ORTECH®

VENTILATION FAN

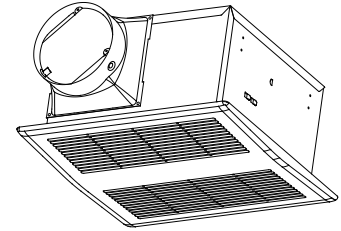# MODEL:OD22025

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 questions, contact the manufacturer.

b). Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switching on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.

c). Installation work and electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction codes and standards.

d). 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 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.

e). When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.

f). Ducted fans must always be vented to the outdoors.

g). Acceptable for use over a tub or shower when connected to a GFCI (Ground Fault Circuit Interrupter) - protected branch circuit (ceiling installation only).

h). This unit must be grounded.

i). Not for Use in Kitchens.

k). To reduce risk of fire and to properly exhaust air, be sure to duct air outside – Do not vent exhaust air into spaces within walls or ceilings or into attics, crawl spaces, or garages

l). WARNING: To Reduce The Risk Of Fire Or Electric Shock, Do Not Use This Fan With Any Solid-State Speed Control Device.

m). The fan must not be installed in a ceiling thermally insulated to a value greater R40.

CAUTION

1. For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.
2. This product is designed for installation in ceilings up to a 12/12 pitch (45 degree angle). Duct connector must point up. DO NOT MOUNT THIS PRODUCT IN A WALL.
3. To avoid motor bearing damage and noisy and/or unbalanced impellers, keep drywall spray, construction dust, etc. off power unit.
4. Please read specification label on product for further information and requirements.

   *The manual in electronic format can be download in our company web, or obtained from our dealer.

CLEANING & MAINTENANCE

For quiet and efficient operation, long life, and attractive appearance - lower or remove grille and vacuum interior of unit with the dusting brush attachment.The motor is permanently lubricated and never needs oiling. If the motor bearings are making excessive or unusual noi-ses, replace the motor with the exact service motor. The impeller should also be replaced.

OPERATION

Fan with no accessories:Use an on/off switch to operate this fan. See "Connect Wiring" for details (Fig.1).

Fan with ADD on Humidity Sensor and no wall switch (Fig.3)

Fan with ADD on Humidity Sensor and wall switch to manually activate the fan (The fan and humidity sensor can be operated separarely by wall switch . Fig.2)

HUMIDITY SENSOR

The humidity-sensing fan uses a sophisticated humidity sensor that responds to: (a) rapid to moderate (user-adjustable) increases in humidity or (b) humidity above a user-adjustable set-point (50%-100% relative humidity). The humidity sensor may occasionally turn the fan ON when environmental conditions change. If the fan continuously responds to changing environmental conditions, "H" (means "humidity") adjustment may be required. This figure is factory-set for about 75% (Ambient temperature of 25℃).

SENSITIVITY ADJUSTMENT

The "H" has been factory set for most shower applications. However, if the fan is in a tub area or is being used for dampness control, the "H" may need to be increased toward maximum "+". If the control is responding too often to changing environmental conditions, movement toward less "-" "H" may be required.To adjust the "H":

1. Disconnect power at service entrance.   2. Through the grille, locate the slot marked "H".   3. Carefully rotate the "H" adjustment toward "+" or "-".   4. Turn on power and check operation by turning on the shower or other humidity source until the fan turns on.

5. Repeat above steps if necessary. When the temperature changes, humidity sensor values will have deviation.

TIMER ADJUSTMENT

The humidity sensing fan has a "T" (means timer) that can be adjusted from 5 to 60 minutes (factory-set at about 20 minutes). This "T" controls the length of time that the fan remains ON after the sensor has stopped sensing a rise in humidity and the humidity level is below the user-adjustable set-point. To adjust the "T":

READ AND SAVE THESE INSTRUCTIONS
Installer: Leave this manual with the homeowner.

OPERATION

1. Disconnect power at service entrance;
2. Through the grille, locate the slot marked "T";
3. Carefully rotate the "T" adjustment to desired setting
4. Check operation by turning on a humidity source until the fan turns on.
5. Turn humidity source off and time the unit.
6. Repeat above steps if necessary.

Fan with ADD on Motion Sensor Grille

The fan and motion sensor can be operated separarely.See "Connect Wiring" for details.(Fig.4)

Sensing distance will be impacted of the body's own situation (for example, the thinner people wearing the more remote sensing distance). Turn on the switch sensor the fan don't work. When enter the gesture area fan will run at the certified airflow rate, indicator light begins flashing. When persons leave, indicator light turn down, the fan remains working until the delay time(3-30minutes) has passed, and then the fan stops.

