



WHOLE-HOUSE AIR CLEANER

# TFP

TFP 3000  
TFP 3000 RTO

Installation Manual

## Pre-Installation Notes



### Note

- Due to ongoing research and product development, specifications, ratings, and dimensions are subject to change without notice. Refer to [www.LIFEBREATH.com](http://www.LIFEBREATH.com) for the latest product information.



### Attention

- Do not apply electrical power to the unit until after the completion of the installation (including installation of low voltage control wiring).
- Ensure the installation and wiring is in accordance with CEC, NEC, and local electrical codes.
- Plug the unit into a standard designated (120 VAC) electrical outlet with ground.
- The use of an extension cord with this unit is not recommended. If the installation requires further wiring, have a licensed electrician make all the electrical connections. The recommended circuit is a separate 15 A/120 V circuit.



### Caution

- Before installation, careful consideration must be given to how this system will operate if connected to any other piece of mechanical equipment, i.e. a forced air furnace or air handler, operating at a higher static. After installation, the compatibility of the two pieces of equipment must be confirmed, by measuring the airflows of the HRV, by using the balancing procedure found in this manual. Never install a ventilator in a situation where its normal operation, lack of operation or partial failure may result in the back drafting or improper functioning of vented combustion equipment
- Unit must be installed level to ensure proper condensate drainage. Due to the broad range of installation and operational conditions, consider the possibility of condensation forming on either the unit or connecting ducting. Objects below the installation may be exposed to condensate.
- Do not install control wiring alongside electrical wire.



### Warning

- Disconnect the power from the unit before cleaning or servicing.
- To prevent electrical shock, it is extremely important to confirm the polarity of the power line that is switched by the safety (disconnect) switch. The hot line (black) is the proper line for switching. Use either a voltmeter or test lamp to confirm the absence of a voltage between the disconnect switch and ground (on the cabinet) while the door is open. This procedure must be followed, as dwellings are occasionally wired improperly. Always ensure the proper grounding of the unit.
- Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Installation and service must be performed by a qualified installer or service agency.

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## **1 INTRODUCTION**

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Thank you for choosing Lifebreath as your Indoor Air Quality solution. Our units will provide you and your family healthy indoor air for many years. Please visit <https://www.lifebreath.com/homeowners/warranty/> to register for your warranty.



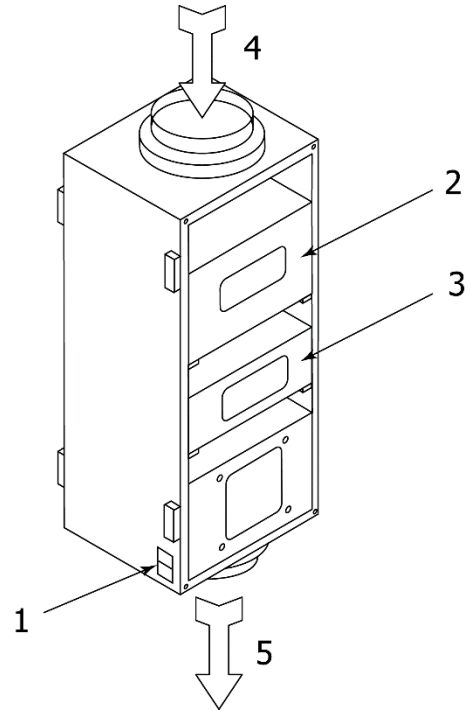
## 2 OVERVIEW

The air in today's homes is 3 to 5 times more polluted than outdoor air creating health problems such as asthma, allergies, headaches, and fatigue for the home's occupants. The TFP air cleaner will remove 99% of these polluting particles from your home creating a clean and comfortable environment for you and your family. It operates continuously at maximum efficiency without the need for constant adjustment and cleanout. The TFP air cleaner is an induced airflow system which requires no electric charge, so no ozone is generated. It cleans the air throughout your home, benefiting all the family, all the time. The TFP air cleaner allows air to circulate freely, without putting any extra load on your air distribution system.

### TFP-3000HEPA

#### Figure Callouts:

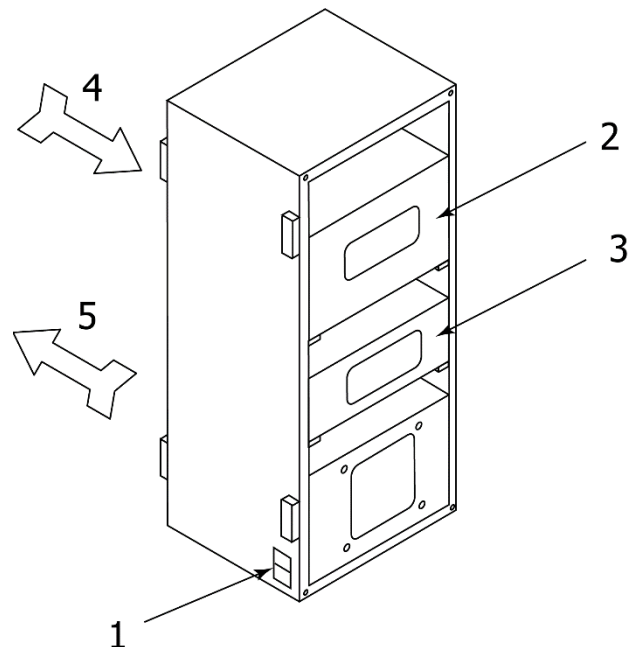
- (1) ON/OFF Switch
- (2) TFP Collector
- (3) HEPA Filter
- (4) Supply Air
- (5) Exhaust Air



