46000 SERIES CONVERTIBLE RANGE HOOD

READ AND SAVE THESE INSTRUCTIONS

A INTENDED FOR DOMES-TIC COOKING ONLY.

IMPORTANT

For Non-ducted Installation:

- a) Purchase non-ducted filter separately.
- Remove and discard damper/duct connector and louver cover (See Step 2) in "Prepare the Hood," Page 2.
- c) Follow all steps except steps inside dotted lines.

For Ducted Installation:

Follow all steps, including steps inside dotted lines.

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 listed in the war-
- 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.
- 6. Ducted fans must always be vented to the outdoors.
- Do not use this unit with an additional speed control
- To reduce the risk of fire, use only metal ductwork.
- 9. Use with approved cord-connection kit only.
- 10 This unit must be grounded.

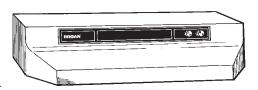
TO REDUCE THE RISK OF A RANGE TOP GREASE FIRE:

- 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.
- 3. 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.

TO REDUCETHE RISK OF INJURYTO PERSONS INTHE EVENT OF A RANGE TOP GREASE FIRE, OBSERVE THE FOLLOWING:*

- SMOTHER FLAMES with a close-fitting lid, cookie sheet, or metal tray, then turn off the burner. BE CARE-FUL 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
- 3. DO NOT USE WATER, including wet dishcloths or towels - a violent steam explosion will result.
- 4. 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.
 - Based on "Kitchen Fire Safety Tips" published by

BREAN



INSTALLER: Leave This Manual With The Homeowner. HOMEOWNER: Use and Care Information on Page 5.



- 1. 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.
- 4. Your hood motor has a thermal overload which will automatically shut off the motor if it becomes overheated. The motor will restart when it cools down. If the motor continues to shut off and restart, have the hood serviced.
- For best capture of cooking impurities, your range hood should be mounted 18-24" above the cooking surface.
- 6. Please read specification label on product for further information and requirements.

TOOLS AND MATERIALS REQUIRED

MATERIALS REQUIRED				
TOOLS				
☐ Drill, electric or ratchet drive				
☐ 1-1/4" Spade bit				
Common head and phillips head screwdriver				
□ Pliers				
Tape measure or ruler and pencil				
For Ducted Installations ONLY:				
☐ Saber saw or drywall saw				
☐ Metal snips				
MATERIALS				
 Electrical wiring and supplies of type to comply with local codes 				
☐ Roof or wall cap				
☐ Roof cement or caulk				
☐ Duct and duct tape				

For Installation on Kitchen Cabinets with Recessed Bottoms Only:

- ☐ Two 1" x 2" x 12" (approximate length) wood strips (purchase locally)
- ☐ Four 1-1/4" long flat head wood screws (purchase locally) to fasten strips to cabinet bottom

PLANNING DUCTWORK INSTALLATION

Begin planning ductwork by deciding where the duct will run between the range hood and the outside. For best performance, use the shortest possible duct run and a minimum number of elbows. There are several choices shown - FIGS. 1A - 1E.

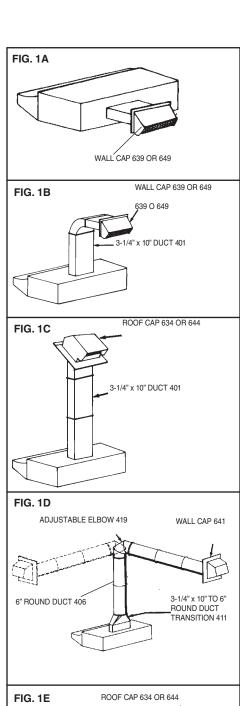
In more complex ducting situations, a 3-1/4" rectangular ducting range hood can be converted to a round duct by means of a transition.

