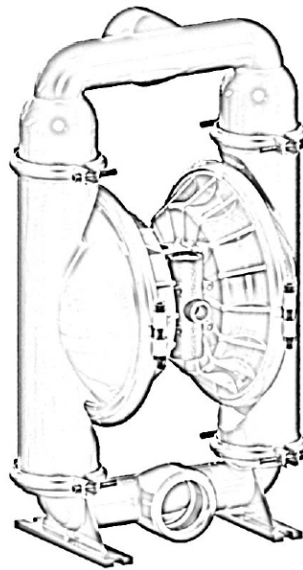




Operation and Maintenance Guide



DP 75 AL N/B/S/H/V/T

DP 75 Aluminum and Stainless Steel Construction, All variants

Models	Descriptions
DP 75 AL N/B/S/H/V/T	Aluminum with Neoprene, Buna N, Santoprene, Hytrel, Viton and PTFE fitments

Read this manual carefully before installing, operating or servicing this equipment. It's the responsibility of the employer to ensure this manual is read by the operator. Please preserve this manual.

This document is issued with Product Serial No

240101

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Pump Nomenclature

XX	XX	XX	X	X	X
Air Valve Type	Pump Size	Material of Construction	Material of Diaphragm	Bolted or Clamped	Threading on Inlet and Outlet
DP - Classic ADP - Advanced SDP - MaxFlo	06 - 1/4"	AL - Aluminium	B - Nitrile N - Neoprene S - Santoprene T - PTFE V - Viton H - Hytrel	B - Bolted C - Clamped	R- NPT G - BSPT P - BSPP F - Flanged
	12 - 1/2"				
	15 - 1/2"	SS - Stainless Steel 316L			
	25 - 1"				
	40 - 1 - 1/2"	PP - Polypropylene			
	50 - 2 "	CI - Ductile Iron			
	75- 3"				
100 - 4"					

Operating and Safety Instructions

Warning. Static Electricity

Static sparks can cause explosion resulting in severe injury or death.

Ground the pump and the pump connections like hoses and containers into which or from the fluid is being transferred. Connect the grounding wire to any bolt on the pump.

Check continuity of electrical path to ground at regular intervals.

Consult local building and electrical codes for grounding requirements where needed.

Use hoses containing a grounding wire.

Warning: Pump Exhaust

In case of a diaphragm failure, fluid being pumped may spray out from the exhaust of the pump. This may cause severe injury depending on the fluid being pumped.

If the fluid is hazardous, pipe away the exhaust to a safe remote location using a generous diameter pipe preferably with a grounding arrangement, and refit the muffler at the end of this arrangement.

Always wear safety glasses while in the

vicinity of an operating pump.

Warning: Overpressure/Hazardous Pressure

Do not exceed the max supply air pressure of 125 PSI.

Make sure all connected hoses and pipelines are rated to operate safely with the pressures generated by pump of 125 PSI.

Do not open or handle pump or hoses while pressurized.

Disconnect air supply line and relieve pressure from the system by carefully opening discharge and supply lines.

Warning: Hazardous Materials

Do not move a pump that contains hazardous fluids trapped inside it. Please observe prescribed handling and safety codes.

Drain the pump safely, by turning it upside down and collecting the fluid safely, before moving the pump.

Warning :Explosion

Please check compatibility of fluids intended to be handled with the materials of construction of the pump. Severe reactions and explosions may occur if materials are incompatible. Caution: Chemical compatibility

Please check that the fluid being pumped is compatible with the wetted parts of the pump. Refer Cole Parmer compatibility (<http://www.coleparmer.in/Chemical-Resistance>) guide for details. Note that chemical compatibility may change with temperature; take this into account while selecting pump material.



Caution: Structural support

Please refer figure 1 and ensure that the piping system is independently supported and does not load the pump. The pumps are not designed to take the continuous and often pulsating load of a piping system. Important to use a flexible connection between rigid piping and pump casings.



Caution: Running dry, disconnection of hoses when not in use

Although these pumps can be run dry for long periods, it is advisable to avoid this as it causes unnecessary wear of wearing parts.



Caution: Operator understanding

Please ensure that all operators have read this manual and have the required understanding of safe working practices and are equipped with safety equipment when working on/around the pump.



Caution: Using genuine teryair fittings & spares

Use genuine teryair parts to ensure correct pump operation and maximize life.



Warning Conditions for Certification

1. Control of Environmental humidity to minimize the generation of the static electricity.
2. Protection from direct airflow causing a charge transfer.
3. Touch with an insulating object to avoid electrostatic charge hazard.
4. Clean the surface with damp cloth only to avoid electrostatic charge hazard.

Operating Instructions

The Teryair Stroke diaphragm pump generates a alternate stroking of the diaphragms against the fluid in the liquid chambers of the Pump. This reciprocatory action is responsible for the fluid being pumped.





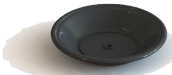

It is possible to control the output of the pump by controlling the supply air pressure.

It is also possible to control the output of the pump by throttling action on the fluid flowing in the outlet piping by means of a valve. if such a valve is shut completely the pressure in the discharge piping increases to a point when the pressure at pump discharge equals it and the pump comes to a stop. This causes no damage to the pump and the pump consumes no more energy.

Upon opening of the valve, the pump starts reciprocating once again and resumes fluid delivery.



Caution: Temperature limitations and diaphragm options

Neoprene		An excellent general-purpose diaphragm for use in non-aggressive applications such as water-based slurries, well water or sea water. Exhibits excellent flex life and low cost. Temperature range -18°C to +93°C (0°F to +200°F)
Nitile		Excellent for applications involving petroleum / oil-based fluids such as leaded gasolines, fuel oils, non-synthetic hydraulic oils, kerosene, turpentine and motor oils. Temperature range -12°C to +82°C (+10°F to +180°F)
Santoprene		Good abrasion resistance. Low cost. Can handle mild acids and alkalis well. Excellent low cost alternative to ptfе. Excellent suction capabilities Excellent general purpose diaphragm. Temperature range -40°C to +107°C (-40F to +225°F)
Hytre		Good abrasion resistance. Low cost. . Excellent suction capabilities Good general purpose diaphragm. Temperature range -29°C to +104°C (-20°F to +220°F)
Viton		Excellent for use in applications requiring extremely hot temperatures. May also be used with aggressive fluids such as aromatic or chlorinated hydrocarbons and highly aggressive acids. Especially where high suction lift is important. Temperature range -40°C to +177°C (-40°F to +350°F)
PTFE		Excellent choice when pumping highly aggressive fluids such as aromatic or chlorinated hydrocarbons, acids, caustics, ketones and acetates. Temperature range +4°C to +104°C (+40°F to +220°F)

