

# VENTED KITCHEN RANGE HOOD FOR 120 V. OPERATION



KITCHEN  
RANGE HOOD  
MODEL

RH8300XLS  
SERIES

## INSTALLATION INSTRUCTIONS

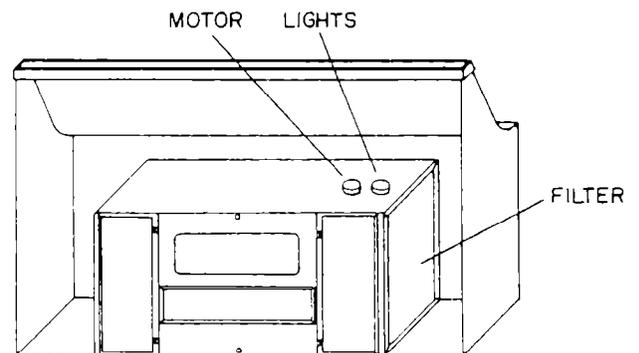
### READ AND SAVE THESE INSTRUCTIONS

Before you begin, read the following instructions completely and carefully. If followed, they will simplify the installation job.

**IMPORTANT: OBSERVE ALL GOVERNING CODES AND ORDINANCES**

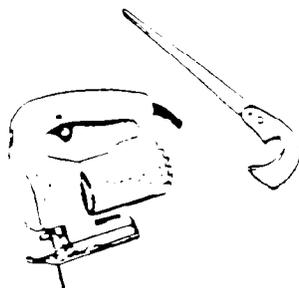
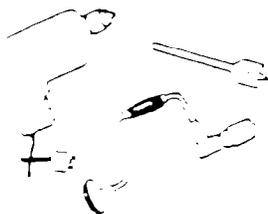
**SAVE THESE INSTRUCTIONS FOR THE LOCAL ELECTRICAL INSPECTOR'S USE**

This unit can be vented vertically through upper cabinets or horizontally through an outside wall. A typical vertical installation is shown in Figure 1. A typical horizontal installation is shown in Figure 2. For proper ventilation when used with an indoor electric grill, see page 4 for guidelines for proper duct sizing. **Improper duct sizing or installation of restrictive roof jacks can reduce air moving capacity and provide inadequate ventilation for an indoor electric grill.**

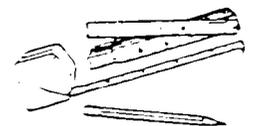
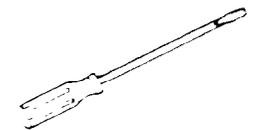


For most efficient smoke removal, the top of the hood should be approximately 66 inches (167.6 cm) from the floor.

### TOOLS AND MATERIALS REQUIRED

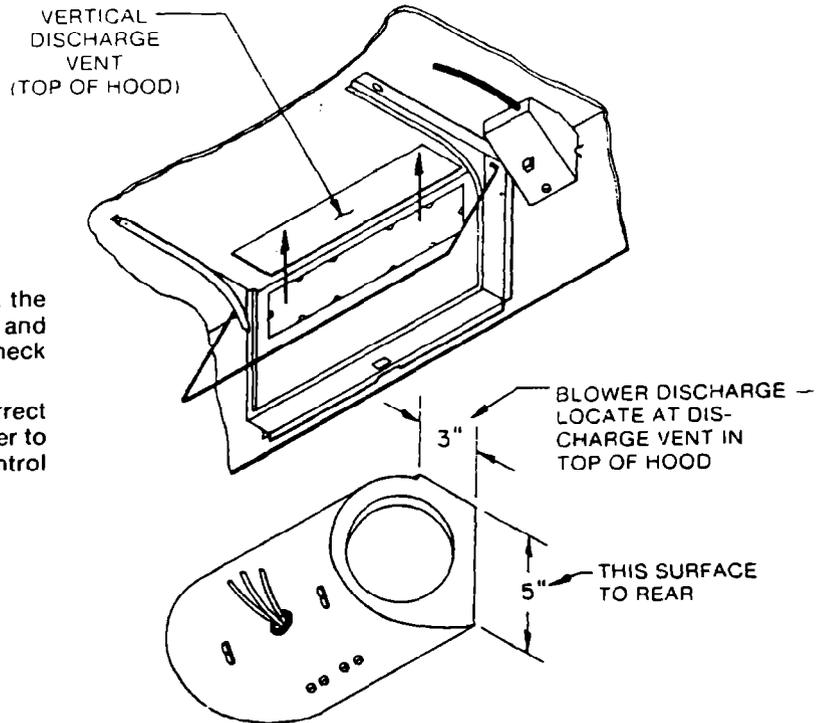


- Drill, electric or ratchet drive, with 1-1/4" wood bit (to drill an access hole in the cabinet or kitchen wall for the electric power line.)
- One common head screwdriver (to secure hood mounting screws to the cabinet and hood sheet metal parts).
- Pliers (for opening knockouts).
- Pencil, ruler and level for marking cabinet locations.
- Saber saw or keyhole saw for cutting the wall or cabinet openings.
- Caulking, metal snips, duct tape, ducts (with elbow and transition, if necessary) and wall cap or roof cap, as required.





