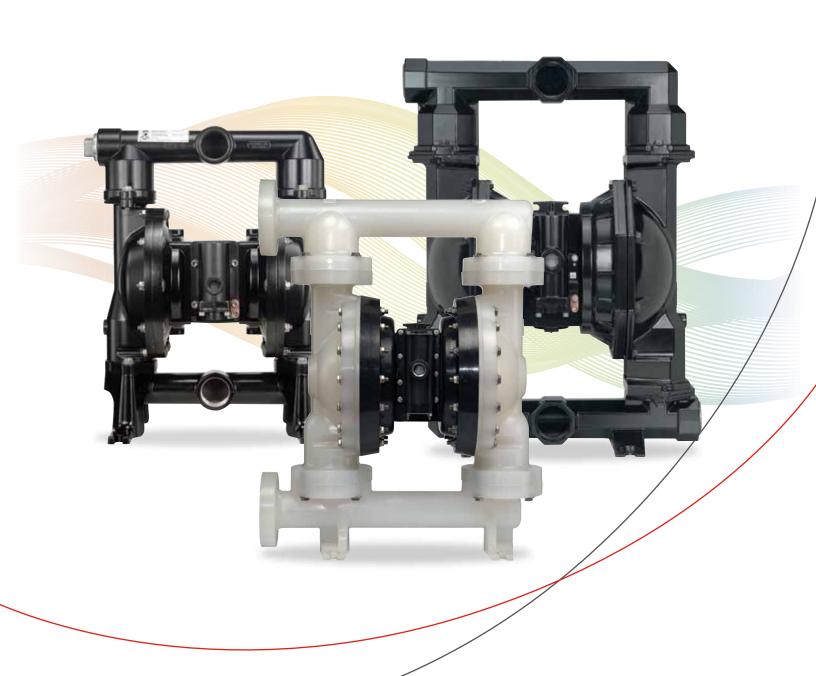


EXPERT SERIES DIAPHRAGM PUMPS

1" THROUGH 3" FLUID PORTS







ARO® is a worldwide manufacturer of fluid management products that are skillfully engineered to deliver performance and serviceability, allowing success to flow freely in our customers' businesses. That's why ARO is fluid intelligence—the smart choice in fluid management products for industrial operations. With over an 85-year legacy of premier product performance and service excellence, ARO provides fluid management equipment for customers and industries around the globe, including chemical, manufacturing, energy, pharmaceutical, mining and more.

ARO has the right product to meet our customers' specific needs. We offer air-operated diaphragm pumps, piston pumps and packages, filters, regulators, and lubricators (FRLs), lubrication equipment, and pneumatic valves and cylinders.

Product and Technical Support

Every ARO product is backed by a highly qualified team of engineers dedicated to designing products that promote success around the world. Because ARO products are built to be as simple as they are smart, customers benefit from efficient operation and high performance for the best total cost of ownership.

At ARO we make success flow

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ARO® Air operated Diaphragm Pumps

Air operated diaphragm pumps are designed for general use. They can easily pump from clean, light viscosity fluids to corrosive, abrasive medium viscosity fluids and can transfer large particles without damage. Due to their pneumatic motor, they could be used in potentially explosive areas. Most of the ARO® diaphragm pumps are ATEX certified (CE Ex11 2GD X).

These pumps offer the ability to vary the flow outlet and discharge pressure as slow as 0.26 gallons (1liter) per minute up to 275 gallons (1041 liter) per minute for our larger sizes and adjust fluid pressure up to 125 p.si. (8.6 bar), by using just an air filter / regulator and a needle valve.

The ARO range of diaphragm pumps offers many materials of construction. Our metallic offering consists of aluminium, cast iron, stainless steel and hastelloy[®]. Our non-metallic offering consists of polypropylene, acetal and PDVF. All ARO pumps are available with convoluted diaphragms offering long product life and reduced maintenance.

Why ARO diaphragm pumps?

- Sealess Design
- Explosion-Proof
- Low Material Shear
- Ease of Maintenance
- Can Run Dry Without Damage
- Portable
- Self Priming
- Fasy-to-Install

Find your EXP opportunity







Bulk Tank/ Tank Farm



Waste Water Treatment/ Fluid Filtration



te Water Formulation ntment/



Basic Transfer/ Supply



Packaging Filling









Processing



Preparation

Œ



Pharmaceuticals

Batching/Blending



Exactly built and designed by ARO, Authentic ARO Parts are the only replacement parts you can count on to restore your ARO equipment to its original performance and quality, while backing up your warranty.

Though a part may look like an ARO part, unless it carries the Authentic ARO Parts name and was bought from one of our authorized distributors, it does not carry the ARO promise and runs the risk of subpar chemical, metallurgical, and mechanical properties.

Don't risk the downtime. Use Authentic ARO Parts every time.

Visit AROzone.com to learn more.

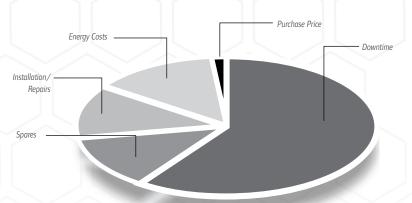
Why ARO diaphragm pumps?

The purchase price of a traditional diaphragm pump is the smallest piece of the total pump cost-of-owner-ship pie. There are downtime costs, energy costs, parts costs and labor costs to consider as well. Add all add all of these costs together and you are dealing with a sizeable financial commitment that gets tougher to swallow with each passing quarter. ARO EXP Series diaphragm pumps, you can slice the total cost of-ownership pie down to a much more digestible size. This is what "solutionizing" is all about; providing smart products that not only demonstrate superior performance, but earn their keep while they are at it.

EXP (ARO) vs. Leading Competitor "Total Cost of Ownership"

- Test Subjects: 2" (ports) aluminum construction with santoprene elastomer's.
- Pump Operation: 4 hrs. a day (intermittent)/ 300 days a year = 1200 hrs.
- Pump Delivery: 150 GPM @ 25 PSI (back pressure)
- Energy Cost: \$0.063 per kilowatt hour
- EXP Air CFM advantage: 37 @ 100 GPM

EXP Total Cost of Ownership cost savings per pump per year: \$742.00



Note: Testing of pumps based on Hydraulic Institute / ANSI (10.6) air-operated pump test guidelines. All tests were conducted on new, out-of-the-box models. Both pumps were tested on Hydraulic Institute - conforming test loop at 25 PSI back pressure, pumping 150 gallons per minute. The fluid being pumped was water. For complete test guidelines and procedure information, contact the manufacturer.

EXP Reliability

Traditional Downtime Problems	ARO EXP Solution	The Benefits
Pump Freezing	Quick Dump™ Checks	Downtime from Freezing Eliminated
Pump Stalling	SimulShift™ Valve / Unbalanced Air Valve	Process Production Uptime
Diaphragm Failure	Convoluted Diaphragms	Up to 4X the Life of Traditional Diaphragms
Air Motor Corrosion Due to Chemical Attack	Engineered Thermoplastic Construction	Extended Pump Life
Pump Leakage	Engineered Bolted Construction	Zero Leakage Downtime, Safer, Cleaner Environment, Material Cost Savings

EXP Efficiency

Compressed Air "Blow-By" Caused by Inferior Design	Positive Seal, Ceramic "D" Valve	No Energy Wasted During Pump Idle
Poor Energy Efficiency	Quick Dump Checks SimulShift Valves	Lower Energy Costs
EXP Serviceability		
Labor/Time: Pulling & Replacing Failed Pumps	Longer Lasting Wear Parts i.e.	Significantly Reduced Labor
Labor/Time: Tearing Down and	Convoluted Diaphragms	and Parts Costs
Replacing Failed Parts	Easy-Access Major Air Valve	
Complex or Incomplete Service Kits	Simplified Service Kits	



Non-Metallic Models

The ARO EXP Series of non-metallic pumps consists of polypropylene, acetal and PDVF. All ARO pumps are available with convoluted diaphragms offering long lasting life and reduced maintenance.

Non-Metallic Model Overview

















Models	1/4" Non-Metallic	3/8" Non-Metallic	1/2" Non-Metallic	1/2" Classic Non-Metallic	3/4" Non-Metallic	1" Non-Metallic	1-1/2" Non-Metallic	2" Non-Metallic
Maximum Flow gpm (lpm)	5.3 (20)	10.6 (40.1)	14.4 (54.5)	13 (49.2)	14.8 (56)	53 (200)	123 (465)	184 (696)
Maximum Discharge Pressure psi (bar)	125 (8.6)	100 (6.8)	100 (6.8)	100 (6'9)	100 (6.8)	120 (8.3)	120 (8.3)	120 (8.3)
Fluid Ports Inlet/Outlet (bsp)	Q-1/4-1/8 PTF SAE SHORT	3/8" (F) - In/Out	1/2" (F) - In/Out	1/2-14 N.P.T.F1	3/4 - 14 N.P.T.F1 Rp 3/4(3/4-14 BSP, parallel)	1" ANSI/DIN Flange (Side or Center) 1 - 11-1/2" NPT Rp 1(1-11 BSP) (Center Discharge)	1-1/2″ ANSI/DIN Flange (Side or Center)	2″ ANSI/DIN Flange (Side Discharge)
Material of Construction	Polypropylene Groundable Acetal PVDF	Polypropylene Groundable Acetal PVDF	Polypropylene Groundable Acetal PVDF	Polypropylene Groundable Acetal PVDF	Polypropylene	Polypropylene PVDF Conductive Polypropylene	Polypropylene PVDF Conductive Polypropylene	Polypropylene PVDF Conductive Polypropylene
Pump Weight lbs (kg)	Poly 2.86 (1.3) PVDF 3.88 (1.76) Acetal 3.52 (1.6)	4.2 (1.9) PD03P-XDS-X 4.3 (1.9) PD03P-XES-X 4.5 (2.0) PD03P-XKS-X 4.6 (2.1) PD03P-XLS-X 3.4 (1.6) PD03P-XPS-X 3.5 (1.6) PD03P-XRS-X	6.3 (2.9) PD05P-XDS-X-B 6.7 (3.0) PD05P-XES-X-B 6.8 (3.1) PD05P-XKS-X-B 7.2 (3.3) PD05P-XLS-X-B 5.2 (2.4) PD05P-XPS-X-B 5.4 (2.5) PD05P-XRS-X-B	7.2 (3.3) Polypropylene 8.8 (4.0) Ground. Acetal 9.5 (4.3) Kynar PVDF	5.61 (2.54)	19.35 (8.78) Poly Threaded 19.59 (8.89) Poly Center Port 19.87 (9.01) Poly Side Port 25.83 (11.72) PVDF Threaded 26.72 (12.12) PVDF Center Port 27.15 (12.32) PVDF Side Port	42.30 (19.19) Poly Center Port 42.60 (19.32) Poly Side Port 55.94 (25.37) PVDF Center Port 63.94 (29.0) PVDF Side Port	85.3 (38.7) Poly 110.9 (50.3) PVDF
Maximum Solids in (mm)	1/16 (1.6)	1/16 (1.6)	3/32 (2.4)	3/32 (2.4)	3/32 (2.4)	1/8 (3.2)	1/4 (6.4)	1/4 (6.4)
Maximum Dry Suction Lift ft (m)	15 (4.6)	9.25 (2.8)	15 (4.5)	15 (4.5)	15 (4.5)	15 (4.5) 19 (5.7)		14 (4.2)
Recommended Filter/Regulator	P39124-620	P39124-600	P39124-600	P39124-624	P39124-600	4-600 P39224-600 F		P39454-610
Airline Kit	66073-1	66073-1	66073-1	66073-1	66073-1	66073-2 66084-1		66109

 $\mbox{Hastelloy-C}^{\circ}$ is a registered trademark of Haynes International, Inc.

1/4" Non-Metallic Models

COMPACT SERIES PUMPS

Part of our Compact Series of pumps, our 1/4" pumps feature big performance in a compact package. They feature flow rates up to 5.3 GPM (20 LPM), a wide range of material options, multi-port versions and the unique hybrid male/female threaded fluid connections.

Ratio: 1:1

Maximum Flow: 5.3 g.p.m. (20) l.p.m.

Displacement per cycle: 0.019 Gallons (0.072 Liters)

Air Inlet (Female): 1/4 - 18 PTF SAE Short

Fluid Inlet/Outlet Hybrid: Internal Thread 1/4"NPTF/BSPT

External Thread 3/4" - 14 NPTF/BSPT

Max. operating pressure psi (bar): 125 (8.6)
Suspended solids max. dia. in.(mm): 1/16" (1.66)

Weight lbs (kg): 2.86 (1.3) Polypropylene

3.88 (1.76) PVDF 3.52 (1.60) Acetal

Maximum dry suction lift ft(m): 15 (4.6)

Sound Level: 70 PSI 60 Cycles/Min 62.3 db(A)

Muffler: Integral, Included



PD01P-HPS-PCC-A

Ordering

Position	1	2		3	4	5		6	7	8		9		10	11
Example:	PX10P	X	-	Н	X	S	-	X	Х	X	-	Α	-	X	X

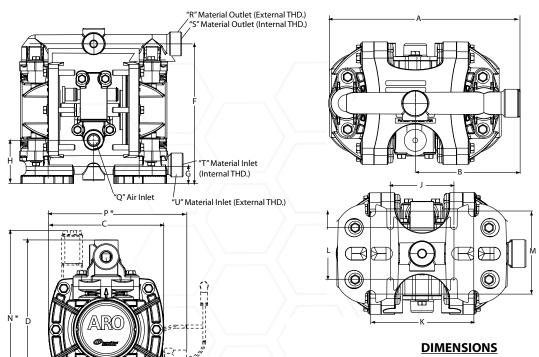
Position 1 Model Series	Position 2 Center Section	Position 3 Fluid Connections	Position 4 Wetted Parts	Position 5 Hardware	Positon 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9 Revision	Position 10 & 11 Specialty Code
PD01 - Standard Pump PE01 - Elec. Interface Accessible Pump	Polypro- pylene F - Polypro-	H - 1/4″ NPT BSP hybrid	K - PVDF P - Polypro- pylene D - Groundable Acetal	S - Stainless Steel	D - Acetal K - PVDF P - Polypro- pylene 0 Polypro- pylene (Flex-Check spacer)* 1 - Acetal (Flex- Check spacer)* 2 - PVDF (Flex- Check spacer)*	Check only) L - Viton (Flex-	A - Santoprene® C - Hytrel® G - Nitrile T - PTFE	A - Revision 1	Fluid control options for pump with elec- tronic interface (PEO1 model). See complete description on page 9

Accessories

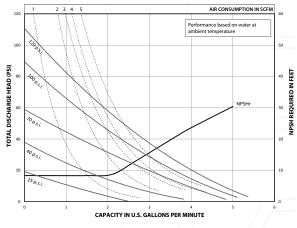
Air Line Connection Kit | 66073-1

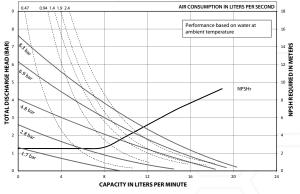
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)

1/4" Non-Metallic Dimensions and Flow Charts



PD01P-XXS-XXX 1/4" NON-METALLIC DIAPHRAGM PUMP





Dimensions shown are for reference only, they are displayed in inches and millimeters (mm).

A - 7.2" (182 mm)	H- 1.9" (48.6 mm)	Q - 1/4 - 18 PTF SAE Short
B - 3.9" (100.0 mm)	J - 2.4" (61 mm)	R- 3/4-14 NPTF
C - 4.6" (117.0 mm)	K - 3.9" (99 mm)	S - 1/4 NPTF / BSPT Hybrid
D- 6.8" (173.0 mm)	L - 2.1" (53 mm)	T - 1/4 NPTF / BSPT Hybrid
E- 0.3" (8.8 mm)	M - 3.2" (81 mm)	U- 3/4-14 NPTF
F- 6.1 " (156 mm)	N - 7.2" (184 mm)	V- 1/4 NPTF
G- 0.8" (20.7 mm)	P - 5.6" (142.2 mm)	

Ordering Position 10

Specialty Code 1

(Blank if no Specialty Code) A - Solenoid 120VAC B - Solenoid 12VDC

C - Solenoid 240VAC D - Solenoid 24VDC

E - 12vDC NEC/CEC

F - 24vDC NEC/CEC

- G Solenoid 12VDC ATEX/IECex
- H Solenoid 24VDC ATEX/IECex
- J 120VAC NEC/CEC
- K Solenoid 220VAC ATEX/IECex
- N Solenoid with no coil
- 0 Standard Valve Block (No Solenoid)

Ordering Position 11 Specialty Code 2 (Blank if no Specialty Code)

E - End of stroke feedback + Leak Detection

F - End of stroke feedback

G - End of Stroke ATEX/IECex/NEC/CEC

H - End of Stroke/Leak Detection ATEX/IECex/NEC/CEC

L - Leak Detection

M - Leak Detection ATEX/IECex/NEC/CEC

3/8" Non-Metallic Models

COMPACT SERIES PUMPS

Part of our Compact Series of pumps, our 3/8" pumps feature big performance in a small package. They feature flow rates up to 10.6 GPM (40.1 LPM) and a wide range of material and porting configurations.

