



## INSTALLATION AND OPERATING INSTRUCTIONS

Models: **APC-18, APC-18-2 and APC-18-3**

# ELECTRIC CONVEYOR OVENS

INTENDED FOR OTHER THAN HOUSEHOLD USE

RETAIN THIS MANUAL FOR FUTURE REFERENCE  
OVEN MUST BE KEPT CLEAR OF COMBUSTIBLES AT ALL TIMES



**FOR YOUR SAFETY:** Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.



**WARNING:** Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the Installation, Operating and Maintenance Instructions thoroughly before installing or servicing this equipment.



Initial heating of oven may generate smoke or fumes and must be done in a well ventilated area. Overexposure to smoke or fumes may cause nausea or dizziness.

This equipment has been engineered to provide you with year-round dependable service when used according to the instructions in this manual and standard commercial kitchen practices.



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# **I. INSTALLATION INSTRUCTIONS**

## **MINIMUM CLEARANCES FROM COMBUSTIBLE OR NON COMBUSTIBLE SURFACES:**

Rear: 6"  
Left: 18"  
Right: 18"

### **1. RECEIVING:**

Read the notice on the outside carton regarding damage in transit. Damage discovered after opening the crate(s)/carton(s) is "CONCEALED DAMAGE" and the carrier must be notified immediately to send an inspector for inspection of the damage and also to furnish forms for the consignee's claim against the carrier. Retain all packaging material including outer carton until the inspection is completed.

When the oven arrives, it should consist of:  
A crate containing: Your new Conveyor Oven, complete with 4" legs mounted.

Note: For stacked installation, only one oven for bottom is shipped with the legs mounted. Other units for stacked installation are shipped without legs

### **2. LOCATION:**

Place your oven as close as possible to area of final installation. Your oven will be packed laying flat. The skid may be left under the oven for convenience in further handling. Unpack carefully avoiding damage to the stainless steel front and/or trim. If concealed transit damage is found, follow the Receiving Instructions (above).

- a. The side with the Bakers Pride Logo is the front of the oven
- b. In some area the local codes may require the oven to be placed under a ventilation hood.
- c. The oven must be installed on its proper legs as furnished. Failure to do so may result in extreme heat build-up underneath the oven.

- d. Adequate air space must be provided for proper venting of the motor and the controls.
- e. Keep the area round your oven free and clear of combustible materials.
- f. Provisions of adequate air supply to the oven for ventilation is essential. Minimum clearances shown must be maintained.

### 3. PREPARATION FOR INSTALLATION:

- 1). Remove any samples or packing material from the oven cavity.
- 2). Install the two removable crumb trays, one on each end of the oven. Each tray has a black handle for ease of handling.

### 4. STACKING:

The units can be stacked up to three (3) high. Each unit is built exactly the same, it does not matter in what order they are stacked. Once the unit with the legs has been installed on the bottom, with the proper lifting equipment gently place the top unit on top of the bottom unit, making sure that it is fully aligned. For a three stack, place the third unit on top of the two units. After stacking the ovens, install the Control Box Stacking Shield on the Control Box to reduce the affect of radiated heat from the lower unit to the Control Compartment of the upper unit. It is very important that this shield be properly installed. Without this shield, electric components of the upper unit may overheat causing failure of the controls.

To stack on a deck oven, see the literature supplied with the stacking kit.

### 5. ELECTRICAL REQUIREMENTS:

#### ELECTRICAL REQUIREMENTS FOR SINGLE APC-18\*

<u>VOLTAGE</u>	<u>3 PHASE AMPS</u>				<u>1 PHASE AMPS</u>		
	<u>L1</u>	<u>L2</u>	<u>L3</u>	<u>N</u>	<u>L1</u>	<u>L2</u>	<u>N</u>
115/208	25	33.3	25	.5	47.5	48	.5
115/240	21.7	29	21.7	.5	41	41.5	.5

\* EACH UNIT MUST BE WIRED SEPARATELY.

\* CHECK DATA PLATE ON THE UNIT BEFORE MAKING ELECTRICAL CONNECTIONS.

