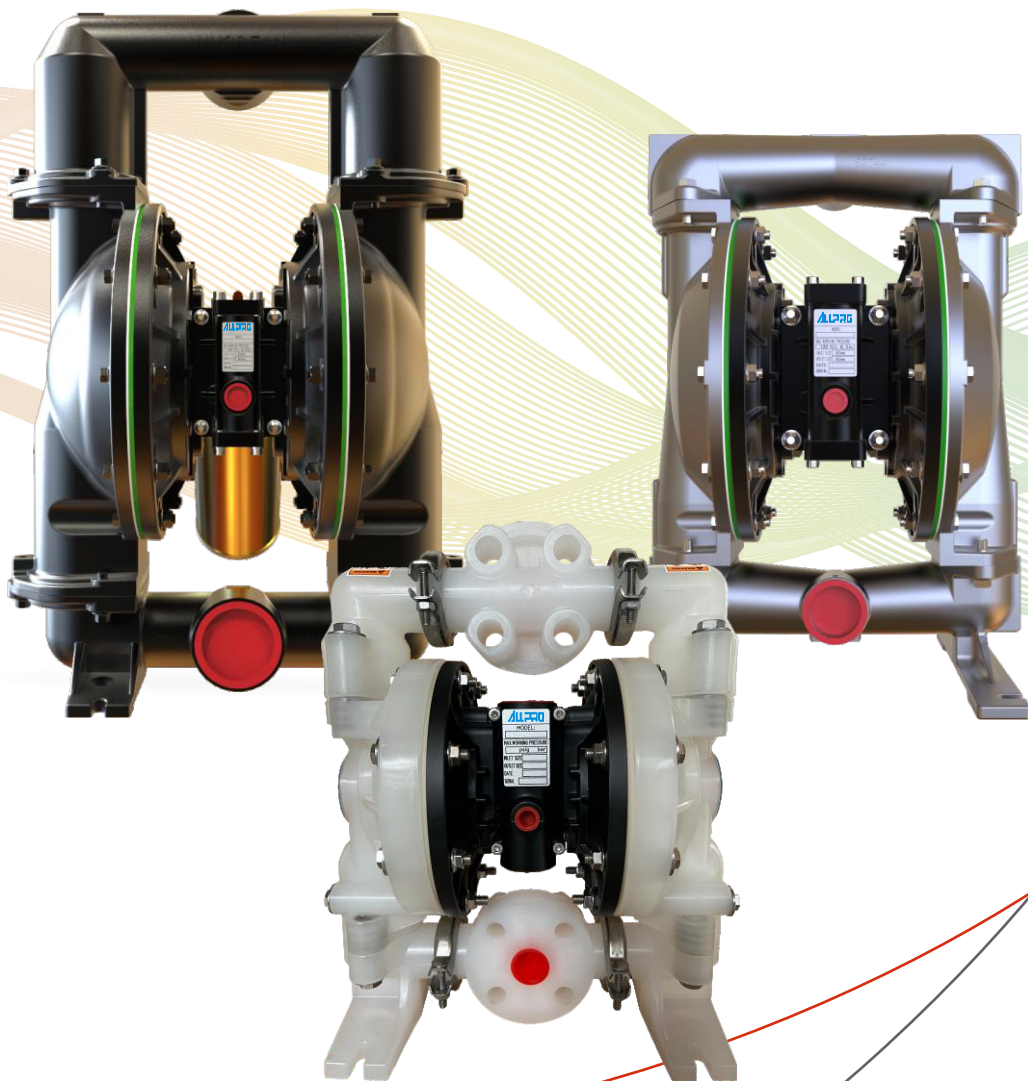




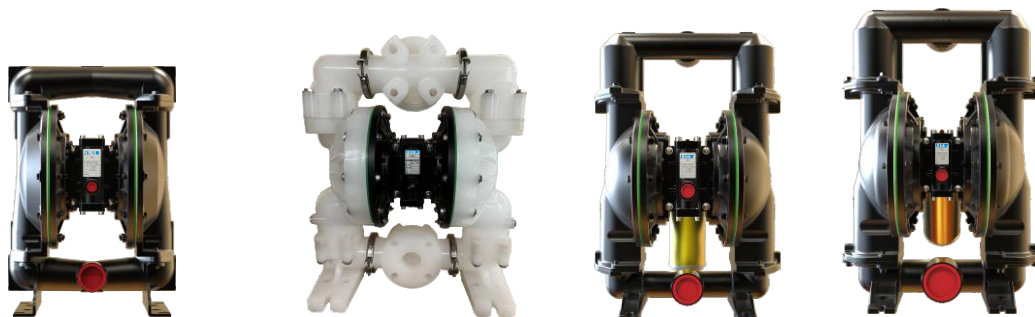
Air Operated Double Diaphragm Pump



Model Overview



Models	1/2"NON-Metallic	1/2"Metallic	1"NON-Metallic	1"Metallic	1-1/2"NON-Metallic
Maximum Flow Rate GPM(LPM)	13 (49.2)	12 (45.4)	47 (177.9)	35 (133)	100 (378.5)
Max.Operating Pressure psi(bar)	100 (6.9)	100 (6.9)	120 (8.3)	120 (8.3)	120 (8.3)
Fluid Outlet/Fluid Inlet	1/2-14NPT	1/2-14"NPT Rp1/2(1/2-14"BSP,parallel)	1"ANSI/DIN Flange	1-11 1/2"NPT Rp1(1-11"BSP,parallel)	1-1/2"ANSI/DIN Flange
Material of Construction	Polypropylene PVDF	Aluminum Stainless Steel	Polypropylene PVDF	Aluminum Cast Iron Stainless Steel	Polypropylene PVDF
Weight lbs(kg)	10.6(4.8) Polypropylene 13.2(6) PVDF	62(28.1)	20.3(9.2) Poly 28.5(12.93) PVDF	19(8.6)Alum 31(14.1)CI 36(16.3)SS	62(28.1) Poly 92(41.7) PVDF
Suspended Solids Max.Dia.(mm)	3/32(2.4)	3/32(2.4)	1/8(3.2)	1/8(3.2)	1/4(6.4)
Maximum Dry Suction Lift	15(4.6)	15(4.6)	15(4.6)	20(6.1)	14(4.27)
Airline Kit	DP31-Air15	DP31-Air15	DP31-Air25	DP31-Air25	DP21-Air40



Models	1-1/2"Metallic	2"NON-Metallic	2:"Metallic	3"Metallic
Maximum Flow Rate GPM(LPM)	90 (340.7)	145 (548.8)	172 (651)	237 (897)
Max.Operating Pressure psi(bar)	120 (8.3)	120 (8.3)	120 (8.3)	120 (8.3)
Fluid Outlet/Fluid Inlet	1-1/2"NPT Rp1-1/2(1-1/22"BSP,parallel)	2"ANSI/DIN Flange	2"NPT Rp2(2"BSP,parallel)	3"NPT Rp3(3"BSP,parallel)
Material of Construction	Aluminum Cast Iron Stainless Steel	Polypropylene PVDF	Aluminum Cast Iron Stainless Steel	Aluminum Cast Iron Stainless Steel
Weight lbs(kg)	51.5(23.4)Alum 79.5(36.1)CI 84.5(38.3)SS	62(28.1) Poly 92(41.7) PVDF	65.2(29.6)Alum 124.3(56.4)CI 125.4(56.9)SS	109.8(49.8)Alum 213.1(96.7)CI 222.2(100.79)SS
Suspended Solids Max.Dia.(mm)	1/4(6.4)	1/4(6.4)	1/4(6.4)	3/8(9.5)
Maximum Dry Suction Lift	19(5.8)	14(4.27)	27.2(8.3)	17.6(5.4)
Airline Kit	DP21-Air40	DP21-Air40	DP21-Air50	DP21-Air80

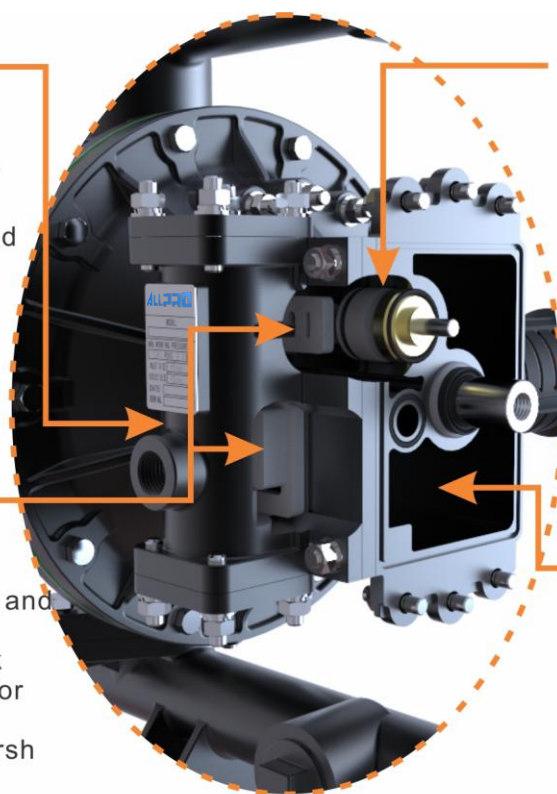
Main Air Valve

Patent

- Patented “stall-free” air valve design.
- Maintenance-free and Self-lubricating.
- Low start-up pressure(1.4bar).

