MODEL WIDTH BLOWER RMDD3004 30" 500 cfm Interior 36" RMDD3604 500 cfm Interior RMDD4804 48" 500 cfm Interior Models 331H, 332H, 335, or 336 Exterior (purchase separately) RMDD3004EX 30" Models 331H, 332H, 335, or 336 Exterior (purchase separately) RMDD3604EX 36" Models 331H, 332H, 335, or 336 Exterior (purchase separately) RMDD4804EX 48"



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.
- 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.
- 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.
- 7. 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.
- 10. Children should not be left alone or unattended in the area where this appliance is in use.
- 11. 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.
- 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<sup>a</sup>:

- 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 immedi ately, 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.
- 4. Use an extinguisher ONLY if:
  - A. You know you have a Class ABC extinguisher, and you already know how to operate it.
  - B. The fire is small and contained in the area where it started.
  - C. The fire department is being called.
  - D. You can fight the fire with your back to an exit.

# CAUTION



- 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.
- 3. 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.

#### NOTE:

Model RMDDRBK Remote Up/Down Control sold separately.

#### **INSTALLER:**

Save this manual for Electrical Inspector and Homeowner to use.

Page 1

<sup>&</sup>lt;sup>a</sup> Based on "Kitchen Firesafety Tips" published by NFPA.

#### **PLANNING**

#### Interior Blower Installation

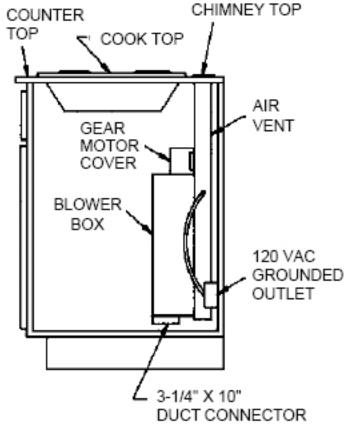
This downdraft blower system is designed to be used to exhaust airborne contaminants when cooking with a variety of gas or electric cooktops. It can be mounted in island, peninsula, or conventional wall locations.

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



SPECIFICATIONS
120 VAC • 60 Hz • 4.0 A

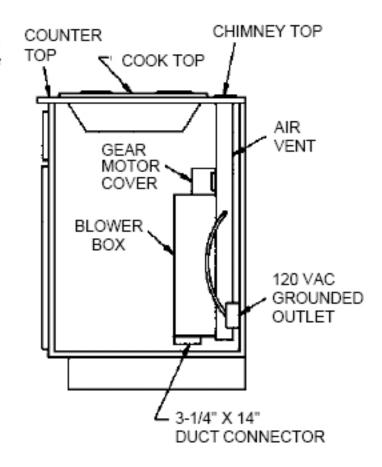
## Exterior Blower Installation

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, or 336 External Blower
- Connect the ductwork and electrical.
- · Install the cooktop.

#### TYPICAL INSTALLATION



ELECTRICAL SPECIFICATIONS

120 VAC • 60 Hz • 6.0 A (max.)

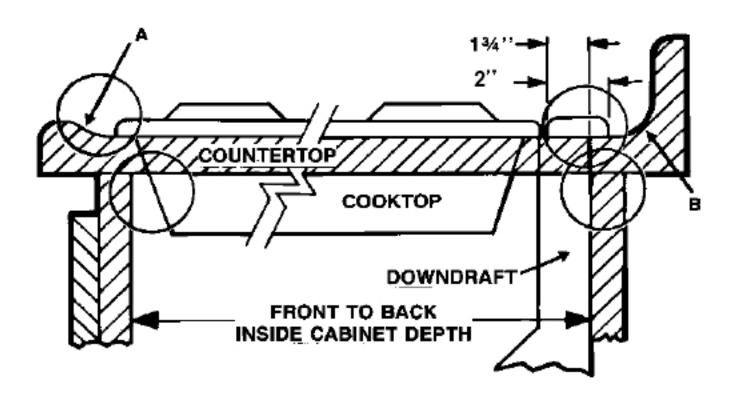
**Note:** the high level of air flow of this appliance may effect the gas flame on some types of gas cooktops. This is NORMAL and will cause no harm, but can be corrected by lowering the speed of the blower.

