

UP20 Metallic PIVOT SERIES



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

METALLIC
UP20

PIVOT
SERIES
UNIVERSAL DESIGN

 **SAMOA**
LEADING THROUGH INNOVATION

UP20 - PIVOT Series

2" Air-operated double diaphragm pump

650 l/min
172 gal/min

The new SAMOA UP20 pump combines a Universal design with a unique frictionless Pivot-Shaft Air Valve to provide maximum performance and **energy efficiency**, exceeding market expectations.

UP20 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.** Threaded or flanged Aluminium, Stainless Steel and Ductile Iron 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. Components designed for long life and reliability.
- **CONNECTIVITY.** Can be configured to connect a Smart Pump-Controller System to actuate, control and monitor your pumps.

Larger section manifolds reduce flow speed and **minimize wear** caused by abrasion.

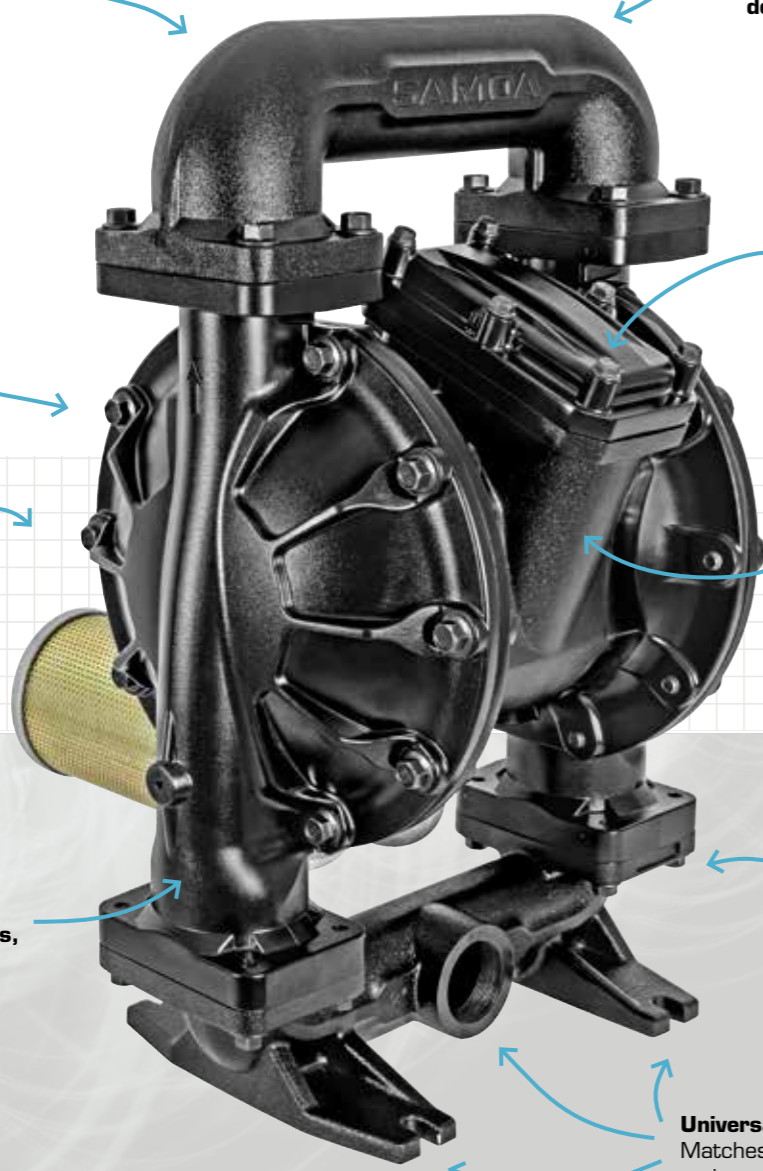
Bolted construction utilizing same bolts for covers and manifolds for optimum sealing to **prevent leakage** and **ease maintenance**.

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

Air exhaust High efficiency noise reducer included.

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

PIVOT
SERIES
UNIVERSAL DESIGN



Optimized flow path results in a **larger flow delivery**.

Air motor technology
With well proven SAMOA Frictionless Pivot-Shaft Air Valve:

- Interchangeable air valve cartridge.
- Superfast change-over shift.
- No dynamic seals.
- Stall prevention device (3^S).
- Short and overdimensioned evacuation air ducts.

Robust air motor

- Threaded and bolted construction.
- Air cap protects valve as a shield.
- Fully groundable ATEX versions.
- Durable diaphragms shaft.

Metallic construction structure

- Electrophoretic epoxy coating in Aluminium and Ductile Iron versions for enhanced corrosion resistance.
- 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.

