

Lang[®]

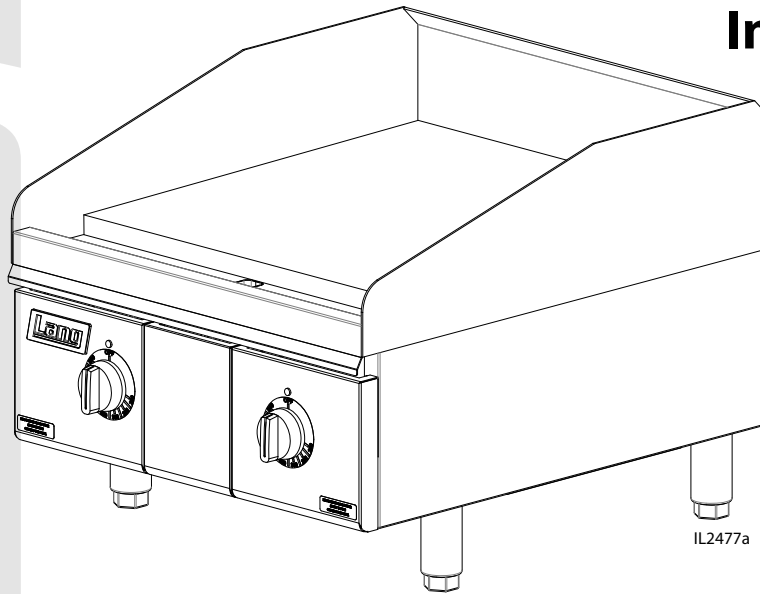
ENVIROZONE-TSTAT ELECTRIC GRIDDLE

Commercial

124ZT, 136ZT, 148ZT, 160ZT, 172ZT

Installation and Operation Instructions

2M-W1823 Rev. C 2/11/2015



IL2477a

124ZT



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 VICINTIY 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 Department at 314-678-6315

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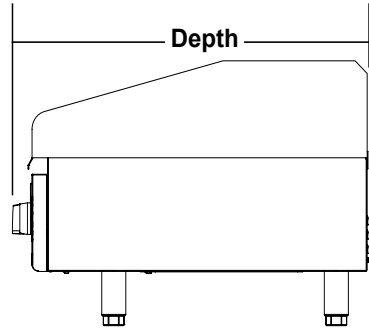
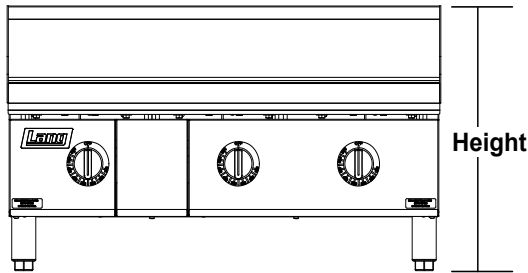
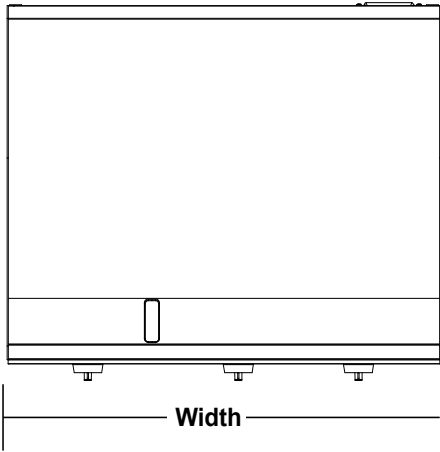
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2M-W1823, Envirozone T-Stat Electric Griddle

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 service number 314-678-6315 or visit our website www.langworld.com for the service agent nearest you.

EQUIPMENT SPECIFICATIONS

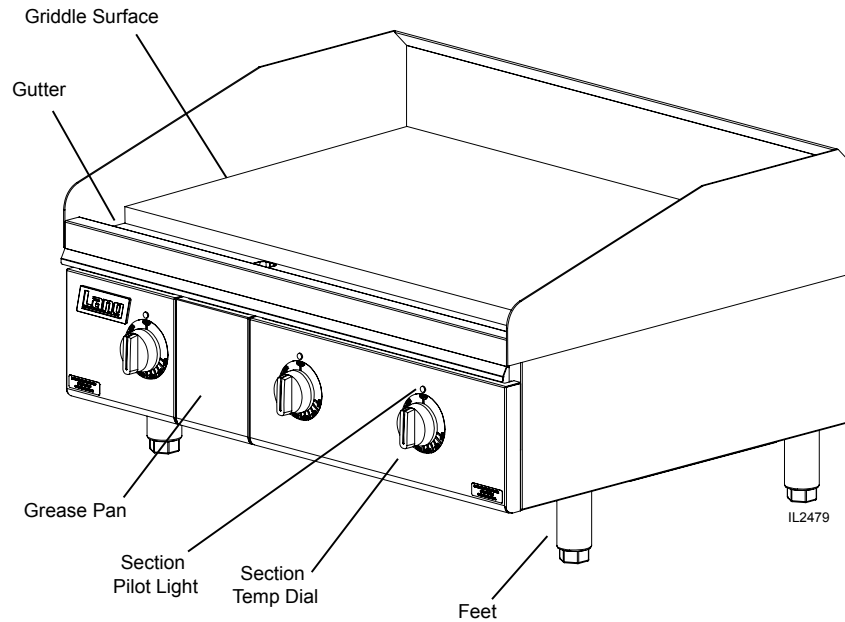
Model	Dimensions (Not including Legs)			Clearance from combustible surface	Weight		Freight Class
	Width	Depth	Height		Actual	Shipping	
124ZT	24" (61 cm)	30.4" (77.2 cm)	16.4" (41.6 cm)	Sides: 2", Back: 2"	243 lbs. 110 kg	280 lbs. 127 kg	85
124ZTD		36.5" (92.7 cm)					
136ZT	36" (91.4 cm)	30.4" (77.2 cm)					
136ZTD		36.5" (92.7 cm)					
148ZT	48" (121.9 cm)	30.4" (77.2 cm)					
148ZTD		36.5" (92.7 cm)					
160ZT	60" (152.4 cm)	30.4" (77.2 cm)					
160ZTD		36.5" (92.7 cm)					
172ZT	72" (183 cm)	30.4" (77.2 cm)					
172ZTD		36.5" (92.7 cm)					



ELECTRICAL SPECIFICATIONS

Model	Volts	Hz.	Ph	Kw Total	A 1PH.	Supply	L1	L2	L3	Supply	Kw Total	A 1PH.	Supply	L1	L2	L3	Supply
124ZT	208/240	60	1/3	12	58	4	50	29	29	6							
136ZT	208/240	60	1/3	18	87	2	50	50	50	6							
148ZT	208/240	60	1/3	24	116	1	75	75	50	3							
160ZT	208/240	60	1/3	12	58	4	50	29	29	6	18	87	2	50	50	50	6
172ZT	208/240	60	1/3	18	87	2	50	50	50	6	18	87	2	50	50	50	6

EQUIPMENT DESCRIPTION



Exterior Construction

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.

