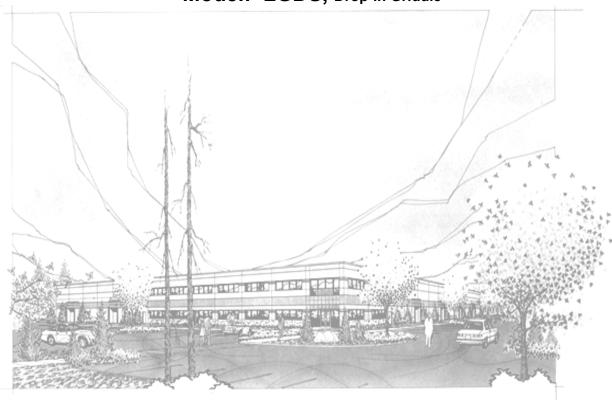


# Installation, Operation, Maintenance, & Troubleshooting Model: LGDS, Drop-In Griddle



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

### **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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IMPORTA	NT READ FIRST IMPOR	RTANT
CAUTION	THE GRIDDLE 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 GRIDDLE WILL BE LOCATED MUST BE DESIGNED TO SUPPORT THE WEIGHT OF THE GRIDDLE.	
CAUTION	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.	DANGER HIGH VOLTAGE
WARNING	INSTALLATION OF THE UNIT MUST BE DONE BY PERSONNEL QUALIFIED TO WORK WITH ELECTRICITY. IMPROPER INSTALLATION CAN CAUSE INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT. UNIT MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES.	lack
NOTICE	The data plate is on top of the control box. The griddle 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.	$\triangle$
<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.	$\triangle$
CAUTION	BE SURE THE POWER SUPPLY VOLTAGE MATCHES THE VOLTAGE SPECIFIED ON THE NAMEPLATE LOCATED ON THE TOP OF THE CONTROL BOX	
NOTICE	During the first few hours of operation you may notice a small amount of smoke coming off the unit, and a faint odor from the smoke. This is normal for a new griddle and will disappear after the first few hours of use.	$\triangle$
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.	
NOTICE	The times and temperatures in this chart are intended as a general guide and starting point. Your actual times and temperatures may vary from this chart.	$\triangle$
WARNING	KEEP WATER AND SOLUTIONS OUT OF CONTROLS. NEVER SPRAY OR HOSE CONTROL CONSOLE, ELECTRICAL CONNECTIONS, ETC.	lack
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.	

### **IMPORTANT IMPORTANT** READ FIRST Any cleaner used should be marked: "SAFE ON ALUMINUM". **NOTICE** Service on this, or any other, LANG appliance must be performed by NOTICE 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. BOTH HIGH AND LOW VOLTAGES ARE PRESENT INSIDE THIS APPLIANCE **WARNING** WHEN THE UNIT IS PLUGGED/WIRED INTO A LIVE RECEPTACLE. BEFORE REPLACING ANY PARTS, DISCONNECT THE UNIT FROM THE ELECTRIC **POWER SUPPLY.** USE OF ANY REPLACEMENT PARTS OTHER THAN THOSE SUPPLIED BY **CAUTION** LANG OR THEIR AUTHORIZED DISTRIBUTORS CAN CAUSE BODILY

INJURY TO THE OPERATOR AND DAMAGE TO THE EQUIPMENT AND WILL

**VOID ALL WARRANTIES.** 

# **EQUIPMENT DESCRIPTION**

# <u>Lang Model: LGDS</u> Electric Drop-In Griddle

#### **Exterior**

The Griddle dimensions are 26" (66cm) Deep, 5 3/8" (13.65cm) High, and width is dependent on model number.

The griddle surface is constructed of 1" thick highly polished steel to reduce hot and cold spots, recovery problems, and ensured even heat through out the griddle.

#### **Controls**

Each twelve-inch section has its own easy to use solid-state temperature controls with a temperature range from 175°F to 450°F in 25° increments.

Each twelve-inch section has a set of 6 kW elements for high efficiency, quick recovery and outstanding performance.

