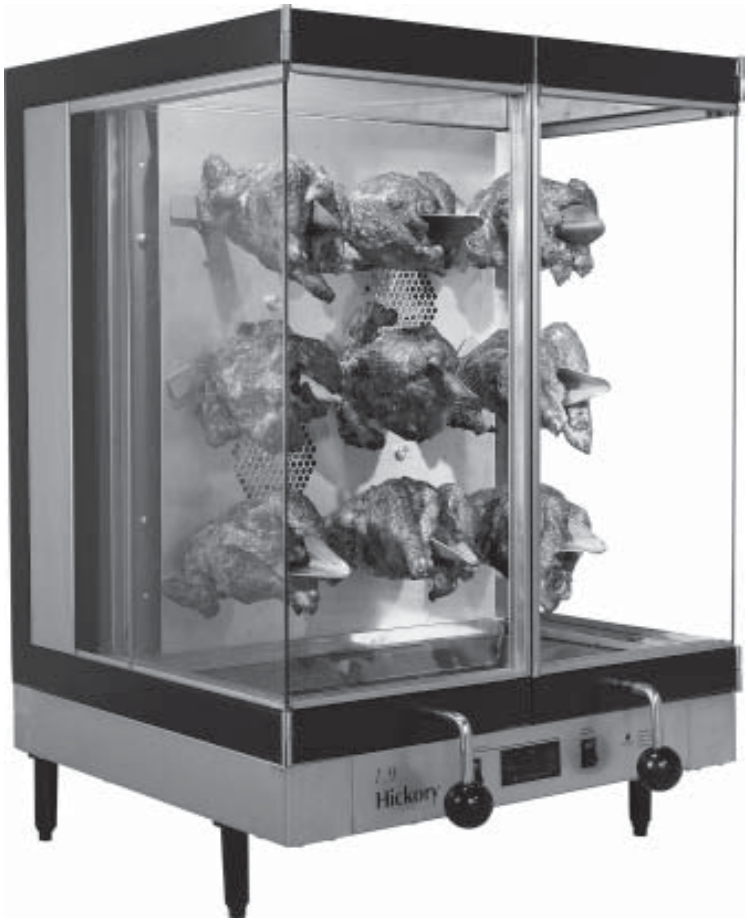
Installation Manual

Owner's Operating Manual

USA

Hickory Rotisseries

Models: N/1.9E



Machine Type	N / 1.9E
Total Power Rating	5 kW
Elements / Spits	2 Heating Elem. with 9 Spits
Elec. Connection	208 - 240 V, 1 Ph. or 3 Ph.
Temp. Regulation	Manual or Computer
Delivery Date:	Final Inspection:

4900 Westside Avenue, North Bergen, New Jersey 07047
Tel: [201] 223-0050 Fax: [201] 223-0950

Dear Customer,

You have received the **WORLD'S FINEST COMMERCIAL BARBECUE MACHINE.** It is the end product of **50 years of experience** and development. This machine has been designed for limited production needs with maximum end product quality and merchandising in mind. Given minimum care and maintenance this machine can, for the amount invested and space occupied, return far greater profits than any other appliance or fixture on your premises.

HICKORY INDUSTRIES, INC.

Steven Maroti
President

INSTALLATION INSTRUCTIONS

Barbecue products are often bought on impulse. The 1.9E been designed for maximum viewing by both the customers, as well as the operator. The unit has glass surfaces, on top, front and on both sides. It should be placed where it will get the best and most exposure. Wherever the unit is placed, remember that the operator will need continual access through the hinged glass door. If placed on a counter, table, or case, care should be taken to secure the unit so that it cannot be dislodged. **The N/1.9e has been designed for wall mounting and an additional kit is available for that purpose.**

WARNING: THIS MACHINE IS AN OVEN AND SHOULD NEVER BE PLACED WITHIN PUBLIC ACCESS. FOLLOW MINIMUM CLEARANCE REQUIREMENTS FOR ALL UNITS AS PER SPECIFICATION GUIDES.

