# Panasonic

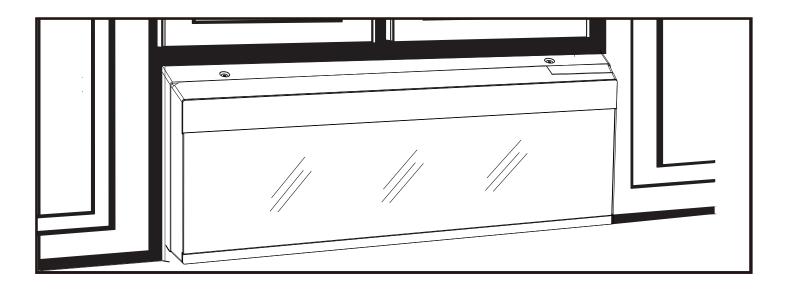
# Installation Instructions

# Over the Range Microwave Oven

# **BEFORE YOU BEGIN**

Read these instructions completely and carefully.

- **IMPORTANT** Save these instructions for local inspector's use.
- **IMPORTANT** Observe all governing codes and ordinances.
- Note to Installer Be sure to leave these instructions with the Consumer.
- Note to Consumer Keep these instructions for future reference.
- **Skill level** Installation of this appliance requires basic mechanical and electrical skills.
- Proper installation is the responsibility of the installer.
- Product failure due to improper installation is not covered under the Warranty.



### READ CAREFULLY. KEEP THESE INSTRUCTIONS.

January 2022

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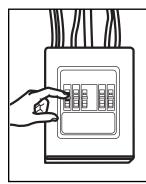
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# **IMPORTANT SAFETY INSTRUCTIONS**

This product requires a three-prong grounded outlet. The installer must perform a ground continuity check on the power outlet box before beginning the installation to ensure that the outlet box is properly grounded. If not properly grounded, or if the outlet box does not meet electrical requirements noted (under ELECTRICAL REQUIREMENTS), a qualified electrician should be employed to correct any deficiencies.



CAUTION: For personal safety, remove house fuse or open circuit breaker before beginning installation to avoid severe or fatal shock injury.

CAUTION: For personal safety, the mounting surface must be capable of supporting the cabinet load, in addition to the added weight of this 63–85 pound (28.5–38.5 kg) product, plus additional oven loads of up to 50 pounds (22.7 kg) or a total weight of 113–135 pounds (51.3–61.2 kg).

CAUTION: For personal safety, this product cannot be installed in cabinet arrangements such as an island or a peninsula. It must be mounted to BOTH a top cabinet AND a wall.

NOTE: For easier installation and personal safety, it is recommended that two people install this product.

IMPORTANT – PLEASE READ CAREFULLY. FOR PERSONAL SAFETY, THIS APPLIANCE MUST BE PROPERLY GROUNDED TO AVOID SEVERE OR FATAL SHOCK.



The power cord of this appliance is equipped with a three-prong (grounding) plug which mates with a standard three-prong (grounding) wall receptacle to minimize the possibility of electric shock hazard from this appliance. You should have the wall receptacle and circuit checked by a qualified electrician to make sure the receptacle is properly grounded.

Where a standard two-prong wall receptacle is encountered, it is very important to have it replaced with a properly grounded three-prong wall receptacle, installed by a qualified electrician.

DO NOT, UNDER ANY CIRCUMSTANCES, CUT, DEFORM OR REMOVE ANY OF THE PRONGS FROM THE POWER CORD. DO NOT USE WITH AN EXTENSION CORD.

### ELECTRICAL REQUIREMENTS

Product rating is 120 volts AC, 60 Hertz, 15 amps and 1.6 kilowatts. This product must be connected to a seperate and dedicated supply circuit of the proper voltage and frequency. Wire size must conform to the requirements of the National Electrical Code or the prevailing local code for this kilowatt rating. The power supply cord and plug should be brought to a seperate and dedicated 15- to 20- ampere branch circuit single grounded outlet. The outlet box should be located in the cabinet above the microwave oven. The outler box and supply circuit should be installed by a qualifed electrician and conform to the National Electrical Code or the prevailing local code.

### DAMAGE—SHIPMENT/ INSTALLATION

- If the unit is damaged in shipment, return the unit to the store in which it was bought for repair or replacement.
- If the unit is damaged by the customer, repair or replacement is the responsibility of the customer.
- If the unit is damaged by the installer (if other than the customer), repair or replacement must be made by arrangement between customer and installer.

### PARTS INCLUDED

### HARDWARE PACKET

| PART   |   | QUANTITY |
|--|---|----------|
| - Contraction  | Wood Screws<br>(¼" x 2")                              | 2        |
|  | Toggle Bolts (and wing nuts) ( $\frac{3}{16}$ " x 3") | 2        |
|  | Self-Aligning Machine<br>Screws (¼"-28 x 3¼")         | 3        |
| and the second | Nylon Grommet<br>(for metal cabinets)                 | 1        |

You will find the installation hardware contained in a packet with the unit. Check to make sure you have all these parts.

NOTE: Some extra parts are included.

