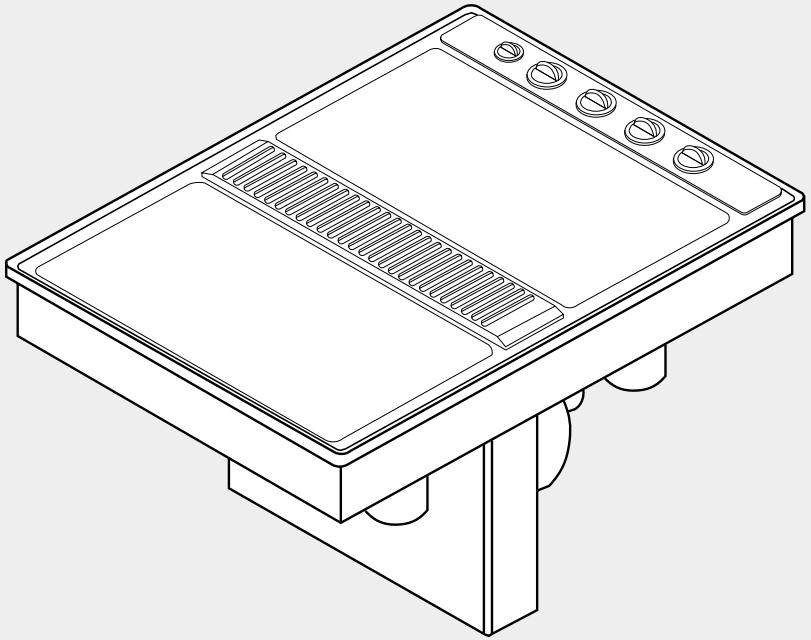
Installation Instructions



30" ELECTRIC Downdraft Cooktop

Modules selected at time of purchase

Quick Reference

Table of Contents:

Need assistance?

Check your Use and Care Guide for a toll-free number to call, or call the dealer from whom you purchased the appliance when you:

- ☑ Have questions about the cooktop installation or operation.
- ☑ Need to obtain the name and number of an authorized service company.

The dealer is listed in the Yellow Pages of your phone directory under "Appliances — Household — Major — Service and Repair."

When you call, you will need:

- ☑ The cooktop model number.
- ☑ The cooktop serial number.

Both numbers are listed on the model/serial rating plate, located on the left side of the downdraft plenum.

Write both numbers down now before installing cooktop.

Model # _____ Serial # _____

IMPORTANT:
Read and save these instructions.

Part No. 208040 A
4381589

IMPORTANT:

Installer: Leave Installation Instructions with the homeowner.

Homeowner: Keep Installation Instructions for future reference.

Save Installation Instructions for local electrical inspector's use.

Before you start...

Important: Observe all governing codes and ordinances.

Proper installation is your responsibility.

- Make sure you have everything necessary for correct installation.
- **Have a qualified technician install this cooktop.**
- Comply with the installation clearances specified on the model/serial rating plate.

Model/serial rating plate is located on the left side of the downdraft plenum.

Cooktop location should be away from strong draft areas, such as windows, doors and strong heating vents or fans. Locate cooktop for convenient use in kitchen.

Grounded electrical system is required. See "Electrical requirements," Page 4.

Venting duct must terminate outdoors.

All openings in the wall or floor where cooktop is to be installed must be sealed.

⚠ WARNING

Electrical Shock Hazard

It is the customer's responsibility to contact a qualified electrical installer, to make sure that the electrical installation is correct, and to make sure the electrical installation follows the National Electrical Code, ANSI/NFPA 70 — latest edition*, and all local codes and ordinances.

Take special care when cutting holes into a wall. Electrical wires may be behind the wall covering and could cause an electrical shock if you touch them.

Disconnect the power to any electrical circuits that could be affected by the installation of this product.

Failure to do so could result in death or serious injury.

Injury Hazard

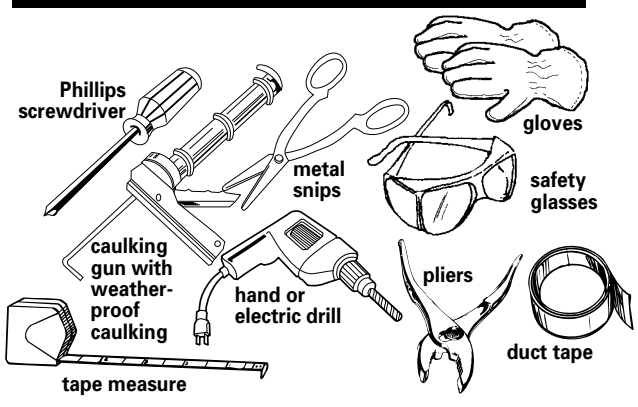
To eliminate the risk of burns or fires, Do Not install cabinets or store things above the cooktop. If cabinets are already installed above the cooktop, install a range hood to the bottom of the cabinet to prevent reaching over a heated cooking surface. The range hood should stick out a minimum of 5 inches (12.7 cm) from the front of the cabinets.

Reaching over a heated cooking surface could result in a serious burn or other injury.

This appliance is Not approved for use in mobile homes.

