NOMAD™

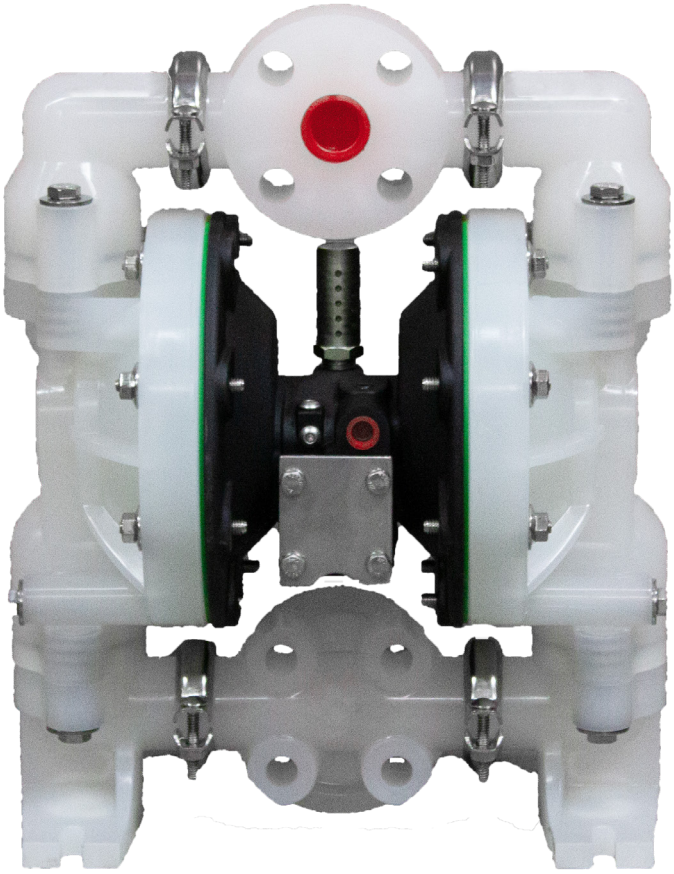
PUMPS • PARTS • PASSION

MODEL: N6661A3-XXX-C Metallic

Assembly, Installation and Operation Manual

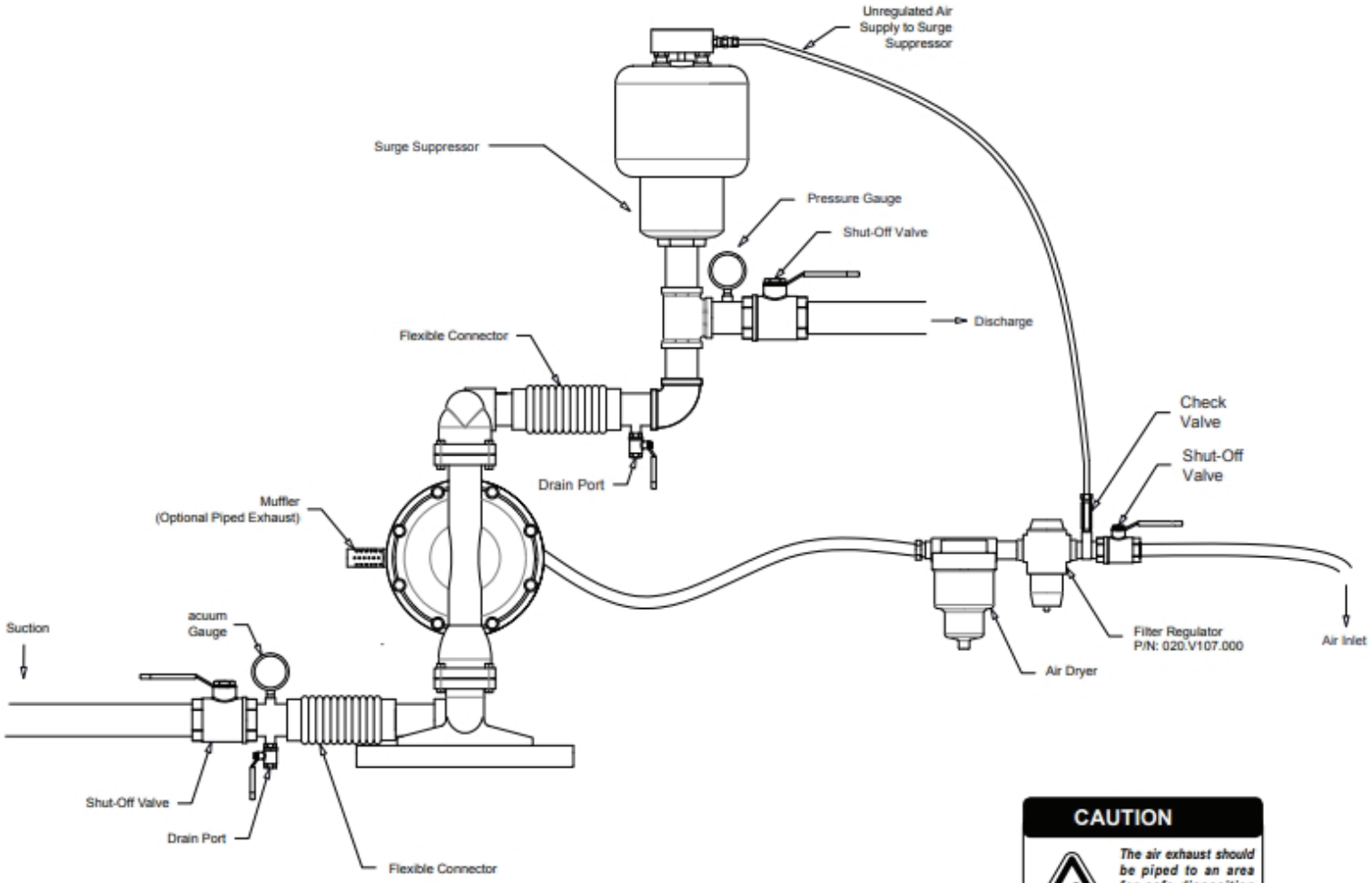
NON-METALLIC

OPTA FLO™



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Recommended Installation Guide



Installation And Start-Up
Locate the pump as close to the product being pumped as possible. Keep the suction line length and number of fittings to a minimum. Do not reduce the suction line diameter.

Air Supply
