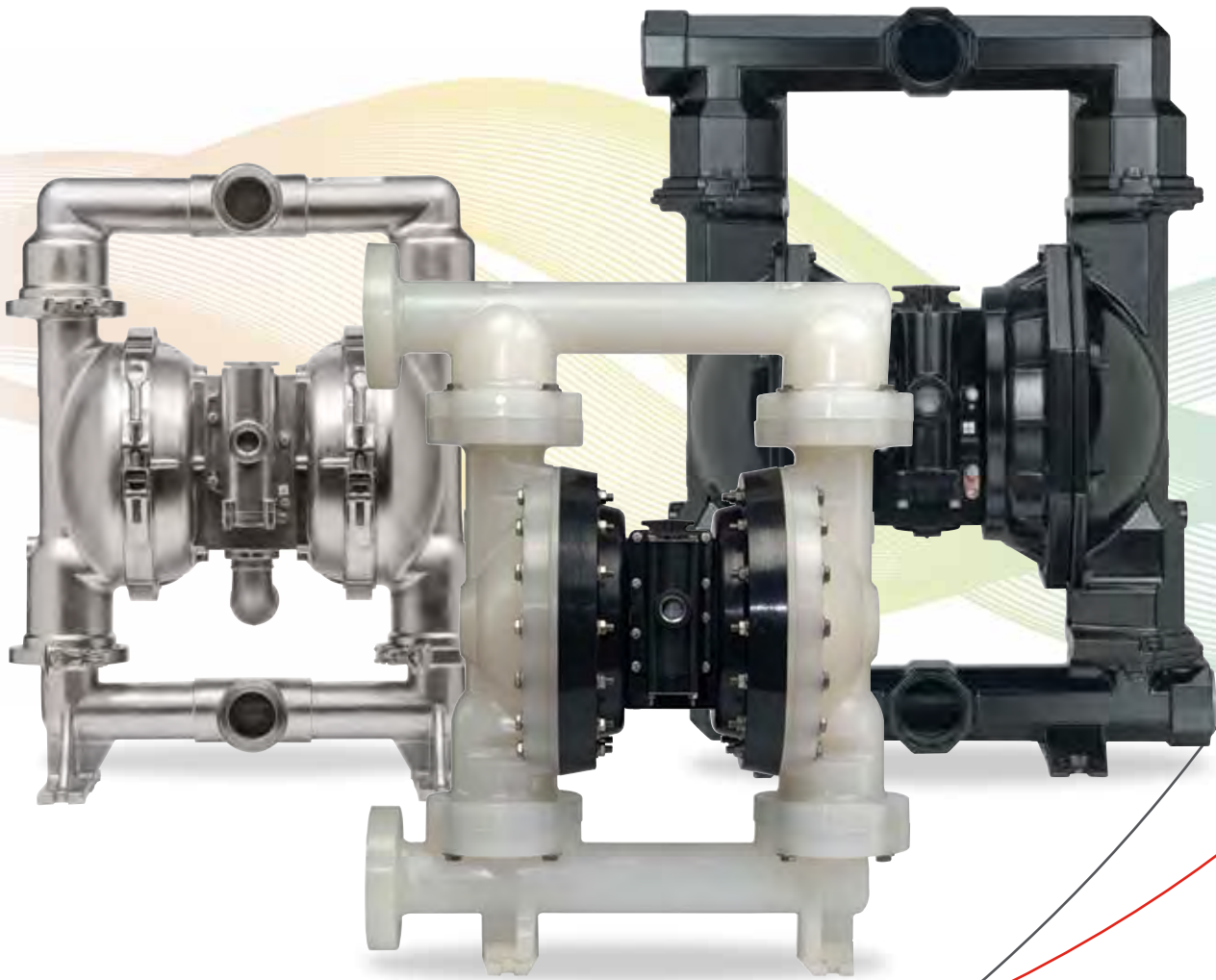


# ARO<sup>®</sup>

## EXPERT AND COMPACT SERIES AIR OPERATED DIAPHRAGM PUMPS

1/4" THROUGH 3" FLUID PORTS





## ARO® Air Operated Diaphragm Pumps

With proven performance in the field and backed by an industry leading 5-year warranty, ARO® air operated diaphragm pumps are a truly versatile fluid handling solution for numerous applications. Known for industry-leading efficiency, reliability, flow rates, and a large range of materials and porting, ARO® has the right pump to deliver consistency in the most demanding situations. The ARO® range of diaphragm pumps offers many materials of construction.

All ARO® pumps are available with convoluted diaphragms offering long product life and reduced maintenance.

### Metallic Materials:

Aluminium  
Cast Iron  
Stainless Steel  
Hastelloy®

### Non-Metallic Materials:

Polypropylene  
Conductive Polypropylene  
Acetal  
PVDF  
Conductive PVDF

## The Value of ARO® Air Operated Diaphragm Pumps

- ✓ Sealless design
- ✓ Handles abrasives, solids and corrosives
- ✓ Gentle fluid transfer
- ✓ Low shear
- ✓ Run-dry capability
- ✓ Portable
- ✓ Self priming
- ✓ Easy to install



## ARO® 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® EXP Series Diaphragm Pumps

**ARO® EXP Series diaphragm pumps include all the benefits of standard air-operating pumps, but with significant additional features and benefits.**

- Electronic Interface capability, assuring consistent flow rates and pinpoint control
- Patented SimulShift™ "unstallable" air balanced valve design which avoids stalling issues associated with other pumps
- Quick Dump™ check valves that divert cold exhaust air from ice-prone components, which prevents freezing and downtime
- Solenoid valve conveniently mounted directly to pump's major valve

## What is the advantage of having a solenoid in the air valve instead of a solenoid in the airline?

The solenoid actuation allows for accurate cycle rate control and provides a more consistent volume per stroke than is achieved with standard pumps. Additionally, solenoid control allows for a precise number of cycles to be fully completed for improved batch repeatability.



Our EXP Series diaphragm pumps feature an exclusive to ARO® Quick Dump™ valve that reduces icing by keeping cold exhaust air out of the air motor. This patented feature improves reliability and durability when running your pumps at high speeds to reduce downtime and maintenance.

## EXP is Automation Ready

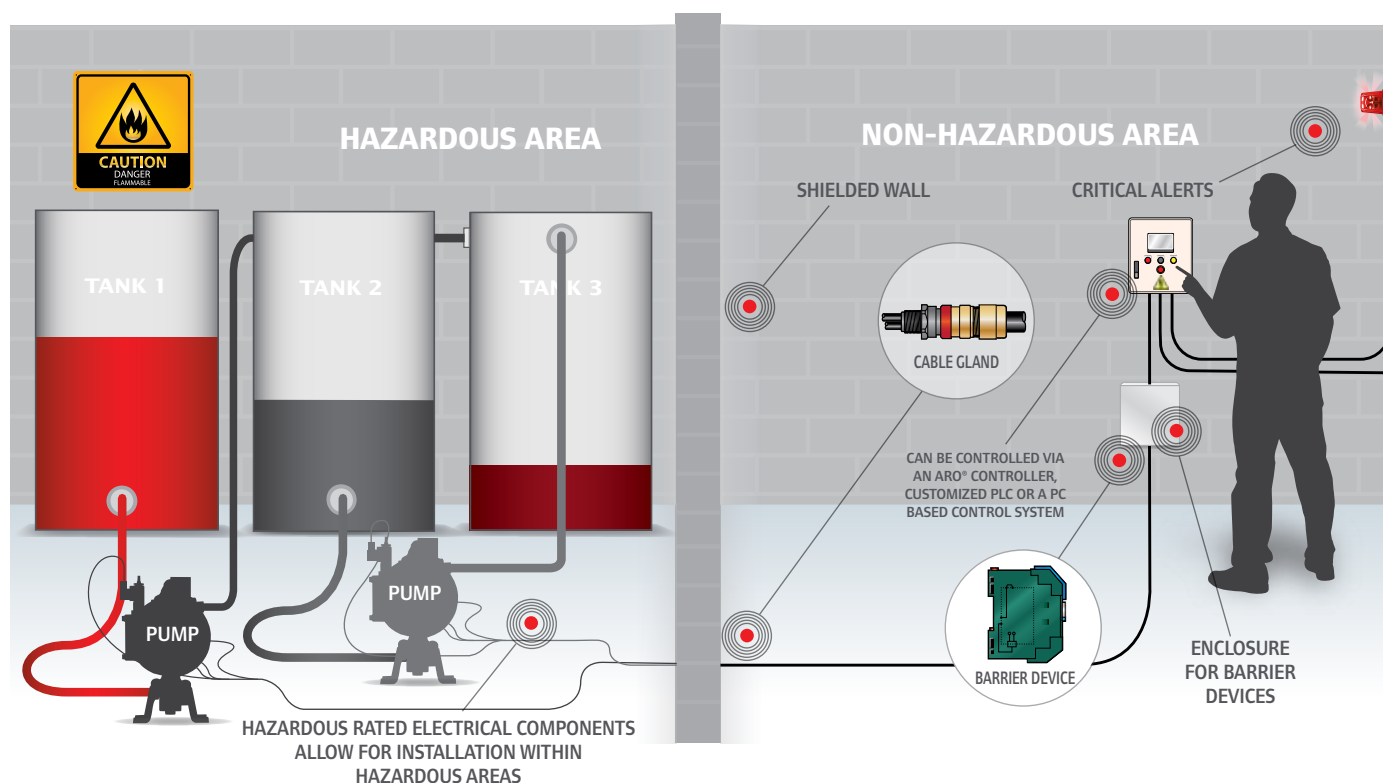
All EXP Series pumps are enhanced with electronic interface capability, providing accurate, electronically controlled dosing. Combine our pump with the ARO® Controller or a PLC or PC based system and switch from inaccurate, inefficient manual processes to intelligent fluid management.

- EXP is compatible with almost any automation system
- Electronic Interface Pumps are now available for hazardous duty environments (ATEX, NEC, and CEC certifications)
- Leak detection option certified for use in ATEX/ and NEC/CEC locations detects diaphragm failure to help reduce costly production downtime
- Internal cycle sensor and end-of-stroke signals track end-of-stroke feedback and pump data
- Preassembled components for hassle-free and error-proof installation

# EXP provides safer control and monitoring

ARO® Compact and EXP Electronic Interface pumps are suitable for use in gas and dust environments, including ATEX and North American applications. Hazardous rated electrical components allow for installation within hazardous areas.

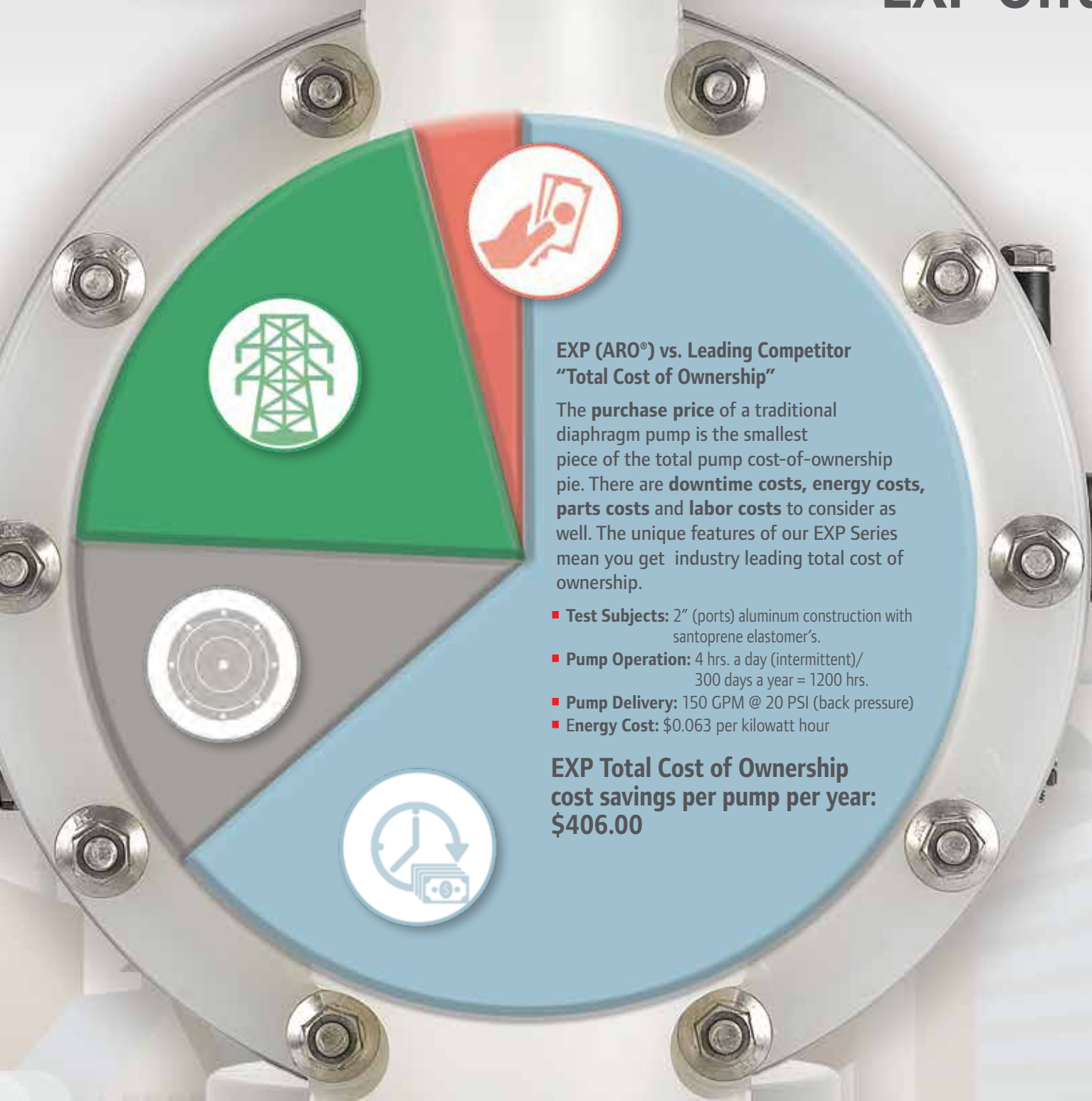
ARO® EXP Electronic Interface pumps are ideal for pumping fluids such as solvents, ethanol or fuels and other potentially flammable materials in HD environments – such as Chemical processing, paint/finishing, energy, ethanol, oil and gas, on-shore and petrochemical and fuel transfer.



- ▶ Operate the pump in the following hazardous locations:  
NEC / CEC: Class I&II, Div 1&2 ATEX: Zone 1&2, 21&22
- ▶ Wire the provided sensors and barrier devices per your local code requirements
- ▶ Install controller and barrier devices in a suitable hazardous enclosure or outside the hazardous area



# EXP Offers



Note: Testing of pumps based on Hydraulic Institute / ANSI (T0.6) 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 20 PSI back pressure, pumping 150 gallons per minute. The fluid being pumped was water. For complete test guidelines and procedure information, contact the manufacturer.

# Industry leading Total Cost of Ownership

## EXP Benefits

### RELIABILITY

#### Traditional Downtime Problems

#### ARO® EXP Solution



- |                     |                                                     |
|---------------------|-----------------------------------------------------|
| ✗ Pump Freezing     | ✓ No Freezing with Quick Dump™ Checks               |
| ✗ Pump Stalling     | ✓ No Stalling with Unbalanced SimulShift™ Valve     |
| ✗ Diaphragm Failure | ✓ Up to 4x Life with Convolute Diaphragms           |
| ✗ Pump Leakage      | ✓ Engineered Bolted Construction for Safe Operation |
| ✗ Corrosion & Wear  | ✓ Anodized Aluminum Fluid Section for Extended Life |

### EFFICIENCY

#### Common Efficiency Issues

#### ARO® EXP Solution



- |                                             |                                                            |
|---------------------------------------------|------------------------------------------------------------|
| ✗ Compressed Air "Blow-By" During Pump Idle | ✓ No Air Leakage with Ceramic "D" Valve                    |
| ✗ Poor Energy Efficiency During Operation   | ✓ Lower Energy Usage with Quick Dump and SimulShift Valves |

### SERVICEABILITY

#### Common Serviceability Issues

#### ARO® EXP Solution



- |                                         |                                                          |
|-----------------------------------------|----------------------------------------------------------|
| ✗ Time to Pull Failed Pumps for Service | ✓ Longer Lasting Wear Parts<br>i.e. Convolute Diaphragms |
| ✗ Time to Replace Failed Parts          | ✓ Easy-Access Major Air Valve                            |
| ✗ Complex or Incomplete Service Kits    | ✓ Simplified Air and Fluid Service Kits                  |

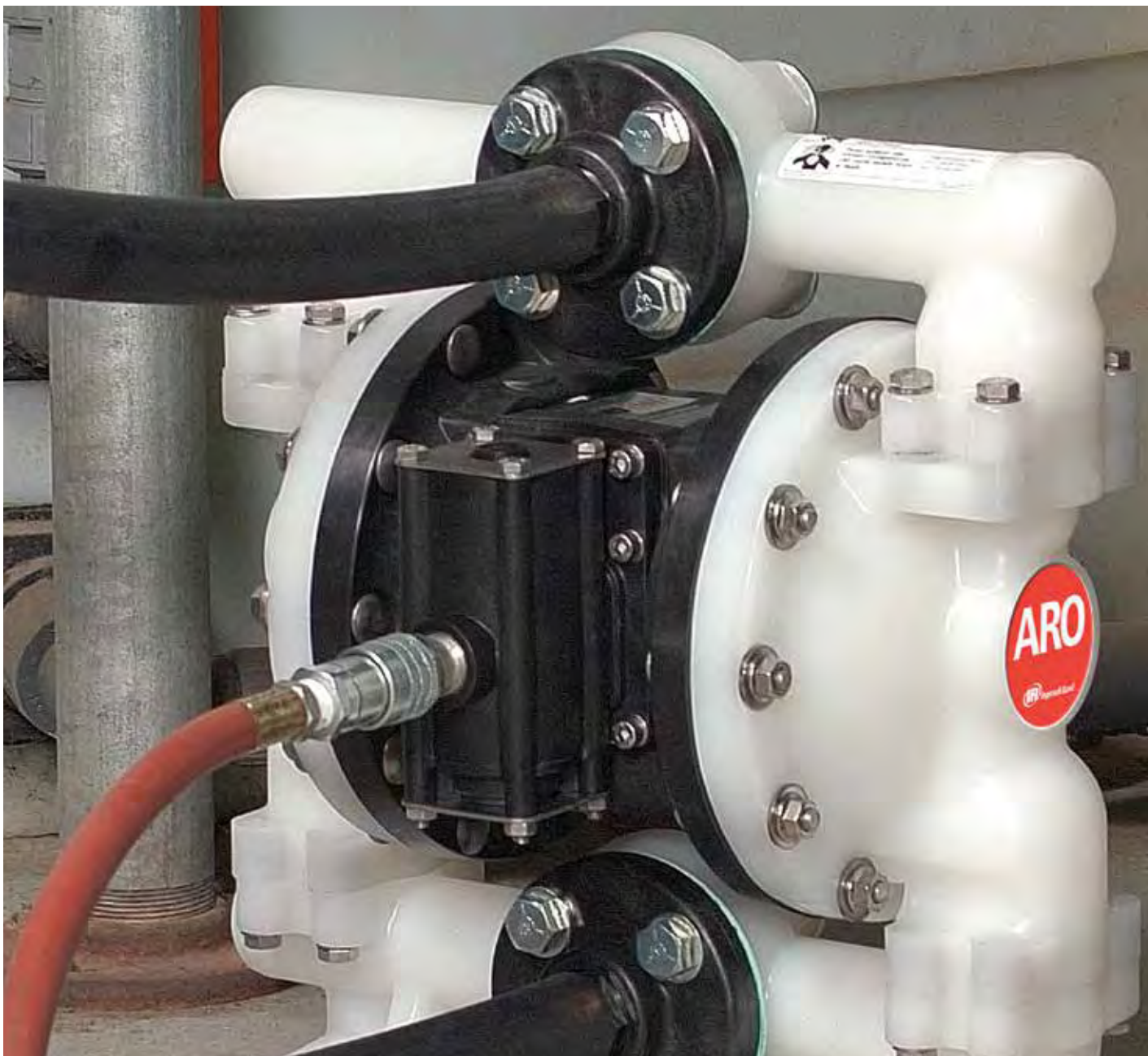
### CONTROL AND MONITORING

#### Common Issues

#### ARO® EXP Solution



- |                                                                       |                                                                               |
|-----------------------------------------------------------------------|-------------------------------------------------------------------------------|
| ✗ Time to integrate into control system                               | ✓ Proven Process Ready Electric Interface Controls                            |
| ✗ Cost and complexity tied to evolving a manual / unmonitored process | ✓ Upgradeable configurations post Installation<br>(air to electrical control) |



---

## Non-Metallic Models

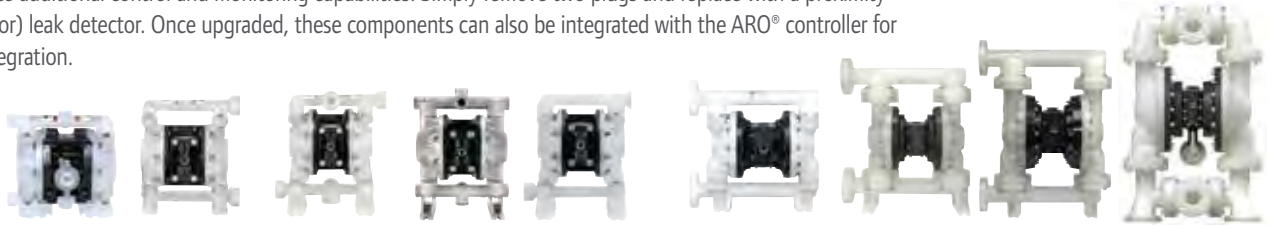
The ARO® EXP Series of non-metallic pumps consists of polypropylene, acetal and PVDF. All ARO® pumps are available with convoluted diaphragms offering long-lasting life and reduced maintenance.

# Non-Metallic Model Overview

## All 1/4" - 3" Non-metallic PD pumps are now upgradeable!

- PD pumps are manufactured such that solenoid operation, flow monitoring and leak detection functionality can be added at a later date. As your processes mature, this capability allows you to enhance manually operated processes to incorporate additional control and monitoring capabilities. Simply remove two plugs and replace with a proximity sensor and (or) leak detector. Once upgraded, these components can also be integrated with the ARO® controller for seamless integration.

