

## INSTALLATION INSTRUCTIONS

# MODELS RMIP33 AND RMIP45

INTENDED FOR DOMESTIC COOKING ONLY

INSTALLER: LEAVE THIS MANUAL WITH HOMEOWNER.  
HOMEOWNER: USE AND CARE INFORMATION ON PAGES 11, 12 AND 13.



V05861 rev. D

**READ AND SAVE THESE INSTRUCTIONS**

## 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 unit, switch power off at service panel and lock 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 qualified personnel 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 guidelines 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. Do not use this unit with any solid-state speed control device other than RMIPWC optional wall mounted control.
8. To reduce the risk of fire, use only metal ductwork.
9. This unit must be grounded.

### TO REDUCE THE RISK OF A 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 cooking flaming foods.
- 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.

## WARNING

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

1. 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.
2. NEVER PICK UP A FLAMING PAN – You may be burned.
3. DO NOT USE WATER, including wet dishcloths or towels – This could cause a violent steam explosion.
4. Use an extinguisher ONLY if:
  - A. You own a Class ABC extinguisher and you know how to operate it.
  - B. The fire is small and contained in the area where it started.
  - C. The fire department has been called.
  - D. You can fight the fire with your back to an exit.

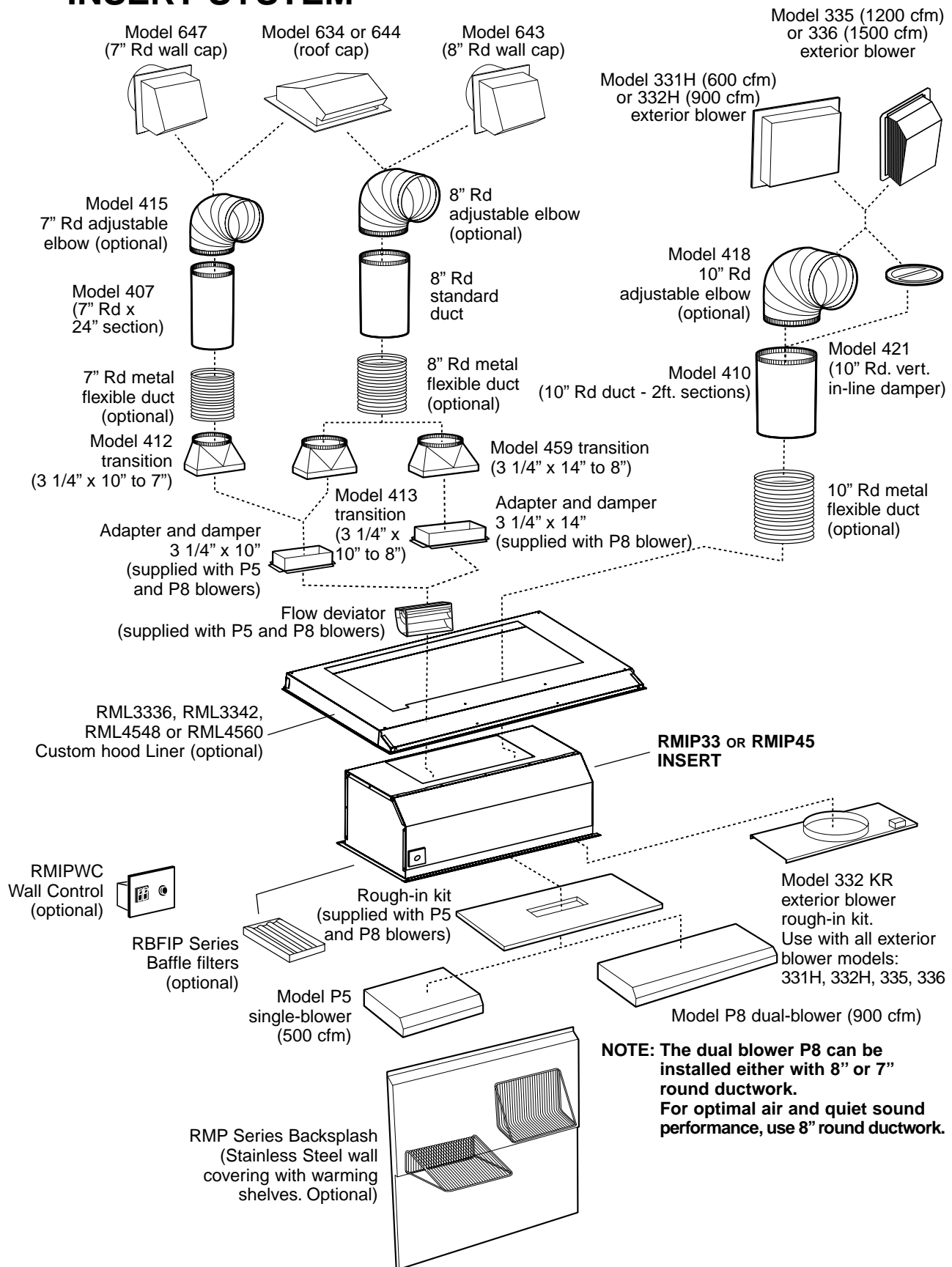
\* Based on "Kitchen Fire Safety Tips" published by NFPA.

