



# Installation, Operation, & Maintenance

Electric Cheese Melter Model: 124CM, 136CM and 148CM

Lang Manufacturing Rev. B Part # 2M-60803-01 10 Sunnen Drive Phone: (314) 678-6315 Fax: (314) 781-2714 www.langworld.com St. Louis, MO 63143

March 06, 2013

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

### FOR YOUR SAFETY

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

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

WARNING: IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

Model #:	Purchased From:
Serial #:	Location:
Date Purchased:	Date Installed:
Purchase Order #:	For Service, Call:

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# IMPORTANT

## **READ FIRST**

# IMPORTANT

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 MELTER WILL BE LOCATED MUST BE DESIGNED TO SUPPORT THE WEIGHT OF THE MELTER.
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 on the left side of unit towards the front. The melter 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 electric cheese melter must be installed more than 12 inches above any cooking surface and never above any open burners or charbroilers.
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 melter, and a faint odor from the smoke. This is normal for a new melter 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:	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 agent directory or call the factory at 314-678-6315, or www.langworld.com for the service agent nearest you.
WARNING:	BOTH HIGH AND LOW VOLTAGES ARE PRESENT INSIDE THIS APPLIANCE WHEN THE UNIT IS PLUGGED/WIRED INTO A LIVE RECEPTACLE. BEFORE REPLACING ANY PARTS, DISCONNECT THE UNIT FROM THE ELECTRIC POWER SUPPLY.
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 Electric Cheese Melter:

### **Exterior Construction**

The melter dimensions are 19.5" (49.5cm) High, 16.5" (42cm) Deep, 24", 36", 48" (61cm, 91cm, 122cm) wide dependent on the actual model number.

The Sides, Bottom, and Rear wall are constructed stainless steel.

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

### **Interior Construction**

The interior dimension are 9.5" (24cm) High, 14.5" (37cm) Deep, 21.25", 32", 45.25" (54cm, 81.25cm, 115cm) wide dependent on the actual model number.

The interior of the melter has one rack that can be placed in 4 different positions.

The interior of the melter has a weight sensitive micro-switch for quick and easy activation.

### **Technical**

The Cheese Melter operates on either 208V or 240V. **This must be specified when ordering.** 

Space required from bottom is 4" (12"-22" from heated source), 0" from back and 28", 40", or 52" wide.

## UNPACKING

### **Receiving the Melter**

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 Star Manufacturing Company. File your claim with the carrier.** 

### **Location**

Prior to un-crating, move the melter 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 melter 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 MELTER WILL BE LOCATED MUST BE DESIGNED TO SUPPORT THE WEIGHT OF THE MELTER.

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

Remove the Melter 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 electric cheese melter must be installed more than 12 inches above any cooking surface and never above any open burners or charbroilers.
NOTICE:	The data plate is located on the left side of melter towards the front of the melter. The melter 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.





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The unit back is not attached to the machine. It is packaged loose behind the cheese-melter. The screws used to attach the back to the cheese-melter are screwed into the rear edge of the machine.

Split the back into two pieces; note the pre-drilled holes in one panel. This is the wall-mounting bracket.

Fasten the wall-mounting bracket to the wall using pre-drilled holes. Use suitable lag screws or anchor fasteners to secure panel to the wall with the offset at the top. Make certain that the mounting bracket is level.

Remove the screws from the rear of the cheese-melter; screw the stainless steel portion of the back to the cheese-melter with the offset at the top.

Lift the cheese-melter and hang it on the wall-mounted bracket.

Replace the screws around the edge of the back.

Must be mounted 12 to 22 inches above any cooking surface.

Install the Heat Shield on the bottom of the unit.

This unit cannot be mounted above a charbroiler.

## INSTALLATION CONT'D

### COUNTER TOP

Split the back into two pieces.

Remove the screws from the rear of the cheese-melter; screw the stainless steel portion of the back to the cheese-melter with the offset at the top.

Reinstall the two back halves together and replace the screws around the edge.

When installing on a counter the legs must be installed before using the unit, as they will provide the required clearance for the bottom of the unit.

Place the unit in location, and level using leg adjustments.

Observe minimum clearances at all times.

### **ELECTRICAL**

Electrical service routing may be made through either of two 1 1/4-inch knockouts provided. One may be found along the bottom edge of the back panel. The second knockout is located on the bottom of the unit.

Reference the Data Plate on the left side of the unit for amperage, voltage and phase requirements. Insure that the power supply is sufficient to meet the units power needs.

Check your local or national electrical code for fuse or circuit breaker requirements.