### TFP-3000HEPA-RTO

#### Figure Callouts:

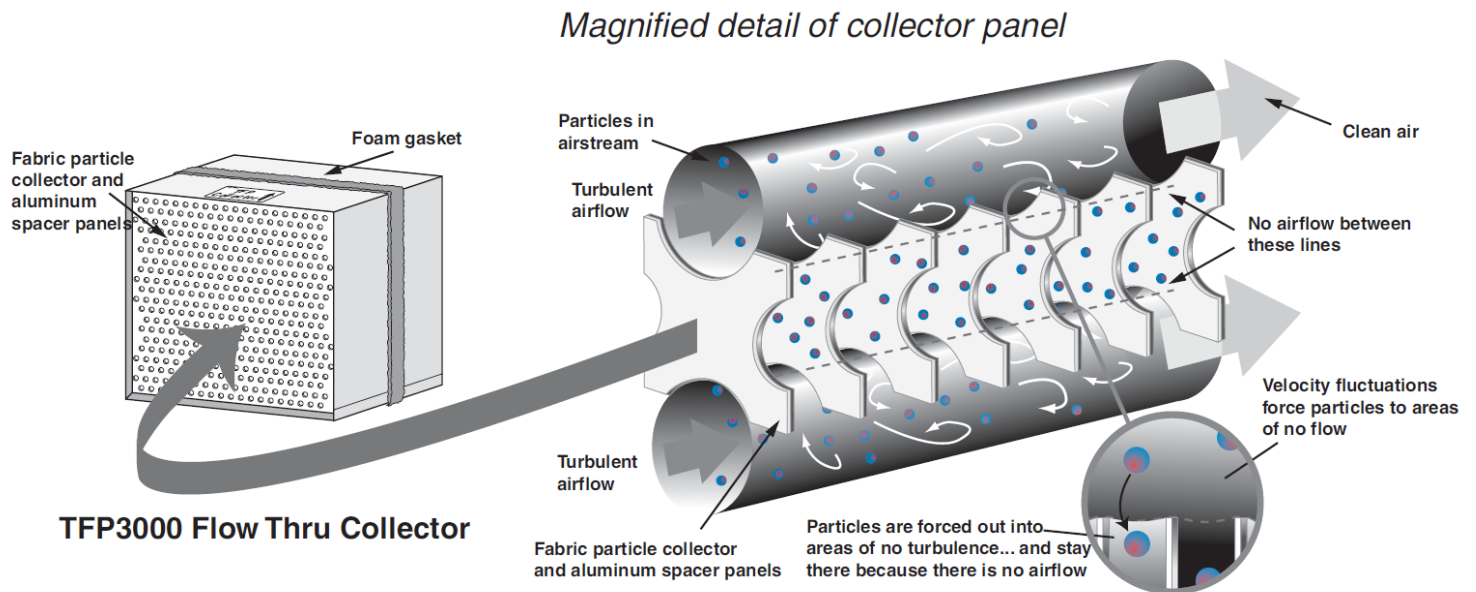
- (1) ON/OFF Switch
- (2) TFP Collector
- (3) HEPA Filter
- (4) Supply Air
- (5) Exhaust Air



### 3 TURBULENT FLOW

The TFP air cleaner uses a Turbulent Flow Precipitation (TFP) collector in combination with High Efficiency Particulate Air (HEPA) filter to remove the millions of dangerous airborne particles in your home. The quiet operating unit has a high efficiency fan motor and a foil faced insulated cabinet that is easy to clean.

#### The Turbulent Flow Precipitator Principle



## 4 OPERATING INSTRUCTIONS AND MAINTENANCE

### Operating Instructions:

- (1) ON/OFF Switch

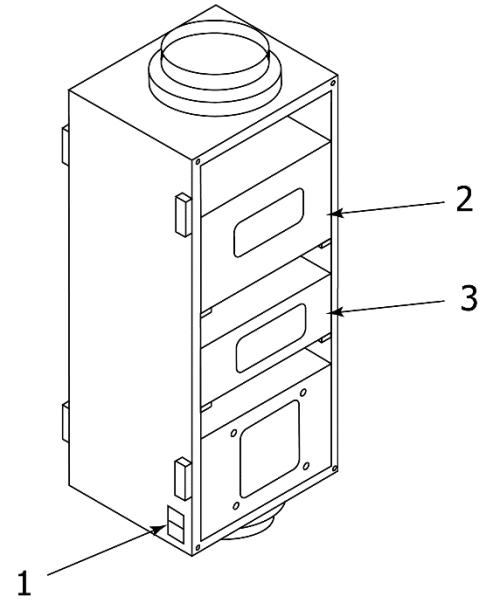
Press the ON/OFF Switch to turn the unit on. It is recommended the unit run continuously to provide the full benefits of particulate removal.

### Maintenance:

- (2) Primary Collector (TFP)
- (3) Secondary Collector (HEPA)

Annual inspection is recommended for cleaning and replacement of the primary and secondary collector's. Discard and replace the collectors when required. See below.

- The primary collector (TFP) is replaced annually
- The secondary collector (HEPA) is replaced every 3 years.



### Replacing the Collectors:

1. Turn off the TFP, furnace, and HRV (if applicable).
2. Open the door.
3. Note the orientation of the directional arrows. Slide both the primary and secondary collectors out. Some discoloration of the collector medium can be expected. If loose dust falls from the collector, it needs to be replaced.
4. Check buildup and do an annual inspection of the overall unit. If your TFP is installed with a forced air heating system, you are still required to use the recommended furnace filter. This may be a good time to inspect this filter as well.
5. Vacuum any dust inside the cabinet or from surrounding areas.
6. Install the primary and secondary collectors into the TFP. Ensure that the directional arrows are used to install them correctly.
7. Close the door.
8. Turn on the TFP, furnace, and HRV (if applicable).



### Caution

- Disconnect all power sources before attempting any service.



### Note

- As each home differs in size, occupancy, location, infiltration rates and homeowner needs, an estimation of when to change the collector is difficult. The TFP collector and HEPA filter life expectancy is based on normal household use.

## 5 INSTALLATION OVERVIEW

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### Location

The TFP air cleaner should be installed in a conditioned space with easy access for maintenance and an annual checkup. A TFP air cleaner is usually installed in a basement area where air flow noise will be negligible to the occupants.

### Materials Supplied

- 1 TFP air cleaner
- Mounting Brackets
- Hanging Straps
- 2 Collar Connections
- 4 Port Collar Screws
- 8 Mounting Bracket Screws
- 4 Pieces of Mounting Foam
- 1 Set of Installation/Operating Instructions
- 1 Wiring Diagram
- 1 Warranty Card

### Optional Installation Kit (99-7TFP) Includes:

- Two 7" Duct Connection Collars
- 12.5' of 7" Duct
- Four Nylon Duct Zip Ties

### Preferred Installation Options (TFP-3000HEPA) – Type 1, Type 2, or Type 3 installation

There are two basic installation options. Select the best method for your needs:

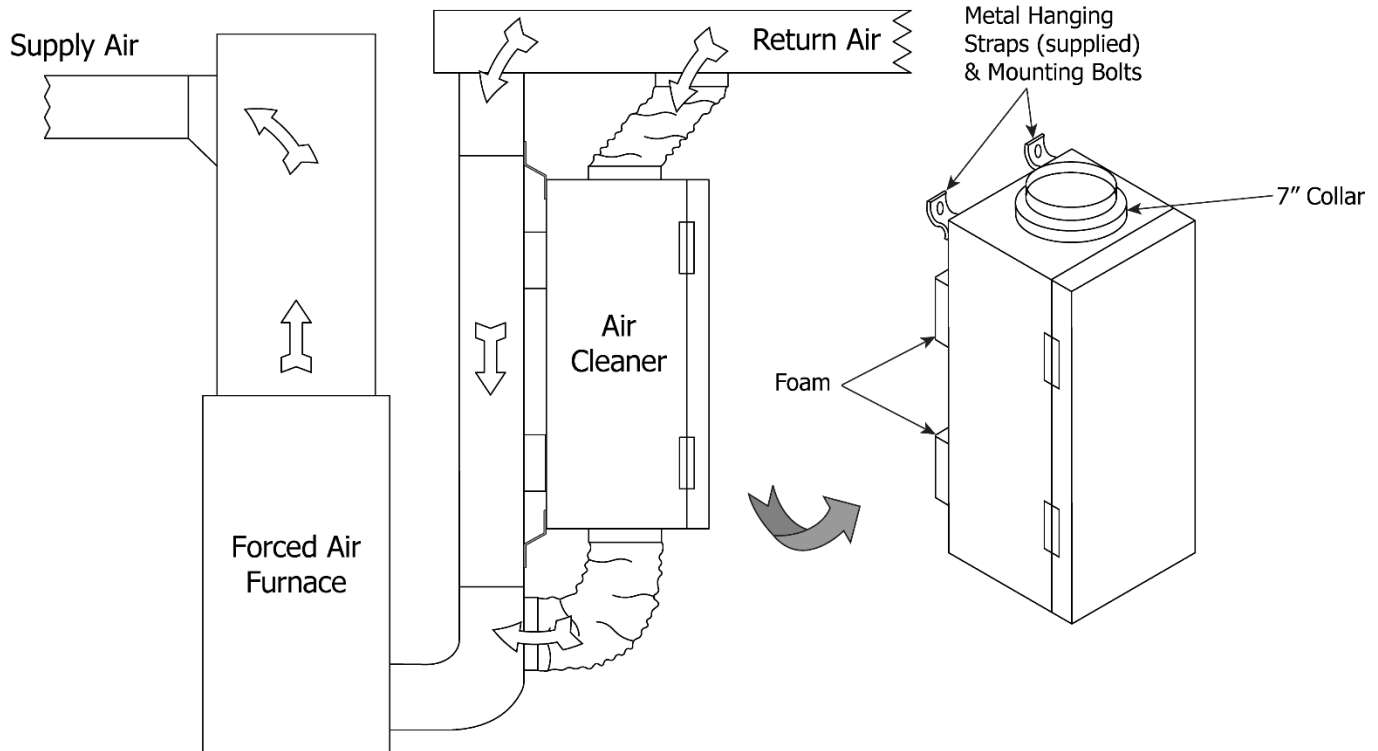
- TFP to a Forced Air System - use Return/Return Method (horizontal or vertical TFP installation)
- TFP to a Fully Dedicated HRV System - recommended when you wish to clean the incoming air from the HRV

### Preferred Installation Options (TFP-3000-RTO) – Return Plenum Installation

- The unit is installed directly on the return plenum of the forced air heating system.

## 6 INSTALLATION (TFP-3000HEPA) – TYPE 1 (OPTION A)

### Option A (Standard Design) - TFP Directly Connected to Force Air Heating System:



1. Use four 8/32" X 3/8" screws and install 7" collar on top and bottom of TFP.
2. Remove protective backing from pieces of foam and stick them to the four corners of the TFP on the side being mounted against the plenum
3. Remove four mounting bolts from the back of the TFP cabinet.
4. Attach top and bottom mounting brackets vertical to the TFP cabinet and reinstall mounting bolts.
5. Lift the TFP into position. Edge of TFP must be positioned on plenum to allow clearance needed for latches.
6. Install the four 8/32" x 3/4" mounting screws through the brackets and into position. Tighten and secure.
7. TFP should now sit securely against the plenum with the foam in between.
8. Cut two 7" holes in the return air plenum. Install ducting to join TFP to the return air plenum.



### Note

- Do not support the weight of the TFP on the duct. Duct must be open and not pinched.
- Due to possible noise transfer through the duct system, it may be preferable in some situations to hang the TFP a short distance from the plenum, and connect by running flexible ducting between them. Four nylon hanging straps are provided for this option.



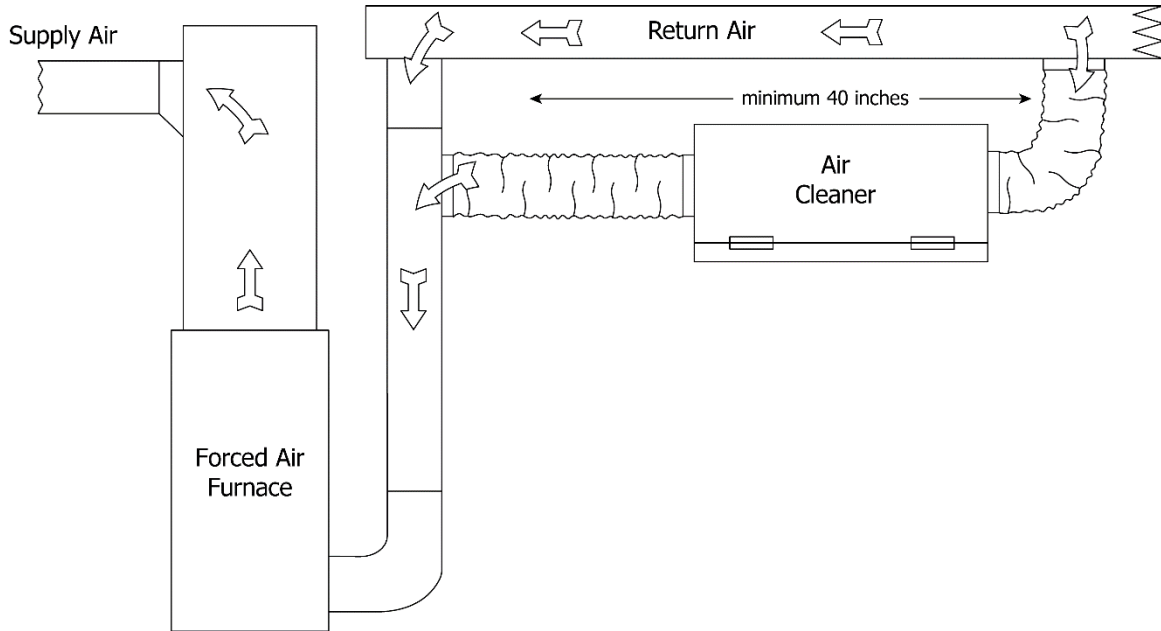
### Warning

- The furnace fan and/or HRV must operate continuously for Type 1 and Type 2 installations. If they do not operate continuously, then interlocking them electrically with the TFP is acceptable. Consult a certified electrician.