ASSEMBLING THE MACHINE:

The 1.9E needs minimal assembly. The glass panels are all packed separately and must be properly positioned prior to use. The spits are individually packed. Check all parts and accessories and compare it to your packing list. Remove all tape on glass, and vinyl coating on stainless steel.

ELECTRICAL HOOK UP:

The N/1.9e must be electrically connected to a hard wired circuit by a *licensed electrician*. Your machine is wired single phase or three phase, 208V/220V or 240V, depending on how it was ordered. The electrical power connections are made in the junction box which can be found by removing the operating side panel. Each junction position is marked as 1, 2, 3, N and G.

WARNING: IF CONNECTIONS ARE MADE INCORRECTLY, IT IS POSSIBLE TO BURN OUT DRIVE MOTORS, FAN MOTORS AND COMPUTER CONTROL CIRCUITS.

The electrical components on the N/1.9e require less than 20amps at 208v.

VENTING:

Follow all local codes and requirements and/or ANSI standards

OPERATING INSTRUCTIONS

SWITCHES:

There are two switches on the front panel of the unit:

1. The ***motor switch*** will activate the 9 individual spits and the 2 fan motors.
2. The ***temperature switch*** will activate the *computer controller* and the heating elements.

In addition to the two switches, there is a *computer controller* or a manual temperature controller.

GENERAL INFORMATION:

Fill the *drip pan* $^1/_2$ full with water and replenish as required. The water evaporates and creates a moist environment for your product to cook in. Allow all models to preheat for 5 - 10 minutes.

USING THE SPIT FOR CHICKENS:

Each spit will accommodate one 2 $^1/_2$ lb. to 3 $^1/_2$ lb. chicken. Load the spits with product as shown in the following section. Place the spits in the rotisserie. The spits use a "bayonet" type mount for locking onto each motor drive shaft. Slide the spit into place until the pin extending from the shaft is locking with the spit. Turn the spit counter-clockwise and pull back gently until the spit is in the locked position.

When cooking incomplete loads, it is importatn to load from the top down. This allows for raw product to be loaded on the lower spit positions without the danger of cross-contamination.

WARNING: NEVER LOAD RAW PRODUCT ABOVE PARTIALLY COOKED PRODUCT! THIS PREVENTS RAW JUICES FROM DRIPPING ONTO AND CONTAMINATING COOKED OR PARTIALLY COOKED PRODUCT.

The most important part in getting started with a rotisserie is knowing how to properly spit the product. This is quite easy, but it must be learned! As an operator, you will become an expert in spitting chickens within half an hour! The following section describes and shows how to properly tie and spit chickens.

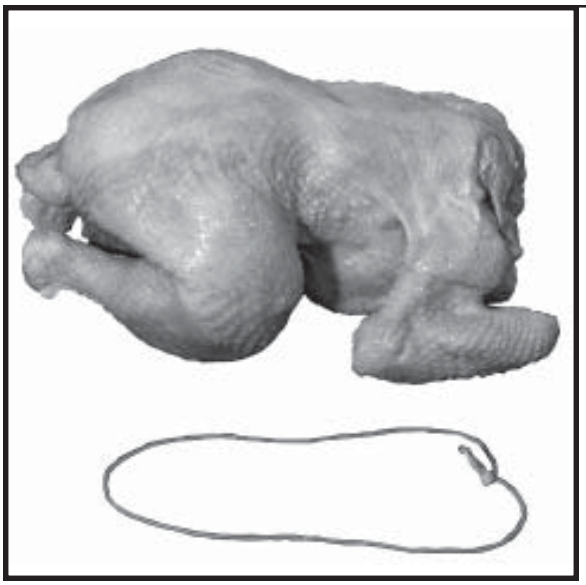


Figure 1. Chickens Ties

When using a "V" or angle spit, it is very important to tie or truss the product being cooked. This prevents the product from moving around the spit and also prevents damage by preventing the legs and wings from flopping. In this section, we will show how to properly truss a chicken. It is important to use a tie to fit the size of the product. In this case, we are tieing a 2 $^{3}/_{4}$ lb. chicken with a 6" tie.

