FRESH IN™ FIN-6MD

INSTALLATION INSTRUCTIONS

⚠ RESIDENTIAL USE ONLY ⚠

Please take note that this manual uses the following symbols to emphasize particular information:

⚠WARNING

Identifies an instruction which, if not followed, might cause serious personal injuries including possibility of death.

CAUTION

Denotes an instruction which, if not followed, may severely damage the unit and/or its components.

Indicates a supplementary information that may relate to optional parts or simply aim to facilitate a task.

⚠WARNING

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSON(S) OBSERVE THE FOLLOWING:

1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
2. Before cleaning this unit, turn off the power to the AHU at service panel. (Powered by AHU)
3. This unit is not designed to provide combustion and/or dilution air for fuel-burning appliances.
4. Installation work must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
5. When cutting or drilling into a wall or ceiling, do not damage electrical wiring and other hidden utilities.
6. When cleaning or performing installation of this unit, it is recommended to wear safety glasses and gloves.
7. When applicable local regulation comprises more restrictive installation and/or certification requirements, the aforementioned requirements prevail on those of this document and the installer agrees to conform to these at his own expense.
8. The unit must be mounted at least 3.3 feet (1.0 meter) away from any accessible opening of the duct.
9. Must be powered using a Class 2 transformer rated 10VA or higher.

CAUTION

1. Please read specification label on product for further information and requirements.
2. Do not intake air into spaces within walls or ceiling or into attics, crawl spaces, or garage. Do not attempt to recover the exhaust air from a dryer or a range hood.
3. Intended for residential installation only in accordance with the requirements of NFPA 90B.
4. When leaving the house for a long period of time (more than two weeks), a responsible person should regularly check if the unit operates adequately.
5. At least once a year, the unit mechanical and electronic parts should be inspected by qualified service personnel.
6. Since the electronic control system of the unit uses a microprocessor, it may not operate correctly because of external noise or very short power failure. If this happens, turn power off at AHU service panel and wait approximately 10 seconds. Then, restore the power to the unit.
7. Outdoor intake hood must be weather tight and comprise a bird screen.
8. Should you decide to dispose of this unit or of parts of it, do so in accordance with local laws and regulation.

1. PREPARATION

Before you start:
Choose the best location and installation type for the FIN-6MD according to the current system. Ducting widely affects the performance of this type of device. Use the shortest, straightest duct run possible to maximize the results.

CAUTION

Do not install in an area where the temperature may exceed 160°F.

The installer shall ensure that, if necessary, an in-line heater sized according to the required airflow and outside design heating temperature from Manual J or ASHRAE table is installed to ensure that the air delivered to the AHU is never below the minimum temperature allowed by the manufacturer. The in-line heater shall have an integrated airflow sensor and an over temperature sensor to prevent heating in no-flow or low-flow conditions.

When deciding if a preheater is required and whether it should be installed BEFORE or AFTER the FIN-6MD, consider the following:

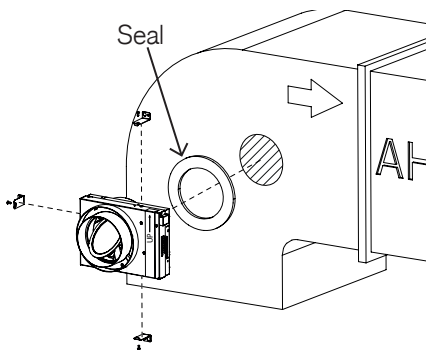
- The FIN-6MD's minimum operating temperature is -4°F.
- The temperature distributed to the AHU should never be below the temperature recommended by the AHU manufacturer.
- The minimum distance between the preheater and the FIN-6MD is 12 inches.

2. INSTALLATION

Always respect the orientation of the FIN-6MD and the direction of the airflow, as indicated on the unit.

Direct-to-AHU is the fastest and easiest method:

1. Make a 6-inch diameter hole in the return duct of your AHU.
2. Install the seal on the FIN-6MD port that will insert the AHU ducting. Make sure that the direction of the airflow indicated on the unit is respected.
3. Install the 3 installation brackets on the unit, as illustrated.
4. Mark and drill holes for the brackets on the AHU ducting and, using appropriate screws, secure the FIN-6MD to the duct of the AHU, making sure it is level horizontally.

