



ZEPHAIRE 50E
ELECTRIC CONVECTION OVEN
INSTALLATION – OPERATION – MAINTENANCE



BLODGETT OVEN COMPANY

www.blodgett.com

44 Lakeside Avenue, Burlington, Vermont 05401 USA Telephone (800) 331-5842, (802) 860-3700 Fax: (802) 864-0183

PN 30454 Rev C (6/01)

© 2000 – G.S. Blodgett Corporation

IMPORTANT

WARNING: IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT

FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

The information contained in this manual is important for the proper installation, use, and maintenance of this oven. Adherence to these procedures and instructions will result in satisfactory baking results and long, trouble free service. Please read this manual carefully and retain it for future reference.

Errors: Descriptive, typographic or pictorial errors are subject to correction. Specifications are subject to change without notice.



THE REPUTATION YOU CAN COUNT ON

For over a century and a half, The Blodgett Oven Company has been building ovens and nothing but ovens. We've set the industry's quality standard for all kinds of ovens for every foodservice operation regardless of size, application or budget. In fact, no one offers more models, sizes, and oven applications than Blodgett; gas and electric, full-size, half-size, countertop and deck, convection, Cook'n Hold, Combi-Ovens and the industry's highest quality Pizza Oven line. For more information on the full line of Blodgett ovens contact your Blodgett representative.

Your Service Agency's Address:



Model:

Serial Number:

Your oven was installed by:

Your oven's installation was checked by:

Table of Contents

Introduction

Oven Description and Specifications	2
Oven Components	3

Installation

Delivery and Location	4
Electrical Connection	5
Oven Assembly	6
Assembly of the stands with shelves	6
oven assembly to stand	6
Double Sections:	6
mounting oven o 4" (10cm) legs	7
Caster Installation:	7
Leveling Oven:	7
Adjustments Associated with Initial Installation:	7

Operation

Single Speed Blower	8
General Guidelines for Operating Personnel	9
Suggested Times and Temperatures	10

Maintenance

Cleaning and Preventative Maintenance	11
Troubleshooting Guide	12



Introduction

Oven Description and Specifications

Cooking in a convection oven differs from cooking in a conventional deck or range oven since heated air is constantly recirculated over the product by a fan in an enclosed chamber. The moving air continually strips away the layer of cool air surrounding the product, quickly allowing the heat to penetrate. The result is a high quality product, cooked at a lower temperature in a shorter amount of time.

Blodgett convection ovens represent the latest advancement in energy efficiency, reliability, and ease of operation. Heat normally lost, is recirculated within the cooking chamber before being vented from the oven: resulting in substantial reductions in energy consumption and enhanced oven performance.

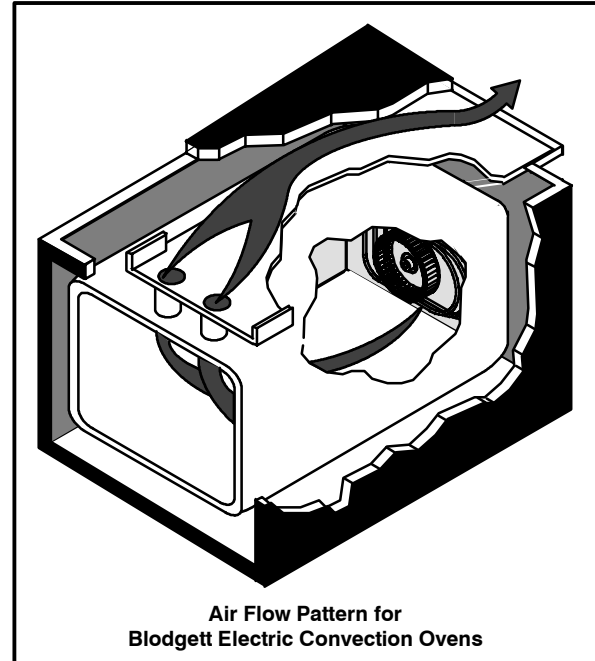


Figure 1

KW/Section	Volts	Phase	Amperes			Electrical Connection AWG*
			L1	L2	L3	
60 HZ UNITS						
5.1	208	1	25	—	25	10
5.1	208	3	25	0	25	10
5.1	220-240	1	22	—	22	10
5.1	220-240	3	22	0	22	10

* Refer to Page 4 in this manual for Electrical Connection specifications

NOTE: Load ratings are double the above data for Double Stacked units.

