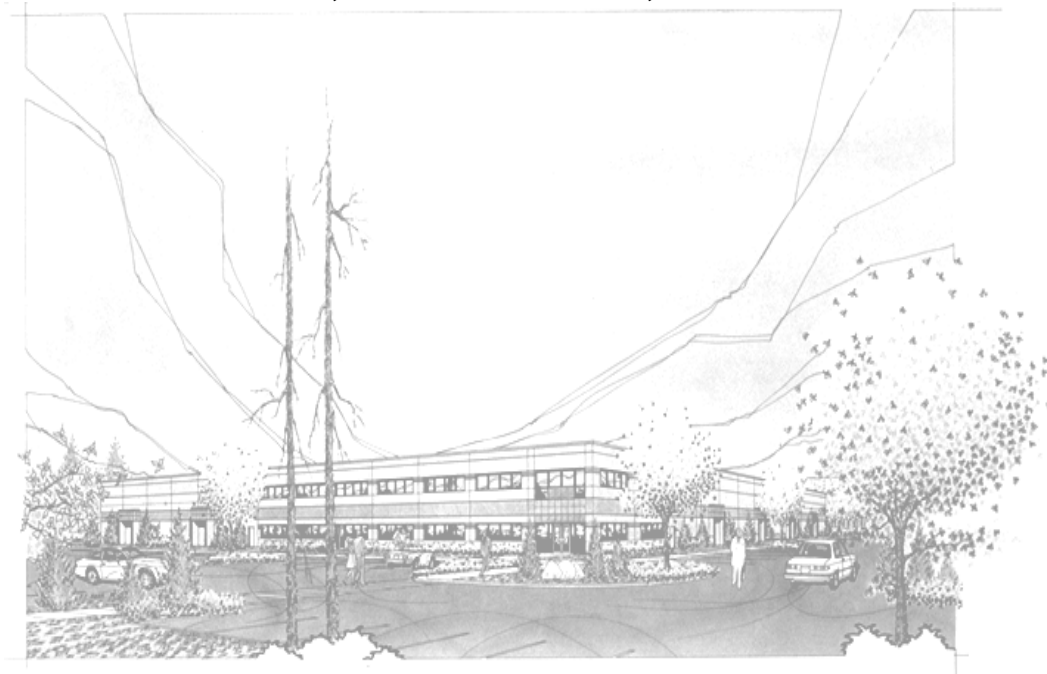




**Installation, Operation, & Maintenance
Model: MM24, MM36 and MM48, Electric Cheese Melter**



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

FOR YOUR SAFETY

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

POST IN A PROMINENT LOCATION

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

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

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

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CAUTION: EACH UNIT 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.

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: MM

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 208 or 240. **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.

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 Lang 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.



WALL MOUNT UNITS

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 MM-24 and MM-36 are shipped single phase.

MM-48 is shipped three-phase and can be converted to single phase by moving wire #3 to L1.

ELEMENT INSTALLATION

Elements for all electric MM 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.

