



A Division of Star Mfg. Int'l, Inc.

# ELECTRIC HALF SIZE COMPUTERIZED CONVECTION OVEN

ECOH-C2/3VCN

ECOH-C2/4VCN

ECOH-C208CNF

ECOH-C208VCN

ECOH-C240VCN

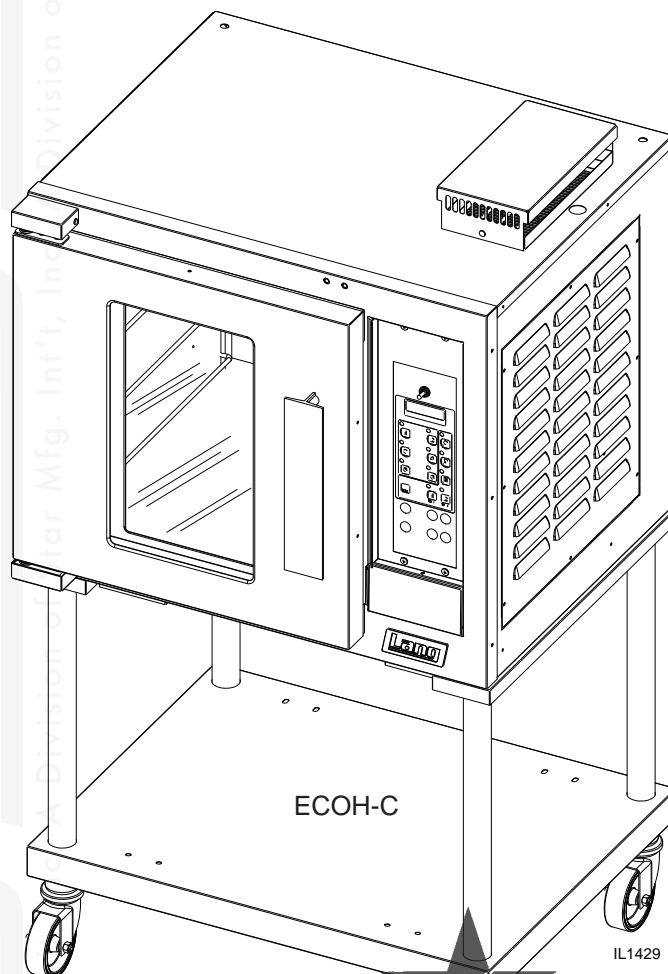
ECOH-2/4CECN

**Installation and**

**Operation**

**Instructions**

2M-W493 Rev.E 5/16/08



## SAFETY SYMBOL



These symbols are intended to alert the user to the presence of important operating and maintenance instructions in the manual accompanying the appliance.

### FOR YOUR SAFETY

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

### POST IN PROMINENT LOCATION

**INSTRUCTIONS TO BE FOLLOWED IN THE EVENT USER SMELLS GAS. THIS INFORMATION SHALL BE OBTAINED BY CONSULTING YOUR LOCAL GAS SUPPLIER. AS A MINIMUM, TURN OFF THE GAS AND CALL YOUR GAS COMPANY AND YOUR AUTHORIZED SERVICE AGENT. EVACUATE ALL PERSONNEL FROM THE AREA.**

### WARNING

**IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.**



### WARNING

**RISK OF FIRE OR ELECTRIC SHOCK  
DO NOT OPEN**



**WARNING, TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE CONTROL PANEL. NO USER-SERVICABLE PARTS INSIDE. REPAIRS SHOULD BE DONE BY AUTHORIZED SERVICE PERSONNEL ONLY.**

### NOTICE

Using any part other than genuine Lang factory supplied parts relieves the manufacturer of all liability.

Star reserves the right to change specifications and product design without notice. Such revisions do not entitle the buyer to corresponding changes, improvements, additions or replacements for previously purchased equipment.

Due to periodic changes in designs, methods, procedures, policies and regulations, the specifications contained in this sheet are subject to change without notice. While Star Manufacturing exercises good faith efforts to provide information that is accurate, we are not responsible for errors or omissions in information provided or conclusions reached as a result of using the specifications. By using the information provided, the user assumes all risks in connection with such use.

## MAINTENANCE AND REPAIRS

Contact your local dealer for service or required maintenance. Please record the model number, serial number, voltage and purchase & Installation Information in the area below and have it ready when you call to ensure a faster service.

Model No.: \_\_\_\_\_

Purchased From: \_\_\_\_\_

Serial No.: \_\_\_\_\_

Location: \_\_\_\_\_

Voltage: \_\_\_\_\_

Purchase Date: \_\_\_\_\_

1-Phase or 3 Phase: \_\_\_\_\_

Installed Date: \_\_\_\_\_



## PROBLEMS, QUESTIONS or CONCERNS

Before you proceed consult you authorized Lang service agent directory  
or  
Call the Lang Technical Service & Parts Department at 1-800-807-9054.

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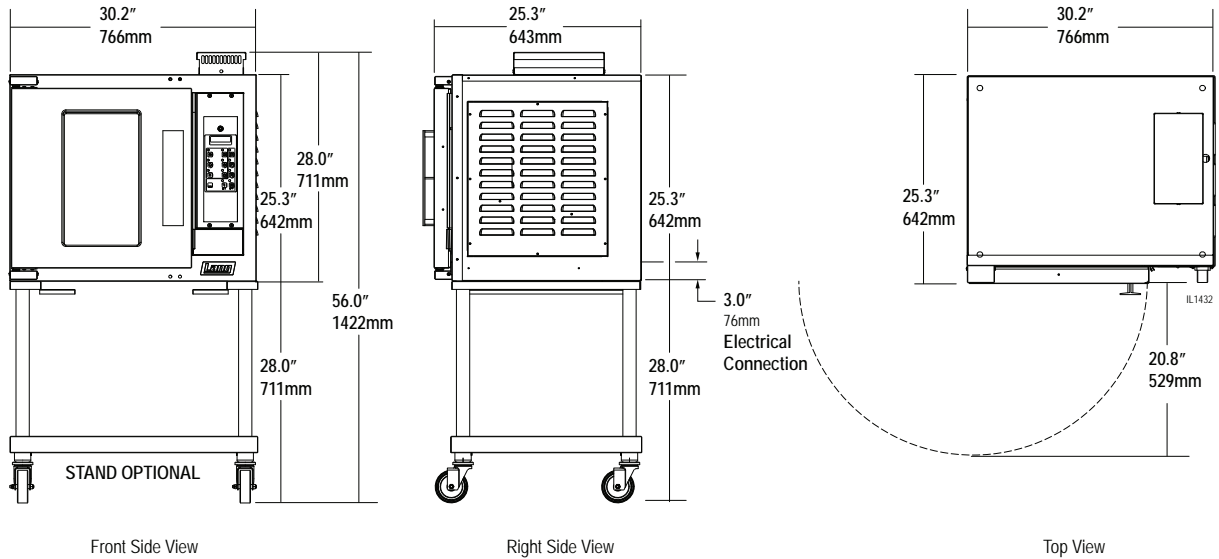
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#### NOTICE

**Service on this or any other Lang appliance must be performed by qualified personnel only. Consult your Lang Authorized Service Agent Directory. You can call our toll free number 1-800-807-9054 or visit our website [WWW.STAR-MFG.COM](http://WWW.STAR-MFG.COM) for the service agent nearest you.**

## SPECIFICATIONS

Model	Height x Width x Depth (without optional stand)	Clearance from combustible surface	Weight		
			Installed	Shipping	Freight Class
ECOH-C	25.3" x 30.2" x 25.3" 642mm x 766mm x 643mm	Side: 6", Back: 6", Floor: 6"	185 lbs. (84 kg)	225lbs (102 kg)	85



## UTILITY REQUIREMENTS

Model Number						
Current Model	Previous Model	Volts	Hz	Motor Amps	Phase	KW
ECOH-2/4CECN	EHS-LMDR-HCE	240/415	50/60	33	1/3PH-4 Wire	7.8
ECOH-C2/3VCN	EHS-LMDR-G	220/380	50/60	3.3	1/3PH-4 Wire	6.7
ECOH-C2/4VCN	EHS-LMDR-J	240/415	50/60	1.2	1/3	7.8
ECOH-C208CNF	EHS-LMDRAFTO	208	60	3.3	1/3	5.6
ECOH-C208VCN	EHS-LMDR-A	208	60	3.3	1/3	7.8
ECOH-C240VCN	EHS-LMDR-I	240	60	2.6	1/3	7.8

Model Number							
Current Model	Previous Model	Amps 1PH	Wire 1PH	L1	L2	L3	Wire 3PH
ECOH-2/4CECN	EHS-LMDR-HCE			11.8	10.4	10.4	12
ECOH-C2/3VCN	EHS-LMDR-G	30	10	11	10	10	12
ECOH-C2/4VCN	EHS-LMDR-J	32.5	8	10.4	10.4	11.6	12
ECOH-C208CNF	EHS-LMDRAFTO	27	10	12	23	15	10
ECOH-C208VCN	EHS-LMDR-A	38	8	23	21	23	10
ECOH-C240VCN	EHS-LMDR-I	33	8	20	18	20	12

## EQUIPMENT DESCRIPTION

### Exterior Construction

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

The oven exterior dimensions are:

30" (76.2 cm) Wide,  
25.25" (74.3 cm) High,  
26.5" (67.31 cm) Deep.

