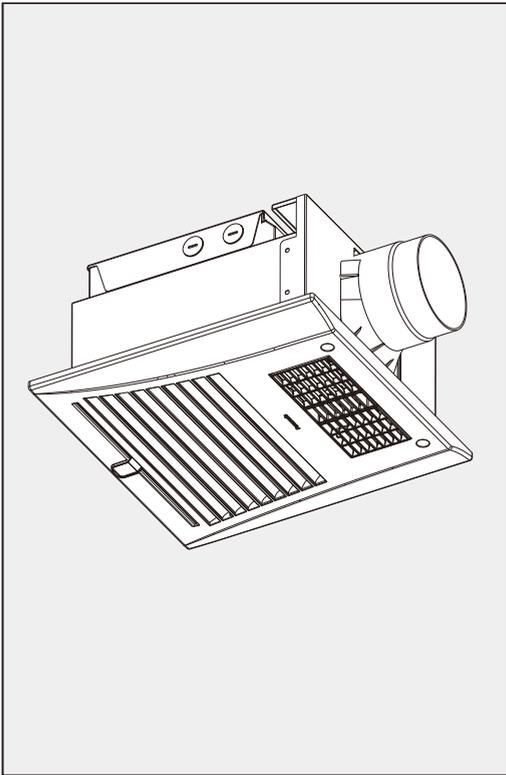


INSTALLATION INSTRUCTIONS

Fan Heater

Model No. **FV-07VFH3**



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READ AND SAVE THESE INSTRUCTIONS

Thank you for purchasing this Panasonic product.

Please read these instructions carefully before attempting to install, operate or service the Panasonic product. Failure to comply with instructions could result in personal injury or property damage. Please explain to users how to operate and maintain the product after installation, and this booklet should be presented to users.

Please retain this booklet for future reference.

GENERAL SAFETY INFORMATION

For Your Safety

To reduce the risk of injury, loss of life, electric shock, fire, malfunction, and damage to equipment or pro always observe the following safety precautions.

Explanation of symbol word panels

The following symbol word panels are used to classify and describe the level of hazard, injury, and property damage caused when the denotation is disregarded and improper use is performed.

 **WARNING**

Denotes a potential hazard that could result in serious injury or death.

 **CAUTION**

Denotes a hazard that could result in minor injury.

NOTICE

Denotes a hazard that could result in property damage.

The following symbols are used to classify and describe the type of instructions to be observed.



This symbol is used to alert users to a specific operating procedure that must not be performed.



This symbol is used to alert users to a specific operating procedure that must be followed in order to operate the unit safely.

IMPORTANT INSTRUCTIONS

Read all instructions before installing or using this fan heater.

 **WARNING**

-  Make sure that the electric service supply voltage is AC 120V, 60Hz.
-  Always disconnect the power source before working on or near the fan, motor or junction box.
-  This product must be properly grounded.
-  Do not operate any heater after it malfunctions. Disconnect power at service panel and have heater inspected by a reputable electrician before reusing.
-  Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction. Neither unauthorized modification, repair nor disassembly is allowed.
-  Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
-  Before servicing or cleaning unit, switch power off at service panel and lock panel cabinet to prevent power from being switched on accidentally. If the panel cabinet cannot be locked, securely fasten a clearly visible warning label to the service panel.

IMPORTANT INSTRUCTIONS CONTINUED

WARNING

-  Do not use out doors.
-  Use only on 20 ampere branch circuit.
-  To prevent a possible fire, do not block air intakes or exhaust in any manner.
-  A statement to the effect that when the product is to no longer be used, it must not be left in place but removed, to prevent it from possibly falling.
-  Do not disassemble the unit for reconstruction. It may cause fire or electric shock.
-  Do not install with a method which is not approved in the instructions.
-  Never place a switch where it can be reached from a tub or shower.
-  A heater has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint, or flammable vapors or liquids are used or stored.

CAUTION

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

-  Use this unit only in the manner intended by the manufacturer. If you have any questions, please contact the manufacturer.
-  Ceiling joist must be subjected to static load more than five times the weight of the product.
-  When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
-  The special-purpose or dedicated parts, such as mounting fixtures, must be used if such parts are provided.
-  This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces. Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, etc. and curtains at least 3 feet(0.9m) from the front of the heater and keep them away from the sides and rear.
-  Do not install this fan heater where air temperature may exceed 40°C(104°F) .
-  Follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupation Safety and Health Act (OSHA).
-  Ducted fans must always be vented to the outdoors.
-  Not to be installed in a ceiling thermally insulated to a value greater than R40. (This is required for installation in Canada only.)

