

# IMPORTANT INSTRUCTIONS - OPERATING MANUAL

Models: AIK14X, AIK16X, AIK24Y, AIK26Y,  
AIF4X, AIF6Y, AIF8X, AIF10X,  
AIG4, AIG6



In-Line Exhaust Fan

## READ AND SAVE THESE INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING TO ASSEMBLE, INSTALL, OPERATE OR MAINTAIN THE PRODUCT DESCRIBED. PROTECT YOURSELF AND OTHERS BY OBSERVING ALL SAFETY INFORMATION. FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE!

RETAIN INSTRUCTIONS FOR FUTURE REFERENCE.

## GENERAL SAFETY INFORMATION

When using electrical appliances, basic precautions should always be followed to reduce the risk of fire, electric shock and injury to person, including the following:

**WARNING: DO NOT CONNECT POWER SUPPLY UNTIL FAN IS COMPLETELY INSTALLED. MAKE SURE ELECTRICAL SERVICE TO THE FAN IS LOCKED IN OFF POSITION.**

1. Read all instructions before installing or using exhaust fan.
2. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
3. Before servicing or cleaning the unit, switch power off at 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 prominent warning device, such as a tag, to the service panel.
4. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-related construction.
5. 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 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 (ASHRAE), and the local code authorities.
6. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
7. Ducted fans must always be vented to the outdoors.
8. To avoid motor bearing damage and noisy and/or unbalanced impellers, keep drywall spray, construction dust, etc. off power unit.
9. Acceptable for use over a bathtub or shower when installed in a GFCI protected branch circuit.
10. Suitable for use with solid-state speed control.
11. This unit has rotating parts and safety precautions should be exercised during installation, operation and maintenance.
12. Guards must be installed when fan is within reach of personnel or within seven (7) feet of working level or when deemed advisable for safety.
13. NEVER place a switch where it can be reached from a tub or shower.
14. Do not insert or allow fingers or foreign objects to enter the motor.

**WARNING: DO NOT USE IN KITCHENS**

**CAUTION: FOR GENERAL VENTILATING USE ONLY. DO NOT USE TO EXHAUST HAZARDOUS OR EXPLOSIVE MATERIALS AND VAPORS.**

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1-800-667-8721

## SAVE THESE INSTRUCTIONS

# INSTALLATION INSTRUCTIONS

**CAUTION: MAKE SURE POWER IS SWITCHED OFF AT SERVICE PANEL BEFORE STARTING INSTALLATION.**

## SECTION 1

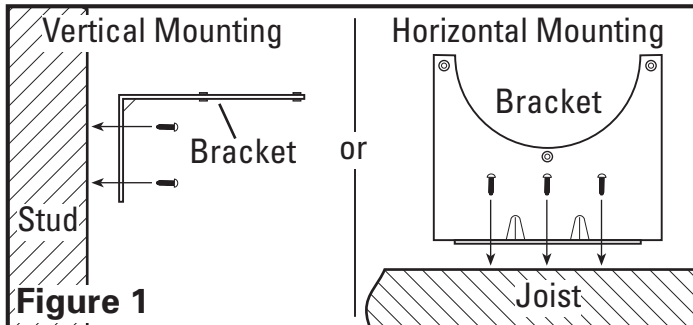
### Preparing for Fan Installation

- When selecting fan mounting location, the following criteria should be considered:
  - Mounting to minimize noise generated by fan operation:** Mounting the fan as far as possible from the intake point will minimize fan operating noise from being transmitted back through the duct work. If the fan is to be used as a booster for moving the air between two rooms, a central point along the duct may be optimal. Insulated flexible type duct work (recommended for all bathroom exhaust applications) will result in much quieter operation. It is recommended that a minimum 8' of insulated flexible ducting be used between any exhaust grill and fan for low noise level.
  - Service accessibility:** Fan location should allow sufficient access for service.

## SECTION 2

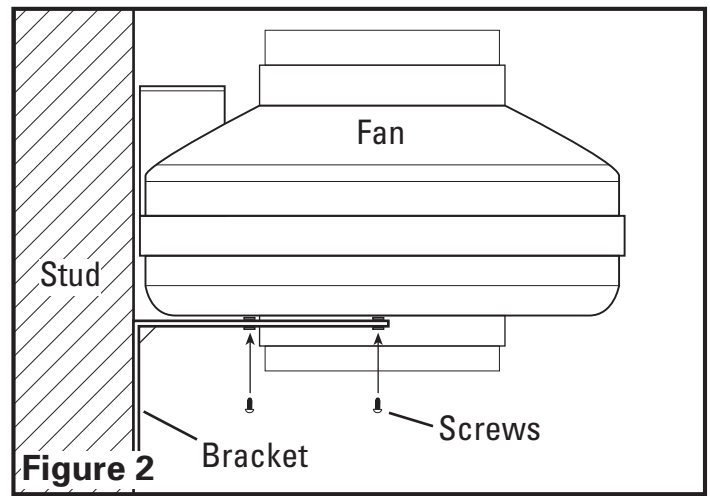
### Installing the Fan

- Using the 1" wood screws provided, attach the fan mounting bracket to a support beam at the selected location (**Figure 1**).