Connect the pump air inlet to an air supply with sufficient capacity and pressure to achieve desired performance. A pressure regulating valve should be installed to insure air supply pressure does not exceed recommended limits.

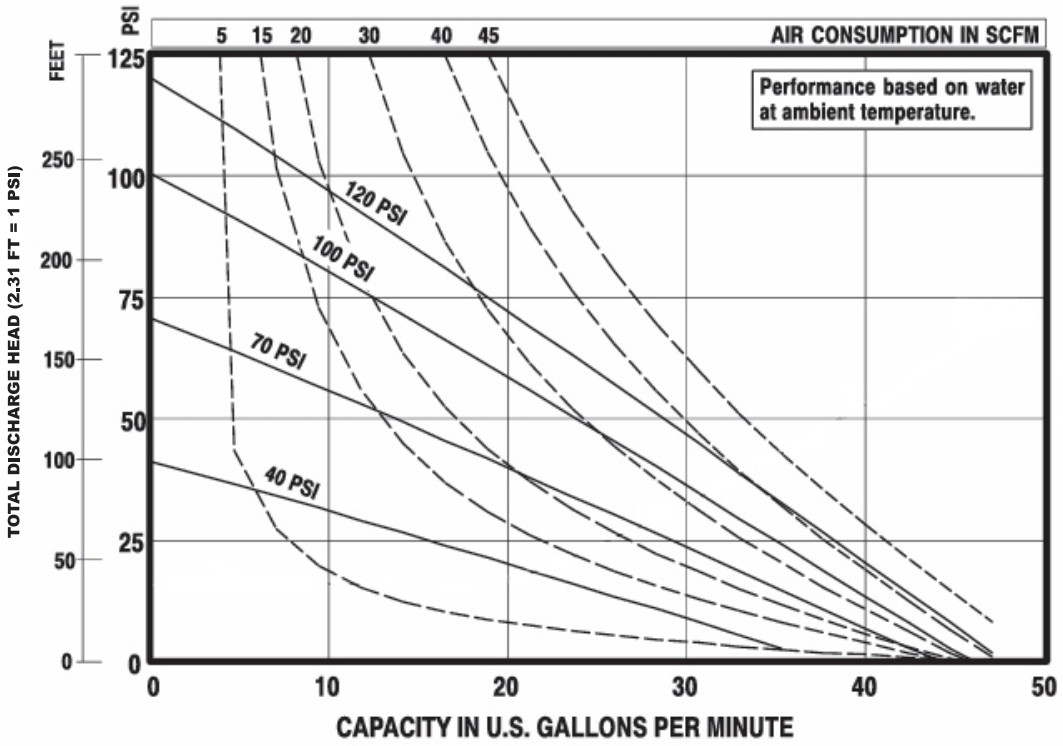
Air Valve Lubrication
The air distribution system is designed to operate WITHOUT lubrication. This is the standard mode of operation. If lubrication is desired, install an air line lubricator set to deliver one drop of SAE 10 non-detergent oil for every 20 SCFM (9.4 liters/sec.) of air the pump consumes. Consult the Performance Curve to determine air consumption.