Ratio: 1:1

Maximum Flow: 10.6 g.p.m. (40.1 l.p.m.) 8.7 (32.9) Flex check
Displacement per cycle: 0.022 Gallons (0.083-Liters) 0.018 (0.068) Flex check

Air Inlet: (Female) 1/4 - 18 P.T.F. SAE Short Fluid Inlet/Outlet: 3/8 - 18 N.P.T.F. - 1

Rp 3/8 (3/8 - 19 BSP, parallel)

Max. operating pressure: 100 psi (6.9-bar)

Suspended solids max. dia.: 1/16-in. (1.6-mm) Flex check (Fibers)

Weight: lbs (kg) PD03P-X<u>D</u>S-XXX 4.2 (1.9)

PD03P-XES-XXX 4.3 (1.9) PD03P-XKS-XXX 4.5 (2.0) PD03P-XLS-XXX 4.6 (2.1) PD03P-XPS-XXX 3.4 (1.6) PD03P-XRS-XXX 3.5 (1.6)

Maximum dry suction lift: ft (m) 9.25 (2.8)

Sound Level: 70 PSI 60 Cycles/Min 72.7 db(A)

Muffler: Integral, Included



Ordering

Position	1	2		3	4	5		6	7	8		9		10	11	
Example:	PX03	Р	-	Х	Х	S	-	Х	Х	Х	-	В	_	X	Х	

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Manifold Material	Position 5 Hardware	Positon 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9
D - Standard E - Remote Actuation Capable	P - Poly- propylene	A - 3/8" N.P.T. B - 3/8" BSP	D - Ground. Acetal (single port) E - Ground. Acetal (multiple port) K - PVDF (single port) L - PVDF (multiple port) P - Polypropylene (single port) R - Polypropylene (multiple port)	S - Stainless Steel	D - Acetal K - PVDF P - Poly- propylene S - Stainless Steel O - Flex Check	A - Santoprene C - Hytrel* I - Nitrile N - Neoprene S - Stainless Steel T - PTFE V - Viton	A - Santoprene C - Hytrel* G - Nitrile T - PTFE/ Santoprene V - Viton * Flex check models	Position 10 & 11 Specialty Code Fluid control options for pump with electronic interface (PE03 model). See com- plete description on page 11

Hytrel® and Viton® are registered trademarks of the DuPont company. Santoprene® is a registered trademark of Monsanto Company, licensed to Advanced Elastomer Systems, L.P.

Accessories

Air Line Connection Kit | 66073-1

(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)

Cycle Counter Kit | 66975
Wall Mount Bracket Kit | 67388
Optional Muffler | used with 637428 kit
Service Repair Kits | 637428 (air section)
637429-XX (fluid section)





Air Line Connection Kit 66073-1

67388

3/8" Non-Metallic Dimensions and Flow Charts



PEO3P-APS-PAA-ROS with 637442-1 Kit

Dual Inlet/Outlet Kits: 637442-1 (N.P.T. Poly) 637442-4 (BSP Poly) 637442-3 (N.P.T. PVDF) 637442-6 (BSP PVDF) 637442-2 (N.P.T. Acetal) 637442-5 (BSP Acetal)

DIMENSIONS

A 7-29/32"(200.2 mm) B 8-7/16" (214.3 mm) 5-9/16" (141.3 mm) D 1-1/4" (31.8 mm)

E 5-23/32" (145.2 mm)

4-7/8" (123.9 mm) G 9-7/32" (234.2 mm)

H 4" (101.6 mm) 4-3/4" (120.7 mm) K 9/32" (7.1 mm)

N 4-11/32"(110.1 mm)

P 4-11/32"(110.3 mm) Q 2-25/32"(70.6 mm)

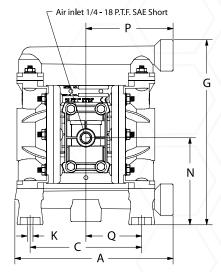
L 1-3/32" (27.8 mm)

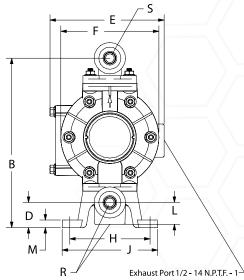
M 3/8" (9.5 mm)

Model PD03P-AXS-XXX PD03P-BXS-XXX

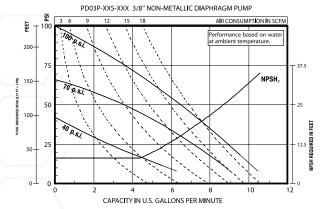
"R" Material Inlet 3/8 - 18 N.P.T.F. - 1 Rp 3/8 (3/8 - 19 BSP)

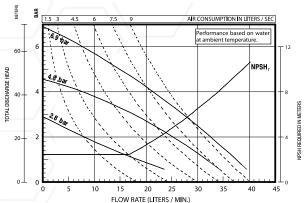
"S" Material Outlet 3/8 - 18 N.P.T.F. - 1 Rp 3/8 (3/8 - 19 BSP)





PERFORMANCE CURVES





Refer to www.AROzone.com for full size flow curves. For additional information contact technical support at 1.800.495.0276

Ordering Position 10

Specialty Code 1 (Blank if no Specialty Code)

A - Solenoid 120VAC

B - Solenoid 12VDC

C - Solenoid 240VAC

D - Solenoid 24VDC

E - 12vDC NEC/CEC

F - 24vDC NEC/CEC

G - Solenoid 12VDC ATEX/IECex

H - Solenoid 24VDC ATEX/IECex

J - 120VAC NEC/CEC

K - Solenoid 220VAC ATEX/IECex

N - Solenoid with no coil

0 - Standard Valve Block

Ordering Position 11 Specialty Code 2 (Blank if no Specialty Code)

E - End of stroke feedback + Leak Detection

F - End of stroke feedback

G - End of Stroke ATEX/IECex/NEC/CEC

H - End of Stroke/Leak Detection ATEX/IECex/NEC/CEC

(No Solenoid)

L - Leak Detection

M - Leak Detection ATEX/IECex/NEC/CEC

1/2" Non-Metallic Models

COMPACT SERIES PUMPS

Part of our Compact Series of pumps, our 1/2" compact pumps feature big performance in a small package. They offer flow rates up to 14.4 GPM (54.5 LPM) and a wide range of material and porting configurations.

Ratio:

Maximum Flow: 14.4 q.p.m. (54.5 l.p.m.) Displacement per cycle: 0.039 Gallons (0.15 Liters) Air Inlet: (Female) 1/4 - 18 P.T.F. SAE Short Fluid Inlet/Outlet: 1/2 - 14 N.P.T.F. - 1

Rp 1/2 (1/2 -14 BSP, parallel)

Max. operating pressure: 100 psi (6.9 bar) Suspended solids max. dia.: 3/32" (2.4 mm)

Weight: lbs (kg) PD05P-XDS-XXX-B 6.3 (2.9)

PD05P-XES-XXX-B 6.7 (3.0) PD05P-XKS-XXX-B 6.8 (3.1) PD05P-XLS-XXX-B 7.2 (3.3) PD05P-XPS-XXX-B 5.2 (2.4) PD05P-XRS-XXX-B 5.4 (2.5)

Maximum dry suction lift: ft (m) 15.0 (4.5)

Sound Level: 70 PSI 60 Cycles/Min 75.0 db(A)

Muffler: Integral, Included



Ordering

Position	1	2		3	4	5		6	7	8		9		10	11
Example:	PX05	Р	-	Х	Х	S	1	X	X	Х	-	В	-	X	X

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Manifold Material	Position 5 Hardware	Positon 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9
D - Standard E - Remote Actuation Capable	P - Poly- propylene	A - 1/2 - 14 N.P.T.F. - 1 B - Rp 1/2 (1/2 -14 BSP, parallel)	D - Ground. Acetal (single port) E - Ground. Acetal (multiple port) K - PVDF (single port) L - PVDF (multiple port) P - Polypropylene (single port) R - Polypropylene (multiple port)	S - Stainless Steel	D - Acetal K - PVDF P - Poly- propylene S - Stainless Steel	A - Santoprene C - Hytrel* G - Nitrile S - Stainless Steel T - PTFE U - Polyurethane V - Viton	A - Santoprene C - Hytrel* G - Nitrile T - PTFE/ Santoprene U - Polyurethane V - Viton	Revision Level Position 10 & 11 Specialty Code Fluid control options for pump with electronic interface (PE05 model). See complete description on page 13

Accessories

Air Line Connection Kit | 66073-1

(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)

Cycle Counter Kit | 66975

Wall Mount Bracket Kit | 76763

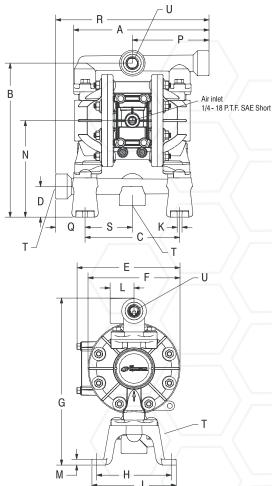
Optional Muffler | 93110 used with 637438 kit

Service Repair Kits | 637428 (air section)

637427-XX (fluid section)



1/2" Non-Metallic Dimensions and Flow Charts



DIMENSIONS

- A 8-27/32" (224.3 mm) B 10-1/16" (255.0 mm)
- 6.164" (156.6 mm)
- D 2" (50.8 mm) E 6-23/32" (170.6 mm)
- F 6" (152.4 mm)

PD05P-AXS-XXX-B PD05P-BXS-XXX-B

- G 10-7/8" (275.7 mm) 4-7/8" (123.8 mm)
- 5-1/2" (139.7 mm) 5/16" (8.0 mm)
- 1-9/16" (39.7 mm) M 3/8" (9.5 mm)
- "T" Material Inlet 1/2 - 14 N.P.T.F. - 1 Rp 1/2 (1/2 - 14 BSP)
- S 3-3/32" (78.3 mm)

Q

N 6-5/16" (159.9 mm)

5" (127.0 mm)

10" (254.0 mm)

1-59/64" (48.8 mm)

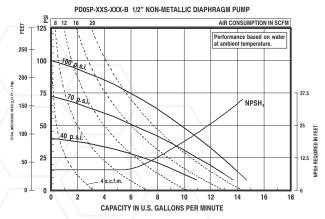
"U" Material Outlet 1/2 - 14 N.P.T.F. - 1 Rp 1/2 (1/2 - 14 BSP)

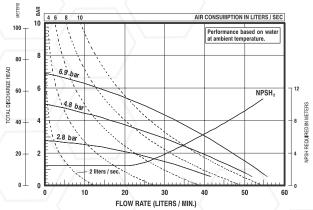


PE05P-APS-PAA-B0S with 637440-1 Kit

Dual Inlet/Outlet Kits: 637440-1 (N.P.T. Poly) 637440-4 (BSP Poly) 637440-2 (N.P.T. Acetal) 637440-5 (BSP Acetal) 637440-3 (N.P.T. PVDF) 637440-6 (BSP PVDF)

PERFORMANCE CURVES





Refer to www.AROzone.com for full size flow curves. For additional information contact technical support at 1.800.495.0276

Ordering Position 10

Specialty Code 1 (Blank if no Specialty Code)

- A Solenoid 120VAC
- B Solenoid 12VDC
- C Solenoid 240VAC
- D Solenoid 24VDC
- E 12vDC NEC/CEC
- F 24vDC NEC/CEC

- G Solenoid 12VDC ATEX/IECex
- H Solenoid 24VDC ATEX/IECex
- J 120VAC NEC/CEC
- K Solenoid 220VAC ATEX/IECex
- N Solenoid with no coil
- 0 Standard Valve Block (No Solenoid)

Ordering Position 11 Specialty Code 2 (Blank if no Specialty Code)

- E End of stroke feedback + Leak Detection
- F End of stroke feedback
- G End of Stroke ATEX/IECex/NEC/CEC
- H End of Stroke/Leak Detection ATEX/IECex/NEC/CEC
- L Leak Detection
- M Leak Detection ATEX/IECex/NEC/CEC
- 0 No Option

1/2" Classic Style Non-Metallic Models

COMPACT SERIES PUMPS

Part of our Compact Series of pumps, our 1/2" classic pumps feature big performance in a small package. With flow rates up to 13 GPM (49.2 LPM) and a wide range of material and porting configurations.

Ratio:

Maximum Flow: (ball) 13 q.p.m. (49.2 l.p.m.) (duckbill) 10 q.p.m. (37.9 l.p.m.) Displacement per cycle: (ball) 0.04 q.p.m. (0.15 l.p.m.) (duckbill) 0.032 q.p.m. (0.12 l.p.m.)

Air Inlet: (Female) 1/4 - 18 N.P.T.F. - 1 Fluid Inlet/Outlet: 1/2 - 14 N.P.T.F. - 1 Max. operating pressure: 100 psi (6.9 bar)

Suspended solids max. dia.: (ball) 3/32" (2.4-mm) (duckbill) fibers Weight: lbs (kg) 7.2 (3.3) Polypropylene Groundable Acetal 8.8 (4.0) Kynar PVDF 9.5 (4.3)

Maximum dry suction lift ft(m): 15 (4.6)

Sound Level: 70 PSI 60 Cycles/Min 71.1 db(A)

Muffler: Integral, Included



Ordering

Position	1	2		3	4	5		6
Example:	66605	X	-	Х	Х	Х	-	04

Position 1	Position 2 Fluid Caps and Manifold Material	Position 3	Position 4	Position 5	Positon 6
Model		Seat	Ball	Diaphragm	Cone Check
Series		Section	Material	Material	Flow
Base Model	3 - Polypropylene 6 - Groundable Acetal 7 - Pure PVDF J - Polypropylene* H - Groundable Acetal* K - Pure PVDF* *Single piece manifold	0 - Duckbill 2 - Stainless Steel 3 - Polypropylene 4 - PVDF 6 - Acetal	1 - Neoprene 2 - Nitrile 3 - Viton 4 - PTFE 5 - E.P.R. 8 - Polyurethane A - Stainless Steel C - Neoprene** D - Nitrile** E - Santoprene **Duckbill models	1 - Neoprene 2 - Nitrile 3 - Viton 4 - PTFE/Santoprene 5 - E.P.R. 8 - Polyurethane 9 - Hytrel B - Santoprene	04 - Top Discharge

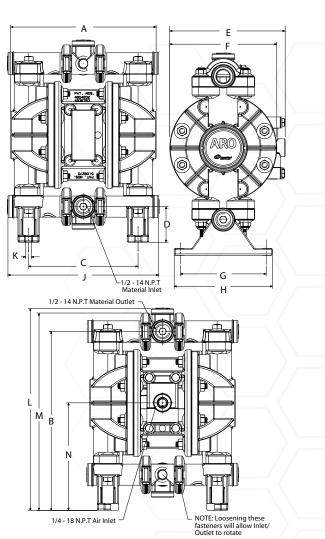
Accessories

Air Line Connection Kit | 66073-1 (Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose) Cycle Counter Kit| 66975 Optional Muffler | 93110 used with 637438 kit **Service Repair Kits** | 637141 (air section) 637140-XX (fluid section)

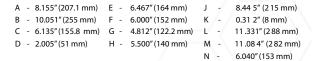


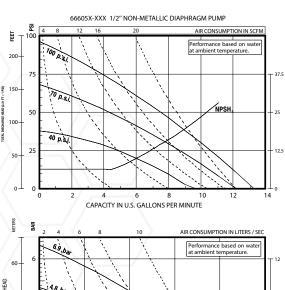


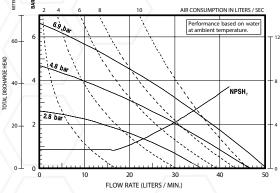
1/2" Non-Metallic Dimensions and Flow Charts



NOTE: Dimensions are shown in inches and (mm) and are supplied for reference only.







Refer to www.AROzone.com for full size flow curves. For additional information contact technical support at 1.800.495.0276

3/4" Non-Metallic Models

COMPACT SERIES PUMPS

Part of our Compact Series of pumps, our 3/4" pumps feature big performance in a small package. They offer flow rates up to 14.8 GPM (56 LPM) and a wide range of material and porting configurations.