***Copies of the standards listed may be obtained from:**
National Fire Protection Association
Batterymarch Park
Quincy, Massachusetts 02269

Tools and materials needed:



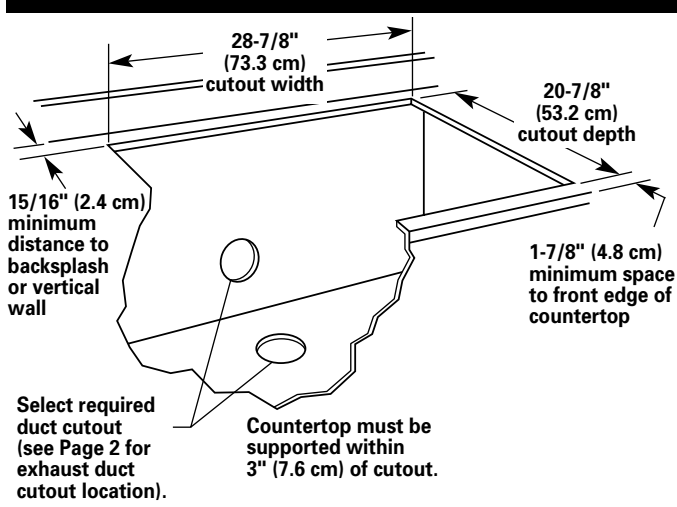
Not shown:
- **wall or roof cap**
- **metal ductwork**
- **2 sheet metal screws to attach transition duct to venting adapter**
- **Two U.L.-listed 1/2" conduit connectors**
- **Flexible, armored or non-metallic sheathed copper cable (with grounding wire) that conforms to existing codes (see "Electrical requirements" Page 4). Length required depends on your installation.**
- **Twist-on connectors. Number and size will depend on your installation. See "Electrical connection," Page 5.**

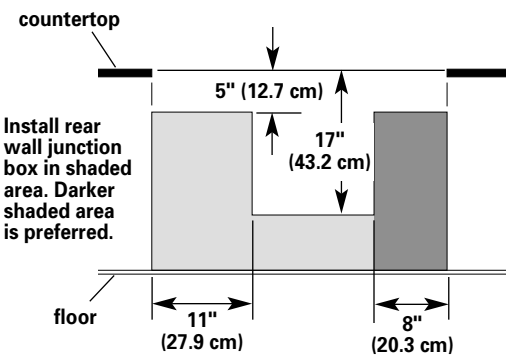
Parts supplied:

Remove parts from packages. Check that all parts were included.

- **literature pack**
- **exhaust flow rate tester card**

Cutout dimensions



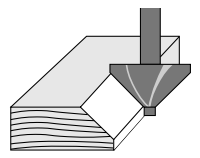


Minimum base cabinet dimensions —
30" (76.2 cm) base cabinet
24" (61.0 cm) base cabinet depth
25" (63.5 cm) countertop depth

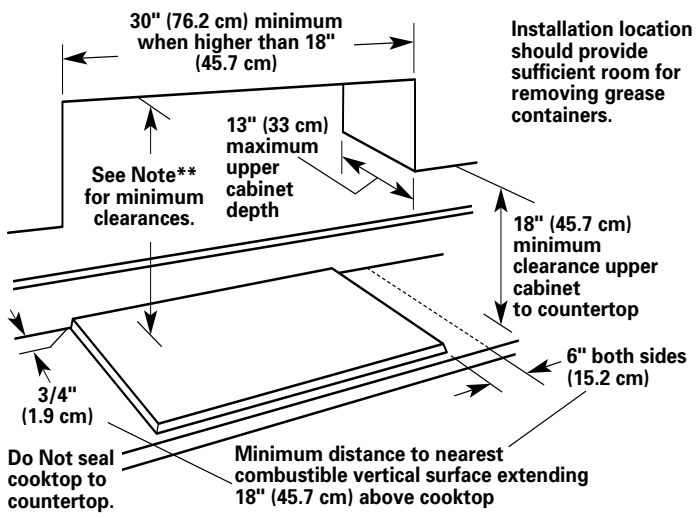
If cabinet has drawers, drawers will need to be removed and drawer fronts installed on front of cabinet.

Cutout preparation:

Decorative laminate — Chamfer all exposed edges to prevent chipping laminate. Cut radius corners and file to smooth edges and to prevent cracking.



Clearance dimensions



**** Note: 24" (61.0 cm) minimum when bottom of wood or metal cabinet is protected by not less than 1/4" flame retardant millboard covered with not less than No. 28 MSG sheet steel, 0.015" stainless steel, 0.024" aluminum or 0.020" copper.**

