ARO®

Pro Series Diaphragm and Piston Pumps

Ideal for General Industrial and OEM installation applications.

Non-Metallic and Metallic Diaphragm Pumps
Low-Ratio Piston Pumps
Specialty Pumps

Ingersoll Rand®

Pro-Series Pumps

Introducing the New High-Performance Pro's: PD05, PD03

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

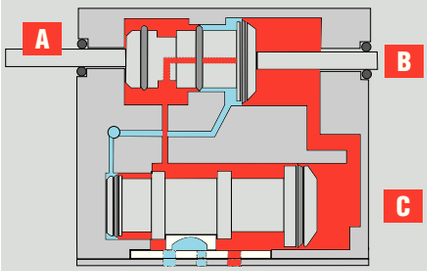
"D" Valve

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

"SimulShift™" Valve

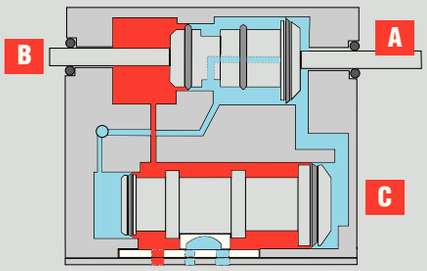
- Provides an ultra-positive, reliable shift signal that avoids stall-out.
- Provides faster pump trip-over with more flow.
- Faster trip-over with less pulsation and superior laminar material flow.

Diaphragm Moving Right to Left



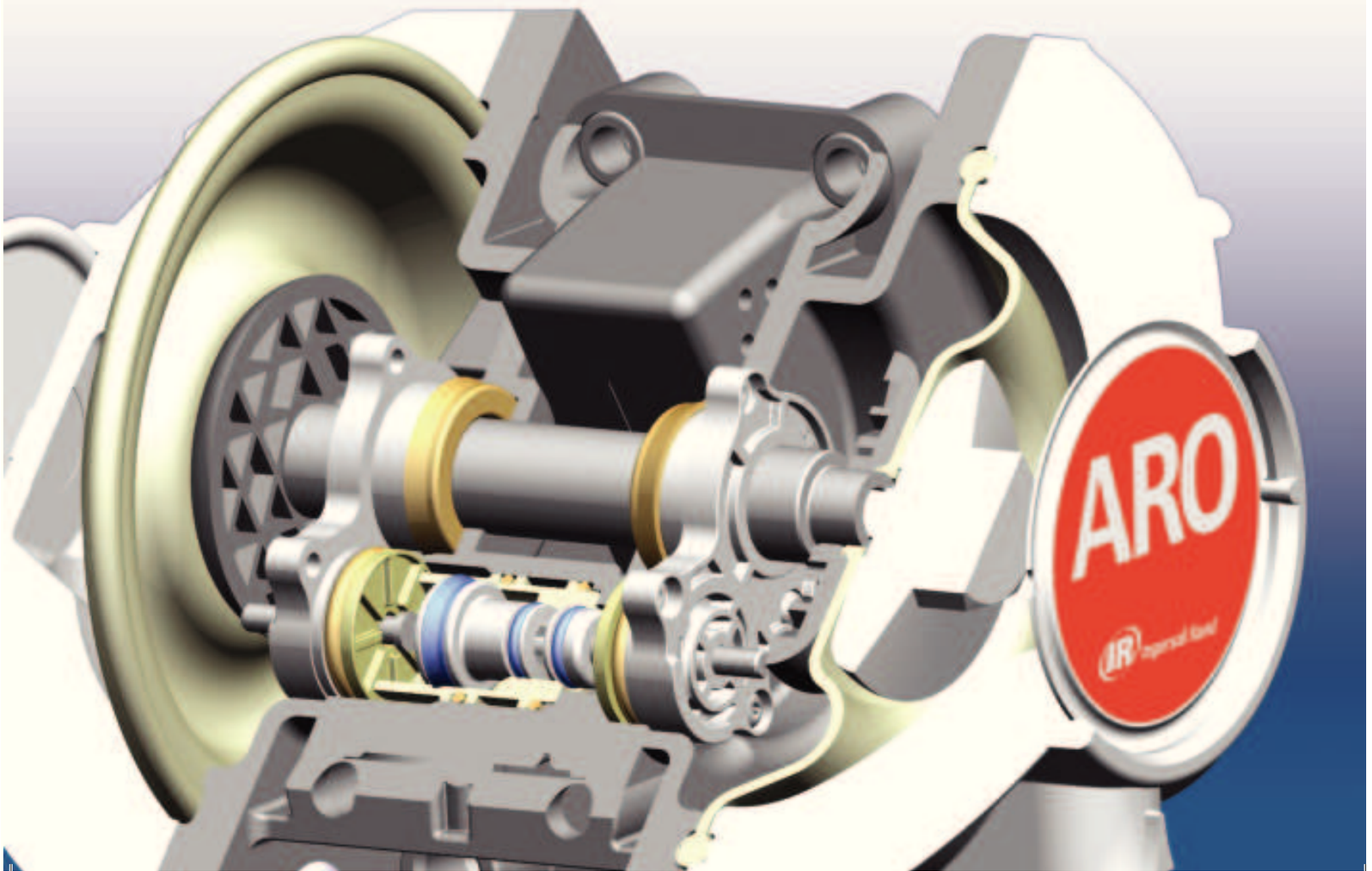
1) The diaphragm pushes the right Actuator Pin (B) mechanically moving the SimulShift Valve (A) to the left.
2.) Compressed air flows to the large side of the SimulShift Valve, pneumatically moving the valve to the position shown.
3.) Compressed air also flows to the large end of the Major Air Valve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

Diaphragm Moving from Left to Right



At end of stroke:

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



Big Delivery. High-Performance.

The best-selling 1/2-inch diaphragm pump in the world, just got better!

Productivity

Versatility
Multiple porting options available along with interface options allow you to customize this

Reliability
Lube Free Patented Differential Valve both on Major air valve and Simulshift (Pilot Valve)

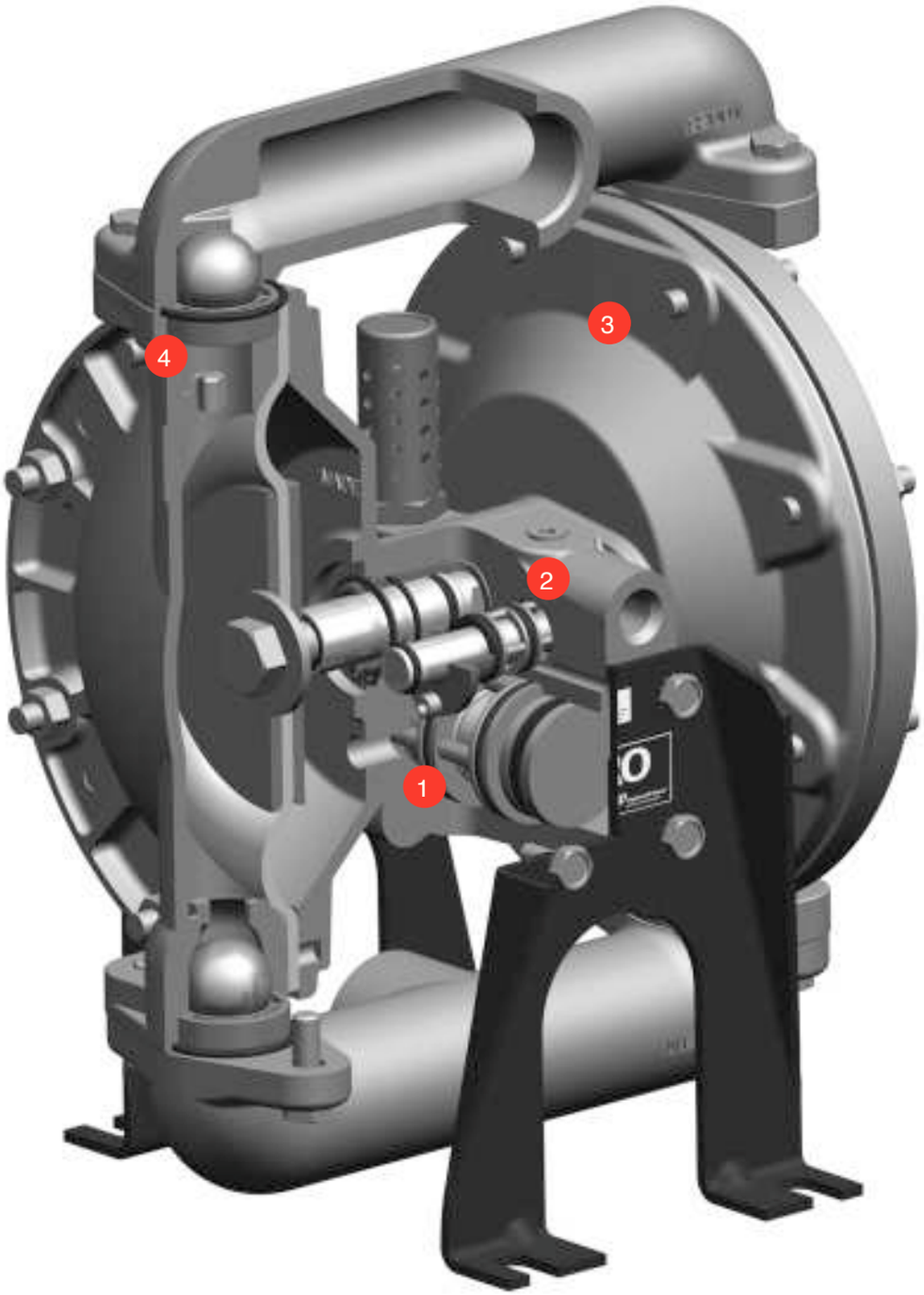
Environmentally Sound
Bolted Construction in conjunction with a wide range of material options provides

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.

Value Proposition

Pro-Series Pumps



ARO Diaphragm Pumps: Keys to ARO Air Motor Technology

1] "Unbalanced" Major Air Valve

- Unbalanced valve design eliminates valve centering and pump stall-out, even under low air inlet pressures.
- "O" Ring seals prevent waste of expensive compressed air. Air flow stops when fluid flow stops.
- Maintenance is simple: just replace the worn "O" Rings and "U" Cups.

[2] Independent Pilot Rod

- Utilizes pneumatics and mechanical action to shift Pilot Rod. Ensures positive pilot signal, avoiding stall-out.

[3] Broad Material Selection

- Options allow you to optimize compatibility between the pump and fluid being moved.
- Non-Metallic Diaphragm Pumps are available in polypropylene, PVDF and groundable acetal. Check models for availability.
- Metallic Diaphragm Pumps are available in aluminum, stainless steel and cast iron. Check models for availability.

[4] Diaphragm/Ball Check Options

- Fit your pump with the diaphragms and ball checks needed to maximize fluid compatibility and abrasion

Introducing the New High-Performance Compact: PD05, PD03, PD07: Aro's new Pro Series family has all new members at both ends of the delivery spectrum. In the low-to-medium flow range, we offer our new PD05 (1/2") and PD03 (3/8") models. Featuring our patented air valve technology, including SimulShift and D-Valve designs, users are assured of stall-free operation, with optimum energy efficiency. These pumps also feature fluid deliveries previously unavailable in port sizes like these: 14.4 GPM (1/2") and 10.4 (3/8")...that's impressive delivery in a small package! ARO pioneered the 1/2", high-demand, low-maintenance diaphragm pump in the eighties - now its time to step it up-with the new Pro PD0s.

Introducing the New High-Flow Pro's: 66625X and 66630X: At the far end of the fluid delivery spectrum, the new ARO Pro Series 2" and 3" port models feature Aro's patented "Unbalanced", stall-free air valve design and bolted construction for leak-tight integrity. With maximum delivery rates of 172 GPM (2") and 237 GPM (3"), the new high-flow Pros are the ideal answer to big volume applications - where performance with economy are a must.

