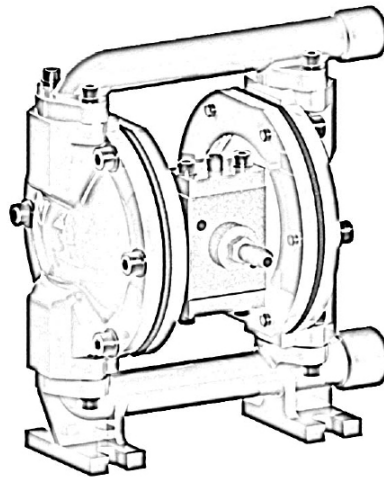




## Operation and Maintenance Guide



TM12 ALX/SSX

TM 12 Aluminum Construction, All variants

Models	Descriptions
TM 12 ALX	Aluminum with Neoprene, Buna N 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

## Table of Contents

3	Pump Nomenclature
3	Operating and Safety Instructions
4	Operating Instructions
5	Suggested Lubricants
6	Suggested site selection and installation recommendations
7	Troubleshooting
8	Maintenance
8 - 9	Diassembly and Re-assembly
10	Bill of Materials for TM12-ANX-REX-AXX Pumps
11	Exploded View for TM 12 Pump
12	Bill of Materials for TM12-ABX-REX-AXX Pumps
13	Bill of Materials for TM12-ATN-REX-AXX Pumps
14	Dimensional Data
14	Air Valve Replacement Kits
14	Repair Kits
15	Repair and Replacement Kits
16	Eu Declaration Of Conformity
17	Summery For The Atex Rating For Teryair Aodd Models
19	Warranty Certificate

## Pump Nomenclature

Position	1	2	3	4	5	6	7	8	9	10	11
Example:	TM	12	A	B	X	R	E	X	A	X	X
<b>Example: TM12-ABX-GEX-AXX</b>											
Position 1 Range	Position 2 Size	Position 3 Body	Position 4 Diaphragm/ Valve	Position 5 Back Up	Position 6 Port	Position 7 Port Position	Position 8 Speciality Code	Position 9 Safety Code	Position 10 Sanitary Code	Position 11 Speciality Code	
TM- Marine	12 - ½"	A - Aluminium	B - Buna (Nitrile)	B - Buna (Nitrile)	G - BSPT	*As per Picture Only	P - Pulse Dampener	A - ATEX/ IECEx	X - None	S - Speed Controller	
	25 - 1"	S - Stainless Steel	T - PTFE	S - Santoprene	R - NPT		R - Remote Solenoid Driven			C - Cycle Counter	
	40 - 1-½"		S - Santoprene	N - Neoprene	P - BSPP		T - Trolley Mounted			D - Diaphragm Monitoring	
	50 - 2"		N - Neoprene	X - None			X - None			X - None	
	75 - 3"										

