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TECHNICAL MANUAL
INSTALLATION, OPERATION
AND MAINTENANCE
LANG MANUFACTURING COMPANY
LG SERIES GRIDDLES

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15 JULY 2005

CHANGE RECORD

Change no.	Date	Title and/or Brief Description	Signature of Validating Officer

NOTICE

(FOR MARINE INSTALLED EQUIPMENT)

**THIS SUPPLEMENT ADDED TO THIS MANUAL
FOR MARINE INSTALLED EQUIPMENT**

THIS EQUIPMENT IS APPROVED FOR INSTALLATION ONLY ON VESSELS GREATER THAN 65 FEET IN LENGTH, IN ACCORDANCE WITH USCG REGULATIONS IN TITLE 46 CFR 110-113.

ANY WIRING USED IN THE INSTALLATION OF THIS APPLAINE MUST BE STRANDED COPPER

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:

Lang Manufacturing Company
Rev. B
Part # 60801-02

6500 Merrill Creek Parkway
Phone: 425-349-2400 Fax: 425-349-2733
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Everett, WA 98203

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LANG LG SERIES GRIDDLES

SECTION 1LG/LG-M SERIES

SECTION 2LG-S SERIES

SECTION 3LG-SM SERIES

SECTION 4LGD SERIES

SECTION 5LG-MDI SERIES

SECTION 1

LG/LG-M SERIES GRIDDLES



Lang

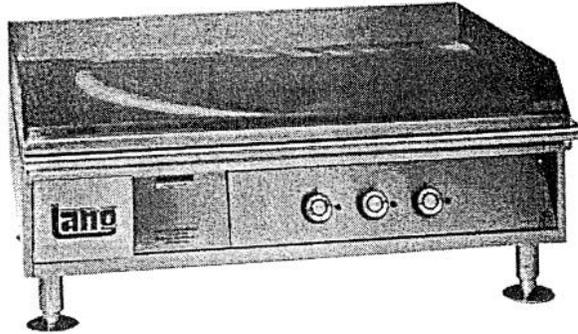


MarineSeries

Item No. _____
 Project _____
 Quantity _____

Electric, Counter Model Griddles

Model: LG-[24,36,48,60,72][M/SM]



Model LG-36M shown

SIZING AND PERFORMANCE GUIDE

Model/Width	Surface Area	Controls	kW Input*
<input type="checkbox"/> LG-24 M/SM	552 sq. in.	2	12-kW
<input type="checkbox"/> LG-36 M/SM	828 sq. in.	3	18-kW
<input type="checkbox"/> LG-48 M/SM	1104 sq. in.	4	24-kW
<input type="checkbox"/> LG-60 M/SM	1380 sq. in.	5	12/18-kW**
<input type="checkbox"/> LG-72 M/SM	1656 sq. in.	6	18/18-kW**

* 6-kW per foot of griddle

** Power input, two power connections required

MARINE SHORT/BID SPECIFICATION

Griddle shall be a LANG Manufacturing Marine Model LG-__ [Specify width: 24", 36", 48", 60" or 72"]__ [Specify controls: ACCU-TEMP Snap-action Thermostat Controls (M) or SELECTRONIC Solid State Controls (SM)], provided for every 12" of griddle width; 6-kW per foot of Incoloy sheathed heating elements, pressure clamped to plate bottom; 1" thick polished cooking surface, with 5-1/2" high side and back splash and full front 1" deep X 3-1/2" wide grease trough; full width front mounted grab bar; and all the features listed and the options/accessories checked:

MARINE PRODUCT WARRANTY

One year, parts & labor (Labor in U.S. only)

MARINE CONSTRUCTION FEATURES

- 1" thick precision machined, polished steel cooking surface
- Continuously bottom welded 5-1/2" high rear & side splash shields
- Full front 3-1/2" wide X 1" deep stainless steel grease trough
- 8 quart capacity grease drawer, with marine latch & fully enclosed, easily removable sleeve [Two on 60" & 72" models]
- All stainless steel base cabinet construction
- Fully enclosed control compartment
- Full width front mounted grab bar
- 4" adjustable bolt-down legs provided

PERFORMANCE FEATURES

- Choice of two control systems [See below]
- Thick griddle plate reduces hot & cold spots and retains heat
- Highly polished surface and continuously welded splash and grease trough speed cleanup
- Incoloy sheathed heating elements for long life
- Elements are pressure clamped to bottom of griddle plate for more even heating
- Recessed control panel protects control knobs
- Accurate temperature control between 175 and 450°F

CONTROLS

- ACCU-TEMP™ Thermostat Controls [M]**
 - Snap-action thermostats
 - Independent temperature control every 12"
 - Power-to-element pilot lights for each control
- SELECTRONIC™ Solid State Controls [SM]**
 - Resistance Temperature Detector system
 - RTD probe reacts to a 1°F temperature change
 - Control for every 12" of cook surface
 - Snap-action 175 to 450°F temperature control, in 25°F increments
 - Eliminate need for periodic calibration



Sheet No. LMSP-G2 (rev. 10/04)



Electric, Counter Model Griddles

Model: LG-[24,36,48,60,72][M/SM]

MARINE INSTALLATION REQUIREMENTS

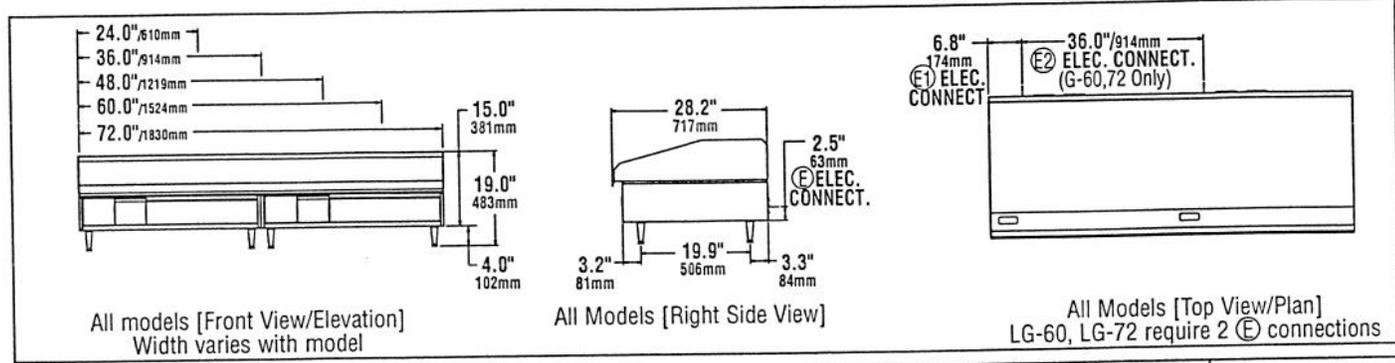
- (E) 208V, 3-phase, field convertible to 240V or 1-phase; or 440V or 480V, 3-phase power connection
- (E) Two electric connections required for 60" and 72" wide units

- Installation under approved vent hood required.
[Connections from rear. See below for location and power requirements]

MARINE OPTIONS & ACCESSORIES

- Custom Grooving [Specified in 12" increments, from left to right.]
Special grooved surface cleaning tool provided

- Stainless steel tubular-leg stand with reinforced undershelf & adjustable flanged mounting feet
- Mil-Spec Adder Package [To meet: MIL-G-2857]



Model	Height x Width x Depth (Including standard legs)	Clearance from combustible surface	Weight		Freight Class
			Actual	Shipping	
LG-24 [M/MS]	19.0" x 24.0" x 30.2" 483mm x 610mm x 767mm	Sides: 2" Back: 2"	330 lbs. 150 kg	380 lbs. 173 kg	85
	LG-36 [M/MS]		19.0" x 36.0" x 30.2" 483mm x 914mm x 767mm	360 lbs. 164 kg	
LG-48 [M/MS]			19.0" x 48.0" x 30.2" 483mm x 1219mm x 767mm	475 lbs. 216 kg	525 lbs. 239 kg
	LG-60 [M/MS]		19.0" x 60" x 30.2" 483mm x 1524mm x 767mm	615 lbs. 280 kg	665 lbs. 302 kg
LG-72 [M/MS]			19.0" x 72.0" x 30.2" 483mm x 1830mm x 767mm	750 lbs. 341 kg	800 lbs. 364 kg

Model	Volts AC - Hz	Total kW	Amps - Three Phase	Amps - Single Phase
LG-24 [M/MS]	208 - 50/60	12.0	50.0	57.7
	240 - 50/60	12.0	43.3	50.0
	440 - 50/60	12.0	23.6	N/A
	480 - 50/60	12.0	21.7	N/A
LG-36 [M/MS]	208 - 50/60	18.0	50.0	86.5
	240 - 50/60	18.0	43.3	75.0
	440 - 50/60	18.0	23.6	N/A
	480 - 50/60	18.0	21.7	N/A
LG-48 [M/MS]	208 - 50/60	24.0	75.0	115.2
	240 - 50/60	24.0	65.0	100.0
	440 - 50/60	24.0	36.8	N/A
	480 - 50/60	24.0	32.5	N/A
LG-60 [M/MS]	208 - 50/60	30.0 [12/18]*	50.0/50.0	57.7/86.5
	240 - 50/60	30.0 [12/18]*	43.3/43.3	50.0/75.0
	440 - 50/60	30.0 [12/18]*	23.6/23.6	N/A
	480 - 50/60	30.0 [12/18]*	21.7/21.7	N/A
LG-72 [M/MS]	208 - 50/60	36.0 [18/18]*	50.0/50.0	86.5/86.5
	240 - 50/60	36.0 [18/18]*	43.3/43.3	75.0/75.0
	440 - 50/60	36.0 [18/18]*	23.6/23.6	N/A
	480 - 50/60	36.0 [18/18]*	21.7/21.7	N/A

* Two Connections

Due to continuous improvements, specifications subject to change without notice.



Sheet No. LMSP-G2 (rev. 10/04)

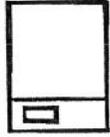
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SPECIFICATIONS FOR TWO FOOT MARINE GRIDDLES

Series LG-24M Smooth or Grooved - 1" or 1/2" thick

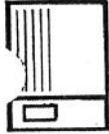
SMOOTH OR GROOVED COMBINATIONS



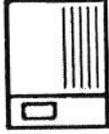
MODEL LG-24M



MODEL LG-24AM

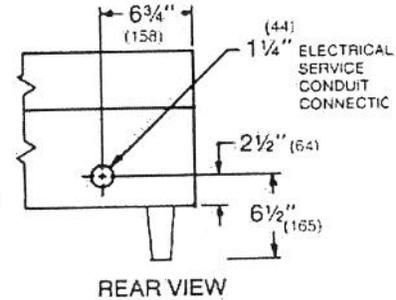
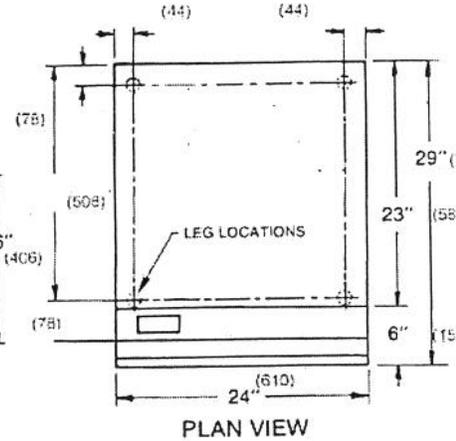
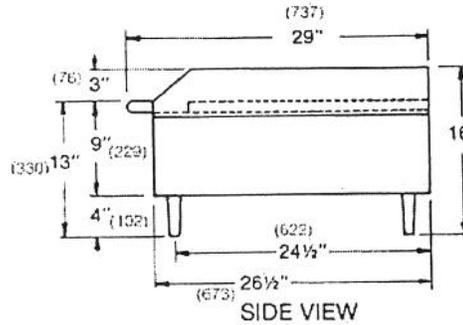
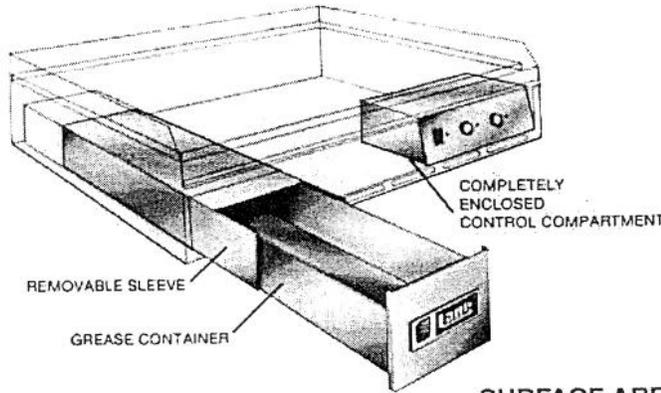


MODEL LG-24BM



MODEL LG-24CM

Grooving Scale: All grooves in increments of 12"



All griddles are supplied with 4" adjustable legs.

SURFACE AREA, WIDTH & WEIGHT

MODEL	SQ. INCHES OF GRILL SURFACE	OVERALL WIDTH	WEIGHT LBS.
LG-24M	552	24"	150
LG-24M-1	552	24"	210

NOTE: All units are shipped from the factory wired for three phase power connection. For simple conversion to single phase power connection, see wiring diagram attached to the unit. This conversion is extremely easy and neither terminates the Lang warranty nor is chargeable to Lang as warranty service.

All dimensions are in both inches and millimeter (approx. millimeters in parentheses)

GRIDDLE SERIES LG-24M SMOOTH OR GROOVED																	
MODEL	THREE PHASE LOADING			TOTAL K.W.	NOMINAL AMPS PER LINE												
	K.W. PER PHASE				THREE PHASE									SINGLE PHASE		D.C. AM	
	L1-L2	L2-L3	L3-L1		208 VOLT			240 VOLT			480 VOLT			208 V	240 V	115VDC	230
					L1	L2	L3	L1	L2	L3	L1	L2	L3				
LG-24M	6.0	0.0	6.0	12.0	50.0	28.8	28.8	43.3	25.0	25.0	21.7	12.5	12.5	57.7	50.0		
LG-24M-1				10.0	K.W. AND AMPERAGE RATING FOR 115V and 230V D.C.											87.0	43

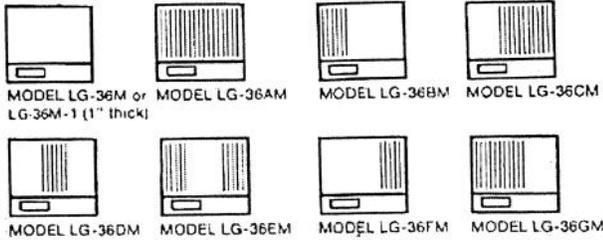
WHEN ORDERING SPECIFY VOLTAGE AND PHASE
Specifications subject to change without notice.
LANG MANUFACTURING COMPANY



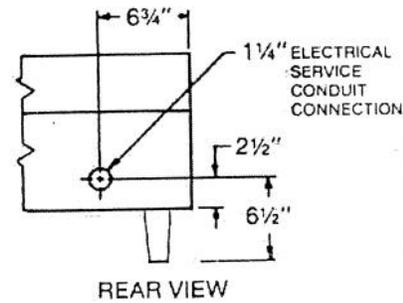
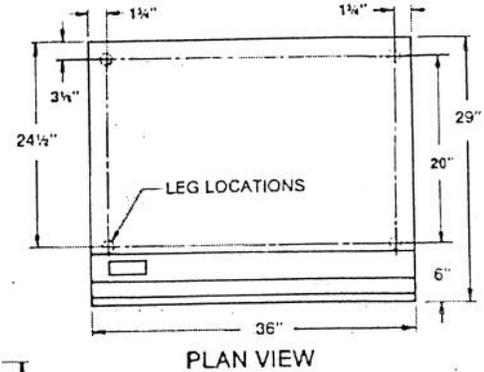
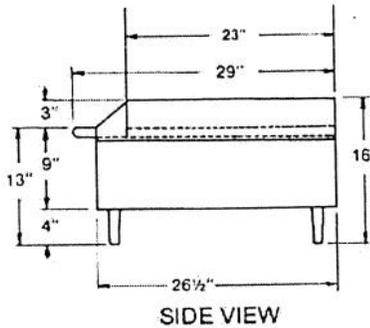
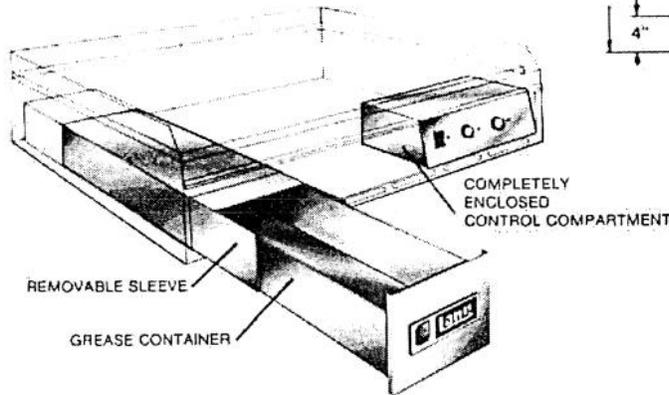
SPECIFICATIONS FOR THREE FOOT MARINE GRIDDLES

Series LG-36M Smooth or Grooved - 1" thick

SMOOTH OR GROOVED COMBINATIONS



Grooving Scale: All grooves in increments of 12".



All grills are supplied with 4" adjustable legs.

NOTE: All units are shipped from the factory wired for three phase power connection. For simple conversion to single phase power connection, see wiring diagram attached to the unit. This conversion is extremely easy and neither terminates the Lang warranty nor is chargeable to Lang as warranty service.

ELECTRICAL DATA																
GRIDDLE SERIES LG-36M SMOOTH OR GROOVED																
MODEL	THREE PHASE LOADING K.W. PER PHASE			TOTAL K.W.	NOMINAL AMPS PER LINE									SINGLE PHASE		D.C. AMPS
					THREE PHASE									208V	240V	
	208 VOLTS				240 VOLTS			480 VOLTS			208V	240V	115VDC			
	L1-L2	L2-L3	L3-L1		L1	L2	L3	L1	L2	L3				L1	L2	L3
LG 36M	6.0	6.0	6.0	18.0	50.0	50.0	50.0	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75.0	65.0
LG 36M				15.0	K.W. AND AMPERAGE RATING FOR 115V AND 230V D.C.											

*Contact factory for amperage information.

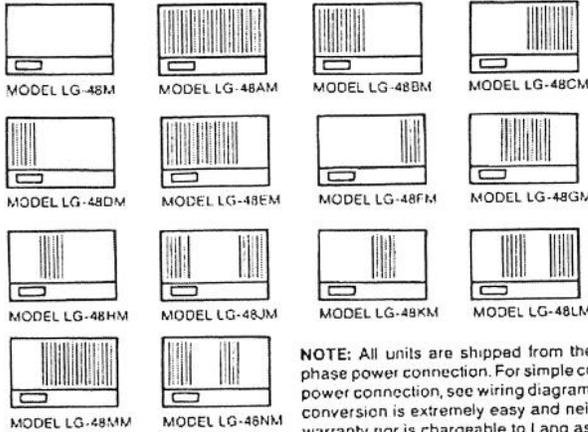
WHEN ORDERING SPECIFY VOLTAGE AND PHASE
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LANG MANUFACTURING COMPANY



SPECIFICATIONS FOR FOUR FOOT MARINE GRIDDLES

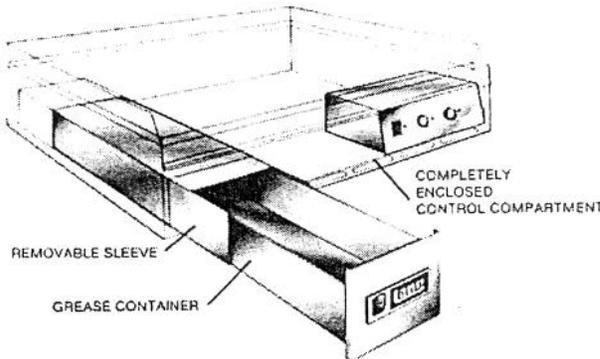
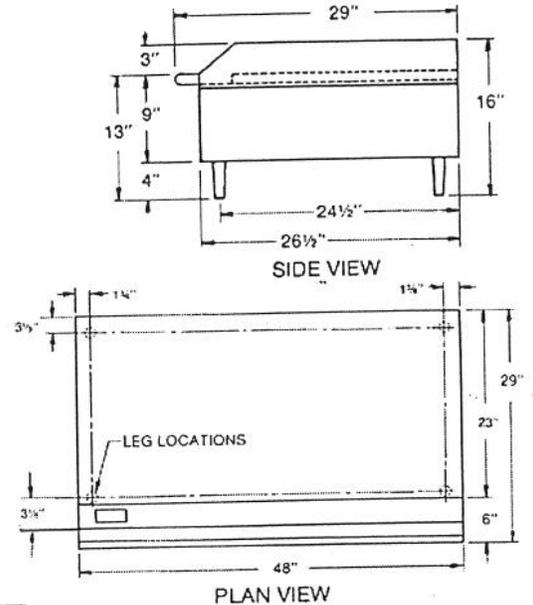
Series LG-48M Smooth or Grooved - 1" thick

SMOOTH OR GROOVED COMBINATIONS

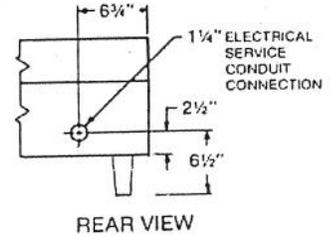


NOTE: All units are shipped from the factory wired for three phase power connection. For simple conversion to single phase power connection, see wiring diagram attached to the unit. This conversion is extremely easy and neither terminates the Lang warranty nor is chargeable to Lang as warranty service.