**UPGRADE**  
PUMP FOR REMOTE  
ACTUATION CAPABILITY



| Models                                        | 1/4"                                                              | 3/8"                                                                                                                                                                 | 1/2"                                                                                                                                                                             | 1/2"<br>Classic                                                                      | 3/4"                                                         | 1"                                                                                                                                                                                                            | 1-1/2"                                                                                                                                      | 2"                                                                         | 3"                                                  |
|-----------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------------------|
| Max.Flow<br>gpm (lpm)                         | 5.3<br>(20)                                                       | 10.6<br>(40.1)                                                                                                                                                       | 14.4<br>(54.5)                                                                                                                                                                   | 13<br>(49.2)                                                                         | 14.8<br>(56)                                                 | 53<br>(200)                                                                                                                                                                                                   | 123<br>(465)                                                                                                                                | 184<br>(696)                                                               | 285<br>(1079)                                       |
| Maximum<br>Discharge<br>Pressure<br>psi (bar) | 125<br>(8.6)                                                      | 100<br>(6.8)                                                                                                                                                         | 100<br>(6.8)                                                                                                                                                                     | 100<br>(6.9)                                                                         | 100<br>(6.8)                                                 | 120<br>(8.3)                                                                                                                                                                                                  | 120<br>(8.3)                                                                                                                                | 120<br>(8.3)                                                               | 120<br>(8.3)                                        |
| Fluid Ports<br>Inlet/Outlet<br>(bsp)          | 1/4"<br>NPTF/BSPT<br>& 3/4"-14<br>NPTF/BSPT                       | 3/8 - 18<br>NPTF - 1<br>Rp 3/8 (3/8 - 19<br>BSP)                                                                                                                     | 1/2 - 14 NPTF - 1<br>Rp 1/2<br>(1/2 - 14 BSP)                                                                                                                                    | 1/2-14<br>N.P.T.F.-1                                                                 | 3/4 - 14<br>N.P.T.F.-1<br>Rp 3/4(3/4-14<br>BSP,<br>parallel) | 1" ANSI/DIN<br>Flange<br>(Side or Center)<br>1 - 11-1/2" NPT<br>Rp 1(1-11 BSP)<br>(Center Discharge)                                                                                                          | 1-1/2"<br>ANSI/DIN<br>Flange<br>(Side or<br>Center)                                                                                         | 2"<br>ANSI/DIN<br>Flange<br>(Side or Center)                               | 3" ANSI<br>(4-hole)<br>or<br>Din (8-hole)<br>Flange |
| Material<br>of<br>Construction                | Poly-<br>propylene-<br>Groundable<br>Acetal<br>PVDF               | Poly-<br>propylene<br>Groundable<br>Acetal<br>PVDF                                                                                                                   | Poly-<br>propylene<br>Groundable<br>Acetal<br>PVDF                                                                                                                               | Poly-<br>propylene<br>Groundable<br>Acetal<br>PVDF                                   | Poly-<br>propylene                                           | Polypropylene<br>PVDF<br>Conductive<br>Polypropylene<br>Conductive PVDF                                                                                                                                       | Poly-<br>propylene<br>PVDF<br>Conductive<br>Poly-<br>propylene                                                                              | Polypropylene<br>PVDF<br>Conductive<br>Polypropylene<br>Conductive<br>PVDF | Poly-<br>propylene<br>PVDF                          |
| Pump<br>Weight<br>lbs (kg)                    | Poly<br>2.86 (1.3)<br>PVDF<br>3.88 (1.76)<br>Acetal<br>3.52 (1.6) | 4.2 (1.9)<br>PD03P-XDS-X<br>4.3 (1.9)<br>PD03P-XES-X<br>4.5 (2.0)<br>PD03P-XKS-X<br>4.6 (2.1)<br>PD03P-XLS-X<br>3.4 (1.6)<br>PD03P-XPS-X<br>3.5 (1.6)<br>PD03P-XRS-X | 6.3 (2.9)<br>PD05P-XDS-X-B<br>6.7 (3.0)<br>PD05P-XES-X-B<br>6.8 (3.1)<br>PD05P-XKS-X-B<br>7.2 (3.3)<br>PD05P-XLS-X-B<br>5.2 (2.4)<br>PD05P-XPS-X-B<br>5.4 (2.5)<br>PD05P-XRS-X-B | 7.2 (3.3)<br>Polypropylene<br>8.8 (4.0)<br>Ground. Acetal<br>9.5 (4.3)<br>Kynar PVDF | 5.61 (2.54)                                                  | 19.35 (8.78)<br>Poly Threaded<br>19.59 (8.89)<br>Poly Center Port<br>19.87 (9.01)<br>Poly Side Port<br>25.83 (11.72) PVDF<br>Threaded<br>26.72 (12.12) PVDF<br>Center Port<br>27.15 (12.32) PVDF<br>Side Port | 42.30 (19.19)<br>Poly Center Port<br>42.60 (19.32)<br>Poly Side Port<br>55.94 (25.37) PVDF<br>Center Port<br>63.94 (29.0)<br>PVDF Side Port | 85.3 (38.7)<br>Poly<br>110.9 (50.3)<br>PVDF                                | 170 (77.11)<br>Poly<br>242 (109.77)<br>PVDF         |
| Max. Solids<br>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)                                                                  | 3/8 (9.5)                                           |
| Max.<br>Dry Suction<br>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)                                                                                                                                    | 19.5 (5.9)                                                                 | 20.5 (6.3)                                          |
| Recommended<br>Filter/<br>Regulator           | P39124-600                                                        | P39124-600                                                                                                                                                           | P39124-600                                                                                                                                                                       | P39124-600                                                                           | P39124-600                                                   | P39224-600                                                                                                                                                                                                    | P39344-600                                                                                                                                  | P39354-600                                                                 | P39454-610                                          |
| Airline Kit                                   | 66073-1                                                           | 66073-1                                                                                                                                                              | 66073-1                                                                                                                                                                          | 66073-1                                                                              | 66073-1                                                      | 66073-2                                                                                                                                                                                                       | 66084-1                                                                                                                                     | 66109                                                                      | 66109                                               |

Compact Series Diaphragm Pumps

EXP Series Diaphragm Pumps

# 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.

**UPGRADE**  
PUMP FOR REMOTE  
ACTUATION CAPABILITY

|                                     |                                                                      |
|-------------------------------------|----------------------------------------------------------------------|
| 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<br>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<br>3.88 (1.76) PVDF<br>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: | PX01 | X | - | H | X | S | - | X | X | X | - | A | X  | X  |

| Position 1<br>Model<br>Series                                 | Position 2<br>Center<br>Section                   | Position 3<br>Fluid<br>Connections | Position 4<br>Wetted<br>Parts                                                                                                                                                  | Position 5<br>Hardware | Position 6<br>Seat<br>Material                                                                                                                            | Position 7<br>Ball<br>Material                                                                                                                                                            | Position 8<br>Diaphragm<br>Material                       | Position 9                                                                                                                                                                             |
|---------------------------------------------------------------|---------------------------------------------------|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PD01 - Standard Pump<br>PE01- Elec. Interface Accessible Pump | E - Conductive Polypropylene<br>P - Polypropylene | H - 1/4" NPT BSP hybrid            | D - Groundable Acetal*<br>E - Groundable Acetal* (Multiple port)<br>K - Kynar PVDF<br>L - Kynar PVDF (Multiple port)<br>P - Polypropylene<br>R - Polypropylene (Multiple port) | S - Stainless Steel    | D - Acetal<br>K - PVDF<br>P - Polypropylene<br>O - Polypropylene (Flex-Check spacer)*<br>1 - Acetal (Flex-Check spacer)*<br>2 - PVDF (Flex-Check spacer)* | A - Santoprene®<br>C - Hytrel®<br>G - Nitrile<br>J - Nitrile (Flex-Check only)<br>K - EPR (Flex-Check only)<br>L - Viton® (Flex-Check only)<br>N - Neoprene (Flex-Check only)<br>T - PTFE | A - Santoprene®<br>C - Hytrel®<br>G - Nitrile<br>T - PTFE | Revision Level<br><br><b>Position 10 &amp; 11<br/>Specialty Code</b><br><br>Fluid control options for pump with electronic interface (PE03 model). See complete description on page 11 |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

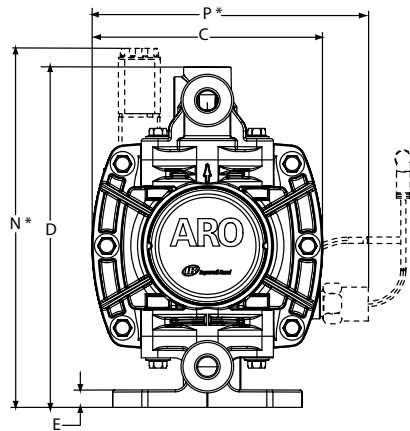
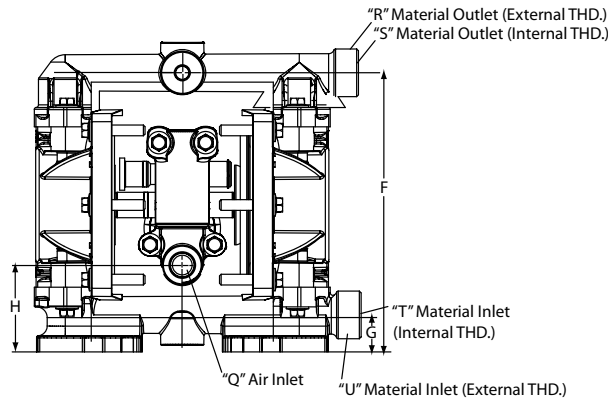
Hytrel® is a registered trademark of DuPont company, Santoprene® is registered trademark of Monsanto and Viton® is a registered trademark of ExxonMobil

## Accessories

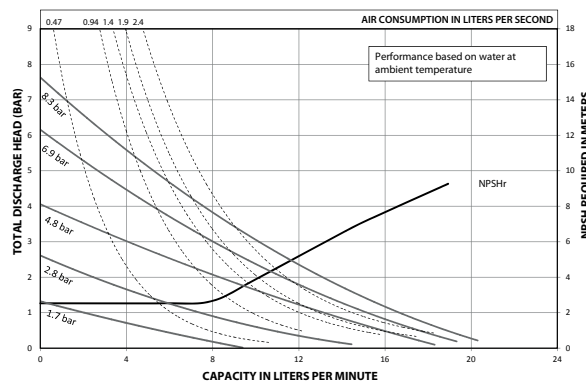
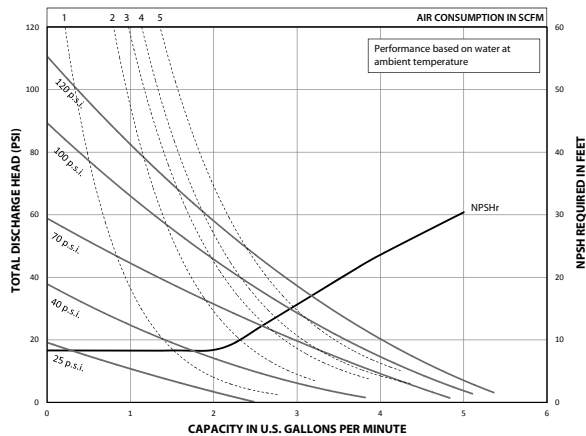
### Air Line Connection Kit | 66073-1

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

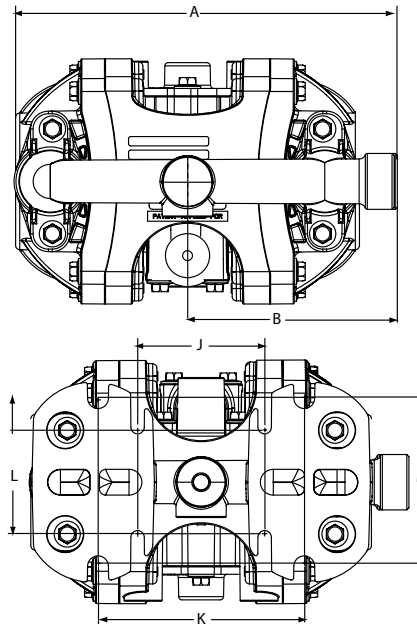
## 1/4" Non-Metallic Dimensions and Flow Charts



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



Performance based on an elastomeric fitted pump, flooded suction with water at ambient conditions.  
Due to varying materials of construction, assembly configurations and operating conditions, published data is for reference only



### 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 | 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*                | O - No Option                                          |
| H - End of Stroke/Leak Detection ATEX/IECex* | R - End of Stroke Feedback NEC / CEC*                  |
|                                              | T - End of Stroke Feedback + Leak Detection NEC / CEC* |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

# 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.

**UPGRADE**  
PUMP FOR REMOTE  
ACTUATION CAPABILITY

|                             |                                                                                                                                                                |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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<br>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)<br>PD03P-XES-XXX 4.3 (1.9)<br>PD03P-XKS-XXX 4.5 (2.0)<br>PD03P-XLS-XXX 4.6 (2.1)<br>PD03P-XPS-XXX 3.4 (1.6)<br>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-APS-PCC

PD03P-ADS-DTT



## Ordering

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

| Position 1<br>Model<br>Series                      | Position 2<br>Center<br>Section | Position 3<br>Connections          | Position 4<br>Manifold<br>Material                                                                                                                                                                                       | Position 5<br>Hardware | Position 6<br>Seat<br>Material                                                               | Position 7<br>Ball<br>Material                                                                                                                                                    | Position 8<br>Diaphragm<br>Material                                                     | Position 9                                                                                                                                                                                                         |
|----------------------------------------------------|---------------------------------|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D - Standard<br>E - Remote<br>Actuation<br>Capable | P - Poly-<br>propylene          | A - 3/8"<br>N.P.T.<br>B - 3/8" BSP | D - Ground. Acetal<br>(single port)*<br>E - Ground. Acetal<br>(multiple port)*<br>K - PVDF<br>(single port)<br>L - PVDF<br>(multiple port)<br>P - Polypropylene<br>(single port)<br>R - Polypropylene<br>(multiple port) | S - Stainless<br>Steel | D - Acetal<br>K - PVDF<br>P - Poly-<br>propylene<br>S - Stainless<br>Steel<br>O - Flex Check | A - Santoprene®<br>C - Hytrel®<br>I - Nitrile<br>J - Nitrile **<br>L - Viton® **<br>N - Neoprene**<br>S - Stainless<br>Steel<br>T - PTFE<br>V - Viton®<br>** Flex check<br>models | A - Santoprene®<br>C - Hytrel®<br>G - Nitrile<br>T - PTFE/<br>Santoprene®<br>V - Viton® | Revision Level<br><br><b>Position<br/>10 &amp; 11<br/>Specialty<br/>Code</b><br><br>Fluid control<br>options for pump<br>with electronic<br>interface (PE03<br>model). See com-<br>plete description<br>on page 13 |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

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Viton® is a registered trademark of ExxonMobil

## Accessories

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

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

**Wall Mount Bracket Kit | 67388**

**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



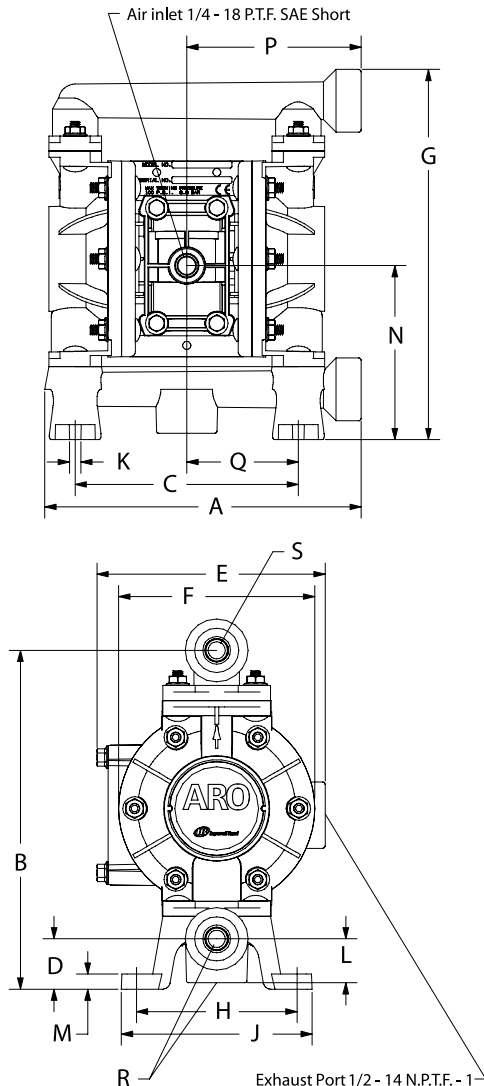
PE03P-APS-PAA-BOS  
with 637442-1 Kit

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

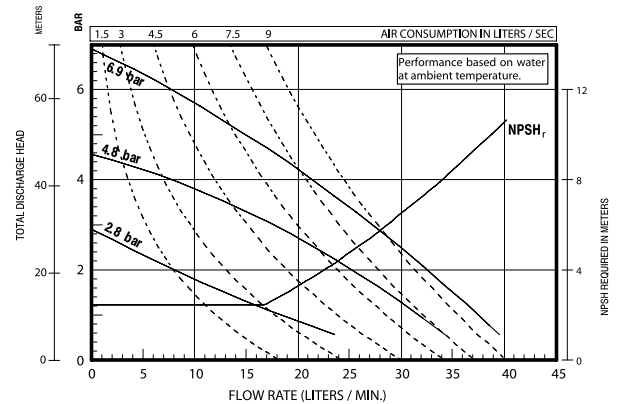
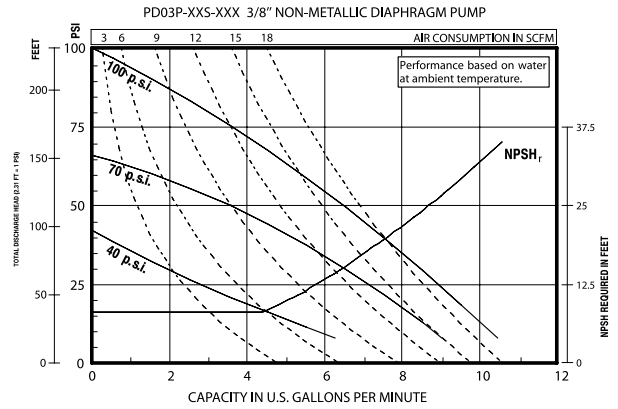
### DIMENSIONS

|                       |                      |                       |
|-----------------------|----------------------|-----------------------|
| A 7-29/32" (200.2 mm) | F 4-7/8" (123.9 mm)  | L 1-3/32" (27.8 mm)   |
| B 8-7/16" (214.3 mm)  | G 9-7/32" (234.2 mm) | M 3/8" (9.5 mm)       |
| C 5-9/16" (141.3 mm)  | H 4" (101.6 mm)      | N 4-11/32" (110.1 mm) |
| D 1-1/4" (31.8 mm)    | J 4-3/4" (120.7 mm)  | P 4-11/32" (110.3 mm) |
| E 5-23/32" (145.2 mm) | K 9/32" (7.1 mm)     | Q 2-25/32" (70.6 mm)  |

| Model         | "R" Material Inlet    | "S" Material Outlet   |
|---------------|-----------------------|-----------------------|
| 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) |



### PERFORMANCE CURVES



Performance based on an elastomeric fitted pump, flooded suction with water at ambient conditions. Due to varying materials of construction, assembly configurations and operating conditions, published data is for reference only

### 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)     |
|                     | P - Ported Motor (No major valve provided) |

### 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*                | O - No Option                                          |
| H - End of Stroke/Leak Detection ATEX/IECex* | R - End of Stroke Feedback NEC / CEC*                  |
|                                              | T - End of Stroke Feedback + Leak Detection NEC / CEC* |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

# 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.

**UPGRADE**  
PUMP FOR REMOTE  
ACTUATION CAPABILITY

|                                  |                                                                                                                                                                            |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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<br>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)<br>PD05P-XES-XXX-B 6.7 (3.0)<br>PD05P-XKS-XXX-B 6.8 (3.1)<br>PD05P-XLS-XXX-B 7.2 (3.3)<br>PD05P-XPS-XXX-B 5.2 (2.4)<br>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<br>Model<br>Series                      | Position 2<br>Center<br>Section | Position 3<br>Connections                                                   | Position 4<br>Manifold<br>Material                                                                                                                                                                                       | Position 5<br>Hardware | Position 6<br>Seat<br>Material                                             | Position 7<br>Ball<br>Material                                                                                        | Position 8<br>Diaphragm<br>Material                                                                                                  | Position 9                                                                                                                                                                                                            |
|----------------------------------------------------|---------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D - Standard<br>E - Remote<br>Actuation<br>Capable | P - Poly-<br>propylene          | A - 1/2 - 14<br>N.P.T.F. - 1<br>B - Rp 1/2<br>(1/2 -14<br>BSP,<br>parallel) | D - Ground. Acetal<br>(single port)*<br>E - Ground. Acetal<br>(multiple port)*<br>K - PVDF<br>(single port)<br>L - PVDF<br>(multiple port)<br>P - Polypropylene<br>(single port)<br>R - Polypropylene<br>(multiple port) | S - Stainless<br>Steel | D - Acetal<br>K - PVDF<br>P - Poly-<br>propylene<br>S - Stainless<br>Steel | A - Santoprene®<br>C - Hytrel®<br>G - Nitrile<br>S - Stainless<br>Steel<br>T - PTFE<br>U - Polyurethane<br>V - Viton® | A - Santoprene®<br>C - Hytrel®<br>G - Nitrile<br>L - Long-Life<br>PTFE<br>T - PTFE/<br>Santoprene®<br>U - Polyurethane<br>V - Viton® | Revision Level<br><br><b>Position<br/>10 &amp; 11<br/>Specialty<br/>Code</b><br><br>Fluid control<br>options for<br>pump with elec-<br>tronic interface<br>(PE05 model).<br>See complete<br>description on<br>page 15 |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

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Viton® is a registered trademark of ExxonMobil

## Accessories

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

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

**Wall Mount Bracket Kit** | 76763

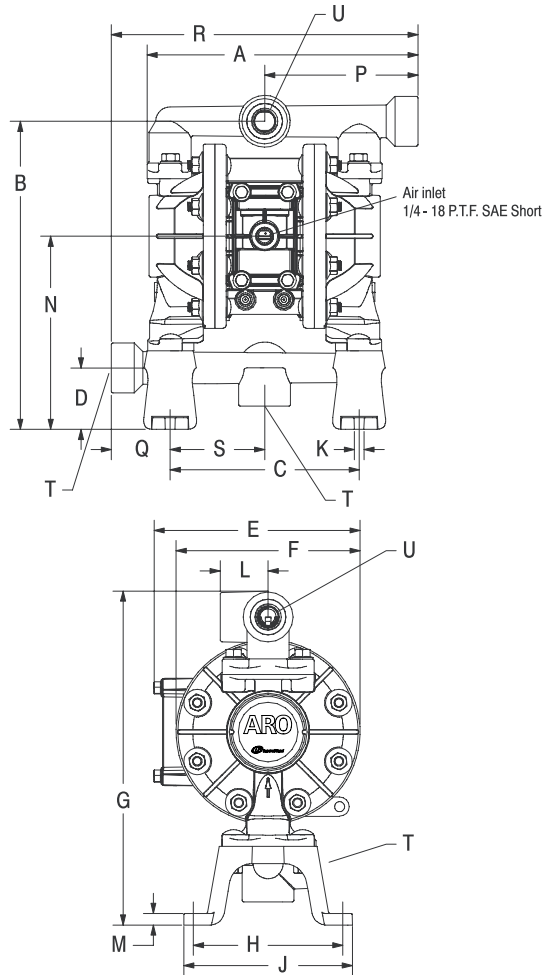
**Optional Muffler** | 93110 used with 637438 kit

**Service Repair Kits** | 637428 (air section)  
637427-XX (fluid section)



Air Line Connection Kit  
66073-1

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



### DIMENSIONS

|                       |                      |                      |
|-----------------------|----------------------|----------------------|
| A 8-27/32" (224.3 mm) | G 10-7/8" (275.7 mm) | N 6-5/16" (159.9 mm) |
| B 10-1/16" (255.0 mm) | H 4-7/8" (123.8 mm)  | P 5" (127.0 mm)      |
| C 6.164" (156.6 mm)   | J 5-1/2" (139.7 mm)  | Q 1-59/64" (48.8 mm) |
| D 2" (50.8 mm)        | K 5/16" (8.0 mm)     | R 10" (254.0 mm)     |
| E 6-23/32" (170.6 mm) | L 1-9/16" (39.7 mm)  | S 3-3/32" (78.3 mm)  |
| F 6" (152.4 mm)       | M 3/8" (9.5 mm)      |                      |

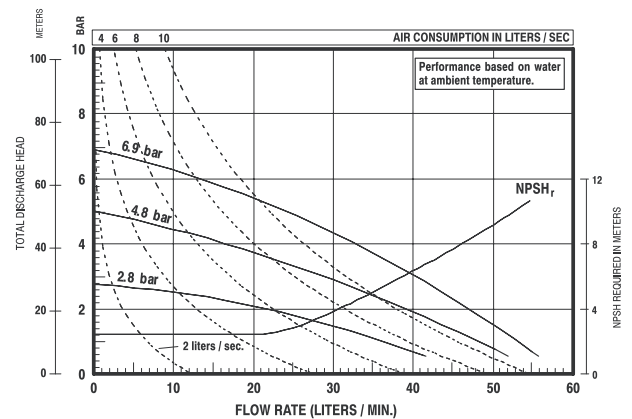
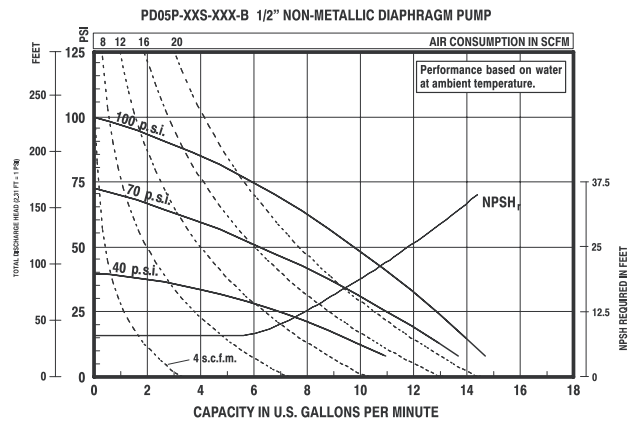
| Model           | "T" Material Inlet    | "U" Material Outlet   |
|-----------------|-----------------------|-----------------------|
| PD05P-AXS-XXX-B | 1/2 - 14 N.P.T.F. - 1 | 1/2 - 14 N.P.T.F. - 1 |
| PD05P-BXS-XXX-B | Rp 1/2 (1/2 - 14 BSP) | Rp 1/2 (1/2 - 14 BSP) |



PD05P-APS-PAA-B05  
with 637440-1 Kit

Dual Inlet/Outlet Kits:  
637440-1 (N.P.T. Poly)

### PERFORMANCE CURVES



Performance based on an elastomeric fitted pump, flooded suction with water at ambient conditions. Due to varying materials of construction, assembly configurations and operating conditions, published data is for reference only

### 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)     |
|                     | P - Ported Motor (No major valve provided) |

### 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*                | O - No Option                                          |
| H - End of Stroke/Leak Detection ATEX/IECex* | R - End of Stroke Feedback NEC / CEC*                  |
|                                              | T - End of Stroke Feedback + Leak Detection NEC / CEC* |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

