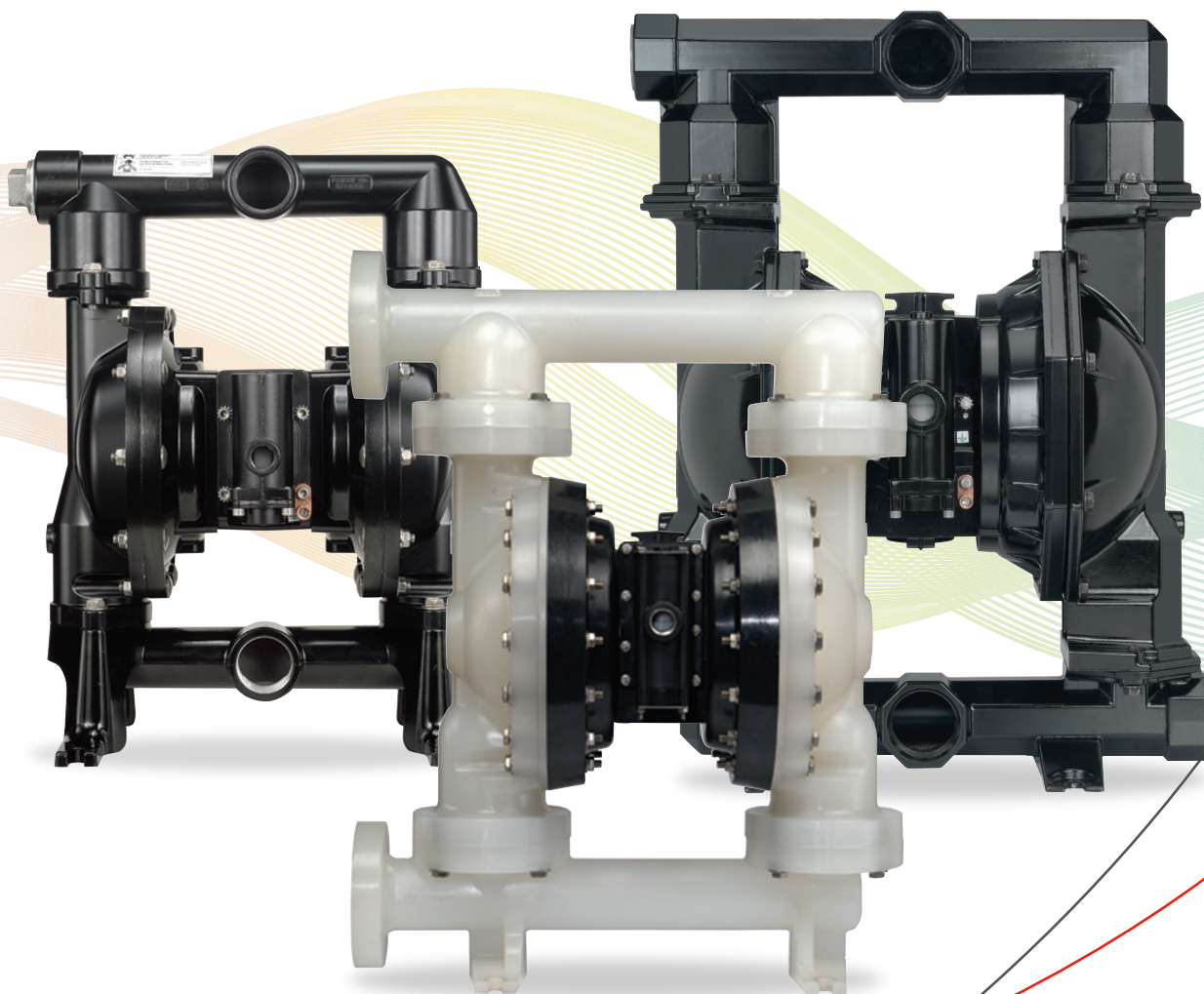


# ARO<sup>®</sup>

## 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 excellent 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 (1 liter) per minute up to 275 gallons (1041 liter) per minute for our larger sizes and adjust fluid pressure up to 125 p.s.i. (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
- Easy-to-Install

## Find your EXP opportunity



**ARO®** AUTHENTIC  
ARO PARTS

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

Though a part may look like an ARO part, unless the part carries the Authentic ARO Parts name and was bought from one of our authorized distributors, the part 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](http://AROzone.com) to learn more.

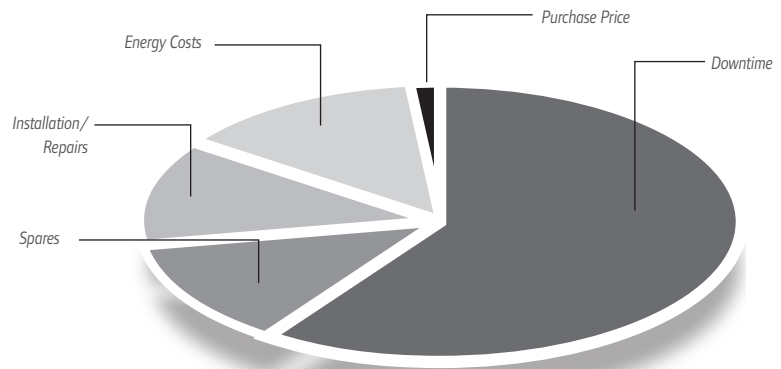
## Why ARO diaphragm pumps?

The purchase price of a traditional diaphragm pump is the smallest piece of the total pump cost-of-ownership pie. There are downtime costs, energy costs, parts costs and labor costs to consider as well. Add all of these costs together and you are dealing with a sizeable financial commitment that gets tougher to swallow with each passing quarter. With 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

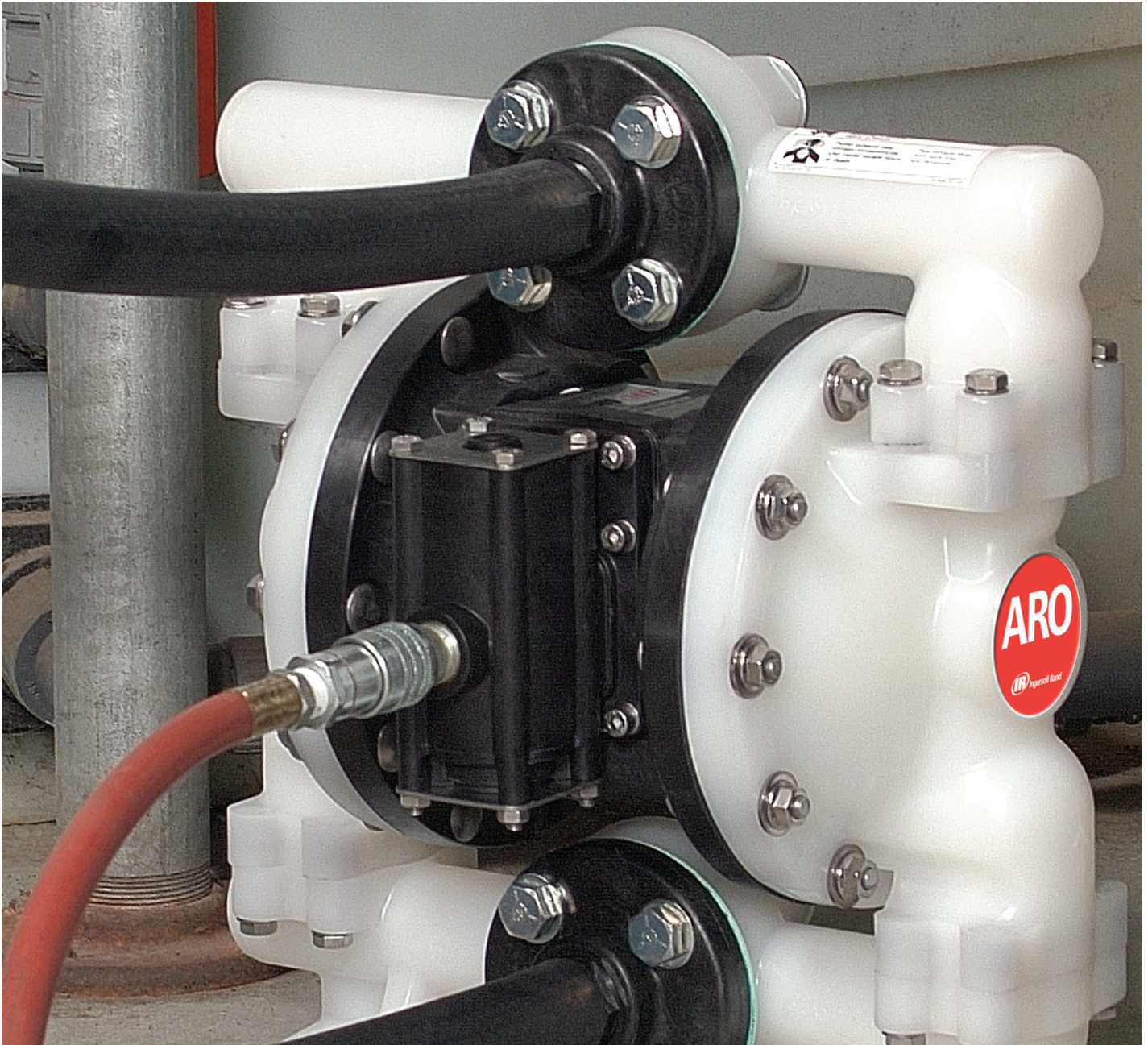
Traditional Downtime Problems	ARO EXP Solution	The Benefits
Pump Freezing	Quick Dump™ Checks	Downtime from Freezing Eliminated
Pump Stalling	SimulShift™ Valve / Unbalanced Air Valve	Process Production Uptime
Diaphragm Failure	Convuluted Diaphragms	Up to 4X the Life of Traditional Diaphragms
Air Motor 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 Labor/Time: Tearing Down and Replacing Failed Parts Complex or Incomplete Service Kits	Longer Lasting Wear Parts i.e. Convuluted Diaphragms Easy-Access Major Air Valve Simplified Service Kits	Significantly Reduced Labor and Parts Costs
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## 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.F.-1	3/4 - 14 N.P.T.F.-1 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)	19 (5.7)	14 (4.2)	14 (4.2)
Recommended Filter/Regulator	P39124-620	P39124-600	P39124-600	P39124-624	P39124-600	P39224-600	P39334-600	P39454-610
Airline Kit	66073-1	66073-1	66073-1	66073-1	66073-1	66073-2	66084-1	66109

# 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:	PX01P	X	-	H	X	S	-	X	X	X	-	A	-	X	X

Position 1 Model Series	Position 2 Center Section	Position 3 Fluid Connections	Position 4 Wetted Parts	Position 5 Hardware	Position 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	E - Conductive Polypropylene F - Polypropylene with leak failure detection P - Polypropylene	H - 1/4" NPT BSP hybrid	D - Groundable Acetal E - Groundable Acetal (Multiple port) K - Kynar PVDF L - Kynar PVDF (Multiple port) P - Polypropylene R - Polypropylene (Multiple port)	S - Stainless Steel	D - Acetal K - PVDF P - Polypropylene 0 - Polypropylene (Flex-Check spacer)* 1 - Acetal (Flex-Check spacer)* 2 - PVDF (Flex-Check spacer)*	A - Santoprene® C - Hytrel® G - Nitrile J - Nitrile (Flex-Check only) K - EPR (Flex-Check only) L - Viton (Flex-Check only) N - Neoprene (Flex-Check only) T - PTFE	A - Santoprene® C - Hytrel® G - Nitrile T - PTFE	A - Revision 1	Fluid control options for pump with electronic interface (PE01 model). See complete description on page 9

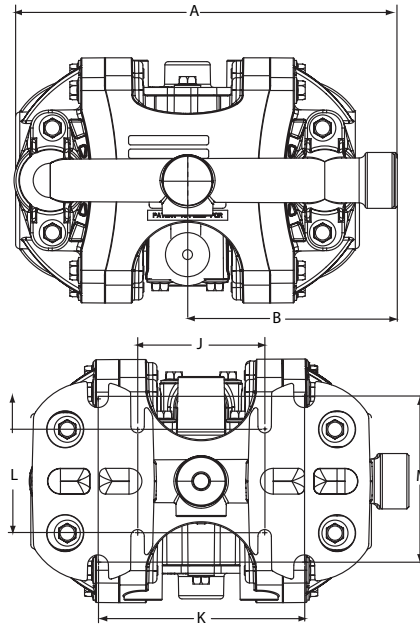
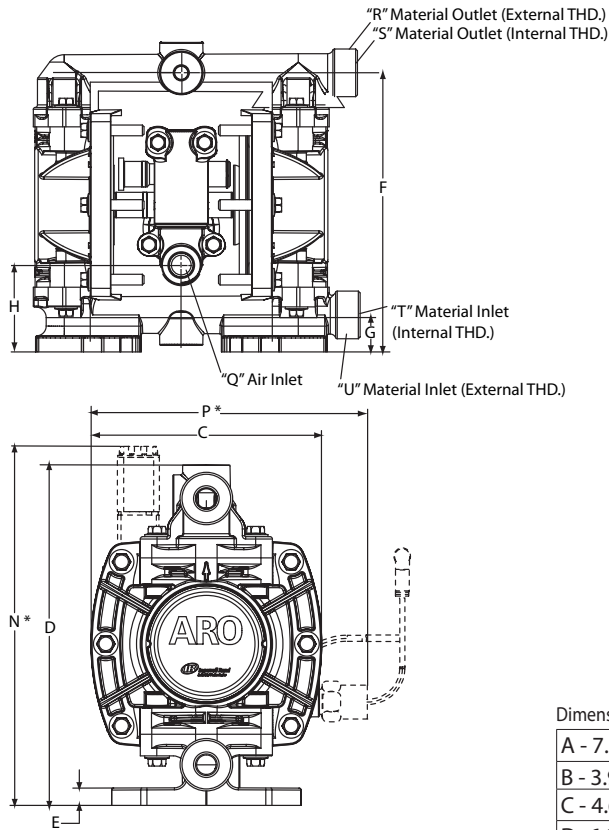
## Accessories

### Air Line Connection Kit | 66073-1

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



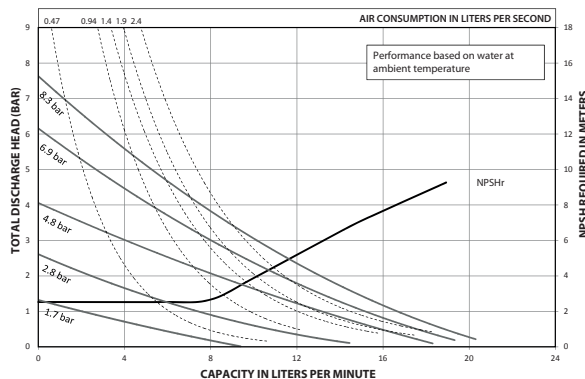
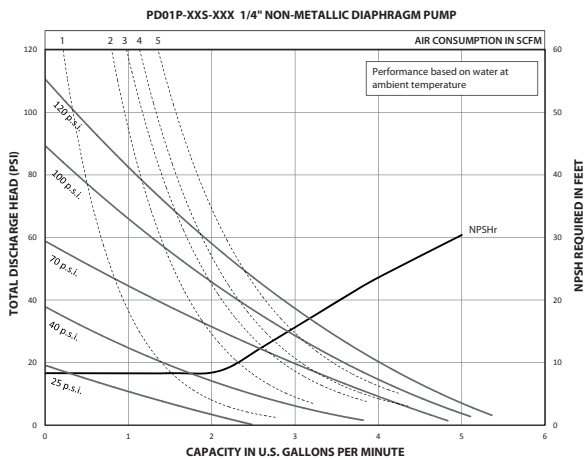
# 1/4" Non-Metallic Dimensions and Flow Charts