Grooving Scale: All grooves in increments of 12"



All grills are supplied with 4" adjustable legs.



SURFACE AREA, WIDTH & WEIGHT

MODEL	SQ. INCHES OF GRILL SURFACE	OVERALL WIDTH	WEIGHT LBS.
LG-48M	1104	48"	515

ELECTRICAL DATA																	
GRIDDLE SERIES LG-48M SMOOTH OR GROOVED																	
MODEL	THREE PHASE LOADING K.W. PER PHASE			TOTAL K.W.	NOMINAL AMPS PER LINE												
					THREE PHASE						SINGLE PHASE		D.C. AMPS				
					208 VOLTS			240 VOLTS			480 VOLTS			208V	240V	115VDC	230VDC
	L1-L2	L2-L3	L3-L1		L1	L2	L3	L1	L2	L3	L1	L2	L3				
LG 48M	12.0	6.0	6.0	24.0	75.0	75.0	50.0	65.0	65.0	43.3	32.5	32.5	21.7	115.4	100.0		
LG 48M				20.0	K.W. AND AMPERAGE RATING FOR 115V AND 230V D.C.												

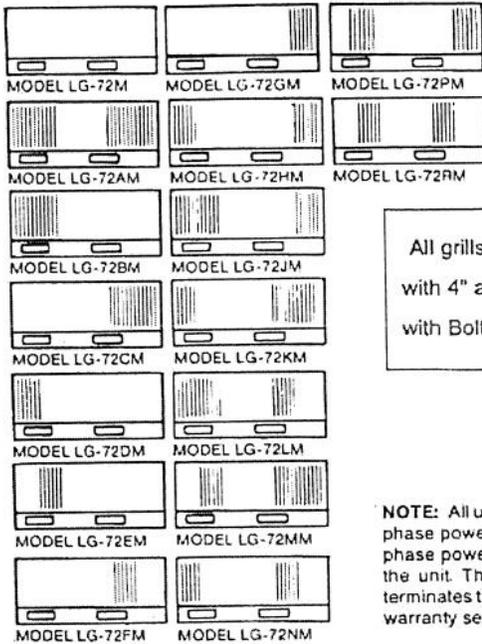
*Contact factory for amperage information.

WHEN ORDERING SPECIFY VOLTAGE AND PHASE
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LANG MANUFACTURING COMPANY



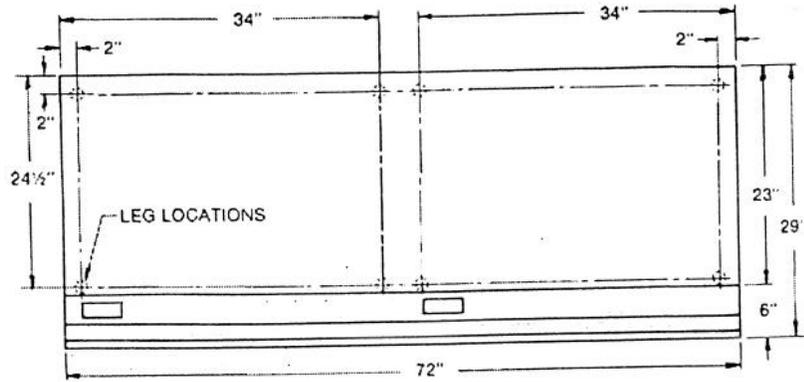
SPECIFICATIONS FOR SIX FOOT MARINE GRIDDLES

Series LG-72M Smooth or Grooved Grill Combinations - 1" thick

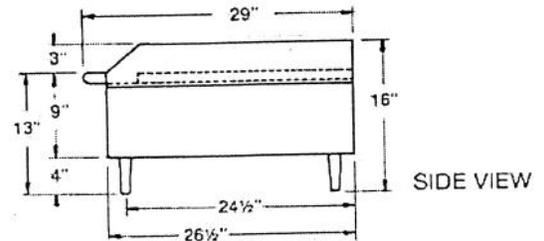


All grills are supplied with 4" adjustable legs with Bolt Down Flange

NOTE: All units are shipped from the factory wired for three phase power connection. For simple conversion to single phase power connection, see wiring diagram attached to the unit. This conversion is extremely easy and neither terminates the Lang warranty nor is chargeable to Lang as warranty service.

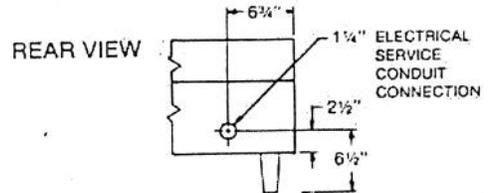
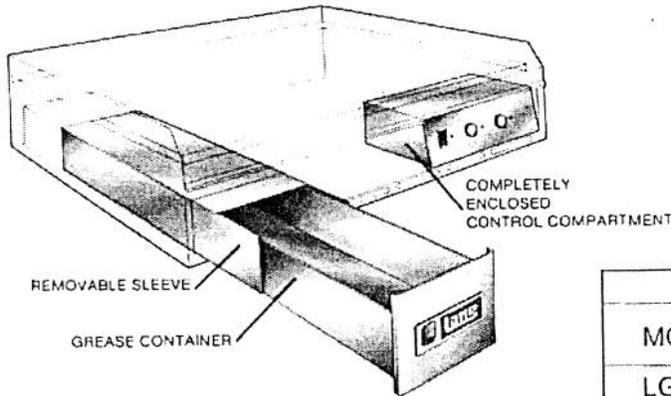


PLAN VIEW



SIDE VIEW

Grooving Scale: All grooves in increments of 12".



Note: Two Separate Connections Are Required.

SURFACE AREA, WIDTH & WEIGHT			
MODEL	SQ. INCHES OF GRILL SURFACE	OVERALL WIDTH	WEIGHT LBS.
LG-72M	1656	72"	785

Clearances: 2" from sides and back.

ELECTRICAL DATA																	
GRIDDLE SERIES LG-72M SMOOTH OR GROOVED																	
MODEL NO. LG-72M	THREE PHASE LOADING			TOTAL	NOMINAL AMPS PER LINE												
					THREE PHASE									SINGLE PHASE		D.C. AMPS	
	K.W. PER PHASE			K.W.	208 VOLTS			240 VOLTS			480 VOLTS			208V	240V	115V DC	230V DC
	L1-L2	L2-L3	L3-L1		L1	L2	L3	L1	L2	L3	L1	L2	L3				
CONN. 1	6.0	6.0	6.0	18.0	50.0	50.0	50.0	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75.0		
CONN. 2	6.0	6.0	6.0	18.0	50.0	50.0	50.0	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75.0		
CONN. 1				15.0												130.4	65.2
CONN. 2				15.0												130.4	65.2

WHEN ORDERING SPECIFY VOLTAGE AND PHASE
Specifications subject to change without notice.
LANG MANUFACTURING COMPANY

INSTALLATION

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.

Uncrate your 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.

LEG INSTALLATION

There are four (4) 4 inch legs provided for 2, 3, and 4 foot griddles. There are eight (8) 4 inch legs provided for 5 and 6 foot griddles. The legs are shipped in the grease drawer of the griddle. Install them into the nuts on the bottom of the griddle body. Adjustment is made by turning the lower portion of the leg.

NOTE: The leg must be screwed all the way into the nut on the bottom of the griddle.

POWER SUPPLY CONNECTION

There is one power supply connection on 2, 3 and 4 foot griddles. There are two power supply connections on 5 and 6 foot griddles. Refer to the power supply chart below for proper power supply size.

GRIDDLE SPECIFICATIONS														
MODEL NUMBER	TOTAL KW.	NOMINAL AMPS PER LINE										WEIGHT	GRIDDLE SURFACE	
		THREE PHASE									SINGLE PHASE			
		208 VOLT			240 VOLT			480 VOLT			208 VOLT			240 VOLT
		LINE 1	LINE 2	LINE 3	LINE 1	LINE 2	LINE 3	LINE 1	LINE 2	LINE 3				
LG-24	12.0	50.0	28.8	28.8	43.3	25.0	25.0	21.7	12.5	12.5	57.7	50.0	210	552 SQ. IN.
LG-36	18.0	50.0	50.0	43.3	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75.0	405	828 SQ. IN.
LG-48	24.0	75.0	75.0	50.0	65.5	65.5	43.3	32.5	32.5	21.7	115.2	100.0	515	1104 SQ.
LG-60 #1	18.0	50.0	50.0	50.0	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75.0	625	1380 SQ.
LG-60 #2	12.0	50.0	28.8	28.8	43.3	25.0	25.0	21.7	12.5	12.5	57.7	50.0	625	1380 SQ.
LG-72 #1	18.0	50.0	50.0	43.3	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75.0	735	1656 SQ.
LG-72 #2	18.0	50.0	50.0	43.3	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75.0	735	1656 SQ.

There is (1) one 1 1/4 inch conduit knockout on 2, 3, and 4 foot griddles located at the rear of the griddle, through the back and the bottom of the griddle body. There are (2) two 1 1/4 inch conduit knockouts provided on the 5 and 6 foot griddles. Use a supply wire suitable for at least 90 degree centigrade.

VOLTAGE CONVERSION

The model LG-S griddle is shipped from the factory wired for 208/240 or 480 volts, the 208/240 griddle is a dual voltage design. Jumper wires on terminal strip next to the main power supply connection determine the griddle voltage. For a 208 volt power supply, leave the jumpers in place. For a 240 volt power supply disconnect the jumpers as indicated on the tag to the terminal strip. The 480 volt griddle can be operated on 480 volts only.

PHASING

All griddles are shipped from the factory set up for a **three phase** service. Rearrange the wires in the power supply terminal block to convert the griddle to single phase. Rephasing the griddle is not chargeable to Lang Manufacturing Company as warranty. To convert to **single phase** follow the chart below.

PHASING BY WIRE NUMBER					
MODEL NUMBER	THREE PHASE			SINGLE PHASE	
	LINE 1	LINE 2	LINE 3	LINE 1	LINE 2
LG-24	1,4	2	3	1,3	2,6
LG-36	1,4	2,5	3,6	1,3,5	2,4,6
LG-48	1,4,7	2,5,8	3,6,9	1,3,5,7	2,4,6,8
LG-60 #1	1,4	2,5	3,6	1,3,5	2,4,6
LG-60 #2	1,4	2	3	1,3	2,6
LG-72 #1	1,4	2,5	3,6	1,3,5	2,4,6
LG-72 #2	1,4	2,5	3,6	1,3,5	2,4,6

INITIAL START UP

Before starting the griddle for the first time, clean the griddle body and cooking surface with a mild soap and water solution then rinse with clear water and dry.

Set the temperature dials to 200 degrees.

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

After 2 hours at 200 degrees, proceed with "SEASONING THE COOKING SURFACE".

SEASONING THE COOKING SURFACE

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

To season, heat the griddle to 200 degrees.

Once at 200 degrees, coat the cooking surface with a non-salted vegetable oil.

Allow the griddle to stand at 200 degrees until the cooking surface looks dry then coat it again.

Heat the griddle to 350 degrees and repeat the procedure.

The griddle may emit a small amount of smoke as the cooking surface passes the 350 degree 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 degrees.

SETTING THE TEMPERATURE

If different temperature settings across the same griddle are to be used, select one side of the griddle and run that at the lowest temperature. Adjoining sections should be set at progressively higher temperatures. Do not try to run end sections hot and center sections cool.

The suggested time and temperature chart (below) is provided as a guide for the products listed.

SUGGESTED TIMES AND TEMPERATURES		
PRODUCTS	TEMPERATURE (F)	TIME (MIN.)
Hamburger	350	
2 patties per LB	350	6 to 8
4 patties per LB	350	4 to 6
6 patties per LB	350	3 to 4
Steaks		
1/2 to 3/4 inch thick,	375	5 to 7
3/4 to 1 inch thick, cooked	375	8 to 10
Lamb Chops	350	6 to 8
Pork Chops	350	6 to 8
Salmon	350	6 to 8
Halibut	325	6 to 8
Snapper	325	6 to 8
Hashbrown Potatoes	375	3 to 4
Bacon	350	3 to 4
Sausage Links or Patties	350	3 to 4
Ham (Pre-cooked)	375	2
Eggs	275	2 to 4

LOADING THE GRIDDLE

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

Each 12 inch section is independently controlled by a thermostat. The sensor for each is mounted under the griddle plate in the center of each cooking section.

If product is loaded directly over the temperature sensor, that section will turn on and the element will heat the entire cooking section. If the product is loaded to the side, front or back of the temperature sensor, the controller will react to the temperature change of the entire section instead of just one product.

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

During busy periods, a systematic approach should be utilized in loading the griddle. Load the entire section from rear to front and continue cooking to the next section if necessary.

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 ensure the proper griddle temperature.

MAINTENANCE

DAILY CLEANING

Empty the grease drawer or whenever it is 3/4 full. It is easily removed for washing.

WARNING

USE CAUTION WHEN REMOVING THE RELEASE DRAWER AS IT CONTAINS HOT GREASE

Clean the exterior of the appliance with hot water and mild detergent to maintain a gleaming appearance.

Keep the griddle surface clean. After each cooking load scrape the griddle surface to remove any carbonized grease.

CAUTION

WHEN SCRAPING THE GRIDDLE SURFACE, DO NOT ABRABE THE SPLASH GUARD. IT MAY EVENTUALLY CUT THROUGH.

WEEKLY CLEANING

Once a week or when necessary the griddle surface should be cleaned and reseasoned. Use a griddle stone, griddle pad, or liquid cleaner. Rub with the grain of the metal, being careful not to scrape the splash guard.

A mild detergent with water or one of the many commercial griddle cleaners may be used.

Be sure to rinse thoroughly and coat the cooking surface with a thin film of oil to prevent rusting.

Reseason the griddle plate after each cleaning.

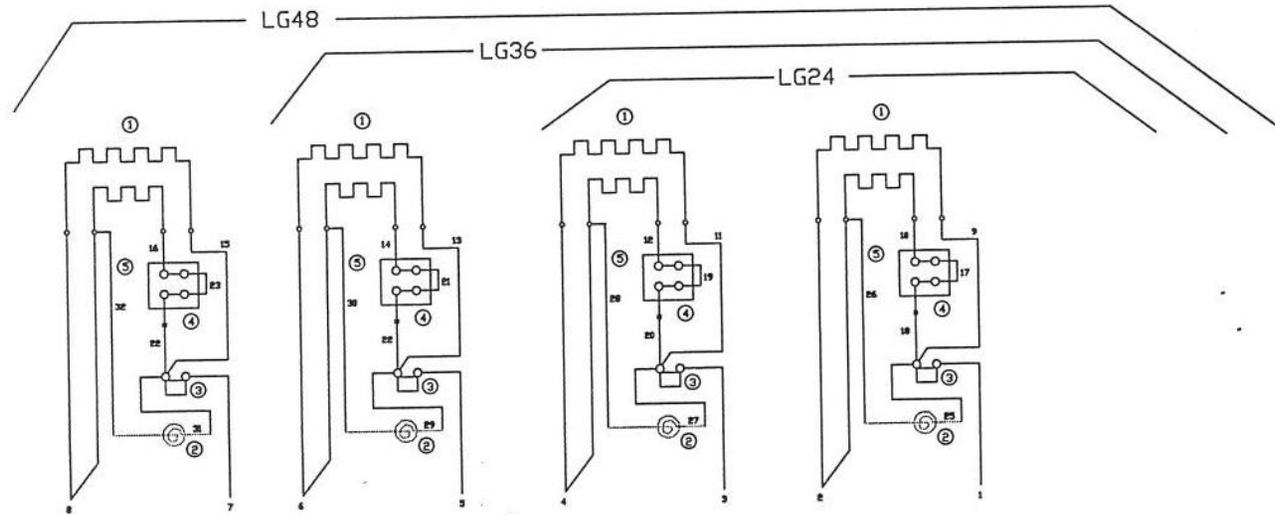
PARTS LIST

DESCRIPTION	PART NUMBER
Drawer, Grease (Not For Marine Use!)	50302-07
Drawer, Grease, (Marine Use Only)	Contact Factory
Element, 440 Volt, (Marine Use Only)	11030-48
Element, 480 Volt	11030-31
Element, Inner	11030-29
Element, Outer	11030-30
Knob, 450 Degree Thermostat	70701-19
Knob, 550 Degree Thermostat (Marine Use Only)	70701-15
Lamp, Indicator 208/240 Volt	31601-01
Lamp, Indicator 480 Volt	31601-02
Leg, 4 Inch Adjustable	72500-02
Leg, 4 Inch Adjustable, (Marine Use Only)	72500-05
Manual, Installation/Operation/Maintenance	60801-01
Terminal Block, 3 Pole	30500-07
Terminal Strip, 6 Pole	30500-03
Terminal Strip, 8 Pole	30500-05
Thermostat, 550 Degree Thermostat (Marine Use Only)	30402-07
Therostat, 450 Degree	30402-08

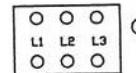
208/240 VOLT

ELEMENT HOOKUP	
208V	240V
INSTALL JUMPER ④	REMOVE JUMPER ④

- ① GRIDDLE ELEMENTS
- ② GRIDDLE PILOT LAMP
- ③ GRIDDLE THERMOSTAT
- ④ JUMPER
- ⑤ TERMINAL BLOCK



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



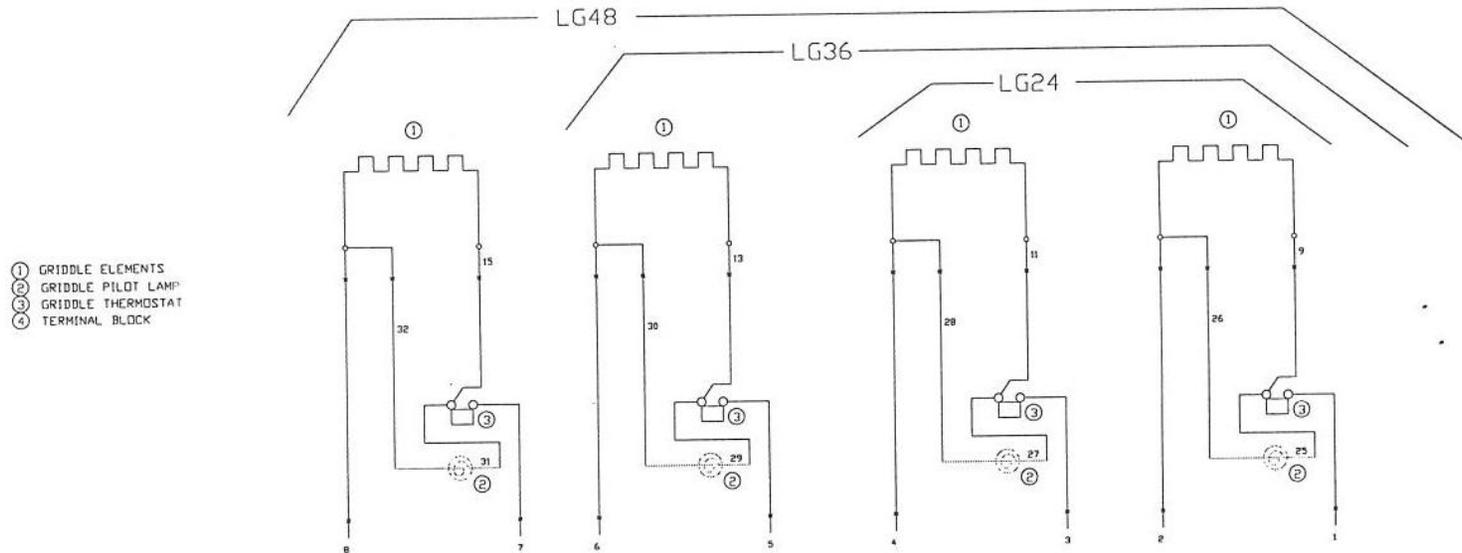
SERVICE CONNECTIONS

MODEL	K.V.			TOTAL
	L1-L2	L2-L3	L3-L1	
24	6.0	0.0	6.0	12.0
36	6.0	6.0	6.0	18.0
48	12.0	6.0	6.0	24.0

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

WIRING DIAGRAMS

440/480 VOLT GRIDDLE



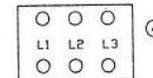
NOTE: LG60 & LG72 HAVE TWO POWER SUPPLY CONNECTIONS

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

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

SERVICE CONNECTIONS			
MODEL	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

* NUMBER



SECTION 2

LG-S SERIES GRIDDLES



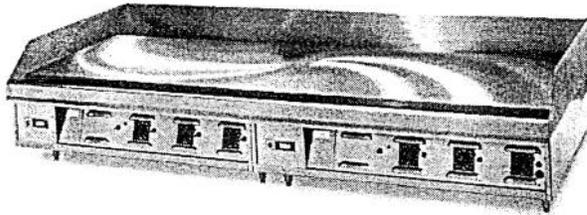
Item No. _____

Project _____

Quantity _____

Electric, Counter Model Griddles

Model: LG-[24,36,48,60,72][S]



Model LG-72S shown

SIZING AND PERFORMANCE GUIDE

Model/Width	Surface Area	Controls	kW Input*
<input type="checkbox"/> LG-24"	552 sq. in.	2	12-kW
<input type="checkbox"/> LG-36"	828 sq. in.	3	18-kW
<input type="checkbox"/> LG-48"	1104 sq. in.	4	24-kW
<input type="checkbox"/> LG-60"	1380 sq. in.	5	30-kW**
<input type="checkbox"/> LG-72"	1656 sq. in.	6	36-kW**

* 6-kW per foot of griddle

** Total power input, two power connections required

SHORT/BID SPECIFICATION

Griddle shall be a LANG Manufacturing Model LG-__ [specify width: 24", 36", 48", 60" or 72"]__ with: standard ACCU-TEMP Snap-action Thermostat Controls or SELECTRONIC Solid State Controls [S], for every 12" of griddle width; 6-kW per foot of Incoloy sheathed heating elements, pressure clamped to plate bottom; 1" thick polished cooking surface, with 5-1/2" high side and back splash and full front 1" deep X 3-1/2" wide grease trough; and all the features listed and the options/accessories checked:

STANDARD PRODUCT WARRANTY

One year, parts & labor

CONSTRUCTION FEATURES

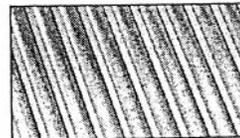
- 1" thick precision machined, polished steel cooking surface
- Continuously bottom welded 5-1/2" high rear & side splash shields
- Full front 3-1/2" wide X 1" deep stainless steel grease trough
- 8 quart capacity grease drawer, with removable fully enclosed sleeve
- All stainless steel base cabinet construction
- 4" adjustable legs provided [Stand option available]

PERFORMANCE FEATURES

- Choice of two control systems [See below]
- Thick griddle plate reduces hot & cold spots and retains heat
- Highly polished surface and continuously welded splash and grease trough speed cleanup
- Heating elements Incoloy sheathed for long life
- Elements are pressure clamped to bottom of griddle plate for more even heating
- Recessed control panel protects control knobs
- Accurate temperature control between 175° and 450°F

CONTROL PACKAGE [Specify One]

- ACCU-TEMP™ Thermostat Controls [Standard]**
 - Snap-action thermostats
 - Independent temperature control every 12"
 - Power-to-element pilot lights for each control
- SELECTRONIC™ Solid State Controls [-S]**
 - Area sensitive Resistance Temperature Detector system
 - RTD probe reacts to a 1°F temperature change
 - Control for every 12" of cook surface
 - 175° to 450°F temperature control, in 25° increments



FOCUS OPTION

Custom Grooving [Specified in 12" increments, from left to right. 24" maximum, from either side.]