The Use Of Dual Ceramic Dynamic Seals:

- More wear-resisting and self-lubricating.
- Better ability to work under polluted and/or dirty air.
- Applicable to the harsh environment of air source.
- Efficient.
- Long lifetime.



Pilot Air Valve

Patent

- Provides an positive, reliable shift signal.
- Provides faster pump trip-over with more flow.
- Faster trip-over with less pulsation.

Built-in Energy Dissipation Chamber

- It effectively reduces the discharge pressure and noise from work.
- It is anti-icing.

Model Descriptions & Ordering

Model:	AP	XX	X	-	X	X	X	X	-	X	X
	Model Series	Pump Size	Center Body Mat.		Fluid Caps & Manifold Mat.	Seat Material	Ball Check Material	Diaphragm Material		Fluid Connections	Hardware

Pump Size	15-1/2"	25-1"	40-1.5"	50-2"	80-3"						
Center Body Mat.	A-Aluminum	B-Cast Iron	S-Stainless Steel	P-Polypropylene							
Fluid Caps & Manifold Mat.	3-Polypropylene(Colorless)	P-Polypropylene(Grey)	4-PVDF	A-Aluminum	S-Stainless Steel	C-Cast Iron					
Seat Material	0 - (Duck Bill)	1 - Aluminum	2 - Stainless Steel	3 - Polypropylene	4-PVDF(Kynar)	5-Carbon Steel					
	E-Santoprene	G-Nitrile	8-Hard Stainless Steel	9-Hytel							
Ball Check Material	1-Neoprene	2-Nitrile	3-Viton	4-PTFE	5-E.P.R.	6-Acetal					
	A-Stainless Steel	E-Santoprene	8-Polyurethane	C-Hytel							
Diaphragm Material	1-Neoprene	2-Nitrile	3-Viton	4-PTFE/Santoprene	5-E.P.R.	6-Acetal					
	B-Santoprene	9-Hytel									
Fluid Connections	F-ANSI Flange	N-NPT Threads	B-BSP Threads								
Hardware	C-Steel	S-Stainless Steel									

1/2" NON-METALLIC Models

SPECIFICATIONS:

Air Inlet(female): 1/4"BSPT(1/4"NPT Available On Request)

Fluid Outlet(female): 1/2-14 NPT

Fluid Inlet(female): 1/2-14 NPT

Maximum Flow Rate: 13GPM(49.2LPM)

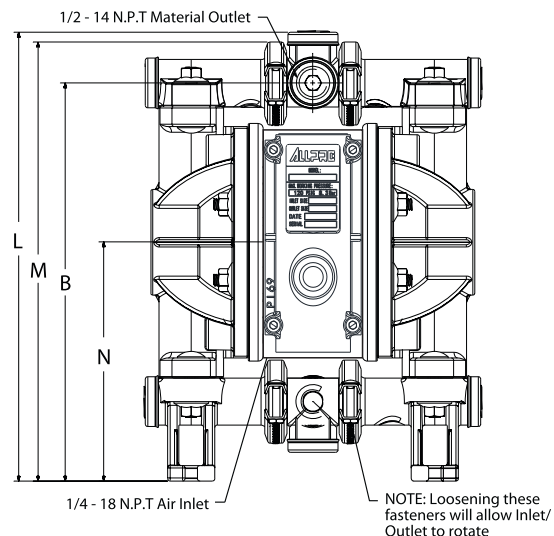
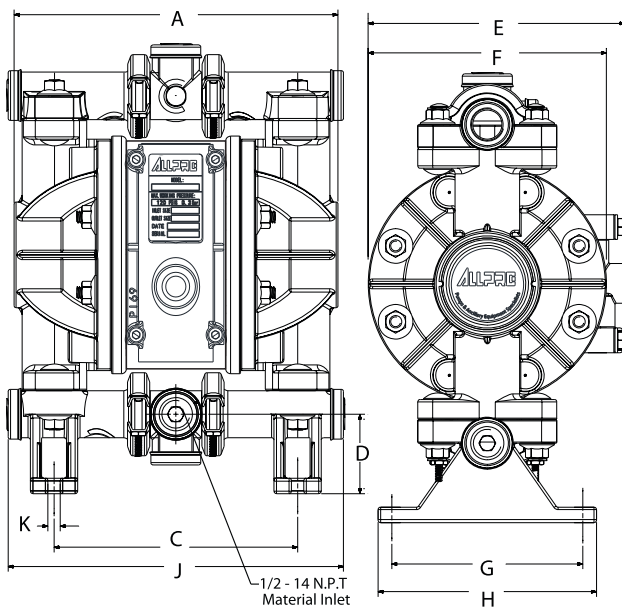
Max. Operating Pressure: 100psi(6.9bar)

Suspended Solids Max. Dia.: 3/32"(2.4mm)

Sound Level:70psi 60 cycles/min. 71.1db(A)



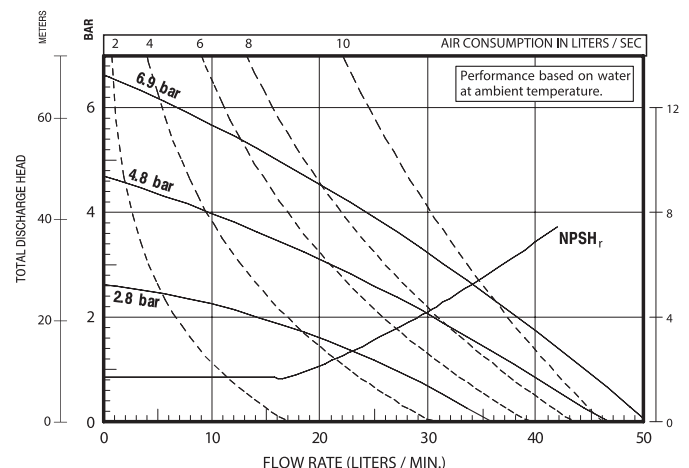
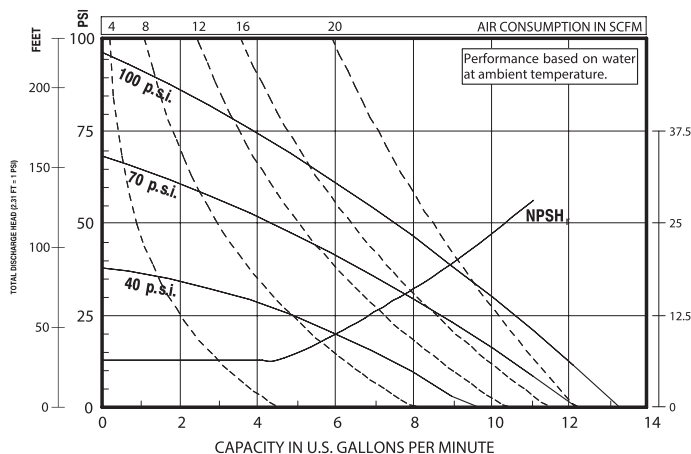
DIMENSIONS:



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

A - 8.155 (207.1 mm)	E - 6.467 (164 mm)
B - 10.051 (255 mm)	F - 6.000 (152 mm)
C - 6.135 (155.8 mm)	G - 4.812 (122.2 mm)
D - 2.005 (51 mm)	H - 5.500 (140 mm)
J - 8.445 (215 mm)	
K - 0.312 (8 mm)	
L - 11.331 (288 mm)	
M - 11.084 (282 mm)	
N - 6.040 (153 mm)	

PERFORMANCE CURVE:



1/2" METALLIC Models

SPECIFICATIONS:

Air Inlet(female): 1/4"BSPT(1/4"NPT Available On Request)

Fluid Outlet: Rp 1/2 (1/2-14 BSP,parallel)
1/2-14 NPT

Fluid Inlet: Rp 1/2 (1/2-14 BSP,parallel)
1/2-14 NPT

Maximum Flow Rate: 12 GPM(45.4 LPM)

Max. Operating Pressure: 100psi(6.9 bar)

Suspended Solids Max. Dia.: 3/32"(2.4mm)

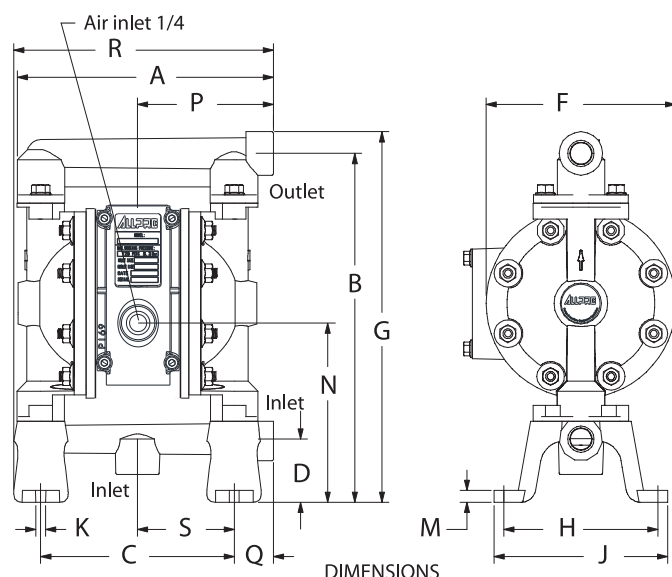
Maximum Dry Suction Lift: 15feet(4.5m)

Weight: 62 lbs(28.1kg)

Sound Level:70psi 60 cycles/min. 75db(A)

