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
- Acetal
- 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/ and NEC/CEC locations detects diaphragm failure to help reduce costly production downtime
- Internal cycle sensor and end-of-stroke signals track end-of-stroke feedback and pump data
- Preassembled components for hassle-free and error-proof installation

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.

<table>
<thead>
<tr>
<th>EXP (ARO®) vs. Leading Competitor “Total Cost of Ownership”</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Test Subjects: 2” (ports) aluminum construction with santoprene elastomer’s.</td>
</tr>
<tr>
<td>▪ Pump Operation: 4 hrs. a day (intermittent)/300 days a year = 1200 hrs.</td>
</tr>
<tr>
<td>▪ Pump Delivery: 150 GPM @ 25 PSI (back pressure)</td>
</tr>
<tr>
<td>▪ Energy Cost: $0.063 per kilowatt hour</td>
</tr>
<tr>
<td>▪ EXP Air CFM advantage: 37 @ 100 GPM</td>
</tr>
</tbody>
</table>

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

EXP Reliability

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

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</td>
<td>Significantly Reduced Labor and Parts Costs</td>
</tr>
<tr>
<td>Labor/Time: Tearing Down and Replacing Failed Parts</td>
<td>Easy-Access Major Air Valve Simplified Service Kits</td>
<td></td>
</tr>
<tr>
<td>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 (1079)</td>
</tr>
<tr>
<td>Maximum Discharge Pressure psi (bar)</td>
<td>125 (8.6)</td>
<td>100 (6.8)</td>
<td>100 (6.8)</td>
<td>100 (6.8)</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(34-14 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/DIN Flange</td>
</tr>
<tr>
<td>Material of Construction</td>
<td>Polypropylene - Groundable</td>
<td>Acetal</td>
<td>Polypropylene - Groundable</td>
<td>Acetal</td>
<td>PVDF</td>
<td>Polypropylene</td>
<td>Polypropylene PVDF</td>
<td>Conductive Polypropylene</td>
<td>Polypropylene PVDF</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 42.60 (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
Exteral Thread 3/4” - 14 NPTF/BSPT
Max. operating pressure psi (bar): 125 (8.6)
Suspended solids max. dia. in.(mm): 1/16” (1.66)
Weight lbs (kg): 2.86 (1.3) Polypropylene
3.88 (1.76) PVDF
3.52 (1.60) Acetal
Maximum dry suction lift ft(m) : 15 (4.6)
Sound Level: 70 PSI 60 Cycles/Min 62.3 db(A)
Muffler: Integral, Included

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>PX01P</td>
<td>X</td>
<td>-</td>
<td>H</td>
<td>X</td>
<td>S</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>A</td>
</tr>
</tbody>
</table>

- **Position 1** Model Series
- **Position 2** Center Section
- **Position 3** Fluid Connections
- **Position 4** Wetted Parts
- **Position 5** Hardware
- **Position 6** Seat Material
- **Position 7** Ball Material
- **Position 8** Diaphragm Material
- **Position 9** Revision
- **Position 10 & 11** Specialty Code

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>
</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>
</tr>
<tr>
<td>H</td>
<td>J</td>
<td>K</td>
<td>L</td>
<td>M</td>
<td>N</td>
<td>P</td>
</tr>
<tr>
<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>- 3.2&quot; (81 mm)</td>
<td>- 7.2&quot; (184 mm)</td>
<td>- 5.6&quot; (142.2 mm)</td>
</tr>
<tr>
<td>Q</td>
<td>R</td>
<td>S</td>
<td>T</td>
<td>U</td>
<td>V</td>
<td>W</td>
</tr>
<tr>
<td>- 1/4 - 18 PTF SAE Short</td>
<td>- 3/4-14 NPTF</td>
<td>- 3/4-14 NPTF</td>
<td>- 1/4  NPTF / BSPT Hybrid</td>
<td>- 3/4-14 NPTF</td>
<td>- 1/4 NPTF</td>
<td>- 1/4 NPTF</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*
- M - Leak Detection ATEX/IECex/NEC/CEC*
- N - Solenoid with no coil
- 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

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
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-XK5-XXX 4.5 (2.0) PD03P-XLS-XXX 4.6 (2.1) PD03P-XPS-XXX 3.4 (1.6) PD03P-XRS-XXX 3.5 (1.6)
Maximum dry suction lift: ft (m) 9.25 (2.8)
Sound Level: 70 PSI 60 Cycles/Min 72.7 db(A)
Muffler: Integral, Included

Ordering

<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 P - X X S - X X X X - B - X X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Position 2: Center Section
- P - Polypropylene
- A - 3/8” N.P.T.
- B - 3/8” BSP

Position 3: Connections
- Ground. Acetal (single port)*
- Ground. Acetal (multiple port)*
- PVDF (single port)
- PVDF (multiple port)
- Polypropylene (single port)
- Polypropylene (multiple port)

Position 4: Manifold Material
- Stainless Steel

Position 5: Hardware
- S - Stainless Steel
- A - Santoprene®
- C - Hytrel®
- D - Acetal
- K - PVDF
- P - Polypropylene
- S - Stainless Steel
- T - PTFE
- V - Viton®

Position 6: Seat Material
- Flex Check

Position 7: Ball Material
- A - Santoprene®
- C - Hytrel®
- G - Nitrile
- I - Neoprene
- N - Neoprene
- O - Flex Check
- T - PTFE
- V - Viton®

Position 8: Diaphragm Material
- A - Santoprene®
- C - Hytrel®
- G - Nitrile
- I - Neoprene
- N - Neoprene
- O - Flex Check
- T - PTFE
- V - Viton®

Position 9: Speciality Code
- Revision Level
- Fluid control options for pump with electronic interface (PE03 model). See complete description on page 13

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

Accessories

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

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

**Dimensions**

<table>
<thead>
<tr>
<th>Model</th>
<th>Material Inlet</th>
<th>Material Outlet</th>
<th>&quot;A&quot; Material Inlet</th>
<th>&quot;B&quot; Material Outlet</th>
</tr>
</thead>
</table>

**Performance Curves**

Performance based on water at ambient temperature.

**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/CEC*
- 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

For additional information contact technical support at 1.800.495.0276.

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
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>
<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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<tbody>
<tr>
<td>Example:</td>
<td>PX05</td>
<td>P</td>
<td>X</td>
<td>X</td>
<td>S</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>B</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</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 - P/VDF (single port)
- L - P/VDF (multiple port)
- P - Polypropylene (single port)
- R - Polypropylene (multiple port)
Position 4: Manifold Material
- D - Acetal
- K - P/VDF
- P - Polypropylene
- S - Stainless Steel
Position 5: Hardware
- S - Stainless Steel
- D - Ground. Acetal (single port)*
- E - Ground. Acetal (multiple port)*
- K - P/VDF (single port)
- L - P/VDF (multiple port)
- P - Polypropylene (single port)
- R - Polypropylene (multiple port)
Position 6: Seat Material
- A - Santoprene®
- C - Hytrel®
- G - Nitrile
- S - Stainless Steel
- T - PTFE
Position 7: Ball Material
- A - Santoprene®
- C - Hytrel®
- G - Nitrile
- L - Long-Life PTFE
Position 8: Diaphragm Material
- A - Santoprene®
- C - Hytrel®
- G - Nitrile
- L - Long-Life PTFE
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

* 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” Non-Metallic Dimensions and Flow Charts

**DIMENSIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>&quot;T&quot; Material Inlet</th>
<th>&quot;L&quot; Material Outlet</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD05PAPS-XXS-XXX-B</td>
<td>1/2” - 1/4 N.P.T.F. - 1</td>
<td>1/2” - 1/4 N.P.T.F. - 1</td>
</tr>
<tr>
<td>PD05P-APS-XXS-XXX-B</td>
<td>Rp 1/2 (1/2 - 14 BSP)</td>
<td>Rp 1/2 (1/2 - 14 BSP)</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 - 12VDC ATEX/IECex*
- H - 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 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
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>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example:</td>
<td>66605</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

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

Base Model
3 - Polypropylene
6 - Groundable Acetal
7 - Pure PVDF
J - Polypropylene*
H - Groundable Acetal*
K - Pure PVDF*

0 - Duckbill
1 - Neoprene
2 - Nitrile
3 - Viton®
4 - PTFE
5 - E.P.R.
6 - Acetal

1 - Neoprene
2 - Nitrile
3 - Viton®
4 - PTFE/Santoprene®
5 - E.P.R.
6 - Polyurethane
9 - Hytrel®
8 - Santoprene®
L - Long-Life

*Single piece manifold
**Duckbill models

## 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)

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1/2" Non-Metallic Dimensions and Flow Charts

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

<table>
<thead>
<tr>
<th></th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>8.155&quot; (207.1 mm)</td>
</tr>
<tr>
<td>B</td>
<td>10.051&quot; (255 mm)</td>
</tr>
<tr>
<td>C</td>
<td>6.135&quot; (155.8 mm)</td>
</tr>
<tr>
<td>D</td>
<td>2.005&quot; (51 mm)</td>
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<tr>
<td>E</td>
<td>6.467&quot; (164 mm)</td>
</tr>
<tr>
<td>F</td>
<td>6.000&quot; (152 mm)</td>
</tr>
<tr>
<td>G</td>
<td>4.812&quot; (122.2 mm)</td>
</tr>
<tr>
<td>H</td>
<td>5.500&quot; (140 mm)</td>
</tr>
<tr>
<td>J</td>
<td>8.445&quot; (215 mm)</td>
</tr>
<tr>
<td>K</td>
<td>0.312&quot; (8 mm)</td>
</tr>
<tr>
<td>L</td>
<td>11.331&quot; (288 mm)</td>
</tr>
<tr>
<td>M</td>
<td>11.084&quot; (282 mm)</td>
</tr>
<tr>
<td>N</td>
<td>6.040&quot; (153 mm)</td>
</tr>
</tbody>
</table>

CAPACITY IN U.S. GALLONS PER MINUTE

0 2 4 6 8 10 12 14

AIR CONSUMPTION IN SCFM

0 5 10 15 20 25 30 35

FLOW RATE (LITERS / MIN.)

0 2 4 6 8 10 12 14

AIR CONSUMPTION IN LITERS / SEC

0 5 10 15 20 25

Performance based on water at ambient temperature.

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
Air Inlet: 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

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

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3/4" Non-Metallic Dimensions and Flow Charts

DIMENSIONS

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

Model
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)

Ordering Position 9
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)
E - End of stroke feedback + Leak Detection
F - End of stroke feedback
L - Leak Detection
O - No Option

Ordering Position 10
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

Performance based on water at ambient temperature.

arotechsupport@irco.com  •  (800) 495-0276  /  EXP Series Diaphragm Pumps  •  AROzone.com 19
**1” Non-Metallic Models**

**EXP SERIES PUMPS**

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

Ratio: 1:1  
Maximum GPM (LPM): 53 (200)  
Displacement per cycle Gallons (Liters): 0.226 (0.86)  
Air Inlet (Female): 1/4 - 18 N.P.T.  
Fluid Inlet/Outlet: 1 - 11-1/2 N.P.T.F., Rp1(1-11 BSP)  
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 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 and 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Center</td>
<td>Connections</td>
<td>Wetted</td>
<td>Hardware</td>
<td>Seat</td>
<td>Ball</td>
<td>Diaphragm</td>
<td>Fluid control options for pump with electronic interface (PE10 model). See complete description on page 21</td>
</tr>
<tr>
<td>PD10 - Standard Pump</td>
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<td></td>
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<tr>
<td>PE10 - Electronic Interface Accessible Pump</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

### Accessories

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

**Diaphragm Failure Detection** 67237  
ARO® Diaphragm Failure Detection is a simple, cost-effective way to get your pumps wired for preventive maintenance. (PE10X pump model is required)

**Cycle Counter Kit** 66350  
**Cycle Sensor Kit** 67350  
**Service Repair Kits** 637397 (air motor for PX10P), 637396-XX (fluid section), 637395-X (major air valve assembly)

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

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1" Non-Metallic Dimensions and Flow Charts

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

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

A - Solenoid 120VAC
B - Solenoid 12VDC
C - Solenoid 240VAC
D - Solenoid 24VDC
E - Solenoid 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 21
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:
- Polypropylene, Side Ported: 93139
- PVDF, Side Ported: 93140
- Polypropylene, Center Ported: 93139
- PVDF, Center Ported: 93140

Ordering

<table>
<thead>
<tr>
<th>Position</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<tbody>
<tr>
<td>Example:</td>
<td>PX15</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>S</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

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

**Position 2** Center Section
- E - Conductive Polypropylene
- P - Polypropylene

**Position 3** Connections
- F - 1-1/2” A.N.S.I./DIN Flange (Side)
- Y - 1-1/2” A.N.S.I./DIN Flange (Center)

**Position 4** Wetted Parts
- E - Conductive Polypropylene
- K - PVDF
- P - Polypropylene

**Position 5** Hardware
- S - SS
- H - 440 SS (Hard)
- K - PVDF
- G - Nitrile
- P - Polypropylene
- S - 316 SS
- T - PTFE
- V - Viton®
- A - Santoprene®
- C - Hytrel®
- G - Buna-N
- L - Long-Life
- M - Medical Grade
- S - 316 SS
- T - PTFE/Santoprene®
- V - Viton®

**Position 6** Seat Material
- A - Santoprene®
- C - Hytrel®
- G - Nitrile
- P - Polypropylene
- S - 316 SS
- T - PTFE
- V - Viton®

**Position 7** Ball Material
- M - Medical Grade
- S - 316 SS
- T - PTFE/Santoprene®
- V - Viton®

**Position 8** Diaphragm Material
- A - Santoprene®
- C - Hytrel®
- G - Buna-N
- L - Long-Life
- M - Medical Grade
- S - 316 SS
- T - PTFE/Santoprene®
- V - Viton®

Accessories

- Air Line Connection Kit | 66084-1
- (Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
- Diaphragm Failure Detection | 67237
- Cycle Counter Kit | Cycle Counter Kit | 66350
- Service Repair Kits | 637389 (air motor for PX15P), 637391-XX (fluid section)
- 637390-X (major air valve assembly)
- Flange Connection Kit | 67341-E15N (side flange), 67341-C15N (center flange)

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

* 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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1-1/2” Non-Metallic Dimensions and Flow Charts

For additional information contact technical support at 1-800-495-0276

Ordering Position 10
Specialty Code 1 (Blank if no Specialty Code)
A - Solenoid 120VAC
B - Solenoid 12VDC
C - Solenoid 240VAC
D - Solenoid 24VDC
E - 12VDC NEC/CEC*
F - 24VDC NEC/CEC*
G - Solenoid 12VDC ATEX/IECEx*
H - Solenoid 24VDC ATEX/IECEx*
J - 120VAC NEC/CEC*
K - Solenoid 220VAC ATEX/IECEx*
N - Solenoid with no coil
0 - Standard Valve Block (No Solenoid)
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, Div 182, Group A-D - ATEX Zone 182, 21822