## DIMENSIONS

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
- O - 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
- O - No Option

# 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-XDS-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



PD03P-BPS-PCC



PD03P-BDS-DTT



### Ordering

Position	1	2		3	4	5		6	7	8		9		10	11
Example:	PX03	P	-	X	X	S	-	X	X	X	-	B	-	X	X

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Manifold Material	Position 5 Hardware	Position 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9
D - Standard E - Remote Actuation Capable	P - Polypropylene	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 - Polypropylene 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	Revision Level  <b>Position 10 &amp; 11 Specialty Code</b>  Fluid control options for pump with electronic interface (PE03 model). See complete 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

Wall Mount Bracket Kit  
67388

### 3/8" Non-Metallic Dimensions and Flow Charts



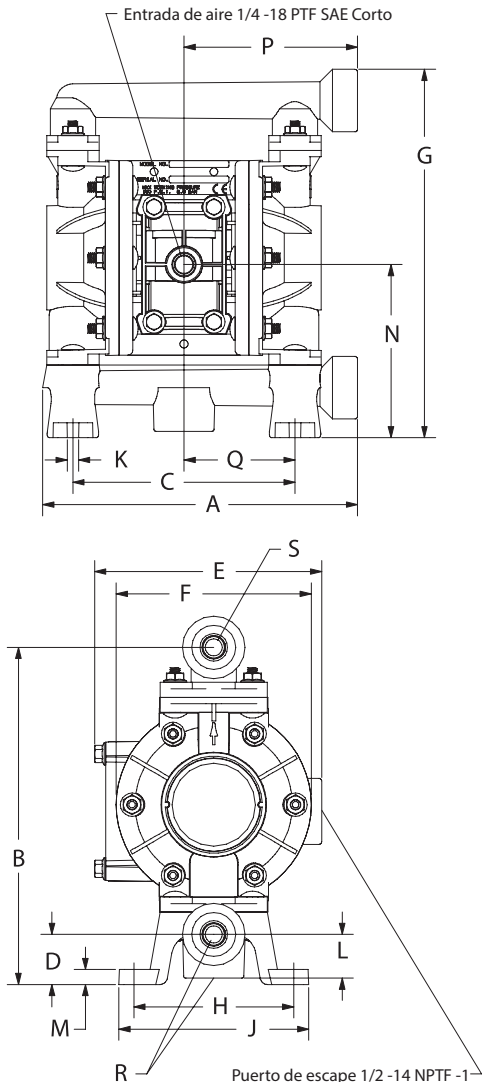
PE03P-APS-PAA-BOS  
with 637442-1 Kit

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)

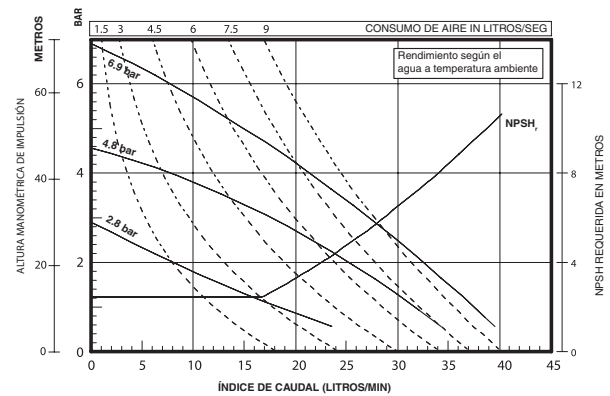
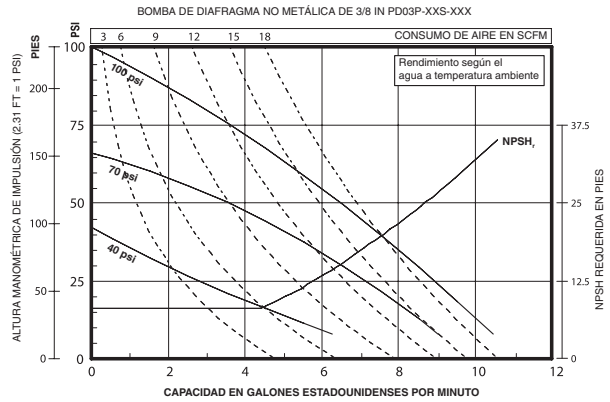
#### DIMENSIONES

A 7-29/32 in (200.2 mm)	F 4-7/8 in (123.9 mm)	L 1-3/32 in (37.8 mm)
B 8-7/16 in (214.3 mm)	G 9-7/32 in (234.2 mm)	M 3/8 in (9.5 mm)
C 5-9/16 in (141.3 mm)	H 4 in (101.6 mm)	N 4-11/32 in (110.1 mm)
D 1-1/4 in (31.8 mm)	J 4-3/4 in (120.7 mm)	P 4-11/32 in (110.3 mm)
E 5-23/32 in (145.2 mm)	K 9/32 in (7.1 mm)	Q 2-25/32 in (70.6 mm)

<b>Modelo</b>	<b>Entrada de material de "R"</b>	<b>Salida de material de "S"</b>
PD03P-AXS-XXX	3/8 - 18 N.P.T.F. - 1	3/8 - 18 N.P.T.F. - 1
PD03P-BXS-XXX	Rp 3/8 (3/8 - 19 BSP)	Rp 3/8 (3/8 - 19 BSP)



#### CURVAS DE RENDIMIENTO



Refer to [www.AROzone.com](http://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	G - Solenoid 12VDC ATEX/IECex
B - Solenoid 12VDC	H - Solenoid 24VDC ATEX/IECex
C - Solenoid 240VAC	J - 120VAC NEC/CEC
D - Solenoid 24VDC	K - Solenoid 220VAC ATEX/IECex
E - 12vDC NEC/CEC	N - Solenoid with no coil
F - 24vDC NEC/CEC	O - Standard Valve Block (No Solenoid)

#### Ordering Position 11

##### Specialty Code 2 (Blank if no Specialty Code)

E - End of stroke feedback + Leak Detection	L - Leak Detection
F - End of stroke feedback	M - Leak Detection ATEX/IECex/NEC/CEC
G - End of Stroke ATEX/IECex/NEC/CEC	O - No Option
H - End of Stroke/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:	1:1		
Maximum Flow:	14.4 g.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		



PD05P-BRS-PAA

## Ordering

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

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Manifold Material	Position 5 Hardware	Position 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9
D - Standard E - Remote Actuation Capable	P - Polypropylene	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 - Polypropylene 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 <b>Position 10 &amp; 11 Specialty Code</b> 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

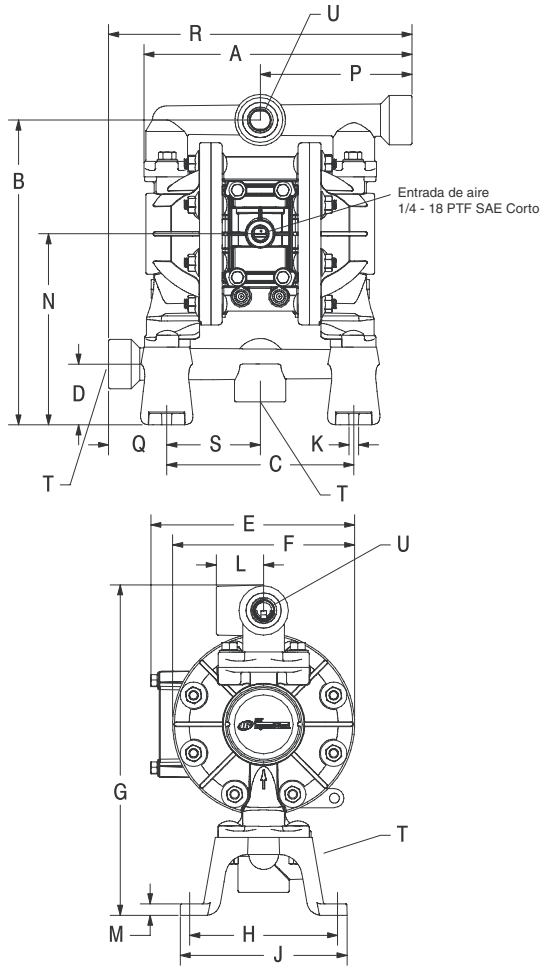
**Service Repair Kits** | 637428 (air section)

637427-XX (fluid section)



Air Line Connection Kit  
66073-1

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



### DIMENSIONES

A 8-27/32 in (224.3 mm)	G 10-7/8 in (275.7 mm)	N 6-5/16 in (159.9 mm)
B 10-1/16 in (255.0 mm)	H 4-7/8 in (123.8 mm)	P 5 in (127.0 mm)
C 6.1/164 in (156.6 mm)	J 5-1/2 in (139.7 mm)	Q 1-59/64 in (48.8 mm)
D 2 in (50.8 mm)	K 5/16 in (8.0 mm)	R 10 in (254.0 mm)
E 6.23/32 in (170.6 mm)	L 1-9/16 in (39.7 mm)	S 3-3/32 in (78.3 mm)
F 6 in (152.4 mm)	M 3/8 in (9.5 mm)	

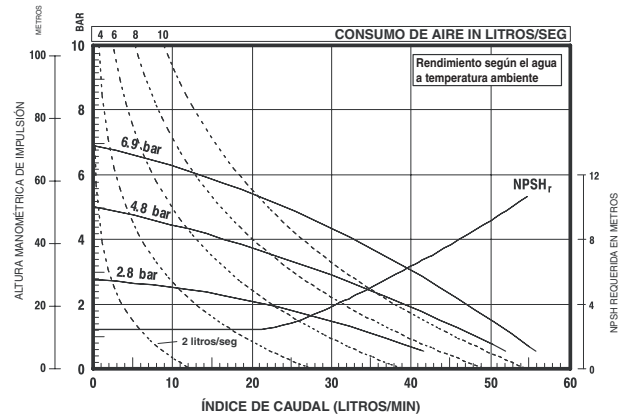
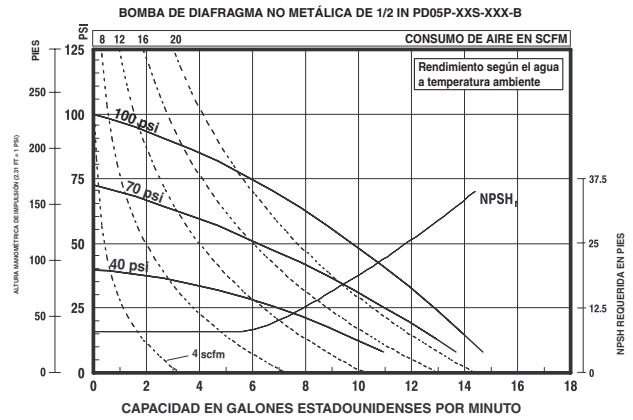
Modelo	Entrada de material de "T"	Salida de material de "U"
PD05P-AXS-XXX-B	1/2 -14 NPTF -1	1/2-14 NPTF1
PD05P-BXS-XXX-B	Rp 1/2 (1/2 -14 BSP)	Rp 1/2 (1/2 -14 BSP)



PE05P-APS-PAA-B05  
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)

### CURVAS DE RENDIMIENTO



Refer to [www.AROzone.com](http://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	G - Solenoid 12VDC ATEX/IECex
B - Solenoid 12VDC	H - Solenoid 24VDC ATEX/IECex
C - Solenoid 240VAC	J - 120VAC NEC/CEC
D - Solenoid 24VDC	K - Solenoid 220VAC ATEX/IECex
E - 12VDC NEC/CEC	N - Solenoid with no coil
F - 24VDC NEC/CEC	O - Standard Valve Block (No Solenoid)

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

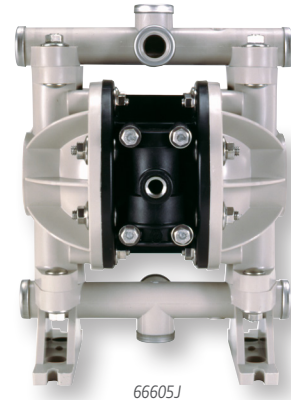
E - End of stroke feedback + Leak Detection	L - Leak Detection
F - End of stroke feedback	M - Leak Detection ATEX/IECex/NEC/CEC
G - End of Stroke ATEX/IECex/NEC/CEC	O - No Option
H - End of Stroke/Leak Detection ATEX/IECex/NEC/CEC	

# 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:	1:1		
Maximum Flow:	(ball) 13 g.p.m. (49.2 l.p.m.) (duckbill) 10 g.p.m. (37.9 l.p.m.)		
Displacement per cycle:	(ball) 0.04 g.p.m. (0.15 l.p.m.) (duckbill) 0.032 g.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)	Polypropylene	7.2 (3.3)	
	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:	<b>66605</b>	<b>X</b>	-	<b>X</b>	<b>X</b>	<b>X</b>	-	<b>04</b>

Position 1 Model Series	Position 2 Fluid Caps and Manifold Material	Position 3 Seat Section	Position 4 Ball Material	Position 5 Diaphragm Material	Position 6 Cone Check 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)

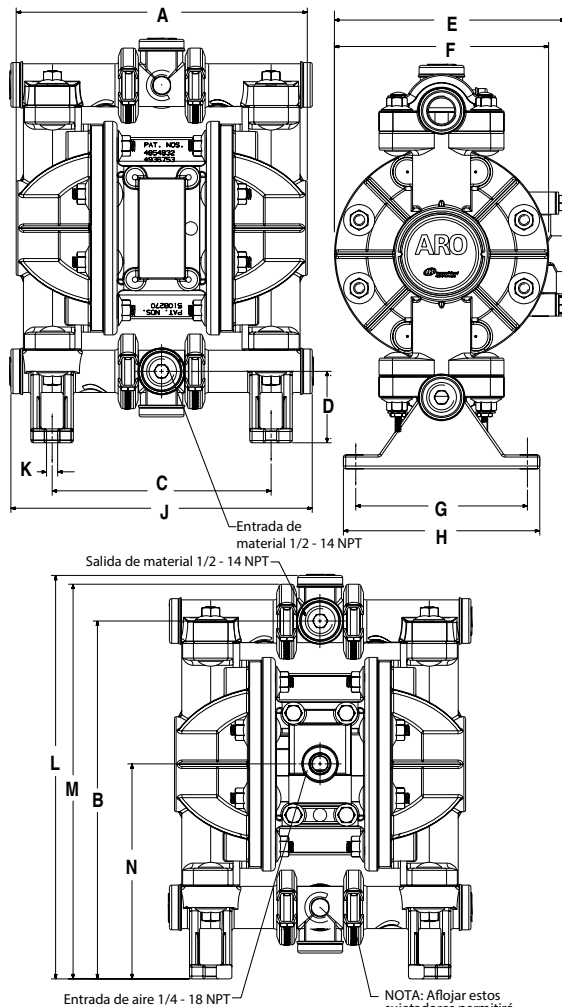


93110



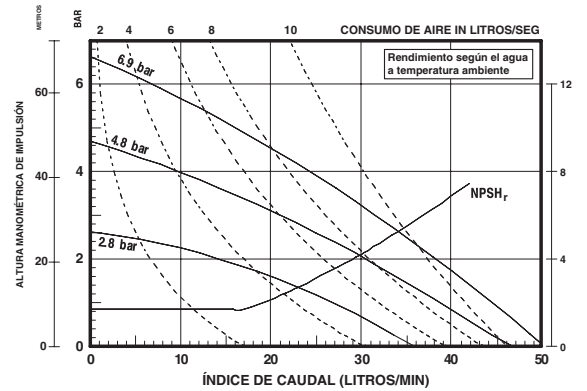
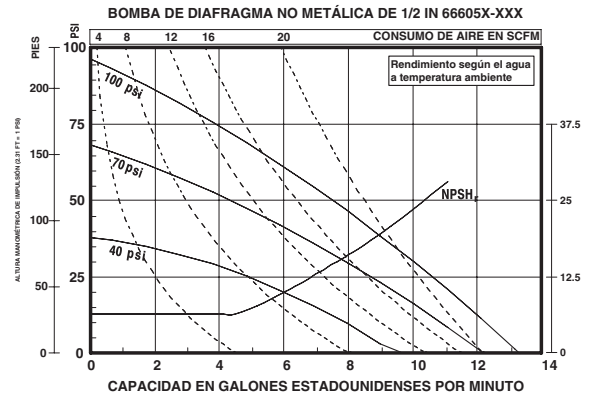
Air Line Connection Kit  
66073-1

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



NOTA: Las dimensiones se muestran en pulgadas y (mm) y son proporcionadas solo de referencia.

