

**Failure To Read  
Instructions Will  
Void Warranty**



## **INSTALLATION INSTRUCTIONS**

**MODELS 600, 1200, 2000HS PLUS  
120V or 240V “BCU Wireless Controller”**



**600HS “L” Housing**



**600HS “S” Housing**



**1200/2000HS “S” Housing**



**1200/2000HS “L” Housing**

# MATERIALS NEEDED FOR COMMON HVAC INSTALLATIONS

- 1) A Section of 12" or (14" for 1200/2000 units) diameter sheet metal (recommended) or flex duct. For most installations, you will need 4' to 6' or (6' to 8' for the 14" for the 1200/2000 units).
- 2) A Section of 10" (14" for 1200/2000 units) diameter sheet metal (recommended) or flex duct. For most installations, you will need 6" to 24".
- 3) A 12" collar or (14" for 1200/2000 units) for connection to return air duct.
- 4) A 10" collar or (14" for 1200/2000 units) for connection to the fan return side of the HVAC unit.
- 5) A 4" by 18" (4" by 24" for 1200/2000 units) piece of sheet metal for an Air Scoop. Or a prefabricated Reflector (12" inlet side for 600 units and 14" inlet side for the 1200/200 units) and Deflector (10" discharge side for 600 units and 14" discharge side for the 1200/200 units). It is recommended that this be installed with every unit.
- 6) Sheet metal screws, duct tape, metal tape., and duct sealant.
- 7) 12-gauge electrical wire for power to the unit.
- 8) Thermostat wire (18 or 20 gauge / six conductor).

# ASSEMBLY INSTRUCTIONS

- 1) Unpack your unit and remove all packing from the blower and motor assembly.
- 2) Remove both housing access doors.
- 3) **VERY IMPORTANT NOTE! MAKE SURE THE BLOWER WHEEL SPINS FREELY.**
- 4) For 1200/2000 "S" version units, skip to Step 8.
- 5) Remove the wire-framed Pre-filter and Carbon filter from the filter section.
- 6) Locate the two HEPA filter holding strips (Compression Brackets) (on the left and right sides) that also act as trays for the Carbon filter and Pre-filter. Remove the two hex nuts and associated bolts on both holding strips and remove the strips from the housing.
- 7) Use the hex head bolts with the attached gasket found in the filter section to attach the filter section to the motor section. The motor and filter sections are symmetrical, so they can be rotated 360 degrees so the discharge can be pointed in four different directions to accommodate any installation configuration. This allows the best directional location for the filter section filter access door to be removed easily. **MAKE SURE THE DISCHARGE DIRECTION IS CORRECT FOR YOUR APPLICATION BEFORE ASSEMBLING.** Align the sections as desired. Place the filter section on the motor section, align the holes, and tighten the hex head bolts with the attached gasket.
- 8) Insert the HEPA filter. **BE CAREFUL NOT TO PUNCTURE THE WHITE HEPA MEDIA.** The gasket should face toward the motor unit. Center the gasket over the knife edges so that it is even on all four sides. Replace the two HEPA-holding strips.
- 9) Remove the clear wrapping from the Carbon filter, then slide the Carbon filter and Pre-filter back into the filter section and replace the filter section access door.

# **INSTALLATION OF THE DUCTING**

Select the proper location for the attachment of the inlet and discharge ducts. Keep a minimum of 6 feet between the inlet and discharge openings. This will prevent the Pure Air Systems' filtration unit from recycling the same air. Cut the openings in the existing return air duct. We recommend an Air Scoop or Reflector be placed inside the return air duct to direct air into the inlet duct of your filtration system. Ensure the Air Scoop or Reflector is angled to direct the air from the return air duct into the inlet duct of your filtration system.

Use sheet metal screws, duct tape, aluminum tape, or duct sealant to attach the duct sections to the collars on the inlet of the unit and the air return. Ensure there are **"NO" air leaks**. Repeat this same procedure for the discharge duct. Ensure all connections are airtight and taped or sealed.

