



ELECTRIC GRIDDLE w/24" CLAMSHELL®

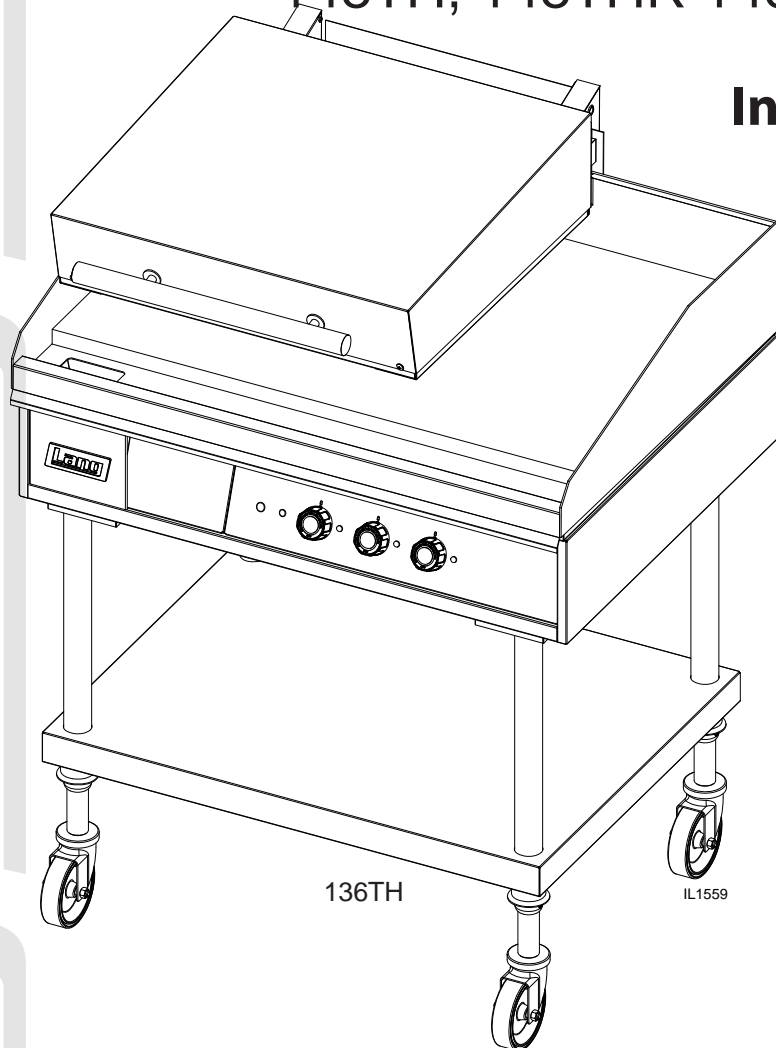
124TH

136TH, 136TH, 136THR

148TH, 148THR 148THS 148TH2

Installation and Operation Instructions

2M-W351 Rev.F 1/21/13



136TH

IL1559



SAFETY SYMBOL



These symbols are intended to alert the user to the presence of important operating and maintenance instructions in the manual accompanying the appliance.

FOR YOUR SAFETY

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

POST IN 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, OPERATION & MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.



WARNING

**RISK OF FIRE OR ELECTRIC SHOCK
DO NOT OPEN**



WARNING, TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE CONTROL PANEL. NO USER-SERVICABLE PARTS INSIDE. REPAIRS SHOULD BE DONE BY AUTHORIZED SERVICE PERSONNEL ONLY.

NOTICE

Using any part other than genuine Lang factory supplied parts relieves the manufacturer of all liability.

Lang reserves the right to change specifications and product design without notice. Such revisions do not entitle the buyer to corresponding changes, improvements, additions or replacements for previously purchased equipment.

Due to periodic changes in designs, methods, procedures, policies and regulations, the specifications contained in this sheet are subject to change without notice. While Lang exercises good faith efforts to provide information that is accurate, we are not responsible for errors or omissions in information provided or conclusions reached as a result of using the specifications. By using the information provided, the user assumes all risks in connection with such use.

MAINTENANCE AND REPAIRS

Contact your local dealer for service or required maintenance. Please record the model number, serial number, voltage and purchase & Installation Information in the area below and have it ready when you call to ensure a faster service.

Model No.: _____

Purchased From: _____

Serial No.: _____

Location: _____

Voltage: _____

Purchase Date: _____

1-Phase or 3 Phase: _____

Installed Date: _____



PROBLEMS, QUESTIONS or CONCERNS

Before you proceed consult you authorized Lang service agent directory
or
Call the Lang Technical Service & Parts Department at 314-678-6315.

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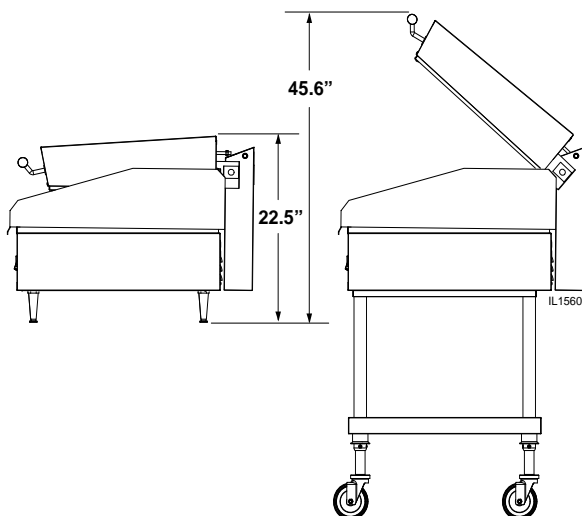
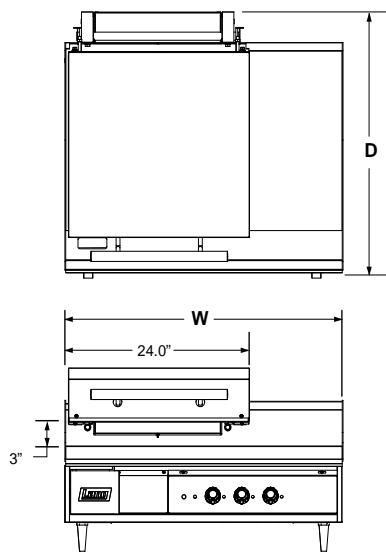
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NOTICE

Service on this or any other Lang appliance must be performed by qualified personnel only. Consult your Lang Authorized Service Agent Directory. You can call our tech service number 314-678-6315 or visit our website www.langworld.com for the service agent nearest you.

EQUIPMENT SPECIFICATIONS

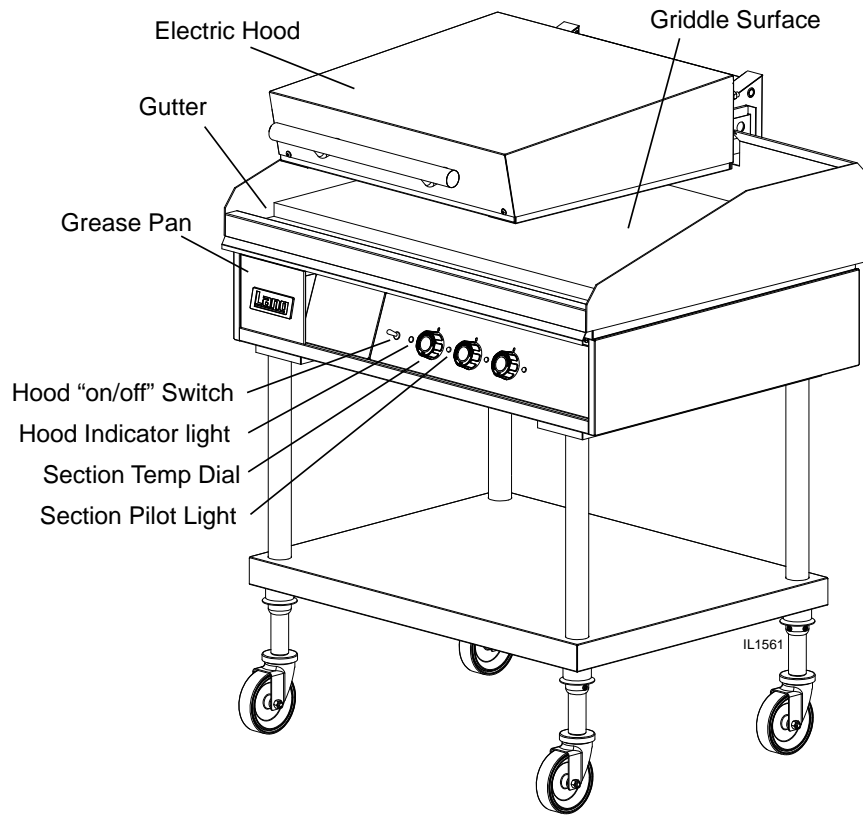
Model	Height x Width x Depth (Not including legs, Clamshell® open)	Clearance from combustible surface	Weight		Freight Class
			Actual	Shipping	
124TH	45.6" X 24.0" 31.9" 1158mm x 610mm x 811mm	Sides & Back: 2"	298 lbs. 135 kg	335 lbs 152 kg	85
136TH	45.6" X 36.0" 31.9" 1158mm x 914mm x 811mm		428 lbs. 195 kg	470 lbs. 214 kg	
148TH	45.6" X 48.0" 31.9" 1158mm x 1219mm x 811mm		568 lbs. 258 kg	590 lbs. 268 kg	
148THS	45.6" X 48.0" 31.9" 1158mm x 1219mm x 811mm		643 lbs. 292 kg	690 lbs. 314 kg	