Model Overview: Metallic Models
Pro-Series Pumps

MODEL	1/2"	3/4"	1"	1-1/2"	2"	3"
Maximum Flow GPM (LPM)	12 (45.4)	13.6 (51.5)	35 (133)	90 (340.7)	172 (651)	237 (897)
Maximum Discharge Pressure PSI (BAR)	100 (6.9)	100 (6.8)	120 (8.3)	120 (8.3)	120 (8.3)	120 (8.3)
Fluid Ports Inlet/Outlet (BSP Available)	1/2" (F) - In/Out	3/4 - 14 N.P.T.F.-2 Rp 3/4(3/4-14BSP, parallel)	1" (F) - In/Out	1-1/2" (F) In/Out	2" (F) In/ Out	3" (F) In/ Out
Materials of Construction	Aluminum Stainless Steel	Aluminum	Aluminum Stainless Steel Cast Iron	Aluminum Stainless Steel Cast Iron	Aluminum Stainless Steel Cast Iron	Aluminum Stainless Steel Cast Iron
Pump Weight Lbs. (Kg.)	10.4 (4.7) PD05A-XAS-X-B 16.6 (7.5) PD05A-XSS-X-B 8.0 (3.7) PD05R-XAS-X-B 14.3 (6.5) PD05R-XSS-X-B	8.74 (3.96)	19 (8.6) Aluminum* 36 (16.3) Stainless 31 (14.1) Cast Iron* *add 8-lb(3.63-kg) for cast iron center section	51.5 (23.4) Aluminum* 84.5 (38.3) Stainless 79.5 (36.1) Cast Iron* *add 23-lb(10.4-kg) for cast iron center section	65.2 (29.6) 129.9 (58.9) 124.3 (56.4)	109.8 (49.8) 221.2 (100.8) 213.1 (96.7)
Maximum Solids Inches (mm)	3/32 (2.4)	3/32 (2.4)	1/8 (3.2)	1/4 (6.4)	1/4 (6.4)	3/8 (9.5)
Best Selling Models (BSP Available)	PD05P-AAS-FAA PD05P-AAS-FTT PD05P-AAS-PGG PD05P-AAS-PTT	PD07R-AAS-FAA PD07R-AAS-PAA PD07R-AAS-FTT PD07R-AAS-PFF	666100-122-C 666100-144-C 666101-244-C 666102-3EB-C	666150-361-C 666150-362-C 666150-3EB-C 666151-244-C 666152-2EB-C	666250-EEB-C 666250-144-C 666250-9C9-C 666251-244-C 666252-EEB-C	666300-EEB-C 666300-144-C 666300-9C9-C 666301-244-C 666302-EEB-C
Recommended Filter/ Regulator	P39124-600	P39124-600	P39224-600	P39334-600	P39334-600	P39334-600
Air Line Kit	66073-1	66073-1	66073-2	66084-1	66312	66312

1/2” Metallic Models
Pro-Series Pumps

1/2” Metallic Performance Specifications

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

Ordering Menu

PX05	X	-	X	X	S	-	X	X	X	-	BXX
Model Series	**Center Section Material**		**Fluid Connection**	**Fluid Caps/ Manifold Material**	**Hardware Material**		**Seat Material**	**Ball Material**	**Diaphragm Material**		**Specialty Code**
D Standard	A Aluminum		A 1/2” N.P.T.	A Aluminum	S Stainless Steel		F Aluminum	A Santoprene	A Santoprene		B Standard
E Remote Actuation Capable	R Polypropylene		B 1/2” BSP	S Stainless Steel			P Polypropylene	C Hytrel	C Hytrel		B0S Remote Actuation Capable**
							S Stainless Steel	G Nitrile	G Nitrile		
								S Stainless Steel	T PTFE/ Santoprene		
								T PTFE	V Viton		
								U Polyurethane			
								V Viton			

Accessories

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

Exhaust Threaded Muffler Kit l *Kit No. 637438*

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

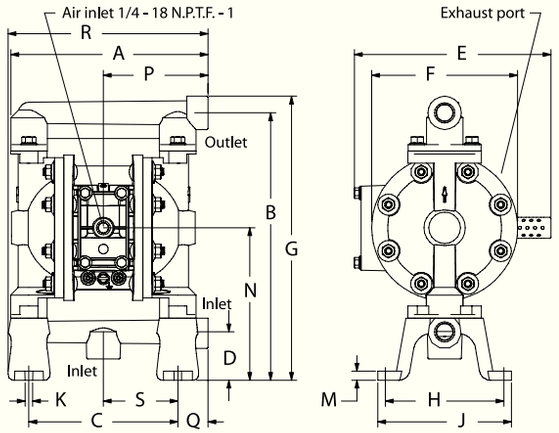
Wall Mount l *76763*

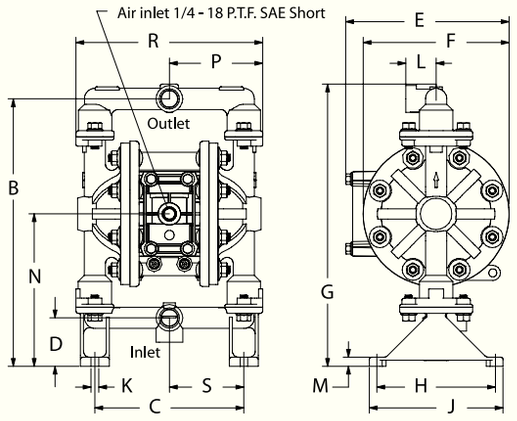
** Please note pumps are not included with these kits.*
*** See options on page 51*

Air Line Connection Kit
66073-1

Wall Mount
76763

1/2” Metallic Dimensions and Flow Charts



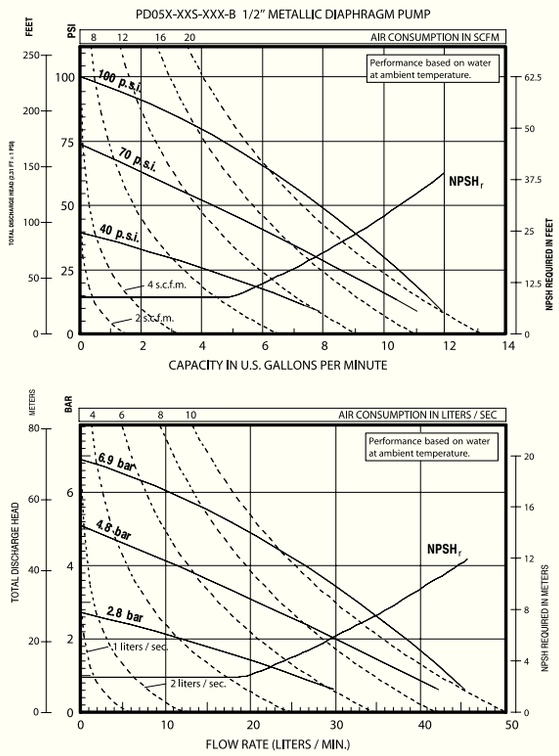


DIMENSIONS

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

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

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 www.ingersollrandproducts.com for full size flow curves.

For additional information contact technical support at 1.800.483.4981

METALLIC

3/4” Metallic Models
Pro-Series Pumps

3/4” Metallic Performance Specifications

Ratio:	1:1
Maximum Flow:	13.6-g.p.m. (51.5-l.p.m.)
Displacement per cycle:	.030-Gallons (0.11-Liters)
Air Inlet: (Female)	1/4 - 18 P.T.F. SAE Short
Fluid Inlet:	3/4 - 14 N.P.T.F.-2 Rp 3/4 (3/4 -14 BSP, parallel)
Fluid Outlet:	3/4 - 14 N.P.T.F. Rp 3/4 (3/4 -14 BSP, parallel)
Max. operating pressure:	100-psi (6.9-bar)
Suspended solids max. dia.:	3/32” (2.4-mm)
Weight: lbs (kg)	8.74 (3.96)
Maximum dry suction lift: ft (m)	15 (4.5)

Ordering Menu

PD07	R	-	X	X	S	-	X	X	X
Model Series	**Center Section Material**		**Fluid Connection**	**Fluid Caps/ Manifold Material**	**Hardware Material**		**Seat Material**	**Ball Material**	**Diaphragm Material**
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 PTFE	A Santoprene® C Hytrel T PTFE

Accessories

Air Line Connection Kit* l *Kit No. 66073-1*

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

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

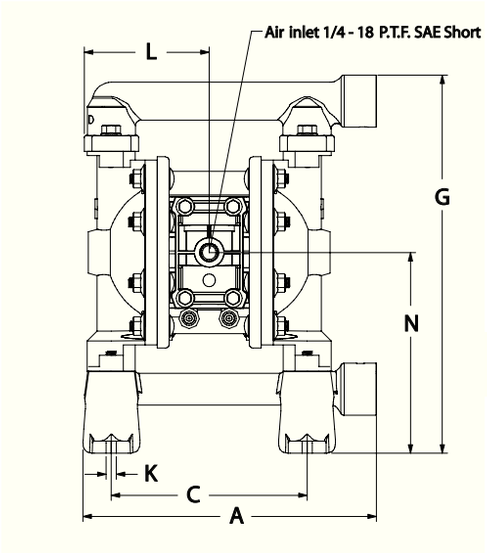
Service Repair Kits l *Kit No. 637428 (air section)*
Kit No. 637427-XX (fluid section)

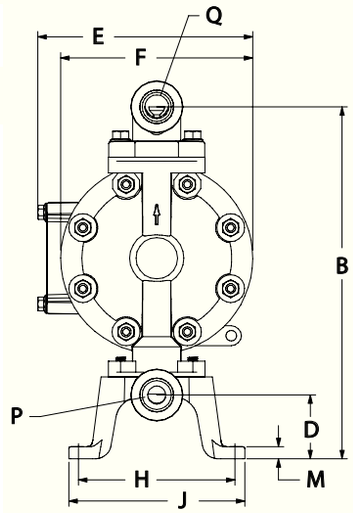
Wall Mount l *76763*

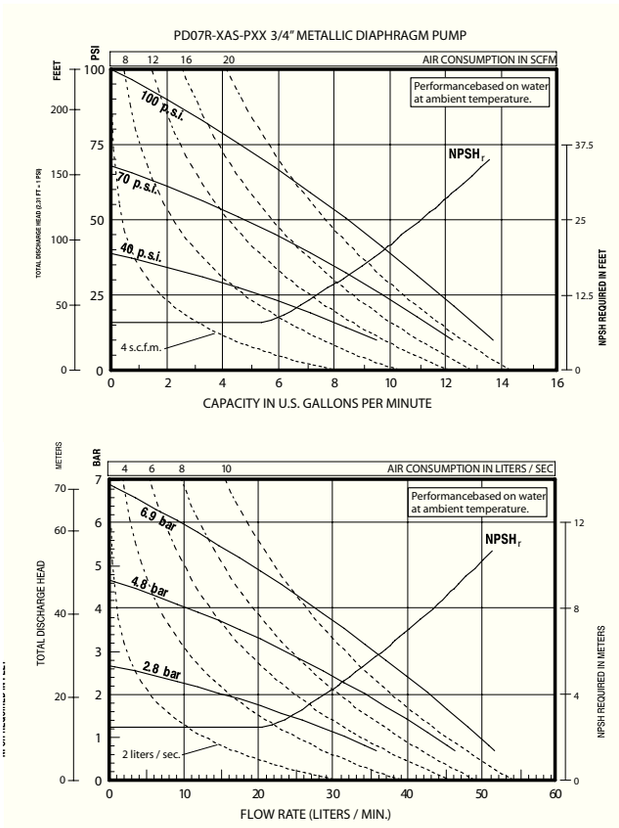
**Please note pumps are not included with these kits.*

Air Line Connection Kit
66073-1

3/4” Metallic Dimensions and Flow Charts







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

For additional information contact technical support at 1.800.483.4981

DIMENSIONS

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

Model	“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

1" Metallic Performance Specifications

Ratio:	1:1	
Maximum Flow:	35-g.p.m. (133-l.p.m.)	
Displacement per cycle:	0.16-Gallons (0.60-Liters)	
Air Inlet: (Female)	1/4 - 18 N.P.T.F. - 1	
Fluid Inlet:	1 - 11-1/2 N.P.T.F. - 1 Rp 1 (1-11 BSP parallel)	
Fluid Outlet:	1 - 11-1/2 N.P.T.F. - 1 Rp 1 (1-11 BSP parallel)	
Max. operating pressure:	120-psi (8.3-bar)	
Suspended solids max. dia.:	1/8-in. (3.2-mm)	
Weight: lbs (kg)		
	666100-X-C (aluminum)	19 (8.6)
	666101-X-C (stainless steel)	36 (16.3)
	666102-X-C (cast iron)	31 (14.1)

Note: Add 8-lbs (3.63-kg) for cast iron air motor section

Maximum dry suction lift: ft (m) 20 (6.1)

Ordering Menu

6661X - X X X - X C

Center Body/ Threads
- 0 Aluminum, N.P.T.F.
- 1 Cast Iron, N.P.T.F.
- 2 Aluminum, BSP
- 3 Cast Iron, BSP

Fluid Caps/ Manifold Material
- 0 Aluminum (steel hardware)
- 1 Stainless Steel (steel hardware)
- 2 Cast Iron (steel hardware)
- 9 Stainless Steel, dual outlet (steel hardware)
- A Aluminum, (stainless hardware)
- B Stainless Steel (stainless hardware)
- C Cast Iron (stainless hardware)
- D Stainless Steel, dual outlet (stainless hardware)

Seat Material
- 1 Aluminum
- 2 316 Stainless Steel
- 3 Polypropylene
- 4 PVDF
- 5 Carbon Steel
- 8 Hard 400 Stainless Steel

Ball Check Material
- 3 Viton
- 4 PTFE
- 8 Polyurethane
- A Stainless Steel
- C Hytrel
- E Santoprene
- G Nitrile

Diaphragm Material
- 3 Viton
- 4 PTFE / Santoprene
- 9 Hytrel
- B Santoprene
- G Nitrile

Accessories

Air Line Connection Kit* l *Kit No. 66073-2*
Kit includes Piggyback Filter/Regulator with gauge, pipe nipple and a 5-foot section of air hose.