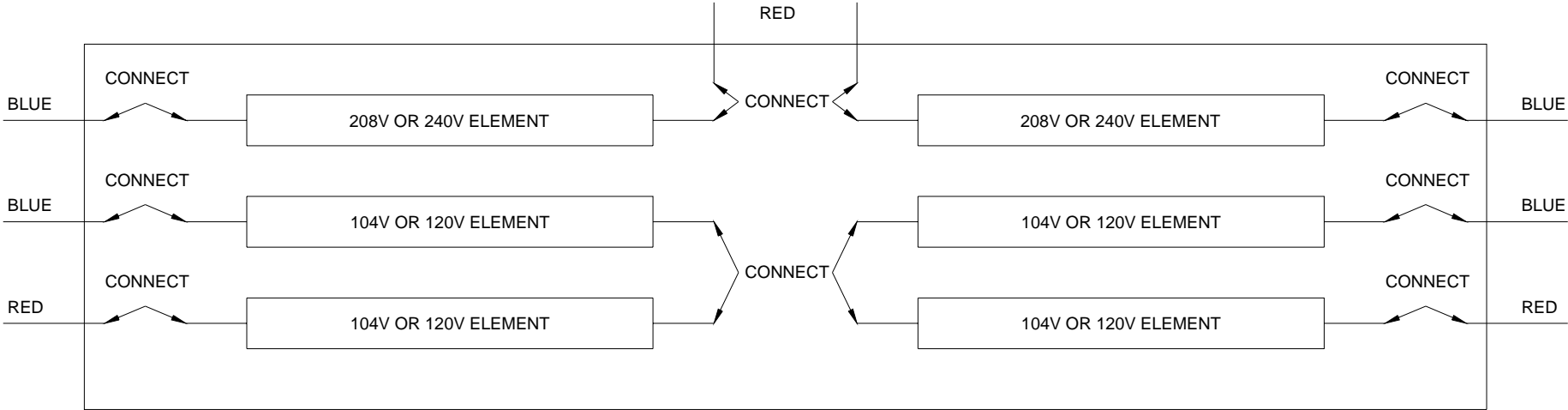
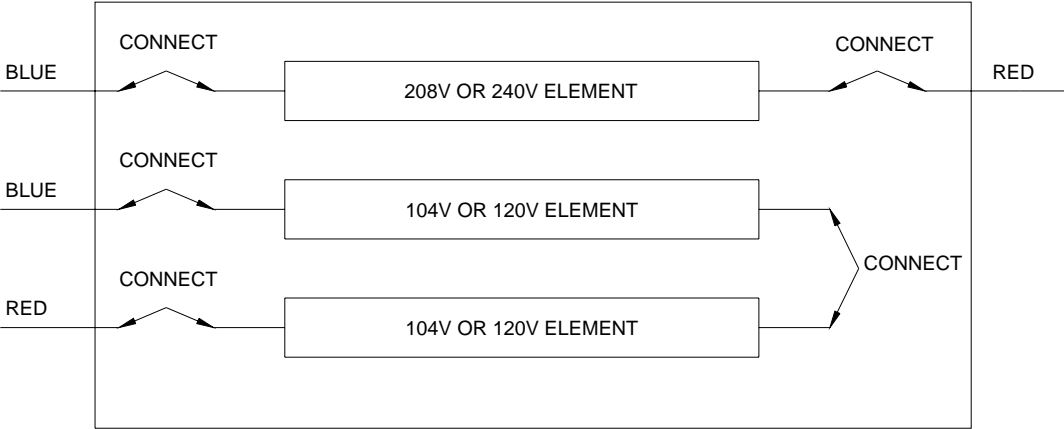
Place element with red or brown ceramic ends in the front and middle position and attach with a ceramic wire nut. (For element wiring see figures 1 and 2 on page 10).

Place element with white ceramic ends in the rear position.

Re-attach element bracket.

INSTALLATION CONT'D

FIGURE 1



MM48

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:

Power Switch: 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.

Automatic: 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.

Constant: 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 **Left** side only, or **Both** sides. This switch is found on Lang Model **MM48** 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.**

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.



Cleaning

- Always start with a cold melter.
- The stainless exterior can easily be cleaned using Lang Mfg. Prime Shine (72804-41) oven cleaner.
- Always follow the cleaner manufacturer's instructions when using any cleaner.
- The melter rack and interior may be cleaned using Lang Mfg. Foam Deluxe (72804-36) cleaner.
- Discoloration or heat tint may be removed using Lang Mfg. Carbon Release (72804-32) cleaner.
- 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 style="list-style-type: none">• Incorrect voltage• Defective power switch• Defective contactor• Defective heat switch• Defective element• Defective rack switch

TROUBLESHOOTING CONT'D

TEST

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
Incorrect Voltage	<ul style="list-style-type: none"> • Confirm that is voltage is correct* • Confirm that melter is phased correctly*
Defective Power Switch	<ul style="list-style-type: none"> • Check switch for proper operation*
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*
Defective Selector Switch	<ul style="list-style-type: none"> • Check switch for proper operation*
Failed Element	<ul style="list-style-type: none"> • Confirm that Elements are getting correct voltage and have continuity*
Defective Rack Switch	<ul style="list-style-type: none"> • 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.