ELECTRICAL SPECIFICATIONS

Lang Model	Volts	Hz.	Ph.	Kw Tot	Amp. 1PH	Supply	L1	L2	L3	Supply	Kw Tot.	Amp. 1PH	Supply	L1	L2	L3	Supply
124TH-2/3V	220/380	50/60	3	12			27	27	27	10	5	23	10				
124TH-2/3VMG	220/380	60	3	12			27	27	27	10	5	23	10				
124TH-208MGT	208V	60	1/3	12	58	4	50	29	29	6	6	29	10				
124TH-208V	208V	60	1/3	12	58	4	50	29	29	6	6	29	10				
124TH-208VMG	208V	60	1/3	12	58	4	50	29	29	6	6	29	10				
124TH-240V	240V	60	1/3	12	50	6	43	25	25	6	6	25	10				
136TH-208V	208V	60	1/3	18	87	2	50	50	50	6	6	29	10				
136TH-240V	240V	60	1/3	18	75	2	44	44	44	6	6	25	10				
136THR-208V	208	60	1/3	18	87	2	50	50	50	6	6	29	10				
148TH-208V	208V	60	1/3	24	116	1/0	75	75	50	3	6	25	10				
148TH2-208V	208	60	1/3	24	115	1	75	75	50	4	12	57	6	50	29	29	6
148TH2-240V	240	60	1/3	24	100	1	65	65	43	4	12	50	6	43	25	25	8
148TH-240V	240	60	1/3	24	100	1	65	65	44	4	6	25	10				
148TH-480V	480	60	1/3	12			21.6	12.5	12.5	10							
148THR-208V	208	60	1/3	24	116	1/0	75	75	50	3	6	29	10				
148THS-208V	208	60	1/3	24	116	1/0	75	75	50	3	6	29	10				
148THS-240V	240	60	1/3	24	100	1	65	65	44	4	6	25	10				

EQUIPMENT DESCRIPTION



Exterior Construction

Griddle

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

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

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

TH Hood

Clamshell® Hood dimensions (including griddle and legs) are 22¼" (55.88cm) high with hood lowered, (44¾" [113.67cm] high with hood raised, 31½" (80cm) deep, x 24" (61cm) wide.

The hood wrap is constructed of stainless steel.

There is a 3" clearance between griddle and hood.

Controls

Griddle

Each twelve-inch section has a manual thermostat with a temperature range of 175°F to 450°F in 50° increments.

The thermostat is mounted in a fully enclosed, air-cooled compartment for protection from heat and grease.

Each thermostat has a pilot light indicating when heating elements are energized. Light shuts off when griddle reaches set temperature.

TH Hood

The TH Hood has an "on/off" toggle switch located in the griddle base control area that energizes the heater. A tilt switch is integrated in the top of the hood that activates the heater to "full on" when lowered, standby when raised.

An "on/off" heat indicator lamp is located next to the "on/off" toggle switch.

EQUIPMENT DESCRIPTION continued

Technical

Griddle

The griddle is standard 208/240 dual voltage, 3 phase, for on-site installation to either 208V or 240V. For simple conversion to single phase power connection see the phasing portion of this manual. This conversion is extremely easy and neither terminates the Lang warranty nor is chargeable to Lang as warranty service.

TH Hood

The hood is standard 208V or 240V single phase. The voltage must be specified when ordering.

CLEARANCES

Spacing requirements are 2" from the sides and back.

NOTICE The data plate is on the right side of the griddle. The oven 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.

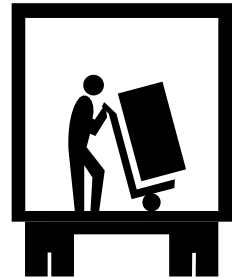
UNPACKING

Receiving the Griddle

Upon receipt, check for freight damage, both visible and concealed. Visible damage should be noted on the freight bill at the time of delivery and signed by the carrier's agent. Concealed loss or damage means it 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.

File your claim with the carrier.



Location

Prior to un-crating, move the oven as near to its intended location as practical. The crating will help protect the unit from the physical damage normally associated with moving it through hallways and doorways.

Un-crating

The griddle will arrive completely assembled inside a wood frame and strapped to a skid.

Cut the straps and remove the wood frame.

The oven can now be removed from the skid.

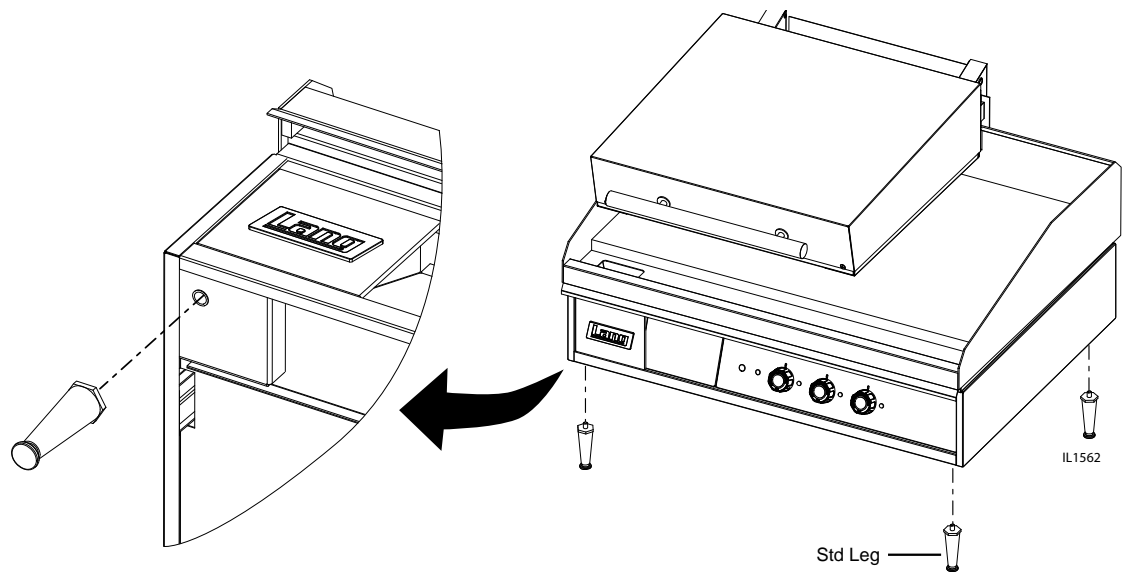


CAUTION

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.

ANY STAND, COUNTER OR OTHER DEVICE ON WHICH OVEN WILL BE LOCATED MUST BE DESIGNED TO SUPPORT THE WEIGHT OF THE GRIDDLE. SHIPPING STRAPS ARE UNDER TENSION AND CAN SNAP BACK WHEN CUT.

INSTALLATION



Above: typical leg installation.

Leg Installation

The TH Hood comes standard with 4-inch stainless steel legs. An optional stand is available.

To install the legs, remove the legs from the grease drawer. Using extreme caution elevate the griddle 10 inches off the ground and install the legs in the threaded holes provided.

To install the stand, turn the stand so that the legs are sticking straight up positioning the side with the three holes to the rear. Place the metal spacer on the legs and slide the shelf over the legs until it rests up against the spacer. Tighten the Allen screws on the shelf so that it is stationary. If casters were ordered, install the caster onto the threaded stud provided in the bottom of the leg to the desired height and tighten the Allen screws on the stand. Flip stand over onto the legs so that the three holes are in the back. Using extreme caution set the griddle onto the stand. Using the threaded holes provided on the bottom of the griddle screw the 5/8 bolt through the stand into griddle.