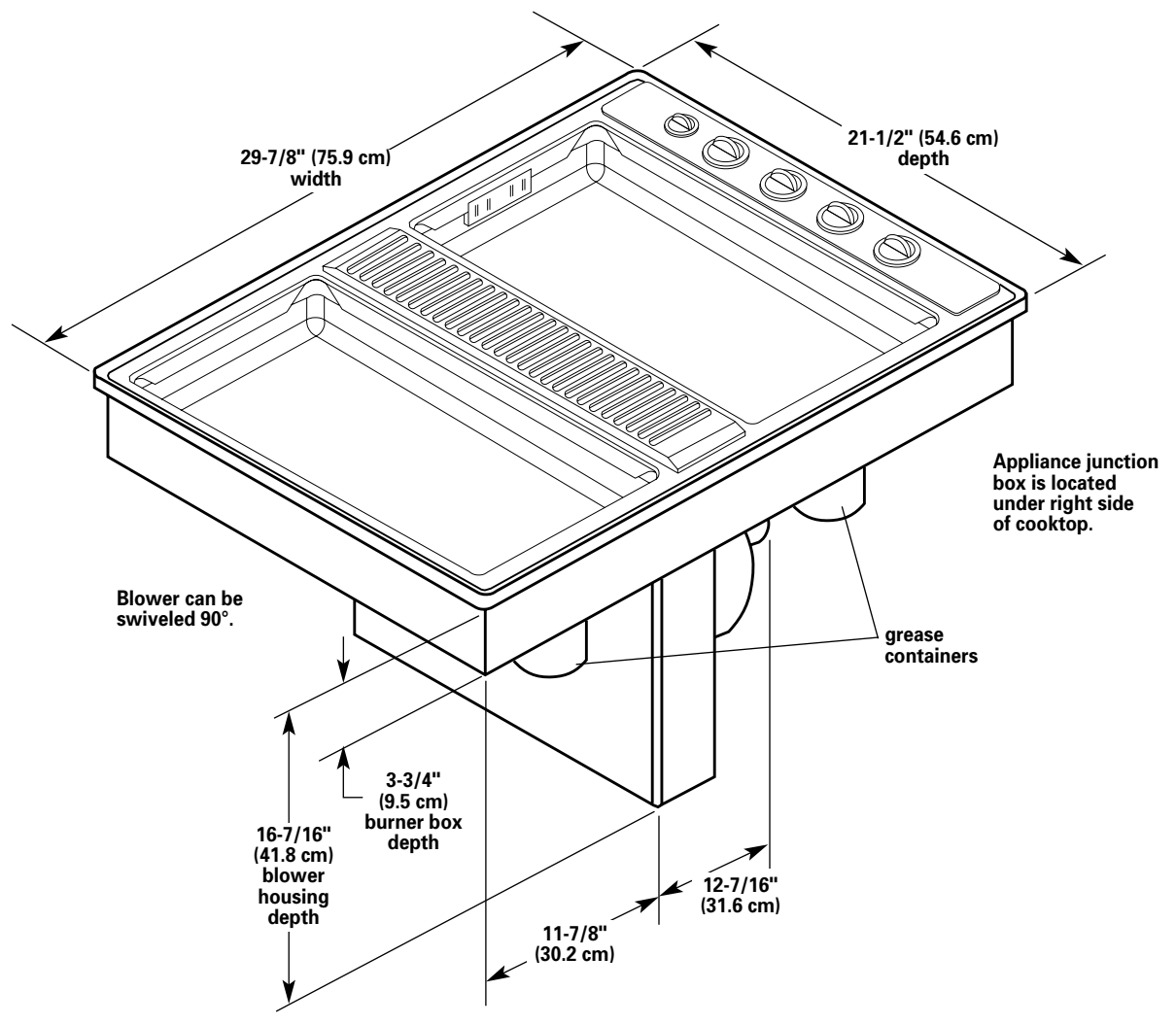
30" (76.2 cm) minimum clearance between the top of the cooking platform and bottom of unprotected wood or sheet metal.

Side clearance — 6" (15.2 cm) minimum clearance between side of cooktop and side wall is recommended for maximum ventilation performance.

Rear clearance — 3/4" (1.9 cm) clearance between rear edge of appliance and rear wall is required.

Motor/blower clearance — 2" (5.1 cm) minimum clearance between motor and cabinet is required for proper cooling. 6" (15.2 cm) clearance is recommended for servicing access.

Product dimensions



Venting requirements

Duct materials needed for installation is not supplied.

⚠ WARNING

Fire Hazard

The venting system MUST end outdoors.

Do Not end the ductwork in an attic, wall, ceiling or other enclosed space.

Do Not use 4" laundry-type wall caps.

Do Not use plastic-type duct.

Do Not block the flow of ventilation air.

Failure to follow these instructions could result in a fire.

Before making cutouts, make sure there is proper clearance within the wall or floor for the exhaust duct.

Do Not cut a joist or stud unless absolutely necessary. If a joist or stud must be cut, then a supporting frame must be constructed.

Determine which venting method to use. See "Venting methods," Page 2.

Next, determine the equivalent duct length using chart on Page 3. This cooktop is equipped with a dual range blower. The equivalent duct length (not actual) determines whether blower is set at the "Low" or "High" range. The blower is set at the "Low" range setting at the factory.

The blower housing must be rotated or swiveled to the proper angle needed for your installation. The blower can be swiveled 90°. The blower maybe rotated horizontally or vertically. Reach through the ventilation chamber to loosen, but Do Not remove, the nuts around blower inlet to adjust the blower.

This downdraft cooktop is rated at 60 feet of straight duct.

- **If duct length is 10 feet (3 m) or less,** 5" diameter round ductwork may be used.
- **If duct length is more than 10 feet (3 m),** use 6" diameter round or 3-1/4" x 10" rectangular duct.

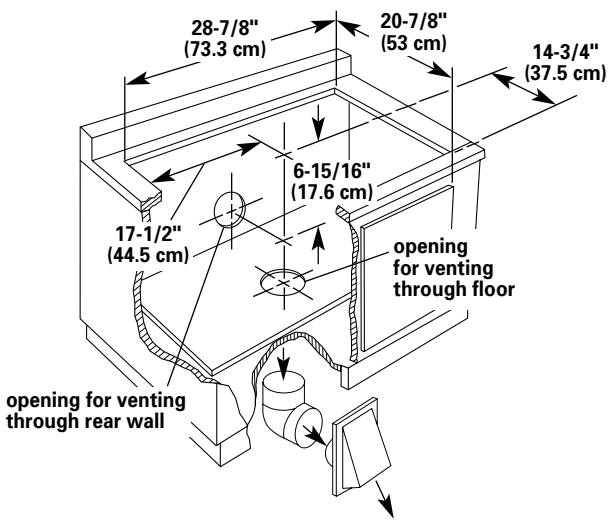
Thermal breaks: In areas of extreme cold weather, it may be necessary to provide a short length of nonmetallic duct as close to the wall as possible to prevent thermal conduction along the metal duct.

