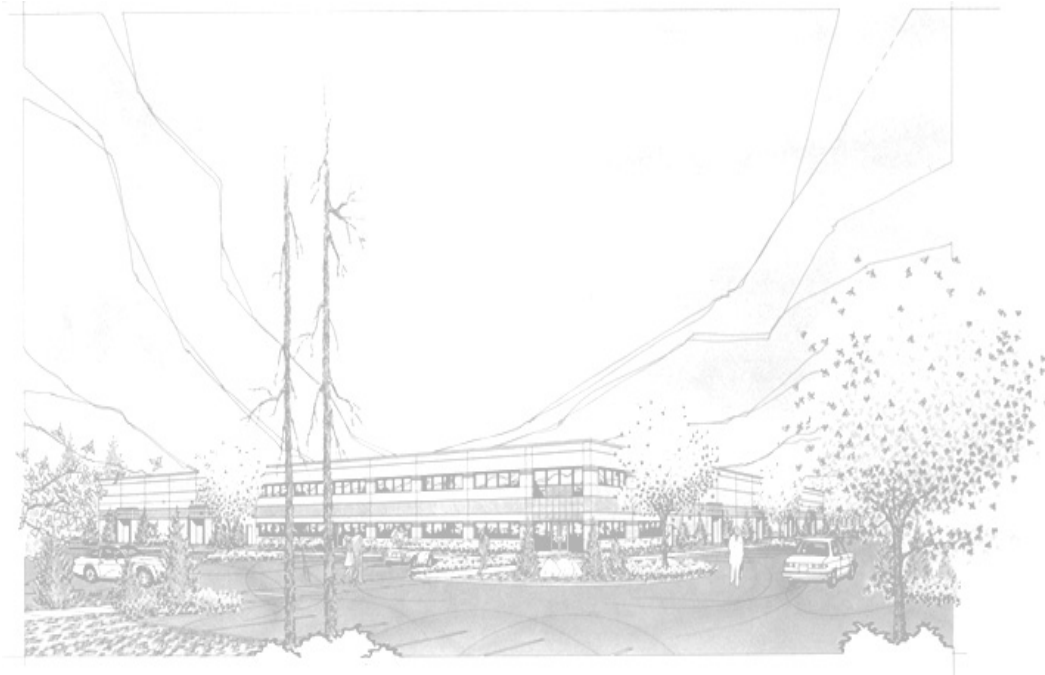








Installation, Operation, & Maintenance
Model: ECCO-LMDR, Electric Full Size Convection Oven



THE INFORMATION IN THIS MANUAL IS CRUCIAL AND MUST BE RETAINED FOR FUTURE REFERENCE. READ, UNDERSTAND AND FOLLOW THE INSTRUCTIONS AND WARNINGS CONTAINED IN THIS MANUAL.

- | | | |
|----------------------|---|---|
| <u>DANGER</u> | POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH. |  |
|----------------------|---|---|
- | | | |
|-----------------------|---|---|
| <u>WARNING</u> | POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY. |  |
|-----------------------|---|---|
- | | | |
|-----------------------|--|---|
| <u>CAUTION</u> | POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, MAY RESULT IN MINOR OR MODERATE INJURY. |  |
|-----------------------|--|---|
- | | | |
|----------------------|---|---|
| <u>NOTICE</u> | Helpful operation and installation instructions and tips are present. |  |
|----------------------|---|---|

FOR YOUR SAFETY

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

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.

Model #:	Purchased From:
Serial #:	Location:
Date Purchased:	Date Installed:
Purchase Order #:	For Service, Call:

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<u>CAUTION</u>	THE UNIT IS EXTREMELY HEAVY. FOR SAFE HANDLING, INSTALLER SHOULD OBTAIN HELP AS NEEDED, OR EMPLOY APPROPRIATE MATERIALS HANDLING EQUIPMENT (SUCH AS A FORKLIFT, DOLLY, OR PALLET JACK) TO REMOVE THE UNIT FROM THE SKID AND MOVE IT TO THE PLACE OF INSTALLATION.
<u>CAUTION</u>	ANY STAND, COUNTER OR OTHER DEVICE ON WHICH OVEN WILL BE LOCATED MUST BE DESIGNED TO SUPPORT THE WEIGHT OF THE OVEN.
<u>CAUTION</u>	SHIPPING STRAPS ARE UNDER TENSION AND CAN SNAP BACK WHEN CUT.
<u>DANGER</u>	THIS APPLIANCE MUST BE GROUNDED AT THE TERMINAL PROVIDED. FAILURE TO GROUND THE APPLIANCE COULD RESULT IN ELECTROCUTION AND DEATH.
<u>WARNING</u>	INSTALLATION OF THE UNIT MUST BE DONE BY PERSONNEL QUALIFIED TO WORK WITH ELECTRICITY AND PLUMBING. IMPROPER INSTALLATION CAN CAUSE INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT. UNIT MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES.
<u>NOTICE</u>	The data plate is located above the control panel behind the screen mesh. The oven voltage, wattage, serial number, wire size, and clearance specifications are on the data plate. This information should be carefully read and understood before proceeding with the installation.
<u>NOTICE</u>	The installation of any components such as a vent hood, grease extractors, fire extinguisher systems, must conform to their applicable National, State and locally recognized installation standards.
<u>NOTICE</u>	During the first few hours of operation you may notice a small amount of smoke coming from the oven, and a faint odor from the smoke. This is normal for a new oven and will disappear after the first few hours of use.
<u>CAUTION</u>	ALWAYS KEEP THE AREA NEAR THE APPLIANCE FREE FROM COMBUSTIBLE MATERIALS.
<u>CAUTION</u>	KEEP FLOOR IN FRONT OF EQUIPMENT CLEAN AND DRY. IF SPILLS OCCUR, CLEAN IMMEDIATELY, TO AVOID THE DANGER OF SLIPS OR FALLS.
<u>WARNING</u>	KEEP WATER AND SOLUTIONS OUT OF CONTROLS. NEVER SPRAY OR HOSE CONTROL CONSOLE, ELECTRICAL CONNECTIONS, ETC.
<u>CAUTION</u>	MOST CLEANERS ARE HARMFUL TO THE SKIN, EYES, MUCOUS MEMBRANES AND CLOTHING. PRECAUTIONS SHOULD BE TAKEN TO WEAR RUBBER GLOVES, GOGGLES OR FACE SHIELD AND PROTECTIVE CLOTHING. CAREFULLY READ THE WARNING AND FOLLOW THE DIRECTIONS ON THE LABEL OF THE CLEANER TO BE USED.
<u>NOTICE</u>	Never leave a chlorine sanitizer in contact with stainless steel surfaces longer than 10 minutes. Longer contact can cause corrosion.



