



Installation

Operation

Maintenance

CR-30

Convection Oven Range

NOTICE TO INSTALLERS

The range top is shipped assembled to the oven base but can be separated from the oven if necessary.

1. Remove the panel from the side of the oven, over the control compartment.
2. Note the location of the four wires coming from the range top and remove them from the circuit breakers.
3. Remove two bolts, that hold the range top to the oven, from the front of the oven at the upper left and right corners.
4. Remove three sheetmetal screws from the strap on the back of the oven.
5. Lift the range top from the oven.

Reverse the above procedure to install the range top.

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INTRODUCTION

RECEIVING THE APPLIANCE

Upon receipt of the appliance, 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, make a written request for inspection by the carrier's agent within 15 days of delivery. All packing material should be kept for inspection. **Do not return damaged merchandise to Lang Manufacturing Company.** File your claim with the carrier.

Uncrate the appliance as near its intended location as practical. The crating will help protect the unit from the physical damage normally associated with moving it through hallways and doorways.

MODEL NUMBERS

The CR-30 range is available in several different models.

The ovens are supplied with a mechanical thermostat control (Accutemp) or a solid state temperature selector (Selectronic).

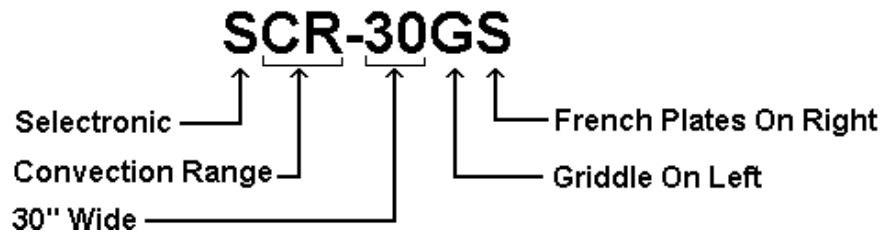
The range top can be supplied without an oven and installed on 4 inch legs.

The range top is offered with three types of cooking surfaces, these are: round french plates, an 18 inch griddle, and a 12 inch hot top.

The model number contains information about the range configuration, below is an example.

1. S = Selectronic, T = Accutemp
2. CR = Convection Range, RT = Range Top Only
3. 30 = 30 inches wide
4. G = Griddle, H = Hot Top, S = French Plates
5. (Optional) M = Marine Approved (Not shown above)

EXAMPLE



VENTILATION AND CLEARANCES

Standard minimum clearance from **combustible** construction is as follows:

- 2 inches from sides
- 4 inches from back
- 4 inches from floor

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

The installation of any components such as a vent hood, grease extractors, and/or fire extinguisher systems, must conform to the their applicable nationally recognized installation standards.

ASSEMBLY

TOE BASE

Assemble the toe base prior to installing it on the oven.

1. Bolt the sides, front, and back using eight 10-32 X 1/2 screws, nuts, and lockwashers.
2. Gently tip the oven forward and install two 3/8 X 1 1/4 studs (provided in toe base hardware) into threaded inserts for the rear oven legs.
3. Place the toe base into position with the front flange facing forward (make sure the base is square).
4. Place the oven onto the toe base so that the studs in the rear threaded inserts nest into the holes at the rear of the toe base.
5. Thread two 3/8 bolts and washers (provided in toe base hardware) through the base's front flange and into the threaded inserts for the oven's front legs.

RANGE TOP TO OVEN

The range top is shipped assembled to the oven base but, can be separated from the oven if necessary.

1. Remove the panel from the side of the oven, over the control compartment.
2. Note the location of the four wires coming from the range top and remove them from the circuit breakers.
3. Remove two bolts, that hold the range top to the oven, from the front of the oven at the upper left and right corners.
4. Remove three sheetmetal screws from the strap on the back of the oven.
5. Lift the range top from the oven.

Reverse the above procedure to install the range top.

ELECTRICAL CONNECTION

Refer to the **wiring diagram**, located at the back of this manual, for load and phasing requirements.

