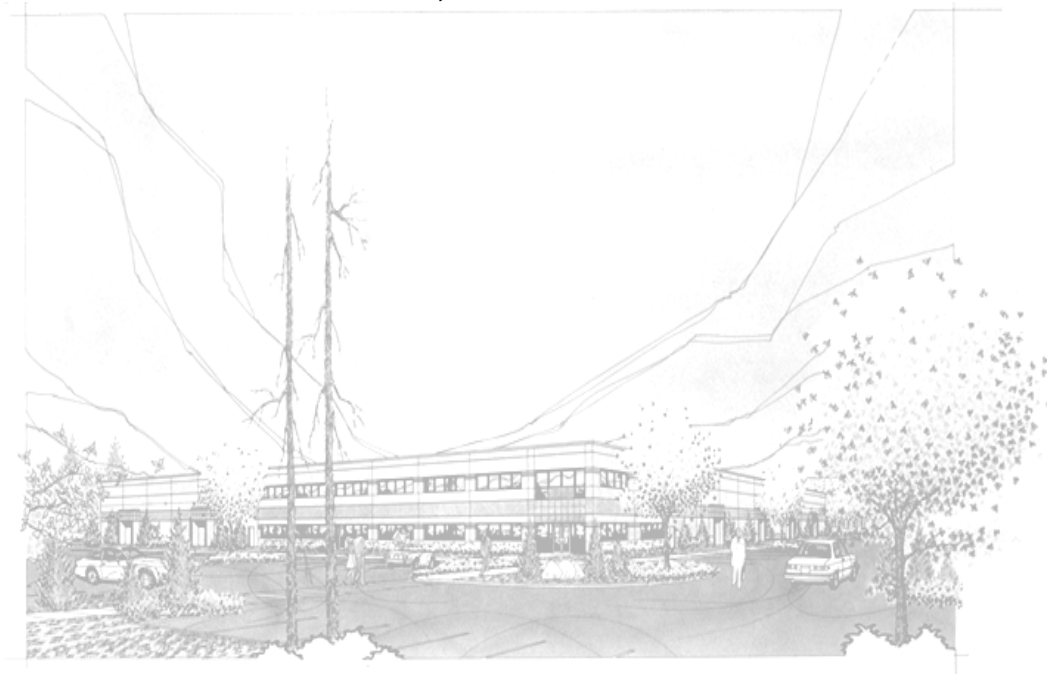




Installation, Operation, & Maintenance
Model: ECCO-PP, Electric Full Size Convection Oven



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

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

POST IN A 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, 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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CAUTION: EACH UNIT WEIGHS 430 LBS. 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.



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 control panel behind wire mesh screen. 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.



NOTICE: During the first few hours of operation you may notice a small amount of smoke coming off 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.



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.



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.



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.



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: Lang Model: ECCO-PP

Exterior Construction

The oven exterior dimensions are 40" (100 cm) Wide, 27" (67.5 cm) High, 38" (95 cm) Deep. The Top, Front, Back, and Sides are constructed of stainless steel with an aluminized bottom.

The oven doors come standard with double pane windows.

The door handle is constructed of Stainless Steel and Phonolic Tubing.

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

Interior Construction

The oven cavity dimensions are 29" (72.5 cm) Wide, 20" (50.84 cm) High, 21" (53.38 cm) Deep.

The interior of the oven is constructed of porcelainized stainless steel.

Operation

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

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

Controls

Complete computerized controls.

Pre-Programmable product selections.

Independent shelf timers for each shelf.

Load control through use of Cooking Curves.

Shelf compensation for uniform baking.

Solid state temperature sensing and controls.

Dual speed fan.

Manual override controls.

Technical

The ECCO-PP oven operates on either 208/240V or 480V. **This must be specified when ordering.**

Floor space required is 48" (122.6 cm) wide, 44" (112.5 cm) deep.

The oven weighs 430 lbs.

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 OVEN WEIGHS 430 LBS. 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 THE 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.



Remove Oven from skid and place in intended location.

