

# ARO

## EXPert Series Diaphragm Pumps

3/8" through 3" Fluid Ports



**IR** Ingersoll Rand®

## 1-1/2" Metallic EXP Models EXPerT Series Pump

# Where's Your EXP Opportunity?

- ▷ Tanker / Truck / Train Unloading
- ▷ Bulk Tank / Tank Farm Transfer
- ▷ Waste Water Treatment / Fluid Filtration
- ▷ Formulation
- ▷ Basic Transfer / Supply
- ▷ Packaging / Filling
- ▷ Batching / Blending
- ▷ System Flush
- ▷ Recirculation / Reclamation

### Chemical Processing

#### Formulation Of:

- Soaps
- Detergents
- Cleansing / Polishing Agents
- Paints / Dyes
- Adhesives
- Inks
- Shear Sensitive Materials

### Surface Preparation:

#### Supply and Transfer of:

- E-Coat
- Etching
- Plating

### Pharmaceuticals

#### Supply and Transfer of:

- FDA Materials



### Why Diaphragm Pumps?

- Seamless Design
- Explosion-Proof
- Low Material Shear
- Ease of Maintenance
- Can be Run Dry Without Damage
- Portable
- Self Priming
- Easy-to-Apply

### Why ARO® Diaphragm Pumps?

- Efficient: The Best "Total Cost of Ownership" in the Industry
- Worldwide Distribution Network for Sales and Service
- 5-Year Warranty

## What Do Your Pumps Cost You?

# EXPERT Series Pump

The purchase price of a traditional diaphragm pump is the smallest piece of the total pump cost-of-ownership pie. There are downtime costs, energy costs, parts costs and labor costs to consider as well. Add all these up and you're dealing with a sizeable financial commitment that gets tougher to swallow with each passing quarter. With EXP, you can slice the total cost-of-ownership pie down to a much more digestible size. This is what "Solutionizing" is all about; providing smart products that not only demonstrate superior performance, but earn their keep while they're at it.

### EXP Reliability

Traditional Pump Downtime Problems	EXP Solution	The Payoff
Pump Freezing	Quick Dump™ Checks	Downtime from Freezing Eliminated
Pump Stalling	SimulShift™ Valve / Unbalanced Air Valve	Process Production Uptime; No More Hammers or Restart Buttons
Diaphragm Failure	Convuluted Diaphragms	Up to 4-Times the Life of Traditional Diaphragms
Air Motor Corrosion Due to Chemical Attack	Engineered Thermoplastic Construction	Extended Pump Life
Pump Leakage	Engineered Bolted Construction	Zero Leakage Downtime Safer, Cleaner Environment Material Cost Savings

### EXP Efficiency

Traditional Pump Design Issues	EXP Design Solution	The Payoff
Compressed Air "Blow-By" Caused by Inferior Design	Positive Seal, Ceramic "D" Valve	No Energy Wasted During Pump Idle
Poor Energy Efficiency	Quick Dump Checks SimulShift Valves	Lower Energy Costs

### EXP Serviceability

Traditional Pump Service Problems	EXP Service Solution	The Payoff
Labor/Time: Pulling & Replacing Failed Pumps Labor/Time: Tearing Down and Replacing Failed Parts Complex or Incomplete Service Kits	Longer Lasting Wear Parts i.e. Convuluted Diaphragms Easy-Access Major Air Valve Simplified Service Kits	Significantly Reduced Labor and Parts Costs
Cost Of Stocking Spares (Inventory)	Longer - Lasting Wear Components Reduced Kits	Reduced Parts Inventory (Tied-Up Capital, Stocking, Taxes, etc.)

### Are EXP Energy Savings For Real? Let's Do The Math:

#### EXP (ARO) Vs. Most "Advanced" Competitor

**Test Subjects:** 2" (Ports) Polypropylene Constructed Pumps with Teflon Diaphragms

**Pump Operation:** 8 Hours a Day/5 Days a Week/250 Days a Year = 2,000 Hours

**Pump Delivery:** 100 GPM @ 25 PSI (Back Pressure)

**Energy Cost:** \$0.06 Per Kilowatt Hour

**EXP Air CFM Advantage:** 37 @ 100 GPM

### EXP Annual Cost Savings Per Pump: \$618.93

**Note:** Testing of pumps based on Hydraulic Institute / ANSI (10.6) air-operated pump test guidelines. All tests were conducted on new, out-of-the-box models. Both pumps were tested on Hydraulic Institute - conforming test loop at 25 PSI back pressure, pumping 100 gallons per minute. The fluid being pumped was water. For complete test guidelines and procedure information, contact the manufacturer.

## High Performance Diaphragm Pumps

# EXPerT Series Pump



### **Productivity**

Maximized flow rates + Minimized pulsation and air consumption = Maximum Performance



### **Versatility**

Multiple porting options available along with interface options allow you to customize this pump specifically to your OEM application.



### **Reliability**

Lube Free Patented Differential Valve both on Major air valve and SimulShift (Pilot Valve) provides reliable Worry Free Operation – Fluid On demand every time.



### **Environmentally Sound**

Bolted Construction in conjunction with a wide range of material options provides maximum chemical and leak resistance.



### **Serviceability**

Modular Construction, reduced parts count and simple to use repair kits will minimize repair time and cost.

**Don't forget the other compelling reasons to use ARO Diaphragm Pumps:** ARO Diaphragm pumps are simple to apply to your application because they are self-priming and can be run at variable flows controlled by air pressure or fluid back pressure. They can handle materials that are abrasive and/or shear sensitive. They can also be run dry without damage to the pump.

## *The Key To EXP: Patented ARO Air Motor Technology*

### **“Simul-Shift™” Valve**

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

### **“D” Valve**

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

### **“Unbalanced” Major Air Valve**

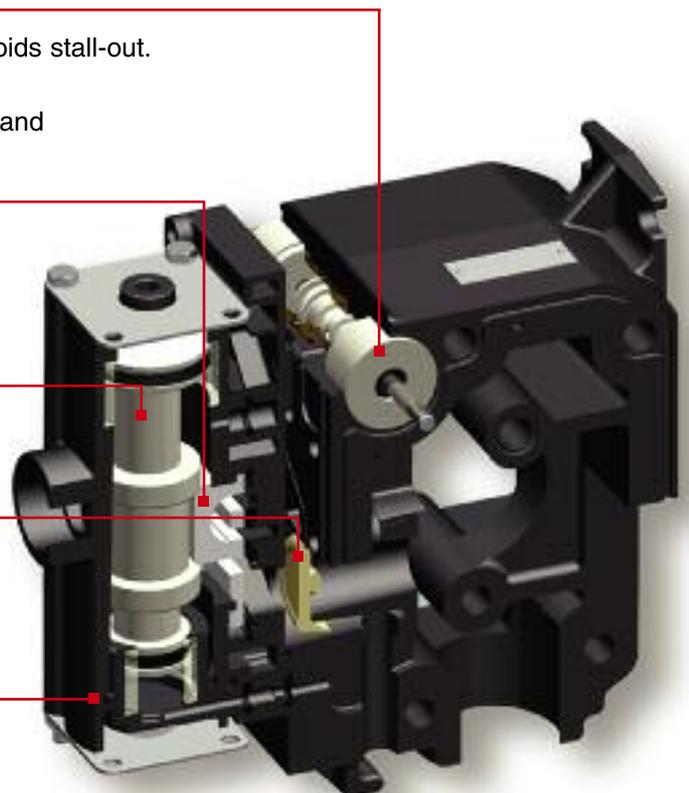
- Unbalanced valve design eliminates valve centering and pump stall-out, even under low air inlet pressures.

### **“Quick Dump™” Checks**

- Eliminates pump ice-up by diverting cold, wet exhaust air away from the major air valve.
- Removes the need for space heaters, hot water taps or other ice preventive contraptions.

### **Simplified Major Air Valve Block**

- New valve block design is easy to access, simple to service and lube free.
- Engineered thermoplastic body combines strength with corrosion resistance.



*EXP Motor Cutaway*

## Patented Valve Technology in Operation

# EXPerT Series Pump

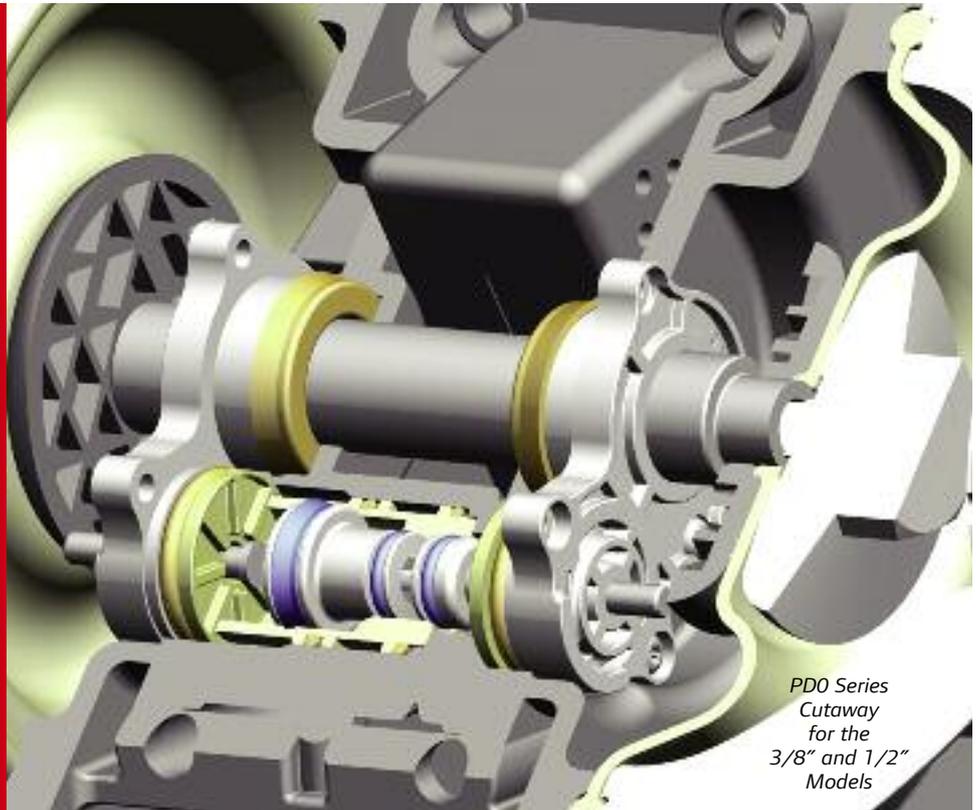
Unbalanced valve design eliminates valve centering and pump stall-out even under low air inlet pressures.

### “D” Valve

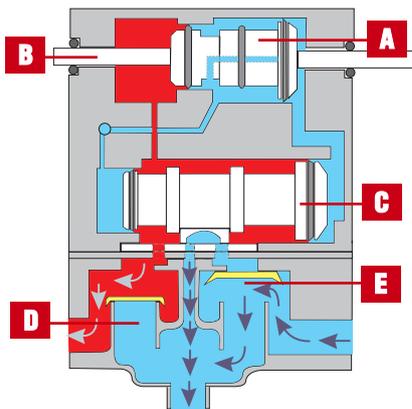
- ▷ Provides a positive seal.
- ▷ Helps insure optimum energy efficiency while avoiding costly air “blow-by.”
- ▷ Ceramic construction insures long service life.

### “Simul-Shift” 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 material flow.



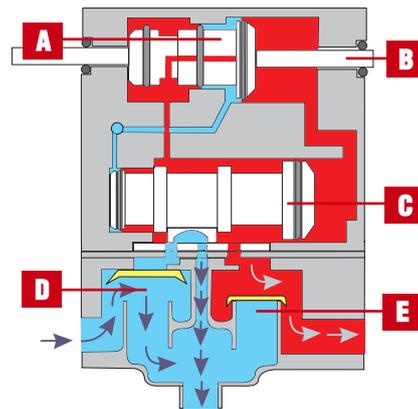
**Diaphragm Moving from Left to Right**



Diaphragm has pushed actuator pin (B) and Simul-Shift Valve (A) to the right.

- 1.) Compressed Air (red) pneumatically holds the Simul-Shift Valve (A) and the Major Air Valve (C) in position. Large ends of the Simul-Shift Valve (A) and Major Air Valve (C) are vented to exhaust.
- 2.) The left Quick Dump Check (D) blocks the exhaust port. Compressed air flows around Quick Dump Check (D) into the left diaphragm chamber.
- 3.) The right Quick Dump Check (E) lifts to open the exhaust port and allows cold, wet exhaust air (blue) from the right diaphragm chamber to flow into the expansion chamber, while diverting cold, wet exhaust air (blue) from the Major Air Valve.
- 4.) Diaphragm reverses direction (C)

**Diaphragm Moving Right to Left**



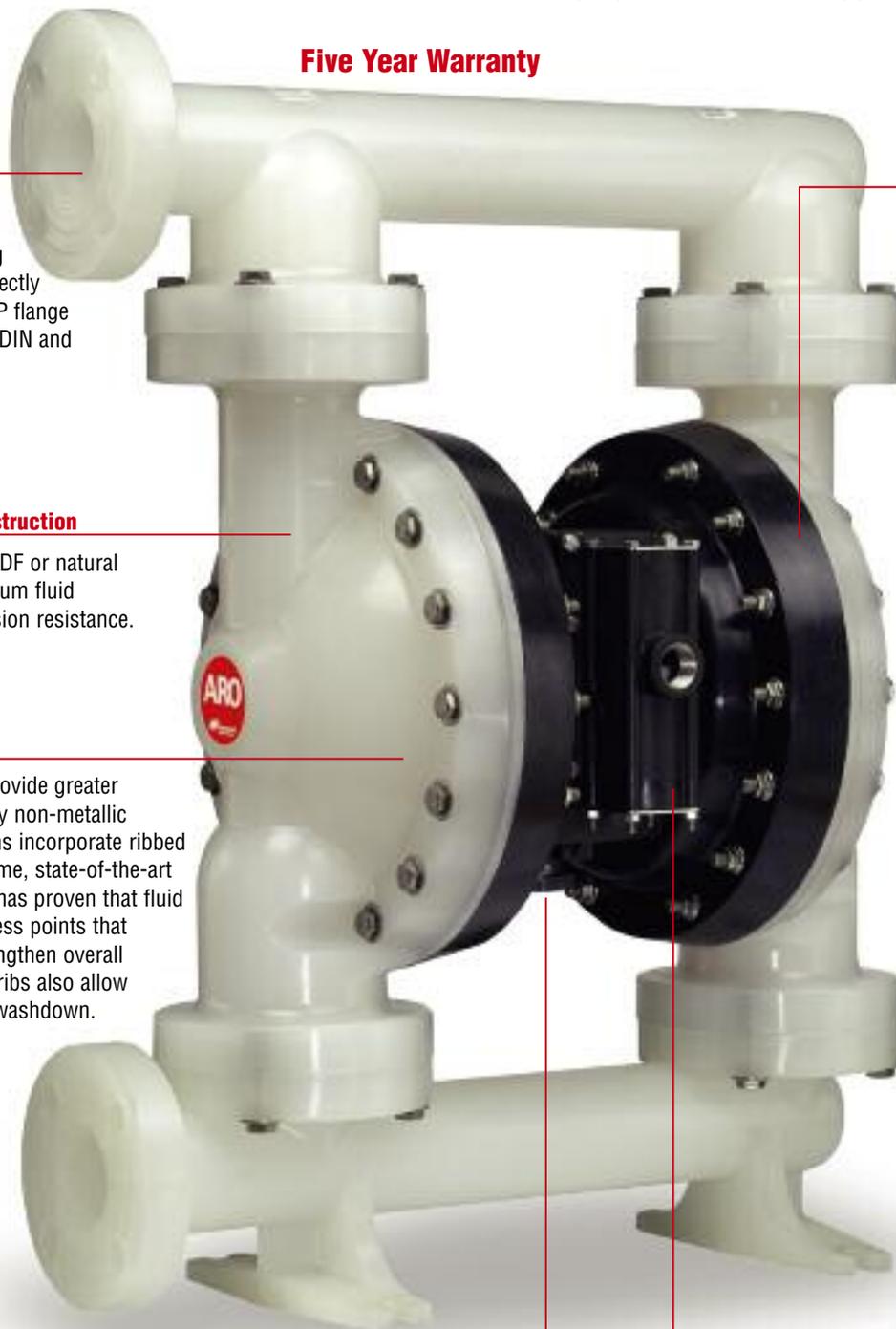
- 1.) The diaphragm pushes the right Actuator Pin (B) mechanically moving the Simul-Shift Valve (A) to the left.
- 2.) Compressed air flows to the large side of the Simul-Shift Valve, pneumatically moving the valve to the position shown.
- 3.) Compressed air also flows to the large end of the Major Air Valve (C), pneumatically shifting it to the left.
- 4.) Shift of the Major Air Valve (C) results in an air pressure differential between the Quick Dump Checks (D&E) - causing the Quick Dump Checks to shift position.
- 5.) The right Quick Dump Check (E) blocks the exhaust port. Compressed air (red) flows around the Quick Dump Check into the right diaphragm chamber.
- 6.) The left Quick Dump Check (D) lifts to open the exhaust port and allows cold, wet exhaust air (blue) from the left diaphragm chamber to flow into the expansion chamber, while diverting cold, wet exhaust air (blue) from the Major Air Valve (C).
- 7.) Diaphragms reverse direction

# The Ultimate Process Pump

## EXPERT Series Pumps: Non-Metallic Models

From its simple beginnings as a utility dewatering / trash pump, through its various phases of design evolution, the diaphragm pump has been a favorite with process professionals everywhere. Why? Simplicity. The ARO EXP design team has taken this fundamental feature and

engineered efficiency, compatibility and economy into every aspect of the new EXP Diaphragm Pump. Economy in fewer repair parts and labor. Economy in saved energy. Economy in superior performance. Do you want to reduce pump downtime while boosting production? Here it is.



### Five Year Warranty

#### Side Fluid Inlet/Outlet Ports

Easy to install side-porting permits fast plumb-up while avoiding fluid material leaking directly onto the pump. The EXP flange bolt pattern meets both DIN and ANSI requirements.

#### Body Materials of Construction

Choose from natural PVDF or natural polypropylene for optimum fluid compatibility and corrosion resistance.

#### Ribless Fluid Caps

Originally intended to provide greater structural integrity, many non-metallic diaphragm pump designs incorporate ribbed fluid caps. Since that time, state-of-the-art Finite Element Analysis has proven that fluid cap ribs are actually stress points that weaken rather than strengthen overall structural integrity. No ribs also allow for easier cleaning and washdown.

#### Corrosion - Resistant Center Body

**Non-Metallic Air Motor** - Featuring a glass-filled polypropylene construction and thermoset vinyl ester, the EXP air motor is both strong and resistant to chemical attack.

**Stainless Steel Hardware** - EXP air motor and end cap fasteners are made of 316 stainless steel for complete corrosion resistance.

#### Long-Lasting Convoluted Diaphragms

EXP convoluted diaphragms can last as long as four times that of traditional diaphragms under normal operating conditions.

#### Stall-Free, Ice-Free Air Motor Design

The new EXP air motor has exclusive Simul-Shift™ valve technology to help insure faster pump trip-over with smoother flow. It also features Quick Dump valves; the final answer to pump stalling due to ice build-up.

**Model Overview: Non-Metallic**

**EXPert Series Pumps: Non-Metallic Models**

NON-METALLIC



<b>Models:</b>	<b>3/8"</b>	<b>1/2"</b>	<b>3/4"</b>	<b>1"</b>	<b>1-1/2"</b>	<b>2"</b>
<b>Maximum Flow GPM (LPM)</b>	10.6 (40.1)	14.4 (54.5)	14.8 (56)	53 (200)	123 (465)	184 (696)
<b>Max. Discharge Pressure PSI (BAR)</b>	100 (6.9)	100 (6.9)	100 (6.8)	120 (8.3)	120 (8.3)	120 (8.3)
<b>Fluid Ports Inlet/Outlet (BSP)</b>	3/8 - 18 N.P.T.F. - 1 Rp 3/8(3/8-19 BSP) Parallel (Side or Center)	1/2 - 18 N.P.T.F. - 1 Rp 1/2(1/2-14 BSP) Parallel (Side or Center)	3/4 - 14 N.P.T.F. - 1 Rp 3/4(3/4-14 BSP) Parallel	1" ANSI/DIN Flange (Side or Center) 1 - 11-1/2" NPT Rp 1(1-11 BSP) (Center Discharge)	1-1/2" ANSI/DIN Flange (Side or Center)	2" ANSI/DIN Flange (Side Discharge)
<b>Materials of Construction</b>	Acetal Polypropylene PVDF	Acetal Polypropylene PVDF	Polypropylene	Polypropylene PVDF	Polypropylene PVDF	Polypropylene PVDF
<b>Pump Weight lbs (Kg.)</b>	4.16 (1.89) Acetal Single Port 4.26 (1.93) Acetal Multi Port 4.50 (2.04) PVDF Single Port 4.62 (2.10) PVDF Multi Port 3.44 (1.56) Poly Single Port 3.55 (1.59) Poly Multi Port	6.28 (2.85) 6.67 (3.03) 6.78 (3.08) 7.24 (3.28) 5.21 (2.36) 5.44 (2.47)	5.61 (2.54)	19.35 (8.78) Poly Threaded 19.59 (8.89) Poly Center Port 19.87 (9.01) Poly Side Port 25.83 (11.72) PVDF Threaded 26.72 (12.12) PVDF Center Port 27.15 (12.32) PVDF Side Port	42.60 (19.32) Poly Side Port 63.94 (29.0) PVDF Side Port 42.30 (19.19) Poly Center Port 55.94 (25.37) PVDF Center Port	85.3 (38.7) Poly 110.9 (50.3) PVDF
<b>Max. Solids inches (mm)</b>	1/16" (1.6)	3/32" (2.4)	3/32" (2.4)	1/8" (3.2)	1/4" (6.4)	1/4" (6.4)
<b>Maximum Dry Suction Lift ft (m)</b>	9.25 (2.8)	15.0 (4.5)	15.0 (4.5)	19 (5.7)	14 (4.2)	14 (4.2)
<b>Recommended Filter/Regulator Air Line Kit</b>	P39124-600 66073-1	P39124-600 66073-1	P39124-600 66073-1	P39224-600 66073-2	P39334-600 66084-1	P39454-610 66109

# 3/8" Non-Metallic Models OEM / Transfer Pumps

## 3/8" Non-Metallic Performance Specifications

<b>Ratio:</b>	1:1		
<b>Maximum GPM (LPM):</b>	10.6 (40.1)	8.7 (32.9)	Flex check
<b>Displacement per cycle Gallons (Liters):</b>	0.022 (.083)	.013 (0.068)	Flex check
<b>Air Inlet (Female):</b>	1/4 - 18 P.T.F. SAE Short		
<b>Fluid Inlet:</b>	3/8 - 18 N.P.T.F. - 1 (side or center) Rp 3/8 (3/8 - 19 BSP side or center)		
<b>Fluid Outlet:</b>	3/8 - 18 N.P.T.F. - 1 (side) Rp 3/8 (3/8 - 19 BSP side)		
<b>Max. operating pressure psi (bar):</b>	100 (6.9)		
<b>Suspended solids max. dia. in. (mm):</b>	1/16" (1.6) Flex check (Fibers)		
<b>Weight lbs (kg):</b>	PD03P-XDS-XXX	4.16 (1.89)	
	PD03P-XES-XXX	4.26 (1.93)	
	PD03P-XKS-XXX	4.50 (2.04)	
	PD03P-XLS-XXX	4.62 (2.10)	
	PD03P-XPS-XXX	3.44 (1.56)	
	PD03P-XRS-XXX	3.55 (1.59)	
<b>Maximum dry suction lift ft (m):</b>	9.25 (2.8)		
<b>Sound Level:</b>	PSI	Cycles / Min	db(A)
	70	60	72.7



## Ordering Menu

<b>PX03</b>	<b>P</b>	-	<b>X</b>	<b>X</b>	<b>X</b>	-	<b>XXX</b>	-	<b>XXX</b>	
<b>Model Series</b>	<b>Center Section</b>		<b>Connection</b>		<b>Hardware</b>		<b>Seat Material</b>		<b>Ball Material</b>	<b>Diaphragm Material</b>
PE03 Standard Pump PE03 Remote Actuation Capable	P Polypropylene		A 3/8 - 18 N.P.T.F.-1 B Rp 3/8 (3/8 - 19 BSP) <b>Wetted Parts</b> D Groundable Acetal (Single Port) E Groundable Acetal (Multiple Port) K PVDF (Single Port) L PVDF (Multiple Port) P Polypropylene (Single Port) R Polypropylene (Multiple Port)	S	S Stainless Steel		D Acetal K PVDF P Polypropylene S Stainless Steel O Flex check	A Santoprene® C Hytrel® J Nitrile* N Neoprene* S Stainless Steel T PTFE V Viton®	A Santoprene C Hytrel T PTFE / Santoprene V Viton	AOS Remote Actuation Capable**

\*Flex check models

## Accessories\*

### Air Line Connection Kit | Kit No. 66073-1

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

### Cycle Counter Kit | Kit No. 67386

Provides a closed contact output for monitoring pump operation. Can be used to monitor cycle rates, preventative maintenance and rough flow rate indication.