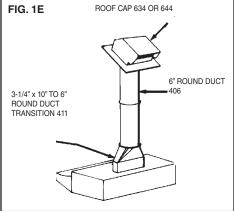
FIG. 1A. Ducting directly through the wall (for range hoods mounted on an exterior wall). Shown are two ways to duct through an outside wall. If a wall cap is used directly off the back of the hood, special care must be taken to make sure that the damper in the damper/duct connector on the hood and damper in the wall cap do not interfere with each other when the hood is operating. This could result in either inadequate air delivery or back drafts. If this condition does exist, remove the hood damper flap. Sometimes when using a wall cap it is easier to duct vertically and then use an elbow as shown in FIG. 1B.

FIG. 1C. Ducting straight up through the roof using $3-1/4" \times 10"$ rectangular duct. (For single story installations.)

FIG. 1D. Ducting between the ceiling joists (for multistory installations) or through the soffit space above the cabinets (where the soffit connects to an outside wall).

FIG. 1E. Straight up through the roof using 6" round duct (for single-story installations).





PREPARING THE RANGE HOOD

- Unpack hood and check contents. You should receive:
 - 1 Aluminum Filter
 - 1 3-1/4" x 10" Damper/Duct Connector (mounted inside of hood for shipping only) (Save screws for mounting.)
 - 1 7" Round Duct Plate (mounted on top of hood) (not shown) (Save screws for mounting.)
- Remove 7" round duct plate from top of hood. Set duct plate aside - with mounting screws.
- 3. Remove wiring box cover. Under cover find:
- 1 Plastic Bag containing loose mounting hardware
- 4. For non-ducted installation, remove louver cover from front of hood. (FIG. 3)
- Remove either top or rear electrical knockout depending upon whether wiring will enter hood from wall or cabinet. (FIG. 4)

DUCTED INSTALLATION ONLY

- NOTE

Louver cover must be installed as shown in Figure 3 to function in ducted mode.

 Remove appropriate duct knockout on hood by inserting screwdriver into edge of knockout and breaking tabs holding knockout to hood. You may have to tap screwdriver with hammer to break tabs. Peel knockout back with pliers. (FIG. 5)

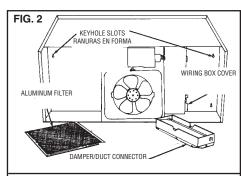
Fit damper/duct connector over opening and secure in place with black sheet metal screws. (FIG. 6)

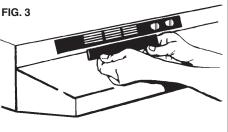
Hinge pins and damper/duct connector should be toward top of hood for ducting through wall or toward back of hood for ducting through cabinet above hood. Seal joint between damper/duct connector and hood with duct tape.

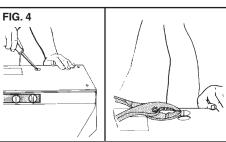
8. 7" round ducted discharge only: Re-install 7" round duct plate removed in Step #2 under "PRE-PARING THE RANGE HOOD" section. For best performance, line up the 7" round duct plate with the 7" round opening on hood. Mount duct plate to hood with 2 screws from duct plate and 2 screws from 3¼" x 10" damper. Install a 7" round damper (purchase separately). Damper flap must open freely in direction of air flow (away from range hood).

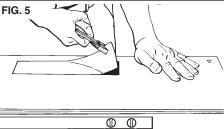
 $\ensuremath{\mathsf{OMIT}}$ STEP 9 if range hood will be installed under cabinets with flush bottom.

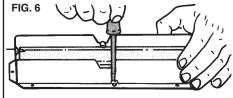
- (For installation on recessed bottom cabinets only)
 Attach a wood filler strip at each side of recessed
 area under cabinet. (Use two 1" x 2" strips cut to
 length.) If recess is more than 1" use thicker strips.
 Attach strips with 1-1/4" screws about 3" from each
 end. See FIG. 7.
- 10. Measure and mark the following (FIGS. 7 & 8):
- a) Electrical line opening
- b) Duct opening
- Drill four pilot holes in corners of marked duct opening as shown and cut opening with saber saw or keyhole saw.
- 12. Use 1-1/4" drill bit to drill opening for electrical connection in wall or cabinet.
- Hold hood up against cabinet bottom and trace keyhole slots onto cabinet bottom of filler strips.
- 14. Screw the four supplied 7/8" wood screws for mounting the hood into the exact center of the narrow end of the keyhole slots marked underneath the cabinet. Allow 3/8" of the screws to project, so the hood can be fitted into place.