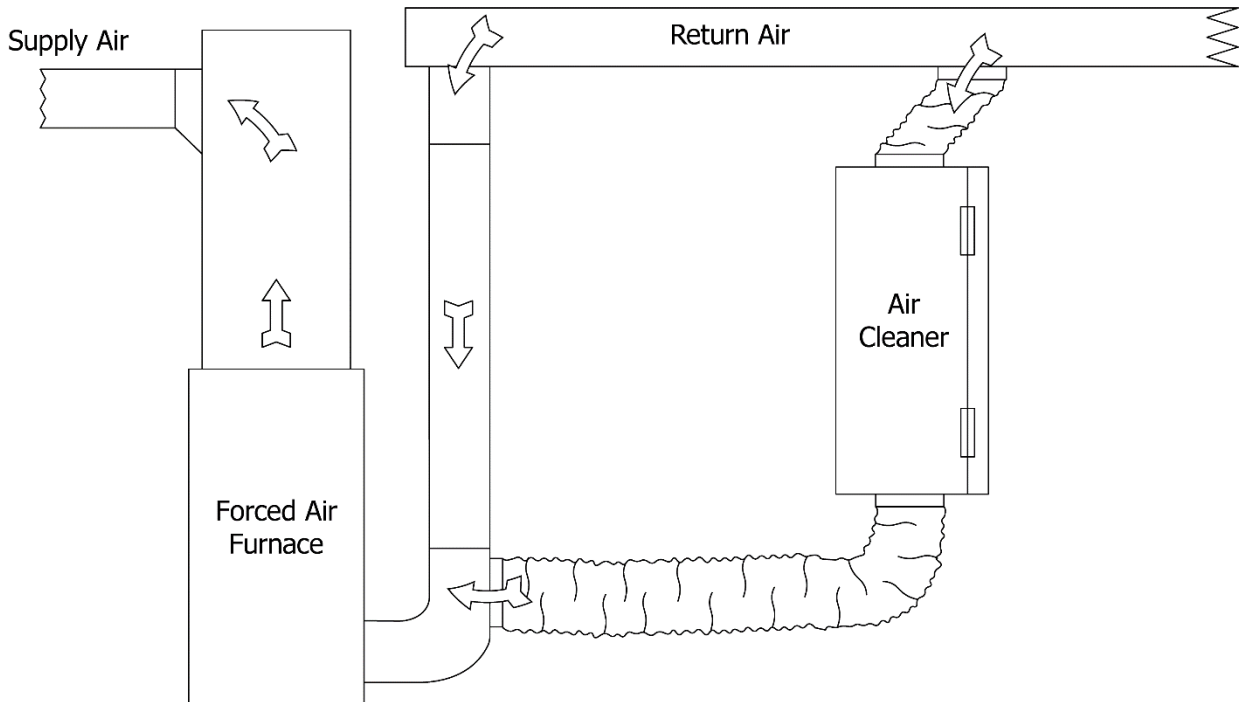


## 7 INSTALLATION (TFP-3000HEPA) – TYPE 1 (OPTION B AND C)

Use Option B when Option A is not practical:



Use Option C when Option A is not practical:

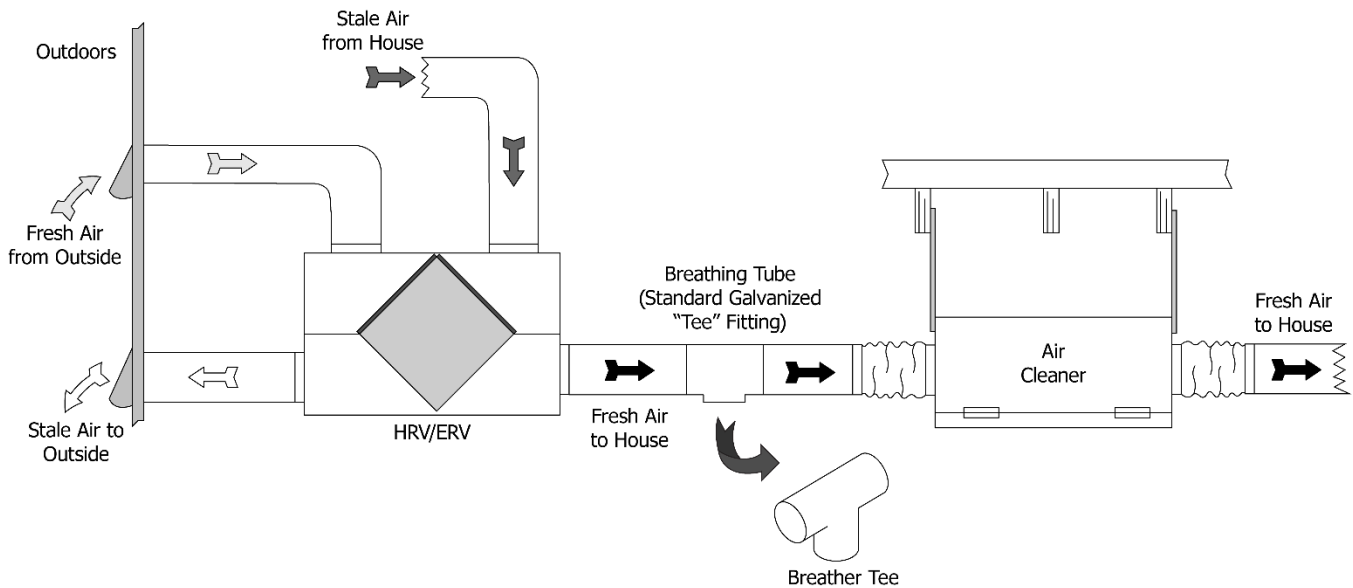


### Warning

- The furnace fan and/or HRV must operate continuously for Type 1 and Type 2 installations. If they do not operate continuously, then interlocking them electrically with the TFP is acceptable. Consult a certified electrician

## 6 INSTALLATION (TFP-3000HEPA) – TYPE 2

### To a Fully dedicated HRV System:



### Location

Locate the TFP in the main trunk of the fresh air to house line, after the HRV/ERV and before any branch lines.

