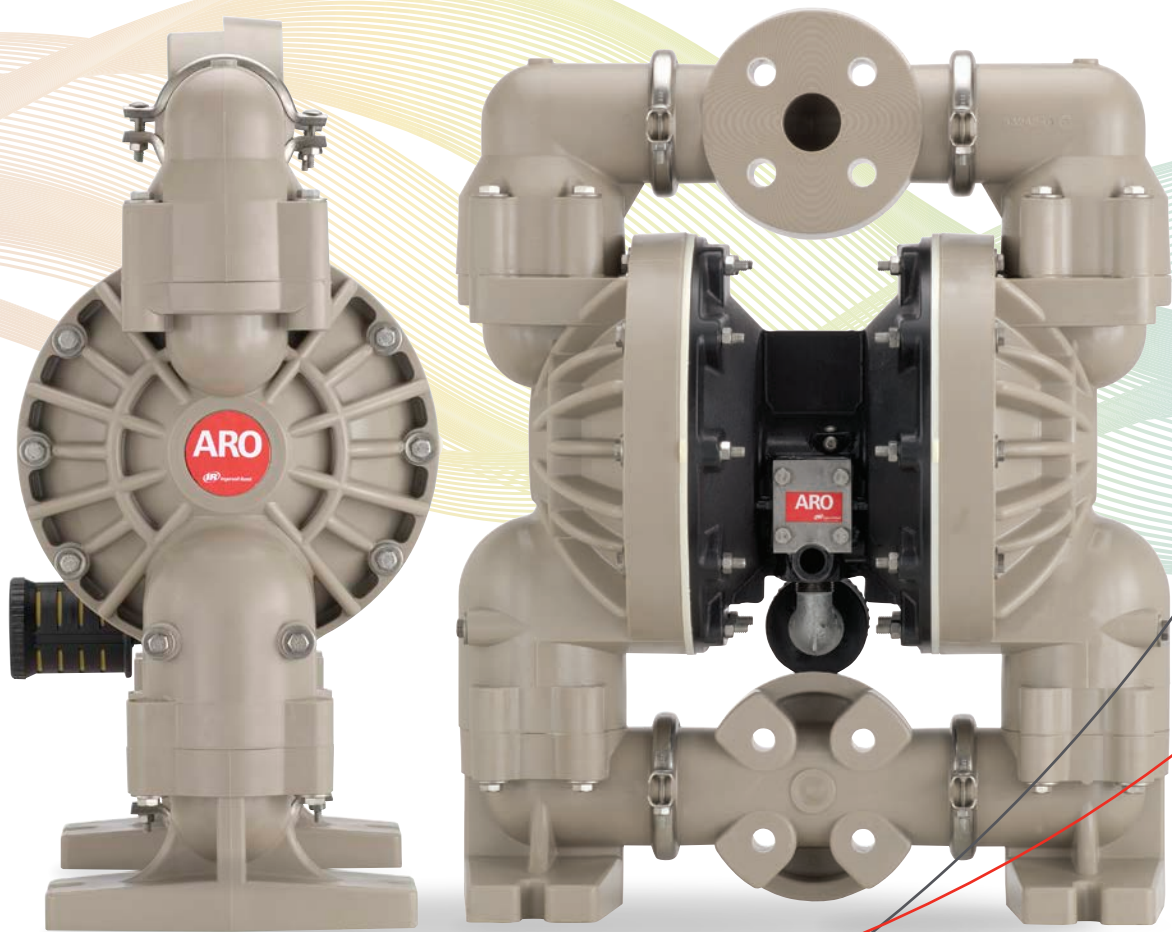


# ARO®

## 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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# 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



**ARO®** AUTHENTIC  
ARO PARTS

Exactly built and designed by ARO®, Authentic ARO® Parts are the replacement parts you can count on to restore your ARO® equipment to 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](http://AROzone.com) to learn more.

# Smart Motor Design

COMPACT SERIES PUMPS 1/4" - 3/4"

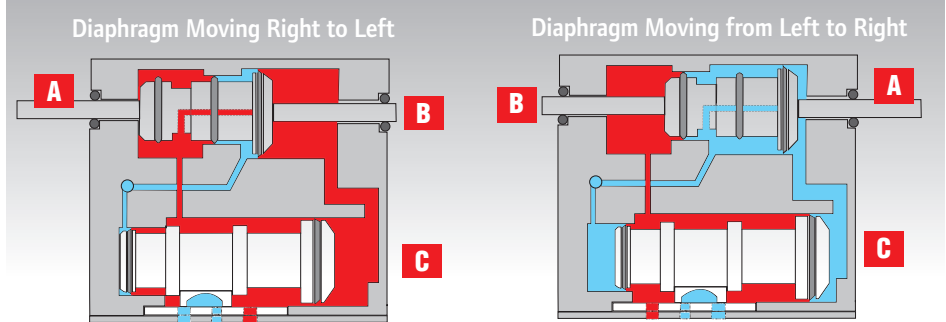
All ARO® Compact Series diaphragm pumps feature an unbalanced valve design, which eliminates valve centering and pump stall-out-even under low air inlet pressures.

## "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

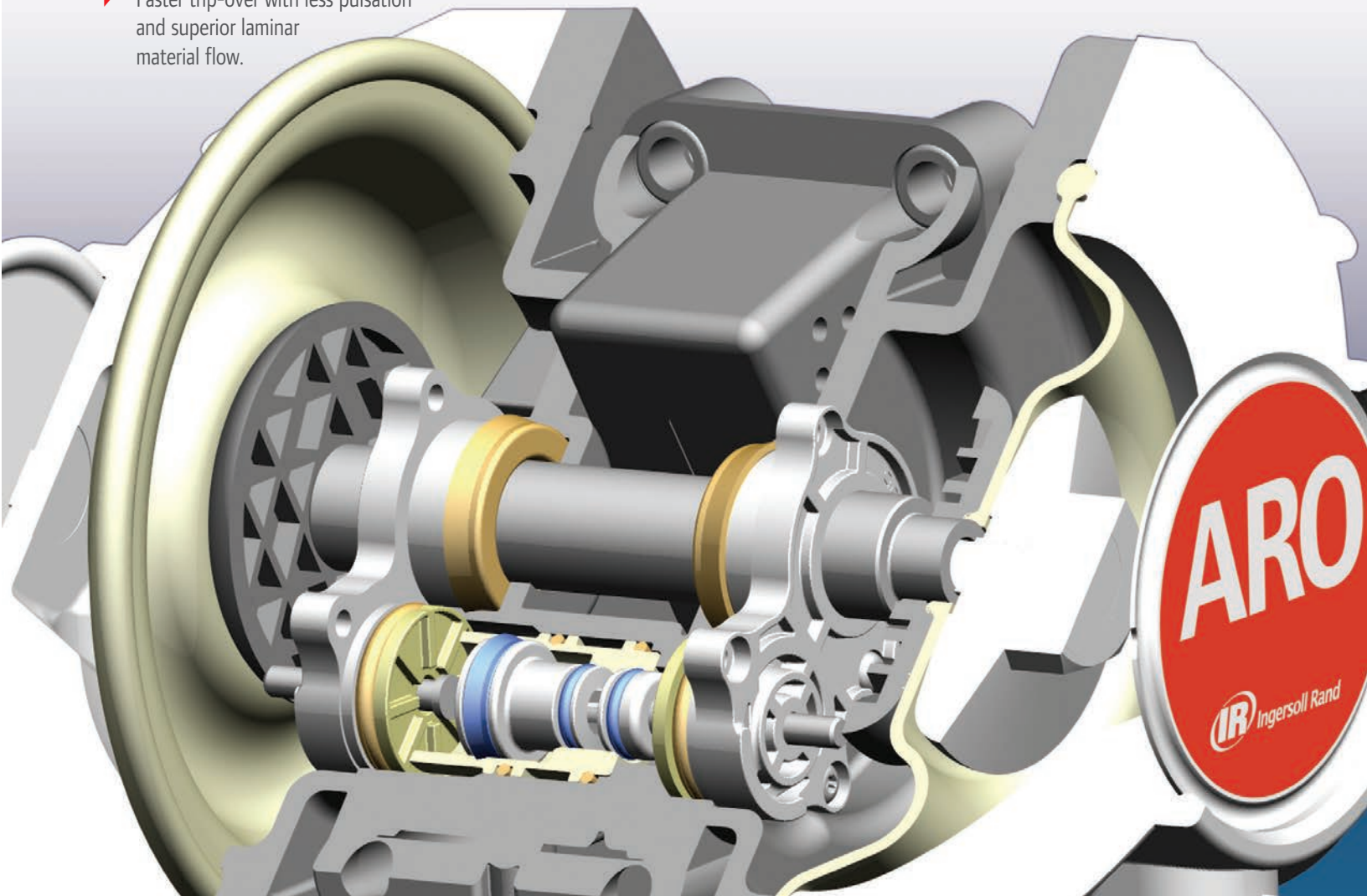
- Provides an ultra-positive, reliable shift signal that avoids stall-out.
- Provides faster pump trip-over with more flow.
- Faster trip-over with less pulsation and superior laminar material flow.

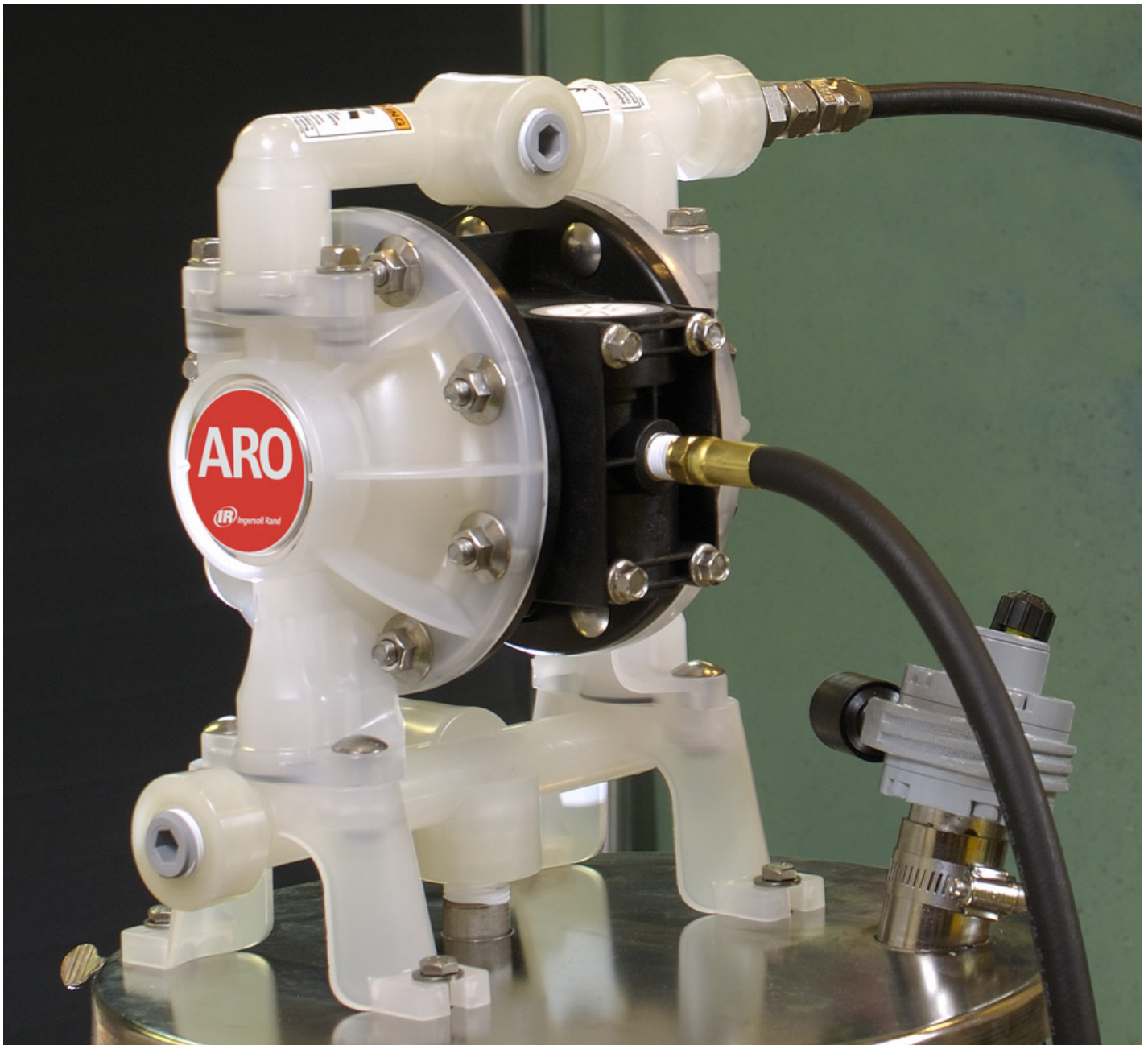


- 1.) The diaphragm pushes the right Actuator Pin (B) mechanically moving the SimulShift Valve (A) to the left.
- 2.) Compressed air flows to the large side of the SimulShift Valve, pneumatically moving the valve to the position shown.
- 3.) Compressed air also flows to the large end of the Major Air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





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## Non-Metallic Models

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



| Model                                           | 1/4"                                                                                                           | 3/8"                                                                                                                                               | 1/2"                                                                                                                                                           | 1/2" Classic                                                                                                 | 3/4"                                               | 1"                                                                                                           | 1-1/2"                                                                       | 2"                                                                                           |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Maximum Flow<br>GPM (LPM)                       | 5.3<br>(20)                                                                                                    | 10.6<br>(40.1)                                                                                                                                     | 14.4<br>(54.5)                                                                                                                                                 | 13<br>(49.2)                                                                                                 | 14.8<br>(56)                                       | 47<br>(178)                                                                                                  | 100<br>(378.5)                                                               | 145<br>(548.8)                                                                               |
| Maximum<br>Discharge<br>Pressure<br>PSI (BAR)   | 125<br>(8.6)                                                                                                   | 100<br>(6.9)                                                                                                                                       | 100<br>(6.9)                                                                                                                                                   | 100<br>(6.9)                                                                                                 | 100<br>(6.9)                                       | 120<br>(8.3)                                                                                                 | 120<br>(8.3)                                                                 | 120<br>(8.3)                                                                                 |
| Fluid Ports<br>Inlet/Outlet<br>(BSP Available)  | Q-1/4-1/8 PTF<br>SAE SHORT                                                                                     | 3/8" (F) - In/Out                                                                                                                                  | 1/2" (F) - In/Out                                                                                                                                              | 1/2-14 N.P.T.F.-1                                                                                            | 3/4 - 14 NPTF-1<br>Rp 3/4(3/4-14 BSP,<br>parallel) | 1" ANSI/DIN Flange<br>1" (F) Threaded                                                                        | 1-1/2" ANSI/DIN<br>Flange                                                    | 2" ANSI/DIN<br>Flange                                                                        |
| Materials<br>of<br>Construction                 | Polypropylene<br>Groundable<br>Acetal<br>PVDF                                                                  | Polypropylene<br>Groundable<br>Acetal<br>PVDF                                                                                                      | Polypropylene<br>Groundable<br>Acetal<br>PVDF                                                                                                                  | Polypropylene<br>Groundable<br>Acetal<br>PVDF                                                                | Polypropylene                                      | Polypropylene                                                                                                | Polypropylene                                                                | Polypropylene                                                                                |
| Pump<br>Weight<br>lbs. (kg.)                    | Poly<br>2.86 (1.3)<br>PVDF<br>3.88 (1.76)<br>Acetal<br>3.52 (1.6)                                              | 4.2 (1.9) PD03P-XDS-X<br>4.3 (1.9) PD03P-XES-X<br>4.5 (2.0) PD03P-XKS-X<br>4.6 (2.1) PD03P-XLS-X<br>3.4 (1.6) PD03P-XPS-X<br>3.5 (1.6) PD03P-XRS-X | 6.3 (2.9) PD05P-XDS-X-B<br>6.7 (3.0) PD05P-XES-X-B<br>6.8 (3.1) PD05P-XKS-X-B<br>7.2 (3.3) PD05P-XLS-X-B<br>5.2 (2.4) PD05P-XPS-X-B<br>5.4 (2.5) PD05P-XRS-X-B | 7.2 (3.3) Polypropylene<br>8.8 (4.0) Ground. Acetal<br>9.5 (4.3) Kynar PVDF                                  | 5.61 (2.54)                                        | 20.3 (9.2) Poly<br>28.8 (13.1) Poly w/<br>Cast Iron Center                                                   | 62 (28.1) Poly<br>85 (38.5) Poly w/<br>Cast Iron Center                      | 62 (28.1) Poly<br>85 (38.5) Poly w/<br>Cast Iron Center                                      |
| Maximum<br>Solids<br>Inches (mm)                | 1/16<br>(1.6)                                                                                                  | 1/16<br>(1.6)                                                                                                                                      | 3/32<br>(2.4)                                                                                                                                                  | 3/32<br>(2.4)                                                                                                | 3/32<br>(2.4)                                      | 1/8<br>(3.2)                                                                                                 | 1/4<br>(6.4)                                                                 | 1/4<br>(6.4)                                                                                 |
| Best<br>Selling<br>Models<br>(BSP<br>Available) | PD01E-HDS-DAA-A<br>PD01E-HDS-DTT-A<br>PD01P-HKS-KTT-A<br>PD01P-HPS-PAA-A<br>PD01P-HPS-PGG-A<br>PD01P-HPS-PTT-A | PD03P-ADS-DTT<br>PD03P-AES-DCC<br>PD03P-AES-DCC<br>PD03P-AKS-KTT<br>PD03P-APS-PAA<br>PD03P-APS-PTT                                                 | PD05P-AKS-KTT-B<br>PD05P-ALS-KTT-B<br>PD05P-APS-PAA-B<br>PD05P-APS-PTT-B<br>PD05P-ARS-PAA-B<br>PD05P-ARS-PGG-B<br>PD05P-ARS-PTT-B<br>PD05P-ARS-PUU-B           | 666053-0D2<br>666053-311<br>666053-344<br>666053-388<br>666053-3EB<br>66605J-344<br>66605J-388<br>66605J-3EB | PD07P-APS-PAA<br>PD07P-APS-PCC<br>PD07P-APS-PTT    | 6661A3-322-C<br>6661A3-344-C<br>6661A3-3EB-C<br>6661AJ-322-C<br>6661AJ-344-C<br>6661AJ-3EB-C<br>6661B3-344-C | 6661T3-344-C<br>6661T3-3EB-C<br>6661T4-444-C<br>6661U3-344-C<br>6661U3-3EB-C | 6662A3-244-C<br>6662A3-311-C<br>6662A3-344-C<br>6662A3-3EB-C<br>6662B3-344-C<br>6662B3-3EB-C |
| Recommended<br>Filter/<br>Regulator             | P39124-624                                                                                                     | P39124-624                                                                                                                                         | P39124-624                                                                                                                                                     | P39124-624                                                                                                   | P39124-624                                         | P39224-614                                                                                                   | P39344-614                                                                   | P39354-614                                                                                   |
| Air Line Kit                                    | 66073-1                                                                                                        | 66073-1                                                                                                                                            | 66073-1                                                                                                                                                        | 66073-1                                                                                                      | 66073-1                                            | 66073-1                                                                                                      | 66084-1                                                                      | 66109                                                                                        |