A - 8.155" (207.1 mm)	E - 6.467" (164 mm)	J - 8.44 5" (215 mm)
B - 10.051" (255 mm)	F - 6.000" (152 mm)	K - 0.31 2" (8 mm)
C - 6.135" (155.8 mm)	G - 4.812" (122.2 mm)	L - 11.331" (288 mm)
D - 2.005" (51 mm)	H - 5.500" (140 mm)	M - 11.08 4" (282 mm)
		N - 6.040" (153 mm)



Refer to [www.AROzone.com](http://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
Maximum Flow:	14.8 g.p.m. (56 l.p.m.)
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
Example:	PD07	P	-	X	X	S	-	X	X	X	-	X	X

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Manifold Material	Position 5 Hardware	Position 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9 and 10
PD07 - Standard Pump PE07 - Remote Actuation Capable	P - Polypropylene	A - 14 - 3/4" N.P.T.F.-1 B - Rp 3/4 (3/41/2 -14 BSP, parallel)	P - Polypropylene (Single Port)	S - SS	P - Polypropylene	A - Santoprene C - Hytrel T - PTFE	A - Santoprene C - Hytrel T - PTFE	Fluid control options for pump with electronic interface (PE07 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)

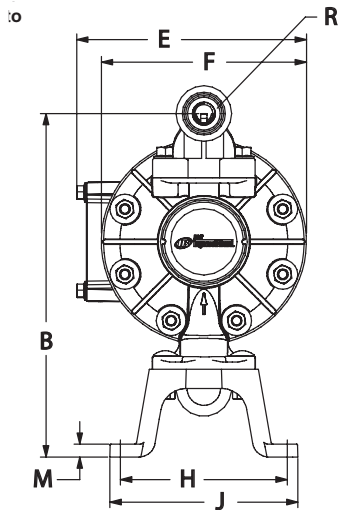
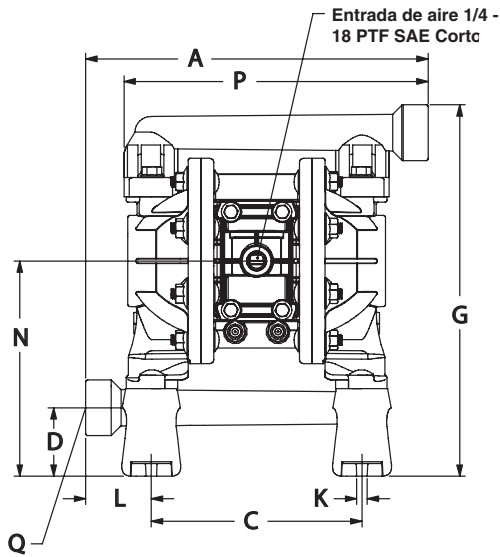
**Wall Mount** | 76763



Air Line Connection Kit  
66073-1



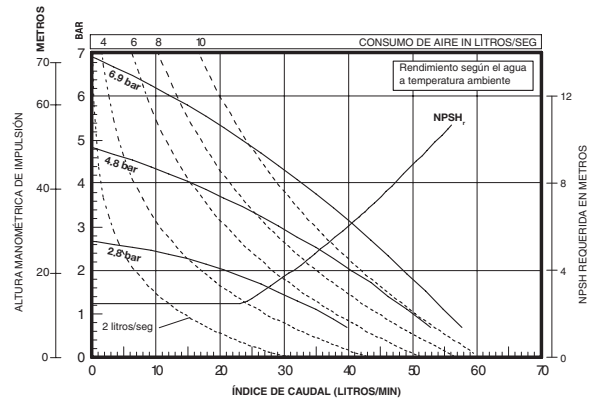
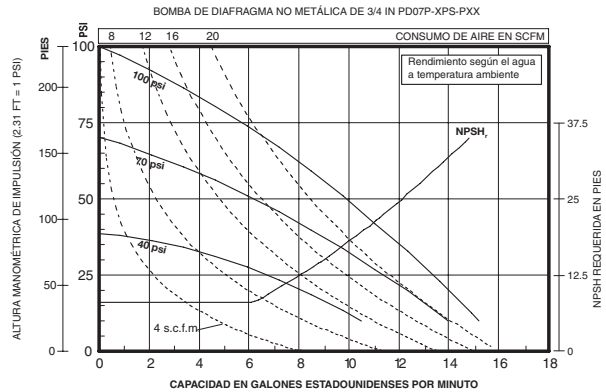
## 3/4" Non-Metallic Dimensions and Flow Charts



### DIMENSIONES

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

Modelo	Entrada de material de "Q"	Salida de material de "R"
PD07P-APS-PXX	3/4 - 14 N.P.T.F. - 1	3/4 - 14 N.P.T.F. - 1
PD07P-BPS-PXX	Rp 3/4 (3/4 - 14 BSP)	Rp 3/4 (3/4 - 14 BSP)



Refer to [www.AROzone.com](http://www.AROzone.com) for full size flow curves.  
For additional information contact  
technical support at 1.800.495.0276

### Ordering Position 9

#### Specialty Code 1 (Blank if no Specialty Code)

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

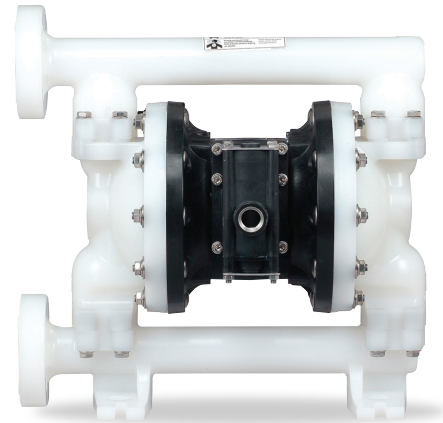
### Ordering Position 10 Specialty Code 2 (Blank if no Specialty Code)

E - End of stroke feedback + Leak Detection	L - Leak Detection
F - End of stroke feedback	M - Leak Detection ATEX/IECex/NEC/CEC
G - End of Stroke ATEX/IECex/NEC/CEC	O - No Option
H - End of Stroke/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, 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
Example:	PX10	X	-	X	X	S	-	X	X	X	-	X	X

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Wetted Parts	Position 5 Hardware	Position 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9 and 10
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	S - SS	H - 440 SS (Hard) K - PVDF P - Polypropylene S - 316 SS	A - Santoprene C - Hytrel G - Nitrile T - PTFE V - Viton	A - Santoprene C - Hytrel G - Buna-N M - Med. Grade Santoprene T - PTFE/Santoprene V - Viton	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)

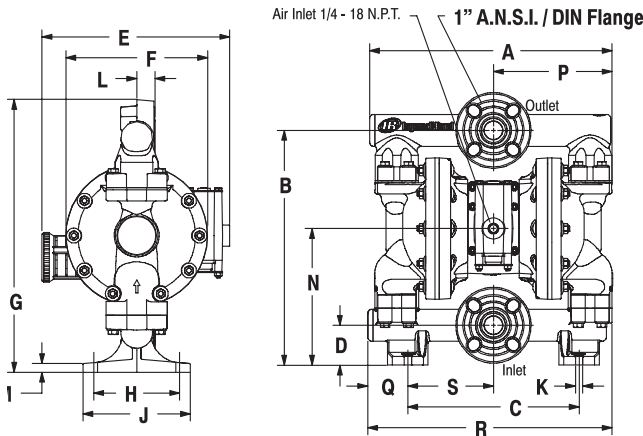
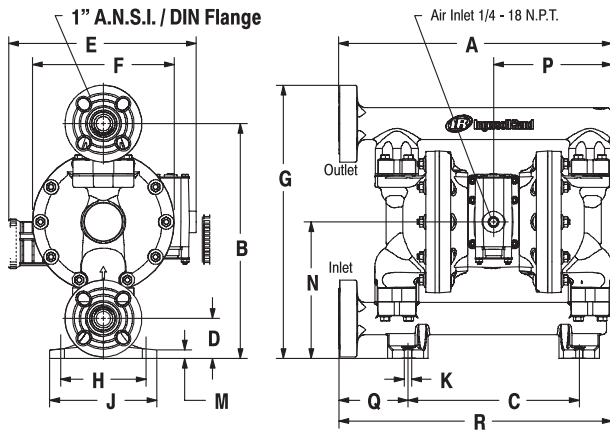
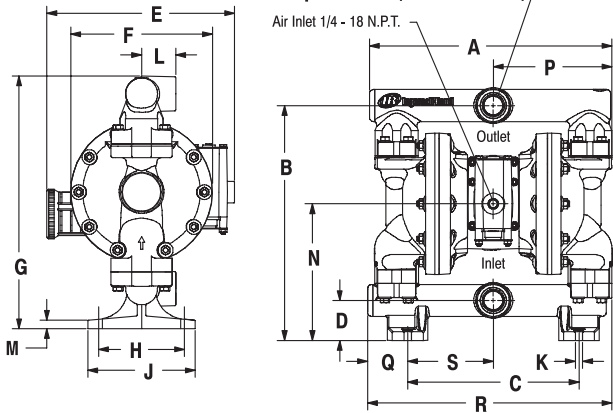
**Flange Connection Kits** | 67341-E10N (side flange), 67341-C10N (center flange)  
Use with non-metallic EXP pumps with the flange manifold option



Flange Connection Kit

# 1" Non-Metallic Dimensions and Flow Charts

1 - 11-1/2 N.P.T.F. - 1 (PX10P-AXS-XXX)  
Rp 1 - 11 BS (PX10P-BXS-XXX)

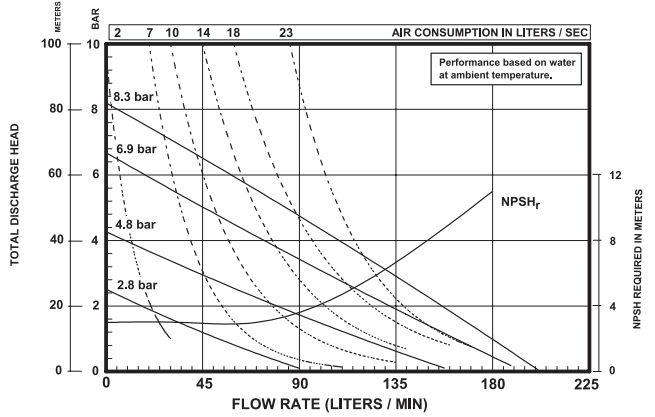
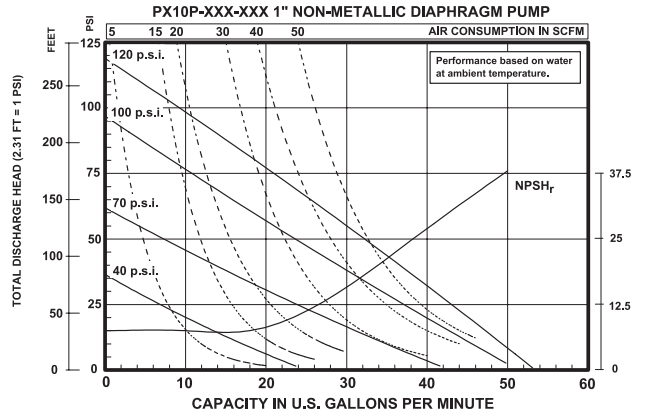


### DIMENSIONS

A - see below	G - see below	N - 8-1/32" (203.4 mm)
B - 13-25/32" (349.8 mm)	H - 5-1/32" (127.6 mm)	P - 6-31/32" (176.6 mm)
C - 10-1/16" (255.3 mm)	J - 6-9/32" (159.6 mm)	Q - see below
D - 2-11/32" (59.4 mm)	K - 7/16" (11.1 mm)	R - see below
E - 11-1/32" (279.5 mm)	L - see below	S - 5-1/32" (127.6 mm)
F - 8-5/16" (211.1 mm)	M - 1/2" (12.7 mm)	

PX10P-AXS-, -BXS- (Threaded)	PX10P-EXS-XXX (End Flange)	PX10P-YXS-XXX (Center Flange)
A - 14-7/32" (361.2 mm)	16-1/32" (407.3 mm)	14-7/32" (361.2 mm)
G - 14-27/32" (376.5 mm)	16-1/32" (407.3 mm)	16" (406.3 mm)
L - 2" (50.8 mm)	-----	1-1/32" (25.6 mm)
Q - 2-3/8" (59.7 mm)	4-1/16" (103.0 mm)	2-3/8" (59.7 mm)
R - 14-11/32" (364.0 mm)	16-1/32" (407.3 mm)	14-11/32" (364.0 mm)



Refer to [www.AROzone.com](http://www.AROzone.com) for full size flow curves.  
For additional information contact  
technical support at 1.800.495.0276

### Ordering Position 9

#### Specialty Code 1 (Blank if no Specialty Code)

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

### Ordering Position 10

#### Specialty Code 2 (Blank if no Specialty Code)

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

# 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
Example:	PX15	X	-	X	X	S	-	X	X	X	-	X	X

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Wetted Parts	Position 5 Hardware	Position 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9 and 10
PD15 - Standard Pump PE15 - Electronic Interface Accessible Pump	E - Conductive Polypropylene P - Polypropylene	F - 1-1/2" A.N.S.I./DIN Flange (Side) Y - 1-1/2" A.N.S.I./DIN Flange (Center)	E - Conductive Polypropylene K - PVDF P - Polypropylene	S - SS	H - 440 SS (Hard) K - PVDF P - Polypropylene 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	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)

