

Installation

Operation

Maintenance

LA 36 Deck Oven

Lang

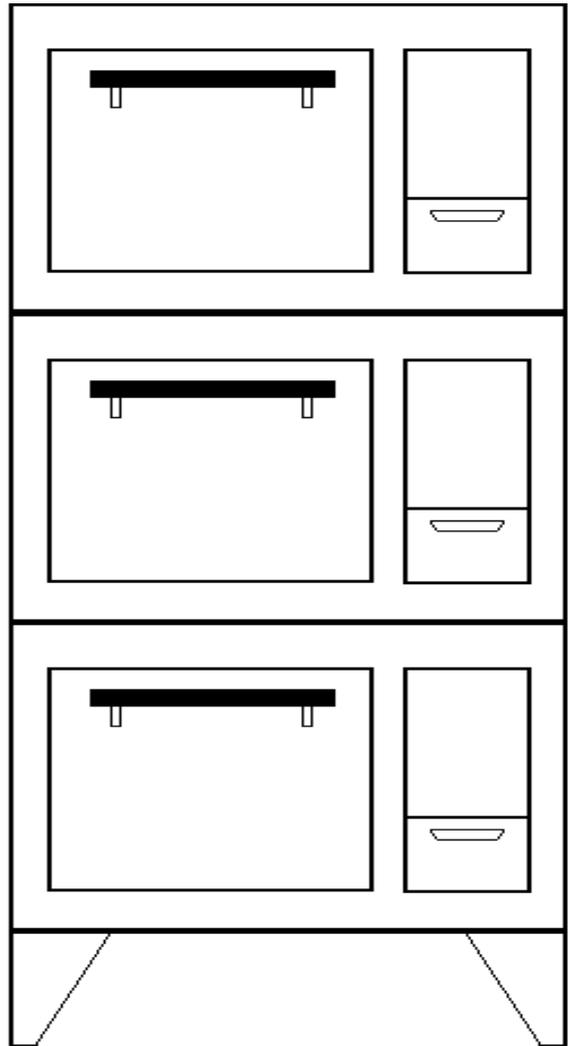


TABLE OF CONTENTS

TABLE OF CONTENTS	1
INTRODUCTION	1
DESCRIPTION	1
FEATURES	1
SAFETY PRECAUTIONS AND WARNINGS	2
INSTALLATION	3
RECEIVING AND UNCRATING	3
INSTALLING THE LEGS	3
CLEARANCES	3
DECK OVEN ASSEMBLY	3
STACKING THE OVENS	3
ELECTRICAL CONNECTION	4
INTERCONNECTING THE OVENS	4
OVEN PHASING.....	5
LOAD REQUIREMENTS	5
RANGE ASSEMBLY	6
INSTALLATION ON OVEN BASE	6
ELECTRICAL CONNECTION	6
PHASING RANGE ASSEMBLY	7
LOAD REQUIREMENTS	7
OPERATION	8
INITIAL START-UP.....	8
NORMAL OPERATION.....	8
PREHEATING.....	8
OVEN RACK.....	8
CONTROL PANEL.....	9
3-HEAT SWITCHES	9
PAN PLACEMENT	9
VENT CONTROL	9
TIMER	9
PRODUCTIVE MAINTENANCE	10
CLEANING.....	10
THERMOSTAT CALIBRATION.....	10
CALIBRATION CHECK PROCEDURE	10
CALIBRATION ADJUSTMENT	10
INSTALLATION TROUBLE SHOOTING GUIDE	11
OVEN PARTS LIST	12
WIRING DIAGRAM	13
WARRANTY	14

INTRODUCTION

This manual contains the necessary information to install, operate, and maintain the Lang 36 Series Electric Deck Oven.

DESCRIPTION

The Lang 36 Series Deck Oven is designed as a single pan all purpose baking and roasting oven. The oven can be stacked with other 36 bake ovens, stacked with a F6 Convection Oven, or assembled with a three section Cook Top to create a range with any top configuration.

