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.

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/ 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

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 Benefits

ARO® EXP offers industry-leading Total Cost of Ownership

The purchase price of a traditional diaphragm pump is the smallest piece of the total pump cost-of-ownership pie. There are downtime costs, energy costs, parts costs and labor costs to consider as well. The unique features of our EXP Series mean you get industry-leading total cost of ownership.

### EXP (ARO®) vs. Leading Competitor “Total Cost of Ownership”

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

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

### EXP Efficiency

<table>
<thead>
<tr>
<th>Common Efficiency Issues</th>
<th>ARO EXP Solution</th>
<th>The Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressed Air “Blow-By” Caused by Inferior Design</td>
<td>Positive Seal, Ceramic “D” Valve</td>
<td>No Energy Wasted During Pump Idle</td>
</tr>
</tbody>
</table>

### EXP Serviceability

<table>
<thead>
<tr>
<th>Common Serviceability Issues</th>
<th>ARO EXP Solution</th>
<th>The Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor/Time: Pulling &amp; Replacing Failed Pumps</td>
<td>Longer Lasting Wear Parts i.e. Convoluted Diaphragms Easy-Access Major Air Valve Simplified Service Kits</td>
<td>Significantly Reduced Labor and Parts Costs</td>
</tr>
<tr>
<td>Labor/Time: Tearing Down and Replacing Failed Parts Complex or Incomplete Service Kits</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### EXP Control and Monitoring

<table>
<thead>
<tr>
<th>Common Issues</th>
<th>ARO® EXP Solution</th>
<th>The Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor/Time: No integrated control solution</td>
<td>Safe control in hazardous locations</td>
<td>Simple to configure and operate</td>
</tr>
<tr>
<td>Cost and complexity tied to evolving a manual / unmonitored process</td>
<td>Upgradeable configurations (air to electrical control)</td>
<td>Simple upgradeable solution, ability to streamline end user process</td>
</tr>
</tbody>
</table>

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

- 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
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.

### Models

<table>
<thead>
<tr>
<th>Models</th>
<th>1/4”</th>
<th>3/8”</th>
<th>1/2”</th>
<th>1/2” Classic</th>
<th>3/4”</th>
<th>1”</th>
<th>1-1/2”</th>
<th>2”</th>
<th>3”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Flow gpm (lpm)</td>
<td>5.3 (20)</td>
<td>10.6 (40.1)</td>
<td>14.4 (54.5)</td>
<td>13 (49.2)</td>
<td>14.8 (56)</td>
<td>53 (200)</td>
<td>123 (465)</td>
<td>184 (696)</td>
<td>285 (1078)</td>
</tr>
<tr>
<td>Maximum Discharge Pressure psi (bar)</td>
<td>125 (8.6)</td>
<td>100 (6.8)</td>
<td>100 (6.6)</td>
<td>100 (6.9)</td>
<td>100 (6.8)</td>
<td>120 (8.3)</td>
<td>120 (8.3)</td>
<td>120 (8.3)</td>
<td>120 (8.3)</td>
</tr>
<tr>
<td>Fluid Ports Inlet/Outlet (bsp)</td>
<td>Q-1/4-1/8 PTF SAE SHORT</td>
<td>3/8” (F) - In/Out</td>
<td>1/2” (F) - In/Out</td>
<td>1/2-14 N.P.T.F.-1</td>
<td>3/4 - 14 N.P.T.F.-1 Rp 3/4(3/4-14 BSP, parallel)</td>
<td>1” ANSI/DIN Flange (Side or Center)</td>
<td>1 - 11-1/2” NPT Rp 1(1-11 BSP) (Center Discharge)</td>
<td>2” ANSI/DIN Flange (Side Discharge)</td>
<td>3” ANSI (4-hole) or Din (8-hole) Flange</td>
</tr>
<tr>
<td>Material of Construction Polypropylene-Groundable Acetal PVDF</td>
<td>Polypropylene Groundable Acetal PVDF</td>
<td>Polypropylene Groundable Acetal PVDF</td>
<td>Polypropylene Groundable Acetal PVDF</td>
<td>Polypropylene</td>
<td>Polypropylene PVDF</td>
<td>Polypropylene PVDF</td>
<td>Polypropylene PVDF</td>
<td>Polypropylene PVDF</td>
<td></td>
</tr>
<tr>
<td>Pump Weight lbs (kg)</td>
<td>Poly 2.86 (1.3) PVDF 3.88 (1.76) Acetal 3.52 (1.6)</td>
<td>4.2 (1.9) PD03P-XDS-X 4.3 (1.9) PD03P-XES-X 4.5 (2.0) PD03P-XKS-X 4.6 (2.1) PD03P-XLS-X 3.4 (1.6) PD03P-XPS-X 3.5 (1.6) PD03P-XRS-X</td>
<td>6.3 (2.9) PD05P-XDS-X-B 6.7 (3.0) PD05P-XES-X-B 6.8 (3.1) PD05P-XKS-X-B 7.2 (3.3) PD05P-XLS-X-B 5.2 (2.4) PD05P-XPS-X-B 5.4 (2.5) PD05P-XRS-X-B</td>
<td>7.2 (3.3) Polypropylene 8.8 (4.0) Ground. Acetal 9.5 (4.3) Kynar PVDF</td>
<td>5.61 (2.54)</td>
<td>19.35 (8.78) Poly Threaded 19.59 (8.89) Poly Center Port 19.87 (9.01) Poly Side Port 25.83 (11.72) PVDF Threaded 26.72 (12.12) PVDF Center Port 27.15 (12.32) PVDF Side Port</td>
<td>42.30 (19.19) Poly Center Port 40.60 (19.32) Poly Side Port 55.94 (25.37) PVDF Center Port 63.94 (29.0) PVDF Side Port</td>
<td>85.3 (38.7) Poly 110.9 (50.3) PVDF 170 (77.11) Poly 242 (109.77) PVDF</td>
<td></td>
</tr>
<tr>
<td>Max. Solids in (mm)</td>
<td>1/16 (1.6)</td>
<td>1/16 (1.6)</td>
<td>3/32 (2.4)</td>
<td>3/32 (2.4)</td>
<td>3/32 (2.4)</td>
<td>1/8 (3.2)</td>
<td>1/4 (6.4)</td>
<td>1/4 (6.4)</td>
<td>3/8 (9.5)</td>
</tr>
<tr>
<td>Max. Dry Suction Lift ft (m)</td>
<td>15 (4.6)</td>
<td>9.25 (2.8)</td>
<td>15 (4.5)</td>
<td>15 (4.5)</td>
<td>15 (4.5)</td>
<td>19 (5.7)</td>
<td>14 (4.2)</td>
<td>14 (4.2)</td>
<td>20.5 (6.3)</td>
</tr>
<tr>
<td>Recommended Filter/Regulator</td>
<td>P39124-620</td>
<td>P39124-600</td>
<td>P39124-600</td>
<td>P39124-624</td>
<td>P39124-600</td>
<td>P39224-600</td>
<td>P39334-600</td>
<td>P39454-610</td>
<td>P39454-614</td>
</tr>
<tr>
<td>Airline Kit</td>
<td>66073-1</td>
<td>66073-1</td>
<td>66073-1</td>
<td>66073-1</td>
<td>66073-1</td>
<td>66073-2</td>
<td>66084-1</td>
<td>66109</td>
<td>66109</td>
</tr>
</tbody>
</table>
1/4” Non-Metallic Models
COMPACT SERIES PUMPS

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

Ratio: 1:1
Maximum Flow: 5.3 g.p.m. (20) l.p.m.
Displacement per cycle: 0.019 Gallons (0.072 Liters)
Air Inlet (Female): 1/4 - 18 PTF SAE Short
Fluid Inlet/Outlet Hybrid: Internal Thread 1/4”NPTF/BSPT
External Thread 3/4” - 14 NPTF/BSPT
Max. operating pressure psi (bar): 125 (8.6)
Suspended solids max. dia. in.(mm): 1/16” (1.66)
Weight lbs (kg): 2.86 (1.3) Polypropylene
3.88 (1.76) PVDF
3.52 (1.60) Acetal
Max. 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](image)

### Ordering

<table>
<thead>
<tr>
<th>Position 1</th>
<th>Position 2</th>
<th>Position 3</th>
<th>Position 4</th>
<th>Position 5</th>
<th>Position 6</th>
<th>Position 7</th>
<th>Position 8</th>
<th>Position 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Center</td>
<td>Fluid</td>
<td>Wetted</td>
<td>Hardware</td>
<td>Seat</td>
<td>Ball</td>
<td>Diaphragm</td>
<td>Revision</td>
</tr>
<tr>
<td>PD01 - Standard Pump</td>
<td>E</td>
<td>Conductive Polypropylene P - Polypropylene</td>
<td>H - 1/4” NPTF BSP hybrid</td>
<td>D - Groundable Acetal* E - Groundable Acetal* (Multiple port)</td>
<td>K - Kynar PVDF L - Kynar PVDF (Multiple port) P - Polypropylene R - Polypropylene (Multiple port) S - Stainless Steel</td>
<td>D - Acetal K - PVDF P - Polypropylene (Flex-Check spacer)*</td>
<td>A - Santoprene® C - Hytrel® G - Nitrile J - Nitrile (Flex-Check only) K - EPR (Flex-Check only) L - Viton® (Flex-Check only) N - Neoprene (Flex-Check only) T - PTFE</td>
<td>A - Santoprene® C - Hytrel® G - Nitrile T - PTFE</td>
</tr>
</tbody>
</table>

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

**Accessories**

**Air Line Connection Kit | 66073-1**
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
1/4" Non-Metallic Dimensions and Flow Charts

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

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.2&quot; (182 mm)</td>
<td>3.9&quot; (100.0 mm)</td>
<td>4.6&quot; (117.0 mm)</td>
<td>6.8&quot; (173.0 mm)</td>
<td>0.3&quot; (8.8 mm)</td>
<td>6.1&quot; (156 mm)</td>
<td>0.8&quot; (20.7 mm)</td>
<td>1.9&quot; (48.6 mm)</td>
<td>2.4&quot; (61 mm)</td>
<td>3.9&quot; (99 mm)</td>
<td>2.1&quot; (53 mm)</td>
<td>8.8 mm</td>
<td>7.2&quot; (184 mm)</td>
<td>3.2&quot; (81 mm)</td>
</tr>
<tr>
<td>1/4&quot; NPT</td>
<td>3/4-14 NPTF</td>
<td>1/4 - 18 PTF SAE Short</td>
<td>1/4 NPTF</td>
<td>3/4-14 NPTF</td>
<td>3/4-14 NPTF</td>
<td>3/4-14 NPTF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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*
L - Leak Detection ATEX / CEC*
M - Leak Detection ATEX/IECex/NEC/CEC*
O - No Option
P - Standard Valve Block (No Solenoid)

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

E - End of stroke feedback + Leak Detection
F - End of stroke feedback
G - End of Stroke ATEX/IECex*
H - End of Stroke/Leak Detection ATEX/IECex*
I - End of Stroke/Leak Detection NEC / CEC*
J - End of Stroke Feedback NEC / CEC*
K - End of Stroke Feedback + Leak Detection NEC / CEC*
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
### 3/8" Non-Metallic Models

**COMPACT SERIES PUMPS**

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

- **Ratio:** 1:1
- **Maximum Flow:** 10.6 g.p.m. (40.1 l.p.m.) 8.7 (32.9) Flex check
- **Displacement per cycle:** 0.022 Gallons (0.083-Liters) 0.018 (0.068) Flex check
- **Air Inlet:** (Female) 1/4 – 18 P.T.F. SAE Short
- **Fluid Inlet/Outlet:** 3/8 - 18 N.P.T.F. - 1 Rp 3/8 (3/8 - 19 BSP, parallel)
- **Max. operating pressure:** 100 psi (6.9-bar)
- **Suspended solids max. dia.:** 1/16-in. (1.6-mm) Flex check (Fibers)
- **Weight:** lbs (kg) PD03P-XDS-XXX 4.2 (1.9) PD03P-XES-XXX 4.3 (1.9) PD03P-XKS-XXX 4.5 (2.0) PD03P-XLS-XXX 4.6 (2.1) PD03P-XPS-XXX 3.4 (1.6) PD03P-XRS-XXX 3.5 (1.6)
- **Maximum dry suction lift:** ft (m) 9.25 (2.8)
- **Sound Level:** 70 PSI 60 Cycles/Min 72.7 db(A)

#### Ordering

<table>
<thead>
<tr>
<th>Position</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example</td>
<td>PX03</td>
<td>P</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>S</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>B</td>
</tr>
</tbody>
</table>

#### Accessories

- **Air Line Connection Kit | 66073-1** (Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
- **Cycle Counter Kit | 66975**
- **Wall Mount Bracket Kit | 67388**
- **Service Repair Kits | 637428 (air section) 637429-XX (fluid section)**

