

MODEL	WIDTH	BLOWER
RMDD3004	30"	500 cfm Internal
RMDD3604	36"	500 cfm Internal
RMDD4804	48"	500 cfm Internal
RMDD3004EX	30"	Models 331H, 332H, 335, 336 HLB3, HLB6, HLB9, and HLB11 External (purchase separately)
RMDD3604EX	36"	Models 331H, 332H, 335, 336 HLB3, HLB6, HLB9, and HLB11 External (purchase separately)
RMDD4804EX	48"	Models 331H, 332H, 335, 336 HLB3, HLB6, HLB9, and HLB11 External (purchase separately)



WARNING - To reduce the risk of burns or ignition of clothing by reaching across burners, the downdraft remote control **MUST** be mounted in the countertop - at least 4" from the burners. See "INSTALL COOKTOP" section on page 8.

READ AND SAVE THESE INSTRUCTIONS

WARNING



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 questions, contact the manufacturer at the address or telephone number in the warranty.
- Before servicing or cleaning 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.
- 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.
- 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.
- When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
- Ducted fans must always be vented to the outdoors.
- To reduce the risk of fire, use only metal ductwork.
- Do not install this product with the activating switch directly behind a burner or element. Minimum distance between the switch and the edge of the burner should be 4 inches.
- Loose-fitting or hanging clothing should never be worn when operating this appliance. They may be ignited by burners/elements on cooktop.
- Children should not be left alone or unattended in the area where this appliance is in use.
- This unit must be grounded.

TO REDUCE THE RISK OF A RANGE TOP GREASE FIRE:

- 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.
- Always turn hood ON when cooking at high heat or when cooking flaming foods.
- Clean ventilating fans frequently. Grease should not be allowed to accumulate on fan or filter.
- Use proper pan size. Always use cookware appropriate for the size of the surface element.

NOTE: Model RMDDRBK Remote Up/Down Control sold separately.

INSTALLER:

Save this manual for Electrical Inspector and Homeowner to use.

WARNING



TO REDUCE THE RISK OF INJURY TO PERSONS IN THE EVENT OF A RANGE TOP GREASE 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.**
- NEVER PICK UP A FLAMING PAN** - You may be burned.
- DO NOT USE WATER**, including wet dishcloths or towels - a violent steam explosion will result.
- Use an extinguisher **ONLY** if:
 - You know you have a Class ABC extinguisher, and you already know how to operate it.
 - The fire is small and contained in the area where it started.
 - The fire department is being called.
 - You can fight the fire with your back to an exit.

^a Based on "Kitchen Firesafety Tips" published by NFPA.

CAUTION



- For indoor use only.
- For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.
- To avoid motor bearing damage and noisy and/or unbalanced impellers, keep drywall spray, construction dust, etc. off power unit.
- Clean filters and grease-laden surfaces frequently.
- Do not repair or replace any part of this appliance unless specifically recommended in this manual. All other servicing should be done by a qualified technician.
- Please read specification label on product for further information and requirements.
- To reduce the risk of fire and electric shock, install this downdraft only with Rangemaster blower models shown below. Other blowers cannot be substituted. (blowers sold separately).

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RMDD3004	30"	500 cfm Internal
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RMDD4804	48"	500 cfm Internal
RMDD3004EX	30"	External, Model 331H, 332H, 335, 336, HLB3, HLB6, HLB9, y HLB11 (purchase separately)
RMDD3604EX	36"	External, Model 331H, 332H, 335, 336, HLB3, HLB6, HLB9, y HLB11 (purchase separately)
RMDD4804EX	48"	External, Model 331H, 332H, 335, 336, HLB3, HLB6, HLB9, y HLB11 (purchase separately)

PLANNING

Internal Blower Installation

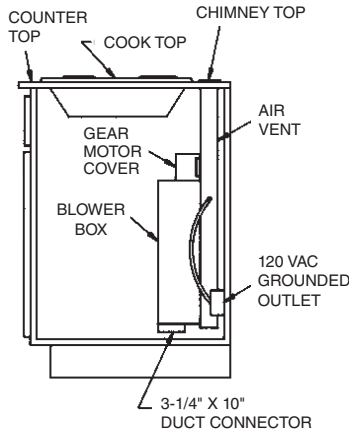
This downdraft blower system is designed to be used to exhaust airborne contaminants when cooking with a variety of gas or electric cooktops. It can be mounted in island, peninsula, or conventional wall locations.

This unit can be easily installed following these basic steps:

- Cut out the countertop opening.
- Mount the unit in the cabinet.
- Connect the ductwork and electrical.
- Install the cooktop.

Note: the high level of air flow of this appliance may effect the gas flame on some types of gas cooktops. This is NORMAL and will cause no harm, but can be corrected by lowering the speed of the blower.

TYPICAL INSTALLATION



ELECTRICAL SPECIFICATIONS
120 VAC • 60 Hz • 4.0 A

External Blower Installation

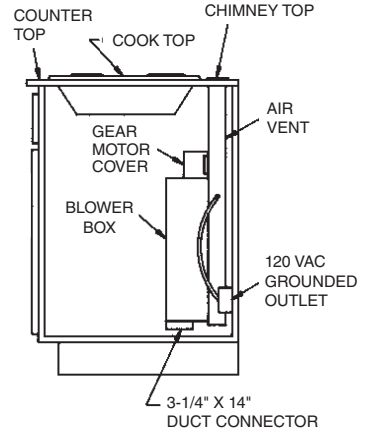
This downdraft blower system is designed to be used to exhaust airborne contaminants when cooking with a variety of gas or electric cooktops. It can be mounted in island, peninsula, or conventional wall locations.

This unit can be easily installed following these basic steps:

- Cut out the countertop opening.
- Mount the unit in the cabinet.
- Install Model 331H, 332H, 335, 336, HLB3, HLB6, HLB9, HLB11 External Blower
- Connect the ductwork and electrical.
- Install the cooktop.