NOTICE

Service on this, or any other, LANG appliance must be performed by qualified personnel only. Consult your authorized service station directory or call the factory at 1-800-224-LANG (5264), or WWW.LANGWORLD.COM For the service station nearest you.



WARNING

BOTH HIGH AND LOW VOLTAGES ARE PRESENT INSIDE THIS APPLIANCE WHEN THE UNIT IS PLUGGED/WIRED INTO A LIVE RECEPTACLE. BEFORE REPLACING ANY PARTS, DISCONNECT THE UNIT FROM THE ELECTRIC POWER SUPPLY.



NOTICE

If an item on the list is followed by an asterisk (*), the work should be done by a factory authorized service representative.



CAUTION

USE OF ANY REPLACEMENT PARTS OTHER THAN THOSE SUPPLIED BY LANG OR THEIR AUTHORIZED DISTRIBUTORS CAN CAUSE BODILY INJURY TO THE OPERATOR AND DAMAGE TO THE EQUIPMENT AND WILL VOID ALL WARRANTIES.



EQUIPMENT DESCRIPTION

Lang Model: ECCO-LMDR

Exterior Construction

The oven exterior dimensions are 40" (101.6cm) Wide, 28" (71.12cm) High, 38" (96.52cm) Deep, plus a 3.25" (8.26cm) handle extension on the door.

The Front, Back, Top, and Sides are constructed of stainless steel with an aluminized bottom.

The oven doors come standard with double-pane windows and open with the pull of a single handle.

The oven cavity is insulated with high temperature insulation for efficiency and reduced heat loss.

Interior Construction

The dimensions of the oven cavity are 29" (73.66cm) Wide, 20" (50.8cm) High, and 21" (53.34cm) Deep.

The oven is designed for three shelves and comes with three Chrome-plated racks.

The interior air deflection baffle is constructed of stainless steel.

Operation

The ECCO-LMDR oven is a forced air convection oven with a vented oven cavity.

The air is driven by a 1/3 HP fan motor.

Controls

Pre-Programmable Product Selections

Independent Shelf Timers for each Shelf.

Shelf Compensation Timing for uniform baking.

Manual Over-ride mode with a back-up thermostat.

Technical

Oven operates as shipped on either 208 or 240-volt (single or three phase), or 480-volt (three phase).

The oven can be shipped with a Power Cord and Plug attached, but must be specified upon ordering (part number is listed in the Parts portion of this manual, pg. 19).

Floor space required is 44" (111.75cm) Wide, 40" (101.6cm) Deep.

The oven weighs 430 lb. (195.37 Kilograms).

The ovens are stackable and can include stacking kit if requested.

UNPACKING

Receiving the Oven

Upon receipt, check for freight damage, both visible and concealed. Visible damage should be noted on the freight bill at the time of delivery and signed by the carrier's agent. Concealed loss or damage means loss or damage, which does not become apparent until the merchandise has been unpacked. If concealed loss or damage is discovered upon unpacking, make a written request for inspection by the carrier's agent within 15 days of delivery. All packing material should be kept for inspection. **Do not return damaged merchandise to Lang Manufacturing Company. File your claim with the carrier.**

Location

Prior to un-crating, move the oven as near to its intended location as practical. The crating will help protect the unit from the physical damage normally associated with moving it through hallways and doorways.

Un-crating

The oven will arrive completely assembled inside a wood frame and strapped to a skid. **Cut the straps and remove the wood frame.**

CAUTION

THE UNIT IS EXTREMELY HEAVY. FOR SAFE HANDLING, INSTALLER SHOULD OBTAIN HELP AS NEEDED, OR EMPLOY APPROPRIATE MATERIALS HANDLING EQUIPMENT (SUCH AS A FORKLIFT, DOLLY, OR PALLET JACK) TO REMOVE THE UNIT FROM THE SKID AND MOVE IT TO THE PLACE OF INSTALLATION.



CAUTION

ANY STAND, COUNTER OR OTHER DEVICE ON WHICH OVEN WILL BE LOCATED MUST BE DESIGNED TO SUPPORT THE WEIGHT OF THE OVEN.



CAUTION

SHIPPING STRAPS ARE UNDER TENSION AND CAN SNAP BACK WHEN CUT.



The oven can now be removed from the skid.

INSTALLATION

DANGER

THIS APPLIANCE MUST BE GROUNDED AT THE TERMINAL PROVIDED. FAILURE TO GROUND THE APPLIANCE COULD RESULT IN ELECTROCUTION AND DEATH.



WARNING

INSTALLATION OF THE UNIT MUST BE DONE BY PERSONNEL QUALIFIED TO WORK WITH ELECTRICITY AND PLUMBING. IMPROPER INSTALLATION CAN CAUSE INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT. UNIT MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES.



NOTICE

The data plate is located above the control panel behind the screen mesh. The oven voltage, wattage, serial number, wire size, and clearance specifications are on the data plate. This information should be carefully read and understood before proceeding with the installation.



NOTICE

The installation of any components such as a vent hood, grease extractors, fire extinguisher systems, must conform to their applicable National, State and locally recognized installation standards.



Leg Installation

Legs are available for both the single and double deck installations. Single deck installations require a 27-inch leg. Double deck installations require 6-inch legs or casters.

To install the 27-inch legs, place some cardboard on the floor and gently tip the oven onto its back. Fasten two legs to the oven's front corners using the four 5/16 inch bolts provided in the leg kit. Lift the oven onto its front legs and block the back up using one of the 27-inch legs set upside down in the center rear of the oven body. Install the last 27-inch leg onto the oven body on the control side rear. Gently lift the oven rear, remove the leg set to support the oven center and install it on the last rear corner.

To install the 6-inch legs or casters, follow the instructions in the Leg Pad section on the following pages or in the Leg Pad box supplied with the oven.

The adjustable feet on the bottom of each leg may be screwed in or out as necessary to level the oven.

A torpedo level placed on an oven rack will assist in leveling the oven.

Stacking the Ovens

Remove all the plug buttons from the top of the lower oven.

Remove the stacking kit from the oven compartment of one oven and install the 1/4-inch plastic bushing into the top of the lower oven.

Tip the top oven backwards and install two 3/8-inch socket head bolts, found in the stacking kit, into the two front leg holes that match the holes in the top of the lower oven. Install the socket head bolts with the heads of the bolt pointing away from the oven.

Lift the top oven and gently set on top of the lower oven so that the heads of the socket head bolts nest into the holes in the top of the lower oven.

INSTALLATION CONT'D

Leg Pad Adapter

Identify the front and rear leg adapters (the front adapters have two threaded inserts, the rear has four).

