

UltraMax[®]

CONVEYOR

OVEN

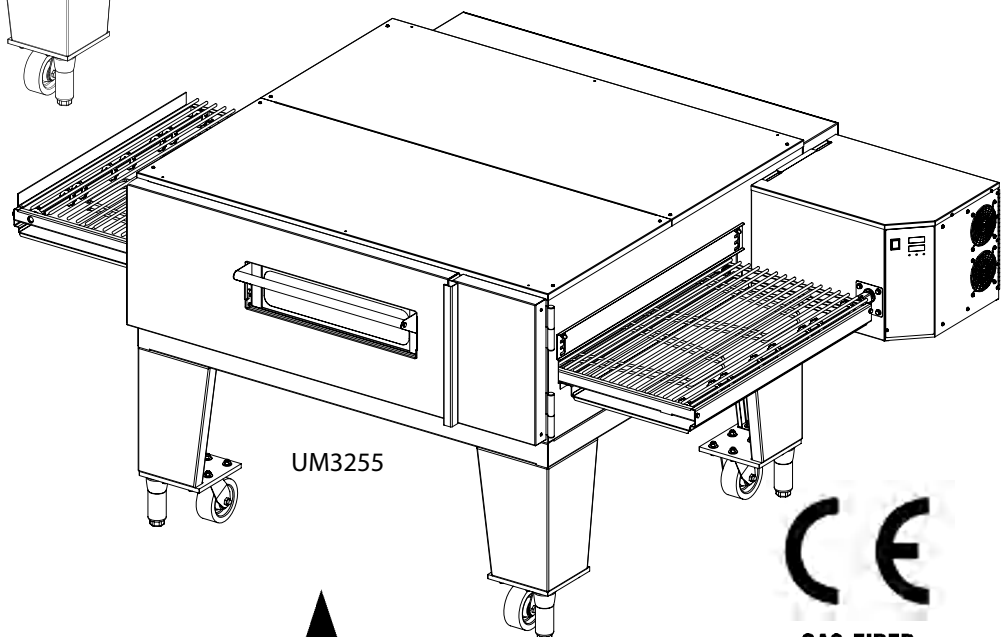
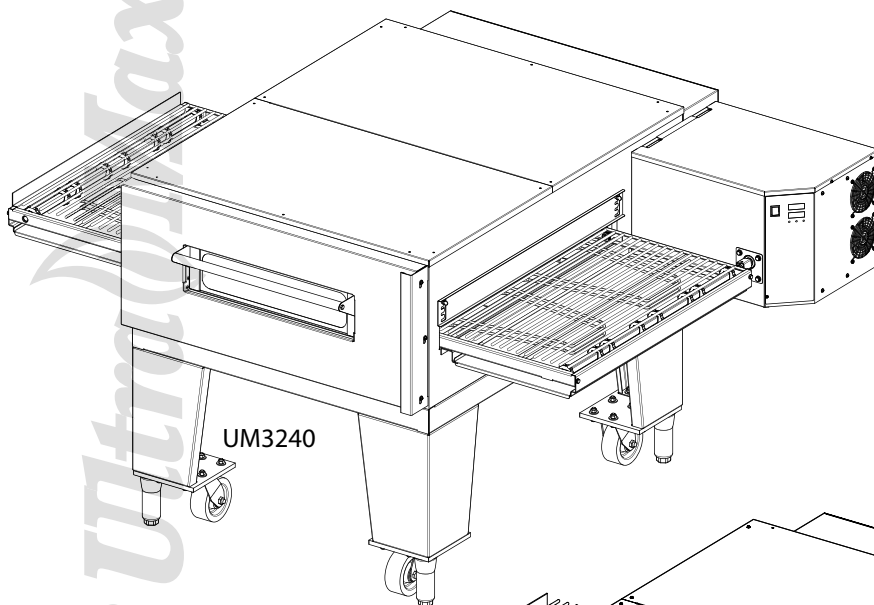
MODEL

UM3240

UM3255

Installation and Operation Instructions

2M-Z9045 Rev.D 6/26/2007



GAS-FIRED



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.

RETAIN THIS MANUAL FOR FUTURE REFERENCE

NOTICE

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

Star 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 Star Manufacturing 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 authorized service agent for service or required maintenance. Please record the model number, serial number, voltage and purchase date in the area below and have it ready when you call to ensure faster service.

Model No. _____

Serial No. _____

Voltage _____

Purchase Date _____

Authorized Service Agent

Reference the listing provided with the unit

or

for an updated listing go to:

Website: www.star-mfg.com
E-mail Service@star-mfg.com
Telephone: (800) 807-9054 Local (314) 781-2777

The Star Service Help Desk

Business Hours: 8:00 am to 4:30 p.m. Central Standard Time

Telephone: (800) 807-9054 Local (314) 781-2777

Fax: (800) 396-2677 Local (314) 781-2714

E-mail Parts@star-mfg.com
Service@star-mfg.com
Warranty@star-mfg.com

Website: www.star-mfg.com

Mailing Address: Star Manufacturing International Inc.
10 Sunnen Drive
St. Louis, MO 63143
U.S.A

IMPORTANT

POST, IN A PROMINENT LOCATION, THE EMERGENCY TELEPHONE NUMBER OF YOUR LOCAL GAS SUPPLIER AND INSTRUCTIONS TO BE FOLLOWED IN THE EVENT YOU SMELL GAS.

Instructions to be followed in the event you smell gas shall be obtained by consulting the local gas supplier. If the smell of gas is detected, immediately call the emergency phone number of your local gas company. Their personnel and provisions available to correct the problem.



CAUTION

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

The installation of the Appliance must conform to the NATIONAL FUEL GAS CODE "ANSI Z223.1 - LATEST EDITION" AND ALL LOCAL GAS COMPANY RULES AND REGULATIONS.

IN CANADA INSTALLATION SHALL BE IN ACCORDANCE WITH THE CURRENT CAN/CGA-B149.1 NATURAL GAS INSTALLATION CODE OR CAN/CGA-B149.2 PROPANE INSTALLATION CODE AND LOCAL CODES WHERE APPLICABLE.



CAUTION

IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE, OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY, OR DEATH. READ ALL INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

IMPORTANT

An electrical wiring diagram for the oven is located on the inside cover of the Control Box Top Lid.

NOTICE

THIS APPLIANCE SHALL BE INSTALLED IN CONFORMITY WITH CURRENT REGULATIONS & USED ONLY IN A WELL VENTILATED LOCATION. CONSULT THE INSTRUCTIONS BEFORE INSTALLING AND USING THE APPLIANCE.



	AT, CH, CZ, DK, ES, FI, GB, GR, HU, IE, IT, NO, PT, SE	NL	LU, DE	BE, FR
GAS	I2H	I2L	I2E	I2E+
P (mBAR)	G20 @ 20	G25 @ 25	G20 @ 20	G20 @ 20/25

Gas/Country Designations



UM3240 - UM3255 CONVEYOR OVEN

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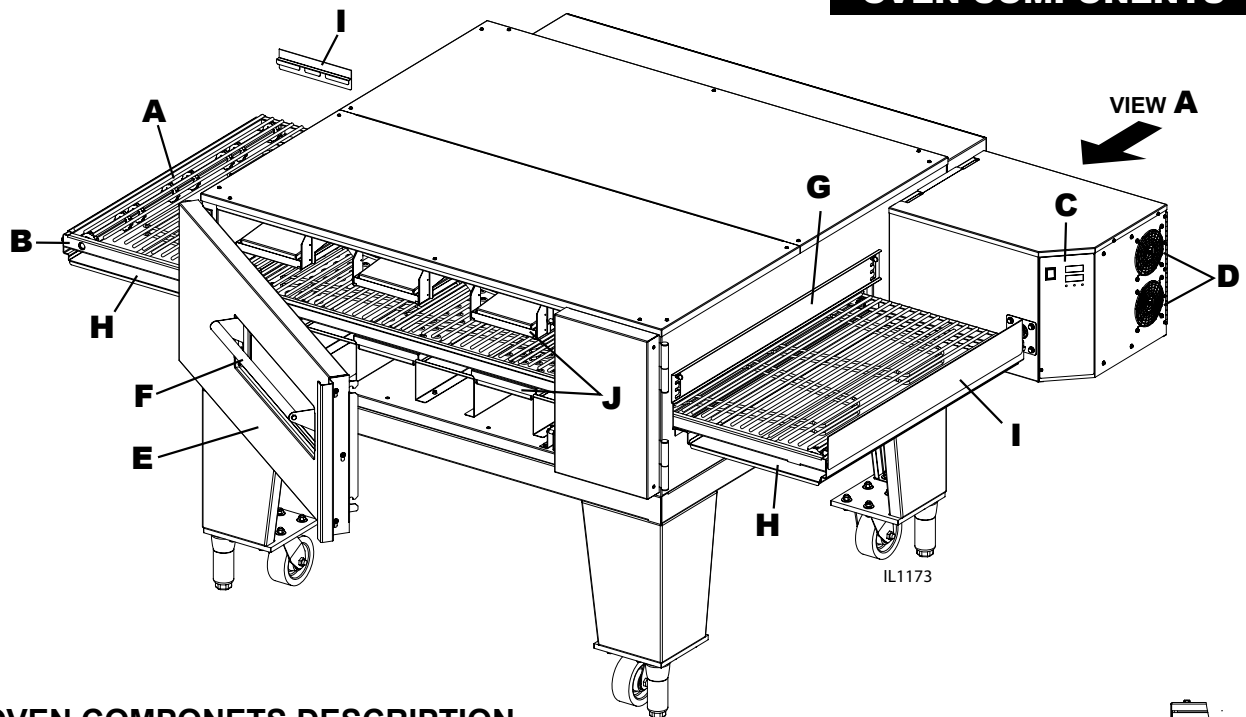
UM3240-NAT, UM3240-LP

Gas Rating/Connection:	120,000 BTU/hr (504 kcal/min)
	3/4" NPT female pipe connection (BSP adapter supplied on CE models)
Gas Supply Pressure:	Natural - 5-6" water column (15-30 mBar) @ rated flow
	Propane - 11-12" water column (27.5-30 mBar) @ rated flow
Electrical Supply:	Separate 15 Amp 208-240VAC, single phase, 50/60 Hz service per Oven
Approximate Weight	(Single Oven without base): Shipping - 868 Lbs (393.7 kg)
	(Single/Double Base): Shipping - 177.3 Lbs (80.4 kg)
	(Triple Base): Shipping - 188.3 Lbs (85.4 kg)
	(Fingers): Shipping - 91.5 Lbs (41.5 kg)
	(Single Oven with base): Installed - 717 Lbs (325.2 kg)
	(Double Oven with base): Installed - 1292 Lbs (586 kg)
	(Triple Oven with base): Installed - 1878 Lbs (851.8 kg)
Dimensions: Width:	80.2" (203.7 cm) - w/control panel door closed
	96.2" (244.3 cm) - w/control panel door open
Depth:	60.5" (153.7 cm) - Front Door(s) Closed
	102.9" (261.4 cm) - Front Door(s) Open
Height:	43.1" (109.5 cm) - Single Oven with Stand
	61.1" (155.2 cm) - Double Oven with Stand
	63.5" (161.4 cm) - Triple Oven with Dolly
Recommended Minimum Clearances:	
Rear of Oven to Wall	0" (0 cm)
Conveyor Extensions to Wall	6" (0 cm)
<i>Allowing 16.25" on the control panel door to open will allow for easier service</i>	

UM3255-NAT, UM3255-LP

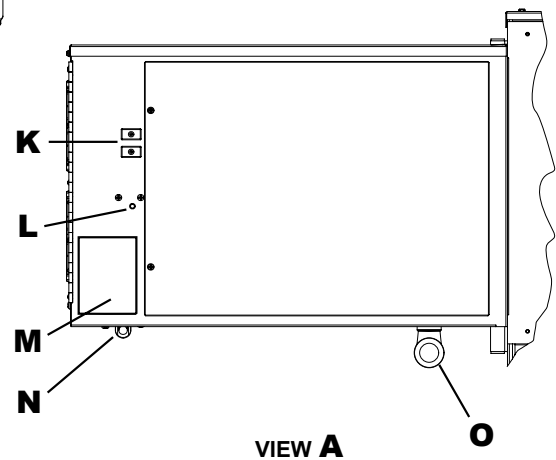
Gas Rating/Connection:	150,000 BTU/hr (630 kcal/min)
	3/4" NPT male pipe connection (BSP adapter supplied on CE models)
Gas Supply Pressure:	Natural - 5-6" water column (15-30 mBar) @ rated flow
	Propane - 11-12" water column (27.5-30 mBar) @ rated flow
Electrical Supply:	Separate 15 Amp 208-240VAC, single phase, 50/60 Hz service per Oven
Approximate Weight	(Single Oven without base): Shipping - 922 Lbs (418.2 kg)
	(Single/Double Base): Shipping - 205.3 Lbs (93.1 kg)
	(Triple Base): Shipping - 216.3 Lbs (98.1 kg)
	(Fingers): Shipping - 122 Lbs 55.3 kg)
	(Single Oven with base): Installed - 827 Lbs (375.1 kg)
	(Double Oven with base): Installed - 1484 Lbs (673.1 kg)
	(Triple Oven with base): Installed - 2152 Lbs (976.1 kg)
Dimensions: Width:	94.6" (240.3 cm) - w/control panel door closed
	110.6" (280.9 cm) - w/control panel door open
Depth:	60.5" (153.7 cm) - Front Door(s) Closed
	102.9" (261.4 cm) - Front Door(s) Open
Height:	43.1" (109.5 cm) - Single Oven with Stand
	61.1" (155.2 cm) - Double Oven with Stand
	63.5" (161.4 cm) - Triple Oven with Dolly
Recommended Minimum Clearances:	
Rear of Oven to Wall	0" (0 cm)
Conveyor Extensions to Wall	6" (0 cm)
<i>Allowing 16.25" on the control panel door to open will allow for easier service</i>	

OVEN COMPONENTS



OVEN COMPONENTS DESCRIPTION

- A: Conveyor Belt:** Moves the product through the oven
- B: Conveyor Assembly:** Supports the Conveyor Belt, the ends fold up for easy removal.
- C: Control Panel:** Bright Red Display for easy notification of ovens current operation, and buttons for making quick modifications.
- D: Air Intake:** Located on the end of the control box to prevent the electronic controls from overheating as well as to allow for a more direct air flow into the blowers. DO NOT BLOCK these air intakes and wipe them clean on a regular basis.
- E: Machinery Compartment Access Door:** Allows access to the oven's interior Finger components.
- F: Access Window:** This allows easy access to the cooking chamber, for product to be placed in to give a shorter or additional cooking time to the product.
- G: Heat Shutter:** Can be adjusted to various settings, depending on product being placed in the oven, to prevent heat loss
- H: Crumb Tray:** Catches crumbs and other material that drops through the conveyor belt. Located at each end of the conveyor assembly.
- I: Conveyor End & Side Stops:** Prevents product from falling off of the moving conveyor.
- J: Fingers:** Projects streams of hot air onto the product.
- K: Circuit Breaker 10Amp:** Protects components from over amperage.
- L: Hi-Limit Reset:** Monitors inside cooking temperature and will only trip when unintended temperature is reached.
- M: Nameplate:** Has specific information regarding this units electrical & gas requirements as well as the units serial number which is needed for any service that will be required. This number should be written in the inside cover of this manual and kept for future needs
- N: Electrical Input:** Electrical Supply connection must meet all national and local electrical code requirements.
- O: Gas Connection:** The installation must confirm with local codes or in the absence of local codes, with the National Fuel Gas Code, ANSI Z2223.1 latest edition.



GENERAL INFORMATION

This equipment is designed and sold for commercial use only by personnel trained and experienced in its operation and is not sold for consumer use in and around the home nor for use directly by the general public in food service locations.

Before using your new equipment, read and understand all the instructions & labels associated with the unit prior to putting it into operation. Make sure all people associated with its use understand the units operation & safety before they use the unit.

First and foremost, each crate should be examined before signing the Bill of Lading to report any visible damage by the freight carrier in transit and to account for the proper number of crates. If there is apparent damage, arrangements should be made to file a claim against the carrier within 15 days. Interstate Commerce Regulations require that the claim must be initiated by the consignee. Proper and secure storage facilities should be arranged for the oven(s) if necessary to protect it from outdoor or damp conditions at all times before installation.