Suggested Lubricants

Brand	Above 27 Deg C (From 5 Deg C to 27 Deg C	Below 5 Deg C
Shell	Toona R 72	Toona R 41	Toona R 27
Mobil	Almo 529	Almo 527	Almo 525
Esso	--- --	Arox EP 65	Arox EP 45
Caltex	Rando Oil 150	Rando Oil 100	Rando Oil 46
Texaco	Regal Oil F	Regal Oil PE	Regal Oil B
Daltron	Silkolene 881	Silkolene 548	Silkolene 773
Burmah Castrol	RD Oil 3	RD Oil Light	Megna SPX
BP	RD 220 HP60C	RD150 HP20C	RD80 HP10C
Duckham	Garnet 7	Garnet 6	Zero Flo 5
Sternol	Merlin 87	Merlin 71	Merlin 54
Petrofina	Purifoc 53	Purifoc 46	Purifoc 32
Chevron	Vistac Oil 18X	Vistac Oil 19X	Vistac Oil 9X

Suggested site selection and installation recommendations

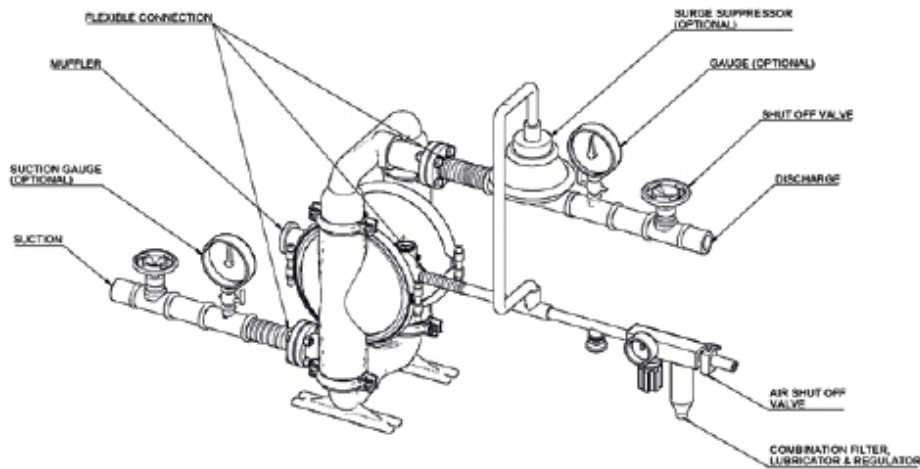


Figure 1

Location selection

Pump location must be easily accessible with reasonable space around for maintenance operations. Pump dimensional data for each variant is available in section showing exploded views

Air supply

Compressed air at 90 PSI (Stroke pumps can take a max of 125PSI), free from moisture and having an oil mist is essential. Use of a filter (50 microns), a lubricator and a regulator is highly recommended and should be installed as close as possible to the pump inlet. Ensure correct grade of oil is used in the lubricator bowl. Too thick oil may slow down the valve shifting mechanism and affect pump performance. See suggested lubricants on page no 5.

Piping

see section on safety if used in hazardous area)
See Figure 1.
Suction side 3 inch or larger, non-collapsible
Delivery side 3 inch or larger.
A minimum number of bends and fittings to be used.
A flexible connection between suction, delivery and air supply piping is highly recommended such that piping stresses and loads do not transfer to pump housing.
Select piping materials such that chemical compatibility is

maintained with the fluid being pumped.

Suction

Ensure that the suction head after installation is well within the pumps suction capabilities

Muffler

Use of supplied muffler is recommended to bring pump operation sounds down to comfortable levels, in case of hazardous fluids handling, please read section of safety regarding piping away of exhaust see Warning: Pump Exhaust) earlier in this manual.

Troubleshooting

Serial No	Description	Causes	Remedial Action
1	Pump stops and will not start	Insufficient Air Pressure	Check air pressure is as recommended at the pump air inlet
		Air Filter Blocked	Check if debris has clogged the inlet filter on the FRL unit/pump inlet air valve (some models have air filter on the air inlet valve) and ensure clear passage of air
		Internal damage or excessive wear on components	Proceed to dismantle the pump, examine component for wear, replace any worn components, re assemble carefully as instructed in this manual and re start the pump.
2	Pumps runs slowly, poor delivery	Cavitation	Check if cavitation is occurring in the suction side, if so reduce suction vacuum by slowing down the pump.
		Worn Balls and Seats	Check proper sealing action of balls against seals, these components need to be replaced as a set if they are worn.
		Insufficient or wrong lubricant in the air supply.	Ensure that the lubricant is as per the recommended chart, a thicker lubricant often makes the air valve work sluggishly
		Internal damage or excessive wear on components	Proceed to dismantle the pump, examine component for wear, replace any worn components, re assemble carefully as instructed in this manual and re start the pump.
3	Pump air valve freezes	Excessive moisture in supply air line.	Ensure that the dew point of the supplied air is low enough. Install a air dryer or moisture separator on the supply line
4	Air bubbles in pump discharge or product sprays out of exhaust vent	Broken Diaphragm	Proceed to dismantle the pump, examine component for wear, replace any worn components, re assembly carefully as instructed in this manual and re start the pump
		Improper seal between inner pistons, outer pistons and shaft.	
		Air leakage into product from balls / seats area	
		Air sucked into suction pipeline due to insufficiently tight joints on suction pipeline.	

Maintenance

Regular inspection and maintenance schedules will greatly enhance the life of the pump and will ensure a trouble free and safe working environment with little chance of breakdowns. Follow the instructions in “Disassembly and Reassembly” of the pump and in the troubleshooting section.

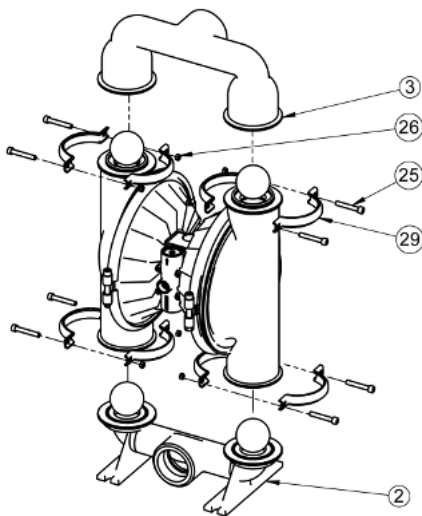
Use genuine Teryair spares and if possible mention the serial number of the pump when ordering spares.

Always replace elastomers as a set, eg diaphragms, balls and seats.