### Service Repair Kits | Kit No. 637428 (air motor) Kit No. 637429-XX (fluid section)

### Wall Mount Bracket | 67388

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

\*\*See options on page 45.

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



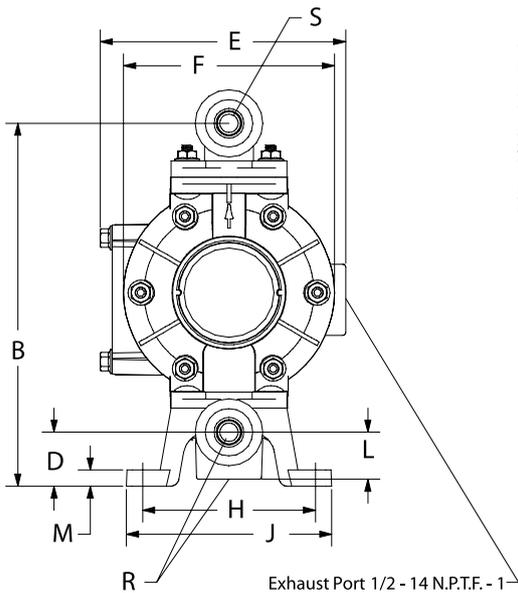
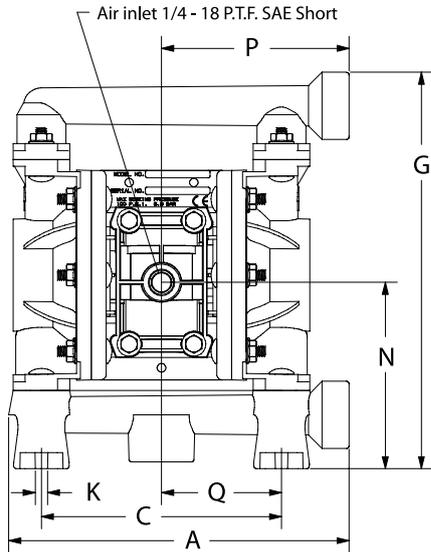
Air Line Connection Kit 66073-1



Wall Mount Bracket Kit 67388

# 3/8" Non-Metallic Dimensions and Flow Curves OEM / Transfer Pumps

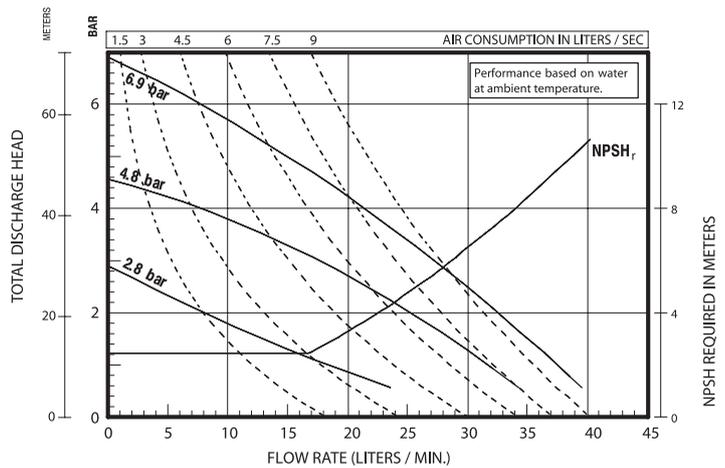
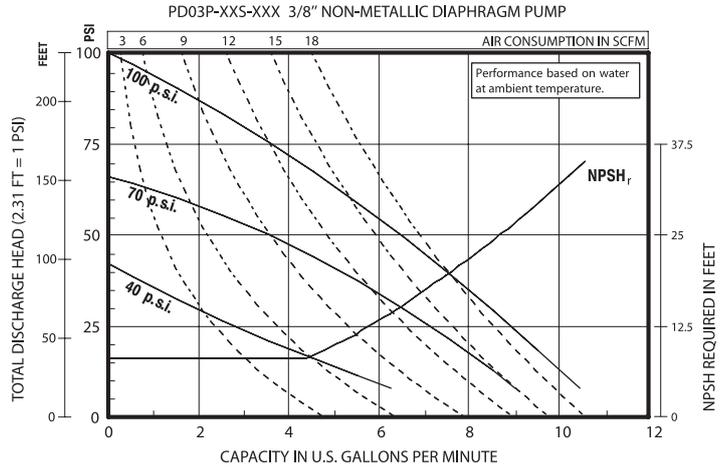
NON-METALLIC



### 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)

<b>Model</b>	<b>"R" Material Inlet</b>	<b>"S" Material Outlet</b>
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)



PE03P-APS-PAA -A0S  
with 637442-1 kit

### Dual Inlet/Outlet Kits

- 637442-1 (NPT Poly)
- 637442-4 (BSP Poly)
- 637442-3 (NPT PVDF)
- 637442-6 (BSP PVDF)
- 637442-2 (NPT ACETAL)
- 637442-5 (BSP ACETAL)

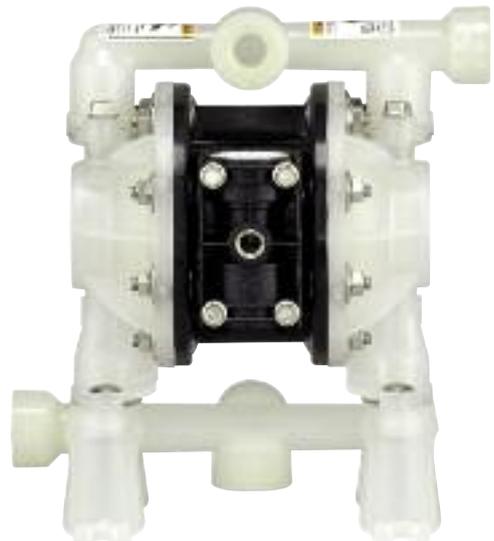
**Note:** For dual inlet / outlet configuration, first order a standard pump, then select the appropriate dual inlet / outlet kit. Upon receipt of pump, replace the original inlet and outlet manifolds with the dual inlet/outlet kit.

For example: PD03P-ARS-PSS (standard pump)  
637442-1 (dual inlet/outlet kit)

# 1/2" Non-Metallic Models OEM / Transfer Pumps

## 1/2" Non-Metallic Performance Specifications

<b>Ratio:</b>	1:1		
<b>Maximum GPM (LPM):</b>	14.4 (54.5)		
<b>Displacement per cycle Gallons (Liters):</b>	0.039 (.15)		
<b>Air Inlet (Female):</b>	1/4 -18 P.T.F. SAE SHORT		
<b>Fluid Inlet/Outlet:</b>	1/2 -14 N.P.T.F. - 1 1/2 -14 BSP, parallel		
<b>Max. operating pressure psi (bar):</b>	100 (6.9)		
<b>Suspended solids max. dia. in. (mm):</b>	3/32" (2.4)		
<b>Weight lbs (kg):</b>	PD05P-XDS-XXX-B	6.28 (2.85)	
	PD05P-XES-XXX-B	6.67 (3.03)	
	PD05P-XKS-XXX-B	6.78 (3.08)	
	PD05P-XLS-XXX-B	7.24 (3.28)	
	PD05P-XPS-XXX-B	5.21 (2.36)	
	PD05P-XRS-XXX-B	5.44 (2.47)	
	<b>Note:</b> PE05P-XXS-XXX-B0S, subtract 0.42 (0.19)		
<b>Maximum dry suction lift ft (m):</b>	15.0 (4.5)		
<b>Sound Level:</b>	PSI	Cycles / Min	db(A)
	70	60	71.0



## Ordering Menu

<b>PX05</b>	<b>P</b>	<b>-</b>	<b>X</b>	<b>X</b>	<b>S</b>	<b>-</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>-</b>	<b>BXX</b>
<b>Model Series</b>	<b>Center Section Material</b>		<b>Fluid Connection</b>	<b>Fluid Caps/ Manifold Material</b>	<b>Hardware Material</b>		<b>Seat Material</b>	<b>Ball Material</b>	<b>Diaphragm Material</b>		<b>Specialty Code</b>
<b>PD05</b> Standard <b>PE05</b> Remote Actuation Capable	<b>P</b> Polypropylene	<b>A</b> 1/2" NPT <b>B</b> 1/2" BSP	<b>D</b> Groundable Acetal (single port) <b>E</b> Groundable Acetal (multiple port) <b>K</b> PVDF (single port) <b>L</b> PVDF (multiple port) <b>P</b> Polypropylene (single port) <b>R</b> Polypropylene (multiple port)	<b>S</b> Stainless Steel	<b>D</b> Acetal <b>K</b> PVDF <b>P</b> Polypropylene <b>S</b> Stainless Steel	<b>A</b> Santoprene <b>C</b> Hytrel <sup>†</sup> <b>G</b> Nitrile <b>S</b> Stainless Steel <b>T</b> PTFE/Santoprene <b>U</b> Polyurethane <b>V</b> Viton	<b>A</b> Santoprene <b>C</b> Hytrel <sup>†</sup> <b>G</b> Nitrile <b>T</b> PTFE/Santoprene <b>U</b> Polyurethane <b>V</b> Viton	<b>B</b> Standard <b>B0S</b> Remote Actuation Capable**			

<sup>†</sup> Hytrel replaces Buna, Geolast, Polyurethane and Nitrile producing superior chemical compatibility and diaphragm life

## Accessories\* (for specialty pump application options and additional accessories see pages 40-45)

**Air Line Connection Kit | Kit No. 66073-1**  
Kit includes Piggyback Filter/Regulator with gauge, pipe nipple and a 5-foot section of air hose.

**Service Repair Kits | Kit No. 637428 (air motor for PX05P)**  
**Kit No. 637427-XX (fluid section)**

**Muffler Kit | Kit No. 637438 (ported exhaust)**

**Wall Mount Kit | 76763**

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

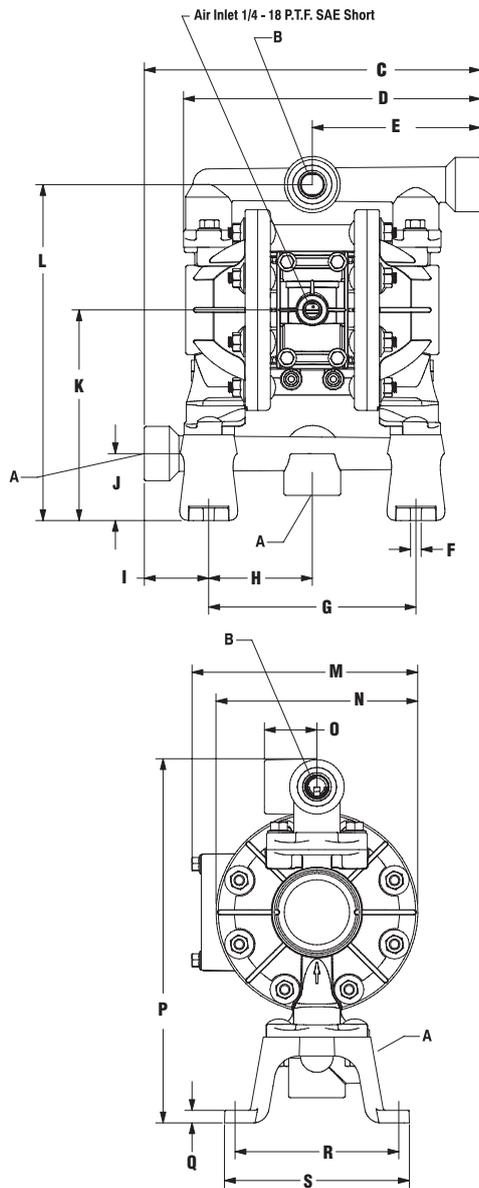
\*\*See options on page 45.



Air Line Connection Kit 66073-1

# 1/2" Non-Metallic Dimensions and Flow Curves OEM / Transfer Pumps

NON-METALLIC

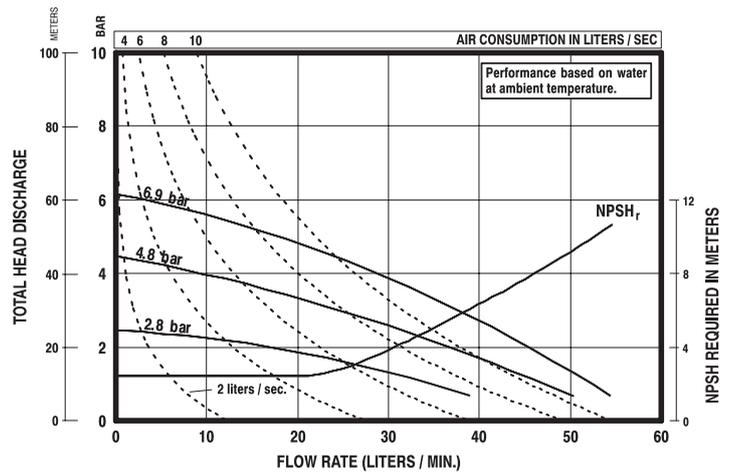
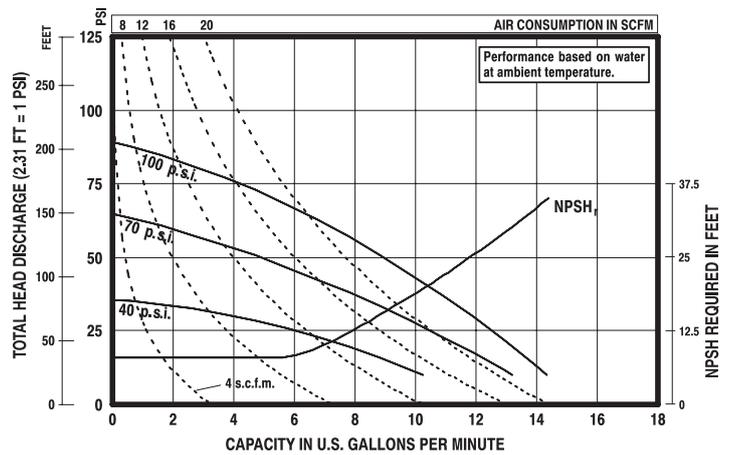


<b>Pump Model</b>	<b>"A" Material Inlet</b>
PD05P- <b>A</b> XS-XXX-B	1/2 - 14 NPTF-1
<b>Pump Model</b>	<b>"B" Material Outlet</b>
PD05P- <b>A</b> XS-XXX-B	1/2 - 14 NPTF-1
<b>Pump Model</b>	<b>"A" Material Inlet</b>
PD05P- <b>B</b> XS-XXX-B	Rp 1/2 (1/2 - 14 BSP, parallel)
<b>Pump Model</b>	<b>"B" Material Outlet</b>
PD05P- <b>B</b> XS-XXX-B	Rp 1/2 (1/2 - 14 BSP, parallel)

### DIMENSIONS

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

PD05P-XXS-XXX 1/2" NON-METALLIC DIAPHRAGM PUMPS



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

For additional information contact technical support at (800)495-0276



PE05P-APS-PAA-B0S  
with 637440-1 kit

### Dual Inlet/Outlet Kits

- 637440-1 (NPT Poly)
- 637440-4 (BSP Poly)
- 637440-2 (NPT Acetal)
- 637440-5 (BSP Acetal)
- 637440-3 (NPT PVDF)
- 637440-6 (BSP PVDF)

**Note:** For dual inlet / outlet configuration, first order a standard pump, then select the appropriate dual inlet / outlet kit. Upon receipt of pump, replace the original inlet and outlet manifolds with the dual inlet/outlet kit.

For example: PD05P-ARS-PSS-B (standard pump)  
637440-1 (dual inlet/outlet kit)

# 3/4" Non-Metallic Models OEM / Transfer Pumps

## 3/4" Non-Metallic Performance Specifications

<b>Ratio:</b>	1:1
<b>Maximum GPM (LPM):</b>	14.8 (56.0)
<b>Displacement per cycle Gallons (Liters):</b>	0.032 (.12)
<b>Air Inlet (Female):</b>	1/4 -18 P.T.F. SAE SHORT
<b>Fluid Inlet/Outlet:</b>	3/4 - N.P.T.F. - 1 Rp 3/4 (3/4 - 14 BSP)
<b>Max. operating pressure psi (bar):</b>	100 (6.9)
<b>Suspended solids max. dia. in. (mm):</b>	3/32" (2.4)
<b>Weight lbs (kg):</b>	5.61 (2.54)
<b>Maximum dry suction lift ft (m):</b>	15.0 (4.5)

<b>Sound Level:</b>	PSI	Cycles / Min	db(A)
	70	60	75.0



## Ordering Menu

<b>PD07</b>	<b>P</b>	<b>-</b>	<b>X</b>	<b>P</b>	<b>S</b>	<b>-</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>Model Series</b>	<b>Center Section Material</b>		<b>Fluid Connection</b>	<b>Fluid Caps/ Manifold Material</b>	<b>Hardware Material</b>		<b>Seat Material</b>	<b>Ball Material</b>	<b>Diaphragm Material</b>
PD07 Standard	P Polypropylene	A 3/4" NPT B 3/4" BSP	P Polypropylene	S Stainless Steel	P Polypropylene	A Santoprene T Teflon/PTFE	A Santoprene C Hytrel <sup>†</sup> T Teflon/PTFE		

## Accessories

### Air Line Connection Kit | Kit No. 66073-1

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

### Service Repair Kits | Kit No. 637428 (air motor for PX057)

Kit No. 637427-XX (fluid section)

### Muffler Kit | Kit No. 637438 (ported exhaust)

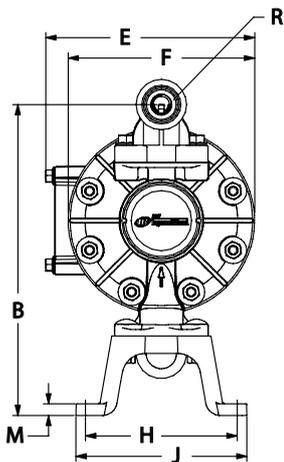
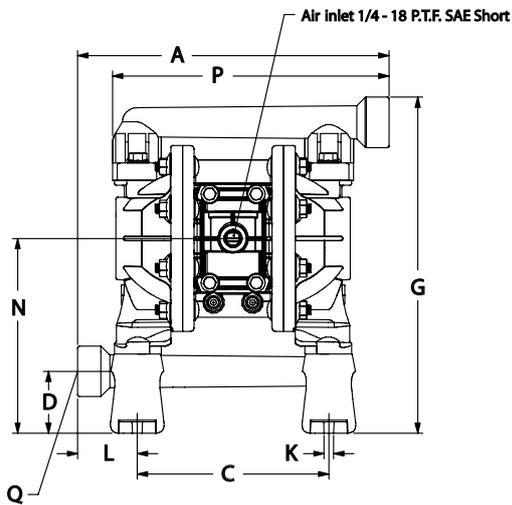
### Wall Mount Kit | 76763

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



Air Line Connection  
Kit 66073-1

# 3/4" Non-Metallic Dimensions and Flow Curves OEM / Transfer Pumps

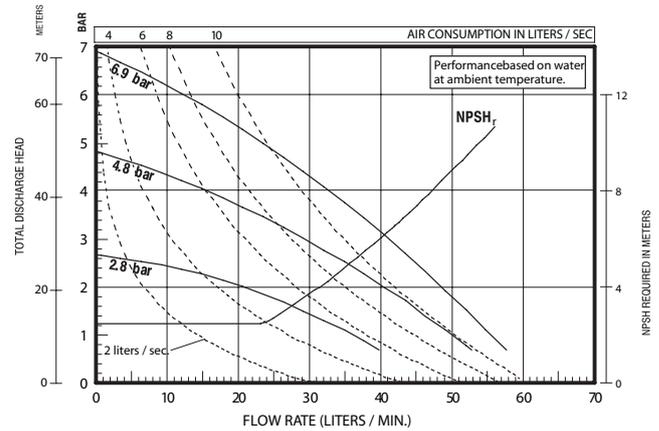
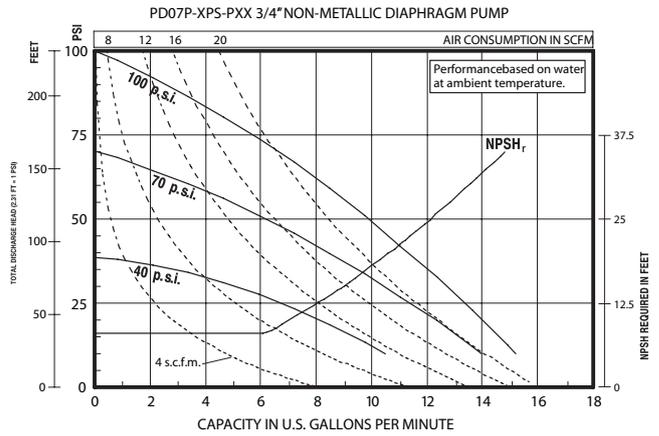


### DIMENSIONS

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

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



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

For additional information contact  
technical support at (800)495-0276

NON-METALLIC

# 1" Non-Metallic Models OEM / Transfer Pumps

## 1" Non-Metallic Performance Specifications

<b>Ratio:</b>	1:1
<b>Maximum GPM (LPM):</b>	53 (200)
<b>Displacement per cycle Gallons (Liters):</b>	0.226 (.86)
<b>Air Inlet (Female):</b>	1/4 - 18 N.P.T.
<b>Fluid Inlet:</b>	1 - 11-1/2 N.P.T.F, Rp1(1-11 BSP) 1" A.N.S.I./DIN flange (side or center)
<b>Fluid Outlet:</b>	1 - 11-1/2 N.P.T.F, Rp1(1-11 BSP) 1" A.N.S.I./DIN flange (side or center)
<b>Max. operating pressure psi (bar):</b>	120 (8.3)
<b>Suspended solids max. dia. in.(mm):</b>	1/8" (3.2)
<b>Weight lbs (kg):</b>	Polypropylene, Threaded Port 19.35 (8.78) Polypropylene, Center Ported 19.59 (8.89) Polypropylene, Side Ported 19.87 (9.01) PVDF, Threaded Port 25.83 (11.72) PVDF, Center Ported 26.72 (12.12) PVDF, Side Ported 27.15 (12.32)
<b>Maximum dry suction lift ft(m) :</b>	19 (5.7)

### Sound Level:

PSI	Cycles / Min	db(A)
70	60	79.7



## Ordering Menu

<b>PX10</b>	<b>X</b>	-	<b>X</b>	<b>X</b>	<b>S</b>	-	<b>X</b>	<b>X</b>	<b>X</b>
<b>Model Series</b>	<b>Center Section</b>		<b>Connection</b>		<b>Hardware</b>		<b>Seat Material</b>		<b>Diaphragm Material</b>
PD10 Standard Pump	E Conductive		A NPTF Thread		S Stainless Steel		H 440 Stainless Steel (Hard)		A Santoprene
PE10 Electronic Interface Accessible Pump	P Polypropylene		B BSP Thread				K PVDF		C Hytrel
			F 1" A.N.S.I./DIN Flange (Side)				P Polypropylene		G Nitrile
			Y 1" A.N.S.I./DIN Flange (Center)				S 316 Stainless Steel		M Medical grade Santoprene
			<b>Wetted Parts</b>						T PTFE/Santoprene
			E Conductive Polypropylene						V Viton
			K PVDF						<b>Ball Material</b>
			P Polypropylene						A Santoprene
									C Hytrel
									G Nitrile
									T PTFE
									V Viton

## Accessories

### Air Line Connection Kit\* | Kit No. 66073-2

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

### Diaphragm Failure Detection (DFD)\* | Kit No. 67237

Costly production downtime due to pump diaphragm failure and resulting (possibly hazardous) material leakage is a very real problem in many process operations. ARO Diaphragm Failure Detection is one simple, cost-effective way to get your pumps wired for preventive maintenance. (PE10X pump model is required)

### Cycle Counter Kit\* | Kit No. 67350

Like the odometer on your car, ARO's cycle sensing / cycle counter lets you know how many pump cycles have elapsed so you can be prepared to perform preventive maintenance. The cycle sensor is a cost-efficient way to save maintenance costs while keeping your pump on-line. (PE10X pump model is required)

### Service Repair Kits | Kit No. 637397 (air motor for PX10P)

Kit No. 637396-XX (fluid section)

Kit No. 637395-X (major air valve assembly)

### Flange Connection Kit | Kit No. 67341-E10N (side flange)

Kit No. 67341-C10N (center flange)

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.