IMPORTANT INSTRUCTIONS CONTINUED

! CAUTION

-  Solid state controls may cause harmonic distortion which can cause motor humming noise. To reduce the risk of fire or electric shock, do not use this unit with any solid-state control device.
-  Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock or fire, or damage the heater.
-  Make sure that all duct work is properly vented.
-  Before cleaning, make sure the power has been turned off at the circuit breaker panel and that the heating element of the heater is cool.
-  Do not install the unit where ducts are configured as shown in Fig. A.



Fig.A

-  Not for use in cooking area. (Fig.B).

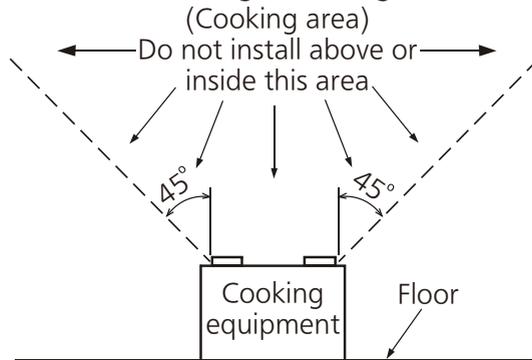


Fig.B

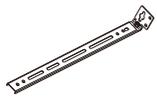
DESCRIPTION

The Panasonic Fan Heater is specially developed for bathroom heating. It uses a 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 cut-off for safety. The louver covering the main body is screw-fixed type. A dumper driven by a gear motor is designed to shift the heating and vent functions. A shutter for preventing counter-flow is provided. The blower uses a high capacity sirocco fan to reduce noise level. The heater for this unit is a 1300W PTC heater. A thermostat and thermal cut-off switch have been added for safety in case of an abnormal temperature rise in the heater.

UNPACKING

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

SUPPLIED ACCESSORIES

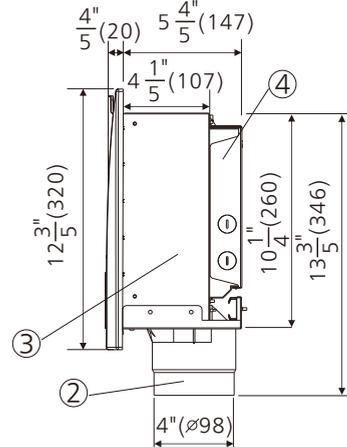
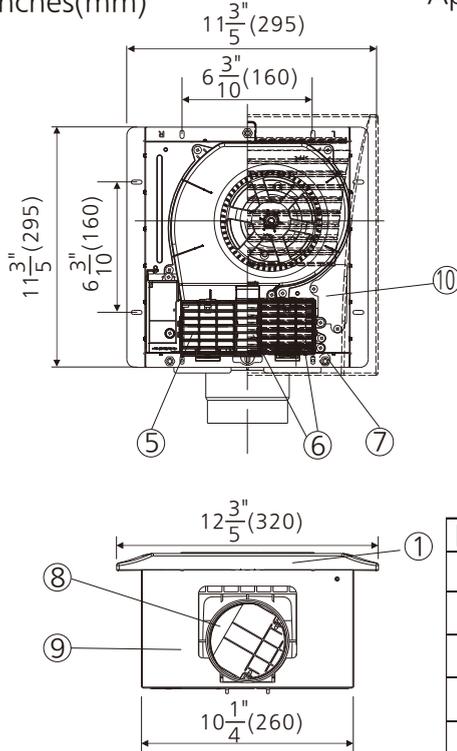
Part name	Appearance	Quantity
Louver		1
Suspension bracket I		1
Suspension bracket II		1
Screw I (M4x8)		3
Screw II (ST4.2X10)		2
Long screw (ST4.2X30)		12

Part name	Appearance	Quantity
Switch labels		1
Install plate L		1
Install plate R		1
Hanger holder		1
Adapter		1
Installation Instructions		2
Warranty card		1