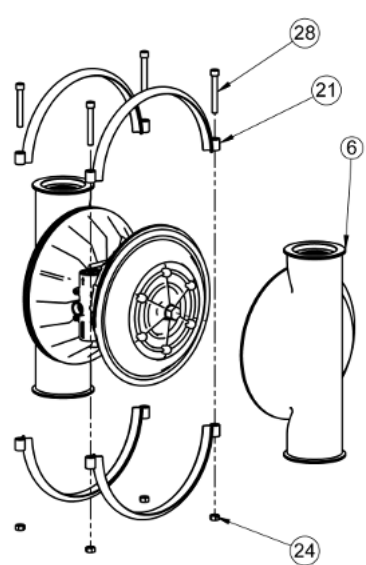
Disassembly and Re-assembly

1) Replacement of Diaphragm

a. Unscrew both bolt (25) & nut (26) as shown in the exploded view and proceed to remove the small clamp (29). Repeat for the other three small clamps. Remove the outlet (3) & inlet (2) respectively. Examine the balls, seals (and seats) for wear.



b. Now unscrew hex socket head bolt (28) & nut (24) of any one side and proceed to remove the big clamp (21). Now remove the outer chamber (6). Now repeat the same procedure to remove the second outer chamber (6).



c. Now with the help of two spanner hold one of the across flat of one outer flange (5) and rotate the second outer flange (5) to disassemble it from the air disc (1A). Now pull out the shaft assembly out of the center piece (1). Remove the diaphragm (11), & inner flange (4) by unscrew the hex bolt (22).

*For ALT/SST series pullup backup diaphragm (11), & PTFE diaphragm (11A), Inner spacer (9) & inner flange (4). Now pull the shaft assembly from the centre piece (1).

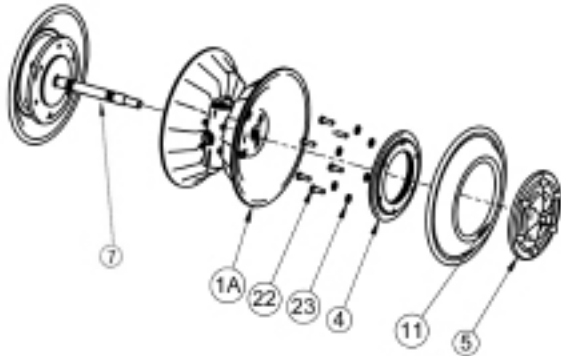
d. Now hold the shaft (7) in a vice with proper packing. Care must be taken not to damage the shaft outer surface. Now remove the outer flange (5) with spanner. Then remove the same parts which mention in column C.

*For ALT/SST series use same process which mention in column C.

e. Now replace the diaphragms (11). Ensure that

diaphragm orientation is correct, i.e. For ALB/ ALN/ALV the sticker side of the diaphragm (11) to be located in the outer chamber (6). Now assemble the outer flange (5) in reverse manner and remove the half shaft assembly from vice.
 * Refer fig. A for ALT & SST model the convex side of outer ring PTFE diaphragm (11A) to be located in outer chamber (6). For the backup diaphragm (11) the larger side of outer ring to be located in air disc (1A) & small in the concave groove of PTFE diaphragm (11A).

* For ALS/ ALH model AIR SIDE marking to be located toward the air disc (1A)



- f. Lubricate the edge of the shaft with specified lubricant. Slowly insert the shaft with rotating motion. Care should be taken not to damage the rod seal (8).
- g. Once the half shaft open portion comes out of the bush, follow the procedure in reverse manner as described in part (a) & (b) and assemble the pump.

2) Replacement of Shaft O rings

- a. For removing the rubber rings from bush, first follow the step a, b & c from the diaphragm replacement.
- b. Now remove the seals with the help of needle Nose pliers. Care should be taken not to damage the inner face of bush.
- c. Once all the old seals are have been removed, the inside of the bushing should be cleaned to ensure no debris is left that may damage to new seals (Pressurized air is preferable).
- d. These following tools can be used to aid in the installation of new seals:
 - Needle Nose pliers
 - Phillips Screwdriver
 - Electrical Tape
- e. Wrap electrical tape around each leg of the needle nose pliers (heat shrink may also be used) . This is done to prevent damaging the inside portion of the new seals.
- f. With a new seal in hand, place the two legs of the nose pliers inside the seal ring. Open the pliers as wide as

the seal diameter will allow, then two fingers pull down on the top portion of the seal to form kidney bean shape.

- g. Lightly clamp the pliers together to hold the seal into the kidney shape. Be sure to pull the seal into as tight of a kidney shape as possible, this will allow the seal to travel down the bushing bore easier.
- h. With the seal clamped in the pliers, insert the seal into the bushing bore and position the bottom of the seal into the correct groove. Once the bottom of the seal is seated in the groove, release the clamp pressure on the pliers. This will allow the seal to partially snap back to its original shape.
- i. After the pliers are removed, you will notice a slight bump in the seal shape. Before the seal can be properly resized, the bump in the seal should be removed as much as possible. This can be done with either the Phillips screw driver or your finger, apply light pressure to the peak of the bump. This pressure will cause the bump to be almost completely eliminated.
- j. Lubricate the edge of the shaft with specified lubricant.
- k. Slowly insert the shaft with rotating motion. This will complete the re sizing of the seals.
- l. Perform these steps for the remaining seals.

3) Replacement of Ball seat & Ball

- a) Follow the step (a) of diaphragm replacement. Replace the ball (12) & seat (13) with new one.
 * For ALT, SST series change the valve seat (13) & oring (13A) with new one.