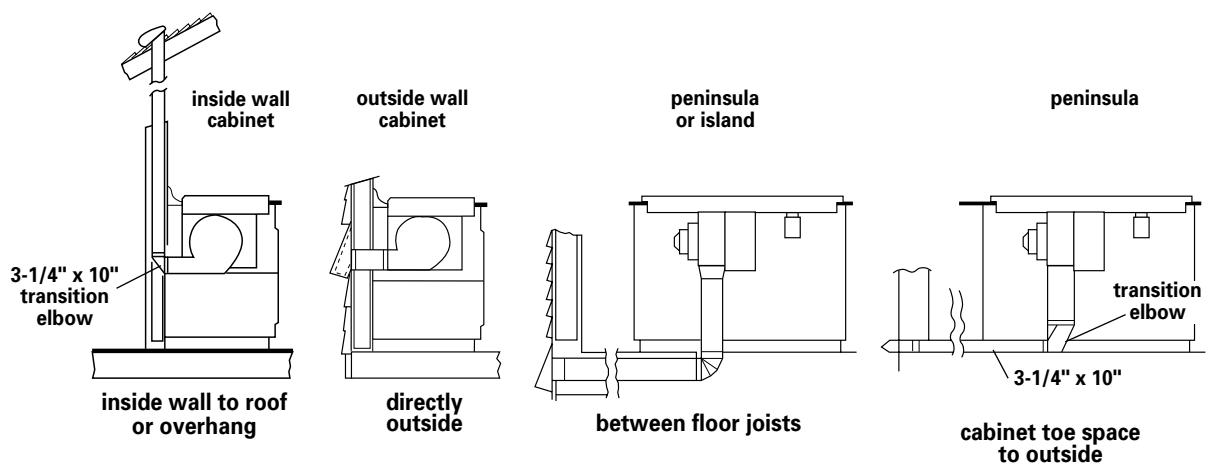
For altitudes above 4,500 ft (1,350 m), reduce recommended duct run by 20%.

For the most efficient and quietest operation:

- ☑ Use 26-gauge minimum galvanized or 25-gauge minimum aluminum metal duct. Poor-quality pipe fittings can reduce air flow. (Note: Local codes may require a heavier-gauge material.) Flexible metal duct is Not recommended.
- ☑ Do Not exhaust more than one downdraft cooktop into a single duct system.
- ☑ The length of duct and number of elbows should be kept to a minimum to provide efficient performance.
- ☑ The size of the duct should be uniform.
- ☑ Use no more than three 90° elbows.
- ☑ Do Not install two elbows together.
- ☑ Make sure there is a minimum of 18" (45.7 cm) of straight duct between the elbows if more than one elbow is used. (Elbows too close together cause excess turbulence that reduces airflow.)
- ☑ Do Not use a 5" elbow in a 6" or 3-1/4" x 10" system. Instead, use a 5" to 6" transition followed by a 6" elbow, or a 5" to 3-1/4" x 10" elbow transition.
- ☑ Do Not reduce back to 5" system after using 6" or 3-1/4" x 10" fittings.
- ☑ Avoid forming handmade crimps. Handmade crimps may restrict airflow.
- ☑ Use the recommended duct caps for proper performance. If an alternate wall or roof cap is used, be certain cap size is not reduced and that it has a backdraft damper.
- ☑ Use duct tape to seal all joints in the duct system.
- ☑ Use caulking to seal exterior wall or roof opening around the cap.