Note: the high level of air flow of this appliance may effect the gas flame on some types of gas cooktops. This is NORMAL and will cause no harm, but can be corrected by lowering the speed of the blower.

TYPICAL INSTALLATION



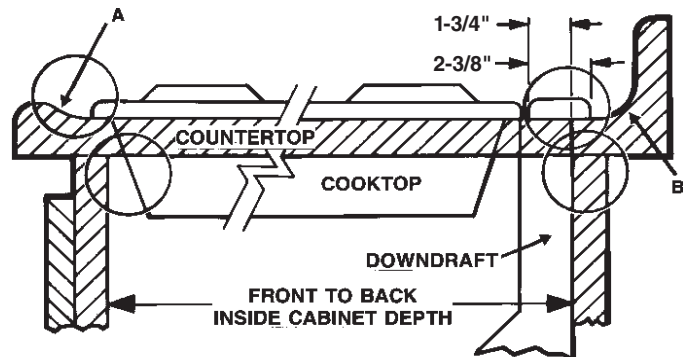
ELECTRICAL SPECIFICATIONS
120 VAC • 60 Hz • 6.0 A (max.)

TAKE MEASUREMENTS

All Units

1. Refer to the cooktop installation instructions for dimensions of cooktop, countertop cut-out, and cabinet requirements. Models RMDD3004 & RMDD3004EX will fit in most 30" wide cabinets. Models RMDD3604 & RMDD3604EX will fit in most 36" wide cabinets. Models RMDD4804 & RMDD4804EX will fit in most 48" wide cabinets. However, it is recommended that oversized cabinets be used for easier installation.
2. Cooktop depth can vary greatly from one to another. This may cause the fit of these two appliances to be rather tight.

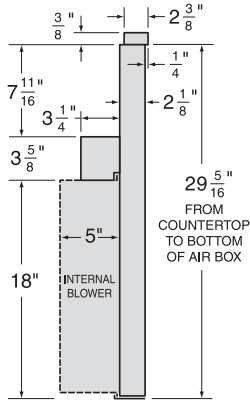
Pay special attention to the areas of potential interference highlighted above. A countertop with (A) a raised lip and/or (B) a backsplash may not allow enough flat countertop for a proper installation. Note that 2-3/8" of flat countertop is required behind cooktop and that 1-3/4" is necessary between the back edge of the cooktop and the inside of cabinet back.



TAKE MEASUREMENTS (CONTINUED)

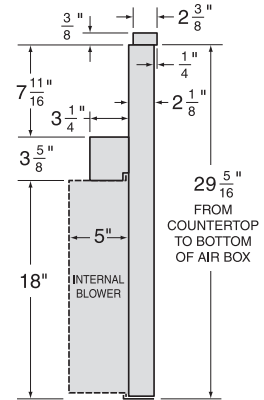
Internal Blower Installation

SIDE VIEW OF DOWNDRAFT



External Blower Installation

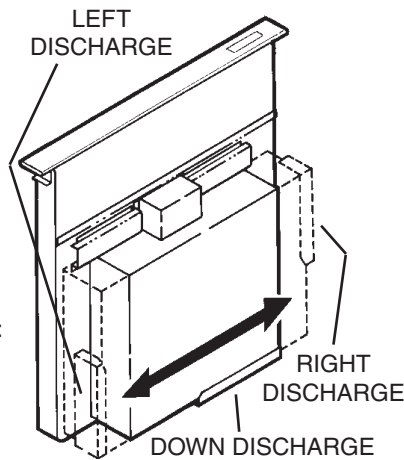
SIDE VIEW OF DOWNDRAFT



PLAN THE DUCTWORK

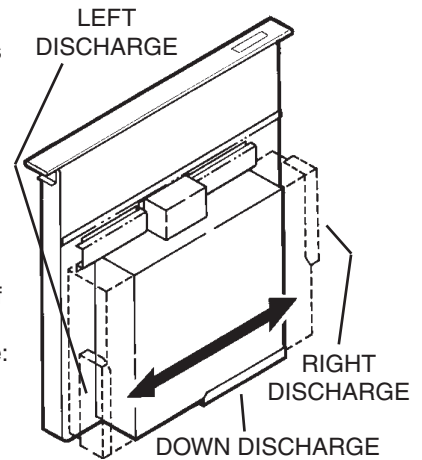
Internal Blower Installation


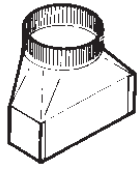
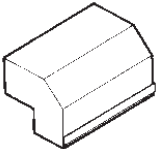
1. The interior down-draft blower system is designed for use with 3-1/4" x 10" ductwork (can be transitioned to 6" round). Three different discharge directions are available with side-to-side adjustment for accurate alignment of ductwork.
2. For best performance: Choose the ducting option which allows the shortest length of ductwork and a minimum number of elbows and transitions. Check location of floor joists, wall studs, electrical wiring or plumbing for possible interference.

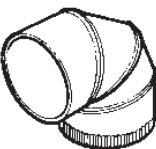
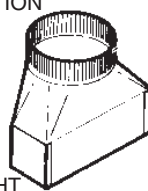
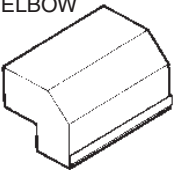


External Blower Installation

1. The exterior down-draft blower system is designed for use with 3-1/4" x 14" rectangular ductwork (can be transitioned to 8" or 10" round). Three different discharge directions are available with side-to-side adjustment for accurate alignment of ductwork.
2. For best performance: Choose the ducting option which allows the shortest length of ductwork and a minimum number of elbows and transitions. Check location of floor joists, wall studs, electrical wiring or plumbing for possible interference.