Service Repair Kits l *Kit No. 637118-C (air section)*
Kit No. 637119-XX-C (fluid section)

Wall Mount l *66100*

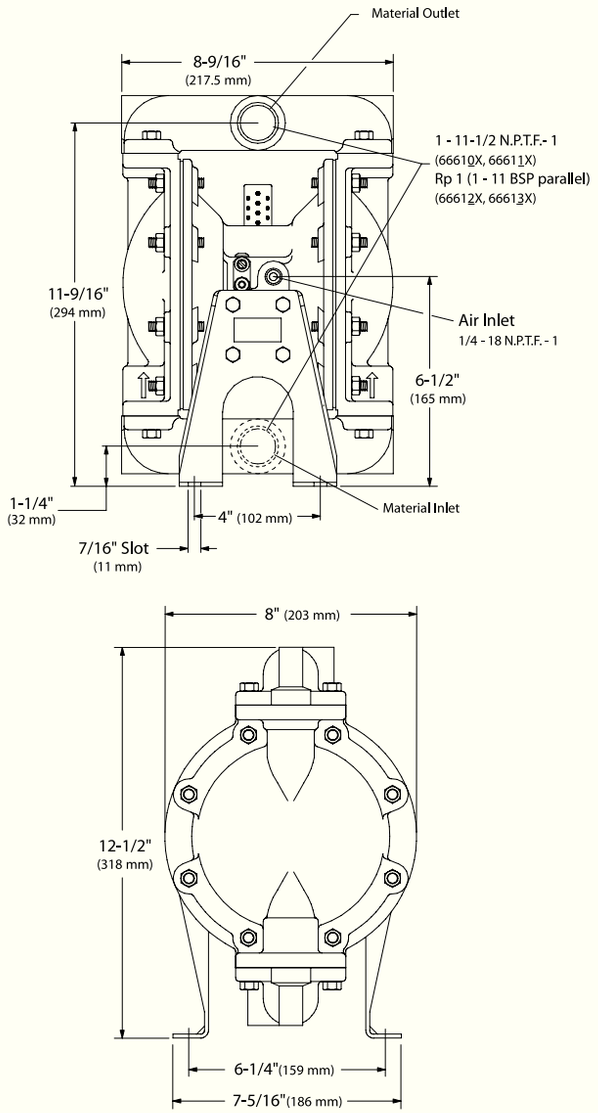
**Please note pumps are not included with these kits.*

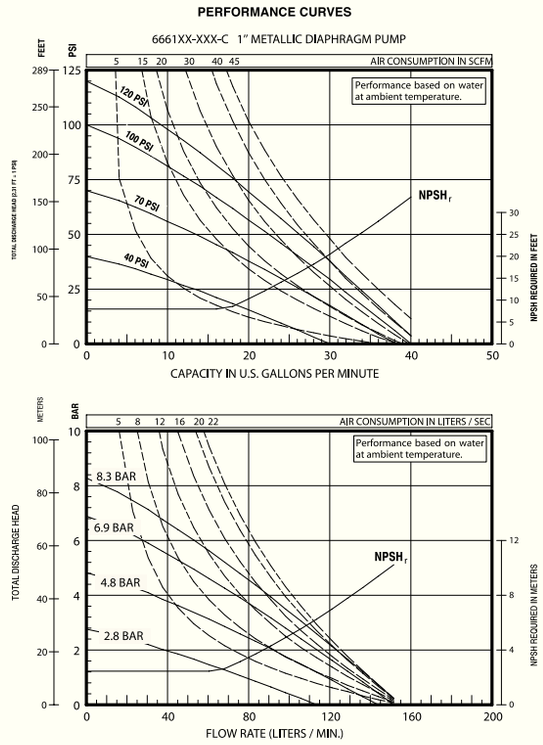
Air Line Connection Kit
66073-2

Wall Mount
66100

1” Metallic Dimensions and Flow Charts

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





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

For additional information contact
technical support at 1.800.483.4981

METALLIC

1-1/2” Metallic Models
Pro-Series Pumps

1-1/2” Metallic Performance Specifications

Ratio:	1:1
Maximum Flow:	90-g.p.m. (340.7-l.p.m.)
Displacement per cycle:	0.64-Gallons (2.42-Liters)
Air Inlet: (Female)	1/2 - 14 N.P.T.F. - 1
Fluid Inlet:	1-1/2 11-1/2 N.P.T.F. - 1 Rp 1-1/2 (1-1/2 - 11 BSP parallel)
Fluid Outlet:	1-1/2 11-1/2 N.P.T.F. - 1 Rp 1-1/2 (1-1/2 - 11 BSP parallel)
Max. operating pressure:	120-psi (8.3-bar)
Suspended solids max. dia.:	1/4-inch (6.4-mm)

Weight: lbs (kg)

666150-X-C (aluminum)	51.5 (23.4)
666151-X-C (stainless steel)	84.5 (38.3)
666152-X-C (cast iron)	79.5 (36.1)

Note: Add 23-lbs (10.4-kg) for cast iron air motor section

Maximum dry suction lift: ft (m) 19 (5.8)

Ordering Menu

6661X - X X X - X C

Center Body/ Threads

5 Aluminum, N.P.T.F.
6 Cast Iron, N.P.T.F.
7 Aluminum, BSP
8 Cast Iron, BSP

Fluid Caps/ Manifold Material

0 Aluminum (steel hardware)
1 Stainless Steel (steel hardware)
2 Cast Iron (steel hardware)
A Aluminum, (stainless hardware)
B Stainless Steel (stainless hardware)
C Cast Iron (stainless hardware)

Seat Material

1 Aluminum
2 316 Stainless Steel
3 Polypropylene
4 PVDF
5 Carbon Steel
8 400 Stainless Steel

Ball Check Material

3 Viton
4 PTFE
8 Polyurethane
A Stainless Steel
C Hytrel
E Santoprene
G Nitrile

Diaphragm Material

3 Viton
4 PTFE / Santoprene
9 Hytrel
B Santoprene
G Nitrile

Accessories

Air Line Connection Kit* I *Kit No. 66084-1*
Kit includes Piggyback Filter/Regulator with gauge, pipe nipple and a 5-foot section of air hose.

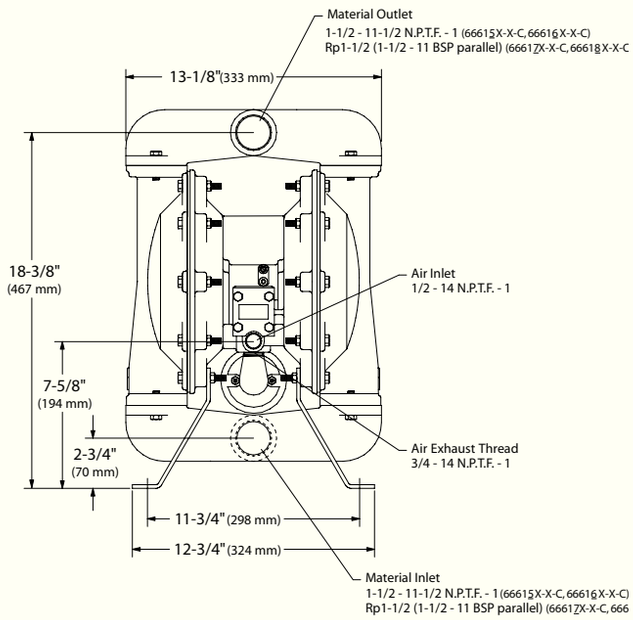
Service Repair Kits I *Kit No. 637118-C (air section)*
Kit No. 637124-XX (fluid section)

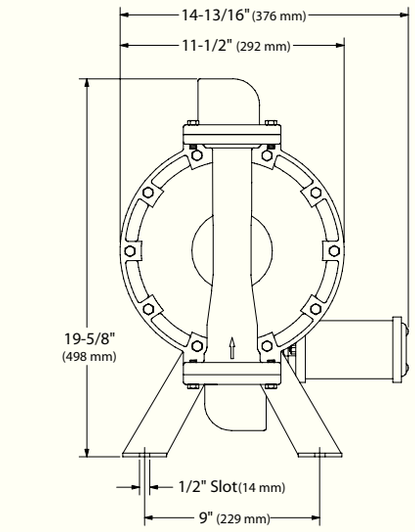
Wall Mount I *62133*

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

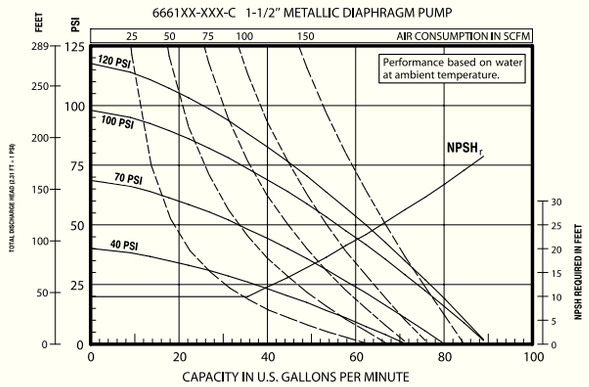
1-1/2” Metallic Dimensions and Flow Charts

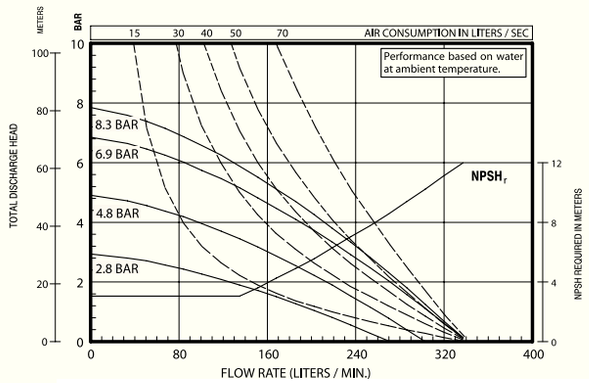
(Dimensions shown are for reference only, they are displayed in inches and millimeters (mm).





PERFORMANCE CURVES





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

For additional information contact
technical support at 1.800.483.4981

METALLIC

2" Metallic Performance Specifications

Ratio:	1:1
Maximum Flow:	172-g.p.m. (651-l.p.m.)
Displacement per cycle:	1.4-Gallons (5.3-Liters)
Air Inlet: (Female)	3/4 - 14 N.P.T.F. - 1
Fluid Inlet:	2 - 11-1/2 N.P.T.F. - 1 Rp 2 (2 - 11 BSP, parallel)
Fluid Outlet:	2 - 11-1/2 N.P.T.F. - 1 Rp 2 (2 - 11 BSP, parallel)
Max. operating pressure:	120-psi (8.3-bar)
Suspended solids max. dia.:	1/4-in. (6.4-mm)
Weight: lbs (kg)	
	6662X0-XXX-C 65.2 (29.6)
	6662X1-XXX-C 129.9 (58.9)
	6662X2-XXX-C 124.3 (58.9)
Maximum dry suction lift: ft (m)	27.2 (8.3)

67389 Muffler Kit (not shown)
included with pump

Ordering Menu

6662X **X** **-** **X** **X** **X** **-** **C**

Center Body/ Threads
- 5 Aluminum, N.P.T.F.
- 7 Aluminum, BSP

Fluid Caps/ Manifold Material
- 0 Aluminum (steel hardware)
- 1 Stainless steel (steel hardware)
- 2 Cast iron (steel hardware)

Seat Material
- 1 Aluminum
- 9 Hytrel
- E Santoprene
- G Nitrile

Ball Check Material
- 4 PTFE
- C Hytrel
- E Santoprene
- G Nitrile

Diaphragm Material
- 4 PTFE / Santoprene
- 9 Hytrel
- B Santoprene
- G Nitrile

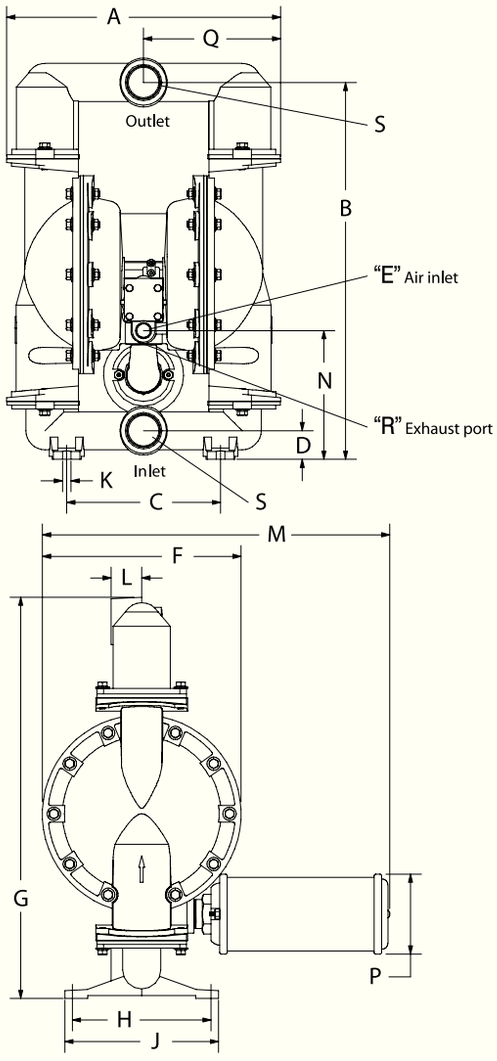
Accessories

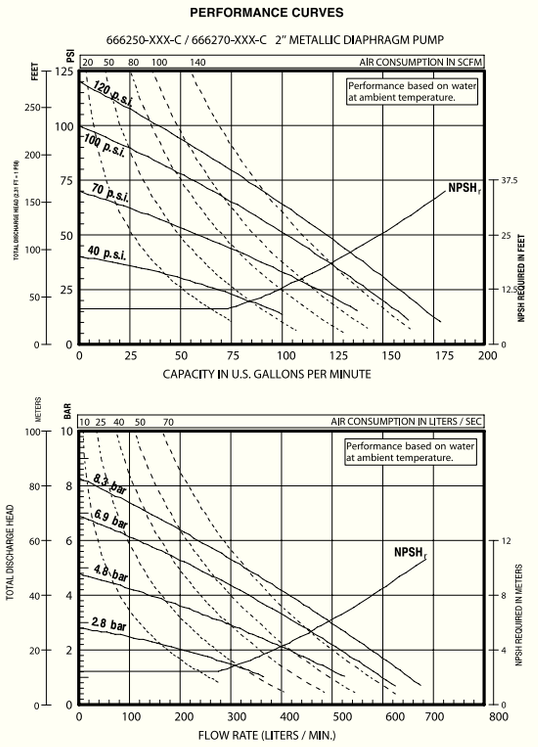
Air Line Connection Kit* | *Kit No. 66312*
Kit includes Piggyback Filter/Regulator with gauge, pipe nipple and a 5-foot section of air hose.