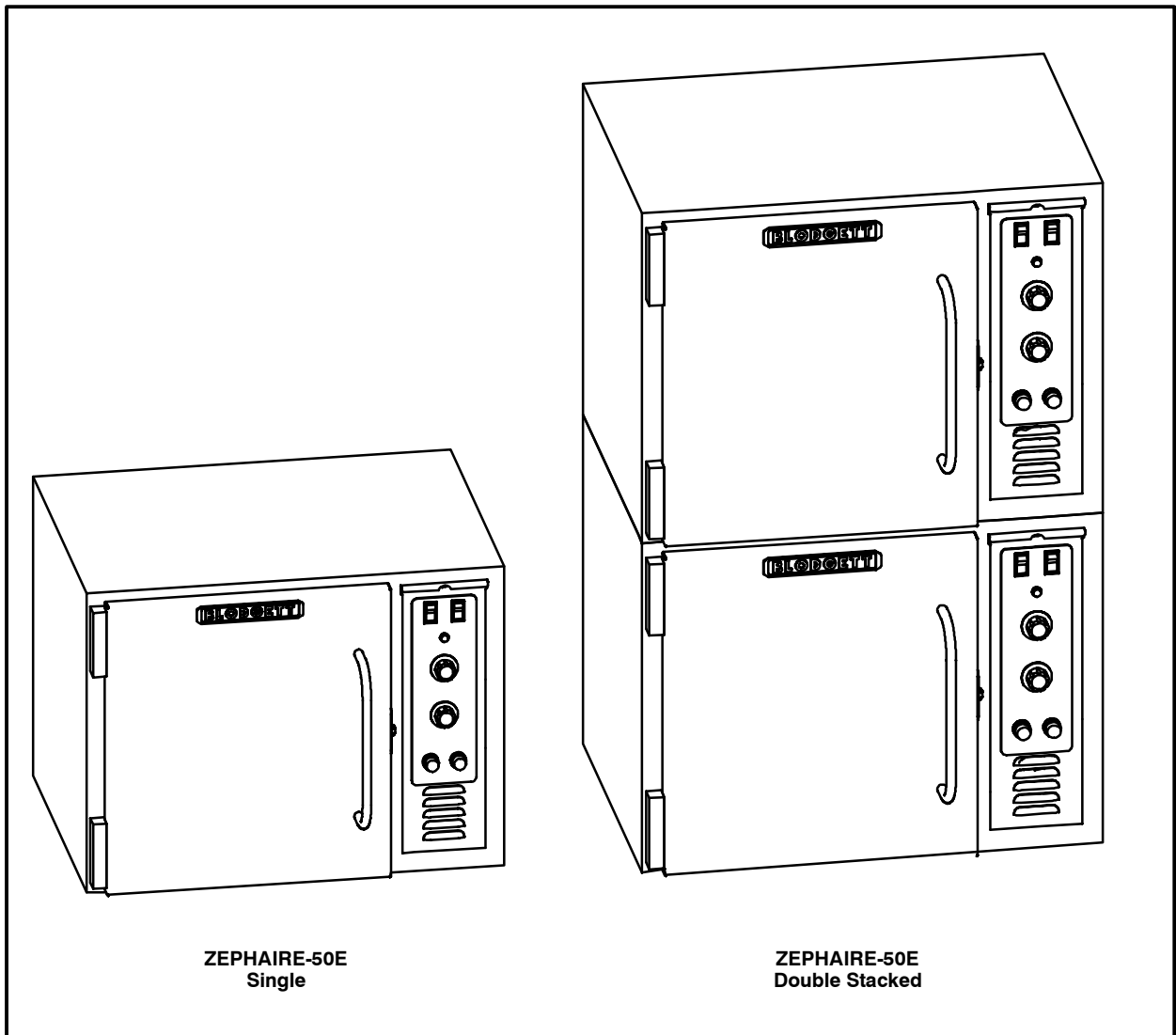


Figure 2



Installation

Delivery and Location

DELIVERY AND INSPECTION

All Blodgett ovens are shipped in containers to prevent damage. Upon delivery of your new oven:

