

# UP05 - PIVOT Series

## 1/2" Air-operated double diaphragm pump



# UP05 Non-Metallic

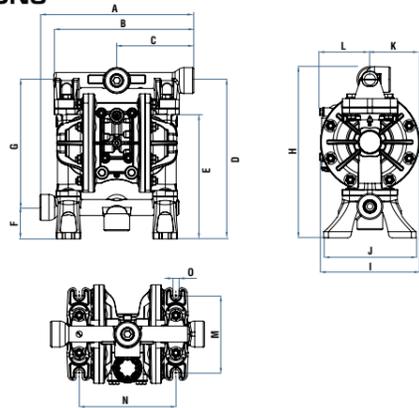
## PIVOT SERIES

### TECHNICAL DATA

	NON-METALLIC
PRESSURE RATIO	1:1
MAXIMUM FREE DELIVERY	54 l/min (14.3 US gal/min)
AIR PRESSURE OPERATING RANGE*	1,5 to 7 bar (20 to 100 psi)
MAX. SIZE SOLIDS IN SUSPENSION	2,5 mm (3/32")
MAXIMUM DRY SUCTION LIFT	5 m (16')
MAXIMUM WET SUCTION LIFT	8 m (26')
DISPLACEMENT PER CYCLE**	0,15 l (0,04 gal)
FLUID INLET AND OUTLET CONNECTIONS (MULTIPOINTS)	1/2" NPT (F) Threaded / 1/2" BSP (F) Threaded
AIR INLET CONNECTION	1/4" NPSM (F)
AIR EXHAUST CONNECTION	1/2" NPT (F)
SOUND LEVEL	75 dB (A) @ 50 cycles/min @ 5 bar
WEIGHT: POLYPROPYLENE	2,7 kg (6 lb)
CONDUCTIVE POLYPROPYLENE	3 kg (6.6 lb)
PVDF	3,7 kg (8.2 lb)
CONDUCTIVE ACETAL	3,3 kg (7.3 lb)

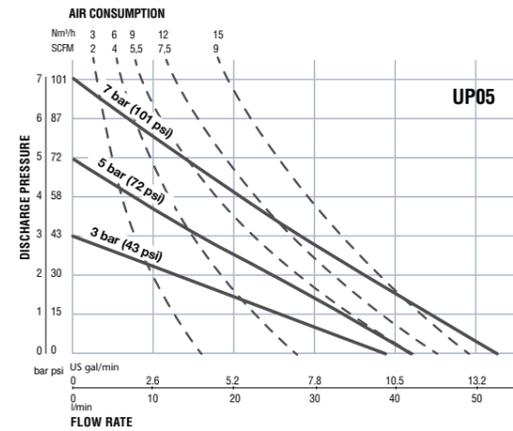
\* Minimum working air pressure may vary depending on the diaphragm material.  
 \*\* Delivery per cycle depends on the diaphragms material, air inlet pressure and fluid viscosity.

### DIMENSIONS



DIMENSIONS (mm)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
UP05 PUMP	250	228	125	257	200	51	206	278	161	150	80	81	125	157	10
DIMENSIONS (inches)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
UP05 PUMP	9.84	8.98	4.92	10.12	7.87	2.01	8.11	10.95	6.34	5.91	3.15	3.19	4.92	6.18	0.39

### PERFORMANCE CURVES



**1/2"**  
**Air-Operated**  
**Double Diaphragm Pump**

NON-METALLIC  
**UP05**

### THREADED PUMPS



POLYPROPYLENE    CONDUCTIVE POLYPROPYLENE    PVDF    CONDUCTIVE ACETAL



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# UP05 - PIVOT Series

## 1/2" Air-operated double diaphragm pump

54 l/min  
14.3 gal/min

The new SAMOA UP05 pump combines a Universal design with a unique frictionless Pivot-Shaft Air Valve to provide maximum performance and **energy efficiency**, exceeding market expectations.

### UP05 Non-metallic pumps make the difference through:

- **HIGHER EFFICIENCY.** Maximum fluid flow with reduced air consumption.
- **INCREASED RELIABILITY.** No stall, no icing, reliable start-up and longer air valve and diaphragms life.
- **MAXIMUM VERSATILITY.** Polypropylene, Conductive Polypropylene, PVDF and Conductive Acetal pumps with a wide range of diaphragms, seats and balls options offer broad fluid and application compatibility. Highly suitable for aggressive chemicals with presence of abrasives.
- **EASY SERVICING.** Simplified maintenance and cleaning. The pump is held together by carriage bolts and nuts allowing to accomplish a much faster tear down and rebuild.
- **ULTRA-COMPACT DESIGN.** Ready to meet any OEM application needs. Multi-port manifolds: central and lateral openings.
- **CONNECTIVITY.** Can be configured to connect a Smart Pump-Controller System to actuate, control and monitor your pumps.