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<br>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):                   | 2.86 (1.3) Polypropylene<br>3.88 (1.76) PVDF<br>3.52 (1.60) Acetal   |
| Maximum dry suction lift ft (m) :  | 15 (4.6)                                                             |
| Sound Level:                       | 70 PSI 60 Cycles/Min 62.3 db(A)                                      |
| Muffler:                           | Integral, Included                                                   |



PD01P-HPS-PCC-A

## Ordering

| Position | 1    | 2 |   | 3 | 4 | 5 |   | 6 | 7 | 8 |   | 9 |   | 10 | 11 |
|----------|------|---|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Example: | PX01 | X | - | H | X | S | - | X | X | X | - | A | - | X  | X  |

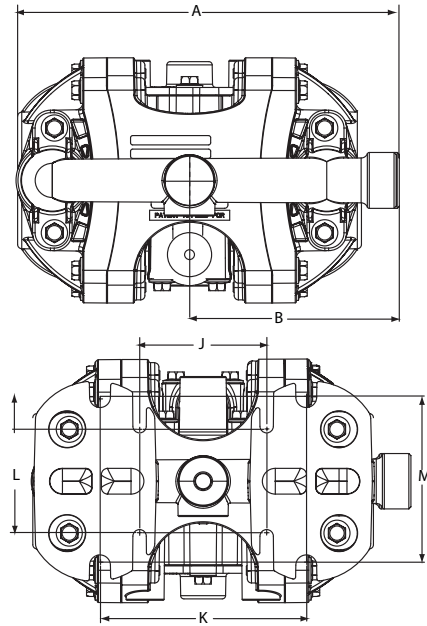
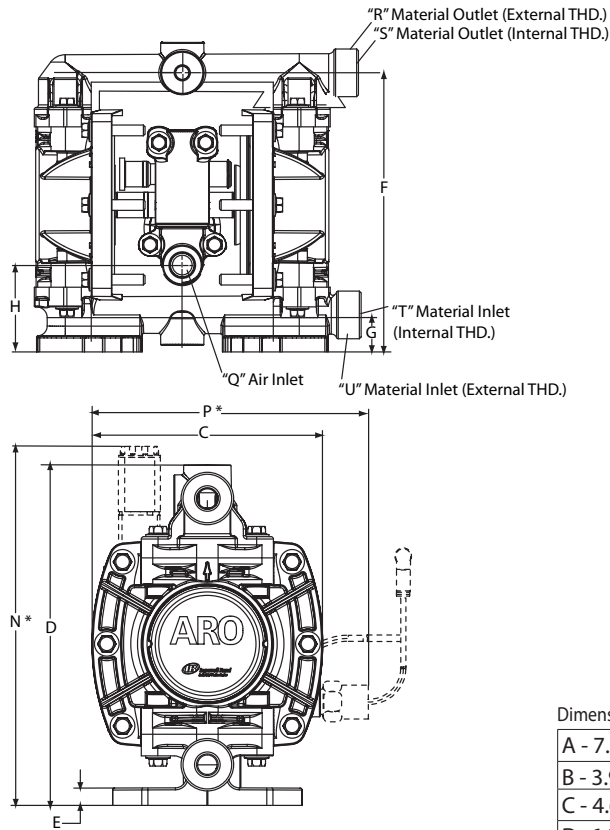
| Position 1<br>Model<br>Series                                  | Position 2<br>Center<br>Section                                                                    | Position 3<br>Fluid<br>Connections | Position 4<br>Wetted<br>Parts                                                                                                                                                | Position 5<br>Hardware | Position 6<br>Seat<br>Material                                                                                                                            | Position 7<br>Ball<br>Material                                                                                                                                                                             | Position 8<br>Diaphragm<br>Material                       | Position 9<br>Revision | Position 10<br>& 11<br>Specialty Code                                                                     |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------|
| PD01 - Standard Pump<br>PE01 - Elec. Interface Accessible Pump | E - Conductive Polypropylene<br>F - Polypropylene with leak failure detection<br>P - Polypropylene | H - 1/4" NPT BSP hybrid            | D - Groundable Acetal<br>E - Groundable Acetal (Multiple port)<br>K - Kynar PVDF<br>L - Kynar PVDF (Multiple port)<br>P - Polypropylene<br>R - Polypropylene (Multiple port) | S - Stainless Steel    | D - Acetal<br>K - PVDF<br>P - Polypropylene<br>0 - Polypropylene (Flex-Check spacer)*<br>1 - Acetal (Flex-Check spacer)*<br>2 - PVDF (Flex-Check spacer)* | A - Santoprene®<br>C - Hytrel®<br>G - Nitrile (Flex-Check only)<br>J - Nitrile (Flex-Check only)<br>K - EPR (Flex-Check only)<br>L - Viton (Flex-Check only)<br>N - Neoprene (Flex-Check only)<br>T - PTFE | A - Santoprene®<br>C - Hytrel®<br>G - Nitrile<br>T - PTFE | A - Revision 1         | Fluid control options for pump with electronic interface (PE01 model). See complete description on page 9 |

## Accessories

### Air Line Connection Kit | 66073-1

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

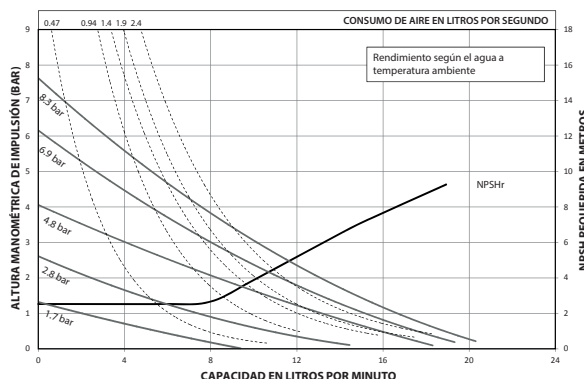
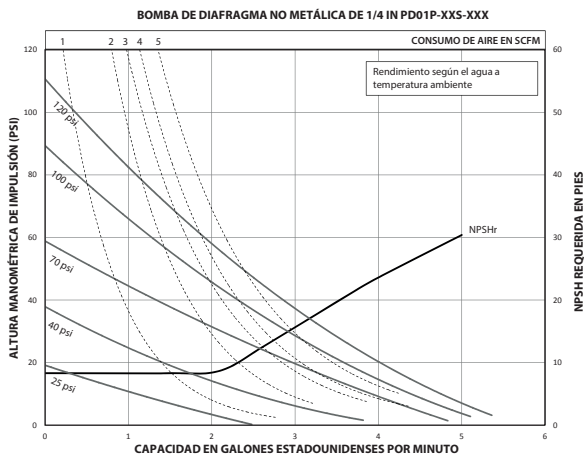
## 1/4" Non-Metallic Dimensions and Flow Charts



### DIMENSIONS

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

|                     |                     |                            |
|---------------------|---------------------|----------------------------|
| A - 7.2" (182 mm)   | H - 1.9" (48.6 mm)  | Q - 1/4 - 18 PTF SAE Short |
| B - 3.9" (100.0 mm) | J - 2.4" (61 mm)    | R - 3/4-14 NPTF            |
| C - 4.6" (117.0 mm) | K - 3.9" (99 mm)    | S - 1/4 NPTF / BSPT Hybrid |
| D - 6.8" (173.0 mm) | L - 2.1" (53 mm)    | T - 1/4 NPTF / BSPT Hybrid |
| E - 0.3" (8.8 mm)   | M - 3.2" (81 mm)    | U - 3/4-14 NPTF            |
| F - 6.1" (156 mm)   | N - 7.2" (184 mm)   | V - 1/4 NPTF               |
| G - 0.8" (20.7 mm)  | P - 5.6" (142.2 mm) |                            |



### Ordering Position 10

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

A - Solenoid 120VAC  
B - Solenoid 12VDC  
C - Solenoid 240VAC  
D - Solenoid 24VDC  
E - 12VDC NEC/CEC  
F - 24VDC NEC/CEC

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

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

E - End of stroke feedback + Leak Detection  
F - End of stroke feedback  
G - End of Stroke ATEX/IECex/NEC/CEC  
H - End of Stroke/Leak Detection ATEX/IECex/NEC/CEC

L - Leak Detection  
M - Leak Detection ATEX/IECex/NEC/CEC  
O - No Option

# 3/8" Non-Metallic Models

## COMPACT SERIES PUMPS

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

|                                    |                                                                                                                                                                |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ratio:                             | 1:1                                                                                                                                                            |
| Maximum Flow gpm (lpm):            | 10.6 (40.1) 8.7 (32.9) Flex check                                                                                                                              |
| Displacement per cycle gal (l):    | .022 (0.083) .018 (0.068) Flex check                                                                                                                           |
| Air Inlet: (Female)                | 1/4 - 18 PTF SAE Short                                                                                                                                         |
| Fluid Inlet/Outlet:                | 3/8 - 18 PTF - 1<br>Rp 3/8 (3/8 - 19 BSP, parallel)                                                                                                            |
| Max. operating pressure psi (bar): | 100 (6.9)                                                                                                                                                      |
| Suspended solids max. dia in (mm): | .0625 (1.6) Flex check (Fibers)                                                                                                                                |
| Weight lbs (kg):                   | PD03P-XDS-XXX 4.2 (1.9)<br>PD03P-XES-XXX 4.3 (1.9)<br>PD03P-XKS-XXX 4.5 (2.0)<br>PD03P-XLS-XXX 4.6 (2.1)<br>PD03P-XPS-XXX 3.4 (1.6)<br>PD03P-XRS-XXX 3.5 (1.6) |
| Maximum dry suction lift ft (m):   | 9.25 (2.8)                                                                                                                                                     |
| Sound Level:                       | 70 PSI 60 Cycles/Min 72.7 db(A)                                                                                                                                |
| Muffler:                           | Integral, Included                                                                                                                                             |



PD03P-APS-PCC



PD03P-ADS-DT

## Ordering

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

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

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## Accessories

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

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

**Cycle Counter Kit** | 66975

**Wall Mount Bracket Kit** | 67388

**Optional Muffler** | used with 637428 kit

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

637429-XX (fluid section)



Air Line Connection Kit  
66073-1

Wall Mount Bracket Kit  
67388

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



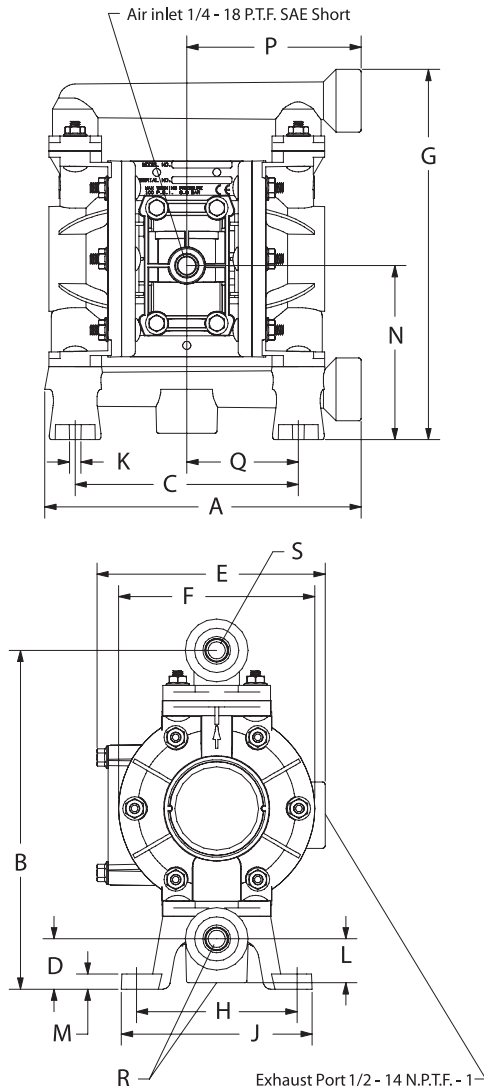
PE03P-APS-PAA-B0S  
with 637442-1 Kit

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

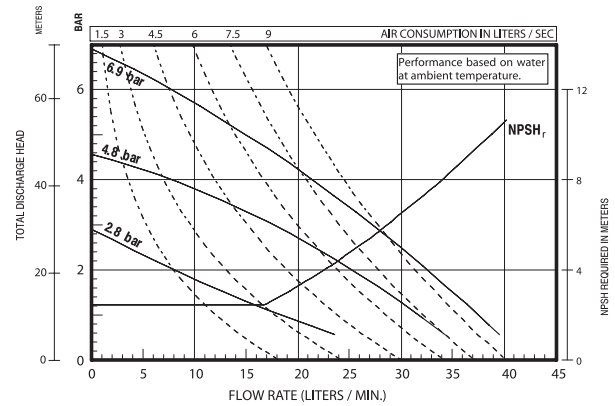
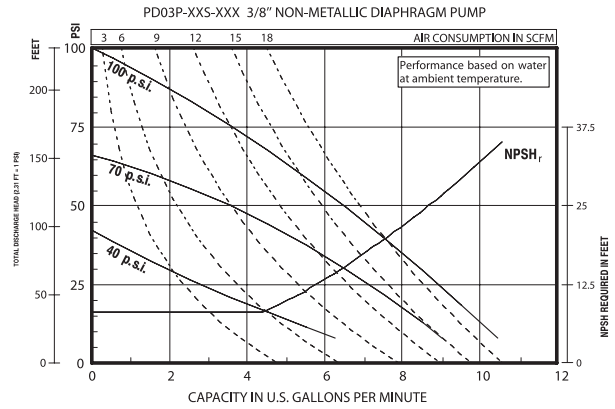
#### DIMENSIONS

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

| Model         | "R" Material Inlet    | "S" Material Outlet   |
|---------------|-----------------------|-----------------------|
| PD03P-AXS-XXX | 3/8 - 18 N.P.T.F. - 1 | 3/8 - 18 N.P.T.F. - 1 |
| PD03P-BXS-XXX | Rp 3/8 (3/8 - 19 BSP) | Rp 3/8 (3/8 - 19 BSP) |



#### PERFORMANCE CURVES



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

#### Ordering Position 10

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

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

#### Ordering Position 11

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

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

# 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<br>Rp 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):                   | PD05P-XDS-XXX-B 6.3 (2.9)<br>PD05P-XES-XXX-B 6.7 (3.0)<br>PD05P-XKS-XXX-B 6.8 (3.1)<br>PD05P-XLS-XXX-B 7.2 (3.3)<br>PD05P-XPS-XXX-B 5.2 (2.4)<br>PD05P-XRS-XXX-B 5.4 (2.5) |
| Maximum dry suction lift ft (m):   | 15.0 (4.5)                                                                                                                                                                 |
| Sound Level:                       | 70 PSI 60 Cycles/Min 75.0 db(A)                                                                                                                                            |
| Muffler:                           | Integral, Included                                                                                                                                                         |



PD05P-ARS-PAA

## Ordering

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

| Position 1<br>Model Series                   | Position 2<br>Center Section | Position 3<br>Connections                                   | Position 4<br>Manifold Material                                                                                                                                                                      | Position 5<br>Hardware | Position 6<br>Seat Material                                        | Position 7<br>Ball Material                                                                                      | Position 8<br>Diaphragm Material                                                                                           | Position 9                                                                                                                                                                         |
|----------------------------------------------|------------------------------|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D - Standard<br>E - Remote Actuation Capable | P - Polypropylene            | A - 1/2 - 14 NPTF - 1<br>B - Rp 1/2 (1/2 -14 BSP, parallel) | D - Ground. Acetal (single port)<br>E - Ground. Acetal (multiple port)<br>K - PVDF (single port)<br>L - PVDF (multiple port)<br>P - Polypropylene (single port)<br>R - Polypropylene (multiple port) | S - Stainless Steel    | D - Acetal<br>K - PVDF<br>P - Polypropylene<br>S - Stainless Steel | A - Santoprene<br>C - Hytrel*<br>G - Nitrile<br>S - Stainless Steel<br>T - PTFE<br>U - Polyurethane<br>V - Viton | A - Santoprene<br>C - Hytrel*<br>G - Nitrile<br>L - Long-Life PTFE<br>T - PTFE/Santoprene<br>U - Polyurethane<br>V - Viton | Revision Level<br><br><b>Position 10 &amp; 11 Specialty Code</b><br><br>Fluid control options for pump with electronic interface (PE05 model). See complete description on page 13 |

## Accessories

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

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

**Cycle Counter Kit** | 66975

**Wall Mount Bracket Kit** | 76763

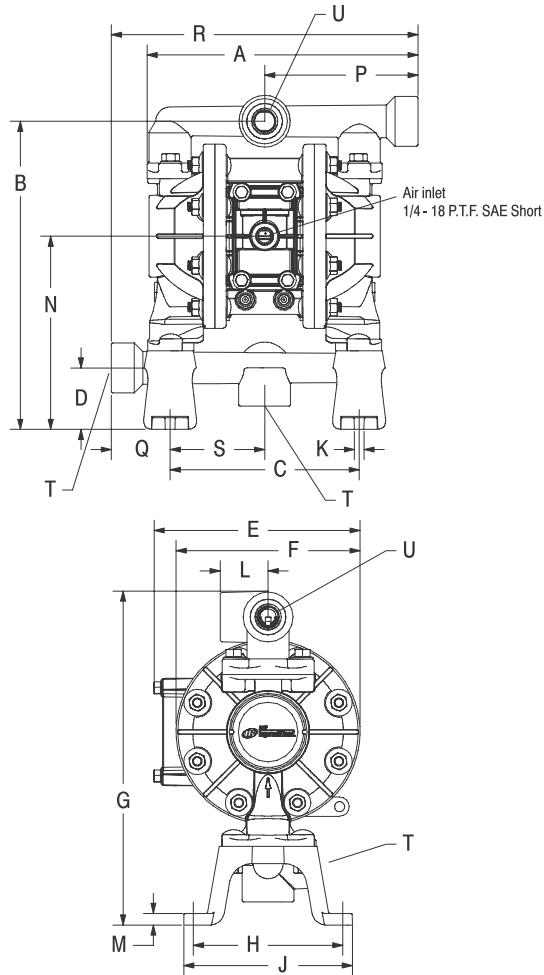
**Optional Muffler** | 93110 used with 637438 kit

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



Air Line Connection Kit  
66073-1

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



### DIMENSIONS

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

#### Model

PD05P-AXS-XXX-B  
PD05P-BXS-XXX-B

#### "T" Material Inlet

1/2 - 14 N.P.T.F. - 1  
Rp 1/2 (1/2 - 14 BSP)

#### "U" Material Outlet

1/2 - 14 N.P.T.F. - 1  
Rp 1/2 (1/2 - 14 BSP)

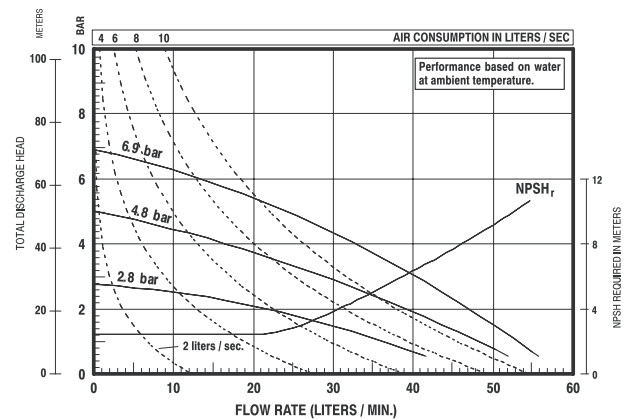
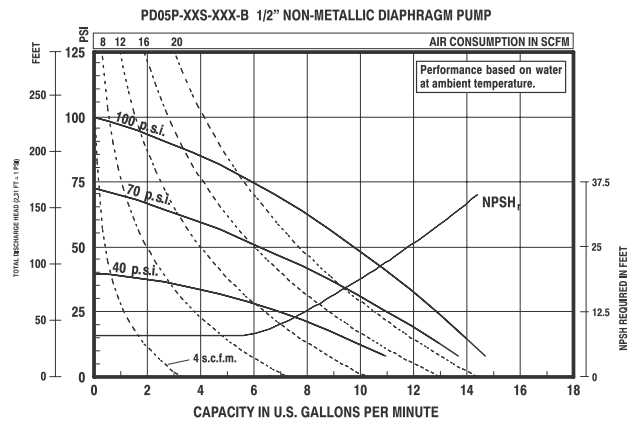


PD05P-APS-PAA-B05  
with 637440-1 Kit

#### Dual Inlet/Outlet Kits:

637440-1 (N.P.T. Poly)  
637440-4 (BSP Poly)  
637440-2 (N.P.T. Acetal)  
637440-5 (BSP Acetal)  
637440-3 (N.P.T. PVDF)  
637440-6 (BSP PVDF)

### PERFORMANCE CURVES



Refer to [www.AROzone.com](http://www.AROzone.com) for full size flow curves.