Service Repair Kits | *Kit No. 637434 (air section)*
Kit No. 637432-XX (fluid section)

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

2” Metallic Dimensions and Flow Charts





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

For additional information contact
technical support at 1.800.483.4981

DIMENSIONS

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

“S” Inlet / Outlet

66625-XXX-C 2 - 11-1/2 N.P.T.F. - 1
66627-XXX-C Rp 2 (2 - 11 BSP parallel)

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

3” Metallic Performance Specifications

Ratio:	1:1
Maximum Flow:	237-g.p.m. (897-l.p.m.)
Displacement per cycle:	2.65-Gallons (10.03-Liters)
Air Inlet: (Female)	3/4 - 14 N.P.T.F. - 1
Fluid Inlet:	3 - 8 N.P.T.F. - 1 Rp 3 (3 - 11 BSP parallel)
Fluid Outlet:	3 - 8 N.P.T.F. - 1 Rp 3 (3 - 11 BSP, parallel)
Max. operating pressure:	120-psi (8.3-bar)
Suspended solids max. dia.:	3/8-in. (9.5-mm)
Weight: lbs (kg)	
	6663X0-XXX-C 109.8 (49.8)
	6663X1-XXX-C 222.2 (100.8)
	6663X2-XXX-C 213.1 (96.7)
Maximum dry suction lift: ft (m)	17.6 (5.4)

67389 Muffler Kit (not shown)
included with pump

Ordering Menu

6663X **X** **-** **X** **X** **X** **-** **C**

Center Body/ Threads
- 0 Aluminum, N.P.T.F.
- 2 Aluminum, BSP

Fluid Caps/ Manifold Material
- 0 Aluminum (steel hardware)
- 1 Stainless steel (steel hardware)
- 2 Cast iron (steel hardware)

Seat Material
- 1 Aluminum
- 9 Hytrel
- E Santoprene
- G Nitrile

Ball Check Material
- 4 PTFE
- C Hytrel
- E Santoprene
- G Nitrile

Diaphragm Material
- 4 PTFE / Santoprene
- 9 Hytrel
- B Santoprene
- G Nitrile

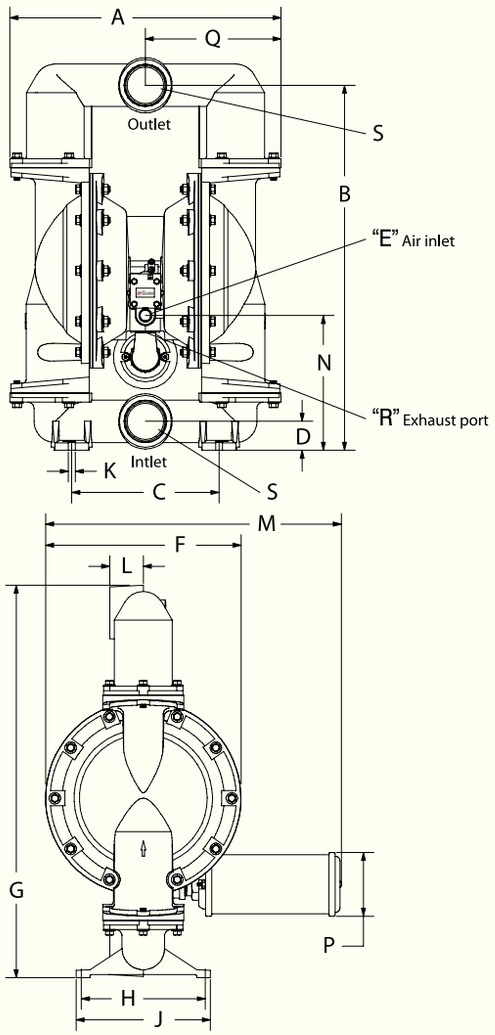
Accessories

Air Line Connection Kit* | *Kit No. 66312*
Kit includes Piggyback Filter/Regulator with gauge, pipe nipple and a 5-foot section of air hose.

Service Repair Kits | *Kit No. 637434 (air section)*
Kit No. 637433-XX (fluid section)

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

3” Metallic Dimensions and Flow Charts

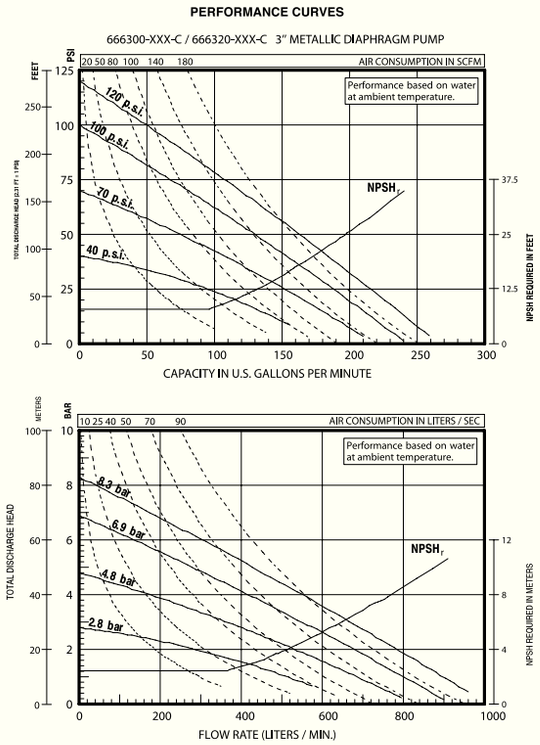


DIMENSIONS

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

	“S” Inlet / Outlet
66630-XXX-C	3 - 8 N.P.T.F. - 1
66632-XXX-C	Rp 3 (3 - 11 BSP parallel)

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 www.ingersollrandproducts.com for full size flow curves.

For additional information contact
technical support at 1.800.483.4981

METALLIC

1:1-to-4:1 Ratio Piston and Diaphragm Pumps
Pro-Series Pumps

MODEL	1:1 Ratio Piston Pump	2:1 Ratio Piston Pump	4:1 Ratio Piston Pump	1:1 Ratio Diaphragm Pump
Maximum Flow GPM (LPM)	18 (68.1)	4.3 (16.3)	4.4 (16.8)	11 (41.6)
Maximum Inlet Pressure PSI (BAR)	150 (10.3)	150 (10.3)	150 (10.3)	100 (6.8)
Fluid Ports Inlet/Outlet (BSP Available)	Immersed Inlet 3/4" (F) Out (No BSP)	1-1/2" (F) In - CS 1-1/4" (F) In - SS Immersed 3/4" (F) Out	1-1/2" (F) In - CS 1-1/4" (F) In - SS Immersed 3/4" (F) Out	1/2" Suction Tube In 1/2" (F), or Hose Accessory Out
Materials of Construction	Carbon Steel	Carbon Steel Stainless Steel	Carbon Steel Stainless Steel	Polypropylene Stainless Steel Aluminum
Pump Weight Lbs. (Kg.)	13 (5.9)	17.5 (7.9) CS-Stub 19.6 (8.9) CS-55-gallon 17.2 (7.8) SS-Stub 22.5 (10.2) SS-55-Gallon	32 (14.5) CS-Stub 46 (20.9) CS-55-gallon 32 (14.5) SS-Stub 46 (20.9) SS-55-Gallon	22 (10) Polypropylene* 26 (11.8) Aluminum* 36 (16.3) Stainless* *basic package shipping weight
Maximum Solids Inches (mm)	Clean Fluids	Clean Fluids	Clean Fluids	3/32 (2.4)
Best Selling Models (BSP Available)	612041-1 612041-3	NM2202B-41-731 NM2202A-41-731 NM2202B-11-731 NM2202A-11-731	NM2304A-11-311 NM2304A-41-311 NM2304B-11-311 NM2304B-41-311	DAB05-PPTT-2-A
Recommended Filter/ Regulator	C28123-600 (Filter/Regulator/Lubricator)	P39124-600	P39124-600	P39124-600
Air Line Kit	66073-1	66073-1	66073-1	66073-1

1:1 Ratio Piston Pump Performance Specifications

Ratio:	1:1
Maximum Flow:	18-g.p.m. (68.1-l.p.m.)
Max. Working Flow:	9-g.p.m. (34.1-l.p.m.)
Maximum Rec'd Cycles:	75 per minute
Displacement per Cycle:	18.8-In^3 (308.0-cm^3)
Air Inlet: (Female)	1/4 - 18 N.P.T.F. - 1
Fluid Inlet:	Immersed
Fluid Outlet:	3/4 - 14 N.P.T.F. - 1
Max. operating pressure:	150-psi (10.3-bar)
Fluid Pressure Range:	0-150-psi (0-10.3-bar)
Material of Construction:	Carbon Steel
Weight: lbs (kg)	
	612041-X 13 (5.9)
	612042-1 14 (6.4)

Ordering Menus

61204X - X

Model Series

1 For use with 55-gallon drums
2 For use with 275-gallon drums

Packing Option

1 Nitrile
3 PTFE

Accessories

Air Line Treatment Combination Unit l *C28121-600*
Unit contains Piggyback Filter/Regulator and Lubricator.
Filter/Regulator features a 20 micron filter, poly bowl with guard and 5-125-psi gauge.
Lubricator features a poly bowl with guard.
Plumb directly to pump's air inlet.

Service Repair Kits l *Kit No. 637084 (air section)*
Kit No. 637081 (Nitrile lower pump end repair)
Kit No. 637083 (PTFE lower pump end repair)

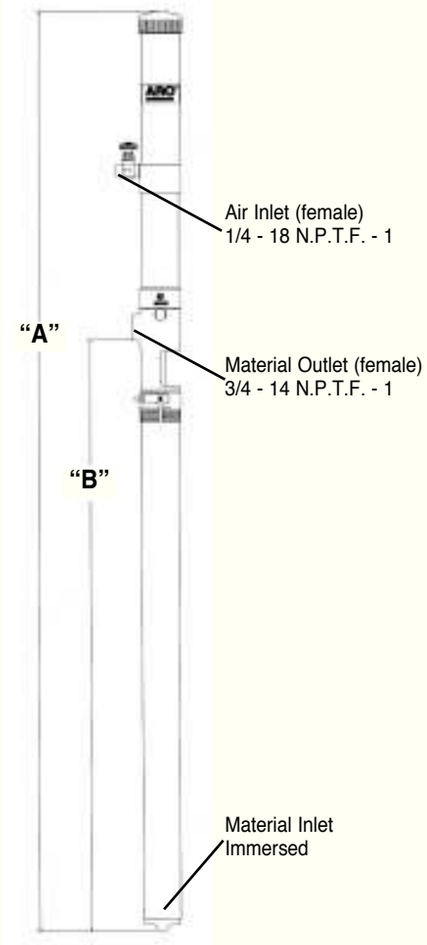
Muffler l *61879*
Muffler reduces operating noise level of pump.

Wall Mount l *61113*
Wall-Mount Bracket Permits pump to be wall-mounted near fluid container.
Bracket can also be attached to side of open 55-gallon drum.

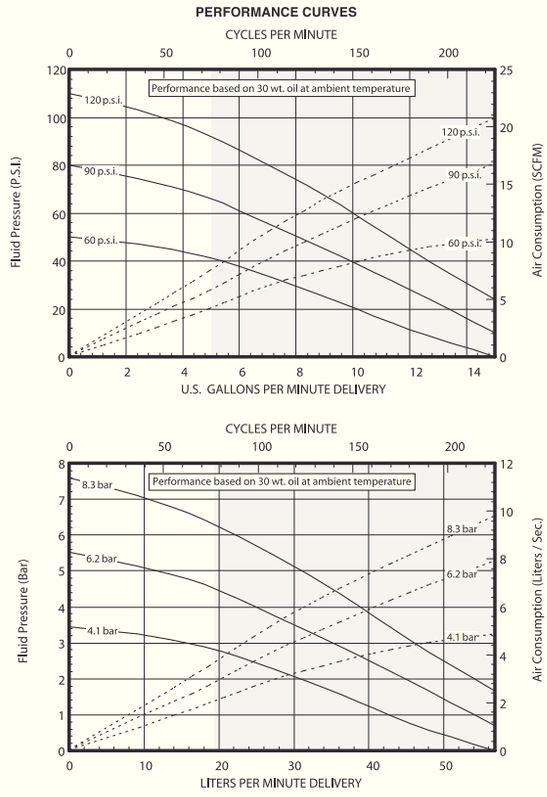
Muffler
61879

Wall / Drum Mount
61113

1:1 Ratio Piston Pump Dimensions and Flow Charts



Model	"A"	"B"
612041-X	54" (1371.6-mm)	34-5/8" (879.5-mm)
612042-1	64-1/4" (1631.9-mm)	44-7/8" (1139.8-mm)



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

For additional information contact
technical support at 1.800.483.4981

SPECIALTY PUMPS

2:1 Ratio Piston Pump Performance Specifications

Ratio:	2:1	
Maximum Flow:	4.3-g.p.m. (16.3-g.p.m.)	
Flow @ 60-Cycles/min.:	2.15-g.p.m. (8.14-l.p.m.)	
Maximum Rec'd Cycles:	120 per minute	
Displacement per Cycle:	8.3-ln^3 (136-cm^3)	
Air Inlet: (Female)	1/4 - 18 N.P.T.F. - 1	
Fluid Inlet:	1-1/2 - 11-1/2 N.P.T.F. - 1 (NM2202A-X)	
	1-1/4 - 11-1/2 N.P.T.F. - 1 (NM2202B-X)	
Fluid Outlet:	3/4 - 14 N.P.T.F. - 1	
Max. operating pressure:	150-psi (10.3-bar)	
Fluid Pressure Range:	0-351-psi (0-24.2-bar)	
Weight: lbs (kg)		
	NM2202A-11-X31	17.5 (7.9)
	NM2202A-41-X31	19.6 (8.9)
	NM2202B-11-X31	17.2 (7.8)
	NM2202B-41-X31	22.5 (10.2)
Materials of Construction:	Carbon Steel	
	Stainless Steel	

Ordering Menu

NM2202X - X 1 - X 3 1

Model Series
- A Carbon Steel
- B Stainless Steel

Container Type
- 1 Universal (Stub)
- 4 55-Gallon Drum

Packing Material
- 7 PTFE upper and lower
- B UHMW-PE upper/ PTFE lower
- C UHMW-PE upper and lower
- J Polyurethane upper/ UHMW-PE lower

Spring Arrangement
- 3 No Spring

Plunger Type
- 1 Standard Carbon Steel on NM2202A-X models Stainless Steel on NM2202B-X 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.

