

# Installation & Operation Manual

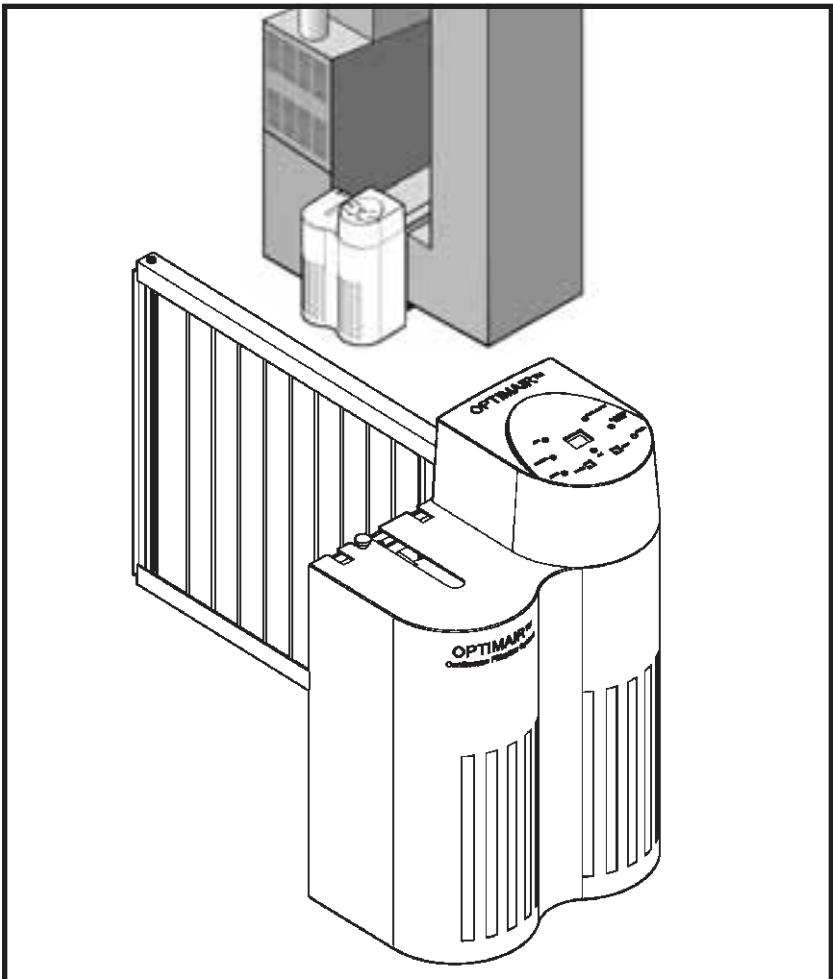
OptimAir™

A Product of  
OPTIMUM CLEAN AIR, LLC

## CONTINUOUS FILTRATION SYSTEM

Patented: 6,632,269; 6,491,735; 6,402,822; 6,743,282

For Residential Forced Air Furnace Only



# WELCOME

Congratulations! You are now the proud owner of the most user friendly, effective Furnace Filter System, the “OPTIMAIR™”. Your OPTIMAIR™ continuous filtration system helps reduce the many problem-causing pollutants and allergies that can linger in your home. The patented continuous filtration system not only keeps your indoor air clean, but more so optimizes your air flow which would result in reaching your preferable temperature faster hence reducing your energy cost.

Optimum Clean Air, LLC is dedicated to our customers and we pride ourselves on the quality and performance of our products. If you have any questions, comments, need service, or parts, please call your local authorized dealer or call: **1-888-877-2524** for the Distributor nearest you.

Please, take a few moments to read all of the sections in this manual and familiarize yourself with your new OPTIMAIR™. We hope you will enjoy all the benefits of clean and efficient air filtration.

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## **SECTION A – IMPORTANT SAFETY INSTRUCTIONS**

When using an electrical appliance, basic precautions should always be followed, including the following:

### **READ ALL INSTRUCTIONS BEFORE USING YOUR OPTIMAIR™**



**WARNING:** To reduce the risk of fire, electric shock or injury:

- Do not use outdoors or on wet surfaces
- Do not use with damaged cord or transformer
- If the supply cord is damaged, it must be replaced by the manufacturer
- Do not unplug the transformer by pulling on cord. To unplug, grasp the transformer, not the cord
- Do not handle transformer with wet hands

