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

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

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

At ARO® we make success flow
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  - U/L Approved
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ARO® Air operated Diaphragm Pumps

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

ARO® PRO and EXP Series pumps offer the ability to vary the flow outlet and discharge pressure as slow as 0.26 gallons (1liter) per minute up to 275 gallons (1040 liter) per minute for our larger sizes and adjust fluid pressure up to 125 p.si. (8.6 bar), by using just an air filter / regulator and a needle valve.

Why ARO® diaphragm pumps?

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

Find your opportunity

Train/Truck/ Tanker Unloading  Bulk Tank/ Tank Farm Transfer  Waste Water Treatment/ Fluid Filtration  Formulation  Basic Transfer/ Supply  Packaging/ Filling

System Flush  Recirculation/ Reclamation  Chemical Processing  Surface Preparation  Pharmaceuticals  Batching/Blending

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

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

Don’t risk the downtime. Use Authentic ARO® Parts every time. Visit AROzone.com to learn more.
All ARO® Compact Series diaphragm pumps feature an unbalanced valve design, which eliminates valve centering and pump stall-out—even under low air inlet pressures.

**“D” Valve**
- Provides a positive seal.
- Helps insure optimum energy efficiency while avoiding costly air “blow-by.”
- Ceramic construction insures long service life.

**“SimulShift™” Valve**
- Provides an ultra-positive, reliable shift signal that avoids stall-out.
- Provides faster pump trip-over with more flow.
- Faster trip-over with less pulsation and superior laminar material flow.

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1) The diaphragm pushes the right Actuator Pin (B) mechanically moving the SimulShift Valve (A) to the left.
2) Compressed air flows to the large side of the SimulShift Valve, pneumatically moving the valve to the position shown.
3) Compressed air also flows to the large end of the Major Air Valve (C), pneumatically shifting it to the left.

At end of stroke:
1) Diaphragm pushes Pin (B) and SimulShift Valve (A) to the right.
2) Large ends of SimulShift Valve (A) and Major Valve (C) are vented to exhaust pilot signal.
3) Constant compressed air supply acting on the smaller areas of the SimulShift Valve and Major Valve shifts both valves to the right and holds them in position until the next cycle begins.
The ARO® non-metallic offering 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

<table>
<thead>
<tr>
<th>Model</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>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum 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>47 (178)</td>
<td>100 (378.5)</td>
<td>145 (548.8)</td>
</tr>
<tr>
<td>Maximum Discharge Pressure PSI (BAR)</td>
<td>125 (8.6)</td>
<td>100 (6.9)</td>
<td>100 (6.9)</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>
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<tr>
<td>Fluid Ports Fluid Ports (BSP Available)</td>
<td>Q-1/4-1/8 PTF</td>
<td>3/8” (F) - In/Out</td>
<td>1/2” (F) - In/Out</td>
<td>1/2-1/2 N.P.T.F.-1</td>
<td>3/4 - 14 NPTF-1</td>
<td>1” ANSI/DIN Flange</td>
<td>1-1/2” ANSI/DIN Flange</td>
<td>2” ANSI/DIN Flange</td>
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<tr>
<td>Materials of Construction</td>
<td>Polypropylene Polypropylene Polypropylene Polypropylene Polypropylene</td>
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<td></td>
<td></td>
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<tr>
<td>Pump Weight lbs. (kg.)</td>
<td>Poly</td>
<td>2.86 (1.3)</td>
<td>4.2 (1.9) PD03P-XDS-X</td>
<td>6.3 (2.9) PD05P-XDS-B</td>
<td>7.2 (3.3) Polypropylene</td>
<td>5.61 (2.54) Polypropylene</td>
<td>20.3 (9.2) Poly</td>
<td>62 (28.1) Poly</td>
</tr>
<tr>
<td></td>
<td>Poly</td>
<td>4.3 (1.9) PD03P-XES-X</td>
<td>6.7 (3.0) PD05P-XES-B</td>
<td>8.8 (4.0) Ground. Acetal</td>
<td>5.61 (2.54) Polypropylene</td>
<td>20.3 (9.2) Poly</td>
<td>62 (28.1) Poly</td>
<td>62 (28.1) Poly</td>
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<tr>
<td></td>
<td>Poly</td>
<td>4.5 (2.0) PD03P-XKS-X</td>
<td>6.8 (3.1) PD05P-XKS-B</td>
<td>9.5 (4.3) Kynar PVDF</td>
<td>5.61 (2.54) Polypropylene</td>
<td>20.3 (9.2) Poly</td>
<td>62 (28.1) Poly</td>
<td>62 (28.1) Poly</td>
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<tr>
<td></td>
<td>Poly</td>
<td>3.88 (1.76) PD03P-XLS-X</td>
<td>7.2 (3.3) PD05P-XLS-B</td>
<td>8.3 (4.0) PVDF</td>
<td>5.61 (2.54) Polypropylene</td>
<td>20.3 (9.2) Poly</td>
<td>62 (28.1) Poly</td>
<td>62 (28.1) Poly</td>
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<tr>
<td></td>
<td>Poly</td>
<td>3.52 (1.6) PD03P-XRS-X</td>
<td>5.4 (2.5) PD05P-XRS-B</td>
<td>8.3 (4.0) PVDF</td>
<td>5.61 (2.54) Polypropylene</td>
<td>20.3 (9.2) Poly</td>
<td>62 (28.1) Poly</td>
<td>62 (28.1) Poly</td>
</tr>
<tr>
<td>Maximum Solids Inches (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>
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<tr>
<td>Best Selling Models (BSP Available)</td>
<td></td>
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<tr>
<td>Air Line Kit</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>
<td>66073-1</td>
<td>66073-1</td>
</tr>
</tbody>
</table>

- **Compact Series**
- **PRO Series**
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 gpm (lpm): 5.3 (20)
Displacement per cycle gal (l): .019 (.072)
Air Inlet (Female): 1/4 - 18 PTF SAE Short
Fluid Inlet/Outlet Hybrid:
- Internal Thread 1/4"NPTF/BSPT
- External Thread 3/4" - 14 NPTF/BSPT
Max. operating pressure psi (bar): 125 (8.6)
Suspended solids max. dia in (mm): .0625 (1.66)
Weight lbs (kg):
- Polypropylene: 2.86 (1.3)
- PVDF: 3.88 (1.76)
- Acetal: 3.52 (1.60)
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>
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<tbody>
<tr>
<td>Example:</td>
<td>PX01</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>X</td>
</tr>
</tbody>
</table>

**Position 1**
- Model Series
  - PD01 - Standard Pump
  - PE01 - Elec. Interface Accessible Pump

**Position 2**
- Center Section
  - E - Conductive Polypropylene
  - F - Polypropylene with leak failure detection
  - P - Polypropylene

**Position 3**
- Fluid Connections
  - H - 1/4" NPT BSP hybrid

**Position 4**
- Wetted Parts
  - D - Groundable Acetal
  - K - Kynar PVDF
  - L - L -- Polypoly (multiple part)
  - P - Polypropylene
  - R - -- Polypoly (multiple part)

**Position 5**
- Hardware
  - S - Stainless Steel

**Position 6**
- Seat Material
  - D - Acetal
  - K - PVDF
  - P - Polypropylene

**Position 7**
- Ball Material
  - D - Acetal
  - K - Kynar
  - L - Nitrile (Flex-Check only)
  - P - PTFE

**Position 8**
- Diaphragm Material
  - H - Santoprene®
  - H - Hytrel®
  - G - Nitrile
  - J - Nitrile (Flex-Check only)
  - K - EPR (Flex-Check only)
  - L - Viton (Flex-Check only)
  - N - Neoprene (Flex-Check only)
  - T - Teflon

**Position 9**
- Revision
  - A - Revision

**Position 10**
- Specialty Code

**Accessories**

**Air Line Connection Kit** | 66073-1
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
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 gpm (lpm): 10.6 (40.1) 8.7 (32.9) Flex check
Displacement per cycle gal (l): 0.022 (0.083) 0.018 (0.068) Flex check
Air Inlet: (Female) 1/4 - 18 PTF SAE Short
Max. operating pressure psi (bar): 100 (6.9)
Suspended solids max. dia in (mm): 0.0625 (1.6) Flex check (Fibers)
Weight lbs (kg):
P D03P-XD-XX 4.2 (1.9)
P D03P-XE-XX 4.3 (1.9)
P D03P-XK-XX 4.5 (2.0)
P D03P-XL-XX 4.6 (2.1)
P D03P-XP-XX 3.4 (1.6)
P D03P-XR-XX 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>
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<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example</td>
<td>PX03</td>
<td>P</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>S</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
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<table>
<thead>
<tr>
<th>Position 1</th>
<th>Position 2</th>
<th>Position 3</th>
<th>Position 4</th>
<th>Position 5</th>
<th>Position 6</th>
<th>Position 7</th>
<th>Position 8</th>
<th>Position 9</th>
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</thead>
<tbody>
<tr>
<td>Model Series</td>
<td>Center Section</td>
<td>Connections</td>
<td>Manifold Material</td>
<td>Hardware</td>
<td>Seat Material</td>
<td>Ball Material</td>
<td>Diaphragm Material</td>
<td>Revision Level</td>
</tr>
<tr>
<td>B - 3/8&quot; BSP</td>
<td>E - Ground. Acetal (multiple port)</td>
<td>K - PVDF (single port)</td>
<td>L - PTFE (multiple port)</td>
<td>P - Polypropylene (single port)</td>
<td>R - Polypropylene (multiple port)</td>
<td>C - Hytrel*</td>
<td>G - Nitrile</td>
<td></td>
</tr>
</tbody>
</table>