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
2” Non-Metallic Models

EXP SERIES PUMPS

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

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

Ordering

<table>
<thead>
<tr>
<th>Position</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example:</td>
<td>PX20</td>
<td>X</td>
<td>-</td>
<td>F</td>
<td>X</td>
<td>S</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>B</td>
</tr>
</tbody>
</table>

Position 1: Model Series
- PD20 - Standard Pump
- PE20 - Electronic Interface Accessible Pump

Position 2: Center Section
- E - Conductive Polypropylene
- P - Polypropylene

Position 3: Connections
- F - 2” A.N.S.I./DIN Flange (Side)
- K - PVDF
- P - Polypropylene

Position 4: Wetted Parts
- S - SS

Position 5: Hardware
- A - Santoprene
- C - Hytrel®
- G - Nitrile
- H - Buna-N
- K - PVDF
- L - Long-Life PTFE
- M - Medical Grade Santoprene®
- P - Polypropylene
- T - PTFE/Santoprene®
- V - Viton®

Position 6: Seat Material
- A - Santoprene
- C - Hytrel®
- G - Nitrile
- H - Buna-N
- K - PVDF
- L - Long-Life PTFE
- M - Medical Grade Santoprene®
- P - Polypropylene
- T - PTFE/Santoprene®
- V - Viton®

Position 7: Ball Material
- A - Santoprene
- C - Hytrel®
- G - Nitrile
- H - Buna-N
- K - PVDF
- L - Long-Life PTFE
- M - Medical Grade Santoprene®
- P - Polypropylene
- T - PTFE/Santoprene®
- V - Viton®

Position 8: Diaphragm Material
- A - Santoprene
- C - Hytrel®
- G - Nitrile
- H - Buna-N
- K - PVDF
- L - Long-Life PTFE
- M - Medical Grade Santoprene®
- P - Polypropylene
- T - PTFE/Santoprene®
- V - Viton®

Position 9: Revision Level

Accessories

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

Diaphragm Failure Detection | Kit No.67237

Cycle Counter Kit | 66350

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

Service Repair Kits | 637369 (air motor for PX20P), 637373-XX (fluid section), 637374-X (major air valve assembly)

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

Flange Connection Kit | 67341-E20N

* 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.
2” Non-Metallic Dimensions and Flow Charts

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

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 - 24-3/16” (614.3mm)
B - 28-21/32” (728.0mm)
C - 14-5/32” (360.0mm)
D - 3-5/8” (92.2mm)
E - 6-1/4” (158.3mm)
F - 13-7/8” (352.0mm)
G - 31-29/32” (810.5mm)
H - 8-3/16” (207.8mm)
J - 9-7/32” (234.2mm)
K - 9/16” (14.3mm)
L - 1/2” (12.7mm)
M - 1” (25.4mm)
N - 2” (50.8mm)
P - 20-31/32” (532.2mm)
Q - 22-9/32” (565.5mm)

* 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/NCE/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” 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” A.N.S.I./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</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example</td>
<td>PX30</td>
<td>P</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>S</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Position 1
- **Model Series**
- **Center Section**

Position 2
- **Connections**
- **Wetted Parts**

Position 3
- **Position 4 Hardware**

Position 4
- **Position 5**

Position 5
- **Position 6**
- **Position 7**
- **Position 8**

Position 6
- **Position 9**

Revision Level
- **Position 10 & 11**

Specialty Code
Fluid control options for pump with electronic interface (PE30 model). See complete description on page 27

Position 10
- **Position 11**

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 (PE20X pump model is required)

**Service Repair Kits** | 637369 (air motor), 637447-XX (fluid section), 637374-X (major air valve assembly)
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
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
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
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&quot; Metallic</th>
<th>3/4&quot; Metallic</th>
<th>1&quot; Metallic</th>
<th>1-1/2&quot; Metallic</th>
<th>2&quot; Metallic</th>
<th>3&quot; 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></td>
</tr>
<tr>
<td>Fluid Ports Inlet/Outlet (bsp)</td>
<td>1/2&quot; (F) - In/Out</td>
<td>3/4 - 14 N.P.T.F.-2 Rp 3/4(3/4-14BSP, parallel)</td>
<td>1-11-1/2&quot; NPT Rp1(1-11 BSP) (Side or Center)</td>
<td>1-1/2 - 11-1/2 NPTF Rp1-1/2(1-1/2 -11 BSP) (Side or Center)</td>
<td>1-1/2 ANSI/DIN (SS only/Center)</td>
<td>2&quot; NPTF Rp2 (2-11 BSP) (Side or Center) 2&quot; ANSI/DIN Flange with 2&quot; pipe tap (SS only/Center) 3&quot; NPTF Rp3(3-11 BSP) (Center) 3&quot; ANSI/DIN Flange</td>
</tr>
<tr>
<td>Material of Construction</td>
<td>Aluminum Stainless Steel</td>
<td>Aluminum</td>
<td>Aluminum Cast Iron Stainless Steel Hastelloy®</td>
<td>Aluminum Cast Iron Stainless Steel Hastelloy®</td>
<td>Aluminum Cast Iron Stainless Steel Hastelloy®</td>
<td></td>
</tr>
<tr>
<td>Pump Weight lbs (kg)</td>
<td>10.4 (4.7) PD05A-XAS-X-B 16.6 (7.5) PD05A-XSS-X-B 8.0 (3.7) PD05R-XAS-X-B 14.3 (6.5) PD05R-XSS-X-B</td>
<td>8.74 (3.96)</td>
<td>20.7 (9.4) Alum 35.2 (16.0) CI 38.2 (17.3) SS 39.6 (18.0) Hastelloy® add 4.65 (2.11) for Alum. air motor add 11.09 (5.03) for SS air motor</td>
<td>37.7 (17.1) Alum. 73.2 (33.2) CI 61.2 (27.8) SS 86.9 (39.4) Hastelloy® add 3.08 (1.40) for Alum. air motor add 14.39 (6.53) for SS air motor</td>
<td>64 (29) Alum. 133 (60) CI 122 (55.3) SS Threaded 114 (51.7) SS Flange 122 (55.3) Hastelloy® add 34 (15) for CI or SS air motor</td>
<td>113 (51.3) Alum. 197 (89.4) CI 203 (92.1) SS 203 (92.1) Hastelloy® add 40 (18.1) 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 (3.32)</td>
<td>1/4 (6.4)</td>
<td>1/4 (6.4)</td>
<td>3/8 (9.5)</td>
</tr>
<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></td>
</tr>
<tr>
<td>Airline Kit</td>
<td>66073-1 66073-1</td>
<td>66073-2 66084-1</td>
<td>66109 66109</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Hastelloy® is a registered trademark of Haynes International, Inc.
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-X-X-S-XXX-B 10.4 (4.7)
PD05A-X-XS-XXX-B 16.6 (7.5)
PD05R-X-X-S-XXX-B 8.0 (3.7)
PD05R-X-XS-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>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>10</th>
<th>11</th>
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</thead>
<tbody>
<tr>
<td>Position 2</td>
<td>Model Series</td>
<td>Center Section</td>
<td>Connections</td>
<td>Position 3</td>
<td>Wetted Parts</td>
<td>Position 4</td>
<td>Seat Material</td>
<td>Position 5</td>
<td>Ball Material</td>
<td>Position 6</td>
<td>Diaphragm Material</td>
</tr>
<tr>
<td>E - Remote</td>
<td>R - Polypropylene</td>
<td>Rp 1/2</td>
<td>5 - Stainless Steel*</td>
<td>P - Polypropylene</td>
<td>C - Hytrel®</td>
<td>C - Hytrel®</td>
<td>G - Nitrile</td>
<td></td>
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</tr>
<tr>
<td>Actuation</td>
<td></td>
<td>(1/2 - 14 BSP, parallel)</td>
<td>S - Stainless Steel</td>
<td>T - PTFE</td>
<td>G - Nitrile</td>
<td>L - Long-Life</td>
<td>T - PTFE/</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Capable</td>
<td></td>
<td></td>
<td>T - PTFE</td>
<td>U - Polyurethane</td>
<td>L - Long-Life</td>
<td>PTFE</td>
<td>Santoprene®</td>
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<td></td>
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<td></td>
<td>V - Viton®</td>
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<td></td>
<td>V - Viton®</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