## **SECTION B – TECHNICAL SPECIFICATIONS**

**Motor:** 24 VDC

**Transformer:** Class 2

Input: 120V AC 60Hz 33.5W

Output: 24V AC 833mA

UL No. 38H3

**Filter:** Electrostatic Charged Media - UL No. R18143.

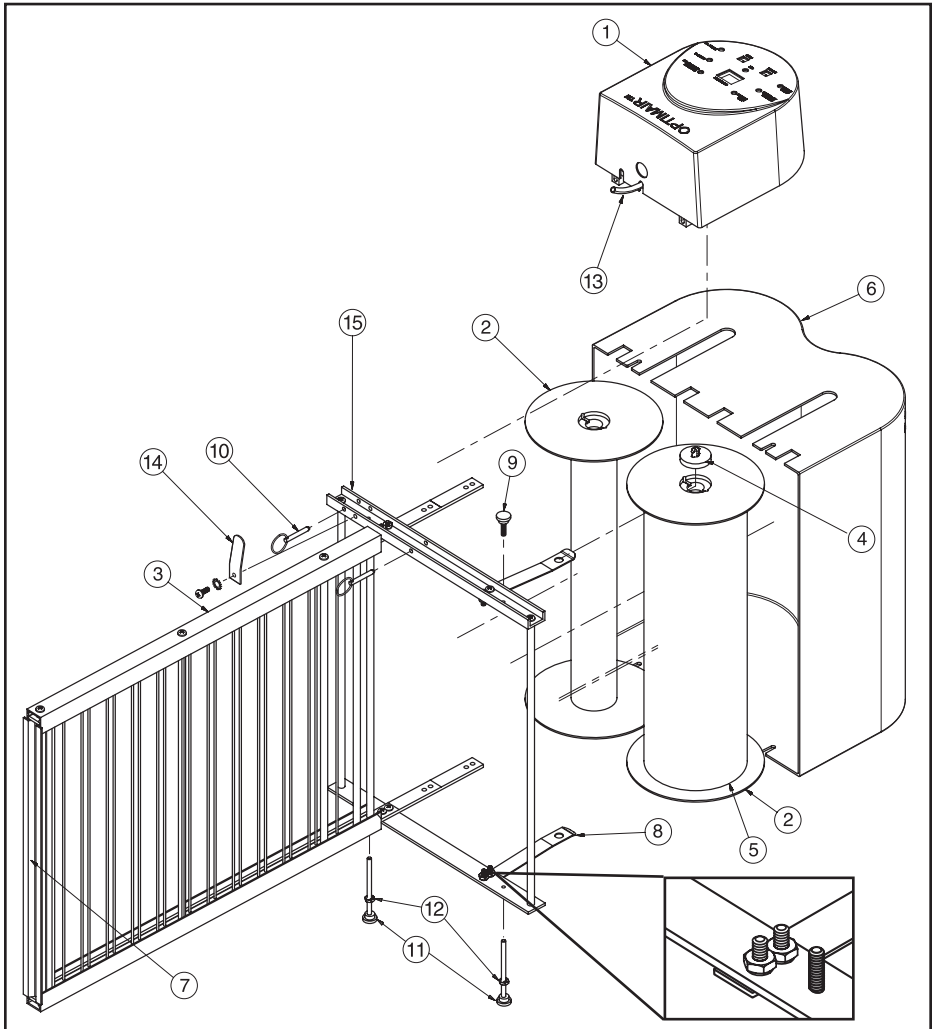
Several filters available at your dealer. Refer to filter packaging for product specification.

**Construction:** Anodized Aluminum frame, ABS control box, Polystyrene cover

**Warranty:** See warranty for details - Page 19

# SECTION C – PARTS DESCRIPTIONS

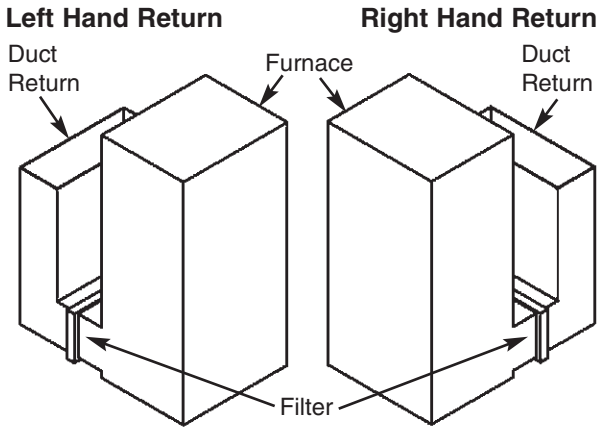
ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
1	1	202502	CONTROL BOX	7	1	162032	GASKET
2	2	162011	16" MEDIA ROLL ASSEMBLY			202532	GASKET (20" UNIT)
		202511	20" MEDIA ROLL ASSEMBLY	8	3	202519	SPRING PLATE
3	1	162001	16 X 20 FRAME ASSEMBLY	9	1		#10-32 X 3/4 KNURLED KNOB
		162501	16 X 25 FRAME ASSEMBLY	10	2		.187 x 1 QUICK RELEASE PIN
		202001	20 X 20 FRAME ASSEMBLY	11	2		#10-32 X 3 LEVELING LEGS
		202501	20 X 25 FRAME ASSEMBLY	12	2		#10-32 HEX NUT
4	1	202520	IDLER BUSHING	13	1		Air SAMPLING TUBE
5	1	162015	FILTER MEDIA	14	1	162038	RETAINING SPRING
		202515	FILTER MEDIA (FOR 20" UNIT)	15			CONTROL BOX AND CARTRIDGE SUPPORT FRAME ASSEMBLY
6	1	162024	FRONT COVER				
		202524	FRONT COVER (FITS 20" UNIT)				