Sheet No. LSP-GD2 (rev. 9/03)

Electric, Counter Model Griddles

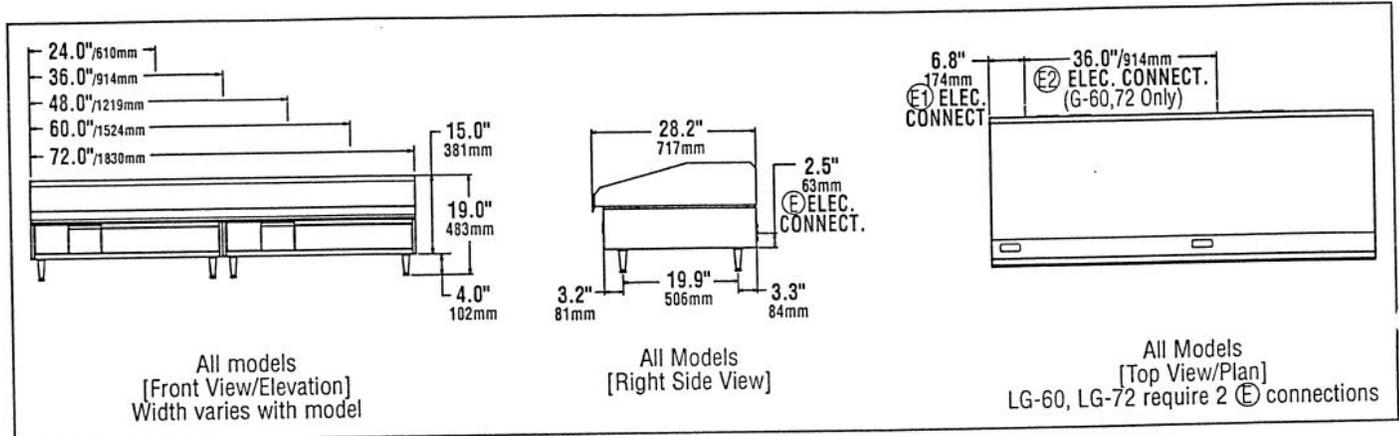
Model: LG-[24,36,48,60,72][S]

INSTALLATION REQUIREMENTS

- Ⓜ 208V, 3-phase, field convertible to 240V or 1-phase; or 408V, 3-phase power connection
- Ⓜ Ⓜ Two electric connections required for 60 & for 72" wide units
- Installation under approved vent hood required.
[Connections from rear. See other below for location and power requirements]

OPTIONS & ACCESSORIES

- Custom Grooving [Specified in 12" increments, from left to right. 24" maximum, from either side.]
- Top-welded – adds a continuous weld around inside splash perimeter
- Stainless steel tubular-leg stand with undershelf & adjustable feet
- Stainless steel tubular-leg stand with undershelf & casters



Model	Height x Width x Depth (Not including legs)	Clearance from combustible surface	Weight		Freight Class
			Actual	Shipping	
LG-24	15.0" x 24.0" x 28.2" 381mm x 610mm x 717mm	Sides: 2" Back: 2"	243 lbs. 110 kg	280 lbs. 127 kg	85
LG-36	15.0" x 36.0" x 28.2" 381mm x 914mm x 717mm		368 lbs. 167 kg	410 lbs. 186 kg	85
LG-48	15.0" x 48.0" x 28.2" 381mm x 1219mm x 717mm		483 lbs. 220 kg	515 lbs. 234 kg	85
LG-60	15.0" x 60" x 28.2" 381mm x 1524mm x 717mm		621 lbs. 282 kg	665 lbs. 302 kg	85
LG-72	15.0" x 72.0" x 28.2" 381mm x 1830mm x 717mm		724 lbs. 329 kg	800 lbs. 364 kg	85

Model	Total kW	Maximum AMP Per Line				
		208V/3-Phase	240V/3-Phase	480V/3-Phase	208V/1-Phase	240V/1-Phase
LG-24	12.0	50.0	43.3	21.7	57.7	50.0
LG-36	18.0	50.0	43.3	21.7	86.5	75.0
LG-48	24.0	75.0	65.0	32.5	115.2	100.0
LG-60	30.0 [12/18]*	50.0	43.3	21.7	86.5	75.0
LG-72	36.0 [18/18]*	50.0	43.3	21.7	86.5	75.0

* Load split for the two power connections required.

CAD SYMBOLS & PRICING



AutoQuotes

Due to continuous improvements, specifications subject to change without notice.

Lang
World Class Cooking Solutions

Sheet No. LSP-GD2 (rev. 9/03)

LANG MANUFACTURING COMPANY • 6500 Merrill Creek Parkway, Everett, WA 98203
TOLL FREE: 800.882.6368 • FAX: 425.349.2733 • www.langworld.com

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



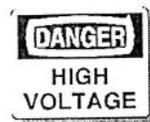
CAUTION: ANY STAND, COUNTER OR OTHER DEVICE ON WHICH THE GRIDDLE WILL BE LOCATED MUST BE DESIGNED TO SUPPORT THE WEIGHT OF THE GRIDDLE.



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



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 behind access panel between controls and grease drawer. The grill 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.



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.



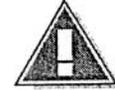
NOTICE: During the first few hours of operation you may notice a small amount of smoke coming off the griddle surface, and a faint odor from the smoke. This is normal for a new griddle and will disappear after the first few hours of use.



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.



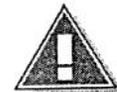
NOTICE: Service on this, or any other, LANG appliance must be performed by qualified personnel only. Consult your authorized service station directory or call the factory at 1-800-224-LANG (5264), or WWW.LANGWORLD.COM for the service station nearest you.



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: LG-S

Exterior Construction

The griddle dimensions are 17" (43.18cm) High, 30" (76.20cm) Deep, and width is dependent on the actual model number.

The Sides, Bottom, and Rear wall are constructed of double wall stainless steel, which allows closer installation to combustible surfaces.

The griddle surface is made of 1" thick, highly polished steel to reduce hot and cold spots, recovery problems, warping, and ensure even heat to the edges of the griddle.

Controls

Each twelve-inch section has its own temperature selector switch that snaps into place to lock in any temperature from 175°F to 450°F in 25° increments.

Each twelve-inch section of the griddle is controlled by an area sensitive RTD probe, which can sense and react to a temperature change of +/- 4°F.

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

Technical

The LG-S griddle operates on either 208/240V or 480V. **This must be specified when ordering.**

Minimum clearances: 2" from side and back

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.**

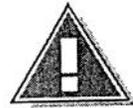
Location

Prior to un-crating, move the griddle as near 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.

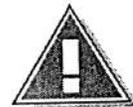
Un-crating

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

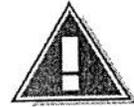
CAUTION: THE UNIT IS EXTREMELY HEAVY. FOR SAFE HANDLING, INSTALLER SHOULD OBTAIN HELP AS NEEDED, OR EMPLOY APPROPRIATE MATERIALS HANDLING EQUIPMENT (SUCH AS A FORKLIFT, DOLLY, OR PALLET JACK) TO REMOVE THE UNIT FROM THE SKID AND MOVE IT TO THE PLACE OF INSTALLATION.



CAUTION: ANY STAND, COUNTER OR OTHER DEVICE ON WHICH THE 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

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 behind access panel between controls and grease drawer. The grill 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.



Leg Installation

There are four, 4-inch legs provided for 2,3 and 4 foot griddles. There are eight 4" legs provided for 5 and 6 foot griddles.

The legs are shipped in the grease drawers of the griddle. Install them into the threaded holes on the underside of the griddle body.

Leveling adjustment may be done by screwing the bottom portion of the leg in and out.

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.

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.

INSTALLATION CONT'D

Ventilation and Clearances

Standard minimum clearance from combustible construction is as follows.

2" from side

2" from back

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

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

Do not install the griddle directly against a **non-combustible** back wall or surface.

Do not install the griddle closer than 12 inches from an uncontrolled heat source (char broiler etc.).

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

Electrical Connection

There is one power supply connection on the 2,3, and 4-foot griddles. There are two power supply connections on 5 and 6-foot griddles. Refer to the power supply chart in the Technical Data portion of this manual, for proper power supply size.

There is (1) one 1 1/4-inch conduit knockout on 2,3 and 4-foot griddles located at the rear of the griddle, through the back and the bottom of the griddle body. There are (2) two 1 1/4-inch conduit knockouts provided on the 5 and 6-foot griddles. Use a supply wire suitable for at least 90 degree centigrade.

The model LG-S griddle is shipped from the factory, wired for 208/240 or 480 volts, the 208/240 griddle is a dual voltage design. Jumper wires on terminal strip next to the main power supply connection determine the griddle voltage. For a 208-volt power supply, leave the jumpers in place. For a 240-volt power supply disconnect the jumpers as indicated on the tag on the terminal strip. The 480-volt griddle can be operated on 480 volts only and must be specified when ordering.



Technical Data

MODEL NUMBER	TOTAL K.W.	NOMINAL AMPS PER LINE									SINGLE PHASE		
		THREE PHASE									208V	240V	
		208 Volt			240 Volt			480 Volt					
		L1	L2	L3	L1	L2	L3	L1	L2	L3			
24"	12.0	50.0	28.8	28.8	43.3	25.0	25.0	21.7	12.5	12.5	57.7	50.0	
36"	18.0	50.0	50.0	50.0	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75.0	
48"	24.0	75.0	75.0	50.0	65.0	65.0	43.3	32.5	32.5	21.7	115.5	100.0	
60"	#1	18.0	50.0	50.0	50.0	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75.0
	#2	12.0	50.0	28.8	28.8	43.3	25.0	25.0	21.7	12.5	12.5	57.7	50.0
72"	#1	18.0	50.0	50.0	50.0	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75.0
	#2	18.0	50.0	50.0	50.0	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75.0

INSTALLATION CONT'D

Phassing

All griddles are shipped from the factory set up for a **three-phase** service. Rearrange the wires in the power supply terminal block to convert the griddle to single phase. Rephasing the griddle is not chargeable to Lang Manufacturing Company as warranty. To convert to **single-phase** follow the chart below.

PHASING BY WIRE NUMBER					
MODEL NUMBER	THREE PHASE			SINGLE PHASE	
	LINE 1	LINE 2	LINE 3	LINE 1	LINE 2
LG-24	1,4	2	3	1,3	2,6
LG-36	1,4	2,5	3,6	1,3,5	2,4,6
LG-48	1,4,7	2,5,8	3,6,9	1,3,5,7	2,4,6,8
LG-60 #1	1,4	2,5	3,6	1,3,5	2,4,6
LG-60 #2	1,4	2	3	1,3	2,6
LG-72 #1	1,4	2,5	3,6	1,3,5	2,4,6
LG-72 #2	1,4	2,5	3,6	1,3,5	2,4,6

Pre-Power On

Before starting the griddle for the first time, clean the griddle body and cooking surface.

Use a mild soap and water solution, then rinse with clear water and dry.

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 ½ hour.

After the griddle reaches 350°F for ½ hour, turn the griddle up another 50°F for another ½ hour and repeat this until the griddle is at 450°F for ½ 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.

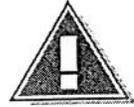
Heat the griddle to 350°F and repeat the procedure.

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

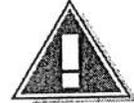
General

The suggested time and temperature chart (below) is provided as a guide for the products listed only.

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.



SUGGESTED TIMES AND TEMPERATURES		
PRODUCTS	TEMPERATURE (F)	TIME (MIN)
HAMBURGER	350	
2 patties per LB	350	6 to 8
4 patties per LB	350	4 to 6
6 patties per LB	350	3 to 4
STEAKS		
1/2 to 3/4 inch thick, cooked medium	375	5 to 7
3/4 to 1 inch thick, cooked medium	375	8 to 10
Lamb Chops	350	6 to 8
Pork Chops	350	6 to 8
Salmon	350	6 to 8
Halibut	325	6 to 8
Snapper	325	6 to 8
Hashbrown Potatoes	375	3 to 4
Bacon	350	3 to 4
Sausage Links or Patties	350	3 to 4
Ham (Pre-cooked)	375	2
Eggs	275	2 to 4
Note: 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.		

If different temperature settings are to be used, select one side of the griddle and operate at the lowest temperature. Adjoining sections should be set at progressively higher temperatures. Do not try to operate the end sections hot and the center sections cool.

Operations

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 temperature controller. The temperature control sensor is mounted in the center of each cooking section under the griddle plate.

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

During slow periods with minimal loads, do not load directly over the thermostat 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.

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 griddle.
- The stainless exterior can easily be cleaned using Lang Mfg. Prime Shine (72804-41) cleaner.
- 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 and Possible Causes 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.

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
Whole Griddle will not heat	<ul style="list-style-type: none">• No Power to Griddle• Failed Power switch• Failed Transformer.
One Section will not heat	<ul style="list-style-type: none">• Failed Power switch (for that section)• Failed Probe• Failed Circuit board• Failed 12-position switch• Failed contactor• Failed Element.
Product Burning	<ul style="list-style-type: none">• Product left on griddle too long• Failed Probe• Failed Circuit board• Failed 12-position switch
Product Under cooked	<ul style="list-style-type: none">• Product removed too soon• Failed Probe• Failed Circuit board• Failed 12-position switch

TROUBLESHOOTING CONT'D

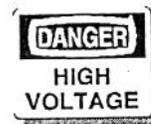
TESTS

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 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 Griddle 208/240 Volt I/S 4500/5991 Watts	11030-29
Element Griddle 208 Volt O/S 1491 Watts	11030-30
Switch Toggle On-Off	30303-06
Switch Temperature Control 12 Position 174-450°F	30304-22
Terminal Strip 4 Pole, LG-24 & LG-60	30500-02
Terminal Strip 6 Pole, LG-36, LG-60, & LG-72	30500-03
Terminal Strip 8 Pole, LG-48	30500-05
Terminal Block 3 Pole	30500-07
Contactors 2 Pole 24 VAC	30701-04
Transformer 120-208-240/24 VAC	31400-07
Pilot Light 208/240V 6" Lead Black Body	31601-01
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
Legs 4" Stainless Steel	72500-02
Grease Drawer Assembly	50302-07

REV		ECN NO.	DESCRIPTION	FG	ENC	DATE
A			REDRAWN			10/15/02
B			Revised per certification testing	CDS		10/25/02

Note:

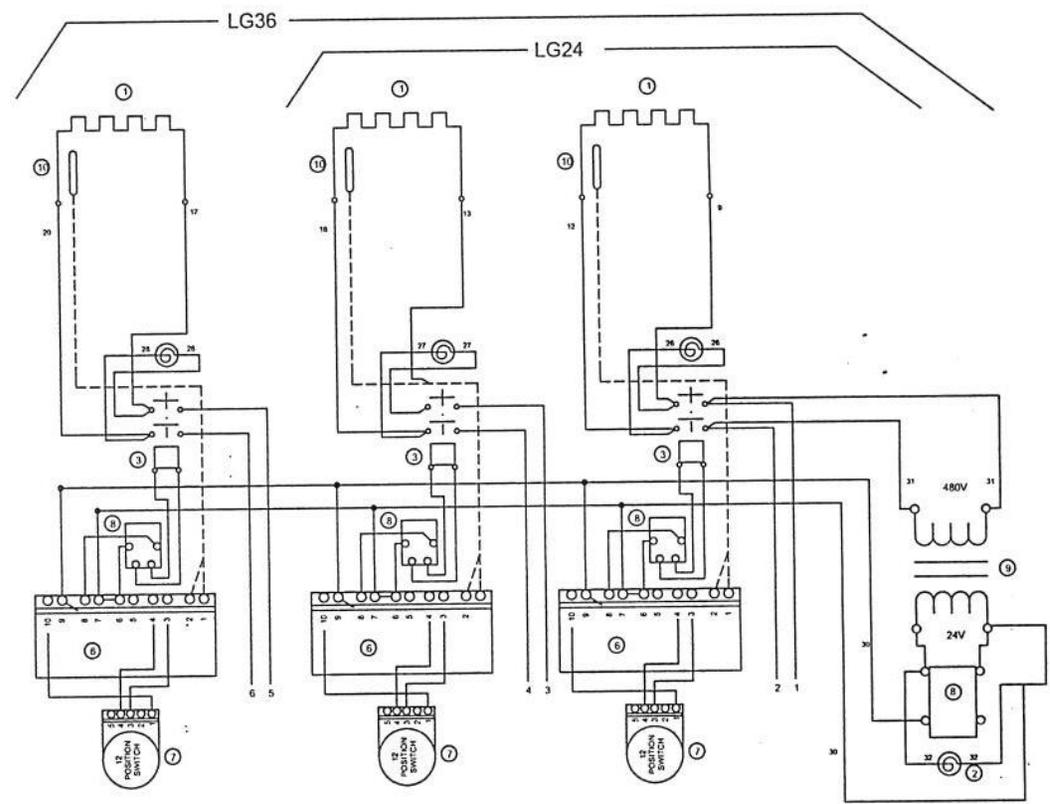
1. Add one more section for a LG-48
2. Add two more sections for a LG-60
3. This wiring diagram shows 1/2 section for a LG-72 model
4. Do not use more than 4 contactors to one transformer

- 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
- ⑩ PROBE

NOTE: LG60 & LG72 HAVE TWO POWER SUPPLY CONNECTIONS

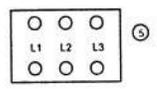
LG60: CONN # 1 USE LG36
CONN # 2 USE LG24

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



AMP TOTAL			
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 Connections			
Model	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



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.

TOLERANCES ARE:
 DECIMALS .X = ± .05
 ANGLES ±.5°
 XX = + .03

MATERIAL PART # :
 DWN. BY : SRC / DWN. DATE : 10-28-96 / REV. BY : CDS / REV. DATE : 10/15/02 / CHK. BY :

MATERIAL TYPE :
 DESCRIPTION: LANG GRIDDLE 480VAC SELECTRONIC

BLANK DIMS. : X
 CHK. DATE : / CAD FILE :

BLANK AREA: / SHEET 1 OF 1
 DWG. NO: 61114-17 / REV: B

SECTION 3

LG-SM SERIES GRIDDLES

TABLE OF CONTENTS

<u>CHAPTER</u>	<u>PAGE</u>
1. TABLE OF CONTENTS	3-3
2. READ FIRST	3-4
3. EQUIPMENT DESCRIPTION	3-6
4. UNPACKING	3-7
5. INSTALLATION	3-8
6. INITIAL START-UP	3-10
7. OPERATION	3-11
8. CLEANING	3-12
9. TROUBLESHOOTING	3-13
10. PARTS LIST	3-15
11. WIRING DIAGRAM	3-17

CAUTION

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



CAUTION

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



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 behind the access panel located between the grease drawer and the control box. The unit 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 from the griddle surface, and a faint odor from the smoke. This is normal for a new unit 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.



