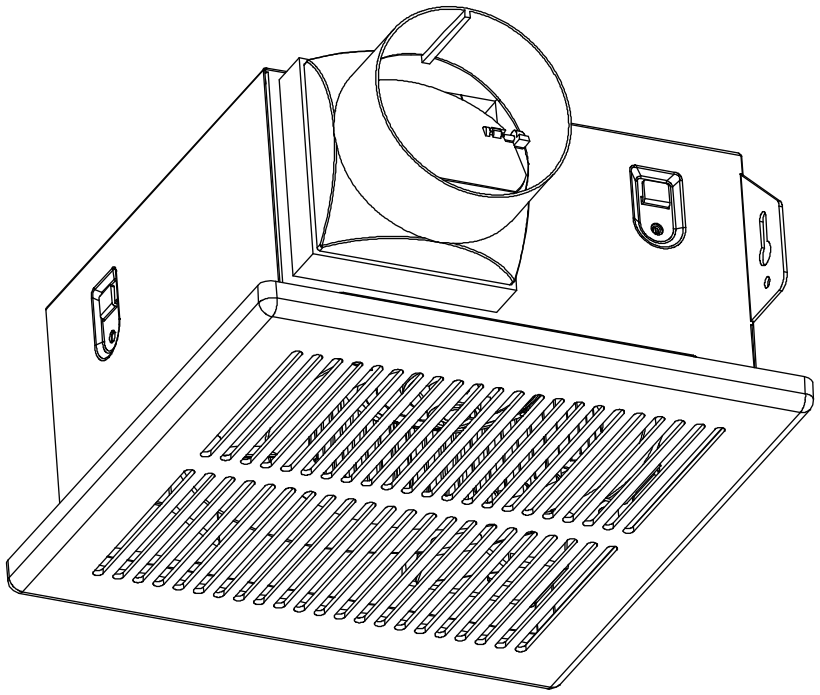
AKICON

USE AND CARE GUIDE

Model: AK1313EN2-W



70 CFM Bathroom Exhaust Fan

akiconhvac.com

NOTICE:

Installer: Leave this guide with the homeowner

Homeowner: Keep this guide for future reference

Read and save these instructions

HVI 2100 CERTIFIED

UL CERTIFIED

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Safety Information

PLEASE READ AND UNDERSTAND THIS ENTIRE MANUAL BEFORE ATTEMPTING TO ASSEMBLE, OPERATE OR INSTALL THE PRODUCT.

1. Always disconnect the power supply prior to servicing the fan, motor or junction box.
2. Follow all local building, safety and electrical codes as well as NEC (National Electrical Code) and OSHA (Occupational Safety and Health Act).
3. Electric Service supply must be 120 volts, 60 hertz.
4. This product must properly connect to the grounding conductor of the supply circuit.
5. Do not bend or kink the power wires.
6. Do not use this fan with any solid state control device, such as a remote control, dimmer switch, or certain timers. Mechanical timers are not solid state devices.
7. Do not install in a ceiling with insulation greater than R40.
8. Duct work should be installed in a straight line with minimal bends.
9. Duct work size must be the same size as the discharge and should not be reduced. Reducing the duct size may increase fan noise.
10. Do not USE rigid conduit when installation.
11. If this unit is to be installed over a tub or shower, it must be marked as a appropriate for the application. When the fan is going to install in the bathroom, the fan and the tub need to be more than 1.0 meter between each other, the fan required to install at the other side of the tub in ceiling. Acceptable for use over a bathtub or shower when installed in a GFCI protected branch circuit.



WARNING: TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:
Use this unit in the manner intended by the manufacturer. If you have any questions. Please call customer service.



WARNING: Before servicing or cleaning 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.



WARNING: Installation work and electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.



WARNING: When cutting the ceiling, do not damage electrical wiring and other hidden utilities.



WARNING: Ducted fans must always be vented to the outdoors.



CAUTION: For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.



CAUTION: Not for use in cooking areas.



CAUTION: To reduce the risk of injury to persons, install the fan at least 7 ft. (2.1 m) above the foor.

Limited 3-Year Warranty

If this product fails due to a defect in materials or workmanship at any time during the first ONE year of ownership, the manufacturer will replace it free of charge, postage-paid at their option. This warranty does not cover products that have been abused, altered, damaged, misused, cut or worn. This warranty does not cover use in commercial applications. Use only manufacturer-supplied genuine warranty repair replacement parts to repair this fan. Use of non-genuine repair parts will void your warranty. The manufacturer DISCLAIMS all other implied or express warranties including all warranties of merchantability and/or fitness for a particular purpose. As some states do not allow exclusions or limitations on an implied warranty, the above exclusions and limitations may not apply. This warranty gives you specific legal rights, and you may have other rights that vary from state to state.

This warranty is limited to the replacement of defective parts only. Labor charges and/or damage incurred during installation, repair, replacement as well as incidental and consequential damages connected with the above are excluded. Any damage to this product as a result of neglect, misuse, accident, improper installation or use other than the purpose SHALL VOID THIS WARRANTY.

Shipping costs for return product as part of a claim on the warranty must be paid for by the customer.