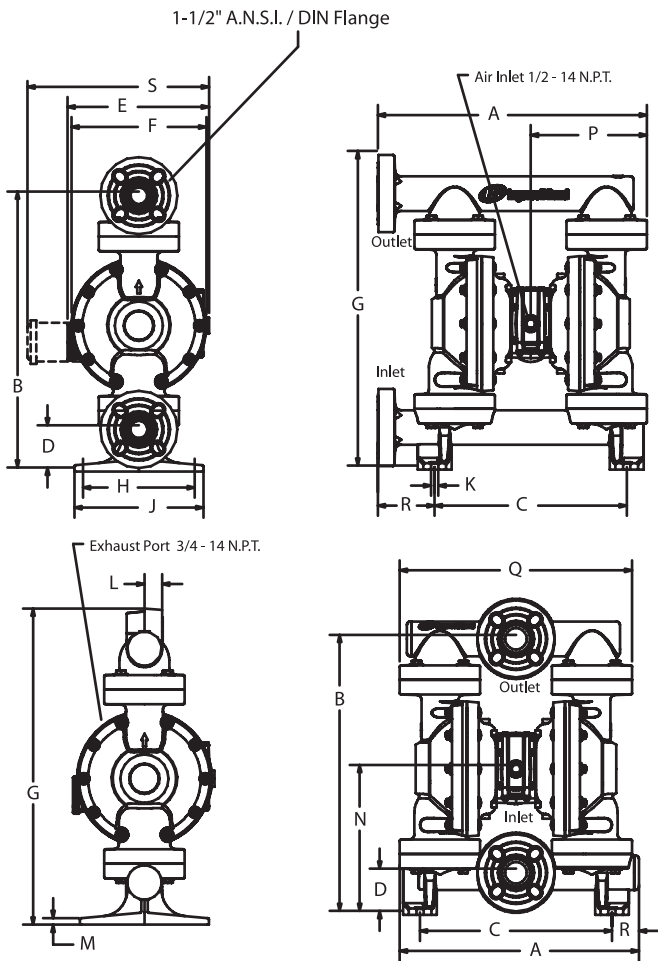
Flange Connection Kit | 67341-E15N (side flange), 67341-C15N (center flange)

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



Flange Connection Kit

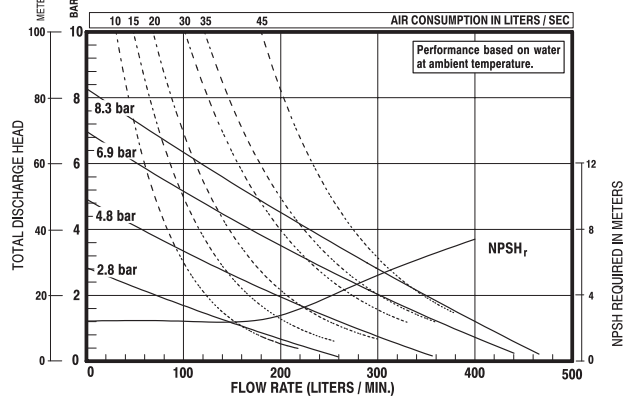
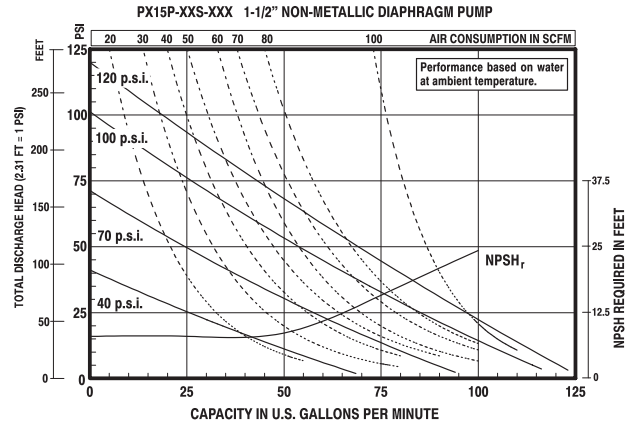
# 1-1/2" Non-Metallic Dimensions and Flow Charts



- 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
- 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- <del>FX</del> S-XXX<br>(End Flange) | PX15P- <del>YX</del> S-XXX<br>(Center Flange) |
| A - 20-15/16" (531.6 mm)                   | 18-19/32" (472.3 mm)                          |
| G - 24-15/32" (621.5 mm)                   | 24-19/32" (624.5 mm)                          |
| L - -----                                  | 1-3/8" (34.9 mm)                              |
| Q - -----                                  | 18-3/32" (459.0 mm)                           |
| R - 4-7/16" (112.4 mm)                     | 2-3/32" (53.1 mm)                             |

- |                            |                |                    |
|----------------------------|----------------|--------------------|
| PX15 <del>E</del> -XXX-XXX | "E"            | "S"                |
| PX15 <del>P</del> -XXX-XXX | 11" (279.5 mm) | 14-1/8" (358.5 mm) |



Refer to [www.AROzone.com](http://www.AROzone.com) for full size flow curves.  
For additional information contact technical support at 1.800.495.0276

## Ordering Position 9

### Specialty Code 1 (Blank if no Specialty Code)

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

## Ordering Position 10

### Specialty Code 2 (Blank if no Specialty Code)

- |   |                                       |
|---|---------------------------------------|
| E - End of stroke feedback + Leak Detection         | L - Leak Detection                    |
| F - End of stroke feedback                          | M - Leak Detection ATEX/IECex/NEC/CEC |
| G - End of Stroke ATEX/IECex/NEC/CEC                | O - No Option                         |
| H - End of Stroke/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.
Fluid Inlet/Outlet:	2" A.N.S.I./DIN flange (side)
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	X	-	F	X	S	-	X	X	X	-	B	-	X	X

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Wetted Parts	Position 5 Hardware	Position 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9
PD20 - Standard Pump PE20 - Electronic Interface Accessible Pump	E - Conductive Polypropylene P - Polypropylene	F - 2" A.N.S.I./DIN Flange (Side)	E - Conductive Polypropylene K - PVDF P - Polypropylene	S - SS	K - PVDF P - Polypropylene	A - Santoprene C - Hytrel G - Nitrile T - PTFE V - Viton	A - Santoprene C - Hytrel G - Buna-N M - Medical Grade Santoprene T - PTFE/Santoprene V - Viton	Revision Level <b>Position 10 &amp; 11 Specialty Code</b> 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)

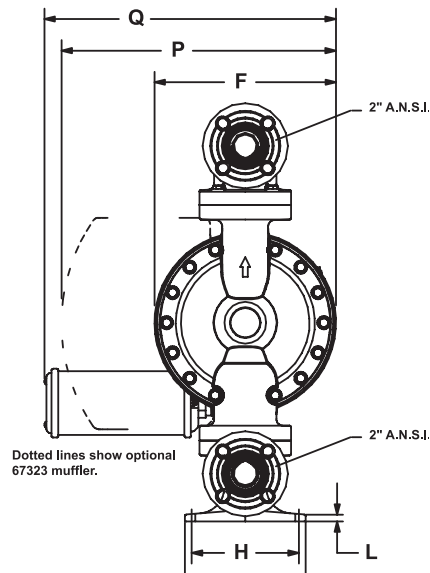
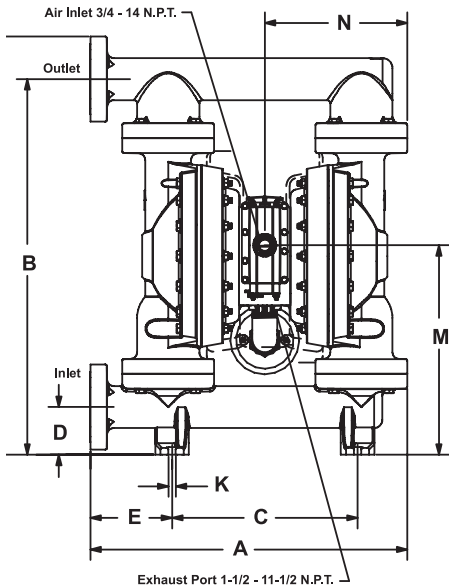
**Continuous-Duty Muffler** | 67323 Recommended for continuous-duty and high-flow applications. Muffler features large expansion chamber, permitting cold exhaust air to exit pump

**Flange Connection Kit** | 67341-E20N



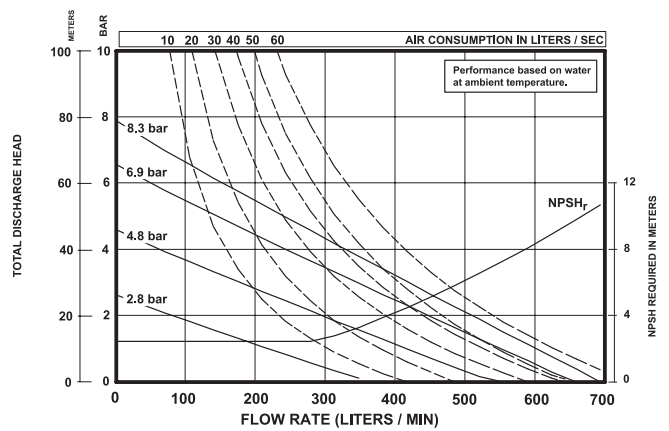
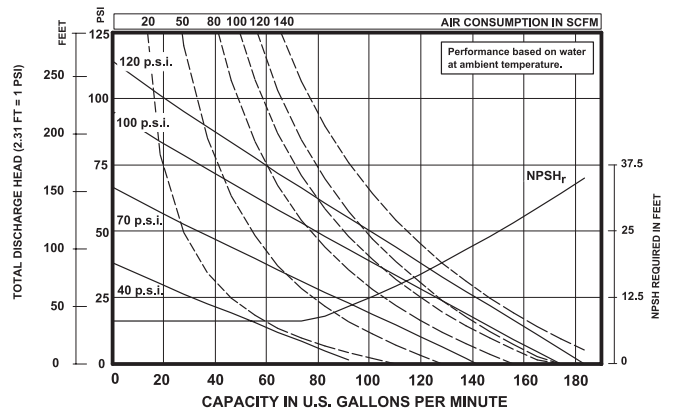
67323  
Continuous Duty  
Muffler

## 2" Non-Metallic Dimensions and Flow Charts



- |                         |                         |
|-------------------------|-------------------------|
| A - 24-3/16" (614.3mm)  | F - 13-7/8" (352.0mm)   |
| B - 28-21/32" (728.0mm) | G - 31-29/32" (810.5mm) |
| C - 14-5/32" (360.0mm)  | H - 8-3/16" (207.8mm)   |
| D - 3-5/8" (92.2mm)     | J - 9-7/32" (234.2mm)   |
| E - 6-1/4" (158.3mm)    | K - 9/16" (14.3mm)      |
| 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](http://www.AROzone.com) for full size flow curves.  
For additional information contact  
technical support at 1.800.495.0276

### Ordering Position 10

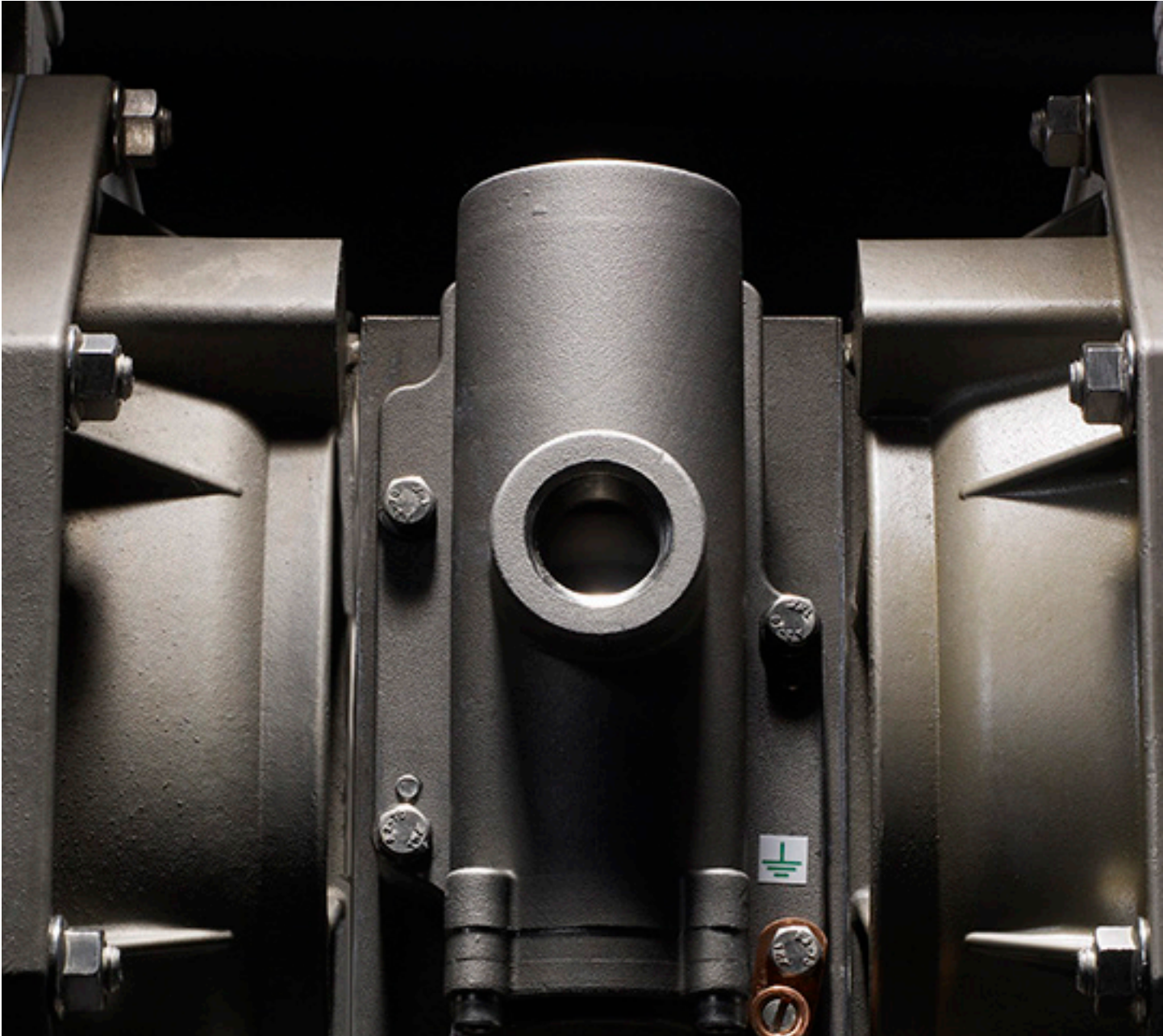
#### Specialty Code 1 (Blank if no Specialty Code)

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

### Ordering Position 11

#### Specialty Code 2 (Blank if no Specialty Code)

- |  |                                       |
|--|---------------------------------------|
| E - End of stroke feedback + Leak<br>Detection         | L - Leak Detection                    |
| F - End of stroke feedback                             | M - Leak Detection ATEX/IECex/NEC/CEC |
| G - End of Stroke ATEX/IECex/NEC/CEC                   | O - No Option                         |
| H - End of Stroke/Leak Detection<br>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