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

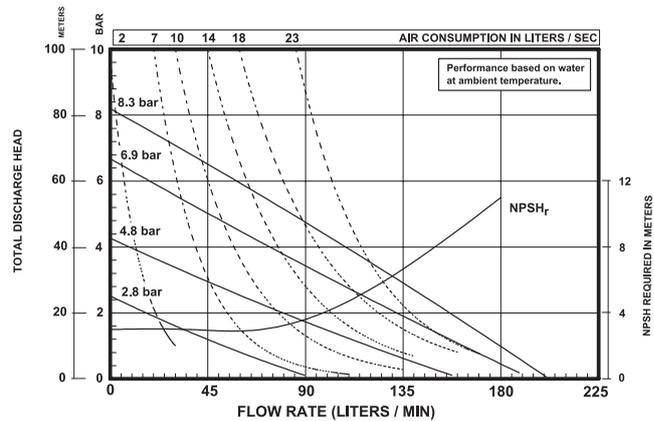
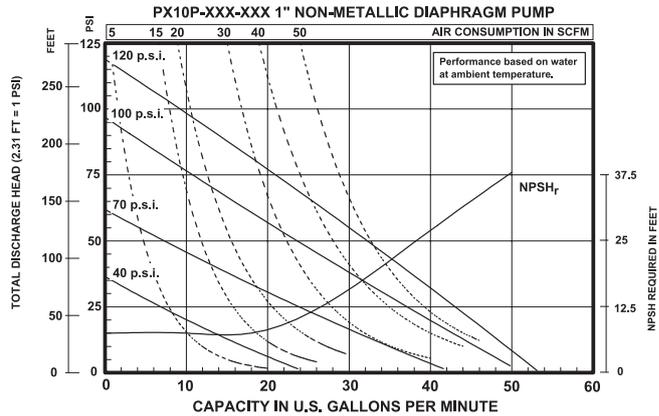
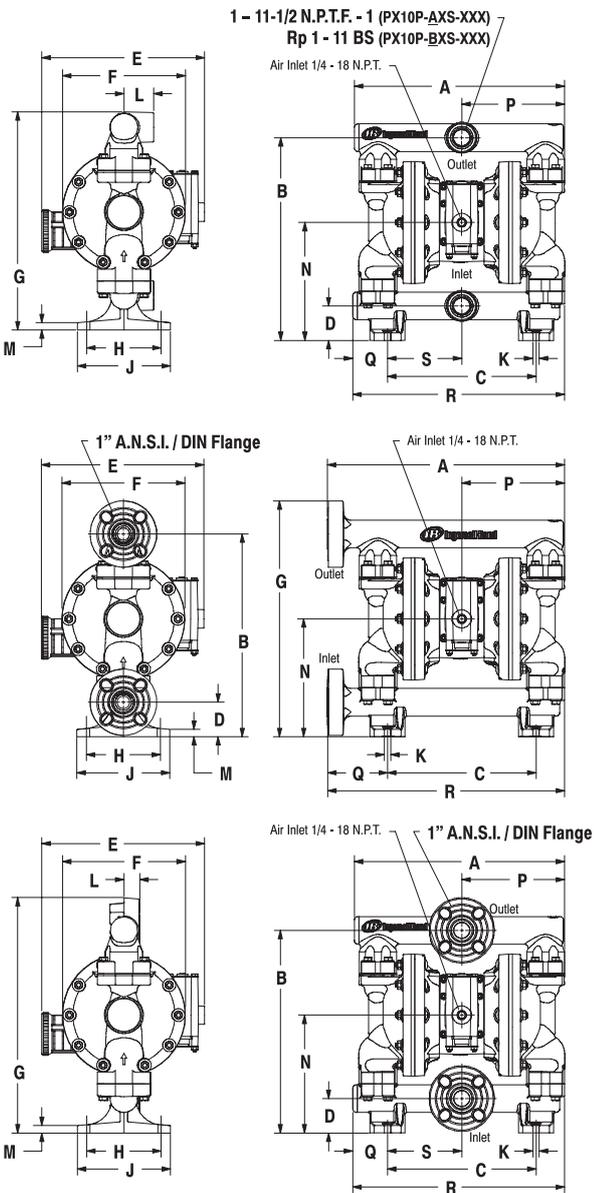


Air Line Connection Kit 66073-2



Flange Connection Kit

# 1" Non-Metallic Dimensions and Flow Curves OEM / Transfer Pumps



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

For additional information contact technical support at (800)495-0276

## DIMENSIONS

A - see below	G - see below	N - 8-1/32" (203.4 mm)
B - 13-25/32" (349.8 mm)	H - 5-1/32" (127.6 mm)	P - 6-31/32" (176.6 mm)
C - 10-1/16" (255.3 mm)	J - 6-9/32" (159.6 mm)	Q - see below
D - 2-11/32" (59.4 mm)	K - 7/16" (11.1 mm)	R - see below
E - 11-1/32" (279.5 mm)	L - see below	S - 5-1/32" (127.6 mm)
F - 8-5/16" (211.1 mm)	M - 1/2" (12.7 mm)	

PX10P-AXS-, -BXS- (Threaded)	PX10P-EXS-XXX (End Flange)	PX10P-YXS-XXX (Center Flange)
A - 14-7/32" (361.2 mm)	16-1/32" (407.3 mm)	14-7/32" (361.2 mm)
G - 14-27/32" (376.5 mm)	16-1/32" (407.3 mm)	16" (406.3 mm)
L - 2" (50.8 mm)	-----	1-1/32" (25.6 mm)
Q - 2-3/8" (59.7 mm)	4-1/16" (103.0 mm)	2-3/8" (59.7 mm)
R - 14-11/32" (364.0 mm)	16-1/32" (407.3 mm)	14-11/32" (364.0 mm)

NON-METALLIC

# 1-1/2" Non-Metallic Models OEM / Transfer Pumps

## 1-1/2" Non-Metallic Performance Specifications

<b>Ratio:</b>	1:1	
<b>Maximum GPM (LPM):</b>	123 (465)	
<b>Displacement per cycle Gallons (Liters):</b>	0.617 (2.34)	
<b>Air Inlet (Female):</b>	1/2 - 14 N.P.T.	
<b>Fluid Inlet:</b>	1-1/2" A.N.S.I./DIN flange (side or center)	
<b>Fluid Outlet:</b>	1-1/2" A.N.S.I./DIN flange (side or center)	
<b>Max. operating pressure psi (bar):</b>	120 (8.3)	
<b>Suspended solids max. dia. in. (mm):</b>	1/4" (6.4)	
<b>Weight lbs (kg):</b>	Polypropylene, Side Ported	42.6 (19.3)
	PVDF, Side Ported	63.9 (29)
	Polypropylene, Center Ported	42.3 (19.2)
	PVDF, Center Ported	55.9 (25.3)
<b>Maximum dry suction lift ft (m) :</b>	14 (4.2)	

### Sound Level:

PSI	Cycles / Min	db(A)
70	60	81.0



## Ordering Menu

<b>PX15</b>	<b>X</b>	-	<b>X</b>	<b>X</b>	<b>X</b>	-	<b>X</b>	<b>X</b>	<b>X</b>
<b>Model Series</b>	<b>Center Section</b>		<b>Connection</b>		<b>Hardware</b>		<b>Seat Material</b>		<b>Diaphragm Material</b>
PD15 Standard Pump	E Conductive		F 1-1/2" A.N.S.I./DIN Flange (Side)	S	Stainless Steel		H 440 Stainless Steel (Hard)	A Santoprene	
PE15 Electronic Interface Accessible Pump	P Polypropylene		Y 1-1/2" A.N.S.I./DIN Flange (Center)				K PVDF	C Hytrel	
			<b>Wetted Parts</b>				P Polypropylene	G Nitrile	
			E Conductive Polypropylene				S 316 Stainless Steel	M Medical Grade Santoprene	
			K PVDF					T PTFE/Santoprene	
			P Polypropylene					V Viton	
								<b>Ball Material</b>	
								A Santoprene®	
								C Hytrel®	
								G Nitrile	
								S 316 Stainless Steel	
								T PTFE	
								V Viton®	

## Accessories\*

### Air Line Connection Kit | Kit No. 66084-1

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

### Diaphragm Failure Detection (DFD) | Kit No. 67237

Costly production downtime due to pump diaphragm failure and resulting (possibly hazardous) material leakage is a very real problem in many process operations. ARO Diaphragm Failure Detection is one simple, cost-effective way to get your pumps wired for preventive maintenance. (PE15X pump model is required)

### Cycle Counter Kit | Kit No. 67350

Like the odometer on your car, ARO's cycle sensing / cycle counter lets you know how many pump cycles have elapsed so you can be prepared to perform preventive maintenance. The cycle sensor is a cost-efficient way to save maintenance costs while keeping your pump on-line. (PE15X pump model is required)

### Service Repair Kits | Kit No. 637389 (air motor for PX15P)

Kit No. 637391-XX (fluid section)

Kit No. 637390-X (major air valve assembly)

### Flange Connection Kit | Kit No. 67341-E15N (side flange)

Kit No. 67341-C15N (center flange)

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

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

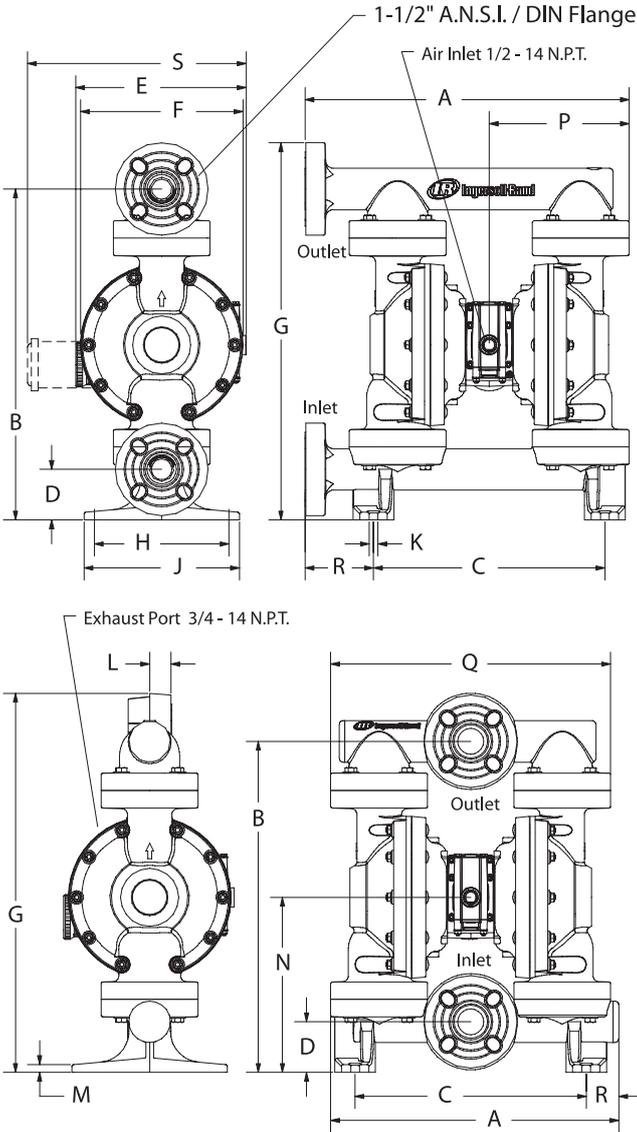


Air Line Connection Kit 66084-1



Flange Connection Kit

# 1-1/2" Non-Metallic Dimensions and Flow Curves OEM / Transfer Pumps

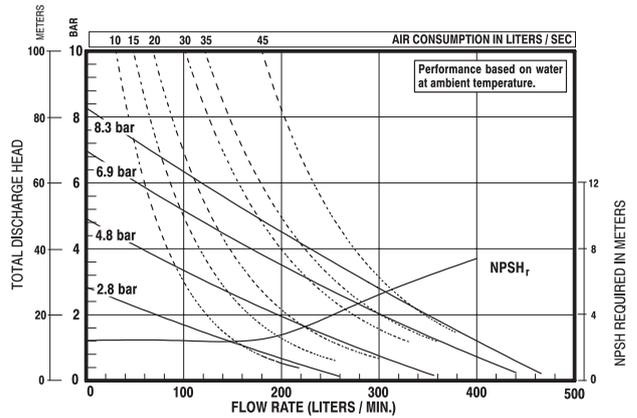
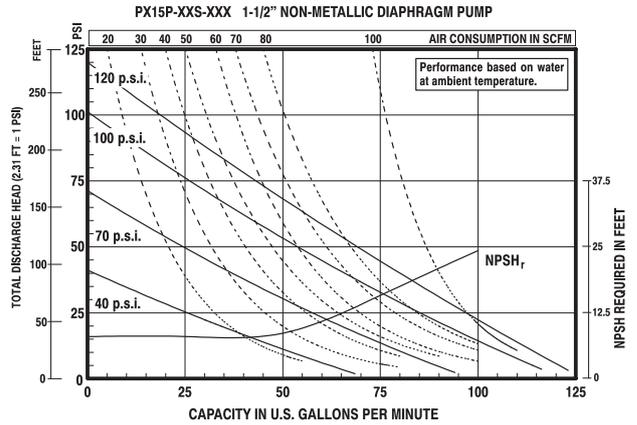


## DIMENSIONS

A - see below	G - see below	N - 11-3/8" (288.4 mm)
B - 21-15/32" (545.3 mm)	H - 8-11/16" (220.7 mm)	P - 9-1/32" (229.5 mm)
C - 14-15/16" (379.4 mm)	J - 10-1/32" (254.8 mm)	Q - see below
D - 3-9/32" (83.3 mm)	K - 9/16" (14.3 mm)	R - see below
E - see below	L - see below	S - see below
F - 10-1/2" (266.3 mm)	M - 17/32" (13.0 mm)	

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

PX15E-XXX-XXX	"E"	"S"
PX15P-XXX-XXX	11" (279.5 mm)	14-1/8" (358.5 mm)



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

For additional information contact technical support at (800)495-0276

NON-METALLIC

## 2" Non-Metallic Models OEM / Transfer Pumps

### 2" Non-Metallic Performance Specifications

<b>Ratio:</b>	1:1
<b>Maximum GPM (LPM):</b>	184 (696)
<b>Displacement per cycle Gallons (Liters):</b>	1.4 (5.3)
<b>Air Inlet (Female):</b>	3/4 - 14 N.P.T.
<b>Fluid Inlet:</b>	2" A.N.S.I./DIN flange (side)
<b>Fluid Outlet:</b>	2" A.N.S.I./DIN flange (side)
<b>Max. operating pressure psi (bar):</b>	120 (8.3)
<b>Suspended solids max. dia. in. (mm):</b>	1/4" (6.4)
<b>Weight lbs (kg):</b>	Polypropylene 85.3 (38.7) PVDF 110.9 (50.3)
<b>Maximum dry suction lift ft (m):</b>	14 (4.2)

#### Sound Level:

PSI	Cycles / Min	db(A)
70	60	85.0



### Ordering Menu

<b>PX20</b>	<b>X</b>	-	<b>F</b>	<b>X</b>	<b>S</b>	-	<b>X</b>	<b>X</b>	<b>X</b>
<b>Model Series</b>	<b>Center Section</b>		<b>Connection</b>		<b>Hardware</b>		<b>Seat Material</b>		<b>Diaphragm Material</b>
PD20 Standard Pump	E Conductive Polypropylene	F 2" ANSI/DIN Flange (Side)	S Stainless Steel	K PVDF	A Santoprene				
PE20 Electronic Interface Accessible Pump	P Polypropylene			P Polypropylene	G Nitrile				
					M Medical Grade Santoprene				
					T PTFE/Santoprene				
					V Viton				
			<b>Wetted Parts</b>						<b>Ball Material</b>
			E Conductive Polypropylene						A Santoprene
			K PVDF						G Nitrile
			P Polypropylene						T PTFE
									V Viton

### Accessories\*

#### Air Line Connection Kit | Kit No. 66109

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

#### Diaphragm Failure Detection (DFD) | Kit No. 67237

Costly production downtime due to pump diaphragm failure and resulting (possibly hazardous) material leakage is a very real problem in many process operations. ARO Diaphragm Failure Detection is one simple, cost-effective way to get your pumps wired for preventive maintenance. (PE20X pump model is required)

#### Cycle Counter Kit | Kit No. 67350-1

Like the odometer on your car, ARO's cycle sensing / cycle counter lets you know how many pump cycles have elapsed so you can be prepared to perform preventive maintenance. The cycle sensor is a cost-efficient way to save maintenance costs while keeping your pump on-line. (PE20X pump model is required)

#### Service Repair Kits | Kit No. 637369 (air motor for PX20P)

Kit No. 637373-XX (fluid section)

Kit No. 637374-X (major air valve assembly)

#### Continuous-Duty Muffler | Kit No. 67323

Helps reduce possibility of pump freeze-over caused by moisture in air supply. Recommended for continuous-duty and high-flow applications. Muffler features large expansion chamber, permitting cold exhaust air to exit pump.

#### Flange Connection Kit | Kit No. 67341-E20N

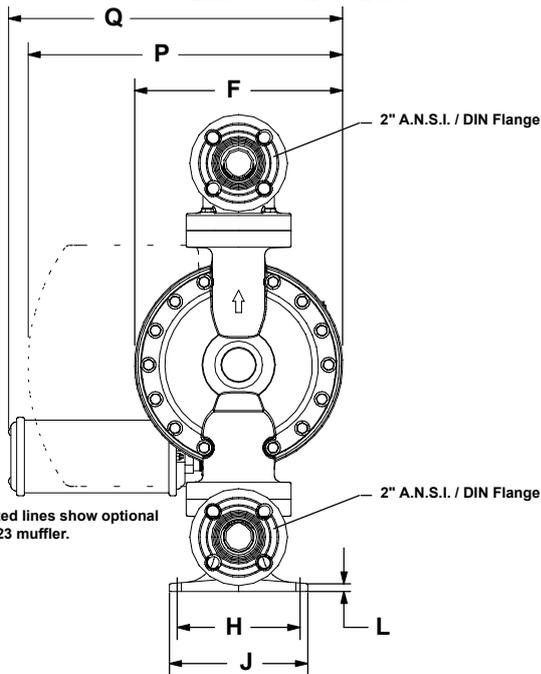
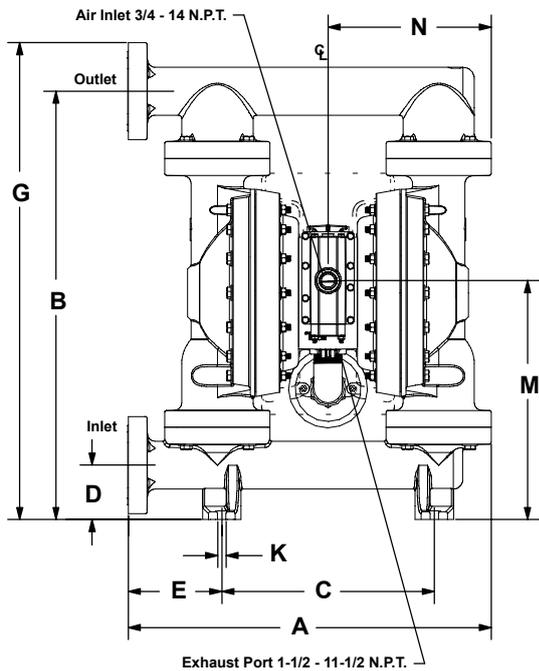
Use with non-metallic EXP pumps with the flange manifold option. Flange kits meet A.N.S.I. / DIN specifications. Flange constructed of glass-filled polypropylene. Bolts, washers and nuts are stainless steel.

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



# 2" Non-Metallic Dimensions and Flow Curves OEM / Transfer Pumps

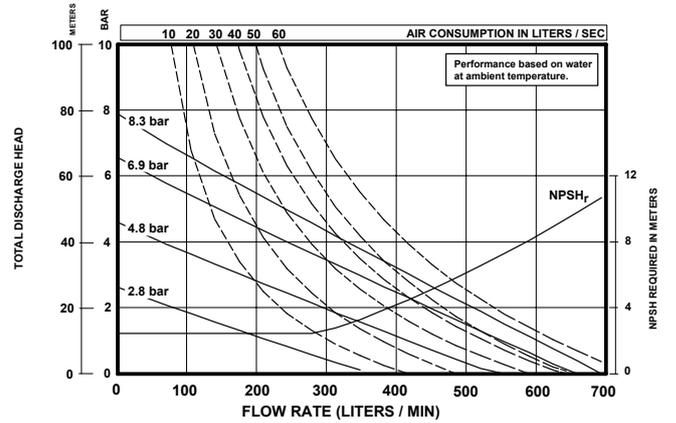
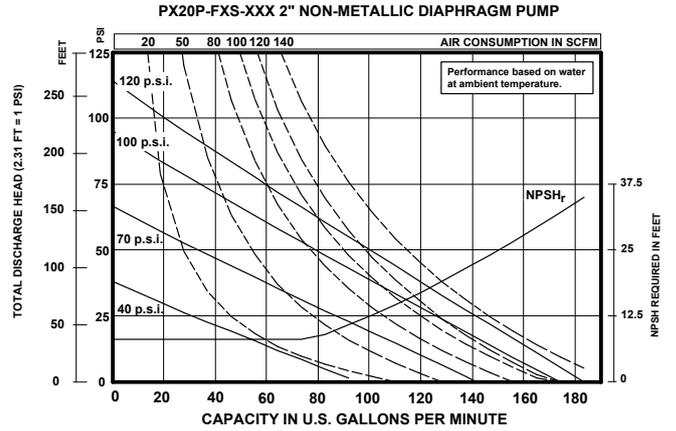
NON-METALLIC



Dotted lines show optional 67323 muffler.

### DIMENSIONS

A - 24-3/16" (614.3mm)	F - 13-7/8" (352.0mm)	L - 1/2" (12.7mm)
B - 28-21/32" (728.0mm)	G - 31-29/32" (810.5mm)	M - 16" (405.9mm)
C - 14-5/32" (360.0mm)	H - 8-3/16" (207.8mm)	N - 10-7/8" (276.2mm)
D - 3-5/8" (92.2mm)	J - 9-7/32" (234.2mm)	P - 20-31/32" (532.2mm)
E - 6-1/4" (158.3mm)	K - 9/16" (14.3mm)	Q - 22-9/32" (565.5mm)



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

For additional information contact technical support at (800)495-0276

# The Ultimate Process Pump

## EXPert Series Pumps: Metallic Models

From its simple beginnings as a utility / dewatering / trash pump, through its various phases of design evolution, the diaphragm pump has been a favorite with process professionals everywhere. Why? Simplicity. The ARO EXP design team has taken this fundamental feature and engineered efficiency, compatibility and economy into

every aspect of the new EXP Diaphragm Pump. Economy in fewer repair parts and labor. Economy in saved energy. Economy in superior performance. Do you want to reduce pump downtime while boosting production? Here it is.

### Inlet/Outlet Port Options

NPT and BSP threaded versions available on stainless steel, aluminum and cast iron models. Center flanges are available in some sizes.

### Body Material

Choose from aluminum, cast iron, Hastelloy® or stainless steel for overall durability and corrosion-resistance in the nastiest of process applications and environments.

### Bolted Construction

EXP utilizes a bolted construction that is not only leak-tight but also makes disassembly and reassembly much faster and easier. Bolted construction also insures a safer work environment by avoiding messy and dangerous material leaks.

### Hardware Options

EXP air motor and end cap fasteners are available in stainless steel for complete corrosion resistance.

