



Model SP/CSP-A700
Ceiling Exhaust and Inline Fans

Installation, Operation and Maintenance Manual

Prepare the Fan

1. Remove either top or side wiring knockout, depending on wiring direction, by bending it back and forth to break tabs, shown in Fig. 1.

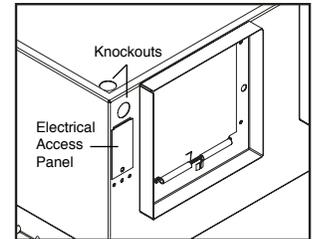


Fig. 1

2. Check ductwork to see if the fan's discharge requires rotation from horizontal to vertical discharge, shown in Fig. 2.

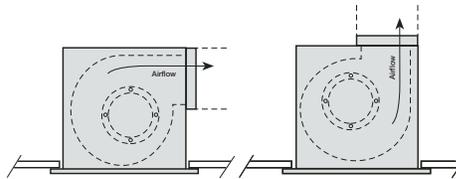


Fig. 2

3. To rotate from horizontal to vertical discharge, remove the eight screws holding the cover panel as shown in Fig. 3a (for the CSP model remove the eight collar screws as shown in Fig. 4a). Then rotate the fan housing so the discharge is facing up, shown in Fig. 3b. Replace the cover panel as shown in Fig. 3b and replace the screws (for the CSP model attach the collar and its screws as shown in Fig. 4b).

WARNING !

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

- If a speed controller is used, this fan should only be used with fan speed control, manufactured by KB Electronics, Inc.
- 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.
- The combustion airflow needed for safe operation of fuel burning equipment may be affected by this unit's operation. 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.
- Ducted fans must always be vented to the outdoors.
- For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.
- These fans are not recommended for cooking exhaust applications. They are designed primarily for low temperature, clean air applications only.

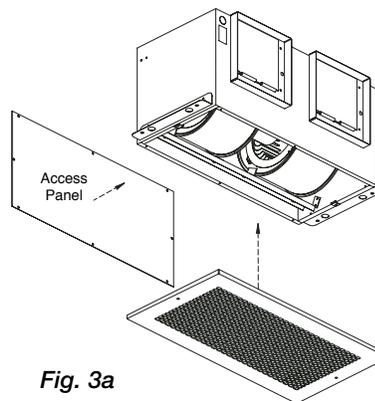


Fig. 3a

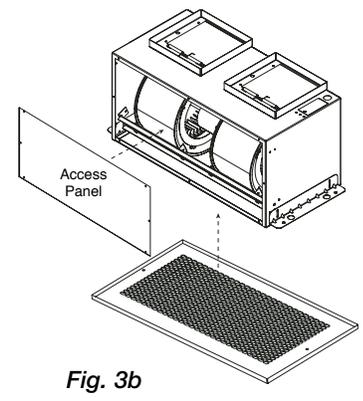


Fig. 3b

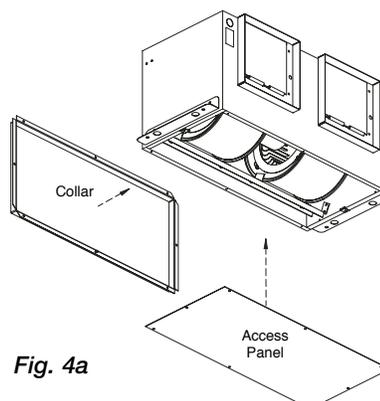


Fig. 4a

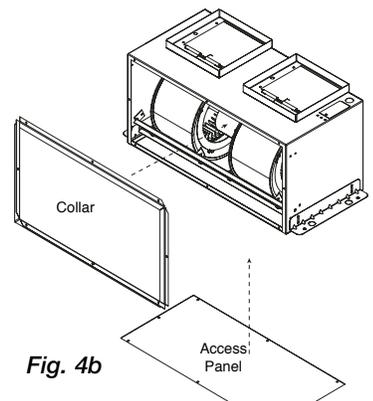
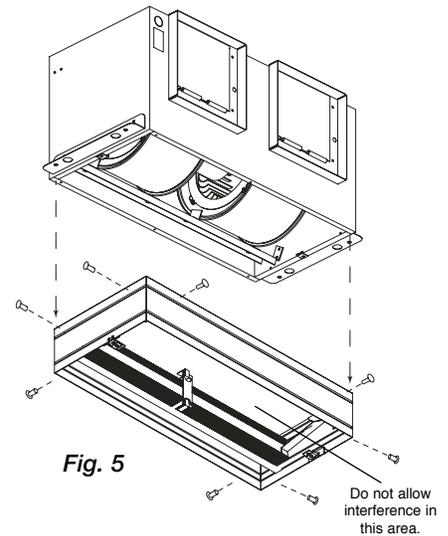


Fig. 4b

Installation Recommendations

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.



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. Fig. 7 shows the minimum distance these fans should be placed in relation to cooking equipment.

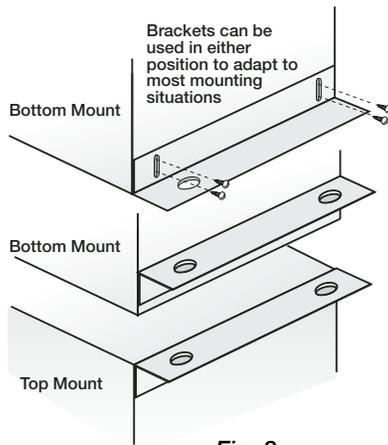
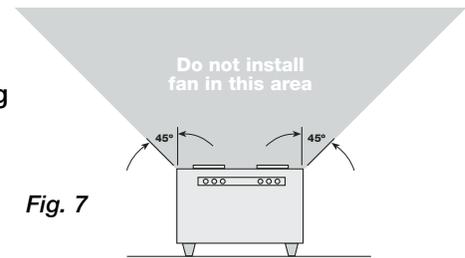


Fig. 8

2. Attach adjustable mounting brackets to fan, but leave the screws loose until proper height is determined, shown in Fig. 8. For fan only opening, cut $23\frac{3}{4} \times 11\frac{3}{4}$ inch hole in ceiling. For fan/CRD combination opening only, cut $24\frac{1}{8} \times 12\frac{1}{4}$ inch hole in ceiling.