FEATURES

The oven cavity is large enough to accept a single Full Size sheet pan. The pan can be placed on the pebble oven deck or raised off of the deck and placed in the middle of the cavity on a rack supplied with the oven.

The heating elements are located above the product and below the oven deck. They are controlled by a thermostat with an operational range of 150° F. to 550° F. and two Hi-Medium-Low (3-Heat) switches.

The oven features a 1 hour timer and oven cavity vent as standard equipment.

The Oven door is a self closing pull down type that when fully open is strong enough to act as a loading platform for the oven.

The oven front is a high quality Stainless Steel, the oven sides, top, and back are baked enamel or optional Stainless Steel. The oven cavity is a durable aluminized finish.

SAFETY PRECAUTIONS AND WARNINGS

DANGER

MAKE SURE THE MAIN POWER SUPPLY IS TURNED OFF AT THE SOURCE PRIOR TO CONNECTING POWER TO THE APPLIANCE.

- Disconnect the appliance from power before attempting any repair
- The following clearances to combustable surfaces must be maintained.
4 inches to sides
3 inches to back
- Make sure the wire leads that supply electricity to the cook top or upper oven decks are not pinched between the oven and range top or between the decks.
- Be sure the power supply voltage matches the voltage specified on the data plate.
- This appliance must be phased per the wiring diagram.
- Any cleaner used in the oven cavity must be labeled "Safe on Aluminum".

INSTALLATION

RECEIVING AND UNCRATING

Upon receipt of the equipment, check for freight damage, both concealed and visible. Visible damage must be noted on the freight bill at the time of delivery and signed for by the freight company's agent. Concealed loss or damage means loss or damage which does not become apparent until the merchandise has been unpacked. When concealed damage is discovered, make a written request for inspection by the carriers agent within 15 days of the delivery date. In either case, **do not return the damaged merchandise to Lang Company, file your claim with the carrier.**

Before uncrating the equipment confirm that the voltage marked on the box matches that of the building. The oven voltage must match the voltage supplied.

Place the crate as near the intended installation as possible before uncrating the equipment. The crate will help protect the equipment while it is being moved through doorways and down halls. Uncrate the oven and set as near the intended installation as practical. Save the crating materials as they may be used during the installation.

INSTALLING THE LEGS

If the oven is to be assembled as a range the legs are packaged in with the range top. If the oven is to be stacked on another oven the legs are packaged in a separate box marked "Fabricated Legs".

Place some cardboard on the floor and gently tip the oven backwards onto it.

The range legs are screwed into 4 nuts welded to the bottom of the oven. Make sure the legs are screwed firmly into the nuts.

The stacked oven fabricated legs attach to the bottom corners of the oven with the nuts and bolts supplied with the legs.

Set the oven on the legs, push it into position, and level it using the adjusters on the bottom of the legs.

CLEARANCES

THE FOLLOWING CLEARANCES TO COMBUSTIBLE SURFACES MUST BE MAINTAINED:

- 4 INCHES TO SIDES
- 3 INCHES TO BACK

DECK OVEN ASSEMBLY

STACKING THE OVENS

If the oven is to be assembled as a range, skip this section refer to the Range Top Installation Manual.

Remove the envelope labeled "Stacking Kit" from the oven cavity.

Place some cardboard on the floor and gently tip the oven that is to be stacked backwards onto it. Install four pins from the stacking kit into the threaded holes on the side flanges of the oven bottom.

Remove the plastic plugs from the top of the oven on legs so the pins just installed in the top oven can nest into the holes.

Lift the oven that is laying on its back onto the oven on legs. Align the pins so they drop into the holes in the bottom oven.

ELECTRICAL CONNECTION

DANGER

MAKE SURE THE POWER SUPPLY TO THE APPLIANCE IS TURNED OFF BEFORE MAKING THE CONNECTION.

If the oven is to be assembled as a range, skip this section and refer to the Range Top Installation Manual.

