



Balanced Make-up Air System

CONGRATULATIONS and thank you for your purchase of a HVACQuick.com Balanced Make-up Air System. Our systems are designed to give you many years of quiet, reliable and powerful operation when installed according to this installation guide.

IMPORTANT: *Please take a few minutes to thoroughly read over the different sections of this installation guide and make sure you are fully prepared for the installation of your system. Please save this guide to refer back to in the future and always be sure to follow local codes, ordinances and safety precautions before, during and after the installation. If you have **any specific questions about specific codes, please refer to your local code authorities.***

WARNINGS AND GENERAL TIPS (please read thoroughly)

Suitable Fan Environment

PrioAir 8 & 10 EC fans can be used for either supply or exhaust and are recommended for ambient operating temperature between -20°F (-28.8°C) to 140°F (60°C). We recommend that the installer insulate the entire length of the makeup air and exhaust system duct work as well as all additional duct work connected to the system to prevent condensation from forming.

Fan & Switch Electrical Warnings



WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, OR INJURY TO PERSONS, PLEASE OBSERVE THE FOLLOWING:

- (a) Use the fan and components only in the manner intended by HVACQuick.com. If you have any questions, please contact us.*
- (b) Before servicing or cleaning your fan, make sure you switch the power off at the service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a warning device such as a tag to the service panel.*

- (c) *Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards including fire-rated construction.*
- (d) *Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent back drafting. Follow the heating and equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA) and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHREA) and the local code authorities.*
- (e) *When cutting or drilling into a wall or ceiling, be careful not to damage electrical wiring and other hidden utilities.*
- (f) *Low voltage wiring should be routed the shortest distance possible to avoid unnecessary voltage drop.*
- (g) *When federal, provincial or state legislation comprises more restrictive installation and/or certification requirements, the aforementioned requirements prevail over those of this document and the installer agrees to conform to these at his/her own expense.*
- (h) **CAUTION:** *The fan is for general ventilating use only. DO NOT USE to ventilation hazardous or explosive materials and vapors.*
- (i) **CAUTION:** *MOUNT WITH THE LOWEST MOVING PARTS AT LEAST 8 FEET ABOVE THE FLOOR OR GRADE LEVEL.*
- (j) **MAKE SURE TO ONLY USE RIGID METAL DUCT FOR KITCHEN APPLICATIONS.**

Balanced Make-up Air System Pre-Installation

This installation manual includes all required and optional components in the Balanced Make-up Air System. If you did not purchase one or more of the components below, please skip the steps. It is important to adhere to the manufacturers instructions included with each system component for proper installation.