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

**DIMENSIONS**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>P005A-XXX-XXX-B</th>
<th>P005SR-XXX-XXX-B</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;E&quot;</td>
<td>8-7/32” (209.5 mm)</td>
<td>6-23/32” (170.6 mm)</td>
</tr>
<tr>
<td>&quot;G&quot;</td>
<td>11-3/4” (297.9 mm)</td>
<td>11-21/32” (296.0 mm)</td>
</tr>
<tr>
<td>&quot;P&quot;</td>
<td>4-5/16” (109.3 mm)</td>
<td>3-27/32” (97.4 mm)</td>
</tr>
<tr>
<td>&quot;R&quot;</td>
<td>8-7/32” (209.5 mm)</td>
<td>7-11/16” (194.9 mm)</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*
- 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

For additional information contact technical support at 1 800 495 0276

Refer to www.AROzone.com for full size flow curves.
**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>1</th>
<th>2</th>
<th>3</th>
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<th>7</th>
<th>8</th>
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<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example</td>
<td>PX07</td>
<td>R</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>S</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</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 Ball Material</th>
<th>Position 8 Diaphragm Material</th>
<th>Position 9 and 10</th>
</tr>
</thead>
</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)**
3/4" Metallic Dimensions and Flow Charts

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

Refer to www.AROzone.com for full size flow curves.

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

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/IECex/NEC/CEC*
M - Leak Detection NEC/CEC*
N - Solenoid with no coil
O - Standard Valve Block (No Solenoid)
P - Ported Motor (No major valve provided)
Q - End of Stroke Feedback NEC / CEC*
R - End of Stroke Feedback NEC / CEC*
T - End of Stroke Feedback + Leak Detection NEC / CEC*

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

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

4 liters / sec.

Performance based on water at ambient temperature.

For additional information contact
technical support at 1.800.495.0276
1” Metallic Models

EXP SERIES PUMPS

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

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 - 11/2 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>Position</th>
<th>1</th>
<th>2</th>
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<th>4</th>
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<tbody>
<tr>
<td>Example</td>
<td>PX10</td>
<td>X</td>
<td>-</td>
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</table>

Position 1
Model Series
PD10- Standard Pump
PE10 - Electronic Interface Accessible Pump

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

Position 3
Connections
A - NPTF Thread
B - BSP Thread

Position 4
Wetted Parts
A - Aluminum
C - Cast Iron
H - Hastelloy-C
S - Stainless Steel

Position 5
Hardware
P - Plated Steel
S - SS

Position 6
Seat Material
A - Santoprene
C - Hytrel
E - Carbon Steel
F - Aluminum
G - Nitrile
H - 440 SS
L - Hastelloy-C
S - 316 SS

Position 7
Ball Material
T - PTFE
V - Viton

Position 8
Diaphragm Material
A - Santoprene
C - Hytrel
G - Buna
L - Long-Life
M - Medical Grade
S - 316 SS
T - PTFE/
V - Viton

Position 9
Fluid control options for pump with electronic interface (PE10 model). See complete description on page 35

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

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

Diaphragm Failure Detection | 67237

Cycle Counter Kit | 66350

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

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

DIMENSIONS

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

Cartridge: PX10XXXXXX

E- 8-1/8" (206.4 mm)  
F- 8-5/16" (211.1 mm)  
R- 14-1/32" (356.2 mm)  
M- 13-27/32" (351.4 mm)

N"  

1/4" (6.4 mm)  
9/32" (7.1 mm)  
9/32" (7.1 mm)  
9/32" (7.1 mm)

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

A - Solenoid 120VAC  
B - Solenoid 12VDC  
C - Solenoid 240VAC  
D - Solenoid 24VDC  
E - 12VDC NEC/CEC*  
F - 24VDC NEC/CEC*  
G - Solenoid 12VDC ATEX/IECex*  
H - Solenoid 24VDC ATEX/IECex*  
J - 120VAC NEC/CEC*  
K - Solenoid 220VAC ATEX/IECex*  
N - Solenoid with no coil  
0 - Standard Valve Block (No Solenoid)  
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*  
J - 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: 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 1</th>
<th>Position 2</th>
<th>Position 3</th>
<th>Position 4</th>
<th>Position 5</th>
<th>Position 6</th>
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<th>Position 8</th>
<th>Position 9</th>
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<tr>
<td>Model</td>
<td>Center</td>
<td>Connections</td>
<td>Wetted</td>
<td>Hardware</td>
<td>Seat</td>
<td>Ball</td>
<td>Diaphragm</td>
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<td>Section</td>
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<td>Parts</td>
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<td>Material</td>
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<tr>
<td>Standard</td>
<td>R - Poly-</td>
<td>B - BSP Thread</td>
<td>C - Hytrel®</td>
<td>P - Stainless Steel</td>
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<td>Pump</td>
<td>propylene</td>
<td>Y' - 1-1/2” A.N.S.I./DIN Flange</td>
<td>H - Carbon Steel</td>
<td>F - Stainless Steel</td>
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<td>S - Stainless Steel*</td>
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<td>S - Nitrile</td>
<td>G - 440 Stainless Steel</td>
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<td>PX15R-XHX-XXX</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

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.

Fluid control options for pump with electronic interface (PE15 model). See complete description on page 37

Ordering Example: PX15 X - X X X - X X X - X X

Accessories

Air Line Connection Kit 66084-1  
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)

Diaphragm Failure Detection 67237

Cycle Counter Kit 67350

Service Repair Kits 637389 (air motor for PX15X), Kit No. 637375-XX (fluid section), 637390-X (major air valve assembly)
1-1/2” Metallic Dimensions and Flow Charts

A - see below
B - 18-3/8” (46.7 mm)
C - 11-3/4” (298.5 mm)
D - 2-3/4” (69.9 mm)
E - see below
F - 10-1/4” (260.4 mm)
G - 19-5/8” (49.1 mm)
H - 9” (228.6 mm)
J - 10” (254.0 mm)
K - 1/2” (12.7 mm)
L - see below
M - 1/4” (6.4 mm)
N - 9-11/16” (246.0 mm)
Q - see below
R - 21-7/16” (543.9 mm)
S - see below
T - 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)
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
2" Metallic Models

ARO® EXP 2" metallic pumps achieve flow rates of up to 172 GPM (651 LPM) and offer a wide array of material and porting configurations. These pumps are often used for transfer, filling, recirculation and batching in ceramic, paint, oil and gas, chemical and petrochemical markets.