The electrical connection is made through a 1 1/4 inch knockout in the bottom of the oven to a terminal block located behind an access door that is below the control panel.

Before connecting the oven to power check the data plate located behind the access door to confirm that the power supply wires are large enough to carry the load.

A one deck oven requires a single phase connection only, however, this does not mean the oven cannot be connected to a three phase service, simply use two lines of the three phase.

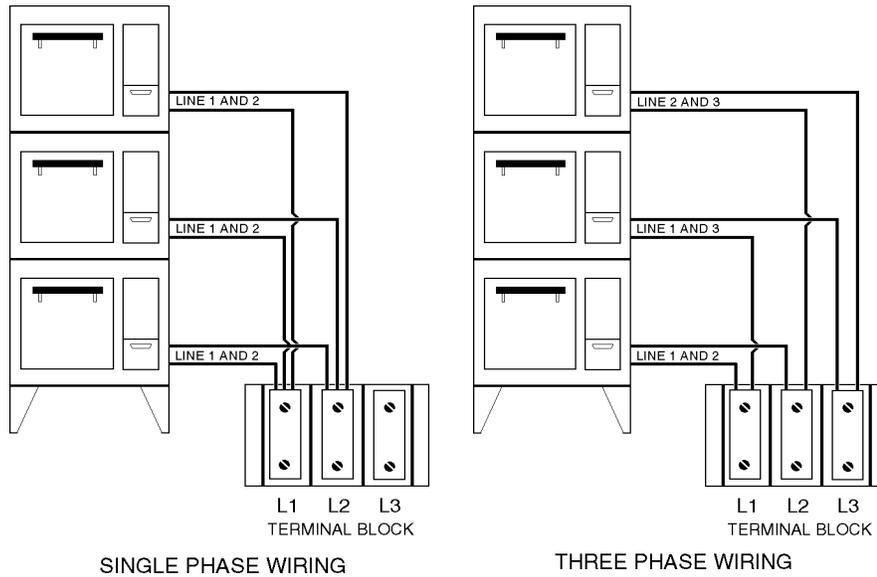
INTERCONNECTING THE OVENS

If the oven is assembled as a 2 deck model, remove the wire from one of the Stacking Kit envelopes and cut it in half. Strip the cut ends of the wires 3/4

inch and install them into the terminal block of the top oven. Snap a 3/4 inch plastic bushing from one of the Stacking Kit envelopes into the hole in the bottom of the top oven and run the wires from the top oven through it to the terminal block in the bottom oven. Connect the top oven wires into the terminal block with the wires from the bottom oven. Refer to the wiring diagram in this manual for the correct phasing of the wires.

If the oven is assembled as a 3 deck model, remove the wires from all three Stacking Kit envelopes and cut one in half. Use the 2 full length wires to connect to the top deck and the cut wire to connect to the middle deck. Refer to the figure below or the wiring diagram in back of this manual for the correct wire grouping at the bottom oven terminal block.

OVEN PHASING



POWER SUPPLY	TERMINAL BLOCK	OVEN		
		1ST DECK	2ND DECK	3RD DECK
SINGLE PHASE	L1	X	X	X
	L2	X	X	X
THREE PHASE	L1	X	X	
	L2	X		X
	L3		X	X

LOAD REQUIREMENTS

MODEL NUMBER	LOADING KW PER PHASE				TOTAL KW	THREE PHASE AMPS						SINGLE PHASE AMPS	
	L1		L2			208 VOLT			240 VOLT			208 V	240 V
	L1	L2	L2	L3		L1	L2	L3	L1	L2	L3		
LA 136	6	0	0	0	6	28.8	28.8	0	25	25	0	28.8	25
LA 236	6	0	6	0	12	50	28.8	28.8	43.3	25	25	57.7	50
LA 336	6	6	6	6	18	50	50	50	43.3	43.3	43.3	86.5	75

RANGE ASSEMBLY

INSTALLATION ON OVEN BASE

Remove all the plastic plug buttons from the top of oven(s).