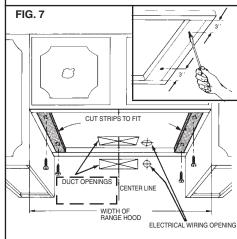












INSTALLING THE DUCTWORK

NOTE

THESE INSTRUCTIONS WILL FOLLOW THE PLANS MADE ON PAGE 2. START AT THE EXTERIOR AND RUN THE DUCT BACK TO THE RANGE HOOD.

FOR BEST PERFORMANCE OF YOUR RANGE HOOD, USE THE SHORTEST POSSIBLE DUCT RUN AND A MINIMUM NUMBER OF ELBOWS.

NEVER VENT A RANGE HOOD INTO AN ATTIC SPACE BECAUSE A BUILDUP OF GREASE WILL BECOME A FIRE HAZARD.

USE ONLY METAL DUCTWORK (DO NOT USE PLASTIC DUCT). ASSEMBLE SECURELY SO THAT IN CASE OF A GREASE FIRE ON THE RANGE, THE FIRE WILL BE CONTAINED INSIDE METAL DUCT WORK.

IT IS A GOOD PRACTICE TO TAPE ALL DUCT CONNECTIONS, MAKING THEM BOTH SECURE AND AIR TIGHT.

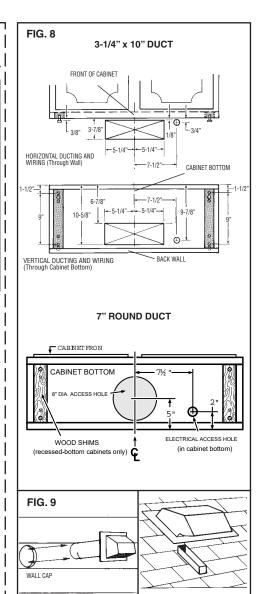
15. Follow appropriate directions below for type of duct work you are installing:

WALL CAPS (FIG. 9)

Use a saber saw to cut a hole slightly larger than duct so duct will line up easily with hood. Install casing strips on outside walls finished in siding. Assemble the duct work and tape all joints. Run duct work back to hood. Fasten wall cap to last section of duct and nail or screw cap to wall. Seal all around flange on wall cap with caulking compound. Make sure that enough duct runs into the room so that the duct will overlap the damper/duct connector by 3/4" when the hood is installed.

ROOF CAPS

Cut hole in roof slightly larger than duct so duct will line up easily with hood. Trim shingles around hole so that they will fit snugly around hood of cap when cap is installed. Assemble the duct work and tape all joints. Run the duct work down to hood. Trim duct parallel to roof pitch, leaving 3/4" of duct projecting above roof. Seal all around duct with roof cement. Install roof cap, inserting back edge of cap under shingles. Seal around cap with roof cement and seal all nail heads and shingles which were cut or lifted. Make sure that enough duct runs into the room so that the duct will overlap the damper/duct connector by 3/4" when the hood is put into place.



INSTALLING THE RANGE HOOD

- 16. Bring electrical cable through access hole drilled in wall or bottom of cabinet. Provide 6" wire leads and install proper connector for type of cable being used. Remove lock nut from connector and let prepared cable project through cabinet or wall opening so it is ready for installation into range hood. (FIG. 10)
- 17. Position hood in place so that:
 - Electrical line is routed through appropriate knockout opening. This step will have to be accomplished while positioning hood. (FIG. 13)
 - Large part of keyhole mounting slots on hood fit onto hood mounting screws projecting from bottom of cabinet. (FIG. 11)
 - Damper/duct connector slides into duct work in wall or cabinet.
- 18. Adjust hood so the front of hood is flush with cabinet
- 19. Tighten the four hood mounting screws securely.
- 20. Install locknut on electrical connector and tighten securely.
- 21. Make electrical connection using wire nuts to connect white wire to white, black wire to black. Ground hood to prepared hole using green ground screw provided. (FIG. 12)
- Replace wiring box cover and screw. Make sure that all wiring is safely contained inside.