# SECTION D – INSTALLATION INSTRUCTIONS

## STEP 1 : Cold Air Return

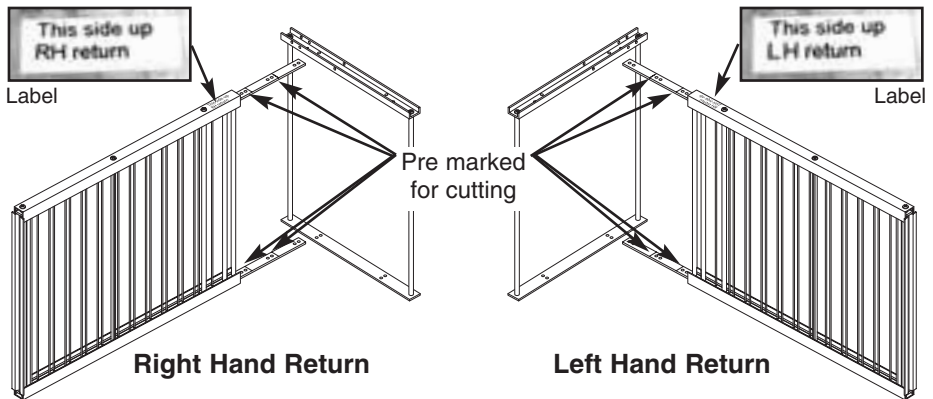
Determine the air duct cold air return in relation to the furnace before assembling and installing the Optimair Filter.



## STEP 2 : Modifying Cartridge Frame Assembly

Make sure the RH or LH label is upward depending on your system.

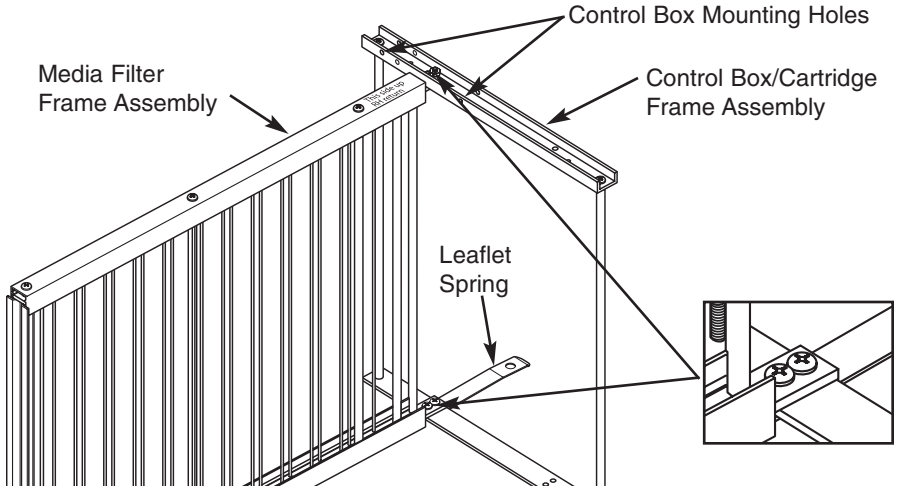
The filter frame assembly extensions are marked in 2-1/2" intervals designed to be cut if necessary to fit your system when drain pipe or furnace offset exist. Measure the distance the furnace extends from the side of the ductwork. **Note:** Possibly pre-assemble the control box frame assembly to verify clearance from the furnace before cutting. Then cut the length of extensions if needed.



### STEP 3 : Frame Assembly

Make sure the filter frame assembly is centered between the two control box mounting holes.

Assemble the two frames and one of the leaflet springs using #10-32 x 1/2" round head machine screw with #10 lock washer and #10-32 hex nut. Firmly tighten the frame. (Total 4 fastener sets)

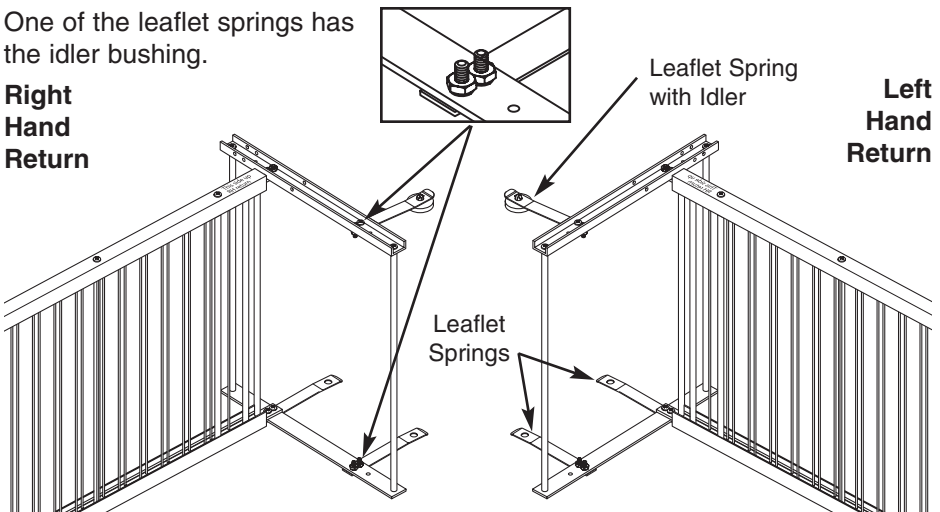


### STEP 4 : Spring and Idler Installation

Attach the other 2 leaflet springs using #10-32 x 1/2" round head screws, #10 lock washer, #10-32 hex nut. (Total of 4 fastener sets)

One of the leaflet springs has the idler bushing.