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. 9.

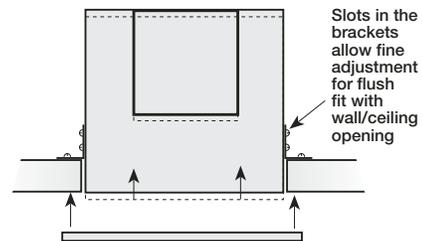


Fig. 9

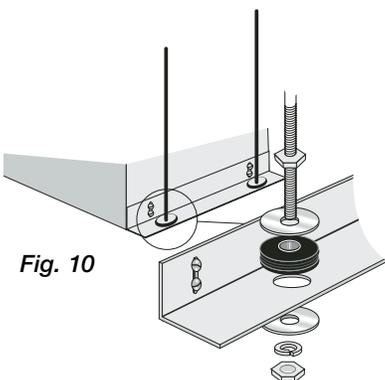


Fig. 10

For Hanging Installations: Use Greenheck'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. 10.

Installation Recommendations

Install the Fan - Continued

3. Installation of ductwork is critical to the performance of the fan, shown in Fig. 11. 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.
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.

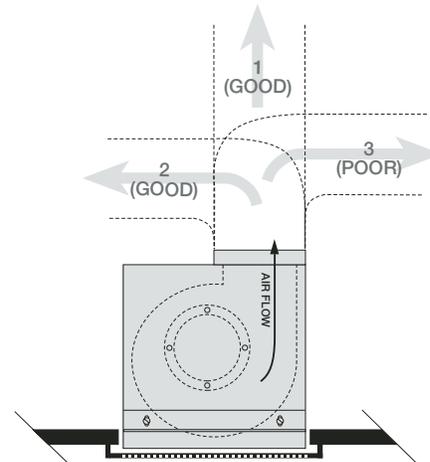


Fig. 11

Wire the Fan

1. Remove wiring cover. Then wire unit to the correct installation type, shown in Fig. 12, using proper wire connectors.

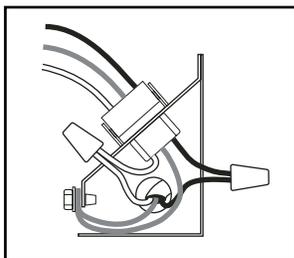


Fig. 12

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

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

Attach the Grille

1. Attach grille with two screws provided, shown in Fig. 13. Make sure not to over tighten, over tightening will damage grille.
2. Turn on power and check fan operation.

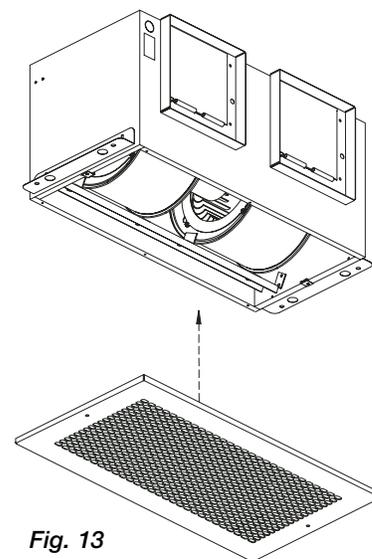
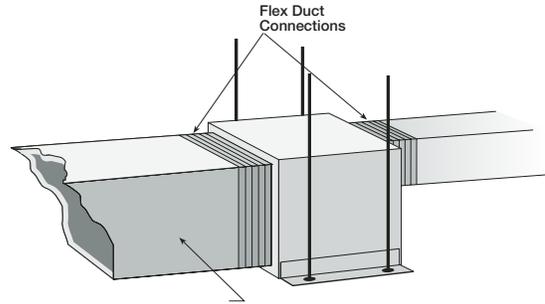


Fig. 13

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

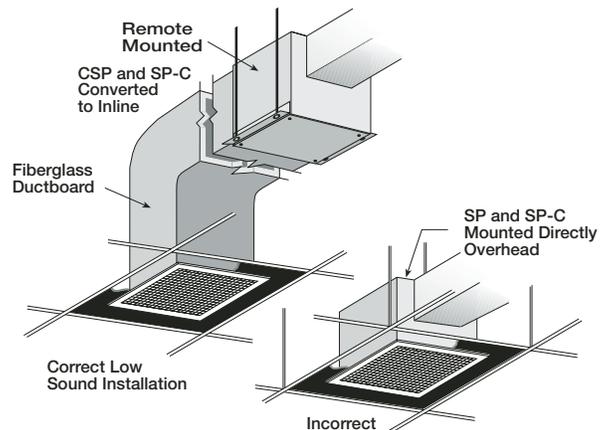
The location of these fans must be taken into consideration before installation. In critical sound installations, insulated ductwork, flexible duct connections or placing the fan in a remote section of ductwork are solutions to meeting the required fan sound levels.

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.

Greenheck offers washable aluminum mesh filters specifically designed for these fans. Please consult SP/CSP catalog for more information.



SP/CSP models shown are UL and cUL listed E 33599

General Maintenance Suggestions

Model SP/CSP 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.

Warranty

Greenheck warrants this equipment to be free from defects in material and workmanship for a period of three years from the purchase date. 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.

Greenheck will not be responsible for any installation or removal costs.



GREENHECK

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