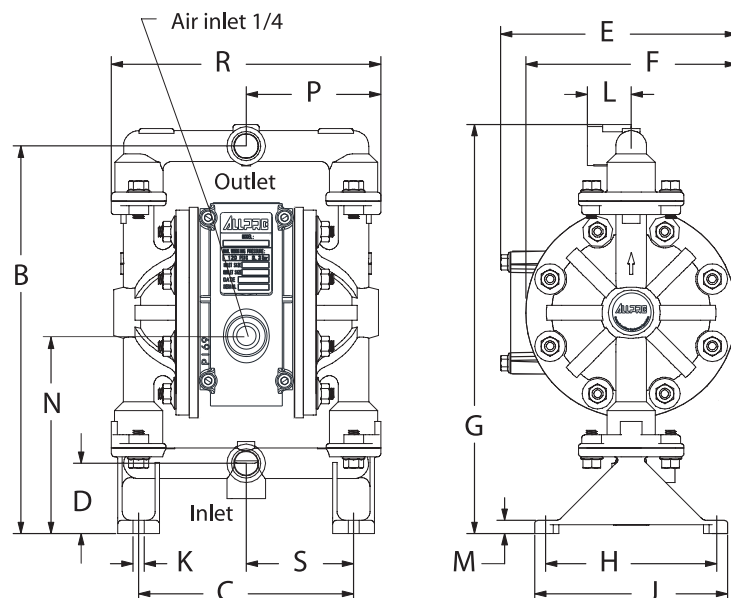


DIMENSIONS:



DIMENSIONS

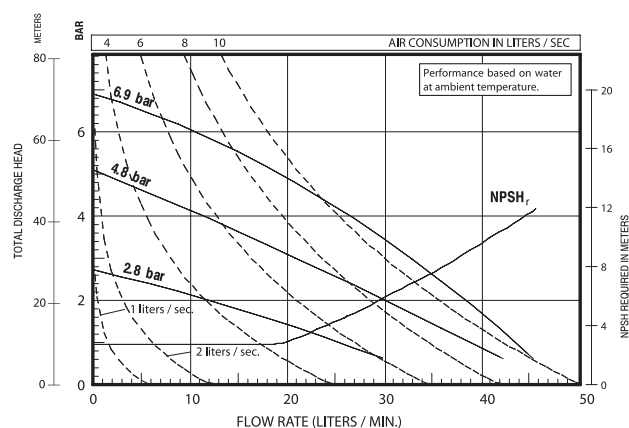
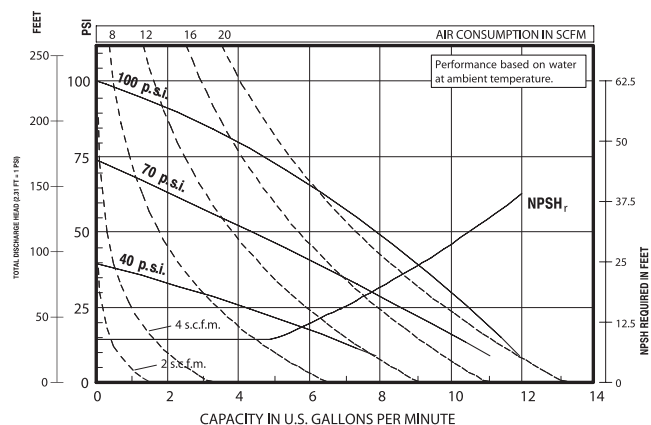
A 8-1/8" (206.0 mm)	G see below	N 6-5/16" (159.9 mm)
B 11-1/16" (280.4 mm)	H 4-7/8" (123.8 mm)	P see below
C 6-1/8" (155.6 mm)	J 5-1/2" (139.7 mm)	Q 1-1/4" (31.6 mm)
D 2" (50.8 mm)	K 5/16" (8.0 mm)	R see below
E see below	L 1-1/4" (31.8 mm)	S 3-1/16" (77.8 mm)
F 6" (152.4 mm)	M 3/8" (9.5 mm)	



Dimension

"E" 6-23/32" (170.6 mm)
"G" 11-21/32" (296.0 mm)
"P" 3-27/32" (97.4 mm)
"R" 7-11/16" (194.9 mm)

PERFORMANCE CURVE:





1" NON-METALLIC Models

SPECIFICATIONS:

Air Inlet(female): 1/4"BSPT(1/4"NPT Available On Request)

Fluid Outlet(female): 1" ANSI/DIN Flange

Fluid Inlet(female): 1" ANSI/DIN Flange

Maximum Flow Rate: 47GPM(177.9LPM)

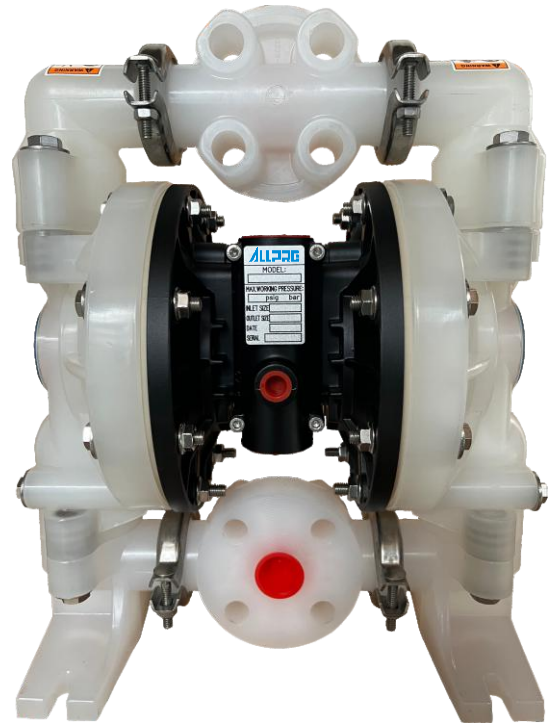
Max. Operating Pressure: 120psi(8.3bar)

Suspended Solids Max. Dia.: 1/8"(3.2mm)

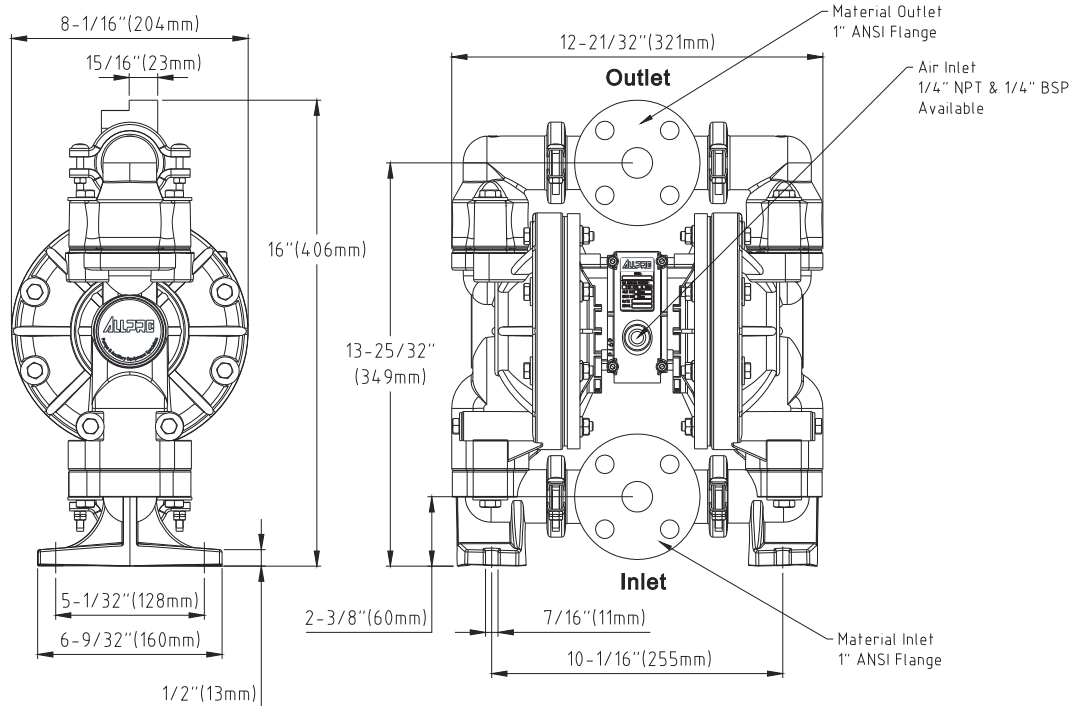
Maximum Dry Suction Lift: 15feet(4.6m)

Weight: 20.3 lbs(9.2kg)

Sound Level:70psi 60 cycles/min. 64.5db(A)

