

VULCAN

INSTALLATION & OPERATION MANUAL

VEC SERIES ELECTRIC CONVEYOR OVENS

MODELS

<i>VEC3018</i>	
10KW	<i>ML-126198</i>
15KW	<i>ML-126401</i>
<i>VEC4018</i>	<i>ML-126199</i>
<i>VEC3624</i>	<i>ML-114836</i>
<i>VEC3632</i>	<i>ML-114837</i>
<i>VEC4824</i>	<i>ML-114838</i>
<i>VEC4832</i>	<i>ML-114739</i>
<i>VEC6024</i>	<i>ML-114797</i>
<i>VEC6032</i>	<i>ML-114798</i>



TABLE OF CONTENTS

GENERAL.....	3
INSTALLATION	3
Unpacking	3
Location	3
Installation Codes and Standards	4
Assembly	4
Leveling	5
Electrical Connections	5
OPERATION	6
Controls	6
Before First Use	7
Using the Oven	7
Cleaning	9
Conveyor Belt Assembling and Disassembling	13
Cooking Chart	14
MAINTENANCE	15
Inspection	15
Service and Parts Information	15
TROUBLESHOOTING GUIDE	16

Installation, Operation and Care of MODEL VEC SERIES ELECTRIC CONVEYOR OVENS

PLEASE KEEP THIS MANUAL FOR FUTURE USE

GENERAL

Vulcan-Hart ovens are produced with quality workmanship and material. Proper installation, usage, and maintenance of your oven will result in many years of satisfactory performance.

It is suggested that you thoroughly read this entire manual and carefully follow all of the instructions provided.

INSTALLATION

Before installing, verify that the electrical service agrees with the specifications on the rating plate located on the right front side panel. If the supply and equipment requirements do not agree, do not proceed with the installation. Contact your Vulcan-Hart service representative immediately.

UNPACKING

This oven was inspected before leaving the factory. The transportation company assumes full responsibility for safe delivery upon acceptance of the shipment. Immediately after unpacking, check for possible shipping damage. If the oven is found to be damaged, save the packaging material and contact the carrier within 15 days of delivery.

1. Tilt the oven on its back side.
2. Place the oven on a four-wheel dolly.
3. Move oven to its installation position.
4. Remove oven from the dolly and place on two pieces of 2 x 4 wood.
5. Carefully unpack oven.

Do not use the door or handle to lift oven.

LOCATION

When the crate is turned on its side, the oven will pass through a 34" (86 cm) door opening (or 30" [76 cm] opening without the crate). Verify that the doors and access routes into the kitchen area will permit clearance.

When installed, minimum clearance from combustible and non-combustible construction must be 2.5" (63.5 mm) at the sides and 2.5" (63.5 mm) at the rear.

The installation location must allow adequate clearances for servicing and proper operation. A minimum front clearance of 36" (914.4 mm) is required.

Information on the construction and installation of ventilating hoods may be obtained from the standard for "Vapor Removal from Cooking Equipment," NFPA No. 96 (latest edition), available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

Exhaust: Approximately 2000 CFM required for double stacked ovens.
Approximately 1500 CFM required for single oven.
Make-up air should be 65% to 80% of the exhaust air rating.

INSTALLATION CODES AND STANDARDS

The oven must be installed in accordance with:

In the United States of America:

1. State and local codes.
2. National Electrical Code, ANSI/NFPA-70 (latest edition). Copies may be obtained from The National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

In Canada:

1. Local codes.
2. Canadian Electrical Code, CSA C22.2 No. 3 (latest edition). Copies may be obtained from The Canadian Standard Association, 178 Rexdale Blvd., Etobicoke, Ontario, Canada M9W 1R3.

ASSEMBLY

Ovens Mounted On Casters

Separate instructions for installing casters to the oven are included with the casters.

Installing Basic Oven

1. Attach front legs by screwing them into the bottom of the oven.
2. Tilt oven forward resting it on the front legs.
3. Lift oven from the rear.
4. Attach back legs once oven is lifted.
5. Place oven in its operating position.

