

Installation, Operation, and Maintenance Manual

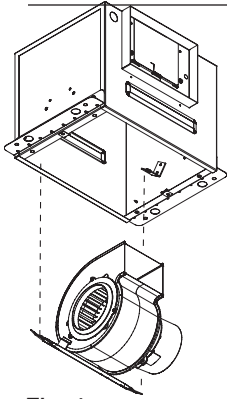


Fig. 1

Prepare the Fan

1. If power assembly (motor, wheel, and scroll) is not installed in housing, insert the electrical plug into fan socket, then slide scroll end of power assembly into fan housing. Attach by using two sheet metal screws provided, shown in Fig. 1.
2. Remove either top or side wiring knockout, depending on wiring direction, by bending it back and forth to break tabs, shown in Fig. 2.
3. Check ductwork to see if the fan's discharge requires rotation from horizontal to vertical discharge, shown in Fig. 3.
4. To rotate from horizontal to vertical discharge, remove the two screws holding the power assembly in, and pull power assembly out. Rotate power assembly 180 degrees and put back into fan. Use the same screws to reattach power assembly to fan housing. Flip fan over and remove the four screws holding the discharge duct and damper assembly. Exchange the assembly with plate mounted on top of fan, shown in Fig. 4.

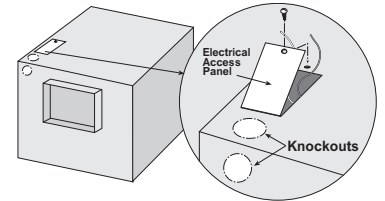


Fig. 2

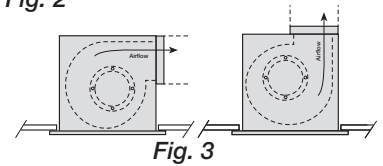


Fig. 3

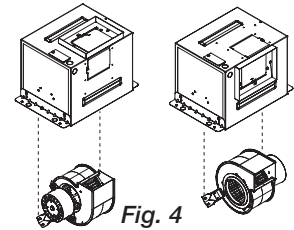


Fig. 4

Ceiling Radiation Damper - CRD

1. If fan is to be used in a fire resistive membrane ceiling, a ceiling radiation damper must be used. Otherwise, proceed to Install the Fan.
2. If the ceiling radiation damper is already mounted to the fan from the factory, proceed to Install the Fan.
3. To mount the ceiling radiation damper to fan, make sure grille attachment tabs are facing down. Then place the inlet part of the fan into the ceiling radiation damper collar, and use self-tapping sheet metal screws (by others) to screw through the damper collar and into the fan housing, shown in Fig. 5. If the fan/light combination is being used, make sure ceiling radiation damper has a electrical plug in it. The electrical plug must be inserted into the fan. Make sure the electrical wire will not interfere with damper operation, shown in Fig. 6.

CAUTION!

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

WARNING!

To reduce the risk of fire, electric shock, or injury to persons, observe the following:

- Suitable for use with solid-state speed controls.
- Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer.
- Before servicing or cleaning unit, switch power off at service panel and lock 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.
- Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
- 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.
- When cutting or drilling into wall or ceiling, do not damage electrical wiring or other hidden utilities.
- Acceptable for use over a bathtub or shower when installed in a GFCI protected branch circuit. (Up through size XCR-A390)
- Never place a switch where it can be reached from a tub or shower.
- Ducted fans must always be vented to the outdoors.
- These fans are not recommended for cooking exhaust applications. They are designed primarily for low temperature, clean air applications only. The diagram shows the minimum distance these fans should be placed in relation to cooking equipment.
- Fan/Light combination not to be installed in a ceiling thermally insulated to a value greater than R40.

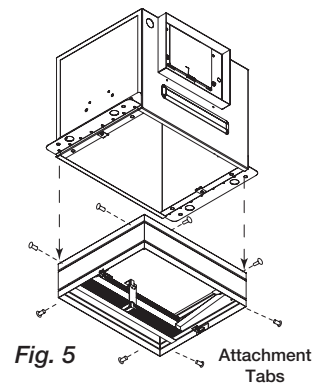


Fig. 5 Attachment Tabs

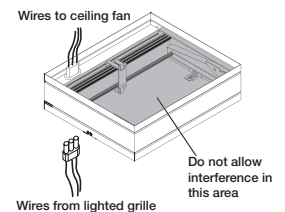


Fig. 6

Please read and save these instructions for future reference. Read carefully before attempting to assemble, install, operate or maintain the unit. Failure to comply with instruction could result in personal injury and/or property damage!

