



## **MODELS LMO-E-P, LMO-E-S, LMO-G-P & LMO-G-S**

**MINI ROTATING RACK OVEN**

**INSTALLATION, OPERATION & MAINTENANCE MANUAL**

**GAS OVENS: POST IN A PROMINENT LOCATION, THE INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE SMELL OF GAS IS DETECTED. THIS INFORMATION CAN BE OBTAINED FROM THE LOCAL GAS SUPPLIER**

**RETAIN THIS MANUAL FOR FUTURE REFERENCE**

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# READ FIRST

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

	<b>WARNING</b>	DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.	
	<b>WARNING</b>	IMPROPER INSTALLATION, ADJUSTMENT, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.	
	<b>CAUTION</b>	ALWAYS KEEP THE AREA NEAR THE APPLIANCE FREE FROM COMBUSTIBLE MATERIALS.	

This LBC Rotisserie was manufactured to rigid standards. The appliance has been tested and is listed by Intertek Testing Services (ETL Semko) and meets applicable safety and sanitation standards.

- A) The **responsibility of the manufacturer** is to supply suitable, comprehensive instructions and recommendations for proper operation and maintenance.
- B) All operations, maintenance and repair of this or any LBC Bakery Equipment appliance must be performed by properly trained and qualified personnel, and all such operations, maintenance and repair must be performed in a diligent manner. It is the **responsibility of the owner/operator** to ensure proper training and diligence of any person coming into contact with either the subject units or the output (product, fumes or otherwise) of the subject units. It is the **responsibility of the owner/operator** to ensure that the subject units are installed and operated in accordance with OSHA Standard 1910.263.
- C) A regular periodic program of cleaning, inspection and maintenance must be established, and comprehensive maintenance records maintained. It is the **sole responsibility of the owner/operator** to establish, schedule and enforce the frequency and scope of these programs in keeping with recommended practice and with due consideration given to actual operating conditions.
- D) The appliance must be operated within limits which will not exceed its working limits. It is the **responsibility of the user** to operate this appliance in accordance with the rules and limits described in this manual and the published product specification sheet, and in accordance with the directions and instructions of the owner/operator of the appliance or employer, and in accordance with applicable federal, state and local laws and ordinances.

# **TABLE of CONTENTS**

Read First .....	2
Lighting and Shutdown – Gas Ovens .....	4
Conditions of Installation .....	5
Dimensions and Utility Connections .....	7
Installation .....	8
Startup Procedure and Check List .....	13
Using the Control .....	16
Schematics .....	20
Illustrated Parts List .....	24
Notes .....	32
Warranty .....	33

# ***LIGHTING and SHUTDOWN – GAS OVENS***

## **Lighting Instructions**

### **Daily use**

1. Press the “Power” button to turn the oven on. Close the oven door.
2. Set the oven temperature to the desired operating temperature by pressing the up or down arrow buttons next to the “Set Temperature” display.

### **After Long-term shut-down**

1. Turn on the gas supply to the oven.
2. Lift the gas valve access door located below the control panel. Switch the gas valve “ON.”

## **Shut-Down Instructions**

### **Daily Use**

1. Press the “Power” button to turn the oven off.

### **Long-term shut-down**

1. Lift the gas valve access door located below the control panel and switch the gas valve to “OFF” position.
2. Turn off the gas supply to the oven.

# **CONDITIONS of INSTALLATION (Part 1 of 2)**

LBC Bakery Equipment shall, for a fee contingent on site location and provided the conditions of installation are met, provide a factory-authorized service agency to install the LBC Rotisserie. The job site must be ready for the installation before LBC Bakery Equipment or its authorized agent arrives. If the installation site is not properly prepared or if there are construction delays, the customer shall be responsible for all expenses incurred during this delay. All expenses resulting from job delay or extension, for reasons beyond the control of LBC Bakery Equipment, shall be the responsibility of the customer. Installation shall be conducted during normal business hours. This installation is for a single trip. **Start-up and training are not included.**

**IN ALL CASES, THE ELECTRICAL, WATER AND DRAIN CONNECTIONS AND VENTILATION MUST MEET ALL FEDERAL, STATE AND LOCAL CODES OR ORDINANCES.**

It is the **responsibility of the owner/operator** to do the following:

- A. Secure all required permits and meet all local code requirements.
- B. Ensure the installation site is cleared and ready for installation before the authorized installer arrives on site. The site shall be smooth and level.
- C. Provide electrical utilities within five (5) feet of the installation location per the specifications provided by LBC Bakery Equipment
- D. Provide licensed trades person to make the final electrical and water connections.
- E. Provide adequate ventilation, including vented hoods and associated roof penetrations.
- F. Remove all packing materials, crates, etc. resulting from the installation.
- G. Provide any sheet metal work required by local codes or otherwise to bridge gaps between appliance and adjacent walls or other building structures.

**Installation of this equipment must be performed by an authorized service representative. Prior to installation verify that all electrical and gas supplies coincide with the manufacturers data label located on the right side below the service panel.**

## **Inspection and Uncrating**

Upon receipt of shipments, all packages should be inspected, and all visible or concealed damages noted and signed for on the bill of lading. Any other damages should be reported to the carrier within 10 days. Freight damages are the responsibility of the consignee.

All orders for replacement products resulting in freight damages will be processed under LBC's standard terms. Any reimbursement or credit is the responsibility of the freight carrier.

Carefully unpack the oven and place it in a work area as near to the final installation position as possible.

# CONDITIONS of INSTALLATION (Part 2 of 2)

The LMO oven ships with the following items please inspect your shipment to ensure that these items were included.

- LMO Oven Rack
- Decorative hood front, sides and back pieces

If moving the oven through a 36" door opening it will be necessary to remove the oven door, door latch, door hinges decorative valance and the rear panel.

## Location

This appliance is **not intended for outdoor use**. This appliance is **not intended for residential use**. This appliance is intended for commercial use in locations suitable for use as listed in this manual.

Clearances to combustible and non-combustible construction: 0" from back, sides and top.

This appliance is suitable for installation on combustible floors.

## Installation Codes

**For US Installation:** The LMO oven must be installed in accordance with all State and local codes as well as the National Electrical Code, ANSI/NFPA-70 (latest edition). Gas ovens must be installed in accordance with the National Fuel Gas Code, ANSI-Z223-1/NFPA 54 (latest edition).

**For Canadian installation:** The LMO oven must be installed in accordance with all local codes. Gas ovens must be installed in accordance with the CAN/CGA-B149.1 National Gas Installation Code

**Gas Ovens:** The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at pressures in excess of ½ psi.

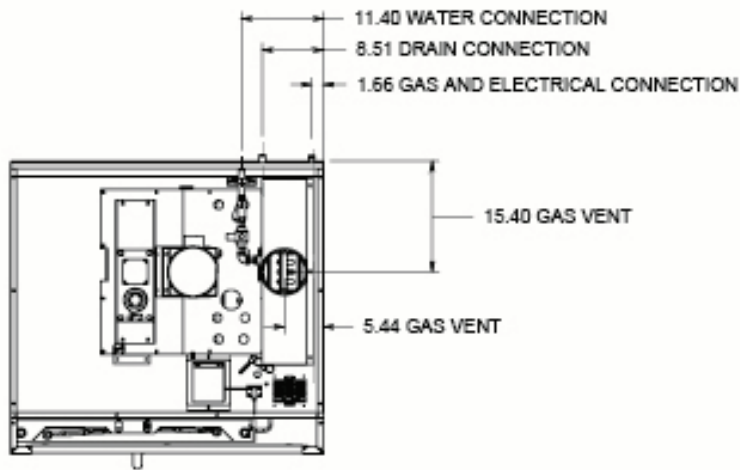
**Gas Ovens:** The appliance must be isolated from gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than ½ psi.

## Model Number Coding

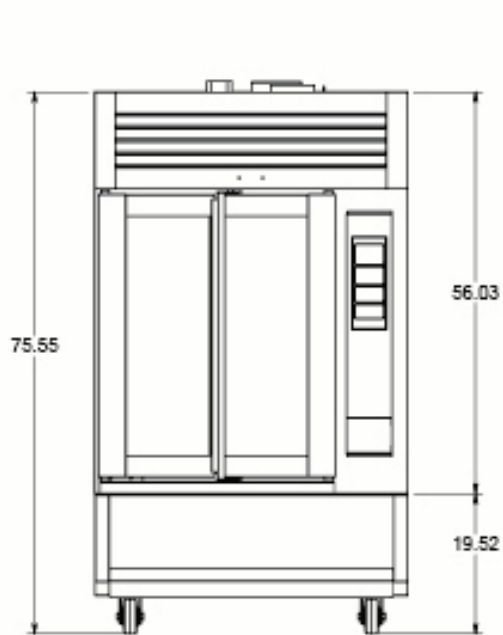
**Electric Oven Number Format: LMO-EX-Y-Z**, where **X** = rack size (use **6** for 6-pan rack, **8** for 8-pan rack), **Y** = voltage (use **-208** for 208V, **-240** for 240V and **-480** for 480V) and **Z** = base (use **-S** for stand, **-P** for proofer base). Example: LMO-E8-480-P is a 480V electric oven with an 8-pan rack and proofer base.

**Gas Oven Number Format: LMO-GX-Y-Z**, where **X** = rack size (use **6** for 6-pan rack, **8** for 8-pan rack), **Y** = gas type (use **-N** for natural gas, **-LP** for propane gas) and **Z** denotes the base (use **-S** for stand, **-P** for proofer base). Example: LMO-G6-N-S is a natural gas oven with a 6-pan rack and stand.

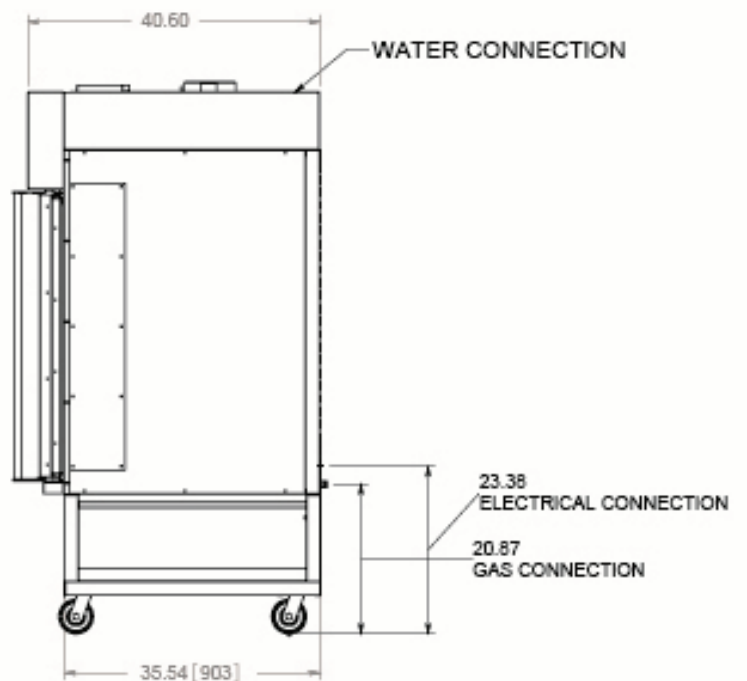
# ***DIMENSIONS and UTILITY CONNECTIONS***



**TOP VIEW**



**FRONT VIEW**



**SIDE VIEW**

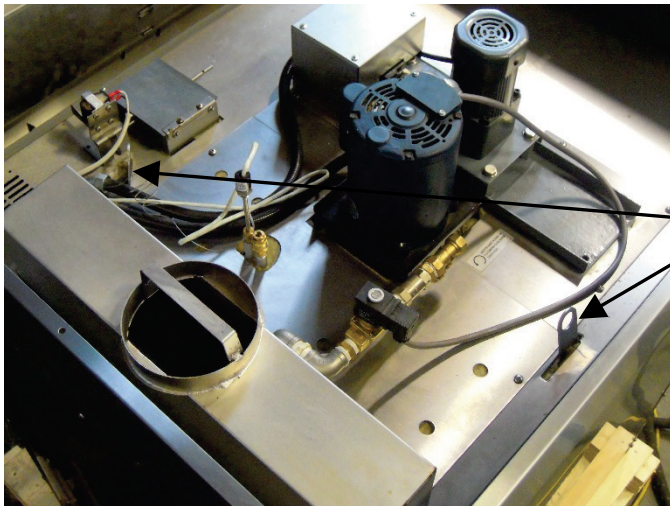
# INSTALLATION (Part 1 of 6)

## WARNING:

All gas ovens must be mounted on a stand or proofer base. DO NOT mount directly to a solid surface as the combustion air intake is from the bottom side of the oven.