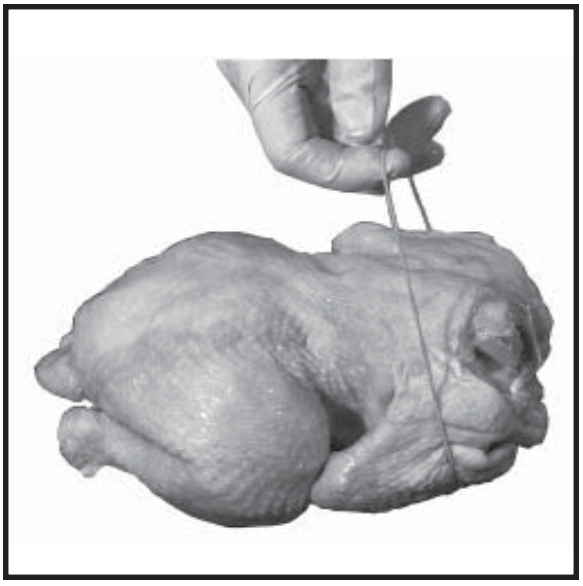


Figure 2. Trussing Wings

With the back of the chicken facing up, take the tie and wrap it around the breast, making sure to tuck the wings against the breast. Pull on the tie as pictured. You will also need to hold the chicken with your other hand.

Figure 3. Trussing Accross Back

While pulling on the tie, cross the strings so that you make an "X" across the back of the chicken. With the "loop" in your hand, you will now need to tie the legs of the chicken.

Figure 4. Trussing Legs

While pulling on the tie, loop the strings over the legs of the chicken.

Figure 5. Trussed Legs

Make sure that both legs are securely held by the tie.

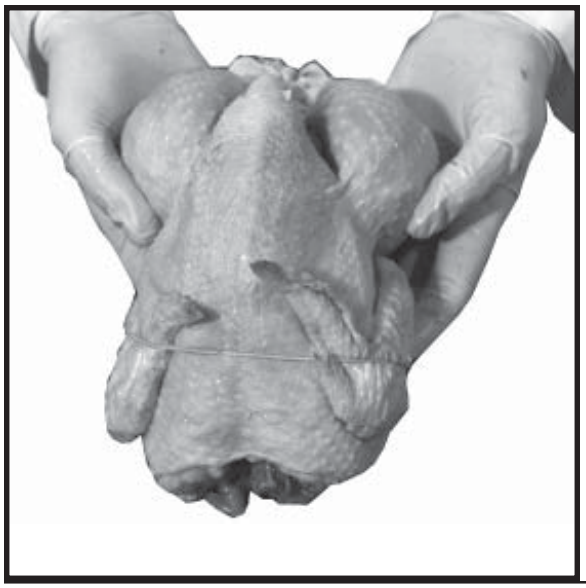


Figure 6. Trussed wings

Make sure that both wings are securely held by the tie against the breast of the chicken.