**UNPACKING** 

### **Receiving the Griddle**

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 griddle as near 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 griddle will arrive completely assembled inside a wood frame covered by cardboard box and strapped to a skid. Remove the cardboard cover, cut the straps and remove the wood frame.

CAUTION	THE GRIDDLE 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 GRIDDLE WILL BE LOCATED MUST BE DESIGNED TO SUPPORT THE WEIGHT OF THE GRIDDLE.
CAUTION	SHIPPING STRAPS ARE UNDER TENSION AND CAN SNAP BACK WHEN CUT.

Remove griddle from skid and place in intended location.







### **INSTALLATION**

<b>DANGER</b>	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. IMPROPER INSTALLATION CAN CAUSE

INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT. UNIT MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES.



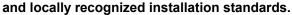
NOTICE The data plate is on top of the control box. The griddle voltage, wattage,

serial number, wire size, and clearance specifications are on the data plate.
This information should be carefully read and understood before proceeding



**NOTICE** The installation of any components such as a vent hood, grease extractors,

fire extinguisher systems, must conform to their applicable National, State





### **Cabinet Preparation**

Cabinet Base must have cross air ventilation. It does not matter if it is on the ends or sides.

If vents are not installed, the controls may overheat rendering the griddle inoperative.

For best results provide a knockout for the control panel a minimum of  $4\frac{1}{2}$ "-inches from griddle support surface as on the following pages.

### Installing Griddle into Cabinet

Turn the griddle over, taking care not to kink or pinch any sensor wires.

Set the griddle on the table that it is to be installed in (leaving a hole big enough to slip the control panel through).

Insert the control panel through the hole and out the control opening of the cabinet.

The hole must be such that the control box can come out of the cabinet 18" for serviceability.

Lower the griddle plate to sit flat in the table opening.

with the installation.

#### **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**).

A power connection box is provided for power connection.

This box must be installed a minimum of 18 inches away from the heating elements in the cabinet box.

All electrical connections can be made at this box.

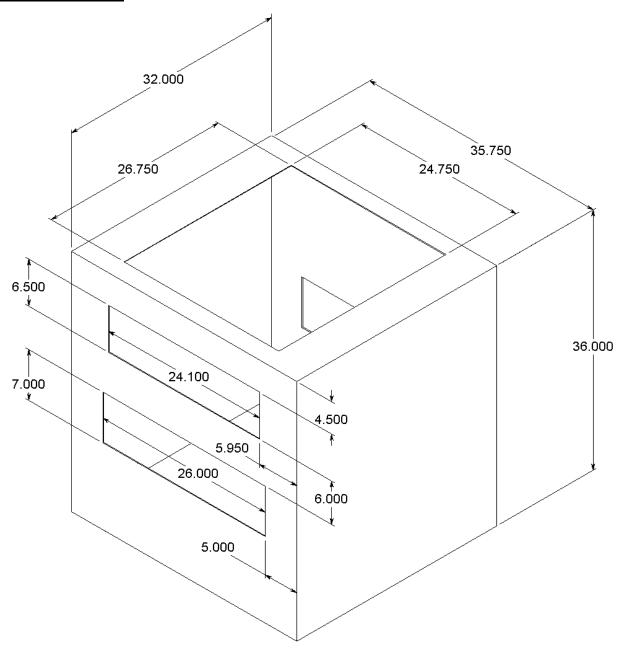
The griddle can now be connected to power.

BOX

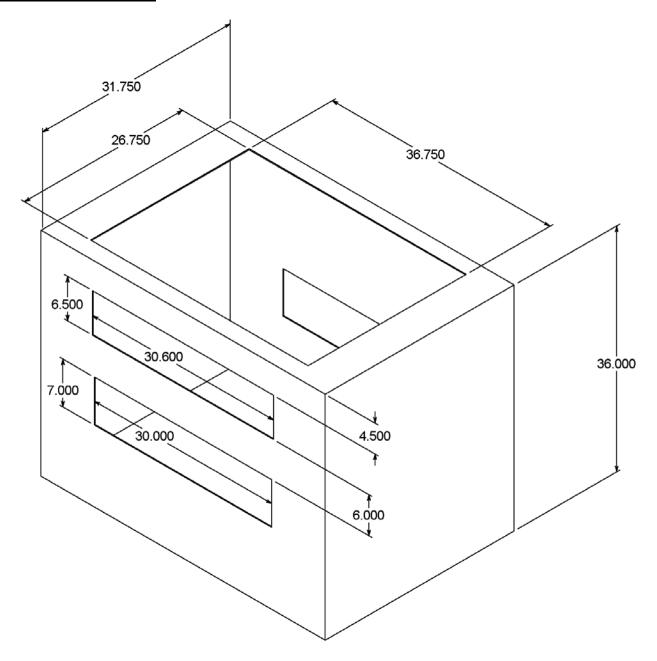
BE SURE THE POWER SUPPLY VOLTAGE MATCHES THE VOLTAGE SPECIFIED ON THE NAMEPLATE LOCATED ON THE TOP OF THE CONTROL