## Installing Casters

If your LMO oven is mounted on a stand, install casters using the supplied fasteners. With the oven still on the shipping pallet, slide forward and install the two front locking casters. Move the oven with stand forward again onto a pallet truck. Lift the oven with stand from the pallet and install the two rear casters. Lift the oven only at the lift points shown in illustration.



**Lifting Points.** Use adequate material handling equipment to lift the oven into place. NOTE: Oven weight is 1100 lbs.

## Oven Location

### WARNING:

Install oven on a surface adequate to support the weight of the appliance.

See the Dimensions and Utility Connections section of this manual for oven dimensions. Select a location with a smooth level surface and with adequate room to operate the appliance. If the oven mounting surface is not level, loosen the caster bolts and shim with washers above the caster plates until the oven is level. Re-tighten the caster bolts.

## Gas Ovens: Gas Supply Connections

Verify that the gas type supplied to the oven matches the gas type listed on the oven's data label. The gas supply line must be at least the equivalent of 3/4" iron pipe. Ensure the pipes are free and clear of any dirt or obstruction. Corrugated lines must not be used.

Codes require installation of a gas shutoff valve in the gas line ahead of the oven.



## **INSTALLATION (Part 2 of 6)**

See the Dimensions and Utility Connections section of this manual for gas connect point location. Connect the gas supply line to the 3/4" NPT gas connection located at the rear of the oven. If the oven is supplied with a flexible gas line, secure it to the oven and wall per the manufacturer's specifications.

Use only connectors that comply with the *Standard for Connectors for Movable Gas Appliances, ANZI Z21.69* or *Connectors for Movable Gas Appliances, CAN/CGA-6.16* with quick-disconnect devices that comply with the *Standard for Quick-Disconnect Devices for Use with Gas Fuel, ANZI Z21.41* or *Quick Disconnect Devices for Use with Gas Fuel, CAN 1-6.9*.

### **WARNING:**

**Gas supply connections and any pipe joint compound must be resistant to the action of natural and propane gases.**

Check the incoming gas pressure before the gas valve. Pressure must remain between 5 to 14 inch W.C. for natural gas and 11 to 14 inch W.C. for propane gas - both with and without the burner firing.

### **Gas Ovens: Gas Type Conversion**

1. Shut off the gas supply to the oven. Remove the bottom burner cover and the side access cover.
2. Disconnect the gas line at the top of the gas valve. Remove the four extended nuts at the bottom of the burner assembly. Lower the burner out of the oven.
3. Remove the 15 orifice marked "65". Use gas-approved Teflon tape to seal the orifices.
4. Replace the burner. Reconnect the gas line and replace the covers.
5. Check for leaks.
6. Operate the burner. Adjust the gas manifold pressure to 5" W.C. Supply pressure must remain between 11 to 14 inch W.C. for propane gas - both with and without the burner firing.
7. Apply proper labeling to indicate (a) the correct gas type and (b) the pressure requirements on the data plate and at the gas connection point.

### **Electrical Connections**

#### **WARNING:**

**This appliance, when installed, must be electrically grounded in accordance with local codes, or in the absence of local codes, with *National Electrical Code, ANSI/NFPA 70* or the *Canadian Electrical Code, CSA C22.2*, as applicable.**

#### **WARNING:**

**Gas Ovens: Do not connect oven to electrical supply until after gas connections have been made.**

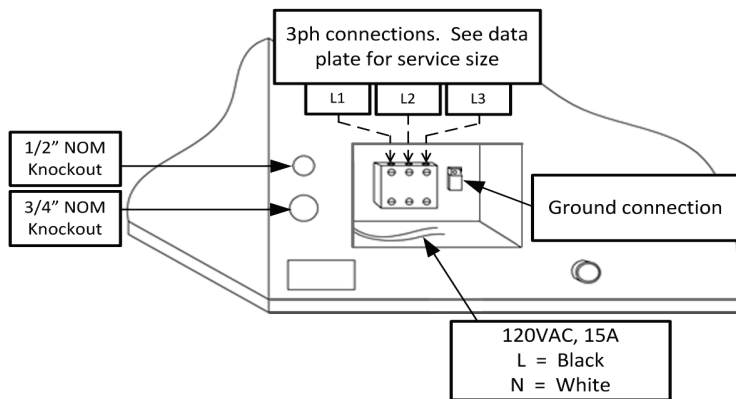
# INSTALLATION (Part 3 of 6)

See the Dimensions and Utility Connections section of this manual for oven electric connect-point locations. Power can be connected at the electrical knockout holes in the oven. A flexible conduit or cord is required. Provide sufficient length to allow the oven to be moved for cleaning without applying tension to the connections.

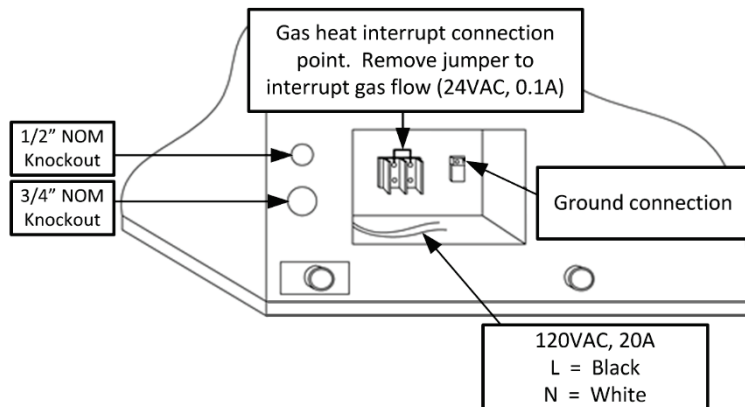
**Electric Ovens:** Ensure that electrical supply matches voltage listed on the ovens data label. All electric models require a 110/120V, 60Hz, 20A power supply as well as one of the following electrical supplies.

Volts	Phase	kW	Amps			MCA	MOP
			L1	L2	L3		
208	3	12.5	39	26	39	50	60
240	3	12.5	30	30	30	40	50
480	3	12.5	15	15	15	20	30

Route electrical supply through knockout at rear of oven. Connect supply high voltage to terminal block located within electrical control compartment at right rear side of oven and low voltage (120VAC) to the black and white wires as shown.



**Gas Ovens:** All gas models are provided with a 6 ft power supply cord. The oven requires a dedicated 110/120V, 60Hz, 20A single phase power supply with ground. *Note: The Commonwealth of Massachusetts requires that gas flow must be prohibited when exhaust hood is not operational. If installing oven in Massachusetts, or where a hood interface is required, remove the jumper wire from the two-pole terminal block and connect the two wires from the hood sensing switch there.*



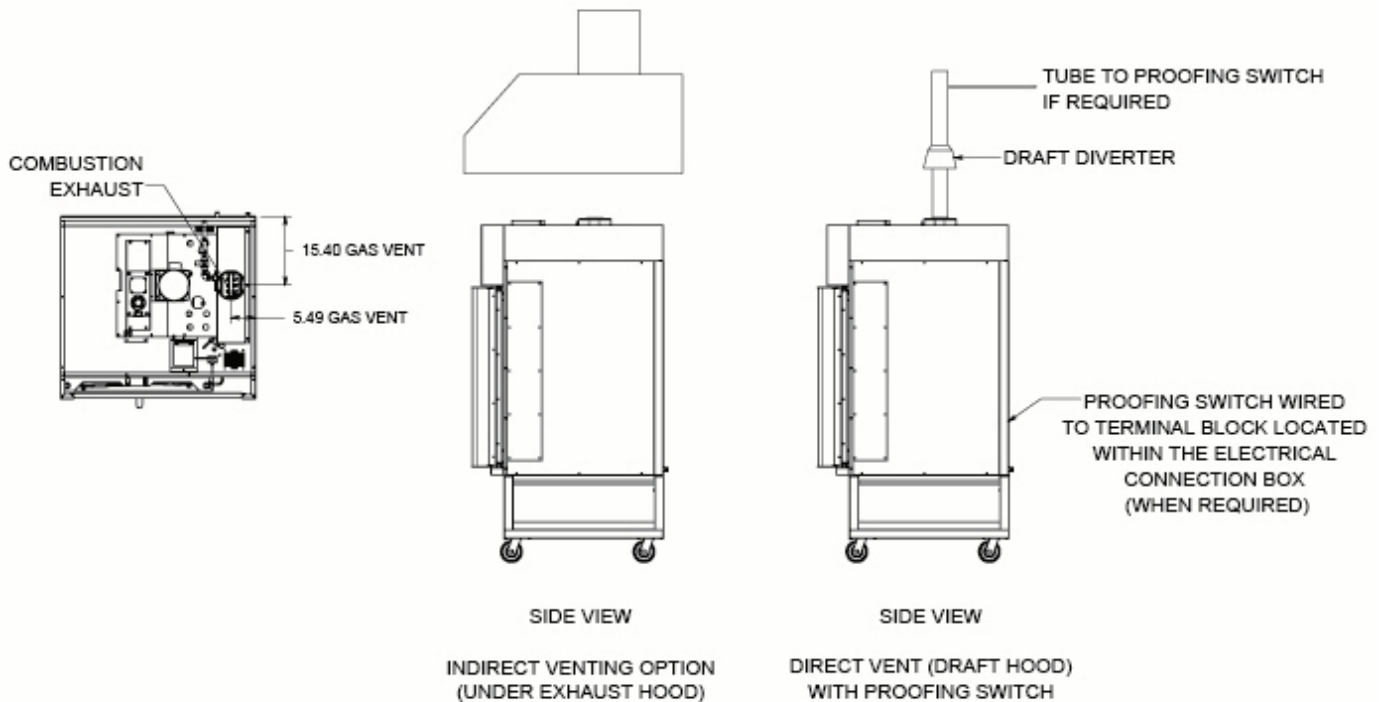
# INSTALLATION (Part 4 of 6)

## Venting

Ventilation requirements vary with each installation and must comply with applicable portions of the *National Fire Protection Association Standard 96* as well as all State and local codes.

Install the exhaust fan interlock. A connection point (5A max) is provided for indirect venting (standard exhaust hood). Connect point is located in the electrical connection box at right rear side of oven. Consult local codes for vent interlock requirements.

**Indirect venting** (standard exhaust hood): Position the oven under the hood with adequate overhangs and exhaust rates to completely capture the byproducts of combustion discharged from the flue. See illustration below. From the termination of the flue to the filters of the hood venting system a clearance of 18" must be maintained. The exhaust hood fan can be directly interlocked to the oven. Refer to the Wiring Diagrams of this manual for terminal location.



# INSTALLATION (Part 5 of 6)

## Water Connections

**WARNING:**  
Plumbing connections must comply with applicable Sanitary, Safety and Plumbing Codes.

See Dimensions and Utility Connections section of this manual for water connect point location. Oven water supply should have a hardness of 4-6 grains per gallon, a pH of 6.5-8.0 and chlorides of less than 30 ppm. Water conditions outside of these parameters may void the warranty. Consult your local water company and or water condition dealer before connecting water supply to oven.

Connect cold water supply to 1/2" NPT fitting located at rear of the oven. Use a 6 ft or longer flexible water line.