### Long-Lasting Convoluted Diaphragms

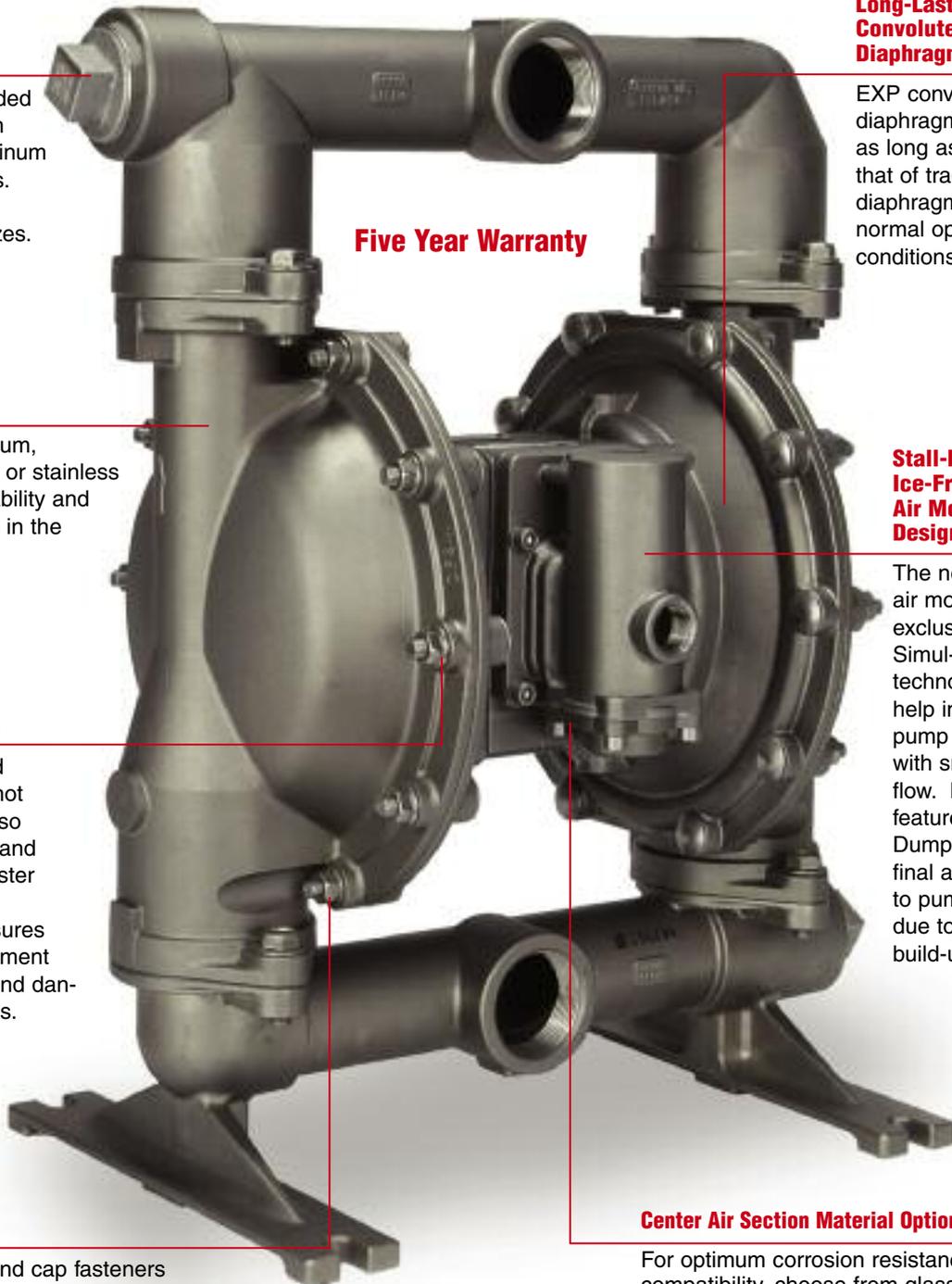
EXP convoluted diaphragms can last as long as four times that of traditional diaphragms under normal operating conditions.

### Stall-Free, Ice-Free Air Motor Design

The new EXP air motor has exclusive Simul-Shift valve technology to help insure faster pump trip-over with smoother flow. It also features Quick Dump valves; the final answer to pump stalling due to ice build-up.

### Center Air Section Material Options

For optimum corrosion resistance and compatibility, choose from glass-filled polypropylene, aluminum or all stainless steel center sections.



**Five Year Warranty**

## Model Overview: Metallic

# EXpert Series Pumps: Metallic Models



Models:	1/2"	3/4"	1"	1-1/2"	2"	3"
<b>Max. Flow GPM (LPM)</b>	12 (45.4)	13.6 (51.5)	52 (197)	123 (465)	172 (651)	275 (1,041)
<b>Maximum Discharge Pressure PSI (BAR)</b>	100 (6.9)	100 (6.8)	120 (8.3)	120 (8.3)	120 (8.3)	120 (8.3)
<b>Fluid Ports Inlet/Outlet (BSP)</b>	3/8 - 18 NPTF-1 Rp 3/8 (3/8-19 BSP Parallel) (Side or Center)	3/4 - 14 NPTF-1 Rp 3/4 (3/4-14 BSP Parallel)	1-11-1/2" NPT Rp1(1-11 BSP) (Side or Center)	1-1/2 - 11-1/2 NPTF Rp1-1/2(1-1/2 -11 BSP) (Side or Center) 1-1/2 ANSI/DIN (SS only/Center)	2" NPTF Rp2(2-11 BSP) (Side or Center) 2" ANSI/DIN Flange with 2" pipe tap (SS only/Center)	3" NPTF Rp3(3-11 BSP) (Center)
<b>Materials of Construction</b>	Aluminum Stainless Steel	Aluminum	Aluminum Cast Iron Stainless Steel Hastelloy®	Aluminum Cast Iron Stainless Steel Hastelloy	Aluminum Cast Iron Stainless Steel Hastelloy	Aluminum Cast Iron Stainless Steel Hastelloy
<b>Pump Weight lbs. (Kg.)</b>	10.36 (4.7) AL/AL Motor 16.57 (7.52) SS/AL Motor 8.04 (3.65) AL/Poly Motor 14.25 (6.46) SS/Poly Motor	8.74 (3.96)	20.7 (9.4) Alum. 35.2 (16.0) CI 38.2 (17.3) SS 39.6 (18) Hastelloy add 4.65 (2.11) for Alum. air motor, add 11.09 (5.03) for SS air motor	37.7 (17.1) Alum. 73.2 (33.2) CI 61.2 (27.8) SS 86.9 (39.4) Hastelloy add 3.08 (1.40) for Alum. air motor, add 14.39 (6.53) for SS air motor	64 (29) Alum. 133 (60) CI 122 (55.3) SS Threaded 114 (51.7) SS Flange 122 (55.3) Hastelloy add 34 (15) for CI or SS air motor	113 (51.3) Alum. 197 (89.4) CI 203 (92.1) SS 203 (92.1) Hastelloy add 40 (18.1) for SS air motor
<b>Max. Solids inches (mm)</b>	3/32" (2.4)	3/32" (2.4)	1/8" (3.32)	1/4" (6.4)	1/4" (6.4)	3/8" (9.5)
<b>Max, Dry Suction Lift ft. (m)</b>	15.0 (4.5)	15.0 (4.5)	19 (5.7)	14 (4.2)	19 (5.7)	19 (5.7)
<b>Recommended Filter/Regulator Air Line Kit</b>	P39124-600 66073-1	P39124-600 66073-1	P39224-600 66073-2	P39334-600 66084-1	P39454-610 66109	P39454-610 66109

METALLIC

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

# 1/2" Metallic Models OEM / Transfer Pumps

## 1/2" Metallic Performance Specifications

<b>Ratio:</b>	1:1		
<b>Maximum GPM (LPM):</b>	12 (45.4)		
<b>Displacement per cycle</b> Gallons (Liters):	0.039 (.15)		
<b>Air Inlet (Female):</b>	1/4 -18 P.T.F. SAE SHORT		
<b>Fluid Inlet/Outlet:</b>	1/2 - 14 N.P.T.F. -1 Rp 1/2(1/2 - 14 BSP, parallel)		
<b>Max. operating pressure</b> psi (bar):	100 (6.9)		
<b>Suspended solids max. dia.</b> in. (mm):	3/32" (2.4)		
<b>Weight</b> lbs (kg):	PD05A-XAS-XXX-B	10.36 (4.7)	
	PD05R-XAS-XXX-B	8.04 (3.65)	
	PD05R-XSS-XXX-B	14.25 (6.46)	
<b>Maximum dry suction lift</b> ft (m):	15.0 (4.5)		
<b>Sound Level:</b>	PSI	Cycles / Min	db(A)
	70	60	71.1



## Ordering Menu

PX05	X	-	X	X	S	-	X	X	X	-	BXX
<b>Model Series</b>	<b>Center Section Material</b>		<b>Fluid Connection</b>	<b>Fluid Caps/ Manifold Material</b>	<b>Hardware Material</b>		<b>Seat Material</b>	<b>Ball Material</b>	<b>Diaphragm Material</b>		<b>Specialty Code</b>
PD05 Standard PE05 Remote Actuation Capable	A Aluminum R Polypropylene		A 1/2" N.P.T. B 1/2" BSP	A Aluminum <sup>1</sup> (Side port outlet manifold) S Stainless Steel (Center port outlet manifold)	S Stainless Steel		F Aluminum P Polypropylene S Stainless Steel	A Santoprene C Hytrel <sup>2</sup> G Nitrile S Stainless Steel T PTFE U Polyurethane V Viton	A Santoprene C Hytrel <sup>2</sup> G Nitrile T PTFE/Santoprene U Polyurethane V Viton		B Standard BOS Remote Actuation Capable**
				<sup>1</sup> Components Anodized to Provide Superior Corrosion and Abrasion Resistance							
				<sup>2</sup> Hytrel replaces Buna, Geolast, Polyurethane and Nitrile producing superior chemical compatibility and diaphragm life							

## Accessories\* (for specialty pump application options and additional accessories see pages 40-45)

**Air Line Connection Kit\* | Kit No. 66073-1**  
Kit includes Piggyback Filter/Regulator with gauge, pipe nipple and a 5-foot section of air hose.

**Service Repair Kits | Kit No. 637428 (air motor for PX05)**  
**Kit No. 637427-XX (fluid section)**

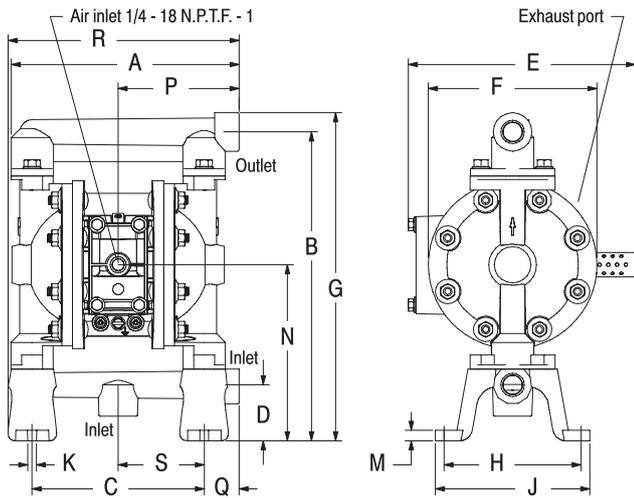
\*Please note pumps are not included with these kits.  
\*\*See options on page 45.



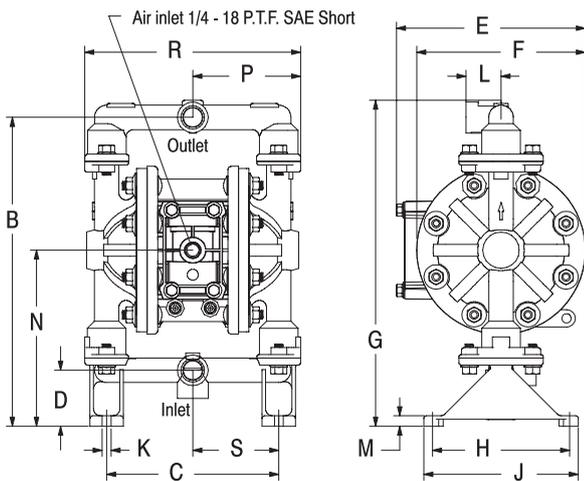
Air Line Connection  
Kit 66073-1

# 1/2" Metallic Dimensions and Flow Curves OEM / Transfer Pumps

**PD05A-XAS-XXX-B**



**PD05R-XSS-XXX-B**

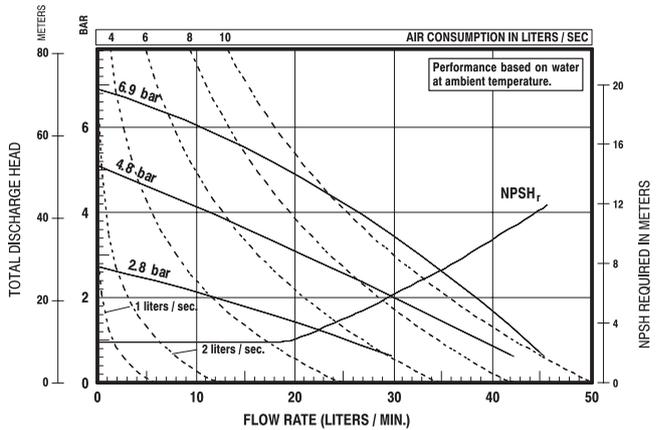
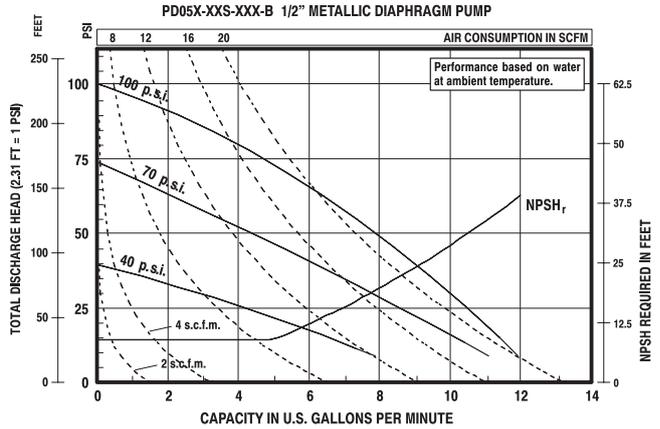


**DIMENSIONS**

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-XXX-XXX-B	PD05R-XXX-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)

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



Refer to fluids.ingersollrand.com for full size flow curves.

For additional information contact technical support at (800)495-0276

METALLIC

## 3/4" Metallic Models OEM / Transfer Pumps

### 3/4" Metallic Performance Specifications

<b>Ratio:</b>	1:1		
<b>Maximum GPM (LPM):</b>	13.6 (51.5)		
<b>Displacement per cycle</b> Gallons (Liters):	0.030 (.11)		
<b>Air Inlet (Female):</b>	1/4 -18 P.T.F. SAE SHORT		
<b>Fluid Inlet/Outlet:</b>	3/4 - 14 N.P.T.F. -2 Rp 3/4(3/4 - 14 BSP)		
<b>Max. operating pressure</b> psi (bar):	100 (6.9)		
<b>Suspended solids max. dia.</b> in. (mm):	3/32" (2.4)		
<b>Weight</b> lbs (kg):	8.74 (3.96)		
<b>Maximum dry suction lift</b> ft (m):	15.0 (4.5)		
<b>Sound Level:</b>			
	PSI	Cycles / Min	db(A)
	70	60	75.0



### Ordering Menu

<b>PD07</b>	<b>R</b>	<b>-</b>	<b>X</b>	<b>X</b>	<b>S</b>	<b>-</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>Model Series</b>	<b>Center Section Material</b>		<b>Fluid Connection</b>	<b>Fluid Caps/ Manifold Material</b>	<b>Hardware Material</b>		<b>Seat Material</b>	<b>Ball Material</b>	<b>Diaphragm Material</b>
PD07 Standard	R Polypropylene	A 3/4" N.P.T. B 3/4" BSP	A Aluminum	S Stainless Steel	F Aluminum P Polypropylene S Stainless Steel	A Santoprene C Hytrel T Teflon/PTFE	A Santoprene C Hytrel T Teflon/PTFE		

### Accessories

#### Air Line Connection Kit\* | Kit No. 66073-1

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

**Service Repair Kits** | Kit No. 637428 (air section)  
Kit No. 637427-XX (fluid section)

**Muffler Kit** | Kit No. 637428 (ported exhaust)

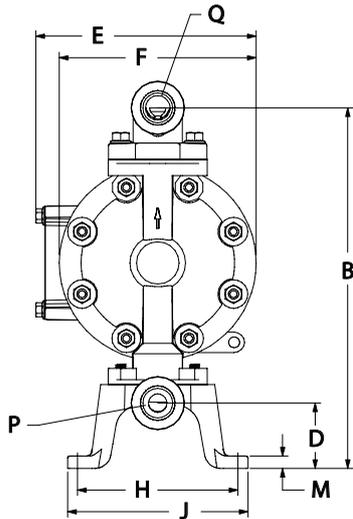
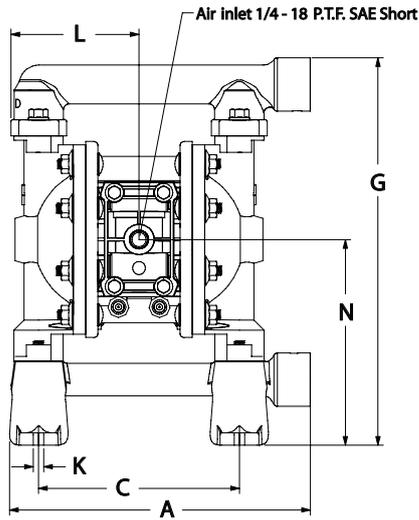
**Wall Mount Kit** | 76763

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



Air Line Connection  
Kit 66073-1

# 3/4" Metallic Dimensions and Flow Curves OEM / Transfer Pumps

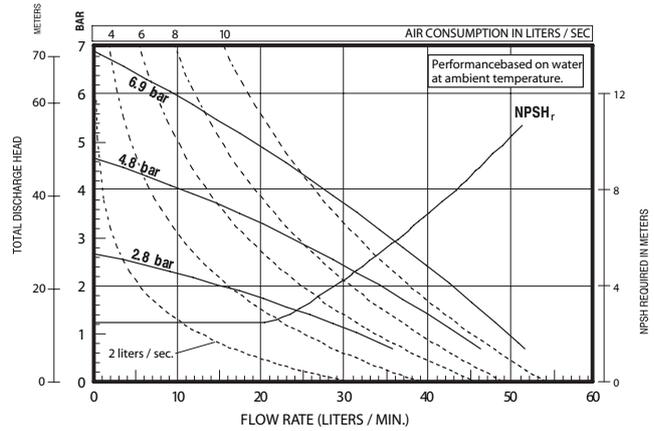
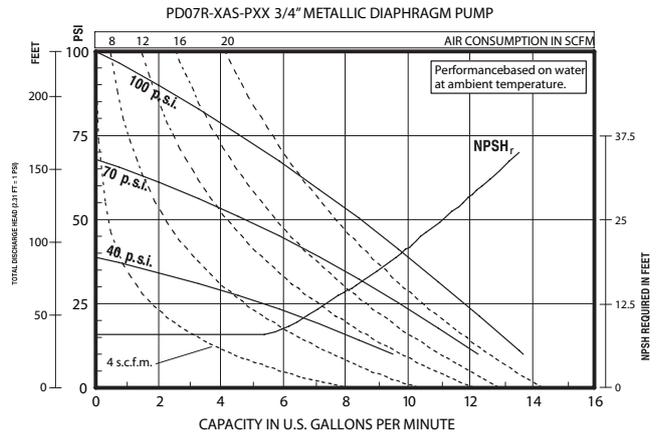


### DIMENSIONS

A - 9-9/32" (235.3mm)	F - 6" (152.4mm)	L - 3-29/32" (99.2mm)
B - 11-1/16" (280.4mm)	G - 11-7/8" (301.2mm)	M - 3/8" (9.5mm)
C - 6-1/8" (155.6mm)	H - 4-29/32" (124.2mm)	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" (8.0mm)	

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

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



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

For additional information contact technical support at (800)495-0276

METALLIC

# 1" Metallic Models OEM / Transfer Pumps

## 1" Metallic Performance Specifications

<b>Ratio:</b>	1:1		
<b>Maximum GPM (LPM):</b>	52 (197)		
<b>Displacement per cycle Gallons (Liters):</b>	0.232 (.88)		
<b>Air Inlet (Female):</b>	1/4 - 18 N.P.T.		
<b>Fluid Inlet:</b>	1 - 11-1/2 N.P.T.F.-1, Rp1(1-11 BSP)		
<b>Fluid Outlet:</b>	1 - 11-1/2 N.P.T.F., Rp1(1-11 BSP)		
<b>Max. operating pressure psi (bar):</b>	120 (8.3)		
<b>Suspended solids max. dia. in. (mm):</b>	1/8" (3.3)		
<b>Weight lbs (kg):</b>	PX10R-XAX-XXX	20.7 (9.4)	
	PX10R-XCX-XXX	35.2 (16.0)	
	PX10R-XHX-XXX	39.6 (18.0)	
	PX10R-XSX-XXX	38.2 (17.3)	
	<b>Note:</b> Add 4.65 lbs (2.11 kg) for aluminum air motor Add 11.09 lbs (5.03 kg) for stainless steel air motor		
<b>Maximum dry suction lift ft(m):</b>	19 (5.7)		
<b>Sound Level:</b>			
	PSI	Cycles / Min	db(A)
	70	60	79.7



## Ordering Menu

<b>PX10</b>	<b>X</b>	-	<b>X</b>	<b>X</b>	<b>X</b>	-	<b>X</b>	<b>X</b>	<b>X</b>
<b>Model Series</b>	<b>Center Section</b>		<b>Connection</b>		<b>Hardware</b>		<b>Seat Material</b>		<b>Diaphragm Material</b>
PD10 Standard Pump	A Aluminum		A NPTF Thread		P Plated Steel		A Santoprene		A Santoprene
PE10 Electronic Interface Accessible Pump	R Polypropylene		B BSP Thread		S Stainless Steel		C Hytrel		C Hytrel
	S Stainless Steel						E Carbon Steel		G Nitrile
			<b>Wetted Parts</b>				F Aluminum		M Medical grade Santoprene
			A Aluminum				G Nitrile		T PTFE/Santoprene
			C Cast Iron				H 440 Stainless Steel (Hard)		V Viton
			H Hastelloy-C				L Hastelloy-C		
			S Stainless Steel				S 316 Stainless Steel		
									<b>Ball Material</b>
									A Santoprene
									C Hytrel
									G Nitrile
									S 316 Stainless Steel
									T PTFE
									V Viton

## Accessories\*

### Air Line Connection Kit | Kit No. 66073-2

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

### Diaphragm Failure Detection (DFD) | Kit No. 67237

Costly production downtime due to pump diaphragm failure and resulting (possibly hazardous) material leakage is a very real problem in many process operations. ARO Diaphragm Failure Detection is one simple, cost-effective way to get your pumps wired for preventive maintenance. (PE10X pump model is required)

### Cycle Counter Kit | Kit No. 67350

Like the odometer on your car, ARO's cycle sensing / cycle counter lets you know how many pump cycles have elapsed so you can be prepared to perform preventive maintenance. The cycle sensor is a cost-efficient way to save maintenance costs while keeping your pump on-line. (PE10X pump model is required)

### Service Repair Kits | Kit No. 637397 (air motor for PX10A, PX10R and PX10S)

Kit No. 637401-XX (fluid section)

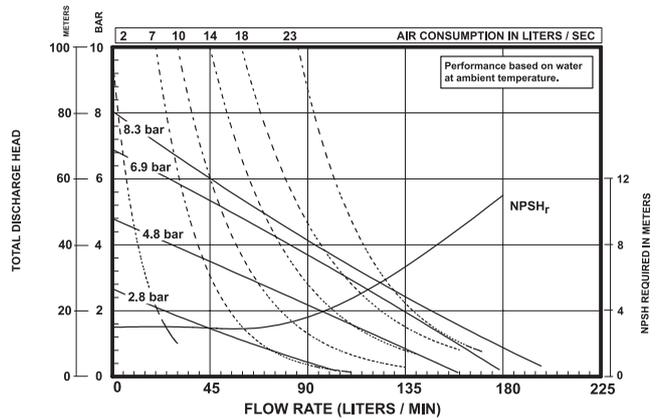
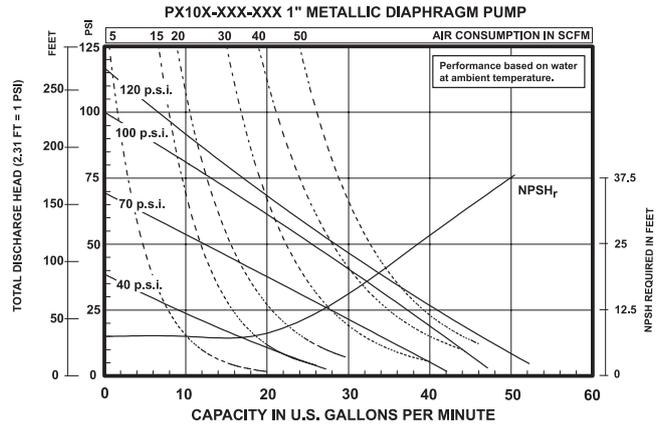
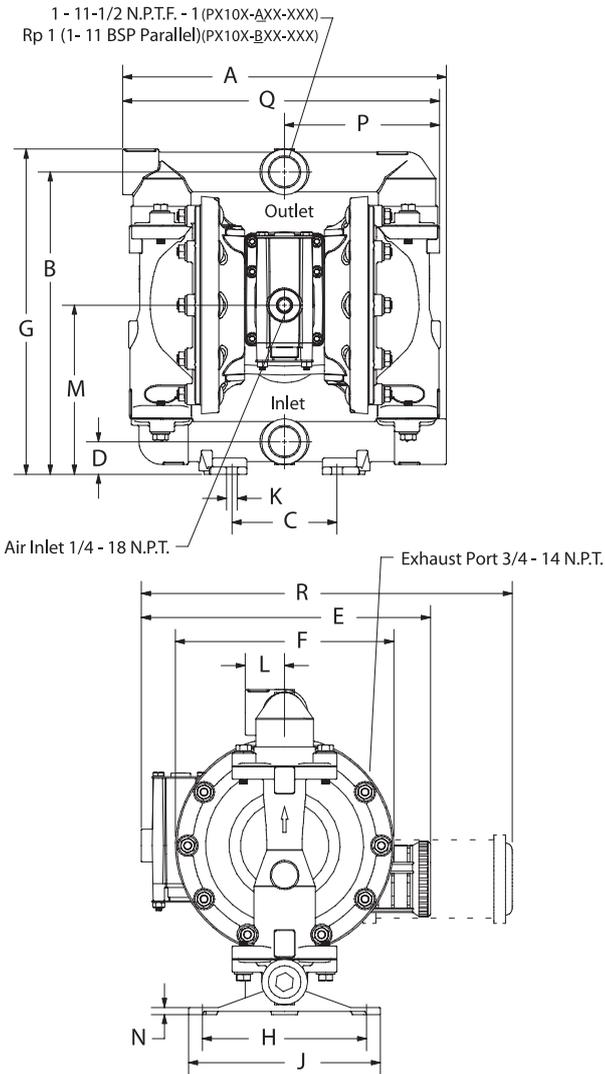
Kit No. 637395-X (major air valve assembly)