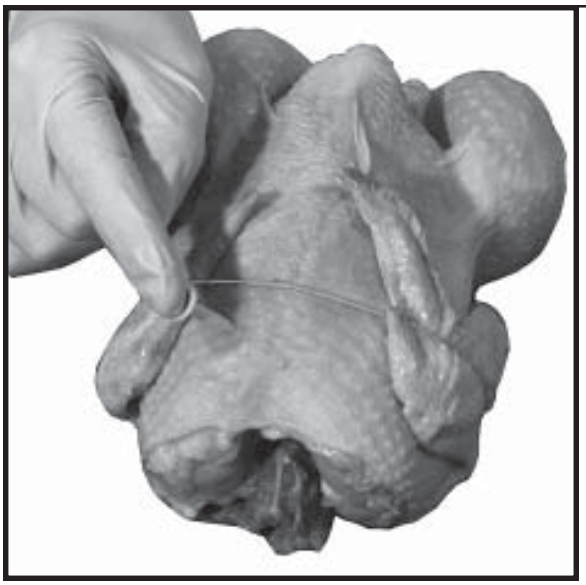


Figure 7. Pop-up Thermometer

The only way to tell if a chicken is done is take the intermal temperature. Since it can be difficult to probe the chickens while they are in the rotisserie, we recommend the use of pop-up thermometer. These inexpensive items should be place in the thickest part of the chicken, which is the breast. The thermostat will "pop-out" when the internal temperature reaches 185º F.

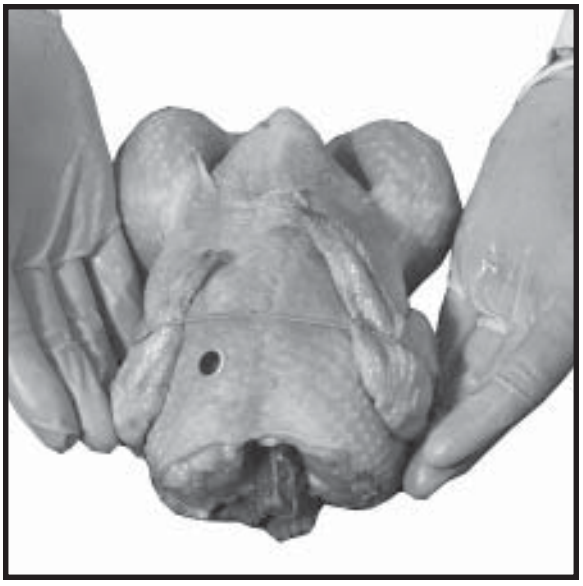


Figure 8. Chicken Ready to Spit

With the chicken trussed and the pop-up thermometer in place, the chicken is ready to be spitted with an angle spit.

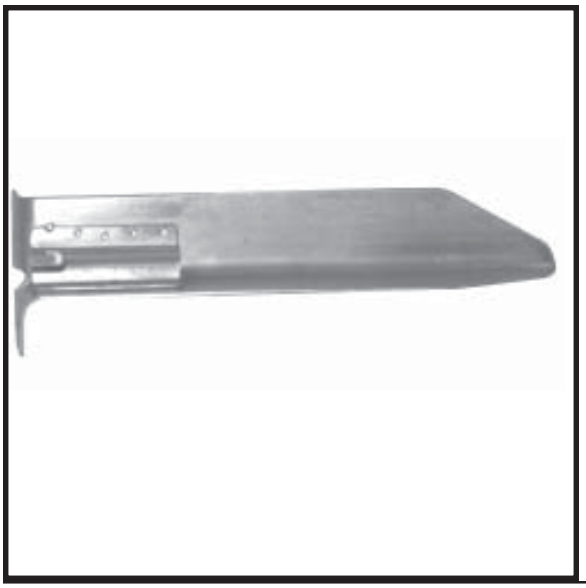


Figure 9. Angle Spit

The N/1.9e is only supplied with angle spits or "v" spits. These are designed to hold one bird each.

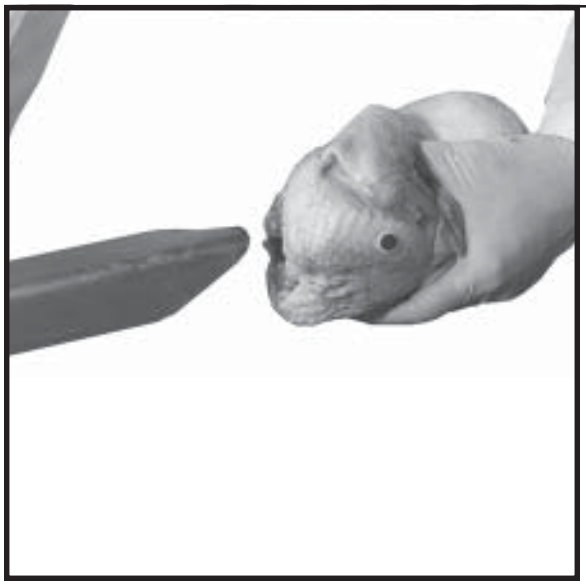


Figure 10. Spitting a Chicken

Spit the chicken through the cavity. The chicken should be inserted through the "head" (or at least where the head used to be) first.