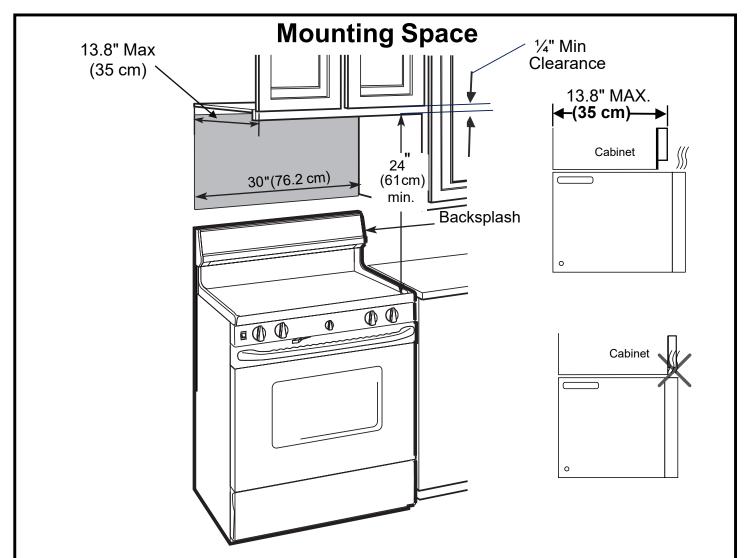
### PARTS INCLUDED (CONT.) ADDITIONAL PARTS

| PART   |   | QUANTITY |
|--|---|----------|
|  | Top Cabinet<br>Template                   | 1        |
|  | Rear Wall<br>Template                     | 1        |
| INSTALLATION<br>INSTRUCTIONS<br>USE & CARE<br>MANUAL | Installation<br>Instructions              | 1        |
|  | Use & Care<br>Manual                      | 1        |
|  | Separately<br>Packed<br>Grease<br>Filters | 2        |
|  | Exhaust<br>adaptor                        | 1        |
|  | Glass<br>Tray                             | 1        |
|  | Turntable<br>Ring                         | 1        |

### Tools you will need:

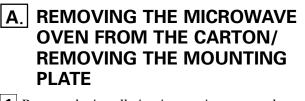
- Tape measure
- Hole saw
- Stud finder or hammer
- Level
- Duct and masking tape
- Scissors

- #1 Phillips screw driver
- Electric drill
- 3/16", 1/2", 5/8" drill bit
- Filler wood blocks for recessed bottom cabinets
- Tin snips



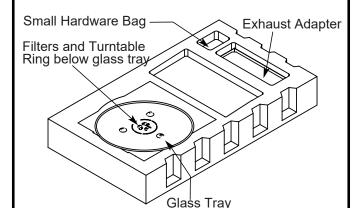
- The space between the cabinets must be 30" (76.2 cm) wide and free of obstructions.
- If you are going to vent your microwave oven to the outside, see Hood Exhaust Section for exhaust duct preparation
- When installing the microwave oven beneath smooth, flat cabinets, be careful to follow the instructions on the top cabinet template for power cord clearance.
- As a guide to installation, see page 26 for Mounting Template Information.
- If the cabinet depth, including the cabinet doors, is more than 13.8", then the unit must be spaced out from wall using adequate materials supporting 150 lbs to allow proper top vent air exhaust/intake.

# 1 PLACEMENT OF THE MOUNTING PLATE

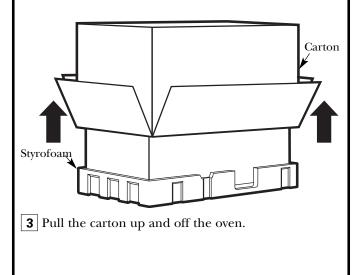


1 Remove the installation instructions, use and care, exhaust adapter, turntable ring, filters, glass tray and the small hardware bag. Do not remove the Styrofoam protecting the top of the oven. please note: Do Not Remove plastic plug protective cover until just before hanging the unit.

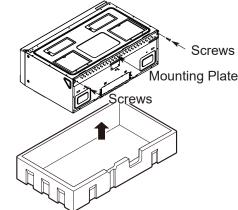
Keep the unit at least 8 inches away from the counter top edge to prevent dropping because of the heavy door



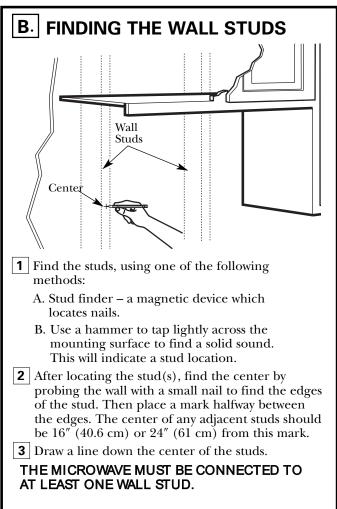
**2** Fold back all 4 carton flaps fully against carton sides. Then carefully roll the oven and carton over onto the top side. The oven should be resting in the Styrofoam.



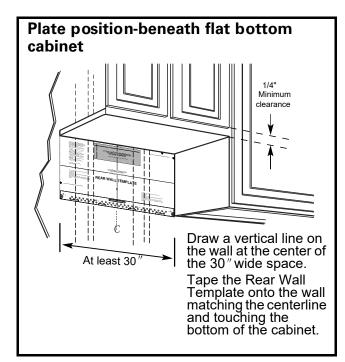
**4** Cut the middle of the outer protective plastic bag to remove the mounting plate

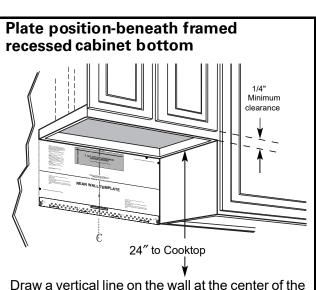


**5** Remove the screws from each end of the mounting plate. This plate will be used as the rear wall template and for mounting. Reinstall the screws into the holes where they were removed.



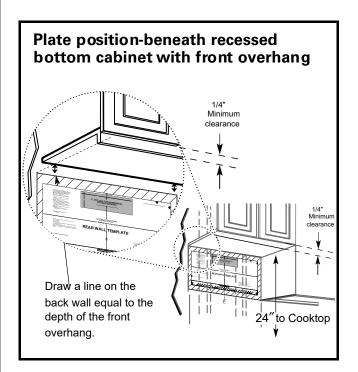
### C. DETERMINING WALL PLATE LOCATION UNDER YOUR CABINET





Draw a vertical line on the wall at the center of the 30<sup>″</sup> space.