# RANGE HOOD BLOWER ORIENTATION



**NOTE:** Before reinstalling the blower Assembly, check the damper for free operation. Open the damper blade and check for any restrictions in the duct system. Check installation instructions for proper duct sizing.

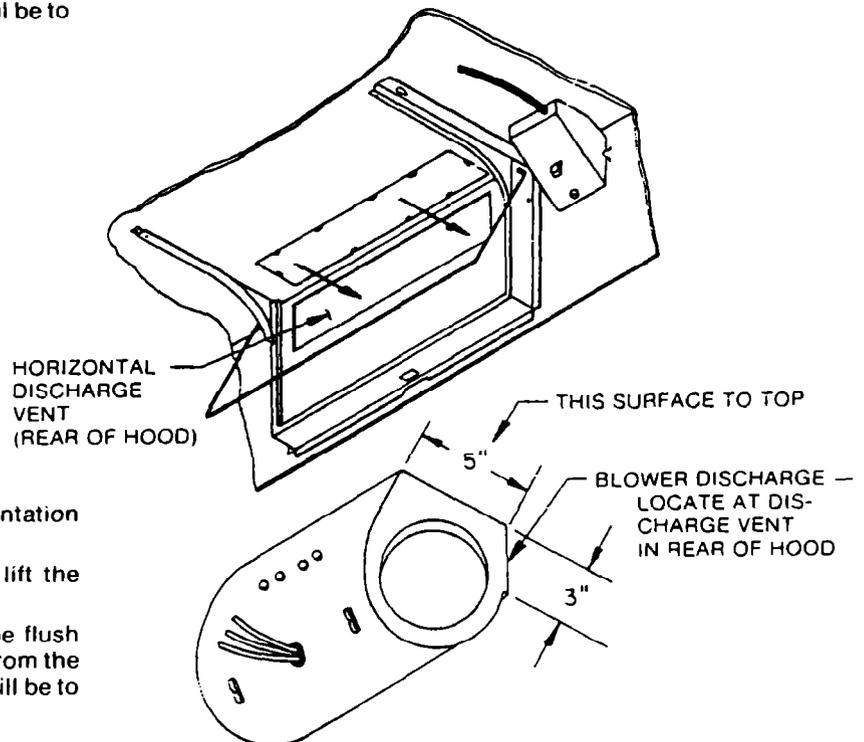
Correct Blower orientation is imperative. Incorrect installation will drastically cut air flow and cause Blower to run at maximum RPM regardless of motor speed control setting.

**FIGURE 7**

**VERTICAL DISCHARGE**

## **VERTICAL DISCHARGE:**

1. Figure 7 shows the proper Blower Assembly orientation for vertical discharge.
2. From the blower position shown in Figure 7, lift the Blower Assembly vertically into mounting position.
3. The 3" blower discharge surface should now be flush against top of hood. This will allow proper air flow from the blower through the top vent. (The wider 5" surface will be to the rear.)



## **HORIZONTAL DISCHARGE:**

1. Figure 8 shows the proper Blower Assembly orientation for horizontal discharge.
2. From the Blower position shown in Figure 8, lift the Blower Assembly vertically into position.
3. The 3" Blower discharge surface should now be flush against rear of hood. This will allow proper air flow from the Blower through the rear vent. (the wider 5" surface will be to the top.)

**FIGURE 8**

**HORIZONTAL DISCHARGE**

These Guidelines are to insure adequate ventilation for an indoor Electric Grill. Indoor electric grills produce more smoke than normal cooking and requires at least 410 CFM to provide adequate ventilation. Less stringent ventilating requirements can deviate from these recommendations.

**HORIZONTAL VENTING**

Figure two on page two shows a direct discharge to the outside through a wall rain cap. Due to the lower CFM rating in this venting position, duct must be limited to a maximum of 2 feet of 3 1/4 x 10 inch duct capped with a wall rain cap with a free discharge area of at least 66 inches square. There should be no bends in the connecting duct between the hood and the wall rain cap.

Figure 9 shows an installation requiring more duct length. A transition to round is used as close to the hood as possible to eliminate the restriction caused by the 3 1/4 x 10 duct. 45° bends should be used instead of 90° bends wherever possible.

