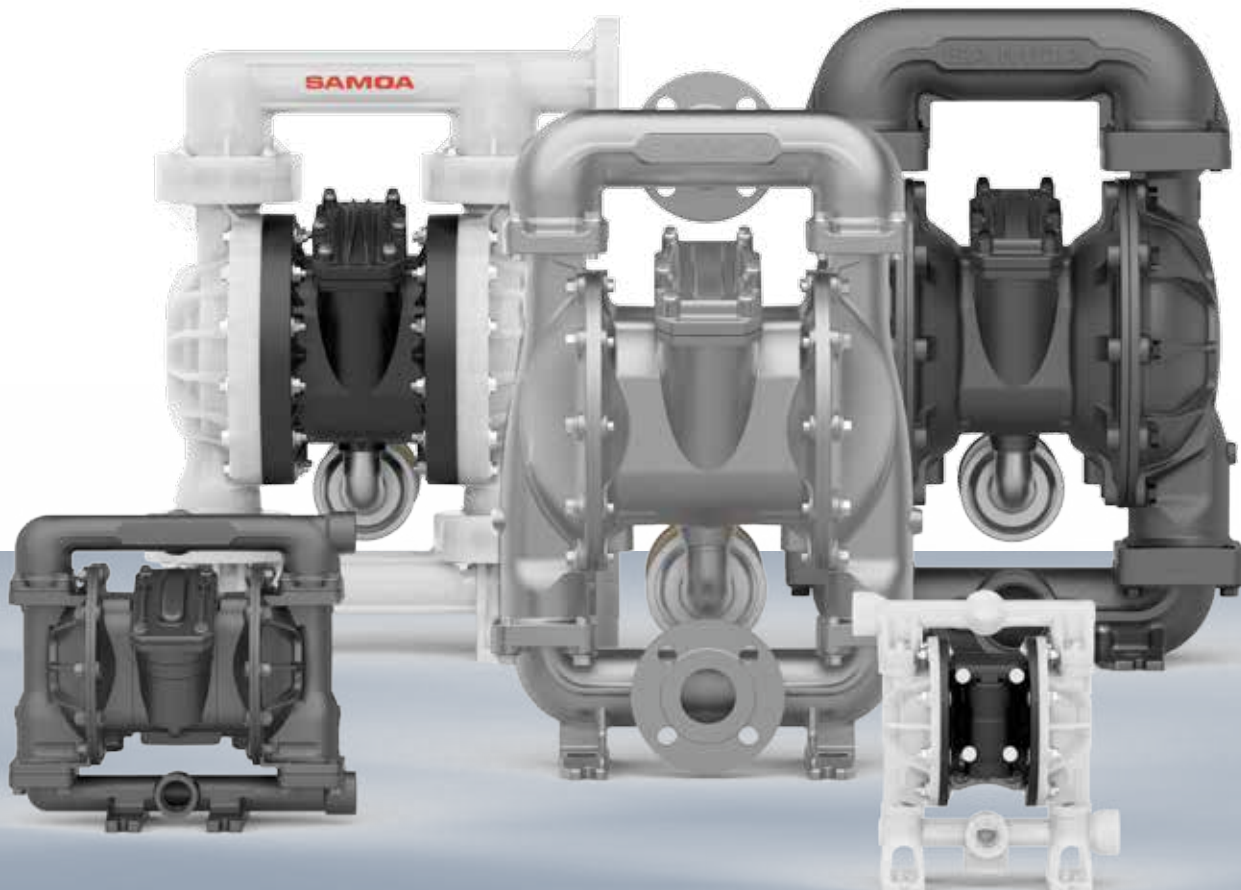
**Long Mean Time Between Failures (MTBF).**

**High Vacuum & Dry Self-Priming.**

**No Heat Generation.**

**Submersible Pump.**

**Dry Run Capable.**

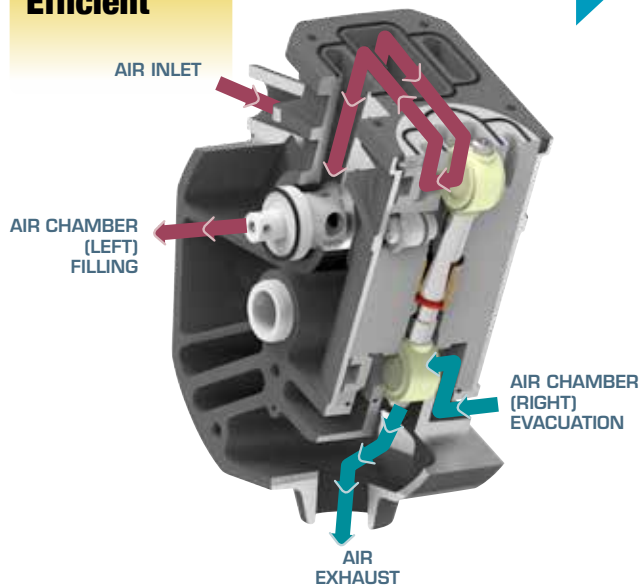


# SAMOA PIVOT SERIES AODD PUMPS

The new SAMOA Pivot Universal Pump (UP) combines a Universal Design with a unique frictionless Pivot-Shaft Air Valve to provide maximum performance and energy efficiency, which exceeds expectations.

