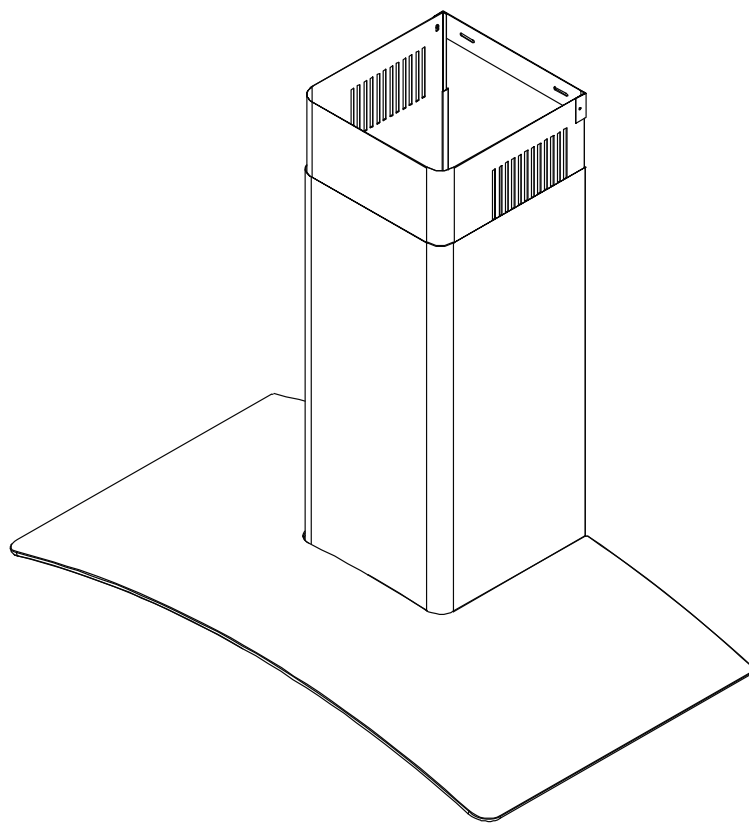


Use, Care, and Installation Guide

PRV-M90BBSGG
PRV-M90BGC



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READ AND SAVE THESE INSTRUCTIONS

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT USE THIS FAN WITH ANY SOLID-STATE CONTROL DEVICE.

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 panel 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.

CAUTION

For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors. Take care when using cleaning agents or detergents. Suitable for use in household cooking area.

WARNING

TO REDUCE THE RISK OF RANGE TOP GREASE FIRE:

- a. Never leave surface units unattended at high settings. Boilovers cause smoking and greasy spillovers that may ignite. Heat oils slowly on low or medium settings.
- b. Always turn hood ON when cooking at high heat or when flaming food
- c. Clean ventilating fans frequently. Grease should not be allowed to accumulate on fan or filter.
- d. Use proper pan size. Always use cookware appropriate for the size of the surface element.
- e. Keep fan, filters and grease laden surfaces clean.
- f. Use high setting on hood only when necessary.
- g. Don't leave hood unattended when cooking.
- h. Always use cookware and utensils appropriate for the type of and amount of food being prepared.

WARNING

TO REDUCE THE RISK OF INJURY TO PERSONS IN THE EVENT OF A RANGE TOP FIRE, OBSERVE THE FOLLOWING:

- a. SMOTHER FLAMES with a close-fitting lid, cookie sheet, or metal tray, then turn off the burner. BE CAREFUL TO PREVENT BURNS. If the flames do not go out immediately, EVACUATE AND CALL THE FIRE DEPARTMENT.
- b. NEVER PICK UP A FLAMING PAN – You may be burned.
- c. DO NOT USE WATER, including wet dishcloths or towels – a violent steam explosion will result.
- d. Use an extinguisher ONLY if:
 1. You know you have a Class ABC extinguisher, and you already know how to operate it.
 2. The fire is small and contained in the area where it started.
 3. The fire department is being called.
 4. You can fight the fire with your back to an exit

WARNING

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

- a. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards. Including fire-rated construction.
- b. Sufficient air is needed for power combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent back-drafting. 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.
- c. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
- d. Ducted fans must always vent to the outdoors.
- e. NEVER place a switch where it can be reached from a tub or shower.
- f. Make sure the power is off before installing, wiring or maintenancing.

WARNING

TO REDUCE THE RISK OF FIRE, USE ONLY METAL DUCTWORK.