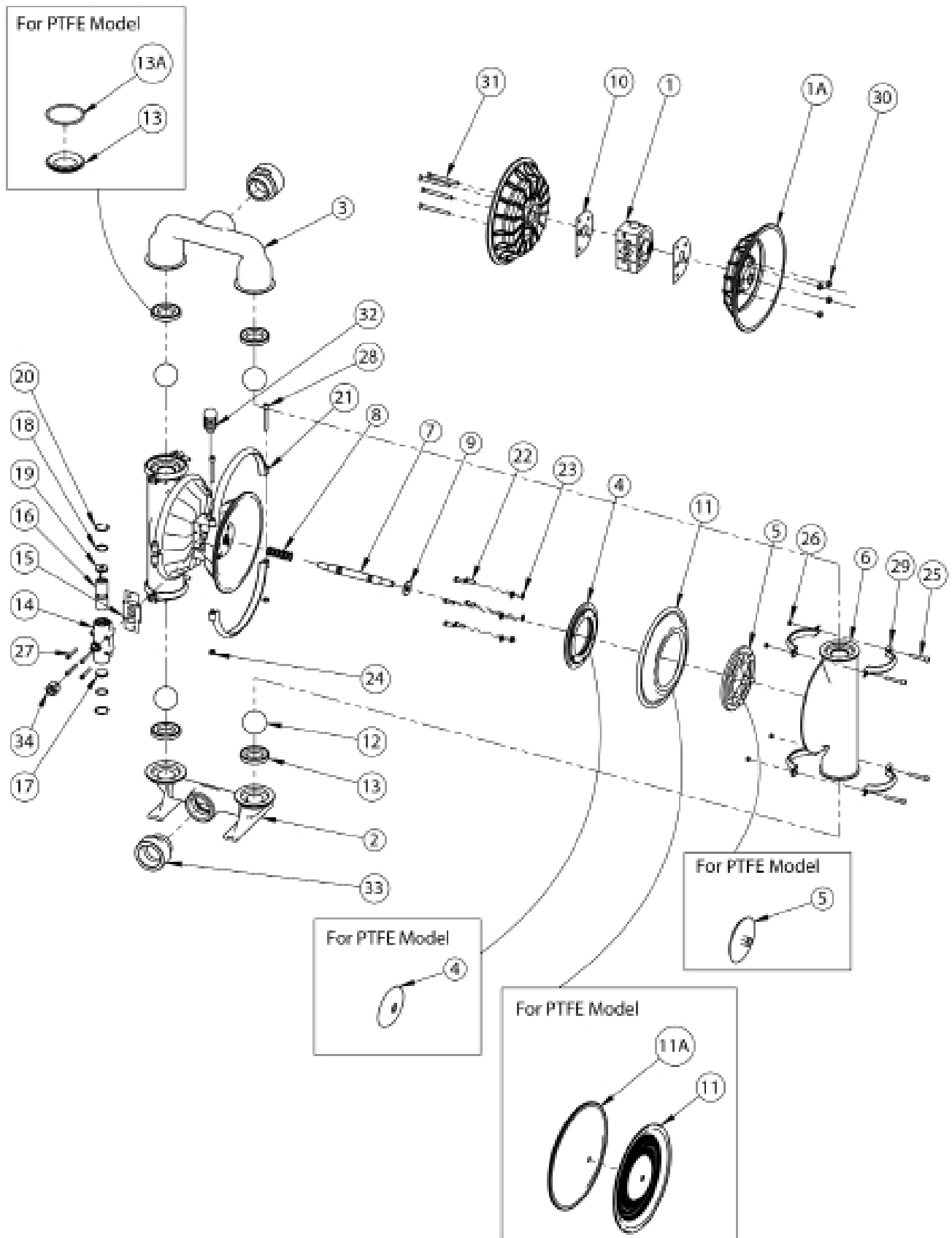
4) Replacement of air valve and oring of end cap

- a) Unscrew socket head bolt (27) from the centre piece (1)& remove the air valve assembly. Now remove the circlips (20) from both ends. Now with the help of bolt (31) pull the end cap (17) & (19) from both ends. Now slide out the air valve (16). Change the oring (18) of both end caps.
- b) While assembly first put the end cap with pin (19) in air valve body (14). Make sure the notch of end cap (19) matches with the drill hole of body. Push the end cap with oring (18) gently. Now fit the circlip (20). Now slide the air valve from other side ensuring the drill portion located in the pin of end cap (18). Now push the end cap (17) with oring (18) from the other end and fit the circlip.
- c) You can also change the gasket for air valve body (14) & Gasket (15). Now assemble the air valve assembly in reverse manner.

Bill of Materials for DP 75 ALN Pumps

ILLU. NO.	PART NO	DESCRIPTION	DP75ALN-CR	DP75ALN-CG	DP75ALN-CP
1	2112003	Centre Piece with Bush	1	1	1
1A	2112002	Air Disc	2	2	2
2	2112005	Inlet Base -NPT	1	-	-
*2	2112010	Inlet Base -BSPT	-	1	-
**2	2112012	Inlet Base -BSP	-	-	1
3	2112004	Outlet - NPT	1	-	-
*3	2112011	Outlet - BSPT	-	1	-
**3	2112013	Outlet - BSP	-	-	1
4	2101008	Inner Flange	2	2	2
5	2101007	Outer Flange	2	2	2
6	2112006	Outer Chamber Side	2	2	2
7	2102110	Shaft	1	1	1
8	2114004	Bonded Rod Seal for DP75	7	7	7
9	2112101	Spacer	2	2	2
10	2104017	Gasket For Shaft Housing	2	2	2
11	2114101N	Diaphragm (Neoprene)	2	2	2
12	2114103	Valve Ball (Neoprene)	4	4	4
13	2114102	Valve Seal (Neoprene)	4	4	4
14	2110401	Air Valve Body	1	-	-
*14	2110403	Air Valve Body-BSPT	-	1	-
**14	2110404	Air Valve Body-BSPP	-	-	1
15	2104015	Gasket For Air Valve Body	1	1	1
16	2112001	Air Valve	1	1	1
17	2100805	Valve End Cap	1	1	1
19	2114001	O' Ring for End cap	2	2	2
18	2100802	Valve End Cap With Pin	1	1	1
20	2109024S	Int Circlip Light B-40x1.7mm thk. Hard Ch Pl	2	2	2
21	2113101	Big lamp	4	4	4
22	2109028	Hex Bolt M10-1.5Px30L-HT Blk	12	12	12
23	2109036	Plain Washer 22x11x2.2thk MS Wh ZnPl	78	78	78
24	3429019	Hex Nut 1/2" BSW - 12 Tpi Ms Wh Zn PI	4	4	4
25	2119004	Allen Bolt 3/8" BSW-18T Pi. X 2½"L	8	8	8
26	2119003	Hex Nut 3/8" BSW-16TPI HT Blk	8	8	8
27	2004011	S.H.C.B. M8-1.25Px60L(22mm) -HT Blk	4	4	4
28	2119001	H.S.C.B.1/2"BSW-12TPI X 31/2"L HT Blk	4	4	4
29	2113102	Small Clamp	8	8	8
30	2004020	M10 Nyloc Nut	2	2	2
31	2119002	Allen CSK M10-1.5P X110L HT-Blk	4	4	4
-	2119718	Silencer With Attachment (Optional)	1 Set	1 Set	1 Set