Refer to the Data Plate located behind the louvered door below the oven control compartment to confirm the range voltage matches the voltage at the installation site. Contact the factory if the voltages do not match.

The electrical connection must be made in accordance with local codes or in the absence of local codes with NFPA No. 70 latest edition (in Canada use: CAS STD. C22.1).

The electrical service entrance is provided by a 1 1/4 inch knockout located at the back of the appliance directly behind the control compartment.

Supply wire size must be large enough to carry the amperage load for the type of appliance being installed.

Wire size information can be found on the data plate.

Refer to the wiring diagram at the back of this manual to group the supply wires to match the power phase.

INITIAL START UP

SETTING THE GRIDDLE TEMPERATURE

Turn the temperature dial located on the upper control panel until the desired temperature is at the top of the dial.

An indicator lamp located next to the thermostat dial will go off once the griddle has reached the set temperature.

SETTING THE BURNER SWITCHES

The round burners are controlled by six-heat switches. Turn the switch to the Hi position until the desired product temperature is achieved then turn the dial to a lower setting to maintain the product temperature.

DO NOT allow the burner to remain on Hi with no product on the burner.

CLEANING THE COOKING SURFACE

The upper cooking surfaces are coated with a preservative coating to prevent rust.

Heat the griddle and/or the burners to a temperature that just turns the preservative into a liquid then turn off the cooking surface. DO NOT heat the cooking surface over 150 degrees.

Wipe the coating off of the surface with a rag.

Dampen a rag with lighter fluid and wipe the remainder of the coating off of the cooking surface.

DRYING THE HEATING ELEMENTS

The heating elements should be brought to operating temperature slowly. Water trapped inside the elements will vaporize and damage the element if not dried from the element before it reaches an elevated temperature.

Heat the griddle to 200 degrees for 2 hours then proceed with the seasoning process.

Shipboard note: The entire range may need to be run for several hours before it will not trip the ground fault detectors.

SETTING THE OVEN TEMPERATURE

Set the toggle switch located on the lower control panel to the On (up) position.

Turn the temperature dial located on the lower control panel until the desired temperature is at the top of the dial.

An indicator lamp located next to the thermostat dial will go off once the oven has reached the set temperature.

SEASONING THE GRIDDLE

The griddle surface must be seasoned in order to eliminate product sticking.

To season, heat the griddle to 250 degrees.

Once at 250 degrees, coat the cooking surface with a non-salted vegetable oil.

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

Heat the griddle to 350 degrees and repeat the procedure.

Product may still stick slightly for the first few loads of product.

NOTE: The griddle may emit a small amount of smoke as the cooking surface passes the 300 degree point. Do not be alarmed as the smoke is caused by oils associated with the manufacturing process and will stop when the griddle reaches 350 degrees.

OPERATING THE OVEN

A convection cooks by circulating heated air around the product. The blower strips off the layer of cold, moist air from around the product and allows the heat of the oven to penetrate the product more efficiently.

Best results will be obtained if the product is loaded into the oven evenly. Space should be maintained around the pan and oven walls.

Convection oven cooking temperatures can typically be set 25 degrees lower than deck ovens.

Do not cover the product with anything that will restrict the flow of air.

Open the oven door as few times as possible and for as short a time as possible. The secret to even baking is to cook with "stored" oven heat. Stored heat means, heat that is in the oven cavity without having to turn the oven elements on. Whenever the oven elements must come on, hotter air is circulated into the oven cavity, product that comes in contact with this air may cook differently than product which is exposed to the lower temperature "stored" heat.

Load the convection oven starting from the middle rack position, working up and down on the evenly spaced oven rack positions.

MAINTENANCE

DAILY CLEANING

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

There is a mark on the grease drawer to indicate when the drawer is considered full.

WARNING

USE CAUTION WHEN REMOVING THE GREASE DRAWER AS IT CONTAINS HOT GREASE!
--

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

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

CAUTION

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

WEEKLY CLEANING

Once a week or when necessary the griddle surface should be thoroughly cleaned and reseasoned. Use a griddle stone, griddle pad, or liquid cleaner.