Ratio: 1:1
Maximum GPM (LPM): 172 (651)
Displacement per cycle: 1.4 (S.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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<tr>
<td>Model</td>
<td>Center</td>
<td>Connections</td>
<td>Wetted</td>
<td>Hardware</td>
<td>Seat</td>
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<td>Diaphragm</td>
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<th>PD20S</th>
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<td>Wetted</td>
<td>Pump Wgt</td>
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<td>AL</td>
<td>91.4 (41.5)</td>
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<tr>
<td>AL</td>
<td>CI</td>
<td>147.4 (66.9)</td>
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<td>AL</td>
<td>H</td>
<td>155 (70.3)</td>
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<td>AL</td>
<td>SS</td>
<td>149.8 (68)</td>
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<td>AL</td>
<td>Flange</td>
<td>169.4 (76.8)</td>
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<tr>
<td>AL</td>
<td>Flange</td>
<td>162.2 (73.6)</td>
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</table>

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

Accessories

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

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

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

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

Service Repair Kits | 637369 (air motor for PX20R and PX20Y), 637421 (air motor for PX20A and PX20S), 637309-XX (fluid section), 637374-X (major air valve assembly)
2” Metallic Dimensions and Flow Charts

**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

---

**DIMENSIONS**

A: see below
B: 1/4-5/8 (6.28 mm)
C: 10-1/16 (25.6 mm)
D: see below
E: 16-3/16 (411.2 mm)
F: 1/2 (304.8 mm)

**G**

- 13/16 (206.8 mm)
- 19-1/4 (510.4 mm)
- 19-1/4 (488.7 mm)
- 19-1/4 (488.7 mm)

**H**

- 19-1/4 (510.4 mm)
- 19-1/4 (488.7 mm)
- 19-1/4 (488.7 mm)
- 19-1/4 (488.7 mm)

**I**

- 2-1/2 (63.5 mm)
- 2-1/2 (63.5 mm)
- 2-1/2 (63.5 mm)
- 2-1/2 (63.5 mm)

**J**

- 2-3/8 (53.0 mm)
- 2-3/8 (53.0 mm)
- 2-3/8 (53.0 mm)
- 2-3/8 (53.0 mm)

**K**

- 1-11/16 (34.5 mm)
- 1-11/16 (34.5 mm)
- 1-11/16 (34.5 mm)
- 1-11/16 (34.5 mm)

**L**

- 3/16 (10.0 mm)
- 3/16 (10.0 mm)
- 3/16 (10.0 mm)
- 3/16 (10.0 mm)

**M**

- 1/16 (1.6 mm)
- 1/16 (1.6 mm)
- 1/16 (1.6 mm)
- 1/16 (1.6 mm)

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arotechsupport@irco.com • (800) 495-0276 / EXP Series Diaphragm Pumps • 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)
Air Inlet: (Female) 3” - 8 N.P.T.F. - 1
Fluid Inlet / Outlet (Female): 3” - 8 N.P.T.F. - 1
Max. operating pressure psi (bar): 120 (8.3)
Suspended solids max. dia. in. (mm): 3/8 (9.5)
Weight lbs (kg): PX30A-XAX-XXX-C 129.5 (58.8)
PX30A-XCX-XXX-C 221.1 (100.3)
PX30A-AHX-XXX-C 249.4 (113.3)
PX30A-ASX-XXX-C 288.3 (103.8)
PX30A-FHX-XXX-C 269.4 (122.3)
PX30A-FSX-XXX-C 245.2 (114.4)

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

### Ordering

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Model Series</td>
<td>A - Aluminum*</td>
<td>R - Polypropylene</td>
<td>W/SS Air Caps</td>
<td>S - Stainless Steel</td>
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<td>Center Section</td>
<td>A - NPTF Thread</td>
<td>B - BSP Thread</td>
<td>D - ANSI 4-hole flange</td>
<td>F - DIN 8-hole flange</td>
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<td>Connections</td>
<td>A - Aluminum*</td>
<td>C - Cast Iron</td>
<td>H - Hastelloy-C*</td>
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<td>Wetted Parts</td>
<td>A - Stainless Steel *</td>
<td>¹ Not available on PD30R-X models</td>
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<td>Hardware</td>
<td>P - Plated Steel</td>
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<td>Seat Material</td>
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<td>C - Hytrel®</td>
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<td>Fluid Control Options</td>
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<td>C - Hytrel®</td>
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<td>G - Buna-N</td>
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<td>L - Long-Life PTFE</td>
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<td></td>
<td>T - PTFE/Santoprene®</td>
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<td>V - Viton®</td>
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</tbody>
</table>

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), Kit No. 637421 (air motor for PX30A and PX30S), 637374-X (major air valve assembly), Kit No. 637303-XX (fluid section)

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

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

- A - Solenoid 120VAC
- B - Solenoid 12VDC
- C - Solenoid 240VAC
- D - Solenoid 24VDC
- E - 24vDC 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
- F - End of stroke feedback + Leak Detection
- 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, Zone 1
  - ATEX Zone 1, 21/22

arotechsupport@irco.com • (800) 495-0276 / EXP Series Diaphragm Pumps • AROzone.com 41
**Choose a Controller**

**Choose a Pump**

---

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

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

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

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

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

---

### Choose a Controller

**Model Options**

- Base Controller (No Cables) 651763-XX-0
- Interface with 1 Pump 651763-XX-1
- Interface with 2 Pumps 651763-XX-2
- Cable Assembly, 16 ft. 47517818001
- Cable Assembly, 50 ft. 47517818005

**Position Options**

- PE - Electronic Interface
- AP - Electronic Interface (Asia/Pacific)
- EM - Electronic Interface (Europe, Middle East, India & Africa)
- AM - Electronic Interface (Americas)

---

### Choose a Pump

#### Position 1

<table>
<thead>
<tr>
<th>Model Series</th>
<th>Port Size</th>
<th>Center Section Mat.</th>
<th>Connection</th>
<th>Wetted Parts</th>
<th>Hardware</th>
<th>Seat Material</th>
<th>Ball Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE - Electronic Interface</td>
<td>01 - 1/4&quot; Port</td>
<td>A - Aluminum*</td>
<td>A - NPT Thread</td>
<td>P - Plated Steel</td>
<td>A - Santoprene*</td>
<td>A - Stainless Steel</td>
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<tr>
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<td>02 - 1/2&quot; Port</td>
<td>P - Polypropylene</td>
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<td>C - Hytrel*</td>
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<td>03 - 3/4&quot; Port</td>
<td>S - Stainless Steel*</td>
<td>B - BSP Thread</td>
<td>S - Stainless Steel</td>
<td>D - Acetal</td>
<td>C - Stainless Steel</td>
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<td>05 - 1&quot; Port</td>
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<td>A - N.S.I. Side</td>
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<td>E - Carbon Steel</td>
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<td>07 - 1-1/2&quot; Port</td>
<td>Y - A.N.S.I. Center</td>
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<td>F - Aluminum</td>
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<tr>
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<td>10 -1&quot; Port</td>
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<td>G - Nitrile</td>
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<tr>
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<td>15 -2&quot; Port</td>
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<td>H - 440 SS Hard</td>
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<tr>
<td></td>
<td>20 - 2&quot; Port</td>
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<td>P - PVDF</td>
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<tr>
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<td>30 -3&quot; Port</td>
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<td>L - Hastelloy</td>
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<td>K - PVDF (Kynar)</td>
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#### Position 9

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<th>Dia. Material</th>
<th>Revision</th>
<th>Specialty Code 1</th>
<th>Specialty Code 2</th>
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<tbody>
<tr>
<td>A - Santoprene*</td>
<td>A - First</td>
<td>J - 120VDC NEC/CEC*</td>
<td>E - End of stroke feedback + Leak Detection</td>
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<tr>
<td>C - Hytrel*</td>
<td>B - Second</td>
<td>K - Solenoid 220VDC ATEX/IECEx*</td>
<td>F - End of stroke feedback</td>
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<tr>
<td>G - Nitrile</td>
<td>C - Third</td>
<td>N - Solenoid with no coil</td>
<td>G - End of Stroke ATEX / IECex*</td>
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<tr>
<td>T - PTFE</td>
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<td>0 - Standard Valve Block (No Solenoid)</td>
<td>H - End of Stroke feedback + Leak Detection ATEX / IECEx*</td>
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<tr>
<td>V - Viton*</td>
<td></td>
<td>P - Ported Motor (No major valve provided)</td>
<td>L - Leak Detection</td>
</tr>
</tbody>
</table>