### **PHASING**

All model numbers 124CM and 136CM are shipped single phase. 148CM is shipped three-phase and can be converted to single phase by moving wire #3 to L1.

### **ELEMENT INSTALLATION**

Elements for all Lang electric Cheese-melters are shipped, packaged separately, within the equipment-shipping crate.

These should be inspected upon opening of the shipping carton. If an element is found damaged or broken, notify the Freight Company immediately.

Installation of the elements is not warrantable expense. The installer or a qualified service company should complete installation. Damage to elements or equipment resulting from incorrect or improper installation will be the responsibility of the equipment owner or individual installing elements.

Elements installed in new equipment are warranted free of defects in material and workmanship, for a period of 90 days from installation of the equipment. Replacement elements are warranted for a period of 90 days from installation.

Remove three (3) screws from each element bracket. Brackets support each end of the elements. One or both brackets may be removed.

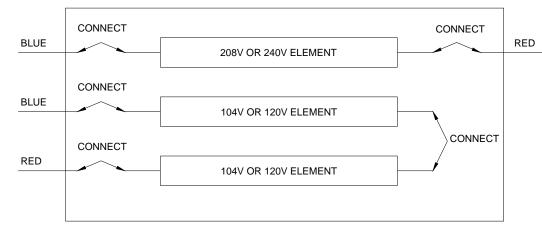
Place element with red or brown ceramic ends in the front and middle position and attach with a ceramic wire nut. (For element wiring see figures 1 and 2 on page 10).

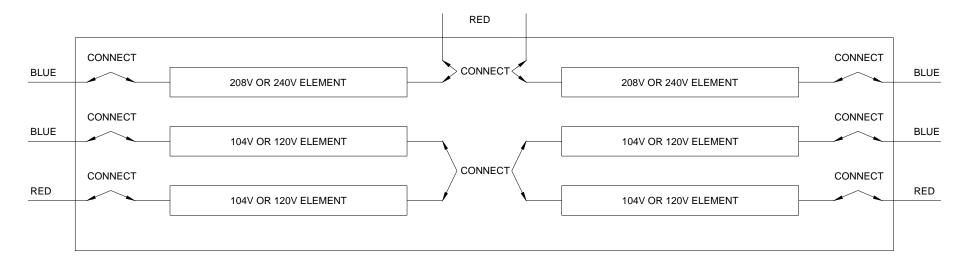
Place element with white ceramic ends in the rear position.

Re-attach element bracket.

### **INSTALLATION CONT'D**

#### FIGURE 1





<u>148C</u>

## **OPERATION**

### **GENERAL**

The Lang Electric Cheese-melter can be used to poach, sauté and brown. In addition to melting cheese on sandwiches, French onion soup, hot apple pie and casseroles, it may be used for finishing Italian, Mexican and au gratin dishes utilizing less energy than conventional broilers.

The product is heated with infrared energy provided by quartz heaters. The rack is counterbalanced so that maximum heat is supplied only when the product is placed in the rack.

Although the heating elements are not directly controlled to regulate heat, the exposure of the product to heat is adjustable. Heat adjustment may be obtained by raising and lowering the rack position. The shelf positions provide a choice of cooking positions for a variety of applications. The top position is very hot, and can be used for quick browning and toasting, with the heat decreasing at each lower position.

In order to change positions, simply slide the rack in and out of the slots provided. Make sure that the end of the rack engages the sliding mechanism located on the right front corner.

### **CONTROLS**

Controls are located on the front panel and consist of the following items:

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<b>Power Switch:</b>	A toggle switch used to turn the unit on and off.	
Heat Switch:	This toggle switch allows the unit to be operated in either automatic or constant modes.	
Autom	<b>atic</b> : When selected with no product on the rack, the unit is in an idle condition. Placing a product on the rack will energize the elements providing heat to the product.	
Consta	<b>nt</b> : When this mode is selected the elements are energized at all times whether or not a product has been placed on the rack. This mode should be used during peak times only, as it will shorten the life span of the elements.	
Side Switch:	Allows the use of the <b>Left</b> side only, or <b>Both</b> sides. This switch is found on Lang Model <b>148CM</b> Cheese-melters 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.

### **OPERATION CONT'D**

#### **OPERATING Do's and Don'ts**

#### DO:

Insure all dishes placed in the cheese-melter are oven safe.

Pre-heat pans in the cheese-melter or on a stove.

Turn products halfway through cooking, as needed.

Use the unit in Automatic as much as possible, use Constant during peak periods.