Leg to Adapter Installation:

Install the leg's threaded stud through the hole in the adapter labeled "C" with the bent flange of the adapter facing away from the leg.

Screw the 3/4-inch nut supplied in the adapter kit onto the leg stud and tighten.

Caster to Adapter Installation:

Place the swivel caster against the front leg adapter with the flange of the adapter facing away from the caster.

Install the four 5/16 inch bolts through the caster base and the adapter holes labeled "A" then install the 5/16 inch nuts with washer and lock washers.

Place the rigid casters against the rear leg adapter with the flange of the adapter facing away from the caster.

Align the caster to the holes in the adapter labeled "B". NOTE: There are two sets of "B" holes set at 90° from the each other. One set will create a left rear adapter and the other set will create a right rear adapter.

Install four 5/16-inch bolts through the caster base and the adapter holes labeled "B" then install 5/16-inch nuts with lock washers and flat washers.

Adapter to Oven Installation:

Gently tip the oven onto its back. Place the front leg adapter into the front corners of the oven. The holes without the threaded inserts face the front of the oven and the flange on the adapter points toward the bottom of the oven.

The edge of the leg adapter with the threaded insert slips under the flange on the oven side, while the edge without the inserts sits on top of the threaded angle on the oven front.

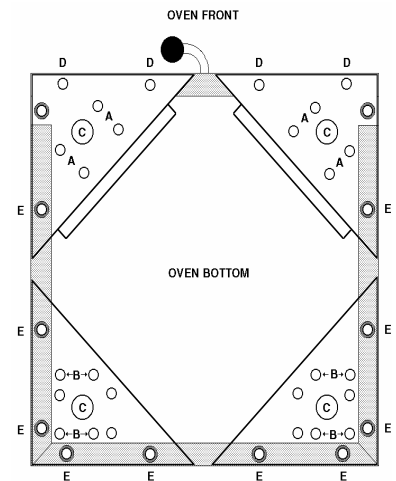
Install two 3/8-inch bolts with lock washers and flat washers through the front holes "D" in the leg adapter and into the threaded inserts on the oven.

Thread one 3/8-inch bolt with lock washer and flat washer into the rear threaded hole labeled "E" on each of the leg adapters.

The forward threaded hole on the front leg adapter does not get a bolt installed.

Place the rear leg adapters into the rear corners of the oven so that the adapter is under the flange of the oven side and back. NOTE: If installing a caster place the adapter on the oven so that the casters roll forward.

Install for 3/8-inch bolts with lock washers and flat washers through the holes labeled "E" in the flange of the oven and into the threaded inserts of the leg adapter.



INSTALLATION CONT'D

Ventilation and Clearances

Standard minimum clearance from combustible construction is as follows.

- 4" from side
- 4" from back
- 6" from floor

These ovens may be set directly, without legs, on a curbed base or **non-combustible** floor.

If the oven is set without legs on a **non-combustible** floor or a curbed base, maintain a 4-inch back clearance.

If the oven is set directly against a **non-combustible** back wall, maintain a 6-inch clearance to the floor.

Do not install the oven closer than 4 inches from another oven on the right hand side (control panel side).

Do not install the oven closer than 12 inches from an uncontrolled heat source (char broiler etc.) on the right side.

Keep the appliance area free and clear of combustible material and do not obstruct the flow of combustion or ventilation air.

The installation of any components such as a vent hood, grease extractors, and/or fire extinguisher systems, must conform to the there applicable nationally recognized installation standards.

Electrical Connection

The electrical connection must be made in accordance with local codes or in the absence of local codes with **NFPA No. 70** latest edition (in Canada use: **CSA STD. C22.1**).

The electrical service entrance is provided by a 1 1/4-inch knockout in the bottom right front corner of each oven, or at the oven back directly behind the control compartment. Grounding lugs are provided at both the front and rear service entrances.

The 208/240-volt oven is a dual voltage oven and is shipped from the factory as 208 volt. The oven must be field converted to operate on a 240-volt power supply.

To convert the oven to 240 volt, remove the jumper wire located on a terminal strip located inside the lower portion to the control compartment.

With 380, 400, & 480-volt installations check to be sure that the motor rotates in a clockwise direction as viewed from the front of the oven.

To reverse the motor rotation, switch any two incoming power supply leads and recheck the rotation.

Supply wire size must be large enough to carry the amperage load for the number of ovens being installed. Wire size information can be found on the oven DATA PLATE. Oven power requirements and service connections can be obtained from the wiring diagram located in the wiring diagram section of this manual.

This oven can be installed on both single and three phase supplies and is shipped from the factory for three phase.

To phase the oven to match the power supply, follow the charts on page 10 for proper wire size and grouping.

INITIAL START UP

Pre-Power On

After the oven is installed and connected to power, prior to turning on, verify the following:

- The doors open and close freely.
- All racks are in the oven correctly.
- All packing materials have been removed from the inside of the oven.
- All power connections are tight

Power On

Once the oven has been turned on verify that the blower wheel is spinning freely in a clockwise position and that the elements are heating properly.

The oven will automatically say “preht” and begin heating.

Once the oven has reached pre-programmed temp display will read “ready”.

Product may now be placed in the oven.