## FRICTIONLESS PIVOT AIR VALVE MAKES THE DIFFERENCE

**Up to 50%  
More  
Efficient**



**Pivoting Air Valve: No Sliding Spools to Wear.**

**Runs with Dry, Dirty, or Damp Air.**

**Lube-Free Operation.**

**No Pump Freezing with Direct Path to Exhaust Air.**

**Simple Maintenance: Pivot Valve located in a cartridge that Can Be Replaced in Minutes.**

**Low Air Consumption: Up to 50% Less cfm Needed than Competitors.**

**Quiet Operation.**

## DESIGNED FOR RELIABILITY & LONG SERVICE LIFE

### ABRASION RESISTANT

Manifolds and the fluid path are optimized to reduce fluid speed and minimize wear caused by abrasion.

### LEAK FREE

Bolted construction ensures leak free reliable operation.

### UNIVERSAL PUMPS

Matches relative dimension of main competitive brands, direct replacement for existing installed pumps.

### ADVANCED MATERIALS

Next generation of material blends are used for the diaphragm, ball, and seats to extend the life.

### RELIABLE

Non-stalling, non-freezing air motor with reliable low pressure start up.

### MINIMAL PUMP VIBRATION & PULSATION

Low Vibrations protect mounting feet and piping failures while low pulsation protect downstream equipment and processes.



# SAMOA PIVOT SERIES AODD PUMPS



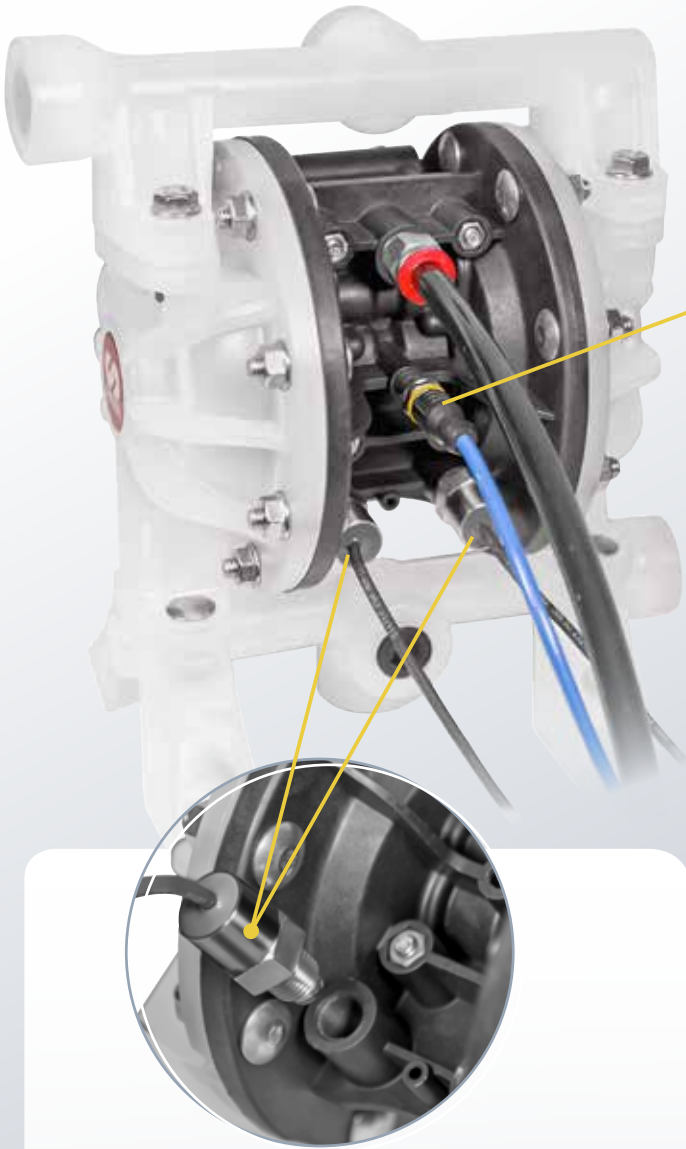
METALLIC	PORT SIZE & TYPE	MAXIMUM FLOW	MAXIMUM PRESSURE	FLUID CHAMBERS & MANIFOLD MATERIALS	FLUID INLET/OUTLET CONNECTIONS	MAXIMUM SOLIDS SIZE	MAXIMUM SUCTION LIFT
	<b>1/2" (UP05)</b>	14.3 gal/min (54 l/min)	120 psi (8 bar)	Aluminium 316 Stainless Steel	1/2" NPT (F) or BSP (F) Threaded	3/32" (2.5 mm)	16 ft Dry (5 m) 26 ft Wet (8 m)
	<b>1" (UP10)</b>	53 gal/min (200 l/min)	120 psi (8 bar)	Aluminium 316 Stainless Steel	1" NPT (F) or BSP (F) Threaded	1/4" (6.4 mm)	16 ft Dry (5 m) 26 ft Wet (8 m)
	<b>2" (UP20)</b>	172 gal/min (650 l/min)	120 psi (8 bar)	Aluminium, 316 Stainless Steel, Ductile Iron	2" NPT (F) or BSP (F) Threaded 2" ANSI/DIN Flange	1/4" (6.4 mm)	16 ft Dry (5 m) 26 ft Wet (8 m)
	<b>3" (UP30)</b>	264 gal/min (1000 l/min)	120 psi (8 bar)	Aluminium 316 Stainless Steel	3" NPT (F) or BSP (F) Threaded 3" ANSI/DIN Flange	1/2" (12.7 mm)	19.7 ft Dry (6 m) 26.3 ft Wet (8 m)