<p>6" ROUND ELBOW</p>  <p>EQUALS 8 FT. OF STRAIGHT DUCT</p>	<p>3-1/4" X 10" TO 6" RD. TRANSITION</p>  <p>EQUALS 2 FT. OF STRAIGHT DUCT</p>	<p>3-1/4" X 10" 90° ELBOW</p>  <p>EQUALS 14 FT. OF STRAIGHT DUCT</p>
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<p>8" ROUND ELBOW</p>  <p>EQUALS 11 FT. OF STRAIGHT DUCT</p>	<p>3-1/4" X 14" TO 8" RD. TRANSITION</p>  <p>EQUALS 5 FT. OF STRAIGHT DUCT</p>	<p>3-1/4" X 14" 90° ELBOW</p>  <p>EQUALS 19 FT. OF STRAIGHT DUCT</p>
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3. The system will operate most efficiently when the ductwork does not exceed 40 feet of equivalent duct. The chart, above, shows equivalent feet of elbows and transitions. The number of feet of straight duct plus the equivalent feet of transitions and/or elbows to be used should equal 40 feet or less.

NOTE: The equivalent feet of various roof and wall caps has been taken into consideration. Do not include them in this calculation.

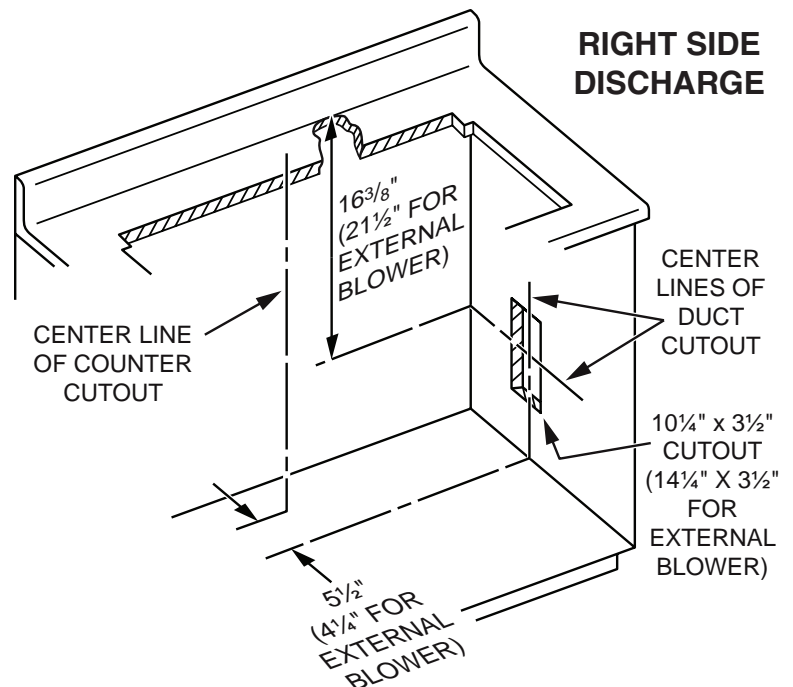
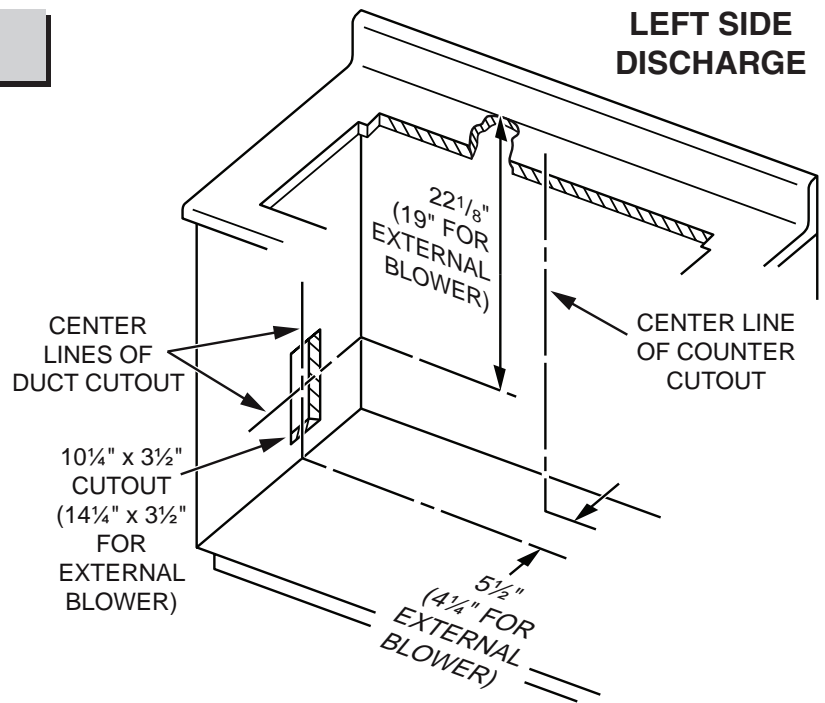
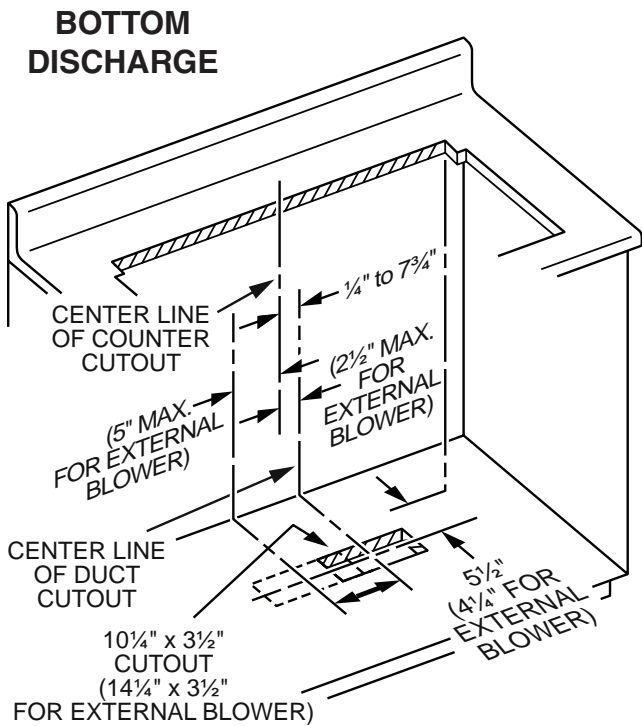
3. The system will operate most efficiently when the ductwork does not exceed 40 feet of equivalent duct. The chart, above, shows equivalent feet of elbows and transitions. The number of feet of straight duct plus the equivalent feet of transitions and/or elbows to be used should equal 40 feet or less.