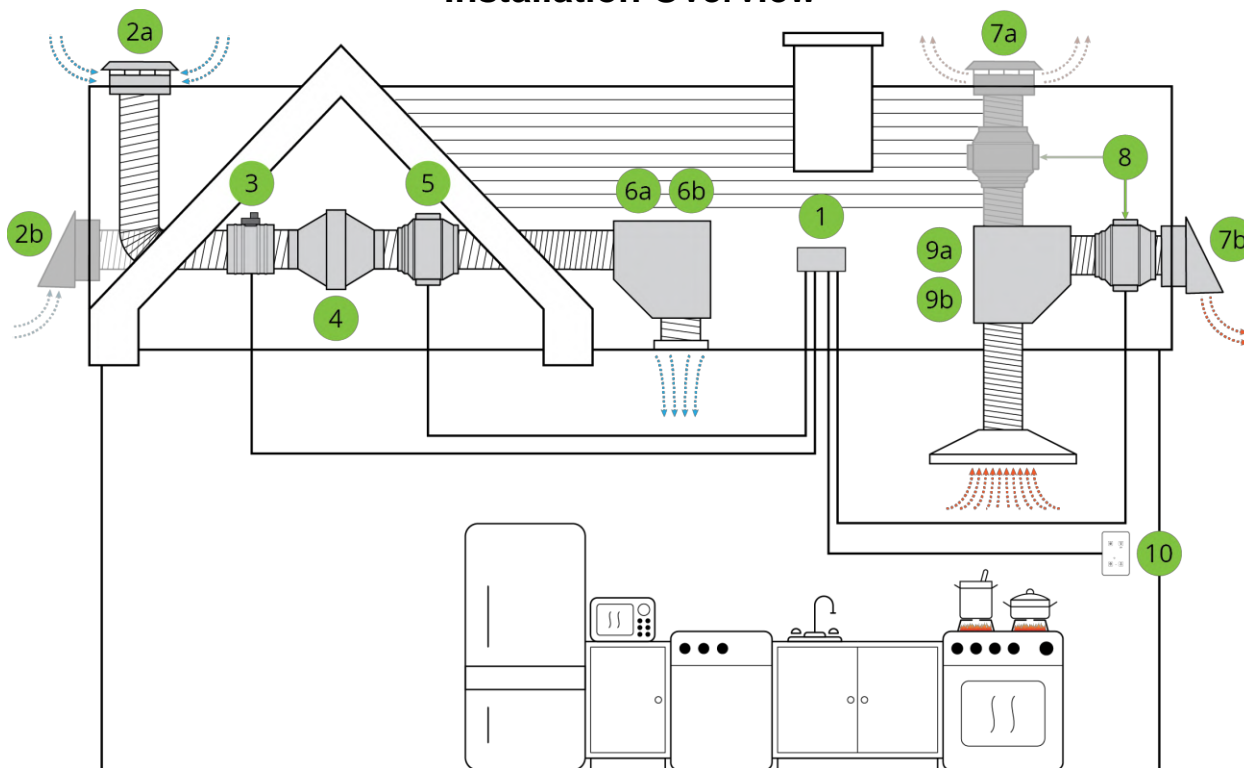


Consult wiring and controls instructions as well as diagram (**Figure 4**) to plan the wiring logistics for the installation. Begin by determining the location and wiring runs of the exhaust and make-up air fan, motorized damper, control box, and digital touch controller before installing any components. **Once location and wiring is planned**, proceed as follows.

2015 International Residential Code (IRC) added additional kitchen exhaust make-up air requirements having to do with the **location** of the supplied exhaust make-up air.

M1503.4.1 Location: Kitchen exhaust makeup air shall be discharged into the same room in which the exhaust system is located or into rooms or *duct systems* that communicate through one or more permanent openings with the room in which such exhaust system is located. Such permanent openings shall have a net cross-sectional area not less than the required area of the make-up air supply openings.

Installation Overview



Make-up Air System Installation

1. Control Box
- 2a. Make-up Air Roof Cap (Optional)
- 2b. Make-up Air Wall Cap (Optional)
3. Damper
4. Conical Filter Box
5. Make-up Air prioAir EC Fan
- 6a. Make-up Air LD Silencer (Optional)
- 6b. Make-up Air CLS Elbow Duct Silencer (Optional)

Kitchen Exhaust Installation

- 7a. Kitchen Exhaust Roof Cap (Optional)
- 7b. Kitchen Exhaust Wall Cap (Optional)
8. Kitchen Exhaust prioAir EC Fan
- 9a. Kitchen Exhaust LD Silencer (Optional)
- 9b. Kitchen Exhaust CLS Elbow Duct Silencer (Optional)