## **6. ELECTRICAL CONNECTIONS:**

### **a) General Instructions:**

1. Electrical connections must be made by a licensed electrician only.
2. When installed, unit must be electrically grounded in accordance with the local codes and/or the latest edition of the National Electrical Code ANSI/NFPA No. 70 in USA or Canadian Electrical Code C22.5 in Canada.
3. Make sure electrical supply corresponds with that specified on the rating plate.
4. For single phase 3 wire or three phase 4 wire 115/208-240 volts AC supplies, the controlling branch circuit is designed to operate at 115 volts AC and is pre-wired at the factory between L2 and N of the field wiring terminal block.
5. For three phase four wire 220/380 volts AC or 240/415 volts AC 50 HZ supplies, the controlling branch circuit is designed to operate at 220-240 volts AC and is pre-wired at the factory between L2 and N of the field wiring terminal block.
6. Use copper conductors only, rated at 90°C.
7. The electric motor, all the related switches and the control panel are pre-wired at the factory.

### **b) Field Connections:**

1. Remove access panel from the side of the oven.
2. Feed the power supply cable (supplied by the customer) through the access hole in the rear of the oven and pull the cable to the front of the oven under the access panel where it may be attached to the cable support bracket.
3. Following the appropriate wiring diagram conforming with the rating plate connect the power supply leads to the field wiring terminal block. The ground wire should be connected to the grounding lug attached to the cable support bracket.
4. Make sure all connections are tight, and replace the access cover.

## **7. INTRODUCTION TO CONTROL PANEL:**

**A. MAIN POWER:** This switch controls the supply of main power to the unit.

**B. CONVEYOR SPEED CONTROL:** This regulates the conveyor motor to provide a uniform speed to conform to the set cook time. To set the cook time press the arrow pointing up (▲) to increase the cook time or press the arrow pointing down (▼) to decrease the cook time. The numbers indicate the time in minutes and seconds in the digital display. Allow a few seconds for the motor to stabilize to the new speed.

**C. CONVEYOR RESET:** This is a safety for the conveyor belt motor. This automatically stops the conveyor belt if the conveyor motor gets overloaded due to any obstructions. After removing the obstruction, this button should be pressed manually to resume the electric supply to the motor.

**D. TEMPERATURE CONTROL:** This is the digital thermostat for the oven. It regulates the temperature in the baking chamber up to 800°F or 400°C. This is preset and programmed at the factory. This has 4 keys for the following functions:

- \*        Displays flashing set point when pressed
- \*▲       Pressed together increases the thermostat set point.
- \*▼       Pressed together decreases the thermostat set point.
- P        This is to access to the programming mode.

**NOTE: Do not touch the key marked "P".**

**E. TOP HEAT CONTROL:** This is a wattage controller for the top heating elements. To increase top heat, turn the dial clockwise towards the DARK setting. To reduce top heat turn the dial counter clockwise towards the LIGHT setting.

**F. BOTTOM HEAT CONTROL:** This is a wattage controller for the bottom heating elements. To increase bottom heat turn the dial clockwise towards the DARK setting. To reduce bottom heat turn the dial counter-clockwise towards the LIGHT setting.

## **II. OPERATING INSTRUCTIONS**

### **1. BASIC DESIGN CONCEPT:**

The APC-18 has been designed for all types of baking. The deck opening is a full 5" (12.7 cm) allowing for higher food items such as muffins or extra thick sandwiches. The oven is equipped with a digital speed control that can be set for a bake time from 1 1/2 minutes to 30 minutes, a digital thermostat and additional adjustable top and bottom heat controls. The desired baking results are obtained by setting the digital thermostat, digital speed control and the Top and Bottom Heat Controls.

### **2. START UP INSTRUCTIONS:**

Do not attempt to operate the oven until the installation has been fully inspected by an authorized technician and/or factory trained specialist.

#### **A. INITIAL START-UP:**

Like any other oven, this oven must be given a proper break-in period. This initial heating allows the insulation to dry out providing a more uniformly baked product. Baking before this break-in period will result in poor quality product.

#### **BREAKING IN:**

1. Make sure that the unit has been installed properly and placed in a well ventilated area.
2. Turn the unit on.
3. Set the Thermostat to 400° F. (205°C.).
4. Set Top Heat Control to 5.
5. Set Bottom Heat Control to 5.
6. Set Conveyor Speed to 7.5 minutes.
7. Allow the oven to heat until all smoking has stopped.
8. Once the smoking has stopped, change the temperature to your desired baking temperature and allow the oven to come up to temperature before baking.

**CAUTION:** Some smoking will occur during this process. Make sure that the break-in is done in a well ventilated area. Over exposure to smoke or fumes may result in nausea or dizziness.