## TAKE MEASUREMENTS

## All Units

- 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.
- Cooktop depth can vary greatly from one to another. This may cause the fit of these two appliances to be rather tight.

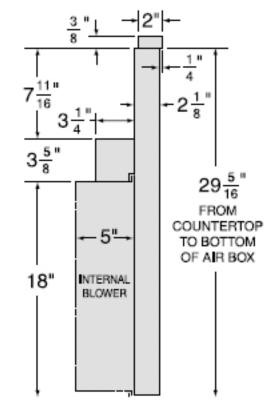
Pay special attention to the areas of potential interference high-lighted above. A countertop with (A) a raised lip and/or (B) a backsplash may not allow enough flat countertop for a proper installation. Note that 2" of flat countertop is required behind cooktop and that 1-3/4" is necessary between the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



## TAKE MEASUREMENTS (CONTINUED)

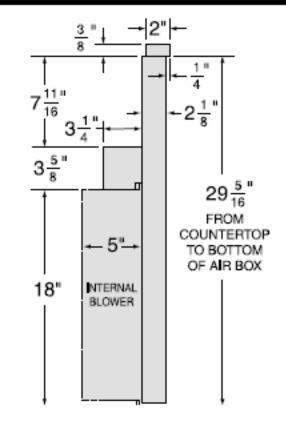
#### Interior Blower Installation

SIDE VIEW OF DOWNDRAFT



## Exterior Blower Installation

SIDE VIEW OF DOWNDRAFT



#### PLAN THE DUCTWORK

## Interior Blower Installation

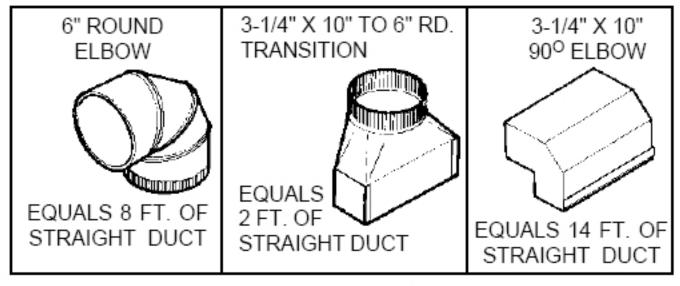
LEFT

DISCHARGE

- The interior downdraft 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

RIGHT DISCHARGE DOWN DISCHARGE

elbows and transitions. Check location of floor joists, wall studs, electrical wiring or plumbing for possible interference.

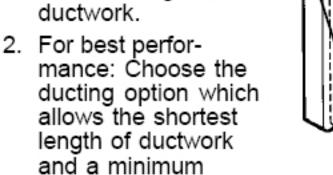


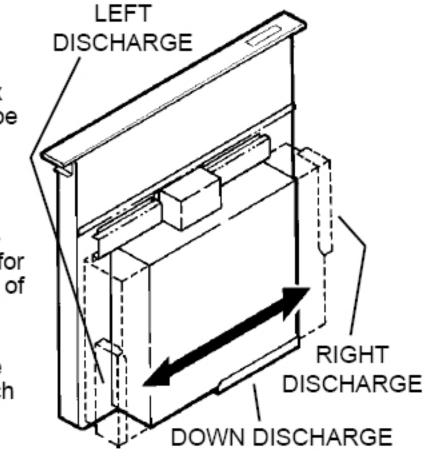
 The system will operate most efficiently when the ductwork does not exceed 40 feet of equivalent duct. The chart, above, shows equivalent feet of elbows and transitions. The number of feet of straight duct plus the equivalent feet of transitions and/or elbows to be used should equal 40 feet or less.