#### DON'T:

Do not use the cheese-melter as a cooking or baking device, it is best suited for finishing dishes immediately prior to serving.

Do not use the unit to heat or thaw chilled or frozen product.

Do not place aluminum foil on the rack or bottom shelf. This will reflect heat and expose components to unnecessary high temperatures.

Do not move rack from one position to another without hand protection.

### TYPICAL OPERATION

#### AUTOMATIC MODE

When the mode select switch is placed in "AUTOMATIC" and the power switch is moved to the "ON" position, power is applied to all of the elements.

The power switch energizes a contactor that connects the elements to the incoming power leads. Because the elements are connected in series, all elements have power applied. With all elements connected in the circuit, the rear element appears dimly lighted and the front elements appear not energized.

In the "AUTOMATIC" mode, the elements are activated to provide full heat only when product is placed on the rack. Placing product on the rack causes the shelf to tilt down, activating a micro switch via the sliding actuator connected to the right front corner of the rack.

Closing the micro switch energizes a 2-pole heating contactor causing both sets of contactor points to close. One set of contactor points is connected in parallel with the rear element. This connection, when activated, changes the circuit resistance/electrical configuration.

Electrically this presents an alternate current path by shorting across the rear element. The effect is that the front and middle elements energize, while appearing to de-energize the rear element. Front and middle elements now have voltage applied for their rated operating level. For 208-volt and 240-volt units, the voltage to these elements is 104 and 120-volts, respectively.

#### **CONTINUOUS MODE**

In this mode of operation, the heat contactor is energized at all times. Movement of the rack does not energize or de-energize the elements. The rear element does not light or heat at any time. The front and middle elements are energized at all times.

## **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.

### <u>Cleaning</u>

- Always start with a cold melter.
- The stainless exterior can easily be cleaned using warm water and mild detergent. **Do not use caustic cleaners.**
- Always follow the cleaner manufacturer's instructions when using any cleaner.
- The melter rack and interior may be cleaned using warm water and mild detergent. **Do not use caustic cleaners.**
- **Do Not** attempt to clean heater tubes, damage can occur from improper cleaning.
- **Do Not** spray cleaning solutions into cooking chamber.
- Always apply these cleaners when the melter 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 melter.

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
Melter will not heat	<ul> <li>Incorrect voltage</li> <li>Defective power switch</li> <li>Defective contactor</li> <li>Defective heat switch</li> <li>Defective element</li> <li>Defective rack switch</li> </ul>

## **TROUBLESHOOTING CONT'D**

<u>TEST</u>	
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 314-678-6315, 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.



VOLTAGE

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
Incorrect Voltage	• Confirm that is voltage is correct*
	• Confirm that melter is phased correctly*
Defective Power Switch	• Check switch for proper operation*
Failed Contactor	<ul> <li>Remove the wires from the contactor coil and check for continuity across the contactor coil connection*</li> <li>Ensure the contactor moveable points move freely up and down*</li> </ul>
Defective Selector Switch	• Check switch for proper operation*
Failed Element	• Confirm that Elements are getting correct voltage and have continuity*
Defective Rack Switch	• Confirm that plunger rod can move up and down easily
	• Confirm that switch has correct voltage*

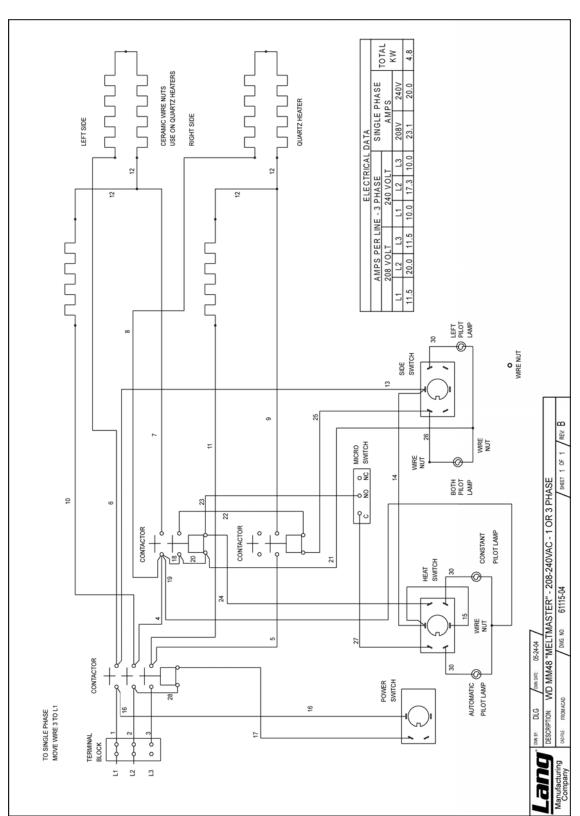
CAUTION: USE OF ANY REPLACEMENT PARTS OTHER THAN THOSE SUPPLIED BY LANG OR THEIR AUTHORIZED DISTRIBUTORS CAN CAUSE BODILY INJURY TO THE OPERATOR AND DAMAGE TO THE EQUIPMENT AND WILL VOID ALL WARRANTIES.