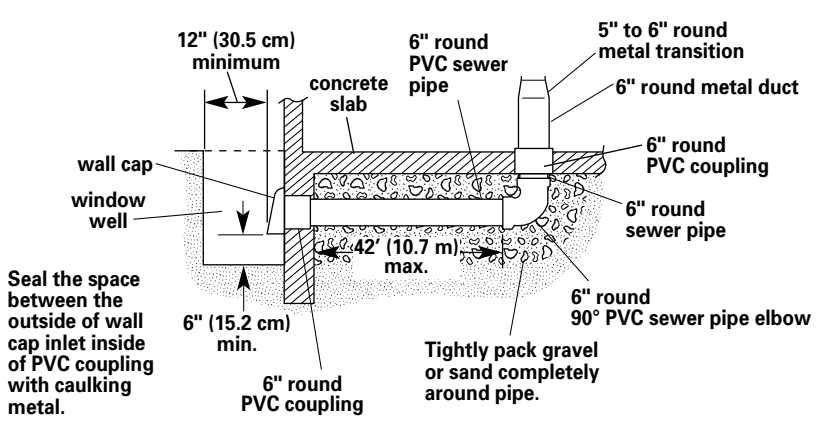
Venting methods



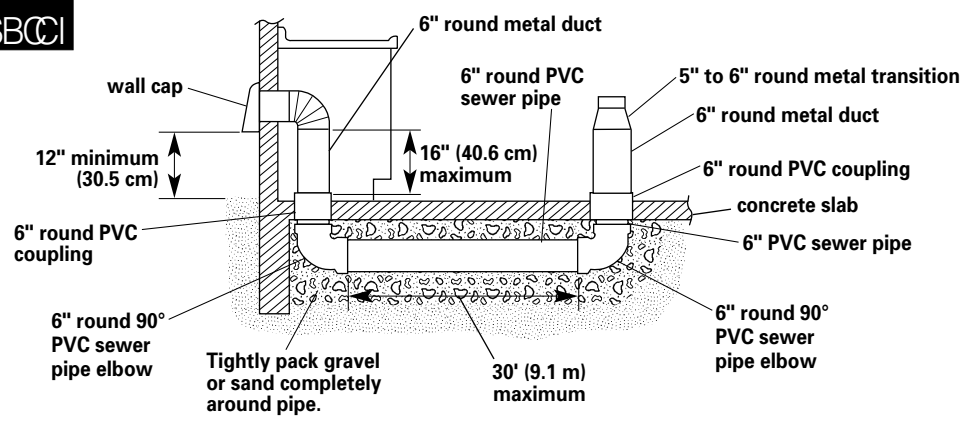


The cooktop may be vented through the rear wall or floor. Common venting methods and the types of materials needed are shown.

Make sure there is proper clearance within the wall or floor for exhaust duct before making cutouts.



optional duct arrangement through window well under concrete slab



optional duct arrangement under concrete slab

Venting requirements con't.

Determine range blower setting.

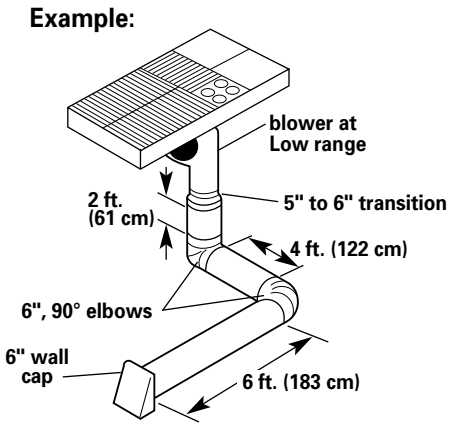
This cooktop is equipped with a dual range blower. It is factory set at "Low" range to be used for equivalent duct length runs of 30 feet (9.1 m) or shorter. **If the equivalent duct length exceeds 30 feet (9.1 m), the blower must be shifted to "High" range. Do Not shift to "High" range for runs shorter than 30 feet (9.1 m).** Using the "High" range on shorter runs will cause excessive noise and conditioned air loss, and will affect the flame pattern of gas burners.
List the number of each piece and length of straight duct you will use. Multiply the equivalent length by the number of pieces. Add the totals to get the total equivalent length of your system.

Duct Piece	Equivalent Length	No. of Pieces/ Length	Total Equivalent Length
straight duct per lineal foot			
3-1/4" x 10"	**1 ft.** (30.5 cm)		
6" round	**1 ft.** (30.5 cm)		
6" flexible	**2 ft.** (61 cm)		
elbow			
6" round 45° elbow	**2.5 ft.** (76 cm)		
6" round 90° elbow	**5 ft.** (152 cm)		
3-1/4" x 10" flat elbow	**12 ft.** (366 cm)		
3-1/4" x 10" 90° elbow	**5 ft.** (152 cm)		
transition to round			
5" to 6" **air flow**	**1 ft.** (30.5 cm)		
3-1/4" x 10" to 6" 90° elbow **air flow**	**9 ft.** (274 cm)		
3-1/4" x 10" to 6"	**4.5 ft.** (137 cm)		
transition to flat			
5" to 3-1/4" x 10" 90° elbow **air flow this direction not recommended** **air flow**	**6 ft.** (183 cm)		
 6" to 3-1/4" x 10" 90° elbow **air flow**	**5 ft.** (152 cm)		
6" to 3-1/4" x 10" **air flow**	**1 ft.** (30.5 cm)		
wall cap*			
3-1/4" x 10"	**0 ft.** (0 cm)		
5" or 6" round	**0 ft.** (0 cm)		
roof cap*			
10" x 10"	**0 ft.** (0 cm)		
thermal break			
5" or 6" round	**2 ft.** (61 cm)		
Total equivalent duct system length			

***** Length for required wall/roof cap has already been incorporated into rating for maximum duct system length. A suitable wall/roof cap must be used.

Duct system equivalent length 30 feet (9.1 m) or less — blower should be set at "Low" range.

Example:

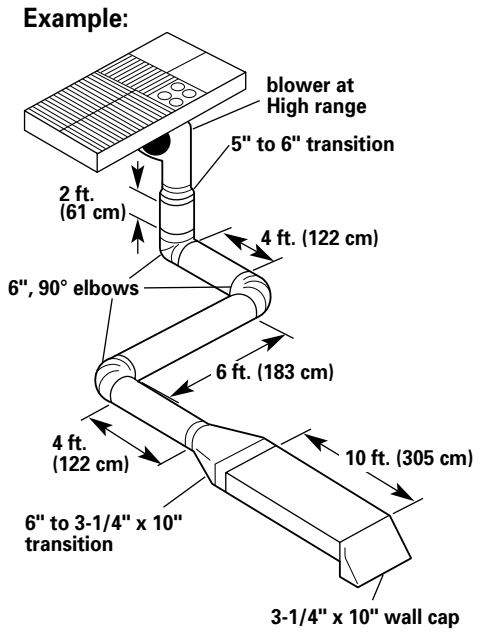


90° elbows (2)	= 10 ft. (305 cm)
12 feet (366 cm) straight	= 12 ft. (366 cm)
5" to 6" transition	= 1 ft. (30.5 cm)
Wall cap	= 0 ft. (0 cm)
Equivalent length of 6" round system	= 23 ft. (701.5 cm)

(In this example, blower can be left in "Low" range as set at factory.)

