EDGE
OVENS

EDGE 1830
EDGE 2440, 3240
EDGE 2460, 3260, 3260S
EDGE 3860, 4460, 4460S
EDGE 3270, 3870

Original Installation
Operation & Service Manual

(2C) Chassis, 2022

US Domestic

Retain This Manual for Future Reference

To Be Service by Authorized & Qualified Personnel Only

MF&B RESTAURANT SYSTEMS, INC.
119 ICMI RD, STE 300, DUNBAR, PA, 15431 USA
(1)888.480.EDGE
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PROUDLY BUILT IN THE USA

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119 ICMI RD, STE 300
Dunbar, PA 15431, USA

724.628.3050 (telephone)
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sales@edgeovens.com
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Valued customer,

We thank you for the opportunity to provide you with, what we believe to be, the finest conveyor oven available on the market today.

Our experience as pizzeria owners has given us the opportunity to improve on the conveyor oven industry. We imagined a better oven with a better bake, so we built one... for you. Thank you for your trust and thank you for choosing EDGE ovens. May your business be blessed with success!

Sincerely,

Mark Bielstein,
President, MF&B Restaurant Systems, Inc.

Michael French,
Secretary & Treasurer, MF&B Restaurant Systems, Inc.

Please visit our website for additional information and documentation.

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Service policy

All service technicians of the EDGE Oven must read this summary and all warnings and cautions in the manual.

Any internal part(s) replacement or assembly and reassembly must be performed by qualified service personnel with a good understanding of mechanical, gas and electrical components. If difficulties arise in locating a qualified service person, please contact your EDGE oven distributor or MF&B for assistance in locating qualified personnel to assist you.

All repairs on products within the warranty period must be PRE-AUTHORIZED by MF&B Restaurant Systems, Inc., or an approved representative within the designated region. Unauthorized repairs will not be reimbursed. Modifications will void the warranty. Consult the WARRANTY POLICY within the Installation and Operation Instructions for complete details.

If the product fails to function correctly—or if you need assistance, service, or spare parts—contact MF&B Restaurant Systems, Inc.

Before contacting MF&B Restaurant Systems, Inc., try to duplicate the problem, and check electrical outlets and gas supply lines to ensure that they are not causing the problem. When calling, please be prepared to provide:

- Supplier, model number, and serial number of your product.
- Complete description of the problem.
- Complete name, address, and phone number of your facility.
- For out-of-warranty repairs or spare parts orders, a purchase order (or credit card) number.
- For parts orders, the required spare or replacement part numbers.

If your product requires warranty, or non-warranty repair service, please call MF&B Restaurant Systems, Inc. first. A representative will assist you troubleshooting the problem and will make every effort to solve it over the phone, avoiding potential unnecessary expenses and downtime.

In case a service call cannot be avoided, the representative will record all necessary information and may attempt to coordinate the delivery of repair parts with a servicer in your area. Repair parts which are not used and/or replaced parts should be returned to MF&B Restaurant Systems, Inc.

To aid in quick service and to accommodate the servicer providers needs, ensure the product is accessible and that there is ample clearance for the product to be disconnected and rotated as needed.

Due to the size of the product and the size of the product parts, a servicer may require assistance with some handling or maneuvering or this product or product parts. Please use care and correct lifting techniques.

Table of Contents

WARNING AND SAFETY INFORMATION

WARNING

Do not store or use gasoline, cleaning solvents, or any other material that may emit flammable vapors near this or any other appliance.

WARNING

Improper installation, adjustment, alteration, service, or maintenance can result in property damage, injury, or death. Read this entire manual and ensure that you thoroughly understand all instructions before installing, operating, or servicing this equipment.

WARNING

Keep the appliance free and clear of combustibles. Do not use aerosols within the area of the operating appliance.

WARNING

Do not obstruct the flow of combustion or ventilation air to and from the oven. There should never be any obstructions on or around the oven that could hamper the flow of combustion or ventilation air to or from the oven. Any changes to the area where the oven is installed must not affect the combustion or ventilation air to and from the oven.

IMPORTANT

Retain all shipping materials until you are certain that the oven has not been damaged (either externally or internally) during shipment. Thoroughly inspect the oven on receipt for both external and internal damage. It is solely the customer's responsibility to report any shipping damage to the freight company.

NOTICE

Oven installation, including electrical and gas connections, oven placement, and ventilation must comply with all applicable national and local codes. National and local codes supersede the recommendations, requirements, and guidelines contained in the manual.

NOTICE

The purchaser of this equipment is required to prominently post instructions to be followed should the user smell gas. This information shall be obtained from the local gas supplier.

NOTICE

Installing any part(s) not provided by the Edge oven OEM shall void the warranty and release the OEM from any and all liabilities.

NOTICE

The oven electrical wiring diagram is located inside the control compartment.

IMPORTANT

US CUSTOMERS

Oven installation must comply with local codes or, if local codes do not exist, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54.

This appliance must be electrically grounded in accordance with local codes, or if local codes do not exist, with the National Electrical Code, ANSI/NFPA 70.

IMPORTANT

CANADIAN CUSTOMERS

Oven installation must comply with local codes or, if local codes do not exist, gas oven installation must comply with the Natural Gas Installation Code, CAN/CGA-B149.1, or the Propane Gas Installation Code, CAN/CSA-B149-2, as applicable.

This appliance must be electrically isolated in accordance with local codes, or if local codes do not exist, with the Canadian Electrical Code, CSA C22.2.

IMPORTANT

EXPORT CUSTOMERS

Oven installation must comply with local codes. This appliance must be electrically grounded in accordance with local codes.

NOTE

This appliance and its individual manual shutoff valves must be disconnected from the gas supply piping system during any pressure testing of gas supply piping at pressures exceeding 1/2 psi (3.5 KPa).

WARNING

Always check for leaks after making any gas supply piping connections or performing any service on the oven.

NOTE

The installer of this oven must contact local building and fire officials concerning inspections and installation requirements of this oven and its ventilation system.

NOTE

Appliance is NOT to be cleaned with jets of water. End plugs and oven back are not to be submerged.

IMPORTANT
NORTH AMERICA CUSTOMERS
OVENS EQUIPPED WITH CASTERS:

1. When this appliance is installed with casters, it must be installed with the casters supplied, a connector complying with ANSI Z21.69 (CSA 6.16), a quick-disconnect device complying with ANSI Z21.41 (CSA 6.9), and a mechanism to limit movement of the appliance without straining the connector or its associated piping system.
2. Adequate means must be provided to limit movement of the appliance without depending on the connector, quick-disconnect device, or associated piping to limit appliance movement.
3. The restraining device must be attached to the mounting eye located on the left side of the oven base assembly.

IMPORTANT
EXPORT CUSTOMERS
OVENS EQUIPPED WITH CASTERS:

1. When this appliance is installed with casters, it must be installed with the casters supplied, a quick-disconnect device, and a mechanism to limit movement of the appliance without straining the connector or its associated piping system.
2. Adequate means must be provided to limit movement of the appliance without depending on the connector, quick-disconnect device, or associated piping to limit appliance movement.
3. The restraining device must be attached to the mounting eye located on the left side of the oven base assembly.

WARNING

To prevent damage to the oven and personal injury or death, the voltage, phase and grounding of the electrical supply must be inspected and verified prior to energizing.

WARNING
NORTH AMERICA CUSTOMERS

This appliance is equipped with a three-prong (grounding) plug and must be connected to a properly grounded three-prong receptacle. This is to protect you from a possible shock hazard.

DO NOT remove the grounding prong from this plug or use any form of adapter to plug the appliance into a standard two-prong receptacle.

Use only the cord set supplied by the oven OEM, or a direct replacement cord set purchased from the oven OEM. Other cord sets may present a fire and/or electric shock hazard.

PREFACE

General cautions

WARNING Indicates conditions that could lead to injury or death.

CAUTION Indicates conditions that could damage equipment or property.

CAUTION Indicates conditions that may result in a burn injury.

General Warnings

Warnings indicate conditions or practices that could lead to injury or death.

Warnings related to the operating environment

WARNING To avoid a possible explosion, do not service the product in an atmosphere where explosive gases or fuel vapors are present. Verify all gas valves are in the OFF position and that enough ventilation is present to evacuate any unburnt gases.

Warnings related to electric shock

WARNING Electricity can seriously injure or kill. Disconnect the power cord for the electrical outlet or lock out the service disconnect before servicing this equipment. Always ensure an earth ground is correctly connected to the equipment. When troubleshooting live electrical circuits, use care and best practices to ensure an electrical pathway is not completed through the body.

Warnings related to hot surfaces

WARNING Seriously injuries may occur from contact to hot surfaces. Allow adequate cooling time of the appliance prior to service or maintenance. In situations where handling of the appliance or its parts is unavoidable, use thermal protective gloves to protect the hands, wear long shirts and pants to protect arms and legs. Do not attempt to “test” the temperature of surfaces by touch.

General Cautions

Cautions indicate conditions or practices that could damage the equipment or other correctly.

CAUTION To prevent possible damage, do not use sharp or hard objects on interface screen, use only fingertips.

CAUTION Mobile RF communications equipment and high frequency LED lighting may affect the performance of this equipment as dictated by FCC regulations.

CAUTION The power cord must be disconnected from the AC power before cleaning, maintaining, servicing, or transporting.

CAUTION The gas supply line must be disconnected from the oven before cleaning, maintaining, servicing, or transporting.

CAUTION There are NO parts of the oven that are designed to withstand impacts. Damage will result.

Electrostatic discharge (ESD)

CAUTION Electrostatic discharge (ESD) can damage or destroy electronic components. Handle static-sensitive components using safe practices.

CAUTION Assume that all electrical and electronic components of the appliance are static sensitive.

Electrostatic discharge is a sudden current flowing from a charged object to another object or to ground. Electrostatic charges can accumulate on common items such as foam drinking cups, cellophane tape, synthetic clothing, untreated foam packaging material, and untreated plastic bags and work folders, to name only a few.

Electronic components and assemblies, if not correctly protected against ESD, can be permanently damaged or destroyed when near or in contact with electrostatic charged objects. When you handle components or assemblies that are not in protective bags and you are not sure whether they are static-sensitive, assume that they are static-sensitive and handle them accordingly.

- Always use techniques to protect personnel and equipment from electrostatic discharge. ESD Wrist or Heel strap (recommended for appliance and personal safety)
- Remove static-sensitive components and assemblies from their static-shielding bags only when you are stationary and prepared to immediately install the component.
- Remove / install static-sensitive components and assemblies only with appliance power disconnected.
- Insert and seal static-sensitive components and assemblies into their original static-shielding bags.
- Always test your ESD strap before beginning any disassembly or assembly procedures.

SPECIFICATIONS

Export, Gas Configuration Data

Destination Country (Export)	Supply Pressure (mbar)	Category
AT-CH-CY-CZ-DK-EE-ES-FI-FR-GB-GR-HR-HU-IE-IT-LT-LU-LV-NO-PT-RO-SE-SI-SK-TR	20	2H
DE-PL-RO	20	2E
RO-NL	25	2L
BE-FR	20; 25	2E+
BE-CY-ES-FR-GB-GR-HU-IE-PT	30; 28-30	3B
DE-FI-NL-RO	30	3P
BE-CH-CZ-ES-FR-GB-GR-IE-IT-LT-NL-PL-PT-SI-SK	37	3P
AT-BE-CH-CY-CZ-DE-DK-EE-FI-GB-GR-HU-IT-LT-NL-NO-PL-RO-SE-SI-SK-TR	30	3B/P
BE-CH-CY-CZ-ES-FR-GB-GR-IE-IT-LT-PT-SI-SK-TR	28; 30/37	3+

Model "B": BASO BGF378 valve

Electrical Supply	Breaker / Circuit Required (per oven)
230VAC / 50Hz / 1Ph / 700W	16A

Model Heating	Category	Orifice	Manifold High-Fire / Low-Fire	Shutter (Air) Opening
EDGE-1830 Gross Net kW/Hr 19.05 17.0	I2H / I2E	0.1405 in.	11.2 mbar	#2
	I2L / I2E+	0.089 in.	17.4 mbar	#2
	I3P / I3+	0.089 in.	24.9 mbar	#3
	I3B / I3B/P	0.089 in.	18.7 mbar	#3
EDGE-2440 Gross Net kW/Hr 23.45 21.5	I2H / I2E	0.154 in.	11.2 mbar	#2
	I2L / I2E+	0.1015 in.	17.4 mbar	#2
	I3P / I3+	0.1015 in.	24.9 mbar	#3
	I3B / I3B/P	0.1015 in.	18.7 mbar	#3
EDGE-3240 Gross Net kW/Hr 36.63 33.6	I2H / I2E	0.191 in.	11.2 mbar	#2
	I2L / I2E+	0.120 in.	17.4 mbar	#2
	I3P / I3+	0.120 in.	24.9 mbar	#3
	I3B / I3B/P	0.120 in.	18.7 mbar	#3
EDGE-2460 EDGE-3260 Gross Net kW/Hr 43.96 40.3	I2H / I2E	0.209 in.	11.2 mbar	#2
	I2L / I2E+	0.136 in.	17.4 mbar	#2
	I3P / I3+	0.136 in.	24.9 mbar	#3
	I3B / I3B/P	0.136 in.	18.7 mbar	#3
EDGE-3860 Gross Net kW/Hr 43.96 40.3	I2H / I2E	0.209 in.	11.2 mbar	#2
	I2L / I2E+	0.136 in.	17.4 mbar	#2
	I3P / I3+	0.136 in.	24.9 mbar	#3
	I3B / I3B/P	0.136 in.	18.7 mbar	#3
EDGE-4460 EDGE-3270 EDGE-3870 Gross Net kW/Hr 54.22 48.4	I2H / I2E	0.2323 in.	11.2 mbar	#3
	I2L / I2E+	0.154 in.	17.4 mbar	#3
	I3B / I3B/P	0.154 in.	24.9 mbar	#3
	I3B / I3B/P	0.154 in.	18.7 mbar	#3

SPECIFICATIONS

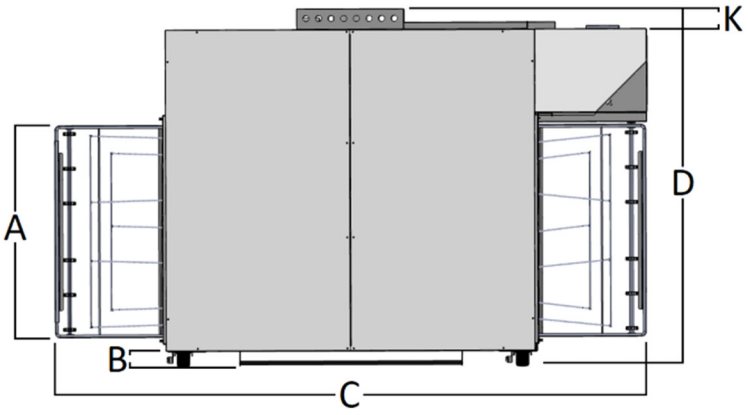
North America, Gas Configuration Data

Model Heating	Gas Type	Supply Pressure	Orifice	Manifold High-Fire / Low-Fire	Shutter (Air) Opening
EDGE-1830	Natural	6”w.c. ~ 8”w.c.	0.1405 in.	4.5 inW.C.	1
	Natural	6”w.c. ~ 8”w.c.	0.1405 in.	4.5 inW.C.	#2
	Propane	11”w.c. ~ 13”w.c.	0.0935 in.	10 inW.C.	1
65k Btu/Hr	Propane	11”w.c. ~ 13”w.c.	0.0935 in.	10 inW.C.	#3
EDGE-2440	Natural	6”w.c. ~ 8”w.c.	0.154 in.	4.5 inW.C.	1.5
	Natural	6”w.c. ~ 8”w.c.	0.154 in.	4.5 inW.C.	#2
	Propane	11”w.c. ~ 13”w.c.	0.1015 in.	10 inW.C.	1
80k Btu/Hr	Propane	11”w.c. ~ 13”w.c.	0.1015 in.	10 inW.C.	#3
EDGE-3240	Natural	6”w.c. ~ 8”w.c.	0.191 in.	4.5 inW.C.	1.5
	Natural	6”w.c. ~ 8”w.c.	0.191 in.	4.5 inW.C.	#2
	Propane	11”w.c. ~ 13”w.c.	0.120 in.	10 inW.C.	1
125k Btu/Hr	Propane	11”w.c. ~ 13”w.c.	0.120 in.	10 inW.C.	#3
EDGE-3860	Natural	6”w.c. ~ 8”w.c.	0.209 in.	4.5 inW.C.	1.5
	Natural	6”w.c. ~ 8”w.c.	0.209 in.	4.5 inW.C.	#2
	Propane	11”w.c. ~ 13”w.c.	0.136 in.	10 inW.C.	1
150k Btu/Hr	Propane	11”w.c. ~ 13”w.c.	0.136 in.	10 inW.C.	#3
EDGE-2460 EDGE-3260	Natural	6”w.c. ~ 8”w.c.	0.209 in.	4.5 inW.C.	1.5
	Natural	6”w.c. ~ 8”w.c.	0.209 in.	4.5 inW.C.	#2
150k Btu/Hr	Propane	11”w.c. ~ 13”w.c.	0.136 in.	10 inW.C.	1
	Propane	11”w.c. ~ 13”w.c.	0.136 in.	10 inW.C.	#3
EDGE-4460 EDGE-3270 EDGE-3870	Natural	6”w.c. ~ 8”w.c.	0.2323 in.	4.5 inW.C.	1.5
	Natural	6”w.c. ~ 8”w.c.	0.2323 in.	4.5 inW.C.	#2
	Propane	11”w.c. ~ 13”w.c.	0.154 in.	10 inW.C.	2
185k Btu/Hr	Propane	11”w.c. ~ 13”w.c.	0.154 in.	10 inW.C.	#3

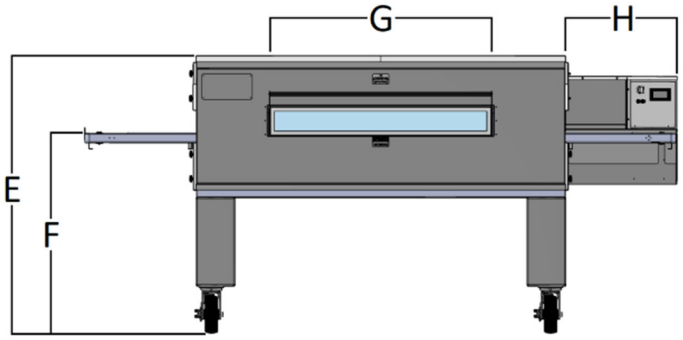
Electrical Supply	Breaker / Circuit Required (per oven)
120VAC / 60Hz / 1Ph / 5.5A ~ 9.5A	20A (If GFCI protection is required, use only panel breakers)