**Right Hand Return**

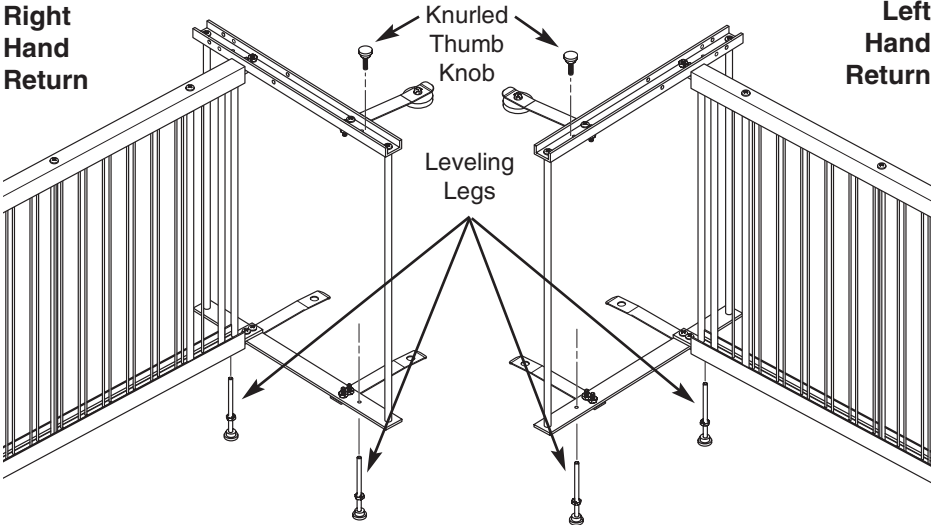


## STEP 5 : Leveling Legs

Install the 2 leveling legs, engaging only 3-4 turns, do not tighten yet. These will serve later to support and level the assembly. The jam nut must be resting against the frame for proper support.

At this time, thread the knurled thumb knob in to the top of the frame. This will secure the top of the cartridge cover.

**Right  
Hand  
Return**

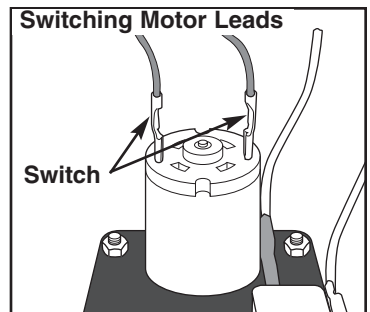
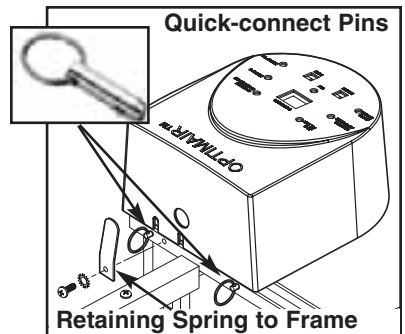


## STEP 6 : Control Box Frame Assembly

Place the control box on the frame so that the 2 positioning legs rest in the U-channel. Make sure the holes are lined up for the quick-connect pins (provided) to go through. The ring should be against the U-channel.

Now assemble the retaining spring using one screw and star washer.

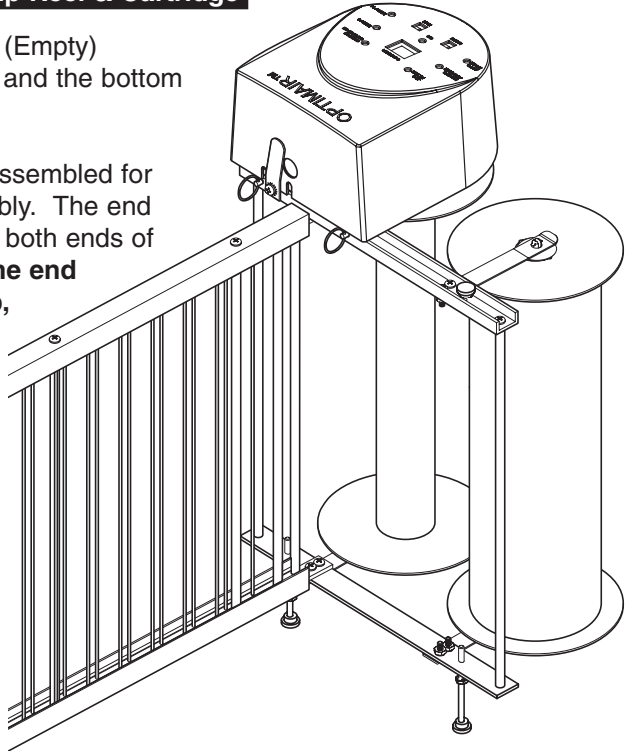
For the right hand return, the control box motor is set at the factory to rotate the cartridge counter clockwise. For the left hand return, the motor should rotate the cartridge clockwise. To do so: before you connect the power, remove the 5 screws holding the bottom plate of the control box, reverse the motor leads connection on the motor, and reassemble the bottom plate making sure not pinching the clear tube.



## STEP 7 : Install Take-up Reel & Cartridge

Snap in the take-up reel (Empty) between the control box and the bottom spring.

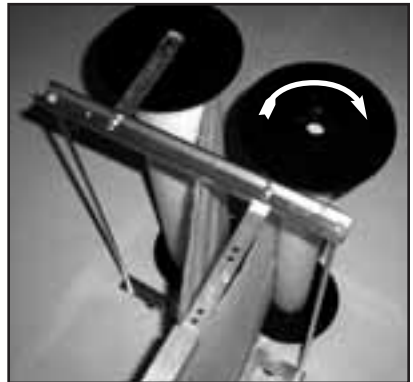
The end caps come unassembled for R.H. or L.H. filter assembly. The end cap must be pressed on both ends of the tube **making sure the end cap idler seat is on top, and the paper filter lead is closest to the control box** - Refer to illustration in **Fig.7A**. Snap in the new filter cartridge between the springs. (Top spring has the idler that fits inside the roll end cap)



**Fig. 7A** shows the filter media installed for both R.H. and L.H. applications. The white arrows show the direction the take-up reel will turn for each.