**NOTE:** Fan mounting can be at any point along the duct and in any angle, however, vertical mounting is recommended to reduce condensation buildup in the fan. If a horizontal installation is necessary and condensation buildup may pose a problem, wrap insulation around the fan to minimize buildup.

- Attach fan to the mounting bracket with the three 7/16" sheet metal screws provided, making sure the wiring box is positioned for easy access (**Figure 2**).

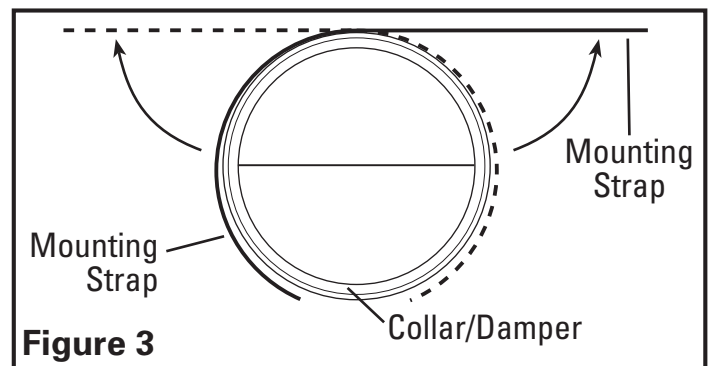


**NOTE:** Bracket is provided with rubber vibration isolation grommets to prevent the transmission of sound through the structure. Be careful not to over tighten. Also, care should be taken not to strip the plastic housing. Screws are self tapping and do not require pilot holes. Pilot holes no larger than 1/16" can be used to ease the installation however.

## SECTION 3

### Installing Supply/Exhaust Grill

- Select the grill mounting point within the area to be ventilated that does not interfere with a ceiling joist. To ease installation, locations of framing beams within the walls or joists supporting the ceiling should be considered. Collar/damper is provided with a perforated hanging strap for attachment directly to a beam or joist. Allow sufficient space between the collar/damper and the beam to attach the duct work. If the location of the grill does not allow direct attachment, a cross-member mounted to the framing should be used.
- Bend the mounting straps attached to the collar outward so they are straight across (**Figure 3**).



## SECTION 4

### New Construction

- Install the collar/damper in the selected location using the provided 1" wood screws through the mounting strap. The mounting height is determined by the thickness of the final wall/ceiling material. Ensure that the edge of the collar/damper will be flush with the finished wall/ceiling material (**Figure 4**).

## SECTION 6

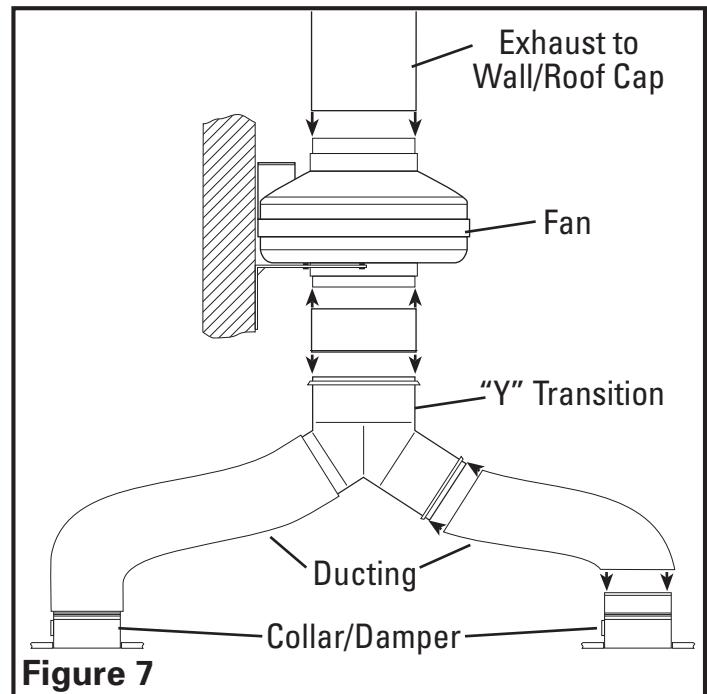
### Ducting

**CAUTION: ALL DUCTING MUST COMPLY WITH LOCAL AND NATIONAL BUILDING CODES.**

**NOTE:** Insulated ducting is required for bathroom exhaust applications, where ducting passes through unconditioned space or where noise is a factor. Failure to use insulation could result in excessive condensation buildup within the duct, and undesirable sound levels within the room. Duct runs should have as few bends as possible.