The oven door comes standard with a high temperature insulated window equipped with a polycarbonate handle.

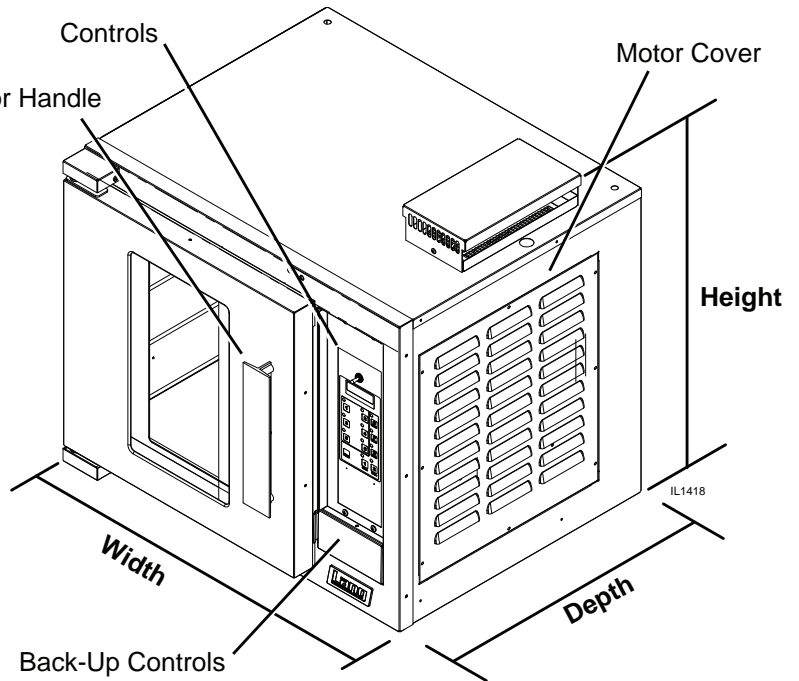
The oven cavity is insulated with high temperature insulation for efficiency and reduced heat loss.

### Interior Construction

The oven is designed for five shelves and comes with five Chrome Plated Racks.

The interior cooking chamber is constructed of stainless steel with dimensions of:

15" (38.1 cm) Wide,  
20" (50.84 cm) High,  
21" (53.38 cm) Deep.



### Operation

The ECOH 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.

### 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*).

Floor space required is 42" (106.68cm) Wide, 32.5" (82.55cm) Deep.

The oven weighs approximately 225 lb. (102.5 Kilograms).

The ovens are stackable, stacking kit available upon request.

**NOTICE** The data plate is on the back side of the oven above the power cord. 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.

## 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 it 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 Star 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.

The oven can now be removed from the skid.



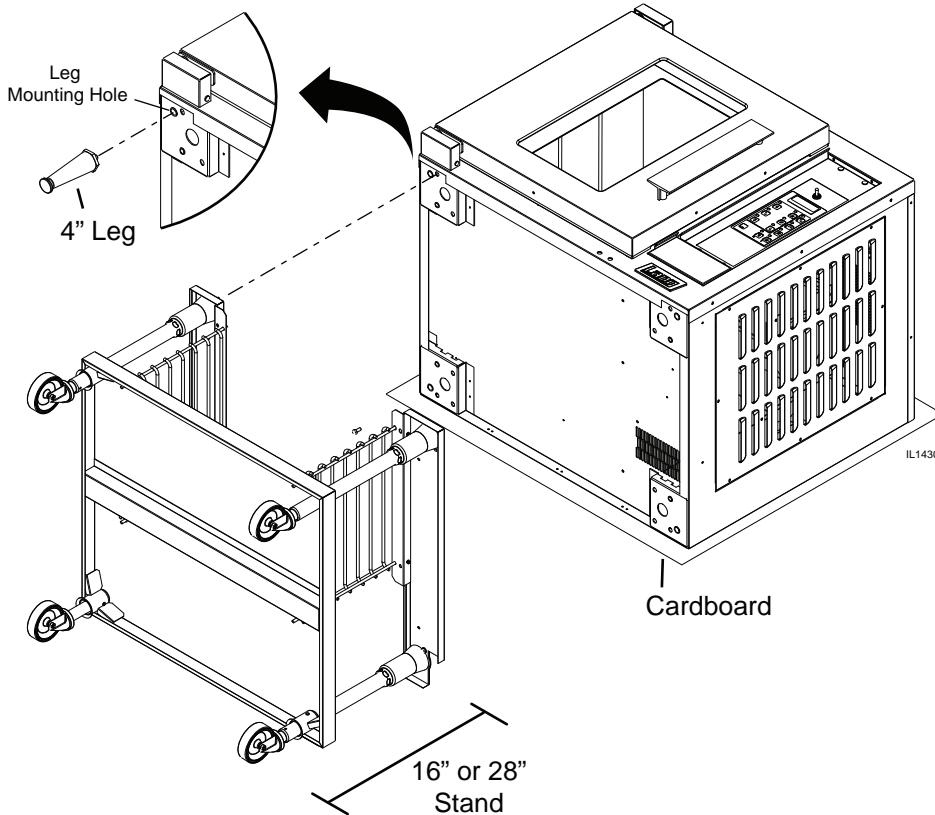
**CAUTION**

**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.**

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

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

# INSTALLATION



## Leg Installation

4" legs are available for single countertop installations. Single and double deck installations require 16" or 28" stand installation, casters may also be used in certain situations.

To install the 4" legs, place some cardboard on the floor and gently tip the unit onto its back. Fasten the four, 4" legs into the threaded holes located on the bottom of the unit. Gently lift the oven into its operating position.

16" & 28" stand installation, after following the assembly instructions that were provided with the stand, gently lower unit on to some cardboard as shown here. Align the stand with the bottom of the unit and secure with the hardware provided. With the assistance of carefully raise the unit to its vertical position.

## Stacking the Ovens

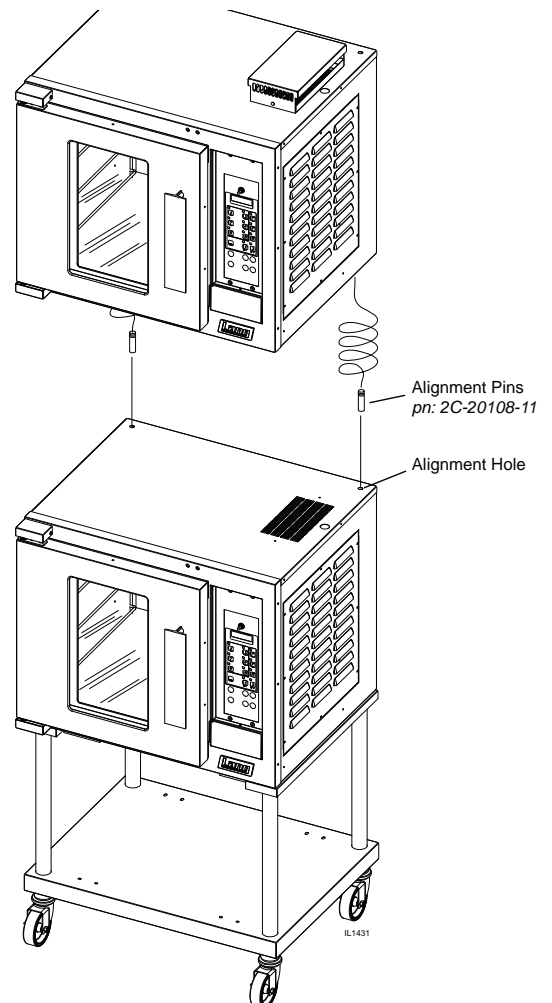
Two alignment pins (pn:2C-20108-11) are needed if you intend on stacking two ECOH-C on each other as shown. These pins must be requested at the time of purchase, or call your Lang authorized service agent, or Lang parts department at 1-800-807-9054.

Having completed the previous step remove any and all button plugs from the lower unit, so the upper unit will lay properly.

Lay the upper unit on its back and screw the alignment pins into the two rear holes.

With assistance lift the upper unit onto the lower unit, being certain that the alignment pins go into the alignment holes, as shown here.

**NOTE: Each unit must have separate electrical connections**



## INSTALLATION continued

### Vent Cap

Certain units come equipped with a vent cap assembly, this gets installed on top of the unit as shown here. If your unit does not come equipped with this feature call the Lang parts department at 1-800-907-9054 to inquire.