- Inspect the shipping container for external damage. Any evidence of damage should be noted on the delivery receipt which must be signed by the driver.
- Uncrate the oven and check for internal damage. Carriers will accept claims for concealed damage if notified within fifteen days of delivery and the shipping container is retained for inspection.

The Blodgett Oven Company cannot assume responsibility for loss or damage suffered in transit. The carrier assumed full responsibility for delivery in good order when the shipment was accepted. We are, however, prepared to assist you if filing a claim is necessary.

ZEPHAIRE-50E OVENS ARE PACKAGED AS FOLLOWS:

- **For single sections** - The steam vent is packaged in the oven.
- **For double sections** - Each oven is packed with a steam vent.

If the oven is ordered with 4" legs:

- Legs are packed with the oven.

If the oven is ordered with a stand:

The Zephaire-50E is designed for countertop use. However, there is a procedure for mounting the unit on a stand both as a single or a double stacked oven.

There are three stand variations available for the Zephaire-50E oven:

- A 33" (83.8 cm) stand is available for a single oven when counter space is not available. This stand is supplied with a shelf that may be used for temporary storage of products or utensils.
- A 19" (48 cm) stand is available for a double stacked oven when the oven is to be located on the floor. This stand is supplied with a shelf.
- A 24" (61 cm) stand is available to meet different installation requirements.

OVEN LOCATION

The well planned and proper placement of your oven will result in long term operator convenience and satisfactory performance.

The following clearances must be maintained between the oven and any combustible or non-combustible construction.

- Oven body right side – 0" (0 cm)
- Oven body left side – 0" (0 cm)
- Oven body back – 0" (0 cm)
- Oven body bottom – 10" (0 cm)

Adequate clearances must be available for servicing.

It is also essential that ventilation air not be obstructed in any way if proper operation is to be assured. Tripping of the blower motor thermal overload protective device is caused by excessive ambient temperature on the control side of the oven resulting from insufficient ventilation. Such a condition must be corrected immediately if permanent damage to the oven is to be avoided.

Before making any utility connections to this oven, check the rating plate to be sure the oven specifications are compatible with the electrical services supplied for the oven.

1. The rating plate is attached to the back of the oven.



STANDARDS AND CODES

THE INSTALLATION INSTRUCTIONS CONTAINED HEREIN ARE FOR THE USE OF QUALIFIED INSTALLATION AND SERVICE PERSONNEL ONLY. INSTALLATION OR SERVICE BY OTHER THAN QUALIFIED PERSONNEL MAY RESULT IN DAMAGE TO THE OVEN AND/OR INJURY TO THE OPERATOR.

Qualified installation personnel are individuals, a firm, a corporation, or a company which either in person or through a representative are engaged in, and responsible for:

- the installation of electrical wiring from the electric meter, main control box or service outlet to the electric appliance.

Qualified installation personnel must be experienced in such work, familiar with all precautions required, and have complied with all requirements of state or local authorities having jurisdiction.

U.S. and Canadian installations

Installation must conform with local codes, or in the absence of local codes, with the *National Electrical Code, ANSI/NFPA 70—Latest Edition and/or Canadian National Electric Code C22.2* as applicable.

General export installations

Installation must conform with Local and National installation standards. Local installation codes and/or requirements may vary. If you have any questions regarding the proper installation and/or operation of your Blodgett oven, please contact your local distributor. If you do not have a local distributor, please call the Blodgett Oven Company at 0011-802-860-3700.

ELECTRICAL CONNECTION

Ovens are supplied for operation on 208 volt or 220-240 volt installation. The electric motor, indicator lights and related switches are interconnected through the one power source supplied to the oven.