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* Acceptable for use in hazardous locations. - NEC / CEC Class II, Div 1, Group A-D
- ATEX Zone 1 & 2, 21 & 22
- ATEX/IECex*
- A.N.S.I.
- F - A.N.S.I. Side
- B - BSP thread
- A - NPT Thread
- Y - A.N.S.I. Center

---

**Hardware**

- A - Solenoid 120VAC, 110VAC + 60VDC
- B - Solenoid 12VDC, 24VDC + 22VDC
- C - Solenoid 240VAC, 220VAC + 120VDC
- D - Solenoid 24VDC, 48VAC + 44VACA*1
- E - Solenoid 12VDC NEC/CEC*1
- F - Solenoid 24VDC NEC/CEC*1
- G - Solenoid 12VDC ATEX / IECEx*1
- H - Solenoid 24VDC ATEX / IECEx*1

*1 only solenoid voltages that will work with controller

---

**Specialty Code 1**

- A - Santoprene*1
- B - Second
- C - Third

**Specialty Code 2**

- A - Stainless Steel
- B - First
- C - Second
- D - Third

---

**Hardware**

- A - Solenoid 120VAC, 110VAC + 60VDC
- B - Solenoid 12VDC, 24VDC + 22VDC
- C - Solenoid 240VAC, 220VAC + 120VDC
- D - Solenoid 24VDC, 48VAC + 44VACA*1
- E - Solenoid 12VDC NEC/CEC*1
- F - Solenoid 24VDC NEC/CEC*1
- G - Solenoid 12VDC ATEX / IECEx*1
- H - Solenoid 24VDC ATEX / IECEx*1
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): 3/4 - 14 N.P.T.F.-1
Air Inlet (Female): PF20X-AXX-XXX-B 2 - 11-1/2 N.P.T.F.-1
Fluid Inlet/Outlet (Female): 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

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<tr>
<th>Position</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>6</th>
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<td>PF20</td>
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<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>
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<tbody>
<tr>
<td></td>
<td>R - Polypropylene</td>
<td>B - BSP Thread</td>
<td>S - Stainless Steel</td>
<td>S - Stainless Steel</td>
<td>G - Nitrile</td>
<td>G - Buna- N</td>
<td>G - Buna- N</td>
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<td>w/SS Air Caps</td>
<td>F - 2” ANSI/DIN Flange</td>
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<td>U - Polyurethane</td>
<td>T - PTFE/ Santoprene®</td>
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<td>S - Stainless Steel*</td>
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<td>V - Viton®</td>
<td>V - Viton®</td>
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<td>Y - Polypropylene</td>
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* Acceptable for use in hazardous locations.

Accessories

Service Repair Kits | 637421 (air motor)
637310-XX (fluid section)
Powder Transfer
SPECIALTY PUMP

- 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.

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.

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)
PP10A-XSX-AAA 50.9 (23.1)
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)

Ordering

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

PP10A - 1” Port
A - 1-11-1/2 N.P.T.F -1
B - Rp1 (1-11 BSP)

A - Aluminum* S - Stainless Steel*
P - Plated Steel S - Stainless Steel
A - Santoprene® S - Stainless Steel
A - Santoprene®

PP20A - 2” Port
A - 2-11-1/2 N.P.T.F - 1
B - Rp2 (2-11 BSP Parallel)
C - 2” ANSI DIN Flange

A - Aluminum* S - Stainless Steel*
P - Plated Steel S - Stainless Steel
A - Santoprene® S - Stainless Steel
A - Santoprene® M - Medical Grade Santoprene®

PP30A - 3” Port
A - 3-8 NPTF - 1
B - Rp3 (3-11 BSP parallel)
F - 3” ANSI/DIN Flange

A - Aluminum* S - Stainless Steel*
P - Plated Steel S - Stainless Steel
A - Santoprene® S - Stainless Steel
A - Santoprene®

* Acceptable for use in hazardous locations
Santoprene® is a registered trademark of Monsanto Company, licensed to Advanced Elastomer Systems, L.P.

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

Optional Suction Probe 67183-1
**Sanitary Transfer**

**SPECIALTY PUMP**

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

**Typical Applications:**
- Food Processing
- Cosmetics
- Pharmaceutical
- Chemical Additives
- Adhesives (Food grade)
- Paint
- Applications Requiring Quick-Disconnect Fluid Connections

<table>
<thead>
<tr>
<th>Ratio: PM05X-X-B02 (1/2&quot;)</th>
<th>PM10X-X-A02 (1&quot;)</th>
<th>PM15X-X-A02 (1-1/2&quot;)</th>
<th>PM20X-X-B02 (2&quot;)</th>
<th>PM30X-X-C02 (3&quot;)</th>
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</thead>
<tbody>
<tr>
<td>Maximum GPM (lpm):</td>
<td>13.0 (49.2)</td>
<td>52.2 (197.6)</td>
<td>123 (465.6)</td>
<td>172 (651)</td>
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<tr>
<td>Displacement per Cycle GPM (lpm):</td>
<td>0.040 (0.15)</td>
<td>0.232 (0.88)</td>
<td>0.617 (2.34)</td>
<td>1.4 (5.3)</td>
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<tr>
<td>Air Inlet (Female):</td>
<td>1/4 - 18 PTE SAE Short</td>
<td>1/4 - 18 N.P.T.F.</td>
<td>1/2 - 14 N.P.T.F.</td>
<td>3/4 - 14 N.P.T.F-1</td>
</tr>
<tr>
<td>Fluid Inlet:</td>
<td>1-1/2&quot; Tri-Clamp</td>
<td>1-1/2&quot; Tri-Clamp</td>
<td>2&quot; Tri-Clamp</td>
<td>2-1/2&quot; Tri-Clamp</td>
</tr>
<tr>
<td>Fluid Outlet:</td>
<td>1-1/2&quot; Tri-Clamp</td>
<td>1-1/2&quot; Tri-Clamp</td>
<td>2&quot; Tri-Clamp</td>
<td>2-1/2&quot; Tri-Clamp</td>
</tr>
<tr>
<td>Max. Operating Pressure:</td>
<td>100 (6.9)</td>
<td>120 (8.3)</td>
<td>120 (8.3)</td>
<td>120 (8.3)</td>
</tr>
<tr>
<td>Suspended solids in.(mm):</td>
<td>3/32&quot; (2.4)</td>
<td>1/8&quot; (3.3)</td>
<td>1/4&quot; (6.4)</td>
<td>1/4&quot; (6.5)</td>
</tr>
<tr>
<td>Weight lbs (kg):</td>
<td>14.75 (6.7)</td>
<td>14.80 (6.7)</td>
<td>24.80 (11.7)</td>
<td>42.80 (19.4)</td>
</tr>
</tbody>
</table>

Optional Muffler 93110 (requires 67367 assembly)

**Ordering** *(Not all options available for each pump size, consult operator’s manual for available options.)*

<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>
</tr>
</thead>
<tbody>
<tr>
<td>Example:</td>
<td>PMXX</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**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*
- P - Polypropylene
- S - Stainless Steel*
- C - Tri-Clamp