-IMPORTANT-

When you have all the crates unloaded, open the crates and remove all plastic covers. Inspect at once for concealed damage. If anything appears to be damaged, contact the appropriate persons immediately to file a damage claim. After completing this inspection, finish unpacking the oven. **Be sure to remove all paper protection and packing material from the unit prior to lighting.**

NOTICE

This appliance must be installed with a stand and casters designed by Star Manufacturing as part of a complete installation. The installation must also include a connector complying with either ANSI Z21.69 or CAN/CGA-6.16 and a quick-disconnect device complying with either ANSI Z21.41 or CAN1-6.9. It must also be installed with restraining means to guard against transmission of strain to the connector as specified in the appliance manufacturer's instructions.

For your protection, we recommend a qualified installing agency install this appliance. They should be familiar with gas installations and your local gas requirements. In any case, your gas company should be called to approve the final installation.

This appliance, its pressure regulator, and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 PSIG. This appliance and its pressure regulator must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 PSIG.

PURCHASER'S RESPONSIBILITY

It is the responsibility of the purchaser:

1. To see that the gas and electric services for the oven are installed on site in accordance with the manufacturer's specifications and municipal codes.
2. To see that all gas and electric services are connected properly by a qualified installer of your choice. All such connections must be in accordance with applicable code requirements.
3. To arrange for inspection and operation check-out by an authorized service technician. The warranty becomes effective upon verification of proper installation.

IMPORTANT SAFETY INFORMATION

Do not attempt to operate the oven until connection of utility service has been fully inspected by an authorized service technician or a Star Service Representative. This service is required by Star in order to assist the purchaser in proper start-up of the oven on site. Please note the specific details on the Warranty and make certain that service connections are made to proper utility services.

The warranty shall not apply if the oven is started up and operated prior to the utilities and oven being inspected and check-out made by an authorized service technician or a Star Service Representative.



CAUTION

IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE, OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY, OR DEATH. READ ALL INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.



CAUTION

Post in a prominent location the emergency telephone number of your local gas supplier and instructions to be followed in the event you smell gas. If the smell of gas is detected, immediately call the emergency phone number of your local gas company. They will have personnel and provisions available to correct the problem.



CAUTION

It is required that the oven be placed under a ventilation hood to provide for adequate air supply and ventilation.



CAUTION

Minimum clearances must be maintained from all walls and combustible materials. Minimum clearances for this unit should be 0 inches from the rear and 6 inches from both sides. Keep the oven free and clear of all combustible material, for use only on Non-Combustible floors.



CAUTION

Adequate clearance for air openings to the combustion control chamber on the right side of the oven is required. Do not obstruct the ventilation holes in the control panels as these provide the combustion air for the burner and cooling air for the controls.



CAUTION

The oven is to be operated only on the type of gas and electricity shown on the specification plate. The burner will not operate and gas will not flow through the burner without electric power.



WARNING

If the supply cord is damaged, it must be replaced by the manufacture, its service agent or similarly qualified persons in order to avoid a hazard. Star replacement parts are listed in the parts list section of this manual.

INSTALLATION INFORMATION

UTILITY INSTALLATION

THE INSTALLATION INSTRUCTIONS CONTAINED HEREIN ARE FOR THE USE OF QUALIFIED INSTALLATION AND SERVICE PERSONNEL ONLY. INSTALLATION OR SERVICE BY OTHER THAN QUALIFIED PERSONNEL MAY RESULT IN DAMAGE TO THE OVEN AND/OR INJURY TO THE OPERATOR.

Qualified installation personnel are individuals, a firm, a corporation, or a company which either in person or through a representative are engaged in and responsible for:

1. The installation or replacement of gas piping and the connection, installation, repair, or servicing of equipment.
2. The installation of electrical wiring from the electric meter, main control box, or service outlet to the electric appliance.

Qualified installation personnel must be experienced in such work, familiar with all precautions required, and have complied with all requirements of state or local authorities having jurisdiction.

LOCATION

The well-planned and proper placement of your oven will result in long-term operator convenience and satisfactory performance.

NOTE: *On gas conveyor ovens, routine servicing can usually be accomplished within the limited movement provided by the gas hose restraint. If the oven needs to be moved further from the wall, the gas must first be turned off and disconnected from the oven before removing the restraint. Reconnect the restraint after the oven has been returned to its regular position.*

It is essential that an adequate air supply to the oven be maintained to provide a sufficient flow of combustion and ventilation air. Follow these guidelines:

1. Place the oven in an area that is free of drafts.
2. Keep the oven area free and clear of all combustibles such as paper, cardboard, flammable liquids, and solvents. Oven should only be used on Non-Combustible Floors.
3. Do not place the oven on a curb base or seal to a wall. This will restrict the flow of air and prevent proper ventilation to the blower motors. This condition must be corrected to prevent permanent damage to the oven.
4. On all models, tripping of the blower motor's thermal overload device indicates an excessive ambient temperature at the back of the oven. This condition must be corrected to avoid permanent damage to the oven.

GAS SUPPLY RATING AND SIZING

Calculations for pipe sizing must take into account the maximum usage rate of all other appliances in the kitchen or one or more of the appliances will suffer from inadequate or dangerous performance. The 3/4" NPT connection for the oven is generously sized for use in the control box of the oven. However, unless the oven installation is within 10 feet of the main building gas supply, the supply must be larger. For each oven, a 3/4" NPT flexible quick connect hose and full port gas shut-off valve is recommended as a MINIMUM. The main pipe supplying each oven branch may need to be larger depending on the number of appliances serviced, the number of elbows in the piping, and the pressure. This should be sized and installed by a professional familiar with any local codes that may also affect the installation.

ACCESS CONSIDERATIONS

Locating the gas valve(s), quick connect hose(s) and electrical outlet(s) at the control box end of the oven will allow easier access for any service visits. This improved access should make any necessary service quicker resulting in less kitchen disruption. It will also allow easier disconnection of electricity, gas, and restraints for cleaning around and behind the oven.

ELECTRICAL CONNECTION

Before making any electrical connections to this unit, check that the power supply is adequate for the voltage, amperage, and phase requirements stated on the rating plate. A wiring diagram is included herewith.

**WARNING**

ENSURE THAT BOTH THE CIRCUIT BREAKER AND THE POWER (ON/OFF) SWITCH IS IN THE OFF POSITION BEFORE PROCEEDING.

**CAUTION**

BE CERTAIN THAT ALL PACKING MATERIAL HAS BEEN REMOVED FROM INSIDE THE OVEN'S CHAMBER.

When installed, this appliance must be electrically grounded and its installation must comply with the National Electric Code, ANSI-NFPA 70, latest version, manufacturer's installation instructions, and applicable local municipal building codes. In Canada, all electrical connections are to be in accordance with CSA C22.1 - Canadian Electrical Code Part 1 and/or local codes.

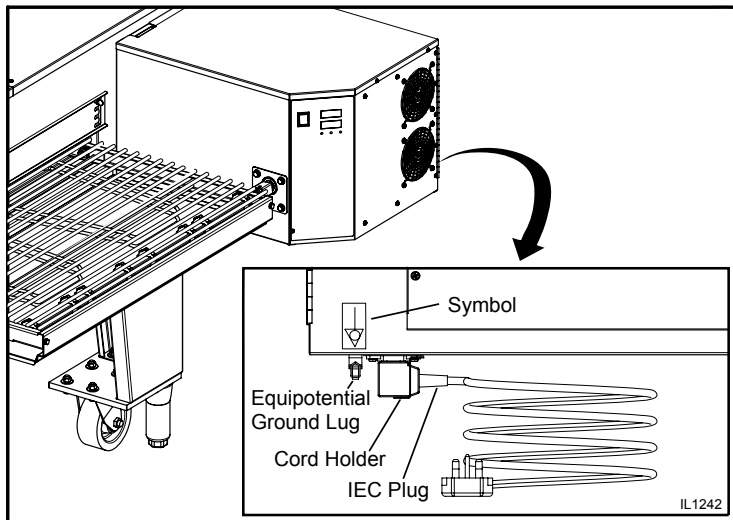
**WARNING**

This device is equipped with a 3-prong (grounded) plug for your protection against shock hazard and should be plugged directly into a properly grounded three prong receptacle. DO NOT cut or remove the grounded prong from this plug.

EQUIPOTENTIAL GROUNDING - CE ONLY

On CE units, connect an equipotential ground wire to the ground lug shown in the figure below. The equipotential ground connection must meet current IEC/CEE and local code requirements. The ground lug is found on the rear side of the control box, below the equipotential ground symbol.

On certain CE/UK models install the IEC plug using the cord holder provided.



IEC/CEE Equipotential Ground Connection



PRESSURE TESTING GAS SUPPLY LINE

During pressure testing note the following:

1. The oven and its individual manual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.45 kPa). **Turn OFF** main gas shut-off valve or main gas supply line.
2. The oven must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.45 kPa).
3. If incoming pressure is over 14" water column, a separate regulator for the oven must be installed before the gas supply to the oven.



To prevent damage to the control valve regulator during the initial turn-on of gas, it is **very important** to open the manual shut-off valve **very slowly**. After the initial gas turn-on, the manual shut-off valve must remain open except during pressure testing as outlined in the above steps or when necessary during service maintenance.

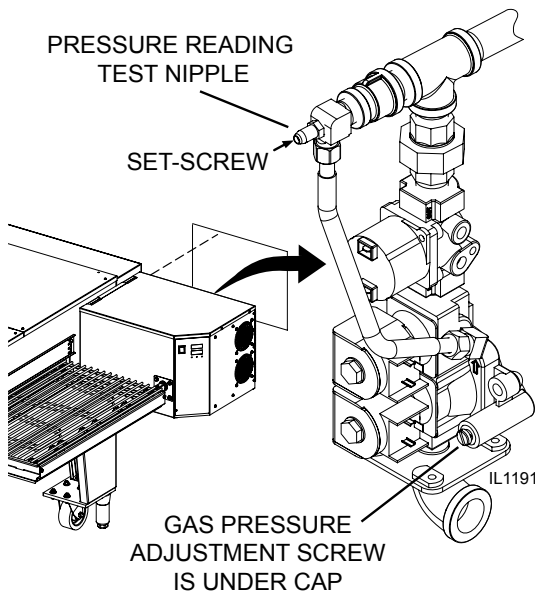
NOTE: The supplied regulator is evaluated for a maximum gas supply pressure of 14" water column (34.5 mBar). The recommended maximum gas supply pressure is 12" water column (29.9 mBar).

Installation must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, NFPA54/ANSI Z223.1 - Latest Edition, the Natural Gas Installation Code CAN/CGA-B149.1 or the Propane Installation Code CAN/CGA-B149.2 as applicable.

OVEN MANIFOLD PRESSURE REGULATION

Each oven has been adjusted at the factory to operate with the gas specified on the nameplate.

Each oven is supplied with a regulator to maintain the proper gas pressure. The regulator is essential to the proper operation of the oven and should not be removed or replaced by another model unless approved by Star Manufacturing. A pressure reading can be taken at the test nipple provided. You must back the set-screw one turn for this test, be certain to re-tighten when you are done. Failure to reset the set-screw to its original position will create a gas leak once the unit is back in operation. The reading should be taken while the oven is heating up & at high fire. The regulator is located on the bottom of the gas combination valve, just inside the control box. Adjust gas manifold regulator gas pressure by removing the cap and adjusting the regulator adjustment screw to match the pressure listed on the name plate (3.5" Nat, 4.8" Propane). Clockwise to increase, counterclockwise to decrease.



Oven Manifold Regulator, w/Set Screw

VENTILATION

INSTALLATION VENTILATION

A VENT IS REQUIRED: Local codes prevail. These are the "authority having jurisdiction" as stated by the National Fire Protection Association, Inc. in NFPA 96-Latest Edition. For further ventilation information see below.

A ventilation hood is required to remove heat and cooking odors. For gas ovens, a ventilation hood is also required to remove the products of combustion. The hood and HVAC installation must meet local codes to gain approval by the authority having jurisdiction. Requirements may vary depending on the location by city, county, and state. Obtain information from the authority having jurisdiction to determine the requirements for your installation. Obtain information and review copies of codes or documents that will be used to inspect and approve your installation. Your ventilation hood supplier and HVAC contractor should be contacted to provide guidance. A properly engineered and installed ventilation hood and HVAC system will expedite approval and reduce oven maintenance costs. Proper ventilation is the responsibility of the oven's owner.

The ventilation hood must operate in harmony with the building HVAC system. (The efficiency of various hood designs makes it necessary to specify such a wide range of ventilator CFM.) Make-up air must be supplied by either a hood design or the HVAC system to avoid a negative pressure condition. This will vary with hoods from various manufacturers. Air supplied directly from outside the building to the kitchen or oven area, non-tempered, could be used as supply air but the design would have to accommodate potential operational changes.

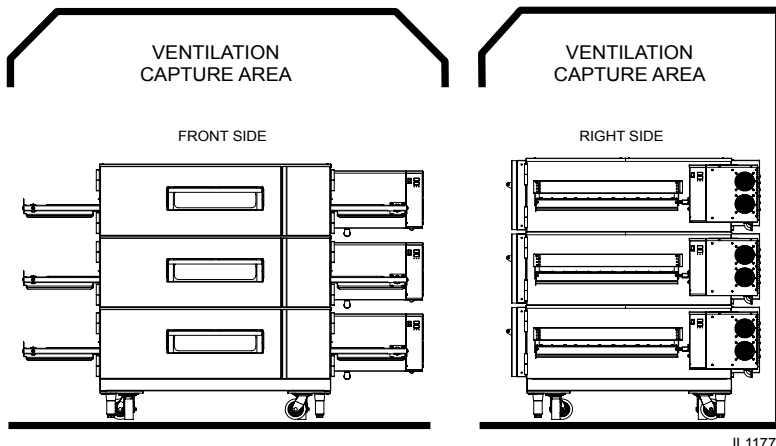


CAUTION

Prevent airflow through the cooking tunnel. Air must NOT be directed onto the oven's front or rear or to the sides of the cooking area.

The following drawing shows a typical installation and is intended to be a guideline. This is not a rigid specification. Hood dimensions and positioning over the oven will vary with hood manufacturer & local guidelines.

Damage sustained as a direct result of improper ventilation will not be covered by the warranty.



CAUTION Failure to properly vent the oven can be hazardous to the health of the operator and may result in operational problems, unsatisfactory baking, and possible damage to the equipment.

SMOKE CANDLE TEST

In order to verify the proper function of your ventilation system, a smoke candle test should be done. If testing a multiple oven system, this test should be done on the bottom oven. The conveyor coupling should be disconnected so conveyor does not move and the oven temperature must be set and operating at a minimum of 480°F (249°C).

Test Procedure:

1. Wear heat-resistant gloves to prevent burns.
2. Put the smoke candle in an cake pan.
3. Insert candle through conveyor tunnel or oven door. **(Use Star Smoke Candle 2W-Z5668.)**
4. Light the fuse of the smoke candle and immediately center the pan in the oven cavity on the conveyor belt (keeping the oven door and window closed).
5. Observe the smoke pattern coming out of all oven openings and the collection of this smoke by the ventilation system.
6. All smoke from the oven must be captured by the ventilation system.

INSTALLATION OVEN ASSEMBLY

BASE PAD ASSEMBLY

Triple Stack Applications

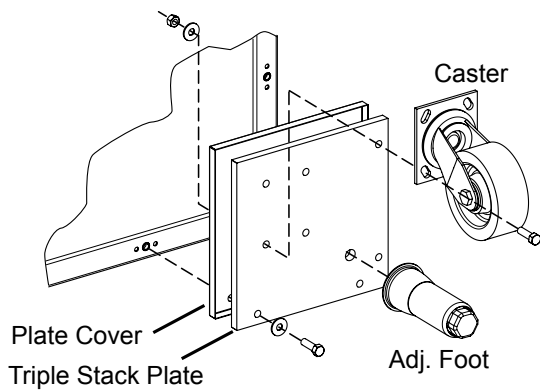
1. Bolt the caster assembly to the Bottom Leg Plate & Plate Cover using provided hardware.
2. Screw the Foot Assembly in place as shown.
3. Bolt the Bottom plate assembly to each corner of the Base Pad Assy. using provided hardware.
4. With assistance turn the Base Pad upright.