Inquiries regarding warranty claims can be directed to +1(888) 828 2025, 8 a.m. - 6 p.m., EST , Monday - Thursday, 8 a.m. - 5 p.m., EST, Friday.

Product Specifications

Airfow: 70 CFM	Sound Output: 1.5 Sones
120 V, 60 Hz	Ceiling Opening Dimension Requirements:
Duct Diameter: 3 in	7.6 in (L) x 7.3 in (W) x 4 in (H)

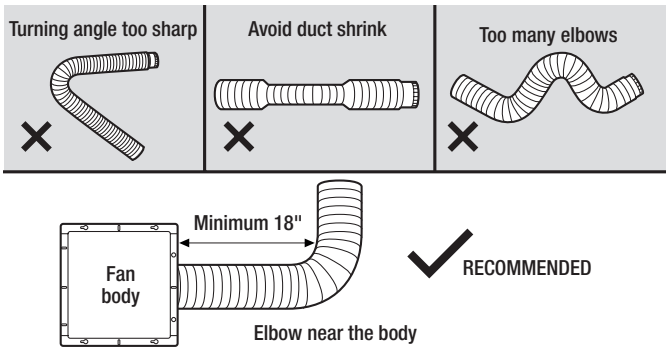
Typical Installation

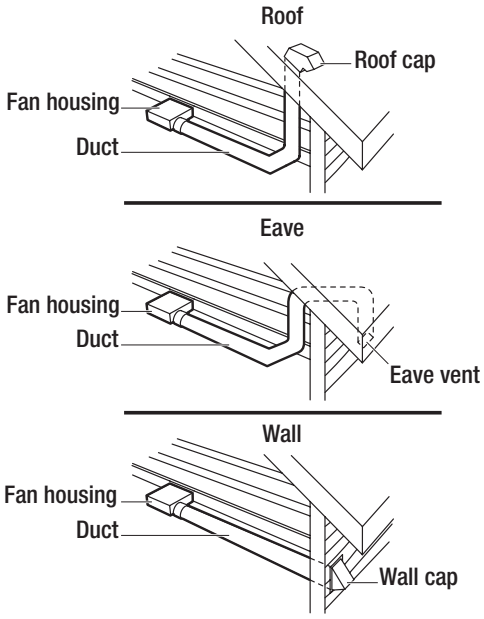
The ducting from this fan to the outside of the building has a strong effect on the air flow, noise and energy use of the fan. Use the shortest, straightest duct routing possible for best performance, and avoid installing the fan with smaller ducts than recommended. Insulation around the ducts can reduce energy loss and inhibit mold growth. Fans installed with existing ducts may not achieve their rated air flow.

Do not install ventilation fan in areas where the duct work will require configuration as shown.

Ensure duct joints and exterior penetrations are sealed with caulk or other similar material to create an air-tight path and to minimize building heat loss and gain and reduce the potential for condensation.

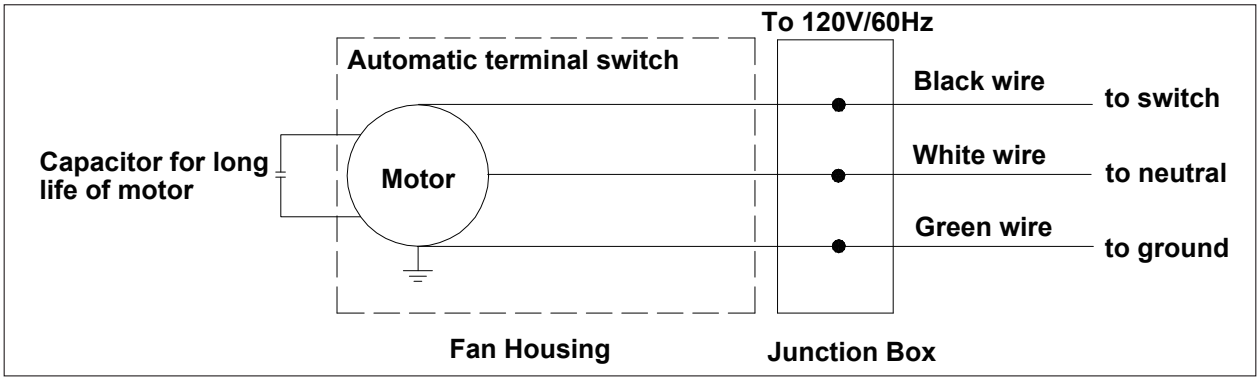
Place/wrap insulation around duct and/or fan to in order to minimize possible condensation buildup within the duct, building heat loss and gain.





Pre-Installation

WIRING DIAGRAMS



QUICK CONNECTOR (NOT INCLUDED) INSTRUCTIONS

To be sold only with installation instructions.

WARNING: Wiring must comply with all applicable electrical codes. Turn OFF power before removing or installing connectors.

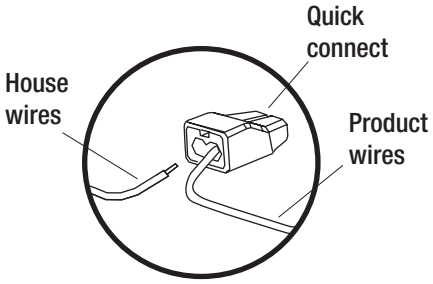
WARNING: COPPER TO COPPER ONLY. Do not use Aluminum wire.