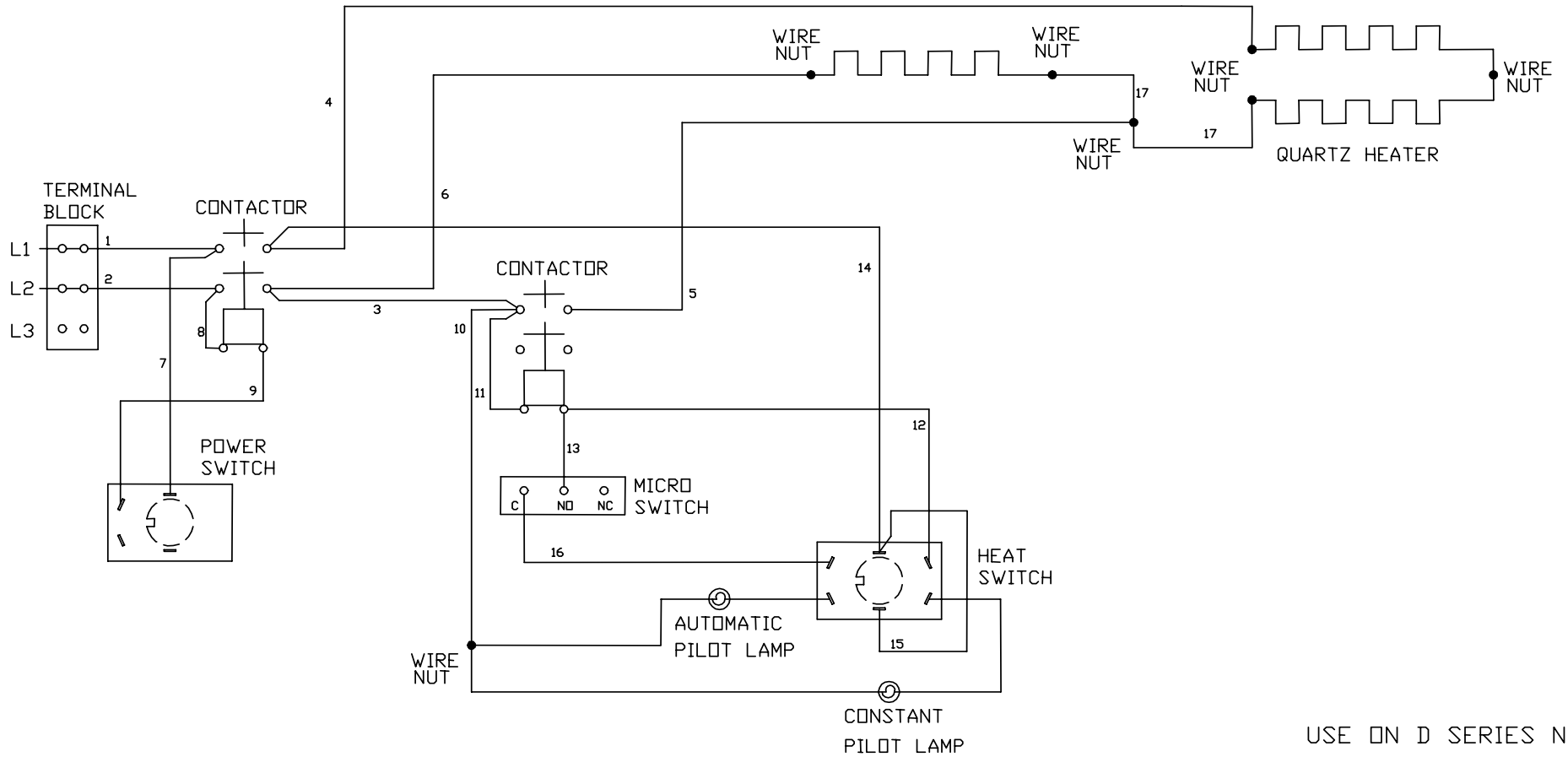


PARTS LIST

Electric Cheese Melter: MM24, MM36 & MM48

DESCRIPTION	PART NO.
Quartz Heater 208V 1200 Watts 2ft MM-24, 48	11160-15
Quartz Heater 240V 1200 Watts 2ft MM-24, 48	11160-16
Quartz Heater 208V 1800 Watts 3ft MM36	11160-17
Quartz Heater 240V 1800 Watts 3ft MM36	11160-18
Quartz Heater 104V 1200 Watts 2ft MM-24, 48 (Front 2 Only)	11160-19
Quartz Heater 120V 1200 Watts 2ft MM-24, 48 (Front 2 Only)	11160-20
Quartz Heater 104V 1800 Watts 3ft MM36 (Front 2 Only)	11160-21
Quartz Heater 120V 1800 Watts 3ft MM36 (Front 2 Only)	11160-22
Switch Toggle On-Off	30303-06
Terminal Block 3 Pole	30500-09
Contactors 3 Pole 208/240 VAC	30700-05
Contactors 2 Pole 208/240 VAC	30701-02
Pilot Light 208/240V 6" Lead Black Body	31601-01
Rack for MM-24	50200-13
Rack for MM-36	50200-14
Rack for MM-48	50200-15
Tube Guard Quartz Heaters MM-24, 48	50201-03
Tube Guard Quartz Heaters MM-36	50201-04
Micro Switch Assembly	51100-12
Control Panel Label MM-24	60700-02
Control Panel Label MM-36	60700-03
Control Panel Label MM-48	60700-04
Reflector MM-24, 48	60102-30
Reflector MM-36	60102-04
Shelf Pivot	2J-MM-166