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

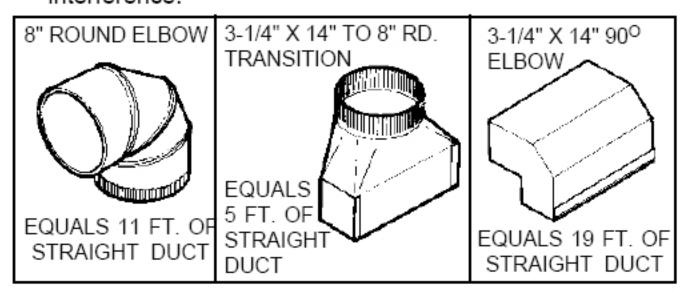
## Exterior Blower Installation

 The exterior downdraft blower system is designed for use with 3-1/4" x 14" ductwork (can be transitioned to 8" round). Three different discharge directions are available with sideto-side adjustment for accurate alignment of ductwork.





number of elbows and transitions. Check location of floor joists, wall studs, electrical wiring or plumbing for possible interference.

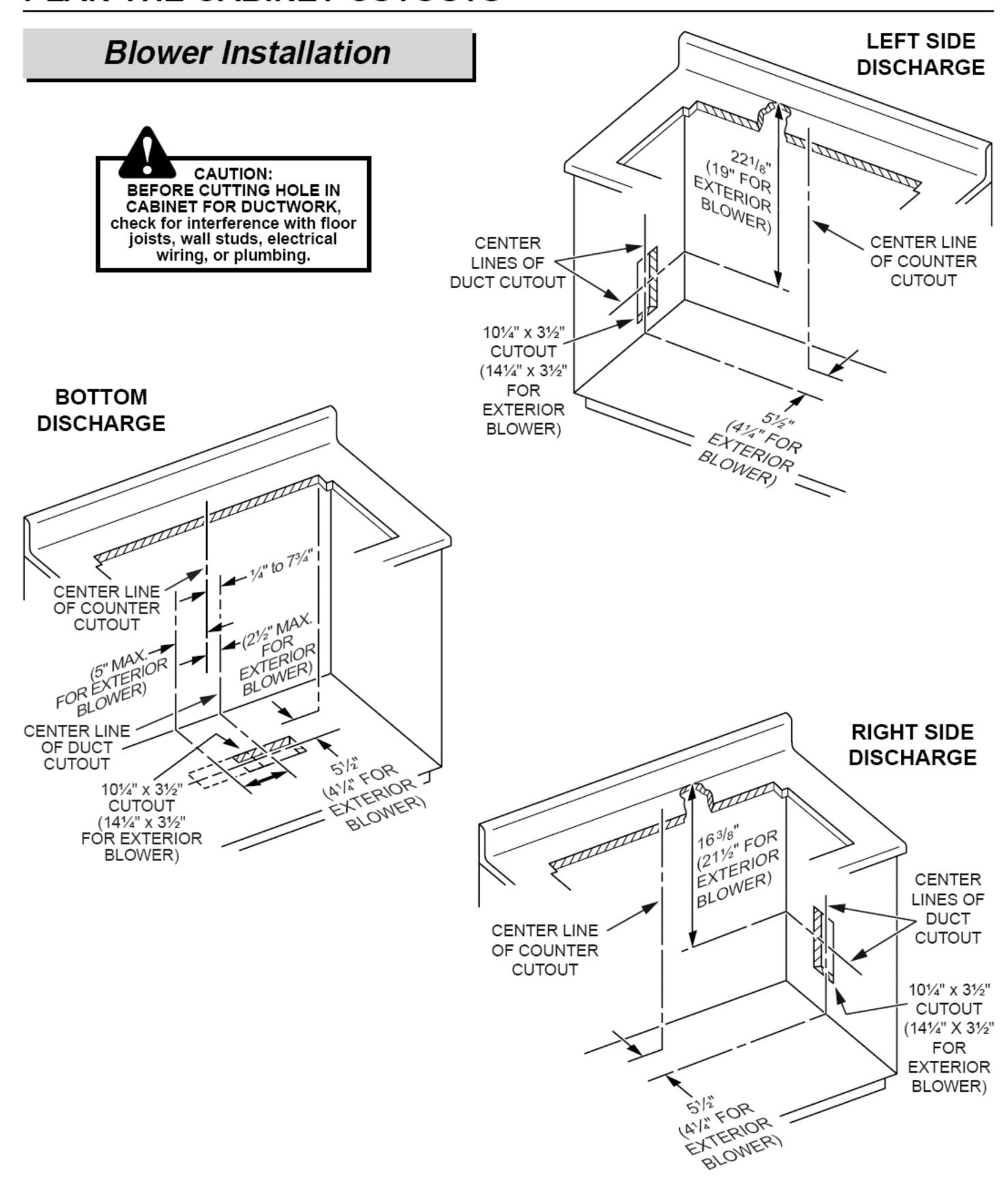


 The system will operate most efficiently when the ductwork does not exceed 40 feet of equivalent duct. The chart, above, shows equivalent feet of elbows and transitions. The number of feet of straight duct plus the equivalent feet of transitions and/or elbows to be used should equal 40 feet or less.