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.F.-2 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	Aluminum Stainless Steel	Aluminum	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) CI 122 (55.3) SS Threaded 114 (51.7) SS Flange 122 (55.3) Hastelloy add 34 (15) for CI 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

# 1/2" Metallic Models

## COMPACT SERIES PUMPS

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:	1:1	
Maximum Flow:	12.0 g.p.m. (45.4 l.p.m.)	
Displacement per cycle:	0.039 Gallons (0.15 Liters)	
Air Inlet: (Female)	1/4 - 18 P.T.F. SAE Short (PD05R-X-X-B models) 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	



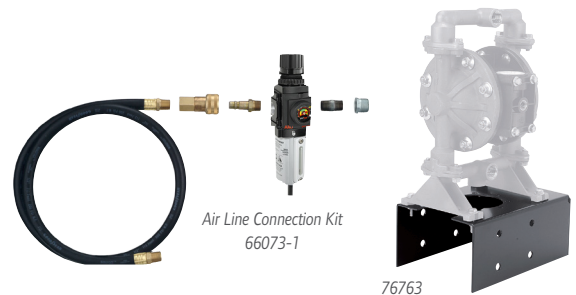
## Ordering

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

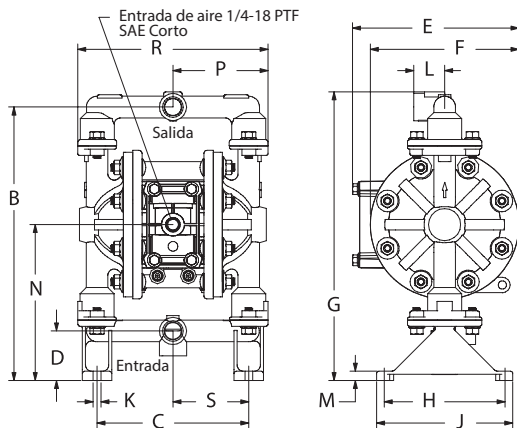
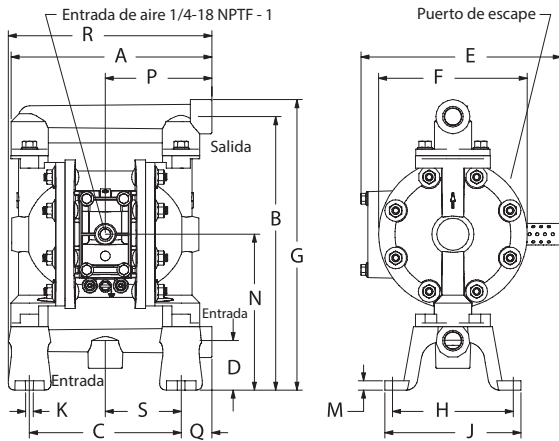
Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Wetted Parts	Position 5 Hardware	Position 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9
D - Standard E - Remote Actuation Capable	A - Aluminum R - Polypropylene	A - 1/2 - 14 N.P.T.F. - 1 B - Rp 1/2 (1/2 - 14 BSP, parallel)	A - Aluminum S - Stainless Steel	S - Stainless Steel	F - Aluminum P - Polypropylene 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  <b>Position 10 &amp; 11 Specialty Code</b>  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)



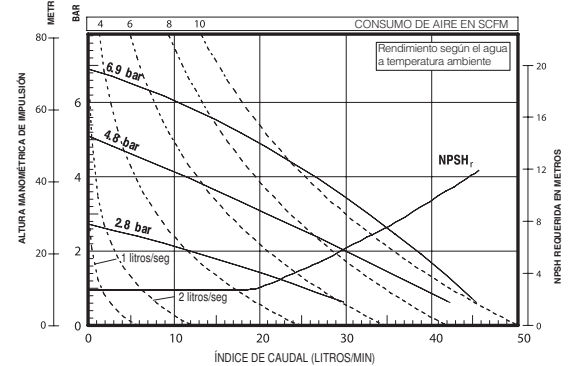
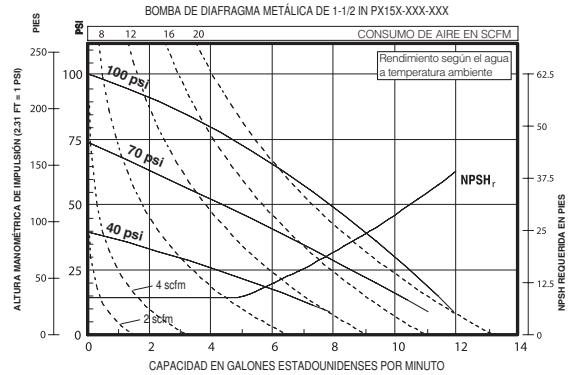
## 1/2" Metallic Dimensions and Flow Charts



### DIMENSIONES

A - 8-1/8 in (206.0 mm)	G - ver a continuación	N - 6-5/16 in (159.9 mm)
B - 11-1/16 in (280.4 mm)	H - 4-7/8 in (123.8 mm)	P - ver a continuación
C - 6-1/8 in (155.6 mm)	J - 5-1/2 in (139.7 mm)	Q - 1-1/4 in (31.6 mm)
D - 2 in (50.8 mm)	K - 5/16 in (8.0 mm)	R - ver a continuación
E - ver a continuación	L - 1-1/4 in (31.8 mm)	S - 3-1/16 in (77.8 mm)
F - 6 in (152.4 mm)	M - 3/8 in (9.5 mm)	

Dimension	PD05A-XXS-XXX-B	PD05R-XXS-XXX-B
"E"	8-3/32 in (205.5 mm)	6-23/32 in (170.6 mm)
"G"	11-3/4 in (297.9 mm)	11-21/32 in (296.0 mm)
"P"	4-5/16 in (109.3 mm)	3-27/32 in (97.4 mm)
"R"	8-7/32 in (208.5 mm)	7-11/16 in (194.9 mm)



Refer to [www.AROzone.com](http://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	G - Solenoid 12VDC ATEX/IECex
B - Solenoid 12VDC	H - Solenoid 24VDC ATEX/IECex
C - Solenoid 240VAC	J - 120VAC NEC/CEC
D - Solenoid 24VDC	K - Solenoid 220VAC ATEX/IECex
E - 12VDC NEC/CEC	N - Solenoid with no coil
F - 24VDC NEC/CEC	O - Standard Valve Block (No Solenoid)

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

E - End of stroke feedback + Leak Detection	L - Leak Detection
F - End of stroke feedback	M - Leak Detection ATEX/IECex/NEC/CEC
G - End of Stroke ATEX/IECex/NEC/CEC	O - No Option
H - End of Stroke/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
Example:	PX07	R	-	X	X	S	-	X	X	X	-	X	X

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Wetted Parts	Position 5 Hardware	Position 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9 and 10
D - Standard Pump E - Remote Actuation Capable	R - Polypropylene	A - 3/4 - 14 N.P.T.F.-2 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	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

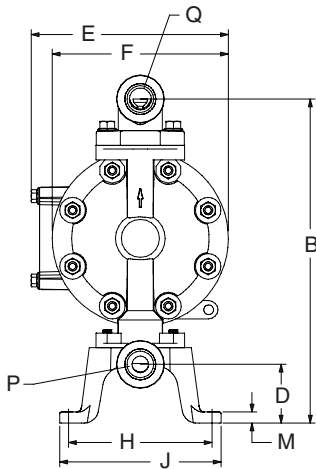
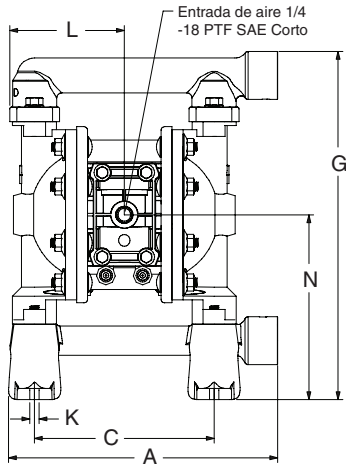
**Service Repair Kits** | 637428 (air section)

637427-XX (fluid section)



Air Line Connection Kit  
66073-1

## 3/4" Metallic Dimensions and Flow Charts

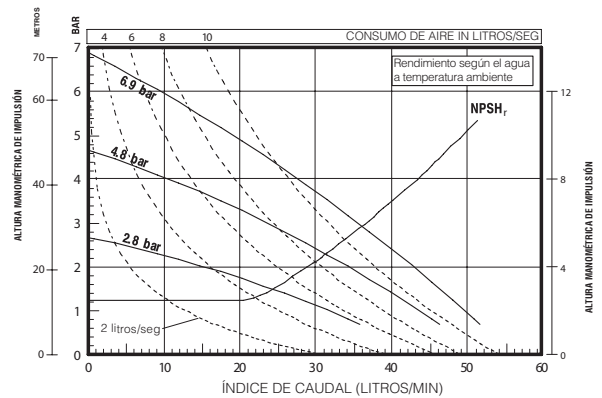
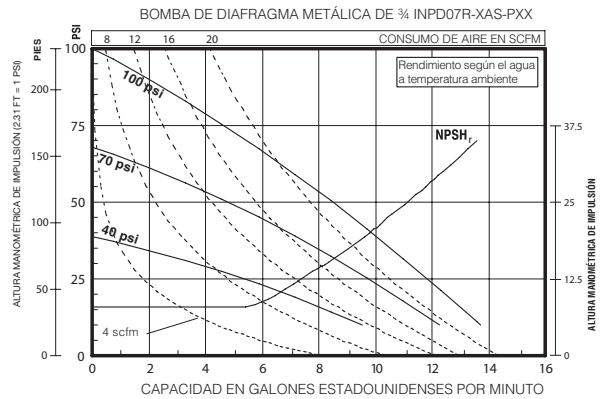


### DIMENSIONES

2 in (235.3 mm)	F - 6 in (152.4 mm)	L - 3-29/32 in (99.2 mm)
16 in (280.4 mm)	G - 11-7/8 in (301.2 mm)	M - 3/8 in (9.5 mm)
in (155.6 mm)	H - 4-29/32 in (124.2 mm)	N - 6-5/16 in (159.8 mm)
50.8 mm)	J - 5-1/2 in (139.7 mm)	
32 in (170.6 mm)	K - 5/16 in (8.0 mm)	

Entrada de material de "P"		Salida de material de "Q"
1AS-PXX	3/4 - 14 N.P.T.F. - 2	3/4 - 14 N.P.T.F. - 2
3AS-PXX	Rp 3/4 (3/4 - 14 BSP)	Rp 3/4 (3/4 - 14 BSP)

↳ dimensiones se muestran en pulgadas y (mm) y son proporcionadas solo de referencia.



Refer to [www.AROzone.com](http://www.AROzone.com) for full size flow curves.  
For additional information contact  
technical support at 1.800.495.0276

### Ordering Position 9

#### Specialty Code 1 (Blank if no Specialty Code)

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

### Ordering Position 10

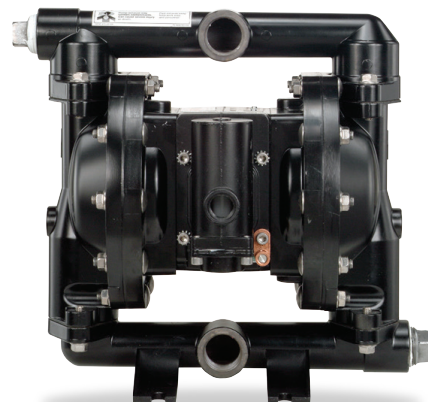
#### Specialty Code 2 (Blank if no Specialty Code)

E - End of stroke feedback + Leak Detection	L - Leak Detection
F - End of stroke feedback	M - Leak Detection ATEX/IECex/NEC/CEC
G - End of Stroke ATEX/IECex/NEC/CEC	O - No Option
H - End of Stroke/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
Example:	PX10	X	-	X	X	X	-	X	X	X	-	X	X

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Wetted Parts	Position 5 Hardware	Position 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9
PD10- Standard Pump PE10 - Electronic Interface Accessible Pump	A - Aluminum R - Polypropylene 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	Fluid control options for pump with electronic interface (PE10 model). See complete description on page 31

## Accessories

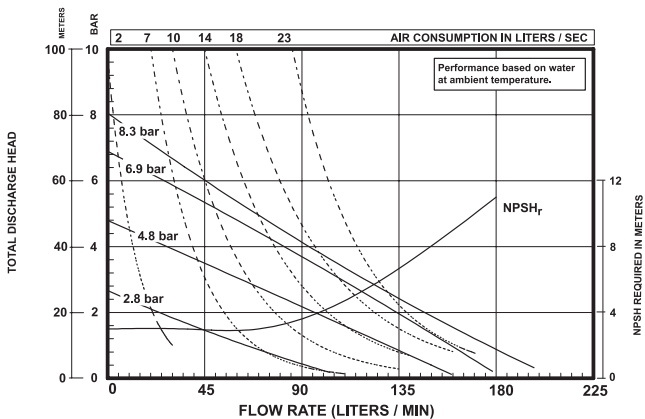
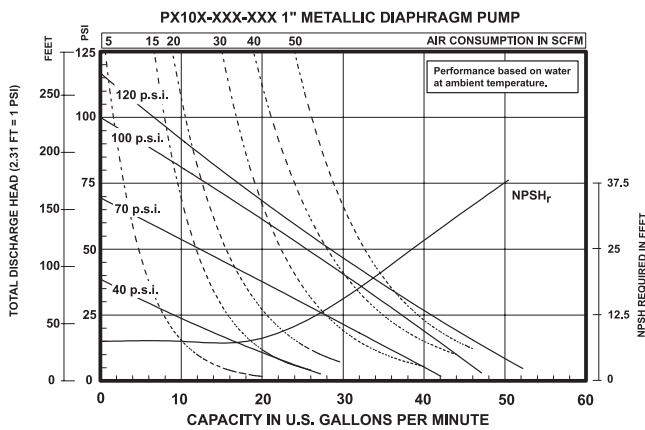
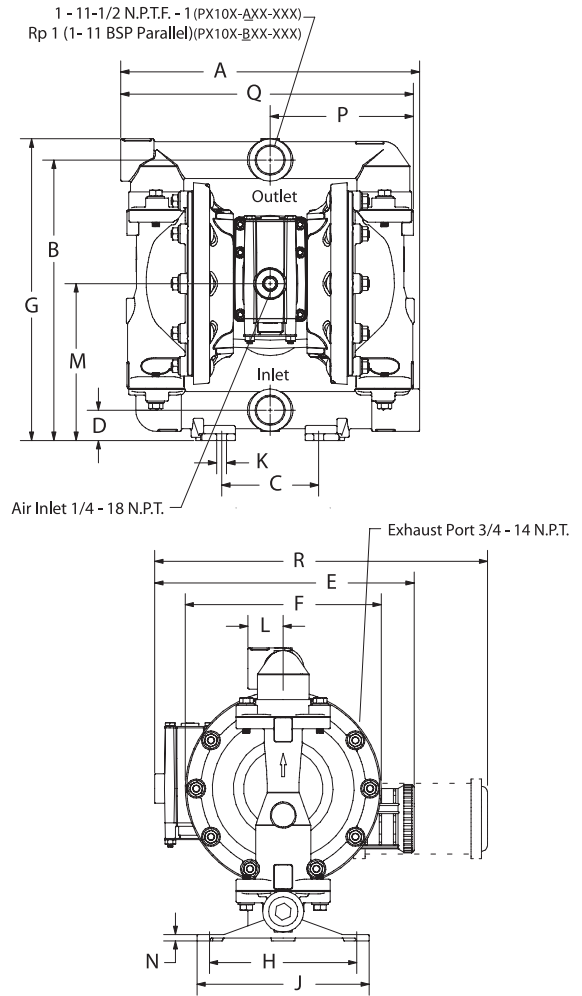
- Air Line Connection Kit | 66073-2  
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
- Diaphragm Failure Detection | 67237
- Cycle Counter Kit | 66350
- Cycle Sensor Kit | 67350 (PE10X pump model is required)
- Service Repair Kits | 637397 (air motor for PX10A, PX10R and PX10S),  
637401-XX (fluid section)  
637395-X (major air valve assembly)