For additional information contact  
technical support at 1.800.495.0276

### Ordering Position 10

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

A - Solenoid 120VAC  
B - Solenoid 12VDC  
C - Solenoid 240VAC  
D - Solenoid 24VDC  
E - 12VDC NEC/CEC  
F - 24VDC NEC/CEC

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

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

E - End of stroke feedback + Leak Detection  
F - End of stroke feedback  
G - End of Stroke ATEX/IECex/NEC/CEC  
H - End of Stroke/Leak Detection ATEX/IECex/NEC/CEC

L - Leak Detection  
M - Leak Detection ATEX/IECex/NEC/CEC  
O - No Option

# 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 .04 (.15) duckbill .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 .09375 (2.4) duckbill fibers                                              |
| Weight lbs (kg):                   | Polypropylene 7.2 (3.3)<br>Groundable Acetal 8.8 (4.0)<br>Kynar PVDF 9.5 (4.3) |
| Sound Level:                       | 70 PSI 60 Cycles/Min 71.1 db(A)                                                |
| Muffler:                           | Integral, Included                                                             |



66605J-3EB

## Ordering

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

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

## Accessories

### Air Line Connection Kit | 66073-1

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

### Cycle Counter Kit| 66975

### Optional Muffler | 93110 used with 637438 kit

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

637140-XX (fluid section)

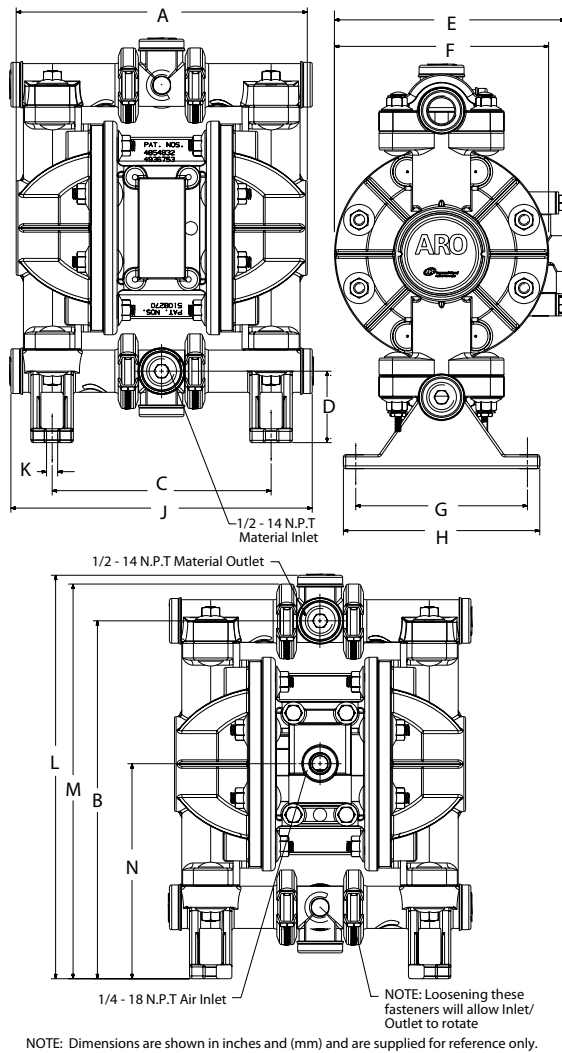


93110

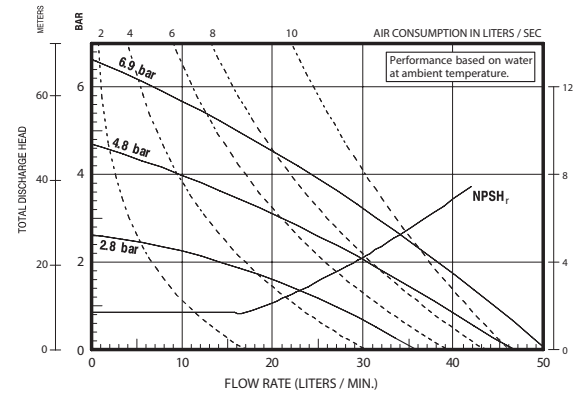
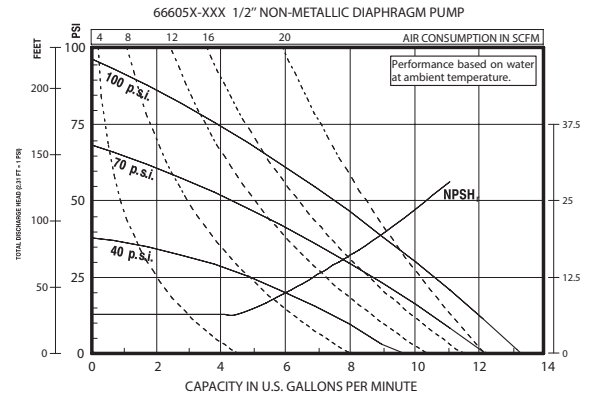


Air Line Connection Kit  
66073-1

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



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



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

# 3/4" Non-Metallic Models

## COMPACT SERIES PUMPS

Part of our Compact Series of pumps, our 3/4" pumps feature big performance in a small package. 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<br>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)                     |



PD07P-APS-PAA

## Ordering

| Position | 1    | 2 |   | 3 | 4 | 5 |   | 6 | 7 | 8 |   | 9 |   | 10 | 11 |
|----------|------|---|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Example: | PD07 | P | - | X | X | S | - | X | X | X | - | B | - | X  | X  |

| Position 1<br>Model<br>Series                           | Position 2<br>Center<br>Section | Position 3<br>Connections                                     | Position 4<br>Manifold<br>Material | Position 5<br>Hardware | Position 6<br>Seat<br>Material | Position 7<br>Ball<br>Material           | Position 8<br>Diaphragm<br>Material                            | Position 9                                                                                                                                                                 |
|---------------------------------------------------------|---------------------------------|---------------------------------------------------------------|------------------------------------|------------------------|--------------------------------|------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PD07 - Standard Pump<br>PE07 - Remote Actuation Capable | P - Polypropylene               | A - 14 - 3/4" NPTF-1<br>B - Rp 3/4 (3/41/2 -14 BSP, parallel) | P - Polypropylene (Single Port)    | S - SS                 | P - Polypropylene              | A - Santoprene<br>C - Hytrel<br>T - PTFE | A - Santoprene<br>C - Hytrel<br>L - Long-Life PTFE<br>T - PTFE | Revision Level<br><b>Position 10 &amp; 11 Specialty Code</b><br>Fluid control options for pump with electronic interface (PE07 model). See complete description on page 17 |

## Accessories

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

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

**Cycle Counter Kit** | 66975

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

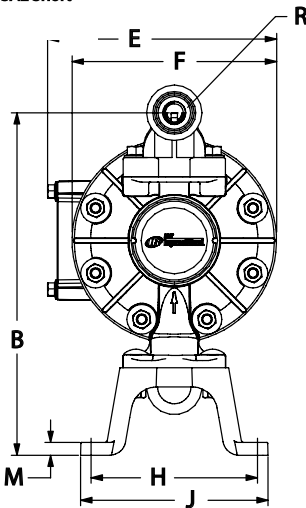
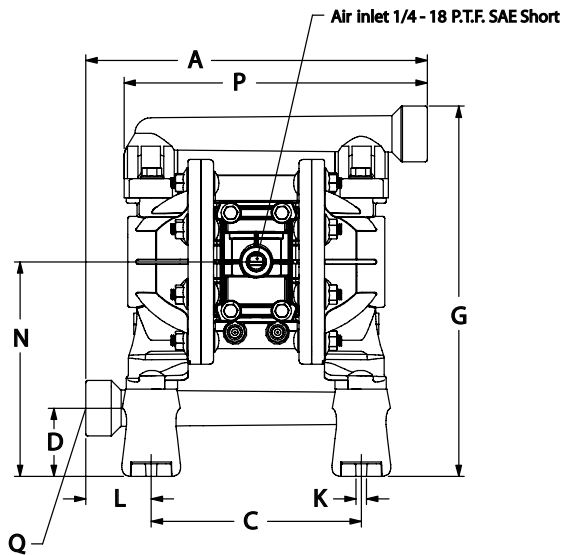
**Service Repair Kits** | 637428 (air section)  
637427-XX (fluid section)

**Wall Mount** | 76763



Air Line Connection Kit  
66073-1

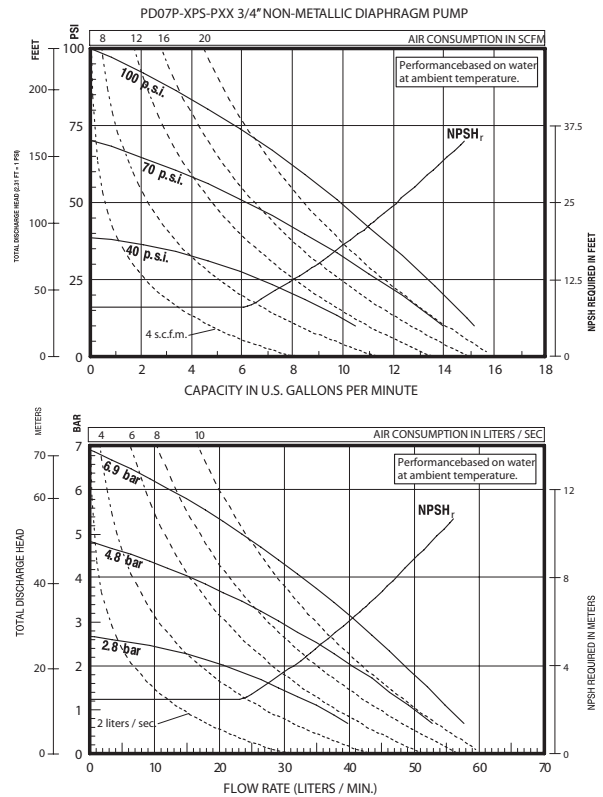
### 3/4" Non-Metallic Dimensions and Flow Charts



#### DIMENSIONS

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

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



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

#### Ordering Position 10

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

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

#### Ordering Position 11

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

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

# 1" Non-Metallic Models

## PRO SERIES PUMPS

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 - 11-1/2 NPTF - 1<br>Rp 1 (1 - 11 BSP, parallel)<br>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)<br>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)                                               |



6661AJ-3EB-C

6661A3-244-C

## Ordering

| Position | 1     | 2 |   | 3 | 4 | 5 |   | 6 |
|----------|-------|---|---|---|---|---|---|---|
| Example: | 6661X | X | - | X | X | X | - | C |

| Position 1<br>Center<br>Body  | Position 2<br>Fluid Caps<br>Manifold Material                                                                                                                                                                              | Position 3<br>Seat<br>Material                                                                   | Position 4<br>Ball Check<br>Material                                                                                                                                    | Position 5<br>Diaphragm<br>Material                                                                                        |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| A - Aluminum<br>B - Cast Iron | 3 - Polypropylene Flange<br>(3-piece manifold)<br>F - Polypropylene Flange<br>(one-piece manifold)<br>J - Polypropylene N.P.T.<br>threads (one piece<br>manifold)<br>L - Polypropylene BSP threads<br>(one-piece manifold) | 2 - 316 Stainless Steel<br>3 - Polypropylene<br>4 - PVDF (Kynar)<br>8 - Hard 400 Stainless Steel | 1 - Neoprene<br>2 - Nitrile<br>4 - PTFE<br>5 - E.P.R.<br>8 - Polyurethane<br>A - 316 Stainless Steel<br>C - Hytrel<br>E - Santoprene<br>M - Medical Grade<br>Santoprene | 1 - Neoprene<br>2 - Nitrile<br>4 - PTFE/ Santoprene<br>5 - E.P.R.<br>6 - Composite PTFE<br>M - Medical Grade<br>Santoprene |

## 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.

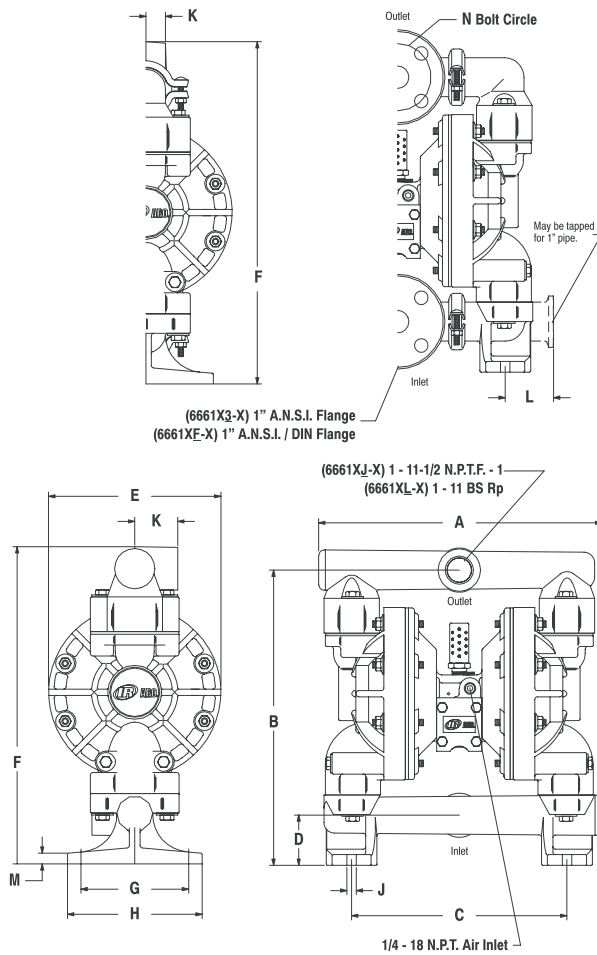


Air Line Connection Kit  
66073-2



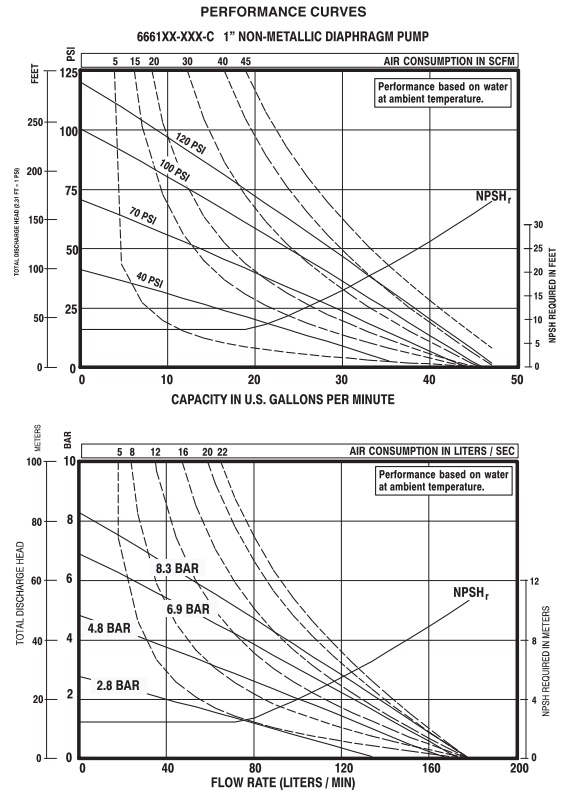
Flange Connection Kit  
67078

## 1" Non-Metallic Dimensions and Flow Charts



### DIMENSIONS

|   | 6661X3-X           | 6661XJ-X<br>6661XL-X | 6661XF-X           |
|---|--------------------|----------------------|--------------------|
| A | 12-21/32" (321 mm) | 13-5/32" (334 mm)    | 13-5/32" (334 mm)  |
| B | 13-25/32" (349 mm) | 13-25/32" (350 mm)   | 13-25/32" (350 mm) |
| C | 10-1/16" (255 mm)  | 10-1/16" (255 mm)    | 10-1/16" (255 mm)  |
| D | 2-3/8" (60 mm)     | 2-11/32" (59 mm)     | 2-11/32" (59 mm)   |
| E | 8-1/16" (204 mm)   | 8-1/16" (204 mm)     | 8-1/16" (204 mm)   |
| F | 16" (406 mm)       | 14-13/16" (376 mm)   | 16" (406 mm)       |
| G | 5-1/32" (128 mm)   | 5-1/32" (128 mm)     | 5-1/32" (128 mm)   |
| H | 6-9/32" (160 mm)   | 6-9/32" (160 mm)     | 6-9/32" (160 mm)   |
| J | 7/16" (11 mm)      | 7/16" (11 mm)        | 7/16" (11 mm)      |
| K | 15/16" (23 mm)     | 2" (51 mm)           | 1-1/32" (26 mm)    |
| L | 2-9/32" (57 mm)    |                      |                    |
| M | 1/2" (13 mm)       | 1/2" (13 mm)         | 1/2" (13 mm)       |
| N | 3.140" (80 mm)     |                      | 3.140" (80 mm)     |
|   | 6661XK-X           |                      |                    |
|   | 6661XN-X           |                      |                    |



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

# 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)                     |



6661T3-389-C

## Ordering

| Position | 1     | 2 |   | 3 | 4 | 5 |   | 6 |
|----------|-------|---|---|---|---|---|---|---|
| Example: | 6661X | X | - | X | X | X | - | C |

| Position 1<br>Center<br>Body  | Position 2<br>Fluid Caps<br>Manifold Material                          | Position 3<br>Seat<br>Material                                                                       | Position 4<br>Ball Check<br>Material                                                                     | Position 5<br>Diaphragm<br>Material                                                                                     |
|-------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| T - Aluminum<br>U - Cast Iron | 3 - Polypropylene Flange<br>(3-piece manifold)<br>4 - P.V.D.F. (Kynar) | 2 - 316 Stainless Steel<br>3 - Polypropylene<br>4 - P.V.D.F. (Kynar)<br>8 - Hard 400 Stainless Steel | 1 - Neoprene<br>2 - Nitrile<br>3 - Viton<br>4 - PTFE<br>8 - Polyurethane<br>C - Hytrel<br>E - Santoprene | 1 - Neoprene<br>2 - Nitrile<br>3 - Viton<br>4 - PTFE / Santoprene<br>6 - Composite PTFE<br>9 - Hytrel<br>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.