10. Digital Touch Controller

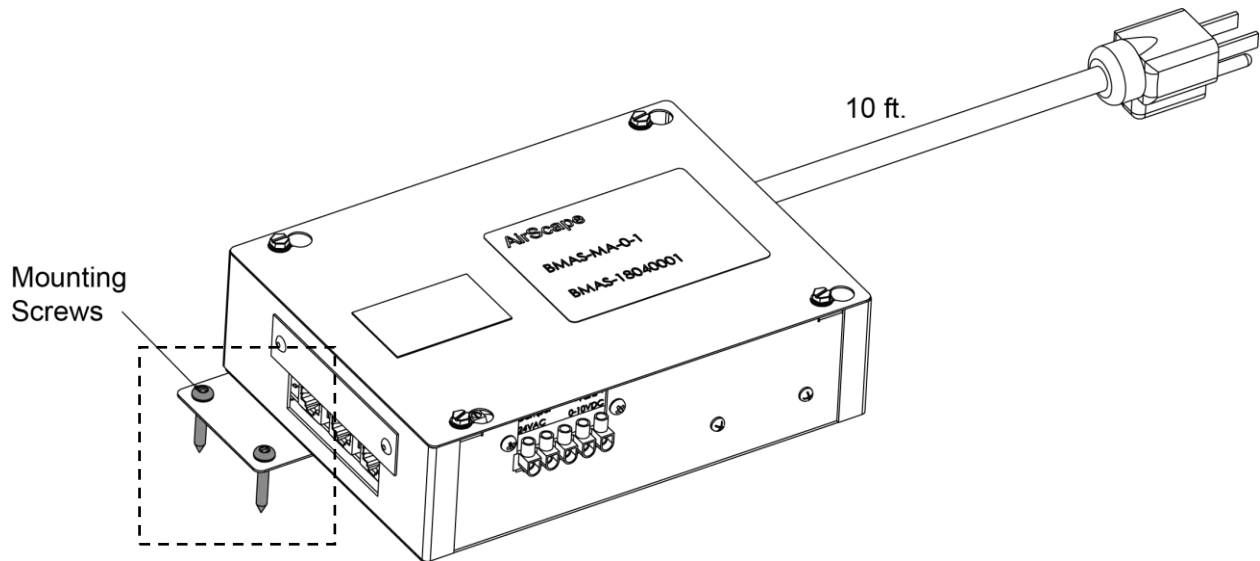
Wiring and Controls

Make-up Air System Installation

1. Control Box

- a. Determine the location and wiring logistics of each component, with the control box 10 ft. power cord and 50 ft. CAT5e cable length constraints in mind (**Figure 5**).
- b. The control box should be mounted to wood beams either on the wall or floor.
- c. Securely fasten the control box into the desired location using the 4 provided mounting screws (**Figure 1**).

Figure 1: Control Box Installation



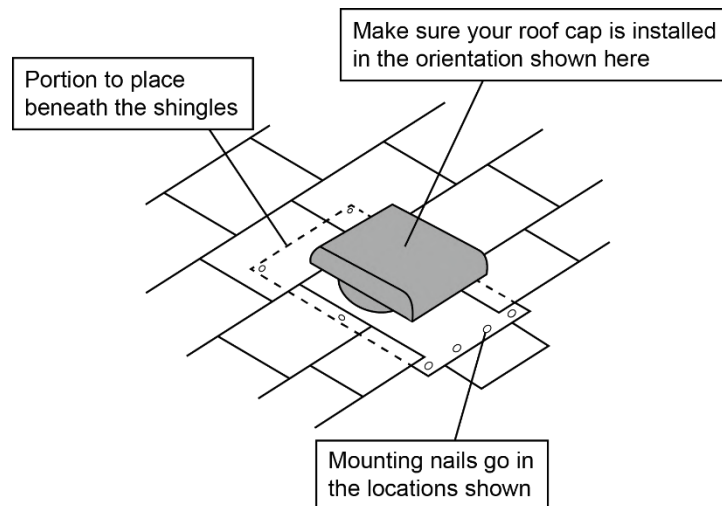
*Note: Securely fasten the two other mounting screws not shown in the diagram, on the other side of the control box.

2a. Make-up Air Roof Cap (Optional)

These are general instructions for installing the optional roof cap (if applicable) in HVACQuick.com Balanced Make-up Air System on a shingle roof and may vary depending on your particular application, roofing material, code requirements and other factors. If you have any specific questions about installing your roof cap, please consult a roofing professional.

- a. Locate the outside air inlet hood above any anticipated snow drift level and away from any architectural and landscape features to ensure that the intake area for the outside air duct is not blocked and provides a clear pathway for outside air to enter the system. If you have any specific questions about installing your roof cap please consult a roofing professional.
- b. Cut a hole in your roof about $\frac{1}{2}$ larger than your duct.
- c. Carefully lift shingles and slide the rear flange of the roof cap under the shingles. **(Figure 2)**
- d. Use roof cement to seal shingles to the top and sides of the roof cap. Make sure to seal all nail heads thoroughly.

