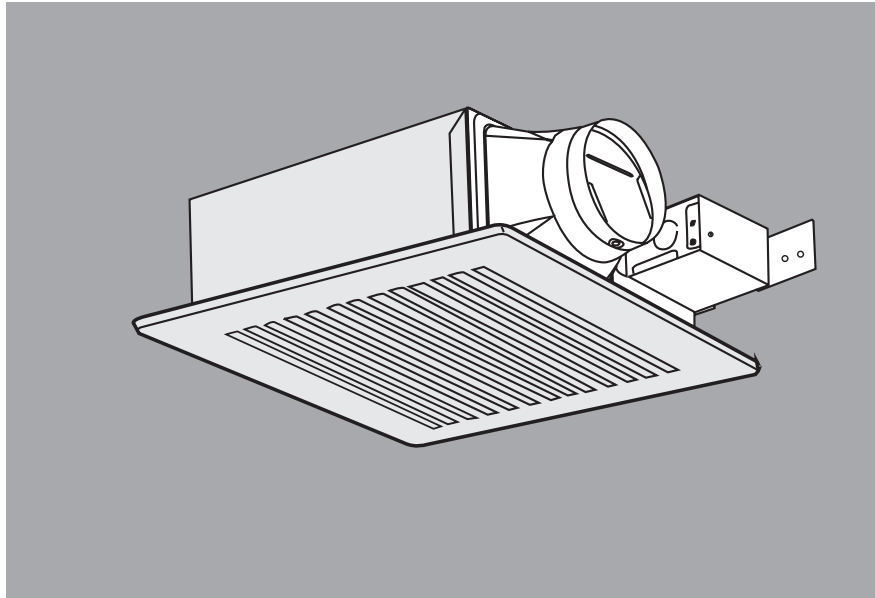


INSTALLATION INSTRUCTIONS

Ventilating Fan

FV-05VF1 FV-07VF1
FV-09VF1 FV-11VF1



Panasonic

READ AND SAVE THESE INSTRUCTIONS.

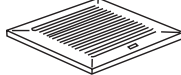



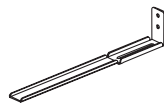




Please read these instructions carefully before attempting to install, operate or service the Panasonic Ventilating Fan. Failure to comply with instructions could result in personal injury and/or property damage. Please retain this booklet for future reference.

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SUPPLIED ACCESSORIES

FV-05VF1
FV-07VF1
FV-09VF1
FV-11VF1

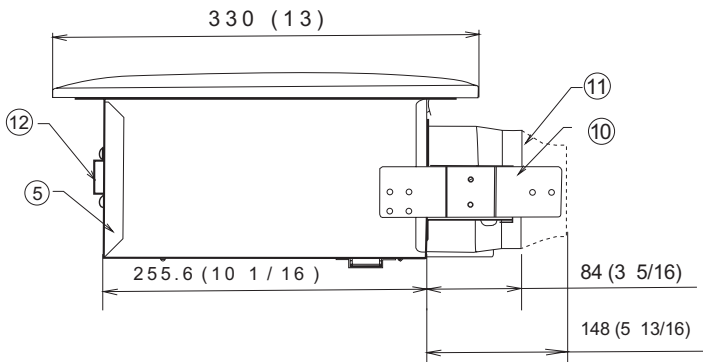
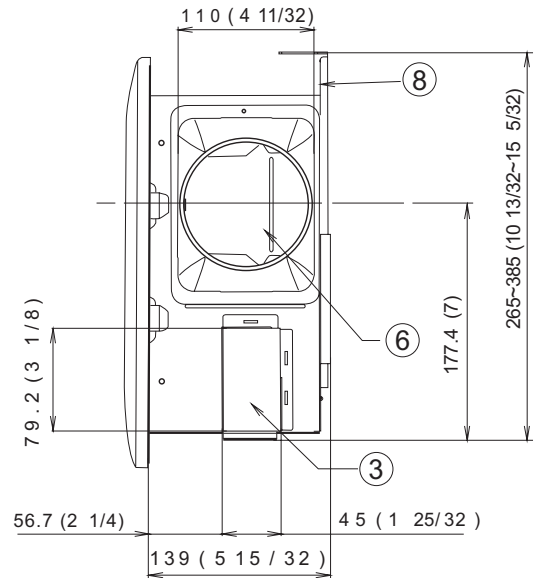
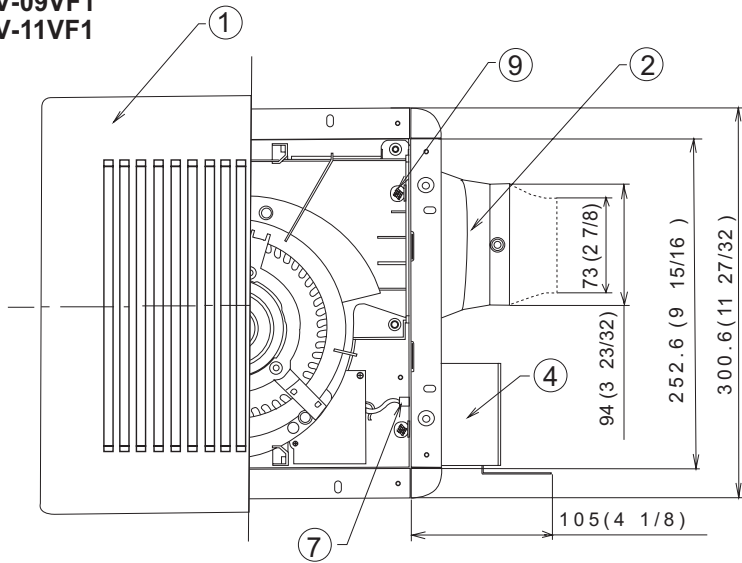
Part name	Appearance	Quantity
Grille		1
Long screw		8
Thumb screw		2
Suspension bracket I		1
Suspension bracket II		1
Screw		4
Suspension bracket III		1
Clamp Plate		2
3 inch adaptor connector(optional part for FV-05VF1 and FV-07VF1)		1

DESCRIPTION

These Panasonic ceiling mount ventilating fan models use a low noise sirocco fan driven by a capacitor motor. The motor is designed to have an extended service life with reduced energy consumption. It also incorporates a thermal-cutoff for safety. The grille covering the main body is a spring-loaded, quick-remove type. A damper for preventing couterflow is provided.