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 control panel behind wire mesh screen. 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 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.

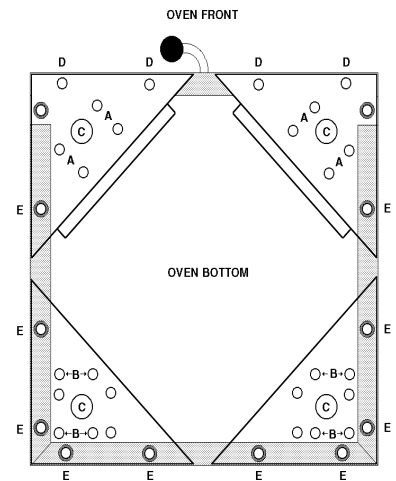
Install two 3/8-inch bolts with lock washers and flat washers through the front holes "D" in the leg adapter and into the threaded inserts on the oven.

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.



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 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 panel above the power supply knock out at the back of the oven and toggle the switch to the 240-volt position.

With 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.

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 the Wiring Diagram located at the back of the Manual.

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.

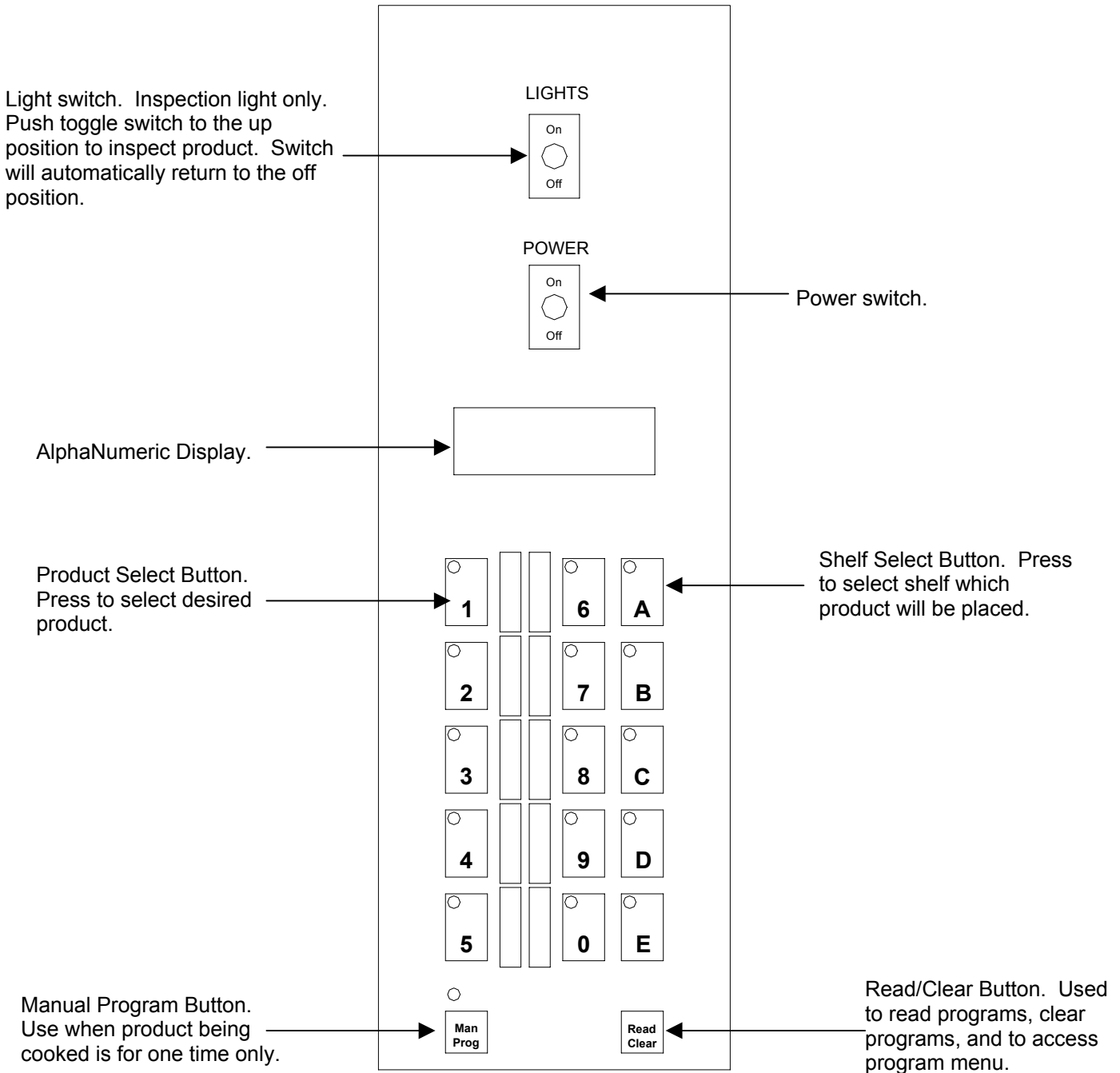
Power On

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

NOTICE: **During the first few hours of operation you may notice a small amount of smoke coming off 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

Typical Operation Sequence

ACTION	RESULT
Turn power switch to ON.	Control panel comes on, display says “SELECT PRODUCT OR READ/CLEAR TO PROGRAM.”
Press a product button.	Display says “PRODUCT X PREHEATING TO XXX F” . Motor starts and oven begins preheating to the programmed temperature.
<i>Beeper sounds briefly.</i>	Display says “READY SELECT PRODUCT TO START ” .
Open the oven doors and load the product. Close the door and press the product button again.	Beeper sounds briefly and display says “SELECT OVEN SHELVES PRODUCT X” .
Press the shelf button(s) which correspond to the shelf positions, which the product is loaded (A equals the top shelf and E equals the bottom shelf).	Display shows a countdown timer and begins to count toward zero.
<i>Beeper sounds continuously.</i>	Display shows “DONE PRESS SHELF BUTTON X, REMOVE PRODUCT” , shelf button(s) flash.