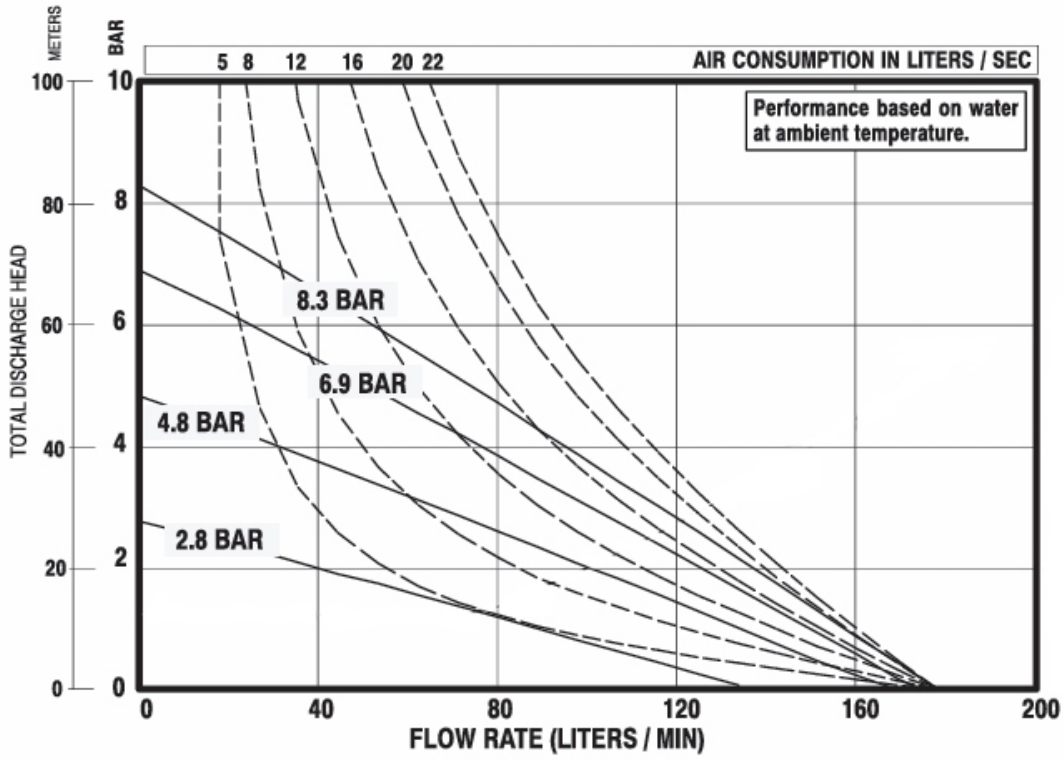
Air Line Moisture
Water in the compressed air supply may cause icing or freezing of the exhaust air, causing the pump to cycle erratically or stop operating. Water in the air supply can be reduced by using a point-of-use air dryer.

Air Inlet And Priming
To start the pump, slightly open the air shut-off valve. After the pump primes, the air valve can be opened to increase air flow as desired. If opening the valve increases cycling rate, but does not increase the rate of flow, cavitation has occurred. The valve should be closed slightly to obtain the most efficient air flow to pump flow ratio.

Preformance Curves

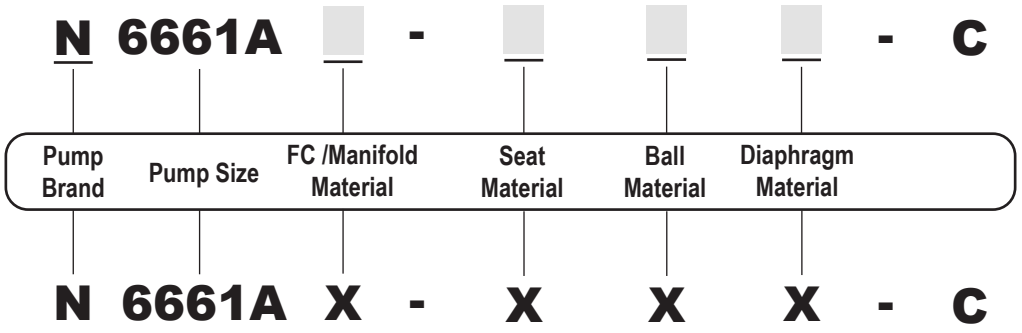
N6661A3-XXX-C 1" NON-METALLIC DIAPHRAGM PUMP





Performance based on an elastomeric fitted pump, flooded suction with water at ambient conditions. Due to varying materials of construction, assembly configurations and operating contitions, published data is for reference only...