NOTE

For Non-ducted Installations Only:

Discard the aluminum filter and purchase a non-ducted filter. Make sure that blue side of non-ducted filter is next to blade.

USE AND CARE

SWITCHES

Right knob controls light.

Left knob controls blower. Rotate knob CLOCKWISE to turn blower ON to HIGH speed. Further CLOCKWISE rotation decreases blower speed. Rotate knob fully COUNTERCLOCKWISE (past HIGH speed) to turn fan OFF.

CLEANING

Finish Keep your range hood clean using a mild detergent suitable for painted surfaces.

Aluminum Filters should be cleaned frequently with a detergent solution to avoid grease build up. They are also dishwasher safe.

FILTER REMOVAL

Filters on the 46000 series hood are removed by turning filter clip to the side and lifting filter or filters out. In ducted version, turn filter retaining clip to one side and place aluminum filter under embossed retaining tabs on back of fan housing. Turn filter clip so that the low end of clip holds single filter firmly in place. (FIG. 13)

In non-ducted version, place non-ducted filter under tabs on back of fan housing. Turn filter retaining clip so that high end holds filter firmly in place. Make sure blue side of filter is next to fan blade.

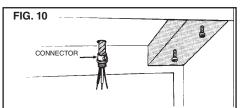
NOTE: Make sure that arrows on filter retaining clip point toward back and front of hood.

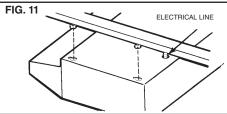
LIGHT BULB REPLACEMENT

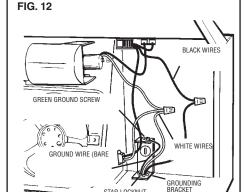
Light bulb (not supplied with hood) should be 75 watts maximum. The lens covering bulb is removed by pressing the two extending tabs together until they release from the retaining slots. (FIG. 14)

FAN ASSEMBLY REMOVAL

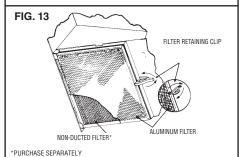
Be sure power is disconnected. Remove filters. Remove the two screws holding the motor bracket to the range hood and unplug the fan assembly. Be careful not to allow fan assembly to drop when the screws are removed. (FIG. 15).

