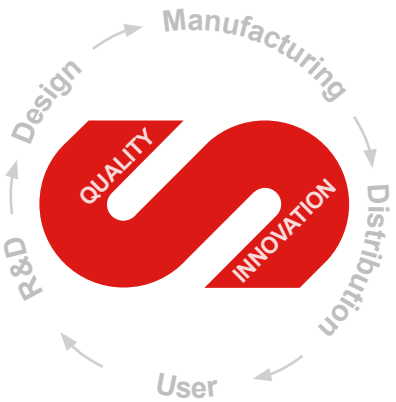
SAMOA
LEADING THROUGH INNOVATION

AIR OPERATED PUMPS

FOR THE **OIL & GAS** INDUSTRY

PRODUCT INNOVATION SINCE 1958

SAMOA Headquarters and Technical Centre in Gijón (Spain)



SAMOA Industrial is a **leading manufacturer of pumps, systems, and solutions for complex fluid handling.** With a focus on quality and innovation, SAMOA designs, develops, manufactures, and distributes products used in transferring, dispensing, applying, measuring, and controlling fluids across various industries.

Founded with an international vision, SAMOA has expanded its presence to over 110 countries through subsidiaries and specialized distributors. The company's core values include innovation, with a **strong R&D department** focused on developing advanced pneumatic pumps and fluid management systems, and excellence, ensuring **high-quality manufacturing and service** through state-of-the-art facilities and strict quality controls. Always committed to **environmental sustainability and a healthy and safe workplace** our work processes and facilities are consequently ISO 9001, ISO 14001 and ISO 45001 certified.

SAMOA also relies on integrity and trust to foster long-term professional relationships with its stakeholders. The company is structured in three product divisions: lubrication equipment, process pumps, and applied industrial-fluid solutions. A third-generation family business, SAMOA has been a trusted leader in fluid handling since 1958.

YouTube

Get to know us.

OIL AND GAS PETROCHEMICAL

CHEMICAL PLANT PROCESSING

MINING AND CONSTRUCTION

PAINTS AND COATINGS

PULP AND PAPER

TEXTILES, LEATHER & GARMENTS

PLANT AND MECHANICAL ENGINEERING

MARINE

TANK FARMS / BULK TRANSFER

ELECTRONICS

CERAMICS

POWER STATIONS (ENERGY)

WASTEWATER AND WATER TREATMENT

Every product we manufacture at SAMOA tells a story of precision and dedication. Our passion for pursuing excellence is reflected in every stage of the process, from design aimed at meeting market needs to after-sales support that ensures optimal performance over time. In a world where it is increasingly common to sacrifice quality to reduce costs, at SAMOA we take pride in offering industrial **solutions designed to last and withstand even the most demanding working conditions.**

The quality of our Europe-made products is embedded in the DNA of every SAMOA product. We use **first-class materials and precision-machined finishes**, and rigorous controls are applied to ensure that every piece, component, and system meets our high targets.

Our reliability and commitment to excellence have been recognized across all continents. Customers have trusted our products for decades to keep their operations running smoothly without interruptions.

Choosing SAMOA Industrial means opting for a company that values precision, reliability, and innovation as much as its customers value results. We are driven by an **unwavering commitment to excellence and a passion for delivering solutions that make a difference.**

NEW PRODUCT LAUNCH PROCESS

- Potential market need and trend detection
- Conceptual design
- Product development
- Pilot series
- Production release
- Launch phase
- Follow-up and comparison with targets
- Logistics adjustments

SAMOA

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 a wide range of AODD pumps for a wide variety of applications in the Oil & Gas industry.

- Tank cleaning.
- Tertiary well control.
- Fuel transfer & stripping.
- Seawater and mud make up.
- Oil spill response and clean-up.
- Glycol recirculation – heat trace.
- Condensate produced water recirculation.
- Utility chemical drain, pit, sump, slurry transfer.
- Cellar pump-out.
- General utility transfer.
- Chemical and fuel flushing.
- Tank bottom recirculation.
- Flare knock-out drum pumping.
- Chemical tote and drum unloading.
- Well stimulation - acidization and coiled tubing.
- Rapid filling pumps for well integrity pressure test units.

SAMOA AODD PUMPS ADVANTAGES

INTRINSICALLY SAFE
Compressed air driven, no electric hazards. CE and ATEX certified.

EFFICIENT
Industry leading air efficiency.

SEAL-LESS PUMPS
No mechanical seals or gland packings.

LEAK FREE
Bolted construction ensures leak free reliable operation.

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

EXTERNALLY SERVICEABLE
Modular Cartridge style air valve design ensures easy maintenance.

MINIMAL VIBRATION AND PULSATION
Thanks to the fast action Frictionless Pivot air valve.

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

SUPERB ABRASION RESISTANCE
Optimized design manifolds and fluid paths reduce fluid speed and minimize wear caused by abrasion.

VERSATILITY
Adjustable flow rates, speed, discharge pressure.

FRICTIONLESS PIVOT AIR VALVE: THE KEY FOR A SUPERIOR PERFORMANCE

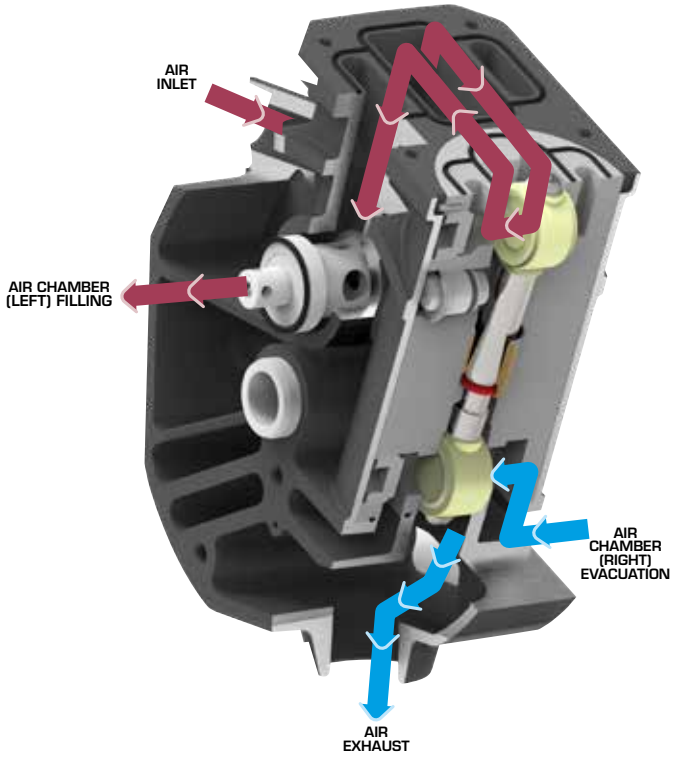
The air valve in an AODD pump makes the difference. SAMOA pumps incorporate a very simple and reliable air valve that features only one moving part: a pivoting rod with two drum-pads at each end. The reciprocating action of this patented Pivot Valve alternatively fills one of pump's air chambers while empties the opposite one.

Two diaphragm end of stroke sensors detect when each diaphragm reaches its end position and instantaneously sends a pneumatic signal to create the reciprocation valve motion.

This pivot valve has no O-rings, sliding blocks or sliding spools that create friction. The friction absence and the immediate pneumatic signal to change direction, provide this valve with the fastest reciprocation action in the industry. This contributes to increase efficiency, reduce compressed air consumption and minimize vibrations when compared with other AODD pumps.

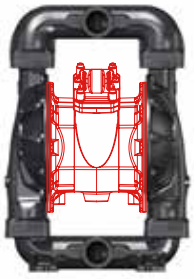
Additionally, the patented air motor incorporates an actuator that prevents stalling and increases pump performance reliability, even with very low air pressure.

The central block design, with generous air flow paths and a direct air exhaust, eliminates the possibility of ice formation, assuring a continuous operation even with the longest pump runs.



- **RUNS WITH DRY, DIRTY, OR DAMP AIR**
- **LUBE-FREE OPERATION**
- **LONG LIFE PIVOT DRUM-PADS**
- **NO ICE FORMATION**

OPTIMIZED PUMP DESIGN FOR LONGER LIFE & INCREASED RELIABILITY



WETTED PARTS

1. **Perfect spherical balls,** grinded and well balanced to guarantee a good performance.
2. **Long life valve-seats design** that facilitates preventive maintenance.
3. **Conventional or overmolded (one piece) diaphragms.**
   - **Annular Vault shape design** for extended diaphragm life in overmolded TPE (Hytrel®) and conventional PTFE / Elastomer, TPE (Hytrel®) and Rubber diaphragms.
   - **Dome shape design with back-up concentric ribs** for extra flexibility in over molded Rubber and PTFE – Rubber (bonded) diaphragms.

PUMP HOUSING

- **All bolted construction** for enhanced safety, sealing capacity, reliability and easy assembly and disassembly. Four bolts pattern per union.
- **Optimized fluid path and cross section** for minimum internal friction.
- **Designed to drop-in as a pump fit-replacement** for existing systems which incorporate competitor's pumps.

1/2" NON-METALLIC PUMPS – UP05 SERIES

54 L/MIN – 14.3 US GAL/MIN

The 1/2" (13 mm) AODD pumps made of injected moulded plastic parts can reach a flow rate up to 5 l/min - 13.5 US gal/min. They offer a wide range of construction materials and multiple porting configurations.

Conductive Acetal, Conductive Polypropylene or PVDF pumps

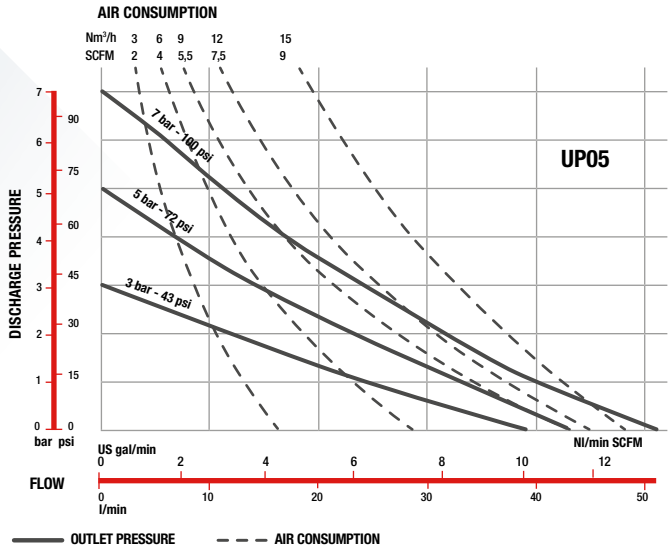
Polypropylene pump

UP05 PUMP DESIGN ADVANTAGES:

- **Higher efficiency. Maximum fluid flow with reduced air consumption.**
- **Full bolted construction for better seal and no leaks. Same bolt size facilitates maintenance.**
- **Universal pump, matches relative dimensions of main competitive brands.**
- **Multiport BSP or NPT threaded manifolds for maximum installation versatility.**
- **Frictionless Air Pivot Valve.**
- **Ideal for drum and IBC/Tote transfer.**

Pumps in conductive polypropylene (black) are ATEX certified Ex II2 GD IIB/IIC 95 °C.