Single & Double Stack Applications

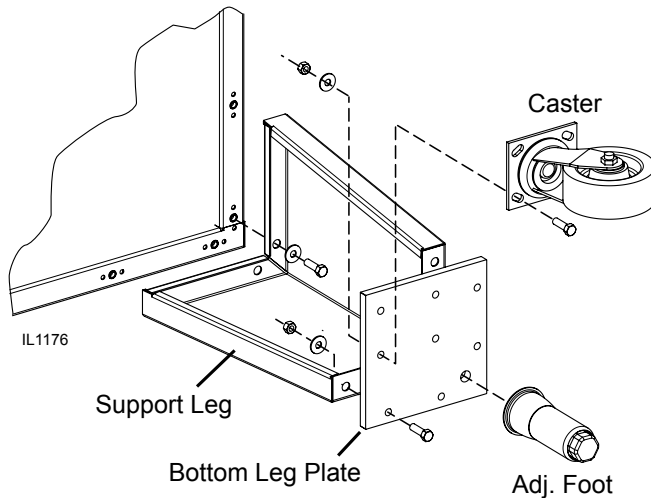
1. Install the support legs in position in each corner of the Base Pad Assy. using provided hardware.
2. Bolt the caster assembly to the Bottom Leg Plate using provided hardware.
3. Screw the Foot Assembly in place as shown.
4. Bolt the Bottom plate assembly to the Support Leg securing with the washer & nuts provided.
5. With assistance turn the Base Pad upright.

OVEN TO BASE ASSEMBLY

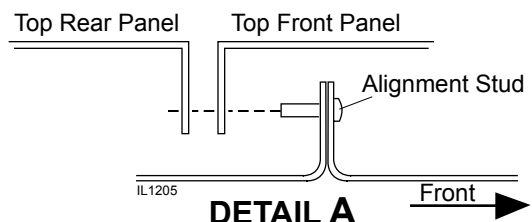
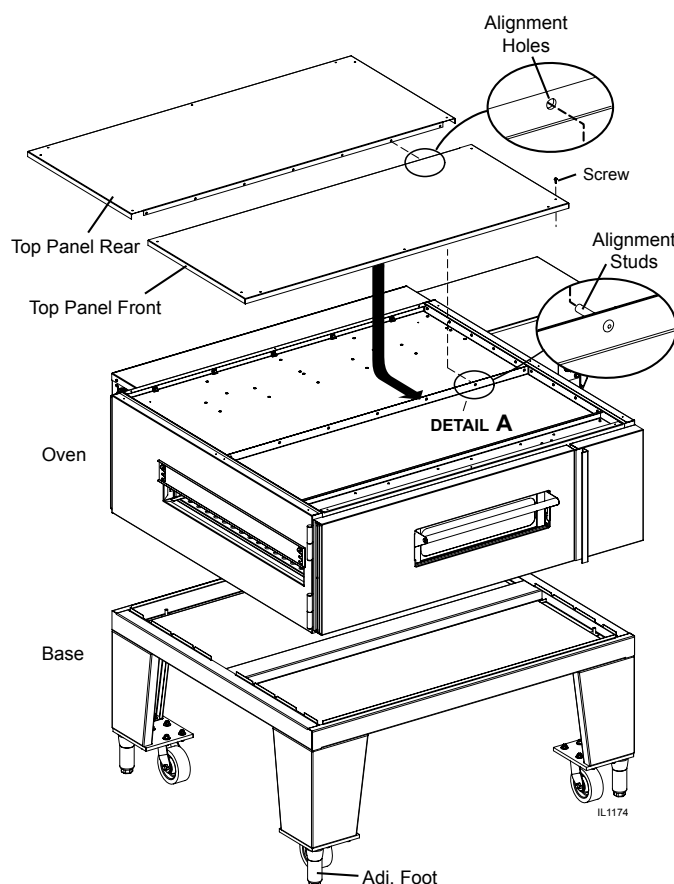
1. Remove any packaging material that was shipped with the oven and base.
2. Prior to placing the oven onto the base make sure the base insulation material is positioned correctly.
3. With assistance, lift the oven and position it onto the base.
4. *For Dual or Triple Oven Installations, go directly to **STACKING INSTRUCTION**.*
5. Install the Top Panels on top of the oven making sure to line-up the Alignment Holes with their appropriate Alignment Studs, as shown here. See *Detail A*.
6. Secure the Top Panels in place.
7. Roll the Oven into position, using a level adjust the Feet until oven is level.

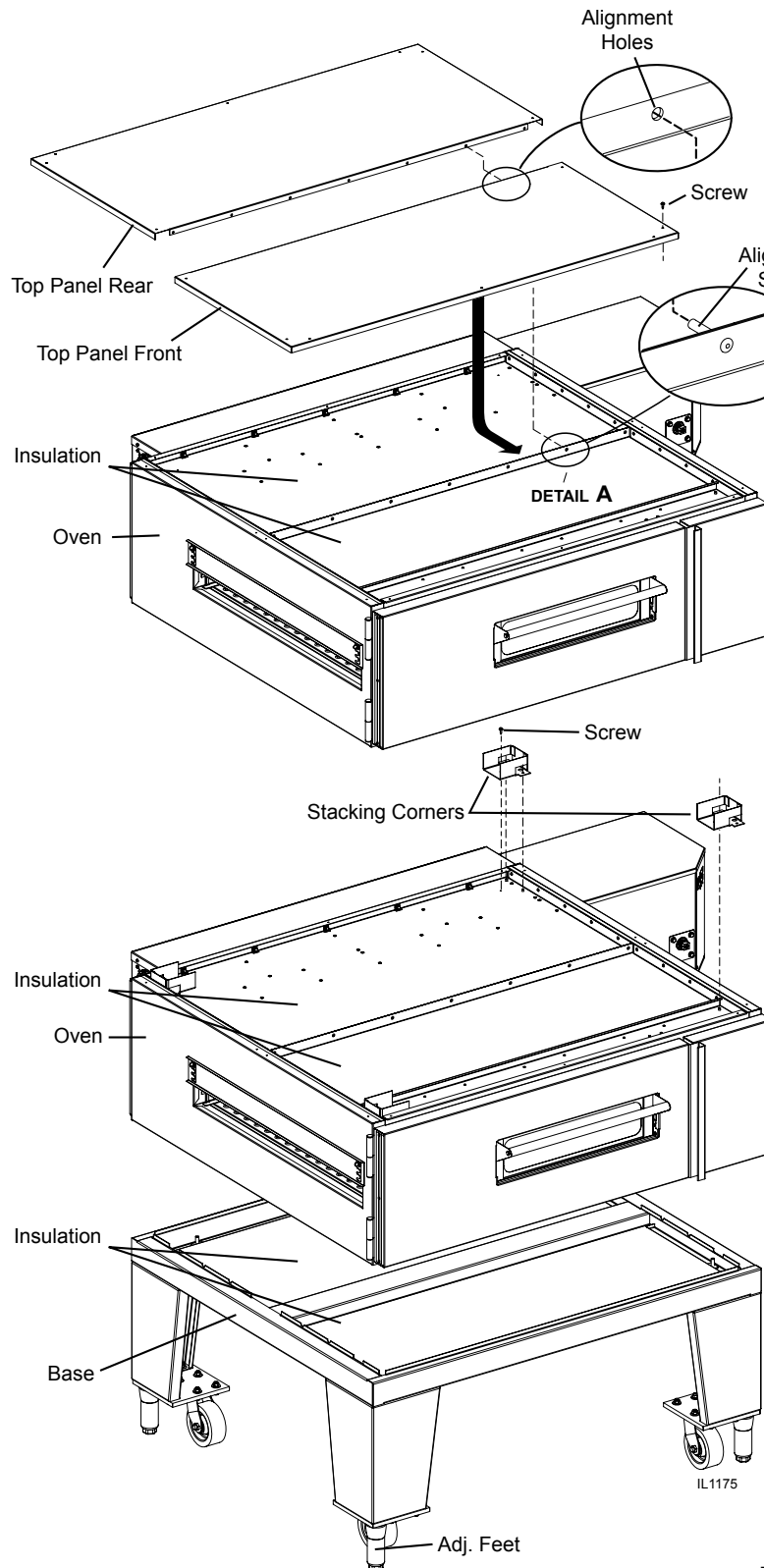


CASTERS for TRIPLE OVEN



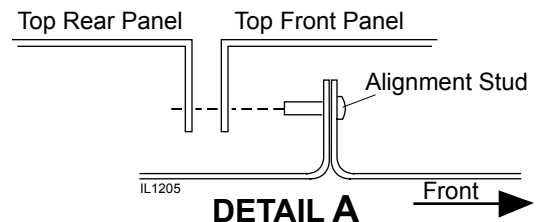
CASTERS for SINGLE & DOUBLE OVEN





STACKING INSTRUCTIONS

1. Remove any packaging material that was shipped with the oven and base.
2. Prior to placing the oven onto the base make sure the base insulation material is positioned correctly.
3. With assistance, lift the oven and position it onto the base.
4. Install the Stacking Corners, as shown being sure to secure the two rear with a screw.
5. Using an Oven Lift (see Pre-Install Manual for specific Oven Lifting Instructions) carefully place the upper oven on top of the lower oven. *Note: Be careful not to lift the unit by the Control Box Assembly.*
6. Be certain the insulation is properly positioned.
7. Repeat steps 4 - 6 if for Triple Oven Installations.
8. Install the Top Panels on top of the oven making sure to line-up the Alignment Holes with their appropriate Alignment Studs, as shown here. *See Detail A.*
9. Secure the Top Panels in place.
10. Roll the Oven into position, using a level adjust the Feet until oven is level.

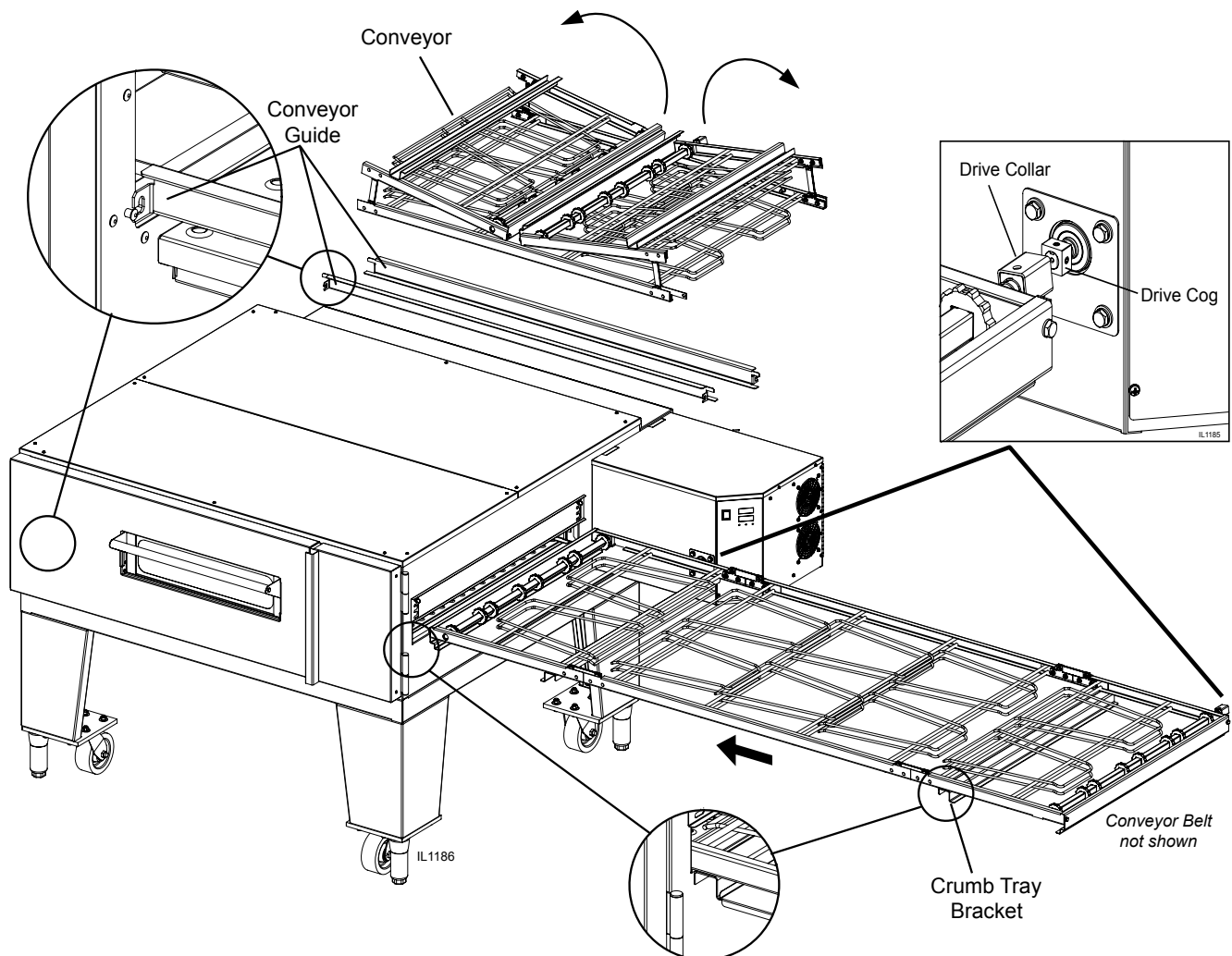


CONVEYOR INSTALLATION

Conveyor installation can only be installed from the control panel/drive motor side. This needs to be removed when cleaning the cooking chamber and removing the Nozzel Finger Assembly for disassembly & cleaning.

**ALLOW THE OVEN TO COOL BEFORE INSTALLING OR REMOVING THE CONVEYOR ASSEMBLY.**

- CAUTION**
1. With Nozzel Finger Assemblies in position, place the Conveyor Guides on its mounting studs located at the opening at each end of the cooking chamber.
 2. Open the conveyor assembly, pull on the conveyor belt making sure it moves freely without obstruction.
 3. With assistance, lift the conveyor and slide it along the Conveyor Guides into position from the drive motor side, be certain the crumb tray brackets are on the outside of the oven, and the Drive Collar is on the control panel side as shown below.
 4. Once the conveyor assembly is installed, slide the Drive Collar over the Drive Cog to sync the conveyor with the drive motor.

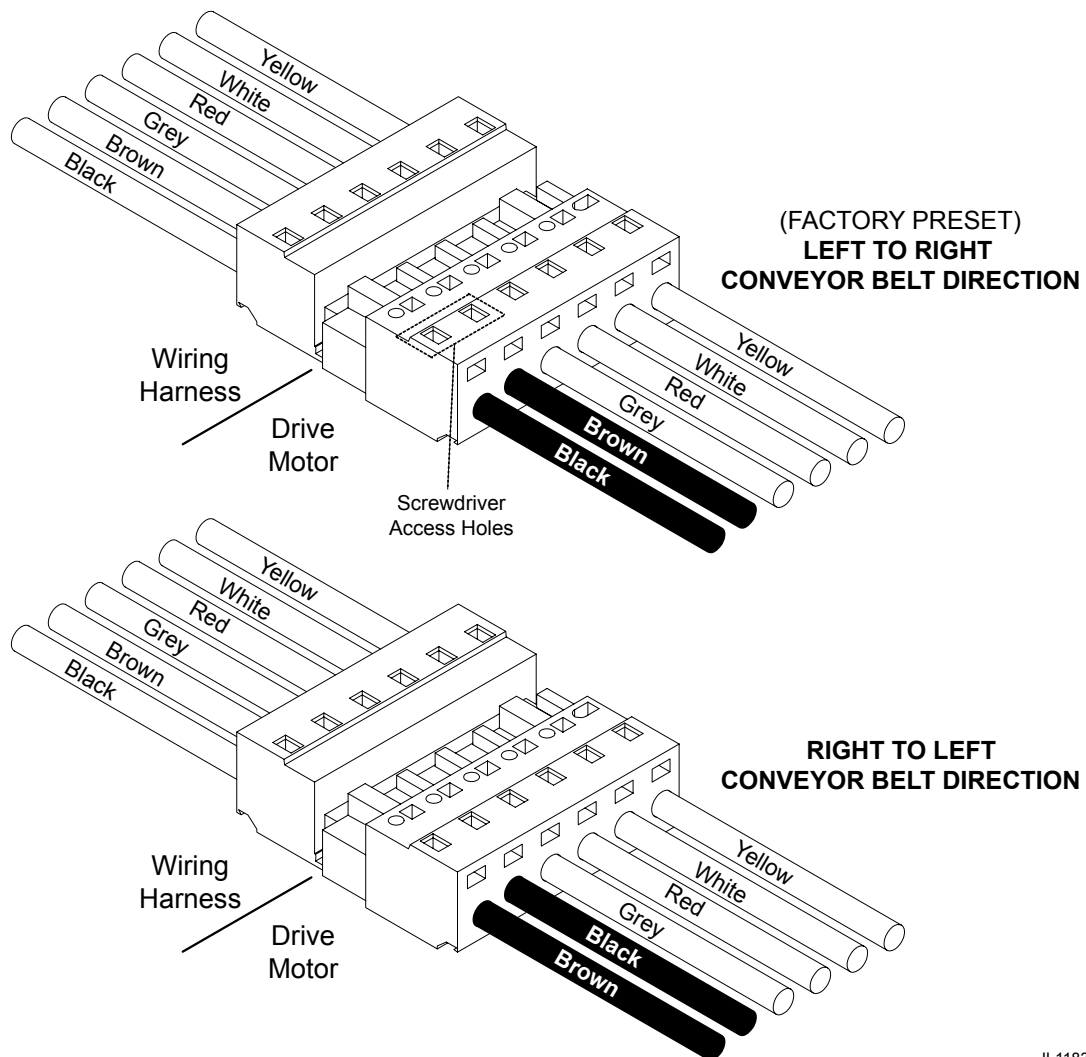


CONVEYOR BELT DIRECTION

Conveyor travel is factory set for left to right operation. If the opposite direction is required, the polarity of the drive motor must be reversed.