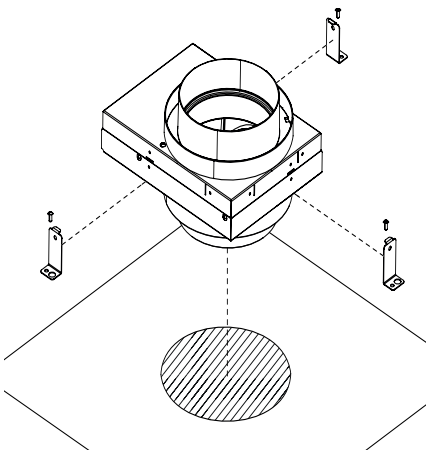


Use self-drilling screws (not included) to avoid marking and drilling steps.

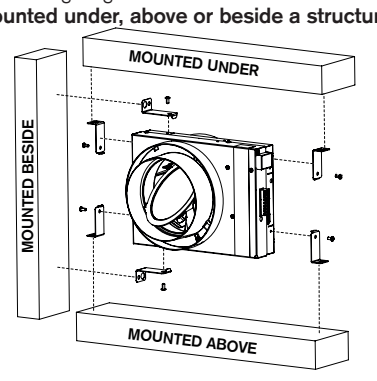
5. Follow steps in section 3 to connect the insulated duct to the FIN-6MD.
6. Perform the electrical connection to the AHU following the wiring diagram in section 4.

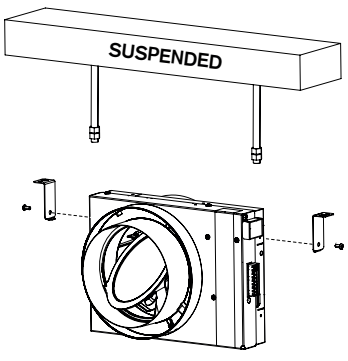
Through a horizontal surface:

1. Make a hole in the surface that the duct will run through. Size the hole so that the vapor barrier of the insulated ducting is not damaged, and the insulation not compressed.
2. Install the 3 installation brackets on the unit, as illustrated.
3. Run a piece of insulated duct through the hole and connect to the FIN-6MD following the steps in section 3. Make sure the direction of the airflow as indicated on the unit is respected.
4. Push the excess ducting on the other side of the surface and, using appropriate screws, secure the FIN-6MD to the surface.
5. Run the insulated duct to the AHU and connect to the AHU ducting, making sure that the vapor barrier sealing is leak-free.
6. Follow steps in section 3 to connect the second insulated duct to the FIN-6MD.
7. Perform the connections to the AHU following the wiring diagram in section 4.



Mounted under, above or beside a structure:





1. Install 2 installation brackets on the unit, as illustrated, according to the surface the unit will mount to.
2. Using appropriate screws, secure the FIN-6MD to the structure, making sure it is level horizontally. Make sure the direction of the airflow as indicated on the unit is respected.
3. Follow steps in section 3 to connect both insulated ducts to the FIN-6MD.
4. Run the insulated duct to the AHU and connect to the AHU ducting, making sure that the vapor barrier sealing is leak-free.
5. Perform the connections to the AHU following the wiring diagram in section 4.

3. CONNECTING THE INSULATED DUCTS TO THE UNIT

CAUTION

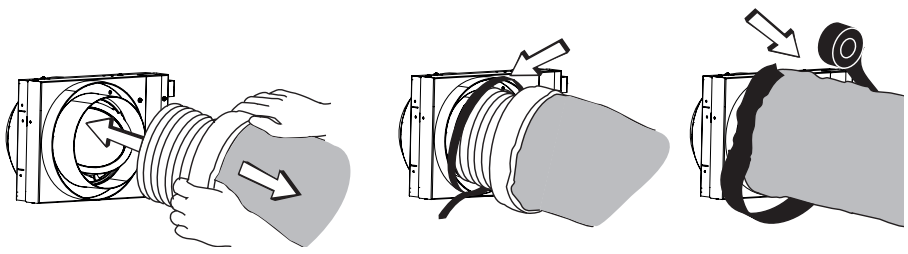
Always use insulated ducting of a minimum R-4 insulation factor.

1. Slide the inner flexible duct over the port and secure it using a tie wrap.
2. Pull the insulation over the flexible duct and port without compressing it.
3. Use duct tape to seal the outer membrane of the insulated duct to the outer ring of the port.

⚠WARNING

Make sure the outdoor intake hood is at least 18 inches above the ground and 6 feet away from any of the following: Dryer exhaust, high-efficiency furnace vent, central vacuum vent, gas meter exhaust, gas barbecue-grill, any exhaust from a combustion source, garbage bin and any other source of contamination.