Tape the Rear Wall Template onto the wall matching the centerline and touching the bottom cabinet frame.



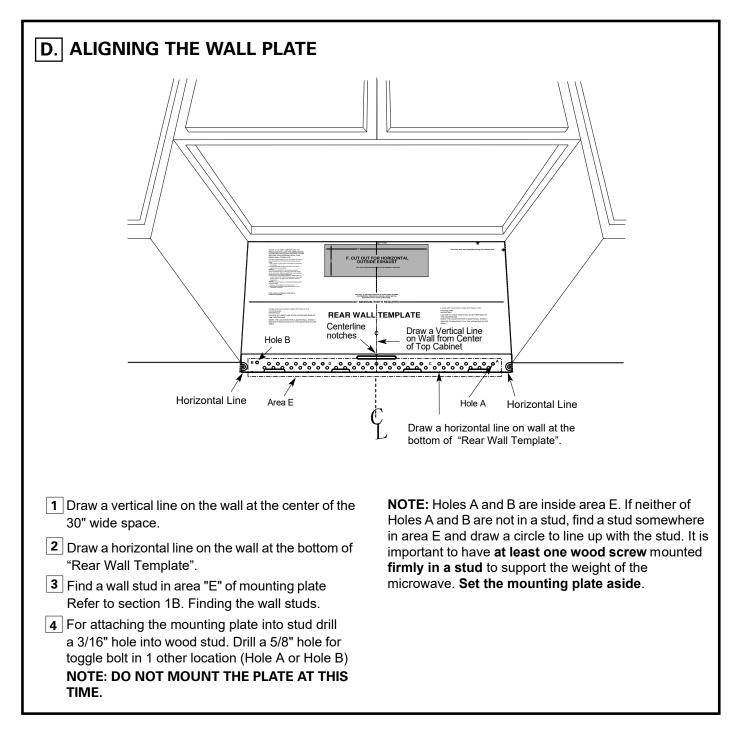
Your cabinets may have decorative trim that interferes with the microwave installation. Remove the decorative trim to install the microwave properly and to make it level.

#### THE MICROWAVE MUST BE LEVEL.

Use a level to make sure the cabinet bottom is level.

If the cabinets have a front overhang only, with no back or side frame, install the mounting plate down the same distance as the front overhang depth. This will keep the microwave level.

- **1** Measure the inside depth of the front overhang.
- **2** Draw a horizontal line on the back wall an equal distance below the cabinet bottom as the inside depth of the front overhang.
- **3** For this type of installation with front overhang only, align the mounting tabs with this horizontal line, not touching the cabinet bottom as described in Step D.



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Α

# **INSTALLATION TYPES** (Choose A, B or C)

This microwave oven is designed for adaptation to the following three types of ventilation:

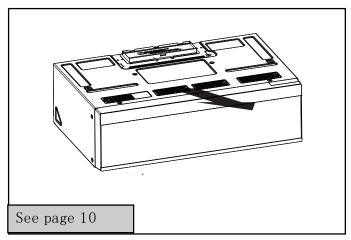
A. Recirculating (Non-Vented Ductless)

B. Outside Back Exhaust (Horizontal Duct)

C. Outside Top Exhaust (Vertical Duct)

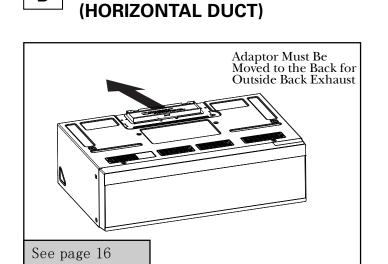
RECIRCULATING

**NOTE:** This microwave is shipped assembled for Recirculating. Select the type of ventilation required for your installation and proceed to that section.



(NON-VENTED DUCTLESS)

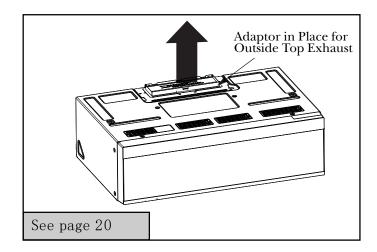
Models are shipped for recirculating exhaust. Some models have a disposable charcoal filter installed to help remove smoke and odors.



OUTSIDE BACK EXHAUST



OUTSIDE TOP EXHAUST (VERTICAL DUCT)



NOTE: Read the pages 14-15 only if you plan to vent your exhaust to the outside. If you plan to recirculate the air back into the room, proceed to page 10.

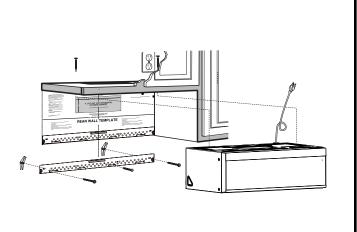
### A RECIRCULATING (Non-Vented Ductless)

#### **INSTALLATION OVERVIEW**

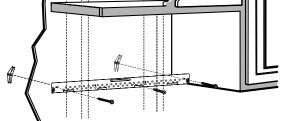
- A1. Attach Mounting Plate to Wall
- A2. Prepare Top Cabinet
- A3. Check Blower Plate
- **A4.** Mount the Microwave Oven
- A5. Install or change Charcoal Filter

#### **IMPORTANT NOTES:**

- Make sure the screws for the blower motor and blower plate are securely tightened when they are reinstalled. This will help to prevent excessive vibration.
- Make sure the motor wiring has been properly routed and secured, and that the wires are not pinched.