**Position 3** Connection
- S - Stainless Steel*

**Position 4** Wetted Parts
- A - Santoprene®
- P - Polypropylene
- S - Stainless Steel

**Position 5** Hardware
- A - Santoprene®
- C - Hytrel®
- G - Nitrile
- S - Stainless Steel
- T - PTFE
- V - Viton®

**Position 6** Seat Material
- A - Santoprene®
- C - Hytrel®
- G - Nitrile

**Position 7** Ball Material
- M - Med. Grade
- Santoprene®

**Position 8** Diaphragm Material
- T - PTFE
- X - Santoprene®

**Position 9** Revision Level

*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 45
FDA Compliant Pumps

SPECIALTY PUMP

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

**SD Series Pumps**
- Quick Knock Down (QKD) design facilitates rapid disassembly.
- Electropolish stainless-steel 316L construction FDA compliance 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-A / 1” Pump</th>
<th>SD20S-CSS-SXX-A / 2” Pump</th>
</tr>
</thead>
<tbody>
<tr>
<td>Startup Pressure PSI (bar)</td>
<td>25 (1.723)</td>
</tr>
<tr>
<td>Dry suction lift ft. H20 (m)</td>
<td>16.49 (5.02)</td>
</tr>
<tr>
<td>Wet suction lift ft. H20 (m)</td>
<td>31.4 (9.57)</td>
</tr>
<tr>
<td>Flow Rate GPM (lpm)</td>
<td>54 (204.4)</td>
</tr>
<tr>
<td>Displacement per/cycle GPM @ 100 PSI (lpm)</td>
<td>0.258 (.976)</td>
</tr>
<tr>
<td>Max. Solids Passage in. (mm)</td>
<td>1/8 (3.2)</td>
</tr>
<tr>
<td>Fluid Inlet/Outlet</td>
<td>1-1/2” Tri-Clamp</td>
</tr>
</tbody>
</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>
<th>8</th>
<th>9</th>
<th>10</th>
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</thead>
<tbody>
<tr>
<td>Example:</td>
<td>SDXX</td>
<td>X</td>
<td>-</td>
<td>C</td>
<td>S</td>
<td>S</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Position 1 Model Series</th>
<th>Position 2 Center Section</th>
<th>Position 3 Port</th>
<th>Position 4 Fluid Caps &amp; Manifold Mat.</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>SD10 - 1” Pump</td>
<td>R - White Polypropylene</td>
<td>S - 316 SS*</td>
<td>C - Sanitary Flange</td>
<td>S - 316L Stainless Steel*</td>
<td>C - Hytrel*</td>
<td>K - PVDF</td>
<td>S - 316L Stainless Steel*</td>
</tr>
</tbody>
</table>
| SD20 - 2” Pump | D - Solenoid 220VDC ATEX/IECEx* | H - End of stroke feedback + Leak Detection
K - Solenoid with no coil
O - Standard Valve Block (No Solenoid) |

Position 9 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 48VDC, 44VAC |
| E - Solenoid 12VDC NEC/CEC* |
| F - Solenoid 24VDC NEC/CEC* |
| G - Solenoid ATEX/IECEx* |
| H - Solenoid 24VDC ATEX/IECEx* |
| J - Solenoid 120VDC NEC/CEC* |

Position 10 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 |

* 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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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>Maximum Gallons @100 PSI (GPM (Liters))</th>
<th>Maximum Displacement Cycles Per Gallons @100 PSI (Liters)</th>
<th>Weight (kg)</th>
<th>Suspended Solids Max. Dia. Pressure PSI (in. (mm))</th>
<th>Maximum Outlet Pressure PSI (bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:1 Ratio 1 1/2” Diaphragm Pump</td>
<td>63 (238.48)</td>
<td>0.88 (3.33)</td>
<td>88 (39.9)</td>
<td>1/4 (6.4)</td>
<td>200 (13.8)</td>
</tr>
<tr>
<td>2:1 Ratio 2” Diaphragm Pump</td>
<td>92 (348.25)</td>
<td>1.28 (4.8)</td>
<td>146 (66.2)</td>
<td>1/4 (6.4)</td>
<td>200 (13.8)</td>
</tr>
<tr>
<td>2:1 Ratio 3” Diaphragm Pump</td>
<td>160 (605.6)</td>
<td>1.4 (5.3)</td>
<td>268 (121.6)</td>
<td>3/8 (9.5)</td>
<td>200 (13.8)</td>
</tr>
</tbody>
</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</td>
<td>F</td>
<td>-</td>
<td>X</td>
<td>S</td>
<td>P</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Position 1**  Model Series
- PH15 - 1 1/2"
- PH20 - 2"
- PH30 - 3"

**Position 2**  Center Section
- F - Conductive Polypropylene/
- Stainless Steel

**Position 3**  Connection
- A - 1-1/2 NPTF
- B - 1-1/2 BSP parallel
- F - 1-1/2 ANSI /DIN Flange

**Position 4**  Seat Material
- S - Stainless Steel
- A - Santoprene®
- B - PTFE
- C - Hytrel®

**Position 5**  Ball Material
- A - Santoprene®
- C - Hytrel®
- L - Long-Life PTFE

**Position 6**  Diaphragm Material
- T - PTFE/Santoprene®

**Position 7**  Revision Level
- A - 1 1/2"
- B - 2"
- C - 3"

**Accessories**

- Filter/Regulator PH15 - 1 1/2” P39344-614
- PH20 - 2” P39354-614
- PH30 - 3” P39454-614
- Air Line Kit 66084-1
- Air Section Service Kit 637389
- Fluid Section Service Kit 637445-XX

Hytrel® is a registered trademark of the DuPont company. Santoprene® is a registered trademark of Monsanto Company, licensed to Advanced Elastomer Systems, L.P.
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 - 1 - 1/2 N.P.T.F - 1
Fluid Outlet: 1-1/4 - 1 - 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>
</tr>
</thead>
<tbody>
<tr>
<td>Example:</td>
<td>PW10</td>
<td>A</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</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

Accessories

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

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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>Position</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example</td>
<td>637371</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

Position 1
Base Part Number: 637371

Position 2
Valve Block Material:
- 1/4" 3/8" 1/2" & 3/4" 1" 1 1/2" 2" & 3"

Position 3
Solenoid Coil Valve Block Mtrl:
- A = 120 VAC
- B = 12 VDC
- C = 240 VAC
- D = 24 VDC
- E = 12 VDC NEC/CEC
- F = 24 VDC NEC/CEC
- G = 12 VDC ATEx/IECEx
- H = 24 VDC ATEx/IECEx
- J = 120 VAC NEC/CEC
- K = 220 VAC ATEx/IECEx
- N = No Coil *

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

Leak Detection
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

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

Position | 1 | 2 | 3 |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Example</td>
<td>637371</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

Position 1
Base Part Number: 637371

Position 2
Valve Block Material:
- 1/4" 3/8", 1/2", & 3/4"
- 1"
- 1 1/2"
- 2" & 3"

Position 3
Solenoid Coil Valve Block Mtrl:
- A = 120 VAC NEC/CEC
- B = 24 VDC NEC/CEC
- C = 12 VDC ATEx/IECEx
- D = 24 VDC ATEx/IECEx
- E = 120 VAC NEC/CEC
- F = 220 VAC ATEx/IECEx
- G = No Coil *

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

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 Re 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**
Drum Pumps