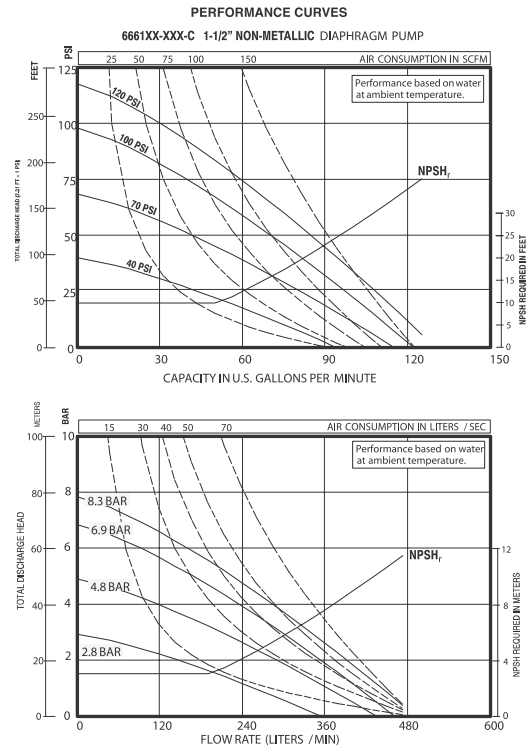
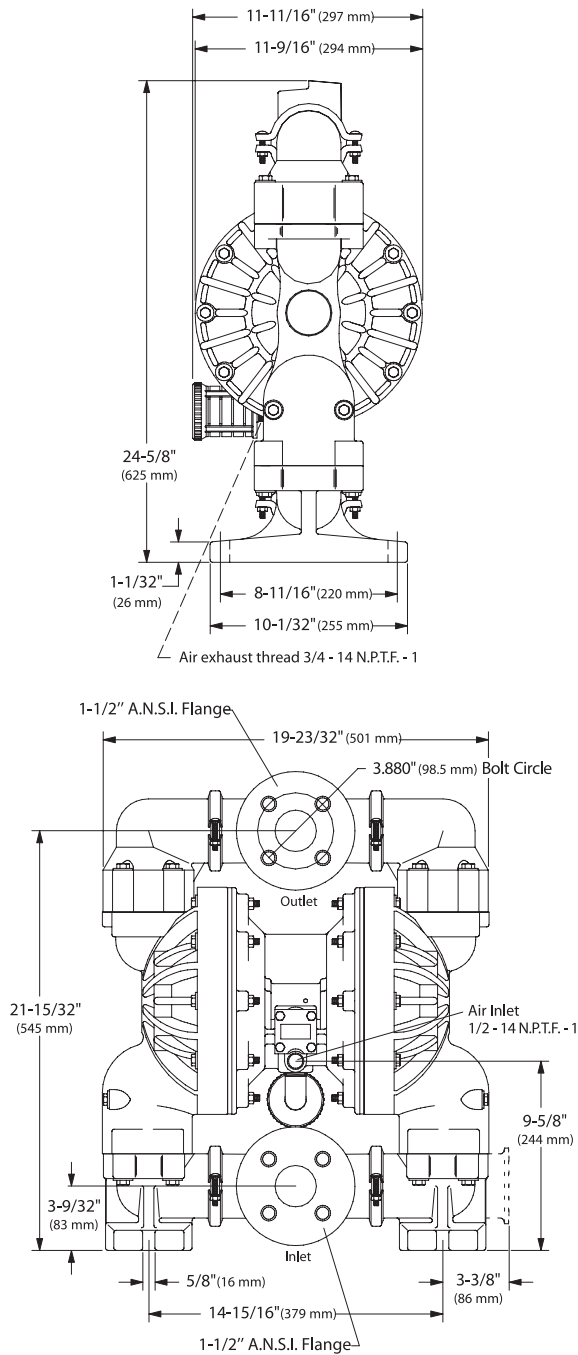
Flange constructed of glass-filled polypropylene. Bolts, washers and nuts are stainless steel. Gasket is 4401 klinger synthetic fiber nitrile binder.



Flange Connection Kit  
67079

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

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



Refer to [www.AROzone.com](http://www.AROzone.com) for full size flow curves.

For additional information contact  
technical support at 1.800.495.0276

# 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)<br>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)                                             |



6662A3-333-C

## Ordering

| Position | 1     | 2 |   | 3 | 4 | 5 |   | 6 |
|----------|-------|---|---|---|---|---|---|---|
| Example: | 6662X | X | - | X | X | X | - | C |

| Position 1<br>Center Body     | Position 2<br>Fluid Caps<br>Manifold Material                          | Position 3<br>Seat Material                                                                     | Position 4<br>Ball Check Material                                                                        | Position 5<br>Diaphragm Material                                                                                         |
|-------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| A - Aluminum<br>B - Cast Iron | 3 - Polypropylene Flange<br>(3-piece manifold)<br>4 - P.V.D.F. (Kynar) | 2 - 316 Stainless Steel<br>3 - Polypropylene<br>4 - P.V.D.F. (Kynar)<br>8 - 440 Stainless Steel | 1 - Neoprene<br>2 - Nitrile<br>3 - Viton<br>4 - PTFE<br>8 - Polyurethane<br>C - Hytrel<br>E - Santoprene | 1 - Neoprene<br>2 - Nitrile<br>3 - Viton<br>4 - PTFE / Santoprene<br>6 - Composite PTFEE<br>9 - Hytrel<br>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)

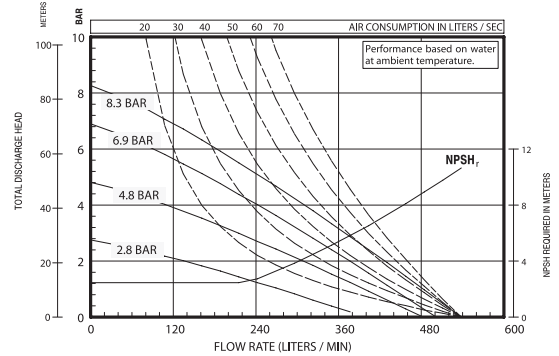
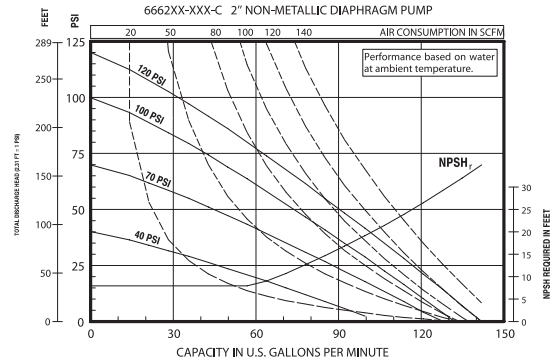
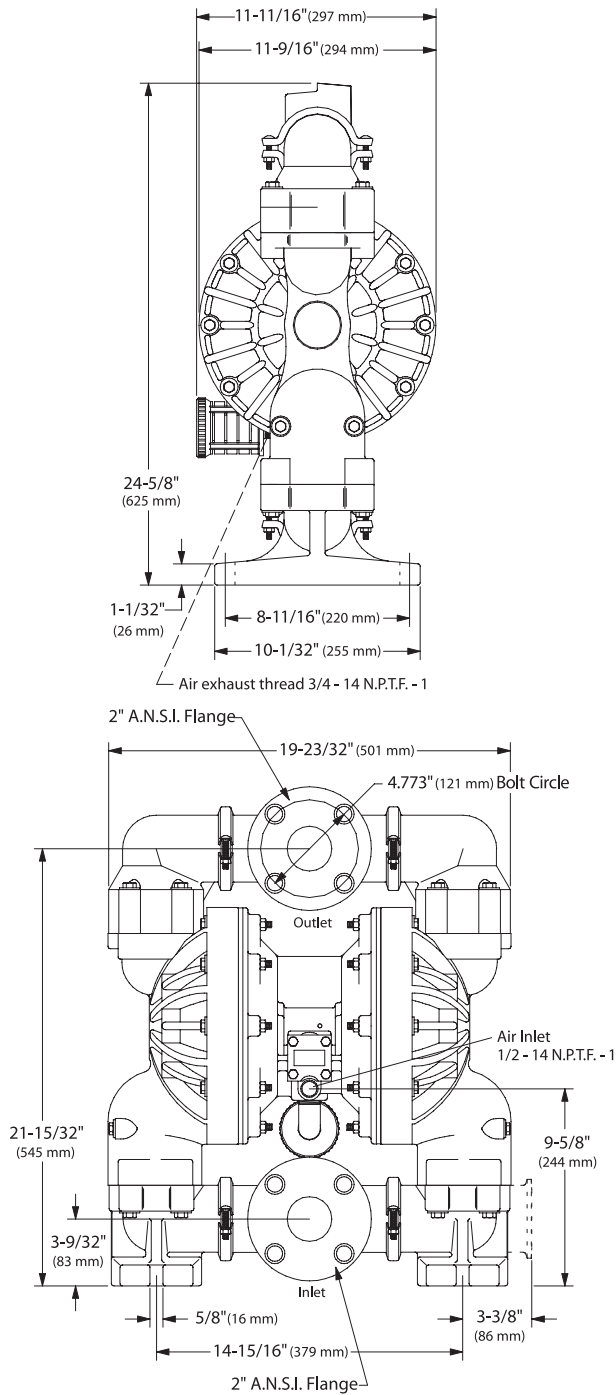
**Flange Connection Kit | 67080** Kit meets ANSI specifications. Flange constructed of glass-filled polypropylene. Bolts, washers and nuts are stainless steel. Gasket is 4401 klinger synthetic fiber nitrile binder.



Flange Connection Kit

## 2" Non-Metallic Dimensions and Flow Charts

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



Refer to [www.AROzone.com](http://www.AROzone.com) for full size flow curves.

For additional information contact  
technical support at 1.800.495.0276



## Metallic Models

The ARO® range of diaphragm pumps offers many materials of construction compatible for the chemical industry: Our metallic offering consists of aluminium, cast iron, stainless steel and hastelloy.

# Model Overview: Metallic Models



| MODEL                                           | 1/2"                                                                                                                                                 | 3/4"                                                                              | 1"                                                                                                                           | 1-1/2"                                                                                                                       | 2"                                                                                           | 3"                                                                           |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Maximum Flow<br>GPM (LPM)                       | 12<br>(45.4)                                                                                                                                         | 13.6<br>(51.5)                                                                    | 35<br>(133)                                                                                                                  | 90<br>(340.7)                                                                                                                | 172<br>(651)                                                                                 | 237<br>(897)                                                                 |
| Maximum<br>Discharge<br>Pressure<br>PSI (BAR)   | 100<br>(6.9)                                                                                                                                         | 100<br>(6.9)                                                                      | 120<br>(8.3)                                                                                                                 | 120<br>(8.3)                                                                                                                 | 120<br>(8.3)                                                                                 | 120<br>(8.3)                                                                 |
| Fluid Ports<br>Inlet/Outlet<br>(BSP Available)  | 1/2" (F) - In/Out                                                                                                                                    | 3/4 - 14 NPTF - 2<br>Rp 3/4(3/4-14BSP,<br>parallel)                               | 1 - 11-1/2 NPTF - 1<br>Rp 1<br>(1-11 BSP parallel)                                                                           | 1-1/2 11-1/2 NPTF - 1<br>Rp 1-1/2<br>(1-11 BSP parallel)                                                                     | 1-1/2 11-1/2 NPTF - 1<br>Rp 2<br>(2-11 BSP parallel)                                         | 3 - 8 NPTF - 1<br>Rp 3<br>(3 - 11 BSP parallel)                              |
| Materials<br>of<br>Construction                 | Aluminum<br>Stainless Steel                                                                                                                          | Aluminum                                                                          | Aluminum<br>Stainless Steel<br>Cast Iron                                                                                     | Aluminum<br>Stainless Steel<br>Cast Iron                                                                                     | Aluminum<br>Stainless Steel<br>Cast Iron                                                     | Aluminum<br>Stainless Steel<br>Cast Iron                                     |
| Pump<br>Weight<br>Lbs. (Kg.)                    | 10.4 (4.7) PD05A-XAS-X-B<br>16.6 (7.5) PD05A-XSS-X-B<br>8.0 (3.7) PD05R-XAS-X-B<br>14.3 (6.5) PD05R-XSS-X-B                                          | 8.74 (3.96)                                                                       | 19 (8.6) Aluminum*<br>29 (13.1) Stainless<br>31 (14.1) Cast Iron*                                                            | 51.5 (23.4) Aluminum*<br>77.5 (35.2) Stainless<br>79.5 (36.1) Cast Iron*                                                     | 65.2 (29.6)<br>129.9 (58.9)<br>124.3 (56.4)                                                  | 109.8 (49.8)<br>222.2 (100.8)<br>213.1 (96.7)                                |
|                                                 |                                                                                                                                                      |                                                                                   | *add 8-lb(3.63-kg) for<br>cast iron center section                                                                           | *add 23-lb(10.4-kg) for<br>cast iron center section                                                                          |                                                                                              |                                                                              |
| Maximum<br>Solids<br>Inches (mm)                | 3/32<br>(2.4)                                                                                                                                        | 3/32<br>(2.4)                                                                     | 1/8<br>(3.2)                                                                                                                 | 1/4<br>(6.4)                                                                                                                 | 1/4<br>(6.4)                                                                                 | 3/8<br>(9.5)                                                                 |
| Best<br>Selling<br>Models<br>(BSP<br>Available) | PD05A-AAS-FAA-B<br>PD05A-AAS-FCC-B<br>PD05A-AAS-FGG-B<br>PD05A-AAS-FTT-B<br>PD05A-AAS-STT-B<br>PD05R-AAS-PGG-B<br>PD05R-AAS-PTT-B<br>PD05R-AAS-STT-B | PD07R-AAS-FAA<br>PD07R-AAS-FCC<br>PD07R-AAS-FTT<br>PD07R-AAS-PCC<br>PD07R-AAS-PTT | 666100-122-C<br>666100-244-C<br>666100-322-C<br>666100-344-C<br>666100-361-C<br>666100-362-C<br>666100-3EB-C<br>666101-244-C | 666150-244-C<br>666150-322-C<br>666150-362-C<br>666150-3EB-C<br>666151-244-C<br>666152-281-C<br>666152-2EB-C<br>66616B-2EB-C | 666250-144-C<br>666250-444-C<br>666250-9C9-C<br>666250-EEB-C<br>666250-G22-C<br>666251-EEB-C | 666300-144-C<br>666300-9C9-C<br>666300-EEB-C<br>666300-G22-C<br>666302-EEB-C |
| Recommended<br>Filter/<br>Regulator             | P39124-624                                                                                                                                           | P39124-624                                                                        | P39224-614                                                                                                                   | P39334-614                                                                                                                   | P39354-614                                                                                   | P39454-614                                                                   |
| 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):    | .039 (.15)                                                                                                          |
| Air Inlet (Female):                | 1/4 - 18 PTF SAE Short (PD05R-X-X-B models)<br>1/4 - 18 NPTF - 1 (PD05A-X-X-B models)                               |
| Fluid Inlet/Outlet:                | 1/2 - 14 NPTF - 1<br>Rp 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):                   | PD05A-XAS-XXX-B 10.4 (4.7)<br>PD05A-XSS-XXX-B 16.6 (7.5)<br>PD05R-XAS-XXX-B 8.0 (3.7)<br>PD05R-XSS-XXX-B 14.3 (6.5) |
| Maximum dry suction lift ft (m):   | 15 (4.5)                                                                                                            |
| Sound Level:                       | 70 PSI 60 Cycles/Min 75 db(A)                                                                                       |
| Muffler:                           | PD05A - 93110; PD05R - Integral                                                                                     |



PD05A-ASS-FAA-B



PD05R-ASS-PTT-B

## Ordering

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

| Position 1<br>Model Series                   | Position 2<br>Center Section      | Position 3<br>Connections                                    | Position 4<br>Manifold Material     | Position 5<br>Hardware | Position 6<br>Seat Material                              | Position 7<br>Ball Material                                                                                     | Position 8<br>Diaphragm Material                                                                                              | Position 9<br>Specialty Code                                                                                                                                                       |
|----------------------------------------------|-----------------------------------|--------------------------------------------------------------|-------------------------------------|------------------------|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D - Standard<br>E - Remote Actuation Capable | A - Aluminum<br>R - Polypropylene | A - 1/2 - 14 NPTF - 1<br>B - Rp 1/2 (1/2 - 14 BSP, parallel) | A - Aluminum<br>S - Stainless Steel | S - Stainless Steel    | F - Aluminum<br>P - Polypropylene<br>S - Stainless Steel | A - Santoprene<br>C - Hytrel<br>G - Nitrile<br>S - Stainless Steel<br>T - PTFE<br>U - Polyurethane<br>V - Viton | A - Santoprene<br>C - Hytrel<br>G - Nitrile<br>L - Long-Life PTFE<br>T - PTFE/<br>Santoprene<br>U - Polyurethane<br>V - Viton | Revision Level<br><br><b>Position 10 &amp; 11 Specialty Code</b><br><br>Fluid control options for pump with electronic interface (PE05 model). See complete description on page 27 |

## Accessories

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

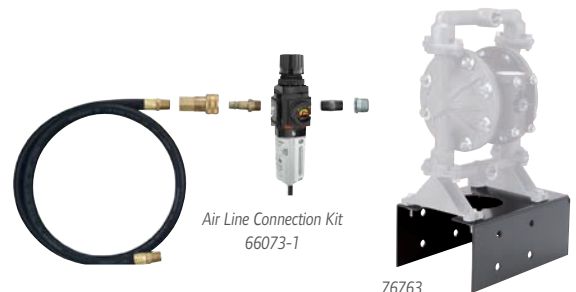
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)

**Cycle Counter Kit** | 66975

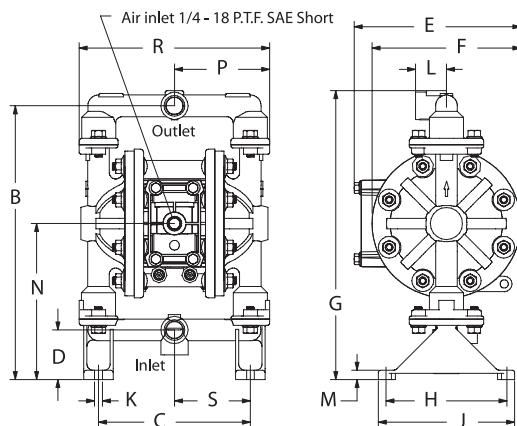
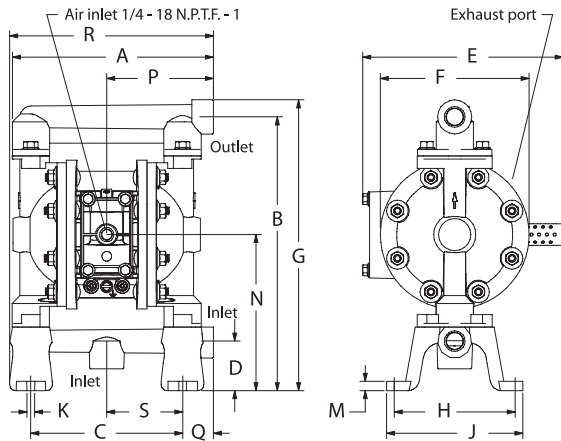
**Wall Mount Bracket Kit** | 76763

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

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



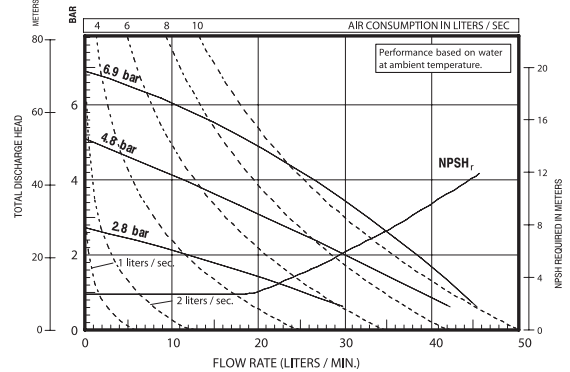
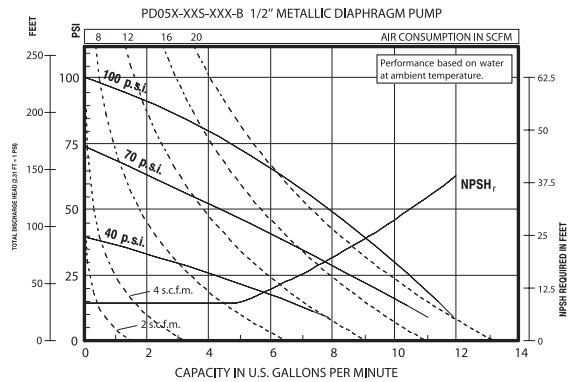
## 1/2" Metallic Dimensions and Flow Charts



### DIMENSIONS

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

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



Refer to [www.AROzone.com](http://www.AROzone.com) for full size flow curves.