**VERTICAL VENTING:**

Figure one on page two shows an installation using 3 feet of 3 1/4 x 10 inch duct terminating in a roof rain cap. In table one we see that 3 feet of 3 1/4 x 10 inch duct is the maximum length of 3 1/4 x 10 inch duct recommended.

For example, if the straight lengths of duct in Fig 9 total 9 ft. the elbow is 45° and the roof rain cap has 113 in<sup>2</sup> free area, choose the duct size required. The 45° elbow can be approximated by dividing the equivalent duct lengths in Table 2 by two.

Since we already have 9 ft. of straight duct, Table 1 tells us that 7" dia. is too small. So we try 8" dia.

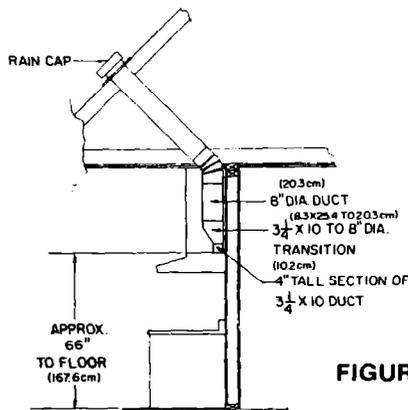
- 9 ft. Straight Duct
- 6 ft. Equivalent straight length of 45° elbow (8" Dia.)
- 15 ft.

Fifteen feet is over the maximum of 13 ft. for 8" dia. duct, so 8" duct is too small.

Move to 9" dia. duct and run through the calculations again.

- 9 ft. Straight Duct.
- 7 ft. Equivalent straight length of 9" dia. duct for 45° elbow.
- 16 ft.

Sixteen feet is under the maximum of 25 ft. for 9" dia. duct, so 9" duct is a good choice.



**FIGURE 9**

**TABLE I**  
Vertical Venting

Duct Size	3 1/4 x 10"	7" dia.	8" dia.	9" dia.	10" dia.
Max. Duct Length (Feet)	3	7	13	25	40

Table I shows the maximum length of duct to be used in conjunction with a roof rain cap having a free area of 113 in<sup>2</sup>.

**TABLE 2**

	Duct Size	Equivalent length of straight duct of same dia.
 90° Elbow	7" dia.	11 ft.
	8" dia.	12 ft.
	9" dia.	14 ft.
	10" dia.	16 ft.

**CFM vs. DUCT LENGTH**  
Equivalent Duct Length (ft.)

Static Pressure	CFM	3-1/4 x 10 Rect.	7" dia.	8" dia.	9" dia.
.06	460	4	8.5	17	30
.10	440	7	16.0	31	55.5
.15	417	12	25.0	50	88
.20	390	18	40	77	142
.25	355	26	61	104	
.275	330	34	73	145	
.30	250	65	136		
.35	180	140			

**NOTE:** The above table is based on vertical discharge. The values in this table are for duct length only and do not account for static pressure loss through roof mounted rain caps.