**NOTICE:** When the oven has pre-heated and settled, we encourage you to experiment until you get the feel of the oven and find a right combination of temperature setting, cook time (conveyor speed), and top and bottom heat adjustments.

#### **B. DAILY USE:**

1. Push power switch to the ON position.
2. The actual temperature of the oven is normally displayed in the temperature controller. Set the desired baking temperature by pressing \*▲ together to increase the temperature, \*▼ to decrease. Press \* only to view set point (FLASHING).
3. Set cook time on the speed controller. Push ▲ to increase, ▼ to decrease.
4. Set top heat control to your desired setting.
5. Set bottom heat control to your desired setting.
6. Allow the oven to pre-heat for at least 45 minutes before baking.

#### **3. OVEN SHUT DOWN:**

Push power switch to OFF position.

**TURN OFF THE POWER SUPPLY TO THE UNIT BEFORE SERVICING.**

#### **4. BAKING INFORMATION:**

This conveyor oven has been designed to continuously produce a consistent product. When initially setting the oven, adjustments can be made for time, temperature, top and bottom heat and exit/entry curtain positions. Each change made to the oven will have some effect on the finished product. We strongly suggest when setting the oven that one change be made a time and that a short waiting period be allowed between bakes so that the unit can stabilize to the changes made.

**A. TEMPERATURE :** We recommend that you start baking at 575° F. If the color of the pizza is more grey than golden the temperature will need to be lowered; if the color of the pizza is pale the temperature will need to be raised. After making any change in temperature be sure to wait 10-15 minutes before baking to allow the oven cavity temperature to stabilize.

**B. TIME:** When initially setting the oven to bake, start at 6.5 to 7.0 minutes. If the pizza is not done, increase the time, if the pizza is over cooked reduce the time.

**C. TOP HEAT CONTROL:** The top heat control allows the operator to increase or decrease the baking/color of the top of the product being baked. Start with a setting of 5 and increase or decrease as needed.

**D. BOTTOM HEAT CONTROL:** The bottom heat control allows the operator to increase or decrease the baking/color of the bottom of the product. Start with a setting of 5 and increase or decrease as needed.

**E. EXIT/ENTRY CURTAINS:** These are provided to restrict cold air from blowing into the oven. The curtains can be used to increase or decrease the color of the product. Raising the curtains will reduce the intensity of heat in the oven, lowering them will increase it.

**F. PIZZA FORMULA:**

Bakers Pride basic formula for New York style pizza:

For a 60 quart mixer:

20 lbs. water

40 lbs. high gluten flour

6 oz. salt

3 oz. yeast

1. Mix water and yeast in mixing bowl until yeast dissolves.
2. Add salt, mix well
3. Add flour and mix on low speed for 10 - 12 minutes. The dough should form a ball and clean the sides of the bowl. The texture of the dough will be soft and smooth.
4. Cut dough to desired weight (depending upon size of pie).
5. Shape dough into round balls.
6. Let rise 30 minutes to 1 hour.
7. Place in refrigerator and chill as quickly as possible.
8. Remove from refrigerator 15-20 minutes before needed. Make sure that the dough is room temperature and double in size before baking.
9. Flatten dough ball to desired thickness, spread on tomato sauce, top with mozzarella cheese and any other desired toppings.
10. Bake until done.

Other ingredients such as eggs, sugar or oil may be added to this formula. Each of these ingredients will change the flavor and texture of the crust. For larger or smaller batches, increase or decrease ingredients proportionately by weight.

#### **G. HELPFUL HINTS:...**

1. Frozen pizza crusts should be defrosted before baking.
2. If overall color is dark and the product is fully cooked, reduce the top and bottom heat settings or reduce the bake time.
3. If overall color is light and the product is fully baked, increase top and bottom heat settings or increase the bake time.
4. If product is well baked but the top color is light increase the top heat setting.
5. If the bottom color is light and the product is well baked increase the bottom heat setting.
6. Use only pans that are well seasoned and black in color.
7. The correct temperature for your product is one where the pizza completely bakes without burning. A grey crust color indicates temperatures are too high.
9. Fresh vegetables have a high water content which is released when cooked. To eliminate soggy pies, either par cook vegetables before baking or slice a day ahead of time and remove excess water by spinning in a salad spinner. Some water may still be given off during the baking process. If excess moisture is still a problem, reduce the amount of vegetables used.
10. Heavily topped pizzas and pizzas with thick crusts generally require a lower bake temperature and longer bake times than pizzas with lighter toppings and thinner crusts.
11. Wet spots on the bottom of the pizza will cause it to stick to the screen or pan.
12. Bubbles in the finished product indicate cold dough. Allow doughballs to proof to double in size and warm to room temperature before baking.
13. Blisters with black spots in the finished product indicate under-proofed dough. Allow dough to proof to double in size before baking. Under-proofed dough can be caused by: old yeast, water too hot, or too cold.
14. Over-proofed dough will take longer to brown than properly proofed dough. Over-proofed dough when stretched out will show thin spots.