## CAUTION

1. For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.
2. To avoid motor bearing damage and noisy and/or unbalanced impellers, keep drywall spray, construction dust, etc. off power unit.
3. Your insert motor has a thermal overload which will automatically shut off the motor if it becomes overheated. The motor will restart when it will cool down. If the motor continues to shut off and restart, have the insert serviced.
4. The minimum hood distance above cooktop must not be less than 24". A maximum of 30" above cooktop is highly recommended for best capture of cooking impurities.
5. Two installers are recommended because of the large size and weight of this insert.
6. To reduce the risk of fire and to properly exhaust air, be sure to duct air outside – Do not exhaust air into spaces within walls or ceiling or into attics, crawl space or garage.
7. This product is equipped with a thermostat which may start blower automatically. To reduce the risk of injury and to prevent power from being switched on accidentally, switch power off at service panel and lock or tag service panel.
8. Because of the high exhausting capacity of this insert, you should make sure enough air is entering the house to replace exhausted air by opening a window close to or in the kitchen.
9. To reduce the risk of fire and electrical shock, the Rangemaster Models RMIP33 and RMIP45 must be installed with blower models P5, P8, 331H, 332H, 335 or 336 only. Other blowers cannot be substituted. (Blowers sold separately).
10. Use with approved cord-connection kit only.
11. Please read specification label on product for further information and requirements.

# RMIP33 AND RMIP45

## INSERT SYSTEM



## 1. SELECT BLOWER OPTION AND INSTALL DUCTWORK

Either an interior or exterior blower may be used with this insert. The insert model RMIP33 or RMIP45 must be installed with blower models P5, P8, 331H, 332H, 335 or 336 only. Other blowers cannot be substituted. (Blowers sold separately).

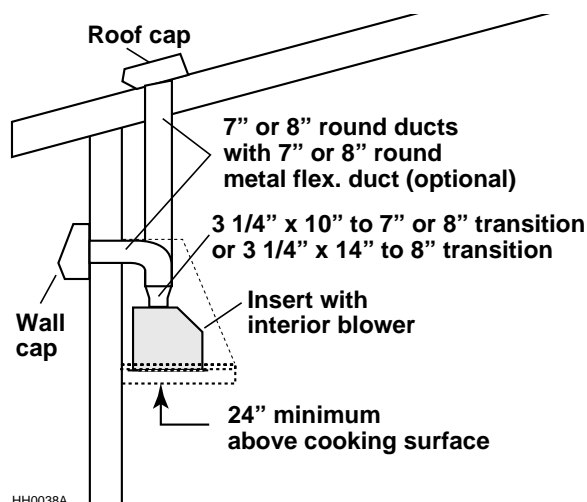
NOTE: The 331H, 332H, 335 or 336 exterior blower MUST BE installed with the rough-in kit model 332KR (sold separately).

Plan where and how the ductwork will be installed. Access to the top of the hood is preferred for connection of ductwork. As an alternative, flexible metal ductwork may be used.

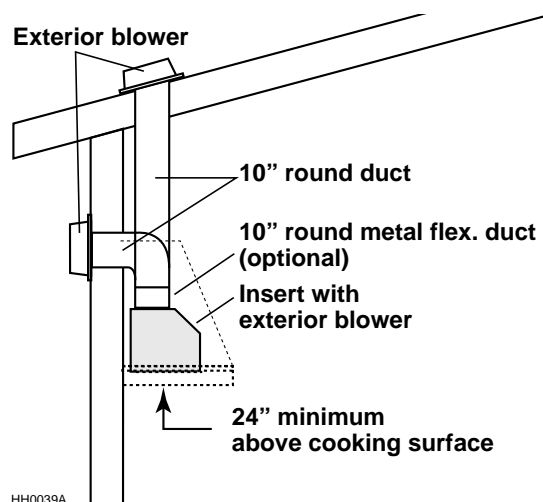
Install proper-sized ductwork, elbows and roof or wall cap for the type of blower you are installing. Use round ductwork, with a short section (about 4' expanded) of flexible metal duct (optional) for attachment to the transition. Use screws to attach flexible metal duct to the rigid duct. Use 2" duct tape to seal duct joints.

**The minimum hood distance above cooktop must not be less than 24". A maximum of 30" above cooktop is highly recommended for best capture of cooking impurities.**

Distances over 30" are at the installer and users discretion.



HH0038A  
**MODEL P5 (SINGLE) OR P8 (DOUBLE)  
INTERIOR BLOWER TYPICAL DUCTWORK**



HH0039A  
**MODEL 331H, 332H, 335 OR 336 EXTERIOR  
BLOWER TYPICAL DUCTWORK**

## 2. PREPARE THE INSTALLATION

Make sure that the following items are included:

- Insert
- Accessories:
  - Filters (3 for RMIP33 model and 4 for RMIP45 model)
  - Bag of parts including:
    - (4) lock nuts, (1) wire clamp, (8) #8 x 3/4" standard screws, (2) wire connectors,
    - (2) #6 x 1/2" standard screws, (8) #8 x 3/8" screws. Discard items not used.

Parts sold separately:

- Interior blower Model P5 includes blower, rough-in kit, flow deviator and 3 1/4" x 10" adapter
- Interior blower Model P8 includes blower, rough-in kit, flow deviator and 3 1/4" x 10" adapter and 3 1/4" x 14" adapter
- Exterior blower Model 331H, 332H, 335 or 336
- Exterior blower rough-in kit Model 332KR (required for all exterior blower models)
- Halogen lights (120V, 50W, PAR 20) (2 for RMIP33 model and 3 for RMIP45 model)
- Custom hood liner Model RML3336, RML3342, RML4548 or RML4560 (optional)
- Backsplash RMP Series (optional)
- RMIPWC Remote control (optional)
- Baffle filters RBFIP Series (optional)
- Transitions, ducts (rigid and flexible), elbows, dampers, wall and roof caps. Refer to page 3 for a complete list of venting options and model numbers.