Right Hand Return



Left Hand Return

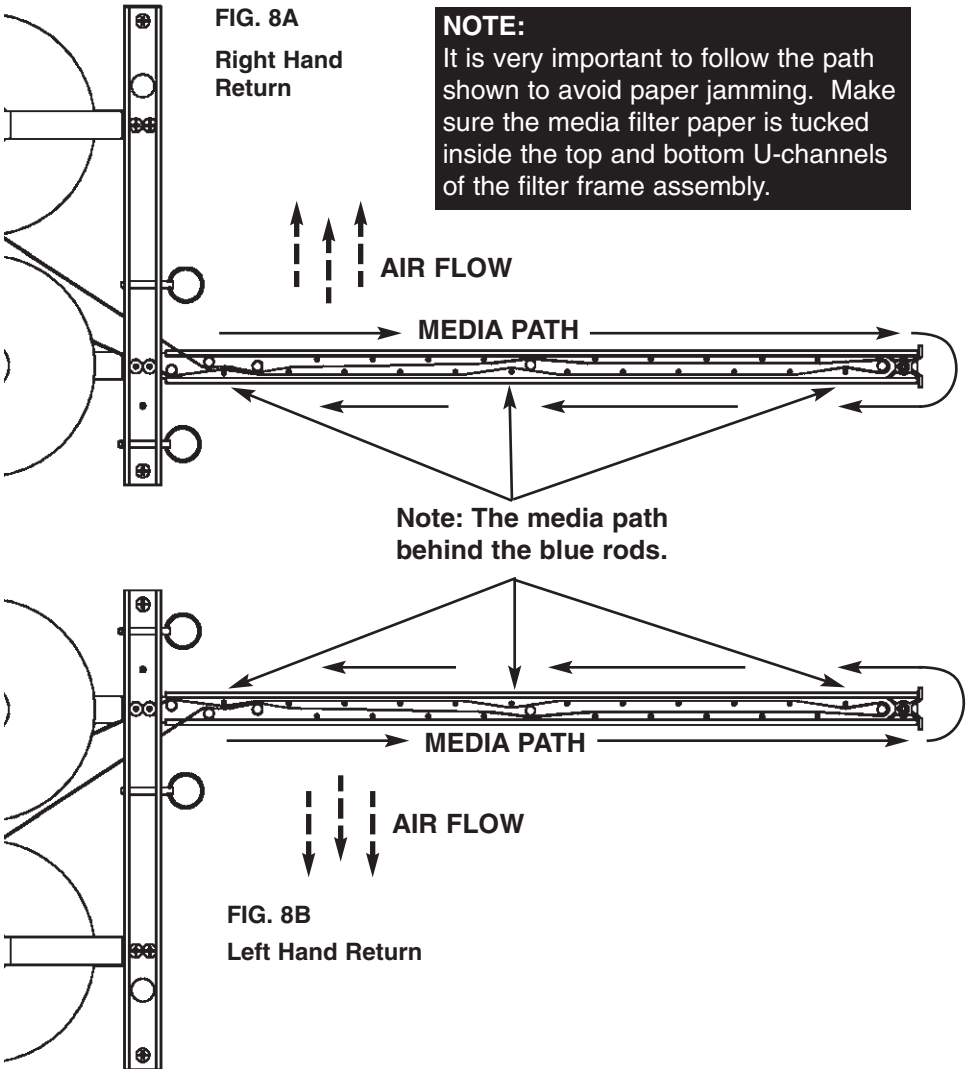


## STEP 8 : Feeding The Filter Media

Using the filter paper with white taped end as a lead, feed the paper as shown in figure **FIG. 8A** (for right hand) **or 8B** (for left hand).

See pages 10 and 11 for a pictorial guide of feeding the filter media through the filter media frame assembly.

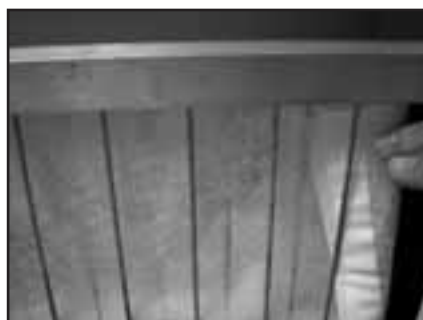
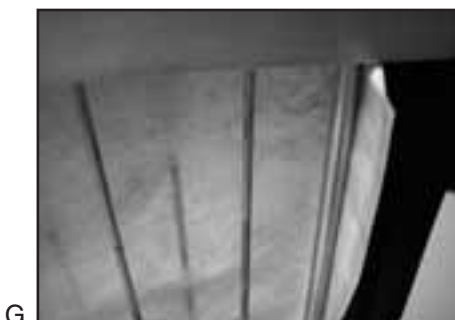
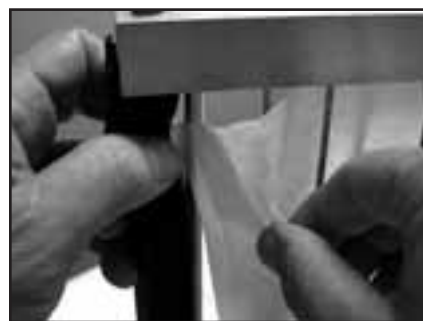
### FILTER MEDIA FEED PATH



**STEP 8 : Feeding The Filter Media – *continued***

Hold the white taped lead of the filter paper, feed the paper as shown in figure FIG. 8C-L.