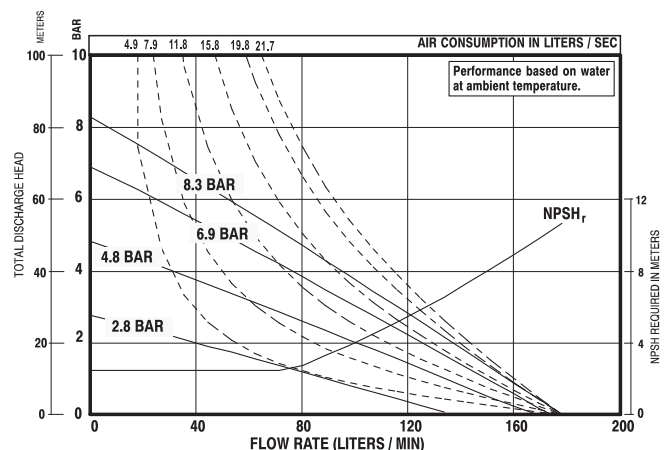
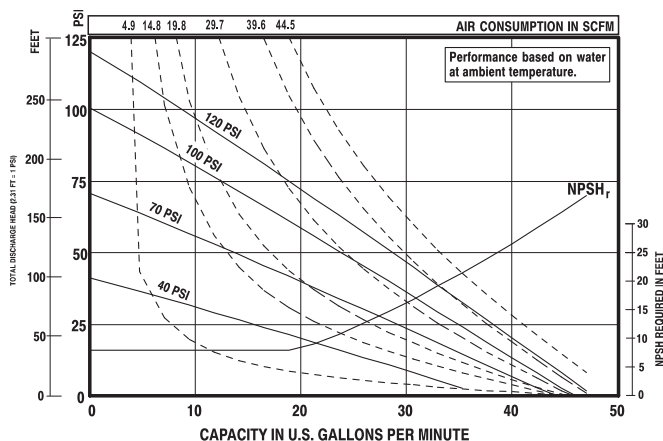


DIMENSIONS:



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

PERFORMANCE CURVE:





1" METALLIC Models

SPECIFICATIONS:

Air Inlet(female): 1/4"BSPT(1/4"NPT Available On Request)

Fluid Outlet: Rp 1 (1-11 BSP,parallel)
1-11 1/2 NPT

Fluid Inlet: Rp 1 (1-11 BSP,parallel)
1-11 1/2 NPT

Maximum Flow Rate: 35 GPM(133 LPM)

Max. Operating Pressure: 120psi(8.3 bar)

Suspended Solids Max. Dia.: 1/8"(3.2mm)

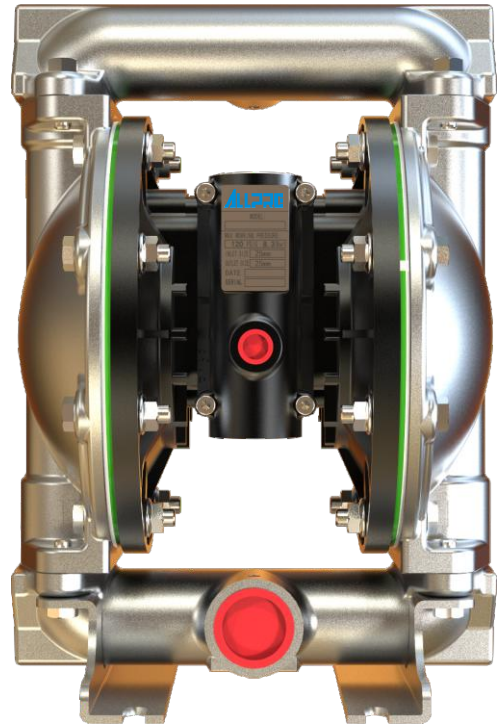
Maximum Dry Suction Lift: 20feet(6.1m)

Weight: aluminum-19 lbs(8.6kg);

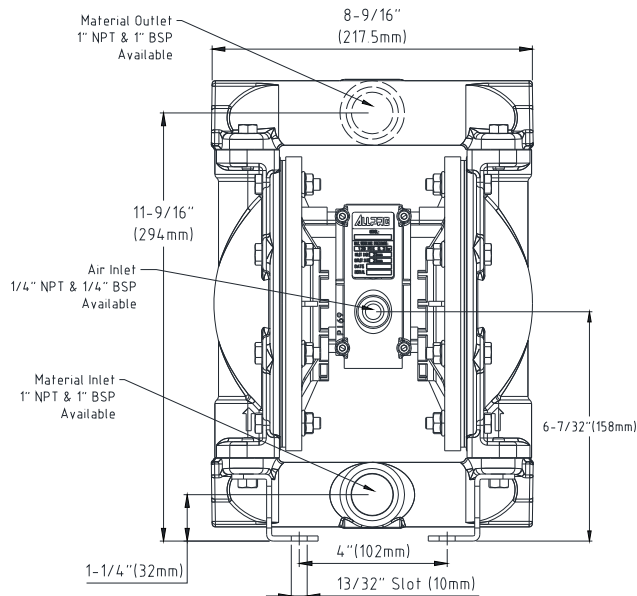
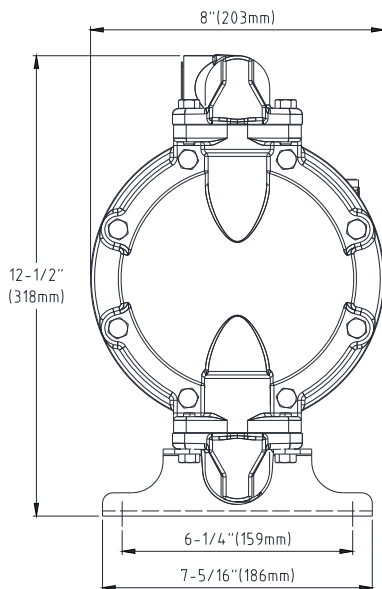
stainless steel-36 lbs(16.3kg);

cast iron-31 lbs(14.1kg);

Sound Level:70psi 60 cycles/min. 64.5db(A)

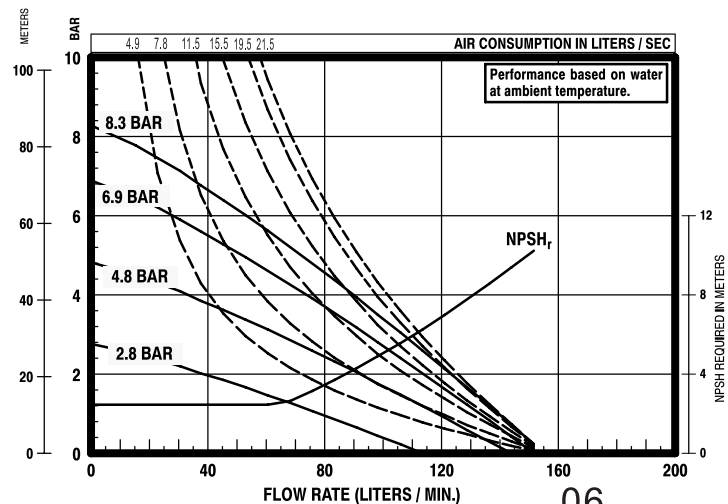
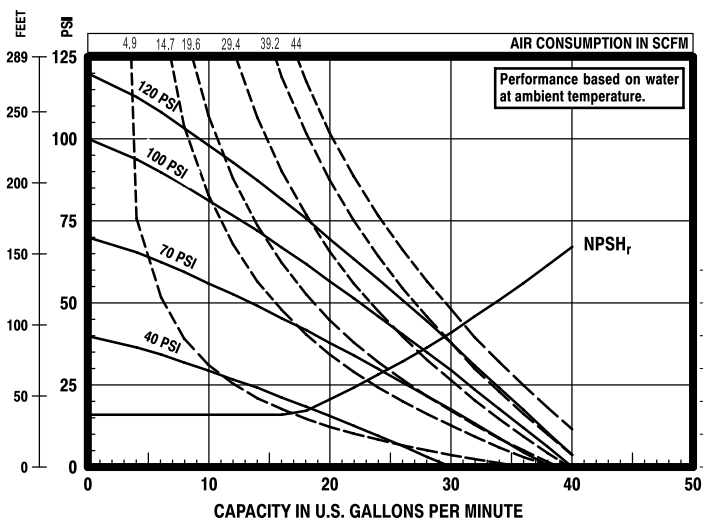


DIMENSIONS:



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

PERFORMANCE CURVE:





1-1/2" NON-METALLIC Models

SPECIFICATIONS:

Air Inlet(female): 3/8"BSPT(3/8"NPT Available On Request)

Fluid Outlet: 1-1/2" ANSI/DIN Flange

Fluid Inlet: 1-1/2" ANSI/DIN Flange

Maximum Flow Rate: 100GPM(378.5LPM)

Max. Operating Pressure: 120psi(8.3bar)

Suspended Solids Max. Dia.: 1/4"(6.4mm)

Maximum Dry Suction Lift: 14feet(4.27m)

