

## Models AK80/90/110/130 Fire Rated Housing

### IMPORTANT SAFEGUARDS

- **WARNING:** Disconnect the power before beginning this installation
- **WARNING:** To reduce the risk of fire or electric shock or injury to persons observe the following:  
Do not use this fan with any solid-state speed control device.  
Use this unit only in the manner intended by the manufacturer.  
Before servicing or cleaning the unit, switch power off at the service panel. 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.  
Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.  
When cutting or drilling into wall or ceiling, do not damage electrical wiring or other hidden utilities.  
Ducted fans must always be vented to the outdoors.  
Do not install this fan in a ceiling thermally insulated to a value greater than R-40
- **WARNING:** Do not use in kitchens.
- **WARNING:** 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 manufacturers guidelines and safety standards such as those published by National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and local code authorities.
- **CAUTION:** For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.
- Acceptable for use over a tub or shower when installed in a GFCI protected branch circuit.
- Never place a switch where it can be reached from the tub or shower.

Air King exhaust fans designed for installation in fire rated ceilings are sold and shipped with the components broken down. For Models AK80, AK90, AK110 and AK130 the components are shipped in 4 pack housings, 4 pack fire dampers, and 4 pack motor/blade/grills (MBG's). It is best to complete the installation of the housing during the rough-in stage of construction.

### Housing Installation, Electrical Wiring, and Ducting

This housing will require at least 10" of clearance above the ceiling. Check the area from above and plan the ducting and wiring routes. A standard wall switch carrying the appropriate electrical rating can be used to control the on/off operation of the fan. The AK80, AK90, AK110 and AK130 housings are designed to mount between 16" on centre joists using the supplied mounting rails, or from above by using the key hole slots on the sides of the housing (ceiling brackets not supplied).

Disconnect the power before beginning this installation. All wiring and ducting must comply with local and national codes. Read these instructions fully before beginning this installation.

1. Install mounting rails on the housing and locate the housing between the joist. Line up the housing on the joist so that the fan/light housing will be flush with the finished ceiling. Nail or screw the housing in place securely.
2. Remove one of the electrical knockouts and connect an approved electrical connector to the housing.
3. Run wiring, one neutral (white), one hot (from switch), and green or bare ground wire to the fan. Make the connections to the fan's receptacle and connect the ground wire to the green ground screw in the fan housing.
4. Once the electrical connections are made, connect the ducting. Models AK80, AK90, AK110 and AK130 come complete from the factory with a 4" duct adapter. Ducted fans must always be vented to the outdoors.

### Motor, Blade, and Venturi Installation

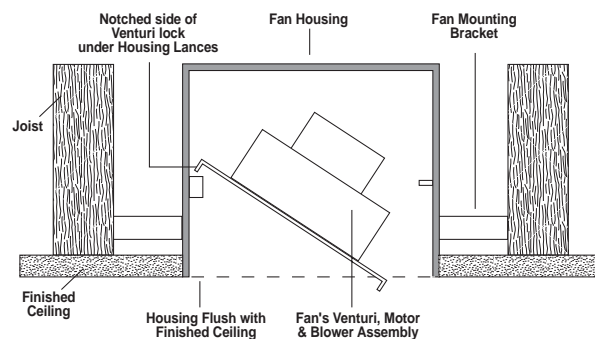
Once the housing is mounted and wired and ducting is run, you may install the motor, blade and venturi into the housing. Leave the grills in the MBG carton until needed so they do not get damaged.

1. Remove the venturi mounting screw from the housing.
2. Insert the venturi (with motor and blower housing factory mounted) into the housing at approximately a 45° angle, with the notched side of the venturi down. As you are installing the venturi, plug the motor into the receptacle. The notched side of the venturi should be locked under the lances in the housing (fig. 1).
3. Once in place secure the venturi with the screw removed earlier.
4. Rotate the blade to make sure it spins freely.

### Fire Damper and Grill Installation

After the venturi is mounted and the motor is plugged into the receptacle, you can install the fire damper.

1. Push the damper up into the housing. There are rails for mounting screws on two sides of the damper and rails with slots to accept the grill springs on the other two sides.



2. With the damper in place secure it using the four screws packaged with the damper.
3. To mount the grill, squeeze the grill springs together and insert them into the slots provided on the damper rails.