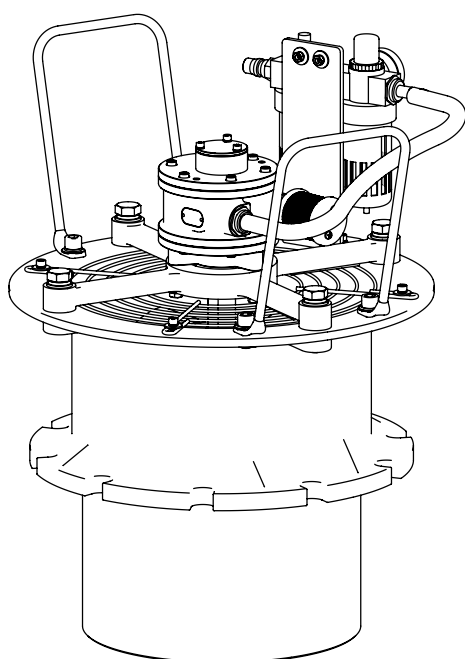
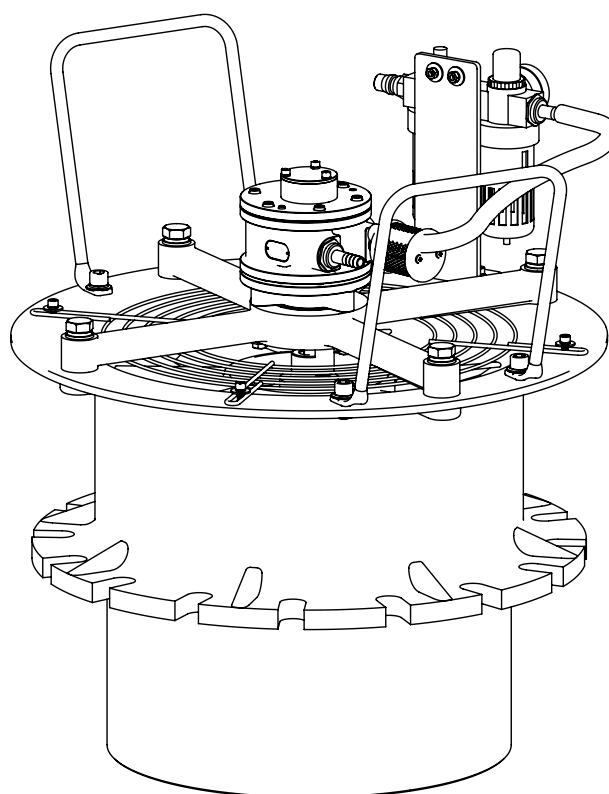


## Operation and Maintenance Guide



PTF-300



PTF-400

Models	Descriptions	IMPA Number
PTF300	Pneumatic driven fan, 300mm diameter	59 14 46
PTF400	Pneumatic driven fan, 400mm diameter	59 14 47

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.

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5	Disassembly and Re-assembly
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## Technical Data

Product Reference	PTF-300	PTF-400
IMPA Code	59 14 46	59 14 47
Outlet Bore diameter in mm	300	400
Air Flow Max.	130 m <sup>3</sup> /min	210 m <sup>3</sup> /min
Recommended Air Pressure	6.2 Bar (90 psi)	6.2 Bar (90 psi)
Air consumption	40m <sup>3</sup> /hr	50m <sup>3</sup> /hr
Recommended Air Hose size	1/2"	1/2"
Air inlet and outlet conn.	1/2" NPT	1/2" NPT
Weight	32 Kgs	42 Kgs

## Intended And Prohibitive Use

### Intended Use

Teryair Air Driven Fans are ideal for releasing gases from tanks. They are compressed air operated driven. This product have wide applicability, and are ideal for expelling poisonous or other harmful gases from enclosed areas such as tanks, holds etc.