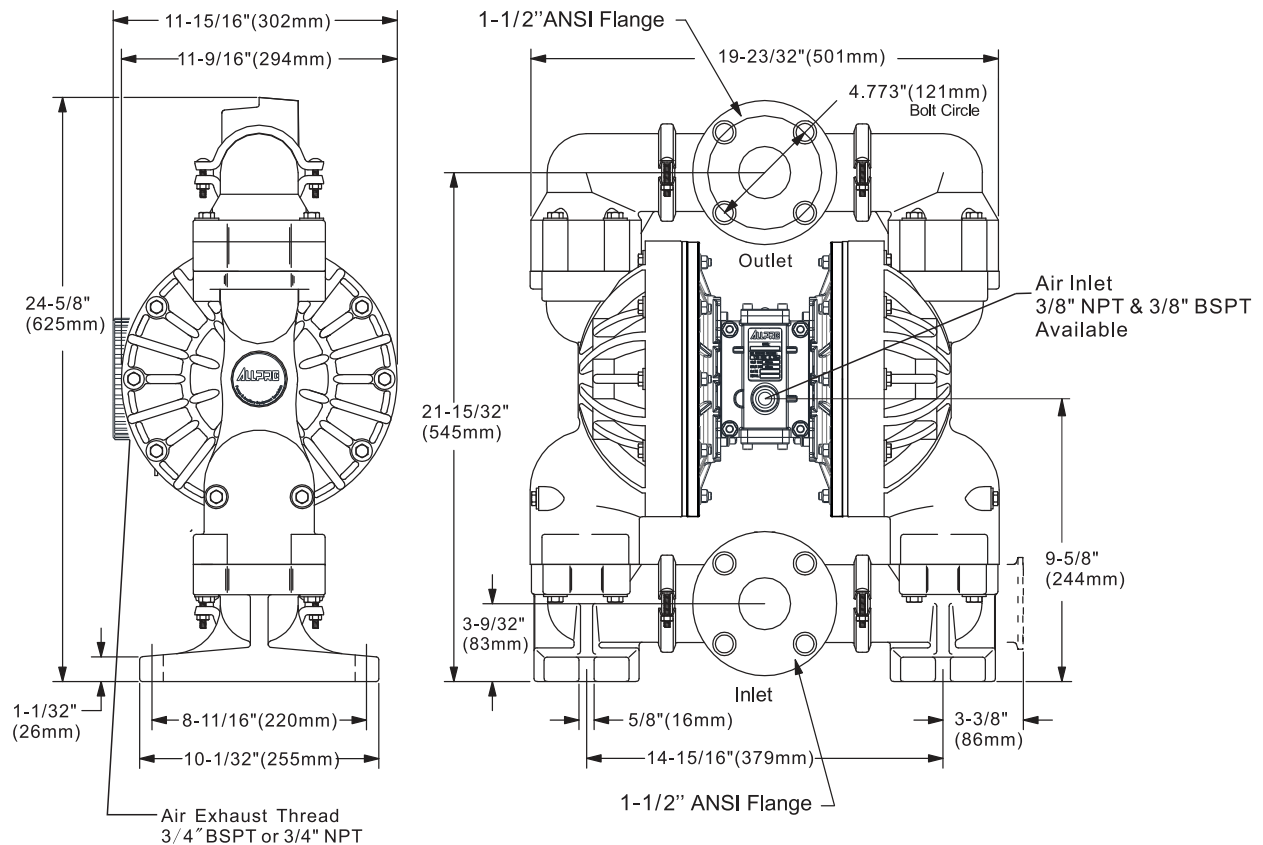
Weight: 62 lbs(28.1kg)

Sound Level:70psi 60 cycles/min. 77.7db(A)

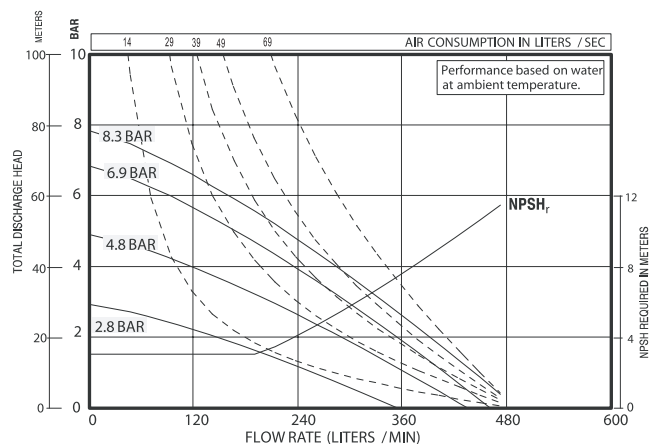
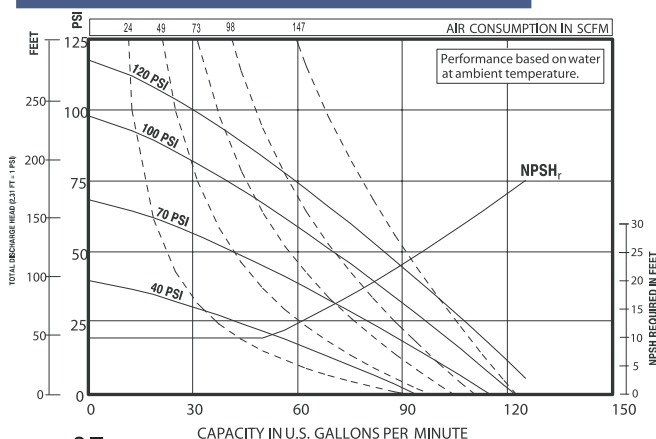


DIMENSIONS:

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



PERFORMANCE CURVE:





1-1/2" METALLIC Models

SPECIFICATIONS:

Air Inlet(female): 3/8"BSPT(3/8"NPT Available On Request)

Fluid Outlet: Rp 1-1/2 (1-1/2 BSP,parallel)
1-1/2 NPT

Fluid Inlet: Rp 1-1/2 (1-1/2 BSP,parallel)
1-1/2 NPT

Maximum Flow Rate: 90 GPM(340.7 LPM)

Max. Operating Pressure: 120psi(8.3 bar)

Suspended Solids Max. Dia.: 1/4"(6.4mm)

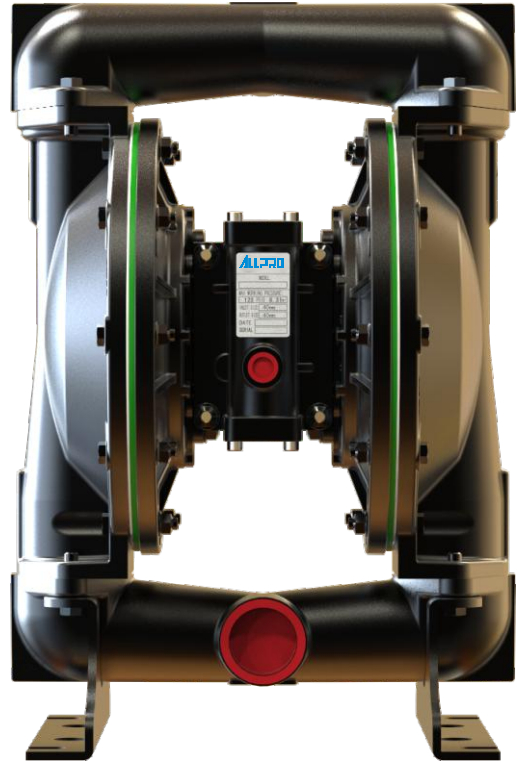
Maximum Dry Suction Lift: 19feet(5.8m)

Weight: aluminum-51.5 lbs(23.4kg);

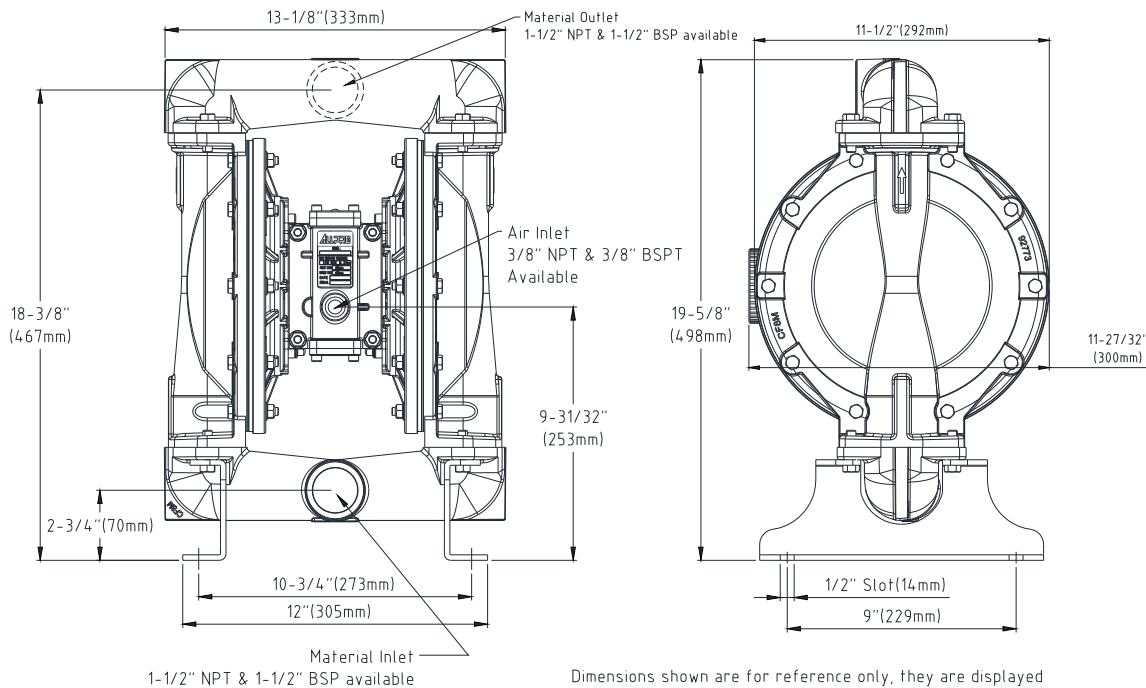
stainless steel-84.5 lbs(38.3kg);

cast iron-79.5 lbs(36.1kg);

Sound Level:70psi 60 cycles/min. 80.5db(A)