DIMENSIONS

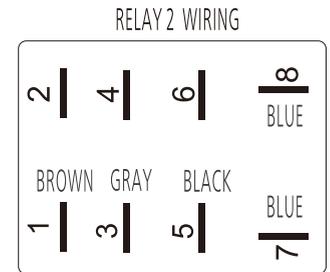
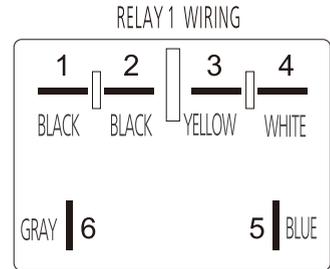
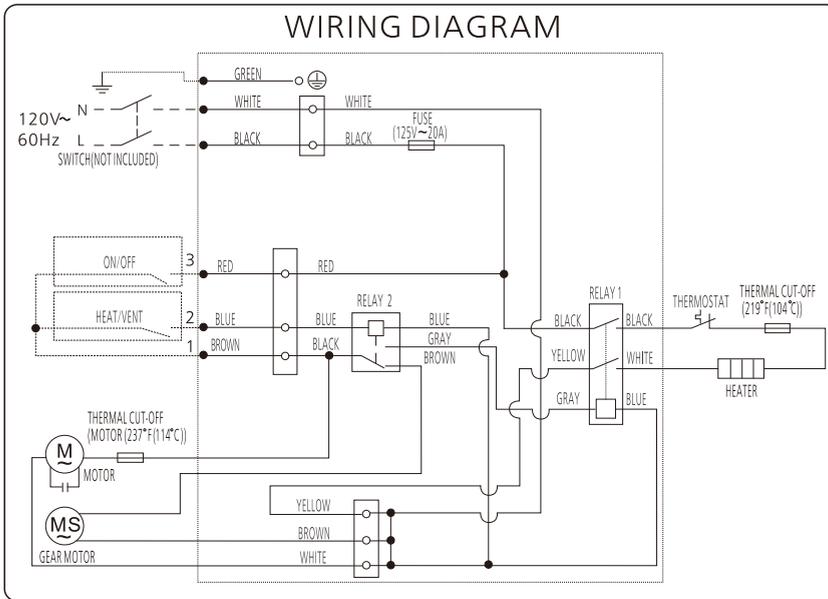
Unit: inches(mm)

Aperture dimensions: $10\frac{3}{5}$ " x $10\frac{3}{5}$ " inches (270x270mm)



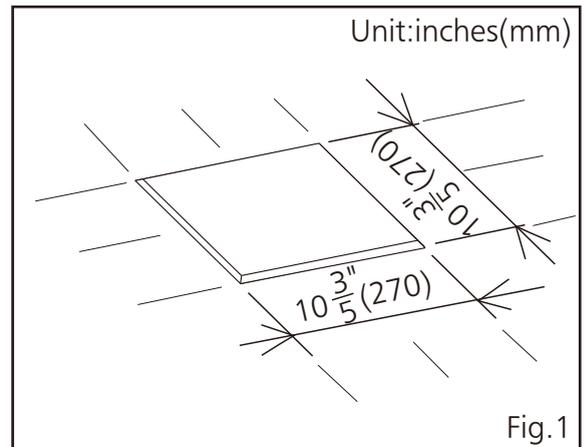
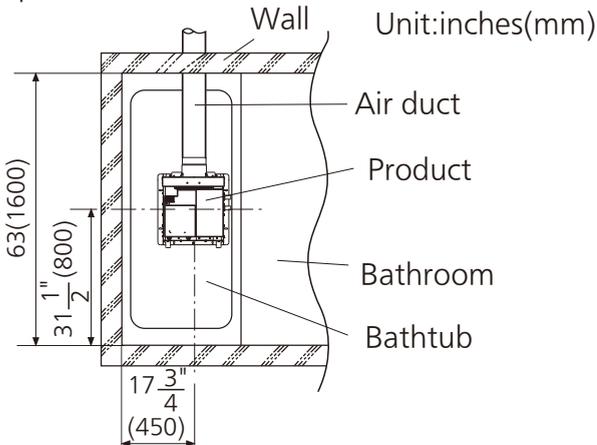
No.	Part name	No.	Part name
①	Louver	⑥	Air outlet grille
②	Adaptor	⑦	Screw cap
③	Unit body	⑧	Airproof shutter
④	Cord cover	⑨	Hanger unit
⑤	Heater assembly	⑩	Inspection cover

WIRING DIAGRAM



INSTALLATION I (BETWEEN JOIST MOUNTING)

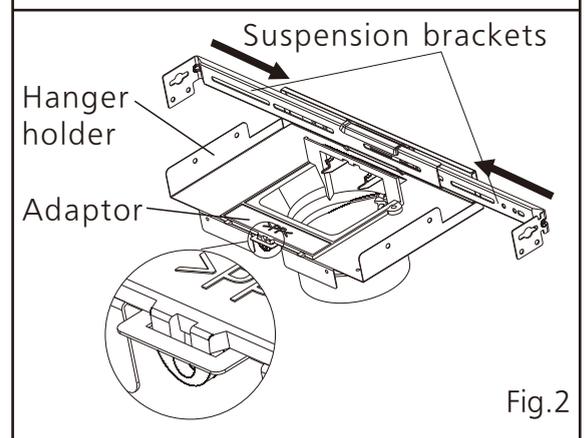
Top view of the recommended installation.



* The bathroom size may affect the room heating result of this product.