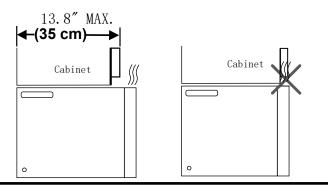


# A1. ATTACH THE MOUNTING PLATE TO THE WALL



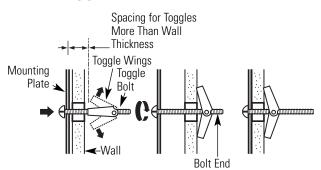
Attach the plate to the wall using toggle bolts. At least one wood screw must be used to attach the plate to a wall stud.

**NOTE:** If the cabinet depth including the cabinet doors is more than 13" then the unit must be spaced out from wall using adequate materials supporting 150 Ibs to allow proper top vent air exhaust/intake.



- **1** Remove the toggle wings from the bolts.
- **2** Insert the bolts into the mounting plate through the holes designated to go into drywall and reattach the toggle wings to <sup>3</sup>/<sub>4</sub>" (19 mm) onto each bolt.

#### To use toggle bolts:



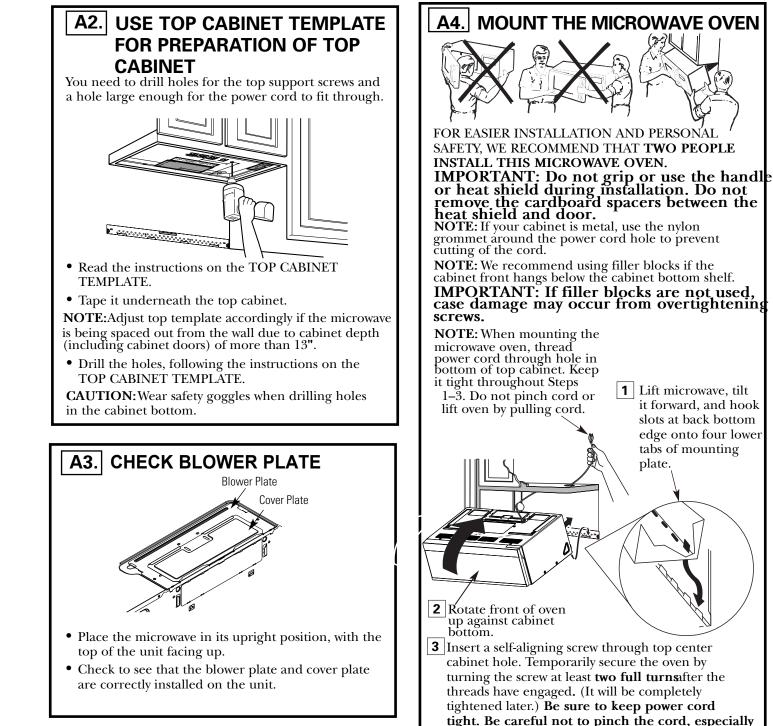
**3** Place the mounting plate against the wall and insert the toggle wings into the holes in the wall to mount the plate.

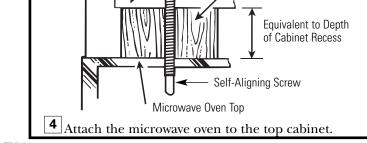
**NOTE:** Before tightening toggle bolts and wood screw, make sure the bottom of the mounting plate touch the bottom of the cabinet when pushed flush against the wall and that the plate is properly centered under the cabinet.

**CAUTION:**Be careful to avoid pinching fingers between the back of the mounting plate and the wall.

**4** Tighten all bolts. Pull the plate away from the wall to help tighten the bolts.

# **Installation Instructions**



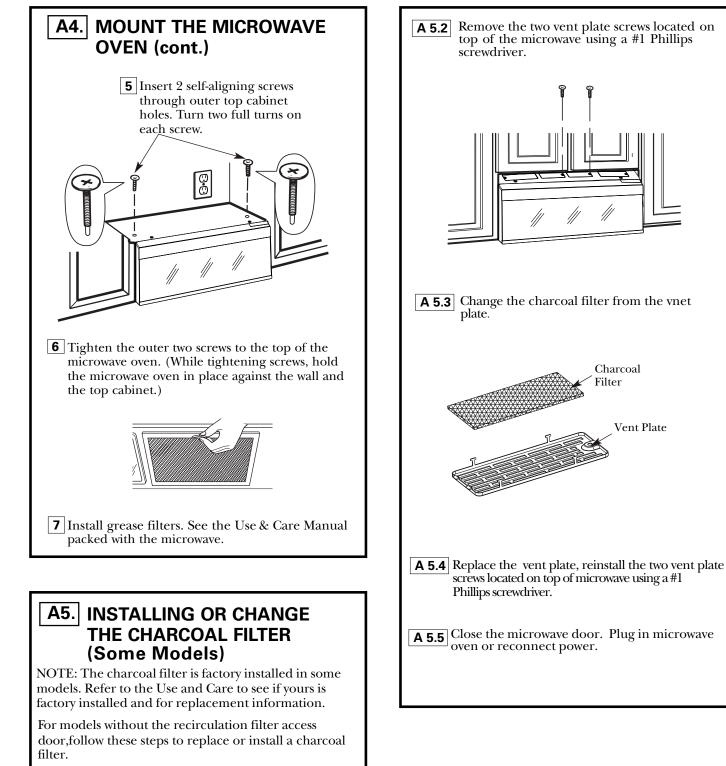


when mounting flush to bottom of cabinet.

Filler Block

Cabinet Bottom Shelf

**Cabinet Front** 



**A 5.1** Unplug microwave oven or disconnect power.

### INSTALLATION INSTRUCTIONS FOR EXTERNAL EXHAUST DUCTING

**NOTE:** If you need to install ducts, note that the total duct length of  $3\frac{1}{4}$ " x 10" (8.2 x 25.4 cm) rectangular or 5" (12.7 cm)diameter/ 6" (15.2 cm) diameter round duct **should not exceed 140 equivalent feet (42.7 m).** 

Outside ventilation requires an EXTERNAL EXHAUST DUCT.Read the following carefully.