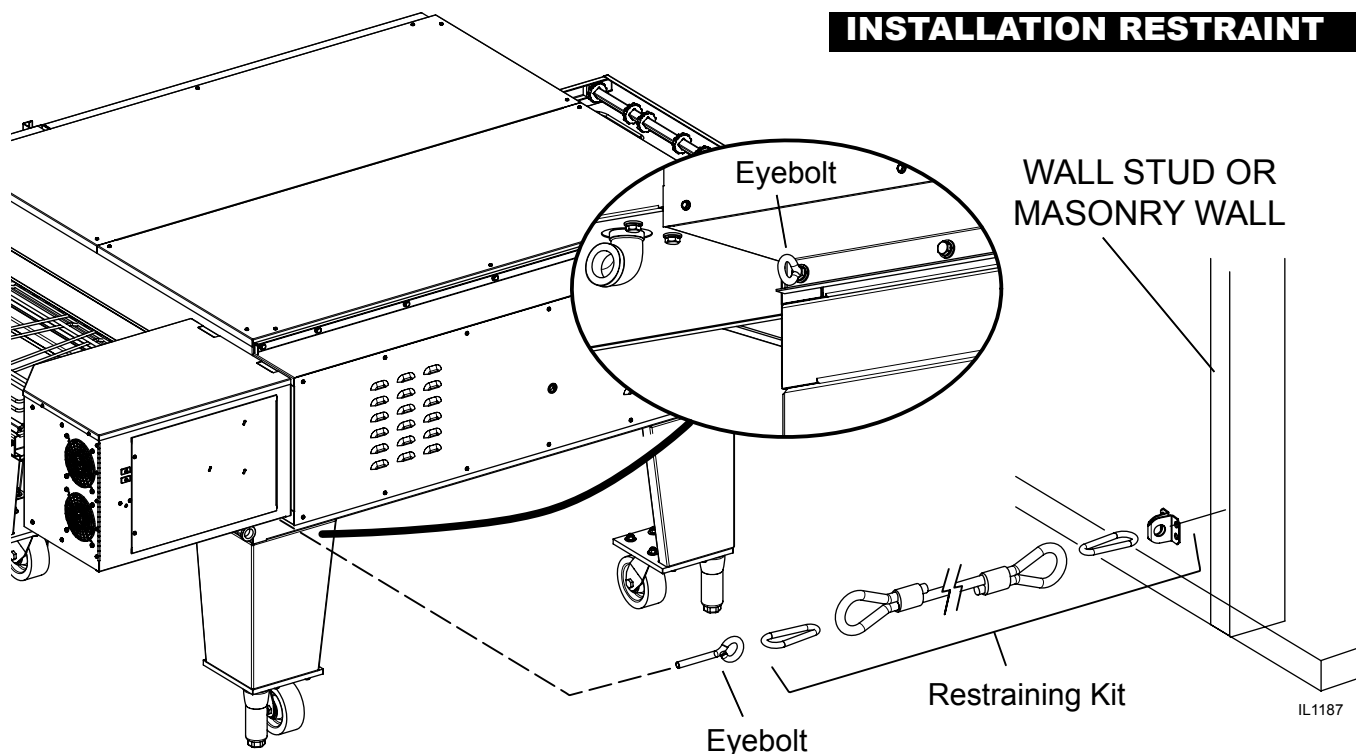
To reverse polarity:

1. **DISCONNECT THE POWER CORD FROM THE UNIT.**
2. Open the Control Box Door and swing open.
3. Find the Drive Motor and follow the wires back until you find the connector shown below.
4. Pressing your small screw driver, into the square hole on top of the connector, you will be able to remove & reverse the black & brown wires of the connector on the **DRIVE MOTOR SIDE ONLY.**
5. Close the Control Box Door, and secure with hardware.
6. Reconnect the unit to its electrical power source, and test for proper conveyor belt direction change.



IL1183

INSTALLATION RESTRAINT



RESTRAINT REQUIREMENT

1. The installation shall be made with a gas connector that complies with local codes for connectors for movable gas appliances and a quick-disconnect device that complies with local codes for such devices in use with gas fuel.

NOTE: Because the oven is equipped with casters, the gas line connection shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69 • CSA 6.16, and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use With Gas Fuel, ANSI Z21.41 • CAN1-6.9.

2. The installation of the restraint must limit the movement of the oven(s) without depending on the connector, the quick disconnect device, or associated piping to limit the oven movement.
3. If the restraint must be disconnected during maintenance or cleaning, it must be reconnected after the oven has been returned to its originally installed position.

OPERATING INSTRUCTIONS

DO NOT ATTEMPT TO OPERATE THE OVEN until connection of utility service and installation has been fully inspected (start-up check-out) by an authorized service technician or a Star Service Technician in order to assure the oven is properly installed and in working order. **The warranty becomes effective upon verification of proper installation.**



CAUTION

DO NOT WORK AROUND THE CONVEYOR BELT WITH LONG HAIR, LOOSE CLOTHING, OR DANGLING JEWELRY. GETTING CAUGHT IN THE BELT COULD RESULT IN DISMEMBERMENT OR FATAL INJURY.

Unless specified otherwise, conveyor travel is factory set for left to right operation when facing the front of the oven. If a direction change is required, refer to "CONVEYOR BELT DIRECTION," for instructions on how to accomplish a belt direction change.

SAFETY OPERATING INSTRUCTIONS

The information contained in this section is provided for the use of qualified operating personnel. Qualified operating personnel are those who have carefully read the information contained in this manual, are familiar with the functions of the oven and/or have had previous experience with the operation of the equipment described. Adherence to the procedures recommended herein will assure the achievement of optimum performance and long, trouble-free service. **Please take time to read the following safety operating instructions. They are the key to the successful operation of your Ultra-Max Conveyor Oven.**



SAFETY TIPS

For your safety, read before operating.

If you smell gas:

1. **DO NOT** try to light any appliance.
2. **DO NOT** touch any electrical switches.
3. Use an exterior phone to call your gas supplier immediately.
4. If you cannot reach your gas supplier, call the fire department.

In the event of a power failure:

1. Turn all switches off.
2. **DO NOT** attempt to operate the oven until the power is restored.

NOTE: In the event of a shut-down of any kind, allow a five (5) minute shut-off period before attempting to restart the oven.

General Safety Tips:

1. **DO NOT** use tools to turn off the gas control. If the gas cannot be turned off manually do not try to repair it. Call a qualified service technician.
2. If the oven needs to be moved for any reason, the gas must be turned off and disconnected from the unit before moving the restraint cable. Reconnect the restraint after the oven has been returned to its original location.
3. **DO NOT** remove the control box cover unless the oven is unplugged.

OPERATION

OPERATION

To turn the oven on:

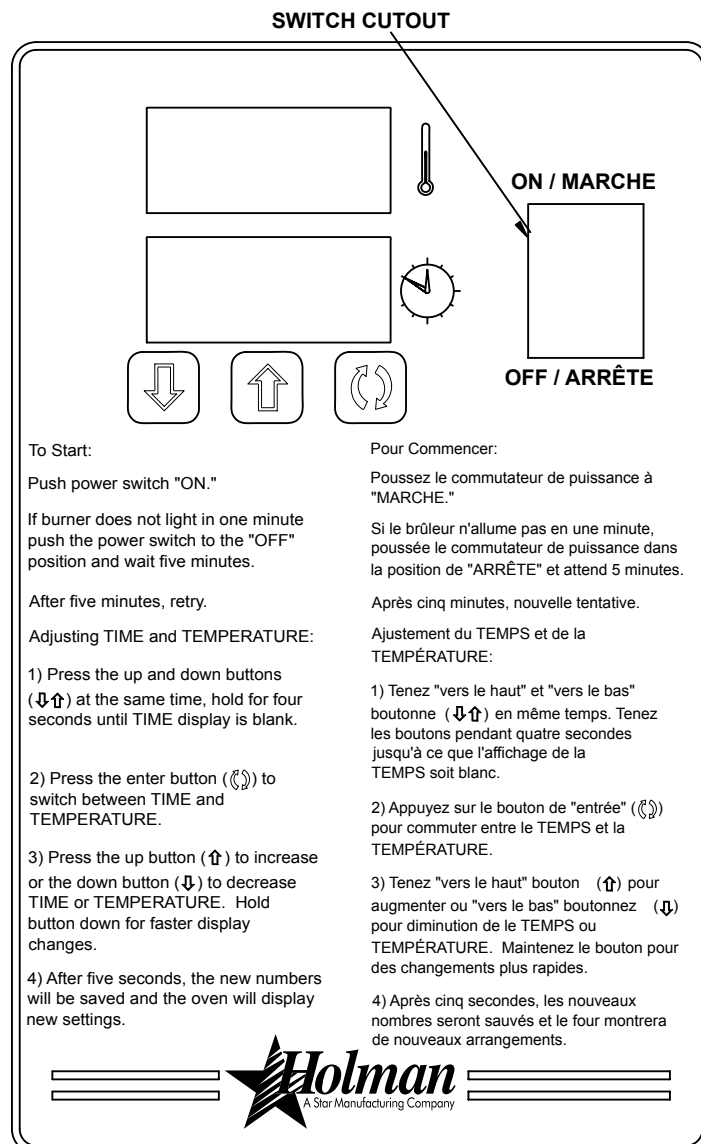
1. Push the power switch to "ON."
2. If the burner does not light in one minute, push the power switch to the "OFF" position and wait five minutes.
3. After five minutes, retry.

To adjust the time and temperature:

1. Press the DOWN and UP arrows (↓ ↑) at the same time. Hold for four seconds until the **TIME** display goes blank.
2. Press the ENTER button (↵) to switch between **TIME** and **TEMPERATURE**.
3. Press the UP arrow (↑) to increase or the DOWN arrow (↓) to decrease the **TIME** or **TEMPERATURE**. Hold either button down for faster display changes.
4. After five seconds, the new numbers will be saved and the oven will display the new settings.

To turn the oven off:

1. Push the power switch to "OFF." The oven is equipped with a cool-down feature for motor shaft and bearing protection. This enables the blower motor(s) to run regardless of the controller status. The blower(s) continue to run until the oven cools to a safe temperature.



DISPLAY INFORMATION

OPERATION

When operating the oven, there are different levels of access:

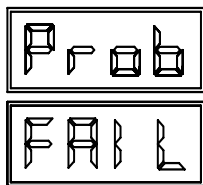
1. **Store Level** - General employees would know these functions and how to change them. While the oven is running, enter this mode by holding the DOWN and UP arrows (⬇️ ⬆️) simultaneously for four seconds. The TIME display goes blank and the TEMP setpoint is displayed. Adjust with the DOWN or UP arrows. The ENTER button (⏎) toggles between TIME and TEMP. The parameter that can be adjusted is displayed, the other is blank. When TIME and TEMP are adjusted as needed, wait five seconds and SAVE is displayed. The values are accepted and the controller begins controlling to these new values. The conveyor continues to operate at the same speed until a new value is accepted. The temperature control output should be OFF during changes.
2. **Manager Level** - This is a lock so that TIME and TEMP cannot be changed even at the Store Level. While the oven is running, enter this mode by holding the DOWN and UP arrows simultaneously for 4 seconds. The TIME display goes blank and the TEMP setpoint is displayed. Release the UP arrow and continue to hold the DOWN arrow for an additional 4 seconds. The TEMP display shows LOC as the TIME display shows nO, which indicates that the TIME/TEMP parameters can be changed. after reaching the STORE level. yES indicates that the parameters cannot be changed even after entering the STORE level. The LOC setting can be toggled using the ENTER button (⏎).

ADDITIONAL FUNCTIONS

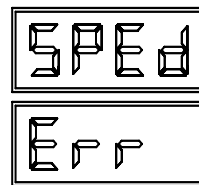
The conveyor belt direction and the temperature display can be changed on the conveyor oven by a qualified technician. To change the belt direction, the technician needs to see the section on "CONVEYOR BELT DIRECTION". A technician can also change the temperature display from Fahrenheit to Celsius. These changes can be made by the technician during the start-up/check-out or at a later date.

ERROR CODES

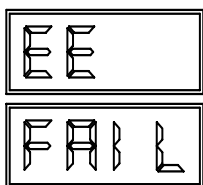
Error codes will display as flashing text messages for diagnostic purposes. Any temperature or thermocouple error should turn the temperature output OFF and leave the conveyor running at the same speed. The belt error should turn the temperature output OFF. The speed error should display when the motor is unable to settle at the chosen speed. This might occur if a fast speed is chosen that the motor is unable to spin fast enough to achieve. The speed signal output will remain the same but the display will flash the error message.



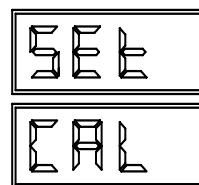
CONTROLLER SENSES
NO SIGNAL FROM T/C
OR REVERSED WIRING



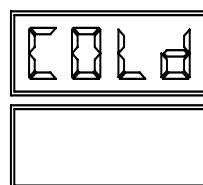
SPEED IS OUT
OF RANGE
BUT MOTOR IS
FUNCTIONING



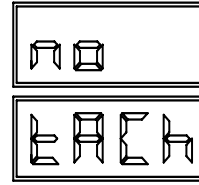
ALERT MESSAGE:
DISPLAYS WHEN MEMORY
PROBLEMS ARE DETECTED
FLASHING GREEN LED IS OFF



TO SET CALIBRATION & RESET MEMORY:
POWER OFF, HOLD BUTTONS 1,2&3
POWER ON (DONE WHEN SEt CAL SHOWS)
WARNING: TEMP CALIBRATION WILL BE OFF
UNLESS T/C SIMULATOR (SET FOR 300 °C)
IS ATTACHED BEFORE TURNING POWER ON



THIS WILL SHOW WHEN BUTTON #3 IS
PUSHED DURING INITIAL PREHEATING
A NUMBER WILL NOT BE DISPLAYED IF
ADJUSTED TEMP IS LOWER THAN 140 °F
OR 60 °C (DEPENDENT ON UNITS DISPLAYING)



THIS WILL SHOW FOR TWO (2) SECONDS EVERY
FIFTEEN (15) SECONDS WHEN TACH SIGNAL IS
LOST AND TACH FEEDBACK IS ENABLED.

IL1188

BAKE TIME VERSUS TEMPERATURE

1. Bake time is actually conveyor speed and is defined as the time the product is actually in the oven. This is measured by noting the time when the leading edge of the product enters the oven and the time the leading edge of the product leaves the oven. This is adjusted by using the conveyor speed controller.
2. Bake temperature is adjusted by changing the setpoint of the temperature controller to the desired bake temperature. When the oven reaches the desired temperature, the red dot in the lower right corner of the temperature display will turn off and on as the controller maintains the temperature.
3. When establishing a bake time and temperature for a given product, the general rule shall be as the bake time increases the bake temperature decreases and the reverse is also true; increase temperature, decrease time. However, there are limits to the above rule. Going to extremes will result in a burnt exterior and raw interior or it will result in a very light color but over-baked product.
4. Once a good bake has been established, the fine adjustments should be made by holding either the bake time or bake temperature constant, then varying the other.

CONVEYOR SPEED

Bake Time (Conveyor Speed) - As stated previously, bake time (conveyor speed) is defined as the amount of time elapsed between the time the leading edge of the product enters the oven and the leading edge of the product exits the oven. Bake time is controlled by adjusting the digital speed controller. The setting on the control panel indicates the actual bake time.