Controls

Each twelve-inch section has its own temperature dial that snaps into place to lock in any temperature from 200°F to 550°F (93°C to 287°C) in 25° increments.

Each twelve-inch section of the griddle is controlled by an area sensitive RTD probe, which can sense and react to a temperature change of +/- 4°F.

Each twelve-inch section has a set of 6 K.W. elements for high efficiency, quick recovery and outstanding performance

Technical

These Enviro-Zone Electric series thermostat griddle operates on either 208, 240V and are shipped three phase, (unless in specific specifications). 208, 240V can be field converted to single phase.

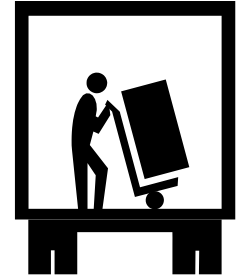
Minimum clearances: 2" from side and back

NOTICE **The data plate is on the right side of the griddle. The griddle 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 Star Manufacturing Company. File your claim with the carrier.**



Location

Prior to un-crating, move the griddle 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 griddle 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.



CAUTION

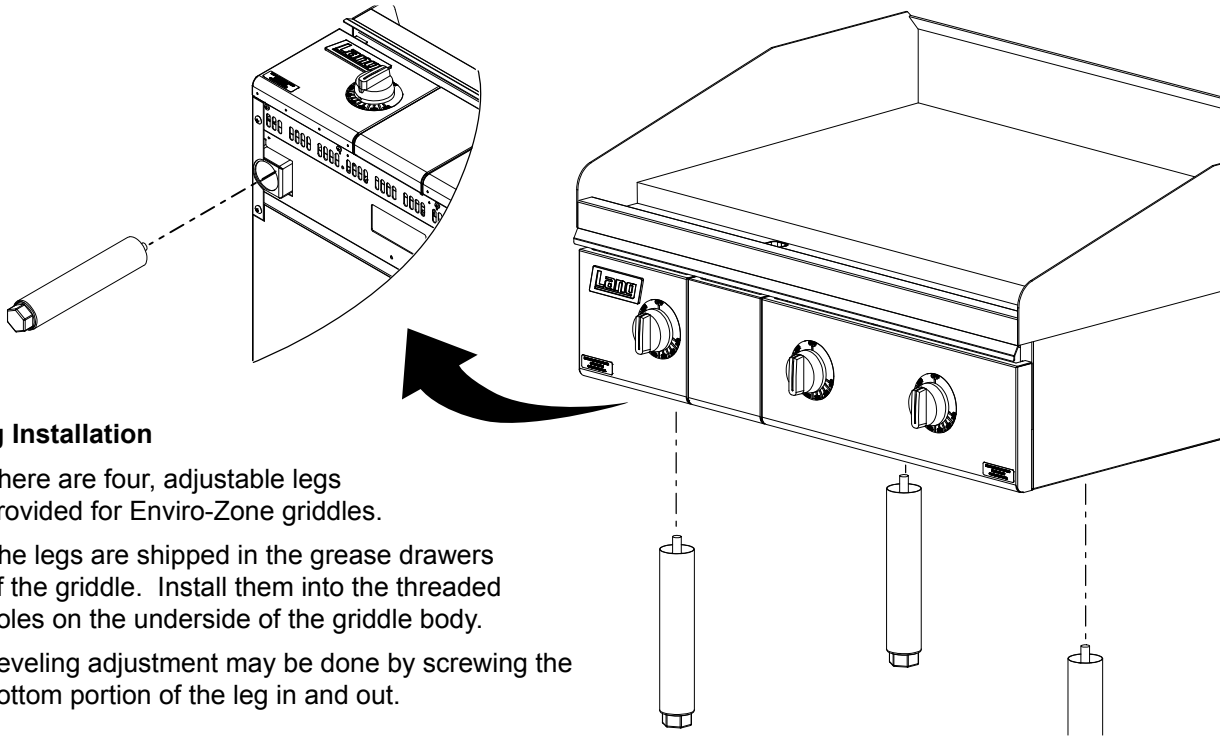
ANY STAND, COUNTER OR OTHER DEVICE ON WHICH GRIDDLE WILL BE LOCATED MUST BE DESIGNED TO SUPPORT THE WEIGHT OF THE GRIDDLE.



WARNING

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

INSTALLATION



Leg Installation

There are four, adjustable legs provided for Enviro-Zone griddles.

The legs are shipped in the grease drawers of the griddle. Install them into the threaded holes on the underside of the griddle body.

Leveling adjustment may be done by screwing the bottom portion of the leg in and out.



WARNING

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. IMPROPER INSTALLATION CAN CAUSE INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT. UNIT MUST BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES.

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



CAUTION

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

Detach cover on junction box at rear of unit. There is one power supply connection on the 2, 3, and 4-foot griddles. There are two power supply connections on 5 and 6-foot griddles. Refer to the power supply chart in the Technical Specification Data portion of this manual (pg 4 & 5), for proper power supply size.

There is (1) one 1 1/4-inch conduit knockout on 2, 3 and 4-foot griddles located at the rear of the griddle, through the back and the bottom of the griddle body. There are (2) two 1 1/4-inch conduit knockouts provided on the 5 and 6-foot griddles. Use a supply wire suitable for at least 90°C/194°F.

This griddle is shipped from the factory set up for a three phase service. On 208V, 220V & 240V the wiring can be changed in the supply terminal junction box to convert the griddle to single phase.