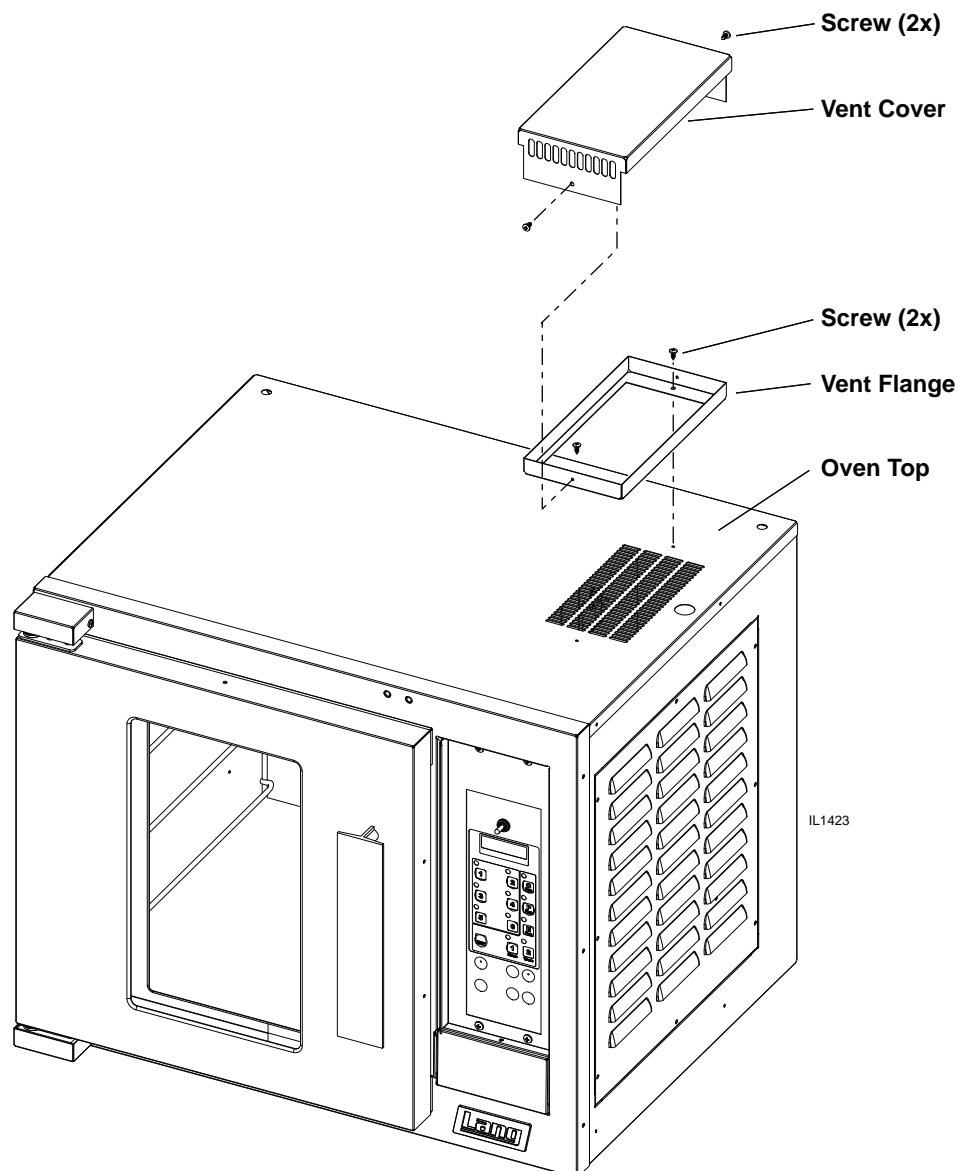
*This vent allows:*

*heat to escape from the electronic controls and motor assembly more freely, allowing cooler air to enter through the side.*

*reduces the possibility of blocking the vent or having objects or moisture falling into the controls & motor compartment possibly damaging sensitive electronic components.*

### Install Vent Cap

1. Unit should be turned off.
2. Align vent flange with mounting holes on top of the unit as shown here.
3. Secure in place with hardware provided.
4. Align the mounting holes on the vent cover, with the holes on the vent flange, and secure with hardware provided.



*Vent Cap Assembly Installation, standard with certain models*



## INSTALLATION continued

### 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 area free & 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 applicable nationally recognized installation standards.

**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.**

### 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 at the oven back directly behind the control

compartment. A grounding lug is provided at the rear service entrance.

The ECOH-C-VCN can be purchased with a Cord & Plug kit (*Part number 9Q-ECOH-CK*). This kit includes a 48" cord with a NEMA L15-30P plug. In stacked situations each units needs to have separate cord & plug assemblies.

### Oven Voltage

The Lang Model ECOH ovens can be operated on 208, 240-volt (single or three phase), or 480-volt (three phase only) source. The Amp draw, KW rating, and phasing can be found in the wiring diagram section of this manual.



**WARNING**

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

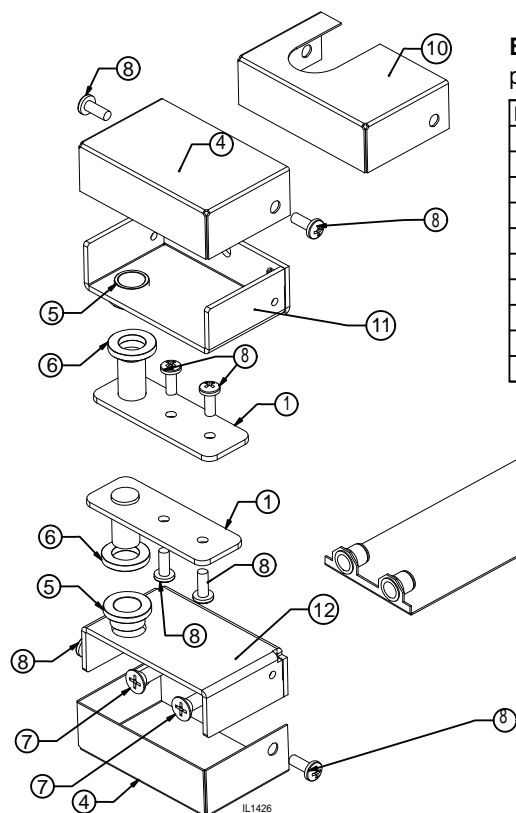


**WARNING**

**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.**

## Reversing the door

1. Disconnect oven from power.
2. Remove the top and bottom door hinge covers (4) by removing the two 10-32 Phillip head screws (8).
3. Remove the top door hinge bracket (1) from the oven by removing the two 1/4-20 Phillip head screws (7). The hinge should now slide off of the door pin (this will now be your right hand lower hinge)
4. Lift the door off the bottom pin and set aside.
5. Remove the bottom door hinge bracket (2) by removing the two 1/4-20 Phillip head screws (7) (this will now be your upper right hand hinge).
6. Remove the lower hinge mounting plate (9) by pulling it from behind the leg pad adapter on the bottom of the oven.
7. Remove the two Phillips head screws in the bottom right corner of the oven, where the new hinge will be placed.
8. Slide the hinge mounting plate (9) into place and mount the hinge bracket (this should be your old upper hinge) using two 1/4-20 (7) Phillips head screws.
9. Remove the two Phillips head screws in the upper right corner of the oven where the new hinge will be placed.
10. Rotate the door 180° and slide the door pin into the bottom hinge bracket.
11. Slide the upper door hinge (1) onto the upper door pin and then screw into place using two 1/4-20 Phillip head screws.
12. Place the top and bottom door hinge covers (4) back on the oven using two 10-32 Phillip head screws (8).



### ECOH HINGE RELPACEMENT KIT

pn: Q9-50313-030

ITEM NO.	QTY.	PART NO.	DESCRIPTION
3	2	50313-031	HINGE PIN WELDMENT
4	2	EH-267	EH HINGE COVER
5	2	70201-19	
6	2	70201-01	
7	2	20109-43	
8	8	20109-15	
9	1	eh-198-1	BOTTOM HINGE PLATE ASSY
10	1	CR30-148	UPPER HINGE COVER FOR EH
11	1	EH-265-1	EH HINGE - TOP - FOR SVC KIT
12	1	EH-266-1	EH HINGE - BOTTOM - FOR SVC KIT

INSERT BEARINGS (ITEMS "5") INTO THE HINGES (ITEMS "1" & "2") AS SHOWN THEN REAM WITH A .508 REAMER.