Lay a 2 X 4 or cardboard corner pad across the top of the oven.

Lift the range top off of the shipping skid and place it on top of the oven so that the front edge of the range top is sitting on the 2 X 4 and is elevated off of the oven top.

Feed the two groups of power supply wires through the two holes in the oven top until all the wire slack is inside the oven control compartment.

NOTE: There are 4 groups of wires on the RF42S and 72S ranges.

Lift the front of the range top and remove the 2 X 4.

Allow the range top to set into place so that the pins in the bottom of the range top nest into the holes in the top of the oven base.

ELECTRICAL CONNECTION

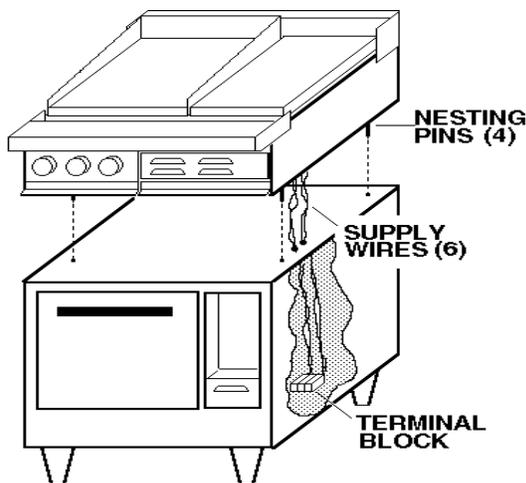
The electrical connection must be made in accordance with local codes or in the absence of local codes with NFPA No. 70 latest edition (in Canada use: CSA STD. C22.1)

Supply wire size must be large enough to carry the amperage load for the range being installed. Wire size information can be found on the range data plate.

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

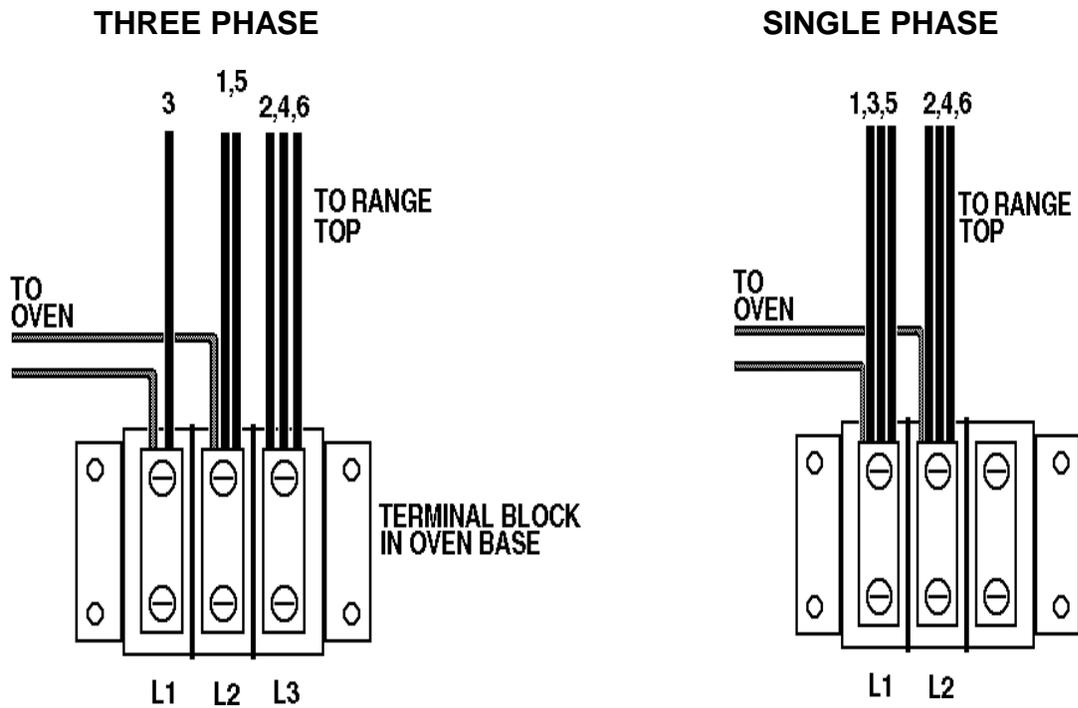
NOTE: The RF-42 and 72 series range has two power supply connections.