IMPORTANT

READ FIRST

IMPORTANT

NOTICE

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WARNING

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



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.



Lang Model: Lang Model: LG-SM

Exterior Construction

The griddle dimensions are 17" (43.18cm) High, 30" (76.20cm) Deep, and width is dependent on the actual model number.

The Sides, Bottom, and Rear wall are constructed of double wall stainless steel, which allows closer installation to combustible surfaces.

The griddle surface is made of 1" thick, highly polished steel to reduce hot and cold spots, recovery problems, warping, and ensure even heat to the edges of the griddle.

Controls

Each twelve-inch section has its own temperature selector switch that snaps into place to lock in any temperature from 175°F to 450°F in 25° increments.

Each twelve-inch section of the griddle is controlled by an area sensitive RTD probe, which can sense and react to a temperature change of +/- 4°F.

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

Technical

The LG-S griddle operates on either 208/240V or 480V. **This must be specified when ordering.**

Minimum clearances: 2" from side and back

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



CAUTION

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



CAUTION

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



Remove griddle 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 behind the access panel located between the grease drawer and the control box. The unit 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

Screw legs into the 3/8-16 weld nuts provided on the underside of the griddle.

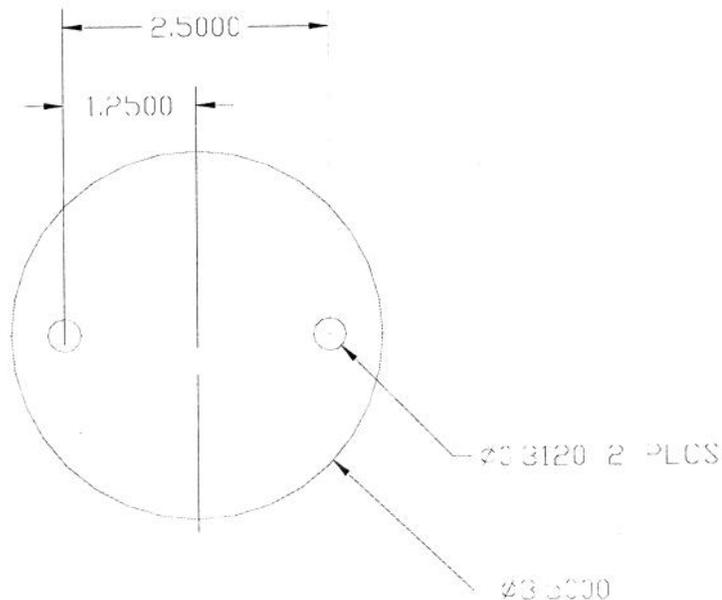
Place the griddle into its intended location.

For bolt down legs see illustration below for dimensions.

Stand Installation

Assemble the stand and place in its intended place.

For bolt down legs see illustration below for dimension.



Electrical Connection

There is one power supply connection on the 24,36, and 48-inch griddles. There are two power supply connections on 60 and 72-inch griddles. Refer to the power supply chart below, for proper power supply size.

There is (1) one 1 1/4-inch conduit knockout on 24,36 and 48-inch griddles located at the rear of the griddle, through the back and the bottom of the griddle body. There are (2) two 1 1/4-inch conduit knockouts provided on the 60 and 72-inch griddles. Use a supply wire suitable for at least 90 degree centigrade.

The model LG-SM griddle is shipped from the factory wired for 208/240 or 480 volts. The 208/240 griddle is a dual voltage design. Jumper wires on a terminal strip next to the main power supply connection determine the griddle voltage. For a 208-volt power supply, leave the jumpers in place. For a 240-volt power supply disconnect the jumpers as indicated on the tag on the terminal strip. The 480-volt griddle can be operated on 480 volts only and must be specified when ordering.

Phasing

All griddles are shipped from the factory set up for a **three-phase** service. Please refer to the power supply chart below for conversions to **single-phase** service.

Technical Data

MODEL NUMBER	TOTAL K.W.	NOMINAL AMPS PER LINE									SINGLE PHASE		
		THREE PHASE									208V	240V	
		208 Volt			240 Volt			480 Volt					
		L1	L2	L3	L1	L2	L3	L1	L2	L3			
24"	12.0	50.0	28.8	28.8	43.3	25.0	25.0	21.7	12.5	12.5	57.7	50.0	
36"	18.0	50.0	50.0	50.0	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75.0	
48"	24.0	75.0	75.0	50.0	65.0	65.0	43.3	32.5	32.5	21.7	115.5	100.0	
60"	#1	18.0	50.0	50.0	50.0	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75.0
	#2	12.0	50.0	28.8	28.8	43.3	25.0	25.0	21.7	12.5	12.5	57.7	50.0
72"	#1	18.0	50.0	50.0	50.0	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75.0
	#2	18.0	50.0	50.0	50.0	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75.0

PHASING BY WIRE					
MODEL NUMBER	THREE PHASE			SINGLE PHASE	
	LINE 1	LINE 2	LINE 3	LINE 1	LINE 2
24"	1,4	2	3	1,3	2,6
36"	1,4	2,5	3,6	1,3,5	2,4,6
48"	1,4,7	2,5,8	3,6,9	1,3,5,7	2,4,6,8
60" #1	1,4	2,5	3,6	1,3,5	2,4,6
60" #2	1,4	2	3	1,3	2,6
72" #1	1,4	2,5	3,6	1,3,5	2,4,6
72" #2	1,4	2,5	3,6	1,3,5	2,4,6

INITIAL START UP

NOTICE

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



Pre-Power On

Before starting the griddle for the first time, clean the griddle body and cooking surface.

Use a mild soap and water solution, then rinse with clear water and dry.

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 ½ hour.

After the griddle reaches 350°F for ½ hour, turn the griddle up another 50°F for another ½ hour and repeat this until the griddle is at 450°F for ½ 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.

Setting the Temperature

If different temperature settings across the same griddle are to be used, select one side of the griddle and run that at the lowest temperature. Adjoining sections should be set at progressively higher temperatures. Do not try to run end sections hot and center sections cool.

Loading the Grill

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

A solid state controller independently controls each 12-inch section. The sensor for each controller is mounted under the griddle plate in the center of each cooking section.

If product is loaded directly over the temperature sensor, that section will turn on and the element will heat the entire cooking section. If the product is loaded to the side, front or back of the temperature sensor, the controller will react to the temperature change of the entire section instead of just one product.

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

During busy periods, a systematic approach should be utilized in loading the griddle. Load the entire section from rear to front and continue cooking to the next section if necessary.

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 ensure the proper griddle temperature.

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.

**Daily Cleaning (after each meal)**

Empty the grease drawer often or whenever it is 3/4 full. Remove the grease drawer after each meal and wash the inside and outside of the drawer.

Keep the griddle surface clean. After each cooking load, scrape the griddle surface with a griddle scraper to remove any carbonized grease.

The griddle surface should be cleaned and re-seasoned. Use a griddle stone, griddle pad, or liquid cleaner. Rub with the grain of the metal, being careful not to scrape the splashguard.

Clean the exterior of the appliance with a hot water and chlorine solution to maintain a gleaming appearance.

Be sure to rinse thoroughly and coat the cooking surface with a thin film of oil to prevent rusting.

Re-season the griddle plate after each cleaning.

Weekly Cleaning

Always start with a cold griddle.

The stainless exterior can easily be cleaned using Lang Mfg. Prime Shine (72804-41) cleaner.

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

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.



9.1 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 cause, refer to the TEST section and locate the Possible Cause then refer to test to identify test procedures.

SYMPTOM	POSSIBLE CAUSE
Whole Griddle will not heat	<ul style="list-style-type: none"> • No Power to Griddle • Failed Power switch • Failed Transformer.
One Section will not heat	<ul style="list-style-type: none"> • Failed Power switch (for that section) • Failed Probe • Failed Circuit board • Failed 12-position switch • Failed contactor • Failed Element.
Product Burning	<ul style="list-style-type: none"> • Product left on griddle too long • Failed Probe • Failed Circuit board • Failed 12-position switch
Product Under cooked	<ul style="list-style-type: none"> • Product removed too soon • Failed Probe • Failed Circuit board • Failed 12-position switch

9.2 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	<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 Element	<ul style="list-style-type: none"> • Confirm that Elements are getting correct voltage and have continuity*

PARTS LIST

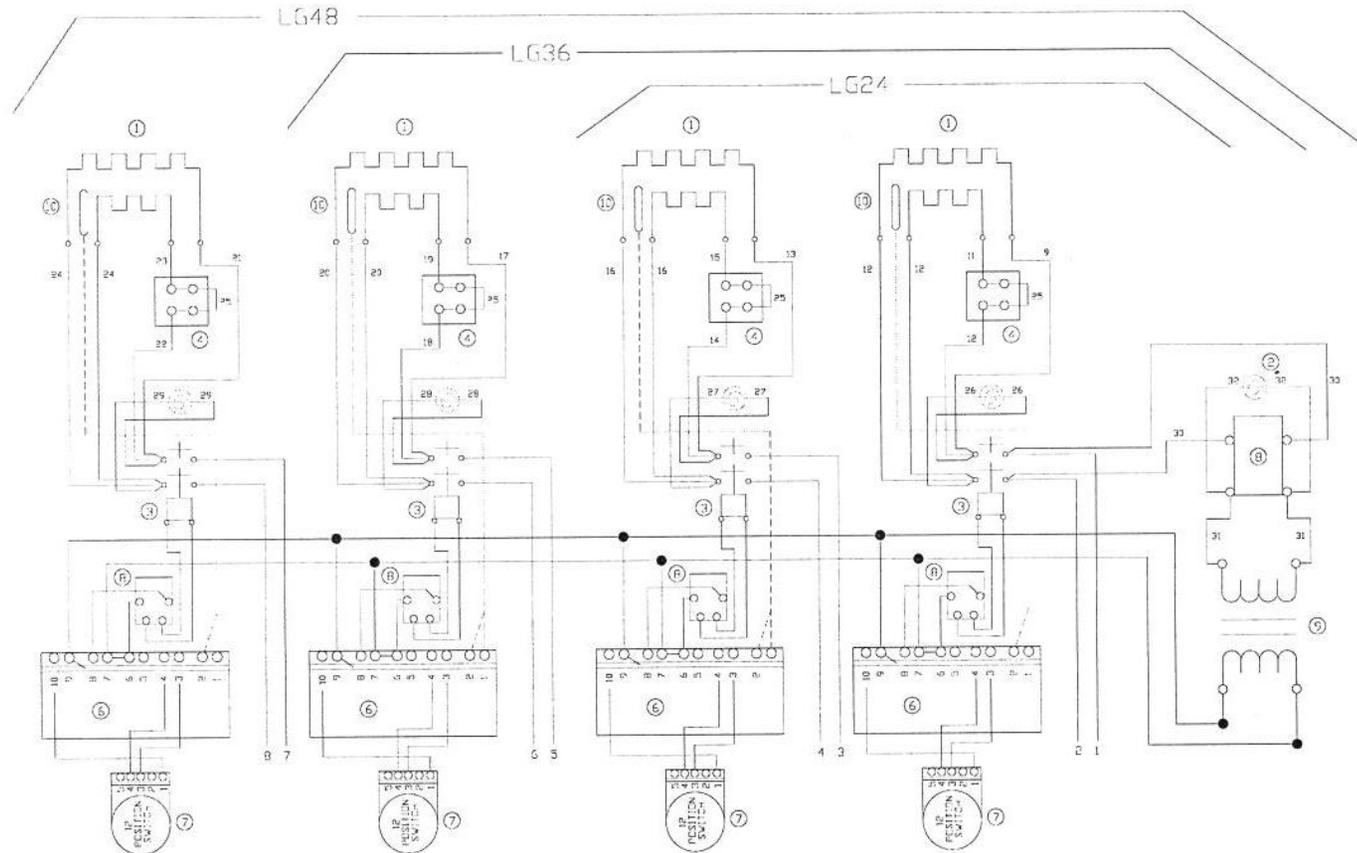
DESCRIPTION	PART NO.
Element Griddle 208/240 Volt I/S 4500/5991 Watts	11030-29
Element Griddle 208 Volt O/S 1491 Watts	11030-30
Element Griddle 480 Volt 5991 Watts	11030-31
Switch Toggle On-Off	30303-06
Switch Temperature Control 12 Position 174-450°F	30304-22
Terminal Strip 4 Pole, LG-24 & LG-60	30500-02
Terminal Strip 6 Pole, LG-36, LG-60, & LG-72	30500-03
Terminal Strip 8 Pole, LG-48	30500-05
Terminal Block 3 Pole	30500-07
Contactors 2 Pole 24 VAC	30701-04
Transformer 120-208-240/24 VAC	31400-07
Transformer 480/24 VAC	31400-15
Pilot Light 208/240V 6" Lead Black Body	31601-01
Pilot Light 480V 6" Lead Black Body	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
Grease Drawer Assembly	50302-07
Grab Bar Assembly 24"	50302-14
Grab Bar Assembly 36"	50302-15
Grab Bar Assembly 48"	50302-16
Grab Bar Assembly 60"	50302-17
Grab Bar Assembly 72"	50302-18
Griddle Plate Assembly 24"	60102-47
Griddle Plate Assembly 36"	60102-48
Griddle Plate Assembly 48"	60102-49
Griddle Plate Assembly 60"	60102-50
Griddle Plate Assembly 72"	60102-51
Panel Label	60301-29
Knob Temperature Control	70701-28
Spacer Support 1/2" Nylon	70801-07
Legs 4" Stainless Steel	72500-02

WIRING DIAGRAM

REVISION BLOCK						
REV	ECN NO.	DESCRIPTION	DR	MFC	ENG	DATE
B		REVISED & REDRAWN	SRC			10-28-96

ELEMENT HOOKUP	
208V	240V
INSTALL JUMPER	REMOVE JUMPER
④	④

- ① GRIDDLE ELEMENTS
- ② GRIDDLE PILOT AND CONTACTOR
- ③ JUMPER
- ④ TERMINAL BLOCK
- ⑤ TEMP. CONTROL BOARD
- ⑥ 12 POSITION SWITCH
- ⑦ TROUBLE SWITCH
- ⑧ TRANSFORMER
- ⑨ PROBE



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

SERVICE CONNECTIONS

MODEL	KW				
	L1-L2	L2-L3	L3-L1	L1-L3	TOTAL
24	6.0	6.0	6.0	18.0	18.0
36	6.0	6.0	6.0	18.0	18.0
48	6.0	6.0	6.0	18.0	18.0

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	2.4.5
1.4.7	2.5.6	3.6	1.3.5.7	2.4.6.8

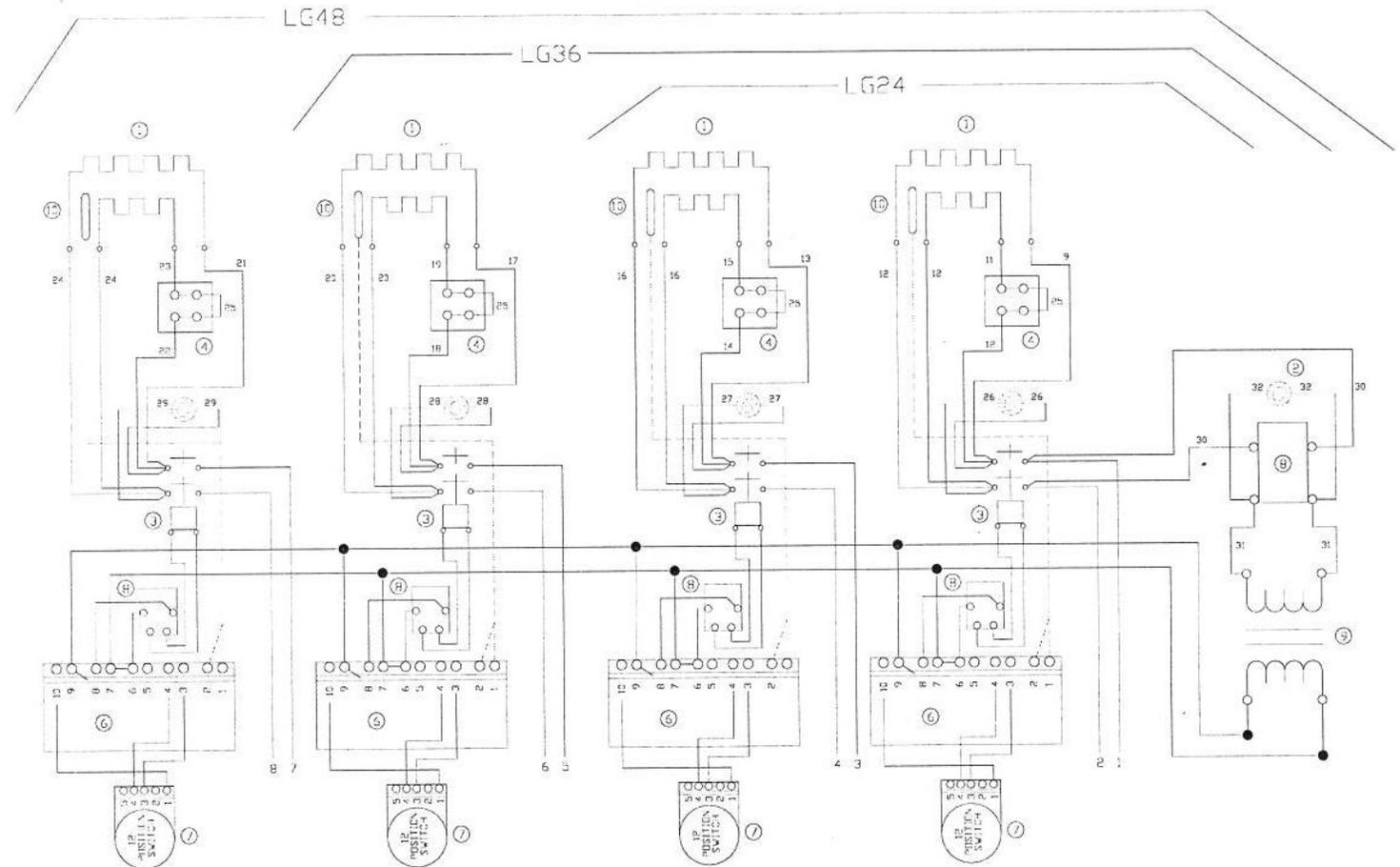


1	QTY	TEMP	PART NUMBER	DESCRIPTION / MATERIAL
				LANG MANUFACTURING
				DR: SRC DATE: 10-28-96 TITLE: LANG-GRIDDLE
				CK: FJD DATE: 10-28-96
				TO: FRANCES FRANCIS 10-28-96 1/84 X + 00 ANG 15 XX + 01 1/27 X14 L 015
				208-240VAC
				SCALE: 1" = 1"
				NEXT HOUR ASSY: SHEET 1 OF 1 DRAWING NUMBER: 6114-14 REV: B

WIRING DIAGRAM

ELEMENT HOOKUP	
200V	240V
INSTALL JUMPER	REMOVE JUMPER
(2)	(2)

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



NOTE: LG60 & LG72 HAVE TWO POWER SUPPLY CONNECTIONS

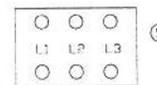
LG60: CONN # 1 USE LG36
CONN # 2 USE LG24

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

SERVICE CONNECTIONS

MODEL	K.W.			
	L1-L2	L2-L3	L3-L1	TOTAL
24	6.0	6.0	6.0	18.0
36	6.0	6.0	6.0	18.0
48	12.0	6.0	6.0	24.0

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



SECTION 4

LGD SERIES GRIDDLES

TABLE OF CONTENTS

<u>CHAPTER</u>	<u>PAGE</u>
1. TABLE OF CONTENTS	4-3
2. READ FIRST	4-4
3. EQUIPMENT DESCRIPTION	4-8
4. UNPACKING	4-8
5. INSTALLATION	4-9
6. INITIAL START-UP	4-15
7. OPERATION	4-16
8. CLEANING & MAINTENANCE PROCEDURES	4-17
9. TROUBLESHOOTING	4-18
10. PARTS LISTS	4-19
11. WIRING DIAGRAMS	4-21

IMPORTANT**READ FIRST****IMPORTANT****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.

**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. 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 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.

**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.

**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.

**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.



IMPORTANT

READ FIRST

IMPORTANT

NOTICE

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



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.