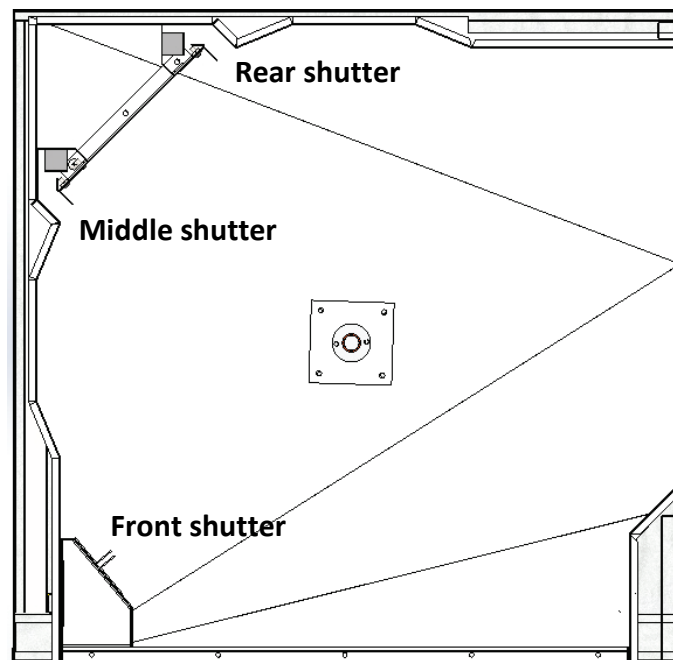
If your oven is used with a proofer insert, it is recommended that a separate water line is provided.

## Drain Connections

See Dimensions and Utility Connections section of this manual for drain connect point location. Connect a 1/2" drain line to 1/2" NPT drain connector located at rear of oven. Route drain line to floor drain allowing a minimum 1" air gap between drain line outlet and floor drain.

If your oven is used with a proofer insert, it is recommended that a separate drain line is provided.

## Shutter Settings



Top View of Oven Interior

# INSTALLATION (Part 6 of 6)

Position	Front Shutter			Middle Shutter			Rear Shutter		
	inch	mm	Fraction	inch	mm	Fraction	inch	mm	Fraction
1 (top)	0.32	8	5/16	0.25	6	1/4	0.38	10	3/8
2	0.18	5	3/16	0.29	7	9/32	0.38	10	3/8
3	0.15	4	5/32	0.18	5	3/16	0.32	8	5/16
4	0.15	4	5/32	0.21	5	3/16	0.32	8	5/16
5	0.18	5	3/16	0.21	5	3/16	0.29	7	9/32
6 (bottom)	0.25	6	1/4	0.41	10	13/32	0.41	10	13/32

## Shutter Settings

### Appliance Restraint

Adequate means must be provided to limit the movement of the appliance.

# STARTUP PROCEDURE and CHECK LIST (Part 1 of 3)

**LMO START-UP FORM:** This form **MUST BE SIGNED & RETURNED** to LBC via Email to [service@lcbakery.com](mailto:service@lcbakery.com) or **FAX 425-642-8310**, in order for the Customers Warranty to take effect.

**\*\*REQUIRED TOOLS/METER:** manometer, multi-meter, amp clamp, combustion meter/gas analyzer, 6' ladder, variety of standard & metric hand tools (including allen wrenches)

## LMO Oven Inspection Procedure

**Specifics**    Serial Number \_\_\_\_\_  
 Model Number \_\_\_\_\_  
 Location Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City, State \_\_\_\_\_

**Photos:**    **(Attach the following Photos to this inspection):**

Any visible damage \_\_\_\_\_  
 Data plate \_\_\_\_\_  
 Power Connection in the oven connection box \_\_\_\_\_  
 Water Supply (filter, RO system or softener) \_\_\_\_\_  
 Gas Supply \_\_\_\_\_  
 Pipe \_\_\_\_\_



**Location Details:**

Oven on Non-combustible floor?    Y \_\_\_\_\_    N \_\_\_\_\_    **If No, CORRECTED?** \_\_\_\_\_  
 Is the oven Level?    Y \_\_\_\_\_    N \_\_\_\_\_    \_\_\_\_\_

**AS FOUND**

**If No, CORRECTED?**

# STARTUP PROCEDURE and CHECK LIST (Part 2 of 3)

## Oven Type:

Gas \_\_\_\_\_ Nat \_\_\_\_\_ Prop. \_\_\_\_\_  
Electric (Voltage)      208 Volts \_\_\_\_\_ 240 Volts \_\_\_\_\_ 480 Volts \_\_\_\_\_

## Install Quality:

Supply voltages: Dedicated 120 VAC, 15Amp Max Rating      Y \_\_\_\_\_ N \_\_\_\_\_ \_\_\_\_\_

Water Connection: No leaks? **(Fig. 1)**      Y \_\_\_\_\_ N \_\_\_\_\_ \_\_\_\_\_

Gas Connection: No leaks? **(Fig. 2)**      Y \_\_\_\_\_ N \_\_\_\_\_ \_\_\_\_\_

Drain Connection: Properly connected and  
to an air-gap drain? **(Fig. 3)**      Y \_\_\_\_\_ N \_\_\_\_\_ \_\_\_\_\_

If hood interlock is required; confirm proper connection and  
hood power switch is properly labeled      Y \_\_\_\_\_ N \_\_\_\_\_ \_\_\_\_\_

## Functional Check: Turn on power to oven.

Press power button on control. Unit turns on?      Y \_\_\_\_\_ N \_\_\_\_\_ \_\_\_\_\_

Interior lights turn on when the door is opened?      Y \_\_\_\_\_ N \_\_\_\_\_ \_\_\_\_\_

Blower motor rotation: Counter-Clockwise when viewed  
from top? **(Should be CCW)**      Y \_\_\_\_\_ N \_\_\_\_\_ \_\_\_\_\_

Rack starts to rotate smoothly?      Y \_\_\_\_\_ N \_\_\_\_\_ \_\_\_\_\_

### Burner test:

Set to 125° F. (Temp starts to rise within a  
minute?):      Y \_\_\_\_\_ N \_\_\_\_\_ \_\_\_\_\_

**(If temp does not start to rise, Call  
LBC)**

Supply side gas pressure when burner is running?      \_\_\_\_\_ WC \_\_\_\_\_

**(If less than 5" and greater than 14", Call LBC)**

Set to 300° F. Minutes to go from 150° to 250° F?      \_\_\_\_\_ Mins

### Combustion Test:

Set to 350° F. **Wait one minute:**

**Check Carbon Monoxide for 1 minute.**      CO \_\_\_\_\_ PPM

**(If greater than 75 PPM, Call LBC)**

### **Take Photo of CO Measurement.**

Check sensor VOLTAGE at test point:      \_\_\_\_\_ VAC

**(If Voltage is not between 3-6 VDC, call LBC)**

Steam Test - Confirm oven temp is at 350°F. Can you hear  
the solenoid open and water spraying? Any visible steam?      Y \_\_\_\_\_ N \_\_\_\_\_ \_\_\_\_\_

### Rack Stopping Position (Hot Oven):

Carrier Stops at the door when door is opened?      Y \_\_\_\_\_ N \_\_\_\_\_ \_\_\_\_\_

### Check Air-Gap settings on pressure panel.

Refer to settings in manual.      Y \_\_\_\_\_ N \_\_\_\_\_ \_\_\_\_\_

# STARTUP PROCEDURE and CHECK LIST (Part 3 of 3)

**Final Inspection:**

- |  |         |         |       |
|--|---------|---------|-------|
| Loading doors open/close freely past 90° without obstruction?      | Y _____ | N _____ | _____ |
| Doors open 1/2" to 1" before motor and rack Stops?                 | Y _____ | N _____ | _____ |
| Gas is on?   | Y _____ | N _____ | _____ |
| Electrical Is on?  | Y _____ | N _____ | _____ |
| Water is on?   | Y _____ | N _____ | _____ |
| Gaskets: Installed and seated correctly?                           | Y _____ | N _____ | _____ |
| No cracks or missing pieces?                                       | Y _____ | N _____ | _____ |
| All screws and electrical are tight? (If not, tighten down firmly) | Y _____ | N _____ | _____ |
| All plumbing connections are tight and do not leak.                | Y _____ | N _____ | _____ |

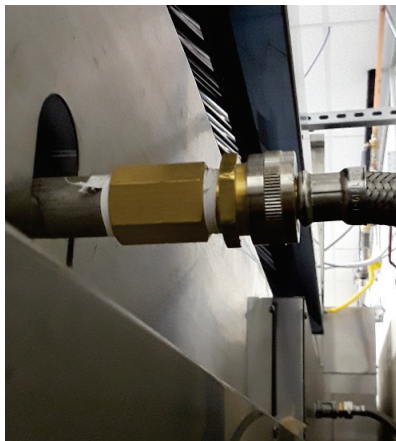


Fig. 1



Fig. 2

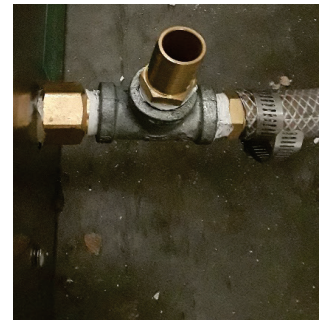


Fig.3

**FOR TECHNICAL SUPPORT, CALL LBC: 888-722-5686 x1**

Name: \_\_\_\_\_ Company: \_\_\_\_\_

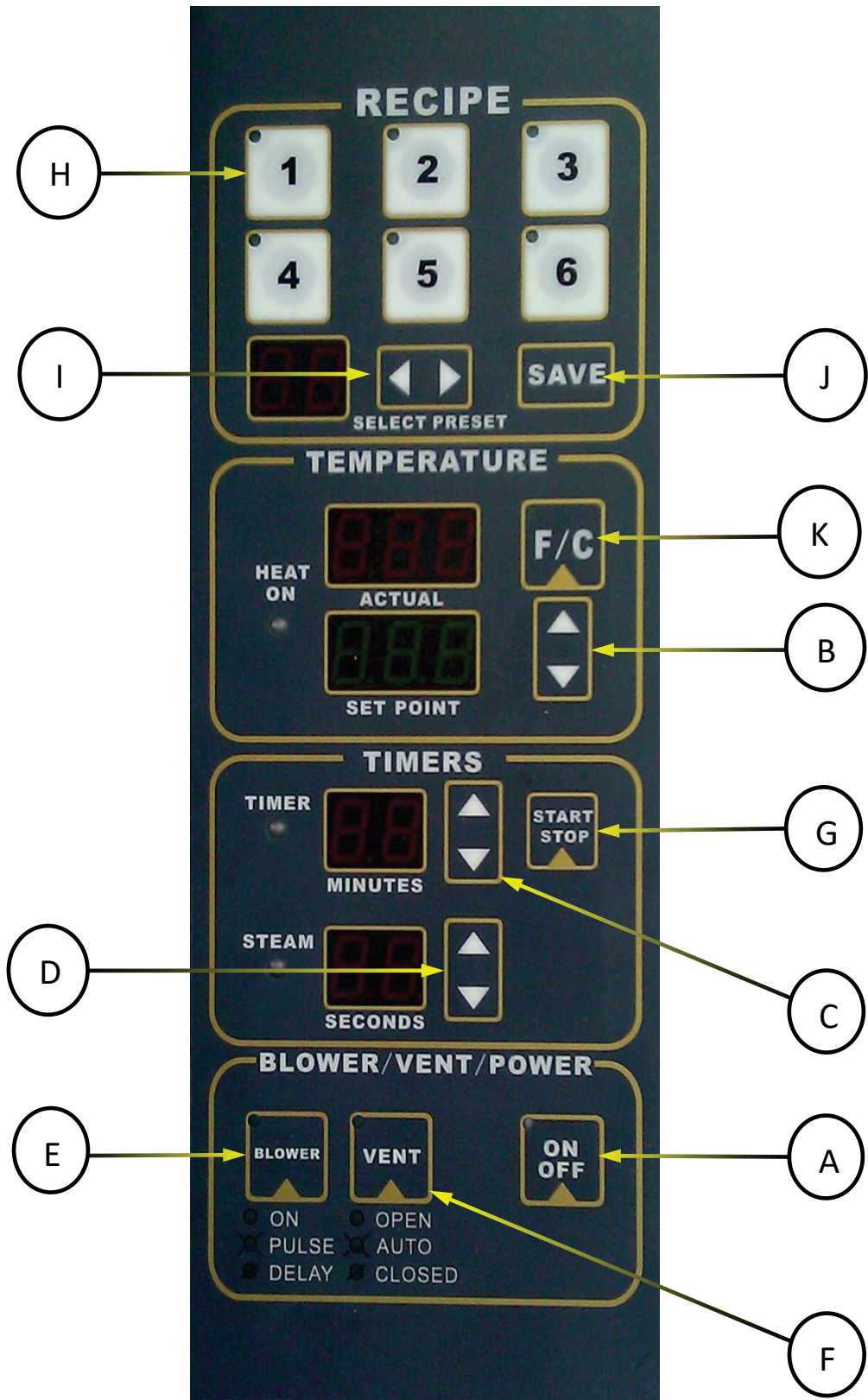
Signature: \_\_\_\_\_

Date: \_\_\_\_\_



# USING the CONTROL

## Digital Control (-70)





## **Digital Control (-70)**

### **Power On**

When power to the oven is on and all circuit breakers are turned on, the green LED in the corner of the “On/Off” button will be lit. To turn the oven on, press the “On/Off” button (A). The display will light up and indicate that the control and the oven are on. If the oven door is closed, the oven will begin to heat to the temperature indicated in the “Set Point” display.