DIMENSIONS

FV-05VF1
 FV-07VF1
 FV-09VF1
 FV-11VF1



Unit: mm(inches)

No.	Part name	No.	Part name
1	Grille	7	Connector
2	Adaptor	8	Suspension bracket I
3	Junction box	9	Thumb screw
4	Junction box cover	10	Suspension plate II
5	Body	11	3 inch adaptor connector (only for FV-05VF1 and FV-07VF1)
6	Damper	12	Bracket cover

SPECIFICATIONS

Model No.	Air direction	V	Hz	Power consumption (W)	Speed (RPM)	Air deliver at 0.1" WG(CFM)	Weight Kg(lb.)
FV-05VF1	Exhaust	120	60	14.0	639	50	3.9 (8.6)
FV-07VF1				20.0	739	70	4.1 (9.0)
FV-09VF1				24.0	835	90	4.2 (9.2)
FV-11VF1				34.0	948	110	4.2 (9.2)

* At 0.0" Static pressure, (Pa)

UNPACKING

Unpack and carefully remove unit from carton.
Refer to the Supplied Accessories list to verify that all parts are present.

GENERAL SAFETY INFORMATION

1. Do not install this ventilating fan where air temperature may exceed 40°c (104°F).
2. Make certain that the electric service supply voltage is 120V, 60 Hz.
3. Follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupation Safety and Health Act (OSHA).
4. Always disconnect the power source before working on or near the fan, motor or junction box.
5. Protect the power cord from sharp edges, oil, grease, hot surfaces, chemicals or other objects.
6. Do not kink the power cord.
7. Do not install the unit where ducts are configured as shown in Fig. A.
8. Provide suction parts with proper ventilation.
9. This unit is approved for use over a bathtub or shower when installed in a GFCI protected branch circuit.

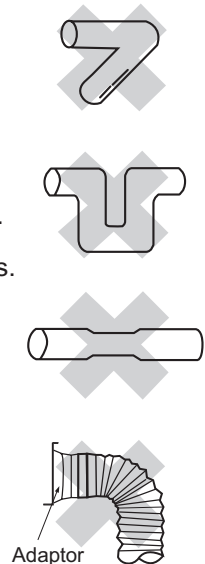


Fig. A

GENERAL SAFETY INFORMATION CONTINUED

CAUTION:

1. For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.
2. Not for use in cooking area. (Fig .B)
3. This product must be properly grounded.

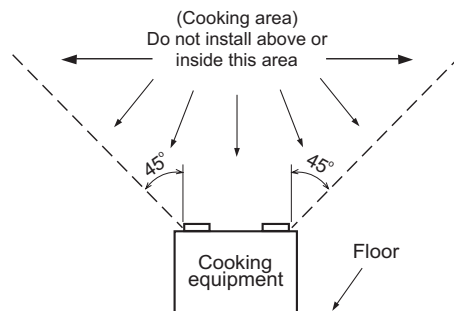


Fig. B

WARNING:

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

- A. Use this unit only in the manner intended by the manufacturer. If you have any questions, contact the manufacturer.
- B. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
- C. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacture'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.
- D. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
- E. Ducted fans must always be vented to the outdoors.
- F. These models are UL listed for tub and shower enclosures.
- G. Solid state controls may cause harmonic distortion which can cause motor humming noise.
- H. 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.
- I. NEVER place a switch where it can be reached from a tub or shower.
- J. Not to be installed in a ceiling thermally insulated to a value greater than R40.

INSTALLATION I (JOIST MOUNTING)

1. Disconnect plug connector from receptacle before starting installation.

IMPORTANT:

Remove the tape from damper and adaptor before installation. As shown in Fig.1.

2. Remove adaptor from body and secure to ceiling joists using long screws. (Fig.2)

Keep the distance B (21.6mm, 7/8 inch) for the thickness of ceiling board.

CAUTION:

Joist spacing A should be between 380mm(14 31/32inch) and 265mm(10 7/16 inch).

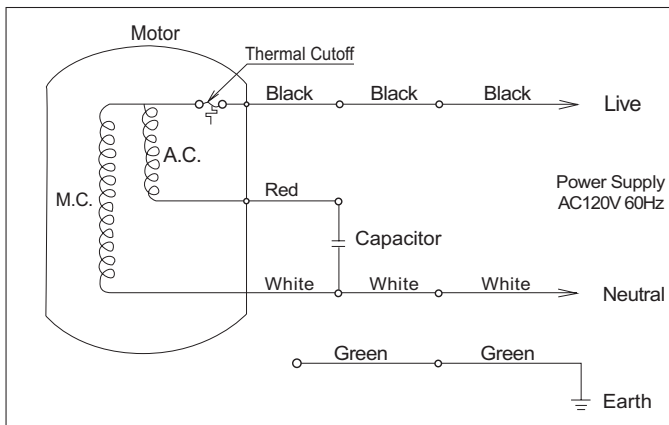
3. Remove junction box cover and secure conduit to junction box knock-out hole. (Fig.3)

4. Refer to wiring diagram below.

Using wire nuts, connect house power wires to ventilating fan wires: black to black; white to white; green to green.

Replace the junction box cover.