**Lateral fluid inlet and outlet ports** avoid leaking directly onto the pump.

**Carriage bolts and nuts used to prevent leakage and ease maintenance.**

**Long-lasting pre-formed elastomer diaphragms** reduce wear and break compared to traditional designs.

### Non-metallic construction structure

- Superior chemical compatibility.
- Increased resistance to corrosive fluids and atmospheres.
- Very robust bolted design for longer operation lifetime compared to clamped pumps.
- Electrically conductive material for groundable pump version.

**High-grade and grinded elastomer valve-balls, moving into formed cages,** avoid wearing, weakening, and breaking.

**Glass-filled polymer** inserts to reinforce threaded ports in plastic pumps.

### Compact pump to fit any application

### Air motor technology

- With well proven SAMOA Frictionless Pivot-Shaft Air Valve:
- Air Valve Cartridge easy to replace.
  - Superfast change-over shift.
  - No dynamic seals.
  - Stall prevention device (3<sup>rd</sup>).
  - Shorter and oversized evacuation air passages.

### Corrosion-resistant air motor

- Conductive polypropylene Air Chambers and Central Body.
- Non-metallic Air Valve Cartridge.
- Stainless Steel diaphragm-shaft.

### Air exhaust

- Built-in noise reducer.
- Threaded connection allows adding external hose for remote exhaust, and installing available higher efficiency noise reducer.

**Universal pump standards**  
Matches relative dimensions of main competitive brands, allowing easy swap-over.

**PIVOT**  
SERIES  
UNIVERSAL DESIGN

## Exclusive frictionless PIVOT-SHAFT Air Valve

Patented®



### Incredibly fast changeover shift:

- High flow delivery.
- Smooth pump operation.
- Reduced flow pulsation.
- No pump vibration.
- Reduced air consumption.

### Patented Smooth Start Shifter (3<sup>rd</sup>):

- Low-pressure start up.
- No stall operation.

### Shorter and oversized evacuation air passages:

- No icing, even during long pump runs at high pressure.
- No whistle noise.

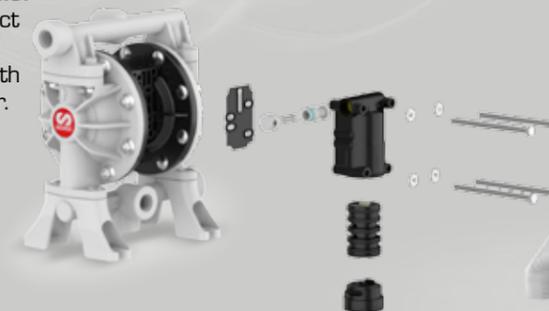
### Long-life Pivot-Pads (shift and evacuation)

### Modular air valve:

- Pivot-Shaft cartridge design
- Precision machined cartridge and Pivot-Shaft.
- Quick teardown for cleaning and repair.

### No dynamic seals:

- No parts subject to wear.
- Reliably work with dry or humid air.
- No lubrication required.



3<sup>rd</sup>  
Smooth-Start-Shifter

## AVAILABLE MATERIALS

SAMOA offers a wide range of material options for chemical compatibility and to withstand abrasion, temperature and fatigue caused by demanding conditions.

Example: UP05X-XXX-XXX

UP05X		XXX			XXX		
PUMP TYPE	AIR MOTOR	HOUSINGS		WETTED PARTS			
1 Pump Type & Size	2 Central Body & Air Chambers	3 Fluid Ports / Location Multiport manifolds: central and lateral	4 Fluid Chambers & Manifolds	5 Hardware Bolts & Inserts	6 Valve Seats	7 Valve Balls	8 Diaphragms Type & Material
UP05 Universal Pump (Bolted)	ATEX Certified B* = Conductive Polypropylene (black)	B = 1/2" BSP threaded ports N = 1/2" NPT threaded ports	P = Polypropylene (white) W = PVDF (Kynar®) (white) ATEX Certified B* = Conductive Polypropylene (black) D* = Conductive Acetal (black)	S = Stainless Steel	C = Acetal P = Polypropylene T = PTFE (Teflon®)	H = Hytrel® M = Santoprene® N = Nitrile (Buna-N) T = PTFE (Teflon®) V = FKM (Viton®)	A = Santoprene® C = Hytrel® G = Nitrile (Buna-N) V = FKM (Viton®)  Two piece Z = PTFE (Teflon with Santoprene® backer)

\*ATEX Certified pumps for use in hazardous locations ATEX Group II 2GDx.

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Contact us for more information about connected pumps' configuration.