For additional information contact  
technical support at 1.800.495.0276

### Ordering Position 9

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

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

### Ordering Position 10 and 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<br>ATEX/IECex/NEC/CEC |                                       |

# 3/4" Metallic Models

## COMPACT SERIES PUMPS

Part of our Compact Series of pumps our 3/4" metallic pumps feature big performance in a small package. 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):    | .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): | .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)  |



PD07R-AAS-FAA

## Ordering

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

| Position 1<br>Model Series                        | Position 2<br>Center Section      | Position 3<br>Connections                                 | Position 4<br>Manifold Material | Position 5<br>Hardware | Position 6<br>Seat Material       | Position 7<br>Ball Material              | Position 8<br>Diaphragm Material                               | Position 9<br>Specialty Code                                                                                                                                                       |
|---------------------------------------------------|-----------------------------------|-----------------------------------------------------------|---------------------------------|------------------------|-----------------------------------|------------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D - Standard Pump<br>E - Remote Actuation Capable | A - Aluminum<br>R - Polypropylene | A - 3/4 - 14 NPTF-2<br>B - Rp 3/4 (3/4 -14 BSP, parallel) | A - Aluminum                    | S - SS                 | F - Aluminum<br>P - Polypropylene | A - Santoprene<br>C - Hytrel<br>T - PTFE | A - Santoprene<br>C - Hytrel<br>L - Long-Life PTFE<br>T - PTFE | Revision Level<br><br><b>Position 10 &amp; 11 Specialty Code</b><br><br>Fluid control options for pump with electronic interface (PE07 model). See complete description on page 29 |

## Accessories

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

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

**Cycle Counter Kit** | 66975

**Wall Mount Bracket Kit** | 76763

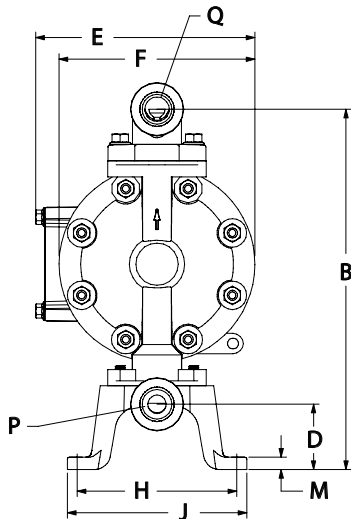
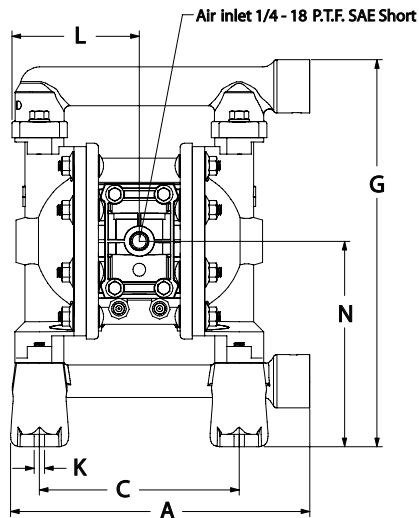
**Optional Muffler** | 93110 used with 637438 kit

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



Air Line Connection Kit  
66073-1

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

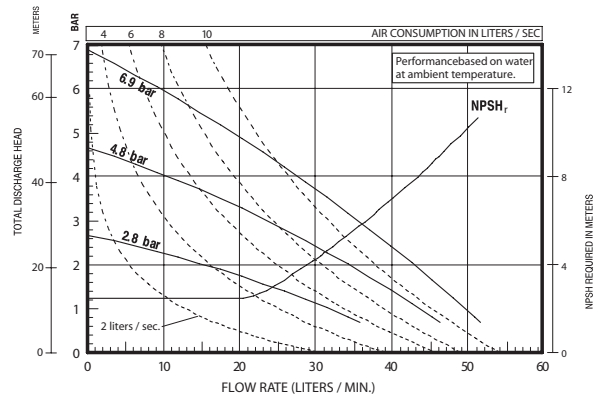
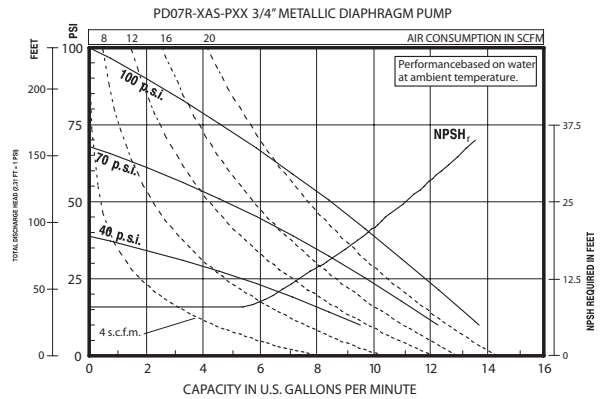


#### DIMENSIONS

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

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

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



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

#### Ordering Position 10

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

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

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

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

# 1" Metallic Models

## PRO SERIES PUMPS

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 - 11-1/2 NPTF - 1<br>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)<br>666101-X-C (stainless steel) 29 (13.1)<br>666102-X-C (cast iron) 31 (14.1)<br>Note: Add 8 (3.63) for cast iron<br>air motor section |
| Maximum dry suction lift ft (m):   | 20 (6.1)                                                                                                                                                              |
| Sound Level:                       | 70 PSI 60 Cycles/Min 64.5 db(A)                                                                                                                                       |



6661X0, 1XA, 1X2 & 1XC  
Aluminum / Cast Iron  
Pump



6661X1 & 1XB  
Stainless Steel  
Pump

## Ordering

| Position | 1     | 2 |   | 3 | 4 | 5 |   | 6 |
|----------|-------|---|---|---|---|---|---|---|
| Example: | 6661X | X | - | X | X | X | - | C |

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

## Accessories

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

**Cycle Counter Kit** | 66975

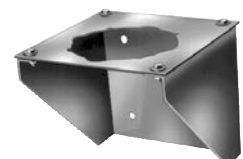
**Service Repair Kits** | 637118-C (air section)

637119-XX-C (fluid section)

**Wall Mount** | 66100



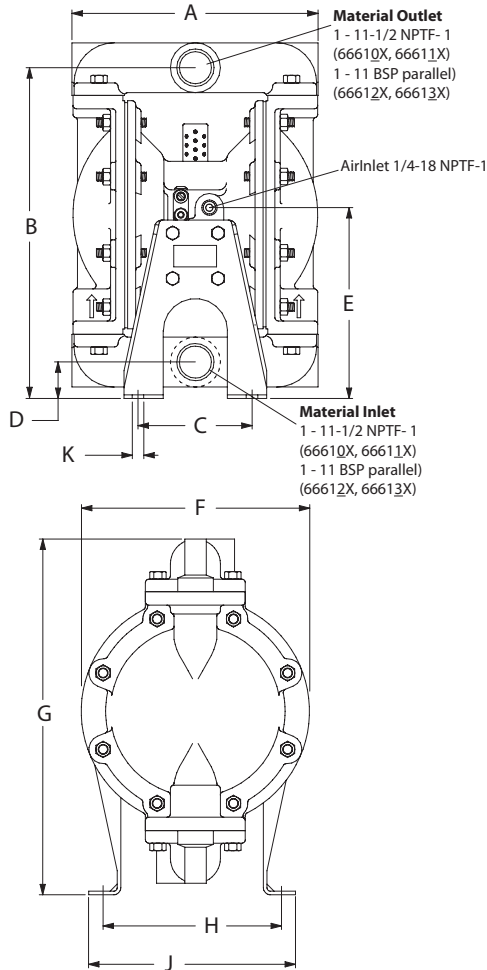
Air Line Connection Kit  
66073-2



Wall Mount  
66100

## 1" Metallic Dimensions and Flow Charts

6661X0, 1XA, 1X2 & 1XC

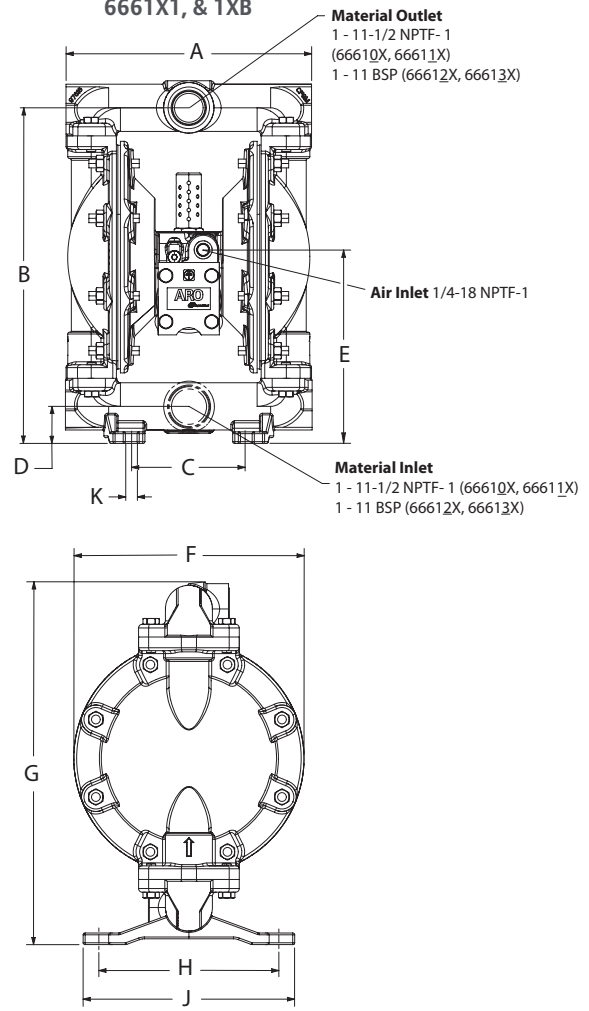


### DIMENSIONS

|                        |                      |                      |
|------------------------|----------------------|----------------------|
| A - 8-9/16" (217.5 mm) | E - 6-1/2" (165 mm)  | H - 6-1/4" (159 mm)  |
| B - 11-9/16" (294 mm)  | F - 8" (203 mm)      | J - 7-5/16" (186 mm) |
| C - 4" (102 mm)        | G - 12-1/2" (318 mm) | K - 13/32" (10 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.

6661X1, & 1XB



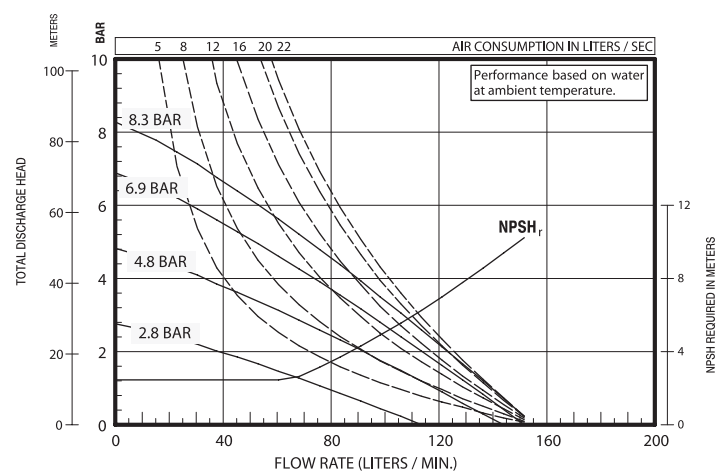
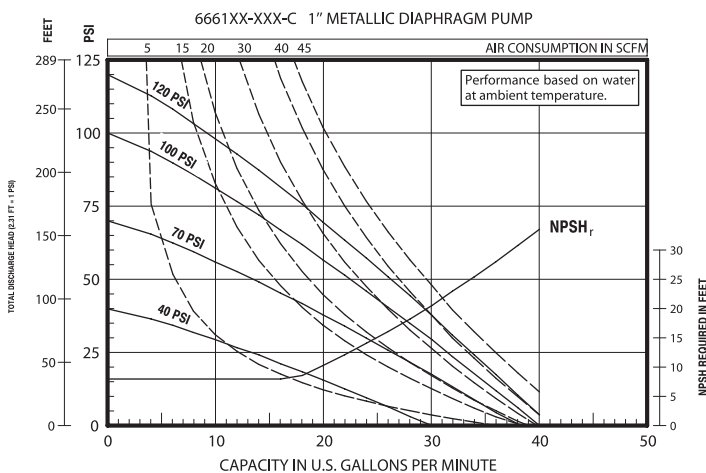
### DIMENSIONS

|                        |                       |                      |
|------------------------|-----------------------|----------------------|
| A - 8-9/16" (217.5 mm) | E - 6-1/2" (165 mm)   | H - 6-1/8" (155 mm)  |
| B - 11-9/16" (294 mm)  | F - 8" (203 mm)       | J - 7-5/16" (186 mm) |
| C - 4" (102 mm)        | G - 12-7/16" (315 mm) | K - 13/32" (10 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.

## PERFORMANCE CURVES

6661XX-XXX-C 1" METALLIC DIAPHRAGM PUMP



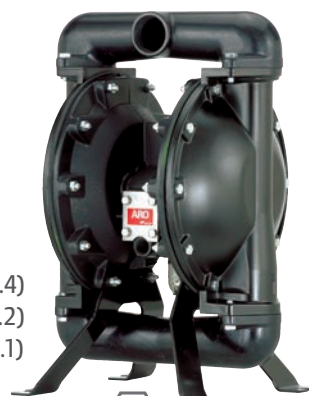
Refer to [www.AROzone.com](http://www.AROzone.com) for full size flow curves. For additional information contact technical support at 1.800.495.0276

# 1-1/2" Metallic Models

## PRO SERIES PUMPS

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<br>Rp 1-1/2 (1-1/2 - 11 BSP parallel)                                                                                                                |
| 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)<br>666151-X-C (stainless steel) 77.5 (35.2)<br>666152-X-C (cast iron) 79.5 (36.1)<br>Note: Add 23 (10.4) for cast iron air motor section |
| Maximum dry suction lift ft (m):   | 19 (5.8)                                                                                                                                                                   |
| Sound Level:                       | 70 PSI 60 Cycles/Min 80.5 db(A)                                                                                                                                            |



6661X0, 1X2, 1XA, & 1XC  
Aluminum / Cast Iron  
Pump



6661X1 & 1XB  
Stainless Steel  
Pump

## Ordering

| Position | 1     | 2 |   | 3 | 4 | 5 |   | 6 |
|----------|-------|---|---|---|---|---|---|---|
| Example: | 6661X | X | - | X | X | X | - | C |

| Position 1<br>Center<br>Body                                                         | Position 2<br>Fluid Caps<br>Manifold Material                                                                                                                                                                                   | Position 3<br>Seat<br>Material                                                                                                       | Position 4<br>Ball Check<br>Material                                                                                                          | Position 5<br>Diaphragm<br>Material                                                                                     |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 5 - Aluminum, NPTF<br>6 - Cast Iron, NPTF<br>7 - Aluminum, BSP<br>8 - Cast Iron, BSP | 0 - Aluminum (steel hardware)<br>1 - Stainless Steel (steel hardware)<br>2 - Cast Iron (steel hardware)<br>A - Aluminum, (stainless hardware)<br>B - Stainless Steel (stainless hardware)<br>C - Cast Iron (stainless hardware) | 1 - Aluminum<br>2 - 316 Stainless Steel<br>3 - Polypropylene<br>4 - PVDF (Kynar)<br>5 - Carbon Steel<br>8 - Hard 400 Stainless Steel | 1 - Neoprene<br>2 - Nitrile<br>3 - Viton<br>4 - PTFE<br>6 - Acetal<br>8 - Polyurethane<br>A - Stainless Steel<br>C - Hytrel<br>E - Santoprene | 1 - Neoprene<br>2 - Nitrile<br>3 - Viton<br>4 - PTFE / Santoprene<br>6 - Composite PTFE<br>9 - Hytrel<br>B - Santoprene |

## Accessories

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

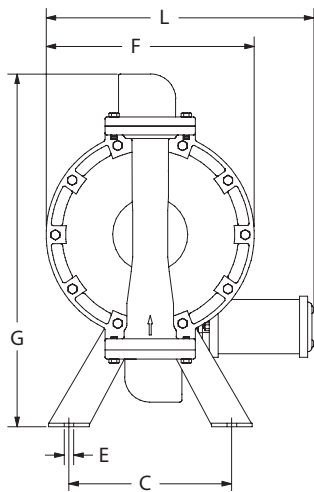
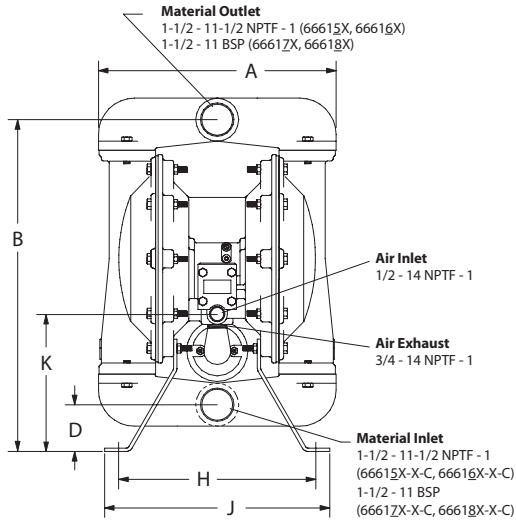
**Cycle Counter Kit** | 66975