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

**PD03P-APS-PCC**

**PD03P-ADS-DTT**

**Wall Mount Bracket Kit | 67388**

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

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Hytrel® and Viton® are registered trademarks of the DuPont company. Santoprene® is a registered trademark of Monsanto Company, licensed to Advanced Elastomer Systems, L.P.
3/8” Non-Metallic Dimensions and Flow Charts

PE03P-APS-PAA-B0S
with 637442-1 Kit

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

DIMENSIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>Material Inlet</th>
<th>Material Outlet</th>
</tr>
</thead>
</table>

PE03P-XXX-XXX 3/8” Non-Metallic Diaphragm Pump

Specialty Code 1 (Blank if no Specialty Code)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Solenoid 120VAC</td>
</tr>
<tr>
<td>B</td>
<td>Solenoid 12VDC</td>
</tr>
<tr>
<td>C</td>
<td>Solenoid 240VAC</td>
</tr>
<tr>
<td>D</td>
<td>Solenoid 24VDC</td>
</tr>
<tr>
<td>E</td>
<td>12VDC NEC/CEC*</td>
</tr>
<tr>
<td>F</td>
<td>24VDC NEC/CEC*</td>
</tr>
<tr>
<td>G</td>
<td>Solenoid 12VDC ATEX/IECex*</td>
</tr>
<tr>
<td>H</td>
<td>Solenoid 24VDC ATEX/IECex*</td>
</tr>
<tr>
<td>J</td>
<td>120VAC NEC/CEC*</td>
</tr>
<tr>
<td>K</td>
<td>Solenoid 220VAC ATEX/IECex*</td>
</tr>
<tr>
<td>N</td>
<td>Solenoid with no coil</td>
</tr>
<tr>
<td>O</td>
<td>Standard Valve Block (No Solenoid)</td>
</tr>
<tr>
<td>P</td>
<td>Ported Motor (No major valve provided)</td>
</tr>
<tr>
<td>R</td>
<td>End of stroke feedback + Leak Detection</td>
</tr>
<tr>
<td>S</td>
<td>End of stroke feedback</td>
</tr>
<tr>
<td>T</td>
<td>End of Stroke / Leak Detection ATEX/IECex*</td>
</tr>
</tbody>
</table>

Specialty Code 2 (Blank if no Specialty Code)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>End of stroke feedback</td>
</tr>
<tr>
<td>G</td>
<td>End of Stroke ATEX/IECex*</td>
</tr>
<tr>
<td>H</td>
<td>End of Stroke ATEX/IECex*</td>
</tr>
<tr>
<td>L</td>
<td>Leak Detection</td>
</tr>
<tr>
<td>M</td>
<td>Leak Detection ATEX/IECex/NEC/CEC*</td>
</tr>
<tr>
<td>O</td>
<td>No Option</td>
</tr>
<tr>
<td>R</td>
<td>End of Stroke Feedback NEC / CEC*</td>
</tr>
<tr>
<td>T</td>
<td>End of Stroke Feedback + Leak Detection NEC / CEC*</td>
</tr>
</tbody>
</table>

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

Refer to www.AROzone.com for full size flow curves.
For additional information contact technical support at 1.800.495.0276
1/2” Non-Metallic Models

COMPACT SERIES PUMPS

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

Ratio: 1:1
Maximum Flow: 14.4 g.p.m. (54.5 l.p.m.)
Displacement per cycle: 0.039 Gallons (0.15 Liters)
Air Inlet: (Female) 1/4 - 18 P.T.F. SAE Short
Fluid Inlet/Outlet: 1/2 - 14 N.P.T.F. - 1
Rp 1/2 (1/2 -14 BSP, parallel)
Max. operating pressure: 100 psi (6.9 bar)
Suspended solids max. dia.: 3/32” (2.4 mm)
Weight: lbs (kg) PD05P-XDS-XXX-B 6.3 (2.9)
PD05P-XES-XXX-B 6.7 (3.0)
PD05P-XKS-XXX-B 6.8 (3.1)
PD05P-XLS-XXX-B 7.2 (3.3)
PD05P-XPS-XXX-B 5.2 (2.4)
PD05P-XRS-XXX-B 5.4 (2.5)

Maximum dry suction lift: ft (m) 15.0 (4.5)
Sound Level: 70 PSI 60 Cycles/Min 75.0 db(A)
Muffler: Integral, Included

Ordering

<table>
<thead>
<tr>
<th>Position</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<td>P</td>
<td>X</td>
<td>X</td>
<td>S</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>B</td>
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</table>

**Position 1**
Model Series
D - Standard
E - Remote Actuation Capable

**Position 2**
Center Section
P - Polypropylene
A - 1/2 - 14 N.P.T.F. - 1
B - Rp 1/2 (1/2 -14 BSP, parallel)

**Position 3**
Connections
D - Ground. Acetal (single port)*
E - Ground. Acetal (multiple port)*
K - PVDF (single port)
L - PVDF (multiple port)
P - Polypropylene (single port)
R - Polypropylene (multiple port)

**Position 4**
Manifold Material
S - Stainless Steel

**Position 5**
Hardware
D - Acetal
K - PVDF
P - Polypropylene
S - Stainless Steel

**Position 6**
Seat Material
A - Santoprene®
C - Hytrel®
G - Nitrile
S - Stainless Steel
T - PTFE
U - Polyurethane
V - Viton®

**Position 7**
Ball Material
A - Santoprene®
C - Hytrel®
G - Nitrile
L - Long-Life PTFE
T - PTFE/Santoprene®
U - Polyurethane
V - Viton®

**Position 8**
Diaphragm Material
D - Acetal
K - PVDF
P - Polypropylene
S - Stainless Steel

**Position 9**
Revision Level

**Position 10 & 11**
Specialty Code
Fluid control options for pump with electronic interface (PED5 model). See complete description on page 15

Accessories

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

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

Hytrel® and Viton® are registered trademarks of the DuPont company. Santoprene® is a registered trademark of Monsanto Company, licensed to Advanced Elastomer Systems, L.P.
1/2” Non-Metallic Dimensions and Flow Charts

**DUAL INLET/OUTLET KITS:**
- 637440-1 (N.P.T. Poly)
- 637440-4 (BSP Poly)
- 637440-2 (N.P.T. Acetal)
- 637440-5 (BSP Acetal)
- 637440-3 (N.P.T. PVDF)
- 637440-6 (BSP PVDF)

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

**Ordering Position 10**

**Specialty Code 1** (Blank if no Specialty Code)
- A - Solenoid 120VAC
- B - Solenoid 12VDC
- C - Solenoid 240VAC
- D - Solenoid 24VDC
- E - 12VDC NEC/CEC*
- F - 24VDC NEC/CEC*
- G - Solenoid 12VDC ATEX/IECex*
- H - Solenoid 24VDC ATEX/IECex*
- J - 120VAC NEC/CEC*
- K - Solenoid 220VAC ATEX/IECex*
- N - Solenoid with no coil
- 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

arotechsupport@irco.com • (800) 495-0276 / EXP Series Diaphragm Pumps • AROzone.com 15
1/2” Classic Style Non-Metallic Models

COMPACT SERIES PUMPS

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

Ratio: 1:1
Maximum Flow: (ball) 13 g.p.m. (49.2 l.p.m.) (duckbill) 10 g.p.m. (37.9 l.p.m.)
Displacement per cycle: (ball) 0.04 g.p.m. (0.15 l.p.m.) (duckbill) 0.032 g.p.m. (0.12 l.p.m.)
Air Inlet: (Female) 1/4 - 18 N.P.T.F. - 1
Fluid Inlet/Outlet: 1/2 - 14 N.P.T.F. - 1
Max. operating pressure: 100 psi (6.9 bar)
Suspended solids max. dia.: (ball) 3/32” (2.4-mm) (duckbill) fibers
Weight: lbs (kg) Polypropylene 7.2 (3.3) Groundable Acetal 8.8 (4.0) Kynar PVDF 9.5 (4.3)
Maximum dry suction lift ft(m) : 15 (4.6)
Sound Level: 70 PSI 60 Cycles/Min 71.1 db(A)
Muffler: Integral, Included

Ordering

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

Air Line Connection Kit | 66073-1
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
Cycle Counter Kit | 66975
Optional Muffler | 93110 used with 637438 kit
Service Repair Kits | 637141 (air section) 637140-XX (fluid section)
1/2” Non-Metallic Dimensions and Flow Charts

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

A - 8.155”(207.1 mm)  E - 6.467” (164 mm)  J - 8.445” (215 mm)
B - 10.051” (255 mm)  F - 6.000” (152 mm)  K - 0.312” (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 - 11.084” (282 mm)
N - 6.040” (153 mm)

Refer to www.AROzone.com for full size flow curves.
For additional information contact technical support at 1.800.495.0276
3/4” Non-Metallic Models
COMPACT SERIES PUMPS

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

Ratio: 1:1
Maximum Flow: 14.8 g.p.m. (56 l.p.m.)
Displacement per cycle: 0.032 Gallons (0.12 Liters)
Air Inlet: (Female) 1/4 - 18 P.T.F. SAE Short
Fluid Inlet/Outlet: 1/2 - 14 N.P.T.F. - 1
Rp 1/2 (1/2 -14 BSP, parallel)
Max. operating pressure: 100 psi (6.9 bar)
Suspended solids max. dia.: 3/32" (2.4 mm)
Weight: lbs (kg) 5.61 (2.54)
Maximum dry suction lift: ft (m) 15.0 (4.5)
Sound Level: 70 PSI 60 Cycles/Min 75.0 db(A)
Muffler: Integral, Included

Ordering

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Model</td>
<td>Center</td>
<td>Connections</td>
<td>Material</td>
<td>Hardware</td>
<td>Material</td>
<td>Ball</td>
<td>Material</td>
<td>Speciality</td>
<td>Code</td>
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<tr>
<td>PD07 - Standard Pump</td>
<td>P</td>
<td>Polypropylene</td>
<td>A - 14 - 3/4” N.P.T.F.-1</td>
<td>S</td>
<td>Polypropylene</td>
<td>A - Santoprene®</td>
<td>A - Santoprene®</td>
<td>Revision Level</td>
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Accessories

Air Line Connection Kit | 66073-1
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
Cycle Counter Kit | 66975
Muffler Kit | 637438 (ported exhaust) 3/8” NPT
Service Repair Kits | 637428 (air section) 637427-XX (fluid section)
Wall Mount | 76763
3/4" Non-Metallic Dimensions and Flow Charts

Air inlet 1/4-18 R.T. SAE Short

DIMENSIONS

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

Model

PD07P-APS-PXX
PD07P-BPS-PXX

"Q" Material Inlet
3/4-14 N.P.T.F. - 1
Rp 3/4(3/4-14 BSP)

"R" Material Outlet
3/4-14 N.P.T.F. - 1
Rp 3/4(3/4-14 BSP)

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

Ordering Position 10
Specialty Code 1
(Blank if no Specialty Code)
A - Solenoid 120VAC
B - Solenoid 12VDC
C - Solenoid 240VAC
D - Solenoid 24VDC
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
L - Leak Detection
O - No Option

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

Ratio: 1:1  
Maximum GPM (LPM): 53 (200)  
Displacement per cycle Gallons (Liters): 0.226 (0.86)  
Air Inlet (Female): 1/4 - 18 N.P.T.  
Fluid Inlet/Outlet: 1 - 11-1/2 N.P.T.F., Rp1(1-11 BSP)  
1” A.N.S.I./DIN flange (side or center)  
Max. operating pressure psi (bar): 120 (8.3)  
Suspended solids max. dia. in.(mm): 1/8” (3.2)  
Weight lbs (kg):  Polypropylene, Threaded Port 19.35 (8.78)  
Polypropylene, Center Ported 19.59 (8.89)  
Polypropylene, Side Ported 19.87 (9.01)  
PVDF, Threaded Port 25.83 (11.72)  
PVDF, Center Ported 26.72 (12.12)  
PVDF, Side Ported 27.15 (12.32)  
Maximum dry suction lift ft(m) : 19 (5.7)  
Sound Level: 70 PSI 60 Cycles/Min 79.7 db(A)  
Muffler Included: 93110

### Ordering

<table>
<thead>
<tr>
<th>Position</th>
<th>1</th>
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<td>S</td>
<td>-</td>
<td>X</td>
<td>X</td>
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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 Counter Kit | 66350**  
**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
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)

Air inlet 1/4 – 18 N.P.T.