Ratio: 1:1

14.8 q.p.m. (56 l.p.m.) Maximum Flow: Displacement per cycle: 0.032 Gallons (0.12 Liters) Air Inlet: (Female) 1/4 - 18 P.T.F. SAE Short Fluid Inlet/Outlet: 1/2 - 14 N.P.T.F. - 1

Rp 1/2 (1/2 -14 BSP, parallel)

Max. operating pressure: 100 psi (6.9 bar) Suspended solids max. dia.: 3/32" (2.4 mm) Weight: lbs (kg) 5.61 (2.54) Maximum dry suction lift: ft (m) 15.0 (4.5)

Sound Level: 70 PSI 60 Cycles/Min 75.0 db(A)

Muffler: Integral, Included



PD07P-BPS-PAA

Ordering

Position	1	2		3	4	5		6	7	8		9		10	11
Example:	PD07	Р	-	Х	Х	S	-	X	Х	Х	-	В	-	Х	Х

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Manifold Material	Position 5 Hardware	Positon 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9
PD07 - Standard Pump PE07 - Remote Actuation Capable	P - Poly- propylene	A - 14 - 3/4" N.P.T.F1 B - Rp 3/4 (3/41/2 -14 BSP, parallel)	P - Poly- propylene (Single Port)	S - SS	P - Poly- propylene	A - Santoprene C - Hytrel T - PTFE	C - Hytrel T - PTFE	Revision Level Position 10 & 11 Specialty Code Fluid control options for pump with electronic interface (PEO7 model). See complete description on page 17

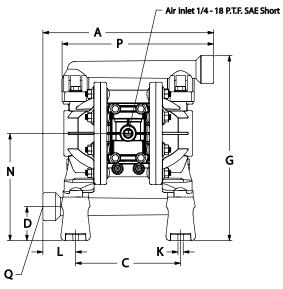
Accessories

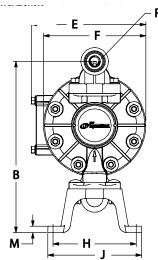
Air Line Connection Kit | 66073-1 (Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose) Cycle Counter Kit | 66975 Muffler Kit | 637438 (ported exhaust) 3/8" NPT Service Repair Kits | 637428 (air section) 637427-XX (fluid section)

Wall Mount | 76763



3/4" Non-Metallic Dimensions and Flow Charts

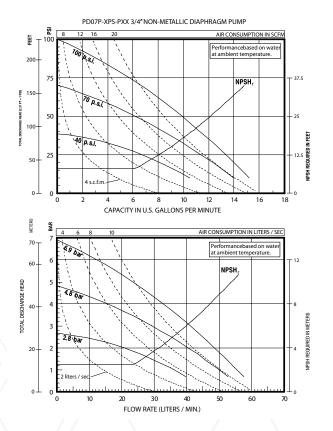




DIMENSIONS

A -10"(254.2 mm) F - 6-1/32"(153.1mm) L - 1-15/16" (48.9mm) B - 10-3/32"(256.1mm) G - 10-29/32"(276.8mm) M - 3/8"(9.6mm) C - 6-3/16"(157.1mm) H -4-29/32"(124.2 mm) N -6-5/16"(160.5mm) D -2"(51.0mm) J - 5-17/32"(140.2mm) P - 8-7/8" (225.3mm) E - 6-3/4"(171.0mm) K - 5/16"(8.0mm)

"Q" Material Inlet "R" Material Outlet Model PD07P-APS-PXX 3/4- 14 N.P.T.F. - 1 3/4- 14 N.P.T.F. - 1 Rp 3/4(3/4- 14 BSP) PD07P-BPS-PXX Rp 3/4(3/4-14BSP)



Refer to www.AROzone.com for full size flow curves. For additional information contact technical support at 1.800.495.0276

Ordering Position 10

Specialty Code 1

(Blank if no Specialty Code) A - Solenoid 120VAC

B - Solenoid 12VDC

C - Solenoid 240VAC

D - Solenoid 24VDC

E - 12vDC NEC/CEC

F - 24vDC NEC/CEC

G - Solenoid 12VDC ATEX/IECex

H - Solenoid 24VDC ATEX/IECex

J - 120VAC NEC/CEC

K - Solenoid 220VAC ATEX/IECex

N - Solenoid with no coil

0 - Standard Valve Block (No Solenoid)

Ordering Position 11 Specialty Code 2 (Blank if no Specialty Code)

E - End of stroke feedback + Leak

Detection

F - End of stroke feedback

G - End of Stroke ATEX/IECex/NEC/CEC

H - End of Stroke/Leak Detection ATEX/IECex/NEC/CEC

L - Leak Detection

M - Leak Detection ATEX/IECex/NEC/CEC

1" Non-Metallic Models

ARO EXP 1" non-metallic diaphragm pumps are a versatile solution for numerous applications. Our EXP 1" models achieve flow rates of up to 53 GPM (200.6 LPM) and offer a wide array of material and porting configurations. These pumps are often used for transfer, filling, recirculation and supply in Chemical, Industrial and Water/Wastewater treatment markets.

Ratio: 1:1

Maximum GPM (LPM): 53 (200)

Displacement per cycle Gallons (Liters): 0.226 (0.86)

Air Inlet (Female): 1/4 - 18 N.P.T.

Fluid Inlet/Outlet: 1 - 11-1/2 N.P.T.F., Rp1(1-11 BSP)

1" A.N.S.I./DIN flange (side or center)

Max. operating pressure psi (bar): 120 (8.3) Suspended solids max. dia. in.(mm): 1/8" (3.2)

Weight lbs (kg): Polypropylene, Threaded Port 19.35 (8.78) Polypropylene, Center Ported 19.59 (8.89)

Polypropylene, Center Ported 19.59 (8.89)
Polypropylene, Side Ported 19.87 (9.01)
PVDF, Threaded Port 25.83 (11.72)
PVDF, Center Ported 26.72 (12.12)

PVDF, Side Ported 27.15 (12.32)

Maximum dry suction lift ft(m): 19 (5.7)

Sound Level: 70 PSI 60 Cycles/Min 79.7 db(A)

Muffler Included: 93110



Ordering

Position	1	2		3	4	5		6	7	8		9		10	11
Example:	PX10	Х	-	Х	Х	S	-	X	X	Х	-	В	•	X	X

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Wetted Parts	Position 5 Hardware	Positon 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9
PD10 - Standard Pump PE10 - Electronic Interface Accessible Pump	E - Conductive Polypropylene P - Polypropylene	A - NPTF Thread B - BSP Thread F - 1" A.N.S.I./DIN Flange (Side) Y - 1" A.N.S.I./DIN Flange (Center)	E - Conductive Polypropylene K - PVDF P - Polypropylene		H - 440 SS (Hard) K - PVDF P - Poly- propylene S - 316 SS	A - Santoprene C - Hytrel G - Nitrile T - PTFE V - Viton	Santonrene	Revision Level Position 10 & 11 Specialty Code Fluid control options for pump with electronic interface (PE10 model). See complete description on page 19

Accessories

Air Line Connection Kit | 66073-2

(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)

Diaphragm Failure Detection | 67237

ARO Diaphragm Failure Detection is a simple, cost-effective way to get your pumps wired for preventive maintenance. (PE10X pump model is required)

Cycle Counter Kit | 66350

Cycle Sensor Kit | 67350
Service Repair Kits | 637397 (air motor for PX10P), 637396-XX (fluid section),

637395-X (major air valve assembly)

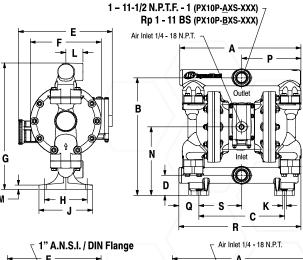
Flange Connection Kits | 67341-E10N (side flange), 67341-C10N (center flange)

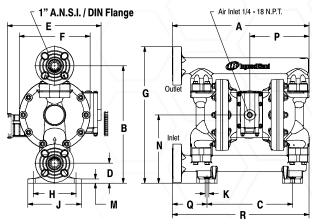
Use with non-metallic EXP pumps with the flange manifold option



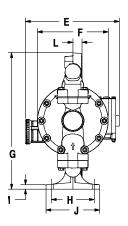
Flange Connection Kit

1" Non-Metallic Dimensions and Flow Charts





Air Inlet 1/4 - 18 N.P.T.



- D Q C R
- A see below
- 13-25/32" (349.8 mm) В-
- C-10-1/16" (255.3 mm)
- D 2-11/32" (59.4 mm) E 11-1/32" (279.5 mm)
- F 8-5/16" (211.1 mm)
- PX10P-<u>A</u>XS-, -<u>B</u>XS-
- (Threaded) 14-7/32" (361.2 mm) 14-27/32" (376.5 mm)
- G-2" (50.8 mm)
- Q-2-3/8" (59.7 mm)
- 14-11/32" (364.0 mm)

DIMENSIONS

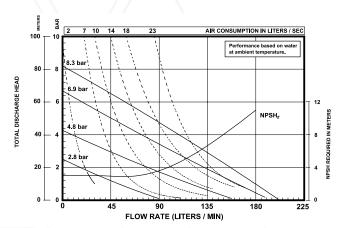
- see below 5-1/32" (127.6 mm) 6-9/32" (159.6 mm)
- 7/16" (11.1 mm)
- see below
- M 1/2" (12.7 mm)
 - PX10P-FXS-XXX (End Flange) 16-1/32" (407.3 mm) 16-1/32" (407.3 mm)

 - 4-1/16" (103.0 mm) 16-1/32" (407.3 mm)
- N 8-1/32" (203.4 mm) P 6-31/32" (176.6 mm)
- Q see below

1" A.N.S.I. / DIN Flange

- see below
- S 5-1/32" (127.6 mm)
 - PX10P-YXS-XXX (Center Flange) 14-7/32" (361.2 mm) 16" (406.3 mm) 1-1/32" (25.6 mm)
- 2-3/8" (59.7 mm) 14-11/32" (364.0 mm)

PX10P-XXX-XXX 1" NON-METALLIC DIAPHRAGM PUMP S AIR CONSUMPTION IN SCFM 15 20 FEET 120 p.s.i. Performance based on water at ambient temperature. TOTAL DISCHARGE HEAD (2.31 FT = 1 PSI) 37.5 NPSH_r 150 25 100 12.5 50 30 40 50 60 CAPACITY IN U.S. GALLONS PER MINUTE



Refer to www.AROzone.com for full size flow curves. For additional information contact technical support at 1.800.495.0276

Ordering Position 10

Specialty Code 1 (Blank if no Specialty Code)

- A Solenoid 120VAC
- B Solenoid 12VDC
- C Solenoid 240VAC
- D Solenoid 24VDC
- E 12vDC NEC/CEC
- F 24vDC NEC/CEC

- G Solenoid 12VDC ATEX/IECex
- H Solenoid 24VDC ATEX/IECex
- J 120VAC NEC/CEC
- K Solenoid 220VAC ATEX/IECex
- N Solenoid with no coil
- 0 Standard Valve Block (No Solenoid)

Ordering Position 11 Specialty Code 2 (Blank if no Specialty Code)

- E End of stroke feedback + Leak Detection
- F End of stroke feedback
- G End of Stroke ATEX/IECex/NEC/CEC
- H End of Stroke/Leak Detection ATEX/IECex/NEC/CEC
- L Leak Detection
- M Leak Detection ATEX/IECex/NEC/CEC
- 0 No Option

1-1/2" Non-Metallic Models

ARO 1-1/2" non-metallic diaphragm pumps are frequently used in transfer, filling, recirculation and supply in Chemical, Industrial and Water/Wastewater treatment markets. Our 1-1/2" models achieve flow rates of up to 123.1 GPM (465.9 LPM) and also offer a diverse selection of material and porting configurations.

Ratio: 1:1

Maximum GPM (LPM): 123 (465) Displacement per cycle Gallons (Liters): 0.617 (2.34) Air Inlet (Female): 1/2 - 14 N.P.T.

Fluid Inlet/Outlet: 1-1/2" A.N.S.I./DIN flange (side or center)

Max. operating pressure psi (bar): 120 (8.3) Suspended solids max. dia. in. (mm): 1/4" (6.4)

Weight lbs (kg): Polypropylene, Side Ported 42.6 (19.3)

> PVDF, Side Ported 63.9 (29) Polypropylene, Center Ported 42.3 (19.2) PVDF, Center Ported 55.9 (25.3)

Maximum dry suction lift ft (m): 14 (4.2)

Sound Level: 70 PSI 60 Cycles / Min 81.0 db(A)

Muffler Included: 93139



Ordering

Position	1	2		3	4	5		6	7	8		9		10	11
Example:	PX15	X	-	Х	Х	S	-	Х	Х	X	_	В	-	X	X

Position 1 Model	Position 2	Position 3		Position 5		Position 7 Ball	Position 8	Position 9
Series	Center Section	Connections	Wetted Parts	Hardware	Seat Material	Material	Diaphragm Material	
PD15 - Standard Pump PE15 - Electronic Interface Accessible Pump	E - Conductive Poly- propylene P - Poly-	F - 1-1/2" A.N.S.I./DIN Flange (Side) Y - 1-1/2"	E - Conductive Poly- propylene K - PVDF P - Poly- propylene		H - 440 SS (Hard) K - PVDF P - Poly- propylene S - 316 SS	A - Santoprene C - Hytrel G - Nitrile S - 316 SS	A - Santoprene C - Hytrel G - Buna-N M - Medical Grade Santoprene T - PTFE/ Santoprene V - Viton	Revision Level Position 10 & 11 Specialty Code Fluid control options for pump with electronic interface (PE15 model). See complete description on page 21

Accessories

Air Line Connection Kit | 66084-1

(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)

Diaphragm Failure Detection | 67237

Cycle Counter Kit | Cycle Counter Kit | 66350

Service Repair Kits | 637389 (air motor for PX15P), 637391-XX (fluid section)

637390-X (major air valve assembly)

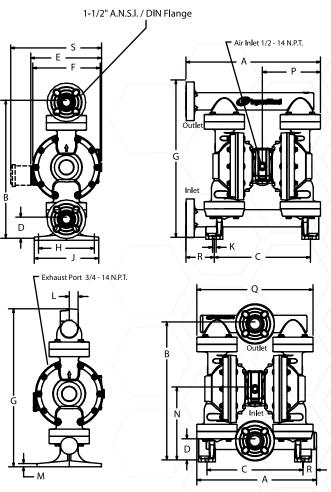
Flange Connection Kit | 67341-E15N (side flange), 67341-C15N (center flange)

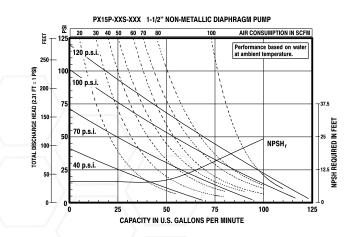
Use with non-metallic EXP pumps with the flange manifold option

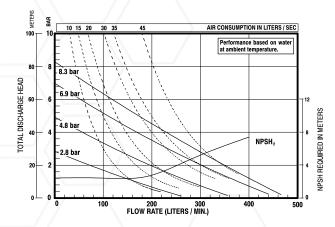


Flange Connection Kit

1-1/2" Non-Metallic Dimensions and Flow Charts







Refer to www.AROzone.com for full size flow curves. For additional information contact technical support at 1.800.495.0276

A - see below B - 21-15/32" (545.3 mm) C - 14-15/16"(379.4 mm) D - 3-9/32"(83.3 mm)

E - see below F - 10-1/2" (266.3 mm) G - see below

H - 8-11/16" (220.7 mm) J - 10-1/32" (254.8 mm) K - 9/16" (14.3 mm) L - see below

PX15P-YXS-XXX

(Center Flange)

18-19/32" (472.3 mm)

24-19/32" (624.5 mm)

1-3/8" (34.9 mm)

2-3/32" (53.1 mm)

18-3/32" (459.0 mm)

M - 17/32" (13.0 mm)

N - 11-3/8" (288.4 mm) P - 9-1/32" (229.5 mm)

Q - see below R - see below S - see below

PX15P-EXS-XXX (End Flange) 20-15/16" (531.6 mm)

24-15/32" (621.5 mm) G-1 -Q-R - 4-7/16" (112.4 mm)

PX15<u>E</u>-XXX-XXX PX15P-XXX-XXX

"E" 11" (279.5 mm) 14-1/8" (358.5 mm)

Ordering Position 10 Specialty Code 1

(Blank if no Specialty Code) A - Solenoid 120VAC B - Solenoid 12VDC C - Solenoid 240VAC

D - Solenoid 24VDC E - 12vDC NEC/CEC F - 24vDC NEC/CEC

G - Solenoid 12VDC ATEX/IECex

H - Solenoid 24VDC ATEX/IECex J - 120VAC NEC/CEC

K - Solenoid 220VAC ATEX/IECex

N - Solenoid with no coil

0 - Standard Valve Block (No Solenoid)

Ordering Position 11 Specialty Code 2 (Blank if no Specialty Code)

E - End of stroke feedback + Leak Detection

F - End of stroke feedback

ATEX/IECex/NEC/CEC

G - End of Stroke ATEX/IECex/NEC/CEC

H - End of Stroke/Leak Detection

L - Leak Detection

M - Leak Detection ATEX/IECex/NEC/CEC

2" Non-Metallic Models

ARO EXP 2" non-metallic pumps achieve flow rates of up to 184 GPM (696.4 LPM) and offer a wide array of material and porting configurations. 2" non-metallic pumps are often used for transfer, filling, recirculation and batching in Chemical, Industrial and Water/Wastewater treatment markets.

Ratio: 1:1 Maximum GPM (LPM): 184 (696) Displacement per cycle Gallons (Liters): 1.4 (5.3) Air Inlet (Female): 3/4 - 14 N.P.T.