### Prohibitive use

Use by an underage, untrained or person who is under the influence of drugs or alcohol. Use with non genuine spare parts or accessories is prohibited Use by an underage, untrained person. Use with non genuine spare parts or accessories is prohibited

with the instructions in this manual before attempting to operate the equipment. Ensure that job site is clear of bystanders. Ensure that no loose items of clothing etc come in the vicinity of the fan



### Caution

Use only genuine Teryair or Teryair approved accessories.



### Warning

Safety and protective clothing, eyewear, head-gear, ear protection, gloves and footwear to be worn during operation of this equipment. The equipment must never be operated without the safety grill in place.



### Warning

This equipment is not designed for use in an explosive environment.

## Safety Instructions

Following symbols are used through out this manual.



### Warning

If not followed could cause personal injuries



### Caution

If not followed could result in damage to equipment.



### Warning

This manual must be read and the operating instructions carefully followed.



### Warning.

Operators under 18 not allowed to operate this Vane motor operators must be made familiar

### Safety checks before and after operating the fan

- Check safety wear mentioned earlier in warnings.
- Check Hose fittings are secure
- Do not wear loose clothing etc around the fan.
- Make sure the safety grill is secure on the fan.
- Connect supply and exit hoses correctly.
- Place the fan as desired and turn on air supply gradually.

## Operating instructions

### Un packing

Identify all the components as below, contact your supplier if any parts are missing or damaged.

This illustration is for identification only.



1. Factory assembled unit main product casing, air motor, turbine impeller, 4 bolts and 4 washers for handle fitment and 2 bolts and 2 washers for FRL fitment.
2. Handle, 2 nos.
3. FRL with mounting plate and hose
4. Adaptor 1 No.

### Lubrication

- At the start and end of each shift make sure to lubricate the bearings. Refer view for bearing lubrication.

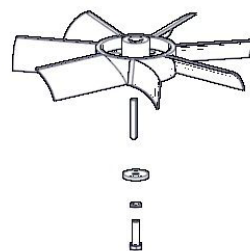
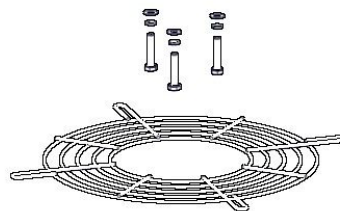
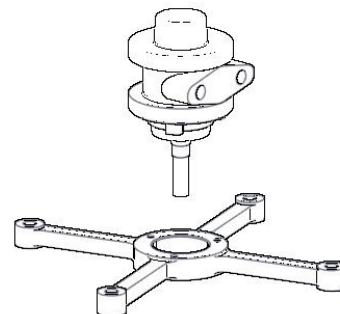
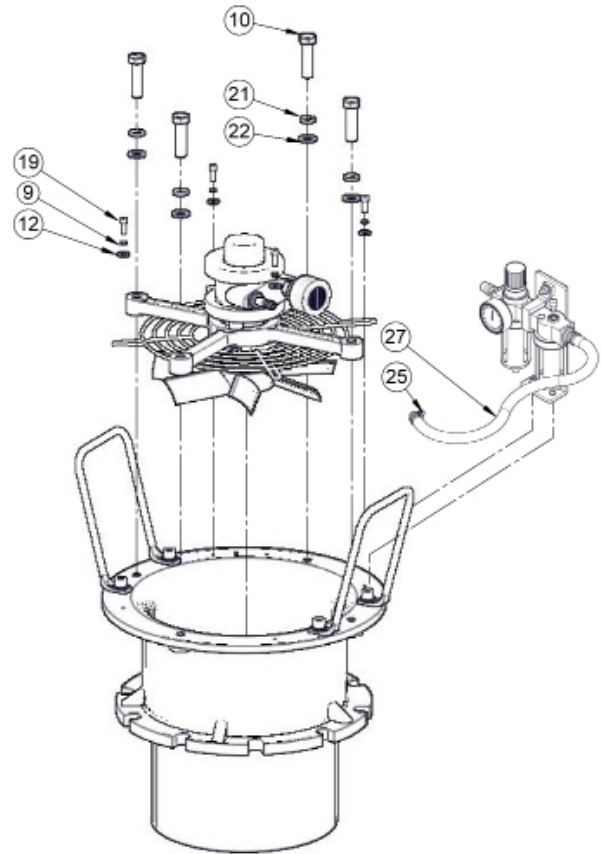
## Installation Instructions

- Invert the casing with air motor assembly (1) and fit the adaptor (4).
- Now invert it back in original position and fit the FRL with mounting plate (3) on the casing.
- Now loosen the hose clip by the flat screw driver on the open end of hose and fit the hose on the nipple provided on the air motor. Tighten the hose clip afterwards.
- Now fix the handles respectively with Bolt , spring washer and plain washer.