Air Line Connection Kit 66073-2

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

# 1" Metallic Dimensions and Flow Curves OEM / Transfer Pumps



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

For additional information contact  
technical support at (800)495-0276

## DIMENSIONS

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

	"E"	"F"	"R"
PX10A-XXX-XXX	-----	8-1/8" (206.4 mm)	14-1/32" (356.2 mm)
PX10B-XXX-XXX	11-1/32" (279.5 mm)	8-5/16" (211.1 mm)	-----
PX10S-XXX-XXX	-----	8-3/16" (207.9 mm)	13-27/32" (351.4 mm)

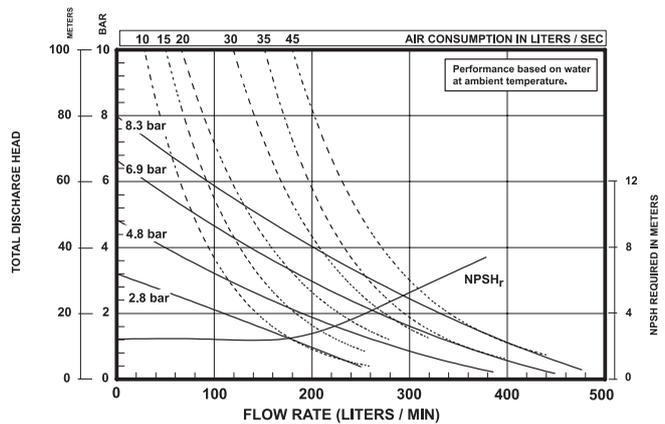
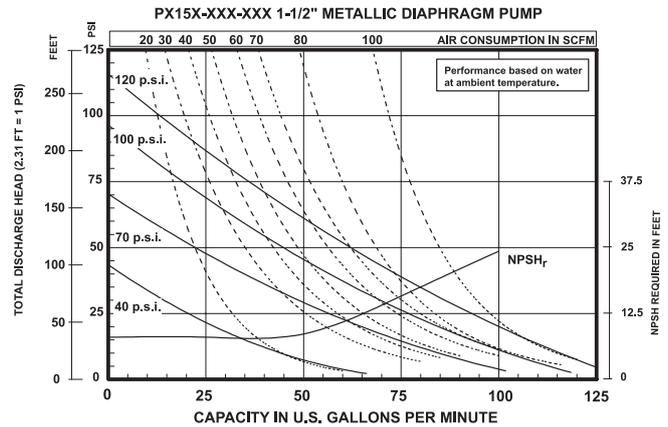
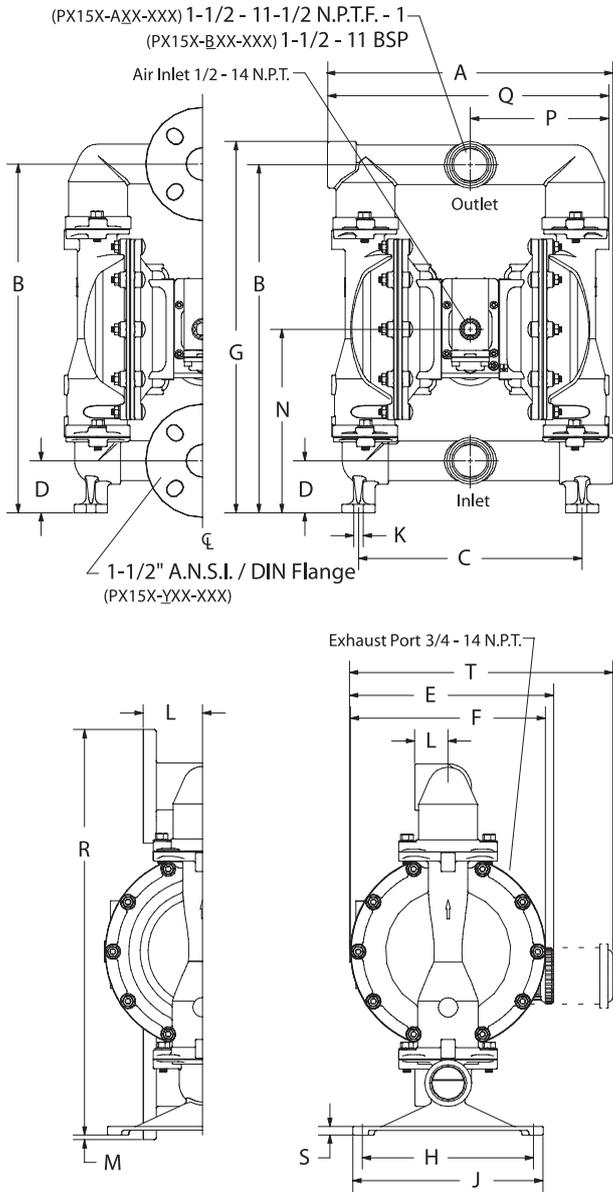
	"N"
PX10X-XAX-XXX	1/4" (6.4 mm)
PX10X-XCX-XXX	9/32" (7.1 mm)
PX10X-XHX-XXX	9/32" (7.1 mm)
PX10X-XSX-XXX	9/32" (7.1 mm)

METALLIC



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

## OEM / Transfer Pumps



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

For additional information contact technical support at (800)495-0276

### DIMENSIONS

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

	"A"	"L"	"P"	"Q"	"S"
PX15X- <u>X</u> AX-XXX	14-7/8" (377.8 mm)	1-3/4" (44.5 mm)	7-7/32" (183.4 mm)	14-23/32" (373.9 mm)	1/2" (12.7 mm)
PX15X- <u>X</u> CX-XXX	14-5/8" (371.5 mm)	1-3/4" (44.5 mm)	7-3/16" (182.6 mm)	14-1/2" (368.3 mm)	1/4" (6.4 mm)
PX15X- <u>X</u> HX-XXX	14-9/16" (370.0 mm)	3-1/8" (79.4 mm)	7-3/16" (182.6 mm)	14-1/2" (368.3 mm)	1/4" (6.4 mm)
PX15X- <u>A</u> SX-XXX, <u>-BS</u> X	14-25/32" (375.5 mm)	1-3/4" (44.5 mm)	7-9/32" (185.0 mm)	14-13/16" (375.5 mm)	15/32" (11.4 mm)
PX15X- <u>Y</u> SX-XXX	14-9/16" (370.0 mm)	3-1/8" (79.4 mm)	7-9/32" (185.0 mm)	14-9/16" (370.0 mm)	15/32" (11.4 mm)

	"E"	"T"
PX15 <u>A</u> -XXX-XXX	-----	14-1/32" (356.2 mm)
PX15 <u>R</u> -XXX-XXX	11-3/32" (281.3 mm)	-----
PX15 <u>S</u> -XXX-XXX	-----	13-27/32" (351.4 mm)

METALLIC

# 2" Metallic Models OEM / Transfer Pumps

## 2" Metallic Performance Specifications

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

### Weight lbs (kg):

Air Motor	Connection	Wetted	Pump Wgt	Air Motor	Connection	Wetted	Pump Wgt
PD20A	AL Thread	AL	91.4 (41.5)	PD20S	SS Thread	AL	120.3 (54.6)
	AL Thread	CI	147.4 (66.9)		SS Thread	CI	176.3 (80)
	AL Thread	H	155 (70.3)		SS Thread	H	183.9 (83.4)
	AL Thread	SS	149.8 (68)		SS Thread	SS	178.7 (81.1)
	AL Flange	H	162.2 (73.6)		SS Flange	H	191.1 (86.7)
	AL Flange	SS	162.2 (73.6)		SS Flange	SS	191.1 (86.7)
PD20R	Poly Thread	CI	165 (74.8)				
	Poly Thread	H	154 (69.9)				
	Poly Thread	SS	154 (69.9)				
	Poly Flange	H	146 (66.2)				
	Poly Flange	SS	146 (66.2)				

AL-Aluminum, CI-Cast Iron, H-Hastelloy, SS-Stainless Steel



### Sound Level:

PSI	Cycles / Min	db(A)
70	50	85.0

## Ordering Menu

PX20		X	-	X	X	X	-	X	X	X	-	B
Model Series	Center Section	Connection			Hardware	Seat Material		Diaphragm Material			Ball Material	
PD20 Standard Pump	A Aluminum	A N.P.T.F. Thread	P Plated Steel	A Santoprene	A Santoprene							
PE20 Electronic Interface Accessible Pump	R Polypropylene w/SS Air Caps	B BSP Thread	S Stainless Steel	C Hytrel	C Hytrel							
	S Stainless Steel	F* 2" A.N.S.I./DIN Flange (Center)		E Carbon Steel	G Nitrile							
	Y Polypropylene w/CI Air Caps	<b>Wetted Parts</b>		F Aluminum	M Medical Grade Santoprene							
		A Aluminum <sup>1</sup>		G Nitrile	T PTFE/Santoprene							
		C Cast Iron		H 440 Stainless Steel (Hard)	V Viton							
		H Hastelloy		K PVDF								
		S Stainless Steel		L Hastelloy-C								
		<sup>1</sup> Stainless Steel pumps only		S 316 Stainless Steel								
		<sup>1</sup> Not available on PD20R-X										

## Accessories\*

### Air Line Connection Kit | Kit No. 66109

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

### Diaphragm Failure Detection (DFD) | Kit No. 67237

Costly production downtime due to pump diaphragm failure and resulting (possibly hazardous) material leakage is a very real problem in many process operations. ARO Diaphragm Failure Detection is one simple, cost-effective way to get your pumps wired for preventive maintenance. (PE20X pump model is required)

### Cycle Counter Kit | Kit No. 67350-1

Like the odometer on your car, ARO's cycle sensing / cycle counter lets you know how many pump cycles have elapsed so you can be prepared to perform preventive maintenance. The cycle sensor is a cost-efficient way to save maintenance costs while keeping your pump on-line. (PE20X pump model is required)

### Service Repair Kits | Kit No. 637369 (air motor for PX20R and PX20Y)

Kit No. 637421 (air motor for PX20A and PX20S)

Kit No. 637309-XX (fluid section)

Kit No. 637374-X (major air valve assembly)

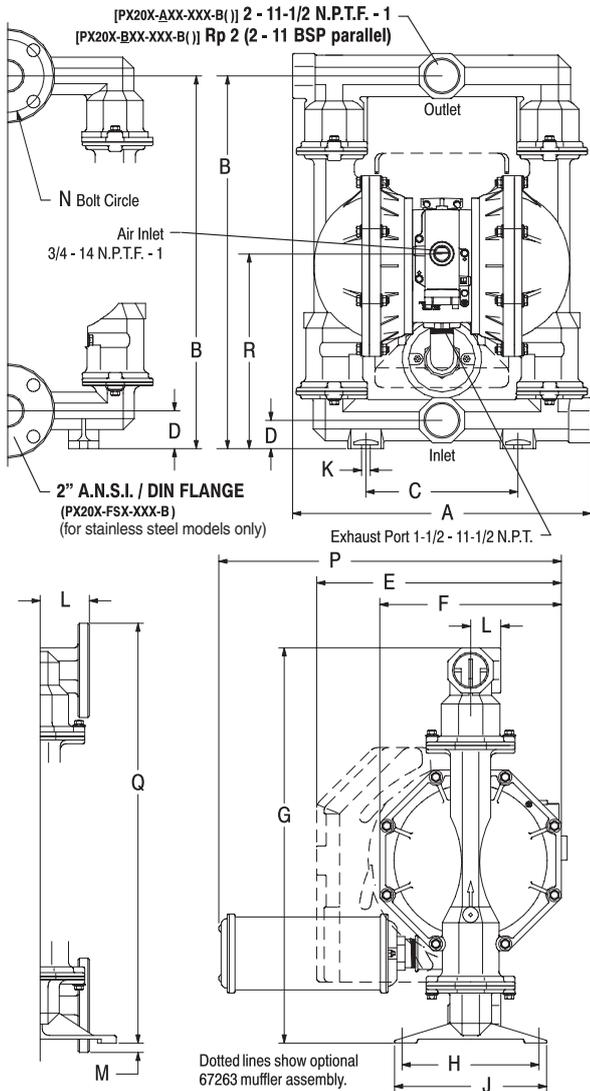
\*Please note pumps are not included with these kits.



66109

Air Line Connection

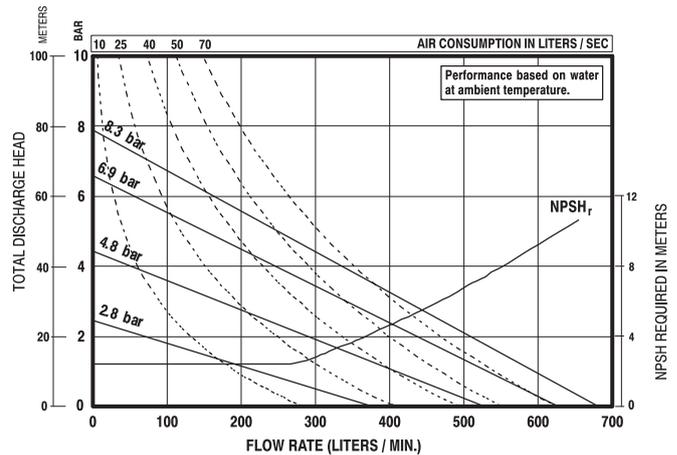
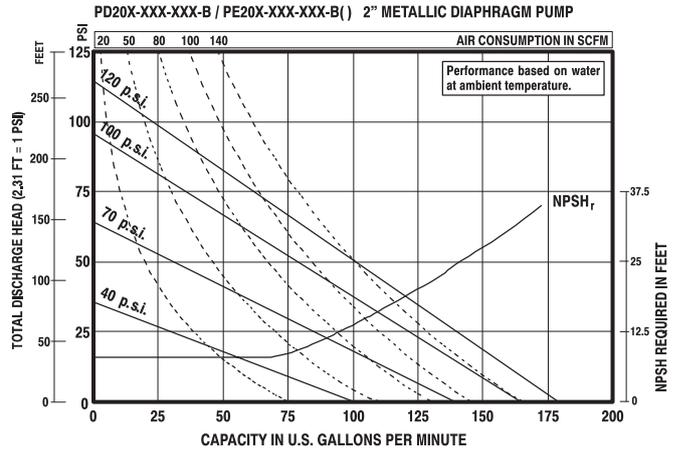
# 2" Metallic Dimensions and Flow Curves OEM / Transfer Pumps



### DIMENSIONS

A	see below	G	26-1/4" (666.8 mm)	M	5/8" (15.9 mm)
B	24-3/4" (628.7 mm)	H	9-1/16" (230.2 mm)	N	4.834" (122.8 mm)
C	10-1/16" (255.6 mm)	J	10-1/16" (255.6 mm)	P	21-5/8" (548 mm)
D	see below	K	9/16" (14.3 mm)	Q	27-7/8" (708.0 mm)
E	16-3/16" (411.2 mm)	L	see below	R	see below
F	12" (304.8 mm)				

	"A"	"D"	"L"	"R"
PX20X-XAX-XXX-B( )	19-3/4" (501.4 mm)	1-7/8" (47.6 mm)	2" (50.8 mm)	12-15/16" (328.6 mm)
PX20X-XCX-XXX-B( )	19-3/4" (501.4 mm)	1-7/8" (47.6 mm)	2" (50.8 mm)	12-15/16" (328.6 mm)
PX20X-AHX-XXX-B( ), -BHx	19-1/4" (488.7 mm)	2-1/2" (63.5 mm)	2-3/32" (53.0 mm)	13-9/16" (344.5 mm)
PX20X-ASX-XXX-B( ), -BSx	19-1/4" (488.7 mm)	2-1/2" (63.5 mm)	2-3/32" (53.0 mm)	13-9/16" (344.5 mm)
PX20X-FHX-XXX-B( ), -FSx	19-1/4" (488.7 mm)	2-1/2" (63.5 mm)	3-1/4" (82.6 mm)	13-9/16" (344.5 mm)



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

For additional information contact technical support at (800)495-0276

## Accessories\*

### Continuous-Duty Muffler | No. 67263

Helps reduce possibility of pump freeze-over caused by moisture in air supply. Recommended for continuous-duty and high-flow applications. Muffler features large expansion chamber, permitting cold exhaust air to exit pump.

67263 Continuous-Duty Muffler would be used to replace 67213 Muffler that comes standard with pump.

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



67263 Continuous Duty Muffler

METALLIC

# 3" Metallic Models OEM / Transfer Pumps

## 3" Metallic Performance Specifications

<b>Ratio:</b>	1:1		
<b>Maximum GPM (LPM):</b>	275 (1041)		
<b>Displacement per cycle:</b>	2.8 (10.6)		
<b>@ 100 psi</b> Gallons (Liters)			
<b>Air Inlet: (Female)</b>	3/4 - 14 N.P.T.F. - 1		
<b>Fluid Inlet / Outlet (Female):</b>	3" - 8 N.P.T.F. - 1		
	Rp 3 (3 - 11 BSP parallel)		
<b>Max. operating pressure</b> psi (bar):	120 (8.3)		
<b>Suspended solids max. dia.</b> in. (mm):	3/8 (9.5)		
<b>Weight</b> lbs (kg):			
	PX30A-XAX-XXX-C	129.5 (58.8)	
	PX30A-XCX-XXX-C	216.6 (98.2)	
	PX30A-XSX-XXX-C	228.8 (103.8)	
	PX30A-XHX-XXX-C	249.8 (113.3)	
	PX30R-XCX-XXX-C	242.3 (109.9)	
	PX30R-XSX-XXX-C	253.3 (114.9)	
	<b>Note:</b> Add 40 lbs (18.2 kg) for stainless steel air motor section		
<b>Maximum dry suction lift</b> ft (m):	14 (4.2)		

### Sound Level:

PSI	Cycles / Min	db(A)
70	50	83.0



## Ordering Menu

<b>PX30</b>	<b>X</b>	-	<b>X</b>	<b>X</b>	<b>X</b>	-	<b>X</b>	<b>X</b>	<b>X</b>	-	<b>C</b>
<b>Model Series</b>	<b>Center Section</b>		<b>Connection</b>	<b>Wetted Parts</b>	<b>Hardware</b>		<b>Seat Material</b>		<b>Diaphragm Material</b>		<b>Ball Material</b>
<b>PD30</b> Standard Pump	<b>A</b> Aluminum	<b>A</b> N.P.T.F. Thread	<b>A</b> Aluminum <sup>1</sup>	<b>P</b> Plated Steel	<b>A</b> Santoprene	<b>A</b> Santoprene					
<b>PE30</b> Electronic Interface Accessible Pump	<b>R</b> Polypropylene w/SS air Caps	<b>B</b> BSP Thread	<b>C</b> Cast Iron	<b>S</b> Stainless Steel	<b>C</b> Hytrel	<b>C</b> Hytrel					
	<b>S</b> Stainless Steel		<b>H</b> Hastelloy-C <sup>1</sup>		<b>E</b> Carbon Steel	<b>G</b> Nitrile					
			<b>S</b> Stainless Steel		<b>F</b> Aluminum	<b>T</b> PTFE/Santoprene					
			<sup>1</sup> Not available on PD30R-X models		<b>G</b> Nitrile	<b>V</b> Viton					
					<b>H</b> 440 Stainless Steel (Hard)						
					<b>K</b> PVDF						
					<b>L</b> Hastelloy						
					<b>S</b> 316 Stainless Steel						

## Accessories\*

### Air Line Connection Kit | Kit No. 66109

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

### Diaphragm Failure Detection (DFD) | Kit No. 67237

Costly production downtime due to pump diaphragm failure and resulting (possibly hazardous) material leakage is a very real problem in many process operations. ARO Diaphragm Failure Detection is one simple, cost-effective way to get your pumps wired for preventive maintenance. (PE30X pump model is required)

### Cycle Counter Kit | No. 67350-1

Like the odometer on your car, ARO's cycle sensing / cycle counter lets you know how many pump cycles have elapsed so you can be prepared to perform preventive maintenance. The cycle sensor is a cost-efficient way to save maintenance costs while keeping your pump on-line. (PE30X pump model is required)

### Service Repair Kits | Kit No. 637369 (air motor for PX30R)

Kit No. 637421 (air motor for PX30A and PX30S)

Kit No. 637374-X (major air valve assembly)

Kit No. 637303-XX (fluid section)

### Continuous-Duty Muffler | No. 67263

Helps reduce possibility of pump freeze-over caused by moisture in air supply. Recommended for continuous-duty and high-flow applications. Muffler features large expansion chamber, permitting cold exhaust air to exit pump.

67263 Continuous-Duty Muffler would be used to replace 94810 Muffler that comes standard with pump.

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

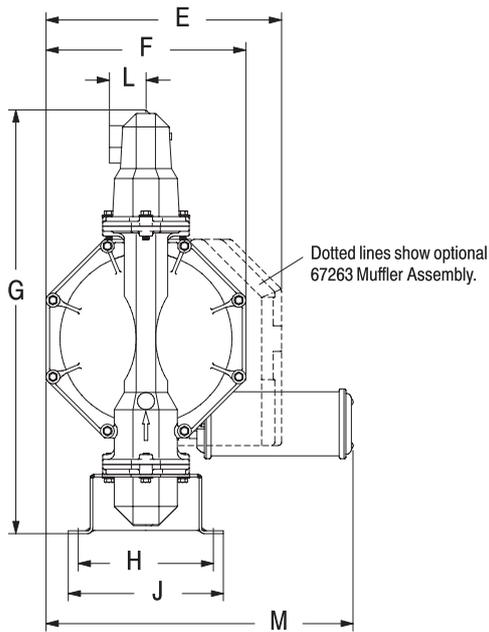
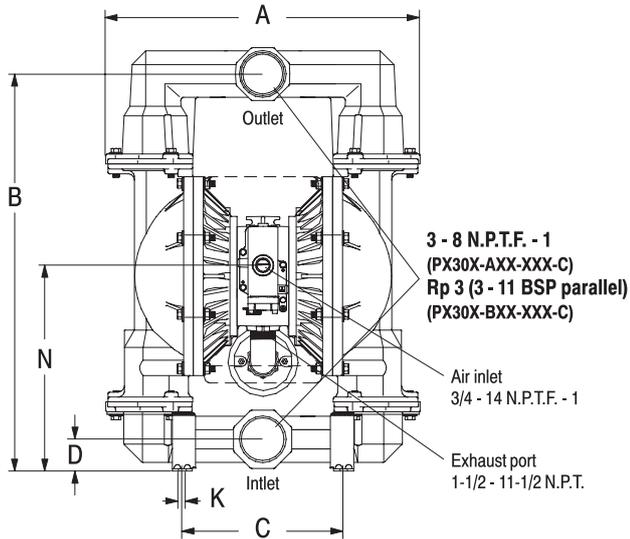


66109  
Air Line Connection



67263 Continuous Duty Muffler

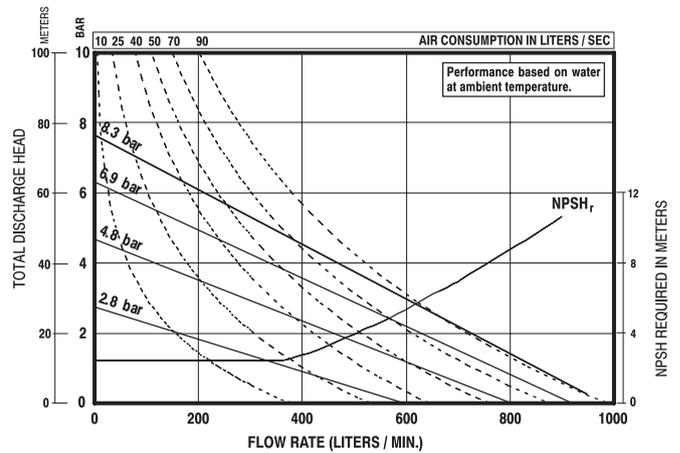
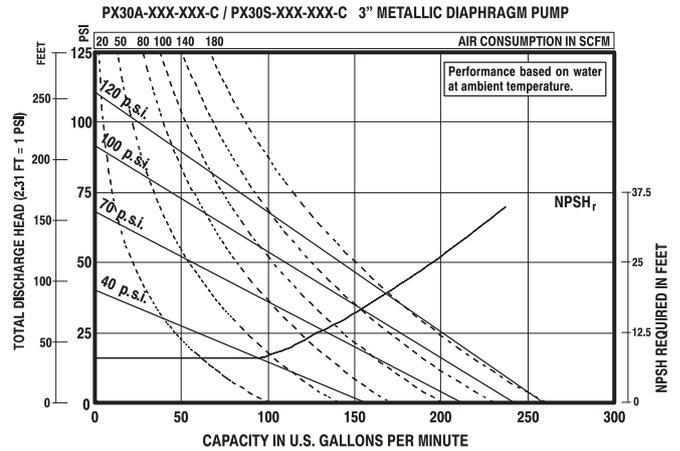
# 3" Metallic Dimensions and Flow Curves OEM / Transfer Pumps