SPECIFICATIONS

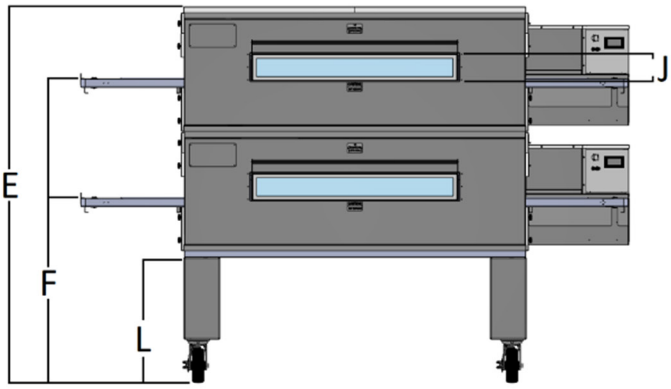
Dimensions



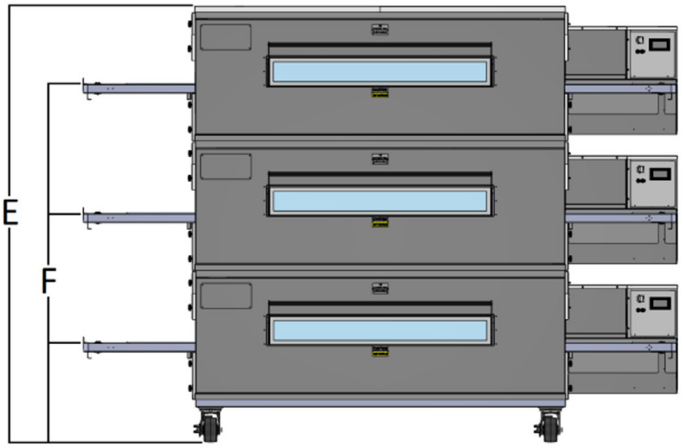
OVEN TOP VIEW



SINGLE FRONT VIEW



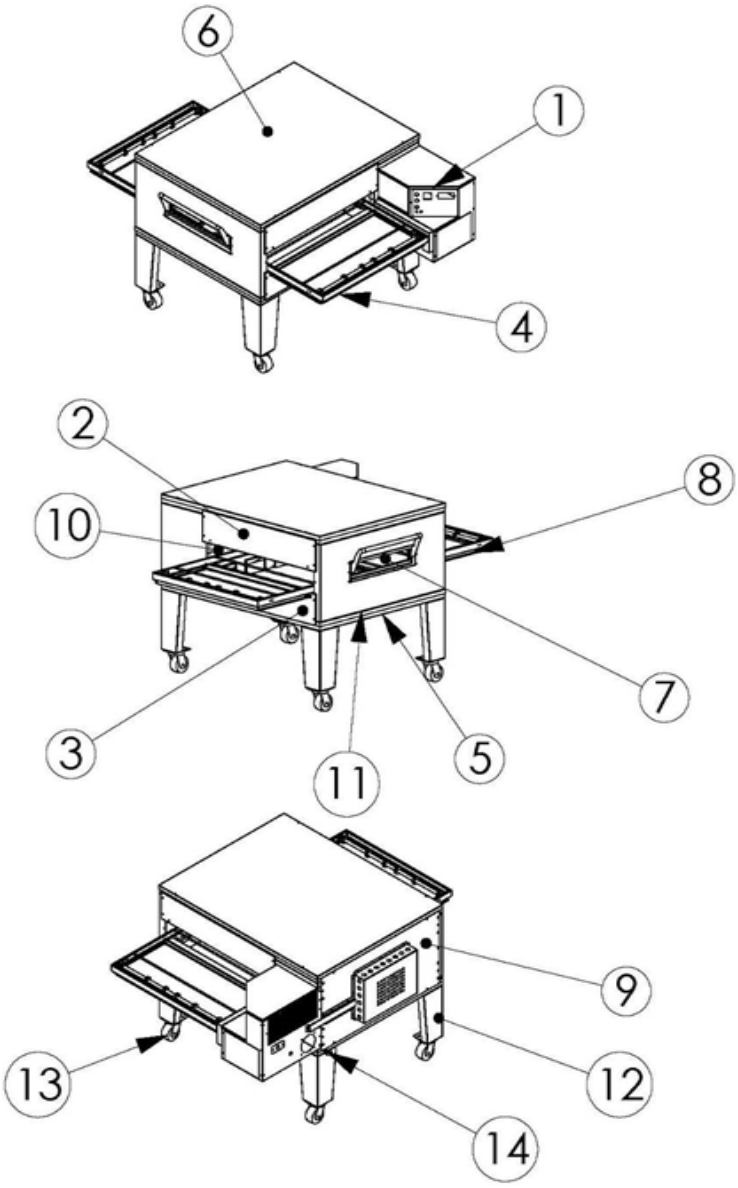
DOUBLE FRONT VIEW



TRIPLE FRONT VIEW

		When installed as:			Measurements are in inch unless otherwise noted								
Detail		Sin-gle	Dou-ble	Triple	EDGE 1830	EDGE 2440	EDGE 3240	EDGE 2460	EDGE 3260	EDGE 3860	EDGE 4460	EDGE 3270	EDGE 3870
A	Chamber (W)				19.8	25.5	33.5	25.5	33.5	39.5	45.5	33.5	39.5
	*Chamber (L)				30.3	40.0		58.5				68.5	
	*Chamber w/plugs (L)				31.3	41.0		59.5				69.5	
B	Window (D)				3.9								
C	Conveyor (L)				65.5	75.3		93.8		93.8		103.8	
D	Oven (D)				44.1	50.6	58.6	50.6	58.6	64.1	70.1	58.6	64.1
G	Window (L)				20.0			35.0					
H	Cont. Cab. (L)				17.8								
J	Chamber (H)				3.5								
K	Motor (D)				5.3	3.8							
	Weight per packaged oven				342 lbs ~ 538 lbs	614 lbs ~ 810 lbs	718 lbs ~ 914 lbs	776 lbs ~ 972 lbs	869 lbs ~ 1000 lbs	899 lbs ~ 1097 lbs	948 lbs ~ 1170 lbs	978 lbs ~ 1198 lbs	1070 lbs ~ 1290 lbs
E	Floor-Oven (H)	44.0	64.1	68.5									
F	Floor-Conveyor (H) t			56.3									
	m		52.0	36.0									
	b	31.5		15.5									
L	Leg/Caster (H)	21.5		5.8									

OVEN COMPONENTS



1. **Control Can Assembly:** Houses the operating controls for the oven and the natural gas control devices and burner.
2. **End Plug, Upper:** Closes off the top half of the bake chamber, above the conveyor belt.
3. **End Plug, Lower:** Closes off the bottom half of the bake chamber, below the conveyor belt.
4. **Conveyor Belt:** Runs horizontally through the bake chamber; carrying the product through the oven.
5. **Oven Base:** Supports and insulates the bottom of the oven.
6. **Oven Lid:** Mounts to the top of the oven, finishes off the oven stack and covers the oven insulation.
7. **Half-Bake Window:** Opens to allow the product to be placed halfway through oven (half bake time).
8. **Crumb Pan:** Located under both the entrance and exit of the conveyor belt, catches debris that falls through the conveyor belt.
9. **Back Assembly:** Closes off the back of the bake chamber.
10. **Plenum Assembly:** Houses the hot air blower motor and fan, and thermocouples to monitor hot air temperature.
11. **Oven Bottom:** Mounts to the top of the oven base, seals off the stack and covers the oven insulation.
12. **Oven Legs:** Used with single- and double-stack configurations to raise / lower oven to convenient working heights.
13. **Oven Casters:** Used on all oven configurations to allow moving the oven for installation and servicing.
14. **Restraining Device:** Secures the oven base to the wall to avoid damage to gas and electrical connections.

INSTALLATION INSTRUCTIONS

IMPORTANT REQUIREMENTS

Oven installation must comply with local codes or, if local codes do not exist, with the *National Fuel Gas Code, ANSI Z223.1/NFPA 54* -OR- *Natural Gas Installation Code, CAN/CGA-B149.1*, or the *Propane Gas Installation Code, CAN/CSA-B149-2*, as applicable.

This appliance must be electrically grounded in accordance with local codes, or if local codes do not exist, with the *National Electrical Code, ANSI/NFPA 70*. OR with the *Canadian Electrical Code, CSA C22.2*.

When this appliance is installed with casters, it must be installed with the casters supplied, a connector complying with ANSI Z21.69 / CAN/CGA-6.16, a quick-disconnect device complying with ANSI Z21.41, and a mechanism to limit movement of the appliance without straining the connector or its associated piping system. This quick-disconnect device must not exceed 1.5 meters in length.

The gas supply tubing or hose shall comply with the national requirements in force and shall be periodically examined and replaced as necessary.

This appliance and its individual manual shutoff valves must be *disconnected* from the gas supply piping system during any pressure testing of gas supply piping at pressures exceeding 1/2 psi (3.5 kPa).

The installer of this oven must contact local building and fire officials concerning inspections and installation requirements of this oven and its ventilation system.

Unless otherwise stated, parts protected by the manufacturer or the authorized agent shall not be adjusted by the installer.

In the event this appliance is to be converted to a gas type other than which it was originally adjusted for, contact manufacturer or authorized agent for the appropriate conversion kit (correct orifice & valve, correct appliance decal, and instructions)

Foreword

Gas must be present at the installation site at the time of the planned installation. If this is not possible, arrangements must be made with the installer or a comparable service provider to complete the requirements of the Installation Checklist and First Firing inspection. This may incur additional cost to you.

The utility connections to the oven MUST match the specifications detailed for the oven(s) installation.

Ovens which are not installed on casters and ovens which are not plumbed using a flexible gas hose are immobile. These conditions will violate the terms of your warranty.

Extraction systems must meet the minimum requirements specified in this manual AND local code. The oven control system must not be subjected to high heat. **If the operating space is uncomfortable to work in, the extraction is insufficient for the oven.** Heat will deteriorate control and drive components, resulting in premature failure. Great care has been taken to equip your EDGE oven with the highest quality of components and thermal protection abilities.

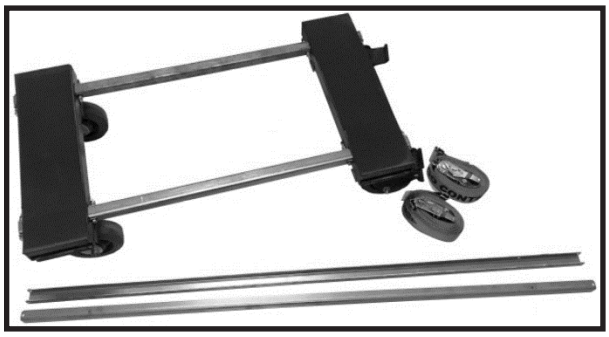
A preventative maintenance guide is provided in this manual. Please utilize it to keep your new oven(s) operating at the best level.

Tools & Equipment Required

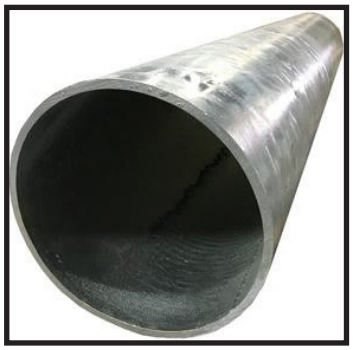
LIFTING SYSTEM

(2) EDGE Lifting Jacks, PN: IE-9001, *Genie Lift* or similar lifting system

(1) EDGE installation cart, PN: IE-9201, 4-wheel cart, pallet jack, or similar.



(1) 10ft, SCH40 steel pipe, 3” O.D. or 2.5” I.D. (Sourced locally)



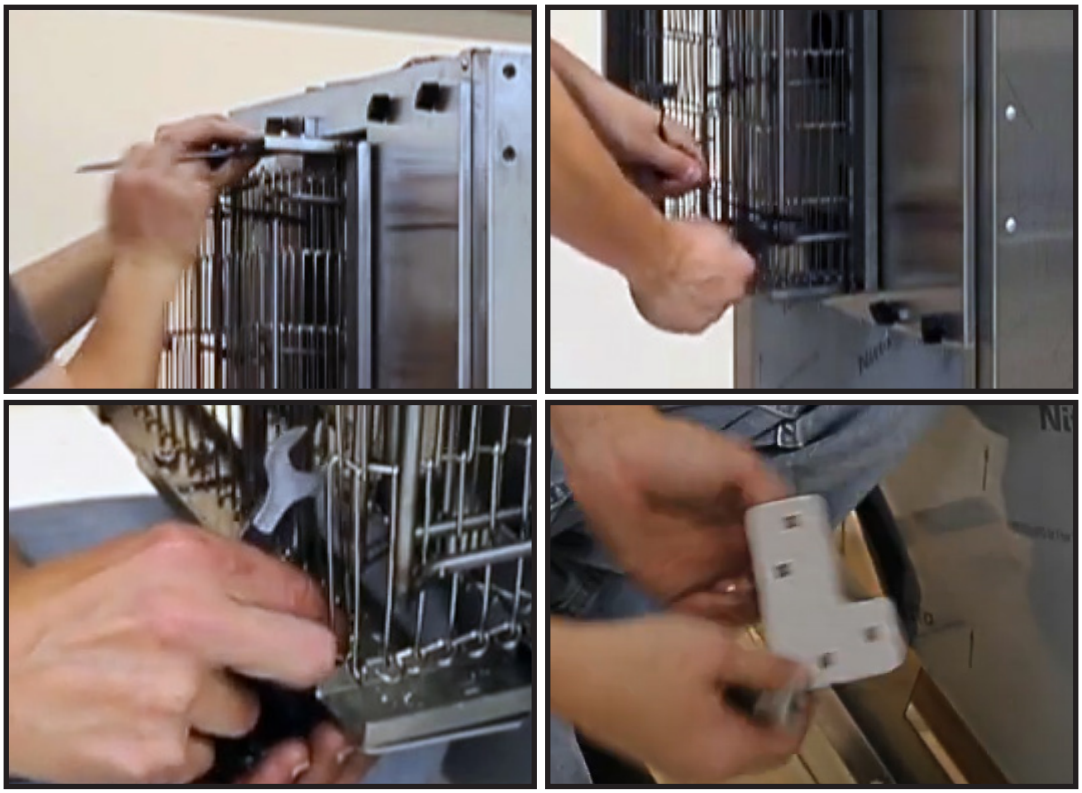
(2) Clamps or locking pliers, when not using EDGE Lifting Jacks IE-9001.

HAND TOOLS

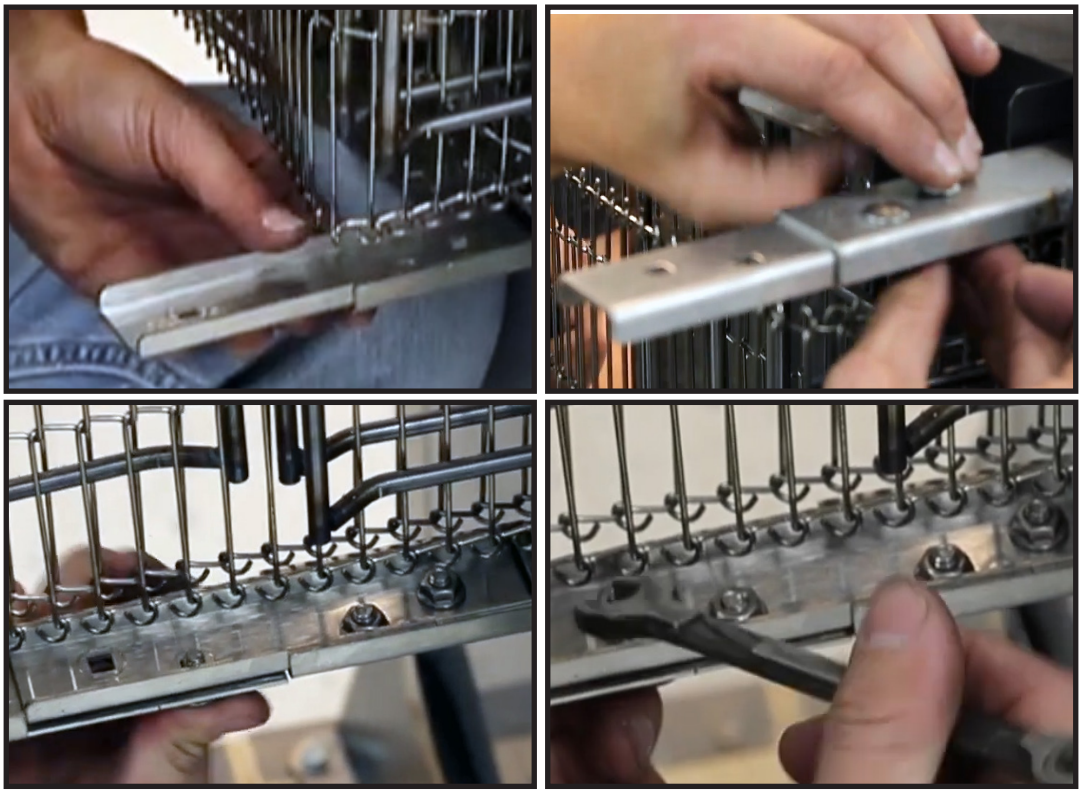
(1) #2 Phillips Screwdriver
(1) Ratchet and short extension
(1) 5/16” Socket or nut driver
(1) 7/16” wrench
(1) 9/16” Socket
(1) 3/8” Socket or wrench *oven back
(1) Tin snips for cutting banding
(1) Adjustable wrench (Crescent) *as needed

Stacking Ovens

1. Unpackage BOTTOM oven, retaining all attached documents and DO NOT cut any banding at this point, the oven must remain attached to the cart or pallet. Inspect the oven for concealed shipping damage before continuing.
2. Use dolly or cart to move the oven to the installation location, allow enough room for the oven to be lifted, rotated, and stacked.
3. Remove the “L” brackets from the belt frame. Retain the hardware, as it is needed for reassembly.



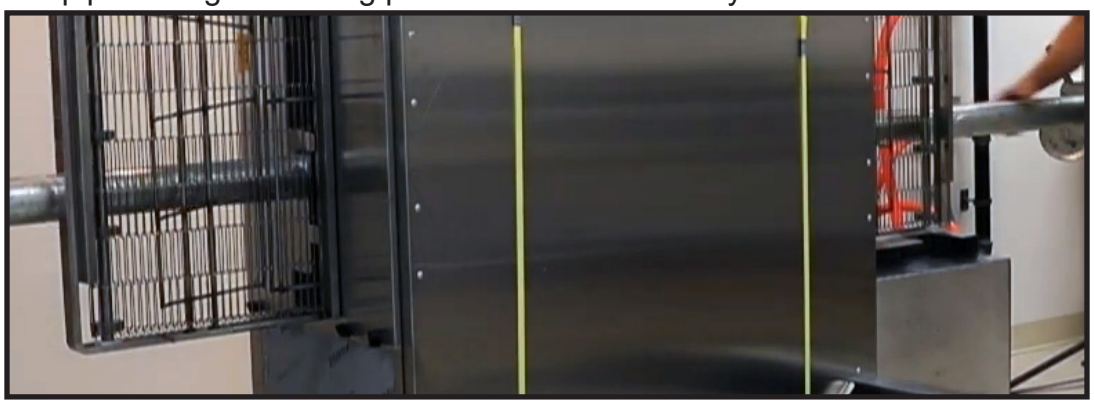
4. Install the supplied belt frame hinge using the previously removed hardware.



5. For Triple Stacked ovens, the casters are to be fastened directly to the bottom oven base. Single and Double Stacked ovens, the casters are to be attached to the supplied legs, which will then be attached to the bottom oven base.

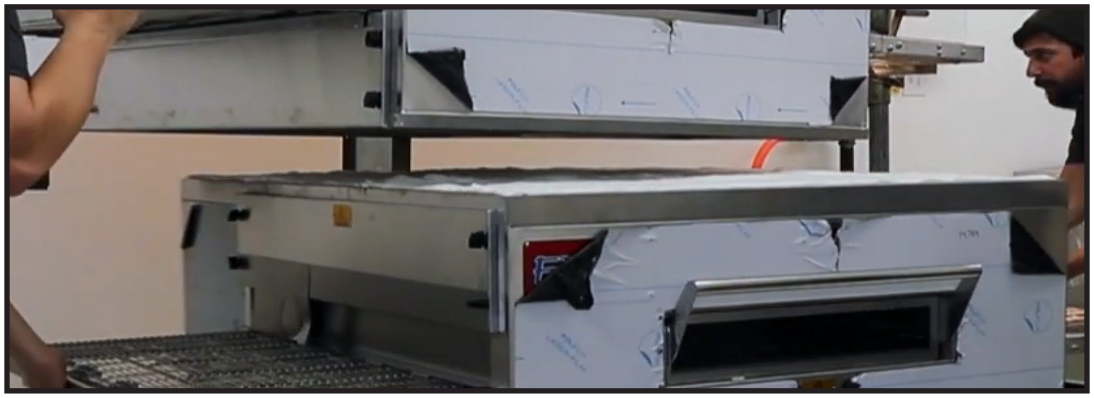
6. Remove the fasteners from the pallet shipping bracket.

7. With the belt now straight and assembled and the oven released from the pallet, pass the 3” O.D. Schedule 80 pipe through the lifting plates and the oven body.



8. Using your Genie Lifts and at least 2 people, begin lifting the oven, rotating it until you clear the floor surface. Banding straps may be removed once the oven is lowered to the ground.

9. Stacking ovens in a Double or Triple Stack requires enough room for the base oven to be moved clear of your work area. Simply repeat the process for each additional oven, continuing the lift until each additional oven clears the height of the oven stack.



10. With a helper maintaining control of the suspended oven, remove the 2 fasteners from each of the pallet shipping brackets. DO NOT DISCARD THE FASTENERS. Once each bracket is removed, install the fasteners back into the screw holes of the oven they were removed from. There should be 5 fasteners in each side of the oven back.