Figure 2: Roof Cap Installation



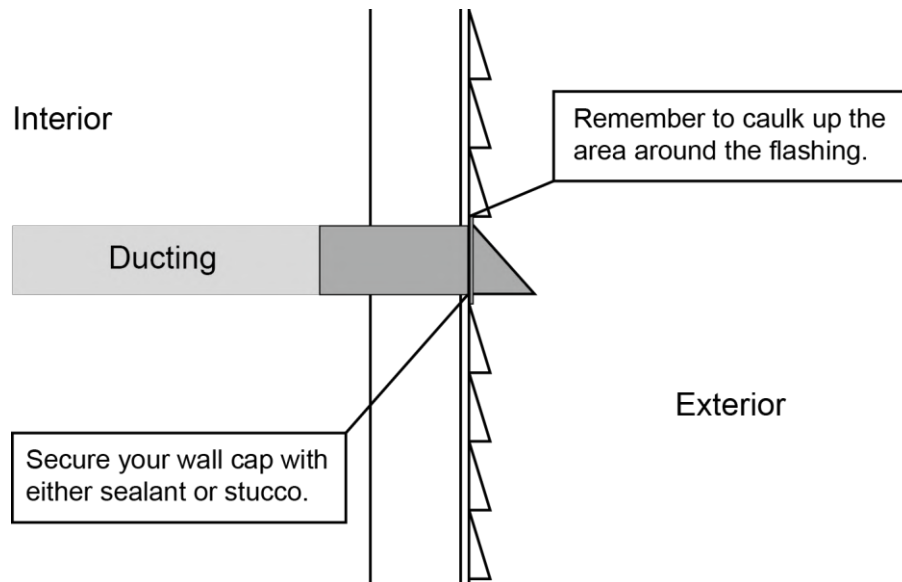
- e. Attach your ducting to the roof cap starting collar from below.
- f. Make sure to use sheet metal screws for your connections and seal the screws as well as all seams with a professional duct sealing tape (UL181BFX)

2b. Make-up Air Wall Cap (Optional)

These are general instructions for installing the optional wall hood (if applicable) in HVACQuick.com Balanced Make-up Air System and may vary depending on your particular situation, siding material, code requirements and other factors. If you have any specific questions about installing your wall hood, please consult a building professional.

- a. Cut a hole in the wall location to the size of your duct.
- b. Feed your ducting through the wall. **(Figure 3)**
- c. Connect your wall hood using sheet metal screws and seal it using duct sealing (UL181BFX) tape.

Figure 3: Wall Cap Installation



- d. Apply caulk to the back of the wall hood flashing and slide into place. Screw it to the wall if applicable.
- e. Make sure to use sheet metal screws for your connections and seal the screws as well as all seams with a professional duct sealing tape (UL181BFX).

3. Damper

- a. Install the motorized damper per its instructions. Do not wire until all components are installed.
*Note: The transformer has already been wired and installed in the control box of the system.
- b. Ensure the electric terminal block is easily accessible for wiring.
- c. Make sure to use sheet metal screws for your connections and seal the screws as well as all seams with a professional duct sealing tape (UL181BFX).

4. Conical Filter Box (CFB)

- a. Install the conical filter box down stream of the damper.
- b. In some scenarios it may be advantage to connect the filter box straight the damper using sheet metal screws. Otherwise, connect the filter box to duct using sheet metal screws.
- c. Ensure the filter is easily accessible for cleaning and replacement.
- d. Make sure to use sheet metal screws for your connections and seal the screws as well as all seams with a professional duct sealing tape (UL181BFX).

5. Make-up Air prioAir EC Fan

- a. Install the model fan per its instructions.
- b. The fan should be installed and mechanically supported to reduce the transmission of fan/motor vibration to the building structure.
- c. We recommend using flex duct for the make-up air system to help reduce noise created by the fan.