## DIMENSIONS

A see below	F 15" (381 mm)	K 9/16" (14.3 mm)
B 30" (761.7 mm)	G 32" (812.5 mm)	L 2-3/4" (69.9 mm)
C 12-1/16" (306.5 mm)	H 10-5/32" (258 mm)	M 23-3/32" (586.3 mm)
D see below	J see below	N see below
E 17-11/16" (449.2 mm)		

	"A"	"D"	"J"	"N"
PX30X-XAX-XXX-C	23-5/8" (598.7 mm)	2-3/8" (60.3 mm)	11" (279.4 mm)	15-1/2" (393.7 mm)
PX30X-XCX-XXX-C	23-5/8" (598.7 mm)	2-7/16" (61.1 mm)	11-11/16" (296.1 mm)	15-1/2" (393.7 mm)
PX30X-XHX-XXX-C	23-1/8" (587.3 mm)	2-3/4" (69.9 mm)	11-11/16" (296.1 mm)	16" (406.4 mm)
PX30X-XSX-XXX-C	23-1/8" (587.3 mm)	2-3/4" (69.9 mm)	11-11/16" (296.1 mm)	16" (406.4 mm)



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

For additional information contact  
technical support at (800)495-0276

METALLIC

# 2" Metallic Flap Valve Specialty Pumps

## 2" Flap Valve Performance Specifications

<b>Ratio:</b>	1:1	
<b>Maximum GPM (LPM):</b>	172 (651)	
<b>Displacement per cycle: @ 100 psi</b>	1.4 (5.3) Gallons (Liters)	
<b>Air Inlet (Female):</b>	3/4 - 14 N.P.T.F.-1	
<b>Fluid Inlet/Outlet (Female):</b>	PF20X-AXX-XXX-B 2 - 11-1/2 N.P.T.F.-1 PF20X-BXX-XXX-B Rp 2 (2 - 11 BSP parallel)	
<b>Max. operating pressure</b>	psi (bar): 120 (8.3)	
<b>Suspended solids max. dia.</b>	in. (mm): 2" (51)	
<b>Maximum dry suction lift</b>	ft (m): 14 (4.2)	
<b>Weight</b>	PF20X-XAX-SXX-B	74 (34)
	PF20X-XCX-SXX-B	161 (73)
	PF20X-XSX-SXX-B	188 (85)

### Sound Level:

PSI	Cycles / Min	db(A)
70	60	85.0



## Ordering Menu

<b>PF20</b>	<b>X</b>	-	<b>X</b>	<b>X</b>	<b>X</b>	-	<b>S</b>	<b>X</b>	<b>X</b>	-	<b>B</b>
<b>Model Series</b>	<b>Center Section</b>		<b>Connection</b>	<b>Wetted Parts</b>	<b>Hardware</b>		<b>Seat Material</b>	<b>Diaphragm Material</b>			<b>Flap Material</b>
PF20 Standard Pump	A Aluminum R Polypropylene w/SS Air Caps S Stainless Steel Y Polypropylene w/CI Air Caps		A N.P.T.F. Thread B BSP Thread	A Aluminum <sup>1</sup> C Cast Iron S Stainless Steel	P Plated Steel S Stainless Steel		S Stainless Steel	A Santoprene G Nitrile T PTFE/Santoprene V Viton			A EPR G Nitrile U Polyurethane V Viton
				<sup>1</sup> Not available w/ PD20R or PD20Y option							

## Accessories\*

### Air Line Connection Kit | Kit No. 66109

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

**Service Repair Kits** | Kit No. 637369 (air motor for PF20R and PF20Y)  
Kit No. 637421 (air motor for PF20A and PF20S)  
Kit No. 637310-XX (fluid section)

### Continuous-Duty Muffler | No. 67263

Helps reduce possibility of pump freeze-over caused by moisture in air supply. Recommended for continuous-duty and high-flow applications. Muffler features large expansion chamber, permitting cold exhaust air to exit pump.

67263 Continuous-Duty Muffler would be used to replace 94810 Muffler that comes standard with pump.

### Int. Muffler | No. 94117

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

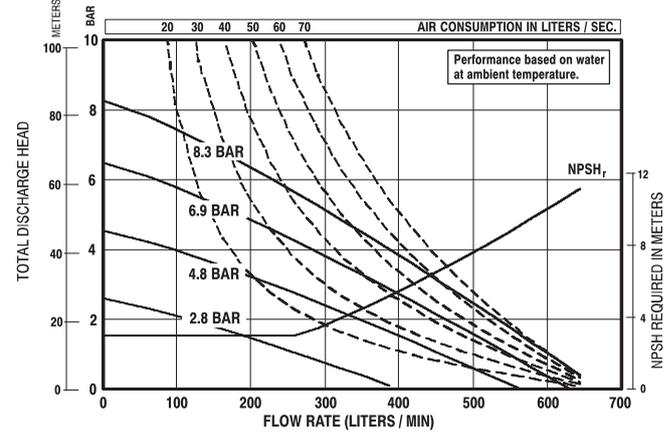
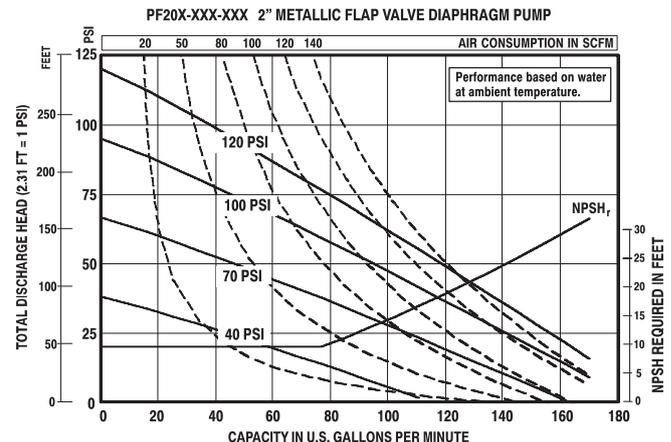
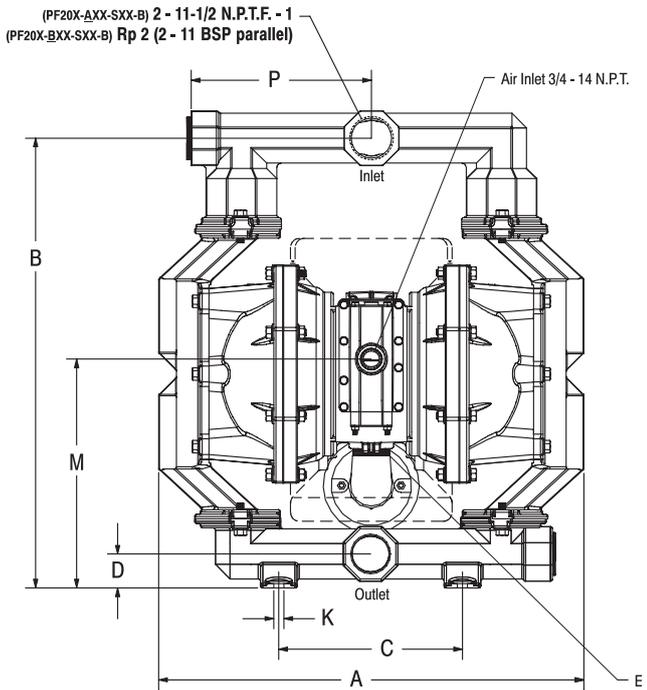


67263 Continuous Duty Muffler



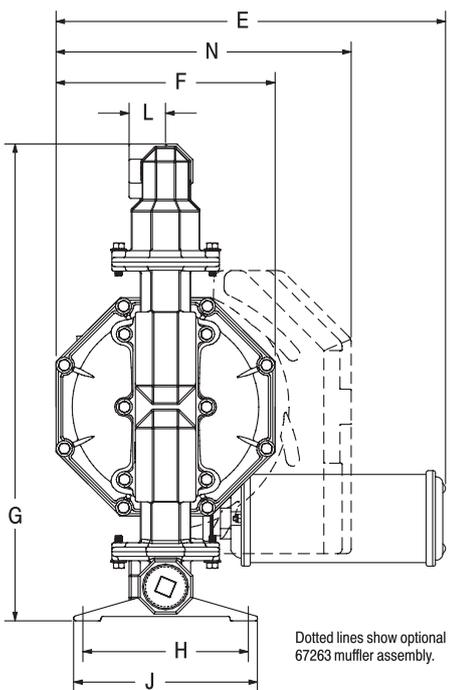
66109 Air Line Connection

# 2" Metallic Flap Valve Dimensions and Flow Curves Specialty Pumps



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

For additional information contact technical support at (800)495-0276



### DIMENSIONS

- |                         |                          |                         |                         |
|-------------------------|--------------------------|-------------------------|-------------------------|
| A - 23-9/32" (591.3 mm) | E - 21-11/32" (541.9 mm) | J - 10-1/16" (255.6 mm) | N - 16-3/16" (410.8 mm) |
| B - 24-3/4" (628.7 mm)  | F - 12" (304.8 mm)       | K - 9/16" (14.3 mm)     | P - see below           |
| C - 10-1/16" (255.6 mm) | G - 26-1/4" (666.8 mm)   | L - see below           |                         |
| D - see below           | H - 9-1/16" (230.2 mm)   | M - see below           |                         |

	"D"	"L"	"M"	"P"
PF20X-XCX-SXX-B	1-7/8" (47.6 mm)	2" (50.8 mm)	12-19/32" (319.9 mm)	9-7/8" (250.7 mm)
PF20X-XSX-SXX-B	2-1/2" (63.5 mm)	2-3/32" (53.0 mm)	13-1/4" (336.6 mm)	-----

SPECIALTY PUMPS

# Powder Transfer Specialty Pumps

## Solution:

ARO's Powder Transfer System. Transfer and handle your dry process powders faster, cleaner and at a fraction of the cost associated with installed "systems".

## Replace Manual Powder Processes.

- **Reduce Airborne Contamination** - With direct transfer from the powder container to your recipe.
- **Unique Patented Air-Induction System** - Avoids the possibility of powder pack-out.
- **Economical and Simple** - Unlike large, complex systems.
- **Portable** - Can be moved from site to site.

For the Consistent Trouble Free Transfer of Powders up to 45-lbs. Per Cubic Foot (721 Kgs. Per Cubic Meter) Dry-Weight.

**Including:** Carbon Black, Expanded Mica, Silicones, Acrylic Resins and Pharmaceuticals

## Performance Specifications

<b>Port:</b>	2" and 3"	
<b>Material:</b>	Aluminum and Stainless Steel	
<b>Max. air inlet pressure</b> psi (bar):	50 (3.4)	
<b>Max. fluidizing pressure</b> psi (bar):	100 (6.9)	
<b>Suspended solids max. dia.</b> in. (mm):	1/4" (6.4) PP20A Models	
	3/8" (9.5) PP30A Models	
<b>Weight:</b> lbs (kg)	PP20A-XAX-AAA	99.4 (45.1)
	PP20A-XSX-AAA	157.8 (71.6)
	P30A-XAX-AAA	137.5 (62.4)
	PP30A-XSX-AAA	236.8 (107.4)



## Ordering Menu

<b>PP20A</b>	-	<b>X</b>	<b>X</b>	<b>X</b>	-	<b>A</b>	<b>A</b>	<b>A</b>
 <b>Model Series</b>		 <b>Connection</b>	 <b>Wetted Parts</b>	 <b>Hardware</b>		 <b>Seat Material</b>	 <b>Diaphragm Material</b>	 <b>Diaphragm Material</b>
2    2" Port		A    2-11-1/2 N.P.T.F. - 1 B    Rp2(2-11 BSP) C    2-1/2" Tri-Clamp*	A    Aluminum S    Stainless Steel	P    Plated Steel S    Stainless Steel		A    Santoprene	A    Santoprene M    Medical Grade Santoprene	A    Santoprene M    Medical Grade Santoprene
		<small>* Available only in Stainless Steel with "M" Ball and Diaphragm option</small>					<b>Ball Material</b>	<b>Ball Material</b>
							A    Santoprene M    Medical Grade Santoprene	A    Santoprene M    Medical Grade Santoprene
<b>PP30A</b>	-	<b>X</b>	<b>X</b>	<b>X</b>	-	<b>A</b>	<b>A</b>	<b>A</b>
 <b>Model Series</b>		 <b>Connection</b>	 <b>Wetted Parts</b>	 <b>Hardware</b>		 <b>Seat Material</b>	 <b>Diaphragm Material</b>	 <b>Diaphragm Material</b>
3    3" Port		A    3-8 N.P.T.F. - 1 B    Rp3(3-11 BSP)	A    Aluminum S    Stainless Steel	P    Carbon Steel S    Stainless Steel		A    Santoprene	A    Santoprene	A    Santoprene
							<b>Ball Material</b>	<b>Ball Material</b>
							A    Santoprene	A    Santoprene

## Accessories\*

### Air Line Connection Kit | Kit No. 66109

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

### Service Repair Kits | Kit No. 637421 (air section)

Kit No. 637303-XX (fluid section for PP30A)

Kit No. 637309-XX (fluid section for PP20A)

### Suction Probe | No. 67183-1

Aluminum Suction Probe - Includes all necessary pump attachment hardware and 10 ft. of groundable hose. Probe can be used with both 2" and 3" ported powder pumps.

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



Air Line  
Connection Kit

# Drum Pumps Specialty Pumps

## Drum Pumps

- Choose from Aluminum, Stainless Steel or Polypropylene Body Construction - ARO Drum Pumps are available in three body materials for optimum fluid compatibility.
- 14.4 GPM (54.5 lpm) Flow Capability for non-metallic diaphragm pumps.
- 12.0 GPM (45.4 lpm) Flow Capability for metallic diaphragm pumps.
- 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 - Unlike traditional band-clamp style pumps.
- ARO Diaphragm Drum Pumps utilize bolted fasteners for leak-tight integrity.
- Five Year Warranty.

## Drum Pump Packages

- Factory-Matched - ARO Drum Pump package components (adapters, siphon tubes, etc.) 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



DAB05-PPCC-B-J  
Drum Pump

SPECIALTY PUMPS

## Ordering

Model	Pump Material	Seat Material	Ball Check and Diaphragm Material	Air Inlet	Fluid Outlet Accessory
<b>Basic Packages</b> (Each package includes Pump, Bung Adapter, Air Shut-off, Siphon Tube, Weather Seal and Base)					
DAB05-APCC-2-A	Aluminum	Polypropylene	Hytrel	Shut-Off Valve	None
DAB05-ASAA-2-A	Aluminum	Stainless	Santoprene	Shut-Off Valve	None
DAB05-ASCC-2-G	Aluminum	Stainless	Hytrel	Piggyback	None
DAB05-ASTT-2-A	Aluminum	Stainless	PTFE	Shut-Off Valve	None
DAB05-PPAA-2-A	Polypropylene	Polypropylene	Santoprene	Shut-Off Valve	None
DAB05-PPCC-2-A	Polypropylene	Polypropylene	Hytrel	Shut-Off Valve	None
DAB05-PPTT-2-A	Polypropylene	Polypropylene	PTFE	Shut-Off Valve	None
DAB05-PPUU-2-A	Polypropylene	Polypropylene	Polyurethane	Shut-Off Valve	None
DAB05-SSTT-2-A	Stainless	Stainless	PTFE	Shut-Off Valve	None
DAB05-SSTT-2-H	Stainless	Stainless	PTFE	Piggyback	None
<b>Transfer Packages</b> (Basic Pump plus Fluid Hose or Fluid Hose with Non-Drip Nozzle)					
DAB05-APCC-2-O	Aluminum	Polypropylene	Hytrel	Shut-Off Valve	10' Nitrile hose**
DAB05-APCC-B-P	Aluminum	Polypropylene	Hytrel	Shut-Off Valve	10' Nitrile hose with non-drip tip**
DAB05-PPAA-2-B	Polypropylene	Polypropylene	Santoprene	Shut-Off Valve	10' E.P.D.M. hose*
DAB05-PPAA-2-E	Polypropylene	Polypropylene	Santoprene	Piggyback	10' E.P.D.M. hose*
DAB05-PPCC-2-M	Polypropylene	Polypropylene	Hytrel	Shut-Off Valve	10' Nitrile hose with non-drip tip*
DAB05-PPCC-2-N	Polypropylene	Polypropylene	Hytrel	Shut-Off Valve	10' Nitrile hose*
DAB05-PPCC-B-M	Polypropylene	Polypropylene	Hytrel	Shut-Off Valve	10' Nitrile hose with non-drip tip*
DAB05-PPUU-2-C	Polypropylene	Polypropylene	Polyurethane	Shut-Off	10' Vinyl hose*
DAB05-PPUU-2-F	Polypropylene	Polypropylene	Polyurethane	Piggyback Filter/Reg	10' Vinyl hose*
<b>Dispensing Packages</b> (Basic Pump plus Foot Valve, Hose and Dispensing Nozzle)					
DAB05-APCC-B-L	Aluminum	Polypropylene	Hytrel	Shut-Off	10' Nitrile hose with Dispensing Bib**
DAB05-PPAA-B-K	Polypropylene	Polypropylene	Santoprene	Shut-Off	10' E.P.D.M. hose with Polypropylene dispensing Nozzle*
DAB05-PPCC-B-J	Polypropylene	Polypropylene	Hytrel	Shut-Off	10' Nitrile hose with Dispensing Bibb*

\*for Polypropylene pumps \*\*for Aluminum pumps

## Drum Pumps

# Specialty Pumps

### 55-Gallon Drum Bung Adapter Kits

- For applications where half inch diaphragm pumps are used to draw fluid from 55-gallon drums.
- Easily mounts pump in bung opening of drum. Permits easy change-over of pump from empty containers.
- Kit contains Baseplate, Bung Adapter, Bung Seal, Siphon Tube, Weather Seal and Stainless Steel Hardware

Model	Base Material	Bung Adapter	Tube Material	Weather Seal
67231	Polypropylene	Polypropylene	Polypropylene	UHMW-PE
67231-6	Aluminum	Aluminum	Stainless Steel	Viton
67231-7	Stainless Steel	Stainless Steel	Stainless Steel	Viton

### Foot Valves

- Attaches to bottom of siphon tube. Allows pump to remain primed during drum changeover.
- Recommended when dispensing nozzle is used.
- Foot Valve contains Housing, Ball Check and O-Ring.

Model	Housing Material	Ball Check	O-Ring	Used with
637336	Polypropylene	Viton	Viton	67231 Bung Adapter Kit
637337	Stainless Steel	Viton	Viton	67231-6 or 673231-7 Bung Adapter Kits

### Bulk Tank Adapter Kits

- For applications where pump will be mounted on a bulk tank.
- Kit comes complete with necessary hardware and acts like a bulk head fitting.
- Customer must supply siphon tube to pump.
- Kit contains Baseplate, Bung or Tank Adapter, Seal and Stainless Steel Hardware.

Model	Base Material	Bung Adapter	Seal
67234	Polypropylene	Polypropylene	Viton O-Ring Seal
67234-7	Stainless Steel	Stainless Steel	Viton O-Ring Seal

### Hoses

- Hose assemblies feature 1/2" ID hose supplied in 10-foot lengths

Model	Hose Material	Pump Used with	Inlet Fitting / Outlet Fitting	Used with Nozzle (sold separately)
621514-10	EPDM	Polypropylene	Cam Fitting / 1" NPTM	95199 Dispensing Nozzle
621515-10	EPDM	Polypropylene	Cam Fitting / Bare	N/A
621516-10	Nitrile	Polypropylene	Cam Fitting / 1/4 NPTM (Brass)	635129 Dispensing Bibb
621517-10	Nitrile	Polypropylene	Cam Fitting / Bare	N/A
621518-10	Nitrile	Aluminum	Cam Fitting / Bare	N/A
621519-10	Vinyl	Polypropylene	Cam Fitting / Bare	N/A
621520-10	Nitrile	Aluminum	Cam Fitting / 1/4 NPTM (Brass)	635129 Dispensing Bibb
621523-10	Nitrile	Polypropylene	Cam Fitting / Non-Drip Nozzle	N/A
621524-10	Nitrile	Aluminum	Cam Fitting / Non-Drip Nozzle	N/A
622514-10	Nylon	Polypropylene	1/2" NPTM inlet and outlet (316 Stainless fittings)	—

### Fluid Dispense Equipment

Model	Description	Used with
95199	Composite Nozzle	Features tough composite (polypropylene) construction for caustic service. Works like gasoline nozzle. Requires 95200 Swivel
95200	Swivel	Polypropylene swivel attaches between hose and 95199 dispensing nozzle. Allows operator to rotate nozzle freely. 1" NPTM x 1" NPTF threads
77617	Oil Tapper Fitting	Used to attach 95183 Oil Tapper to 1/2" Aluminum Pump. Plated carbon steel. 1/2 NPTF x 3/8" NPTF threads.
635129	Dispensing Bibb	Radiator type bibb has 1/4" fluid inlet and non-drip tip. For water or oil service. Zinc die casting with brass and nitrile seals. 1/4" NPTF inlet threads

### Pump Outlet Adapter

- Required to connect pump to hose assembly with Cam Fitting

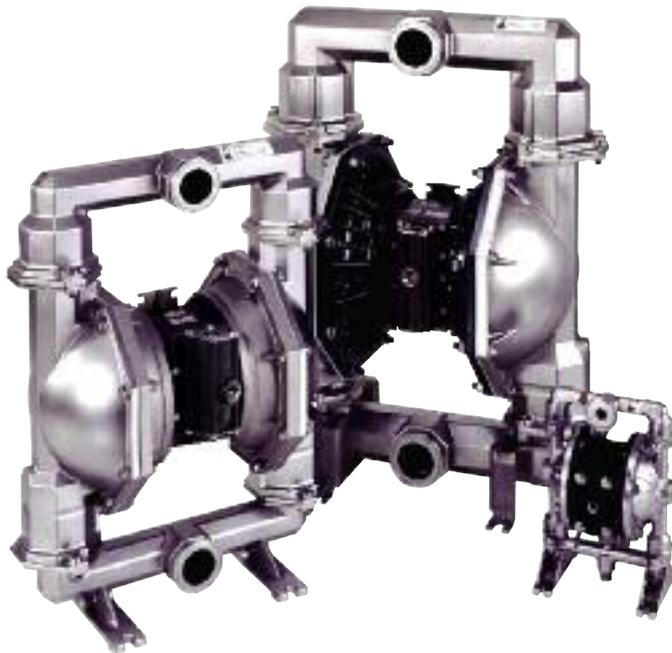
Model	Description	Pump Used with	Inlet / Outlet Threads:
95189	Composite Fitting	Polypropylene	1/2" NPTM / Male Cam Fitting
95190	Aluminum Fitting	Aluminum	1/2" NPTM / Male Cam Fitting

# Sanitary Transfer Specialty Pumps

- Constructed of FDA Accepted Materials
- Electro-Polished 316 Stainless Steel Fluid Section
- Bolted Construction with all Stainless Steel Hardware
- All Investment Cast Wetted Parts

## Typical Applications:

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



SPECIALTY PUMPS

## S-Tran Performance Specifications

	PM05X-X-A02 (1/2")	PM10X-X-A02 (1")	PM15X-X-A02 (1-1/2")	PM20X-X-X-B02 (2")	PM30X-X-X-C02 (3")
<b>Ratio:</b>	1:1	1:1	1:1	1:1	1:1
<b>Maximum GPM (lpm):</b>	13.0 (49.2)	52.2 (197.6)	123 (465.6)	172 (651)	275 (1041)
<b>Displacement per Cycle GPM (lpm):</b>	0.040 (.15)	.232 (.88)	.617 (2.34)	1.4 (5.3)	2.8 (10.6)
<b>Air Inlet (Female):</b>	1/4 - 18 N.P.T.	1/4 - 18 N.P.T.	1/2 - 14 N.P.T.	3/4 - 14 N.P.T.F.-1	3/4 - 14 N.P.T.
<b>Fluid Inlet:</b>	1-1/2" Tri-Clamp	1-1/2" Tri-Clamp	2" Tri-Clamp	2-1/2" Tri-Clamp	3" Tri-Clamp
<b>Fluid Outlet:</b>	1-1/2" Tri-Clamp	1-1/2" Tri-Clamp	2" Tri-Clamp	2-1/2" Tri-Clamp	3" Tri-Clamp
<b>Max. Operating Pressure: PSI (bar)</b>	100 (6.9)	120 (8.3)	120 (8.3)	120 (8.3)	120 (8.3)
<b>Suspended solids in.(mm):</b>	3/32" (2.4)	1/8" (3.3)	1/4" (6.4)	1/4" (6.5)	3/8" (9.5)
<b>Weight lbs (kg.):</b>	14.75 (6.7)	PM10A-CSS-X-A02 44.3 (20.1) PM10R-CSS-X-A02 38.2 (17.3) PM10S-CSS-X-A02 51.1 (23.2)	PM15A-CSS-X-A02 61.9 (28.1) PM15R-CSS-X-A02 60.3 (27.3) PM15S-CSS-X-A02 77.9 (35.3)	PM20A-CSS-X-B02 142.8(64.8) PM20R-CSS-X-B02 157.4(71.4) PM20S-CSS-X-B02 171.7(77.9)	PM30A-CSS-X-C02 227.5(103.2) PM30R-CSS-X-C02 253.3(114.9) PM30S-CSS-X-C02 267.2(121.2)
<b>Optional Muffler</b>	93110 (requires 67367 assembly)			67213 (Standard Duty) 67263 (continuous Duty)	67213 (Standard Duty) 67263 (continuous Duty)

## Ordering Menu

<b>PMXX</b>	<b>X</b>	-	<b>C</b>	<b>S</b>	<b>S</b>	-	<b>X</b>	<b>X</b>	<b>X</b>	-	<b>X02</b>
<b>Model Series</b>	<b>Center Section</b>		<b>Connection</b>	<b>Wetted Parts</b>	<b>Hardware</b>		<b>Seat Material</b>	<b>Ball Material</b>	<b>Diaphragm Material</b>		
PM05 1/2" Pump	A Aluminum		C Tri-Clamp	S Stainless Steel	S Stainless Steel		A Santoprene	A Santoprene	A Santoprene		A 1/2", 1", 1-1/2" ported pumps
PM10 1" Pump	R Polypropylene						S Stainless Steel	T PTFE	M Medical grade Santoprene		B 2" ported pumps
PM15 1-1/2" Pump	S Stainless Steel							T PTFE/Santoprene	T PTFE/Santoprene		C 3" ported pumps
PM20 2" Pump											
PM30 3" Pump	P Polypropylene PM05P sole designation for 1/2" pumps										

# High Pressure Specialty Pumps

The high pressure pumps were developed for applications requiring fluid pressures in excess of the 100 psi developed by traditional pumps. Compared to a standard diaphragm pump, these high-pressure pumps can produce up to 200 psi (2:1 Ratio Pump) and nearly 300 psi (3:1 Ratio Pump), at about half the flow rate.