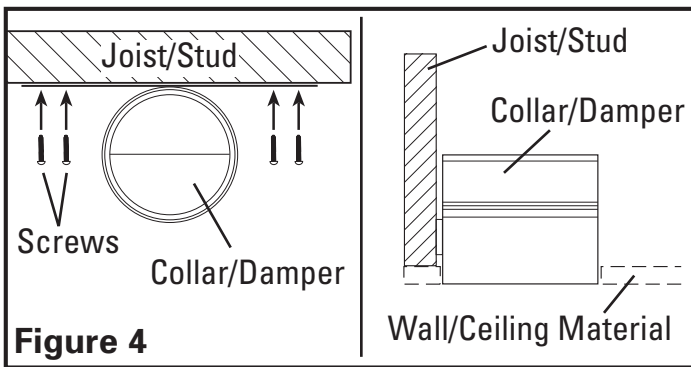
**NOTE:** Flexible insulated ducting may be used where allowed by local code. For the quietest possible installations, it is recommended a minimum of 8' of insulated flexduct be used between any exhaust grill and fan. When using flexible type duct work, duct should be stretched as tight and straight as possible. Failure to do so could result in dramatic loss of system performance. Flexible duct should be connected to the fan with screw clamps or duct tape. All connections should be as airtight as possible to maximize system performance.

1. Connect one end of the ducting (not included) to the room level collar/damper and the other end to the "Y" transition. Secure both ends in place using tape or a screw clamp to create as air tight a seal as possible. Repeat this step for the other room level grill housing (**Figure 7**).



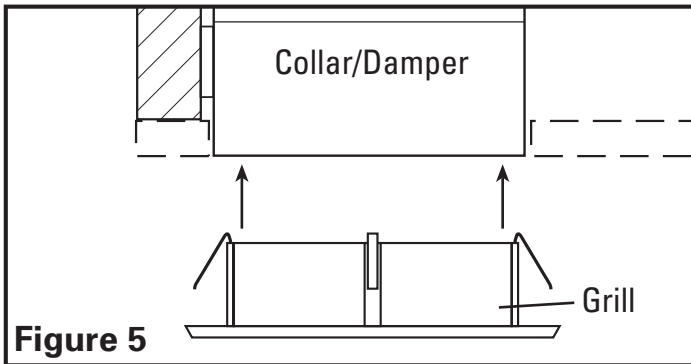
**NOTE:** Units that include only one collar do not utilize the "Y" transition. Follow the same instructions as in step 1, except connect the one end of the ducting directly to the fan.

2. Connect one end of the ducting to the top of the "Y" transition and the other end to the intake of the fan (**Figure 7**).
3. Connect one end of the ducting to the exhaust of the fan and the other end to a wall or ceiling cap (**Figure 7**). Always duct the fan to the outside through a wall or roof cap.



**Figure 4**

2. Once the wall/ceiling material is in place, install the grill into the collar by pushing it firmly inward towards the collar until it fits flush against the wall/ceiling material (**Figure 5**).

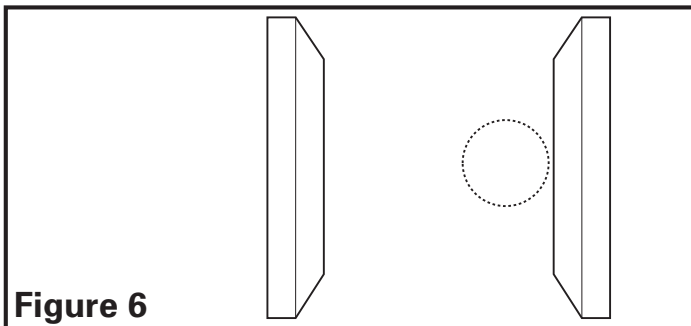


**Figure 5**

## SECTION 5

### Existing Construction

1. Place the collar/damper in the selected location and trace a circle onto the surface. From the interior side of the room, cut through the surface. Please note: Take care not to damage the ceiling and make a smooth cut (**Figure 6**).