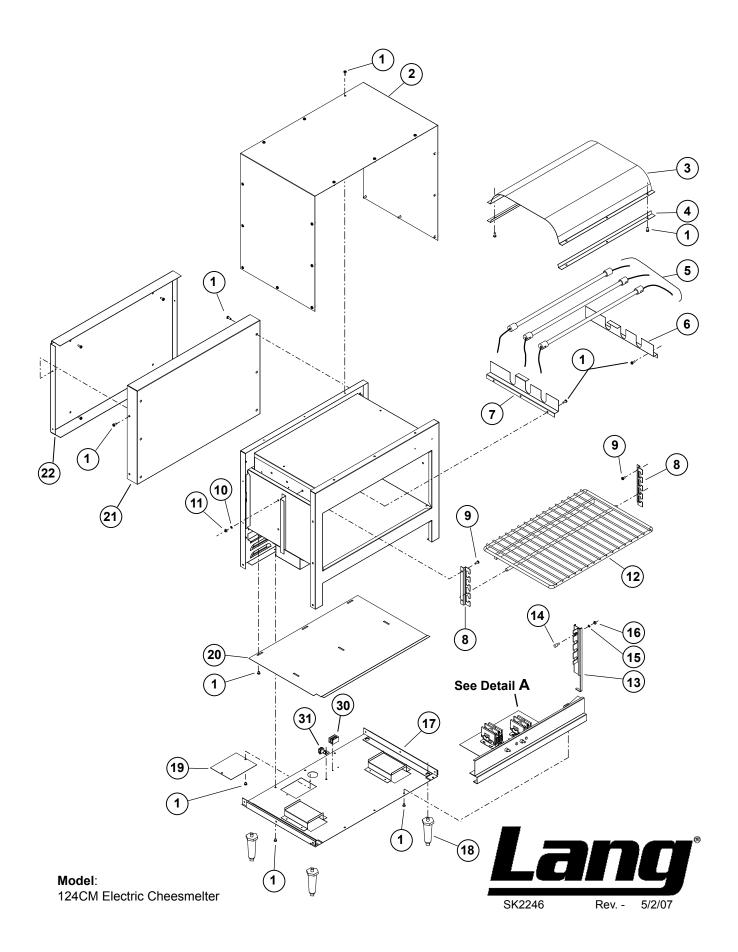
WIRE USE ON D SERIES NO. QUARTZ HEATER HEAT SWITCH WIRE 1 2 얻 CONSTANT PILOT LAMP WIRE 5 WIRE 4 AUTOMATIC PILOT LAMP MICRO SWITCH SHEET 1 OF 1 / REV: D 16 CHK DATE: 0 2 WIRE NUT 0 CONTACTOR **0** 2 ę 0 0... WIRE REV. DATE: DIM BY: DLG / OW DATE: 11-25-03 / REV BY: DESCRIPTION: MM24, MM36, MELTMASTER - 208-240VAC DWG. NO: 61115-03 240V 10.0 15.0 AMPERES 4 208V 11.5 17.3 CONTACTOR POWER SWITCH **ELECTRICAL DATA** Q 2.4 3.6 Ň FROMACAD CUDFILE: TERMINAL BLOCK 0 0 ģ MODEL ļ Lang MM24 **MM36** Manufacturing Company 2 Ξ 5