## Disassembly and Re-assembly

### Turbine Fan Dis-Assembly

- a. Loose the Hose Clips (27) from Hose (25). Now remove the Hose (25) from the Hose Connector (23). (Refer Detail B)
- b. Unscrew Allen Bolt (13) with Spring Washer (9) and Plain Washer (16) to remove FRL Unit Assembly (28) with FRL Mounting Plate (24).
- c. Unscrew Allen bolt (19) with Spring Washer (9) and Plain Washer (12) from Casing (4) to Loosen the Grill (6). (Refer Detail A)
- d. Now unscrew Hex Bolt (10) with Spring Washer (21) and Plain Washer (22) from Casing and lift the fan assembly with the Motor Frame (3) and Grill (6).
- e. Hold the Turbine Fan (4) and unscrew Allen Bolts (11), Spring Washer (15), Plain Washer (17) respectively.
- f. Now tap the back of the Turbine fan (10) gently to remove it. Secure the key (14) and replace it with new one and store it properly. (If found damaged)
- g. Now remove the Grill (6).
- h. Unscrew Allen Bolt (32) and Hex Nut (33) to remove Extension Shaft (30) from vane Motor

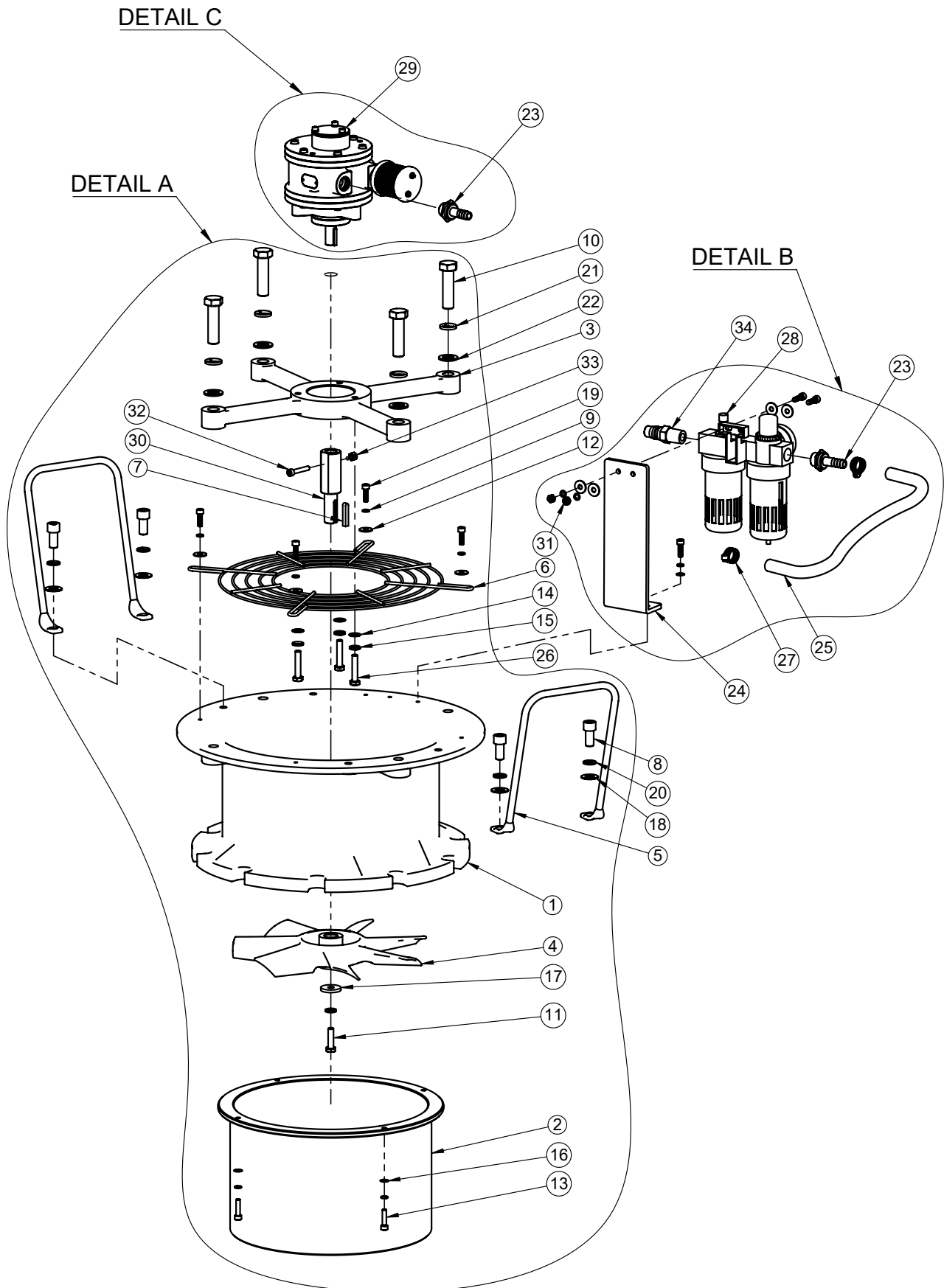


## Vane Motor Dis-assembly

(Refer Detail C and BOM on Page No.)