1. Make a hole of 10 3/5" X 10 3/5" inch (270 X 270mm) in the ceiling between joist. (Fig. 1)

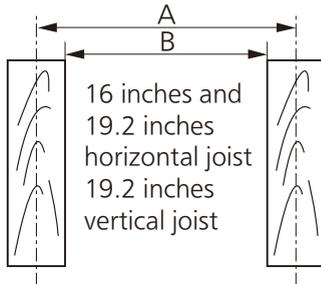
2. Assemble the hanger unit
Insert the suspension brackets into hanger holder and put the adaptor into the hanger holder. (Fig. 2)



INSTALLATION I (BETWEEN JOIST MOUNTING)

Unit: inches (mm)

Spacing A on center joists	B
16 inches	13 1/4~15 1/2(336~394)
19.2 inches horizontal joists	14 3/4~16 3/4(374~425)
19.2 inches vertical joists	16 1/2~18 3/4(419~476)



3. Fix the hanger unit to the ceiling.
 - (1) Using 1 of the ST4.2X30 tapping screws provided in the accessory package to fix the hanger unit to the ceiling.(Fig.3)
 - (2) Using 4 of the ST4.2X30 tapping screws provided in the accessory package to fix the suspension brackets to the joists. (Fig.4)

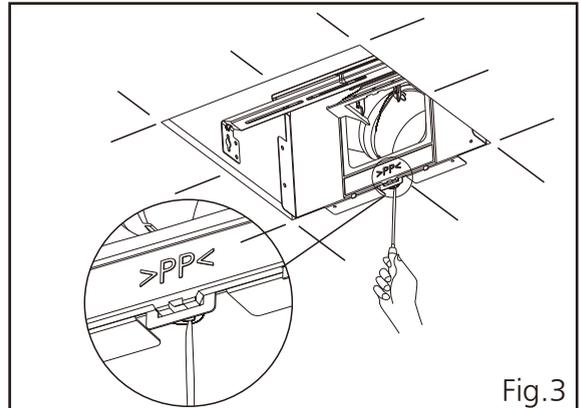


Fig.3

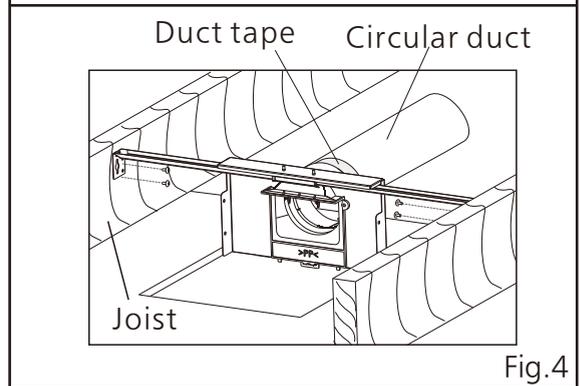


Fig.4

INSTALLATION I (BETWEEN JOIST MOUNTING- I) CONTINUED

4. Slip the circular duct onto the adaptor and secure it with duct tape.(Fig.4)
5. The connection of power wire and control lead wire.

WARNING:

1. Wiring procedures and connections shall be in accordance with the national and local electrical codes having jurisdiction.
2. This product must be properly grounded.

- ① Take out the cord cover and stress relief two knockout holes.(Fig.5)
- ② Secure conduits, pass house power wires and control lead wires through the holes. (Fig.6)

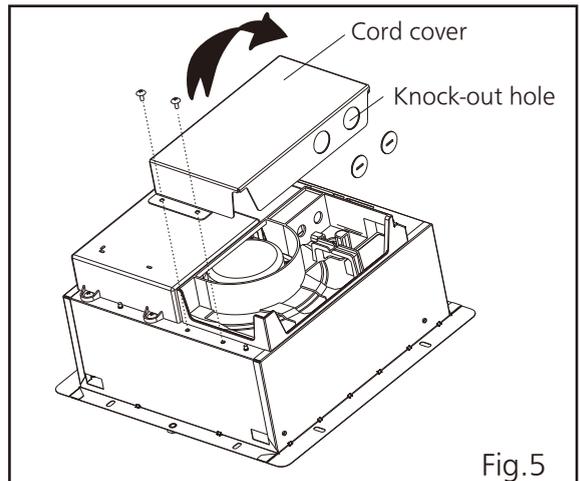


Fig.5

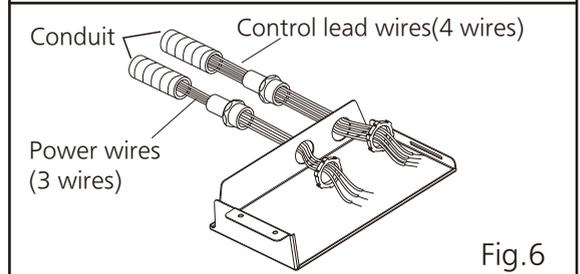


Fig.6

INSTALLATION I (BETWEEN JOIST MOUNTING- I) CONTINUED

- ③ Refer to wiring diagram (Page.6) or Fig.9, follow all the local electrical safety codes. As well as the National Electrical code (NEC), Using UL approved wire nuts, connect house power wires and control lead wires to product wires.(Fig.7) Make sure all connections are fastened firmly after wiring is finished.
- ④ For future inspection by qualified persons, put the lead wires into the hook after connection work.(Fig.8)
- ⑤ Fix the cord cover with the screws that taken off at step1.