Explanation of Pump Nomenclature



Pump Brand:

NOMAD

Pump Size:

1”

Pump Center Body Material:

A - Aluminum

Fluidcap / Manifold Material:

3 - Polypropylene

Seat Material:

2 - Stainless Steel (316)

3 - Polypropylene

Ball Material:

1 - Neoprene

2 - Buna

3 - Viton ®

4 - PTFE

C - Hytrel ®

E - Santoprene ®

Diaphragm Material:

1 - Neoprene

2 - Buna

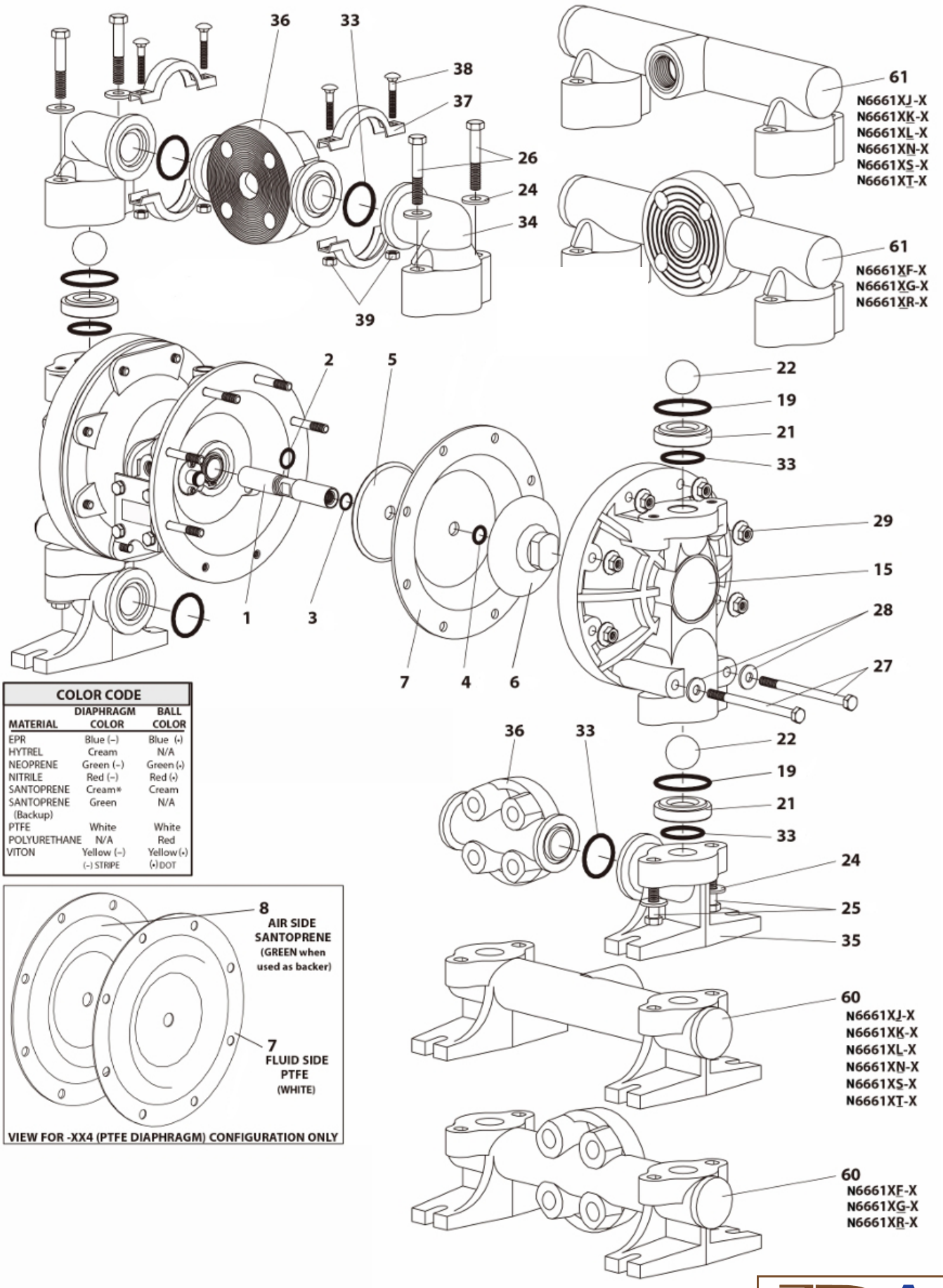
3 - Viton ®

4 - PTFE / Santoprene

9 - Hytrel ®

B - Santoprene ®

Parts List N6661A3-XXX-C Fluid Section



COLOR CODE		
MATERIAL	DIAPHRAGM COLOR	BALL COLOR
EPR	Blue (–)	Blue (•)
HYTREL	Cream	N/A
NEOPRENE	Green (–)	Green (•)
NITRILE	Red (–)	Red (•)
SANTOPRENE	Cream*	Cream
SANTOPRENE (Backup)	Green	N/A
PTFE	White	White
POLYURETHANE	N/A	Red
VITON	Yellow (–) (–) STRIPE	Yellow (•) (•) DOT

VIEW FOR -XX4 (PTFE DIAPHRAGM) CONFIGURATION ONLY

Figure 3

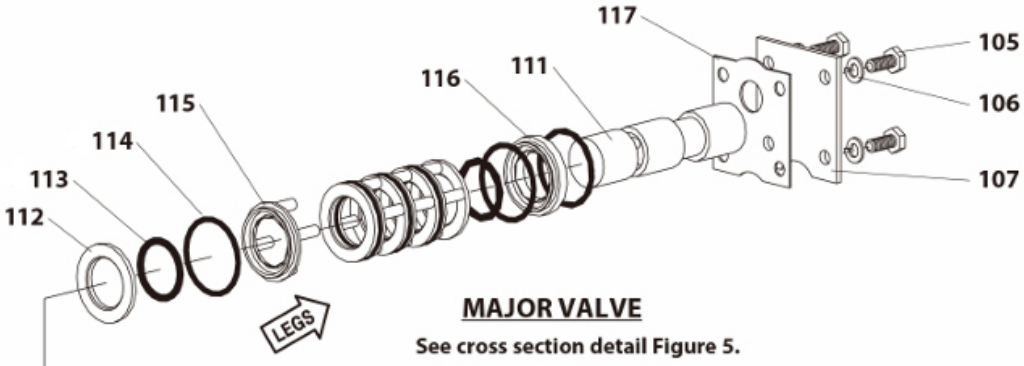
Parts List N6661A3-XXX-C Fluid Section

Item	Part Number	Description	Qty	Mtl
N6661A3-XXX-C Pump Parts List Non-Metallic				
1	N48489660	Rod	1	[C]
2	NY330-113	O-Ring	1	[B]
3	NY325-14	O-Ring	2	[B]
3	NY328-14	O-Ring	2	[T]
4	NY325-212	O-Ring	2	[B]
4	NY328-212	O-Ring	2	[T]