The 2:1 ratio is accomplished by using the effective surface area of both diaphragms to double the output pressure. The 3:1 ratio is accomplished by using two power pistons that drive the fluid handling diaphragms.

## 2:1 Ratio High-Pressure Pump

- Conductive polypropylene air motor provides higher protection from static electric
- Stainless steel wetted sections provide better protection from material fatigue/stress
- Max. flow rate of 160 GPM (605.6 LPM)
- Eliminates wastage of compressed air during operation, minimize energy loss
- Sturdy bolted construction design prevents air & fluid leakages
- SimulShift™ and Quick Dump valve technologies ensure stall-free/ ice-free operation

## Applications:

- High-viscosity fluid transfer
- High-solidify fluid transfer
- High-discharge pressure transfer
- Long-distance transfer



670045-X  
3" 2:1 Ratio Pump

## Technical Specifications

	PH15F-XXX-XXX-A	PH20F-XXX-XXX-B	PH30F-XXX-XXX-C
Weight lb (kg)	88 (39.9)	146 (66.2)	268 (121.6)
Max Air Inlet Pressure psi (bar):	100 (6.9)	100 (6.9)	100 (6.9)
Max Material Inlet Pressure psi (bar):	10 (0.69)	10 (0.69)	10 (0.69)
Max Material Outlet Pressure psi (bar):	200 (13.8)	200 (13.8)	200 (13.8)
Max Flow gpm (lpm):	63 (238.48)	92 (348.25)	160 (605.6)
Displacement per cycle Gal. (L) @ 100 psig:	0.88 (3.33)	1.28 (4.8)	1.4 (5.3)
Suspended solids max. dia. in. (mm):	1/4 (6.4)	1/4 (6.4)	3/8 (9.5)
Sound Level db (A) @ 70 PSI, 53 cpm:	75.6	77.0	83.0

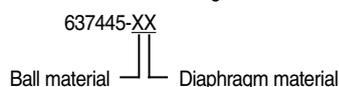
## Ordering Menu

<b>PH</b>	<b>XX</b>	<b>F</b>	<b>-</b>	<b>XSP</b>	<b>-</b>	<b>S</b>	<b>X</b>	<b>X</b>	<b>-</b>	<b>(X)</b>
High Pressure Diaphragm Pump	Port	Center Section		Connection	Seat Material	Ball Material	Diaphragm Material			
	15 1.5" 20 2" 30 3"	F Conductive Polypropylene		A NPT B BSP	S Stainless steel	A Santoprene B PTFE C Hytrel V Viton	A Santoprene B PTFE/Santoprene C Hytrel			A 1.5" B 2" C 3"

## Accessories

Service Repair Kits	PH15F-XXX-XXX-A	PH20F-XXX-XXX-B	PH30F-XXX-XXX-C
Fluid section service kits	637455-XX	637466-XX	637441-XX
Air motor section service kits	637389	637369	637369
Major air valve assembly	637390-7	637374-6	637374-6

Fluid Section Service Kits Ordering Menu



Fluid Section Service Kits Ordering Example

Diaphragm Model: PH15F-ASP-SAA-C  
Service Kits: 637445-AA

# High Pressure Specialty Pumps

## 3:1 Ratio High-Pressure Pump

- Can generate nearly 300 psi on standard 100 psi shop air
- Stall-Free
- Exceptional material compatibility
- Easy to maintain
- 5-Year warranty

### Ideal Transfer of:

- Paint recirculation and high solid coatings
- Inks
- Adhesives
- Filled Material
- Drilling Grout
- Caulking
- Solvent reclamation
- Resins



PH10A-XXX-XXX  
3:1 Ratio Pump

Model	Maximum Gallons GPM (Liters)	Displacement @ 100 PSI Cycles Per Gallons (Liters)	Fluid Inlet/Outlet (female)	Maximum Operating pressure PSI(bar)
<b>Stainless Steel**Construction - NPT Inlet/Outlet</b>				
PH10A-ASS-HHT	26(98.4)	0.06(.23)	1-Inch	300(20.4)
PH10A-ASS-SST	26(98.4)	0.06(.23)	1-Inch	300(20.4)
<b>Stainless Steel Construction - BSP Inlet/Outlet</b>				
PH10A-BSS-HHT	26(98.4)	0.06(.23)	1-Inch	300(20.4)
PH10A-BSS-SST	26(98.4)	0.06(.23)	1-Inch	300(20.4)

\*\* All Stainless Steel is electro-polished/passivated

SPECIALTY PUMPS

## Diaphragm Pump Demo Box

The Diaphragm pump demo box introduces characteristic AROExper Series diaphragm pump and accessories, as well as the working performance of EXP diaphragm pump under different outlet pressure and flow rate conditions. Directly and completely show the advantages of EXP air motor.

### Main performance

- Introduction of filter regulator, needle valve, pulsation dampener and other accessories
- Function presentation of remote monitoring
- Display "Pump stalling in dead head operation"

### Ordering Number

TE12 0020



# PW Series Specialty Pumps

## ARO PW10X-X EXP Pumps

- Upgrade to EXP from existing Wilden® P4,T4 or M4 pumps, or Versa-Matic® E4 pumps.
- The ARO PW10X-X matches the fluid inlet/outlet port dimensions of these other pumps
- Leave the stalling issues and leaking band-clamps behind.

### 1" Metallic EXP Performance Specifications

<b>Ratio:</b>	1:1
<b>Maximum GPM (LPM):</b>	60 (227.1)
<b>Displacement per cycle Gallons (Liters):</b>	0.234 (.89)
<b>Air Inlet (Female):</b>	1/2 - 14 N.P.T.
<b>Fluid Inlet:</b>	1-1/2 - 11-1/2 N.P.T.F - 1
<b>Fluid Outlet:</b>	1-1/4 - 11-1/2 N.P.T.F - 1
<b>Max. operating pressure psi (bar):</b>	120 (8.3)
<b>Suspended solids max. dia. in. (mm):</b>	1/8" (3.2)
<b>Weight lbs (kg):</b>	PW10A-XXX-XXX 26.2 (11.9)
<b>Maximum dry suction lift ft (m):</b>	19 (5.8)

### Sound Level:

PSI	Cycles / Min	db(A)
70	60	79.7

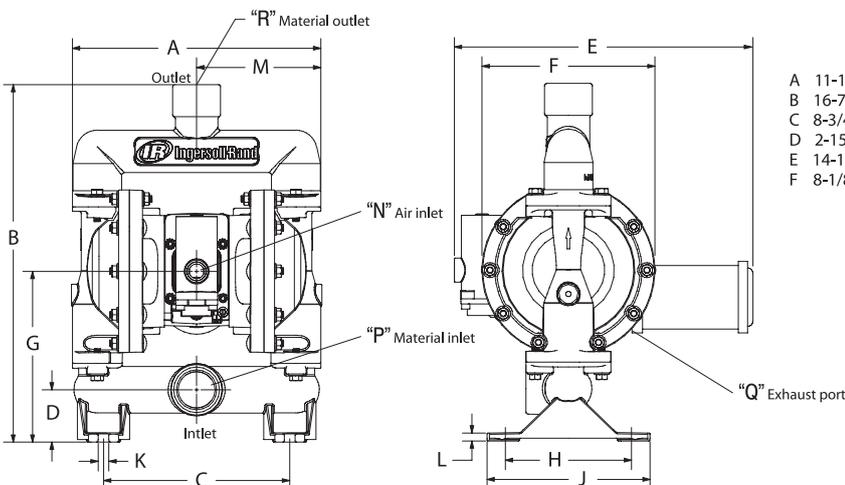


### Ordering Menu

<b>PW10</b>	<b>A</b>	-	<b>A</b>	<b>A</b>	<b>X</b>	-	<b>X</b>	<b>X</b>	<b>X</b>
<b>Model Series</b>	<b>Center Section</b>		<b>Connection</b>	<b>Wetted Parts</b>	<b>Hardware</b>		<b>Seat Material</b>	<b>Diaphragm Material</b>	<b>Ball Material</b>
PW10 Standard Pump	A Aluminum		A N.P.T.F. Thread	A Aluminum	P Plated Steel S Stainless Steel		A Santoprene F Aluminum G Nitrile	A Santoprene G Nitrile T PTFE/Santoprene	A Santoprene G Nitrile T PTFE

### Accessories

- Service Repair Kits | *Kit No. 637397 (air motor)*  
*Kit No. 637401-XX (fluid section)*  
*Kit No. 637390-X (major air valve assembly)*



## U.L. Listed Pumps Specialty Pumps

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

**Note:** To meet UL79 specifications, pumps utilize pressure relief valves to limit dispensing line pressure to under 50-psi. If line pressure between the pump and dispensing point exceeds 50 psi due to thermal expansion, line compression, backfeed, or gravity, the pressure relief valve opens and bleeds off excess pressure. The relief valve must be plumbed to return the bleed-off fuel to the storage container.

### Performance Specifications

<b>Port:</b>	1/2", 1", 1-1/2" and 2"
<b>Ratio:</b>	1:1
<b>Maximum GPM (LPM):</b>	670042: 12 (45.4) 650717-C: 29 (109.8) flooded inlet 650718-C: 75 (283.9) flooded inlet 650719-C: 75 (283.9) flooded inlet
<b>Air Inlet (Female):</b>	670042: 1/4" 650717-C: 1/4" 650718-C: 1/2" 650719-C: 3/4"
<b>Fluid Inlet/Outlet (Female):</b>	670042: 1/2" 650717-C: 1" 650718-C: 1-1/2" 650719-C: 2"
<b>Max. operating pressure psi (bar):</b>	50 (3.4)
<b>Suspended solids max. dia. in. (mm):</b>	670042: 3/32" (2.4) 650717-C: 1/8" (3.2) 650718-C: 1/4" (6.4) 650719-C: 1/4" (6.4)
<b>Weight: lbs (kg)</b>	670042: 10.36 (4.70) 650717-C: 22 (9.9) 650718-C: 60.4 (27.4) 650719-C: 58.4 (26.5)



650717-C  
UL Approved Pump

### Ordering Menus

Model	Ball	Seat	Diaphragm
670042	Viton	Aluminum	Viton
650717-C	Acetal	PVDF	Viton
650718-C	Acetal	PVDF	Viton
650719-C	Acetal	PVDF	Viton

### Accessories

**Service Repair Kits |** *Kit No. 637118-C (air motor)*  
*Kit No. 637428 (670042 air motor)*  
*Kit No. 637118-C (650717-C, 650718-C and 650719-C air motor)*  
*Kit No. 637137-63 (650717-C fluid section)*  
*Kit No. 637448 (670042 fluid section)*  
*Kit No. 637138-63 (650718-C and 650719-C fluid section)*

# Cone Check Pumps Specialty Pumps

## ARO Cone-Check Pumps

- Traditional ball checks are replaced with a flexible cone.
- Ideal for pumping slips and slurries found in the stone, clay and glass industry.
- Hexagon opening cut into check permits flow of viscous, abrasive fluids with less turbulence than ball checks.
- Optional top-to-bottom flow of material through pump available.



## Performance Specifications

<b>Ratio:</b>	1:1
<b>Maximum GPM (LPM):</b>	85 (321.7)
<b>Displacement per cycle Gallons (Liters):</b>	0.64 (2.42)
<b>Air Inlet (Female):</b>	1/2 - 14 N.P.T.F-1
<b>Fluid Inlet:</b>	1-1/2 - 11-1/2 N.P.T.F - 1
<b>Fluid Outlet:</b>	Rp 1-1/2 (1-1/2 - 11 BSP Parallel)
<b>Suspended solids max. dia. in. (mm):</b>	1/2" (12.7)
<b>Weight lbs (kg):</b>	54.5 (23.4)
<b>Sound Level:</b>	
	PSI    Cycles / Min    db(A)
	70        60        79.7

## Ordering Menu

<b>67005</b>	<b>X</b>	-	<b>0</b>	<b>X</b>	<b>X</b>	-	<b>C</b>	-	<b>03</b>
<b>Model Series</b>	<b>Thread type</b>		<b>Check Type</b>	<b>Diaphragm Material</b>					<b>Cone Check Flow</b>
67005 Cone Check Pump	3 N.P.T.F. 9 BSP		0 Cone Check	2 Nitrile B Santoprene					03 Bottom Discharge
			<b>Check Material</b>						
			J Nitrile K E.P.R.						

## Accessories

### Air Line Connection Kit | Kit No. 66084-1

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

**Service Repair Kits** | Kit No. 637118-C (air motor)  
Kit No. 637124-XX (fluid section)

# Dewatering Specialty Pumps

## Centrifugal Type

- Simple design, few moving parts
- Handles a wide variety of debris-laden applications
- Can also be used for simple transfer requiring high flows (200 + GPM/750 LPM Avg.) with high discharge head (65 feet/20 meters avg.)
- Self-Priming
- Adjustable impeller and impeller cover help maintain peak performance
- Closed-type impeller promotes greater efficiency when pumping against high heads
- Ultra-rugged body construction insures durability
- Lightweight and extremely portable
- Pressurized lubrication of the impeller shaft seals prolongs operational life



P237A1  
Centrifugal Pump

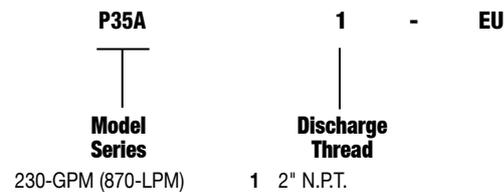
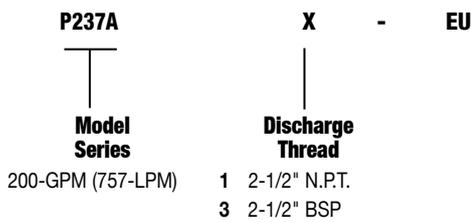


P35A1-EU  
Centrifugal Pump

## Centrifugal Pump Performance Specifications

<b>Maximum Flow</b> GPM (LPM):	200 (757) P237AX-EU 230 (870.5) P35AX-EU
<b>Air Inlet</b> (Female):	3/4 -14 N.P.T. (P237AX-EU) 1 - 11-1/2 N.P.T. (P35A1-EU)
<b>Fluid Inlet:</b>	Screened Inlet
<b>Fluid Outlet:</b>	2" N.P.T.F. P35A1-EU 2-1/2" N.P.T.F. P237A1-EU 2-1/2" BSP P237A3-EU
<b>Max. operating pressure</b> psi (bar):	90 (6.2)
<b>Air Consumption in CFM:</b>	P237AX-EU 100 P35A1-EU 160
<b>Suspended solids max. dia.</b> in. (mm):	1/4" (6.4)
<b>Pump Housing Material:</b>	P237AX-EU Cast Iron P35A1-EU Cast Iron
<b>Weight</b> lbs (kg):	P237AX-EU 48 (21.8) P35A1-EU 79 (36)

## Ordering Menus



## Accessories

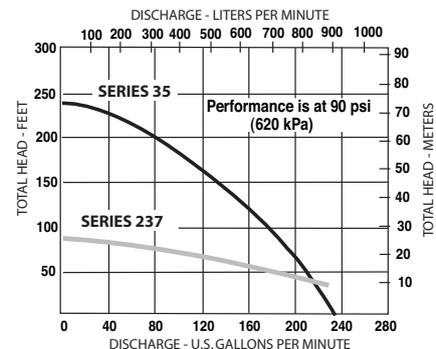
**Air Line Unit** | C28453-810 for P237AX-EU  
C28463-810 for P35A1-EU

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



# Pulsation Dampeners Accessories

## Pulsation Dampeners

Diaphragm and piston 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.

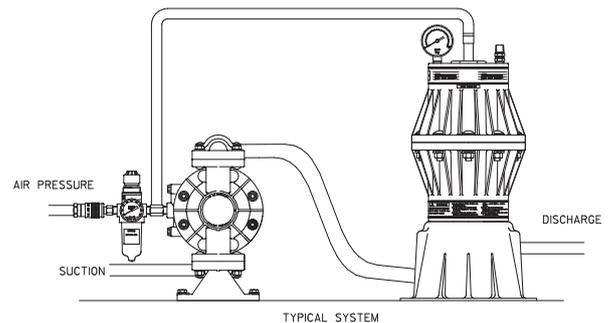


## Automatic Shock Blockers

- 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 159 in.<sup>3</sup> maximum fluid volume, and 3" models up to 509 in.<sup>3</sup> maximum fluid volume.
- Broad Material Range for Compatibility - choose from PVDF, 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 new Shock Blockers are built tough to deliver worry-free, near pulse-free fluid handling.

## 1" Port Models

<b>Pulsation Dampener Type:</b>	Non-Metallic / Automatic	
<b>Material:</b>	See model description chart	
<b>Weight lbs (kg):</b>	Polypropylene	8.4 (3.8)
	Conductive Acetal	8.6 (3.9)
	PVDF	9.0 (4.1)
<b>Material Inlet/Outlet:</b>	SB10X-AXX 1" - 11-1/2 N.P.T. (Female) (Both are available) SB10X-BXX Rp1(1-11 BSP)	
<b>Air Inlet:</b>	3/8 - 18 N.P.T.F.-1 (Male) (Standard)	
<b>Maximum Air Inlet Pressure psi (bar):</b>	100 (6.9)	
<b>Maximum Material Inlet Pressure psi (bar):</b>	100 (6.9)	
<b>Maximum Temperature Limits:</b>	Polypropylene 35° F - 150° F (+1.6° C - 66° C) Conductive Acetal 10° F - 180° F (-12° C - 82° C) PVDF 10° F - 200° F (-12° C - 93° C)	
<b>Maximum Fluid Volume:</b>	57 In. <sup>3</sup> (0.931 lit)	



## Ordering Menu

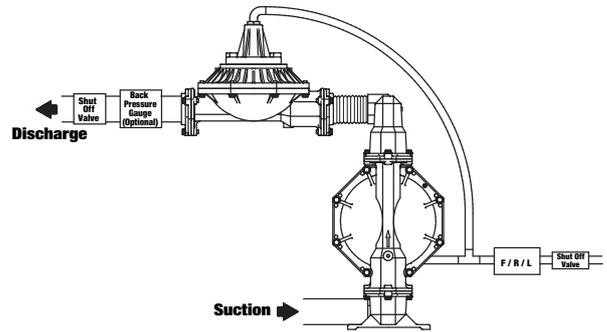
<b>SB</b>	<b>XX</b>	<b>X</b>	-	<b>X</b>	<b>X</b>	<b>X</b>	-	<b>X</b>
<b>Model Series</b>	<b>Blocker Size</b>	<b>Air Body</b>		<b>Thread</b>	<b>Fluid Construction</b>	<b>Hardware</b>		<b>Diaphragm</b>
	10    1-Inch	P    Polypropylene (Glass Filled) K    PVDF D    Conductive Acetal		A    N.P.T. B    BSP	P    Polypropylene (Glass Filled) K    PVDF D    Conductive Acetal	S    Stainless Steel (304)		A    Santoprene C    Hytrel T    PTFE U    Urethane

**Notice:** All possible options are shown in the chart above, however, certain combinations may not be recommended. Consult a representative or the factory if you have questions concerning availability.

# Pulsation Dampeners Accessories

## 2" Port Models

<b>Pulsation Dampener Type:</b>	Metallic / Automatic
<b>Material:</b>	See model description chart
<b>Weight lbs (kg):</b>	Aluminum (fluid cap) 29 (13.2) Cast Iron (fluid cap) 70 (31.8) Stainless St. (fluid cap) 71 (32.2)
<b>Material Inlet/Outlet:</b>	SB20X-AXX-X 2" -11-1/2 N.P.T.F -1 SB20X-BXX-X Rp 2(2-11 BSP)
<b>Air Inlet:</b>	3/4" - 14 N.P.T. (female)
<b>Max. Air Inlet Pressure psi (bar):</b>	120 (8.3)
<b>Max. Material Inlet Pressure psi (bar):</b>	120 (8.3)
<b>Maximum Temperature Limits:</b>	EPR -60° - 280°F (-51° - 138°C) Nitrile 10° - 180°F (-12° - 82°C) Santoprene -40° - 225°F (-40° - 107°C) PTFE 40° - 225°F (4° - 107°C) Viton -40° - 350°F (-40° - 177°C)
<b>Maximum Fluid Volume:</b>	159 in. <sup>3</sup> (2.61 lit.)



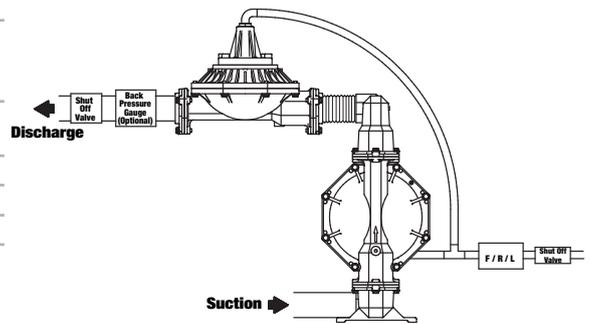
Proper support of piping and pulsation dampener is required.

## Ordering Menu

<b>SB</b>	<b>XX</b>	<b>X</b>	-	<b>X</b>	<b>X</b>	<b>X</b>	-	<b>X</b>
Model Series	Blocker Size	Air Body		Thread	Fluid Construction	Hardware		Diaphragm
	20 2-Inch	A Aluminum C Cast Iron S Stainless Steel		A N.P.T.F B BSP	A Aluminum C Cast Iron S Stainless Steel	S Stainless Steel (304) P Plated Steel		A Santoprene G Nitrile T PTFE/ Santoprene V Viton

## 3" Port Models

<b>Pulsation Dampener Type:</b>	Metallic / Automatic
<b>Material:</b>	See model description chart
<b>Weight lbs (kg):</b>	Aluminum (fluid cap) 41 (18.6) Cast Iron (fluid cap) 94 (42.6) Stain. Steel (fluid cap) 96 (43.5)
<b>Material Inlet/Outlet:</b>	SB30X-AXX-X 3" - 8 N.P.T.-1 SB30X-BXX-X Rp 3(3-11 BSP)
<b>Air Inlet:</b>	3/4" - 14 N.P.T. (female)
<b>Maximum Air Inlet Pressure psi (bar):</b>	120 (8.3)
<b>Maximum Material Inlet Pressure psi (bar):</b>	120 (8.3)
<b>Maximum Temperature Limits:</b>	EPR -60° - 280°F (-51° - 138°C) Nitrile 10° - 180°F (-12° - 82°C) Santoprene -40° - 225°F (-40° - 107°C) PTFE 40° - 225°F (4° - 107°C) Viton -40° - 350°F (-40° - 177°C)
<b>Maximum Fluid Volume:</b>	509 in. <sup>3</sup> (8.34 lit.)