Wiring diagram

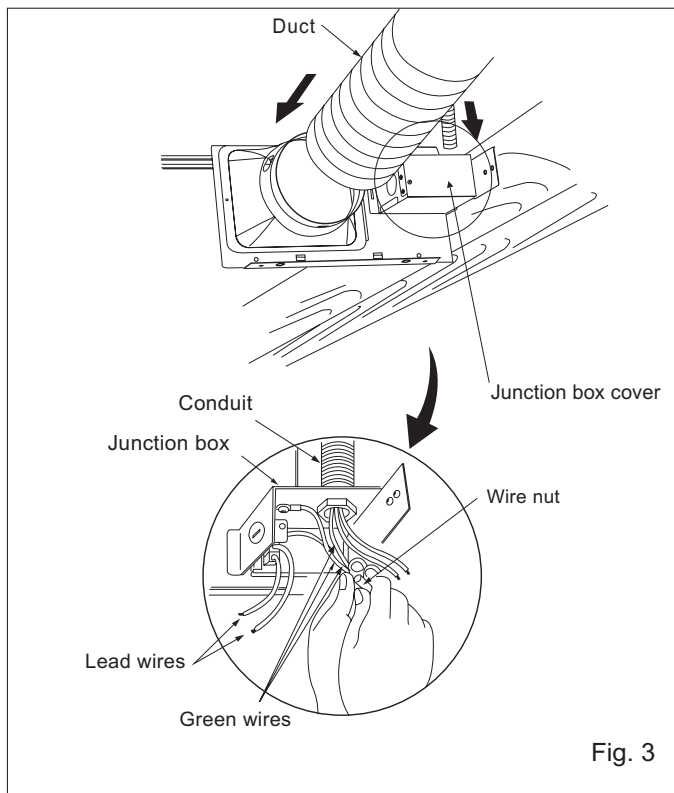
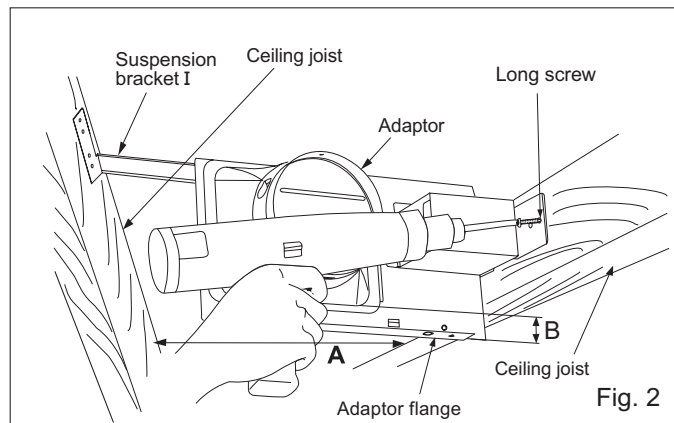
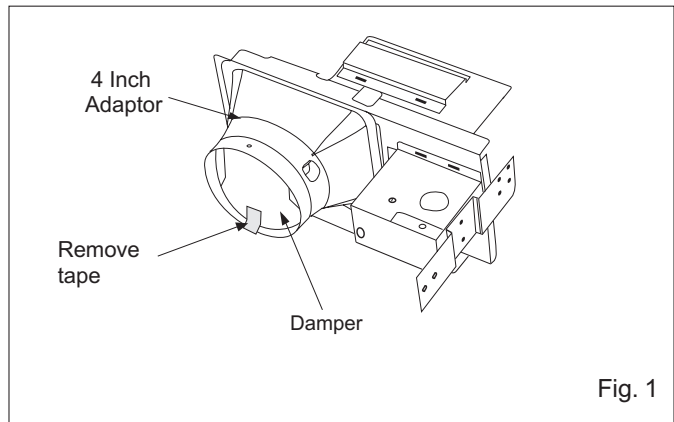
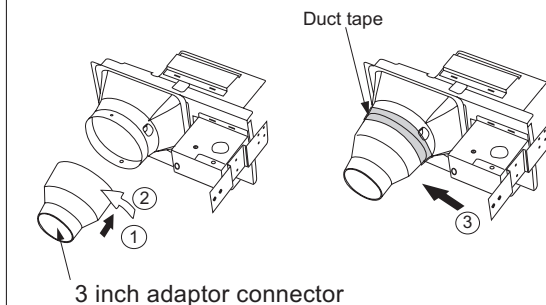


CAUTION:

Mount junction box cover carefully so that lead wires are not pinched.

5. Install circular duct (4 inch) or optional part (3 inch adaptor connector) that is only for FV-05VF1 and FV-07VF1 and secure it with duct tape.

Connection method for 3 inch adaptor connector



INSTALLATION I (JOIST MOUNTING) CONTINUED

6. Remove ceiling section. (Fig.4)

7. Insert fan body into ceiling. (Fig.6)

IMPORTANT:

Make sure that body "Claws" are properly inserted into adaptor slots.

8. Secure fan body to adaptor using two thumb screws.(Fig.7)

9. Connect plug connector to receptacle.(Fig.8)

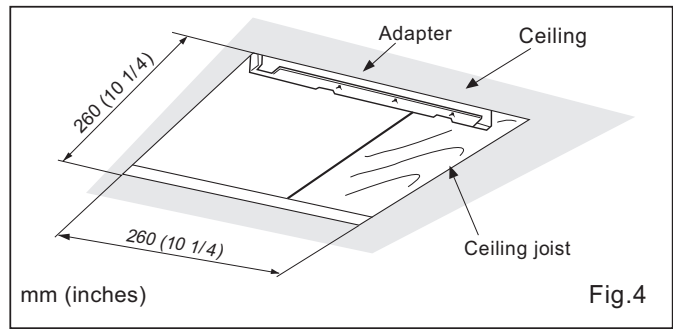


Fig.4

When mounting body and blower separately

1. Loosen 4 screws (but do not remove them from blower).(Fig.5-1)
2. Remove blower section. (Fig.5-2)
3. Remove adaptor from fan body and secure to ceiling joists as in Fig.2 of page 6.
4. Insert fan body (without blower section) into ceiling.(Fig.6)
5. Secure the adaptor and fan body using one thumb screw as shown in Fig.5-3.
6. Secure the fan body to the ceiling joists as shown in Fig.9 and Fig.10 of page 8.
7. Insert the blower into the fan body.(Fig.5-4)
8. Secure the blower by 4 screws as shown in Fig.5-5.
9. Mount the fan body with thumb screw (on the right side of bottom of the adaptor) as shown in Fig.7.