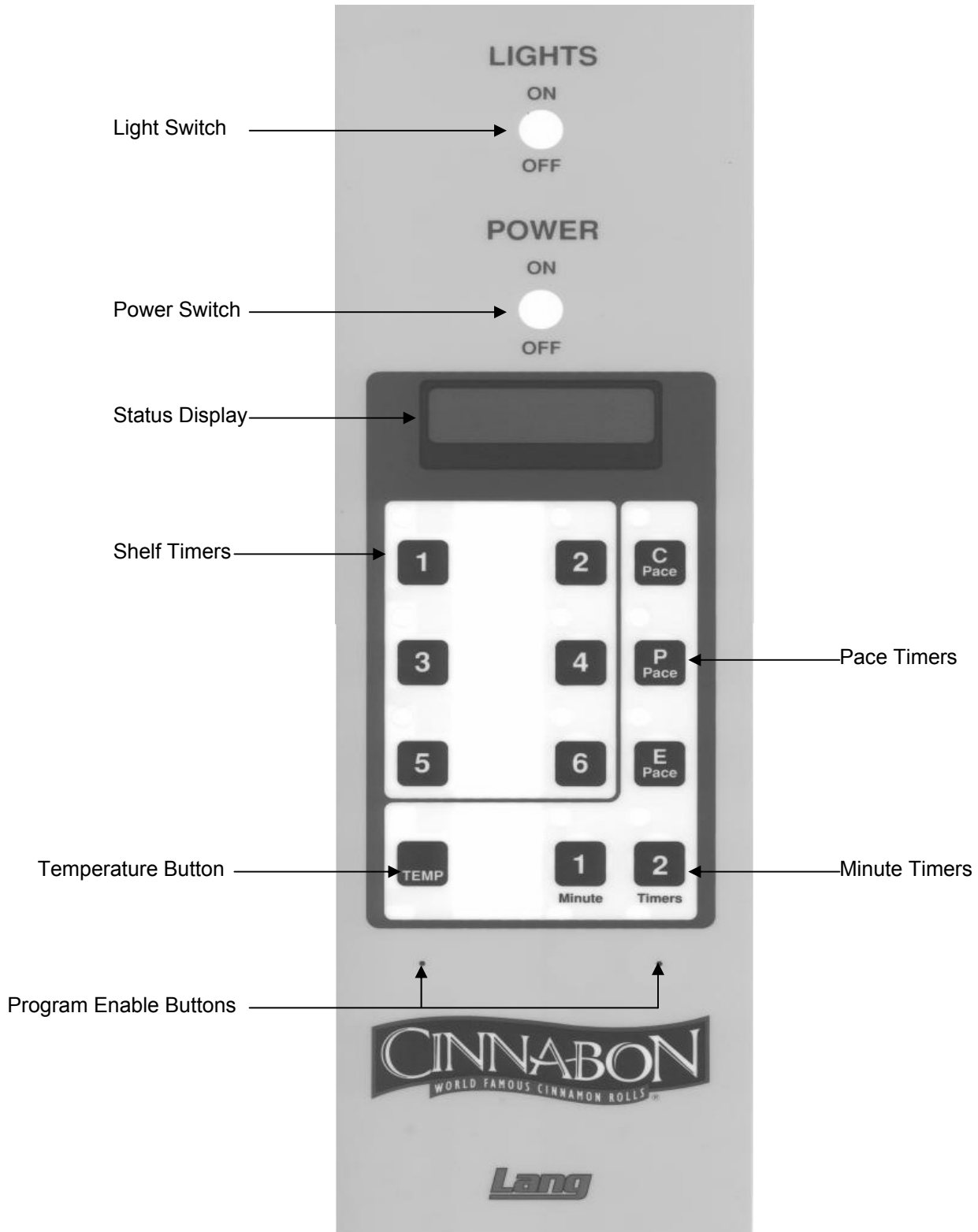
NOTICE

During the first few hours of operation you may notice a small amount of smoke coming from the oven, and a faint odor from the smoke. This is normal for a new oven and will disappear after the first few hours of use.



OPERATION

Control Panel



OPERATION CONT'D

General

Convection ovens constantly circulate air over and around the product. This strips away the thin layer of moisture and cool air from around the product allowing heat to penetrate more quickly.

Always weigh your product. This will give you a more consistent size, color and quality.

Check the product near the end of the initial cooking.

Do not open the oven door during baking as this will change the baking characteristics of the oven and make it difficult to determine a final program.

If the product is overdone on the outside and underdone on the inside, reduce the baking temperature.

If the product is pulling away from the edge of the pan, the temperature is too high or the cooking time too long.

The convection is a mechanical piece of equipment. The same control settings will always give the same results. If the results vary, problems may be because of product preparation.

Control Panel

The Control panel consists of the following items. Detailed operational descriptions are given later this section.

POWER SWITCH	Turns the oven on and off														
LIGHT SWITCH	Momentarily will turn light on.														
STATUS DISPLAY	Displays the oven status (preheat, ready, done) and is the count down timer.														
SHELF TIMERS	Numbered 1 to 6, these buttons represent different shelf positions.														
	<table><thead><tr><th><u>Button #</u></th><th><u>Shelf Position</u></th></tr></thead><tbody><tr><td>1</td><td>Top Left</td></tr><tr><td>2</td><td>Top Right</td></tr><tr><td>3</td><td>Middle Left</td></tr><tr><td>4</td><td>Middle Right</td></tr><tr><td>5</td><td>Bottom Left</td></tr><tr><td>6</td><td>Bottom Right</td></tr></tbody></table>	<u>Button #</u>	<u>Shelf Position</u>	1	Top Left	2	Top Right	3	Middle Left	4	Middle Right	5	Bottom Left	6	Bottom Right
<u>Button #</u>	<u>Shelf Position</u>														
1	Top Left														
2	Top Right														
3	Middle Left														
4	Middle Right														
5	Bottom Left														
6	Bottom Right														
PACE TIMERS	Labeled C, P, and E these buttons are adjustable from one to thirty minutes.														
MINUTE TIMERS	There are two "Minute" timers. "1" is programmed for one minute, "2" is programmed for two minutes.														
TEMP BUTTON	When pressed this button will display the temperature of the oven.														
PROGRAM	These are "hidden" buttons that allow the times of the shelf position														
ENABLE BUTTONS	buttons to be set.														

OPERATION CONT'D

Status Display

The Status Display informs the operator of the oven's status.

Preht	Stands for PREHEAT . The oven has been turned on and is adjusting to the preprogrammed temperature (350°F).
Ready	The oven has reached the preset temperature and is awaiting for product to be loaded into the oven.
Cool	The oven's internal temperature is below what is programmed.
Hot	The oven's internal temperature is above what is programmed.
Done	The time has expired for that program and the product is finished.
Help	There is a fault in the control system, the computer will not operate until service is performed.

Control Panel Buttons

Shelf Buttons	Place the product into the oven on one of the six shelf positions. Close the oven doors. Press the shelf position button that corresponds to the shelf position once for "C" product, twice for "P" product, three times for "E" product, or four times for off. A beeper will sound once the product is done and "done" will be displayed. Press the flashing shelf to cancel the beeper.
Minute and Pace Timers	The "1" button is preset to one minute, the "2" button is preset to two minutes, and the "Pace" buttons are adjustable from one to thirty minutes. Press the button once to start the timer. The display will read out the programmed time and then revert to the previous read out. The timers will countdown internally. Time remaining can be recalled by pressing the button again.
Canceling a timer	Any timer can be cancelled at any time. Press and hold the timer to be cancelled until "cancel" appears in the display.

Loading

When loading and unloading the oven, stage products and racks so the oven door is opened for the least amount of time.

Be sure that racks are level within the oven.

Bent or warped pans can greatly affect the evenness of the cook or bake.

If using baker's parchment, be sure the parchment does not blow over the product. This will create an uneven bake.

Load each shelf evenly. Spaces should be maintained equally between the pan and oven walls, front and back.

Do not overload pan's this will create a uneven bake.

For best baking results, load the oven from the center out during random loading.

CAUTION ALWAYS KEEP THE AREA NEAR THE APPLIANCE FREE FROM COMBUSTIBLE MATERIALS.