### Mounting

1. Locate and remove the four mounting bolts (used for vertical mounting) from the side of the TFP cabinet.
2. Measure distance between the mounting bolt holes and mark this distance on the floor/header joists at the mounting location.
3. Use either wide head nails or screws and washers to fasten two pairs of hanging straps to the floor joists at the mounting location.
4. Insert the hanging bolts through pre-punched holes in the hanging straps and lift the TFP into position. Tighten and secure bolts.

### Ducting

1. Install two 7" collars (provided) on TFP cabinet with the eight 8/32" X 3/8" sheet metal screws provided.
2. The ducting between the TFP and HRV, and between the TFP and the main supply trunk line to the house, should be kept as straight as possible.
3. A relief opening or breathing T is required to prevent pressure differences.
4. A short piece (1-2 foot) of flexible ducting should be used on both sides of the TFP to reduce vibration and noise transfer.

**NOTE: Please refer to the HRV installation manual for proper ducting of that appliance.**

### Breathing T

The "Breathing T" is designed to assist in neutralizing pressure differences which can occur between the HRV and the TFP when joined together. The "Breathing T" should be situated in an area with suitable indoor air quality (IAQ). Avoid mechanical rooms and workshops. If required, an external connection should be made from the "Breathing T" to an area with suitable IAQ (the air should be free of fumes, vapors, odors, or large airborne particles etc.).



## Caution

- The room in which the "breathing T" is open should be free of combustion equipment such as gas hot water tanks and furnaces. If the "T" must be exposed in these areas, a pressure test (spillage or backdraft test) should be conducted on the combustion equipment after everything is installed.

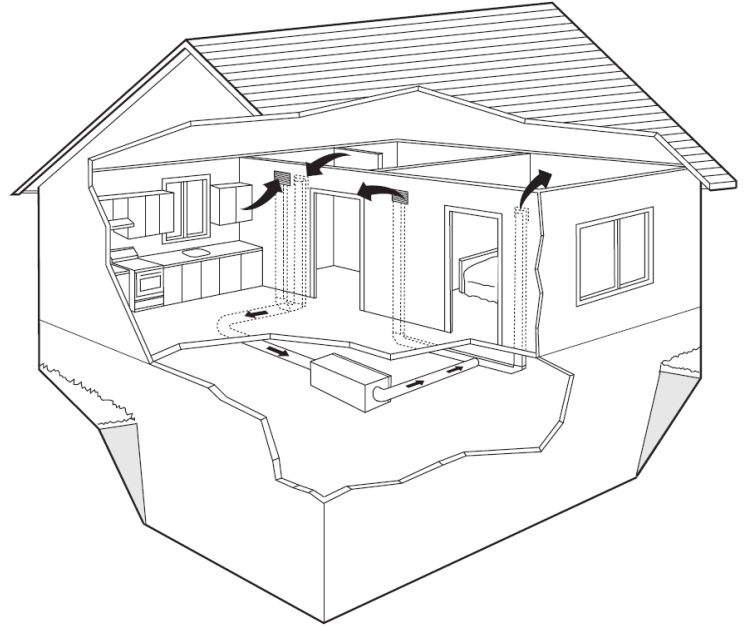
## 7 INSTALLATION (TFP-3000HEPA) – TYPE 3

### Independent Duct System with No HRV:

This installation configuration is recommended for homes without forced air system (i.e. radiantly heated homes). The duct should be sized and designed to achieve a sweeping action from one end of the home to the other. Considerations may include strategic clean air placement for allergy or asthma sufferer.

### Suggested Air Cleaner locations:

- Mechanical Room
- Attic (Extra consideration is required to ensure heat loss through duct work is minimized).
- Closet



### TFP Independent Installation No HRV, Radiant Heating System

#### Location

1. A TFP is usually installed in a basement area where air flow noise will be negligible to the occupants.
2. A central location between the clean air supply grille and return grille is recommended.

#### Mounting

Refer to "Mounting" under [Type 2 Installation \(To a Fully dedicated HRV System\)](#).

#### Ducting

1. Install two 7" collars (provided) on TFP cabinet with eight 8/32" x 3/8" sheet metal screws provided.
2. Ducting will usually consist of one return with grille from one side of the home and one supply with grille at the opposite end of the home.
3. Ductwork should be no smaller than the size of the port collars (7") on the TFP.
4. Ductwork should be kept as short and straight as possible to allow for good air circulation.