5	N93441-2	Inner Piston	2	[C]
6	N93239-1	Outer Piston	2	[P]
7	N90533-1	Diaphragm	2	[N]
7	N90533-2	Diaphragm	2	[B]
7	N90533-3	Diaphragm	2	[V]
7	N93459-4	Diaphragm	2	[T]
7	N90533-9	Diaphragm	2	[H]
7	N90533-B	Diaphragm	2	[Sp]
8	N92973-B	Backup Diaphragm	2	[Sp]
15	N93235	Fluid Cap	2	[P]
19	NY327-225	O-Ring	4	[B]
19	N93282	O-Ring	4	[T]
19	NY327-225	O-Ring	4	[V]
Seat OptionsN6661A3-XXX-C				
21				
2XX	N96151	Valve Seat	4	[SS]
3XX	N94707-1	Valve Seat	4	[P]
8XX	N94706	Valve Seat	4	[SH]
Ball Options N6661A3-XXX-C				
22				
X1X	N93278-1	Valve Ball	4	[N]
X2X	N93278-2	Valve Ball	4	[B]
X3X	N93278-3	Valve Ball	4	[V]
X4X	N93278-4	Valve Ball	4	[T]
XCX	N93278-C	Valve Ball	4	[H]
XEX	N93278-A	Valve Ball	4	[SP]
24	N93360-1	Washer (13/32" OD)	8	[SS]
25	NY6-67-T	Bolt (3/8"-16 x 1-1/2")	4	[SS]
26	NY6-610-T	Bolt (3/8"-16 x 2-1/4")	4	[SS]
27	NY6-518-T	Bolt (5/16" -18 x 4 1/2")	4	[SS]
28	N93359-1	Washer (5/16")	4	[SS]
29	N93886	Nut (5/16" - 18)	12	[SS]

Material Code

[A] = Aluminum
[B] = Buna
[C] = Carbon Steel
[Co] = Copper
[CP] = Composite PTFE
[H] = Hytrel
[K] = Kynar
[SP] = Santoprene
[SS] = Stainless Steel
[T] = PTFE
[V] = Viton
{U} = Polyurthane