CAUTION

To reduce risk of fire and to properly exhaust air outside - Do not vent exhaust air into spaces within walls, ceilings, attics, crawl spaces or garages.

OPERATION

Always leave safety grilles and filters in place. Without these components, operating blowers could catch onto hair, fingers and loose clothing.

The manufacturer declines all responsibility in the event of failure to observe the instructions given here for installation, maintenance and suitable use of the product. The manufacturer further declines all responsibility for injury due to negligence and the warranty of the unit automatically expires due to improper maintenance.

ELECTRICAL REQUIREMENTS

Important:

Observe all governing codes and ordinances.

It is the customer's responsibility:

- To contact a qualified electrical installer.
- To assure that the electrical installation is adequate and in conformance with National Electrical Code, ANSI/NFPA 70 latest edition* or CSA standards C22.1-94, Canadian Electrical Code, Part 1 and C22.2 No.0-M91 - latest edition** and all local codes and ordinances.

If codes permit and a separate ground wire is used, it is recommended that a qualified electrician determine that the ground path is adequate.

Do not ground to a gas pipe.

Check with a qualified electrician if you are not sure the range hood is properly grounded.

Do not have a fuse in the neutral or ground circuit.

*National Fire Protection Association Batterymarch Park, Quincy, Massachusetts 02269

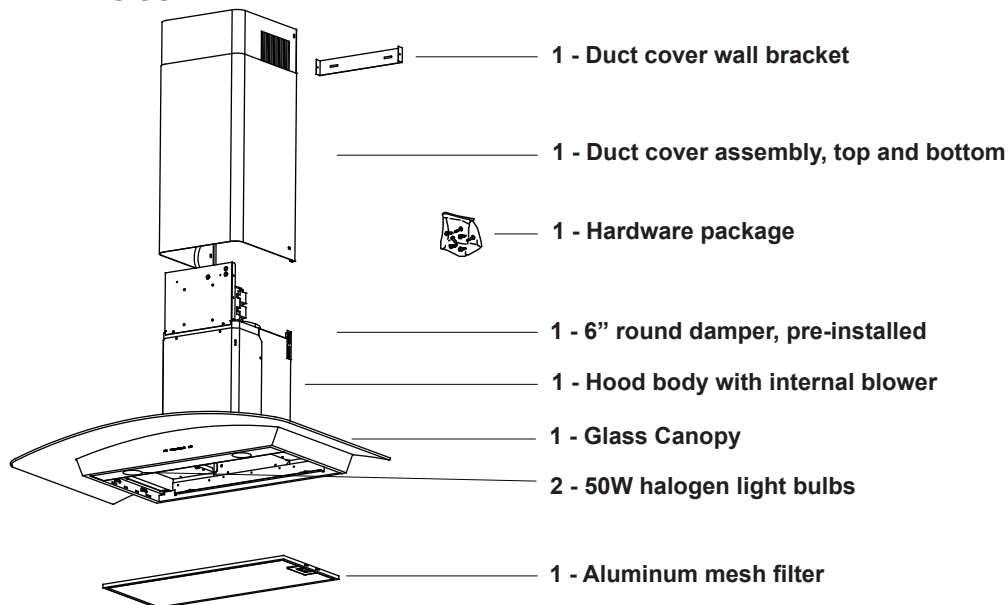
** CSA International 8501 East Pleasant Valley Road, Cleveland, Ohio 44131-5575

This appliance requires a 120V 60Hz electrical supply and connected to an individual properly grounded branch circuit protected by a 15 or 20 ampere circuit breaker or time delay fuse. Wiring must be 2 wire with ground. Please also refer to Electrical Diagram on product.

A cable locking connector (not supplied) might also be required by local codes. Check with local requirements, purchase and install appropriate connector if necessary.