Press the flashing shelf button(s).	Beeper stops. Display shows “READY SELECT PRODUCT TO START” if no other shelves carry product or resume count down for shelves that still have product cooking.
Open oven door and remove the product, which corresponds to flashing shelf button(s).	

Programming

Prior to programming new ovens, you must program at least one button (position 2 through 0) before you can delete or replace the sample program in position one. If you are programming an oven after replacement of the computer board, or blanking the EPROM, you must first complete the "CPU" startup procedures that provided with the new computer board. This must be accomplished prior to programming the product buttons. Identify the oven being used and answer NO to the questions regarding Steam, Rack Rotation, and 650°F maximum temperature.

In order to prepare the programming of your Purple Plus oven, you must determine the

Product Name	Tier 1				
	Cooking Temp	Cooking Time	Cooking Curve	Fan Speed	Pulse Rate
Biscuits	325°F	12:30	50%	HI	100%

cooking parameters you will be using for each product to be programmed. The following table is an example to follow:

Procedure

1. With the oven ON, press the R/C (Read/Clear) button until the display screen appears.

ENTER PASSWORD
OR READ/CLEAR
TO DISPLAY PRODUCT

2. Enter new password using corresponding product select buttons. (Default password is 1, 6, 2, 7, 3, 8). The display screen will appear.
3. Press the "C" button to program products. See programming manual to set time and date.

A. SET TIME
B. SET DATE
C. PROGRAM PRODUCTS
D. NEXT MENU

4. Press the Select Product button in which you wish to install a program (0-9).

PRODUCT PROGRAM MODE
SELECT PRODUCT
NUMBER 0-9

NOTE

If a program already exists, you will see a screen asking "Edit Product?" Choose "2" for delete and begin programming sequence again from Step 3. If you did select "1" for Edit, the information on line 3 will reflect the existing program settings from this point forward.