## 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.



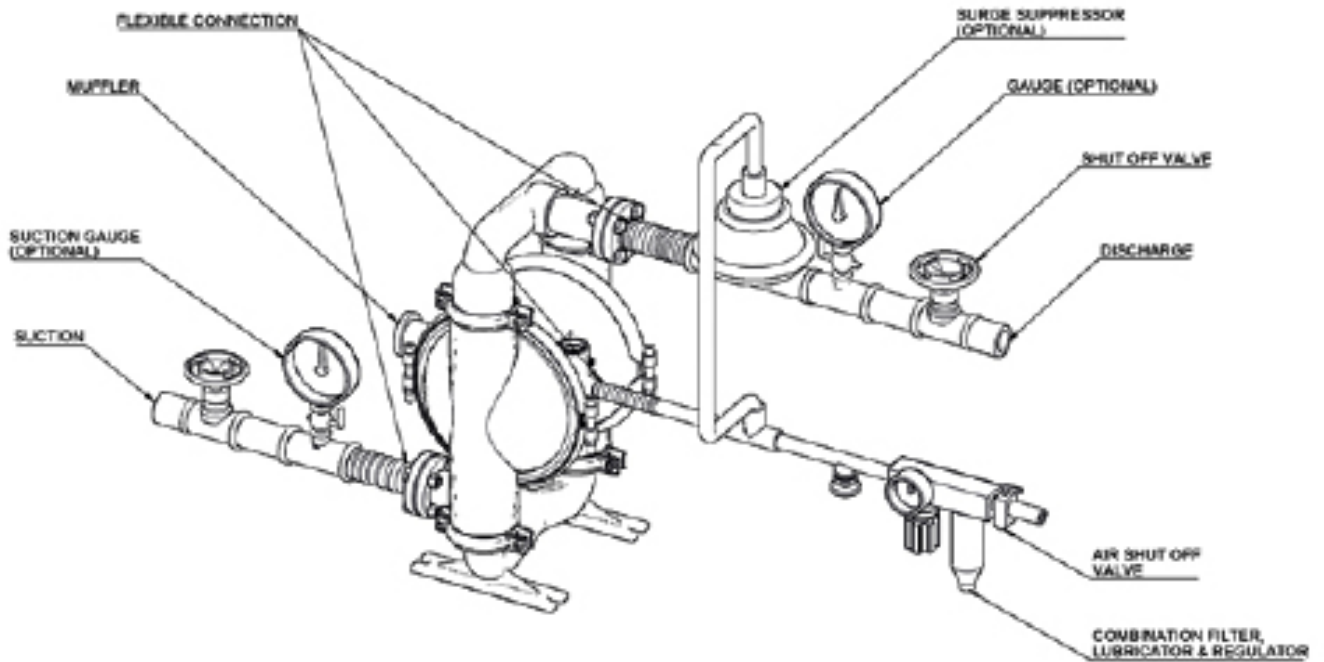
**Caution: Temperature limitations and diaphragm options**

<b>Neoprene</b>		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)
<b>Nitile</b>		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)
<b>Santoprene</b>		Good abrasion resistance. Low cost. Can handle mild acids and alkalis well. Excellent low cost alternative to ptf. Excellent suction capabilities Excellent general purpose diaphragm. Temperature range -40°C to +107°C (-40F to +225°F)
<b>PTFE</b>		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



### 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 ½ inch or larger, non-collapsible  
 Delivery side ½ 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	roceed 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.

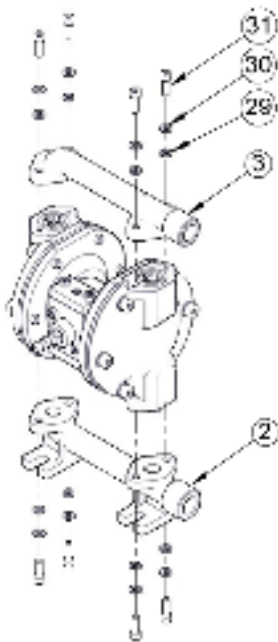
Follow the instructions clearly in “Disassembly and Reassembly” of the pump and in the troubleshooting section.

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

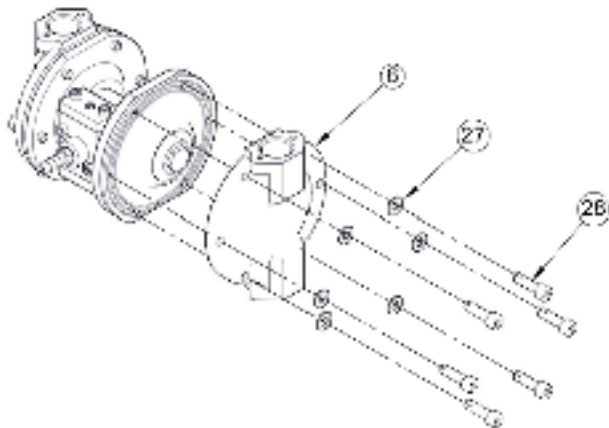
Always replace elastomers as a set, eg diaphragms, balls and seats.