CAUTION KEEP FLOOR IN FRONT OF EQUIPMENT CLEAN AND DRY. IF SPILLS OCCUR, CLEAN IMMEDIATELY, TO AVOID THE DANGER OF SLIPS OR FALLS.



PROGRAMMING

Pace Timers

The pace timers can be set at any time. Press and hold the “PACE” button for three seconds. The display will read out the set time then begin to flash. Press the “1” minute button to increase the time, or the “2” minute button to decrease the time. Once the corrected time is set, press and hold the “PACE” button for three seconds to exit the programming mode.

Program Enable Buttons

The control can not be put into the programming mode if any of the timers are running. The two blue dots above the “CINNABON” logo are the program enable buttons. Press the left dot then the right dot within 3 seconds to put the control into a programming mode. Once the shelf position buttons are set, press the left dot then the right dot within 3 seconds to exit the programming mode. There will be no beeper sound when the buttons are pressed.

Shelf Position Buttons

Put the control into the programming mode. Press the shelf button to be adjusted once for “C” product, twice for “P” product, or three times for “E” product. The display will read out “00:00” then begin to flash. Press the one-minute timer button to increase the time, or the two-minute timer button to decrease the time. Once the correct time is set move on to another shelf position button or exit the programming mode.

MAINTENANCE & CLEANING

WARNING

KEEP WATER AND SOLUTIONS OUT OF CONTROLS. NEVER SPRAY OR HOSE CONTROL CONSOLE, ELECTRICAL CONNECTIONS, ETC.



CAUTION

MOST CLEANERS ARE HARMFUL TO THE SKIN, EYES, MUCOUS MEMBRANES AND CLOTHING. PRECAUTIONS SHOULD BE TAKEN TO WEAR RUBBER GLOVES, GOGGLES OR FACE SHIELD AND PROTECTIVE CLOTHING. CAREFULLY READ THE WARNING AND FOLLOW THE DIRECTIONS ON THE LABEL OF THE CLEANER TO BE USED.



NOTICE

Never leave a chlorine sanitizer in contact with stainless steel surfaces longer than 10 minutes. Longer contact can cause corrosion.



Cleaning

- Always start with a cold oven.
- The stainless exterior can easily be cleaned using Lang Mfg. Prime Shine (72804-41) oven cleaner.
- Always follow the cleaner manufacturer's instructions when using any cleaner.
- Care should be taken to prevent caustic cleaning compounds from coming in contact with the blower wheel.
- The oven racks, rack slides, and interior may be cleaned using Lang Mfg. Foam Deluxe (72804-36) oven cleaner.
- Discoloration or heat tint may be removed using Lang Mfg. Carbon Release (72804-32) oven cleaner.
- Always apply these cleaners when the oven is cold and rub in the direction of the metal's grain.

TROUBLESHOOTING

Symptoms

What follows is a chart of Symptoms and Possible Causes to aid in diagnosing faults with the oven.

Refer to the Symptoms column to locate the type of failure then to the Possible Cause for the items to be checked.

To test for a possible causes refer to the TEST section and locate the Possible Cause then refer to test to identify test procedures.

SYMPTOM	POSSIBLE CAUSE
No Display	<ul style="list-style-type: none">• No power to cord outlet• Circuit breaker tripped.• Oven unplugged from outlet• Failed power cord or plug• Failed power switch• Failed circuit board
Oven will not heat	<ul style="list-style-type: none">• Power Switch is not "ON"• Failed Transformer• Failed Probe• Failed Circuit board• Failed Contactor• Failed Over-temperature Thermostat• Failed Element
Oven motor will not run	<ul style="list-style-type: none">• Power Switch is not "ON"• Failed Transformer• Failed Circuit Board• Failed Contactor• Failed Motor
Product burning	<ul style="list-style-type: none">• Product is cooked too long• Failed Probe• Failed Circuit board
Product under done	<ul style="list-style-type: none">• Product is not cooking long enough• Failed Probe• Failed Circuit board

TROUBLESHOOTING CONT'D

NOTICE

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WARNING

BOTH HIGH AND LOW VOLTAGES ARE PRESENT INSIDE THIS APPLIANCE WHEN THE UNIT IS PLUGGED/WIRED INTO A LIVE RECEPTACLE. BEFORE REPLACING ANY PARTS, DISCONNECT THE UNIT FROM THE ELECTRIC POWER SUPPLY.



NOTICE

If an item on the list is followed by an asterisk (*), the work should be done by a factory authorized service representative.



Possible Cause	TEST
Product is cooked too long	<ul style="list-style-type: none"> • No test available, operational condition
Failed Probe	<ul style="list-style-type: none"> • Check probe for proper resistance*
Failed Circuit board	<ul style="list-style-type: none"> • Confirm that Circuit board is getting correct voltage and putting out correct voltage*
Failed Transformer	<ul style="list-style-type: none"> • Check both Primary and Secondary coils for correct voltage*
Failed Contactor	<ul style="list-style-type: none"> • Remove the wires from the contactor coil and check for continuity across the contactor coil connection* • Ensure the contactor moveable points move freely up and down*
Failed Motor	<ul style="list-style-type: none"> • Confirm that motor is getting correct voltage*
Failed or disconnected safety thermostat	<ul style="list-style-type: none"> • Check across the thermostat connectors for continuity*
Failed Element	<ul style="list-style-type: none"> • Confirm that Elements are getting correct voltage and have continuity*