6a. Make-up Air LD Silencer (Optional)

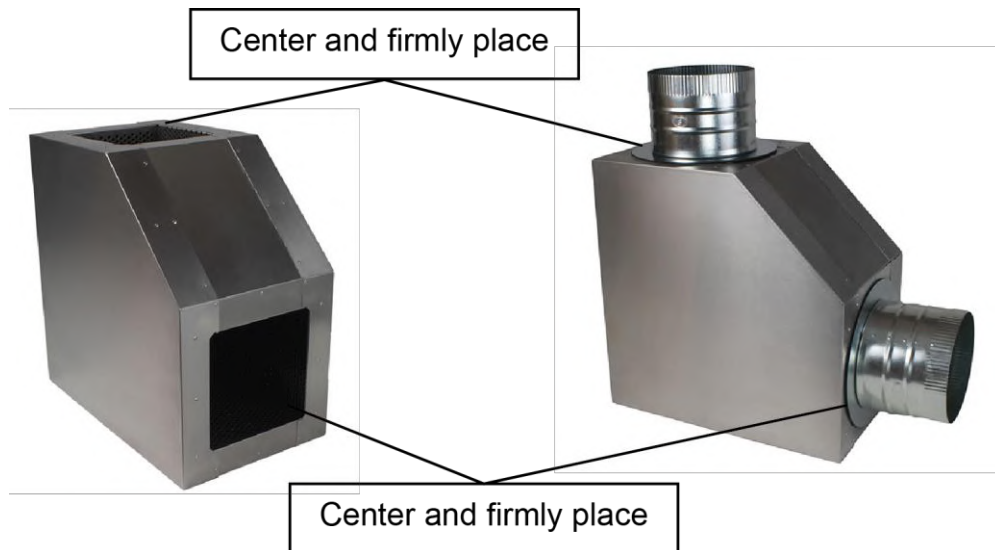
- a. The silencer must be placed somewhere between the fan and the hood liner.

- b. For the most effective noise reduction, the silencer should be fitted as close to the fan as possible.
- c. Connect the duct to each side of the silencer (where applicable) using sheet metal screws.
- d. Seal the screws as well as all seams with a professional duct sealing tape (UL181BFX).

6b. Make-up Air CLS Elbow Duct Silencer (Optional)

- a. Use water and a cloth to clean the surface where the duct flanges attach. Peel off the protective layer revealing the adhesive and carefully center and firmly place each flange onto the silencer (**Figure 4**). Let the adhesive set for 20 minutes before installing.

Figure 4: CLS Elbow Silencer Flange Attachment



- b. Once the adhesive has set, connect each side to the corresponding duct using the provided self-tapping screws.
- c. Support the silencer if it hangs using wire and hooks.
- d. Make sure to use sheet metal screws for your connections and seal the screws as well as all seams with a professional duct sealing tape (UL181BFX).

Kitchen Exhaust Installation



RIGID METAL DUCT MUST BE USED FOR KITCHEN EXHAUST SYSTEM

7a. Kitchen Exhaust Roof Cap (Optional)

- a. Please refer to section 1 for installation instructions.

7b. Kitchen Exhaust Wall Cap (Optional)

- a. Please refer to section 2 for installation instructions.

8. Kitchen Exhaust prioAir EC Fan

- a. Please refer to section 5 as well as the fans installation manual for further instructions.
- b. Use sheet metal screws and rigid metal duct to connect the fan to either the silencer or the kitchen hood liner.

9a. Kitchen Exhaust LD Silencer (Optional)

- a. Please refer to section 6 as well as the products installation manual for further instructions.
- b. Use sheet metal screws to connect the silencer to the kitchen hood liner. Seal screws and seams with professional grade duct sealing tape (UL181BFX).

9b. Kitchen Exhaust CLS Elbow Duct Silencer (Optional)

- a. Please refer to section 7 for installation instructions.
- b. Use sheet metal screws and rigid metal duct to connect the silencer to the kitchen hood liner. Seal screws and seams with professional grade duct sealing tape (UL181BFX).

10. Digital Touch Controller

Do not install the Digital Touch controller in an external, south-facing wall as this may expose its circuitry to excessive heat.

First, locate the desired location for the Digital Touch Controller. Install the mounting bracket according to Figures A–C below.

Figure A



Use the mounting bracket as a template to mark the hole location.

Figure B



Cut out a rough opening.

Figure C



Place the mounting bracket and secure its locking tabs by tightening the silver

Figure D



Mount the faceplate to the bracket with the provided white faceplate screws

Wiring and Controls



WARNING: PLEASE MAKE SURE TO COMPLETE THE FOLLOWING STEPS SAFELY AND THAT YOU ADHERE TO LOCAL CODE REQUIREMENTS. KEEP THE MAIN POWER OFF UNTIL YOU HAVE FULLY COMPLETED WIRING OF THE COMPONENTS.