Duct system equivalent length greater than 30 feet (9.1 m) — blower should be set at "High" range.

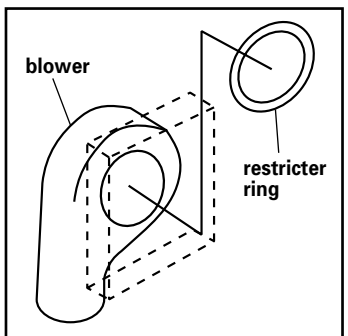
Example:



90° elbows (3)	= 15 ft. (457.2 cm)
5" to 6" transition	= 1 ft. (30.5 cm)
6" to 3-1/4" x 10" transition	= 1 ft. (30.5 cm)
Wall cap	= 0 ft. (0 cm)
16 feet (488 cm) 6" straight	= 16 ft. (488 cm)
10 feet (254 cm) 3-1/4" x 10" straight	= 10 ft. (305 cm)
Equivalent length of 6" round system	= 43 ft. (1311.2 cm)

(In this example, blower **MUST** be shifted to "High" range.)

Note: Flexible metal duct is Not recommended.
If it is used, calculate each foot of flexible duct as two feet of straight metal ductwork. Flexible metal elbows count twice as much as standard elbows.



Shifting blower to "High" range

To shift blower to "High" range:

1. **Turn blower off.**
2. Remove the air grille and filter from blower housing.
3. Snap the spring-loaded restricter ring out of the blower inlet.
4. Reinstall the filter and air grille.

Electrical requirements

IMPORTANT: Save Installation Instructions for electrical inspector's use.

⚠ WARNING

Electrical Shock Hazard

Electrical ground is required on this appliance.

Do Not ground to a gas pipe.

Do Not have a fuse in the neutral or grounding circuit. A fuse in the neutral or grounding circuit could result in an electrical shock.

Check with a qualified electrician if you are not sure the appliance is properly grounded.

Failure to follow these instructions could result in death or serious injury.

If codes permit and a separate grounding wire is used, it is recommended that a qualified electrician determine that the grounding path is adequate.

The downdraft cooktop must be connected to the proper electrical voltage and frequency as specified on the model/serial rating plate. (The model/serial rating plate is located on the left side of the plenum.)

- ☑ A three-wire or four-wire, single-phase, 120/240-volt, 60-Hz, AC-only electrical supply (or three-wire or four-wire, 120/208-volt if specified on the model/serial rating plate) is required on a separate 40-ampere circuit, fused on both sides of the line.
- ☑ A time-delay fuse or circuit breaker is recommended. The fuse size must not exceed the circuit rating of the appliance as specified on the model/serial rating plate.
- ☑ CONNECT WITH COPPER WIRE ONLY.
- ☑ Connected directly to the fused disconnect (or circuit breaker box) through flexible, armored or non-metallic sheathed, copper cable (with grounding wire).
- ☑ Flexible armored cable should connect cooktop directly to the junction box.
- ☑ Fuse both sides of the line.
- ☑ Locate the junction box to allow as much slack as possible between the junction box and cooktop so that the downdraft cooktop can be moved if servicing is ever necessary.
- ☑ A U.L.-listed 1/2" (1.3 cm) conduit connector must be provided at the junction box and cooktop junction box.

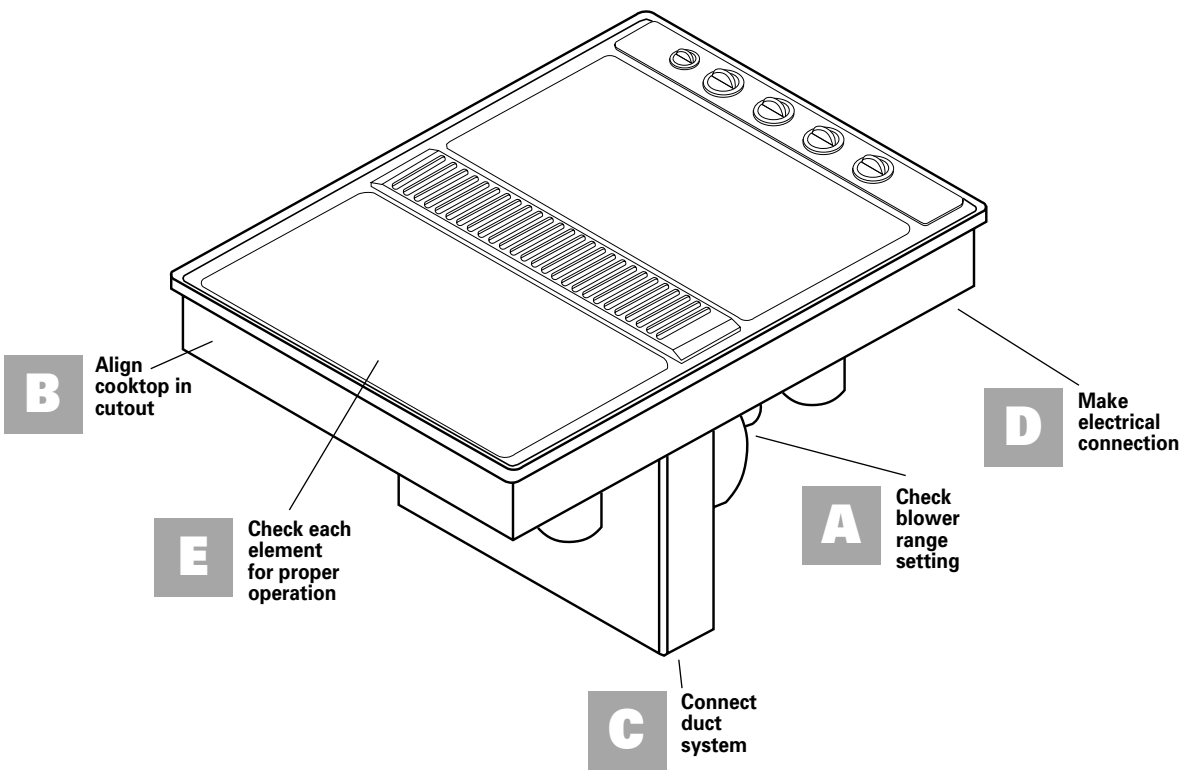
The recommended minimum copper wire size is No.-8 gauge. However, wire sizes and connections must conform to the requirements of the National Electrical Code, ANSI/NFPA 70 — latest edition*, and all local codes and ordinances. Wire sizes and connections must conform with the rating of the appliance.