NON-METALLIC	PORT SIZE & TYPE	MAXIMUM FLOW	MAXIMUM PRESSURE	FLUID CHAMBERS & MANIFOLD MATERIALS	FLUID INLET/OUTLET CONNECTIONS	MAXIMUM SOLIDS SIZE	MAXIMUM SUCTION LIFT
	<b>3/8" (UP03)</b>	8.2 gal/min (31 l/min)	100 psi (7 bar)	Polypropylene, Conductive Acetal, PVDF, Conductive Polypropylene	3/8" NPT (F) or BSP (F) Threaded	1/16" (1.6 mm)	10 ft Dry (3 m) 23 ft Wet (7 m)
	<b>1/2" (UP05)</b>	13.5 gal/min (51 l/min)	100 psi (7 bar)	Polypropylene, Conductive Acetal, PVDF, Conductive Polypropylene	1/2" NPT (F) or BSP (F) Threaded	3/32" (2.5 mm)	16 ft Dry (5 m) 26 ft Wet (8 m)
	<b>1" (UP10)</b>	53 gal/min (200 l/min)	100 psi (7 bar)	Polypropylene, PVDF, Conductive Polypropylene	1" NPT (F) or BSP (F) Threaded 1" ANSI/DIN Flange (Central or Lateral)	1/4" (6.4 mm)	16 ft Dry (5 m) 26 ft Wet (8 m)
	<b>2" (UP20)</b>	172 gal/min (650 l/min)	100 psi (7 bar)	Polypropylene, PVDF, Conductive Polypropylene	2" ANSI/DIN Lateral Flange	1/4" (6.4 mm)	16 ft Dry (5 m) 26 ft Wet (8 m)

# ELECTRONIC INTERFACE ACCESSORIES

Connectivity for Control and Monitoring Systems – PLC Compatible



## STROKE SENSOR

Electronic pulse is created each time the pump completes a stroke.

- **Preventive Maintenance:** monitoring total number of cycles to establish a maintenance program.
- **Process Validation:** monitoring the cycle rate for proof of operation.
- **Prevents Dry Running:** whenever a pump exceeds a fixed maximum speed, the pump stops.
- **Batching / Blending:** monitoring pump cycles to reach a specific batch application (Tank filling, formulating, etc.).

## LEAK DETECTION

Optic-electric sensors used to detect diaphragm failures.