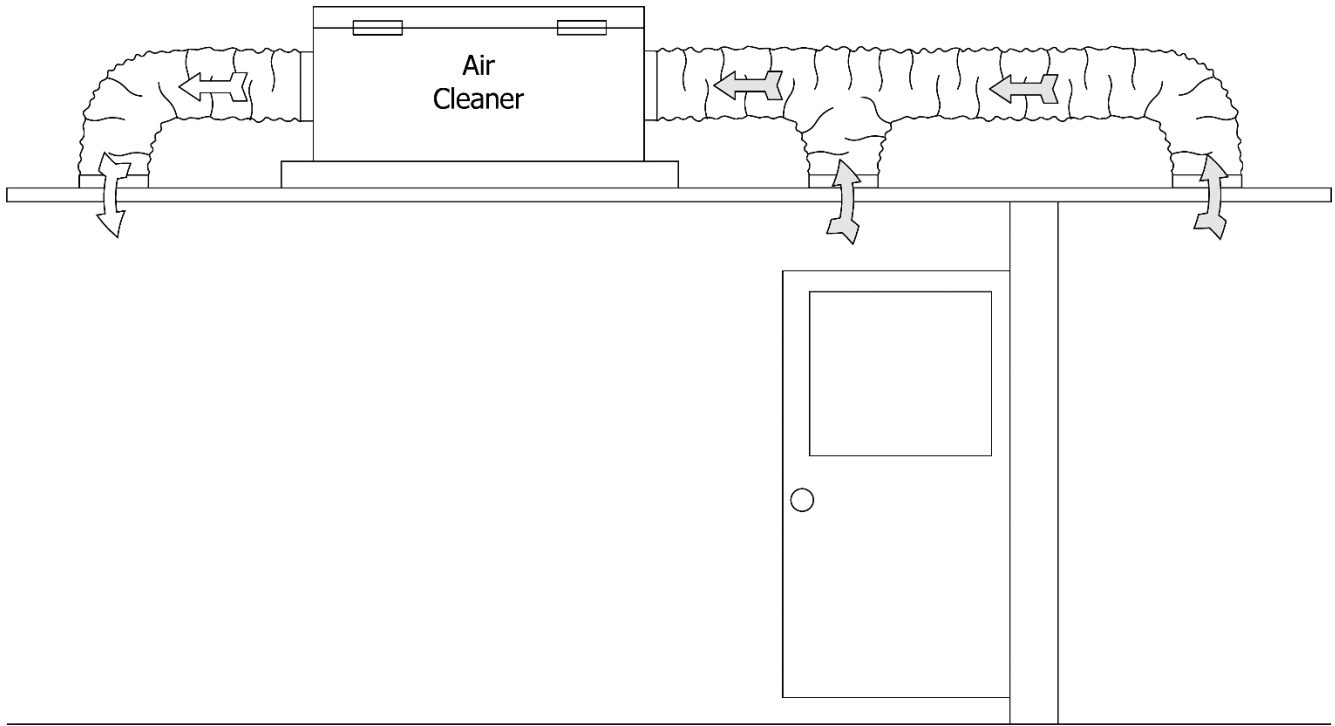


### Note

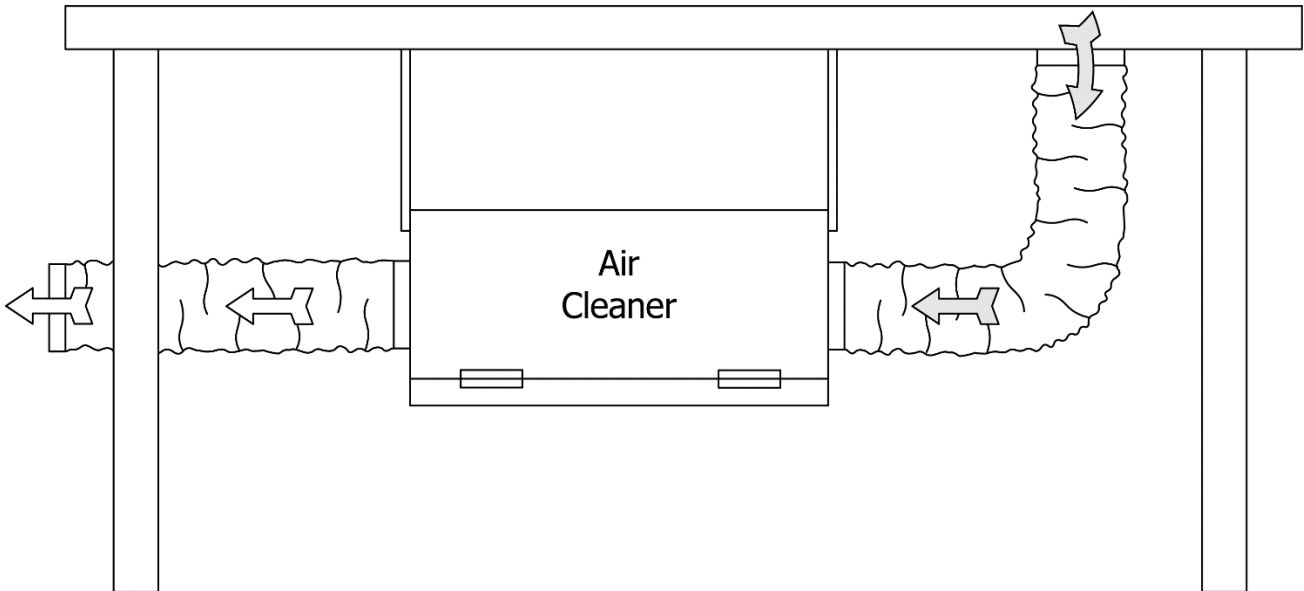
- For installations of more than one return or supply (greater than .5 e.s.p.), it is often necessary to add an in-line fan to the system as a booster.