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

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

Reseason the griddle plate after each cleaning.

PARTS LIST

RANGE TOP

DESCRIPTION	PART NO.
Element, Griddle, 208 Volt	11030-45
Element, Griddle, 240 Volt	11030-46
Element, Griddle, 480 Volt	11030-47
Frame, Speed Unit	50300-83
French Plate, Round, 208 Volt	11120-12
French Plate, Round, 240 Volt	11120-13
French Plate, Round, 480 Volt	11120-14
Hot Top, 208 Volt	11010-34
Hot Top, 240 Volt	11010-35
Hot Top, 480 Volt	11010-36
Knob, Griddle Thermostat	70701-16
Knob, 6 Heat Switch	70701-41
Lamp, Indicator, 240 Volt	31601-01
Lamp, Indicator, 480 Volt	31601-02
Leg, 4 inch adjustable	72500-02
Pan, Griddle Element	50200-92
Switch, 6 Heat, French Plate	30304-09
Thermostat, Griddle, 450 F	30402-08
Thermostat, Hot Top, 850 F	30402-23

OVEN

Blower Wheel, Motor	71500-06
Circuit Board, Temperature Control, <i>Selectronic</i>	40101-10
Contactor, 3 Pole, 24 Volt Coil	30700-06
Contactor, 2 Pole, 24 Volt Coil	30701-04
Element, Oven, 208 Volt, 7500 Watts, <i>Selectronic</i>	11090-20
Element, Oven, 240 Volt 7500 Watts, <i>Selectronic</i>	11090-21
Element, Oven, 480 Volt 7500 Watts, <i>Selectronic</i>	11090-22
Element, Oven, 208 Volt, 5000 Watts, <i>Accutemp</i>	11090-23
Element, Oven, 208 Volt, 5000 Watts, <i>Accutemp</i>	11090-24
Fuse, 15 Amp	30900-10

DESCRIPTION	PART NO.
Handle, Oven Door	50800-12
Hinge, Oven Door, Upper	70601-02
Hinge, Oven Door, Lower	70601-07
Holder, Fuse	30901-08
Knob, Mechanical Timer, <i>Selectronic</i>	70701-27
Knob, Temperature Selector Switch	70701-28
Knob, Mechanical Timer, <i>Accutemp</i>	70701-09
Label, Oven Panel	60301-36
Lamp, Indicator, 480 Volt	31601-02
Lamp, Indicator, 24 Volt, <i>Selectronic</i>	31601-07
Lamp, Indicator, 208/240 Volt, <i>Accutemp</i>	31601-01
Motor, Blower, 208/240 Volt	30200-12
Motor, Blower, 480 Volt	30200-03
Sensor, Temperature Control, <i>Selectronic</i>	41100-12
Switch, Toggle	30303-06
Switch, Micro, Oven Door	51100-18
Switch, Temperature Selector, <i>Selectronic</i>	30304-16
Thermostat, High Limit	30401-09
Thermostat, Oven, 450 F, <i>Accutemp</i>	30402-24
Timer, Mechanical	30801-01
Timer, Electronic	30803-01
Transformer, 480/240 Volt	31400-04
Transformer, 240/24 Volt	31400-10
Window, Oven Door	71301-04