E - see below
F - see below
G - see below
H - 5-1/8" (127.6 mm)
J - 6-9/32" (159.6 mm)
K - 7/16" (11.1 mm)
L - see below
M - 1/2" (12.7 mm)

Dimensions

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)

A - see below
B - see below
C - see below
D - see below
E - see below
F - see below
G - see below
H - see below

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)

A - see below
B - see below
C - see below
D - see below
E - see below
F - see below
G - see below
H - see below

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)

A - see below
B - see below
C - see below
D - see below
E - see below
F - see below
G - see below
H - see below

E - End of stroke feedback + Leak Detection
F - End of stroke feedback
G - End of Stroke ATEX/IECex*
H - End of Stroke/Leak Detection
I - Leakage Detection
J - Leakage Detection ATEX/IMEX/NEC/CEC*
K - Leakage Detection NEC/CEC*

M - Leakage Detection NEC/CEC*
N - Leakage Detection NEC/CEC*
O - No Option
P - Ported Motor (No major valve provided)

For additional information contact technical support at 1.800.495.0276
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.

Ratio: 1:1
Maximum GPM (LPM): 123 (465)
Displacement per cycle Gallons (Liters): 0.617 (2.34)
Air Inlet (Female): 1/2 - 14 N.P.T.
Fluid Inlet/Outlet: 1-1/2" A.N.S.I./DIN flange (side or center)
Max. operating pressure psi (bar): 120 (8.3)
Suspended solids max. dia. in. (mm): 1/4" (6.4)

Weight lbs (kg):
- Polypropylene, Side Ported: 42.6 (19.3)
- PVDF, Side Ported: 63.9 (29)
- Polypropylene, Center Ported: 42.3 (19.2)
- PVDF, Center Ported: 55.9 (25.3)

Maximum dry suction lift ft (m): 14 (4.2)
Sound Level: 70 PSI 60 Cycles / Min 81.0 db(A)
Muffler Included: 93139

Ordering

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<tr>
<th>Position 1</th>
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<td>S</td>
<td>-</td>
<td>X</td>
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</table>

**Position 1**
- Model Series
- Model: PD15 - Standard Pump
- PE15 - Electronic Interface Accessible Pump

**Position 2**
- Center Section
- Connections
- F - 1-1/2" A.N.S.I./DIN Flange (Side)
- Y - 1-1/2" A.N.S.I./DIN Flange (Center)

**Position 3**
- Connections
- E - Conductive Polypropylene
- P - Polypropylene

**Position 4**
- Wetted Parts
- F - 1-1/2" A.N.S.I./DIN Flange (Side)
- Y - 1-1/2" A.N.S.I./DIN Flange (Center)

**Position 5**
- Hardware
- E - Conductive Polypropylene
- K - PVDF
- P - Polypropylene

**Position 6**
- Seat Material
- H - 440 SS (Hard)
- G - Nitride
- S - 316 SS
- T - PTFE

**Position 7**
- Ball Material
- V - Viton®

**Position 8**
- Diaphragm Material
- A - Santoprene®
- C - Hytrel®
- G - Buna-N
- L - Long-Life PTFE
- M - Medical Grade Santoprene®
- T - PTFE/Santoprene®
- V - Viton®

**Position 9**
- Revision Level

**Position 10 & 11**
- Specialty Code

- Fluid control options for pump with electronic interface (PE20 model).
- See complete description on page 23

Accessories

- Air Line Connection Kit | 66084-1
- Cycle Counter Kit | 66350
- 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

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

Hytrel® and Viton® are registered trademarks of the DuPont company. Santoprene® is a registered trademark of Monsanto Company, licensed to Advanced Elastomer Systems, L.P.
1-1/2" Non-Metallic Dimensions and Flow Charts

A - see below  G - see below  N - 11-3/8"(288.4 mm)
B - 21-15/32" (545.3 mm)  H - 8-11/16" (220.7 mm)  P - 9-1/32" (229.5 mm)
C - 14-15/16" (379.4 mm)  J - 10-1/32" (254.8 mm)  Q - see below
D - 3-9/32" (8.3 mm)  K - 9-15/32" (14.3 mm)  R - see below
E - see below  L - see below  S - see below
F - 10-1/2" (266.3 mm)  M - 17/32" (13.0 mm)

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*

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

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)

Refer to www.AROzone.com for full size flow curves.
For additional information contact technical support at 1-800-495-0276
2” Non-Metallic Models

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

Ratio: 1:1
Maximum GPM (LPM): 184 (696)
Displacement per cycle Gallons (Liters): 1.4 (5.3)
Air Inlet (Female): 3/4 - 14 N.P.T.
Fluid Inlet/Outlet: 2” A.N.S.I./DIN flange (side)
Max. operating pressure psi (bar): 120 (8.3)
Suspended solids max. dia. in. (mm): 1/4” (6.4)
Weight lbs (kg): Polypropylene 85.3 (38.7) PVDF 110.9 (50.3)
Maximum dry suction lift ft (m): 14 (4.2)
Sound Level: 70 PSI 60 Cycles/Min 85.0 db(A)
Muffler Included: 93139

Accessories

Air Line Connection Kit | 66109
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
Diaphragm Failure Detection | Kit No.67237
Cycle Counter Kit | 66350
Cycle Sensor Kit | 67350-1 (PE20X pump model is required)
Service Repair Kits | 637369 (air motor for PX20P), 637373-XXX (fluid section with seats), 637374-X (major air valve assembly)
Continuous-Duty Muffler | 67323 Recommended for continuous-duty and high-flow applications. Muffler features large expansion chamber, permitting cold exhaust air to exit pump
Flange Connection Kit | 67341-E20N
2" Non-Metallic Dimensions and Flow Charts

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

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

arotechsupport@irco.com • (800) 495-0276 / EXP Series Diaphragm Pumps • AROzone.com 25
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) 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

Ordering

<table>
<thead>
<tr>
<th>Position 1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Series</td>
<td>Center Section</td>
<td>Connections</td>
<td>Wetted Parts</td>
<td>Hardware</td>
<td>Seat Material</td>
<td>Ball Material</td>
<td>Diaphragm Material</td>
<td>Hardware</td>
<td>Fluid Control Options</td>
</tr>
<tr>
<td>PD30 - Standard Pump</td>
<td>PE30† - Electronic Interface Accessible Pump</td>
<td>P - Polypropylene</td>
<td>D - 3” ANSI 4-hole Flange F - 3” DIN 8-hole Flange</td>
<td>K - PVDF P - Polypropylene</td>
<td>S - SS</td>
<td>A - Santoprene C - Hytrel® G - Nitrile T - PTFE V - Viton®</td>
<td>A - Santoprene C - Hytrel® G - Buna-N L - Long-Life PTFE T - PTFE/Santoprene®</td>
<td>Revision Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>¹ Call customer service for availability</td>
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</tr>
</tbody>
</table>

Accessories

Air Line Connection Kit | 66109
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
Diaphragm Failure Detection | Kit No. 67237
Cycle Sensor Kit | 67350-1
Service Repair Kits | 637369 (air motor), 637447-XXX (fluid section with seats), 637374-X (major air valve assembly)

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

Revision Level

Position 10 & 11 Specialty Code
Fluid control options for pump with electronic interface (PE30 model). See complete description on page 27
3" Non-Metallic Dimensions and Flow Charts

Ordering Position 10
Specialty Code 1 (Blank if no Specialty Code)
A - Solenoid 120VAC
B - Solenoid 12VDC
C - Solenoid 240VAC
D - Solenoid 24VDC
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
L - Leak detection
O - No Option

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

<table>
<thead>
<tr>
<th>Models</th>
<th>1/2” Metallic</th>
<th>3/4” Metallic</th>
<th>1” Metallic</th>
<th>1-1/2” Metallic</th>
<th>2” Metallic</th>
<th>3” Metallic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Flow gpm (lpm)</td>
<td>12 (45.4)</td>
<td>13.6 (51.5)</td>
<td>52 (197)</td>
<td>123 (465)</td>
<td>172 (651)</td>
<td>275 (1,041)</td>
</tr>
<tr>
<td>Maximum Discharge Pressure psi (bar)</td>
<td>100 (6.9)</td>
<td>100 (6.9)</td>
<td>120 (8.3)</td>
<td>120 (8.3)</td>
<td>120 (8.3)</td>
<td>120 (8.3)</td>
</tr>
<tr>
<td>Fluid Ports Inlet/Outlet (bsp)</td>
<td>1/2” (F) - In/Out</td>
<td>3/4”-14 N.P.T.F.-2 R P 3/4(3/4”-14 B S P, parallel)</td>
<td>11/2”-11/2” NPT R P 11/2(1-11 B S P) (Side or Center)</td>
<td>1-1/2”-1-1/2” NPT R P 1(1-1/2 B S P) (Side or Center)</td>
<td>2” NPTF R P 2(2-11 B S P) (Side or Center)</td>
<td>3” NPTF R P 3(3-11 B S P) (Center)</td>
</tr>
<tr>
<td>Material of Construction</td>
<td>Aluminum</td>
<td>Aluminum</td>
<td>Aluminum</td>
<td>Aluminum</td>
<td>Aluminum</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Pump Weight lbs (kg)</td>
<td>10.4 (4.7) PD05A-XAS-X-B</td>
<td>16.6 (7.5) PD05A-XSS-X-B</td>
<td>8.74 (3.96)</td>
<td>20.7 (9.4) Alum 35.2 (16.0) CI 38.2 (17.3) SS</td>
<td>39.6 (18.0) Hastelloy® 4.65 (2.11) for Alum. air motor, add 11.09 (5.03) for SS air motor</td>
<td>37.7 (17.1) Alum. 73.2 (33.2) CI 61.2 (27.8) SS 86.9 (39.4) Hastelloy® 3.08 (1.40) for Alum. air motor, add 14.39 (6.53) for SS air motor</td>
</tr>
<tr>
<td>Maximum Solids in (mm)</td>
<td>3/32 (2.4)</td>
<td>3/32 (2.4)</td>
<td>1/8 (3.22)</td>
<td>1/4 (6.4)</td>
<td>1/4 (6.4)</td>
<td>3/8 (9.5)</td>
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<tr>
<td>Maximum Dry Suction Lift ft (m)</td>
<td>15 (4.5)</td>
<td>15 (4.5)</td>
<td>19 (5.7)</td>
<td>14 (4.2)</td>
<td>14 (4.2)</td>
<td>14 (4.2)</td>
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<tr>
<td>Airline Kit</td>
<td>66073-1 66073-1</td>
<td>66073-2 66084-1</td>
<td>66109 66109</td>
<td>66073-1 66073-1</td>
<td>66073-2 66084-1</td>
<td>66109 66109</td>
</tr>
</tbody>
</table>

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.

| Ratio: | 1:1 |
| Maximum Flow: | 12.0 g.p.m. (45.4 l.p.m.) |
| Displacement per cycle: | 0.039 Gallons (0.15 Liters) |
| Air Inlet: (Female) | 1/4 - 18 P.T.F. SAE Short (PD05R-X-X-B models) |
| | 1/4 - 18 N.P.T.F. - 1 (PD05A-X-X-B models) |
| Fluid Inlet/Outlet: | 1/2 - 14 N.P.T.F. - 1 |
| | Rp 1/2 (1/2 - 14 BSP, parallel) |
| Max. operating pressure: | 100-psi (6.9-bar) |
| Suspended solids max. dia.: | 3/32-in. (2.4-mm) |
| Weight: lbs (kg) | PD05A-XAS-XXX-B 10.4 (4.7) |
| | PD05A-XSS-XXX-B 16.6 (7.5) |
| | PD05R-XAS-XXX-B 8.0 (3.7) |
| | PD05R-XSS-XXX-B 14.3 (6.5) |
| Maximum dry suction lift: ft (m) | 15 (4.5) |
| Sound Level: 70 PSI 60 Cycles/Min 75 db(A) |
| Muffler: | PD05A - 93110; PD05R - Integral |

Ordering

<table>
<thead>
<tr>
<th>Position 1</th>
<th>Position 2</th>
<th>Position 3</th>
<th>Position 4</th>
<th>Position 5</th>
<th>Position 6</th>
<th>Position 7</th>
<th>Position 8</th>
<th>Position 9</th>
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</thead>
<tbody>
<tr>
<td>Model</td>
<td>Center</td>
<td>Connections</td>
<td>Wetted Parts</td>
<td>Hardware</td>
<td>Seat Material</td>
<td>Ball Material</td>
<td>Diaphragm Material</td>
<td>Revision Level</td>
</tr>
<tr>
<td>E - Remote</td>
<td>propylene</td>
<td>B - Rp 1/2</td>
<td>5 - Stainless Steel*</td>
<td>P - Polypropylene</td>
<td>C - Hytrel®</td>
<td>G - Nitride</td>
<td>L - Long-Life</td>
<td>C - Hytrel®</td>
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<tr>
<td>Actuation</td>
<td>(1/2 - 14</td>
<td>S - Stainless Steel</td>
<td>T - PTFE</td>
<td>U - Polyurethane</td>
<td>T - PTFE</td>
<td>S - Stainless Steel</td>
<td>PTFE</td>
<td>T - PTFE/Santoprene®</td>
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<td>Capable</td>
<td>BSP, parallel)</td>
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<tr>
<td>A - Aluminum*</td>
<td>C - Hytrel®</td>
<td>U - Polyurethane</td>
<td>V - Viton*</td>
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<tr>
<td>C - Hytrel®</td>
<td>G - Nitride</td>
<td>L - Long-Life</td>
<td>PTFE</td>
<td>T - PTFE/Santoprene®</td>
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<tr>
<td>G - Nitride</td>
<td>L - Long-Life</td>
<td>PTFE</td>
<td>T - PTFE/Santoprene®</td>
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<td>L - Long-Life</td>
<td>PTFE</td>
<td>T - PTFE/Santoprene®</td>
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<td>PTFE</td>
<td>T - PTFE/Santoprene®</td>
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<tr>
<td>T - PTFE/Santoprene®</td>
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<tr>
<td>U - Polyurethane</td>
<td>V - Viton*</td>
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<tr>
<td>V - Viton*</td>
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</tr>
</tbody>
</table>

