

# UP05 - PIVOT Series

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



### TECHNICAL DATA

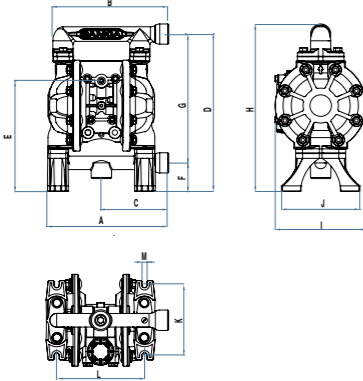
#### METALLIC UP05 - PIVOT SERIES

|  |  |
|--|--|
| PRESSURE RATIO                                   | 1:1  |
| MAXIMUM FREE DELIVERY                            | 54 l/min (14.3 US gal/min)                         |
| AIR PRESSURE OPERATING RANGE*                    | 1,5 to 8 bar (20 to 120 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<br>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: ALUMINIUM                                | Threaded<br>3,9 kg (8,6 lb)                        |
| STAINLESS STEEL                                  | 6,5 kg (14,3 lb)                                   |

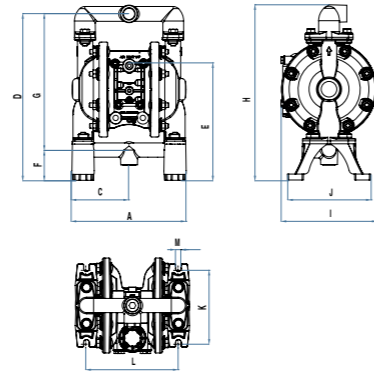
\* Minimum working air pressure may vary depending on the diaphragm material.  
\*\* Delivery per cycle depends on the diaphragms material, air inlet pressure and fluid viscosity.

### DIMENSIONS

#### ALUMINIUM

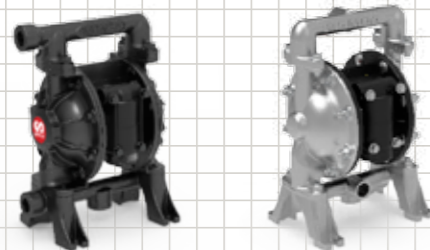


#### STAINLESS STEEL



| DIMENSIONS (mm)      | A    | B    | C    | D     | E    | F    | G    | H     | I    | J    | K    | L    | M    |
|----------------------|------|------|------|-------|------|------|------|-------|------|------|------|------|------|
| ALUMINIUM            | 216  | 207  | 120  | 281   | 197  | 51   | 230  | 299   | 162  | 140  | 124  | 155  | 9    |
| STAINLESS STEEL PUMP | 193  | -    | 96   | 281   | 198  | 51   | 230  | 295   | 161  | 140  | 124  | 155  | 9    |
| DIMENSIONS (inches)  | A    | B    | C    | D     | E    | F    | G    | H     | I    | J    | K    | L    | M    |
| ALUMINIUM            | 8.50 | 8.15 | 4.72 | 11.06 | 7.76 | 2.01 | 9.06 | 11.77 | 6.38 | 5.52 | 4.88 | 6.10 | 0.35 |
| STAINLESS STEEL PUMP | 7.60 | -    | 3.78 | 11.06 | 7.80 | 2.01 | 9.06 | 11.61 | 6.34 | 5.52 | 4.88 | 6.10 | 0.35 |

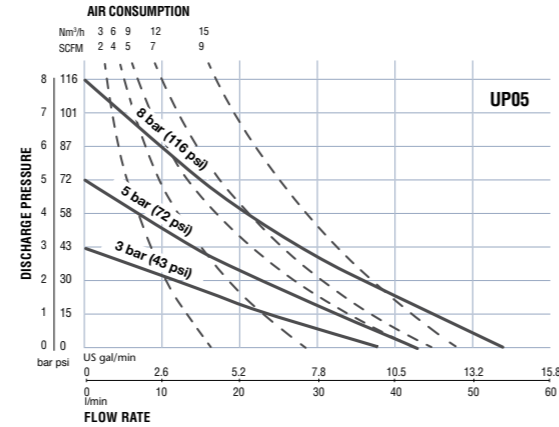
#### THREADED PUMPS



ALUMINIUM

STAINLESS STEEL

### PERFORMANCE CURVES



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

METALLIC  
**UP05**



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Visit: [www.samoaindustrial.com](http://www.samoaindustrial.com) for more information.