Installing Stacked Ovens

1. Stack ovens after basic oven is installed.
2. Lift top oven and place it on top of bottom oven.
3. No fasteners are required; the weight of the oven will keep it in place.

LEVELING

Casters for this oven are of the non-adjustable type. For best results oven should be installed on a level floor.

ELECTRICAL CONNECTIONS

WARNING: ELECTRICAL AND GROUNDING CONNECTIONS MUST COMPLY WITH THE APPLICABLE PORTIONS OF THE NATIONAL ELECTRICAL CODE ANSI/NFPA 70 (LATEST EDITION) AND/OR OTHER LOCAL ELECTRICAL CODES.

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY AND PLACE A TAG AT THE DISCONNECT SWITCH TO INDICATE YOU ARE WORKING ON THE CIRCUIT.

1. Remove wiring compartment cover from the right rear of the oven.
2. Run power supply cord through the conduit fitting.
3. Connect wires at the terminal block.
4. Follow the appropriate wiring diagram that is included with this manual when making connections at the electric supply lines.
5. Replace wiring compartment cover.
6. Turn power supply ON.

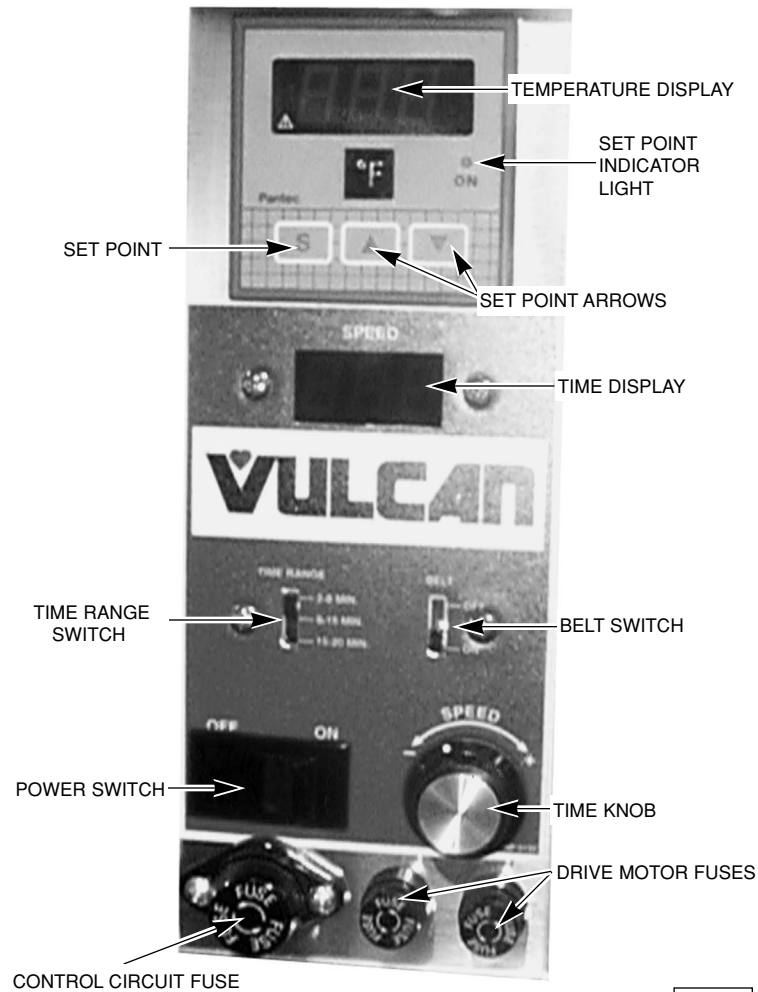
Electrical Data

Oven Model	Total Kw	Nominal Amps Per Line Wire				
		3 Phase			1 Phase	
		208V	240V	480V	208V	240V
VEC3018	10	28	24	12	48	42
	15	42	36	18	72	63
VEC4018	15	42	36	18	72	63
VEC3624	30	83	72	36	144	125
VEC3632	30	83	72	36	144	125
VEC4824	45	125	108	54	216	188
VEC4832	45	125	108	54	216	188
VEC6024	60	166	144	72	288	250
VEC6032	60	166	144	72	288	250

OPERATION

WARNING: THE OVEN AND ITS PARTS ARE HOT. BE VERY CAREFUL WHEN OPERATING, CLEANING OR SERVICING THE OVEN.