# 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)<br>Groundable Acetal 8.8 (4.0)<br>Kynar PVDF 9.5 (4.3) |
| Maximum dry suction lift ft(m) : | 15 (4.6)                                                                       |
| Sound Level:                     | 70 PSI 60 Cycles/Min 71.1 db(A)                                                |
| Muffler:                         | Integral, Included                                                             |



## Ordering

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

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

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## Accessories

### Air Line Connection Kit | 66073-1

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

### Optional Muffler | 93110 used with 637438 kit

### Service Repair Kits | 637141 (air section)

637140-XX (fluid section)

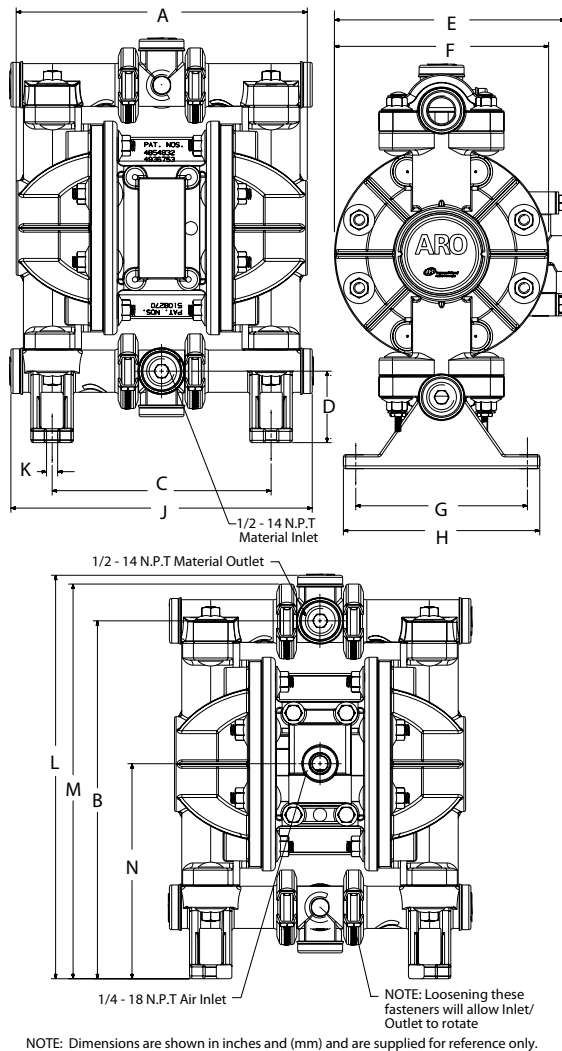


93110

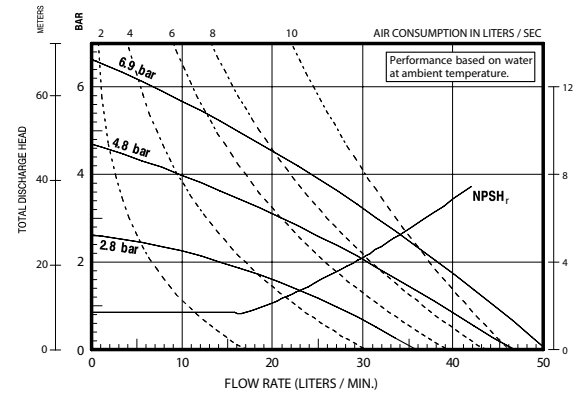
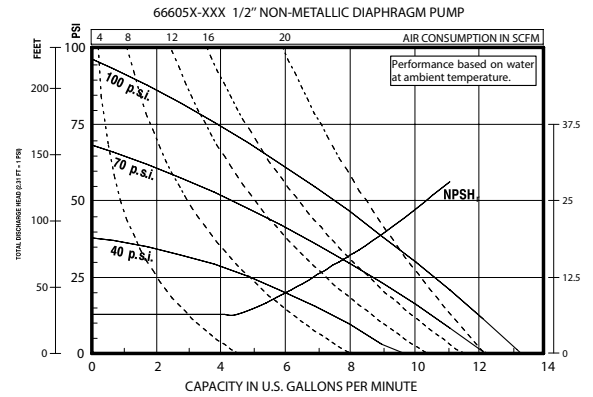


Air Line Connection Kit  
66073-1

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



|                       |                       |                       |
|-----------------------|-----------------------|-----------------------|
| 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)   |



Performance based on an elastomeric fitted pump, flooded suction with water at ambient conditions. Due to varying materials of construction, assembly configurations and operating conditions, published data is for reference only

# 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.

**UPGRADE**  
PUMP FOR REMOTE  
ACTUATION CAPABILITY

|                             |                                                         |
|-----------------------------|---------------------------------------------------------|
| 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<br>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-APS-PAA

## Ordering

| Position | 1    | 2 |   | 3 | 4 | 5 |   | 6 | 7 | 8 |   | 9 | 10 | 11 |
|----------|------|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Example: | PX07 | P | - | X | X | S | - | X | X | X | - | A | X  | X  |

| Position 1<br>Model<br>Series                                    | Position 2<br>Center<br>Section | Position 3<br>Connections                                                  | Position 4<br>Manifold<br>Material         | Position 5<br>Hardware | Position 6<br>Seat<br>Material | Position 7<br>Ball<br>Material             | Position 8<br>Diaphragm<br>Material                                 | Position 9<br>and 10                                                                                                                                                                                               |
|------------------------------------------------------------------|---------------------------------|----------------------------------------------------------------------------|--------------------------------------------|------------------------|--------------------------------|--------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PD07 - Standard<br>Pump<br>PE07 - Remote<br>Actuation<br>Capable | P - Poly-<br>propylene          | A - 14 - 3/4"<br>N.P.T.F.-1<br>B - Rp 3/4<br>(3/41/2 -14<br>BSP, parallel) | P - Poly-<br>propylene<br>(Single<br>Port) | S - SS                 | P - Poly-<br>propylene         | A - Santoprene®<br>C - Hytrel®<br>T - PTFE | A - Santoprene®<br>C - Hytrel®<br>L - Long-Life<br>PTFE<br>T - PTFE | Revision Level<br><br><b>Position<br/>10 &amp; 11<br/>Specialty<br/>Code</b><br><br>Fluid control<br>options for pump<br>with electronic<br>interface (PE07<br>model). See com-<br>plete description<br>on page 19 |

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## Accessories

### Air Line Connection Kit | 66073-1

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

### Muffler Kit | 637438 (ported exhaust) 3/8" NPT

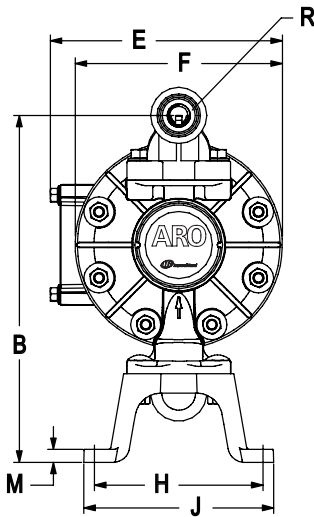
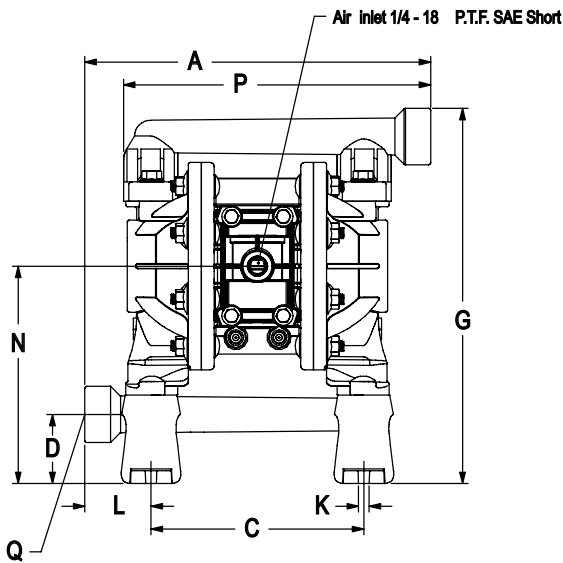
### Service Repair Kits | 637428 (air section) 637427-XX (fluid section)

### Wall Mount | 76763



Air Line Connection Kit  
66073-1

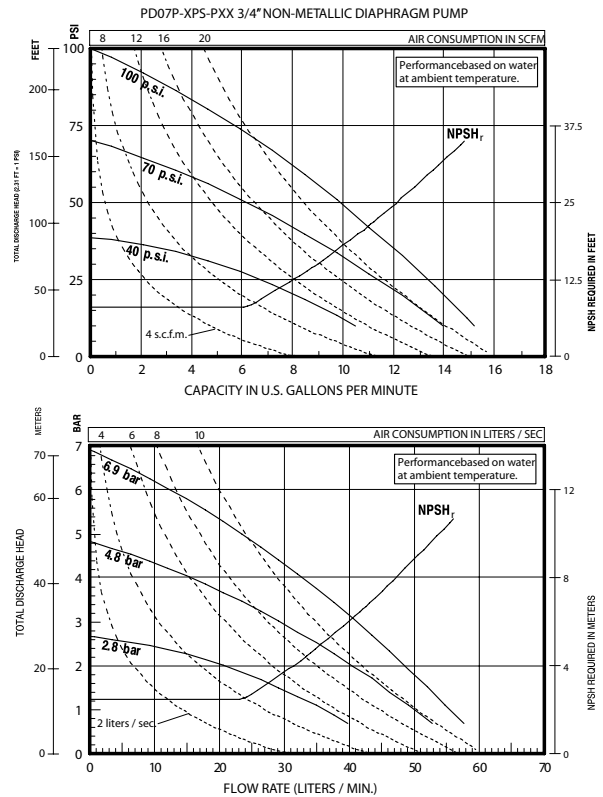
## 3/4" Non-Metallic Dimensions and Flow Charts



### DIMENSIONS

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

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



Performance based on an elastomeric fitted pump, flooded suction with water at ambient conditions. Due to varying materials of construction, assembly configurations and operating conditions, published data is for reference only

### 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)     |
|                     | P - Ported Motor (No major valve provided) |

### 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*                | O - No Option                                          |
| H - End of Stroke/Leak Detection ATEX/IECex* | R - End of Stroke Feedback NEC / CEC*                  |
|                                              | T - End of Stroke Feedback + Leak Detection NEC / CEC* |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

# 1" Non-Metallic Models

## EXP SERIES PUMPS

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)<br>1" ANSI/DIN hybrid 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)<br>Polypropylene, Center Ported 19.59 (8.89)<br>Polypropylene, Side Ported 19.87 (9.01)<br>PVDF, Threaded Port 25.83 (11.72)<br>PVDF, Center Ported 26.72 (12.12)<br>PVDF, Side Ported 27.15 (12.32) |
| Maximum dry suction lift ft(m) :         | 19 (5.7)                                                                                                                                                                                                                                       |
| Sound Level:                             | 70 PSI 60 Cycles/Min 79.7 db(A)                                                                                                                                                                                                                |
| Muffler Included:                        | 93110                                                                                                                                                                                                                                          |



## Ordering

| Position | 1    | 2 |   | 3 | 4 | 5 |   | 6 | 7 | 8 |   | 9 | 10 | 11 |
|----------|------|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Example: | PX10 | X | - | X | X | S | - | X | X | X | - | A | X  | X  |

| Position 1<br>Model<br>Series                                       | Position 2<br>Center<br>Section                   | Position 3<br>Connections                                                                                       | Position 4<br>Wetted<br>Parts                                                          | Position 5<br>Hardware | Position 6<br>Seat<br>Material                                   | Position 7<br>Ball<br>Material                                          | Position 8<br>Diaphragm<br>Material                                                                      | Position 9                                                                                                                                                                     |
|---------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------|------------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PD10 - Standard Pump<br>PE10 - Electronic Interface Accessible Pump | E - Conductive Polypropylene<br>P - Polypropylene | A - NPTF Thread<br>B - BSP Thread<br>F - 1" ANSI/DIN Hybrid Side Flange<br>Y - 1" ANSI/DIN Hybrid Center Flange | E - Conductive Polypropylene*<br>K - PVDF<br>N - Conductive PVDF*<br>P - Polypropylene | S - SS                 | H - 440 SS (Hard)<br>K - PVDF<br>P - Polypropylene<br>S - 316 SS | A - Santoprene®<br>C - Hytrel®<br>G - Nitrile<br>T - PTFE<br>V - Viton® | A - Santoprene®<br>C - Hytrel®<br>G - Buna-N<br>L - Long-Life PTFE<br>T - PTFE/Santoprene®<br>V - Viton® | Revision Level<br><b>Position 10 &amp; 11<br/>Specialty Code</b><br>Fluid control options for pump with electronic interface (PE10 model). See complete description on page 21 |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

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## 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 Sensor Kit | 67350

Service Repair Kits | 637397 (air motor for PX10P), 637396-XXX (fluid section with seats), 637395-X (major air valve assembly)

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

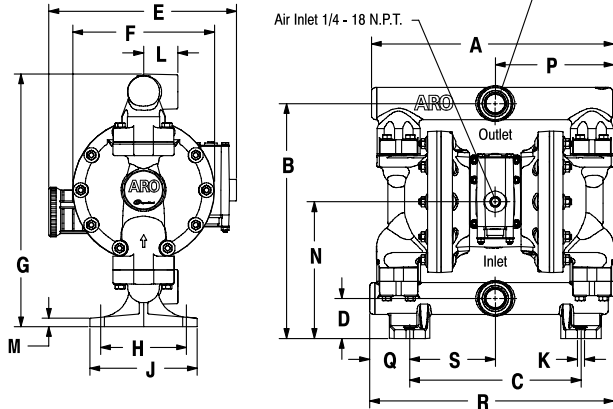
Use with non-metallic EXP pumps with the flange manifold option



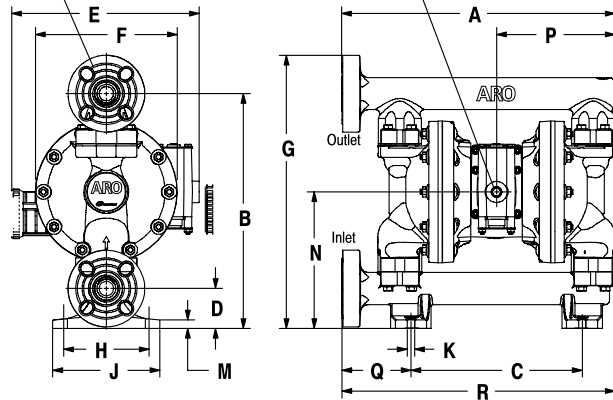
Flange Connection Kit

## 1" Non-Metallic Dimensions and Flow Charts

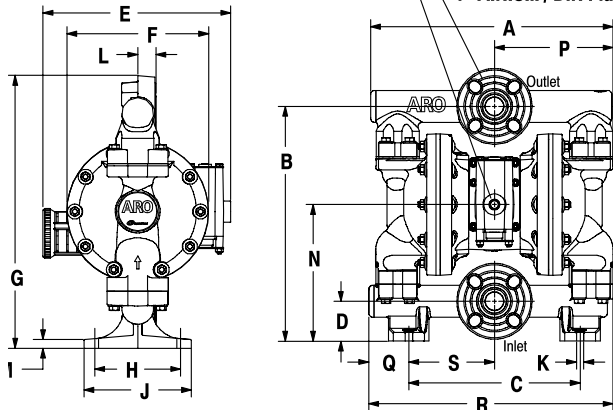
1 - 11-1/2 N.P.T.F. - 1 (PX10P-AXS-XXX)  
Rp 1 - 11 BS (PX10P-BXS-XXX)



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

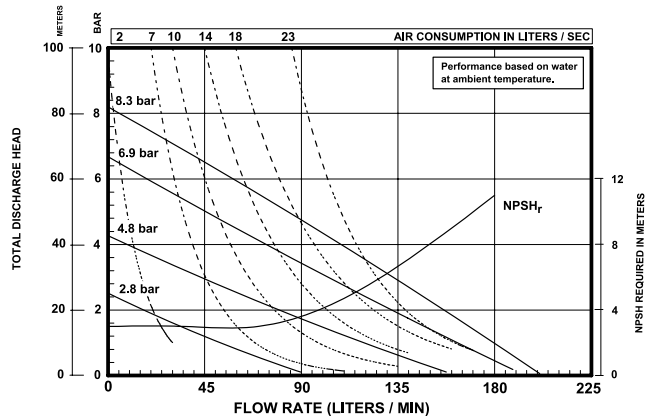
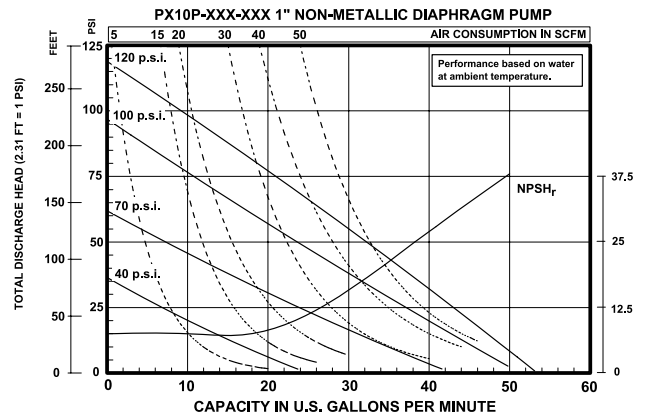


Air Inlet 1/4 - 18 N.P.T. 1" A.N.S.I. / DIN Flange



### 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-<br>(Threaded) | PX10P-EXS-XXX<br>(End Flange) | PX10P-YXS-XXX<br>(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)             |



Performance based on an elastomeric fitted pump, flooded suction with water at ambient conditions. Due to varying materials of construction, assembly configurations and operating conditions, published data is for reference only

### 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)     |
|                     | P - Ported Motor (No major valve provided) |

### 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*                | O - No Option                                          |
| H - End of Stroke/Leak Detection ATEX/IECex* | R - End of Stroke Feedback NEC / CEC*                  |
|                                              | T - End of Stroke Feedback + Leak Detection NEC / CEC* |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

# 1-1/2" Non-Metallic Models

## EXP SERIES PUMPS

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.

**UPGRADE**  
PUMP FOR REMOTE  
ACTUATION CAPABILITY

|                                          |                                                                                                                                                                                         |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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" ANSI/DIN hybrid 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):                         | <div>Polypropylene, Side Ported 42.6 (19.3)</div> <div>PVDF, Side Ported 63.9 (29)</div> <div>Polypropylene, Center Ported 42.3 (19.2)</div> <div>PVDF, Center Ported 55.9 (25.3)</div> |
| Maximum dry suction lift ft (m) :        | 14 (4.2)                                                                                                                                                                                |
| Sound Level:                             | 70 PSI    60 Cycles / Min    81.0 db(A)                                                                                                                                                 |
| Muffler Included:                        | 93139                                                                                                                                                                                   |



## Ordering

| Position | 1    | 2 |   | 3 | 4 | 5 |   | 6 | 7 | 8 |   | 9 | 10 | 11 |
|----------|------|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Example: | PX15 | X | - | X | X | S | - | X | X | X | - | A | X  | X  |

| Position 1<br>Model<br>Series                                       | Position 2<br>Center<br>Section                   | Position 3<br>Connections                                                          | Position 4<br>Wetted<br>Parts                                  | Position 5<br>Hardware | Position 6<br>Seat<br>Material                                   | Position 7<br>Ball<br>Material                                                        | Position 8<br>Diaphragm<br>Material                                                                      | Position 9                                                                                                                                                                         |
|---------------------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------|------------------------|------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PD15 - Standard Pump<br>PE15 - Electronic Interface Accessible Pump | E - Conductive Polypropylene<br>P - Polypropylene | F - 1-1/2" ANSI/DIN Hybrid Side Flange<br>Y - 1-1/2" ANSI/DIN Hybrid Center Flange | E - Conductive Polypropylene*<br>K - PVDF<br>P - Polypropylene | S - SS                 | H - 440 SS (Hard)<br>K - PVDF<br>P - Polypropylene<br>S - 316 SS | A - Santoprene®<br>C - Hytrel®<br>G - Nitrile<br>S - 316 SS<br>T - PTFE<br>V - Viton® | A - Santoprene®<br>C - Hytrel®<br>G - Buna-N<br>L - Long-Life PTFE<br>T - PTFE/Santoprene®<br>V - Viton® | Revision Level<br><br><b>Position 10 &amp; 11<br/>Specialty Code</b><br>Fluid control options for pump with electronic interface (PE15 model). See complete description on page 23 |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

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## Accessories

**Air Line Connection Kit** | 66084-1

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

**Diaphragm Failure Detection** | 67237

**Service Repair Kits** | 637389 (air motor for PX15P), 637391-XXX (fluid section with seats), 637390-X (major air valve assembly)

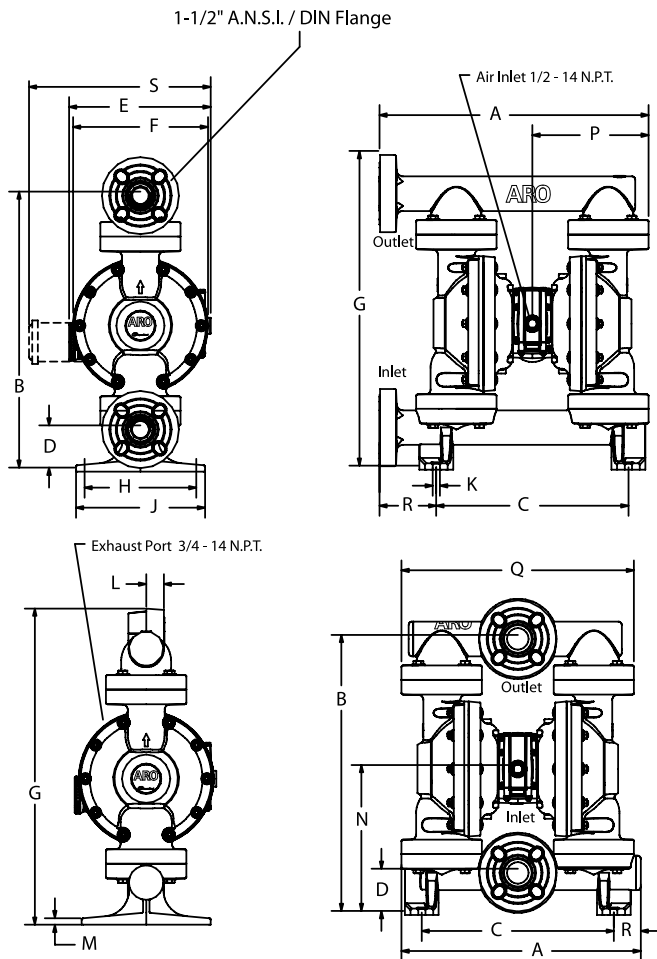
**Flange Connection Kit** | 67341-E15N (side flange), 67341-C15N (center flange)

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



Flange Connection Kit

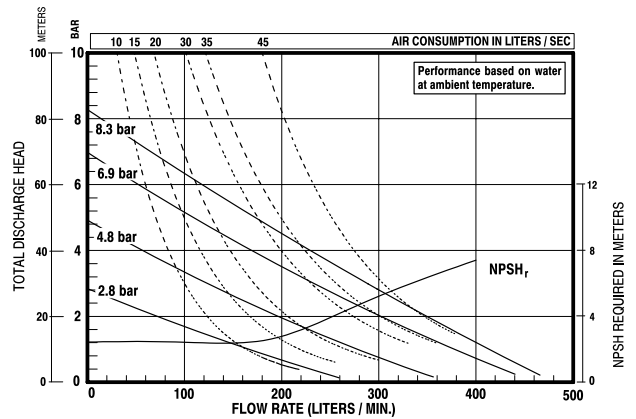
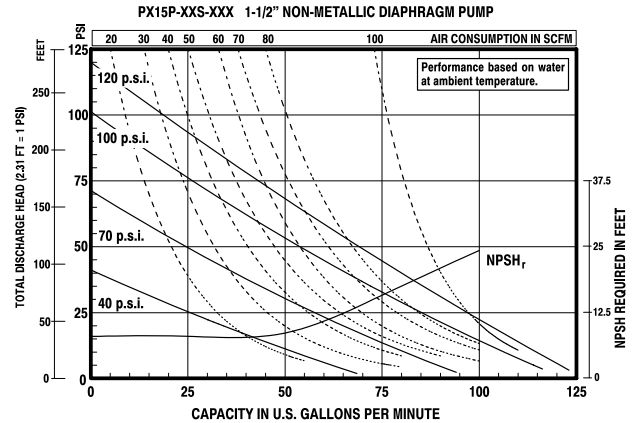
## 1-1/2" Non-Metallic Dimensions and Flow Charts



- 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-~~E~~XS-XXX  
(End Flange)  
A - 20-15/16" (531.6 mm)  
G - 24-15/32" (621.5 mm)  
L - -----  
Q - -----  
R - 4-7/16" (112.4 mm)
- PX15P-~~X~~S-XXX  
(Center Flange)  
18-19/32" (472.3 mm)  
24-19/32" (624.5 mm)  
1-3/8" (34.9 mm)  
18-3/32" (459.0 mm)  
2-3/32" (53.1 mm)

- PX15~~E~~-XXX-XXX  
PX15~~P~~-XXX-XXX
- "E" -----  
11" (279.5 mm)
- "S" 14-1/8" (358.5 mm)  
-----



Performance based on an elastomeric fitted pump, flooded suction with water at ambient conditions. Due to varying materials of construction, assembly configurations and operating conditions, published data is for reference only

### 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)     |
|                     | P - Ported Motor (No major valve provided) |

### 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*                | O - No Option                                          |
| H - End of Stroke/Leak Detection ATEX/IECex* | R - End of Stroke Feedback NEC / CEC*                  |
|                                              | T - End of Stroke Feedback + Leak Detection NEC / CEC* |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

# 2" Non-Metallic Models

## EXP SERIES PUMPS

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/Waste-water treatment markets.