MODEL NUMBER	TOTAL K.W.	NOMINAL AMPS PER LINE									SINGLE PHASE		
		THREE PHASE											
		208 Volt			240 Volt			480 Volt			208V	240V	
		L1	L2	L3	L1	L2	L3	L1	L2	L3			
24"	12	50	28.8	28.8	43.3	25	25	21.7	12.5	12.5	57.7	50	
36"	18	50	50	50	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75	
48"	24	75	75	50	65	65	43.3	32.5	32.5	21.7	115.5	100	
60"	#1	18	50	50	50	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75
	#2	12	50	28.8	28.8	43.3	25	25	21.7	12.5	12.5	57.7	50
72"	#1	18	50	50	50	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75
	#2	18	50	50	50	43.3	43.3	43.3	21.7	21.7	21.7	86.5	75

Technical Data

Re-Phasing

All griddles are shipped from the factory set up for a three-phase service. Rearrange the wires in the power supply terminal block to convert the griddle to single phase. Re-phasing the griddle is not chargeable to Lang Manufacturing Company as warranty. To convert to single-phase have a Lang Authorized Service Agent, follow this chart.

MODEL NUMBER	PHASING BY WIRE NUMBER				
	THREE PHASE			SINGLE PHASE	
	LINE 1	LINE 2	LINE 3	LINE 1	LINE 2
124T	1,4	2	3	1,3	2,4
136T	1,4	2,5	3,6	1,3,5	2,4,6
148T	1,4,7	2,5,8	3,6	1,3,5,7	2,4,6,8
160T #1	1,4	2,5	3,6	1,3,5	2,4,6
160T #2	1,4	2	3	1,3	2,4
172T #1	1,4	2,5	3,6	1,3,5	2,4,6
172T #2	1,4	2,5	3,6	1,3,5	2,4,6

INITIAL START UP

Pre-Power On

Before starting the griddle for the first time, clean the griddle body and cooking surface.

Use a mild soap and water solution, then rinse with clear water and dry.

The griddle is shipped with a protective coating and craft paper covering the cooking surface.

This **MUST** be removed before heating the cooking surface. After removing the craft paper, the coating can be scrapped from the cooking surface and then wiped with a dry cloth.

Power On

Set the temperature dials to 200°F (93°C).

Heat the griddle at 200°F (93°C) for 2 hours to evaporate any moisture that may be in the elements.

Wipe surface again with dry cloth to remove any residue that still remains.

After 2 hours at 200°F (93°C), turn the temperature up to 350°F (176°C) for ½ hour.

After the griddle reaches 350°F (176°C) for ½ hour, turn the griddle up another 50°F (10°C) for another ½ hour and repeat this until it is at 450°F (232°C) for ½ hour.

The unit may emit a small amount of smoke as the cooking surface passes the 300°F (148°C) 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°F (176°C).

Seasoning Cooking Surface

The cooking surface must be “seasoned” in order to eliminate product sticking during cooking.

To season, heat the griddle to 250°F (121°C).

Once at 250°F (121°C), coat the cooking surface with non-salted vegetable oil.

Allow the griddle to stand at 250°F (121°C) until the cooking surface looks dry then coat it again.

Heat the griddle to 350°F (176°C) and repeat the procedure.

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.



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

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

SUGGESTED TIMES AND TEMPERATURES		
PRODUCTS	TEMPERATURE F / C	TIME (MIN)
HAMBURGER	350°F / 176°C	
2 patties per LB		6 to 8
4 patties per LB		4 to 6
6 patties per LB		3 to 4
STEAKS		
1/2 to 3/4 inch thick, cooked medium	375°F / 190°C	5 to 7
3/4 to 1 inch thick, cooked medium		8 to 10
Lamb Chops	350°F / 176°C	6 to 8
Pork Chops		6 to 8
Salmon	350°F / 176°C	6 to 8
Halibut	325°F / 162°C	6 to 8
Snapper		6 to 8
Hash Brown Potatoes	375°F / 190°C	3 to 4
Bacon	350°F / 176°C	3 to 4
Sausage Links or Patties		3 to 4
Ham (Pre-cooked)	375°F / 190°C	2
Eggs	275°F / 135°C	2 to 4
Note: The times and temperatures in this chart are intended as a general guide and starting point. Your actual times and temperatures may vary from this chart.		

Loading the Griddle

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

Each 12-inch section of your griddle is independently controlled by a temperature controller.

The temperature control sensor is mounted in the center of each cooking section under the griddle plate.

If the product is loaded directly over the temperature sensor, 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 temperature sensor, the thermostat will react to the temperature change much slower.

During slow periods with minimal loads, do not load directly over the thermostat sensors 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.

2M-W1823, Envirozone T-Stat Electric Griddle

MAINTENANCE & CLEANING

Cleaning

- Always start with a cold griddle.
- The stainless exterior can easily be cleaned using a good non-abrasive cleaner.
- Always follow the cleaner manufacturer's instructions when using any cleaner.
- Always apply these cleaners when the griddle is cold and rub in the direction of the metal's grain.

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 re-seasoned. 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.

Daily Cleaning

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



WARNING

USE CAUTION WHEN REMOVING THE RELEASE DRAWER AS IT CONTAINS HOT GREASE.

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

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

Weekly Cleaning

Once a week or when necessary the griddle surface should be cleaned and seasoned. Use a griddle stone, griddle pad, or liquid cleaner. Rub with the grain of the metal, being careful not to scrape the splash guard.

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

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

Season the griddle plate after each cleaning.

MAINTENANCE & CLEANING

GRIDDLE CARE (CHROME SURFACES)

(Chrome surface griddles are marked with "CHS" at the end of the model number designation on the nameplate.)

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.

Note: All Chrome griddles come with: a *scraper* (p/n: 2P-50100-15) *Bon-Ami Cleaner* (p/n: 2P-50100-16) and a *20" Palmyra Brush* (p/n: 2P-50100-17).



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.



KEEP WATER AND SOLUTIONS OUT OF CONTROLS. NEVER SPRAY OR HOSE CONTROL CONSOLE.

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

NOTICE: Never leave a chlorine sanitizer in contact with stainless steel surfaces longer than 10 minutes. Longer contact can cause corrosion.

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.

SYMPTOM	POSSIBLE CAUSE
Whole Griddle will not heat	<ul style="list-style-type: none"> • No Power to Griddle
One Section will not heat	<ul style="list-style-type: none"> • Failed contactor • Failed Element.
Product Burning	<ul style="list-style-type: none"> • Product left on griddle too long • Out of Calibration
Product Under cooked	<ul style="list-style-type: none"> • Product removed too soon • Out of Calibration

POSSIBLE CAUSE	TEST
Product is cooked too long	<ul style="list-style-type: none"> • No test available, operational condition
Failed Contactor	<ul style="list-style-type: none"> • Remove the wires from the contactor coil and check for continuity across the contactor coil connection* • Ensure the contactor moveable points move freely up and down*
Failed Element	<ul style="list-style-type: none"> • Confirm that Elements are getting correct voltage and have continuity*

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

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.