Exploded View for DP 75 Pump



Bill of Materials for DP 75 ALB Pumps

ILLU. NO.	PART NO	DESCRIPTION	DP75ALB-CR	DP75ALB-CG	DP75ALB-CP
1	2112003	Centre Piece with Bush	1	1	1
1A	2112002	Air Disc	2	2	2
2	2112005	Inlet Base -NPT	1	-	-
*2	2112010	Inlet Base -BSPT	-	1	-
**2	2112012	Inlet Base -BSP	-	-	1
3	2112004	Outlet - NPT	1	-	-
*3	2112011	Outlet - BSPT	-	1	-
**3	2112013	Outlet - BSP	-	-	1
4	2101008	Inner Flange	2	2	2
5	2101007	Outer Flange	2	2	2
6	2112006	Outer Chamber Side	2	2	2
7	2102110	Shaft	1	1	1
7	2102121	Shaft - ALT	-	-	-
8	2114004	Bonded Rod Seal for DP75	7	7	7
9	2112101	Spacer	2	2	2
10	2104017	Gasket For Shaft Housing	2	2	2
11	2114002B	Diaphragm (Buna-N)	2	2	2
12	2104019B	Valve Ball (Buna)	4	4	4
13	2104020B	Valve Seal (Buna)	4	4	4
14	2110401	Air Valve Body	1	-	-
*14	2110403	Air Valve Body-BSPT	-	1	-
**14	2110404	Air Valve Body-BSPP	-	-	1
15	2104015	Gasket For Air Valve Body	1	1	1
16	2112001	Air Valve	1	1	1
17	2100805	Valve End Cap	1	1	1
18	2114001	O' Ring for End cap	2	2	2
19	2100802	Valve End Cap With Pin	1	1	1
20	2109024	Int Circlip Light B-40x1.7mm thk. Hard Ch Pl	2	2	2
21	2113101	Big lamp	4	4	4
22	2109028	Hex Bolt M10-1.5Px30L-HT Blk	12	12	12
23	2109036	Plain Washer 22x11x2.2thk MS Wh ZnPl	78	78	78
24	3429019	Hex Nut 1/2" BSW - 12 Tpi Ms Wh Zn Pl	4	4	4
25	2119004	Allen Bolt 3/8" BSW-18T Pi. X 2½"L	8	8	8
26	2119003	Hex Nut 3/8" BSW-16TPI HT Blk	8	8	8
27	2004011	S.H.C.B. M8-1.25Px60L(22mm) -HT Blk	4	4	4
28	2119001	H.S.C.B.1/2"BSW-12TPI X 31/2"L HT Blk	4	4	4
29	2113102	Small Clamp	8	8	8
30	2004020	M10 Nyloc Nut	2	2	2
31	2119002	Allen CSK M10-1.5P X110L HT-Blk	4	4	4
-	2119718	Silencer With Attachment (Optional)	1 Set	1 Set	1 Set

Bill of Materials for DP 75 ALS Pumps

ILLU. NO.	PART NO	DESCRIPTION	DP75ALS-CR	DP75ALS-CG	DP75ALS-CP
1	2112003	Centre Piece with Bush	1	1	1
1A	2112002	Air Disc	2	2	2
2	2112005	Inlet Base -NPT	1		-
2	2112010	Inlet Base -BSPT		1	-
2	2112012	Inlet Base -BSP	-	-	1
3	2112004	Outlet - NPT	1		-
3	2112011	Outlet - BSPT	-	1	-
3	2112013	Outlet - BSP	-	-	1
4	2101008	Inner Flange	2	2	2
5	2101007	Outer Flange	2	2	2
6	2112006	Outer Chamber Side	2	2	2
7	2102110	Shaft	1	1	1
8	2114004	Bonded Rod Seal for DP75	7	7	7
9	2112101	Spacer	2	2	2
10	2104017	Gasket For Shaft Housing	2	2	2
11	2114101	Diaphragm (Santoprene)	2	2	2
14	2110401	Air Valve Body	1	-	-
*14	2110403	Air Valve Body-BSPT	-	1	-
**14	2110404	Air Valve Body-BSPP	-	-	1
15	2104015	Gasket For Air Valve Body	1	1	1
16	2112001	Air Valve	1	1	1
17	2100805	Valve End Cap	1	1	1
19	2114001	O' Ring for End cap	2	2	2
18	2100802	Valve End Cap With Pin	1	1	1
20	2109024	Int Circlip Light B-40x1.7mm thk. Hard Ch Pl	2	2	2
21	2113101	Big lamp	4	4	4
22	2109028	Hex Bolt M10-1.5Px30L-HT Blk	12	12	12
23	2109036	Plain Washer 22x11x2.2thk MS Wh ZnPl	12	12	12
24	3429019	Hex Nut 1/2" BSW - 12 Tpi Ms Wh Zn Pl	4	4	4
25	2119004	Allen Bolt 3/8" BSW-18T Pi. X 2½"L	8	8	8
26	2119003	Hex Nut 3/8" BSW-16TPI HT Blk	8	8	8
27	2004011	S.H.C.B. M8-1.25Px60L(22mm) -HT Blk	4	4	4
28	2119001	H.S.C.B.1/2"BSW-12TPI X 31/2"L HT Blk	4	4	4
29	2113102	Small Clamp	8	8	8
30	2004020	M10 Nyloc Nut	2	2	2
31	2119002	Allen CSK M10-1.5P X110L HT-Blk	4	4	4
-	2119718	Silencer With Attachment (Optional)	1 Set	1 Set	1 Set

Bill of Materials for DP 75 ALH Pumps

ILLU. NO.	PART NO	DESCRIPTION	DP75ALH-CR	DP75ALH-CG	DP75ALH-CP
1	2112003	Centre Piece with Bush	1	1	1
1A	2112002	Air Disc	2	2	2
2	2112005	Inlet Base -NPT	1	-	-
*2	2112010	Inlet Base -BSPT	-	1	-
**2	2112012	Inlet Base -BSP	-	-	1
3	2112004	Outlet - NPT	1	-	-
*3	2112011	Outlet - BSPT	-	1	-
**3	2112013	Outlet - BSP	-	-	1
4	2101008	Inner Flange	2	2	2
5	2101007	Outer Flange	2	2	2
6	2112006	Outer Chamber Side	2	2	2
7	2102110	Shaft	1	1	1
8	2114004	Bonded Rod Seal for DP75	7	7	7
9	2112101	Spacer	2	2	2
10	2104017	Gasket For Shaft Housing	2	2	2
11	2114301	Diaphragm (Hytrel)	2	2	2
12	2114303	Valve Ball (Hytrel)	2	2	2
13	2114302	Valve Seal (Hytrel)	4	4	4
14	2110401	Air Valve Body	1	-	-
*14	2110403	Air Valve Body-BSPT	-	1	-
**14	2110404	Air Valve Body-BSP	-	-	1
15	2104015	Gasket For Air Valve Body	1	1	1
16	2112001	Air Valve	1	1	1
17	2100805	Valve End Cap	1	1	1
18	2114001	O' Ring for End cap	2	2	2
19	2100802	Valve End Cap With Pin	1	1	1
20	2109024S	Int Circlip Light B-40x1.7mm thk. Hard Ch Pl	2	2	2
21	2113101	Big lamp	4	4	4
22	2109028	Hex Bolt M10-1.5Px30L-HT Blk	12	12	12
23	2109036	Plain Washer 22x11x2.2thk MS Wh ZnPl	12	12	12
24	3429019	Hex Nut 1/2" BSW - 12 Tpi Ms Wh Zn PI	4	4	4
25	2119004	Allen Bolt 3/8" BSW-18T Pi. X 2½"L	8	8	8
26	2119003	Hex Nut 3/8" BSW-16TPI HT Blk	8	8	8
27	2004011	S.H.C.B. M8-1.25Px60L(22mm) -HT Blk	4	4	4
28	2119001	H.S.C.B.1/2"BSW-12TPI X 31/2"L HT Blk	4	4	4
29	2113102	Small Clamp	8	8	8
30	2004020	M10 Nyloc Nut	2	2	2
31	2119002	Allen CSK M10-1.5P X110L HT-Blk	4	4	4
-	2119718	Silencer With Attachment (Optional)	1 Set	1 Set	1 Set