The range top wires connect into a terminal block located in the oven base control compartment.



PHASING RANGE ASSEMBLY

Follow the drawings, below, to group the supply wires to match the power phase.



LOAD REQUIREMENTS

For proper supply wire and circuit breaker size, refer to the chart below.

ELECTRICAL DATA															
MODEL NUMBER	THREE PHASE LOADING			TOTAL K.W. CORR.	NOMINAL AMPS PER LINE										
	K.W. PER PHASE				THREE PHASE									SINGLE PHASE	
	L1 - L2	L2 - L3	L3 - L1		208 VOLT			240 VOLT			480 VOLT			208 VOLT	240 VOLT
					L1	L2	L3	L1	L2	L3	L1	L2	L3		
36S	6.0	10.0	5.0	21.0	45.8	66.7	62.5	39.7	57.8	54.2	19.9	28.9	27.1	101.0	87.5
72S #1	6.0	10.0	5.0	21.0	45.8	66.7	62.5	39.7	57.8	54.2	19.9	28.9	27.1	101.0	87.5
72S #2	6.0	10.0	5.0	21.0	45.8	66.7	62.5	39.7	57.8	54.2	19.9	28.9	27.1	101.0	87.5
RF21S	6.6	10.0	5.0	21.6	48.3	69.2	62.5	41.9	59.9	54.2	20.9	30.0	27.1	103.8	90.0
RF42S #1	6.6	10.0	5.0	21.6	48.3	69.2	62.5	41.9	59.9	54.2	20.9	30.0	27.1	103.8	90.0
RF42S #2	6.6	10.0	5.0	21.6	48.3	69.2	62.5	41.9	59.9	54.2	20.9	30.0	27.1	103.8	90.0
TOP ONLY	5.0	5.0	5.0	15.0	41.7	41.7	41.7	36.1	36.1	36.1	18.1	18.1	18.1	72.1	62.5

INITIAL START-UP

The preservatives must be cleaned off the oven front before it is heated. Wipe the oven front with a damp rag and a mild soap solution, rinse with clear water and a damp rag, then completely dry the oven front.

Before the initial use of the oven it must be allowed to thoroughly dry the elements out. This is accomplished by setting the top and bottom oven 3-heat switches to the "Low" position and the thermostat to 350 degrees. Allow the oven to heat until all vapor and smoke has been eliminated.

Somewhere along the rising temperature curve between 250 and 350 degrees a moderate amount of smoke will issue from within the oven. Preservative oils and oil accumulated during manufacture will come off as smoke at these temperatures. Do not be alarmed.

NORMAL OPERATION

PREHEATING

The oven will not bake uniformly if not allowed to thoroughly preheat before loading the product. To compensate for the temperature loss during

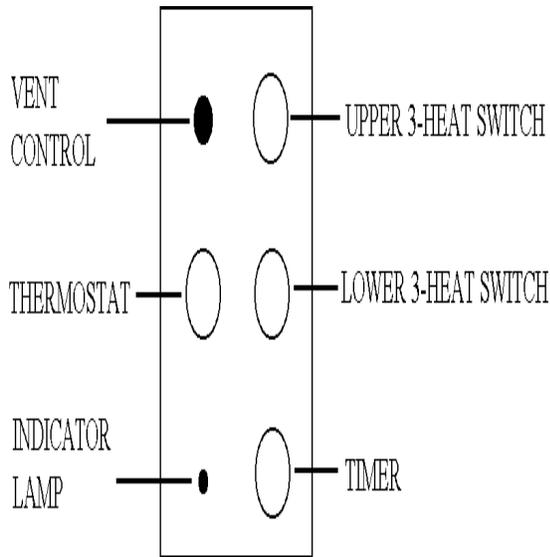
loading, set the oven thermostat 50 degrees over the desired cooking temperature, load the oven, then reset the thermostat to the proper temperature after closing the oven door. The oven can be preheated with the 3-Heat switches set on any position, however, the fastest preheat will be accomplished with both the switches set to the "High" position. Once the oven is at the set temperature and the product is loaded reset the 3-Heat switches to their proper setting. An indicator light, located below the oven thermostat knob, will go out once the oven is at the set temperature. Allow the oven indicator lamp to cycle on and off at least two times during the preheat.