### **To set the Temperature**

Use the up and down buttons (B) next to the “Set Point” display to set the oven to the desired temperature. This temperature can be adjusted at any time. The oven will heat or cool to this set point. The actual temperature will fluctuate up and down about the set point as indicated in the “Actual” temperature display. Note: Allow the oven to operate for one hour at the desired temperature before you begin to bake.

### **To set the Bake Timer (Normally set in minutes)**

Use the up and down buttons (C) next to the timer display to set the bake time. This timer indicates the remaining time in the bake and can be adjusted at any time. The display will show the remaining time in full minutes. An example of this is that if the time is set to 1 minute, it will show 1 minute as it counts down to zero seconds.

The time can also be set to less than one minute or up to 59 seconds. To choose seconds, press the down button that is to the right of the time display until it reaches zero minutes. Continue to hold the down button for an additional 5 seconds. The display will change to show a time of 01 with a decimal point showing. This indicates one second. Press the up button to increase the time up to 59 seconds. Increase the time setting to greater than 59 seconds to return to full minute settings.

### **To set the Steam Timer**

Use the up and down buttons (D) next to the steam timer display to set the steam time. Note that the steam time is limited by preset parameters in the control. This timer indicates the remaining time in the steam event. When the steam event is complete, the steam timer display will indicate “\_”.

### **To set the Blower Functions**

The blower button (E) selects the way the circulation blower will operate during the bake. There are three options: 1) “ON” will cause the blower to operate at all times while the oven is baking except during the time that the steam timer is counting down. 2) “PULSE” will cause the blower to turn on and off during the bake cycle to slow the baking process down. 3) “DELAY” will cause the blower to

stay off for the first 90 seconds after the start button is pressed. Note that this function will be locked out if the control is configured with the programming limitation feature turned on.

### **To set Vent Functions**

The vent button (F) selects the way the vent will operate during the bake. There are three options: 1) "OPEN" will cause the vent to be open all times while the oven is baking except during the time that the steam timer is counting down. 2) "AUTO" will cause the vent to open during the last third of the bake cycle. 3) "CLOSED" will cause the vent to stay closed through the entire bake cycle. Note that this function will be locked out if the control is configured with the programming limitation feature turned on.

### **To start the Bake Timer**

Press the "START/STOP" button (G) to start the bake after loading the oven with the rack of product. The loading door must be closed for the bake timer to start. Once the start button is pressed, the steam time will count down if the steam time is set. If the loading door is opened, the bake timer and steam timer will pause. The timers will resume automatically when the door is closed.

### **End of Bake Alarm**

When the time has run out, the time display will show two dash lines. The timer alarm will sound. You may add time to the bake by pressing the up button (C) in the timer display. The timer will automatically resume. You may also press the "START/STOP" button (G) to silence the alarm and then adjust the time. If you press the "START/STOP" button (G) again, the displays will reset to the original bake time and steam time. You may also open the door to silence the alarm and check the baking progress.

### **Selecting Preset Recipes**

To select a preset recipe, press the left and right buttons next to the "SELECT PRESET" display (I). The preset that is shown will be the recipe that will be operating when the "START/STOP" button (G) is pressed. Note: if the control is configured for Step Recipe operation, the six buttons above the "SELECT PRESET" will indicate the step that is being executed (see Step Recipe Operation for specific instructions).

### **Saving a Preset Recipe**

A recipe may be saved as a preset recipe in the following manner. 1) Select the preset number (H) under which you want to save the recipe. 2) Enter all of the settings. 3) press the "SAVE" button (J) twice. Note that this function will be locked out if the control is configured with the Programming Limitation (PL) function turned on. In order to save a recipe, the programming limitations feature must be turned off to save and can then be turned on to prevent any changing the recipe.

### **Step Recipe Operation**

The control can be configured to operate in Step mode. In step mode, the control creates six sequential recipe steps and executes all six in order. The step mode is best utilized with preset recipes only.

### **Recipe Set-up in Step Mode**

When the step mode is turned on, the preset recipe is selected using the left and right buttons in the “SELECT PRESET” display. The step is selected using the six numbered buttons above the “SELECT PRESET” display.

### **To save a recipe with Step Mode on**

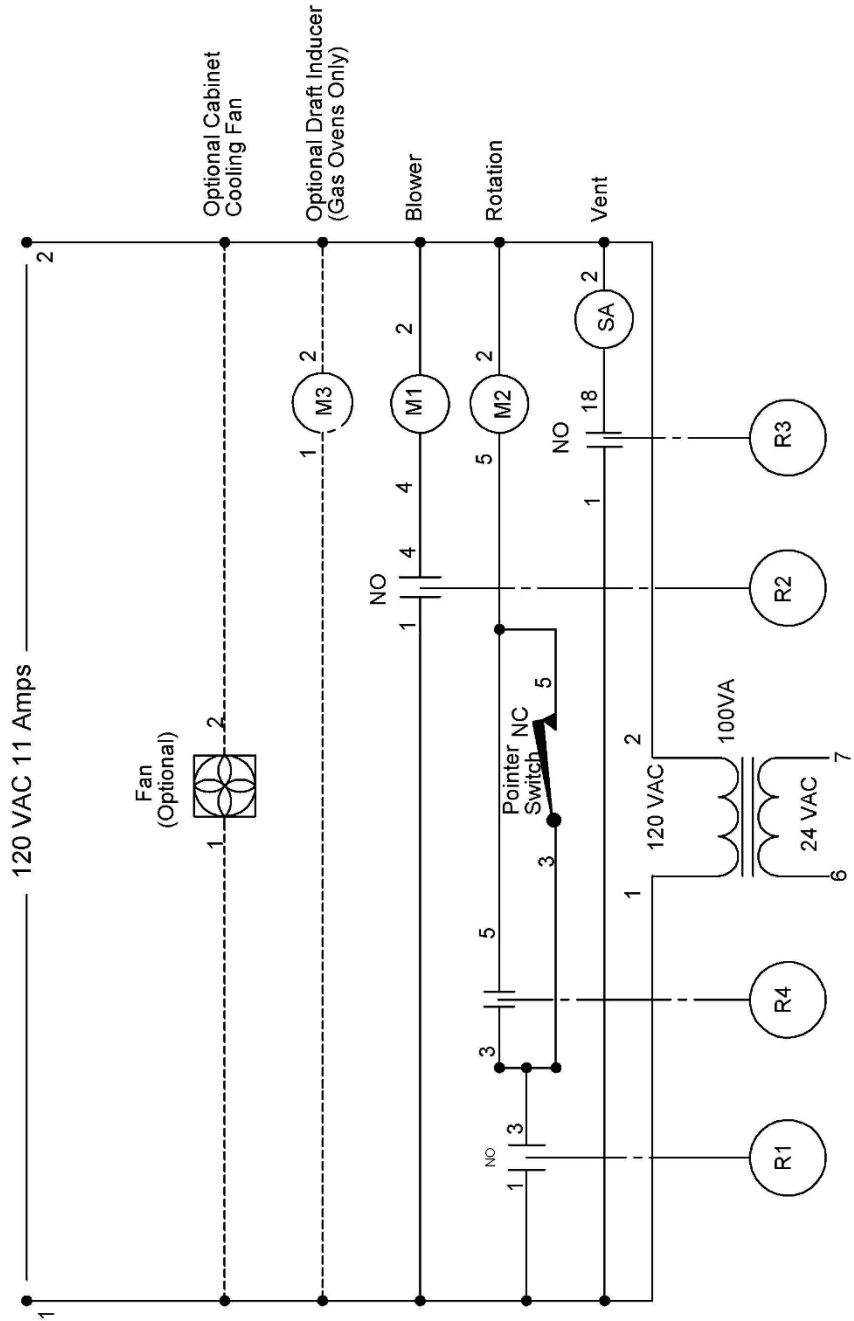
Select the recipe number you wish to program. Press step button 1 and enter the recipe parameters. Press step button 2 and enter the recipe parameters. Repeat this through all the steps. Make sure that you set the time to “00” in the steps you don’t want. Press the save button twice to save the recipe.

Note: When the oven is configured to operate in Step mode, all recipes must be programmed as steps, even if you only want one step. Be sure that the remainder of the steps have “00” time.

### **To Change between Degrees F and Degrees C**

The control can change from one temperature scale to the other. To change, simply press the button (K) marked “F/C”. The oven can also be configured to lock in either degrees F or degrees C.