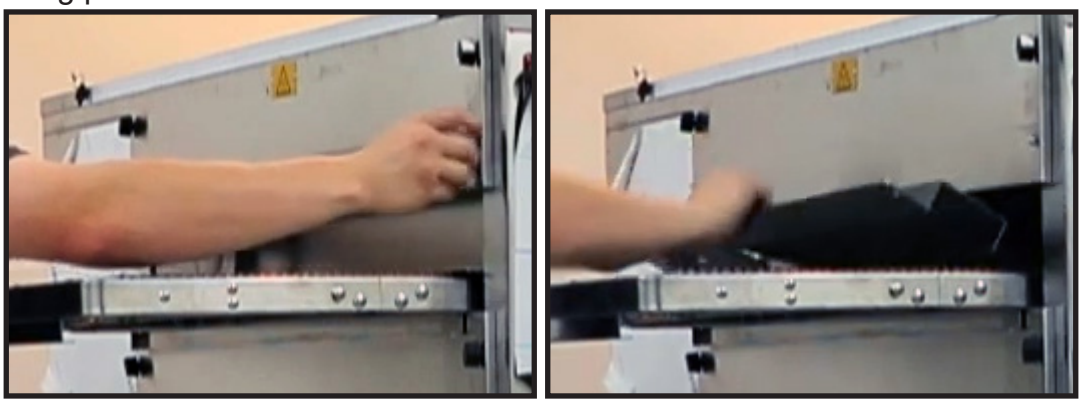
11. The oven(s) can then be pushed under the suspended oven and lowered onto the stack.

WARNING

Do not place your hands or fingers under the connecting lip. The edge of the connecting lip is sharp and can cause severe cuts or amputation.

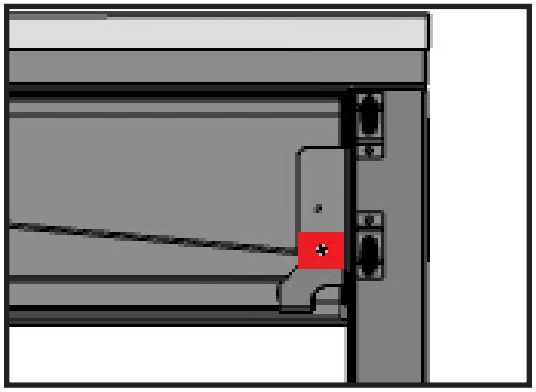
For TOP ovens, remove the protective plastic from the lid BEFORE stacking the oven.

12. Once the ovens are stacked, begin removing the lifting plates. Remove the lower wingnuts from the end plugs and pull the lifting plate from the oven. Repeat for all lifting plates. Install the wingnuts once the lifting plates are removed.



End Plug Removal & Inspection

1. Remove the TOP End Plugs from one oven at a time. Locate and remove the shipping brackets across the tip of the oven fingers. These brackets are secured with a 5/16” Hex/slot head sheet metal screw. Brackets may be discarded.



2. At this time, it is good practice to verify the finger pattern in the oven you received is the pattern suggested for your product and which is detailed on your Sales Order.

- **a.** Pull each of the top fingers from the oven, lifting the narrow fingertip from the front bracket, then lifting the larger end from the plenum wall at the rear. **Make sure you DO NOT mix up the fingers.**
- **b.** You can slide the Finger Cover off to verify the Collimating panel within. Refer to the chart in the section “FINGER ASSEMBLIES” for identification. When installing the fingers, be sure the finger is fully seated against the Plenum wall. When finished, install the end-plugs on the oven. DO NOT over tighten the black wing nuts.
- **c.** Repeat the process on each of the remaining ovens.

Conveyor Drive System

The conveyor motor shaft and sprockets bore are 1/2”, keyed. The sprocket for the motor(s) are:

Standard, single conveyor system - 10 tooth, 35 pitch, (2x Allen set screws)

Split-Belt, dual belt system - 15 tooth, 25 pitch, (2x Allen set screws)

Motor sprocket orientation for the rear-most motor is flipped on a split-belt system:

Standard Rear Motor

Split-Belt Rear Motor

Split-Belt Front Motor

The conveyor input shaft and sprockets bore are 1/2”. The sprockets for the conveyor are:

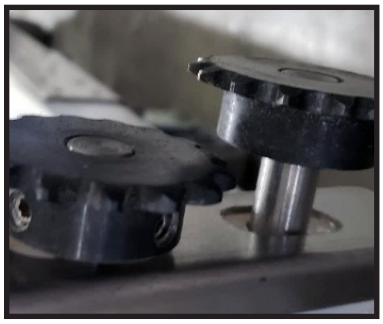
Standard, Single conveyor system - 15 tooth, 36 pitch, (2x Allen set screws)

Split-Belt, dual belt system - 22 tooth, 25 pitch, (2x Allen set screws)

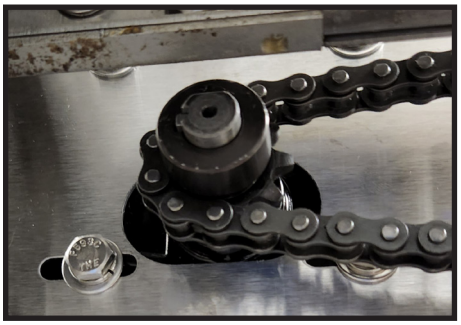
Conveyor sprocket orientation is as follows:

Standard Conveyor

Split Conveyor



The rear motor is held in place using 4 bolts, while a front motor on a split-belt system only has 3 bolts. These bolts are to be loosened, and the motor pushed toward the cabinet to remove slack in the drive chains. ***Failure to remove slack may result in chain slip which will destroy the conveyor sprocket.** Tighten the motor bolts once the slack has been removed from the upper and lower side of the chain. DO NOT exceed 40 in-lbs of torque on these bolts. Bolts are: 1/2” x 1/4-20 SS, 716” hex head.

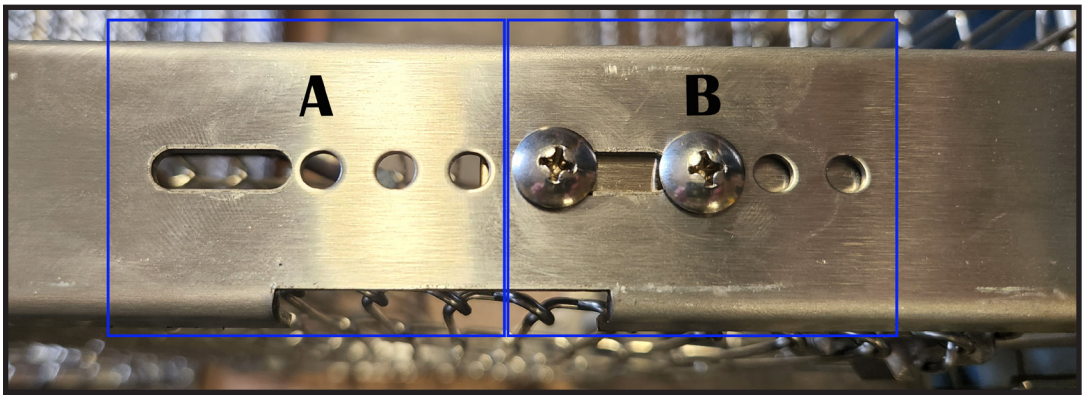


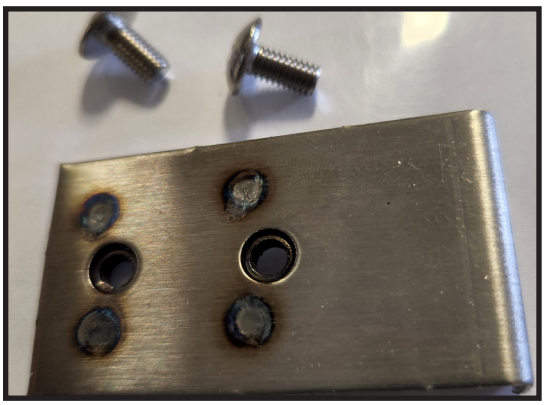
Over the life of the oven, these bolts will be removed many times to remove the conveyor belt assembly. It is important to understand the chain alignment and adjustment to ensure correct operation and long system life.

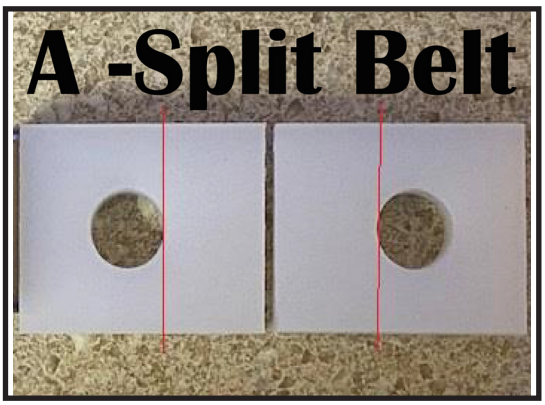
The conveyor belting used for the Edge Oven conveyor is C-CureEdge, a product of Wire Belt Company of America. This **belting is bi-directional**. **Removing and reversing the belt when changing the**

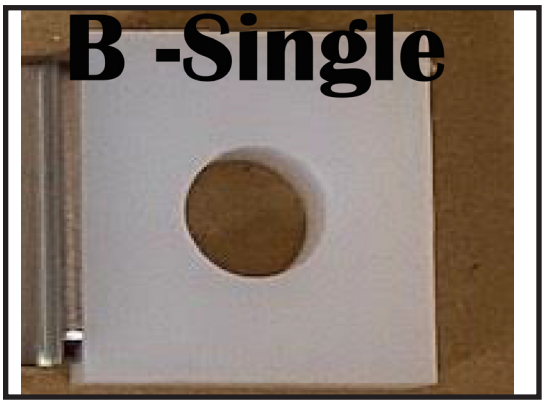
oven belt direction is NOT NEEDED.

The conveyor belting tension must be adjusted over time. To make this task easier, beginning January 2022, the left (non-drive side) of the belt frame incorporates adjustment brackets.









Adjustment set A is for use with Split-Belt conveyors. Adjustment set B is for use with Standard, single conveyor systems. Belt tension adjustment involves removing 1 bolt from the fixed sized hole, loosening the bolt in the slotted portion, then pushing the adjuster ahead to the next fixed hole and installing the bolt. The intention of this system is to reduce the frequency of belt link removal, it does not eliminate link removal. Belt links must be removed when the adjustment set has been expended. At which point, the adjustment must be returned to the most relaxed position (as shown above) prior to the link removal. ***Please note: Split-Belt conveyors use 2 white nylon bushings per side. These bushings have wider sections that must face one another for correct shaft spacing and chain tensioning.**

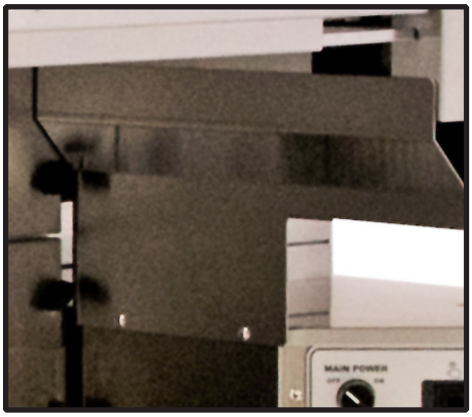
Standard Accessories

The standard accessories supplied with your new oven(s) may include:

- Heat Shields (**REQUIRED** for operation of stacked ovens)
- Chain Guards
- Perforated Crumb Pans (For middle or top ovens)
- Non-Perforated Crumb Pans (For lower or single ovens)
- Belt Stops (For exit side of all ovens)

Additional Collimating Panels or accessories may come with the oven(s), please refer to the instruction sheet packaged with those parts.

Heat Shields



Heat shields are required when stacking 2 or 3 ovens. The heat shields deflect escaping heat, from the lower oven(s), away from the underside of the Control Cabinet(s) above. The heat shield is secured using (2) of the existing Phillips fasteners which secure the Control Cabinet lid.

Chain Guards

Chain guards are intended to prevent access to the moving drive chain of the conveyor system. This guard installs between the conveyor belt and the control cabinet. A Phillips fastener is then installed through the guard, into the side of the control cabinet, to secure the guard from accidental removal.

Crumb Pans

Crumb pans are provided for sanitation purposes. Single ovens or BOTTOM ovens in a stack will have SOLID crumb pans installed under the end of the belts. These pans simply slide into place, using the brackets provided on the underside of the belt. Stacked ovens, other than the bottom, use Perforated Crumb pans only. NEVER install solid crumb pans on a middle or top oven. Doing so will cause trapped heat under the conveyor which will push out under the control system, potentially damaging it. Heat damage is not warrantied.

Belt Stops

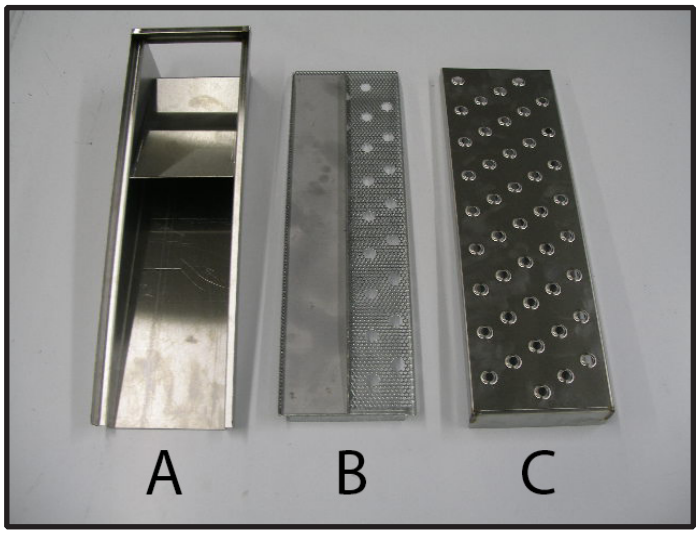
There are a few styles of Belt Stops. The typical variety simply flip over the end of the conveyor belt on the exit side of the belt travel. This is an aide in preventing finished products from falling on the floor in a busy shop. Some variations of this include Take-Off-Trays, which extend the take-off area. Other styles are Side Stops, which help keep product from rolling out the side as well. All styles slip over the belt at an angle and then are pulled flush to seat them.

Collimating Panels

Additional Collimating panels may also be provided with the oven. Ovens are built with a universal pattern pre-installed. Additional panels are provided to alter the oven baking characteristics, to best match the product being baked. Collimating panels are used within the oven finger housing.

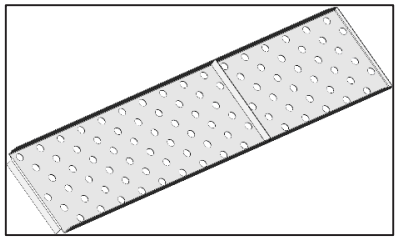
Finger Assemblies

1. All *EDGE* ovens are shipped with (8) or (14) finger assemblies per oven. Each finger assembly consists of three (3) parts:
   A) Finger Housing
   B) Collimating Panel (various configurations)
   C) Finger Cover

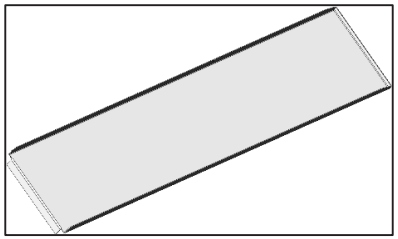


2. The finger pattern of the oven determines the baking characteristics. Once the finger pattern is known, mark the decal on the control cabinet. All bottom fingers are fully open, using #10 Collimating panels.
3. Working from the control side of the oven, set the first pair of upper and lower finger assemblies into place by sliding them into the oven with the narrow end slightly raised (to avoid the front finger holders). Align the wider (open) end of the finger over the finger opening in the plenum wall and lower the narrow end into the front finger holder.

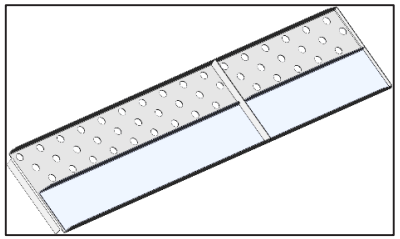
4. Repeat step 3 until all finger assemblies have been installed.



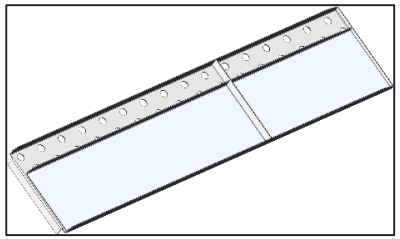
#10, Full Open, provides 100% impingement air across the entire finger



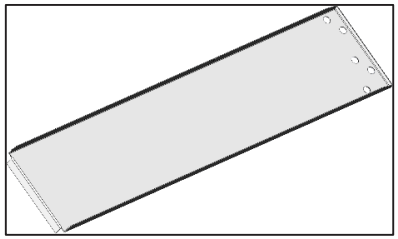
#30, Full Block, delivers radiant heating across the product, impingement air is completely blocked



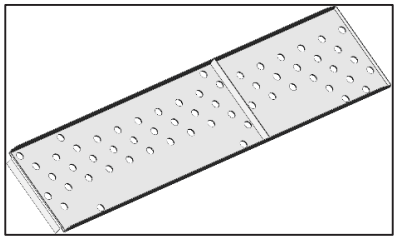
#60, Half Open Left, provides 50% impingement air along the left side of the finger and radiant along the right side



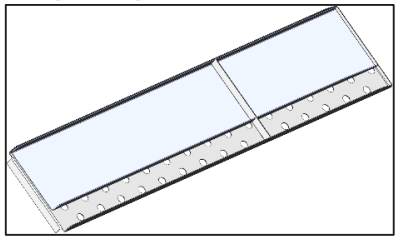
#80, Quarter Open Left, provides 25% impingement air along the left side of the finger and radiant along the right side



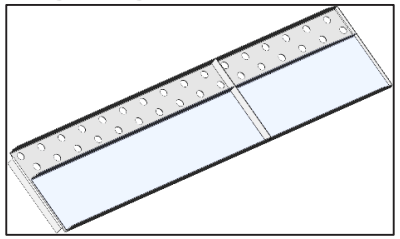
#20, Back Edge Open, gives a small increase to the back-edge impingement air and only radiant heating elsewhere



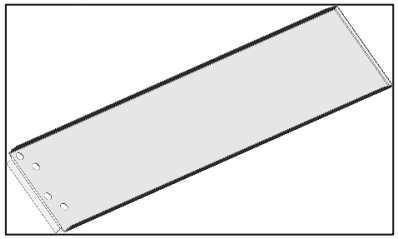
#40, Finish Panel, a special Columnating panel that is used exclusively on the exit finger



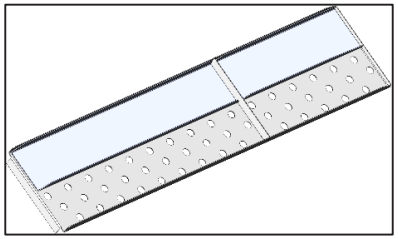
#70, Quarter Open Right, provides 25% impingement air along the right side of the finger and radiant along the left side



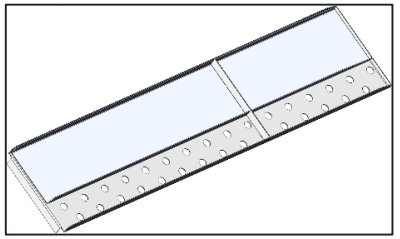
#85, Third Open Left, provides 33% impingement air along the left side of the finger and radiant along the right side



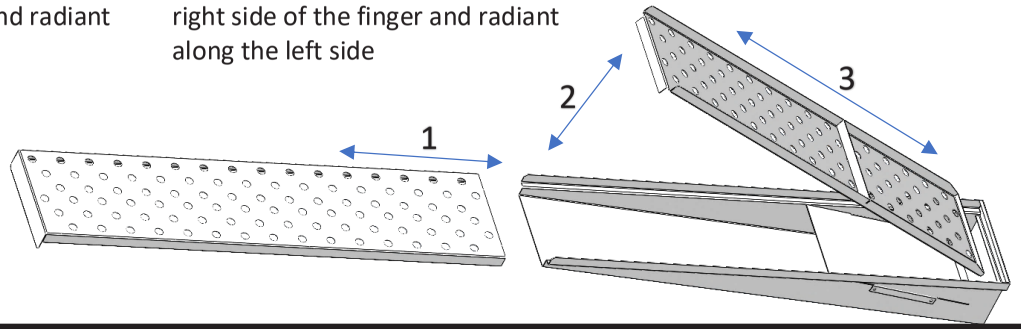
#25, Front Edge Open, gives a small increase to the front-edge impingement air and only radiant heating elsewhere



#50, Half Open Right, provides 50% impingement air along the right side of the finger and radiant along the left side



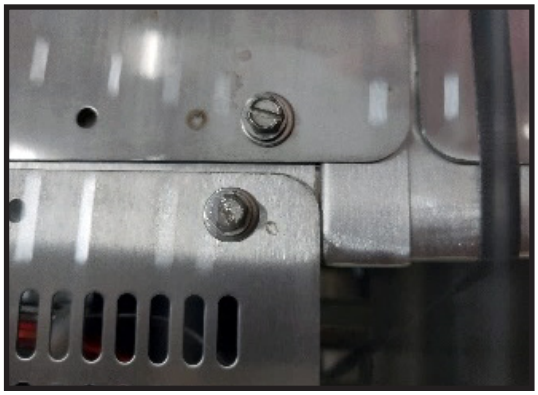
#75, Third Open Right, provides 33% impingement air along the right side of the finger and radiant along the left side



INSTALLATION

Restraint Cable

All EDGE ovens are equipped with casters. A restraint cable must be installed to limit movement of the oven without straining the gas or electrical connections. One end of the restraint cable is to be anchored to the wall, the other end is anchored to the supplied eyelet bracket.