PERFORMANCE CHART



Data measured with water and with the pump inlet flooded.

TECHNICAL DATA	UP05 NON-METAL PUMPS
Pressure ratio	1:1
Maximum free delivery	51 l/min (13.5 US gal/min)
Air pressure range	1,5 to 7 bar (20 to 100 psi)
Ball valve maximum clearance	2,5 mm (3/32")
Max. dry suction lift	5 m (16')
Max. wet suction lift	8 m (26')
Pump delivery per cycle*	0,15 l (0.04 gal)
Fluid inlet / outlet ports	1/2" BSP (F) Threaded 1/2" NPT (F) Threaded
Air inlet port	1/4" NPSM (F)
Air exhaust port	1/2" NPT (F)
Sound level	75 dB (A) @ 50 cycles/min @5 bar (70 psi)
Material and weight: Central Body/Fluid Chamber & Manifolds · Conductive PP / PP · Conductive PP / PVDF · Conductive PP / Conductive PP · Conductive PP / Conductive POM (Acetal)	 2,7 kg (6 lb) 3,7 kg (8.2 lb) 3 kg (6.6 lb) 3,3 kg (7.3 lb)

** Delivery per cycle depends on the diaphragm materials, air inlet pressure and fluid viscosity.*

PUMP NOMENCLATURE

Example: **UP05B-XXX-XXX**

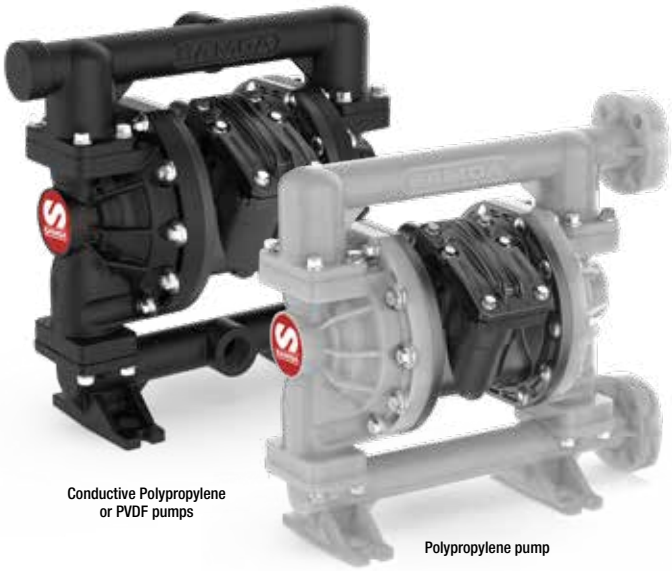
PUMP TYPE	AIR BODY	HOUSINGS			WETTED PARTS		
Pump Type & Size	Central Body & Air Chambers	Fluid Ports / Location	Fluid Chambers & Manifolds	Hardware Bolts	Valve Seats	Valve Balls	Diaphragms Type & Material
UP05 Universal Pump (Bolted)	⟨Ex⟩ **ATEX Certified** **B***= Conductive Polypropylene (black)	**B** = 1/2" BSP threaded ports **N** = 1/2" NPT threaded ports	**P** = Polypropylene **W** = PVDF ⟨Ex⟩ **ATEX Certified** **B***= Conductive Polypropylene **D***= Conductive POM (Acetal)	**S** = Stainless Steel	**C** = POM (Acetal) **P** = Polypropylene **S** = AISI 316 Stainless Steel **W** = PVDF	**H** = TPE (Hytrel®) **M** = TPV (Santoprene®) **N** = Nitrile (Buna-N) **S** = AISI 316 Stainless Steel **T** = PTFE (Teflon®) **V** = FKM (Viton®)	**Conventional** **A** = TPV (Santoprene®) **C** = TPE (Hytrel®) **G** = Nitrile (Buna-N) **V** = FKM (Viton®) **Two-piece** **Z** = PTFE (Teflon®) with TPV (Santoprene®) backer

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

1" NON-METALLIC PUMPS – UP10 SERIES

200 L/MIN – 53 US GAL/MIN

The 1" (25 mm) AODP pumps made of injected moulded plastic parts can reach a flow rate up to 200 l/min - 53 US gal/min. They offer a wide range of construction materials and multiple porting configurations.



Conductive Polypropylene or PVDF pumps

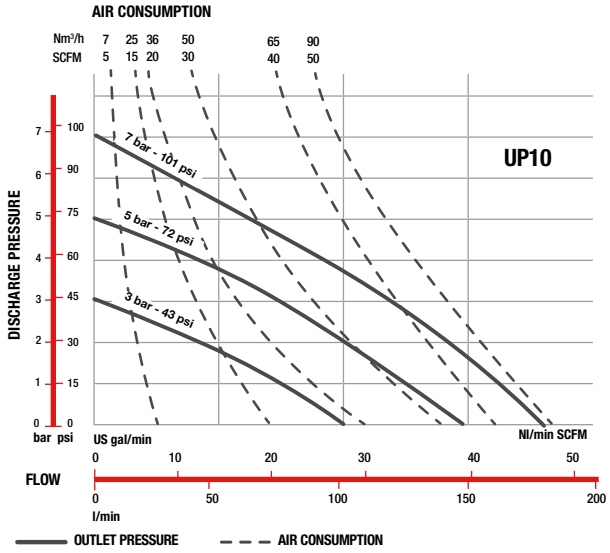
Polypropylene pump

UP10 PUMP DESIGN ADVANTAGES:

- **Higher efficiency. Maximum fluid flow with reduced air consumption.**
- **Full bolted construction for better seal and no leaks. Same bolt size facilitates maintenance.**
- **Universal pump, matches relative dimensions of main competitive brands.**
- **BSP or NPT lateral and central threaded ports or ANSI / DIN laterlal and central ports available.**
- **Frictionless Air Pivot Valve.**

Pumps in conductive polypropylene (black) are ATEX certified Ex II2 GD IIB/IIC 95 °C.

PERFORMANCE CHART



Data measured with water and with the pump inlet flooded.

TECHNICAL DATA	UP10 NON-METAL PUMPS	
Pressure ratio	1:1	
Maximum free delivery	200 l/min (53 US gal/min)	
Air pressure range	1,5 to 7 bar (20 to 100 psi)	
Ball valve maximum clearance	6,4 mm (1/4")	
Max. dry suction lift	5 m (16')	
Max. wet suction lift	8 m (26')	
Pump delivery per cycle*	0,85 l (0.2 gal)	
Fluid inlet / outlet ports	1" BSP or NPT (F) Threaded 1" ANSI/DIN Flanged	
Air inlet port	1/2" NPT (F)	
Air exhaust port	1" NPT (F)	
Sound level	75 dB (A) @ 50 cycles/min @ 5 bar (70 psi)	
Material and weight: Central Body/Fluid Chamber & Manifolds	**Threaded**	**Flanged**
· Conductive PP / PP	10,2 kg (22.5 lb)	10,5 kg (23.1 lb)
· Conductive PP / PVDF	13,5 kg (29.8 lb)	14,1 kg (31.1 lb)
· Conductive PP / Conductive PP	11,6 kg (25.6 lb)	12 kg (26.4 lb)

* Delivery per cycle depends on the diaphragm materials, air inlet pressure and fluid viscosity.

PUMP NOMENCLATURE

Example: **UP10B-XXX-XXX**

PUMP TYPE	AIR BODY	HOUSINGS			WETTED PARTS		
Pump Type & Size	**Central Body & Air Chambers**	**Fluid Ports / Location**	**Fluid Chambers & Manifolds**	**Hardware Bolts**	**Valve Seats**	**Valve Balls**	**Diaphragms Type & Material**
UP05 Universal Pump (Bolted)	⟨Ex⟩ **ATEX Certified** **B***= Conductive Polypropylene (black)	**Central ports** **C** = 1" ANSI/DIN flanged ports **B** = 1" BSP threaded ports **N** = 1" NPT threaded ports **Lateral ports** **F** = 1" ANSI/DIN flanged ports **P** = 1" BSP threaded ports **T** = 1" NPT threaded ports	**P** = Polypropylene **W** = PVDF ⟨Ex⟩ **ATEX Certified** **B***= Conductive Polypropylene	**S** = Stainless Steel	**P** = Polypropylene **W** = PVDF	**H** = TPE (Hytrel®) **M** = TPV (Santoprene®) **N** = Nitrile (Buna-N) **T** = PTFE (Teflon®) **V** = FKM (Viton®)	**Conventional** **A** = TPV (Santoprene®) **C** = TPE (Hytrel®) **G** = Nitrile (Buna-N) **V** = FKM (Viton®) **Two-piece** **Z** = PTFE (Teflon®) with TPV (Santoprene®) backer

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

1-1/2" NON-METALLIC PUMPS – UP15 SERIES

470 L/MIN – 125 US GAL/MIN

The 1-1/2" (38 mm) Air Operated Diaphragm Pumps, made from injection-molded plastic, are available in natural polypropylene and PVDF for optimal fluid compatibility. They offer side offset or central flanged or threaded inlet and outlet ports, with 180º rotating manifolds for versatile installation.

PVDF pump

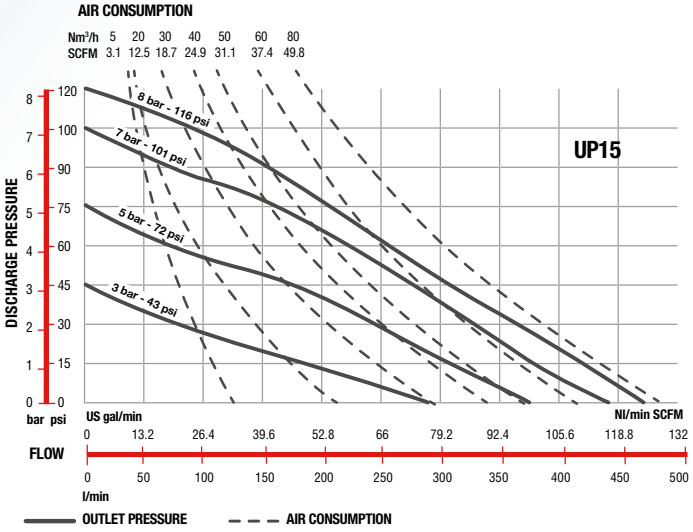
Polypropylene pump

UP15 PUMP DESIGN ADVANTAGES:

- **Higher efficiency. Maximum fluid flow with reduced air consumption.**
- **Full bolted construction for better seal and no leaks. Same size bolts facilitates maintenance.**
- **Universal pump, matches relative dimensions of main competitive brands.**
- **ANSI / DIN Lateral and central ports available.**
- **Frictionless Air Pivot Valve.**

Pumps in conductive polypropylene (black) are ATEX certified Ex II2 GD IIB/IIC 95 ˚C.