# SCHEMATICS (Part 1 of 4)



See Page 2

## High Voltage Circuit

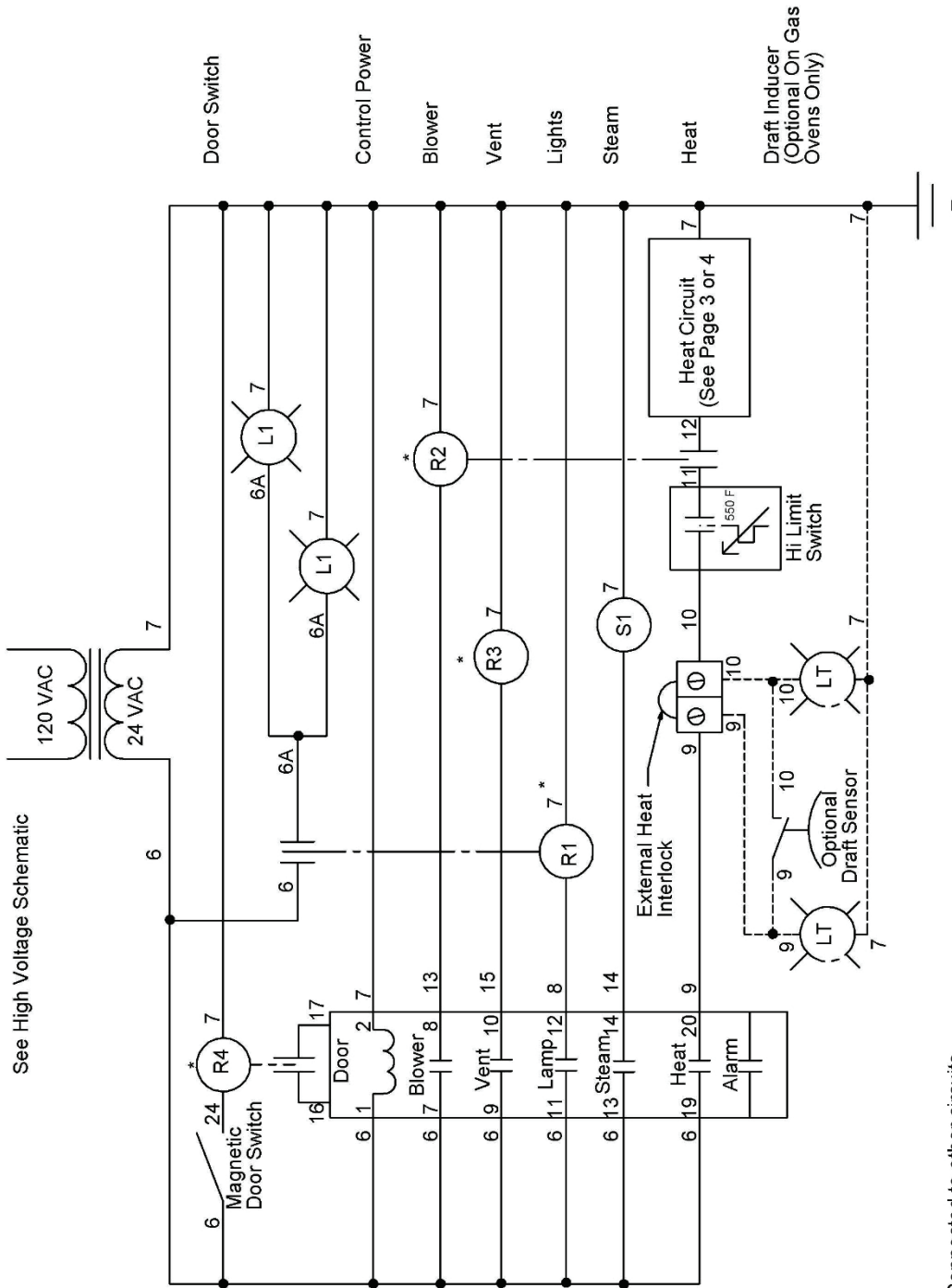


DESCRIPTION: Schematic for LMO Ovens

DWG. NO: 61111-180-1

REV: B

# SCHEMATICS (Part 2 of 4)



\* Connected to other circuits

## Low Voltage Circuit



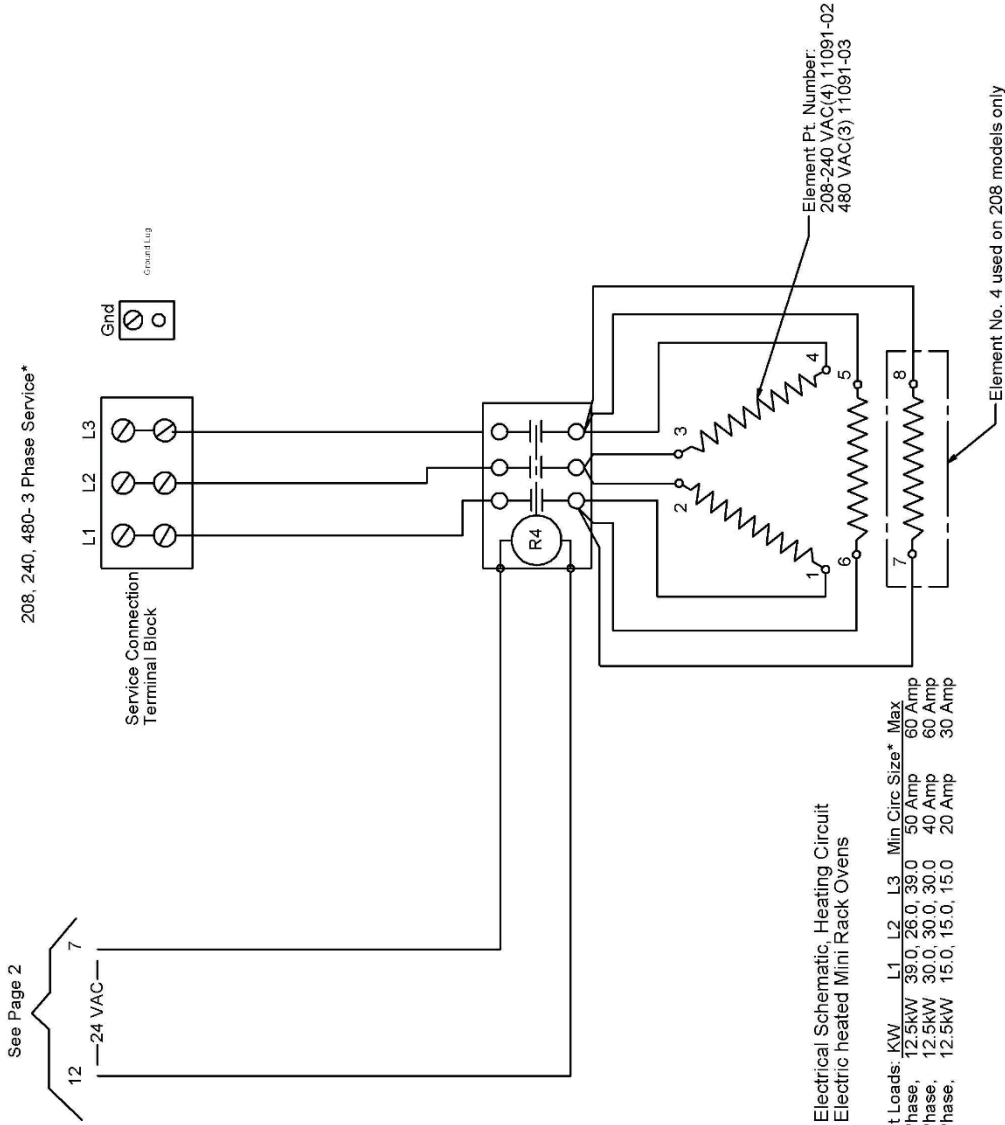
Bakery Equipment  
Everett WA

DESCRIPTION: Schematic for LMO Ovens

DWG. NO: 61111-180-1

REV: B

# SCHEMATICS – ELEC OVENS (Part 3 of 4)



Electrical Schematic, Heating Circuit  
Electric heated Mini Rack Ovens

Branch Circuit Loads, KW	L1	L2	L3	Min Circ Size*	Max
208 VAC, 3 Phase, 12.5KW	39.0	26.0	39.0	50 Amp	60 Amp
240 VAC, 3 Phase, 12.5KW	30.0	30.0	30.0	40 Amp	60 Amp
480 VAC, 3 Phase, 12.5KW	15.0	15.0	15.0	20 Amp	30 Amp

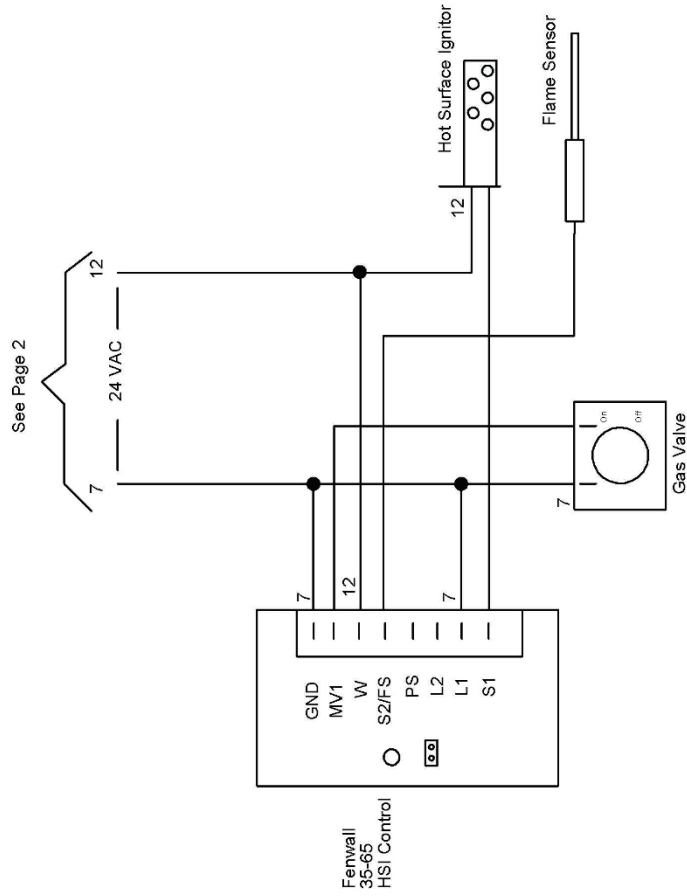
## Electric Heat Circuit

DWG. NO: 61111-180-1 REV: B

DESCRIPTION: Schematic for LMO Ovens



# SCHEMATICS – GAS OVENS (Part 4 of 4)



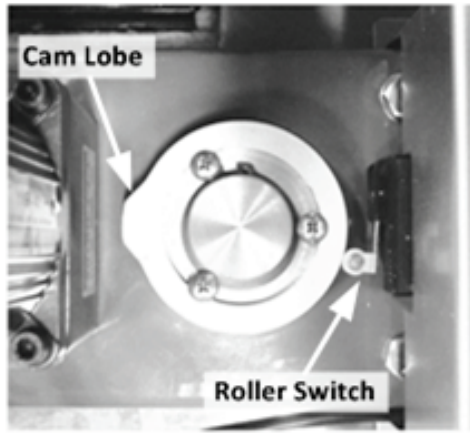
## Gas Heat Circuit

DWG. NO: 61111-180-1 REV: B

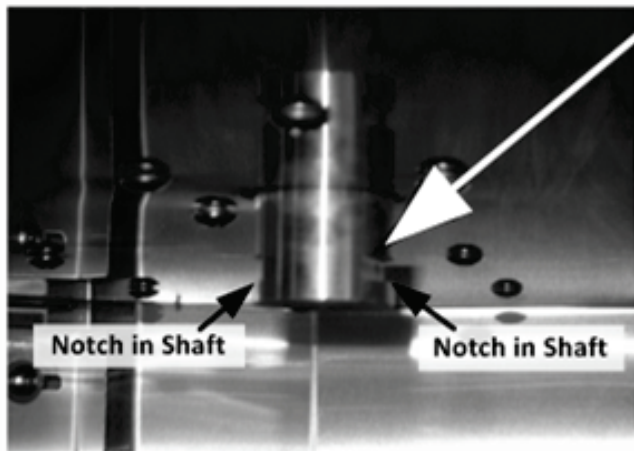
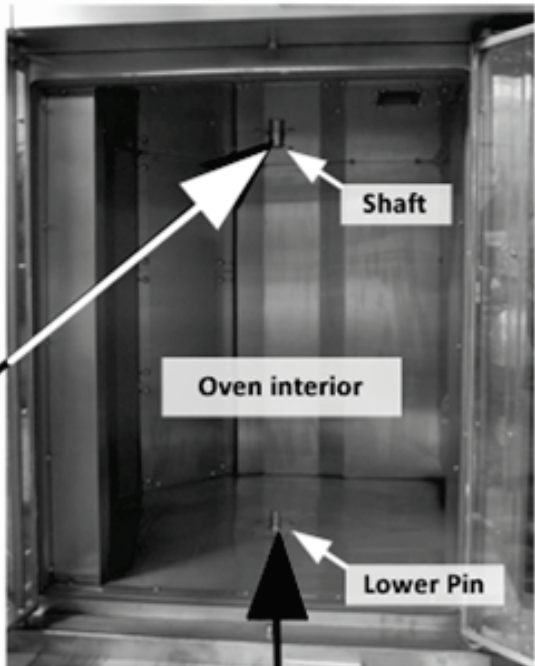
DESCRIPTION: Schematic for LMO Ovens



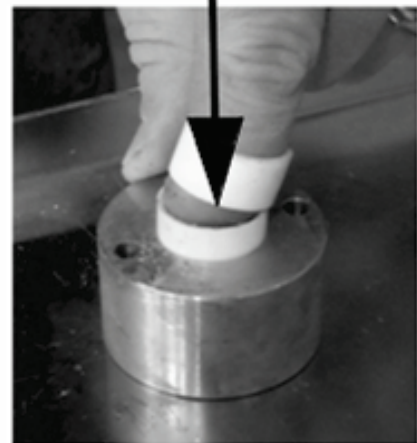
# ILLUSTRATED PARTS LIST (Part 1 of 8)



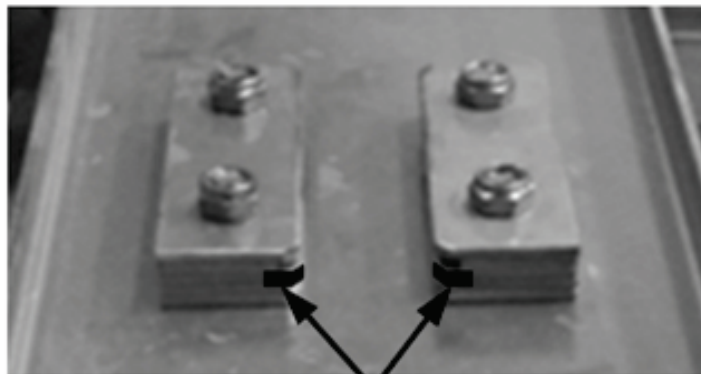
**1st:** Rotate shaft until cam lobe is 180° from roller switch



**4th:** Push shaft up slightly and slide rack into place. Install rack with front side toward back of oven. Notches in rack mount blocks (step 3) allow rack to slide onto shaft notches.