DANGER: THIS APPLIANCE MUST BE GROUNDED AT THE TERMINAL PROVIDED. FAILURE TO GROUND THE APPLIANCE COULD RESULT IN ELECTROCUTION AND DEATH.



WARNING

INSTALLATION OF THE UNIT MUST BE DONE BY PERSONNEL QUALIFIED TO WORK WITH ELECTRICITY AND PLUMBING. IMPROPER INSTALLATION CAN CAUSE INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT. UNIT MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES.

NOTICE: The data plate is located behind access panel between controls and grease drawer. The grill voltage, wattage, serial number, wire size, and clearance specifications are on the data plate. This information should be carefully read and understood before proceeding with the installation.

NOTICE: The installation of any components such as a vent hood, grease extractors, fire extinguisher systems, must conform to their applicable National, State and locally recognized installation standards.



CAUTION

ALWAYS KEEP THE AREA NEAR THE APPLIANCE FREE FROM COMBUSTIBLE MATERIALS.

KEEP FLOOR IN FRONT OF EQUIPMENT CLEAN AND DRY. IF SPILLS OCCUR, CLEAN IMMEDIATELY, TO AVOID THE DANGER OF SLIPS OR FALLS.

INSTALLATION cont.

Ventilation and Clearances

Standard minimum clearance from combustible construction is as follows.

2" from side

2" from back

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

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

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

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

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

Electrical Connection

Griddle

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

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

The griddle is shipped from the factory wired 208/240 dual voltage. Jumper wires on terminal strip next to the main power supply connection determine the griddle voltage. For a 208 - volt power supply, leave the jumpers in place. For a 240 - volt power supply disconnect the jumpers to the terminal strip as indicated on the tag.

TH Hood

For power connection to the hood, a two pole terminal block is provided next to the three pole terminal block on the back of the griddle.

The hood is shipped either 208 or 240 volt single phase only.

The voltage must be specified when ordering.

WARNING: MAKE SURE THE MAIN POWER SUPPLY TO THE GRIDDLE IS TURNED OFF AT THE SOURCE PRIOR TO CONNECTING POWER TO THE GRIDDLE.

CAUTION: BE SURE THE POWER SUPPLY VOLTAGE MATCHES THE VOLTAGE SPECIFIED ON THE NAMEPLATE LOCATED ON THE FRONT OF THE GRIDDLE.

Phasing

GRIDDLE						TH HOOD	
Model Number	Three Phase			Single Phase		Single Phase	
	L1	L2	L3	L1	L2	L1	L2
124TH	1,4	2	3	1,3	2,4	A	B
136TH	1,4	2,5	3,6	1,3,5	2,4,6	A	B
148TH	1,4,7	2,5,8	3,6	1,3,5,7	2,4,6,8	A	B

INITIAL START UP

Griddles

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

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

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

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

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

TH Hood

After the griddle has been completely seasoned and dried out place hood in standby mode and allow to hold for a minimum of one hour.

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

OPERATION

General

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

If different temperature settings are to be used, select one side of the griddle and operate at the lowest temperature. Adjoining sections should be set at progressively higher temperatures.

Do not try to operate the end sections hot and the center sections cool.



CAUTION

ALWAYS KEEP THE AREA NEAR THE APPLIANCE FREE FROM COMBUSTIBLE MATERIALS.

KEEP FLOOR IN FRONT OF EQUIPMENT CLEAN AND DRY. IF SPILLS OCCUR, CLEAN IMMEDIATELY, TO AVOID THE DANGER OF SLIPS & FALLS.

Loading the Griddle

Griddle

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

A mechanical thermostat independently controls each 12-inch section of your griddle. The thermostat capillary tube is mounted in the center of each 12-inch cooking section under the griddle plate.

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

During slow periods with minimal loads, do not load directly over the thermostat capillary tube as this will unnecessarily turn the burners on and overheat the remainder of the section not being utilized.

Turn the product and continue cooking until it has reached its desired degree of doneness.

Remove the product from the griddle.

When reloading the griddle, first use the griddle surface on which a previous load was not placed. This will help insure the proper griddle temperature.

TH Hood

Once the griddle has been loaded properly lower the hood over the product.

Below is a chart and with some basic products the suggested cooking temperatures, and cooking time.

PRODUCT	FLAT GRILL TEMP	GROOVED GRILL TEMP	TIME
Hamburger			
2 patties per pound	350°F (176°C)	400°F (204°C)	3 Min
4 patties per pound	350°F (176°C)	400°F (204°C)	1 1/2 Min
6 patties per pound	350°F (176°C)	400°F (204°C)	1 Min
Steaks			
1/2" to 3/4" thick cooked to Medium	375°F (190°C)	450°F (232°C)	3 Min
3/4" to 1" thick cooked to Medium	375°F (190°C)	450°F (232°C)	4 1/2 Min
Lamb Chops			
1" Thick	350°F (176°C)	400°F (204°C)	3 1/2 Min
Pork Chops			
3/4" thick	350°F (176°C)	400°F (204°C)	3 1/2 Min
1 to 1 1/2" thick	350°F (176°C)	400°F (204°C)	4 Min
Liver			
3/8 to 1/2 thick	350°F (176°C)	375°F (190°C)	2 Min
Salmon			
Steak or Fillet 3/4" thick	350°F (176°C)	400°F (204°C)	3 1/2 Min
Shrimp / Scallops	275°F (135°C)	300°F (148°)	2 Min
Halibut			
3/4" thick	325°F (162°C)	350°F (176°C)	3 1/2 Min
Grilled Sandwiches	325°F (162°C)	350°F (176°C)	1 1/2 Min

MAINTENANCE & CLEANING

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



CAUTION

MOST CLEANERS ARE HARMFUL TO THE SKIN, EYES, MUCOUS MEMBRANES AND CLOTHING. PRECAUTIONS SHOULD BE TAKEN TO WEAR RUBBER GLOVES, GOGGLES OR FACE SHIELD AND PROTECTIVE CLOTHING. CAREFULLY READ THE WARNING AND FOLLOW THE DIRECTIONS ON THE LABEL OF THE CLEANER TO BE USED.

Daily Cleaning

Griddle

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

Daily, use a clean cloth and a good non-abrasive cleaner to clean the stainless steel body of the griddle. Wipe the polished front with a soft cloth.

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

TH Hood

The TH hood is a self-cleaning device and does not require any other cleaning.

Do not use any water or cleaning solution on the elements. Clean the exterior of the appliance with a good non-abrasive cleaner, to maintain a gleaming appearance. Wipe drip shield between hood and griddle to remove any grease.

Weekly Cleaning

Griddle Surface Care (non-chromium surfaces)

It takes very little time and effort to keep the griddle attractive and performing at top efficiency. If grease is permitted to accumulate, it will form a gummy cake and then carbonize into a hard substance which is extremely difficult to remove. To prevent this condition, the following suggestions for cleanliness should be followed:

After each use, scrape the griddle with a scraper or flexible spatula to remove excess grease and food. A waste drawer is provided for the scrapings. If there is an accumulation of burned on grease and food, the griddle should be thoroughly scoured and reseasoned. Use pumice or griddle stone while the griddle is warm.

Do not use steel wool because of the danger of steel slivers getting into the food.

TH Hood

It may be necessary after high use to allow the hood to burn off any carbon build up.

With a cold griddle, lower the hood and allow the hood to cook for 15 minutes. Additional time may be necessary for more baked-on grease.

GRIDDLE CARE (CHROME SURFACES)

It takes very little time and effort to keep this Industrial Chrome griddle surface sparkling clean and performing at top efficiency. DO NOT allow grease to accumulate as it will carbonize and become difficult to remove.

To prevent this condition, the following cleaning suggestions should be followed:

1. Remove excess oil and food regularly with a 4" (100mm) wide razor sharp type scraper and wipe surface with a damp cloth if desired.
2. Following the scraping, for end of the day cleaning, a damp cloth and a non-silicated, non-abrasive, non-chlorinated cleaner such as Bon-Ami may be used to wipe surface clean, followed by wiping with clean wet cloth.
3. Follow daily cleaning steps for Non-Chrome Surfaces.

ON CROME SURFACES:



1. Never use pumice, griddle stones, or abrasives on the surface.
2. Never strike the griddle surface with a sharp instrument or spatula edge.
3. Never use steel wool.
4. Never use commercial liquid grill cleaner on the griddle surface.
5. Abusing the surface voids the warranty.

MAINTENANCE & CLEANING

Griddle

Calibration Check

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

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

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

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

(See illustration below.)