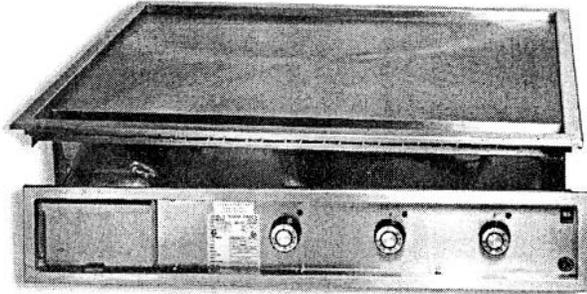
Item No. _____

Project _____

Quantity _____

Electric, Drop-In Model Griddles

Model: LGD-[24,36,48,60,72]



Model LGD-36 shown

SIZING AND PERFORMANCE GUIDE

Model/Width	Surface Area	Controls	kW Input*
<input type="checkbox"/> LG-24"	552 sq. in.	2	12-kW
<input type="checkbox"/> LG-36"	828 sq. in.	3	18-kW
<input type="checkbox"/> LG-48"	1104 sq. in.	4	24-kW
<input type="checkbox"/> LG-60"	1380 sq. in.	5	30-kW**
<input type="checkbox"/> LG-72"	1656 sq. in.	6	36-kW**

* 6-kW per foot of griddle

** Total power input, two power connections required

SHORT/BID SPECIFICATION

Griddle shall be a LANG Manufacturing Model LGD-__ [specify width: 24", 36", 48", 60" or 72"] with: Solid State Controls for each 12" of griddle width; 6-kW per foot of incoloy sheathed heating elements, pressure clamped to plate bottom; 1" thick polished cooking surface; flanged griddle surface module and recessed control panel module for easy installation in existing or new cabinet or work center; and all the features listed and the options checked:

STANDARD PRODUCT WARRANTY

One year, parts & labor

CONSTRUCTION FEATURES

- 1" thick precision machined, polished steel cooking surface
- Full parameter stainless steel top mounting flange
- 8 quart capacity grease drawer, with removable fully enclosed sleeve
- Separate, insulated stainless steel griddle and control modules

PERFORMANCE FEATURES

- Thick griddle plate reduces hot & cold spots and retains heat
- Highly polished, recessed surface and continuously welded mounting flange speeds cleanup
- Heating elements incoloy sheathed, for long life
- Elements are pressure clamped to bottom of griddle plate for more even heating
- Recessed control panel protects controls
- Accurate temperature control between 175° and 450°F

CONTROL PACKAGE

- Solid State Controls react to a 2°F temperature change
- Independent temperature control every 12"
- Power-to-element pilot lights for each control
- 175° to 450°F temperature control, in 25° increments



Sheet No. LSP-GD3 (rev. 10/03)

Electric, Drop-In Model Griddles

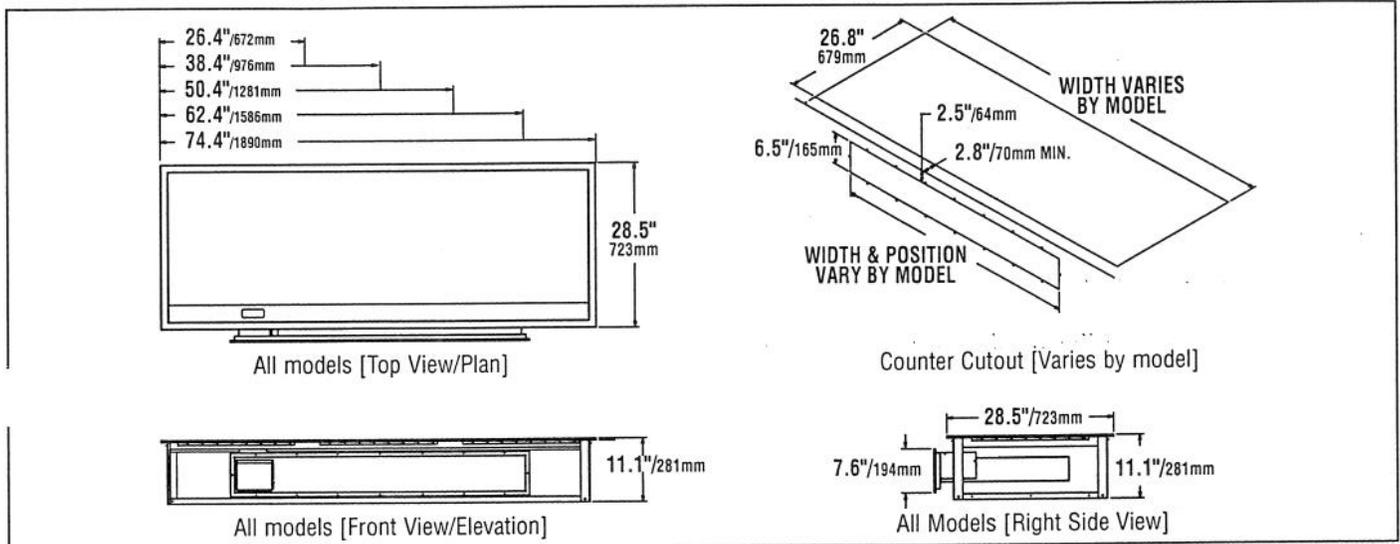
Model: LGD-[24,36,48,60,72]

INSTALLATION REQUIREMENTS

- (E) 208V, 3-phase, field convertible to 240V or 1-phase; or optional 408V, 3-phase power connection
- (E1) (E2) Two electric connections required for 60" and 72" units
- Installation in approved cabinet or fabricated work center. [Provided by others] See below for rough openings required for griddle and control panel module.
- Installation under approved vent hood required.

OPTIONS & ACCESSORIES

- 408V, 3-Phase operating voltage



Model	Top-Rough Opening		Controls-Opening		Clearance from combustible surface	Weight		Freight Class
	Width	Depth	Height	Width		Actual	Shipping	
LGD-24	24.8"	26.8"	6.5"	22.8"	Sides: 2" Back : 2"	N/A	N/A	85
LGD-36	36.8"	26.8"	6.5"	30.8"		263 lbs. 120 kg	410 lbs. 186 kg	85
LGD-48	48.8"	26.8"	6.5"	37.3"		368 lbs. 167 kg	525 lbs. 239 kg	85
LGD-60	60.8"	26.8"	6.5"	43.8"		589 lbs. 268 kg	665 lbs. 302 kg	85
LGD-72	72.8"	26.8"	6.5"	50.3"		N/A	N/A	85

Model	Total kW	Maximum AMP Per Line				
		208V/3-Phase	240V/3-Phase	480V/3-Phase	208V/1-Phase	240V/1-Phase
LGD-24	12.0	50.0	43.3	21.7	57.7	50.0
LGD-36	18.0	50.0	43.3	21.7	86.5	75.0
LGD-48	24.0	75.0	65.0	32.5	115.2	100.0
LGD-60	30.0 [12/18]*	50.0	43.3	21.7	86.5	75.0
LGD-72	36.0 [18/18]*	50.0	43.3	21.7	86.5	75.0

* Load split for the two power connections required.

AD SYMBOLS & PRICING



AutoQuotes

Due to continuous improvements, specifications subject to change without notice.



Sheet No. LSP-GD3 (rev. 10/03)

LANG MANUFACTURING COMPANY • 6500 Merrill Creek Parkway, Everett, WA 98203
TOLL FREE: 800.882.6368 • FAX: 425.349.2733 • www.langworld.com

EQUIPMENT DESCRIPTION

Lang Model: LGD 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 manual thermostat 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

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. 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 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.



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 4½ inches away from the griddle support surface as shown on next page.

Installing Griddle into Cabinet

Turn the griddle over, taking care not to kink the thermostat capillary tubes.

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.

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.

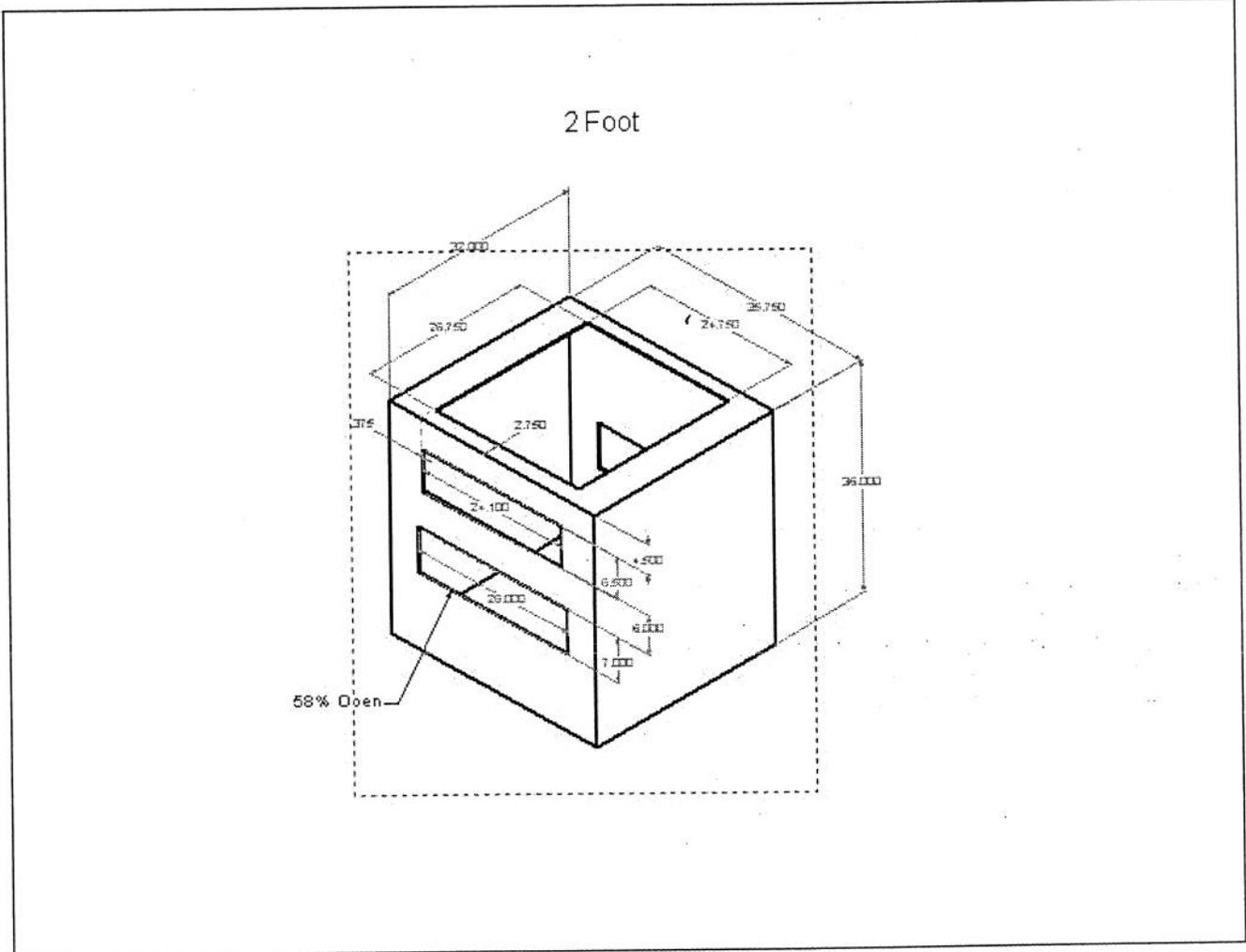
The griddle can now be connected to power.

CAUTION

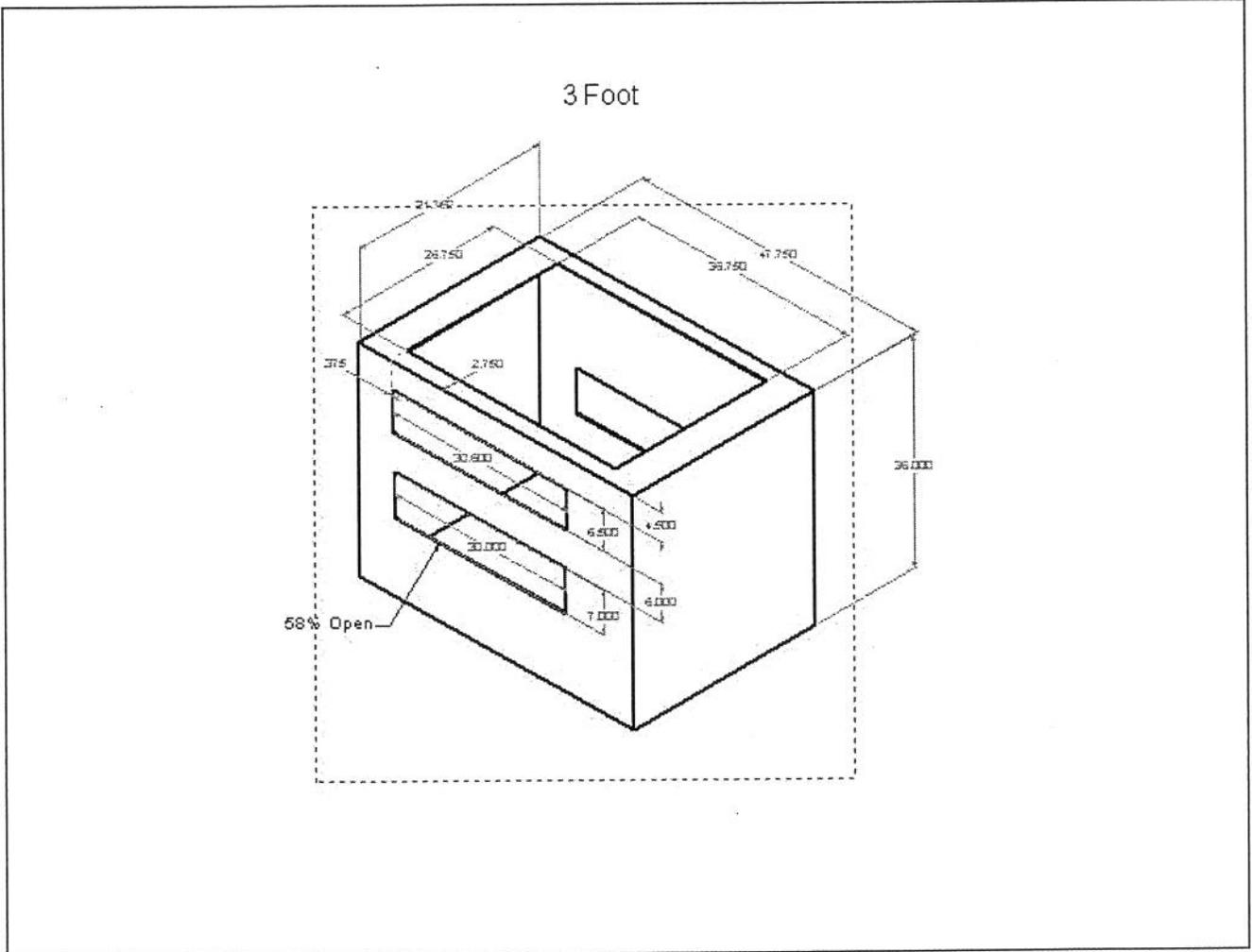
BE SURE THE POWER SUPPLY VOLTAGE MATCHES THE VOLTAGE SPECIFIED ON THE NAMEPLATE LOCATED ON THE TOP OF THE CONTROL BOX



LGD24 Cabinet Cut-out

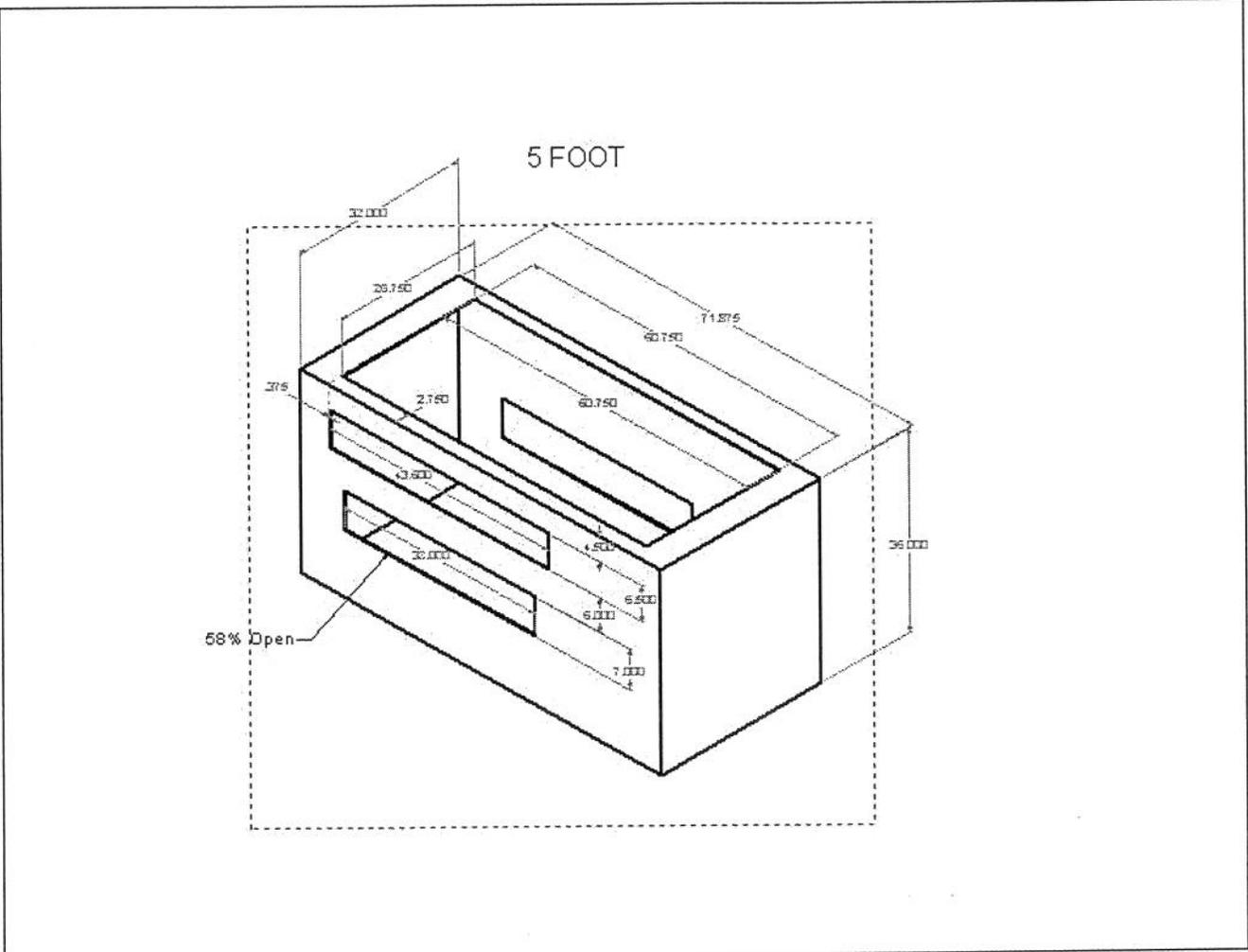


LGD36 Cabinet Cut-out

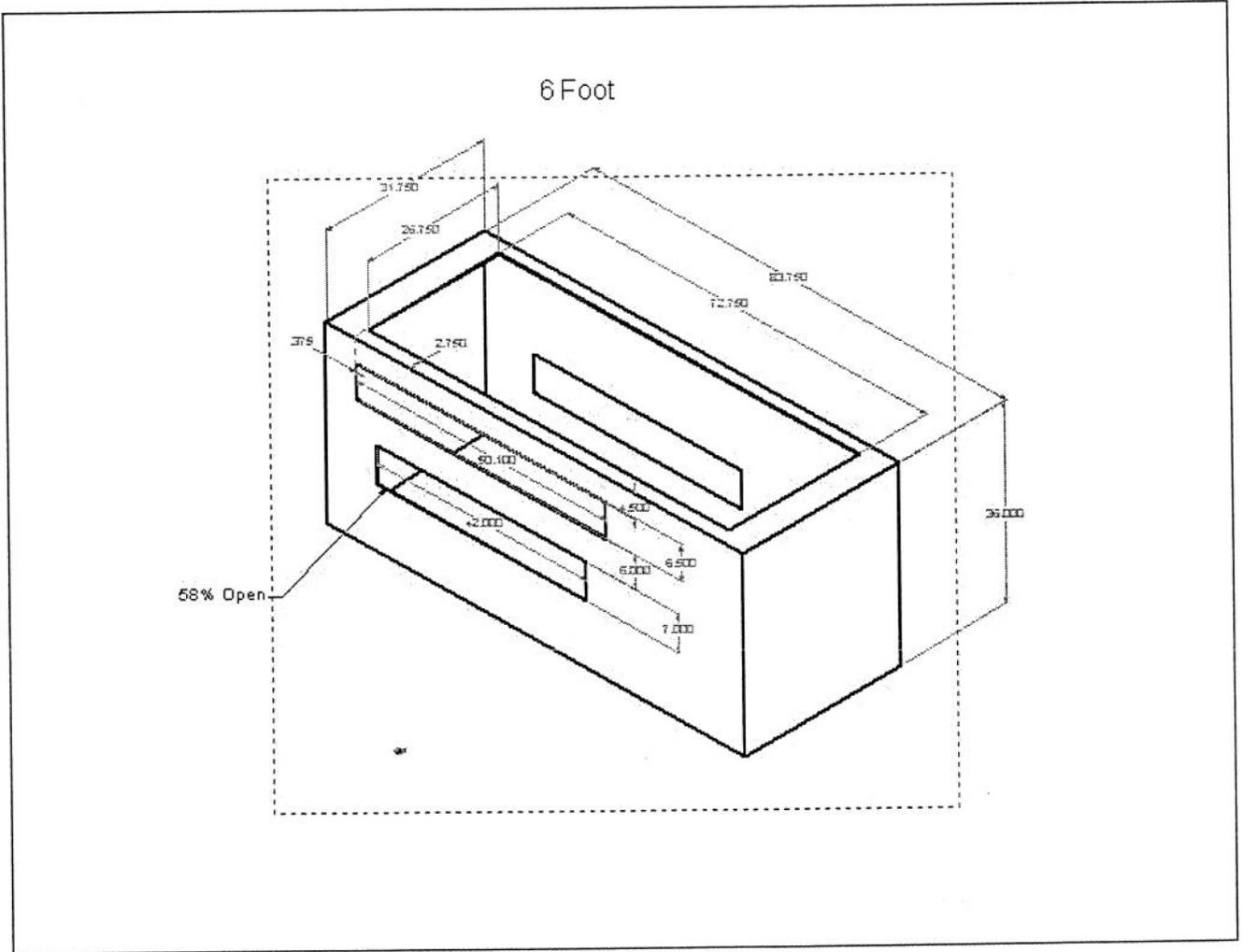


INSTALLATION CONT'D

LGD60 Cabinet Cut-out



LGD72 Cabinet Cut-out



INITIAL START UP

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 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 ½ hour.