CONTROLS (Fig. 1)



PL-41123-1

Fig. 1

- | | |
|----------------------------------|--|
| Temperature Display | — Displays actual oven cavity temperature during cooking cycle. |
| Set Point | — Press to display set temperature. |
| Set Point Arrows | — Press up or down to reach desired set point temperature. |
| Set Point Indicator Light | — When lit, indicates that heat is being provided to the oven. When set point is reached, light will go off. |
| Time Display | — Displays actual cooking time in minutes and tenths of minutes. |

- Time Range Switch** — Use to set cook time range from 2 to 8 minutes, 8 to 15 minutes, or 15 to 20 minutes. Switch must be on cook time range desired in order to change belt speed.
- Belt Switch** — Push switch to ON to start conveyor belt; push to OFF to stop conveyor belt.
- Power Switch** — Press ON to start oven; press OFF to stop oven.
- Time Knob** — After Time Range Switch has been set to the desired time range, turn knob until desired time is reached on the display.
 - Turn knob clockwise to increase cook time.
 - Turn knob counterclockwise to decrease cook time.
- Control Circuit Fuse** — 25 Amp. / 250V. Time delay.
- Drive Motor Fuses** — 375 ma / 250V.

BEFORE FIRST USE

1. Clean the protective metal oils from all surfaces of the oven.
2. Use a non-corrosive, grease dissolving commercial cleaner. Follow manufacturer's directions.
3. Rinse thoroughly with a clean damp cloth and wipe dry with a soft clean cloth.
 - **DO NOT** hose down the oven.
 - Do not use this oven if its controls have been wet. If the controls are wet, contact your Vulcan-Hart servicer.

USING THE OVEN

1. Turn main power switch ON.
 - Oven will begin operating at the factory set temperature of 525°F (273°C).
 - Actual oven cavity temperature will appear in the temperature display.
 - Set Point Indicator Light will indicate if the heat is on.
2. Press and hold Set Point button to read the temperature set point.
 - Set point will appear in the temperature display.
3. Reset temperature set point (if needed).
 - a. Press and hold Set Point button, at the same time, press the Set Point Arrows up or down until the desired set point temperature appears in the digital display.
 - b. Release Set Point button.
 - c. The actual oven cavity temperature will display.

If the conveyor belt stalls, the time display will indicate "O.L." and the belt will automatically stop.

- a. Remove blockage.
- b. Move Belt Switch up and down to reset the control.
 - Time should be indicated on the display again.
 - Drive motor should restart.

A baffle (Fig. 2) is located on each end of the oven. It can be adjusted higher or lower to accommodate the height of the product being cooked.

To raise or lower baffles:

1. Loosen the two thumb screws (Fig. 2) - use insulated gloves.
2. Readjust baffle height.
3. Retighten the two thumb screws.