## INITIAL START UP

### Pre-Power On

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

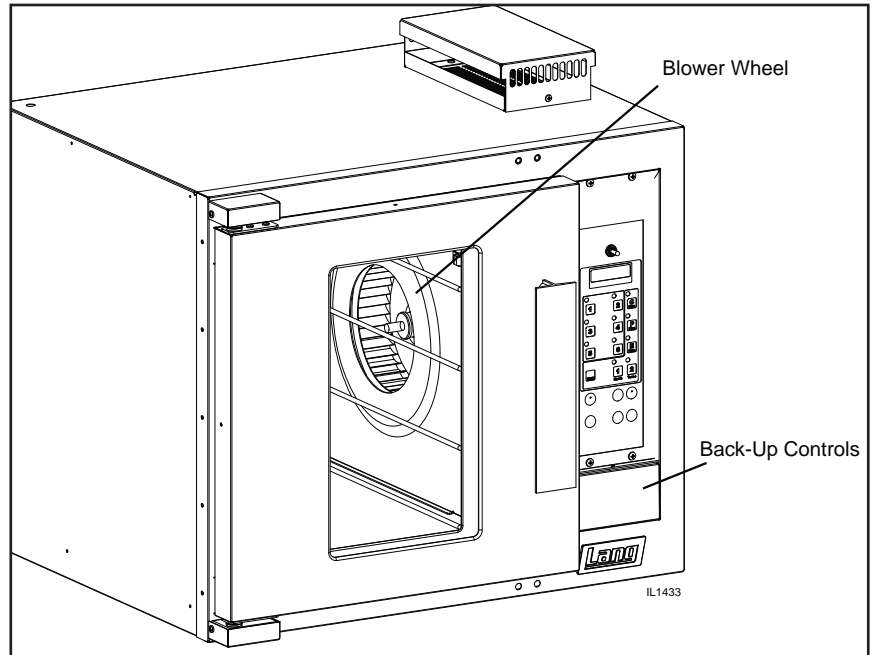
- The door opens and closes freely
- All racks are in the oven correctly
- All packing materials have been removed from the inside of the oven

### 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.

Switch the back-up controls on and make certain it can run the unit,

Confirm that the thermostat knob in the back-up controls is move freely.



**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 unit and will disappear after the first few hours of use.

## General Operation & Programming

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.

A convection oven 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 changes in the 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

**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.

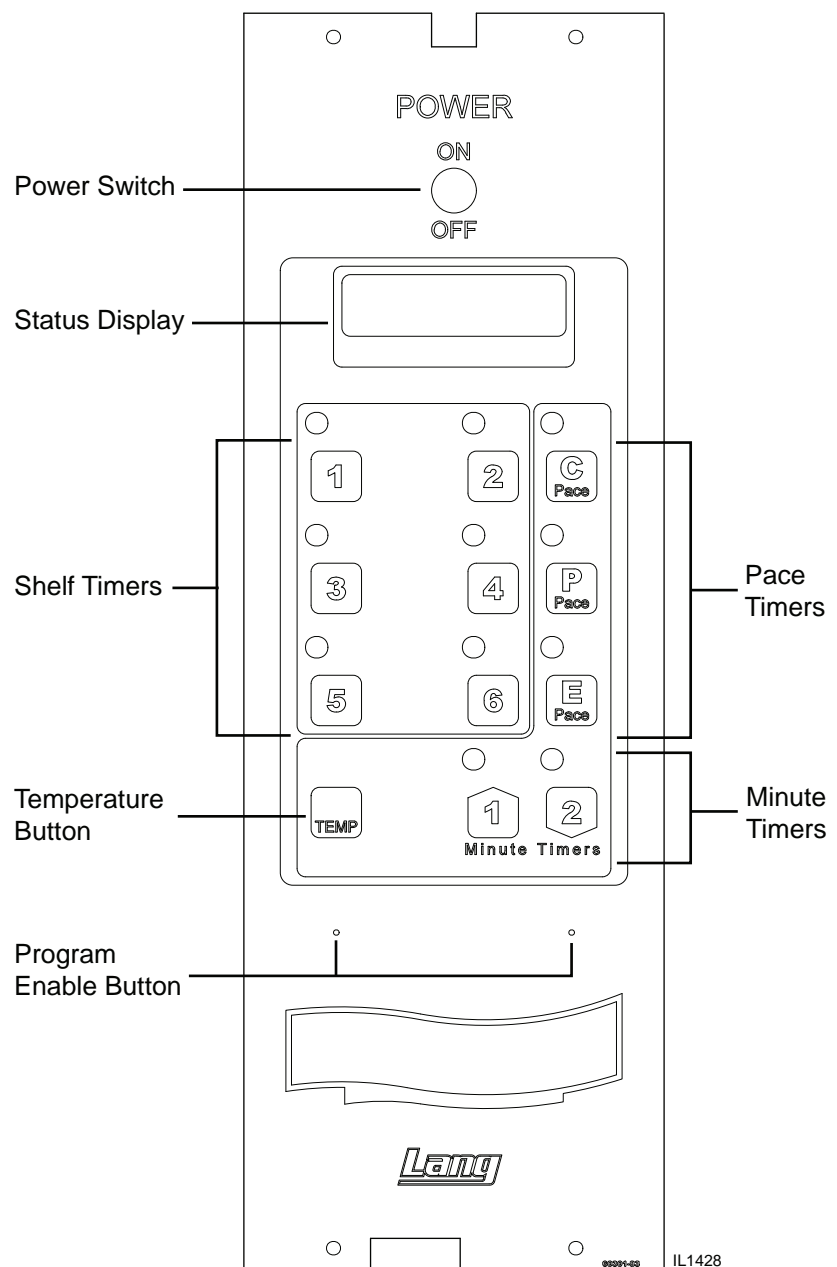
Button #	Shelf Position
1	Top Left
2	Top Right
3	Middle Left
4	Middle Right
5	Bottom Left
6	Bottom Right

**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 Enable Buttons:** These are "hidden" buttons that allow the times of the shelf position buttons to be set.



## General Operation & Programming cont.

### Status Display

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

Preht	Stands for <b>PREHEAT</b> . The oven has been turned on and is adjusting to the preprogrammed temperature (350°F, 176°C).
Ready	The oven has reached the preset temperature and is waiting 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

Here are some things to remember when loading your oven.

- 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 an 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.**

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

## General Operation & Programming cont.

### 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 cannot 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

- Oven interiors should be wiped down daily and thoroughly cleaned weekly using warm water and mild detergent. **DO NOT use caustic cleaners.**
- The appliance should be thoroughly checked at six-monthly intervals by a qualified technician (heating unit, mechanical stability, corrosion...) with particular emphasis on all control and safety devices.

## CLEANING

- Always start with a cold oven.
- The stainless exterior can easily be cleaned using stainless steel 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 fan wheel.
- The oven racks, rack slides, may be cleaned outside the oven cavity using oven cleaner.
- Using any harsh chemicals will result in the removal of the ETC coating and etching of the porcelain below it. The oven interior should only be cleaned using a mild soap and a non metal scouring pad. **DO NOT use caustic cleaners.**
- Always apply stainless steel cleaners when the oven is cold and rub in the direction of the metal’s grain.



### 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.**

**NEVER LEAVE A CHLORINE SANITIZER IN CONTACT WITH STAINLESS STEEL SURFACES LONGER THAN 10 MINUTES. LONGER CONTACT CAN CAUSE CORROSION.**

## Troubleshooting

### Symptoms & Possible Causes

The following are charts of Symptoms and Possible Causes to aid in diagnosing faults with your unit.

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 cause refer to test to identify test procedures. Test indicated with an “\*” should be done by a Lang factory authorized service representative.

Symptoms	Possible Cause	Possible Cause	Test
Power indicator is not lit	No power to cord outlet	Product is cooked too long	No test available, operational condition
	Oven unplugged from outlet	Failed Probe	Check probe for proper resistance*
	Failed Power cord or plug	Failed Circuit board	Confirm that Circuit board is getting correct voltage and putting out correct voltage*
	Failed power switch	Failed Transformer	Check both Primary and Secondary coils for correct voltage*
	Failed indicator light	Failed Contactor	Remove the wires from the contactor coil and check for continuity across the contactor coil connection*
Oven will not heat	Power Switch is not “ON”		Ensure the contactor moveable points move freely up and down*
	Failed Transformer	Failed Motor	Confirm that motor is getting correct voltage*
	Failed Probe	Failed or disconnected safety thermostat	Check across the thermostat connectors for continuity*
	Failed Circuit board	Failed Element	Confirm that Elements are getting correct voltage and have continuity*
	Failed Contactor		
	Failed Over-temperature Thermostat		
Oven motor will not run	Failed Element		
	Power Switch is not “ON”		
	Failed Transformer		
	Failed Contactor		
Product burning	Failed Motor		
	Product is cooked too long		
	Failed Probe		
Product is under done	Failed Circuit board		
	Product is not cooked long enough		
	Failed Probe		
	Failed Circuit board		

#### NOTICE

If an item on the list is followed by an asterisk (\*), the work should be done by a Lang 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.**

#### NOTICE

Service on this or any other Lang appliance must be performed by qualified personnel only. Consult your Lang Authorized Service Agent Directory. You can call our toll free number 1-800-807-9054 or visit our website [WWW.STAR-MFG.COM](http://WWW.STAR-MFG.COM) for the service agent nearest you.