CAUTION

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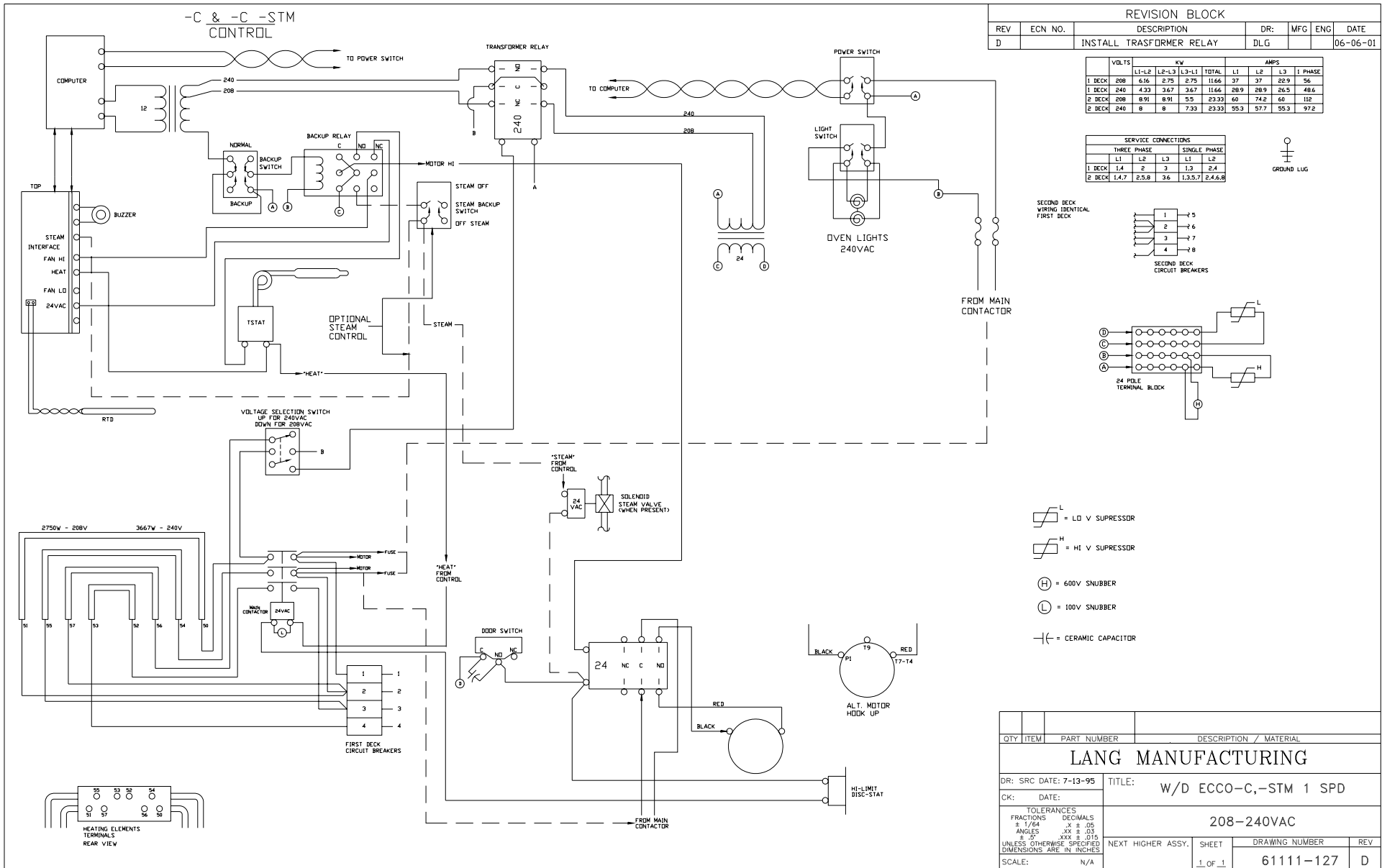