## 1" Metallic Dimensions and Flow Charts

A - 12-11/32" (313.2 mm)	G - 12-7/16" (315.9 mm)	N - see below
B - 11-9/16" (293.7 mm)	H - 6-1/4" (158.8 mm)	P - 5-27/32" (148.2 mm)
C - 4" (101.6 mm)	J - 7-5/16" (185.7 mm)	Q - 12" (304.8 mm)
D - 1-1/4" (31.8 mm)	K - 13/32" (10.3 mm)	R - see below
E - see below	L - 1-1/2" (38.1 mm)	
F - see below	M - 6-15/32" (164.3 mm)	

	"E"	"F"	"R"
PX10A-XXX-XXX	-----	8-1/8" (206.4 mm)	14-1/32" (356.2 mm)
PX10R-XXX-XXX	11-1/32" (279.5 mm)	8-5/16" (211.1 mm)	-----
PX10S-XXX-XXX	-----	8-3/16" (207.9 mm)	13-27/32" (351.4 mm)

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



Refer to [www.AROzone.com](http://www.AROzone.com) for full size flow curves.  
For additional information contact  
technical support at 1.800.495.0276

### Ordering Position 9

#### Specialty Code 1 (Blank if no Specialty Code)

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

### Ordering Position 11

#### Specialty Code 2 (Blank if no Specialty Code)

E - End of stroke feedback + Leak Detection	L - Leak Detection
F - End of stroke feedback	M - Leak Detection ATEX/IECex/NEC/CEC
G - End of Stroke ATEX/IECex/NEC/CEC	O - No Option
H - End of Stroke/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
Example:	PX15	X	-	X	X	X	-	X	X	X	-	X	X

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Wetted Parts	Position 5 Hardware	Position 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9
PD15 - Standard Pump PE15 - Electronic Interface Accessible Pump	A - Aluminum R - Polypropylene 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	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

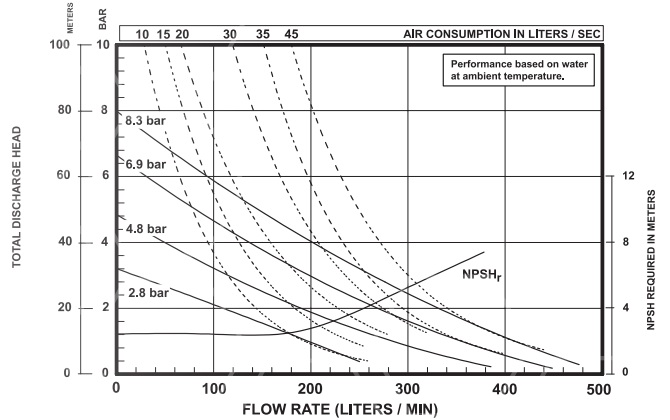
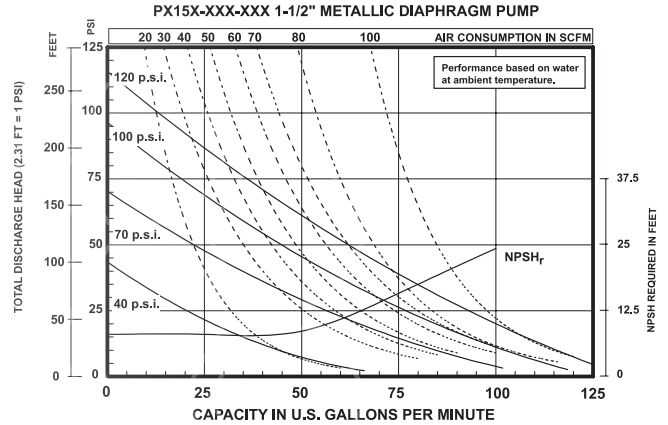
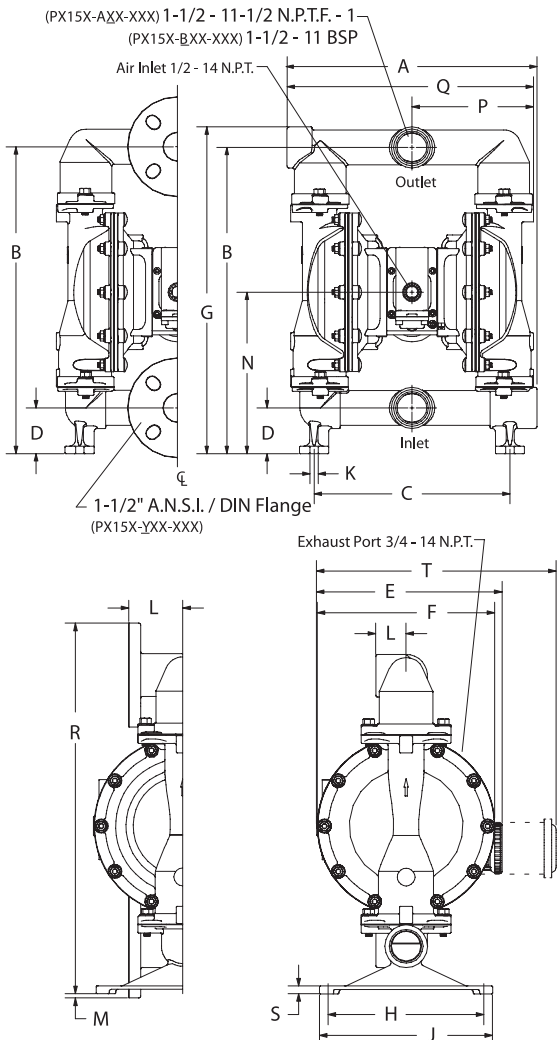
A - see below	G - 19-5/8" (498.1 mm)	N - 9-11/16" (246.0 mm)
B - 18-3/8" (466.7 mm)	H - 9" (228.6 mm)	P - see below
C - 11-3/4" (298.5 mm)	J - 10" (254.0 mm)	Q - see below
D - 2-3/4" (69.9 mm)	K - 1/2" (12.7 mm)	R - 21-7/16" (543.9 mm)
E - see below	L - see below	S - see below
F - 10-1/4" (260.4 mm)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

	"A"	"L"
PX15X-XAX-XXX	14-7/8" (377.8 mm)	1-3/4" (44.5 mm)
PX15X-XCX-XXX	14-5/8" (371.5 mm)	1-3/4" (44.5 mm)
PX15X-XHX-XXX	14-9/16" (370.0 mm)	3-1/8" (79.4 mm)
PX15X-ASX-XXX, -BSX	14-25/32" (375.5 mm)	1-3/4" (44.5 mm)
PX15X-YSX-XXX	14-9/16" (370.0 mm)	3-1/8" (79.4 mm)

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

	"P"	"Q"	"S"
7-7/32" (183.4 mm)	14-23/32" (373.9 mm)	1/2" (12.7 mm)	
7-3/16" (182.6 mm)	14-1/2" (368.3 mm)	1/4" (6.4 mm)	
7-3/16" (182.6 mm)	14-1/2" (368.3 mm)	1/4" (6.4 mm)	
7-9/32" (185.0 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)	

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



### Ordering Position 9

#### Specialty Code 1 (Blank if no Specialty Code)

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

### Ordering Position 10

#### Specialty Code 2 (Blank if no Specialty Code)

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

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): 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		Air Motor	Connection	Wetted	Pump Wgt		Air Motor	Connection	Wetted	Pump Wgt
<b>PD20A</b>	AL	Thread	AL	91.4 (41.5)	<b>PD20R</b>	Poly	Thread	CI	165 (74.8)	<b>PD20S</b>	SS	Thread	AL	120.3 (54.6)
	AL	Thread	CI	147.4 (66.9)		Poly	Thread	H	154 (69.9)		SS	Thread	CI	176.3 (80)
	AL	Thread	H	155 (70.3)		Poly	Thread	SS	154 (69.9)		SS	Thread	H	183.9 (83.4)
	AL	Thread	SS	149.8 (68)		Poly	Flange	H	153.2 (69.5)		SS	Thread	SS	178.7 (81.1)
	AL	Flange	H	169.4 (76.8)		Poly	Flange	SS	146 (66.2)		SS	Flange	H	198.3 (89.9)
	AL	Flange	SS	162.2 (73.6)							SS	Flange	SS	191.1 (86.7)

## Ordering

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

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Wetted Parts	Position 5 Hardware	Position 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	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 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 <b>Position 10 &amp; 11 Specialty Code</b> 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)

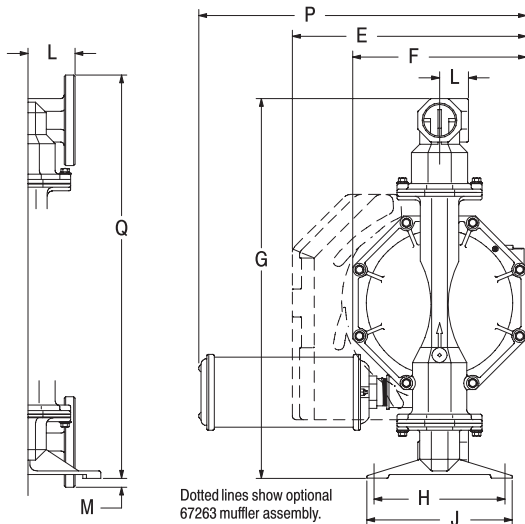
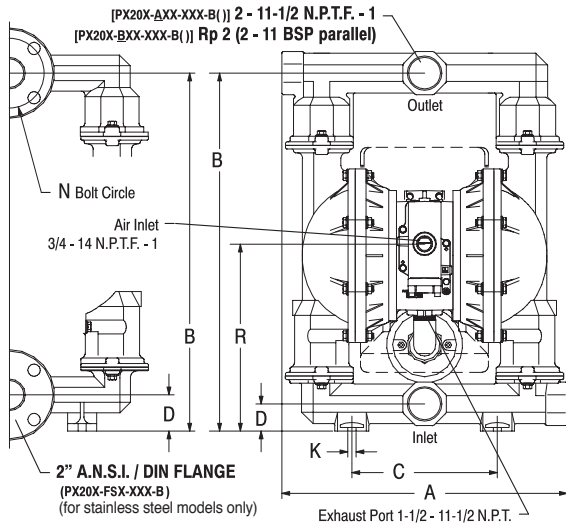
**Continuous-Duty Muffler** | 67263

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



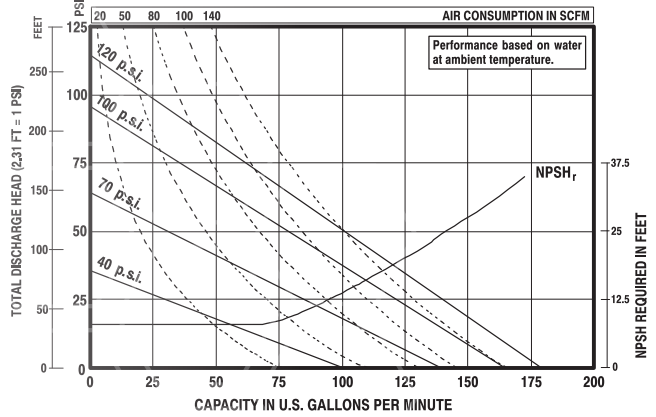
### DIMENSIONS

A see below	G 26-1/4" (666.8 mm)	M 5/8" (15.9 mm)
B 24-3/4" (628.7 mm)	H 9-1/16" (230.2 mm)	N 4.834" (122.8 mm)
C 10-1/16" (255.6 mm)	J 10-1/16" (255.6 mm)	P 21-5/8" (548 mm)
D see below	K 9/16" (14.3 mm)	Q 27-7/8" (708.0 mm)
E 16-3/16" (411.2 mm)	L see below	R see below
F 12" (304.8 mm)		

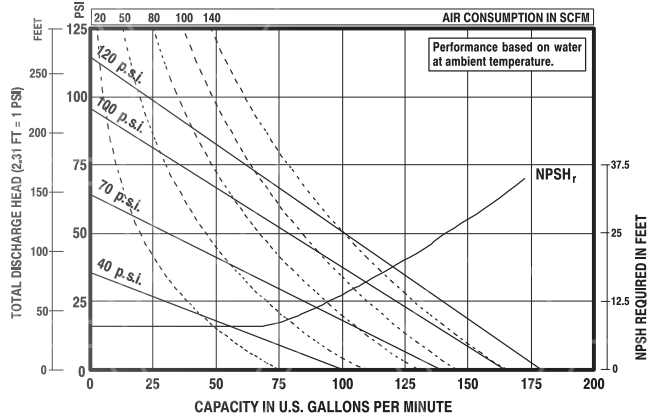
	"A"	"D"
PX20X-XAX-XXX-B ( )	19-3/4" (501.4 mm)	1-7/8" (47.6 mm)
PX20X-XCX-XXX-B ( )	19-3/4" (501.4 mm)	1-7/8" (47.6 mm)
PX20X-AHX-XXX-B ( ), -BHX	19-1/4" (488.7 mm)	2-1/2" (63.5 mm)
PX20X-ASX-XXX-B ( ), -BSX	19-1/4" (488.7 mm)	2-1/2" (63.5 mm)
PX20X-FHX-XXX-B ( ), -FSX	19-1/4" (488.7 mm)	2-1/2" (63.5 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)

PD20X-XXX-XXX-B / PE20X-XXX-XXX-B ( ) 2" METALLIC DIAPHRAGM PUMP



PD20X-XXX-XXX-B / PE20X-XXX-XXX-B ( ) 2" METALLIC DIAPHRAGM PUMP



### Ordering Position 10

#### Specialty Code 1 (Blank if no Specialty Code)

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

### Ordering Position 11

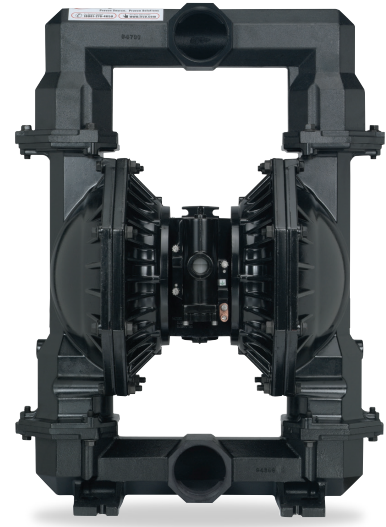
#### Specialty Code 2 (Blank if no Specialty Code)