Installation distance: 7 to 9 feet.
Sensing range is within the cone angle of 90°.
One LED light is a sensor indicator and the other 5 LED light are the night light which is operated by a switch.
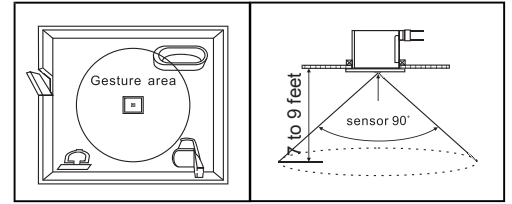
PLAN THE INSTALLATION

1. Do not use in a cooking area.
2. Two ways to connect ductwork to a factory-shipped unit.
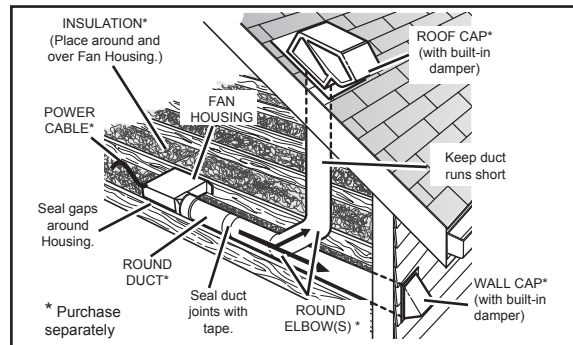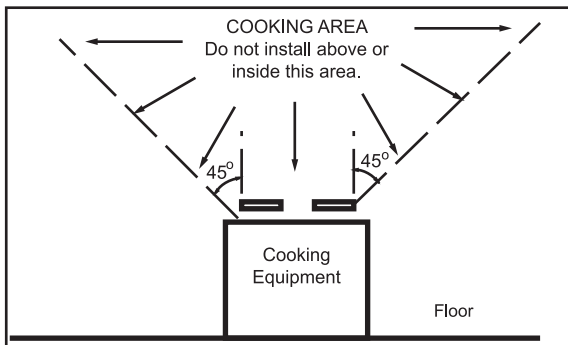
TYPES OF TYPICAL INSTALLATIONS

1. Housing mounted with hanger bracket (Start at "ASSEMBLY INSTRUCTIONS 2")
2. Housing mounted with mounting holes (Start at "ASSEMBLY INSTRUCTIONS 3")

ASSEMBLY INSTRUCTIONS

1. Before installation, you need to know:

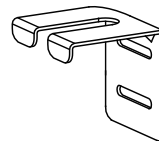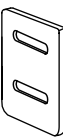|			
Screw A		Screw B	
Rubber 1		Rubber 2	
Washer		Hanger bracket	
Rubber 3			

2.MOUNT WITH HANGER BRACKET

Before installation, need to assembly hanger bracket and rubber 3 to housing with screw A.Then install the rubber 1. rubber2 and washer to hanger bracket.Use anchor bolts (not included) to secure housing.（Fig.1）
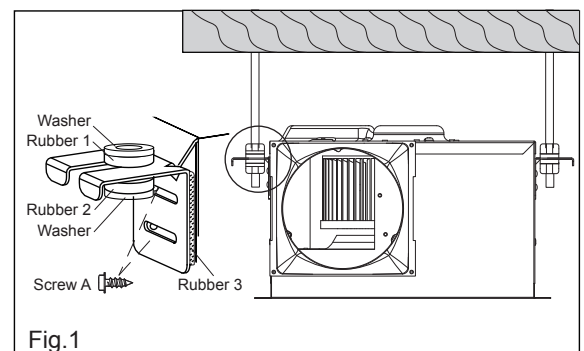

Fig.1

ASSEMBLY INSTRUCTIONS

3. MOUNT WITH MOUTING HOLES
   Select the appropriate size of the wood is installed between the joists using screw (not included). Hold housing in place so that the housing contacts the bottom of the joist and woods, Screw housing to joist and woods through the hole.（Fig.2）
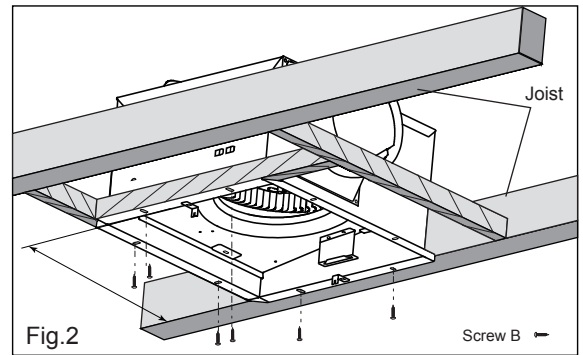