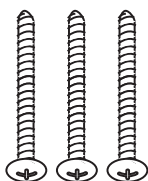
MODELS: PRV-M90BBSGG, PRV-M90BGC

PARTS SUPPLIED

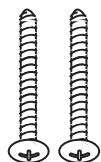


HARDWARE PACKAGE CONTENTS

(3) M6 x 1-1/2"



(2) M6 x 1"



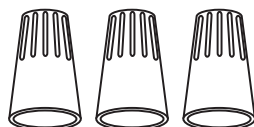
(2) M3.5 x 8



(4) 3/16 x 1/4 pan-head machine screws



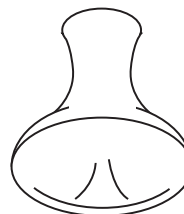
(3) Wire Nuts



(1) $\varnothing 12$ OD / $\varnothing 5$ ID Washers

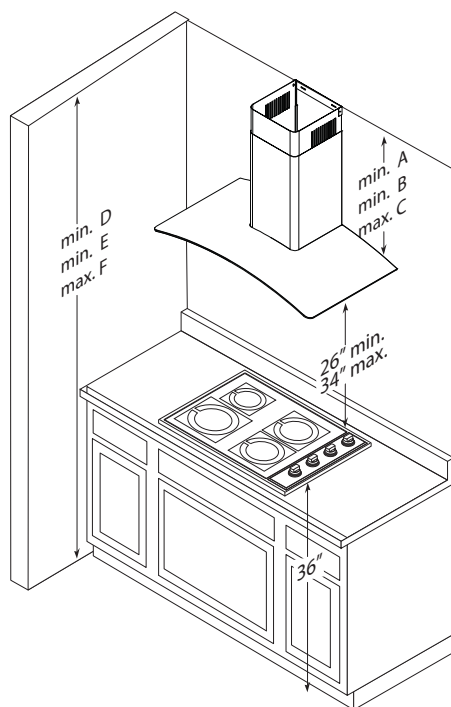


(1) Light Bulb Removal Suction Cup



PARTS NOT SUPPLIED

- Ducting, conduit and all installation tools
- Cable connector (if required by local codes)
- Duct cover extension accessory
- Recirculating kit accessory



Hood Heights	Standard Duct Cover	Extension Duct Cover
minimum ducted (A)	23"	41"
minimum recirculating (B)	27-1/2"	46"
maximum (C)	42-1/2"	80"
Ceiling Heights		
minimum ducted (D)	85" (7' 1")	103" (8' 7")
minimum recirculating (E)	89-1/2" (7' 5-1/2")	108" (9')
maximum (F)	112-1/2" (9' 4-1/2")	150" (12' 6")

DUCTING

A minimum of 6" round duct is recommended to maintain maximum air flow efficiency.

Always use rigid type metal ducts only. Flexible ducts could restrict air flow by up to 50%.

Use calculation worksheet to compute total duct work (Page 5).

ALWAYS, when possible, reduce the number of transitions and turns. If a long duct run is required, increase duct size from 6" to 7" or 8".

If turns or transitions are required: Install as far away from duct opening and as far apart between the two transitions as possible.

Minimum mount height between range top to hood bottom should be no less than 26".

Maximum mount height should be no higher than 34".