## Disassembly and Re-assembly

### 1) Replacement of Diaphragm

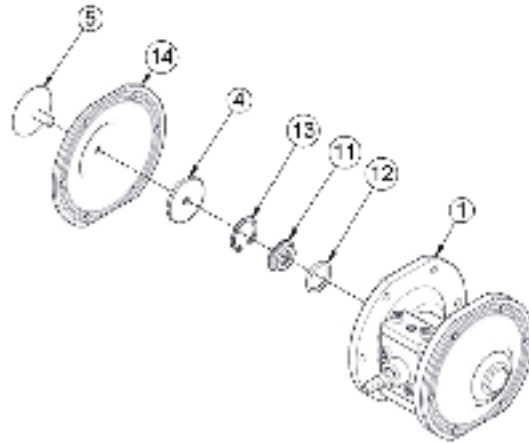


a. Unscrew bolt (31) along with washer (30) & spring washer (29) as shown in the exploded view and proceed to remove outlet (3) & inlet (2). Examine the balls, seals (and seats) for wear.



b. Now unscrew hex socket head bolt (28) & washer (27) of any one side and proceed to remove the outer chamber (6). Now repeat the same procedure to remove

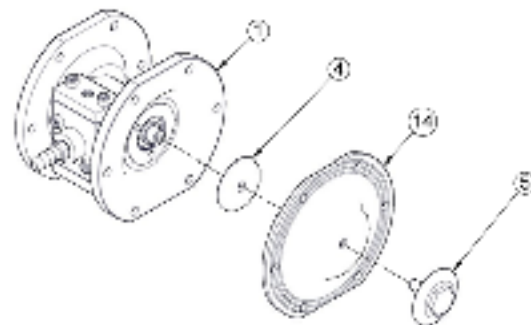
the second outer chamber (6).



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 shaft assembly. Remove the diaphragm (14), & inner flange (4).

\* For SST model hold one of the across flat of the hex. Bolt (5A) and rotate the second bolt (5A) to disassemble it from the shaft assembly. Remove PTFE diaphragm (14A), diaphragm (14), & inner flange (4).

d. Now remove the circlip (13) with the help of Nose plier and remove the collar (11), O-ring (12).



e. Now push the other side of shaft (7). 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 and remove the diaphragm (14) & inner flange (4) respectively.

\*For ALT/SST series remove the bolt (5A) and remove the outer flange (5), Backup diaphragm (14), Inner spac-



er (7A)& PTFE diaphragm (14A).

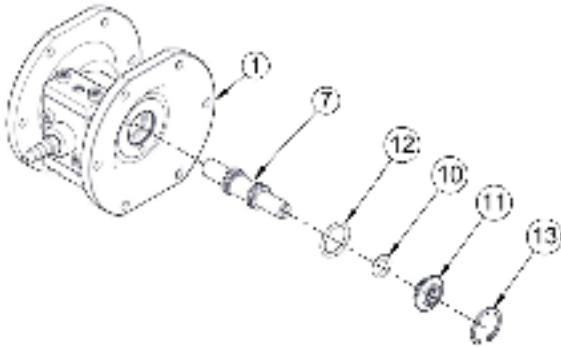
f. Now replace the diaphragms (14). Ensure that diaphragm orientation is correct, i.e. For ALB/ ALN the sticker side of the diaphragm (14) to be located in the outer chamber (6).  
 \* For ALT & SST model the PTFE diaphragm (14A) to be located in outer chamber (6) side.

g. Lubricate the edge of the shaft (7) with specified lubricant. Slowly insert the shaft with rotating motion. Care should be taken not to damage the backup rings (8).

h. 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 seals from shaft, first follow the step a, b, c, d & e from the diaphragm replacement.

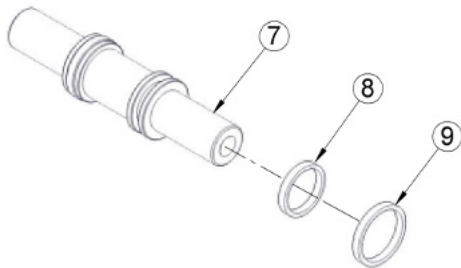


b. Remove the circlip (13) with the help of nose pliers. This will allow to remove the shaft (7) with seals along with the collar (11) and O-rings (12).

c. Now pull out the shaft (7) from the circlip open side of shaft housing (1).

d. Now remove the PTFE rings (9)& backup ring (8) from the shaft (7) with the help of needle Nose pliers.

e. Once all the old seals are have been removed, the inside of the bush (located in shaft housing) should be cleaned to ensure no debris is left that may damage to new seals (Pressurized air is preferable).



f. Now fit new seals in following manner. First back up rings (8) and later PTFE rings (9).

g. Lubricate the inner portion of bush with specified lubricant.

h. Slowly insert the shaft with rotating motion. This will complete the resizing of the seals.