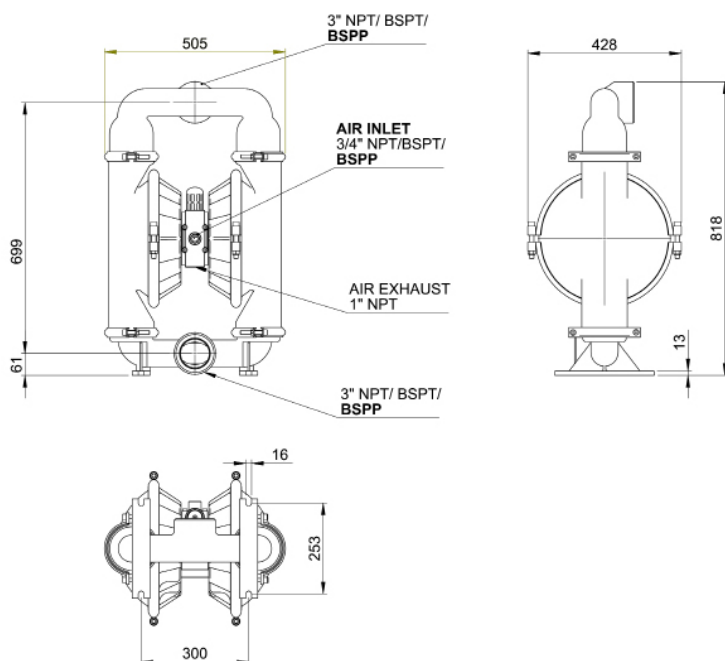
Bill of Materials for DP 75 ALV Pumps

ILLU. NO.	PART NO	DESCRIPTION	DP75ALV-CR	DP75ALV-CG	DP75ALV-CP
1	2112003	Centre Piece with Bush	1	1	1
1A	2112002	Air Disc	2	2	2
2	2112005	Inlet Base -NPT	1	-	-
*2	2112010	Inlet Base -BSPT	-	1	-
**2	2112012	Inlet Base -BSP	-	-	1
3	2112004	Outlet - NPT	1	-	-
*3	2112011	Outlet - BSPT	-	1	-
**3	2112013	Outlet - BSP	-	-	1
4	2101008	Inner Flange	2	2	2
5	2101007	Outer Flange	2	2	2
6	2112006	Outer Chamber Side	2	2	2
7	2102110	Shaft	1	1	1
8	2114004	Bonded Rod Seal for DP75	7	7	7
9	2112101	Spacer	2	2	2
10	2104017	Gasket For Shaft Housing	2	2	2
11	2114002V	Diaphragm (Viton)	2	2	2
12	2104019V	Valve Ball (Viton)	4	4	4
13	2104020V	Valve Seal (Viton)	4	4	4
14	2110401	Air Valve Body	1	-	-
*14	2110403	Air Valve Body-BSPT	-	1	-
**14	2110404	Air Valve Body-BSPP	-	-	1
15	2104015	Gasket For Air Valve Body	1	1	1
16	2112001	Air Valve	1	1	1
17	2100805	Valve End Cap	1	1	1
19	2114001	O' Ring for End cap	2	2	2
18	2100802	Valve End Cap With Pin	1	1	1
20	2109024S	Int Circlip Light B-40x1.7mm thk. Hard Ch Pl	2	2	2
21	2113101	Big lamp	4	4	4
22	2109028	Hex Bolt M10-1.5Px30L-HT Blk	12	12	12
23	2109036	Plain Washer 22x11x2.2thk MS Wh ZnPl	78	78	78
24	3429019	Hex Nut 1/2" BSW - 12 Tpi Ms Wh Zn PI	4	4	4
25	2119004	Allen Bolt 3/8" BSW-18T Pi. X 2½"L	8	8	8
26	2119003	Hex Nut 3/8" BSW-16TPI HT Blk	8	8	8
27	2004011	S.H.C.B. M8-1.25Px60L(22mm) -HT Blk	4	4	4
28	2119001	H.S.C.B.1/2"BSW-12TPI X 31/2"L HT Blk	4	4	4
29	2113102	Small Clamp	8	8	8
30	2004020	M10 Nyloc Nut	2	2	2
31	2119002	Allen CSK M10-1.5P X110L HT-Blk	4	4	4
-	2119718	Silencer With Attachment (Optional)	1 Set	1 Set	1 Set

Bill of Materials for DP 75 ALT Pumps

ILLU. NO.	PART NO	DESCRIPTION	DP75ALT-CR	DP75ALT-CG	DP75ALT-CP
1	2112003	Centre Piece with Bush	1	1	1
1A	2112002	Air Disc	2	2	2
2	2112005	Inlet Base -NPT	1	-	-
*2	2112010	Inlet Base -BSPT	-	1	-
**2	2112012	Inlet Base -BSP	-	-	1
3	2112004	Outlet - NPT	1	-	-
*3	2112011	Outlet - BSPT	-	1	-
**3	2112013	Outlet - BSP	-	-	1
4	2101016	Inner Flange ALT	2	2	2
5	2101011	Outer Flange ALT	2	2	2
6	2112006	Outer Chamber Side	2	2	2
7	2102121	Shaft	1	1	1
8	2114004	Bonded Rod Seal	7	7	7
9	2112101	Spacer	2	2	2
10	2104017	Gasket For Shaft Housing	2	2	2
11	2103618T	Diaphragm (PTFE)	2	2	2
11A	210 40 35N	Back Up Diaphragm	2	2	2
12	210 36 19T	Ball (PTFE)	2	2	2
13	2102020A	Valve Seat	4	4	4
13A	2103637T	O' Ring for valve seal	4	4	4
14	2110401	Air Valve Body	1	-	-
*14	2110403	Air Valve Body-BSPT	-	1	-
**14	2110404	Air Valve Body-BSPP	-	-	1
15	2104015	Gasket For Air Valve Body	1	1	1
16	2112001	Air Valve	1	1	1
17	2100805	Valve End Cap	1	1	1
19	2114001	O' Ring for End cap	2	2	2
18	2100802	Valve End Cap With Pin	1	1	1
20	2109024S	Int Circlip	2	2	2
21	2113101	Big Clamp	4	4	4
24	3429019	Hex Nut	4	4	4
25	2119004	Allen Bolt	8	8	8
26	2119003	Hex Nut	8	8	8
27	2004011	Allen Bolt	4	4	4
28	2119001	Allen Bolt	4	4	4
29	2113102	Small Clamp	8	8	8
30	2004020	Chamfered Nut	2	2	2
31	2119002	Screw	4	4	4
-	2119718	Silencer With Attachment (Optional)	1 Set	1 Set	1 Set

Dimensional Data



DP 75 AL N/B/S/H/V/T

Air Valve Replacement Kits for DP 75 ALX Pumps

Air Valve Replacement Kit consists of a complete operational air valve assembly complete. Consisting of Air Valve Body, End Plates, Spool and all seals, o rings and gaskets.