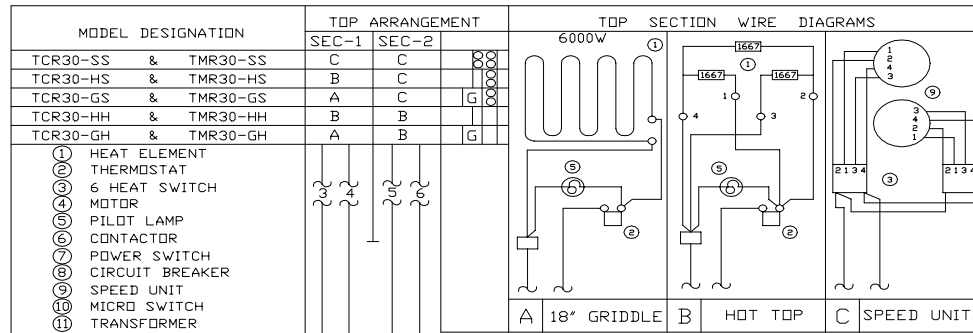
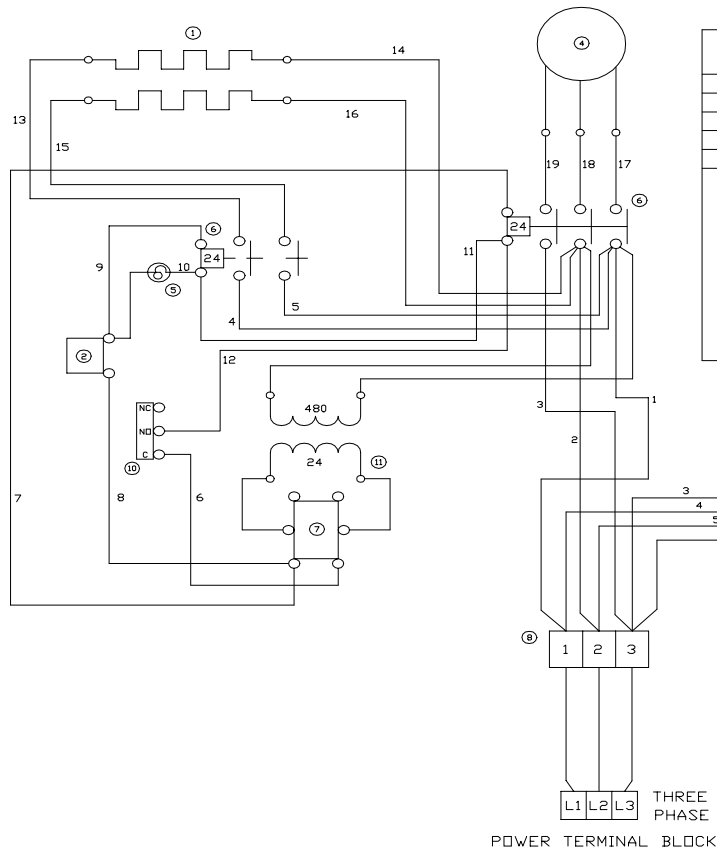
TCR-30 (ACCUTEMP) - 208/240 VOLT