OVEN RACK

The oven is equipped with a removable rack as standard. Baking pies, bread, or for roasting operations the rack can be placed directly on the metal deck and the pans placed on the rack. For cakes or pastries the rack can be slid into the rack supports, located about halfway up the oven sides, and the pans placed on the rack in this raised position.

CONTROL PANEL

3-HEAT SWITCHES



temperature, the 3-Heat switches control the amount of power from the upper and lower elements. Setting the top element 3-Heat switch to "High" will burn (or broil) the tops and setting the bottom 3-Heat switch to "Low" will not cook the bottom of most products. Set the 3-Heat switches to achieve the best uniformity between the top and bottom of the product. Best results for baking will be accomplished with the top 3-Heat switch set to the "Low" position and the bottom 3-Heat switch set to either "Medium" or "High".

The following Temperature Switch Setting and Rack Position chart is suggested as a guide in baking the various classes of product. Be aware this chart is only a suggestion. Correct temperature, switch settings and rack positions will be arrived at through experience.

While the oven thermostat controls the

Class of product	Average Temperature	Switch Settings		Rack Position
		Top	Bottom	
Pie	375-425	Low	Medium	On Deck
Rolls	375-400	Low	High	Rack Support
Cake	350-400	Low	High	Rack Support
Pastries	325-375	Low	High	Rack Support
Bread	425-450	Low	Medium	On Deck
Roast	300-325	Low	Medium	On Deck

PAN PLACEMENT

Place the pan in the center of the oven rack for the best baking results. Keep the oven door closed as

much as possible. Excessively opening the oven

door will cool the front section of the oven and the products placed near the opening will bake slower.

VENT CONTROL

The oven is supplied with a oven vent control located above the thermostat dial. If cooking products with a high moisture content open the vent by pulling the knob out. The moisture will be vented out the back of the oven as steam. If the products require a moist baking environment push the vent damper closed.

TIMER

A 60 minute mechanical timer is supplied as standard equipment. To set, turn the dial until the desired time is at the top of the dial. If setting the timer for less than 10 minutes the dial must first be turned past the 10 minute mark then reset to the required time. Once the timer has timed-out it will sound a bell for about 5 seconds then automatically turn off.

PRODUCTIVE MAINTENANCE

"Productive Maintenance" is defined as a means of keeping the appliance as efficient and productive after years of service as it was when new.

CLEANING

Cleaning the appliance on a regular basis will assure years of efficient performance and maintain the gleaming appearance it has when new..

Clean the exterior of the oven using a mild soap and water solution. Rinse with clear water and a damp rag.

Do not use a pressure washer of any kind to clean the appliance exterior or interior.

The oven interior must be cleaned with a cleaner that states it is "Safe on Aluminum". Use of any other cleaner will severely damage the coating on the inside of the oven and it can not be repaired.

Pay particular attention around the door opening, door edges, and at the bottom of the door so the

CALIBRATION CHECK PROCEDURE

Locate an oven thermometer or thermocouple in the center of the oven cavity.

Set the thermostat to 350 degrees, the upper element 3-Heat switch to "Low", and the lower element 3-Heat switch to "High".

Allow the oven to heat for at least one hour before attempting any calibration check.