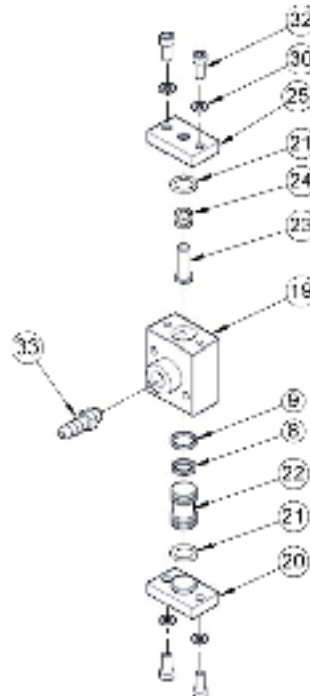
i. Now replace the O-ring (12), (10)and complete the assembly procedure in reverse manner.

## 3) Replacement of Ball seat& Ball

a. Follow the step (a) of diaphragm replacement. Replace the o-ring (18), ball cage (17),ball (16)&ball seat (15) with new one.

## 4) Replacement of air valve and oring of end cap

a. Unscrew bolt (34) from the shaft housing (1). Remove the air valve assembly along with the bolt (32).



b. Now remove the bolt (32) and washer (30) from both ends. Now remove the end cap (25) & (20) from both ends. Now slide out the air valve (22). Change the O-ring (21) of both end caps. Remove the pin (23) and replace the o ring (24).

c. Now remove and replace the ring (9) and backup ring (8) from the air valve (22).Lubricate the inner portion of air valve body (19) before assembling the air valve (22).

d. Now assemble the rest of the parts in reverse manner

e. You can also change the gasket (26) for air valve body.