After the griddle reaches 350°F for ½ hour, turn the griddle up another 50°F for another ½ hour and repeat this until the griddle is at 450°F for ½ 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 temperature thermostat. The thermostat sensor is mounted in the center of each cooking section under the griddle plate.

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

During slow periods with minimal loads, do not load directly over the thermostat 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.

CALIBRATION

Calibration Check

Place thermometer or thermocouple in the center of griddle directly over the sensor.

Set thermostat to 350°.

Allow the griddle to Preheat for at least half an hour.

Note cycle "ON" temperatures and cycle "OFF" temperatures for 3 cycles. (Red indicator light indicates when the griddle is calling for heat)

After 3 cycles average the temperature. (Add all six temperatures and divide by 6).

The temp should be +/- 10°F

Calibration Adjustment

A 1/16" flat blade screwdriver with a 2" shaft is required to make adjustments on the thermostat.

Maintain the griddle temperature at 350°.

Without turning the thermostat, remove the knob.

Locate the adjustment screw at the base of the shaft and insert the screwdriver.

Grasp the shaft and turn the screwdriver. Counter clockwise to increase and clockwise to decrease (1/8 of a turn will move the temperature 5-7 ° in either direction).

Reinstall the thermostat knob and recheck the griddle temperature.

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
Griddle will not heat	<ul style="list-style-type: none"> • No power to Unit • Defective thermostat • Defective element
Product is under cooked	<ul style="list-style-type: none"> • No power to griddle • Thermostat out of calibration • Defective thermostat
Product is burning	<ul style="list-style-type: none"> • Thermostat out of calibration • Defective thermostat

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.



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	<ul style="list-style-type: none"> • No test available, operational condition
Failed thermostat	<ul style="list-style-type: none"> • Verify calibration • Replace thermostat*
Failed element	<ul style="list-style-type: none"> • Remove the wires and check for continuity across the element * • Replace element*

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.

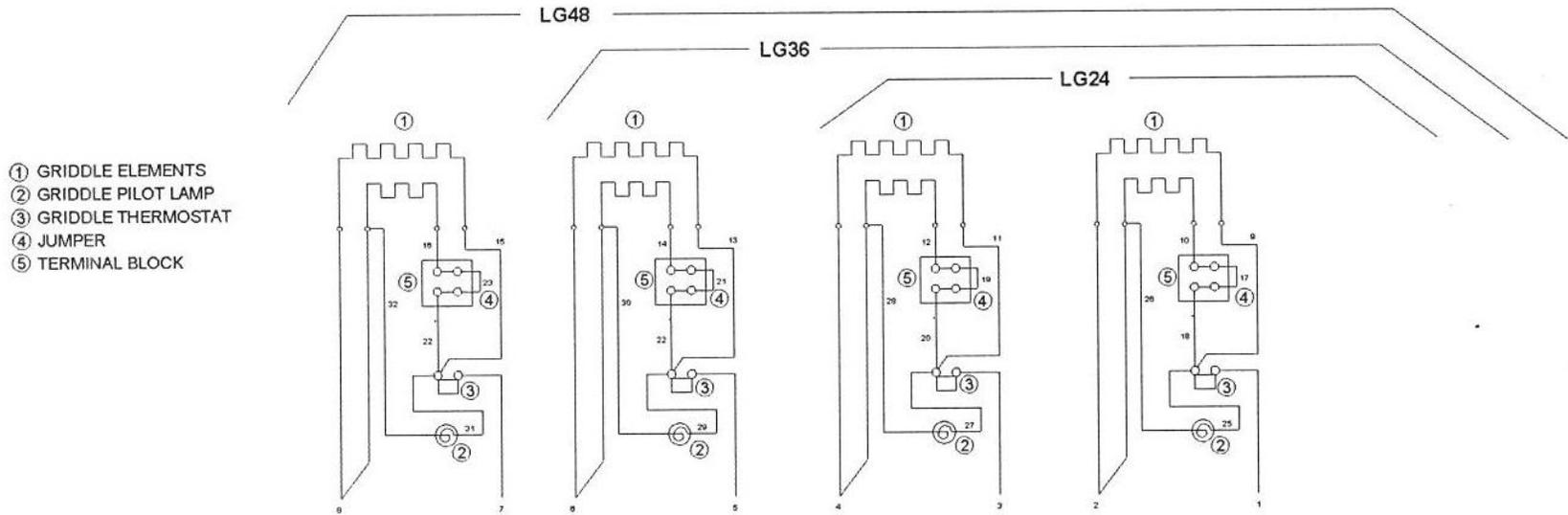


PARTS LIST

DESCRIPTION	PART NO.
Griddle Element 208 / 240-Volt O/S 4500 Watts / 6000 Watts	11030-29
Griddle Element 208-Volt I/S 1491 Watts	11030-30
Griddle Element 480-Volt 5991 Watts	11030-31
Thermostat 450° F	30402-08
Thermostat 550° F	30402-07
Knob Thermostat 450°F	70701-19
Knob Thermostat 550°F	70701-15
Indicator Lamp 240-Volt	31601-01
Indicator Lamp 480-Volt	31601-02
Terminal Strip, 4-Pole	30500-02
Terminal Strip, 6-Pole	30500-03
Terminal Strip, 8-Pole	30500-05
Terminal Block 3-Pole	30500-09
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

WIRING DIAGRAM 208/240- VOLT

Revision Block		DR.	MFG.	ENG.	DATE
REV	ECN NO.	DESCRIPTION			
E		REVISED AND REDRAWN	CDS		10/15/2002
F		ADDED 220VAC FOR LGCL	DLG		12/13/2002



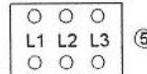
- ① GRIDDLE ELEMENTS
- ② GRIDDLE PILOT LAMP
- ③ GRIDDLE THERMOSTAT
- ④ JUMPER
- ⑤ TERMINAL BLOCK

NOTES:

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



ELEMENT HOOKUP	
208-220 V	240V
INSTALL JUMPER (ITEM 4)	REMOVE JUMPER (ITEM 4)

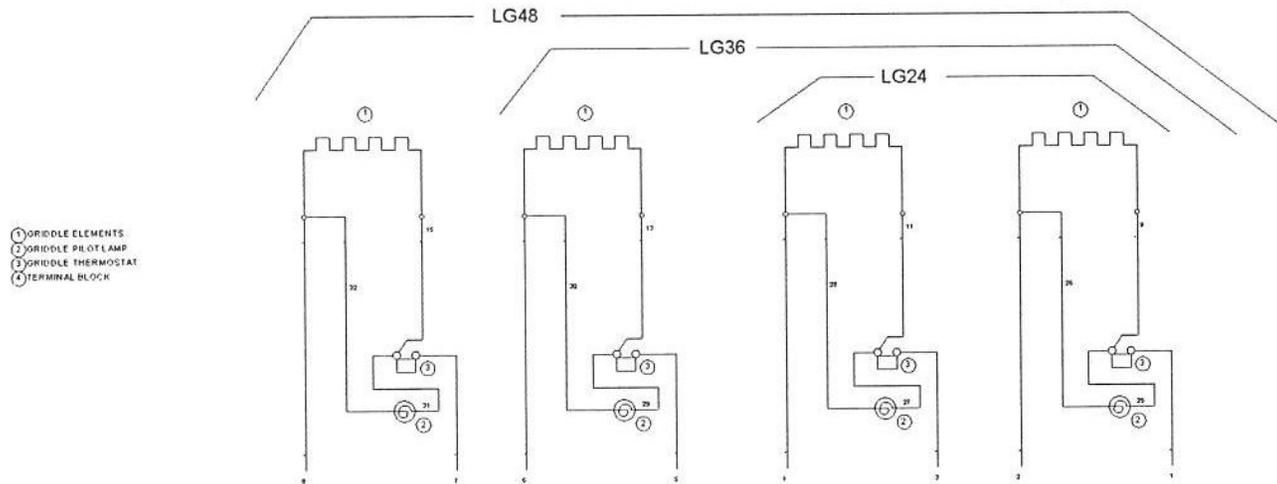
MODEL	VOLT	Kw				AMP TOTALS			AMPS 1 PHASE	THREE PHASE			SINGLE PHASE	
		L1-L2	L2-L3	L1-L3	TOTAL	L1	L2	L3		L1	L2	L3	L1	L2
		LG24	208	6.0		6.0	12.0	50.0		28.9	28.9	57.7	1,4	2
	220	6.7		6.7	13.4	52.9	30.5	30.5	60.9					
	240	6.0		6.0	12.0	43.3	25.0	25.0	50					
LG36	208	6.0	6.0	6.0	18.0	50.0	50.0	50.0	86.5					
	220	6.7	6.7	6.7	20.1	52.9	52.9	52.9	91.4	1,4	2,5	3,6	1,3,5	2,4,6
	240	6.0	6.0	6.0	18.0	43.3	43.3	43.3	75					
LG48	208	12.0	6.0	6.0	24.0	76.0	76.3	50.0	115.4					
	220	13.4	6.7	6.7	26.8	80.6	80.6	52.9	121.8	1,4,7	2,5,8	3,6	1,3,5,7	2,4,6,8
	240	12.0	6.0	6.0	24.0	66.1	66.1	43.3	100					



DRAWN BY: DLG	DATE: 12-13-02	REV BY:	REV DATE:	CHE BY:	CHE DATE:
DESCRIPTION: LANG GRIDDLE 208-240/220VAC					
CAD FILE FROM ACAD		DWG. NO: 61114-01		SHEET 1 OF 1 REV: F	

WIRING DIAGRAM 480 VOLT

Revision Block						
REV	ECN NO.	DESCRIPTION	DR.	MFG.	ENG.	DATE
C		REVISED AND REDRAWN	CDS			10/15/2002



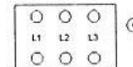
NOTE: LG60 & LG72 HAVE TWO POWER SUPPLY CONNECTIONS

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

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

SERVICE CONNECTIONS			
MODEL	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

* NUMBER



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

Lang
Manufacturing
Company

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES.

TOLERANCES ARE:
DECIMALS ANGLES
X = ±.05 ±.5°
XX = ±.03
XXX = ±.015

MATERIAL
PART # :

MATERIAL
TYPE :

BLANK
DIMS. :

X

BLANK
AREA :

SQ
in

DWN. BY: CDS / DWN. DATE: 10/15/02 / REV. BY: / REV. DATE: / CHK. BY: / CHK. DATE: / CAD FILE: / SHEET 1 OF 1

DESCRIPTION: LANG GRIDDLE 480VAC ACCUTEMP / DWG. NO: 61114-02 / REV: C

SECTION 5

LG-MD1 SERIES GRIDDLES



Lang



MarineSeries

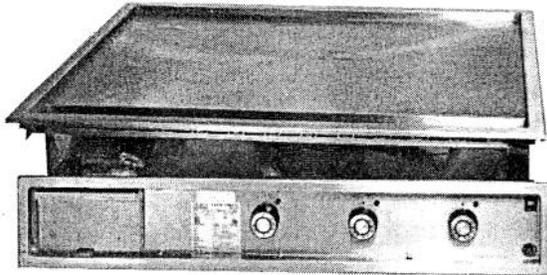
Item No. _____

Project _____

Quantity _____

Electric, Drop-In Model Griddles

Model: LG[36,48,72]MDI



Model LG36MDI shown

SIZING AND PERFORMANCE GUIDE

Model/Width	Surface Area	Controls	kW Input*
<input type="checkbox"/> LG36MDI	828 sq. in.	3	18-kW
<input type="checkbox"/> LG48MDI	1104 sq. in.	4	24-kW
<input type="checkbox"/> LG72MDI	1656 sq. in.	6	18/18-kW**

* 6-kW per foot of griddle

** Power input, two power connections required

MARINE SHORT/BID SPECIFICATION

Griddle shall be a LANG Manufacturing Marine Model LG__ [Specify width: 36", 48" or 72"]MDI, with: thermostat controls for each 12" of griddle width; 6-kW per foot of Incoloy sheathed heating elements, pressure clamped to plate bottom; 3/4" thick polished cooking surface; flanged flush-mount griddle surface module and recessed control panel module for easy installation in countertop.

MARINE PRODUCT WARRANTY

One year, parts & labor (Labor in U.S. only)

MARINE CONSTRUCTION FEATURES

- 3/4" thick precision machined, polished steel cooking surface
- Full parameter stainless steel top mounting flange
- Full front 3-1/2" wide x 1" deep stainless steel grease trough
- 8 quart capacity grease drawer, with marine latch & fully enclosed, easily removable sleeve [Two on 72" model]
- Fully enclosed control compartment
- Separate, insulated stainless steel griddle and control modules

PERFORMANCE FEATURES

- Thick griddle plate reduces hot & cold spots and retains heat
- Highly polished, recessed surface and continuously welded mounting flange speeds cleanup
- Heating elements incoloy sheathed, for long life
- Elements are pressure clamped to bottom of griddle plate for more even heating
- Recessed control panel protects control knobs
- Accurate temperature control between 175 and 450°F

CONTROLS

- Independent temperature control every 12"
- Power-to-element pilot lights for each control



Sheet No. LMSP-G1 (rev. 10/04)

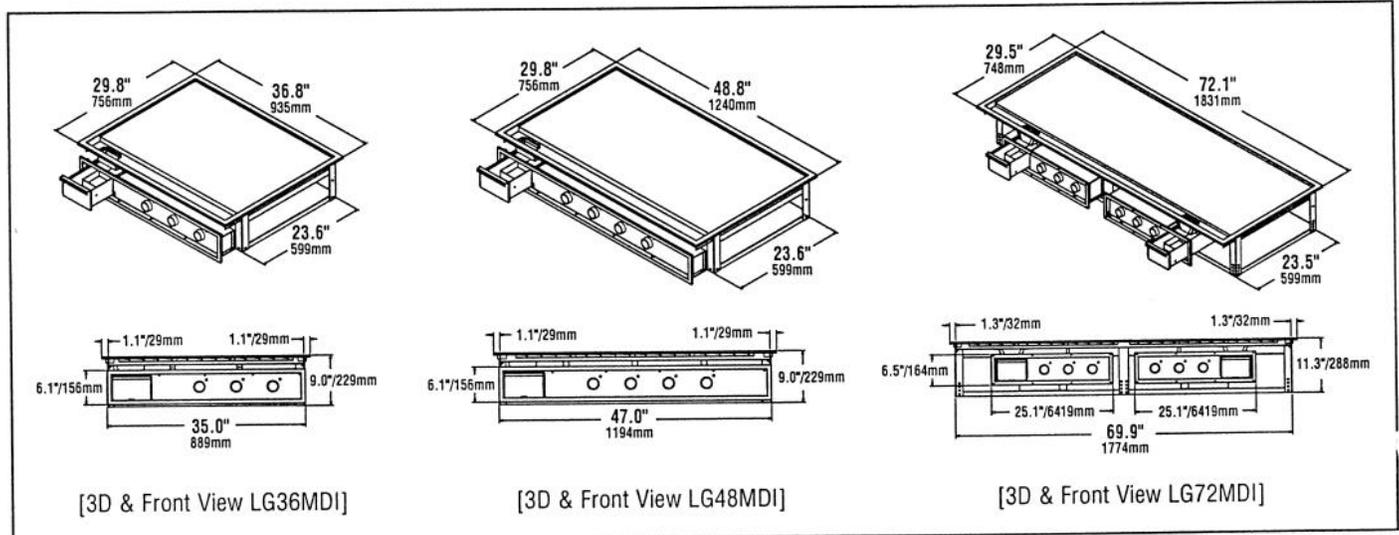


Electric, Drop-In Model Griddles

Model: LG[36,48,72]MDI

MARINE INSTALLATION REQUIREMENTS

- ⓔ 440V or 480V, 3-phase power connection
- ⓔⓔ Two electric connections required for 72" unit
- Installation in approved cabinet or galley work center. [Provided by others]
- See below for rough openings required for griddle and control panel module.
- Installation under approved vent hood required.



Model	Top-Rough Opening		Controls-Opening		Clearance from combustible surface	Weight		Freight Class
	Width	Depth	Height	Width		Actual	Shipping	
LG36MDI	36.8"	29.8"	6.1"	35.0"	Sides: 2" Back: 2"	295 lbs.	345 lbs.	85
	935mm	756mm	156mm	889mm		120 kg	186 kg	
LG48MDI	48.8"	29.8"	6.1"	47.0"		400 lbs.	450 lbs.	85
	1240mm	756mm	156mm	1194mm		167 kg	239 kg	
	72.1"	29.5"	6.5"*	25.2"*		650 lb	700 lb	
LG72MDI	1831mm	748mm	164mm	641mm		295 kg	318 kg	85

* Two openings required in the Controls-Opening table for the LG72MDI model.

Model	Volts AC - Hz	Total kW	Amps - Three Phase	Amps - Single Phase
LG36MDI	208 - 50/60	18.0	50.0	86.5
	240 - 50/60	18.0	43.3	75.0
	440 - 50/60	18.0	23.6	N/A
	480 - 50/60	18.0	21.7	N/A
LG48MDI	208 - 50/60	24.0	75.0	115.2
	240 - 50/60	24.0	65.0	100.0
	440 - 50/60	24.0	36.8	N/A
	480 - 50/60	24.0	32.5	N/A
LG72MDI	208 - 50/60	36.0 [18/18]**	50.0/50.0	86.5/86.5
	240 - 50/60	36.0 [18/18]**	43.3/43.3	75.0/75.0
	440 - 50/60	36.0 [18/18]**	23.6/23.6	N/A
	480 - 50/60	36.0 [18/18]**	21.7/21.7	N/A

** Two connections.

Due to continuous improvements, specifications subject to change without notice.



Sheet No. LMSP-G1 (rev. 10/04)

LANG MANUFACTURING COMPANY • 6500 Merrill Creek Parkway, Everett, WA 98203
 TOLL FREE: 800.882.6368 • FAX: 425.349.2733 • www.langworld.com

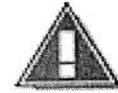
TABLE OF CONTENTS

<u>CHAPTER</u>	<u>PAGE</u>
1. TABLE OF CONTENTS	5-1
2. READ FIRST	5-2
4. SPECIFICATIONS	5-4
5. EQUIPMENT DESCRIPTION	5-5
6. INSTALLATION	5-7
7. OPERATION.....	5-15
8. MAINTENANCE & TROUBLESHOOTING PROCEDURES	5-17
9. TROUBLESHOOTING.....	5-20
10. WIRING DIAGRAMS	5-21
11. PARTS LIST	5-25

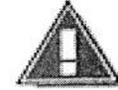
CAUTION: THE GRIDDLE IS EXTREMELY HEAVY. FOR SAFE HANDLING, INSTALLER SHOULD OBTAIN HELP AS NEEDED, OR EMPLOY APPROPRIATE MATERIALS HANDLING EQUIPMENT (SUCH AS A FORKLIFT, DOLLY, OR PALLET JACK) TO REMOVE THE UNIT FROM THE SKID AND MOVE IT TO THE PLACE OF INSTALLATION.



CAUTION: ANY STAND, COUNTER OR OTHER DEVICE ON WHICH GRIDDLE WILL BE LOCATED MUST BE DESIGNED TO SUPPORT THE WEIGHT OF THE GRIDDLE(S).



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. 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 next to the grease drawer, behind access panel. 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.



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 griddle surface, and a faint odor from the smoke. This is normal for a new griddle 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.



IMPORTANT

READ FIRST

IMPORTANT

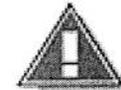
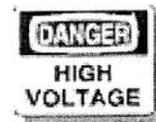
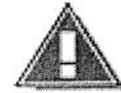
WARNING: KEEP WATER AND SOLUTIONS OUT OF CONTROLS. NEVER SPRAY OR HOSE CONTROL CONSOLE, ELECTRICAL CONNECTIONS, ETC.

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: 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.



LANG MANUFACTURING COMPANY
MANUAL FOR MODEL ECO
ELECTRIC CONVECTION OVENS

ISSUE DATE FEBRUARY 1999

LANG MANUFACTURING COMPANY
6500 MERRILL CREEK PARKWAY
EVERETT, WA 98203

ELECTRIC GRIDDLES PER: MIL-G-2338L

<u>MIL SPEC</u>	<u>LANG MODEL NUMBER</u>
TYPE I, SIZE 2*	LG-36M
TYPE I, SIZE 3*	LG-72M
TYPE I, SIZE 5*	LG-24M
TYPE I, SIZE 6*	LG-48M
TYPE II- Use the same model number as above Then add for:	
	STYLE 1- with Stand
	STYLE 2- with Castered Stand
	STYLE 3- with Bolt Down Stand
TYPE III, SIZE 2*	LGMDI36
TYPE III, SIZE 3*	LGMDI72
TYPE III, SIZE 6*	LGMDI48

* N.S.A. for "Naval Shipboard Application". All components will fit through a 26" X 66" watertight door.