Calibration

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

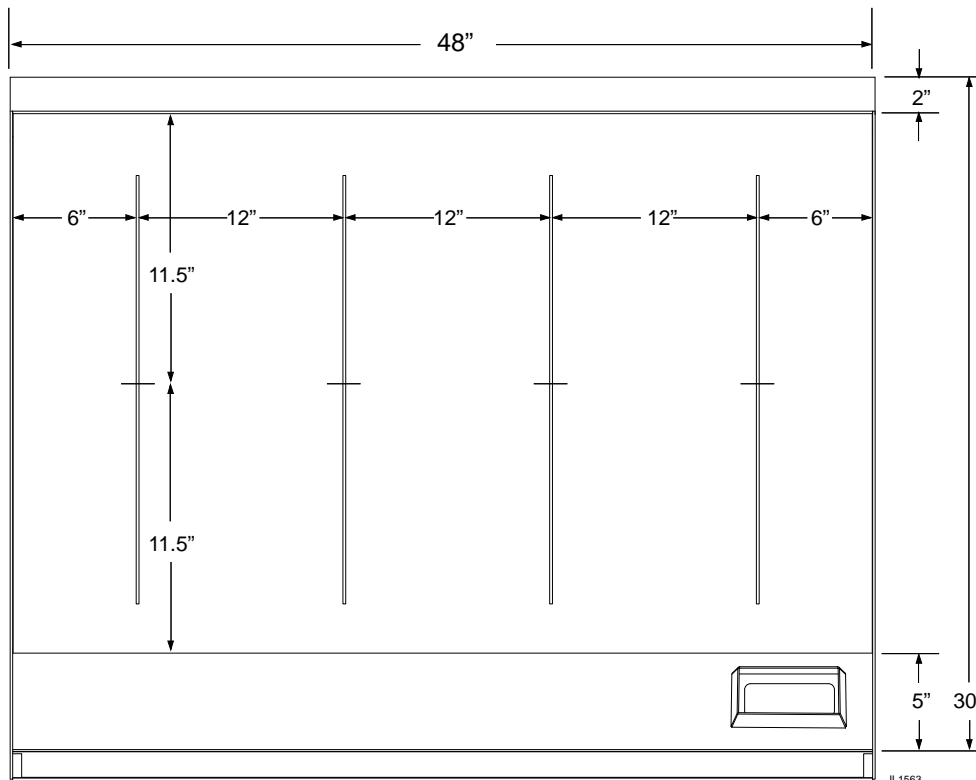
Maintain the units temperature at 350°F.

Without turning the thermostat, remove the knob.

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

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

Reinstall the knob and recheck the temperature.



TROUBLESHOOTING

Symptoms

What follows is a chart of Symptoms and Possible Causes to aid in diagnosing faults with the griddle.

Refer to the Symptoms column to locate the type of failure then to the Possible Cause for the items to be checked.

To test for a possible causes refer to the TEST section and locate the Possible Cause then refer to test to identify test procedures.

NOTICE: Service on this, or any other, LANG appliance must be performed by qualified personnel only. Consult your Lang 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.

If an item on the list is followed by an asterisk (*), the work should be done by a factory authorized service representative.



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.

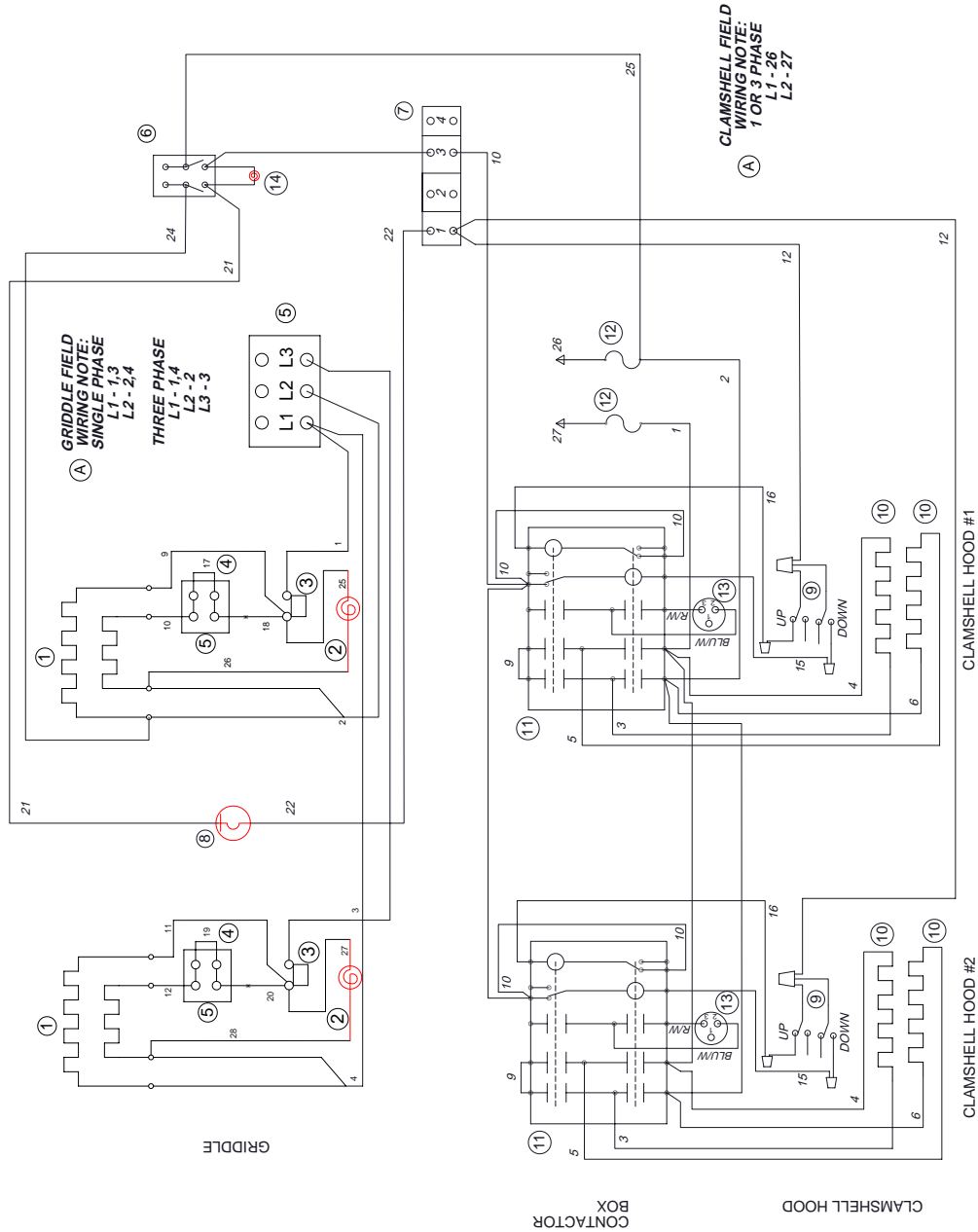
SYMPTOM	POSSIBLE CAUSE	REMEDY
Griddle will not heat	<ul style="list-style-type: none"> No power to unit Not phased correctly Defective thermostat Defective element 	<ul style="list-style-type: none"> Check circuit breakers Check phasing against wiring diagram Replace thermostat Replace element
TH hood will not heat	<ul style="list-style-type: none"> No power to unit Failed tilt switch Failed standby switch Failed element 	<ul style="list-style-type: none"> Check circuit breakers Replace tilt switch Replace standby switch Replace element

Possible Cause	TEST
Failed Thermostat	<ul style="list-style-type: none"> Verify calibration
Failed Element	<ul style="list-style-type: none"> Remove the wires and check for continuity across the element*
Failed Tilts Switch	<ul style="list-style-type: none"> Remove the wires and check for continuity*
Failed Standby Switch	<ul style="list-style-type: none"> Remove the wires and check for continuity*