Eyelet is to be installed on the lower left side of the base oven assembly. If not already attached, it will be included with the restraint cable (market dependent).

After connecting the restraint cable, move the oven into its final position and lock the casters.

Whenever any maintenance or service is performed and the restraint must be disconnected, ensure that it is reconnected as soon as the oven is returned to its normal installed position.

Final connections

Final installation and connection of gas and electrical should be performed by a licensed plumber and electrician. Gas inlet pressure must be verified with all ovens and gas appliance ON, to ensure adequate supply pressure and volume. The Electrical supply voltage and the integrity of the ground must be verified prior to connection.

Electrical

WARNING

To prevent damage to the oven and personal injury or death, the voltage, phase and grounding of the electrical supply must be inspected and verified prior to energizing.

The intended electrical supply voltage MUST be verified at the connection point (electrical outlet or electrical junction box) prior to connecting the oven. Voltage exceeding +/-10% of the rated voltage may result in damage to the components of the oven and WILL NOT BE COVERED BY WARRANTY.

This appliance operates using an inverter and inverter duty motor. GFCI/RCD devices are not recommended. False or “nuisance” trip are possible at start-up and during operation. In the event a GFCI/RCCB is required by the local electrical code, a quality GFCI/RCD must be selected. EDGE recommends **Eaton/Siemens panel mounted GFCI 20A / RCD-A 16A breaker**, protection devices.

North America appliances include an attached 14/3-AWG, NEMA-15 cord set. Ensure the retaining clip is correctly installed over the corded receptacle during installation. This cord must not be altered in any way. **A dedicated 120VAC / 20A circuit is to be used for EACH oven within a stack.**

Europe (CE) appliances shall be connected using a gland and a fitted cord set. Connections are to be made directly to the EM filter. Ensure the earth ground is properly terminated to the marked bonding point. **A dedicated 230VAC / 16A circuit is to be used for EACH oven within a stack.**

Gas

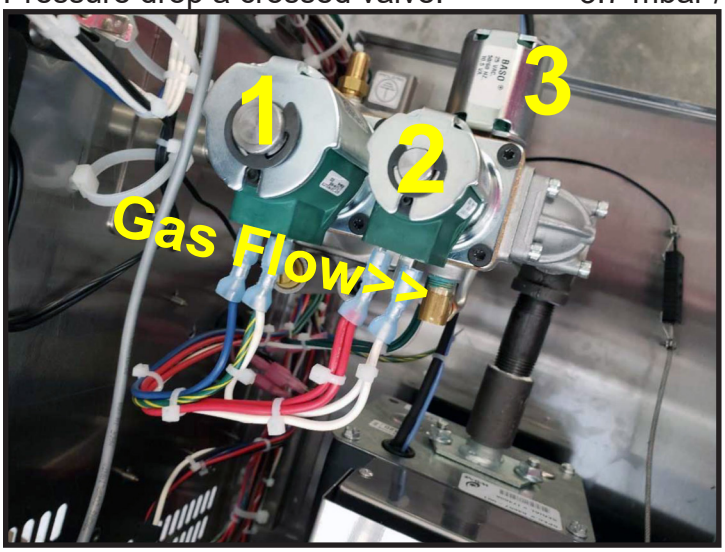
WARNING

Always check for leaks after making any gas supply piping connections or performing any service on the oven. Leak testing is required during installation.

Gas Inlet pressures must not exceed 37 mbar / 14.8 inW.C. In the event the supply pressure is greater, a gas regulator must be installed at each appliance.

Valve Specifications

Maximum inlet pressure:	37 mbar / 14.8 inW.C.
Heating capacity:	58.6 kW / 200,000 BTU/hr
Pressure drop a crossed valve:	3.7 mbar / 1.5 inW.C.

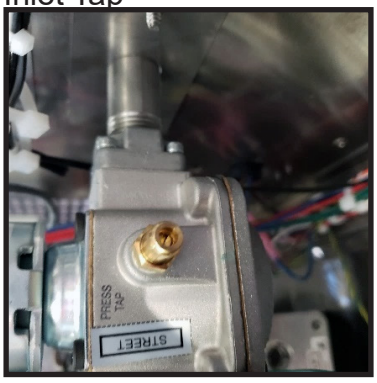


1	PILOT Valve
2	MAIN Valve
3	BYPASS Valve

- Adjustment of the manifold pressure, via the valve regulator spring, is generally not required. Manifold pressure is factory adjusted. The correct setting for the manifold is stated in the section ‘Gas Configuration Data’.

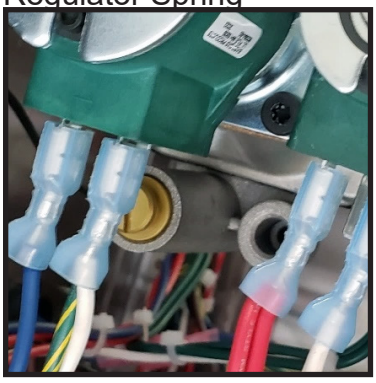
There are (2) pressure taps on the BASO valve. The Inlet tap is located on the side of the valve. The Manifold tap is located under the valve, below the MAIN valve. The regulator spring and cap are located on the opposite side of the Inlet Tap.

Inlet Tap



Manifold Tap (under)

Regulator Spring



The INLET PRESSURE TAP allows measurement of the supply or “curb” pressure to the gas valve. The MANIFOLD PRESSURE TAP allows measurement of the manifold pressure out of the gas valve. The REGULATOR SPRING provides the means to adjust the manifold pressure.

INSTALLATION

Manifold Adjustment

The MANIFOLD is to be adjusted to the Region Specifications and gas type provided earlier in this manual.

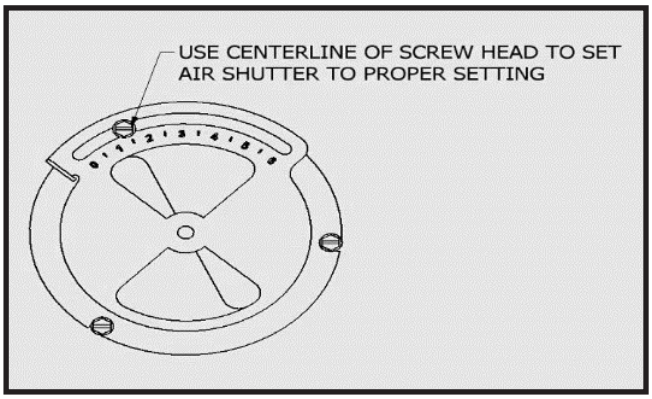
*Damaged gas valves are NOT covered under the limited warranty.

- Starting with a cold oven, turn the oven on with a temperature setting of 500°F/260°C.
- Remove the cap from the regulator spring and connect your manometer to the Manifold tap.
- Within 15 seconds of the MAIN rear motor spinning up, make note of the pressure on the manometer. **This is the Zero from which adjustments will be made**. (Ex. If you measure -0.25, the adjustment for Natural would be 4.25… 4.25 + 0.25 = 4.5
- When the oven lights, using a standard blade screwdriver, rotate the regulator adjustment nut CW to increase the pressure and CCW to decrease the pressure.
    - **Apply only light, downward pressure to the regulator adjustment nut**. The plastic adjustment nut can be easily damaged by excessive force. If pressure stops increasing, so must the adjustment process. This is an indication of low / insufficient supply pressure and this must be corrected before the Manifold can be adjusted correctly.
    - When adjustment is complete, turn off the oven, install the Regulator spring cap, disconnect manometer, tighten manifold gas tap screw.

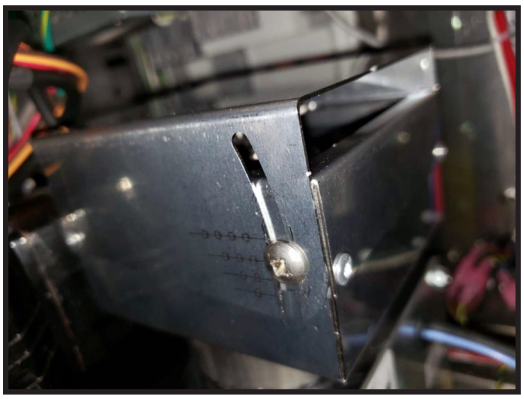
Air shutter

The air shutter allows the correct amount of combustion air to be drawn into the blower and delivered to the burner. The shutter is to be adjusted to the Region Specifications provided earlier in this manual.

Type 1



Type 2



First Firing / Test Firing

The oven must be fired to temperature following the installation to ensure correct operation. Prior to firing the oven, ensure all tools are clear of the conveyor belt. Verify the gas pressure taps of the gas valve have been closed. Install all accessories: crumb pans, heat shields, pan stops, etc.

Mistakes can be made and shipping incidents may occur. It is important that concerns and questions be addressed as quickly as possible. We intend for your new EDGE oven to provide you and your business many years of reliable and successful operation.

Should you have a question or concern, please talk with us. Give us a call at 888-480-3343.

Warranty Activation

It is important that the installed oven(s) are properly commissioned and the record of the commissioning be recorded. Provided with this documentation you will find a “START-UP CHECKLIST”. Please complete and mail this document you may send a scanned copy to warranty@edgeovens.com.

OVEN VENTILATION

IMPORTANT

This oven *must be* installed under a ventilation hood. The ventilation hood must be installed in accordance with local codes and requirements.

IMPORTANT

- **Gas ovens *must have* a mechanically driven ventilation system.**
- **All local, national, or international codes *must be* followed when installing the ventilation system for this appliance.**
- **All local, national, or international codes supersede any recommendations found in this manual.**
- **Proper ventilation of this oven is the sole responsibility of the purchaser.**

Ventilation Requirements

Hoods should extend beyond each end of the belt and the front of the oven by no less than (6) inches. The ventilation system must be vented outdoors and away from any entrance or air intake vent. Proper balance of exhaust and make-up air is critical in the design of a properly functioning hood system.

CFM requirements will vary depending on the hood design and the oven model installed. Consult your hood manufacturer or ventilation engineer for proper hood sizing (minimum CFM rating).

General specifications, which do not supersede any stated hood manufacturer specifications, are:

3240(1)- 700~800CFM	3240(2)- 1000~1100CFM	3240(3)- 1600~1700CFM
4460(1)- 1000~1100CFM	4460(2)- 1150~1350CFM	4460(3)- 1600~2000CFM

Fire Suppression

Local code may require the installation of fire suppression for your oven.. This equipment must not be fastened to the body of the oven. Such mounting damages the oven, restricts the oven movement required for service and may void the oven certification. Brackets and 3/8” SS plumbing kits are available from EDGE for this purpose. A flexible fire suppression supply line is recommended.

DECOMMISSIONING AND DISPOSAL

In the event of disposal and decommissioning, please recycle. This process may include disassembly of the control cabinet and inner assemblies. Please consult your local governing bodies for information related to laws, statutes, ordinances, and/or guidelines which may regulate this activity.

OVEN OPERATION

Oven Start-Up

1. Turn the MAIN POWER switch to ON.
2. Touch and hold the POWER Icon for three (3) seconds.
3. Set temperature to the desired baking temperature.
4. Wait for the oven to light (may take 90 seconds).
5. If the burner does not light, turn OFF the MAIN POWER switch, wait five (5) minutes, and then repeat STEPS 1 – 4

   ➢ *Troubleshooting:* verify that the supply valve is ON, the gas line has been bled of air (new installation), the gas hose connection is engage (disengage and fully engage), and that any fire suppression interlock devices are reset and not in a tripped state.

6. Set the CONVEYOR SPEED to the desired baking time.
7. Preheat the oven for 15 minutes before baking any product.

Oven Shutdown

1. Turn the MAIN POWER switch to OFF.

NOTE

Oven is equipped with a cool down circuit. Oven fan will continue to operate until oven temperature reaches 223˚F. In case of a power failure or interruption, turn the oven power switch to off and remove all product from the oven. When power is restored, follow the instructions above to restart the oven.

Basics

Control Use and Cleaning

The EDGE G2 display is a “touch” screen. Do not strike or impact the screen with hard objects. Clean with a lightly dampened cloth, do not directly spray the display with cleaning solutions or water.

Power Up

Power up and starting the oven system is performed by turning the POWER switch to the ON position. Allow 5 seconds for the system to power up. Touch the power icon on the display.

Power Down

Power down the oven by using the MAIN POWER switch or by using the power icon in the system menu.

Manual Operation

Manual operation is needed to actively adjust the Time and Temperature of the oven. This mode is protected by the Customer PIN. Touch the recipe name above the displayed temperature for 2 seconds and release. Use the arrows to navigate to MANUAL, then touch the check. The default customer pin is 0000.

Temperature Adjustment: Touch the displayed temperature, use the UP / DOWN arrows to adjust the temperature. Touch the check when finished, X to cancel.

Bake Time Adjustment: Touch the displayed bake time, use the UP / DOWN arrows to adjust the bake time. Touch the check when finished, X to cancel.

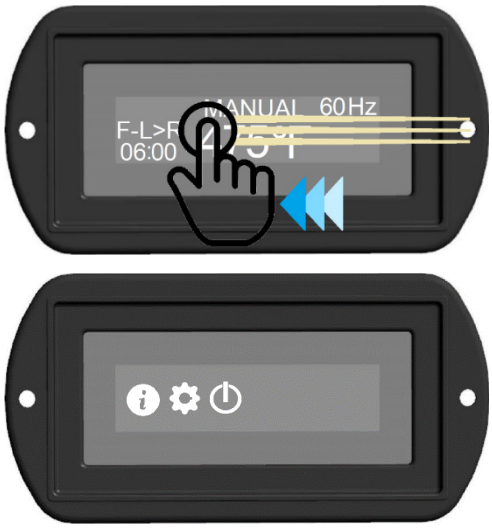
Fan Speed Adjustment: Touch the displayed Hz setting, use the UP / DOWN arrows to adjust the fan speed. Touch the check when finished, X to cancel.

*Default is 60Hz. Fan Speed adjustments are not generally required.

**This feature is not available on all models.

Menu System

Additional operation features are found in the Menu System. To access this menu, touch and swipe the display screen, Left or Right.



The menu icons are: Information, Settings, Power

- **Information**: The information menu is useful for viewing Alarm history, Software version, Serial number, Build date, System voltage, Belt demand, iHeat information and for Exporting Logged data files.

- **Settings**: The CUSTOMER level Settings Menu provides access to Units of Measurement, Customer PIN setup, Belt Direction, Software Updating, and Recipe Download/Upload. This menu is protected by the Customer PIN.

- **Power**: Touching the Power icon will simply place the oven into Cool Down mode, following a few seconds of delay. The oven fans will continue to run until the oven temperature falls below 223F / 106C. Normal operation can be resumed by touching and holding the Power icon on the cooldown screen.

Advanced Operation

Selecting a Recipe

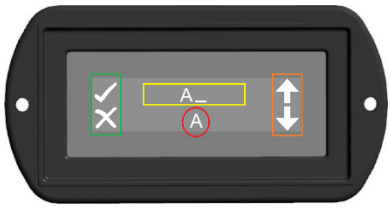
Touch and hold the recipe name space on the display for 1-2 seconds. Select the desired recipe using the UP/DOWN arrows, touch CHECK to accept.

Create a New Recipe:

You may store up to 30 recipes. MANUAL mode is primarily for tuning a recipe, although unsecured, the oven may be operated in this mode without ever defining a recipe.

Touch and hold the recipe name space on the display for 1-2 seconds. Select <NEW> using the UP/DOWN arrows, touch CHECK to accept. Enter the CUSTOMER PIN.

Recipe NAME SPACE:



- UP/DOWN (Orange box) arrows adjust the value of the alpha-numeric character (Red circle)

- To select the alpha-numeric character, touch it (Red Circle). This will advance to the next character selection.

  - Name spaces may be 8 characters long.
  - When you complete the Name space, touch the CHECK (Green box). The X will cancel without storing any changes.

Temp:

- Use the UP/DOWN arrows to change the temperature value. (300˚F – 600˚F, 177˚C – 316˚C)

- When the temperature is correct, touch the CHECK to accept or X to cancel without storing.

Time:

- Use the UP/DOWN arrows to change the time value (03:00 – 30:00).

- When the time is correct, touch the CHECK to accept or X to cancel without storing.

Hz:

- Use the UP/DOWN arrows to change the VFD Frequency Hz (50 – 68).

- When the Hz adjustment is correct, touch the CHECK to accept or X to cancel without storing.

Editing a Recipe

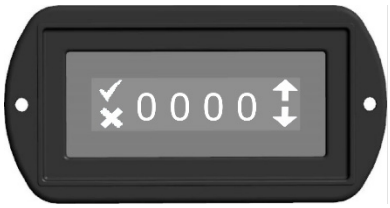
Selecting the recipe (see *Change Recipe*). Touch and hold the recipe name space on the display until a PIN entry screen appears. Customer PIN is required. Advance through the parameters (Name space, Temp, Time, Hz), adjustment as needed.

Deleting a Recipe

Selecting the recipe (see *Change Recipe*). Touch and hold the recipe name space on the display until a PIN entry screen appears. Customer PIN is required. In the Name space adjustment, select '<DEL RCP>'. The control will default to 'MANUAL'.

Customer PIN

Touch each digit to adjust from 0-9. Adjust the value using the UP/DOWN arrows. When the pin is correct, touch the CHECK to accept or X to cancel without storing.



Belt Direction

**Belt direction AND finger pattern are a matched item. Reversing the direction of belt travel often involves reversing the finger pattern in the oven.*

Swipe the control screen Left or Right to access the Menu System. Touch the GEAR icon to enter the Settings Menu, Customer PIN is required. Select 'CUSTOMER'. Use UP/DOWN arrows to navigate to 'BELT', select. Select 'FRONT DIR'. Select 'L to R' or 'R to L' to change the belt direction. Repeat for 'REAR DIR' if equipped with a split-belt system.

Units

Swipe the control screen Left or Right to access the Menu System. Touch the GEAR icon to enter the Settings Menu, Customer PIN is required. Select 'CUSTOMER'. Select 'DISPLAY'. Use UP/DOWN arrows to navigate to 'UNITS', select. Select 'C' or 'F' to change the units of measurements.

Change PIN

**This action will change the default Customer PIN. Default is 0000. Please remember this pin for future use. If lost or forgotten, please contact MF&B for assistance.*

Swipe the control screen Left or Right to access the Menu System. Touch the GEAR icon to enter the Settings Menu, Customer PIN is required. Select 'CUSTOMER'. Use UP/DOWN arrows to navigate to 'PIN SET', select. Touch each digit to adjust from 0-9. Adjust the value using the UP/DOWN arrows. When finished, touch the CHECK to accept or X to cancel without storing.