WIRING DIAGRAM MM24 & MM36

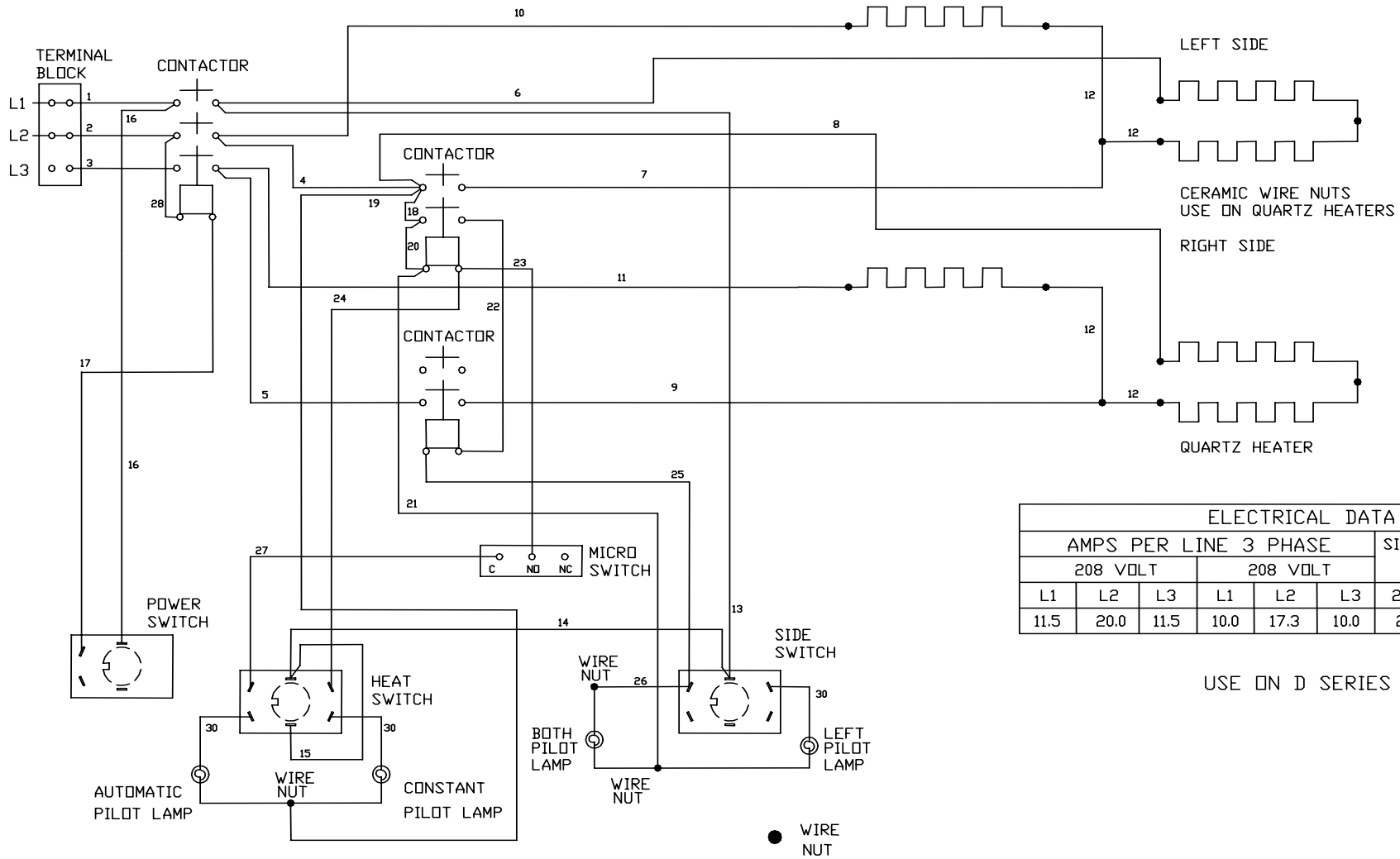


USE ON D SERIES NO.

ELECTRICAL DATA			
MODEL	KW	AMPERES	
		208V	240V
MM24	2.4	11.5	10.0
MM36	3.6	17.3	15.0

TO SINGLE PHASE
MOVE WIRE 3 TO L1

WIRING DIAGRAM MM48



ELECTRICAL DATA								
AMPS PER LINE 3 PHASE						SINGLE PHASE		TOTAL KW
208 VOLT			208 VOLT			AMPS		
L1	L2	L3	L1	L2	L3	208V	240V	
11.5	20.0	11.5	10.0	17.3	10.0	23.1	20.0	4.8

USE ON D SERIES NO.