Joist

Fig.2   Screw B

4. INSTALL ROUND DUCTWORK
   Connect the round ductwork (not included) to the damper/duct connector, and run the ductwork to a roof or wall cap (not included). Using tape (not included), secure all the ductwork connections so that they are air tight.(Fig.3) The ducting from this fan to the outside of building has a strong effect on the air flow, noise and energy use of the fan. Use the shortest, straightest duct routing possible for best performance, and avoid installing the fan with smaller ducts than recommended. Insulation around the ducts can reduce energy loss and inhibit mold growth. Fans installed with existing ducts may not achieve their rated air flow.
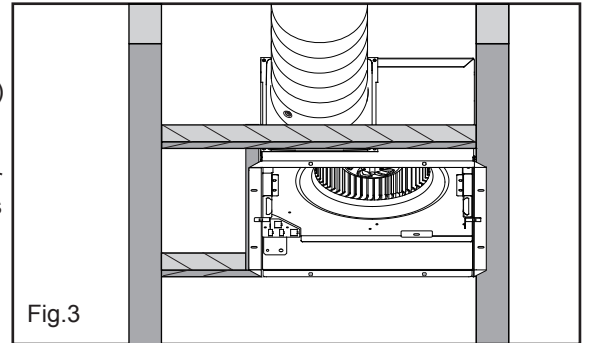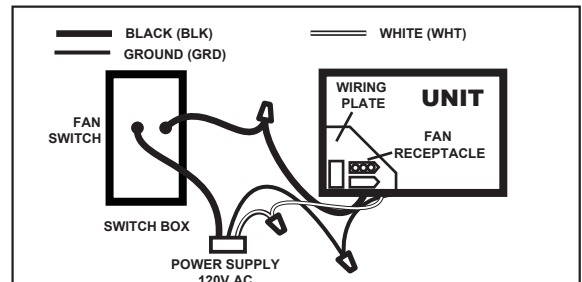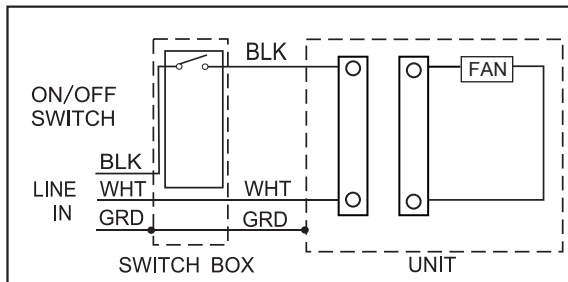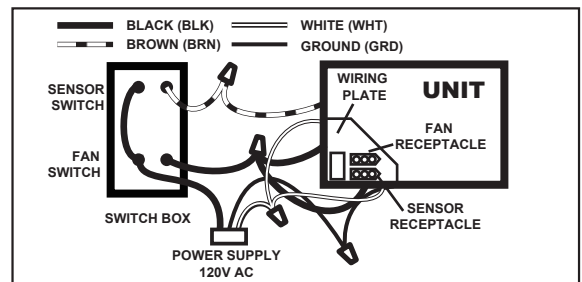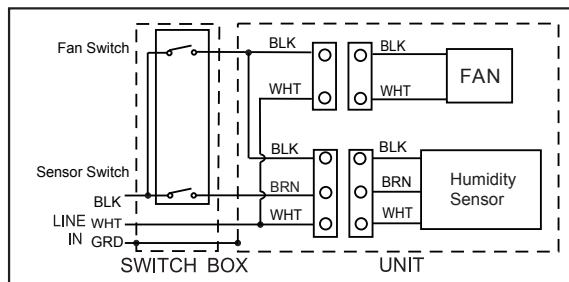

Fig.3

CONNECT ELECTRICAL WIRING

Run 120 V AC house wiring to the location of the fan. Use only UL-approved connectors (not included) to attach the house wiring to the wiring plate. Refer to the wiring diagram, and connect the wires as shown.
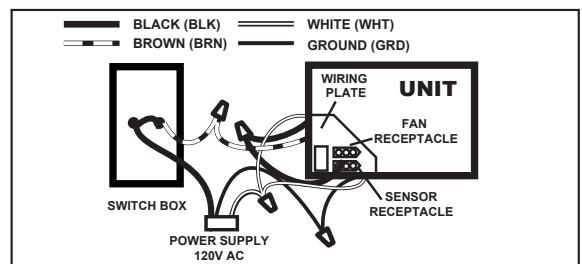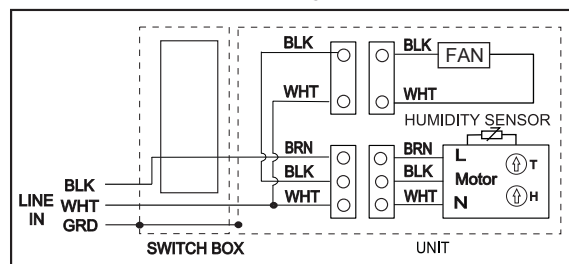
(Fig.1) **Fan with no accessories**