## **IF YOU ARE USING YOUR SYSTEM AS A STAND-ALONE, YOU MAY SKIP TO THE ELECTRICAL WIRING SECTION.**

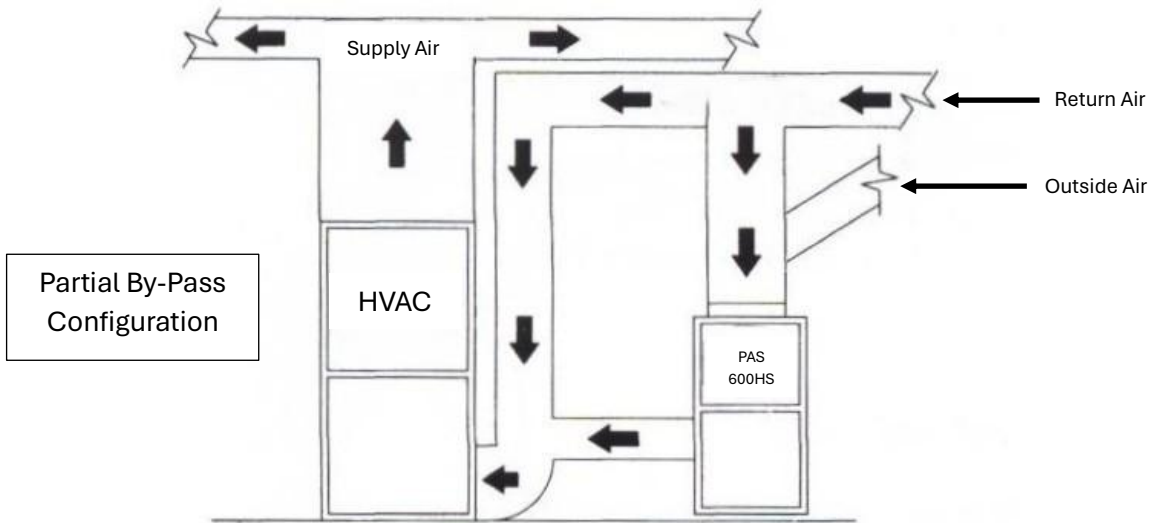
Please look at the attached "typical installation" drawings. The inlet duct should be connected to the central return air duct leading to the heating/cooling system, and the discharge duct should be connected to the point where the return air duct enters the heating/cooling fan area.

## **ALWAYS INSTALL THIS SYSTEM IN A BY-PASS CONFIGURATION.**

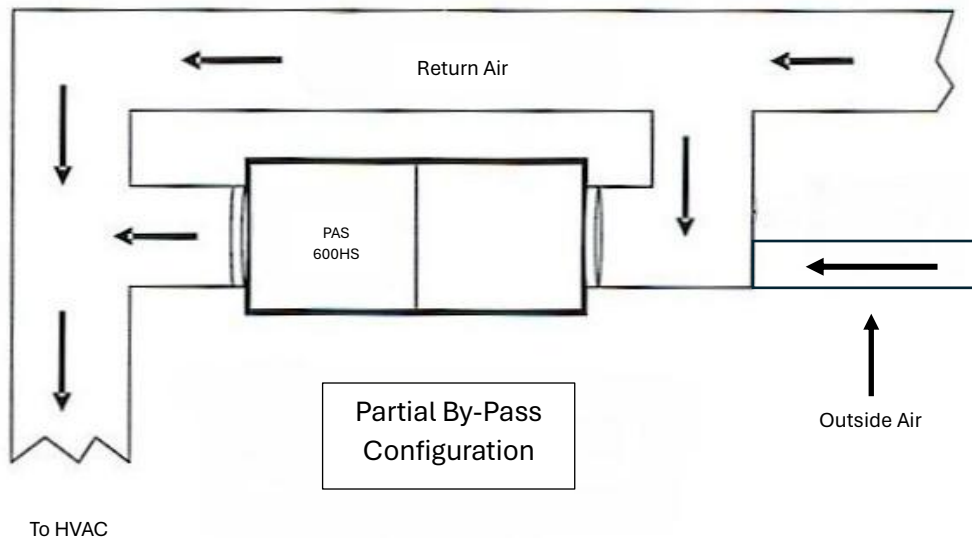
### **ODOR ADSORPTION MODELS**

All Odor Adsorption (OA) models are identical to the standard models except for the absence of a HEPA filter. A Carbon cartridge (OA Filter) replaces the HEPA filter.