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

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

Accessories

Air Line Connection Kit | 66073-1
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
Cycle Counter Kit | 66975
Wall Mount Bracket Kit | 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

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 - No Option
- 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
- M - Leak Detection ATEX/IECex/NEC/CEC*
- F - End of stroke feedback
- N - No Option
- G - End of Stroke ATEX/IECex*
- J - 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

Refer to www.AROzone.com for full size flow curves.
For additional information contact technical support at 1.800.495.0276
3/4” Metallic Models

COMPACT SERIES PUMPS

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

Ratio: 1:1
Maximum Flow: 13.6-g.p.m. (51.5-l.p.m.)
Displacement per cycle: 0.030-Gallons (0.11-Liters)
Air Inlet: (Female) 1/4 - 18 P.T.F. SAE Short
Fluid Inlet/Outlet: 3/4 - 14 N.P.T.F.-2
Rp 3/4 (3/4 -14 BSP, parallel)
Max. operating pressure: 100-psi (6.9-bar)
Suspended solids max. dia.: 3/32” (2.4-mm)
Weight: lbs (kg) PX07R 8.74 (3.96)
PX07A 11.0 (4.99)
Maximum dry suction lift: ft (m) 15 (4.5)
Sound Level: 70 PSI 60 Cycles/Min 75 db(A)

Ordering

<table>
<thead>
<tr>
<th>Position 1</th>
<th>Position 2</th>
<th>Position 3</th>
<th>Position 4</th>
<th>Position 5</th>
<th>Position 6</th>
<th>Position 7</th>
<th>Position 8</th>
<th>Position 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Series</td>
<td>Center Section</td>
<td>Connections</td>
<td>Wetted Parts</td>
<td>Hardware</td>
<td>Seat Material</td>
<td>Ball Material</td>
<td>Diaphragm Material</td>
<td></td>
</tr>
<tr>
<td>E - Remote Actuation Capable</td>
<td>R - Polypropylene</td>
<td>B - Rp 3/4 (3/4 -14 BSP, parallel)</td>
<td></td>
<td></td>
<td>C - Hytrel®</td>
<td>C - Hytrel®</td>
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<td></td>
</tr>
</tbody>
</table>

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

Accessories

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

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3/4” Metallic Dimensions and Flow Charts

PD07R-XAS-PXX 3/4” METALLIC DIAPHRAGM PUMP

DIMENSIONS

<table>
<thead>
<tr>
<th>A</th>
<th>9-9/32” (235.3 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>11-1/16” (280.4 mm)</td>
</tr>
<tr>
<td>C</td>
<td>6-1/8” (155.6 mm)</td>
</tr>
<tr>
<td>D</td>
<td>2” (50.8 mm)</td>
</tr>
<tr>
<td>E</td>
<td>6-23/32” (170.6 mm)</td>
</tr>
<tr>
<td>F</td>
<td>6” (152.4 mm)</td>
</tr>
<tr>
<td>G</td>
<td>11-7/8” (301.2 mm)</td>
</tr>
<tr>
<td>H</td>
<td>4-29/32” (124.2 mm)</td>
</tr>
<tr>
<td>J</td>
<td>5-1/2” (139.7 mm)</td>
</tr>
<tr>
<td>K</td>
<td>5/16” (8.0 mm)</td>
</tr>
<tr>
<td>L</td>
<td>3-29/32” (99.2 mm)</td>
</tr>
</tbody>
</table>

Model

PD07R-AAS-PXX  3/4”-14 N.P.T.F. - 2
PD07R-BAS-PXX  Rp 3/4 (3/4 - 14 BSP)

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/IEEx*
H - Solenoid 24VDC ATEX/IEEx*
J - 120VAC NEC/CEC*
K - Solenoid 220VAC ATEX/IEEx*
L - Leak Detection ATEX/IEEx/NEC/CEC*
M - Leak Detection ATEX/IEEx/NEC/CEC*
N - Solenoid with no coil
O - Standard Valve Block (No Solenoid)
P - Ported Motor (No major valve provided)
Q - No Option
R - End of Stroke Feedback NEC / CEC*
S - End of Stroke Feedback + Leak Detection NEC / CEC*
T - End of Stroke Feedback NEC / CEC*

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/IEEx*
H - End of Stroke/Leak Detection ATEX/IEEx*
I - ATEX: Zone 1&2, 21&22
J - NEC / CEC: Class I&II, Div 1&2 , Group A-D

At ambient temperature.
Performance based on water

AIR CONSUMPTION IN SCFM

AIR CONSUMPTION IN LITERS / SEC

CAPACITY IN U.S. GALLONS PER MINUTE

FLOW RATE (LITERS / MIN.)

Refer to www.AROzone.com for full size flow curves.
ARO® EXP 1” metallic diaphragm pumps achieve flow rates of up to 52.2 GPM (197.6 LPM) and offer a wide array of material and porting configurations. These pumps are often used for transfer, filling, recirculation and batching in ceramic, industrial, chemical and petrochemical markets.

Ratio: 1:1
Maximum GPM (LPM): 52 (197)
Displacement per cycle Gallons (Liters): 0.232 (0.88)
Air Inlet (Female): 1/4 - 18 N.P.T.
Fluid Inlet/Outlet: 1 - 11-1/2 N.P.T.F. - 1, Rp(1-11 BSP)
Max. operating pressure psi (bar): 120 (8.3)
Suspended solids max. dia. in. (mm): 1/8” (3.3)
Weight lbs (kg): PX10R-XAX-XXX 20.7 (9.4)
PX10R-XCX-XXX 35.2 (16.0)
PX10R-XHX-XXX 39.6 (18.0)
PX10R-XSX-XXX 38.2 (17.3)
Note: Add 4.65 lbs (2.11 kg) for aluminum air motor
Add 11.09 lbs (5.03 kg) for stainless steel air motor
Maximum dry suction lift ft(m): 19 (5.7)
Sound Level: 70 PSI 60 Cycles/Min 80.6 db(A)
Muffler Included: 93110

### Ordering

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>PE10 - Electronic Interface Accessible Pump</td>
<td>R - Polypropylene</td>
<td>B - BSP Thread</td>
<td>C - Cast Iron</td>
<td>S - Stainless Steel*</td>
<td>C - Hytrel®</td>
<td>H - Carbon Steel</td>
<td>F - Aluminum G - Nitrile H - 440 SS L - Hastelloy-C S - 316 SS</td>
<td>T - PTFE V - Viton®</td>
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</tr>
<tr>
<td></td>
<td>S - Stainless Steel*</td>
<td></td>
<td>H - Hastelloy-C*</td>
<td>S - Stainless Steel*</td>
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</tbody>
</table>

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

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

### Accessories

**Accessories**

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

Diaphragm Failure Detection | 67237

Cycle Counter Kit | 66350

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

Service Repair Kits | 637397 (air motor for PX10A, PX10R and PX10S), 637401-XXX (fluid section with seats), 637395-X (major air valve assembly)
# 1" Metallic Dimensions and Flow Charts

### Dimensions

<table>
<thead>
<tr>
<th>Position</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>12-11/32&quot; (313.2 mm)</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>11-9/16&quot; (293.7 mm)</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>4&quot; (101.6 mm)</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>1-1/4&quot; (31.8 mm)</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>12-7/16&quot; (315.9 mm)</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>6-1/4&quot; (158.8 mm)</td>
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</tr>
<tr>
<td>J</td>
<td>7-5/16&quot; (185.7 mm)</td>
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<tr>
<td>K</td>
<td>13-32&quot; (10.3 mm)</td>
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<tr>
<td>L</td>
<td>1-1/2&quot; (38.1 mm)</td>
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<tr>
<td>M</td>
<td>6-15/32&quot; (164.3 mm)</td>
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</tr>
<tr>
<td>N</td>
<td>see below</td>
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</tr>
</tbody>
</table>

### Ordering Positions

**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)

**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
- 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*

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

Refer to www.AROzone.com for full size flow curves.
For additional information contact technical support at 1.800.495.0276
1-1/2” Metallic Models

ARO® 1-1/2” metallic diaphragm pumps achieve flow rates of up to 123.1 GPM (465.9 LPM) and offer a wide array of material and porting configurations. These pumps are often used for transfer, filling, recirculation and batching in paint, oil and gas, chemical and petrochemical markets.

Ratio: 1:1
Maximum GPM (LPM): 123 (465)
Displacement per cycle Gallons (Liters): 0.617 (2.34)
Air Inlet (Female): 1/2 – 14 N.P.T.
Fluid Inlet/Outlet: 1-1/2” - 11-1/2 N.P.T.F.-1, Rp1-1/2(1-1/2-11BSP)
1-1/2” A.N.S.I./DIN flange
Max. operating pressure psi (bar): 120 (8.3)
Suspended solids max. dia. in.(mm): 1/4” (6.4)
Weight lbs (kg): PX15R-XAX-XXX 37.7 (17.1)
PX15R-XCX-XXX 73.2 (33.2)
PX15R-XSX-XXX 61.2 (27.8)
PX15R-XHX-XXX 86.9 (39.4)
Note: add 2.14 lbs (0.97 kg) for aluminum air motor section
add 18.14 lbs (8.23 kg) for stainless steel air motor section

Maximum dry suction lift ft(m): 14 (4.2)
Sound Level: 70 PSI 50 Cycles/Min 81.0 db(A)
Muffler Included: 350-568

Ordering

<table>
<thead>
<tr>
<th>Position</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
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<tr>
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<td>PX15</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>A</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Position 1</th>
<th>Position 2</th>
<th>Position 3</th>
<th>Position 4</th>
<th>Position 5</th>
<th>Position 6</th>
<th>Position 7</th>
<th>Position 8</th>
<th>Position 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Series</td>
<td>Center Section</td>
<td>Connections</td>
<td>Wetted Parts</td>
<td>Hardware</td>
<td>Seat Material</td>
<td>Ball Material</td>
<td>Diaphragm Material</td>
<td></td>
</tr>
<tr>
<td>PE15 - Electronic Interface Accessible Pump</td>
<td></td>
<td>R - Polypropylene</td>
<td>B - BSP Thread</td>
<td>S - Stainless Steel*</td>
<td>C - Cast Iron</td>
<td>C - Hytrel®</td>
<td>C - Hytrel®</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>S - Stainless Steel*</td>
<td>Y - 1-1/2” A.N.S.I./DIN Flange (Center)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>P - Plated Steel</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>F - Aluminum</td>
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<td></td>
<td></td>
<td></td>
<td>G - Nitrile</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>H - 440 Stainless Steel</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>L - Hastelloy-C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>S - 316 Stainless Steel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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

Accessories

Air Line Connection Kit | 66084-1
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
Diaphragm Failure Detection | 67237
Cycle Counter Kit | 67350
Service Repair Kits | 637389 (air motor for PX15X), 637375-XXX (fluid section with seats), 637390-X (major air valve assembly)
### 1-1/2" Metallic Dimensions and Flow Charts