Replacement KIT Ordering No	Suitable for
211 97 11	NPT fitted DP75ALB , DP75ALS, DP75ALH or DP75ALT or DP75ALN or DP75ALV
211 97 12	BSPT fitted DP75ALB , DP75ALS, DP75ALH or DP75ALT or DP75ALN or DP75ALV
211 97 13	BSPP fitted DP75ALB , DP75ALS, DP75ALH or DP75ALT or DP75ALN or DP75ALV

Repair Kits for DP 75 ALX Pumps

Repair Kits consist of everything you need to quickly restore the pump. Repair Kits contain one set of Diaphragms, one set of balls, one set of seats or seats+Orings, air valve spool complete, all gaskets, end caps with fitted rings. Repair kits are threading independant.

Repair KIT Ordering No	Suitable for
211 97 10N	DP 75 ALN
211 97 10B	DP 75 ALB
211 97 10S	DP 75 ALS
211 97 10H	DP 75 ALH
211 97 10V	DP 75 ALV
211 97 10T	DP 75 ALT

Repair and Replacement Kits

ILLU. NO.	PART NUMBER	DESCRIPTION	CR	CG	CP	ALX Pumps					
			2119711 replacement Kit	2119712 replacement kit	2119713 replacement kit	Repair Kit 2119710B	Repair Kit 2119710N	Repair Kit 2119710V	Repair Kit 2119710S	Repair Kit 2119710H	Repair Kit 2119710T
8	211 40 04	BONDED ROD SEAL				7	7	7	7	7	7
10	210 40 17	GASKET	2	2	2						
11	211 40 02B	DIAPHRAGM (BUNA-N)				2					
11	211 40 02	DIAPHRAGM (NEOPRENE)					2				
11	211 40 02V	DIAPHRAGM (VITON)						2			
11	211 41 01	DIAPHRAGM (SANTOPRENE)							2		
11	211 43 01	DIAPHRAGM (HYTREL)								2	
11	210 36 18T	DIAPHRAGM (PTFE)									2
11A	210 40 35N	BACKUP DIAPHRAGM									2
12	210 40 19B	BALL (BUNA)				4					
12	210 40 19	BALL (NEOPRENE)					4				
12	210 40 19V	BALL (VITON)						4			
12	211 41 03	BALL (SANTOPRENE)							4		
12	211 43 03	BALL (HYTREL)								4	
12	210 36 19T	BALL (PTFE)									4
13	210 40 20B	VALVE SEAL (BUNA)				4					
13	210 40 20	VALVE SEAL (NEOPRENE)					4				
13	210 40 20V	VALVE SEAL (VITON)						4			
13	211 41 02	VALVE SEAL (SANTOPRENE)							4		
13	211 43 02	VALVE SEAL (HYTREL)								4	
13	210 20 20A	VALVE SEAT									4
13A	210 36 37T	O- RING									4
14	210 25 47	AIR VALVE BODY	1	1	1						
15	210 40 15	GASKET	1	1	1	1	1	1	1	1	1
16	211 20 01	AIR VALVE	1	1	1	1	1	1	1	1	1
17	210 0805	VALVE END CAP	1	1	1	1	1	1	1	1	1
18	211 40 01	O- RING	2	2	2	2	2	2	2	2	2
19	210 0802	VALVE END CAP WITH PIN	1	1	1	1	1	1	1	1	1
20	210 90 24S	INT. CIRCLIP	2	2	2	2	2	2	2	2	2
27	200 40 11	ALLEN BOLT	4	4	4						
34	202 04 08	ADAPTOR 3/4" BSPT(F)		1							
34	202 04 05	ADAPTOR 3/4" BSPP(F)			1						

EU DECLARATION OF CONFORMITY

Object of declaration

PRODUCT : **AIR OPERATED DOUBLE DIAPHRAGM PUMP**

MODEL : **DP75 Series**

MANUFACTURER'S NAME : **TERYAIR EQUIPMENT PVT. LTD.**

ADDRESS : **SITE - 1 : BUILDING A - 1/2, 102 TO 105 & BUILDING C 12 & 13,
TIRUPATI UDYOG NAGAR, SATIVALI ROAD, VASAI (E),
PALGHAR: 401208.
SITE - 2: AUGUSTINE - II, COLACO INDUSTRIAL COMPLEX,
GALA NO - 101 TO 107, SATIVALI ROAD, VILLAGE WALIV,
VASAI (E), PALGHAR: 401208**

To provide presumption of conformity in order to directive 2014/34/EU; the following harmonized standards and/or other normative documents as referenced within the following official journals are applied:

APPLICABLE DIRECTIVE: ATEX DIRECTIVE (2014/34/EU)

APPLICABLE STANDARDS:

EN ISO 80079-36: 2016 : Explosive atmospheres —Part 36: Non-electrical equipment for explosive atmospheres —Basic method and requirements.

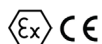
EN ISO 80079-37:2016 : Explosive atmospheres —Part 37: Non-electrical equipment for explosive atmospheres —Non- electrical type of protection constructional safety 'c', control of ignition sources 'b', liquid immersion 'k'.

Notified body to whom Technical file has logged with: - Technicka Inspekcia (Ref: 1354).

DECLARATION: - TERYAIR EQUIPMENT PVT. LTD., declare that under our sole responsibility for the supply of the product defined above, the said product complies with all the applicable Directives, Regulations and all essential Health and Safety requirements applying to it.

I, the undersigned, hereby declare that the product specified above conforms to the above standard(s).

ATEX MARKING APPLIED



Please Refer ATEX Rating for **Teryair Aodd Models Table**

Signed for and on behalf of

TERYAIR EQUIPMENT PVT. LTD.