NOTE: The equivalent feet of various roof and wall caps has been taken into consideration. Do not include them in this calculation.

PLAN THE CABINET CUTOUTS

Blower Installation

CAUTION:
BEFORE CUTTING HOLE IN
CABINET FOR DUCTWORK,
check for interference with floor
joists, wall studs, electrical wir-
ing, or plumbing.



PLAN THE WIRING

Internal Blower Installation

1. The Internal Downdraft Blower system draws 4 AMPS and requires a 120 VAC, 60 Hz circuit.
2. The unit has a 18 in. long power cord with a 3-pronged plug. Plan to provide a grounded outlet in a location which will allow the unit's power cord to reach.

IMPORTANT - LOCATION OF ELECTRICAL OUTLET:

If Model RMDD3004 is being installed in a 30" wide cabinet...
 or Model RMDD3604 is being installed in a 36" wide cabinet...
 or Model RMDD4804 is being installed in a 48" wide cabinet...

...the outlet cannot be located on the back wall of cabinet.

In these cases, the width of the downdraft covers nearly the entire width of the back wall of the cabinet. So you must either:

- mount the electrical box to a side wall or cabinet floor - at least 12 inches from the back wall.
 - mount the electrical box to a wall stud behind the cabinet - where it will not be covered by the downdraft.
- Then provide a clearance hole in the back wall of the cabinet.

External Blower Installation

1. The External Downdraft Blower system draws 6 AMPS and requires a 120 VAC, 60 Hz circuit.
2. The unit has a 18 in. long power cord with a 3-pronged plug. Plan to provide a grounded outlet in a location which will allow the unit's power cord to reach.

IMPORTANT - LOCATION OF ELECTRICAL OUTLET:

If Model RMDD3004EX is being installed in a 30" wide cabinet...
 or Model RMDD3604EX is being installed in a 36" wide cabinet...
 or Model RMDD4804EX is being installed in a 48" wide cabinet...

...the outlet cannot be located on the back wall of cabinet.

In these cases, the width of the downdraft covers nearly the entire width of the back wall of the cabinet. So you must either:

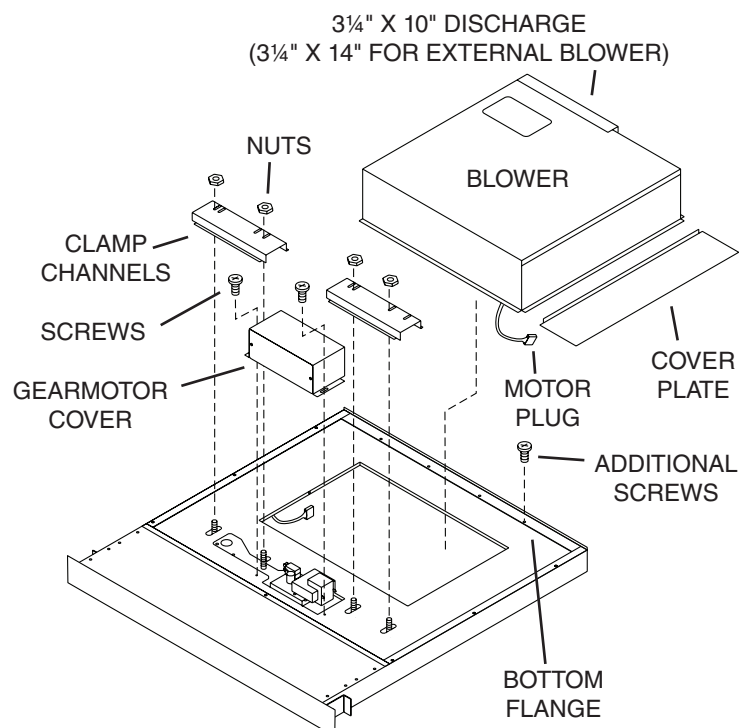
- mount the electrical box to a side wall or cabinet floor - at least 12 inches from the back wall.
 - mount the electrical box to a wall stud behind the cabinet - where it will not be covered by the downdraft.
- Then provide a clearance hole in the back wall of the cabinet.

PREPARE THE DOWNDRAFT

Blower Duct Connection Installation (all blowers)

The downdraft is shipped with duct connector pointing toward the bottom of the unit. If you wish to change this orientation, follow the steps below:

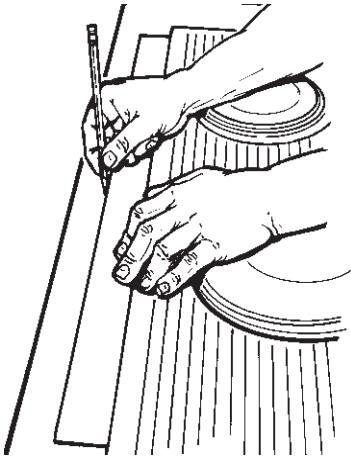
1. Place the downdraft on its back on a table of flat work surface.
2. Remove the 4 nuts and 2 clamp channels.
3. Remove 2 screws and the gear motor cover.
4. Carefully position the blower under the bottom flange of the downdraft with the 3 1/4" x 10" discharge (3 1/4" x 14" for exterior or in-line blower) pointed in the desired direction.
5. Connect motor plug.
6. Replace the gear motor cover and 2 sheet metal screws.
7. Replace the 2 clamp channels and start the 4 nuts, do not tighten.
8. Slide blower left of right to desired position. Use cover plate (supplied) to close up any open space.
9. Tighten 4 nuts to secure top of blower. Use additional screws (supplied) through bottom flange to secure bottom in blower.



