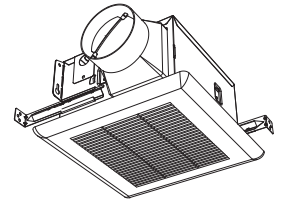




# VENTILATION FAN



**MODEL: PCD80XHP**

## WARNING

**TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:**

1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer at the address or telephone number listed in the warranty.
2. Before servicing or cleaning the 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.
3. 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.
4. 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.
5. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
6. Ducted fans must always be vented to the outdoors.
7. Acceptable for use over a tub or shower when connected to a GFCI (Ground Fault Circuit Interrupter) - protected branch circuit (ceiling installation only).
8. This unit must be grounded.

## 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.
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.

## 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 noises, replace the motor with the exact service motor. The impeller should also be replaced.

## OPERATION

See "Connect Wiring Diagram" for details.

The control box, located inside the fan housing, has two settings:

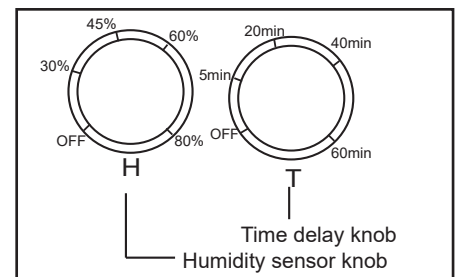
- (1) The time delay knob sets the amount of time that the fan will continue to run at high speed after switch is turned OFF, or the RH% limit is reached. It is adjustable from 5 to 60 minutes. Once the set time has elapsed, the fan will run at the Low speed. The time delay setting is de-activated when set between OFF-5 mins (factory set to OFF). NOTE: for humidity sensing applications, the fan will continue to run for 5 minutes after humidity is below the RH% limit, even if the time delay knob is set between OFF-5 mins.
- (2) The humidity sensor knob sets the RH% limit at which the fan will automatically operate at high speed. The humidity sensor is de-activated when set between OFF-30% .

### Operation Sequence

1. Turn power ON. The fan will run at low speed (40 CFM) and the humidity sensor will start sensing .
2. Turn switch ON. The fan will run at high speed(80 CFM) and will override the humidity sensor.
3. Turn switch OFF. The fan will continue to run at high speed until the time delay has elapsed (if enabled), and then will automatically change back to low speed.

### HUMIDITY SENSOR OPERATION

The fan runs continuously at a low speed and automatically boosts up to high speed when the relative humidity (RH%) in the room exceeds the RH% limit set with the humidity sensor knob. If the fan continuously responds to changing environmental conditions (too sensitive), the RH% limit may need to be adjusted.



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

# OPERATION

## SENSITIVITY ADJUSTMENT

The "H" limit has been factory set for most shower applications. However, if the fan is in a tub area or is being used for moisture control, the "H" may need to be increased toward 80%. If the fan is responding too often to changing environmental conditions, the "H" setting may need to be increased toward 80%.

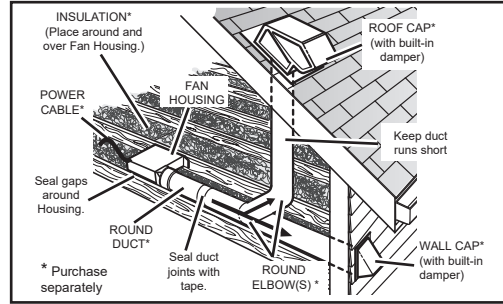
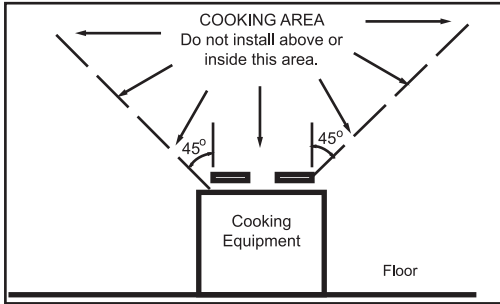
To adjust the "H" limit:

1. Disconnect power at service entrance.
2. Through the grille, locate the slot marked "H".
3. Carefully rotate the "H" adjustment toward 30% or 80%.
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 some amount of deviation.

## PLAN THE INSTALLATION

1. Do not install fan above or inside a 45-degree angle projected outwards from the cooking equipment element closest to the fan. See instruction sheet for clarification.
2. Two ways to connect ductwork to a factory-shipped unit.