CAUTION: Accessory part (quick connector) should meet installation instructions below.

NOTICE: The connector is reusable on solid wires of the same wire gage or smaller. Do not reuse the connector on stranded wires.

NOTICE: Important wire information. Maximum temperature rating 105˚C (221˚F). 600 volts maximum for building wire and 1000 volts maximum in signs and lighting fixtures. The acceptable wire range includes: Solid: 12-18 AWG.

- □ Strip wires 3/8 in. - 1/2 in.
- □ Grip the wire firmly and push the stripped end of the wire into the open port of the connector. Use only one conductor per port.
- □ Verify the stripped end of the wires is fully inserted to the back of the connector.



PLANNING INSTALLATION

Before beginning installation of the product, make sure all parts are present. Compare parts with the package contents list and hardware contents. If any part is missing or damaged, do not attempt to install the product.

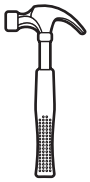
WARNING: Turn off electricity at breaker box before beginning installation.

NOTE: Installation may vary depending on how the previous bath fan was installed. Supplies necessary for the installation of your bath fan are not all included. However, most are available at your local home improvement or hardware store.

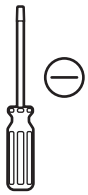
1. Carefully remove the unit from the carton.
2. Check the area above the installation location to be sure that wiring can run to the planned location, that duct work can be run and the area is sufficient for proper ventilation.
3. Inspect duct work and wiring before proceeding with installation.
4. Before installation, provide inspection and future maintenance access at a location that will not interfere with installation work.
5. You may need the help of a second person to install this fan; one person on the attic side and one on the room side.

Pre-Installation (continued)