### Bill of Materials for TM12-ANX-REX-AXX Pumps

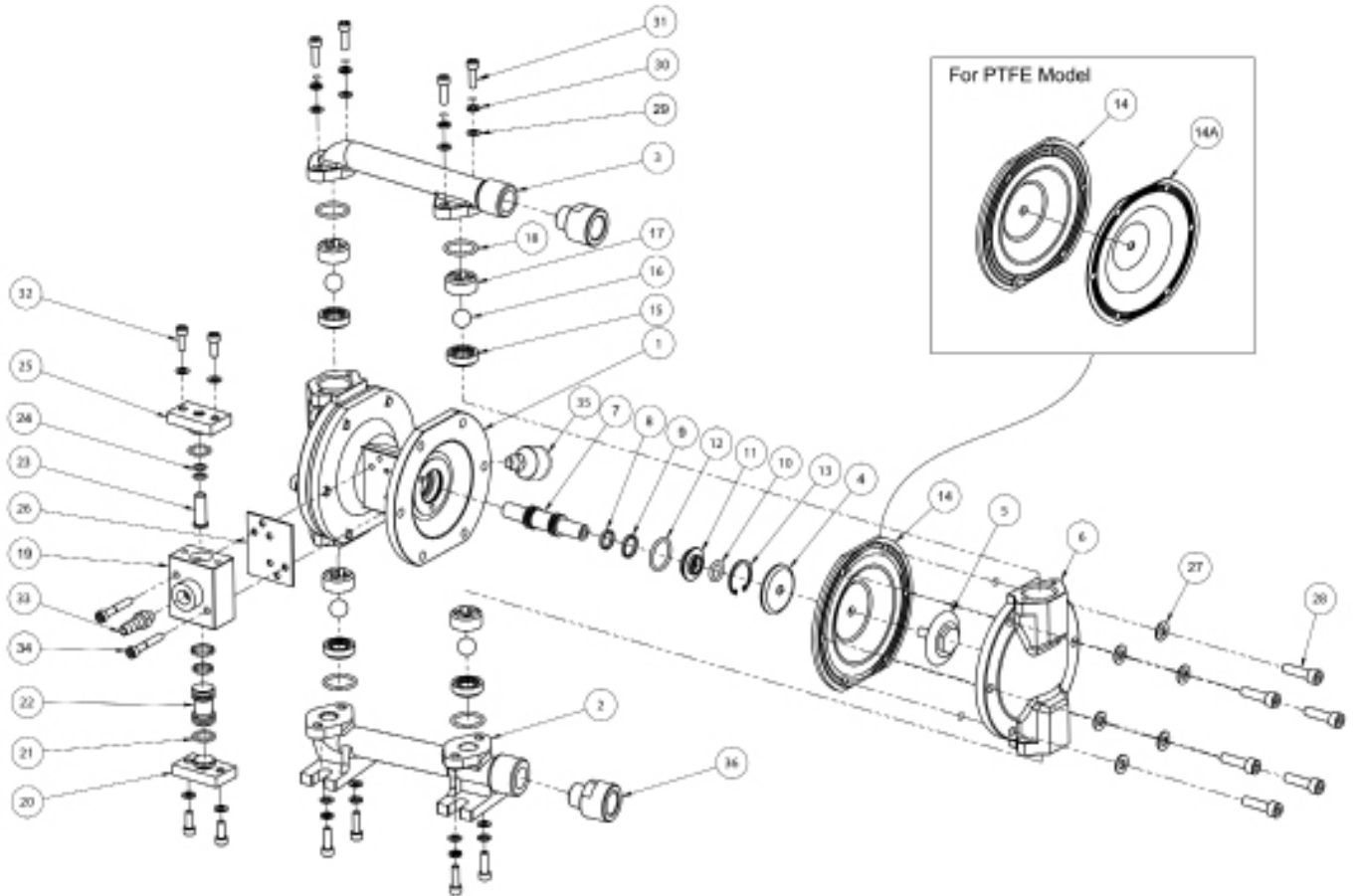
Illustration Number	Part Number	Description	Qty
1	171 10 05	COMBINED SHAFT HOUSING	1
2	171 10 01	INLET BASE	1
3	171 10 03	OUTLET	1
4	171 20 07	INNER FLANGE	2
5	171 10 04	OUTER FLANGE WITH BOLT	2
6	171 10 02	OUTER CHAMBER SIDE	2
7	171 21 08	SHAFT	1
8	171 40 42	O RING	4
9	171 36 28T	O RING	4
10	171 40 40	O RING	2
11	171 25 14	COLLAR	2
12	101 40 03	O RING	2
13	050 90 23	INT CIRCLIP	2
14	171 40 37N	DIAPHRAGM (NEOPRENE)	2
15	171 20 16A	VALVE SEAT (BOTTOM)	4
16	171 36 31T	VALVE BALL (PTFE)	4
17	171 20 17A	VALVE SEAT (CROSS)	4
18	171 40 39N	O RING	4
19	171 15 41	AIR VALVE BODY	1
20	171 10 46BL	END CAP (LOWER)	1
21	171 40 34	O RING	2
22	171 40 36	NYLON AIR VALVE	1
23	171 25 11	PIN FOR UPPER END CAP	1
24	171 40 35	O RING	2
25	171 10 45BL	END CAP (UPPER)	1
26	171 40 38	GASKET	1
27	171 90 50	PLAIN WASHER	12
28	200 90 68	ALLEN BOLT	12
29	500 90 48	SPRING WASHER	8
30	298 00 90	PLAIN WASHER	12
31	500 90 41	ALLEN BOLT	8
32	500 90 51	ALLEN BOLT	4
33	171 25 12	AIR INLET NIPPLE	1
34	171 90 51	ALLEN BOLT	2
35	803 98 01	SILENCER	1

**Note.**

Above all parts are common for (NPT), (BSPT) & (BSPP) Pumps.  
 The additional parts for (BSPT) & (BSPP) pumps model are as Below

ITEM NO	PART NUMBER	DESCRIPTION	BSPT MODELS	BSPP MODELS
36	171 10 06	ADAPTOR 1/2" BSPT(F)	2	-
36	171 10 10	ADAPTOR 1/2" BSPP(F)	-	2