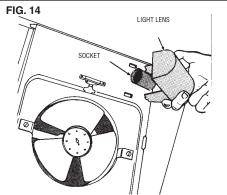


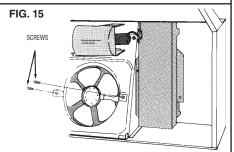


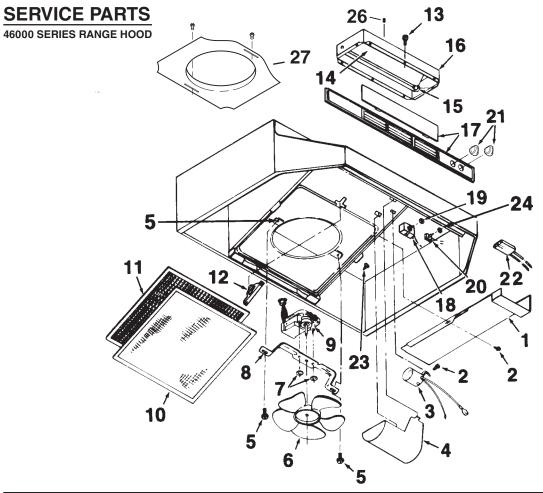


STAR LOCKNUT









KEY NO. NO. CODIGO	PART NO. NO. PIEZ	DESCRIPTION	
1 2 3 4 5	97006184 99170245 97010966 99110437 97011217	Outlet Box Cover #8-18 x 3/8 Phillips Truss Sheet Metal Screw* Bulb Holder with Wires Light Lens Screw/Nut Kit (Includes 2 - #10-16 x .500 screws and 2 - #10-16 sheet metal nuts	HOW TO AVOID A COMMON RANGE-TOP GREASE FIRE • Your range hood provides a protective barrier
6 7 8 9 10 11 12 13 14 15 16 17	99020272 99260428 98005568 97011224 97006931 97007696 99420472 99150415 98005221 99100379 97005544 97015718 97015719 97015720 97015721 99030285 99260491 97016438 99360232 99360232 99360233 99360234 99360248 97013649 99150471	and 2 - # 10-16 sheet metal hus Fan Blade #6-32 Locking Nuts* (2 req.) Motor Mounting Bracket Motor Assembly (Includes Key Nos. 6, 7, 8) Aluminum Filter Non-Ducted Filter (Purchase separately) Filter Retainer #8B x 1/4 Hex Head Sheet Metal Screws* (2 req.) Damper Flap Damper Bushing Damper Assembly (Includes Key Nos. 14 and 15) Nameplate Assembly - Black Nameplate Assembly - White Nameplate Assembly - Almond Nameplate Assembly - Biscuit Solid State Motor Switch 3/8-32 Nut* Light Switch Knob - Black (2 req.) Knob - White (2 req.) Knob - Biscuit (2 req.) Knob - Biscuit (2 req.) Wire Harness (Includes Key Nos. 3,18, and 20) #10-32 x 1/2 Green Ground Screw* Light Bulb, 75 Watt (not included)* 15/32-32 Nut*	between the cooking surface and the cabinets. Keep fan, filters and grease laden surfaces CLEAN according to instructions. Always turn hood ON when cooking at high heat to keep the cooking area and the hood cooler. Use high heat settings only when necessary. Never leave cooking surface unattended. Boilover causes smoking and greasy spillovers that may ignite. Always use adequate-sized utensils. If preparing flaming foods, such as Cherries Jubilee, always turn hood ON to HIGH to prevent a high heat situation which can cause damage or fire. HOW TO EXTINGUISH A COMMON RANGE-TOP GREASE FIRE Never pick up a flaming pan. If dropped, flames can spread quickly. DO NOT USE WATER! A violent steam explosion may result. Wet dishcloths or towels are also dangerous. Smother flames with a close fitting lid, cookie sheet or metal tray. Flaming grease can also be extinguished with baking soda or a multi-purpose dry chemical extinguisher. Turn off surface units - if you can do so without getting burned.
26 27 **	99100408 R680508 97007501	Damper Bumper 7" Round Duct Plate Diode Assembly	

^{*} Standard Hardware. May be purchased locally.
** Not Illustrated.

WARNING

FOR USE WITH RANGE HOODS ONLY.

GROUNDING INSTRUCTIONS

Range Hoods must be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. After attaching this cord kit to the range hood, it is equipped with a cord having a grounding wire with a grounding plug. The plug must be plugged into an outlet that is properly installed and grounded.

WARNING - Improper grounding can result in a risk of electric shock.

Consult a qualified electrician if the grounding instructions are not completely understood, or if doubt exists as to whether the range hood is properly grounded.

Do not use an extension cord. If the power supply cord is too short, have a qualified electrician install an outlet near the appliance.

This kit includes the following:

- (1) 36" Cord & Plug with Cord Connector
- (1) Anti-Rotation Plate with Lock Bushing
- (2) Wire Nuts

CAUTION

TO REDUCE THE RISK OF FIRE AND ELECTRICAL SHOCK, THIS RANGE HOOD CORD-CONNECTION KIT IS U.L. CLASSIFIED ONLY FOR USE WITH THE RANGE HOOD MODEL SERIES LISTED BELOW:

BROAN SERIES

40000, 41000, 42000, 43000, 46000, BCDF1, BCDJ1, BCSD1, BCSEK1, BKDB1, BKDEG1, BKSA1, BKSH1, TEN1, TEN2, BPDP1, ALT1, ALT2, ALT3, CLDA1, CLDH1, CLSC1, CRDE1, CRSF1, SPE1 and ALT4

NUTONE SERIES

RL, ACS, AR1, AHDA1, AHSA1, AVDF1, AVSF1 and NPDP1

KENMORE SERIES

5094, 5104, 5134, 5164, 5184, 5324, 5334, 5128, 5139, 5141, 5129, 5126, 5135 and 5140

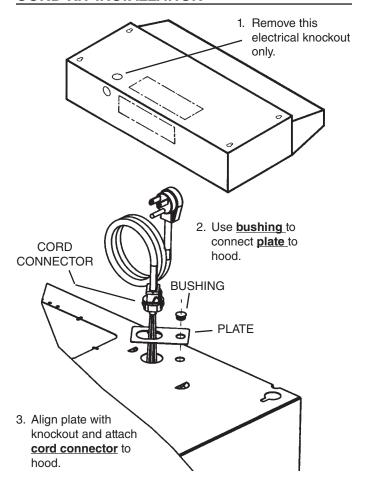
Other cord kits are not U.L. Classified - unless the specific model numbers are listed.

ELECTRICAL RECEPTACLE LOCATION

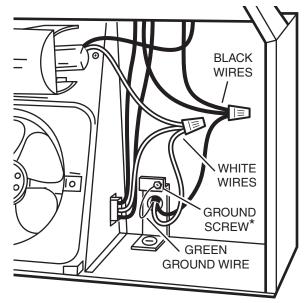
A grounded, electrical receptacle for this cord kit must be in a location that will not allow the cord to come in contact with any heat source. Inside the cabinet above the range is the most common location.

Do not plug into receptacles that would permit cord to come into contact with heat sources.

CORD KIT INSTALLATION



WIRING CONNECTIONS



- Connect <u>black wires</u> together. Connect <u>white wires</u> together. Connect <u>green ground wire</u> beneath <u>ground screw</u>.
- * If the range hood has an internal ground connection beneath a ground screw, A SECOND GROUND SCREW MUST BE USED for the cord kit ground.
 99523894K





Additional Information for Range Hoods meeting ADA Compliance

Broan and NuTone branded residential range hoods can be installed to comply with Sections 308 and 309 of ADA Guidelines, when used with appropriately mounted controls installed at 15" to 48" above the floor and control access should not require reaching over a cooking appliance.

The following range hoods can work in an ADA Compliant situation when the range hood is wired to operate from a dedicated, standard electrical wall switch. To facilitate this application, share the information on the following pages with your electrician when preparing for the installation.

2-SPEED RANGE HOODS:

Broan 40000, F40000, 41000, 42000, 43000, 52000, PM250, QL1, QS1, QSE1, QDE, QML and CBD1 Series, BKSA1, CLSC1, CRSF1

NuTone NS6500, NSPM250, RL6200, WS1 Series, AHSA1, AVSF1

INTERMEDIATE RANGE HOODS: (with variable speed)

Broan 46000 & QT20000 Series

NuTone ACS Series

2-ROCKER & 3-ROCKER SWITCHES

WARNING

ALL ELECTRICAL WORK MUST BE DONE IN ACCORDANCE WITH LOCAL CODES, ORDINANCES, OR NATIONAL ELECTRICAL CODE AS APPLICABLE. FOR SAFETY, THIS PRODUCT MUST BE INSTALLED IN A GROUNDED SWITCH BOX. IF YOU ARE UNFAMILIAR WITH METHODS OF INSTALLING ELECTRICAL WIRING, SECURE THE SERVICES OF A QUALIFIED ELECTRICIAN.

Turn off power and lock out service panel before installing or wiring this product.

Use this control only with copper or copper-clad wire. Do not use aluminum wire with this device.

INSTALLATION

1. WARNING

To avoid fire or electrical shock, turn off power at circuit breaker or fuse. Test that the power is off before wiring.