WARNING

1. Disconnect power source before working on unit.
2. When making wiring connections take care to prevent excessive slack in the wiring since a layge of current is drawn through the heater electrical wire.
3. To reduce the risk of fire, do not store or use gasoline or other flammable vapors and liquids in the vicinity of the heater

CAUTION

- 1.High temperature, risk of fire, keep electrical cords, drapery,furnishings, and other combustibles at least 3 feet (0.9 m) from the front of the heater and away from the side and rear.
- 2.Mount the cord cover carefully so that lead wires are not pinched.

6. Main body fixed.

Push the main body upward into the ceiling, use 4 of the ST4.2X30self-tapping screws provided in the accessory package to fix it. (Fig.10)

7.Install plate fixed.

Insert the install plates into the main body jockey for position(one of each side), use the ST4.2X10 self-tapping screws provided in the accessory package to fix them. (Fig.11)

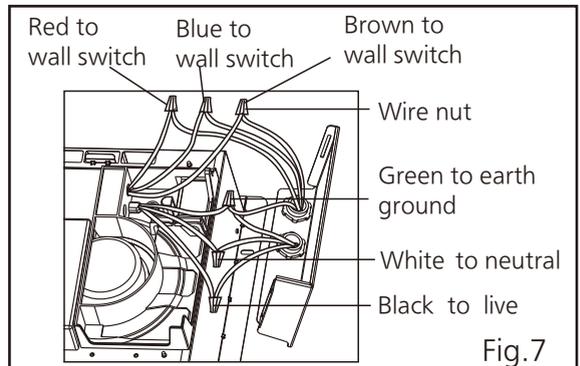


Fig.7

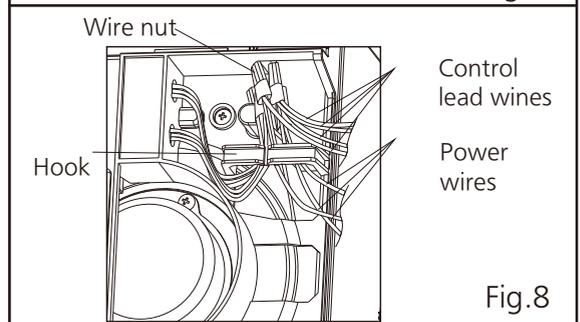


Fig.8

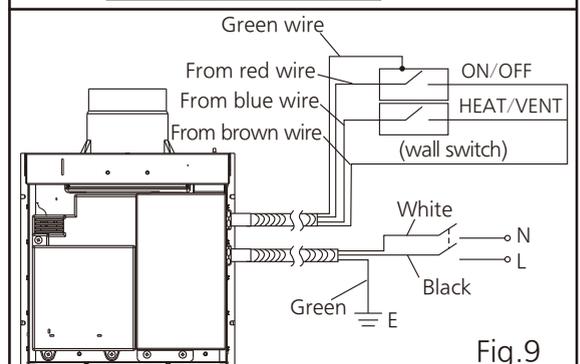
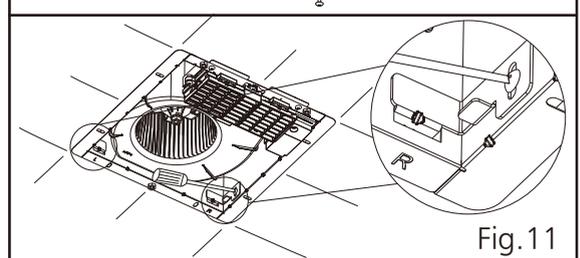
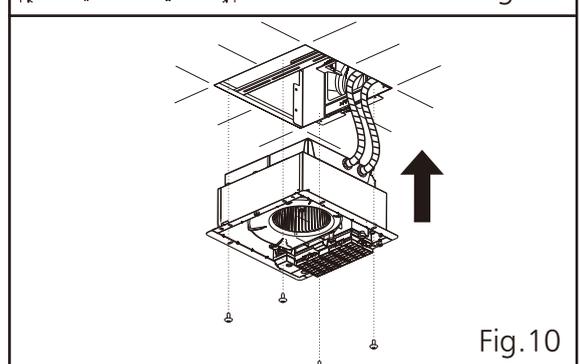
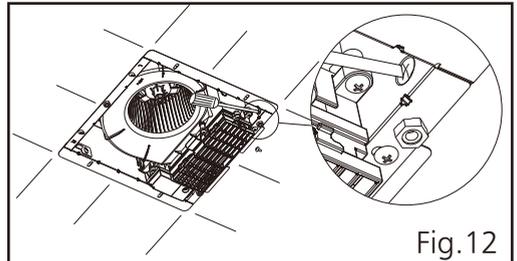