## Exploded View for TM 12 Pump



### Bill of Materials for TM12-ABX-REX-AXX Pumps

Illustration Number	Part Number	Description	Qty
1	171 10 05	COMBINED SHAFT HOUSING	1
2	171 10 01	INLET BASE	1
3	171 10 03	OUTLET	1
4	171 20 07	INNER FLANGE	2
5	171 10 04	OUTER FLANGE WITH BOLT	2
6	171 10 02	OUTER CHAMBER SIDE	2
7	171 21 08	SHAFT	1
8	171 40 42	O RING	4
9	171 36 28T	O RING	4
10	171 40 40	O RING	2
11	171 25 14	COLLAR	2
12	101 40 03	O RING	2
13	050 90 23	INT CIRCLIP	2
14	171 40 37B	DIAPHRAGM (BUNA)	2
15	171 20 16A	VALVE SEAT (BOTTOM)	4
16	171 36 31T	VALVE BALL (PTFE)	4
17	171 20 17A	VALVE SEAT (CROSS)	4
18	171 40 39	O RING	4
19	171 15 41	AIR VALVE BODY	1
20	171 10 46BL	END CAP (LOWER)	1
21	171 40 34	O RING	2
22	171 40 36	NYLON AIR VALVE	1
23	171 25 11	PIN FOR UPPER END CAP	1
24	171 40 35	O RING	2
25	171 10 45BL	END CAP (UPPER)	1
26	171 40 38	GASKET	1
27	171 90 50	PLAIN WASHER	12
28	200 90 68	ALLEN BOLT	12
29	500 90 48	SPRING WASHER	8
30	298 00 90	PLAIN WASHER	12
31	500 90 41	ALLEN BOLT	8
32	500 90 51	ALLEN BOLT	4
33	171 25 12	AIR INLET NIPPLE	1
34	171 90 51	ALLEN BOLT	2
35	803 98 01	SILENCER	1

**Note.**

Above all parts are common for (NPT), (BSPT) & (BSPP) Pumps.  
 The additional parts for (BSPT) & BP (BSPP) pumps model are as below

ITEM NO	PART NUMBER	DESCRIPTION	BSPT MODELS	BSPP MODELS
36	171 10 06	ADAPTOR 1/2" BSPT(F)	2	-
36	171 10 10	ADAPTOR 1/2" BSPP(F)	-	2