PERFORMANCE CHART



Data measured with water and with the pump inlet flooded.

TECHNICAL DATA	UP15 NON-METAL PUMPS
Pressure ratio	1:1
Maximum free delivery	470 l/min (125 US gal/min)
Air pressure range	1,5 to 8 bar (20 to 120 psi)
Ball valve maximum clearance	6,4 mm (1/4")
Max. dry suction lift	5 m (16.4')
Max. wet suction lift	9 m (29.5')
Pump delivery per cycle*	2,5 l (0.66 gal)
Fluid inlet / outlet ports	1 1/2" ANSI/DIN Flanged
Air inlet port	1/2" NPT (F)
Air exhaust port	1 NPT (F)
Sound level	75 dB (A) @50 cycles/min @5 bar (70 psi)
Material and weight: Central Body/Fluid Chamber & Manifolds · Reinforced PP / PP · Reinforced PP / PVDF	 21,7 kg (47.8 lb) 31,3 kg (70 lb)

* *Delivery per cycle depends on the diaphragm materials, air inlet pressure and fluid viscosity.*

PUMP NOMENCLATURE

Example: **UP15X-XXX-XXX**

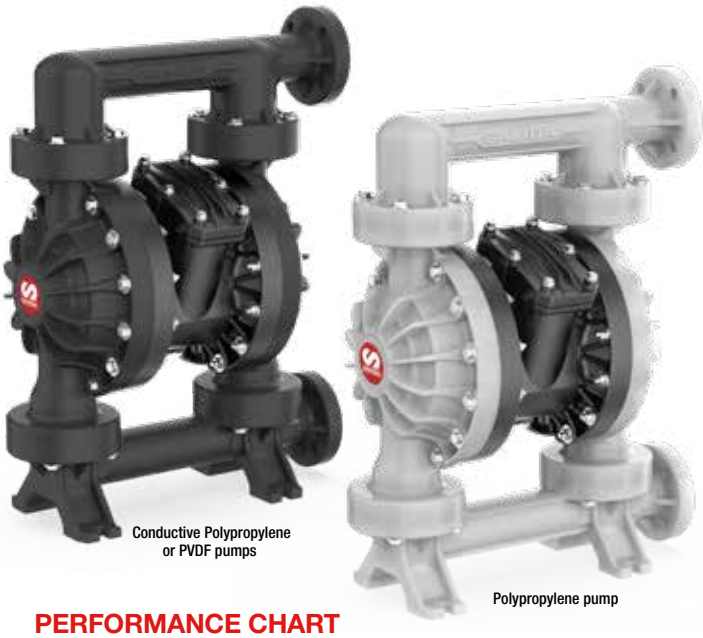
PUMP TYPE	AIR BODY	HOUSINGS			WETTED PARTS		
Pump Type & Size	Central Body & Air Chambers	Fluid Ports / Location	Fluid Chambers & Manifolds	Hardware Bolts	Valve Seats	Valve Balls	Diaphragms Type & Material
UP15 Universal Pump (Bolted)	**P** =Reinforced Polypropylene	**Central ports** **C** = 1-1/2" ANSI/DIN flanged ports **Lateral ports** **F** = 1-1/2" ANSI/DIN flanged ports	**P** = Polypropylene **W** = PVDF	**S** = Stainless Steel	**P** = Polypropylene **W** = PVDF	**H** = TPE (Hytrel®) **M** = TPV (Santoprene®) **N** = Nitrile (Buna-N) **T** = PTFE (Teflon®) **V** = FKM (Viton®)	**Conventional** **A** = TPV (Santoprene®) **C** = TPE (Hytrel®) **G** = Nitrile (Buna-N) **V** = FKM (Viton®) **Two piece** **Z** = PTFE (Teflon®) with TPV (Santoprene®) backer

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

2" NON-METALLIC PUMPS – UP20

650 L/MIN – 172 US GAL/MIN

The 2" (51 mm) AODD pumps made of injected molded plastic parts can reach a flow rate up to 650 l/min – 172 US gal/min. They are available in natural or conductive polypropylene and PVDF for optimum fluid compatibility and corrosion resistance.



Conductive Polypropylene or PVDF pumps

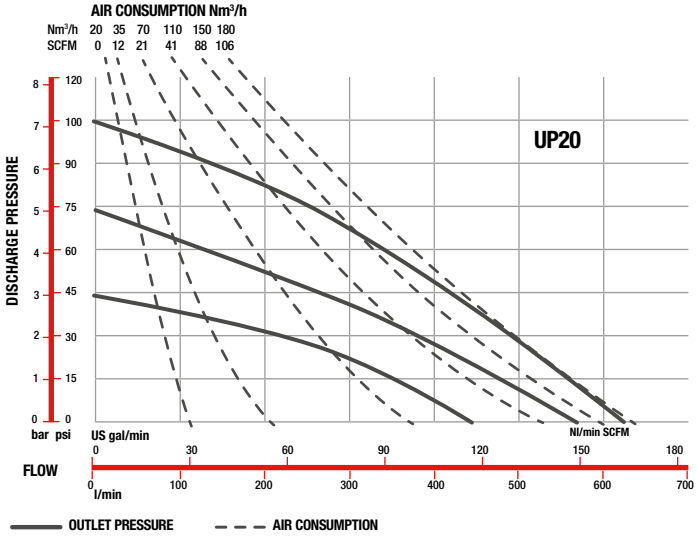
Polypropylene pump

UP20 PUMP DESIGN ADVANTAGES:

- **Higher efficiency. Maximum fluid flow with reduced air consumption.**
- **Full bolted construction for better seal and no leaks. Same size bolts facilitates maintenance.**
- **Universal pump, matches relative dimensions of main competitive brands.**
- **Side offset flanged ports to avoid fluid leaks onto the pump footprint. ANSI / DIN Flanges.**
- **Frictionless Air Pivot Valve.**

Pumps in conductive polypropylene (black) are ATEX certified Ex II2 GD IIB/IIC 95 ˚C.

PERFORMANCE CHART



Data measured with water and with the pump inlet flooded.

TECHNICAL DATA	UP20 METAL PUMPS
Pressure ratio	1:1
Maximum free delivery	650 l/min (172 US gal/min)
Air pressure range	1,5 to 7 bar (20 to 120 psi)
Ball valve maximum clearance	6,4 mm (1/4")
Max. dry suction lift	5 m (16')
Max. wet suction lift	8 m (26')
Pump delivery per cycle*	4,5 l (1.2 gal)
Fluid inlet / outlet ports	2" DIN / ANSI Flanged. Side Ends
Air inlet port	3/4" NPT (F)
Air exhaust port	1-1/2" NPT (F)
Sound level	85 dB (A) @ 50 cycles/min @ 5 bar (70 psi)
Material and weight: Central Body/Fluid Chamber & Manifolds · Conductive PP / PP · Conductive PP / PVDF · Conductive PP / Conductive PP	 42 kg (92 lb) 46 kg (102 lb) 54 kg (119 lb)

* Delivery per cycle depends on the diaphragm materials, air inlet pressure and fluid viscosity.

PUMP NOMENCLATURE

Example: **UP20B-XXX-XXX**

PUMP TYPE	AIR BODY	HOUSINGS			WETTED PARTS		
Pump Type & Size	Central Body & Air Chambers	Fluid Ports / Location	Fluid Chambers & Manifolds	Hardware Bolts	Valve Seats	Valve Balls	Diaphragms Type & Material
UP20 Universal Pump (Bolted)	(Ex) ATEX Certified **B***= Conductive Polypropylene (black)	**F** = 2" ANSI/DIN Flanged Ports / Side Ends.	**P** = Polypropylene **W** = PVDF (Ex) ATEX Certified **B***= Conductive Polypropylene	**S** = Stainless Steel	**P** = Polypropylene **W** = PVDF	**H** = TPE (Hytrel®) **M** = TPV (Santoprene®) **N** = Nitrile (Buna-N) **T** = PTFE (Teflon®) **V** = FKM (Viton®)	**Conventional** **A** = TPV (Santoprene®) **C** = TPE (Hytrel®) **G** = Nitrile (Buna-N) **V** = FKM (Viton®) **Two-piece** **Z** = PTFE (Teflon®) with TPV (Santoprene®) backer **Overmolded** **N** = Nitrile (Buna N) **H** = TPE (Hytrel®) **M** = TPV (Santoprene®) **T** = PTFE / EPDM (Bonded)

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

1/2" METALLIC PUMPS – UP05 SERIES

54 L/MIN – 14.3 US GAL/MIN

The 1/2" (13 mm) AODD pumps made of cast metal can reach a flow rate up to 53 l/min - 14.3 US gal/min. They offer a wide range of construction materials and multiple porting configurations.

Stainless Steel pump

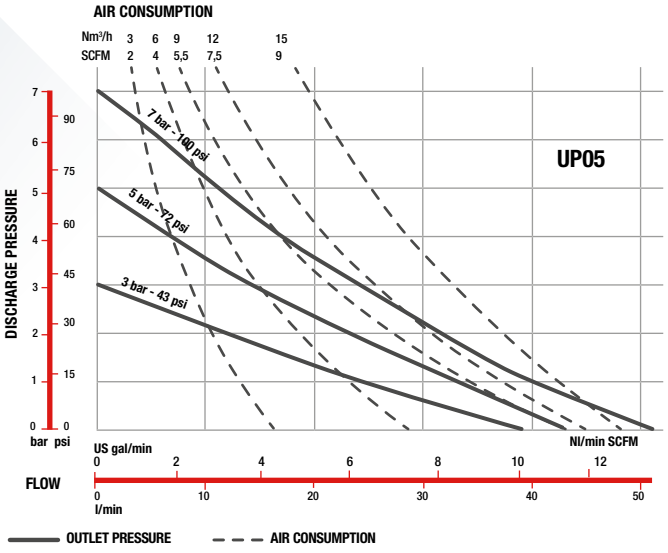
Aluminium pump

UP05 PUMP DESIGN ADVANTAGES:

- **Higher efficiency. Maximum fluid flow with reduced air consumption.**
- **Full bolted construction for better seal and no leaks. Same bolt size facilitates maintenance.**
- **Universal pump, matches relative dimensions of main competitive brands.**
- **Multiport BSP or NPT threaded manifolds for maximum installation versatility.**
- **Frictionless Air Pivot Valve.**

Pumps available in Aluminium and Stainless Steel and they are ATEX certified Ex II2 GD IIB/IIC 95 °C.