**UPGRADE**  
PUMP FOR REMOTE  
ACTUATION CAPABILITY

|                                          |                                                                                                                                                        |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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" ANSI/DIN hybrid 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 85.3 (38.7)<br>Polypropylene, Center Ported 89.0 (40.4)<br>PVDF, Side Ported 110.9 (50.3)<br>PVDF, Center Ported 116.8 (53) |
| Maximum dry suction lift ft (m):         | 19.5 (5.9)                                                                                                                                             |
| 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 | - | X | X | S | - | X | X | X | - | A | X  | X  |

| Position 1<br>Model Series                                          | Position 2<br>Center Section                      | Position 3<br>Connections                                                  | Position 4<br>Wetted Parts                                                             | Position 5<br>Hardware | Position 6<br>Seat Material   | Position 7<br>Ball Material                                             | Position 8<br>Diaphragm Material                                                                         | Position 9                                                                                                                                                                             |
|---------------------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------|-------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PD20 - Standard Pump<br>PE20 - Electronic Interface Accessible Pump | E - Conductive Polypropylene<br>P - Polypropylene | F - 2" ANSI/DIN Hybrid Side Flange<br>Y - 2" ANSI/DIN Hybrid Center Flange | E - Conductive Polypropylene*<br>K - PVDF<br>N - Conductive PVDF*<br>P - Polypropylene | S - SS                 | K - PVDF<br>P - Polypropylene | A - Santoprene®<br>C - Hytrel®<br>G - Nitrile<br>T - PTFE<br>V - Viton® | A - Santoprene®<br>C - Hytrel®<br>G - Buna-N<br>L - Long-Life PTFE<br>T - PTFE/Santoprene®<br>V - Viton® | Revision Level<br><b>Position 10 &amp; 11</b><br><b>Specialty Code</b><br>Fluid control options for pump with electronic interface (PE20 model). See complete description on next page |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

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## Accessories

**Air Line Connection Kit** | 66109

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

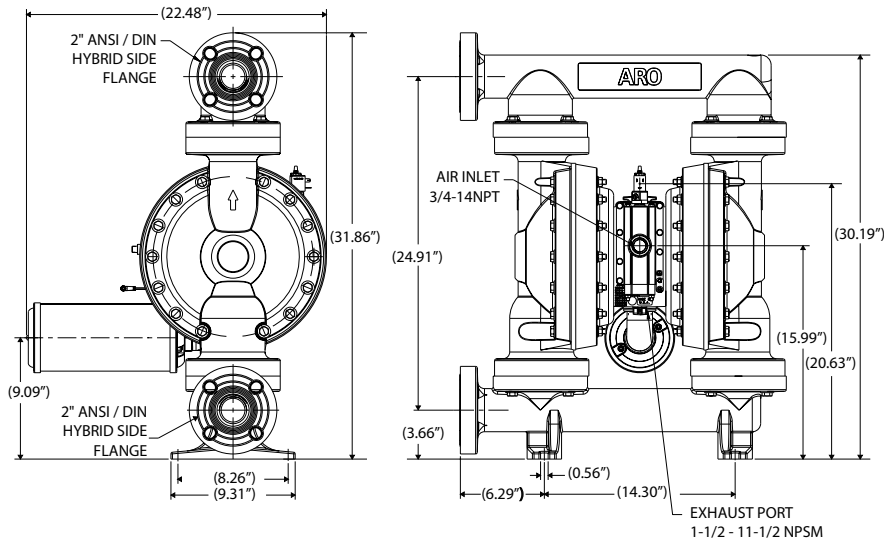
**Diaphragm Failure Detection** | Kit No.67237

**Service Repair Kits** | 637369 (air motor for PD20P), 637373-XXX (fluid section with seats),  
637374-X (major air valve assembly)

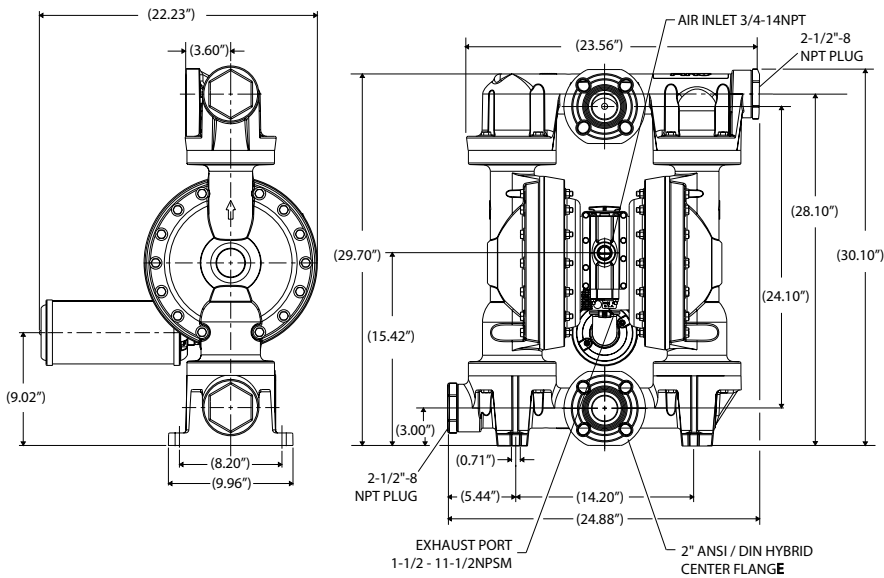
**Flange Connection Kit** | 67341-E20N

## 2" Non-Metallic Dimensions and Flow Charts

### PX20P-FXS-XXX-AXXX, PX20E-FXS-XXX-AXXX



### PX20P-YXS-XXX-AXXX



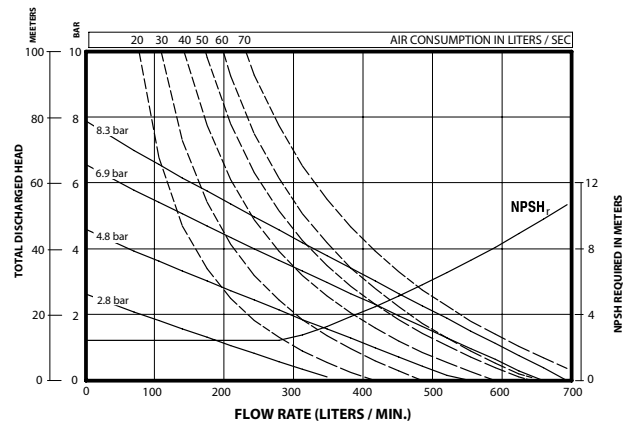
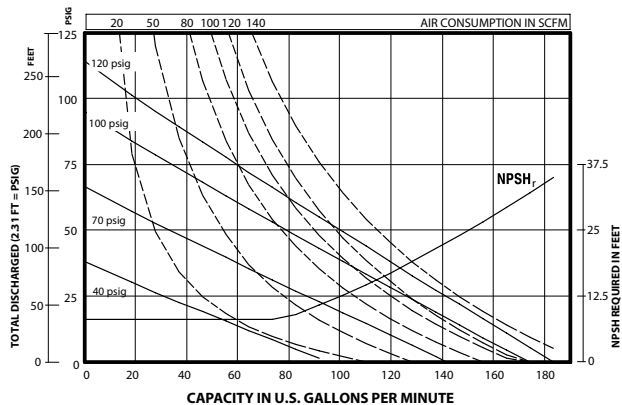
### Ordering Position 10 Specialty Code 1 (Blank if no Specialty Code)

- 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)
- P - Ported Motor (No major valve provided)

### 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\*
- H - End of Stroke/Leak Detection ATEX/IECex\*
- L - Leak Detection
- M - Leak Detection ATEX/IECex/NEC/CEC\*
- O - No Option
- R - End of Stroke Feedback NEC / CEC\*
- T - End of Stroke Feedback + Leak Detection NEC / CEC\*

\* Acceptable for use in hazardous locations.  
- NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22



Performance based on an elastomeric fitted pump (PX20P-FXS-XXX), flooded suction with water at ambient conditions.  
Due to varying materials of construction, assembly configurations and operating conditions, published data is for reference only

# 3" Non-Metallic Models

## EXP SERIES PUMPS

ARO® EXP 3" non-metallic pumps achieve flow rates of up to 285 GPM (1079 LPM) and offer a wide array of material and porting configurations. 3" 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):                       | 285 (1079)                                     |
| Displacement per cycle Gallons (Liters): | 2.80 (10.6)                                    |
| Air Inlet (Female):                      | 3/4 - 14 N.P.T.                                |
| Fluid Inlet/Outlet:                      | 3" ANSI/DIN flange                             |
| Max. operating pressure psi (bar):       | 120 (8.3)                                      |
| Suspended solids max. dia. in. (mm):     | 3/8" (9.5)                                     |
| Weight lbs (kg):                         | Polypropylene 170 (77.11)<br>PVDF 242 (109.77) |
| Maximum dry suction lift ft (m):         | 20.5 (6.3)                                     |
| Sound Level:                             | 70 PSI 60 Cycles/Min 85.0 db(A)                |
| Muffler Included:                        | 67389                                          |

**UPGRADE**  
PUMP FOR REMOTE  
ACTUATION CAPABILITY



## Ordering

| Position | 1    | 2 |   | 3 | 4 | 5 |   | 6 | 7 | 8 |   | 9 | 10 | 11 |
|----------|------|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Example: | PX30 | P | - | X | X | S | - | X | X | X | - | A | X  | X  |

| Position 1<br>Model<br>Series                                        | Position 2<br>Center<br>Section | Position 3<br>Connections                             | Position 4<br>Wetted<br>Parts | Position 5<br>Hardware | Position 6<br>Seat<br>Material | Position 7<br>Ball<br>Material                                          | Position 8<br>Diaphragm<br>Material                                                        | Position 9                                                                                                                                                                         |
|----------------------------------------------------------------------|---------------------------------|-------------------------------------------------------|-------------------------------|------------------------|--------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PD30 - Standard Pump<br>PE30† - Electronic Interface Accessible Pump | P - Polypropylene               | D - 3" ANSI 4-hole Flange<br>F - 3" DIN 8-hole Flange | K - PVDF<br>P - Polypropylene | S - SS                 | K - PVDF<br>P - Polypropylene  | A - Santoprene®<br>C - Hytrel®<br>G - Nitrile<br>T - PTFE<br>V - Viton® | A - Santoprene®<br>C - Hytrel®<br>G - Buna-N<br>L - Long-Life PTFE<br>T - PTFE/Santoprene® | Revision Level<br><br><b>Position 10 &amp; 11<br/>Specialty Code</b><br>Fluid control options for pump with electronic interface (PE30 model). See complete description on page 27 |

Hytrel® is a registered trademark of DuPont company, Santoprene® is registered trademark of Monsanto and Viton® is a registered trademark of ExxonMobil

## Accessories

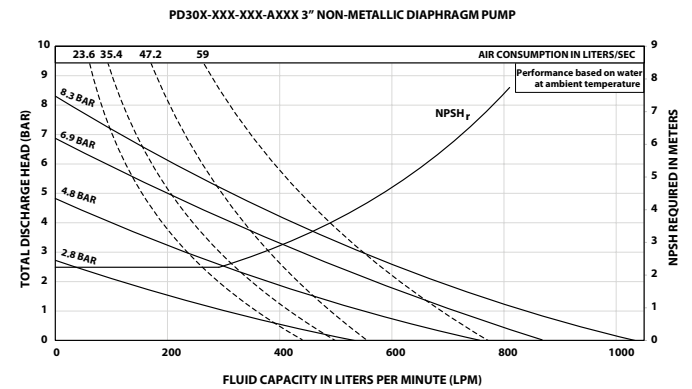
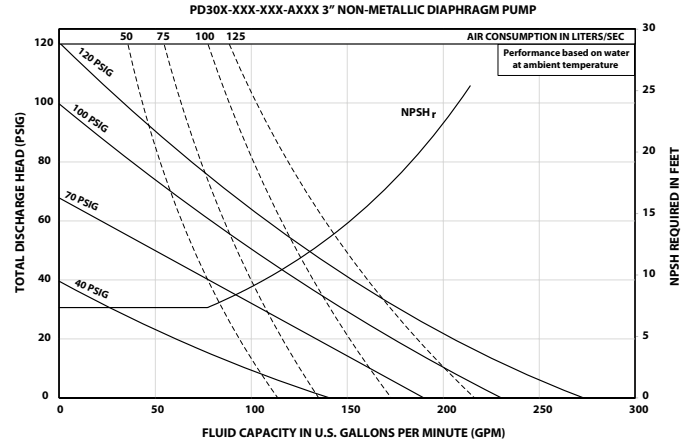
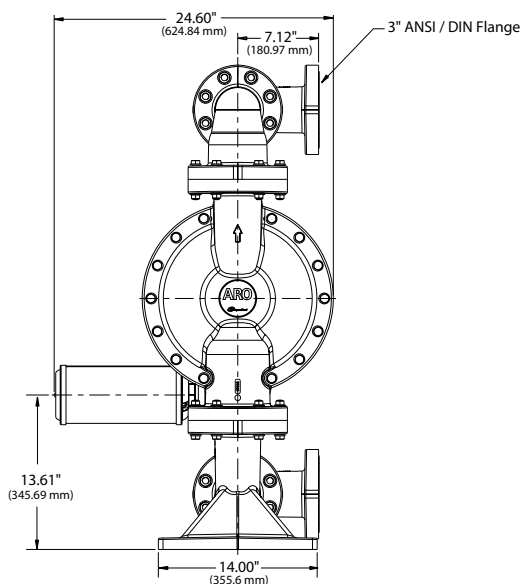
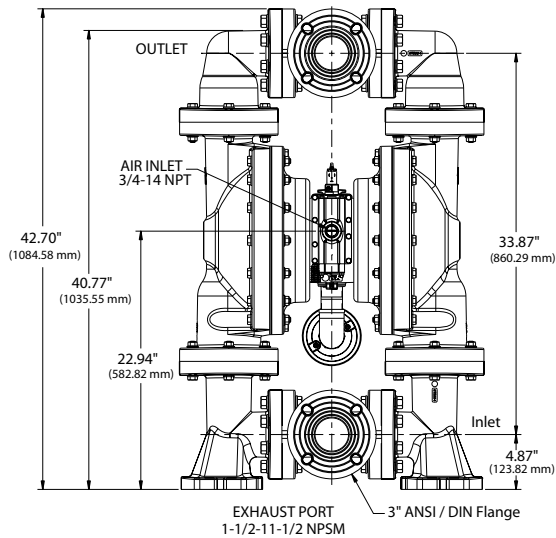
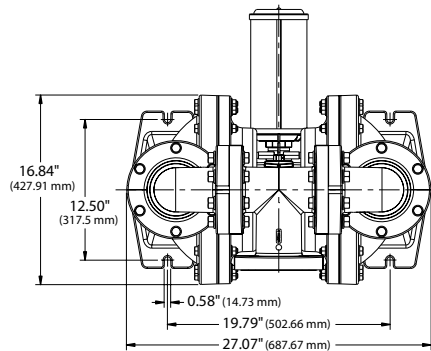
**Air Line Connection Kit** | 66109

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

**Diaphragm Failure Detection** | Kit No.67237

**Service Repair Kits** | 637369 (air motor), 637447-XXX (fluid section with seats), 637374-X (major air valve assembly)

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



Performance based on an elastomeric fitted pump, flooded suction with water at ambient conditions. Due to varying materials of construction, assembly configurations and operating conditions, published data is for reference only

#### Ordering Position 10

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

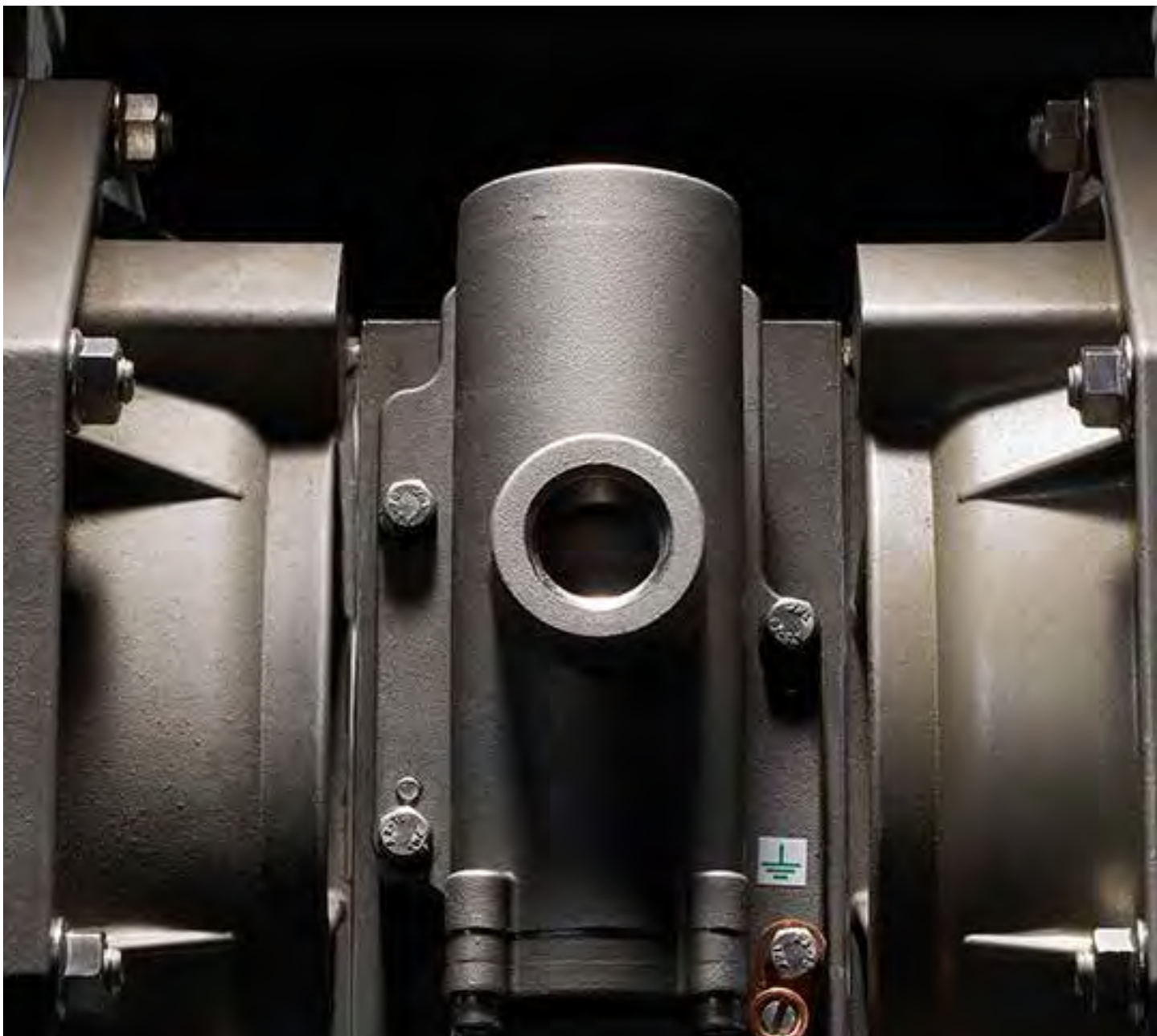
|                     |                                            |
|---------------------|--------------------------------------------|
| A - Solenoid 120VAC | G - Solenoid 12VDC ATEX/IECex*             |
| B - Solenoid 12VDC  | H - Solenoid 24VDC ATEX/IECex*             |
| C - Solenoid 240VAC | J - 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)     |
|                     | P - Ported Motor (No major valve provided) |

#### 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*                | O - No Option                                          |
| H - End of Stroke/Leak Detection ATEX/IECex* | R - End of Stroke Feedback NEC / CEC*                  |
|                                              | T - End of Stroke Feedback + Leak Detection NEC / CEC* |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22



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## 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

## All 1/2" - 3" Metallic PD pumps are now upgradeable!

- PD pumps are manufactured such that solenoid operation, flow monitoring and leak detection functionality can be added at a later date. As your processes mature, this capability allows you to enhance manually operated processes to incorporate additional control and monitoring capabilities. Simply remove two plugs and replace with a proximity sensor and (or) leak detector. Call ARO® Technical Service to learn more. Once upgraded, these components can also be integrated with the ARO® controller for seamless integration.

**UPGRADE**  
PUMP FOR REMOTE  
ACTUATION CAPABILITY



| 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 (198)                                                                                                                                                  | 123 (466)                                                                                                                                                   | 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 - 14 NPTF -1 Rp (1/2 - 14 BSP)                                                                          | 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<br>Stainless Steel                                                                                 | Aluminum                                        | Aluminum<br>Cast Iron<br>Stainless Steel<br>Hastelloy®                                                                                                    | Aluminum<br>Cast Iron<br>Stainless Steel<br>Hastelloy®                                                                                                      | Aluminum<br>Cast Iron<br>Stainless Steel<br>Hastelloy®                                                                                       | Aluminum<br>Cast Iron<br>Stainless Steel<br>Hastelloy®                                                       |
| Pump Weight lbs (kg)                 | 10.4 (4.7) PD05A-XAS-X-B<br>16.6 (7.5) PD05A-XSS-X-B<br>8.0 (3.7) PD05R-XAS-X-B<br>14.3 (6.5) PD05R-XSS-X-B | 8.74 (3.96)                                     | 20.7 (9.4) Alum<br>35.2 (16.0) CI<br>38.2 (17.3) SS<br>39.6 (18.0) Hastelloy add<br>4.65 (2.11) for Alum. air motor, add<br>11.09 (5.03) for SS air motor | 37.7 (17.1) Alum.<br>73.2 (33.2) CI<br>61.2 (27.8) SS<br>86.9 (39.4) Hastelloy add<br>3.08 (1.40) for Alum. air motor, add<br>14.39 (6.53) for SS air motor | 64 (29) Alum.<br>133 (60) CI<br>122 (55.3) SS Threaded<br>114 (51.7) SS Flange<br>122 (55.3) Hastelloy add<br>34 (15) for CI or SS air motor | 113 (51.3) Alum.<br>197 (89.4) CI<br>203 (92.1) SS<br>203 (92.1) Hastelloy add<br>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         | P39124-600                                                                                                  | P39124-600                                      | P39224-600                                                                                                                                                | P39344-600                                                                                                                                                  | P39444-600                                                                                                                                   | P39454-610                                                                                                   |
| Airline Kit                          | 66073-1                                                                                                     | 66073-1                                         | 66073-2                                                                                                                                                   | 66084-1                                                                                                                                                     | 66109                                                                                                                                        | 66109                                                                                                        |

Compact Series Diaphragm Pumps

EXP Series Diaphragm Pumps

Hastelloy-C® is a registered trademark of Haynes International, Inc.