**NOTE:** It is important that venting be installed using the most direct route and with as few elbows as possible. This ensures clear venting of exhaust and helps prevent blockages. **Also, make sure dampers swing freely and nothing is blocking the ducts.** 

#### **Exhaust connection:**

The exhaust adaptor has been designed to mate with a standard  $3\frac{1}{4}$ " x 10" (8.2 x 25.4 cm) rectangular duct.

If a round duct is required, a rectangular-to-round

transition adaptor must be used. A 5<sup>"</sup>"""""" (12.<sup>7</sup>7cm) / 6" (15.2cm) diameter duct is acceptable to use.

#### Maximum duct length:

For satisfactory air movement, the total duct length of  $3\frac{1}{4}$ " x 10" (8.2 x 25.4 cm) rectangular or 5" (12.7 cm) diameter / 6" (15.2 cm) diameter round duct **should not** exceed 140 equivalentet (42.7 m).

#### Elbows, transitions, wall and roof caps,

**etc.,** present additional resistance to airflow and are equivalent to a section of straight duct which is longer than their actual physical size. When calculating the total duct length, add the equivalent lengths of all transitions and adaptors plus the length of all straight duct sections. The chart below shows you how to calculate total equivalent ductwork length using the approximate feet of equivalent length of some typical ducts.

| DUCT PIECES |   | EQUIVALENT<br>LENGTH | x    | NUMBER<br>USED | = | EQUIVALENT<br>LENGTH |
|-------------|---|----------------------|------|----------------|---|----------------------|
|             | Rectangular-to-Round<br>Transition Adaptor*                                     | 5 Ft. (1.5 m)        | х    | ( )            | Н | Ft. or m             |
|             | Wall Cap  | 40 Ft. (12.2 m)      | Х    | ( )            | = | Ft. or m             |
|             | 90° Elbow   | 10 Ft. (3 m)         | х    | ( )            | П | Ft. or m             |
|             | 45° Elbow   | 5 Ft. (1.5 m)        | х    | ( )            | = | Ft. or m             |
|             | 90° Elbow   | 25 Ft. (7.6 m)       | Х    | ( )            | = | Ft. or m             |
|             | 45° Elbow   | 5 Ft. (1.5 m)        | х    | ( )            | = | Ft. or m             |
|             | Roof Cap  | 24 Ft. (7.3 m)       | х    | ( )            | = | Ft. or m             |
|             | Straight Duct 6" (15.2 cm)<br>Round or 3¼" x 10"<br>(8.2 x 25.4 cm Rectangular) | 1 Ft. (0.3 m)        | х    | ( )            | = | Ft. or m             |
|             |   |                      | Tota | al Ductwork    | = | Ft. or m             |



\* **IMPORTANT:**If a rectangular-to-round transition adaptor is used, the bottom corners of the damper will have to be cut to fit, using the tin snips, in order to allow free movement of the damper.

Equivalent lengths of duct pieces are based on actual tests and reflect requirements for good venting performance with any vent hood.

# **EXTERNAL EXHAUST DUCTING**

### **OUTSIDE TOP EXHAUST (EXAMPLE ONLY)**

The following chart describes an example of one possible ductwork installation.

| DUCT PIECES   |  | EQUIVALENT<br>LENGTH | x            | NUMBER<br>USED | =               | EQUIVALENT<br>LENGTH |
|---|--|----------------------|--------------|----------------|-----------------|----------------------|
|   | Roof Cap   | 24 Ft. (7.3 m)       | x            | (1)            | =               | 24 Ft. (7.3 m)       |
|   | 12 Ft. (3.6 m) Straight Duct<br>(6"/15.2 cm Round) | 12 Ft. (3.6 m)       | х            | (1)            | =               | 12 Ft. (3.6 m)       |
|   | Rectangular-to-Round<br>Transition Adaptor*        | 5 Ft. (1.5 m)        | х            | (1)            | =               | 5 Ft. (1.5 m)        |
| Equivalent lengths of duct pieces are based on actual tests and reflect requirements for good venting performance with any vent hood. |  |                      | Total Length | =              | 41 Ft. (12.5 m) |                      |

will have to be cut to fit, using the tin snips, in order to allow free movement of the damper.

### **OUTSIDE BACK EXHAUST (EXAMPLE ONLY)**

The following chart describes an example of one possible ductwork installation.

| n  | DUCT PIECES |   | EQUIVALENT<br>LENGTH* | x            | NUMBER<br>USED | =               | Equivalent<br>Length |
|--|-------------|---|-----------------------|--------------|----------------|-----------------|----------------------|
| F  |             | Wall Cap  | 40 Ft. (12.2 m)       | X            | (1)            | =               | 40 Ft. (12.2 m)      |
|  |             | 3 Ft. Straight Duct<br>(3¼″ x 10″/8.2 x 25.4 cm<br>Rectangular) | 3 Ft. (0.9 m)         | Х            | (1)            | Ш               | 3 Ft. (0.9 m)        |
|  |             | 90° Elbow   | 10 Ft. (3 m)          | Х            | (2)            | Н               | 20 Ft. (3 m)         |
|  |             | s of duct pieces are based on<br>nts for good venting performa  | hood.                 | Total Length | =              | 63 Ft. (19.2 m) |                      |
| NOTE: For back exhaust, care should be taken to align exhaust with space between studs, or wall should be prepared |             |   |                       |              |                |                 |                      |