PERFORMANCE CHART



Data measured with water and with the pump inlet flooded.

TECHNICAL DATA	UP05 NON-METAL PUMPS
Pressure ratio	1:1
Maximum free delivery	54 l/min (14.3 US gal/min)
Air pressure range	1,5 to 8 bar (20 to 120 psi)
Ball valve maximum clearance	2,5 mm (3/32")
Max. dry suction lift	5 m (16')
Max. wet suction lift	8 m (26')
Pump delivery per cycle*	0,15 l (0.04 gal)
Fluid inlet / outlet ports	1/2" BSP (F) Threaded 1/2" NPT (F) Threaded
Air inlet port	1/4" NPSM (F)
Air exhaust port	1/2" NPT (F)
Sound level	75 dB (A) @ 50 cycles/min @ 5 bar (70 psi)
Material and weight: Central Body/Fluid Chamber & Manifolds · Conductive PP / 316 SS · Aluminium / Aluminium · Aluminium / 316 SS	 3,9 kg (8.6 lb) 6,5 kg (14.3 lb) 6,8 kg (15 lb)

** Delivery per cycle depends on the diaphragm materials, air inlet pressure and fluid viscosity.*

PUMP NOMENCLATURE

Example: **UP05B-XXX-XXX**

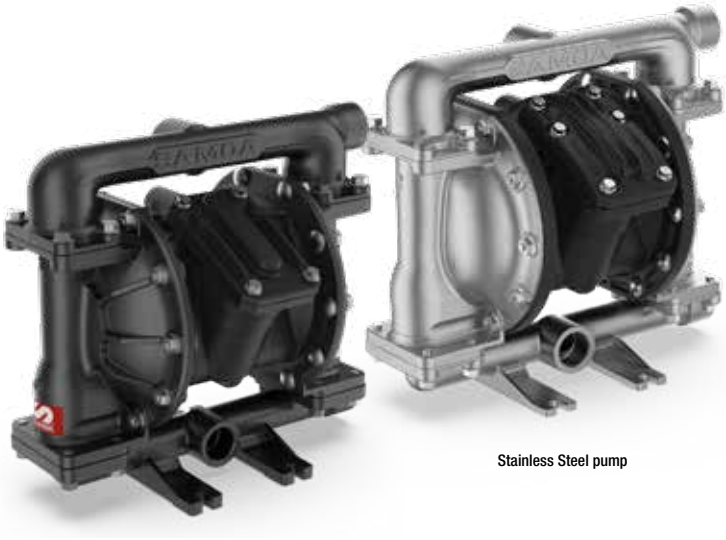
PUMP TYPE	AIR BODY	HOUSINGS			WETTED PARTS		
Pump Type & Size	Central Body & Air Chambers	Fluid Ports / Location	Fluid Chambers & Manifolds	Hardware Bolts	Valve Seats	Valve Balls	Diaphragms Type & Material
UP05 Universal Pump (Bolted)	⟨Ex⟩ **ATEX Certified** **A** = Aluminium **B***= Conductive Polypropylene	**B** = 1/2" BSP threaded ports **N** = 1/2" NPT threaded ports	⟨Ex⟩ **ATEX Certified** **A** = Aluminium **S** = AISI 316 Stainless Steel	**C** = Carbon Steel **S** = Stainless Steel	**A** = Aluminium **S** = AISI 316 Stainless Steel	**H** = TPE (Hytrel®) **M** = TPV (Santoprene®) **N** = Nitrile (Buna-N) **S** = AISI 316 Stainless Steel **T** = PTFE (Teflon®) **V** = FKM (Viton®)	**Conventional** **A** = TPV (Santoprene®) **C** = TPE (Hytrel®) **G** = Nitrile (Buna-N) **V** = FKM (Viton®) **Two-piece** **Z** = PTFE (Teflon®) with TPV (Santoprene®) backer

⟨Ex⟩ **ATEX Certified** pumps for use in hazardous locations ATEX Group II 2GDx.
*Only available for pumps with Stainless Steel fluid chambers and manifolds.

1" METALLIC PUMPS – UP10 SERIES

200 L/MIN – 53 US GAL/MIN

The 1" (25 mm) AODD pumps made of cast metal can reach a flow rate of up to 200 l/min - 53 US gal/min. They offer a wide range of construction materials and porting configurations.



Stainless Steel pump

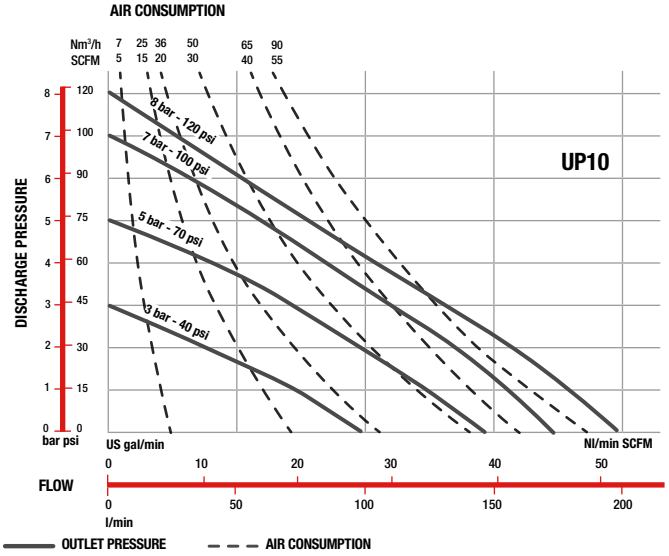
Aluminium pump

UP10 PUMP DESIGN ADVANTAGES:

- **Higher efficiency. Maximum fluid flow with reduced air consumption.**
- **Full bolted construction for better seal and no leaks. Same bolt size facilitates maintenance.**
- **Universal pump, matches relative dimensions of main competitive brands.**
- **Multiport BSP or NPT threaded manifolds for maximum installation versatility.**
- **Frictionless Air Pivot Valve.**

Pumps available in Aluminium, Ductile Iron and Stainless Steel and they are ATEX certified Ex II2 GD IIB/IIC 95 ˚C.

PERFORMANCE CHART



Data measured with water and with the pump inlet flooded.

TECHNICAL DATA	UP10 METAL PUMPS
Pressure ratio	1:1
Maximum free delivery	200 l/min (53 US gal/min)
Air pressure range	1,5 to 8 bar (20 to 120 psi)
Ball valve maximum clearance	6,4 mm (1/4")
Max. dry suction lift	5 m (16')
Max. wet suction lift	8 m (26')
Pump delivery per cycle*	0,85 l (0.2 gal)
Fluid inlet / outlet ports	1" BSP (F) Threaded 1" NPT (F) Threaded
Air inlet port	1/2" NPT (F)
Air exhaust port	1" NPT (F)
Sound level	75 dB (A) @ 50 cycles/min @ 5 bar (70 psi)
Material and weight: Central Body/Fluid Chamber & Manifolds	
· Aluminium / Aluminium	111,5 kg (25 lb)
· Aluminium / Ductile Iron	17,1 kg (37.7 lb)
· Aluminium / 316 SS	18,5 kg (40.8 lb)
· 316 SS / 316 SS	26,6 kg (38.6 lb)
· Conductive PP / 316 SS	17,4 kg (38.4 lb)

** Delivery per cycle depends on the diaphragm materials, air inlet pressure and fluid viscosity.*

PUMP NOMENCLATURE

Example: **UP10X-XXX-XXX**

PUMP TYPE	AIR BODY	HOUSINGS			WETTED PARTS		
Pump Type & Size	Central Body & Air Chambers	Fluid Ports / Location	Fluid Chambers & Manifolds	Hardware Bolts	Valve Seats	Valve Balls	Diaphragms Type & Material
UP10 Universal Pump (Bolted)	⟨Ex⟩ **ATEX Certified** **A** = Aluminium **S*** = AISI 316 Stainless Steel **B*** = Conductive Polypropylene	**B** = 1" BSP Threaded Ports **N** = 1" NPT Threaded Ports	⟨Ex⟩ **ATEX Certified** **A** = Aluminium **S** = AISI 316 Stainless Steel **F** = Ductile Iron	**C** = Carbon Steel **S** = Stainless Steel	**A** = Aluminium **H** = TPE (Hytrel®) **M** = TPV (Santoprene®) **N** = Nitrile (Buna-N) **S** = AISI 316 Stainless Steel	**H** = TPE (Hytrel®) **M** = TPV (Santoprene®) **N** = Nitrile (Buna-N) **T** = PTFE (Teflon®) **S** = AISI 316 Stainless Steel **V** = FKM (Viton®)	**Conventional** **A** = TPV (Santoprene®) **C** = TPE (Hytrel®) **G** = Nitrile (Buna-N) **V** = FKM (Viton®) **Two-piece** **Z** = PTFE (Teflon®) with TPV (Santoprene®) backer

⟨Ex⟩ **ATEX Certified** pumps for use in hazardous locations ATEX Group II 2GDx.
*Only available for pumps with Stainless Steel fluid chambers and manifolds.
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1-1/2" METALLIC PUMPS – UP15 SERIES

475 L/MIN – 125 US GAL/MIN

The 1-1/2" (38 mm) Air Operated Diaphragm Pumps made of cast metal can reach a flow rate up to 470 l/min (125 US gal/min). Manifolds can rotate 180° for maximum puminstallation versatility.

Aluminium pump

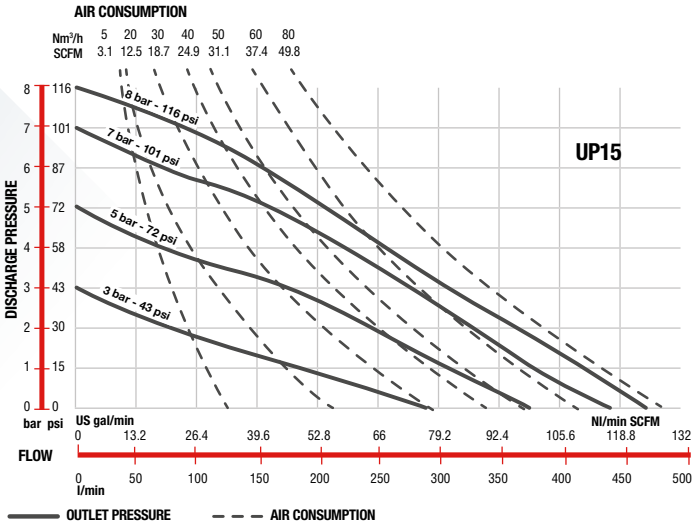
Stainless Steel pump

UP15 PUMP DESIGN ADVANTAGES:

- **Higher efficiency. Maximum fluid flow with reduced air consumption.**
- **Full bolted construction for better seal and no leaks. Same bolt size facilitates maintenance.**
- **Universal pump, matches relative dimensions of main competitive brands.**
- **Multiport BSP or NPT threaded manifolds for maximum installation versatility.**
- **Frictionless Air Pivot Valve.**
- **Precise air chamber filling reduces air consumption thanks to the Quick-fill valve.**

Pumps available in Aluminium and Stainless Steel and they are ATEX certified Ex II2 GD IIB/IIC 95 ˚C.