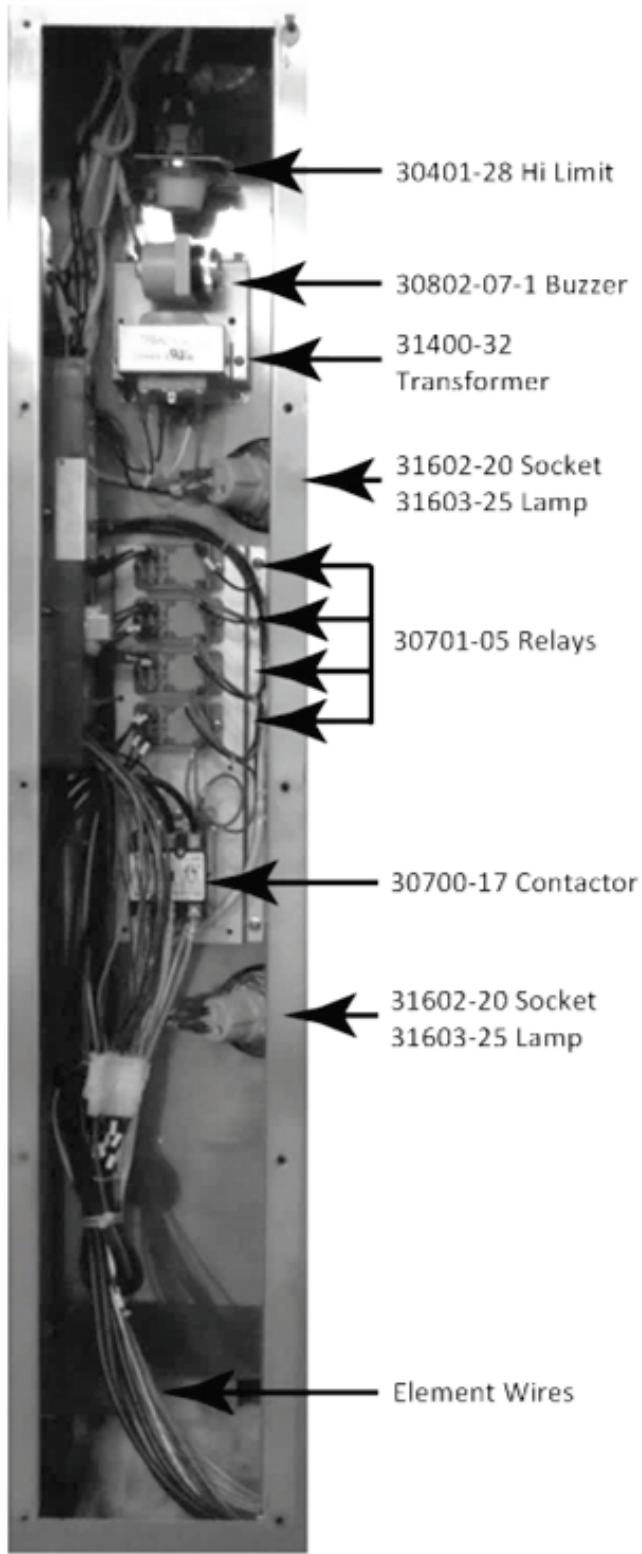
**2nd:** Ensure bushings are installed in bottom spacer of rack before installing rack on lower pin inside oven



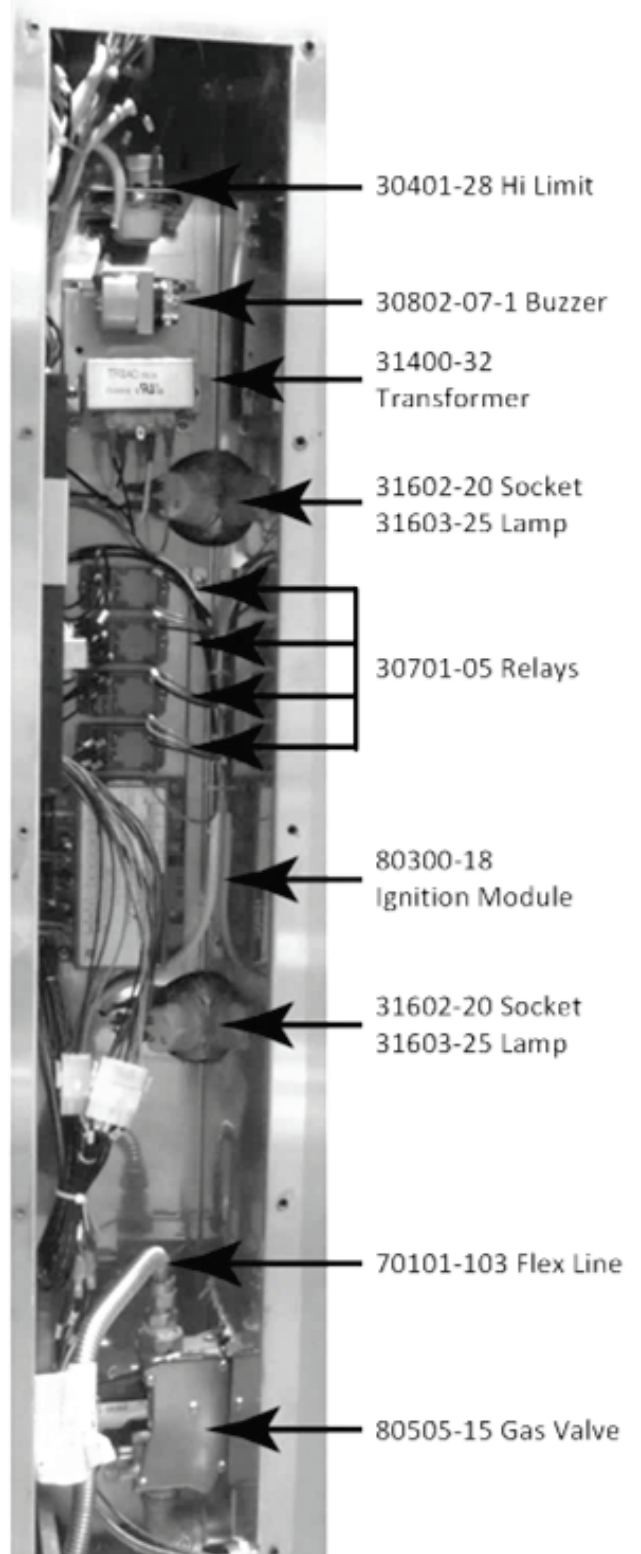
**3rd:** Locate notches in both mount blocks at top of rack



# ILLUSTRATED PARTS LIST (Part 2 of 8)



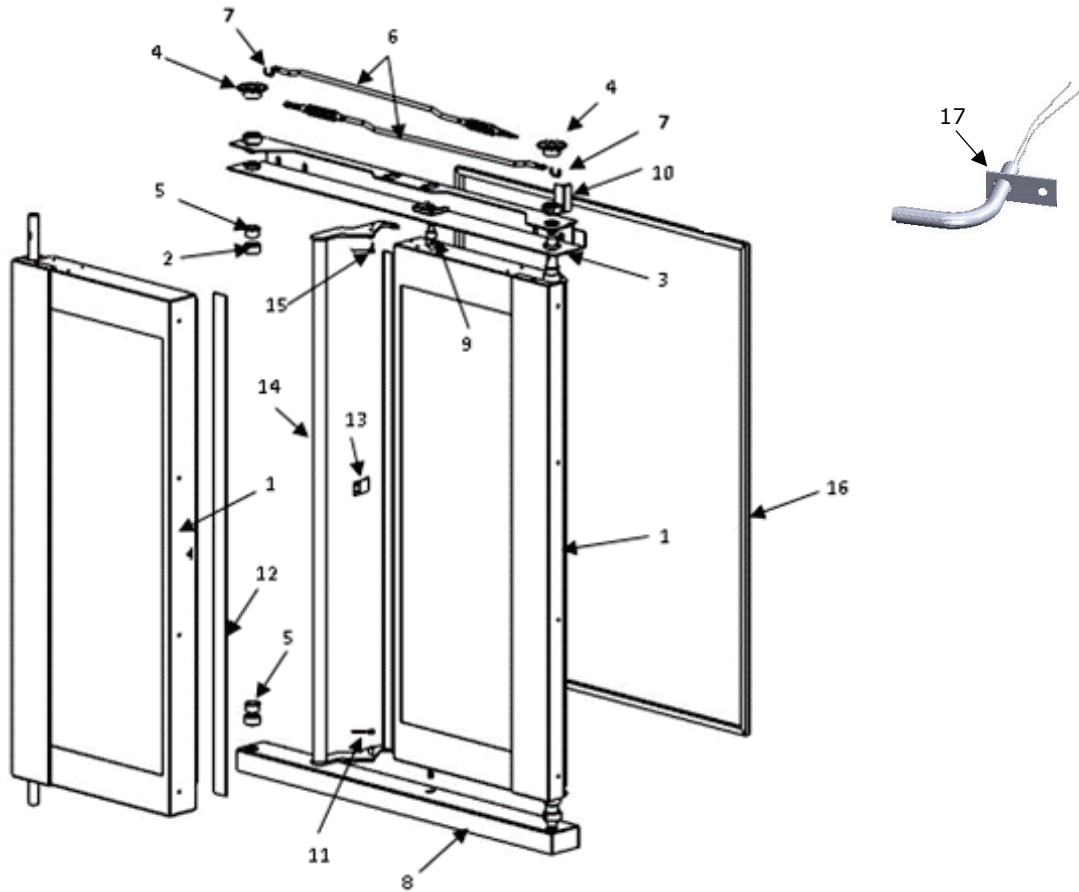
**LMO-E Electrical Compartment**



**LMO-G Electrical Compartment**

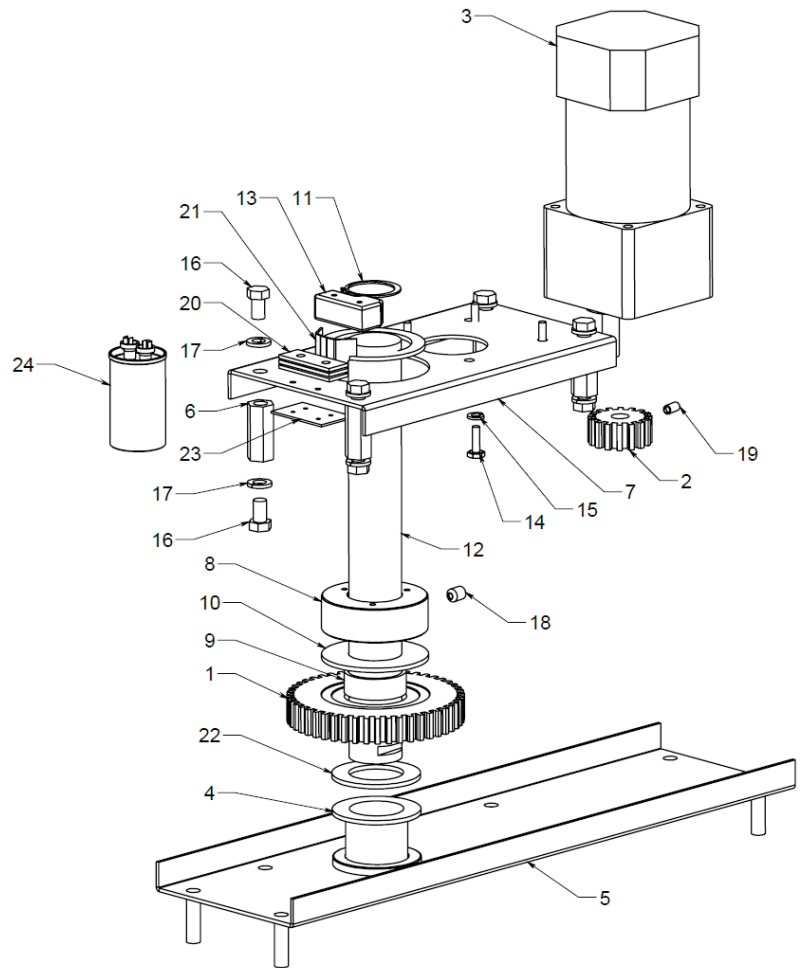
# ILLUSTRATED PARTS LIST (Part 3 of 8)