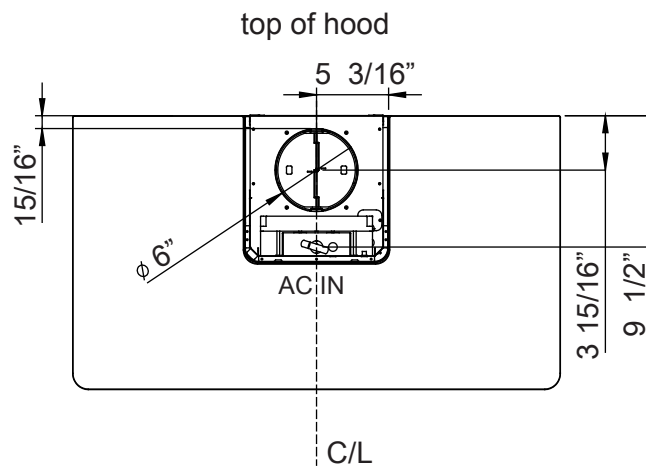
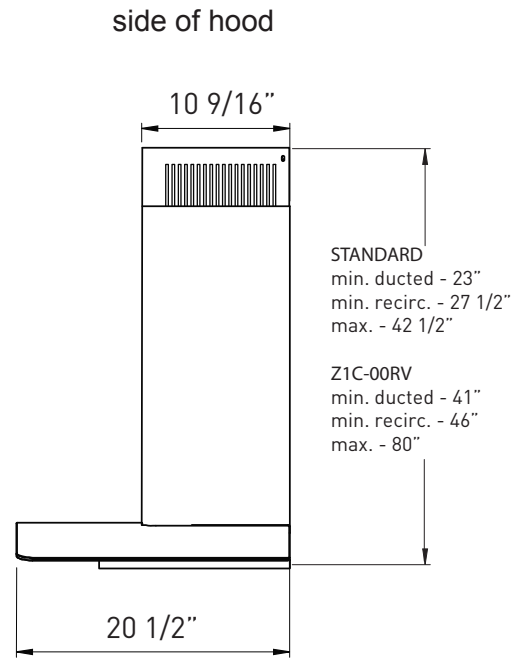
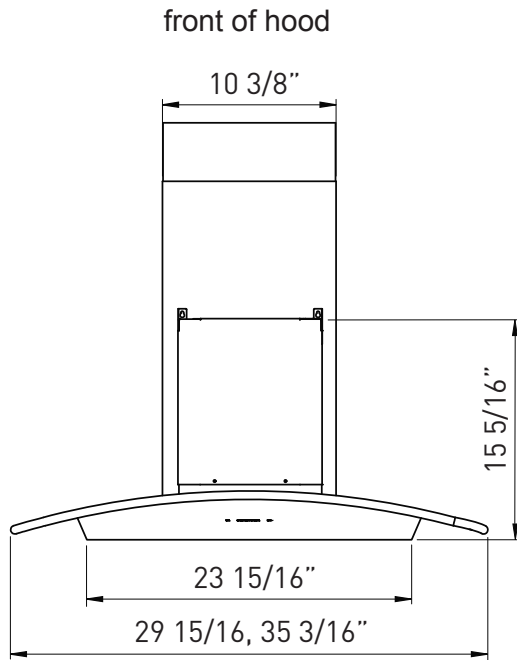
It is important to install the hood at the proper mounting height. Hoods mounted too low could result in heat damage and fire hazard; while hoods mounted too high will be hard to reach and will lose its performance and efficiency.

If available, also refer to range manufacturer's height clearance requirements and recommended hood mounting height above range. Always check your local codes for any differences.

Duct cover extension kit available for ceiling heights up to 12 feet. Turn to page 19 for part number and ordering information.

DAMAGE-SHIPMENT / INSTALLATION:

- Please fully inspect unit for damage before installation.
- If the unit is damaged in shipment, return the unit to the store in which it was bought for repair or replacement.
- If the unit is damaged by the customer, repair or replacement is the responsibility of the customer.
- If the unit is damaged by the installer (if other than the customer), repair or replacement must be made by arrangement between customer and installer.



Installation – Mounting the Hood

⚠ CAUTION: At least two installers are required due to the weight and size of the hood.

1. Measure from range top to hood bottom and mark line A. (26" minimum from range top) .
2. Plum and mark center line.
3. Mark mounting height line B. (15 7/8" from line A)
4. Mark mounting spread from C/L. (8 15/16")
5. Fasten (2) M6 x 1-1/2" screws into studs on line B but do not tighten all the way. **Note: Wood blocking may need to be added behind the drywall if no studs are present. Wall anchors may also be used but check local codes for compliance. Failure to use suitable wall anchors and screws to hold the weight of the hood could result in personal injury or damage to cooking surface or counter.**
6. Remove (2) screws securing electrical junction box to motor housing. Remove junction box.
7. Remove the (1) aluminum mesh filter.
8. Hang hood onto the mounting screws and hand tighten each screw. (FIG. A #1) Secure third M6 x 1-1/2" screw through inside of hood into wall for extra support. (FIG. A #2)
9. Center and attach duct cover mounting bracket to wall just below the ceiling or soffit using (2) M6 x 1" screws.
10. Install electrical and duct work. Seal duct work with aluminum duct tape. Re-install electrical junction box with cable lock and install the electrical. (FIG. B #2)
11. Power up hood and check for leaks around duct tape.
12. Place telescopic duct covers onto hood and extend inner (top) duct cover upwards and secure to duct cover bracket using (2) M3.5 x 8 screws.
13. Place canopy over hood body and secure it to hood body using (4) 3/16 x 1/4 screws through filter opening.
14. Reinstall aluminum mesh filter.

* If using hood in recirculating mode you must secure the air diverter plate onto wall before installing duct work and duct covers. Turn to page 10 for more details.