**Service Repair Kits** | 637118-C (air section)  
637124-XX (fluid section)

**Wall Mount** | 62133

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

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

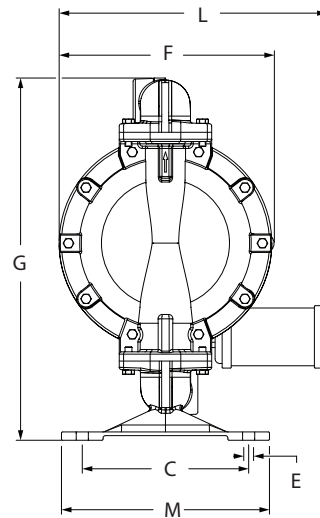
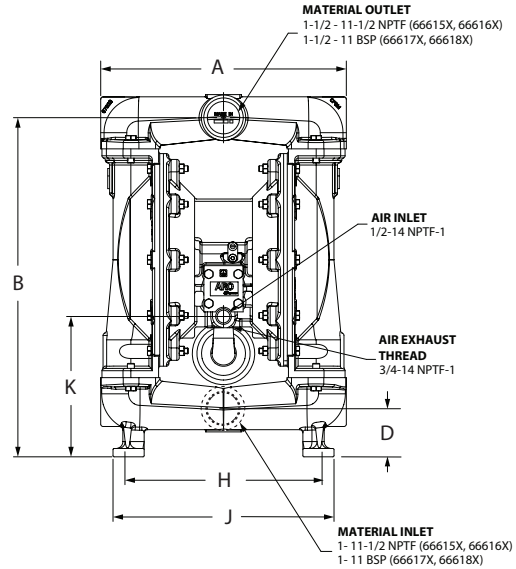


#### DIMENSIONS

|                      |                      |                        |
|----------------------|----------------------|------------------------|
| A - 13-1/8" (333 mm) | E - 1/2" (14 mm)     | J - 12" (305 mm)       |
| B - 18-3/8" (467 mm) | F - 11-1/2" (292 mm) | K - 7-5/8" (194 mm)    |
| C - 9" (229 mm)      | G - 19-5/8" (498 mm) | L - 14-13/16" (376 mm) |
| D - 2-3/4" (70 mm)   | H - 10-3/4" (273 mm) |                        |

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

### 6661X1 & 1XB



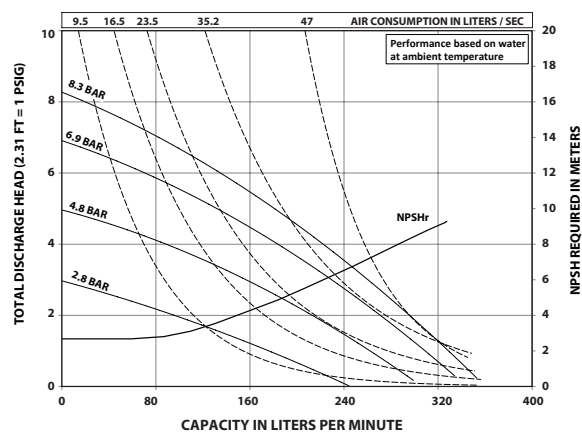
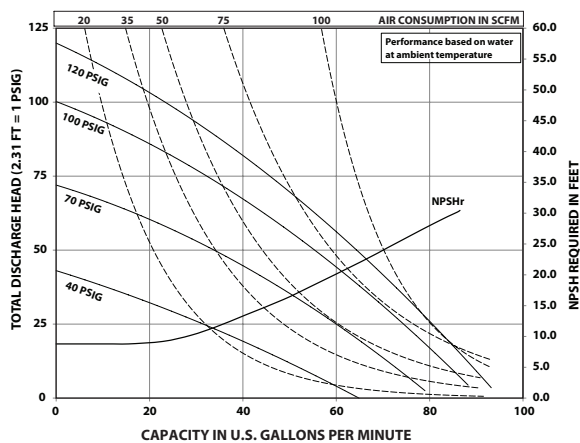
#### DIMENSIONS

|                       |                      |                      |
|-----------------------|----------------------|----------------------|
| A - 13-5/16" (337 mm) | E - 17/32" (13.5 mm) | J - 12" (305 mm)     |
| B - 18-3/8" (467 mm)  | F - 11-1/2" (292 mm) | K - 7-5/8" (194 mm)  |
| C - 9" (229 mm)       | G - 19-5/8" (498 mm) | L - 14-1/2" (368 mm) |
| D - 2-3/4" (70 mm)    | H - 10-3/4" (273 mm) | M - 11-1/4" (286 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



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

# 2" Metallic Models

## PRO SERIES PUMPS

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<br>Rp 2 (2 - 11 BSP, parallel)                                 |
| Max. operating pressure psi (bar): | 120 (8.3)                                                                          |
| Suspended solids max. dia in (mm): | .25 (6.4)                                                                          |
| Weight lbs (kg):                   | 6662X0-XXX-C 65.2 (29.6)<br>6662X1-XXX-C 129.9 (58.9)<br>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)                                                    |



666252-244-C

67389 Muffler Kit (not shown) included with pump

## Ordering

| Position | 1     | 2 |   | 3 | 4 | 5 |   | 6 |
|----------|-------|---|---|---|---|---|---|---|
| Example: | 6662X | X | - | X | X | X | - | C |

| Position 1<br>Center<br>Body            | Position 2<br>Fluid Caps<br>Manifold Material                                                                                                                                                                                  | Position 3<br>Seat<br>Material                                                                                                                             | Position 4<br>Ball Check<br>Material                                               | Position 5<br>Diaphragm<br>Material                                                                       |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| 5 - Aluminum, NPTF<br>7 - Aluminum, BSP | 0 - Aluminum (steel hardware)<br>1 - Stainless steel<br>(steel hardware)<br>2 - Cast Iron (steel hardware)<br>A - Aluminum / Stainless<br>Steel<br>B - Stainless Steel / Stainless<br>Steel<br>C - Cast Iron / Stainless Steel | 1 - Aluminum<br>2 - 316 Stainless Steel<br>4 - PVDF (Kynar)<br>5 - Carbon Steel<br>8 - Hard Stainless Steel<br>9 - Hytrel<br>E - Santoprene<br>G - Nitrile | 2 - Nitrile<br>4 - PTFE<br>A - 316 Stainless Steel<br>C - Hytrel<br>E - Santoprene | 2 - Nitrile<br>4 - PTFE / Santoprene<br>6 - Composite PTFE<br>9 - Hytrel<br>B - Santoprene<br>G - Nitrile |

## Accessories

**Air Line Connection Kit** | 66312

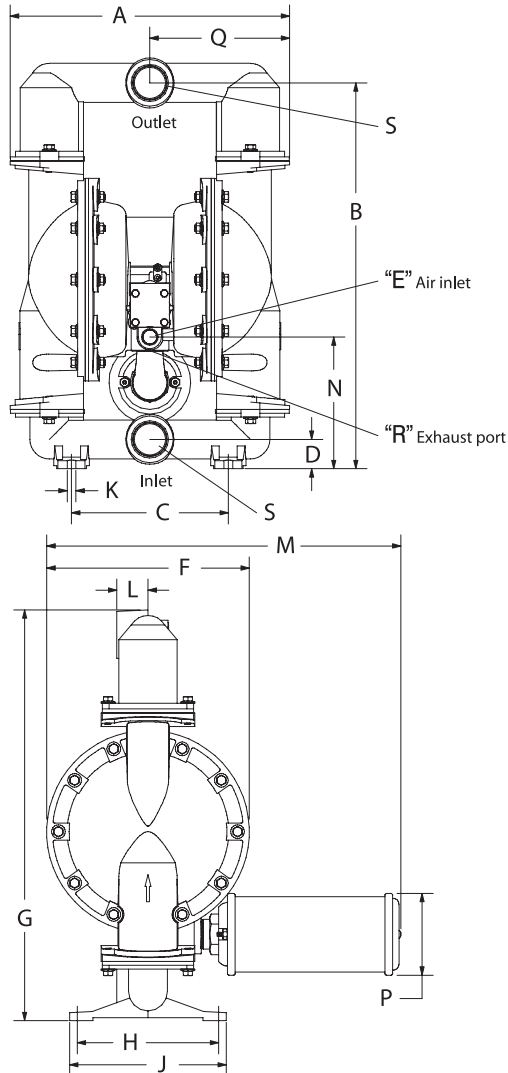
(Piggyback Filter/Regulator with gauge, pipe nipple and 5-foot air hose)

**Cycle Counter Kit** | 66975

**Service Repair Kits** | 637434 (air section)

637432-XX (fluid section)

## 2" Metallic Dimensions and Flow Charts



### DIMENSIONS

|                         |                       |                             |
|-------------------------|-----------------------|-----------------------------|
| A 17-15/16" (455.1 mm)  | G 26-3/8" (669.5 mm)  | N 8-15/32" (214.6 mm)       |
| B 24-3/4" (628.7 mm)    | H 9-1/16" (230.2 mm)  | P 5-1/4" (133.4 mm)         |
| C 10-1/16" (255.6 mm)   | J 10-1/16" (255.6 mm) | Q 8-13/32" (227.6 mm)       |
| D 1-7/8" (47.6 mm)      | K 9/16" (14.3 mm)     | R 1-1/4 - 11-1/2 N.P.T.F.-1 |
| E 3/4 - 14 N.P.T.F. - 1 | L 2" (50.8 mm)        | S (see below)               |
| F 13" (330.2 mm)        | M 22-3/4" (577.3 mm)  |                             |

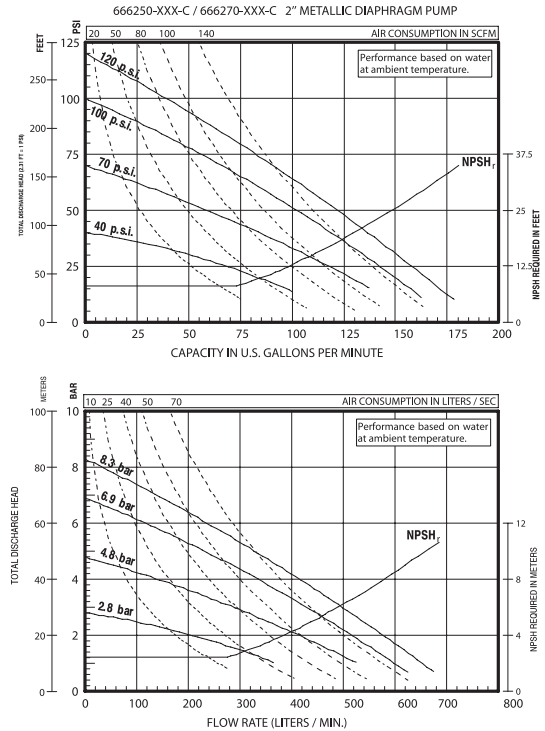
#### "S" Inlet / Outlet

66625-XXX-C 2 - 11-1/2 N.P.T.F. - 1

66627-XXX-C Rp 2 (2 - 11 BSP parallel)

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



Refer to [www.AROzone.com](http://www.AROzone.com) for full size flow curves.

For additional information contact  
technical support at 1.800.495.0276

# 3" 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<br>Rp 3 (3 - 11 BSP parallel)                                         |
| Max. operating pressure psi (bar): | 120 (8.3)                                                                            |
| Suspended solids max. dia in (mm): | .375 (9.5)                                                                           |
| Weight lbs (kg):                   | 6663X0-XXX-C 109.8 (49.8)<br>6663X1-XXX-C 222.2 (100.8)<br>6663X2-XXX-C 213.1 (96.7) |
| Maximum dry suction lift ft (m):   | 17.6 (5.4)                                                                           |
| Sound Level:                       | 70 PSI 60 Cycles/Min 86.3 db(A)                                                      |



666322-144-C

67389 Muffler Kit (not shown) included with pump

## Ordering

| Position | 1     | 2 |   | 3 | 4 | 5 |   | 6 |
|----------|-------|---|---|---|---|---|---|---|
| Example: | 6663X | X | - | X | X | X | - | C |

| Position 1<br>Center<br>Body            | Position 2<br>Fluid Caps<br>Manifold Material                                                                                                                                                                               | Position 3<br>Seat<br>Material                                                                                                                             | Position 4<br>Ball Check<br>Material                    | Position 5<br>Diaphragm<br>Material                                  |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------------------|
| 0 - Aluminum, NPTF<br>2 - Aluminum, BSP | 0 - Aluminum (steel hardware)<br>1 - Stainless steel<br>(steel hardware)<br>2 - Cast Iron (steel hardware)<br>A - Aluminum / Stainless Steel<br>B - Stainless Steel / Stainless<br>Steel<br>C - Cast Iron / Stainless Steel | 1 - Aluminum<br>9 - Hytrel<br>E - Santoprene<br>G - Nitrile<br>2 - 316 Stainless Steel<br>4 - PVDF (Kynar)<br>5 - Carbon Steel<br>8 - Hard Stainless Steel | 2 - Nitrile<br>4 - PTFE<br>C - Hytrel<br>E - Santoprene | 2 - Nitrile<br>4 - PTFE / Santoprene<br>9 - Hytrel<br>B - Santoprene |

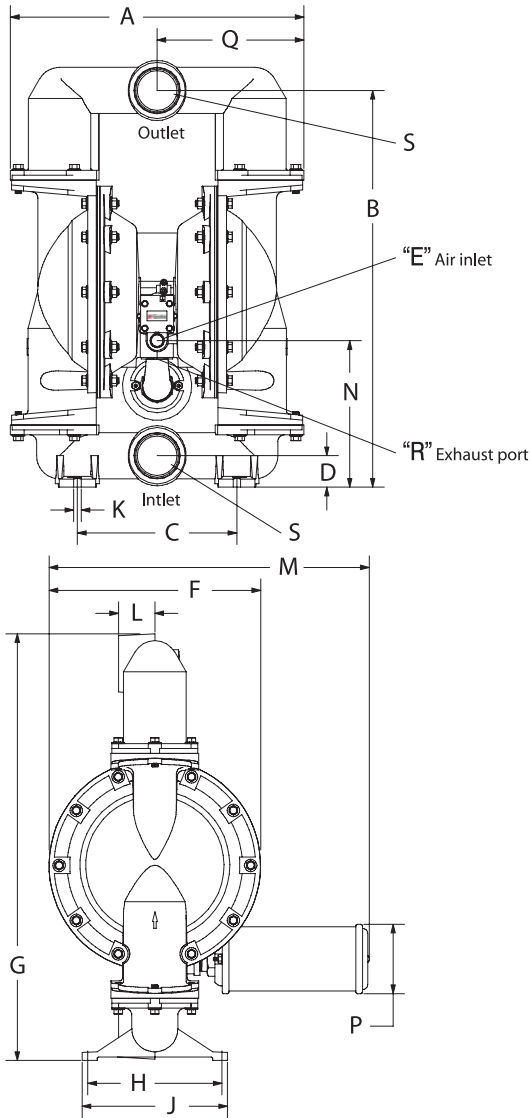
## Accessories

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

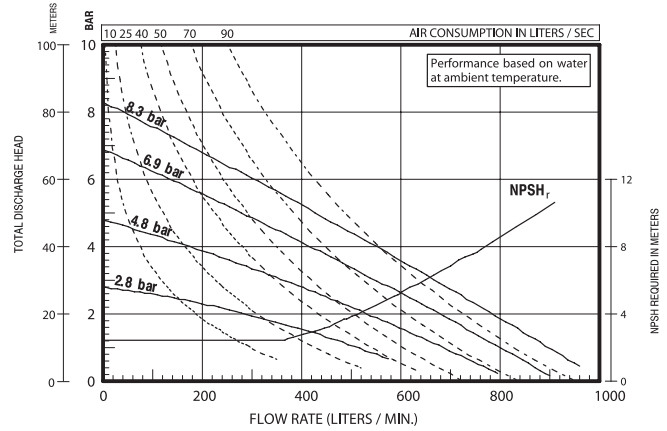
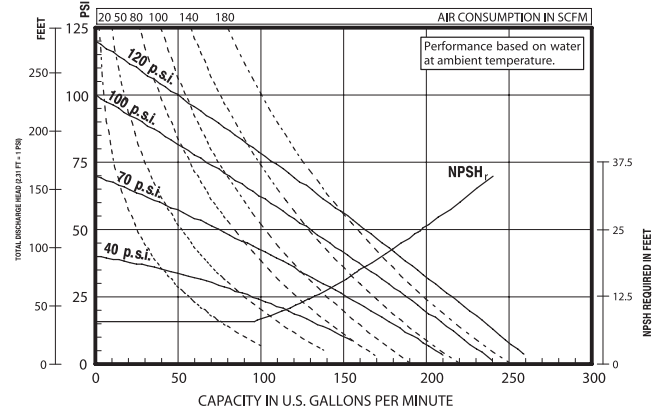
"S" Inlet / Outlet

66630-XXX-C 3 - 8 N.P.T.F. - 1

66632-XXX-C Rp 3 (3 - 11 BSP parallel)

#### PERFORMANCE CURVES

666300-XXX-C / 666320-XXX-C 3" METALLIC DIAPHRAGM PUMP



Refer to [www.AROzone.com](http://www.AROzone.com) for full size flow curves.