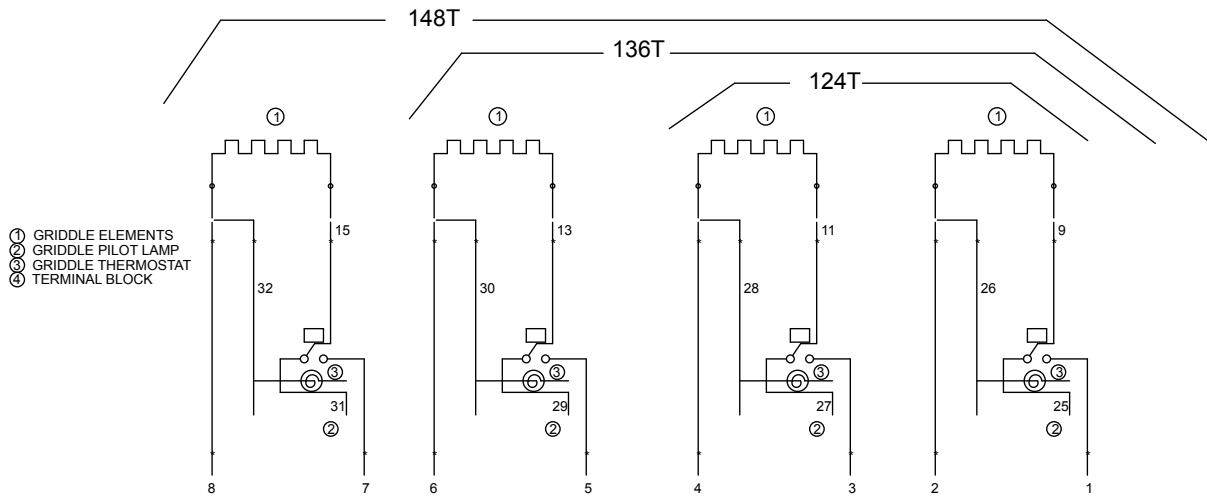

WARNING

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.


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.

REVISIONS			
REV.	DATE/ECO	DESCRIPTION OF CHANGE	DR
C	10/15/02	REVISED & REDRAWN	CDS
D	2/8/2008 ECO# 6574	ADDED 380V MODEL, REVISED NOTES, REMOVED AMP TABLE	LRC



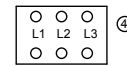
- ① GRIDDLE ELEMENTS
- ② GRIDDLE PILOT LAMP
- ③ GRIDDLE THERMOSTAT
- ④ TERMINAL BLOCK

NOTES:



1. 160T & 172T HAVE TWO POWER SUPPLY CONNECTIONS.
160T: CONN #1 USE 136T; CONN #2 USE 124T
172T: CONN #1 USE 136T; CONN #2 USE 136T
2. MODELS:
380V, 3 PHASE ELECTRIC GRIDDLES
480V, 3 PHASE ELECTRIC GRIDDLES

MODEL	THREE PHASE		
	L1	L2	L3
24	1,4	2	3
36	1,4	2,5	3,6
48	1,4,7	2,5,8	3,6



* NUMBER

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES.

Lang	TOLERANCES ARE: DECIMALS ANGLES .X ± .05 ± .5° .XX ± .03 .XXX ± .015	MATERIAL PART #:	MATERIAL TYPE:	BLANK DIMS.:	X	BLANK AREA:	sq in		
		DWN. BY: CDS	DWN. DATE: 10/15/02	REV. BY:	REV. DATE:	CHK. BY:	CHK. DATE:	CAD FILE:	SHEET 1 OF 1
		DESCRIPTION: WD LANG GRIDDLE 380 & 480 VAC ACCUTEMP						DWG. NO: 61114-02	

NOTES:

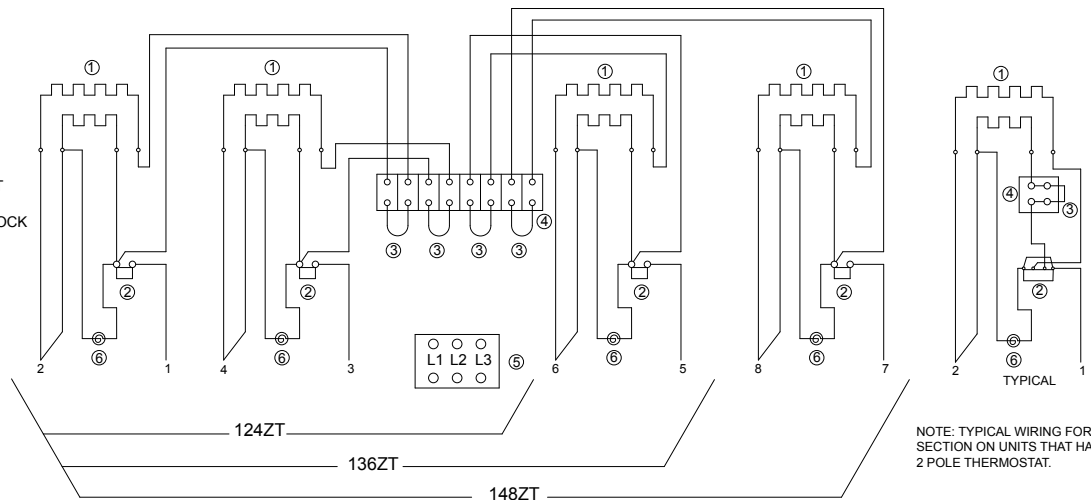
- 160ZT & 172ZT HAVE TWO POWER SUPPLY CONNECTIONS
- 160ZT: CONN #1 USE 136ZT
CONN #2 USE 124ZT
- 172ZT: CONN #1 USE 136ZT
CONN #2 USE 136ZT