## Typical Installation 600HS Series Configuration

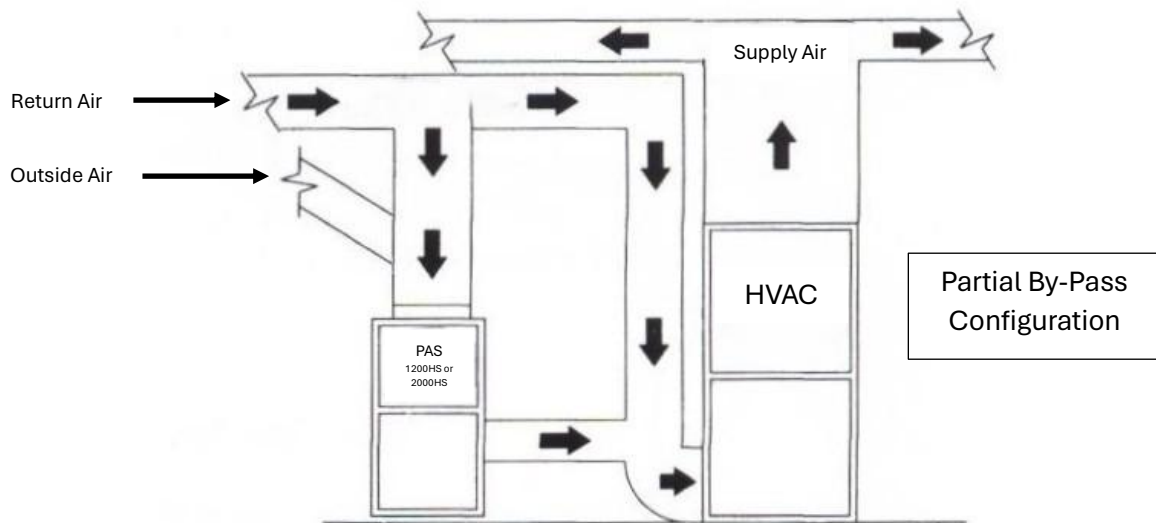


600HS -L- Housing Installation

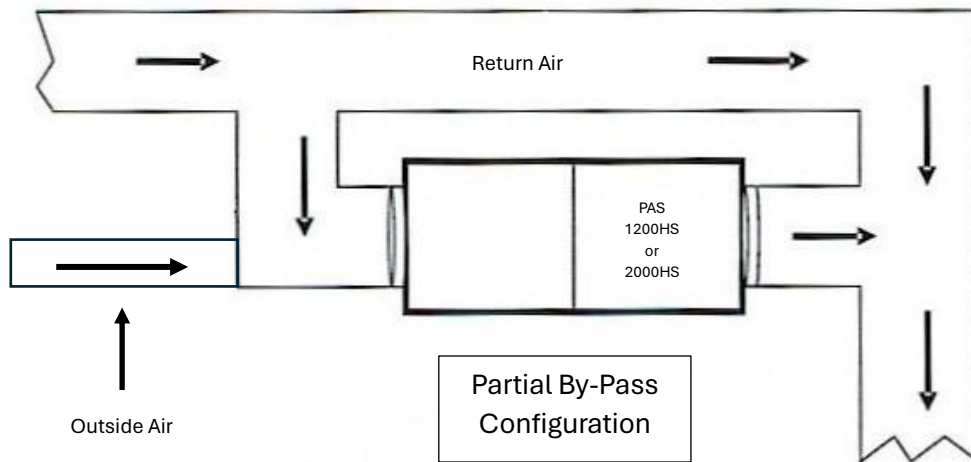


600HS -S- Housing Installation

## Typical Installation 1200/2000HS Series Configuration



1200/2000HS -L- Housing



1200/2000HS -S- Housing

To HVAC

# **INTRODUCTION OF OUTSIDE, FILTERED FRESH AIR FOR VENTILATION AND PRESSURIZATION IN INDOOR ENVIRONMENTS USING MODELS 600, 1200, AND 2000HS UNITS**

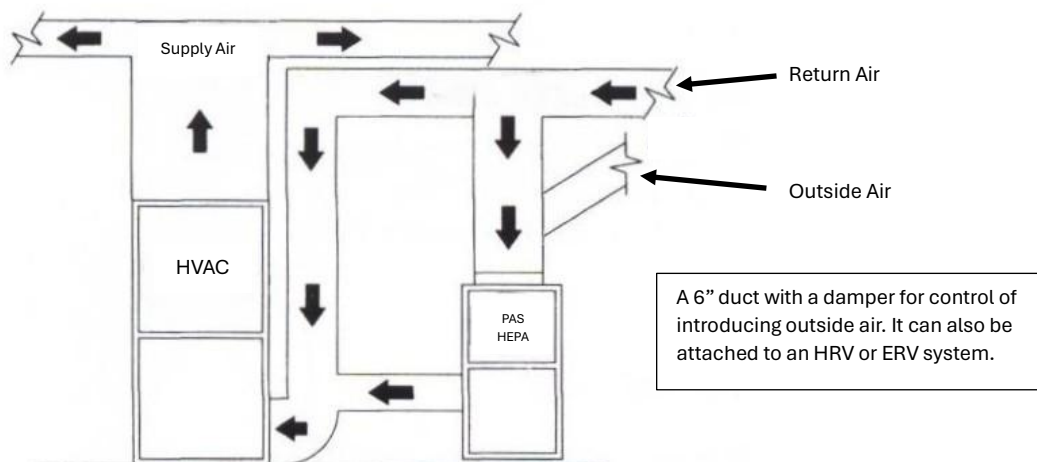
## **THE MOST COST-EFFECTIVE COMBINATION FILTER AND FRESH AIR ENTRY SYSTEM ON THE MARKET TODAY!**