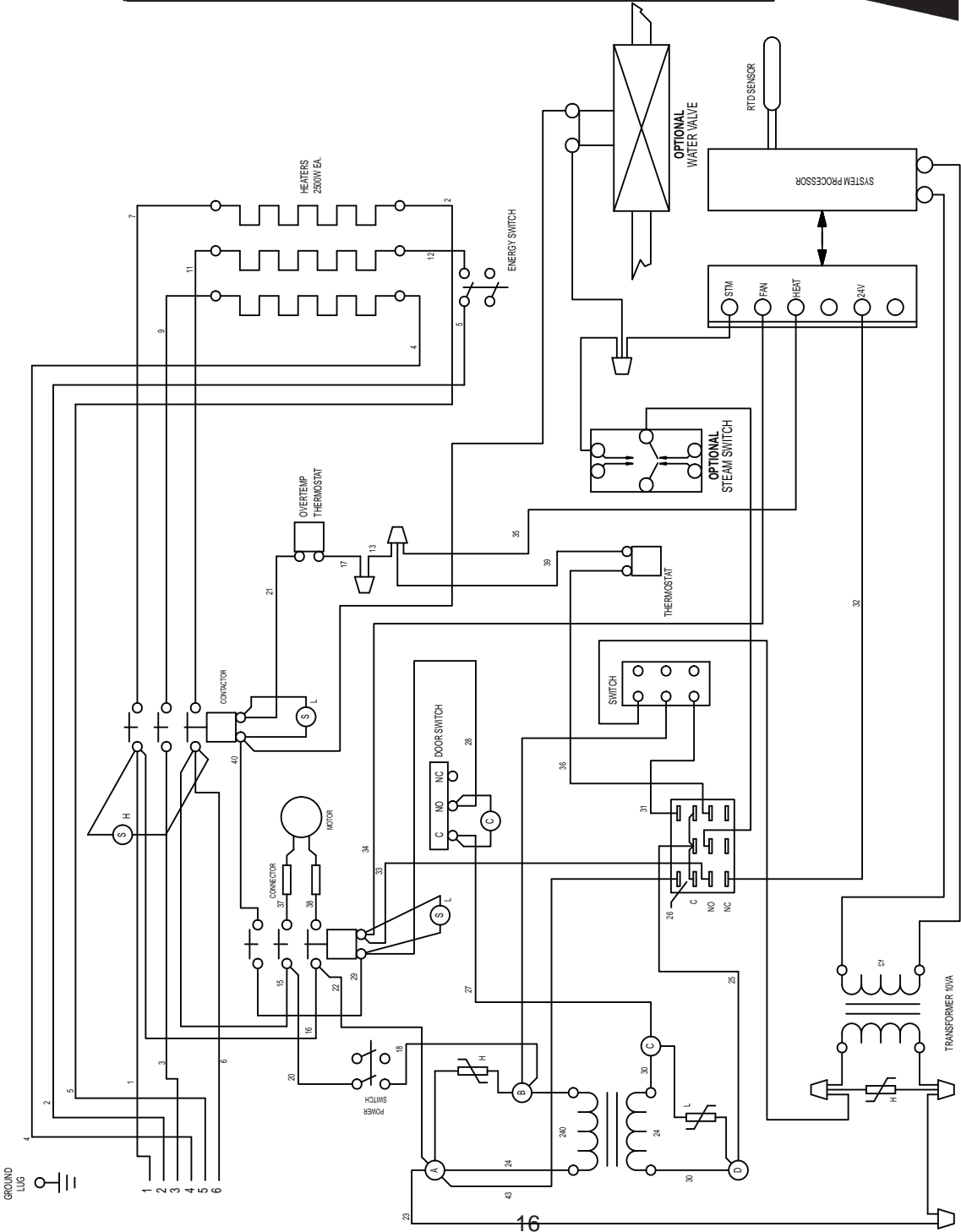
#### WARNING

**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.**

Model	Volt	Kw				Amps 3 Phase			
		L1-N	L2-N	L1-N	Total	L1	L2	L3	N
ECHO-C, EHS-C	220/380	2.1	2.1	2.4	6.7	9.5	9.5	10.9	10.9
	230/400	2.3	2.3	2.6	7.2	10.0	10.0	11.3	18.3
	240/415	2.5	2.5	2.8	7.8	10.4	10.4	11.6	11.6

Model	Volt	Kw Per Phase				Amps 3 Phase		
		L1-L2	L2-L3	L1-L3	Total	L1	L2	L3
ECHO-C,	208	2.5	2.5	2.8	7.8	22.1	20.8	22.1
EHS-C	240	2.5	2.5	2.8	7.8	19.1	18.0	19.1

Power Connection Phasing Instructions								
Voltage	Wiring Three Phase				Wiring Single Phase			
	Line 1	Line 2	Line 3	Neutral	Line 1	Line 2	Neutral	
208	1 & 4	2 & 5	3 & 6	-	1, 3 & 5	2, 4, & 6	-	
240	1 & 4	2 & 5	3 & 6	-	1, 3 & 5	2, 4, & 6	-	
440	1 & 4	2 & 5	3 & 6	-	1, 3 & 5	2, 4, & 6	-	
230/380	1	2	3	2, 4, & 6	1, 3 & 5	-	2, 4, & 6	
230/400	1	2	3	2, 4, & 6	1, 3 & 5	-	2, 4, & 6	
240/415	1	2	3	2, 4, & 6	1, 3 & 5	-	2, 4, & 6	



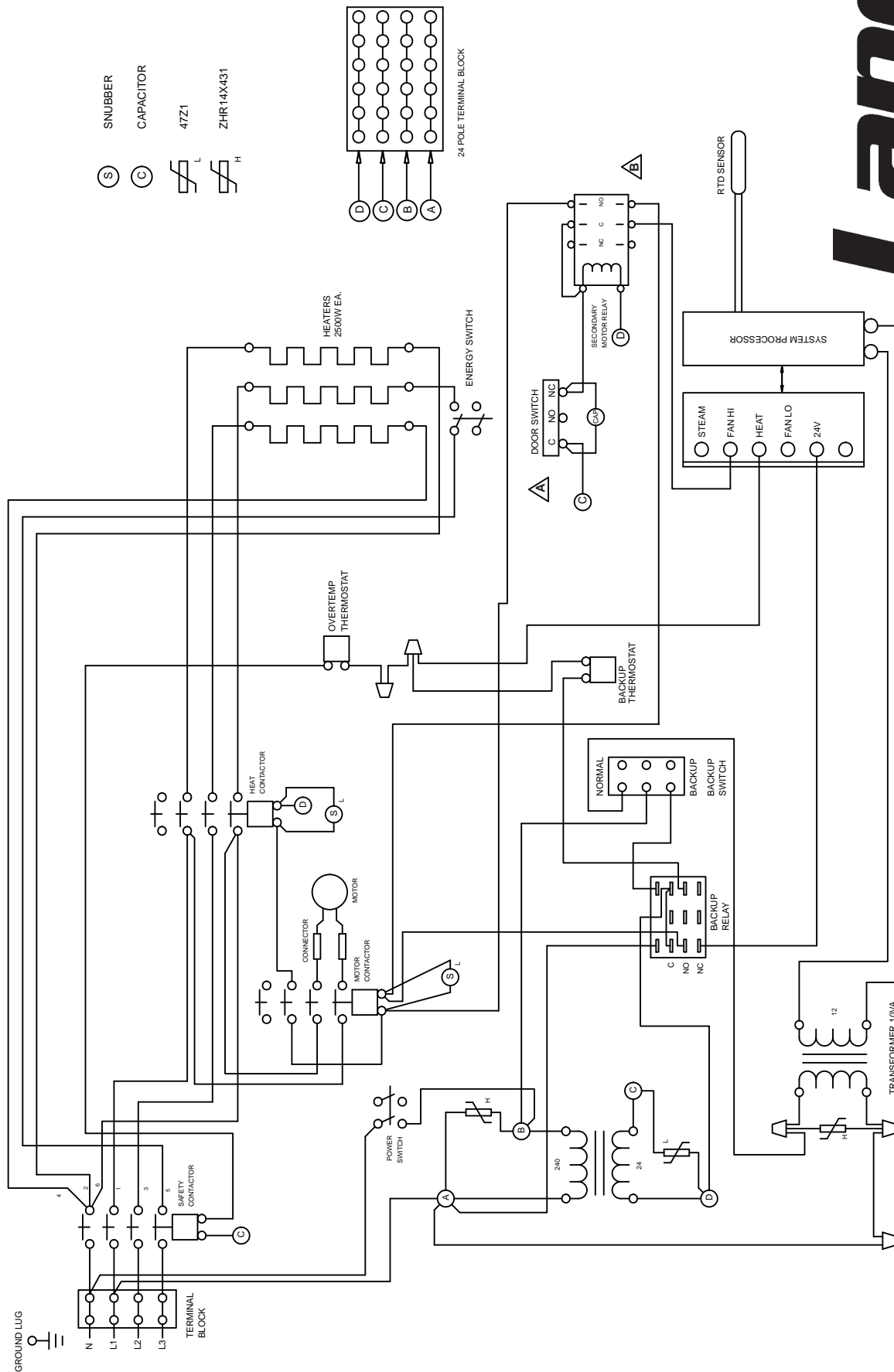
**Lang**<sup>TM</sup>

A Division of Star Mfg. Int'l, Inc.