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

Exclusive frictionless PIVOT-SHAFT Air Valve

3^S
Smooth-Start-Shifter



Incredibly fast changeover shift:

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

Patented Smooth Start Shifter (3^S):

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

Short and overdimensioned evacuation air ducts:

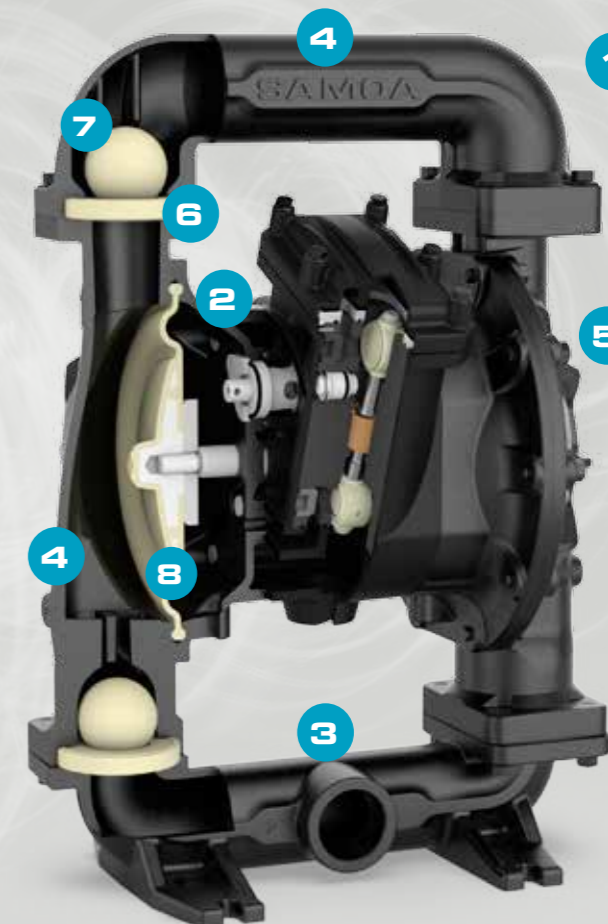
- No icing, even during long pump runs at high pressure.
- No whistle noise.
- Long-life shift and evacuation Pivot-Pads even with high operating pressure.

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.

| UP20X | | XXX | | | XXX | | |
|---------------------------------|---|---|---|---|--|--|---|
| PUMP TYPE | AIR MOTOR | HOUSINGS | | WETTED PARTS | | | |
| 1 Pump Type & Size | 2 Central Body & Air Chambers | 3 Fluid Ports / Location | 4 Fluid Chambers & Manifolds | 5 Hardware Bolts | 6 Valve Seats | 7 Valve Balls | 8 Diaphragms Type & Material |
| UP20 Universal Pump (Bolted) | ATEX Certified A* = Aluminium L* = Conductive polypropylene with Stainless Steel air chambers S* = Stainless Steel | B = 2" BSP Threaded Ports / Centre horizontal C = 2" ANSI/ DIN Flanged Ports / Centre Horizontal N = 2" NPTF Threaded Ports / Centre Horizontal | ATEX Certified A* = Aluminium F* = Ductile Iron S* = Stainless Steel | C = Carbon Steel S = Stainless Steel | A = Aluminium D = AISI 440 Hardened Stainless Steel H = Hytrel® M = Santoprene® N = Nitrile (Buna-N) S = AISI 316 Stainless Steel T = PTFE (Teflon®) V = FKM (Viton®) | H = Hytrel® M = Santoprene® N = Nitrile (Buna-N) S = AISI 316 Stainless Steel T = PTFE (Teflon®) V = FKM (Viton®) | Conventional A = Santoprene® C = Hytrel® G = Nitrile (Buna-N) V = FKM (Viton®) Two-piece Z = PTFE (Teflon®) with Santoprene backer Overmolded H = Hytrel® M = Santoprene® N = Nitrile (Buna N) T = PTFE / EPDM (Bonded) |

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

Hytrel® is a registered trademark of the DuPont Company, Viton® & Teflon® of the Chemours Company and Santoprene® of the Monsanto Company, licensed for Advanced Elastomer Systems, L.P. Kynar® is a registered trademark of Arkema, Inc.

Contact us for more information about connected pumps' configuration.