PARTS LIST

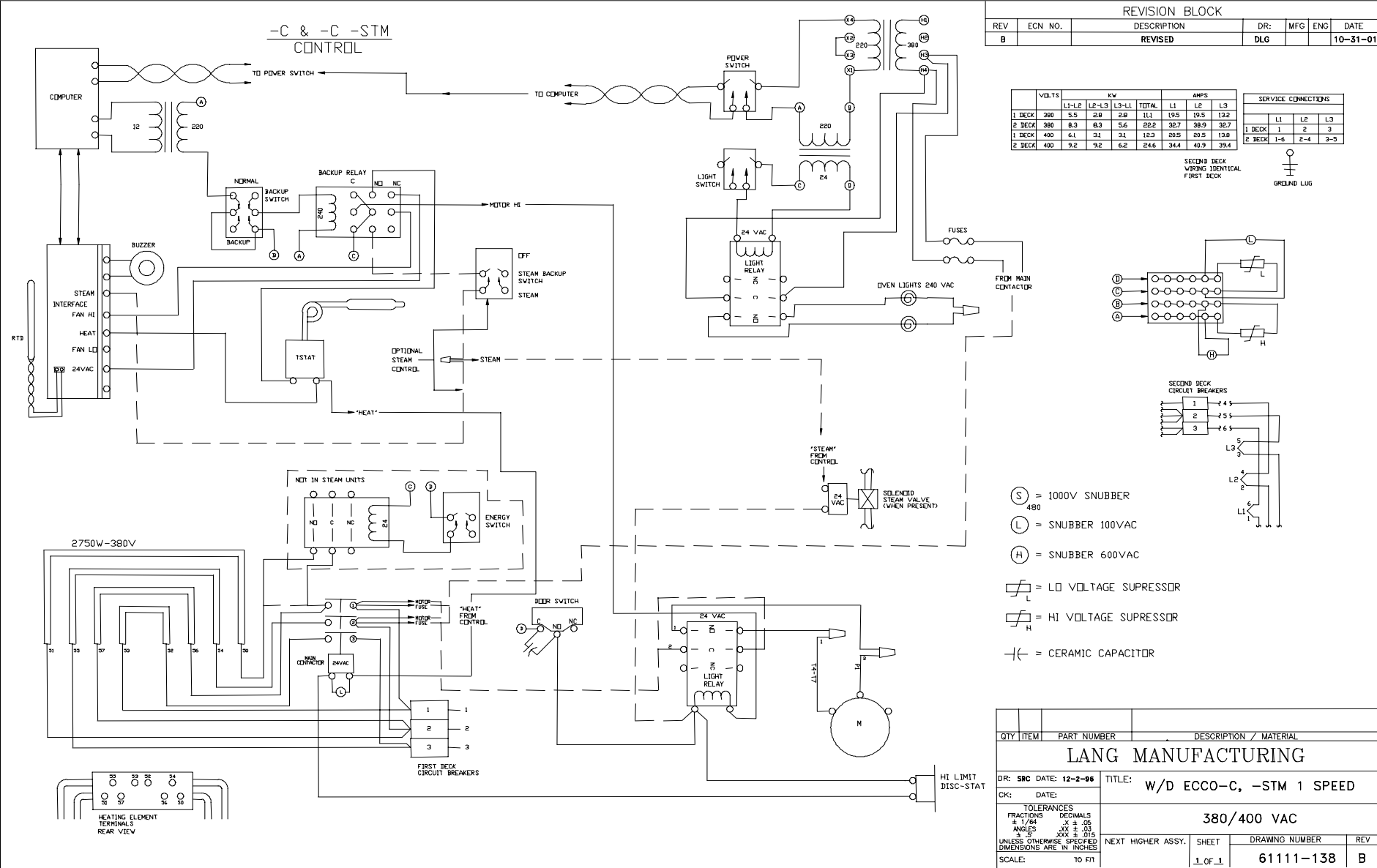
ECCO-LMDR ELECTRIC CONVECTION OVEN

DESCRIPTION	PART NO.
Element ECCO Oven 208/240 Volt 11000 Watts	11090-16
Element ECCO Oven 380 Volt 11000 Watts	11090-30
Element ECCO Oven 480 Volt 11000 Watts	11090-18
Motor 1/3 HP 480 Volt	30200-03
Motor 1/3 HP 208/240 Volt 1 Speed	30200-12
Motor 1/3 HP 380 Volt 1 Speed	30200-60
Switch Micro Convection Oven Door	30301-02
Switch Toggle On-Off	30303-06
Switch Toggle Spring Return	30303-16
Thermostat Safety 490°F Open	30401-09
Thermostat 450°F Oven	30402-27
Terminal Strip 2 Pole	30500-01
Terminal Block 24 Position Quick Disconnect	30503-01
Relay 240 VAC	30600-02
Contactors 3 Pole 24 VAC	30700-06
Contactors 2 Pole 30 Amp 24 VAC (With Serial V)	30701-05
Fuse 15 AMP 300 Volt	30900-10
Fuse Holder 15 Amp	30901-08
Cable Ribbon Assembly	31110-01
Transformer 480/240 VAC	31400-04
Transformer 120-208-240/24 VAC	31400-07
Transformer 380/220 VAC	31400-17
Transformer 240/12 VAC	31400-26
Lamp Socket	31602-04
Lamp Incandescent 250 Volt Clear	31603-04
Oven Lamp Lens (Watch Glass)	31604-01
Oven Lamp Lens Gasket	31604-02
Circuit Breaker 208/240 Volt 1-Pole	31800-01
Circuit Breaker 480 Volt 3-Pole	31800-04
Circuit Board (Replaces 40102-15 & 40102-16)	Q9-40102-60-2
Circuit Board Assembly Buzzer Cinnabon	40102-17
Snubber Low Voltage On Coil, 3-Pole Contactor	40705-02
Snubber Hi Voltage Contactor Circuit Feed 208/240V	40705-04
Snubber Hi Voltage Across Poles, 3-Pole Contact 208/240V	40705-05
Snubber Hi Voltage On Coil, 2-Pole Contactor 480V	40705-06
Snubber Hi Voltage Across Pole, 3-Pole Contactor 480V	40705-07
Snubber Low Voltage 24 Pole Terminal Block 480V	40705-08
Snubber Hi Voltage 24 Pole Terminal Block 480V	40705-09
Suppressor Low Voltage 24 Pole Terminal Block	40705-10
Suppressor Hi Voltage 24 Pole Terminal Block	40705-11
Probe Temperature Sensor	41100-08
Turnbuckle Assembly	50312-02
Door Left Hand	51100-45
Door Right Hand	51100-46
208/240 VAC Cord and Plug (Nema 15-50P)	60101-67
480 VAC Cord and Plug (Nema L16-20P)	60101-68
Panel Label, Cinnabon	60301-82
Handle Assembly, Single Handle Oven	70603-15
Knob Thermostat 450°F Oven	70701-19
Knob Damper Black	70701-25
Window Assembly, Oven Door	71301-04
Blower Wheel	71500-05