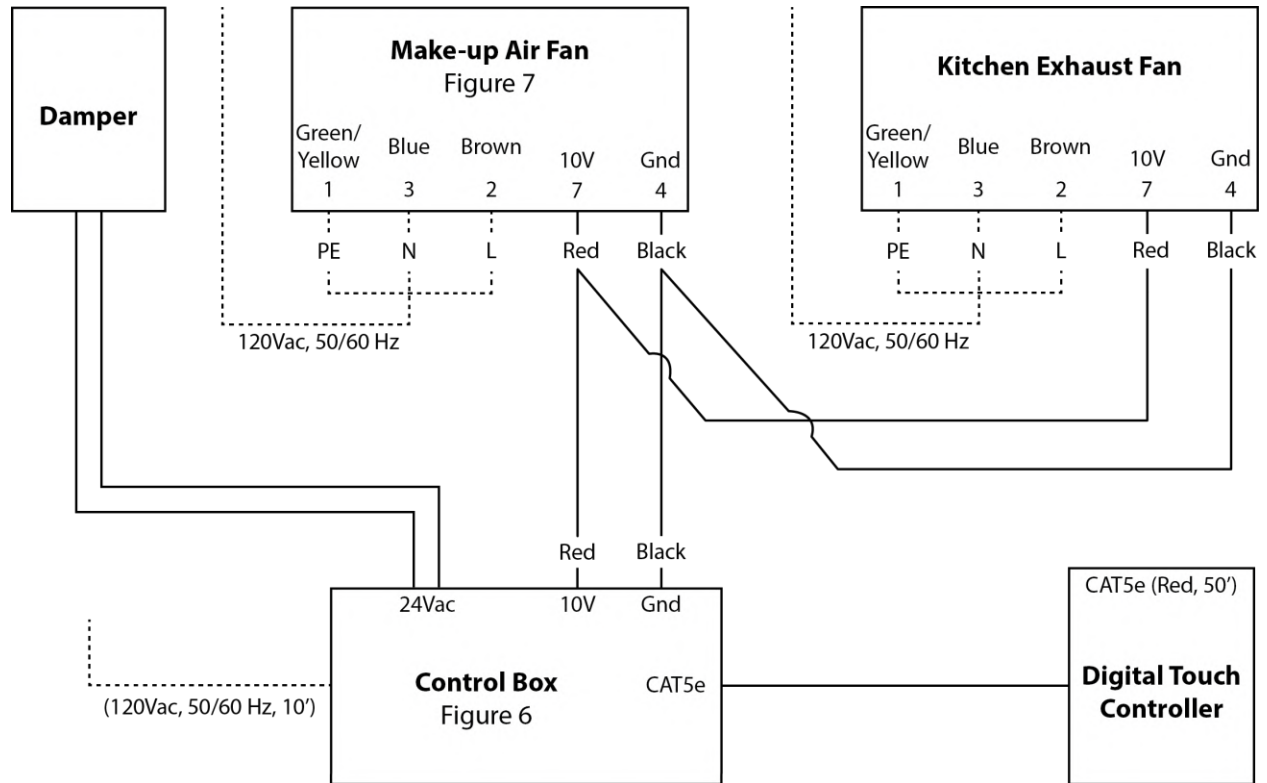
All wires are low voltage. DO NOT run any wires parallel to high-voltage cables. Building codes generally require low-voltage cables to be run through shielded conduit.

Please review **Figure 4: Wiring Diagram** as well as each component's individual wiring diagram for more detailed information.

1. Use CAT5e cable (50 ft) to connect the digital touch controller to the control box. Use extreme caution when running this cable as even minor kinks can interrupt the signal between the controller and the fans.
2. Wire the red 10 volt and black ground from the control box terminal to the make-up air fan into the red 7 and black 4 terminals respectively. **A potentiometer in the fan's terminal box must be removed before wiring.** Provide 120Vac 50/60 Hz electrical power to the make-up air fan.
3. Daisy chain the make-up air fan to the kitchen exhaust fan, using the red 10 volt and black ground terminals. Again, the potentiometer in the fan's terminal box must also be removed before wiring. Also provide 120Vac 50/60 Hz electrical power to kitchen exhaust fan.