**Ordering Position 10**

Specialty Code 1 (Blank if no Specialty Code)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>Solenoid 120VAC</td>
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<tr>
<td>B</td>
<td>Solenoid 12VDC</td>
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<tr>
<td>C</td>
<td>Solenoid 240VAC</td>
</tr>
<tr>
<td>D</td>
<td>Solenoid 24VDC</td>
</tr>
<tr>
<td>E</td>
<td>12vDC NEC/CEC*</td>
</tr>
<tr>
<td>F</td>
<td>24vDC NEC/CEC*</td>
</tr>
<tr>
<td>G</td>
<td>Solenoid 12VDC ATEX/IECex*</td>
</tr>
<tr>
<td>H</td>
<td>Solenoid 24VDC ATEX/IECex*</td>
</tr>
<tr>
<td>J</td>
<td>120VAC NEC/CEC*</td>
</tr>
<tr>
<td>N</td>
<td>Solenoid with no coil</td>
</tr>
<tr>
<td>O</td>
<td>Standard Valve Block (No Solenoid)</td>
</tr>
<tr>
<td>P</td>
<td>Ported Motor (No major valve provided)</td>
</tr>
<tr>
<td>E</td>
<td>End of stroke feedback + Leak Detection</td>
</tr>
<tr>
<td>F</td>
<td>End of stroke feedback</td>
</tr>
<tr>
<td>G</td>
<td>End of Stroke ATEX/IECex*</td>
</tr>
<tr>
<td>H</td>
<td>End of Stroke/Leak Detection ATEX/IECex*</td>
</tr>
<tr>
<td>L</td>
<td>Leak Detection</td>
</tr>
<tr>
<td>M</td>
<td>Leak Detection ATEX/IECex/NEC/CEC*</td>
</tr>
<tr>
<td>O</td>
<td>No Option</td>
</tr>
<tr>
<td>R</td>
<td>End of Stroke Feedback NEC / CEC*</td>
</tr>
<tr>
<td>T</td>
<td>End of Stroke Feedback + Leak Detection NEC / CEC*</td>
</tr>
</tbody>
</table>

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

**ATEX: Zone 1&2, 21&22**

**Ordering Position 11**

Specialty Code 2 (Blank if no Specialty Code)

<table>
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<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>End of stroke feedback + Leak Detection</td>
</tr>
<tr>
<td>F</td>
<td>End of stroke feedback</td>
</tr>
<tr>
<td>G</td>
<td>End of Stroke ATEX/IECex*</td>
</tr>
<tr>
<td>H</td>
<td>End of Stroke/Lockdown ATEX/IECex*</td>
</tr>
<tr>
<td>L</td>
<td>Leak Detection</td>
</tr>
<tr>
<td>M</td>
<td>Leak Detection ATEX/IECex/NEC/CEC*</td>
</tr>
<tr>
<td>O</td>
<td>No Option</td>
</tr>
</tbody>
</table>

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

**ATEX: Zone 1&2, 21&22**
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.

Ratio: 1:1
Maximum GPM (LPM): 172 (651)
Displacement per cycle: 1.4 (5.3)
@ 100 psi Gallons (Liters)
Air Inlet (Female): 3/4 - 14 N.P.T.F.-1
Fluid Inlet/Outlet (Female): PX20X-AXX-XXX-B( ) 2 - 11-1/2 N.P.T.F.-1
PX20X-BXX-XXX-B( ) Rp 2 (2 - 11 BSP parallel)
PX20X-FXX-XXX-B( ) 2” A.N.S.I./DIN Flange
Max. operating pressure psi (bar): 120 (8.3)
Suspended solids max. dia. in. (mm): 1/4” (6.4)
Maximum dry suction lift ft (m): 14 (4.2)
Sound Level: 70 PSI 50 Cycles/Min 85.0 db(A)
Muffler Included: 67389

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

Ordering

<table>
<thead>
<tr>
<th>Position 1</th>
<th>Position 2</th>
<th>Position 3</th>
<th>Position 4</th>
<th>Position 5</th>
<th>Position 6</th>
<th>Position 7</th>
<th>Position 8</th>
<th>Position 9</th>
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<tbody>
<tr>
<td>Model Series</td>
<td>Center Section</td>
<td>Connections</td>
<td>Wetted Parts</td>
<td>Hardware</td>
<td>Seat Material</td>
<td>Ball Material</td>
<td>Diaphragm Material</td>
<td>Specialty Code</td>
</tr>
<tr>
<td>PE20 - Electronic Interface Accessible Pump</td>
<td>R - Polypropylene</td>
<td>B - BSP Thread F - 2” ANSI/DIN Flange Center</td>
<td>H - Hastelloy-C</td>
<td>SS</td>
<td>A - Santoprene®</td>
<td>G - Nitrile</td>
<td>S - 316 SS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S - Stainless Steel</td>
<td></td>
<td></td>
<td>Flange Center</td>
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<td></td>
</tr>
<tr>
<td>PE20 - Electronic Interface Accessible Pump</td>
<td>R - Polypropylene</td>
<td>B - BSP Thread F - 2” ANSI/DIN Flange Center</td>
<td>H - Hastelloy-C</td>
<td>SS</td>
<td>A - Santoprene®</td>
<td>G - Nitrile</td>
<td>S - 316 SS</td>
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<td>S - Stainless Steel</td>
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<td></td>
<td>Flange Center</td>
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<tr>
<td>PE20 - Electronic Interface Accessible Pump</td>
<td>R - Polypropylene</td>
<td>B - BSP Thread F - 2” ANSI/DIN Flange Center</td>
<td>H - Hastelloy-C</td>
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<td>G - Nitrile</td>
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<td>S - Stainless Steel</td>
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<tr>
<td>PE20 - Electronic Interface Accessible Pump</td>
<td>R - Polypropylene</td>
<td>B - BSP Thread F - 2” ANSI/DIN Flange Center</td>
<td>H - Hastelloy-C</td>
<td>SS</td>
<td>A - Santoprene®</td>
<td>G - Nitrile</td>
<td>S - 316 SS</td>
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<tr>
<td></td>
<td>S - Stainless Steel</td>
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<td></td>
<td>Flange Center</td>
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</tbody>
</table>

* 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)
Continuous-Duty Muffler | 67263
Muffler features large expansion chamber, permitting cold exhaust air to exit pump
Cycle Counter Kit | 66350 for PD20R-X and PD20Y-X, 67350-1, (PE20X pump model is required)
Service Repair Kits | 67369 (air motor for PX20R and PX20Y), 673421 (air motor for PX20A and PX20S), 637309-XXX (fluid section with seats), 637374-X (major air valve assembly)
2” Metallic Dimensions and Flow Charts

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

* AROzone.com
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.

Ratio: 1:1
Maximum GPM (LPM): 275 (1041)
Displacement per cycle: 2.8 (10.6)
@ 100 psi Gallons (Liters): 3/4 - 14 N.P.T.F. - 1
Air Inlet: (Female): 3” - 8 N.P.T.F. - 1
Fluid Inlet / Outlet (Female): Rp 3 (3 - 11 BSP parallel)
Max. operating pressure psi (bar): 120 (8.3)
Suspended solids max. dia. in. (mm): 3/8 (9.5)
Weight lbs (kg): PX30A-XX-XXX-C 129.5 (58.8)
PX30A-XXX-XXX-C 221.1 (100.3)
PX30A-AHXXX-C 249.4 (113.3)
PX30A-ASX-XXX-C 282.3 (130.8)
PX30A-FHXX-XXX-C 269.4 (122.3)
PX30A-FSXX-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

### Accessories

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

**Diaphragm Failure Detection | 67237**

**Cycle Sensor Kit | 67350-1**

**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)**

**Continuous-Duty Muffler | 67263** Muffler features large expansion chamber, permitting cold exhaust air to exit pump.
### 3” Metallic Dimensions and Flow Charts

#### Ordering Position 10

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

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

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

---

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

### Choose a Controller

#### Model Options

<table>
<thead>
<tr>
<th>Model Options</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Controller (No Cables)</td>
<td>651763-XX-0</td>
</tr>
<tr>
<td>Interface with 1 Pump</td>
<td>651763-XX-1</td>
</tr>
<tr>
<td>Interface with 2 Pumps</td>
<td>651763-XX-2</td>
</tr>
<tr>
<td>Cable Assembly, 16 ft.</td>
<td>47517818001</td>
</tr>
<tr>
<td>Cable Assembly, 50 ft.</td>
<td>47517818005</td>
</tr>
</tbody>
</table>

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

### Flow Meter Integration

- A Flow meter signal provides accurate input for precise volume control
- The controller closes an outlet valve to quickly stop flow when the desired volume is reached
- Integrates with ease and eliminates the need for PLC wiring and programming

### Simul-Start Pumping

- Synchronize your pumps
- Controller can signal 2 pumps to start simultaneously in applications requiring consistent volumetric ratios

### Touch-and-Walk Away

- Accurate, electronically controlled dosing
- Includes pre-programmed and user-directed functions
- Closed loop system achieves dispensing repeatability within +/- 1%

### Choose a Pump

<table>
<thead>
<tr>
<th>Position</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example</td>
<td>PE XX X -</td>
<td>X X X -</td>
<td>X X X -</td>
<td>B X X</td>
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</tr>
</tbody>
</table>

#### Model Series

**PE - Electronic Interface**

- 01 - 1/4" Port
- 03 - 3/8" Port
- 05 - 1/2" Port
- 07 - 3/4" Port
- 10 - 1" Port
- 15 - 1-1/2" Port
- 20 - 2" Port
- 30 - 3" Port

- A - Aluminum*
- P - Polypropylene
- S - Stainless Steel*
- A - NPT Thread
- B - BSP thread
- F - A.N.S.I. Side Y - A.N.S.I. Center
- A - Aluminum*
- C - Cast Iron
- D,E - Groundable Acetal*
- H - Hastelloy*
- K,L - PVDF (Kynar)
- P,R - Polypropylene
- S - Stainless Steel*
- P - Plated Steel
- S - Stainless Steel

- A - Santoprene®
- C - Hytrel®
- D - Acetal
- E - Carbon Steel
- F - Aluminum
- G - Nitrite
- H - 440 SS Hard
- K - PVDF
- L - Hastelloy
- P - Polypropylene
- S - Stainless Steel

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- C - Hytrel®
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### Automate Your Process

- Eliminate manual processes and mistakes
- Achieve safer control and monitoring via remote operation
- Accepts leak detection, liquid level sensing and proportional control

### Real Time System Alerts

- Remote alerts send operating data
- Triggers can perform auto shut-down
- Notifications can be programmed for maintenance tasks

### Multi-Pump Control

- Control 2 pumps for accurate two part batching processes
- Pre-program up to 5 batches per pump
- Alarm notifies on batch completion

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

† only solenoid voltages that will work with controller

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

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

| Ratio:      | 1:1          |
| Maximum GPM (LPM): | 172 (651)   |
| Displacement per cycle: | 1.4 (5.3)   |
| @ 100 psi Gallons (Liters) |     |
| Air Inlet (Female): | 3/4 - 14 N.P.T.F.-1 |
| Fluid Inlet/Outlet (Female): | PF20X-AXX-XXX-B 2 - 11-1/2 N.P.T.F.-1 |
|                        | PF20X-BXX-XXX-B Rp 2 (2 - 11 BSP parallel) |
| Max. operating pressure psi (bar): | 120 (8.3) |
| Suspended solids max. dia. in. (mm): | 2” (51) Semi-solid |
| Maximum dry suction lift ft (m): | 14 (4.2) |
| Weight lbs (kg): | PF20A-XAX-XXX-B 97.3 (44.2) |
|                 | PF20A-XCX-XXX-B 166.2 (75.4) |
|                 | PF20A-ASX-XXX-B 166 (75.3) |
|                 | PF20A-BSX-XXX-B 166 (75.3) |
|                 | PF20A-FSX-XXX-B 177.1 (80.3) |
|                 | Add 28.9 lbs (13.1kg) for stainless steel air motor |
|                 | PF20R-XCX-XXX-B 178.7 (81.1) |
|                 | PF20R-XSX-XXX-B 180.6 (81.9) |

Sound Level: 70 PSI 60 Cycles / Min 85.0 db(A)
Muffler: 94810 (optional 94117)

### Ordering

<table>
<thead>
<tr>
<th>Position</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<th>5</th>
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<tbody>
<tr>
<td>Example:</td>
<td>PF20</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>S</td>
<td>X</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Position 1 Model Series</th>
<th>Position 2 Center Section</th>
<th>Position 3 Connections</th>
<th>Position 4 Wetted Parts</th>
<th>Position 5 Hardware</th>
<th>Position 6 Seat Material</th>
<th>Position 7 Flap Material</th>
<th>Position 8 Diaphragm Material</th>
<th>Position 9 Revision Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>PF20 - Standard Pump</td>
<td>A - Aluminum*</td>
<td>A - NPTF Thread B - BSP Thread F - 2” ANSI/DIN Flange</td>
<td>A¹ - Aluminum* C - Cast Iron S - Stainless Steel¹</td>
<td>P - Plated Steel S - Stainless Steel</td>
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<td></td>
<td>R - Polypropylene w/SS Air Caps</td>
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<tr>
<td></td>
<td>S - Stainless Steel*</td>
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<tr>
<td></td>
<td>Y - Polypropylene w/CI Air Caps</td>
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</tr>
</tbody>
</table>

* Acceptable for use in hazardous locations.