Place of Issue: Vasai

Date : 02/02/2024

SUMMARY FOR THE ATEX RATING FOR TERYAIR AODD MODELS

Pump Size	Series	Wetted Materials	Center Section	Diphragm Materials	ATEX Rating
06 (1/4")	SDP	Aluminium	Aluminium	Neoprene	II 2 GD Ex h IIC T6 Gb Ex h IIIC T85°C Db (IP65)
				Buna-N	
				Viton-FKM	II 2 GD Ex h IIC T3 Gb Ex h IIIC T200°C Db (IP65)
				Sentoprene	II 2 GD Ex h IIC T5 Gb Ex h IIIC T100°C Db (IP65)
				Hytrel	
		PTFE			
		Stainless Steel	Stainless Steel	Neoprene	II 2 GD Ex h IIC T6 Gb Ex h IIIC T85°C Db I M2 Ex h I Mb (IP65)
				Buna-N	
				Viton-FKM	II 2 GD Ex h IIC T3 Gb Ex h IIIC T200°C Db (IP65) I M2 Ex h I Mb (IP65)
				Sentoprene	II 2 GD Ex h IIC T5 Gb Ex h IIIC T100°C Db (IP65) I M2 Ex h I Mb (IP65)
Hytrel					
PTFE					
12 (1/2")	DP/SDP	Aluminium	Aluminium	Neoprene	II 2 GD Ex h IIC T6 Gb Ex h IIIC T85°C Db (IP65)
				Buna-N	
				Viton-FKM	II 2 GD Ex h IIC T3 Gb Ex h IIIC T200°C Db (IP65)
				Sentoprene	II 2 GD Ex h IIC T5 Gb Ex h IIIC T100°C Db (IP65)
				Hytrel	
	PTFE				
	SDP	Stainless Steel	Stainless Steel	Neoprene	II 2 GD Ex h IIC T6 Gb Ex h IIIC T85°C Db I M2 Ex h I Mb (IP65)
				Buna-N	
				Viton-FKM	II 2 GD Ex h IIC T3 Gb Ex h IIIC T200°C Db (IP65) I M2 Ex h I Mb (IP65)
				Sentoprene	II 2 GD Ex h IIC T5 Gb Ex h IIIC T100°C Db (IP65) I M2 Ex h I Mb (IP65)
Hytrel					
PTFE					
25 (1")	DP / SDP	Aluminium / Stainless Steel	Aluminium	Neoprene	II 2 GD Ex h IIC T6 Gb Ex h IIIC T85°C Db (IP65)
				Buna-N	
				Viton-FKM	II 2 GD Ex h IIC T3 Gb Ex h IIIC T200°C Db (IP65)
				Sentoprene	II 2 GD Ex h IIC T5 Gb Ex h IIIC T100°C Db (IP65)
				Hytrel	
PTFE					

SUMMARY FOR THE ATEX RATING FOR TERYAIR AODD MODELS

Pump Size	Series	Wetted Materials	Center Section	Diphragm Materials	ATEX Rating
40 (1-1/2")	DP / SDP	Aluminium / Stainless Steel	Aluminium	Neoprene	II 2 GD Ex h IIC T6 Gb Ex h IIIC T85°C Db (IP65)
				Buna-N	
				Viton-FKM	II 2 GD Ex h IIC T3 Gb Ex h IIIC T200°C Db (IP65)
				Sentoprene	II 2 GD Ex h IIC T5 Gb Ex h IIIC T100°C Db (IP65)
				Hytrel	
				PTFE	
50 (2")	DP / SDP	Aluminium / Stainless Steel	Aluminium	Neoprene	II 2 GD Ex h IIC T6 Gb Ex h IIIC T85°C Db (IP65)
				Buna-N	
				Viton-FKM	II 2 GD Ex h IIC T3 Gb Ex h IIIC T200°C Db (IP65)
				Sentoprene	II 2 GD Ex h IIC T5 Gb Ex h IIIC T100°C Db (IP65)
				Hytrel	
	PTFE				
	SDP	Cast Iron	Cast Iron	Neoprene	II 2 GD Ex h IIC T6 Gb Ex h IIIC T85°C Db I M2 Ex h I Mb (IP65)
				Buna-N	
				Viton-FKM	"II 2 GD Ex h IIC T3 Gb Ex h IIIC T200°C Db (IP65) I M2 Ex h I Mb (IP65)"
				Sentoprene	II 2 GD Ex h IIC T5 Gb Ex h IIIC T100°C Db (IP65) I M2 Ex h I Mb (IP65)
Hytrel					
PTFE					
75 (3")	DP / SDP	Aluminium	Aluminium	Neoprene	II 2 GD Ex h IIC T6 Gb Ex h IIIC T85°C Db (IP65)
				Buna-N	
				Viton-FKM	II 2 GD Ex h IIC T3 Gb Ex h IIIC T200°C Db (IP65)
				Sentoprene	II 2 GD Ex h IIC T5 Gb Ex h IIIC T100°C Db (IP65)
				Hytrel	
	PTFE				
	SDP	Cast Iron	Cast Iron	Neoprene	II 2 GD Ex h IIC T6 Gb Ex h IIIC T85°C Db I M2 Ex h I Mb (IP65)
				Buna-N	
				Viton-FKM	II 2 GD Ex h IIC T3 Gb Ex h IIIC T200°C Db (IP65) I M2 Ex h I Mb (IP65)
				Sentoprene	II 2 GD Ex h IIC T5 Gb Ex h IIIC T100°C Db (IP65) I M2 Ex h I Mb (IP65)
				Hytrel	
PTFE					



Warranty Certificate

Every product manufactured by Teryair
is built to meet the highest standards of quality.

Teryair warrants that the Products, accessories and parts manufactured or supplied by the company be free from defects in material and workmanship for a period of six months from date of Teryair authorized dealer invoice to customer, or one year from date of Teryair invoice to dealer, whichever is earlier. Failure due to normal wear, misapplication, or abuse is, of course, excluded from this warranty.

Since the use of Teryair products and parts is beyond our control, Teryair cannot guarantee the suitability of any product or part for a particular application and Teryair shall not be liable for any consequential damage or expense arising from the use or misuse of its products on any application. Teryair does not warranty bought out products or components such as electric motors and hardware but will assist in directing warranty queries to the dealer/manufacturer responsible. Teryair responsibility is limited solely to replacement or repair of defective Teryair products or components.

Dealer/End User shall have no right or remedy and Teryair shall have no liability or obligation under the warranty, if: (i) a Product is altered, changed, modified or tampered with in any way; (ii) a Product is damaged after deposit with the transporter for shipment; (iii) a Product is not properly preserved, packaged, stored, processed or handled after receipt; (iv) a Product is not used and maintained in accordance with Teryair's recommended operating and maintenance manuals, instructions and procedures, if any; (v) a Product is not properly incorporated or installed in, or not properly combined with, an Other Product; (vi) the issue with a Product is directly or indirectly attributable to, or directly or indirectly results from or arises out of, a failure, substandard performance or other issue with another product, material, component or part not supplied by Teryair; (vii) the issue with a Product is directly or indirectly attributable to, or directly or indirectly results from or arises out of, compliance with any design, specification or other specific requirement of Dealer/End User; (viii) a Product is used in a manner, with a substance or for a purpose other than the normal manner, substance and purpose for which it is intended or is otherwise subjected to abnormal use or service; (ix) a Product is subjected to a power surge, brown out or other similar occurrence; (x) the issue with a Product is directly or indirectly attributable to, or directly or indirectly results from or arises out of, normal wear and tear of such Product (including, without limitation, things such as worn seals, diaphragms, balls, O rings, gaskets, chisels, cutters, hoses and other such wearing components; (xi) the issue with a Product is directly or indirectly.

Model Number : DP75 Series

Serial Number : 240101

Dated : 02/02/2024

A handwritten signature in blue ink, appearing to read 'M. Yadav', is written over a horizontal line.

M. Yadav, Q.A. Manager
(Company Seal)