When Pure Air Systems, Inc. first introduced the 600HS unit in 1985, we offered the option of introducing outside, filtered, fresh air with the unit. Today, introducing filtered, fresh outside air provides better ventilation and pressurization to homes and commercial facilities.

### **EASY TO DO**

Our system is designed with your convenience in mind. The installation process is straightforward: add a 6" duct from the outside to the inlet of the HEPA Shield units. This allows you to enjoy the benefits of the best filtration system and the ability to introduce outside fresh, filtered air. Depending on your HEPA Shield unit, you can introduce from 50 CFM to 100 CFM of outside air, providing 72,000 to 144,000 cubic feet of air into the home or indoor environment daily. This approach allows for pressurization of the home or indoor environment, eliminating the entry of fine particulate gases and odors whenever your HVAC system fan is running.

Introducing 50 CFM of outside air (3000 cubic feet per hour) has no adverse effect on the performance of your HVAC system. It represents only a small fraction, approximately 3% to 5%, of the total air volume passing through the HVAC unit. If you wish to introduce more air, you can easily adjust the damper or install a larger infiltration duct. For more information on this application, feel free to contact us.



# **ELECTRICAL WIRING & POWER CONNECTION**

**NOTE: ALWAYS FOLLOW ELECTRICAL CODES FOR YOUR AREA.**

For our air filtration systems, we strongly recommend a dedicated 15-Amp service. The conduit connector is specifically designed for EMT conduit or Romex cable. It's crucial to wire the black, white, and green (ground) wires through the conduit connector to the unit's corresponding black, white, and green wires.

## **BCU CONTROLLER**

The BCU wireless controller allows you to adjust the speed from 0 to 100% in 1% increments. The app will show the speed in terms of air volume capacity. See the attached EVO BCU quick startup sheets. Always turn the power off at the lighted rocker on/off switch when the unit is not in use.

For more information on the BCU controller.

[EVO/ECM-BCU](#)



## **TESTING THE UNIT**

Open the EVO controller app to ensure the BCU wireless controller works correctly. Turn on the lighted rocker switch on the unit. The BCU controller should now be capable of adjusting the motor speed. If it does not, please check that your Android or Apple device is connected to the BCU controller.





## **WIRING SCHEMATIC FOR PLUS UNITS** **BCU WIRELESS CONTROLLER**

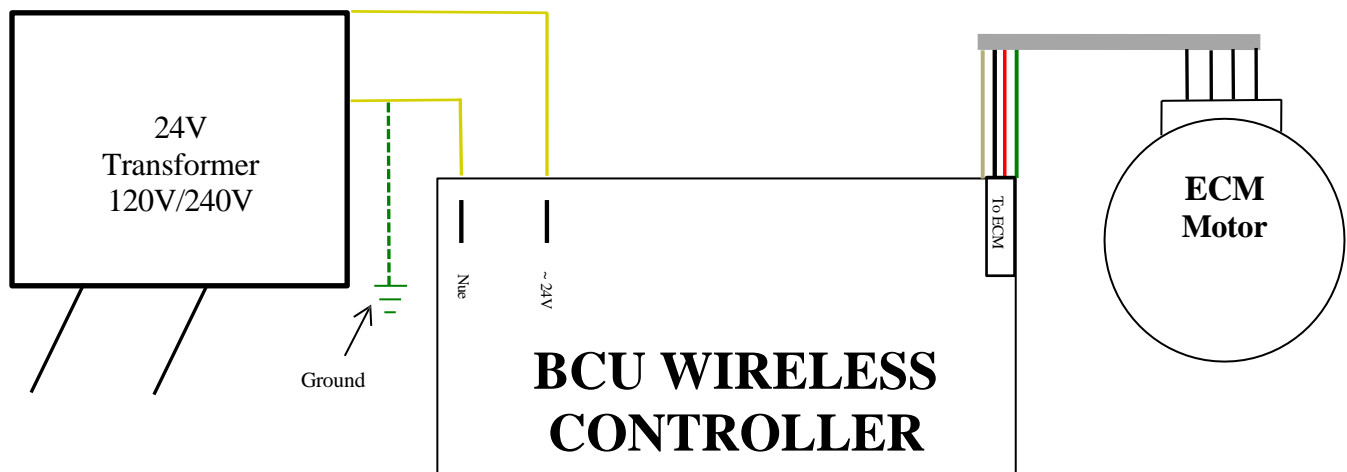
**For Models 600, 1200, 2000HS PLUS UNITS**