Make sure that the outdoor intake hood is easily accessible for annual maintenance. If located above the first floor, place it close to a window or balcony to allow easy access.



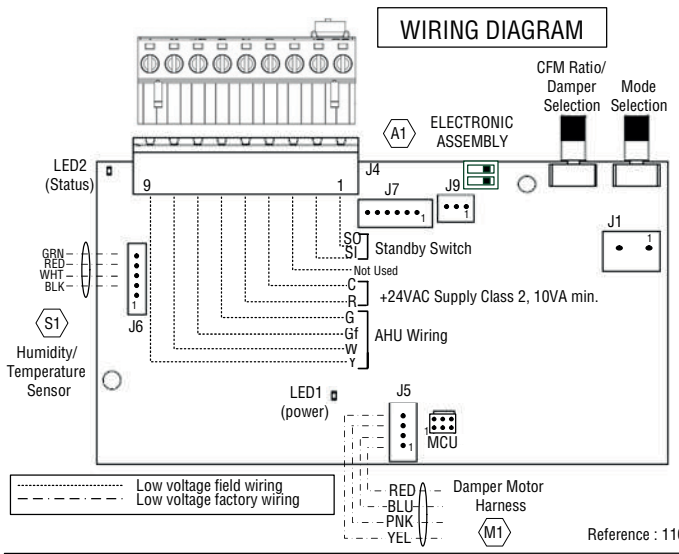
4. WIRING DIAGRAM

⚠WARNING

Risk of electric shock. Electrical wiring must be done by qualified personnel in accordance with all applicable codes and standards. Before connecting wires, switch off the power to the AHU at service panel and lock service disconnecting means to prevent power from being switched on accidentally.

CAUTION

Faulty connections can cause damage to the AHU, to the thermostat and/or to this unit. Always double check connections before turning power back on.

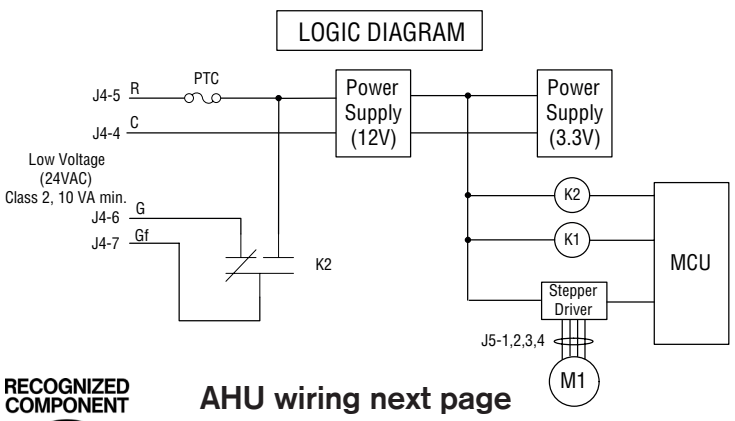


WIRING COLOR CODE

BLK	BLACK
BLU	BLUE
GRN	GREEN
PNK	PINK
RED	RED
WHT	WHITE
YEL	YELLOW

The terminal block can be removed for easier connection.

Use the included tie wrap and the loop above the terminal block to secure the wires and reduce the risk of broken connections.