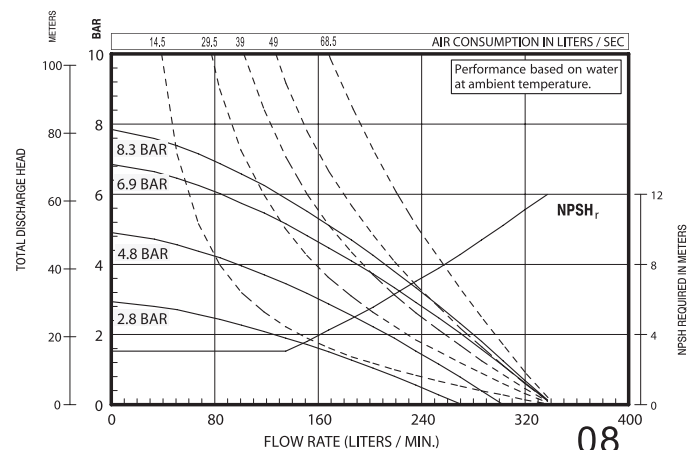
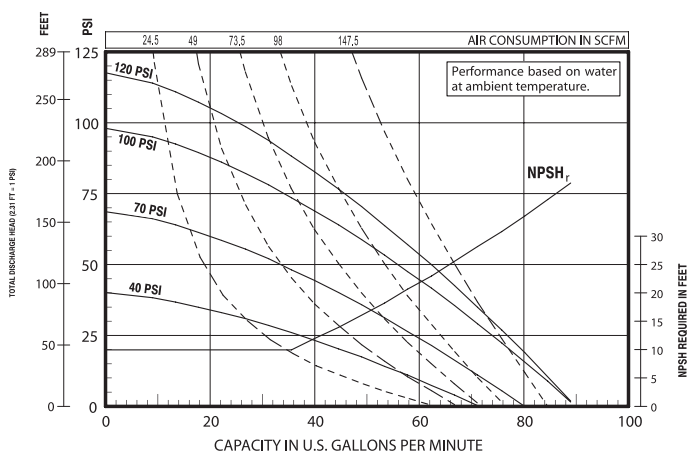


DIMENSIONS:



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

PERFORMANCE CURVE:



2" NON-METALLIC Models

SPECIFICATIONS:

Air Inlet(female): 3/8"BSPT(3/8"NPT Available On Request)

Fluid Outlet: 2" ANSI/DIN Flange

Fluid Inlet: 2" ANSI/DIN Flange

Maximum Flow Rate: 145GPM(548.8LPM)

Max. Operating Pressure: 120psi(8.3bar)

Suspended Solids Max. Dia.: 1/4"(6.4mm)

Maximum Dry Suction Lift: 14feet(4.27m)

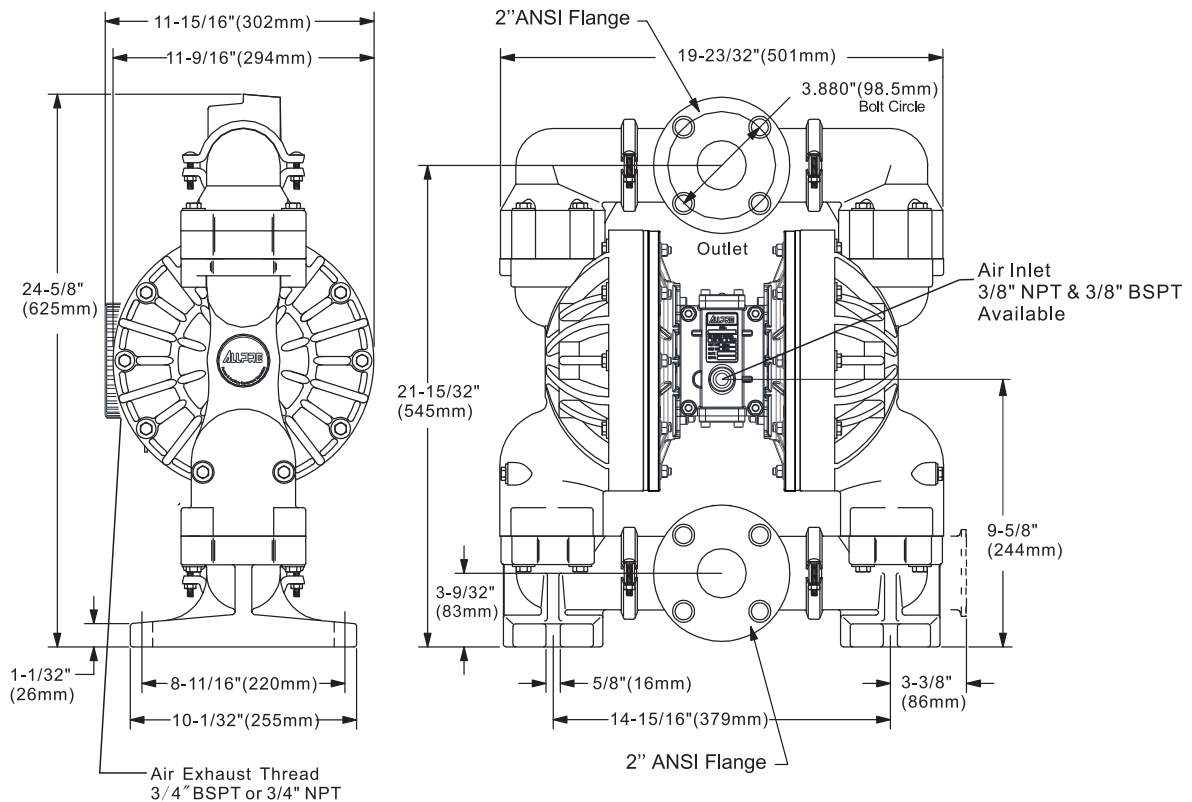
Weight: 62 lbs(28.1kg)

Sound Level:70psi 60 cycles/min. 77.7db(A)

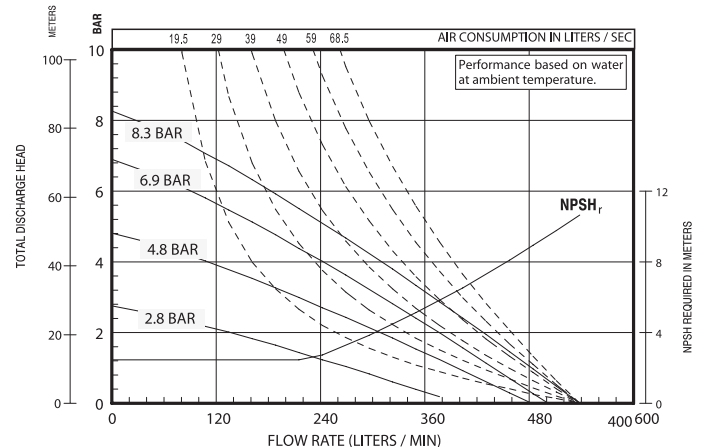
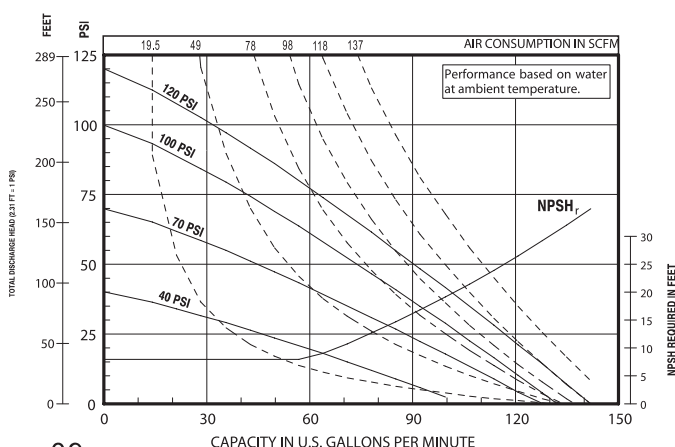


DIMENSIONS:

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



PERFORMANCE CURVE:



ALLPRO

2" METALLIC Models

SPECIFICATIONS:

Air Inlet(female): 3/4"BSPT(3/4"NPT Available On Request)

Fluid Outlet: Rp 2 (2" BSP,parallel)
2" NPT

Fluid Inlet: Rp 2 (2" BSP,parallel)
2" NPT

Maximum Flow Rate: 172 GPM(651 LPM)

Max. Operating Pressure: 120psi(8.3 bar)

Suspended Solids Max. Dia.: 1/4"(6.4mm)

Maximum Dry Suction Lift: 27.2feet(8.3m)

Weight: aluminum-65.2 lbs(29.6kg);

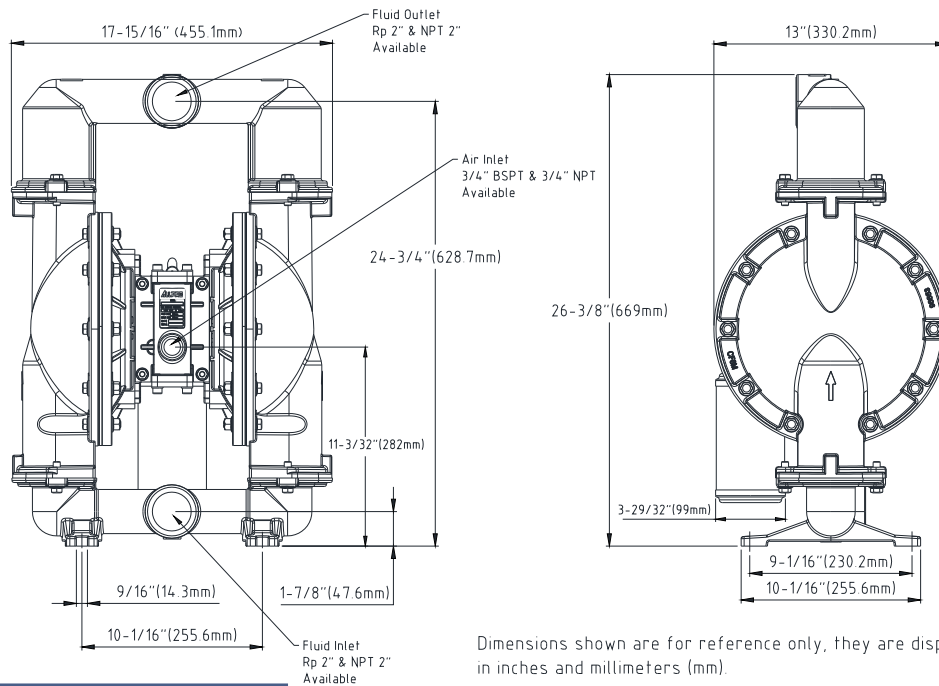
stainless steel-125.4 lbs(56.9kg);

cast iron-124.3 lbs(56.4kg);