**Figure 6**

2. Position the collar/damper in the previously cut hole so that it is flush with the finished ceiling and secure to the joist/stud using the provided 1" wood screws through the mounting strap (**Figure 4**).
3. Install the grill into the collar by pushing it firmly inward towards the collar until it fits flush against the wall/ceiling material (**Figure 5**).

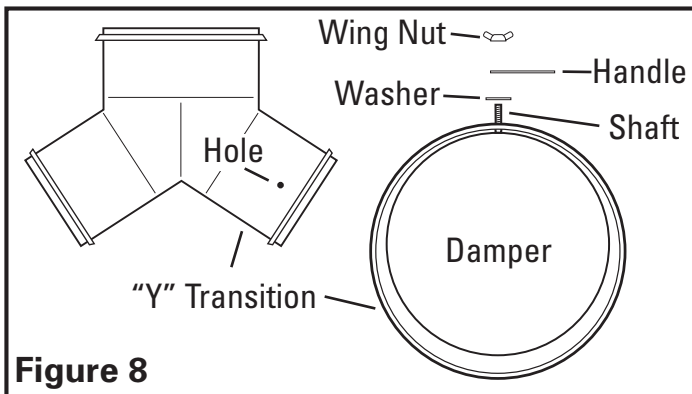
**NOTE:** When using insulated flex duct, it is recommended that the inner vinyl core be screw clamped or taped to the inlet and outlet and that the vapor barrier surrounding the insulation be taped to the fan housing.

**NOTE:** When attaching flex duct to the collar/damper combination and an immediate elbow is necessary, be certain that the elbow is installed with a "soft" bend to allow damper blades to operate properly.

## SECTION 7 Installing Optional Balancing Damper

Some kits include an optional balancing damper to allow for adjustment of the system. The damper may be used where the grills will be connected using branches of unequal length or where the flow will need to be balanced for any reason. To install the optional damper:

1. The damper must be installed on the branch with the least restriction. This is generally the duct that is shortest or has the fewest bends.
2. Drill a 5/16" hole approximately 1-1/2" from the edge on the flat side of the "Y" transition.
3. Insert the shaft of the damper into the hole drilled in step 2. Place the washer, handle, then wing nut onto the shaft (**Figure 8**).



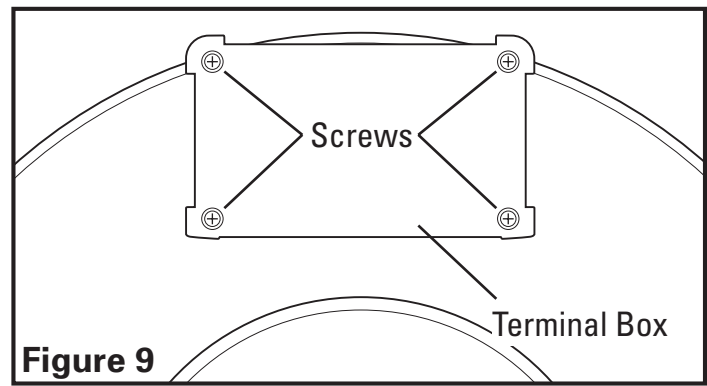
4. Adjust the damper to balance airflow and tighten the wing nut to secure.

## SECTION 8 Wiring the Fan

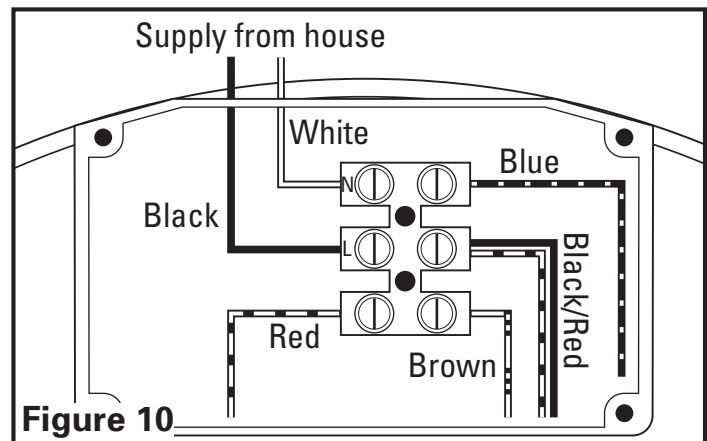
**CAUTION:** MAKE SURE POWER IS SWITCHED OFF AT SERVICE PANEL BEFORE STARTING INSTALLATION.