Accessories

Air Line Connection Kit | 66073-1
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
Cycle Counter Kit | 66975
Wall Mount Bracket Kit | 67388
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

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

Ordering Position 11
Specialty Code 2
(Blank if no Specialty Code)
E - End of stroke feedback + Leak Detection
F - End of stroke feedback
G - End of Stroke ATEX/IECex/NEC/CEC
H - End of Stroke/Leak Detection ATEX/IECex/NEC/CEC
L - Leak Detection
M - Leak Detection ATEX/IECex/NEC/CEC
N - Solenoid with no coil
O - Standard Valve Block (No Solenoid)
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. With flow rates up to 14.4 GPM (54.5 LPM) and a wide range of material and porting configurations.

Ratio: 1:1
Maximum Flow gpm (lpm): 14.4 (54.5)
Displacement per cycle gal (l): .039 (15)
Air Inlet: (Female) 1/4 - 18 PTF SAE Short
Fluid Inlet/Outlet: 1/2 - 14 NPTF - 1
R p 1/2 (1/2 -14 BSP, parallel)
Max. operating pressure psi (bar): 100 (6.9)
Suspended solids max. dia in (mm): .09375 (2.4)
Weight lbs (kg):

<table>
<thead>
<tr>
<th>Position 1 Model Series</th>
<th>Position 2 Center Section</th>
<th>Position 3 Connections</th>
<th>Position 4 Manifold Material</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 Fluid Control Options</th>
</tr>
</thead>
</table>

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>
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<th>7</th>
<th>8</th>
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</thead>
<tbody>
<tr>
<td>Example:</td>
<td>PX05</td>
<td>P</td>
<td>X</td>
<td>X</td>
<td>S</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>B</td>
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</table>

**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>LETTER</th>
<th>Dim.</th>
<th>LETTER</th>
<th>Dim.</th>
<th>LETTER</th>
<th>Dim.</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>8-27/32” (224.3 mm)</td>
<td>G</td>
<td>10-7/8” (271.7 mm)</td>
<td>N</td>
<td>6-5/16” (160.9 mm)</td>
</tr>
<tr>
<td>B</td>
<td>10-1/16” (255.0 mm)</td>
<td>H</td>
<td>4-7/8” (123.8 mm)</td>
<td>P</td>
<td>5” (127.0 mm)</td>
</tr>
<tr>
<td>C</td>
<td>5-1/2” (156.6 mm)</td>
<td>J</td>
<td>5-1/2” (139.7 mm)</td>
<td>Q</td>
<td>1-59/64” (48.9 mm)</td>
</tr>
<tr>
<td>D</td>
<td>3/4” (50.8 mm)</td>
<td>K</td>
<td>5/16” (8.0 mm)</td>
<td>R</td>
<td>10” (254.0 mm)</td>
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<tr>
<td>E</td>
<td>6-23/32” (170.6 mm)</td>
<td>L</td>
<td>1-9/16” (26.7 mm)</td>
<td>S</td>
<td>3-3/32” (79.3 mm)</td>
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<tr>
<td>F</td>
<td>6” (152.4 mm)</td>
<td>M</td>
<td>3/8” (9.5 mm)</td>
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</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 - 12V DC NEC/CEC
- F - 24V DC NEC/CEC
- G - Solenoid 12VDC ATEX/IECex
- H - Solenoid 24VDC ATEX/IECex
- J - 120VAC NEC/CEC
- K - Solenoid 220VAC ATEX/IECex
- N - Solenoid with no coil
- 0 - Standard Valve Block (No Solenoid)

**Ordering Position 11**

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

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

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 gpm (lpm):**
- Ball 13 (49.2)
- Duckbill 10 (37.9)

**Displacement per cycle gal (l):**
- Ball 0.04 (0.15)
- Duckbill 0.032 (0.12)

**Air Inlet:** (Female) 1/4 - 18 NPTF - 1

**Fluid Inlet/Outlet:** 1/2 - 14 NPTF - 1

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

**Suspended solids max. dia in (mm):**
- Ball 0.09375 (2.4)
- Duckbill fibers

**Weight lbs (kg):**
- Polypropylene 7.2 (3.3)
- Groundable Acetal 8.8 (4.0)
- Kynar PVDF 9.5 (4.3)

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

### Accessories

**Air Line Connection Kit | 66073-1**
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)

**Cycle Counter Kit | 66975**

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

**Service Repair Kits | 637141 (air section)**
637140-XX (fluid section)
1/2” Non-Metallic Dimensions and Flow Charts

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

A - 8.155” (207.1 mm)  E - 6.467” (164 mm)  J - 8.445” (215 mm)
B - 10.051” (255 mm)  F - 6.000” (152 mm)  K - 0.312” (8 mm)
C - 6.135” (155.8 mm)  G - 4.812” (122.2 mm)  L - 11.331” (288 mm)
D - 2.005” (51 mm)  H - 5.500” (140 mm)  M - 11.084” (282 mm)
N - 6.640” (168 mm)

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

**COMPACT SERIES PUMPS**

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

- **Ratio:** 1:1
- **Maximum Flow gpm (lpm):** 14.8 (56)
- **Displacement per cycle gal (l):** .032 (.12)
- **Air Inlet:** (Female) 1/4 - 18 PTF SAE Short
- **Fluid Inlet/Outlet:** 3/4 - 14 NPTF - 1

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

- **Max. operating pressure psi (bar):** 100 (6.9)
- **Suspended solids max. dia in (mm):** .09375 (2.4)
- **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)

## 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

### Ordering

<table>
<thead>
<tr>
<th>Position 1</th>
<th>Position 2</th>
<th>Position 3</th>
<th>Position 4</th>
<th>Position 5</th>
<th>Position 6</th>
<th>Position 7</th>
<th>Position 8</th>
<th>Position 9</th>
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<tbody>
<tr>
<td>Model</td>
<td>Center</td>
<td>Connections</td>
<td>Manifold Material</td>
<td>Hardware</td>
<td>Seat Material</td>
<td>Ball Material</td>
<td>Diaphragm Material</td>
<td>Specialty Code</td>
</tr>
<tr>
<td>PD07 - Standard Pump</td>
<td>P - Polypropylene</td>
<td>A - 14 – 3/4” NPTF-1</td>
<td>P - Polypropylene</td>
<td>S - SS</td>
<td>A - Santoprene</td>
<td>A - Santoprene</td>
<td>A - Santoprene</td>
<td>-</td>
</tr>
</tbody>
</table>

**Position 1 & 11 Specialty Code**

Fluid control options for pump with electronic interface (PE07 model). See complete description on page 17.
3/4” Non-Metallic Dimensions and Flow Charts

Air Inlet 1/4 - 18 R.T.E. SAE Short

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
M - Leak Detection ATEX/IECex/NEC/CEC
N - Solenoid with no coil
O - Standard Valve Block (No Solenoid)

Ordering Position 11

Specialty Code 2 (Blank if no Specialty Code)

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

Model
PD07P-APS-PXX 3/4- 14 N.P.T.F. - 1
PD07P-BPS-PXX Rp 3/4(3/4- 14 BSP)

DIMENSIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>&quot;Q&quot; Material Inlet</th>
<th>&quot;R&quot; Material Outlet</th>
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</thead>
<tbody>
<tr>
<td>PD07P-APS-PXX</td>
<td>3/4- 14 N.P.T.F. - 1</td>
<td>3/4- 14 N.P.T.F. - 1</td>
</tr>
</tbody>
</table>

NOTE: Dimensions are shown in inches and (mm) and are supplied for reference only.
1" Non-Metallic Models

ARO® PRO 1" non-metallic diaphragm pumps are a versatile solution for numerous applications. Our PRO 1" models achieve flow rates of up to 47 GPM (178 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 Flow gpm (lpm): 47 (177.9)
Displacement per cycle gal (l): .17 (0.64)
Air Inlet: (Female) 1/4 - 18 NPT
Fluid Inlet/Outlet: 1 - 1-1/2 NPTF - 1
Rp 1 (1 - 11 BSP, parallel) 1" ANSI/DIN Flange
Max. operating pressure psi (bar): 120 (8.3)
Suspended solids max. dia in (mm): .125 (3.2)
Weight lbs (kg): 6661A3-, 1AF-, 1AJ-, 1AL- 20.3 (9.2)
6661B3-, 1BF-, 1BJ-, 1BL- 28.8 (13.1)
Maximum dry suction lift ft (m): 15 (4.6)
Sound Level: 70 PSI 60 Cycles/Min 64.5 db(A)