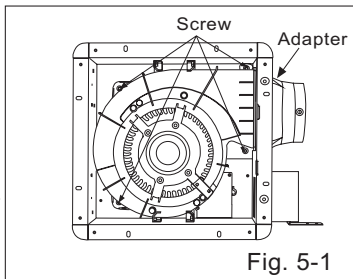


Fig. 5-1

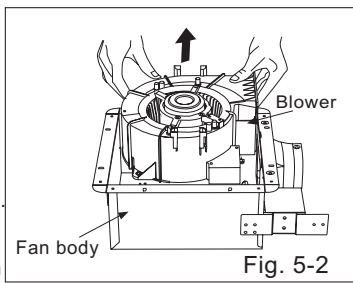


Fig. 5-2

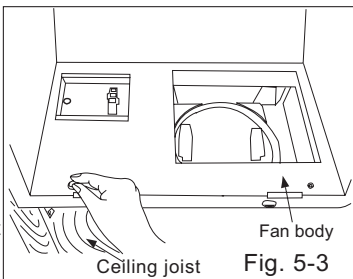


Fig. 5-3

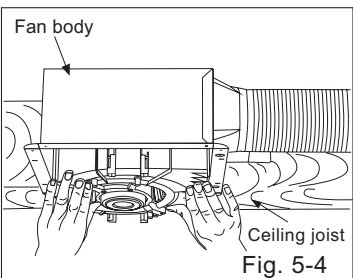


Fig. 5-4

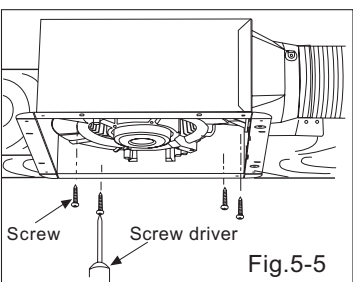


Fig.5-5

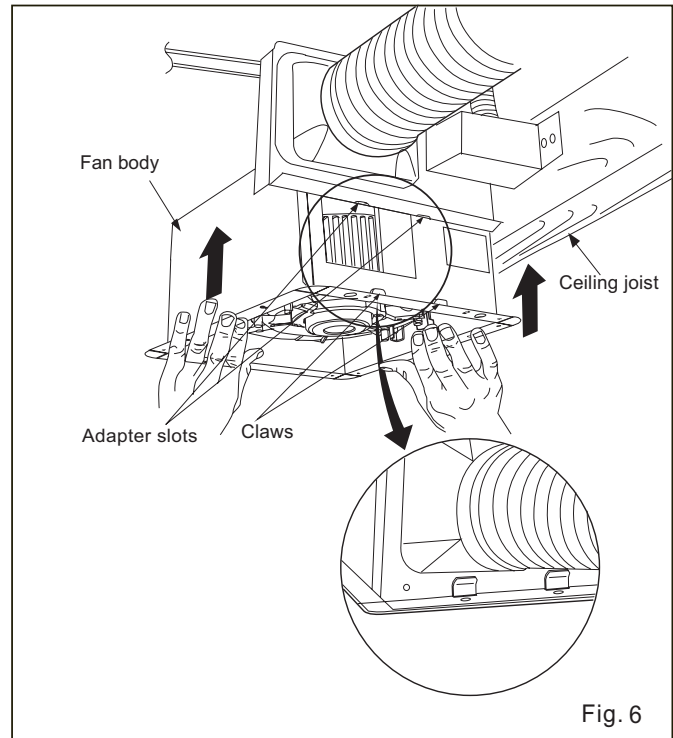


Fig. 6

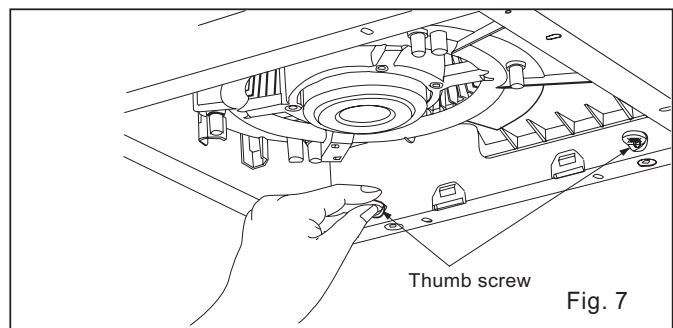


Fig. 7

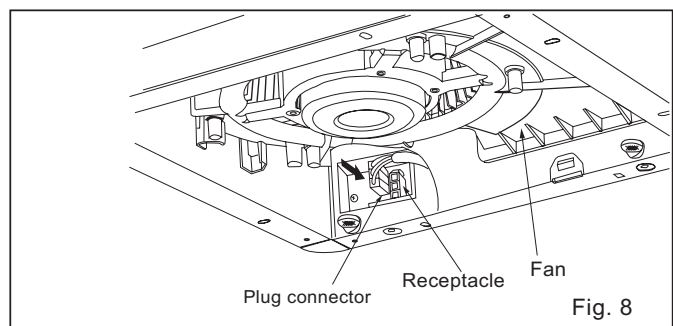
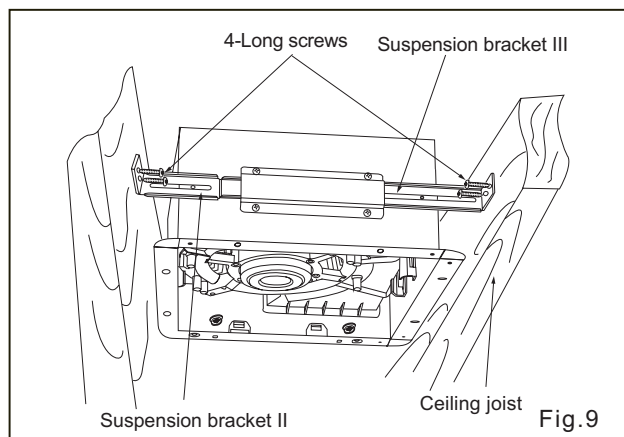