WIRING DIAGRAM

TCR-30 (ACCUTEMP) - 480 VOLT

OVEN WIRING

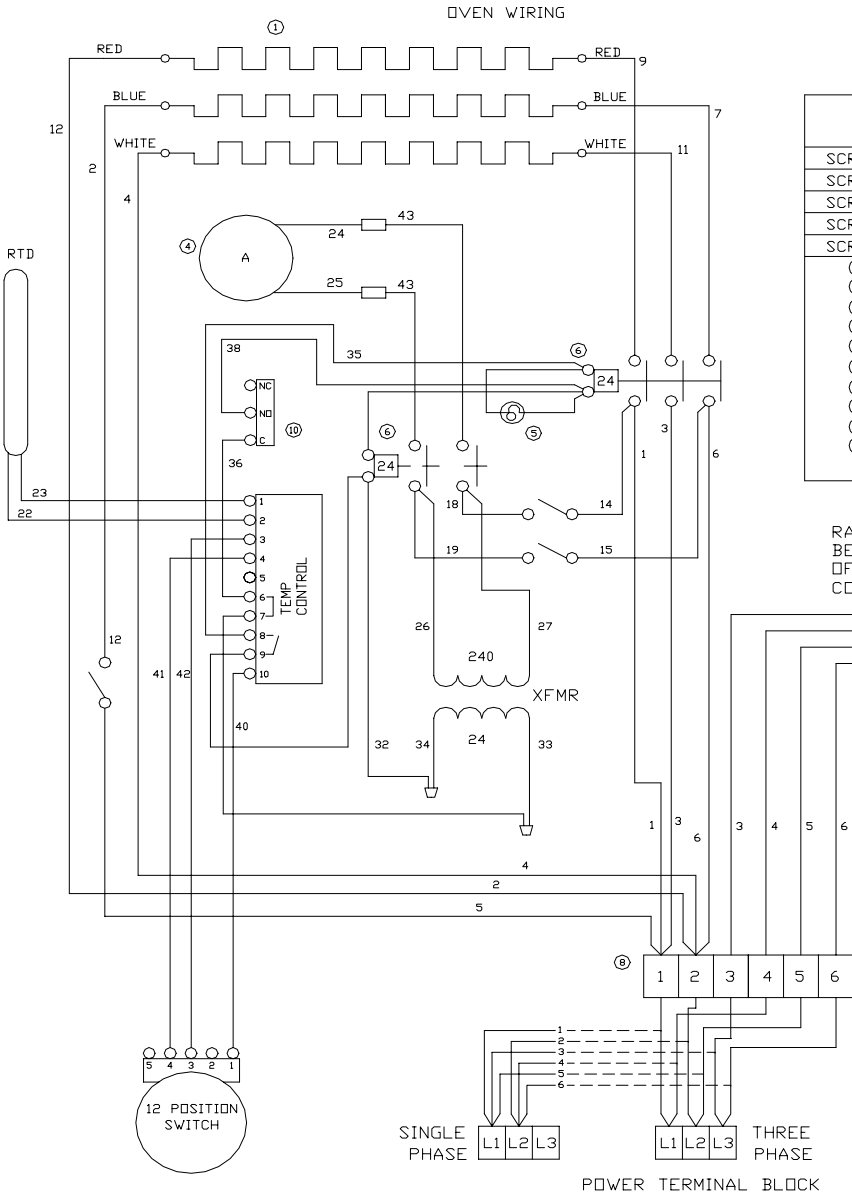


IMPORTANT
RANGE TOP WIRE MUST
BE CONNECTED TO BREAKERS
SAME AS SHOWN BELOW

ELECTRICAL DATA FOR CONVECTION OVEN RANGE								
MODEL NUMBER	LOADING				KW TOTAL	THREE PHASE AMPS		
	KW PER PHASE					480 VOLT		
	L1	L2	L3	L1		L1	L2	L3
TCR30-SS	5.2	5.4	5.4	5.4	15.9	19.0	19.1	19.4
TCR30-HS	5.2	5.4	5.2	5.2	15.7	18.7	19.1	19.1
TCR30-GS	5.2	5.4	6.2	6.2	16.7	20.5	19.1	20.9
TCR30-HH	5.2	5.2	5.2	5.2	15.5	18.7	18.7	18.7
TCR3-GH	5.2	5.2	6.2	6.2	16.5	20.5	18.7	20.5

ELECTRICAL DATA FOR 30" COUNTER TOP RANGE						
ELECTRIC CONNECTION		MODEL NUMBER	KW TOTAL	AMPS PER LINE 480V		
LINE	WIRE #			L1	L2	L3
L1	1	RT30-SS	10.4	10.8	10.8	18.8
L2	2	RT30-HS	10.2	10.4	10.8	18.4
L3	3 & 3	RT30-GS	11.2	12.5	10.8	20.2
		RT30-HH	10	10.4	10.4	18.0
		RT30-GH	11.0	12.5	10.4	19.9

SCR-30 (SELECTRONIC) - 208/240 VOLT



MODEL DESIGNATION	TOP ARRANGEMENT		
	SEC-1	SEC-2	
SCR30-SS & SMR30-SS	C	C	
SCR30-HS & SMR30-HS	B	C	
SCR30-GS & SMR30-GS	A	C	G
SCR30-HH & SMR30-HH	B	B	
SCR30-GH & SMR30-GH	A	B	G

① HEAT ELEMENT
② THERMOSTAT
③ 6 HEAT SWITCH
④ MOTOR
⑤ PILOT LAMP
⑥ CONTACTOR
⑦ POWER SWITCH
⑧ CIRCUIT BREAKER
⑨ SPEED UNIT
⑩ MICRO SWITCH