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

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

Port: 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, 1/4" (6.4) PP20A Models, 3/8" (9.5) PP30A Models

Weight: lbs (kg) PP10A-XAX-AAA 33.3 (15.1) PP20A-XAX-AAA 99.4 (45.1) PP20A-XSX-AAA 157.8 (71.6) PP30A-XAX-AAA 137.5 (62.4) PP30A-XSX-AAA 236.8 (107.4)

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)

* Acceptable for use in hazardous locations

Santoprene® is a registered trademark of Monsanto Company, licensed to Advanced Elastomer Systems, L.P.
2:1 Ratio High Pressure
SPECIALTY PUMP

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

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

2:1 Ratio High-Pressure Pump

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

Applications:
- High viscosity fluids
- High solids fluids
- Charging filter presses
- High head / back pressure

<table>
<thead>
<tr>
<th>Model</th>
<th>2:1 Ratio 1 1/2&quot; Diaphragm Pump</th>
<th>2:1 Ratio 2&quot; Diaphragm Pump</th>
<th>2:1 Ratio 3&quot; Diaphragm Pump</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>63 (238.48)</td>
<td>92 (348.25)</td>
<td>160 (605.6)</td>
</tr>
<tr>
<td>1</td>
<td>GPM (Liters)</td>
<td>GPM (Liters)</td>
<td>GPM (Liters)</td>
</tr>
<tr>
<td>2</td>
<td>Maximum Displacement</td>
<td>Maximum Displacement</td>
<td>Maximum Displacement</td>
</tr>
<tr>
<td>3</td>
<td>Cycles Per Gallons @ 100 PSI</td>
<td>Cycles Per Gallons @ 100 PSI</td>
<td>Cycles Per Gallons @ 100 PSI</td>
</tr>
<tr>
<td>4</td>
<td>Weight (kg)</td>
<td>Weight (kg)</td>
<td>Weight (kg)</td>
</tr>
<tr>
<td>5</td>
<td>SUSPENDED SOLIDS MAX. Dia.</td>
<td>SUSPENDED SOLIDS MAX. Dia.</td>
<td>SUSPENDED SOLIDS MAX. Dia.</td>
</tr>
<tr>
<td>6</td>
<td>OUTLET PRESSURE PSI (bar)</td>
<td>OUTLET PRESSURE PSI (bar)</td>
<td>OUTLET PRESSURE PSI (bar)</td>
</tr>
<tr>
<td>7</td>
<td></td>
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</table>

Ordering

<table>
<thead>
<tr>
<th>Position</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example:</td>
<td>PHXX F - X S P - S X X - C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Accessories

Filter/Regulator
- PH15 - 1 1/2"
  P39344-614
- PH20 - 2"
  P39354-614
- PH30 - 3"
  P39454-614

Air Line Kit
- PH15 - 1 1/2"
  66084-1
- PH20 - 2"
  66109
- PH30 - 3"
  66109

Air Section Service Kit
- PH15 - 1 1/2"
  637389
- PH20 - 2"
  637369
- PH30 - 3"
  637369

Fluid Section Service Kit
- PH15 - 1 1/2"
  637445-XX
- PH20 - 2"
  637446-XX
- PH30 - 3"
  637441-CC

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Sanitary Transfer - Clamped

SANITARY 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.
- 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

<table>
<thead>
<tr>
<th>SD10S-CSS-SXX-B / 1&quot; Pump</th>
<th>SD20S-CSS-SXX-B / 2&quot; Pump</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Startup Pressure PSI (bar)</strong></td>
<td>25 (1.723)</td>
</tr>
<tr>
<td><strong>Dry suction lift ft. H2O (m)</strong></td>
<td>16.49 (5.02)</td>
</tr>
<tr>
<td><strong>Wet suction lift ft. H2O (m)</strong></td>
<td>31.4 (9.57)</td>
</tr>
<tr>
<td><strong>Flow Rate GPM (lpm)</strong></td>
<td>54 (204.4)</td>
</tr>
<tr>
<td><strong>Displacement per/cycle GPM @ 100 PSI (lpm)</strong></td>
<td>0.258 (.976)</td>
</tr>
<tr>
<td><strong>Max. Solids Passage in. (mm)</strong></td>
<td>1/8 (3.2)</td>
</tr>
<tr>
<td><strong>Fluid Inlet/Outlet</strong></td>
<td>1-1/2&quot; Tri-Clamp</td>
</tr>
</tbody>
</table>

**Ordering**

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>SD10 - 1&quot; Pump</td>
<td>-</td>
<td>R - White Polypropylene S - 316 SS*</td>
<td>C - Sanitary Tri-Clamp</td>
<td>S - 316L Stainless Steel*</td>
<td>S - Stainless Steel</td>
<td>C - Hytrel* K - PTFE S - 316L Stainless Steel</td>
<td>C - Hytrel® M - Medical Grade Santoprene® S - 316L SS</td>
<td>T - PTFE</td>
</tr>
</tbody>
</table>

**Specialty Code 1** (blank if no specialty code)

- A - Solenoid 120VAC, 110VAC + 60VDC
- B - Solenoid 12VDC, 24VAC + 22VDC
- C - Solenoid 240VAC, 220VAC + 120VDC
- D - Solenoid 24VDC, 48VAC + 44VAC
- E - Solenoid 12VDC NEC/CEC®
- F - Solenoid 24VDC NEC/CEC®
- G - Solenoid 12VDC ATEX/IECEx®
- H - Solenoid 24VDC ATEX/IECEx®
- J - Solenoid 120VDC 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

**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 Feedback + 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®

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Sanitary Transfer – Bolted

- 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)

<table>
<thead>
<tr>
<th>Model</th>
<th>Center Section</th>
<th>Connection</th>
<th>Wetted Parts</th>
<th>Hardware</th>
<th>Seat Material</th>
<th>Ball Material</th>
<th>Wetted Parts</th>
<th>Hardware</th>
<th>Seat Material</th>
<th>Ball Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM05X-X-B02 (1/2&quot;)</td>
<td>A - Aluminum* R - Polypropylene S - Stainless Steel*</td>
<td>C - Tri-Clamp</td>
<td>S - Stainless Steel*</td>
<td>A - Santoprene® P - Polypropylene S - Stainless Steel</td>
<td>A - Santoprene®</td>
<td>C - Hytrel®</td>
<td>G - Nitrile</td>
<td>S - Stainless Steel</td>
<td>T - PTFE</td>
<td>V - Viton</td>
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<tr>
<td>PM10X-X-A02 (1&quot;)</td>
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<tr>
<td>PM15X-X-A02 (1-1/2&quot;)</td>
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<tr>
<td>PM20X-X-B02 (2&quot;)</td>
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<tr>
<td>PM30X-X-C02 (3&quot;)</td>
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</tbody>
</table>

Maximum GPM (lpm):
- PM05X-X-B02 (1/2") 13.0 (49.2)
- PM10X-X-A02 (1") 52.2 (197.6)
- PM15X-X-A02 (1-1/2") 123 (465.6)
- PM20X-X-B02 (2") 172 (651)
- PM30X-X-C02 (3") 275 (1041)

Displacement per Cycle GPM (lpm):
- PM05X-X-B02 (1/2") 0.040 (0.15)
- PM10X-X-A02 (1") 0.232 (0.88)
- PM15X-X-A02 (1-1/2") 0.617 (2.34)
- PM20X-X-B02 (2") 1.4 (5.3)
- PM30X-X-C02 (3") 2.8 (10.6)

Air Inlet (Female):
- 1/4 - 18 PTE SAE Short
- 3/4 - 14 N.P.T.F

Fluid Inlet/Outlet:
- 1-1/2" Tri-Clamp

Max. Operating Pressure (PSI (bar)):
- PM05X-X-B02 (1/2") 100 (6.9)
- PM10X-X-A02 (1") 120 (8.3)
- PM15X-X-A02 (1-1/2") 120 (8.3)
- PM20X-X-B02 (2") 120 (8.3)
- PM30X-X-C02 (3") 120 (8.3)

Suspended solids in.(mm):
- PM05X-X-B02 (1/2") 3/32" (2.4)
- PM10X-X-A02 (1") 1/8" (3.3)
- PM15X-X-A02 (1-1/2") 1/4" (6.4)
- PM20X-X-B02 (2") 1/4" (6.4)
- PM30X-X-C02 (3") 3/8" (9.5)

Weight lbs (kg.):
- PM05X-X-B02 (1/2") 14.75 (6.7)
- PM10X-X-A02 (1") 44.8 (20.3)
- PM15X-X-A02 (1-1/2") 62.4 (28.3)
- PM20X-X-B02 (2") 183.6 (83.5)
- PM30X-X-C02 (3") 253.3 (114.9)

Optional Muffler (requires assembly)
- PM05X-X-B02 (1/2") 93110
- PM10X-X-A02 (1") 67213 (Standard Duty)
- PM15X-X-A02 (1-1/2") 67263 (Continuous Duty)
- PM20X-X-B02 (2") 67213 (Standard Duty)
- PM30X-X-C02 (3") 67263 (Continuous Duty)

Position 1 Model Series
- PM05 - 1/2" Pump
- PM10 - 1" Pump
- PM15 - 1-1/2" Pump
- PM20 - 2" Pump
- PM30 - 3" Pump

Position 2 Center Section
- A - Aluminum*
- R - Polypropylene
- S - Stainless Steel*

Position 3 Connection
- C - Tri-Clamp
- S - Stainless Steel*

Position 4 Wetted Parts
- A - Santoprene®
- C - Hytrel®
- G - Nitrile
- S - Stainless Steel
- T - PTFE
- V - Viton

Position 5 Hardware
- E - End of stroke feedback + Leak Detection
- F - End of stroke feedback + Leak Detection
- G - End of Stroke ATEX / IECex
- H - End of Stroke Feedback + Leak Detection
- J - Solenoid 120VDC NEC/CEC
- K - Solenoid 220VDC ATEX / IECex
- M - Leak Detection ATEX / IECex / NEC/CEC
- N - Soldo not with coil
- O - Standard Valve Block (No Santoprene®)
- P - Solenoid 120VAC, 110VAC + 60VDC
- Q - Solenoid 120VDC, 24VAC + 22VDC
- R - Solenoid 240VDC, 220VAC + 120VDC
- S - Solenoid 240VDC, 48VAC + 44VACA
- T - Solenoid 12VDC NEC/CEC
- U - Solenoid 12VDC NEC/CEC

Position 10 Specialty Code 1 (blank if no specialty code)
- A - Solenoid 120VAC, 110VAC + 60VDC
- B - Solenoid 12VDC, 24VAC + 22VDC
- C - Solenoid 240VDC, 220VAC + 120VDC
- D - Solenoid 240VDC, 48VAC + 44VACA
- E - Solenoid 12VDC NEC/CEC
- F - Solenoid 12VDC NEC/CEC

Position 11 Specialty Code 2 (blank if no specialty code)
- G - End of stroke feedback + Leak Detection
- H - End of Stroke Feedback + Leak Detection
- I - End of Stroke ATEX / IECex
- J - End of Stroke Feedback + Leak Detection
- K - End of Stroke Feedback + Leak Detection
- L - Leak Detection

---

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

* Acceptable for use in hazardous locations.

arotechsupport@irco.com • (800) 495-0276 / EXP Series Diaphragm Pumps • AROzone.com
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

<table>
<thead>
<tr>
<th>Position</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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</thead>
<tbody>
<tr>
<td>Example:</td>
<td>PW10</td>
<td>A</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

- **Position 1**: Model Series
- **Position 2**: Center Section
- **Position 3**: Connection
- **Position 4**: Wetted Parts
- **Position 5**: Hardware
- **Position 6**: Seat Material
- **Position 7**: Ball Material
- **Position 8**: Diaphragm Material

<table>
<thead>
<tr>
<th>Position 1 Model Series</th>
<th>Position 2 Center Section</th>
<th>Position 3 Connection</th>
<th>Position 4 Wetted Parts</th>
<th>Position 5 Hardware</th>
<th>Position 6 Seat Material</th>
<th>Position 7 Ball Material</th>
<th>Position 8 Diaphragm Material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>S - Stainless Steel</td>
<td>C - Hytrel®</td>
<td>C - Hytrel®</td>
<td>C - Hytrel®</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>F - Aluminum</td>
<td>G - Nitrile</td>
<td>G - Nitrile</td>
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<td></td>
<td>G - Nitrile</td>
<td>T - PTFE</td>
<td>T - PTFE</td>
<td>T - PTFE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>V - Viton®</td>
<td>V - Viton®</td>
<td>V - Viton®</td>
</tr>
</tbody>
</table>

**Accessories**

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

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

Quickly find your accessories, leak detection sensors, end of stroke sensors, and solenoid value 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.