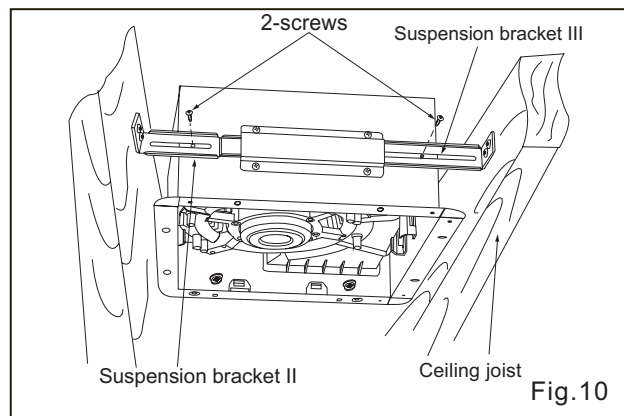
Fig. 8

INSTALLATION I (JOIST MOUNTING) CONTINUED

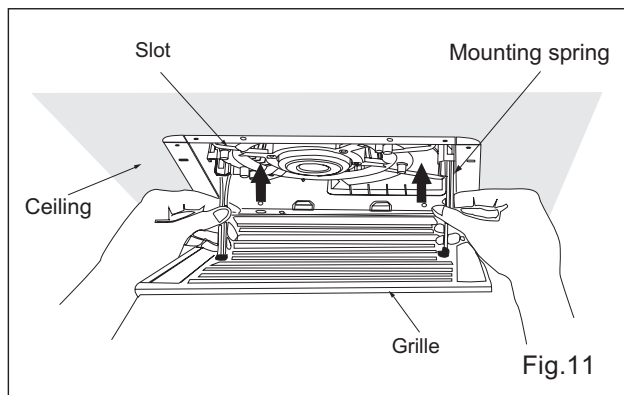
10. Secure fan body to ceiling joists using long screws in horizontal direction with suspension bracket II and III.(Fig.9)



11. Secure suspension bracket II and III to the fan body using 2 screws(Fig.10)

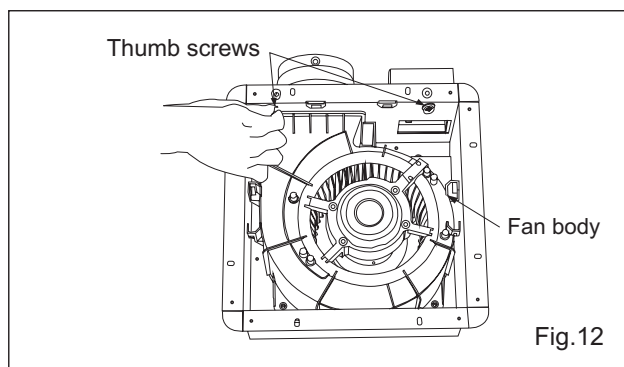


12. Replace ceiling and insert mounting springs into slots as shown and mount grille to fan body.(Fig.11)



INSTALLATION II (WOODEN HEADER)

1. Before installation, secure fan body to adaptor using two thumb screws. (Fig.12)



INSTALLATION II (WOODEN HEADER) CONTINUED

2. Install header between ceiling joists using nails or screws.
3. Install the ventilating fan and secure with screws.(Fig.13 and Fig.14)
4. Insert the circular duct to the adaptor.
Remove the junction box cover and secure conduit to junction box knockout hole (7/8 inch) (Fig.14)
5. Refer to wiring diagram.
Using wire nuts,connect house power wires to ventilating fan wires:
black to black; white to white; green to green.
Replace the junction box cover.

CAUTION:

Mount junction box cover carefully so that lead wires are not pinched

Wiring diagram

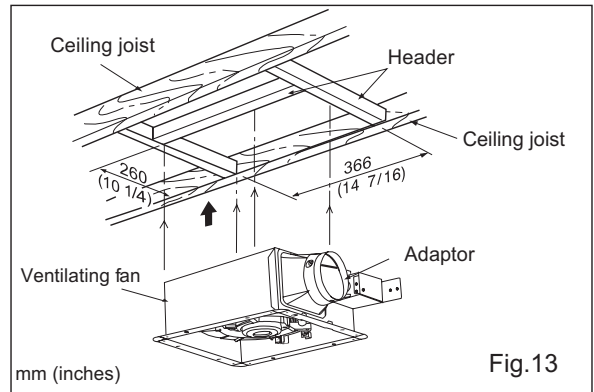
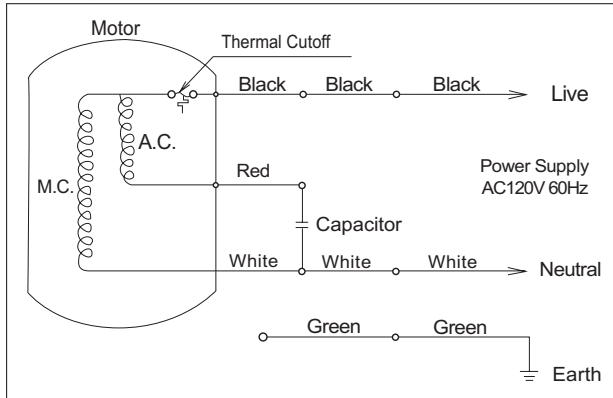