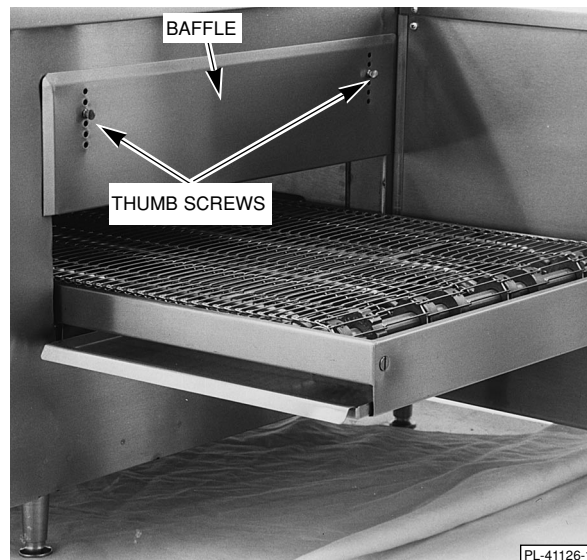


Fig. 2

Loading and Unloading the Oven

1. Place product in utensils (if required).
2. Set utensils or products on the entrance end of the belt; not in the oven tunnel.
3. Remove utensils or products from the oven after they completely clear the oven tunnel.

Air Distribution Panels

The oven is equipped with a top and a bottom air distribution panel.

- These panels regulate the quantity of air on the top and bottom of the product that is being cooked.
- They have been adjusted at the factory for proper baking performance.
- Some products may need additional panel adjustments. This should be done by a Vulcan-Hart authorized servicer.

Shutdown

Press main power switch OFF.

CLEANING

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY BEFORE CLEANING.

Daily

Clean the outside of the oven daily by wiping with a clean damp cloth. Avoid using abrasive powders or pads; these cleaners may damage the finish.

Clean right-hand and left-hand crumb trays (Fig. 3).

1. Remove and wash in a sink as you would any normal utensil.
2. Replace crumb trays.

Clean center crumb tray (Fig. 3).

1. Remove front panel.
 - a. Grasp each side of the door handle and lift up.
 - b. Swing the bottom of the front panel out.
 - c. Lower panel and pull away.
2. Loosen the conveyor belt (see Conveyor Belt Removal in this manual) and brush away the crumbs under the belt.
3. Remove crumb tray.
4. Wash in a sink as you would any normal utensil.
5. Replace the tray and the front panel by reversing this procedure.



Fig. 3

Conveyor

To maintain proper belt tension, adjust the conveyor belt to remove any slack.

1. Locate the two adjustment screws (Fig. 4) on the right hand end (facing machine) of the conveyor assembly.
2. Loosen the nuts on the inside of the conveyor rack and turn the adjusting screws clockwise to increase belt tension. Be sure to adjust both screws an equal amount.
3. Retighten the nuts on the inside of the conveyor rack.

If the conveyor belt adjustment is at its maximum and the belt is still slack, remove one belt link.

1. Locate the conveyor belt splicing strand and remove it as shown in the CONVEYOR BELT ASSEMBLING AND DISASSEMBLING (Fig. 8).
2. Remove one conveyor link and set the tension screws at their minimum by turning them counterclockwise. Adjust both screws an equal amount.
3. Reinstall the splicing strand as shown in the CONVEYOR BELT ASSEMBLING AND DISASSEMBLING (Fig. 8), and readjust the belt tensions with the adjusting screws.

Two ways to remove conveyor for cleaning:

1. Conveyor Belt Removal
 - a. Loosen belt tension screws at the end of the belt track (Fig. 4).
 - b. Locate the wide end-hooks of the splicing strands where the belt should be disconnected.
 - c. Remove splicing strands by following the directions shown in CONVEYOR BELT ASSEMBLING AND DISASSEMBLING in this manual.
 - d. Reverse this procedure to replace the belt.