2M-61111-39      Rev F      11/4/2003

**MODELS:**  
ECHO-C & EHS-C-208/240V W/STEAM OPTION



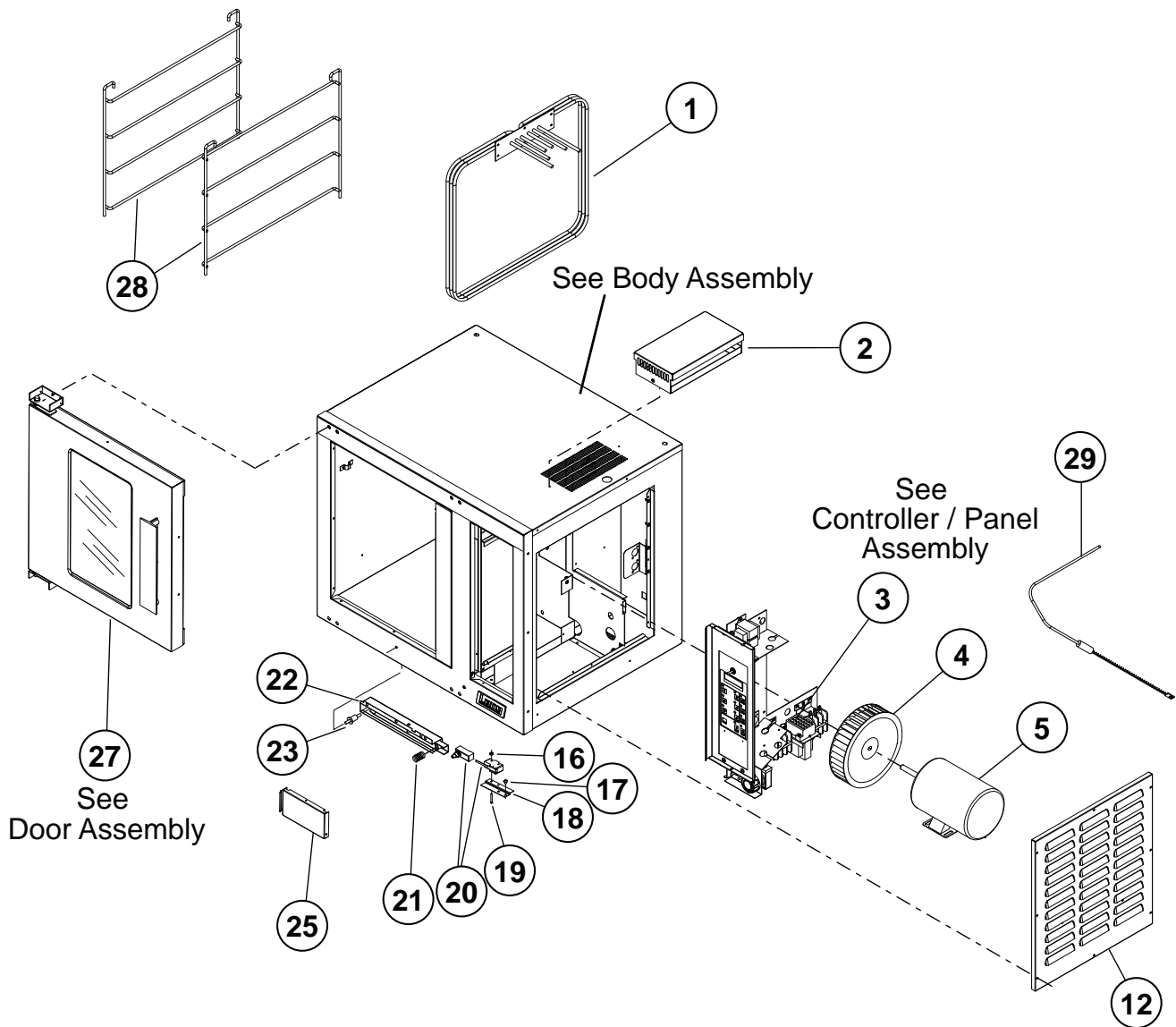


**MODELS:**  
 ECOH-2/4CECN Electric Half Size Convection Oven

**Lang**<sup>TM</sup>

A Division of Star Mfg. Int'l, Inc.

2M-61111-103-CE Rev B 7-23-08



ECOH-C Complete Assembly

**Lang**<sup>TM</sup>  
A Division of Star Mfg. Int'l, Inc.

SK2330

Rev. -

11/14/2007

# PARTS LIST

May 16, 2008, Rev E

**Model No:** ECOH-C2/3VCN, ECOH-C2/4VCN, ECOH-C208CNF, ECOH-C208VCN, ECOH-C240VCN, ECOH-2/4CECN

## Commercial Half Size Economy Convection Oven

Key Number	Part Number	Qty Per	Description
1	2N-11090-20	1	ELMNT EHS 208V 7.5KW
	2N-11090-23	1	ELMNT EHS OVEN 208VAC 5.0
	2N-11090-21	1	ELMNT EHS 240V 7.5KW
2	Q9-EH-623-1	1	VENT CAP ASSY - EHS
3	Q9-EHPLMDR-C	1	PNL EH 208/240V CINNABON
	Q9-EHPLMDR-HCE	1	PNL EH 220/380/240/415 CE
4	2U-71500-06	1	BLOWER WHEEL EHS OVEN
5	2U-30200-12	1	MTR 1/3HP 115/208-240 1PH
	2U-30200-17	1	MTR 1/3HP208/204V1PH2SPD
12	Q9-60102-1368		MOTOR COVER EH (EH-141) & HRDW
16	2C-20301-10	2	NUT HEX 6-32 PLTD
17	2C-20101-65	2	SCRW MS PLT 10-32 X .25 THD
18	Q9-EH-356	1	SWITCH BRACKET
	Q9-EH-356-2	1	DOOR SWITCH BRACKET - CE
19	2C-20101-17	2	SCRW RND MS 6-32X1 PLTD
20	Q9-EH-363	1	SWITCH ARM, MICRO
21	2P-51001-12	1	SPRING COMPRSN.665ID X 1.4 LONG
22	Q9-EH-250	1	WELD SWITCH ARM
23	Q9-EH-350	1	SWITCH PLUNGER - ASSY
25	Q9-60102-112	1	SWITCH DOOR - ASSY EH
27	Q9-51100-53	1	CMPLT DOOR ASSY EHS/GHS WNDW
28	2B-50200-97	2	RACK SLIDE - EHS - MB
29	2E-41100-12	1	SENSOR EHS OVEN 450°
NI	2B-50200-34	4	RACK HALF SIZE OVENS
NI	2B-50200-34	5	RACK HALF SIZE OVENS
NI	2C-20108-01	2	STACKING PINS
NI	2K-70801-02	2	SNAP BUSH 1 3/8 SB1375-16
NI	2K-70801-04	8	SNAP BUSH 3/4 SB750-10
NI	2M-61111-39		WD EHS-C OVEN
NI	Q9-60102-97	1	DOOR SEAL EH w/ mounting hardware
NI	2E-30500-15	1	TRM BLOCK 4 POLE 115AMP
NI	2E-30701-05	1	CONTC 2POLE 30A 24VAC