E - End of stroke feedback + Leak Detection	L - Leak Detection
F - End of stroke feedback	M - Leak Detection ATEX/IECex/NEC/CEC
G - End of Stroke ATEX/IECex/NEC/CEC	O - No Option
H - End of Stroke/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: @ 100 psi Gallons (Liters)	2.8 (10.6)
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	X	-	X	X	X	-	X	X	X	-	C	-	X	X

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Wetted Parts	Position 5 Hardware	Position 6 Seat Material	Position 7 Ball Material	Position 8 Diaphragm Material	Position 9
PD30 - Standard Pump PE30 - Electronic Interface Accessible Pump	A - Aluminum R - Polypropylene w/SS Air Caps S - SS	A - NPTF Thread B - BSP Thread D - ANSI 4-hole flange F - DIN 8-hole flange	A - Aluminum C - Cast Iron H - Hastelloy-C* S - SS * Not available on PD30R-X models	P - Plated Steel S - SS	A - Santoprene C - Hytrel E - Carbon Steel F - Aluminum G - Nitrile H - 440 SS K - PVDF L - Hastelloy S - 316 SS	A - Santoprene C - Hytrel G - Nitrile T - PTFE V - Viton	A - Santoprene C - Hytrel G - Buna- N T - PTFE/ Santoprene V - Viton	Revision Level  <b>Position 10 &amp; 11 Specialty Code</b>  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)

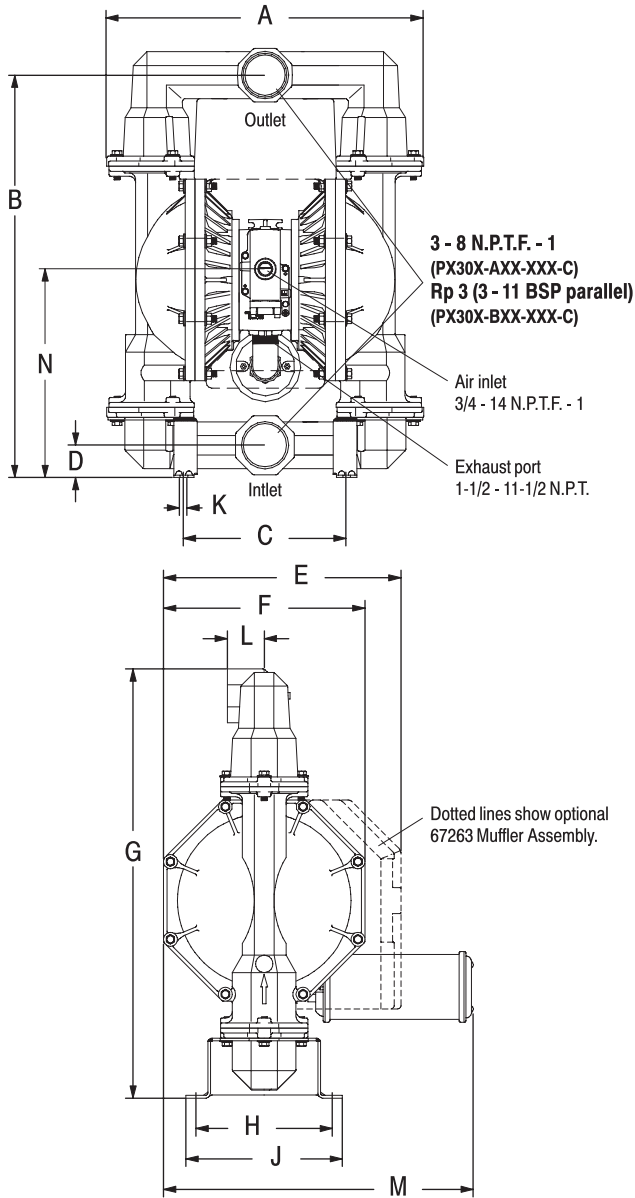
**Diaphragm Failure Detection** | 67237, (PE30X pump model is required)

**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

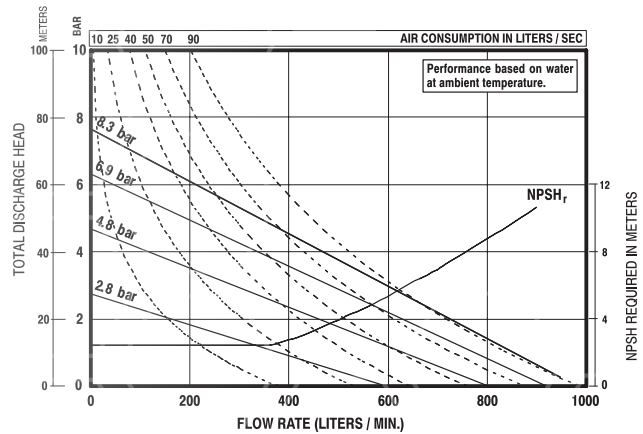
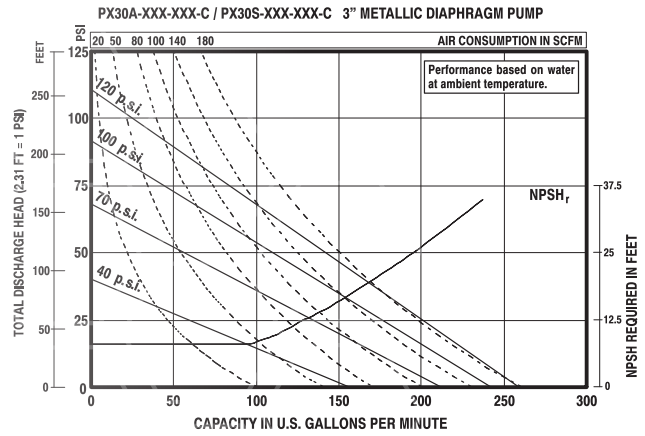


#### DIMENSIONS

A see below	F 15" (381 mm)	K 9/16" (14.3 mm)
B 30" (761.7 mm)	G 32" (812.5 mm)	L 2-3/4" (69.9 mm)
C 12-1/16" (306.5 mm)	H 10-5/32" (258 mm)	M 23-3/32" (586.3 mm)
D see below	J see below	N see below
E 17-11/16" (449.2 mm)		

	"A"	"D"
PX30X-XAX-XXX-C	23-5/8" (598.7 mm)	2-3/8" (60.3 mm)
PX30X-XCX-XXX-C	23-5/8" (598.7 mm)	2-7/16" (61.1 mm)
PX30X-XHX-XXX-C	23-1/8" (587.3 mm)	2-3/4" (69.9 mm)
PX30X-XSX-XXX-C	23-1/8" (587.3 mm)	2-3/4" (69.9 mm)

"J"	"N"
11" (279.4 mm)	15-1/2" (393.7 mm)
11-11/16" (296.1 mm)	15-1/2" (393.7 mm)
11-11/16" (296.1 mm)	16" (406.4 mm)
11-11/16" (296.1 mm)	16" (406.4 mm)



#### Ordering Position 10

#### Specialty Code 1 (Blank if no Specialty Code)

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

#### Ordering Position 11

#### Specialty Code 2 (Blank if no Specialty Code)

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

# 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	-	A	P	S	-	P	A	A	-	B	D	E

Position 1 Model Series	Position 2 Port Size	Position 3 Center Section Material	Position 4 Connection	Position 5 Wetted Parts	Position 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 - NPT Thread B - BSP thread F - A.N.S.I. Side Y - A.N.S.I. Center	A - Aluminum C - Cast Iron D,E - Groundable Acetal H - Hastelloy K,L - PVDF (Kynar) P,R - Polypropylene 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	A - Santoprene C - Hytrel G - Nitrile S - 316 SS T - PTFE U - Polyurethane V - Viton

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 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 O - Standard Valve Block (No Solenoid)	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 O - 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) PF20A-XCX-SXX-B 166.2 (75.4) PF20A-ASX-SXX-B 166 (75.3) PF20A-BSX-SXX-B 166 (75.3) PF20A-FSX-SXX-B 177.1 (80.3) 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)
Sound Level:	70 PSI 60 Cycles / Min 85.0 db(A)
Muffler:	94810 (optional 94117)



## Ordering

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

Position 1 Model Series	Position 2 Center Section	Position 3 Connections	Position 4 Wetted Parts	Position 5 Hardware	Position 6 Seat Material	Position 7 Flap Material	Position 8 Diaphragm 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 - Polyurethane 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.

Port:	2" and 3"
Material:	Aluminum and Stainless Steel
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	X	X	-	X	X	X

Position 1 Model Series	Position 2 Connections	Position 3 Wetted Parts	Position 4 Hardware	Position 5 Seat Material	Position 6 Ball Material	Position 7 Diaphragm Material
PP20A - 2" Port	A - 2-11-1/2 NPTF - 1 B - Rp2 (2-11 BSP Parallel) 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	X	-	X	X	X

Position 1 Model Series	Position 2 Connections	Position 3 Wetted Parts	Position 4 Hardware	Position 5 Seat Material	Position 6 Ball Material	Position 7 Diaphragm Material
PP30A - 3" Port	A - 3-8 NPTF - 1 B - Rp3 (3-11 BSP parallel) 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



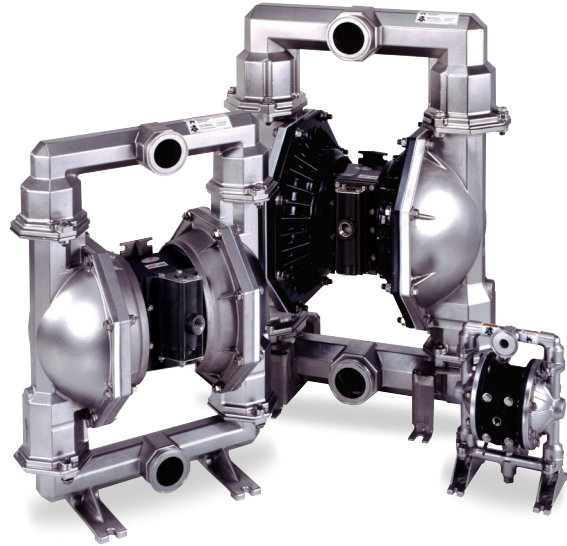
# Sanitary Transfer

## 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



	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")
Ratio:	1:1	1:1	1:1	1:1	1:1
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 Pressure: PSI (bar)	100 (6.9)	120 (8.3)	120 (8.3)	120 (8.3)	120 (8.3)
Suspended solids in.(mm):	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) PM10R-CSS-X-A02 38.2 (17.3) PM10S-CSS-X-A02 51.6 (23.4)	PM15A-CSS-X-A02 62.4 (28.3) PM15R-CSS-X-A02 60.3 (27.3) PM15S-CSS-X-A02 78.4 (35.6)	PM20A-CSS-X-B02 142.8 (64.8) PM20R-CSS-X-B02 183.6 (83.5) PM20S-CSS-X-B02 171.7 (77.9)	PM30A-CSS-X-C02 227.5 (103.2) PM30R-CSS-X-C02 253.3 (114.9) 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	-	X	X	X	-	X	X	X	X02

Position 1 Model Series	Position 2 Center Section	Position 3 Connection	Position 4 Wetted Parts	Position 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	

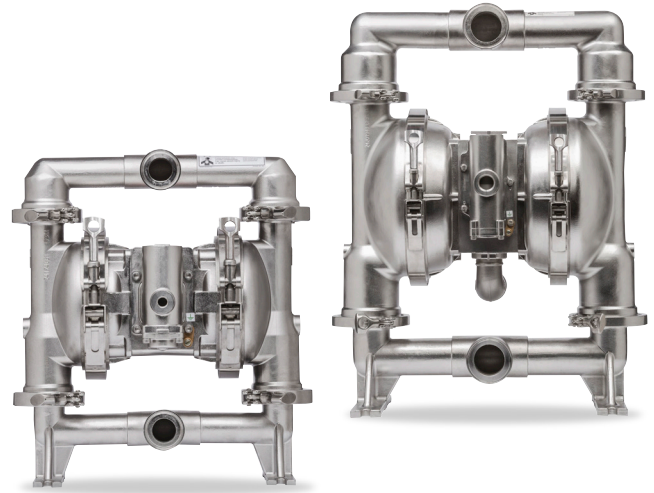
# FDA Compliant Pumps

## 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**  
1" Pump

**SD20S-CSS-SXX-A**  
2" Pump

	SD10S-CSS-SXX-A 1" Pump	SD20S-CSS-SXX-A 2" Pump
Startup Pressure PSI (bar)	25 (1.723)	25 (1.723)
Dry suction lift ft. H2O (m)	16.49 (5.02)	18.25 (5.56)
Wet suction lift ft. H2O (m)	31.4 (9.57)	31.4 (9.57)
Flow Rate GPM (lpm)	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	X	-	C	S	S	-	X	X	X	-	B	X	X	X

Position 1 Model Series	Position 2 Center Section	Position 3 Port	Position 4 Fluid Caps & Manifold Mat.	Position 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 specialty code)			Position 10 Specialty Code 2 (blank if no specialty code)			Position 11 Special Test
A - Solenoid 120VAC B - Solenoid 12VDC C - Solenoid 240VAC D - Solenoid 24VDC E - 12vDC NEC/CEC	F - 24vDC NEC/CEC G - Solenoid 12VDC ATEX/IE Cex H - Solenoid 24VDC ATEX/IE Cex J - 120VAC NEC/CEC K - Solenoid 220VAC ATEX/IE Cex	N - Solenoid No Coil O - Standard Valve Block (no solenoid)	E - End of Stroke Feedback + Leak Detection F - End of Stroke Feedback G - End of Stroke Feedback ATEX/IE Cex/ NEC/CEC H - End of Stroke Feedback/Leak Detection ATEX/IE Cex/ NEC/CEC L - Leak Detection M - Leak Detection ATEX/IE Cex/ NEC/CEC O - No option	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 quick 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

Model	Maximum Gallons GPM (Liters)	Displacement Cycles Per Gallons @ 100 PSI (Liters)	Weight (kg)	Suspended Solids Max. Dia. in. (mm)	Maximum Outlet 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	-	X	S	P	-	S	X	X	-	C

Position 1 Model Series	Position 2 Center Section	Position 3 Connection	Position 4 Seat Material	Position 5 Ball Material	Position 6 Diaphragm Material	Position 7 Revision Level
PH15 - 1 1/2" PH20 - 2" PH30 - 3"	F - Conductive Polypropylene/ Stainless Steel	A - 1-1/2 NPTF B - 1-1/2 BSP parallel 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	A	-	X	X	X	-	X	X	X

Position 1 Model Series	Position 2 Center Section	Position 3 Connection	Position 4 Wetted Parts	Position 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 polyethylene 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 - Closed Cover



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.