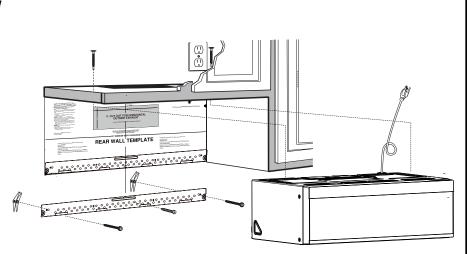
### B OUTSIDE BACK EXHAUST (Horizontal Duct)

#### **INSTALLATION OVERVIEW**

- B1. Prepare Rear Wall
- **B2.** Remove Blower Plate
- **B3.** Attach Mounting Plate to Wall
- B4. Prepare Top Cabinet
- **B5.** Adjust Blower
- **B6.** Mount the Microwave Oven

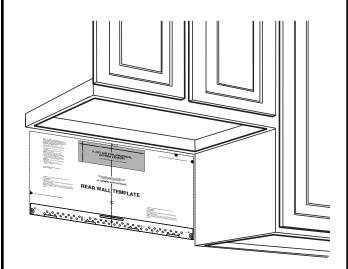
#### **IMPORTANT NOTES:**

- Make sure the screws for the blower motor and blower plate are securely tightened when they are reinstalled. This will help to prevent excessive vibration.
- Make sure the motor wiring has been properly routed and secured, and that the wires are not pinched.



### B1. PREPARING THE REAR WALL FOR OUTSIDE BACK EXHAUST

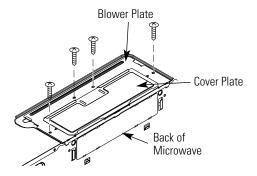
You need to cut an opening in the rear wall for outside exhaust.



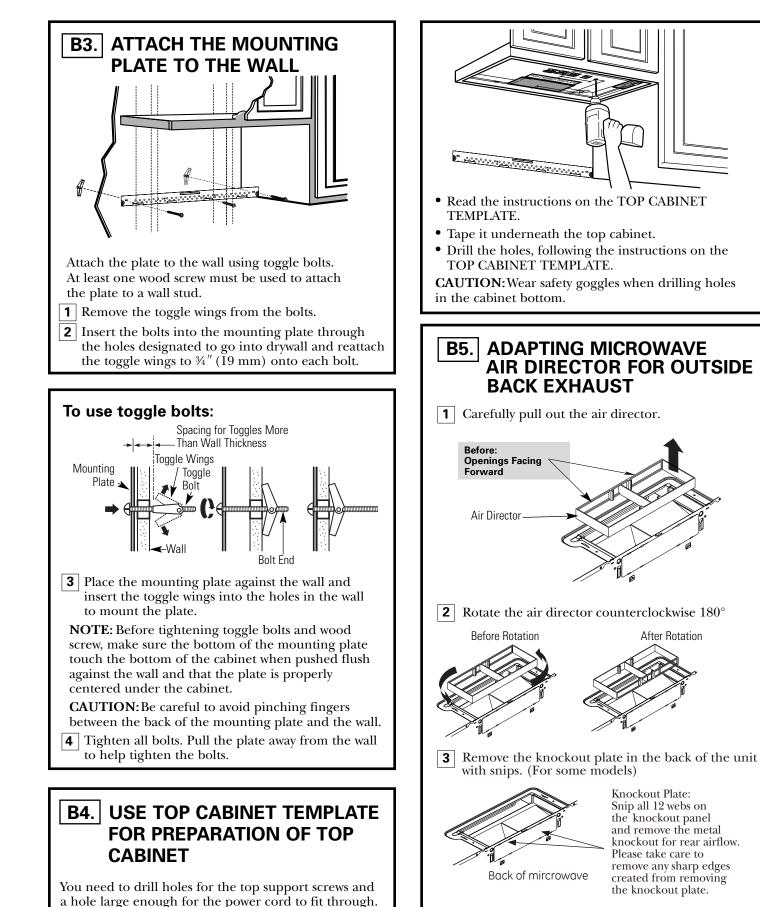
- Read the instructions on the REAR WALL TEMPLATE.
- Tape it to the rear wall.
- Cut the opening, following the instructions of the REAR WALL TEMPLATE.