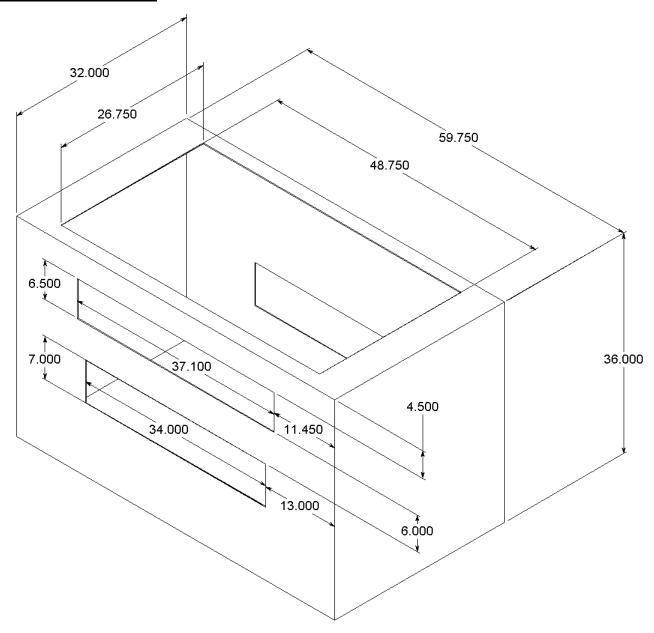
# **LGD24 Cabinet Cut-out**



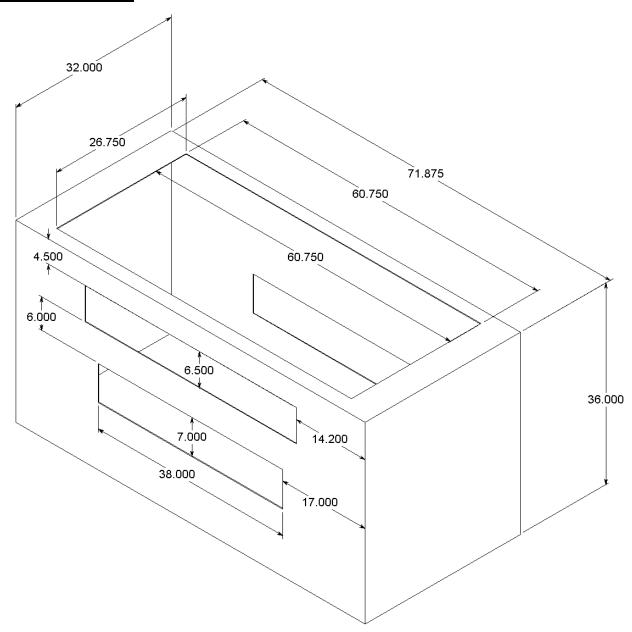
# **LGD36 Cabinet Cut-out**



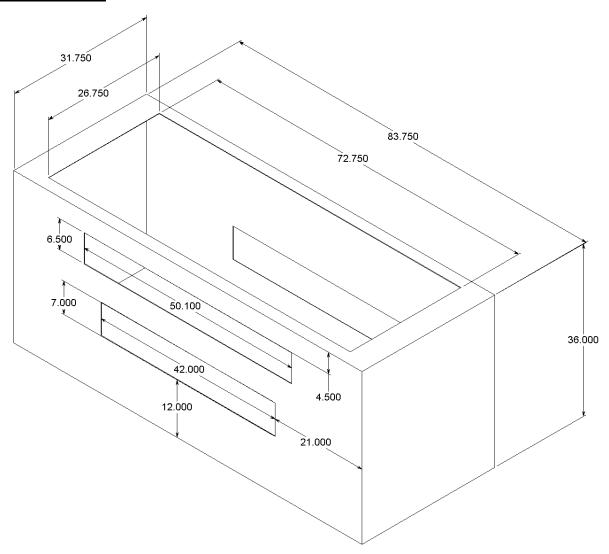
### **LGD48 Cabinet Cut-out**



# **LGD60 Cabinet Cut-out**



# **LGD72 Cabinet Cut-out**





#### NOTICE

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



#### **Pre-Power On**

Before turning the griddle on verify all electrical connections and remove excess shipping grease from the griddle surface.

### **Power On**

Set the main power switch, located at the far left of the control panel, to the "ON" (up) position (there are two "ON" switches on 5 and 6 foot griddles).

Set each cooking section's power switch, located next to each temperature dial, to the "ON" (up) position.

Set the temperature dials to 200°F.

Heat the griddle at 200°F for 2 hours to evaporate any moisture that may be in the elements.

After 2 hours at 200°F, turn the griddle temperature up to 350°F for  $\frac{1}{2}$  hour. After the griddle reaches 350°F for  $\frac{1}{2}$  hour, turn the griddle up another 50°F for another  $\frac{1}{2}$  hour and repeat this until the griddle is at 450°F for  $\frac{1}{2}$  hour The griddle may emit a small amount of smoke as the cooking surface passes the 300°F point. Do not be alarmed as the smoke is caused by oils associated with the manufacturing process and will stop when the griddle reaches 350°F.

### **Seasoning Cooking Surface**

The cooking surface must be "seasoned" in order to eliminate product sticking during cooking.

To season, heat the griddle to 250°F.

Once at 250°F, coat the cooking surface with non-salted vegetable oil.

Allow the griddle to stand at 250°F until the cooking surface looks dry then coat it again.

Heat the griddle to 350°F and repeat the procedure.

# **OPERATION**

**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.

An understanding of how the griddle sections are controlled will be a valuable aid in loading your griddle.