NOTE: During installation, protect countertop and/or cooktop.

### 3. INSTALL BACKSPLASH (OPTIONAL)

It is recommended to install the backsplash before the custom hood insert. The custom hood will cover the backsplash top mounting screws. In order to be able to install the backsplash, make sure you have at least 18" clearance between bottom of custom hood and range control panel or cooktop. (See instructions packed with backsplash.)

### 4. CUSTOM HOOD PREPARATION

#### ⚠ WARNING

**When building a custom hood, always follow all applicable construction codes and standards.**

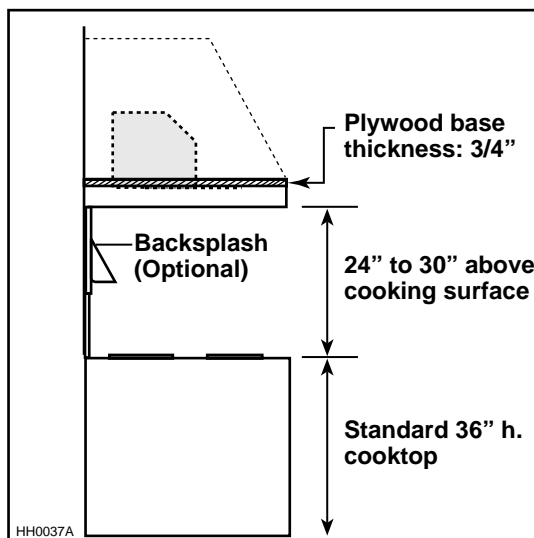
The custom hood frame must be sized to the shape and total weight of the insert assembly. Refer to the table below for total weight of the insert, according to the type of blower chosen.

INSERT MODELS	WITH P5 INT.BLOWER	WITH P8 INT. BLOWER	WITH EXT. BLOWERS (ROUGH-IN PLATE ONLY)
RMIP33	41 LBS	49 LBS	27 LBS
RMIP45	49 LBS	57 LBS	35 LBS

Start with the custom hood base, because its position will determine the height of the insert. We recommend the base of the custom hood should be 3/4 inch thick plywood. If an optional custom hood liner will be installed, we recommend the sides and front of the custom hood to be 3/4 inch thick, assuming standard cabinet widths. If the optional custom hood liner will not be installed, the custom hood side and front thickness is at the installer's discretion.

Run power cable to installation location. Stub out a 4 foot length of electrical cable below the custom hood.

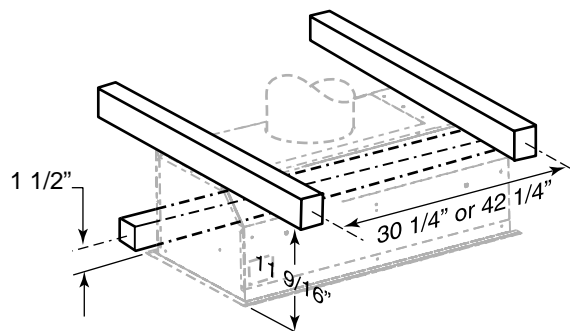
If the RMIPWC optional remote control will be installed, run electrical cable from the insert to the remote control location. Stub out a 6 inch length from the remote control wall location. Refer to the remote control installation instruction.



### 5. SUGGESTED CUSTOM HOOD FRAME

The mounting holes for the 2 top stud supports are located at 11 9/16" up from the insert base. The on center distance between the 2 studs is 30 1/4" for the RMIP33 insert model and 42 1/4" for the RMIP45 insert model.

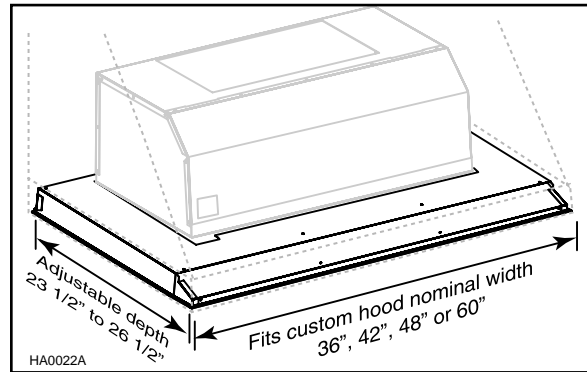
The mounting holes for the rear stud support are located at 1 1/2" up from the insert base. See illustration beside. Once the custom hood base and frame are done, finalize the custom hood.



## 6. INSTALL CUSTOM HOOD LINER (OPTIONAL)

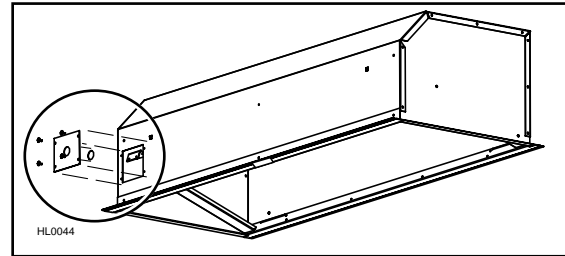
The liners are specially designed to protect the exterior base of the custom hood. All models are adjustable for depth from 23 1/2" to 26 1/2" (front to back). The liner must be installed before the insert. To order, refer to table below to find the right liner part number for your insert and for width of the custom hood. To install, see instructions packed with the custom hood liner.