PERFORMANCE CHART



Data measured with water and with the pump inlet flooded.

TECHNICAL DATA	UP15 METAL PUMPS	
Pressure ratio	1:1	
Maximum free delivery	475 l/min (125 US gal/min)	
Air pressure range	1,5 to 8 bar (20 to 120 psi)	
Ball valve maximum clearance	6,4 mm (1/4")	
Max. dry suction lift	6 m (19.6')	
Max. wet suction lift	9 m (29.5')	
Pump delivery per cycle*	2,5 l (0.66 gal)	
Fluid inlet / outlet ports	1 1/2" NPT (F) Threaded 1 1/2" BSP (F) Threaded 1 1/2" ANSI /DIN Flanged	
Air inlet port	1/2" NPT (F)	
Air exhaust port	1" NPT (F)	
Sound level	75 dB (A) @ 60 cycles/min @ 5 bar (70 psi)	
Material and weight: Central Body/Fluid Chamber & Manifolds	**Threaded**	**Flanged**
· Aluminium / Aluminium	22 kg (48.5 lb)	
· Aluminium / Ductile Iron	36 kg (79.4 lb)	
· Aluminium / 316 SS	38 kg (83.8 lb)	41,5 kg (91.5 lb)

** Delivery per cycle depends on the diaphragm materials, air inlet pressure and fluid viscosity.*

PUMP NOMENCLATURE

Example: **UP15X-XXX-XXX**

PUMP TYPE	AIR BODY	HOUSINGS			WETTED PARTS		
Pump Type & Size	**Central Body & Air Chambers**	**Fluid Ports / Location**	**Fluid Chambers & Manifolds**	**Hardware Bolts**	**Valve Seats**	**Valve Balls**	**Diaphragms Type & Material**
UP15 Universal Pump (Bolted)	⟨Ex⟩ **ATEX Certified** **A** = Aluminium **S*** = AISI 316 Stainless Steel	**B** = 1-1/2" BSP threaded ports/lateral (only in Aluminiun versions) or central **C** = 1-1/2" ANSI / DIN flanged ports / Central horizontal (only in Stainless Steel version) **N** = 1-1/2" NPT threaded ports/lateral (only in Aluminiun versions) or central **V** = 1-1/2" ANSI / DIN flanged ports/Central horizontal inlet, Central vertical outlet (only in Stainless Steel version)	⟨Ex⟩ **ATEX Certified** **A** = Aluminium **F** = Ductile Iron **S** = AISI 316 Stainless Steel	**C** = Carbon Steel **S** = Stainless Steel	**A** = Aluminium **D** = AISI 440 Hardened Stainless Steel **H** = TPE (Hytrel®) **M** = TPV (Santoprene®) **N** = Nitrile (Buna-N) **S** = AISI 316 Stainless Steel	**H** = TPE (Hytrel®) **M** = TPV (Santoprene®) **N** = Nitrile (Buna-N) **T** = PTFE (Teflon®) **S** = AISI 316 Stainless Steel **V** = FKM (Viton®)	**Conventional** **A** = TPV (Santoprene®) **C** = TPE (Hytrel®) **G** = Nitrile (Buna-N) **V** = FKM (Viton®) **Two piece** **Z** = PTFE (Teton® with TPV backer)

⟨Ex⟩ **ATEX Certified** pumps for use in hazardous locations ATEX Group II 2GDx.
*Only available for pumps with Stainless Steel fluid chambers and manifolds.
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2" METALLIC PUMPS – UP20

650 L/MIN – 172 US GAL/MIN

The 2" (51 mm) AODD pumps made of cast metal can reach a flow rate up to 650 l/min – 172 US gal/min. They offer a wide range of construction materials and porting configurations.

Aluminium pump

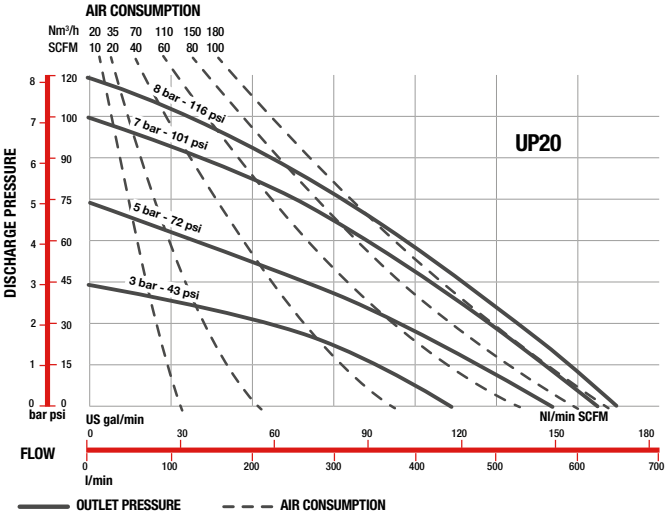
Stainless Steel pump

UP20 PUMP DESIGN ADVANTAGES:

- **Higher efficiency. Maximum fluid flow with reduced air consumption.**
- **Full bolted construction for better seal and no leaks. Same size bolts facilitates maintenance.**
- **Universal pump, matches relative dimension of main competitive brands.**
- **Pump design ensures high abrasion resistance when pumping abrasive media.**
- **BSP or NPT threaded inlet and outlet ports or central ANSI / DIN Flanges.**
- **Frictionless Air Pivot Valve.**

Pumps available in Aluminium, Ductile Iron and Stainless Steel and they are ATEX certified Ex II2 GD IIB/IIC 95 ˚C.

PERFORMANCE CHART



Data measured with water and with the pump inlet flooded.

TECHNICAL DATA	DP200 METAL PUMPS	
Pressure ratio	1:1	
Maximum free delivery	650 l/min (172 US gal/min)	
Air pressure range	1,5 to 8 bar (20 to 120 psi)	
Ball valve maximum clearance	6,4 mm (1/4")	
Max. dry suction lift	5 m (16')	
Max. wet suction lift	8 m (26')	
Pump delivery per cycle*	4,5 l (1.2 gal)	
Fluid inlet / outlet ports	2" BSP (F) Threaded 2" NPT (F) Threaded 2" ANSI / DIN Flange	
Air inlet port	3/4" NPT (F)	
Air exhaust port	1-1/2" NPT (F)	
Sound level	85 dB (A) @ 50 cycles/min @ 5 bar (70 psi)	
Material and weight: Central Body/Fluid Chamber & Manifolds	**Threaded**	**Flanged**
· Aluminium / Aluminium	46 kg (101 lb)	48 kg (106 lb)
· Aluminium / Ductile Iron	74 kg (163 lb)	78 kg (172 lb)
· Aluminium / 316 SS	76 kg (168 lb)	82 kg (181 lb)
· Conductive PP / 316 SS	85 kg (187 lb)	90 kg (198 lb)
· 316 SS / 316 SS	98 kg (216 lb)	102 kg (225 lb)

* *Delivery per cycle depends on the diaphragm materials, air inlet pressure and fluid viscosity.*

PUMP NOMENCLATURE

Example: **UP20X-XXX-XXX**

PUMP TYPE	AIR BODY	HOUSINGS			WETTED PARTS		
Pump Type & Size	Central Body & Air Chambers	Fluid Ports / Location	Fluid Chambers & Manifolds	Hardware Bolts	Valve Seats	Valve Balls	Diaphragms Type & Material
UP20 Universal Pump (Bolted)	⟨Ex⟩ **ATEX Certified** **A** = Aluminium **L***= Conductive polypropylene **S***= Aluminium	**B** = 2" BSP Threaded Ports / Centre horizontal **C** = 2" ANSI/ DIN Flanged Ports / Centre Horizontal **N** = 2" NPTF Threaded Ports / Centre Horizontal	⟨Ex⟩ **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** = TPE (Hytrel®) **M** = TPV (Santoprene®) **N** = Nitrile (Buna-N) **S** = AISI 316 Stainless Steel	**H** = TPE (Hytrel®) **M** = TPV (Santoprene®) **N** = Nitrile (Buna-N) **S** = AISI 316 Stainless Steel **T** = PTFE (Teflon®) **V** = FKM (Viton®)	**Conventional** **A** = TPV (Santoprene®) **C** = TPE (Hytrel®) **G** = Nitrile (Buna-N) **V** = FKM (Viton®) **Two-piece** **Z** = PTFE (Teflon®) with TPV (Santoprene®) backer **Overmolded** **H** = TPE (Hytrel®) **N** = Nitrile (Buna-N) **T** = PTFE / EPDM (Bonded)

⟨Ex⟩ **ATEX Certified** pumps for use in hazardous locations ATEX Group II 2GDx.
*Only available for pumps with Stainless Steel fluid chambers and manifolds.
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3" METALLIC PUMPS – UP30

1.000 L/MIN – 264 US GAL/MIN

The 3" (76 mm) AODD pumps made of cast metal can reach a flow rate up to 1.000 l/min – 264 US gal/min. They offer a wide range of construction materials and porting configurations.