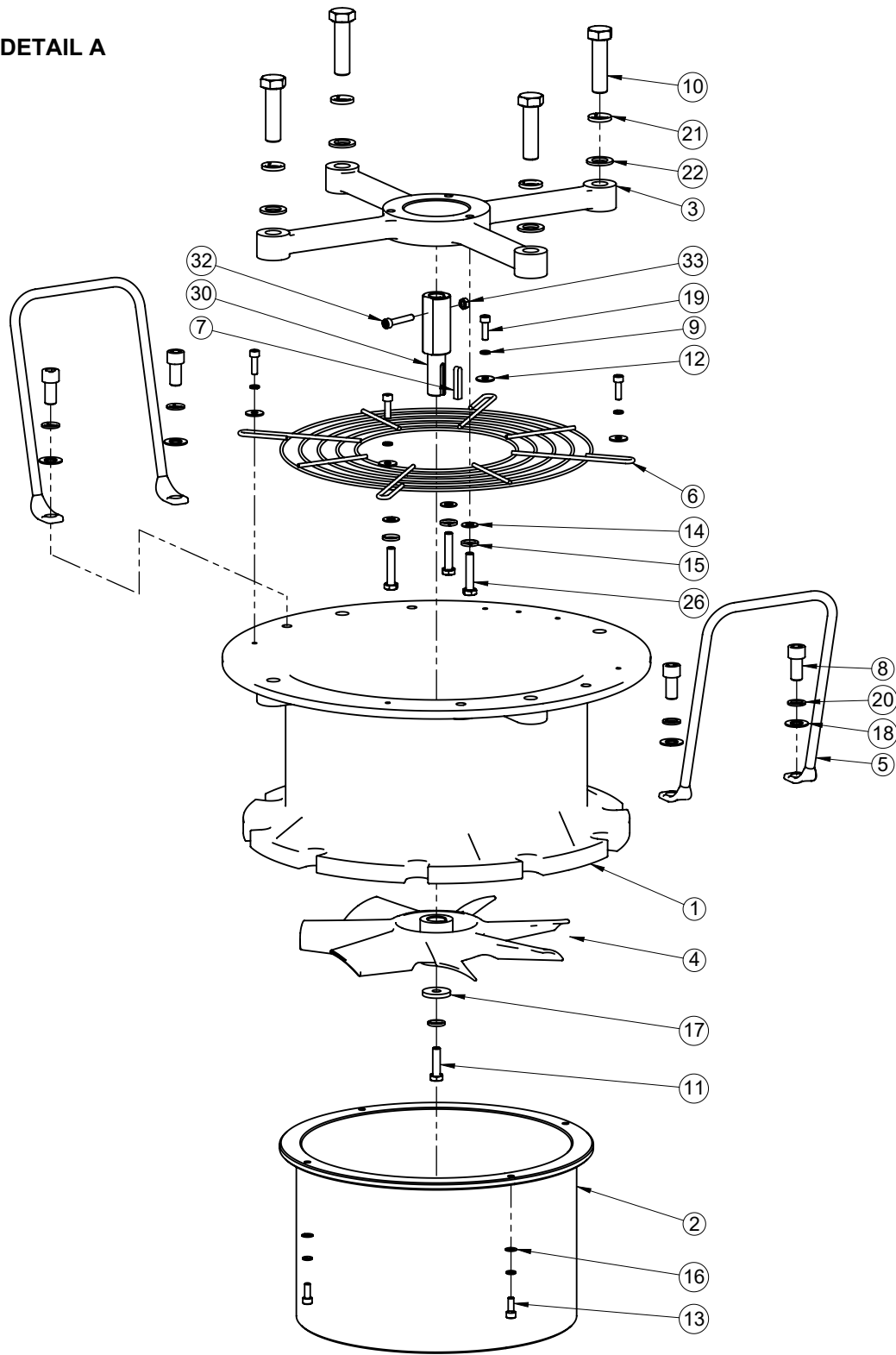
- a. Unscrew Allen Bolts(11) with Spring Washer (19) from Bearing Cap (5) from Rear Flange (3). Remove O-ring (9) from Bearing Cap (5) and replace with new one (if found damaged).
- b. Unscrew Allen Bolts (14) with Spring Washer (18) from Rear Flange (3) & replace Shim (17) with new one (if found damaged).
- c. Now remove Ball bearing (7) from Rear Flange (3) using mallet and replace it with new one (if worn-out).
- d. Now remove the Rotor Shaft (4) with Rotor Blades (15) from the Motor Housing (1), Now remove the Rotor Blades (15), Leaf Spring (20) & Pin (17) from Rotor Shaft (4) and replace them with new ones (if found damaged).
- e. To remove the Front Bearing Cap (6) from Front Flange (2), unscrew CSK Bolt (21) from it. The O-ring (9) and Oil Seal (10) can be now removed from Front Bearing Cap (6). Replace with new ones (if found damaged).
- f. Now remove Ball bearing (7) from Front Flange (2) by using puller. Replace it with new ones (if worn-out).
- g. After installing bearing & seal then install the Front Bearing Cap (6) on Front Flange (2) by fastening CSK Bolts (21).
- h. Now insert Pins (16) into the Rotor Shaft's (4) through holes (use small amount of grease to prevent Pins to fall during assembly). Now insert the Rotor Shaft (4) into the Motor Housing (1) and Front Flange bearing using press/mallet precisely and ensure that rotor face is not above the housing face.
- i. Now place the Leaf Spring (20) on Rotor Blades (15), ensure that leaf spring one end is inside the slot of Rotor Blade (15).
- j. Insert the above blade assembly one at a time into Rotor Shaft (4).
- k. Now follow the above steps 'c' & 'b' in reverse manner to assemble the motor.
- l. Now after assembly, ensure that Rotor Shaft (4) is rotating smoothly inside, else tap lightly on the rotor shaft front end or rear end until you obtain smooth rotation of Rotor Shaft (4).
- m. Once smooth rotation is achieved follow the step 'a' in reverse manner and complete the assembly.