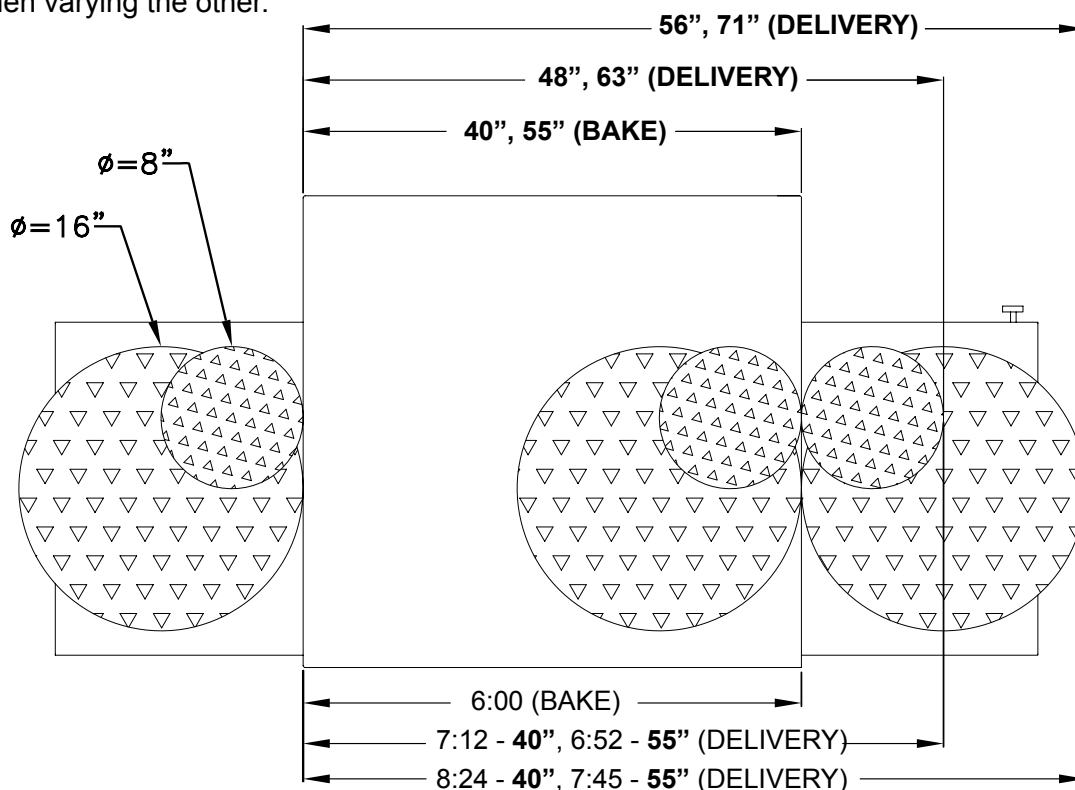
Bake time will be the same for any size product.

TIME OF DELIVERY

The time of delivery is the amount of elapsed time between the period when the leading edge of the product enters the oven and the trailing edge of the product is fully discharged and is ready to be delivered to the customer.

Time of delivery changes if the product size changes.

Tip: Train yourself not to pull the product out of the oven when the leading edge comes out. Always wait until the entire product is out - the product needs this time to fully bake.



BAKE vs. DELIVERY TIME

Time to Delivery changes with product
but Bake Time remains constant
at a steady conveyor speed.

MAINTENANCE INSTRUCTIONS



WARNING

DISCONNECT THE POWER SUPPLY BEFORE SERVICING OR CLEANING THIS OVEN. SAFEGUARD THE POWER SO IT CANNOT BE ACCIDENTALLY RESTORED. FAILURE TO DO SO COULD RESULT IN DISMEMBERMENT, ELECTROCUTION, OR FATAL INJURY. THERE IS MORE THAN ONE POWER SUPPLY CONNECTION POINT WHEN OVENS ARE STACKED, SO MAKE SURE THAT ALL SWITCHES ARE IN THE OFF POSITION BEFORE CLEANING OR MAINTENANCE.

No electrical components should be subjected to moisture. It is therefore important that the oven is wiped down carefully. NEVER throw buckets of water over the oven or subject it to pressure washing from a hose or a pressure spray. If water or other liquid is spilled on the oven, make sure that none of it has entered the control box area before switching the oven ON. If in doubt, call your service company.

Adhere to the following warnings when cleaning or maintaining your gas conveyor oven:

1. The oven must be cool. Do not use power cleaning equipment, steel wool, or wire brushes on stainless steel surfaces.
2. Do not use a caustic or an alkaline base cleaner on the interior of the oven. This will ruin the aluminized finish of the oven interior.
3. When using cleaning solutions, be sure they meet local and national health standards.



CAUTION



CAUTION

If the gas oven needs to be moved, the gas must be turned off and disconnected from the unit before removing the restraint. Reconnect the restraint after the oven has been returned to its original location.

Follow this recommended cleaning schedule for proper oven performance:

DAILY

1. Clean the conveyor belt using a nylon brush. Allow any foreign material to drop into the crumb pans.
2. Empty and clean the crumb pans. Use a hot water and detergent mix. Rinse with clean water.

EVERY MONTH

1. Brush and clean the guard on the motor cooling fans.

EVERY THREE MONTHS

1. Unplug the oven and disconnect gas connections.
2. Remove the crumb pans.
3. The Conveyor Assembly needs to be removed when cleaning the cooking chamber and removing the fingers for disassembly & cleaning. *See Conveyor Installation Section*
4. Unlatch and open the front door. Remove all Finger Assemblies.
5. Clean the oven interior with an appropriate oven cleaner.
6. Clean the conveyor assembly, crumb pans, and other removable components. Wash in a hot water, detergent mix and rinse with clean water. For difficult cleaning areas, use a heavy-duty de-greaser or oven cleaner.
7. Move the oven, if necessary, and clean under it being careful not to damage the oven's gas hose or electrical cords when moving.
8. Reassemble the oven.



CAUTION

ALLOW THE OVEN TO COOL BEFORE INSTALLING OR REMOVING THE CONVEYOR & FINGER ASSEMBLIES.

EVERY TWELVE MONTHS

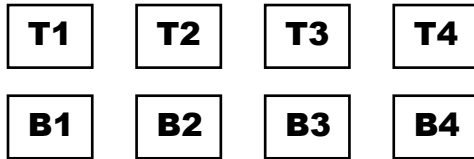
A factory authorized service person should:

1. Open and clean the inside of the control box.
2. Check and tighten all electrical components.

If maintenance is required, contact your local service company, a factory representative, or Star Manufacturing.

NOZZLE FINGER ASSEMBLY DISSEMBLY

Before removing the Nozzle Finger Assemblies for cleaning be certain the oven is off and has cooled. You may find it easier to perform this operation with the Conveyor Belt Assy & Conveyor Guides removed, see page 13 for information. As each finger is removed, mark all parts to insure proper assembly, this includes the Finger Body Assembly, Coulumnating Plate and the Nozzle Plate. Some ovens have a custom Nozzle configuration in order to achieve a piticular bake.



Suggested Nozzle Marking System



CAUTION

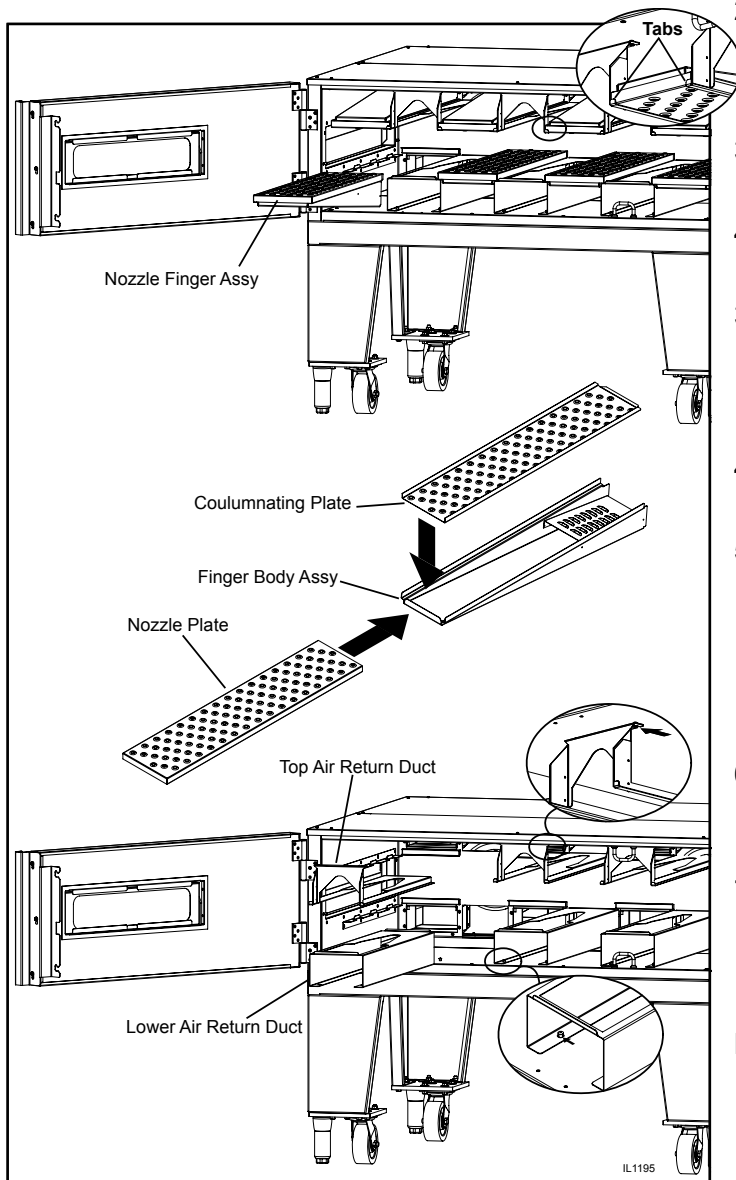
Failure to re-assemble the nozzles back to there original configuration will give you a different baking performance. See chart below for a suggested marking system.

Removal of the finger assemblies:

1. Unplug the oven and allow to cool.
2. Disconnect the conveyor's Drive Collar from the Drive Cog. Once separated, lift the conveyor and remove it from the control end side. *See page 13 for details.*
3. Lift both of the conveyor guide off its mounting studs, remove.
4. Slide B1 out of position marking all parts using a black flet tip marker.
3. Slide the Nozzle Plate off of the Finger Body Assy exposing the Coulumnating Plate. Notice and mark the direction of the three parts for easier assembly.
4. Continue until all Nozzle Finger Assemblies are removed and labeled.
5. Remove top return ducts by lifting up on the far end and sliding them off of there mounting studs. To remove the bottom return ducts lift the front end off of its mounting studs and unhook the rear tab from behind the rear wall.
6. With the oven disassembled wipe out the cooking chamber with a damp cloth, **DO NOT use a caustic cleaner or excessive water.**
7. The removed stainless parts can be cleaned by soaking in a hot detergent solution or using a caustic cleaner. The conveyor belt assembly can be cleaned the same way.

Reassembly of the finger assemblies

1. Install in the reverse order of removal.



IL1195

CONVEYOR BELT TENSION

The conveyor belt of the Ultra-Max Gas Conveyor Oven does not have a tension adjustment. If the belt becomes too loose, a link will have to be removed to tighten. A belt that is too tight will also cause operational problems due to excessive drag. We suggest that you have a qualified service technician perform this adjustment.



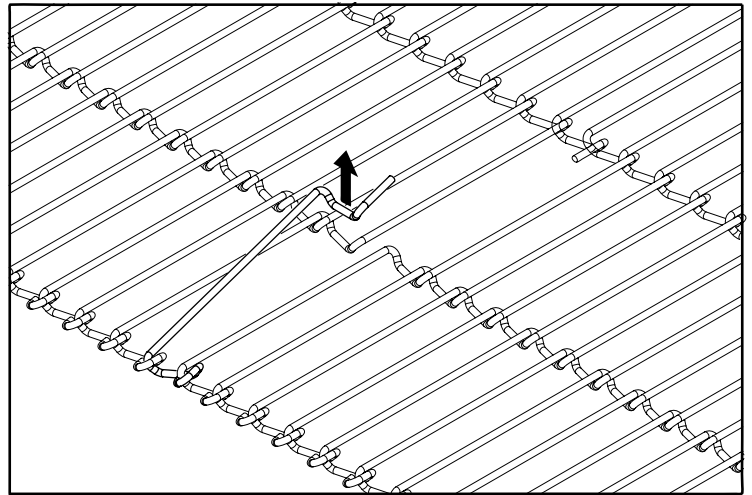
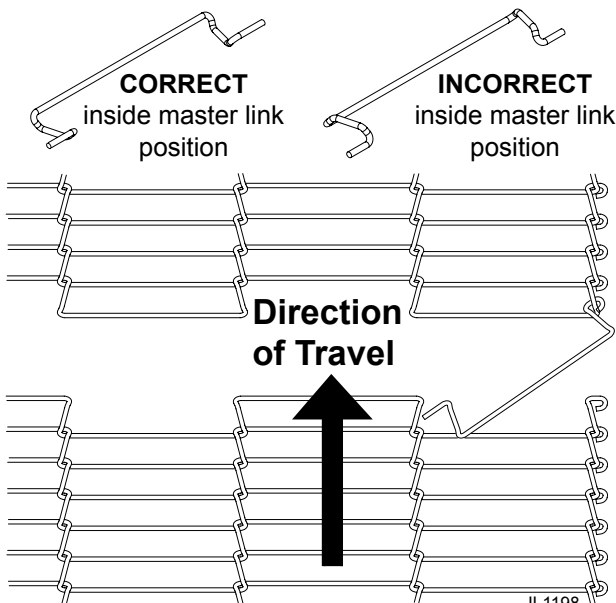
CAUTION

Careful consideration should be exercised prior to removing a belt link because a belt that is too tight will impede the smooth operation of the conveyor.

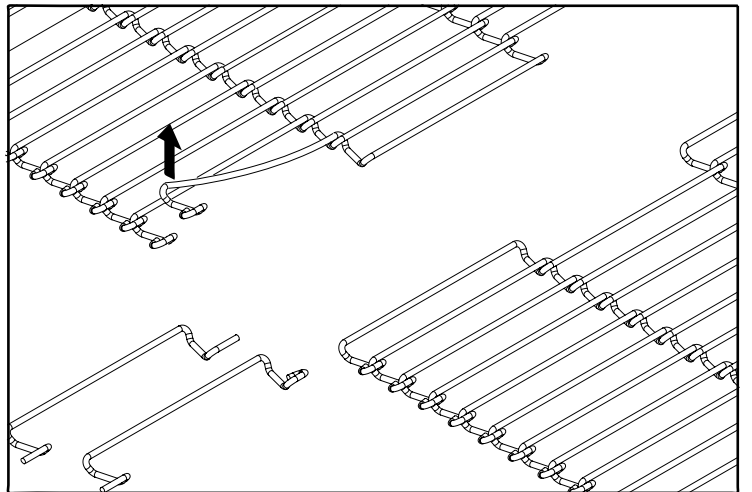
CONVEYOR BELT LINK REMOVAL

An entire link can be removed with the conveyor assembly either in or out of the oven. This may be necessary as the belt stretches after continuous use. Following are the necessary steps for removing links:

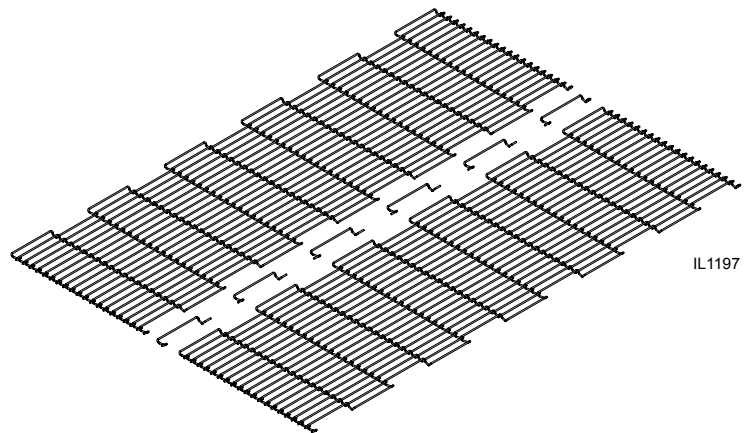
1. Move the splice clips to either end of the oven for easy access.
2. Unhook the splice clips using long nose pliers.
3. Unhook the full link to be removed and slide it out. Do not discard the link removed as it may be used for making spare splice clips.
4. Reconnect the inside splice clips.
5. Reconnect the outside splice clips.
6. Replace all parts removed from the oven.
7. Straighten any bent wires to ensure smooth sprocket engagement.



Remove the outside master links on the right and left sides of the conveyor belt. Remove the center splice clips next.