Stainless Steel pump

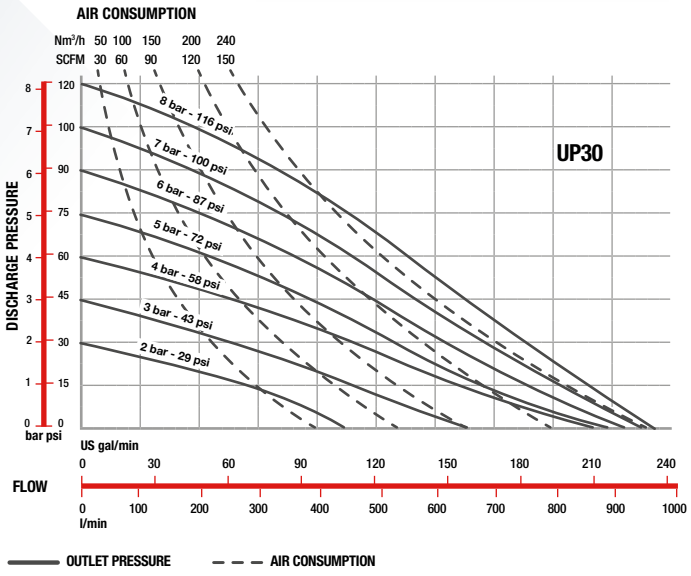
Aluminium pump

UP30 PUMP DESIGN ADVANTAGES:

- **Higher efficiency. Maximum fluid flow with reduced air consumption.**
- **Full bolted construction for better seal and no leaks. Same size bolts facilitates maintenance.**
- **Universal pump, matches relative dimension of main competitive brands.**
- **Pump design ensures high abrasion resistance when pumping abrasive media.**
- **BSP or NPT threaded inlet and outlet ports or central ANSI / DIN Flanges.**
- **Frictionless Air Pivot Valve.**

Pumps available in Aluminium and Stainless Steel and they are ATEX certified Ex II2 GD IIB/IIC 95 ˚C.

PERFORMANCE CHART



Data measured with water and with the pump inlet flooded.

TECHNICAL DATA	UP30 METAL PUMPS	
Pressure ratio	1:1	
Maximum free delivery	1.000 l/min (264 US gal/min)	
Air pressure range	1,5 to 8 bar (20 to 120 psi)	
Ball valve maximum clearance	12,7 mm (1/2")	
Max. dry suction lift	6 m (19.7')	
Max. wet suction lift	8 m (26')	
Pump delivery per cycle*	10 l (2.6 gal)	
Fluid inlet / outlet ports	3" BSP (F) Threaded 3" NPT (F) Threaded 3" ANSI / DIN Flanged	
Air inlet port	3/4" NPT (F)	
Air exhaust port	1-1/2" NPT (F)	
Sound level	83 dB (A) @ 50 cycles/min @ 5 bar (70 psi)	
Material and weight: Central Body/Fluid Chamber & Manifolds	**Threaded**	**Flanged**
· Aluminium / Aluminium	64 kg (141 lb)	71 kg (156.5 lb)
· Aluminium / Ductile Iron	109 kg (240 lb)	116 kg (256 lb)
· Aluminium / 316 SS	118 kg (260 lb)	125 kg (275.6 lb)
· 316 SS / 316 SS	140 kg (308.6 lb)	147 kg (324 lb)

** Delivery per cycle depends on the diaphragm materials, air inlet pressure and fluid viscosity.*

PUMP NOMENCLATURE

Example: **UP30X-XXX-XXX**

PUMP TYPE	AIR BODY	HOUSINGS			WETTED PARTS		
Pump Type & Size	Central Body & Air Chambers	Fluid Ports / Location	Fluid Chambers & Manifolds	Hardware Bolts	Valve Seats	Valve Balls	Diaphragms Type & Material
UP30 Universal Pump (Bolted)	⟨Ex⟩ ATEX Certified **A** = Aluminium **S*** = AISI 316 Stainless Steel	**B** = 3" BSP Threaded Ports / Centre Horizontal **C** = 3" ANSI/DIN Flanged Ports / Centre Horizontal **N** = 3" NPTF Threaded Ports / Centre Horizontal	⟨Ex⟩ ATEX Certified **A** = Aluminium **F** = Cast Iron **S** = AISI 316 Stainless Steel	**C** = Carbon Steel **S** = Stainless Steel	**A** = Aluminium **D** = AISI 440 Hardened Stainless Steel **H** = TPE (Hytrel®) **M** = TPV (Santoprene®) **N** = Nitrile (Buna-N) **S** = AISI 316 Stainless Steel	**H** = TPE (Hytrel®) **M** = TPV (Santoprene®) **N** = Nitrile (Buna-N) **S** = AISI 316 Stainless Steel **T** = PTFE (Teflon®) **V** = FKM (Viton®)	**Conventional** **A** = TPV (Santoprene®) **C** = TPE (Hytrel®) **G** = Nitrile (Buna-N) **V** = FKM (Viton®) **Two-piece** **Z** = PTFE (Teflon®) with TPV (Santoprene®) backer

⟨Ex⟩ **ATEX Certified** pumps for use in hazardous locations ATEX Group II 2GDx.
*Only available for pumps with Stainless Steel fluid chambers and manifolds.
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AIR OPERATED PISTON PUMPS

Air Operated Piston Pumps are positive-displacement reciprocating pumps. They are the ideal choice for transferring medium to high viscosity clean fluids. The availability of various discharge pressure ratios makes that these pumps can be used in a wide variety of applications including transfer, extrusion, circulation, injection, metered dispensing, lubrication, high pressure cleaning etc.

APPLICATIONS

- Oil & Grease Transfer
- API 6A / 6D Valve Flushing
- Passive Fire Protection (PFP)
- Pressure Washing & Cleaning
- Flow Assurance – Chemical Injection
- Wireline Pressure Control Grease Injection
- Hydraulic Supply Pumps for BOP Control Units / Accumulators / BOP Closing Units
- API 6A / 6D Valve Sealant Injection in Wellheads, Christmas Tree Valves, BOP, Manifolds etc.
- Hydrostatic Pressure Testing.

FEATURES & BENEFITS

INTRINSICALLY SAFE
Compressed air driven pumps with CE ATEX certification – suitable for hazardous zones and inflammable liquids.

RELIABLE
Proven non-stalling, non-freezing air motor with quick changeover and recovery design.

HEAVY-DUTY
Suitable for intensive or intermittent duty applications

RUGGED CONSTRUCTION
Suitable for dry, hot, humid, wet, damp and cold conditions.

BROAD RANGE
Wide range of discharge pressure ratios and fluid displacement rates

VERSATILITY
Adjustable flowrates, speed and fluid discharge pressure.

LOW DOWNTIME
Modular construction, reduced parts count and simple to use various repair kit options minimizes repair time and cost.

SAMOA

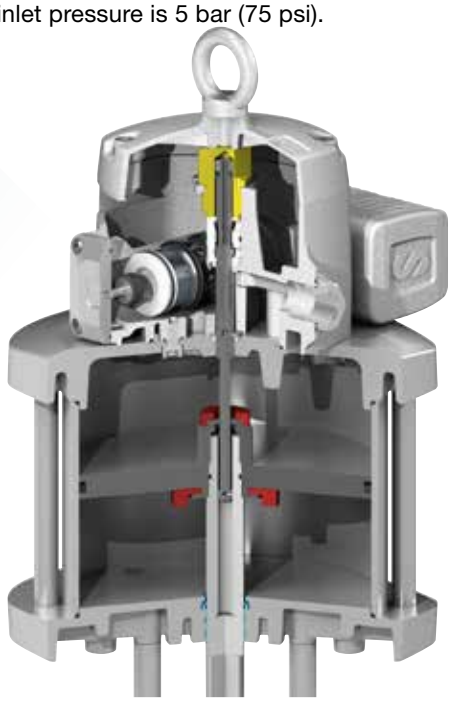
AIR OPERATED PISTON PUMPS

AN AIR OPERATED PUMP HAS TWO WELL DIFFERENTIATED COMPONENTS:

THE AIR MOTOR AND THE PISTON PUMP

The Air Motor has an air valve that creates a reciprocating motion to the air motor piston. This piston is fixed to the pump piston using a rigid rod that transmits this reciprocation motion and the force created by the air pressure on the air motor piston.

The relation between the air piston and the pump piston effective areas is known as PUMP RATIO. The Pump Ratio corresponds to a multiplying factor for the air inlet pressure, and it indicates the maximum pressure the pump can develop in stall condition: a pump with a 45:1 pressure ratio can develop up to 225 bar (3,375 psi) in stall conditions when the air inlet pressure is 5 bar (75 psi).



RELIABLE AIR MOTORS

SAMOA air motors provide the reliability and dependability required for assuring a no stalling operation and superb performance under every working condition. The very simple air valve has no energy consuming springs that could fail due to material fatigue or pneumatic end of stroke sensors that could get blocked because of dirty air.

All SAMOA air motors include a well dimensioned air exhaust manufactured in aluminium for an efficient heat transfer to avoid icing. The air exhaust includes a muffler to reduce noise level, to meet or exceed OSHA requirements.

SAMOA PISTON PUMP TYPES

DYNAMIC-PRIMER PUMPS
The primer rod extends below pump cylinder to penetrate and work the material as well as to provide positive priming of the heaviest pumpable materials.

DOUBLE-BALL PUMPS
They have a large porting for positive priming and pumping of light to medium viscosity fluids.

HYDRAULIC OIL SUPPLY PUMP

45:1 PRESSURE RATIO - 125 CC PER PUMP CYCLE

PM80 AIR MOTOR

Pump designed for hydraulic oil supply in accumulators in oil rig Blow-Out Prevention (BOP) or Wireline Valve systems.

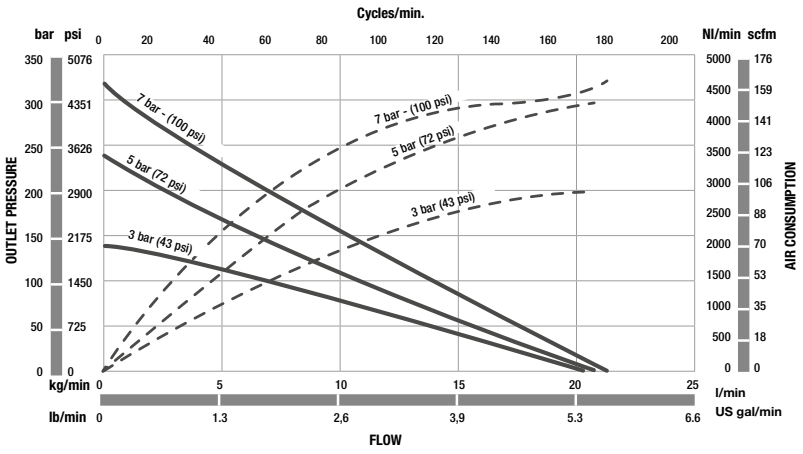
These systems consist in a series of safety valves, which can be opened and closed to control the uncontrolled flow of formation liquids into the wellhead. These are large heavy equipment, and in the event of kick, these pumps are used to supply hydraulic oil to close the valves, preventing the combustible formation liquids escaping to atmosphere through the wellhead.

High pressure hydraulic fluids (3,000 psi nominal pressure) are used for closing these valves in a fast and safe mode.