## Exploded View for PTF - 300 & PTF - 400





Exploded View Detail-A for PTF - 300 & PTF - 400



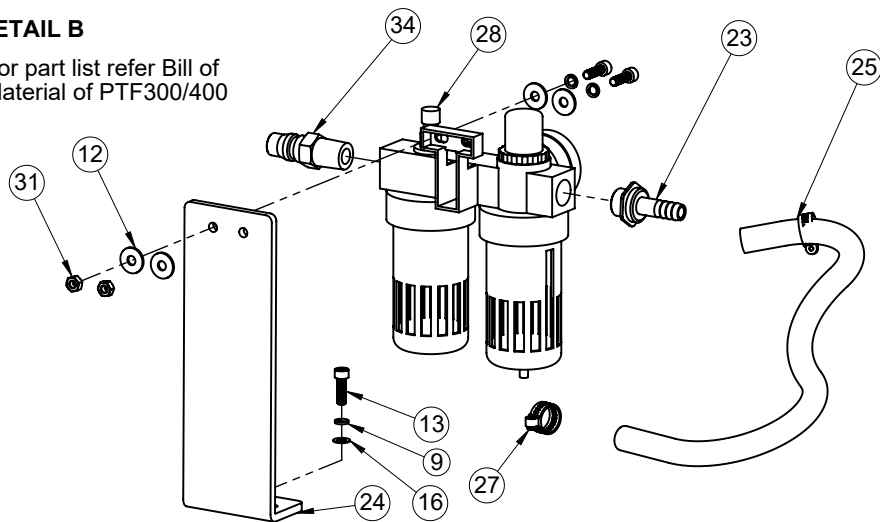
Note: For part list refer Bill of Material of PTF300/400



## Exploded View Detail-B and C for PTF - 300 & PTF - 400

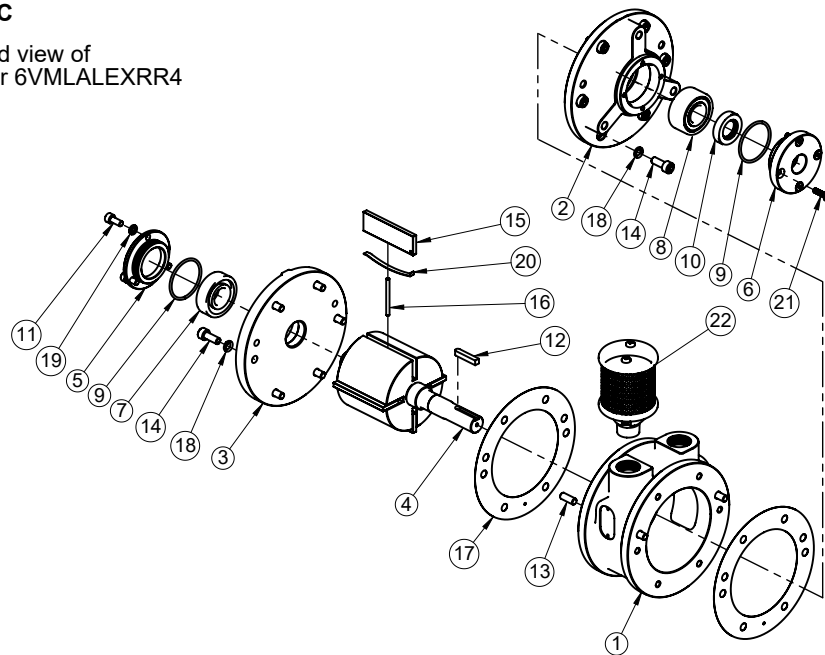
### DETAIL B

For part list refer Bill of Material of PTF300/400



### DETAIL C

Exploded view of Air Motor 6VMLALEXRR4



### Bill of Materials for Air Motor 6VMLALEXRR4

Illu No	Description	Part No	Qty
1	MOTOR HOUSING	8050501	1
2	FRONT FLANGE	8050502	1
3	REAR FLANGE	8050503	1
4	ROTOR SHAFT	8052101	1
5	REAR BEARING CAP	8052102	1
6	FRONT BEARING CAP	8052103	1
7	REAR BALL BEARING	8055002	1
8	FRONT BALL BEARING	1995035	1
9	O' RING	8054001	2
10	OIL SEAL	8056001	1
11	ALLEN BOLT	5509028	3