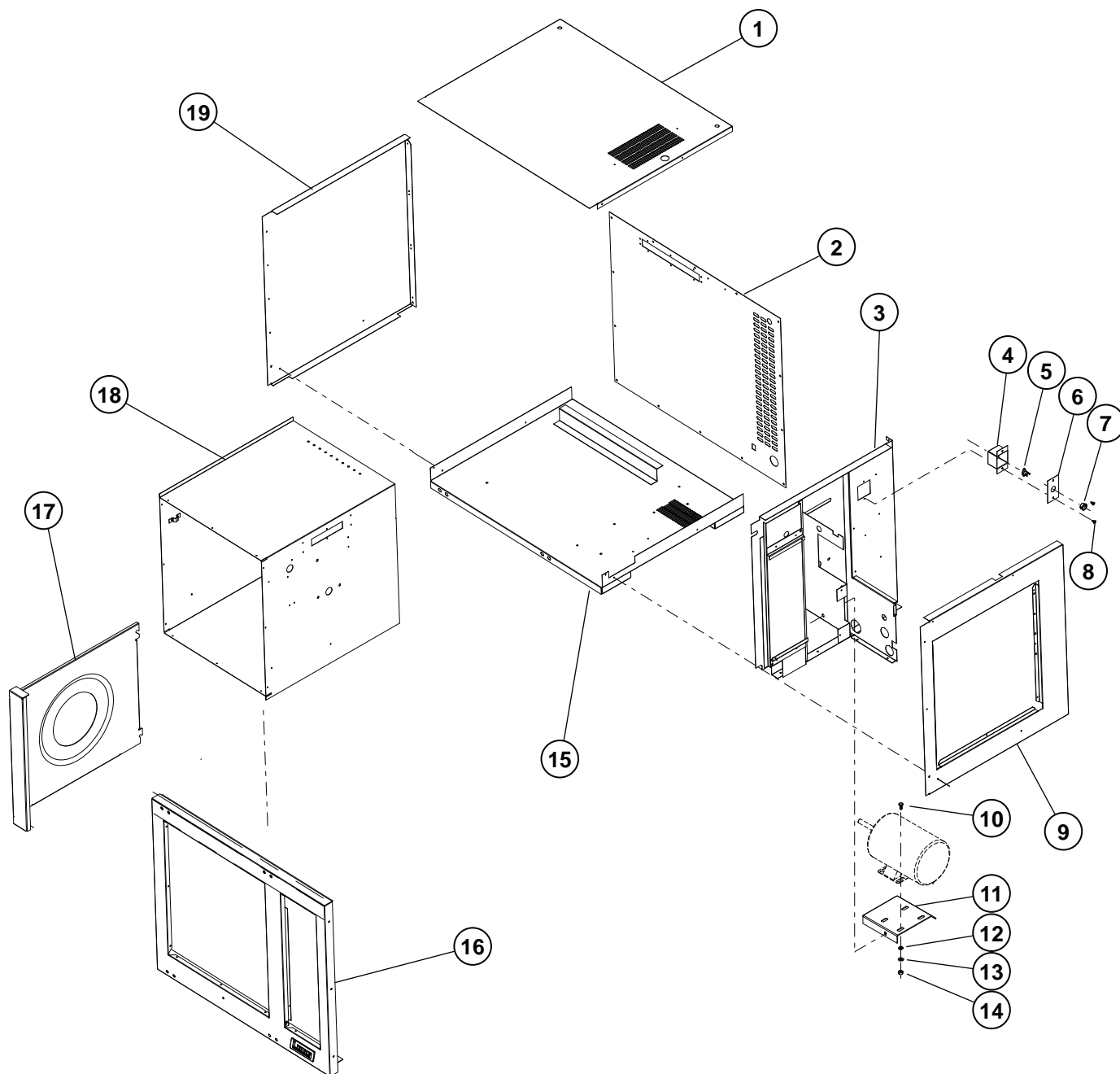
**IMPORTANT: WHEN ORDERING, SPECIFY VOLTAGE OR TYPE GAS DESIRED  
INCLUDE MODEL AND SERIAL NUMBER**

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Some items are included for illustrative purposes only and in certain instances may not be available.



**Star Manufacturing International, Inc.**



ECOH Body Assembly

**Lang**<sup>TM</sup>

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SK2325

Rev. A

1/9/2008

# PARTS LIST

May 16, 2008, Rev E

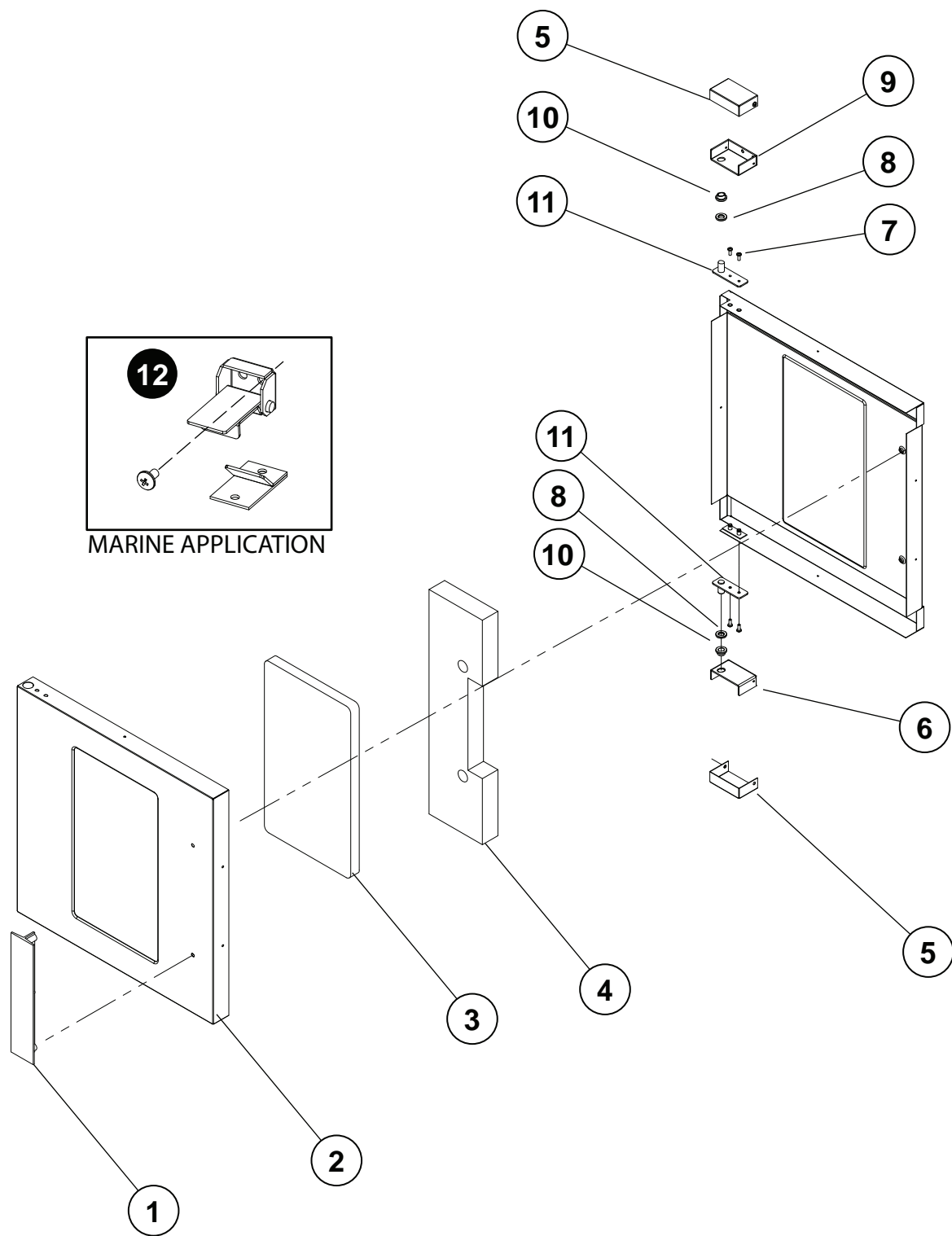
**Model No:** ECOH-C2/3VCN, ECOH-C2/4VCN, ECOH-C208CNF, ECOH-C208VCN, ECOH-C240VCN, ECOH-2/4CECN  
**BODY PANELS Commercial Half Size Economy Convection Oven**

Key Number	Part Number	Qty Per	Description
1	Q9-EH-129-5	1	TOP - BODY W/VENT ALL
2	Q9-60102-1361	1	BODY BACK EH & HRDW ALL
3	Q9-EH-119-2	1	FIREWALL - ASSY ALL
4	Q9-EH-135	1	SAFETY STAT BOX ALL
5	2T-30401-09	1	STAT FXD 500° DEG OPEN ALL
6	Q9-EH-136	1	SAFETY STAT COVER ALL
7	2K-70801-04	1	SNAP BUSH 3/4 SB750-10 BLK ALL
8	2C-20103-02	2	SCRW SM PLT 10 X .5 PHLSL ALL
9	Q9-60102-1364	1	BODY R/H SIDE EH & HRDW ALL
10	2C-20104-41	4	SCRW MACH. 1/4-20X5/8 H/H ALL
11	Q9-EH-209	1	MOTOR MOUNT ALL
12	2C-20202-08	4	WSHR PLT 5/16 LOCK SPLIT ALL
13	2C-20201-09	4	WSHR PLT 5/16 FLAT SAE ALL
14	2C-20301-06	4	NUT HEX 5/16-18 PLTD ALL
15	Q9-EH-104-2	1	BOTTOM SPOT WELD ALL
16	Q9-EH-215-2	1	FRONT - ASSY REVERSIBLE ALL
17	Q9-EH-452-2	1	BAFFLE STD ALL
	Q9-EH-452-3	1	BAFFLE ASSY STEAM STEAM
18	Q9-EH-374-3	1	CAN ASSY STD -[NEW RACK ALL
19	Q9-60102-1365	1	BODY L/H SIDE EH & HRDW ALL
<p><b>IMPORTANT: WHEN ORDERING, SPECIFY VOLTAGE OR TYPE GAS DESIRED</b></p> <p><b>INCLUDE MODEL AND SERIAL NUMBER</b></p> <p>Some items are included for illustrative purposes only and in certain instances may not be available.</p>			

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**Star Manufacturing International, Inc.**