Ordering

<table>
<thead>
<tr>
<th>Position 1 Center Body</th>
<th>Position 2 Fluid Caps Manifold Material</th>
<th>Position 3 Seat Material</th>
<th>Position 4 Ball Check Material</th>
<th>Position 5 Diaphragm Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Aluminum</td>
<td>3 - Polypropylene Flange (3-piece manifold)</td>
<td>2 - 316 Stainless Steel</td>
<td>1 - Neoprene</td>
<td></td>
</tr>
<tr>
<td>B - Cast Iron</td>
<td>F - Polypropylene Flange (one-piece manifold)</td>
<td>3 - Polypropylene</td>
<td>2 - Nitrile</td>
<td></td>
</tr>
<tr>
<td></td>
<td>J - Polypropylene N.P.T. threads (one piece manifold)</td>
<td>4 - PVDF (Kynar)</td>
<td>4 - PTFE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>L - Polypropylene BSP threads (one-piece manifold)</td>
<td>8 - Hard 400 Stainless Steel</td>
<td>5 - E.P.R.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8 - Polyurethane</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>A - 316 Stainless Steel</td>
<td></td>
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<tr>
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<td></td>
<td>C - Hytrel</td>
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<td></td>
<td>E - Santoprene</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M - Medical Grade Santoprene</td>
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</tr>
</tbody>
</table>

Accessories

Air Line Connection Kit | 66073-2
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
Cycle Counter Kit | 66975
Service Repair Kits | 637118-C (air section)
637161-XX-C (fluid section)
Flange Connection Kit | 67078 Kit meets ANSI specifications.
Flange constructed of glass-filled polypropylene. Bolts, washers and nuts are stainless steel. Gasket is 4401 klinger synthetic fiber nitrile binder.
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
1-1/2” Non-Metallic Models

PRO SERIES PUMPS

PRO 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 100 GPM (378.5 LPM) and also offer a diverse selection of material and porting configurations.

- **Ratio:** 1:1
- **Maximum Flow gpm (lpm):** 100 (378.5)
- **Displacement per cycle gal (l):** .67 (2.54)
- **Air Inlet (Female):** 1/2 - 14 NPTF - 1
- **Fluid Inlet/Outlet:** 1-1/2” A.N.S.I./DIN Flange
- **Max. operating pressure psi (bar):** 120 (8.3)
- **Suspended solids max. dia in (mm):** .25 (6.4)
- **Weight lbs (kg):** 6661T3-X-C 62 (28.1)
  
  Note: Add 23 (10.4) for cast iron air motor section
- **Maximum dry suction lift ft (m):** 14 (4.27)
- **Sound Level:** 70 PSI 60 Cycles/Min 77.7 db(A)

### Ordering

<table>
<thead>
<tr>
<th>Position</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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</thead>
<tbody>
<tr>
<td>Example</td>
<td>6661X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>-</td>
</tr>
</tbody>
</table>

#### Position 1
**Center Body**
- T - Aluminum
- U - Cast Iron

#### Position 2
**Fluid Caps**
- 3 - Polypropylene Flange (3-piece manifold)
- 4 - P.V.D.F. (Kynar)

#### Position 3
**Manifold Material**
- 2 - 316 Stainless Steel
- 3 - Polypropylene
- 4 - P.V.D.F. (Kynar)
- 8 - Hard 400 Stainless Steel

#### Position 4
**Seat Material**
- 1 - Neoprene
- 2 - Nitrile
- 3 - Viton
- 4 - PTFE
- 8 - Polyurethane
- C - Hytrel
- E - Santoprene

#### Position 5
**Diaphragm Material**
- 1 - Neoprene
- 2 - Nitrile
- 3 - Viton
- 4 - PTFE / Santoprene
- 6 - Composite PTFE
- 9 - Hytrel
- B - Santoprene

### Accessories

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

**Cycle Counter Kit | 66975**

**Service Repair Kits | 637118-C (air section)**
**637165-XX (fluid section)**

**Flange Connection Kit | 67079** Kit meets ANSI specifications.
Flange constructed of glass-filled polypropylene. Bolts, washers and nuts are stainless steel. Gasket is 4401 klinger synthetic fiber nitrile binder.
1-1/2" Non-Metallic Dimensions and Flow Charts

All dimensions are given in inches and millimeters (mm).

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

For additional information contact technical support at 1.800.495.0276
2” Non-Metallic Models

PRO SERIES PUMPS

ARO® PRO 2” non-metallic pumps achieve flow rates of up to 145 GPM (548.8 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 Flow gpm (lpm): 145 (548.8)
Displacement per cycle gal (l): .72 (2.7)
Air Inlet (Female): 1/2 - 14 NPTF - 1
Fluid Inlet/Outlet: 2” A.N.S.I./DIN Flange
Max. operating pressure psi (bar): 120 (8.3)
Suspended solids max. dia in (mm): .25 (6.4)
Weight lbs (kg): 6662A3-X-C 62 (28.1)
Note: Add 23 (10.4) for cast iron air motor section

Maximum dry suction lift ft (m): 14 (4.27)
Sound Level: 70 PSI 60 Cycles/Min 77.7 db(A)

Accessories

Air Line Connection Kit | 66084-1
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
Cycle Counter Kit | 66975
Service Repair Kits | 637118-C (air section)
637165-XX (fluid section)
Flange Connection Kit | 67080 Kit meets ANSI specifications. Flange constructed of glass-filled polypropylene. Bolts, washers and nuts are stainless steel. Gasket is 4401 klinger synthetic fiber nitrile binder.
2" Non-Metallic Dimensions and Flow Charts

All dimensions are given in inches and millimeters (mm).

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.
### Model Overview: Metallic Models

#### MODEL | 1/2" | 3/4" | 1" | 1-1/2" | 2" | 3"
--- | --- | --- | --- | --- | --- | ---
Max Flow GPM (LPM) | 12 (45.4) | 13.6 (51.5) | 35 (133) | 90 (340.7) | 172 (651) | 237 (897)
Max Discharge Pressure PSI (BAR) | 100 (6.9) | 100 (6.9) | 120 (8.3) | 120 (8.3) | 120 (8.3) | 120 (8.3)
Fluid Ports Inlet/Outlet (BSP Available) | 1/2" (F) - In/Out | 3/4 - 14 NPTF - 2 | 1 - 11/2 NPTF - 1 | 1 - 11/2 NPTF - 1 | 1 - 11/2 NPTF - 1 | 3 - 8 NPTF - 1
Materials of Construction | Aluminum Stainless Steel | Aluminum | Aluminum | Aluminum | Aluminum | Aluminum
Pump Weight Lbs. (Kg.) | 10.4 (4.7) PD05A-XAS-X-B | 16.6 (7.5) PD05A-XSS-X-B | 19 (8.6) Aluminum* | 51.5 (23.4) Aluminum* | 65.2 (29.6) | 109.8 (49.8)
| 8.74 (3.96) PD05A-XAS-X-B | 8.0 (3.7) PD05R-XAS-X-B | 77.5 (35.2) Stainless | 129.9 (58.9) | 124.3 (56.4) | 222.2 (100.8)
| 14.3 (6.5) PD05R-XSS-X-B | 31 (14.1) Cast Iron* | 79.5 (36.1) Cast Iron* | 124.3 (56.4) | 213.1 (96.7)
| *add 8-lb(3.63-kg) for cast iron center section | *add 23-lb(10.4-kg) for cast iron center section
Max Solids Inches (mm) | 3/32 (2.4) | 3/32 (2.4) | 1/8 (3.2) | 1/4 (6.4) | 1/4 (6.4) | 3/8 (9.5)
Best Selling Models (BSP Available) | PD05A-AAS-FAA-B | PD07R-AAS-FAA | 666100-122-C | 666100-244-C | 666150-244-C | 666250-144-C
| PD05A-AAS-FGG-B | PD07R-AAS-FTT | 666100-344-C | 666150-3EB-C | 666250-EEB-C | 666300-EEB-C
| PD05A-ASS-STT-B | PD07R-AAS-PTT | 666100-361-C | 666151-281-C | 666251-244-C | 666302-EEB-C
| PD0SR-AAS-PGG-B | PD0SR-AAS-PGG-B | 666100-362-C | 666152-281-C | 666252-G22-C | 666302-G22-C
| PD0SR-AAS-PTT-B | PD0SR-AAS-PTT-B | 666100-3EB-C | 666152-2EB-C | 666251-G22-C | 666302-G22-C
| PD0SR-ASS-STT-B | PD0SR-ASS-STT-B | 666101-244-C | 666161-2EB-C | 666252-EEB-C | 666302-EEB-C
Air Line Kit | 66073-1 | 66073-1 | 66073-2 | 66084-1 | 66312 | 66109