Software Update

Updates are available from https://edgeovens.com/support. Download and follow the 'Firmware Update Instructions' and the latest firmware. Verify the software has installed correctly, see "Software Version Identification".

Software Version Identification

To view the current software installed in the oven: Swipe the control screen Left or Right to access the Menu System. Touch the INFORMATION icon to enter the Information Menu. Use UP/DOWN arrows to navigate to 'UI VERSION', select. The UI version will be displayed. *If updated, this number will match the UI** filename. To view the MC version, return to the Information menu. Use UP/DOWN arrows to navigate to 'MC VERSION', select. The MC version(s) will be displayed. *If updated, this number will match the MC** filename. If equipped with a split-belt system, MC1 and MC2 will be shown. If these numbers do not match, please perform the software update process again.

Recipe Download

This feature will save the recipes stored within the control system on a USB Thumb drive. Remove the USB dust cover, located near the control cabinet, cooling fan. Insert a USB thumb-drive in the USB connector. Swipe the control screen Left or Right to access the Menu System. Touch the GEAR icon to enter the Settings Menu, Customer PIN is required. Select 'CUSTOMER'. Use UP/DOWN arrows to navigate to 'SYSTEM', select. Use UP/DOWN arrows to navigate to 'RECIPE DOWNLOAD', select. The file will be transferred very quickly (< 1s). When the control screen returns to the DOWNLOAD screen, the process is complete. Remove the thumb-drive and install the dust cover over the USB port.

Recipe Upload

This feature will load the recipes stored on a USB Thumb drive to the control system. Remove the USB dust cover, located near the control cabinet, cooling fan. Insert a USB thumb-drive in the USB connector. Swipe the control screen Left or Right to access the Menu System. Touch the GEAR icon to enter the Settings Menu, Customer PIN is required. Select 'CUSTOMER'. Use UP/DOWN arrows to navigate to 'SYSTEM', select. Use UP/DOWN arrows to navigate to 'RECIPE UPLOAD', select. The file will be transferred very quickly (< 1s). When the control screen returns to the UPLOAD screen, the process is complete. Remove the thumb-drive and install the dust cover over the USB port.

Export

This feature will export Log Data Files stored in the control system to a USB Thumb drive. Remove the USB dust cover, located near the control cabinet, cooling fan. Insert a USB thumb-drive in the USB connector. Swipe the control screen Left or Right to access the Menu System. Touch the INFORMATION icon to enter the Information Menu. Use UP/DOWN arrows to navigate to 'EXPORT', select. The EXPORT process may take a few minutes, during this time the oven systems will stop or be interrupted. It is important that the process be completed successfully. If it does not, unplug the oven for 30 seconds, reconnect and attempt again. When complete, remove the thumb-drive and install the dust cover over the USB port. Unplug the oven for 30 seconds before reconnecting and returning the oven to service.

PREVENTATIVE MAINTENANCE

NOTICE

MF&B Restaurant Systems, Inc. assumes NO responsibility or liability for equipment damage, property damage, bodily injury, or incident claims related to the application of Preventative Maintenance.

PREVENTATIVE MAINTENANCE, PURPOSE

It is good practice to develop and execute a strict preventative maintenance schedule for ALL equipment utilized within your business operations. Preventative maintenance has many benefits, which include increased equipment life, reduced downtime, and reduction of service fees. Your EDGE Conveyor Oven(s) require regular maintenance and it is the intention of this document to provide you with the necessary information needed to develop and execute a preventative maintenance schedule for them. The Limited Warranty of the EDGE Conveyor Oven is dependent on correct and frequent maintenance. Please read this information carefully!

PLANNING

While developing a preventative maintenance schedule, planning the time-of-day the action must occur is as important as the interval of the action. Many maintenance items must be performed with the equipment in COLD STATE. Others may require the equipment to be DISCONNECTED and/or MOVED to gain access to the maintenance item. These maintenance items are best addressed at a time at which the equipment is not in use.

PRECAUTIONS

We must advise that appropriate care and measures be taken when performing maintenance within the Control Cabinet. If this maintenance is beyond your skill set, knowledge, or comfort level, please defer this activity to a Service Provider. Gas and electrical connections should be disconnected prior to moving the appliance and before maintenance.

OVEN CLEANING, SURFACE AREAS

Frequency:

Surface areas of the equipment should be wiped clean daily.

Method:

Use a solution of mild dish detergent and water for normal cleaning. Wipe the surface using a soft cloth. Wiping motions should be performed WITH the grain of the finish to avoid scratching.

Caution:

Do not apply solvents of any kind to a HOT surface. Solvents may be used only when the surface is cool to the touch. NEVER saturate any surface or apply excessive fluids to a surface, as fluids may seep through seams and be absorbed by insulating materials.

OVEN CLEANING, GLASS ½ BAKE DOOR

Frequency:

Surface areas of the equipment should be wiped clean daily.

Method:

Use a solution of mild dish detergent and water for normal cleaning. Wipe the surface using a soft cloth. Observe hinge function and mounting brackets for soundness, tighten as needed.

Caution:

Do not apply solvents of any kind to a HOT surface. Solvents may be used only when the surface is cool to the touch. NEVER saturate any surface or apply excessive fluids to a surface, as fluids may seep through seams and be absorbed by insulating materials.

OVEN CLEANING, CRUMB TRAYS

Frequency:

Surface areas of the equipment should be wiped clean daily.

Method:

Use a solution of mild dish detergent and water for normal cleaning. Wipe the surface using a soft cloth. Crumb trays may be submerged for cleaning.

OVEN CLEANING, CONVEYOR BELTING

Frequency:

General cleaning of the conveyor belting should occur monthly or as needed.

Method:

Use a stiff bristle brush to remove debris from the belting. Observe belt travel and ensure alignment is correct. Observe belt for bent linkage or damage, bent linkage may be corrected using 2 pairs of pliers. Damaged sections (torn or bent sections that are not repairable) may be corrected with segment replacement. Contact MF&B for details of this process. NEVER STRIKE THE BELT TO REMOVE DEBRIS. Use a (2) person lift method if belt removal is needed. Do not twist the conveyor or drag it through the oven. Damage due to improper handling is not covered by the warranty.

OVEN CLEANING, INTERIOR

Frequency:

The interior of the equipment should be cleaned as needed or on a bi-annual schedule, while in a COOL state.

Method:

Remove the oven conveyor using 2 persons, do not drag the conveyor through the oven, do not twist the belt frame. In instances where a split belt option has been purchased, you will need to use a 7/16” wrench to loosen the front conveyor drive motor and then remove the chain. Use a bristle brush, solvents, and/or pressure washer to clean the conveyor. Ensure tightness of all fasteners and cog / sprocket set keys. Remove the top and bottom end-plugs from the oven. Wipe the end-plugs clean, DO NOT soak or use a pressure washer on these parts, as they do contain insulation material. Remove the lower fingers of the oven. Slide the covers off the finger housings and remove the Collimating panel. Wipe the Collimating panel clean, DO NOT use solvents on these parts, as damage will occur. Solvents and pressure washing may be used to clean the finger housings and the finger covers. Reassemble when dry and place the lower fingers in a controlled place so they can be identified. Remove the upper fingers, 1 at a time, placing them in the order in which they were installed in the oven. Clean each finger using the methods provided previously. Take extra care to avoid mixing up the Collimating panels, these must be installed in the same location within the oven of which they were removed. Wipe out the loose debris from the interior of the oven. Heavy soiled areas may require scouring, solvents or scraping instruments. Do not saturate or pressure wash the interior, the body of the oven contains insulating material. The area directly in front of the control cabinet (far back right corner), under the plenum is a common collection point for debris. Inspect this area using a flashlight and clear debris using available means (vacuum wand, dowel rod, etc.). Install lower fingers, be sure each finger is fully seated against the plenum wall. Install upper finger, be sure they are seated and in the correct order. Install upper and lower end-plugs. Install the conveyor belt using 2 persons. Adjust the tension of the drive chains as needed, these should have a small amount of slack or sag, approximately 0.5”, DO NOT over tension.

Caution:

In cases where a split-belt option has been purchased, it is important that the master links are identified and are facing away from one another. Failure to do this can cause the masters to contact one another during chain travel. Contact will cause the belt to bounce and can damage the chains.

Thick bodies of the oven, Top, Base, Walls and End-Plugs are filled with insulating material. If saturated, moisture will be retained EVEN AFTER HEATED. This moisture WILL result in microbial growth. It is important that cleaning instructions are followed for these areas and saturation is avoided.

MAINTENANCE, 4” COOLING FAN

Frequency:

The 4” cooling fan maintains a steady supply of ambient temperature air to the control system and should be maintained as needed or minimally once a month.

Method:

Locate the **5”x5” 30PPI** filter media on the rear of the control cabinet. Pull the filter media free from the filter bracket. Using only warm water and a light amount of mild soap, cleanse and rinse the filter. Allow the filter to dry and install. Contact MF&B if filter media is dilapidated and needs replaced, P/N: 135137

Caution:

Operation of the equipment without the filter media installed is deemed negligence. Dust will accumulate on components and insulate them from cooling. Heat damage is the leading cause of premature equipment failure.

MAINTENANCE, MAIN MOTOR

Frequency:

The main fan is mounted to the main motor shaft. Heat is conducted back through this shaft, which the motor is designed to dissipate using vents and an impeller which moves air along the motor. The vents, which draw air, must be cleaned annually, while in a COOL state.

Method:

Locate the main motor cover (perforated with 1” holes), located on the back side of the oven. Remove the 12+ screws which secure the cover. Use a vacuum and moist rag to remove dust and debris from the main motor, motor cover and related areas. If your oven is equipped with a 1PH (single phase) motor (60Hz market only), there will be a 2-wire capacitor located to the right of the motor. Use caution around this capacitor, treat it as though it were an electrically live part. If swelling or leaking of this capacitor is discovered, contact MF&B for a replacement. If your oven is equipped with a 3PH (three phase) motor, you may need to remove the motor, rear shroud cap (loosen the 4 screws) and vacuum/wipe the cooling fan blades and cap. Dust build-up between the shroud cap and fan blades can collect and rub, creating a scratching sound from the rear of the oven during operation. Once cleaning is complete, install the rear motor cover with care.

Caution:

As stated, treat the capacitor as a live part. Prior to handling, the capacitor should be discharged by shorting the terminals together.

During rear motor cover installation, ensure the motor wiring harness is clear of all pinch points and is not between the cover and the oven back.

MAINTENANCE, BURNER CLEANING

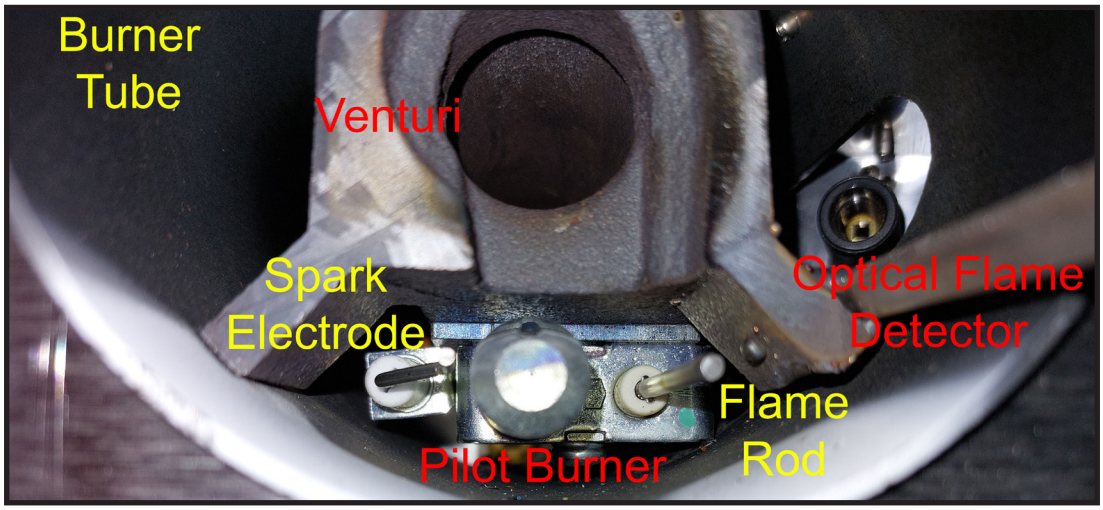
Frequency:

The EDGE Conveyor Oven is a gas burning appliance. Much like a furnace system, maintenance is periodically required to ensure continued, reliable operation. The burner system must be inspected and maintained annually.

Method:

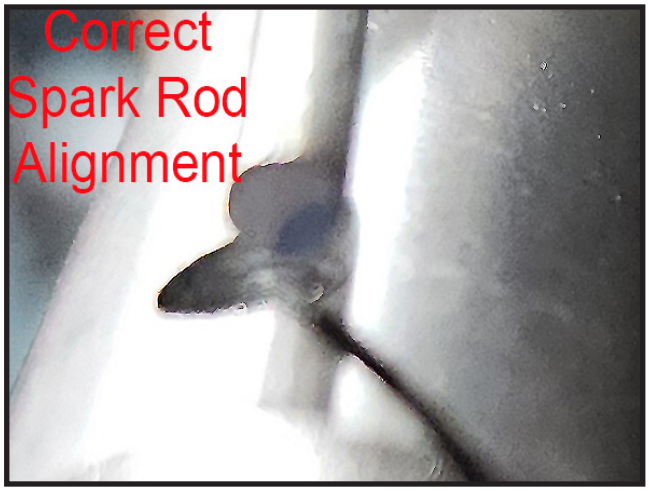
Disconnect the gas supply and electrical supply to the oven. Remove 2 screws on either side of the gas piping as it enters the side of the control cabinet. Remove 4 screw securing the control cabinet lid. Remove 2 screws along left side of the control panel and 2 additional screws on lower left face of thee control cabinet. The cabinet door will now lift and swing open on hinges located on the right. If the oven is split belt equipped, unbolt the front conveyor motor (7/16” wrench) and lay the motor away from the burner. Using a 1/2” wrench, disconnect the aluminum pilot tube from the burner faceplate. Remove the 2, 1/2” nuts which secure the valve train to the burner faceplate. The valve can now be moved out of the way without disconnecting the electrical wires. Using a 5/16” socket, remove the 4 machine screws in the corners of the burner faceplate. Insert your finger into the venturi opening and carefully pull the burner assembly from the burner tube.

The burner assembly is comprised of: the burner tube, venturi, and pilot burner. The spark electrode and flame rod and connected to the pilot burner. The optical flame detector is mounted to the burner tube.



The ignition spark originates from the electrode and arcs to the pilot burner. It is important to clean the entire pathway. Using a moist cloth, wipe the white/gray material from the electrodes and pilot burner. Use scuff pad or emery cloth to scuff off the remaining material. Scuff the flame rod, if you desire, as it is not normally used.

The spark rod must not be parallel with the pilot, the rod tip should tilt toward the pilot head with about 1/8" gap. The spark must occur forward of the pilot butterfly outlet, where the gas and air are mixed.



Carefully install the venturi back within the burner housing and install the 4 machine screws. Install the gas train on the burner face plate, connect the pilot tube and **start the 1/2" nuts. Do not tighten them yet.** Install the 2 screws to secure the inlet piping to the control cabinet. Tighten the pilot tube and the 1/2" nuts to complete the valve train installation. Test fire the equipment and complete the reassembly of the front split-belt motor (if equipped) and the control cabinet.

The Induction Blower is secured to the top of Burner assembly. This blower has a fan blade style like a "squirrel cage" blower. Dust and fat solids will collect on the blades and should be inspected and cleaned at this time. Mark the setting of the restriction plate with a permanent marker. Remove the 3, 1/4" sheet metal screws and set the restriction plate aside. Gently clean the fan blades with a brush. Install the restriction plate according to the original settings noted by your marking.

If equipped with an Induction Fan, remove the Philips screws which secure the fan to the lower housing. Gently clean the blades with a brush. Reassemble the fan and set the air shutter to the original position.

Caution:

Always use care when moving parts within the control cabinet. Avoid pulling or snagging wires. When installing the venturi, avoid dragging the bottom of the burner housing, this can knock the spark electrode or flame

sense wire from the respected terminals. Be mindful of live electrical components when test firing the appliance, use care and good practices. It is recommended that the cabinet be closed during normal operation.

MAINTENANCE, FLAME MONITOR

Frequency:

EDGE Conveyor Ovens, produced from 2019, are equipped with an advanced flame monitoring system. This equipment should be cleaned annually or as needed.

Method:

Remove 2 screws on either side of the gas piping as it enters the side of the control cabinet. Remove 4 screw securing the control cabinet lid. Remove 2 screws along left side of the control panel and 2 additional screws on lower left face of the control cabinet. The cabinet door will now lift and swing open on hinges located on the right. Locate the flame detector, installed on the left side of the burner tube. Disconnect the 3 pin, right angled plug attached to the detector. The detector is installed at an angle, grasp the detector and pull firmly in the direction of the angle. Clean the detector with a clean, soft damp cloth. Reinstall the detector, in the same orientation as removed. Press firmly, ensure it is fully seated against the body of the mounting flange. Test fire the equipment and complete the reassembly of the control cabinet.

Caution:

Always use caution when moving parts within the control cabinet. Avoid pulling or snagging wires. Be mindful of live electrical components when test firing the appliance, use care and good practices. It is recommended that the cabinet be closed during normal operation.

IMPORTANT

Ensure that each finger assembly is reinstalled into the same location they were removed from to avoid altering the baking characteristics of your oven.

WARNING

Any maintenance or service performed inside of the control can assembly or other than listed in this manual should be performed by an authorized service company to avoid oven damage, personal injury or demise.

WARNING

Following any maintenance, service work, or adjustments to the oven:

- **Ensure that the ventilation system is working properly.**
- **Test for gas supply leaks.**
- **Visually inspect the oven to make sure it has been reassembled correctly.**

SERVICE OPERATION

Service Menu:

- Swipe the control screen Left or Right to access the Menu System.
- Touch the GEAR icon to enter the Settings Menu, Service PIN is required (6453).
- Use UP/DOWN arrows to navigate to ‘SERVICE’, select.

*Note: The service PIN supersedes the customer PIN, making both the SERVICE and the CUSTOMER menu trees accessible.

Belt MIN/MAX Time:

-*Minimum and Maximum adjustment must be authorized by MF&B. Although the parameter IS adjustable, this does not ensure the system is capable of achieving the set value. There are physical limitations of the conveyor system and the motors. This must not be compromised.

- Enter Service Menu.
- Use UP/DOWN arrows to navigate to ‘BELT’, select.
- Use UP/DOWN arrows to navigate to ‘TIME MIN’ or ‘TIME MAX’, select.
- Adjust the value using the UP/DOWN arrows,
- Touch the CHECK to accept or X to cancel without storing.

Temp MIN/MAX:

-*Minimum and Maximum adjustment must be authorized by MF&B. Although the parameter IS adjustable, this does not ensure the system is capable of achieving the set value (300°F is default). 185°F is the allowed minimum set-point. 600°F is the maximum allowable operating temperature, this must NEVER be adjusted higher.

- Enter Service Menu.
- Use UP/DOWN arrows to navigate to ‘TEMP’, select.
- Use UP/DOWN arrows to navigate to ‘TIME MIN’ or ‘TIME MAX’, select.
- Adjust the value using the UP/DOWN arrows,
- Touch the CHECK to accept or X to cancel without storing.

System events which have generated an error message ARE logged events. Diagnosis of system errors will be performed by means of Logfile review. Please use the EXPORT function of the oven and send the Logfile(s) to *support@edgeovens.com* for evaluation and diagnosis.