Fig.13

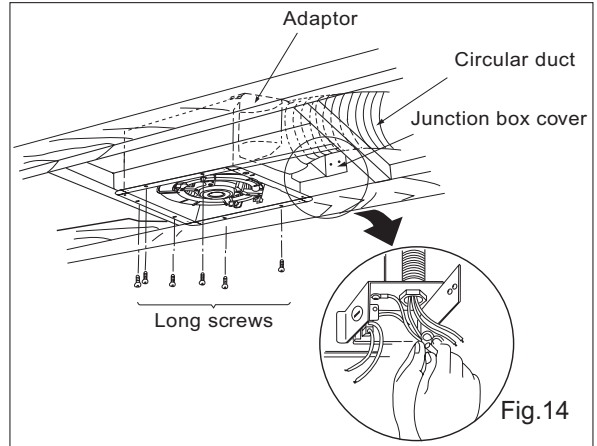


Fig.14

6. Finish ceiling work. Ceiling hole should be aligned with edge of the flange. (Fig.15)
7. Mount grille to fan body. (Fig.11, page 8.)

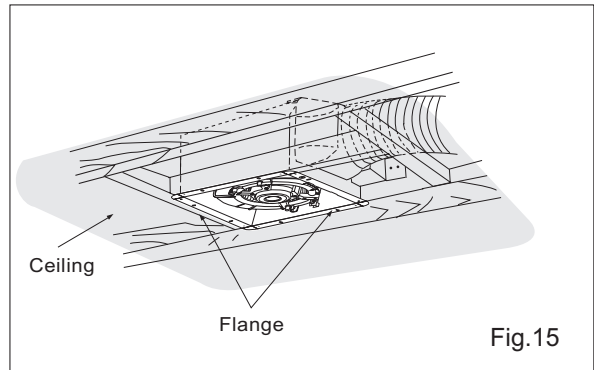


Fig.15

INSTALLATION III (IN EXISTING CONSTRUCTION)

1. Installation in existing construction.
Installing the ventilating fan in an existing building requires an accessible area (attic or crawl space) above the planned installation location or existing ducting and wiring.
 - (1) To install the ventilating fan, follow the procedures described in Installation II. Take the following precautions before installation.

CAUTION:

Check area above planned installation location to be sure that:

1. Duct work can be installed and that area is sufficient for proper ventilation.
2. Wiring can be run to planned location.
3. No wiring or other obstructions will interfere with installation.

- (2) Inspect duct work and wiring before proceeding with installation.
- (3) Plan suitable location for ventilating fan.(next to ceiling joist)

INSTALLATION III (IN EXISTING CONSTRUCTION) CONTINUED

- (4) Before installation, provide inspection and maintenance access at a location that will not interfere with installation work shown in installation II.
 - (5) First, remove ceiling section according to Fig.4 of page 7.
 - (6) Install ventilating fan.
2. Installation from accessible area above fan location.
- (1) Inspect duct work and wiring before proceeding with installation.
 - (2) Remove ceiling section according to Fig.4 of page 7.
 - (3) Install ventilating fan.
3. Installation without removing ceiling.

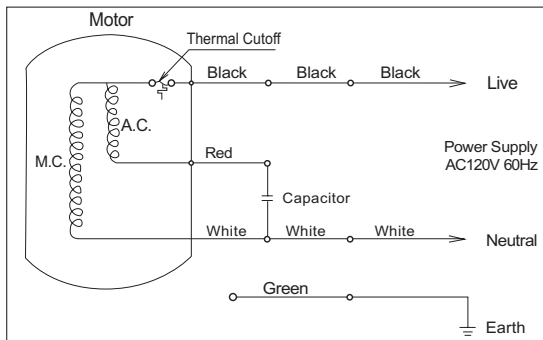
CAUTION:

Check area above planned installation location to be sure that:

1. Ensure that the square hole size in ceiling should be sufficient according to Fig.16
2. Duct work can be installed and that area is sufficient for proper ventilation.
3. Wiring can be run to planned location.
4. No wiring or other obstructions will interfere with installation.

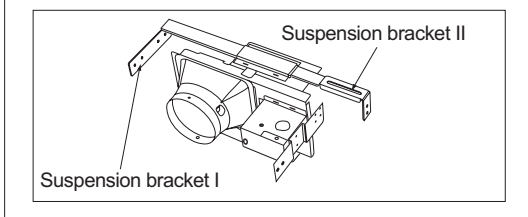
- (1) Loosen 4 screws (but do not remove them from blower) as shown in Fig.5-1.
- (2) Remove blower from fan body as shown in Fig.5-2 of page 6. remove adaptor from fan body.
- (3) Remove junction box cover and secure the existing conduit to junction box knockout hole.(Fig.17)
- (4) Refer to wiring diagram on page 9.
Using wire nuts, connect house power wires to ventilating fan wires: black to black; white to white; green to green.
Replace the junction box cover.

Wiring diagram



- (5) Secure adaptor to ceiling joists with 4 long screws inside of the ceiling as shown in Fig.18.

If the location is in the middle between 2 joists, connect suspension bracket I and II as shown below.



- (6) Install circular duct(4 inch) or optional part (3 inch adaptor connector) that is only for FV-05VF1 and FV-07VF1 and secure it with duct tape as shown in Fig.17.