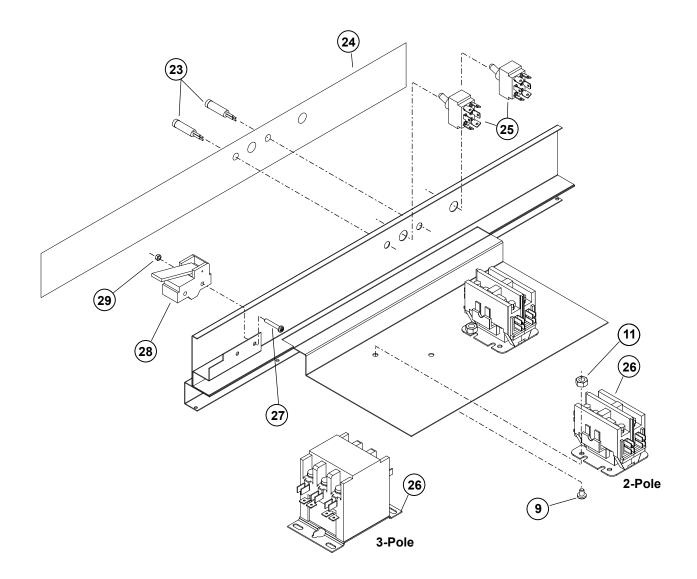
WIRING DIAGRAM 124CM & 136CM

WIRING DIAGRAM 148CM



17





Detail A

**Model**: 124CM Electric Cheesmelter - Control Panel Assembly

**Lang** SK2247 Rev. - 5/2/07

### MODEL 124CM Electric Cheesemelter

-20103-02 MM-174 MM-177 MM-179 -11160-15 -11160-19 -11160-16 -11160-20 MM-141 MM-142 MM-166 -20101-24 -20202-07 -20301-15 -50200-13	4 1 2 1 2 1 2 1 1 2 1 1 2 16 4	SCRW SM PLT 10 X .5 PHLSL BODY WRAP 2'ALL REFLECTOR 2'ALL REFLECTOR ANGLE 2' & 4' QTZ HTR 208V/1200W 2FT QTZ HTR 104V/1200W 2FT QTZ HTR 120V/1200W 2FT QTZ HTR 120V/1200W 2FT LAMP SUPPORT BOTTOM L.H. LAMP SUPPORT BOTTOM L.H. SHELF PIVOT 2-3-4 FT SCRW MS PLT 10-32 X .375	
MM-174 MM-177 MM-179 11160-15 11160-19 11160-16 11160-20 MM-141 MM-142 MM-166 20101-24 20202-07 20301-15	1 1 2 1 2 1 2 1 1 2 1 1 2 16 4	BODY WRAP 2'ALL REFLECTOR 2'ALL REFLECTOR ANGLE 2' & 4' QTZ HTR 208V/1200W 2FT QTZ HTR 104V/1200W 2FT QTZ HTR 240V/1200W 2FT QTZ HTR 120V/1200W 2FT LAMP SUPPORT BOTTOM L.H. LAMP SUPPORT BOTTOM R.H. SHELF PIVOT 2-3-4 FT	ALL 124CM-208V, CMPT-208V, CMW-208V, CMWOC-208 124CM-208V, CMPT-208V, CMW-208V, CMWOC-208 124CM-240V, CMPT-240V, CMW-230/240V 124CM-240V, CMPT-240V, CMW-230/240V ALL ALL
MM-177 MM-179 11160-15 11160-19 11160-20 MM-141 MM-142 MM-166 20101-24 20202-07 20301-15	1 2 1 2 1 2 1 1 2 1 1 2 16 4	REFLECTOR 2'ALL REFLECTOR ANGLE 2' & 4' QTZ HTR 208V/1200W 2FT QTZ HTR 104V/1200W 2FT QTZ HTR 240V/1200W 2FT QTZ HTR 120V/1200W 2FT LAMP SUPPORT BOTTOM L.H. LAMP SUPPORT BOTTOM R.H. SHELF PIVOT 2-3-4 FT	124CM-208V, CMPT-208V, CMW-208V, CMWOC-208 124CM-208V, CMPT-208V, CMW-208V, CMWOC-208 124CM-240V, CMPT-240V, CMW-230/240V 124CM-240V, CMPT-240V, CMW-230/240V ALL ALL
MM-179 11160-15 11160-19 11160-20 MM-141 MM-142 MM-166 20101-24 20202-07 20301-15	2 1 2 1 2 1 1 2 16 4	REFLECTOR ANGLE 2' & 4' QTZ HTR 208V/1200W 2FT QTZ HTR 104V/1200W 2FT QTZ HTR 240V/1200W 2FT QTZ HTR 120V/1200W 2FT LAMP SUPPORT BOTTOM L.H. LAMP SUPPORT BOTTOM R.H. SHELF PIVOT 2-3-4 FT	124CM-208V, CMPT-208V, CMW-208V, CMWOC-208 124CM-208V, CMPT-208V, CMW-208V, CMWOC-208 124CM-240V, CMPT-240V, CMW-230/240V 124CM-240V, CMPT-240V, CMW-230/240V ALL ALL
11160-15 11160-19 11160-20 MM-141 MM-142 MM-166 20101-24 20202-07 20301-15	1 2 1 2 1 1 2 16 4	QTZ HTR 208V/1200W 2FT QTZ HTR 104V/1200W 2FT QTZ HTR 240V/1200W 2FT QTZ HTR 120V/1200W 2FT LAMP SUPPORT BOTTOM L.H. LAMP SUPPORT BOTTOM R.H. SHELF PIVOT 2-3-4 FT	124CM-208V, CMPT-208V, CMW-208V, CMWOC-208 124CM-208V, CMPT-208V, CMW-208V, CMWOC-208 124CM-240V, CMPT-240V, CMW-230/240V 124CM-240V, CMPT-240V, CMW-230/240V ALL ALL
11160-19 11160-16 11160-20 MM-141 MM-142 MM-166 20101-24 20202-07 20301-15	2 1 2 1 1 2 16 4	QTZ HTR 104V/1200W 2FT QTZ HTR 240V/1200W 2FT QTZ HTR 120V/1200W 2FT LAMP SUPPORT BOTTOM L.H. LAMP SUPPORT BOTTOM R.H. SHELF PIVOT 2-3-4 FT	CMWOC-208 124CM-208V, CMPT-208V, CMW-208V, CMWOC-208 124CM-240V, CMPT-240V, CMW-230/240V 124CM-240V, CMPT-240V, CMW-230/240V ALL ALL