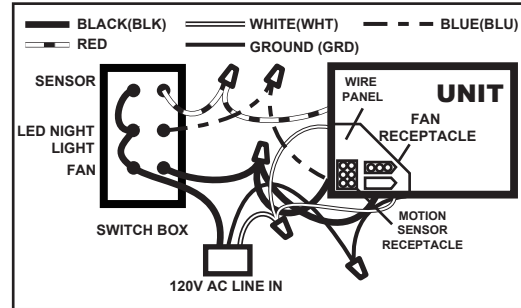(Fig.2) **Fan with ADD on Humidity Sensor and wall switch to manually activate the fan**
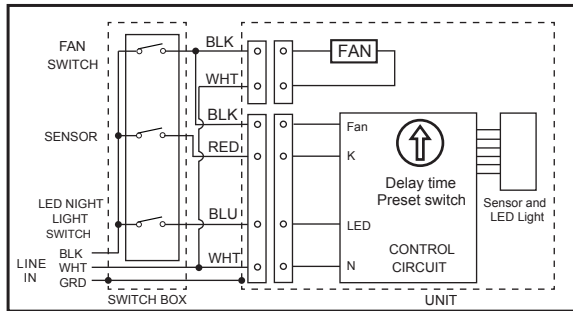

(Fig.3) **Fan with ADD on Humidity Sensor and no wall switch**

CONNECT ELECTRICAL WIRING

(Fig.4) **Fan with ADD on Motion Sensor Grille**

INSTALL GRILLE

Install ceiling material to complete the ceiling construction. Then, cut around the fan housing.

To attach the grille assembly to the fan housing, pinch the grille springs on the sides of the grille assembly, and position the grille into the housing with the grille springs in the appropriate slots. Push the grille assembly towards the ceiling to secure.
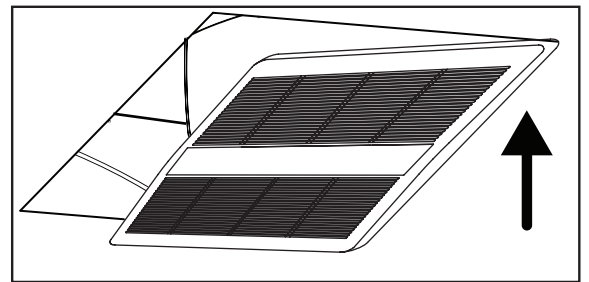
SERVICE PARTS

PART	PART NAME	Qty.
1	Grille Assembly	1
2	Power Box	1
3	Motor Plate	1
4	Blower Wheel	1
5	Motor	1
6	Blower	1
7	Plate	1
8	Fixed matter	3
9	Housing	1
10	Damper / Duct Connector	1
11	Wire Panel / Harness Assembly	1
a	Nut, Hex Lock	1
b	Gasket	1
c	Screw 1	4
d	Screw 2	2
e	Screw 3	3
f	Screw 4	1
g	Screw 5	1
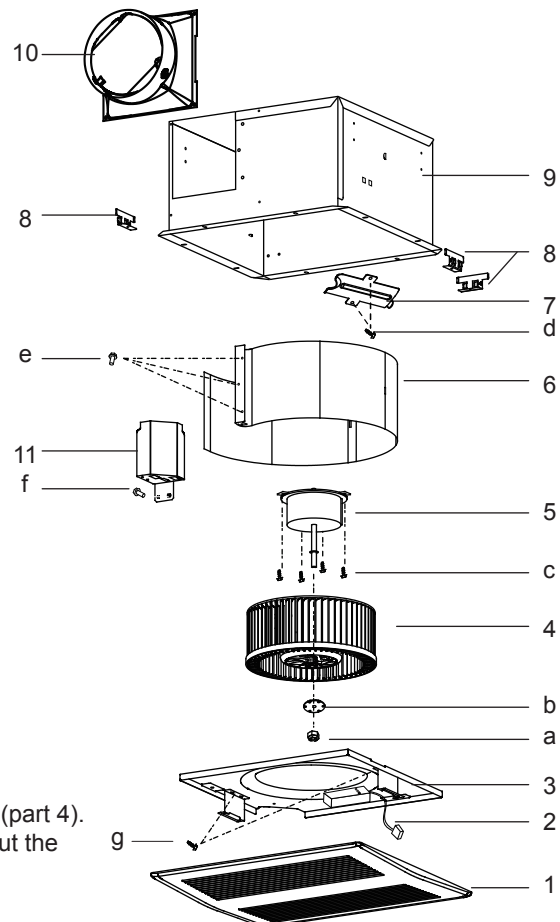
Replacement installation:
Remove the Screw 5, then take out the motor plate (part 3) from the housing (part 9).
Remove the nut (part a) and gasket (part b),take out the blower wheel (part 4).
Remove Screw 2,take out plate (part7),Then remove the Screw 1,take out the motor (part5) .Replace the broken parts.
WARNING: Before replacing, be sure to turn off power at power source.

WARRANTY