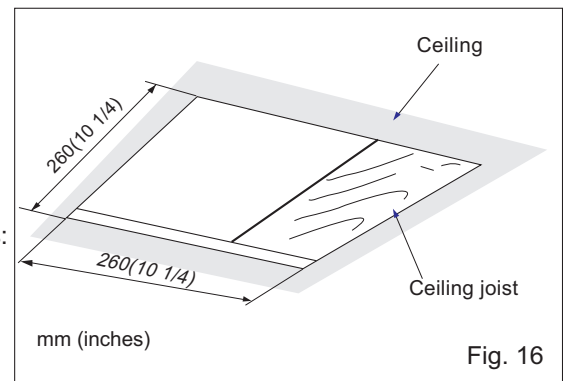


Fig. 16

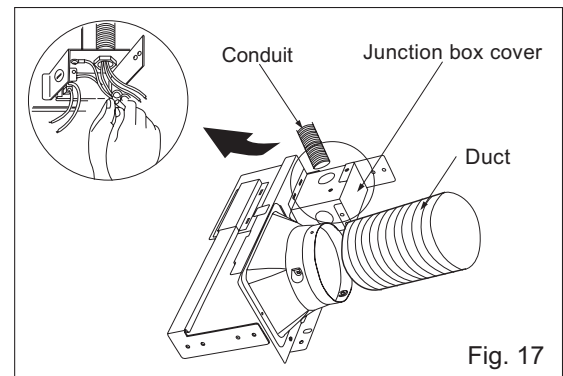


Fig. 17

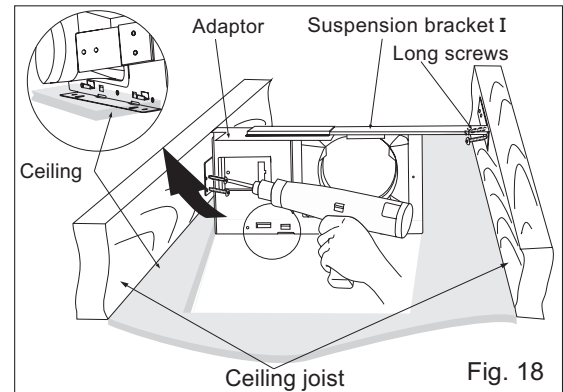
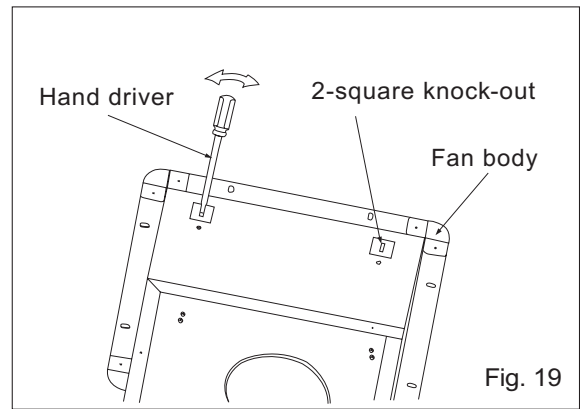


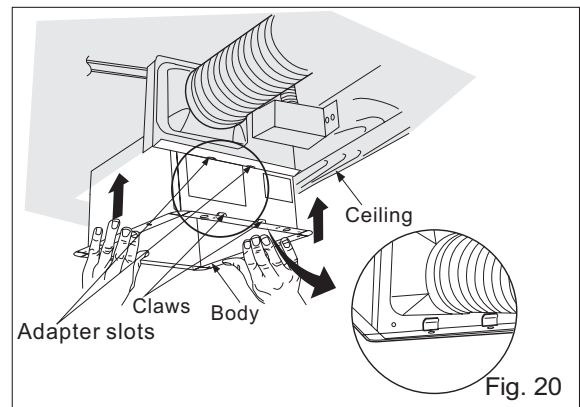
Fig. 18

INSTALLATION III (IN EXISTING CONSTRUCTION) CONTINUED

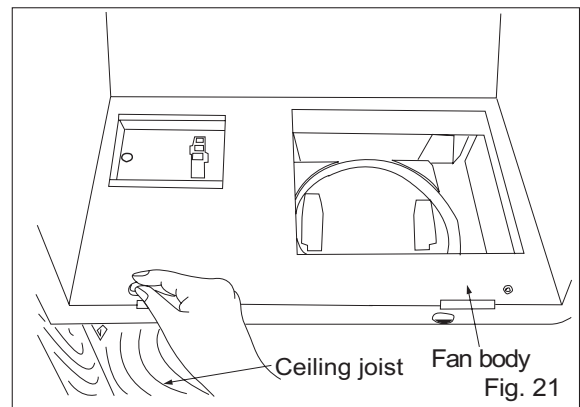
(7) Remove the 2 square knock-out carefully from surface of the frame by screw driver (Fig.19) .And remove the bracket cover on the other side of the frame body.



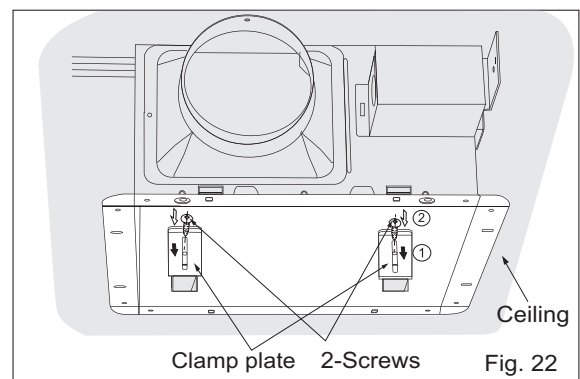
(8) Insert fan body into ceiling as shown in Fig.20.