Illu No	Description	Part No	Qty
12	ONE SIDE KEY	5672201	1
13	DOWEL PIN	8049004	4
14	ALLEN BOLT	8049003	12
15	ROTOR BLADE	8053902	4
16	DOWEL PIN	8052108	2
17	SHIM	8053701	2
18	SPRING WASHER	5369004	12
19	SPRING WASHER	8059001	6
20	LEAF SPRING	8055102	4
21	ALLEN C'SK	8059004	4
22	SILENCER	8049801	1

**Bill of Materials for PTF-300 / PTF-400**

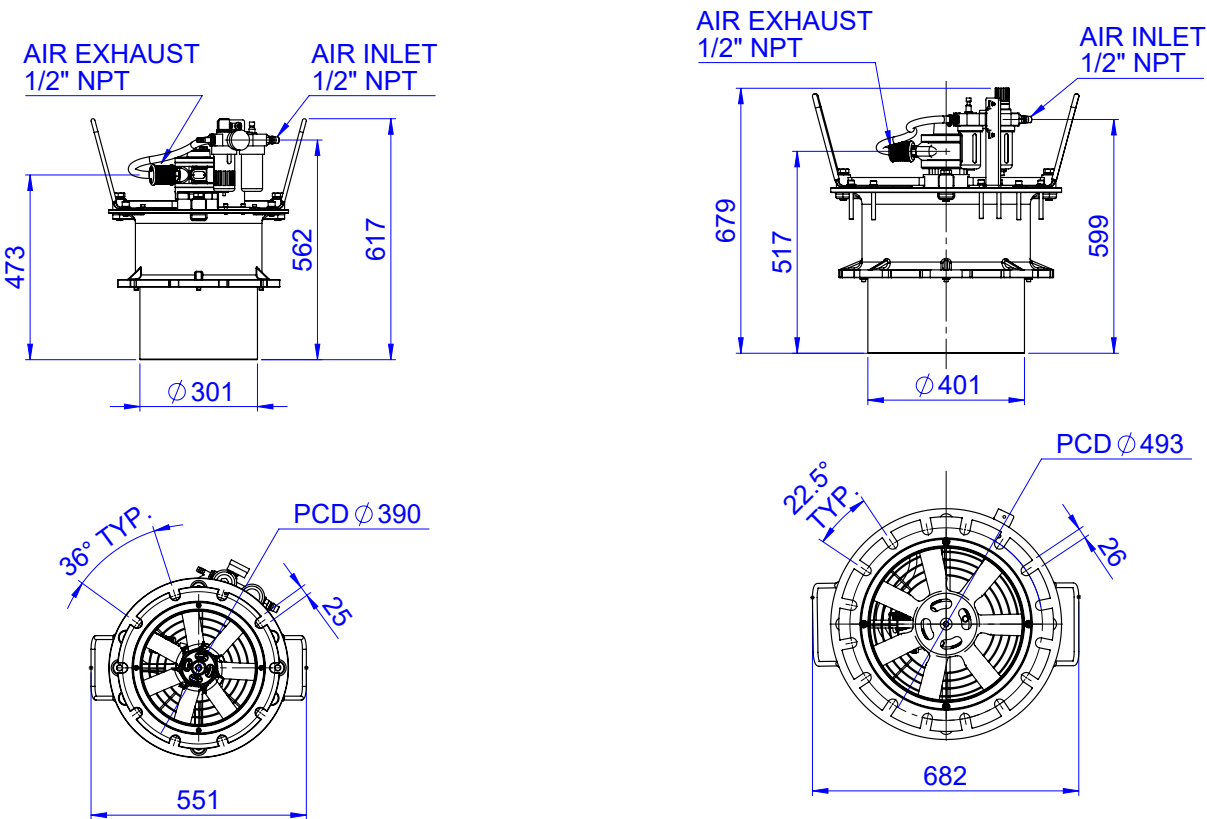
Sr.No	Description	Part Number	PTF-300	PTF-400
1	CASING FOR PTF300	801 10 01	1	-
1	CASING FOR PTF400	802 10 01	-	1
2	ADAPTOR FOR PTF300	536 10 02	1	-
2	ADAPTOR FOR PTF400	537 10 02	-	1
3	MOTOR FRAME FOR PTF300	801 10 02	1	-
3	MOTOR FRAME FOR PTF400	802 10 02	-	1
4	TURBINE FAN FOR PTF300	536 10 07	1	-
4	TURBINE FAN FOR PTF400	537 10 04	-	1
5	HANDLE FOR PTF300	536 21 01	2	-
5	HANDLE FOR PTF400	537 21 01	-	2
6	GRILL FOR PTF300	536 21 02	1	-
6	GRILL FOR PTF400	537 21 02	-	1
7	KEY FOR TURBINE FAN	536 31 01	1	1