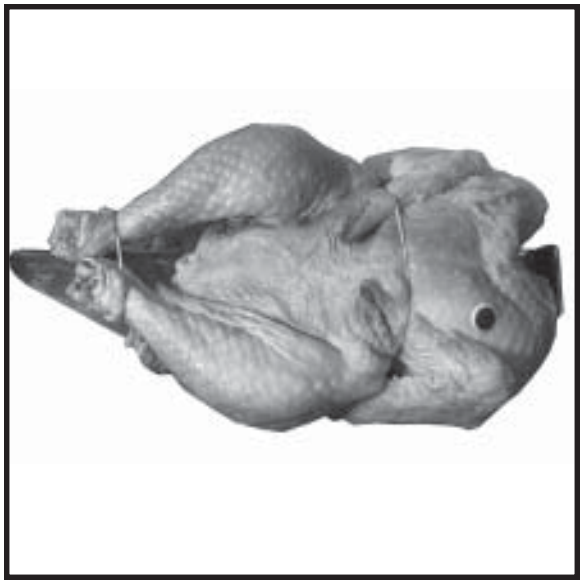


Figure 11. Chicken Position on Spit

When spitting the chicken, make sure that the breast is sitting on the flat, exterior side of the spit. Notice on the picture how the breast is not directly on the rounded corner of the spit, but above one of the flat parts of the "V". It is also important to note that the legs (and the tie) must sit on the same flat side of the spit. This picture shows exactly how the chicken should look when spitted.

LOADING AND UNLOADING:

With the chickens properly tied and spitted, slide each loaded spit onto a drive shaft. Repeat the process for all the spits you intend to use. When you are finished loading, the unit is ready to cook. To remove the cooked product, use a barbecue forked to loosen the chicken form the spit and just slide toward you. Repeat the process for all the other spits and the unit is ready for the next batch.

CHECKING CHICKENS FOR DONENESS:

A 2 $^{1}/_{2}$ lb. chicken will take approximately 75 minutes to cook in a preheated oven when the thermostat is set for 400°F. By using a *stem type thermometer,* the operator should determine the interior temperature to test for doneness. Chicken is done at 185°F.

CLEANING:

The machine should be thoroughly cleaned after **each day's use**. Any commercial grade grill and oven cleaner may be used. The operator should follow the cleaner manufacturer's instructions. Avoid steel wool or abrasives. If carbon has built up, use a nylon "Scotch Brite" pad to repolish the surface. (Do not use Scotch Brite on any control panel surface because lettering may be removed). For polishing the exterior surface use a commercial grade stainless cleaner and polisher. For the glass panels, use a glass cleaner and dilute it with up to 20% ammonia. The rear panel can be removed by loosing the thumb nuts and removing the panel. Before doing so please power down the unit so that the heating element and fans cannot be turned on. The panel can be soaked or placed in a dishwasher to eliminate most grime and carbonization. With the rear panel out the fan blades are accessible for cleaning. The more dirt and grime on the fans the less efficient they are.

WARNING: BE CAREFUL, GLASS MARRING, CHIPPING OR BREAKAGE OCCURS PREDOMINANTLY WHEN GLASS IS REMOVED FROM MACHINES. IF CHIPPING OCCURS, DO NOT PLACE IT BACK IN THE MACHINE. ONCE GLASS IS CHIPPED OR SCRATCHED, IT CAN AND WILL BREAK. REMEMBER, IF YOU KEEP YOUR ROTISSERIE CLEAN YOUR CUSTOMERS MAY NOT NOTICE, BUT THEY WILL NOTICE IF YOU KEEP IT DIRTY!