EQUIPMENT DESCRIPTION

INTRODUCTION

This manual contains the necessary information to install, operate, maintain, and service the Lang self-heating electric griddles.

Replacement parts should be genuine Lang parts. Failure to use genuine Lang replacement parts may result in malfunction of the appliance or possible injury to the contractor or service technician.

PURPOSE AND FUNCTION

Electric griddles provide heated surface constantly regulated at a thermostatically set temperature. They are designed to cook a wide variety of food products including, but not limited to, eggs, hamburgers, fish, chicken and pancakes.

CAPABILITIES

These griddles are capable of cooking all types of products requiring contact with a heated surface.

ENVIRONMENTAL REQUIREMENTS

The following minimum spacing from combustible surfaces must be maintained:

Sides – 2 inches, Back – 2 inches

ITEMS FURNISHED (Listed by Type and Style)

Type I Griddle

Size 2, 5, 6

- 1 ea. Griddle
- 4 ea. Legs
- 2 ea. Manuals, Technical

Type I Griddle

Size 3

- 1 ea. Griddle
- 8 ea. Legs
- 2 ea. Manuals, Technical

Type II Griddle

Style 1

- 1 ea. Griddle
- 1 ea. Stand
- 1 ea. Stand Hardware
- 2 ea. Manuals, Technical

Type II Griddle

Style 2

- 1 ea. Griddle
- 1 ea. Stand
- 1 ea. Stand Hardware
- 2 ea. Swivel Casters
- 2 ea. Rigid Casters
- 2 ea. Manuals, Technical

EQUIPMENT DESCRIPTION CONT'D

Type II Griddle

Style 3

- 1 ea. Griddle
- 1 ea. Bolt Down Stand
- 1 ea. Stand Hardware
- 2 ea. Manuals, Technical

Type III Griddle

Size 1 & 6

- 1 ea. Griddle
- 1 ea. Griddle Control Panel
- 2 ea. Manuals, Technical

Type III Griddle

Size 3

- 1 ea. Griddle
- 2 ea. Griddle Control Panel
- 2 ea. Manuals, Technical

ITEMS REQUIRED

An adequate supply of wire suitable for the loads and application specified on the data sheet must be provided. The data sheet is on Page 4 of this manual.

TOOLS AND TEST EQUIPMENT REQUIRED

For Installation:

- 1 set – Open End Wrenches
- 1 ea. – Flat Blade Screwdriver
- 1 ea. – Phillips Screwdriver
- 1 ea. – Wire Cutter/Stripper
- 1 ea. – AMP Probe
- 1 ea. – Voltmeter

For Service: All of the above plus –

- 1 ea. – Needle Nose Pliers
- 1 ea. – Crimping Pliers
- 1 ea. – Allen Wrench Set
- 1 ea. – Temperature Meter
- 1 ea. – Very Small Flat Blade Screwdriver

CONTROLS

A mechanical snap action thermostat (100°F-450°F) controls each 12" section of the griddle.

A red indicator lamp indicates that the griddle is heating.

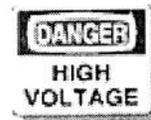
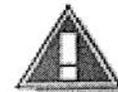
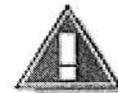
INSTALLATION

- 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 OVEN(S).
- 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. 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 next to the grease drawer, behind access panel. 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.
- 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.



INSPECTION AND INSTALLATION

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

Move the crate(s) containing the oven(s) as close to the place of installation as possible before removing the protective crating. Uncrate the oven(s) and move them as close as practical to the final installation site.

INSTALLATION CONT'D

TYPE I

Screw legs into the 3/8-16 weld nuts provided on the underside of the griddle.

Place the griddle into its intended location.

A 1 1/4-inch conduit knockout through the back and the bottom of the griddle body is located at the rear of the griddle. A 3-pole terminal block is provided for service connections and can be accessed through a removable panel on the back of the griddle. Use a supply wire suitable for at least 90 degree centigrade.

Sizes 2, 5, and 6 have one electrical connection and size 3 has two electrical connections.

TYPE II

Construct stand and place into its intended location.

For bolt down legs see illustration below for dimensions.

Carefully place griddle onto its stand.

Electric connection can be made at the rear of the griddle.

Sizes 2, 5, and 6 have one electrical connection and size 3 has two electrical connections.

TYPE III

Carefully cut the countertop and the control panel cutouts to the clearance dimensions shown on the cutout illustrations.

The griddle will have a control box and a griddle portion. Disconnect as necessary.

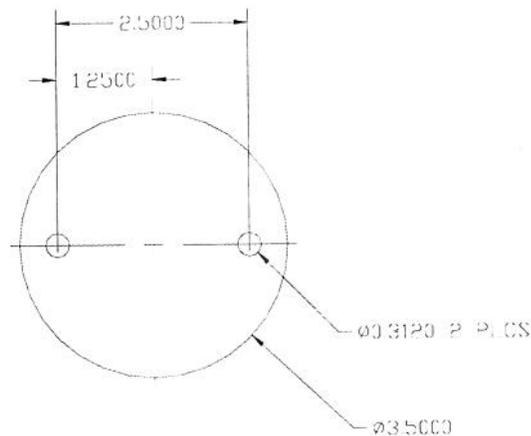
Block the griddle over the hole in the top of the counter and put the gasket in place under the flange that will support the griddle.

Position the control boxes close to there installed position. Attach the thermostat capillary tubes to the griddle.

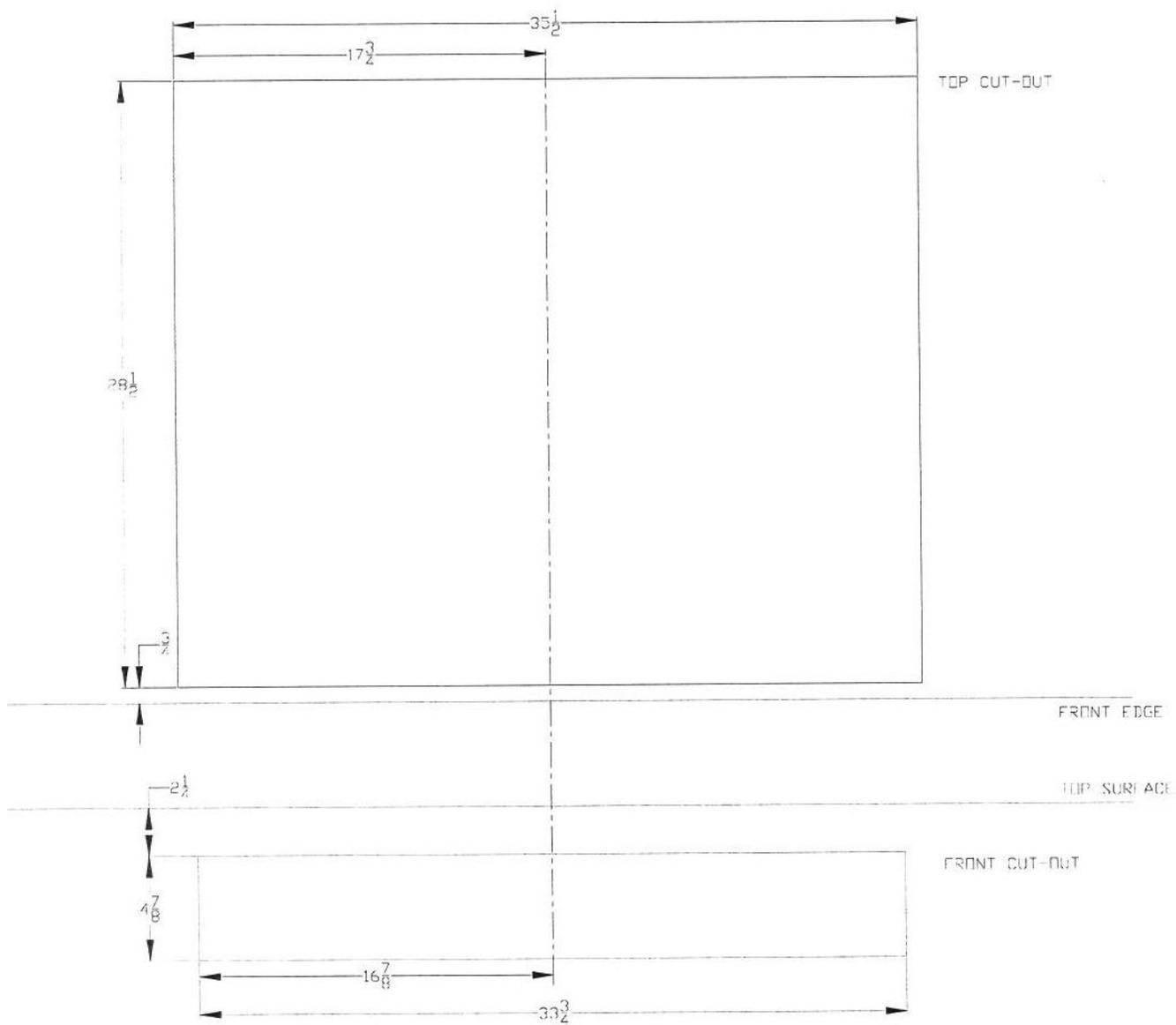
Drop the griddle into place and twist the hold-downs around the edge of the griddle that is now below the counter to lock the griddle in place.

A separate box with a terminal block is provided for power connections.

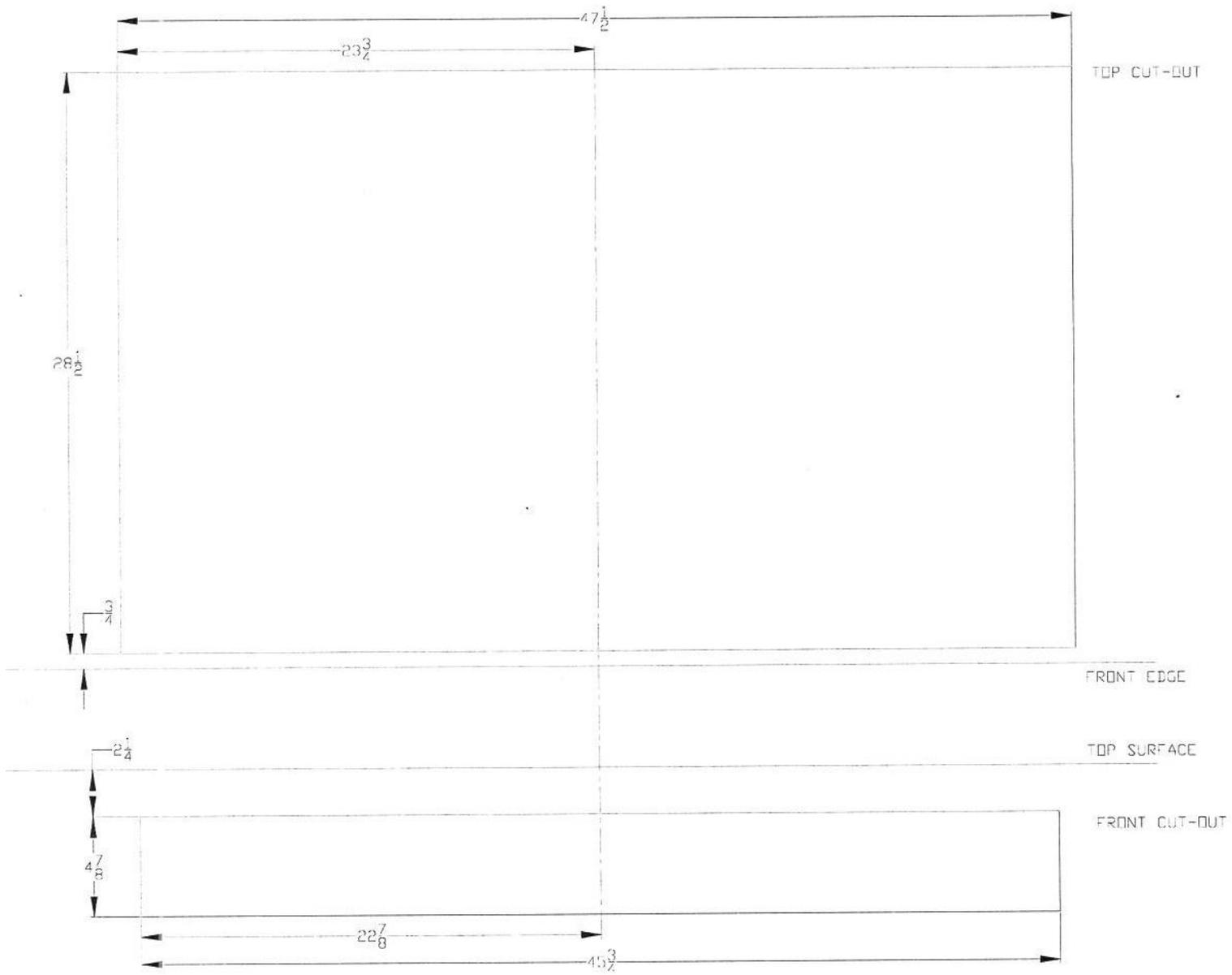
The griddle may now be connected to power



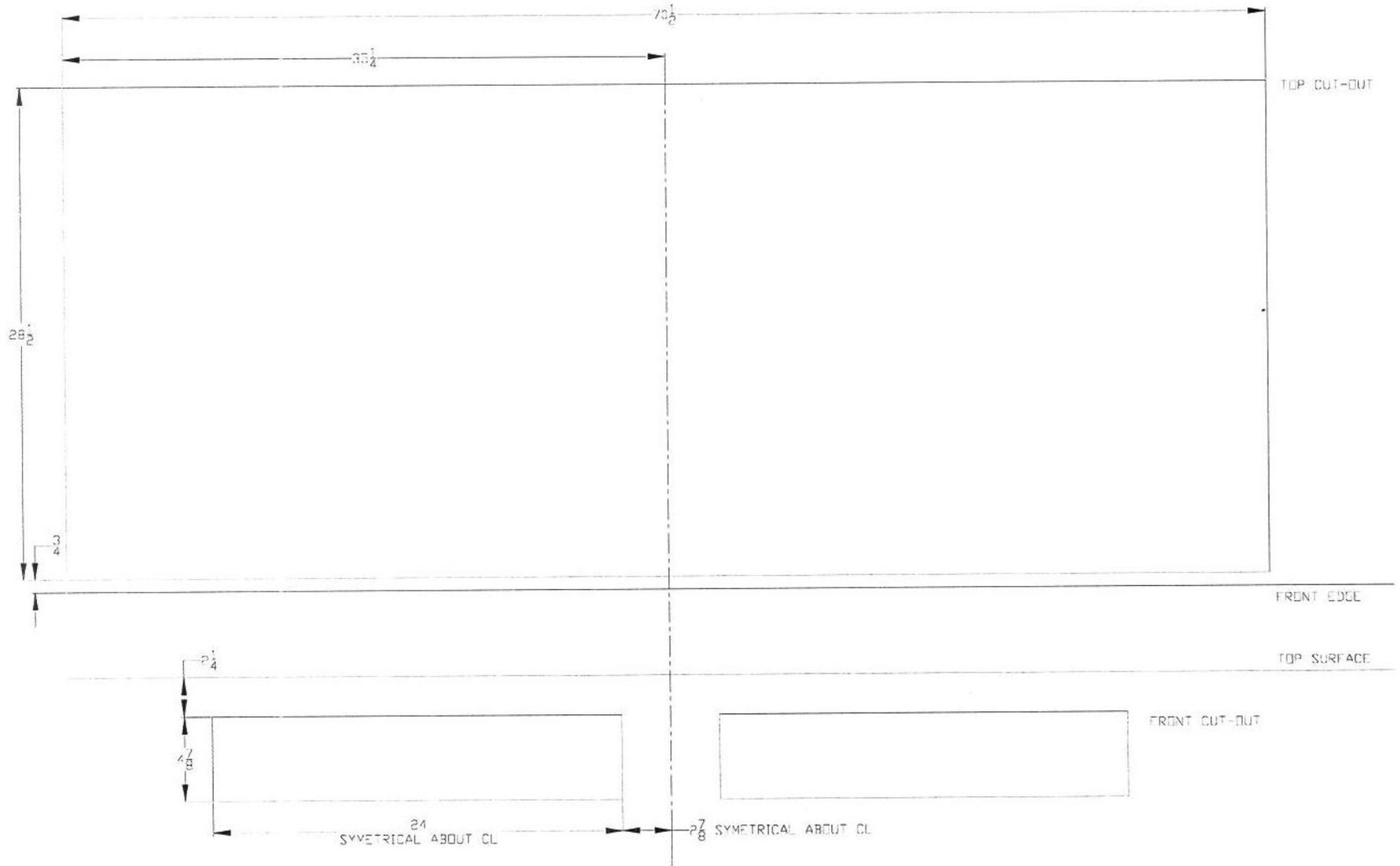
MDI-36 CUT OUT



MDI-48 CUT OUT



MDI-72 CUT OUT



5-13/(5-14 BLANK)

OPERATION

- NOTICE:** During the first few hours of operation you may notice a small amount of smoke coming off the griddle surface, and a faint odor from the smoke. This is normal for a new griddle 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.



OPERATING INSTRUCTIONS

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 temperature controller. The temperature control sensor is mounted in the center of each cooking section under the griddle plate.

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

During slow periods with minimal loads, do not load directly over the thermostat 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.

INITIAL START-UP

Prior to putting any griddle into full time operation at normal cooking temperatures, it must be thoroughly "seasoned" and dried out. Moisture absorption in the closed spaces, in the insulation and even inside the heating elements can cause future trouble if not properly treated.

Before seasoning the griddle it is first necessary to remove the shipping preservative from the griddle surface. To do this, add a mild detergent to hot water and wash the griddle plate. Rinse with a damp sponge and dry with a clean rag.

To "season" the griddle, set the thermostat dial to 300°. Allow unit to come up to temperature and cycle off. Apply a thin coat of high-grade, non-salted vegetable oil to the griddle surface. Rub the oil into the griddle surface with the flat side of a spatula or a towel. Re-coat any dry spots that appear then wait 30 minutes and wipe off any excess oil. Repeat these steps at 350°, 400°, and 450°.

To "dry out" the Griddle, set the thermostat to 250° and turn on the power switch. Allow the unit to cycle at least 15 minutes at this heat level. Reset the thermostat to 350° allowing the same time. Reset the thermostat to 450° and allow the unit to maintain the temperature for a minimum of 4 hours. More time may be required if the unit will be operating in a moist or humid environment.

If the unit is out of use for three or more days, a one-hour preheat schedule should be used, especially when exposed to high humidity and/or cool temperatures.

NORMAL OPERATION

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

Turn the griddle thermostat to the desired temperature and allow 30 minutes to preheat. Once griddle has been preheated place product on the griddle and allow to cook.

MAINTENANCE AND CLEANING

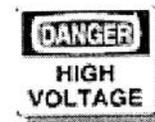
WARNING: KEEP WATER AND SOLUTIONS OUT OF CONTROLS. NEVER SPRAY OR HOSE CONTROL CONSOLE, ELECTRICAL CONNECTIONS, ETC.

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: 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.



DAILY CLEANING

Empty the grease drawer or whenever it is 3/4 full by pulling straight out toward the front. It is easily removed for washing.

Clean the exterior of the appliance with Lang Mfg. Prima Shine (72804-41) cleaner to maintain a gleaming appearance.

Keep the griddle surface clean. After each cooking load, scrape the griddle surface to remove any carbonized grease

WEEKLY CLEANING

Once a week (or when necessary) the griddle surface should be cleaned and re-seasoned. Use Lang Mfg Carbon Release (72804-32). Rub with the grain of the metal, being careful not to scrape the splashguard.

Be sure to rinse thoroughly and re-season to prevent rusting and corrosion.

MAINTENANCE AND CLEANING CONT'D

CALIBRATION CHECK

Set the griddle temperature to 350°F on all sections (it should take approximately 22 minutes to reach temperature).

Let the griddle reach 350°F and cycle off and on at least three times.

Measure 6" from the left, and 11 1/2" from the front of the plate for the first checkpoint. This will check the center of the sensor for the first cooking section.

Each checkpoint is located every 12" to the right from the last point, and always 11 1/2" from the front. (See illustration below.)

CALIBRATION

A 1/16" flat blade screwdriver with a 2" shaft is required to make adjustments on the thermostat.