Wiring diagrams are located in the control compartment area and included at the back of this manual.

The supply enters through the rear of the oven and electrical connection is made to the terminal block secured to the mounting panel in the control compartment. Electrical connection sizes for the oven are shown in the "Electrical Connection AWG" column of the Electrical Specifications section in this manual. Wiring is sized for 60°C copper wire at 125% of rated input. Reference is from the National Electric Code ANSI/NFPA 70-1987.





Installation

Stand Assembly

STAND ASSEMBLY

Small Stands Without Shelves

1. Place stand frame upside down on a work surface.
2. Attach one leg to each of the corner stud bolts on the bottom of the stand top.
3. Place a lock washer and nut on each stud, and tighten securely.
4. The stand is now ready for the oven assembly.

Stands With Shelves

1. Place stand frame upside down on a work surface.
2. Attach one leg to each of the corner stud bolts on the bottom of the stand top.
3. Place a lock washer and nut on each bolt, and tighten. **DO NOT** tighten leg bolts completely.
4. Place the shelf between the legs so that the smooth top surface is facing the top of the stand.
5. Align the shelf holes with the bolt holes found near the bottom of each leg.
6. Insert a carriage bolt from the outside of the leg, through the leg, and through the shelf corner bracket.
7. Place a lock washer and nut on each bolt, and tighten securely.
8. Tighten the leg frame bolts.

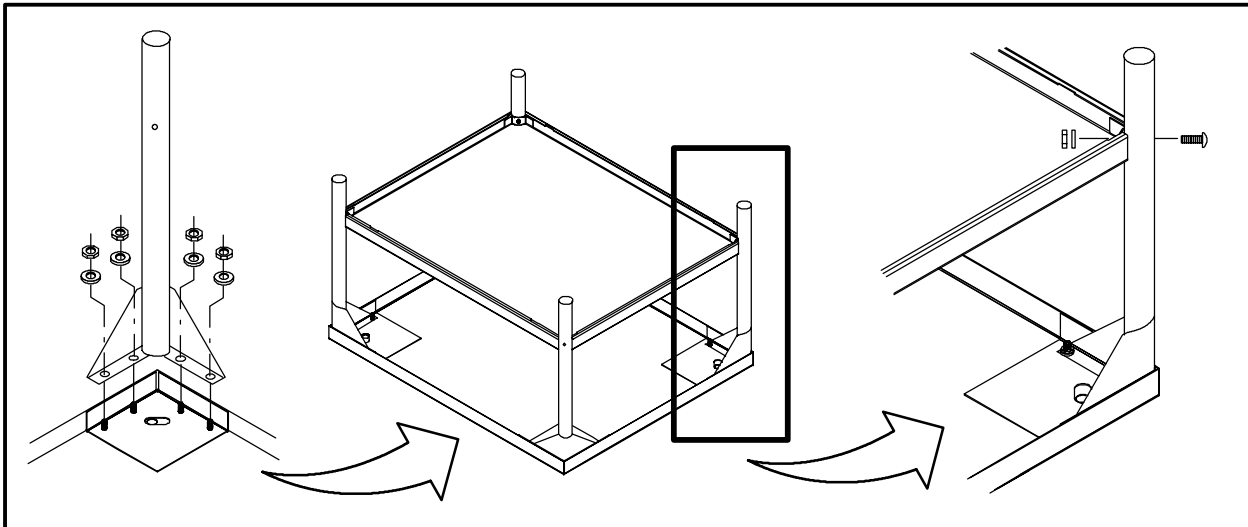


Figure 3



Oven Assembly

OVEN ASSEMBLY TO STAND

Ovens are fastened to the stand by placing the connecting bolts into the holes located in the front and rear corners on the oven bottom.

1. Place stand in location of oven use.
2. Set a single oven on the stand and center on the frame.
3. Locate and align bottom bolt holes front and rear with bolt holes in stand frame.
4. Insert a bolt and washer from the bottom up through the holes in the stand.
5. Tighten securely with a wrench.
6. Remove two existing sheet metal screws near the rear of the vent.
7. Place steam vent over 1" x 10" (2.5 x 25.4 cm) opening on rear panel of oven. Fasten the vent to the oven with the five screws provided.