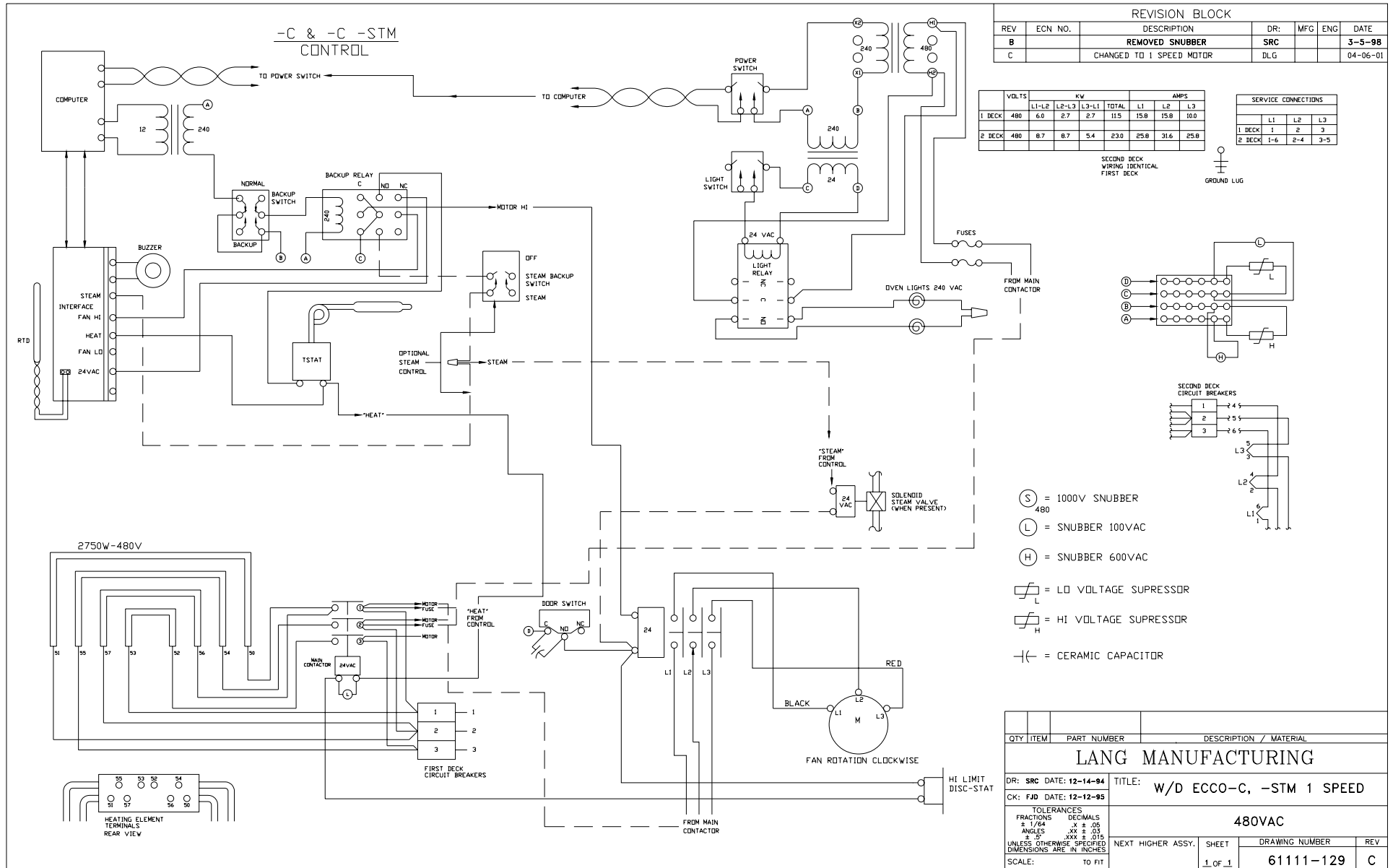
WIRING DIAGRAM 208/240



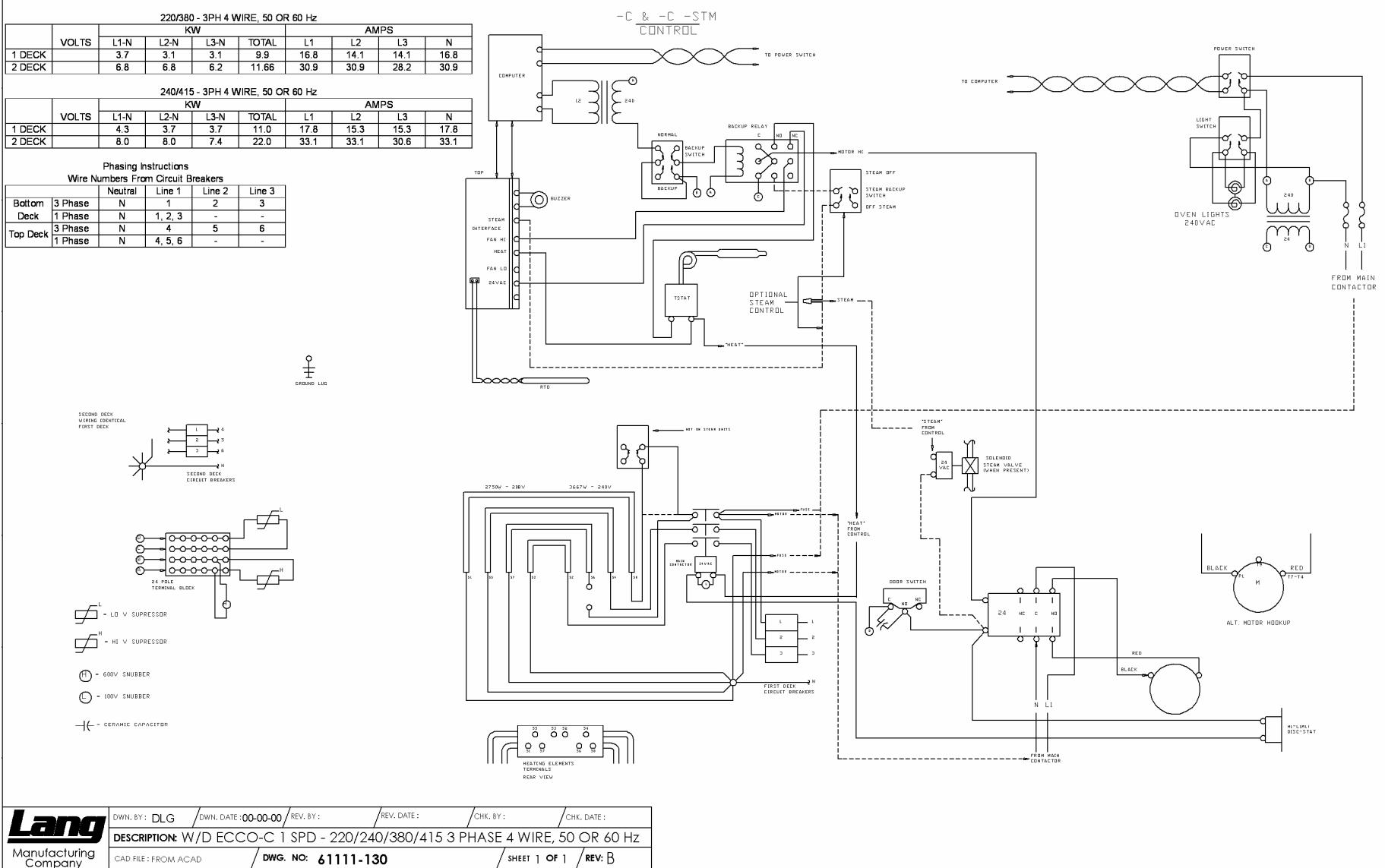
WIRING DIAGRAM 380/400



WIRING DIAGRAM 480



WIRING DIAGRAM 220/380



Lang Manufacturing Company

DWN. BY: DLG / DWN. DATE: 00-00-00 / REV. BY: / REV. DATE: / CHK. BY: / CHK. DATE:

DESCRIPTION: W/D ECCO-C 1 SPD - 220/240/380/415 3 PHASE 4 WIRE, 50 OR 60 Hz

CAD FILE: FROM ACAD / DWG. NO: 61111-130 / SHEET 1 OF 1 / REV: B

**Lang Manufacturing Limited
Warranty
to Commercial Purchasers*
(Contiguous U.S. Including Hawaii,
Alaska & **Canada.)**

Lang Manufacturing Equipment (“Lang Equipment”) has been skillfully manufactured, carefully inspected and packaged to meet rigid standards of excellence. Lang warrants its Equipment to be free from defects in material and workmanship for (12) twelve consecutive months. Exception: School Food Services for (36) Thirty-six consecutive months effective June 1, 2001, for all full size convection ovens with AP or AT controllers, with the following conditions and subject to the following limitations.

I. This parts and labor warranty is limited to Lang Equipment sold to the original commercial purchaser/users (but not original equipment manufacturers), at its original place of installation, in the continental United States, Hawaii and Canada.

Quartz elements are warranted for ninety (90) days from the date of installation.

II. Damage during shipment is to be reported to the carrier, is not covered under this warranty, and is the sole responsibility of purchaser/user.

III. Lang, or an authorized service representative, will repair or replace, at Lang’s sole election, and Lang Equipment, including but not limited to, safety valves, gas and electric components, found to be defective during the warranty period. As to warranty service in the territory described above, Lang will absorb labor and portal to portal transportation costs (time & mileage) for the first (12) twelve months from the date of installation or eighteen (18) months from date of shipment from Lang Manufacturing, whichever comes first.

***Canada warranty paid in US dollars based on current exchange rates.**

IV. This warranty does not cover routine general maintenance, periodic adjustments, as specified in operating instructions or manuals, and consumable parts such as quartz elements, or labor costs incurred for removal of adjacent equipment or objects to gain access to Lang Equipment. This warranty does not cover defects caused by improper installation, abuse, careless operation, or improper maintenance of equipment.

V. THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, EACH OF WHICH IS HEREBY EXPRESSLY DISCLAIMED. THE REMEDIES DESCRIBED ABOVE ARE EXCLUSIVE AND IN NO EVENT SHALL LANG BE LIABLE FOR SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR THE BREACH OR DELAY IN PERFORMANCE OF THIS WARRANTY.

VI. Lang Equipment is for commercial use only. If sold as a component of another (OEM) manufacturer’s equipment, or if used as a consumer product, such Equipment is sold AS IS and without any warranty.