Item No	Part No	Description	Qty
1	151-741	Door Assembly	2
2	151-499	Spacer Bushings	2
3	151-500	Door Mount	1
4	73000-10	Sprocket (35B, 13TG)	2
5	151-503	Bronze Bearing	4
6	151-744	Door Linkage Assembly	2
7	Chain Link	Chain and Master Link (35B)	2
8	151-745	Bottom Door Support	1
9	CR-34	Cam Follower	2
10	151-798	Door Switch Magnet Assembly	1
11	51001-17	Bottom Door Handle Spring	1
12	151-493	Silicone Lap Strip	2
13	151-518	Inner Door Latch	2
14	151-792	Door Handle Assembly	1
15	51001-16	Top Door Handle Spring	1
16	72602-24-5	Vertical Door Gasket	1
17	180-762-2	Reed Switch Assembly (Door sw.)	1



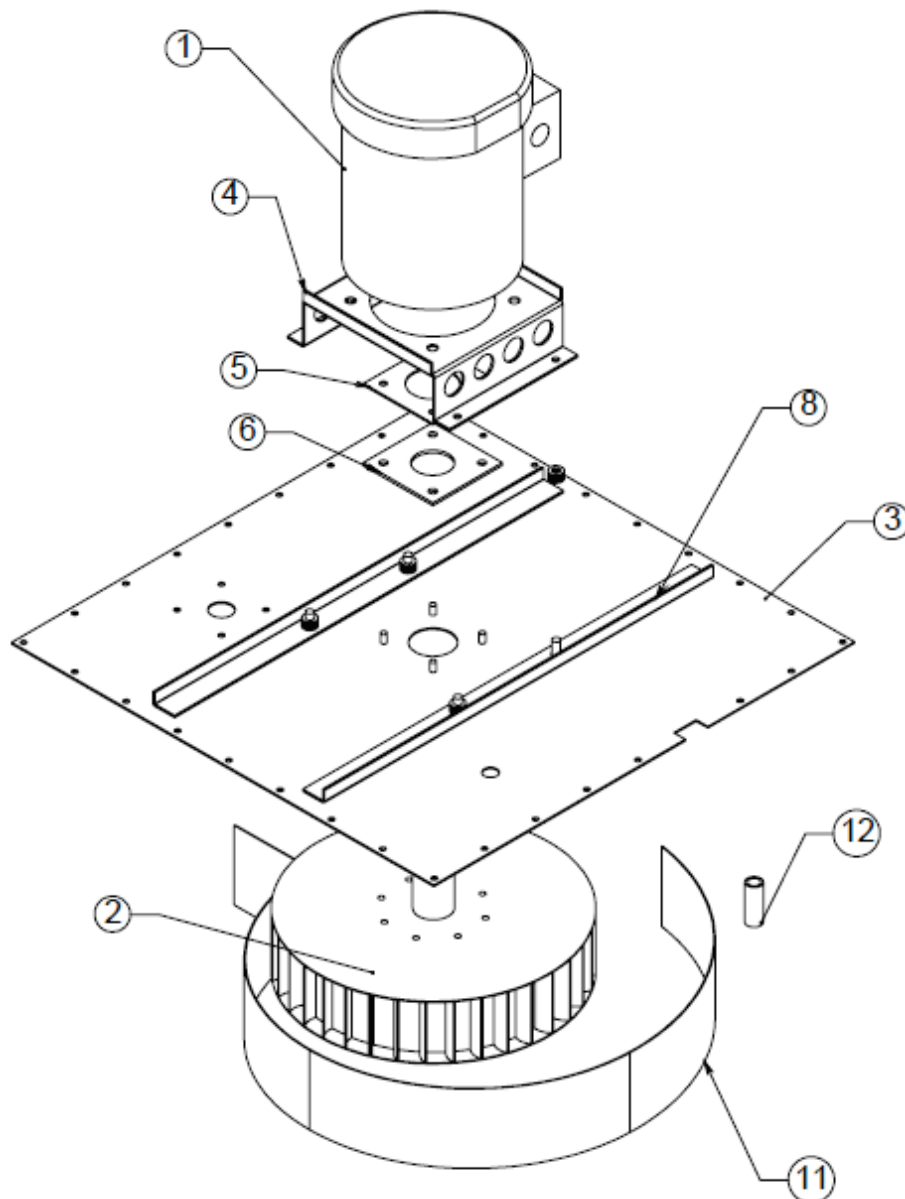
# ILLUSTRATED PARTS LIST (Part 4 of 8)

Item No	Part No	Description	Qty
1	73000-06a	Driven Gear	1
2	73000-05c	Motor Gear	1
3	30200-56-1	Motor Rotation Dr	1
4	70200-11	Bushing	1
5	151-739	Rotator Bottom Assembly	1
6	150-150-2	Spacer, Rotator	4
7	151-740	Rotator Top Assembly	1
8	50803-002	Drive Collar	1
9	70200-13	Bushing	1
10	70200-14	Friction Washer	1
11	20601-04	Snap Ring	1
12	151-482	Drive Shaft	1
13	30301-15	Roller Switch	1
14	20104-20	1/4-20 x 3/4" HH Mach Screw, SS	4
15	20202-05	1/4 Split Lock Washer, SS	4
16	20104-09	3/8-16 x 5/8" Mach Cap Screw, SS	8
17	20202-09	3/8 Split Lock Washer, SS	8
18	20105-20	3/8-16 x 1/2 Mach Cup Screw, SS	1
19	20105-04	6mm-1mm x 10mm Set Screw, SS	2
20	151-524	Spacer, Roller Switch	1
21	151-523A	Rotator Cam	3
22	70200-12	Washer 1.55 ID	1
23	151-524-1	Rack Rotation Plate	1
24	40704-12	Rotation Capacitor	1
25	70200-15	Split Rulon Bushing (Part not Shown)	1



# ILLUSTRATED PARTS LIST – GAS OVENS (Part 5 of 8)

Item No	Part No	Description	Qty
1	30200-66	Circulation Motor, ½ HP, 115/208-230 VAC	1
2	71500-30	Impeller, Forward Curve	1
3	151-717	Blower Mount Weldment	1
4	151-268	Motor Mount, C-Face	1
5	151-271	Clamp, Blower Seal	1
6	151-270	Seal, Blower	1
8	151-272	Stiffeners, Blower Plate	2 </td
11	151-273b	Blower Involute	1
12	151-211	Pipe, Temperature Sensor	1



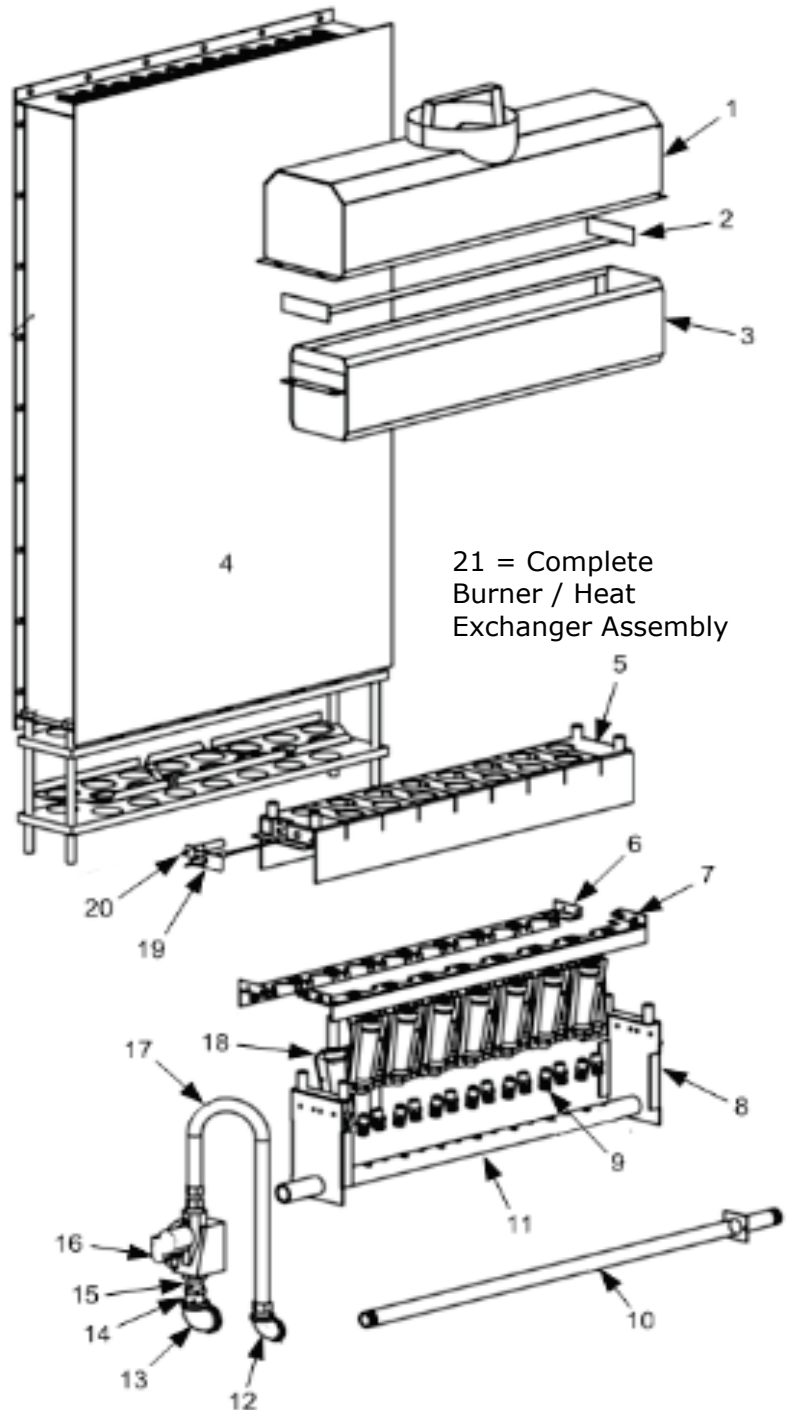
# ILLUSTRATED PARTS LIST – GAS OVENS (Part 6 of 8)

Item No	Part No	Description	Qty
1	151-722	Exhaust Collector	1
2	151-727	Exhaust Restrictor	1
3	151-719	Chimney	1
4	151-702b	Heat Exchanger	1
5	151-160	Burner Box	1
6	151-311	Mount, Burner - Left	1
7	151-312	Mount, Burner - Right	1
8	151-313	End, Burner Assembly	2
9	80400-01	Orifice*	15
10	150-215	Gas Pipe Assy	1
11	151-310	Manifold	1
12	70305-01	Elbow, 1/2NPT - Steel	1
13	70305-09	Elbow, 3/4NPT - Steel	1
14	70307-02	Reducer, Pipe – 3/4 x 1/2 NPT, Steel	1
15	70302-08	Nipple, Close – 1/2NPT, Steel	1
16	80505-15	Gas Valve, Combination	1
17	70302-09	Gas Connector – 18"	1
18	80002-14	Burner, Inshot	15
19	41100-36-1	Flame Sensor	1
20	80302-12	Ignitor, Hot Surface	1
21	151-763	Burner / Heat Exchanger Assy	1