LINER MODEL	INSERT MODEL	CUSTOM HOOD NOMINAL WIDTH
RML3336	RMIP33	36"
RML3342	RMIP33	42"
RML4548	RMIP45	48"
RML4560	RMIP45	60"



## 7. INSTALL THE RMIPWC REMOTE CONTROL (OPTIONAL)

The electrical connection for the remote control is located in front of the insert. Perform this connection before the insert installation. For installation details, see installation instructions included with the RMIPWC remote control.

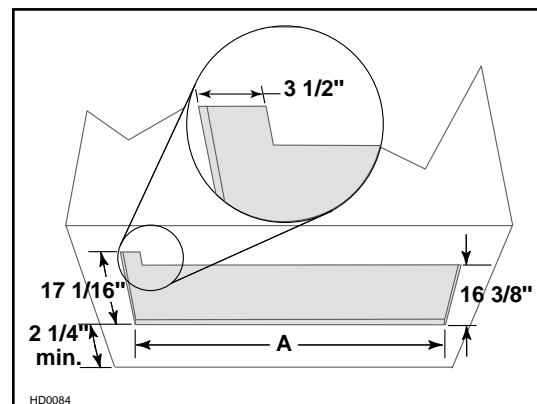


## 8. CUT THE HOLE IN CUSTOM HOOD BASE

If it is not done yet, cut a hole in the bottom of the cabinet, using the dimensions shown beside.

INSERT MODEL NUMBER	A
RMIP33	32 1/2"
RMIP45	44 1/2"

- NOTES: 1. The notch shown in the inset must be cut only if the RMIPWC optional remote control will be installed.  
2. The recommended distance from the back to the rearmost cutout edge is 2 1/4" minimum.



## 9. INSTALL BLOWER (EXTERIOR OR INTERIOR)

INTERIOR BLOWER: Follow all subsequent steps of this manual.

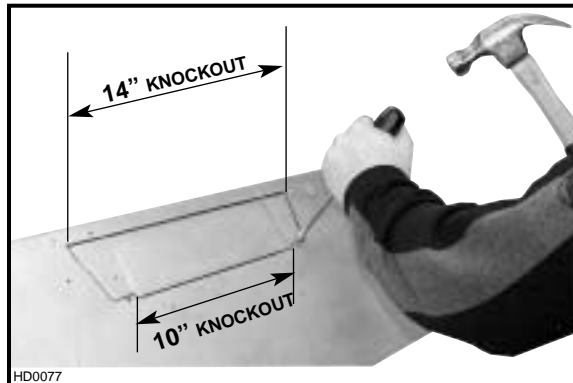
EXTERIOR BLOWER: Refer to instructions packed with exterior blower and follow steps 13, 14, 16, 17, 19 and up of this manual.

## 10. REMOVE THE KNOCK-OUT OPENING (INTERIOR BLOWER)

Remove the knockout on rough-in plate. See picture below.

### CAUTION

When using P5 blower, remove the 10" wide knockout (smaller part). If using P8 blower, remove the knockout corresponding to the ducting installed (10" or 14" adapter/damper).

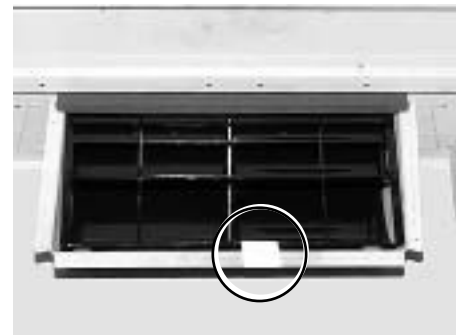


Removing vertical knockout opening on rough-in plate

## 11. INSTALL THE DEVIATOR (INTERIOR BLOWER)

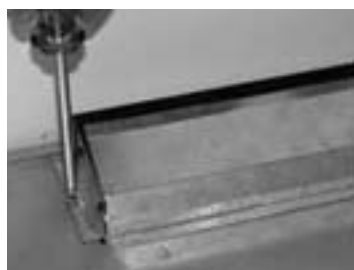
Install the deviator as shown.

NOTE: To prevent the deviator from sliding out of the rough-in plate, put some tape on the deviator base after sliding it into the rough-in plate (provided with the P5 and P8 blower) opening. If installed correctly, the deviator will protrude about 1/8" above the rough-in plate.



## 12. INSTALL THE ADAPTER (INTERIOR BLOWER)

Using two (2) #6 x 1/2" screws provided with insert, secure the adapter to the top of the rough-in plate. Remove tape from damper flap. Seal the adapter to the rough-in plate by using duct tape.





## 13. CONNECT WIRING (INTERIOR & EXTERIOR BLOWER)

### **⚠ WARNING**

**Risk of electrical shock. Electrical wiring must be done by qualified personnel in accordance with all applicable codes and standards. Before connecting wires, switch power off at service panel and lock service disconnecting means to prevent power from being switched on accidentally.**

Position insert below the installed custom hood. Pull cable through hole in top of insert.

**INTERIOR BLOWER:** Remove the cable knock-out on the top of the rough-in plate. Remove rough-in plate wiring cover. Place the wire clamp in the knock-out hole, insert the cable through the wire clamp in the rough-in plate wiring box. Tighten the wire clamp to secure the cable.

Connect cable into wiring box using provided wire connectors.

Connect wires as follow: BLACK to BLACK, WHITE to WHITE and GREEN or BARE wire under ground screw. **DO NOT FORGET TO CONNECT THE GROUND.** Reinstall wiring cover.