2" A.N.S.I./DIN flange (side) Fluid Inlet/Outlet:

Max. operating pressure psi (bar): 120 (8.3) Suspended solids max. dia. in. (mm): 1/4" (6.4)

Weight lbs (kg): Polypropylene 85.3 (38.7)

PVDF 110.9 (50.3)

Maximum dry suction lift ft (m): 14 (4.2)

Sound Level: 70 PSI 60 Cycles/Min 85.0 db(A)

Muffler Included: 93139



Ordering

Position	1	2		3	4	5		6	7	8		9		10	11
Example:	PX20	Х	-	F	Х	S	-	Х	X	Х	-	В	-	Х	Х

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Wetted Parts	Position 5 Hardware	Positon 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9
PD20 - Standard Pump PE20 - Electronic Interface Accessible Pump	E - Conductive Poly- propylene P - Poly- propylene	F - 2" A.N.S.I./DIN Flange (Side)	E - Conductive Poly- propylene K - PVDF P - Poly- propylene	S - SS	K - PVDF P - Poly- propylene	C - Hytrel	A - Santoprene C - Hytrel G - Buna- N M - Medical Grade Santoprene T - PTFE/ Santoprene V - Viton	Revision Level Position 10 & 11 Specialty Code Fluid control options for pump with electronic interface (PE20 model). See complete description on page 23

Accessories

Air Line Connection Kit | 66109

(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)

Diaphragm Failure Detection | Kit No.67237

Cycle Counter Kit | 66350

Cycle Sensor Kit | 67350-1(PE20X pump model is required)

Service Repair Kits | 637369 (air motor for PX20P), 637373-XX (fluid section),

637374-X (major air valve assembly)

Continuous-Duty Muffler | 67323 Recommended for continuous-duty and high-flow applications.

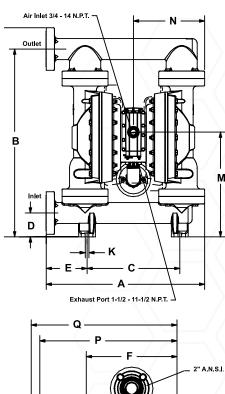
Muffler features large expansion chamber, permitting cold exhaust air to exit pump

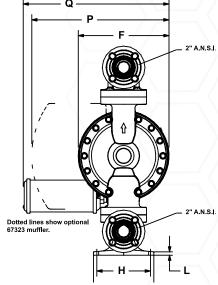
Flange Connection Kit | 67341-E20N



67323 Continuous Duty Muffler

2" Non-Metallic Dimensions and Flow Charts





A - 24-3/16" (614.3mm) B - 28-21/32" (728.0mm) F - 13-7/8" (352.0mm) G - 31-29/32" (810.5mm)

C - 14-5/32" (360.0mm) D - 3-5/8" (92.2mm)

H - 8-3/16" (207.8mm) J - 9-7/32" (234.2mm)

E - 6-1/4" (158.3mm) K - 9/16" (14.3mms)

L - 1/2" (12.7mm)

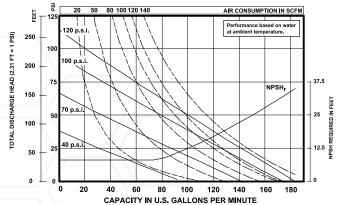
M - 16" (405.9mm)

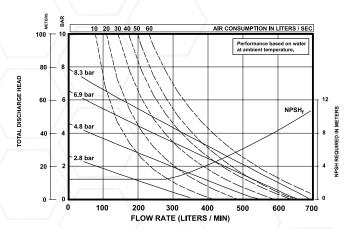
N - 10-7/8" (276.2mm)

P - 20-31/32" (532.2mm)

Q - 22-9/32" (565.5mm)

PX20P-FXS-XXX 2" NON-METALLIC DIAPHRAGM PUMP





Refer to www.AROzone.com for full size flow curves. For additional information contact technical support at 1.800.495.0276

Ordering Position 10

Specialty Code 1 (Blank if no Specialty Code)

A - Solenoid 120VAC

H - Solenoid 24VDC ATEX/IECex

B - Solenoid 12VDC

J - 120VAC NEC/CEC

C - Solenoid 240VAC D - Solenoid 24VDC

K - Solenoid 220VAC ATEX/IECex

G - Solenoid 12VDC ATEX/IECex

E - 12vDC NEC/CEC

N - Solenoid with no coil

0 - Standard Valve Block

F - 24vDC NEC/CEC

(No Solenoid)

Ordering Position 11 Specialty Code 2 (Blank if no Specialty Code)

E - End of stroke feedback + Leak

L - Leak Detection

Detection

M - Leak Detection ATEX/IECex/NEC/CEC

F - End of stroke feedback

0 - No Option

G - End of Stroke ATEX/IECex/NEC/CEC

H - End of Stroke/Leak Detection ATEX/IECex/NEC/CEC



Metallic Models

The ARO range of diaphragm pumps offers many materials of construction compatible for the chemical industry: Our metallic offering consists of aluminium, cast iron, stainless steel and hastelloy.

Metallic Model Overview













	7 - J	20 20 40		~ ~		
Models	1/2″ Metallic	3/4″ Metallic	1″ Metallic	1-1/2″ Metallic	2" Metallic	3″ Metallic
Maximum Flow gpm (lpm)	12 (45.4)	13.6 (51.5)	52 (197)	123 (465)	172 (651)	275 (1,041)
Maximum Discharge Pressure psi (bar)	100 (6.9)	100 (6.9)	120 (8.3)	120 (8.3)	120 (8.3)	120 (8.3)
Fluid Ports Inlet/Outlet (bsp)	1/2" (F) - In/Out	3/4 - 14 N.P.T.F2 Rp 3/4(3/4-14BSP, parallel)	1-11-1/2″ NPT Rp1(1-11 BSP) (Side or Center)	1-1/2 - 11-1/2 NPTF Rp1-1/2(1-1/2 -11 BSP) (Side or Center) 1-1/2 ANSI/DIN (SS only/Center)	2" NPTF Rp2 (2-11 BSP) (Side or Center) 2" ANSI/DIN Flange with 2" pipe tap (SS only/Center)	3″ NPTF Rp3(3-11 BSP) (Center) 3″ ANSI/DIN Flange
Material of Construction	Stainless Steel		Aluminum Cast Iron Stainless Steel Hastelloy®	Aluminum Cast Iron Stainless Steel Hastelloy®	Aluminum Cast Iron Stainless Steel Hastelloy®	Aluminum Cast Iron Stainless Steel Hastelloy®
Pump Weight lbs (kg)	10.4 (4.7) PD05A-XAS-X-B 16.6 (7.5) PD05A-XSS-X-B 8.0 (3.7) PD05R-XAS-X-B 14.3 (6.5) PD05R-XSS-X-B	8.74 (3.96)	20.7 (9.4) Alum 35.2 (16.0) CI 38.2 (17.3) SS 39.6 (18.0) Hastelloy add 4.65 (2.11) for Alum. air motor, add 11.09 (5.03) for SS air motor	37.7 (17.1) Alum. 73.2 (33.2) CI 61.2 (27.8) SS 86.9 (39.4) Hastelloy add 3.08 (1.40) for Alum. air motor, add 14.39 (6.53) for SS air motor	64 (29) Alum. 133 (60) Cl 122 (55.3) SS Threaded 114 (51.7) SS Flange 122 (55.3) Hastelloy add 34 (15) for Cl or SS air motor	113 (51.3) Alum. 197 (89.4) CI 203 (92.1) SS 203 (92.1) Hastelloy add 40 (18.1) for SS air motor
Maximum Solids in (mm)	3/32 (2.4)	3/32 (2.4)	1/8 (3.32)	1/4 (6.4)	1/4 (6.4)	3/8 (9.5)
Maximum Dry Suction Lift ft (m)	15 (4.5)	15 (4.5)	19 (5.7)	14 (4.2)	14 (4.2)	14 (4.2)
Recommended Filter/Regulator	P39124-624	P39124-624	P39224-614	P39344-614	P39354-614	P39454-614
Airline Kit	66073-1	66073-1	66073-2	66084-1	66109	66109

Compact Series Diaphragm Pumps

 $\mathsf{Hastelloy\text{-}C}^{\circ}$ is a registered trademark of Haynes International, Inc.

1/2" Metallic Models

Part of our Compact Series of pumps, our 1/2" metallic pumps feature big performance in a small package. They achieve flow rates up to 14.4 GPM (54.5 LPM) and offer a wide range of material and porting configurations.

Ratio:

Maximum Flow: 12.0 g.p.m. (45.4 l.p.m.) Displacement per cycle: 0.039 Gallons (0.15 Liters)

1/4 - 18 P.T.F. SAE Short (PD05R-X-X-B models) Air Inlet: (Female)

1/4 - 18 N.P.T.F - 1 (PD05A-X-X-B models)

Fluid Inlet/Outlet: 1/2 - 14 N.P.T.F. - 1

Rp 1/2 (1/2 - 14 BSP, parallel)

Max. operating pressure: 100-psi (6.9-bar) Suspended solids max. dia.: 3/32-in. (2.4-mm)

Weight: lbs (kg) PD05A-XAS-XXX-B 10.4 (4.7) PD05A-XSS-XXX-B 16.6 (7.5) PD05R-XAS-XXX-B 8.0 (3.7)

PD05R-XSS-XXX-B 14.3 (6.5)

Maximum dry suction lift: ft (m) 15 (4.5)

Sound Level: 70 PSI 60 Cycles/Min 75 db(A) Muffler: PD05A - 93110; PD05R - Integral



PD05R-BSS-PTT-B

Ordering

Position	1	2		3	4	5		6	7	8		9		10	11
Example:	PX05	X	-	X	Х	S	-	X	X	Х	-	В	-	X	X

Position 1 I Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Wetted Parts	Position 5 Hardware	Positon 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9
	A - Aluminum R - Poly- propylene	A - 1/2 - 14 N.P.T.F 1 B - Rp 1/2 (1/2 - 14 BSP, parallel)	A - Aluminum S - Stainless Steel	S - Stainless Steel	F - Aluminum P - Poly- propylene S - Stainless Steel	A - Santoprene C - Hytrel G - Nitrile S - Stainless Steel T - PTFE U - Polyurethane V - Viton	A - Santoprene C - Hytrel G - Nitrile T - PTFE/ Santoprene U - Polyurethane V - Viton	Position 10 & 11 Specialty Code Fluid control options for pump with electronic interface (PE05 model). See complete description on page 27

Accessories

Air Line Connection Kit | 66073-1

(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)

Cycle Counter Kit | 66975

Wall Mount Bracket Kit | 76763

Optional Muffler | 93110 used with 637438 kit

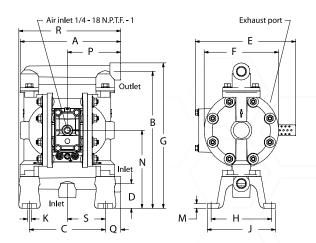
Service Repair Kits | 637428 (air section)

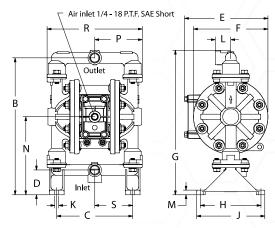
637427-XX (fluid section)





1/2" Metallic Dimensions and Flow Charts



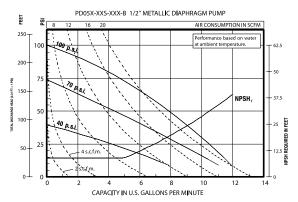


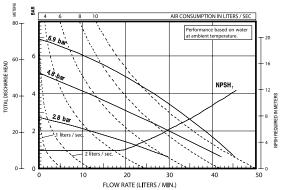


- A 8-1/8" (206.0 mm) 11-1/16" (280.4 mm)
- 6-1/8" (155.6 mm) D 2" (50.8 mm)
- see below
- 6" (152.4 mm)
- G see below
- 4-7/8" (123.8 mm)
- 5-1/2" (139.7 mm) 5/16" (8.0 mm)
- 1-1/4" (31.8 mm)
- N 6-5/16" (159.9 mm)
- see below
- Q 1-1/4"(31.6 mm)
- see below S 3-1/16" (77.8 mm)
- M 3/8" (9.5 mm)

Dimension PD05A-XXS-XXX-B PD05R-XXS-XXX-B

"E"	8-3/32" (205.5 mm)	6-23/32" (170.6 mm)
"G"	11-3/4" (297.9 mm)	11-21/32"(296.0 mm)
"P"	4-5/16" (109.3 mm)	3-27/32" (97.4 mm)
"R"	8-7/32" (208.5 mm)	7-11/16" (194.9 mm)





Refer to www.AROzone.com for full size flow curves. For additional information contact technical support at 1.800.495.0276

Ordering Position 10

Specialty Code 1 (Blank if no Specialty Code)

A - Solenoid 120VAC

B - Solenoid 12VDC

C - Solenoid 240VAC

D - Solenoid 24VDC

E - 12vDC NEC/CEC

F - 24vDC NEC/CEC

G - Solenoid 12VDC ATEX/IECex

H - Solenoid 24VDC ATEX/IECex

J - 120VAC NEC/CEC

K - Solenoid 220VAC ATEX/IECex

N - Solenoid with no coil

0 - Standard Valve Block (No Solenoid)

Ordering Position 11 Specialty Code 2 (Blank if no Specialty Code)

E - End of stroke feedback + Leak Detection

F - End of stroke feedback

G - End of Stroke ATEX/IECex/NEC/CEC

H - End of Stroke/Leak Detection ATEX/IECex/NEC/CEC

L - Leak Detection

M - Leak Detection ATEX/IECex/NEC/CEC

3/4" Metallic Models

COMPACT SERIES PUMPS

Part of our Compact Series of pumps our 3/4" metallic pumps feature big performance in a small package. They achieve flow rates up to 14.8 GPM (56 LPM) and offer a wide range of material and porting configurations.

Ratio: 1:1

Maximum Flow: 13.6-g.p.m. (51.5-l.p.m.) Displacement per cycle: 0.030-Gallons (0.11-Liters) Air Inlet: (Female) 1/4 - 18 P.T.F. SAE Short Fluid Inlet/Outlet: 3/4 - 14 N.P.T.F.-2

Rp 3/4 (3/4 -14 BSP, parallel)

Max. operating pressure: 100-psi (6.9-bar) Suspended solids max. dia.: 3/32" (2.4-mm) Weight: lbs (kg) 8.74 (3.96) Maximum dry suction lift: ft (m) 15 (4.5)

Sound Level: 70 PSI 60 Cycles/Min 75 db(A)



PD07R-BAS-FAA

Ordering

Position	1	2		3	4	5		6	7	8		9		10	11
Example:	PX07	R	-	Х	Х	S	-	Х	Х	Х	-	В	-	Х	Х

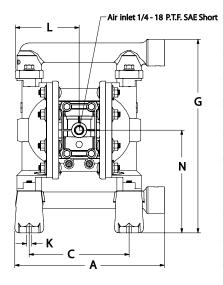
Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Wetted Parts	Position 5 Hardware	Positon 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9 Specialty Code
	R - Poly- propylene	A - 3/4 - 14 N.P.T.F2 B - Rp 3/4 (3/4 -14 BSP, parallel)	A - Aluminum	S - SS	F - Aluminum P - Polypropylene	A - Santoprene C - Hytrel T - PTFE	A - Santoprene C - Hytrel T - PTFE	Revision Level Position 10 & 11 Specialty Code Fluid control options for pump with electronic interface (PE07 model). See complete description on page 29

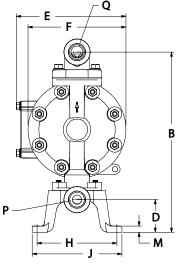
Accessories

Air Line Connection Kit | 66073-1 (Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose) **Cycle Counter Kit** | 66975 Wall Mount Bracket Kit | 76763 Optional Muffler | 93110 used with 637438 kit **Service Repair Kits** | 637428 (air section) 637427-XX (fluid section)



3/4" Metallic Dimensions and Flow Charts

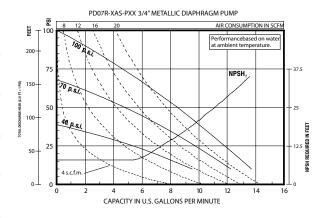


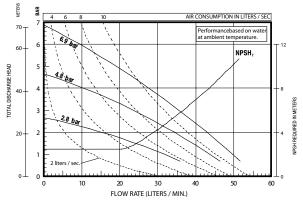


DIMENSIONS

A -9-9/32"(235.3mm) F - 6" (152.4 mm) L - 3-29/32"(99.2mm) B - 11-1/16"(280.4mm) G - 11-7/8"(301.2 mm) M -3/8" (9.5mm) C - 6-1/8"(155.6mm) $H - 4-29/32"(124.2 \, mm) N - 6-5/16"(159.8 \, mm)$ D -2"(50.8mm) J - 5-1/2"(139.7mm) E - 6-23/32"(170.6mm) K - 5/16"(8.0 mm)

"P" Material Inlet "Q" Material Outlet Model PD07R-AAS-PXX 3/4-14 N.P.T.F. - 2 3/4-14 N.P.T.F. - 2 PD07R-BAS-PXX Rp 3/4(3/4-14BSP) Rp 3/4(3/4- 14 BSP)





Refer to www.AROzone.com for full size flow curves. For additional information contact technical support at 1.800.495.0276

Ordering Position 10

Specialty Code 1

(Blank if no Specialty Code) A - Solenoid 120VAC

B - Solenoid 12VDC C - Solenoid 240VAC

D - Solenoid 24VDC

E - 12vDC NEC/CEC

F - 24vDC NEC/CEC

G - Solenoid 12VDC ATEX/IECex

H - Solenoid 24VDC ATEX/IECex

J - 120VAC NEC/CEC

K - Solenoid 220VAC ATEX/IECex

N - Solenoid with no coil

0 - Standard Valve Block (No Solenoid)

Ordering Position 11 **Specialty Code 2** (Blank if no Specialty Code)

E - End of stroke feedback + Leak

Detection

F - End of stroke feedback

G - End of Stroke ATEX/IECex/NEC/CEC

H - End of Stroke/Leak Detection ATEX/IECex/NEC/CEC

L - Leak Detection

M - Leak Detection ATEX/IECex/NEC/CEC

1" Metallic Models

ARO EXP 1" metallic diaphragm pumps achieve flow rates of up to 52.2 GPM (197.6 LPM) and offer a wide array of material and porting configurations. These pumps are often used for transfer, filling, recirculation and batching in Ceramic, Industrial, Chemical and Petrochemical markets.