\* Orifice Sizes:

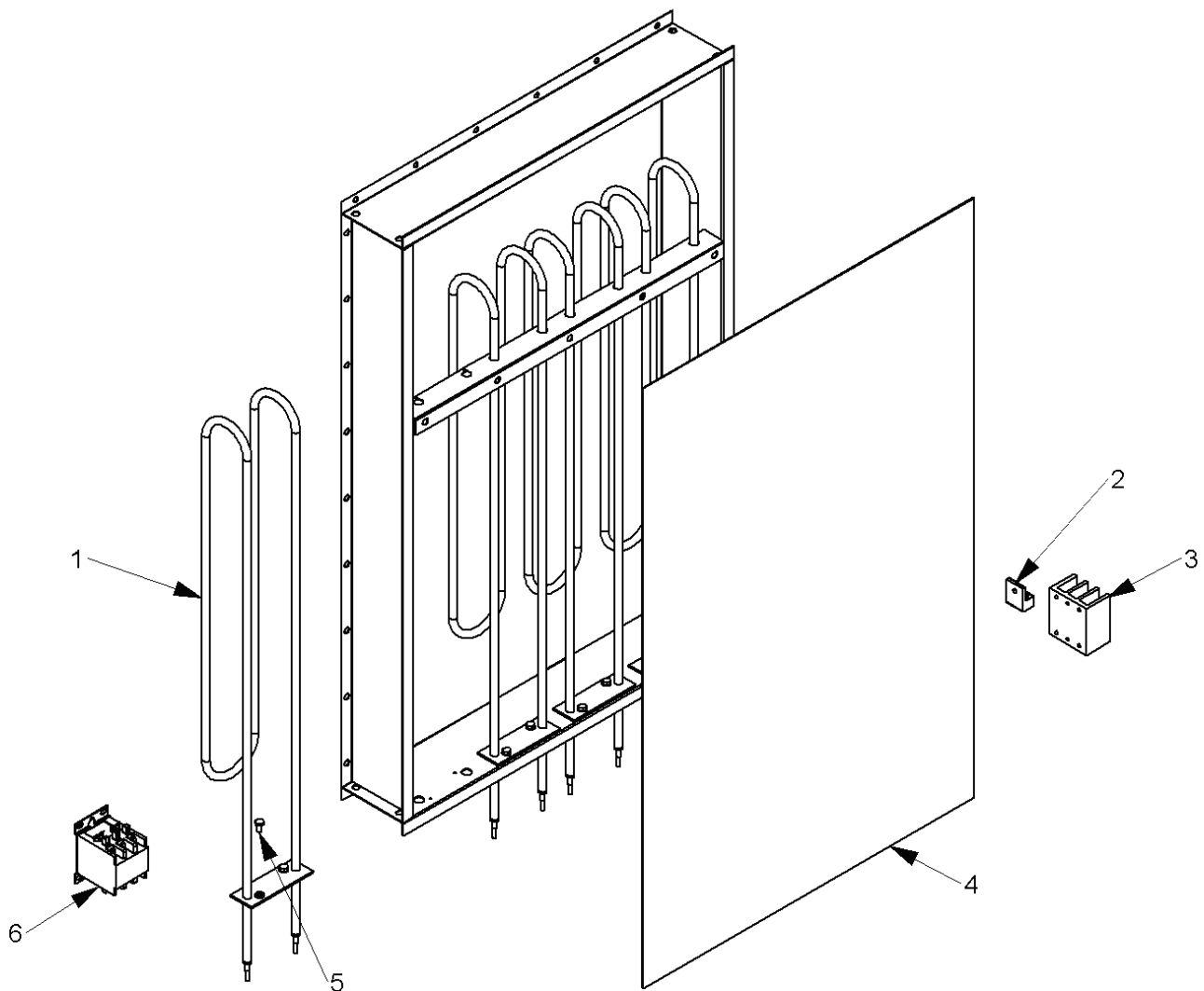
Natural Gas @ 3.5 inwc =  
3/64" (0.047)[1.19mm]

Propane Gas @ 5.0 inwc =  
#65 (0.035)[0.89mm]

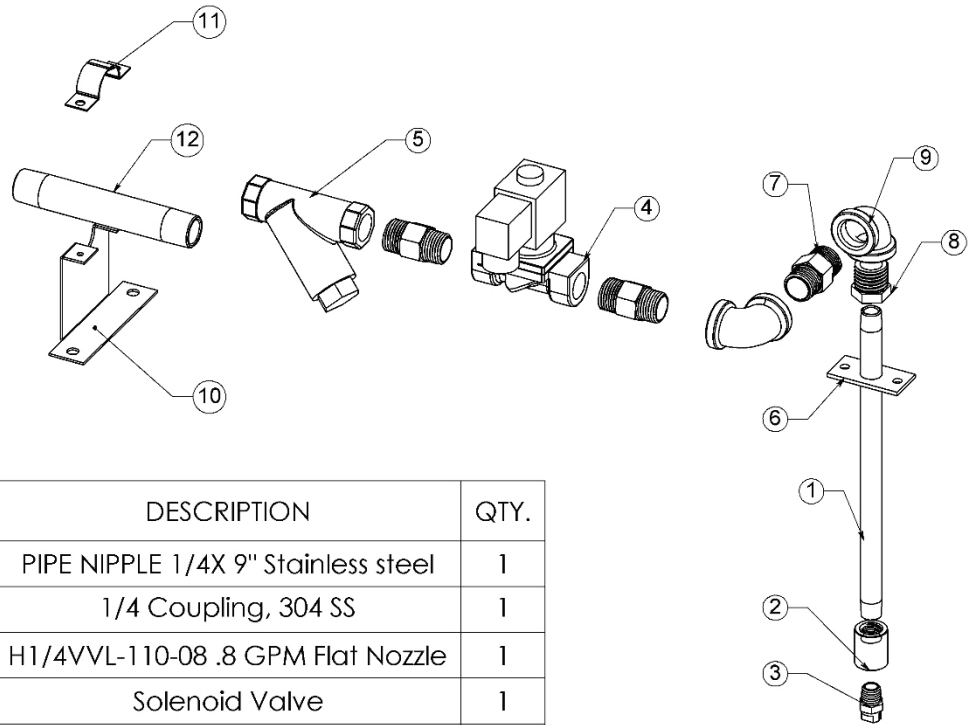


# ILLUSTRATED PARTS LIST – ELECTRIC OVENS (Part 7 of 8)

Item No	Part No	Description	Qty
1	11091-02-1	Element Assy (4166W @240V)	4
1	11091-03-1	Element Assy (4166W @480V)	4
2	31200-08	Ground Lug, 2-Hole	1
3	30500-07	Term Block, 3-Pole	1
4	151-164b	Cover, Heat Exchanger	1
5	20202-01	Hex Bolt, 6mm-1x12mm, MS	8
6	30700-17	Contactors, 3-Pole, 40A, 24V Coil	1



# ILLUSTRATED PARTS LIST – ELECTRIC OVENS (Part 8 of 8)



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	70302-57-16	PIPE NIPPLE 1/4X 9" Stainless steel	1
2	70403-04	1/4 Coupling, 304 SS	1
3	70101-77	H1/4VVL-110-08 .8 GPM Flat Nozzle	1
4	70403-03	Solenoid Valve	1
5	73701-04	Y STRNR 1/2" #20 MESH RACK	1
6	151-463	Flange, Water Pipe, Rev B	1
7	Pipe Nipple, one half inch	1/2 Inch Close Nipple, Brass	3
8	70307-01S	1/2 x 1/4 Hex Reducing Bushing, Stainless Steel	1
9	70305-10S	1/2 NPT Stainless Steel Pipe Elbow	2
10	151-541	Water Supply Support	1
11	151-541-1	Clamp, Water Supply	1
12	70302-54-5	1/2" x 5" Pipe, 21mm x 2.75mm	1

# **NOTES**





## LIMITED WARRANTY

LBC Bakery Equipment ("LBC Equipment") has been skillfully manufactured, carefully inspected and packaged to meet rigid standards of excellence. LBC Bakery Equipment, Inc. (LBC) warrants products produced and sold by LBC and its duly authorized agents against defects in materials and workmanship within the following limitations:

### **What is Provided:**

- Limited replacement parts as specified below, including standard ground shipping from LBC or service parts center when required.
- Limited labor for repair as specified below, including authorized service agent's transportation, portal to portal, up to one hundred (100) miles round trip and two (2) hours travel time.
- LBC, or an authorized service representative, will repair or replace, at LBC's sole discretion, any LBC equipment, including but not limited to the listed exclusions.

### **Coverage Period:**

*Extending from the date of shipment from LBC or its duly authorized dealer/distributor for the specified period:*

- LRO and LMO Model Rack Ovens, LRP Model Rack Proofers, LRPR Model Retarder Proofers, LCR Model Rotisseries and LHC Model Holding Cabinets for a period of one (1) year limited parts and labor.
- Replacement parts shall be warranted for a period of ninety (90) days after installation by an authorized LBC service agent.

### **Conditions:**

- Covered equipment must have been properly installed according to the requirements of the installation manual and all applicable local codes.
- The equipment shall not have been abused, misused or neglected or used for purposes other than intended by LBC.
- Water connected to the appliance shall have been in compliance with the following requirements:
  - Cold Water: 30 - 80 PSI
  - pH: 7 - 7.5
  - Conductivity: < 1/500,000  $\Omega$  per inch
  - Total Dissolved Solids: < 100 ppm
  - Hardness: 6.3 - 8.8 grains per gallon
  - Maximum Salinity and Ion content:
    - Chlorides: < 30 ppm
    - Sulfates: < 40 ppm
    - Iron: < 0.1 ppm
    - Copper: < 0.05 ppm
    - Manganese: < 0.05 ppm
- It is the responsibility of the purchaser to install and maintain the water supply to the appliance. Failure to provide satisfactory water quality in accordance with the operating manual requirements can cause damage to internal components and will VOID the warranty.
- All repair work is to be performed by an LBC authorized service agent.
- Equipment must be at the installation location of the original purchaser/user and shall not have been resold or reclaimed by another party.

### **Conditions (Continued):**

- LBC equipment is for commercial use only. If sold as a component of another (OEM) manufacturer's equipment, or if used as a consumer product, such equipment is sold AS IS and without any warranty.
- Conditions of sale of the equipment shall have been met in full.
- The request for repair shall be made within the limited period of the warranty.  
***Failure to meet the above conditions will void this warranty.***

### **Exclusions:**

*This warranty does not cover the following:*

- Routine general maintenance, or periodic adjustment.
- Thermostat calibration after the first 30 days of use.
- Glass, Lamps, Gaskets, Oven Racks and other consumable parts.
- Air and gas burner adjustments.
- Fuse replacement.
- Cleaning and adjusting burners and pilot burners.
- Rack oven shutter adjustments.
- Repairs adjustments and corrections in the refrigeration portion of retarder/proofers resulting from the improper installation.
- Retightening of screws and fasteners.
- Failures caused by erratic or inadequate electrical, water, ventilation or gas service.
- Unauthorized repairs.
- Premature rusting, corrosion, or mineral build up caused by incoming water.
- Attached water treatment systems.
- Expedited freight on replacement parts other than standard ground shipments.
- Ordinary wear and tear.
- Use of the equipment for purposes other than those intended including non-commercial use such as residential or domestic.
- Appliances installed outside the contiguous U.S., including Alaska and Hawaii, and Canada.
- Incidental costs, charges, loss of business and damages as incurred by the user or others as a result of the use or failure of the equipment.
- Work and workmanship of the authorized service agent or others in the repair of the equipment.
- Other failures that are beyond the reasonable scope of this warranty.
- Damage caused during shipment is to be reported to the carrier, is not covered under this warranty, and is the sole responsibility of the purchaser/user.
- Natural disaster.

This warranty is exclusive and in lieu of all other warranties, expressed or implied, including expressed or implied warranties of merchantability or fitness for a particular purpose, each of which is hereby expressly disclaimed. The remedies described herein are exclusive and in no event shall LBC be liable for special, consequential or incidental damages for the breach or delay in the performance of this warranty