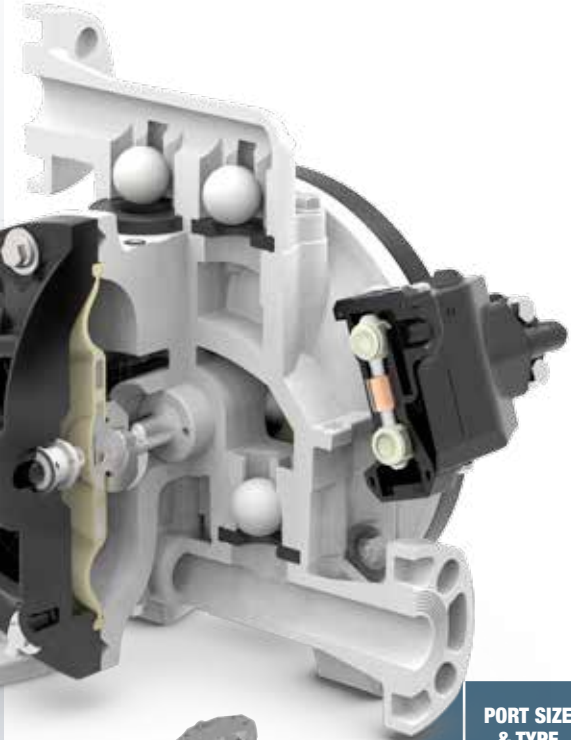
- **Prevents Material Spills:** Electronic signal provided as soon as drop of fluid enters the air chamber. Sensors are paired with a Solenoid Valve to stop the pump operation.
- **Reduces Maintenance Cost:** Alert of failure before fluid potentially contaminates the Air Motor and increases the scope of the repair.



## SOLENOID VALVE

- 24-volt air solenoid valves control the compressed air supply to the pumps.
- 2/3 solenoid valves, can be connected in either normally closed or normally open.

# SAMOA DIRECTFLO® SERIES ADD PUMPS



### COMPACT DESIGN

- Fluid flows through the center of the pump, compressed air acts on the outside of the diaphragms
- 30% - 50% smaller than UP Series.

### OVERMOLDED DIAPHRAGMS ARE STANDARD

- Extremely reliable, with no exposed piston to entrap particles that wear diaphragms.

### REDUCED AIR CONSUMPTION

- 30-60% less at the same flow rate when compared with manufacturers.

### MINIMAL VIBRATIONS & PULSATIONS

- Could eliminate the need for pulsation dampeners.



	PORT SIZE & TYPE	MAXIMUM FLOW	MAXIMUM PRESSURE	FLUID CHAMBERS & MANIFOLD MATERIALS	FLUID INLET/OUTLET CONNECTIONS	MAXIMUM SOLIDS SIZE	MAXIMUM SUCTION LIFT
<b>METALLIC</b>	<b>1/2" (DF50)</b>	14 gal/min (50 l/min)	120 psi (8 bar)	Aluminium 316 Stainless Steel	1/2" NPT (F) or BSP (F) Threaded	1/8" (3 mm)	20 ft Dry (6 m) 26 ft Wet (8 m)
	<b>1" (DF100)</b>	28 gal/min (100 l/min)	120 psi (8 bar)	Aluminium 316 Stainless Steel	1" NPT (F) or BSP (F) Threaded	3/16" (4 mm)	15 ft Dry (4.5 m) 23 ft Wet (7 m)
	<b>1" (DP200)</b>	53 gal/min (200 l/min)	120 psi (8 bar)	Aluminium 316 Stainless Steel	1" NPT (F) or BSP (F) Threaded	1/4" (6.4 mm)	16 ft Dry (5 m) 26 ft Wet (8 m)
<b>NON-METALLIC</b>	<b>1/4" (DC20)</b>	5 gal/min (120 l/min)	100 psi (7 bar)	Polypropylene, Conductive Acetal, PVDF, Conductive Polypropylene	1/4" NPT (F) or BSP (F) Threaded	3/32" (2 mm)	6.5 ft Dry (2 m) 23 ft Wet (7 m)
	<b>1/2" (DF30)</b>	10 gal/min (38 l/min)	120 psi (8 bar)	Polypropylene, Conductive Acetal, Conductive Polypropylene	1/2" NPT (F) or BSP (F) Threaded	1/8" (3 mm)	13 ft Dry (4 m) 26 ft Wet (8 m)
	<b>1/2" (DF50)</b>	14 gal/min (50 l/min)	120 psi (8 bar)	Polypropylene, Conductive Acetal, Conductive Polypropylene	1/2" NPT (F) or BSP (F) Threaded	1/8" (3 mm)	20 ft Dry (6 m) 26 ft Wet (8 m)
	<b>1" (DF100)</b>	28 gal/min (100 l/min)	120 psi (8 bar)	Polypropylene, Conductive Acetal, Conductive Polypropylene	1" NPT (F) or BSP (F) Threaded	3/16" (4 mm)	15 ft Dry (4.55 m) 23 ft Wet (7 m)
	<b>1" (DP200)</b>	53 gal/min (200 l/min)	120 psi (8 bar)	Polypropylene, PVDF, Conductive Polypropylene	1" ANSI/DIN FLANGE	1/4" (6.4 mm)	16 ft Dry (5 m) 26 ft Wet (8 m)



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Distributor