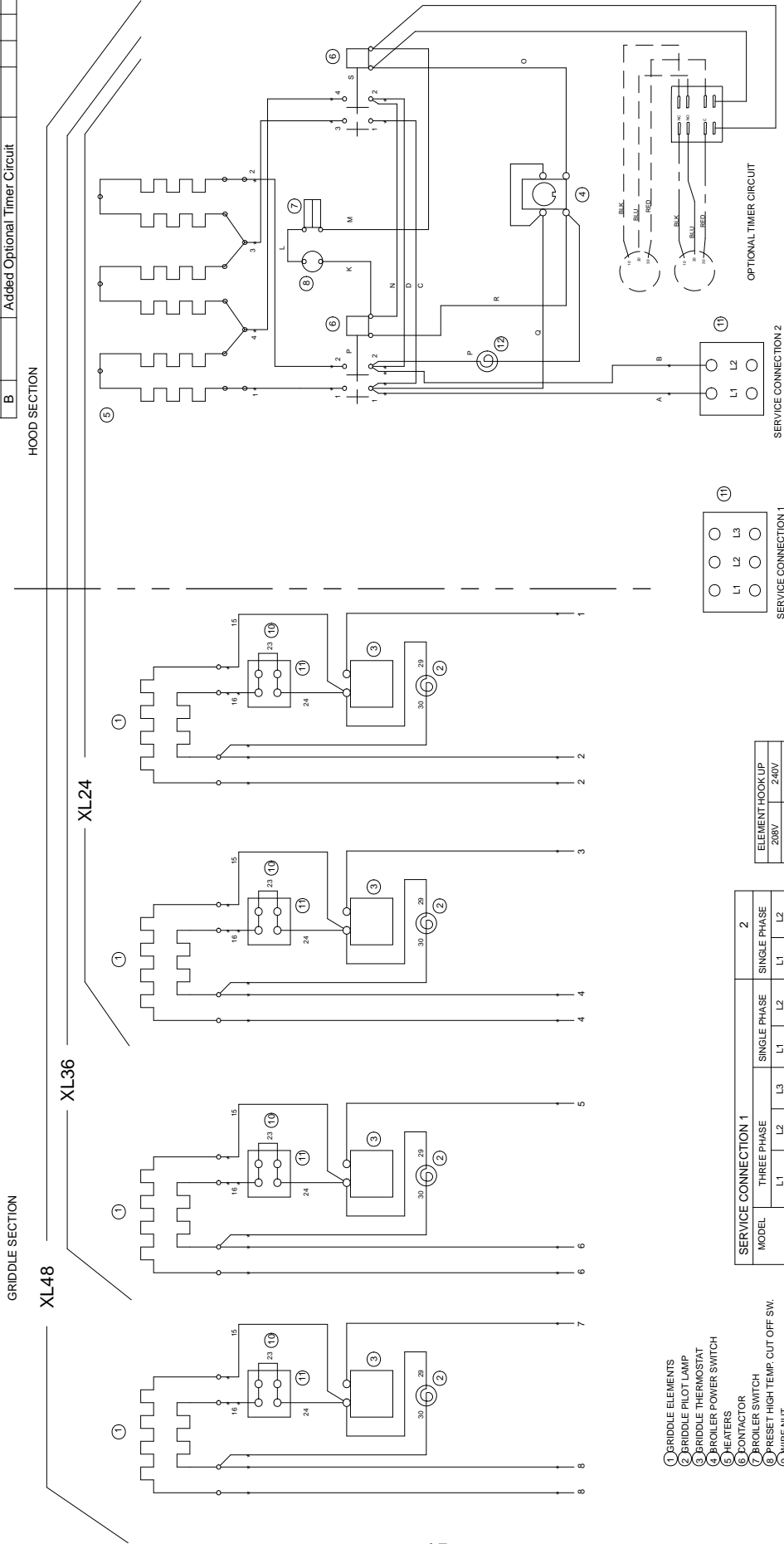
<p>STAR MANUFACTURING INTERNATIONAL INC. ST. LOUIS, MO. 63143, USA</p> <p>Lang</p> <p>THIS DRAWING CONTAINS INFORMATION CONFIDENTIAL TO STAR MFG. INT'L INC. NO REPRODUCTION OR DISCLOSURE OF ITS CONTENTS IS PERMITTED</p>	MATERIAL		PART NO.	
	FINISH		2M-61114-W51	
	DR. DJS	CK.	TITLE	
DATE: 7/29/2008		WD 2' ACCUTEMP ELECT GRID W/ CSE 12 HOODS - 208/240V		REV. DATE/ECO
TOLERANCE: UNLESS NOTED .xxx ± .015 ANGLES ± 1°		DESCRIPTION OF CHANGE		DR
REVISED GRIDDLE AND CLAMSHELL		WIRING NOTES		JMM

- ① GRIDDLE ELEMENTS
- ② GRIDDLE PILOT LAMP
- ③ GRIDDLE THERMOSTAT
- ④ JUMPER
- ⑤ TERMINAL BLOCK
- ⑥ SWITCH
- ⑦ TERMINAL BLOCK - 4 POLE
- ⑧ OVERTEMP STAT #1
- ⑨ HOOD TILT SWITCH
- ⑩ HOOD ELEMENTS
- ⑪ CONTACTOR
- ⑫ FUSE
- ⑬ TIMER PLUG
- ⑭ HOOD PILOT LAMP

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



REVISION BLOCK				
REV	ECN NO.	DESCRIPTION	DR.	MFG
B		Added Optional Timer Circuit		
			ENG	DATE



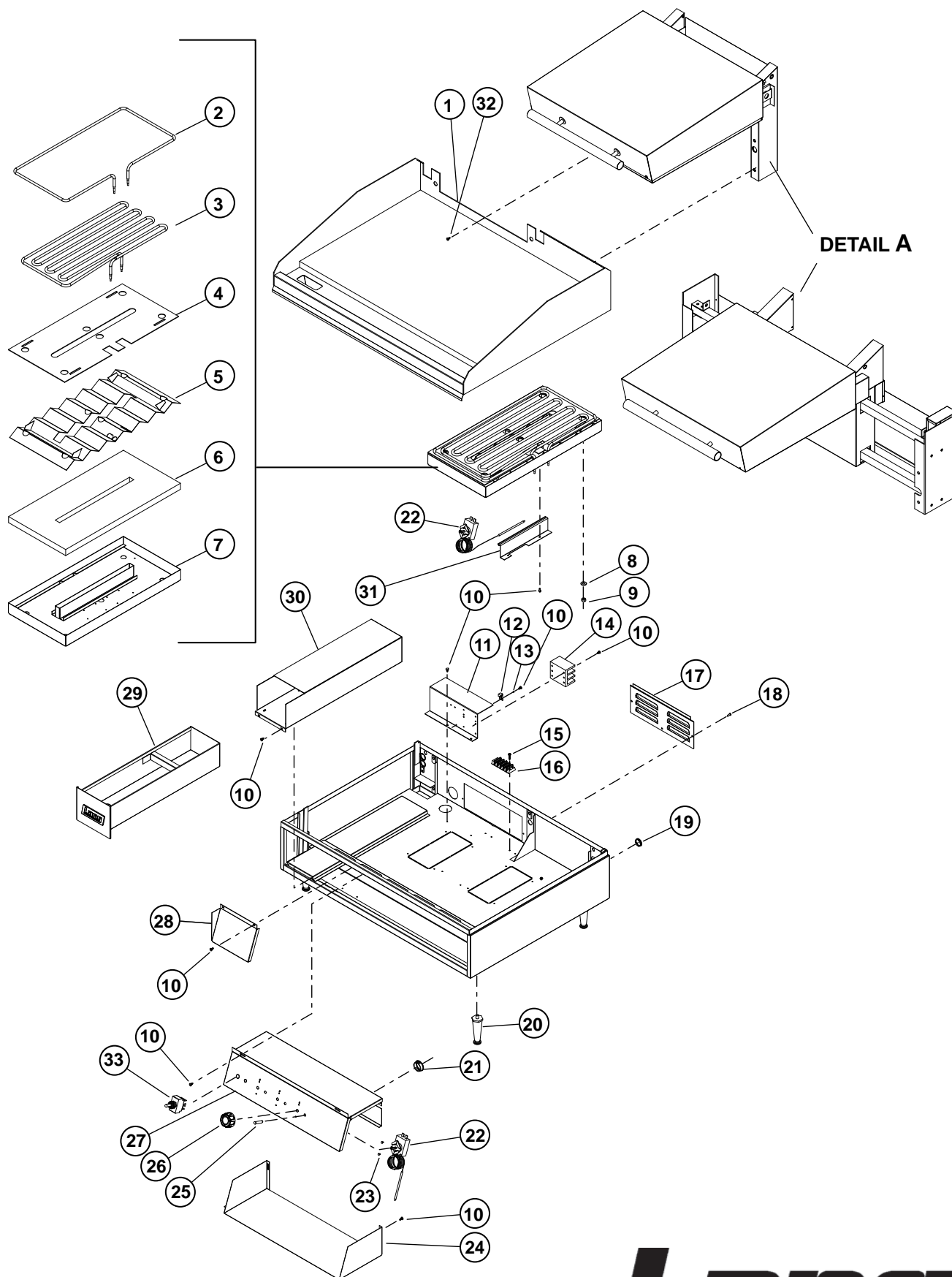
LangTM

A Division of Star Mfg. Int'l, Inc.