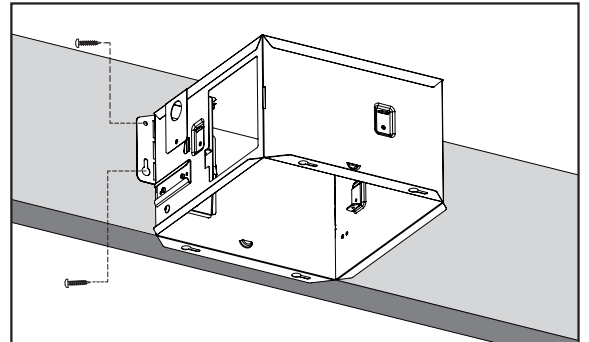
## TYPES OF TYPICAL INSTALLATIONS

1. Housing mounted to a single joist (Start at "ASSEMBLY INSTRUCTIONS 1")
2. Housing mounted in between joists (Start at step "ASSEMBLY INSTRUCTIONS 2")
3. Housing mounted to I-joists (Start at "ASSEMBLY INSTRUCTIONS 3")

## ASSEMBLY INSTRUCTIONS

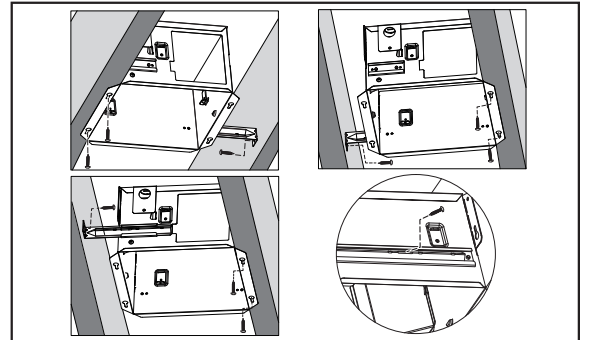
### 1. HOUSING MOUNTED TO A SINGLE JOIST

- a. Hold the housing so that it is in contact with the bottom of the joist.
- b. Attach the housing with four (4) screws to the joist through the holes in each mounting flange.



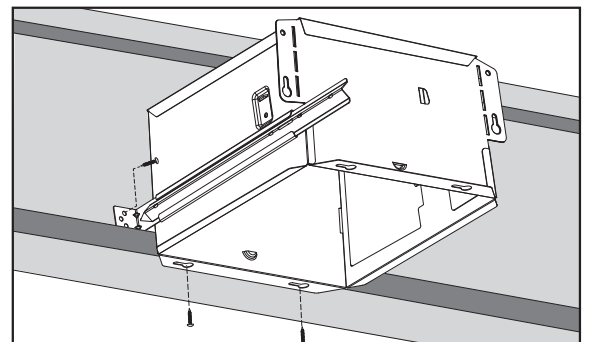
### 2. HOUSING MOUNTED BETWEEN JOISTS

- a. Slide one hanger bar into the channel on the housing and adjust as needed to fit in between the framing.
- b. Hold housing in place so that the housing contacts the bottom of the joist, screw the housing to the joist through the hole of the housing.
- c. Screw the hanger bar onto the other side of the joist through the hole.
- d. Screw hanger bar to the housing with screw.
- e. Secure the hanger bar onto the housing with screw



### 3. Mount to I-joist

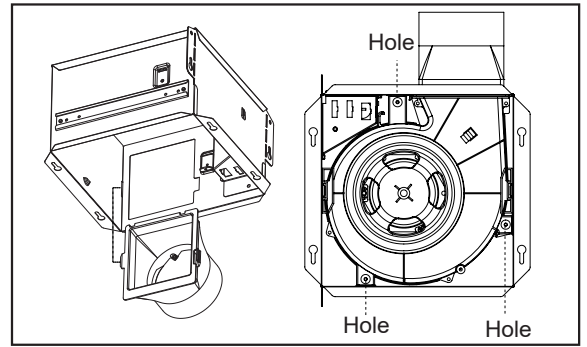
- a. Slide one hanger bar into the channel on the housing and adjust as needed
- b. Hold the housing in place so that the lower mounting flange contacts the bottom of the joist.
- c. Screw housing to the joist through the holes on the lower mounting flange.
- d. Screw the hanger bar onto the joist through the hole.