UP20 - PIVOT Series

2" Air-operated double diaphragm pump

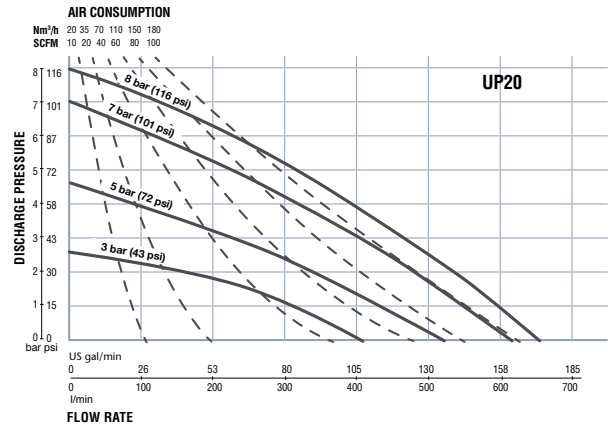
TECHNICAL DATA

METALLIC UP20 - PIVOT SERIES

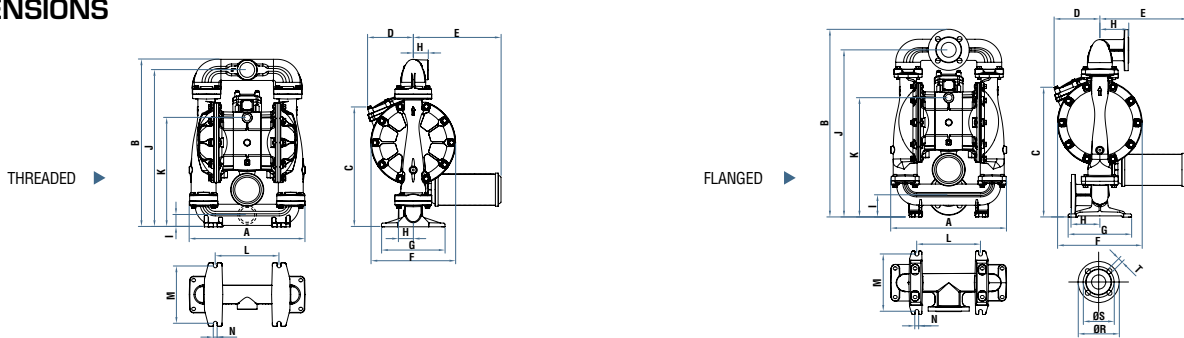
| | | |
|---|--|-----------------|
| PRESSURE RATIO | 1:1 | |
| MAXIMUM FREE DELIVERY | 650 l/min (172 US gal/min) | |
| AIR PRESSURE OPERATING RANGE | 1,5 to 8 bar (20 to 120 psi) | |
| MAX. SIZE SOLIDS IN SUSPENSION | 6,4 mm (1/4") | |
| MAXIMUM DRY SUCTION LIFT | 5 m (16') | |
| MAXIMUM WET SUCTION LIFT | 8 m (26') | |
| DISPLACEMENT PER CYCLE* | 5,1 l (1.35 gal) | |
| FLUID INLET AND OUTLET CONNECTIONS | 2" NPT (F) - Threaded 2" BSP (F) - Threaded 2" ANSI - DIN Flange | |
| AIR INLET CONNECTION | 3/4" NPT (F) | |
| AIR EXHAUST CONNECTION | 1 1/2" NPT (F) | |
| SOUND LEVEL | 85 dB (A) @ 50 cycles/min @ 70 psi | |
| Weight: | Threaded: | Flanged: |
| ALUMINIUM | 46 kg (101 lb) | 48 kg (106 lb) |
| DUCTILE IRON | 74 kg (163 lb) | 78 kg (172 lb) |
| STAINLESS STEEL (Central body: Stainless Steel) | 98 kg (216 lb) | 102 kg (225 lb) |
| STAINLESS STEEL (Central body: Conductive PP) | 85 kg (187 lb) | 90 kg (198 lb) |
| STAINLESS STEEL (Central body: Aluminium) | 76 kg (168 lb) | 82 kg (181 lb) |

*Delivery per cycle depends on the diaphragms material, air inlet pressure and fluid viscosity.

PERFORMANCE CURVES



DIMENSIONS



DIMENSIONS (mm)

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | R | S | T |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|----|-----|-----------|----|
| UP20 FLANGED PUMP | 465 | 754 | 251 | 184 | 353 | 340 | 255 | 116 | 89 | 671 | 479 | 256 | 230 | 15 | 165 | 120,6-125 | 19 |
| UP20 THREADED PUMP | 465 | 672 | 480 | 184 | 353 | 340 | 255 | 60 | 48 | 630 | 438 | 256 | 230 | 15 | - | - | - |

DIMENSIONS (inches)

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | R | S | T |
|--------------------|---------|----------|----------|-------|----------|----------|---------|---------|---------|----------|----------|---------|--------|-------|-------|---------------|------|
| UP20 FLANGED PUMP | 18 5/16 | 29 11/16 | 9 7/8 | 7 1/4 | 13 57/64 | 13 25/64 | 10 3/64 | 4 9/16 | 3 1/2 | 26 27/64 | 18 55/64 | 10 5/64 | 9 1/16 | 19/32 | 6 1/2 | 4 3/4-4 59/64 | 3/4" |
| UP20 THREADED PUMP | 18 5/16 | 26 29/64 | 18 57/64 | 7 1/4 | 13 57/64 | 13 25/64 | 10 3/64 | 2 23/64 | 1 57/64 | 24 51/64 | 17 1/4 | 10 5/64 | 9 1/16 | 19/32 | - | - | - |

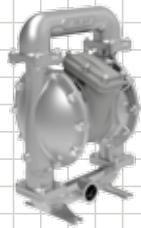
THREADED PUMPS



ALUMINIUM



DUCTILE IRON



STAINLESS STEEL

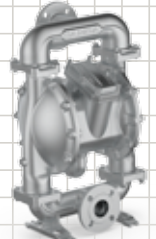
FLANGED PUMPS



ALUMINIUM



DUCTILE IRON



STAINLESS STEEL



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