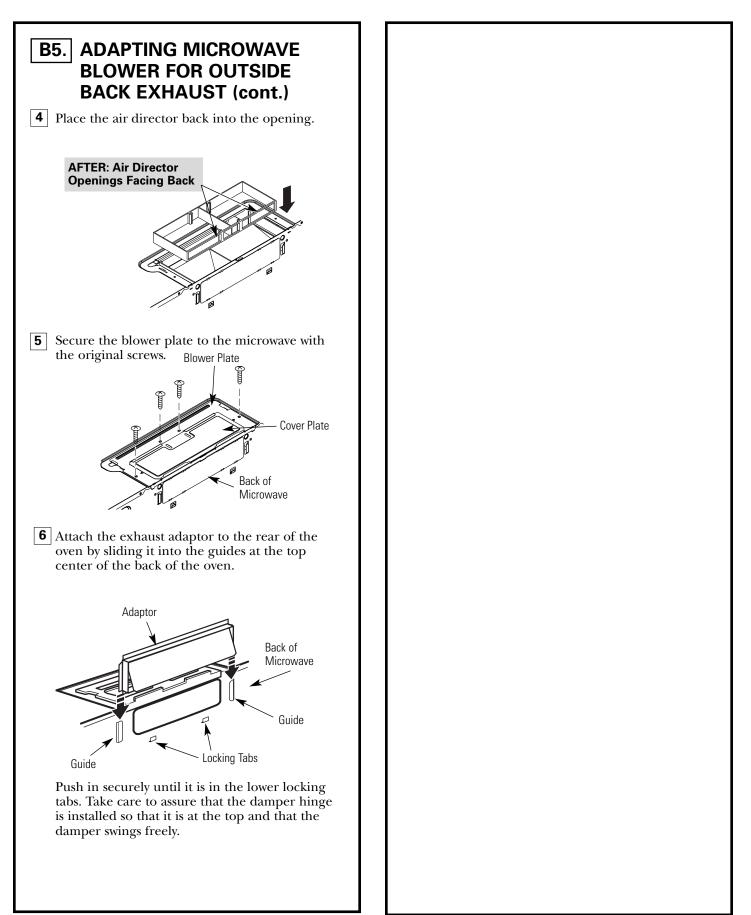
### **B2.** REMOVE BLOWER PLATE

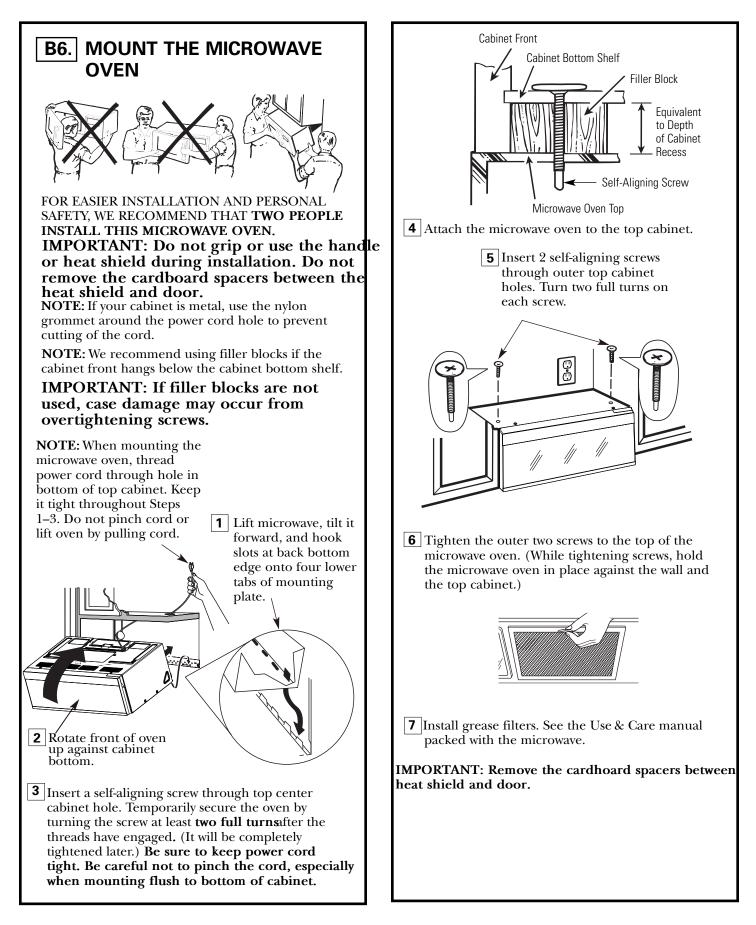
Remove and save the screws that hold the blower plate to the microwave. Lift off the blower plate.



• The cover plate is installed with the blower plate, not need to unintall.







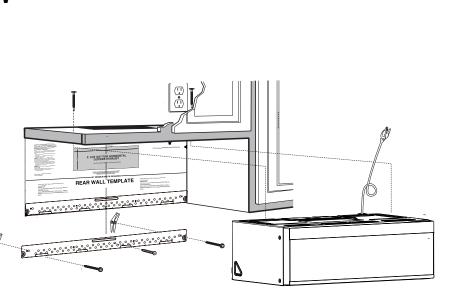
### C OUTSIDE TOP EXHAUST (Vertical Duct)

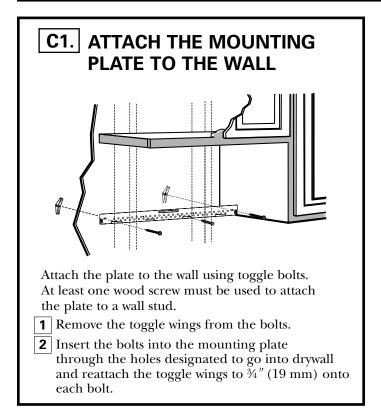
#### **INSTALLATION OVERVIEW**

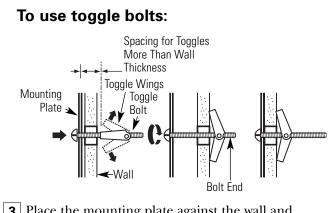
- C1. Attach Mounting Plate to Wall
- C2. Prepare Top Cabinet
- **C3.** Adapting Microwave Blower for Outside Top Exhaust
- C4. Check Damper Operation
- C5. Mount Microwave Oven
- C6. Adjust Exhaust Adaptor
- **C7.** Connect Ductwork

#### **IMPORTANT NOTES:**

- Make sure the screws for the blower motor and blower plate are securely tightened when they are reinstalled. This will help to prevent excessive vibration.
- Make sure the motor wiring has been properly routed and secured, and that the wires are not pinched.







**3** Place the mounting plate against the wall and insert the toggle wings into the holes in the wall to mount the plate.

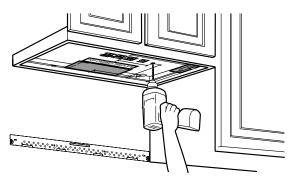
**NOTE:** Before tightening toggle bolts and wood screw, make sure the bottom of the mounting plate touch the bottom of the cabinet when pushed flush against the wall and that the plate is properly centered under the cabinet.

**CAUTION:**Be careful to avoid pinching fingers between the back of the mounting plate and the wall.

**4** Tighten all bolts. Pull the plate away from the wall to help tighten the bolts.

### C2. USE TOP CABINET TEMPLATE FOR PREPARATION OF TOP CABINET

You need to drill holes for the top support screws, a hole large enough for the power cord to fit through, and a cutout large enough for the exhaust adaptor.