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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 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.** Aluminium and Stainless Steel pumps with a wide range of diaphragms, seats and balls options offer broad fluid and application compatibility. Highly suitable for outdoors and general applications 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.
- **COMPACT DESIGN.** Ready to meet any OEM application needs.
- **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.**

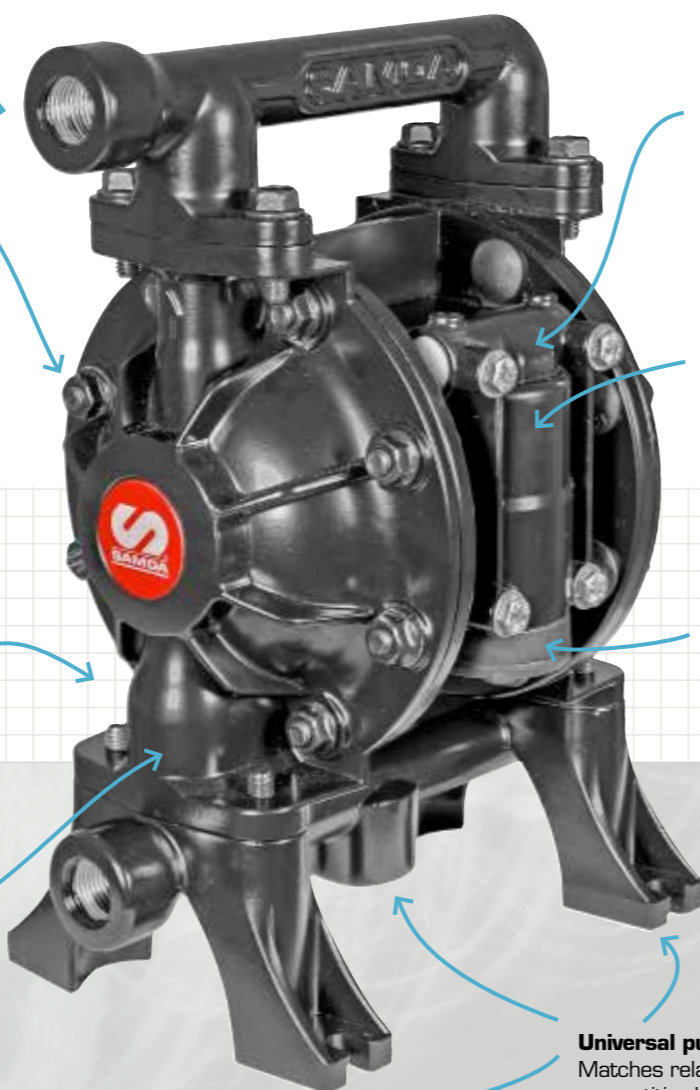
**Long-lasting pre-formed elastomer diaphragms** reduce wear and break compared to traditional designs.

### Metallic construction structure

- Superior abrasion resistance.
- Stainless Steel versions for increased resistance to corrosive fluids, harsh atmospheres, high tensile, and aggressive temperatures.
- Very robust design for longer operation lifetime compared to clamped pumps.

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

**PIVOT SERIES**  
UNIVERSAL DESIGN



### 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>s</sup>).
- Shorter and oversized evacuation air passages.

### Robust air motor

- One piece central body and air chambers.
- Cartridge holder protects valve as a shield.
- Fully groundable ATEX versions.
- Durable diaphragms 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.