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

Page 4

## PLAN THE CABINET CUTOUTS



Page 5

#### PLAN THE WIRING

## Interior Blower Installation

- The Interior Downdraft Blower system draws 4 AMPS and requires a 120 VAC, 60 Hz circuit.
- 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.

#### Exterior Blower Installation

- The Exterior Downdraft Blower system draws 6 AMPS and requires a 120 VAC, 60 Hz circuit.
- 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:

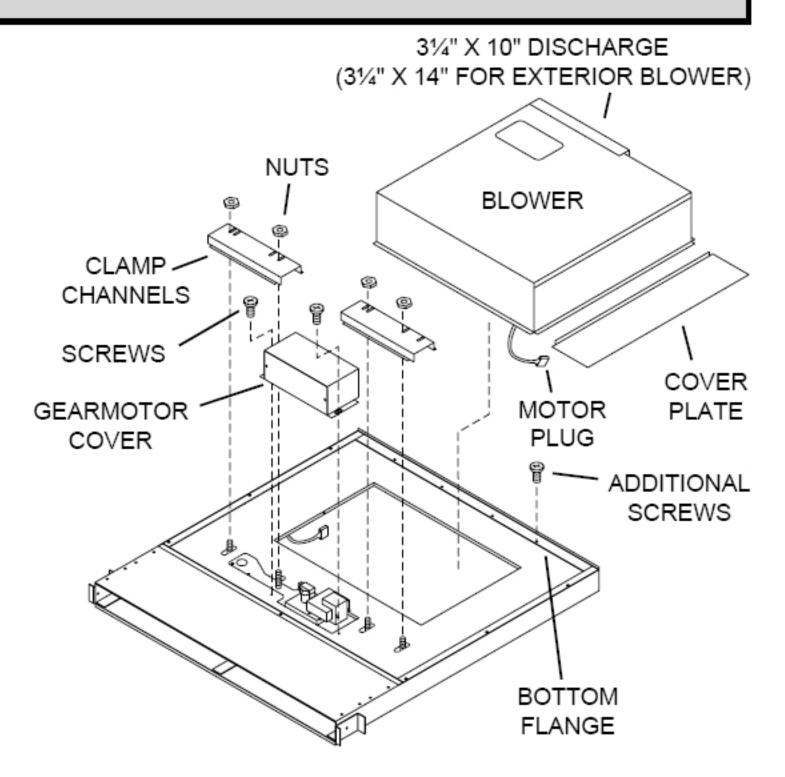
- mount the electrical box to a side wall or cabinet floor
   at least 12 inches from the back wall.
- mount the electrical box to a wall stud behind the cabinet - where it will not be covered by the downdraft.
   Then provide a clearance hole in the back wall of the cabinet.

#### PREPARE THE DOWNDRAFT

#### Interior/Exterior Blower Duct Connection Installation

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.
- Remove the 4 nuts and 2 clamp channels.
- 3. Remove 2 screws and the gear motor cover.
- Carefully position the blower under the bottom flange of the downdraft with the 3¼" x 10" discharge (3¼" x 14" for exterior blower) pointed in the desired direction.
- 5. Connect motor plug.
- 6. Replace the gear motor cover and 2 sheet metal screws.
- Replace the 2 clamp channels and start the 4 nuts, do not tighten.
- Slide blower left of right to desired position. Use cover plate (supplied) to close up any open space.
- 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