## 7 INSTALLATION (TFP-3000HEPA) – TYPE 3 (ALTERNATIVE)

### Alternative Applications - Office or Classroom Application:

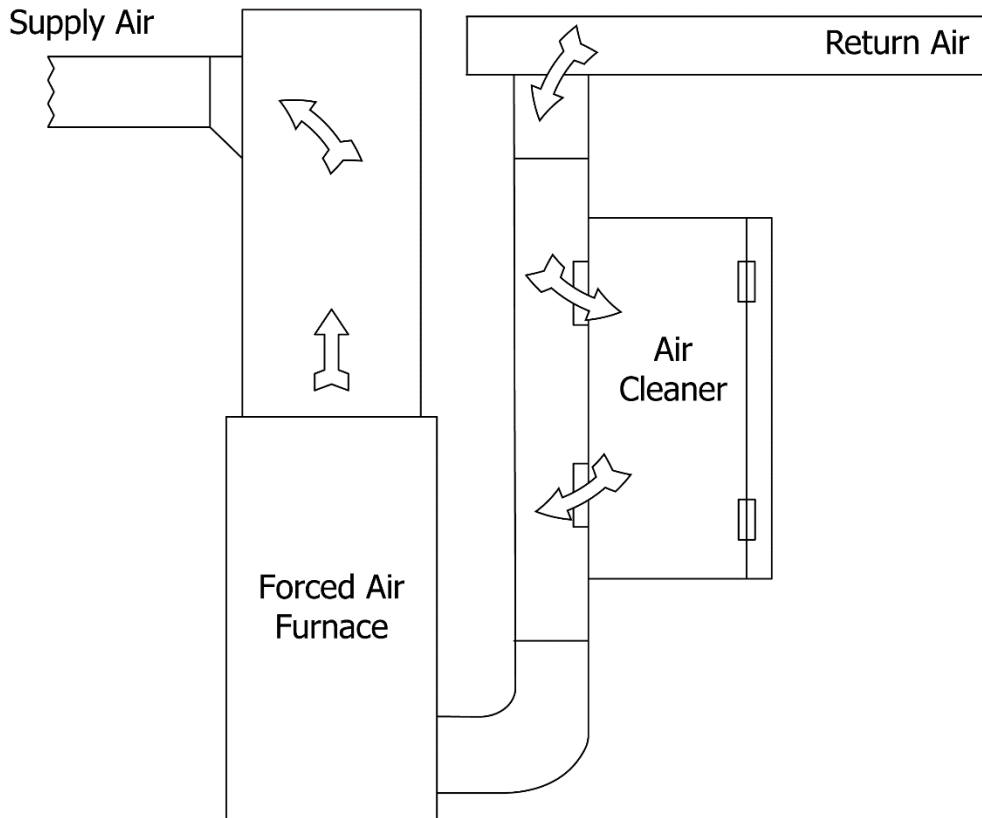


### Alternative Applications – Work Table Application:



## 8 INSTALLATION (TFP-3000HEPA-RTO)

### TFP Directly connected to Force Air Heating System (Return Plenum):

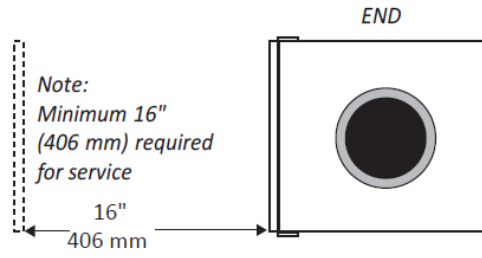
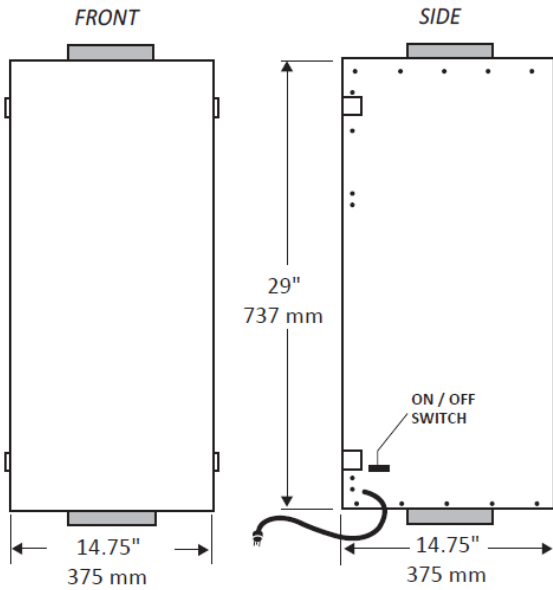


### Mounting

1. Cut two 8 in. by 4 in. in holes in the return air plenum.
2. Fold out collars on back of TFP prior to installation.
3. Install eight mounting screws through TFP air cleaner housing to mount it directly to the return air plenum. Ensure that the collars are snug in the holes cut previously.
4. Tighten and secure the screws.
5. Seal the connection with aluminum tape.

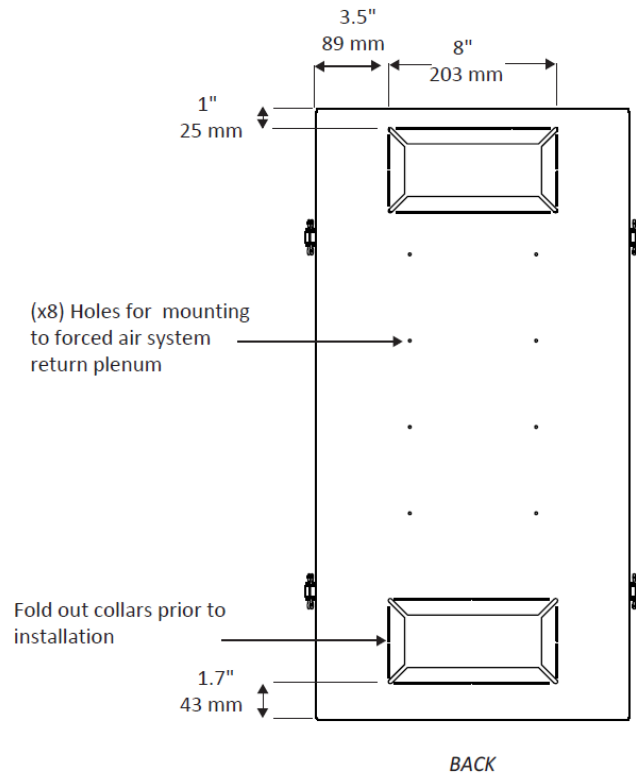
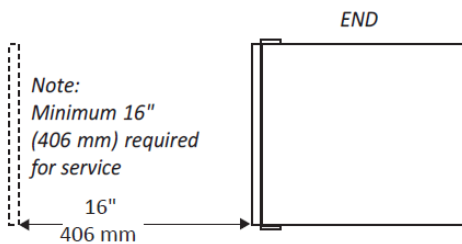
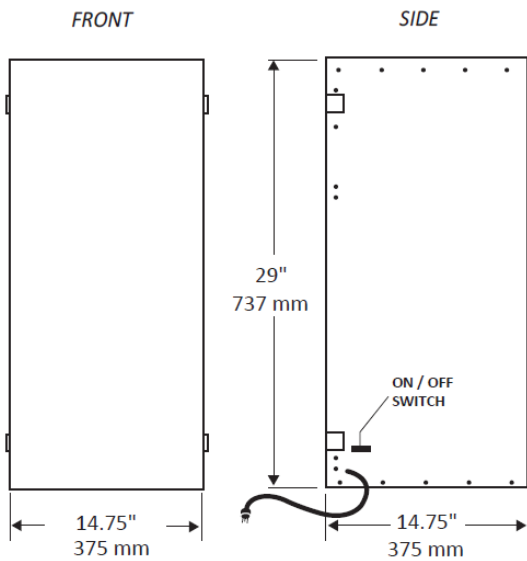
# 9 DIMENSIONAL DRAWINGS