CUT COUNTERTOP OPENING

All Units

1. Lay out and cut the cooktop cut-out far enough FORWARD so downdraft will fit behind it.
2. Set cooktop in place and slide it as far forward as possible. Center and square it with edges of countertop.

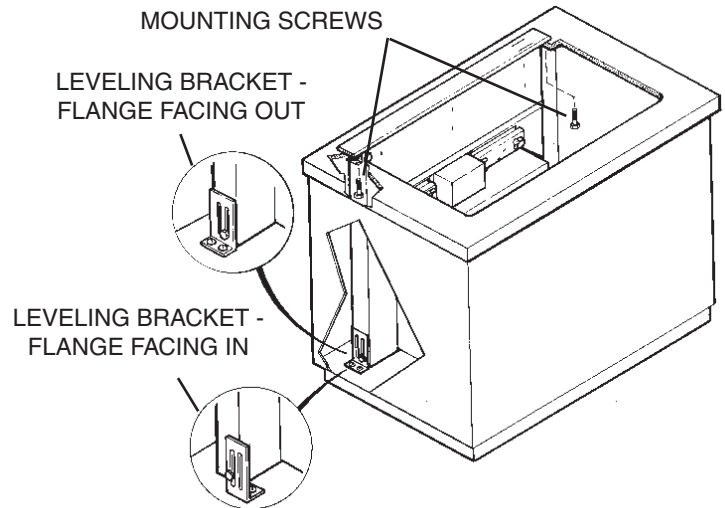


3. Place the plastic template against the back flange of the cooktop and center it. Trace around template to mark the downdraft opening.
4. Remove cooktop from countertop.
5. Cut downdraft opening. Be careful not to chip edges of countertop.

MOUNT THE UNIT

All Units

1. Set downdraft into opening. Extend **leveling brackets** to floor of cabinet so downdraft sits straight. (Note: Leveling brackets can be removed and re-attached in other positions. Bottom flange may have to face inward in tight cabinet installations.)
2. Secure the downdraft to the countertop as follows: Hold the downdraft against the back of countertop cut-out and tightening the two **mounting screws** (one on each end of unit) on underside of countertop. Use a wood shim between screw and underside of granite countertops.
3. Screw **leveling brackets** to bottom of cabinet. Tighten screws holding leveling bracket to unit on each side.



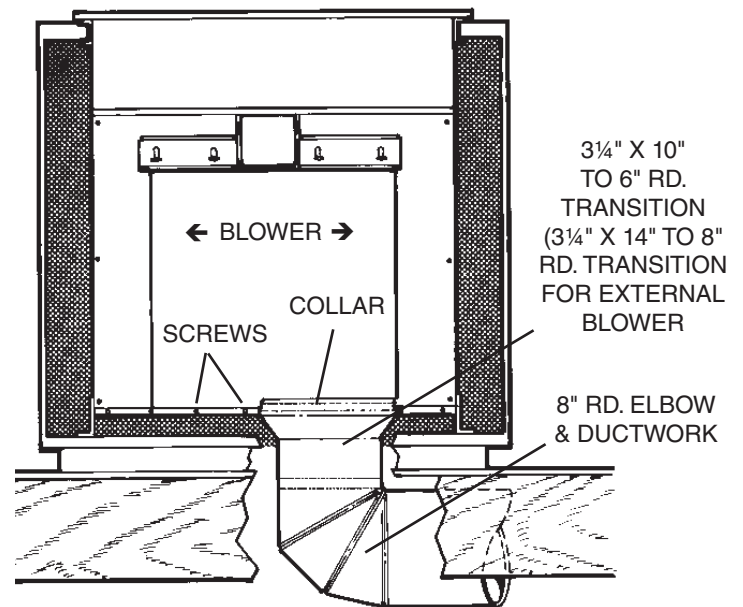
INSTALL DUCTWORK

Blower Installation



1. Cut hole in cabinet as well as holes in wall or floor as necessary.
2. Mount the roof or wall cap and work back towards the cabinet, attaching all **ductwork, elbows and transitions** as previously planned. Tape all ductwork connections to make them secure and air tight.
3. Connect **ductwork** (and transition, if required) to downdraft. If necessary, **LOOSEN** nuts and **screws** that hold the blower in place, and slide **blower** left or right to meet ductwork. Retighten screws and nuts.

Note: A 3¼" x 10" collar (3¼" x 14" collar for external blower) is provided for installers who prefer to rivet the ductwork to the unit. This will allow blower to be removed and replaced easily in service situations without disturbing ductwork.



INSTALL ELECTRICAL WIRING

Internal Blower Installation



CAUTION: All electrical wiring should be done by a qualified person(s) in accordance with all applicable codes and standards.

1. Mount a standard wiring box, with 3-pronged receptacle, inside the cabinet. Make sure the downdraft's power cord can easily reach it.
2. Run appropriate power cable into cabinet and connect it to receptacle.
3. Plug the downdraft's power cord into the outlet. Make sure that the power cord is routed away from the heat generated by the cooktop.

External Blower Installation



CAUTION: All electrical wiring should be done by a qualified person(s) in accordance with all applicable codes and standards.