Upon receiving unit, check for any damage that may have occurred during transit and report it immediately to the shipper. Also check to see that all accessory items are accounted for.

Installation Recommendations

Install the Fan

1. For best performance, choose a location with the shortest possible duct run and minimum number of elbows. Do not mount near cooking equipment, as shown in Fig. 7.
2. Attach adjustable mounting brackets to fan, but leave the screws loose until proper height is determined, shown in Fig. 8. Cut hole to dimensions shown in Table:

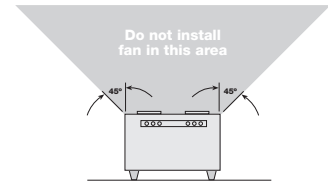


Fig. 7

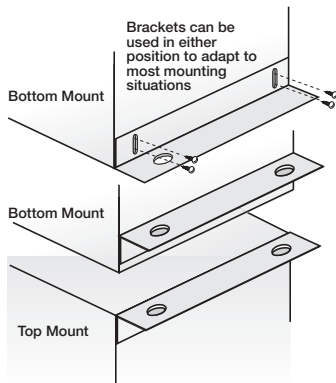


Fig. 8

Ceiling Openings		
Sizes	Fan or Fan/Light	Fan/CRD
XCR-A50, A70, A90 XCR-A110, A125, A190	10 ³ / ₈ x 13 ³ / ₈	11 ¹ / ₈ x 13 ⁷ / ₁₆
XCR-A200, A250, A290, A390	12 ¹ / ₈ x 14 ¹ / ₄	12 ¹ / ₄ x 14 ³ / ₈
XCR-A410, A510, A710, A780	14 ¹ / ₄ x 18 ³ / ₈	14 ³ / ₈ x 18 ⁷ / ₁₆
XCR-A900, A1050, A1410, A1550	14 ³ / ₄ x 24	14 ³ / ₈ x 24 ¹ / ₈

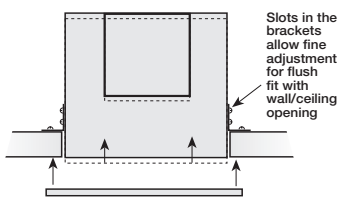


Fig. 10

For Frame Construction: Position unit between joists. Position brackets such that bottom edge of housing will be flush with finished ceiling, and tighten the adjustable mounting brackets, shown in Fig. 10.

For Hanging Installations: Use Accurex's optional vibration isolator kit Part Number VI Kit. Using the fan's standard adjustable mounting brackets and 10 by 32 threaded rod (by others), hang unit as shown in Fig. 11.

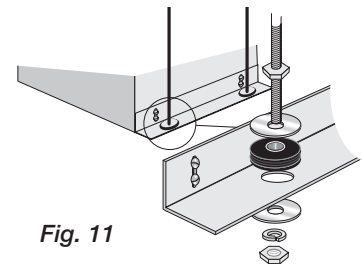


Fig. 11

3. Installation of ductwork is critical to the performance of the fan, shown in Fig. 12. Straight ductwork (1) or ductwork that turns in the same direction as the wheel (2) is recommended. Ductwork turning opposite the wheel direction (3) will cause turbulence and back pressure resulting in poor performance.

Note: If round duct is to be used, Model RDC (Round Duct Connector) can be purchased from Accurex that bolts in place of the standard square duct connector.

4. Slide ductwork over the fan's discharge collar and securely attach it with sheet metal screws. *Make sure the screws do not interfere with damper operation. Check damper to make sure it opens freely.*

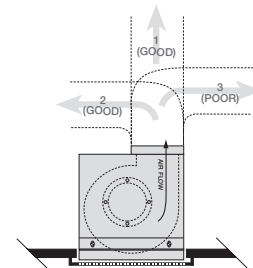


Fig. 12

Wire the Fan

1. Remove wiring cover. If fan/light combination is being used, make sure the fan plug is connected to the fan receptacle and the light plug is connected to the light receptacle as shown in Fig. 13. Using proper wire connectors, wire the fan as shown in Fig. 13a. For wiring of light proceed to Fig. 13b.