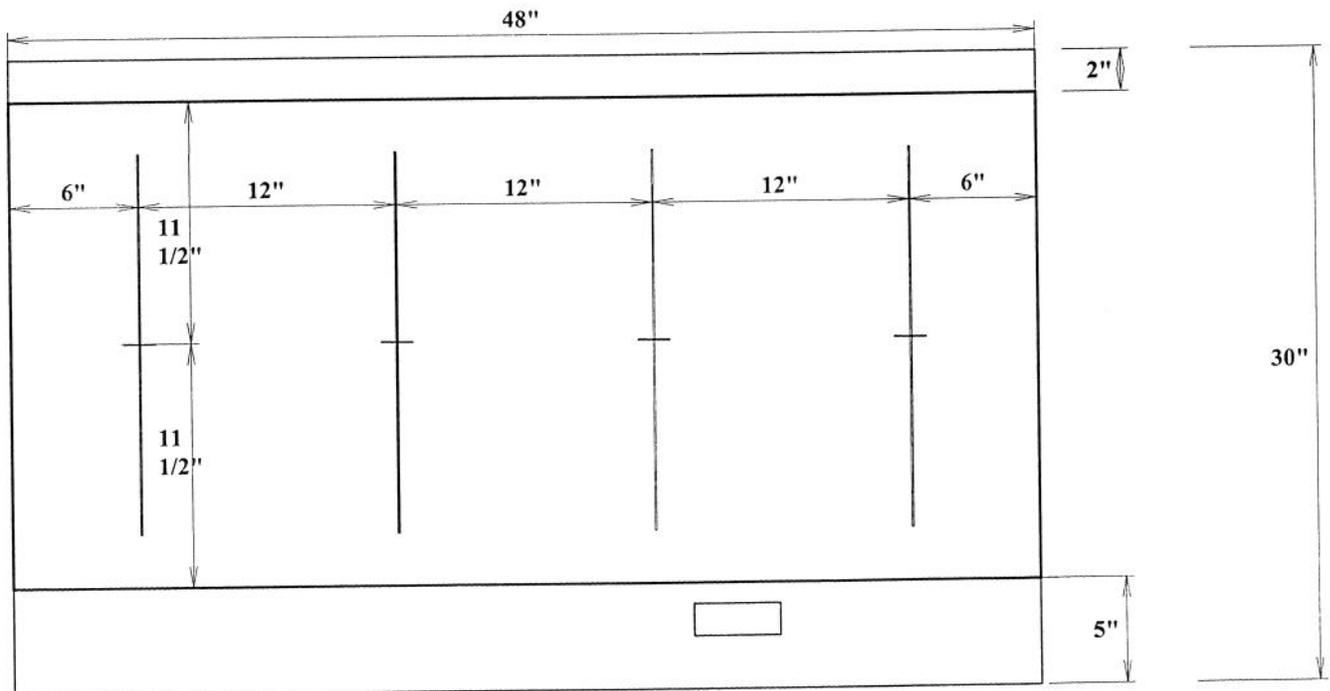
Maintain the oven temperature at 350°.

Without turning the thermostat, remove the knob.

Locate the adjustment screw at the base of the shaft and insert the screwdriver.

Grasp the shaft and turn the screwdriver counter clockwise to increase temperature and clockwise to decrease temperature (1/8 of a turn will move the temperature 5-7 ° in either direction).

Reinstall the oven knob and recheck the oven temperature.



MAINTENANCE AND CLEANING CONT'D

ELEMENT REMOVAL

Disconnect power from griddle.

Prop griddle plate up.

Disconnect power wire attached to heating element terminals. Mark or identify each wire to ensure correct replacement on new heating element. Inspect for frayed ends, broken strands and grease soaked insulation. Replace as necessary.

Remove the two sheet metal screws securing the thermostat capillary tube clip to the element pan. Pull the clip and the tube down and out of the center slot of the element pan. Take care not to break the capillary tube, as it may be brittle from prolonged exposure to high temperature.

Remove the nuts and washers retaining the element pan and pressure plate.

Drop the element pan straight down until studs are cleared and pull forward out of griddle body. The elements will normally drop down with the element pan and are now accessible for replacement as necessary.

Compare voltage and wattage marking of old element with new one to ensure proper replacement.

Reverse the removal procedure to install the new element. Be sure the nuts holding the element pan are snug as this will assure proper contact between the element and griddle plate. The capillary tube bulb must also be tightly clamped against the griddle plate to obtain proper temperature control.

THERMOSTAT REPLACEMENT

Disconnect power from griddle.

Prop griddle plate up.

Loosen the two sheet metal screws securing the thermostat capillary tube clip to the element pan. Gently pull the thermostat capillary tube from the clip.

Remove the two sheet metal screws from the rear of the control panel box and pull off the box cover.

Remove thermostat control knob. Loosen and remove the two screws securing the thermostat body to the front panel. Remove wires from thermostat terminals. Mark for proper replacement.

Reverse this procedure for replacement.

PILOT INDICATOR REPLACEMENT

Disconnect power from griddle.

Prop griddle plate up.

Remove the two sheet metal screws from the rear of the control panel box and pull off the box cover.

Remove the wires from the pilot indicator.

The pilot light is held firmly in place by means of a spring metal speed nut on the back. Remove the pilot indicator by removing the speed nut and pulling it out through the front. It may be necessary to break the pilot light in two to remove the speed nut.

Install the new pilot light and hold in place with speed nut.

Reverse the procedure to reinstall.

TROUBLE SHOOTING

SYMPTOM	PROBLEM	REMEDY
Whole griddle will not heat	Circuit breaker turned off Griddle not turned on Improper connection Improperly Phased	Turn on Turn on Connect per wiring diagram Phase per wiring diagram
One section will not heat.	Defective elements Defective thermostat	Replace elements Replace thermostat
Griddle is burning product	Griddle is out of calibration	Calibrate
Griddle is undercooking product	Griddle is out of calibration	Calibrate
Indicator light will not come on	Defective Indicator light	Replace Indicator light

TECHNICAL DATA

Part#	Description	Volts	Watts	Amps
11030-29	I/S Element	208/240	4500/5991	22/26
11030-30	O/S Element	208	1491	8
11030-31	Element	480	5991	12.5
11030-04	Element	380	5991	16

GRIDDLE LINE AMPERAGE, AND WATTAGE

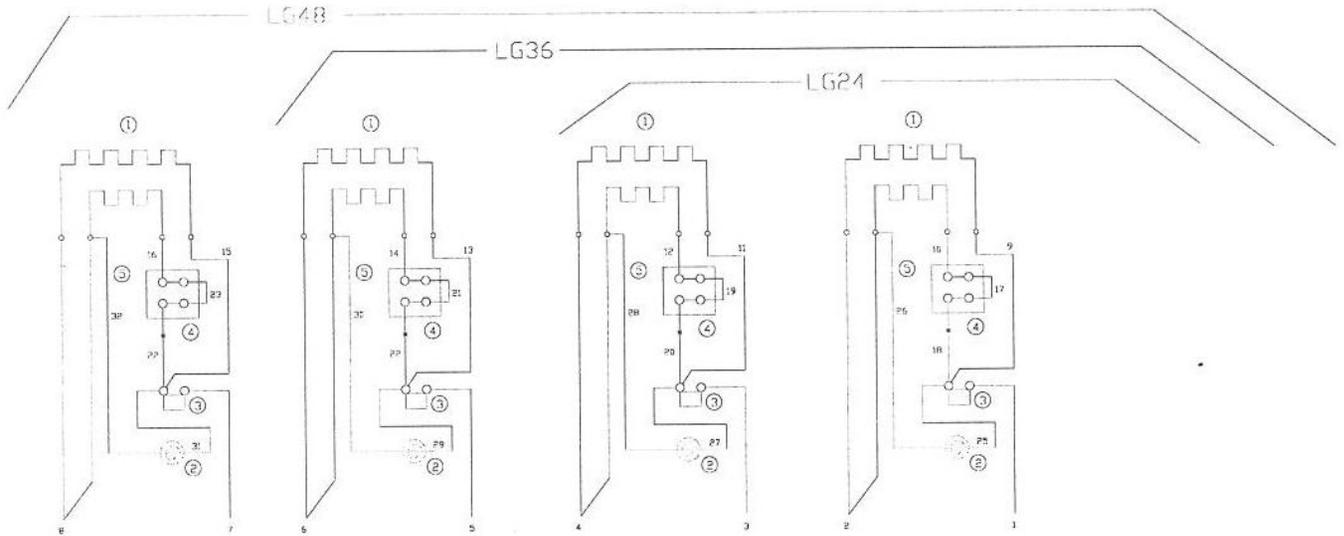
Type: I, II, III	TOTAL K.W.	NOMINAL AMPS PER LINE									SINGLE PHASE		
		THREE PHASE									208V	240V	
		208 Volt			240 Volt			480 Volt					
		L1	L2	L3	L1	L2	L3	L1	L2	L3			
24"	12.0	50.0	28.8	28.8	43.3	25.0	25.0	21.7	12.5	12.5	57.7	50.0	
36"	18.0	50.0	50.0	50.0	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75.0	
48"	24.0	75.0	75.0	50.0	65.0	65.0	43.3	32.5	32.5	21.7	115.4	100.0	
72"	#1	18.0	50.0	50.0	50.0	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75.0
	#2	18.0	50.0	50.0	50.0	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75.0

208/240 WIRING DIAGRAM

REVISION BLOCK				
REV	ECN NO.	DESCRIPTION	DR:	MFG/ENG DATE

ELEMENT HOOKUP	
208V	240V
INSTALL JUMPER	REMOVE JUMPER
④	②

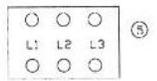
- ① GRIDBLE ELEMENTS
- ② GRIDBLE POINT LAMP
- ③ GRIDBLE THERMOSTAT
- ④ JUMPER
- ⑤ TERMINAL BLOCK



NOTE: LG72 HAS TWO POWER SUPPLY CONNECTIONS
 LG72: CONN # 1 USE LG36
 CONN # 2 USE LG36

SERVICE CONNECTIONS

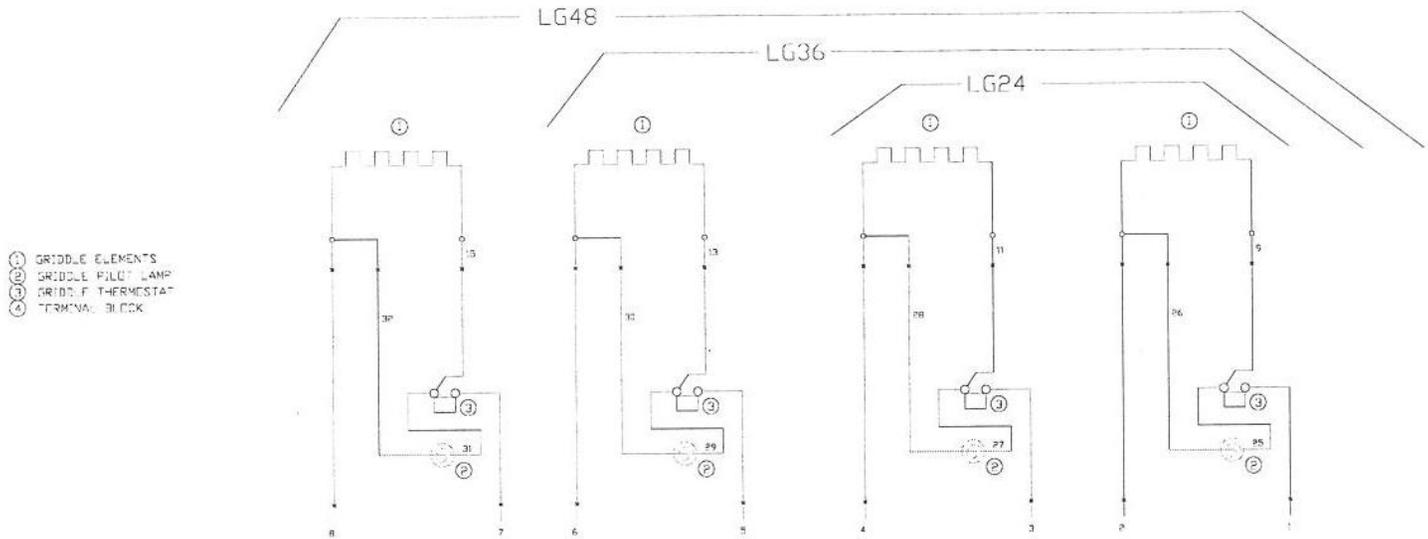
THREE PHASE			SINGLE PHASE	
L1	L2	L3	L1	L2
1,4	2,5	3,6	1,3	2,4
1,4	2,5	3,6	1,3,5	2,4,6
1,4,7	2,5,8	3,6	1,3,5,7	2,4,6,8



LANG MANUFACTURING	
LANG GRIDBLE	
208 - 240VAC	
8" 114-0"	0

480 WIRING DIAGRAM

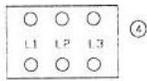
REVISION BLOCK				
REV	ECN NO.	DESCRIPTION	DR:	MFG ENG. DATE



- ① GRIDDLE ELEMENTS
- ② GRIDDLE PILOT LAMP
- ③ GRIDDLE THERMOSTAT
- ④ TERMINAL BLOCK

NOTE: LG72 HAS TWO POWER SUPPLY CONNECTIONS
 LG72 CONN # 1 USE LG36
 LG72 CONN # 2 USE LG36

SERVICE CONNECTIONS			
MODEL	THREE PHASE		
	L1	L2	L3
P4	1,4	2	3
P6	1,4	2,3	3,6
P8	1,4,7	2,3,8	3,6



✶ NUMBER

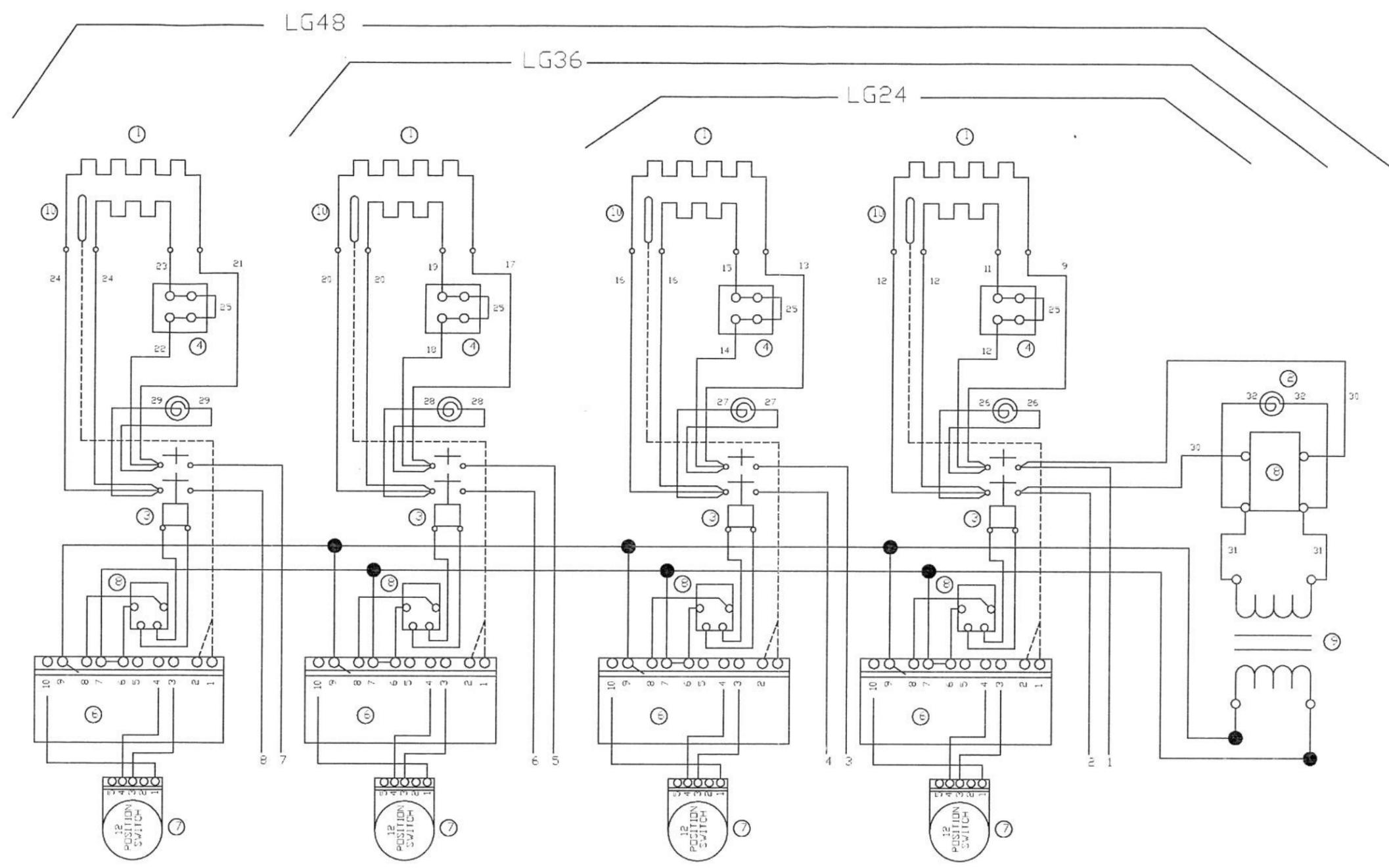
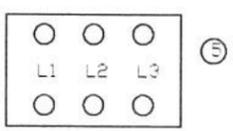
LANG MANUFACTURING	
LANG GRIDDLE	
480VAC 3 PHASE	
<small> MODEL: P4, P6, P8 PART NO: 61114-02 REV: B DATE: 11/14/02 </small>	<small> DRAWING NUMBER: 61114-02 REV: B </small>

PARTS LIST

Item #	Description	Lang Part #	Vendor	Vendor #
1A	Element, 208V / 1491 Watts I/S	11030-30	Caloritech Inc.	IXI-11030-30
1B	Element, 208/240V / 4500/6000 Watts O/S	11030-29	Caloritech Inc.	IXI-11030-29
1C	Element, 380V / 6000 Watts	11030-04	Caloritech Inc.	IXI-11030-04
1D	Element, 440V / 6000 Watts	11030-48	Caloritech Inc.	IXI-11030-48
1E	Element, 480V / 6000 Watts	11030-31	Caloritech Inc.	IXI-11030-31
2	Thermostat, 450° F.	30402-08	Invensys	SP-173-72
3A	Terminal Strip, 4 pole (Type I & II, Size 5)	30500-02	Cooper-Bussman	TB30004-00
3B	Terminal Strip, 6 pole (Type I & II, Size 2 & 3)	30500-03	Cooper-Bussman	TB30006
3C	Terminal Strip, 8 pole (Type I & II, Size 6)	30500-05	Cooper-Bussman	TB30008
4	Terminal Block, 3 pole	30500-07	All-West Fasteners	162-04-3L
5A	Indicator Light, 208/240V	31601-01	Solico	2152-1-23-20110
5B	Indicator Light, 480V	31601-02	Solico	1854-1-20-20310
6	Element Pan Assembly	50302-05	Lang Mfg	50302-05
7A	Knob, 450° Thermostat (Type I & II)	70701-19	Lang Mfg.	70701-19
7B	Knob, 450° Thermostat (Type III)	70701-16	Lang Mfg.	70701-16
8A	Grease Drawer (Type I & II)	50302-07	Lang Mfg	50302-07
8B	Grease Drawer (Type III, Size 2 & 6)	MDI-212-2	Lang Mfg	MDI-212-2
8C	Grease Drawer (Type III, Size 3)	MDI-212-6	Lang Mfg	MDI-212-6
9A	Grab Bar Assembly (Type I & II, Size 5)	50302-14	Lang Mfg	50302-14
9B	Grab Bar Assembly (Type I & II, Size 2)	50302-15	Lang Mfg	50302-15
9C	Grab Bar Assembly (Type I & II, Size 6)	50302-16	Lang Mfg	50302-16
9D	Grab Bar Assembly (Type I & II, Size 3)	50302-18	Lang Mfg	50302-18
10A	Griddle Plate Assembly (Type I & II, Size 5)	XL-722-2	Lang Mfg	XL-722-2
10B	Griddle Plate Assembly (Type I & II, Size 2)	XL-722-3	Lang Mfg	XL-722-3
10C	Griddle Plate Assembly (Type I & II, Size 6)	XL-722-4	Lang Mfg	XL-722-4
10D	Griddle Plate Assembly (Type I & II, Size 3)	XL-722-6	Lang Mfg	XL-722-6
10E	Griddle Plate Assembly (Type III, Size 2)	MDI-105-3	Lang Mfg	MDI-105-3
10F	Griddle Plate Assembly (Type III, Size 6)	MDI-105-4	Lang Mfg	MDI-105-4
10G	Griddle Plate Assembly (Type III, Size 3)	MDI-105-6	Lang Mfg	MDI-105-6
11	Griddle Cleaning Tool	50100-05	Chef Aid MFG	50100-05
11A	Griddle Cleaning Tool (Replacement Fingers)	50100-051	Chef Aid MFG	50100-051
11B	Griddle Cleaning Tool (Replacement Blades)	50100-052	Chef Aid MFG	50100-052

ELEMENT HOOKUP	
208V	240V
INSTALL JUMPER ④	REMOVE JUMPER ④

- 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
- ⑩ PROBE



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

MODEL	K.W.			
	L1-L2	L2-L3	L3-L1	TOTAL
24	6.0	0.0	6.0	12.0
36	6.0	6.0	6.0	18.0
48	12.0	6.0	6.0	24.0

SERVICE CONNECTIONS				
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

Lang Manufacturing Company

DWN. BY: DLG / DWN. DATE: 12-10-03 / REV. BY: / REV. DATE: / CHK. BY: / CHK. DATE:

DESCRIPTION: W/D GRIDDLE 208/240VAC

CAD FILE: FROM ACAD / DWG. NO: 61114-14 / SHEET 1 OF 1 / REV: B