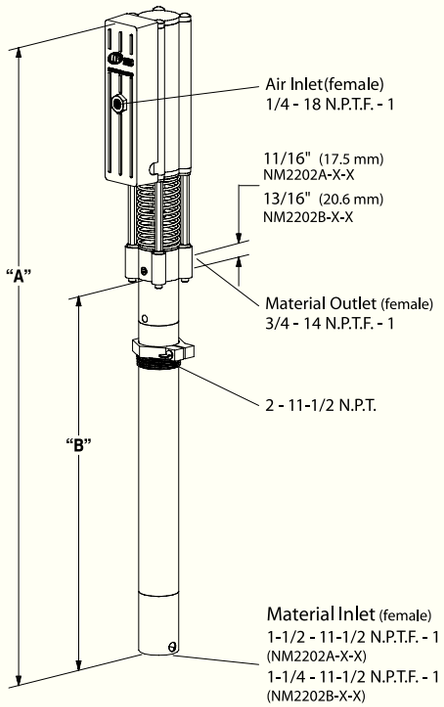
Service Repair Kits | *Kit No. 637377 (air section)*
Kit No. 637378-X31 (NM2202A-X fluid section)
Kit No. 637379-X31 (NM2202B-X fluid section)

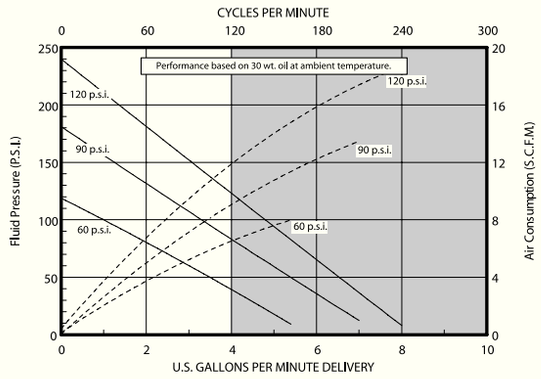
Wall Mount | *61113*
For use with stub style pumps. Siphon tube then used to connect pump to fluid supply.

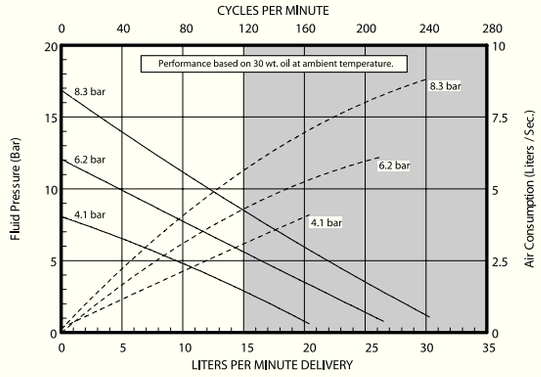
**Please note pumps are not included with these kits.*

Wall / Drum Mount
61113

2:1 Ratio Piston Pump Dimensions and Flow Charts







Dimensions: Inches (mm)

Model Number:	"A"	"B"
NM2202A-11-X31	34-3/16 (868.0)	20-1/16 (508.8)
NM2202A-41-X31	47-7/8 (1214.8)	33-11/16 (855.6)
NM2202B-11-X31	33-7/8 (859.9)	19-7/8 (503.7)
NM2202B-41-X31	47-3/4 (1211.8)	33-11/16 (855.6)

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

For additional information contact
technical support at 1.800.483.4981

4:1 Ratio Piston Pump Performance Specifications

Ratio:	4:1
Maximum Flow:	4.44-g.p.m. (16.79-l.p.m.) NM2304A-X
	4.26-g.p.m. (16.12-l.p.m.) NM2304B-X
Flow @ 60-Cycles/min.:	2.12-g.p.m. (8.02-l.p.m.) NM2304A-X
	2.13-g.p.m. (8.06-l.p.m.) NM2304B-X
Maximum Rec'd Cycles:	125 per minute NM2304A-X
	120 per minute NM2304B-X
Displacement per Cycle:	8.2-In^3 (134.3-cm^3)
Air Inlet: (Female)	1/4 - 18 N.P.T.F. - 1
Fluid Inlet:	Immersed Inlet (NM2304A-41, -91, -A1)
	1-1/2 - 11-1/2 N.P.T.F. - 1 (NM2304A-11, -81, -B1)
	1-1/4 - 11-1/2 N.P.S.M. (NM2304B-X)
Fluid Outlet:	3/4 - 14 N.P.T.F. - 1
Max. operating pressure:	150-psi (10.3-bar)
Fluid Pressure Range:	0-600-psi (0-41.4-bar)

Weight: lbs (kg)

NM2304A-11-X11	32 (14.5)	NM2304B-11-X1X	32 (14.5)
NM2304A-41-X11	46 (20.9)	NM2304B-41-X1X	46 (20.9)
NM2304A-81-X11	31.4 (14.3)		
NM2304A-91-X11	45.4 (20.6)		
NM2304A-A1-X11	31.0 (14.1)		
NM2304A-B1-X11	32 (14.5)		

Lower Pump End Series:

NM2304A-X1-X11	67151-X-X11
NM2304B-X1-X1X	6510X-X

Ordering Menus

NM2304A - X 1 - X 1 1

Model Series
Carbon Steel

Container Type
1 Universal (Stub)
4 55-Gallon Drum
8 Universal(Stub) without bung
9 55-Gallon without bung
A Stub Follower Plate
B Universal (Stub) with alternate bung

Packing Material
C UHMW-PE upper and lower
3 Glass-filled PTFE upper Virgin PTFE lower
5 Glass-filled PTFE/ Leather staggered upperVirgin PTFE lower

Spring Arrangement
1 Coil Spring

Plunger Type
1 Standard Carbon Steel

NM2304B - X 1 - X 1 X

Model Series
Stainless Steel

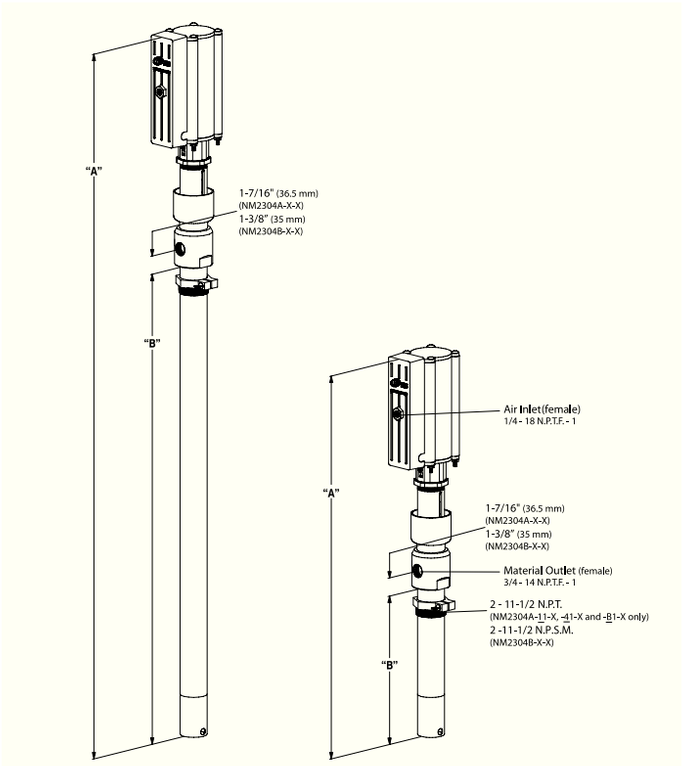
Container Type
1 Universal (Stub)
4 55-Gallon Drum

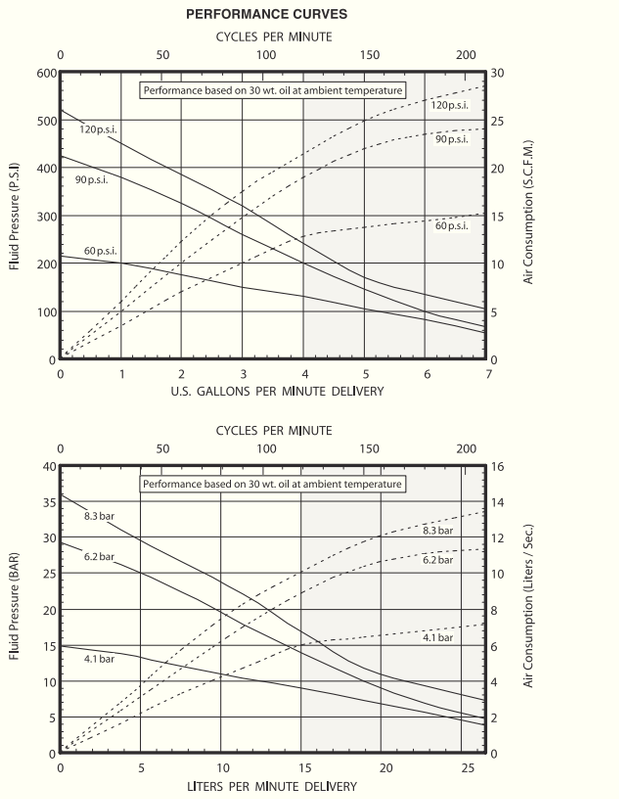
Packing Material
C UHMW-PE upper and lower
3 PTFE upper and lower
W Viton upper/ PTFE lower

Spring Arrangement
1 Coil Spring

Plunger Type
1 Standard 300-Series Stainless Steel
B Ceramic

4:1 Ratio Piston Pump Dimensions and Flow Charts





Dimensions: Inches (mm)

Model Number:	"A"	"B"
NM2304A-11-X11	30-1/4 (768.5)	11-3/4 (297.7)
NM2304A-41-X11	55-5/8 (1413.0)	37-1/8 (942.2)
NM2304A-81-X11	30-1/4 (768.5)	11-3/4 (297.7)
NM2304A-91-X11	55-5/8 (1413.0)	37-1/8 (942.2)
NM2304A-A1-X11	29-9/16 (751.0)	11-1/16 (280.2)
NM2304A-B1-X11	30-1/4 (768.5)	11-3/4 (297.7)
NM2304B-11-X1X	28-1/8 (714.4)	9-23/32 (246.8)
NM2304B-41-X1X	51-21/32 (1312.1)	33-1/4 (844.6)

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

For additional information contact
technical support at 1.800.483.4981

Accessories

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

Service Repair Kits I *Kit No. 637316 (air section)*
Kit No. 637176 (NM2304A-X: 67151-X-311, -X-511 fluid section)
Kit No. 637228 (NM2304A-X: 67151-X-C11 fluid section)
Kit No. 637010 (NM2304B-X: 65106, 65108, 65108-5 fluid section)
Kit No. 637010-4 (
NM2304B-X: 65106-4, 65108-4, 65108-6 fluid section)
Kit No. 637010-6 (NM2304B-X: 65108-8 fluid section)

Wall Mount I *61113*
For use with stub style pumps. Siphon tube then used to connect pump to fluid supply.

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

Wall / Drum Mount
61113

SPECIALTY PUMPS

1:1 Ratio Drum Pump Performance Specifications

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

Drum Pumps

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

Drum Pump Packages

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

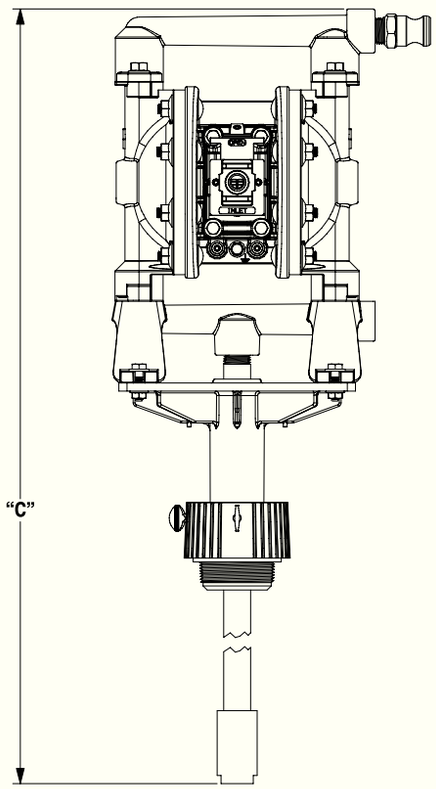
Pump Features

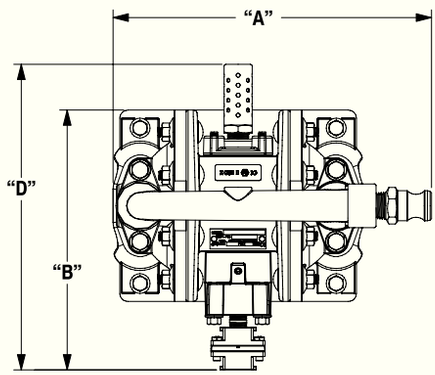
- 11-g.p.m. Flow Capability - Drum Pumps offer plenty of capacity to satisfy a broad range of transfer application volume demands.
- Stall-Free Operation - ARO Diaphragm Drum Pumps feature a patented “unbalanced” air valve design that avoids stall-out, even under low air-inlet pressures.
- Bolted Construction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