---

**Compact Series**

---

**PRO Series**
1/2” Metallic Models
COMPACT SERIES PUMPS

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

Ratio: 1:1
Maximum Flow gpm (lpm): 12.0 (45.4)
Displacement per cycle gal (l): 0.39 (15)
Air Inlet (Female): 1/4 - 18 PTF SAE Short (PD05R-X-X-B models)
1/4 - 18 NPTF - 1 (PD05A-X-X-B models)
Fluid Inlet/Outlet: 1/2 - 14 NPTF - 1
Rp 1/2 (1/2 - 14 BSP, parallel)
Max. operating pressure psi (bar): 100 (6.9)
Suspended solids max. dia in (mm): 0.09375 (2.4)
Weight lbs (kg): PD05A-XAS-XXX-B 10.4 (4.7)
PD05A-XSS-XXX-B 16.6 (7.5)
PD05R-XAS-XXX-B 8.0 (3.7)
PD05R-XSS-XXX-B 14.3 (6.5)
Maximum dry suction lift ft (m): 15 (4.5)
Sound Level: 70 PSI 60 Cycles/Min 75 db(A)
Muffler: PD05A - 93110; PD05R - Integral

Ordering

<table>
<thead>
<tr>
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<td>S</td>
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<td>X</td>
<td>X</td>
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</tbody>
</table>

Position 1 Model Series
Position 2 Center Section
Position 3 Connections
Position 4 Manifold Material
Position 5 Hardware
Position 6 Seat Material
Position 7 Ball Material
Position 8 Diaphragm Material
Position 9 Specialty Code
Position 10 & 11 Specialty Code

D - Standard
E - Remote Actuation Capable
A - Aluminum
R - Polypropylene
A - 1/2 - 14 NPTF - 1
B - Rp 1/2 (1/2 - 14 BSP, parallel)
A - Aluminum
S - Stainless Steel
S - Stainless Steel
A - Santoprene
C - Hytrel
G - Nitrile
S - Stainless Steel
T - PTFE
U - Polyurethane
V - Viton
A - Santoprene
C - Hytrel
G - Nitrile
L - Long-Life PTFE
T - PTFE/Santoprene
U - Polyurethane
V - Viton

Revision Level
Fluid control options for pump with electronic interface (PE05 model). See complete description on page 27

Accessories
Air Line Connection Kit | 66073-1
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
Cycle Counter Kit | 66975
Wall Mount Bracket Kit | 76763
Optional Muffler | 93110 used with 637438 kit
Service Repair Kits | 637428 (air section)
637427-XX (fluid section)
1/2” Metallic Dimensions and Flow Charts

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

Ordering Position 9
Specialty Code 1
(Blank if no Specialty Code)

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

Ordering Position 10 and 11
Specialty Code 2
(Blank if no Specialty Code)

E - End of stroke feedback + Leak Detection
F - End of stroke feedback
G - End of Stroke ATEX/IECex/NEC/CEC
H - End of Stroke/Leak Detection ATEX/IECex/NEC/CEC
L - Leak Detection
M - Leak Detection ATEX/IECex/NEC/CEC
O - No Option
3/4” Metallic Models
COMPACT SERIES PUMPS

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

Ratio: 1:1
Maximum Flow gpm (lpm): 13.6 (51.5)
Displacement per cycle gal (l): 0.030 (11)
Air Inlet (Female): 1/4 - 18 PTF SAE Short
Fluid Inlet/Outlet: 3/4 - 14 NPTF-2
Rp 3/4 (3/4 - 14 BSP, parallel)
Max. operating pressure psi (bar): 100 (6.9)
Suspended solids max. dia in (mm): 0.09375 (2.4)
Weight lbs (kg):
PX07R 8.74 (3.96)
PX07A 11.0 (4.99)
Maximum dry suction lift ft (m): 15 (4.5)
Sound Level: 70 PSI 60 Cycles/Min 75 db(A)

Ordering

<table>
<thead>
<tr>
<th>Position 1</th>
<th>Position 2</th>
<th>Position 3</th>
<th>Position 4</th>
<th>Position 5</th>
<th>Position 6</th>
<th>Position 7</th>
<th>Position 8</th>
<th>Position 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Series</td>
<td>Center Section</td>
<td>Connections</td>
<td>Manifold Material</td>
<td>Hardware</td>
<td>Seat Material</td>
<td>Ball Material</td>
<td>Diaphragm Material</td>
<td>Specialty Code</td>
</tr>
<tr>
<td>E - Remote Actuation Capable</td>
<td>R - Polypropylene</td>
<td>B - Rp 3/4 (3/4 - 14 BSP, parallel)</td>
<td>P - Polypropylene</td>
<td>T - PTFE</td>
<td>C - Hytrel</td>
<td>L - Long-Life PTFE</td>
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<td></td>
</tr>
</tbody>
</table>

Accessories

Air Line Connection Kit | 66073-1
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
Cycle Counter Kit | 66975
Wall Mount Bracket Kit | 76763
Optional Muffler | 93110 used with 637438 kit
Service Repair Kits | 637428 (air section)
637427-XX (fluid section)
3/4” Metallic Dimensions and Flow Charts

Dimensions:

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

Model: PD07R-XAS-PXX 3/4” PRESSURE DIE CAST MATERIAL

Ordering Position 10
Specialty Code 1 (Blank if no Specialty Code)
A - Solenoid 120VAC  G - Solenoid 12VDC ATEX/IECex
B - Solenoid 12VDC  H - Solenoid 24VDC ATEX/IECex
C - Solenoid 240VAC  J - 120VAC NEC/CEC
D - Solenoid 24VDC  K - Solenoid 220VAC ATEX/IECex
E - 12vDC NEC/CEC  N - Solenoid with no coil
F - 24vDC NEC/CEC  O - Standard Valve Block (No Solenoid)

Ordering Position 11
Specialty Code 2 (Blank if no Specialty Code)
E - End of stroke feedback + Leak Detection  L - Leak Detection
F - End of stroke feedback  M - Leak Detection ATEX/IECex/NEC/CEC
G - End of Stroke ATEX/IECex/NEC/CEC  O - No Option
H - End of Stroke/Leak Detection ATEX/IECex/NEC/CEC

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

ARO® PRO 1” metallic diaphragm pumps achieve flow rates of up to 35 GPM (133 LPM) and offer a wide array of material and porting configurations. These pumps are often used for transfer, filling, recirculation and batching in Industrial, Mining, Construction, Chemical and Petrochemical markets.

Ratio: 1:1
Maximum Flow gpm (lpm): 35 (133)
Displacement per cycle gal (l): .16 (.60)
Air Inlet (Female): 1/4 - 18 NPTF - 1
Fluid Inlet/Outlet: 1 - 11/2 NPTF - 1
Rp 1 (1-11 BSP parallel)
Max. operating pressure psi (bar): 120 (8.3)
Suspended solids max. dia in (mm): .125 (3.2)
Weight lbs (kg):
- 666100-X-C (aluminum) 19 (8.6)
- 666101-X-C (stainless steel) 29 (13.1)
- 666102-X-C (cast iron) 31 (14.1)
Note: Add 8 (3.63) for cast iron air motor section
Maximum dry suction lift ft (m): 20 (6.1)
Sound Level: 70 PSI 60 Cycles/Min 64.5 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>
</tr>
</thead>
<tbody>
<tr>
<td>Example:</td>
<td>6661X X - X X - C</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Position 1 Center Body</th>
<th>Position 2 Fluid Caps Manifold Material</th>
<th>Position 3 Seat Material</th>
<th>Position 4 Ball Check Material</th>
<th>Position 5 Diaphragm Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - Aluminum, NPTF</td>
<td>0 - Aluminum (steel hardware)</td>
<td>1 - Aluminum</td>
<td>1 - Neoprene</td>
<td>1 - Neoprene</td>
</tr>
<tr>
<td>1 - Cast Iron, NPTF</td>
<td>1 - SS (steel hardware)</td>
<td>2 - 316 Stainless Steel</td>
<td>2 - Nitrile</td>
<td>2 - Nitrile</td>
</tr>
<tr>
<td>2 - Aluminum, BSP</td>
<td>2 - Cast Iron (steel hardware)</td>
<td>3 - Polypropylene</td>
<td>3 - Viton</td>
<td>3 - Viton</td>
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<tr>
<td>3 - Cast Iron, BSP</td>
<td>9 - SS, dual outlet (steel hardware)</td>
<td>4 - PTFE (Kynar)</td>
<td>4 - PTFE</td>
<td>4 - PTFE / Santoprene</td>
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<tr>
<td></td>
<td>A - Aluminum, (stainless hardware)</td>
<td>5 - Carbon Steel</td>
<td>5 - Acetal</td>
<td>6 - Composite PTFE</td>
</tr>
<tr>
<td></td>
<td>B - SS (stainless hardware)</td>
<td>8 - Polyurethane</td>
<td>8 - Polyurethane</td>
<td>9 - Hytrel</td>
</tr>
<tr>
<td></td>
<td>C - Cast Iron (stainless hardware)</td>
<td>A - Stainless Steel</td>
<td>C - Hytrel</td>
<td>B - Santoprene</td>
</tr>
<tr>
<td></td>
<td>D - SS, dual outlet (stainless hardware)</td>
<td>E - Santoprene</td>
<td>G - Nitrile</td>
<td>G - Nitrile</td>
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</tbody>
</table>

Accessories

- **Air Line Connection Kit** | 66073-2 (Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
- **Cycle Counter Kit** | 66975
- **Service Repair Kits** | 637118-C (air section)
  637119-XX-C (fluid section)
- **Wall Mount** | 66100
1” Metallic Dimensions and Flow Charts

6661X0, 1XA, 1X2 & 1XC

**DIMENSIONS**

- A - 8-9/16” (217.5 mm)
- B - 11-9/16” (294 mm)
- C - 4” (102 mm)
- D - 1-1/4” (32 mm)

**NOTE:** Dimensions are shown in inches and (mm), supplied for reference only and are typically rounded up to the nearest 1/16 inch.