**EXTERIOR BLOWER:** Remove rough-in plate wiring cover and connect wiring (see instructions included with exterior blower).

## 14. INSTALL THE ROUGH-IN PLATE (INTERIOR & EXTERIOR BLOWER)

**INTERIOR BLOWER:** Carefully install the rough-in plate inside the top of the insert with four (4) lock nuts. See picture beside.



**EXTERIOR BLOWER:** Refer to instructions included with 332 KR rough-in plate (sold separately). Secure the rough-in plate inside the top of the insert with (4) lock nuts.

## 15. INSTALL THE TRANSITION (INTERIOR BLOWER)

Slide the transition over the adapter/damper. Seal the transition to the adapter/damper by using duct tape.





## 16. DUCTING CONNECTION (INTERIOR & EXTERIOR BLOWER)

- A. When there is access to the top of the hood, connect ductwork and seal connections with duct tape after Step 17 *Install the insert*.
- B. When there is no access to the top of the hood, carefully pull down the metal duct through the custom hood base hole. Slide this duct over the transition (interior blower) or over the flange of the rough-in plate (exterior blower). Make sure the adapter/damper assembly enters the ducting. Seal the connection with duct tape.



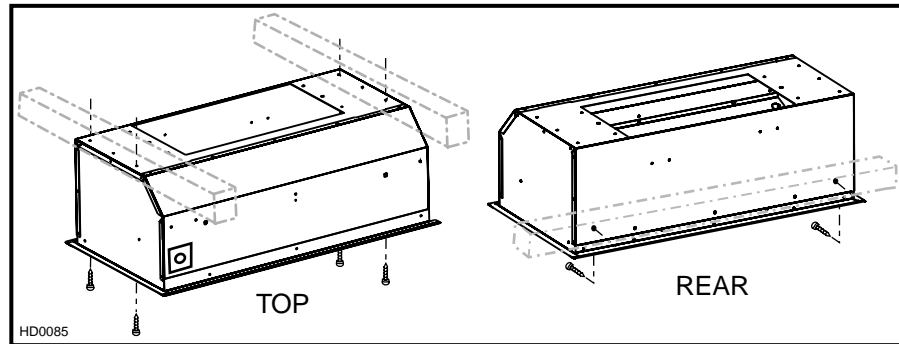
### CAUTION

Take care not to kink ducting when installing insert (step 17).

## 17. INSTALL THE INSERT

If an optional wall control will be installed, refer to its installation instructions now. When done, continue the insert installation.

Install the insert inside the custom hood and secure to the frame by using the #8 x 3/4" mounting screws provided. Start with 4 screws on top and finish with 2 on rear side. (See figure beside for mounting screw specific locations.)



### CAUTION

Take care not to kink ducting or pinch electrical cable when installing insert.

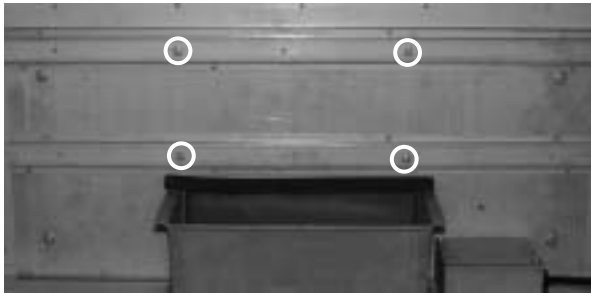
## 18. INSTALL THE BLOWER (INTERIOR BLOWER)

The blower must be installed to the rough-in plate using (6) #8 x 3/8" screws for the single blower unit and (8) #8 x 3/8" screws for the dual blower unit. Remove the cover from the blower assembly. Remove the impeller(s) by pulling them out gently (see pictures below).

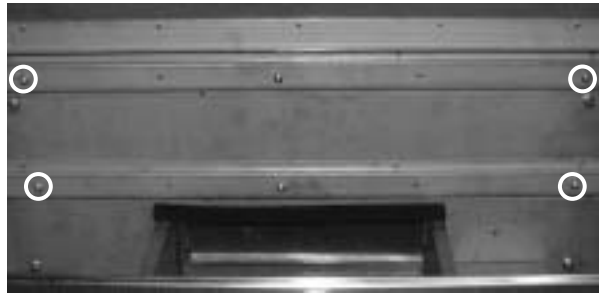


## 18. INSTALL THE BLOWER (INTERIOR BLOWER) (CONT'D)

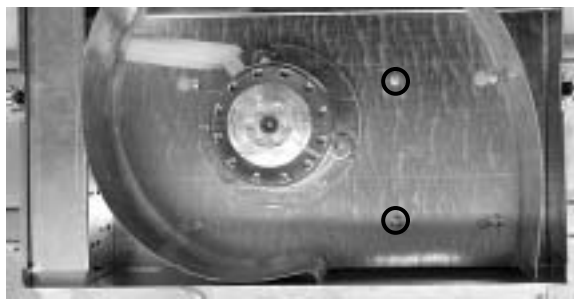
Install (4) #8 x 3/8" screws into the location as shown in the pictures below (single blower or dual blower). Do not tighten screws down fully, leave a 1/8" gap. Hang blower unit onto blower plate (screws through the large part of the keyhole). Slide the blower to its position (screws in the small part of the keyhole). Tighten the (4) screws.