4. Wire the motorized damper from the control box using 3 conductor wire.
5. Finish by plugging the power cord from the control box into an outlet with uninterrupted 120-volt power and restoring the main power.

Figure 5: Wiring Diagram



*Note: Depending on the location and accessibility of each component, either fan can be daisy-chained to the other, or each fan can be directly wired to the control box.

Figure 6: Control Box

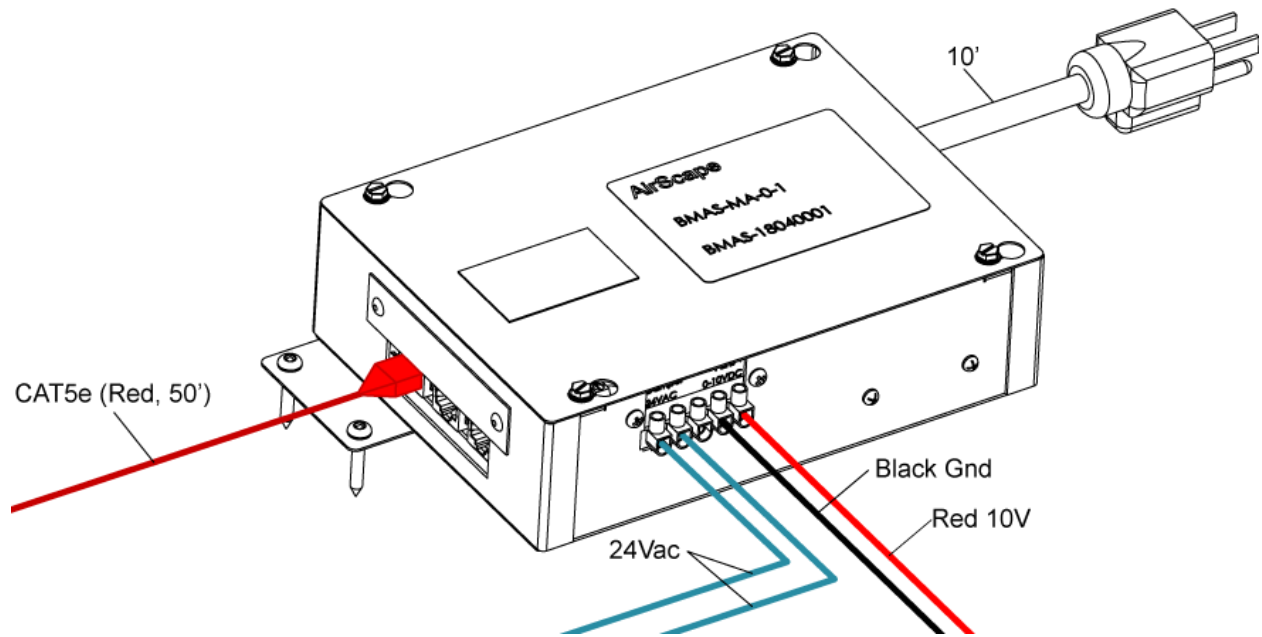
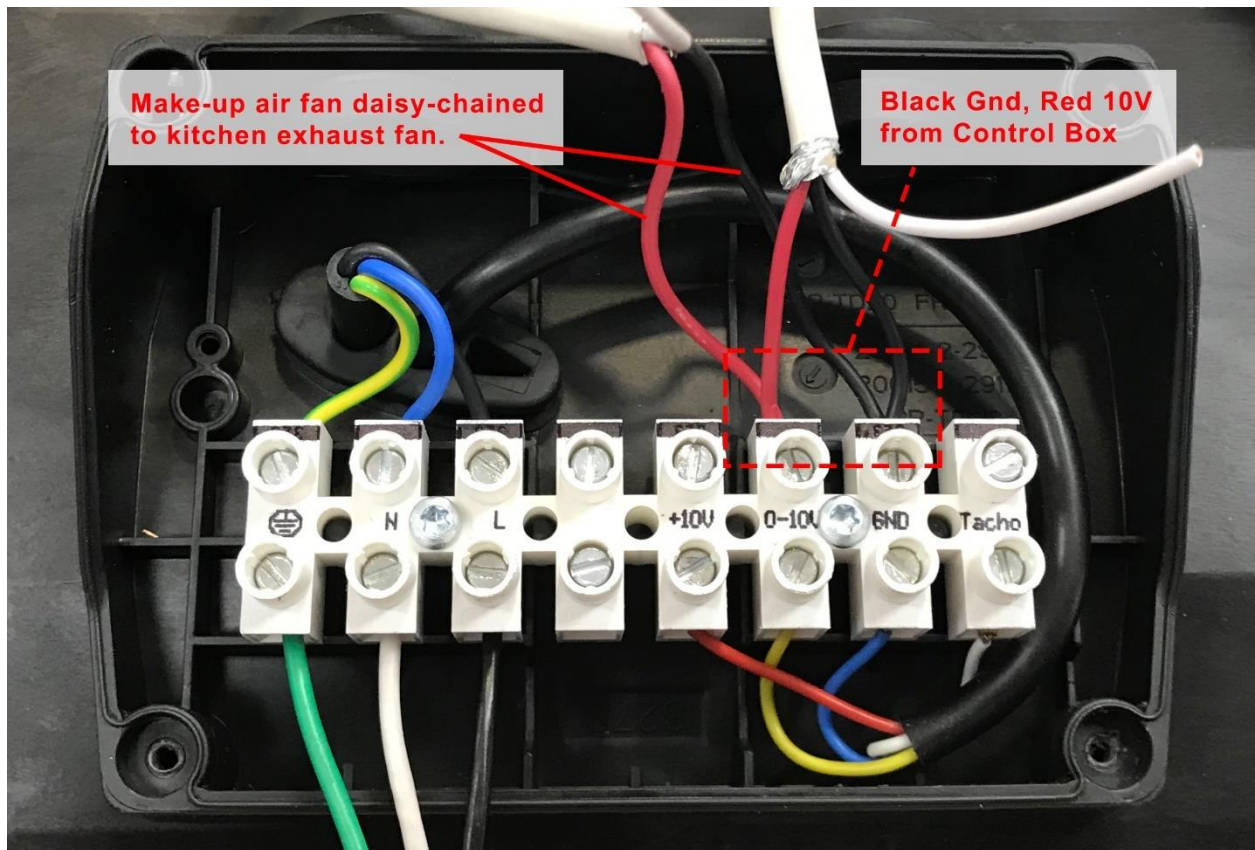