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



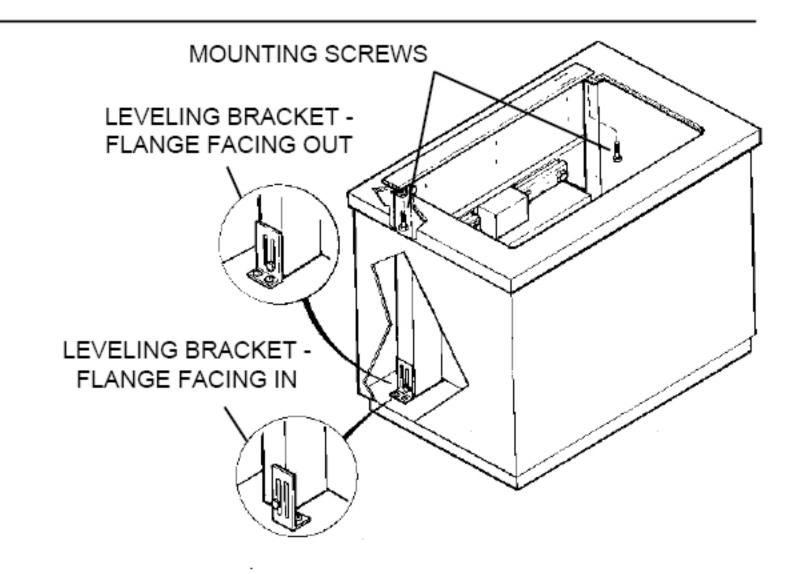
- Place the plastic template against the back flange of the cooktop and center it. Trace around template to mark the downdraft opening.
- 4. Remove cooktop from countertop.
- Cut downdraft opening. Be careful not to chip edges of countertop.

Page 7

## MOUNT THE UNIT

#### All Units

- 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.)
- 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.
- Screw leveling brackets to bottom of cabinet. Tighten screws holding leveling bracket to unit on each side.



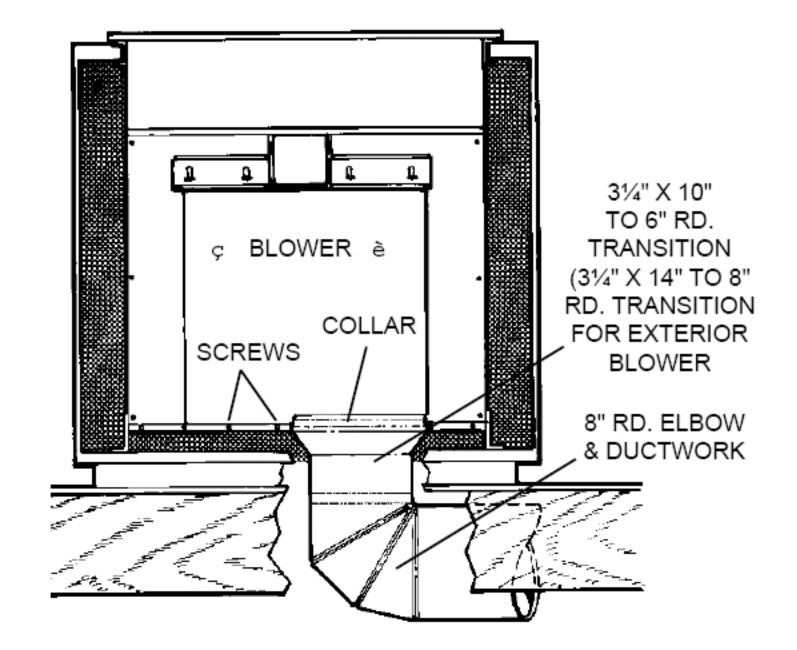
#### **INSTALL DUCTWORK**

#### Blower Installation



- Cut hole in cabinet as well as holes in wall or floor as necessary.
- 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.
- 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  $3\frac{1}{4}$ " x 10" collar ( $3\frac{1}{4}$ " x 14" collar for exterior 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.



Page 8

#### INSTALL ELECTRICAL WIRING

#### Interior Blower Installation



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

- Mount a standard wiring box, with 3-pronged receptacle, inside the cabinet. Make sure the downdraft's power cord can easily reach it.
- Run appropriate power cable into cabinet and connect it to receptacle.
- 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.