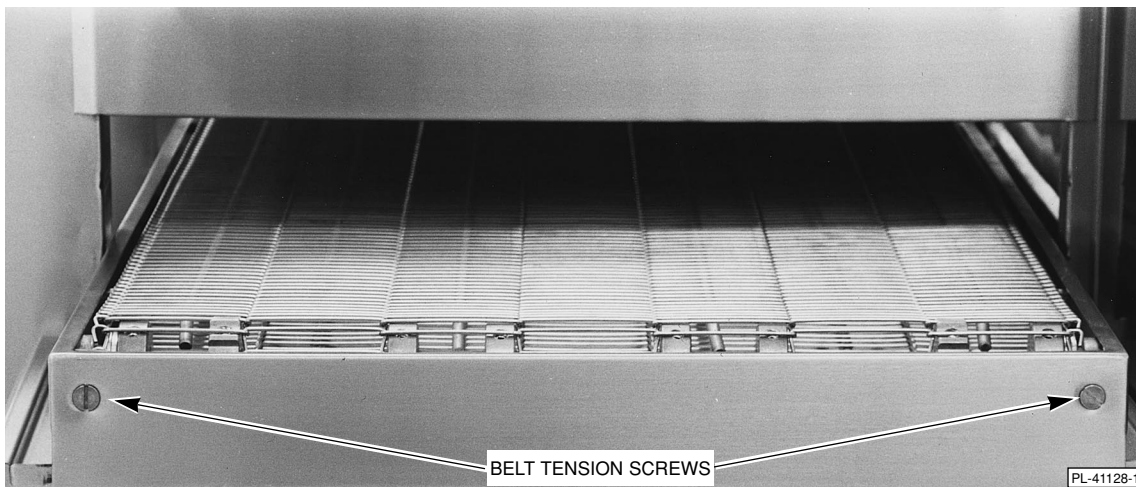


Fig. 4

2. Conveyor Assembly Removal

- a. Remove conveyor crumb trays (see Fig. 3).
- b. Remove cover where conveyor shaft enters the left-hand control box (Fig. 5).

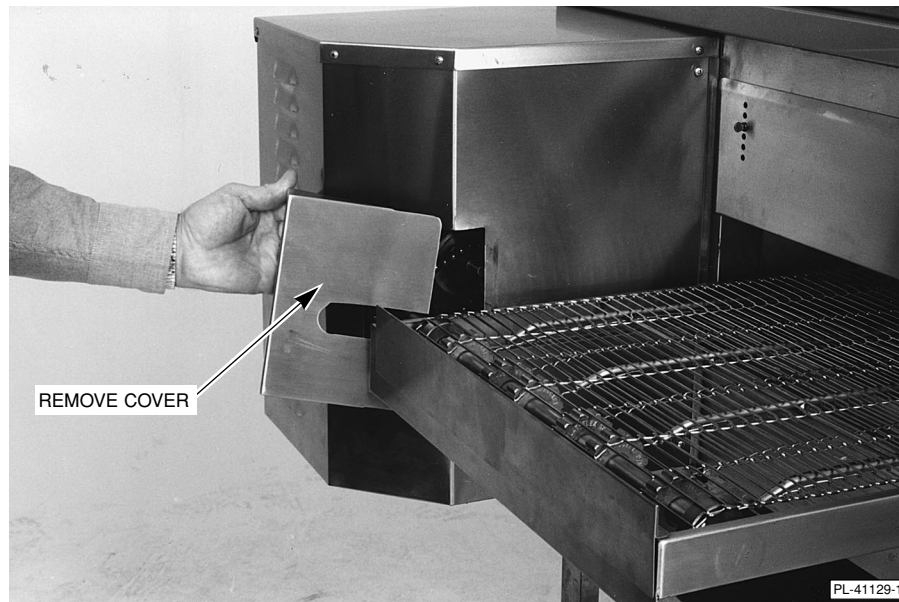


Fig. 5

- c. Lift up the drive end of the conveyor assembly and slide the conveyor assembly into the oven tunnel to remove the tension on the drive chain.
- d. Slip drive chain off the conveyor drive sprocket (Fig. 6).