# 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.

**UPGRADE**  
PUMP FOR REMOTE  
ACTUATION CAPABILITY

|                                  |                                                                                                                     |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------|
| 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)<br>1/4 - 18 N.P.T.F. - 1 (PD05A-X-X-B models)                        |
| Fluid Inlet/Outlet:              | 1/2 - 14 N.P.T.F. - 1<br>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)<br>PD05A-XSS-XXX-B 16.6 (7.5)<br>PD05R-XAS-XXX-B 8.0 (3.7)<br>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                                                                                     |



PD05A-ASS-FAA-B



PD05R-ASS-PTT-B

## 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<br>Model Series                   | Position 2<br>Center Section       | Position 3<br>Connections                                        | Position 4<br>Wetted Parts            | Position 5<br>Hardware | Position 6<br>Seat Material                              | Position 7<br>Ball Material                                                                                        | Position 8<br>Diaphragm Material                                                                                                  | Position 9                                                                                                                                                                         |
|----------------------------------------------|------------------------------------|------------------------------------------------------------------|---------------------------------------|------------------------|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D - Standard<br>E - Remote Actuation Capable | A - Aluminum*<br>R - Polypropylene | A - 1/2 - 14 N.P.T.F. - 1<br>B - Rp 1/2 (1/2 - 14 BSP, parallel) | A - Aluminum*<br>S - Stainless Steel* | S - Stainless Steel    | F - Aluminum<br>P - Polypropylene<br>S - Stainless Steel | A - Santoprene®<br>C - Hytrel®<br>G - Nitrile<br>S - Stainless Steel<br>T - PTFE<br>U - Polyurethane<br>V - Viton® | A - Santoprene®<br>C - Hytrel®<br>G - Nitrile<br>L - Long-Life PTFE<br>T - PTFE/<br>Santoprene®<br>U - Polyurethane<br>V - Viton® | Revision Level<br><br><b>Position 10 &amp; 11 Specialty Code</b><br><br>Fluid control options for pump with electronic interface (PE05 model). See complete description on page 31 |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

Hytrel® is a registered trademark of DuPont company, Santoprene® is registered trademark of Monsanto and Viton® is a registered trademark of ExxonMobil

## Accessories

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

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

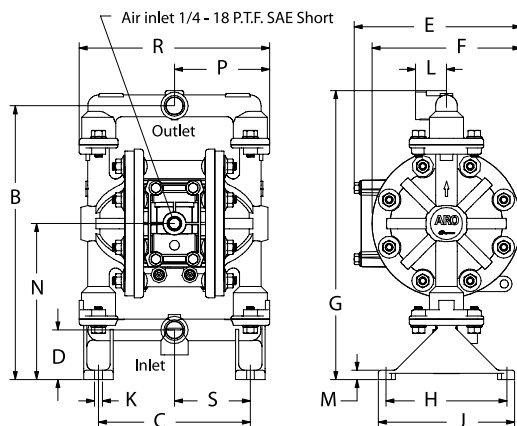
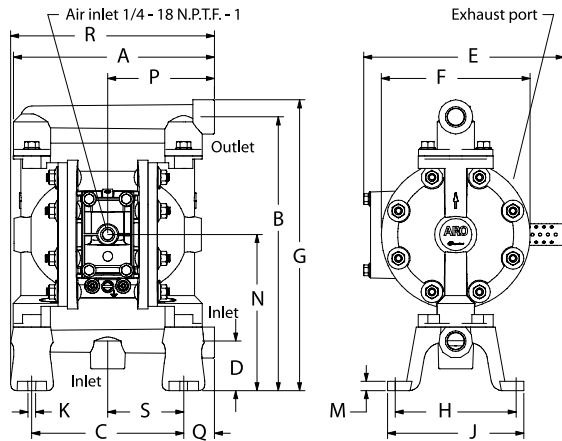
**Wall Mount Bracket Kit** | 76763

**Optional Muffler** | 93110 used with 637438 kit

**Service Repair Kits** | 637428 (air section)  
637427-XX (fluid section)



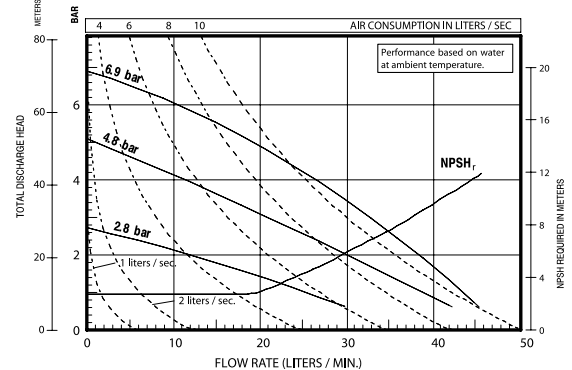
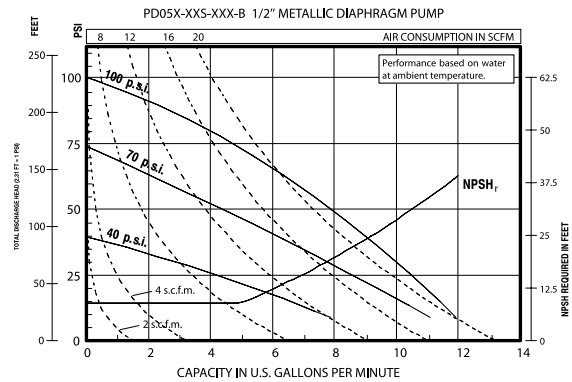
## 1/2" Metallic Dimensions and Flow Charts



### DIMENSIONS

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

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



Performance based on an elastomeric fitted pump, flooded suction with water at ambient conditions. Due to varying materials of construction, assembly configurations and operating conditions, published data is for reference only

### 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)     |
|                     | P - Ported Motor (No major valve provided) |

### 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*                | O - No Option                                          |
| H - End of Stroke/Leak Detection ATEX/IECex* | R - End of Stroke Feedback NEC / CEC*                  |
|                                              | T - End of Stroke Feedback + Leak Detection NEC / CEC* |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

# 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.

**UPGRADE**  
PUMP FOR REMOTE  
ACTUATION CAPABILITY

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| 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<br>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)                 | PX07R 8.74 (3.96)<br>PX07A 11.0 (4.99)                |
| Maximum dry suction lift: ft (m) | 15 (4.5)                                              |
| Sound Level:                     | 70 PSI 60 Cycles/Min 75 db(A)                         |



PD07R-AAS-FAA

## Ordering

| Position | 1    | 2 |   | 3 | 4 | 5 |   | 6 | 7 | 8 |   | 9 | 10 | 11 |
|----------|------|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Example: | PX07 | X | - | X | X | S | - | X | X | X | - | A | X  | X  |

| Position 1<br>Model<br>Series                     | Position 2<br>Center<br>Section    | Position 3<br>Connections                                     | Position 4<br>Wetted<br>Parts | Position 5<br>Hardware | Position 6<br>Seat<br>Material    | Position 7<br>Ball<br>Material             | Position 8<br>Diaphragm<br>Material                              | Position 9                                                                                                                                                                         |
|---------------------------------------------------|------------------------------------|---------------------------------------------------------------|-------------------------------|------------------------|-----------------------------------|--------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D - Standard Pump<br>E - Remote Actuation Capable | A - Aluminum*<br>R - Polypropylene | A - 3/4 - 14 N.P.T.F.-2<br>B - Rp 3/4 (3/4 -14 BSP, parallel) | A - Aluminum*                 | S - SS                 | F - Aluminum<br>P - Polypropylene | A - Santoprene®<br>C - Hytrel®<br>T - PTFE | A - Santoprene®<br>C - Hytrel®<br>L - Long-Life PTFE<br>T - PTFE | Revision Level<br><br><b>Position 10 &amp; 11 Specialty Code</b><br><br>Fluid control options for pump with electronic interface (PE07 model). See complete description on page 33 |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

Hytrel® is a registered trademark of DuPont company, Santoprene® is registered trademark of Monsanto and Viton® is a registered trademark of ExxonMobil

## Accessories

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

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

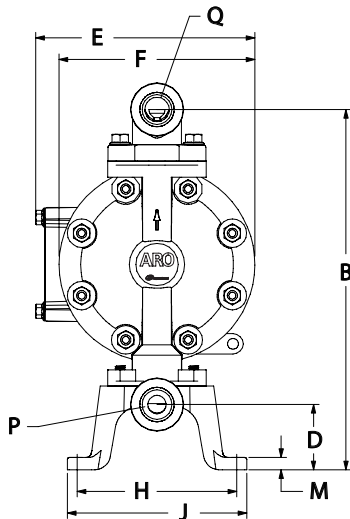
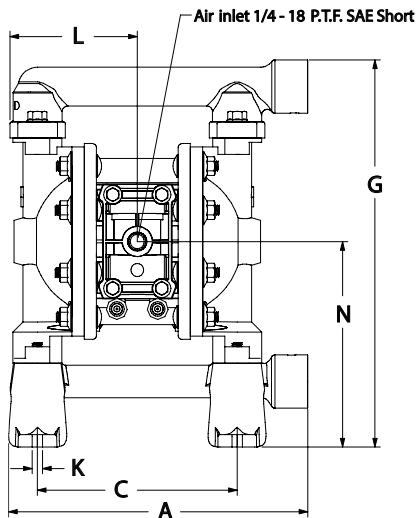
**Wall Mount Bracket Kit** | 76763

**Optional Muffler** | 93110 used with 637438 kit

**Service Repair Kits** | 637428 (air section)  
637427-XX (fluid section)



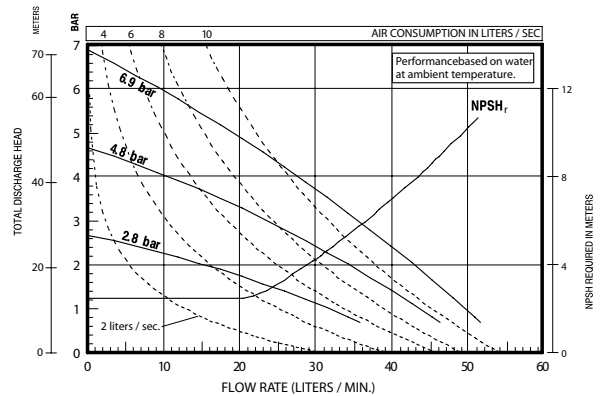
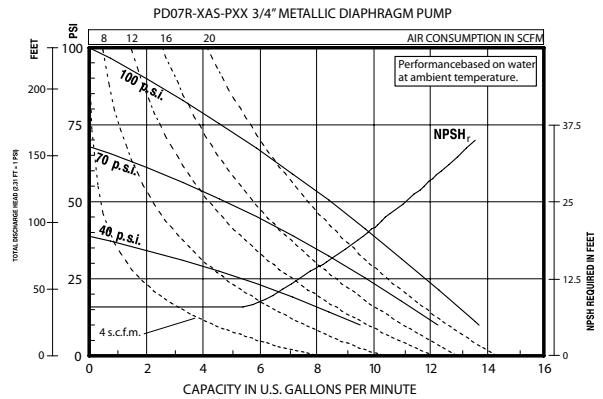
### 3/4" Metallic Dimensions and Flow Charts



#### DIMENSIONS

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

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



Performance based on an elastomeric fitted pump, flooded suction with water at ambient conditions. Due to varying materials of construction, assembly configurations and operating conditions, published data is for reference only

#### 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)     |
|                     | P - Ported Motor (No major valve provided) |

#### 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*                | O - No Option                                          |
| H - End of Stroke/Leak Detection ATEX/IECex* | R - End of Stroke Feedback NEC / CEC*                  |
|                                              | T - End of Stroke Feedback + Leak Detection NEC / CEC* |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

# 1" Metallic Models

## EXP SERIES PUMPS

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.

**UPGRADE**  
PUMP FOR REMOTE  
ACTUATION CAPABILITY

|                                                       |                                      |
|-------------------------------------------------------|--------------------------------------|
| 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-ASX-XXX, 38.2 (17.3)           |
|                                                       | PX10R-BSX-XXX                        |
|                                                       | PX10R-FSX-XXX 43.9 (19.9)            |
| 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         |
| Muffler Included:                                     | 93110                                |



PD10A-AAP-XXX



PD10A-FSS-XXX

## Ordering

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

| Position 1<br>Model<br>Series                                                  | Position 2<br>Center<br>Section                                    | Position 3<br>Connections                                                                      | Position 4<br>Wetted<br>Parts                                                 | Position 5<br>Hardware        | Position 6<br>Seat<br>Material                                                                                                   | Position 7<br>Ball<br>Material                                                        | Position 8<br>Diaphragm<br>Material                                                                              | Position 9                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PD10- Standard<br>Pump<br>PE10 - Electronic<br>Interface<br>Accessible<br>Pump | A - Aluminum*<br>R - Poly-<br>propylene<br>S - Stainless<br>Steel* | A - NPTF Thread<br>B - BSP Thread<br>F - 1" ANSI/DIN<br>Hybrid End<br>Flange with<br>Flat Face | A - Aluminum*<br>C - Cast Iron<br>H - Hastelloy-C*<br>S - Stainless<br>Steel* | P - Plated<br>Steel<br>S - SS | A - Santoprene®<br>C - Hytrel®<br>E - Carbon Steel<br>F - Aluminum<br>G - Nitrile<br>H - 440 SS<br>L - Hastelloy-C<br>S - 316 SS | A - Santoprene®<br>C - Hytrel®<br>G - Nitrile<br>S - 316 SS<br>T - PTFE<br>V - Viton® | A - Santoprene®<br>C - Hytrel®<br>G - Buna- N<br>L - Long-Life<br>PTFE<br>T - PTFE/<br>Santoprene®<br>V - Viton® | Revision Level<br><br><b>Position<br/>10 &amp; 11<br/>Specialty Code</b><br><br>Fluid control<br>options for<br>pump with<br>electronic interface<br>(PE10 model).<br>See complete<br>description on<br>back page |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

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## Accessories

**Air Line Connection Kit** | 66073-2 (Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)

**Diaphragm Failure Detection** | 67237

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

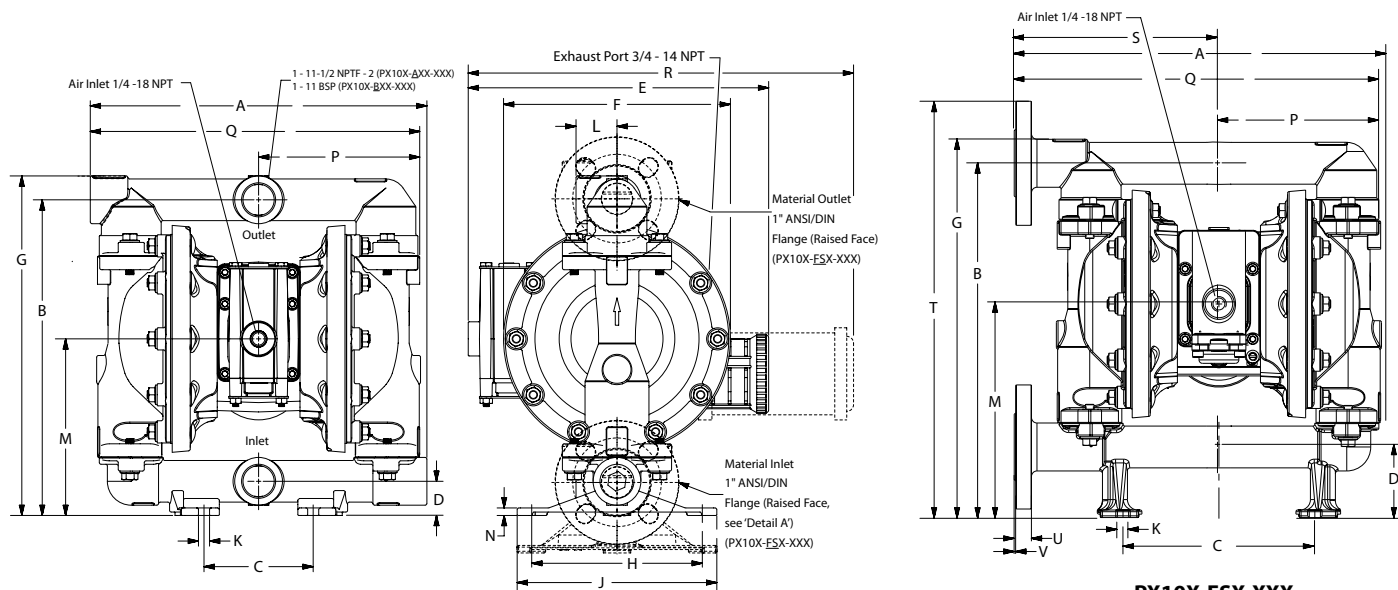
**Service Repair Kits** | 637397 (air motor for PX10A, PX10R and PX10S),

637401-XXX (fluid section with seats)

637395-X (major air valve assembly)

# 1" Metallic Dimensions and Flow Charts

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



A - 12.34" (313.4 mm)  
B - 11.56" (293.6 mm)  
C - 4" (101.6 mm)  
D - 1.25" (31.7 mm)

E - see below  
F - see below  
G - 12.43" (315.7 mm)  
H - 6.25" (158.7 mm)

J - 7.31" (185.6 mm)  
K - 0.4" (10.1 mm)  
L - 1.5" (38.1 mm)  
M - 6.46" (164.0 mm)

N - see below  
P - 5.84" (148.3 mm)  
Q - 12" (304.8 mm)  
R - see below

PX10A-XXX-XXX  
PX10R-XXX-XXX  
PX10S-XXX-XXX

"E"  
11.09" (281.6 mm)

"F"  
8.12" (206.2 mm)  
8.31" (211.0 mm)  
8.18" (207.7 mm)

"R"  
14.03" (356.3 mm)  
13.84" (351.5 mm)

"N"  
PX10X-XAX-XXX 0.25" (6.3 mm)  
PX10X-XCX-XXX 0.28" (7.1 mm)  
PX10X-XHX-XXX 0.28" (7.1 mm)  
PX10X-XSX-XXX 0.28" (7.1 mm)

## PX10X-FSX-XXX

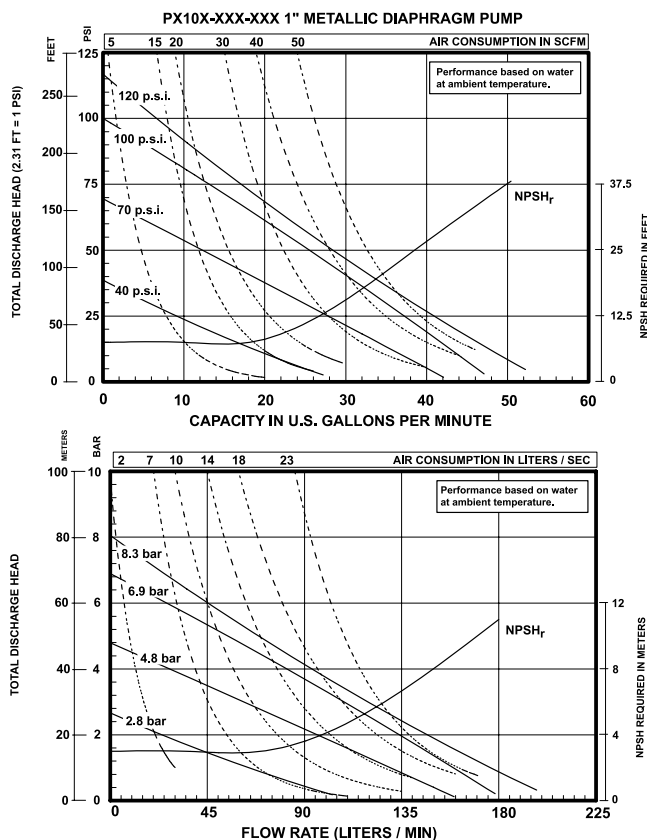
A - 13.37" (339.5 mm)  
B - 12.92" (328.1 mm)  
C - 7" (177.8 mm)

D - 2.57" (65.2 mm)  
G - 13.80" (350.5 mm)  
K - 0.4" (10.1 mm)

M - 7.79" (197.8 mm)  
N - 9/32" (7.1 mm)  
P - 5.83" (148.0 mm)

Q - 13.30" (337.8 mm)  
R - 13.83" (351.2 mm)

T - 15.19" (385.8 mm)  
U - 0.63" (16.0 mm)  
V - 0.60" (15.2 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)     |
|                     | P - Ported Motor (No major valve provided) |

## 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*                | O - No Option                                          |
| H - End of Stroke/Leak Detection ATEX/IECex* | R - End of Stroke Feedback NEC / CEC*                  |
|                                              | T - End of Stroke Feedback + Leak Detection NEC / CEC* |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

Performance based on an elastomeric fitted pump, flooded suction with water at ambient conditions. Due to varying materials of construction, assembly configurations and operating conditions, published data is for reference only

# 1-1/2" Metallic Models

## EXP SERIES PUMPS

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 and gas, chemical and petrochemical markets.

**UPGRADE**  
PUMP FOR REMOTE  
ACTUATION CAPABILITY

|                                          |                                                                                                                              |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Ratio:                                   | 1:1                                                                                                                          |
| Maximum GPM (LPM):                       | 123 (466)                                                                                                                    |
| 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)<br>1-1/2" ANSI/DIN hybrid 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)<br>PX15R-XCX-XXX 73.2 (33.2)<br>PX15R-XXS-XXX 61.2 (27.8)<br>PX15R-XHX-XXX 86.9 (39.4)             |
|                                          | Note: add 2.14 lbs (0.97 kg) for aluminum air motor section<br>add 18.14 lbs (8.23 kg) for stainless steel air motor section |
| Maximum dry suction lift ft(m):          | 14 (4.2)                                                                                                                     |
| Sound Level:                             | 70 PSI 50 Cycles/Min 81.0 db(A)                                                                                              |
| Muffler Included:                        | 350-568                                                                                                                      |



## Ordering

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

| Position 1<br>Model<br>Series                                       | Position 2<br>Center<br>Section                            | Position 3<br>Connections                                                                                                           | Position 4<br>Wetted<br>Parts                                              | Position 5<br>Hardware                  | Position 6<br>Seat<br>Material                                                                                                                             | Position 7<br>Ball<br>Material                                                        | Position 8<br>Diaphragm<br>Material                                                                      | Position 9                                                                                                                                                                             |
|---------------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PD15 - Standard Pump<br>PE15 - Electronic Interface Accessible Pump | A - Aluminum*<br>R - Polypropylene<br>S - Stainless Steel* | A - NPTF Thread<br>B - BSP Thread<br>Y <sup>†</sup> - 1-1/2" ANSI/DIN Hybrid Center Flange<br><br><sup>†</sup> Stainless Steel Only | A - Aluminum*<br>C - Cast Iron<br>H - Hastelloy-C*<br>S - Stainless Steel* | P - Plated Steel<br>S - Stainless Steel | A - Santoprene®<br>C - Hytrel®<br>E - Carbon Steel<br>F - Aluminum<br>G - Nitrile<br>H - 440 Stainless Steel<br>L - Hastelloy-C<br>S - 316 Stainless Steel | A - Santoprene®<br>C - Hytrel®<br>G - Nitrile<br>S - 316 SS<br>T - PTFE<br>V - Viton® | A - Santoprene®<br>C - Hytrel®<br>G - Buna-N<br>L - Long-Life PTFE<br>T - PTFE/Santoprene®<br>V - Viton® | Revision Level<br><br><b>Position 10 &amp; 11<br/>Specialty Code</b><br><br>Fluid control options for pump with electronic interface (PE15 model). See complete description on page 37 |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

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## Accessories

**Air Line Connection Kit** | 66084-1

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

**Diaphragm Failure Detection** | 67237

**Service Repair Kits** | 637389 (air motor for PX15X), 637375-XXX (fluid section with seats), 637390-X (major air valve assembly)

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

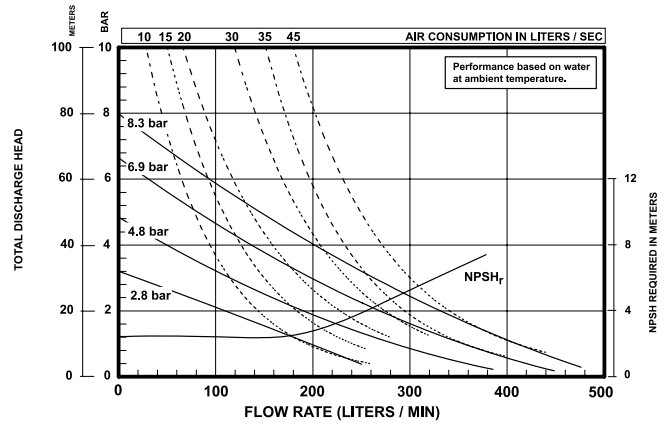
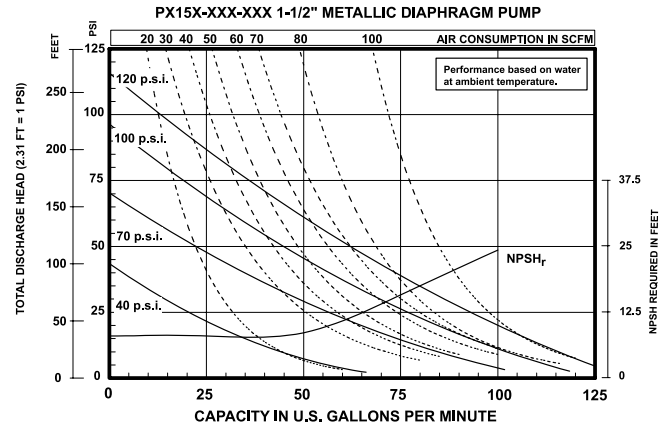
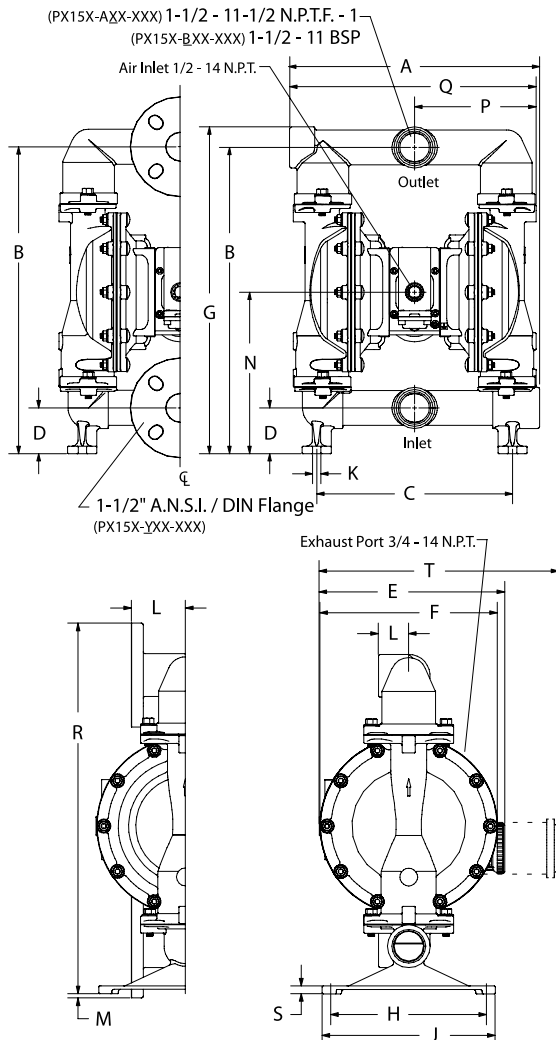
A - see below  
B - 18-3/8" (466.7 mm)  
C - 11-3/4" (298.5 mm)  
D - 2-3/4" (69.9 mm)  
E - see below  
F - 10-1/4" (260.4 mm)  
G - 19-5/8" (498.1 mm)  
H - 9" (228.6 mm)  
J - 10" (254.0 mm)  
K - 1-1/2" (12.7 mm)  
L - see below  
M - 1/4" (6.4 mm)  
N - 9-11/16" (246.0 mm)  
P - see below  
Q -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

|                                     | "A"                  | "L"              |
|-------------------------------------|----------------------|------------------|
| PX15X- <u>X</u> AX-XXX              | 14-7/8" (377.8 mm)   | 1-3/4" (44.5 mm) |
| PX15X- <u>X</u> CX-XXX              | 14-5/8" (371.5 mm)   | 1-3/4" (44.5 mm) |
| PX15X- <u>X</u> HX-XXX              | 14-9/16" (370.0 mm)  | 3-1/8" (79.4 mm) |
| PX15X- <u>A</u> SX-XXX, <u>BS</u> X | 14-25/32" (375.5 mm) | 1-3/4" (44.5 mm) |
| PX15X- <u>Y</u> SX-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) |



Performance based on an elastomeric fitted pump, flooded suction with water at ambient conditions. Due to varying materials of construction, assembly configurations and operating conditions, published data is for reference only

### 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)     |
|                     | P - Ported Motor (No major valve provided) |

### 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*                | O - No Option                                          |
| H - End of Stroke/Leak Detection ATEX/IECex* | R - End of Stroke Feedback NEC / CEC*                  |
|                                              | T - End of Stroke Feedback + Leak Detection NEC / CEC* |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

# 2" Metallic Models

## EXP SERIES PUMPS

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 and gas, chemical and petrochemical markets.