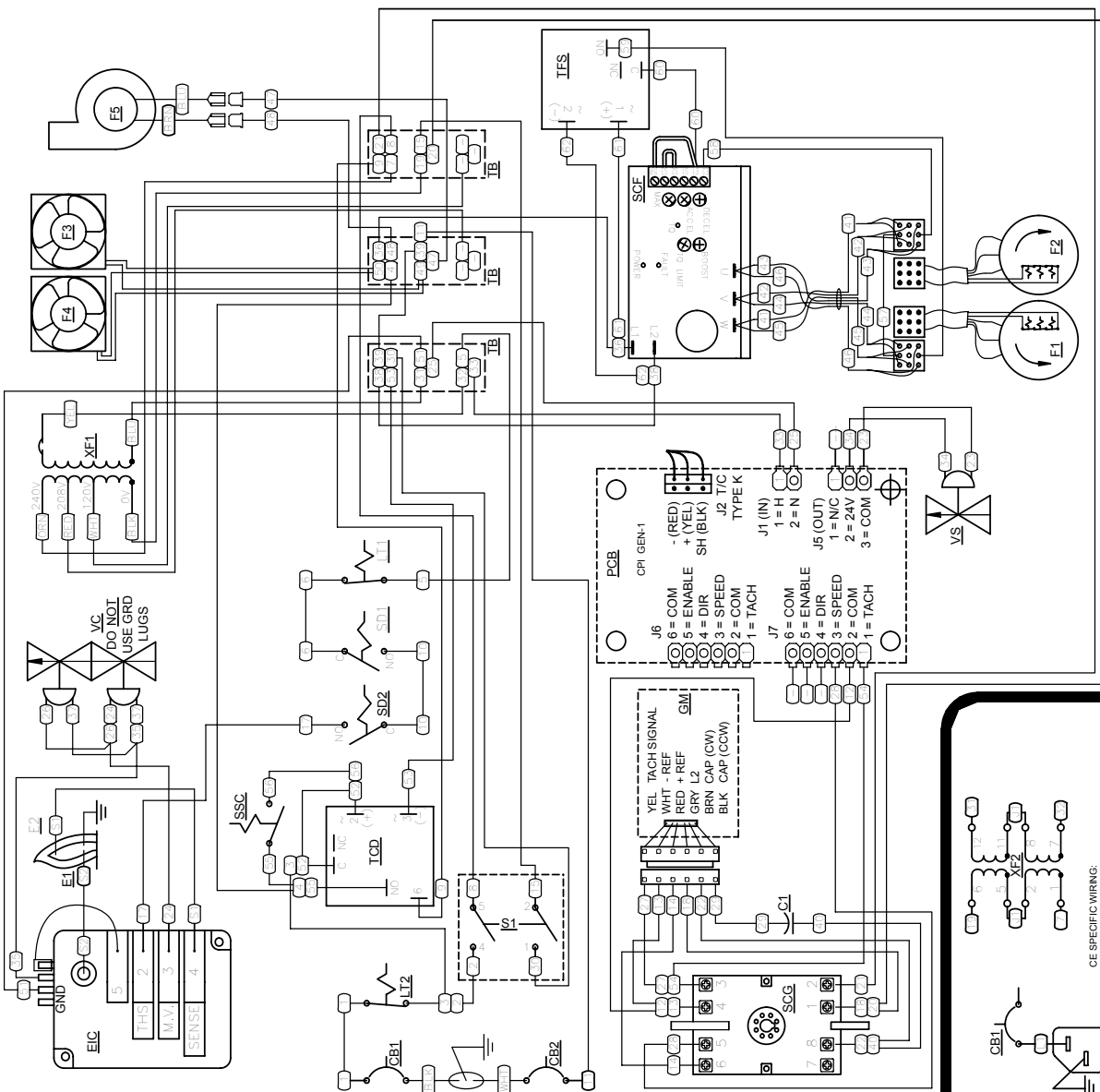
Unhook the end loop and pull up on the link section. Save this link as it may be used for making splice clips.



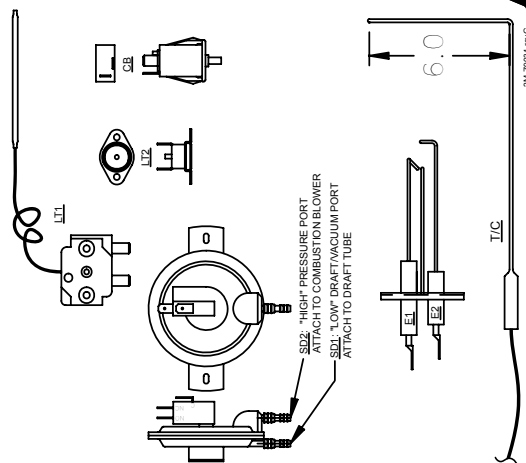
Check the orientation of the splice clips (the hooks should be up). The belt shown is the top section, ready for left-to-right travel.

- C1 CAPACITOR, GEARMOTOR RUN
 CB1 CIRCUIT BREAKER
 CB2 CIRCUIT BREAKER
 E1 ELECTRODE, SPARK
 E2 ELECTRODE, SENSE
 EIC ELECTRONIC IGNITION CONTROL
 F1 FAN, AIR CIRCULATION (W/ TEMP SWITCHES)
 F2 FAN, AIR CIRCULATION (W/ TEMP SWITCHES)
 F3 FAN, CONTROL BOX MUFFIN
 F4 FAN, CONTROL BOX MUFFIN
 F5 FAN, COMBUSTION AIR
 GM GEAR MOTOR
 LT1 LIMIT TEMP (COOK CHAMBER, BULB & CAP)
 LT2 LIMIT TEMP (CONTROL BOX, MAN, RESET)
 PCB PROGRAMMABLE CONTROL BOARD
 SCF SPEED CONTROL, FAN (INVERTER)
 SCG SPEED CONTROL, GEAR MOTOR (OCTAL BASE)
 TCD TIMER, COOLDOWN
 TFS TIMER, FAN START
 SD1 SWITCH, DIFFERENTIAL PRESSURE
 SD2 SWITCH, DIFFERENTIAL PRESSURE
 S1 SWITCH, MAIN (DPST)
 SSC SWITCH, STANDBY COOLDOWN
 XF1 TRANSFORMER, 24V UL
 XF2 TRANSFORMER, 24V CE
 VS VALVE, SINGLE (ON/OFF HIGH FIRE)
 VC VALVE, COMBINATION (REGULATOR/LOW FIRE)
 T/C THERMOCOUPLE (TYPE K)
 MOV METAL OXIDE VARISTOR
 TB TERMINAL BLOCK(S)

NOTES:
 1) Wires MUST rotate in direction shown as viewed from rear of oven. Reverse "OFF" jumper OR SWITCH AND CONNECTIONS ON INVERTER.
 2) ADJUST COOLDOWN TIMER TO 55 MINUTES (APPROX).
 3) IGNITION SPARK WIRE (S2) SUPPLIED WITH BURNER (NOT LABELED). BLACK, RED OR ORANGE RUBBER INSULATED, 14" FEMALE QC BOTH TERMINAL ENDS.
 4) FLAME SENSE WIRE (S1) SUPPLIED WITH BURNER (NOT LABELED). BLUE, WHITE OR ORANGE RUBBER INSULATED, 14" FEMALE QC BOTH TERMINAL ENDS.
 5) TRANSFORMER IS MULTIVOLTAGE CAPABLE AND HAS BARE WIRE LEADS.
 6) ATTACH TERMINALS TO THE ORANGE, RED & BLACK WIRES AND NUMBER AS SHOWN. LEAD FOR THE VOLTAGE REQUIRED (280V/200-225V, 240V/225-250V).
 7) INVERTER DEFAULT SETTINGS: T/LIMIT = 100%, BOOST = 10-15%, DECEL = 0-10%, ACCEL = 25-50%, MAX = 30% (SET FOR 60HZ OUTPUT).



GE SPECIFIC WIRING:
 1) SUPPLEMENTAL WIRING KIT REQUIRED
 2) TRANSFORMER & POWER INLET CONNECTIONS ARE DIFFERENT FROM UL WIRING



WIRING DIAGRAM PROVIDED ON THE INSIDE COVER OF YOUR CONTROL BOX TOP LID.

Visit our Website at: www.star-mfg.com

Email: service@star-mfg.com

THOROUGHLY INSPECT YOUR UNIT ON ARRIVAL

This unit has been tested for proper operation before leaving our plant to insure delivery of your unit in perfect condition. However, there are instances in which the unit may be damaged in transit. In the event you discover any type of damage to your product upon receipt, you must immediately contact the transportation company who delivered the item to you and initiate your claim with same. If this procedure is not followed, it may affect the warranty status of the unit.

LIMITED EQUIPMENT WARRANTY

All workmanship and material in Star products have a one (1) year limited warranty on parts & labor in the United States and Canada. Such warranty is limited to the original purchaser only and shall be effective from the date the equipment is placed in service. Star's obligation under this warranty is limited to the repair of defects without charge, by the factory authorized service agency or one of its sub-agencies. Models that are considered portable (*see below*) should be taken to the closest Star service agency, transportation prepaid.

- > Star will not assume any responsibility for loss of revenue.
- > On all shipments outside the United States and Canada, see International Warranty.
- * The warranty period for the JetStar six (6) ounce & Super JetStar eight (8) ounce series popcorn machines is two (2) years.
- * The warranty period for the Chrome-Max Griddles is five (5) years on the griddle surface. See detailed warranty provided with unit.
- * The warranty period for Teflon/Dura-Tec coatings is one year under normal use and reasonable care. This warranty does not apply if damage occurs to Teflon/Dura-Tec coatings from improper cleaning, maintenance, use of metallic utensils, or abrasive cleaners. This warranty does not apply to the "non-stick" properties of such materials.
- > This warranty does not apply to "Special Products" but to regular catalog items only. Star's warranty on "Special Products" is six (6) months on parts and ninety (90) days on labor.
- > This warranty does not apply to any item that is disassembled or tampered with for any purpose other than repair by a Star Authorized Service Center or the Service Center's sub-agency.
- > This warranty does not apply if damage occurs from improper installation, misuse, wrong voltage, wrong gas or operated contrary to the Installation and Operating instructions.
- > This warranty is not valid on Conveyor Ovens *unless* a "start-up/check-out" has been performed by a Factory Authorized Technician.

PARTS WARRANTY

Parts that are sold to repair out of warranty equipment are warranted for ninety (90) days. The part only is warranted. Labor to replace the part is chargeable to the customer.

SERVICES NOT COVERED BY WARRANTY

- | | |
|--|---|
| 1. Travel time and mileage rendered beyond the 50 mile radius limit | 10. Voltage conversions |
| 2. Mileage and travel time on portable equipment (<i>see below</i>) | 11. Gas conversions |
| 3. Labor to replace such items that can be replaced easily during a daily cleaning routine, ie; removable kettles on fryers, knobs, grease drawers on griddles, etc. | 12. Pilot light adjustment |
| 4. Installation of equipment | 13. Miscellaneous adjustments |
| 5. Damages due to improper installation | 14. Thermostat calibration and by-pass adjustment |
| 6. Damages from abuse or misuse | 15. Resetting of circuit breakers or safety controls or reset buttons |
| 7. Operated contrary to the Operating and Installation Instructions | 16. Replacement of bulbs |
| 8. Cleaning of equipment | 17. Replacement of fuses |
| 9. Seasoning of griddle plates | 18. Repair of damage created during transit, delivery, & installation OR created by acts of God |

PORTABLE EQUIPMENT

Star will not honor service bills that include travel time and mileage charges for servicing any products considered "Portable" including items listed below. These products should be taken to the Service Agency for repair:

- * The Model 510FD Fryer.
- * The Model J4R, 4 oz. Popcorn Machine.
- * The Model 518CMA & 526CMA Cheese Melter.
- * The Model 12MC & 15MC & 18MCP Hot Food Merchandisers.
- * The Model 12NCPW & 15NCPW Nacho Chip/Popcorn Warmer.
- * All Hot Dog Equipment **except Roller Grills & Drawer Bun Warmers.**
- * All Nacho Cheese Warmers **except Model 11WLA Series Nacho Cheese Warmer.**
- * All Condiment Dispensers **except the Model HPDE, & SPDE Series Dispenser.**
- * All Specialty Food Warmers **except Model 130R, 11RW Series, and 11WSA Series.**
- * All QCS/RCS Series Toasters **except Model QCS3 & RCS3 Series.**

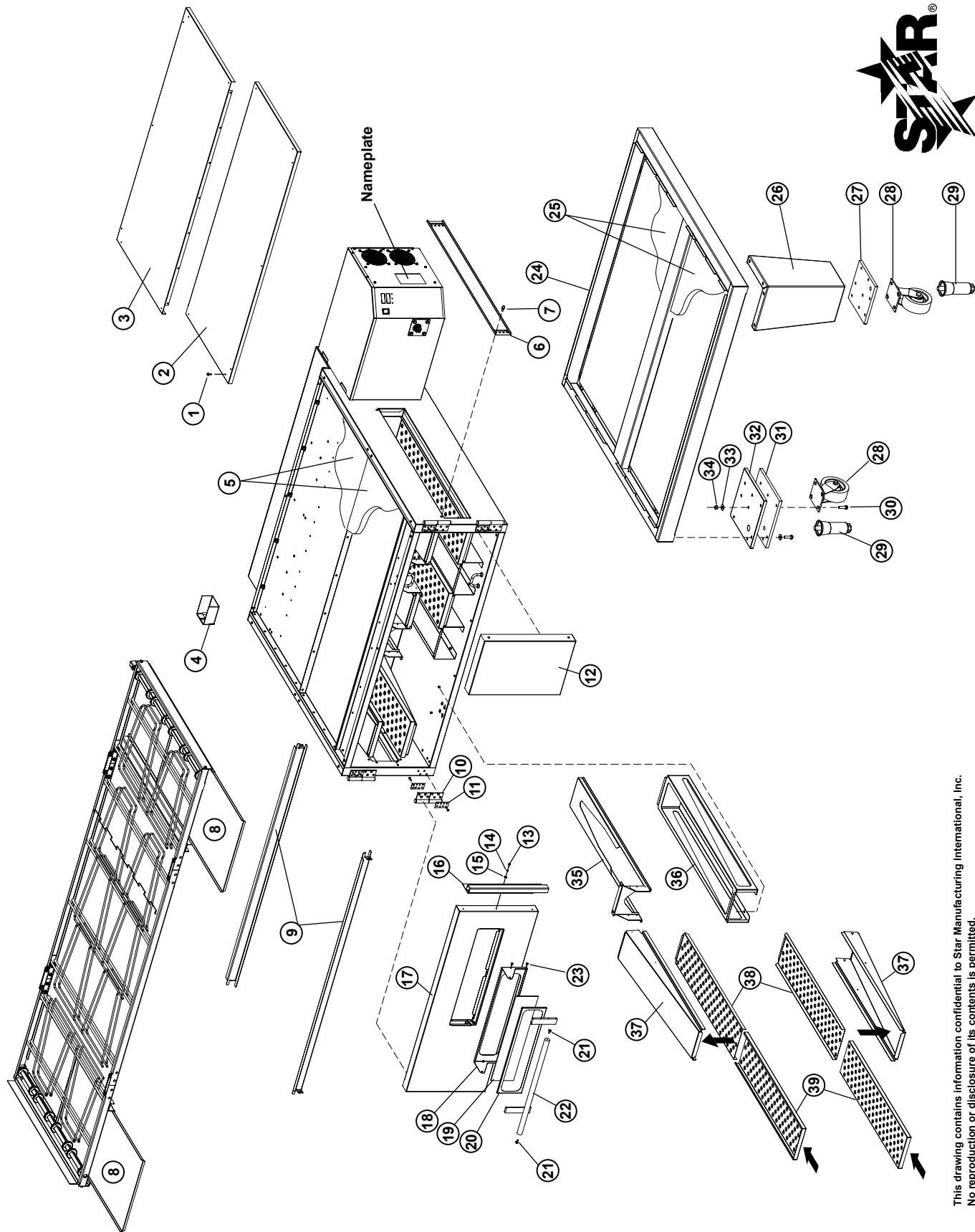
ALL:

- * Pop-Up Toasters
- * Butter Dispensers
- * Pretzel Merchandisers
- * Pastry Display Cabinets
- * Nacho Chip Merchandisers
- * Accessories of any kind
- * Sneeze Guards
- * Pizza Ovens
- * Heat Lamps
- * Pumps

The foregoing warranty is in lieu of any and all other warranties expressed or implied and constitutes the entire warranty.

FOR ASSISTANCE

Should you need any assistance regarding the Operation or Maintenance of any Star equipment; write, phone, fax or email our Service Department. In all correspondence mention the Model number and the Serial number of your unit, and the voltage or type of gas you are using.