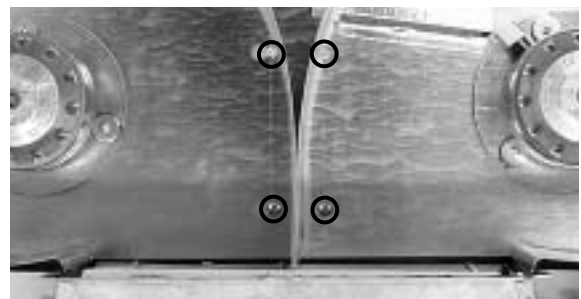
Single blower (P5)



Dual blower (P8)

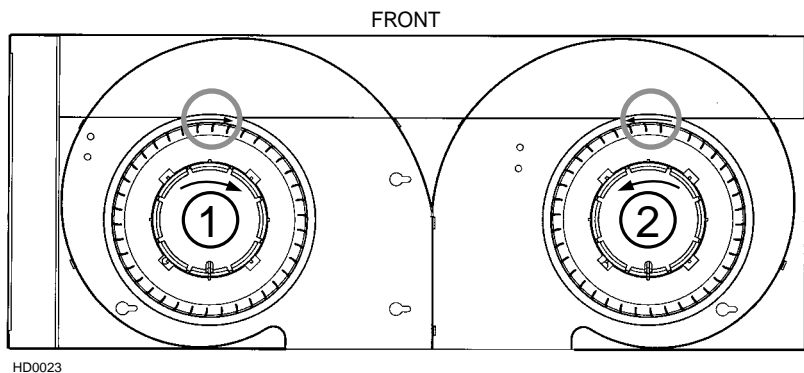


Single blower (P5)



Dual blower (P8)

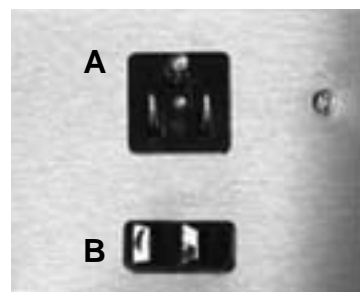
FOR DUAL BLOWER UNIT, MAKE SURE THE IMPELLERS ARE CORRECTLY INSTALLED, THE INSERT WILL NOT WORK PROPERLY IF REVERSED. Both impellers are different in the dual blower, one rotates clockwise and the other counterclockwise. Each wheel and motor have an arrow and a number on them, you have to match them correctly (see drawing beside).



### **⚠ WARNING**

**Never plug the 2-prong blower cord to the 3-prong power supply cord.**

Plug the power supply to the 3-prong male connector (A) and the blower unit into the 2-prong female receptacle (B) inside the insert.



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## 19. LIGHT BULBS

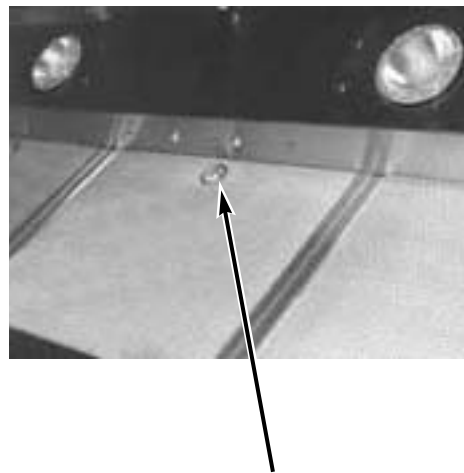
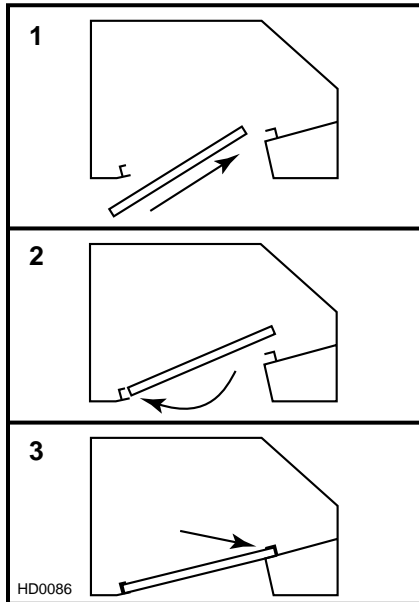
This insert uses 50W halogen lamps (120V, 50W, PAR 20) (Purchase separately).  
Install the lamps by rotating them clockwise into their socket holder.

## 20. INSTALL FILTERS

It is recommended to install side filters first and finish with center one(s).

1. Insert upper end of filter into the insert (finger sized cup side).
2. Raise lower end of filter to position it into grease rail inside of hood and pull.
3. While pulling the filter, slide it under the inner retaining piece.

Replacement filters are available from your dealer. See inside label insert for size and part number.



1) Finger sized cup

### Baffle Filters

Baffle filters are available as an option. To order them, refer to the table below to find the right filter kit number for your insert. To install them, refer to instruction sheet included with baffle filter kit.

KIT #	INSERT MODEL
RBFIP33	RMIP33
RBFIP45	RMIP45



BAFFLE FILTER (TYPICAL)

## 21. USE AND CARE

Grease filters and impeller(s).

The grease filters, impeller(s) and grease rail should be cleaned frequently. Use a warm detergent solution. Grease filters and impeller(s) are dishwasher safe.

Remove grease filters by pushing them towards the back of hood and rotating downward.

Stainless steel cleaning: How to maintain its « BRIGHT LOOK »

### Do:

- Regularly wash surfaces with clean cloth or rag soaked with warm water and mild soap or liquid dish detergent.
- Always clean in the direction of original polish lines.
- Always rinse well with clear water (2 or 3 times) after cleaning. Wipe dry completely.
- You may also use a specialized household stainless steel cleaner.