SERVICE TOOLS & MATERIAL

This list may not cover all scenarios. Please use best judgment and practices

For effective repairs, have available a general tool sets available

- 1/4” or 3/8” Drive Socket Set {SAE - 3/16”, 7/32”, 1/4”, 5/16”, 11/32”, 3/8”, 7/16”, 1/2”, 9/16”; MM - 5, 6, 7, 8, 9, 10, 11, 12, 13; 6” Ext Bar; 1/4” or 3/8” Ratchet}
- Wrenches {SAE - 1/4”, 5/16”, 11/32”, 3/8”, 7/16”, 1/2”, 9/16”, 5/8”, 11/16”, 3/4”, 7/8”; MM - 4, 5, 6, 7, 8, 9, 10, 11, 12, 13}
- Hex Key Sets {SAE - 0.050”, 1/16”, 5/64”, 3/32”, 7/64”, 1/8”, 9/64”, 5/32”, 3/16”, 7/32”, 1/4”, 5/16”, 3/8”; MM - 1.5, 2, 2.5, 3, 4, 5, 4.5, 5, 5.5, 6, 7, 8, 9, 10}
- Assortment of screwdrivers {SL1/8, SL1/4, 1/4” round shank(PH2 x 1.5”, PH2 x 4”, PH2 x 12”)}
- Wire Snip, Wire Stripper, Terminal Crimper
- (2) 6~8” Long Nose Pliers
- (2) 12” Pipe Wrenches
- 12” Adjustable Wrench

Instruments necessary for troubleshooting and adjustments

- Dwyer 1213-15 Water Manometer or equivalent
- DMM - VAC, VDC, A, mA, AC µA, DC µA, Ohm, Capacitor {Fluke 87-5 or Amprobe AM-570}

General Supplies

- TFE Pipe Sealant
- 220/230 emery cloth
- Leak detection solution or a leak detector with a minimum 50PPM detection level

Other items which can be needed for structural or Main Fan motor maintenance or repair

- Dead Blow Hammer
- Heavy Duty Rivet Gun {Dual Handle, for structural rivet applications}
- 6”, 2 Jaw Gear/Bearing puller
- Spray penetrating catalyst
- Measuring Tape

Common Wire and Connections

- Machine wire: 18AWG, UL 1015, 16 Strand, 105C, PVC
- Machine wire: 22AWG, UL 1015, 7 Strand, 105C, PVC
- Spade terminal: 1/4”, 18-22AWG(Pink/Red)
- Spade terminal: 1/4”, 14-16AWG(Blue)
- Fork terminal: #6, 18-22AWG
- Ring terminal: #10, 18-22AWG

Common Structural Fasteners

- #6-20, SS 18-8, B Thread, Phillips (Control and UI mounting)
- #8-15 x 1/2”, SS 18-8, AB, Pan Head Phillips (Component mounting)
- #8-15 x 3/4”, SS 18-8, AB, Pan Head Phillips (Component mounting)
- #10-16 x 1/2”, SS 18-8, AB Thread, Pan Head Phillips (Structural Fastening)
- #14-10 a 1”, SS 18-8, 3/8” Hex/Slot Head (Cabinet attachment, Oven Back)
- 1/8” SS Structural Rivet
- 3/16” SS Structural Rivet

SEQUENCE OF OPERATION

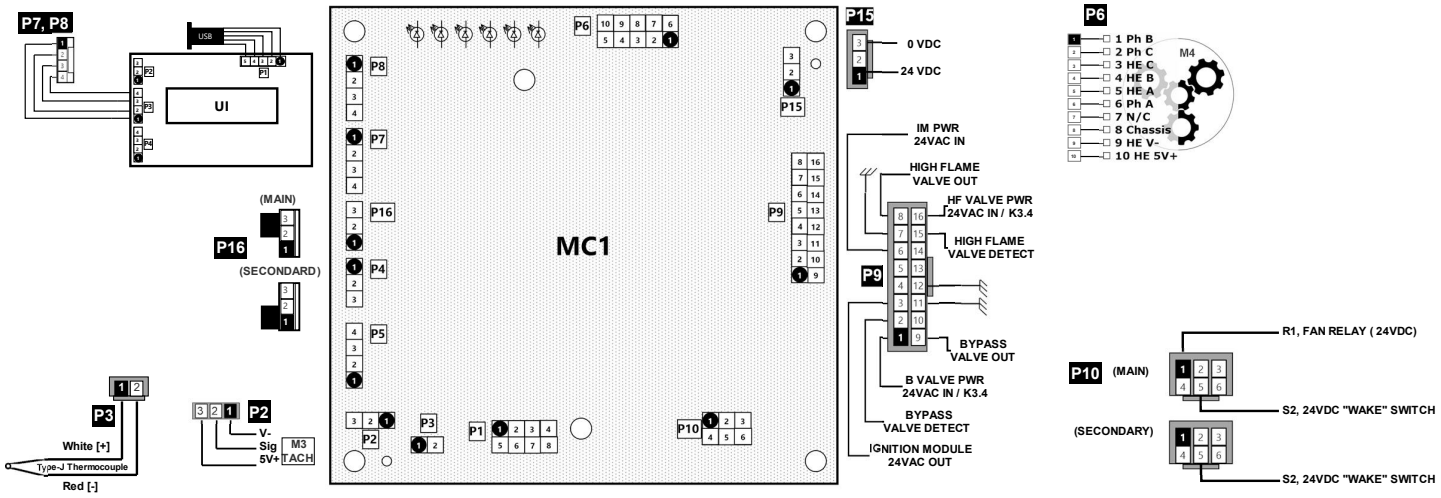
Part references, terminal, plugs and plug pins should be referenced with the wiring diagram.

STEP	*OPERATIONS*	*TEST POINTS*
1	**MAIN POWER switch OFF and the Control System OFF**	
2	Two-piece MAIN POWER switch: Switch 1, **S1** and Switch 2, **S2**	
3	Live contact point: **S1**, top terminal	**PS**(N) Wht – **S1**(T) Brn *MAINS Vac*
4	Live contact point: Fan Relay, **R1**, terminal 2	**PS**(N) Wht – **R1**(2) Brn *MAINS Vac*
5	**MAIN POWER switch ON**	
6	**S1**, bottom terminal, passes MAINS to Circuit Breaker 1, **CB1**	**PS**(N) Wht – **CB1**(T) Blk *MAINS Vac*
7	**S1**, bottom terminal, passes MAINS to Fan Relay, **R1**, terminal 8	**PS**(N) Wht – **R1**(8) Pur *MAINS Vac*
8	**CB1** passes MAINS to the 24Vdc Power Supply, **PS**	**PS**(N) Wht – **PS**(L) Gry *MAINS Vac*
9	**CB1** passes MAINS to the Air Switch, **AS1**	**PS**(N) Wht – **AS1** Red *MAINS Vac*
10	**PS** will provide 24Vdc to the **MC** on plug 15, pins 1 & 3, P15(1,3)	**MC** P15(3) Blk – **MC**P15(1) Rd/Bl *24Vdc*
11	**PS** will also provide 24Vdc to **S2**, top terminal	**MC** P15(3) Blk – **S2**(T) Rd/Wh *24Vdc*
12	**S2**, bottom terminal, provide a 24Vdc “wake” signal to the Machine Control, **MC** P10(5)	**MC** P15(3) Blk – **MC**P10(5) Red *24Vdc*
13	**System in Standby, User Interface, UI, ready. Touch UI POWER ICON begins operation**	
14	System performs “open” safety test of the **AS1**, confirming 0Vac is present on **MC** P9(6)	*Chassis Ground* – **MC**P9(6) Org *0 Vac*
15	**R1** closed by 24Vdc from **MC** P10(1) to **R1**, terminal 1	**R1**(0) Brw – **R1**(1) Rd/Wh *24 Vdc*
16	**R1**, terminals 2, 4, 6, and 8 are now common points of MAINS	**PS**(N) Wht – **R1**(2,4,6,8) *MAINS Vac*
17	**S1 now bypassed. R1, terminal 2 & R1, terminal 8 (*Cooldown Bypass*)**	
18	**R1**, terminal 4, passes MAINS to the Cooling Fan, **M2**	**M2** Begins operation
19	**R1**, terminal 4, passes MAINS to the Circuit Breaker 2, **CB2**	**PS**(N) Wht – **CB2** Blu *MAINS Vac*
20	**CB2** passes MAINS to the Main Motor System **M1** (*figure 2a/2b*)	**PS**(N) Wht – (3 Pin Main Motor System Plug) Brn *MAINS Vac*

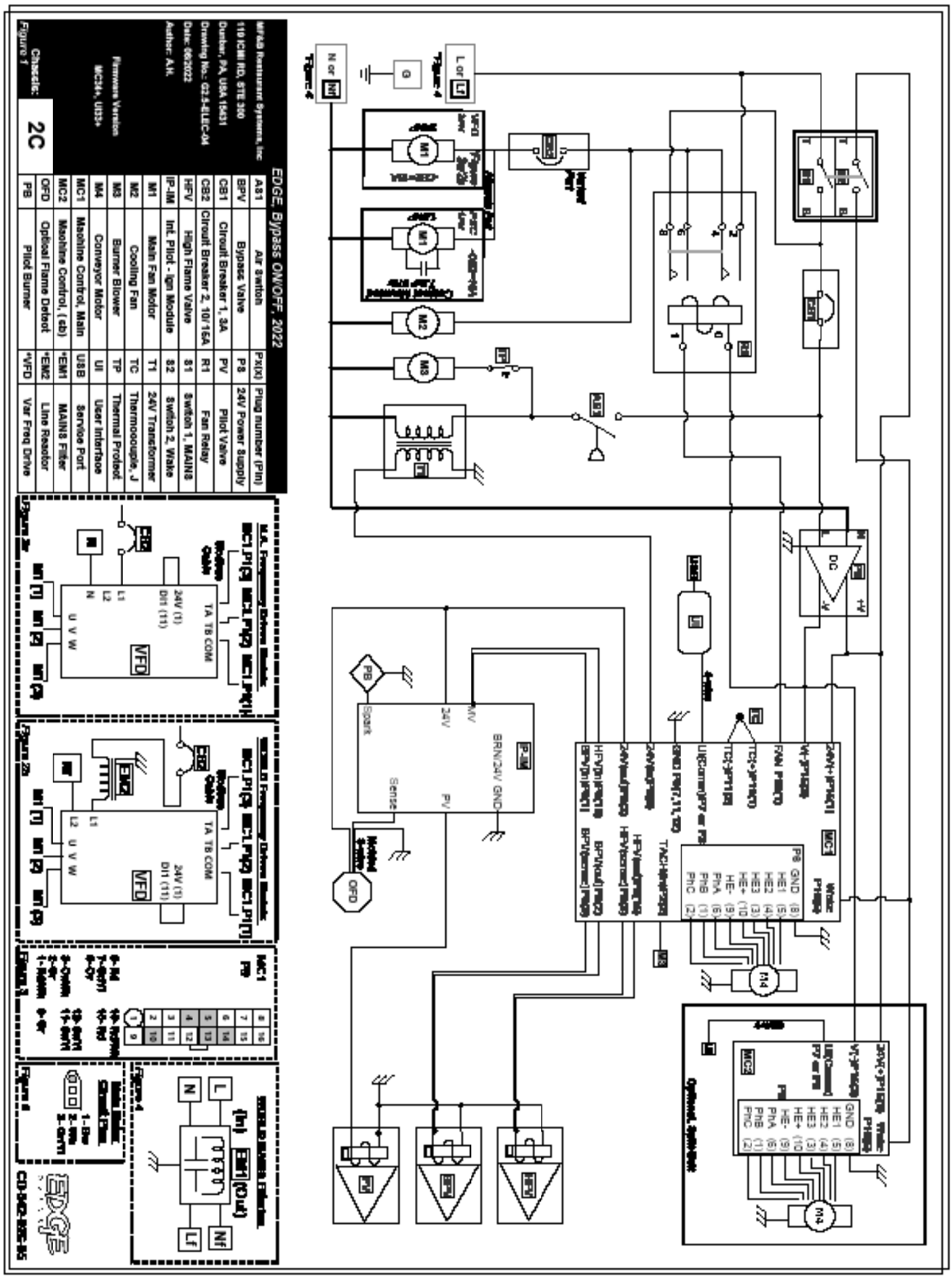
21	**Fan Blade of M1 rotates, plenum pressure rises**	
22	**AS1** closes, MAINS passes to 24Vac Transformer, **T1**	**PS**(N) -Wht – **AS1** Rd/Wh *MAINS Vac*
23	**T1** will then supply 24Vac to **MC** P9(6) "proof-of-air"	*Chassis Ground* – **MC**P9(6) Org *24 Vac*
24	**AS1** closes, MAINS passes to Thermal Protection switch, **TP**	**PS**(N) Wht – **AS1** Red/Wht *MAINS Vac*
25	**TP** passes MAINS to Burner Blower Motor, **M3**.	**M3** Begins operation
26	**MC P2(2) monitors TACH of M3.** TACH MAY BE VERIFIED IN THE INFORMATION MENU, SYSTEM, BLOWER SPEED	
27	Conveyor system starts. **MC** P6(1,2,6) delivers Phased 24Vdc to the Conveyor Motor, **M4**. **M4** delivers Hall Effect feedback to **MC** P6(3,4,5).	**M4** Begins operation
28	**MC** P9(3) passes 24Vac to Ignition Module, **IP-IM**	*Chassis Ground* – **MC**P9(3)(N) *24 Vac*
29	**MC** P9(3) passes 24Vac to Optical Flame Detector, **OFD**	**OFD** Lamp flashing Red
30	Burner system starts. **IP-IM** begins a pre-purge delay	**IP-IM** Diagnostic Lamp flashing Green
31	Ignition trial, *PV terminal* of **IP-IM** is energized	**PV** Blu – **PV** Wht *24 Vac*
32	Immediate Spark trial, **IP-IM** Spark to Pilot Burner **PB**	**IP-IM** Diagnostic Lamp flashing Green
33	Flame detected by Optical Flame Detector, **OFD**. **OFD** sends flame signal to **IP-IM** Sense terminal	**OFD** Lamp solid Red **IP-IM** Diagnostic Lamp solid Green
34	**IP-IM** *MV* terminal sends 24Vac to **MC** P9(1)	Chassis Ground – **MC**P9(1) Rd/Wh *24 Vac*
35	**IP-IM** *MV* terminal sends 24Vac to **MC** P9(16)	Chassis Ground – **MC**P9(16) Rd/Wh *24 Vac*
36	**Thermocouple, TC, provides feedback to MC P11**	
37	**Bypass Set-point: defined by Control System Settings**	
38	**MC** P9(2) supplies 24Vac to Bypass Valve, **BPV**	Chassis Ground – MCP9(2) Grn *24 Vac*
39	**MC** P9(9) monitors presence of 24Vac on **BPV**	Chassis Ground – MCP9(9) Grn *24 Vac*
40	**Oven Set-point: defined by Operation Settings**	
41	**MC** P9(15) supplies 24Vac to High Flame Valve, **HFV**	Chassis Ground – MCP9(15) Red *24 Vac*
42	**MC** P9(8) monitors presence of 24Vac on **HFV**	Chassis Ground – MCP9(8) Red *24 Vac*

43	**(Shutdown Option 1) Cooldown triggered by POWER ICON touch**	
44	Conveyor system stopped, **MC** P6 de-energized	**M4** shuts down
45	**MC** P9(3) de-energized, removing power from burner	*Chassis Ground* – **MC**P9(3)(N) *0 Vac*
46	**Oven cools to 223F**	
47	**MC** P10(1) removes 24Vdc from **R1**, terminal 1	**R1**(0) Brw – **R1**(1) Rd/Wh *0 Vdc*
48	*Cooldown Bypass* of **S1** released, **M1** System de-energized	**M1** shuts down
49	**Control system returns to a Standby (return to step 13)**	
50	**(Shutdown Option 2) Cooldown triggered by MAIN POWER Switch OFF**	
51	**S2** de-energizes **MC** P10(5), “wake” signal	**MC** P15(3) Blk – **MC**P10(5) Red *0 Vdc*
52	Conveyor system stopped, **MC** P6 de-energized	**M4** shuts down
53	**MC** P9(3) de-energized, removing power from burner	*Chassis Ground* – **MC**P9(3)(N) *0 Vac*
54	**Oven cools to 223F**	
55	**MC** P10(1) removes 24Vdc from **R1**, terminal 1	**R1**(0) Brw – **R1**(1) Rd/Wh *0 Vdc*
56	*Cooldown Bypass* of **S1** released, **M1** System de-energized	**M1** shuts down
57	**Control system shutdown occurs (return to step 1)**	

EDGE G2, Control Module Pinout



WIRING DIAGRAM



PART IDENTIFICATION

USB Port.....*135063*

Cooling Fan.....*135130, 135134*

24VDC Power Supply.....*135140*

Air Switch.....*135145*

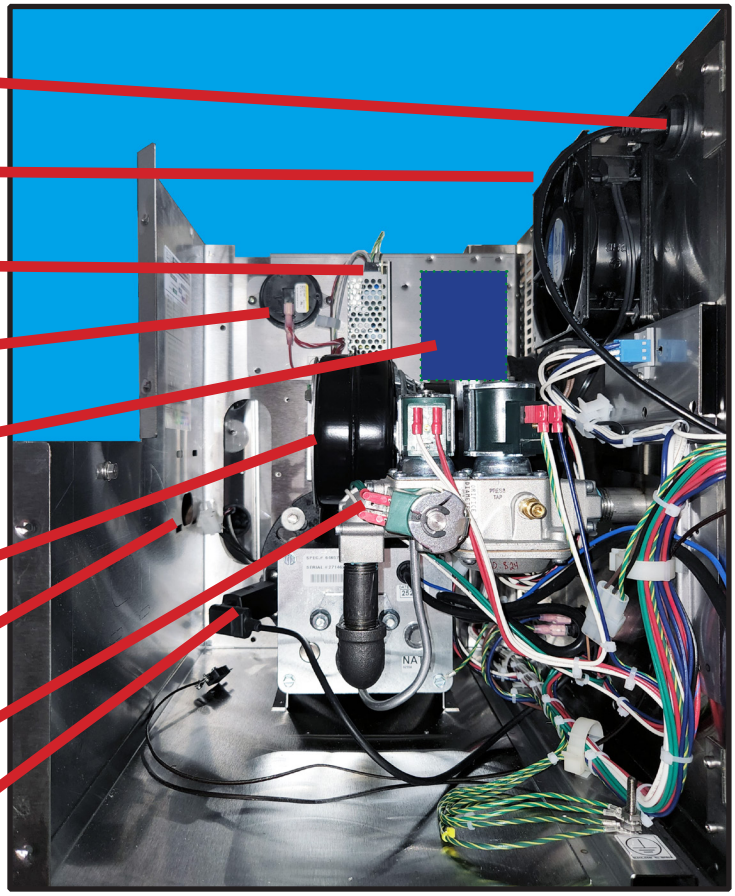
*Frequency Drive, if equipped.....
.....(CE)135142, (US,CA,MX)135142-120,
(ALL)135142-120/240

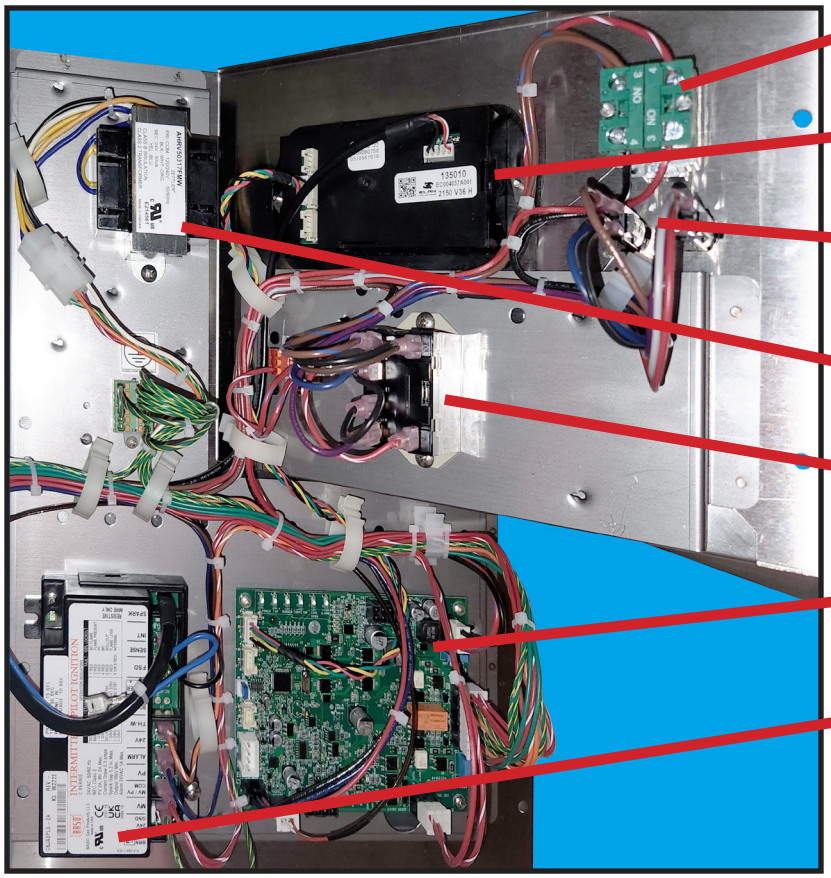
Induction Blower.....*135120*
Induction Fan(not shown).....*135123*

*Conveyor Motor(not shown).....*135148*

Gas Valve.....*135108-xxx.xxx-REP*

Optical Detector.....*135049*





135001.G2.....4-Piece Switch

135010.....User Interface (UI)

*135003-BK, 135004-BK.....
.....3A and 10A Breaker*

135026-50VA..50VA 24V Transformer

135032-A.....Main Fan Relay

135011.1.....Machine Control (MC)

135036.1B.....Ignition Module

GAS CONVERSION

*The BASO combination gas valve contains a bypass orifice which is not EDGE approved for field replacement.