MOUNTING OVEN ON 4" (10CM) LEGS

1. Tilt the oven onto its back.
2. Screw 4" (10 cm) legs into 4 holes located near oven corners.
3. Lift oven forward onto legs.

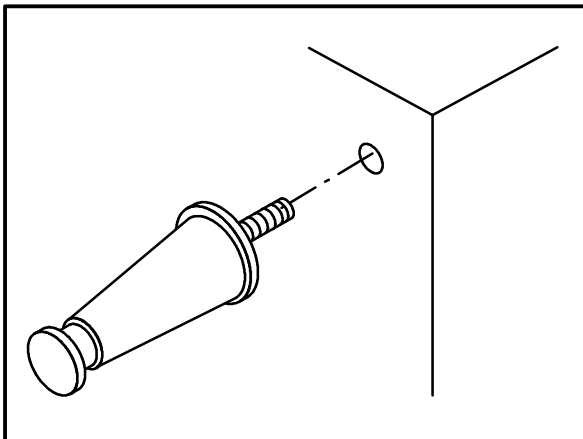


Figure 4

CASTER INSTALLATION:

Castors are available as an option for single or double section ovens.

NOTE: Two casters with locking devices must be installed on the front legs or the front of the stand. Casters without locking devices must be installed on the rear legs or the rear of the stand.

Adjustable leg feet may be replaced with casters as follows:

1. Remove the leg foot assembly.
2. Insert the caster.
3. Secure the caster by tightening the lock nut with a wrench.

LEVELING OVEN:

Whenever an oven is mounted on legs or a stand it should be leveled by screwing the adjustable leg feet in or out as necessary and checking with a spirit level placed on the top of the oven.



Installation

Oven Assembly

DOUBLE SECTIONS:

1. Double section ovens may be secured to the stand with the same procedure as above utilizing the same four bolt holes on the bottom of the oven.
2. Secure double stacked units together using fastening brackets and bolts provided.
3. Seal the seam between the top and bottom ovens with an NSF listed splash zone sealant.
4. A steam vent will be installed on each unit to vent the ovens.

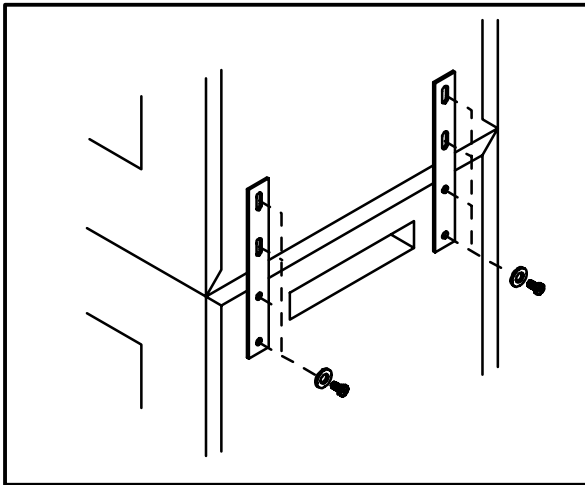


Figure 5

ADJUSTMENTS ASSOCIATED WITH INITIAL INSTALLATION:

Each oven, and its component parts, have been thoroughly tested and inspected prior to shipment. However, it is often necessary to further test or adjust the oven as part of normal and proper installation. Such adjustments associated with initial installation are the responsibility of the dealer or installer. Since these adjustments are not considered defects in material or workmanship, they are not covered under the Original Equipment Warranty. They include, but are not limited to calibration of the solid state temperature control, adjustment of the doors, leveling, testing of electrical components, and tightening of fasteners. No installation should be considered complete without proper inspection and, if necessary, adjustment by qualified installation or service personnel.