STAR MANUFACTURING INT'L INC.
10 SUNNEN DRIVE
ST. LOUIS, MO. 63143, USA

MATERIAL FINISH	DATE: 1/19/2012
DR: DJS	ICK
TOLERANCE: UNLESS NOTED: .XXX ± .015 ANGLER	SHEET 1 OF 1

MODEL NO.	PART NO.		
TITLE	2M-61114-W68		
LANG "ZT" ELECTRIC GRIDDLE 208-240V			
REV.	DATE/ECO	DESCRIPTION OF CHANGE	DR

- ① GRIDDLE ELEMENTS
- ② GRIDDLE THERMOSTAT
- ③ JUMPER
- ④ JUMPER TERMINAL BLOCK
- ⑤ TERMINAL BLOCK
- ⑥ PILOT LIGHT

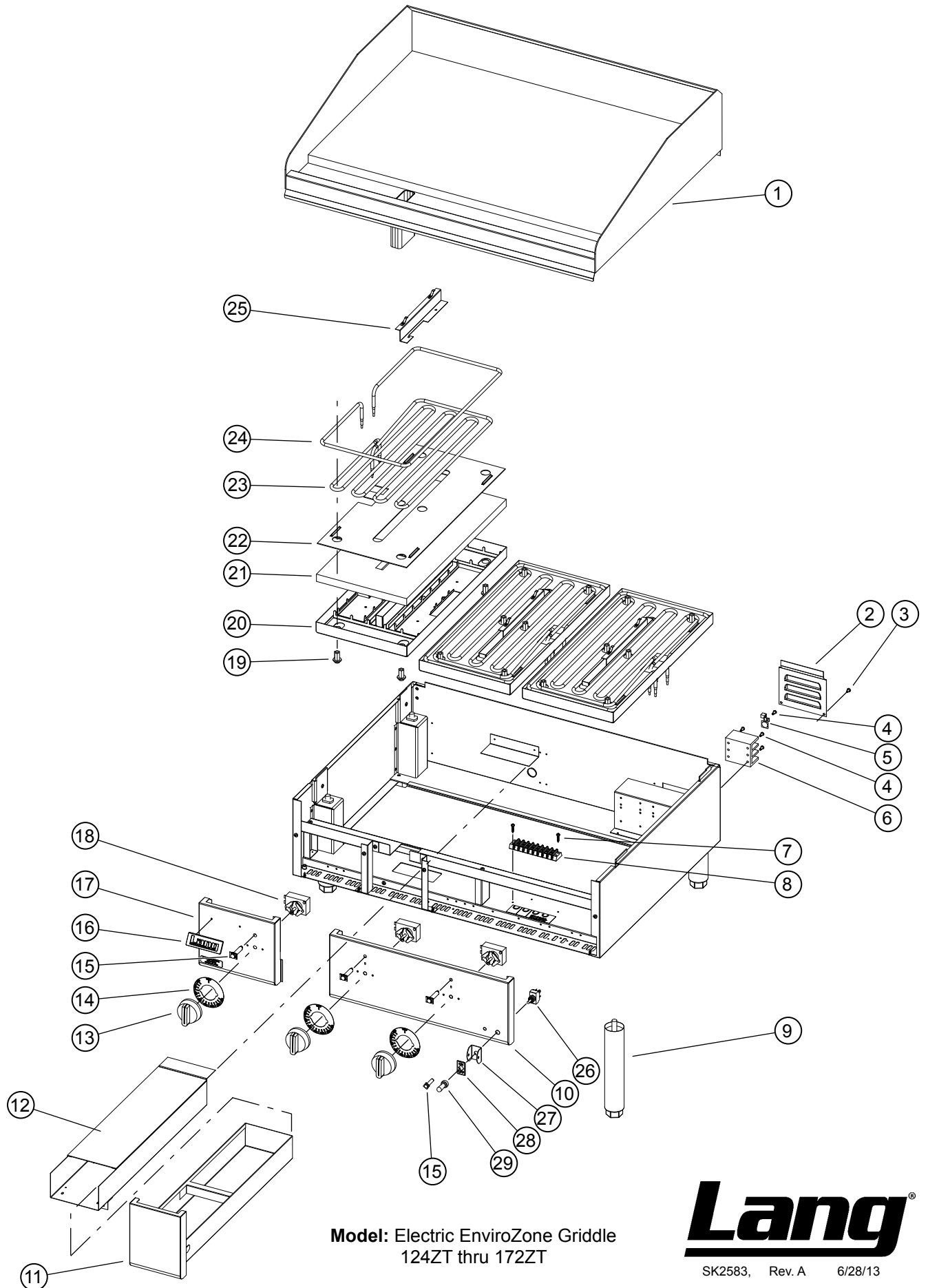


NOTE: TYPICAL WIRING FOR EACH SECTION ON UNITS THAT HAVE A 2 POLE THERMOSTAT.

ELEMENT HOOKUP	
208V	240V
INSTALL JUMPER (ITEM 3)	REMOVE JUMPER (ITEM 3)

MODEL	VOLTAGE	KW				AMP TOTALS - 3 PHASE			AMPS - 1 PHASE	THREE PHASE		SINGLE PHASE		
		L1-L2	L2-L3	L1-L3	TOTAL	L1	L2	L3		L1	L2	L3	L1	L2
124ZT	208V	6.0	6.0	6.0	12.0	50.0	28.9	28.9	57.7	1,4	2	3	1,3	2,4
	240V	6.0	6.0	6.0	12.0	43.3	25.0	25.0	50					
136ZT	208V	6.0	6.0	6.0	18.0	50.0	50.0	50.0	86.5	1,4	2,5	3,6	1,3,5	2,4,6
	240V	6.0	6.0	6.0	18.0	43.3	43.3	43.3	75					
148ZT	208V	12.0	6.0	6.0	24.0	76.3	76.3	50.0	115.4	1,4,7	2,5,8	3,6	1,3,5,7	2,4,6,8
	240V	12.0	6.0	6.0	24.0	66.1	66.1	43.3	100					

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Model: Electric EnviroZone Griddle
124ZT thru 172ZT