**UPGRADE**  
PUMP FOR REMOTE  
ACTUATION CAPABILITY

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" ANSI/DIN hybrid 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



| PD20A | Air Motor | Connection | Wetted | Pump Wgt     | PD20R | Air Motor | Connection | Wetted | Pump Wgt     | PD20S | Air Motor | Connection | Wetted | Pump Wgt     |
|-------|-----------|------------|--------|--------------|-------|-----------|------------|--------|--------------|-------|-----------|------------|--------|--------------|
|       | AL        | Thread     | AL     | 91.4 (41.5)  |       | Poly      | Thread     | CI     | 165 (74.8)   |       | 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<br>Model Series                                          | Position 2<br>Center Section                               | Position 3<br>Connections                                                                                                  | Position 4<br>Wetted Parts                                                 | Position 5<br>Hardware     | Position 6<br>Seat Material                                                                                                                        | Position 7<br>Ball Material                                                           | Position 8<br>Diaphragm Material                                                                         | Position 9                                                                                                                                                                         |
|---------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PD20 - Standard Pump<br>PE20 - Electronic Interface Accessible Pump | A - Aluminum*<br>R - Polypropylene<br>S - Stainless Steel* | A - NPTF Thread<br>B - BSP Thread<br>F <sup>†</sup> - 2" ANSI/DIN Hybrid Center Flange<br><br>† Stainless Steel Pumps Only | A - Aluminum*<br>C - Cast Iron<br>H - Hastelloy-C*<br>S - Stainless Steel* | P - Plated Steel<br>S - SS | A - Santoprene®<br>C - Hytrel®<br>E - Carbon Steel<br>F - Aluminum<br>G - Nitrile<br>H - 440 SS<br>K - Kynar/PVDF<br>L - Hastelloy-C<br>S - 316 SS | A - Santoprene®<br>C - Hytrel®<br>G - Nitrile<br>S - 316 SS<br>T - PTFE<br>V - Viton® | A - Santoprene®<br>C - Hytrel®<br>G - Buna-N<br>L - Long-Life PTFE<br>T - PTFE/Santoprene®<br>V - Viton® | Revision Level<br><b>Position 10 &amp; 11<br/>Specialty Code</b><br><br>Fluid control options for pump with electronic interface (PE20 model). See complete description on page 39 |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

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## Accessories

**Air Line Connection Kit** | 66109

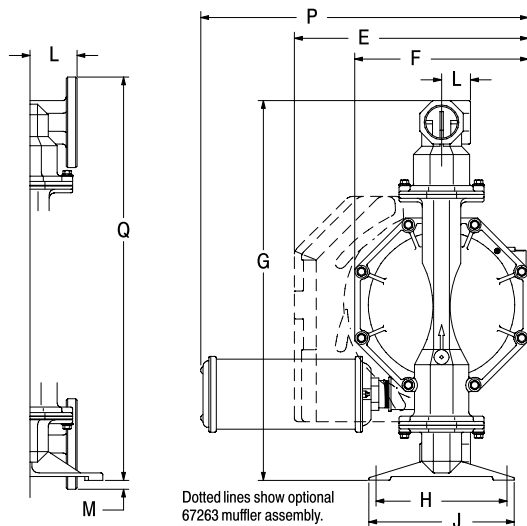
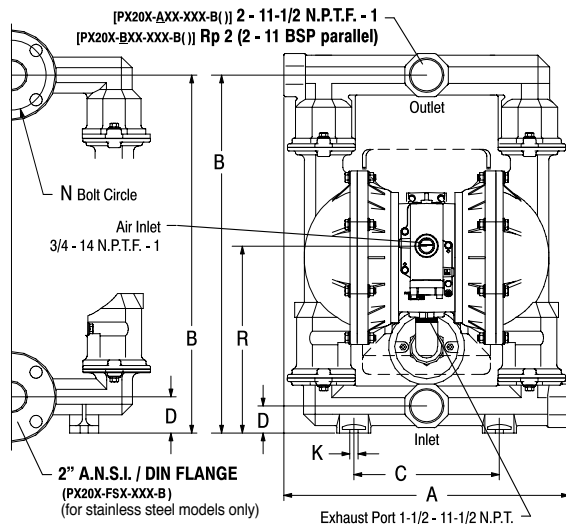
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)

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

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

**Service Repair Kits** | 637369 (air motor for PX20R and PX20Y), 637421 (air motor for PX20A and PX20S), 637309-XXX (fluid section with seats), 637374-X (major air valve assembly)

## 2" Metallic Dimensions and Flow Charts

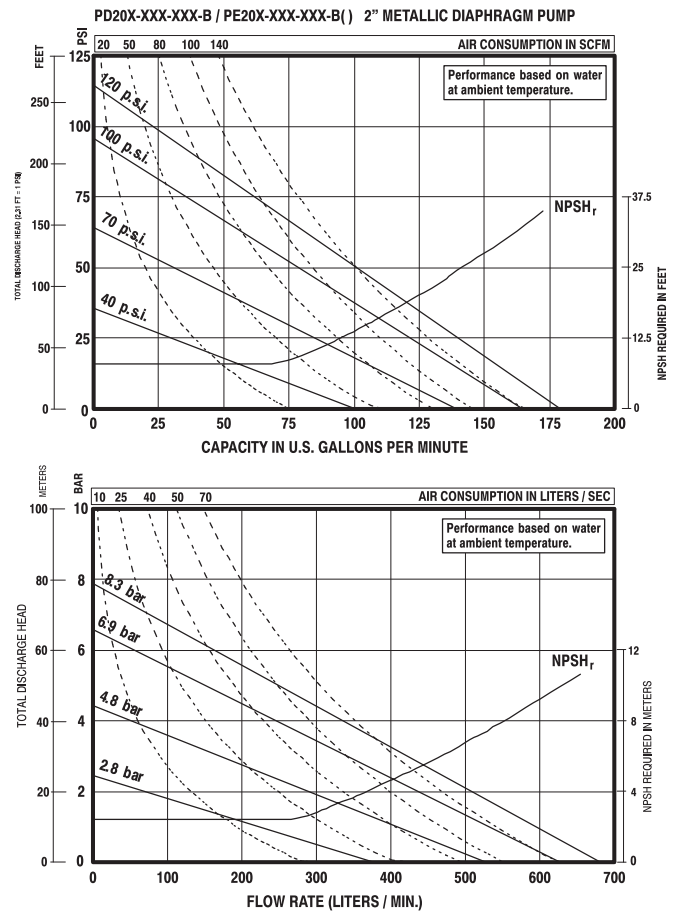


### DIMENSIONS

|   |                     |   |                     |   |                    |
|---|---------------------|---|---------------------|---|--------------------|
| 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)  |



Performance based on an elastomeric fitted pump, flooded suction with water at ambient conditions. Due to varying materials of construction, assembly configurations and operating conditions, published data is for reference only

### 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)     |
|                     | P - Ported Motor (No major valve provided) |

### 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*                | O - No Option                                          |
| H - End of Stroke/Leak Detection ATEX/IECex* | R - End of Stroke Feedback NEC / CEC*                  |
|                                              | T - End of Stroke Feedback + Leak Detection NEC / CEC* |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

# 3" Metallic Models

## EXP SERIES PUMPS

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 and gas, chemical and petrochemical markets.

**UPGRADE**  
PUMP FOR REMOTE  
ACTUATION CAPABILITY

|                                      |                                                                                                                                                                                                   |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ratio:                               | 1:1                                                                                                                                                                                               |
| Maximum GPM (LPM):                   | 275 (1041)                                                                                                                                                                                        |
| Displacement per cycle:              | 2.8 (10.6)                                                                                                                                                                                        |
| @ 100 psi Gallons (Liters)           |                                                                                                                                                                                                   |
| Air Inlet: (Female)                  | 3/4 - 14 N.P.T.F. - 1                                                                                                                                                                             |
| Fluid Inlet / Outlet (Female):       | 3" - 8 N.P.T.F. - 1<br>Rp 3 (3 - 11 BSP ANSI or DIN Center Flange)                                                                                                                                |
| 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)<br>PX30A-XCX-XXX-C 221.1 (100.3)<br>PX30A-AHX-XXX-C 249.4 (113.3)<br>PX30A-ASX-XXX-C 228.3 (103.8)<br>PX30A-FHX-XXX-C 269.4 (122.3)<br>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<br>Model Series                                          | Position 2<br>Center Section                                    | Position 3<br>Connections                                                                                                                                               | Position 4<br>Wetted Parts                                                                                                                    | Position 5<br>Hardware                  | Position 6<br>Seat Material                                                                                                                | Position 7<br>Ball Material                                             | Position 8<br>Diaphragm Material                                                                              | Position 9                                                                                                                                                                         |
|---------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PD30 - Standard Pump<br>PE30 - Electronic Interface Accessible Pump | A - Aluminum*<br>R - Polypropylene w/SS<br>S - Stainless Steel* | A - NPTF Thread<br>B - BSP Thread<br>D <sup>†</sup> - ANSI 4-hole center flange<br>F <sup>†</sup> - DIN 4-hole center flange<br><sup>†</sup> Stainless Steel Pumps Only | A - Aluminum*<br>C - Cast Iron<br>H <sup>††</sup> - Hastelloy-C*<br>S - Stainless Steel*<br><br><sup>††</sup> Not available on PD30R-X models | P - Plated Steel<br>S - Stainless Steel | A - Santoprene®<br>C - Hytrel®<br>E - Carbon Steel<br>F - Aluminum<br>G - Nitrile<br>H - 440 SS<br>K - PVDF<br>L - Hastelloy<br>S - 316 SS | A - Santoprene®<br>C - Hytrel®<br>G - Nitrile<br>T - PTFE<br>V - Viton® | A - Santoprene®<br>C - Hytrel®<br>G - Buna- N<br>L - Long-Life PTFE<br>T - PTFE/<br>Santoprene®<br>V - Viton® | Revision Level<br><br><b>Position 10 &amp; 11 Specialty Code</b><br><br>Fluid control options for pump with electronic interface (PE30 model). See complete description on page 41 |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

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## Accessories

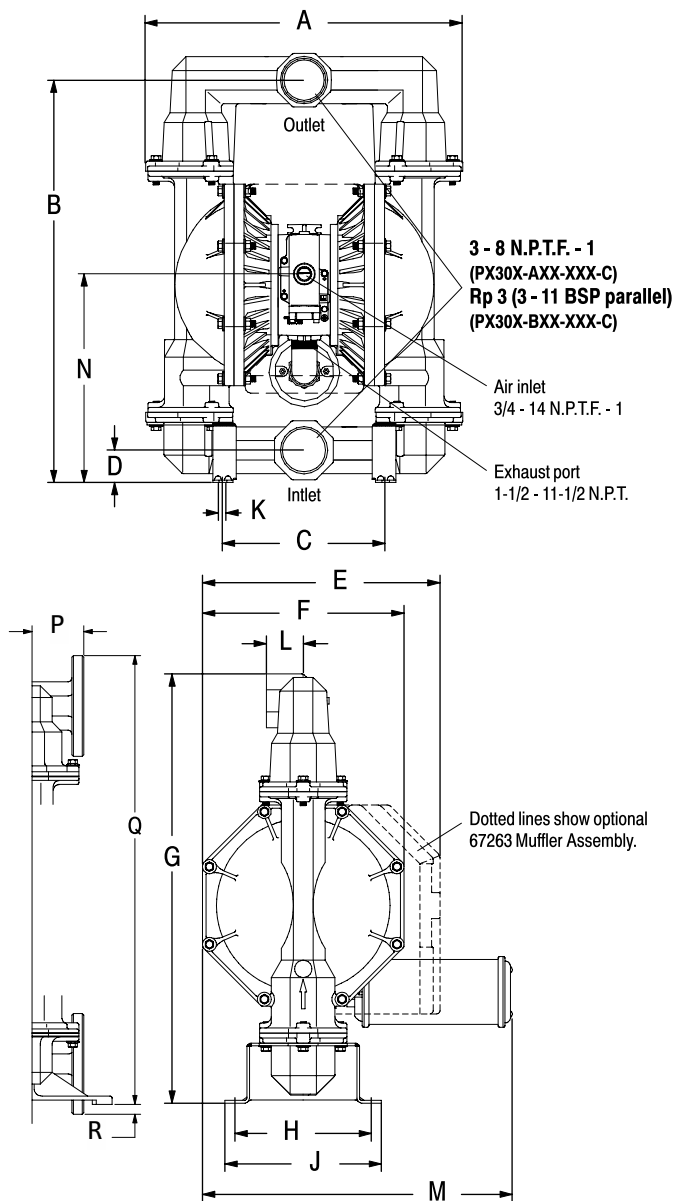
**Air Line Connection Kit** | 66109

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

**Diaphragm Failure Detection** | 67237

**Service Repair Kits** | 637369 (air motor for PX30R), 637421 (air motor for PX30A and PX30S),  
637374-X (major air valve assembly), 637303-XXX (fluid section with seats)

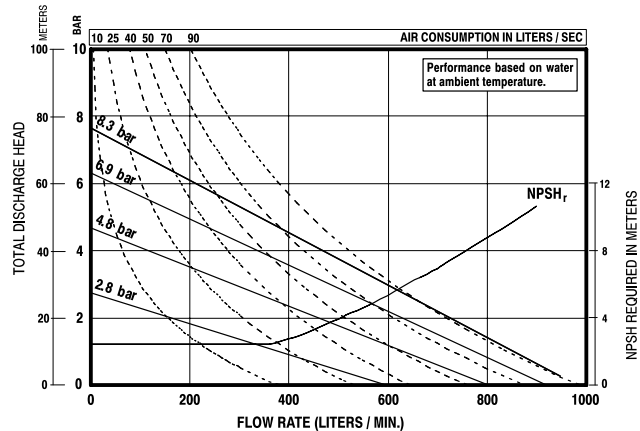
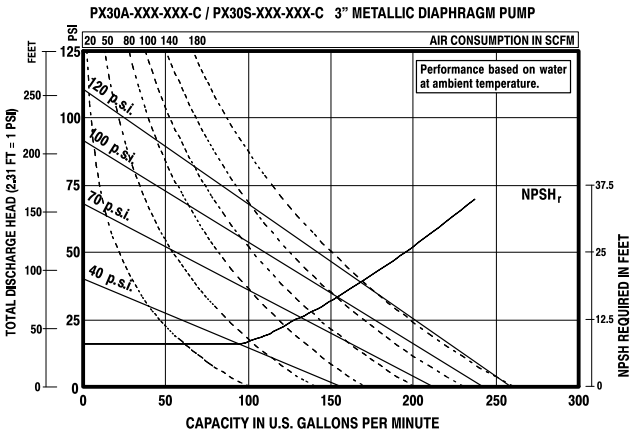
### 3" Metallic Dimensions and Flow Charts



#### DIMENSIONS

|                        |                     |                       |
|------------------------|---------------------|-----------------------|
| A see below            | F 15" (381 mm)      | L 2-3/4" (69.9 mm)    |
| B 30" (761.7 mm)       | G 32" (812.5 mm)    | M 23-3/32" (586.3 mm) |
| C 12-1/16" (306.5 mm)  | H 10-5/32" (258 mm) | N See Below           |
| D see below            | J see below         | P See Below           |
| E 17-11/16" (449.2 mm) | K 9/16" (4.3 mm)    | Q 27-7/8" (708.0 mm)  |
|                        |                     | R 5/8" (5.9 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"                | "p"               |
| 11" (279.4 mm)       | 15-1/2" (393.7 mm) | 2" (50.8 mm)      |
| 11-11/16" (296.1 mm) | 15-1/2" (393.7 mm) | 2" (50.8 mm)      |
| 11-11/16" (296.1 mm) | 16" (406.4 mm)     | 2-3/32" (53.0 mm) |
| 11-11/16" (296.1 mm) | 16" (406.4 mm)     | 2-3/32" (53.0 mm) |
|                      |                    | 3-1/4" (82.6 mm)  |



Performance based on an elastomeric fitted pump, flooded suction with water at ambient conditions. Due to varying materials of construction, assembly configurations and operating conditions, published data is for reference only

#### 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)     |
|                     | P - Ported Motor (No major valve provided) |

#### 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*                | O - No Option                                          |
| H - End of Stroke/Leak Detection ATEX/IECex* | R - End of Stroke Feedback NEC / CEC*                  |
|                                              | T - End of Stroke Feedback + Leak Detection NEC / CEC* |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

# 2" Band Clamp Models - BD Series

## SPECIALTY PUMP

ARO's Band Clamp models features the Quick Knock Down (QKD) compression clamp system to facilitate easier cleaning, service and maintenance. 2" BD Series pumps are often used for transfer, filling and recirculation and batching in Chemical (ink), Marine and General Industrial markets.

|                                          |                                             |
|------------------------------------------|---------------------------------------------|
| Ratio:                                   | 1:1                                         |
| Maximum GPM (LPM):                       | 185 (700)                                   |
| Displacement per cycle Gallons (Liters): | 1.4 (5.3)                                   |
| Air Inlet (Female):                      | 3/4 - 14 NPTF-1                             |
| Fluid Inlet/Outlet:                      | 2-11-1/2 NPTF -1<br>Rp 2(2-11 BSP parallel) |
| Max. operating pressure psi (bar):       | 120 (8.3)                                   |
| Suspended solids max. dia. in. (mm):     | 1/4" (6.4)                                  |
| Weight lbs (kg):                         | 75 (34.02)                                  |
| Maximum dry suction lift ft (m):         | 18 (5.4)                                    |
| Maximum wet suction lift ft(m)           | 31 (9.4)                                    |
| Sound Level: 70 PSI 60 Cycles/Min        | 85.0 db(A)                                  |
| Muffler Included:                        | 67389                                       |



## Ordering

| Position | 1    | 2 |  | 3 | 4 | 5 |  | 6 | 7 | 8 |  | 9 | 10 | 11 |
|----------|------|---|--|---|---|---|--|---|---|---|--|---|----|----|
| Example: | BD20 | X |  | X | A | S |  | X | X | X |  | A | X  | X  |

| Position 1<br>Model<br>Series | Position 2<br>Center<br>Section | Position 3<br>Connections         | Position 4<br>Wetted<br>Parts | Position 5<br>Hardware | Position 6<br>Seat<br>Material                                                   | Position 7<br>Ball<br>Material                                       | Position 8<br>Diaphragm<br>Material                                                 | Position 9                                                                                                                                                                                                     |
|-------------------------------|---------------------------------|-----------------------------------|-------------------------------|------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BD20 - Standard<br>Pump       | A - Aluminum                    | A - NPTF Thread<br>B - BSP Thread | A - Aluminum                  | S - Stainless<br>Steel | A - Santoprene®<br>C - Hytrel®<br>F - Aluminum<br>S - 316L<br>Stainless<br>Steel | A - Santoprene®<br>C - Hytrel®<br>S - Stainless<br>Steel<br>T - PTFE | A - Santoprene®<br>C - Hytrel®<br>K - PTFE<br>Composite<br>T - PTFE/<br>Santoprene® | Revision Level<br><br><b>Position<br/>10 &amp; 11<br/>Specialty Code</b><br><br>Fluid control options<br>for pump with<br>electronic interface<br>(BE20 model).<br>See complete<br>description on<br>next page |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-  
- ATEX: Zone 1&2, 21&22

Santoprene® is a registered trademark of ExxonMobil; Hytrel is a registered trademark of the DuPont Company

## Accessories

**Air Line Connection Kit** | 66109 (Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)

**Service Repair Kits** | 637421 (air motor for BD20A), 637494-XX,  
637374-X (major air valve assembly)

# 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<br>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)<br>PF20A-XCX-SXX-B 166.2 (75.4)<br>PF20A-ASX-SXX-B 166 (75.3)<br>PF20A-BSX-SXX-B 166 (75.3)<br>PF20A-FSX-SXX-B 177.1 (80.3)<br>Add 28.9 lbs (13.1kg) for stainless steel air motor<br>PF20R-XCX-SXX-B 178.7 (81.1)<br>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 |   | 9 |
|----------|------|---|---|---|---|---|---|---|---|---|---|---|
| Example: | PF20 | X | - | X | X | X | - | S | X | X | - | B |

| Position 1<br>Model<br>Series | Position 2<br>Center<br>Section                                          | Position 3<br>Connections                                                 | Position 4<br>Wetted<br>Parts                                                                            | Position 5<br>Hardware                  | Position 6<br>Seat<br>Material | Position 7<br>Flap<br>Material                           | Position 8<br>Diaphragm<br>Material                                      | Position 9     |
|-------------------------------|--------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-----------------------------------------|--------------------------------|----------------------------------------------------------|--------------------------------------------------------------------------|----------------|
| PF20 - Standard Pump          | A - Aluminum*<br>R - Polypropylene w/SS Air Caps<br>S - Stainless Steel* | A - NPTF Thread<br>B - BSP Thread<br>F - 2" ANSI/DIN Hybrid Center Flange | A† - Aluminum*<br>C - Cast Iron<br>S - Stainless Steel<br><br>† Not available with PF20R or PF20Y option | P - Plated Steel<br>S - Stainless Steel | S - Stainless Steel            | A - EPR<br>G - Nitrile<br>U - Polyurethane<br>V - Viton® | A - Santoprene®<br>G - Buna- N<br>T - PTFE/<br>Santoprene®<br>V - Viton® | Revision Level |

\* Acceptable for use in hazardous locations.