- E - 6-1/2” (165 mm)
- F - 8” (203 mm)
- G - 12-1/2” (318 mm)
- H - 6-1/4” (159 mm)
- J - 7-5/16” (186 mm)
- K - 13/32” (10 mm)

Material Outlet

1 - 11-1/2 NPTF-1

6661X0, 6661X1, 6661X2

Material Inlet

1 - 11-1/2 NPTF-1

6661X0, 6661X1, 6661X2

**PERFORMANCE CURVES**

6661XX-XXX-C 1” METALLIC DIAPHRAGM PUMP

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® PRO 1-1/2” metallic diaphragm pumps achieve flow rates of up to 90 GPM (340.7 LPM) and offer a wide array of material and porting configurations. These pumps are often used for transfer, filling, recirculation and batching in Paint, Oil & Gas, Mining, Construction, Chemical and Petrochemical markets.

Ratio: 1:1
Maximum Flow gpm (lpm): 90 (340.7)
Displacement per cycle gal (l): .64 (2.42)
Air Inlet (Female): 1/2 - 14 NPTF - 1
Fluid Inlet/Outlet: 1-1/2 11-1/2 NPTF - 1
Max. operating pressure psi (bar): 120 (8.3)
Suspended solids max. dia in (mm): .25 (6.4)
Weight lbs (kg): 666150-X-C (aluminum) 51.5 (23.4)
666151-X-C (stainless steel) 77.5 (35.2)
666152-X-C (cast iron) 79.5 (36.1)
Note: Add 23 (10.4) for cast iron air motor section
Max. dry suction lift ft (m): 19 (5.8)
Sound Level: 70 PSI 60 Cycles/Min 80.5 db(A)

Ordering

<table>
<thead>
<tr>
<th>Position</th>
<th>1</th>
<th>2</th>
<th>3</th>
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<tr>
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<table>
<thead>
<tr>
<th>Position 1</th>
<th>Position 2</th>
<th>Position 3</th>
<th>Position 4</th>
<th>Position 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center Body</td>
<td>Fluid Caps Manifold Material</td>
<td>Seat Material</td>
<td>Ball Check Material</td>
<td>Diaphragm Material</td>
</tr>
<tr>
<td>5 - Aluminum, NPTF</td>
<td>0 - Aluminum (steel hardware) 1 - Stainless Steel (steel hardware) 2 - Cast Iron (steel hardware) A - Aluminum, (stainless steel hardware) B - Stainless Steel (stainless steel hardware) C - Cast Iron (stainless steel hardware)</td>
<td>1 - Aluminum 2 - 316 Stainless Steel 3 - Polypropylene 4 - PVDF (Kynar) 5 - Carbon Steel 8 - Hard 400 Stainless Steel</td>
<td>1 - Neoprene 2 - Nitrile 3 - Viton 4 - PTFE 6 - Acetal 8 - Polyurethane A - Stainless Steel C - Hytrel E - Santoprene</td>
<td>1 - Neoprene 2 - Nitrile 3 - Viton 4 - PTFE / Santoprene 6 - Composite PTFE 9 - Hytrel B - Santoprene</td>
</tr>
</tbody>
</table>

Accessories

Air Line Connection Kit* | 66084-1 (Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
Cycle Counter Kit | 66975
Service Repair Kits | 637118-C (air section) 637124-XX (fluid section)
Wall Mount | 62133
**1-1/2” Metallic Dimensions and Flow Charts**

**6661X0, 1X2, 1XA, & 1XC**

**6661X1 & 1XB**

**Dimensions**

- A - 13-1/8” (333 mm)
- B - 18-3/8” (467 mm)
- C - 9” (229 mm)
- D - 2-3/4” (70 mm)
- E - 1/2” (14 mm)
- F - 11-1/2” (292 mm)
- G - 19-5/8” (498 mm)
- H - 10-3/4” (273 mm)
- J - 12” (305 mm)
- K - 7-5/8” (194 mm)
- L - 14-1/2” (368 mm)

**NOTE:** Dimensions are shown in inches and (mm), supplied for reference only and are typically rounded up to the nearest 1/16 inch.

**Performance Curves**

- **6661XX-XXX-C 1-1/2” METALLIC DIAPHRAGM PUMP**

**Material Outlet**

1-1/2” NPTF-1 (6661X1X-X, 66616X)

1-1/2” BSP (6661X1X-X-C, 66616X-X-C)

**Material Inlet**

1-1/2” NPTF-1 (66615X-X, 66619X)

1-1/2” BSP (66617X-X-C, 66618X-X-C)

**Air Inlet**

1/2-14 NPTF-1

**Air Exhaust**

3/4-14 NPTF-1

**MATERIAL INLET**

1-1/2 NPTF (66615X, 66618X)

1-1/2 BSP (66617X, 66618X)

**NPSH REQUIRED IN FEET**

- 120 PSIG
- 100 PSIG
- 70 PSIG
- 40 PSIG

**AIR CONSUMPTION IN SCFM20**

- 35
- 50
- 75
- 100

**TOTAL DISCHARGE HEAD (2.31 FT = 1 PSIG)**

- 0
- 25
- 50
- 75
- 100

**CAPACITY IN U.S. GALLONS PER MINUTE**

- 0
- 20
- 50
- 75
- 100

**CAPACITY IN LITERS PER MINUTE**

- 0
- 2
- 4
- 6
- 8

**NOTE:** Dimensions are shown in inches and (mm), supplied for reference only and are typically rounded up to the nearest 1/16 inch.
2” Metallic Models

ARO® PRO 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, Mining, Construction, Chemical and Petrochemical markets.

Ratio: 1:1
Maximum Flow gpm (lpm): 172 (651)
Displacement per cycle gal (l): 1.4 (5.3)
Air Inlet (Female): 3/4 - 14 NPTF - 2
Fluid Inlet/Outlet: 2 - 11-1/2 NPTF - 1
Max. operating pressure psi (bar): 120 (8.3)
Suspended solids max. dia in (mm): .25 (6.4)
Weight lbs (kg): 6662X0-XXX-C 66.2 (29.6)
6662X1-XXX-C 129.9 (58.9)
6662X2-XXX-C 124.3 (58.9)
Maximum dry suction lift ft (m): 27.2 (8.3)
Sound Level: 70 PSI 60 Cycles/Min 85.3 db(A)

Accessories

Air Line Connection Kit | 66312
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
Cycle Counter Kit | 66975
Service Repair Kits | 637434 (air section)
637432-XX (fluid section)
67389 Muffler Kit (not shown) included with pump

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>6662X</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>-</td>
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</tbody>
</table>

Position 1
Center Body

Position 2
Fluid Caps
Manifold Material

Position 3
Seat Material

Position 4
Ball Check Material

Position 5
Diaphragm Material

5 - Aluminum, NPTF
7 - Aluminum, BSP
0 - Aluminum (steel hardware)
1 - Stainless steel (steel hardware)
2 - Cast Iron (steel hardware)
A - Aluminum / Stainless Steel
B - Stainless Steel / Stainless Steel
C - Cast Iron / Stainless Steel
1 - Aluminum
2 - 316 Stainless Steel
4 - PVDF (Kynar)
5 - Carbon Steel
8 - Hard Stainless Steel
9 - Hytrel
E - Santoprene
G - Nitrile
2 - Nitrile
4 - PTFE / Santoprene
A - 316 Stainless Steel
C - Hytrel
E - Santoprene
G - Nitrile
2 - Nitrile
4 - PTFE / Santoprene
6 - Composite PTFE
9 - Hytrel
B - Santoprene
G - Nitrile

AROzone.com • PRO Series Diaphragm Pumps / (800) 495-0276 • arotechsupport@irco.com
2" 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
3" Metallic Models

PRO SERIES PUMPS

ARO® PRO 3" metallic diaphragm pumps achieve flow rates of up to 237 GPM (897 LPM) and offer a wide array of material and porting configurations. These pumps are often used for transfer, filling, recirculation and batching in Ceramic, Paint, Oil & Gas, Mining, Construction, Chemical and Petrochemical markets.