SK2583, Rev. A 6/28/13

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Model: 124ZT EnviroZone Electric Griddle				
Fig No.	Part Number	Description	Quantity	Application
1	K9-142-201-23	GRIDDLE PLATE ASSY - 2'ZT	1	124ZT
	K9-142-201-323	GRIDDLE PLATE ASSY -2' ZTD		124ZTD
	K9-142-201-23-2	GRIDDLE PLT ASSY-2'ZT CHROME		124ZTCHE
2	K9-XL-507-2	REAR COVER - ZT	1	124ZT
3	2C-20102-12	SCRW PHD ST 10-32X3/8	14	124ZT
4	2C-20102-21	SCRW PHD ST 10-32X1/2 PLT	5	124ZT
5	Y9-31200-02-1	GROUNDING LUG/+LABEL	2	124ZT
6	2E-30500-07	TRM BLOCK 3PLELRGE 125AMP	1	124ZT
7	2C-20103-01	SCRW SM PLT 10X7/8 PHIL	2	124ZT
8	2E-30500-22	TRMINL STRP 8POLE 50A250V	1	124ZT
9	2A-72500-20	LEG 10.25 WITH ADJ HEX	4	124ZT
10	K9-142-231-21	FRONT PANEL - RIGHT WELDMT	1	124ZT
	K9-142-231-11	FRONT PANEL ASSY-RT W/CSE12		124ZTCHE
11	K9-141-251	GREASE DRAWER ASSY	1	124ZT
	K9-141-252			124ZTD
12	K9-141-161-3W1	GREASE DRAWER SLIDE WELD	1	124ZTD
	K9-141-161-W1			124ZT
13	2R-W498-2	KNOB-RED, METAL INSERT .188	2	Mfg after 6-4-2013
	2R-W498	KNOB-RED		Mfg before 6-3-2013
14	2M-W728-W4	LABEL - CONTROL 200-550F	2	124ZT
15	Y9-31601-01-1	PILOT LT 250V W/TIN CLIP	2	124ZT
	Y9-31601-02-1	PILOT LT 480V W/TIN CLIP		124ZTD-480V
16	K9-60301-43-1	DIE CAST LOGO + TINNERMAN	1	124ZT
17	K9-142-241	FRONT PANEL-LEFT END 2FT	1	124ZT
18	2T-30402-07	STAT ADJ 550o 48 C/T	2	124ZT
19	K9-XL-532	BOLT AND SCREW ASSY	12	124ZT
20	K9-XL-434-1	ELEMENT PAN SPOTWELD	2	124ZT
	K9-XL-434-2	ELEMENT PAN SPOTWELD-30"D		124ZTD
21	K9-XL-424-1	ELEMENT PAN INSULATION	2	124ZT
	K9-XL-424-2	ELEMENT PAN INSUL 30" DEEP		124ZTD
22	K9-XL-429	ELEMENT PLATE GUIDE WLDMT	2	124ZT
	K9-XL-429-1			124ZTD
23	2N-11030-29	ELE GRD 208/240V4.5KW/6KW	2	124ZT
	2N-11030-29-1	DUAL VOLTAGE ELEMENT-30"D		124ZTD
	2N-11030-31-1	480V ELEMENT 30"		124ZTD-480V
24	2N-11030-30	ELMNT GRID 208V 1257W	2	124ZT
	2N-11030-30-1	PERIMETER ELEMENT-30"D		124ZTD
25	K9-XL-505	BULB HOLDER ASSY - ELECT	2	124ZT
NI	2M-61114-W68	WD EZONE T'STAT GRIDDLE	AR	124ZT
NI	2P-50100-15	GRIDDLE SCRAPER 12"	1	CHROME UNITS
NI	2P-50100-16	BOM AMI CLEANER	1	CHROME UNITS
NI	2P-50100-17	20" PALMYRA BRUSH	1	CHROME UNITS

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Model: 136ZT EnviroZone Electric Griddle				
Fig No.	Part Number	Description	Quantity	Application
1	K9-142-201-33	GRIDDLE PLATE ASSY - 3'ZT	1	136ZT
	K9-142-201-33-1	GRID PLATE ASSY-3' ZT		136ZTC
	K9-142-201-333	GRIDDLE PLATE ASSY -3' ELEC		136ZTD
	K9-142-201-3330	GRIDDLE PL ASY 3' EL DP CH		136ZTDC
	K9-142-201-33-3	GRIDDLE PL. ASSY-3" ZT W.		136ZTHE
2	K9-XL-507-2	REAR COVER - ZT	1	136ZT
3	2C-20102-12	SCRW PHD ST 10-32X3/8	19	136ZT
4	2C-20102-21	SCRW PHD ST 10-32X1/2 PLT	5	136ZT
5	Y9-31200-02-1	GROUNDING LUG+/LABEL	2	136ZT
6	2E-30500-07	TRM BLOCK 3PLELRGE 125AMP	1	136ZT
7	2C-20103-01	SCRW SM PLT 10X7/8 PHIL	2	136ZT
8	2E-30500-22	TRMINL STRP 8POLE 50A250V	1	136ZT
9	2A-72500-20	LEG 10.25 WITH ADJ HEX	4	136ZT
10	K9-142-245	FRONT PANEL - RIGHT END	1	136ZT
	K9-142-245-13			136ZTHE-380V
11	K9-141-251	GREASE DRAWER ASSY	1	136ZT
	K9-142-251			136ZTD
12	K9-141-161-W1	GREASE DRAWER SLIDE WELD	1	136ZT
	K9-142-161-W1			136ZTD
13	2R-W498-2	KNOB-RED, METAL INSERT .188	3	Mfg after 6-4-2013
	2R-W498	KNOB-RED		Mfg before 6-3-2013
14	2M-W728-W4	LABEL - CONTROL 200-550F	3	136ZT
15	Y9-31601-01-1	PILOT LT 250V W/TIN CLIP	3	136ZT
			4	136ZTHE
	Y9-31601-02-1	PILOT LT 480V W/TIN CLIP	3	136ZT-480V,136ZTHE-380V
16	K9-60301-43-1	DIE CAST LOGO + TINNEMAN	1	136ZT
17	K9-142-241	FRONT PANEL-LEFT END 2FT	1	136ZT
18	2T-30402-07	STAT ADJ 550o 48 C/T	3	136ZT
19	K9-XL-532	BOLT AND SCREW ASSY	18	136ZT
20	K9-XL-434-1	ELEMENT PAN SPOTWELD	3	136ZT
	K9-XL-434-2			136ZTD
21	K9-XL-424-1	ELEMENT PAN INSULATION	3	136ZT
	K9-XL-424-2	ELEMENT PAN INUSL 30" DEEP		136ZTD
22	K9-XL-429	ELEMENT PLATE GUIDE WLDMT	3	136ZT
	K9-XL-429-1			136ZTD
23	2N-11030-29	ELE GRD 208/240V4.5KW/6KW	3	136ZT
	2N-11030-29-1	DUAL VOLTAGE ELEMENT-30"D		136ZTD
	2N-11030-04	ELMNT GRID 380V 5991W		136ZTHE-380V
	2N-11030-31	ELMNT GRID 480V 5991W		136ZT-480V
	2N-11030-31-1	480V ELEMENT 30"		136ZTD-480V
24	2N-11030-30	ELMNT GRID 208V 1257W	3	136ZT
	2N-11030-30-1	PERIMETER ELEMENT-30"D		136ZTD
25	K9-XL-505	BULB HOLDER ASSY - ELECT	3	136ZT
*	2M-61114-W68	WD EZONE T'STAT GRIDDLE	AR	136ZT
26	2E-Z12020	SWITCH-TOGGLE 2P ST	1	136ZTHE
27	Z1-70-07-0343	SWITCH GUARD	1	136ZTHE
28	2M-12-07-0038	LABEL ON & OFF	1	136ZTHE
29	2I-05-07-0013	BOOT SWITCH	1	136ZTHE
NI	2P-50100-15	GRIDDLE SCRAPER 12"	1	CHROME UNITS
NI	2P-50100-16	BOM AMI CLEANER	1	CHROME UNITS
NI	2P-50100-17	20" PALMYRA BRUSH	1	CHROME UNITS