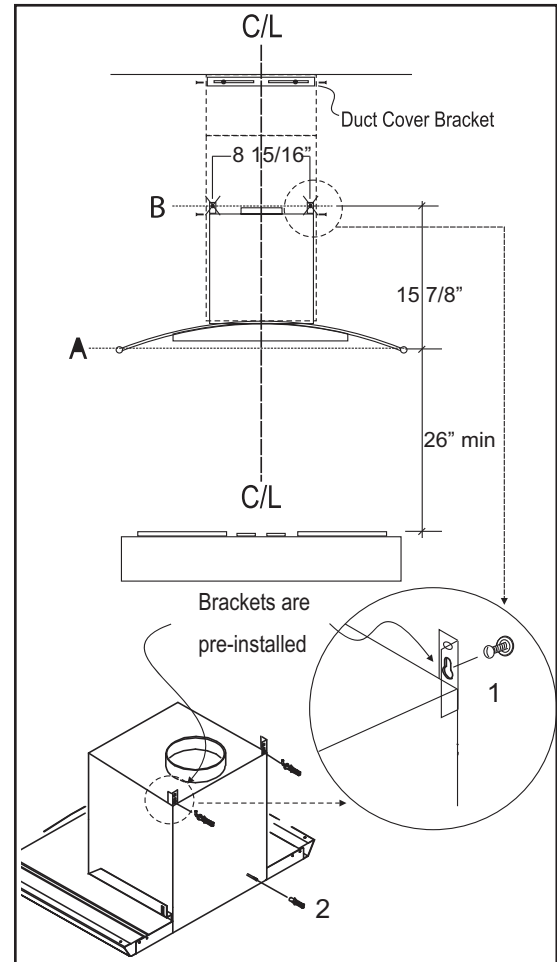


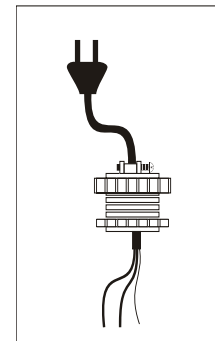
FIG. A

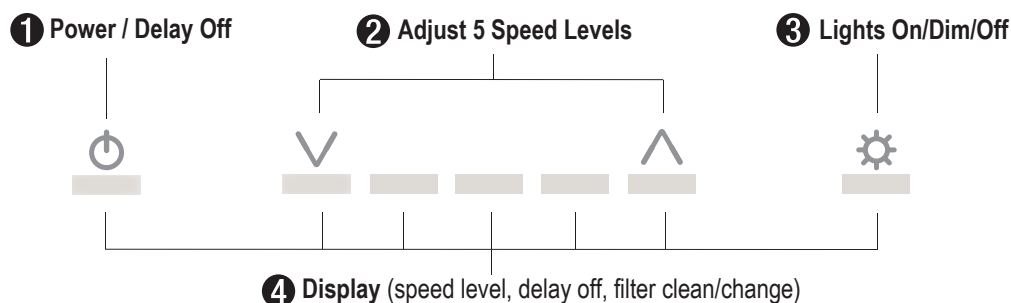
⚠ WARNING: Electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards. This range hood must be properly grounded. Turn off electrical power at service entrance before wiring.

Cable Lock

A cable locking connector (not supplied) might be required by local codes. Check with local requirements and codes, purchase and install appropriate connector if necessary.

Cable Lock





1 POWER / DELAY OFF BUTTON

Power Button Function

-  Button will turn power on and off for entire hood (fan and lights).
- Hood will remember the last speed and light level it was turned off at.
(Example: Press  Button to turn off hood when on fan speed 4 and high lights. Press  Button again and the hood will turn back on at speed 4 and high lights level.)

Delay Off Button Function

- With the fan on press and hold the  Button for two seconds. The fan will change to speed 1 and the 5 minute delay off timer will start.
 +  LEDs will illuminate and slowly blink in accordance with the time remaining until the fan and lights automatically turn off.
- Pressing  Button while Delay Off Function is enabled will turn the hood off and cancel the Delay Off Function.

3 LIGHTS BUTTON

- Lights are two levels, High and Low.
- From off, press one time for High. Press again for Low. Press again to power lights off.

4 DISPLAY INDICATORS

Mesh Filter Clean Reminder *(always enabled)*

- After 30 hours of fan usage, the  button indicator will begin to slowly blink indicating it is time to clean the mesh filters.
- **To reset:** With hood off: hold the  button for three seconds. All LED indicators will blink two times confirming the 30 hour timer has been reset.