TOOLS REQUIRED

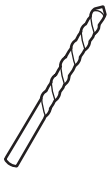

Claw hammer

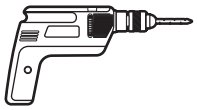

Philips screwdriver


Flat screwdriver


Utility knife

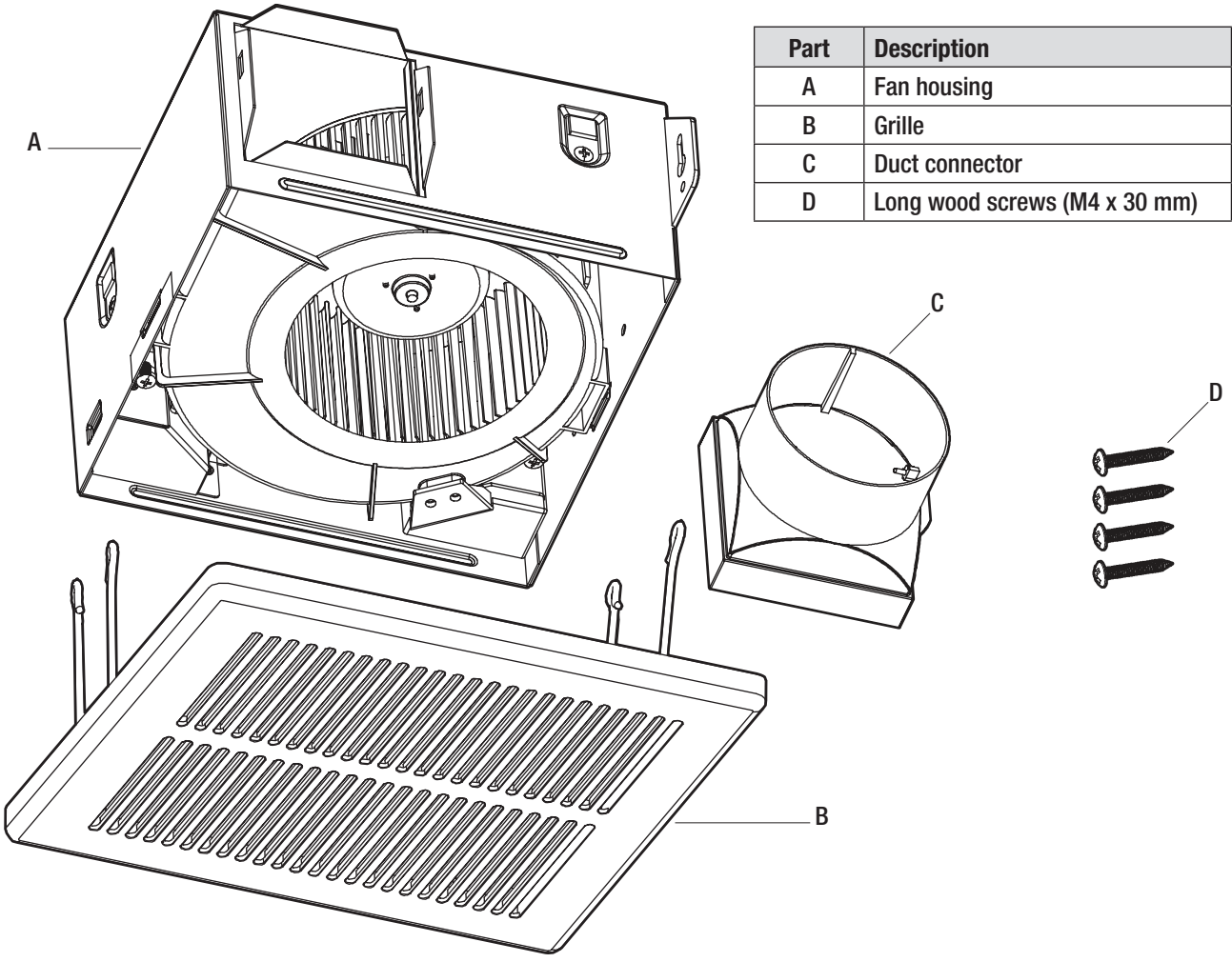

Safety glasses


Drill bits


Power drill


Duct tape

PACKAGE CONTENTS

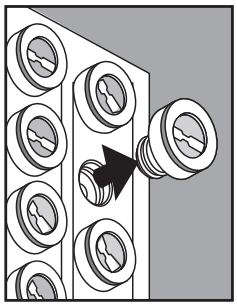


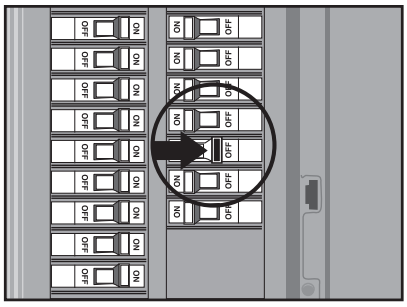
Part	Description	Quantity
A	Fan housing	1
B	Grille	1
C	Duct connector	1
D	Long wood screws (M4 x 30 mm)	4

Installation - New Construction

CAUTION: Make sure power is switched off at service panel before starting installation.

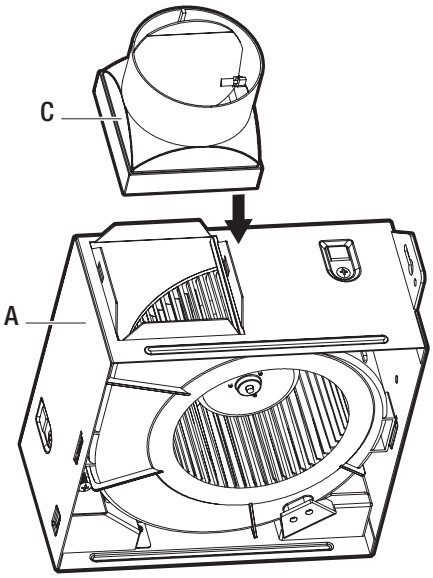
NOTE: Ceiling mount only.





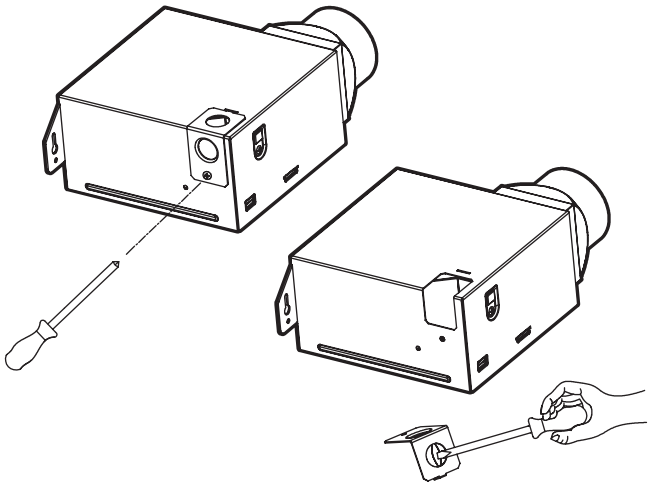
1 Attaching the duct connector

- ☐ Attach duct connector (C) to the fan housing (A) as shown in the drawing.



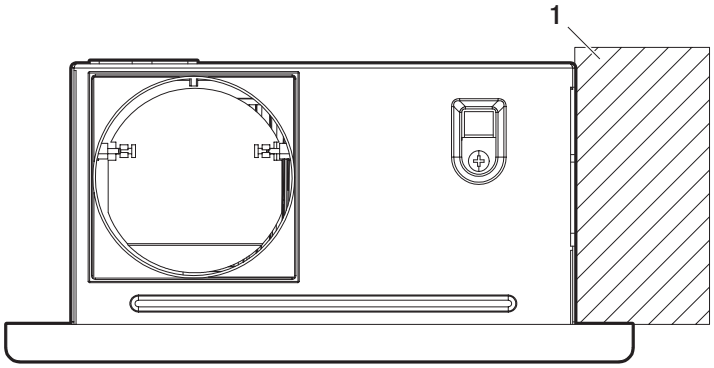
2 Removing the wiring box housing

- ☐ Remove the wiring box cover from the fan housing with a Phillips head screwdriver (not included).
- ☐ Remove the wiring knockout from the wiring box cover with a flathead screwdriver (not included).