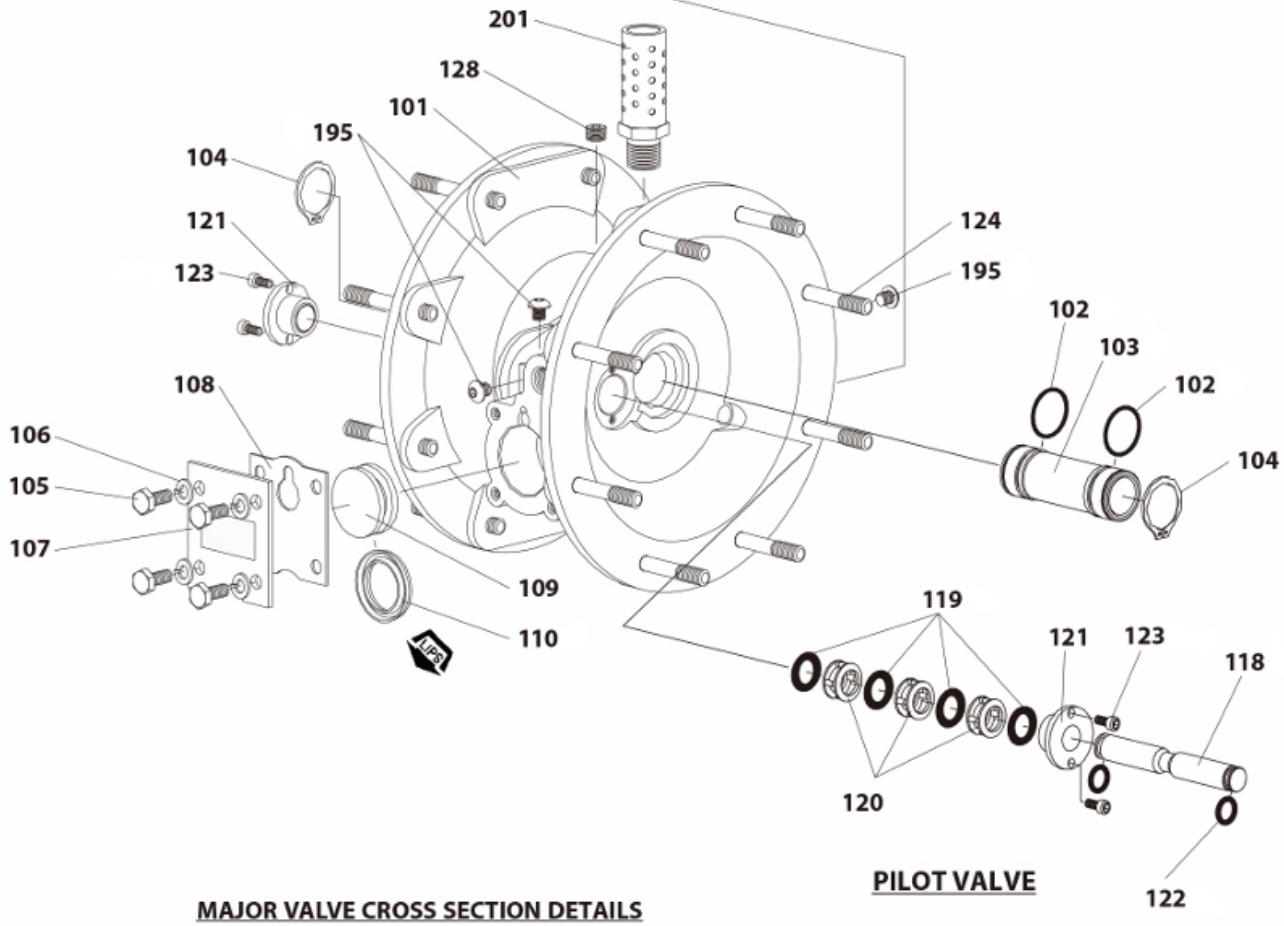
Parts List N6661A3-XXX-C Air Motor Section



MAJOR VALVE

See cross section detail Figure 5.