Proper support of piping and pulsation dampener is required.

## Ordering Menu

<b>SB</b>	<b>XX</b>	<b>X</b>	-	<b>X</b>	<b>X</b>	<b>X</b>	-	<b>X</b>
Model Series	Blocker Size	Air Body		Thread	Fluid Construction	Hardware		Diaphragm
	30 3-Inch	A Aluminum S Stainless Steel		A N.P.T. B BSP	A Aluminum C Cast Iron S Stainless Steel	S Stainless Steel (304) P Plated Steel		A Santoprene G Nitrile T PTFE/ Santoprene V Viton

**Notice:** All possible options are shown in the chart above, however, certain combinations may not be recommended. Consult a representative or the factory if you have questions concerning availability.

# Covers / Agitators / Wall Mounts / Siphon Tubes / Counting Accessories

## Drum Cover

- Available in stainless steel (SS), durable drum cover will accommodate both diaphragm pump and agitator, where needed.

## Material Agitators

- Agitators available for both 5 and 55-gallon containers. Air-operated agitator motors generate between 500-1,000 RPM (5 gal. model), and 300-3,000 RPM (55 gal. model). Agitator shaft and propellers are constructed of corrosion-resistant 316 stainless steel.



Description	Model Number	Used With
Drum Cover	66971(stainless steel)	1/2" Pump 5-Gallon Container
Material Agitator	651100 651103	5-Gallon Container 55-Gallon Container

## Wall Mount Brackets

- Sturdy wall mount brackets provide a convenient means of mounting pumps for centralized transfer operations. Mounts are constructed of heavy-gauge, coated steel and include mounting hardware.



Description	Model Number	Used With
Wall Mount Bracket	76763 (Does Not include mounting hardware)	1/2" Pump
	66100	1" Pump (Metallic Only)
	62133	1-1/2" Pump (Metallic Only)
	67142	1" Pump and 3:1 1" Diaphragm Pump

## Mini Batch Counter Kit

- Converts a diaphragm pump into a simple batching system. Can be powered by 110VAC or 12-15VDC. Kits include 67161-2 Mini Batch Counter, 59891 Air-to-Electric Interface Switch, CHW-30 Connector, and TBOXB-X-X Valve.



67337-X Mini Batch Counter Kit with PE10P-X Pump

Description	Kit	Kit Options	Pump Model
Mini Batch Counter Kit	67337-X	-1 (24 VDC)	PE10X, PE10P
		-2 (120 VAC)	PE10X, PE10P
		-3 (No Coil)	PE10X, PE10P
	67338-X	-1 (24 VDC)	PE20X, PE30X
		-2 (120 VAC)	PE20X, PE30X
		-3 (No Coil)	PE20X, PE30X

## Siphon Tubes

- For use when pumping from a 55-gallon container, siphon tubes are available in plastic (PVC, PP, PTFE), carbon steel (CS), or 316 stainless steel (SS). 1-inch siphon tubes come with foot valve for positive priming. Both 1/2-inch and 1-inch models include bung adapters and are constructed of corrosion-resistant 316 stainless steel.



Description	Model Number	Used With
Siphon Tubes	61409 PVC 90° N.P.T.(M)	1/2" (Non-Metallic) 55-Gallon Container
	61412 PVC Straight N.P.T.(M)	1/2" (Non-Metallic) 55-Gallon Container
	65109 (CS) N.P.T.(F)	1" (Metallic) 55-Gallon Container
	66568 (SS) N.P.T.(F)	1" (Metallic) 55-Gallon Container
	66779 (PVC) N.P.T.(F)	1" (Non-Metallic) 55-Gallon Container

## Countdown Batcher

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



67072  
(Pump not included)

Description	Model No.	Pump Model
Countdown Batcher	67072	PD03P-X-X
		PD05-X-B, PD05X-X-B
		PD07P-X, PD07-X
		PE10X-X-X

**Ordering Note:** Select the PE (Electronic Interface Accessible) model pump for add-on of accessories like the Cycle Actuation Kit, Cycle Counter or Mini Batch Counter.

# Control / Leak Detection / Grounding Strap Accessories

## Cycle Actuation Kits

- Kits allow operator to control cycling of an Ingersoll Rand/ARO EXP Pump with an electrical signal from PLC's, pH or Pressure Sensors, or even a simple Line Switch. Electric signal actuates valve, which in turn supplies air to large end of unbalanced valve, allowing pump to cycle. When electrical signal is removed, the pump's air valve resets itself, completing cycle.



Cycle Actuation Kit on PE10P-X Pump

## Cycle Counter / Sensor Kits

- Like the odometer on your car, ARO's cycle counter / cycle sensing lets you know how many pump cycles have elapsed so you can be prepared to perform preventive maintenance. The cycle sensor is a cost-efficient way to save maintenance costs while keeping your pump on-line.



67350 Cycle Counter on PE10P-X Pump

## Cycle Sensor Kits

- Provides a closed contact output for monitoring pump operation. Can be used to monitor cycle rates, preventative maintenance and rough flow rate indication. Power supply and other devices required to gather, store or manipulate data. (pump not included).



67386 Cycle Sensor

Description	Kit	Kit Options	Pump Model
<b>Cycle Actuation Kit</b>	67165-X	-1 (24 VDC)	PD03P-X-X, PD05P-X-X-B,
		-2 (120 VAC)	PD05R-X-X-B,
		-3 (No Coil)	PM05P-X-X-A02, PD07P-X-X, PD07R-X-X
	67355-X	-1 (24 VDC) -2 (120 VAC) -3 (No Coil)	PE10P-X, PE10X-X, PE15-X, PE15X-X
	67357-X	-1 (24 VDC) -2 (120 VAC) -3 (No Coil)	PE20X-X
<b>Cycle Counter Kit</b>	67350	-	PD10X-X, PD10E-X-X, PE10X0X, PM10X-X-X-A02, PW10X-X
		67350-1	-
<b>Cycle Sensor Kit</b>	67386	-	PD03P-X, PD05A-X-X-B, PD05P-X-X-B, PD05R-X-X-B, PD07P-X-X, PD07R-X-X
		-	PD10P-X, PE10P-X, PD10E-X, PD10R-X, PE10R-X, PD15P-X, PE15P-X, PD15E-X, PD15R-X, PE15R-X
		-	PD20P-X, PE20P-X, PD20R-X-B, PE20R-X-B, PD30R-X-C, PE30R-X-C
		-	PD10X-X, PE10X-X, PW10A-X, PD15X-X, PE15X-X
		-	PD20X-X-B, PE20X-X-B, PF20X-B, PP20X-X, PD30X-C, PE30X-X-C, PP30X-X

**Ordering Note:** Select the PE (Electronic Interface Accessible) model pump for add-on of accessories like the Cycle Actuation Kit, Cycle Counter or Mini Batch Counter.

## Diaphragm Failure Detection

- Costly production downtime due to pump diaphragm failure and resulting (possibly hazardous) material leakage is a very real problem in many process operations. ARO Diaphragm Failure Detection is one simple, cost-effective way to get your pumps wired for preventive maintenance.



DFD Kit 67237 on PD15S-X Pump

## How ARO Diaphragm Failure Detection (DFD) Works

A refractive infrared light sensor installed into the air side of the diaphragm housing sends and receives a continuous optic signal. If diaphragm failure occurs and fluid enters the air side, the sensor's beam is absorbed and an output signal is sent indicating failure.

### Kit Description

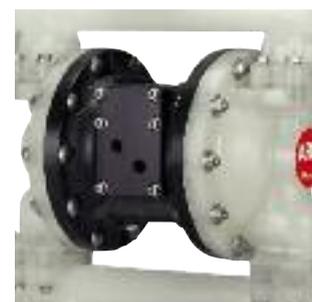
**67237** Diaphragm Failure Detection Kit

**\*Ordering Note:** Select the PE (Electronic Interface Accessible) model pump for add-on of accessories like the Diaphragm Failure Detection Kit.

**Note:** PLC and computer system not included.

## Externally Controlled Pumps

- For the ultimate control of your pumping process, choose the "B0S" version of the 1/2", or choose the "A0S" version of the 1" or 1-1/2" EXP Pumps. Air Valves are removed from the pumps, which are then controlled with solenoid or pilot actuated four-way valves. Cycle-rate and speed can be matched to specific application requirements. To order, add "B0S" to the end of the pump's model number. *Example: PE15P-FPS-PTT-A0S*



PE10P-FPS-X-A0S showing air valve removed from center-body of pump.

Pump	Model Number
3/8"	PE03P-X-X-A0S
1/2"	PE05P-X-X-B0S, PE05X-X-X-B0S
1"	PE10P-X-X-A0S, PE10X-X-X-A0S
1-1/2"	PE15P-X-X-A0S, PE15X-X-X-A0S
2"	PE20X-X-X-B0S
3"	PE30X-X-X-C0S

## Field Conversion Kits

Convert existing 1" and 1-1/2" EXP Pumps to externally controlled models. Kits contain materials needed to complete conversion.

Kit	Pump Number
<b>67360</b>	PE10P-XX-A0S, PE10XX-X-A0S
<b>67361</b>	PE15P-XX-A0S, PE15XX-X-A0S
<b>67404</b>	PE20R-X-X-B0S, PE30A-X-X-C0S

## Grounding Strap

Description	Model Number
<b>25' grounding cable</b>	66885-1

# Air Controls Accessories

## Air Line Connection Kits

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



Air Line Connection Kit

Kit Number	Pump Model
66073-1	PD03P-X, PD05P-X, PD05X-X
66073-2	PD10P-X, PD10X-X, PE10P-X, PE10X-X, PM10X-X, PW10X-X
66084-1	PD15P-X, PD15X-X, PE15P-X, PE15X-X, PM15X-X
66109	PD20P-X, PE20P-X, PD20X-X-B, PF20X-X-B, PP20X-X-X, PM20X-X-X-B02, PD30X-X-C, PD03R-X-C, PP30A-X-X, PM30X-X-X-C02

## Air Filter/Regulator

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



P39124-600

P39234-600

P39454-610

## Ordering Information

Model Number	Description	Pumps Used With	N.P.T. Inlet	Gauge Ports	Max. Inlet PSI	Pressure Range	Max. CFM	Micron Element	Size L x W
<b>1000 Series</b>									
P39124-600	Filter / Reg. w/gauge	1/4", 3/8", and 1/2"(Dia.)	1/4	1/8	150	0-140	47	5	6.2 x 2.9
<b>1500 Series</b>									
P39224-600	Filter / Reg. w/gauge	1/2", 1" Models	1/4	1/8	150	0-140	72	5	8.2 x 2.2
P39234-600	Filter / Reg. w/gauge	3:1 (Dia.)	3/8	1/8	150	0-140	90	5	8.2 x 2.2
<b>2000 Series</b>									
P39334-600	Filter / Reg. w/gauge	1-1/2" Models	1/2	1/8	150	0-140	172	5	9.7 x 2.8
<b>3000 Series</b>									
P39454-610	Filter / Reg. w/gauge and bracket	2" & 3" Models	3/4	1/8	250	0-140	236	5	13.6 x 5.5

# Service Kit / Air Line Kits / Air Valve Kits Reference

## Service Kits, Air Filter/Regulator Units, Air Line Kits

Pump Port Size	SERVICE KITS		AIR LINE KITS	
	Air Valve Kit	Fluid Section Kit (Diaphragm Material)	Recommended Air Line Filter/Regulator Units	Air Line Kit
<b>3/8" Non-Metallic</b> PD03P, PE03P	637428	637429-XX	P39124-600	66073-1
<b>1/2" Non-Metallic</b> PD05P, PE05P	637428	637427-XX	P39124-600 P39224-600 P39124-600	66073-1 66073-2 66073-1
<b>1/2" Metallic</b> PD05A, PE05A, PD05R PE05R	637428 637428	637427-XX 637427-XX	P39124-600 P39224-600	66073-1 66073-2
<b>3/4" Non-Metallic</b> PD07P	637428	637427-XX	P39124-600	66073-1
<b>3/4" Metallic</b> PD07R	637428	637427-XX	P39124-600	66073-1
<b>1" Non-Metallic</b> PD10P, PE10P, PD10E PE10E	637397	637396-XX	P39224-600	66073-2
<b>1" Metallic</b> PD10A, PE10A, PD10R PE10R, PD10S, PE10S PM10A, PM10R, PM10S PW10A 3:1 PH10A-XSS-SST	637397 637338	637401-XX 637339	P39234-600 P39234-600	66073-2 N/A
<b>1-1/2" Non-Metallic</b> PD15P, PE15P, PD15E PE15E	637389	637391-XX	P39334-600	66084-1
<b>1-1/2" Metallic</b> PD15A, PE15A, PD15R PE15R, PD15S, PE15S PM15A, PM15R, PM15S	637389	637375-XX	P39334-600	66084-1
<b>2" Non-Metallic</b> PD20P, PE20P, PD20E, PE20E	637369	637373-XX	P39454-610	66109
<b>2" Metallic</b> PD20A, PD20S, PE20A PE20S, PM20A, PM20S, PP20A PD20R, PD20Y, PD20R PE20Y, PM20R PF20A, PF20S PF20R, PF20Y	637421 637369 637421 637369	637309-XX 637309-XX 637310-XX 637310-XX	P39454-610 P39454-610 P39454-610 P39454-610	66109 66109 66109 66109
<b>3" Metallic</b> PD30A, PE30A, PD30S PE30S, PP30A, PM30A PM30S PD30R, PE30R, PM30R PH30F-X	637421 637369 637369	637303-XX 637303-XX 637441	P39454-610 P39454-610 P39454-610	66109 66109 66109

## Upgrade your current 2" and 3" ARO Metallic Pumps to EXP Technology

- **Easily update existing PD20X-X and PD30X-X-B pumps to EXP**
  - Infield retrofit with valve kit
  - **637374-2:** For aluminum pumps
  - **637374-3:** Aluminum pumps with cycle counter
  - **637374-4:** For stainless steel pumps
  - **637374-5:** Stainless steel with cycle counter
- **EXP Valve Kit fits directly onto existing ARO Pump**
- **EXP Air Valve has fewer parts**
  - Provides a 47% parts reduction over the original PD20X-X and PD30X-X-B air valves.
  - Simplifies repairs
  - Lower start-up pressure
  - Long lasting ceramic valve components



ACCESSORIES

## Material Service Guideline / Warranty Reference

### Material Service Guideline

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

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

All ARO Pumps are backed up by our famous 5-year warranty, as a measure of the confidence we place in the quality of these products. A confidence that you can share.

### PUMP FIVE-YEAR WARRANTY

Ingersoll Rand/ARO warrants to the original use purchaser of IR/ARO manufactured pumps that Ingersoll Rand/ARO will repair or replace, free of charges, including return shipping costs within the Continental United States of America, any such product which under normal use and service proves defective in material or workmanship, as determined by Ingersoll Rand/ARO Inspection, within FIVE YEARS from date of shipment from Ingersoll Rand/ARO, provided the claimed defective product, or part thereof, is promptly returned to the Ingersoll Rand/ARO factory or Ingersoll Rand/ARO authorized warranty repair center with transportation prepaid.

This warranty does not cover failure of parts or components due to normal wear or damage, which in the judgment of Ingersoll Rand/ARO, arises from misuse, abrasion, corrosion, negligence, accident, substitution of non-Ingersoll Rand/ARO parts, faulty installation or tampering.

If Ingersoll Rand/ARO Inspection discloses no defect in material or workmanship, repair or replacement and return will be made at customary charges.

This warranty covers Ingersoll Rand/ARO manufactured pumps shipped on or after July 4, 1988.

Equipment not covered by Ingersoll Rand/ARO warranty: accessories or components of equipment sold by Ingersoll Rand/ARO that are not manufactured by Ingersoll Rand/ARO (such as switches, hoses, gasoline engines, etc.) are subject to the warranty, if any, of their manufacturer. Ingersoll Rand/ARO will provide the purchaser with reasonable assistance in making such claims.

The foregoing warranty supersedes, voids and is in lieu of all or any other warranties, express or implied, and no warranty or merchantability or fitness for particular purpose is intended or made. Ingersoll Rand/ARO's sole obligation and the original use purchaser's sole remedy is as stated above and in no event shall Ingersoll Rand/ARO be liable for any special, direct, indirect, incidental, consequential or other damages, or expenses of any nature including, without limitation, loss of profits or production time incurred by the original use purchaser or any other party.

## Plant Audit

# EXPert Series Pumps

### Schedule a Fluid Solutions Air-Operated Diaphragm Pump Plant Audit

A pre-audit feasibility study is conducted by an Ingersoll Rand Specialty Distributor or Ingersoll Rand Sales Manager to determine if an audit can enhance your situation or solve your problem. A plant audit is conducted by an Ingersoll Rand SWAT team member who specializes in identifying opportunities and providing solutions. Once the audit is completed, an audit report will be generated that will identify all pumps, their location, as well as the application that they are being used for. This report will indicate the annual customer cost-savings based on reduced energy costs using Ingersoll Rand/ARO EXP pumps.

#### *Plant Air Audit: What's in it for me?*

##### ■ Reduced Operating Costs

- Reduce air consumption by up to 40%
- Decreased frequency between repairs
- Lower repair costs

##### ■ Improved Manufacturing Productivity

- Longer mean time between failures
  - Eliminate Stalling – Unbalanced Valve
  - Eliminate Freezing – Non-Icing Valve
  - Leak free integrity – Bolted design
  - Audit Solution Process

##### ■ Finance Program

Budgets are tight, Ingersoll Rand offers a finance program that allows the customer the opportunity to upgrade their pumps to the energy efficient Ingersoll Rand/ARO EXP Pumps. Based on Total Cost of Ownership (energy costs, installation /repair, spares, purchase price, downtime) the Ingersoll Rand/ARO EXP pump could pay for itself within a few months.

To schedule your **FREE** plant audit call (800) 495-0276 or go online at [fluids.ingersollrand.com](http://fluids.ingersollrand.com)



# Contact Us



## Americas

### United States

One Aro Center, P.O. Box 151  
Bryan, Ohio 43506-0151  
PHONE: (801) 316-0747  
FAX: (419) 633-6979

### Canada

Productivity Solutions  
Ingersoll Rand Canada Inc.  
51 Worcester Road  
Rexdale, Ontario M9W 4K2  
PHONE (Toll Free): (877) 924-7435  
(416) 213-4500  
FAX: (Toll Free): (888) 422-2258  
(416) 213-4506

### Brazil

Ingersoll Rand do Brasil Ltda.  
Alameda dos Caiapos, 311  
Tamboré - Barueri - SP  
06460-110, Brasil  
PH: (55-11) 2109-8933  
FAX: (55-11) 2109-8998

### Chile

Comercial Ingersoll Rand Chile  
Av. Americo Vespucio # 2568  
Centro empresas El Cortijo  
Conchali, Santiago, Chile  
PH: 56-2 4858341  
FAX: 56-2 4858303

### Mexico

Ingersoll Rand, S.A. de C.V.  
Blvd. Centro Industrial No.11  
Industrial Puente de Vigas  
54070 Tlanepantla, Edo. Mex.  
PH: (52) 55-50056600  
FAX: (52) 55-53904030

## Europe/Africa/Middle East

### Baltic and Balkan

Ingersoll Rand  
Str. Apostol Karamitev No.2; vh. V; ap.7  
Sofia 1172  
Bulgaria  
PHONE: +359 2 862 53 04  
FAX: +359 2 862 53 04

### Czech and Slovak Republic

Ingersoll Rand Technical and Services  
Ostrovskeho 34  
151 28 Prague  
Czech Republic  
PHONE: +420 2 57 109 756  
FAX: +420 2 57 109 758

### France and Benelux

Ingersoll Rand  
Z.I. du Chene Sorcier  
78346 Les Clayes sous Bois  
France  
PHONE: +33 (0)1 30 07 68 00  
FAX: +33 (0)1 30 07 69 80

### Germany, Austria & Switzerland

Ingersoll Rand GmbH  
Wilhelmstrasse 20  
45478 Mulheim / Ruhr  
Germany  
PHONE: +49 (0)208 9994-0  
FAX: +49 (0)208 9994-445

### Greece

Ingersoll Rand  
Strada Provinciale Cassanese 108  
20060 Vignate, Milano  
Italy  
PHONE: +(39) 02 9505 6544  
FAX: +(39) 02 956 0415

### Hungary, Slovenia and Croatia

Ingersoll Rand  
Arpad u.1.  
2100 Godollo  
Hungary  
PHONE: +36 8 512800  
FAX: +36 28 411799

### Italy

Ingersoll Rand Italiana Spa  
Strada Provinciale Cassanese 108  
20060 Vignate, Milano  
Italy  
PHONE: +(39) 02 9505 6261  
FAX: +(39) 02 9536 0159

### Poland

Ingersoll Rand  
Nowiniarska 1 ap.1  
PL 00-235 Warsaw  
Poland  
PHONE: +48 22 635 72 45  
FAX: +48 22 635 73 32

### Russia and CIS

Ingersoll Rand  
Bld. 1, 32/1 Myasnitskaya Street  
101990 Moscow, Russia  
PHONE: +7 095 933 03 24  
FAX: +7 095 785 21 26

### Southern Africa

Ingersoll Rand Company SA  
P.O. Box 123720  
Alrode 1451  
South Africa  
PHONE: +27 11 864 3930  
FAX: +27 11 864 3954

### Spain and Portugal

Ingersoll Rand Iberica  
Tierra de Barros, 2  
28820 - Coslada  
Madrid, Spain  
PHONE: +(34) 91 6277405  
FAX: +(34) 91 6277406

### UK and Ireland

Ingersoll Rand Sales Co. Ltd.  
Hindley Green  
Wigan  
Lancashire WN2 4EZ England  
PHONE: +44 (0)1942 257171  
FAX: +44 (0)1942 503451

## Asia/Pacific

### Marketing / Sales / Service Headquarters

Ingersoll Rand Asia Pacific  
11F Tower B, City Center of Shanghai  
No. 100 Zun Yi Road  
Shanghai 200051, PR China  
PH: 86-21-22081288  
FAX: 86-21-62371993

### Japan

Ingersoll Rand Japan, Ltd.  
LS Building, 2F  
1-1-17 Kami Ohaski  
Shinagawa-ku, Tokyo 141-0021  
PH: 81 3 54203392

### Singapore

Ingersoll Rand  
South East Asia (Pte) Ltd.  
42 Benoi Road, Singapore  
629903  
PH: 65-68606774

### Australia

Ingersoll Rand Australia, Ltd.  
45-47 Ventura Place  
Dandenong South Victoria  
Australia 3175  
PH: 61-3-8787 4343  
FAX: 61-3-8787 5510

### Korea

Ingersoll Rand Korea  
320-2, 2FL Ingersoll Rand Bldg.  
Sangdaewon-dong, Jungwon-gu,  
Seongnam City  
Gyeonggi-Do, Korea 462-120  
PH: 82-31-7403120  
FAX: 82-31-7337602

### Taiwan

Ingersoll Rand Taiwan  
6F, No. 360-3, Ta-Tung Road  
Sec. 1, Hsi-Chih- City, Taipei  
Hsien, Taiwan, R.O.C.  
PH: 886-2-2754-7310

### Philippines

Ingersoll Rand Philippines Inc  
Km 22 East Service Road,  
South Superhighway Cupang,  
Muntinlupa City 1771  
Philippines  
PH: (632) 772-5461  
FAX: (632) 772-5460

## India

Ingersoll Rand Wadco Tools, Ltd.  
37A, Site 4  
Sahibabad Industrial Area  
Ghaziabad 201 010 (U.P.) India  
PH: (+91) 120-4389200  
(+91) 22-23704972-5  
FAX: (+91) 120-2895127

# Progress in Motion



For more than 100 years, we've helped drive innovation with revolutionary technology — creating new standards for how the world gets work done. We've done it by producing best-in-class Ingersoll Rand / ARO pumps and dispensing technologies, and by knowing our customers' industries and the demands placed on productivity and quality.

## Get Connected! [fluids.ingersollrand.com](http://fluids.ingersollrand.com)



- ✓ **Easy Access to Operator's Manuals and Product Data**

Users can now search with complete or partial model numbers, gaining access to documents in multiple languages

- ✓ **Pump Selection Software**

Allows you to identify the best pump for your application



- ✓ **Competitive Model Crossover**

Visitors can easily and quickly crossover competitive units to ARO models



- ✓ **Productivity Park**

An interactive 3D tour of markets and industries where Ingersoll Rand Fluid Technologies' products are utilized



Ingersoll Rand (NYSE:IR) advances the quality of life by creating and sustaining safe, comfortable and efficient environments. Our people and our family of brands—including Club Car®, Ingersoll Rand®, Schlage®, Thermo King® and Trane® —work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; secure homes and commercial properties; and increase industrial productivity and efficiency. We are a \$14 billion global business committed to a world of sustainable progress and enduring results.



[www.ingersollrandproducts.com](http://www.ingersollrandproducts.com)



**Distributed by:**