**FIG. 8**





The filter media is passed behind only three guide rods marked with blue dye.



Peel the adhesive tape strip on the take-up reel (i). Adhere the filter media to the tape making sure it is adhered to the proper side for clockwise or counter clockwise motor operation (j).

## **PROCEED TO STEP 9**

## STEP 9 : Jogging The Filter Media

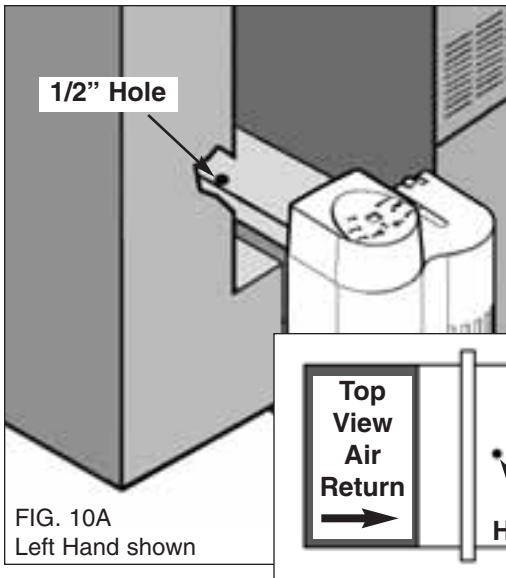
Plug the transformer provided to a 110/120 VAC outlet and to the back of the control box.

When the power is on, set the mode to **JOG**, press **JOG** to wind a couple revolutions of filter paper on the take-up reel.



Insert the frame inside the duct work making sure you push it in far enough to ensure that the gasket installed at the end of the frame seals any air leaks.

## STEP 10 : Pitot Tube Installation

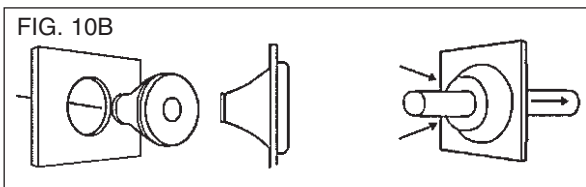


If operating the fan continuously, the pitot tube should not be installed as it will prevent the filter media from advancing.

Using 1/2" drill bit, drill 1 hole in the ductwork between the blower fan and the filter as shown in **FIG. 10A**

FIG. 10A  
Left Hand shown

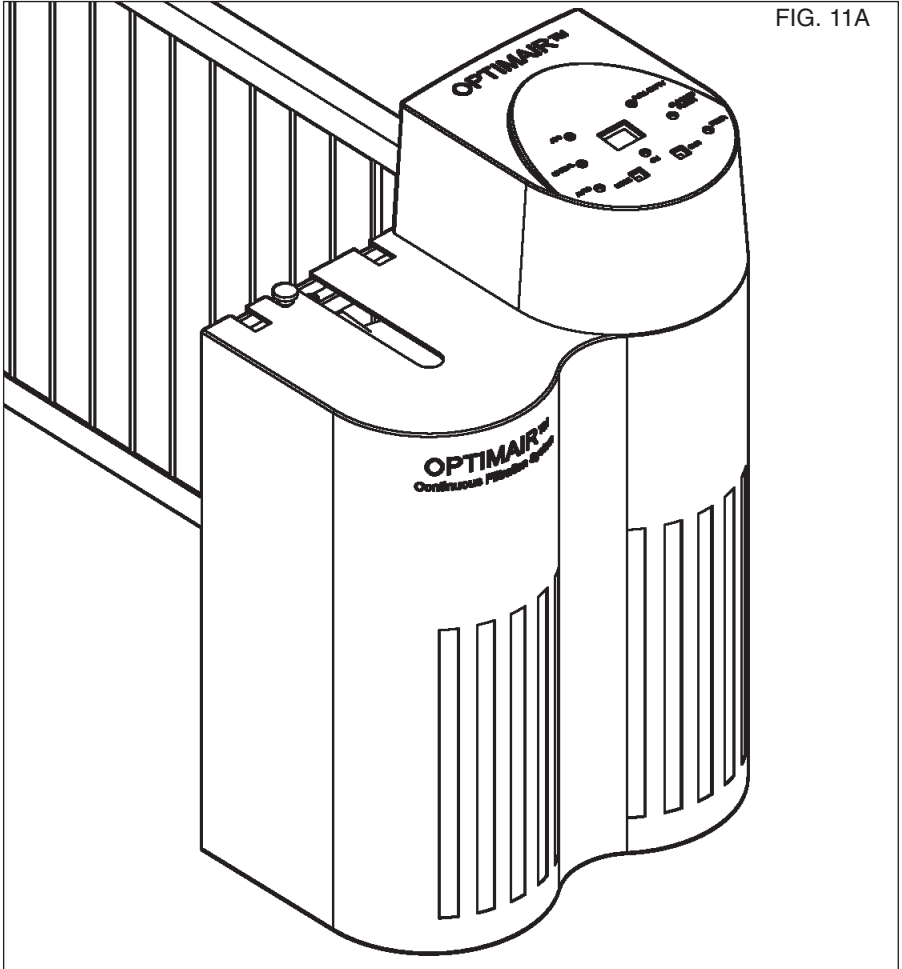
Insert the rubber plug as shown in **FIG. 10B**. Snap the plug into the panel. Push in the probe attached to the end of the clear tube in the plug.