### Bill of Materials for TM12-ATN-REX-AXX Pumps

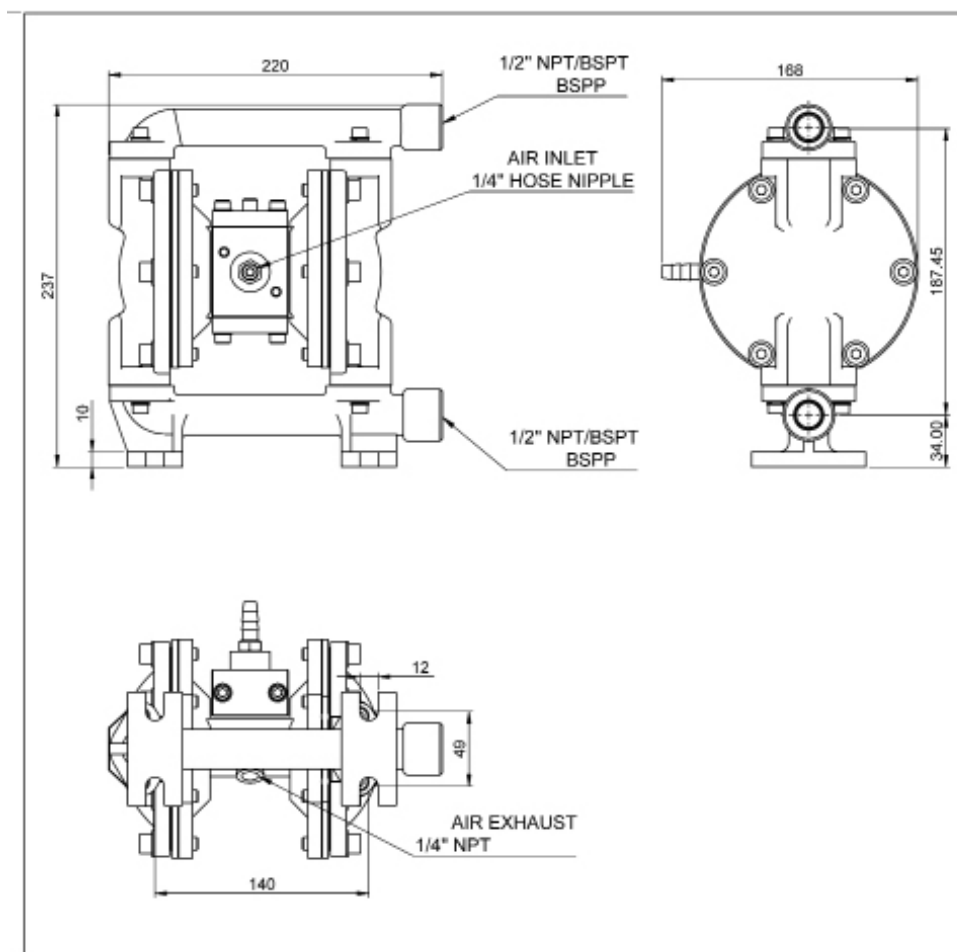
Illustration Number	Part Number	Description	Qty
1	171 10 05	COMBINED SHAFT HOUSING	1
2	171 10 01	INLET BASE	1
3	171 10 03	OUTLET	1
4	171 20 07	INNER FLANGE	2
5	171 10 04	OUTER FLANGE WITH BOLT	2
6	171 10 02	OUTER CHAMBER SIDE	2
7	171 21 08	SHAFT	1
8	171 40 42	O RING	4
9	171 36 28T	O RING	4
10	171 40 40	O RING	2
11	171 25 14	COLLAR	2
12	101 40 03	O RING	2
13	050 90 23	INT CIRCLIP	2
14	171 40 37N	DIAPHRAGM (NEOPRENE)	2
14A	171 36 30T	DIAPHRAGM (PTFE)	2
15	171 20 16A	VALVE SEAT (BOTTOM)	4
16	171 36 31T	VALVE BALL (PTFE)	4
17	171 20 17A	VALVE SEAT (CROSS)	4
18	171 36 29T	ENCL. O RING	4
19	171 15 41	AIR VALVE BODY	1
20	171 10 46BL	END CAP (LOWER)	1
21	171 40 34	O RING	2
22	171 40 36	NYLON AIR VALVE	1
23	171 25 11	PIN FOR UPPER END CAP	1
24	171 40 35	O RING	2
25	171 10 45BL	END CAP (UPPER)	1
26	171 40 38	GASKET	1
27	171 90 50	PLAIN WASHER	12
28	200 90 68	ALLEN BOLT	12
29	500 90 48	SPRING WASHER	8
30	298 00 90	PLAIN WASHER	12
31	500 90 41	ALLEN BOLT	8
32	500 90 51	ALLEN BOLT	4
33	171 25 12	AIR INLET NIPPLE	1
34	171 90 51	ALLEN BOLT	2
35	803 98 01	SILENCER	1

**Note.**

Above all parts are common for (NPT), (BSPT) & (BSPP) Pumps.  
 The additional parts for (BSPT) & (BSPP) pumps model are as below.

ITEM NO	PART NUMBER	DESCRIPTION	BSPT MODELS	BSPP MODELS
36	171 10 06	ADAPTOR 1/2" BSPT(F)	2	-
36	171 10 10	ADAPTOR 1/2" BSPP(F)	-	2

### Dimensional Data



TM 12 ALX

### Air Valve Replacement Kits

Replacement KIT Ordering No	Suitable for
171 97 41	NPT Fitted ALX Pumps With Any Diaphragm Variant BSPT Fitted ALX Pumps With Any Diaphragm Variant BSPP Fitted ALX Pumps With Any Diaphragm Variant

### Repair Kits

Repair KIT Ordering No	Suitable for
171 97 52	TM 12 ANX
171 97 52B	TM 12 ABX
171 97 52T	TM 12 ATN