Gas conversions require replacement of the BASO combination gas valve, Main orifice, and the adjustment of the air shutter. Part and labor costs incurred for gas conversions are not covered by the limited warranty.

Removing the Gas Train

- Disconnect the electrical and the gas supply from the oven.
- Disconnect the Plugs from the gas valve.
- Remove the (2) Phillips screws that secure the gas train to the control canister.
  - Located on the outside of the canister, on the left and right side of the 1/2” gas inlet stub.
- Remove the (2), 1/2” nuts that secure the gas train to the face of the burner.
- Use a 1/2” wrench and remove the Pilot Tube from the valve.
- Remove the gas train from the oven.

Replacing the Main Orifice

- Using an 11/16” wrench, remove the Main Orifice from the holder.
- Apply a thin coating of the paste to the new orifice threads.
- Install the new orifice and secure using 11/16” wrench

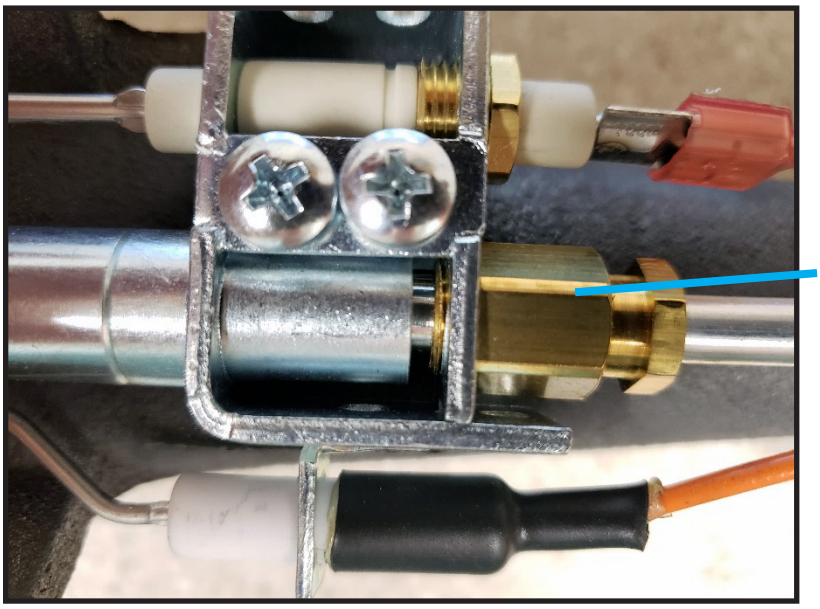
	MAIN ORIFICE										PILOT		BYPASS	
	65K		80K		125K		150K		185K		LP	NAT	10K LP	10K NAT
SIZE	0.089	0.1405	0.1015	0.154	0.12	0.191	0.136	0.209	0.154	0.2323	0.025	0.039	#61	#53
PN	135069	135068	135075	135074	135071	135070	135073	135072	135067	135066	(7225)	(3239)	0.039	0.059
1830 - P	X										X		X	
1830 - N		X										X		X
2440 - P			X								X		X	
2440 - N				X								X		X
													25K LP	25K NAT
													#53	3/32
													0.059	0.093
3240 - P					X						X		X	
3240 - N						X						X		X
2460 - P							X				X		X	
2460 - N								X				X		X
3260 - P							X				X		X	
3260 - N								X				X		X
3860 - P							X				X		X	
3860 - N								X				X		X
4460 - P									X		X		X	
4460 - N										X		X		X
3270 - P									X		X		X	
3270 - N										X		X		X
3870 - P									X		X		X	
3870 - N										X		X		X

Orifice Chart

Replacing the Pilot Orifice

The pilot orifice must match the gas type. A 7225 orifice is used for Propane, while a 3239 is used for Natural.

- Disconnect the Blue electrode wire from the pilot assembly attached to the Venturi.
- Remove the (2) Phillips screws from the pilot assembly.
- Remove the pilot tube from the pilot orifice.
- Replace the pilot orifice with the appropriate number orifice.
- Snug the pilot fitting, tubing and be sure to verify the bulkhead fitting through the burner faceplate to tight. This will cause problems if the fitting spins during final re-assembly.
- Do not over tighten the (2) Philips screws for the pilot. This will distort and crush the bracket.



Natural/G20/G25:	3239
Propane/G30/G31:	7225

Replacing the Gas Valve

- Use a 3mm hex wrench to remove the (4) screws from the straight flange.
- Ensure the O-Ring is seated within the flange and then install the flange on the new valve using the same orientation.
- Remove the (4) 3mm hex screws from the angle flange.
- Ensure the O-Ring is seated within the flange and then install the flange on the new valve using the same orientation.

Installing the Gas Train

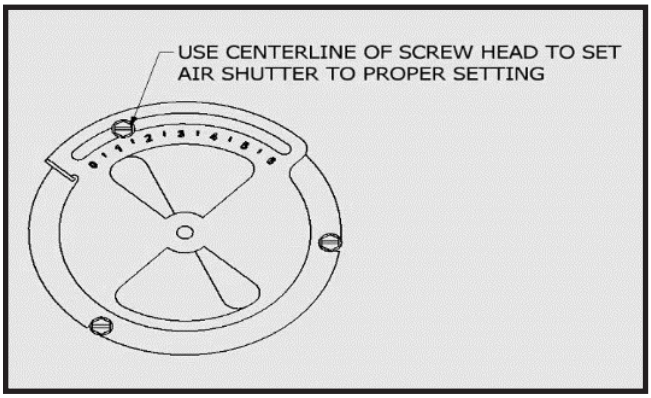
- Seat the gas train through the side wall of the cabinet.
- Seat the orifice holder against the burner and retaining studs.
- Start the (2) 1/2” nuts on the studs for only a few threads.
- Install the (2) Phillips screws to secure the gas train to the cabinet side wall.
- Tighten the (2) 1/2” nuts to secure the gas train to the burner.
- Install Pilot Tube, tighten with 1/2” wrench.

Adjustment Air Shutter

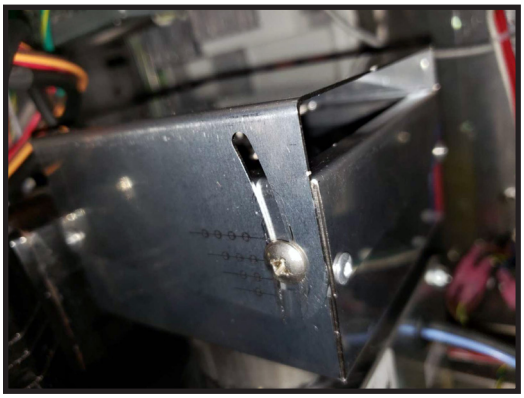
Air Shutter Settings

Gas Type	Shutter	Gas Type	Shutter
NATURAL	E1830: 1, Others: 1.5	G20/G25	3
PROPANE	1	G30/G31	2

Shutter Style 1, Induction Blower



Shutter Style 2, Induction Fan



Gas Type Markings

The valve will be marked with the correct fuel type and adjustment. It is the responsibility of the person performing the conversion to apply the correct rating/marking on the exterior of the oven.

TROUBLESHOOTING

Basics First

The G2 Control System stores component I/O, user adjustments, and any errors (seen or unseen) which have occurred over a 14 - 21 day period. Please use the EXPORT function of the oven and send the Logfile(s) to *support@edgeovens.com* for evaluation and diagnosis.

Know your 24VAC measurement. The ignition module, valve, and flame detector are all powered from this voltage.

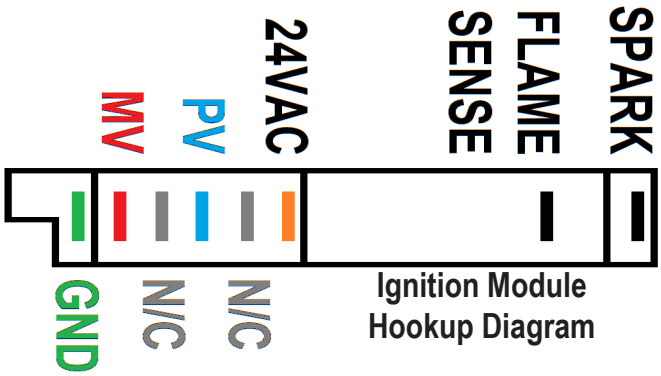
Symptom		Possible cause		Possible correction
Oven Control does not illuminate	1	Supply Power Disconnected	a	Check AC breakers.
			b	Check to make sure the oven is plugged into a working receptacle.
			c	Verify the molded receptacle end of the power cord is completely installed into the oven.
	2	3 Breaker	a	Check the 3A system breaker.
	3	Main Power Switch	a	Turn the Main Power switch on and check for MAINS voltage on both sides of the switch 1 (Brown and Black wires). If power is present on only one side and not the other, replace switch.
	4	24VDC SMPS has failed	a	Check the power supply for MAINS on L and N, 24VDC on V+ and V-. Is the GREEN LED illuminated?
	5	Control Display or Control Board are not powered or have failed	a	Check Control Board for Blinking Power LED. If blinking, go to (c).
			b	Is 24VDC present between Control Board P15.1 and P15.3? If power is present, replace Control Board.
			c	Disconnect 4 pin connector for Control Display, does the Power LED and ALARM LED begin flashing on the Control Board? If yes, replace the Control Display.
Control box cooling fan will not run	1	Power to Cooling Fan	a	Check for MAINS to cooling fan. If power is present, replace cooling fan. If no power is present at fan, check for MAINS at terminal #4 on relay R1.
Oven fans will not turn off	1	Cool Down Operation	a	The Main Motor and Cooling Fan will operate until the oven cools to 223°F/107°C.
Cannot adjust Time or Temperature	1	A recipe is selected	a	The Control System must be in “MANUAL” mode to adjust Time, Temperature and VFD Hz. Please review the Operations section for details.

Symptom		Possible cause		Possible correction
Conveyor does not turn	1	Missing Tach Pickup	a	Check for 5VDC between P6.10 (Red/Wht) and P6.9 (Black). If missing, replace the Control Board
	2	Motor is bound (may occur during extended periods in an unused state)	a	This condition produces a “Belt Low Speed” error. Measure DCV between P6.9 (Black) to P6.5 / P6.4 / P6.3. If a measurement is 5VDC, the motor is bound. With the motor unplugged, attempt to rotate the shaft with a wrench. If the problem is unresolved, replace the motor. *Lubricating oil may settle from the internal gear surfaces over a period of time. An oven which has not been used for an extended period OR an oven which is newly installed may experience initial conveyor motor rotation problems. Rotate the shaft of the motor slightly to overcome the friction and lubricate the gearbox.
	3	The Belt is Jammed	a	This condition produces a “Belt Jam” error. Free the conveyor motor from the drive chain. If the problem is resolved, locate, and correct the belt obstruction. If no obstruction is found, ensure the Drive Chain and Conveyor Belt are not slacked, causing binding during rotation.
Oven does not heat	1	No fuel to oven	a	Verify fuel is present. Purge fuel line of air
	2	Protection thermostat has tripped	a	Reset protection thermostat under main motor cover. Verify oven temperature during operation. Replace thermocouple if failing.
	3	Various	a	Follow Diagnostic tables below.

G2 ‘DIAGNOSTIC’ Lamp

Located on the right-front side of the control cabinet, the ‘DIAGNOSTIC’ lamp communicates the Intermittent Pilot Ignition Module status. This lamp can be helpful when determining the cause of an “Ignite” alarm. The lamp states are listed below. Fault indication ex: 🔴.🔴...🔴.🔴 = 2 RED

NORMAL / STANDBY	
SOLID GRN	RUN MODE
1 GRN @ 1/4 SEC	TRIAL FOR IGNITION
1 GRN @ 1 SEC	PRE-PURGE
1 GRN @ 2 SEC	INTER-PURGE
1 ORG @ 1 SEC	FLAME PRESENT STANDBY
1 ORG @ 5 SEC	RETRY



Ignition Module Hookup Diagram

FAULT		CHECK
SOLID RED	FREQ/VOLT STANDBY	Inspect ground connections: Burner, Ignition Module, Transformer.
1 RED	NO FLAME DURING TRIAL	Flame in site-glass? Check hose connection, supply valve open?
2 RED	FLAME BEFORE TRIAL	Debris stuck in the gas valve. Close supply valve and correct.
3 RED	PILOT VALVE OPEN	Pilot valve coil disconnected or failure.
4 RED	MAIN VALVE OPEN	MC P9 disconnected or High Flame and Bypass valve disconnected or failure.
5 RED	RELAY OUTPUT FAULT	Ignition Module is mis-wired, verify with the diagram above
7 RED	FLAME LOSS	Clean the optical detector.
8 OR 9 RED	INTERNAL ERROR	Ignition Module must be replaced.

G2 Control System Messages

The EDGE oven has sophisticated diagnostic and error logging ability which can store about 21 days of operation data. For the most effective and complete diagnostics of the system, review the "Advanced Operation" section of the Operations section. EXPORT the oven logfile(s) to a USB device and send them to *support@edgeovens.com* The file(s) are: {mc1.eec} {mc2.eec}. Follow up with a phone call to EDGE. After logfile review, the root cause and resolution will be communicated.

*mc2.eec is unique to split-belt systems and will not be exported on standard, single belt systems.

ALARMS (Will auto-reset as condition is resolved, oven will continue to operate)				
Error Name	**Display Line 1**	**Display Line 2**	**Error Trigger**	**Possible Cause**
24VDC Under-voltage	"24VDC Low"	"DC Power Fault"	24VDC is 20% low	24VDC power supply has a fault or MC voltage detection is wrong. Measure 24VDC system to validate.
24VDC Over-voltage	"24VDC High"	"DC Power Fault"	24VDC is 25% high	24VDC power supply has a fault or MC voltage detection is wrong. Measure 24VDC system to validate.
Belt High Speed	"Belt High Speed"	"Conveyor System Fault"	Conveyor System is running 30 seconds fast	Conveyor motor tach problem
Belt Low Speed	"Belt Low Speed"	"Conveyor System Fault"	Conveyor System is running 30 seconds slow	Conveyor motor tach problem, motor is bound
Bypass	"Bypass Error"	"Valve Not Detected"	Bypass valve power is not detected	Power to the Bypass valve has been turned off. **This will occur during an ignition trial if flame signal is lost. Clean flame detection, ensure it is seated.**
Bypass Overshoot	"Bypass Overshoot"	(Actual Temperature)	Oven temperature exceeds the bypass set-point by 25F	Bypass set-point can be adjusted by an authorized service provider or through phone support. Oven will continue to operate.
High Temp	"High Temp"	"Exceeds Set-Point"	Temperature is 50F over the set-point	Gas valve is not adjusted correctly, oven was not properly commissioned
High Alarm	"High Alarm"	"Oven Over Temp"	Temperature exceeded 650F	Gas valve is not adjusted correctly, oven was not properly commissioned
Ignition	"Ignite"	"Check Gas Supply"	Main Valve power is not detected	Ignition Module may be in "Lock-Out" state; **oven did not light**. Ensure gas supply hose to oven is fully connected, the collar is fully engaged, and the supply valve is open.

ALARMS (Will auto-reset as condition is resolved, oven will continue to operate)				
Error Name	**Display Line 1**	**Display Line 2**	**Error Trigger**	**Possible Cause**
Ignition	“Ignite”	“Check Gas Supply”	Main Valve power is not detected	The **flame signal was lost** or not detected; ignition cycle restarted. Flame detector needs cleaned.
Low Temp	“Low Temp”	“Check Gas Supply”	Not at set-point in 45 min. or cannot maintain temperature	Gas valve is not adjusted correctly, oven was not properly commissioned, gas supply pressure is too low for operation
MC1 Comm	“MC1 Comm”	“System Fault”	Lost communication with MC	Main MC COMM has a failed
MC2 Comm	“MC2 Comm”	“System Fault”	Lost communication with MC	Secondary MC COMM has failed
System Temp Warn	“System Temp High”	“Clean/Replace Filter”	Cabinet temperature is 125F or greater	Check points: 120mm cooling fan filter is blocked, ventilation is poor (hood is not drawing enough), incorrect crumb pan positions (solid pans on bottom oven), heat shield not installed between stacked, oven cabinets. The control system is drawing in hot air or has hot air diverted towards it. Normal cabinet temperatures are below 110F.
Temp Probe	“Temp Probe”	“Break Detected”	Thermocouple is not detected	Thermocouple connector is loose, or thermocouple has failed
Temp Probe	“Temp Probe”	“Break Detected”	Thermocouple is not detected	Ambient temperature is 40˚F or below
Thermistor	“Thermistor”	“System Fault”	Main MC has a fault	Main MC has a fault. Ambient temperature is below 32F/0C
VFD Comm	“VFD Comm”	“VFD Fault”	Lost communication with VFD	VFD is not powered. 10A breaker is OPEN.
VFD Comm	“VFD Comm”	“VFD Fault”	Lost communication with VFD	VFD communication has dropped (call for assistance). Connection loose or VFD is not powered. VFD was not permitted to power down correctly before attempting to restart. Unplug for 30 seconds.
VFD Comm	“VFD Comm”	“VFD Fault”	A VFD Error is present	The VFD is entering a fault and needs further diagnosis. Submit an oven logfile for evaluation.

FAULTS (Will result in system shutdown, will not auto-reset)				
Error Name	**Display Line 1**	**Display Line 2**	**Error Trigger**	**Possible Cause**
Air Switch	“Air Switch Not Ready”	“Closed Before Requested”	Safety circuit is closed or bypassed before signaled	Air switch is bypassed, or the air switch has shorted. This safety check occurs prior to Main Fan startup.
Circulation Fan	“Circulation Fan”	“No Proof of Air”	Voltage not returning from Air Switch	Circulation fan is not turning, there is a break in the air tube system, VFD is not powered or in a fault state
Blower Speed	“Blower Speed”	“Induct”	Burner Induction Blower Motor speed is <3000 RPM	Thermal Protection (OTP) is OPEN (rear of oven) TACH MAY BE VERIFIED IN THE INFORMATION MENU, SYSTEM, BLOWER SPEED
Blower Speed	“Blower Speed”	“Induct”	Burner Induction Blower Motor speed is <3000 RPM	Induction motor has failed
Conveyor Belt Jam	“Belt Jam”	“Clear Belt / Retry”	Conveyor motor speed has dropped 25% below expected rate	Object is obstructing the belt, clear the belt, place oven in cooldown and then power back on. May occur at installation due to shipping vibration. Rotate sprocket with wrench to relieve pressure from gearbox.
Conveyor Belt Jam	“Belt Jam”	“Clear Belt / Retry”	Conveyor motor speed has dropped 25% below expected rate	Drive chain(s) were not tensioned correctly during the last belt installation. Chains should not be sagging. Correct the chain tension.
Conveyor Belt Jam	“Belt Jam”	“Clear Belt / Retry”	Conveyor motor speed has dropped 25% below expected rate	Conveyor belting has relaxed and requires links to be removed. If belting links can be pulled together, links need removed. This is normal belting wear and will be required during the first year of use.
System Temp High	“System Temp Protect”	“Clean/Replace Filter”	Cabinet temperature is 145F or greater	Oven control system is operating far above normal temperature conditions. Check points: 120mm cooling fan filter is blocked, ventilation is poor (hood is not drawing enough), incorrect crumb pan positions (solid only on bottom oven), heat shield not installed between stacked, oven cabinets. The control system is drawing in hot air or has hot air diverted towards it. Normal cabinet temperatures are below 110F.