SURFACE MAINTENANCE:

Clean the hood surface periodically with hot soapy water and clean cotton cloth. Do not use corrosive or abrasive detergent, or steel wool/scouring pads which will scratch and damage surface.

For heavier soil use liquid degreaser.

After cleaning it is recommended that you use non-abrasive stainless steel polish/cleaners, to polish and buff out the stainless luster and grain. Always scrub lightly, with clean cotton cloth, and with the grain.

Do not use any product containing chlorine bleach. Do not use “orange” cleaners.

Aluminum Mesh Filters

The aluminum mesh filters installed by the factory are intended to filter out residue and grease from cooking. They need not be replaced on a regular basis but are required to be kept clean.

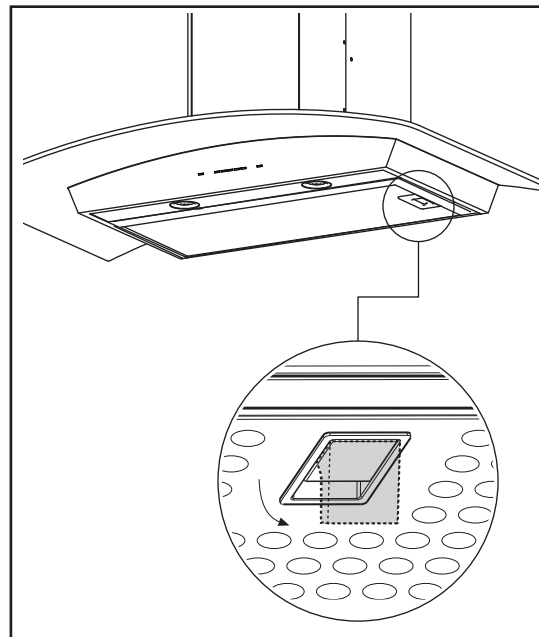
Remove and clean by hand or in dishwasher on low heat. Spray degreasing detergent and leave to soak if heavily soiled.

Dry filters and re-install before using hood.

Removing Aluminum Mesh Filters

1. Pull down on filter latch to release filter tabs
2. Pull down on front of filter to remove

Should filters wear out due to age and prolonged use, replace with following part number:



REPLACING LIGHT BULBS

CAUTION: Light bulb becomes extremely hot when turned on.

DO NOT touch bulb until switched off and cooled. Touching hot bulbs could cause serious burns.

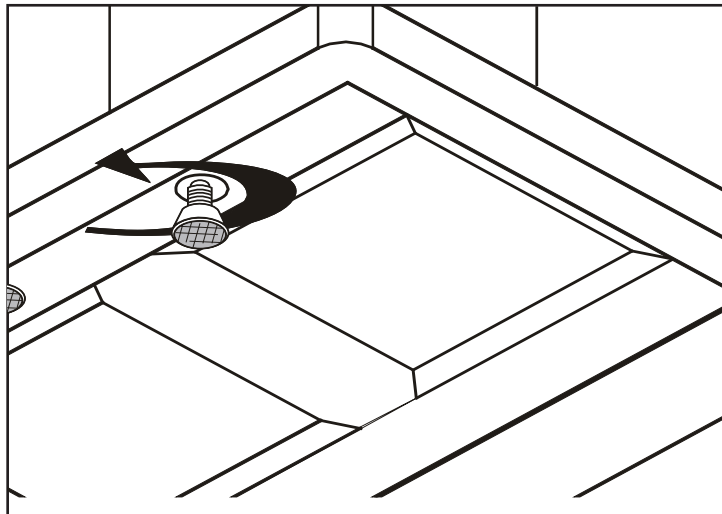
Make sure all power is turned off and bulbs are not hot.

Remove by turning bulb counter clockwise. Note: Bulb does not unscrew; it turns 60 degrees, stops and falls out.

If bulbs are difficult to turn due to prolonged use, firmly attach the included glass suction cup or use a rubber/latex glove grip and turn the bulb counter clockwise.

Replacement bulbs are available at specialty lighting stores. Purchase type GU-10 50W halogen.

For part numbers please turn to page 19 of the manual.