8	ALLEN BOLT	536 90 02	4	4
9	SPRING WASHER	536 90 04	10	10
10	HEX BOLT	536 90 05	4	-
10	HEX BOLT	537 90 01	-	4
11	HEX BOLT	536 90 06	1	1
12	PLAIN WASHER	536 90 07	8	8
13	ALLEN BOLT	804 90 03	4	4
14	PLAIN WASHER	171 90 50	7	7
15	SPRING WASHER	199 90 47	4	4
16	PLAIN WASHER	298 00 90	6	6
17	PLAIN WASHER.	311 90 11	1	1
18	PLAIN WASHER	342 90 24	4	4
19	ALLEN BOLT	500 90 41	8	8
20	SPRING WASHER	591 90 05	4	4
21	SPRING WASHER	653 90 04	4	4
22	PLAIN WASHER	671 90 06	4	4
23	HOSE CONNECTOR	128 90 10B	2	2
24	FRL MOUNTING PLATE	801 19 01	1	1
25	HOSE	801 40 01	0.6 Mtr.	0.6 Mtr.
26	HEX BOLT	187 90 10	3	-
26	HEX BOLT	187 90 08	-	3
27	HOSE CLIP	808 50 01	2	2
28	FRL UNIT ASSEMBLY	801 50 01	1	1
29	AIR MOTOR	6VMLALEXRR4	1	1
30	EXTENSION SHAFT	801 21 01	1	1
31	HEX NUT	150 40 25	2	2
32	ALLEN BOLT	808 90 03	1	1
33	HEX NUT	298 00 75	1	1
34	400 PM PLUG (OPTIONAL)	35.13.54	1	1