2M-61113-25 Rev B 6/05/1998

MODELS:

124TH, 136TH, 148TH HOOD w/IDLE



Model: 124TH, 136TH, 148TH Electric Clamshell®

Lang®

SK2399

Rev. -

10/06/08

PARTS LIST

October 5, 2012, Rev. F

Model: 124TH, 124TH-208MGT, 124TH-208VMG; Thermostatic Electric Clamshell® Commercial				
Fig No	Part Number	Qty	Description	Application
1	K9-XL-722-7	1	PLATE ASY 2' COMBO	124TH
	K9-XL-722-C7		PLATE ASSY 2' COMBO CHROME	124THC
2	2N-11030-30	2	ELMNT GRID 208V 1257W	124TH
3	2N-11030-29	2	ELE GRD 208/240V4.5KW/6KW	124TH
4	K9-XL-426	2	ELEMENT PAN PLATE	124TH
5	K9-XL-439	2	ELEMENT PAN Z ASSY	124TH
6	2H-XL-424	2	ELEMENT PAN INSULATION	124TH
7	K9-XL-434	2	ELEMENT PAN ASSEMBLY	124TH
8	2C-20201-04	12	WSHR FLT 3/8 USS PLTD	124TH
9	2C-20301-06	12	NUT HEX 5/16-18 PLTD	124TH
10	2C-20103-02	5	SCRW SM PLT 10 X .5 PHLSL	124TH
11	K9-XL-227	1	SUPPLY WIRE BAFFLE	124TH
12	Y9-31200-02-1	1	GROUNDING LUG/+LABEL	124TH
13	2C-20202-06	1	WSHR LOCK #10 INT STAR	124TH
14	2E-30500-07	1	TRM BLOCK 3PLELRGE 125AMP	124TH
15	2C-20103-01	4	SCRW SM PLT 10X7/8 PHIL	124TH
17	K9-XL-507	1	REAR COVER	124TH
18	2C-20104-04	4	SCRW PHD ST 8-32X.5 PLTD PHILP	124TH
19	2P-70903-08	1	PLG BTN PLTD MTL 5/16	124TH
	2P-70903-09	4	PLG BTN PLTD MTL 7/16	124TH
20	2A-Z0314	4	FOOT, 4" DIE CAST	124TH
21	2K-70801-02	2	SNAP BUSH 1 3/8 SB1375-16	124TH
22	2T-30402-07	2	STAT ADJ 550o 48 C/T	124TH
23	2C-20101-77	4	SCRW MS PLT 6-32 X .25 PHD	124TH
24	K9-XL-524-1	1	ELECT BOX COVER SPOT 2'	124TH
25	Y9-31601-01-1	3	PILOT LT 250V W/TIN CLIP	124TH
		2		124TH-208MGT, 124TH-208VMG, 124TH-2/3-VMG
26	Y9-70701-15	2	KNOB 550°F D, BLACK	124TH
	Y9-70701-15-2		KNOB 550°F D, BLACK, RED	124TH
27	K9-XL-725-04	1	ELECT BOX ASY 2' XL/LG	124TH
28	K9-XL-422-1	1	ACCESS PANEL ASSY 2'	124TH
29	K9-XL-235-1	1	GREASE BUCKET ASSY S/S	124TH
30	K9-XL-228	1	BUCKET SLIDE ASSY	124TH
31	K9-XL-504	2	STAT HOLDER	124TH
32	2C-20109-04	1	SCREW THD MS SS 10-32X 3/8	124TH
33	2E-30303-06	1	SWT TOG ON-ON DPDT BLK	124TH
NI	2E-30303-05	1	SWT PLATE ON/OFF	124TH
NI	2E-30600-02	1	RELAY 240VAC 3FORMC FLNG	124TH-208MGT, 124TH-2/3-VMG
NI	2J-40102-67	1	TIMER - MOE'S	124TH-208MGT
NI	2T-30401-05	1	STAT FXD TEMP 385°F CLS	124TH

**IMPORTANT: WHEN ORDERING, SPECIFY VOLTAGE OR TYPE GAS DESIRED
INCLUDE MODEL AND SERIAL NUMBER**

PAGE 1
OF 1

Some items are included for illustrative purposes only and in certain instances may not be available.

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PARTS LIST

October 5, 2012, Rev. F

Model: 136TH, 136THE-480VM; Thermostatic Electric Clamshell® Commercial				
Fig No	Part Number	Qty	Description	Application
1	K9-XL-722-8	1	PLATE ASY 3' COMBO	136TH
	K9-XL-722-81		PLATE ASY 3' COMBO RH	136THR
2	2N-11030-30	3	ELMNT GRID 208V 1257W	136TH
3	2N-11030-29	3	ELE GRD 208/240V4.5KW/6KW	136TH
4	K9-XL-426	3	ELEMENT PAN PLATE	136TH
5	K9-XL-439	3	ELEMENT PAN Z ASSY	136TH
6	2H-XL-424	3	ELEMENT PAN INSULATION	136TH
7	K9-XL-434	3	ELEMENT PAN ASSEMBLY	136TH
8	2C-20201-04	18	WSHR FLT 3/8 USS PLTD	136TH
9	2C-20301-06	18	NUT HEX 5/16-18 PLTD	136TH
10	2C-20103-02	5	SCRW SM PLT 10 X .5 PHLSL	136TH
11	K9-XL-227	1	SUPPLY WIRE BAFFLE	136TH
12	Y9-31200-02-1	1	GROUNDING LUG/+LABEL	136TH
13	2C-20202-06	1	WSHR LOCK #10 INT STAR	136TH
14	2E-30500-07	1	TRM BLOCK 3PLELRGE 125AMP	136TH
15	2C-20103-01	4	SCRW SM PLT 10X7/8 PHIL	136TH
16	2E-30500-22	1	TRMINL STRP 8POLE 50A250V	136TH
17	K9-XL-507	1	REAR COVER	136TH
18	2C-20104-04	4	SCRW PHD ST 8-32X.5 PLTD PHILP	136TH
19	2P-70903-08	1	PLG BTN PLTD MTL 5/16	136TH
	2P-70903-09	4	PLG BTN PLTD MTL 7/16	136TH
20	2A-72500-05	4	LEG 4" W/BOLT DOWN ADJ	MARINE
	2A-Z0314		FOOT, 4" DIE CAST	136TH
21	2K-70801-02	2	SNAP BUSH 1 3/8 SB1375-16	136TH
22	2T-30402-07	2	STAT ADJ 550o 48 C/T	136TH
23	2C-20101-77	6	SCRW MS PLT 6-32 X .25 PHD	136TH
24	K9-XL-524-1	1	ELECT BOX COVER SPOT 2'	136TH
25	2J-31601-01	4	PILOT LT 250V 6LEAD BLK	136TH
	2J-31601-01	3	PILOT LT 250V 6LEAD BLK	136THE
	2J-31601-02	3	PILOT LT 480V 6LEAD BLK	136THE-480VM
26	Y9-70701-15	3	KNOB ASSY 550°F D, BLACK	136TH
	Y9-70701-15-2		KNOB ASSY 550°F D, BLACK, RED	136TH
27	K9-XL-725-8	1	ELECT BOX ASY 3' XL/LG	136TH
28	K9-XL-422-1	1	ACCESS PANEL ASSY 2'	136TH
29	K9-XL-235-1	1	GREASE BUCKET ASSY S/S	136TH
30	K9-XL-228	1	BUCKET SLIDE ASSY	136TH
31	K9-XL-504	3	STAT HOLDER	136TH
32	2C-20109-04	1	SCREW THD MS SS 10-32X 3/8	136TH
33	2E-30303-06	1	SWT TOG ON-ON DPDT BLK	136TH
NI	2E-30303-05	1	SWT PLATE ON/OFF	136TH
NI	2T-30401-05	1	STAT FXD TEMP 385°F CLS	136TH

**IMPORTANT: WHEN ORDERING, SPECIFY VOLTAGE OR TYPE GAS DESIRED
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PAGE 1
OF 1