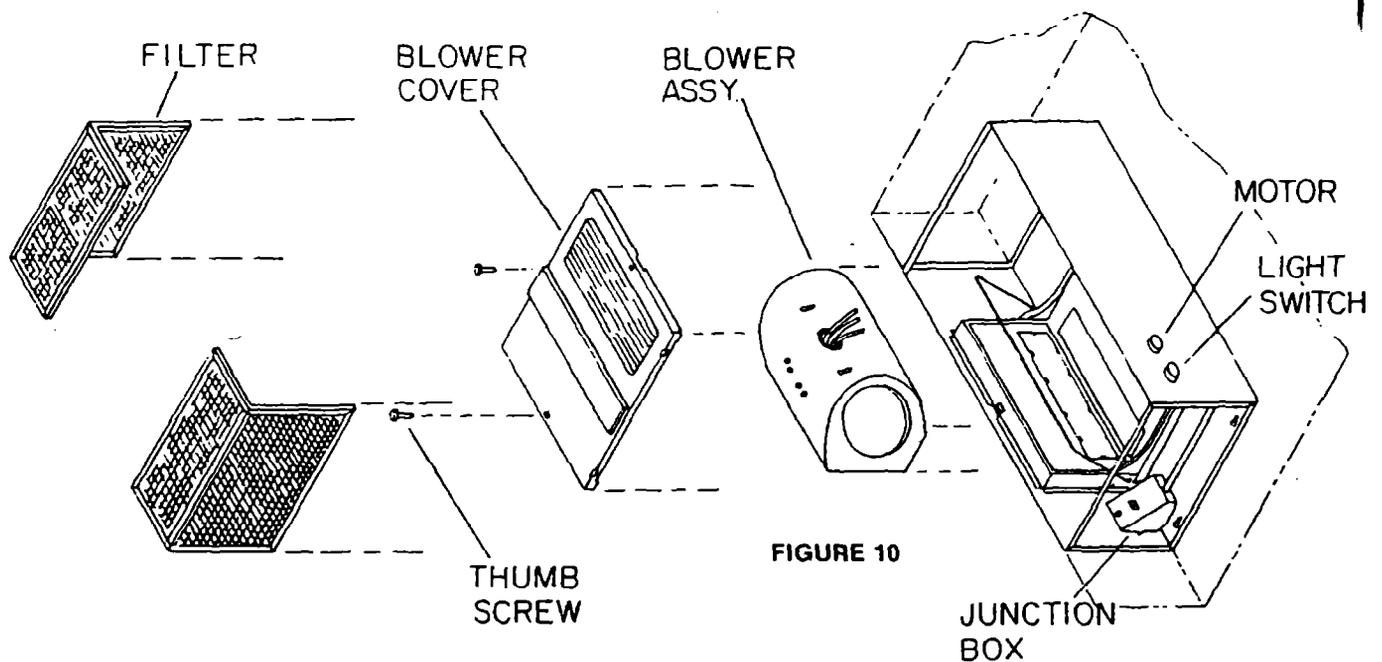


FIGURE 10

## OPERATION AND CARE OF UNIT

### BLOWER CONTROL

This range hood has a solid state motor speed control. This allows an infinite control of blower air moving capacity from 440 CFM down. After setting the control to a desired speed, it will take approx. 15 seconds for the blower to respond to that setting.

### CARE OF BLOWER

Under normal operating conditions, this blower requires no oiling for the first year. After the first year oil every 6 months with SAE 20 oil.

### LIGHTING

Do not use bulb larger than 60 watts in light socket.

### CARE OF FILTER

For greatest efficiency, the permanent aluminum filter should be removed and cleaned periodically. The filter can be washed in a dishwasher.

### CARE OF EXTERIOR SURFACES

Your range hood is a beautifully finished addition to your kitchen. To preserve its lasting beauty, clean with a mild detergent. **DO NOT** use abrasive cleaners.

For most effective removal of smoke and odors, turn on fan a beginning of cooking operation and allow to run until smoke and odors are removed from the room.

## If you need service or assistance, we suggest you follow these four steps:

### 1. Before calling for assistance...

Performance problems often result from little things you can find and fix yourself without tools.

If nothing operates:

- Have you checked the main fuse or circuit breaker box?

### 2. If you need assistance...

Call the Whirlpool COOL-LINE® service assistance telephone number. Dial free from:

Continental U.S. .... (800) 253-1301  
 Michigan ..... (800) 632-2243  
 Alaska & Hawaii ..... (800) 253-1121

and talk with one of our trained Consultants. The Consultant can instruct you in how to obtain satisfactory operation from your appliance or, if service is necessary, recommend a qualified service company in your area.



### 3. If you need service...



Whirlpool has a nationwide network of franchised TECH-CARE® Service Companies. TECH-CARE service technicians are trained to fulfill the product warranty and provide after-

warranty service anywhere in the United States. To locate TECH-CARE service in your area, call our COOL-LINE service assistance telephone number (see Step 2) or look in your telephone directory Yellow Pages under:

<p>APPLIANCES—HOUSEHOLD          MAJOR—SERVICE &amp; REPAIR</p> <p>WHIRLPOOL APPLIANCES          FRANCHISED TECH-CARE SERVICE          SERVICE COMPANIES          XYZ SERVICE CO          123 Maple</p>	<p>OR</p> <p>999-9999</p> <p>OR</p> <p>WASHING MACHINES, DRYERS          &amp; IRONERS—SERVICING</p> <p>WHIRLPOOL APPLIANCES          FRANCHISED TECH-CARE SERVICE          SERVICE COMPANIES          XYZ SERVICE CO          123 Maple</p>	<p>ELECTRICAL APPLIANCES—          MAJOR—REPAIRING &amp; PARTS</p> <p>WHIRLPOOL APPLIANCES          FRANCHISED TECH-CARE SERVICE          SERVICE COMPANIES          XYZ SERVICE CO          123 Maple</p> <p>999-9999</p>
---	--	--

### 4. If you have a problem...

Call our COOL-LINE service assistance telephone number (see Step 2) and talk with one of our Consultants, or if you prefer, write to:

Mr. Guy Turner, Vice President  
 Whirlpool Corporation  
 Administrative Center  
 2000 US-33 North  
 Benton Harbor, MI 49022

If you must call or write, please provide model number, serial number, date of purchase, and a complete description of the problem. This information is needed in order to better respond to your request for assistance.