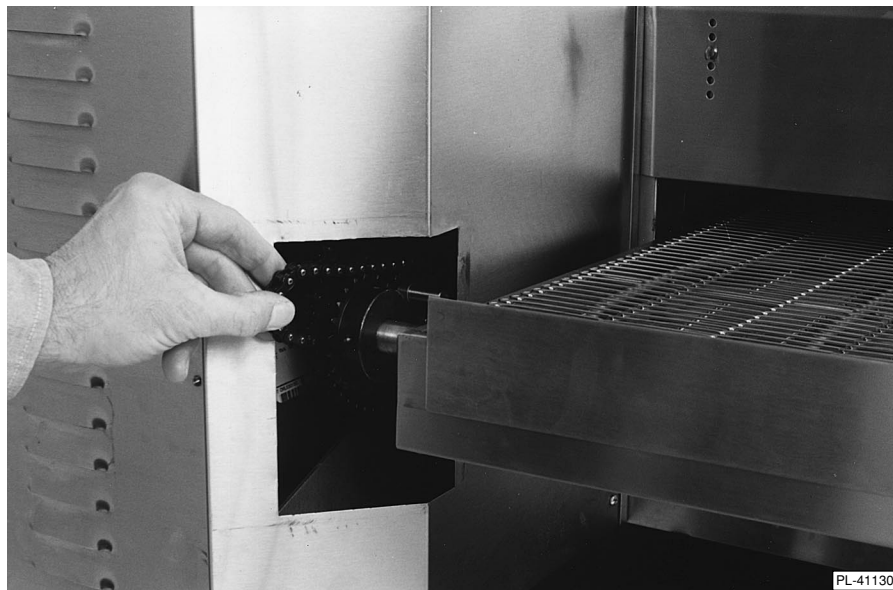


Fig. 6

- e. Pull the entire conveyor assembly from the oven (Fig. 7).

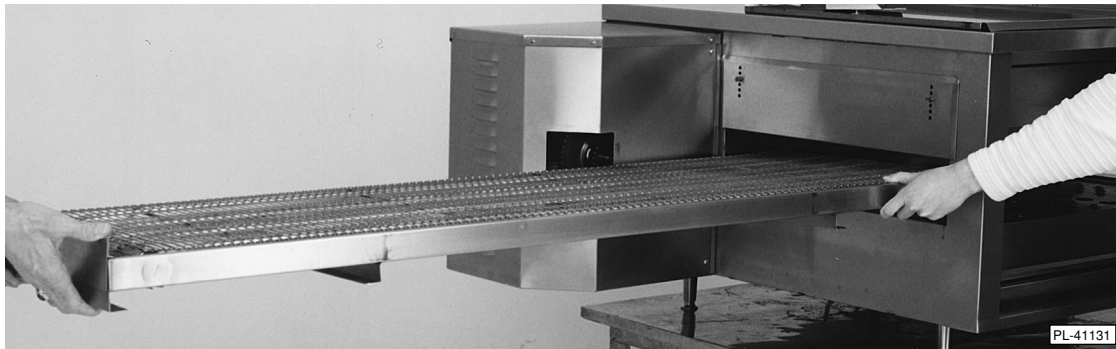


Fig. 7

- f. Take conveyor assembly to cleaning area.
- g. Reverse this procedure to replace conveyor assembly.

Weekly

CAUTION: Intake fans and slots on the back of the oven and control box must be cleaned weekly. Any obstructions may cause motor damage.

Use a long bristle brush to clean these areas.

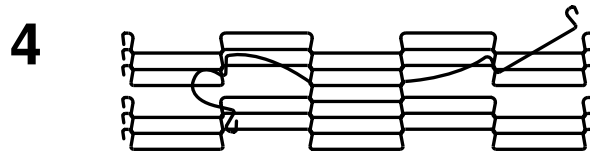
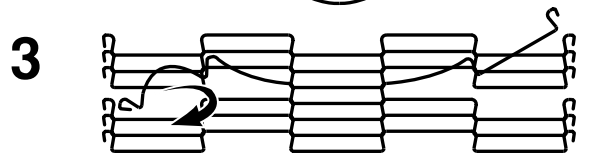
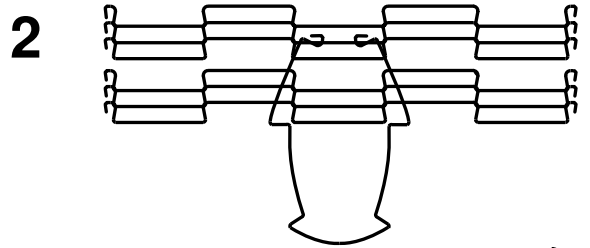
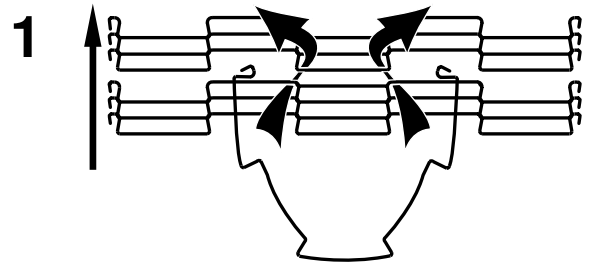
Clean the wire belt and frame with a stiff bristle brush as needed.