**CAUTION:** ALL ELECTRICAL CONNECTIONS MUST BE MADE IN ACCORDANCE WITH LOCAL CODES, ORDINANCES, OR NATIONAL ELECTRICAL CODE. IF YOU ARE UNFAMILIAR WITH METHODS OF INSTALLING ELECTRICAL WIRING, SECURE THE SERVICES OF A QUALIFIED ELECTRICIAN.

1. Remove the screws securing the terminal box cover plate located on the side of the motor (**Figure 9**).



2. Run wiring from an approved wall switch carrying the appropriate rating. One neutral (white) and one hot (black lead connected to the switch). Secure the electrical wires to the housing with an approved electrical connector. Make sure you leave enough wiring in the terminal box to make the connections to the fan's pre-wired electrical terminal strip.
3. Insert the white wire from the house into the terminal strip port labeled "N" and tighten using a small regular screwdriver. Insert the black wire from the wall switch into the terminal strip port labeled "L" and tighten using a small regular screwdriver. Since the motor is isolated within a plastic housing, grounding is not necessary (**Figure 10**).



4. Check to make sure all wire connections are securely fastened to the terminal strip and replace the fan terminal box cover.
5. Restore power and test your installation.

## SECTION 9 Use and Care

**CAUTION:** MAKE SURE POWER IS SWITCHED OFF AT SERVICE PANEL BEFORE SERVICING THE UNIT.

1. **Cleaning the Grill:** Remove grill and use a mild detergent, such as dishwashing liquid, and dry with a soft cloth. NEVER USE ANY ABRASIVE PADS OR SCOURING POWDERS. Completely dry grill before reinstalling. Refer to instructions in Step 2 of **Section 4**, to reinstall grill.
2. The fan's bearings are sealed and provided with an internal lubricating material, no additional lubrication is necessary.

## Troubleshooting Guide

Trouble	Probable Cause	Suggested Remedy
1. Fan does not operate when the switch is on.	1a. A fuse may be blown or a circuit tripped. 1b. Wiring is not connected properly. 1c. Motor has stopped operating.	1a. Replace fuse or reset circuit breaker. 1b. Turn off power to unit. Check that all wires are connected. 1c. Replace motor.
2. Fan is operating, but air moves slower than normal.	2a. Obstruction in the exhaust ducting. 2b. Speed control not set high enough. 2c. Incorrect wiring.	2a. Check for any obstructions in the ducting. The most common are bird nests in the roof cap or wall cap where the fan exhausts to the outside. 2b. If a speed control is being used, confirm the setting. 2c. Turn off power to unit. Check that all wires are connected correctly.
3. Fan is operating louder than normal.	3a. Motor is loose. 3b. Fan mounting screws too tight. 3c. Fan damaged in shipping.	3a. Turn off power to unit. Confirm unit is mounted securely to bracket. Restore power to unit. 3b. Turn off power to the unit. Loosen screws going through rubber grommets. 3c. Contact seller for replacement.

### LIMITED WARRANTY

All products manufactured by Air King Limited are warranted for one year from the date of purchase against defects in workmanship and/or material. In addition, all ventilating/exhaust fans, heaters, combination fan lights and/or heaters, and range hoods are guaranteed for five years from the date of purchase against defects in workmanship and/or material.

This warranty does not cover any labor or shipping costs or the cost of replacement components as part of routine maintenance such as: range hood grease filters, charcoal filters or combination charcoal/grease filters; replacement light bulbs in range hoods or bathroom fan/light/bulb heater combinations. As well, any damage or failure caused by abuse, misuse, abnormal usage, faulty installation, or improper maintenance will not be covered by this warranty.

In order to make a claim on this warranty, you must be the original consumer of the product. You will be required to present to Air King the original bill of sale showing: date of purchase, place of purchase and model purchased. Failure to meet these requirements will void your warranty.

Air King will not be held responsible for any bodily injury or damages to personal property or real estate whether caused directly or indirectly by the product. Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages and some states do not allow limitations on how long an implied warranty lasts, so these exclusions or limitations may not apply to you. This warranty gives you specific legal rights and you may have other rights which vary from state to state and province to province.

### FOR PARTS OR TECHNICAL ASSISTANCE

Please call: 1-800-465-7300, **MONDAY THROUGH FRIDAY, BETWEEN THE HOURS OF 8 AM AND 4:00 PM EST.**  
**PLEASE DO NOT RETURN PRODUCT TO PLACE OF PURCHASE.**

Reference the type and style of product (located on label inside of the product) when you call.  
For more information please visit our website: [www.airkinglimited.com](http://www.airkinglimited.com)