AHU wiring next page

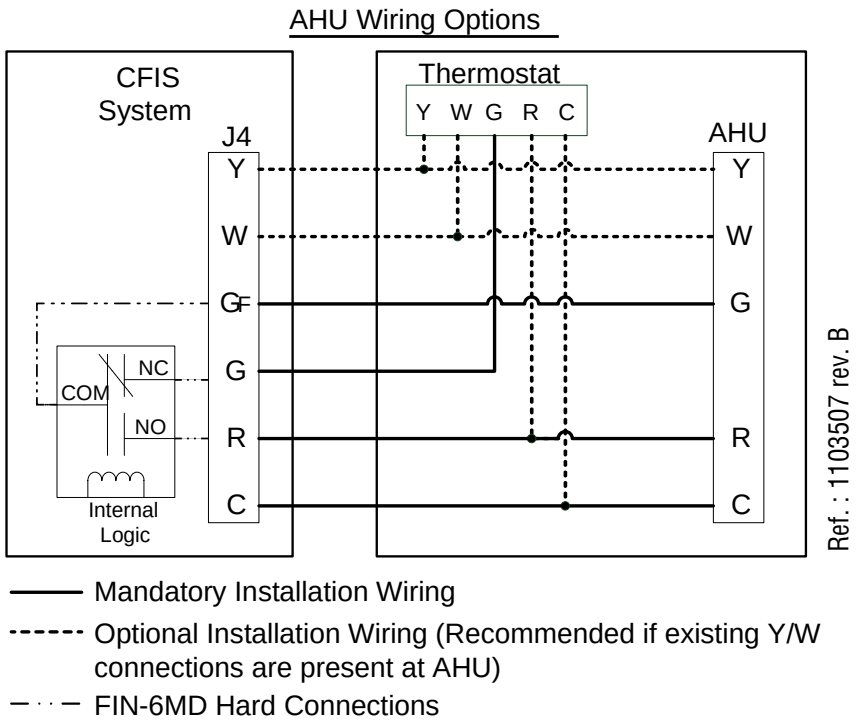
RECOGNIZED COMPONENT

ETL LISTED US

Intertek

5011110
CONFORM TO UL STD. 1995

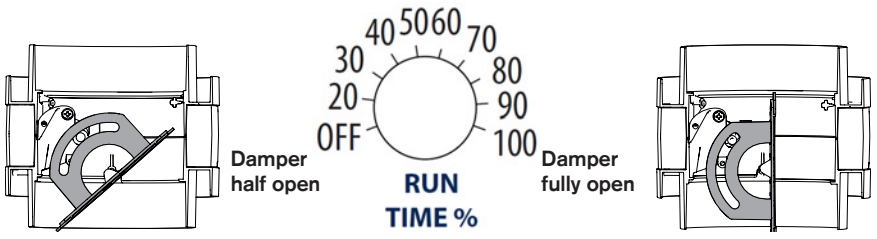
4.1 AHU Wiring



5. SETTING UP THE UNIT

When powered ON, the FIN-6MD performs a 30-second booting sequence followed by a 30-minute period where it stays OFF, but will activate if a heating or cooling call is sent to the AHU.
Refer to local building codes to determine the required airflow.

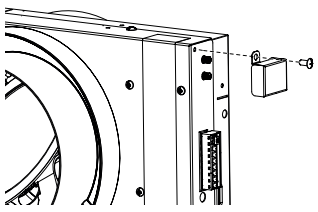
1. Doublecheck the wiring, and turn power back ON to the AHU.
2. Set the thermostat to send a heating or cooling call, or jump R and Y on the terminal block. This will force the ventilation ON for at least 5 minutes.
3. Measure the airflow.
   If it needs adjustment, perform steps 4. If the airflow does not need adjustment, go to step 5.
4. The damper is factory set to fully open position. To adjust it, set the left pot to **DAMPER ADJUSTMENT** to start the AHU blower, and wait 5 seconds. The LED will blink continuously to indicate the unit is in DAMPER ADJUSTMENT mode.
   While measuring the airflow, adjust the damper using the RUN TIME % pot until you've reached the desired value.



5. Select the desired mode according to the table and map in section 7.3. Doing so also saves the damper adjustment made in the previous step if applicable.
6. Set the RUN TIME % pot.

$$\text{Run time \%} = \frac{\text{Required Airflow}}{\text{Measured Airflow}} \qquad \text{Example : Run Time \%} = \frac{60\ \text{CFM}}{120\ \text{CFM}} = 50\%$$

7. Install the supplied cover to protect the adjustment pots and prevent an accidental change of settings. Note that the hole may be hidden by the label.



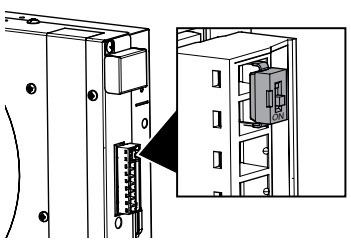
6. TESTING

When powered ON, the FIN-6MD performs a 30-second booting sequence followed by a 30-minute period where it stays OFF, but will activate if a heating or cooling call is sent to the AHU.

6.1 Blower door test (force the damper closed)

If the access to the integrated switch OR to the remote switch (if applicable) is **easy**, set the integrated switch OR remote switch to OFF.

Integrated switch



If the access to the switch is **not easy**, such as in an attic:

1. Turn OFF the power to the AHU at the service panel.
2. Turn the power to the AHU back ON at the service panel.
3. Wait 30 seconds for the booting sequence to execute.
4. Make sure that the thermostat will not send a heating or cooling call.
5. Unit is OFF with its damper closed for 30 minutes, but will activate if a heating or cooling call is sent to the AHU.