5. Enter the desired cooking/baking temperature and then press the "E" button to continue.
6. Enter the cooking time.

ENTER COOKING TEMP
100 TO 450F
NOX T1 XXXF

ENTER COOKING TIME
HR:MIN:SEC
NOX T1 XXXF C XX

Operation cont'd.

NOTE

If you do not fill all available characters (i.e. xx: 20:30) the light on the "E" button will flash and you will need to press the "E" button to continue to the next screen.

7. Enter the desired cooking curve percentage (i.e. 040 = 40% 050 = 50%.

NOTE

If you do not fill all available characters (i.e. xx: 20:30) the light on the "E" button will flash and you will need to press the "E" button to continue to the next screen.

8. Enter either "1" for HI or "2" for low.

NOTE

If you do not fill all available characters (i.e. xx: 20:30) the light on the "E" button will flash and you will need to press the "E" button to continue to the next screen.

9. Enter a number from 000 to 100.

NOTE

Any number that you enter between 000 and 100 will be the amount of time in each one hundred second block that the fan will be ON during the cooking cycle when heat is OFF. The fan will always stay ON when the heat is ON.

10. Press button 2. This completes the single Tier programming for the current product.

NOTE

If you press button 1 at this time, you will initiate Tiered Programming. This will take you through the same sequence as outlined above for the next Tier and the screen will display SET TIME as shown.

To continue programming, start at step 3. If you have completed your programming press, READ/CLEAR button until the display shows SELECT PRODUCT.

To begin using your oven, press the appropriate product select button. Refer to your operations manual for complete cooking instructions.

ENTER COOKING CURVE
0 TO 100%
NOX T1 XXXF C XX
XX:XX:XX PXXX FX

ENTER FAN SPEED
1=HI 2=LOW
NOX T1 XXXF C XX
XX:XX:XX PXXX FX

ENTER FAN PULSE RATE
1=HI 2=LOW
NOX T1 XXXF C XX
XX:XX:XX PXXX FX

CONTINUE TO TIER 2
1=YES 2=NO
NOX T1 XXXF C XX
XX:XX:XX PXXX FX

A. SET TIME
B. SET DATE
C. PROGRAM PRODUCTS
D. NEXT MENU

SELECT PRODUCT OR
READ/CLEAR TO
PROGRAM
XX: XX: PM XXX FX

Hints & Suggestions

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.

Cooking times can be shortened and cooking temperatures can be reduced.

To convert standard deck oven recipes, reduce the temperature 50 degrees and the time by 25%. Make minor adjustments as necessary.

The lower the oven temperature the more even the bake.

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 cycle by turning on the oven light and looking through the oven door windows.

Do not open the oven doors 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.

OPERATION CONT'D

Loading

When loading and unloading the oven, stage products and racks so the oven doors are 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. The will create a 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.



MAINTENANCE & CLEANING

WARNING: KEEP WATER AND SOLUTIONS OUT OF CONTROLS. NEVER SPRAY OR HOSE CONTROL CONSOLE.

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 • Oven unplugged from outlet • Failed power cord or plug • Failed power switch • Contrast needs to be adjusted • Failed display board
Oven will not heat	<ul style="list-style-type: none"> • Power Switch is not "ON" • Product has not been selected • 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" • Product has not been selected • Failed Transformer • Failed Contactor • Failed Motor • Failed output on circuit board
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

TESTS

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.



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:

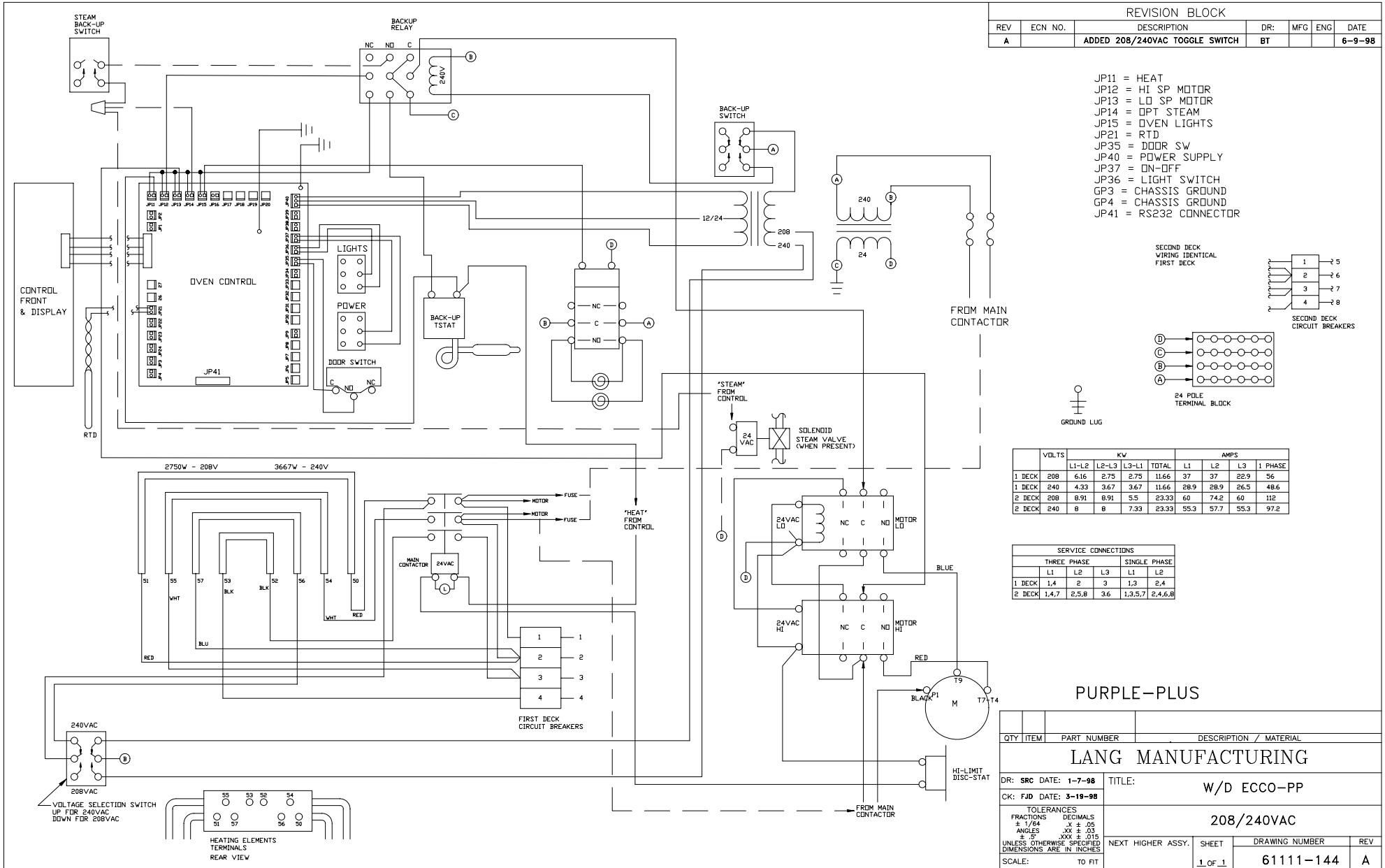
USE OF ANY REPLACEMENT PARTS OTHER THAN THOSE SUPPLIED BY LANG OR THEIR AUTHORIZED DISTRIBUTORS CAN CAUSE BODILY INJURY TO THE OPERATOR AND DAMAGE TO THE EQUIPMENT AND WILL VOID ALL WARRANTIES.