CONVEYOR BELT ASSEMBLING AND DISASSEMBLING (Fig. 8)

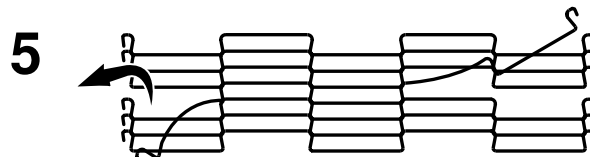
Install the conveyor belt so that it always runs in the direction indicated by this arrow — the closed end of the loop toward the direction of travel.

The arrows in the belt illustrate the movement of the splicing strand between steps.

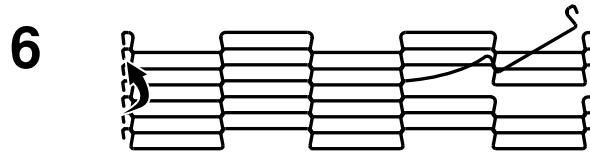
When bending the splicing strand, try to limit bending to straight portions of the strand rather than in the "Z" bend area.



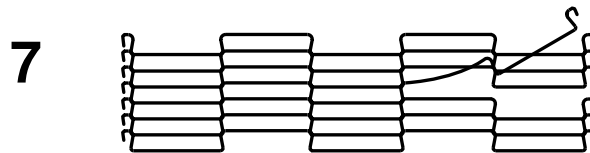
Splice one side completely before starting the other side.



After completely splicing the belt, it is advisable to go along the width of the belt straightening the spliced-in strand.



Depending upon the width of the belt, there might be one, two, or three splicing strands.



PL-52997

Fig. 8

COOKING CHART

The times and temperatures shown in this chart are only suggestions. Experiment with your food products to determine the cooking temperatures and times that give you the best results.

TYPE OF FOOD	PRODUCT	APPROX. TIME (IN MIN.)	TEMP. (°F) / (°C)
ITALIAN	Pizza (par baked dough)	4 to 4.5	510 / 265
	Pizza (fresh dough)	5.5 to 6.5	510 / 265
	Pizza (thick pan type)	7.5 to 8.5	510 / 165
	Calzone (fresh dough)	5 to 6	510 / 265
	Pastas (precooked to gratin)	5 to 6	510 / 265
BREADS & SUBS	Garlic Bread	2.5 to 3.5	510 / 265
	Bread Sticks	2.5 to 3.5	510 / 265
	Submarine Sandwiches	2.5 to 3.5	510 / 265
BAKERY	Dinner Rolls (par baked)	4 to 4.5	390 / 199
	Dinner Rolls (fresh)	7.5 to 8.5	390 / 199
	Bagels (fresh)	12 to 13	390 / 199
	Croissants (par baked)	4 to 4.5	390 / 199
	Croissants (fresh)	9 to 10	390 / 199
	Muffins (fresh)	12 to 13	390 / 199
	Biscuits and Cookies (fresh)	4.5 to 6.5	390 / 199
MEAT & POULTRY	Chicken Wings (precooked)	5.5 to 6.5	510 / 265
	Chicken Wings (fresh)	18 to 20	390 / 199
	Chicken Breasts (boneless)	5.5 to 6.5	510 / 265
	B.B.Q. Ribs (fresh)	18 to 20	390 / 199
	Hamburger Patties (fresh)	5.5 to 6.5	510 / 265
FISH & SEAFOOD	Shrimp (fresh)	4.5 to 5.5	510 / 265
	Fish Filets (fresh)	6.5 to 7.5	510 / 265
	Tuna Steak (fresh)	8.5 to 9.5	510 / 265
	Salmon Steak (fresh)	6 to 7.5	510 / 265
MEXICAN	Burritos and Enchiladas	2.5 to 3.5	475 / 246
	Nachos Assorted Styles	2.5 to 3.5	475 / 246
EGGS	Souffles and Omelettes	5.5 to 6.5	510 / 265
	Quiches	9 to 10	390 / 199