Fig.9

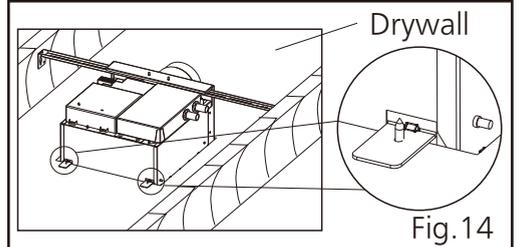
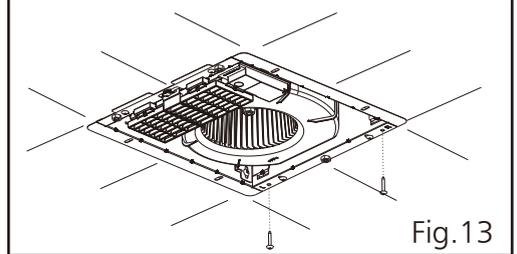


INSTALLATION I (BETWEEN JOIST MOUNTING- I) CONTINUED

8. Use one of the ST4.2X30 self-tapping screws provided in the accessory package to fix the product frame and the hanger unit.(Fig.12)

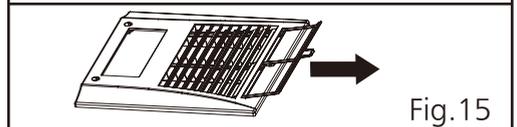


9. Install plates locked.
Using 2 of the ST4.2X30 self-tapping screws provided in the accessory package to lock the install plates (Fig.13), make sure the screws are go through the hole of install plates, and the drywall is clamped tightly.(Fig.14)

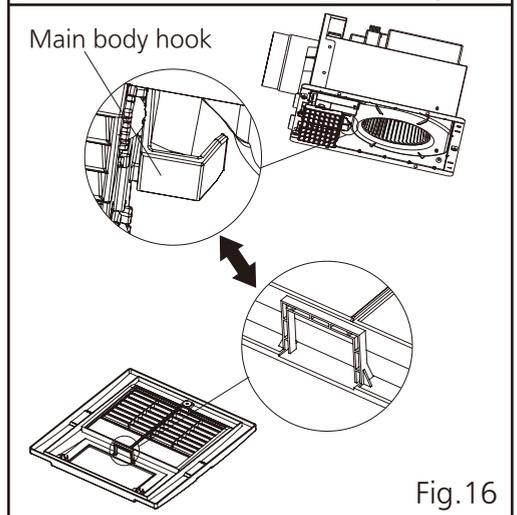


9. Louver fixed

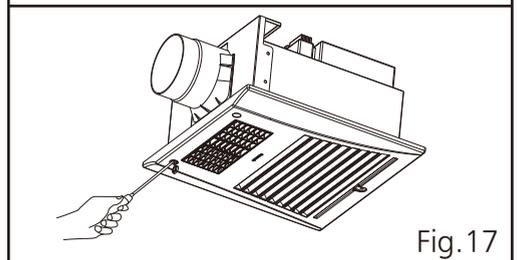
① Pull out the filter mesh from the louver assembly.(Fig.15)



② Hang the louver into the hook on the main body.(Fig.16)

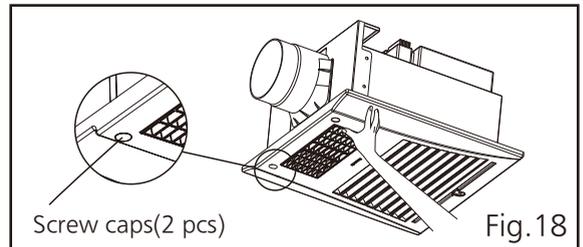


③ Insert a straight screw driver into the gap of the screw cap (2 positions), and unclench the screw cover outward.(Fig.17)

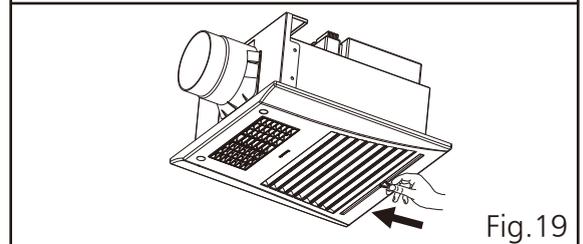


INSTALLATION I (BETWEEN JOIST MOUNTING- I) CONTINUED

- ④ Fix the louver assembly with the 3 of the M4X8 mechanical screws in the accessory. (Fig.18)