PARTS LIST

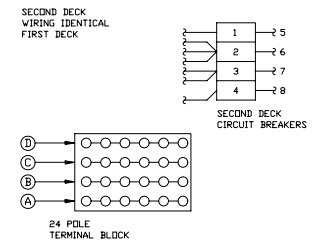
DESCRIPTION	PART NO.
Element ECCO Oven 208/240 Volt 11000 Watts	11090-16
Element ECCO Oven 480 Volt 11000 Watts	11090-18
Motor 1/3 HP 480 Volt 2 Speed	30200-16
Motor 1/3 HP 208/240 Volt 2 Speed	30200-17
Switch Micro Convection Oven Door	30301-02
Switch Toggle On-Off	30303-06
Switch Toggle Spring Return	30303-16
Thermostat Safety 490°F Open	30401-09
Thermostat 450°F Oven	30402-27
Terminal Block 24 Position Quick Disconnect	30503-01
Relay 240 VAC	30600-02
Contactors 3 Pole 24 VAC (Heat)	30700-06
Contactors 2 Pole 24 VAC (208/240 VAC only)	30701-05
Contactors 2 Speed Motor 24 VAC (480V Only)	30705-03
Fuse 15 AMP 300 Volt	30900-10
Fuse Holder 15 Amp	30901-08
Cable Ribbon Assembly	31110-13
Transformer 480/24 VAC	31400-15
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 Front Panel	40102-24
Circuit Board Microprocessor	40102-26
Probe Temperature Sensor	41100-08
Oven Rack	50200-20
Oven Rack Slide	50200-36
Turnbuckle Assembly	50312-02
Door Left Hand	51100-45
Door Right Hand	51100-46
Panel Label, Purple Plus	60101-881
Valve Manual Main Water Supply (Steam Units)	70400-02
Valve Manual Water Supply (Steam Units)	70402-08
Valve Solenoid 24/60V Water Supply (Steam Units)	70403-01
Regulator Water Supply (Steam Units)	70404-01
Handle Assembly, Single Handle Oven	70603-15
Knob Thermostat 450°F Oven	70701-28
Knob Damper Black	70701-25
Window Assembly, Oven Door	71301-04
Blower Wheel	71500-05
Blower Wheel (Steam Units)	51100-57
Orifice Water/Steam #60 DRL (Steam Units)	80405-01

WIRING DIAGRAM 208/240



REVISION BLOCK						
REV	ECN NO.	DESCRIPTION	DR:	MFG	ENG	DATE
A		ADDED 208/240VAC TOGGLE SWITCH	BT			6-9-98

- JP11 = HEAT
- JP12 = HI SP MOTOR
- JP13 = LO SP MOTOR
- JP14 = OPT STEAM
- JP15 = OVEN LIGHTS
- JP21 = RTD
- JP35 = DOOR SW
- JP40 = POWER SUPPLY
- JP37 = ON-OFF
- JP36 = LIGHT SWITCH
- GP3 = CHASSIS GROUND
- GP4 = CHASSIS GROUND
- JP41 = RS232 CONNECTOR