## TFP-3000HEPA Dimensions



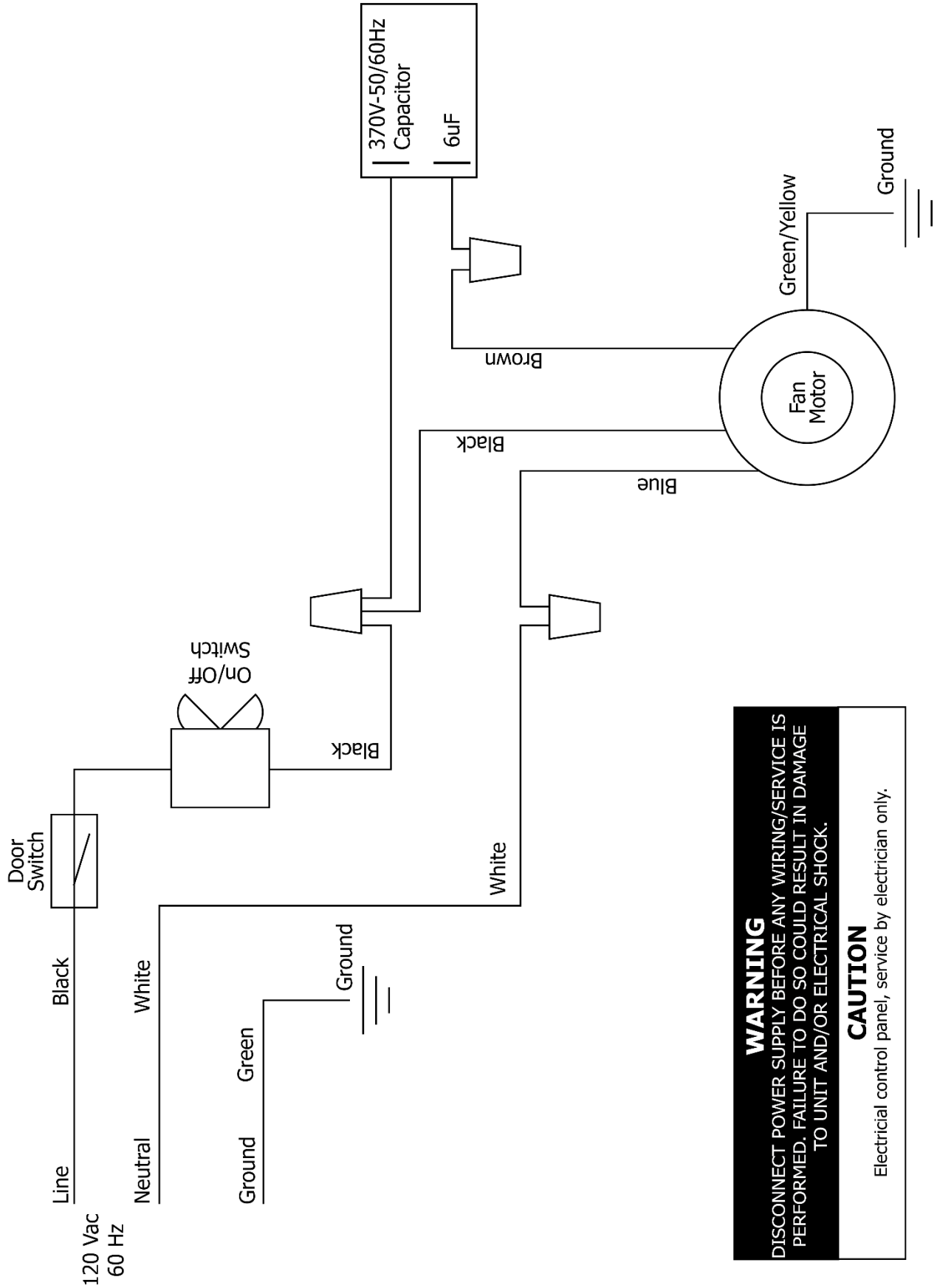
All duct connections are 7" (178 mm)

## TFP-3000HEPA-RTO Dimensions



All duct connections are 8" (203 mm) by 4" (102 mm).

# 10 WIRING DIAGRAM



**WARNING**  
DISCONNECT POWER SUPPLY BEFORE ANY WIRING/SERVICE IS PERFORMED. FAILURE TO DO SO COULD RESULT IN DAMAGE TO UNIT AND/OR ELECTRICAL SHOCK.

**CAUTION**  
Electrical control panel, service by electrician only.

# 11 WARRANTY

AIRIA BRANDS INC.® (AIRIA) warrants to the original purchaser of the LIFE BREATH® model and accessories referred to below, to be free from manufacturing defects.

This Limited Warranty is personal to AIRIA® and is in effect from the installation date, but no later than 12 months after the date the product was manufactured (if the installation date cannot be verified, the warranty period will begin on the date of manufacture). The serial number can be used to determine the date of manufacture: XX XX MMDDYY ###; or MMDDYY ###. The warranty is dependent on the type of unit:

Type of Unit	Warranty
HRV Residential	Lifetime on the Core / 5 years on other components
HRV Commercial	15 years on the Core / 2 years on other components
ERV Residential	5 years on the Core / 5 years on other components
ERV Commercial	5 years on the Core / 2 years on other components
Accessories (e.g. controls and timers)	1 year
Replacement Parts (e.g. motor)	1 year
Clean Air Furnace (HRV)	Lifetime on the Core / 2 years on other components
Clean Air Furnace (ERV)	5 years on the Core / 2 years on other components
Air Handler	5 years
TFP	5 years

Damage resulting from all other causes, including but not limited to: lightning, hurricane, tornado, earthquake or any other acts of God; improper installation, modification, alteration or misuse of the LIFE BREATH® unit or its operation in a manner contrary to the instructions accompanying the unit at the time of sale; accidental or intentional damage, neglect, improper care, or other failure by the owner to provide reasonable and necessary maintenance of the product; any attempt at repair by an unauthorized service representative or not in accordance with this warranty; or any other causes beyond the control of AIRIA®, are excluded from this warranty.

If you feel that the LIFE BREATH® unit you purchased is not free from manufacturing defects, please refer to <https://www.lifebreath.com/homeowners-2/find-a-contractor/> to find the name of your nearest dealer in order to repair the product. The labour required to install any replacement part(s) is not covered by AIRIA®.

AIRIA® reserves the right to replace the entire unit or to refund the original purchase price in lieu of repair.

**AIRIA® MAKES NO EXPRESS WARRANTIES, EXCEPT FOR THOSE THAT SET FORTH HEREIN AND SHALL NOT BE LIABLE FOR ANY INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES WITH RESPECT TO LIFE BREATH® COVERED BY THIS WARRANTY. AIRIA'S COMPLETE LIABILITY AND THE OWNER'S EXCLUSIVE REMEDY BEING LIMITED TO REPAIR OR REPLACEMENT ON THE TERMS STATED HEREIN. ANY IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTY OF MERCHANTABILITY AND OF FITNESS FOR ANY PARTICULAR PURPOSE, ARE EXPRESSLY EXCLUDED.**

**NO PERSON IS AUTHORIZED TO CHANGE THE WARRANTY IN ANY WAY OR GRANT ANY OTHER WARRANTY UNLESS SUCH CHANGES ARE MADE IN WRITING AND SIGNED BY AN OFFICER OF AIRA®.**

**MODEL NO.:** \_\_\_\_\_

**UNIT SERIAL NO.:** \_\_\_\_\_

**INSTALLED BY:** \_\_\_\_\_

**DATE:** \_\_\_\_\_