IMPORTANT
RANGE TOP WIRE MUST
BE CONNECTED TO BREAKER
OF SAME NUMBER IN OVEN
CONTROL AREA

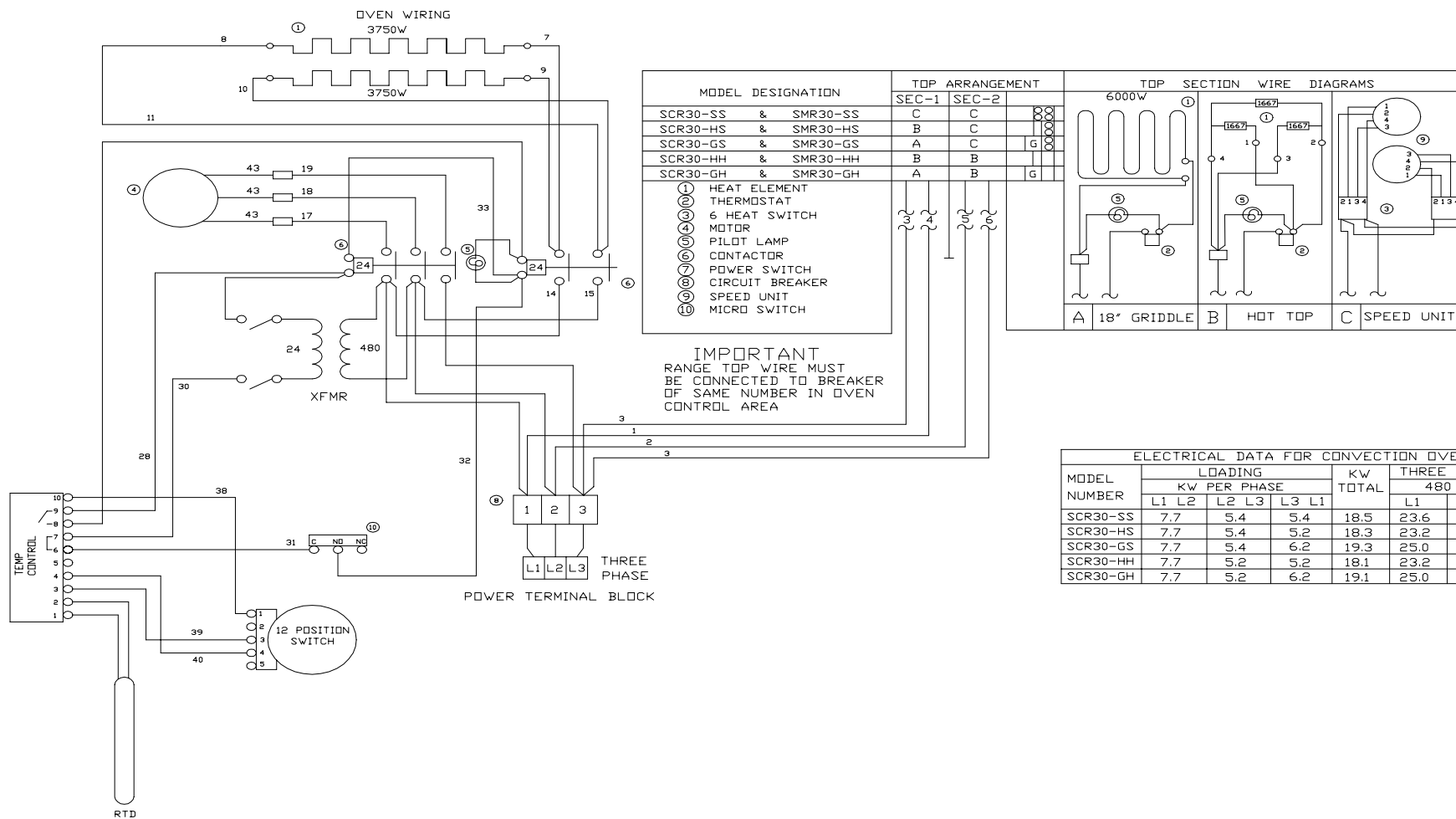
TOP SECTION WIRE DIAGRAMS		
6000W A 18" GRIDDLE	B HOT TOP	C SPEED UNITS

OVEN ELECTRICAL CONNECTIONS			
POWER SUPPLY	TERMINAL BLOCK	BREAKER FEED WIRE	
SINGLE PHASE	L1	1,3 & 5	BREAKER IN OVEN SWITCH
	L2	2,4 & 6	AREA ARE PREWIRED FOR
THREE PHASE	L1	1 & 4	3 PHASE-SEE INSTRUCTIONS
	L2	2 & 5	AT LEFT TO CHANGE TO
	L3	3 & 6	SINGLE PHASE

ELECTRICAL DATA FOR CONVECTION OVEN RANGE											SINGLE		
MODEL NUMBER	LOADING				KW TOTAL	THREE PHASE AMPS						PHASE AMPS	
	KW PER PHASE					208 VOLT			240 VOLT			208V	240V
	L1 L2	L2 L3	L3 L1			L1	L2	L3	L1	L2	L3		
SCR30-SS	8.1	5.2	5.2		18.6	55.9	55.9	43.3	48.4	48.4	37.5	87.5	75.8
SCR30-HS	8.1	5.2	5.0		18.4	55.2	55.9	42.5	47.8	48.4	36.8	86.6	75.0
SCR30-GS	8.1	5.2	6.0		19.4	59.0	55.9	46.7	51.1	48.4	40.5	91.3	79.2
SCR30-HH	8.1	5.0	5.0		18.2	55.2	55.2	41.6	47.8	47.8	36.1	85.6	74.2
SCR30-GH	8.1	5.0	6.0		19.2	59.0	55.2	45.9	51.1	47.8	39.8	90.4	78.3

WIRING DIAGRAM

SCR-30 (SELECTRONIC) - 480 VOLT



WARRANTY

Lang Manufacturing Limited Warranty to Commercial Purchasers* (Domestic U.S., Hawaii, & Canadian Sales only.)

Lang Manufacturing Equipment ("Lang Equipment") has been skillfully manufactured, carefully inspected and packaged to meet rigid standards of excellence. Lang warrants its Equipment to be free from defects in material and workmanship for (12) twelve consecutive months, with the following conditions and subject to the following limitations.

I. This parts and labor warranty is limited to Lang Equipment sold to the original commercial purchaser/users (but not original equipment manufacturers), at its original place of installation, in the continental United States, Hawaii and Canada.