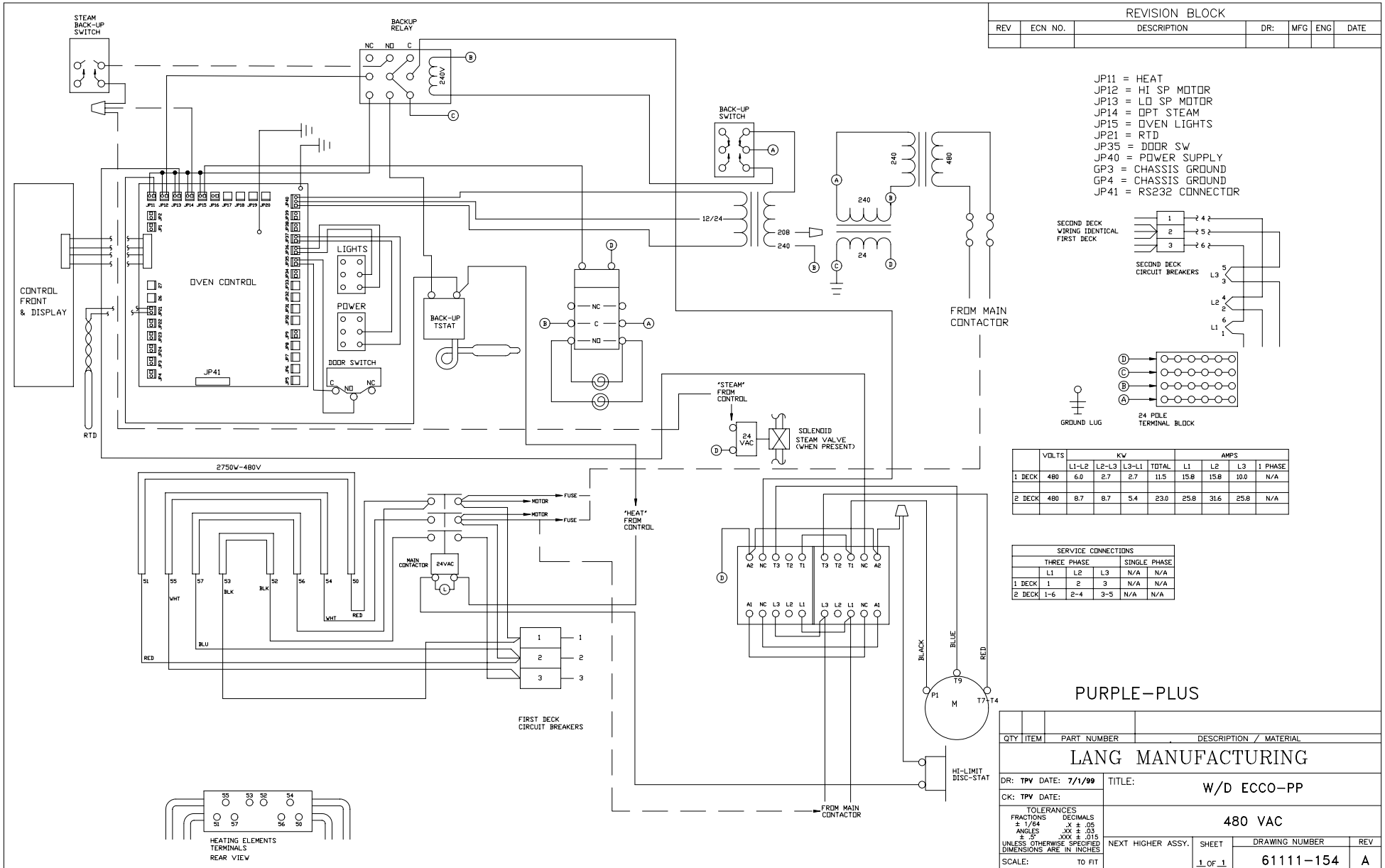
	VOLTS	KW				AMPS			
		L1-L2	L2-L3	L3-L1	TOTAL	L1	L2	L3	1 PHASE
1 DECK	208	6.16	2.75	2.75	11.66	37	37	22.9	56
1 DECK	240	4.33	3.67	3.67	11.66	28.9	28.9	26.5	48.6
2 DECK	208	8.91	8.91	5.5	23.33	60	74.2	60	112
2 DECK	240	8	8	7.33	23.33	55.3	57.7	55.3	97.2

SERVICE CONNECTIONS					
	THREE PHASE			SINGLE PHASE	
	L1	L2	L3	L1	L2
1 DECK	1,4	2	3	1,3	2,4
2 DECK	1,4,7	2,5,8	3,6	1,3,5,7	2,4,6,8

PURPLE-PLUS

QTY	ITEM	PART NUMBER	DESCRIPTION / MATERIAL
LANG MANUFACTURING			
DR: SRC DATE: 1-7-98		TITLE: W/D ECCO-PP	
CK: FJD DATE: 3-19-98		208/240VAC	
TOLERANCES		NEXT HIGHER ASSY.	
FRACTIONS: DECIMALS		SHEET	
± 1/64 X ± .05		DRAWING NUMBER	
ANGLES: XX ± .03		REV	
± .5° XXX ± .015		1 OF 1	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		61111-144	
SCALE: TO FIT		A	

WIRING DIAGRAM 480



STAR MANUFACTURING

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