Each 12-inch section of your griddle is independently controlled by a solid state temperature control. The temperature sensor is mounted in the center of each cooking section under the griddle plate.

If the product is loaded directly over the sensor, the control board will turn on the burner and heat the entire cooking section. If the product is loaded to the side, front or back of the sensor, the control board will react to the temperature change much slower.

During slow periods with minimal loads, do not load directly over the sensors as this will unnecessarily turn the burners on and overheat the remainder of the section not being utilized.

Turn the product and continue cooking until it has reached its desired degree of doneness.

Remove the product from the griddle.

When reloading the griddle, first use the griddle surface on which a previous load was not placed. This will help insure the proper griddle temperature.

### **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	Any cleaner used should be marked: "SAFE ON ALUMINUM".







### **Cleaning**

The griddle should be thoroughly cleaned at least once a week in addition to the normal daily cleaning to insure against the accumulation of foreign material.

Electric equipment is inherently clean and sanitary, but may become unsanitary if dirt is allowed to accumulate on it. Take advantage of the clean, sanitary features of electric equipment, give it the regular attention that it deserves the same as any other highly perfected machinery, to insure best results and continued high operating efficiency.

Always start with a cold griddle.

Always follow the cleaner manufacturer's instructions when using any cleaner. Griddle surface may be cleaned using Lang Mfg. Carbon Release (72804-32) cleaner.

Always apply these cleaners when the griddle is cold and rub in the direction of the metal's grain.

# **TROUBLESHOOTING**

### **Symptoms**

What follows is a chart of Symptoms, Possible Causes, and Remedy's to aid in diagnosing faults with the griddle.