TECHNICAL DATA	
Pump Ratio	45:1
Pump delivery per cycle	125 cc
Air pressure range	1,5 to 7 bar (20 to 100 psi)
Maximum fluid pressure	315 bar (4,500 psi)
Air motor piston effective diameter	200 mm (8")
Air motor piston stroke	100 mm (4")
Air inlet thread	3/4" NPT (F)
Fluid outlet thread	3/4" NPT (F)
Fluid inlet thread	1" NPT (F)
Fluid outlet thread (gauge / bleeding)	-
Wetted parts materials	Zinc plated steel/ Hard chromed steel/ carbon steel/ PU.
Pump type	Double ball stub pump

ATEX certified pump ⟨Ex⟩ II 2G Ex h IIB T4 Gb.

PERFORMANCE CHART

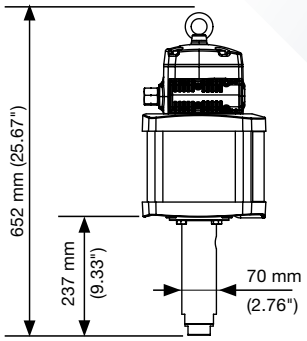


NLGI-2 GREASE 21 °C (70 °F)

Outlet pressure

Air consumption

DIMENSIONS



ORDER INFORMATION

PART No	MODEL	DESCRIPTION
538 431	DB-45-125-CSA-N	HYDRAULIC OIL SUPPLY PUMP, 45:1, 125 CC, STUB.

SAMOA

PM60 AIR MOTOR

HIGH PRESSURE PUMP

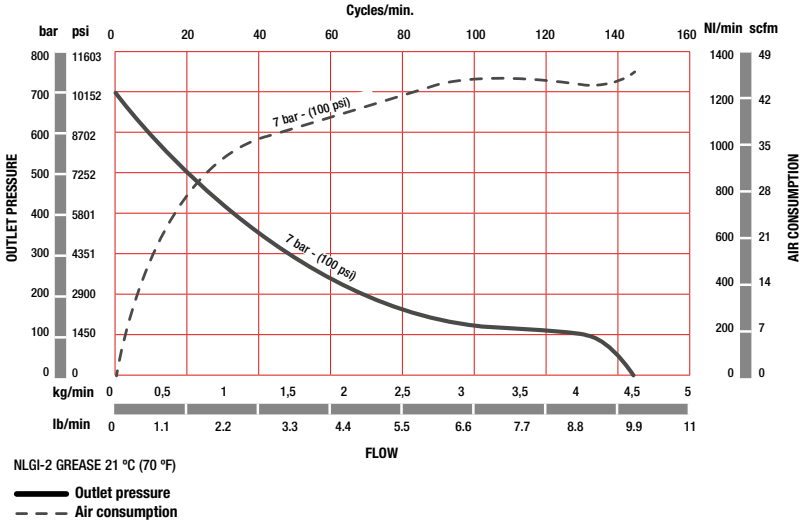
100:1 PRESSURE RATIO - 34 CC PER PUMP CYCLE

High pressure pumps used for wellhead valve integrity services such as lubrication and sealant injection in API 6A / 6D valves in wellheads, Christmas trees, BOP systems and manifolds.

TECHNICAL DATA	
Pump Ratio	100:1
Pump delivery per cycle	34 cc
Air pressure range	1,5 to 7 bar (20 to 100 psi)
Maximum fluid pressure	700 bar (10,000 psi)
Air motor piston effective diameter	150 mm (6")
Air motor piston stroke	100 mm (4")
Air inlet thread	1/2" NPT (F)
Fluid outlet thread	3/4" NPT (F)
Fluid inlet thread	-
Fluid outlet thread (gauge / bleeding)	1/4" NPT (F)
Wetted parts materials	Ductile iron/ Hard chromed steel/ Carbon steel/ Viton/ Zinc plated steel/ Buna-N/ PTFE/ POM Flanged
Pump type	Dynamic primer pump

ATEX certified pump ⟨Ex⟩ II 2D Ex h IIB T6...T5 Gb.
II 2D Ex h IIIB T70°C...T95°C Db.

PERFORMANCE CHART

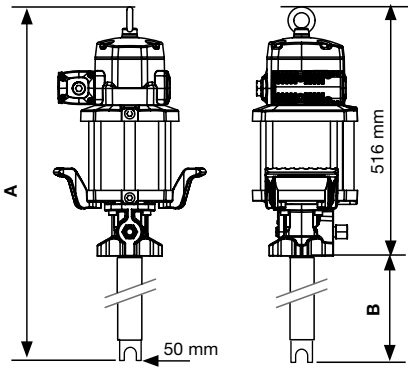


NLGI-2 GREASE 21 °C (70 °F)

Outlet pressure

Air consumption

DIMENSIONS



ORDER INFORMATION

PART No	MODEL	DESCRIPTION
538 931	PD-100-34-CSA-N	HIGH PRESSURE PUMP, 100:1, 34 CC, 30 KG / 35 LB PAILS
532 921	PD-100-34-CSB-N	HIGH PRESSURE PUMP, 100:1, 34 CC, 50 KG / 120 LB DRUMS
532 911	PD-100-34-CSC-N	HIGH PRESSURE PUMP, 100:1, 34 CC, 180 KG / 400 LB DRUMS

DIMENSIONS		
MODEL	A (mm)	B (mm)
30 kg / 35 lb pumps	1.006	490
50 kg / 120 lb pumps	1.166	650
180 kg / 400 lb pumps	1.371	855

ULTRA-HIGH PRESSURE PUMPS

168:1 PRESSURE RATIO - 34 CC PER CYCLE
200:1 PRESSURE RATIO - 28 CC PER CYCLE

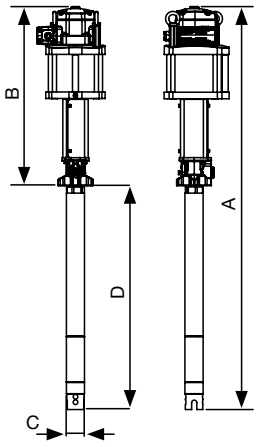
PM80 AIR MOTOR

Ultra-High pressure pumps designed for grease injection in wireline pressure control equipment. Can also be used for wellhead sealant injection for valve integrity services.
In wireline pressure control equipment, the high-pressure grease / sealant seals the well pressure while the wirelines are operated (lowering/raising tools and equipment, logging, data collection etc.)

TECHNICAL DATA		
Pump Ratio	168:1	200:1
Pump delivery per cycle	34 cc	28 cc
Air pressure range	1,5 to 7 bar (20 to 100 psi)	1,5 to 7 bar (20 to 100 psi)
Maximum fluid pressure	1.180 bar (16,900 psi)	1.400 bar (20,000 psi)
Air motor piston effective diameter	200 mm (8")	200 mm (8")
Air motor piston stroke	100 mm (4")	100 mm (4")
Air inlet thread	3/4" NPT (F)	3/4" NPT (F)
Fluid outlet thread	13/16 -16 UNF, for coned and threaded 9/16" tube.	13/16 -16 UNF, for coned and threaded 9/16" tube.
Fluid inlet thread	-	-
Fluid outlet thread (gauge / bleeding)	7/16-20 UNF, for coned and threaded 1/4" tube.	7/16-20 UNF, for coned and threaded 1/4" tube.
Wetted parts materials	Ductile iron/ Carbon steel/ Bronze/ PEEK/ PTFE	Ductile iron/ Carbon steel/ Bronze/ PEEK/ PTFE
Pump type	Dynamic primer pump	Dynamic primer pump

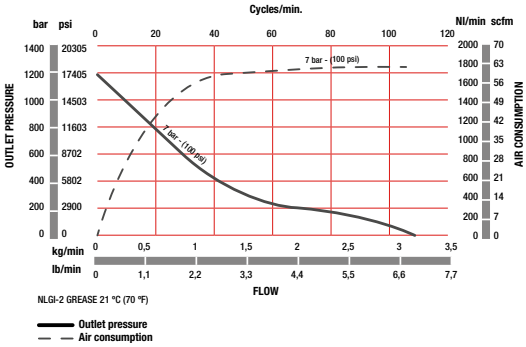
ATEX certified pump ⟨Ex⟩ II 2D Ex h IIB T6...T5 Gb.
II 2D Ex h IIIB T70 °C...T95 °C Db.

DIMENSIONS

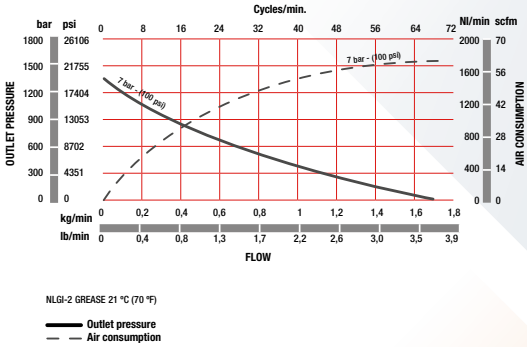


PERFORMANCE CHARTS

168:1 PUMP



200:1 PUMP



ORDER INFORMATION

DIMENSIONS		
MODEL	180 KG / 400 LB DRUMS	50 KG / 120 LB DRUMS
A (mm)	1.540	1.390
B (mm)	684	684
C (mm)	70	70
D (mm)	855	700

PART No	MODEL	DESCRIPTION
533 621	PD-168-34-CSB-N	ULTRA HIGH PRESSURE PUMP, 168:1, 34 CC, 50 KG / 120 LB PAILS
533 611	PD-168-34-CSC-N	ULTRA HIGH PRESSURE PUMP, 168:1, 34 CC, 180 KG / 400 LB DRUMS
533 921	PD-200-28-CSB-N	ULTRA HIGH PRESSURE PUMP, 200:1, 28 CC, 50 KG / 120 LB DRUMS
533 911	PD-200-28-CSC-N	ULTRA HIGH PRESSURE PUMP, 200:1, 28 CC, 180 KG / 400 LB drum

SAMOA

PM100 AIR MOTOR

ULTRA-HIGH PRESSURE PUMP

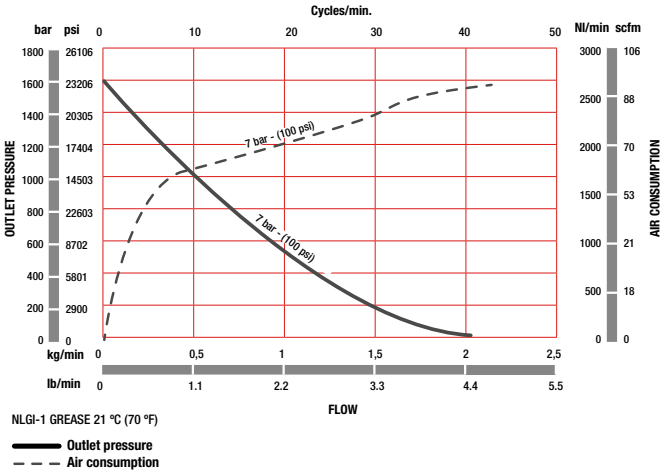
240:1 PRESSURE RATIO - 52 CC PER CYCLE

Ultra-High pressure grease pump designed for grease injection in wireline pressure control equipment.
The grease / sealant injected at very high pressure seals the well pressure while the wirelines are operated (lowering/raising of tools & equipment, logging, data collection etc.)