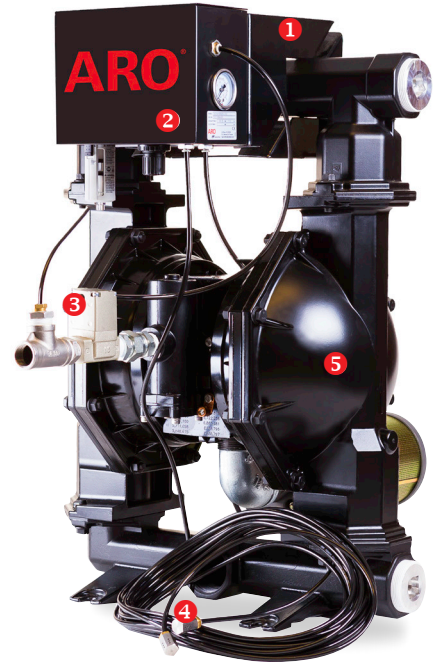
- Simple design is easy to setup and use.
- All pneumatic operation eliminates electrical ignition source.
- High/Low level control maintains fluid between established levels.
- Reduces air consumption by avoiding pump dry running.
- Portable system with directly mounted liquid level sensor.

### 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



- ❶ Bracket
- ❷ Liquid Level Sensor
- ❸ Pneumatic Controlled Valve
- ❹ Sensing Tubes with Screen
- ❺ Pro/EXP Series Diaphragm Pump (purchase separately)

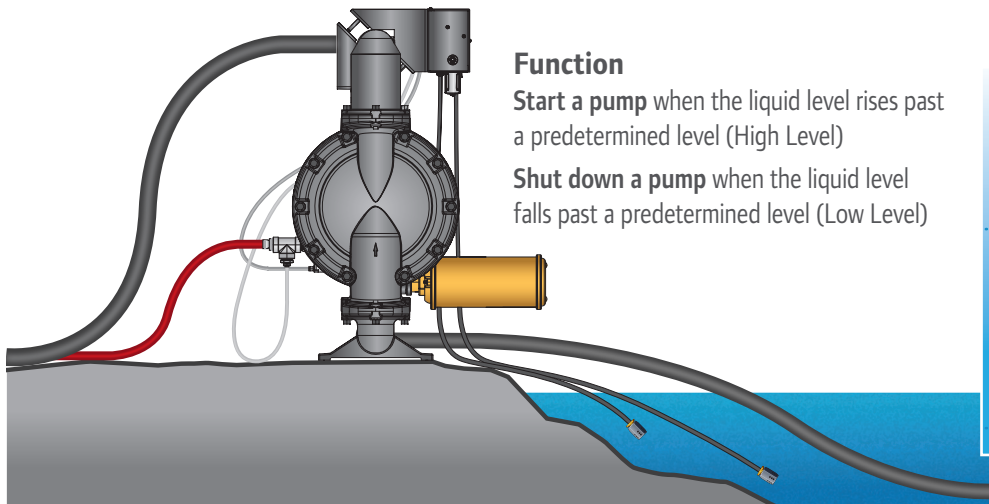
### AUTOMATIC DEWATERING SYSTEM

SCD501BN08-V1D	Dewatering Kit (without pump)
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### PUMP COMPATIBILITY

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

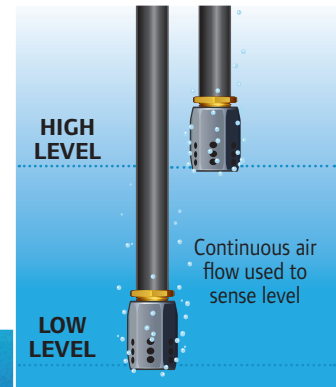
## ➤ Working Principle



### Function

**Start a pump** when the liquid level rises past a predetermined level (High Level)

**Shut down a pump** when the liquid level falls past a predetermined level (Low Level)



# Drum Pumps

SPECIALTY PUMP

## Drum Pumps

- Choose from Aluminum, Stainless Steel or Polypropylene body construction - ARO Drum Pumps are available in three body materials for optimum fluid compatibility.

Ratio:	1:1
Maximum Flow:	11-g.p.m. (41.6-l.p.m.)
Displacement per cycle:	.039-Gallons (.15-Liters)
Air Inlet: (Female)	1/4 -18 N.P.T.
Fluid Inlet:	Siphon Tube for 55-Gallon Drum
Fluid Outlet:	1/2 -14 N.P.T.F. - 1
Max. operating pressure:	100-psi (6.8-bar)
Suspended solids max. dia.:	3/32-in. (2.4-mm)
Shipping Weight: lbs (kg)	22 (10) Polypropylene, basic package 26 (11.8) Aluminum, basic package 36 (16.3) Stainless, basic package

## Drum Pump Packages

- Package Components Factory-Matched - ARO Drum Pump package components contain pre-specified, matching materials of construction for complete fluid compatibility.
- Choose from Basic to Complete - Drum Pump Packages can be ordered in 3 styles:
- Basic: Pump, Bung Adapter, Air Safety Shut-Off, Siphon Tube, Weather Seal and base
- Complete/Transfer: Basic Pump plus Fluid Hose or Fluid Hose with Non-Drip Nozzle
- Complete/Dispensing: Basic Pump plus Foot Valve, Hose and Dispensing Nozzle

## Ordering

Model Number	Pump Housing and Seats	Pump Dia. and Balls	Lock Out Valve (P/N 104253-2)	Foot Valve	10' Hose ASM	Dispense Valve	Fluid Service
DAB05-PPTT-2-A	POLYPROPYLENE	PTFE	X	-	-	-	ACIDS & CAUSTICS
DAB05-PPCC-2-A	POLYPROPYLENE	HYTREL	X	-	-	-	OIL
DAB05-PPUU-2-A	POLYPROPYLENE	POLYURETHANE	X	-	-	-	WATER/OIL
DAB05-PPAA-2-A	POLYPROPYLENE	SANTOPRENE	X	-	-	-	MILD ACIDS/MILD
DAB05-PPCC-2-N	POLYPROPYLENE	HYTREL	X	-	NITRILE	-	OIL
DAB05-PPCC-B-M	POLYPROPYLENE	HYTREL	X	X	NITRILE	NO-DRIP	OIL
DAB05-PPAA-2-B	POLYPROPYLENE	SANTOPRENE	X	-	EPDM	-	MILD ACIDS/MILD
DAB05-PPUU-2-C	POLYPROPYLENE	POLYURETHANE	X	-	VINYL	-	WATER/OIL
DAB05-PPCC-B-J	POLYPROPYLENE	HYTREL	X	X	REINFORCED NITRILE	X	OIL
DAB05-PPAA-B-K	POLYPROPYLENE	SANTOPRENE	X	X	EPDM	X	MILD ACIDS/MILD
DAB05-SSTT-2-A	STAINLESS STEEL	PTFE	X	-	-	-	SOLVENT
DAB05-ASTT-2-A	ALUM./SS.	PTFE	X	-	-	-	SOLVENT
DAB05-APCC-2-A	ALUM./POLY.	HYTREL	X	-	-	-	OIL/SOME SOLVENTS
DAB05-APCC-2-O	ALUM./POLY.	HYTREL	X	-	NITRILE	-	OIL/SOME SOLVENTS
DAB05-APCC-B-P	ALUM./POLY.	HYTREL	X	X	NITRILE	NO-DRIP	OIL/SOME SOLVENTS
DAB05-APCC-B-L	ALUM./POLY.	HYTREL	X	X	REINFORCED NITRILE	X	OIL/SOME SOLVENTS
DAB05-ASAA-2-A	ALUM./S.S.	SANTOPRENE	X	-	-	-	WATER



## Pump Features

- 11-g.p.m. Flow Capability - Drum Pumps offer plenty of capacity to satisfy a broad range of transfer application volume demands.
- Stall-Free Operation - ARO Diaphragm Drum Pumps feature a patented "unbalanced" air valve design that avoids stall-out, even under low air-inlet pressures.
- Bolted Construction - ARO Diaphragm Drum Pumps utilize bolted fasteners for leak-tight integrity.
- 5-Year Warranty

## Accessories

**Air Line Connection Kit** | 66073-1

**Service Repair Kit** | 637458 (air), 637427-XX (fluid), 104255 (for repair of P29122-600 piggyback filter/regulator)

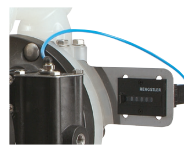
# Accessories



Air Line Connection Kit  
66073-1



Diaphragm Failure Detection  
67237



Cycle Counter Kit  
67350



Continuous Duty Muffler  
67323



Flange Connection Kit  
637341-E10N

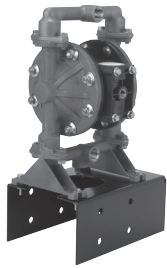


Over-run Control  
635040

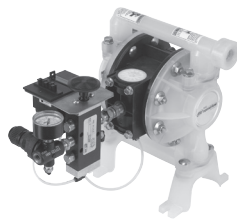
\*Please note pumps are not included with these kits.

	1/4" Non-Metallic	3/8" Non-Metallic	1/2" Non-Metallic	1/2" Classic Non-Metallic	3/4" Non-Metallic	1/2" Metallic
<b>Air Line Connection Kit</b> 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
<b>Diaphragm Failure Detection (DFD)</b> 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
<b>Pneumatic Cycle Counter Kit</b> Like the odometer on your car, ARO's cycle counter lets you know how many pump cycles have elapsed so you can be prepared to perform preventive maintenance	-	66975	66975	-	66975	66975
<b>Cycle Sensor Kit</b> (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	-
<b>Continuous-Duty Muffler</b> Recommended for continuous-duty and high-flow applications. Muffler features large expansion chamber, permitting cold exhaust air to exit pump.	-	-	-	-	-	-
<b>Flange Connection Kit</b> 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)	-	-	-	-	-	-
<b>Over-run Control</b> Shuts off pump when excessive cycling occurs due to empty fluid supply container.	-	-	635040	635040	635040	635040
<b>Wall Mount</b> Conveniently mount pump above container. Made of heavy gauge coated steel. (pump not included) * Does not include hardware	-	67388	76763	-	76763	76763
<b>Countdown Batcher</b> 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
<b>Solenoid Actuation Kit</b> 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
<b>Diaphragm Pump Speed Controls</b> 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
<b>Groundable Strap</b> Reliable static control.	-	-	-	-	-	66885-1 Acetal Center Body





Wall Mount  
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	-

# Accessories

## 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.



P39224-614



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/Regulator, Poly Bowl w/Guard, Manual 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"	P39124-600	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 met. 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,

H2545S-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

H2545S-024-D for 1-1/2" pumps

MQ3729-024-D for 2" and 3" pumps



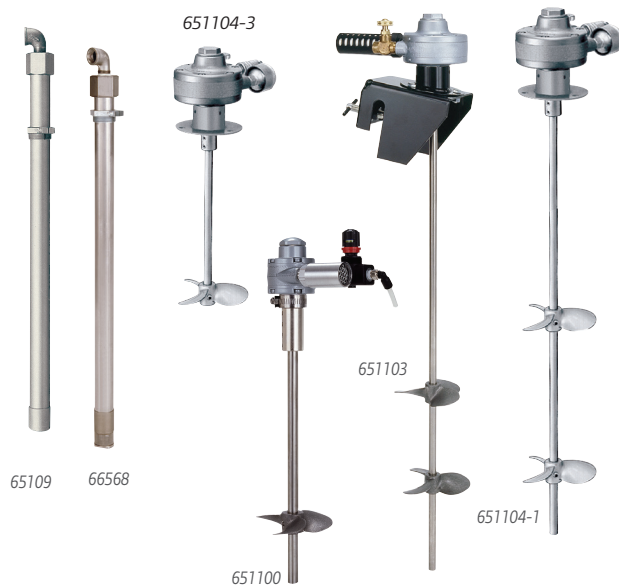
MQ3728-120-A used on 1/2" and 1" pumps

# Accessories

## 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.

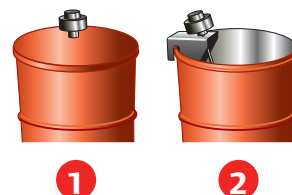
Model no.	Description	For use with pumps
65109	Steel — NPT(F)	1" (Metallic)
66568	Stainless steel — NPT(F)	1" (Metallic)
66568	Stainless steel filter & Siphon tube	1" (Non-Metallic)
66779	PVC — NPT(F)	1" (Non-Metallic)



## 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, accommodate the use of both diaphragm pump and agitator where you need.

Model no.	For drum	Material	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



# Accessories

## 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



Vibration Isolator

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)

# Accessories

## Pulsation Dampeners

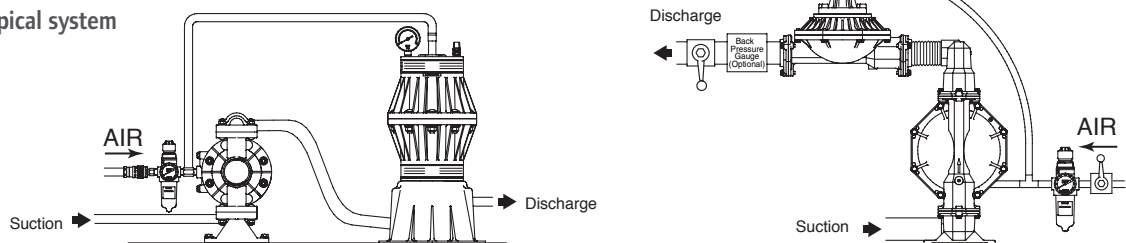
Diaphragm pumps of any type have at least two points in their cycle where they provide no pressure or flow to a process. The unwanted result of this pressure fluctuation can often be material foaming, material pulsation, hydraulic shock or material splashing. While traditional pulsation dampeners can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

Typical system



## Ordering

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

Position 1 Model and Size	Position 2 Air Section	Position 3 Fluid Connection	Position 4 Fluid Section	Position 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

# Maintenance Kits



Pump type	Models	Air Motor Section	Fluid Section	One Piece Diaphragms	Major Air Valve Assembly
<b>3/8"</b> Non-Metallic	PD03P, PE03P	637428	637429-XX	—	—
Non-Metallic	PD05P, PE05P	637428	637427-XX	—	—
<b>1/2"</b> Metallic	PM05P	637389	637375-XX	—	—
	PD05A, PD05R, PE05A, PE05R	637428	637427-XX	—	—
<b>3/4"</b> Non-Metallic	PD07P	637428	637427-XX	—	—
Metallic	PD07R	637428	637427-XX	—	—
Non-Metallic	PD10P, PE10P, PD10E, PE10E	637397	637396-XX	—	637395-X
<b>1"</b> Metallic	PD10A, PD10R, PD10S, PE10A, PE10R, PE10S, PM10A, PM10R, PM10S	637397	637401-XX	—	637395-X
	PH10A-XSS-SST	637338	637339	—	—
	SD10S	637495	637493-XX	—	637496
Non-Metallic	PD15P, PE15P, PD15E, PE15E	637389	637391-XX	—	637390-X
<b>1 1/2"</b> Metallic	PD15A, PD15R, PD15S, PE15A, PE15R, PE15S, PM15A, PM15R, PM15S	637389	637375-XX	—	637390-X
	Non-Metallic	PD20P, PE20P, PD20E, PE20E	637369	637373-XX	—
<b>2"</b> 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
<b>3"</b> Metallic	PD30R, PE30R, PM30R	637369	637303-XX	—	637374-X
	PD30A, PD30S, PE30A, PE30S, PP30A, PM30A, PM30S	637421	637303-XX	—	637374-X
	PH30F-X	637369	637441-XX	—	637374-X



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