## Repair and Replacement Kits

Illu. No.	Part No.	Description	ALX Pumps			
			1719741 replacement Kit	Repair Kit 1719752B	Repair Kit 1719752	Repair Kit 1719752T
8	171 40 42	O RING	4	4	4	4
9	171 36 28T	O RING	4	4	4	4
14	171 40 37B	DIAPHRAGM (BUNA)		2		
14	171 40 37N	DIAPHRAGM (NEOPRENE)			2	2
14A	171 36 30T	DIAPHRAGM (PTFE)				2
15	171 20 16A	VALVE SEAT (BOTTOM)		4	4	4
16	171 36 31T	VALVE BALL (PTFE)		4	4	4
17	171 20 17A	VALVE SEAT (CROSS)		4	4	4
18	171 40 39	O RING		4		
18	171 40 39N	O RING			4	
18	171 36 29T	ENCL. O RING				4
19	171 15 41	AIR VALVE BODY	1			
20	171 10 46BL	END CAP (LOWER)	1	1	1	1
21	171 40 34	O RING	2	2	2	2
22	171 40 36	NYLON AIR VALVE	1	1	1	1
23	171 25 11	PIN FOR UPPER END CAP	1	1	1	1
24	171 40 35	O RING	2	2	2	2
25	171 10 45BL	END CAP (UPPER)	1	1	1	1
26	171 40 38	GASKET	1	1	1	1
30	298 00 90	PLAIN WASHER	4	4	4	4
31	500 90 41	ALLEN BOLT				
32	500 90 51	ALLEN BOLT	4	4	4	4
33	171 25 12	AIR INLET NIPPLE	1			
34	171 90 51	ALLEN BOLT	2			

## EU DECLARATION OF CONFORMITY

### Object of declaration

**PRODUCT** : AIR OPERATED DOUBLE DIAPHRAGM PUMP

**MODEL** : TM 12 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 Inspekcja (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 :



### SUMMARY FOR THE ATEX RATING FOR TERYAIR AODD MODELS

Pump Size	Series	Wetted Materials	Center Section	Diphragm Materials	ATEX Rating
06 (1/4")	TP	Aluminium	Aluminium	Neoprene	II 2 GD Ex h IIC T6 Gb Ex h IIIC T85°C Db (IP65)
				Buna-N	
				Sentoprene	II 2 GD Ex h IIC T5 Gb Ex h IIIC T100°C Db (IP65)
				PTFE	
		Stainless Steel	Stainless Steel	Neoprene	II 2 GD Ex h IIC T6 Gb Ex h IIIC T85°C Db <b>I M2 Ex h I Mb (IP65)</b>
				Buna-N	
				Sentoprene	II 2 GD Ex h IIC T5 Gb Ex h IIIC T100°C Db (IP65) <b>I M2 Ex h I Mb (IP65)</b>
				PTFE	
12 (1/2")	TM / TP	Aluminium	Aluminium	Neoprene	II 2 GD Ex h IIC T6 Gb Ex h IIIC T85°C Db (IP65)
				Buna-N	
				Sentoprene	II 2 GD Ex h IIC T5 Gb Ex h IIIC T100°C Db (IP65)
				PTFE	
	TP	Stainless Steel	Stainless Steel	Neoprene	II 2 GD Ex h IIC T6 Gb Ex h IIIC T85°C Db <b>I M2 Ex h I Mb (IP65)</b>
				Buna-N	
				Sentoprene	II 2 GD Ex h IIC T5 Gb Ex h IIIC T100°C Db (IP65) <b>I M2 Ex h I Mb (IP65)</b>
				PTFE	
25 (1")	TM / TP	Aluminium / Stainless Steel	Aluminium	Neoprene	II 2 GD Ex h IIC T6 Gb Ex h IIIC T85°C Db (IP65)
				Buna-N	
				Sentoprene	II 2 GD Ex h IIC T5 Gb Ex h IIIC T100°C Db (IP65)
				PTFE	
40 (1-1/2")	TM / TP	Aluminium / Stainless Steel	Aluminium	Neoprene	II 2 GD Ex h IIC T6 Gb Ex h IIIC T85°C Db (IP65)
				Buna-N	
				Sentoprene	II 2 GD Ex h IIC T5 Gb Ex h IIIC T100°C Db (IP65)
				PTFE	
50 (2")	TM / TP	Aluminium / Stainless Steel	Aluminium	Neoprene	II 2 GD Ex h IIC T6 Gb Ex h IIIC T85°C Db (IP65)
				Buna-N	
				Sentoprene	II 2 GD Ex h IIC T5 Gb Ex h IIIC T100°C Db (IP65)
				PTFE	
75 (3")	TM / TP	Aluminium	Aluminium	Neoprene	II 2 GD Ex h IIC T6 Gb Ex h IIIC T85°C Db (IP65)
				Buna-N	
				Sentoprene	II 2 GD Ex h IIC T5 Gb Ex h IIIC T100°C Db (IP65)
				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 : TM12 Series  
Serial Number :  
Dated :

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

This page is intentionally  
Left blank.