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

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

Drum Pump Packages

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

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</th>
<th>Dispense Valve</th>
<th>Fluid Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAB05-PPTT-2-A</td>
<td>POLYPROPYLENE PTFE</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>ACIDS &amp; CAUSTICS</td>
<td></td>
</tr>
<tr>
<td>DAB05-PPTT-2-B</td>
<td>POLYPROPYLENE HYTREL®</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>OIL</td>
<td></td>
</tr>
<tr>
<td>DAB05-PPTT-2-C</td>
<td>POLYPROPYLENE POLYURETHANE</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>WATER/OIL</td>
<td></td>
</tr>
<tr>
<td>DAB05-PPTT-2-D</td>
<td>POLYPROPYLENE SANTOPRENE®</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>MILK ACIDS/MILK</td>
<td></td>
</tr>
<tr>
<td>DAB05-PPTT-2-E</td>
<td>POLYPROPYLENE HYTREL®</td>
<td>X</td>
<td>X</td>
<td>NITRILE</td>
<td>NO-DRIP</td>
<td>OIL</td>
<td></td>
</tr>
<tr>
<td>DAB05-PPTT-2-F</td>
<td>POLYPROPYLENE POLYURETHANE</td>
<td>X</td>
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<td>-</td>
<td>-</td>
<td>WATER/OIL</td>
<td></td>
</tr>
<tr>
<td>DAB05-PPTT-2-G</td>
<td>POLYPROPYLENE HYTREL®</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>MILK ACIDS/MILK</td>
<td></td>
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<tr>
<td>DAB05-PPTT-2-H</td>
<td>POLYPROPYLENE SANTOPRENE®</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>SOLVENT</td>
<td></td>
</tr>
<tr>
<td>DAB05-PPTT-2-I</td>
<td>POLYPROPYLENE HYTREL®</td>
<td>X</td>
<td>X</td>
<td>REINFORCED NITRILE</td>
<td>X</td>
<td>MILK ACIDS/MILK</td>
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<td>DAB05-PPTT-2-J</td>
<td>POLYPROPYLENE POLYURETHANE</td>
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<td>SOLVENT</td>
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<td>POLYPROPYLENE HYTREL®</td>
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<td>OIL/SOME SOLVENTS</td>
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<tr>
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<td>POLYPROPYLENE SANTOPRENE®</td>
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<td>-</td>
<td>OIL/SOME SOLVENTS</td>
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<tr>
<td>DAB05-PPTT-2-M</td>
<td>POLYPROPYLENE HYTREL®</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>WATER/SOLVENT</td>
<td></td>
</tr>
</tbody>
</table>

Accessories

| Air Line Connection Kit | 66073-1 |
| Service Repair Kit | 637458 (air), 637427-XX (fluid), 104255 (for repair of P29122-600 piggyback filter/regulator) |

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

arotechsupport@irco.com • (800) 495-0276 / EXP Series Diaphragm Pumps • AROzone.com
### 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>
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<tbody>
<tr>
<td></td>
<td>66073-1</td>
<td>66073-1</td>
<td>66073-1</td>
<td>66073-1</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.

|------|--------------|--------------|--------------|----------------------|--------------|--------------|

#### 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>
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<tbody>
<tr>
<td></td>
<td>–</td>
<td>66975</td>
<td>66975</td>
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<td>66975</td>
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</tr>
</tbody>
</table>

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

|------|--------------|--------------|--------------|----------------------|--------------|--------------|

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

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</tbody>
</table>

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

<table>
<thead>
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</tbody>
</table>

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

<table>
<thead>
<tr>
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<tbody>
<tr>
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<td>635040</td>
<td>635040</td>
<td>635040</td>
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</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>
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<tbody>
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<td>67388</td>
<td>76763</td>
<td>–</td>
<td>76763</td>
<td>76763</td>
</tr>
</tbody>
</table>

#### Countdown Batcher
- Manual start batch counter kit controls the volume of fluid dispensed by controlling the number of pump cycles. (pump not included)

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td></td>
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<td>67072</td>
<td>–</td>
<td>67072</td>
<td>67072</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></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>–</td>
<td>–</td>
<td>67165-1 (24VDC)</td>
<td>67165-2 (120VAC)</td>
<td>67165-1 (24VDC)</td>
<td>67165-2 (120VAC)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>104104-N02</td>
<td>104104-N02</td>
<td>104104-N02</td>
<td>104104-N02</td>
<td>104104-N02</td>
<td>104104-N02</td>
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</tbody>
</table>
### 1” Non-Met.

<table>
<thead>
<tr>
<th>Item</th>
<th>Catalog Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wolf Mount</td>
<td>76763</td>
<td></td>
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<tr>
<td>Countdown Batcher</td>
<td>67072</td>
<td></td>
</tr>
<tr>
<td>Solenoid Actuation Kit</td>
<td>67165-1</td>
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<tr>
<td>Speed Control</td>
<td>104104-N02</td>
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### 1-1/2” Non-Met.

<table>
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<tr>
<th>Item</th>
<th>Catalog Number</th>
<th>Description</th>
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<tbody>
<tr>
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### 2” Non-Met.

<table>
<thead>
<tr>
<th>Item</th>
<th>Catalog Number</th>
<th>Description</th>
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### 3” Non-Met.

<table>
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### 1” Metallic

<table>
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<tr>
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<th>Description</th>
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<tbody>
<tr>
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### 1-1/2” Metallic

<table>
<thead>
<tr>
<th>Item</th>
<th>Catalog Number</th>
<th>Description</th>
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<tbody>
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### 2” Metallic

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<th>Item</th>
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### 3” Metallic

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<th>Description</th>
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<tbody>
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</table>

### 1” 3:1 Ratio

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<th>Catalog Number</th>
<th>Description</th>
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<tbody>
<tr>
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</tbody>
</table>
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>
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</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>

Caution 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,
H2545S-120-A for 1-1/2” pumps,
MQ3729-120-A for 2” and 3” pumps
24 VDC MQ3728-024-D for 1/2” and 1” pumps
H2545S-024-D for 1-1/2” pumps
MQ3729-024-D for 2” and 3” pumps
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 filter &amp; Siphon tube</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>1</td>
<td>0.33 hp</td>
<td>500 - 1000 rpm</td>
<td>4” (102 mm)</td>
<td>12” (305 mm)</td>
</tr>
<tr>
<td>651103</td>
<td>55 GAL (200 L)</td>
<td>2</td>
<td>0.75 hp</td>
<td>500 - 3000 rpm</td>
<td>5” (127 mm)</td>
<td>32.6” (830 mm)</td>
</tr>
<tr>
<td>651104-1</td>
<td>55 GAL (200 L)</td>
<td>1</td>
<td>0.95 hp</td>
<td>500 - 3000 rpm</td>
<td>5” (127 mm)</td>
<td>32.6” (830 mm)</td>
</tr>
<tr>
<td>651104-3</td>
<td>5 GAL (20 L)</td>
<td>1</td>
<td>0.75 hp</td>
<td>500 - 3000 rpm</td>
<td>5” (127 mm)</td>
<td>10.5” (267 mm)</td>
</tr>
</tbody>
</table>

Drum Covers
Durable stainless steel and carbon steel drum covers, accommodate 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>
</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.

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>
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</thead>
<tbody>
<tr>
<td>Example:</td>
<td>SBX0</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>S</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Position 1 Model and Size</th>
<th>Position 2 Air Section</th>
<th>Position 3 Fluid Connection</th>
<th>Position 4 Fluid Section</th>
<th>Position 5 Hardware</th>
<th>Position 6 Diaphragm Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB10 - 1” SB20 - 2” SB30 - 3”</td>
<td>A - 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>

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## Maintenance Kits

<table>
<thead>
<tr>
<th>Pump Type</th>
<th>Models</th>
<th>Air Motor Section</th>
<th>Fluid Section</th>
<th>Major Air Valve Assembly</th>
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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

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With over an 85-year legacy of premier product performance and service excellence, ARO® provides fluid management equipment for customers and industries around the globe, including chemical, manufacturing, energy, pharmaceutical, mining and more.

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