Sound Level:70psi 60 cycles/min. 80.5db(A)

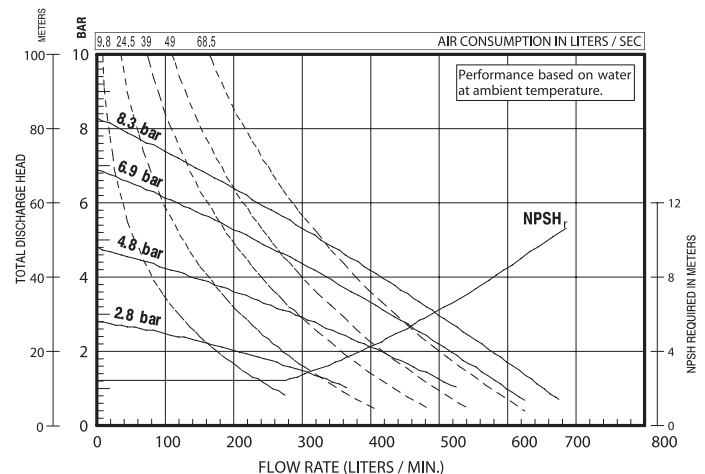
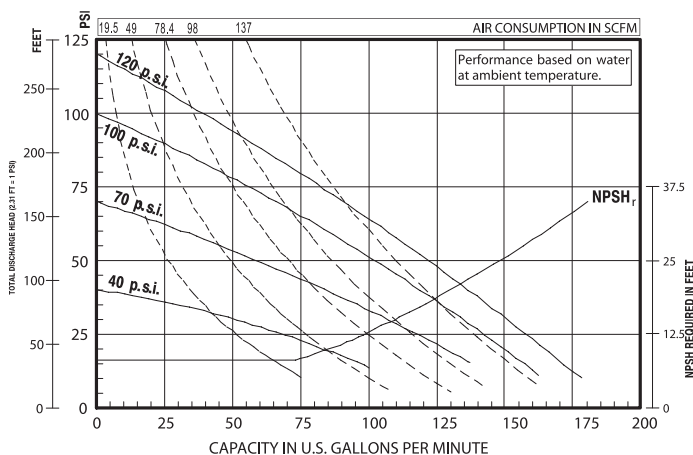


DIMENSIONS:



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

PERFORMANCE CURVE:



3" METALLIC Models

SPECIFICATIONS:

Air Inlet(female): 3/4"BSPT(3/4"NPT Available On Request)

Fluid Outlet: Rp 3 (3" BSP,parallel)

3" NPT

Fluid Inlet: Rp 3 (3" BSP,parallel)

3" NPT

Maximum Flow Rate: 237 GPM(897 LPM)

Max. Operating Pressure: 120psi(8.3 bar)

Suspended Solids Max. Dia.: 3/8"(9.5mm)

Maximum Dry Suction Lift: 17.6feet(5.4m)

Weight: aluminum-109.8 lbs(49.8kg);

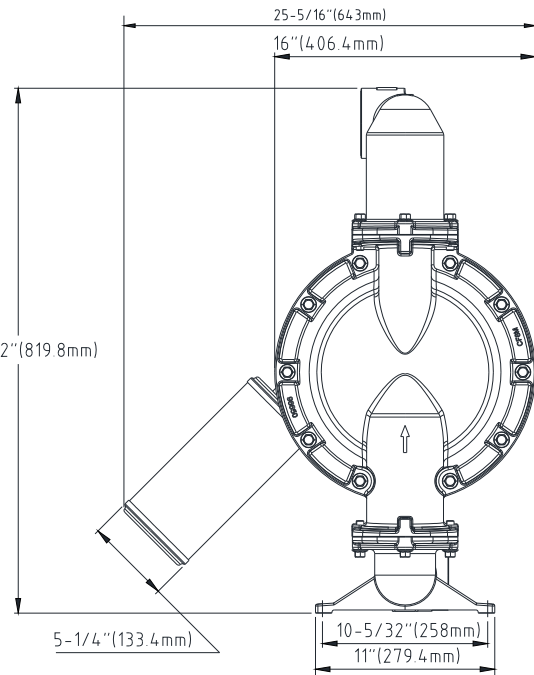
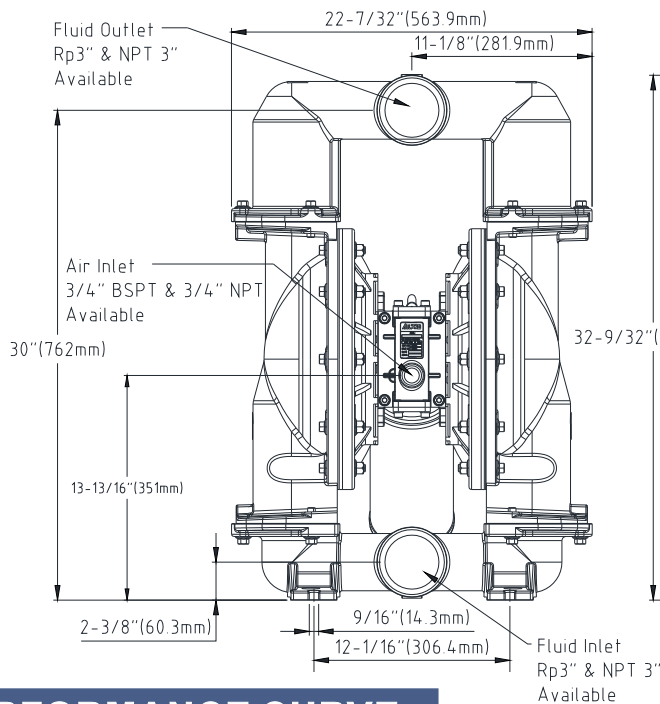
stainless steel-222.2 lbs(100.79kg);

cast iron-213.1 lbs(96.7kg);

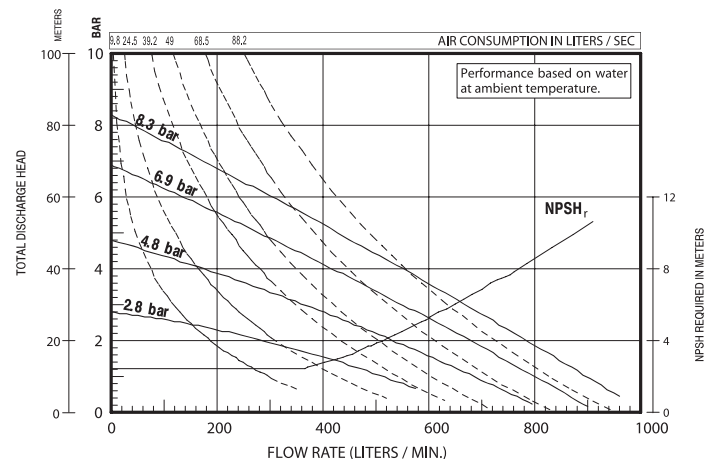
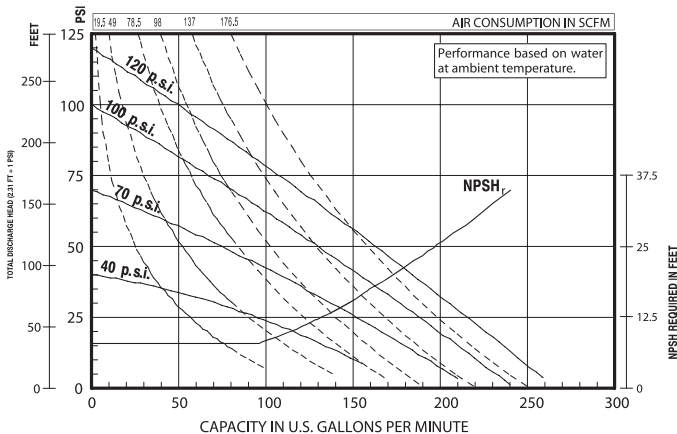
Sound Level:70psi 60 cycles/min. 86.3 db(A)



DIMENSIONS:

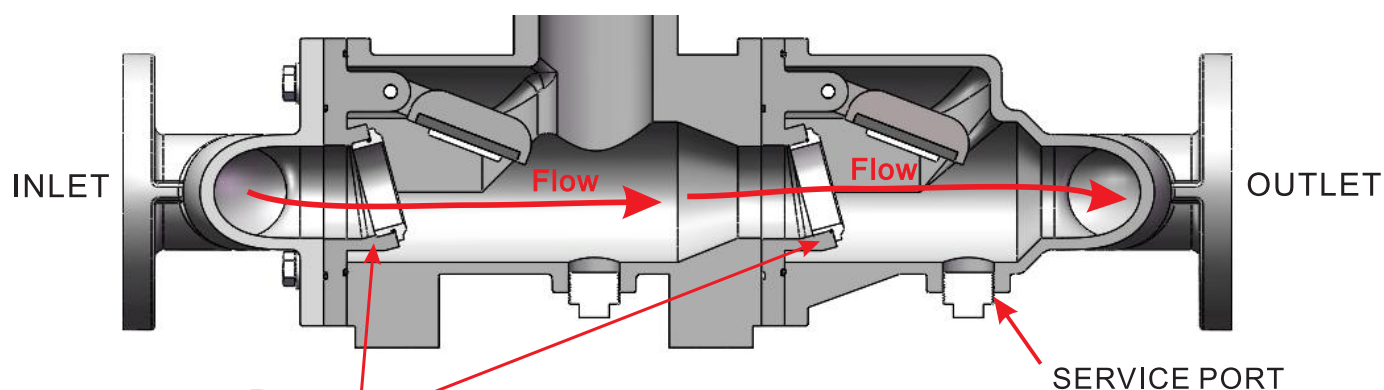
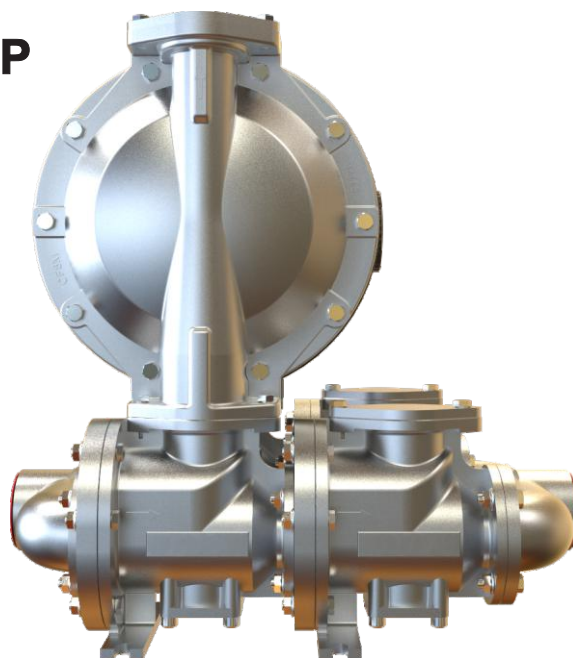


PERFORMANCE CURVE:



HEAVY DUTY FLAP-VALVE PUMP

- The passage of fluid is horizontal, not vertical.
 - Fluid is easier to pass through.
 - Easier to repair or maintain.
 - No accumulation of fluid.
- Swing check valve is adopt.
 - Better passing ability for fluid
 - Easier to repair or maintain.
 - Longer lifetime.
 - modularized



Heavy-duty, modularized Swing Flap Check valve

Disc with resilient seal

- Larger Opening
- Better sealing effect

SS seats

- Corrosion resisting
- Replaceable
- Better sealing effect

MODEL DESCRIPTIONS:

AP27	-	XX	X	X	X	X	X
		Pump Size	Center Body Mat.	Fluid Caps Manifold Mat.	Diaphragm Material	Fluid Connections	Hardware

Pump Size	50-2"		80-3"	
Center Body Mat.	A-Aluminum		C-CastIron	
Fluid Caps Manifold Mat.	A-Aluminum		S-StainlessSteel	C-CastIron
Diaphragm Material	2-Nitrile	4-PTFE/Santoprene	9-Hytrel	B-Santoprene
Fluid Connections	N-NPTThreads	F-FlangeANSI150	B-BSPTreads	F-FlangePN10/PN16
Hardware	S-StainlessSteel		C-CastIronSteel	

DRY POWDER DIAPHRAGM PUMP



Transfer and handle your dry process powder faster, cleaner and at a fraction of the cost associated with installed “systems”.

Consistent trouble-free transfer of powders up to 45-lbs.per cubic foot(721kgs. per cubic meter) dry-weight, such as carbon black, expanded mica, silicones, acrylic resins, 3D printing powders and pharmaceuticals.

- Replace manual powder processes
- Reduce airborne contamination-with direct transfer from the powdercontainer to your recipe.
- Uniqueair-induction system-avoids the possibility of powder pack-out.
- Portable-Can be moved from site to site.

MODEL DESCRIPTIONS:

Position		1		2	3	4	5	6	7
	AP26-	XX	-	X	X	X	X	X	X

Position 1 Size	Position 2 Connections	Position 3 Wetted Parts	Position 4 Hardware	Position 5 Seat Material	Position 6 Ball Material	Position 7 Diaphragm Material
40-- 1-1/2"	A-NPT Screwed	A-Aluminum	P-Plated Steel	A-Santoprene	A-Santoprene	A-Santoprene
50--2"	B-BSPT Screwed	S-Stainless Steel	S-Stainless Steel	S-Stainless Steel		M-Medical Grade Santoprene
80--3"						

Pump Airborne Noise Emissions

Pump Airborne Noise Emissions

The pump sound pressure levels published below have been updated to an Equivalent Continuous Sound Level (L_{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.

	Scale 1 - 5 (5 is best)			
	Max. Operating Temp Limit F (C)	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	-	-
Hytre	150 (66)	2	4	4
Neoprene	200 (93)	2	2	3
Nitrile	180 (82)	2	2	3
Polypropylene	175 (80)	4	2	-
Polyurethane	150 (66)	1	4	4
PTFE	225 (107)	5	2	4**
PVDF	200 (93)	5	2	-
Santoprene	225 (107)	4	4	5
Stain Steel (300 Series)	-	4	4	-
Stain Steel (400 Series)	-	3	5	-
Viton	350 (177)	4	2	1

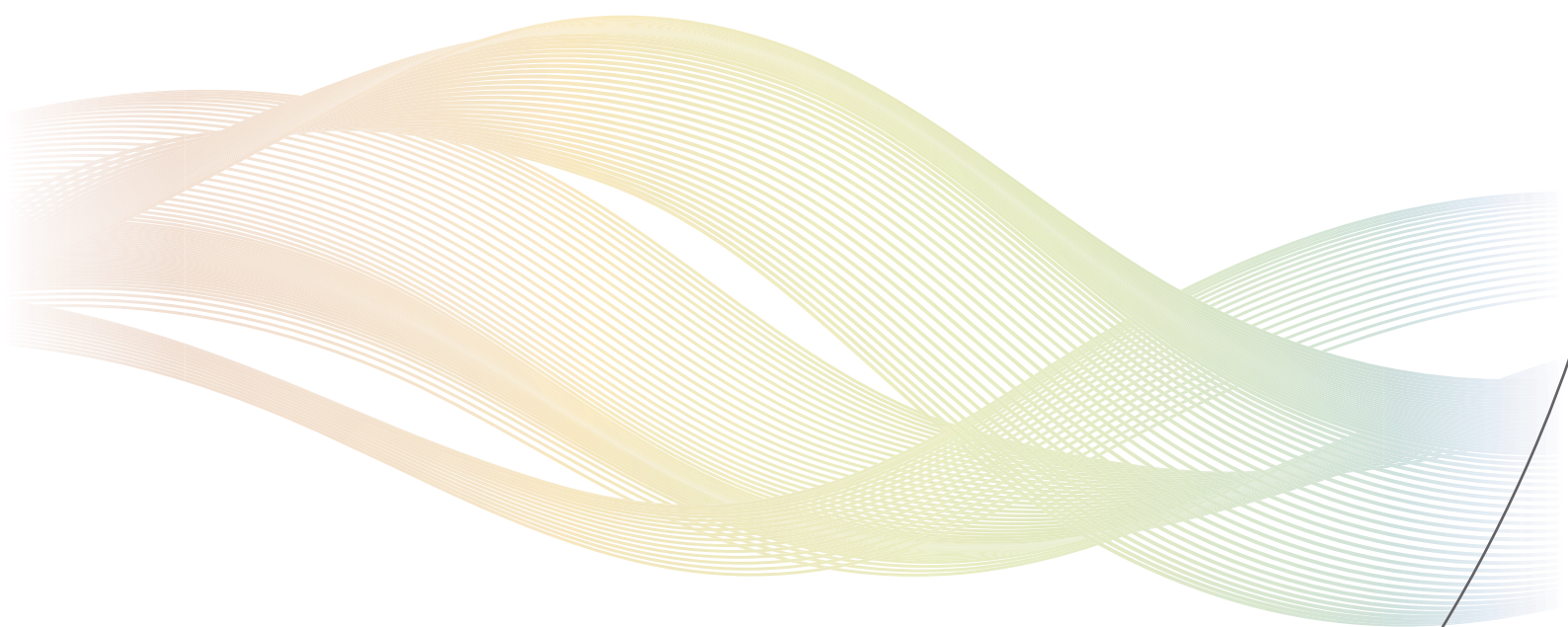
* Applies to diaphragms only.

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

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

Viscosity Conversion Chart

Centi Poise	Poise	Saybolt Universal (SSU)	Saybolt Furol	Ford No. 3	Ford No. 4	Zahn No. 1	Zahn No. 2	Zahn No. 3
1	.01	31						
2	.02	34						
4	.04	38						
7	.07	47		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					



ALLPRO