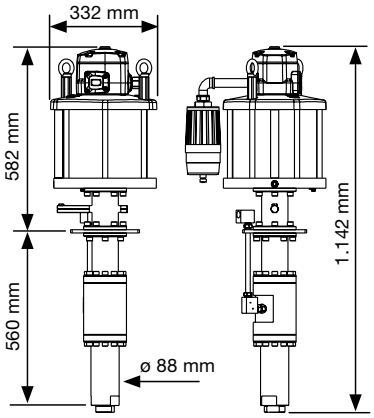
TECHNICAL DATA	
Pump Ratio	**240:1**
Pump delivery per cycle	**52 cc**
Air pressure range	**1,5 to 7 bar (20 to 100 psi)**
Maximum fluid pressure	**1.780 bar (24,000 psi)**
Air motor piston effective diameter	**250 mm (10")**
Air motor piston stroke	**150 mm (6")**
Air inlet thread	**3/4" NPT (F)**
Fluid outlet thread	**13/16 -16 UNF, for coned and threaded 9/16" tube.**
Fluid inlet thread	**3/4" NPT**
Wetted parts materials	**Carbon steel/ Copper/ Hard chromed steel/ PEEK/ PTFE/ PU**
Pump type	**Double ball stub pump**

ATEX certified pump ⟨Ex⟩ II 2G Ex h IIB T4 Gb.

PERFORMANCE CHARTS



DIMENSIONS



ORDER INFORMATION

PART No	MODEL	DESCRIPTION
545 211	DB-240-52-CSA-N	ULTRA HIGH PRESSURE PUMP, 240:1; 52 CC; STUB

GREASE TRANSFER PUMPS

GREASE TRANSFER PUMPS

12:1 PRESSURE RATIO 300 CC DELIVERY PER CYCLE

High delivery grease pump for fast and efficient grease transfer from totes, bins, fluid bags, etc. fitted with a 3" Cam-Lock adaptor.
ATEX certified pumps: ATEX II 2 G EX h IIB T4.

35:1 PRESSURE RATIO 156 CC DELIVERY PER CYCLE

High delivery grease pumps for transferring large volumes of grease from drums to smaller containers.
Large air motor and large pressure ratio allows moving big amounts of grease efficiently.
ATEX certified pumps: ATEX II 2 G EX h IIB T4.

TECHNICAL DATA		
Pump ratio	12:1	35:1
Delivery per cycle	300 cc	156 cc
Max. delivery at 60 cycle/min	18 l/min (4.75 US gal/min)	9,4 l/min (2.5 US gal/min)
Max. air pressure	7 bar (100 psi)	7 bar (100 psi)
Max. fluid pressure	84 bar (1,200 psi)	245 bar (3.500 psi)
Air motor	PM60	PM80
Fluid outlet thread	3/4" NPT (F)	1" NPT(F)
Fluid Inlet	Priming disc	Priming disc
Air inlet thread	1/2" NPT (F)	3/4" NPT (F)

ODER INFORMATION		
12:1	532 131	Stub pump, with 3" Cam-Lock adaptor
35:1	532 321	Pump for use with 50 kg (120 lb) drum
	532 311	Pump for use with 180 kg (400 lb) drum

GREASE LUBRICATION FLUSHING PUMPS

60:1 PRESSURE RATIO 14 CC DELIVERY PER CYCLE

High pressure lubrication pumps for use with 180 kg (400 lb) drums, 50 kg (120 lb) drums and 18 kg (35 lb) pails. Available as loose pumps or complete kits including pump, drum cover, grease hose and grease gun with Z-swivel and hydraulic type nozzle.
ATEX certified pumps: ATEX II 2 G EX h IIB T4.

TECHNICAL DATA	
Pump ratio	60:1
Delivery per cycle	14 cc
Max. delivery at 80 cycle/min	1,1 l/min (0.3 US gal/min)
Max. air pressure	7 bar (100 psi)
Max. fluid pressure	420 bar (6,000 psi)
Air motor	PM35
Fluid outlet thread	3/8" NPT (F)
Fluid Inlet	Priming disc
Air inlet thread	3/8" NPT (F)

ODER INFORMATION		
60:1	530 631	Pump for 18 kg (35 lb) pails.
	530 621	Pump for 50 kg (120 lb) drums
	530 611	Pump for 180 kg (400 lb) drum

LUBRICATION PUMP KITS

PART NO. 423021
PM35 60:1 GREASE PUMP KIT FOR 18 KG – 35 LB. PAILS.
Includes pump 530 631, drum cover with carrying handle, follower plate, 2 m x 3/8" high pressure hose and grease gun with Z-swivel and hydraulic type coupler.

PART NO. 423160
PM35 60:1 GREASE PUMP KIT FOR 50 KG – 120 LB. DRUMS.
Includes pump 530 621, drum cover, trolley, 3 m x 3/8" high pressure hose and grease gun with Z-swivel and hydraulic type coupler.

PART NO. 426244
PM35 60:1 GREASE PUMP KIT FOR 180 KG – 400 LB. DRUMS.
Includes pump 530 611, drum cover, follower plate, trolley, 4 m x 3/8" high pressure hose and grease gun with Z-swivel and hydraulic type coupler.

SAMOA

2 BALL TRANSFER PUMPS

HYDRAIR 80 TRANSFER PUMPS

5:1 PRESURE RATIO 155 CC PER CYCLE

ATEX certified pumps: ATEX II 2 G EX h IIB T4. Stainless steel divorced pump.

HYDRAIR 120 TRANSFER PUMPS

10:1 PRESURE RATIO 202 CC PER CYCLE

ATEX certified pumps: ATEX II 2 G EX h IIB T4. Stainless steel divorced pump.

TECHNICAL DATA		
Pump ratio	5:1	10:1
Max. delivery at 60 cycle/min	9 l/min (2,4 US gal/min)	12 l/min (3.2 US gal/min)
Max. air pressure	8 bar (120 psi)	7 bar (100 psi)
Max. fluid pressure	40 bar (600 psi)	70 bar (1000 psi)
Fluid outlet thread	3/4" NPT (F)	3/4" NPT (F)
Fluid Inlet thread	1" NPT (F)	1" NPT (F)
Air inlet thread	3/8" NPT (F)	1/2" NPT (F)

ODER INFORMATION		
5:1	HY08D05155-SS73-N4	60 l (16 gal), drum pump
	HY08D05155-SS73-N5	200 l (55 gal) drum pump
10:1	HY11D10202-SS73-N0	1" NPT, stub pump
	HY11D10202-SS73-N4	60 l (16 gal), drum pump
	HY11D10202-SS73-N5	200 l (55 gal) drum pump

PM35 TRANSFER PUMPS

5:1 PRESSURE RATIO 170 CC PER CYCLE

ATEX certified pumps: ATEX II 2 G EX h IIB T4 Gb.
Carbon steel in line pump with Polyurethane seals.

TECHNICAL DATA	
Max. delivery at 80 cycle/min	13,6 l/min (3.6 US gal/min)
Max. fluid outlet pressure	50 bar (725 psi)
Air motor	PM35
Fluid outlet	1/2" NPT (F)
Fluid inlet (stub pump only)	1-1/2" NPT (M)
Air inlet	3/8" NPT (F)

ODER INFORMATION		
5:1	535 531	Transfer pump, stub pump
5:1	535 511	Transfer pump, 200 l (55 gal) drum pump
5:1	535 530	Transfer pump, stub pump, BSP threaded

GREASE PUMP PORTABLE UNITS

GREASE BUCKET PUMP

Part No. 150 000

Lever action grease pump with a 16 kg capacity oval shape bucket.
Heavy duty construction, ductile iron pump body. Pump lever with three alternative positions to adjust pump pressure and delivery.

Maximum pressure range between 175 to 350 bar (2,500 to 5,000 psi) with a delivery of 20 g, 15 g or 10 g per stroke depending on the position of the lever chosen.
Ideal pump for high pressure greasing and valve flushing. Includes 1,5 m high pressure hose with a three-jaw hydraulic connector.

GREASE PEDAL PUMP

Part No. 157 000

High pressure grease pump with pedal action and 5 kg reservoir. Ductile iron pump mechanism and spring primed follower plate.

Maximum working pressure: 500 bar (7,250 psi).

Can be used in Pressure Control Equipment Skids for emergency applications if the pneumatic pump or air supply fails.
Includes 2 m pressure grease hose and hydraulic type.

HOSE REELS

All metal construction, automatic spring rewind hose reels. Suitable for 700 bar (10,000 psi).

Hose not included

Hose not included

BARE REELS FOR GREASE AND HYDRAULIC FLUID

Maximum wroking pressure: 700 bar (10,000 psi). Reel only, hose not included.

Part No.	HOSE IN Ø	HOSE LENGTH	FLUID INLET THREAD	FLUID OULET THREAD
504 359	max. 3/8"	15 m (50')	3/8" BSP (M)	1/4" BSP (M)
505 339	max. 1/2"	20 m (65')	1/2" BSP (M)	1/2" BSP (M)

ELECTRONIC GREASE METER

EGM700 ELECTRONIC GREASE METER

Shock proof and increased durability.
Large LCD display. Calibration function.

TECHNICAL SPECIFICATIONS	
Fluid	Grease (up to NLGI-2)
Flow range	0,1 to 2,5 kg/min (0.22 to 5.5 lb/min)
Maximum working pressure	700 bar (10,150 psi)
Pulses rate	1,11 ppg / 1100 ppkg - 34.47 ppoz / 503.49 pplb
Accuracy	± 2%
Repeatability	± 0,2%
Inlet	1/8" BSP (F)
Outlet	1/8" BSP (F)
Maximum/minimum totalizer	0.001 to 999999 units
Maximum/minimum recorded dispense	0.001 to 99999 units
Working temperature range	-10 °C to 55 °C (14 °F to 131 °F)
Power supply	2 x "AAA" alkaline
Wetted parts	Aluminium, Acetal, NBR, Stainless steel
Weight	528 g (1.16 lb)
Units of measure	Grams / Kilograms, Ounces / Pounds

Part No.	MODEL	DESCRIPTION
411 110.300	EGM700-18	Electronic grease meter, 1/8" inlet / outlet connection, NPT Threaded

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LEADING THROUGH INNOVATION

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