Ratio: 1:1
Maximum Flow gpm (lpm): 237 (897)
Displacement per cycle gal (l): 2.65 (10.03)
Air Inlet (Female): 3/4 - 14 NPTF - 2
Fluid Inlet/Outlet: 3 - 8 NPTF - 1
R p 3 (3 - 11 BSP parallel)
Max. operating pressure psi (bar): 120 (8.3)
Suspended solids max. dia in (mm): .375 (9.5)

Maximum dry suction lift ft (m): 17.6 (5.4)
Sound Level: 70 PSI 60 Cycles/Min 86.3 db(A)

Accessories

Air Line Connection Kit | 66312 (Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)
Cycle Counter Kit | 66975
Service Repair Kits | 637434 (air section)

637433-XX (fluid section)
3" Metallic Dimensions and Flow Charts

DIMENSIONS

A 22-7/32" (563.9 mm)  
B 30" (762.0 mm)  
C 12-1/16" (306.4 mm)  
D 2-3/8" (60.3 mm)  
E 3/4" - 14 N.P.T.F. -1  
F 16" (406.4 mm)  
G 32-9/32" (819.8 mm)  
H 10-5/32" (258.0 mm)  
J 11" (279.4 mm)  
K 9/16" (14.3 mm)  
L 2-3/4" (69.9 mm)  
M 24-7/16" (620.7 mm)  
N 11-3/32" (281.4 mm)  
P 5-1/4" (133.4 mm)  
Q 11-1/8" (281.9 mm)  
R 1-1/6 - 11-1/2" N.P.T.F. -1  
S (see below)  

*"S" inlet/outlet

666300-XXX-C 3 - 8 N.P.T.F. - 1
666320-XXX-C Rp 3 (3 - 11 BSP parallel)

PERFORMANCE CURVES

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
**3:1 Ratio High Pressure Diaphragm Pump**

ARO’s pneumatic 3:1 ratio, high pressure diaphragm pumps provide effective flow rates up to 24 gpm (90.7 lpm) at pressures up to 300 psi (20.4 bar). The compact size and footprint makes this a smart choice for a wide variety of markets and OEM’s. This pump is useful for feeding filter presses, the transfer of paint, recirculation and high solid coatings, inks, adhesives, filled material, drilling grout, caulking, solvent reclamation and resins.

**Ratio:** 3:1  
**Maximum Flow gpm (lpm):** 26 (98.4) flooded inlet  
12 (45.6) at 125 psi back pressure  
**Displacement per cycle gal (l):** 0.06-Gallons (0.23)  
**Air Inlet (Female):** 3/8 - 18 NPTF - 1  
**Fluid Inlet:** 1 - 11-1/2 NPTF - 1  
**Fluid Outlet:** 1 - 11-1/2 NPTF - 1  
**Max. operating pressure psi (bar):** 100 (6.9)  
**Suspended solids max. dia in (mm):** 0.125 (3.2)  
**Weight lbs (kg):** 94.73 (42.97)  
**Maximum dry suction lift ft (m):** 5-6 (1.5-1.8)  
**Sound Level:** 70 PSI 60 Cycles/Min 84.5 db(A)

### 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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<tbody>
<tr>
<td>Example:</td>
<td>PH10</td>
<td>A</td>
<td>X</td>
<td>S</td>
<td>S</td>
<td>XX</td>
<td>T</td>
</tr>
</tbody>
</table>

#### Position 1 Base Model  
**1” Pump**  
A - Aluminum

#### Position 2 Center Section  
A - NPTF Threads  
B - BSP Threads

#### Position 3 Port Size  
S - Stainless Steel

#### Position 4 Wetted Parts  
S - Stainless Steel

#### Position 5 Hardware  
HH 440 SS/ 440 SS  
316 SS / 316 SS

#### Position 6 Seat/Ball Check Material  
T - PTFE

#### Position 7 Diaphragm Material

### Accessories

**Air Line Filter-Regulator**  
P39344-614  
Piggyback unit with a 5 micron filter, metal bowl with auto drain, sight glass and 0-125-psi gauge.

**Service Repair Kits**  
637338 (air section)  
637339 (PH10X-XXX-XSXX fluid section)  
637339-1 (PH10X-XXX-XHXX fluid section)

**Wall Mount Bracket**  
67142
High Pressure Diaphragm Pump 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
When you purchase an ARO® Pit Boss pneumatic diaphragm pump, you can be confident that you’re getting industry-proven durability, reliability, and value. They’re the ideal solution for general transfer, dewatering, and solids-handling applications.

- Comfort-grip handles
- Removable screened inlet
- One-way exhaust check valve - Permits submersible operation

**PIT BOSS DEWATERING PUMP**

<table>
<thead>
<tr>
<th>Size</th>
<th>1-1/2”</th>
<th>2”</th>
<th>3”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max flow-gpm (L/min)</td>
<td>80 (302.8)</td>
<td>156 (590.5)</td>
<td>217 (821.3)</td>
</tr>
<tr>
<td>Max discharge pressure-psi (bar)</td>
<td>120 (8.3)</td>
<td>120 (8.3)</td>
<td>120 (8.3)</td>
</tr>
<tr>
<td>Max particle size-inches (mm)</td>
<td>0.5 (12.7)</td>
<td>0.75 (19.0)</td>
<td>1 (25.4)</td>
</tr>
<tr>
<td>Pump weight-lb (kg)</td>
<td>55 (25)</td>
<td>74 (34)</td>
<td>118 (54)</td>
</tr>
<tr>
<td>Fluid ports</td>
<td>1.5” NPTF and BSP (female)</td>
<td>2” NPTF and BSP (female)</td>
<td>3” NPTF and BSP (female)</td>
</tr>
</tbody>
</table>

### Ordering

<table>
<thead>
<tr>
<th>Position</th>
<th>1</th>
<th>2</th>
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<th>Position 3</th>
<th>Position 4</th>
<th>Position 5</th>
<th>Position 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Model</td>
<td>Center Body/ Fluid Connection</td>
<td>Fluid cap, Manifold, Mat’l Hardware Material</td>
<td>Seat Material</td>
<td>Ball Material</td>
<td>Diaphragm Material</td>
</tr>
<tr>
<td>666M</td>
<td>15 Aluminum / 1-1/2” NPTF</td>
<td>0 Aluminum / Carbon Steel</td>
<td>1 Aluminum</td>
<td>2 Nitrile</td>
<td>2 Nitrile</td>
</tr>
<tr>
<td>17 Aluminum / 1-1/2” BSP</td>
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<td>C Hytrel</td>
<td>C Hytrel</td>
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<tr>
<td>25 Aluminum / 2” NPTF</td>
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<td>E Santoprene</td>
<td>B Santoprene</td>
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<tr>
<td>27 Aluminum / 2” BSP</td>
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<td></td>
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<td></td>
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<tr>
<td>30 Aluminum / 3” NPTF</td>
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</tr>
<tr>
<td>32 Aluminum / 3” BSP</td>
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### Accessories

<table>
<thead>
<tr>
<th>Size</th>
<th>1-1/2”</th>
<th>2”</th>
<th>3”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter / regulator</td>
<td>P39344-614</td>
<td>P39354-614</td>
<td>P39454-614</td>
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<tr>
<td>Air section service kit</td>
<td>637118-C</td>
<td>637434</td>
<td>637434</td>
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<tr>
<td>Fluid section service kit</td>
<td>637469-XX</td>
<td>637468-XX</td>
<td>637467-XX</td>
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<tr>
<td>Muffler kit</td>
<td>67463</td>
<td>67389</td>
<td>67389</td>
</tr>
</tbody>
</table>
Automatic DeWatering System

Air Operated Control Solution with Liquid Level Sensing

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

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

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

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

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

PUMP COMPATIBILITY
2” PRO Series Pump 6662XX-XXX-C
3” PRO Series Pump 6663XX-XXX-C

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
ARO’s pneumatic centrifugal pumps provide effective flow rates up to 230 gpm (870.5 lpm). Compact in size, these pumps are useful for dewatering trenches, holes, bilges, pits or other bodies of standing water. These pumps are used by municipalities, utilities, mines, ships, construction and industrial sites.