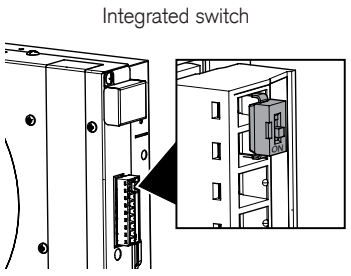
6.2 Ventilation test (forcing the unit ON):

1. Turn OFF the power to the AHU at the service panel, and make sure that the integrated or remote switch is set to ON.
2. Turn the power back ON at the service panel.
3. Wait 30 seconds for the booting sequence to execute.
4. Set the thermostat to send a heating or cooling call, **or** jump R and Y on the terminal block. This will force the ventilation ON for at least 5 minutes.

7. USER INFORMATION

7.1 Integrated and remote switches

Integrated switch



This unit is equipped with an integrated ON/OFF switch. For more convenience, your FIN-6MD can also be connected to a remote switch.
To use a remote switch, disconnect the integrated switch and connect the remote switch in the same manner that the integrated one was connected.

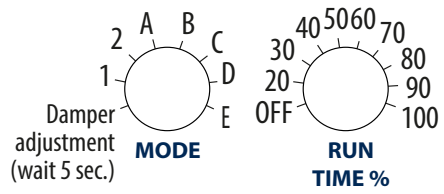
7.2 User Servicing Instructions

- Inspect the outdoor air intake at least once a year.
- These recommendations may change according to the environmental conditions in your area.

7.3 Comfort Mode

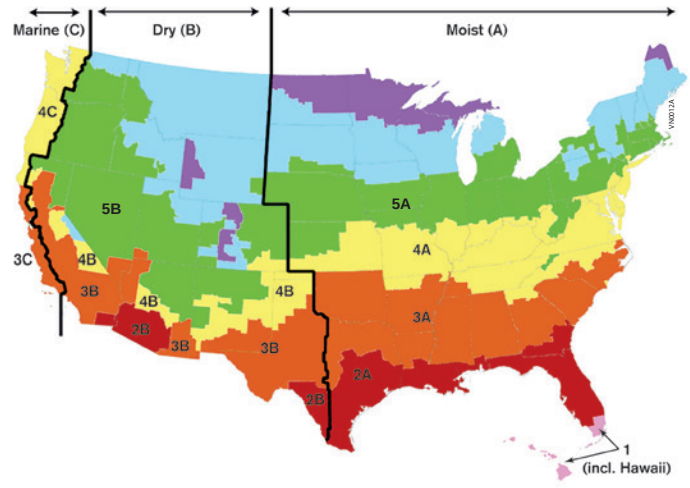
Should the air inside your house become too humid, or if such conditions want to be prevented, the operation mode of your FIN-6MD can be changed from a Code-Compliant one (modes 1 and 2) to a Comfort Mode (modes A to E). Refer to the map below to make the right choice.

When making such change, make sure to only change the Mode and to leave the Run time % as it was set by your installer. If in doubt, refer to your HVAC contractor.



Selected mode*	Climate Zones**
1 - Ashrae 2010/IRC/IMC (factory set)	Zones 1-5
2 - Ashrae 2016/2019	Zones 1-5
A - Comfort mode Hot / Humid #1	Zones 2A and 1
B - Comfort mode Hot / Humid #2	Zones 1 and 2A
C - Comfort mode Hot / Dry	Zone 2B
D - Comfort mode Mixed / Humid	Zones 3A, 4A, 5A, 3C and 4C
E - Comfort mode Mixed / Dry	Zones 3B, 4B and 5B

*Refer to the label on the unit for the full limits table.
**As defined by the Department of Energy.



7.4 Troubleshooting

A LED indicator is located to the right of the terminal block on the unit and communicates the different states of the unit. Blinking patterns and ways to address them, if applicable, are as follows:

Sensor error	1 blink	Disconnect the terminal block, and connect again. If the error persists, replace the unit.
Damper error	2 blinks	Disconnect the terminal block. Open unit (see image below). Perform a visual inspection and remove any debris hindering damper movement. Close unit and put the terminal block back in place. If error persists, replace the unit.
Damper adjustment mode	Continuous blink	This is normal while the unit is in adjustment mode.
Learning mode	1 s ON, 10 s OFF	This is normal. Will blink for 48 hours after being powered ON.