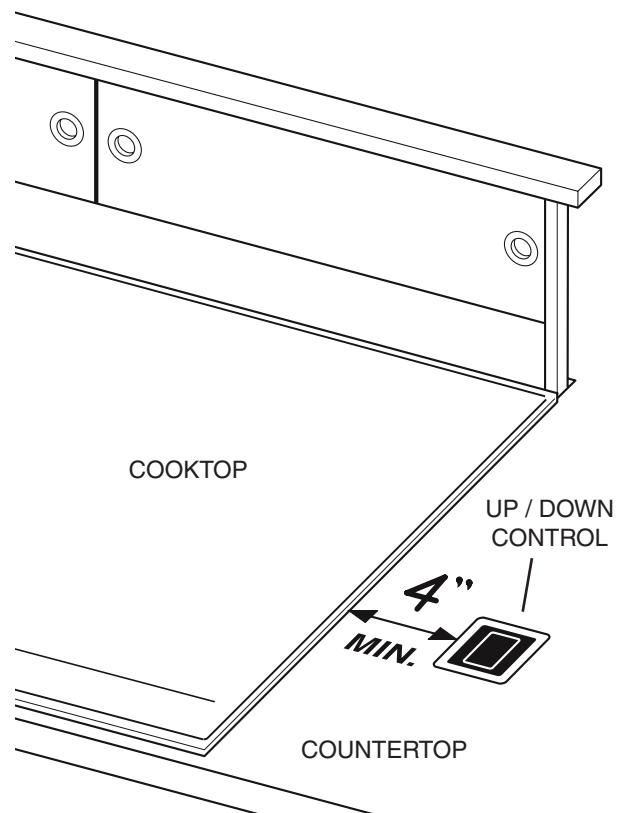
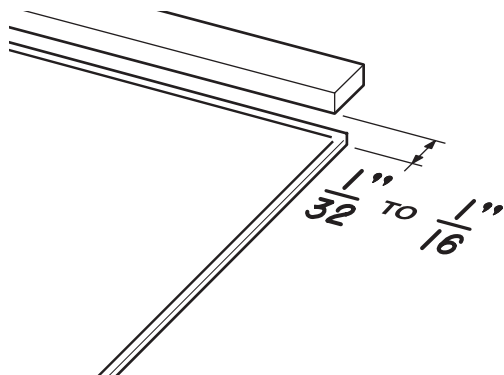
1. Mount a standard wiring box, with 3-pronged grounded receptacle, inside the kitchen cabinet. Make sure the unit's power cord can easily reach it.
2. Run appropriate power cable into cabinet and connect it to electrical box and receptacle.
3. External blower **may not exceed 6.0 Amp** rating.
4. Run 2-wire plus ground power cable from the external blower to wiring box on adaptor plate. Remove wiring box cover.
5. Connect wiring harness to power cable from external blower. Wire black to black, white to white, and green to green or bare wire.
6. Replace wiring box cover.
7. Plug the downdraft's power cord into outlet. Make sure that the power cord is routed away from the heat generated by the cooktop.

INSTALL COOKTOP

All Units

1. Align the cooktop with the downdraft and fasten cooktop in place.

Note: Accurate alignment of cooktop and downdraft is necessary to ensure that there is no interference when air vent is raised and lowered. There should be a gap of 1/32" - 1/16" between the back of the cooktop and the front of the downdraft cover.



Note:

The downdraft **up/down control** must be mounted into the **countertop**, at least 4" from the cooktop.

REMOTE UP/DOWN CONTROL INSTALLATION (OPTIONAL)

All Units

When to use the Remote UP/DOWN Control

The Remote UP/DOWN Control should be used when your cooktop has a burner that is within 4 inches of the UP/DOWN Button on the downdraft chimney.

The Remote UP/DOWN Control can be used for convenient UP/DOWN operation of the downdraft chimney (even when a burner is more than 4 inches from the UP/DOWN Button of the downdraft chimney).

How to use the Remote UP/DOWN Control

Do not place the remote control where it will interfere with cooking, where hot pans could be set, or where hot liquids could be spilled on the control.

The Remote UP/DOWN Control disables the UP/DOWN function of the UP/DOWN Button on the downdraft chimney.

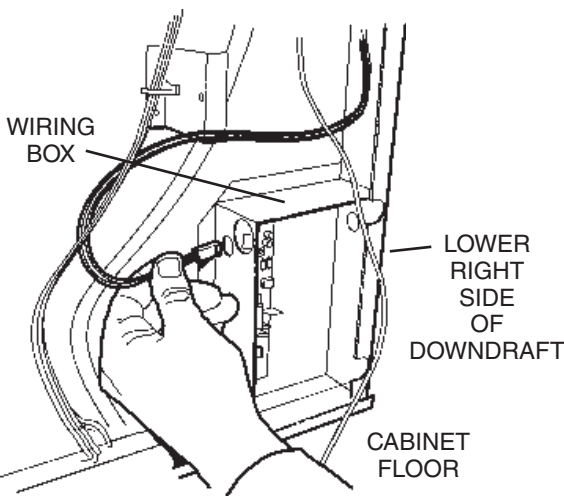
Installation

1. Using the template at right, lay out the 3-hole pattern on the counter top. Mark the centers of the three holes to be drilled.
2. Carefully drill the three holes through the counter top. Be careful not to damage or chip the counter top surface when drilling the holes.
3. Remove the control from the plastic bag. Line the control up with the three holes and position the control so it is parallel with the front of the counter top.
4. Remove the two nylon thumbnuts from the plastic bag and thread onto the two studs on the control from below the counter top. **Hand tighten only.**