#### Exterior Blower Installation



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

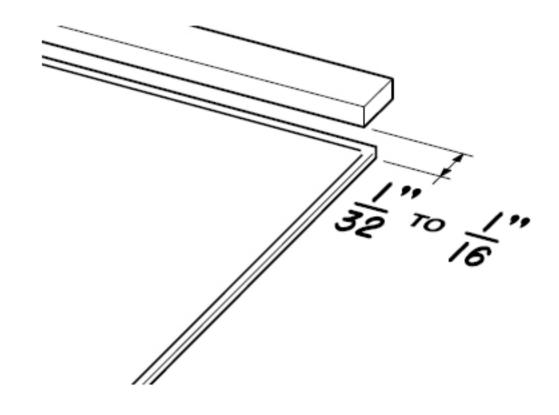
- Mount a standard wiring box, with 3-pronged grounded receptacle, inside the kitchen cabinet. Make sure the unit's power cord can easily reach it.
- Run appropriate power cabinet into cabinet and connect it to electrical box and receptacle.
- Exterior blower may not exceed 6.0 Amp rating.
- Run 2-wire plus ground power cable from the remote blower to wiring box on 10" round discharge plate.
- Connect downdraft wiring to power cable from remote blower. Wire black to black, white to white, and green to green or bare wire.
- Replace wiring box cover.
- Plug the downdraft's power cord into outlet. Make sure that the power cord is routed away from the heat generated by the cooktop.

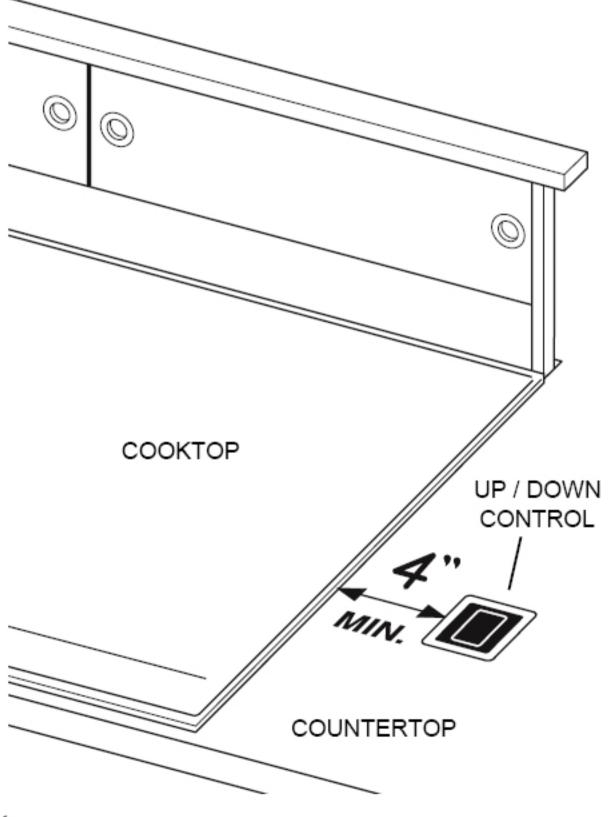
#### INSTALL COOKTOP

#### All Units

 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 <u>can be used</u> 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.

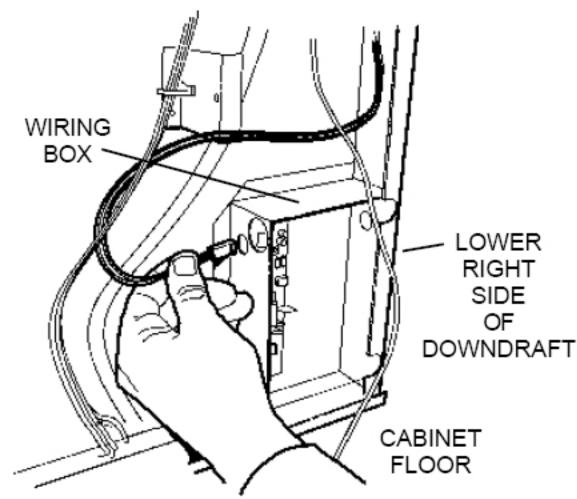
#### Installation

- 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.
- Carefully drill the three holes through the counter top. Be careful not to damage or chip the counter top surface when drilling the holes.
- 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.
- 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.