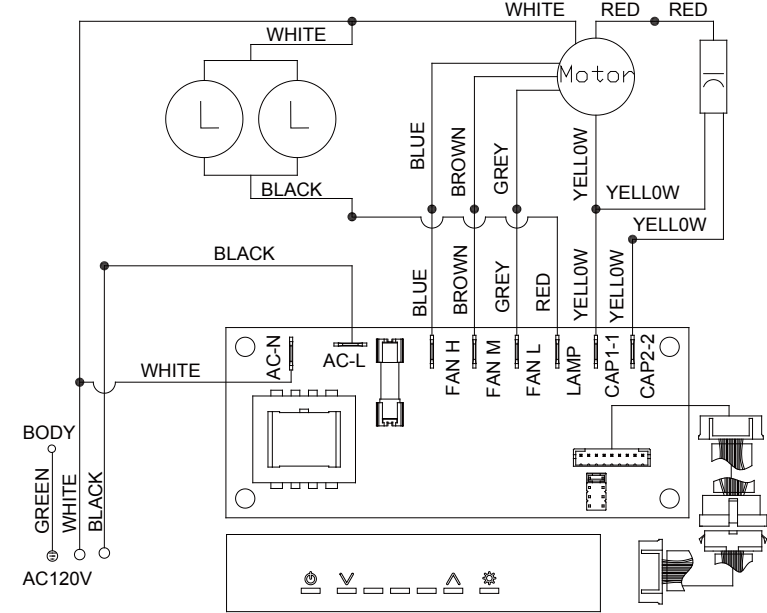


TROUBLESHOOTING PROCEDURES FOR RAVENNA

Issue	Cause	What to do
After installation, the unit doesn't work.	1. The power source is not turned ON.	1. Make sure the circuit breaker and the unit's power is ON.
	2. The power line and the cable locking connector is not connecting properly.	2. Check the power connection with the unit is connected properly.
	3. The wires on the control board are loose.	3. Make sure the wires on the control board are connected properly.
	4. The switch board and control board wirings are disconnected.	4. Make sure the wirings between the switch board and control board are connected properly.
	5. The switch board or control board is defective.	5. Change the switch board or control board.
Light works, but blower is not turning.	1. The blower cable is disconnected.	1. Check all wirings from the blower to be sure all cables are connected properly.
	2. The blower is defective, possibly seized.	2. Change the blower.
	3. The thermally protected system detects if the blower is too hot to operate and shuts the blower down.	3. The blower will function properly after the thermally protected system cool down.
	4. The switch board or control board is defective.	4. Change defective part.
The unit is vibrating.	1. The motor is not secure in place.	1. Tighten the motor in place.
	2. Damaged blower wheel.	2. Replace the blower.
	3. The hood is not secured in place.	3. Check the installation of the hood.
The unit is whistling.	1. The filter is not in the correct position.	1. Adjust the filters until the whistling stops.
	2. The duct pipe connections are not sealed or connected properly.	2. Check the duct pipe connections to be sure all connections are sealed properly.
The blower is working, but the lights are not.	1. Defective halogen bulb.	1. Change the halogen bulb.
	2. The bulb wire is loose.	2. Check bulb wire connections at the control board and the light bulbs. Reconnect any loose wires.
The unit turns on by itself.	1. A spot light or kitchen lamp is shining directly onto the switch controls.	1. The switch controls are light sensitive. A direct light source onto the switch controls may disrupt switch functions.
The speed levels of the blower sound the same.	1. Using the wrong size of ducting.	1. Change the ducting to at least 6" or higher.
The hood is not venting out properly.	1. The hood might be hanging too high from the cook top.	1. Adjust the distance between the cook top and the bottom of the hood within 26" and 34" range.
	2. The wind from the opened windows or opened doors in the surrounding area are affecting the ventilation of the hood.	2. Close all the windows and doors to eliminate the outside wind flow.
	3. Blockage in the duct opening or ductwork.	3. Remove all the blocking from the duct work or duct opening.
	4. The direction of duct opening is against the wind.	4. Adjust the duct opening direction.
	5. Using the wrong size of ducting.	5. Change the ducting to at least 6" or higher for the internal blower.
Mesh Filter is vibrating.	1. Mesh filter is loose.	1. Make sure the metal clips in the handle are not stuck. Or replace the mesh filter.
	2. Filter spring clip is loose or broken.	2. Uninstall and reinstall filter, push up on filter latch. Replace mesh filter if needed.

PRV-M90BBSGG	VOLTS	HZ	MAX.AMPS
PRV-M90BGC	120	60	5

CIRCUIT DIAGRAM



CONDENSER 12.5+12.5 μ F 250V AC FIT AC120V 60Hz

Power consumption shown for default 600 CFM blower configuration