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MODEL: UM3255 - Front Panel Assy

SK2198

Rev. B

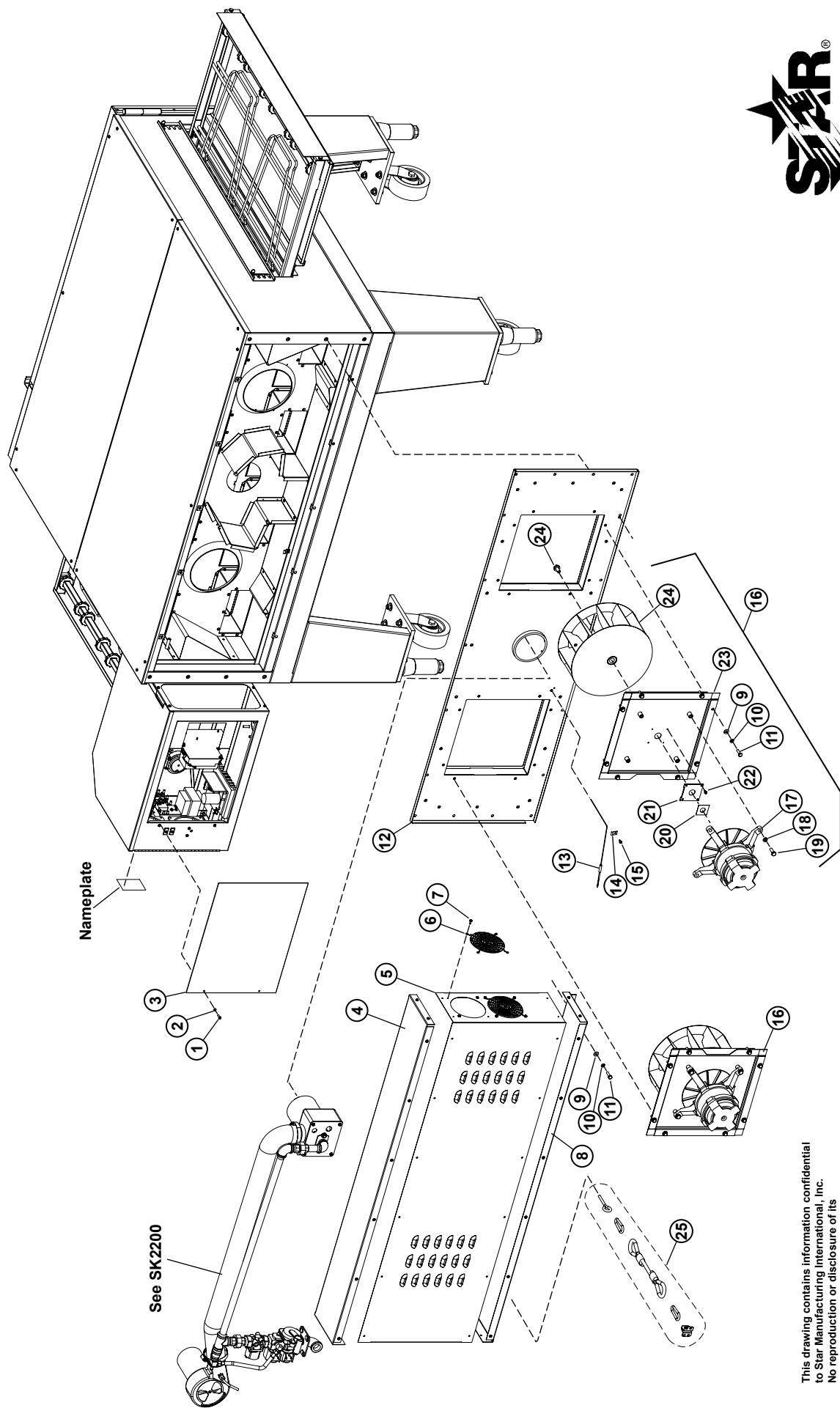
12/5/06



UM3240, UM3255 Front Panel Assy

Fig No.	Part Number	Quantity Per	Description	Fig No.	Part Number	Quantity Per	Description
1	2C-Z8925	16	SCREW #8 X 1/2 HEX SS SDR	30	2C-Z2206	32	BOLT 3/8-16X1 1/4 HEX STL, CASTER LOW PROFILE BASE
2	B5-Z8647	1	TOP REAR PANEL		2C-Z2206	48	BOLT 3/8-16X1 1/4 HEX STL, CASTER
2	B5-Z9059	1	TOP REAR PANEL	31	2A-Z9083	4	PLATE, TRIPLE STACK LEG LOW PROFILE BASE
3	B5-Z8648	1	TOP FRONT PANEL	32	B5-Z9084	4	FOOT PLATE TRIM LOW PROFILE BASE
4	B5-Z9060	1	TOP FRONT PANEL	33	2C-Y9767	32	WASHER .390x.718x.048 LOW PROFILE BASE
4	B5-Z8650	4	STACKING CORNERS		2C-Y9767	48	WASHER .390x.718x.048
5	B5-Z9039-7	2	INSULATION-TOP LINER	34	2C-Y9771	16	NUT, HEX 3/8-16 LOW PROFILE BASE
	B5-Z9071-2	2	INSULATION-TOP LINER		2C-Y9771	32	NUT, HEX 3/8-16
6	B5-Z9037	2	RESTRICTOR PLATE	35	B5-LC0010	2	TOP RETURN BAFFLE ASSY UM3240
7	2C-Z5182	4	THUMB SCREW 1/4-20x1/2		B5-LC0010	3	TOP RETURN BAFFLE ASSY UM3255
8	B5-Z9029	2	CRUMB TRAY	36	B5-Z9020	2	LOWER RETURN DUCT UM3240
9	B5-Z8603	2	CONVEYOR GUIDE 40		B5-Z9020	3	LOWER RETURN DUCT UM3255
	B5-Z9057	2	CONVEYOR GUIDE 55	37	B5-LC0003		FINGER BODY ASSY SEE CHART
10	2I-Z8656	2	DOOR HINGE UM3240	38	VARIES		COULUMNATING PLATE SEE CHART
	2I-Z8656	4	DOOR HINGE UM3255	39	VARIES		NOZZLE PLATE SEE CHART
11	B5-Z9459	4	HINGE SPACER PLATE				
	B5-Z9459	8	HINGE SPACER PLATE				
12	B5-LC0028	1	SMALL DOOR ASSY				
13	2C-1513	3	SCREW 10-24X1/2 RHP STL NP, DOOR LATCH				
14	2C-6260	3	WASHER #10 INT STL NP, DOOR LATCH				
15	2C-Z3780	3	RETAINER, DOOR LATCH				
16	B5-Z9043-4	1	DOOR LATCH				
17	B5-LC0019	1	DOOR ASSY COMPLETE				
	B5-LC0030	1	DOOR ASSY COMPLETE				
18	B5-Z8677	1	ACCESS DOOR				
19	2Q-Z8678	1	GLASS, ACCESS DOOR				
20	B5-Z8681	1	GLASS RETAINER				
21	2C-Y1221	2	BOLT 1/4-20X1/2 HEX STL, DOOR HANDEL				
22	2R-Z8679	1	ACCESS DOOR HANDLE				
23	2C-Z5026	4	SCREW 8-32X1/2 SS SHCS				
24	B5-LC0031	1	BASE FRAME				
	B5-LC0032	1	BASE FRAME				
25	B5-Z9039-6	2	INSULATION-BASE TRAY				
	B5-Z9071-3	2	INSULATION-BASE TRAY				
26	B5-Z8602	4	BASE LEG BODY				
27	2A-Z8600	4	BOTTOM LEG PLATE				
28	2P-Z8617	4	CASTER, 5"H 2"W				
29	2A-Z8618	4	6" EQUIPMENT LEG				

	#37	#38	#39
UMNA-0	B5-LC0003	B5-Z10047	B5-Z9465
UMNA-1	B5-LC0003	B5-Z8614	B5-Z8613
UMNA-2	B5-LC0003	B5-Z8614	B5-Z9466
UMNA-3	B5-LC0003	B5-Z8614	B5-Z9467
UMNA-4	B5-LC0003	B5-Z8614	B5-Z9468



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MODEL: UM3255 - Rear Panel Assy



STAR MANUFACTURING INTERNATIONAL, INC.

SK2199

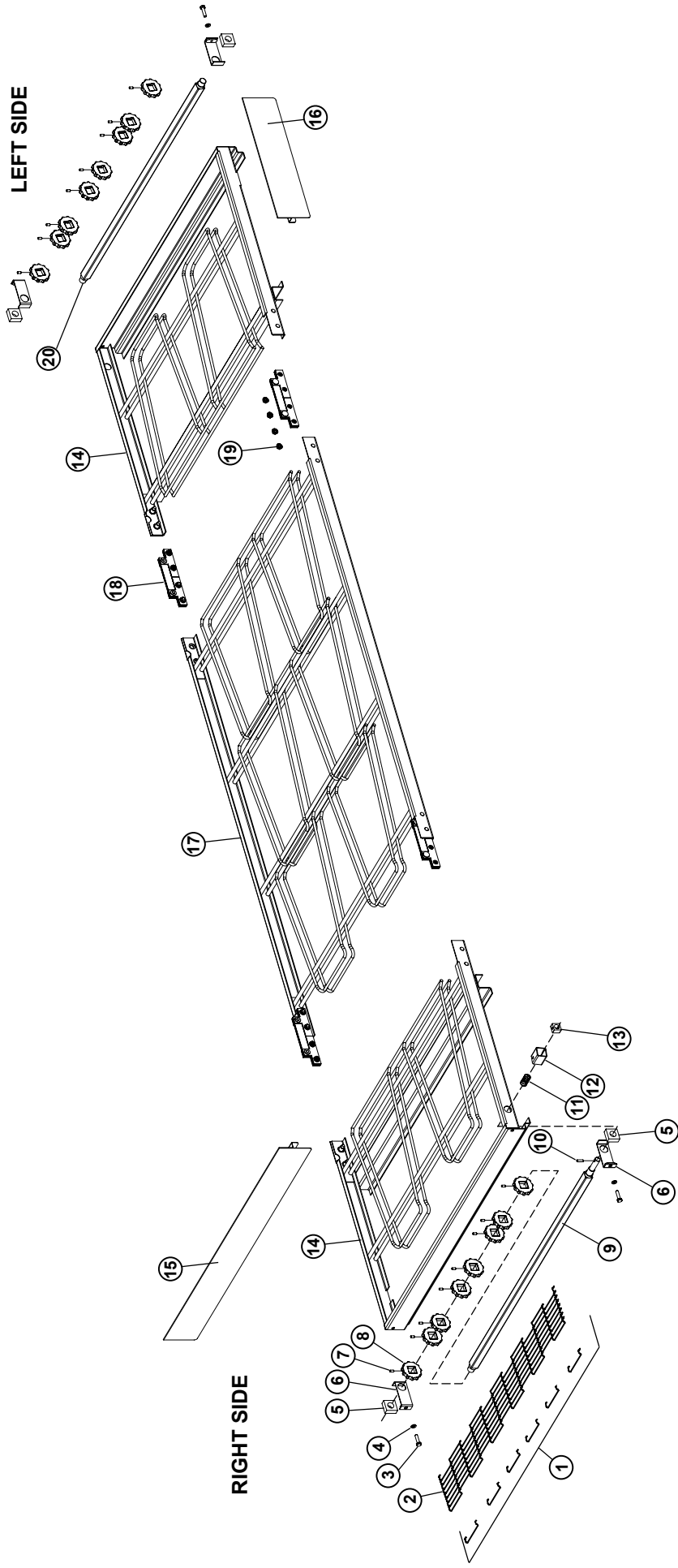
REV. A

9/29/06



UM3240, UM3255 Rear Panel Assy

Fig No.	Part Number	Quantity Per	Description	Fig No.	Part Number	Quantity Per	Description
1	2C-1494	2	SCREW 8-32X1/2 RHP STL NP, REAR CONTROL PANEL	16	B5-LC0045	1	BLOWER ASSY COMPLETE, LEFT
2	2C-H8670	2	WASHER #8 INT STL NP, REAR PANEL		B5-LC0044	1	BLOWER ASSY COMPLETE, RIGHT
3	B5-Z9008	1	CONTROL BOX REAR COVER	17	2U-Z8670-1	2	BLOWER
4	B5-Z6891	1	REAR HOUSING TOP UM3240	18	2C-1824	9	WASHER-LOCK 5/16 SPLIT
	B5-Z9069	1	REAR HOUSING TOP UM3255	19	2C-Z8651	9	BOLT-HEX 5/16-18X1 SS
5	B5-Z8694	1	REAR HOUSING UM3240	20	2I-Z9032	2	AIR SEAL, BLOWER MOTOR
	B5-Z9065	1	REAR HOUSING UM3255	21	B5-Z9094	2	SHAFT SEAL RETAINER, BLOWER MOTOR
6	2R-200562	2	FAN GUARD	22	2C-Z6925	8	SCREW #8 X.5 TEK HW SS, SHAFT SEAL
7	2C-Z6925	28	SCREW #8 X.5 TEK HW SS, REAR PANEL		B5-LC0015	2	FAN PANEL ASSY
8	B5-Z8693	1	REAR HOUSING BOTTOM UM3240	23	2U-Z8670-2	2	BLOWER WHEEL & BOLT
	B5-Z9064	1	REAR HOUSING BOTTOM UM3255	25		1	RESTRAINING KIT
9	2C-Z5556	34	WASHER, FLAT 1/4 SS	NI	2E-Z9041	1	WIRING HARNESS, FREQUENCY INVERTER TO BLOWERS
10	2C-Z5557	34	WASHER, LOCK 1/4 SPLIT SS				
11	2C-Z5555	34	SCREW, 1/4-20 X 3/4 HEX SS				
12	B5-LC0006	1	BLOWER FAN WALL ASSY UM3240				
	B5-LC0023	1	BLOWER FAN WALL ASSY UM3255				
13	2J-Z5189	1	THERMOCOUPLE ASSY				
14	2C-Z3350	1	HALF CLAMP - .188 DIA.				
15		1					



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MODEL: Conveyor Assembly



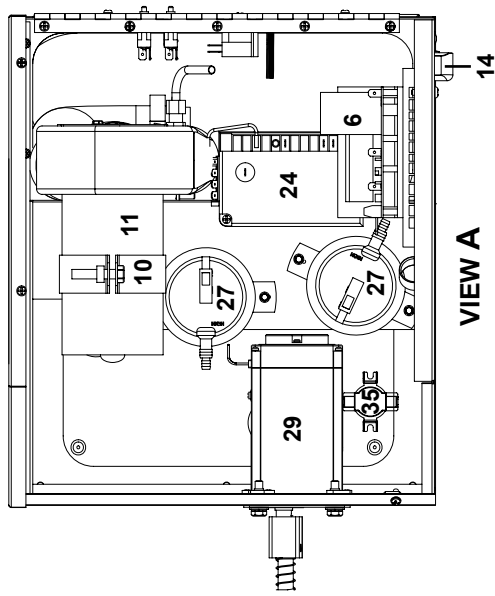
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SK2201 **REV. -** **6/14/06**



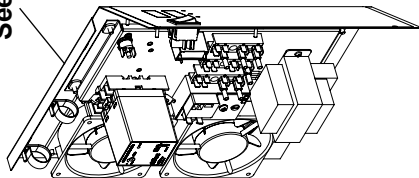
UM3240, UM3255 Conveyor Assembly

Fig No.	Part Number	Quantity Per	Description	Fig No.	Part Number	Quantity Per	Description
1	PS-	1 KIT	BELT MASTER LINKS	11	2P-Z9051	1	SPRING-COUPLING
2	B5-LC0042	1	CONVEYOR BELT	12	B5-LC0013	1	COUPLING ASSY
	B5-LC0043	1	CONVEYOR BELT	13	2A-Z8601	1	AXLE COG
2.1	2B-Z9046	1 FOOT	CONVEYOR BELT 32"W X 12"L	14	B5-LC0011	2	END CONVEYOR ASSY
3	2C-Z5555	4	HEX BOLT 1/4"-20X.75 SS	15	B5-Z9086	1	END STOP
4	2C-Z5557	4	LOCK WASHER 1/4 SPLIT SS	16	B5-Z9454	1	SIDE STOP
5	2A-Z8665	4	BEARING BLOCK	17	B5-LC0012	1	CENTER CONVEYOR ASSY
6	B5-Z8666	4	BEARING RETAINER		B5-LC0029	1	CENTER CONVEYOR ASSY
7	2C-Z8663	16	SET SCREW 8-32X3/8 SS	18	B5-LC0017	4	HINGE ASSY
8	2A-Z8621	16	SPROCKET-WIRE BELT	19	2C-Z9958	16	NUT 1/4-20 HEX SERRATED
9	2V-LC0014	1	DRIVE SHAFT ASSY	20	2V-LC0004	1	IDLER SHAFT ASSY
10	2A-Z9052	1	ROLL PIN				



VIEW A

See SK2002



See SK2199:
FOR BLOWER MOTOR WIRING HARNESS



STAR MANUFACTURING INTERNATIONAL, INC.