ECOH, RCOH Door Assembly

# PARTS LIST

May 16, 2008, Rev E

**Model No:** ECOH-C2/3VCN, ECOH-C2/4VCN, ECOH-C208CNF, ECOH-C208VCN, ECOH-C240VCN, ECOH-2/4CECN  
**Door Assembly Commercial Half Size Economy Convection Oven**

Key Number	Part Number	Qty Per	Description
0	Q9-51100-53	1	COMPLETE DOOR ASSY w/WINDOW ALL
1	2R-50800-12	1	DOOR T HANDLE 11 1/2 LNG ALL
2	Q9-60102-1362	1	OUTER DOOR EH NO/LOGO ALL
3	2Q-71301-04	1	WINDOW ASSY 9-5/8X16-5/8 ALL
4	2H-60106-17	1	INSULATION KIT EHS DOOR - ALL
5	Q9-EH-267	2	HINGE COVER ALL
6	Q9-EH-266	1	HINGE BOTTOM ALL
7	2C-20109-15	4	SCRW PHD MS SS 10-32X1/2 ALL
8	2P-70201-01	2	BRNZBR.505IDX.8750DX.175 ALL
9	Q9-EH-265	1	HINGE TOP ALL
10	2P-70201-19	2	BRNZBRFLN1/2IDX5/8ODX3/8 ALL
11	Q9-50313-031	2	HINGE PIN - WELD ALL
12	N/A	1	DOOR LATCH ASSY

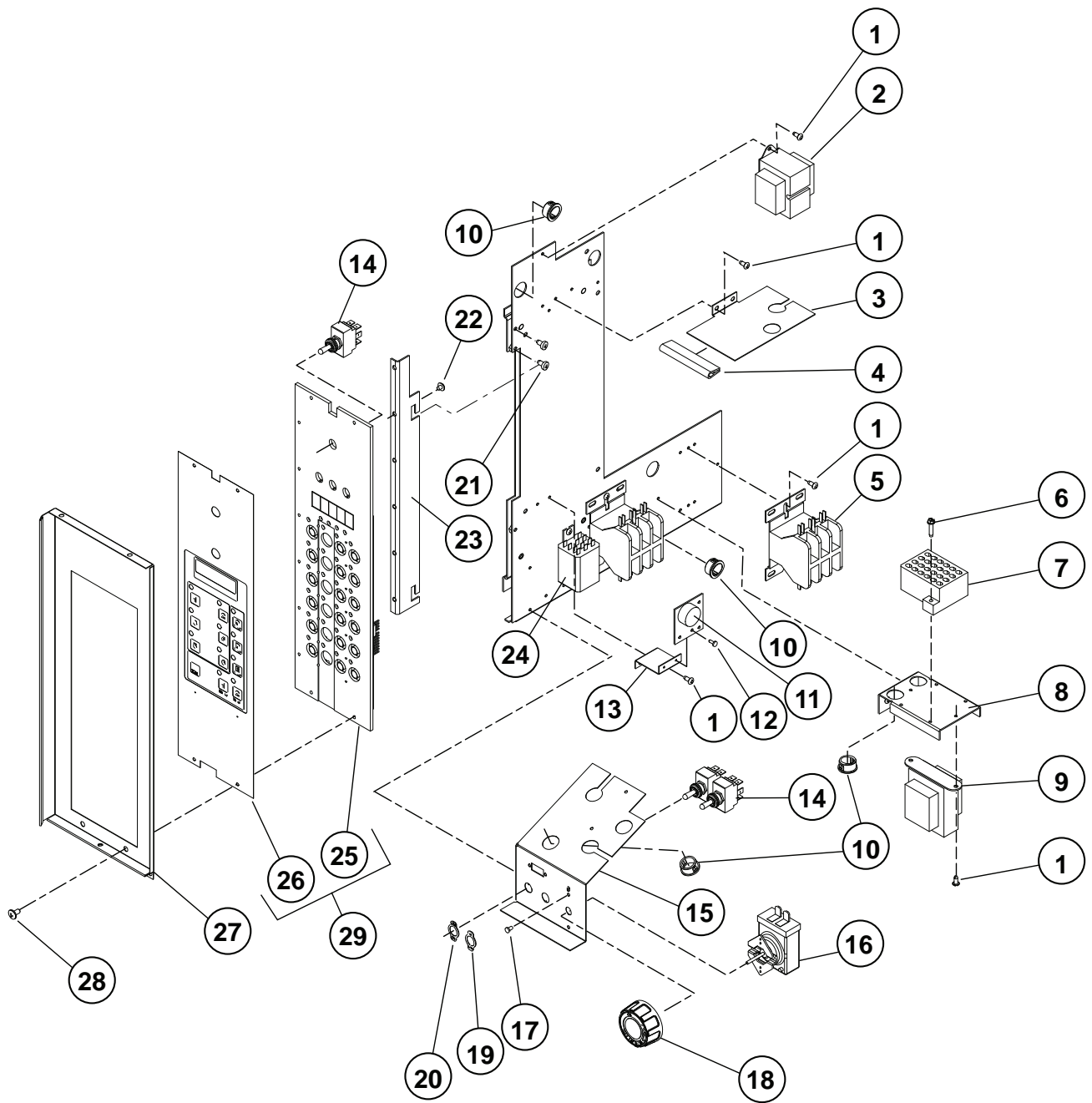
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**Star Manufacturing International, Inc.**



ECOH-C Complete Assembly

**Lang**™  
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SK2331

Rev. -

11/14/2007



# PARTS LIST

May 16, 2008, Rev E

**Model No:** ECOH-C2/3VCN, ECOH-C2/4VCN, ECOH-C208CNF, ECOH-C208VCN, ECOH-C240VCN, ECOH-2/4CECN  
**CONTROL PANEL ASSEMBLY Commercial Half Size Economy Convection Oven**

Key Number	Part Number	Qty Per	Description
1	2C-20102-08	15	SCRW PHD ST 8-32X.375 ALL
2	2E-31400-12	1	XFRMR 240V/12V 10VA CLASS ALL
	2E-31400-28	1	XFORMR208-240/24VCT 40VA ECOH-2/4CECN
3	Q9-EH-513	1	24V TRANSFORMER SHIELD ALL
4	Q9-EH-501	1	TRIMLOCK 3 ALL
5	2E-30700-06	2	CONTC3POLE35A24VAC50/60HZ ALL
	2E-30702-02	3	CONTC 4POLE 24V 25FLA CE ECOH-2/4CECN
6	2C-20102-05	2	SCRW HXHD ST 8-32X.75 ALL
7	2E-30503-01	1	TRM BLOCK 24 POS QK CON ALL
8	Q9-EH-507	1	TERMINAL BLOCK MOUNT ALL
9	2E-31400-07	1	XFORMR120-208-240/24V40VA ALL
	2E-31400-28	1	XFORMR208-240/24VCT 40VA ECOH-2/4CECN
10	2K-70801-04	4	SNAP BUSH 3/4 SB750-10 ALL
11	2J-40102-17	1	BUZZER BOARD ASSY ALL
12	2C-20103-06	2	SCRW SM PLT 6 X 3/8 PHL ALL
13	Q9-GCCO-355	1	BUZZER BOARD MOUNT ALL
14	2E-30303-06	3	SWT TOG ON-ON DPDT BLK ALL
	2E-30303-19	3	SWT TOG ON-ON DPDT BLK ECOH-2/4CECN
15	Q9-EH-509	1	SWITCH BRACKET ALL
16	2T-30402-27	1	STAT ADJ 450 DEG 48 PILOT ALL
	2T-30402-37	1	STAT ADJ 450 DEG45 PILT ECOH-2/4CECN
17	2C-20101-77	2	SCRW MS PLT 6-32 X .25 ALL
18	Y9-70701-19	1	KNOB ASSY 450o D ALL
	P9-70701-58	1	KNOB ASSY 450° D CELCIUS ECOH-2/4CECN
19	2E-30303-09	1	SWT PLATE HI/LOW ALL
20	2E-30303-05	1	SWT PLATE ON/OFF IND ALL
21	2C-20102-12	7	SCRW PHD ST 10-32X3/8 ALL
22	2C-20101-51	6	SCRW MS PLT 8-32 X .1875 ALL
23	Q9-EH-503	1	FRONT PANEL HOLDER C,P,PP ALL
24	2E-30600-02	1	RELAY 240VAC 3FORMC FLNG ALL
25	Q9-40102-53	1	CIRBD CPU/FRONT PANEL ALL
26	2M-60301-83	1	PANEL LBL PURPLE-CUSTOM ALL
27	Q9-EH-518	1	CONTROL PANEL - C ALL
28	2C-20101-24	4	SCRW MS PLT 10-32 X .375 ALL
29	Q9-40102-60-2	1	CRBD CPU/FRT PANEL CINN ALL
NI	2E-30500-15	1	TRM BLOCK 4 POLE 115AMP ECOH-2/4CECN

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10 Sunnen Drive, St. Louis, MO 63143 U.S.A.

(800) 807-9054 (314) 781-2777

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