Copies of the standard listed may be obtained from:

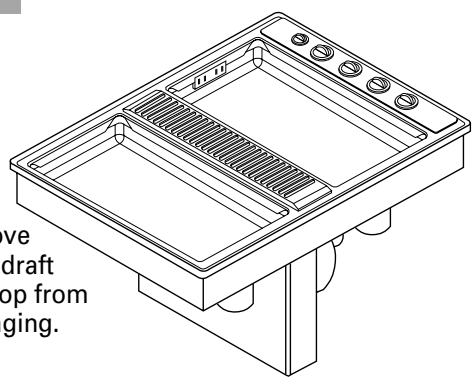
*** National Fire Protection Association**
Batterymarch Park
Quincy, Massachusetts 02269

The wiring diagram is located on the junction box cover plate under the right side of the unit.

Installation steps



A Preparation



1. Remove downdraft cooktop from packaging.

2. Check equivalent duct length to determine if blower should be set at "Low" or "High" range (see chart on Page 3 to determine equivalent duct system length). If duct system length is greater than 30 feet (9.1m), shift the blower range setting from "Low" to "High" (see instructions on Page 3 for shifting the blower range).

If blower must be shifted to "High" range, do it now.

B Installation

It may be easier to connect appliance cable to junction box before inserting cooktop into cutout. See D, "Electrical connection," Page 5.

3. Insert downdraft cooktop into cutout. Check that:

- ☑ cooktop is centered in cutout.
- ☑ front edge of downdraft cooktop is at least 1-1/2" (3.8 cm) from front edge of countertop and parallel to countertop.
- ☑ rear edge of cooktop is at least 3/4" (1.9 cm) from rear wall as recommended.
- ☑ side edge of cooktop is at least 6 inches (15.2 cm) from side wall.

C Duct connection

4. Connect duct system. See "Venting requirements," Pages 2-3. Use duct tape to seal all joints. Duct must end with a wall or roof cap outside the building.

D Electrical connection

WARNING

Electrical Shock Hazard

Electrical ground is required on this cooktop.

Do Not connect to the electrical supply until the cooktop is permanently grounded.

Disconnect power to the junction box before making the electrical connection.

This cooktop must be connected to a grounded, metallic, permanent wiring system, or a grounding connector should be connected to the grounding terminal or wire lead on the cooktop.

Failure to follow these instructions could result in death or serious injury.

This appliance is manufactured with a white (neutral) power supply wire and a cooktop-connected green (or bare) grounding wire twisted together.

Appliance cable and connectors are not provided.

5. Make the electrical connection:

1. **Disconnect the power supply.**
2. Remove the junction box cover from junction box inside cabinet.
3. Remove cooktop junction box cover located on right side of cooktop.
4. Use a U.L.-listed conduit connector to connect appliance cable to junction box inside cabinet.
5. Remove knockout on side of cooktop junction box needed to fit size of appliance cable. Use a U.L.-listed conduit connector to connect appliance cable to cooktop junction box.
6. Connect the two black wires together with twist-on connectors in both junction boxes.
7. Connect the two red wires together with twist-on connectors in both junction boxes.
8. Complete the electrical connection according to local codes and ordinances. (See chart.)

Wire connections: Junction box in wall or cabinet

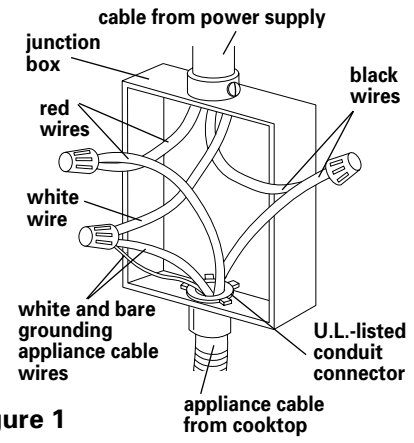


Figure 1

If local codes PERMIT connecting cooktop-grounding conductor to neutral junction box wire:

9. Connect the bare and white appliance cable wires to the neutral (white) wire in junction box. See Figure 1.
10. Replace junction box cover.