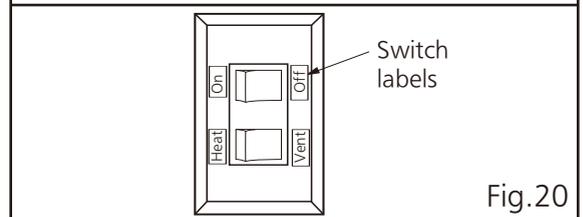
- ⑤ Install the filter mesh again and attach the unclenched screw caps again.(Fig.19)



- 10.Paste the switch labels provided in the accessory package on the switch panel. (Fig.20)

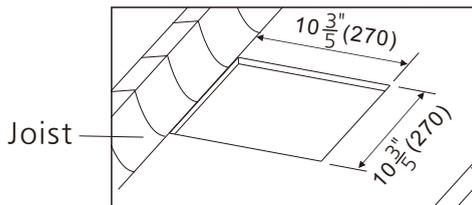
[Optional]

Attach the given switch labels (in accessories) on the wall switch (not included) as shown in the diagram for clearer indication.(Fig.20)

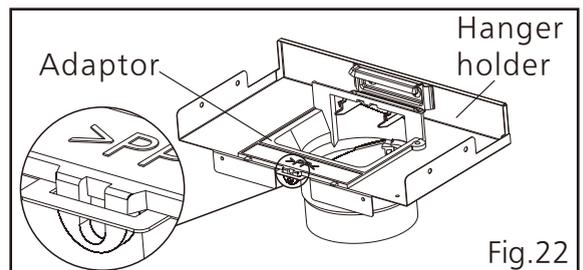


INSTALLATION II (JOIST MOUNTING)

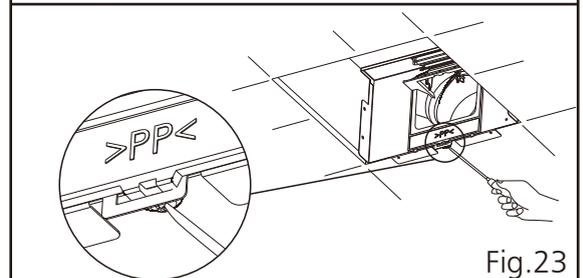
1. Make a hole of $10\frac{3}{5}$ X $10\frac{3}{5}$ inches (270 X 270mm) adjacent to a joist.(Fig.21)



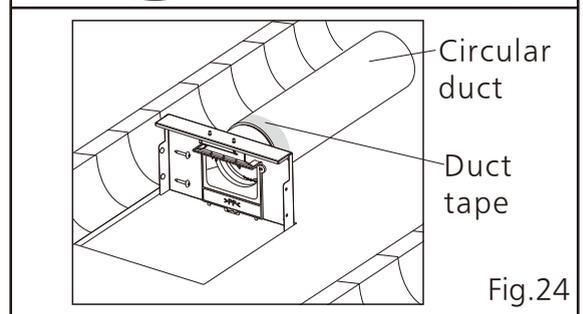
2. Assemble the hanger unit.
Put the adaptor into the hanger holder. (Fig.22)



3. Fix the hanger unit to the ceiling.
(1) Using 1 of the ST4.2X30 tapping screws provided in the accessory package to fix the hanger unit to the ceiling.(Fig.23)



- (2) Using 2 of the ST4.2X30 tapping screws provided in the accessory package to fix the hanger unit to the joist.(Fig.24)



- 4.Slip the circular duct onto the adaptor and secure it with duct tape.(Fig.24)

INSTALLATION II (JOIST MOUNTING)

5. Follow step 5 of installation I (page 8) to complete the connection of power wires and control lead wires.

6. Main body fixed.

Push the main body upward into the ceiling, use 4 of the ST4.2X30 self-tapping screws provided in the accessory package to fix it. (Fig.25 & Fig.26)

7. Follow step 7,8,9,10 of installation I (page 9-10) to complete the install plate fixed, install plate locked, louve fixed and paste the switch labels.

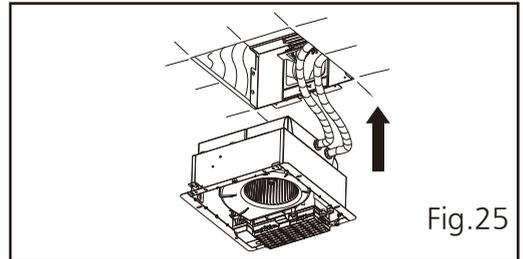


Fig.25

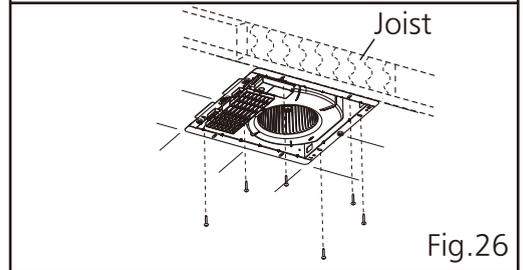


Fig.26

OPERATING INSTRUCTIONS

WARNING

The heater shall be properly installed before it is used.