11160-16 11160-20 MM-141 MM-142 MM-166 -20101-24 -20202-07 -20301-15	1 2 1 1 2 16 4	QTZ HTR 240V/1200W 2FT QTZ HTR 120V/1200W 2FT LAMP SUPPORT BOTTOM L.H. LAMP SUPPORT BOTTOM R.H. SHELF PIVOT 2-3-4 FT	124CM-208V, CMPT-208V, CMW-208V, CMWOC-208 124CM-240V, CMPT-240V, CMW-230/240V 124CM-240V, CMPT-240V, CMW-230/240V ALL ALL
.11160-20 MM-141 MM-142 MM-166 .20101-24 .20202-07 .20301-15	2 1 2 16 4	QTZ HTR 120V/1200W 2FT LAMP SUPPORT BOTTOM L.H. LAMP SUPPORT BOTTOM R.H. SHELF PIVOT 2-3-4 FT	124CM-240V, CMPT-240V, CMW-230/240V ALL ALL
MM-141 MM-142 MM-166 -20101-24 -20202-07 -20301-15	1 1 2 16 4	LAMP SUPPORT BOTTOM L.H. LAMP SUPPORT BOTTOM R.H. SHELF PIVOT 2-3-4 FT	ALL ALL
MM-142 MM-166 -20101-24 -20202-07 -20301-15	1 1 2 16 4	LAMP SUPPORT BOTTOM R.H. SHELF PIVOT 2-3-4 FT	ALL ALL
MM-166 -20101-24 -20202-07 -20301-15	2 16 4	LAMP SUPPORT BOTTOM R.H. SHELF PIVOT 2-3-4 FT	ALL
MM-166 -20101-24 -20202-07 -20301-15	2 16 4	SHELF PIVOT 2-3-4 FT	
20101-24 20202-07 20301-15	16 4		
-20202-07 -20301-15	4		ALL
-20301-15		WSHR LOCK #10 STD SPLIT	ALL
50200-13	4	NUT HEX 10-32 PLTD	ALL
	1	RACK MELTER 24	ALL
MM-167-1	1	RACK SLIDE WELDMENT 5/16	ALL
-20106-02	1	SCRSHLDR HEXHD	ALL
-20202-08	2	WSHR PLT 5/16 LOCK SPLIT	ALL
			ALL
			ALL
			124CM-208V & 240V, CMPT-208V & 240V
			ALL
	-		ALL
			124CM-208V & 240V,
			124CM-208V & 240V
			ALL
			ALL
			ALL
			ALL
			ALL
			ALL
	1		ALL
31200-02	1		ALL
-60106-50	1	INSULATION KIT	ALL
50201-04	1		ACCESSORY
200376	1		124CMTC-208V, 240V
	20301-13 MM-143 Z0314 MM-153 MM-163 MM-185 31601-01 -60700-03 30303-06 30701-03 -20101-17 GM-219 -20301-10 30500-08 31200-02 -60106-50 50201-04	20301-13       1         MM-143       1         Z0314       4         MM-153       1         MM-163       1         MM-185       1         MM-185       1         31601-01       2         -60700-03       1         30303-06       2         20101-17       2         GM-219       1         -20301-10       2         30500-08       1         31200-02       1         -60106-50       1         50201-04       1	20301-13       1       NUT HEX 5/16-18 PLTD         MM-143       1       2' BOTTOM SPOTWELD         Z0314       4       LEG 4 SS MM, GRID, FRYER         MM-153       1       ACCESS PANEL         MM-163       1       BOTTOM INS. SUP. 2'         MM-182       1       BACK 2'         MM-185       1       WALL BRACKET 2'         31601-01       2       PILOT LT 250V 6LEAD BLK         -60700-03       1       CONTROL PANEL MM+2 36         30303-06       2       SWT TOG ON-ON DPDT BLK         30701-03       2       CONTC2POL35A208-240V50/60         20101-17       2       SCRW RND MS 6-32X1 PLTD         GM-219       1       MICRO SWITCH ASSY         20301-10       2       NUT HEX 6-32 PLTD         30500-08       1       TERMINAL BLOCK         31200-02       1       GROUNDING LUG         60106-50       1       INSULATION KIT         50201-04       1       LAMP GUARD 24"