Ratio: 1:1 Maximum GPM (LPM): 52 (197) Displacement per cycle Gallons (Liters): 0.232 (0.88) Air Inlet (Female): 1/4 - 18 N.P.T.

Fluid Inlet/Outlet: 1 - 11-1/2 N.P.T.F.-1, Rp1(1-11 BSP)

Max. operating pressure psi (bar): 120 (8.3) Suspended solids max. dia. in. (mm): 1/8" (3.3) Weight lbs (kg): PX10R-XAX-XXX 20.7 (9.4) PX10R-XCX-XXX

35.2 (16.0) PX10R-XHX-XXX 39.6 (18.0) PX10R-XSX-XXX 38.2 (17.3)

Note: Add 4.65 lbs (2.11 kg) for aluminum air motor Add 11.09 lbs (5.03 kg) for stainless steel air motor

Maximum dry suction lift ft(m): 19 (5.7)

Sound Level: 70 PSI 60 Cycles/Min 80.6 db(A)

Muffler Included: 93110



Ordering

Position	1	2		3	4	5		6	7	8		9		10	11
Example:	PX10	Х	-	Х	Х	Х	-	Х	Х	Х	-	В	-	X	Х

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Wetted Parts	Position 5 Hardware	Positon 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9
PD10- Standard Pump PE10 - Electronic Interface Accessible Pump	A - Aluminum R - Poly- propylene S - Stainless Steel	A - NPTF Thread B - BSP Thread	A - Aluminum C - Cast Iron H - Hastelloy-C S - Stain. Steel	P - Plated Steel S - SS	A - Santoprene C - Hytrel E - Carbon Steel F - Aluminum G - Nitrile H - 440 SS L - Hastelloy-C S - 316 SS	A - Santoprene C - Hytrel G - Nitrile S - 316 SS T - PTFE V - Viton	A - Santoprene C - Hytrel G - Buna- N M - Medical Grade Santoprene T - PTFE/ Santoprene V - Viton	Revision Level Position 10 & 11 Specialty Code Fluid control options for pump with electronic interface (PE10 model). See com- plete description on page 31

Accessories

Air Line Connection Kit | 66073-2

(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)

Diaphragm Failure Detection | 67237

Cycle Counter Kit | 66350

Cycle Sensor Kit | 67350 (PE10X pump model is required)

Service Repair Kits | 637397 (air motor for PX10A, PX10R and PX10S),

637401-XX (fluid section)

637395-X (major air valve assembly)

1" Metallic Dimensions and Flow Charts

DIMENSIONS

A - 12-11/32" (313.2 mm)
B - 11-9/16" (293.7 mm)
C - 4" (101.6 mm)
D - 1-1/4" (31.8 mm)
E - see below

G - 12-7/16" (315.9 mm) H - 6-1/4" (158.8 mm)

J - 7-5/16" (185.7 mm) K - 13/32" (10.3 mm)

P - 5-27/32" (148.2 mm) Q - 12" (304.8 mm) R - see below

N - see below

F - see below

PX10AXXX-XXX

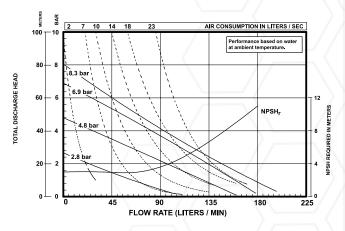
PX10S-XXX-XXX

L - 1-1/2" (38.1 mm) M - 6-15/32" (164.3 mm)

"R" 8-1/8" (206.4 mm) 14-1/32" (356.2 mm) PX10<u>R-</u>XXX-XXX 11-1/32"(279.5 mm) 8-5/16"(211.1 mm) 13-27/32" (351.4 mm) 8-3/16" (207.9 mm)

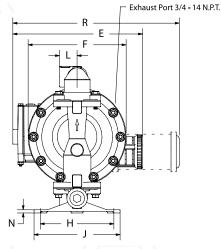
"N" PX10X-XAX-XXX 1/4" (6.4 mm) 9/32" (7.1 mm) PX10X-XCX-XXX PX10X-XHX-XXX 9/32" (7.1 mm) PX10X-XSX-XXX 9/32" (7.1 mm)

PX10X-XXX-XXX 1" METALLIC DIAPHRAGM PUMP AIR CONSUMPTION IN SCFM DISCHARGE HEAD (2.31 FT = 1 PSI) 200 37.5 NPSH. 150-100 12.5 30 60 CAPACITY IN U.S. GALLONS PER MINUTE



Refer to www.AROzone.com for full size flow curves. For additional information contact technical support at 1.800.495.0276

1 - 11-1/2 N.P.T.F. - 1 (PX10X-<u>A</u>XX-XXX)_ Rp 1 (1- 11 BSP Parallel)(PX10X-<u>B</u>XX-XXX) 0 В G M Air Inlet 1/4 - 18 N.P.T.



Ordering Position 10

Specialty Code 1 (Blank if no Specialty Code)

A - Solenoid 120VAC

B - Solenoid 12VDC

C - Solenoid 240VAC

D - Solenoid 24VDC

E - 12vDC NEC/CEC

F - 24vDC NEC/CEC

G - Solenoid 12VDC ATEX/IECex

H - Solenoid 24VDC ATEX/IECex

J - 120VAC NEC/CEC

K - Solenoid 220VAC ATEX/IECex

N - Solenoid with no coil

0 - Standard Valve Block (No Solenoid)

Ordering Position 11 Specialty Code 2 (Blank if no Specialty Code)

E - End of stroke feedback + Leak Detection

F - End of stroke feedback

G - End of Stroke ATEX/IECex/NEC/CEC

H - End of Stroke/Leak Detection ATEX/IECex/NEC/CEC

L - Leak Detection

M - Leak Detection ATEX/IECex/NEC/CEC

1-1/2" Metallic Models

ARO 1-1/2" metallic diaphragm pumps achieve flow rates of up to 123.1 GPM (465.9 LPM) and offer a wide array of material and porting configurations. These pumps are often used for transfer, filling, recirculation and batching in Paint, Oil & Gas, Chemical and Petrochemical markets.

Ratio: 1:1

Maximum GPM (LPM): 123 (465)

Displacement per cycle Gallons (Liters): 0.617 (2.34)

Air Inlet (Female): 1/2 - 14 N.P.T.

Fluid Inlet/Outlet: 1-1/2" - 11-1/2 N.P.T.F.-1, Rp1-1/2(1-1/2-11BSP)

1-1/2" A.N.S.I./DIN flange

 Max. operating pressure psi (bar):
 120 (8.3)

 Suspended solids max. dia. in.(mm):
 1/4" (6.4)

 Weight lbs (kg):
 PX15R-XAX-XXX
 37.7 (17.1)

 PX15R-XCX-XXX
 73.2 (33.2)

 PX15R-XSX-XXX
 61.2 (27.8)

 PX15R-XHX-XXX
 86.9 (39.4)

Note: add 2.14 lbs (0.97 kg) for aluminum air motor section add 18.14 lbs (8.23 kg) for stainless steel air motor section

Maximum dry suction lift ft(m): 14 (4.2)

Sound Level: 70 PSI 50 Cycles/Min 81.0 db(A)

Muffler Included: 350-568



Ordering

Position	1	2		3	4	5		6	7	8		9		10	11
Example:	PX15	X	-	Х	Х	Х	-	X	Х	Х	-	В	-	X	X

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Wetted Parts	Position 5 Hardware	Positon 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9
PD15 - Standard Pump PE15 - Electronic Interface Accessible Pump	A - Aluminum R - Poly- propylene S - SS	A - NPTF Thread B - BSP Thread Y - 1-1/2" A.N.S.I./DIN Flange (Center)	A - Aluminum C - Cast Iron H - Hastelloy-C S - SS	P - Plated Steel S - SS	A - Santoprene C - Hytrel E - Carbon Steel F - Aluminum G - Nitrile H - 440 Stainless Steel L - Hastelloy-C S - 316 Stainless Steel	A - Santoprene C - Hytrel G - Nitrile S - 316 SS T - PTFE V - Viton	A - Santoprene C - Hytrel G - Buna- N M - Medical Grade Santoprene T - PTFE/ Santoprene V - Viton	Revision Level Position 10 & 11 Specialty Code Fluid control options for pump with electronic interface (PE15 model). See complete description on page 33

Accessories

Air Line Connection Kit | 66084-1

(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)

Diaphragm Failure Detection | 67237

Cycle Counter Kit | 67350

Service Repair Kits | 637389 (air motor for PX15X), Kit No. 637375-XX (fluid section),

637390-X (major air valve assembly)

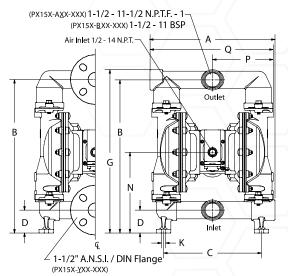
1-1/2" Metallic Dimensions and Flow Charts

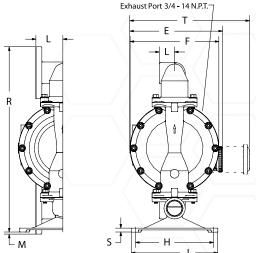
G - 19-5/8"(498.1 mm) N - 9-11/16" (246.0 mm) A - see below P - see below B - 18-3/8"(466.7 mm) H - 9" (228.6 mm) C - 11-3/4"(298.5 mm) J - 10"(254.0 mm) Q - see below R - 21-7/16" (543.9 mm) K - 1/2"(12.7 mm) D - 2-3/4"(69.9 mm) S - see below E - see below L - see below M - 1/4" (6.4 mm) T - see below F - 10-1/4"(260.4 mm)

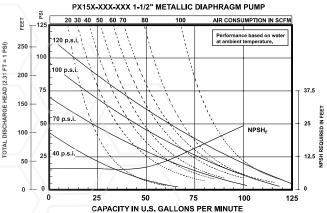
"A" "L" 1-3/4" (44.5 mm) 14-7/8"(377.8 mm) PX15X-XAX-XXX PX15X-XCX-XXX 14-5/8" (371.5 mm) 1-3/4" (44.5 mm) 3-1/8" (79.4 mm) 14-9/16" (370.0 mm) PX15X-XHX-XXX 14-25/32" (375.5 mm) 1-3/4" (44.5 mm) PX15X-AS X-XXX, -BS X 3-1/8" (79.4 mm) 14-9/16" (370.0 mm) PX15X-YSX-XXX "T" "E" PX15<u>A</u>-XXX-XXX 14-1/32" (356.2 mm)

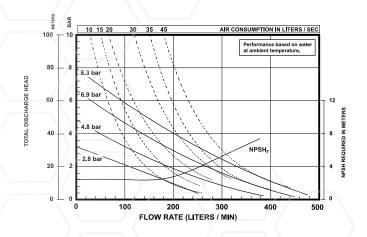
11-3/32" (281.3 mm) PX15R-XXX-XXX PX15<u>S</u>-XXX-XXX 13-27/32"(351.4 mm) "Q" "S" "P" 1/2" (12.7 mm) 7-7/32"(183.4 mm) 14-23/32" (373.9 mm) 1/4" (6.4 mm) 14-1/2"(368.3 mm) 7-3/16"(182.6 mm) 1/4" (6.4 mm) 14-1/2" (368.3 mm) 7-3/16"(182.6 mm) 14-13/16" (375.5 mm) 15/32"(11.4 mm) 7-9/32"(185.0 mm) 14-9/16" (370.0 mm) 15/32" (11.4 mm) 7-9/32"(185.0 mm) "E"

14-1/32" (356.2 mm) PX15A-XXX-XXX PX15R-XXX-XXX 11-3/32" (281.3 mm) 13-27/32"(351.4 mm) PX15S-XXX-XXX









Ordering Position 10 Specialty Code 1 (Blank if no Specialty Code)

G - Solenoid 12VDC ATEX/IECex A - Solenoid 120VAC H - Solenoid 24VDC ATEX/IECex B - Solenoid 12VDC J - 120VAC NEC/CEC C - Solenoid 240VAC K - Solenoid 220VAC ATEX/IECex D - Solenoid 24VDC N - Solenoid with no coil E - 12vDC NEC/CEC 0 - Standard Valve Block F - 24vDC NEC/CEC (No Solenoid)

Ordering Position 11 Specialty Code 2 (Blank if no Specialty Code)

E - End of stroke feedback + Leak Detection

F - End of stroke feedback

G - End of Stroke ATEX/IECex/NEC/CEC

H - End of Stroke/Leak Detection ATEX/IECex/NEC/CEC

L - Leak Detection

M - Leak Detection ATEX/IECex/NEC/CEC

2" Metallic Models

ARO EXP 2" metallic pumps achieve flow rates of up to 172 GPM (651 LPM) and offer a wide array of material and porting configurations. These pumps are often used for transfer, filling, recirculation and batching in Ceramic, Paint, Oil & Gas, Chemical and Petrochemical markets.