<table>
<thead>
<tr>
<th>Compact/EXP Port Size</th>
<th>Regular Duty</th>
<th>Hazardous Duty*: ATEX</th>
<th>Hazardous Duty*: NEC, CEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>24110934</td>
<td>97404 &amp; 97491</td>
<td>97404 &amp; 97412</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>97048</td>
<td>97405 &amp; 97491</td>
<td>97405 &amp; 97412</td>
</tr>
<tr>
<td>1/2&quot; &amp; 3/4&quot;</td>
<td>97053</td>
<td>97406 &amp; 97491</td>
<td>97406 &amp; 97412</td>
</tr>
<tr>
<td>1&quot;</td>
<td>97119</td>
<td>97408 &amp; 97491</td>
<td>97408 &amp; 97412</td>
</tr>
<tr>
<td>1 1/2&quot;</td>
<td>97396</td>
<td>97410 &amp; 97491</td>
<td>97410 &amp; 97412</td>
</tr>
<tr>
<td>2&quot; &amp; 3&quot;</td>
<td>97121</td>
<td>97411 &amp; 97491</td>
<td>97411 &amp; 97412</td>
</tr>
</tbody>
</table>

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

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.

<table>
<thead>
<tr>
<th>Position</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example:</td>
<td>637371</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Position 1 Base Part Number</td>
<td>637371</td>
<td>637540</td>
<td>637541</td>
</tr>
<tr>
<td>Position 2 Valve Block Material</td>
<td>1- Aluminum</td>
<td>2- Stainless Steel</td>
<td>3- Black Polypropylene</td>
</tr>
<tr>
<td>Position 3 Solenoid Coil Valve Block Mtrl.</td>
<td>A = 120 VAC</td>
<td>B = 12 VDC</td>
<td>C = 240 VAC</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>637371</td>
<td>637540</td>
<td>637541</td>
</tr>
<tr>
<td>3/8&quot;, 1/2&quot;, 3/4&quot;</td>
<td>637540</td>
<td>637541</td>
<td>637542</td>
</tr>
<tr>
<td>1&quot;</td>
<td>637541</td>
<td>637542</td>
<td>637543</td>
</tr>
<tr>
<td>1 1/2&quot;</td>
<td>637542</td>
<td>637543</td>
<td>637543</td>
</tr>
</tbody>
</table>

* Note: 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

Leak Detection Sensing
Minimize unwanted downtime by detecting diaphragm failures.

<table>
<thead>
<tr>
<th>Compact/EXP Port Size</th>
<th>Regular Duty</th>
<th>Hazardous Duty*: ATEX, NEC, CEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>67237</td>
<td>96270-2 (Qty: 2) &amp; 97414 (Qty: 1)</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>67237</td>
<td>96270-2 (Qty: 2) &amp; 97414 (Qty: 1)</td>
</tr>
<tr>
<td>1/2&quot; &amp; 3/4&quot;</td>
<td>67237</td>
<td>96270-2 (Qty: 2) &amp; 97414 (Qty: 1)</td>
</tr>
<tr>
<td>1&quot;</td>
<td>67237</td>
<td>96270-2 (Qty: 2) &amp; 97414 (Qty: 1)</td>
</tr>
<tr>
<td>1 1/2&quot;</td>
<td>67237</td>
<td>96270-2 (Qty: 2) &amp; 97414 (Qty: 1)</td>
</tr>
<tr>
<td>2&quot; &amp; 3&quot;</td>
<td>67237</td>
<td>96270-2 (Qty: 2) &amp; 97414 (Qty: 1)</td>
</tr>
</tbody>
</table>

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

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.

<table>
<thead>
<tr>
<th>Pump Port Size</th>
<th>24VDC Valve and Connector*</th>
<th>120VAC Valve and Connector*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot; to 1&quot;</td>
<td>TB03EB-024-D and CSN-30</td>
<td>TB03EB-120-A and CSN-30</td>
</tr>
<tr>
<td>1-1/2&quot;</td>
<td>TB04EB-024-D and CSN-30</td>
<td>TB04EB-120-A and CSN-30</td>
</tr>
<tr>
<td>2&quot; to 3&quot;</td>
<td>TB06HB-024-D and CSN-30</td>
<td>TB06HB-120-A and CSN-3</td>
</tr>
</tbody>
</table>

* Note: Valve and Connector Needs to be purchased
Automatic DeWatering System

SPECIALTY PUMP

Air Operated Control Solution with Liquid Level Sensing

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

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

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

SERVICE KITS
SS-BQG550 Mounting Bracket
PNCV-1/2 Pneumatic Controlled Valve
637523 Sensing Tube and Screen Kit

AUTOMATIC DEWATERING SYSTEM
SCD501BN08-V1D Dewatering Kit (without pump)

PUMP COMPATIBILITY
2” EXP Series Pump PX20X-XXX-XXX-X, PX20P-FXS-XXX
3” EXP Series Pump PX30X-AXX-XXX-X, PX30X-BXX-XXX-X

Working Principle

Function
Start a pump when the liquid level rises past a predetermined level (High Level)
Shut down a pump when the liquid level falls past a predetermined level (Low Level)

Continuous air flow used to sense level

HIGH LEVEL

LOW LEVEL
Drum Pumps

**SPECIALTY PUMP**

**Drum Pumps**

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

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

**Drum Pump Packages**

- 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

**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

**Ordering**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Pump Housing and Seats</th>
<th>Pump Dia. and Balls</th>
<th>Lock Out Valve (P/N 104253-2)</th>
<th>Foot Valve</th>
<th>10’ Hose ASM</th>
<th>Dispense Valve</th>
<th>Fluid Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAB05-PPTT-2-A</td>
<td>POLYPROPYLENE</td>
<td>PTFE</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>ACIDS &amp; CAUSTICS</td>
</tr>
<tr>
<td>DAB05-PPCT-2-A</td>
<td>POLYPROPYLENE</td>
<td>HYTREL®</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>OIL</td>
</tr>
<tr>
<td>DAB05-PPLU-2-A</td>
<td>POLYPROPYLENE</td>
<td>POLYURETHANE</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>WATER/OIL</td>
</tr>
<tr>
<td>DAB05-PPLA-2-A</td>
<td>POLYPROPYLENE</td>
<td>SANTOPRENE®</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>MILD ACIDS/MILD</td>
</tr>
<tr>
<td>DAB05-PPCC-2-N</td>
<td>POLYPROPYLENE</td>
<td>HYTREL®</td>
<td>X</td>
<td>-</td>
<td>NITRIE</td>
<td>-</td>
<td>OIL</td>
</tr>
<tr>
<td>DAB05-PPCC-B-M</td>
<td>POLYPROPYLENE</td>
<td>HYTREL®</td>
<td>X</td>
<td>X</td>
<td>NITRIE</td>
<td>NO-DRIP</td>
<td>OIL</td>
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<tr>
<td>DAB05-PPLA-2-B</td>
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<td>SANTOPRENE®</td>
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<td>-</td>
<td>EPDM</td>
<td>-</td>
<td>MILD ACIDS/MILD</td>
</tr>
<tr>
<td>DAB05-PPLU-2-C</td>
<td>POLYPROPYLENE</td>
<td>POLYURETHANE</td>
<td>X</td>
<td>-</td>
<td>VINYL</td>
<td>-</td>
<td>WATER/OIL</td>
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<tr>
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<td>POLYPROPYLENE</td>
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<td>X</td>
<td>X</td>
<td>REINFORCED NITRIE</td>
<td>X</td>
<td>OIL</td>
</tr>
<tr>
<td>DAB05-PPLA-2-K</td>
<td>POLYPROPYLENE</td>
<td>SANTOPRENE®</td>
<td>X</td>
<td>X</td>
<td>EPDM</td>
<td>X</td>
<td>MILD ACIDS/MILD</td>
</tr>
<tr>
<td>DAB05-PSTT-2-A</td>
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<td>PTFE</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>SOLVENT</td>
</tr>
<tr>
<td>DAB05-ASTT-2-A</td>
<td>ALUM./SS</td>
<td>PTFE</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>SOLVENT</td>
</tr>
<tr>
<td>DAB05-APCC-2-A</td>
<td>ALUM./POLY.</td>
<td>HYTREL®</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>OIL/SOME SOLVENTS</td>
</tr>
<tr>
<td>DAB05-APCC-2-O</td>
<td>ALUM./POLY.</td>
<td>HYTREL®</td>
<td>X</td>
<td>-</td>
<td>NITRIE</td>
<td>-</td>
<td>OIL/SOME SOLVENTS</td>
</tr>
<tr>
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<td>ALUM./POLY.</td>
<td>HYTREL®</td>
<td>X</td>
<td>X</td>
<td>NITRIE</td>
<td>NO-DRIP</td>
<td>OIL/SOME SOLVENTS</td>
</tr>
<tr>
<td>DAB05-APCC-B-L</td>
<td>ALUM./POLY.</td>
<td>HYTREL®</td>
<td>X</td>
<td>X</td>
<td>REINFORCED NITRIE</td>
<td>X</td>
<td>OIL/SOME SOLVENTS</td>
</tr>
<tr>
<td>DAB05-ASCC-2-A</td>
<td>ALUM./SS</td>
<td>SANTOPRENE®</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>WATER</td>
</tr>
</tbody>
</table>

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## Accessories

### Air Line Connection Kit
Kit includes Piggyback Filter/Regulator with gauge, pipe nipple and a 5-foot section of air hose.

<table>
<thead>
<tr>
<th>Size</th>
<th>Non-Met.</th>
<th>Metallic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>66073-1</td>
<td>66073-1</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>66073-1</td>
<td>66073-1</td>
</tr>
<tr>
<td>1/2&quot; Classic</td>
<td>66073-1</td>
<td>66073-1</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>66073-1</td>
<td>66073-1</td>
</tr>
</tbody>
</table>

### Leak Detection
Provides a warning of diaphragm failure by sensing the presence of liquid in the air chamber of the pump.

<table>
<thead>
<tr>
<th>Size</th>
<th>Reg. Duty</th>
<th>ATEX, NEC, CEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>67237</td>
<td>96270-2 (Qty: 2)</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>67237</td>
<td>96270-2 (Qty: 2)</td>
</tr>
<tr>
<td>1/2&quot; Classic</td>
<td>67237</td>
<td>96270-2 (Qty: 2)</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>67237</td>
<td>96270-2 (Qty: 2)</td>
</tr>
</tbody>
</table>

### Pneumatic Cycle Counter Kit
Like the odometer on your car, ARO®'s cycle counter lets you know how many pump cycles have elapsed so you can be prepared to perform preventative maintenance.

<table>
<thead>
<tr>
<th>Size</th>
<th>Reg. Duty</th>
<th>ATEX, NEC, CEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>66975</td>
<td>97048</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>66975</td>
<td>97053</td>
</tr>
<tr>
<td>1/2&quot; Classic</td>
<td>66975</td>
<td>97053</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>66975</td>
<td>97053</td>
</tr>
</tbody>
</table>

### Cycle Sensor Kit
For monitoring pump operation. Can be used to monitor cycle rates, preventative maintenance and rough flow rate indication.

<table>
<thead>
<tr>
<th>Size</th>
<th>Reg. Duty</th>
<th>ATEX, NEC, CEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>67386</td>
<td>97404 &amp; 97491</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>67386</td>
<td>97405 &amp; 97491</td>
</tr>
<tr>
<td>1/2&quot; Classic</td>
<td>67386</td>
<td>97405 &amp; 97491</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>67386</td>
<td>97405 &amp; 97491</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Size</th>
<th>Non-Met.</th>
<th>Metallic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>1/2&quot; Classic</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

### Flange Connection Kit
Use with non-metallic EXP pumps with the flange manifold option. Flanges meet DIN / A.N.S.I. specifications. Flange constructed of glass-filled polypropylene. Bolts, washers and nuts are stainless steel. (Gaskets included)

<table>
<thead>
<tr>
<th>Size</th>
<th>Reg. Duty</th>
<th>ATEX, NEC, CEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>67237</td>
<td>96270-2 (Qty: 2)</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>67237</td>
<td>96270-2 (Qty: 2)</td>
</tr>
<tr>
<td>1/2&quot; Classic</td>
<td>67237</td>
<td>96270-2 (Qty: 2)</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>67237</td>
<td>96270-2 (Qty: 2)</td>
</tr>
</tbody>
</table>

### Over-run Control
Shuts off pump when excessive cycling occurs due to empty fluid supply container.

<table>
<thead>
<tr>
<th>Size</th>
<th>Reg. Duty</th>
<th>ATEX, NEC, CEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>635040</td>
<td>97406 &amp; 97412</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>635040</td>
<td>97406 &amp; 97412</td>
</tr>
<tr>
<td>1/2&quot; Classic</td>
<td>635040</td>
<td>97406 &amp; 97412</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>635040</td>
<td>97406 &amp; 97412</td>
</tr>
</tbody>
</table>

### Wall Mount
Conveniently mount pump above container. Made of heavy gauge coated steel. (pump not included) * Does not include hardware

<table>
<thead>
<tr>
<th>Size</th>
<th>Reg. Duty</th>
<th>ATEX, NEC, CEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>67388</td>
<td>97404 &amp; 97491</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>67388</td>
<td>97405 &amp; 97491</td>
</tr>
<tr>
<td>1/2&quot; Classic</td>
<td>67388</td>
<td>97405 &amp; 97491</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>67388</td>
<td>97405 &amp; 97491</td>
</tr>
</tbody>
</table>

### Countdown Batch Control
Manual start batch controller lets you control the volume of fluid dispensed by controlling the number of pump cycles. (pump not included)

<table>
<thead>
<tr>
<th>Size</th>
<th>Reg. Duty</th>
<th>ATEX, NEC, CEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>67390</td>
<td>97396</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>67390</td>
<td>97396</td>
</tr>
<tr>
<td>1/2&quot; Classic</td>
<td>67390</td>
<td>97396</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>67390</td>
<td>97396</td>
</tr>
</tbody>
</table>

### Solenoid Actuation Kit
Control pump cycle rate with on/off signal from PLC or other device. Kit includes connector w/ 36" cable plus components and instructions to install on standard pump. For dosing and batching applications.