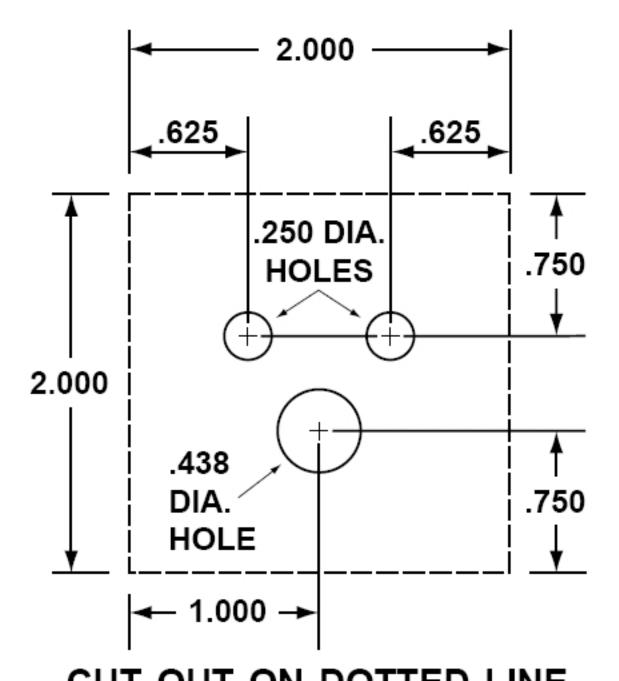


WARNING: To reduce the risk of burns or ignition of clothing by reaching across burners, the remote control must be mounted at least 4" away from any cook top burner.

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.



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



# WIRING BOX REMOTE CABLE

- 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.
- Stuff excess cable out of the way, secure the cable so it is not damaged by items stored in the cabinet, and reassemble downdraft.

#### Downdraft Ventilators

Page 10

#### **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

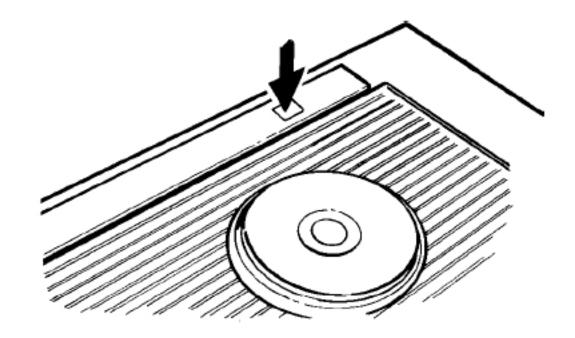
It may be necessary to remove the downdraft blower system from the cabinet in order to service components such as the blower motor or air vent mechanism.

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

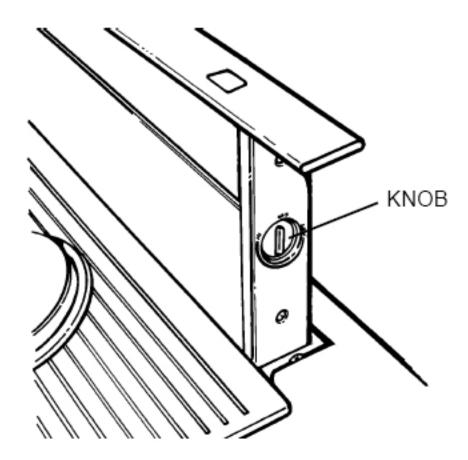
BACKSIDE OF REMOTE SWITCH TEMPLATE

## **OPERATION**

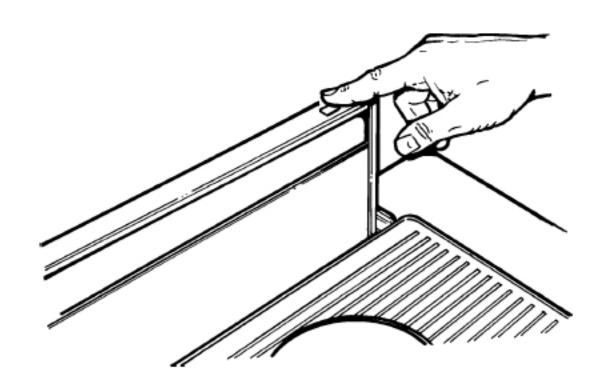
## All Units



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



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.