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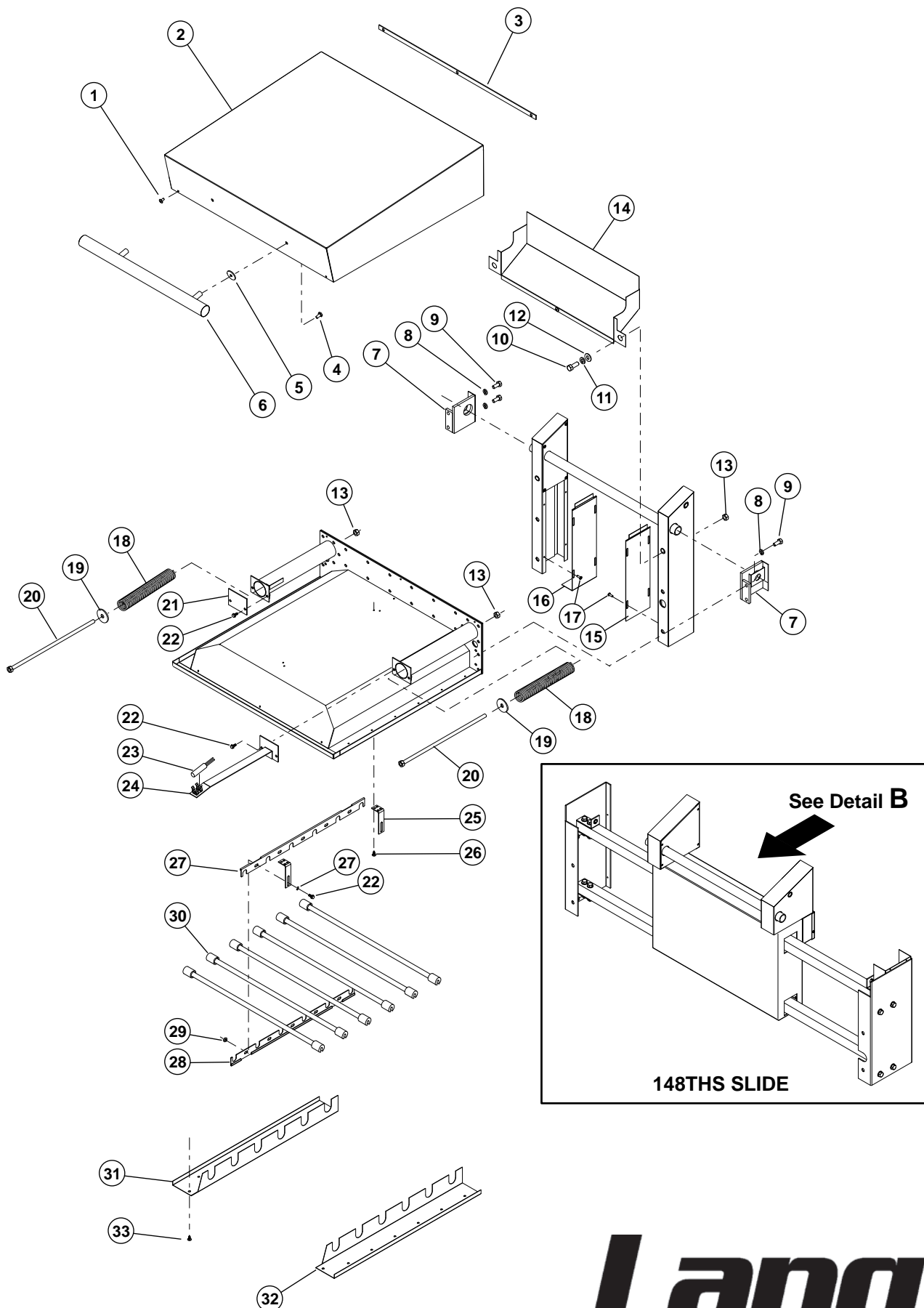
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PARTS LIST

October 5, 2012, Rev. F

Model: 148TH, 148THR, 148THS; Thermostatic Electric Clamshell® Commercial				
Fig No	Part Number	Qty	Description	Application
1	K9-XL-722-9	1	PLATE ASY 4' COMBO LH	148TH
	K9-XL-722-901		PLATE ASY 4' COMBO RH	148THR
	K9-XL-722-903		PLATE ASY 4' SLIDER TALL	148THS
2	2N-11030-30	4	ELMNT GRID 208V 1257W	148TH
3	2N-11030-29	4	ELE GRD 208/240V4.5KW/6KW	148TH
	2N-11030-31		ELMNT GRID 480V	148TH-480V
4	K9-XL-426	4	ELEMENT PAN PLATE	148TH
5	K9-XL-439	4	ELEMENT PAN Z ASSY	148TH
6	2H-XL-424	4	ELEMENT PAN INSULATION	148TH
7	K9-XL-434	4	ELEMENT PAN ASSEMBLY	148TH
8	2C-20201-04	24	WSHR FLT 3/8 USS PLTD	148TH
9	2C-20301-06	24	NUT HEX 5/16-18 PLTD	148TH
10	2C-20103-02	28	SCRW SM PLT 10 X .5 PHLSL	148TH
		85		148THS
11	K9-XL-227	1	SUPPLY WIRE BAFFLE	148TH
		2		148THR
12	Y9-31200-02-1	1	GROUNDING LUG/+LABEL	148TH
13	2C-20202-06	2	WSHR LOCK #10 INT STAR	148TH
14	2E-30500-07	1	TRM BLOCK 3PLELRGE 125AMP	148TH
15	2C-20103-01	4	SCRW SM PLT 10X7/8 PHIL	148TH
16	2E-30500-22	1	TRMINL STRP 8POLE 50A250V	148TH
17	K9-XL-507	2	REAR COVER	148TH
18	2C-20104-04	4	SCRW PHD ST 8-32X.5 PLTD PHILP	148TH
19	2P-70903-02	2	PLG BTN PLTD MTL 1/2	148TH
	2P-70903-06	1	PLG BTN PLTD MTL 1/2	148TH
	2P-70903-08	1	PLG BTN PLTD MTL 5/16	148TH
		20		148THR
	2P-70903-09	3	PLG BTN PLTD MTL 7/16	148TH
20	2A-Z0314	4	FOOT, 4" DIE CAST	148TH
21	2K-70801-02	2	SNAP BUSH 1 3/8 SB1375-16	148TH
		4		148THR
22	2T-30402-07	4	STAT ADJ 550o 48 C/T	148TH
23	2C-20101-77	8	SCRW MS PLT 6-32 X .25 PHD	148TH
24	K9-XL-524-1	2	ELECT BOX COVER SPOT 2'	148THR
	K9-XL-524-2	1	ELECT BOX COVER SPT 3'&4'	148TH
25	2J-31601-01	5	PILOT LT 250V 6LEAD BLK	148TH
		1		148TH-480V
	2J-31601-02	4	PILOT LT 480V 6 LEAD BLK	
26	Y9-70701-15	4	KNOB 550° D, BLACK	148TH
	Y9-70701-15-2		KNOB 550° D, RED	148TH
27	K9-XL-725-12	1	ELECT BOX ASY 4' XL/LG	148TH
28	K9-XL-422-1	2	ACCESS PANEL ASSY 2'	148THR
	K9-XL-422-3	1	ACCESS PANEL ASSY 4'	148TH
29	K9-XL-235-1	1	GREASE BUCKET ASSY S/S	148TH
		2		148THR
30	K9-XL-228	1	BUCKET SLIDE ASSY	148TH
		2		148THR
31	K9-XL-504	4	STAT HOLDER	148TH
32	2C-20109-04	1	SCREW THD MS SS 10-32X 3/8	148TH
33	2E-30303-06	1	SWT TOG ON-ON DPDT BLK	148TH
NI	2E-30303-05	1	SWT PLATE ON/OFF	148TH
NI	2T-30401-05	1	STAT FXD TEMP 385oCLS	148TH