SK2203

REV. C

6/25/07

SEE VIEW A

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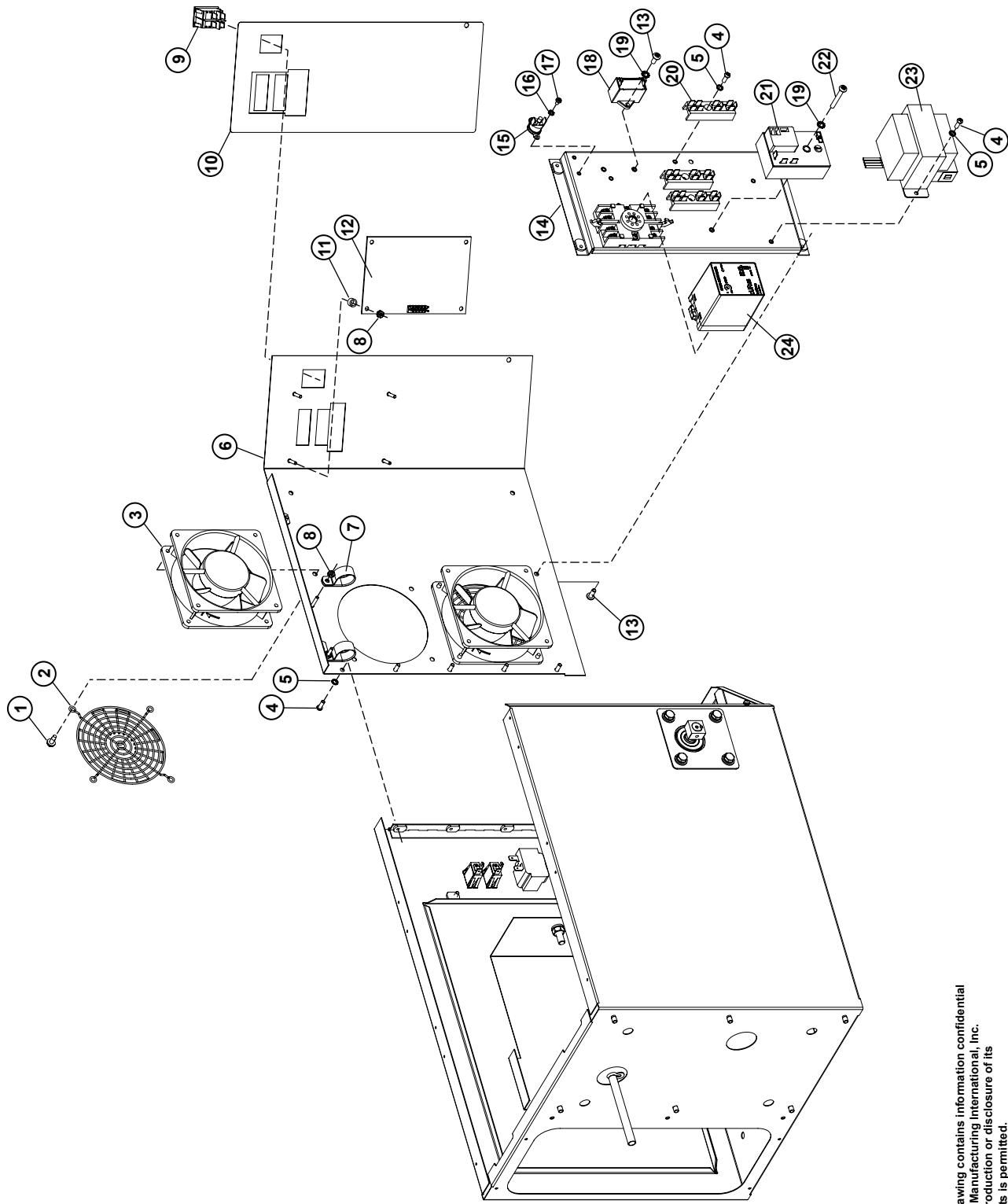
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MODEL: UM3200 Series Control Box Assembly



UM3240, UM3255 Series Control Box Assembly

Fig No.	Part Number	Quantity Per	Description	Fig No.	Part Number	Quantity Per	Description
1	B5-Z9016	1	CONTROL BOX TOP LID	18	B5-Z10050	1	CORD HOLDER - IEC INLET
2	2C-H8670	4	WASHER #8 INT STL NP	19	2C-200201	2	6-32 HEX NUT,W/STAR WASHER
3	2C-1494	4	SCREW 8-32X1/2 RHP STL NP	20	2C-200004	2	SCREW, 6-32X38PHITRU SS410N
4	2C-Z3447	2	HEX NUT W/WASHER 8-32, FREQ. INVERTER	21	2C-1810	1	WASHER 3/16 BURR STL NP
5	2E-200468	3	CLAMP, NYLON WIRE 7/8	22	2C-08-07-0207	2	NUT 10-24 HEX STL NP W/LOCKWASH
6	2E-Z9007	1	FREQUENCY INVERTER	23	2C-1515	4	SCREW 10-24X.75 ST RH NP
7	2T-Z5177	1	THERMOSTAT HIGH LIMIT	24	2E-Z5163	1	IGNITION CONTROL, 24VAC
8	2C-Z0215	2	SCREW M4X5 ST NP PAN PH	25	2C-1496	2	SCREW 8-32 X 3/4 ST RH NP
9	2E-Z5206	2	BREAKER, CIRCUIT-10A	26	2C-Z6925	6	SCREW #8 X .5 TEK HW SS
10	2C-Z8652	1	CLAMP, BLOWER 3"	27	2E-Z5683	2	SWITCH-DIFFERENTIAL PRESSURE
11	2F-Z8616-1	1	COMBUSTION BLOWER	28	2C-H1027	4	NUT WELD 1/4-20, ANTI ROTATION, MOTOR
12	B5-Z9028-1	1	PRESSURE HOSE, SWITCH TO BLOWER	29	2U-Z8629	1	GEAR MOTOR W/CAPACITOR
13	B5-Z9008	1	CONTROL BOX REAR COVER	30	B5-Z8661	1	GEAR MOTOR COVER PLATE
14	2K-Y3240	1	BUSHING HEYCO SR 17-2	31	2C-Z5556	4	WASHER, FLAT 1/4 SS
15	2E-Z3034	1	IEC CORD INLET HOT 10AMP 230 VOLT	32	2C-Z5557	4	WASHER, LOCK 1/4 SPLIT SS
	2E-Z9858	1	CORD SET, 14/3 6-15P 10'	33	2C-Z5555	4	SCREW,1/4-20 X 3/4 HEX SS
	2E-Z7278	1	CORDSET, UK 10A 90° BOTH ENDS 2.5METERS	34	2A-Z8633	1	DRIVE COG
	2E-Z0512	1	CORD SET, CONT. EUR 10A	35	2T-Z5175	1	THERMOSTAT, COOLDOWN TIMER
16	B5-Z8668	1	POWER INLET PLATE	36	B5-Z9028-2	1	SUCTION HOSE, SWITCH TO COOKING CHAMBER
17	2C-Y2344	1	TERMINAL GROUND	37	2E-Z7476	1	RELAY, TIME DELAY
				38	2K-Z2895	1	BUSHING
				39	1L-14-07-0100	1FT	TUBING-SILICONE 1/4 OD 1/16 WAL



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MODEL: UM3200 Series Control Box Door Assembly



STAR MANUFACTURING INTERNATIONAL, INC.

SK2202

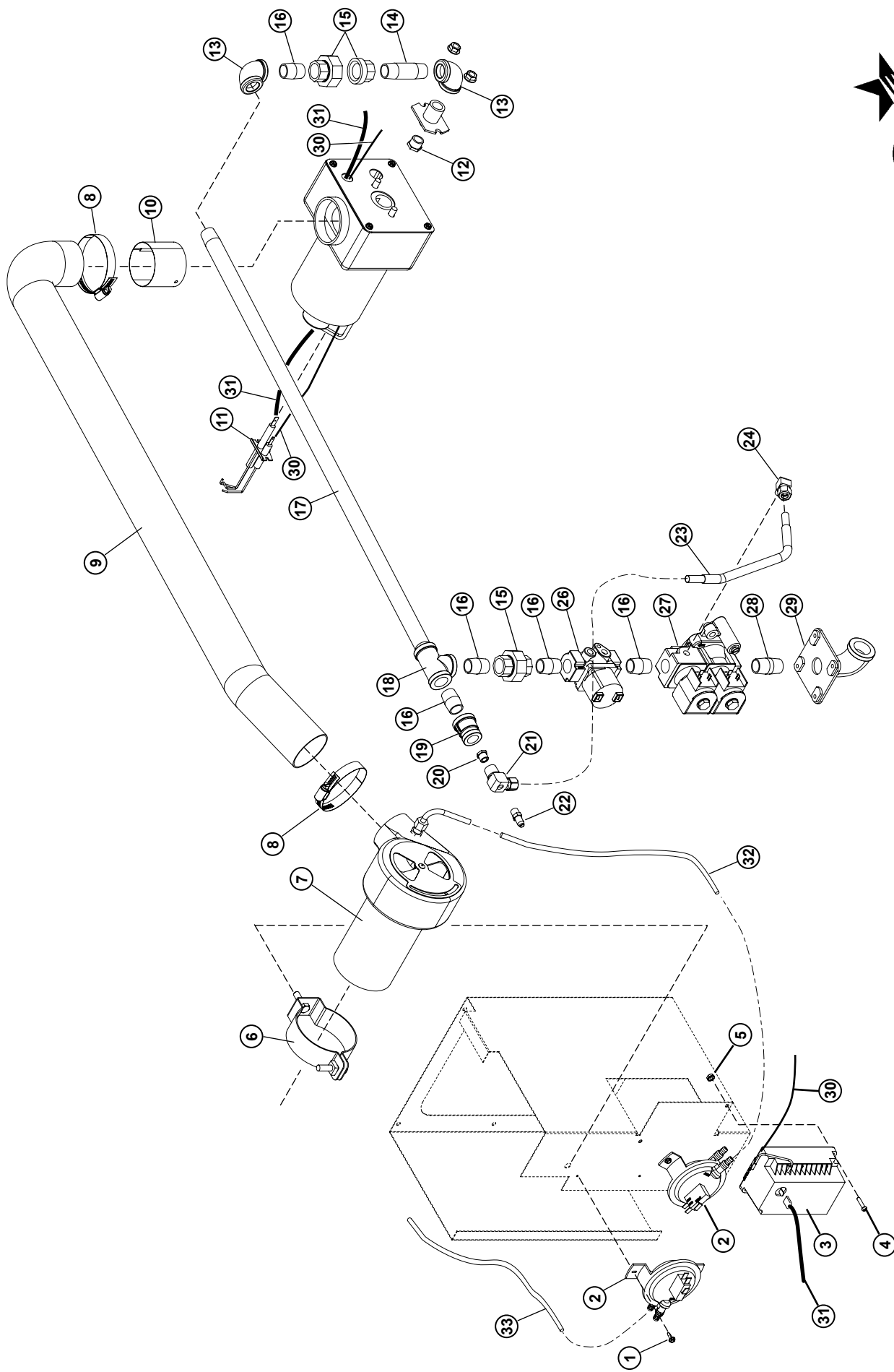
REV. -

6/1/06



UM3240, UM3255 Series Control Box Door Assembly

Fig No.	Part Number	Quantity Per	Description	Fig No.	Part Number	Quantity Per	Description
1	2C-200048	8	SCREW, 10-24X1/2 HEX, SELF THREADING	15	2T-Z5176	1	THERMOSTAT, 140V
2	2R-200562	4	FAN GUARD FOR MUFFIN FAN	16	2C-4538	2	WASHER LOCK EXT 6 STL NP
3	2U-200577	2	MOTOR, FAN 240V, HI-OUTPUT, 23BTH	17	2C-1487	2	SCREW 6-32X1/4 RHP STL NP
4	2C-1494	16	SCREW 8-32X1/2 RHP STL NP	18	2E-Z8629	1	GEARMOTOR, BROTHER
5	2C-H8670	16	WASHER #8 INT STL NP	19	2C-1827	2	WASHER #10 EXT STL NP
6	B5-Z8662	1	CONTROL BOX DOOR	20	2E-Z4597	3	TERMINAL BLOCK 1/4 P.O.
7	2E-200468	3	CLAMP, NYLON WIRE 7/8	21	2E-Z9054	1	TIMER DELAY
8	2C-200201	6	HEX-NUT, W/STAR WASHER 6-32	22	2C-1557	1	SCREW 10-24X1 1/2 RHP STL NP
9	2E-Z1858	1	SWITCH-LIGHTED	23	2E-Z9090	1	TRANSFORMER, 120/208/240V/ CE
10	2M-Z9000	1	LABEL, CONTROL PANEL	24	2E-Z8628	1	SPEED CONTROL
11	2K-Z1971	4	SPACERS				
12	2J-Z7279	1	CONTROLLER, TIME/TEMP				
13	2C-1513	7	SCREW 10-24X1/2 RHP STL NP				
14	B5-Z8626	1	CONTROL MOUTN PANEL				



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STAR MANUFACTURING INTERNATIONAL, INC.

MODEL: UM3200 Manifold & Blower/Burner Assembly

SK2200

REV. A

9/29/06



UM3240, UM3255 Manifold & Blower/Burner Assy

Fig No.	Part Number	Quantity Per	Description	Fig No.	Part Number	Quantity Per	Description
1	2C-Z6925	4	SCREW #8 X .5 TEK HW SS	18	2K-Z9004	1	TEE-1/2" NPT
2	2E-Z6583	2	SWITCH-DIFFERENTIAL PRESSURE	19	2K-3671	1	REDUCER 1/2"NPT TO 3/8"NPT
3	2E-Z5163	1	IGNITION CONTROL, 24VAC	20	2K-Z9025-1	1	ORIFICE LOW FIRE NAT #43
4	2C-1496	2	SCREW 8-32 X 3/4 ST RH NP	20	2K-Z9025-2	1	ORIFICE LOW FIRE LP #48
5	2C-Z3447	2	HEX-NUT W/WASHER 8-32	21	2K-Z9025	1	PILOT ELBOW
6	2C-Z8652	1	CLAMP, BLOWER 3"	22	2K-Z7221	1	NIPPLE, GAS TEST PRESSURE
7	2F-Z8616-1	1	BLOWER BURNER	23	2V-Z5194	1	TUBE, SS FLEX - 3/8X12
8	2C-Z9027	2	HOSE CLAMP	24	2A-Z5106	1	ELBOW, 1/8P-3/8T - BRASS
9	B5-Z9026-1	1	AIR HOSE	26	2V-Z5104	1	VALVE, SOLENOID 1/2 24V
	B5-Z9026-2	1	HOSE	27	2V-Z6825	1	VALVE, GAS COMBI 1/2 24V
10	B5-Z9055	1	BURNER COUPLING	28	2K-Z3381	1	NIPPLE 1/2 NPT X 1&1/2
11	B5-Z10005	1	IGNITOR/SENSOR, UM3200	29	B5-LC0027	1	GAS INLET ASSY 3/4 NPT
12	2F-Z8616-7	1	ORIFICE 40 LP .147D	30	2F-Z8616-3	1	WIRE IGNITION, BURNER TO IGNITION CONTROL
	2F-Z8616-5	1	ORIFICE 40 NAT .203D	31	2F-Z8616-4	1	WIRE SENSOR, BURNER TO IGNITION CONTROL
	2F-Z8616-8	1	ORIFICE 55 LP .173D	32	B5-Z9028-1	1	PRESSURE HOSE, SWITCH TO BLOWER
	2F-Z8616-6	1	ORIFICE 55 NAT .234D	33	B5-Z9028-2	1	SUCTION HOSE, SWITCH TO COOKING CHAMBER
13	2K-Z667	2	ELBOW 90° 1/2 FPT IRON				
14	2K-9138	1	NIPPLE 1/2NPT X 2.5" STL				
15	2K-5877	2	UNION 1/2" NPT				
16	2K-1388	5	NIPPLE 1/2 NPT CLOSE STL				
17	2K-Z9001	1	NIPPLE 1/2 NPT X 22.437				
	2K-Z9056	1	NIPPLE 1/2 NPT X 29.938				
			UM3240				
			UM3255				

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