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Model: 148ZT EnviroZone Electric Griddle				
Fig No.	Part Number	Description	Quantity	Application
1	K9-142-201-3430	GRIDDLE PLATE ASSY - 4'ZTDC	1	148ZTDC-480V
	K9-142-201-343	GRIDDLE PLATE ASSY - 4'ZTD		148ZTD
	K9-142-201-43	GRIDDLE PLATE ASSY - 4'ZT		148ZT
	K9-142-201-43-1	GRID PLT ASSY-4' ZT		148ZTC
	K9-142-201-43-3	GRIDDLE PLATE ASSY 4'		148ZTHE
2	K9-XL-507-2	REAR COVER - ZT	1	148ZT
3	2C-20102-12	SCRW PHD ST 10-32X3/8	23	148ZT
4	2C-20102-21	SCRW PHD ST 10-32X1/2 PLT	5	148ZT
5	Y9-31200-02-1	GROUNDING LUG/+LABEL	2	148ZT
6	2E-30500-07	TRM BLOCK 3PLELRGE 125AMP	1	148ZT
7	2C-20103-01	SCRW SM PLT 10X7/8 PHIL	2	148ZT
8	2E-30500-22	TRMINL STRP 8POLE 50A250V	1	148ZT
9	2A-72500-20	LEG 10.25 WITH ADJ HEX	4	148ZT
10	K9-142-231-11	FRONT PNL ASSY-RT W/CSE12	1	148ZTHE
	K9-142-231-21	FRONT PANEL - RIGHT END		148ZT
	K9-142-231-61	FRONT PANEL - MID ASSY - 6"		148ZT
11	K9-141-251	GREASE DRAWER ASSY	2	148ZT
	K9-142-251			148ZTD
12	K9-141-161-W1	GREASE DRAWER SLIDE WELD	2	148ZT
	K9-142-161-W1			148ZTD
13	2R-W498-2	KNOB-RED, METAL INSERT .188	4	Mfg after 6-4-2013
	2R-W498	KNOB-RED		Mfg before 6-3-2013
14	2M-W728-W4	LABEL - CONTROL 200-550F	4	148ZT
15	Y9-31601-01-1	PILOT LT 250V W/TIN CLIP	4	148ZT
16	K9-60301-43-1	DIE CAST LOGO + TINNERMAN	1	148ZT
17	K9-142-241	FRONT PANEL-LEFT END 2FT	1	148ZT
18	2T-30402-07	STAT ADJ 550o 48 C/T	4	148ZT
19	K9-XL-532	BOLT AND SCREW ASSY	24	148ZT
20	K9-XL-434-1	ELEMENT PAN SPOTWELD	4	148ZT
	K9-XL-434-2	ELEMENT PAN SPOTWELD-30"D		148ZTD
21	K9-XL-424-1	ELEMENT PAN INSULATION	4	148ZT
	K9-XL-424-2			148ZTD
22	K9-XL-429	ELEMENT PLATE GUIDE WLDMT	4	148ZT
	K9-XL-429-1			148ZTD
23	2N-11030-29	ELE GRD 208/240V4.5KW/6KW	4	148ZT
	2N-11030-29-1	DUAL VOLTAGE ELEMENT-30"D		148ZTD
	2N-11030-31	ELMNT GRID 480V 5991W		148ZTDC-480V
24	2N-11030-30	ELMNT GRID 208V 1257W	4	148ZT
	2N-11030-30-1	PERIMETER ELEMENT-30"D		148ZTD
25	K9-XL-505	BULB HOLDER ASSY - ELECT	4	148ZT
NI	2M-61114-W68	WD EZONE T'STAT GRIDDLE	AR	148ZT
NI	2P-50100-15	GRIDDLE SCRAPER 12"	1	CHROME UNITS
NI	2P-50100-16	BOM AMI CLEANER	1	CHROME UNITS
NI	2P-50100-17	20" PALMYRA BRUSH	1	CHROME UNITS