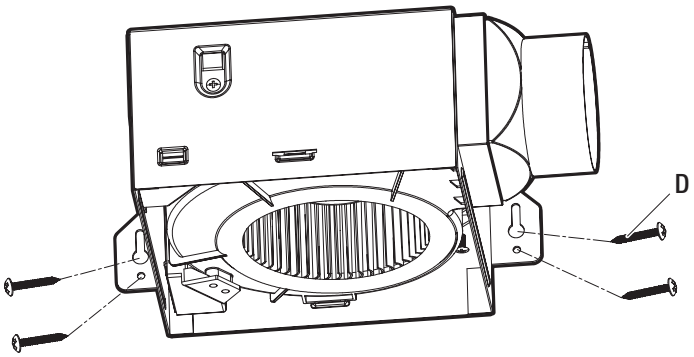
3 Placing the fan housing

- ☐ Place the fan housing next to a ceiling joist or wall stud. The fan housing should be level and perpendicular to the joist or stud (1).



4 Mounting the fan housing

- ☐ Mount the fan housing to the joist using four long wood screws (D) where indicated.



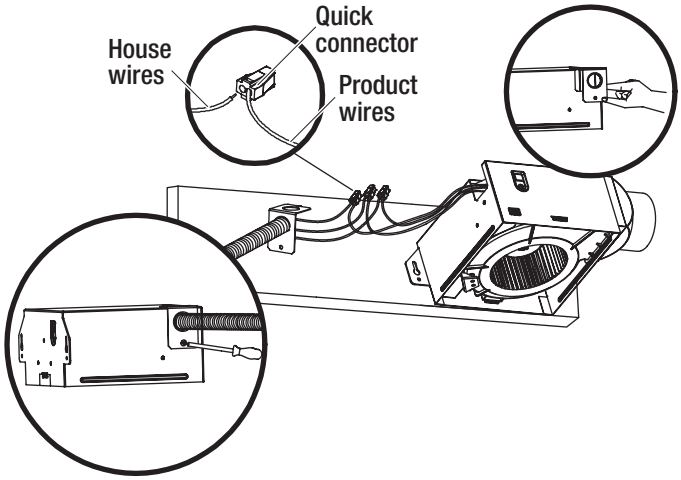
Installation - New Construction (continued)

5 Connecting the house and fan wires

- □ Pull the wire through the hole and into the junction box (not included). Using a quick connector (neither included), secure 120 VAC house wiring from the wall switch to the fan as shown in the wiring diagram. 14AWG is the smallest conductor that shall be used for branch-circuit wiring.

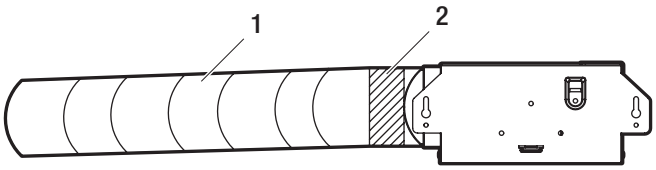
CAUTION: Make sure power is switched off at service panel before starting installation.

- □ Push the wires back through the hole. Reattach the wiring box cover.



6 Installing the duct

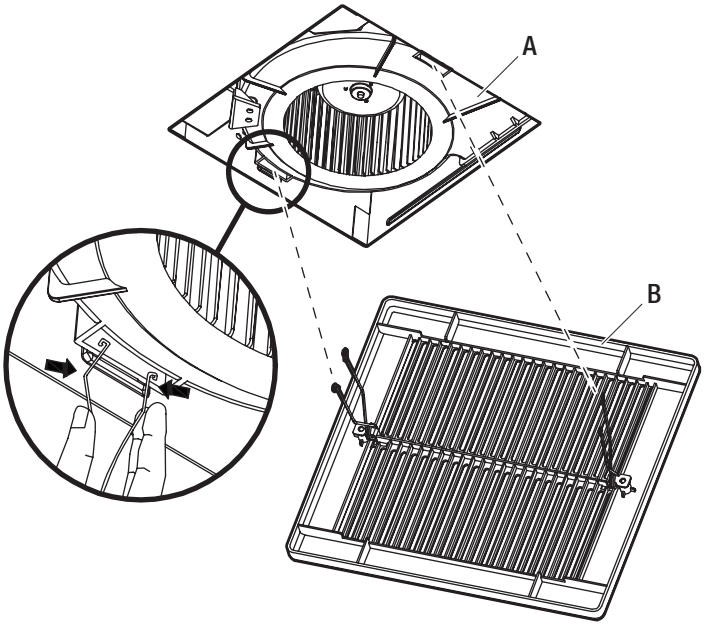
- □ Install a circular 3 in. duct (not included) and secure it with duct tape or clamps (neither included).
- □ Finish ceiling work. The ceiling hole should be aligned with the edge of the fan housing.



7 Installing the grille

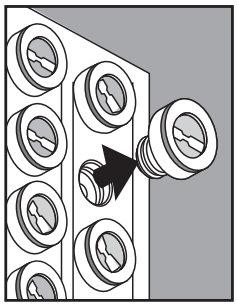
- □ Pinch the mounting springs on the grille (B) and insert them into the narrow rectangular slots inside the fan (A). Push the grille (B) up toward the ceiling.
- □ Turn on electricity at the breaker box after finishing installation.