Operation

Single Speed Blower

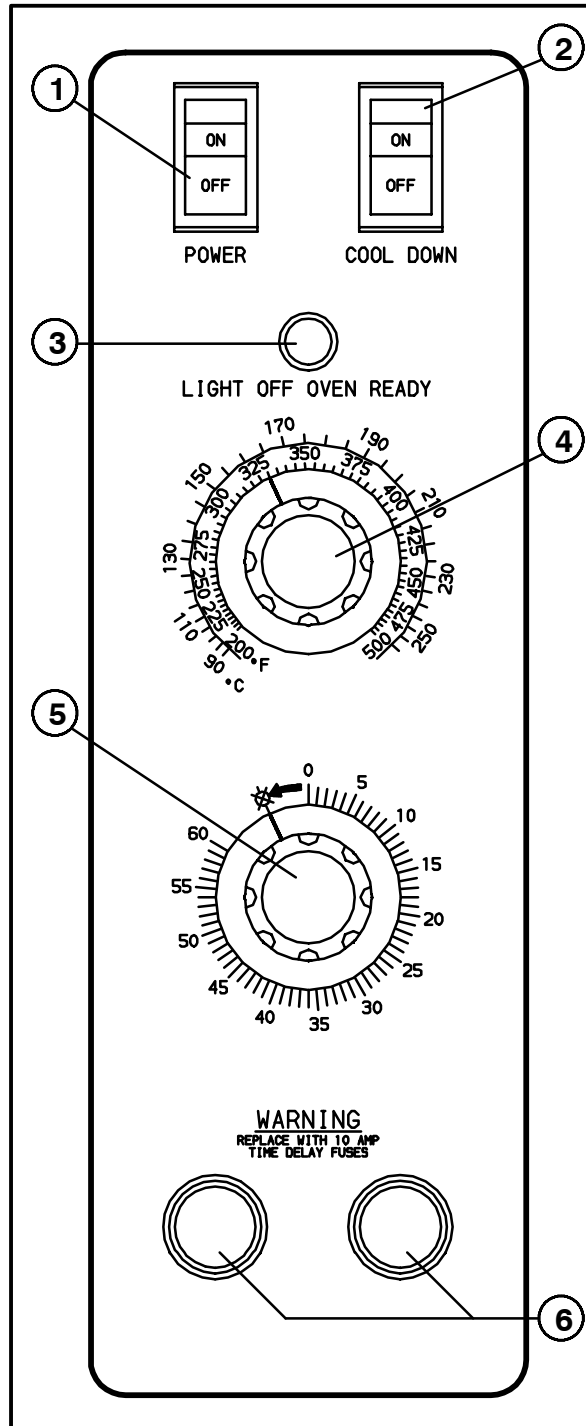


Figure 6

THE INFORMATION CONTAINED IN THIS SECTION IS PROVIDED FOR THE USE OF QUALIFIED OPERATING PERSONNEL. QUALIFIED OPERATING PERSONNEL ARE THOSE WHO HAVE CAREFULLY READ THE INFORMATION CONTAINED IN THIS MANUAL, ARE FAMILIAR WITH THE FUNCTIONS OF THE OVEN AND/OR HAVE HAD PREVIOUS EXPERIENCE WITH THE OPERATION OF THE EQUIPMENT DESCRIBED. ADHERENCE TO THE PROCEDURES RECOMMENDED HEREIN WILL ASSURE THE ACHIEVEMENT OF OPTIMUM PERFORMANCE AND LONG, TROUBLE-FREE SERVICE.

CONTROL DESCRIPTION

1. **POWER ON/OFF** - Controls the operation of the oven. If the power switch is in the OFF position the oven will be turned off.
2. **COOL DOWN** - When this switch is in the OFF position, the oven can be used to cook. When the switch is in the ON position, the oven is not operating but cooling down for the next bake.
3. **OVEN READY LIGHT** - When the light is on, the oven is preheating. When the light goes out, the oven has reached the desired temperature.
4. **THERMOSTAT** - Controls the temperature at which the oven will operate. The range of temperature is from 200°-500°F (93°-260°C).
5. **ELECTRIC TIMER** - Used to time the length of the cooking operation. When the preset time expires, a buzzer will sound.
6. **FUSES** - Circuit protection for all of the electrical components.