1. Fan heater is in STOP stage when switch is set as shown in Fig.27. The unit is not operated in this stage.
2. Fan heater is in HEAT mode when switch is set as shown in Fig.28. The unit blows out hot air. The bathroom becomes warm.
3. Fan heater is in VENT mode when switch is set as shown in Fig.29. Fresh air is coming into the bathroom.

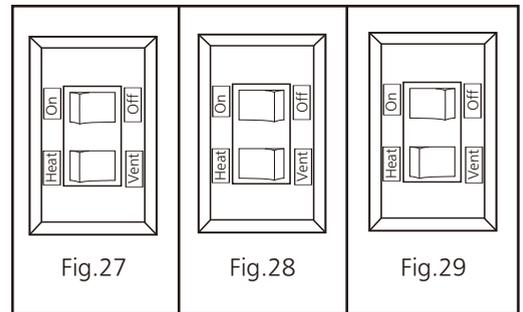


Fig.27

Fig.28

Fig.29

MAINTENANCE (CLEANING)

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 any water to get into the motor.
3. Do not soak resin parts in water over 60°C (140°F).

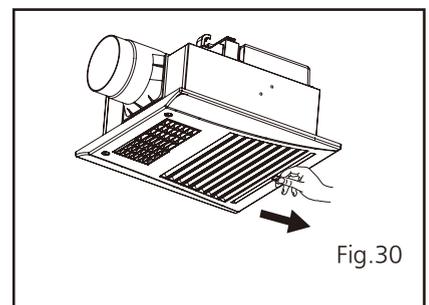


Fig.30

Before cleaning, make sure the power has been turned off at the circuit breaker panel and that the heating element of the heater is cool.

- ① Pull out the filter mesh assembly as shown in the figure (Fig.30).

MAINTENANCE (CLEANING)

- ② Remove the filter mesh. And vacuum-clean, wash and dry (Fig.31).
- ③ Install the filter mesh assembly again (Fig.32).

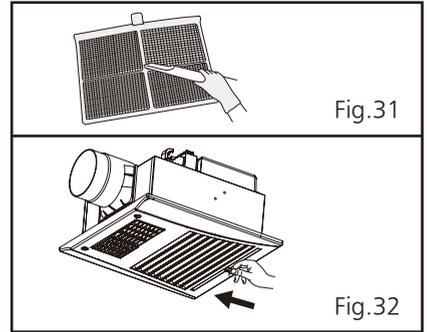


Fig.31

Fig.32

PRACTICAL GUIDE TO INSTALLATION

Properly insulate the area around the fan to minimize building heat loss and gain. (Fig.33)

Loose fill or batt insulation can be placed directly over the fan housing in the attic.

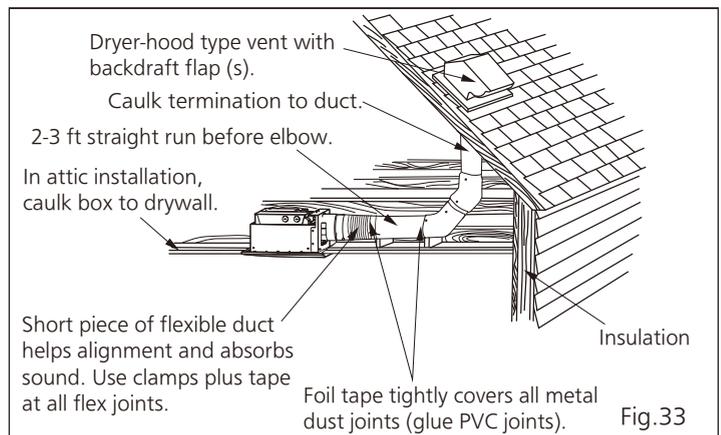


Fig.33

SPECIFICATIONS

Model No.	Air direction	Voltage (V)	Frequency (Hz)	Power consumption (W)		Air deliver Vent (0.1" WG) (cfm)	Noise Vent (sone)	Weight lb.(kg)
				Heat	Vent			
FV-07VFH3	Exhaust & Circulation	120	60	1346(25°C)	26	70	1.5	3.6

Specifications of Vent are based on HVI standard.

PRODUCT SERVICE

Warning Concerning Removal of Covers.

The unit should be serviced by qualified technicians only.

Your product is designed and manufactured to ensure a minimum of maintenance.

Should your unit require service or parts, call panasonic Call Center at 1-866-292-7292 (USA) or 1-800-669-5165 (Canada).

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 Printed in China

X0113-0 07VFH34200