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

SYMPTOM	POSSIBLE CAUSE
Whole Griddle will not heat	<ul><li>No Power to Griddle</li><li>Failed Power switch</li><li>Failed Transformer</li></ul>
One Section will not heat	<ul> <li>Failed Power switch (for that section)</li> <li>Failed Probe</li> <li>Failed Circuit board</li> <li>Failed 12-position switch</li> <li>Failed contactor</li> <li>Failed Element</li> </ul>
Product Burning	<ul> <li>Product left on griddle too long</li> <li>Failed Probe</li> <li>Failed Circuit board</li> <li>Failed 12-position switch</li> </ul>
Product Under cooked	<ul> <li>Product removed too soon</li> <li>Failed Probe</li> <li>Failed Circuit board</li> <li>Failed 12-position switch</li> </ul>

### **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.



### TROUBLESHOOTING CON'T

**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.



### **TESTS**

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	No test available, operational condition		
Failed Probe	Check probe for proper resistance*		
Failed Circuit board	Confirm that Circuit board is getting correct voltage and putting out correct voltage*		
Failed Transformer	Check both Primary and Secondary coils for correct voltage*		
Failed Contactor	<ul> <li>Remove the wires from the contactor coil and check for continuity across the contactor coil connection*</li> <li>Ensure the contactor moveable points move freely up and down*</li> </ul>		
Failed Element	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 Griddle 208/240 Volt I/S 4500/5991 Watts	11030-29
Element Griddle 208 Volt O/S 1491 Watts	11030-30
Element Griddle 480 Volt 5991 Watts	11030-31
Switch Toggle On-Off	30303-06
Switch Temperature Control 12 Position 174-450°F	30304-22
Terminal Strip 4 Pole	30500-02
Terminal Strip 6 Pole	30500-03
Terminal Strip 8 Pole	30500-05
Terminal Block 3 Pole	30500-07
Contactor 2 Pole 24 VAC	30701-04
Transformer 120-208-240/24 VAC	31400-07
Transformer 480/24 VAC	31400-15
Pilot Light 208/240V	31601-01
Pilot Light 480V	31601-02
Circuit Board Temperature Control	40101-19
Probe Temperature Sensor	41100-17
Grooved Griddle Cleaning Tool	50100-05
Grooved Griddle Cleaning Tool – Replacement Fingers	50100-051
Grooved Griddle Cleaning Tool – Replacement Blades	50100-052
Element Pan Assembly	50302-05
Panel Label	60301-29
Knob Temperature Control	70701-28
Spacer Support 1/2" Nylon	70801-07

### **WIRING DIAGRAM 208/240- VOLT**

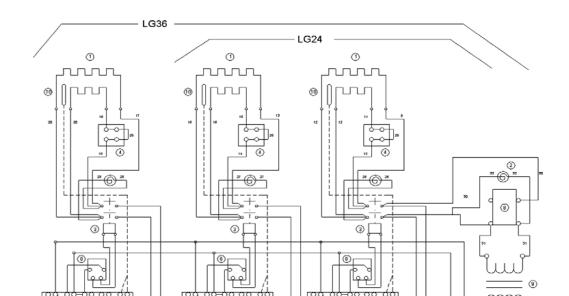
ELEMENT HOOKUP				
208V	240V			
INSTALL JUMPER	REMOVE JUMPER			
<b>④</b>	(4)			

REV	ECN NO.	DESCRIPTION	DR.	MFG.	ENG.	DATE
Α		REVISED AND REDRAWN	CDS			10/15/2002
В		REVISED PER CERTIFICATION TESTING	CDS			10/25/2002

(1) GRIDDLE ELEMENTS (2) GRIDDLE PILOT LAMP 3 CONTACTOR (4) JUMPER (5) TERMINAL BLOCK (6) TEMP. CONTROL BOARD (7)12 POSITION SWITCH (8)TOGGLE SWITCH 9 TRANSFORMER (1) PROBE

#### Note:

- Add one more section for a LG-48
- Add two more sections for a LG-60
   This wiring diagram shows 1/2 section for a LG-72 model
- 4. No more than 4 contactors to one transformer



(6)

AMP TO	TAL	208 (240)		
MODEL	<u>L1</u>	<u>L2</u>	<u>L3</u>	
24	50 (43)	29 (25)	29 (25)	
36	50 (43)	50 (43)	50 (43)	
48	76 (66)	76 (66)	50 (43)	
60	100 (86)	76 (66)	76 (66)	
72	100 (86)	100 (86)	100 (86)	