# ASSEMBLY INSTRUCTIONS

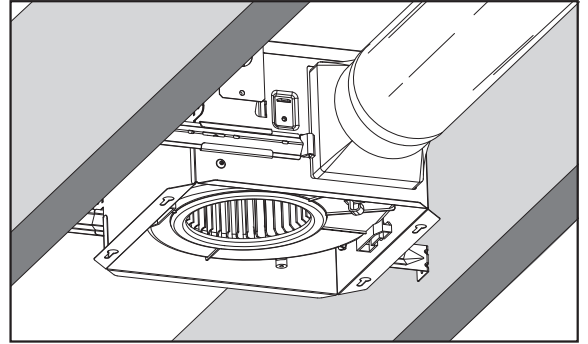
## 4. INSTALL DUCT AND BLOWER ASSEMBLY

- Install duct from the inside of the housing; Fix the duct by the tab.
- Fix the BLOWER ASSEMBLY to the housing by 3 screws.



## 5. INSTALL ROUND DUCTWORK

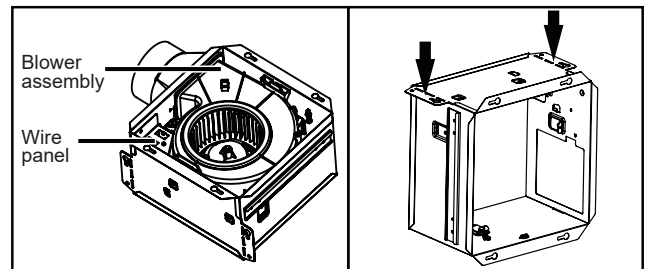
- Connect the round ductwork (not included) to the damper/duct connector, and run the ductwork to a roof or wall cap (not included).
- Using tape (not included), secure all the ductwork connections so that they are air tight.
- Insulated flexible duct is recommended for the quietest possible installation. If rigid duct is used, a short (1-3 feet) section of insulated flexible duct will ensure quiet operation.



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.

## RETROFIT INSTALLATION

- Remove wire panel and blower assembly before installation.
- Fold mounting ears flat against housing.



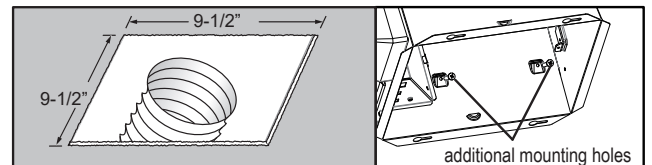
- Enlarge ceiling opening to 9-1/2" by 9-1/2", leave ductwork and wiring in place.
- Connect wiring according to the wiring diagram. Re-install wire panel.
- Fan Mounting:

Mount with additional mounting holes

The interior of the fan housing contains additional mounting holes in case exterior mounting is not possible.

Screw or nail the fan housing directly to the framing or joists.

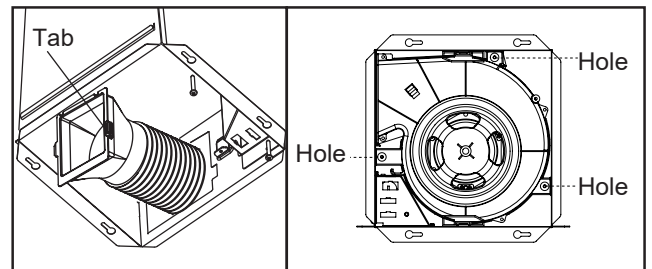
Remove the blower assembly as directed in the service parts section of this manual to gain access to the additional mounting holes.



## 6. Connect duct

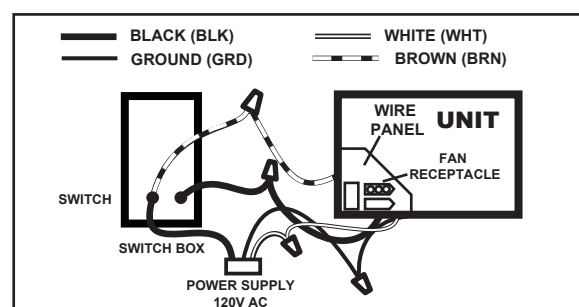
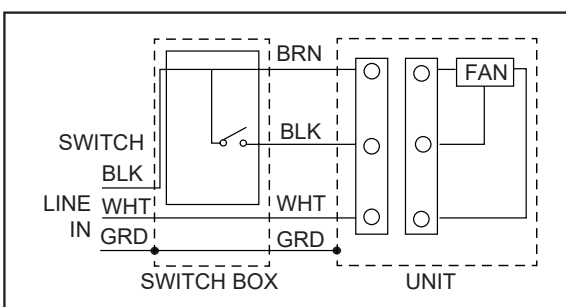
Pull existing ducting through housing discharge opening and tape ducting to duct connector. Push connector/ducting back through opening, fix the duct by the tab.