## STEP 11 : Cover Installation

Slide the cover over the aluminum frame as shown in the illustration. Make sure the notches on the cover line up with the pre-tightened knurled knobs **FIG. 11A**.

Tighten the top knob 10-32 x 3/4" to hold the cover in place. The bottom of the cover will rest on the leveling legs.



# SECTION E – OPERATION INSTRUCTIONS

## Powering The Unit

Plug the transformer into a nearby outlet. (Indicator power **ON** light will illuminate) indicating that the unit has power and is turned on.

**SAFETY NOTE:** Use of extension cords is strongly discouraged.

## Choosing Proper Program

There are five programs to choose from depending on type of filter cartridge you are using. Refer to the label on your cartridge to choose the proper program.

Program	Filter Level	Program Description
01	STD	Advances every 60 days – 6 Cycle = 1 year supply
02	STD	Advances every 60 days – 12 Cycle = 2 year supply
03	ULTRA	Advances every 45 days – 8 Cycle = 1 year supply
04	ULTRA	Advances every 30 days – 12 Cycle = 1 year supply
05	STD	Advances every 30 days – 12 Cycle = 1 year supply

## Selecting A Program

**NOTE:** The filter cartridge and media must be installed before proceeding with programming the control box.

### **STEP 1** Set Control Box To Program Mode

Hold both **RUN** and **MODE** down for a few seconds until dashed lines appear on counter.

### **STEP 2** Select A Program

Select one of the programs listed above by pressing the **RUN** button. Once for 01, twice for 02, and so on.

### **STEP 3** Set Selected Program

To set the selected program, press and hold the **RUN** and **MODE** buttons until the cycle number appears. **NOTE:** The number that appears represents the number of cycles remaining since the first is already in the media frame and attached to the take-up tube. i.e. **5** will appear for “6 Cycle”.

### **STEP 4** End Of Cycle

When the last cycle is complete, the **CHANGE CARTRIDGE** indicator light flashes to tell you to order a new cartridge within the next 30 to 60 days, depending on the program. The counter will show **00**. At this stage, only the **JOG** mode is functional to allow advancing the remaining paper media. After installing new cartridge the control box will be set to the new program.

## Important Operating Features

- 1.) When the **CHANGE CARTRIDGE** indicator is flashing, switching to **JOG** mode allows you to change the media cartridge.  
**NOTE:** The **MANUAL** and **AUTO** mode functions will not operate until the program is reset.
- 2.) The Control Box system will automatically switch to **AUTO MODE** when left unattended in **JOG** or **MANUAL** modes for 16 seconds to ensure the system remains as functional as it was intended to be.
- 3.) Built-in Memory – In case of a power outage, the system will resume operation upon power restoration with correct program and number of cycles remaining.
- 4.) The auto filter media advance will not operate when the furnace fan is on, and will stop if the fan turns on during advancement. In the second case the advancement will resume when the fan shuts off. This will ensure the media retains all captured particles.

**NOTE:** This feature will not function if the Pitot Tube is not installed properly (See installation instructions for proper Pitot Tube assembly). **If operating furnace in “Constant Fan”, the pitot tube should not be installed as it will prevent the filter media from advancing.**

- 5.) If the **MANUAL ADVANCE** button is pushed inadvertently, it can be stopped by pushing simultaneously the **MODE** and **RUN** button, this will stop the advancement immediately and in 16 seconds the program will revert to **AUTO** status.
- 6.) At any time when the system is in **AUTO** mode, you can check on the number of days remaining until the next cycle by pressing the **RUN** button.

## **SECTION F – FILTER REPLACEMENT**

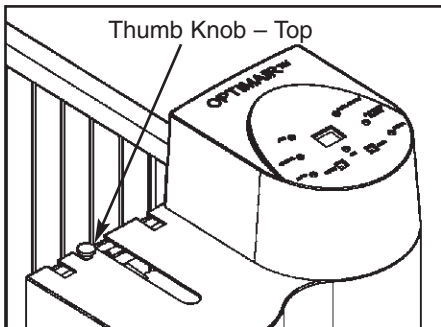
OPTIMAIR™ offers several types of filters. Which one is correct for your home depends on your environment and your dealer recommendations. Contact your nearest dealer or call our toll free number for service.

At the end of the cartridge filter life, the “**CHANGE CARTRIDGE**” light comes on to indicate a filter replacement. Prompt filter replacement will prevent any potential damage to your furnace that may result from its continued operation with a clogged filter.

### **TO REPLACE YOUR FILTER**

#### **STEP 1 Remove The Cover**

Loosen the top thumb knob and remove the cover.



#### **STEP 2 Release and Advance The Remaining Media**

Set the Control Box mode to “**JOG**”. Advance the remaining filter media by pressing the button “**RUN**”. Release the tape that is holding the end of the media from the plastic core roll.