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## 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, 3D printing powders and pharmaceuticals

### Replace Manual Powder Processes.

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

|                                         |                                                                                                                                                                                |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Port:                                   | 1", 2" and 3"                                                                                                                                                                  |
| Material:                               | Aluminum and Stainless Steel                                                                                                                                                   |
| Max. operating pressure: psi (bar)      | 50 (3.4)                                                                                                                                                                       |
| Suspended solids maximum: dia. in. (mm) | 1/8" (3.3) PP10A Models,<br>1/4" (6.4) PP20A Models<br>3/8" (9.5) PP30A Models                                                                                                 |
| Weight: lbs (kg)                        | PP10A-XAX-AAA 33.3 (15.1)<br>PP10A-XSX-AAA 50.9 (23.1)<br>PP20A-XAX-AAA 99.4 (45.1)<br>PP20A-XSX-AAA 157.8 (71.6)<br>PP30A-XAX-AAA 137.5 (62.4)<br>PP30A-XSX-AAA 236.8 (107.4) |



### Ordering

| Position | 1     |   | 2 | 3 | 4 |   | 5 | 6 | 7 |
|----------|-------|---|---|---|---|---|---|---|---|
| Example: | PP10A | - | X | X | X | - | X | X | X |

| Position 1<br>Model Series | Position 2<br>Connections                      | Position 3<br>Wetted Parts            | Position 4<br>Hardware                  | Position 5<br>Seat Material            | Position 6<br>Ball Material | Position 7<br>Dia. Material |
|----------------------------|------------------------------------------------|---------------------------------------|-----------------------------------------|----------------------------------------|-----------------------------|-----------------------------|
| PP10A - 1" Port            | A - 1-11-1/2 N.P.T.F - 1<br>B - Rp1 (1-11 BSP) | A - Aluminum*<br>S - Stainless Steel* | P - Plated Steel<br>S - Stainless Steel | A - Santoprene®<br>S - Stainless Steel | A - Santoprene®             | A - Santoprene®             |

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

| Position 1<br>Model Series | Position 2<br>Connections                            | Position 3<br>Wetted Parts            | Position 4<br>Hardware                  | Position 5<br>Seat Material            | Position 6<br>Ball Material | Position 7<br>Dia. Material |
|----------------------------|------------------------------------------------------|---------------------------------------|-----------------------------------------|----------------------------------------|-----------------------------|-----------------------------|
| PP20A - 2" Port            | A - 2-11-1/2 NPTF - 1<br>B - Rp2 (2-11 BSP Parallel) | A - Aluminum*<br>S - Stainless Steel* | P - Plated Steel<br>S - Stainless Steel | A - Santoprene®<br>S - Stainless Steel | A - Santoprene®             | A - Santoprene®             |

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

| Position 1<br>Model Series | Position 2<br>Connections                                                 | Position 3<br>Wetted Parts            | Position 4<br>Hardware                  | Position 5<br>Seat Material | Position 6<br>Ball Material | Position 7<br>Dia. Material |
|----------------------------|---------------------------------------------------------------------------|---------------------------------------|-----------------------------------------|-----------------------------|-----------------------------|-----------------------------|
| PP30A - 3" Port            | A - 3-8 NPTF - 1<br>B - Rp3 (3-11 BSP parallel)<br>F - 3" ANSI/DIN Flange | A - Aluminum*<br>S - Stainless Steel* | P - Plated Steel<br>S - Stainless Steel | A - Santoprene®             | A - Santoprene®             | A - Santoprene®             |

\* Acceptable for use in hazardous locations.

Santoprene® is registered trademark of Monsanto

### Accessories

**Service Repair Kits** | 637397 (air motor PP10A), 637421 (air motor PP20A), 637421 (air motor PP30A)  
637401-XX (fluid section PP10A), 637309-XX (fluid section PP20A), 637303-XX (fluid section PP30A)  
**Suction Probe:** 67183-1 (10ft Long Hose with 2" Diameter. For PP20A & PP30A)

# 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.
- Convolute 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)                  | 0.3 (1.17) for 1 1/2"                              | 88 (39.9)   | 1/4 (6.4)                           | 200 (13.8)                        |
| 2:1 Ratio 2" Diaphragm Pump     | 92 (348.25)                  | 0.64 (2.65) for 2"                                 | 146 (66.2)  | 1/4 (6.4)                           | 200 (13.8)                        |
| 2:1 Ratio 3" Diaphragm Pump     | 160 (605.6)                  | 1.4 (5.3) for 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<br>Model Series              | Position 2<br>Center Section                        | Position 3<br>Connection                                                                                                                                                                                                                     |   |   | Position 4<br>Seat Material | Position 5<br>Ball Material                | Position 6<br>Diaphragm Material                                             |   |   | Position 7<br>Revision Level   |   |   |
| PH15 - 1 1/2"<br>PH20 - 2"<br>PH30 - 3" | F - Conductive<br>Polypropylene/<br>Stainless Steel | 1-1/2" (PH15F)<br>A - 1-1/2 NPTF<br>B - 1-1/2 BSP parallel<br><br>2" (PH20F)<br>A - 2 - 11-1/2 NPTF-1<br>B - Rp 2 (2 - 11 BSP parrallel)<br><br>3" (PH30F)<br>A - 3 - 8 NPTF-1<br>B - Rp 3 (3 - 11 BSP parrallel)<br>F - 3" ANSI /DIN Flange |   |   | S - Stainless Steel         | A - Santoprene®<br>T - PTFE<br>C - Hytrel® | A - Santoprene®<br>C - Hytrel®<br>L - Long-Life PTFE<br>T - PTFE/Santoprene® |   |   | A - 1 1/2"<br>B - 2"<br>C - 3" |   |   |

*Hytrel® is a registered trademark of DuPont company and Santoprene® is registered trademark of Monsanto*

### Accessories

|                           | PH15 - 1 1/2" | PH20 - 2" | PH30 - 3" |
|---------------------------|---------------|-----------|-----------|
| Air Line Kit              | 66084-1       | 66109     | 66109     |
| Air Section Service Kit   | 637389        | 637369    | 637369    |
| Fluid Section Service Kit | 637445-XX     | 637446-XX | 637441-CC |

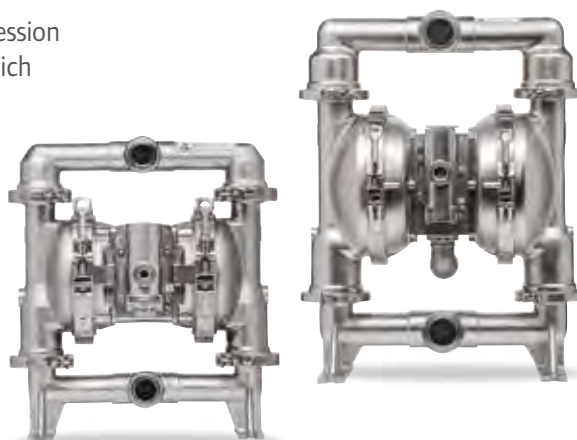
# Sanitary Transfer - Clamped

## SPECIALTY PUMP

Our FDA Compliant 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 and CE 1935/2004 accepted materials and high temperature capability.
- Optional electronic interface capability
- Optional Single piece composite PTFE diaphragms



### Applications:

Food / Beverage / Pharmaceutical / Cosmetics

|                                            | 1" Pump<br>SD10S-CSS-SXX-B | 2" Pump<br>SD20S-CSS-SXX-B |
|--------------------------------------------|----------------------------|----------------------------|
| 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)                  |
| Fluid Inlet/Outlet                         | 1-1/2" Tri-Clamp           | 2-1/2" Tri-Clamp           |

### 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  |

| Position 1<br>Model Series       | Position 2<br>Center Section              | Position 3<br>Port        | Position 4<br>Fluid Caps & Manifold Mat. | Position 5<br>Hardware | Position 6<br>Seat Material                           | Position 7<br>Ball Material                                             | Position 8<br>Diaphragm Material                                                               | Position 9     |
|----------------------------------|-------------------------------------------|---------------------------|------------------------------------------|------------------------|-------------------------------------------------------|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|----------------|
| SD10 - 1" Pump<br>SD20 - 2" Pump | R - White<br>Polypropylene<br>S - 316 SS* | C - Sanitary<br>Tri-Clamp | S - 316L Stainless Steel*                | S - Stainless Steel    | C - Hytrel<br>K - PVDF<br>S - 316L<br>Stainless Steel | C - Hytrel®<br>M - Medical Grade Santoprene®<br>S - 316L SS<br>T - PTFE | C - Hytrel®<br>M - Med. Grade Sant.<br>K - Single Piece PTFE Composite<br>T - PTFE/Santoprene® | Revision Level |

| Position 10<br>Specialty Code 1 (blank if no specialty code) |                                        |  |  | Position 11<br>Specialty Code 2 (blank if no specialty code) |  |  |  |
|--------------------------------------------------------------|----------------------------------------|--|--|--------------------------------------------------------------|--|--|--|
| A - Solenoid 120VAC, 110VAC + 60VDC                          | K - Solenoid 220VDC ATEX/IECex*        |  |  | E - End of stroke feedback + Leak Detection                  |  |  |  |
| B - Solenoid 12VDC, 24VAC + 22VDC                            | N - Solenoid with no coil              |  |  | F - End of stroke feedback                                   |  |  |  |
| C - Solenoid 240VAC, 220VAC + 120VDC                         | O - Standard Valve Block (No Solenoid) |  |  | G - End of Stroke ATEX/IECex*                                |  |  |  |
| D - Solenoid 24VDC, 48VAC + 44VACA                           |                                        |  |  | H - End of Stroke feedback + Leak Detection ATEX / IECex*    |  |  |  |
| E - Solenoid 12VDC NEC/CEC*                                  |                                        |  |  | L - Leak Detection                                           |  |  |  |
| F - Solenoid 24VDC NEC/CEC*                                  |                                        |  |  | M - Leak Detection ATEX/IECex/NEC/CEC*                       |  |  |  |
| G - Solenoid 12VDC ATEX/IECex*                               |                                        |  |  | O - No Option                                                |  |  |  |
| H - Solenoid 24VDC ATEX/IECex*                               |                                        |  |  | R - End of Stroke Feedback NEC / CEC*                        |  |  |  |
| J - Solenoid 120VDC NEC/CEC*                                 |                                        |  |  | T - End of Stroke Feedback + Leak Detection NEC / CEC        |  |  |  |

\* Acceptable for use in hazardous locations. - NEC / CEC: Class I&II, Div 1&2, Group A-D  
- ATEX: Zone 1&2, 21&22

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# Sanitary Transfer - Bolted

## SPECIALTY PUMP

- Constructed of FDA and CE 1935/2004 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")                               |
|------------------------------------|------------------------------------|--------------------------------|--------------------------------|--------------------------------------------------|--------------------------------------------------|
| Maximum GPM (lpm):                 | 13.0 (45.4)                        | 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/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<br>44.8 (20.3) | PM15A-CSS-X-A02<br>62.4 (28.3) | PM20A-CSS-X-B02<br>142.8 (64.8)                  | PM30A-CSS-X-C02<br>227.5 (103.2)                 |
|                                    |                                    | PM10R-CSS-X-A02<br>38.2 (17.3) | PM15R-CSS-X-A02<br>60.3 (27.3) | PM20R-CSS-X-B02<br>183.6 (83.5)                  | PM30R-CSS-X-C02<br>253.3 (114.9)                 |
|                                    |                                    | PM10S-CSS-X-A02<br>51.6 (23.4) | PM15S-CSS-X-A02<br>78.4 (35.6) | PM20S-CSS-X-B02<br>171.7 (77.9)                  | PM30S-CSS-X-C02<br>267.2 (121.2)                 |
| Optional Muffler                   | 93110<br>(requires 67367 assembly) |                                |                                | 67213 (Standard Duty)<br>67263 (continuous Duty) | 67213 (Standard Duty)<br>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 | 10 | 11 |
|----------|------|---|---|---|---|---|---|---|---|---|---|----|----|
| Example: | PMXX | X | - | X | X | X | - | X | X | X | X | X  | X  |

| Position 1<br>Model Series                                                                   | Position 2<br>Center Section                               | Position 3<br>Connection | Position 4<br>Wetted Parts | Position 5<br>Hardware | Position 6<br>Seat Material                                               | Position 7<br>Ball Material                                                                              | Position 8<br>Diaphragm Material                                                        | Position 9<br>Revision Level                         |
|----------------------------------------------------------------------------------------------|------------------------------------------------------------|--------------------------|----------------------------|------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------|
| PM05 - 1/2" Pump<br>PM10 - 1" Pump<br>PM15 - 1-1/2" Pump<br>PM20 - 2" Pump<br>PM30 - 3" Pump | A - Aluminum*<br>R - Polypropylene<br>S - Stainless Steel* | C - Tri-Clamp            | S - Stainless Steel*       | S - Stainless Steel    | M - Medical Grade Santoprene®<br>P - Polypropylene<br>S - Stainless Steel | C - Hytrel®<br>G - Nitrile<br>M - Medical Grade Santoprene®<br>S - Stain. Steel<br>T - PTFE<br>V - Viton | C - Hytrel®<br>G - Nitrile<br>M - Medical Grade Santoprene®<br>T - PTFE/<br>Santoprene® | 1/2" - B<br>1" - A<br>1-1/2" - A<br>2" - B<br>3" - C |

| Position 10<br>Specialty Code 1 (blank if no specialty code)                                                                                                                                                         |                                                                                                                                                                                                            |  | Position 11<br>Specialty Code 2 (blank if no specialty code)                                                                                                                                  |                                                                                                                                                           |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| A - Solenoid 120VAC, 110VAC + 60VDC<br>B - Solenoid 12VDC, 24VAC + 22VDC<br>C - Solenoid 240VAC, 220VAC + 120VDC<br>D - Solenoid 24VDC, 48VAC + 44VACA<br>E - Solenoid 12VDC NEC/CEC*<br>F - Solenoid 24VDC NEC/CEC* | G - Solenoid 12VDC ATEX/IECex*<br>H - Solenoid 24VDC ATEX/IECex*<br>J - Solenoid 120VDC NEC/CEC*<br>K - Solenoid 220VDC ATEX/IECex*<br>N - Solenoid with no coil<br>O - Standard Valve Block (No Solenoid) |  | E - End of stroke feedback + Leak Detection<br>F - End of stroke feedback<br>G - End of Stroke ATEX/IECex*<br>H - End of Stroke feedback + Leak Detection ATEX / IECex*<br>L - Leak Detection | M - Leak Detection ATEX/IECex/NEC/CEC*<br>O - No Option<br>R - End of Stroke Feedback NEC / CEC*<br>T - End of Stroke Feedback + Leak Detection NEC / CEC |  |

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\* Acceptable for use in hazardous locations.

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

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### Accessories

Service Repair Kits | 637397 (air motor)  
637410-XXX (fluid section with seats)

# 2" PW Series

## SPECIALTY PUMP

### ARO® PW20P-YPX-XXX EXP Pumps

- Upgrade to EXP from existing Wilden® P800 or PS800 pumps, or Versa-Matic® U2 pumps.
- ARO® pump matches the fluid inlet/outlet port dimensions of the pumps and it matches Wilden's mounting feet location.
- Leave the stalling issues and complex maintenance procedures behind.
- ARO® has the lowest total cost of ownership over the competition.

|                                          |                                           |
|------------------------------------------|-------------------------------------------|
| 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" ANSI/DIN hybrid flange (center)        |
| Max. operating pressure psi (bar):       | 120 (8.3)                                 |
| Suspended solids max. dia. in. (mm):     | 1/4" (6.4)                                |
| Weight lbs (kg):                         | Polypropylene 89.0 (40.4) PVDF 116.8 (53) |
| Maximum dry suction lift ft (m):         | 19.5 (5.9)                                |
| Sound Level:                             | 70 PSI 60 Cycles / Min 85.0 db(A)         |



### Ordering

| Position | 1    | 2 |   | 3 | 4 | 5 |   | 6 | 7 | 8 |
|----------|------|---|---|---|---|---|---|---|---|---|
| Example: | PW20 | P | - | Y | P | S | - | X | X | X |

| Position 1<br>Model<br>Series | Position 2<br>Center<br>Section | Position 3<br>Connection             | Position 4<br>Wetted<br>Parts | Position 5<br>Hardware | Position 6<br>Seat<br>Material | Position 7<br>Ball<br>Material                                          | Position 8<br>Diaphragm<br>Material                                                                           |
|-------------------------------|---------------------------------|--------------------------------------|-------------------------------|------------------------|--------------------------------|-------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| PW20 - Standard Pump          | P - Polypropylene               | Y - 2" ANSI/DIN Hybrid Center Flange | K - PVDF<br>P - Polypropylene | S - Stainless Steel    | K - PVDF<br>P - Polypropylene  | A - Santoprene®<br>C - Hytrel®<br>G - Nitrile<br>T - PTFE<br>V - Viton® | A - Santoprene®<br>C - Hytrel®<br>G - Nitrile<br>L - Long Life PTFE<br>T - PTFE/<br>Santoprene®<br>V - Viton® |

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### Accessories

**Service Repair Kits** | 637369 (air motor),  
637373-XXX (fluid section with seats),  
637374-X (major air valve assembly)

**Flange Connection Kit** | 67341-E20N

**Diaphragm Failure Detection** | Kit No.67237

**Air Line Connection Kit** | 66109 (Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)



Air Line Connection Kit  
66109

# 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.

### Featured

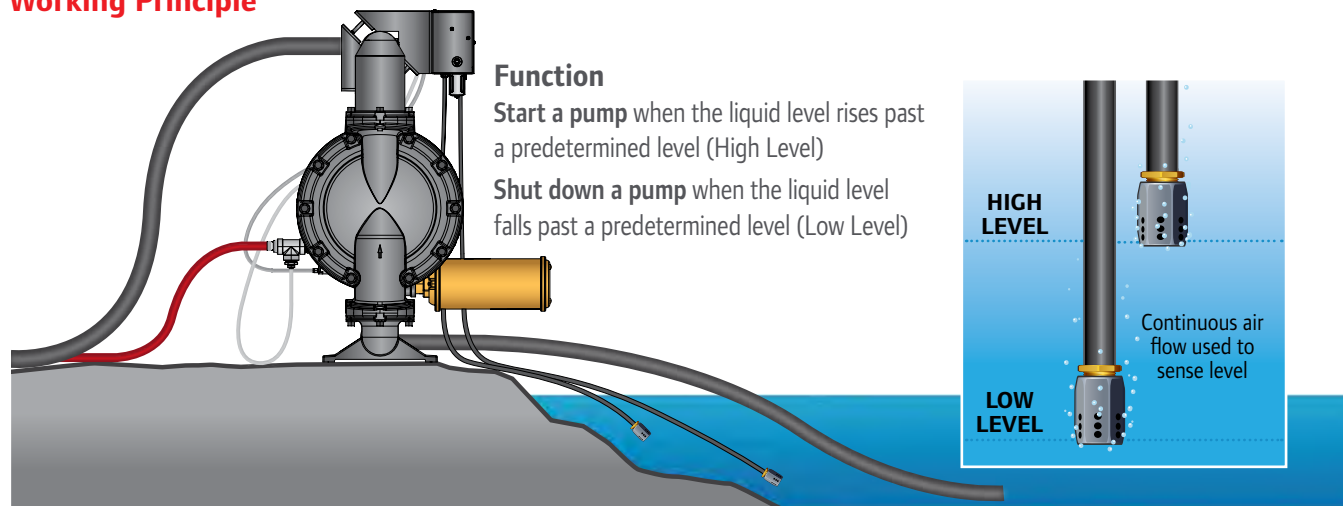
- Simple design is easy to setup and use
- All pneumatic operation eliminates electrical ignition source
- High/Low level control maintains fluid between established levels
- Reduces air consumption by avoiding pump dry running
- Portable system with directly mounted liquid level sensor

| AUTOMATIC DEWATERING SYSTEM                                                                                                                        |                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| SCD501BN08-V1D                                                                                                                                     | Dewatering Kit (without pump)    |
| PUMP COMPATIBILITY                                                                                                                                 |                                  |
| 2" EXP Series Pump                                                                                                                                 | PX20X-XXX-XXX-X, PX20P-FXS-XXX   |
| 2" PRO Series Pump                                                                                                                                 | 6662XX-XXX-C                     |
| 3" EXP Series Pump                                                                                                                                 | PX30X-AXX-XXX-X, PX30X-BXX-XXX-X |
| 3" PRO Series Pump                                                                                                                                 | 6663XX-XXX-C                     |
| Other EXP/Pro Series are compatible with remotely mounted Liquid Level Sensor by reducing air inlet fitting from 3/4"-14 NPTF-1 to necessary size. |                                  |



- ① Bracket
- ② Liquid Level Sensor
- ③ Pneumatic Controlled Valve
- ④ Sensing Tubes with Screen
- ⑤ Pro/EXP Series Diaphragm Pump (purchase separately)

### Working Principle



# 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<br>26 (11.8) Aluminum, basic package<br>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                             | -          | -                  | -              | WATER/COOLANT      |
| DAB05-PPUU-2-A | POLYPROPYLENE          | POLYURETHANE        | X                             | -          | -                  | -              | WATER/COOLANT      |
| DAB05-PPAA-2-A | POLYPROPYLENE          | SANTOPRENE®         | X                             | -          | -                  | -              | MILD ACIDS & BASES |
| DAB05-PPCC-2-N | POLYPROPYLENE          | HYTREL®             | X                             | -          | NITRILE            | -              | WATER/COOLANT      |
| DAB05-PPCC-B-M | POLYPROPYLENE          | HYTREL®             | X                             | X          | NITRILE            | NO-DRIP        | WATER/COOLANT      |
| DAB05-PPAA-2-B | POLYPROPYLENE          | SANTOPRENE®         | X                             | -          | EPDM               | -              | MILD ACIDS & BASES |
| DAB05-PPUU-2-C | POLYPROPYLENE          | POLYURETHANE        | X                             | -          | VINYL              | -              | WATER/COOLANT      |
| DAB05-PPCC-B-J | POLYPROPYLENE          | HYTREL®             | X                             | X          | REINFORCED NITRILE | X              | WATER/COOLANT      |
| DAB05-PPAA-B-K | POLYPROPYLENE          | SANTOPRENE®         | X                             | X          | EPDM               | X              | MILD ACIDS & BASES |
| 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/COOLANT      |

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\* Consult ARO Chemical Compatibility Guide to select proper pump construction



### 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)

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# Electronic Interface Accessories

Quickly find your accessories, leak detection sensors, end of stroke sensors, and solenoid valve block kits



Upgrade your Compact or EXP pump with electric interface accessories to integrate seamlessly into automated processes. Whether you have a PLC automated process or ARO®'s batching/flow controller these accessories can provide remote operation, remove wasteful manual processes and improve uptime through proactive maintenance solutions. Consult with your ARO® representative or Tech Support to learn which accessories will work best for your pump and application.

## End of Stroke Sensors

Used to monitor cycle rates for preventative maintenance and determining volume transferred in batching applications.

| End of Stroke Sensing for Cycle Counting |              |                       |                           |
|------------------------------------------|--------------|-----------------------|---------------------------|
| Compact/ EXP Port Size                   | Regular Duty | Hazardous Duty*: ATEX | Hazardous Duty*: NEC, CEC |
| 1/4"                                     | 24110934     | 97404 & 97491         | 97404 & 97412             |
| 3/8"                                     | 97048        | 97405 & 97491         | 97405 & 97412             |
| 1/2" & 3/4"                              | 97053        | 97406 & 97491         | 97406 & 97412             |
| 1"                                       | 97119        | 97408 & 97491         | 97408 & 97412             |
| 1 1/2"                                   | 97396        | 97410 & 97491         | 97410 & 97412             |
| 2" & 3"                                  | 97121        | 97411 & 97491         | 97411 & 97412             |

\* Note: hazardous options require both an end of stroke sensor and barrier amplifier

## Leak Detection

Minimize unwanted downtime by detecting diaphragm failures.

| Leak Detection Sensing |              |                                   |
|------------------------|--------------|-----------------------------------|
| Compact/ EXP Port Size | Regular Duty | Hazardous Duty*: ATEX, NEC, CEC   |
| 1/4"                   | 67237        | 96270-2 (Qty: 2) & 97414 (Qty: 1) |
| 3/8"                   | 67237        | 96270-2 (Qty: 2) & 97414 (Qty: 1) |
| 1/2" & 3/4"            | 67237        | 96270-2 (Qty: 2) & 97414 (Qty: 1) |
| 1"                     | 67237        | 96270-2 (Qty: 2) & 97414 (Qty: 1) |
| 1 1/2"                 | 67237        | 96270-2 (Qty: 2) & 97414 (Qty: 1) |
| 2" & 3"                | 67237        | 96270-2 (Qty: 2) & 97414 (Qty: 1) |

\* Note: hazardous options require both 2 leak detection sensors (1 for each diaphragm) and (2) Zener barriers

## Solenoid Valve Block Kits

Replaced existing major valve with a solenoid actuated main valve. Each time the solenoid is energized or de-energized the pump will stroke one time. With combination of a PLC or ARO® controller, precise batching can be achieved.

| Position                    | 1      | 2                               | 3                                          |
|-----------------------------|--------|---------------------------------|--------------------------------------------|
| Example:                    | 637371 | - X                             | - X                                        |
| Position 1 Base Part Number |        | Position 2 Valve Block Material | Position 3 Solenoid Coil Valve Block Mtrl. |
| 1/4"                        | 637371 | 1- Aluminum                     | A = 120 VAC                                |
| 3/8", 1/2", 3/4"            | 637540 | 2- Stainless Steel              | B = 12 VDC                                 |
| 1"                          | 637541 | 3- Black Polypropylene          | C = 240 VAC                                |
| 1 1/2"                      | 637542 | 4- White Polypropylene          | D = 24 VDC                                 |
| 2" & 3"                     | 637543 |                                 | E = 12 VDC NEC/CEC                         |
|                             |        |                                 | F = 24 VDC NEC/CEC                         |
|                             |        |                                 | G = 12 VDC ATEX/IECex                      |
|                             |        |                                 | H = 24 VDC ATEX/IECex                      |
|                             |        |                                 | J = 120 VAC NEC/CEC                        |
|                             |        |                                 | K = 220 VAC ATEX/IECex                     |
|                             |        |                                 | N = No Coil *                              |

\* Note: a no coil option can be purchased where multiple environments exist within your facility. Contact your ARO® Representative or Tech Support for the correct solenoid coil for your application.