## 21. USE AND CARE (CONT'D)

### Don't:

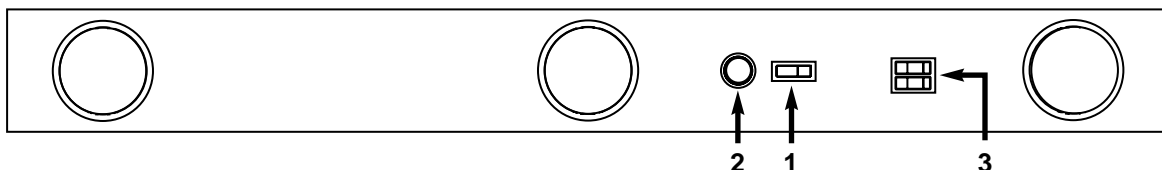
- Do not use any steel or stainless steel wool or any other scrapers to remove stubborn dirt.
- Do not use any harsh or abrasive cleansers.
- Do not allow dirt to accumulate.
- Do not let plaster dust or any other construction residues reach the hood. During construction or renovation, cover the hood to make sure no dust sticks to stainless steel surface.

### Avoid: when choosing a detergent

- Any cleaners that contain **bleach** will attack stainless steel.
- Any products containing : **chloride, fluoride, iodide, bromide** will deteriorate surfaces rapidly.
- Any **combustible products** used for cleaning such as **acetone, alcohol, ether, benzol**, etc., are highly explosive and should never be used close to a range.

## 22. OPERATION

Always turn your blower on before you begin cooking to establish an air flow in the kitchen. Let the blower run for a few minutes to clear the air after you turn off the range. This will help keep the whole kitchen cleaner and brighter.



- 1) ON/OFF blower switch
- 2) Blower speed control
- 3) Halogen light switches

### BLOWER

The blower is operated using two (2) controls or with the RMIPWC optional wall control.

Use the red, lighted on/off switch to start and stop the blower. When turned on, the blower will operate at the previous setting of the speed control.

Turn the speed control knob clockwise to decrease blower speed – counterclockwise to increase speed.

### COOKTOP LIGHTING (HALOGEN)

A double set of ON/OFF switches controls the halogen lights.

The front rocker controls the center light (for 45" inserts). The rear rocker controls both side lights (each switch controls one light for 33" insert). Select one, two or three lights for best cooking lighting.

Use PAR 20, 50W halogen bulbs. (Purchase separately)

### HEAT SENTRY™

This insert is equipped with a Heat Sentry™ thermostat. This thermostat is a device that will turn on or speed up the blower if it senses excessive heat above the cooking surface.

- 1) If blower is OFF - it turns blower ON to HIGH speed.
- 2) If blower is ON at a lower speed setting – it turns the blower up to HIGH speed.

### ! WARNING

**The HEAT SENTRY™ can start the blower even if the insert is turned OFF. In this case, it is impossible to turn the blower OFF with blower switch. If you must stop the blower, do it from the main electrical panel.**

When the temperature level drops to normal, the blower will return to its original setting.

Test all insert switches. If a RMIPWC remote control is installed, test all its switches.

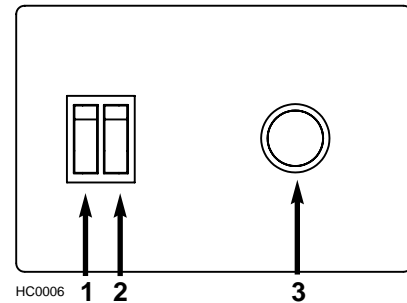
Finalize the custom hood.

## 22. OPERATION (CONT'D)

### RMIPWC REMOTE CONTROL (OPTIONAL)

An optional remote control is also available to operate your hood insert. For installation details, see installation instructions included with the RMIPWC remote control.

NOTE: When the RMIPWC remote control is connected to the insert, the control switches on the insert are no longer operational.