#### **STEP 3 Removal Of Used Media/Take-Up Reel**

When all the media has cleared the aluminum frame, remove the take-up reel. While holding the used media roll with both hands, apply downward pressure and pull the top of reel out from under the control box. Remove the take-up reel from the leaflet spring.

- Dispose appropriately.

#### **STEP 4 Remove The Empty Cartridge**

While holding the cartridge tube with one hand, lift the top leaflet spring away from the cartridge and pull the cartridge out from the top.



### **STEP 5 Move The Empty Cartridge To Control Box**

Place the empty cartridge on the leaflet spring on the control box side. While applying pressure downward, position the top of the cartridge under the control box which will serve now as a take-up reel.

### **STEP 6 Installing The New Cartridge.**

Refer back to STEP 7, on page 8 for instructions.

### **STEP 7 Remove The OptimAir™ From The Air Duct**

- Unplug the transformer from the outlet and the control box.
- Remove the clear tube from the pitot tube in the duct work.
- Slide out completely the frame assembly and place on the floor.

### **STEP 8 Feeding The Filter Media**

Refer back to STEP 8 on pages 9 - 11.

### **STEP 9 Jogging The Filter Media**

Plug the transformer provided, to a 110/120 VAC outlet and to the back of the control box.

When the power is on, set the mode to **JOG**, press **JOG** to wind a couple revolutions of filter paper on the take-up reel.

**Now refer back to page 14 to set the program.**

Insert the frame inside the duct work and push it in far enough to ensure that the gasket installed at the end of the frame seals any air leaks.

Connect the pitot tube. See item no. 4 on page 15.

### **STEP 10 Replace The Cover:**

Slide the cover over the aluminum frame. Make sure the notch on the top of the cover lines up with the knurled thumb knob. Tighten the thumb knob to hold the cover in place.

## **SECTION G – TROUBLE SHOOTING GUIDE**

- 1.) The filter media is not centered between the top and bottom U-channel frame (riding high or low):
  - a. The extender on the media frame assembly is bent upward or downward. Straighten the top and bottom ends as needed to center the filter media.
  - b. Make sure the end caps on the filter cartridges are pressed in all the way.
  
- 2.) There is an excessive tension on the filter media:
  - a. The frame must be squared when assembled.
  - b. Leaflet springs should be perpendicular to the frame.
  - c. Level the frame with the two bottom leveling knobs.
  - d. Make sure the end caps on the filter cartridges are pressed in all the way.
  - e. Filter media path should be as illustrated on page 9.
  
- 3.) There is no power to the unit:
  - a. The transformer should be plugged in 110 VAC only.
  - b. The transformer electrical cord is not connected to the back of the control box.
  
- 4.) Filter media is rubbing on the stud of the leveling leg for the left hand return assembly.
  - a. Refer to the left hand return control box installation (step 5). The motor leads should be reversed to rotate the cartridge clockwise.

# **SECTION H – WARRANTY**

Optimum Clean Air, LLC warrants the Optimair™ continuous filtration system to one year from the date of purchase. The original purchaser must register their new unit using one of the following choices listed below.

The original purchaser of the Optimair™ may extend this warranty for successive additional year(s) by purchasing and using, during each year, genuine Optimair™ filter cartridges (6 cycles extends 1 year, 12 cycles extends 2 years). In order to extend the Optimair™ warranty for an additional year(s), the purchaser can use one of the choices below.

## **Warranty and Extended Warranty Registration Options**

- 1.) Return the warranty extension card enclosed in the cartridge package
- 2.) Call our toll free number **1-888-877-2524**
- 3.) Register online – **www.optimair.com**

Optimum Clean Air, LLC will repair or replace any defect or defective part under this warranty provided the Optimair™ or the defective part is returned, with proof of purchase date, extended warranty records to:

Optimum Clean Air, LLC  
99 Ken Mar Industrial Pkwy  
Broadview Heights, OH 44147  
U.S.A.

If the Optimair™ or part is found on inspection to be defective in material or workmanship, it will be repaired or replaced at the option of Optimum Clean Air, LLC and returned to the sender, freight paid. No reimbursement will be made for replacement of defective parts or service performed during the warranty period if done by anyone other than the authorized dealers or Optimum Clean Air, LLC without having obtained written authorization from Optimum Clean Air, LLC.

## **Warranty Considerations and Exemptions**

This warranty does not cover:

- Use of the Optimair™ for commercial, industrial, or other non-household purposes.
- Damage occurring through misuse or negligence.
- Damage caused by the use of a current or voltage other than 24 volts, .833Amp, transformer provided.
- Damage resulting from service work performed by parties other than Optimum Clean Air, LLC or the authorized dealers.
- Cost of transportation to our offices, or service calls.
- Cost of filters.

This warranty is null and void, and of no effect unless the Optimair™ was purchased from an authorized dealer; and the manufacturer serial number for the Optimair™ has not been changed, defaced, or removed.

Any repair or replacement of a defect or defective part under this warranty will be warranted for one year or until such time where the warranty have been extended with the filter purchase.

There is no other express warranty applicable to the Optimair™. Implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the period of time during which the express warranty given herein is in effect.

All consequential or other damages resulting from a breach of this warranty are excluded from coverage under this warranty.

Some states do not allow limitations on how long an implied warranty lasts, or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

Optimum Clean Air, LLC does not assume any additional liability.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

OptimAir™

A Product of   
OPTIMUM CLEAN AIR, LLC

**Website: [www.OptimAir.com](http://www.OptimAir.com)**

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