Watch the red indicator lamp below the thermostat dial. When the lamp comes on the oven elements are "cycling on", when the indicator lamp goes out the elements are "cycling off".

After the oven has heated of an hour record the temperature of the oven when the indicator lamp "cycles on".

Allow the oven to continue heating and record the temperature when the indicator lamp "cycles off".

Continue taking the "cycle on" and "cycle off" readings three times.

After 3 complete "cycles" average the six temperature readings (add them up and divide by 6).

door continues to close tightly. Should the paint around the door opening begin to wear off, it can be recoated using a high temperature silver paint found in any hardware store.

THERMOSTAT CALIBRATION

All Thermostats are factory calibrated and are extremely reliable mechanical devices. Thermostat calibration should be attempted only when continued experience indicates inaccurate cooking temperatures and then only after the calibration of the thermostat has been thoroughly checked.

However, as the appliance becomes older the thermostat should be checked once a year in order to make minor adjustments to the calibration.

The average temperature should be within 25 degrees, plus or minus, of 350 degrees.

CALIBRATION ADJUSTMENT

A 1/16 inch flat blade screwdriver with a 2 inch shaft is required to adjust the thermostat.

Maintain the oven temperature at 350 degrees.

Without turning the thermostat dial, pull it off the shaft of the thermostat.

Locate the screw at the base of the thermostat shaft, this is the thermostat calibration screw.

Insert a small flat blade screwdriver down the thermostat shaft until it contacts the screw.

Grasp the thermostat shaft so it does not move while turning the calibration screw.

Use caution when making adjustments to the thermostat, a 1/8 turn of the calibration screw will adjust the oven temperature about 5 to 7 degrees.

To raise the oven temperature turn the calibration screw Counter-Clock-Wise.

To lower the oven temperature turn the calibration screw Clock-Wise.

Reinstall the oven knob and recheck the oven temperature.

INSTALLATION TROUBLE SHOOTING GUIDE

SYMPTOM	PROBLEM	CAUSE
Not Heating	Breakers off	Reset Breakers
	Not Connected to Power	Connect to Power
	Improper Phasing at Terminal Block	Correct Phasing
	Defective Thermostat	Replace Thermostat
One Deck Works Others Do Not	Internal Circuit Breakers off	Reset Breakers
	Ovens Not Interconnected	
	Improper Phasing at Terminal Block	Connect all Decks to Lower Terminal Block Correct Phasing
Circuit Breakers Trip	Supply and Oven Voltage Do Not Match	Correct Voltage Mismatch
	Thermostat Capillary Tube Shorted to Element	Replace Thermostat to Clear Short
Too Long To Preheat	Supply and Oven Voltage Do Not Match	Correct Voltage Mismatch
	"3-Heat" Switches Set on Low	Set Switches to High