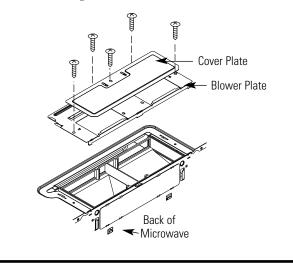


- Read the instructions on the TOP CABINET TEMPLATE.
- Tape it underneath the top cabinet.
- Drill the holes, following the instructions on the TOP CABINET TEMPLATE.

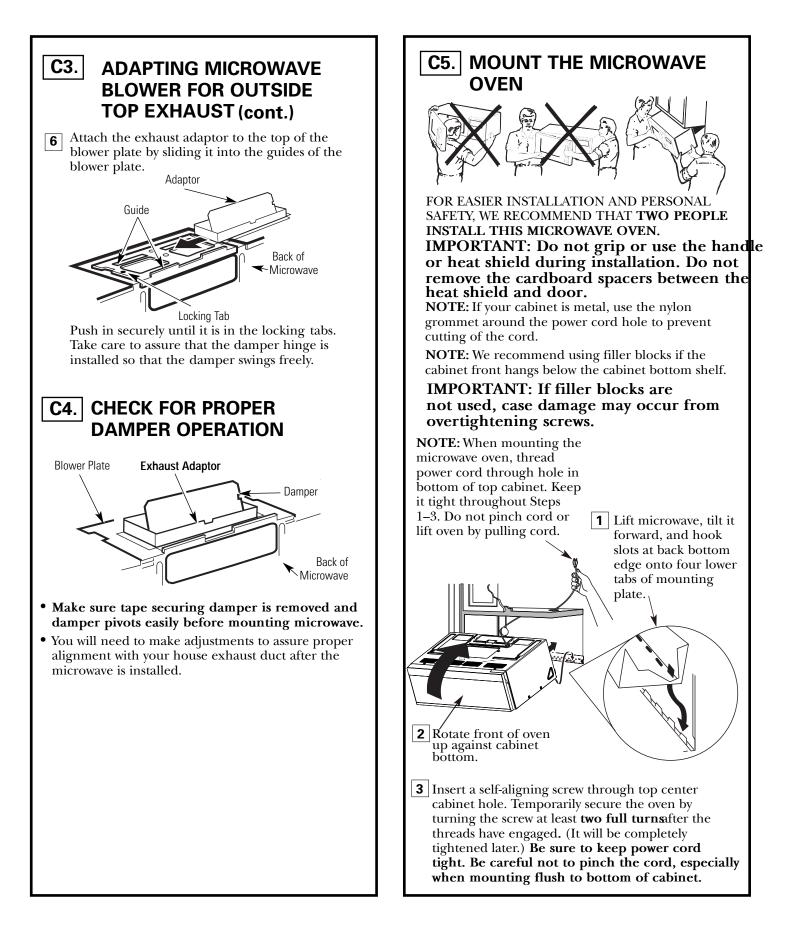
**CAUTION:** Wear safety goggles when drilling holes in the cabinet bottom.

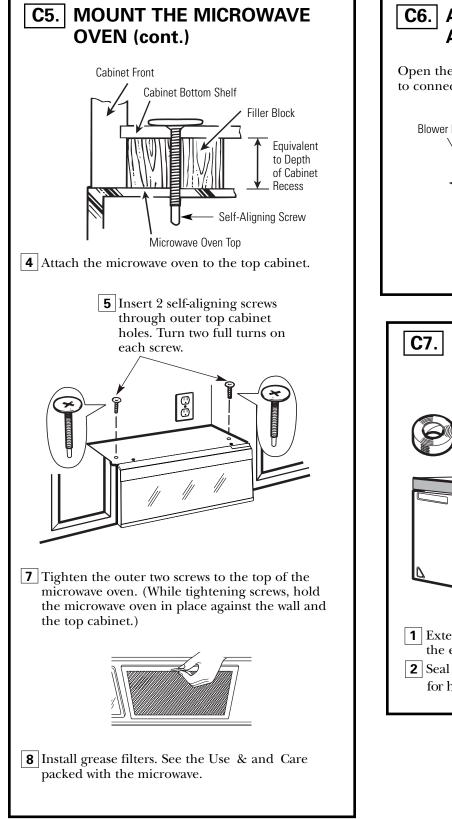
### C3. ADAPTING MICROWAVE AIR DIRECTOR FOR OUTSIDE TOP EXHAUST

**1** Remove the four screws that hold the blower plate to the microwave. Take off the cover plate after removing the center screw.



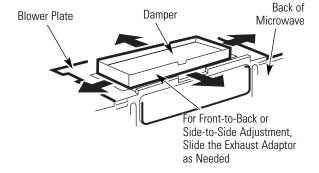
**2** Carefully pull out the air director. Before: **Openings Facing** Forward Air Director **3** Rotate the air director counterclockwise 180° **Before Rotation** After Rotation **4** Place the air director back into the opening. **AFTER: Air Director Openings Facing Back 5** Replace blower plate with the screws removed in Step 1. Make sure the screws are tight. Back of Microwave

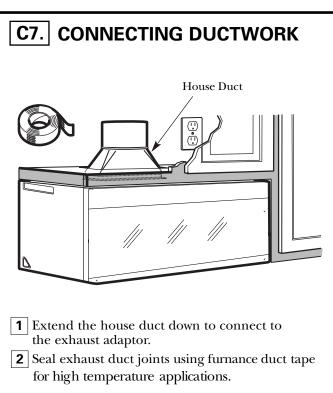




### C6. ADJUST THE EXHAUST ADAPTOR

Open the top cabinet and adjust the exhaust adaptor to connect to the house duct.





# **BEFORE YOU USE YOUR MICROWAVE**