Quartz elements are warranted for ninety(90) days from the date of installation.

II. Damage during shipment is to be reported to the carrier, is not covered under this warranty, and is the sole responsibility of purchaser/user.

III. Lang, or an authorized service representative, will repair or replace, at Lang's sole election, and Lang Equipment, including but not limited to, safety valves, gas and electric components, found to be defective during the warranty period. As to warranty service in the territory described above, Lang will absorb labor and portal to portal transportation costs (time & mileage) for the first (12) twelve months from the date of installation or eighteen (18) months from date of shipment from Lang Manufacturing, whichever ever comes first.

IV. This warranty does not cover routine general maintenance, periodic adjustments, as specified in operating instructions or manuals, and consumable parts such as quartz elements, or labor costs incurred for removal of adjacent equipment or objects to gain access to Lang Equipment. This warranty does not cover defects caused by improper installation, abuse, careless operation, or improper maintenance of equipment.

V. THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, EACH OF WHICH IS HEREBY EXPRESSLY DISCLAIMED. THE REMEDIES DESCRIBED ABOVE ARE EXCLUSIVE AND IN NO EVENT SHALL LANG BE LIABLE FOR SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR THE BREACH OR DELAY IN PERFORMANCE OF THIS WARRANTY.

VI. Lang Equipment is for commercial use only. If sold as a component of another(OEM) manufacturer's equipment, or if used as a consumer product, such Equipment is sold AS IS and without any warranty.