### **\*\*\*WIRING FOR 240V\*\*\***

For 240V operation, you must cut the "black jumper wire" that connects pin 1 to pin 2 on the 5-pin power connector attached to the back end of the ECM motor.

**FAILURE TO COMPLETE THIS WIRING CHANGE WILL RESULT**  
**IN DAMAGE TO THE MOTOR AND OTHER COMPONENTS**

**ALWAYS TURN OFF THE POWER TO THE SYSTEM BEFORE**  
**CHANGING FILTERS OR WORKING ON THE SYSTEM.**



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# **Instruction for Replacing**

## **Filters Installed Version**

- 1) Turn off the lighted rocker switch.
- 2) Remove the filter section access door by removing the phillips head screws.
- 3) Remove the Pre-filter and Carbon filter by simply pulling them toward you. (for replacing the Pre-filter and Carbon filter, only skip to step 7) If you are replacing the HEPA filter, continue to the next step.
- 4) Locate and remove the two HEPA filter compression brackets, one on the left and one on the right side of the inside of the filter section, for the 600, 1200, and 2000HS “L” series systems. (The 1200 and 2000HS “S” series systems HEPA filter compression brackets are on the top and bottom.)
- 5) Remove the HEPA filter and replace it with a new one with the gasket seal facing the motor section so it sits on the knife edge to ensure a tight seal.
- 6) Reinstall the two HEPA brackets and tighten them down.
- 7) Remove the clear bag from the Carbon filter and insert it into the filter section so it sits on top of the HEPA filter.
- 8) Insert the Pre-filter into the filter section so the blue side sits on top of the Carbon filter.
- 9) Reattach the filter section access door and tighten the phillips head screws.
- 10) Turn on the lighted rocker switch.

Pure Air System

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# Pure Air Systems Limited Warranty

Your Pure Air Systems product has been manufactured, tested, and inspected according to carefully specified engineering requirements. Under the terms and conditions set forth below, it is warranted to be free from defects and workmanship.

## Duration of Warranty and To Whom Extended

This Limited Warranty covers the motor for one year and the other electrical components and blower for three years. It does not cover the system filters, as they are a standard maintenance item.

## Exceptions and Exclusions from Warranty

Those products that incorporate an electrical motor must be used on electrical current as indicated on the rating plate. This Limited Warranty does not apply to products that have been subject to use on electrical current other than indicated on the rating sticker of the product.

This Limited Warranty does not apply to products subject to improper, unreasonable, or negligent use, abuse, or the use of parts or accessories not approved by Pure Air Systems.

If your equipment is repaired by anyone other than those designated as authorized to perform such work, Pure Air Systems, at its sole option, may determine that this Limited Warranty will not apply.

## Procedure to be taken to obtain Performance of Warranty

To secure repair of the product or any warranted parts under the Limited Warranty, the following procedures shall be taken:

- Contact Pure Air Systems or the dealer that installed your system.
- It is essential to provide Pure Air Systems with the system's model and serial numbers to ensure the product falls within the warranty time frame.
- The inoperative component (s) or warranted parts and satisfactory evidence of the purchase date must be delivered to Pure Air Systems, with shipping and delivery charges prepaid.
- Upon compliance with the above procedure, all warranted defective parts will be repaired or replaced. Pure Air Systems will pay for return shipping and replacement parts.

## NO REFUND OF THE PURCHASE PRICE

Pure Air Systems will not refund the customer's purchase price as part of its Warranty Policy. This limited warranty gives you specific legal rights, which may vary from state to state.

NO CLAIMS FOR CONSEQUENTIAL OR OTHER DAMAGES WILL BE ALLOWED, AND NO OTHER EXPRESS WARRANTIES EXCEPT THOSE EXPRESSLY STIPULATED HEREIN. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES. THEREFORE, THE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

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