### Centrifugal Pump Models

**SPECIALTY PUMP**

Maximum Flow gpm (lpm):
- 200 (757) P237AX-EU
- 230 (870.5) P35AX-EU

Air Inlet (Female):
- 3/4 -14 NPT (P237AX-EU)
- 1 - 11-1/2 NPT (P35A1-EU)

Fluid Inlet:
- Screened Inlet

Fluid Outlet:
- 2" NPTF P35A1-EU
- 2-1/2" NPTF P237A1-EU
- 2-1/2" BSP P237A3-EU

Max. operating pressure psi (bar):
- 90 (6.2)

Air Consumption in CFM:
- P237AX-EU 100
- P35A1-EU 160

Suspended solids max. dia in (mm):
- .25 (6.4)

Pump Housing Material:
- P237AX-EU Cast Iron
- P35A1-EU Cast Iron

Weight lbs (kg):
- P237AX-EU 48 (21.8)
- P35A1-EU 79 (36)

### Ordering

<table>
<thead>
<tr>
<th>Position</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example</td>
<td>P237A</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Position 1</th>
<th>Position 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Series</td>
<td>Discharge Thread</td>
</tr>
<tr>
<td>200-GPM (757-LPM)</td>
<td>1 - 2-1/2’ NPT</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Position</th>
<th>1</th>
<th>2</th>
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<tbody>
<tr>
<td>Example</td>
<td>P35A</td>
<td>-</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Position 1</th>
<th>Position 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Series</td>
<td>Discharge Thread</td>
</tr>
<tr>
<td>230-GPM (870-LPM)</td>
<td>1 - 2’ NPT</td>
</tr>
</tbody>
</table>

### Accessories

**Air Line Unit**
- C28453-810 for P237AX-EU
- C28463-810 for P35A1-EU
- C284X3-810 models contain Filter, Regulator and Lubricator units.

**Service Repair Kits**
- Repair parts are ordered individually.

Refer to Operator’s Manuals:
- P237AX-EU Pumps: Form P6856
- P35A1-EU Pumps: Form P7263

---

Centrifugal Pump Dimensional Data and Flow Charts

**Height:**
- P237AX-EU 17-5/8 (448)
- P35A1-EU 22-1/2 (570)

**Size of opening pump will pass through:**
- P237AX-EU 8-3/4 (222) x 8-3/4 (222)
- P35A1-EU 8-7/16 (214) x 14-1/16 (357)

**Discharge Pipe Tap:**
- P237AX-EU 2-1/2” NPT
- P35A1-EU 2’ NPTF
- P237A1-EU 2-1/2” NPTF
- P35A1-EU 2’ NPTF
- P237A3-EU 2-1/2” BSP

**Air Inlet Pipe Tap:**
- P237AX-EU 3/4" NPTF
- P35A1-EU 1” NPTF

**Air Inlet Recommended Hose Size:**
- P237AX-EU 3/4 (19)
- P35A1-EU 1 (25.4)

**Exhaust Pipe Tap:**
- P237AX-EU 1-1/4" NPTF
- P35A1-EU 1-1/4” NPTF

**Exhaust Recommended Hose Size:**
- P237AX-EU 1-1/4 (31.7)
- P35A1-EU 1-1/4 (31.7)

---

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

For additional information contact technical support at 1.800.495.0276
Fuel Antifreeze / Water Blending Pump

**Model no. 650715-C**

This 1:1 ratio diaphragm pump is designed for mixing anti-freeze and water in 50 / 50 proportion for automotive coolant systems. It has dual inlets to allow simultaneous pumping and blending of antifreeze and water.

2 x 1” NPTF fluid inlets – 1” NPTF fluid outlet.

U/L Approved Fuel Pump

**Model no. 650717-C, 670042, 650718-C and 650719-C**

Designed specifically for high volume transfer, bulk-unloading, or fueling applications. These pumps meet UL 79 specification code and are compatible with gasoline, aviation fuel, diesel fuel, fuel oil and kerosene.

Calcium Chloride Tire-fill Pump Package

**Model no. 613201-2-C**

Designed for the purpose of evacuating and filling tires with calcium chloride ballast solution. Package includes a 666100-441-C, 1” port diaphragm pump. Aluminum construction with neoprene diaphragms and PTFE checks for compatibility with corrosive calcium chloride and 60154 hose / strainer / gun assembly. Also includes check valve and all required clamps and related hardware.

<table>
<thead>
<tr>
<th>Model</th>
<th>Body materials (wetted)</th>
<th>Diaphragm / ball material</th>
<th>Air inlet NPT (F) in (mm)</th>
<th>Fluid inlet / outlet material in (mm)</th>
<th>Max flow gpm (L/min)</th>
<th>Compatible fluids</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1” PORTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>650717-C</td>
<td>Aluminum</td>
<td>Viton / Acetal</td>
<td>1/4” (6.3)</td>
<td>1” / 1” (25.4)</td>
<td>29 (109.8)</td>
<td>Fuel (UL 79 approved)</td>
</tr>
<tr>
<td><strong>1-1/2” PORTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>650718-C</td>
<td>Aluminum</td>
<td>Viton / Acetal</td>
<td>1/2” (127)</td>
<td>1-1/2” (38.1)</td>
<td>75 (283.9)</td>
<td>Fuel (UL 79 approved)</td>
</tr>
<tr>
<td><strong>2” PORTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>650719-C</td>
<td>Aluminum</td>
<td>Viton / Acetal</td>
<td>3/4” (19.1)</td>
<td>2” (50.8)</td>
<td>105 (397.5)</td>
<td>Fuel (UL 79 approved)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Application</th>
<th>Manifold material</th>
<th>Diaphragm, O-ring material</th>
<th>Air inlet NPT / F in (mm)</th>
<th>Fluid outlet NPT / F in (mm)</th>
<th>Max flow gpm (L/min)</th>
<th>Package includes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1/2” PORTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>670042</td>
<td>Fuels</td>
<td>Aluminum</td>
<td>Viton</td>
<td>1/4” (6)</td>
<td>1/2” (13)</td>
<td>12 (45.4)</td>
<td>UL Pump only</td>
</tr>
<tr>
<td><strong>1” PORTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>650715-C</td>
<td>50 / 50 mix of antifreeze and water</td>
<td>Aluminum</td>
<td>Nitrile</td>
<td>1/4” (6)</td>
<td>1” (25.4)</td>
<td>35 (133)</td>
<td>Pump only</td>
</tr>
<tr>
<td>613201-2-C</td>
<td>Calcium chloride tire filling</td>
<td>Aluminum</td>
<td>Neoprene</td>
<td>1/4” (6)</td>
<td>1” (25.4)</td>
<td>35 (133)</td>
<td>Inlet and outlet hoses, strainer, 8’ suction hose, control handle, check valve</td>
</tr>
</tbody>
</table>
Drum Pumps

**SPECIALTY PUMP**

**Drum Pumps**

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

- **Ratio:** 1:1
- **Maximum Flow gpm (lpm):** 11 (41.6)
- **Displacement per cycle gal (l):** .039 (.15)
- **Air Inlet (Female):** 1/4 -18 NPT
- **Fluid Inlet:** Siphon Tube for 55-Gallon Drum
- **Fluid Outlet:** 1/2 -14 NPTF - 1
- **Max. operating pressure psi (bar):** 100 (6.8)
- **Suspended solids max. dia in (mm):** .09375 (2.4)
- **Shipping Weight lbs (kg):**
  - Polypropylene, basic package: 22 (10)
  - Aluminum, basic package: 26 (11.8)
  - Stainless, basic package: 36 (16.3)

**Drum Pump Packages**

- Choose from Basic to Complete - Drum Pump Packages can be ordered in 3 styles:
  - Basic: Pump, Bung Adapter, Air Safety Shut-Off, Siphon Tube, Weather Seal and base
  - Complete/Transfer: Basic Pump plus Fluid Hose or Fluid Hose with Non-Drip Nozzle
  - Complete/ Dispensing: Basic Pump plus Foot Valve, Hose and Dispensing Nozzle