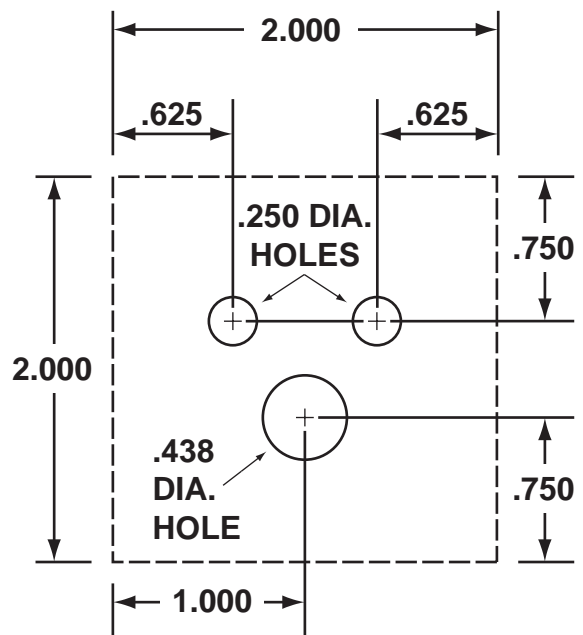


WARNING: To reduce the risk of burns or ignition of clothing by reaching across burners, the remote control must be mounted at least 4" away from any cook top burner.

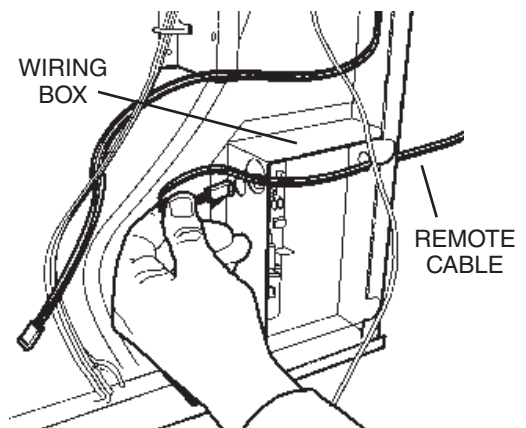
5. Remove the blower, clamp channels, and gearmotor cover from downdraft (see "Prepare the Downdraft" on page 5). Remove the large panel to expose the downdraft's wiring.



6. At the lower right hand corner of downdraft, unplug the cable from the left side of the wiring box.



CUT OUT ON DOTTED LINE



7. Remove remote cable from the plastic bag and plug into back of control from below counter top. Route cable through cabinet to lower right hand corner of downdraft and through the clearance holes in the side of downdraft and wiring box. Plug cable into circuit board plug, as shown.
8. Stuff excess cable out of the way, secure the cable so it is not damaged by items stored in the cabinet, and reassemble downdraft.

USE AND CARE

All Units

WARNING: Always disconnect electric power supply before cleaning and/or servicing unit.

Always turn the downdraft blower on before you begin cooking to establish an air flow in the kitchen. Let the blower run for a few minutes to clean the air after you turn the cooktop off. This will keep the whole kitchen cleaner and brighter. The activating switch is pressed and the air vent rises.

Cleaning

Use a mild detergent suitable for painted surfaces. **DO NOT USE ABRASIVE CLOTH, STEEL WOOL PADS, OR SCOURING POWDERS.** Vacuum blower to clean. Do not immerse blower in water.

Wash the 2 aluminum/stainless steel grease filters in a mild detergent solution or a dishwasher. Remove them from the air vent by grasping the tab at the top of each filter.

Servicing

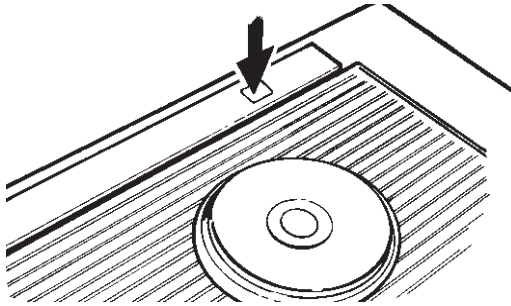
It may be necessary to remove the downdraft blower system from the cabinet in order to service components such as the blower motor or air vent mechanism.

Disconnect power to the cooktop and remove it first. Reverse the steps under "MOUNT THE UNIT" to remove the downdraft from the cabinet.

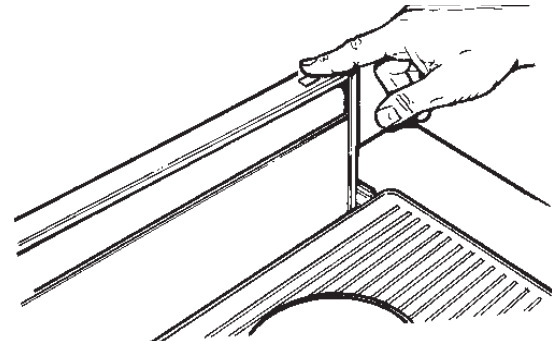
**BACKSIDE OF
REMOTE SWITCH
TEMPLATE**

OPERATION

All Units

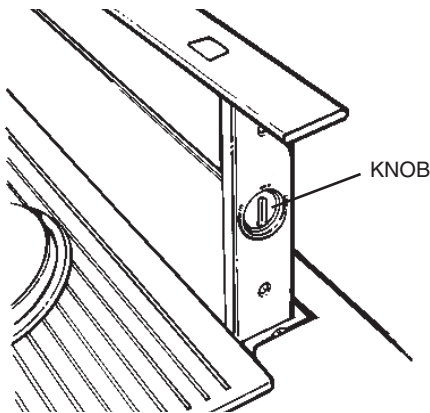


Turn the downdraft blower ON by pressing down on the activating switch. The air vent will rise.



Turn the downdraft blower OFF by pressing the activating switch again. The air vent will go down and the blower will shut OFF.

Note: For most convenient operation, set the blower to your favorite speed. The blower will come on to this speed whenever the activating switch is pressed and the air vent rises.