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Model: 160ZT EnviroZone Electric Griddle				
Fig No.	Part Number	Description	Quantity	Application
1	K9-142-201-353	GRIDDLE PLATE ASSY-5' ZTD	1	160ZTD
	K9-142-201-53	GRIDDLE PLATE ASSY - 5'ZT		160ZT
	K9-142-201-53-3	GRIDDLE PLATE ASSY 5' ZT		160ZTHE
	K9-142-201-53-1	GRIDDLE PLATE ASSY 5' ZT, CHROME		160TZTC
2	K9-XL-507-2	REAR COVER - ZT	2	160ZT
3	2C-20102-12	SCRW PHD ST 10-32X3/8	22	160ZT
4	2C-20102-21	SCRW PHD ST 10-32X1/2 PLT	10	160ZT
5	Y9-31200-02-1	GROUNDING LUG/+LABEL	4	160ZT
6	2E-30500-07	TRM BLOCK 3PLELRGE 125AMP	2	160ZT
7	2C-20103-01	SCRW SM PLT 10X7/8 PHIL	4	160ZT
8	2E-30500-22	TRMINL STRP 8POLE 50A250V	2	160ZT
9	2A-72500-20	LEG 10.25 WITH ADJ HEX	4	160ZT
10	K9-142-231-21	FRONT PANEL - RIGHT END	1	160ZT
	K9-142-231-51	FRONT PANEL - MIDDLE ASSY 5		160ZT
	K9-142-231-11	FRONT PANEL ASSY-RT W/CSE12		160THE-480V
11	K9-141-251	GREASE DRAWER ASSY	2	160ZT, 160THE
	K9-142-251			160ZTD
12	K9-141-161-3W1	GREASE DRAWER SLIDE WELD	2	160ZTD
	K9-141-161-W1	GREASE DRAWER SLIDE WELD		160ZT
13	2R-W498-2	KNOB-RED, METAL INSERT .188	5	Mfg after 6-4-2013
	2R-W498	KNOB-RED		Mfg before 6-3-2013
14	2M-W728-W4	LABEL - CONTROL 200-550F	5	160ZT
15	Y9-31601-01-1	PILOT LT 250V W/TIN CLIP	5	160ZT
	Y9-31601-02-1	PILOT LT 480V W/TIN CLIP		160ZTHE-480V
16	K9-60301-43-1	DIE CAST LOGO + TINNERMAN	1	160ZT
17	K9-142-241	FRONT PANEL - MID ASSY - 5"	1	160ZT
18	2T-30402-07	STAT ADJ 550o 48 C/T	5	160ZT
19	K9-XL-532	BOLT AND SCREW ASSY	30	160ZT
20	K9-XL-434-1	ELEMENT PAN SPOTWELD	5	160ZT
	K9-XL-434-2	ELEMENT PAN SPOTWELD-30"D		160ZTD
21	K9-XL-424-1	ELEMENT PAN INSULATION	5	160ZT
	K9-XL-424-2	ELEMENT PAN INSUL 30"DEEP		160ZTD
22	K9-XL-429	ELEMENT PLATE GUIDE WLDMT	5	160ZT
	K9-XL-429-1	ELEMENT PLATE GUIDE WELD		160ZTD
23	2N-11030-29	ELE GRD 208/240V4.5KW/6KW	5	160ZT
	2N-11030-29-1	DUAL VOLTAGE ELEMENT-30"D		160ZTD
24	2N-11030-30	ELMNT GRID 208V 1257W	5	160ZT
	2N-11030-30-1	PERIMETER ELEMENT-30"D		160ZTD
	2N-11030-31	ELMNT GRID 480V 5991W		160THE-480V
25	K9-XL-505	BULB HOLDER ASSY - ELECT	5	160ZT
NI	2M-61114-W68	WD EZONE T'STAT GRIDDLE	AR	160ZT
NI	2P-50100-15	GRIDDLE SCRAPER 12"	1	CHROME UNITS
NI	2P-50100-16	BOM AMI CLEANER	1	CHROME UNITS
NI	2P-50100-17	20" PALMYRA BRUSH	1	CHROME UNITS

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Model: 172ZT EnviroZone Electric Griddle				
Fig No.	Part Number	Description	Quantity	Application
1	K9-142-201-363	GRIDDLE PLATE ASSY - 6' ZTD	1	172ZTD
	K9-142-201-63	GRIDDLE PLATE ASSY - 6'ZT		172ZT
	K9-142-201-63-1	GRIDDLE PLATE ASSY - 6'ZT CHROME		172ZTC
	K9-142-201-63-2	GRIDDLE PLATE ASSY 6' ZT w/CSE12		172ZTHE
2	K9-XL-507-2	REAR COVER - ZT	2	172ZT
3	2C-20102-12	SCRW PHD ST 10-32X3/8	26	172ZT
4	2C-20102-21	SCRW PHD ST 10-32X1/2 PLT	12	172ZT
5	Y9-31200-02-1	GROUNDING LUG/+LABEL	4	172ZT
6	2E-30500-07	TRM BLOCK 3PLELRGE 125AMP	2	172ZT
7	2C-20103-01	SCRW SM PLT 10X7/8 PHIL	4	172ZT
8	2E-30500-22	TRMINL STRP 8POLE 50A250V	2	172ZT
9	2A-72500-20	LEG 10.25 WITH ADJ HEX	4	172ZT
10	K9-142-231-61	FRONT PANEL - MID ASSY - 6"	1	172ZT
	K9-142-245	FRONT PANEL - RIGHT END		172ZT
	K9-142-245-13	FRONT PANEL - ASY RIGHT END		172ZTHE
11	K9-141-251	GREASE DRAWER ASSY	2	172ZT
	K9-142-251			172ZTD
12	K9-141-161-W1	GREASE DRAWER SLIDE WELD	2	172ZT
	K9-142-161-W1			172ZTD
13	2R-W498-2	KNOB-RED, METAL INSERT .188	6	Mfg after 6-4-2013
	2R-W498	KNOB-RED		Mfg before 6-3-2013
14	2M-W728-W4	LABEL - CONTROL 200-550F	6	172ZT
15	Y9-31601-01-1	PILOT LT 250V W/TIN CLIP	6	172ZT
	Y9-31601-02-1	PILOT LT 480V W/TIN CLIP		172ZTD-480V
16	K9-60301-43-1	DIE CAST LOGO + TINNERMAN	1	172ZT
17	K9-142-241-1	FRONT PANEL ASSY-6' LH	1	172ZT
18	2T-30402-07	STAT ADJ 550o 48 C/T	6	172ZT
19	K9-XL-532	BOLT AND SCREW ASSY	36	172ZT
20	K9-XL-434-1	ELEMENT PAN SPOTWELD	6	172ZT
	K9-XL-434-2	ELEMENT PAN SPOTELED-30"D		172ZTD
21	K9-XL-424-1	ELEMENT PAN INSULATION	6	172ZT
	K9-XL-424-2	ELEMENT PAN INSUL 30"DEEP		172ZTD
22	K9-XL-429	ELEMENT PLATE GUIDE WLDMT	6	172ZT
	K9-XL-429-1			172ZTD
23	2N-11030-29	ELE GRD 208/240V4.5KW/6KW	6	172ZT
	2N-11030-29-1	DUAL VOLTAGE ELEMENT-30"D		172ZTD
24	2N-11030-30	ELMNT GRID 208V 1257W	6	172ZT
	2N-11030-30-1	PERIMETER ELEMENT-30"D		172ZTD
	2N-11030-31-1	480V ELEMENT 30"		172ZTD-480V
25	K9-XL-505	BULB HOLDER ASSY - ELECT	6	172ZT
NI	2M-61114-W68	WD EZONE T'STAT GRIDDLE	AR	172ZT
NI	2P-50100-15	GRIDDLE SCRAPER 12"	1	CHROME UNITS
NI	2P-50100-16	BOM AMI CLEANER	1	CHROME UNITS
NI	2P-50100-17	20" PALMYRA BRUSH	1	CHROME UNITS

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