For additional information contact  
technical support at 1.800.495.0276

# 3:1 Ratio High Pressure Diaphragm Pump

## SPECIALTY 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<br>12 (45.6) at 125 psi back pressure |
| Displacement per cycle gal (l):    | .06-Gallons (.23)                                             |
| Air Inlet (Female):                | 3/8 - 18 NPTF - 1                                             |
| Fluid Inlet:                       | 1 - 11-1/2 NPTF - 1<br>Rp 1 (1- 11 BSP parallel)              |
| Fluid Outlet:                      | 1 - 11-1/2 NPTF - 1<br>Rp 1 (1- 11 BSP parallel)              |
| Max. operating pressure psi (bar): | 100 (6.9)                                                     |
| Suspended solids max. dia in (mm): | .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)                               |



PH10A-ASS-SST

## Ordering

| Position | 1    | 2 |   | 3 | 4 | 5 |   | 6  | 7 |
|----------|------|---|---|---|---|---|---|----|---|
| Example: | PH10 | A | - | X | S | S | - | XX | T |

| Position 1<br>Base<br>Model | Position 2<br>Center<br>Section | Position 3<br>Port<br>Size      | Position 4<br>Wetted<br>Parts | Position 5<br>Hardware | Position 6<br>Seat/Ball Check<br>Material | Position 7<br>Diaphragm<br>Material |
|-----------------------------|---------------------------------|---------------------------------|-------------------------------|------------------------|-------------------------------------------|-------------------------------------|
| 1" Pump                     | A - Aluminum                    | A NPTF Threads<br>B BSP Threads | S - Stainless Steel           | S - Stainless Steel    | HH 440 SS/ 440 SS<br>SS 316 SS / 316 SS   | T - PTFE                            |

## 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.

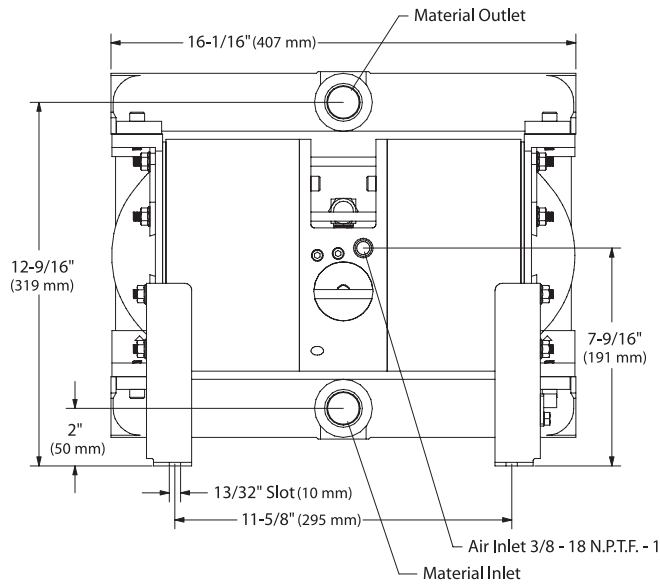
**Service Repair Kits** | 637338 (air section)  
637339 (PH10X-XXX-XSX fluid section)  
637339-1 (PH10X-XXX-XHX fluid section)

**Wall Mount Bracket** | 67142



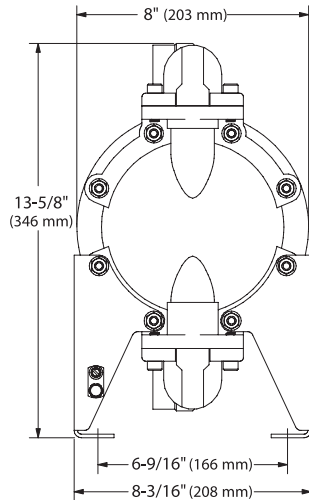
Wall Mount Bracket  
67142

## High Pressure Diaphragm Pump Dimensions and Flow Charts

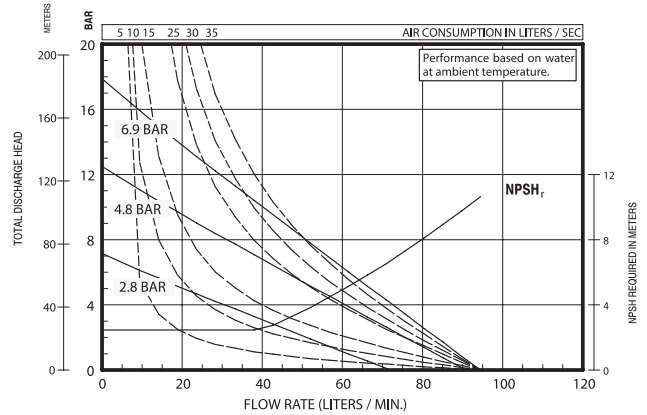
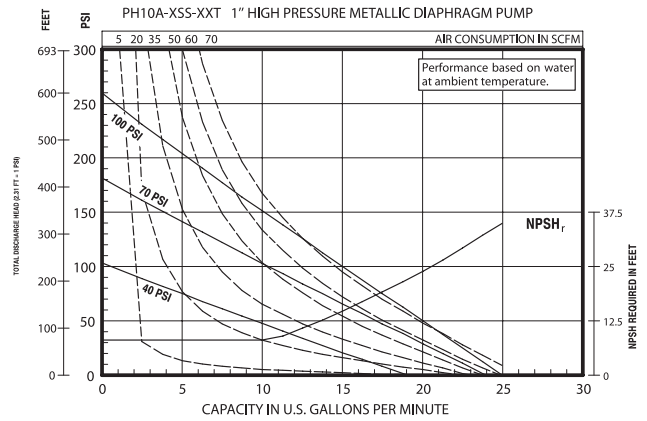


Material Inlet  
PH10A-~~A~~SS-XXT 1 - 11-1/2 N.P.T.F. - 1  
PH10A-~~B~~SS-XXT Rp 1 (1 - 11 BSP parallel)

Material Outlet  
1 - 11-1/2 N.P.T.F. - 1  
Rp 1 (1 - 11 BSP parallel)



### PERFORMANCE CURVES



Refer to [www.AROzone.com](http://www.AROzone.com) for full size flow curves.

For additional information contact  
technical support at 1.800.495.0276

# Pit Boss Diaphragm Pumps

## SPECIALTY PUMP

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

## Ordering

| Position | 1    | 2  | 3 |   | 3 | 4 | 5 |   |   |
|----------|------|----|---|---|---|---|---|---|---|
| Example: | 666M | XX | 0 | - | 1 | X | X | - | C |

| Position 1<br>Base<br>Model | Position 2<br>Center Body/<br>Fluid Connection                                                                                                             | Position 3<br>Fluid cap, Manifold, Mat'l<br>Hardware Material | Position 4<br>Seat<br>Material | Position 5<br>Ball<br>Material         | Position 6<br>Diaphragm<br>Material   |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------------|----------------------------------------|---------------------------------------|
| 666M                        | 15 Aluminum /<br>1-1/2" NPTF<br>17 Aluminum / 1-1/2" BSP<br>25 Aluminum / 2" NPTF<br>27 Aluminum / 2" BSP<br>30 Aluminum / 3" NPTF<br>32 Aluminum / 3" BSP | 0 Aluminum /<br>Carbon Steel                                  | 1 Aluminum                     | 2 Nitrile<br>C Hytrel<br>E Santoprenel | 2 Nitrile<br>9 Hytrel<br>B Santoprene |

## Accessories

|                           | 1-1/2"     | 2"         | 3"         |
|---------------------------|------------|------------|------------|
| Filter / regulator        | P39344-614 | P39354-614 | P39454-614 |
| Air section service kit   | 637118-C   | 637434     | 637434     |
| Fluid section service kit | 637469-XX  | 637468-XX  | 637467-XX  |
| Muffler kit               | 67463      | 67389      | 67389      |

# Automatic DeWatering System

## SPECIALTY PUMP

### Air Operated Control Solution with Liquid Level Sensing

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

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

#### SPECIFICATIONS

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

#### SERVICE KITS

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



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

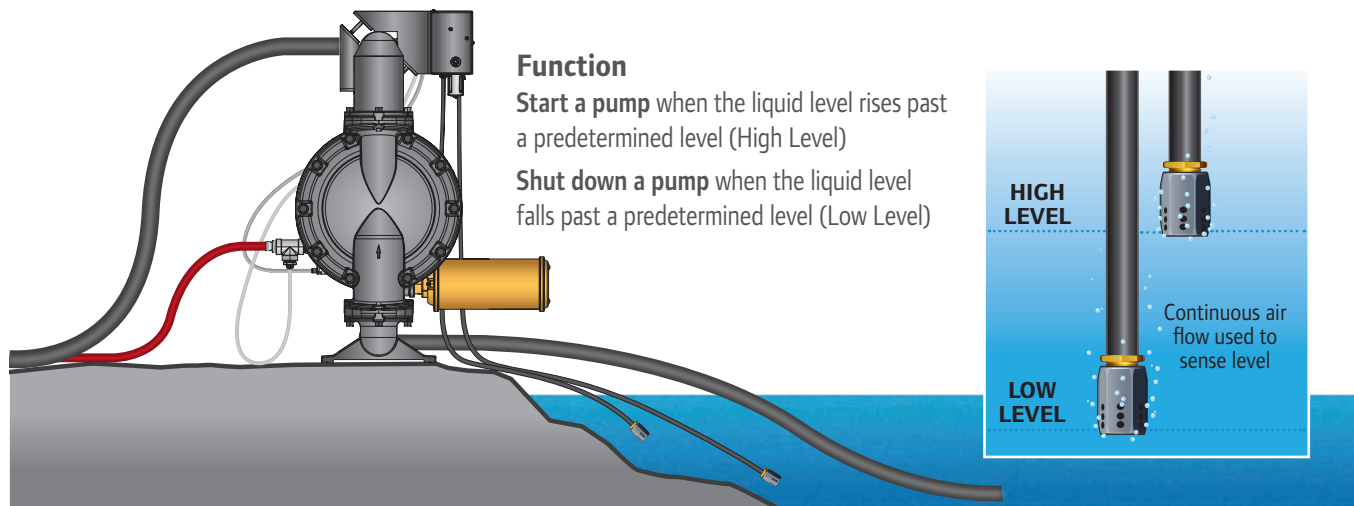
#### AUTOMATIC DEWATERING SYSTEM

SCD501BN08-V1D Dewatering Kit (without pump)

#### PUMP COMPATIBILITY

|                    |              |
|--------------------|--------------|
| 2" PRO Series Pump | 6662XX-XXX-C |
| 3" PRO Series Pump | 6663XX-XXX-C |

### Working Principle



# Centrifugal Pump Models

## SPECIALTY PUMP

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.

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

| Position | 1     |   | 2 |   |    |
|----------|-------|---|---|---|----|
| Example: | P237A | - | X | - | EU |

| Position 1<br>Model Series | Position 2<br>Discharge Thread   |
|----------------------------|----------------------------------|
| 200-GPM (757-LPM)          | 1 - 2-1/2" NPT<br>3 - 2-1/2" BSP |

| Position | 1    |   | 2 |   |    |
|----------|------|---|---|---|----|
| Example: | P35A | - | 1 | - | EU |

| Position 1<br>Model Series | Position 2<br>Discharge Thread |
|----------------------------|--------------------------------|
| 230-GPM (870-LPM)          | 1 - 2" NPT                     |

## Accessories

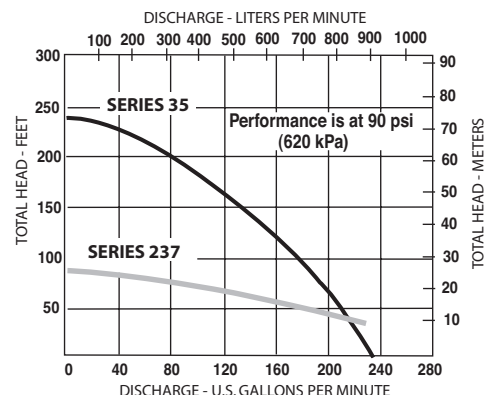
**Air Line Unit** | C28453-810 for P237AX-EU  
C28463-810 for P35A1-EU  
C284X3-810 models contain Filter, Regulator and Lubricator units.

**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: inches (mm)                                 | P237AX-EU 17-5/8 (448)                |
|                                                     | P35A1-EU 22-1/2 (570)                 |
| Size of opening pump will pass through: inches (mm) |                                       |
|                                                     | 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:                                 | P237A1-EU 2-1/2" NPTF                 |
|                                                     | P237A3-EU 2-1/2" BSP                  |
|                                                     | P35A1-EU 2" NPTF                      |
| Air Inlet Pipe Tap:                                 | P237AX-EU 3/4" NPTF                   |
|                                                     | P35A1-EU 1" NPTF                      |
| Air Inlet Recommended Hose Size: inches (mm)        |                                       |
|                                                     | 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: inches (mm)          |                                       |
|                                                     | P237AX-EU 1-1/4 (31.7)                |
|                                                     | P35A1-EU 1-1/4 (31.7)                 |



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

# Fuel Antifreeze / Water Blending Pump

## SPECIALTY 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

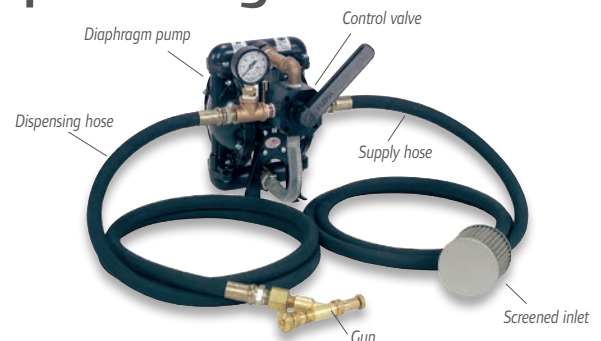
Designed specifically for high volume transfer, bulk-unloading, or fueling applications. These pumps meet UL 79 specification code and are compatible with gasoline, aviation fuel, diesel fuel, fuel oil and kerosene.



## 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.



| Model               | Body materials (wetted) | Diaphragm / ball material | Air inlet NPT (F) in (mm) | Fluid inlet / outlet material in (mm) | Max flow gpm (L/min) | Compatible fluids     |
|---------------------|-------------------------|---------------------------|---------------------------|---------------------------------------|----------------------|-----------------------|
| <b>1" PORTS</b>     |                         |                           |                           |                                       |                      |                       |
| 650717-C            | Aluminum                | Viton / Acetal            | 1/4" (6.3 mm)             | 1" / 1" (25.4 mm)                     | 29 (109.8)           | Fuel (UL 79 approved) |
| <b>1-1/2" PORTS</b> |                         |                           |                           |                                       |                      |                       |
| 650718-C            | Aluminum                | Viton / Acetal            | 1/2" (12.7 mm)            | 1-1/2" (38.1 mm)                      | 75 (283.9)           | Fuel (UL 79 approved) |
| <b>2" PORTS</b>     |                         |                           |                           |                                       |                      |                       |
| 650719-C            | Aluminum                | Viton / Acetal            | 3/4" (19.1 mm)            | 2" (50.8 mm)                          | 105 (397.5)          | Fuel (UL 79 approved) |

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

# 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):          | 22 (10) Polypropylene, basic package<br>26 (11.8) Aluminum, basic package<br>36 (16.3) Stainless, basic package |



### Drum Pump Packages

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

### 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

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

# 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.



P39224-614



P39124-600

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

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

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

| Pump Size    | NPT Model Number | Port Size | Max Inlet Pressure (psi) | Pressure Range (psi) | Max CFM | Micron Element | Size HxWxD (inches) |
|--------------|------------------|-----------|--------------------------|----------------------|---------|----------------|---------------------|
| 1/4" to 3/4" | P39124-600       | 1/4"      | 150                      | 0-140                | 47      | 5              | 6.2 x 2.9 x 2.9     |
| 1"           | P39224-600       | 1/4"      | 150                      | 0-140                | 72      | 5              | 8.1 x 2.2 x 3.2     |
| 1-1/2"       | P39344-600       | 1/2"      | 150                      | 0-140                | 172     | 5              | 10.0 x 2.8 x 3.2    |
| 2"           | P39354-600       | 3/4"      | 150                      | 0-140                | 173     | 5              | 10.9 x 2.8 x 3.2    |

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



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

# Accessories



Air Line Connection Kit  
66073-1



Diaphragm Failure Detection  
67237



Cycle Counter Kit  
67350



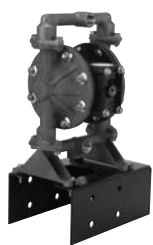
Flange Connection Kit  
637341-E10N



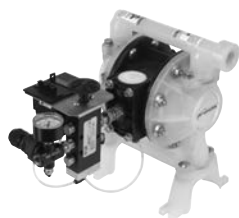
Over-run Control  
635040

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

|                                                                                                                                                                                                                                                                    | 1/4"<br>Non-Metallic | 3/8"<br>Non-Metallic                | 1/2"<br>Non-Metallic                | 1/2" Classic<br>Non-Metallic        | 3/4"<br>Non-Metallic | 1/2"<br>Metallic                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------|-------------------------------------|-------------------------------------|----------------------|----------------------------------------------------------------------------|
| <b>Air Line Connection Kit</b><br>Kit includes Piggyback Filter/Regulator with gauge, pipe nipple and a 5-foot section of air hose.                                                                                                                                | 66073-1              | 66073-1                             | 66073-1                             | 66073-1                             | 66073-1              | 66073-1                                                                    |
| <b>Diaphragm Failure Detection (DFD)</b><br>Provides a warning of a diaphragm failure by sensing the presence of liquid in the air chamber of the pump.                                                                                                            | -                    | -                                   | -                                   | -                                   | -                    | -                                                                          |
| <b>Pneumatic Cycle Counter Kit</b><br>Like the odometer on your car, ARO's cycle counter lets you know how many pump cycles have elapsed so you can be prepared to perform preventive maintenance                                                                  | -                    | 66975                               | 66975                               | -                                   | 66975                | 66975                                                                      |
| <b>Cycle Sensor Kit</b> (close electrical contact type)<br>For monitoring pump operation. Can be used to monitor cycle rates, preventative maintenance and rough flow rate indication.                                                                             | -                    | 67386                               | 67386                               | 67168                               | 67386                | -                                                                          |
| <b>Flange Connection Kit</b><br>Use with non-metallic EXP pumps with the flange manifold option. Flange kits meet DIN / A.N.S.I. specifications. Flange constructed of glass-filled polypropylene. Bolts, washers and nuts are stainless steel. (Gaskets included) | -                    | -                                   | -                                   | -                                   | -                    | -                                                                          |
| <b>Over-run Control</b><br>Shuts off pump when excessive cycling occurs due to empty fluid supply container.                                                                                                                                                       | -                    | -                                   | 635040                              | 635040                              | 635040               | 635040                                                                     |
| <b>Wall Mount</b><br>Conveniently mount pump above container. Made of heavy gauge coated steel. (pump not included)<br>* Does not include hardware                                                                                                                 | -                    | 67388                               | 76763                               | -                                   | 76763                | 76763                                                                      |
| <b>Countdown Batcher</b><br>Manual start batch counter kit controls the volume of fluid dispensed by controlling the number of pump cycles.                                                                                                                        | -                    | 67072                               | 67072                               |                                     | 67072                | 67072                                                                      |
| <b>Solenoid Actuation Kit</b><br>Control pump cycle rate with on/off signal from PLC or other device. Kit includes connector w/36" cable plus components and instructions to install on standard pump. For dosing and batching applications.                       | -                    | 67165-1 (24VDC)<br>67165-2 (120VAC) | 67165-1 (24VDC)<br>67165-2 (120VAC) | 67165-1 (24VDC)<br>67165-2 (120VAC) | -                    | 67165-1 (24VDC)<br>for PD05R-X-X-B,<br>67165-2 (120VAC)<br>for PD05R-X-X-B |
| <b>Diaphragm Pump Speed Controls</b><br>Controls air volume supplied to pump, thus permitting operator to control speed of pump. Can be panel mounted. Composite body.                                                                                             | 104104-N02           | 104104-N02                          | 104104-N02                          | 104104-N02                          | 104104-N02           | 104104-N02                                                                 |
| <b>Groundable Strap</b><br>Reliable static control.                                                                                                                                                                                                                | -                    | -                                   | -                                   | 66885-1<br>Acetal Center Body       | -                    | -                                                                          |
| <b>Screened Inlet Kit</b><br>Protects inlet of pump from debris in submerged applications.                                                                                                                                                                         | -                    | -                                   | -                                   | -                                   | -                    | -                                                                          |