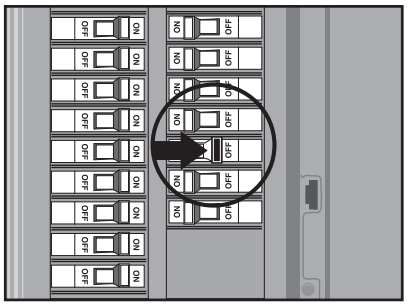
NOTE: Make sure the mounting spring is properly loaded into the fan slots.



Installation - Existing Construction

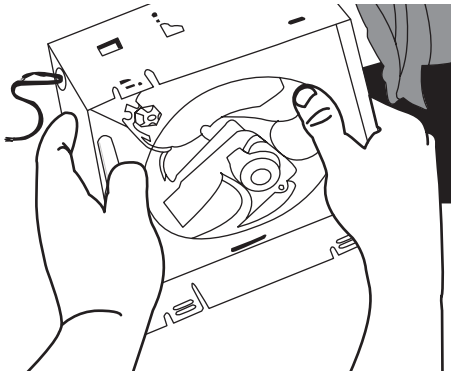
CAUTION: Make sure power is switched off at service panel before starting installation.





1 Removing the existing fan

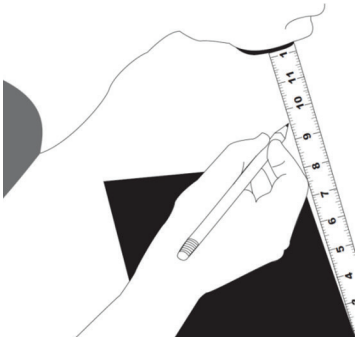
- ☐ Remove the old fan from the ceiling.



2 Measuring the ceiling opening

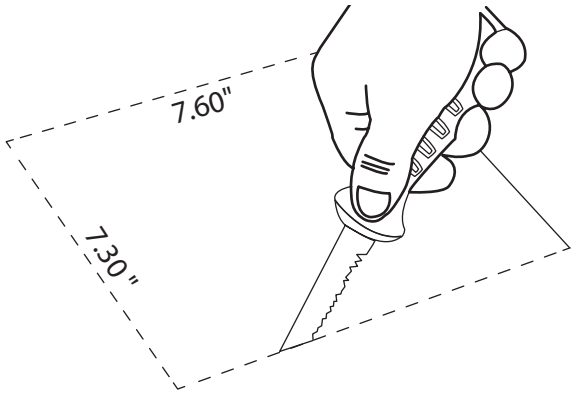
- ☐ Measure the opening to assure it is large enough to accommodate the new fan body (A) (7.5 in x 7.25 in).

NOTE: 7.25 in side of opening should be flush with the joinst.



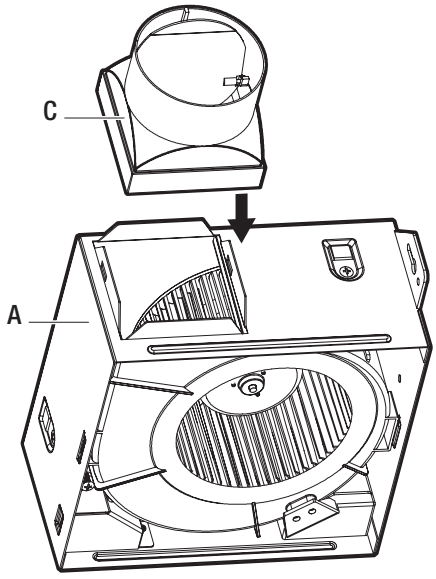
3 Enlarging the opening (optional)

- ☐ If this fan is not replacing an old fan, be sure to cut a 7.60 in. x 7.30 in. opening for the fan body (A).
- ☐ ENSURE THE 7.30 IN. SIDE OF THE OPENING IS FLUSH WITH THE JOIST FOR INSTALLATION FROM BELOW.



4 Attaching the duct connector

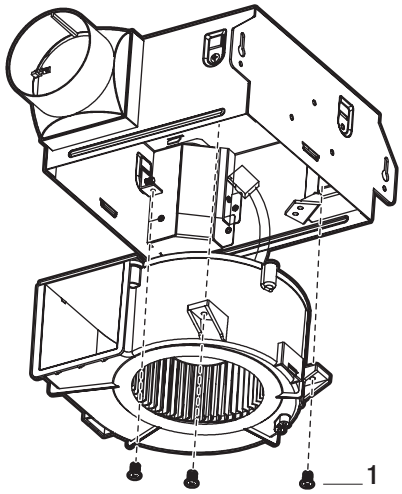
- ☐ Attach duct connector (C) to the fan housing (A) as shown in the drawing.