# MODEL \_\_\_\_\_136CM Electric Cheesemelter

Key Number	Part Number	Number Per Unit	Description	and Model Designation
				-
1	2C-20103-02	4	SCRW SM PLT 10 X .5 PHLSL	136CM-208V & 240V, CMW-208V & 240V, CMWTF-208
2	J9-MM-175	1	BODY WRAP 3	ALL
3	J9-MM-178	1	REFLECTOR 3	ALL
4	J9-MM-180	2	REFLECTOR ANGLE 3	ALL
5	K9-11160-17	1	QTZ HTR 208V/1800W 3FT	136CM-208V & 208VBB, CMPT-208V, CMW-208V, CMWTF-208
	K9-11160-21	2	QTZ HTR 104V/1800W 3FT	136CM-208V & 208VBB, CMPT-208V, CMW-208V, CMWTF-208
	K9-11160-18	1	QTZ HTR 240V/1800W 3FT	136CM-240V, CMPT-240V, CMW-230/240V
	K9-11160-22	2	QTZ HTR 120V/1800W 3FT	136CM-240V, CMPT-240V, CMW-230/240V
6	J9-MM-141	1	LAMP SUPPORT BOTTOM L.H.	ALL
7				
	J9-MM-142		LAMP SUPPORT BOTTOM R.H.	
8	J9-MM-166	2	SHELF PIVOT 2-3-4 FT	ALL
9	2C-20101-24	16	SCRW MS PLT 10-32 X .375	ALL
10	2C-20202-07	4	WSHR LOCK #10 STD SPLIT	ALL
11	2C-20301-15	4	NUT HEX 10-32 PLTD	ALL
12	2B-50200-14	1	RACK MELTER 36	ALL
13	J9-MM-167-1	1	RACK SLIDE WELDMENT 5/16	ALL
14	2C-20106-02	1	SCRSHLDR HEXHD	ALL
15	2C-20202-05	1	WSHR PLT 5/16 LOCK SPLIT	ALL
16	2C-20301-13	1	NUT HEX 5/16-18 PLTD	ALL
17	J9-MM-144	1	3 BOTTOM SPOTWELD	ALL
18	2A-Z0314	4	LEG 4 SS MM, GRID, FRYER	136CM-208V & 208VBB & 240V, CMPT-208V & 240V
19	J9-MM-153	1	ACCESS PANEL	ALL
20	J9-MM-164	1	BOTTOM INS. SUP. 3	ALL
21	J9-MM-183	1	BACK 3	136CM-208V & 240V, CMW-208V & 240V, CMWTF-208
22	J9-MM-186	1	WALL BRACKET 3	136CM-208V & 240V, CMW-208V & 240V, CMWTF-208
23	2J-31601-01	2	PILOT LT 250V 6LEAD BLK	ALL
24	2M-60700-03	1	CONTROL PANEL MM+2 36	ALL
25	2E-30303-06	2	SWT TOG ON-ON DPDT BLK	ALL
26	2E-30701-03	2	CONTC2POL35A208-240V50/60	
27	2C-20101-17	2	SCRW RND MS 6-32X1 PLTD	ALL
28	J9-GM-219		MICRO SWITCH ASSY	ALL
29	2C-20301-10	2	NUT HEX 6-32 PLTD	ALL
30	2E-30500-08	1	TRM BLOCK 2 PL SM 95AMP	ALL
31	2E-30500-08 2E-31200-02	1	GROUNDING LUG	ALL
NI	2H-60106-50	2	INSULATION KIT	ALL
NI	2B-50201-03	1	LAMP GUARD 36"	ACCESSORY
	28-30201-03		LAMP GOARD 30	ACCESSORT
			ODEL AND SERIAL NUMBER	
Some items are included for illustrative purposes only and in certain instances may not be available.				