Figure 4



PILOT VALVE

MAJOR VALVE CROSS SECTION DETAILS

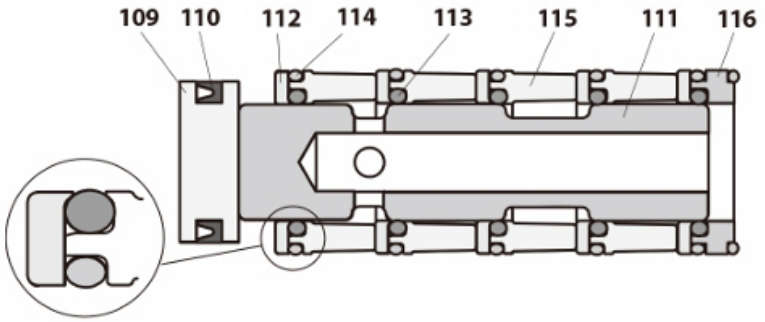


Figure 5

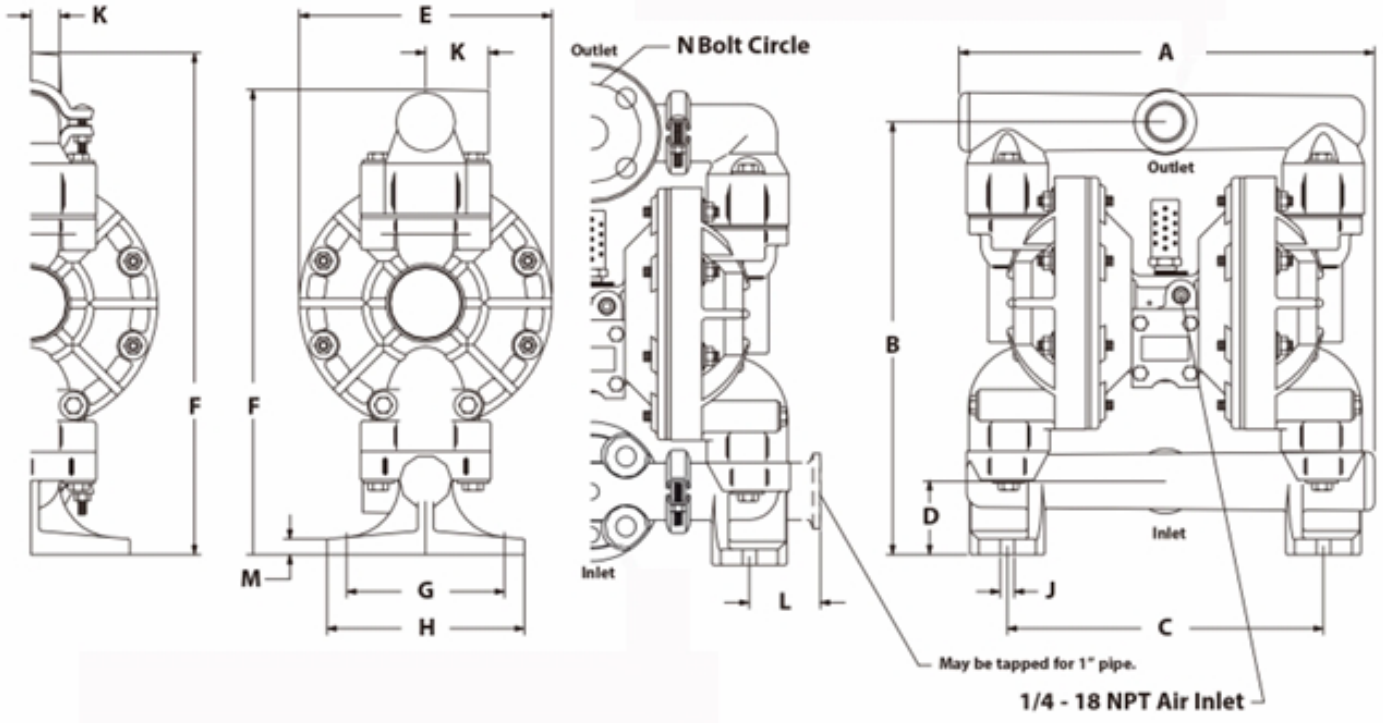
Parts List N6661A3-XXX-C Air Motor Section