MAINTENANCE

WARNING: THE OVEN AND ITS PARTS ARE HOT. BE VERY CAREFUL WHEN OPERATING, CLEANING OR SERVICING THE OVEN.

WARNING: DISCONNECT ELECTRICAL POWER SUPPLY BEFORE PERFORMING ANY MAINTENANCE ON THE OVEN.

INSPECTION

The oven should be inspected at least annually by a Vulcan-Hart authorized servicer. More frequent cleaning may be required due to oven grease vapors, dust, etc. It is imperative that control compartments and circulating air passageways of the oven be kept clean.

SERVICE AND PARTS INFORMATION

To obtain service and parts information concerning this oven, contact your local Vulcan-Hart Service Office.

TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSES	ACTION
Power switch is on, but oven will not operate.	<ul style="list-style-type: none"> • Blown fuse. • Problem with power supply. • Problem with power switch. 	<ul style="list-style-type: none"> • Replace fuse. • Contact your Vulcan-Hart servicer. • Contact your Vulcan-Hart servicer.
Speed control shows "OL".	<ul style="list-style-type: none"> • Conveyor belt is stuck. • Problem with belt motor. 	<ul style="list-style-type: none"> • Check the belt. • Contact your Vulcan-Hart servicer.
Conveyor belt does not turn.	<ul style="list-style-type: none"> • Problem with speed control. • Gear loose. 	<ul style="list-style-type: none"> • Contact your Vulcan-Hart servicer. • Contact your Vulcan-Hart servicer.
Conveyor belt jumps.	<ul style="list-style-type: none"> • Chain too loose. 	<ul style="list-style-type: none"> • Adjust belt tension screws evenly (see Fig. 4).
Cooking is not even.	<ul style="list-style-type: none"> • Air distribution panels need adjustment. 	<ul style="list-style-type: none"> • Contact your Vulcan-Hart servicer.
Oven is on, temperature controller is on, but oven is not heating.	<ul style="list-style-type: none"> • Axial fan problem. • Fan circulating motor is overloaded or overheated. • Temperature controller setting not properly adjusted. • Problem with thermocouple. • Hi-limit switch activated. 	<ul style="list-style-type: none"> • Contact your Vulcan-Hart servicer. • Contact your Vulcan-Hart servicer. • Adjust temperature controller. • Contact your Vulcan-Hart servicer. • Press reset button (Fig. 9) located on the back panel (control side). Contact your Vulcan-Hart servicer.
Excessive vibrations of circulating motor.	<ul style="list-style-type: none"> • Blower cage is unbalanced. 	<ul style="list-style-type: none"> • Contact your Vulcan-Hart servicer.

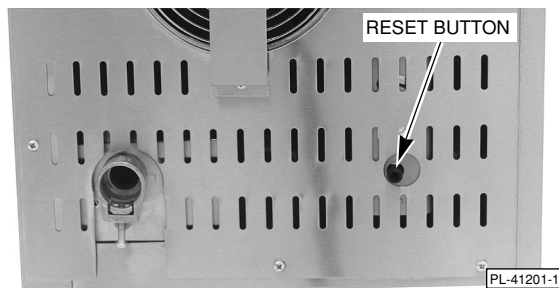


Fig. 9