1:1 Ratio:

Maximum GPM (LPM): 172 (651) Displacement per cycle: 1.4 (5.3)

@ 100 psi Gallons (Liters)

Air Inlet (Female): 3/4 - 14 N.P.T.F.-1

Fluid Inlet/Outlet (Female): PX20X-AXX-XXX-B() 2 - 11-1/2 N.P.T.F.-1

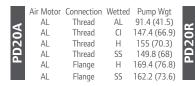
> PX20X-BXX-XXX-B() Rp 2 (2 - 11 BSP parallel) PX20X-FXX-XXX-B() 2" A.N.S.I./DIN Flange

Max. operating pressure psi (bar): 120 (8.3) Suspended solids max. dia. in. (mm): 1/4" (6.4) Maximum dry suction lift ft (m): 14 (4.2)

Sound Level: 70 PSI 50 Cycles/Min 85.0 db(A)

Muffler Included: 67389

Weight lbs (kg): AL-Aluminum, CI-Cast Iron, H-Hastelloy, SS-Stainless Steel



Air Motor Connection Wetted Pump Wgt Poly Thread CI 165 (74.8) Poly Thread H 154 (69.9) Poly Thread SS 154 (69.9) Poly Flange H 153.2 (69.5) Poly Flange SS 146 (66.2)	Poly Poly Poly Poly	Thread Thread Thread Flange	CI H SS H	154 (69.9) 154 (69.9) 153.2 (69.5)	PD205
--	------------------------------	--------------------------------------	--------------------	--	-------

Air Motor	Connection	Wetted	Pump Wgt
SS	Thread	AL	120.3 (54.6)
SS	Thread	CI	176.3 (80)
SS	Thread	Н	183.9 (83.4)
SS	Thread	SS	178.7 (81.1)
SS	Flange	Н	198.3 (89.9)
SS	Flange	SS	191.1 (86.7)



Position	1	2		3	4	5		6	7	8		9		10	11
Example:	PX20	X	-	X	X	Х	ı	X	Х	Х	-	В	ı	X	X

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Wetted Parts	Position 5 Hardware	Positon 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9
PD20- Standard Pump PE20 - Electronic Interface Accessible Pump	A - Aluminum R - Poly- propylene S - SS	A - NPTF Thread B - BSP Thread F* - 2" ANSI/DIN Flange Center * Stainless Steel Pumps Only	C - Cast Iron H - Hastelloy-C	P - Plated Steel S - SS	A - Santoprene C - Hytrel E - Carbon Steel F - Aluminum G - Nitrile H - 440 SS K - Kynar/PVDF L - Hastelloy-C S - 316 SS	A - Santoprene C - Hytrel G - Nitrile S - 316 SS T - PTFE V - Viton	A - Santoprene C - Hytrel G - Buna- N M - Med. Grade Santoprene T - PTFE/ Santoprene V - Viton	Revision Level Position 10 & 11 Specialty Code Fluid control options for pump with electronic interface (PE20 model). See complete description on page 35

Accessories

Air Line Connection Kit | 66109

(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)

Diaphragm Failure Detection | 67237 (PE20X pump model is required)

Continuous-Duty Muffler | 67263

Muffler features large expansion chamber, permitting cold exhaust air to exit pump

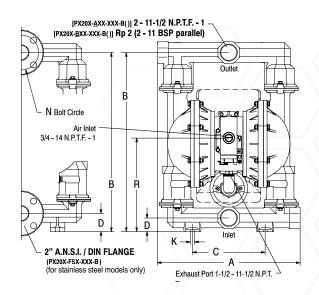
Cycle Counter Kit | 66350 for PD20R-X and PD20Y-X, 67350-1, (PE20X pump model is required)

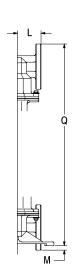
Service Repair Kits | 637369 (air motor for PX20R and PX20Y), 637421 (air motor for PX20A and PX20S),

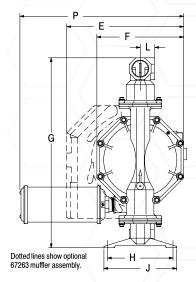
637309-XX (fluid section), 637374-X (major air valve assembly)



2" Metallic Dimensions and Flow Charts







DIMENSIONS

Α	see below
В	24-3/4" (628.7 mm)
	10-1/16" (255.6 mm)
D	see below
F	16-3/16" (411.2 mm)

12" (304.8 mm)

	DIMENSIONS
G	26-1/4" (666.8 mm)
Н	9-1/16" (230.2 mm)
J	10-1/16" (255.6 mm)

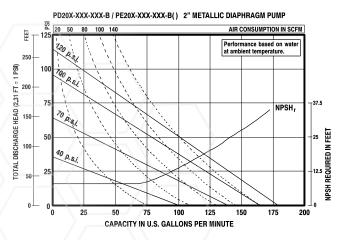
K 9/16" (14.3 mm) see below

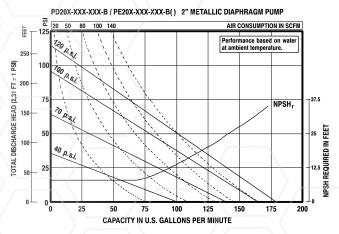
4.834" (122.8 mm) 21-5/8" (548 mm) Q 27-7/8" (708.0 mm) R see below

M 5/8" (15.9 mm)

	"A"	"D"
PX20X-X <u>A</u> X-XXX-B()	19-3/4" (501.4 mm)	1-7/8" (47.6 mm)
PX20X-X <u>C</u> X-XXX-B()	19-3/4" (501.4 mm)	1-7/8" (47.6 mm)
PX20X- <u>AH</u> X-XXX-B(), - <u>BH</u> X	19-1/4" (488.7 mm)	2-1/2" (63.5 mm)
PX20X- <u>AS</u> X-XXX-B(), - <u>BS</u> X	19-1/4" (488.7 mm)	2-1/2" (63.5 mm)
PX20X- <u>FH</u> X-XXX-B(), - <u>FS</u> X	19-1/4" (488.7 mm)	2-1/2" (63.5 mm)

"L"	"R"
2" (50.8 mm)	12-15/16" (328.6 mm)
2" (50.8 mm)	12-15/16" (328.6 mm)
2-3/32" (53.0 mm)	13-9/16" (344.5 mm)
2-3/32" (53.0 mm)	13-9/16" (344.5 mm)
3-1/4" (82.6 mm)	13-9/16" (344.5 mm)





Ordering Position 10

Specialty Code 1 (Blank if no Specialty Code)

A - Solenoid 120VAC

B - Solenoid 12VDC C - Solenoid 240VAC

D - Solenoid 24VDC

E - 12vDC NEC/CEC

F - 24vDC NEC/CEC

G - Solenoid 12VDC ATEX/IECex

H - Solenoid 24VDC ATEX/IECex

J - 120VAC NEC/CEC

K - Solenoid 220VAC ATEX/IECex

N - Solenoid with no coil

0 - Standard Valve Block (No Solenoid)

Ordering Position 11 Specialty Code 2 (Blank if no Specialty Code)

E - End of stroke feedback + Leak Detection

F - End of stroke feedback

G - End of Stroke ATEX/IECex/NEC/CEC

H - End of Stroke/Leak Detection ATEX/IECex/NEC/CEC

L - Leak Detection

M - Leak Detection ATEX/IECex/NEC/CEC

3" Metallic Models

ARO EXP 3" metallic diaphragm pumps achieve flow rates of up to 275 GPM (1040.9 LPM) and offer a wide array of material and porting configurations. These pumps are often used for transfer, filling, recirculation and batching in Ceramic, Paint, Oil & Gas, Chemical and Petrochemical markets.

Ratio: 1:1

Maximum GPM (LPM): 275 (1041)
Displacement per cycle: 2.8 (10.6)

@ 100 psi Gallons (Liters)

Air Inlet: (Female) 3/4 - 14 N.P.T.F. - 1
Fluid Inlet / Outlet (Female): 3" - 8 N.P.T.F. - 1
Rp 3 (3 - 11 BSP parallel)

Max. operating pressure psi (bar): 120 (8.3) Suspended solids max. dia. in. (mm): 3/8 (9.5)

Weight lbs (kg): PX30A-XAX-XXX-C 129.5 (58.8)

PX30A-XCX-XXX-C 221.1 (100.3) PX30A-AHX-XXX-C 249.4 (113.3) PX30A-ASX-XXX-C 228.3 (103.8) PX30A-FHX-XXX-C 269.4 (122.3) PX30A-FSX-XXX-C 245.2 (114.4)

Note: Add 40 lbs (18.2 kg) for stainless steel air motor section

Maximum dry suction lift ft (m): 14 (4.2)

Sound Level: 70 PSI 50 Cycles / Min 83.0db(A)

Muffler Included: 67389



Ordering

Position	1	2		3	4	5		6	7	8		9		10	11
Example:	PX30	Х	-	Х	Х	Х	-	Х	Х	Х	-	С	-	Х	X

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Wetted Parts	Position 5 Hardware	Positon 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9
PD30 - Standard Pump	A - Aluminum R - Polv-	A - NPTF Thread B - BSP Thread	A - Aluminum C - Cast Iron	P - Plated Steel	A - Santoprene C - Hytrel	A - Santoprene C - Hytrel	A - Santoprene C - Hytrel	Revision Level Position
PE30 - Electronic Interface Accessible Pump	propylene w/SS Air Caps S - SS	D - ANSI 4-hole flange F - DIN 8-hole flange	H - Hastelloy-C* S - SS * Not available on PD30R-X models	S - SS	E - Carbon Steel F - Aluminum G - Nitrile H - 440 SS K - PVDF L - Hastelloy S - 316 SS	G - Nitrile T - PTFE V - Viton	G - Buna- N T - PTFE/ Santoprene V - Viton	Fosition 10 & 11 Specialty Code Fluid control options for pump with electronic interface (PE30 model). See complete description on page 37

Accessories

Air Line Connection Kit | 66109

(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)

Diaphragm Failure Detection | 67237, (PE30X pump model is required)

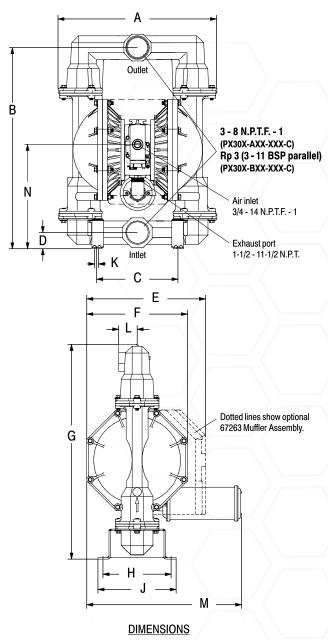
Cycle Sensor Kit | 67350-1 (PE30X pump model is required)

Service Repair Kits | 637369 (air motor for PX30R), Kit No. 637421 (air motor for PX30A and PX30S),

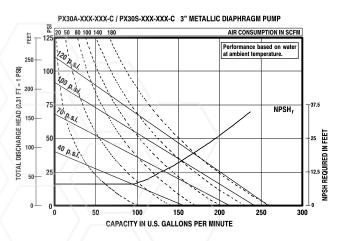
637374-X (major air valve assembly), Kit No. 637303-XX (fluid section)

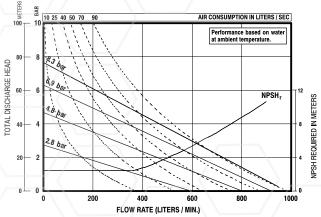
Continuous-Duty Muffler | 67263 Muffler features large expansion chamber, permitting cold exhaust air to exit pump

3" Metallic Dimensions and Flow Charts



Α	see below	F 15" (381	mm) K	9/16" (14.3 mm)
В	30" (761.7 mm)	G 32" (812	.5 mm) L	2-3/4" (69.9 mm)
С	12-1/16" (306.5 mm)	H 10-5/32"	(258 mm) M	1 23-3/32" (586.3 mm)
D	see below	J see belo	w N	see below
Ε	17-11/16" (449.2 mm)			
		"A'	, //	"D"
	PX30X-XAX-XXX-C	23-5/8" (59	8.7 mm) 2-3	3/8" (60.3 mm)
	PX30X-XCX-XXX-C	23-5/8" (59	8.7 mm) 2-7	7/16" (61.1 mm)
	PX30X-XHX-XXX-C	23-1/8" (58	7.3 mm) 2-	3/4" (69.9 mm)
	PX30X-XSX-XXXX-C	23-1/8" (58	7.3 mm) 2-	3/4" (69.9 mm)
		<u>'J"</u>	"N"	
		•	/ //	
	· · · · · · · · · · · · · · · · · · ·	9.4 mm)	15-1/2" (393.7	,
	11-11/16"	(296.1 mm)	15-1/2" (393.7	mm)
	11-11/16"	(296.1 mm)	16" (406.4 mi	m)
		(296.1 mm)	16" (406.4 mi	





Ordering Position 10

Specialty Code 1 (Blank if no Specialty Code)

G - Solenoid 12VDC ATEX/IECex A - Solenoid 120VAC H - Solenoid 24VDC ATEX/IECex B - Solenoid 12VDC J - 120VAC NEC/CEC C - Solenoid 240VAC K - Solenoid 220VAC ATEX/IECex D - Solenoid 24VDC N - Solenoid with no coil E - 12vDC NEC/CEC 0 - Standard Valve Block F - 24vDC NEC/CEC (No Solenoid)

Ordering Position 11 Specialty Code 2 (Blank if no Specialty Code)

E - End of stroke feedback + Leak Detection

F - End of stroke feedback

G - End of Stroke ATEX/IECex/NEC/CEC

H - End of Stroke/Leak Detection ATEX/IECex/NEC/CEC

L - Leak Detection

M - Leak Detection ATEX/IECex/NEC/CEC

0 - No Option

Batching/Flow Control

CONTROLLER

The ARO Controller works seamlessly with ARO EXP Electronic Interface pumps, and now creates a fully automated multi-pump system that helps manufacturers and operators manage fluid easily and intelligently, with less operator oversight required. Migrate to a smart touch-and-walk-away system that helps optimize your costs and production time.

- Closed loop system achieves dispensing repeatability within 1%.
- ▼ Safe control and monitoring via remote operation.
- Multi-pump control for accurate batching processes.
- Controller accepts leak detection, liquid level sensing and proportional control.
- Remote triggers and alerts send operating data, can perform auto shut-down, and keep you up-to-date on maintenance needs.
- Seamless integration between the ARO® Controller and EXP Series Electronic Interface pumps.



Choose a Controller

Model Options								
Base Controller	651763-XX-0							
Interface with 1 Pump	651763-XX-1							
Interface with 2 Pumps	651763-XX-2							

XX = AM (Americas), EM (Europe, Middle East, India and Africa), AP (Asia/Pacific)

Choose a Pump

Position	1	2	3		4	5	6		7	8	9		10	11	12
Example:	PE	05	P	-	Α	Р	S	-	Р	Α	Α	_	В	D	E

Position 1 Model Series	Position 2 Port Size	Position 3 Center Section Material	Position 4 Connection	Position 5 Wetted Parts	Positon 6 Hardware	Position 7 Seat Material	Position 8 Ball Material
PE - Electronic Interface	01 - 1/4" Port 03 - 3/8" Port 05 - 1/2" Port 07 - 3/4" Port 10 -1" Port 15 -1-1/2" Port 20 -2" Port 30 -3" Port	A - Aluminum P - Polypropylene S - Stainless Steel		A -Aluminum C - Cast Iron D,E - Groundable Acetal H - Hastelloy K,L - PVDF (Kynar) P,R - Polypro- pylene S - Stainless Steel	P - Plated Steel S - Stainless Steel	A - Santoprene C - Hytrel D - Acetal E - Carbon Steel F - Aluminum G - Nitrile H - 440 SS Hard K - PVDF L - Hastelloy P - Polypropylene S - Stainless Steel	

Position 9 Diaphragm Material	Position 10 Revision	Position 11 Specialty Code 1	Position 12 Specialty Code 2
A - Santoprene C - Hytrel G - Nitrile T - PTFE V - Viton	A - First B - Second C - Third	A - Solenoid 120VAC J - 120VAC NEC/CEC B - Solenoid 12VDC K - Solenoid 220VAC ATEX/IECex C - Solenoid 240VAC N - Solenoid with no coil D - Solenoid 24VDC 0 - Standard Valve Block E - 12vDC NEC/CEC (No Solenoid) F - 24vDC NEC/CEC G - Solenoid 12VDC ATEX/IECex H - Solenoid 24VDC ATEX/IECex	E - End of stroke feedback + Leak Detection F - End of stroke feedback G - End of Stroke ATEX/IECex/NEC/CEC H - End of Stroke/Leak Detection ATEX/IECex/NEC/CEC L - Leak Detection M - Leak Detection ATEX/IECex/NEC/CEC 0 - No Option

2" Metallic Flap Valve Models

SPECIALTY PUMP

ARO's pneumatic flap valve diaphragm pumps provide effective flow rates up to 172 gpm (651 lpm). These pumps are designed to handle materials that are stringy, fibrous, large solids (suspended or non-suspended), abrasive, slurries and other applications less suited for ball check style pumps. Flap valve pumps are useful for feeding filter presses, waste treatment, dewatering, filled material transfer and a variety of other demanding applications.

Ratio: 1:1 Maximum GPM (LPM): 172 (651) Displacement per cycle: 1.4 (5.3)

@ 100 psi Gallons (Liters)

Air Inlet (Female): 3/4 - 14 N.P.T.F.-1

Fluid Inlet/Outlet (Female): PF20X-AXX-XXX-B 2 - 11-1/2 N.P.T.F.-1 PF20X-BXX-XXX-B Rp 2 (2 - 11 BSP parallel)

Max. operating pressure psi (bar): 120 (8.3)

Suspended solids max. dia. in. (mm): 2" (51) Semi-solid

Maximum dry suction lift ft (m): 14 (4.2)

Weight lbs (kg): PF20A-XAX-SXX-B 97.3 (44.2) 166.2 (75.4) PF20A-XCX-SXX-B

PF20A-ASX-SXX-B 166 (75.3) 166 (75.3) PF20A-BSX-SXX-B 177.1 (80.3) PF20A-FSX-SXX-B

Add 28.9 lbs (13.1kg) for stainless steel air motor

PF20R-XCX-SXX-B 178.7 (81.1) PF20R-XSX- SXX- B 180.6 81.9) 70 PSI 60 Cycles / Min 85.0 db(A)

Muffler: 94810 (optional 94117)



Ordering

Sound Level:

Position	1	2		3	4	5		6	7	8		
Example:	PF20	X	-	Х	Х	Х	-	S	Х	Х	-	В

Position 1 Model	Position 2 Center	Position 3	Position 4 Wetted	Position 5	Seat	Position 7 Flap	Position 8 Diaphragm
Series	Section	Connections	Parts	Hardware	Material	Material	Material
PF20 - Standard Pump	A - Aluminum R - Polypropylene w/SS Air Caps S - Stainless Steel Y - Polypropylene w/CI Air Caps	A - NPTF Thread B - BSP Thread F - 2" ANSI/DIN Flange	A* - Aluminum C - Cast Iron S - Stainless Steel * Not available with PD20R or PD20Y option	P - Plated Steel S - Stainless Steel	S - Stainless Steel	A - EPR G - Nitrile U - Poly- urethane V - Viton	A - Santoprene G - Buna- N T - PTFE/ Santoprene V - Viton

Accessories

Service Repair Kits | 637421 (air motor) 637310-XX (fluid section)

Powder Transfer

SPECIALTY PUMP

Transfer and handle your dry process powders faster, cleaner and at a fraction of the cost associated with installed "systems." Consistent trouble-free transfer of powders up to 45-lbs. per cubic foot (721 kgs. per cubic meter) dry-weight, such as carbon black, expanded mica, silicones, acrylic resins and pharmaceuticals

Replace Manual Powder Processes.