OVEN PARTS LIST

Beginning with Serial Number D-65300

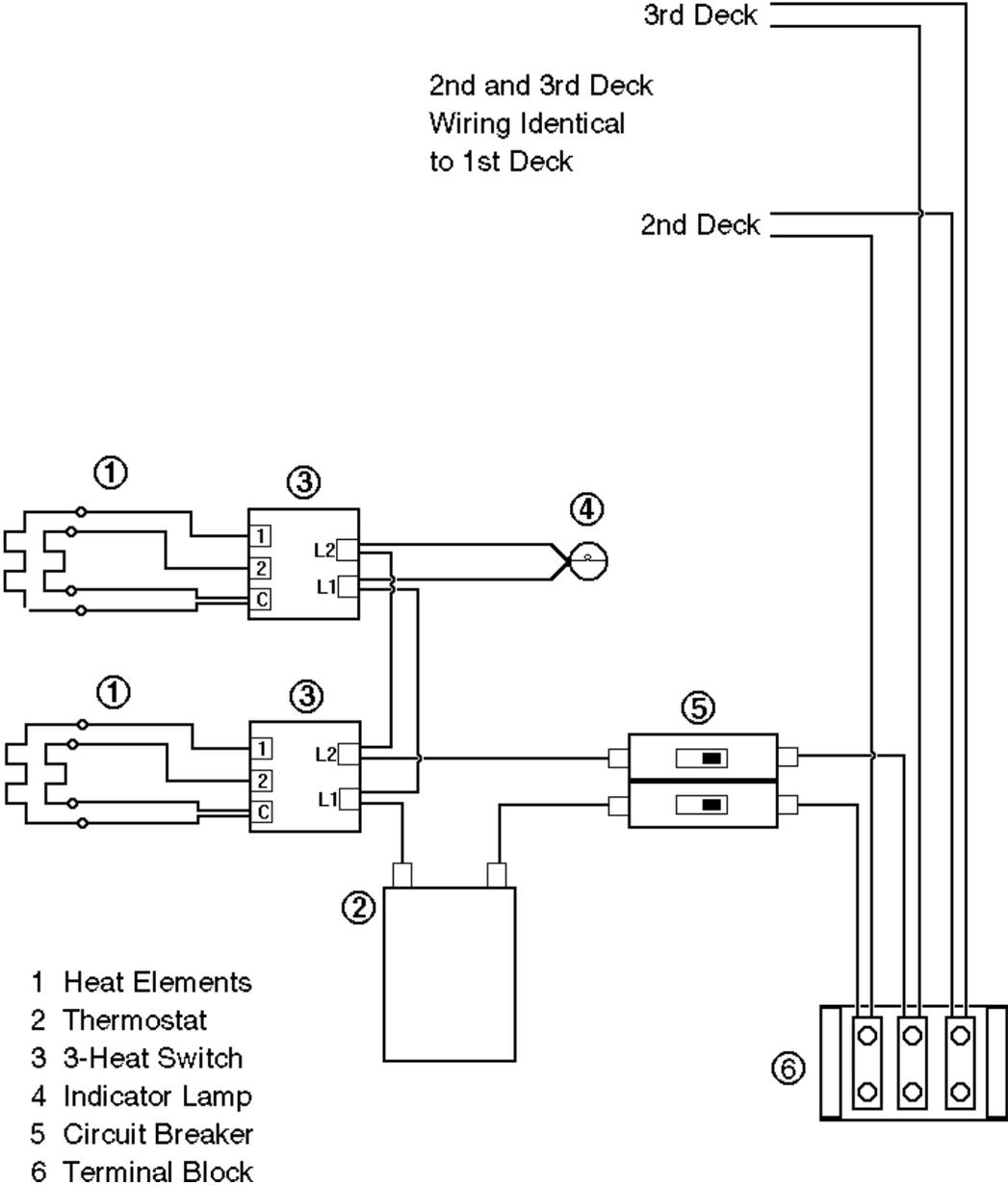
DESCRIPTION	PART NO.
Thermostat	30402-07
Knob, Oven Thermostat	70701-15
Switch, 3-Heat	30304-06
Knob, 3-Heat Switch	70701-10
Timer, Mechanical 60 Minute	30801-01
Vent Damper Knob	70701-25
Circuit Breaker 208/240 Volt	31800-01
Circuit Breaker 480 Volt	31800-04
Handle, Oven Door	70603-05
Spring, Oven Door L/H	51001-01
Spring, Oven Door R/H	51001-02
Tension Disc, Door Spring	50800-07
Oven Rack	50200-09
Terminal Block	30500-07
Indicator Lamp 208/240 Volt	31601-01
Indicator Lamp 480 Volt	31601-02

Elements

	208 Volt	240 Volt	480 Volt
Oven, Inner	11050-32	11050-26	11050-30
Oven, Outer	11050-31	11050-25	11050-29

WIRING DIAGRAM

LA 36 Series Deck Oven Wiring



WARRANTY

Lang Manufacturing Limited Warranty to Commercial Purchasers* (Domestic U.S., Hawaii, & Canadian Sales only.)

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, 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, which ever comes first.

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.