Item	Part Number	Description	Qty	Mtl
N6661AXX-XXX-C Air Motor Parts List				
101	N94743	Center Section	1	[A]
102	NY325-20	O-Ring	2	[B]
103	N94527	Pilot Sleeve	1	[D]
104	NY145-25	Retaining Ring	2	[C]
105	NY6-42-T	Cap Screw (1/4" - 20 x 5/8")	8	[SS]
106	NY14-416-T	Lockwasher (1/4")	8	[SS]
107	N93707-1	Plate	2	[SS]
108	N92878	Gasket (with notch)	1	[B/NY]
109	N92011	Piston	1	[D]
110	NY186-51	U-Cup	1	[B]
111	N92005	Spool	1	[A]
112	N92877	Washer	5	[Z]
113	NY325-214	O-Ring	5	[B]
114	NY325-126	O-Ring	6	[B]
115	N92876	Spacer	4	[Z]
116	N92006	Spacer	1	[Z]
117	N92004	Gasket	1	[B/NY]
118	N93309-1	Pilot Rod	1	[C]
119	N93075	O-Ring	2	[U]
120	N115959	Spacer	3	[Z]
121	N98723-1	Sleeve Brushing	2	[Bz]
122	N94820	O-Ring	2	[U]
123	NY154-41	Screw (#8 - 32 x 3/8")	4	[C]
124	N93277	Screw (5/16" - 18 x 2 3/8")	12	[SS]
128	NY227-2-L	Pipe Plug (1/8-27 N.P.T. x 1/4")	1	[C]
195	N94987	Button Head Screw (1/4" -20 x 1/4")	3	[SS]
201	N93110	Muffler	1	[C]
		Grease Packet		

Material Code

[A] = Aluminum
[B] = Buna
[Bz] = Bronze
[C] = Carbon Steel
[D] = Acetal
[Ny] = Nylon
[SS] = Stainless Steel
[U] = Polyurethane
[Z] = Zinc

Dimensional Data



DIMENSIONS

	N6661X3-X N6661XP-X	N6661X4-X	N6661XJ-X N6661XL-X N6661XS-X N6661XT-X	N6661XK-X N6661XN-X	N6661XF-X N6661XR-X	N6661XG-X
A	12-21/32" (321 mm)	12-15/32" (316 mm)	13-17/32" (344 mm)	13-13/32" (340 mm)	13-17/32" (344 mm)	13-13/32 (340 mm)
B	13-25/32" (349 mm)	13-19/32" (345 mm)	13-25/32" (350 mm)	13-19/32" (345 mm)	13-25/32" (350 mm)	13-19/32" (345 mm)
C	10-1/16" (255 mm)	9-15/16" (252 mm)	10-1/16" (255 mm)	9-15/16" (252 mm)	10-1/16" (255 mm)	9-15/16" (252 mm)
D	2-3/8" (60 mm)	2-11/32" (59 mm)	2-11/32" (59 mm)	2-5/16" (59 mm)	2-11/32" (59 mm)	2-5/16" (59 mm)
E	8-1/16" (204 mm)	7-15/16" (201 mm)	8-1/16" (204 mm)	7-15/16" (201 mm)	8-1/16" (204 mm)	7-15/16" (201 mm)
F	16" (406 mm)	15-25/32" (400 mm)	14-13/16" (376 mm)	14-5/8" (371 mm)	16" (406 mm)	15-25/32" (401 mm)
G	5-1/32" (128 mm)	4-31/32" (126 mm)	5-1/32" (128 mm)	4-31/32" (126 mm)	5-1/32" (128 mm)	4-31/32" (126 mm)
H	6-9/32" (160 mm)	6-7/32" (157 mm)	6-9/32" (160 mm)	6-7/32" (157 mm)	6-9/32" (160 mm)	6-7/32" (157 mm)
J	7/16" (11 mm)	7/16" (11 mm)	7/16" (11 mm)	7/16" (11 mm)	7/16" (11 mm)	7/16" (11 mm)
K	15/16" (23 mm)	29/32" (23 mm)	2" (51 mm)	1-25/32" (50 mm)	1-1/32" (26 mm)	1" (25 mm)
L	2-9/32" (57 mm)	2-1/4" (56 mm)				
M	1/2" (13 mm)	1/2" (13 mm)	1/2" (13 mm)	1/2" (13 mm)	1/2" (13 mm)	1/2" (13 mm)
N	3.140" (80 mm)	3.097" (79 mm)			3.140" (80 mm)	3.097" (79 mm)

Figure 6

Troubleshooting

Low output volume, erratic flow or no flow.

• Check air supply.

• Check for plugged outlet hose.

• Check for kinked (restrictive) outlet material hose.

• Check for kinked (restrictive) or collapsed inlet material hose.

• Check for pump cavitation – suction pipe should be sized at least as large as the inlet thread diameter of the pump for proper flow if high viscosity fluids are being pumped. Suction hose must be a non-collapsing type, capable of pulling a high volume.

• Check all joints on the inlet manifolds and suction connections. These must be air tight.

• Inspect the pump for solid objects lodged in the diaphragm chamber or the seat area.

Product discharged from exhaust outlet.

• Check for diaphragm rupture.

• Check tightness of (14) diaphragm screw.

Air bubbles in product discharge.

• Check connections of suction plumbing.

• Check “O” rings between intake manifold and fluid caps.

• Check tightness of (14) diaphragm screw.

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