Figure 7: Make-up Air Fan



LIMITED WARRANTY

HVACQuick.com (Distributor) warrants from the date of purchase that the product supplied by Distributor is free of defects in material and workmanship for a period of 3 years.

If a failure of the product occurs, contact the Distributor at 877-711-4822 and give the model number of the product, the purchase date, proof of purchase, and a description of the problem. The Distributor will cover shipping charges during the first 6 months of warranty. Customer is responsible for all inbound and outbound shipping charges after the initial 6 month period.

Once a problem is diagnosed, and proof of purchase is verified, the Distributor will have the option of shipping the necessary repair part(s) to the Customer or having the product returned to the Distributor for repair or replacement.

If the Distributor finds the returned product to be in operating condition, the product will be returned to the customer at customer's expense. Distributor reserves the right to obtain a credit card authorization for possible freight charges or non- return of defective parts/unit.

Specific warranty exclusions:

Except as provided by this express warranty, the goods are sold without any implied warranties. This limited warranty does not cover labor or field diagnosis, nor does it cover failure of the installer to follow installation instructions, damage resulting from accident, misuse or abuse, lack of maintenance, improper installation. In no event, shall the Distributor be liable for any special, incidental, or consequential damages resulting from any defect in material or workmanship. It is expressly understood that Buyer's sole and exclusive remedy shall be repair or replacement of defective parts.

DISTRIBUTOR INFO:

HVACQuick.com
625 Charles Way
Medford, OR 97520
Office: 1.877.711.4822
Fax: 541.245.2988
email: sales@hvacquick.com
web: www.hvacquick.com