Ordering Menu

MODEL NO.	PUMP HOUSING and SEATS	PUMP DIA. and BALLS	LOCK OUT VALVE (P/N 104253-2)	FOOT VALVE	10’ HOSE ASM	DISPENSE VALVE	FLUID SERVICE
DAB05-PPTT-2-A	POLYPROPYLENE	PTFE	X	-	-	-	ACIDS & CAUSTICS
DAB05-PPCC-2-A	POLYPROPYLENE	HYTREL	X	-	-	-	OIL
DAB05-PPUU-2-A	POLYPROPYLENE	POLYURETHANE	X	-	-	-	WATER/OIL
DAB05-PPAA-2-A	POLYPROPYLENE	SANTOPRENE	X	-	-	-	MILD ACIDS/MILD CAUSTICS
DAB05-PPCC-2-N	POLYPROPYLENE	HYTREL	X	-	NITRILE	-	OIL
DAB05-PPCC-B-M	POLYPROPYLENE	HYTREL	X	X	NITRILE	NO-DRIP	OIL
DAB05-PPAA-2-B	POLYPROPYLENE	SANTOPRENE	X	-	EPDM	-	MILD ACIDS/MILD CAUSTICS
DAB05-PPUU-2-C	POLYPROPYLENE	POLYURETHANE	X	-	VINYL	-	WATER/OIL
DAB05-PPCC-B-J	POLYPROPYLENE	HYTREL	X	X	REINFORCED NITRILE	X	OIL
DAB05-PPAA-B-K	POLYPROPYLENE	SANTOPRENE	X	X	EPDM	X	MILD ACIDS/MILD CAUSTICS
DAB05-SSTT-2-A	STAINLESS STEEL	PTFE	X	-	-	-	SOLVENT
DAB05-ASTT-2-A	ALUM./SS.	PTFE	X	-	-	-	SOLVENT
DAB05-APCC-2-A	ALUM./POLY.	HYTREL	X	-	-	-	OIL/SOME SOLVENTS
DAB05-APCC-2-O	ALUM./POLY.	HYTREL	X	-	NITRILE	-	OIL/SOME SOLVENTS
DAB05-APCC-B-P	ALUM./POLY.	HYTREL	X	X	NITRILE	NO-DRIP	OIL/SOME SOLVENTS
DAB05-APCC-B-L	ALUM./POLY.	HYTREL	X	X	REINFORCED NITRILE	X	OIL/SOME SOLVENTS
DAB05-ASAA-2-A	ALUM./S.S.	SANTOPRENE	X	-	-	-	WATER

1:1 Ratio Drum Pump Dimensional Data





Model Number:	"A"	"B"	"C"	"D"
DAB05-AXXX-X-X	9-31/32" (253 mm)	8-5/32" (207 mm)	51-5/32" (1299 mm)	9-19/32" (243 mm)
DAB05-PXXX-X-X	12-1/32" (306 mm)	8-3/32" (206 mm)	50-5/32" (1274 mm)	--
DAB05-SXXX-X-X	7-3/4" (197 mm)	8-3/32" (206 mm)	49-25/32" (1264 mm)	--

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

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)
Kit No. 104255 (for repair of P29122-600 piggyback filter/regulator)

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

Pro-Series Pumps

Model	3:1 Ratio Power Pump	Oil Packages	Grease Packages	Centrifugal Pumps
Maximum Flow GPM (LPM)	24 (90.7)	9 (34.1)	7.5-lbs/min (3.4-kg/min)	P237AX-EU=200 (757) P35AX-EU=230(870.5)
Maximum Discharge Pressure PSI (BAR)	300 (20.7)	450 (31.0) 750 (51.7)	7500 (517)	90 (6.1)
Fluid Ports Inlet/Outlet (BSP Available)	1” (F) - In/Out	Immersed Inlet Control Handle Outlet	Immersed Inlet Control Handle Outlet	Screened Inlet 2” Outlet 2-1/2” Outlet
Materials of Construction	Stainless Steel	Carbon Steel	Carbon Steel	Cast Iron
Pump Weight Lbs. (Kg.)	94.7 (42.9)	33.9 (15.4) 44.7 (20.3)	LP3001-1=30.7 (12) LP3003-1=42.1 (19.1)	P237AX=48 (21.8) P35AX=79 (36)
Maximum Solids Inches (mm)	1/8 (3.2)	Clean Fluids	Clean Fluids	1/4 (6.4)
Best Selling Models (BSP Available)	PH10A-ASS-SST PH10A-BSS-SST	LP2100-1-B LP3100-1-B	LP3001-1 LP3003-1	P237A1-EU P237A3-EU P35A1-EU
Recommended Filter/ Regulator	P39234-600	P39224-600	P39224-600	C284X3-810 (Filter-Regulator-Lubricator)
Air Line Kit	66073-1	66073-1	66073-1	66084-1

High Pressure Diaphragm Pump Performance Specifications

Ratio:	3:1
Maximum Flow:	24-g.p.m. (90.7-l.p.m.) Free Flow 12 (45.6) at 125-psi back pressure
Displacement per cycle:	0.06-Gallons (.23-Liters)
Air Inlet: (Female)	3/8 - 18 N.P.T.F. - 1
Fluid Inlet:	1 - 11-1/2 N.P.T.F. - 1 Rp 1 (1- 11 BSP parallel)
Fluid Outlet:	1 - 11-1/2 N.P.T.F. - 1 Rp 1 (1- 11 BSP parallel)
Max. operating pressure:	100-psi (6.9-bar)
Suspended solids max. dia.:	1/8-in. (3.2-mm)
Weight: lbs (kg)	94.73 (42.97)
Maximum dry suction lift:	5 - 6-ft (1.5 - 1.8-m)

Ordering Menu

PH10	A	-	X	S	S	-	XX	T
Base Model	**Center Section**		**Port Size**	**Wetted Parts**	**Hardware**		**Seat/Ball Check Material**	**Diaphragm Material**
1" Pump	A Aluminum		A N.P.T.F. Threads B BSP Threads	S Stainless Steel	S Stainless Steel		HH 440 SS/ 440 SS SS 316 SS / 316 SS	T PTFE

Accessories

Air Line Filter-Regulator l *P39234-600*

Piggyback unit features a 40 micron filter, metal bowl with sight glass and 0-125-psi gauge. Plumb directly to pump's air inlet.

Service Repair Kits l *Kit No. 637338 (air section)*
Kit No. 637339 (PH10X-XXX-XSX fluid section)
Kit No. 637339-1 (PH10X-XXX-XHX fluid section)

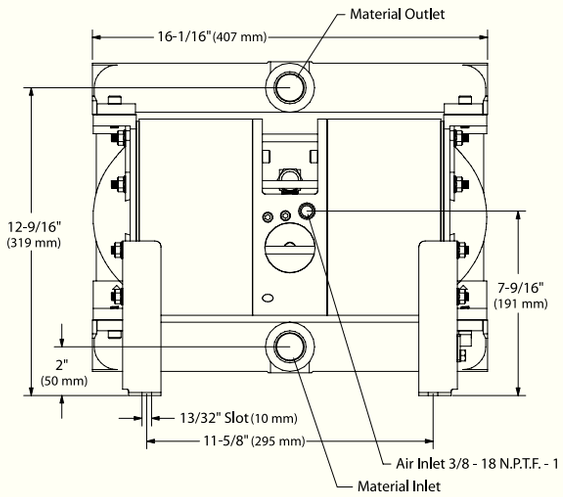
Wall Mount Bracket l *67142*

Siphon tube then used to connect pump to fluid supply.

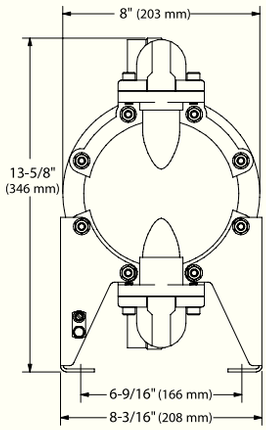
**Please note pumps are not included with these kits.*

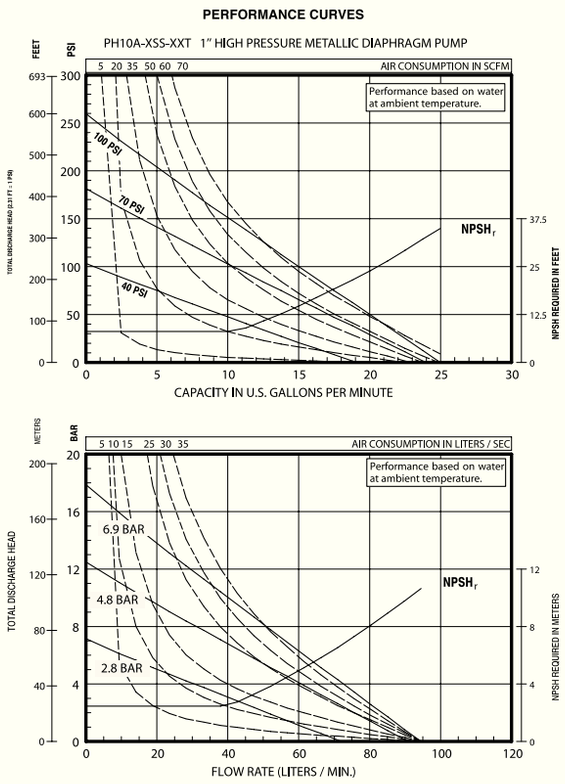
Wall Mount Bracket
67142

High Pressure Diaphragm Pump Dimensions and Flow Charts



	Material Inlet	Material Outlet
PH10A-ASS-XXT	1 - 11-1/2 N.P.T.F. - 1	1 - 11-1/2 N.P.T.F. - 1
PH10A-BSS-XXT	Rp 1 (1 - 11 BSP parallel)	Rp 1 (1 - 11 BSP parallel)





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

For additional information contact
technical support at 1.800.483.4981

Oil Package Performance Specifications

	LP210X-1-B	LP310X-1-B
Ratio:	3:1	5:1
Maximum Flow: GPM (LPM)	9 (34.1)	9 (34.1)
Max. Working Flow:	6-g.p.m. (22.7-l.p.m.)	6-g.p.m. (22.7-l.p.m.)
Maximum Rec'd Cycles:	125	170 per minute LM2305A-31-B
Displacement per Cycle:	8.3-In^3 (136-cm^3)	8.3-In^3 (136-cm^3)
Air Inlet: (Female)	1/4 - 18 N.P.T.F. - 1	1/4 - 18 N.P.T.F. - 1
Fluid Inlet:	3/4 - 14 N.P.T.	1-1/2 - 11-1/2 N.P.T.F. - 1
Fluid Outlet:	1/2 - 14 N.P.T.F. - 1	1/2 - 14 N.P.T.F. - 1
Max. operating pressure:	150-psi (10.3-bar)	150-psi (10.3-bar)
Fluid Pressure Range:	0-450-psi (0-31.0-bar)	0-750-psi (0-51.7-bar)
Weight: lbs (kg)	33.9 (15.4)	44.7 (20.3)

Major Components	LP210X-1-B	LP310X-1-B
Basic Oil Pump	LM2203A-31-C	LM2305A-31-B
Digital Meter	635190-1 (Pints)	635190-1 (Pints)
	635190-3 (Liters)	635190-3 (Liters)
Drum Cover	94421	94421
Material Hose	623501-6	623501-6
Fluid Control Handle	635391-1	635391-1
Dolly Assembly	640058-2	640058-2-

LP3100-1-B Oil Package
(Package does not include container)

Ordering Menu

LP210 **X - 1 - B**

Model Series
16-Gallon (120-lb) Portable Gear Oil Package

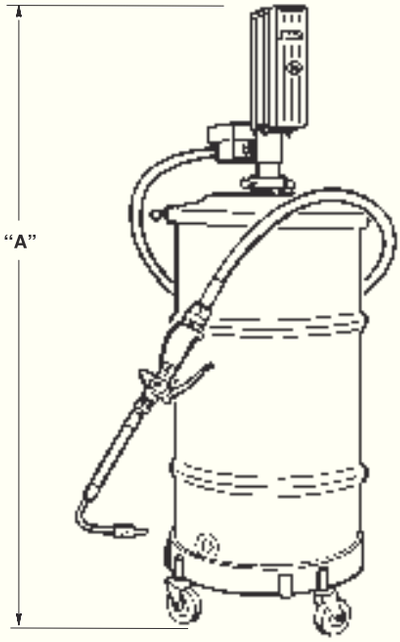
Meter Type
0 Pint
1 Liter

LP310 **X - 1 - B**

Model Series
16-Gallon (120-lb) Portable Gear Oil Package

Meter Type
0 Pint
1 Liter

LP310X-1-B Dimensions



(Drum not included)

Dimensions: Inches (mm)

Model Number:	"A"
LP310X-1-B	45 (1143)
LP210X-1-B	43 (1092)

Refer to www.ingersollrandproducts.com.