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.

#### **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.

#### WARRANTY

#### BROAN ONE YEAR LIMITED WARRANTY

Broan 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 MERCHANT ABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

During this one-year period, Broan 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 EXTEND TO FLUO-RESCENTLAMP STARTERS, TUBES, HALOGEN AND INCANDESCENDT BULBS. 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), 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 do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

BROAN'S OBLIGATION TO REPAIR OR REPLACE, AT BROAN'S OPTION, SHALL BE THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY. BROAN SHALL NOT BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH PRODUCT USE OR PERFORMANCE.

Some states 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. This warranty supersedes all prior warranties.

To qualify for warranty service, you must (a) notify Broan at the address or telephone number 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.

Broan-NuTone LLC, 926 W. State Street, Hartford, Wisconsin 53027 (1-800-637-1453)

## **SERVICE PARTS**

1 97015987 97015988 97015989 TOP COVER 2 99140195 99140195 99140195 FILTER SPRING 3 99230345 99230345 POP RIVET	
2 99140195 99140195 99140195 FILTER SPRING	
3 33230343 33230343 1 OI KIVET	
4 97015970 97015971 97015972 CHIMNEY WELDME	NT
5 97015874 97015874 97015874 END CAP RH	
6 98009358 98009358 98009358 END CAP LR	
7 97015973 97015973 97015973 MACHINED CHIMNE	FY SLIDE
8 98010013 98010013 98010013 MACHINED AIRBOX	
9 99160421 99160421 99160421 SCREW RHM 8-32 x	
10 99160419 99160419 99160419 SCREW 8-32 x500	1 10 10 10
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 SPACER	
15 99111184 99111184 99111184 SLIDE STRIPS	
16 97015974 97015975 97015976 AIRBOX WELDMEN	т І
17 99271210 99271210 99271210 CORD SET	
18 99400060 99400060 99400060 STRAIN RELIEF BU	ISHING
19 99271295 99271295 99271295 WIRE HARNESS	
20 99271292 99271292 POT ASSEMBLY	
21 99271291 99271291 99271291 CONTROL BOARD	
22 97015674 97015674 97015674 CRANK ASSEMBLY	<i>,</i>
23 97015977 97015977 97015977 GEAR MOTOR BRA	ACKET
24 99080513 99080542 99080542 GEAR MOTOR	27.77
26 98009802 98009801 98009800 FRONT AIRBOX BC	ттом
27 97015990 97015991 97015992 GEAR MOTOR COV	/ER
INTERNAL BLOWER	R MODELS
97015993 97015994 97015995 GEAR MOTOR COV	/ER
EXTERNAL BLOWE	R MODELS
28 98008158 98008158 98008158 AIRBOX OPENING	COVER
29 98009773 98009773 98009773 AIRBOX CLAMP	
30 99260488 99260488 99260488 WHIZ NUT 10-24	
31 97015700 97015700 97015700 SCROLL BOX ASSE	EMBLY
32 98008150 98008150 98008150 SCROLL BOX COVE	ER
33 98008157 98008157 98008157 CAPACITOR CLAMI	P
34 98008167 98008167 98008167 EXT - SCROLL BOX	WELDMENT
35 99080362 99080362 99080362 MOTOR W/CAPACI	TOR
36 99020247 99020247 99020247 BLOWER WHEEL	
37 99100484 99100484 99100484 MOTOR MOUNT IS	OLATOR
38 99260477 99260477 99260477 WHIZ NUT 1/4-20	
39 99030323 99030323 THERMOSTAT	
40 97015903 97015903 97015903 ADAPTOR PLATE	l
41 98010005 98010005 98010005 OUTLET PLATE	l
42 99271304 99271304 WIRE HARNESS	l
43 99400042 99400042 STRAIN RELIEF BU	ISHING
44 99271296 99271296 99271296 UP/DOWN BUTTON	HARNESS
45 99271306 99271306 99271306 THERMOSTAT WIR	E HARNESS
46 98010010 98010010 98010010 THERMOSTAT MOU	UNTING
BRACKET	l

Page 13

# **SERVICE PARTS**