# Repair Kits for PTF-300 & PTF-400

Repair KIT Ordering No	Suitable for
8059701	Suitable for 6 FACE VM variant

**Note:** for detail refer 6VM air motor manual - FF-MM-370 & page 14

## Dimensional Data



## EU DECLARATION OF CONFORMITY

We hereby certify that the Listed Product stipulated below comply with all relevant provisions of the machinery directive (2006/42/EC) and the national laws and regulations adopting this directive.

Description : Pneumatic Turbine Fans

Model Number : PTF Series

Is in conformity with the provisions of the following European Directives: (2006/42/EC) Machinery Safety and Harmonized standards

ISO 12100-1: 2010: Safety of Machinery –general Principles for Design –Risk Assessment and Risk Reduction.

Registered Office : 416 Gundecha Industrial Complex, Akuril Road,  
Kandivali East, Mumbai – 400101, Maharashtra, India.

Web site : [www.teryair.com](http://www.teryair.com)

Works : A-1, Tirupati Udyog Nagar, Sativali Road, Vasai East,  
Palghar – 401208, Maharashtra, India.

CE certification registration no – C E 16831

Issued by – BMQR Certifications Pvt Ltd.  
[www.cemarking-india.com](http://www.cemarking-india.com)

Signed for and on behalf of

TERYAIR EQUIPMENT PVT. LTD.

Place of Issue : Vasai



# 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.

A handwritten signature in blue ink, appearing to read "Pratik", is written over a horizontal line.

Mr. Pratik Tikhande  
Q.A. Manager  
(Company Seal)

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