OPERATION

1. Set the **COOL DOWN SWITCH** (2) to the OFF position. Turn the **THERMOSTAT** (4) to the desired operating temperature.
2. Set the **POWER SWITCH** (1) to the ON position. When the **OVEN READY LIGHT** (3) goes out, load the product and set the timer.
3. When the **TIMER** (5) sounds, remove the product. If the next product requires a lower operating temperature, then the **COOL DOWN** mode can be used. Turn the **POWER SWITCH** (1) to the ON position and the **COOL DOWN SWITCH** (2) to the ON position. Make sure that the door is open.
4. Turn the oven off by setting the **POWER SWITCH** (1) to the OFF position.



Operation

General Guidelines for Operating Personnel

Always preheat the oven before using by setting the thermostat to the desired setting. The oven has reached operating temperature when the "LIGHT OFF OVEN READY" light goes out.

Follow the Time and Temperature recommendations provided for the product to be prepared in the oven. Cooking at higher temperatures will not reduce cooking time, it will produce unsatisfactory results. Time will vary with the amount of product loaded, the type of pan and the temperature. Record times and temperatures which provide best results for future reference.

Five racks are provided with the oven; however, up to nine may be used. Product or pan height determine the number of racks to be used.

Do not place a pan or aluminum foil on the bottom of the oven. This will obstruct the flow of air and result in uneven baking.

When baking, weigh the product to assure equal quantities in all pans or uneven results may occur.

For cooking, the selector switch will be placed in the ON position and the COOL DOWN switch in the OFF position. When placed in this mode, operation of the blower is automatically controlled by the action of the doors. Use the ON position of the COOL DOWN switch when the oven doors are open to lower the temperature of the oven quickly.

Suggested Times and Temperatures

Product	Temperature	Time	# Shelves
Meats			
Hamburger Patties (5 per lb)	400°F (205°C)	8-10 mins.	10
Steamship Round (80 lb. quartered)	275°F (135°C)	2 hrs 45 mins.	2
Standing Rib Choice (20 lbs, trimmed, rare)	235°F (115°C)	2 hrs 45 mins.	2
Banquet Shell Steaks (10 oz. meat)	450°F (235°C)	7-8 mins.	5
Swiss Steak after Braising	275°F (135°C)	1 hr.	5
Baked Stuffed Pork Chop	375°F (190°C)	25-30 mins.	5
Boned Veal Roast (15 lbs.)	300°F (150°C)	3 hrs. 10 mins.	2
Lamb Chops (small loin)	400°F (205°C)	7-8 mins.	5
Bacon (on racks in 18" x 26" pans)	400°F (205°C)	5-7 mins.	10
Poultry			
Chicken Breast & Thigh	350°F (175°C)	40 mins.	5
Chicken Back & Wing	350°F (175°C)	35 mins.	5
Chicken (2 ¹ / ₂ lbs. quartered)	350°F (175°C)	30 mins.	5
Turkey Rolled (18 lb. rolls)	310°F (155°C)	3 hrs 45 mins.	3
Fish and Seafood			
Halibut Steaks, Cod Fish (frozen 5 oz)	350°F (175°C)	20 mins.	5
Baked Stuffed Lobster (2 ¹ / ₂ lb.)	400°F (205°C)	10 mins.	3
Lobster Tails (frozen)	425°F (220°C)	9 mins.	5
Cheese			
Macaroni & Cheese Casserole	350°F (175°C)	30 mins.	5
Melted Cheese Sandwiches	400°F (205°C)	8 mins.	10
Potatoes			
Idaho Potatoes (120 ct.)	400°F (205°C)	50 mins.	5
Oven Roasted Potatoes (sliced or diced)	325°F (165°C)	10 mins.	5
Baked Goods			
Frozen Berry Pies (22 oz)	325°F (150°C)	35 mins.	5 (30 pies)
Fresh Apple Pie (20 oz.)	350°F (175°C)	25-30 mins.	5 (30 pies)
Pumpkin Pies (32 oz.)	300°F (150°C)	30-50 mins.	5 (20 pies)
Fruit Crisp	300°F (150°C)	25 mins.	5
Bread (24 - 1 lb. loaves)	325°F (155°C)	30 mins.	3
Southern Corn Bread	375°F (190°C)	15-20 mins.	5
Baking Soda Biscuits	400°F (205°C)	6 mins.	5
Brown & Serve Rolls	350°F (175°C)	15 mins.	5
Sheet Cakes (5 lb. mixed batter per pan)	325°F (160°C)	16-18 mins.	5
Chocolate Cake	325°F (160°C)	20 mins.	5
Brownies	325°F (150°C)	15 mins.	5