1) Light switch

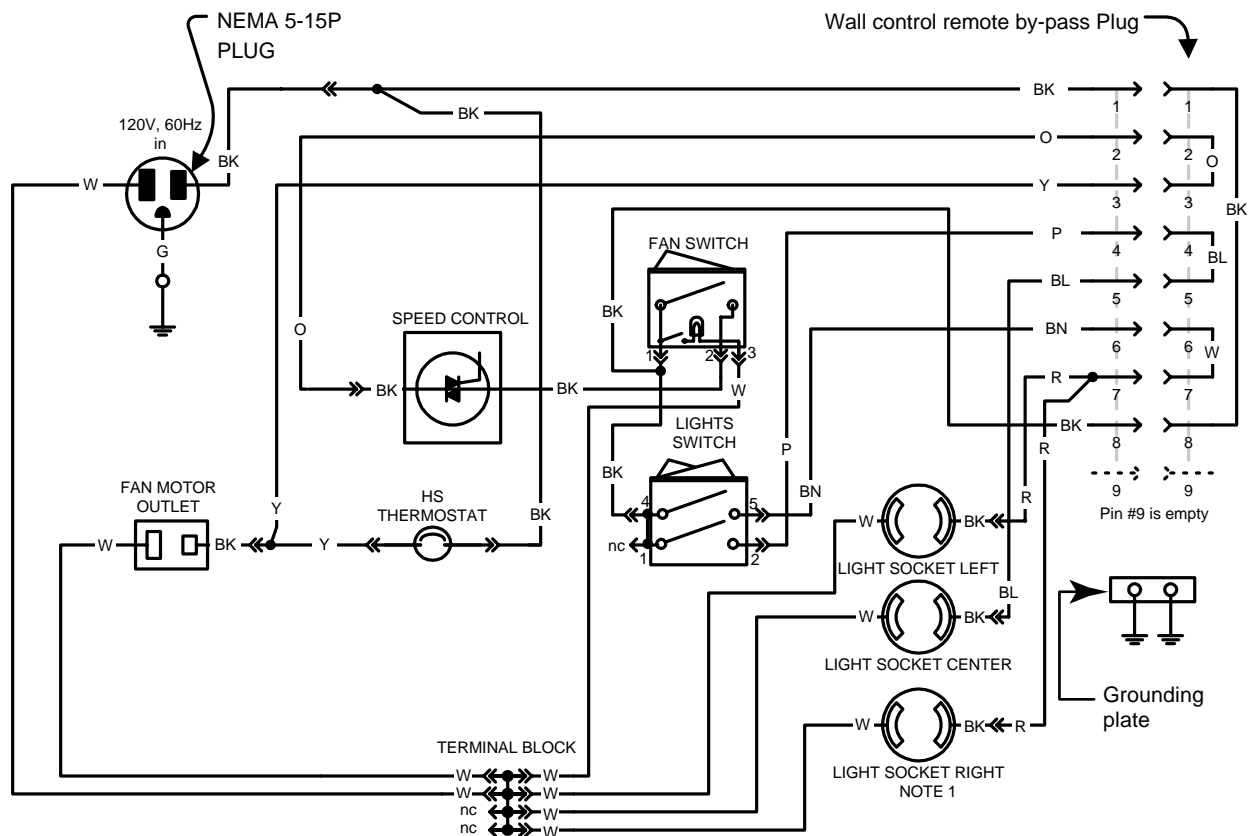
2) Blower ON/OFF switch

3) Blower speed control

## 23. WIRING DIAGRAM

### ! WARNING

**Risk of electrical shock. Electrical wiring must be done by qualified personnel in accordance with all applicable codes and standards. Before connecting wires, switch power off at service panel and lock service disconnecting means to prevent power from being switched on accidentally.**



### NOTES

1. Light socket not included in RMIP33 model.
2. If any of the original wire, as supplied, must be replaced, use the same equivalent wire.
3. Field wiring must comply with applicable codes, ordinances and regulations.

### WIRING COLOR CODE

BK	BLACK	P	PURPLE
BL	BLUE	R	RED
BN	BROWN	W	WHITE
G	GREEN	Y	YELLOW
O	ORANGE		

## WARRANTY

### BROAN-NUTONE LLC ONE-YEAR LIMITED WARRANTY

Broan-NuTone LLC warrants to the original consumer purchaser of its products that such products will be free from defects in materials or workmanship for a period of one year from the date of original purchase. THERE ARE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

During this one-year period, Broan-NuTone LLC will, at its option, repair or replace, without charge, any product or part which is found to be defective under normal use and service.

This warranty does not cover (a) normal maintenance and service or (b) any products or parts which have been subject to misuse, negligence, accident, improper maintenance or repair (other than by Broan-NuTone LLC), faulty installation or installation contrary to recommended installation instructions.

The duration of any implied warranty is limited to the one-year period as specified for the express warranty. Some states or provinces do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

**BROAN-NUTONE LLC'S OBLIGATION TO REPAIR OR REPLACE, AT BROAN-NUTONE LLC'S OPTION, SHALL BE THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY. BROAN-NUTONE LLC SHALL NOT BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH PRODUCT USE OR PERFORMANCE. Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.**

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state or province to another. This warranty supersedes all prior warranties.

To qualify for warranty service, you must (a) notify the company stated below, (b) give the model number and part identification and (c) describe the nature of any defect in the product or part. At the time of requesting warranty service, you must present evidence of the original purchase date.

## SERVICE PARTS

### RMIP33 and RMIP45 MODELS

KEY #	PART NUMBER	DESCRIPTION	MODEL
			33 45
1	V03493	RANGEMASTER LOGO	1 1
2	V03686	FILTER CLIP	3 4
3	V15085	GREASE RAIL 33"	1 -
	V15086	GREASE RAIL 45"	- 1
4	V03435	THERMOSTAT	1 1
5	V03501	SPEED CONTROL	1 1
6	V02512	SCREW #8-32 x 1/2", QUADREX	2 2
7	V02773	MALE CONNECTOR	1 1
8	V02772	FEMALE CONNECTOR	1 1
9	V03505	TERMINAL STRIP	1 1
10	V00673	LOCK NUT #8-32	2 2
11	V02264	SOCKET LAMP	2 3
12	V03502	SPST DOUBLE SWITCH (HAL. LIGHT)	1 1
13	V03503	SPST LIGHTED SINGLE SWITCH (BLOWER)	1 1
14	V03504	SPEED CONTROL BUTTON	1 1
15	V05865	MICROMESH FILTERS 9.250" x 12.500"	3 2
	V05866	MICROMESH FILTERS 11.130" x 12.500"	- 2
	V02544	HALOGEN LAMP PAR 20 50W	3 4
	V05861	INSTALLATION MANUAL	1 1
	V03888	PARTS BAG ((4) lock nut #10-32, (1) wire clamp LP16-AP, (2) wire connectors #74B, (8) #8 x 3/4" screws, (8) #8 x 3/8" screws, (2) #6 x 1/2" screws)	1 1