DETAIL A

Model: 124TH, 136TH, 148TH Electric Clamshell®

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SK2400

Rev. -

10/06/08

PARTS LIST

June 3, 2011, Rev. F

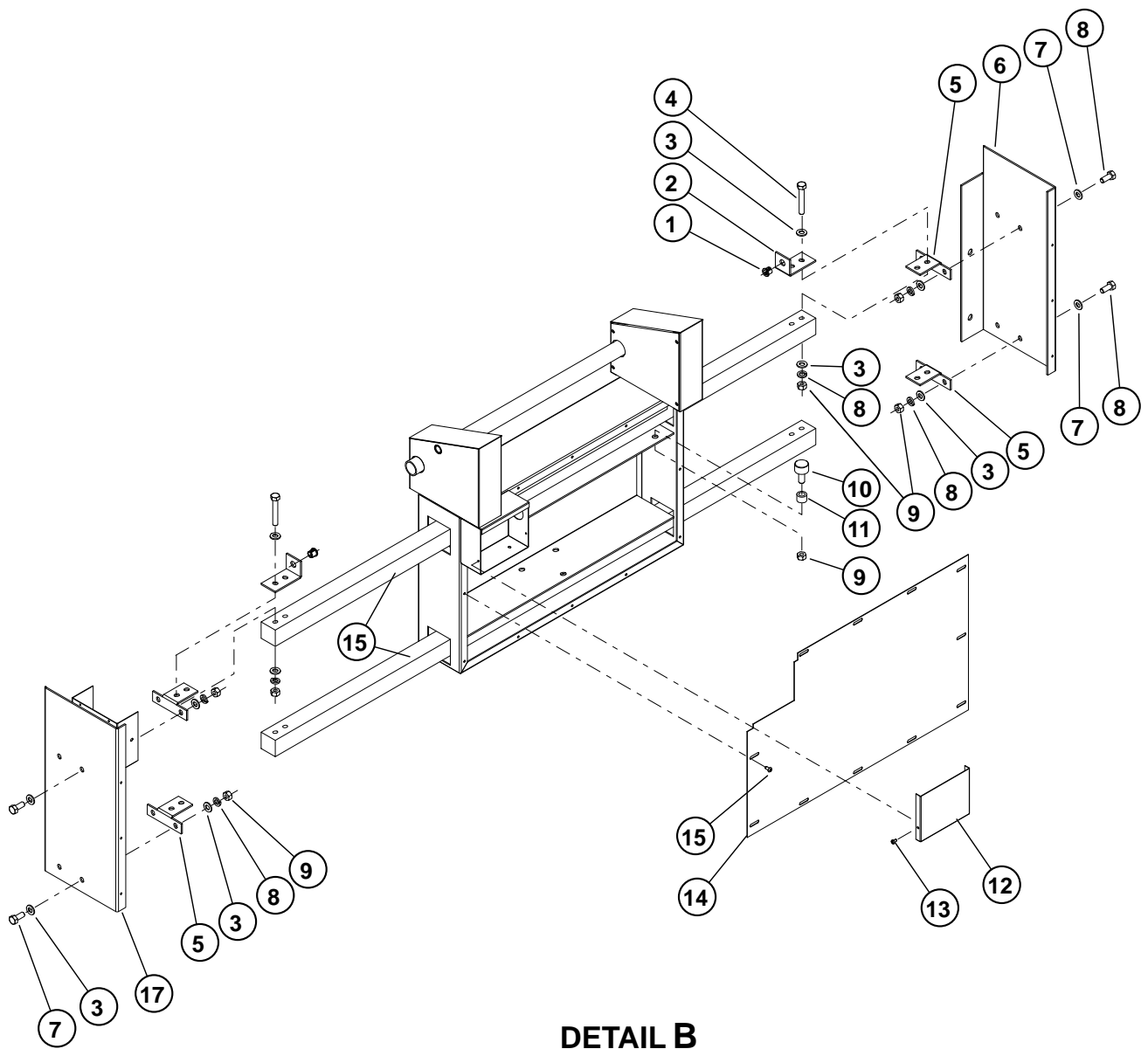
Model: 124TH, 136TH, 148TH, 148THS, 148TH2, DETAIL A, THERMOSTAT ELECTRIC HOOD					
Fig No.	Part No	Single Hood Qty	Double Hood Qty	Description	Applications
1	2C-20101-09	2	4	SCRW THD MS 10-24X3/8 PLT	ALL
2	K9-XLH-122	1	2	HOOD WRAP	ALL
3	K9-XLH-125	1	2	HOOD WRAP SHIM A	ALL
3	K9-XLH-125-1	1	2	HOOD WRAP SHIM B	ALL
4	2C-20104-48	2	4	SCRW HXHD CAP 1/4-28X1/2	ALL
5	2C-20202-05	2	4	WSHR PLT 1/4 LOCK SPLIT	ALL
6	Y9-50312-05	1	2	HANDLE ASSY 1 HANDLE	ALL
7	K9-XLH-114	1	2	HOOD ATTACH ASSY	ALL
8	2C-20202-08	4	8	WSHR PLT 5/16 LOCK SPLIT	ALL
9	2C-20104-10	4	8	SCRW HXHD CAP 5/16-18X3/4	ALL
10	2C-20111-10	2	4	SCRW HXHD CAP 3/8-16X1 SS	ALL
11	2C-20202-09	2	4	WSHR LOCK 3/8 STD SPLIT	ALL
12	2C-20203-05	2	4	WASHER SS 3/8 USS FLAT	ALL
13	2C-20301-08	4	8	NUT HEX 3/8-16 PLTD	ALL
14	K9-XLH-237	1	2	DRIP SHIELD	124TH, 136TH, 148TH
14	K9-XLH-548	1	-	DRIP SHIELD ASSY	148THS
15	K9-XLH-265	1	2	STANCHION COVER L/H	ALL
16	K9-XLH-266	1	2	STANCHION COVER R/H	ALL
17	2C-20102-04	19	38	SCRW PHD ST 8-32X.5 PLTD	ALL
18	2P-51002-01	2	4	SPRING COMPRESSION TYPE	ALL
19	K9-50312-40	2	4	SPRING PISTON	ALL
20	2C-20104-37	2	4	SCRW 3/8-16X12 H/H CAP 2	ALL
21	K9-XLH-202	2	4	SPRING COVER	ALL
22	2C-20104-04	9	18	SCRW HXWSHRS CP 10/32X1/2	ALL
23	K9-30307-01	1	2	SWT MERC TLT W/250°C 18GA	ALL
24	K9-XLH-204	1	2	MERC. SWT. BRACKET ASSY	ALL
25	K9-XLH-752	2	4	ELEMENT BRACE MOUNT	ALL
27	2C-20204-08	5	10	WSHR S/S #10 LOCK EXT	ALL
28	K9-XLH-751	2	4	ELEMENT BRACE	ALL
29	2C-20301-15	5	10	NUT HEX 10-32 PLTD	ALL
30	K9-11160-26-1	6	12	STL HTR 104V 1000W (208V	208V
	K9-11160-27-1			STL HTR 120V/1000W (240V	240V
31	K9-XLH-209-1	1	2	BOTTOM LAMP HOLDER LEFT	ALL
32	K9-XLH-209	1	2	BOTTOM LAMP HOLDER RIGHT	ALL
33	2C-20103-02	28	48	SCRW SM PLT 10 X .5 PHLSL	ALL
NI	2E-30701-03	2	4	CONTC2POL35A208-240V50/60	ALL

**IMPORTANT: WHEN ORDERING, SPECIFY VOLTAGE OR TYPE GAS DESIRED
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PAGE 1
OF 1

Some items are included for illustrative purposes only and in certain instances may not be available.

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DETAIL B

Model: 148THS Electric Sliding Clamshell® Frame Assy

Lang®

SK2401

Rev. - 10/06/08

PARTS LIST

September 10, 2009, Rev. F

Model No: 148THS
Detail A: Sliding Hood Frame Assy

Key Number	Part Number	Qty Per	Description
1	2K-70801-01	2	SNAP BUSH 7/16 SB437-5 148THS
2	K9-XLH-435	2	SLIDER STOP SLIDER HOOD 148THS
3	2C-20201-09	20	WSHR PLT 5/16 FLAT SAE 148THS
4	2C-20104-12	2	SCRW HXHD CAP 5/16-18X2 148THS
5	K9-XLH-433	4	SLIDE BAR ANGLE SLIDER 148THS
6	K9-XLH-430	1	BAR SUPPORT - LH SLIDER 148THS
7	2C-20104-10	8	SCRW HXHD CAP 5/16-18X3/4 148THS
8	2C-20202-08	10	WSHR PLT 5/16 LOCK SPLIT 148THS
9	2C-20301-06	18	NUT HEX 5/16-18 PLTD 148THS
10	2P-70202-02	8	CAM ROLLER BRNG 148THS
11	K9-XLH-413-1	8	SPACER 148THS
12	K9-XLH-416	1	J-BOX COVER SLIDER HOOD 148THS
13	2C-20102-18	2	SCRW PHD ST 6-32X1/4 PLTD 148THS
14	K9-XLH-414	1	REAR COVER SLIDER HOOD 148THS
15	2C-20102-08	11	SCRW PHD ST 8-32X.375 148THS
16	K9-XLH-434	2	SLIDE BAR SLIDER HOOD 148THS
17	K9-XLH-428	1	BAR SUPPORT ASSY RH 148THS
<p>IMPORTANT: WHEN ORDERING, SPECIFY VOLTAGE OR TYPE GAS DESIRED</p> <p>INCLUDE MODEL AND SERIAL NUMBER</p> <p>Some items are included for illustrative purposes only and in certain instances may not be available.</p>			



STAR INTERNATIONAL HOLDINGS INC. COMPANY
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