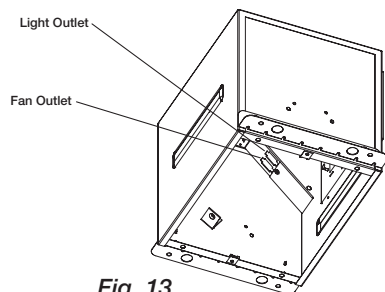


Fig. 13

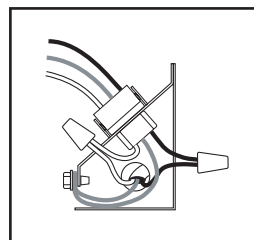


Fig. 13a

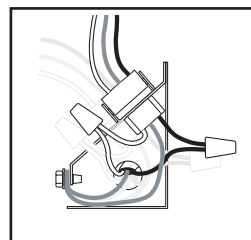


Fig. 13b

115 & 277 Volt

Black wire is "Hot"
White wire is "Neutral"
Green wire is "Ground"

220 - 240 Volt

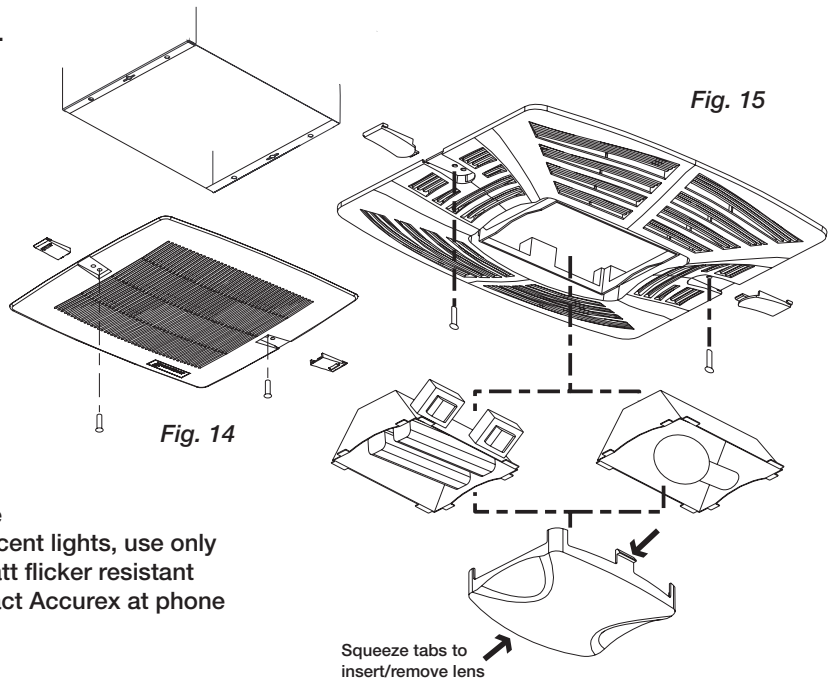
Black wire is "Hot"
White wire is "Hot"
Green wire is "Neutral/Ground"

2. Push all wiring into the unit's cover and replace wiring cover.

Installation Recommendations

Attach the Grille

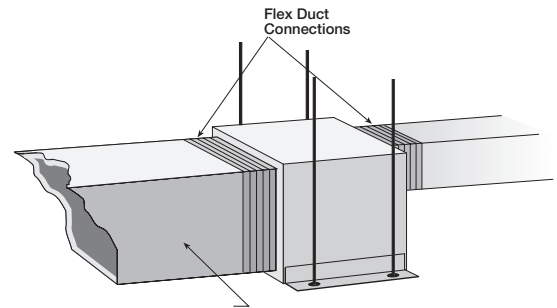
1. If lighted grille is being used, plug wire into fan socket.
If lighted grille and ceiling radiation damper are being used, plug wire from lighted grille into ceiling radiation damper socket. Do not plug wire directly into the fan socket. Make sure the wire does not interfere with the ceiling radiation damper operation.
2. Attach grille with two screws provided. Make sure not to over tighten, over tightening will damage grille.
3. Slide attachment screw covers over the attachment screws, shown in Figure 14 and 15.
4. If lighted grille is being used, install light bulb(s) into light socket(s). For incandescent lights, use maximum 100 watt bulb (by others). For fluorescent lights, use only Accurex's Part Number 382854, provided, 13 watt flicker resistant light bulbs. For replacement bulbs please contact Accurex at phone number 1-800-355-5354.
5. If lighted grille is being used, snap lens into place, by pushing on the outside edges of lens, shown in Fig. 15. To remove lens, use small screw driver and pry on one side of lens.
6. Turn on power and check fan and light operation.



Other Installation Considerations:

Ductwork and Noise

Fiberglass ductboard is a better choice than metal ductwork for reducing fan noise and is highly recommended for low sound applications. Where metal duct is used, sound transmission can be reduced with flexible duct connections between the fan and the duct.