For additional information contact technical support at 1.800.483.4981

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. 637224 (LP210X-1-B)*
Kit No. 637226 (LP310X-1-B)

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

Grease Package Performance Specifications

Ratio:	50:1
Maximum Delivery/Min.:	7.5-lbs. (3.4-kg)
Maximum Rec'd Cycles:	135 per minute (LM2350E-X1-B)
Displacement per Cycle:	0.875-In^3 (14.33-cm^3)
Air Inlet: (Female)	1/4 - 18 N.P.T.F. - 1
Material Inlet:	Immersed
Material Outlet:	3/8 -18 N.P.T.F. - 1
Max. operating pressure:	150-psi (10.3-bar)
Max. fluid pressure:	7500-psi (517.2-bar)
Weight: lbs (kg)	30.7 (12)

LP3001-1 Grease Packages
(Packages do not include containers)

Ordering Menu

LP300X - 1

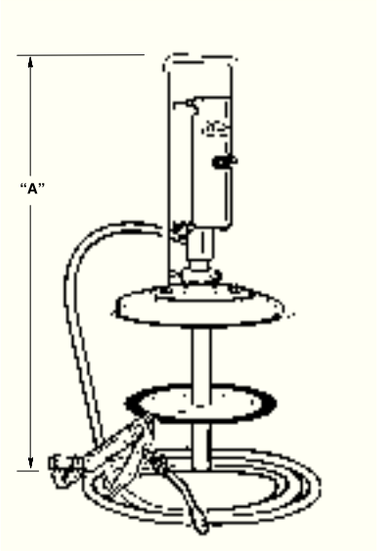
Model Series

1 35-pound (5-gal) Grease Package

LP3001-1 Major Components

Item:	Description:
Basic 50:1 Grease Pump:	LM2350E-21-B
Handle:	94334
Drum Cover:	94420
Follower Plate:	640095-2-B
Material Hose:	624201-10
Booster Grease Gun:	636103
Z-Swivel:	636077

LP3001-1 Dimensions



Dimensions: Inches (mm)

Model Number:	**"A"**
LP3001-1	29 (737)

Refer to www.ingersollrandproducts.com.

For additional information contact technical support at 1.800.483.4981

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. 637227-B*
(Pump Rebuild Kit: Contains necessary soft parts to rebuild entire pump.)

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

Grease Package Performance Specifications

Ratio:	50:1
Maximum Delivery/Min.:	7.5-lbs. (3.4-kg)
Maximum Rec'd Cycles:	135 per minute (LM2350E-X1-B)
Displacement per Cycle:	0.875-In^3 (14.33-cm^3)
Air Inlet: (Female)	1/4 - 18 N.P.T.F. - 1
Material Inlet:	Immersed
Material Outlet:	3/8 -18 N.P.T.F. - 1
Max. operating pressure:	150-psi (10.3-bar)
Max. fluid pressure:	7500-psi (517.2-bar)
Weight: lbs (kg)	42.1 (19.1)

LP3003-1 Grease Packages
(Packages do not include containers)

Ordering Menu

LP300X - 1

Model Series

3 20-pound (16-gal) Grease Package

LP3003-1 Major Components

Item:	Description:
Basic 50:1 Grease Pump:	LM2350E-31-B
Drum Cover:	94421
Follower Plate:	640165
Material Hose:	624201-10
Booster Grease Gun:	636103
Z-Swivel:	636077
Dolly Assembly:	640057

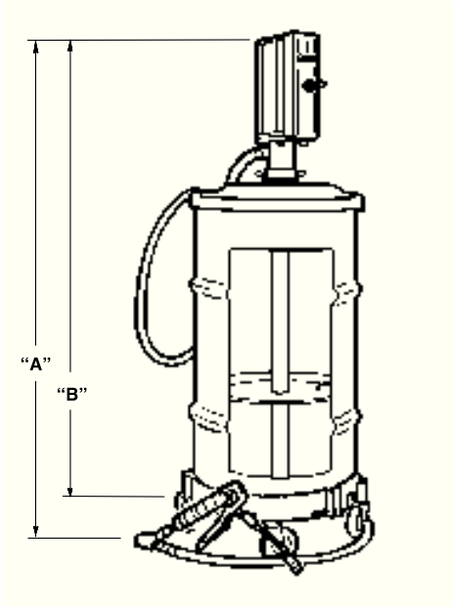
Accessories

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. 637227-B*
(Pump Rebuild Kit: Contains necessary soft parts to rebuild entire pump.)

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

LP3003-1 Dimensions



Dimensions: Inches (mm)

Model Number:	"A"	"B"
LP3003-1	43 (1092)	40-1/8 (1019)

Refer to www.ingersollrandproducts.com.

For additional information contact technical support at 1.800.483.4981

Pro-Series Pumps

Centrifugal Pump Performance Specifications

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

Ordering Menus

P237A - X - EU

Model Series | **Discharge Thread**

200-GPM (757-LPM)	1	2-1/2" N.P.T.
	3	2-1/2" BSP

P35A - 1 - EU

Model Series | **Discharge Thread**

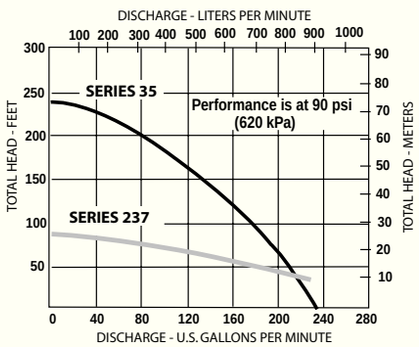
230-GPM (870-LPM)	1	2" N.P.T.

Centrifugal Pump Dimensional Data and Flow Charts

Height: inches (mm)	P237AX-EU	17-5/8 (448)
	P35A1-EU	22-1/2 (570)
Size of opening pump will pass through: inches (mm)		
	P237AX-EU	8-3/4 (222) x 8-3/4 (222)
	P35A1-EU	8-7/16 (214) x 14-1/16 (357)
Discharge Pipe Tap:	P237A1-EU	2-1/2" N.P.T.F.
	P237A3-EU	2-1/2" BSP
	P35A1-EU	2" N.P.T.F.
Air Inlet Pipe Tap:	P237AX-EU	3/4" N.P.T.F.
	P35A1-EU	1" N.P.T.F.
Air Inlet Recommended Hose Size: inches (mm)		
	P237AX-EU	3/4 (19)
	P35A1-EU	1 (25.4)
Exhaust Pipe Tap:	P237AX-EU	1-1/4" N.P.T.F.
	P35A1-EU	1-1/4" N.P.T.F.
Exhaust Recommended Hose Size: inches (mm)		
	P237AX-EU	1-1/4 (31.7)
	P35A1-EU	1-1/4 (31.7)

Refer to www.ingersollrandproducts.com.

For additional information contact technical support at 1.800.483.4981



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

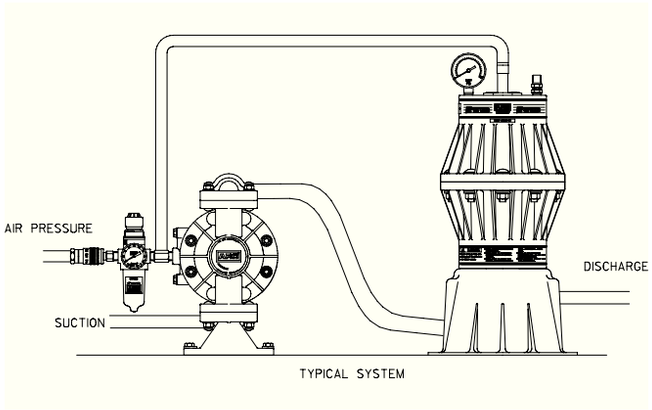
Diaphragm and piston pumps of any type have at least two points in their cycle where they provide no pressure or flow to a process. The unwanted result of this pressure fluctuation can often be material foaming, material pulsation, hydraulic shock or material splashing. While traditional pulsation dampeners 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 - the new 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 $in.^3$ maximum fluid volume, and 3" models up to 509 $in.^2$ maximum fluid volume.
- Broad Material Range for Compatibility - choose from PVDF, polypropylene, groundable acetal (1" models) or aluminum, cast iron or stainless steel (2" & 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 helps 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

Pulsation Dampener Type	**Non-Metallic / w/o Air Tamer**		
Material	**See model description chart**		
Weight	**Polypropylene**	**8.4 lbs**	**(3.8 kgs)**
	Conductive Acetal	**8.6 lbs**	**(3.9 kgs)**
	PVDF	**9.0 lbs**	**(4.1 kgs)**
Material Inlet/Outlet (female)	**66700X-01X 1 - 11-1/2 N.P.T.**		
	66700X-02X Rp 1 (1-11 BSP parallel)		
Air Inlet (male)	**Air Tamer is 3/8 - 18 N.P.T.F.-1**		
Maximum Air Inlet Pressure	**100-psi (6.9 bar)**		
Maximum Material Inlet Pressure	**100-psi (6.9 bar)**		
Maximum Temperature Limits	**Polypropylene 35° - 150° F (+1.6° - 66° C)**		
	Conductive Acetal 10° - 180° F (-12° - 82° C)		
	PVDF 10° - 200° F (-12° - 93° C)		
Maximum Fluid Volume	**57 in.^{3} (934 cm^3)**		



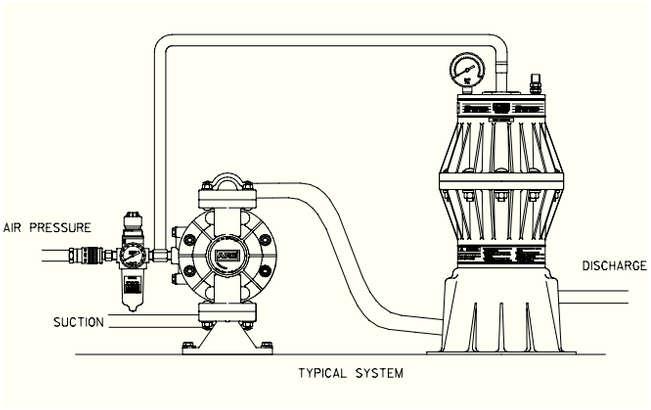
Ordering Menu

66700	X	0	X
Model Series	**Fluid Construction**	**Thread**	**Diaphragm**
1-inch	3 Polypropylene (Glass Filled)	1 N.P.T.	B Santoprene
	6 PVDF	2 BSP	9 Hytrel
	7 Conductive Acetal		8 PTFE
			3 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.**

1" Port Models

Pulsation Dampener Type	**Non-Metallic / Automatic**		
Material	**See model description chart**		
Weight	**Polypropylene**	**8.4 lbs**	**(3.8 kgs)**
	Conductive Acetal	**8.6 lbs**	**(3.9 kgs)**
	PVDF	**9.0 lbs**	**(4.1 kgs)**
Material Inlet/Outlet (female)	**SB10X-AXX-X 1 - 11-1/2 N.P.T.**		
	SB10X-BXX-X Rp 1 (1-11 BSP parallel)		
Air Inlet (male)	**Air Tamer is 3/8 - 18 N.P.T.**		
Maximum Air Inlet Pressure	**100-psi (6.9 bar)**		
Maximum Material Inlet Pressure	**100-psi (6.9 bar)**		
Maximum Temperature Limits	**Polypropylene 35° - 150° F (+1.6° - 66° C)**		
	Conductive Acetal 10° - 180° F (-12° - 82° C)		
	PVDF 10° - 200° F (-12° - 93° C)		
Maximum Fluid Volume	**57 in.^{3} (934 cm^3)**		



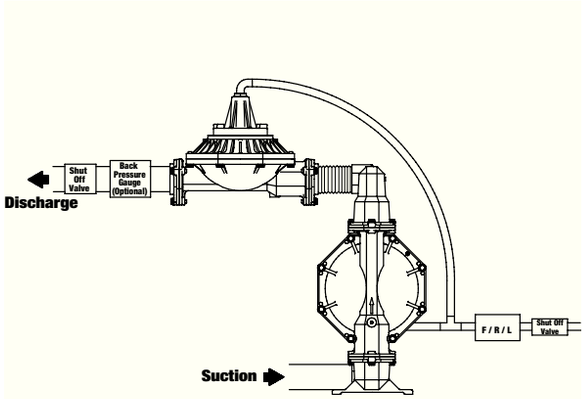
Ordering Menu

SB	10	X	-	X	X	X	-	X
Model Series	**Blocker Size**	**Air Body**		**Thread**	**Fluid Construction**	**Hardware**		**Diaphragm**
	1-inch	P Polypropylene (Glass Filled)		A N.P.T.	P Polypropylene (Glass Filled)	S Stainless Steel (304)		A Santoprene
		K PVDF		B BSP	K PVDF			C Hytrel
		D Conductive Acetal			D Conductive Acetal			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.**

2" Port Models

Pulsation Dampener Type:	Metallic / Automatic
Material:	See model description chart
Weight lbs (kg):	Aluminum (fluid cap) 29 (13.2)
	Cast Iron (fluid cap) 70 (31.8)
	Stainless St. (fluid cap) 71 (32.2)
Material Inlet/Outlet:	SB20X-AXX-X
	2" -11-1/2 N.P.T.F -1
	SB20X-BXX-X
	Rp 2(2-11 BSP)
Air Inlet:	3/4" - 14 N.P.T. (female)
Max. Air Inlet Pressure psi (bar):	120 (8.3)
Max. Material Inlet Pressure psi (bar):	120 (8.3)
Maximum Temperature Limits:	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)
Maximum Fluid Volume:	159 $in.^3$ (2.61 lit.)



Proper support of piping and pulsation dampener is required.