Computer Controller Programming Instructions

1. After the 1.9e has been plugged in, the display on the computer controller will be powered up and will show [HLd]. The *computer (thermostat/timer) controller* is used to set and control cooking temperature, hold temperature and a timed cooking cycle.

2. In addition to the display, there are four button on the controller {t}, {s}, {SET}, and {START}.

3. With [HLd] appearing on the display, press {SET} button once to enter the programming mode:

Press	Display HLd	Result
SET	SPC	Computer indicates that you are in the programming mode and the Set Point Cooking (SPC) temperature can be set next.
SET	###	By pressing {SET} again, a cooking temperature value will appear on the display.
s t	400	Press the arrow up (or arrow down) buttons until the desired value appears on the display. As in this example, we recommend a value of 400 which means that the Set Point Cooking (SPC) temperature is 400ºF.
SET	SPH	By pressing set again, the computer indicates that the Set Point Hold temperature can be entered next.
SET	###	By pressing {SET} again, a hold temperature value will appear on the display.
s t	200	Press the arrow up (or arrow down) buttons until the desired value appears on the display. As in this example, we recommend a value of 200 which means that the Set Point Hold (SPH) temperature is 200ºF.
SET	t1	By pressing {SET} again, the computer indicates that the cooking time (in hours and minutes) can be entered next.
SET	###	By pressing {SET} again, a cooking time value will appear on the display.
s t	130	Press the arrow up (or arrow down) buttons until the desired value appears on the display. In this example, we use a value of 130 which means that the set cooking Time (t1) is one hour and 30 minutes.

NOTE: When setting the cooking time, the display will jump from [59] to [100], which mean one hour. Thus
a display of [130] means one hour and 30 minutes, not 130 minutes!

WARNING! When setting a cooking time, it is only an estimate of when the product being cooked will be done! The only way to be certain that a product (such as chicken) is cooked is by taking the internal temperature of the product (for chicken, it is 185ºF). A load of 9 chickens, with an average weight of 3 lbs. each will take about 90 minutes to cook.

SET	.	Once the desired cooking time is entered, press {SET} again and a blank display with a single dot will appear. This means that all the values have been entered.
	HLd	The computer will then automatically display [HLd] indicating that the computer is not longer in a programming mode.

4. Once programmed, the contoller will store and save the set points.

Computer Controller Operating Instructions

1. After the N/1.9e computer controller has been programmed, [HLd]will again appear on the display.

2. In addition to the display, there are four buttons on the controller {t}, {s}, {SET}, and {START}.

3. With [HLd] appearing on the display, press the {START} button once to start pre-heating the unit:

Press	Display HLd	Result
START	HLd	After pressing {START}, [HLd} will blink, indicating that the unit is attempting to reach the Set Point Cooking (SPC) temperature. At this point, the unit can not reach the SPC since the fans nor the heating elements are on yet

NOTE: Press the TEMPERATURE and MOTOR switches to the ON position (the top half of the switches should be flat or down) in order to activate the fans, the heating elements, and the computer controller.

		At this point
	HLd	With the motors and the heating elements on, [HLd] will continue to blink until the Set Point Cooking (SPC) temperature is reached (in this example, 400ºF).
s	###	To view the actual temperature in the rotisserie, press the {s} button and the actual temperature inside the cooking chamber will appear on the display. When the button is realeased, a blinking [HLd] will again appear on the display.

	130	Once the set point of 400ºF is reached (which will take about 20 minutes), there will be a 5 second audible alarm and the dispaly will show the cooking time (t1), which in this case has been programmed to one hour and 30 minutes.