<table>
<thead>
<tr>
<th>Size</th>
<th>Reg. Duty</th>
<th>ATEX, NEC, CEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>67165-1 (24VDC)</td>
<td>97410 &amp; 97412</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>67165-1 (24VDC)</td>
<td>97410 &amp; 97412</td>
</tr>
<tr>
<td>1/2&quot; Classic</td>
<td>67165-1 (24VDC)</td>
<td>97410 &amp; 97412</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>67165-1 (24VDC)</td>
<td>97410 &amp; 97412</td>
</tr>
</tbody>
</table>

### Diaphragm Pump Speed Controls
Controls air volume supplied to pump, thus permitting operator to control pump speed. Can be panel mounted. Composite body.

<table>
<thead>
<tr>
<th>Size</th>
<th>Reg. Duty</th>
<th>ATEX, NEC, CEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>104104-N02</td>
<td>97406 &amp; 97412</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>104104-N02</td>
<td>97406 &amp; 97412</td>
</tr>
<tr>
<td>1/2&quot; Classic</td>
<td>104104-N02</td>
<td>97406 &amp; 97412</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>104104-N02</td>
<td>97406 &amp; 97412</td>
</tr>
</tbody>
</table>

**Please note pumps are not batching applications.**
<table>
<thead>
<tr>
<th>1” Non-Met.</th>
<th>1-1/2” Non-Met.</th>
<th>2” Non-Met.</th>
<th>3” Non-Met.</th>
<th>1” Metallic</th>
<th>1-1/2” Metallic</th>
<th>2” Metallic</th>
<th>3” Metallic</th>
<th>1” 3:1 Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>66073-2</td>
<td>66084-1</td>
<td>66109</td>
<td>66109</td>
<td>66073-2</td>
<td>66084-1</td>
<td>66109</td>
<td>66109</td>
<td>-</td>
</tr>
</tbody>
</table>

Reg. Duty on Major Valve: 67390  
Reg. Duty on Body: 97119  
ATEX on Body: 97408 & 97491  
NEC, CEC on Body: 97408 & 97412

| 67350       | 67350         | 67350       | 67350       | 67350      | 67350-1       | 67350-1    | -           |

Reg. Duty on Major Valve: 67391  
Reg. Duty on Body: 97121  
ATEX on Body: 97411 & 97491  
NEC, CEC on Body: 97411 & 97412

| 67341-E10N (Side flange) | 67341-E15N (Side flange) | 67341-C10N (Center flange) | 67341-E20N | - | - | - | - | - |
| 635040 | 23644-400 | 23644-400 | 635043 | 635040 | 23644-400 | 23644-400 | 635043 | - |

| 67072 | - | - | 67072 | - | - | - | - |

| 67355-1 (24VDC) for PE10X-X-X | 67355-2 (120VAC) for PE10X-X-X | 67355-1 (24VDC) for PE20X-X-B | 67355-2 (120VAC) for PE20X-X-B | - | - | 67357-1 (24VDC) PE30X-X-X-C | 67357-2 (120VAC) PE30X-X-X-C | - |

| 104104-N02 | 104104-N04 | 104104-N04 | 104104-N06 | 104104-N02 | 104104-N04 | 104104-N06 | 104104-N06 | - |
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.

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

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

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

<table>
<thead>
<tr>
<th>Pump Size</th>
<th>NPT Model Number</th>
<th>Port Size</th>
<th>Max Inlet Pressure (psi)</th>
<th>Pressure Range (psi)</th>
<th>Max CFM</th>
<th>Micron Element</th>
<th>Size HxWxD (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot; to 3/4&quot;</td>
<td>P39124-600</td>
<td>1/4&quot;</td>
<td>150</td>
<td>0-140</td>
<td>47</td>
<td>5</td>
<td>6.2 x 2.9 x 2.9</td>
</tr>
<tr>
<td>1&quot;</td>
<td>P39224-600</td>
<td>1/4&quot;</td>
<td>150</td>
<td>0-140</td>
<td>72</td>
<td>5</td>
<td>8.1 x 2.2 x 3.2</td>
</tr>
<tr>
<td>1-1/2&quot;</td>
<td>P39344-600</td>
<td>1/2&quot;</td>
<td>150</td>
<td>0-140</td>
<td>172</td>
<td>5</td>
<td>10.0 x 2.8 x 3.2</td>
</tr>
<tr>
<td>2&quot;</td>
<td>P39354-600</td>
<td>3/4&quot;</td>
<td>150</td>
<td>0-140</td>
<td>173</td>
<td>5</td>
<td>10.9 x 2.8 x 3.2</td>
</tr>
</tbody>
</table>

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

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

Air Control Actuation Valves

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

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

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

<table>
<thead>
<tr>
<th>Model no.</th>
<th>Description</th>
<th>For use with pumps</th>
</tr>
</thead>
<tbody>
<tr>
<td>65109</td>
<td>Steel — NPT(F)</td>
<td>1” (Metallic)</td>
</tr>
<tr>
<td>66568</td>
<td>Stainless steel — NPT(F)</td>
<td>1” (Metallic)</td>
</tr>
<tr>
<td>66568</td>
<td>Stainless steel</td>
<td>1” (Non-Metallic)</td>
</tr>
<tr>
<td>66779</td>
<td>PVC — NPT(F)</td>
<td>1” (Non-Metallic)</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Model no.</th>
<th>For drum</th>
<th>Mounting</th>
<th>Power</th>
<th>Motor speed</th>
<th>Propeller dia.</th>
<th>Axle length</th>
</tr>
</thead>
<tbody>
<tr>
<td>651100</td>
<td>5 GAL (20 L)</td>
<td>0.33 hp</td>
<td>500 - 1000 rpm</td>
<td>4” (102 mm)</td>
<td>12”(305 mm)</td>
<td></td>
</tr>
<tr>
<td>651103</td>
<td>55 GAL (200 L)</td>
<td>0.75 hp</td>
<td>500 - 3000 rpm</td>
<td>5” (127 mm)</td>
<td>32.6”(830 mm)</td>
<td></td>
</tr>
<tr>
<td>651104-1</td>
<td>55 GAL (200 L)</td>
<td>0.95 hp</td>
<td>500 - 3000 rpm</td>
<td>5” (127 mm)</td>
<td>32.6”(830 mm)</td>
<td></td>
</tr>
<tr>
<td>651104-3</td>
<td>5 GAL (20 L)</td>
<td>0.75 hp</td>
<td>500 - 3000 rpm</td>
<td>5” (127 mm)</td>
<td>10.5”(267 mm)</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Model no.</th>
<th>For drum</th>
<th>Material</th>
<th>For use with agitator:</th>
</tr>
</thead>
<tbody>
<tr>
<td>66971</td>
<td>5 GAL (20 L)</td>
<td>Stainless steel</td>
<td>651100</td>
</tr>
<tr>
<td>66197</td>
<td>55 GAL (200 L)</td>
<td>Carbon steel</td>
<td>651104-1</td>
</tr>
<tr>
<td>94422</td>
<td>55 GAL (200 L)</td>
<td>Carbon steel</td>
<td>—</td>
</tr>
</tbody>
</table>

Pneumatic Liquid Level Sensor*
Used to control pump.
59916-1 to sense when fluid exceeds a desired level
59916-2 to sense when fluid falls below a desired level
* 3 or 4- way valve required
Accessories

**ARO® Vibration Isolators**

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

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

<table>
<thead>
<tr>
<th>Model Number (4 per kit)</th>
<th>CPN</th>
<th>Description (Max. weight of pump with fluid)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSK-20</td>
<td>47532069001</td>
<td>Vibration Isolator Kit 20 KG (44 LB)</td>
</tr>
<tr>
<td>HSK-40</td>
<td>47532069002</td>
<td>Vibration Isolator Kit 40 KG (88 LB)</td>
</tr>
<tr>
<td>HSK-70</td>
<td>47532069003</td>
<td>Vibration Isolator Kit 70 KG (154 LB)</td>
</tr>
<tr>
<td>HSK-110</td>
<td>47532069004</td>
<td>Vibration Isolator Kit 110 KG (243 LB)</td>
</tr>
<tr>
<td>HSK-160</td>
<td>47636854001</td>
<td>Vibration Isolator Kit 160 KG (353 LB)</td>
</tr>
</tbody>
</table>
Accessories

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

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

Typical system

<table>
<thead>
<tr>
<th>Position 1</th>
<th>Position 2</th>
<th>Position 3</th>
<th>Position 4</th>
<th>Position 5</th>
<th>Position 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model and Size</td>
<td>Air Section</td>
<td>Fluid Connection</td>
<td>Fluid Section</td>
<td>Hardware</td>
<td>Diaphragm Material</td>
</tr>
<tr>
<td>SB10 - 1”</td>
<td>P - Polypropylene K - PVDF (Kynar) D - Conductive Acetal</td>
<td>A - NPTF B - BSP</td>
<td>P - Polypropylene K - PVDF (Kynar) D - Conductive Acetal</td>
<td>S - Stainless Steel 304</td>
<td>A - Santoprene® C - Hytrel® T - PTFE U - Urethane</td>
</tr>
</tbody>
</table>

Ordering

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

<table>
<thead>
<tr>
<th>Pump Type</th>
<th>Models</th>
<th>Air Motor Section</th>
<th>Fluid Section (with seats)</th>
<th>Major Air Valve Assembly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>Non-Metallic</td>
<td>PD03P, PE03P</td>
<td>637428</td>
<td>637429-XX</td>
</tr>
<tr>
<td></td>
<td>Non-Metallic</td>
<td>PD05P, PE05P</td>
<td>637428</td>
<td>637427-XX</td>
</tr>
<tr>
<td></td>
<td>Metallic</td>
<td>PM05P</td>
<td>637389</td>
<td>637375-XX</td>
</tr>
<tr>
<td></td>
<td>Non-Metallic</td>
<td>PD05A, PD05R, PE05A, PE05R</td>
<td>637428</td>
<td>637427-XX</td>
</tr>
<tr>
<td></td>
<td>Non-Metallic</td>
<td>PD07P</td>
<td>637428</td>
<td>637427-XX</td>
</tr>
<tr>
<td></td>
<td>Metallic</td>
<td>PD07R</td>
<td>637428</td>
<td>637427-XX</td>
</tr>
<tr>
<td></td>
<td>Metallic</td>
<td>PH10A-XSS-SST</td>
<td>637338</td>
<td>637339</td>
</tr>
<tr>
<td></td>
<td>Metallic</td>
<td>SD10S</td>
<td>637495</td>
<td>637496-XX</td>
</tr>
<tr>
<td></td>
<td>Metallic</td>
<td>PF20A, PF20S</td>
<td>637421</td>
<td>637310-XX</td>
</tr>
<tr>
<td></td>
<td>Metallic</td>
<td>PF20R, PF20Y</td>
<td>637369</td>
<td>637310-XX</td>
</tr>
<tr>
<td></td>
<td>Metallic</td>
<td>SD20S</td>
<td>637497</td>
<td>637494-XX</td>
</tr>
<tr>
<td>2&quot;</td>
<td>Non-Metallic</td>
<td>PD30P, PE30P</td>
<td>637369</td>
<td>637447-XX</td>
</tr>
<tr>
<td></td>
<td>Metallic</td>
<td>PF30-F</td>
<td>637369</td>
<td>637441-XX</td>
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</table>
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.

Authentic ARO® Parts include:
- Diaphragm Pump Parts and Accessories
- Piston Pump Parts and Accessories
- Lubrication Parts and Accessories
- FRL Parts and Accessories

ARO® Long-Life PTFE diaphragms keeps your pumps flowing
- Proven 2 time increase in service life over standard PTFE*
- 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

About ARO®

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.
ARO® is a brand of Ingersoll Rand. Ingersoll Rand (NYSE:IR) advances the quality of life by creating comfortable, sustainable and efficient environments. Our people and our family of brands—including Club Car®, Ingersoll Rand®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. We are a $14 billion global business committed to a world of sustainable progress and enduring results. For more information, visit www.ingersollrand.com.