Ordering Menu

SB — Model Series

XX — Blocker Size
- 20 — 2-Inch

X — Air Body
- A — Aluminum
- C — Cast Iron
- S — Stainless Steel

\-

X — Thread
- A — N.P.T.F
- B — BSP

X — Fluid Construction
- A — Aluminum
- C — Cast Iron
- S — Stainless Steel

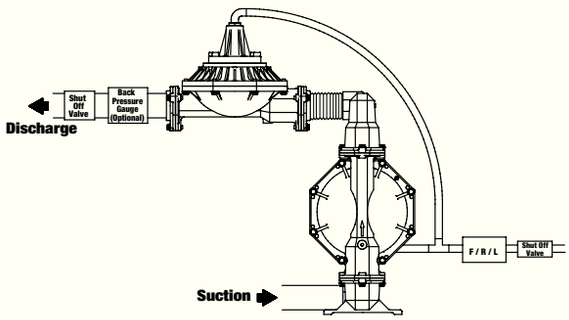
X — Hardware
- S — Stainless Steel (304)
- P — Plated Steel

\-

X — Diaphragm
- A — Santoprene
- G — Nitrile
- T — PTFE/ Santoprene
- V — Viton

3" Port Models

Pulsation Dampener Type:	Metallic / Automatic
Material:	See model description chart
Weight lbs (kg):	Aluminum (fluid cap) 41 (18.6)
	Cast Iron (fluid cap) 94 (42.6)
	Stain. Steel (fluid cap) 96 (43.5)
Material Inlet/Outlet:	SB30X-AXX-X 3" - 8 N.P.T.-1
	SB30X-BXX-X Rp 3(3-11 BSP)
Air Inlet:	3/4" - 14 N.P.T. (female)
Maximum Air Inlet Pressure psi (bar):	120 (8.3)
Maximum Material Inlet Pressure psi (bar):	120 (8.3)
Maximum Temperature Limits:	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)
Maximum Fluid Volume:	509 $in.^3$ (8.34 lit.)



Proper support of piping and pulsation dampener is required.

Ordering Menu

SB — Model Series

XX — Blocker Size
- 30 — 3-Inch

X — Air Body
- A — Aluminum
- S — Stainless Steel

\-

X — Thread
- A — N.P.T.
- B — BSP

X — Fluid Construction
- A — Aluminum
- C — Cast Iron
- S — Stainless Steel

X — Hardware
- S — Stainless Steel (304)
- P — Plated Steel

\-

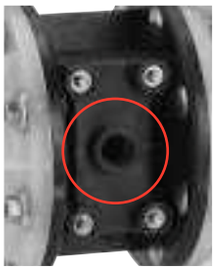
X — Diaphragm
- A — Santoprene
- G — Nitrile
- T — PTFE/ Santoprene
- V — Viton

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.

EXHAUST THREADED MUFFLER KIT

Description

Kit allows operator to pipe exhaust air away from application. Fits only non-metallic air motor section. 3/8" NPT exhaust port.
(muffler not included)



PE SERIES PUMP CONTROL

Description

ARO Alpha™ 4-way valve supplies air to cycle pump. Features bonded spool plus many actuator/return and solenoid options. (pump not included)

1/4" body ported. Actuator/Return options. Solenoid coil voltage options.

Order No.

Model:	Actuator/Return:	Voltage:
A212SD-120-A	Solenoid/Solenoid	120-VAC
A212SS-120-A	Solenoid/Spring	120-VAC
A212SD-012-D	Solenoid/Solenoid	12-VDC
A212SS-012-D	Solenoid/Spring	12-VDC
A212SD-024-D	Solenoid/Solenoid	24-VDC
A212SS-024-D	Solenoid/Spring	24-VDC
A212PS	Pilot/Spring	
A212PD	Pilot/Pilot	

(Solenoid Valves require use of Connector, referenced on this page.)

Valve does not include connector, mufflers or fittings

PE SERIES PUMPS WITH B0S SPECIALTY CODE

Description

Replaces standard pump air valve. Operate pump with a remote four-way valve. Provides the ultimate cycle rate control for dosing and batching applications.

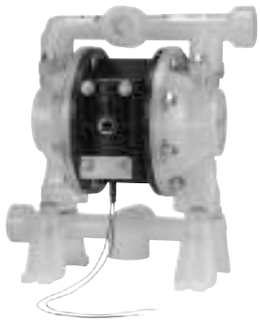
Order No. PE0XX-XXX-XXX-B0S
For 3/8" and 1/2" PD0 Series
(Remote valve not included in model. See below for four-way valve options.)

CYCLE SENSOR

Description

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

Order No. 67386 3/8", 1/2", and 3/4" Non-Metallic Pumps (PD03-X, PD05-X, PD07-X)
67168 3/8" and 1/2" Non-Metallic Pumps (66605X-X)
67169 1", 1-1/2" and 2" Non-Metallic Pumps. 1" and 1-1/2" Metallic Pumps



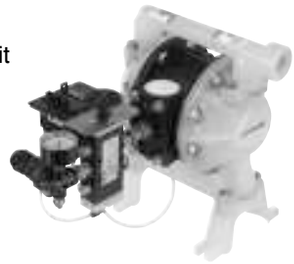
67386 on PD05P-X-X-B

COUNTDOWN BATCHER

Description

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

Order No. 67072 For 3/8", 1/2", 3/4" and 1" ported pumps



CYCLE COUNTER KIT

Description

Easy to install counter records up to 999,999 cycles. Kit includes necessary installation hardware. For fluid inventory, preventative maintenance and fluid metering.

Order No. 66975 for 3/8", 1/2", 3/4", 1",1-1/2", 2" and 3" ported

SOLENOID ACTUATION KIT

Description

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

Order No. 67165-1 (24VDC) for 3/8" and 1/2" ported pumps

67165-2 (120VAC) for 3/8" and 1/2" ported pumps

67166-1 (24VDC) for 1", 1-1/2" and 2" non-metallic and 1", 1-1/2" metallic pumps (less 3:1 models)

67166-2 (120VAC) for 1", 1-1/2" and 2" non-metallic and 1", 1-1/2" metallic pumps (less 3:1 models)

AIR CONTROL ACTUATION VALVES

Description

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

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

120 VAC

Order No. MQ3728-120-A for 1/2" and 1" pumps

H254SS-120-A for 1-1/2" pumps

MQ3729-120-A for 2" and 3" pumps

24 VDC

Order No. MQ3728-024-D for 1/2" and 1" pumps

H254SS-024-D for 1-1/2" pumps

MQ3729-024-D for 2" and 3" pumps

Solenoid valve requires use of connector. See below for connector information.

CONNECTORS

Description

Connects valve solenoid to PLC or other control device. Female connector to male DIN of valve solenoid.

CBW

Straight connector with 36" horizontal cable located on back.
Order No. CBW

Straight connector with 36" vertical cable located on back.
Order No. CHW

CHW

DIAPHRAGM PUMP SPEED CONTROLS

Description

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

Order No. 104104-N02 1/4" port size

104104-N04 1/2" port size

104104-N06 3/4" port size

MINI BATCH COUNTER

Description

For simple batching applications. Used with cycle counter or flow meter to control fluid output from pump.

Order No. 67161-2

67161-2 Mini Batch Counter with 1" pump

PNEUMATIC LIQUID LEVEL SENSORS

Description

Used to control pump.

Order No 59916-1 to sense when fluid exceeds a desired level

59916-2 to sense when fluid falls below a desired level

WALL MOUNT

Description

Conveniently mount pump above container. Made of of heavy gage coated steel. (pump not included)

Order No. 67388* 3/8" Pumps
76763* 1/2" Pumps
66100* 1" Metallic Pumps
62133 1-1/2" Metallic Pumps
67142 1" 3:1 High Pressure Pumps

*(does not include mounting hardware)

76763 Wall Mount

PNEUMATIC MATERIAL AGITATORS

Description

Prevents fluid from separating. Mounts in opening on 5-gallon or 55-gallon drum covers.

Order No. 651100 5-Gallon containers, use with 651851 and 66971 drum covers

651103 55-Gallon drums, use with 66087 drum side-mount adapter. Use with 66197 or 67141 drum covers requires 75704 mount (3), Y8-58-C screws and (3) Y12-5-C nuts

651100 Agitator

SIPHON TUBE

Description

Used to draw fluid from 55-gallon drums. Straight tube when pump is mounted on drum; angle tube when pump is wall mounted above container. Plastic (PVC, PP, PTFE), Carbon Steel (CS) or 316 Stainless (SS)

Order No. 61412 Straight N.P.T. (male) PVD for 1/2" Pumps

65109 CS N.P.T. (female) for 1" Pumps

66779 PVC 36" N.P.T. (female) for 1" Pumps

66779-1 PVC, N.P.T. (female) 14.875" L for 1" pumps used with 275-gallon bulk tank

66779-2 PVC, N.P.T. (female) 49" L for 1" pumps used with 275-gallon bulk tank

66779-3 PVC, N.P.T. (female) 61" L for 1" pumps used with large bulk tanks

65109 Siphon Tube

DRUM COVERS

Description

Keeps debris from entering fluid supply. Accommodates diaphragm pump. Fits 5-gallon and 55-gallon containers.

Order No. 67055-B Stainless Steel, for 1/4" Pumps on 5-gal. containers

66971 Stainless Steel, for 1/2" Pumps on 5-gal. containers

DRUM / WALL MOUNTS

Description

Permits pump to be mounted near fluid containers. Can also be mounted on drum lip. For use with stub style 2:1 and 4:1 ratio pumps.

Order No. 61113 for N-Series air motor stub pumps fitted with bung adapters.

WET-SOL "PLUS"

Description

Designed to prolong packing life by keeping piston rod and packings wetted.

Order No. 66333-B Quart
for NM2202X-X and NM2304X-X pumps

66334-B Gallon
for NM2202X-X and NM2304X-X pumps

MUFFLER

Description

Reduces noise level of air exhaust to acceptable OSHA standards.

Order No. 61879 for use with 612041-X models.

AIR LINE LUBRICANT

Description

Used in air line lubricator to air motor. High quality "EP" extreme pressure gear oil. Non-detergent, rust or oxidation inhibited. Viscosity of 700 to 1000 S.U.S. at 100° F.

Order No. 62274 one quart bottle

OVER-RUN CONTROL

Description

Shuts off pump when excessive cycling occurs due to empty fluid supply container.

Order No. 635040 for 1/2" and 1" ported diaphragm pumps for 1:1, 2:1 and 4:1 ratio piston pumps

23644-400 for 1-1/2" and 2" ported diaphragm pumps

635043 for 3" ported diaphragm pumps

DRUM COVERS

Description

Keeps debris from entering fluid supply. Accommodates siphon hose and agitator. Fits 5-gallon containers.

Order No. 651851 Carbon Steel, for 2" and 3" air motor pumps

94422 Carbon Steel, 2" bung opening for 55-gal. containers

651851 Drum Cover

94422 Drum Cover

Viscosity Conversion Chart

Centi Poise	Poise	Saybolt Universal (SSU)	Saybolt Furol	Ford No. 3	Ford No. 4	Zahn No. 1	Zahn No. 2	Zahn No. 3
1	.01	31						
2	.02	34						
4	.04	38						
7	.07	47		8				
10	.10	60		9	5	30	16	
15	.15	80	13	10	8	34	17	
20	.20	100	15	12	10	37	18	
25	.24	130	17	15	12	41	19	
30	.30	160	19	19	14	44	20	
40	.40	210	24	25	18	52	22	
50	.50	260	29	29	22	60	24	
60	.60	320	34	33	25	68	27	
70	.70	370	39	36	28	72	30	
80	.80	430	42	41	31	81	34	
90	.90	480	49	45	32	88	37	10
100	1.0	530	54	50	34		41	12
120	1.2	580	59	58	41		49	14
140	1.4	690	70	66	45		58	16
160	1.6	790	79	72	50		66	18
180	1.8	900	91	81	54		74	20
200	2.0	1000	100	90	58		82	23
220	2.2	1100	110	98	62		88	25
240	2.4	1200	120	106	65			27
260	2.6	1280	128	115	68			30
280	2.8	1380	138	122	70			32
300	3.0	1475	148	130	74			34
320	3.2	1530	153	136	89			36
340	3.4	1630	163	142	95			39
360	3.6	1730	173	150	100			41
380	3.8	1850	185	160	106			43
400	4.0	1950	195	170	112			46
420	4.2	2050	205	180	118			48
440	4.4	2160	216	188	124			50
460	4.6	2270	227	200	130			52
480	4.8	2380	238	210	137			54
500	5.0	2480	248	218	143			58
550	5.5	2660	266	230	153			64
600	6.0	2900	290	250	170			68
700	7.0	3380	338	295	194			76
800	8.0	3880	388	340	223			
900	9.0	4300	430	365	247			
1000	10.0	4600	460	390	264			
1100	11	5200	520	445	299			
1200	12	5620	562	480	323			
1300	13	6100	610	520	350			
1400	14	6480	648	550	372			
1500	15	7000	700	595	400			
1600	16	7500	750	635	430			
1700	17	8000	800	680	460			
1800	18	8500	850	720	490			
1900	19	9000	900	760	520			
2000	20	9400	940	800	540			
2100	21	9850	985	835	565			
2200	22	10300	1030	875	592			
2300	23	10750	1075	910	617			
2400	24	11200	1120	950	645			
2500	25	11600	1160	985	676			
3000	30	14500	1450	1230	833			
3500	35	16500	1650	1400	950			
4000	40	18500	1850	1570	1060			
4500	45	21000	2100	1780	1175			
5000	50	23500	2350		1350			
5500	55	26000	2600		1495			
6000	60	28000	2800		1605			
6500	65	30000	3000		1720			
7000	70	32500	3250		1870			
7500	75	35000	3500		2010			
8000	80	37000	3700		2120			
8500	85	39500	3950		2270			
9000	90	41000	4100		2360			
9500	95	43000	4350		2470			
10000	100	46500	4650		2670			
15000	150	69400	6940					
20000	200	92500	9250					
30000	300	138600	13860					
40000	400	185000	18500					
50000	500	231000	23100					
60000	600	277500	27750					
70000	700	323500	32350					
80000	800	370000	37000					
90000	900	415500	41550					
100000	1000	462000	46200					
125000	1250	578000	57800					
150000	1500	694000	69400					
175000	1750	810000	81000					
200000	2000	925000	92500					

Pump Airborne Noise Emissions

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

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

Material Service Guideline

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

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

* Applies to diaphragms only.

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

NOTE: Temperatures are reference for materials only. Refer to operator's manual for maximum pump operating temperature.

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