NOTE: Once the blinking [HLd] is replaced by the cooking time on the display, the product (chickens) can be loaded into the rotisserie. **The unit will maintain this temperature indefinitely unless the next step is taken!**

START	1:30	By pressing start, the display will show the count down from the set cooking time (t1) to zero. A blinking colon will appear, separting the hours from minutes, indicating that the timer is counting down.
	000	When the set time expires, there will be a 5 sec. audible alarm and the controller will automatically go into the hold mode.
	HLd	In the hold mode, the unit will maintain the Set Point Hold (SPH) temperature until the unit is shut off manually or another cooking cycle is initiated.

NOTE: If the TEMPERATURE and MOTOR switches are pressed to the ON position while a steady [HLd] appears on the controller display (which means that the {START} button has not been pressed or a cooking cycle has just ended), the unit will automatically heat up (or cool down) to the SPH or Set Point Hold temperature. The unit will not ramp up to the Set Point Cooking (SPC) temperature until {START} is pressed and [HLd] begins to blink!

t	###	While the unit is in the hold mode (the display shows [HLd]) the length of time that the unit has been in hold can be viewed by pressing the arrow down button.

NOTE: When a pre-heat or cooking cycle has been started, the cycle can aborted. By pressing the {SET}button for 3 seconds, the cycle will be terminated and unit will revert to the hold mode [HLd].

POINTERS ON HOW TO CARE FOR BBQ GLASS PROPERLY

HICKORY ROTISSERIES USE ONLY HEAT RESISTANT TEMPERED GLASS that is tempered and formed to size in the manufacturing process. All glass is fragile. The glass will require continual care in handling to avoid breakage. Here are some pointers:

- Once the glass is chipped or scratched, the integrity of the heat resistant process is gone. When the glass loses its ability to resist quick changes in temperature, it will break. It may happen in one week or one year, but it will eventually break.

- The glass on the rotisserie exists so that the retailer can showcase and merchandise the product. If the glass is dirty, then merchandising is hopeless which will eventually create lost sales. The glass should be cleaned every day along with the machine. Clean the glass with a commercial glass cleaner which will dissolve grease. Spray on the cleaner and follow directions accurately.

- When tempered glass breaks, it will shatter into tiny pieces. Untempered glass would generally break into large jagged pieces which could cause serious injury. That is why tempered glass is referred to as safety glass. If the glass breaks is important to check out if any exposed food has been contaminated with glass shards.

- In an environment such as a deli department there is traffic and movement and incidents can happen in a matter of seconds. Be careful.

CRITICAL CONTROL STEPS FOR PREPARATION AND COOKING OF BARBECUE CHICKENS

1. Clean and sanitize product sink.
2. Clean and sanitize spits, skewers, and thumbscrews.
3. Use only authorized sink for raw product.
4. Rinse off chickens in product sink.
5. Follow product spit-up procedure in manual.
6. Load spited product into machine. Follow loading instructions in manual.
7. Thoroughly wash and sanitize hands before contacting switches and/or dials.
8. Follow operating instructions for oven operation.
9. Check product for doneness as per instruction manual.
10. Follow unloading procedures. Use an authorized surface for cooked product only. Insure that no cross contamination occurs with any surface previously used for raw product. Including employee hands.
11. If placing product in a display warmer, insure that the product temperature (*NOT WARMER TEMPERATURE*) does not fall below 140 degrees. Warmer temperature insures that the ambient air temperature in the warmer is correct and does not include product temperature.
12. All cooked product should be sold daily. Product that is not sold should be either cooled down and sold cold or used as chicken salad. Do not reheat day old product and try to sell as a fresh product. Reheating product will be disastrous.
13. Advance preparation and storage for spited product should be in an authorized, properly covered and maintained bin set aside for storing spited product in the walk-in refrigeration unit.
14. ***THE MOST CRITICAL STEP IN THE PREVENTION OF CROSS CONTAMINATION IS THE HUMAN HAND. THEREFORE HANDLING RAW PRODUCT AND THE WASHING OF HANDS IS THE MOST CRITICAL CONTROL STEP IN PREVENTING CROSS CONTAMINATION.***