Wall Mount  
76763



Countdown Batcher  
67072



Solenoid Actuation Kit  
67165-1



Speed Control  
104104-N02



Groundable Strap  
66885-1



Screened Inlet  
67174-15

| 3/4" Metallic | 1" Non-Metallic                     | 1-1/2" Non-Metallic                 | 2" Non-Metallic                     | 1" Metallic                         | 1-1/2" Metallic                     | 2" Metallic | 3" Metallic | 1" 3:1 Ratio |
|---------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------|-------------|--------------|
| 66073-1       | 66073-2                             | 66084-1                             | 66109                               | 66073-2                             | 66084-1                             | 66109       | 66109       | -            |
| -             | -                                   | 67237<br>CI Center Bodies           | 67237<br>CI Center Bodies           | -                                   | 67237<br>CI Center Bodies           | -           | -           | -            |
| 66975         | 66975                               | 66975                               | 66975                               | 66975                               | 66975                               | 66975       | 66975       | -            |
| -             | 67169                               | 67169                               | 67169                               | 67169                               | 67169                               | -           | -           | -            |
| -             | 67078                               | 67079                               | 67080                               | -                                   | -                                   | -           | -           | -            |
| 635040        | 635040                              | 23644-400                           | 23644-400                           | 635040                              | 23644-400                           | 635043      | 635043      | -            |
| 76763         | -                                   | -                                   | -                                   | 66100                               | 62133                               | -           | -           | 67142        |
| 67072         | 67072                               | 67072-1                             | 67072-1                             | 67072                               | 67072-1                             | -           | -           | -            |
| -             | 67166-1 (24VDC)<br>67166-2 (120VAC) | 67166-1 (24VDC)<br>67166-2 (120VAC) | 67166-1 (24VDC)<br>67166-2 (120VAC) | 67166-1 (24VDC)<br>67166-2 (120VAC) | 67166-1 (24VDC)<br>67166-2 (120VAC) | -           | -           | -            |
| 104104-N02    | 104104-N02                          | 104104-N04                          | 104104-N04                          | 104104-N02                          | 104104-N04                          | 104104-N06  | 104104-N06  | -            |
| -             | -                                   | -                                   | -                                   | 66885-1                             | 66885-1                             | 66885-1     | 66885-1     | -            |
| -             | -                                   | -                                   | -                                   | -                                   | 67174-15                            | 67174-20    | 67174-30    | -            |

# Accessories

## Siphon Tubes

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

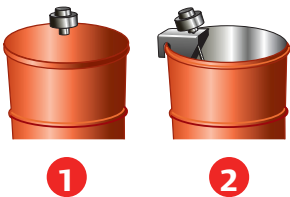
| Model no. | Description    | For use with pumps |
|-----------|----------------|--------------------|
| 65109     | Steel — NPT(F) | 1" (Metallic)      |
| 66779     | PVC — NPT(F)   | 1" (Non-Metallic)  |



## Material Agitators

Agitators available for both 5 GAL (20 L) and 55 GAL (200 L) containers. Air operated agitator motors generate between 500-1000 RPM 5 GAL (20 L), and 500-3000 RPM (for 55 GAL, 200 L). Agitator shaft and propellers are constructed of corrosion resistant 316 stainless steel.

| Model no. | For drum       | Mounting | Power   | Motor speed    | Propeller dia. | Axle length   |
|-----------|----------------|----------|---------|----------------|----------------|---------------|
| 651100    | 5 GAL (20 L)   | 1        | 0.33 hp | 500 - 1000 rpm | 4" (102 mm)    | 12"(305 mm)   |
| 651103    | 55 GAL (200 L) | 2        | 0.75 hp | 500 - 3000 rpm | 5" (127 mm)    | 32.6"(830 mm) |
| 651104-1  | 55 GAL (200 L) | 1        | 0.95 hp | 500 - 3000 rpm | 5" (127 mm)    | 32.6"(830 mm) |
| 651104-3  | 5 GAL (20 L)   | 1        | 0.75 hp | 500 - 3000 rpm | 5" (127 mm)    | 10.5"(267 mm) |



## Drum Covers

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

| Model no. | For drum       | Material        | For use with agitator: |
|-----------|----------------|-----------------|------------------------|
| 66971     | 5 GAL (20 L)   | Stainless steel | 651100                 |
| 66197     | 55 GAL (200 L) | Carbon steel    | 651104-1               |
| 94422     | 55 GAL (200 L) | Carbon steel    | —                      |



## Pneumatic Liquid Level Sensor\*

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



## 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



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

# Accessories

## Pulsation Dampeners

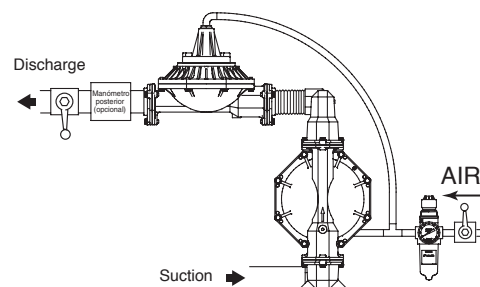
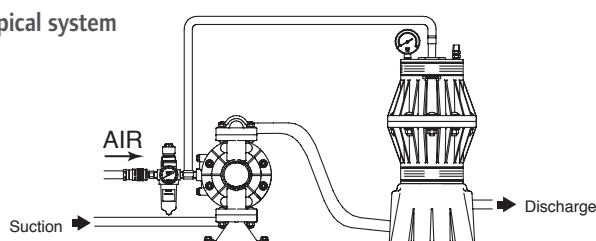
Diaphragm pumps of any type have at least two points in their cycle where they provide no pressure or flow to a process. The unwanted result of this pressure fluctuation can often be material foaming, material pulsation, hydraulic shock or material splashing. While traditional pulsation dampeners can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



## Automatic Shock Blockers®

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

Typical system



## Ordering

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

| Position 1<br>Model and<br>Size | Position 2<br>Air<br>Section                                   | Position 3<br>Fluid<br>Connection | Position 4<br>Fluid<br>Section                                 | Position 5<br>Hardware                  | Position 6<br>Diaphragm<br>Material                                 |
|---------------------------------|----------------------------------------------------------------|-----------------------------------|----------------------------------------------------------------|-----------------------------------------|---------------------------------------------------------------------|
| SB10 - 1"                       | P - Polypropylene<br>K - PVDF (Kynar)<br>D - Conductive Acetal | A - NPTF<br>B - BSP               | P - Polypropylene<br>K - PVDF (Kynar)<br>D - Conductive Acetal | S - Stainless Steel 304                 | A - Santoprene<br>C - Hytrel®<br>T - PTFE<br>U - Polyurethane       |
| SB20 - 2"<br>SB30 - 3"          | A - Aluminum<br>C - Cast Iron<br>S - Stainless Steel           | A - NPTF<br>B - BSP               | A - Aluminum<br>C - Cast Iron<br>S - Stainless Steel           | P - Carbon Steel<br>S - Stainless Steel | A - Santoprene<br>G - Nitrile<br>T - PTFE / Santoprene<br>V - Viton |

# Maintenance Kits



637432-XX



48495964



637375-XX

| Pump type                  | Models                     | Air Motor Section | Fluid Section      | One Piece Diaphragms | Major Air Valve Assembly |
|----------------------------|----------------------------|-------------------|--------------------|----------------------|--------------------------|
| <b>3/8"</b> Non-Metallic   | PD03P, PE03P               | <b>637428</b>     | <b>637429-XX</b>   | —                    | —                        |
| Non-Metallic               | PD05P, PE05P               | <b>637428</b>     | <b>637427-XX</b>   | —                    | —                        |
| <b>1/2"</b> Metallic       | PM05P                      | <b>637389</b>     | <b>637375-XX</b>   | —                    | —                        |
|                            | PD05A, PD05R, PE05A, PE05R | <b>637428</b>     | <b>637427-XX</b>   | —                    | —                        |
| <b>3/4"</b> Non-Metallic   | PD07P                      | <b>637428</b>     | <b>637427-XX</b>   | —                    | —                        |
| Metallic                   | PD07R                      | <b>637428</b>     | <b>637427-XX</b>   | —                    | —                        |
| <b>1"</b> Non-Metallic     | 6661A, 6661B               | <b>637118-C</b>   | <b>637161-XX-C</b> | <b>48495964</b>      | —                        |
| Metallic                   | 66610, 66611, 66612, 66613 | <b>637118-C</b>   | <b>637119-XX-C</b> | <b>48495964</b>      | —                        |
|                            | PH10A-XSS-SST              | <b>637338</b>     | <b>637339</b>      | —                    | —                        |
| <b>1 1/2"</b> Non-Metallic | 6661T, 6661U               | <b>637118-C</b>   | <b>637165-XX</b>   | <b>48496806</b>      | —                        |
| Metallic                   | 66615, 66616, 66617, 66618 | <b>637118-C</b>   | <b>637124-XX</b>   | <b>48496806</b>      | —                        |
|                            | 66M170                     | <b>637118-C</b>   | <b>637469-XX</b>   | —                    | —                        |
| <b>2"</b> Non-Metallic     | 6662A, 6662B               | <b>637118-C</b>   | <b>637165-XX</b>   | <b>48497374</b>      | —                        |
| Metallic                   | 66625, 66627               | <b>637434</b>     | <b>637432-XX</b>   | <b>48497374</b>      | —                        |
|                            | 66M270                     | <b>637434</b>     | <b>637468-XX</b>   | —                    | —                        |
| <b>3"</b> Metallic         | 66630, 66632               | <b>637434</b>     | <b>637433-XX</b>   | —                    | —                        |
|                            | 66M320                     | <b>637434</b>     | <b>637467-XX</b>   | —                    | —                        |
|                            | PH30F-X                    | <b>637369</b>     | <b>637441-XX</b>   | —                    | <b>637374-X</b>          |

## 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.



Vibration Isolator

- 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

| 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

## Pump Airborne Noise Emissions

The pump sound pressure levels published below have been updated to an Equivalent Continuous Sound Level (L<sub>Aeq</sub>) to meet the intent of ANSI S1.13-1971. CAGI-PNEUROP S5.1 using four microphone locations.

| Pump Port Size (Inches) | Air Operating Pressure (PSI) | Cycles/Minute | Sound Pressure (L <sub>Aeq</sub> ) |
|-------------------------|------------------------------|---------------|------------------------------------|
| <b>Diaphragm Pumps</b>  |                              |               |                                    |
| 1/2                     | 70                           | 60            | 75.0 db(A)                         |
| 1                       | 70                           | 60            | 79.7 db(A)                         |
|                         |                              |               | 80.6 db(A)                         |
| 1-1/2                   | 70                           | 60            | 81.0 db(A)                         |
|                         |                              |               | 82.8 db(A)                         |
| 2                       | 70                           | 60            | *85.0 db(A)                        |
| 3                       | 70                           | 50            | *83.0 db(A)                        |

## Material Service Guideline

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

|                          | Max. Operating Temp Limit F (C) | Scale 1 - 5 (5 is best) |                     |            |
|--------------------------|---------------------------------|-------------------------|---------------------|------------|
|                          |                                 | Chemical Resistance     | Abrasion Resistance | Flex Life* |
| Acetal                   | 180 (82)                        | 3                       | 3                   | -          |
| Aluminum                 | -                               | 1                       | 3                   | -          |
| Cast Iron                | -                               | 3                       | 4                   | -          |
| Geolast (Nitrile Based)  | 180 (82)                        | 2                       | 2                   | 3          |
| Hastelloy C              | -                               | 5                       | -                   | -          |
| Hytrel                   | 150 (66)                        | 2                       | 4                   | 4          |
| Neoprene                 | 200 (93)                        | 2                       | 2                   | 3          |
| Nitrile                  | 180 (82)                        | 2                       | 2                   | 3          |
| Polypropylene            | 175 (80)                        | 4                       | 2                   | -          |
| Polyurethane             | 150 (66)                        | 1                       | 4                   | 4          |
| PTFE                     | 225 (107)                       | 5                       | 2                   | 4**        |
| PVDF                     | 200 (93)                        | 5                       | 2                   | -          |
| Santoprene               | 225 (107)                       | 4                       | 4                   | 5          |
| Stain Steel (300 Series) | -                               | 4                       | 4                   | -          |
| Stain Steel (400 Series) | -                               | 3                       | 5                   | -          |
| Viton                    | 350 (177)                       | 4                       | 2                   | 1          |

\* 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.

# Viscosity Conversion Chart

| Centi Poise | Poise | Saybolt Universal (SSU) | Saybolt Furol | Ford No. 3 | Ford No. 4 | Zahn No. 1 | Zahn No. 2 | Zahn No. 3 |
|-------------|-------|-------------------------|---------------|------------|------------|------------|------------|------------|
| 1           | .01   | 31                      |               |            |            |            |            |            |
| 2           | .02   | 34                      |               |            |            |            |            |            |
| 4           | .04   | 38                      |               |            |            |            |            |            |
| 7           | .07   | 47                      |               |            |            |            |            |            |
| 10          | .10   | 60                      |               | 8          |            |            |            |            |
| 15          | .15   | 80                      | 13            | 10         | 5          | 30         | 16         |            |
| 20          | .20   | 100                     | 15            | 12         | 10         | 34         | 17         |            |
| 25          | .24   | 130                     | 17            | 15         | 12         | 37         | 18         |            |
| 30          | .30   | 160                     | 19            | 19         | 14         | 41         | 19         |            |
| 40          | .40   | 210                     | 24            | 25         | 18         | 44         | 20         |            |
| 50          | .50   | 260                     | 29            | 29         | 22         | 52         | 22         |            |
| 60          | .60   | 320                     | 34            | 33         | 25         | 60         | 24         |            |
| 70          | .70   | 370                     | 39            | 36         | 28         | 68         | 27         |            |
| 80          | .80   | 430                     | 42            | 41         | 31         | 72         | 30         |            |
| 90          | .90   | 480                     | 49            | 45         | 32         | 81         | 34         |            |
| 100         | 1.0   | 530                     | 54            | 50         | 34         | 88         | 37         | 10         |
| 120         | 1.2   | 580                     | 59            | 58         | 41         |            | 41         | 12         |
| 140         | 1.4   | 690                     | 70            | 66         | 45         |            | 49         | 14         |
| 160         | 1.6   | 790                     | 79            | 72         | 50         |            | 58         | 16         |
| 180         | 1.8   | 900                     | 91            | 81         | 54         |            | 66         | 18         |
| 200         | 2.0   | 1000                    | 100           | 90         | 58         |            | 74         | 20         |
| 220         | 2.2   | 1100                    | 110           | 98         | 62         |            | 82         | 23         |
| 240         | 2.4   | 1200                    | 120           | 106        | 65         |            | 88         | 25         |
| 260         | 2.6   | 1280                    | 128           | 115        | 68         |            |            | 27         |
| 280         | 2.8   | 1380                    | 138           | 122        | 70         |            |            | 30         |
| 300         | 3.0   | 1475                    | 148           | 130        | 74         |            |            | 32         |
| 320         | 3.2   | 1530                    | 153           | 136        | 89         |            |            | 34         |
| 340         | 3.4   | 1630                    | 163           | 142        | 95         |            |            | 36         |
| 360         | 3.6   | 1730                    | 173           | 150        | 100        |            |            | 39         |
| 380         | 3.8   | 1850                    | 185           | 160        | 106        |            |            | 41         |
| 400         | 4.0   | 1950                    | 195           | 170        | 112        |            |            | 43         |
| 420         | 4.2   | 2050                    | 205           | 180        | 118        |            |            | 46         |
| 440         | 4.4   | 2160                    | 216           | 188        | 124        |            |            | 48         |
| 460         | 4.6   | 2270                    | 227           | 200        | 130        |            |            | 50         |
| 480         | 4.8   | 2380                    | 238           | 210        | 137        |            |            | 52         |
| 500         | 5.0   | 2480                    | 248           | 218        | 143        |            |            | 54         |
| 550         | 5.5   | 2660                    | 266           | 230        | 153        |            |            | 58         |
| 600         | 6.0   | 2900                    | 290           | 250        | 170        |            |            | 64         |
| 700         | 7.0   | 3380                    | 338           | 295        | 194        |            |            | 68         |
| 800         | 8.0   | 3880                    | 388           | 340        | 223        |            |            | 76         |
| 900         | 9.0   | 4300                    | 430           | 365        | 247        |            |            |            |
| 1000        | 10.0  | 4600                    | 460           | 390        | 264        |            |            |            |
| 1100        | 11    | 5200                    | 520           | 445        | 299        |            |            |            |
| 1200        | 12    | 5620                    | 562           | 480        | 323        |            |            |            |
| 1300        | 13    | 6100                    | 610           | 520        | 350        |            |            |            |
| 1400        | 14    | 6480                    | 648           | 550        | 372        |            |            |            |
| 1500        | 15    | 7000                    | 700           | 595        | 400        |            |            |            |
| 1600        | 16    | 7500                    | 750           | 635        | 430        |            |            |            |
| 1700        | 17    | 8000                    | 800           | 680        | 460        |            |            |            |
| 1800        | 18    | 8500                    | 850           | 720        | 490        |            |            |            |
| 1900        | 19    | 9000                    | 900           | 760        | 520        |            |            |            |
| 2000        | 20    | 9400                    | 940           | 800        | 540        |            |            |            |
| 2100        | 21    | 9850                    | 985           | 835        | 565        |            |            |            |
| 2200        | 22    | 10300                   | 1030          | 875        | 592        |            |            |            |
| 2300        | 23    | 10750                   | 1075          | 910        | 617        |            |            |            |
| 2400        | 24    | 11200                   | 1120          | 950        | 645        |            |            |            |
| 2500        | 25    | 11600                   | 1160          | 985        | 676        |            |            |            |
| 3000        | 30    | 14500                   | 1450          | 1230       | 833        |            |            |            |
| 3500        | 35    | 16500                   | 1650          | 1400       | 950        |            |            |            |
| 4000        | 40    | 18500                   | 1850          | 1570       | 1060       |            |            |            |
| 4500        | 45    | 21000                   | 2100          | 1780       | 1175       |            |            |            |
| 5000        | 50    | 23500                   | 2350          |            | 1350       |            |            |            |
| 5500        | 55    | 26000                   | 2600          |            | 1495       |            |            |            |
| 6000        | 60    | 28000                   | 2800          |            | 1605       |            |            |            |
| 6500        | 65    | 30000                   | 3000          |            | 1720       |            |            |            |
| 7000        | 70    | 32500                   | 3250          |            | 1870       |            |            |            |
| 7500        | 75    | 35000                   | 3500          |            | 2010       |            |            |            |
| 8000        | 80    | 37000                   | 3700          |            | 2120       |            |            |            |
| 8500        | 85    | 39500                   | 3950          |            | 2270       |            |            |            |
| 9000        | 90    | 41000                   | 4100          |            | 2360       |            |            |            |
| 9500        | 95    | 43000                   | 4350          |            | 2470       |            |            |            |
| 10000       | 100   | 46500                   | 4650          |            | 2670       |            |            |            |
| 15000       | 150   | 69400                   | 6940          |            |            |            |            |            |
| 20000       | 200   | 92500                   | 9250          |            |            |            |            |            |
| 30000       | 300   | 138600                  | 13860         |            |            |            |            |            |
| 40000       | 400   | 185000                  | 18500         |            |            |            |            |            |
| 50000       | 500   | 231000                  | 23100         |            |            |            |            |            |
| 60000       | 600   | 277500                  | 27750         |            |            |            |            |            |
| 70000       | 700   | 323500                  | 32350         |            |            |            |            |            |
| 80000       | 800   | 370000                  | 37000         |            |            |            |            |            |
| 90000       | 900   | 415500                  | 41550         |            |            |            |            |            |
| 100000      | 1000  | 462000                  | 46200         |            |            |            |            |            |
| 125000      | 1250  | 578000                  | 57800         |            |            |            |            |            |
| 150000      | 1500  | 694000                  | 69400         |            |            |            |            |            |
| 175000      | 1750  | 810000                  | 81000         |            |            |            |            |            |
| 200000      | 2000  | 925000                  | 92500         |            |            |            |            |            |

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