- ▼ Reduce Airborne Contamination With direct transfer from the powder container to your recipe.
- Unique Patented Air-Induction System Avoids the possibility of powder pack-out.
- Portable Can be moved from site to site.

2" and 3" Port:

Aluminum and Stainless Steel Material:

Max. operating pressure psi (bar): 50 (3.4)

Suspended solids max. dia. in. (mm): 1/4" (6.4) PP20A Models

3/8" (9.5) PP30A Models

Weight: lbs (kg) PP20A-XAX-AAA 99.4 (45.1)

PP20A-XSX-AAA 157.8 (71.6) P30A-XAX-AAA 137.5 (62.4) PP30A-XSX-AAA 236.8 (107.4)



Ordering

Position	1		2	3	4		5	6	7
Example:	PP20A	-	X	Х	X	-	X	X	X

Position 1 Model	Position 2	Position 3 Wetted	Position 4	Positon 5 Seat	Position 6 Ball	Position 7 Diaphragm Ma-
Series	Connections	Parts	Hardware	Material	Material	terial
PP20A - 2" Port	A - 2-11-1/2 NPTF - 1 B - Rp2 (2-11 BSP Parrallel) C - 2"ANSI DIN Flange	A - Aluminum S - Stainless Steel	P - Plated Steel S - Stainless Steel	A - Santoprene S - Stainless Steel	A - Santoprene M - Medical Grade Santoprene	A - Santoprene M - Medical Grade Santoprene

Position	1		2	3	4		5	6	7
Example:	PP30A	-	X	X	Х	-	X	X	X

Position 1 Model Series	Position 2 Connections	Position 3 Wetted Parts	Position 4 Hardware	Positon 5 Seat Material	Position 6 Ball Material	Position 7 Diaphragm Material
PP30A - 3" Port	A - 3-8 NPTF - 1 B - Rp3 (3-11 BSP parrallel) F - 3" ANSI/DIN	A - Aluminum S - Stainless Steel	P - Plated Steel S - Stainless Steel	A - Santoprene	A - Santoprene	A - Santoprene

Accessories

Service Repair Kits | 637421 (air motor PP20A), 637421 (air motor PP30A),

637309-XX (fluid section PP20A), 637303-XX (fluid section PP30A)

Suction Probe: 67183-1

Sanitary Transfer

SPECIALTY PUMP

- Constructed of FDA accepted materials.
- Electro-polished 316 stainless steel fluid section.
- Bolted construction with all stainless steel hardware.
- All investment cast wetted parts.

Typical Applications:

Food Processing

Cosmetics

Pharmaceutical

Chemical Additives

Adhesives (Food grade)

Paint

Applications Requiring Quick-Disconnect

Fluid Connections



Ratio:	PM05X-X-X-B02 (1/2")	PM10X-X-X-A02 (1")	PM15X-X-X-A02 (1-1/2")	PM20X-X-X-B02 (2")	PM30X-X-X-C02 (3")
Maximum GPM (lpm):	13.0 (49.2)	52.2 (197.6)	123 (465.6)	172 (651)	275 (1041)
Displacement per Cycle GPM (lpm):	0.040 (0.15)	0.232 (0.88)	0.617 (2.34)	1.4 (5.3)	2.8 (10.6)
Air Inlet (Female):	1/4 - 18 PTE SAE Short	1/4 - 18 N.P.T.F	1/2 - 14 N.P.T.F	3/4 - 14 N.P.T.F-1	3/4 - 14 N.P.T.F-1
Fluid Inlet:	1-1/2" Tri-Clamp	1-1/2" Tri-Clamp	2" Tri-Clamp	2-1/2" Tri-Clamp	3" Tri-Clamp
Fluid Outlet:	1-1/2" Tri-Clamp	1-1/2" Tri-Clamp	2" Tri-Clamp	2-1/2" Tri-Clamp	3" Tri-Clamp
Max. Operating Pressur PSI (bar)	re: 100 (6.9)	120 (8.3)	120 (8.3)	120 (8.3)	120 (8.3)
Suspended solids in.(mi	m): 3/32" (2.4)	1/8" (3.3)	1/4" (6.4)	1/4" (6.5)	3/8" (9.5)
Weight lbs (kg.):	14.75 (6.7)	PM10A-CSS-X-A02 44.8 (20.3)	PM15A-CSS-X-A02 62.4 (28.3)	PM20A-CSS-X-B02 142.8 (64.8)	PM30A-CSS-X-C02 227.5 (103.2)
		PM10R-CSS-X-A02 38.2 (17.3)	PM15R-CSS-X-A02 60.3 (27.3)	PM20R-CSS-X-B02 183.6 (83.5)	PM30R-CSS-X-C02 253.3 (114.9)
		PM10S-CSS-X-A02 51.6 (23.4)	PM15S-CSS-X-A02 78.4 (35.6)	PM20S-CSS-X-B02 171.7 (77.9)	PM30S-CSS-X-C02 267.2 (121.2)
Optional Muffler	93110 (requires 67367 assembly)			67213 (Standard Duty) 67263 (continuous Duty)	67213 (Standard Duty) 67263 (continuous Duty)

▼ Ordering (Not all options available for each pump size, consult operator's manual for available options.

Position	1	2		3	4	5		6	7	8	9
Example:	PMXX	X	-	Х	Х	Х	-	Х	X	X	X02

Position 1 Model Series	Position 2 Center Section	Position 3 Connection	Wetted	Positon 5 Hardware	Position 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9 Revision Level
PM05 - 1/2" Pump PM10 - 1" Pump PM15 - 1-1/2" Pump PM20 - 2" Pump PM30 - 3" Pump	A - Aluminum P - Polypropylene S - Stainless Steel	C - Tri-Clamp	S - Stainless Steel	S - Stainless Steel	A - Santoprene P - Polypropylene S - Stainless Steel	A - Santoprene C - Hytrel G - Nitrile S - Stainless Steel T - PTFE V - Viton	A - Santoprene C - Hytrel G - Nitrile M - Med. Grade Santoprene T - PTFE/ Santoprene	

FDA Compliant Pumps

SPECIALTY PUMP

Our SD line features the Quick Knock Down (QKD) compression clamp system to facilitate easier cleaning, service and maintenance, which promotes reliability and long product life.

SD Series Pumps

- Quick Knock Down (QKD) design facilitates rapid disassembly.
- Flow-rate optimized. Better overall performance, low material shear.
- Electropolish stainless-steel 316L construction FDA compliance and high temperature capability.





Applications:

Food / Beverage / Pharmaceutical / Cosmetics

	SD10S-CSS-SXX-A	SD20S-CSS-SXX-A
	1" Pump	2" Pump
Startup Pressure PSI (bar)	25 (1.723)	25 (1.723)
Dry suction lift ft. H20 (m)	16.49 (5.02)	18.25 (5.56)
Wet suction lift ft. H20 (m)	31.4 (9.57)	31.4 (9.57)
Flow Rate GPM (Ipm)	54 (204.4)	195 (738)
Displacement per/cycle GPM @ 100 PSI (lpm)	0.258 (.976)	1.3 (4.9)
Max. Solids Passage in. (mm)	1/8 (3.2)	1/4 (6.4)

Ordering

Position	1	2		3	4	5		6	7	8			9	10	11
Example:	SDXX	S	-	С	S	S	-	X	X	X	-	В	X	X	X

Position 1 Model Series	Position 2 Center Section	Position 3 Port	Position 4 Fluid Caps & Manifold Mat.	Positon 5 Hardware	Position 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material
SD10 - 1" Pump SD20 - 2" Pump	R - White Polypropylene S - 316 SS	C - Sanitary Flange	S - 316L Stainless Steel	S - Stainless Steel	C - Hytrel K - PVDF S - 316L Stainless Steel	C - Hytrel M - Medical Grade Santoprene S - 316L SS T - PTFE	C - Hytrel E - Hytrel Composite M - Med.Grade Sant. H - Med. Grade Sant. Composite T - PTFE/Santoprene K - PTFE Composite

Position 9 Specialty Code 1 (blank if no specialy code)	Position 10 Specialty Code 2 (blank if no specialy code)	Position 11 Special Test
A - Solenoid 120VAC F - 24vDC NEC/CEC N - Solenoid No Co B - Solenoid 12VDC G - Solenoid 12VDC ATEX/IE Cex C - Solenoid 240VAC H - Solenoid 24VDC ATEX/IE Cex D - Solenoid 24VDC J - 120VAC NEC/CEC E - 12vDC NEC/CEC K - Solenoid 220VAC ATEX/IE Cex		Testing for special options, contact ARO Customer Service Rep. or distributor

2:1 Ratio High Pressure

SPECIALTY PUMP

The high pressure pump was developed for applications requiring fluid pressures in excess of the 100 psi developed by traditional pumps. Compared to a standard diaphragm pump, the 2:1 ratio high-pressure pump can produce up to 200 psi, at about half the flow rate.

The 2:1 ratio is accomplished by using the effective surface area of both diaphragms to double the output pressure.

2:1 Ratio High-Pressure Pump

- ▼ Bolted construction for leak free integrity.
- Simul-shift and guick dump valve technology for stall free / ice free performance.
- Convoluted diaphragms for long life.
- Modular major valve for ease of repair.

Applications:

High viscosity fluids

High solids fluids

Charging filter presses

High head / back pressure



	Maximum Gallons	Displacement Cycles Per Gallons	Weight	Suspended Solids Max. Dia.	Maximum Outlet
Model	GPM (Liters)	@ 100 PSI (Liters)	(kg)	in. (mm)	pressure PSI (bar)
2:1 Ratio 1 1/2" Diaphragm Pump	63 (238.48)	0.88 (3.33)	88 (39.9)	1/4 (6.4)	200 (13.8)
2:1 Ratio 2" Diaphragm Pump	92 (348.25)	1.28 (4.8)	146 (66.2)	1/4 (6.4)	200 (13.8)
2:1 Ratio 3" Diaphragm Pump	160 (605.6)	1.4 (5.3)	268 (121.6)	3/8 (9.5)	200 (13.8)

Ordering

Position	1	2			3			4	5	6		7
Example:	PHXX	F	-	Х	S	Р	-	S	Х	Х	-	С

Position 1	Position 2	Position 3 Connection	Position 4	Positon 5	Position 6	Position 7
Model	Center		Seat	Ball	Diaphragm	Revision
Series	Section		Material	Material	Material	Level
PH15 - 1 1/2" PH20 - 2" PH30 - 3"	F - Conductive Polypropylene/ Stainless Steel	A - 1-1/2 NPTF B - 1-1/2 BSP parrallel F - 1-1/2 ANSI /DIN Flange	S - Stainless Steel	A - Santoprene T - PTFE C - Hytrel®	A - Santoprene T - PTFE/Santoprene C - Hytrel®	A - 1 1/2" B - 2" C - 3"

Accessories

	PH15 - 1 1/2"	PH20 - 2"	PH30 - 3"
Filter/Regulator	P39344-614	P39354-614	P39454-614
Air Line Kit	66084-1	66109	66109
Air Section Service Kit	637389	637369	637369
Fluid Section Service Kit	637445-XX	637446-XX	637441-CC

1" PW Series

SPECIALTY PUMP

ARO PW10X-X EXP Pumps

- ✓ Upgrade to EXP from existing Wilden® P4,T4 or M4 pumps, or Versa-Matic E4 pumps.
- ▼ The ARO PW10X-X matches the fluid inlet/outlet port dimensions of these other pumps
- Leave the stalling issues and leaking band-clamps behind.

Ratio: 1:1

Maximum GPM (LPM): 60 (227.1) Displacement per cycle Gallons (Liters): 0.234 (0.89) Air Inlet (Female): 1/2 - 14 N.P.T.

Fluid Inlet: 1-1/2 - 11-1/2 N.P.T.F - 1 Fluid Outlet: 1-1/4 - 11-1/2 N.P.T.F. - 1

Max. operating pressure psi (bar): 120 (8.3) Suspended solids max. dia. in. (mm): 1/8" (3.3)

Weight lbs (kg): PW10A-XXX-XXX 25.7 (11.7)

Maximum dry suction lift ft (m): 19 (5.8)

Sound Level: 70 PSI 60 Cycles / Min 80.6 db(A)



Ordering

Position	1	2		3	4	5		6	7	8
Example:	PW10	Α	-	X	X	X	-	Χ	X	Χ

Position 1 Model Series	Position 2 Center Section	Position 3 Connection	Position 4 Wetted Parts	Positon 5 Hardware	Position 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material
PW10 - Standard Pump	A - Aluminum	A - NPTF Thread	A - Aluminum	P - Plated Steel S - Stainless Steel	A - Santoprene C- Hytrel F - Aluminum G - Nitrile	A - Santoprene C- Hytrel G - Nitrile T - PTFE V - Viton	A - Santoprene C- Hytrel G- Nitrile T - PTFE/ Santoprene V - Viton

Accessories

Service Repair Kits | 637397 (air motor) 637401-XX (fluid section)

ARO Station

SPECIALTY PUMP

The ARO Station is a customized solution with piping and a durable housing that is ready to house an ARO® pump. It offers the ability to capture spills and fumes during chemical transfer from one container to another.

The ARO Station can accommodate three different sized pumps – the 1", 1-1/2" or 2" Expert Series (EXP) ARO diaphragm pump. With the capability to pump material from 20 to 132 gallons per minute (500 lpm), the ARO Station can be calibrated to pump the appropriate quantity for each application. Use of the ARO Station increases the safety of chemical installations during the unloading process by reducing risks of water hammer that occur during the pressurization of the tanks.

- Made of high-density polyethlylene that is impervious to corrosion
- Drip collection tray that holds up to 39.6 gal (150 liters)
- Free-standing or can be equipped with wheels for mobility
- Standardized skid size. Overall dimensions: 47.25" (1200mm) length x 31.5" (800mm) width x 48.5" (1230mm) height when case is closed.

ARO offers three add-ons to increase environmental and operator safety:

- A leak detector that communicates possible leakage, helping to minimize air pollution and risk from fumes.
- A heater to prevent freezing in extreme situations.
- An alarm that monitors the level of liquid in the tank and whether the system is running dry.







ARO Station with field-supplied pump - Cover Open

Description	Material	Weight lbs (kg)
ARO Station empty cabinet with EPHD +plates	PEHD Plates	176.3 (80)
ARO Station Cabinet Configured for 1" Polypropylene Side Flanged EXP Pumps	PVC-U EPDM	228.6 (103.7)
ARO Station Cabinet Configured for 1" PVDF Side Flanged EXP Pumps	PVDF VITON	228.6 (103.7)
ARO Station Cabinet Configured for 1-1/2" Polypropylene Side Flanged EXP Pumps	PVC-U EPDM	228.6 (103.7)
ARO Station Cabinet Configured for 1-1/2" PVDF Side Flanged EXP Pumps	PVDF VITON	228.6 (103.7)
ARO Station Cabinet Configured for 2" Polypropylene Side Flanged EXP Pumps	PVC-U EPDM	228.6 (103.7)
ARO Station Cabinet Configured for 2" PVDF Side Flanged EXP Pumps	PVDF VITON	228.6 (103.7)
ARO Station Leak Detection Option		N/A
ARO Station Heating System Option		N/A
ARO Station Alarm Kit Option		N/A

Note: Pumps are not included and need to be purchased separately. Please direct all inquiries to your ARO Technical support team.

Automatic DeWatering System

SPECIALTY PUMP

Air Operated Control Solution with Liquid Level Sensing

The ARO® Automatic Dewatering System offers automatic on/off controls for Pro and EXP diaphragm pumps. A pneumatically controlled Liquid Level Sensor is used to easily control the fluid level within a desired range. The Automatic Dewatering System will limit the monitoring labor and reduce air consumption by avoiding dry running of the pump.

- Simple design is easy to setup and use.
- All pneumatic operation eliminates electrical ignition source.
- ► High/Low level control maintains fluid between established levels.
- Reduces air consumption by avoiding pump dry running.
- Portable system with directly mounted liquid level sensor.