PART FAILURE VERIFICATION

All attempts have been made to provide solid information and techniques to verify that a suspect part has in fact failed. We are committed to providing the absolute best possible service to our customers throughout the life of their product.

Controls and assemblies

Switches

Visually inspect the switch for damage. Observe the mechanical function and snapping action to the ON and OFF position. Disconnect the wires to a minimum of 1 terminal. Use an Ohm meter to verify the closed contact (switch ON) is less than 1 Ohm and that the open contact (switch OFF) is an open load (OL). Replace the switch if mechanically or electrically damaged.

Breakers

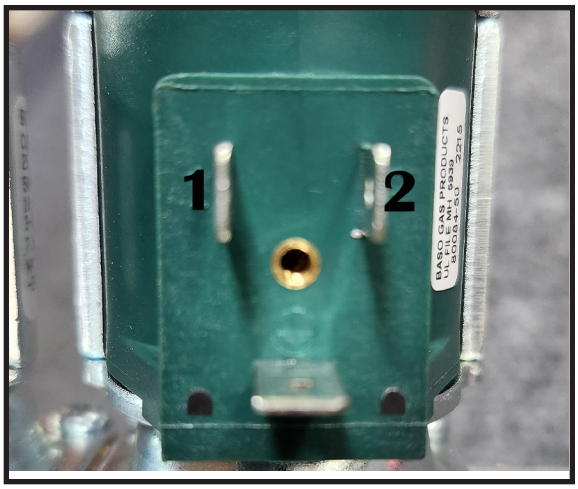
Visually inspect the breakers for damage. Use an Ohm meter to verify that the breaker measures less than 1 Ohm. Replace the breaker if mechanically or electrically damaged.

Cooling Fan

The fan power connector can be pulled out slightly, allowing meter leads to access the terminals. Measure the voltage on these terminals. If MAINS voltage is present and the fan is not spinning, replace the cooling fan.

Main Valve Coils

To test, measure the resistance between post 1 and 2 on each coil. These coils do naturally become HOT to the touch during normal operation. The Baso ignition module performs a test on the Main/Pilot and the Bypass/High Flame at start up. The Ignition module cannot distinguish between the Bypass and High Flame coils. Each must be checked if a failure is alerted.



15 VA coil:	6M ohm ~ 8.5M ohm
10.5 VA coil:	5M ohm ~ 6M ohm

Failed coils, in general, will measure OL or open load. If any coil is below 4M ohm and misoperating, replace it.

Optical Flame Detector

The optical flame detector is positioned on the burner tube so that it has a clear line-of-sight that intersects with the burner flame. The body of the detector MUST be fully seated in the flange. The detector inspects the light received to ensure that it is not artificial. When a flame is detected, the sensor will return a µA signal, much like a standard flame rod. Additionally, the detector houses a red LED that will flash very rapidly (appearing more STEADY and brighter) during normal operation and while detecting a flame. The detector requires 24VAC to operate. If the red LED is not illuminated DURING the ignition cycle of the oven (spark will be audible), verify this supply voltage is present on the Brown and Green/Yellow wire. If supply voltage is present, replace the detector. If the LED does not maintain STEADY illumination with flame visible in the burner site glass, remove the detector and clean the lens with a cotton cloth or lens wipe. Measure the flame signal in-loop (BLACK, SENSE terminal on Ignition Module). A strong flame signal for this device is 0.7~0.9µA. If the signal is low or not present, replace the detector.

*In the event the detector fails, the electrode Flame Rod may be connected until a new detector can be installed. See the following: Ignition Electrodes / Flame Rod topic for details.

Ignition Electrodes / Flame Rod

Buildup of soot and silica will cause ignition failures and flame detection problems (if using the flame rod). Visual-

ly inspect the ignition electrodes and flame rod for buildup, clean as needed. Use 220 grit sandpaper to clean the electrodes. NEVER use metallic materials to clean the electrodes, this will degrade them. The pilot head must also be cleaned. Failure to clean both the electrodes and the pilot head is likened to cleaning only 1 post of an automotive battery; the failure will rapidly reoccur. If the condition is not improved by cleaning, please verify the electrical connections of the burner (igniter cable and the flame sense wire are connected and the contacts are clean and secure, and the burner is grounded. The signal produced by the flame rod and the control is relatively small. At 0.2~0.3μA, this is considered strong returning flame signal. **(The flame rod is used as a back-up. The Optical Flame Detector is the primary flame detection device. The BLUE wire from the burner flame rod is secured with a cable tie. Cut the cable tie and swap out the BLACK wire on the SENSE terminal for the BLUE wire if flame rod operation is needed.)**

Burner Blower Motor/ Burner Fan (Induction)

The Induction Blower/Fan should spin freely and ramp to high speed when line voltage is applied. If the motor rotates roughly, has excessive drag, or fails to start when voltage is applied, replace the motor.

Transformer

If the transformer is suspected, test the windings before powering the oven. The secondary (yellow/blue wires) of the transformer will measure between 0.5~2 Ohms. The primary black/white wires (120V) or black/orange (240V)of the transformer will be 10~30 ohms. If either winding is OPEN or SHORTED, replace the transformer.

Conveyor Motor

The conveyor motor is powered and monitored by the control system. This is a 3 Phase, 24VDC motor with Hall Effect feedback. Do not attempt to power the motor by other means. If the motor is bound, this may indicate a lubrication problem from staging (new installs or prolonged idle periods more than 30 days). A slight manual rotation of the sprocket will resolve this. Use the 'Export' feature to obtain a logfile from the oven to thoroughly diagnose conveyor motor problems which fall outside of the 'idle' condition mentioned.

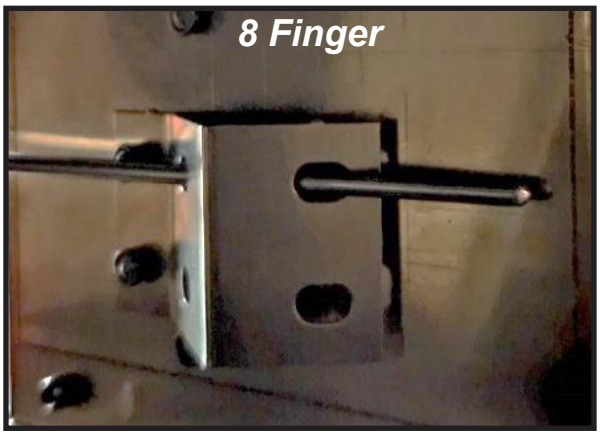
Air Switch

An "**Air Switch Not Ready**" alarm is an immediate air switch replacement event. To verify pressure to the air switch, connect a Manometer hose to the aluminum air tube which feeds the silicon air tube connected to the air switch. Turn the oven on and measure the air pressure supplied by the tube. If 0.5 inW.C. or more is present, the air switch should be functioning. Turn on the oven and verify MAINS voltage on each side of the air switch after the main fan spins up. If voltage is present on one and not the other, replace the Air Switch. If the pressure is low, the air tube system needs evaluated. The pressure to the air switch comes from the plenum.

The plenum atmosphere is communicated through a 0.5 inch SS tube which terminates inside of the yellow air stopper. If the tube is not fully seated within the plenum and air stopper, or the tubes are damaged, pressure will be lost. *Also see Thermocouple.* If the air switch is passing voltage reliably when engaged, the supplied pressure to the switch is good, the fault is elsewhere. *Detection occurs on the MC, P9(6)... largest 16 pin connector.

Thermocouple

The Thermocouple is located between the bottom finger 2 & 3 (or 5 & 6 on S & 70" models). The baking chamber will be slightly lower than the displayed temperature, due to the point of measurement. A 10°F offset is used in the control to decrease this variation. The thermocouple extension junction should be cleaned prior to verification.



To verify the thermocouple, follow the following process:

- Allow the oven temperature to stabilize (500°F works well).
- Measure the ambient temperature of the machine control (PCB on back of the control cabinet door). This is your "Ambient" measurement.
- Note the temperature on the display. Subtract (10) from this value. This is your "Displayed" temperature. *10°F is default, verification may be needed.
- Measure the mVDC output of the *connected* thermocouple. Red meter lead to the WHITE wire of P3.1, Black meter lead to the RED wire of P3.2. Note this measurement as the "Measured mVDC" value.
- Referencing the ***Type-J thermocouple chart,*** make note of the mVDC value for the "Ambient" you recorded.
- Add the mV values "Ambient mVDC" + "Measured mVDC" = "Actual mVDC"
- Again, referencing the chart, record the Temperature equivalency of "Actual".
- "Actual" should be within 15°F of "Displayed" temperature. If not, replace the thermocouple AND the thermocouple extension.

Replacement of the thermocouple should be made from within the bake chamber. Remove the lower right fingers to access the thermocouple clip and remove the thermocouple. Pull the thermocouple through the control cabinet air stopper. Pay attention to the 0.5 inch SS tube, ensure it is not dislodged during reassembly.

Variable Frequency Drive

The frequency drive converts single phase power to three phase power. The drive will produce an output voltage with the main fan motor disconnected. If the VFD is not powering up, verify MAINS voltage is present across the L1/L2/N terminals (will vary by model). If voltage is present, replace the frequency drive. If the voltage is missing, begin troubleshooting back to the 10A breaker and R1 relay. A flashing 'SP' on the VFD display indicates 'Start Pending'. This will require an Exported logfile for further diagnosis.

Main Fan, Motor (3PH, 3/4HP)

If power from the Lenze has been verified, as detailed in the preceding article, ***Lenze Frequency Drive***, verify the resistance across the motor windings with the motor connector unplugged. Blue to Red, Blue to Black, and Black to Red. The resistance should be about 8 Ohm. Lastly, measure the resistance from each of the wires to the bare motor case, to ensure the motor is not shorted to ground. The resistance should measure infinite or open. If the motor measures out of spec, replace the motor.

TYPE-J THERMOCOUPLE CHART

Formula: *(Actual Temp)mV = (Ambient Temp* ***+ 10****)mV + (Measured)mV*

(Measured)mV = Measured value of thermocouple with oven at stable temperature.

(Ambient Temp)°F = Ambient temp of control PCB (back of control cabinet door).

(Displayed Temp)°F = Temperature displayed on control UI.

(Displayed Temp)°F - (Actual Temp)°F = -15°F/+15°F

*10°F is a default offset used to calibrate the center of the oven to the thermocouple.

Use the chart below to convert °F to mVDC. ***Example worksheet is on the following page.

°F	0	1	2	3	4	5	6	7	8	9	°F
60	0.791	0.819	0.848	0.876	0.905	0.933	0.962	0.991	1.019	1.048	60
70	1.076	1.105	1.134	1.162	1.191	1.220	1.249	1.277	1.306	1.335	70
80	1.364	1.392	1.421	1.450	1.479	1.508	1.537	1.566	1.594	1.623	80
90	1.652	1.681	1.710	1.739	1.768	1.797	1.826	1.855	1.884	1.913	90
100	1.942	1.972	2.001	2.030	2.059	2.088	2.117	2.146	2.175	2.205	100
350	9.485	9.515	9.546	9.577	9.608	9.639	9.669	9.700	9.731	9.762	350
360	9.793	9.823	9.854	9.885	9.916	9.947	9.977	10.008	10.039	10.070	360
370	10.101	10.131	10.162	10.193	10.224	10.255	10.285	10.316	10.347	10.378	370
380	10.409	10.440	10.470	10.501	10.532	10.563	10.594	10.625	10.655	10.686	380
390	10.717	10.748	10.779	10.810	10.840	10.871	10.902	10.933	10.964	10.995	390
400	11.025	11.056	11.087	11.118	11.149	11.180	11.211	11.241	11.272	11.303	400
410	11.334	11.365	11.396	11.426	11.457	11.488	11.519	11.550	11.581	11.612	410
420	11.642	11.673	11.704	11.735	11.766	11.797	11.828	11.858	11.889	11.920	420
430	11.951	11.982	12.013	12.044	12.074	12.105	12.136	12.167	12.198	12.229	430
440	12.260	12.290	12.321	12.352	12.383	12.414	12.445	12.476	12.506	12.537	440
450	12.568	12.599	12.630	12.661	12.691	12.722	12.753	12.784	12.815	12.846	450
460	12.877	12.907	12.938	12.969	13.000	13.031	13.062	13.093	13.123	13.154	460
470	13.185	13.216	13.247	13.278	13.308	13.339	13.370	13.401	13.432	13.463	470
480	13.494	13.524	13.555	13.586	13.617	13.648	13.679	13.709	13.740	13.771	480
490	13.802	13.833	13.864	13.894	13.925	13.956	13.987	14.018	14.049	14.079	490
500	14.110	14.141	14.172	14.203	14.233	14.264	14.295	14.326	14.357	14.388	500
510	14.418	14.449	14.480	14.511	14.541	14.573	14.603	14.634	14.665	14.696	510
520	14.727	14.757	14.788	14.819	14.850	14.881	14.911	14.942	14.973	15.004	520
530	15.035	15.065	15.096	15.127	15.158	15.189	15.219	15.250	15.281	15.312	530
540	15.343	15.373	15.404	15.435	15.466	15.496	15.527	15.558	15.589	15.620	540
550	15.650	15.681	15.712	15.743	15.773	15.804	15.835	15.866	15.897	15.927	550
560	15.958	15.989	16.020	16.050	16.081	16.112	16.143	16.173	16.204	16.235	560
570	16.266	16.296	16.327	16.358	16.389	16.419	16.450	16.481	16.512	16.542	570
580	16.573	16.604	16.635	16.665	16.696	16.727	16.758	16.788	16.819	16.850	580
590	16.881	16.911	16.942	16.973	17.003	17.034	17.065	17.096	17.126	17.157	590
600	17.188	17.219	17.249	17.280	17.311	17.341	17.372	17.403	17.434	17.464	600
°F	0	1	2	3	4	5	6	7	8	9	°F

Thermocouple Worksheet

(A) Ambient Temperature	=_____ °F	=	_____ mVDC
(D) Displayed Temperature	- 10 = *offset	_____ °F	
(M) Measured Thermocouple	=_____ mVDC		
	(A) mVDC	_____	
	+ **(M)** mVDC	+ _____	
	(ACTUAL) mVDC	_____	
*Convert using chart ***(ACTUAL)***	_____ °F - **(D)** _____ °F = _____ °F		Deviation +/- 15°F

Measured Thermocouple: With an operating oven and the meter configured for mVDC, Red meter lead to the WHITE wire of P3.1, Black meter lead to the RED wire of P3.2.

The thermocouple chart and the worksheet above are both in Fahrenheit. If unfamiliar with the Celsius conversion, please reference the formula below.

({Temperature}°F - 32) x 5/9 = {Temperature}°C

For the purposes of this manual, round up/down to the nearest whole integer.

Verification of thermocouple offset: Enter the Factory menu (reference Service Menu in SERVICE OPERATION). Using **PIN 7591**, navigate to FACTORY -> TEMP -> OFFSET. If your temperature UNIT setting is °C, for simplicity sake just multiply the offset value by 2 for your calculations in °F.

PART LIST

Part No.	Description	Part No.	Description
135001.G2	4pc Power Switch	135142-120 /240	120V/240V (Invertek) (All Regions)
135003-BK	3A Breaker	135145	Air Switch
135004-BK	10A Breaker	135148	24Vdc BLDC Conveyor Motor (Extended harness)
135008	OTP Thermostat	135156	Power Receptacle
135010	G2 Control, UI	135158	14/3 Power Cord
135011.1	G2 Control, MC	135160	3/4HP Main Motor, 3PH (60” & 70” Models)
135026-50VA	25VAC, 50VA Transformer	135165	1/3HP Main Motor, 1PH/60Hz (30” & 40” Models)
135032-A	24VDC Relay	135170	Capacitor, 7.5uF/370V (for 135165)
135032-D	24VAC Relay (can be used in place of -A)	135173	Clamp to Main Motor
135036.1B	BASO IPI Module	135175	1830 Main Fan Blade
135049	Optical Detector	135177	2440 3240 Main Fan Blade
135050	Detector Flange	135179	2460 3260 Main Fan Blade
135051-FR	Flame Rod with sense wire	135181	3260S 3860 4460 3270 3870 Main Fan Blade
135052	Detector Cable	145162	Large Window, 60”,70”
135055-18	18” Thermocouple, EDGE-30	145163	Small Window, 30”/40”
135055-23	23” Thermocouple, EDGE-40	145280	Conveyor Cogs
135055-32	32” Thermocouple, EDGE-60	145282	Conveyor Belt Drive Sprocket 35P, 15T, 0.5B
135055-37	37” Thermocouple, EDGE-70	145282-2	Conveyor Belt Drive Sprocket 25P, 15T, 0.5B
135058	Standing Pilot Burner, with spark wire (no FR)	145284	Conveyor Motor Sprocket 10T
135060-PC	5 inch, 0.5 OD / 0.25 ID, Silicon Air Switch Tube	145286-2	Conveyor Belt Drive Sprocket 25P, 22T, 0.5B
135063	YU-USB Port	145289-1	Conveyor Shaft Bushing, Standard Belt
135082.LP	LP Valve Spring (order with valve)	145289-2	Conveyor Shaft Bushing, Split Belt
135082.NAT	NAT Valve Spring (order with valve)	145290	Conveyor Belting 12”
135104	BASO Straight Flange	145291	Conveyor Belting 11”
135105	BASO Angle Flange	145292	Conveyor Belting 15”
135107.1	Pilot Orifice, 7225, LP	145293	Conveyor Belting 8”
135107.32	Pilot Orifice, 7225, LP	145294	Conveyor Belting 18”
135108-332.NAT-CONV	0.093 BASO Valve, (3240+NAT), pilot/main orifice(specify)	145295	Conveyor Belting 21”
135108-332.NAT-REP	0.093 BASO Valve, (3240+NAT)	145296	Conveyor Belting 24”
135108-53.LP-CONV	0.053 BASO Valve, (3240+LP), pilot/main orifice(specify)	145298	Conveyor Belting 32”
135108-53.LP-REP	0.053 BASO Valve, (3240+LP)	145300	Conveyor Belting 38”
135108-53.NAT-CONV	0.053 BASO Valve, (1830/2440NAT), pilot/main orifice(specify)	145302	Conveyor Belting 44”
135108-53.NAT-REP	0.053 BASO Valve, (1830/2440NAT)	145310	Shaft-Conveyor, Drive Side, Standard, 18" Models
135108-61.LP-CONV	0.061 BASO Valve, (1830/2440LP), pilot/main orifice(specify)	145311	Shaft-Conveyor, Left Side, Standard, 18" Models
135108-61.LP-REP	0.061 BASO Valve, (1830/2440LP)	145312	Shaft-Conveyor, Drive Side, Standard, 24" Models
135109-PLUG	BASO Valve Plug	145313	Shaft-Conveyor, Left Side, Standard, 24" Models
135120	WAYNE Induction Blower	145314	Shaft-Conveyor, Drive Side, Standard, 32" Models
135123	EDGE Induction Fan Assy	145315	Shaft-Conveyor, Drive Side, Split Belt-Short, 32" Models
135130	120VAC Cooling Fan	145316	Shaft-Conveyor, Drive Side, Split Belt-Long, 32" Models
135131	Fan Cord (120/240v)	145317	Shaft-Conveyor, Left Side, Standard & Split, 32" Models
135134	240VAC Cooling Fan (CE)	145318	Shaft-Conveyor, Drive Side, Standard, 38" Models
135137	Fan Filter Media	145319	Shaft-Conveyor, Drive Side, Split Belt-Short, 38" Models
135138-A	120V VFD (AC TECH) (US/CA/MX Only)	145320	Shaft-Conveyor, Drive Side, Split Belt-Long, 38" Models
135140	24VDC Power Supply	145321	Shaft-Conveyor, Left Side, Standard & Split, 38" Models
135142	230V VFD (Lenze) (CE Only)	145322	Shaft-Conveyor, Drive Side, Standard, 44" Models
135142-120	120V (Invertek) (US/CA/MX Only)	145325	Shaft-Conveyor, Left Side, Standard & Split, 44" Models

Verify part and part number prior to ordering

REVISION HISTORY

12/12/2022	rev 2	Addition of note regarding Blower Speed monitoring, page 46
03/27/2023	rev 3	Corrections of NAT Air shutter settings