Installation - Existing Construction (continued)

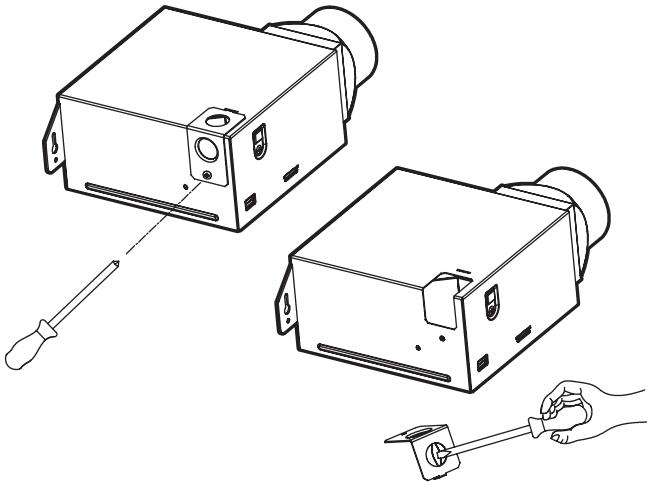
5 Removing the fan motor assembly

- ☐ Remove the three screws (1) that hold the fan motor assembly in place. Remove the fan motor assembly from the fan housing. Unplug the fan power unit.



6 Removing the wiring box housing

- ☐ Remove the wiring box cover from the fan housing with a Phillips head screwdriver (not included). Remove the wiring knockout from the wiring box cover with a flathead screwdriver (not included).

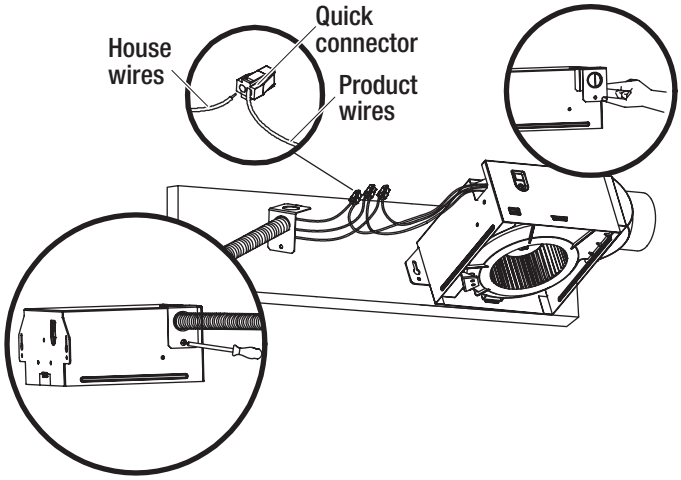


7 Connecting the house and fan wires

- ☐ Pull the wire through the hole and into the junction box (not included). Using a quick connector (neither included), secure 120 VAC house wiring from the wall switch to the fan as shown in the wiring diagram. 14AWG is the smallest conductor that shall be used for branch-circuit wiring.

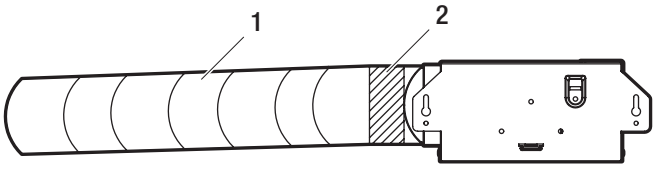
CAUTION: Make sure power is switched off at service panel before starting installation.

- ☐ Push the wires back through the hole. Reattach the wiring box cover.



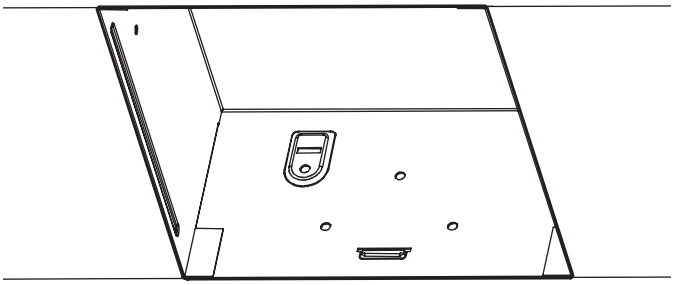
8 Installing the duct

- ☐ Install a circular 3 in. duct (not included) (1) and secure it with duct tape or clamps (neither included) (2).
- ☐ Finish ceiling work. The ceiling hole should be aligned with the edge of the fan housing.



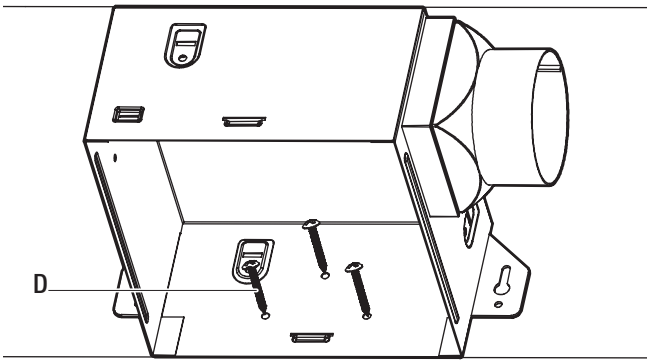
9 Inserting the fan housing

- ☐ Insert the fan housing through the existing hole in the ceiling. The fan housing should be level and perpendicular to the joist or stud.