NOTE: LG60 & LG72 HAVE TWO POWER SUPPLY CONNECTIONS

LG60: CONN # 1 USE LG36 CONN # 2 USE LG24

LG72: CONN # 1 USE LG36 CONN # 2 USE LG36

OEITHOE CONTINECTIONS									
THREE	PHASE	SINGLE PHASE							
Lt	L2	L3	L1	L2					
1,4	2	3	1,3	2,4					
1,4	2,5	3,6	1,3,5	2,4,6					
1,4,7	2,5,8	3,6	1,3,5,7	2,4,6,8					

6

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

SERVICE CONNECTIONS



UNLESS OTHERWISE SPECIFIED IMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS ANGLES  $X = \pm .05$   $XX = \pm .03$   $XXX = \pm .015$ ±.5°

BLANK DIMS.:  $\mathbf{x}$ DWN. BY: CDS / DWN. DATE: 10/15/02 / REV. BY: CDS / REV. DATE: 10/25/02 / CHK. BY: SHEET 1 OF 1 CHK. DATE: CAD FILE: LANG GRIDDLE 208-240VAC SELECTRONIC DWG, NO: 61114-21 REV: B DESCRIPTION:

000 L1 L2 L3 000

6

		REVISION BLOCK				
REV	ECN NO.	DESCRIPTION	DR:	MFG	ENG	DATE
A		REVISED & REDRAWN	CDS			10/15/02
0		Revised per certification testing	CDS			10/25/02

#### Note:

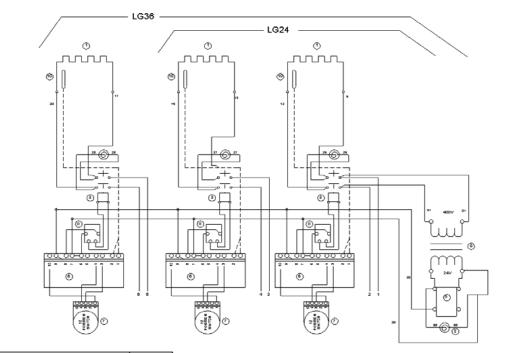
- Add one more section for a LG-48
   Add two more sections for a LG-60
   This wiring diagram shows 1/2 section for a LG-72 model
- 4. Do not use more than 4 contactors to one transformer

(3) ORIDDLE ELEMENTS
(2) ORIDDLE PILOT LAMP
(3) CONTACTOR
(3) IMPER
(5) TERMINAL BLOCK
(6) TERMINAL BLOCK
(7) 12 POSITION SWITCH
(8) TOO OLE SWITCH TRANSFORMER

NOTE: LG60 & LG72 HAVE TWO POWER SUPPLY CONNECTIONS

LG60: CONN #1 USE LG36 CONN#2USELG24 LG72: CONN # 1 USE LG36 CONN # 2 USE LG36

AMP TO	TAL		
Model	L1	L2	L3
24	22	13	13
36	22	22	22
48	33	33	22
60	43	33	33
72	43	43	43



Service						
Model	Three Phase	Three Phase				
	L1	L2	L3			
24	1,4	2	3			
36	1,4	2,5	3,6			
48	1,4,7	2,5,8	3,6			

0	0	0	<b>®</b>
0	0	0	



UNLESS OTHERWISE SPECIFIED IMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS ANGLES

 $X = \pm .05$   $XX = \pm .03$   $XXX = \pm .015$ ±.5°

ED S.	MATERIAL PART #:	/-	MATERIAL TYPE:		/	BLANK DIMS.:	x	BLANK AREA:		sq in
	DWN. BY: SRC	DWN. DATE:10-28-96	REV. BY: CDS	REV. DATE : 10/15/02/	CHK. BY:	CHK. DATE:	CAD FILE:		SHEET 1	OF 1
	DESCRIPTION	ı: LANG-GRI	DDLE 480VA	AC SELECTRON	IIC		DWG. NO:	61114-17	/	REV: B

# 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.