(9) Secure the fan body to the adaptor by using one thumb screw as shown in Fig.21

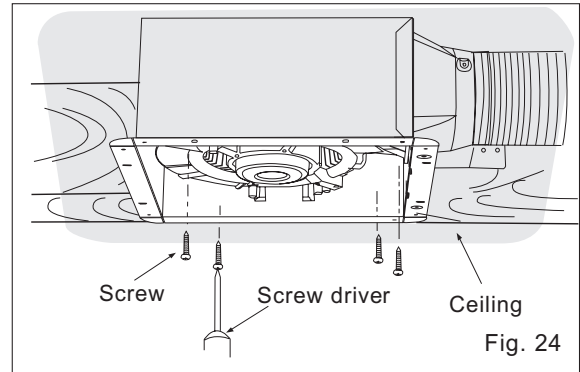
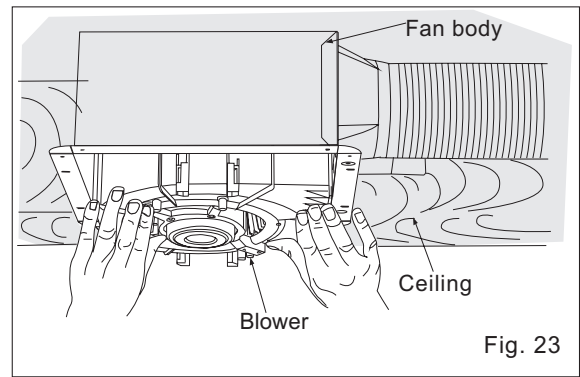


(10) Replace with clamp plates(accessories) and secure the fan body on ceiling board with 2 screws from inside of the frame. (Fig.22)



INSTALLATION III (IN EXISTING CONSTRUCTION) CONTINUED

- (11) Insert the blower into the fan body.(Fig.23)
- (12) Secure blower to fan body with screws that were loosen before.(Fig.24)
- (13) Mount the fan body with thumb screw (on the right side of bottom of the adaptor) as shown in Fig.7 of page 7.
- (14) Connect plug connector to receptacle.(Fig.8 of page 7.)
- (15) Insert mounting springs into slots as shown and mount grille to fan body.(Fig.11 of page 8.)



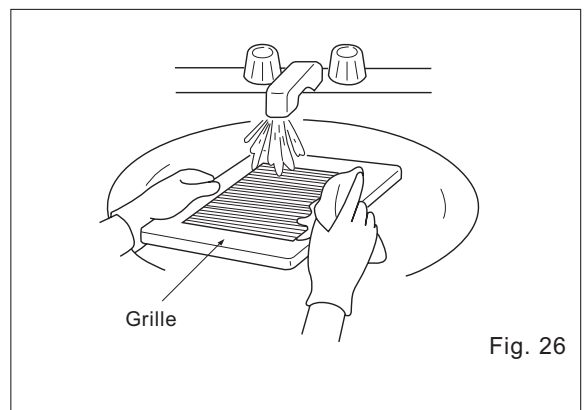
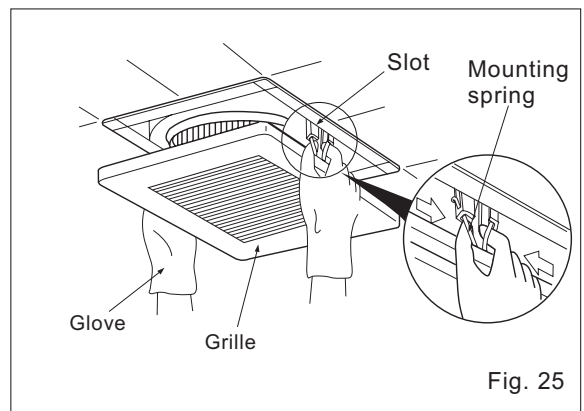
MAINTENANCE

WARNING:

Disconnect power source before working on unit. Routine maintenance must be done every year.

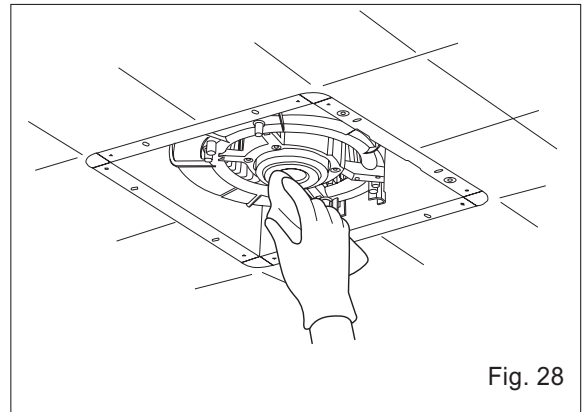
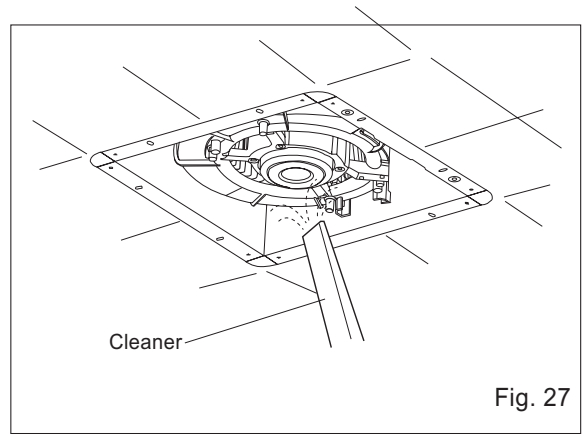
CAUTION:

1. Never use petrol, benzene, thinner or any other such chemicals for cleaning the ventilating fan.
 2. Do not allow water to enter motor.
 3. Do not immerse resin parts in water over 60°C (140°F).
1. Remove grille. (Squeeze mounting spring and pull down carefully.) (Fig.25)
 2. Wash and clean grille.(Use non-abrasive kitchen detergent, wipe dry with new cloth.) (Fig.26)



MAINTENANCE CONTINUED

3. Remove dust and dirt on fan body using a vacuum cleaner. (Fig.27)
4. Using a cloth dampened with mild dish soap,remove any dirt from fan body. Wipe dry with new choth.(Fig.28)
5. Replace grille.



PRODUCT SERVICE

Warning Concerning Removal of Covers.

The unit should be serviced by qualified technicians only.No service information is provided for customers. Your product is designed and manufactured to ensure a minimum of maintenance. However, should your unit ever require service, a nationwide system of factory service centers and AUTHORIZED INDEPENDENT SERVICE CENTERS is maintained to support your product's warranty.

(In the U.S.A.,call 1-866-292-7292 to locate the Panasonic Authorized Service Center nearest you.)

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