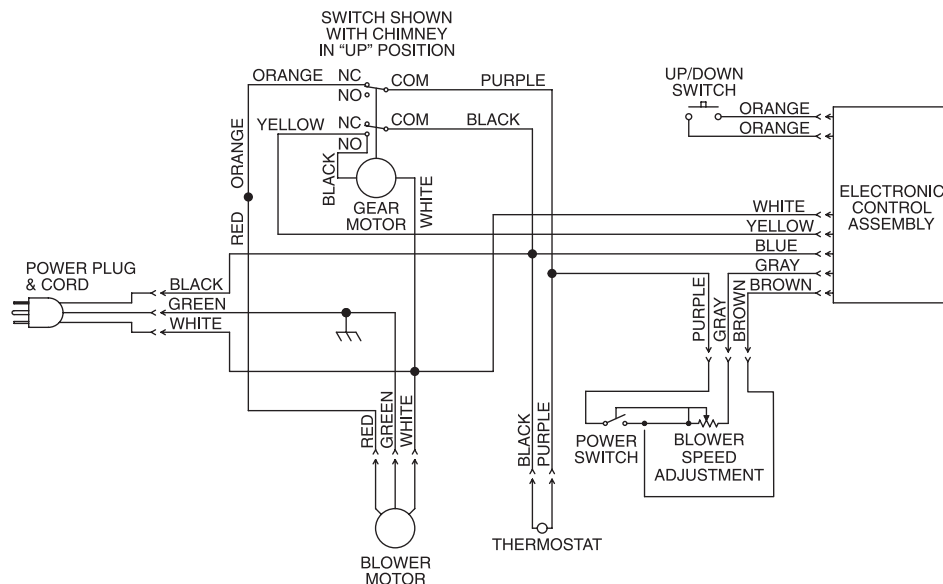


The blower can be turned ON or OFF and its speed can be adjusted with the recessed knob on the right side of the air vent.

Heat Sentry

When chimney is UP and blower is ON (at any speed) or OFF:
 If the exhaust temperature becomes higher than expected, the Heat Sentry mode will activate and increase the blower speed to HIGH.
 Lowering the chimney will turn blower OFF - even if Heat Sentry is active.

WIRING DIAGRAM



SERVICE PARTS

KEY NO.	30N WIDTH	36N WIDTH	48N WIDTH	DESCRIPTION
1	97018397	97018398	97018399	TOP COVER
2	99140195	99140195	99140195	FILTER SPRING
3	99230345	99230345	99230345	POP RIVET
4	97018526	97018527	97018528	CHIMNEY ASSEMBLY
5	97015874	97015874	97015874	END CAP RH
6	98009358	98009358	98009358	END CAP LR
7	97015973	97015973	97015973	MACHINED CHIMNEY SLIDE
8	98010013	98010013	98010013	MACHINED AIRBOX SLIDE
9	99160421	99160421	99160421	SCREW RHM 8-32 x .375
10	99160419	99160419	99160419	SCREW 8-32 x .500 PHL
11	99271218	99271218	99271218	GROUND WIRE
12	99150471	99150471	99150471	SCREW 10-32 x .500 TYP CA PH
13	97015841	97015842	97015843	FILTER
14	99710032	99710032	99710032	SPACER
15	99111184	99111184	99111184	SLIDE STRIPS
16	97015974	97015975	97015976	AIRBOX WELDMENT
17	99271210	99271210	99271210	CORD SET
18	99400060	99400060	99400060	STRAIN RELIEF BUSHING
19	99271295	99271295	99271295	WIRE HARNESS
20	99271292	99271292	99271292	SWITCH ASSEMBLY
21	99271291	99271291	99271291	CONTROL BOARD
22	97018525	97018525	97018525	CRANK ASSEMBLY
23	97017023	97017023	97017023	GEAR MOTOR BRACKET
24	97017039	97017035	97017036	GEAR MOTOR KIT INTERNAL BLOWER MODELS (INCLUDES ITEM 23 & 27 ON 36N & 48N MODELS)
	97017059	97017037	97017038	GEAR MOTOR KIT EXTERNAL BLOWER MODELS (INCLUDES ITEM 23 & 27 ON 36N & 48N MODELS)
26	98010798	98010799	98010801	FRONT AIRBOX BOTTOM
27	97017045	97017041	97017042	GEAR MOTOR COVER INTERNAL BLOWER MODELS
	97017046	97017043	97017044	GEAR MOTOR COVER EXTERNAL BLOWER MODELS
28	98010802	98010803	98010803	AIRBOX OPENING COVER
29	98010804	98010804	98010824	AIRBOX CLAMP
30	99260488	99260488	99260488	WHIZ NUT 10-24
31	97018476	97018476	97018476	SCROLL BOX ASSEMBLY
32	98010809	98010809	98010809	SCROLL BOX COVER
33	98008157	98008157	98008157	CAPACITOR CLAMP
34	98010810	98010810	98010810	EXT - SCROLL BOX WELDMENT
35	99080362	99080362	99080362	MOTOR W/CAPACITOR
36	99020247	99020247	99020247	BLOWER WHEEL
37	99100484	99100484	99100484	MOTOR MOUNT ISOLATOR
38	99260477	99260477	99260477	WHIZ NUT 1/4-20
39	99030323	99030323	99030323	THERMOSTAT
40	97016974	97016974	97016974	ADAPTOR PLATE
41	98010005	98010005	98010005	OUTLET PLATE
42	99271304	99271304	99271304	WIRE HARNESS
43	99400042	99400042	99400042	STRAIN RELIEF BUSHING
44	99271296	99271296	99271296	UP/DOWN BUTTON HARNESS
45	99271306	99271306	99271306	THERMOSTAT WIRE HARNESS
46	98010010	98010010	98010010	THERMOSTAT MOUNTING BRACKET

SERVICE PARTS