NOTE: Actual times and temperatures may vary considerably from those shown above. They are affected by weight of load, temperature of the product, recipe, type of pan and calibration of thermostat. Should your recipe vary, write in your proven time and temperature for ready reference.



Cleaning and Preventative Maintenance

CLEANING THE OVEN

Stainless steel ovens may be kept clean and in good condition with a light oil.

1. Saturate a cloth, and wipe the oven when it is cold.
2. Dry the oven with a clean cloth.

On the stainless front or interiors, deposits of baked on splatter may be removed with any non-toxic industrial stainless steel cleaner. Heat tint and heavy discoloration may be removed with any non-toxic commercial oven cleaner.

1. Apply cleaners when the oven is cold. Always rub with the grain of the metal.

Keep liquid away from the light sockets, temperature probes, heating elements, etc. Avoid spraying the oven's electrical connections, thermostat and light bulb receptacles.

The porcelain interior can be cleaned with any commercial oven cleaner. Be sure caustic cleaning compounds DO NOT come in contact with the aluminized steel panel directly behind the blower wheel.

1. Remove the racks and rack supports from the oven.
2. Soak the parts in a solution of ammonia and water.
3. Reinstall after cleaning.

PREVENTATIVE MAINTENANCE

The best preventative maintenance measures are, the proper installation of the equipment and a program for routinely cleaning the ovens.

Annual Maintenance

This oven requires no lubrication, however, the venting system should be checked annually for possible deterioration resulting from moisture and corrosive flue products.

If maintenance or repairs are required, contact your local Blodgett service company, a factory representative or the Blodgett Oven company.



WARNING!!

Always disconnect the appliance from the power supply before servicing or cleaning.

Troubleshooting Guide

POSSIBLE CAUSE(S)	SUGGESTED REMEDY
SYMPTOM: Elements will not heat	
<ul style="list-style-type: none"> • Oven not plugged in. • Power switch on the control panel is off. • Control set below ambient temperature. • Doors are open. 	<ul style="list-style-type: none"> • Plug in electrical supply cord. • Set the control panel to COOK or OVEN ON. • Set to desired cook temperature. • Close doors.
SYMPTOM: Oven does not come to ready.	
<ul style="list-style-type: none"> • The oven has not reached preheat temperature. • Internal problem with main temperature control. 	<ul style="list-style-type: none"> • Wait for oven to reach preheat temperature. • *
SYMPTOM: Convection fan does not run.	
<ul style="list-style-type: none"> • Oven is not plugged in. • Circuit breaker tripped. • Doors are open 	<ul style="list-style-type: none"> • Plug in electrical supply cord. • Reset the breaker. • Close doors.
SYMPTOM: General baking problems.	
<ul style="list-style-type: none"> • Thermostat out of calibration. • Improper oven venting. 	<ul style="list-style-type: none"> • * • *
<p>*Denotes remedy is a difficult operation and should be performed by qualified personnel only. It is recommended, however, that All repairs and/or adjustments be done by your local Blodgett service agency and not by the owner/operator. Blodgett cannot assume responsibility for damage as a result of servicing done by unqualified personnel.</p>	



WARNING!!

Always disconnect the power supply before cleaning or servicing the oven.

**CUSTOMER
INSERT
WIRING DIAGRAM
HERE**