# PARTS LIST

### MODEL 148CM Electric Cheesemelter

Key	Part	Number Per			
Number	Number	Unit	Description and Model Designation		
1	2C-20103-02	4	SCRW SM PLT 10 X .5 PHLSL	148CM-208V & 240V, CMW-208V & 240V, CMWTF-208	
2	J9-MM-176	1	BODY WRAP 4	ALL	
3	J9-MM-177	1	REFLECTOR 2	ALL	
4	J9-MM-179	4	<b>REFLECTOR ANGLE 2 &amp; 4</b>	ALL	
5	K9-11160-15	2	QTZ HTR 208V/1200W 2FT	148CM-208V, CMPT-208V, CMW-208V, CMWTF-208	
	K9-11160-19	4	QTZ HTR 104V/1200W 2FT	148CM-208V, CMPT-208V, CMW-208V, CMWTF-208	
	K9-11160-16	2	QTZ HTR 240V/1200W 2FT	148CM-240V, CMPT-240V, CMW-240V	
	K9-11160-20	4	QTZ HTR 120V/1200W 2FT	148CM-240V, CMPT-240V, CMW-240V	
6	J9-MM-141	2	LAMP SUPPORT BOTTOM L.H.		
7	J9-MM-142	2	LAMP SUPPORT BOTTOM R.H.		
8	J9-MM-166	2	SHELF PIVOT 2-3-4 FT	ALL	
9	2C-20101-24	16	SCRW MS PLT 10-32 X .375	ALL	
10	2C-20202-07	4	WSHR LOCK #10 STD SPLIT	ALL	
11	2C-20301-15	4	NUT HEX 10-32 PLTD	ALL	
12	2B-50200-15	1	RACK MELTER 48	ALL	
13	J9-MM-167-1	1	RACK SLIDE WELDMENT 5/16	ALL	
14	2C-20106-02	1	SCRSHLDR HEXHD	ALL	
15	2C-20202-05	1	WSHR PLT 5/16 LOCK SPLIT	ALL	
16	2C-20301-13	1	NUT HEX 5/16-18 PLTD	ALL	
17	J9-MM-145	1	4 BOTTOM SPOTWELD	ALL	
18	2A-Z0314	4	LEG 4 SS MM, GRID, FRYER	148CM-208V & 240V, CMPT-208V & 240V	
19	J9-MM-153	1	ACCESS PANEL	ALL	
20	J9-MM-165	1	BOTTOM INS. SUP. 4	ALL	
21	J9-MM-184	1	BACK 3	148CM-208V & 240V, CMW-208V & 240V, CMWTF-208	
22	J9-MM-187	1	WALL BRACKET 4	148CM-208V & 240V, CMW-208V & 240V, CMWTF-208	
23	2J-31601-01	4	PILOT LT 250V 6LEAD BLK	ALL	
24	2M-60700-04	1	CONTROL PANEL MM+2 48	ALL	
25	2E-30303-06	3	SWT TOG ON-ON DPDT BLK	ALL	
26	2E-30701-03	2	CONTC2POL35A208-240V50/60		
	2E-30700-03	1	CONTC 3POLE 40A 208/240VAC		
27	2C-20101-17	2	SCRW RND MS 6-32X1 PLTD	ALL	
28	J9-GM-219	1	MICRO SWITCH ASSY	ALL	
29	2C-20301-10	2	NUT HEX 6-32 PLTD	ALL	
30	2E-30500-09	1	TERMINAL BLOCK	ALL	
31	2E-31200-02	1	GROUNDING LUG	ALL	
NI	2H-60106-50	2	INSULATION KIT	ALL	
NI	2B-50201-04	2	LAMP GUARD 24"	ACCESSORY	
IMPORTANT: WHEN ORDERING, INCLUDE MODEL AND SERIAL NUMBER					

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### **STAR INTERNATIONAL HOLDINGS INC. COMPANY**

Star - Holman - Lang - Wells - Bloomfield - Toastmaster 10 Sunnen Drive, St. Louis, MO 63143 U.S.A. (314) 678-6303 www.star-mfg.com