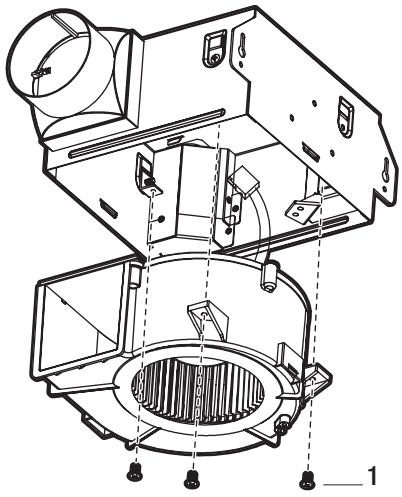
10 Mounting the fan housing to the joist

- ☐ Mount the fan housing to the joist using three long wood screws (D) where indicated by arrows inside the fan housing.



11 Reattaching the motor assembly

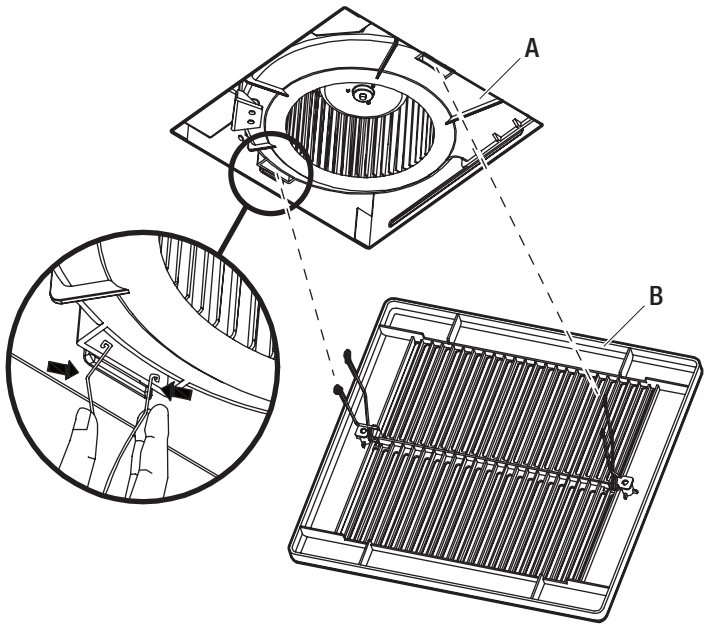
- ☐ Plug the motor assembly back into the power unit. Reattach the motor assembly using the three screws (1) removed in step 5.



12 Installing the grille

- ☐ Pinch the mounting springs on the grille (B) and insert them into the narrow rectangular slots inside the fan (A). Push the grille (B) up toward the ceiling.
- ☐ Turn on electricity at the breaker box after finishing installation.

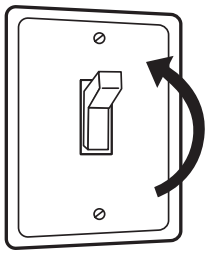
NOTE: Make sure the mounting spring is properly loaded into the fan slots.



Ventilation Fan Operation

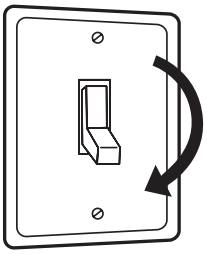
1 Turning the fan on

- □ Move the wall switch to the ON position to turn the fan on.



2 Turning the fan off

- □ Move the wall switch to the OFF position to turn the fan off.



Care and Maintenance

WARNING: Disconnect power supply before servicing.

- □ See SAFETY INFORMATION before proceeding. Routine maintenance should be done at least once a year.
- □ Never use solvents, thinner or harsh chemicals for cleaning the fan.
- □ Do not allow water to enter the motor.
- □ Do not immerse metal parts in water.

Troubleshooting

Problem	Solution	
The fan seems louder than it should.	The CFM is too great.	Be sure the CFM rating on the fan matches the square footage of your room.
	The damper is damaged or not working properly.	Check the damper to ensure it is opening and closing properly. If the damper has become damaged, please call Customer Service.
	The bend in the duct is too close to the fan discharge.	Be sure you do not have any sharp bends in the duct closer than 18 in. to the fan discharge.
	The fan discharge is reduced to fit a smaller duct.	Use the recommended size ducting to reduce fan noise.
	The fan body is not attached securely.	Be sure the fan is securely attached to the ceiling joists.
The fan is not clearing the room.	There is insufficient airflow intake in the room.	Be sure a door or window is slightly ajar or opened to allow airflow. The fan is not able to draw air out of the room without enough airflow to draw from.
	There is insufficient CFM.	Be sure the CFM rating on the fan matches the requirements for your room size. **NOTE:** Using a tissue is not the correct method for determining if the fan is operating properly. If the fan clears steam from the room within approximately 15 minutes of completeing your shower, then the fan is operating properly.

AKICON

Questions, problems, or missing parts?
Contact AKICON Customer Service before returning the product.
Service Hours: Monday-Friday, 8:00 a.m.-6:00 p.m. EST

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