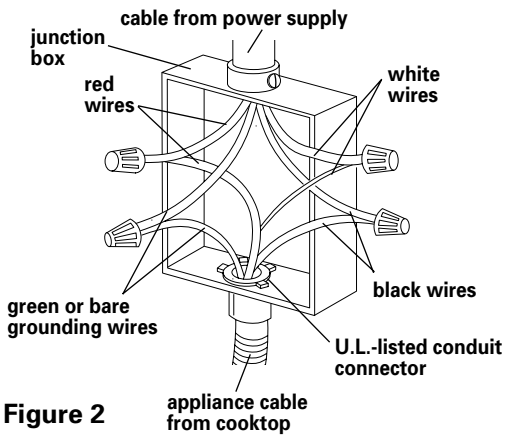


Figure 2

If local codes DO NOT PERMIT connecting cooktop-grounding conductor to neutral white wire in junction box OR If connecting to a four-wire electrical system:

9. Separate bare and white appliance cable wires.
10. Connect white appliance cable wire to neutral (white) wire in junction box. See Figure 2.
11. Connect the bare grounding appliance cable wire to the green grounding wire in junction box. **Do Not connect bare grounding wire to neutral (white) wire in junction box.** See Figure 2.
12. Replace junction box cover.

Wire connections: Cooktop junction box

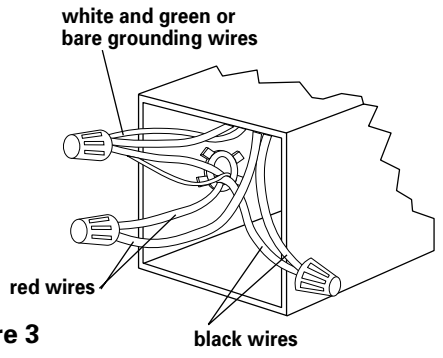


Figure 3

If local codes PERMIT connecting cooktop-grounding conductor to neutral junction box wire:

9. Connect the cooktop white and green or bare grounding wire to the neutral (white) wire and bare grounding wire in the appliance cable. See Figure 3.
10. Replace junction box cover.

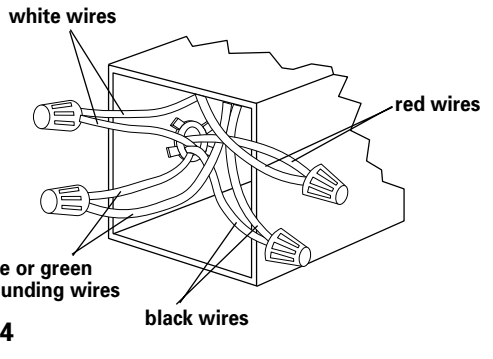


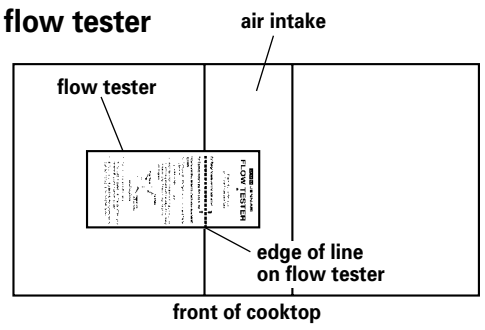
Figure 4

If local codes DO NOT PERMIT connecting cooktop-grounding conductor to neutral white wire in junction box OR If connecting to a four-wire electrical system:

9. Separate bare and white appliance cable wires.
10. Connect white appliance cable wire to neutral (white) wire in junction box. See Figure 4.
11. Connect the bare grounding appliance cable wire to the bare or green grounding wire in junction box. **Do Not connect bare grounding wire to neutral (white) wire in junction box.** See Figure 4.
12. Replace junction box cover.

E Check operation

flow tester



6. Check for proper venting:

- Check that the air filter is in place.
- Align the dotted line labeled for "cooktop models" on the flow tester with the edge of the intake on the left side of the cooktop near the center.
- Turn on the downdraft system:

  If the card is pulled into the air intake, your downdraft is working properly.

  If the card is not pulled into the system, see "Venting requirements," Pages 2-3, and check ductwork installation for possible causes.

7. Install modules in cooktop.

8. Check that modules heat and indicator light is operating correctly. If the downdraft cooktop does not operate, disconnect the power supply and check that wire connections have been made correctly.

You have just finished installing your new downdraft cooktop. To get the most efficient use from your new cooktop, read your Use & Care Guide. Keep Installation Instructions and Guide close to cooktop for easy reference.

Cooktop removal

If removing the cooktop is necessary for cleaning or maintenance:

1. Disconnect electrical supply.
2. Disconnect vent duct system.
3. Lift cooktop out of countertop to complete cleaning or maintenance.

After cleaning and maintenance:

1. Reinstall cooktop in cutout.
2. Check that front edge of cooktop is parallel to front edge of countertop.
3. Connect electrical supply.
4. Connect vent duct system.

If cooktop does not operate:

- ☑ Check that circuit breaker is not tripped or the house fuse blown.
- ☑ Check that wire connections are intact.
- ☑ See Use and Care Guide for troubleshooting list.

If you need assistance:

Check your Use and Care Guide for a toll-free number to call, or call the dealer from whom you purchased this appliance. The dealer is listed in the Yellow Pages of your phone directory under "Appliances — Household — Major — Service and Repair."

When you call, you will need the cooktop model number and serial number. Both numbers can be found on the model/serial rating plate located on the left side of the plenum.

Part No. 208040 A
4381589

Benton Harbor, Michigan 49022

Printed in U.S.A.