- Install the blower assembly.



## CONNECT ELECTRICAL WIRING

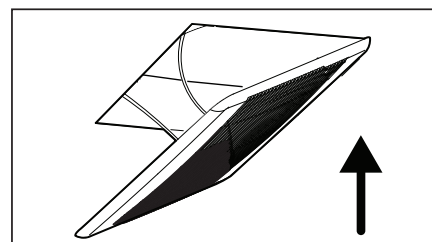
Run 120 VAC house wiring to the location of the fan. Use only UL-approved connectors (not included) to attach the house wiring to the wiring plate. Refer to the wiring diagram, and connect the wires as shown.



## INSTALL GRILLE

Install ceiling material to complete the ceiling construction and 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

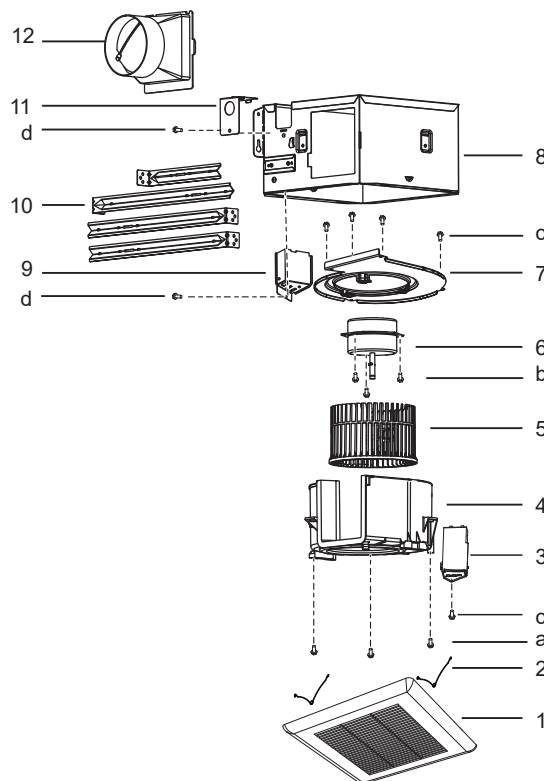
PART	PART NAME	Qty.
1	Grille Assembly (includes part 2)	1
2	Grille Spring	2
3	Power box	1
4	Blower	1
5	Blower Wheel	1
6	Motor	1
7	Motor Plate	1
8	Housing	1
9	Wire Panel / Harness Assembly	1
10	Hanger Bars	4
11	Wiring Plate	1
12	Damper/Duct Connector	1
a	Screw	3
b	Screw	3
c	Screw	5
d	Screw	2

\* Blower Assembly includes part 3, 4, 5, 6, 7, a, b

Replacement installation: Remove the screw (part a), then take out the blower assembly from the housing (part 8). Replace the broken parts.

\* Replacement parts are shown for illustration purposes only and are not sold separately

**WARNING:** Ensure that the fan is switched off from the supply power before replacing.



## WARRANTY

S&P USA Ventilation Systems, LLC. & S&P Canada Ventilation Products, Inc. warrants to the original end user of its products that our exhaust fans will be free from defects in materials and workmanship for a period of Five (5) years from the date of original purchase. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF SUITABILITY FOR A PARTICULAR PURPOSE. During this five year period, S&P will, at its option, repair returned products or parts, or provide replacement products or parts, without charge, for any product or part which is found to be defective under normal use. This warranty does not cover normal maintenance and service or any parts that have been subject to misuse, negligence, accident, improper maintenance or repair, faulty installation or installation contrary to recommended installation instructions. S&P's obligation to repair or replace, at S&P's option, shall be the purchaser's sole and exclusive remedy under this warranty. No labor or materials are covered by this warranty. S&P shall not be liable for incidental damages arising out of or in connection with product use or performance. This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

To qualify for warranty service, you must notify S&P at the address or telephone number stated below, provide the model number and part identification, and describe the nature of any defect in product or part. You may be required to ship a defective part to S&P. There will be no charge for shipping repaired or replacement parts from S&P to you if your address is in the United States or Canada. At the time of requesting warranty service, you must present evidence of the original purchase date.



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