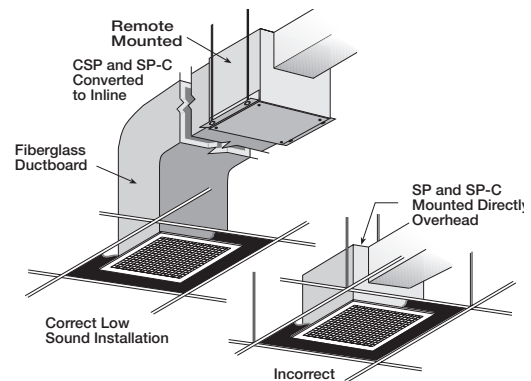


Sound and Location

The location of these fans must be taken into consideration before installation. In critical sound installations, insulated ductwork, flexible duct connections or placing the fan in a remote section of ductwork are solutions to meeting the required fan sound levels.

Filters

The addition of an intake filter is highly recommended for these fans, even in clean air environments excess dirt can accumulate on wheels and motors causing reduced performance and imbalance. Filters, once installed, should be checked and cleaned periodically to maintain performance. Accurex offers washable aluminum mesh filters specifically designed for these fans. Please consult XCR/XIR catalog for more information.



Installation Recommendations

For Model XCR-C Only

Conversion from Ceiling to Cabinet Fan

Conversion Kit Parts List:

Qty. of 1 Blower Box Cover

Tools Required

Phillips Head Screwdriver

All XCR-C sizes will be shipped with grille and duct collar cover.

Converting to a Cabinet Design

Step 1:

Remove Grille (A) by removing the two Grille Screws (B).

Step 2:

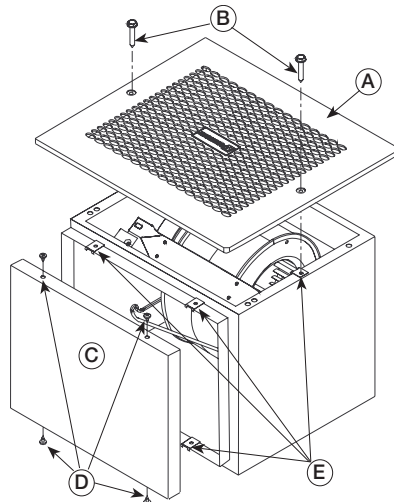
Remove Duct Collar Cover (C) by removing the four Duct Collar Screws (D).

Step 3:

Discard Grille (A), two Grille Screws (B), and Duct Collar Cover (C).

Step 4:

Remove the six Tinnerman Clips (E) by twisting them to one side and pulling straight out. Discard two of the six Tinnerman clips.



Step 5:

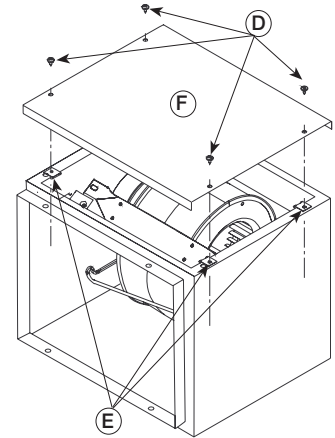
Insert the remaining four Tinnerman Clips (E) on grille opening side.

Step 6:

Place Blower Box Cover (F) over Tinnerman Clips (E), which were inserted in Step 5.

Step 7:

Screw the Blower Box Cover (F) into place with four Blower Box Cover Screws (D).



XCR/XIR models shown are UL and cUL listed E 33599

General Maintenance Suggestions

Model XCR/XIR ceiling exhaust fans require very little maintenance. But since small problems over time left unchecked could lead to loss of performance or early motor failure, we do recommend that the unit be inspected periodically (once or twice a year).

The fan motor and wheel should be checked for dust and dirt accumulations. (See Filters). Dirt buildup can lead to loss of performance and motor overheating. Cleaning can be accomplished by brushing off any dust that may have accumulated. Even filtered units can accumulate build-up and should be checked when cleaning filters.

The motor should be checked for lubrication at this time. Lubricate only those motors which have an oil hole provided. A few drops of all purpose oil (SAE 20) will be sufficient.

WARRANTY

Accurex warrants this equipment to be free from defects in material and workmanship for a period of three years from the date of purchase. Any units or parts which prove to be defective during the warranty period will be replaced at our option when returned to our factory, transportation prepaid. Motors are warranted by the motor manufacturer for a period of one year. Should motors furnished by Accurex prove defective during this period, they should be returned to the nearest authorized motor service station. Accurex will not be responsible for any removal or installation costs.

As a result of our commitment to continuous improvement, Accurex reserves the right to change specifications without notice.



P.O. Box 410 Schofield, WI 54476
Phone: 888.333.1400 Fax: 715.241.6191
www.accurex-systems.com

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