SPECIFICATIONS

Temperature Range- °F (°C)	32 – 122 (0 - 50)
Air Supply Pressure- psi (bar)	29-101 (2-7)
Weight w/o Pump lbs (kg)	11 (4.8)
Air Connection Size	Rc 3/4"
Sensing Tube lengths - ft (m)	66 (20)
Sensitivity to detect liquid level- in (cm)	2-4 (5-10)

SERVICE KITS

SS-BQG550 Mounting Bracket

PNCV-1/2 Pneumatic Controlled Valve 637523 Sensing Tube and Screen Kit



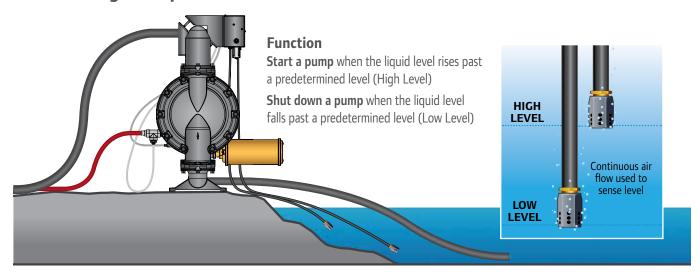
- Bracket
- 2 Liquid Level Sensor
- 8 Pneumatic Controlled Valve
- 4 Sensing Tubes with Screen
- Pro/EXP Series Diaphragm Pump (purchase separately)

AUTOMATIC DEWA	ATERING SYSTEM
SCD501BNI08-V1D	Dowatoring Kit (without pu

np)	2" EXP Series Pump	PX20X-XXX-XXX-X, PX20P-FXS-XXX
	3" EXP Series Pump	PX30X-AXX-XXX-X, PX30X-BXX-XXX-X

PUMP COMPATIBILIT

Working Principle



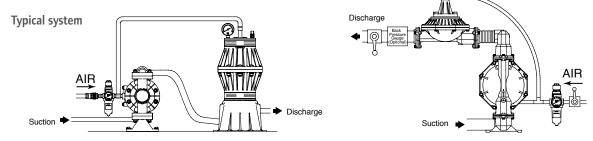
Pulsation Dampeners

Diaphragm pumps of any type have at least two points in their cycle where they provide no pressure or flow to a process. The unwanted result of this pressure fluctuation can often be material foaming, material pulsation, hydraulic shock or material splashing. While traditional pulsation dampeners can help reduce unwanted pulsation and other problems, they also require operator intervention and adjustments.



Automatic Shock Blockers®

- Automatic Air Adjustment compensates for fluctuations in fluid pressure without operator intervention.
- Significant Pulsation Reduction Shock Blockers deliver an average 60% 80% pulsation reduction in high back pressure applications.
- ▶ Built for high-flow/aggressive fluid applications the 2" models can handle up to 2.6 L maximum fluid volume, and 3" models up to 8.3 L maximum fluid volume.
- ▼ Broad Material Range for Compatibility choose from Kynar®, polypropylene, groundable acetal (1" models) or aluminum, cast iron or stainless steel (2" and 3" models) body materials for optimum pump-to-pulsation dampener compatibility.
- ▼ Broad Diaphragm/Bladder Fluid Compatibility choose from Santoprene, Nitrile, PTFE, Hytrel, Viton or Urethane for optimum fluid-to-diaphragm compatibility.
- Perfect for Process Applications pulsation reduction in long piping runs help prevent costly fluid pipe and downstream valve damage.
- **▼** Bolted construction for leak-free vessel integrity and a safer work-site.
- Ultra-Rugged Construction for long service Life both inside and out, the Shock Blockers are built tough to deliver worry-free, near pulse-free fluid handling.



Ordering

Position	1	2		3	4	5		6
Example:	SBX0	X	-	X	Х	S	-	X

Position 1 Model and Size	Position 2 Air Section	Position 3 Fluid Connection	Position 4 Fluid Section	Positon 5 Hardware	Position 6 Diaphragm Material
SB10 - 1"	P - Polypropylene K - PVDF (Kynar) D - Conductive Acetal	A - NPTF B - BSP	P - Polypropylene K - PVDF (Kynar) D - Conductive Acetal	S - Stainless Steel 304	A - Santoprene C - Hytrel® T - PTFE U - Urethane
SB20 - 2" SB30 - 3"	A - Aluminum C - Cast Iron S - Stainless Steel	2" A - 2-11-1/2 NPTF-1 B - Rp 2 (2-11 BSP, parallel) 3" A - 3-8-1/2 NPTF-1 B - Rp 3 (3-11 BSP, parallel)	A - Aluminum C - Cast Iron S - Stainless Steel	P - Carbon Steel S - Stainless Steel 304	A - Santoprene G- Nitrile T - PTFE / Santoprene V - Viton













Air Line Connection Kit 66073-1

Diaphragm Failure Detection 67237

Cycle Counter Kit 67350

Continuous Duty Muffler 67323

Flange Connection Kit 637341-E10N

Over-run Control 635040

*Please note pumps are not included with these kits.	1/4" Non-Metallic	3/8" Non-Metallic	1/2" Non-Metallic	1/2" Classic Non-Metallic	3/4" Non-Metallic	1/2" Metallic
Air Line Connection Kit Kit includes Piggyback Filter/Regulator with gauge, pipe nipple and a 5-foot section of air hose.	66073-1	66073-1	66073-1	66073-1	66073-1	66073-1
Diaphragm Failure Detection (DFD) Provides a warning of a diaphragm failure by sensing the presence of liquid in the air chamber of the pump.	67237	67237	67237	-	67237	67237
Pneumatic Cycle Counter Kit Like the odometer on your car, ARO's cycle counter lets you know how many pump cycles have elapsed so you can be pre- pared to perform preventive maintenance	-	66975	66975	-	66975	66975
Cycle Sensor Kit (close electrical contact type) For monitoring pump operation. Can be used to monitor cycle rates, preventative maintenance and rough flow rate indication.	-	67386	67386	67168	67386	-
Continuous-Duty Muffler Recommended for continuous-duty and high-flow applications. Muffler features large expansion chamber, permit- ting cold exhaust air to exit pump.	-	-	-	-	-	-
Flange Connection Kit Use with non-metallic EXP pumps with the flange manifold option. Flange kits meet DIN / A.N.S.I. specifications. Flange constructed of glass-filled polypropylene. Bolts, washers and nuts are stainless steel. (Gaskets included)	-	-	-	-	-	-
Over-run Control Shuts off pump when excessive cycling occurs due to empty fluid supply container.	-	-	635040	635040	635040	635040
Wall Mount Conveniently mount pump above container. Made of of heavy gauge coated steel. (pump not included) * Does not include hardware	-	67388	76763	-	76763	76763
Countdown Batcher Manual start batch counter kit controls the volume of fluid dispensed by controlling the number of pump cycles. (pump not included)	-	67072	67072	-	67072	67072
Solenoid Actuation Kit Control pump cycle rate with on/off signal from PLC or other device. Kit includes connector w/36" cable plus components and instructions to install on standard pump. For dosing and batching applications.	-	67165-1 (24VDC) 67165-2 (120VAC)	67165-1 (24VDC) 67165-2 (120VAC)	67165-1 (24VDC) 67165-2 (120VAC)	-	67165-1 (24VDC) for PD05R-X-X-B 67165-2 (120VAC) for PD05R-X-X-B
Diaphragm Pump Speed Controls Controls air volume supplied to pump, thus permitting operator to control speed of pump. Can be panel mounted. Composite body.	104104-N02	104104-N02	104104-N02	104104-N02	104104-N02	104104-N02
Groundable Strap Reliable static control.	-	-	-	-	-	66885-1 Acetal Center Body



76763









Countdown Batcher 67072

Solenoid Actuation Kit 67165-1

Speed Control 104104-N02

Groundable Strap 66885-1

3/4" Metallic	1" Non-Metallic	1-1/2" Non-Metallic	2" Non-Metallic	1" Metallic	1-1/2" Metallic	2" Metallic	3" Metallic	1" 3:1 Ratio
66073-1	66073-2	66084-1	66109	66073-2	66084-1	66109	66109	-
67237	67237	67237	67237	67237	67237	67237	67237	
66975	67350	67350	67350	67350	67350	67350-1	67350-1	
-	67390	67390	67391	67392	67392	67393	67393	-
-	-	-	67323	-	-	67263	67263	-
-	67341-E10N (Side flange) 67341-C10N (Center flange)	67341-E15N (Side flange) 67341-C15N (Center flange)	67341-E20N	-	-	-	-	-
635040	635040	23644-400	23644-400	635040	23644-400	23644-400	635043	-
76763	-	-	-	66100	62133	-	-	67142
67072	67072	67072-1	67072-1	67072	67072-1	-	-	-
-	67355-1 (24VDC) for PE10X-X-X 67355-2 (120VAC) for PE10X-X-X	-	67355-1 (24VDC) for PE20X-X-X-B 67355-2 (120VAC) for PE20X-X-X-B	67355-1 (24VDC) for PE10X-X-X 67355-2 (120VAC) for PE10X-X-X	-	-	67357-1 (24VDC) PE30X-X-X-C 67357-2 (120VAC) PE30X-X-X-C	-
104104-N02	104104-N02	104104-N04	104104-N04	104104-N02	104104-N04	104104-N06	104104-N06	-
-	66885-1 Conductive Poly Center Body	66885-1 Conductive Poly Center Body	66885-1 Conductive Poly Center Body	66885-1	66885-1	66885-1	66885-1	-

Air Filter/Regulator

The ARO-FLO Series units extend the life of air operated equipment while reducing operating costs. These units efficiently remove solid particles from compressed air lines - making them the great choice for large flow applications.





P39124-600

Piggyback Filter/Regulator, Metal Bowl w/ Sight Glass, Auto Drain

Pump Size	NPT Model Number	Port Size	Max Inlet Pressure (psi)	Pressure Range (psi)	Max CFM	Micron Element	Size HxWxD (inches)
1/4" to 3/4"	P39124-624	1/4"	250	0-140	47	5	6.9 x 2.9 x 2.9
1"	P39224-614	1/4"	250	0-140	72	5	9.0 x 2.2 x 3.2
1-1/2"	P39344-614	1/2"	250	0-140	172	5	10.9 x 2.8 x 3.2
2"	P39354-614	3/4"	250	0-140	173	5	10.9 x 2.8 x 3.2
3″	P39454-614	3/4"	250	0-140	236	5	14.7 x 3.5 x 4.1

Piggyback Filter/Requaltor, Poly Bowl w/Guard, Manual Drain

			Max Inlet				
Pump Size	NPT Model Number	Port Size	Pressure (psi)	Pressure Range (psi)	Max CFM	Micron Element	Size HxWxD (inches)
1/4" to 3/4"	P39124-600	1/4"	150	0-140	47	5	6.2 x 2.9 x 2.9
1"	P39224-600	1/4"	150	0-140	72	5	8.1 x 2.2 x 3.2
1-1/2"	P39344-600	1/2"	150	0-140	172	5	10.0 x 2.8 x 3.2
2"	P39354-600	3/4"	150	0-140	173	5	10.9 x 2.8 x 3.2

Cautions of the Use of Polycarbonate Plastic Bowls - Use Only with Compressed Air. Filters and lubricators with polycarbonate plastic bowls are specifically designed for compressed air service, and their use with any other fluid (liquid or gas) is a misapplication. Avoid Harmful Substances. Some compressor oils, chemical cleaners, solvents, paints, and fumes will attack plastic bowls and can cause bowl failure. Do not use with or near these materials. Consult the factory with any questions.



Ingersoll Rand attests that ARO-Flo Series of filters, regulators, lubricators (1000, 1500, 2000, 3000 Series) and select accessories are out of scope for ATEX Directive 94/9/EEC or 2014/34/EU. The products listed in IRITS-1215-197 certificate can be used in group II, category 2 environment; Gas and Dust with temperature a T6 (Ex II 2GD T6) if all conditions set up in the Instruction Manual are meet. Instruction Manuals and certificate regarding ATEX Declaration can be found at AROZONE.COM

Air Control Actuation Valves

3-way valve controls air supply to pump. Activation starts pump, deactivation cuts off air supply to pump and exhausts air from motor, which prevents stalling.

MQ3728-120-A for 1/2" and 1" pumps, H254SS-120-A for 1-1/2" pumps, MQ3729-120-A for 2" and 3" pumps 24 VDC MQ3728-024-D for 1/2" and 1" pumps H254SS-024-D for 1-1/2" pumps MQ3729-024-D for 2" and 3" pumps



MO3728-120-A used on 1/2' and 1" pumps

Siphon Tubes

For use when pumping from a 55 GAL (200 L) container; siphon tubes are available in PVC, carbon steel, or 316 stainless steel. 1" siphon tubes come with foot valve for positive priming. All models include bung adapter.

Model no	o. Description	For use with pumps
65109	Steel — NPT(F)	1" (Metallic)
66568	Stainless steel — NPT(F)	1" (Metallic)
66568	Stainless steel	1" (Non-Metallic)
	filter & Siphon tube	
66779	PVC - NPT(F)	1" (Non-Metallic)



Material Agitators

Agitators available for both 5 GAL (20 L) and 55 GAL (200 L) containers. Air operated agitator motors generate between 500-1000 RPM 5 GAL (20 L), and 500-3000 RPM (for 55 GAL, 200 L). Agitator shaft and propellers are constructed of corrosion resistant 316 stainless steel.

Model no.	For drum	Mounting	Power	Motor speed	Propeller dia.	Axle length
651100	5 GAL (20 L)	1	0.33 hp	500 - 1000 rpm	4" (102 mm)	12"(305 mm)
651103	55 GAL (200 L	.) 2	0.75 hp	500 - 3000 rpm	5" (127 mm)	32.6"(830 mm)
651104-1	55 GAL (200 L	.) 1	0.95 hp	500 - 3000 rpm	5" (127 mm)	32.6"(830 mm)
651104-3	5 GAL (20 L)	1	0.75 hp	500 - 3000 rpm	5" (127 mm)	10.5"(267 mm)



Drum Covers

Durable stainless steel and carbon steel drum covers, ccommodate the use of both diaphragm pump and agitator where you need.

Model no.	For drum	Marerial	For use with agitator:
66971	5 GAL (20 L)	Stainless steel	651100
66197	55 GAL (200 L)	Carbon steel	651104-1
94422	55 GAL (200 L)	Carbon steel	_



Pneumatic Liquid Level Sensor*

Used to control pump.

59916-1 to sense when fluid exceeds a desired level 59916-2 to sense when fluid falls below a desired level



^{* 3} or 4- way valve required

ARO Vibration Isolators

Protect your pump installation by reducing vibration. ARO Vibration Isolators are used for an efficient reduction of mechanical vibration and stress in the mounting system of an air operated diaphragm pump. They are recommended to be used with flexible fluid pipe connectors to isolate the impact of the pump vibration to fixed pipes.

- Reduces up to 96% of vibration transmitted through the mount
- A set of 4 vibration isolators and mounting hardware are included
- ▼ Smart design: different kit sizes depending on pump weight

Model Number (4 per kit)	CPN	Description (Max. weight of pump with fluid)
HSK-20	47532069001	Vibration Isolator Kit 20 KG (44 LB)
HSK-40	47532069002	Vibration Isolator Kit 40 KG (88 LB)
HSK-70	47532069003	Vibration Isolator Kit 70 KG (154 LB)
HSK-110	47532069004	Vibration Isolator Kit 110 KG (243 LB)



Vibration Isolator

Maintenance Kits







Pump	type	Models	Air Motor Section	Fluid Section	One Piece Diaphragms	Major Air Valve Assembly
³ / ₈ "	Non-Metallic	PD03P, PE03P	637428	637429-XX	-	_
	Non-Metallic	PD05P, PE05P	637428	637427-XX	-	_
1/"	Metallic -	PM05P	637389	637375-XX	_	_
		PD05A, PD05R, PE05A, PE05R	637428	637427-XX	_	_
2.1.11	Non-Metallic	PD07P	637428	637427-XX	_	_
³ / ₄ "	Metallic	PD07R	637428	637427-XX	_	_
	Non-Metallic	PD10P, PE10P, PD10E, PE10E	637397	637396-XX	-	637395-X
1"	Metallic	PD10A, PD10R, PD10S, PE10A, PE10R, PE10S, PM10A, PM10R, PM10S	637397	637401-XX	-	637395-X
		PH10A-XSS-SST	637338	637339	_	_
		SD105	637495	637493-XX	_	637496
	Non-Metallic	PD15P, PE15P, PD15E, PE15E	637389	637391-XX	_	637390-X
11/"	Metallic	PD15A, PD15R, PD15S, PE15A, PE15R, PE15S, PM15A, PM15R, PM15S	637389	637375-XX	-	637390-X
2"	Non-Metallic	PD20P, PE20P, PD20E, PE20E	637369	637373-XX	_	637374-X
	Metallic	PD20R, PD20Y, PE20R, PE20Y, PM20R	637369	637309-XX	-	637374-X
		PD20A, PD20S, PE20A, PE20S PM20A, PM20S, PP20A	637421	637309-XX	-	637374-X
		PF20A, PF20S	637421	637310-XX	_	637374-X
		PF20A	637421	637309-XX	_	_
		PF20R, PF20Y	637369	637310-XX	-	637374-X
		SD20S	637497	637494-XX	_	637498
		PD30R, PE30R, PM30R	637369	637303-XX	_	637374-X
3"	Metallic	PD30A, PD30S, PE30A, PE30S PP30A, PM30A, PM30S	637421	637303-XX	-	637374-X
		PH30F-X	637369	637441-XX	_	637374-X

Notes

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ARO°

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