**Pump Features**

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

**Accessories**

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

**Ordering**

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

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

Air Filter/Regulator

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

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

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

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

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

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

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

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

<table>
<thead>
<tr>
<th>Accessory</th>
<th>1/4” Non-Metallic</th>
<th>3/8” Non-Metallic</th>
<th>1/2” Non-Metallic</th>
<th>1/2” Classic Non-Metallic</th>
<th>3/4” Non-Metallic</th>
<th>1/2” Metallic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Air Line Connection Kit</strong></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>
<tr>
<td>Kit includes Piggyback Filter/Regulator with gauge, pipe nipple and a 5-foot section of air hose.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Diaphragm Failure Detection (DFD)</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Provides a warning of a diaphragm failure by sensing the presence of liquid in the air chamber of the pump.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pneumatic Cycle Counter Kit</strong></td>
<td>-</td>
<td>66975</td>
<td>66975</td>
<td>-</td>
<td>66975</td>
<td>66975</td>
</tr>
<tr>
<td>Like the odometer on your car, ARO’s cycle counter lets you know how many pump cycles have elapsed so you can be prepared to perform preventive maintenance.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cycle Sensor Kit</strong> (close electrical contact type)</td>
<td>-</td>
<td>67386</td>
<td>67386</td>
<td>67168</td>
<td>67386</td>
<td>-</td>
</tr>
<tr>
<td>For monitoring pump operation. Can be used to monitor cycle rates, preventative maintenance and rough flow rate indication.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Flange Connection Kit</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>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)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Over-run Control</strong></td>
<td>-</td>
<td>-</td>
<td>635040</td>
<td>635040</td>
<td>635040</td>
<td>635040</td>
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<tr>
<td>Shuts off pump when excessive cycling occurs due to empty fluid supply container.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Wall Mount</strong></td>
<td>-</td>
<td>67388</td>
<td>76763</td>
<td>-</td>
<td>76763</td>
<td>76763</td>
</tr>
<tr>
<td>Conveniently mount pump above container. Made of of heavy gauge coated steel. (pump not included)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
* Does not include hardware |
<p>| <strong>Countdown Batcher</strong>            | -                 | 67072             | 67072             | 67072                     | 67072            | 67072         |
| Manual start batch counter kit controls the volume of fluid dispensed by controlling the number of pump cycles. |                   |                   |                   |                           |                  |               |
| <strong>Solenoid Actuation Kit</strong>       | -                 | 67165-1 (24VDC)   | 67165-2 (24VDC)   | 67165-1 (24VDC)           | 67165-2 (24VDC)  | -             |
| 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. |                   |                   |                   |                           |                  |               |
| <strong>Diaphragm Pump Speed Controls</strong> | 104104-N02       | 104104-N02       | 104104-N02       | 104104-N02                | 104104-N02       | 104104-N02    |
| Controls air volume supplied to pump, thus permitting operator to control speed of pump. Can be panel mounted. Composite body. |                   |                   |                   |                           |                  |               |
| <strong>Groundable Strap</strong>             | -                 | -                 | -                 | 66885-1                   | -                | -             |
| Reliable static control. |                   |                   |                   | Acetal Center Body |                  |               |
| <strong>Screened Inlet Kit</strong>           | -                 | -                 | -                 | -                         | -                | -             |
| Protects inlet of pump from debri in submerged applications. |                   |                   |                   |                           |                  |               |</p>
<table>
<thead>
<tr>
<th>3/4&quot; Metallic</th>
<th>1&quot; Non-Metallic</th>
<th>1-1/2&quot; Non-Metallic</th>
<th>2&quot; Non-Metallic</th>
<th>1&quot; Metallic</th>
<th>1-1/2&quot; Metallic</th>
<th>2&quot; Metallic</th>
<th>3&quot; Metallic</th>
<th>1&quot; 3:1 Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>66073-1</td>
<td>66073-2</td>
<td>66084-1</td>
<td>66109</td>
<td>66073-2</td>
<td>66084-1</td>
<td>66109</td>
<td>66109</td>
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<td>67237</td>
<td>67237</td>
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<tr>
<td>66975</td>
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<td>66975</td>
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<td>67079</td>
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<tr>
<td>635040</td>
<td>635040</td>
<td>23644-400</td>
<td>23644-400</td>
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<td>23644-400</td>
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<td>62133</td>
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<td>67072-1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>67166-1 (24VDC)</td>
<td>67166-1 (24VDC)</td>
<td>67166-1 (24VDC)</td>
<td>67166-1 (24VDC)</td>
<td>67166-1 (24VDC)</td>
<td>67166-1 (24VDC)</td>
<td>67166-1 (24VDC)</td>
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<tr>
<td></td>
<td>67166-2 (120VAC)</td>
<td>67166-2 (120VAC)</td>
<td>67166-2 (120VAC)</td>
<td>67166-2 (120VAC)</td>
<td>67166-2 (120VAC)</td>
<td>67166-2 (120VAC)</td>
<td>67166-2 (120VAC)</td>
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</tr>
<tr>
<td>104104-N02</td>
<td>104104-N02</td>
<td>104104-N04</td>
<td>104104-N04</td>
<td>104104-N02</td>
<td>104104-N04</td>
<td>104104-N04</td>
<td>104104-N06</td>
<td>104104-N06</td>
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<td>66885-1</td>
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<td>67174-15</td>
<td>67174-20</td>
<td>67174-30</td>
<td>-</td>
</tr>
</tbody>
</table>
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>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, ccommodate the use of both diaphragm pump and agitator where you need.

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

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

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

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

```
<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>SBX0</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>S</td>
</tr>
</tbody>
</table>
```

<table>
<thead>
<tr>
<th>Position 1</th>
<th>Position 2</th>
<th>Position 3</th>
<th>Position 4</th>
<th>Position 5</th>
<th>Position 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model and Size</td>
<td>Air Section</td>
<td>Fluid Connection</td>
<td>Fluid Section</td>
<td>Hardware</td>
<td>Diaphragm Material</td>
</tr>
<tr>
<td>SB10 - 1”</td>
<td>P - Polypropylene</td>
<td>A - NPTF</td>
<td>P - Polypropylene</td>
<td>S - Stainless Steel</td>
<td>A - Santoprene</td>
</tr>
<tr>
<td>K - PVDF (Kynar)</td>
<td>B - BSP</td>
<td>K - PVDF (Kynar)</td>
<td>C - Cast Iron</td>
<td>T - PTFE</td>
<td></td>
</tr>
<tr>
<td>D - Conductive Acetal</td>
<td></td>
<td>D - Conductive Acetal</td>
<td></td>
<td>G - Nitrile</td>
<td></td>
</tr>
<tr>
<td>SB20 - 2”</td>
<td>A - Aluminum</td>
<td>A - NPTF</td>
<td>A - Aluminum</td>
<td>P - Carbon Steel</td>
<td>A - Santoprene</td>
</tr>
<tr>
<td>SB30 - 3”</td>
<td>C - Cast Iron</td>
<td>B - BSP</td>
<td>C - Cast Iron</td>
<td>S - Stainless Steel</td>
<td>G - Nitrile</td>
</tr>
<tr>
<td></td>
<td>S - Stainless Steel</td>
<td></td>
<td>S - Stainless Steel</td>
<td></td>
<td>T - PTFE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>V - Viton</td>
</tr>
</tbody>
</table>
## Maintenance Kits

### 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

#### Pump type

<table>
<thead>
<tr>
<th>Models</th>
<th>Air Motor Section</th>
<th>Fluid Section</th>
<th>One Piece Diaphragms</th>
<th>Major Air Valve Assembly</th>
</tr>
</thead>
</table>

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

The pump sound pressure levels published below have been updated to an Equivalent Continuous Sound Level (L_{Aeq}) to meet the intent of ANSI S1.13-1971. CAGI-PNEUPRO $5.1$ using four microphone locations.

### Material Service Guideline

This chart is a quick reference guide. Always check material compatibility with a trusted chemical guide.

<table>
<thead>
<tr>
<th>Pump Port Size (Inches)</th>
<th>Air Operating Pressure (PSI)</th>
<th>Cycles/Minute</th>
<th>Sound Pressure (L_{Aeq})</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2</td>
<td>70</td>
<td>60</td>
<td>75.0 db(A)</td>
</tr>
<tr>
<td>1</td>
<td>70</td>
<td>60</td>
<td>79.7 db(A)</td>
</tr>
<tr>
<td>1-1/2</td>
<td>70</td>
<td>60</td>
<td>80.6 db(A)</td>
</tr>
<tr>
<td>2</td>
<td>70</td>
<td>60</td>
<td>*85.0 db(A)</td>
</tr>
<tr>
<td>3</td>
<td>70</td>
<td>50</td>
<td>*83.0 db(A)</td>
</tr>
</tbody>
</table>

### Viscosity Conversion Chart

#### Centipoise to Saybolt Universal (SSU)

<table>
<thead>
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<th>Centipoise</th>
<th>Saybolt Universal (SSU)</th>
</tr>
</thead>
<tbody>
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<td>30</td>
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<td>2</td>
<td>34</td>
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<td>4</td>
<td>38</td>
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<tr>
<td>7</td>
<td>42</td>
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</table>

#### Saybolt Universal (SSU) to Saybolt Furol

<table>
<thead>
<tr>
<th>Saybolt Universal (SSU)</th>
<th>Saybolt Furol</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>60</td>
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<tr>
<td>15</td>
<td>80</td>
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<td>80</td>
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<td>100</td>
<td>540</td>
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</table>

#### Ford No. 3 to Ford No. 4

<table>
<thead>
<tr>
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</thead>
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<tr>
<td>150</td>
<td>185</td>
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<tr>
<td>200</td>
<td>242</td>
</tr>
</tbody>
</table>

#### Zahn No. 1 to Zahn No. 2

<table>
<thead>
<tr>
<th>Zahn No. 1</th>
<th>Zahn No. 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>125</td>
</tr>
<tr>
<td>150</td>
<td>185</td>
</tr>
</tbody>
</table>

### Pump Airborne Noise Emissions

**Increased flex life with use of santoprene diaphragm backer.**

* Applies to diaphragms only.

** Increased flex life with use of santoprene diaphragm backer.

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