## MaxAir 2 Way Valve

Controls the inlet air to the pump for simple on/off controls. Die-cast brass body, Stainless Stem and Buna-N diaphragms provide excellent durability.



| Pump Port Size | 24VDC Valve and Connector* | 120VAC Valve and Connector* |
|----------------|----------------------------|-----------------------------|
| 1/4" to 1"     | TB03EB-024-D and CSN-30    | TB03EB-120-A and CSN-30     |
| 1-1/2"         | TB04EB-024-D and CSN-30    | TB04EB-120-A and CSN-30     |
| 2" to 3"       | TB06HB-024-D and CSN-30    | TB06HB-120-A and CSN-3      |

\* Note: Valve and Connector Needs to be purchased.

# Accessories



Air Line Connection Kit  
66073-1



Diaphragm Failure Detection  
67237



Continuous Duty Muffler  
67323



Flange Connection Kit  
637341-E10N



Over-run Control  
635040

|                                                                                                                                                                                                                                                                    | 1/4"<br>Non-Met.                                                                                       | 3/8"<br>Non-Met.                                                                                                                          | 1/2"<br>Non-Met.                                                                                                                          | 1/2" Classic<br>Non-Met.              | 3/4"<br>Non-Met.                                                                                                                          | 1/2"<br>Metallic                                                                                    | 3/4"<br>Metallic                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>Air Line Connection Kit</b><br>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                                                                                             | 66073-1                                                                                             |
| <b>Leak Detection</b><br>Provides a warning of diaphragm failure by sensing the presence of liquid in the air chamber of the pump                                                                                                                                  | Reg. Duty: 67237<br>ATEX, NEC, CEC:<br>96270-2 (Qty: 2)<br>& 97414 (Qty: 1)                            | Reg. Duty: 67237<br>ATEX, NEC, CEC:<br>96270-2 (Qty: 2)<br>& 97414 (Qty: 1)                                                               | Reg. Duty: 67237<br>ATEX, NEC, CEC:<br>96270-2 (Qty: 2)<br>& 97414 (Qty: 1)                                                               | -                                     | Reg. Duty: 67237<br>ATEX, NEC, CEC:<br>96270-2 (Qty: 2)<br>& 97414 (Qty: 1)                                                               | Reg. Duty: 67237<br>ATEX, NEC, CEC:<br>96270-2 (Qty: 2)<br>& 97414 (Qty: 1)                         | Reg. Duty: 67237<br>ATEX, NEC, CEC:<br>96270-2 (Qty: 2)<br>& 97414 (Qty: 1)                         |
| <b>Cycle Sensor Kit</b><br>For monitoring pump operation. Can be used to monitor cycle rates, preventative maintenance and rough flow rate indication.                                                                                                             | Reg. Duty on<br>Body: 24110934<br>ATEX on Body:<br>97404 & 97491<br>NEC, CEC on Body:<br>97404 & 97412 | Reg. Duty on<br>Major Valve: 67386<br>Reg. Duty on<br>Body: 97048<br>ATEX on Body:<br>97405 & 97491<br>NEC, CEC on Body:<br>97405 & 97412 | Reg. Duty on<br>Major Valve: 67386<br>Reg. Duty on<br>Body: 97053<br>ATEX on Body:<br>97406 & 97491<br>NEC, CEC on Body:<br>97406 & 97412 | Reg. Duty on<br>Major Valve:<br>67168 | Reg. Duty on<br>Major Valve: 67386<br>Reg. Duty on<br>Body: 97053<br>ATEX on Body:<br>97406 & 97491<br>NEC, CEC on Body:<br>97406 & 97412 | Reg. Duty on<br>Body: 97053<br>ATEX on Body:<br>97406 & 97491<br>NEC, CEC on Body:<br>97406 & 97412 | Reg. Duty on<br>Body: 97053<br>ATEX on Body:<br>97406 & 97491<br>NEC, CEC on Body:<br>97406 & 97412 |
| <b>Cycle Counter Kits</b><br>Counts pumps cycles to help establish and sustain a preventative maintenance program. Battery based counter with NEMA 4X/IP65 enclosure.                                                                                              | -                                                                                                      | -                                                                                                                                         | -                                                                                                                                         | -                                     | -                                                                                                                                         | -                                                                                                   | -                                                                                                   |
| <b>Flange Connection Kit</b><br>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><br>Shuts off pump when excessive cycling occurs due to empty fluid supply container.                                                                                                                                                       | -                                                                                                      | -                                                                                                                                         | 635040                                                                                                                                    | 635040                                | 635040                                                                                                                                    | 635040                                                                                              | 635040                                                                                              |
| <b>Wall Mount</b><br>Conveniently mount pump above container. Made of heavy gauge coated steel. (pump not included) * Does not include hardware                                                                                                                    | -                                                                                                      | 67388                                                                                                                                     | 76763                                                                                                                                     | -                                     | 76763                                                                                                                                     | 76763                                                                                               | 76763                                                                                               |
| <b>Countdown Batcher</b><br>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                                                                                               | 67072                                                                                               |
| <b>Solenoid Actuation Kit</b><br>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)<br>67165-2 (120VAC)                                                                                                       | 67165-1 (24VDC)<br>67165-2 (120VAC)                                                                                                       | 67165-1 (24VDC)<br>67165-2 (120VAC)   | 67165-1 (24VDC)<br>67165-2 (120VAC)                                                                                                       | 67165-1 (24VDC)<br>for PD05R-X-X-B<br>67165-2 (120VAC)<br>for PD05R-X-X-B                           | -                                                                                                   |
| <b>Diaphragm Pump Speed Controls</b><br>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                                                                                          | 104104-N02                                                                                          |
| <b>Groundable Strap</b><br>Reliable static control.                                                                                                                                                                                                                | -                                                                                                      | -                                                                                                                                         | -                                                                                                                                         | -                                     | -                                                                                                                                         | 66885-1<br>Acetal Center Body                                                                       | -                                                                                                   |



Wall Mount  
76763



Countdown Batcher  
67072



Solenoid Actuation Kit  
67165-1



Speed Control  
104104-N02

| 1" Non-Met.                                                                                                                               | 1-1/2" Non-Met.                                                                                                                           | 2" Non-Met.                                                                                                                               | 3" Non-Met.                                                                                                                               | 1" Metallic                                                                                                                               | 1-1/2" Metallic                                                                                                                           | 2" Metallic                                                                                                                               | 3" Metallic                                                                                                                               | 1" 3:1 Ratio |
|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 66073-2                                                                                                                                   | 66084-1                                                                                                                                   | 66109                                                                                                                                     | 66109                                                                                                                                     | 66073-2                                                                                                                                   | 66084-1                                                                                                                                   | 66109                                                                                                                                     | 66109                                                                                                                                     | -            |
| Reg. Duty: 67237<br>ATEX, NEC, CEC:<br>96270-2 (Qty: 2)<br>& 97414 (Qty: 1)                                                               | Reg. Duty: 67237<br>ATEX, NEC, CEC:<br>96270-2 (Qty: 2)<br>& 97414 (Qty: 1)                                                               | Reg. Duty: 67237<br>ATEX, NEC, CEC:<br>96270-2 (Qty: 2)<br>& 97414 (Qty: 1)                                                               | Reg. Duty: 67237<br>ATEX, NEC, CEC:<br>96270-2 (Qty: 2)<br>& 97414 (Qty: 1)                                                               | Reg. Duty: 67237<br>ATEX, NEC, CEC:<br>96270-2 (Qty: 2)<br>& 97414 (Qty: 1)                                                               | Reg. Duty: 67237<br>ATEX, NEC, CEC:<br>96270-2 (Qty: 2)<br>& 97414 (Qty: 1)                                                               | Reg. Duty: 67237<br>Haz. Duty:<br>96270-2 (Qty: 2)<br>& 97414 (Qty: 1)                                                                    | Reg. Duty: 67237<br>ATEX, NEC, CEC:<br>96270-2 (Qty: 2)<br>& 97414 (Qty: 1)                                                               | -            |
| Reg. Duty on<br>Major Valve: 67390<br>Reg. Duty on<br>Body: 97119<br>ATEX on Body:<br>97408 & 97491<br>NEC, CEC on Body:<br>97408 & 97412 | Reg. Duty on<br>Major Valve: 67390<br>Reg. Duty on<br>Body: 97396<br>ATEX on Body:<br>97410 & 97491<br>NEC, CEC on Body:<br>97410 & 97412 | Reg. Duty on<br>Major Valve: 67391<br>Reg. Duty on<br>Body: 97121<br>ATEX on Body:<br>97411 & 97491<br>NEC, CEC on Body:<br>97411 & 97412 | Reg. Duty on<br>Major Valve: 67391<br>Reg. Duty on<br>Body: 97121<br>ATEX on Body:<br>97411 & 97491<br>NEC, CEC on Body:<br>97411 & 97412 | Reg. Duty on<br>Major Valve: 67392<br>Reg. Duty on<br>Body: 97119<br>ATEX on Body:<br>97408 & 97491<br>NEC, CEC on Body:<br>97408 & 97412 | Reg. Duty on<br>Major Valve: 67392<br>Reg. Duty on<br>Body: 97396<br>ATEX on Body:<br>97410 & 97491<br>NEC, CEC on Body:<br>97410 & 97412 | Reg. Duty on<br>Major Valve: 67393<br>Reg. Duty on<br>Body: 97396<br>ATEX on Body:<br>97410 & 97491<br>NEC, CEC on Body:<br>97410 & 97412 | Reg. Duty on<br>Major Valve: 67393<br>Reg. Duty on<br>Body: 97396<br>ATEX on Body:<br>97410 & 97491<br>NEC, CEC on Body:<br>97410 & 97412 | -            |
| 67571-3                                                                                                                                   | 67571-6                                                                                                                                   | 67571-9                                                                                                                                   | 67571-11                                                                                                                                  | 67571-2<br>(Metallic Center Body)<br>67571-1<br>(Non-Metallic<br>Center Body)                                                             | 67571-5<br>(Metallic Center Body)<br>67571-4<br>(Non-Metallic<br>Center Body)                                                             | 67571-8<br>(Metallic Center Body)<br>67571-7<br>(Non-Metallic<br>Center Body)                                                             | 67571-10<br>(Metallic Center Body)<br>67571-9<br>(Non-Metallic<br>Center Body)                                                            | -            |
| 67341-E10N<br>(Side flange)<br>67341-C10N<br>(Center flange)                                                                              | 67341-E15N<br>(Side flange)<br>67341-C15N<br>(Center flange)                                                                              | 67341-E20N                                                                                                                                | -                                                                                                                                         | -                                                                                                                                         | -                                                                                                                                         | -                                                                                                                                         | -                                                                                                                                         | -            |
| 635040                                                                                                                                    | 23644-400                                                                                                                                 | 23644-400                                                                                                                                 | 635043                                                                                                                                    | 635040                                                                                                                                    | 23644-400                                                                                                                                 | 23644-400                                                                                                                                 | 635043                                                                                                                                    | -            |
| -                                                                                                                                         | -                                                                                                                                         | -                                                                                                                                         | -                                                                                                                                         | 66100                                                                                                                                     | 62133                                                                                                                                     | -                                                                                                                                         | -                                                                                                                                         | 67142        |
| 67072                                                                                                                                     | -                                                                                                                                         | -                                                                                                                                         | -                                                                                                                                         | 67072                                                                                                                                     | -                                                                                                                                         | -                                                                                                                                         | -                                                                                                                                         | -            |
| 67355-1 (24VDC)<br>for PE10X-X-X<br>67355-2 (120VAC)<br>for PE10X-X-X                                                                     | -                                                                                                                                         | 67355-1 (24VDC)<br>for PE20X-X-X-B<br>67355-2 (120VAC)<br>for PE20X-X-X-B                                                                 | -                                                                                                                                         | 67355-1 (24VDC)<br>for PE10X-X-X<br>67355-2 (120VAC)<br>for PE10X-X-X                                                                     | -                                                                                                                                         | -                                                                                                                                         | 67357-1 (24VDC)<br>PE30X-X-X-C<br>67357-2 (120VAC)<br>PE30X-X-X-C                                                                         | -            |
| 104104-N02                                                                                                                                | 104104-N04                                                                                                                                | 104104-N04                                                                                                                                | 104104-N06                                                                                                                                | 104104-N02                                                                                                                                | 104104-N04                                                                                                                                | 104104-N06                                                                                                                                | 104104-N06                                                                                                                                | -            |
| 66885-1<br>Conductive Poly Center<br>Body                                                                                                 | 66885-1<br>Conductive Poly Center<br>Body                                                                                                 | 66885-1<br>Conductive Poly Center<br>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  
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 or carbon steel. 1" siphon tubes come with foot valve for positive priming. All models include bung adapter.

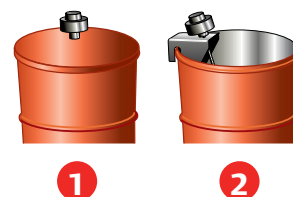
| Model no. | Description    | For use with pumps |
|-----------|----------------|--------------------|
| 65109     | Steel — NPT(F) | 1" (Metallic)      |
| 66779     | PVC — NPT(F)   | 1" (Non-Metallic)  |



## 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

## Digital Cycle Counter Kits

The ARO® Cycle Counters Kits provides an accurate way to count pump cycles to help establish and sustain a preventative maintenance program. The cycle counter can be mounted on the pump with the provided enclosure or remotely mounted in a separate panel up to 25 ft. (7.6m) away. The unit uses a magnet located at the end of the major air valve and hall effect sensor to register a complete pump cycle.

- Easy to Install, no drilling or tapping needed to install kit
- Lithium Battery Based Counter with 7-10 years battery life
- Enclosure and counter meets NEMA 4X/ IP65 specification
- Large 0.35" (8.9 mm) character height on LCD display
- Front reset button can be disabled to prevent unattended resets
- Corrosion resistant stainless steel mounting bracket and hardware



Remote Panel Mounting Components



Pump Mounted Kits

## Ordering Options

|                              | Remote Panel Mounting | Pump Mounted Kit |
|------------------------------|-----------------------|------------------|
| Counter w/Digital Display    | ✓                     | ✓                |
| Major Spool w/Magnet         | ✓                     | ✓                |
| Hall Effect Sensor w/Bracket | ✓                     | ✓                |
| NEMA 4X Enclosure            |                       | ✓                |

| Remote Panel Mounting |            |                                              |                            |                      |
|-----------------------|------------|----------------------------------------------|----------------------------|----------------------|
| Pump Type             | Port Size  | Non - Metallic Fluid Section and Center Body | Metallic Fluid Section     |                      |
|                       |            |                                              | Non - Metallic Center Body | Metallic Center Body |
| EXP Series            | 1", 1-1/2" | 98244* + 67390**                             | 98244* + 67392**           |                      |
|                       | 2" and 3"  | 98244* + 67391**                             | 98244* + 67393**           |                      |

\* Counter \*\* Spool and Sensor Kit

| Pump Mounted Kit |           |                                              |                            |                      |
|------------------|-----------|----------------------------------------------|----------------------------|----------------------|
| Pump Type        | Port Size | Non - Metallic Fluid Section and Center Body | Metallic Fluid Section     |                      |
|                  |           |                                              | Non - Metallic Center Body | Metallic Center Body |
| EXP Series       | 1"        | 67571-3                                      | 67571-1                    | 67571-2              |
|                  | 1-1/2"    | 67571-6                                      | 67571-4                    | 67571-5              |
|                  | 2"        | 67571-9                                      | 67571-7                    | 67571-8              |
|                  | 3"        | 67571-11                                     | 67571-9                    | 67571-10             |

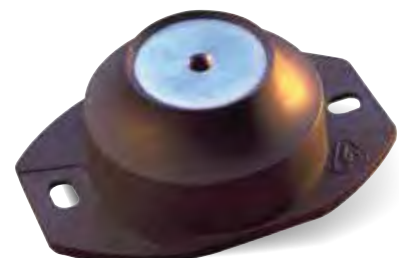


## ARO® Vibration Isolators

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

| Port size | Polypropylene | Aluminum | PVDF    | Stainless Steel |
|-----------|---------------|----------|---------|-----------------|
| 3"        | HSK-160       | HSK-160  | HSK-160 | HSK-160         |
| 2"        | HSK-110       | HSK-110  | HSK-110 | HSK-160         |
| 1.5"      | HSK-40        | HSK-40   | HSK-40  | HSK-70          |
| 1"        | HSK-20        | HSK-20   | HSK-40  | HSK-40          |



Vibration Isolator

# Accessories

## Pulsation Dampeners

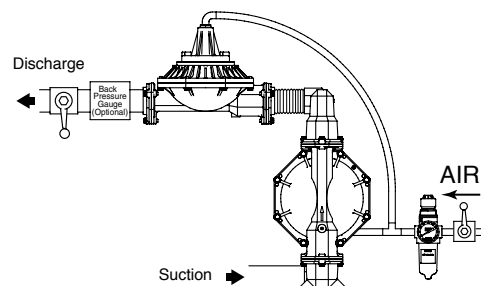
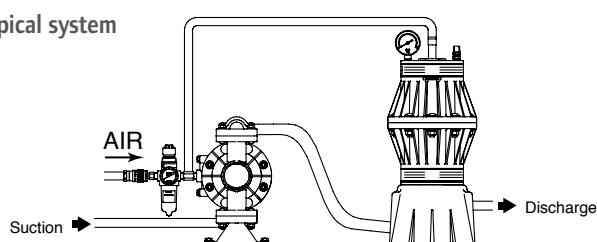
Diaphragm pumps of any type have at least two points in their cycle where they provide no pressure or flow to a process. The unwanted result of this pressure fluctuation can often be material foaming, material pulsation, hydraulic shock or material splashing. While traditional pulsation dampeners can 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 PVDF, polypropylene, groundable acetal, aluminum, cast iron or stainless steel 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<br>Model and Size | Position 2<br>Air Section                                                                                                           | Position 3<br>Fluid Connection                                                                                                                                        | Position 4<br>Fluid Section                                                | Position 5<br>Hardware                      | Position 6<br>Diaphragm Material                                      |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------|-----------------------------------------------------------------------|
| SB10 - 1"                    | P - Polypropylene<br>K - PVDF (Kynar)<br>D - Conductive Acetal                                                                      | A - NPTF<br>B - BSP                                                                                                                                                   | P - Polypropylene<br>K - PVDF (Kynar)<br>D - Conductive Acetal             | S - Stainless Steel 304                     | A - Santoprene®<br>C - Hytrel®<br>T - PTFE<br>U - Urethane            |
| SB20 - 2"<br>SB30 - 3"       | A - Aluminum<br>S - Stainless Steel<br>P - Polypropylene/<br>Aluminum*<br>R - Polypropylene/<br>Stainless Steel*<br>Stainless Steel | A - NPTF<br>B - BSPP<br>F - 2" ANSI/DIN Flange Inlet<br>and Outlet*<br>K - 2" ANSI/DIN Flange Inlet/<br>NPTF Outlet*<br>L - 2" ANSI/DIN Flange Inlet/<br>BSPP Outlet* | A - Aluminum<br>C - Cast Iron<br>P - Polypropylene*<br>S - Stainless Steel | P - Carbon Steel<br>S - Stainless Steel 304 | A - Santoprene®<br>G- Nitrile<br>T - PTFE / Santoprene®<br>V - Viton® |

\* Only available with 2" Polypropylene fluid sections.

Hytrel® is a registered trademark of DuPont company, Santoprene® is registered trademark of Monsanto and Viton® is a registered trademark of ExxonMobil

# Maintenance Kits



| Pump Type                | Models                                                        | Air Motor Section | Fluid Section (without seats) | Major Air Valve Assembly |
|--------------------------|---------------------------------------------------------------|-------------------|-------------------------------|--------------------------|
| <b>3/8"</b> Non-Metallic | PD03P, PE03P                                                  | <b>637428</b>     | <b>637429-XX</b>              | —                        |
| Non-Metallic             | PD05P, PE05P, PM05R                                           | <b>637428</b>     | <b>637427-XX</b>              | —                        |
| <b>1/2"</b> Metallic     | PM05P                                                         | <b>637141</b>     | <b>637140-XX</b>              | —                        |
|                          | PD05A, PD05R, PE05A, PE05R                                    | <b>637428</b>     | <b>637427-XX</b>              | —                        |
| <b>3/4"</b> Non-Metallic | PD07P                                                         | <b>637428</b>     | <b>637427-XX</b>              | —                        |
| Metallic                 | PD07R                                                         | <b>637428</b>     | <b>637427-XX</b>              | —                        |
| Non-Metallic             | PD10P, PE10P, PD10E, PE10E                                    | <b>637397</b>     | <b>637396-XX</b>              | <b>637395-X</b>          |
| <b>1"</b> Metallic       | PD10A, PD10R, PD10S, PE10A, PE10R, PE10S, PM10A, PM10R, PM10S | <b>637397</b>     | <b>637401-XX</b>              | <b>637395-X</b>          |
|                          | PH10A-XSS-SST                                                 | <b>637338</b>     | <b>637339</b>                 | —                        |
|                          | SD10S, SD10R                                                  | <b>637495</b>     | <b>637496-XX</b>              | <b>637496-X</b>          |
| Non-Metallic             | PD15P, PE15P, PD15E, PE15E                                    | <b>637389</b>     | <b>637391-XX</b>              | <b>637390-X</b>          |
| <b>1 1/2"</b> Metallic   | PD15A, PD15R, PD15S, PE15A, PE15R, PE15S, PM15A, PM15R, PM15S | <b>637389</b>     | <b>637375-XX</b>              | <b>637390-X</b>          |
| Non-Metallic             | PD20P, PE20P, PD20E, PE20E                                    | <b>637369</b>     | <b>637373-XX</b>              | <b>637374-X</b>          |
| <b>2"</b> Metallic       | PD20R, PD20Y, PE20R, PE20Y, PM20R                             | <b>637369</b>     | <b>637309-XX</b>              | <b>637374-X</b>          |
|                          | PD20A, PD20S, PE20A, PE20S, PM20A, PM20S, PP20A               | <b>637421</b>     | <b>637309-XX</b>              | <b>637374-X</b>          |
|                          | PF20A, PF20S                                                  | <b>637421</b>     | <b>637310-XX</b>              | <b>637374-X</b>          |
|                          | PF20A                                                         | <b>637421</b>     | <b>637309-XX</b>              | —                        |
|                          | PF20R, PF20Y                                                  | <b>637369</b>     | <b>637310-XX</b>              | <b>637374-X</b>          |
|                          | SD20S, SD20R                                                  | <b>637497</b>     | <b>637494-XX</b>              | <b>637498-X</b>          |
|                          | BD20A                                                         | <b>637421</b>     | <b>637494-XX</b>              | <b>637374-X</b>          |
| <b>3"</b> Non-Metallic   | PD30P, PE30P                                                  | <b>637369</b>     | <b>637447-XX</b>              | <b>637374-X</b>          |
| Metallic                 | PD30R, PE30R, PM30R                                           | <b>637369</b>     | <b>637303-XX</b>              | <b>637374-X</b>          |
|                          | PD30A, PD30S, PE30A, PE30S, PP30A, PM30A, PM30S               | <b>637421</b>     | <b>637303-XX</b>              | <b>637374-X</b>          |
|                          | PH30F-X                                                       | <b>637369</b>     | <b>637441-XX</b>              | <b>637374-X</b>          |



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

### Why Authentic ARO® Parts?

Without Authentic ARO® name, it does not carry the ARO® promise and runs the risk of subpar chemical, metallurgical, and mechanical properties.

And, only Authentic ARO® Parts ensure that our pumps continue to meet the strict requirements for ATEX and CE certifications.

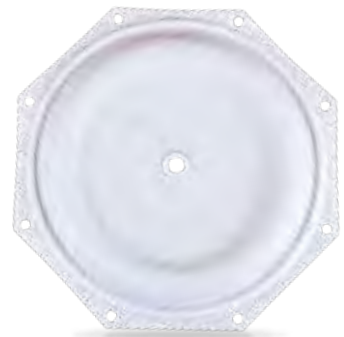
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- Made with uniquely formulated PTFE that provides greater flex life
- Same great chemical resistance as conventional PTFE
- Seamless replacement for your existing PTFE diaphragms

\*as measured by mean time between failure



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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, pneumatic valves and cylinders.



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