## Exclusive frictionless PIVOT-SHAFT Air Valve

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

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>s</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.

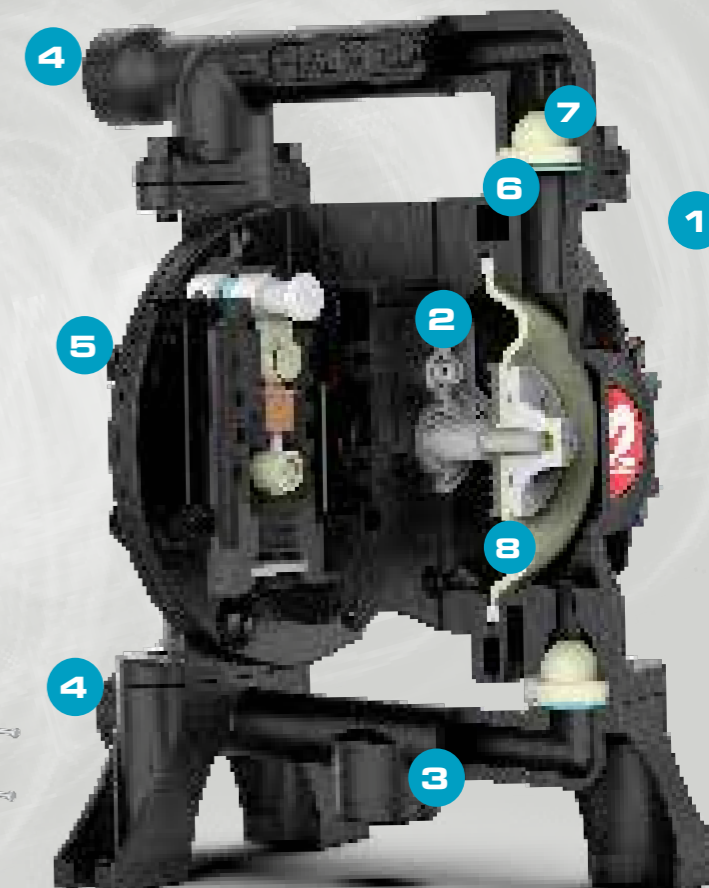
### Long-life Pivot-Pads (shift and evacuation)

### 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.



## 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<br>Pump Type & Size        | 2<br>Central Body & Air Chambers   | 3<br>Fluid Ports / Location<br>Multiport manifolds:<br>central and lateral | 4<br>Fluid Chambers & Manifolds                                   | 5<br>Hardware Bolts & Inserts           | 6<br>Valve Seats                              | 7<br>Valve Balls   | 8<br>Diaphragms Type & Material  |
| UP05 Universal Pump (Bolted) | ATEX Certified<br>A* = Aluminium<br>B* = Conductive Polypropylene (only for pumps with Stainless Steel Fluid Chambers & Manifolds) | B = 1/2" BSP threaded ports<br>N = 1/2" NPT threaded ports                 | ATEX Certified<br>A* = Aluminium<br>S* = AISI 316 Stainless Steel | C = Carbon Steel<br>S = Stainless Steel | A = Aluminium<br>S = AISI 316 Stainless Steel | H = Hytrel®<br>M = Santoprene®<br>N = Nitrile (Buna-N)<br>T = PTFE (Teflon®)<br>S = AISI 316 Stainless Steel<br>V = FKM (Viton®) | A = Santoprene®<br>C = Hytrel®<br>G = Nitrile (Buna-N)<br>V = FKM (Viton®)<br>Two piece<br>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.

**NO VIBRATION | PROVEN SUPERIOR PERFORMANCE | RELIABLE | DURABLE | LOWER CONSUMPTION | UNIVERSAL**

Product pictures and specifications are subject to change without prior notice.

METALLIC  
UP05