15. Consistency is the key to baking in a conveyor oven. Dough weight, amount of proofing, temperature of dough, amount of sauce and toppings all play a critical part in the consistency of the final product. Changes to any of the above mentioned items will effect the final baked product. For example: If you are baking dough that is properly proofed and at room temperature and run out, the dough pulled directly from the walk-in will be cold and will bake differently than the warm dough. In most cases you will notice that the bottoms become light and bubbling will occur. Anticipate dough needs and pull dough long enough ahead of time so it has time to warm to room temperature and proof properly.

#### **H. PANS AND SCREENS:**

When choosing pans, be sure to pick one with the closest height to that of your product. Baking in a pan that is too high for your product will result in poor top color. **SHINY ALUMINUM PANS OR SCREENS ARE NOT RECOMMENDED.** Dark color pans or screens transfer heat better than light colored pans or screens. All types must be seasoned before use. Baking on unseasoned pans or screens will result in pale bottom color and product sticking. Follow these simple instructions to season pans or screens:

1. Set temperature to 300° F.
2. Set conveyor speed control to 5 minutes.
3. Spray pan or screen lightly with Pam or similar vegetable spray.
4. Run the pans or screens through the conveyor.
5. Repeat this process at least three times or until a dark color is reached. Some smoking will result. Be sure this procedure is done in a well ventilated area.

#### **5. CLEANING AND MAINTENANCE:**

##### **A. OVEN EXTERIOR:**

Clean exterior surfaces of the oven by wiping down with a mild detergent and warm water or commercial stainless steel cleaner.. A sample of Bakers Pride stainless steel cleaner expressly made for the purpose is supplied with the unit.

##### **B. OVEN INTERIOR:**

Clean crumb trays, receiving pans, loading pans and exterior removable accessories by washing with a mild detergent and rinsing with warm water. Dry thoroughly before replacing. Clean the conveyor belt by wiping with a clean cloth or brushing with a soft wire brush.

**\*DO NOT USE WATER TO CLEAN THE INTERIOR OF THE UNIT.**

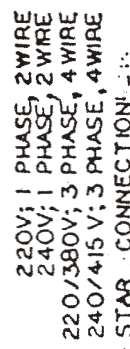
## 6. SERVICING:

### CAUTION: DISCONNECT POWER SUPPLY BEFORE SERVICING

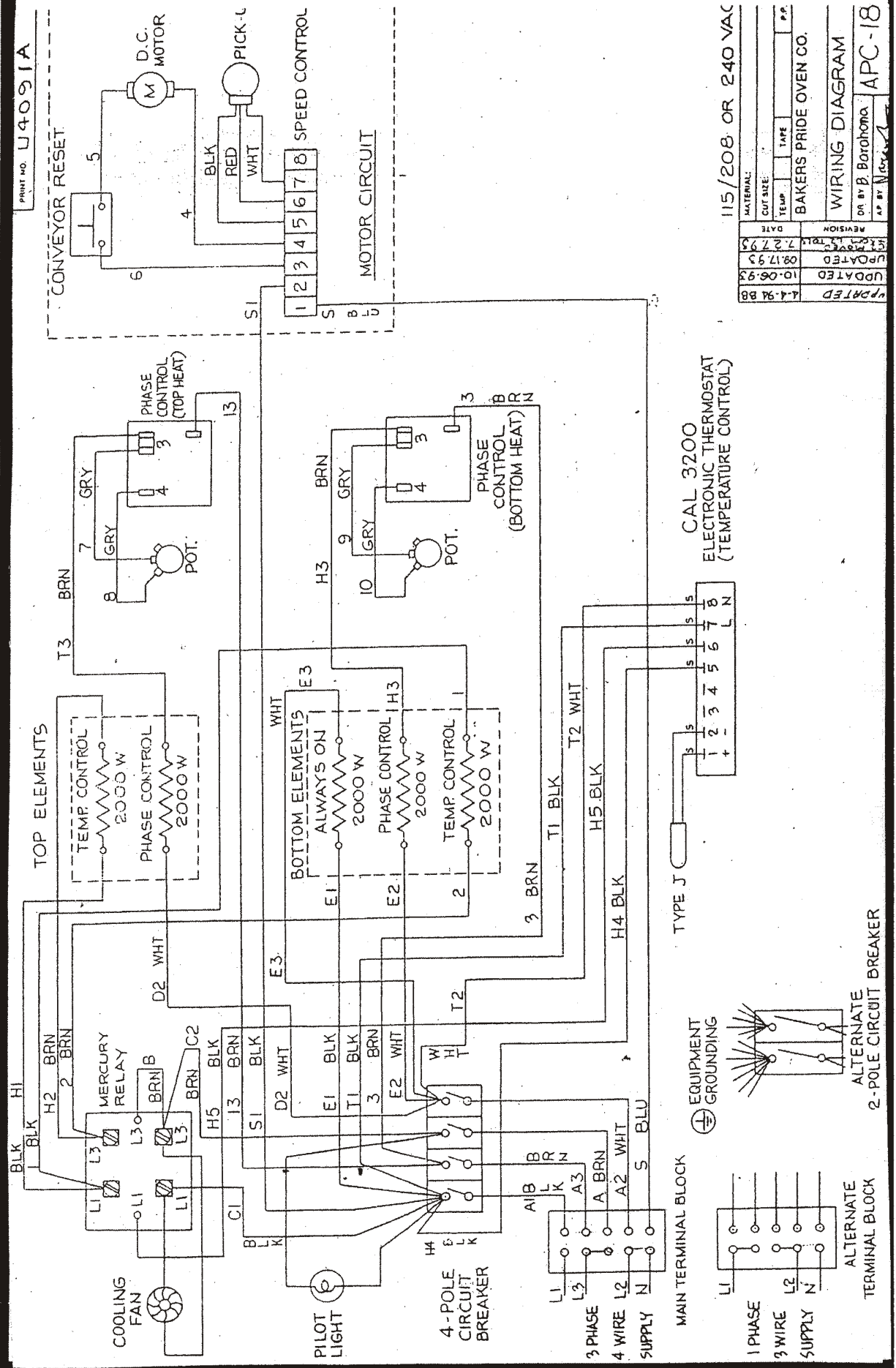
- a). All servicing should be performed by a factory authorized technician only.
- b). For proper servicing, adequate clearance to the control panel side must be provided. This is a must for service needs related to electric power supply.
- c) A system wiring diagram is a part of this manual.

## 7. TROUBLESHOOTING:

PROBLEM	CAUSE	SOLUTION
Product under bakes	Temperature too low	Increase temperature
	Bake time too short	Increase bake time
	Draft blowing in oven	Reduce draft or lower exit/entry curtains
	Top controller set to low	Turn top control up.
	Bottom controller set to low	Turn bottom control up
	Screens not seasoned	Season screens
Product over bakes	Temperature too high	Lower temperature
	Bake time too long	Reduce bake time
	Top controller set too high Bottom controller set too high	Reduce top control Reduce bottom control.
Conveyor does not turn	Electrical supply is not on	Check power supply
	Obstruction is blocking belt	Remove obstruction & press reset button
	Speed control not working	Call service agency
	Conveyor motor not working	Call service agency



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## 8. USER COOKING GUIDE

MENU ITEM	TEMP	TIME	TOP SETTING	BOTTOM SETTING
Foccacia	575°	6:15	7.5	Dark
Fresh Dough Pizza	575°	8:15	7.5	9
Par Baked Dough	525°	5:30	8	8.5
Fresh Dough Soft Pretzel	575°	6:00	8	9
Calzones	575°	6:15	7.5	Dark
Pita Bread	750°	2:45	Dark	Dark
Cookies	350°	10:00	6.5	6.5
Biscuits	400°	13:00	7	7
Bread Sticks	550°	6:00	7.5	9
Fruit turnovers in Puff Pastry	375°	7:00	8	8
Omelettes	550°	4:00	9	6
Bakes Clams	450°	4:00	8	8
Ribs	525°	7:00	9	9
Mexican Entrees	550°	3:00	8	8
Sandwiches	550°	3:00	8	8

For further information contact BAKERS PRIDE OVEN CO., INC. at  
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