2. MOUNT THE SWITCH BOX

For 2-Rocker Switch: Install a 3½" deep single-gang switch box or a 2" deep double-gang switch box.

For 3-Rocker Switch: Install a 2½" deep double-gang switch box with a single device adapter plate.

3. ATTACH POWER CABLE

Clamp wiring to switch box and unit using appropriate clamp. Provide 6" leads inside box and fan for easier wiring.

4. CONNECT WIRING

General instructions for all configurations:

Make sure both the switch box and the appliance are properly grounded.

Make sure ground wire is securely fastened to control's ground screw. Tighten ground screw 14 to 16-in. lbs. torque.

Remove insulation per strip gauge on control (approx. 5/8"). Use proper wire nut sizes for number and size of wires.

For push-in terminals: Use #14-AWG solid copper wire only.

For screw terminals: Use #12 or #14-AWG solid copper wire only. Tighten screw terminals 14 to 16-in. lbs. torque.

Choose 4A., 4B. or 4C

4A. When using 2-Rocker or 3-Rocker Switch to turn an appliance ON & OFF:

Make electrical connections following appropriate diagram.

(over)

WARNING

To prevent serious injury from electrical shock or damage to electrical components - **DO NOT WIRE HOT!**

Each individual rocker switch on this control is rated at 15 AMPS, @ 120 VAC. The total load on this control must not exceed 20 AMPS, @ 120 VAC.

Warranty is void if miswired.

NOTE: If the switch has not been wired properly and wires need to be moved, proceed as follows:

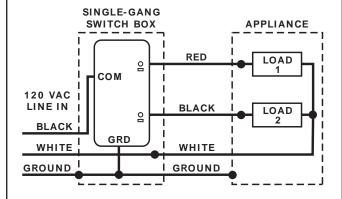
WARNING: To avoid fire or electrical shock, turn off power at circuit breaker or fuse. Test that the power is off before wiring.



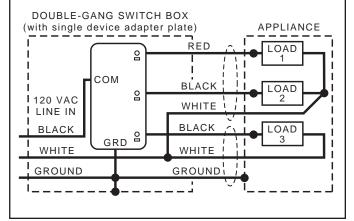
- Each wire opening has a release slot.
- Push a small nail or screwdriver into release slot while gently removing wire.
- DO NOT pull any wire out of the switch without using the release slot. The switch may become damaged.

STEP 4A

2 - ROCKER SWITCH



3 - ROCKER SWITCH



4B. When using a 2-Rocker Switch to turn a range hood ON & OFF from another location with 120 VAC POWER CABLE ENTERING SWITCH BOX:

Remove the range hood's wiring cover. If the hood has a BLACK JUMPER WIRE, it must be cut and the end stripped as shown. (FIG. I)

Use UL approved clamps to secure all cables to hood and box. Make wiring connections following appropriate diagram. Use proper wire nut sizes for number and size of wires. Replace range hood wiring cover.

4C. When using a 2-Rocker Switch to turn a range hood ON & OFF from another location with 120 VAC POWER CABLE ENTERING HOOD:

Remove the range hood's wiring cover. If the hood has a BLACK JUMPER WIRE, it must be cut and the end stripped as shown. (FIG. I)

Use UL approved clamps to secure all cables to hood and box. Make wiring connections following appropriate diagram. Use proper wire nut sizes for number and size of wires. Replace range hood wiring cover.

5. MOUNT CONTROL IN SWITCH BOX

Tuck wires into switch box and fasten the control to box using attached screws.

6. ATTACH SWITCH PLATE

Fasten the switch plate to the control using the short screws from the parts bag.

* 2-SPEED RANGE HOODS:

Broan 40000, F40000, 41000, 42000, 43000, 52000, PM250, CBD1, QL1, QML, QS1 & QSE1 Series. NuTone NS6500, NSPM250, RL6200 & WS1 Series.

** INTERMEDIATE RANGE HOODS:

Broan 46000 & QT20000 Series. NuTone ACS3 Series.

